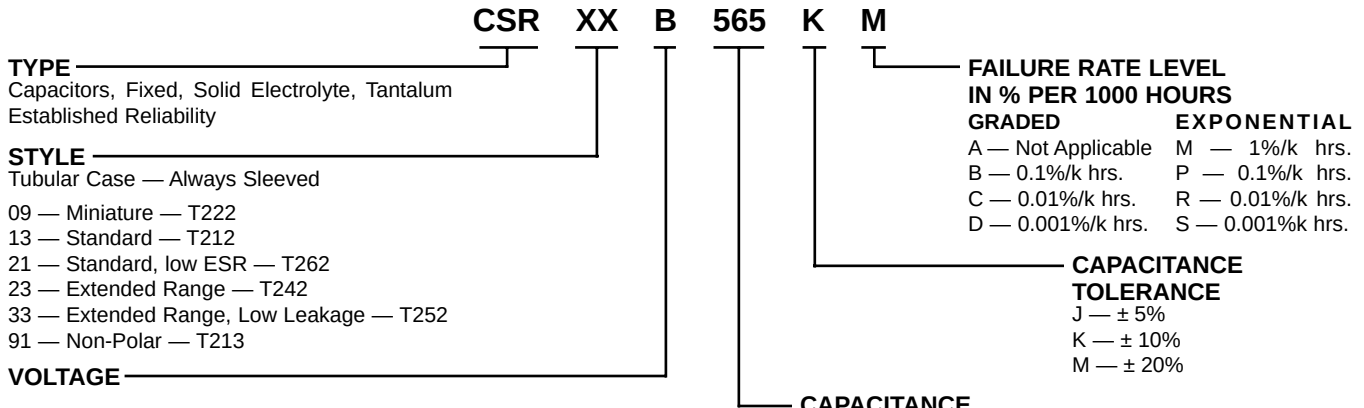


## ORDERING INFORMATION (OBSOLETE\*)



| Symbol | VDC Working |       | VDC Surge |       |
|--------|-------------|-------|-----------|-------|
|        | 85°C        | 125°C | 85°C      | 125°C |
| B      | 6           | 4     | 8         | 5     |
| C      | 10          | 7     | 13        | 9     |
| D      | 15          | 10    | 20        | 12    |
| E      | 20          | 13    | 26        | 16    |
| F      | 35          | 23    | 46        | 28    |
| G      | 50          | 33    | 65        | 40    |
| H      | 75          | 50    | 98        | 64    |
| J      | 100         | 67    | 130       | 86    |

**Examples**

565 — 5,600,000 = 5.60  $\mu\text{F}$  563 — 56,000 = .056  $\mu\text{F}$   
564 — 560,000 = .56  $\mu\text{F}$

\* This Military Part Numbering System is obsolete in accordance with the current specifications. The correct current designation for a CSR part number is the MIL Specification Number, followed by the Specification (slash) Sheet Number and Dash Number (i.e. — MIL-PRF-39003/01-2270). However, the part number breakdown shown above is still widely used and is shown for reference.

## MILITARY CAPACITOR APPROVED FAILURE RATE LEVELS AND MARKINGS PER MIL-PRF-39003 FOR CSR09 (T222 A & B CASE SIZES ONLY), CSR13 (T212), CSR21 (T262), CSR23 (T242) & CSR33 (T252) CAPACITORS

### KEMET APPROVED FAILURE RATE LEVELS — MIL-PRF-39003/H (EXPONENTIAL)

| STYLE | DESCRIPTION            | KEMET SERIES | APPROVED FAILURE RATE LEVEL |
|-------|------------------------|--------------|-----------------------------|
| CSR09 | Polar-Subminiature     | T222         | S (0.001%/k hrs.)           |
| CSR13 | Polar-Standard         | T212         | S (0.001%/k hrs.)           |
|       | MIL Range              |              |                             |
| CSR21 | Polar-Standard Low ESR | T262         | S (0.001%/k hrs.)           |
|       | MIL Range              |              |                             |
| CSR23 | Polar-Extended Range   | T242         | S (0.001%/k hrs.)           |

| STYLE | DESCRIPTION          | KEMET SERIES | APPROVED FAILURE RATE LEVEL |
|-------|----------------------|--------------|-----------------------------|
| CSR33 | Polar-Extended Range | T252         | S (0.001%/k hrs.)           |
|       | Low Leakage          |              |                             |
| CSR91 | Non-Polar            | T213         | S (0.001%/k hrs.)           |

## MILITARY MARKING

### A CASE

|        |                                                                                          |
|--------|------------------------------------------------------------------------------------------|
| 39003  | Military specification number                                                            |
| 01 - K | Specification sheet number and trademark                                                 |
| 9002J  | Military dash number and "J" for JAN                                                     |
| +333   | Polarity, date code (1st digit indicates year and the next two digits indicate the week) |
| XY     | Lot symbol                                                                               |

### C & D CASES

|                    |                                                                   |
|--------------------|-------------------------------------------------------------------|
| M39003             | Military specification number                                     |
| 01 - 8222J         | Specification sheet number, Military dash number, and "J" for JAN |
| +8.2 $\mu\text{F}$ | Positive terminal identifier and capacitance value                |
| 10% 50V            | Capacitance tolerance and voltage                                 |
| 31433              | Source code                                                       |
| 0333 XY K          | Date code, lot code, and trademark                                |

### B CASE

|         |                                                                                                      |
|---------|------------------------------------------------------------------------------------------------------|
| M39003  | Military specification number                                                                        |
| 01 -    | Specification sheet number                                                                           |
| 8006J   | Military dash number and "J" for JAN                                                                 |
| 31433   | Source code                                                                                          |
| +333 XY | Polarity, date code (1st digit indicates year and the next two digits indicate the week), lot symbol |

### CSR91 (T213) CAPACITORS

#### A, B, C & D CASES

|                 |                                                                   |
|-----------------|-------------------------------------------------------------------|
| M39003          | Military specification number                                     |
| 04 - 0980J      | Specification sheet number, Military dash number, and "J" for JAN |
| 1 $\mu\text{F}$ | Capacitance value                                                 |
| 10% 20VNP       | Capacitance tolerance and voltage rating                          |
| 0333 XY 31433   | Date code, lot code, and source code                              |

(See page 38 for CSS Marking)

## KEMET APPROVED FAILURE RATE LEVELS — MIL-PRF-39003/H (GRADED)

| STYLE   | DESCRIPTION                     | KEMET SERIES | APPROVED FAILURE RATE LEVEL* |
|---------|---------------------------------|--------------|------------------------------|
| CSR09   | Polar-Subminiature              | T222         | D (0.001%/k hrs.)            |
| CSR13*  | Polar-Standard MIL Case         | T212         | D (0.001%/k hrs.)            |
| CSS13** | Polar-Standard MIL Case         | T216         | C (0.01%/k hrs.)             |
| CSR21   | Polar-Standard Low ESR MIL Case | T262         | D (0.001%/k hrs.)            |
| CSR23*  | Polar-Extended Range            | T242         | D (0.001%/k hrs.)            |

\*Not approved to 'D' Failure Rate Level on all voltages and capacitance values.

\*\*MIL-PRF-39003/10 for space applications.

| STYLE   | DESCRIPTION                      | KEMET SERIES | APPROVED FAILURE RATE LEVEL* |
|---------|----------------------------------|--------------|------------------------------|
| CSR33*  | Polar-Extended Range Low Leakage | T252         | D (0.001%/k hrs.)            |
| CSS33** | Polar-Extended Range Low Leakage | T256         | C (0.01%/k hrs.)             |
| CSR91*  | Non-Polar                        | T213         | D (0.001%/k hrs.)            |

\*Not approved to 'D' Failure Rate Level on all voltages and capacitance values.

\*\*MIL-PRF-39003/10 for space applications.

## PERFORMANCE CHARACTERISTICS

- **CAPACITANCE/VOLTAGE RANGE:** .0023-1200 $\mu$ F, 6-125 Volts.
- **CAPACITANCE TOLERANCE:** Available in standard EIA values with  $\pm 20\%$ ,  $\pm 10\%$  and  $\pm 5\%$  tolerances.
- **DISSIPATION FACTOR:** Maximum DF limits are shown in corresponding series part number listings on pages 7-41. See Application Notes Section, page 76 for additional description.
- **DC LEAKAGE CURRENT:** Each corresponding part number table lists maximum leakage current for each capacitor on pages 7-41. See Application Notes Section, page 76 for additional description.
- **RATED VOLTAGE; WORKING VOLTAGE; SURGE VOLTAGE; REVERSE VOLTAGE:** See Application Notes Section, Pages 76 & 77 for description.
- **IMPEDANCE and ESR:** See Application Notes Section, pages 77 & 78 for description. Reference ESR values are shown for commercial hermetically sealed capacitors on page 19.

- **AC RIPPLE VOLTAGE:** Permissible AC ripple voltage is related to the ESR of the capacitor and the power dissipation capabilities of a particular case size. Thermal capacities for the various case sizes have been determined empirically and are listed below. For additional description see page 78.

| Standard Case Size | Watts | T222 |
|--------------------|-------|------|
| A                  | .09   | .070 |
| B                  | .100  | .090 |
| C                  | .125  | —    |
| D                  | .180  | —    |

Maximum Power Dissipation: 25°C Ambient

- **ENVIRONMENTAL CONSIDERATIONS:**
  - A. Shock Test: MIL-STD-202, Method 213
  - B. Thermal Shock, MIL-STD-202, Method 107, Condition B.
  - C. Moisture Resistance: MIL-STD-202, Method 106.
  - D. Solderability: MIL-STD-202, Method 208

For additional Environmental Test Information see pages 80, 81 and 82.

- **LEAD MATERIAL:** Standard leads are solder-coated nickel per MIL-STD-1276.
- **INSULATING SLEEVES:** The standard insulating material used in transparent high temperature plastic, having 2000 volt dielectric strength, excellent dimensional stability and chemical and cold flow resistance.
- **LEAD TAPE and REEL:** Reeling per specification RS-296. See pages 71 and 73 for additional information.

KEMET standard hermetic sealed T110 Series are desirable for use in high humidity environments. They are ruggedly built, designed for miniaturized circuitry, and are especially suited for coupling, bypass, filtering and R-C timing circuits. They exhibit excellent stability, extremely low DC leakage current, dissipation factor, and ESR/impedance over a wide temperature and frequency range.

Available in standard EIA capacitance values from .0047-330  $\mu\text{F}$  in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances and working voltages from 6-125 VDC.

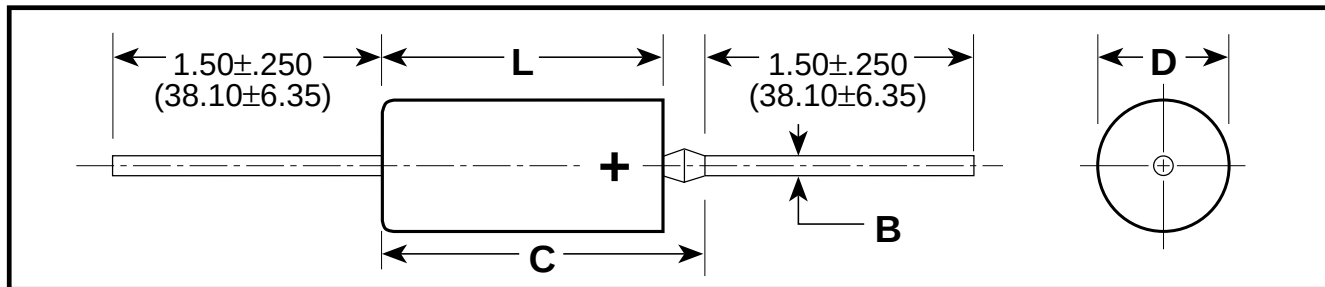
Higher CV values in comparable case sizes are available in KEMET T140 Series. Refer to page 27.

Included in the following Series table is a complete listing of CSR13 qualified MIL-PRF-39003 capacitors. KEMET is approved to manufacture the S (0.001%/k hrs.) Exponential & D (0.001%/k hrs.) Graded failure rate levels.

KEMET is now offering low ESR limits in the T110 Series. See ESR chart on page 19. You may order the lower ESR by using Customer Specification 2864 as the last four digits of the part number.

**Effective September 30, 2005, the KEMET T110 Series is RoHS Compliant.**

### CAPACITOR OUTLINE DRAWINGS



### DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED               |                           | INSULATED                 |                           | B<br>$\pm 0.002$<br>(.05) | C<br>MAX.        |
|-----------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------|
|           | D<br>$\pm 0.005$<br>(.13) | L<br>$\pm 0.031$<br>(.79) | D<br>$\pm 0.010$<br>(.25) | L<br>$\pm 0.031$<br>(.79) |                           |                  |
| A         | 0.125<br>(3.18)           | 0.250<br>(6.35)           | 0.135<br>(3.43)           | 0.286<br>(7.26)           | 0.020<br>(.51)            | 0.422<br>(10.72) |
| B         | 0.175<br>(4.45)           | 0.438<br>(11.13)          | 0.185<br>(4.70)           | 0.474<br>(12.04)          | 0.020<br>(.51)            | 0.610<br>(15.49) |
| C         | 0.279<br>(7.09)           | 0.650<br>(16.51)          | 0.289<br>(7.34)           | 0.686<br>(17.42)          | 0.025<br>(.64)            | 0.822<br>(20.88) |
| D         | 0.341<br>(8.66)           | 0.750<br>(19.05)          | 0.351<br>(8.92)           | 0.786<br>(19.96)          | 0.025<br>(.64)            | 0.922<br>(23.42) |

### ORDERING INFORMATION\*

**TANTALUM** — T

**SERIES** — XXX  
T110, T212 (CSR13)  
T111, T213 (CSR91)  
T140, T242 (CSR23)

**CASE SIZE** — A  
A / B / C / D

**PICOFARAD CODE** — 105  
First two digits represent significant figures.  
Third digit specifies number of zeros to follow.

**CAPACITANCE TOLERANCE** — K  
M —  $\pm 20\%$  K —  $\pm 10\%$  J —  $\pm 5\%$

**VOLTAGE** — 050  
At 85°C

**LEAD MATERIAL** — A  
S — Standard  
T — 100% Tin (T110, T140 Series only)

**FAILURE RATE\*\***  
**GRADED**  
A — Not Applicable  
B — 0.1%/k hrs.  
C — 0.01%/k hrs.  
D — 0.001%/k hrs.  
**EXPONENTIAL**  
M — 1%/k hrs.  
P — 0.1%/k hrs.  
R — 0.01%/k hrs.  
S — 0.001%/k hrs.

**SPECIFICATION**  
All capacitors are sleeved unless specified.

**\*\*Part Number Example: T110A105K050AS (14 digits - no spaces)**  
**\*For Military Ordering Information, see page 4.**

**\*\*Failure Rates apply only to military products.**

### MARKING INFORMATION

Marking: Unless otherwise specified by special order, standard marking of T110 Series capacitor consists of the following:

#### A, B, C & D CASES

|                   |                                                                   |
|-------------------|-------------------------------------------------------------------|
| +K 10%            | — Polarity, Manufacturer's Identification and Capacitance Tol.    |
| R56 $\mu\text{F}$ | — Nominal Capacitance — ( $\mu\text{F}$ ) ("R" indicates decimal) |
| 100V              | — Voltage                                                         |
| 0312              | — Date Code (e.g.: 0312)                                          |

\* For Military Marking, see page 4.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                               | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                                                |
|-------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------------------------------------|
|                                                 |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|                                                 |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                                                |
|                                                 |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                                                |
| 6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C  |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                                                |
| 2.2                                             | A            | 5,10,20                        | T110A225(1)006AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 2.7                                             | A            | 5,10,20                        | T110A275(1)006AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 3.3                                             | A            | 5,10,20                        | T110A335(1)006AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 3.9                                             | A            | 5,10,20                        | T110A395(1)006AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 4.7                                             | A            | 5,10,20                        | T110A475(1)006AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 5.6                                             | A            | 5                              | T110A565J006AS       | 0.3                                | 4                                                 | 5001                                                      | 5201       | 5401        | 5601         | 6001                       | 7001        | 8001         | T212A565J006(2)S                               |
| 5.6                                             | A            | 10                             | T110A565K006AS       | 0.3                                | 4                                                 | 2241                                                      | 2481       | 2721        | 2961         | 6002                       | 7002        | 8002         | T212A565K006(2)S                               |
| 5.6                                             | A            | 20                             | T110A565M006AS       | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 6.8                                             | A            | 5                              | T110A685J006AS       | 0.3                                | 6                                                 | 5002                                                      | 5202       | 5402        | 5602         | 6003                       | 7003        | 8003         | T212A685J006(2)S                               |
| 6.8                                             | A            | 10                             | T110A685K006AS       | 0.3                                | 6                                                 | 2242                                                      | 2482       | 2722        | 2962         | 6004                       | 7004        | 8004         | T212A685K006(2)S                               |
| 6.8                                             | A            | 20                             | T110A685M006AS       | 0.3                                | 6                                                 | 2243                                                      | 2483       | 2723        | 2963         | 6005                       | 7005        | 8005         | T212A685M006(2)S                               |
| 8.2                                             | B            | 5,10,20                        | T110B825(1)006AS     | 0.3                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 10.0                                            | B            | 5,10,20                        | T110B106(1)006AS     | 0.3                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 12.0                                            | B            | 5,10,20                        | T110B126(1)006AS     | 0.5                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 15.0                                            | B            | 5,10,20                        | T110B156(1)006AS     | 0.9                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 18.0                                            | B            | 5,10,20                        | T110B186(1)006AS     | 0.9                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 22.0                                            | B            | 5,10,20                        | T110B226(1)006AS     | 0.9                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 27.0                                            | B            | 5,10,20                        | T110B276(1)006AS     | 0.9                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 33.0                                            | B            | 5,10,20                        | T110B336(1)006AS     | 0.9                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 39.0                                            | B            | 5,10,20                        | T110B396(1)006AS     | 0.9                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 47.0                                            | B            | 5                              | T110B476J006AS       | 1.5                                | 6                                                 | 5003                                                      | 5203       | 5403        | 5603         | 6006                       | 7006        | 8006         | T212B476J006(2)S                               |
| 47.0                                            | B            | 10                             | T110B476K006AS       | 1.5                                | 6                                                 | 2244                                                      | 2484       | 2724        | 2964         | 6007                       | 7007        | 8007         | T212B476K006(2)S                               |
| 47.0                                            | B            | 20                             | T110B476M006AS       | 1.5                                | 6                                                 | 2245                                                      | 2485       | 2725        | 2965         | 6008                       | 7008        | 8008         | T212B476M006(2)S                               |
| 56.0                                            | B            | 5                              | T110B566J006AS       | 1.5                                | 6                                                 | 5004                                                      | 5204       | 5404        | 5604         | 6009                       | 7009        | 8009         | T212B566J006(2)S                               |
| 56.0                                            | B            | 10                             | T110B566K006AS       | 1.5                                | 6                                                 | 2246                                                      | 2486       | 2726        | 2966         | 6010                       | 7010        | 8010         | T212B566K006(2)S                               |
| 56.0                                            | B            | 20                             | T110B566M006AS       | 1.5                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 68.0                                            | C            | 5,10,20                        | T110C686(1)006AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 82.0                                            | C            | 5,10,20                        | T110C826(1)006AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 100.0                                           | C            | 5,10,20                        | T110C107(1)006AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 120.0                                           | C            | 5,10,20                        | T110C127(1)006AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 150.0                                           | C            | 5                              | T110C157J006AS       | 4.5                                | 6                                                 | 5005                                                      | 5205       | 5405        | 5605         | 6011                       | 7011        | 8011         | T212C157J006(2)S                               |
| 150.0                                           | C            | 10                             | T110C157K006AS       | 4.5                                | 6                                                 | 2247                                                      | 2487       | 2727        | 2967         | 6012                       | 7012        | 8012         | T212C157K006(2)S                               |
| 150.0                                           | C            | 20                             | T110C157M006AS       | 4.5                                | 6                                                 | 2248                                                      | 2488       | 2728        | 2968         | 6013                       | 7013        | 8013         | T212C157M006(2)S                               |
| 180.0                                           | C            | 5                              | T110C187J006AS       | 5.5                                | 6                                                 | 5006                                                      | 5206       | 5406        | 5606         | 6014                       | 7014        | 8014         | T212C187J006(2)S                               |
| 180.0                                           | C            | 10                             | T110C187K006AS       | 5.5                                | 6                                                 | 2249                                                      | 2489       | 2729        | 2969         | 6015                       | 7015        | 8015         | T212C187K006(2)S                               |
| 180.0                                           | C            | 20                             | T110C187M006AS       | 5.5                                | 6                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 220.0                                           | D            | 5,10,20                        | T110D227(1)006AS     | 6.0                                | 8                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 270.0                                           | D            | 5                              | T110D277J006AS       | 6.0                                | 8                                                 | 5007                                                      | 5207       | 5407        | 5607         | 6016                       | 7016        | 8016         | T212D277J006(2)S                               |
| 270.0                                           | D            | 10                             | T110D277K006AS       | 6.0                                | 8                                                 | 2250                                                      | 2490       | 2730        | 2970         | 6017                       | 7017        | 8017         | T212D277K006(2)S                               |
| 270.0                                           | D            | 20                             | T110D277M006AS       | 6.0                                | 8                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 330.0                                           | D            | 5                              | T110D337J006AS       | 7.5                                | 8                                                 | 5008                                                      | 5208       | 5408        | 5608         | 6018                       | 7018        | 8018         | T212D337J006(2)S                               |
| 330.0                                           | D            | 10                             | T110D337K006AS       | 7.5                                | 8                                                 | 2251                                                      | 2491       | 2731        | 2971         | 6019                       | 7019        | 8019         | T212D337K006(2)S                               |
| 330.0                                           | D            | 20                             | T110D337M006AS       | 7.5                                | 8                                                 | 2252                                                      | 2492       | 2732        | 2972         | 6020                       | 7020        | 8020         | T212D337M006(2)S                               |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                                                |
| 1.0                                             | A            | 5,10,20                        | T110A105(1)010AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 1.2                                             | A            | 5,10,20                        | T110A125(1)010AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 1.5                                             | A            | 5,10,20                        | T110A155(1)010AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 1.8                                             | A            | 5,10,20                        | T110A185(1)010AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 2.2                                             | A            | 5,10,20                        | T110A225(1)010AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 2.7                                             | A            | 5,10,20                        | T110A275(1)010AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 3.3                                             | A            | 5,10,20                        | T110A335(1)010AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 3.9                                             | A            | 5                              | T110A395J 010AS      | 0.3                                | 4                                                 | 5009                                                      | 5209       | 5409        | 5609         | 6021                       | 7021        | 8021         | T212A395J010(2)S                               |
| 3.9                                             | A            | 10                             | T110A395K 010AS      | 0.3                                | 4                                                 | 2253                                                      | 2493       | 2733        | 2973         | 6022                       | 7022        | 8022         | T212A395K010(2)S                               |
| 3.9                                             | A            | 20                             | T110A395M 010AS      | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                                                |
| 4.7                                             | A            | 5                              | T110A475J 010AS      | 0.4                                | 4                                                 | 5010                                                      | 5210       | 5410        | 5610         | 6023                       | 7023        | 8023         | T212A475J010(2)S                               |
| 4.7                                             | A            | 10                             | T110A475K 010AS      | 0.4                                | 4                                                 | 2254                                                      | 2494       | 2734        | 2974         | 6024                       | 7024        | 8024         | T212A475K010(2)S                               |
| 4.7                                             | A            | 20                             | T110A475M010AS       | 0.4                                | 4                                                 | 2255                                                      | 2495       | 2735        | 2975         | 6025                       | 7025        | 8025         | T212A475M010(2)S                               |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T110 SERIES — POLAR TYPE & T212 (CSR13)

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                        | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |  |  |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|------------------------------------------------|
|                                                          |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |  |  |                                                |
|                                                          |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |  |  |  |                                                |
|                                                          |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |  |  |                                                |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 5.6                                                      | B            | 5,10,20                        | T110B565(1)010AS     | 0.4                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 6.8                                                      | B            | 5,10,20                        | T110B685(1)010AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 8.2                                                      | B            | 5,10,20                        | T110B825(1)010AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 10.0                                                     | B            | 5,10,20                        | T110B106(1)010AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 12.0                                                     | B            | 5,10,20                        | T110B126(1)010AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 15.0                                                     | B            | 5,10,20                        | T110B156(1)010AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 18.0                                                     | B            | 5,10,20                        | T110B186(1)010AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 22.0                                                     | B            | 5,10,20                        | T110B226(1)010AS     | 2.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 27.0                                                     | B            | 5                              | T110B276J010AS       | 2.0                                | 6                                                 | 5011                                                      | 5211       | 5411        | 5611         | 6026                       | 7026        | 8026         |  |  |  | T212B276J010(2)S                               |
| 27.0                                                     | B            | 10                             | T110B276K010AS       | 2.0                                | 6                                                 | 2256                                                      | 2496       | 2736        | 2976         | 6027                       | 7027        | 8027         |  |  |  | T212B276K010(2)S                               |
| 27.0                                                     | B            | 20                             | T110B276M010AS       | 2.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 33.0                                                     | B            | 5                              | T110B336J010AS       | 2.0                                | 6                                                 | 5012                                                      | 5212       | 5412        | 5612         | 6028                       | 7028        | 8028         |  |  |  | T212B336J010(2)S                               |
| 33.0                                                     | B            | 10                             | T110B336K010AS       | 2.0                                | 6                                                 | 2257                                                      | 2497       | 2737        | 2977         | 6029                       | 7029        | 8029         |  |  |  | T212B336K010(2)S                               |
| 33.0                                                     | B            | 20                             | T110B336M010AS       | 2.0                                | 6                                                 | 2258                                                      | 2498       | 2738        | 2978         | 6030                       | 7030        | 8030         |  |  |  | T212B336M010(2)S                               |
| 39.0                                                     | B            | 5                              | T110B396J010AS       | 2.0                                | 6                                                 | 5013                                                      | 5213       | 5413        | 5613         | 6031                       | 7031        | 8031         |  |  |  | T212B396J010(2)S                               |
| 39.0                                                     | B            | 10                             | T110B396K010AS       | 2.0                                | 6                                                 | 2259                                                      | 2499       | 2739        | 2979         | 6032                       | 7032        | 8032         |  |  |  | T212B396K010(2)S                               |
| 39.0                                                     | B            | 20                             | T110B396M010AS       | 2.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 47.0                                                     | C            | 5,10,20                        | T110C476(1)010AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 56.0                                                     | C            | 5,10,20                        | T110C566(1)010AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 68.0                                                     | C            | 5,10,20                        | T110C686(1)010AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 82.0                                                     | C            | 5                              | T110C826J010AS       | 3.0                                | 6                                                 | 5014                                                      | 5214       | 5414        | 5614         | 6033                       | 7033        | 8033         |  |  |  | T212C826J010(2)S                               |
| 82.0                                                     | C            | 10                             | T110C826K010AS       | 3.0                                | 6                                                 | 2260                                                      | 2500       | 2740        | 2980         | 6034                       | 7034        | 8034         |  |  |  | T212C826K010(2)S                               |
| 82.0                                                     | C            | 20                             | T110C826M010AS       | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 100.0                                                    | C            | 5                              | T110C107J010AS       | 5.0                                | 6                                                 | 5015                                                      | 5215       | 5415        | 5615         | 6035                       | 7035        | 8035         |  |  |  | T212C107J010(2)S                               |
| 100.0                                                    | C            | 10                             | T110C107K010AS       | 5.0                                | 6                                                 | 2261                                                      | 2501       | 2741        | 2981         | 6036                       | 7036        | 8036         |  |  |  | T212C107K010(2)S                               |
| 100.0                                                    | C            | 20                             | T110C107M010AS       | 5.0                                | 6                                                 | 2262                                                      | 2502       | 2742        | 2982         | 6037                       | 7037        | 8037         |  |  |  | T212C107M010(2)S                               |
| 120.0                                                    | C            | 5                              | T110C127J010AS       | 6.0                                | 6                                                 | 5016                                                      | 5216       | 5416        | 5616         | 6038                       | 7038        | 8038         |  |  |  | T212C127J010(2)S                               |
| 120.0                                                    | C            | 10                             | T110C127K010AS       | 6.0                                | 6                                                 | 2263                                                      | 2503       | 2743        | 2983         | 6039                       | 7039        | 8039         |  |  |  | T212C127K010(2)S                               |
| 120.0                                                    | C            | 20                             | T110C127M010AS       | 6.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 150.0                                                    | D            | 5,10,20                        | T110D157(1)010AS     | 9.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 180.0                                                    | D            | 5                              | T110D187J010AS       | 9.0                                | 6                                                 | 5017                                                      | 5217       | 5417        | 5617         | 6040                       | 7040        | 8040         |  |  |  | T212D187J010(2)S                               |
| 180.0                                                    | D            | 10                             | T110D187K010AS       | 9.0                                | 6                                                 | 2264                                                      | 2504       | 2744        | 2984         | 6041                       | 7041        | 8041         |  |  |  | T212D187K010(2)S                               |
| 180.0                                                    | D            | 20                             | T110D187M010AS       | 9.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 220.0                                                    | D            | 5                              | T110D227J010AS       | 10.0                               | 8                                                 | 5018                                                      | 5218       | 5418        | 5618         | 6042                       | 7042        | 8042         |  |  |  | T212D227J010(2)S                               |
| 220.0                                                    | D            | 10                             | T110D227K010AS       | 10.0                               | 8                                                 | 2265                                                      | 2505       | 2745        | 2985         | 6043                       | 7043        | 8043         |  |  |  | T212D227K010(2)S                               |
| 220.0                                                    | D            | 20                             | T110D227M010AS       | 10.0                               | 8                                                 | 2266                                                      | 2506       | 2746        | 2986         | 6044                       | 7044        | 8044         |  |  |  | T212D227M010(2)S                               |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C         |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.33                                                     | A            | 5,10,20                        | T110A334(1)015AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.39                                                     | A            | 5,10,20                        | T110A394(1)015AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.47                                                     | A            | 5,10,20                        | T110A474(1)015AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.56                                                     | A            | 5,10,20                        | T110A564(1)015AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.68                                                     | A            | 5,10,20                        | T110A684(1)015AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.82                                                     | A            | 5,10,20                        | T110A824(1)015AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 1.0                                                      | A            | 5,10,20                        | T110A105(1)015AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 1.2                                                      | A            | 5,10,20                        | T110A125(1)015AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 1.5                                                      | A            | 5,10,20                        | T110A155(1)015AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 1.8                                                      | A            | 5,10,20                        | T110A185(1)015AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 2.2                                                      | A            | 5,10,20                        | T110A225(1)015AS     | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 2.7                                                      | A            | 5                              | T110A275J015AS       | 0.3                                | 4                                                 | 5019                                                      | 5219       | 5419        | 5619         | 6045                       | 7045        | 8045         |  |  |  | T212A275J015(2)S                               |
| 2.7                                                      | A            | 10                             | T110A275K015AS       | 0.3                                | 4                                                 | 2267                                                      | 2507       | 2747        | 2987         | 6046                       | 7046        | 8046         |  |  |  | T212A275K015(2)S                               |
| 2.7                                                      | A            | 20                             | T110A275M015AS       | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 3.3                                                      | A            | 5                              | T110A335J015AS       | 0.4                                | 4                                                 | 5020                                                      | 5220       | 5420        | 5620         | 6047                       | 7047        | 8047         |  |  |  | T212A335J015(2)S                               |
| 3.3                                                      | A            | 10                             | T110A335K015AS       | 0.4                                | 4                                                 | 2268                                                      | 2508       | 2748        | 2988         | 6048                       | 7048        | 8048         |  |  |  | T212A335K015(2)S                               |
| 3.3                                                      | A            | 20                             | T110A335M015AS       | 0.4                                | 4                                                 | 2269                                                      | 2509       | 2749        | 2989         | 6049                       | 7049        | 8049         |  |  |  | T212A335M015(2)S                               |
| 3.9                                                      | B            | 5,10,20                        | T110B395(1)015AS     | 0.4                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 4.7                                                      | B            | 5,10,20                        | T110B475(1)015AS     | 0.7                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 5.6                                                      | B            | 5,10,20                        | T110B565(1)015AS     | 0.7                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 6.8                                                       | B            | 5,10,20                        | T110B685(1)015AS     | 0.7                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 8.2                                                       | B            | 5,10,20                        | T110B825(1)015AS     | 0.7                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 10.0                                                      | B            | 5,10,20                        | T110B106(1)015AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 12.0                                                      | B            | 5,10,20                        | T110B126(1)015AS     | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 15.0                                                      | B            | 5,10,20                        | T110B156(1)015AS     | 2.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 18.0                                                      | B            | 5                              | T110B186J015AS       | 2.0                                | 6                                                 | 5021                                                      | 5221       | 5421        | 5621         | 6050                       | 7050        | 8050         | T212B186J015(2)S |                                                |
| 18.0                                                      | B            | 10                             | T110B186K015AS       | 2.0                                | 6                                                 | 2270                                                      | 2510       | 2750        | 2990         | 6051                       | 7051        | 8051         | T212B186K015(2)S |                                                |
| 18.0                                                      | B            | 20                             | T110B186M015AS       | 2.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 22.0                                                      | B            | 5                              | T110B226J015AS       | 2.0                                | 6                                                 | 5022                                                      | 5222       | 5422        | 5622         | 6052                       | 7052        | 8052         | T212B226J015(2)S |                                                |
| 22.0                                                      | B            | 10                             | T110B226K015AS       | 2.0                                | 6                                                 | 2271                                                      | 2511       | 2751        | 2991         | 6053                       | 7053        | 8053         | T212B226K015(2)S |                                                |
| 22.0                                                      | B            | 20                             | T110B226M015AS       | 2.0                                | 6                                                 | 2272                                                      | 2512       | 2752        | 2992         | 6054                       | 7054        | 8054         | T212B226M015(2)S |                                                |
| 27.0                                                      | C            | 5,10,20                        | T110C276(1)015AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 33.0                                                      | C            | 5,10,20                        | T110C336(1)015AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 39.0                                                      | C            | 5,10,20                        | T110C396(1)015AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 47.0                                                      | C            | 5,10,20                        | T110C476(1)015AS     | 4.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 56.0                                                      | C            | 5                              | T110C566J015AS       | 4.0                                | 6                                                 | 5023                                                      | 5223       | 5423        | 5623         | 6055                       | 7055        | 8055         | T212C566J015(2)S |                                                |
| 56.0                                                      | C            | 10                             | T110C566K015AS       | 4.0                                | 6                                                 | 2273                                                      | 2513       | 2753        | 2993         | 6056                       | 7056        | 8056         | T212C566K015(2)S |                                                |
| 56.0                                                      | C            | 20                             | T110C566M015AS       | 4.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 68.0                                                      | C            | 5                              | T110C686J015AS       | 5.0                                | 6                                                 | 5024                                                      | 5224       | 5424        | 5624         | 6057                       | 7057        | 8057         | T212C686J015(2)S |                                                |
| 68.0                                                      | C            | 10                             | T110C686K015AS       | 5.0                                | 6                                                 | 2274                                                      | 2514       | 2754        | 2994         | 6058                       | 7058        | 8058         | T212C686K015(2)S |                                                |
| 68.0                                                      | C            | 20                             | T110C686M015AS       | 5.0                                | 6                                                 | 2275                                                      | 2515       | 2755        | 2995         | 6059                       | 7059        | 8059         | T212C686M015(2)S |                                                |
| 82.0                                                      | D            | 5,10,20                        | T110D826(1)015AS     | 6.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 100.0                                                     | D            | 5,10,20                        | T110D107(1)015AS     | 6.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 120.0                                                     | D            | 5                              | T110D127J015AS       | 6.0                                | 6                                                 | 5025                                                      | 5225       | 5425        | 5625         | 6060                       | 7060        | 8060         | T212D127J015(2)S |                                                |
| 120.0                                                     | D            | 10                             | T110D127K015AS       | 6.0                                | 6                                                 | 2276                                                      | 2516       | 2756        | 2996         | 6061                       | 7061        | 8061         | T212D127K015(2)S |                                                |
| 120.0                                                     | D            | 20                             | T110D127M015AS       | 6.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 150.0                                                     | D            | 5                              | T110D157J015AS       | 8.0                                | 6                                                 | 5026                                                      | 5226       | 5426        | 5626         | 6062                       | 7062        | 8062         | T212D157J015(2)S |                                                |
| 150.0                                                     | D            | 10                             | T110D157K015AS       | 8.0                                | 6                                                 | 2277                                                      | 2517       | 2757        | 2997         | 6063                       | 7063        | 8063         | T212D157K015(2)S |                                                |
| 150.0                                                     | D            | 20                             | T110D157M015AS       | 8.0                                | 6                                                 | 2278                                                      | 2518       | 2758        | 2998         | 6064                       | 7064        | 8064         | T212D157M015(2)S |                                                |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C          |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.047                                                     | A            | 5,10,20                        | T110A473(1)020AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.056                                                     | A            | 5,10,20                        | T110A563(1)020AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.068                                                     | A            | 5,10,20                        | T110A683(1)020AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.082                                                     | A            | 5,10,20                        | T110A823(1)020AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.1                                                       | A            | 5,10,20                        | T110A104(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.12                                                      | A            | 5,10,20                        | T110A124(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.15                                                      | A            | 5,10,20                        | T110A154(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.18                                                      | A            | 5,10,20                        | T110A184(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.22                                                      | A            | 5,10,20                        | T110A224(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.27                                                      | A            | 5,10,20                        | T110A274(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.33                                                      | A            | 5,10,20                        | T110A334(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.39                                                      | A            | 5,10,20                        | T110A394(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.47                                                      | A            | 5,10,20                        | T110A474(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.56                                                      | A            | 5,10,20                        | T110A564(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.68                                                      | A            | 5,10,20                        | T110A684(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.82                                                      | A            | 5,10,20                        | T110A824(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.0                                                       | A            | 5,10,20                        | T110A105(1)020AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.2                                                       | A            | 5                              | T110A125J020AS       | 0.3                                | 4                                                 | 5027                                                      | 5227       | 5427        | 5627         | 6065                       | 7065        | 8065         | T212A125J020(2)S |                                                |
| 1.2                                                       | A            | 10                             | T110A125K020AS       | 0.3                                | 4                                                 | 2279                                                      | 2519       | 2759        | 2999         | 6066                       | 7066        | 8066         | T212A125K020(2)S |                                                |
| 1.2                                                       | A            | 20                             | T110A125M020AS       | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.5                                                       | A            | 5                              | T110A155J020AS       | 0.3                                | 4                                                 | 5028                                                      | 5228       | 5428        | 5628         | 6067                       | 7067        | 8067         | T212A155J020(2)S |                                                |
| 1.5                                                       | A            | 10                             | T110A155K020AS       | 0.3                                | 4                                                 | 2280                                                      | 2520       | 2760        | 3000         | 6068                       | 7068        | 8068         | T212A155K020(2)S |                                                |
| 1.5                                                       | A            | 20                             | T110A155M020AS       | 0.3                                | 4                                                 | 2281                                                      | 2521       | 2761        | 3001         | 6069                       | 7069        | 8069         | T212A155M020(2)S |                                                |
| 1.8                                                       | A            | 5                              | T110A185J020AS       | 0.3                                | 4                                                 | 5029                                                      | 5229       | 5429        | 5629         | 6070                       | 7070        | 8070         | T212A185J020(2)S |                                                |
| 1.8                                                       | A            | 10                             | T110A185K020AS       | 0.3                                | 4                                                 | 2282                                                      | 2522       | 2762        | 3002         | 6071                       | 7071        | 8071         | T212A185K020(2)S |                                                |
| 1.8                                                       | A            | 20                             | T110A185M020AS       | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.2                                                       | A            | 5                              | T110A225J020AS       | 0.4                                | 4                                                 | 5010                                                      | 5230       | 5430        | 5630         | 6072                       | 7072        | 8072         | T212A225J020(2)S |                                                |
| 2.2                                                       | A            | 10                             | T110A225K020AS       | 0.4                                | 4                                                 | 2283                                                      | 2523       | 2763        | 3003         | 6073                       | 7073        | 8073         | T212A225K020(2)S |                                                |
| 2.2                                                       | A            | 20                             | T110A225M020AS       | 0.4                                | 4                                                 | 2284                                                      | 2524       | 2764        | 3004         | 6074                       | 7074        | 8074         | T212A225M020(2)S |                                                |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

Bold Face lines indicate popular part types and values.





# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T110 SERIES — POLAR TYPE & T212 (CRS13)

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |  |  |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |  |  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |  |  |  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |  |  |                                                |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 2.7                                                       | B            | 5,10,20                        | T110B275(1)020AS     | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 3.3                                                       | B            | 5,10,20                        | T110B335(1)020AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 3.9                                                       | B            | 5,10,20                        | T110B395(1)020AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 4.7                                                       | B            | 5,10,20                        | T110B475(1)020AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 5.6                                                       | B            | 5,10,20                        | T110B565(1)020AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 6.8                                                       | B            | 5,10,20                        | T110B685(1)020AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 8.2                                                       | B            | 5                              | T110B825J020AS       | 1.0                                | 6                                                 | 5031                                                      | 5231       | 5431        | 5631         | 6075                       | 7075        | 8075         |  |  |  | T212B825J020(2)S                               |
| 8.2                                                       | B            | 10                             | T110B825K020AS       | 1.0                                | 6                                                 | 2285                                                      | 2525       | 2765        | 3005         | 6076                       | 7076        | 8076         |  |  |  | T212B825K020(2)S                               |
| 8.2                                                       | B            | 20                             | T110B825M020AS       | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 10.0                                                      | B            | 5                              | T110B106J020AS       | 1.0                                | 6                                                 | 5032                                                      | 5232       | 5432        | 5632         | 6077                       | 7077        | 8077         |  |  |  | T212B106J020(2)S                               |
| 10.0                                                      | B            | 10                             | T110B106K020AS       | 1.0                                | 6                                                 | 2286                                                      | 2526       | 2766        | 3006         | 6078                       | 7078        | 8078         |  |  |  | T212B106K020(2)S                               |
| 10.0                                                      | B            | 20                             | T110B106M020AS       | 1.0                                | 6                                                 | 2287                                                      | 2527       | 2767        | 3007         | 6079                       | 7079        | 8079         |  |  |  | T212B106M020(2)S                               |
| 12.0                                                      | B            | 5                              | T110B126J020AS       | 1.0                                | 6                                                 | 5033                                                      | 5233       | 5433        | 5633         | 6080                       | 7080        | 8080         |  |  |  | T212B126J020(2)S                               |
| 12.0                                                      | B            | 10                             | T110B126K020AS       | 1.0                                | 6                                                 | 2288                                                      | 2528       | 2768        | 3008         | 6081                       | 7081        | 8081         |  |  |  | T212B126K020(2)S                               |
| 12.0                                                      | B            | 20                             | T110B126M020AS       | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 15.0                                                      | B            | 5                              | T110B156J020AS       | 2.0                                | 6                                                 | 5034                                                      | 5234       | 5434        | 5634         | 6082                       | 7082        | 8082         |  |  |  | T212B156J020(2)S                               |
| 15.0                                                      | B            | 10                             | T110B156K020AS       | 2.0                                | 6                                                 | 2289                                                      | 2529       | 2769        | 3009         | 6083                       | 7083        | 8083         |  |  |  | T212B156K020(2)S                               |
| 15.0                                                      | B            | 20                             | T110B156M020AS       | 2.0                                | 6                                                 | 2290                                                      | 2530       | 2770        | 3010         | 6084                       | 7084        | 8084         |  |  |  | T212B156M020(2)S                               |
| 18.0                                                      | C            | 5,10,20                        | T110C186(1)020AS     | 2.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 22.0                                                      | C            | 5,10,20                        | T110C226(1)020AS     | 2.5                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 27.0                                                      | C            | 5                              | T110C276J020AS       | 2.5                                | 6                                                 | 5035                                                      | 5235       | 5435        | 5635         | 6085                       | 7085        | 8085         |  |  |  | T212C276J020(2)S                               |
| 27.0                                                      | C            | 10                             | T110C276K020AS       | 2.5                                | 6                                                 | 2291                                                      | 2531       | 2771        | 3011         | 6086                       | 7086        | 8086         |  |  |  | T212C276K020(2)S                               |
| 27.0                                                      | C            | 20                             | T110C276M020AS       | 2.5                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 33.0                                                      | C            | 5                              | T110C336J020AS       | 3.0                                | 6                                                 | 5036                                                      | 5236       | 5436        | 5636         | 6087                       | 7087        | 8087         |  |  |  | T212C336J020(2)S                               |
| 33.0                                                      | C            | 10                             | T110C336K020AS       | 3.0                                | 6                                                 | 2292                                                      | 2532       | 2772        | 3012         | 6088                       | 7088        | 8088         |  |  |  | T212C336K020(2)S                               |
| 33.0                                                      | C            | 20                             | T110C336M020AS       | 3.0                                | 6                                                 | 2293                                                      | 2533       | 2773        | 3013         | 6089                       | 7089        | 8089         |  |  |  | T212C336M020(2)S                               |
| 39.0                                                      | C            | 5                              | T110C396J020AS       | 3.0                                | 6                                                 | 5037                                                      | 5237       | 5437        | 5637         | 6090                       | 7090        | 8090         |  |  |  | T212C396J020(2)S                               |
| 39.0                                                      | C            | 10                             | T110C396K020AS       | 3.0                                | 6                                                 | 2294                                                      | 2534       | 2774        | 3014         | 6091                       | 7091        | 8091         |  |  |  | T212C396K020(2)S                               |
| 39.0                                                      | C            | 20                             | T110C396M020AS       | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 47.0                                                      | C            | 5                              | T110C476J020AS       | 4.5                                | 6                                                 | 5038                                                      | 5238       | 5438        | 5638         | 6092                       | 7092        | 8092         |  |  |  | T212C476J020(2)S                               |
| 47.0                                                      | C            | 10                             | T110C476K020AS       | 4.5                                | 6                                                 | 2295                                                      | 2535       | 2775        | 3015         | 6093                       | 7093        | 8093         |  |  |  | T212C476K020(2)S                               |
| 47.0                                                      | C            | 20                             | T110C476M020AS       | 4.5                                | 6                                                 | 2296                                                      | 2536       | 2776        | 3016         | 6094                       | 7094        | 8094         |  |  |  | T212C476M020(2)S                               |
| 56.0                                                      | D            | 5                              | T110D566J020AS       | 5.5                                | 6                                                 | 5039                                                      | 5239       | 5439        | 5639         | 6095                       | 7095        | 8095         |  |  |  | T212D566J020(2)S                               |
| 56.0                                                      | D            | 10                             | T110D566K020AS       | 5.5                                | 6                                                 | 2297                                                      | 2537       | 2777        | 3017         | 6096                       | 7096        | 8096         |  |  |  | T212D566K020(2)S                               |
| 56.0                                                      | D            | 20                             | T110D566M020AS       | 5.5                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 68.0                                                      | D            | 5                              | T110D686J020AS       | 6.0                                | 6                                                 | 5040                                                      | 5240       | 5440        | 5640         | 6097                       | 7097        | 8097         |  |  |  | T212D686J020(2)S                               |
| 68.0                                                      | D            | 10                             | T110D686K020AS       | 6.0                                | 6                                                 | 2298                                                      | 2538       | 2778        | 3018         | 6098                       | 7098        | 8098         |  |  |  | T212D686K020(2)S                               |
| 68.0                                                      | D            | 20                             | T110D686M020AS       | 6.0                                | 6                                                 | 2299                                                      | 2539       | 2779        | 3019         | 6099                       | 7099        | 8099         |  |  |  | T212D686M020(2)S                               |
| 82.0                                                      | D            | 5                              | T110D826J020AS       | 6.0                                | 6                                                 | 5041                                                      | 5241       | 5441        | 5641         | 6100                       | 7100        | 8100         |  |  |  | T212D826J020(2)S                               |
| 82.0                                                      | D            | 10                             | T110D826K020AS       | 6.0                                | 6                                                 | 2300                                                      | 2540       | 2780        | 3020         | 6101                       | 7101        | 8101         |  |  |  | T212D826K020(2)S                               |
| 82.0                                                      | D            | 20                             | T110D826M020AS       | 6.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 100.0                                                     | D            | 5                              | T110D107J020AS       | 10.0                               | 6                                                 | 5042                                                      | 5242       | 5442        | 5642         | 6102                       | 7102        | 8102         |  |  |  | T212D107J020(2)S                               |
| 100.0                                                     | D            | 10                             | T110D107K020AS       | 10.0                               | 6                                                 | 2301                                                      | 2541       | 2781        | 3021         | 6103                       | 7103        | 8103         |  |  |  | T212D107K020(2)S                               |
| 100.0                                                     | D            | 20                             | T110D107M020AS       | 10.0                               | 6                                                 | 2302                                                      | 2542       | 2782        | 3022         | 6104                       | 7104        | 8104         |  |  |  | T212D107M020(2)S                               |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C          |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.0047                                                    | A            | 5,10,20                        | T110A472(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.0056                                                    | A            | 5,10,20                        | T110A562(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.0068                                                    | A            | 5,10,20                        | T110A682(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.0082                                                    | A            | 5,10,20                        | T110A822(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.01                                                      | A            | 5,10,20                        | T110A103(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.012                                                     | A            | 5,10,20                        | T110A123(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.015                                                     | A            | 5,10,20                        | T110A153(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.018                                                     | A            | 5,10,20                        | T110A183(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.022                                                     | A            | 5,10,20                        | T110A223(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.027                                                     | A            | 5,10,20                        | T110A273(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.033                                                     | A            | 5,10,20                        | T110A333(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.039                                                     | A            | 5,10,20                        | T110A393(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.047                                                     | A            | 5,10,20                        | T110A473(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.056                                                     | A            | 5,10,20                        | T110A563(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                        | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                          |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                          |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |                                                |
|                                                          |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125° (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.068                                                    | A            | 5,10,20                        | T110A683(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.082                                                    | A            | 5,10,20                        | T110A823(1)035AS     | 0.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.1                                                      | A            | 5,10,20                        | T110A104(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.12                                                     | A            | 5,10,20                        | T110A124(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.15                                                     | A            | 5,10,20                        | T110A154(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.18                                                     | A            | 5,10,20                        | T110A184(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.22                                                     | A            | 5,10,20                        | T110A224(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.27                                                     | A            | 5,10,20                        | T110A274(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.33                                                     | A            | 5,10,20                        | T110A334(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.39                                                     | A            | 5,10,20                        | T110A394(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.47                                                     | A            | 5,10,20                        | T110A474(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.56                                                     | A            | 5,10,20                        | T110A564(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.68                                                     | A            | 5,10,20                        | T110A684(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.82                                                     | A            | 5,10,20                        | T110A824(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.0                                                      | A            | 5,10,20                        | T110A105(1)035AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.2                                                      | B            | 5,10,20                        | T110B125(1)035AS     | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.5                                                      | B            | 5,10,20                        | T110B155(1)035AS     | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.8                                                      | B            | 5,10,20                        | T110B185(1)035AS     | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.2                                                      | B            | 5,10,20                        | T110B225(1)035AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.7                                                      | B            | 5,10,20                        | T110B275(1)035AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.3                                                      | B            | 5,10,20                        | T110B335(1)035AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.9                                                      | B            | 5,10,20                        | T110B395(1)035AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 4.7                                                      | B            | 5,10,20                        | T110B475(1)035AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 5.6                                                      | B            | 5                              | T110B565J035AS       | 1.0                                | 4                                                 | 5043                                                      | 5243       | 5443        | 5643         | 6105                       | 7105        | 8105         | T212B565J035(2)S |                                                |
| 5.6                                                      | B            | 10                             | T110B565K035AS       | 1.0                                | 4                                                 | 2303                                                      | 2543       | 2783        | 3023         | 6106                       | 7106        | 8106         | T212B565K035(2)S |                                                |
| 5.6                                                      | B            | 20                             | T110B565M035AS       | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 6.8                                                      | B            | 5                              | T110B685J035AS       | 1.5                                | 4                                                 | 5044                                                      | 5244       | 5444        | 5644         | 6107                       | 7107        | 8107         | T212B685J035(2)S |                                                |
| 6.8                                                      | B            | 10                             | T110B685K035AS       | 1.5                                | 4                                                 | 2304                                                      | 2544       | 2784        | 3024         | 6108                       | 7108        | 8108         | T212B685K035(2)S |                                                |
| 6.8                                                      | B            | 20                             | T110B685M035AS       | 1.5                                | 4                                                 | 2305                                                      | 2545       | 2785        | 3025         | 6109                       | 7109        | 8109         | T212B685M035(2)S |                                                |
| 8.2                                                      | C            | 5,10,20                        | T110C825(1)035AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 10.0                                                     | C            | 5,10,20                        | T110C106(1)035AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 12.0                                                     | C            | 5,10,20                        | T110C126(1)035AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 15.0                                                     | C            | 5,10,20                        | T110C156(1)035AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 18.0                                                     | C            | 5,10,20                        | T110C186(1)035AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 22.0                                                     | C            | 5                              | T110C226J035AS       | 4.0                                | 4                                                 | 5045                                                      | 5245       | 5445        | 5645         | 6110                       | 7110        | 8110         | T212C226J035(2)S |                                                |
| 22.0                                                     | C            | 10                             | T110C226K035AS       | 4.0                                | 4                                                 | 2306                                                      | 2546       | 2786        | 3026         | 6111                       | 7111        | 8111         | T212C226K035(2)S |                                                |
| 22.0                                                     | C            | 20                             | T110C226M035AS       | 4.0                                | 4                                                 | 2307                                                      | 2547       | 2787        | 3027         | 6112                       | 7112        | 8112         | T212C226M035(2)S |                                                |
| 27.0                                                     | D            | 5                              | T110D276J035AS       | 4.5                                | 4                                                 | 5046                                                      | 5246       | 5446        | 5646         | 6113                       | 7113        | 8113         | T212D276J035(2)S |                                                |
| 27.0                                                     | D            | 10                             | T110D276K035AS       | 4.5                                | 4                                                 | 2308                                                      | 2548       | 2788        | 3028         | 6114                       | 7114        | 8114         | T212D276K035(2)S |                                                |
| 27.0                                                     | D            | 20                             | T110D276M035AS       | 4.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 33.0                                                     | D            | 5                              | T110D336J035AS       | 5.5                                | 4                                                 | 5047                                                      | 5247       | 5447        | 5647         | 6115                       | 7115        | 8115         | T212D336J035(2)S |                                                |
| 33.0                                                     | D            | 10                             | T110D336K035AS       | 5.5                                | 4                                                 | 2309                                                      | 2549       | 2789        | 3029         | 6116                       | 7116        | 8116         | T212D336K035(2)S |                                                |
| 33.0                                                     | D            | 20                             | T110D336M035AS       | 5.5                                | 4                                                 | 2310                                                      | 2550       | 2790        | 3030         | 6117                       | 7117        | 8117         | T212D336M035(2)S |                                                |
| 39.0                                                     | D            | 5                              | T110D396J035AS       | 6.0                                | 4                                                 | 5048                                                      | 5248       | 5448        | 5648         | 6118                       | 7118        | 8118         | T212D396J035(2)S |                                                |
| 39.0                                                     | D            | 10                             | T110D396K035AS       | 6.0                                | 4                                                 | 2311                                                      | 2551       | 2791        | 3031         | 6119                       | 7119        | 8119         | T212D396K035(2)S |                                                |
| 39.0                                                     | D            | 20                             | T110D396M035AS       | 6.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 47.0                                                     | D            | 5                              | T110D476J035AS       | 8.0                                | 4                                                 | 5049                                                      | 5249       | 5449        | 5649         | 6120                       | 7120        | 8120         | T212D476J035(2)S |                                                |
| 47.0                                                     | D            | 10                             | T110D476K035AS       | 8.0                                | 4                                                 | 2312                                                      | 2552       | 2792        | 3032         | 6121                       | 7121        | 8121         | T212D476K035(2)S |                                                |
| 47.0                                                     | D            | 20                             | T110D476M035AS       | 8.0                                | 4                                                 | 2313                                                      | 2553       | 2793        | 3033         | 6122                       | 7122        | 8122         | T212D476M035(2)S |                                                |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°          |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0047                                                   | A            | 5                              | T110A472J050AS       | 0.1                                | 2                                                 | 5050                                                      | 5250       | 5450        | 5650         | 6123                       | 7123        | 8123         | T212A472J050(2)S |                                                |
| 0.0047                                                   | A            | 10                             | T110A472K050AS       | 0.1                                | 2                                                 | 2314                                                      | 2554       | 2794        | 3034         | 6124                       | 7124        | 8124         | T212A472K050(2)S |                                                |
| 0.0047                                                   | A            | 20                             | T110A472M050AS       | 0.1                                | 2                                                 | 2315                                                      | 2555       | 2795        | 3035         | 6125                       | 7125        | 8125         | T212A472M050(2)S |                                                |
| 0.0056                                                   | A            | 5                              | T110A562J050AS       | 0.1                                | 2                                                 | 5051                                                      | 5251       | 5451        | 5651         | 6126                       | 7126        | 8126         | T212A562J050(2)S |                                                |
| 0.0056                                                   | A            | 10                             | T110A562K050AS       | 0.1                                | 2                                                 | 2316                                                      | 2556       | 2796        | 3036         | 6127                       | 7127        | 8127         | T212A562K050(2)S |                                                |
| 0.0056                                                   | A            | 20                             | T110A562M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0068                                                   | A            | 5                              | T110A682J050AS       | 0.1                                | 2                                                 | 5052                                                      | 5252       | 5452        | 5652         | 6128                       | 7128        | 8128         | T212A682J050(2)S |                                                |
| 0.0068                                                   | A            | 10                             | T110A682K050AS       | 0.1                                | 2                                                 | 2317                                                      | 2557       | 2797        | 3037         | 6129                       | 7129        | 8129         | T212A682K050(2)S |                                                |
| 0.0068                                                   | A            | 20                             | T110A682M050AS       | 0.1                                | 2                                                 | 2318                                                      | 2558       | 2798        | 3038         | 6130                       | 7130        | 8130         | T212A682M050(2)S |                                                |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.





# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

T110 SERIES — POLAR TYPE & T212 (CSR13)

## RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0082                                                    | A            | 5                              | T110A822J050AS       | 0.1                                | 2                                                 | 5053                                                      | 5253       | 5453        | 5653         | 6131                       | 7131        | 8131         | T212A822J050(2)S |                                                |
| 0.0082                                                    | A            | 10                             | T110A822K050AS       | 0.1                                | 2                                                 | 2319                                                      | 2559       | 2799        | 3039         | 6132                       | 7132        | 8132         | T212A822K050(2)S |                                                |
| 0.0082                                                    | A            | 20                             | T110A822M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.01                                                      | A            | 5                              | T110A103J050AS       | 0.1                                | 2                                                 | 5054                                                      | 5254       | 5454        | 5654         | 6133                       | 7133        | 8133         | T212A103J050(2)S |                                                |
| 0.01                                                      | A            | 10                             | T110A103K050AS       | 0.1                                | 2                                                 | 2320                                                      | 2560       | 2800        | 3040         | 6134                       | 7134        | 8134         | T212A103K050(2)S |                                                |
| 0.01                                                      | A            | 20                             | T110A103M050AS       | 0.1                                | 2                                                 | 2321                                                      | 2561       | 2801        | 3041         | 6135                       | 7135        | 8135         | T212A103M050(2)S |                                                |
| 0.012                                                     | A            | 5                              | T110A123J050AS       | 0.1                                | 2                                                 | 5055                                                      | 5255       | 5455        | 5655         | 6136                       | 7136        | 8136         | T212A123J050(2)S |                                                |
| 0.012                                                     | A            | 10                             | T110A123K050AS       | 0.1                                | 2                                                 | 2322                                                      | 2562       | 2802        | 3042         | 6137                       | 7137        | 8137         | T212A123K050(2)S |                                                |
| 0.012                                                     | A            | 20                             | T110A123M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.015                                                     | A            | 5                              | T110A153J050AS       | 0.1                                | 2                                                 | 5056                                                      | 5256       | 5456        | 5656         | 6138                       | 7138        | 8138         | T212A153J050(2)S |                                                |
| 0.015                                                     | A            | 10                             | T110A153K050AS       | 0.1                                | 2                                                 | 2323                                                      | 2563       | 2803        | 3043         | 6139                       | 7139        | 8139         | T212A153K050(2)S |                                                |
| 0.015                                                     | A            | 20                             | T110A153M050AS       | 0.1                                | 2                                                 | 2324                                                      | 2564       | 2804        | 3044         | 6140                       | 7140        | 8140         | T212A153M050(2)S |                                                |
| 0.018                                                     | A            | 5                              | T110A183J050AS       | 0.1                                | 2                                                 | 5057                                                      | 5257       | 5457        | 5657         | 6141                       | 7141        | 8141         | T212A183J050(2)S |                                                |
| 0.018                                                     | A            | 10                             | T110A183K050AS       | 0.1                                | 2                                                 | 2325                                                      | 2565       | 2805        | 3045         | 6142                       | 7142        | 8142         | T212A183K050(2)S |                                                |
| 0.018                                                     | A            | 20                             | T110A183M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.022                                                     | A            | 5                              | T110A223J050AS       | 0.1                                | 2                                                 | 5058                                                      | 5258       | 5458        | 5658         | 6143                       | 7143        | 8143         | T212A223J050(2)S |                                                |
| 0.022                                                     | A            | 10                             | T110A223K050AS       | 0.1                                | 2                                                 | 2326                                                      | 2566       | 2806        | 3046         | 6144                       | 7144        | 8144         | T212A223K050(2)S |                                                |
| 0.022                                                     | A            | 20                             | T110A223M050AS       | 0.1                                | 2                                                 | 2327                                                      | 2567       | 2807        | 3047         | 6145                       | 7145        | 8145         | T212A223M050(2)S |                                                |
| 0.027                                                     | A            | 5                              | T110A273J050AS       | 0.1                                | 2                                                 | 5059                                                      | 5259       | 5459        | 5659         | 6146                       | 7146        | 8146         | T212A273J050(2)S |                                                |
| 0.027                                                     | A            | 10                             | T110A273K050AS       | 0.1                                | 2                                                 | 2328                                                      | 2568       | 2808        | 3048         | 6147                       | 7147        | 8147         | T212A273K050(2)S |                                                |
| 0.027                                                     | A            | 20                             | T110A273M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.033                                                     | A            | 5                              | T110A333J050AS       | 0.1                                | 2                                                 | 5060                                                      | 5260       | 5460        | 5660         | 6148                       | 7148        | 8148         | T212A333J050(2)S |                                                |
| 0.033                                                     | A            | 10                             | T110A333K050AS       | 0.1                                | 2                                                 | 2329                                                      | 2569       | 2809        | 3049         | 6149                       | 7149        | 8149         | T212A333K050(2)S |                                                |
| 0.033                                                     | A            | 20                             | T110A333M050AS       | 0.1                                | 2                                                 | 2330                                                      | 2570       | 2810        | 3050         | 6150                       | 7150        | 8150         | T212A333M050(2)S |                                                |
| 0.039                                                     | A            | 5                              | T110A393J050AS       | 0.1                                | 2                                                 | 5061                                                      | 5261       | 5461        | 5661         | 6151                       | 7151        | 8151         | T212A393J050(2)S |                                                |
| 0.039                                                     | A            | 10                             | T110A393K050AS       | 0.1                                | 2                                                 | 2331                                                      | 2571       | 2811        | 3051         | 6152                       | 7152        | 8152         | T212A393K050(2)S |                                                |
| 0.039                                                     | A            | 20                             | T110A393M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.047                                                     | A            | 5                              | T110A473J050AS       | 0.1                                | 2                                                 | 5062                                                      | 5262       | 5462        | 5662         | 6153                       | 7153        | 8153         | T212A473J050(2)S |                                                |
| 0.047                                                     | A            | 10                             | T110A473K050AS       | 0.1                                | 2                                                 | 2332                                                      | 2572       | 2812        | 3052         | 6154                       | 7154        | 8154         | T212A473K050(2)S |                                                |
| 0.047                                                     | A            | 20                             | T110A473M050AS       | 0.1                                | 2                                                 | 2333                                                      | 2573       | 2813        | 3053         | 6155                       | 7155        | 8155         | T212A473M050(2)S |                                                |
| 0.056                                                     | A            | 5                              | T110A563J050AS       | 0.1                                | 2                                                 | 5063                                                      | 5263       | 5463        | 5663         | 6156                       | 7156        | 8156         | T212A563J050(2)S |                                                |
| 0.056                                                     | A            | 10                             | T110A563K050AS       | 0.1                                | 2                                                 | 2334                                                      | 2574       | 2814        | 3054         | 6157                       | 7157        | 8157         | T212A563K050(2)S |                                                |
| 0.056                                                     | A            | 20                             | T110A563M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.068                                                     | A            | 5                              | T110A683J050AS       | 0.1                                | 2                                                 | 5064                                                      | 5264       | 5464        | 5664         | 6158                       | 7158        | 8158         | T212A683J050(2)S |                                                |
| 0.068                                                     | A            | 10                             | T110A683K050AS       | 0.1                                | 2                                                 | 2335                                                      | 2575       | 2815        | 3055         | 6159                       | 7159        | 8159         | T212A683K050(2)S |                                                |
| 0.068                                                     | A            | 20                             | T110A683M050AS       | 0.1                                | 2                                                 | 2336                                                      | 2576       | 2816        | 3056         | 6160                       | 7160        | 8160         | T212A683M050(2)S |                                                |
| 0.082                                                     | A            | 5                              | T110A823J050AS       | 0.1                                | 2                                                 | 5065                                                      | 5265       | 5465        | 5665         | 6161                       | 7161        | 8161         | T212A823J050(2)S |                                                |
| 0.082                                                     | A            | 10                             | T110A823K050AS       | 0.1                                | 2                                                 | 2337                                                      | 2577       | 2817        | 3057         | 6162                       | 7162        | 8162         | T212A823K050(2)S |                                                |
| 0.082                                                     | A            | 20                             | T110A823M050AS       | 0.1                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.1                                                       | A            | 5                              | T110A104J050AS       | 0.3                                | 2                                                 | 5066                                                      | 5266       | 5466        | 5666         | 6163                       | 7163        | 8163         | T212A104J050(2)S |                                                |
| 0.1                                                       | A            | 10                             | T110A104K050AS       | 0.3                                | 2                                                 | 2338                                                      | 2578       | 2818        | 3058         | 6164                       | 7164        | 8164         | T212A104K050(2)S |                                                |
| 0.1                                                       | A            | 20                             | T110A104M050AS       | 0.3                                | 2                                                 | 2339                                                      | 2579       | 2819        | 3059         | 6165                       | 7165        | 8165         | T212A104M050(2)S |                                                |
| 0.12                                                      | A            | 5                              | T110A124J050AS       | 0.3                                | 2                                                 | 5067                                                      | 5267       | 5467        | 5667         | 6166                       | 7166        | 8166         | T212A124J050(2)S |                                                |
| 0.12                                                      | A            | 10                             | T110A124K050AS       | 0.3                                | 2                                                 | 2340                                                      | 2580       | 2820        | 3060         | 6167                       | 7167        | 8167         | T212A124K050(2)S |                                                |
| 0.12                                                      | A            | 20                             | T110A124M050AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.15                                                      | A            | 5                              | T110A154J050AS       | 0.3                                | 2                                                 | 5068                                                      | 5268       | 5468        | 5668         | 6168                       | 7168        | 8168         | T212A154J050(2)S |                                                |
| 0.15                                                      | A            | 10                             | T110A154K050AS       | 0.3                                | 2                                                 | 2341                                                      | 2581       | 2821        | 3061         | 6169                       | 7169        | 8169         | T212A154K050(2)S |                                                |
| 0.15                                                      | A            | 20                             | T110A154M050AS       | 0.3                                | 2                                                 | 2342                                                      | 2582       | 2822        | 3062         | 6170                       | 7170        | 8170         | T212A154M050(2)S |                                                |
| 0.18                                                      | A            | 5                              | T110A184J050AS       | 0.3                                | 2                                                 | 5069                                                      | 5269       | 5469        | 5669         | 6171                       | 7171        | 8171         | T212A184J050(2)S |                                                |
| 0.18                                                      | A            | 10                             | T110A184K050AS       | 0.3                                | 2                                                 | 2343                                                      | 2583       | 2823        | 3063         | 6172                       | 7172        | 8172         | T212A184K050(2)S |                                                |
| 0.18                                                      | A            | 20                             | T110A184M050AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.22                                                      | A            | 5                              | T110A224J050AS       | 0.3                                | 2                                                 | 5070                                                      | 5270       | 5470        | 5670         | 6173                       | 7173        | 8173         | T212A224J050(2)S |                                                |
| 0.22                                                      | A            | 10                             | T110A224K050AS       | 0.3                                | 2                                                 | 2344                                                      | 2584       | 2824        | 3064         | 6174                       | 7174        | 8174         | T212A224K050(2)S |                                                |
| 0.22                                                      | A            | 20                             | T110A224M050AS       | 0.3                                | 2                                                 | 2345                                                      | 2585       | 2825        | 3065         | 6175                       | 7175        | 8175         | T212A224M050(2)S |                                                |
| 0.27                                                      | A            | 5                              | T110A274J050AS       | 0.3                                | 2                                                 | 5071                                                      | 5271       | 5471        | 5671         | 6176                       | 7176        | 8176         | T212A274J050(2)S |                                                |
| 0.27                                                      | A            | 10                             | T110A274K050AS       | 0.3                                | 2                                                 | 2346                                                      | 2586       | 2826        | 3066         | 6177                       | 7177        | 8177         | T212A274K050(2)S |                                                |
| 0.27                                                      | A            | 20                             | T110A274M050AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.33                                                      | A            | 5                              | T110A334J050AS       | 0.3                                | 2                                                 | 5072                                                      | 5272       | 5472        | 5672         | 6178                       | 7178        | 8178         | T212A334J050(2)S |                                                |
| 0.33                                                      | A            | 10                             | T110A334K050AS       | 0.3                                | 2                                                 | 2347                                                      | 2587       | 2827        | 3067         | 6179                       | 7179        | 8179         | T212A334K050(2)S |                                                |
| 0.33                                                      | A            | 20                             | T110A334M050AS       | 0.3                                | 2                                                 | 2348                                                      | 2588       | 2828        | 3068         | 6180                       | 7180        | 8180         | T212A334M050(2)S |                                                |
| 0.39                                                      | A            | 5                              | T110A394J050AS       | 0.3                                | 2                                                 | 5073                                                      | 5273       | 5473        | 5673         | 6181                       | 7181        | 8181         | T212A394J050(2)S |                                                |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.39                                                      | A            | 10                             | T110A394K050AS       | 0.3                                | 2                                                 | 2349                                                      | 2589       | 2829        | 3069         | 6182                       | 7182        | 8182         | T212A394K050(2)S |                                                |
| 0.39                                                      | A            | 20                             | T110A394M050AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.47                                                      | A            | 5                              | T110A474J050AS       | 0.3                                | 2                                                 | 5074                                                      | 5274       | 5474        | 5674         | 6183                       | 7183        | 8183         | T212A474J050(2)S |                                                |
| 0.47                                                      | A            | 10                             | T110A474K050AS       | 0.3                                | 2                                                 | 2350                                                      | 2590       | 2830        | 3070         | 6184                       | 7184        | 8184         | T212A474K050(2)S |                                                |
| 0.47                                                      | A            | 20                             | T110A474M050AS       | 0.3                                | 2                                                 | 2351                                                      | 2591       | 2831        | 3071         | 6185                       | 7185        | 8185         | T212A474M050(2)S |                                                |
| 0.56                                                      | A            | 5                              | T110A564J050AS       | 0.3                                | 2                                                 | 5075                                                      | 5275       | 5475        | 5675         | 6186                       | 7186        | 8186         | T212A564J050(2)S |                                                |
| 0.56                                                      | A            | 10                             | T110A564K050AS       | 0.3                                | 2                                                 | 2352                                                      | 2592       | 2832        | 3072         | 6187                       | 7187        | 8187         | T212A564K050(2)S |                                                |
| 0.56                                                      | A            | 20                             | T110A564M050AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.68                                                      | A            | 5                              | T110A684J050AS       | 0.3                                | 2                                                 | 5076                                                      | 5276       | 5476        | 5676         | 6188                       | 7188        | 8188         | T212A684J050(2)S |                                                |
| 0.68                                                      | A            | 10                             | T110A684K050AS       | 0.3                                | 2                                                 | 2353                                                      | 2593       | 2833        | 3073         | 6189                       | 7189        | 8189         | T212A684K050(2)S |                                                |
| 0.68                                                      | A            | 20                             | T110A684M050AS       | 0.3                                | 2                                                 | 2354                                                      | 2594       | 2834        | 3074         | 6190                       | 7190        | 8190         | T212A684M050(2)S |                                                |
| 0.82                                                      | A            | 5                              | T110A824J050AS       | 0.3                                | 2                                                 | 5077                                                      | 5277       | 5477        | 5677         | 6191                       | 7191        | 8191         | T212A824J050(2)S |                                                |
| 0.82                                                      | A            | 10                             | T110A824K050AS       | 0.3                                | 2                                                 | 2355                                                      | 2595       | 2835        | 3075         | 6192                       | 7192        | 8192         | T212A824K050(2)S |                                                |
| 0.82                                                      | A            | 20                             | T110A824M050AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.0                                                       | A            | 5                              | T110A105J050AS       | 0.4                                | 2                                                 | 5078                                                      | 5278       | 5478        | 5678         | 6193                       | 7193        | 8193         | T212A105J050(2)S |                                                |
| 1.0                                                       | A            | 10                             | T110A105K050AS       | 0.4                                | 2                                                 | 2356                                                      | 2596       | 2836        | 3076         | 6194                       | 7194        | 8194         | T212A105K050(2)S |                                                |
| 1.0                                                       | A            | 20                             | T110A105M050AS       | 0.4                                | 2                                                 | 2357                                                      | 2597       | 2837        | 3077         | 6195                       | 7195        | 8195         | T212A105M050(2)S |                                                |
| 1.2                                                       | B            | 5                              | T110B125J050AS       | 0.4                                | 4                                                 | 5079                                                      | 5279       | 5479        | 5679         | 6196                       | 7196        | 8196         | T212B125J050(2)S |                                                |
| 1.2                                                       | B            | 10                             | T110B125K050AS       | 0.4                                | 4                                                 | 2358                                                      | 2598       | 2838        | 3078         | 6197                       | 7197        | 8197         | T212B125K050(2)S |                                                |
| 1.2                                                       | B            | 20                             | T110B125M050AS       | 0.4                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.5                                                       | B            | 5                              | T110B155J050AS       | 0.5                                | 4                                                 | 5080                                                      | 5280       | 5480        | 5680         | 6198                       | 7198        | 8198         | T212B155J050(2)S |                                                |
| 1.5                                                       | B            | 10                             | T110B155K050AS       | 0.5                                | 4                                                 | 2359                                                      | 2599       | 2839        | 3079         | 6199                       | 7199        | 8199         | T212B155K050(2)S |                                                |
| 1.5                                                       | B            | 20                             | T110B155M050AS       | 0.5                                | 4                                                 | 2360                                                      | 2600       | 2840        | 3080         | 6200                       | 7200        | 8200         | T212B155M050(2)S |                                                |
| 1.8                                                       | B            | 5                              | T110B185J050AS       | 0.5                                | 4                                                 | 5081                                                      | 5281       | 5481        | 5681         | 6201                       | 7201        | 8201         | T212B185J050(2)S |                                                |
| 1.8                                                       | B            | 10                             | T110B185K050AS       | 0.5                                | 4                                                 | 2361                                                      | 2601       | 2841        | 3081         | 6202                       | 7202        | 8202         | T212B185K050(2)S |                                                |
| 1.8                                                       | B            | 20                             | T110B185M050AS       | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.2                                                       | B            | 5                              | T110B225J050AS       | 0.8                                | 4                                                 | 5082                                                      | 5282       | 5482        | 5682         | 6203                       | 7203        | 8203         | T212B225J050(2)S |                                                |
| 2.2                                                       | B            | 10                             | T110B225K050AS       | 0.8                                | 4                                                 | 2362                                                      | 2602       | 2842        | 3082         | 6204                       | 7204        | 8204         | T212B225K050(2)S |                                                |
| 2.2                                                       | B            | 20                             | T110B225M050AS       | 0.8                                | 4                                                 | 2363                                                      | 2603       | 2843        | 3083         | 6205                       | 7205        | 8205         | T212B225M050(2)S |                                                |
| 2.7                                                       | B            | 5                              | T110B275J050AS       | 0.8                                | 4                                                 | 5083                                                      | 5283       | 5483        | 5683         | 6206                       | 7206        | 8206         | T212B275J050(2)S |                                                |
| 2.7                                                       | B            | 10                             | T110B275K050AS       | 0.8                                | 4                                                 | 2364                                                      | 2604       | 2844        | 3084         | 6207                       | 7207        | 8207         | T212B275K050(2)S |                                                |
| 2.7                                                       | B            | 20                             | T110B275M050AS       | 0.8                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.3                                                       | B            | 5                              | T110B335J050AS       | 1.2                                | 4                                                 | 5084                                                      | 5284       | 5484        | 5684         | 6208                       | 7208        | 8208         | T212B335J050(2)S |                                                |
| 3.3                                                       | B            | 10                             | T110B335K050AS       | 1.2                                | 4                                                 | 2365                                                      | 2605       | 2845        | 3085         | 6209                       | 7209        | 8209         | T212B335K050(2)S |                                                |
| 3.3                                                       | B            | 20                             | T110B335M050AS       | 1.2                                | 4                                                 | 2366                                                      | 2606       | 2846        | 3086         | 6210                       | 7210        | 8210         | T212B335M050(2)S |                                                |
| 3.9                                                       | B            | 5                              | T110B395J050AS       | 1.5                                | 4                                                 | 5085                                                      | 5285       | 5485        | 5685         | 6211                       | 7211        | 8211         | T212B395J050(2)S |                                                |
| 3.9                                                       | B            | 10                             | T110B395K050AS       | 1.5                                | 4                                                 | 2367                                                      | 2607       | 2847        | 3087         | 6212                       | 7212        | 8212         | T212B395K050(2)S |                                                |
| 3.9                                                       | B            | 20                             | T110B395M050AS       | 1.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 4.7                                                       | B            | 5                              | T110B475J050AS       | 1.7                                | 4                                                 | 5086                                                      | 5286       | 5486        | 5686         | 6213                       | 7213        | 8213         | T212B475J050(2)S |                                                |
| 4.7                                                       | B            | 10                             | T110B475K050AS       | 1.7                                | 4                                                 | 2368                                                      | 2608       | 2848        | 3088         | 6214                       | 7214        | 8214         | T212B475K050(2)S |                                                |
| 4.7                                                       | B            | 20                             | T110B475M050AS       | 1.7                                | 4                                                 | 2369                                                      | 2609       | 2849        | 3089         | 6215                       | 7215        | 8215         | T212B475M050(2)S |                                                |
| 5.6                                                       | C            | 5                              | T110C565J050AS       | 2.2                                | 4                                                 | 5087                                                      | 5287       | 5487        | 5687         | 6216                       | 7216        | 8216         | T212C565J050(2)S |                                                |
| 5.6                                                       | C            | 10                             | T110C565K050AS       | 2.2                                | 4                                                 | 2370                                                      | 2610       | 2850        | 3090         | 6217                       | 7217        | 8217         | T212C565K050(2)S |                                                |
| 5.6                                                       | C            | 20                             | T110C565M050AS       | 2.2                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 6.8                                                       | C            | 5                              | T110C685J050AS       | 2.2                                | 4                                                 | 5088                                                      | 5288       | 5488        | 5688         | 6218                       | 7218        | 8218         | T212C685J050(2)S |                                                |
| 6.8                                                       | C            | 10                             | T110C685K050AS       | 2.2                                | 4                                                 | 2371                                                      | 2611       | 2851        | 3091         | 6219                       | 7219        | 8219         | T212C685K050(2)S |                                                |
| 6.8                                                       | C            | 20                             | T110C685M050AS       | 2.2                                | 4                                                 | 2372                                                      | 2612       | 2852        | 3092         | 6220                       | 7220        | 8220         | T212C685M050(2)S |                                                |
| 8.2                                                       | C            | 5                              | T110C825J050AS       | 2.5                                | 4                                                 | 5089                                                      | 5289       | 5489        | 5689         | 6221                       | 7221        | 8221         | T212C825J050(2)S |                                                |
| 8.2                                                       | C            | 10                             | T110C825K050AS       | 2.5                                | 4                                                 | 2373                                                      | 2613       | 2853        | 3093         | 6222                       | 7222        | 8222         | T212C825K050(2)S |                                                |
| 8.2                                                       | C            | 20                             | T110C825M050AS       | 2.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 10.0                                                      | C            | 5                              | T110C106J050AS       | 2.5                                | 4                                                 | 5090                                                      | 5290       | 5490        | 5690         | 6223                       | 7223        | 8223         | T212C106J050(2)S |                                                |
| 10.0                                                      | C            | 10                             | T110C106K050AS       | 2.5                                | 4                                                 | 2374                                                      | 2614       | 2854        | 3094         | 6224                       | 7224        | 8224         | T212C106K050(2)S |                                                |
| 10.0                                                      | C            | 20                             | T110C106M050AS       | 2.5                                | 4                                                 | 2375                                                      | 2615       | 2855        | 3095         | 6225                       | 7225        | 8225         | T212C106M050(2)S |                                                |
| 12.0                                                      | C            | 5                              | T110C126J050AS       | 3.0                                | 4                                                 | 5091                                                      | 5291       | 5491        | 5691         | 6226                       | 7226        | 8226         | T212C126J050(2)S |                                                |
| 12.0                                                      | C            | 10                             | T110C126K050AS       | 3.0                                | 4                                                 | 2376                                                      | 2616       | 2856        | 3096         | 6227                       | 7227        | 8227         | T212C126K050(2)S |                                                |
| 12.0                                                      | C            | 20                             | T110C126M050AS       | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 15.0                                                      | C            | 5                              | T110C156J050AS       | 4.0                                | 4                                                 | 5092                                                      | 5292       | 5492        | 5692         | 6228                       | 7228        | 8228         | T212C156J050(2)S |                                                |
| 15.0                                                      | C            | 10                             | T110C156K050AS       | 4.0                                | 4                                                 | 2377                                                      | 2617       | 2857        | 3097         | 6229                       | 7229        | 8229         | T212C156K050(2)S |                                                |
| 15.0                                                      | C            | 20                             | T110C156M050AS       | 4.0                                | 4                                                 | 2378                                                      | 2618       | 2858        | 3098         | 6230                       | 7230        | 8230         | T212C156M050(2)S |                                                |
| 18.0                                                      | C            | 5                              | T110C186J050AS       | 4.5                                | 4                                                 | 5093                                                      | 5293       | 5493        | 5693         | 6231                       | 7231        | 8231         | T212C186J050(2)S |                                                |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part type and values.



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T110 SERIES — POLAR TYPE & T212 (CSR13)

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 18.0                                                      | C            | 10                             | T110C186K050AS       | 4.5                                | 4                                                 | 2379                                                      | 2619       | 2859        | 3099         | 6232                       | 7232        | 8232         | T212C186K050(2)S |                                                |
| 18.0                                                      | C            | 20                             | T110C186M050AS       | 4.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 22.0                                                      | D            | 5                              | T110D226J050AS       | 5.5                                | 4                                                 | 5094                                                      | 5294       | 5494        | 5694         | 6233                       | 7233        | 8233         | T212D226J050(2)S |                                                |
| 22.0                                                      | D            | 10                             | T110D226K050AS       | 5.5                                | 4                                                 | 2380                                                      | 2620       | 2860        | 3100         | 6234                       | 7234        | 8234         | T212D226K050(2)S |                                                |
| 22.0                                                      | D            | 20                             | T110D226M050AS       | 5.5                                | 4                                                 | 2381                                                      | 2621       | 2861        | 3101         | 6235                       | 7235        | 8235         | T212D226M050(2)S |                                                |
| 60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C          |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0047                                                    | A            | 5,10,20                        | T110A472(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0056                                                    | A            | 5,10,20                        | T110A562(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0068                                                    | A            | 5,10,20                        | T110A682(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0082                                                    | A            | 5,10,20                        | T110A822(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.01                                                      | A            | 5,10,20                        | T110A103(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.012                                                     | A            | 5,10,20                        | T110A123(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.015                                                     | A            | 5,10,20                        | T110A153(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.018                                                     | A            | 5,10,20                        | T110A183(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.022                                                     | A            | 5,10,20                        | T110A223(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.027                                                     | A            | 5,10,20                        | T110A273(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.033                                                     | A            | 5,10,20                        | T110A333(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.039                                                     | A            | 5,10,20                        | T110A393(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.047                                                     | A            | 5,10,20                        | T110A473(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.056                                                     | A            | 5,10,20                        | T110A563(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.068                                                     | A            | 5,10,20                        | T110A683(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.082                                                     | A            | 5,10,20                        | T110A823(1)060AS     | 0.3                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.1                                                       | A            | 5,10,20                        | T110A104(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.12                                                      | A            | 5,10,20                        | T110A124(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.15                                                      | A            | 5,10,20                        | T110A154(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.18                                                      | A            | 5,10,20                        | T110A184(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.22                                                      | A            | 5,10,20                        | T110A224(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.27                                                      | A            | 5,10,20                        | T110A274(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.33                                                      | A            | 5,10,20                        | T110A334(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.39                                                      | A            | 5,10,20                        | T110A394(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.47                                                      | A            | 5,10,20                        | T110A474(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.56                                                      | A            | 5,10,20                        | T110A564(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.68                                                      | A            | 5,10,20                        | T110A684(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.82                                                      | B            | 5,10,20                        | T110B824(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.0                                                       | B            | 5,10,20                        | T110B105(1)060AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.2                                                       | B            | 5,10,20                        | T110B125(1)060AS     | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.5                                                       | B            | 5,10,20                        | T110B155(1)060AS     | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.8                                                       | B            | 5,10,20                        | T110B185(1)060AS     | 0.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.2                                                       | B            | 5,10,20                        | T110B225(1)060AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.7                                                       | B            | 5,10,20                        | T110B275(1)060AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.3                                                       | B            | 5,10,20                        | T110B335(1)060AS     | 1.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.9                                                       | B            | 5,10,20                        | T110B395(1)060AS     | 1.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 4.7                                                       | C            | 5,10,20                        | T110C475(1)060AS     | 2.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 5.6                                                       | C            | 5,10,20                        | T110C565(1)060AS     | 2.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 6.8                                                       | C            | 5,10,20                        | T110C685(1)060AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 8.2                                                       | C            | 5,10,20                        | T110C825(1)060AS     | 4.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 10.0                                                      | C            | 5,10,20                        | T110C106(1)060AS     | 5.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 12.0                                                      | C            | 5,10,20                        | T110C126(1)060AS     | 5.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 15.0                                                      | D            | 5,10,20                        | T110D156(1)060AS     | 4.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 18.0                                                      | D            | 5,10,20                        | T110D186(1)060AS     | 5.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 22.0                                                      | D            | 5,10,20                        | T110D226(1)060AS     | 6.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C          |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0047                                                    | A            | 5,10,20                        | T110A472(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0056                                                    | A            | 5,10,20                        | T110A562(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0068                                                    | A            | 5,10,20                        | T110A682(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0082                                                    | A            | 5,10,20                        | T110A822(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.01                                                      | A            | 5,10,20                        | T110A103(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |  |  |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|--|--|--|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |  |  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |  |  |  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |  |  |                                                |
| 75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.012                                                     | A            | 5,10,20                        | T110A123(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.015                                                     | A            | 5,10,20                        | T110A153(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.018                                                     | A            | 5,10,20                        | T110A183(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.022                                                     | A            | 5,10,20                        | T110A223(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.027                                                     | A            | 5,10,20                        | T110A273(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.033                                                     | A            | 5,10,20                        | T110A333(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.039                                                     | A            | 5,10,20                        | T110A393(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.047                                                     | A            | 5,10,20                        | T110A473(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.056                                                     | A            | 5,10,20                        | T110A563(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.068                                                     | A            | 5,10,20                        | T110A683(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.082                                                     | A            | 5,10,20                        | T110A823(1)075AS     | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.1                                                       | A            | 5                              | T110A104J075AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  | T212A104J075(2)S                               |
| 0.1                                                       | A            | 10                             | T110A104K075AS       | 0.3                                | 2                                                 | 2382                                                      | 2622       | 2862        | 3102         | 6237                       | 7237        | 8237         |  |  |  | T212A104K075(2)S                               |
| 0.1                                                       | A            | 20                             | T110A104M075AS       | 0.3                                | 2                                                 | 2383                                                      | 2623       | 2863        | 3103         | 6238                       | 7238        | 8238         |  |  |  | T212A104M075(2)S                               |
| 0.12                                                      | A            | 5                              | T110A124J075AS       | 0.3                                | 2                                                 | 5096                                                      | 5296       | 5496        | 5696         | 6239                       | 7239        | 8239         |  |  |  | T212A124J075(2)S                               |
| 0.12                                                      | A            | 10                             | T110A124K075AS       | 0.3                                | 2                                                 | 2384                                                      | 2624       | 2864        | 3104         | 6240                       | 7240        | 8240         |  |  |  | T212A124K075(2)S                               |
| 0.12                                                      | A            | 20                             | T110A124M075AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.15                                                      | A            | 5                              | T110A154J075AS       | 0.3                                | 2                                                 | 5097                                                      | 5297       | 5497        | 5697         | 6241                       | 7241        | 8241         |  |  |  | T212A154J075(2)S                               |
| 0.15                                                      | A            | 10                             | T110A154K075AS       | 0.3                                | 2                                                 | 2385                                                      | 2625       | 2865        | 3105         | 6242                       | 7242        | 8242         |  |  |  | T212A154K075(2)S                               |
| 0.15                                                      | A            | 20                             | T110A154M075AS       | 0.3                                | 2                                                 | 2386                                                      | 2626       | 2866        | 3106         | 6243                       | 7243        | 8243         |  |  |  | T212A154M075(2)S                               |
| 0.18                                                      | A            | 5                              | T110A184J075AS       | 0.3                                | 2                                                 | 5098                                                      | 5298       | 5498        | 5698         | 6244                       | 7244        | 8244         |  |  |  | T212A184J075(2)S                               |
| 0.18                                                      | A            | 10                             | T110A184K075AS       | 0.3                                | 2                                                 | 2387                                                      | 2627       | 2867        | 3107         | 6245                       | 7245        | 8245         |  |  |  | T212A184K075(2)S                               |
| 0.18                                                      | A            | 20                             | T110A184M075AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.22                                                      | A            | 5                              | T110A224J075AS       | 0.3                                | 2                                                 | 5099                                                      | 5299       | 5499        | 5699         | 6246                       | 7246        | 8246         |  |  |  | T212A224J075(2)S                               |
| 0.22                                                      | A            | 10                             | T110A224K075AS       | 0.3                                | 2                                                 | 2388                                                      | 2628       | 2868        | 3108         | 6247                       | 7247        | 8247         |  |  |  | T212A224K075(2)S                               |
| 0.22                                                      | A            | 20                             | T110A224M075AS       | 0.3                                | 2                                                 | 2389                                                      | 2629       | 2869        | 3109         | 6248                       | 7248        | 8248         |  |  |  | T212A224M075(2)S                               |
| 0.27                                                      | A            | 5                              | T110A274J075AS       | 0.3                                | 2                                                 | 5100                                                      | 5300       | 5500        | 5700         | 6249                       | 7249        | 8249         |  |  |  | T212A274J075(2)S                               |
| 0.27                                                      | A            | 10                             | T110A274K075AS       | 0.3                                | 2                                                 | 2390                                                      | 2630       | 2870        | 3110         | 6250                       | 7250        | 8250         |  |  |  | T212A274K075(2)S                               |
| 0.27                                                      | A            | 20                             | T110A274M075AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.33                                                      | A            | 5                              | T110A334J075AS       | 0.3                                | 2                                                 | 5101                                                      | 5301       | 5501        | 5701         | 6251                       | 7251        | 8251         |  |  |  | T212A334J075(2)S                               |
| 0.33                                                      | A            | 10                             | T110A334K075AS       | 0.3                                | 2                                                 | 2391                                                      | 2631       | 2871        | 3111         | 6252                       | 7252        | 8252         |  |  |  | T212A334K075(2)S                               |
| 0.33                                                      | A            | 20                             | T110A334M075AS       | 0.3                                | 2                                                 | 2392                                                      | 2632       | 2872        | 3112         | 6253                       | 7253        | 8253         |  |  |  | T212A334M075(2)S                               |
| 0.39                                                      | A            | 5                              | T110A394J075AS       | 0.3                                | 2                                                 | 5102                                                      | 5302       | 5502        | 5702         | 6254                       | 7254        | 8254         |  |  |  | T212A394J075(2)S                               |
| 0.39                                                      | A            | 10                             | T110A394K075AS       | 0.3                                | 2                                                 | 2393                                                      | 2633       | 2873        | 3113         | 6255                       | 7255        | 8255         |  |  |  | T212A394K075(2)S                               |
| 0.39                                                      | A            | 20                             | T110A394M075AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.47                                                      | A            | 5                              | T110A474J075AS       | 0.3                                | 2                                                 | 5103                                                      | 5303       | 5503        | 5703         | 6256                       | 7256        | 8256         |  |  |  | T212A474J075(2)S                               |
| 0.47                                                      | A            | 10                             | T110A474K075AS       | 0.3                                | 2                                                 | 2394                                                      | 2634       | 2874        | 3114         | 6257                       | 7257        | 8257         |  |  |  | T212A474K075(2)S                               |
| 0.47                                                      | A            | 20                             | T110A474M075AS       | 0.3                                | 2                                                 | 2395                                                      | 2635       | 2875        | 3115         | 6258                       | 7258        | 8258         |  |  |  | T212A474M075(2)S                               |
| 0.56                                                      | A            | 5                              | T110A564J075AS       | 0.3                                | 2                                                 | 5104                                                      | 5304       | 5504        | 5704         | 6259                       | 7259        | 8259         |  |  |  | T212A564J075(2)S                               |
| 0.56                                                      | A            | 10                             | T110A564K075AS       | 0.3                                | 2                                                 | 2396                                                      | 2636       | 2876        | 3116         | 6260                       | 7260        | 8260         |  |  |  | T212A564K075(2)S                               |
| 0.56                                                      | A            | 20                             | T110A564M075AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 0.68                                                      | A            | 5                              | T110A684J075AS       | 0.3                                | 2                                                 | 5105                                                      | 5305       | 5505        | 5705         | 6261                       | 7261        | 8261         |  |  |  | T212A684J075(2)S                               |
| 0.68                                                      | A            | 10                             | T110A684K075AS       | 0.3                                | 2                                                 | 2397                                                      | 2637       | 2877        | 3117         | 6262                       | 7262        | 8262         |  |  |  | T212A684K075(2)S                               |
| 0.68                                                      | A            | 20                             | T110A684M075AS       | 0.3                                | 2                                                 | 2398                                                      | 2638       | 2878        | 3118         | 6263                       | 7263        | 8263         |  |  |  | T212A684M075(2)S                               |
| 0.82                                                      | B            | 5                              | T110B824J075AS       | 0.3                                | 2                                                 | 5106                                                      | 5306       | 5506        | 5706         | 6264                       | 7264        | 8264         |  |  |  | T212B824J075(2)S                               |
| 0.82                                                      | B            | 10                             | T110B824K075AS       | 0.3                                | 2                                                 | 2399                                                      | 2639       | 2879        | 3119         | 6265                       | 7265        | 8265         |  |  |  | T212B824K075(2)S                               |
| 0.82                                                      | B            | 20                             | T110B824M075AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 1.0                                                       | B            | 5                              | T110B105J075AS       | 0.3                                | 2                                                 | 5107                                                      | 5307       | 5507        | 5707         | 6266                       | 7266        | 8266         |  |  |  | T212B105J075(2)S                               |
| 1.0                                                       | B            | 10                             | T110B105K075AS       | 0.3                                | 2                                                 | 2400                                                      | 2640       | 2880        | 3120         | 6267                       | 7267        | 8267         |  |  |  | T212B105K075(2)S                               |
| 1.0                                                       | B            | 20                             | T110B105M075AS       | 0.3                                | 2                                                 | 2401                                                      | 2641       | 2881        | 3121         | 6268                       | 7268        | 8268         |  |  |  | T212B105M075(2)S                               |
| 1.2                                                       | B            | 5                              | T110B125J075AS       | 0.3                                | 4                                                 | 5108                                                      | 5308       | 5508        | 5708         | 6269                       | 7269        | 8269         |  |  |  | T212B125J075(2)S                               |
| 1.2                                                       | B            | 10                             | T110B125K075AS       | 0.3                                | 4                                                 | 2402                                                      | 2642       | 2882        | 3122         | 6270                       | 7270        | 8270         |  |  |  | T212B125K075(2)S                               |
| 1.2                                                       | B            | 20                             | T110B125M075AS       | 0.3                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 1.5                                                       | B            | 5                              | T110B155J075AS       | 0.6                                | 4                                                 | 5109                                                      | 5309       | 5509        | 5709         | 6271                       | 7271        | 8271         |  |  |  | T212B155J075(2)S                               |
| 1.5                                                       | B            | 10                             | T110B155K075AS       | 0.6                                | 4                                                 | 2403                                                      | 2643       | 2883        | 3123         | 6272                       | 7272        | 8272         |  |  |  | T212B155K075(2)S                               |
| 1.5                                                       | B            | 20                             | T110B155M075AS       | 0.6                                | 4                                                 | 2404                                                      | 2644       | 2884        | 3124         | 6273                       | 7273        | 8273         |  |  |  | T212B155M075(2)S                               |
| 1.8                                                       | B            | 5                              | T110B185J075AS       | 0.7                                | 4                                                 | 5110                                                      | 5310       | 5510        | 5710         | 6274                       | 7274        | 8274         |  |  |  | T212B185J075(2)S                               |
| 1.8                                                       | B            | 10                             | T110B185K075AS       | 0.7                                | 4                                                 | 2405                                                      | 2645       | 2885        | 3125         | 6275                       | 7275        | 8275         |  |  |  | T212B185K075(2)S                               |
| 1.8                                                       | B            | 20                             | T110B185M075AS       | 0.7                                | 4                                                 |                                                           |            |             |              |                            |             |              |  |  |  |                                                |
| 2.2                                                       | B            | 5                              | T110B225J075AS       | 0.8                                | 4                                                 | 5111                                                      | 5311       | 5511        | 5711         | 6276                       | 7276        | 8276         |  |  |  | T212B225J075(2)S                               |
| 2.2                                                       | B            | 10                             | T110B225K075AS       | 0.8                                | 4                                                 | 2406                                                      | 2646       | 2886        | 3126         | 6277                       | 7277        | 8277         |  |  |  | T212B225K075(2)S                               |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

Bold Face lines indicate popular part types and values.





# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T110 SERIES — POLAR TYPE & T212 (CSR13)

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |                                                |
|                                                           |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.2                                                       | B            | 20                             | T110B225M075AS       | 0.8                                | 4                                                 | 2407                                                      | 2647       | 2887        | 3127         | 6278                       | 7278        | 8278         | T212B225M075(2)S |                                                |
| 2.7                                                       | B            | 5                              | T110B275J075AS       | 1.0                                | 4                                                 | 5112                                                      | 5312       | 5512        | 5712         | 6279                       | 7279        | 8279         | T212B275J075(2)S |                                                |
| 2.7                                                       | B            | 10                             | T110B275K075AS       | 1.0                                | 4                                                 | 2408                                                      | 2648       | 2888        | 3128         | 6280                       | 7280        | 8280         | T212B275K075(2)S |                                                |
| 2.7                                                       | B            | 20                             | T110B275M075AS       | 1.2                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.3                                                       | B            | 5                              | T110B335J075AS       | 1.2                                | 4                                                 | 5113                                                      | 5313       | 5513        | 5713         | 6281                       | 7281        | 8281         | T212B335J075(2)S |                                                |
| 3.3                                                       | B            | 10                             | T110B335K075AS       | 1.2                                | 4                                                 | 2409                                                      | 2649       | 2889        | 3129         | 6282                       | 7282        | 8282         | T212B335K075(2)S |                                                |
| 3.3                                                       | B            | 20                             | T110B335M075AS       | 1.2                                | 4                                                 | 2410                                                      | 2650       | 2890        | 3130         | 6283                       | 7283        | 8283         | T212B335M075(2)S |                                                |
| 3.9                                                       | B            | 5                              | T110B395J075AS       | 1.5                                | 4                                                 | 5114                                                      | 5314       | 5514        | 5714         | 6284                       | 7284        | 8284         | T212B395J075(2)S |                                                |
| 3.9                                                       | B            | 10                             | T110B395K075AS       | 1.5                                | 4                                                 | 2411                                                      | 2651       | 2891        | 3131         | 6285                       | 7285        | 8285         | T212B395K075(2)S |                                                |
| 3.9                                                       | B            | 20                             | T110B395M075AS       | 1.5                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 4.7                                                       | C            | 5                              | T110C475J075AS       | 3.0                                | 4                                                 | 5115                                                      | 5315       | 5515        | 5715         | 6286                       | 7286        | 8286         | T212C475J075(2)S |                                                |
| 4.7                                                       | C            | 10                             | T110C475K075AS       | 3.0                                | 4                                                 | 2412                                                      | 2652       | 2892        | 3132         | 6287                       | 7287        | 8287         | T212C475K075(2)S |                                                |
| 4.7                                                       | C            | 20                             | T110C475M075AS       | 3.0                                | 4                                                 | 2413                                                      | 2653       | 2893        | 3133         | 6288                       | 7288        | 8288         | T212C475M075(2)S |                                                |
| 5.6                                                       | C            | 5                              | T110C565J075AS       | 3.0                                | 4                                                 | 5116                                                      | 5316       | 5516        | 5716         | 6289                       | 7289        | 8289         | T212C565J075(2)S |                                                |
| 5.6                                                       | C            | 10                             | T110C565K075AS       | 3.0                                | 4                                                 | 2414                                                      | 2654       | 2894        | 3134         | 6290                       | 7290        | 8290         | T212C565K075(2)S |                                                |
| 5.6                                                       | C            | 20                             | T110C565M075AS       | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 6.8                                                       | C            | 5                              | T110C685J075AS       | 5.0                                | 4                                                 | 5117                                                      | 5317       | 5517        | 5717         | 6291                       | 7291        | 8291         | T212C685J075(2)S |                                                |
| 6.8                                                       | C            | 10                             | T110C685K075AS       | 5.0                                | 4                                                 | 2415                                                      | 2655       | 2895        | 3135         | 6292                       | 7292        | 8292         | T212C685K075(2)S |                                                |
| 6.8                                                       | C            | 20                             | T110C685M075AS       | 5.0                                | 4                                                 | 2416                                                      | 2656       | 2896        | 3136         | 6293                       | 7293        | 8293         | T212C685M075(2)S |                                                |
| 8.2                                                       | C            | 5                              | T110C825J075AS       | 5.0                                | 4                                                 | 5118                                                      | 5318       | 5518        | 5718         | 6294                       | 7294        | 8294         | T212C825J075(2)S |                                                |
| 8.2                                                       | C            | 10                             | T110C825K075AS       | 5.0                                | 4                                                 | 2417                                                      | 2657       | 2897        | 3137         | 6295                       | 7295        | 8295         | T212C825K075(2)S |                                                |
| 8.2                                                       | C            | 20                             | T110C825M075AS       | 5.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 10.0                                                      | C            | 5                              | T110C106J075AS       | 5.0                                | 4                                                 | 5119                                                      | 5319       | 5519        | 5719         | 6296                       | 7296        | 8296         | T212C106J075(2)S |                                                |
| 10.0                                                      | C            | 10                             | T110C106K075AS       | 5.0                                | 4                                                 | 2418                                                      | 2658       | 2898        | 3138         | 6297                       | 7297        | 8297         | T212C106K075(2)S |                                                |
| 10.0                                                      | C            | 20                             | T110C106M075AS       | 5.0                                | 4                                                 | 2419                                                      | 2659       | 2899        | 3139         | 6298                       | 7298        | 8298         | T212C106M075(2)S |                                                |
|                                                           |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 12.0                                                      | D            | 5                              | T110D126J075AS       | 5.0                                | 4                                                 | 5120                                                      | 5320       | 5520        | 5720         | 6299                       | 7299        | 8299         | T212D126J075(2)S |                                                |
| 12.0                                                      | D            | 10                             | T110D126K075AS       | 5.0                                | 4                                                 | 2420                                                      | 2660       | 2900        | 3140         | 6300                       | 7300        | 8300         | T212D126K075(2)S |                                                |
| 12.0                                                      | D            | 20                             | T110D126M075AS       | 5.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 15.0                                                      | D            | 5                              | T110D156J075AS       | 7.0                                | 4                                                 | 5121                                                      | 5321       | 5521        | 5721         | 6301                       | 7301        | 8301         | T212D156J075(2)S |                                                |
| 15.0                                                      | D            | 10                             | T110D156K075AS       | 7.0                                | 4                                                 | 2421                                                      | 2661       | 2901        | 3141         | 6302                       | 7302        | 8302         | T212D156K075(2)S |                                                |
| 15.0                                                      | D            | 20                             | T110D156M075AS       | 7.0                                | 4                                                 | 2422                                                      | 2662       | 2902        | 3142         | 6303                       | 7303        | 8303         | T212D156M075(2)S |                                                |
|                                                           |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°          |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0047                                                    | A            | 5                              | T110A472J100AS       | 0.3                                | 2                                                 | 5122                                                      | 5322       | 5522        | 5722         | 6304                       | 7304        | *            | T212A472J100(2)S |                                                |
| 0.0047                                                    | A            | 10                             | T110A472K100AS       | 0.3                                | 2                                                 | 2423                                                      | 2663       | 2903        | 3143         | 6305                       | 7305        | *            | T212A472K100(2)S |                                                |
| 0.0047                                                    | A            | 20                             | T110A472M100AS       | 0.3                                | 2                                                 | 2424                                                      | 2664       | 2904        | 3144         | 6306                       | 7306        | *            | T212A472M100(2)S |                                                |
| 0.0056                                                    | A            | 5                              | T110A562J100AS       | 0.3                                | 2                                                 | 5123                                                      | 5323       | 5523        | 5723         | 6307                       | 7307        | *            | T212A562J100(2)S |                                                |
| 0.0056                                                    | A            | 10                             | T110A562K100AS       | 0.3                                | 2                                                 | 2425                                                      | 2665       | 2905        | 3145         | 6308                       | 7308        | *            | T212A562K100(2)S |                                                |
| 0.0056                                                    | A            | 20                             | T110A562M100AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0068                                                    | A            | 5                              | T110A682J100AS       | 0.3                                | 2                                                 | 5124                                                      | 5324       | 5524        | 5724         | 6309                       | 7309        | *            | T212A682J100(2)S |                                                |
| 0.0068                                                    | A            | 10                             | T110A682K100AS       | 0.3                                | 2                                                 | 2426                                                      | 2666       | 2906        | 3146         | 6310                       | 7310        | *            | T212A682K100(2)S |                                                |
| 0.0068                                                    | A            | 20                             | T110A682M100AS       | 0.3                                | 2                                                 | 2427                                                      | 2667       | 2907        | 3147         | 6311                       | 7311        | *            | T212A682M100(2)S |                                                |
| 0.0082                                                    | A            | 5                              | T110A822J100AS       | 0.3                                | 2                                                 | 5125                                                      | 5325       | 5525        | 5725         | 6312                       | 7312        | *            | T212A822J100(2)S |                                                |
| 0.0082                                                    | A            | 10                             | T110A822K100AS       | 0.3                                | 2                                                 | 2428                                                      | 2668       | 2908        | 3148         | 6313                       | 7313        | *            | T212A822K100(2)S |                                                |
| 0.0082                                                    | A            | 20                             | T110A822M100AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.01                                                      | A            | 5                              | T110A103J100AS       | 0.3                                | 2                                                 | 5126                                                      | 5326       | 5526        | 5726         | 6314                       | 7314        | *            | T212A103J100(2)S |                                                |
| 0.01                                                      | A            | 10                             | T110A103K100AS       | 0.3                                | 2                                                 | 2429                                                      | 2669       | 2909        | 3149         | 6315                       | 7315        | *            | T212A103K100(2)S |                                                |
| 0.01                                                      | A            | 20                             | T110A103M100AS       | 0.3                                | 2                                                 | 2430                                                      | 2670       | 2910        | 3150         | 6316                       | 7316        | *            | T212A103M100(2)S |                                                |
| 0.012                                                     | A            | 5                              | T110A123J100AS       | 0.3                                | 2                                                 | 5127                                                      | 5327       | 5527        | 5727         | 6317                       | 7317        | *            | T212A123J100(2)S |                                                |
| 0.012                                                     | A            | 10                             | T110A123K100AS       | 0.3                                | 2                                                 | 2431                                                      | 2671       | 2911        | 3151         | 6318                       | 7318        | *            | T212A123K100(2)S |                                                |
| 0.012                                                     | A            | 20                             | T110A123M100AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.015                                                     | A            | 5                              | T110A153J100AS       | 0.3                                | 2                                                 | 5128                                                      | 5328       | 5528        | 5728         | 6319                       | 7319        | *            | T212A153J100(2)S |                                                |
| 0.015                                                     | A            | 10                             | T110A153K100AS       | 0.3                                | 2                                                 | 2432                                                      | 2672       | 2912        | 3152         | 6320                       | 7320        | *            | T212A153K100(2)S |                                                |
| 0.015                                                     | A            | 20                             | T110A153M100AS       | 0.3                                | 2                                                 | 2433                                                      | 2673       | 2913        | 3153         | 6321                       | 7321        | *            | T212A153M100(2)S |                                                |
| 0.018                                                     | A            | 5                              | T110A183J100AS       | 0.3                                | 2                                                 | 5129                                                      | 5329       | 5529        | 5729         | 6322                       | 7322        | *            | T212A183J100(2)S |                                                |
| 0.018                                                     | A            | 10                             | T110A183K100AS       | 0.3                                | 2                                                 | 2434                                                      | 2674       | 2914        | 3154         | 6323                       | 7323        | *            | T212A183K100(2)S |                                                |
| 0.018                                                     | A            | 20                             | T110A183M100AS       | 0.3                                | 2                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.022                                                     | A            | 5                              | T110A223J100AS       | 0.3                                | 2                                                 | 5130                                                      | 5330       | 5530        | 5730         | 6324                       | 7324        | *            | T212A223J100(2)S |                                                |
| 0.022                                                     | A            | 10                             | T110A223K100AS       | 0.3                                | 2                                                 | 2435                                                      | 2675       | 2915        | 3155         | 6325                       | 7325        | *            | T212A223K100(2)S |                                                |

(1) To complete T110 Series part number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

\*Note: D Failure Rate — Not QPL for -8304 thru -8401.



## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                          | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   |                                                           | MIL-PRF-39003 (CSR13) CAPACITORS |             |              |                            |             |              |                  |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|------------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|----------------------------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|------------------------------------------------|
|                                                            |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |                                  |             |              |                            |             |              |                  |  |                                                |
|                                                            |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |                                  |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |  |                                                |
|                                                            |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1)                       | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |  |                                                |
| 100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.022                                                      | A            | 20                             | T110A223M100AS       | 0.3                                | 2                                                 | 2436                                                      | 2676                             | 2916        | 3156         | 6326                       | 7326        | *            | T212A223M100(2)S |  |                                                |
| 0.027                                                      | A            | 5                              | T110A273J100AS       | 0.3                                | 2                                                 | 5131                                                      | 5331                             | 5531        | 5731         | 6327                       | 7327        | *            | T212A273J100(2)S |  |                                                |
| 0.027                                                      | A            | 10                             | T110A273K100AS       | 0.3                                | 2                                                 | 2437                                                      | 2677                             | 2917        | 3157         | 6328                       | 7328        | *            | T212A273K100(2)S |  |                                                |
| 0.027                                                      | A            | 20                             | T110A273M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.033                                                      | A            | 5                              | T110A333J100AS       | 0.3                                | 2                                                 | 5132                                                      | 5332                             | 5532        | 5732         | 6329                       | 7329        | *            | T212A333J100(2)S |  |                                                |
| 0.033                                                      | A            | 10                             | T110A333K100AS       | 0.3                                | 2                                                 | 2438                                                      | 2678                             | 2918        | 3158         | 6330                       | 7330        | *            | T212A333K100(2)S |  |                                                |
| 0.033                                                      | A            | 20                             | T110A333M100AS       | 0.3                                | 2                                                 | 2439                                                      | 2679                             | 2919        | 3159         | 6331                       | 7331        | *            | T212A333M100(2)S |  |                                                |
| 0.039                                                      | A            | 5                              | T110A393J100AS       | 0.3                                | 2                                                 | 5133                                                      | 5333                             | 5533        | 5733         | 6332                       | 7332        | *            | T212A393J100(2)S |  |                                                |
| 0.039                                                      | A            | 10                             | T110A393K100AS       | 0.3                                | 2                                                 | 2440                                                      | 2680                             | 2920        | 3160         | 6333                       | 7333        | *            | T212A393K100(2)S |  |                                                |
| 0.039                                                      | A            | 20                             | T110A393M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.047                                                      | A            | 5                              | T110A473J100AS       | 0.3                                | 2                                                 | 5134                                                      | 5334                             | 5534        | 5734         | 6334                       | 7334        | *            | T212A473J100(2)S |  |                                                |
| 0.047                                                      | A            | 10                             | T110A473K100AS       | 0.3                                | 2                                                 | 2441                                                      | 2681                             | 2921        | 3161         | 6335                       | 7335        | *            | T212A473K100(2)S |  |                                                |
| 0.047                                                      | A            | 20                             | T110A473M100AS       | 0.3                                | 2                                                 | 2442                                                      | 2682                             | 2922        | 3162         | 6336                       | 7336        | *            | T212A473M100(2)S |  |                                                |
| 0.056                                                      | A            | 5                              | T110A563J100AS       | 0.3                                | 2                                                 | 5135                                                      | 5335                             | 5535        | 5735         | 6337                       | 7337        | *            | T212A563J100(2)S |  |                                                |
| 0.056                                                      | A            | 10                             | T110A563K100AS       | 0.3                                | 2                                                 | 2443                                                      | 2683                             | 2923        | 3163         | 6338                       | 7338        | *            | T212A563K100(2)S |  |                                                |
| 0.056                                                      | A            | 20                             | T110A563M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.068                                                      | A            | 5                              | T110A683J100AS       | 0.3                                | 2                                                 | 5136                                                      | 5336                             | 5536        | 5736         | 6339                       | 7339        | *            | T212A683J100(2)S |  |                                                |
| 0.068                                                      | A            | 10                             | T110A683K100AS       | 0.3                                | 2                                                 | 2444                                                      | 2684                             | 2924        | 3164         | 6340                       | 7340        | *            | T212A683K100(2)S |  |                                                |
| 0.068                                                      | A            | 20                             | T110A683M100AS       | 0.3                                | 2                                                 | 2445                                                      | 2685                             | 2925        | 3165         | 6341                       | 7341        | *            | T212A683M100(2)S |  |                                                |
| 0.082                                                      | A            | 5                              | T110A823J100AS       | 0.3                                | 2                                                 | 5137                                                      | 5337                             | 5537        | 5737         | 6342                       | 7342        | *            | T212A823J100(2)S |  |                                                |
| 0.082                                                      | A            | 10                             | T110A823K100AS       | 0.3                                | 2                                                 | 2446                                                      | 2686                             | 2926        | 3166         | 6343                       | 7343        | *            | T212A823K100(2)S |  |                                                |
| 0.082                                                      | A            | 20                             | T110A823M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.1                                                        | A            | 5                              | T110A104J100AS       | 0.3                                | 2                                                 | 5138                                                      | 5338                             | 5538        | 5738         | 6344                       | 7344        | *            | T212A104J100(2)S |  |                                                |
| 0.1                                                        | A            | 10                             | T110A104K100AS       | 0.3                                | 2                                                 | 2447                                                      | 2687                             | 2927        | 3167         | 6345                       | 7345        | *            | T212A104K100(2)S |  |                                                |
| 0.1                                                        | A            | 20                             | T110A104M100AS       | 0.3                                | 2                                                 | 2448                                                      | 2688                             | 2928        | 3168         | 6346                       | 7346        | *            | T212A104M100(2)S |  |                                                |
| 0.12                                                       | A            | 5                              | T110A124J100AS       | 0.3                                | 2                                                 | 5139                                                      | 5339                             | 5539        | 5739         | 6347                       | 7347        | *            | T212A124J100(2)S |  |                                                |
| 0.12                                                       | A            | 10                             | T110A124K100AS       | 0.3                                | 2                                                 | 2449                                                      | 2689                             | 2929        | 3169         | 6348                       | 7348        | *            | T212A124K100(2)S |  |                                                |
| 0.12                                                       | A            | 20                             | T110A124M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.15                                                       | A            | 5                              | T110A154J100AS       | 0.3                                | 2                                                 | 5140                                                      | 5340                             | 5540        | 5740         | 6349                       | 7349        | *            | T212A154J100(2)S |  |                                                |
| 0.15                                                       | A            | 10                             | T110A154K100AS       | 0.3                                | 2                                                 | 2450                                                      | 2690                             | 2930        | 3170         | 6350                       | 7350        | *            | T212A154K100(2)S |  |                                                |
| 0.15                                                       | A            | 20                             | T110A154M100AS       | 0.3                                | 2                                                 | 2451                                                      | 2691                             | 2931        | 3171         | 6351                       | 7351        | *            | T212A154M100(2)S |  |                                                |
| 0.18                                                       | A            | 5                              | T110A184J100AS       | 0.3                                | 2                                                 | 5141                                                      | 5341                             | 5541        | 5741         | 6352                       | 7352        | *            | T212A184J100(2)S |  |                                                |
| 0.18                                                       | A            | 10                             | T110A184K100AS       | 0.3                                | 2                                                 | 2452                                                      | 2692                             | 2932        | 3172         | 6353                       | 7353        | *            | T212A184K100(2)S |  |                                                |
| 0.18                                                       | A            | 20                             | T110A184M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.22                                                       | A            | 5                              | T110A224J100AS       | 0.3                                | 2                                                 | 5142                                                      | 5342                             | 5542        | 5742         | 6354                       | 7354        | *            | T212A224J100(2)S |  |                                                |
| 0.22                                                       | A            | 10                             | T110A224K100AS       | 0.3                                | 2                                                 | 2453                                                      | 2693                             | 2933        | 3173         | 6355                       | 7355        | *            | T212A224K100(2)S |  |                                                |
| 0.22                                                       | A            | 20                             | T110A224M100AS       | 0.3                                | 2                                                 | 2454                                                      | 2694                             | 2934        | 3174         | 6356                       | 7356        | *            | T212A224M100(2)S |  |                                                |
| 0.27                                                       | A            | 5                              | T110A274J100AS       | 0.3                                | 2                                                 | 5143                                                      | 5343                             | 5543        | 5743         | 6357                       | 7357        | *            | T212A274J100(2)S |  |                                                |
| 0.27                                                       | A            | 10                             | T110A274K100AS       | 0.3                                | 2                                                 | 2455                                                      | 2695                             | 2935        | 3175         | 6358                       | 7358        | *            | T212A274K100(2)S |  |                                                |
| 0.27                                                       | A            | 20                             | T110A274M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.33                                                       | A            | 5                              | T110A334J100AS       | 0.3                                | 2                                                 | 5144                                                      | 5344                             | 5544        | 5744         | 6359                       | 7359        | *            | T212A334J100(2)S |  |                                                |
| 0.33                                                       | A            | 10                             | T110A334K100AS       | 0.3                                | 2                                                 | 2456                                                      | 2696                             | 2936        | 3176         | 6360                       | 7360        | *            | T212A334K100(2)S |  |                                                |
| 0.33                                                       | A            | 20                             | T110A334M100AS       | 0.3                                | 2                                                 | 2457                                                      | 2697                             | 2937        | 3177         | 6361                       | 7361        | *            | T212A334M100(2)S |  |                                                |
| 0.39                                                       | A            | 5                              | T110A394J100AS       | 0.3                                | 2                                                 | 5145                                                      | 5345                             | 5545        | 5745         | 6362                       | 7362        | *            | T212A394J100(2)S |  |                                                |
| 0.39                                                       | A            | 10                             | T110A394K100AS       | 0.3                                | 2                                                 | 2458                                                      | 2698                             | 2938        | 3178         | 6363                       | 7363        | *            | T212A394K100(2)S |  |                                                |
| 0.39                                                       | A            | 20                             | T110A394M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.47                                                       | A            | 5                              | T110A474J100AS       | 0.3                                | 2                                                 | 5146                                                      | 5346                             | 5546        | 5746         | 6364                       | 7364        | *            | T212A474J100(2)S |  |                                                |
| 0.47                                                       | A            | 10                             | T110A474K100AS       | 0.3                                | 2                                                 | 2459                                                      | 2699                             | 2939        | 3179         | 6365                       | 7365        | *            | T212A474K100(2)S |  |                                                |
| 0.47                                                       | A            | 20                             | T110A474M100AS       | 0.3                                | 2                                                 | 2460                                                      | 2700                             | 2940        | 3180         | 6366                       | 7366        | *            | T212A474M100(2)S |  |                                                |
| 0.56                                                       | A            | 5                              | T110A564J100AS       | 0.3                                | 2                                                 | 5147                                                      | 5347                             | 5547        | 5747         | 6367                       | 7367        | *            | T212A564J100(2)S |  |                                                |
| 0.56                                                       | A            | 10                             | T110A564K100AS       | 0.3                                | 2                                                 | 2461                                                      | 2701                             | 2941        | 3181         | 6368                       | 7368        | *            | T212A564K100(2)S |  |                                                |
| 0.56                                                       | A            | 20                             | T110A564M100AS       | 0.3                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 0.68                                                       | B            | 5                              | T110B684J100AS       | 0.3                                | 2                                                 | 5148                                                      | 5348                             | 5548        | 5748         | 6369                       | 7369        | *            | T212B684J100(2)S |  |                                                |
| 0.68                                                       | B            | 10                             | T110B684K100AS       | 0.3                                | 2                                                 | 2462                                                      | 2702                             | 2942        | 3182         | 6370                       | 7370        | *            | T212B684K100(2)S |  |                                                |
| 0.68                                                       | B            | 20                             | T110B684M100AS       | 0.3                                | 2                                                 | 2463                                                      | 2703                             | 2943        | 3183         | 6371                       | 7371        | *            | T212B684M100(2)S |  |                                                |
| 0.82                                                       | B            | 5                              | T110B824J100AS       | 0.4                                | 2                                                 | 5149                                                      | 5349                             | 5549        | 5749         | 6372                       | 7372        | *            | T212B824J100(2)S |  |                                                |
| 0.82                                                       | B            | 10                             | T110B824K100AS       | 0.4                                | 2                                                 | 2464                                                      | 2704                             | 2944        | 3184         | 6373                       | 7373        | *            | T212B824K100(2)S |  |                                                |
| 0.82                                                       | B            | 20                             | T110B824M100AS       | 0.4                                | 2                                                 |                                                           |                                  |             |              |                            |             |              |                  |  |                                                |
| 1.0                                                        | B            | 5                              | T110B105J100AS       | 0.5                                | 2                                                 | 5150                                                      | 5350                             | 5550        | 5750         | 6374                       | 7374        | *            | T212B105J100(2)S |  |                                                |
| 1.0                                                        | B            | 10                             | T110B105K100AS       | 0.5                                | 2                                                 | 2465                                                      | 2705                             | 2945        | 3185         | 6375                       | 7375        | *            | T212B105K100(2)S |  |                                                |
| 1.0                                                        | B            | 20                             | T110B105M100AS       | 0.5                                | 2                                                 | 2466                                                      | 2706                             | 2946        | 3186         | 6376                       | 7376        | *            | T212B105M100(2)S |  |                                                |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

Bold Face lines indicate popular part types and values.

\*Note: D Failure Rate — Not QPL for -8304 thru -8401.



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T110 SERIES — POLAR TYPE & T212 (CSR13)

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                          | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|------------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                            |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                            |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |                  |                                                |
|                                                            |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.2                                                        | B            | 5                              | T110B125J100AS       | 0.5                                | 3                                                 | 5151                                                      | 5351       | 5551        | 5751         | 6377                       | 7377        | *            | T212B125J100(2)S |                                                |
| 1.2                                                        | B            | 10                             | T110B125K100AS       | 0.5                                | 3                                                 | 2467                                                      | 2707       | 2947        | 3187         | 6378                       | 7378        | *            | T212B125K100(2)S |                                                |
| 1.2                                                        | B            | 20                             | T110B125M100AS       | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.5                                                        | B            | 5                              | T110B155J100AS       | 0.7                                | 3                                                 | 5152                                                      | 5352       | 5552        | 5752         | 6379                       | 7379        | *            | T212B155J100(2)S |                                                |
| 1.5                                                        | B            | 10                             | T110B155K100AS       | 0.7                                | 3                                                 | 2468                                                      | 2708       | 2948        | 3188         | 6380                       | 7380        | *            | T212B155K100(2)S |                                                |
| 1.5                                                        | B            | 20                             | T110B155M100AS       | 0.7                                | 3                                                 | 2469                                                      | 2709       | 2949        | 3189         | 6381                       | 7381        | *            | T212B155M100(2)S |                                                |
| 1.8                                                        | B            | 5                              | T110B185J100AS       | 0.7                                | 3                                                 | 5153                                                      | 5353       | 5553        | 5753         | 6382                       | 7382        | *            | T212B185J100(2)S |                                                |
| 1.8                                                        | B            | 10                             | T110B185K100AS       | 0.7                                | 3                                                 | 2470                                                      | 2710       | 2950        | 3190         | 6383                       | 7383        | *            | T212B185K100(2)S |                                                |
| 1.8                                                        | B            | 20                             | T110B185M100AS       | 0.7                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.2                                                        | B            | 5                              | T110B225J100AS       | 0.9                                | 3                                                 | 5154                                                      | 5354       | 5554        | 5754         | 6384                       | 7384        | *            | T212B225J100(2)S |                                                |
| 2.2                                                        | B            | 10                             | T110B225K100AS       | 0.9                                | 3                                                 | 2471                                                      | 2711       | 2951        | 3191         | 6385                       | 7385        | *            | T212B225K100(2)S |                                                |
| 2.2                                                        | B            | 20                             | T110B225M100AS       | 0.9                                | 3                                                 | 2472                                                      | 2712       | 2952        | 3192         | 6386                       | 7386        | *            | T212B225M100(2)S |                                                |
| 2.7                                                        | B            | 5                              | T110B275J100AS       | 1.1                                | 3                                                 | 5155                                                      | 5355       | 5555        | 5755         | 6387                       | 7387        | *            | T212B275J100(2)S |                                                |
| 2.7                                                        | B            | 10                             | T110B275K100AS       | 1.1                                | 3                                                 | 2473                                                      | 2713       | 2953        | 3193         | 6388                       | 7388        | *            | T212B275K100(2)S |                                                |
| 2.7                                                        | B            | 20                             | T110B275M100AS       | 1.1                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.3                                                        | C            | 5                              | T110C335J100AS       | 1.5                                | 3                                                 | 5156                                                      | 5356       | 5556        | 5756         | 6389                       | *           | *            | T212C335J100(2)S |                                                |
| 3.3                                                        | C            | 10                             | T110C335K100AS       | 1.5                                | 3                                                 | 5157                                                      | 5357       | 5557        | 5757         | 6390                       | *           | *            | T212C335K100(2)S |                                                |
| 3.3                                                        | C            | 20                             | T110C335M100AS       | 1.5                                | 3                                                 | 5158                                                      | 5358       | 5558        | 5758         | 6391                       | *           | *            | T212C335M100(2)S |                                                |
| 3.9                                                        | C            | 5                              | T110C395J100AS       | 1.5                                | 3                                                 | 5159                                                      | 5359       | 5559        | 5759         | 6392                       | *           | *            | T212C395J100(2)S |                                                |
| 3.9                                                        | C            | 10                             | T110C395K100AS       | 1.5                                | 3                                                 | 5160                                                      | 5360       | 5560        | 5760         | 6393                       | *           | *            | T212C395K100(2)S |                                                |
| 4.7                                                        | C            | 5                              | T110C475J100AS       | 2.5                                | 3                                                 | 5161                                                      | 5361       | 5561        | 5761         | 6394                       | *           | *            | T212C475J100(2)S |                                                |
| 4.7                                                        | C            | 10                             | T110C475K100AS       | 2.5                                | 3                                                 | 5162                                                      | 5362       | 5562        | 5762         | 6395                       | *           | *            | T212C475K100(2)S |                                                |
| 4.7                                                        | C            | 20                             | T110C475M100AS       | 2.5                                | 3                                                 | 5163                                                      | 5363       | 5563        | 5763         | 6396                       | *           | *            | T212C475M100(2)S |                                                |
| 5.6                                                        | C            | 5                              | T110C565J100AS       | 2.5                                | 3                                                 | 5164                                                      | 5364       | 5564        | 5764         | 6397                       | *           | *            | T212C565J100(2)S |                                                |
| 5.6                                                        | C            | 10                             | T110C565K100AS       | 2.5                                | 3                                                 | 5165                                                      | 5365       | 5565        | 5765         | 6398                       | *           | *            | T212C565K100(2)S |                                                |
| 6.8                                                        | C            | 5                              | T110C685J100AS       | 2.5                                | 3                                                 | 5166                                                      | 5366       | 5566        | 5766         | 6399                       | *           | *            | T212C685J100(2)S |                                                |
| 6.8                                                        | C            | 10                             | T110C685K100AS       | 2.5                                | 3                                                 | 5167                                                      | 5367       | 5567        | 5767         | 6400                       | *           | *            | T212C685K100(2)S |                                                |
| 6.8                                                        | C            | 20                             | T110C685M100AS       | 2.5                                | 3                                                 | 5168                                                      | 5368       | 5568        | 5768         | 6401                       | *           | *            | T212C685M100(2)S |                                                |
| 8.2                                                        | D            | 5,10,20                        | T110D825(1)100AS     | 5.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 10.0                                                       | D            | 5,10,20                        | T110D106(1)100AS     | 5.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 125 VOLT RATING AT 85°C — 82 VOLT RATING AT 125°           |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0047                                                     | A            | 5,10,20                        | T110A472(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0056                                                     | A            | 5,10,20                        | T110A562(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0068                                                     | A            | 5,10,20                        | T110A682(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0082                                                     | A            | 5,10,20                        | T110A822(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.01                                                       | A            | 5,10,20                        | T110A103(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.012                                                      | A            | 5,10,20                        | T110A123(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.015                                                      | A            | 5,10,20                        | T110A153(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.018                                                      | A            | 5,10,20                        | T110A183(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.022                                                      | A            | 5,10,20                        | T110A223(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.027                                                      | A            | 5,10,20                        | T110A273(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.033                                                      | A            | 5,10,20                        | T110A333(1)125AS     | 0.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.039                                                      | A            | 5,10,20                        | T110A393(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.047                                                      | A            | 5,10,20                        | T110A473(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.056                                                      | A            | 5,10,20                        | T110A563(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.068                                                      | A            | 5,10,20                        | T110A683(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.082                                                      | A            | 5,10,20                        | T110A823(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.1                                                        | A            | 5,10,20                        | T110A104(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.12                                                       | A            | 5,10,20                        | T110A124(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.15                                                       | A            | 5,10,20                        | T110A154(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.18                                                       | A            | 5,10,20                        | T110A184(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.22                                                       | A            | 5,10,20                        | T110A224(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.27                                                       | A            | 5,10,20                        | T110A274(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.33                                                       | A            | 5,10,20                        | T110A334(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.39                                                       | B            | 5,10,20                        | T110B394(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.47                                                       | B            | 5,10,20                        | T110B474(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.56                                                       | B            | 5,10,20                        | T110B564(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.68                                                       | B            | 5,10,20                        | T110B684(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.82                                                       | B            | 5,10,20                        | T110B824(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

\*Note: C failure rate — Not QPL for 7389 thru 7401.

D failure rate — Not QPL for -8304 thru -8401.

# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T110 SERIES — POLAR TYPE & T212 (CSR13)



### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                 | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T110           |                                    |                                                   | MIL-PRF-39003 (CSR13) CAPACITORS                          |            |             |              |                            |             |              |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|---------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|--|------------------------------------------------|
|                                                   |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  |                                                |
|                                                   |              |                                |                      |                                    |                                                   | MIL-PRF-39003/1H<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/1H<br>GRADED |             |              |  |                                                |
|                                                   |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |                                                |
| 125 VOLT RATING AT 85°C — 82 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |  |                                                |
| 1.0                                               | B            | 5,10,20                        | T110B105(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 1.2                                               | B            | 5,10,20                        | T110B125(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 1.5                                               | B            | 5,10,20                        | T110B155(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 1.8                                               | B            | 5,10,20                        | T110B185(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 2.2                                               | B            | 5,10,20                        | T110B225(1)125AS     | 1.5                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 2.7                                               | C            | 5,10,20                        | T110C275(1)125AS     | 2.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 3.3                                               | C            | 5,10,20                        | T110C335(1)125AS     | 2.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 3.9                                               | C            | 5,10,20                        | T110C395(1)125AS     | 2.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 4.7                                               | C            | 5,10,20                        | T110C475(1)125AS     | 3.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 5.6                                               | C            | 5,10,20                        | T110C565(1)125AS     | 3.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 6.8                                               | C            | 5,10,20                        | T110C685(1)125AS     | 3.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 8.2                                               | D            | 5,10,20                        | T110D825(1)125AS     | 6.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |
| 10.0                                              | D            | 5,10,20                        | T110D106(1)125AS     | 6.0                                | 3                                                 |                                                           |            |             |              |                            |             |              |  |                                                |

(1) To complete T110 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T212 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

T110/T212 Series Tantalum  
Hermetically Sealed

#### T110/T140 Herm Seal ESR (OHMS) at 100 kHz @ +25°C

(The ESR values provided below are for reference only. No warranty, as stated on page 3 and reincorporated here, is made as to the accuracy of these values for any particular T110/T140 Series product.)

| Cap<br>μF | 6<br>Volt | 10<br>Volt | 15<br>Volt | 20<br>Volt | 30<br>Volt | 35<br>Volt | 50<br>Volt | 60<br>Volt | 75<br>Volt | 100<br>Volt | 125<br>Volt |
|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| 0.10      |           |            |            | 37.0       |            | 26.0       | 26.0       | 26.0       | 26.0       | 25.0        | 25.0        |
| 0.12      |           |            |            | 37.0       |            | 26.0       | 26.0       | 26.0       | 26.0       | 25.0        | 25.0        |
| 0.15      |           |            |            | 32.0       |            | 21.0       | 21.0       | 21.0       | 21.0       | 20.0        | 20.0        |
| 0.18      |           |            |            | 32.0       |            | 21.0       | 21.0       | 21.0       | 21.0       | 20.0        | 20.0        |
| 0.22      |           |            |            | 27.0       |            | 17.0       | 17.0       | 17.0       | 17.0       | 16.0        | 16.0        |
| 0.27      |           |            |            | 25.0       |            | 17.0       | 17.0       | 17.0       | 17.0       | 16.0        | 16.0        |
| 0.33      |           |            | 28.0       | 22.0       |            | 15.0       | 15.0       | 15.0       | 15.0       | 14.0        | 14.0        |
| 0.39      |           |            | 28.0       | 22.0       |            | 15.0       | 15.0       | 15.0       | 15.0       | 14.0        | 14.0        |
| 0.47      |           |            | 26.0       | 20.0       |            | 13.0       | 13.0       | 13.0       | 13.0       | 12.0        | 12.0        |
| 0.56      |           |            | 26.0       | 18.0       |            | 13.0       | 13.0       | 13.0       | 13.0       | 12.0        | 12.0        |
| 0.68      |           |            | 24.0       | 16.0       |            | 10.0       | 10.0       | 10.0       | 10.0       | 9.0         | 9.0         |
| 0.82      |           |            | 24.0       | 16.0       |            | 10.0       | 10.0       | 10.0       | 10.0       | 9.0         | 9.0         |
| 1.0       |           | 20.0       | 17.0       | 10.0       |            | 8.0        | 8.0        | 8.0        | 8.0        | 7.0         | 7.0         |
| 1.2       |           | 20.0       | 17.0       | 10.0       | 9.0        | 8.0        | 8.0        | 8.0        | 8.0        | 7.0         | 7.0         |
| 1.5       |           | 14.0       | 10.0       | 9.0        | 8.0        | 6.0        | 5.0        | 5.0        | 5.0        | 4.0         | 4.0         |
| 1.8       |           | 14.0       | 10.0       | 9.0        | 8.0        | 6.0        | 5.0        | 5.0        | 5.0        | 4.0         | 4.0         |
| 2.2       | 14.0      | 13.0       | 8.0        | 7.0        | 6.0        | 5.0        | 3.5        | 3.5        | 3.5        | 3.0         | 3.0         |
| 2.7       | 14.0      | 13.0       | 8.0        | 7.0        | 6.0        | 5.0        | 3.5        | 3.5        | 3.5        | 3.0         | 3.0         |
| 3.3       | 13.0      | 10.0       | 6.0        | 5.5        |            | 4.0        | 3.0        | 3.0        | 3.0        | 2.5         | 2.5         |
| 3.9       | 13.0      | 10.0       | 6.0        | 5.5        |            | 4.0        | 3.0        | 3.0        | 3.0        | 2.5         | 2.5         |
| 4.7       | 10.0      | 8.0        | 5.0        | 4.5        |            | 3.0        | 2.5        | 2.5        | 2.5        | 2.0         | 2.0         |
| 5.6       | 10.0      | 8.0        | 5.0        | 4.5        |            | 3.0        | 2.5        | 2.5        | 2.5        | 2.0         | 2.0         |
| 6.8       | 8.0       | 6.0        | 4.0        | 3.6        |            | 2.5        | 2.0        | 2.0        | 2.0        | 1.5         | 1.5         |
| 8.2       | 8.0       | 6.0        | 4.0        | 3.6        |            | 2.5        | 2.0        | 2.0        | 2.0        | 1.5         | 1.5         |
| 10.0      | 6.0       | 5.0        | 3.2        | 2.9        |            | 2.0        | 1.6        | 1.6        | 1.6        | 1.0         | 1.0         |
| 12.0      | 6.0       | 5.0        | 3.2        | 2.9        | 2.5        | 2.0        | 1.6        | 1.6        | 1.6        |             |             |
| 15.0      | 5.0       | 3.7        | 2.5        | 2.3        | 2.0        | 1.6        | 1.2        | 1.2        | 1.2        |             |             |
| 18.0      | 5.0       | 3.7        | 2.5        | 2.3        | 2.0        | 1.6        | 1.2        | 1.2        |            |             |             |
| 22.0      | 3.7       | 2.7        | 2.0        | 1.8        |            | 1.3        | 1.0        | 1.0        |            |             |             |
| 27.0      | 3.7       | 2.7        | 2.0        | 1.8        |            | 1.3        | 1.0        | 1.0        |            |             |             |
| 33.0      | 3.0       | 2.1        | 1.6        | 1.4        | 1.2        | 1.0        | 0.8        | 0.8        |            |             |             |
| 39.0      | 3.0       | 2.1        | 1.6        | 1.4        | 1.2        | 1.0        | 0.8        |            |            |             |             |
| 47.0      | 2.0       | 1.7        | 1.3        | 1.2        | 1.0        | 0.8        | 0.6        |            |            |             |             |
| 56.0      | 2.0       | 1.7        | 1.3        | 1.2        | 1.0        | 0.8        |            |            |            |             |             |
| 68.0      | 1.8       | 1.3        | 1.0        | 0.9        | 0.8        | 0.6        |            |            |            |             |             |
| 82.0      | 1.8       | 1.3        | 1.0        | 0.9        | 0.8        | 0.6        |            |            |            |             |             |
| 100.0     | 1.6       | 1.0        | 0.8        | 0.6        | 0.5        |            |            |            |            |             |             |
| 120.0     | 1.6       | 1.0        | 0.8        | 0.6        |            |            |            |            |            |             |             |
| 150.0     | 0.9       | 0.8        | 0.6        | 0.5        |            |            |            |            |            |             |             |
| 180.0     | 0.9       | 0.8        | 0.6        | 0.5        |            |            |            |            |            |             |             |
| 220.0     | 0.9       | 0.6        | 0.5        |            |            |            |            |            |            |             |             |
| 270.0     | 0.9       | 0.6        | 0.5        |            |            |            |            |            |            |             |             |
| 330.0     | 0.7       | 0.5        | 0.4        |            |            |            |            |            |            |             |             |
| 390.0     | 0.7       | 0.5        |            |            |            |            |            |            |            |             |             |
| 470.0     | 0.5       | 0.5        |            |            |            |            |            |            |            |             |             |
| 560.0     | 0.5       | 0.5        |            |            |            |            |            |            |            |             |             |
| 680.0     | 0.3       |            |            |            |            |            |            |            |            |             |             |
| 820.0     | 0.3       |            |            |            |            |            |            |            |            |             |             |
| 1000.0    | 0.12      |            |            |            |            |            |            |            |            |             |             |
| 1200.0    | 0.12      |            |            |            |            |            |            |            |            |             |             |

#### T110 Herm Seal LOW ESR (OHMS) at 100 kHz @ +25° C

The ESR values provided below may be ordered using  
KEMET Customer Specification 2864.

| Cap<br>μF | 6<br>Volt | 10<br>Volt | 15<br>Volt | 20<br>Volt | 35<br>Volt | 50<br>Volt |
|-----------|-----------|------------|------------|------------|------------|------------|
| 5.6       |           |            |            |            |            | 0.300      |
| 6.8       |           |            |            |            |            | 0.275      |
| 8.2       |           |            |            |            | 0.250      | 0.250      |
| 10.0      |           |            |            |            | 0.230      | 0.230      |
| 12.0      |           |            |            |            | 0.210      | 0.210      |
| 15.0      |           |            |            |            | 0.190      | 0.190      |
| 18.0      |           |            |            |            | 0.175      | 0.175      |
| 22.0      |           |            |            |            | 0.160      | 0.160      |
| 27.0      |           |            |            | 0.145      | 0.145      |            |
| 33.0      |           |            |            | 0.130      | 0.130      |            |
| 39.0      |           |            |            | 0.120      | 0.120      |            |
| 47.0      |           |            |            | 0.110      | 0.110      |            |
| 56.0      |           |            | 0.100      | 0.100      |            |            |
| 68.0      |           |            | 0.095      | 0.095      |            |            |
| 82.0      |           | 0.085      | 0.085      | 0.085      |            |            |
| 100.0     |           | 0.075      | 0.075      | 0.075      |            |            |
| 120.0     |           | 0.070      | 0.070      |            |            |            |
| 150.0     | 0.065     | 0.065      |            |            |            |            |
| 180.0     | 0.060     | 0.060      |            |            |            |            |
| 220.0     | 0.055     | 0.055      |            |            |            |            |
| 270.0     | 0.050     |            |            |            |            |            |
| 330.0     | 0.045     |            |            |            |            |            |

Primarily designed for use in tuned low frequency circuits, phasing low voltage AC motors, servo systems and other applications where reversal of polarity is a primary consideration. The T111 unit consists of two polar T110 Series hermetically sealed tantalum capacitors, electrically and mechanically connected back-to-back and supported by an outer

corrosion-resistant metal sleeve. They exhibit comparable electrical and performance characteristics of T110 Series. Available in capacitance values ranging from .0023 to 160  $\mu\text{F}$  in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances in working voltages from 6 to 100 VDC at  $+85^\circ\text{C}$ . Also, the following table includes M39003/4 QPL Product.

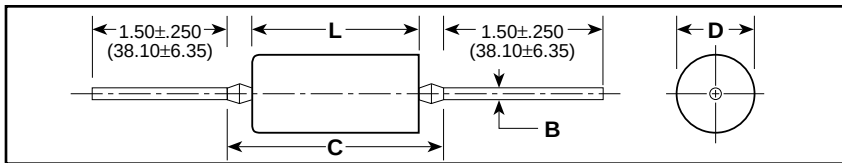
### DIMENSIONS — INCHES & (MILLIMETERS)

### MARKING INFORMATION\* A, B, C & D CASES

| CASE SIZE | B<br>$\pm 0.002$ ( $\pm .05$ ) | UNINSULATED                    |                                | INSULATED                                             |                                | C<br>MAX.     |
|-----------|--------------------------------|--------------------------------|--------------------------------|-------------------------------------------------------|--------------------------------|---------------|
|           |                                | D<br>$\pm 0.010$ ( $\pm .25$ ) | L<br>$\pm 0.031$ ( $\pm .79$ ) | D<br>$\pm 0.010$ ( $\pm .25$ )<br>$-0.015$ ( $-.38$ ) | L<br>$\pm 0.031$ ( $\pm .79$ ) |               |
| A         | 0.020 (.51)                    | 0.147 (3.73)                   | 0.565 (14.35)                  | 0.161 (4.09)                                          | 0.575 (14.61)                  | 0.750 (19.05) |
| B         | 0.020 (.51)                    | 0.194 (4.93)                   | 0.916 (23.27)                  | 0.207 (5.26)                                          | 0.955 (24.26)                  | 1.130 (28.70) |
| C         | 0.025 (.64)                    | 0.300 (7.62)                   | 1.340 (34.04)                  | 0.314 (7.98)                                          | 1.350 (34.29)                  | 1.525 (38.74) |
| D         | 0.025 (.64)                    | 0.362 (9.19)                   | 1.540 (39.12)                  | 0.376 (9.55)                                          | 1.550 (39.37)                  | 1.725 (43.82) |

|                   |                                                                  |
|-------------------|------------------------------------------------------------------|
| K 10%             | — Manufacturer's Classification and Tolerance                    |
| 6R0 $\mu\text{F}$ | — Normal Capacitance — ( $\mu\text{F}$ ) ("R" indicates decimal) |
| 20V               | — Voltage                                                        |
| 0325AB            | — Date Code and Batch Code                                       |

### CAPACITOR OUTLINE DRAWINGS



\* For Military Marking, see page 4.

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                               | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T111 SERIES    |                                    |                                                        | MIL-PRF-39003 (CSR91) CAPACITORS                          |            |             |              |            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|-------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|------------|-------------|--------------|------------------|------------------------------------------------|
|                                                 |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |            |             |              |                  |                                                |
|                                                 |              |                                |                      |                                    |                                                        | MIL-PRF-39003/4C<br>EXPONENTIAL                           |            |             |              |            |             |              |                  |                                                |
|                                                 |              |                                |                      |                                    |                                                        | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(1.0) | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C  |              |                                |                      |                                    |                                                        |                                                           |            |             |              |            |             |              |                  |                                                |
| 2.8                                             | A            | 10                             | T111A285K006AS       | 0.3                                | 4                                                      | 0221                                                      | 0441       | 0661        | 0881         | 3001       | 4001        | 5001         | T213A285K006(1)S |                                                |
| 3.4                                             | A            | 10                             | T111A345K006AS       | 0.3                                | 6                                                      | 0222                                                      | 0442       | 0662        | 0882         | 3002       | 4002        | 5002         | T213A345K006(1)S |                                                |
| 3.4                                             | A            | 20                             | T111A345M006AS       | 0.3                                | 6                                                      | 0223                                                      | 0443       | 0663        | 0883         | 3003       | 4003        | 5003         | T213A345M006(1)S |                                                |
| 23.0                                            | B            | 10                             | T111B236K006AS       | 1.5                                | 6                                                      | 0224                                                      | 0444       | 0664        | 0884         | 3004       | 4004        | 5004         | T213B236K006(1)S |                                                |
| 23.0                                            | B            | 20                             | T111B236M006AS       | 1.5                                | 6                                                      | 0225                                                      | 0445       | 0665        | 0885         | 3005       | 4005        | 5005         | T213B236M006(1)S |                                                |
| 28.0                                            | B            | 10                             | T111B286K006AS       | 1.5                                | 6                                                      | 0226                                                      | 0446       | 0666        | 0886         | 3006       | 4006        | 5006         | T213B286K006(1)S |                                                |
| 75.0                                            | C            | 10                             | T111C756K006AS       | 4.5                                | 6                                                      | 0227                                                      | 0447       | 0667        | 0887         | 3007       | 4007        | 5007         | T213C756K006(1)S |                                                |
| 75.0                                            | C            | 20                             | T111C756M006AS       | 4.5                                | 6                                                      | 0228                                                      | 0448       | 0668        | 0888         | 3008       | 4008        | 5008         | T213C756M006(1)S |                                                |
| 90.0                                            | C            | 10                             | T111C906K006AS       | 4.5                                | 6                                                      | 0229                                                      | 0449       | 0669        | 0889         | 3009       | 4009        | 5009         | T213C906K006(1)S |                                                |
| 90.0                                            | C            | 20                             | T111C906M006AS       | 5.5                                | 6                                                      | 0230                                                      | 0450       | 0670        | 0890         |            |             |              | T213C906M006(1)S |                                                |
| 130.0                                           | D            | 10                             | T111D137K006AS       | 6.0                                | 8                                                      | 0231                                                      | 0451       | 0671        | 0891         | 3010       | 4010        | 5010         | T213D137K006(1)S |                                                |
| 130.0                                           | D            | 20                             | T111D137M006AS       | 6.0                                | 8                                                      | 0232                                                      | 0452       | 0672        | 0892         |            |             |              | T213D137M006(1)S |                                                |
| 160.0                                           | D            | 10                             | T111D167K006AS       | 7.5                                | 8                                                      | 0233                                                      | 0453       | 0673        | 0893         | 3011       | 4011        | 5011         | T213D167K006(1)S |                                                |
| 160.0                                           | D            | 20                             | T111D167M006AS       | 7.5                                | 8                                                      | 0234                                                      | 0454       | 0674        | 0894         | 3012       | 4012        | 5012         | T213D167M006(1)S |                                                |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                        |                                                           |            |             |              |            |             |              |                  |                                                |
| 1.9                                             | A            | 10                             | T111A195K010AS       | 0.3                                | 4                                                      | 0235                                                      | 0455       | 0675        | 0895         | 3013       | 4013        | 5013         | T213A195K010(1)S |                                                |
| 2.3                                             | A            | 10                             | T111A235K010AS       | 0.4                                | 4                                                      | 0236                                                      | 0456       | 0676        | 0896         | 3014       | 4014        | 5014         | T213A235K010(1)S |                                                |
| 2.3                                             | A            | 20                             | T111A235M010AS       | 0.4                                | 4                                                      | 0237                                                      | 0457       | 0677        | 0897         | 3015       | 4015        | 5015         | T213A235M010(1)S |                                                |
| 13.0                                            | B            | 10                             | T111B136K010AS       | 2.0                                | 6                                                      | 0238                                                      | 0458       | 0678        | 0898         | 3016       | 4016        | 5016         | T213B136K010(1)S |                                                |
| 16.0                                            | B            | 10                             | T111B166K010AS       | 2.0                                | 6                                                      | 0239                                                      | 0459       | 0679        | 0899         | 3017       | 4017        | 5017         | T213B166K010(1)S |                                                |
| 16.0                                            | B            | 20                             | T111B166M010AS       | 2.0                                | 6                                                      | 0240                                                      | 0460       | 0680        | 0900         | 3018       | 4018        | 5018         | T213B166M010(1)S |                                                |
| 19.0                                            | B            | 10                             | T111B196K010AS       | 2.0                                | 6                                                      | 0241                                                      | 0461       | 0681        | 0901         | 3019       | 4019        | 5019         | T213B196K010(1)S |                                                |
| 41.0                                            | C            | 10                             | T111C416K010AS       | 3.0                                | 6                                                      | 0242                                                      | 0462       | 0682        | 0902         | 3020       | 4020        | 5020         | T213C416K010(1)S |                                                |
| 50.0                                            | C            | 10                             | T111C506K010AS       | 5.0                                | 6                                                      | 0243                                                      | 0463       | 0683        | 0903         | 3021       | 4021        | 5021         | T213C506K010(1)S |                                                |
| 50.0                                            | C            | 20                             | T111C506M010AS       | 5.0                                | 6                                                      | 0244                                                      | 0464       | 0684        | 0904         | 3022       | 4022        | 5022         | T213C506M010(1)S |                                                |
| 60.0                                            | C            | 10                             | T111C606K010AS       | 6.0                                | 6                                                      | 0245                                                      | 0465       | 0685        | 0905         | 3023       | 4023        | 5023         | T213C606K010(1)S |                                                |
| 60.0                                            | C            | 20                             | T111C606M010AS       | 6.0                                | 6                                                      | 0246                                                      | 0466       | 0686        | 0906         |            |             |              | T213C606M010(1)S |                                                |
| 90.0                                            | D            | 10                             | T111D906K010AS       | 9.0                                | 6                                                      | 0247                                                      | 0467       | 0687        | 0907         | 3024       | 4024        | 5024         | T213D906K010(1)S |                                                |
| 110.0                                           | D            | 10                             | T111D117K010AS       | 10.0                               | 8                                                      | 0248                                                      | 0468       | 0688        | 0908         | 3025       | 4025        | 5025         | T213D117K010(1)S |                                                |
| 110.0                                           | D            | 20                             | T111D117M010AS       | 10.0                               | 8                                                      | 0249                                                      | 0469       | 0689        | 0909         | 3026       | 4026        | 5026         | T213D117M010(1)S |                                                |

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6.

\*For ordering information see page 4 (military) and page 6.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T111 SERIES    |                                    |                                                        | MIL-PRF-39003 (CSR91) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                  |              |                                |                      |                                    |                                                        | MIL-PRF-39003/4C<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/4C<br>GRADED |             |              |                  |                                                |
|                                                  |              |                                |                      |                                    |                                                        | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.3                                              | A            | 10                             | T111A135K015AS       | 0.3                                | 4                                                      | 0250                                                      | 0470       | 0690        | 0910         | 3027                       | 4027        | 5027         | T213A135K015(1)S |                                                |
| 1.6                                              | A            | 10                             | T111A165K015AS       | 0.4                                | 4                                                      | 0251                                                      | 0471       | 0691        | 0911         | 3028                       | 4028        | 5028         | T213A165K015(1)S |                                                |
| 1.6                                              | A            | 20                             | T111A165M015AS       | 0.4                                | 4                                                      | 0252                                                      | 0472       | 0692        | 0912         | 3029                       | 4029        | 5029         | T213A165M015(1)S |                                                |
| 9.0                                              | B            | 10                             | T111B905K015AS       | 2.0                                | 6                                                      | 0253                                                      | 0473       | 0693        | 0913         | 3030                       | 4030        | 5030         | T213B905K015(1)S |                                                |
| 11.0                                             | B            | 10                             | T111B116K015AS       | 2.0                                | 6                                                      | 0254                                                      | 0474       | 0694        | 0914         | 3031                       | 4031        | 5031         | T213B116K015(1)S |                                                |
| 11.0                                             | B            | 20                             | T111B116M015AS       | 2.0                                | 6                                                      | 0255                                                      | 0475       | 0695        | 0915         | 3032                       | 4032        | 5032         | T213B116M015(1)S |                                                |
| 28.0                                             | C            | 10                             | T111C286K015AS       | 4.0                                | 6                                                      | 0256                                                      | 0476       | 0696        | 0916         | 3033                       | 4033        | 5033         | T213C286K015(1)S |                                                |
| 34.0                                             | C            | 10                             | T111C346K015AS       | 5.0                                | 6                                                      | 0257                                                      | 0477       | 0697        | 0917         | 3034                       | 4034        | 5034         | T213C346K015(1)S |                                                |
| 34.0                                             | C            | 20                             | T111C346M015AS       | 5.0                                | 6                                                      | 0258                                                      | 0478       | 0698        | 0918         | 3035                       | 4035        | 5035         | T213C346M015(1)S |                                                |
| 60.0                                             | D            | 10                             | T111D606K015AS       | 6.0                                | 6                                                      | 0259                                                      | 0479       | 0699        | 0919         | 3036                       | 4036        | 5036         | T213D606K015(1)S |                                                |
| 75.0                                             | D            | 10                             | T111D756K015AS       | 10.0                               | 6                                                      | 0260                                                      | 0480       | 0700        | 0920         | 3037                       | 4037        | 5037         | T213D756K015(1)S |                                                |
| 75.0                                             | D            | 20                             | T111D756M015AS       | 10.0                               | 6                                                      | 0261                                                      | 0481       | 0701        | 0921         | 3038                       | 4038        | 5038         | T213D756M015(1)S |                                                |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.6                                              | A            | 10                             | T111A604K020AS       | 0.3                                | 4                                                      | 0262                                                      | 0482       | 0702        | 0922         | 3039                       | 4039        | 5039         | T213A604K020(1)S |                                                |
| 0.75                                             | A            | 10                             | T111A754K020AS       | 0.3                                | 4                                                      | 0263                                                      | 0483       | 0703        | 0923         | 3040                       | 4040        | 5040         | T213A754K020(1)S |                                                |
| 0.75                                             | A            | 20                             | T111A754M020AS       | 0.3                                | 4                                                      | 0264                                                      | 0484       | 0704        | 0924         | 3041                       | 4041        | 5041         | T213A754M020(1)S |                                                |
| 0.9                                              | A            | 10                             | T111A904K020AS       | 0.3                                | 4                                                      | 0265                                                      | 0485       | 0705        | 0925         | 3042                       | 4042        | 5042         | T213A904K020(1)S |                                                |
| 1.1                                              | A            | 10                             | T111A115K020AS       | 0.4                                | 4                                                      | 0266                                                      | 0486       | 0706        | 0926         | 3043                       | 4043        | 5043         | T213A115K020(1)S |                                                |
| 1.1                                              | A            | 20                             | T111A115M020AS       | 0.4                                | 4                                                      | 0267                                                      | 0487       | 0707        | 0927         | 3044                       | 4044        | 5044         | T213A115M020(1)S |                                                |
| 4.1                                              | B            | 10                             | T111B415K020AS       | 1.0                                | 6                                                      | 0268                                                      | 0488       | 0708        | 0928         | 3045                       | 4045        | 5045         | T213B415K020(1)S |                                                |
| 5.0                                              | B            | 10                             | T111B505K020AS       | 1.0                                | 6                                                      | 0269                                                      | 0489       | 0709        | 0929         | 3046                       | 4046        | 5046         | T213B505K020(1)S |                                                |
| 5.0                                              | B            | 20                             | T111B505M020AS       | 1.0                                | 6                                                      | 0270                                                      | 0490       | 0710        | 0930         | 3047                       | 4047        | 5047         | T213B505M020(1)S |                                                |
| 6.0                                              | B            | 10                             | T111B605K020AS       | 1.0                                | 6                                                      | 0271                                                      | 0491       | 0711        | 0931         | 3048                       | 4048        | 5048         | T213B605K020(1)S |                                                |
| 7.5                                              | B            | 10                             | T111B755K020AS       | 2.0                                | 6                                                      | 0272                                                      | 0492       | 0712        | 0932         | 3049                       | 4049        | 5049         | T213B755K020(1)S |                                                |
| 7.5                                              | B            | 20                             | T111B755M020AS       | 2.0                                | 6                                                      | 0273                                                      | 0493       | 0713        | 0933         | 3050                       | 4050        | 5050         | T213B755M020(1)S |                                                |
| 13.0                                             | C            | 10                             | T111C136K020AS       | 2.5                                | 6                                                      | 0274                                                      | 0494       | 0714        | 0934         | 3051                       | 4051        | 5051         | T213C136K020(1)S |                                                |
| 16.0                                             | C            | 10                             | T111C166K020AS       | 3.0                                | 6                                                      | 0275                                                      | 0495       | 0715        | 0935         | 3052                       | 4052        | 5052         | T213C166K020(1)S |                                                |
| 16.0                                             | C            | 20                             | T111C166M020AS       | 3.0                                | 6                                                      | 0276                                                      | 0496       | 0716        | 0936         | 3053                       | 4053        | 5053         | T213C166M020(1)S |                                                |
| 19.0                                             | C            | 10                             | T111C196K020AS       | 3.0                                | 6                                                      | 0277                                                      | 0497       | 0717        | 0937         | 3054                       | 4054        | 5054         | T213C196K020(1)S |                                                |
| 23.0                                             | C            | 10                             | T111C236K020AS       | 4.5                                | 6                                                      | 0278                                                      | 0498       | 0718        | 0938         | 3055                       | 4055        | 5055         | T213C236K020(1)S |                                                |
| 23.0                                             | C            | 20                             | T111C236M020AS       | 4.5                                | 6                                                      | 0279                                                      | 0499       | 0719        | 0939         | 3056                       | 4056        | 5056         | T213C236M020(1)S |                                                |
| 28.0                                             | D            | 10                             | T111D286K020AS       | 5.5                                | 6                                                      | 0280                                                      | 0500       | 0720        | 0940         | 3057                       | 4057        | 5057         | T213D286K020(1)S |                                                |
| 34.0                                             | D            | 10                             | T111D346K020AS       | 6.0                                | 6                                                      | 0281                                                      | 0501       | 0721        | 0941         | 3058                       | 4058        | 5058         | T213D346K020(1)S |                                                |
| 34.0                                             | D            | 20                             | T111D346M020AS       | 6.0                                | 6                                                      | 0282                                                      | 0502       | 0722        | 0942         | 3059                       | 4059        | 5059         | T213D346M020(1)S |                                                |
| 41.0                                             | D            | 10                             | T111D416K020AS       | 6.0                                | 6                                                      | 0283                                                      | 0503       | 0723        | 0943         | 3060                       | 4060        | 5060         | T213D416K020(1)S |                                                |
| 50.0                                             | D            | 10                             | T111D506K020AS       | 10.0                               | 6                                                      | 0284                                                      | 0504       | 0724        | 0944         | 3061                       | 4061        | 5061         | T213D506K020(1)S |                                                |
| 50.0                                             | D            | 20                             | T111D506M020AS       | 10.0                               | 6                                                      | 0285                                                      | 0505       | 0725        | 0945         | 3062                       | 4062        | 5062         | T213D506M020(1)S |                                                |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.8                                              | B            | 10                             | T111B285K035AS       | 1.0                                | 4                                                      | 0289                                                      | 0509       | 0729        | 0949         | 3063                       | 4063        | 5063         | T213B285K035(1)S |                                                |
| 3.4                                              | B            | 10                             | T111B345K035AS       | 1.5                                | 4                                                      | 0290                                                      | 0510       | 0730        | 0950         | 3064                       | 4064        | 5064         | T213B345K035(1)S |                                                |
| 3.4                                              | B            | 20                             | T111B345M035AS       | 1.5                                | 4                                                      | 0291                                                      | 0511       | 0731        | 0951         | 3065                       | 4065        | 5065         | T213B345M035(1)S |                                                |
| 11.0                                             | C            | 10                             | T111C116K035AS       | 4.0                                | 4                                                      | 0292                                                      | 0512       | 0732        | 0952         | 3066                       | 4066        | 5066         | T213C116K035(1)S |                                                |
| 11.0                                             | C            | 20                             | T111C116M035AS       | 4.0                                | 4                                                      | 0293                                                      | 0513       | 0733        | 0953         | 3067                       | 4067        | 5067         | T213C116M035(1)S |                                                |
| 13.0                                             | D            | 10                             | T111D136K035AS       | 4.5                                | 4                                                      | 0294                                                      | 0514       | 0734        | 0954         | 3068                       | 4068        | 5068         | T213D136K035(1)S |                                                |
| 16.0                                             | D            | 10                             | T111D166K035AS       | 5.5                                | 4                                                      | 0295                                                      | 0515       | 0735        | 0955         | 3069                       | 4069        | 5069         | T213D166K035(1)S |                                                |
| 16.0                                             | D            | 20                             | T111D166M035AS       | 5.5                                | 4                                                      | 0296                                                      | 0516       | 0736        | 0956         | 3070                       | 4070        | 5070         | T213D166M035(1)S |                                                |
| 19.0                                             | D            | 10                             | T111D196K035AS       | 6.0                                | 4                                                      | 0297                                                      | 0517       | 0737        | 0957         | 3071                       | 4071        | 5071         | T213D196K035(1)S |                                                |
| 23.0                                             | D            | 10                             | T111D236K035AS       | 8.0                                | 4                                                      | 0298                                                      | 0518       | 0738        | 0958         | 3072                       | 4072        | 5072         | T213D236K035(1)S |                                                |
| 23.0                                             | D            | 20                             | T111D236M035AS       | 8.0                                | 4                                                      | 0299                                                      | 0519       | 0739        | 0959         | 3073                       | 4073        | 5073         | T213D236M035(1)S |                                                |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                  |                                                |
| 0.0023                                           | A            | 10                             | T111A232K050AS       | 0.1                                | 2                                                      | 1171                                                      | 1241       | 1311        | 1381         | 3074                       | 4074        | 5074         | T213A232K050(1)S |                                                |
| 0.0023                                           | A            | 20                             | T111A232M050AS       | 0.1                                | 2                                                      | 1172                                                      | 1242       | 1312        | 1382         | 3075                       | 4075        | 5075         | T213A232M050(1)S |                                                |
| 0.0028                                           | A            | 10                             | T111A282K050AS       | 0.1                                | 2                                                      | 1173                                                      | 1243       | 1313        | 1383         | 3076                       | 4076        | 5076         | T213A282K050(1)S |                                                |
| 0.0034                                           | A            | 10                             | T111A342K050AS       | 0.1                                | 2                                                      | 1174                                                      | 1244       | 1314        | 1384         | 3077                       | 4077        | 5077         | T213A342K050(1)S |                                                |
| 0.0034                                           | A            | 20                             | T111A342M050AS       | 0.1                                | 2                                                      | 1175                                                      | 1245       | 1315        | 1385         | 3078                       | 4078        | 5078         | T213A342M050(1)S |                                                |
| 0.0041                                           | A            | 10                             | T111A412K050AS       | 0.1                                | 2                                                      | 1176                                                      | 1246       | 1316        | 1386         | 3079                       | 4079        | 5079         | T213A412K050(1)S |                                                |
| 0.005                                            | A            | 10                             | T111A502K050AS       | 0.1                                | 2                                                      | 1177                                                      | 1247       | 1317        | 1387         | 3080                       | 4080        | 5080         | T213A502K050(1)S |                                                |
| 0.005                                            | A            | 20                             | T111A502M050AS       | 0.1                                | 2                                                      | 1178                                                      | 1248       | 1318        | 1388         | 3081                       | 4081        | 5081         | T213A502M050(1)S |                                                |
| 0.006                                            | A            | 10                             | T111A602K050AS       | 0.1                                | 2                                                      | 1179                                                      | 1249       | 1319        | 1389         | 3082                       | 4082        | 5082         | T213A602K050(1)S |                                                |
| 0.0075                                           | A            | 10                             | T111A752K050AS       | 0.1                                | 2                                                      | 1180                                                      | 1250       | 1320        | 1390         | 3083                       | 4083        | 5083         | T213A752K050(1)S |                                                |
| 0.0075                                           | A            | 20                             | T111A752M050AS       | 0.1                                | 2                                                      | 1181                                                      | 1251       | 1321        | 1391         | 3084                       | 4084        | 5084         | T213A752M050(1)S |                                                |
| 0.009                                            | A            | 10                             | T111A902K050AS       | 0.1                                | 2                                                      | 1182                                                      | 1252       | 1322        | 1392         | 3085                       | 4085        | 5085         | T213A902K050(1)S |                                                |
| 0.011                                            | A            | 10                             | T111A113K050AS       | 0.1                                | 2                                                      | 1183                                                      | 1253       | 1323        | 1393         | 3086                       | 4086        | 5086         | T213A113K050(1)S |                                                |
| 0.011                                            | A            | 20                             | T111A113M050AS       | 0.1                                | 2                                                      | 1184                                                      | 1254       | 1324        | 1394         | 3087                       | 4087        | 5087         | T213A113M050(1)S |                                                |
| 0.013                                            | A            | 10                             | T111A133K050AS       | 0.1                                | 2                                                      | 1185                                                      | 1255       | 1325        | 1395         | 3088                       | 4088        | 5088         | T213A133K050(1)S |                                                |
| 0.016                                            | A            | 10                             | T111A163K050AS       | 0.1                                | 2                                                      | 1186                                                      | 1256       | 1326        | 1396         | 3089                       | 4089        | 5089         | T213A163K050(1)S |                                                |

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6.





# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

T111 SERIES — NON-POLAR & T213 (CSR91)

## RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T111 SERIES    |                                    |                                                        | MIL-PRF-39003 (CSR91) CAPACITORS                          |            |             |              |                            |             |              |                                                |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIP-<br>ATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|                                                           |              |                                |                      |                                    |                                                        | MIL-PRF-39003/4C<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/4C<br>GRADED |             |              |                                                |
|                                                           |              |                                |                      |                                    |                                                        | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                                                |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                                                |
| 0.016                                                     | A            | 20                             | T111A163M050AS       | 0.1                                | 2                                                      | 1187                                                      | 1257       | 1327        | 1397         | 3090                       | 4090        | 5090         | T213A163M050(1)S                               |
| 0.019                                                     | A            | 10                             | T111A193K050AS       | 0.1                                | 2                                                      | 1188                                                      | 1258       | 1328        | 1398         | 3091                       | 4091        | 5091         | T213A193K050(1)S                               |
| 0.023                                                     | A            | 10                             | T111A233K050AS       | 0.1                                | 2                                                      | 1189                                                      | 1259       | 1329        | 1399         | 3092                       | 4092        | 5092         | T213A233K050(1)S                               |
| 0.023                                                     | A            | 20                             | T111A233M050AS       | 0.1                                | 2                                                      | 1190                                                      | 1260       | 1330        | 1400         | 3093                       | 4093        | 5093         | T213A233M050(1)S                               |
| 0.028                                                     | A            | 10                             | T111A283K050AS       | 0.1                                | 2                                                      | 1191                                                      | 1261       | 1331        | 1401         | 3094                       | 4094        | 5094         | T213A283K050(1)S                               |
| 0.034                                                     | A            | 10                             | T111A343K050AS       | 0.1                                | 2                                                      | 1192                                                      | 1262       | 1332        | 1402         | 3095                       | 4095        | 5095         | T213A343K050(1)S                               |
| 0.034                                                     | A            | 20                             | T111A343M050AS       | 0.1                                | 2                                                      | 1193                                                      | 1263       | 1333        | 1403         | 3096                       | 4096        | 5096         | T213A343M050(1)S                               |
| 0.041                                                     | A            | 10                             | T111A413K050AS       | 0.1                                | 2                                                      | 1194                                                      | 1264       | 1334        | 1404         | 3097                       | 4097        | 5097         | T213A413K050(1)S                               |
| 0.05                                                      | A            | 10                             | T111A503K050AS       | 0.3                                | 2                                                      | 1195                                                      | 1265       | 1335        | 1405         | 3098                       | 4098        | 5098         | T213A503K050(1)S                               |
| 0.05                                                      | A            | 20                             | T111A503M050AS       | 0.3                                | 2                                                      | 1196                                                      | 1266       | 1336        | 1406         | 3099                       | 4099        | 5099         | T213A503M050(1)S                               |
| 0.06                                                      | A            | 10                             | T111A603K050AS       | 0.3                                | 2                                                      | 1197                                                      | 1267       | 1337        | 1407         | 3100                       | 4100        | 5100         | T213A603K050(1)S                               |
| 0.075                                                     | A            | 10                             | T111A753K050AS       | 0.3                                | 2                                                      | 1198                                                      | 1268       | 1338        | 1408         | 3101                       | 4101        | 5101         | T213A753K050(1)S                               |
| 0.075                                                     | A            | 20                             | T111A753M050AS       | 0.3                                | 2                                                      | 1199                                                      | 1269       | 1339        | 1409         | 3102                       | 4102        | 5102         | T213A753M050(1)S                               |
| 0.09                                                      | A            | 10                             | T111A903K050AS       | 0.3                                | 2                                                      | 1200                                                      | 1270       | 1340        | 1410         | 3103                       | 4103        | 5103         | T213A903K050(1)S                               |
| 0.11                                                      | A            | 10                             | T111A114K050AS       | 0.3                                | 2                                                      | 1201                                                      | 1271       | 1341        | 1411         | 3104                       | 4104        | 5104         | T213A114K050(1)S                               |
| 0.11                                                      | A            | 20                             | T111A114M050AS       | 0.3                                | 2                                                      | 1202                                                      | 1272       | 1342        | 1412         | 3105                       | 4105        | 5105         | T213A114M050(1)S                               |
| 0.13                                                      | A            | 10                             | T111A134K050AS       | 0.3                                | 2                                                      | 1203                                                      | 1273       | 1343        | 1413         | 3106                       | 4106        | 5106         | T213A134K050(1)S                               |
| 0.16                                                      | A            | 10                             | T111A164K050AS       | 0.3                                | 2                                                      | 1204                                                      | 1274       | 1344        | 1414         | 3107                       | 4107        | 5107         | T213A164K050(1)S                               |
| 0.16                                                      | A            | 20                             | T111A164M050AS       | 0.3                                | 2                                                      | 1205                                                      | 1275       | 1345        | 1415         | 3108                       | 4108        | 5108         | T213A164M050(1)S                               |
| 0.19                                                      | A            | 10                             | T111A194K050AS       | 0.3                                | 2                                                      | 1206                                                      | 1276       | 1346        | 1416         | 3109                       | 4109        | 5109         | T213A194K050(1)S                               |
| 0.23                                                      | A            | 10                             | T111A234K050AS       | 0.3                                | 2                                                      | 1207                                                      | 1277       | 1347        | 1417         | 3110                       | 4110        | 5110         | T213A234K050(1)S                               |
| 0.23                                                      | A            | 20                             | T111A234M050AS       | 0.3                                | 2                                                      | 1208                                                      | 1278       | 1348        | 1418         | 3111                       | 4111        | 5111         | T213A234M050(1)S                               |
| 0.28                                                      | A            | 10                             | T111A284K050AS       | 0.3                                | 2                                                      | 1209                                                      | 1279       | 1349        | 1419         | 3112                       | 4112        | 5112         | T213A284K050(1)S                               |
| 0.34                                                      | A            | 10                             | T111A344K050AS       | 0.3                                | 2                                                      | 1210                                                      | 1280       | 1350        | 1420         | 3113                       | 4113        | 5113         | T213A344K050(1)S                               |
| 0.34                                                      | A            | 20                             | T111A344M050AS       | 0.3                                | 2                                                      | 1211                                                      | 1281       | 1351        | 1421         | 3114                       | 4114        | 5114         | T213A344M050(1)S                               |
| 0.41                                                      | A            | 10                             | T111A414K050AS       | 0.3                                | 2                                                      | 0300                                                      | 0520       | 0740        | 0960         | 3115                       | 4115        | 5115         | T213A414K050(1)S                               |
| 0.5                                                       | A            | 10                             | T111A504K050AS       | 0.4                                | 2                                                      | 0301                                                      | 0521       | 0741        | 0961         | 3116                       | 4116        | 5116         | T213A504K050(1)S                               |
| 0.5                                                       | A            | 20                             | T111A504M050AS       | 0.4                                | 2                                                      | 0302                                                      | 0522       | 0742        | 0962         | 3117                       | 4117        | 5117         | T213A504M050(1)S                               |
| 0.6                                                       | B            | 10                             | T111B604K050AS       | 0.4                                | 4                                                      | 1212                                                      | 1282       | 1352        | 1422         | 3118                       | 4118        | 5118         | T213B604K050(1)S                               |
| 0.6                                                       | B            | 20                             | T111B604M050AS       | 0.4                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 0.75                                                      | B            | 10                             | T111B754K050AS       | 0.5                                | 4                                                      | 2001                                                      | 2101       | 2201        | 2301         | 3119                       | 4119        | 5119         | T213B754K050(1)S                               |
| 0.75                                                      | B            | 20                             | T111B754M050AS       | 0.5                                | 4                                                      | 2002                                                      | 2102       | 2202        | 2302         | 3120                       | 4120        | 5120         | T213B754M050(1)S                               |
| 0.9                                                       | B            | 10                             | T111B904K050AS       | 0.5                                | 4                                                      | 1215                                                      | 1285       | 1355        | 1425         | 3121                       | 4121        | 5121         | T213B904K050(1)S                               |
| 0.9                                                       | B            | 20                             | T111B904M050AS       | 0.5                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 1.1                                                       | B            | 10                             | T111B115K050AS       | 0.8                                | 4                                                      | 1216                                                      | 1286       | 1356        | 1426         | 3122                       | 4122        | 5122         | T213B115K050(1)S                               |
| 1.1                                                       | B            | 20                             | T111B115M050AS       | 0.8                                | 4                                                      | 1217                                                      | 1287       | 1357        | 1427         | 3123                       | 4123        | 5123         | T213B115M050(1)S                               |
| 1.3                                                       | B            | 10                             | T111B135K050AS       | 1.0                                | 4                                                      | 1218                                                      | 1288       | 1358        | 1428         | 3124                       | 4124        | 5124         | T213B135K050(1)S                               |
| 1.3                                                       | B            | 20                             | T111B135M050AS       | 1.0                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 1.6                                                       | B            | 10                             | T111B165K050AS       | 1.2                                | 4                                                      | 1219                                                      | 1289       | 1359        | 1429         | 3125                       | 4125        | 5125         | T213B165K050(1)S                               |
| 1.6                                                       | B            | 20                             | T111B165M050AS       | 1.2                                | 4                                                      | 1220                                                      | 1290       | 1360        | 1430         | 3126                       | 4126        | 5126         | T213B165M050(1)S                               |
| 1.9                                                       | B            | 10                             | T111B195K050AS       | 1.5                                | 4                                                      | 1221                                                      | 1291       | 1361        | 1431         | 3127                       | 4127        | 5127         | T213B195K050(1)S                               |
| 1.9                                                       | B            | 20                             | T111B195M050AS       | 1.5                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 2.3                                                       | B            | 10                             | T111B235K050AS       | 1.7                                | 4                                                      | 1222                                                      | 1292       | 1362        | 1432         | 3128                       | 4128        | 5128         | T213B235K050(1)S                               |
| 2.3                                                       | B            | 20                             | T111B235M050AS       | 1.7                                | 4                                                      | 1223                                                      | 1293       | 1363        | 1433         | 3129                       | 4129        | 5129         | T213B235M050(1)S                               |
| 2.8                                                       | C            | 10                             | T111C285K050AS       | 2.2                                | 4                                                      | 1224                                                      | 1294       | 1364        | 1434         | 3130                       | 4130        | 5130         | T213C285K050(1)S                               |
| 2.8                                                       | C            | 20                             | T111C285M050AS       | 2.2                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 3.4                                                       | C            | 10                             | T111C345K050AS       | 2.2                                | 4                                                      | 1225                                                      | 1295       | 1365        | 1435         | 3131                       | 4131        | 5131         | T213C345K050(1)S                               |
| 3.4                                                       | C            | 20                             | T111C345M050AS       | 2.2                                | 4                                                      | 1226                                                      | 1296       | 1366        | 1436         | 3132                       | 4132        | 5132         | T213C345M050(1)S                               |
| 4.1                                                       | C            | 10                             | T111C415K050AS       | 2.5                                | 4                                                      | 1227                                                      | 1297       | 1367        | 1437         | 3133                       | 4133        | 5133         | T213C415K050(1)S                               |
| 4.1                                                       | C            | 20                             | T111C415M050AS       | 2.5                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 5.0                                                       | C            | 10                             | T111C505K050AS       | 2.5                                | 4                                                      | 1228                                                      | 1298       | 1368        | 1438         | 3134                       | 4134        | 5134         | T213C505K050(1)S                               |
| 5.0                                                       | C            | 20                             | T111C505M050AS       | 2.5                                | 4                                                      | 1229                                                      | 1299       | 1369        | 1439         | 3135                       | 4135        | 5135         | T213C505M050(1)S                               |
| 6.0                                                       | C            | 10                             | T111C605K050AS       | 3.0                                | 4                                                      | 0303                                                      | 0523       | 0743        | 0963         | 3136                       | 4136        | 5136         | T213C605K050(1)S                               |
| 6.0                                                       | C            | 20                             | T111C605M050AS       | 3.0                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 7.5                                                       | C            | 10                             | T111C755K050AS       | 4.1                                | 4                                                      | 0304                                                      | 0524       | 0744        | 0964         | 3137                       | 4137        | 5137         | T213C755K050(1)S                               |
| 7.5                                                       | C            | 20                             | T111C755M050AS       | 4.1                                | 4                                                      | 0305                                                      | 0525       | 0745        | 0965         | 3138                       | 4138        | 5138         | T213C755M050(1)S                               |
| 9.0                                                       | C            | 10                             | T111C905K050AS       | 4.5                                | 4                                                      | 0306                                                      | 0526       | 0746        | 0966         | 3139                       | 4139        | 5139         | T213C905K050(1)S                               |
| 9.0                                                       | C            | 20                             | T111C905M050AS       | 4.5                                | 4                                                      |                                                           |            |             |              |                            |             |              |                                                |
| 11.0                                                      | D            | 10                             | T111D116K050AS       | 5.5                                | 4                                                      | 0307                                                      | 0527       | 0747        | 0967         | 3140                       | 4140        | 5140         | T213D116K050(1)S                               |
| 11.0                                                      | D            | 20                             | T111D116M050AS       | 5.5                                | 4                                                      | 0308                                                      | 0528       | 0748        | 0968         | 3141                       | 4141        | 5141         | T213D116M050(1)S                               |
| 75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C          |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                                                |
| 0.34                                                      | A            | 10                             | T111A344K075AS       | 0.3                                | 2                                                      | 0309                                                      | 0529       | 0749        | 0969         | 3142                       | 4142        | 5142         | T213A344K075(1)S                               |
| 0.34                                                      | A            | 20                             | T111A344M075AS       | 0.3                                | 2                                                      | 0310                                                      | 0530       | 0750        | 0970         | 3143                       | 4143        | 5143         | T213A344M075(1)S                               |
| 0.41                                                      | B            | 10                             | T111B414K075AS       | 0.3                                | 2                                                      | 2008                                                      | 2108       | 2208        | 2308         | 3144                       | 4144        | 5144         | T213B414K075(1)S                               |
| 0.5                                                       | B            | 10                             | T111B504K075AS       | 0.4                                | 2                                                      | 2009                                                      | 2109       | 2209        | 2309         | 3145                       | 4145        | 5145         | T213B504K075(1)S                               |
| 0.5                                                       | B            | 20                             | T111B504M075AS       | 0.4                                | 2                                                      | 2010                                                      | 2110       | 2210        | 2310         | 3146                       | 4146        | 5146         | T213B504M075(1)S                               |
| 0.6                                                       | B            | 10                             | T111B604K075AS       | 0.4                                | 4                                                      | 2011                                                      | 2111       | 2211        | 2311         | 3147                       | 4147        | 5147         | T213B604K075(1)S                               |
| 0.75                                                      | B            | 10                             | T111B754K075AS       | 0.6                                | 4                                                      | 2012                                                      | 2112       | 2212        | 2312         | 3148                       | 4148        | 5148         | T213B754K075(1)S                               |
| 0.75                                                      | B            | 20                             | T111B754M075AS       | 0.6                                | 4                                                      | 2013                                                      | 2113       | 2213        | 2313         | 3149                       | 4149        | 5149         | T213B754M075(1)S                               |

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                         | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T111 SERIES    |                                    |                                                        | MIL-PRF-39003 (CSR91) CAPACITORS                          |            |             |              |                            |             |              |                                                |
|-----------------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------------------------------------|
|                                                           |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|                                                           |              |                                |                      |                                    |                                                        | MIL-PRF-39003/4C<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/4C<br>GRADED |             |              |                                                |
|                                                           |              |                                |                      |                                    |                                                        | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                                                |
| 75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C (Cont'd) |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                                                |
| 0.9                                                       | B            | 10                             | T111B904K075AS       | 0.7                                | 4                                                      | 2014                                                      | 2114       | 2214        | 2314         | 3150                       | 4150        | 5150         | T213B904K075(1)S                               |
| 1.1                                                       | B            | 10                             | T111B115K075AS       | 0.8                                | 4                                                      | 2015                                                      | 2115       | 2215        | 2315         | 3151                       | 4151        | 5151         | T213B115K075(1)S                               |
| 1.1                                                       | B            | 20                             | T111B115M075AS       | 0.8                                | 4                                                      | 2016                                                      | 2116       | 2216        | 2316         | 3152                       | 4152        | 5152         | T213B115M075(1)S                               |
| 1.3                                                       | B            | 10                             | T111B135K075AS       | 1.0                                | 4                                                      | 2017                                                      | 2117       | 2217        | 2317         | 3153                       | 4153        | 5153         | T213B135K075(1)S                               |
| 1.6                                                       | B            | 10                             | T111B165K075AS       | 1.2                                | 4                                                      | 0311                                                      | 0531       | 0751        | 0971         | 3154                       | 4154        | 5154         | T213B165K075(1)S                               |
| 1.6                                                       | B            | 20                             | T111B165M075AS       | 1.2                                | 4                                                      | 0312                                                      | 0532       | 0752        | 0972         | 3155                       | 4155        | 5155         | T213B165M075(1)S                               |
| 1.9                                                       | B            | 10                             | T111B195K075AS       | 1.5                                | 4                                                      | 0313                                                      | 0533       | 0753        | 0973         | 3156                       | 4156        | 5156         | T213B195K075(1)S                               |
| 2.3                                                       | C            | 10                             | T111C235K075AS       | 3.0                                | 4                                                      | 2003                                                      | 2103       | 2203        | 2303         | 3157                       | 4157        | 5157         | T213C235K075(1)S                               |
| 2.3                                                       | C            | 20                             | T111C235M075AS       | 3.0                                | 4                                                      | 2004                                                      | 2104       | 2204        | 2304         | 3158                       | 4158        | 5158         | T213C235M075(1)S                               |
| 2.8                                                       | C            | 10                             | T111C285K075AS       | 3.0                                | 4                                                      | 2005                                                      | 2105       | 2205        | 2305         | 3159                       | 4159        | 5159         | T213C285K075(1)S                               |
| 3.4                                                       | C            | 10                             | T111C345K075AS       | 5.0                                | 4                                                      | 2006                                                      | 2106       | 2206        | 2306         | 3160                       | 4160        | 5160         | T213C345K075(1)S                               |
| 3.4                                                       | C            | 20                             | T111C345M075AS       | 5.0                                | 4                                                      | 2007                                                      | 2107       | 2207        | 2307         | 3161                       | 4161        | 5161         | T213C345M075(1)S                               |
| 4.1                                                       | C            | 10                             | T111C415K075AS       | 5.0                                | 4                                                      | 0314                                                      | 0534       | 0754        | 0974         | 3162                       | 4162        | 5162         | T213C415K075(1)S                               |
| 5.0                                                       | C            | 10                             | T111C505K075AS       | 5.0                                | 4                                                      | 0315                                                      | 0535       | 0755        | 0975         | 3163                       | 4163        | 5163         | T213C505K075(1)S                               |
| 5.0                                                       | C            | 20                             | T111C505M075AS       | 5.0                                | 4                                                      | 0316                                                      | 0536       | 0756        | 0976         | 3164                       | 4164        | 5164         | T213C505M075(1)S                               |
| 6.0                                                       | D            | 10                             | T111D605K075AS       | 5.0                                | 4                                                      | 0317                                                      | 0537       | 0757        | 0977         | 3165                       | 4165        | 5165         | T213D605K075(1)S                               |
| 7.5                                                       | D            | 10                             | T111D755K075AS       | 7.0                                | 4                                                      | 0318                                                      | 0538       | 0758        | 0978         | 3166                       | 4166        | 5166         | T213D755K075(1)S                               |
| 7.5                                                       | D            | 20                             | T111D755M075AS       | 7.0                                | 4                                                      | 0319                                                      | 0539       | 0759        | 0979         | 3167                       | 4167        | 5167         | T213D755M075(1)S                               |
| 100 VOLT RATING AT 85°C — 67 VOLT RATING AT 125°C         |              |                                |                      |                                    |                                                        |                                                           |            |             |              |                            |             |              |                                                |
| 0.0023                                                    | A            | 10                             | T111A232K100AS       | 0.3                                | 2                                                      | 0320                                                      | 0540       | 0760        | 0980         | 3168                       | 4168        | *            | T213A232K100(1)S                               |
| 0.0023                                                    | A            | 20                             | T111A232M100AS       | 0.3                                | 2                                                      | 0321                                                      | 0541       | 0761        | 0981         | 3169                       | 4169        | *            | T213A232M100(1)S                               |
| 0.0028                                                    | A            | 10                             | T111A282K100AS       | 0.3                                | 2                                                      | 0322                                                      | 0542       | 0762        | 0982         | 3170                       | 4170        | *            | T213A282K100(1)S                               |
| 0.0034                                                    | A            | 10                             | T111A342K100AS       | 0.3                                | 2                                                      | 0323                                                      | 0543       | 0763        | 0983         | 3171                       | 4171        | *            | T213A342K100(1)S                               |
| 0.0034                                                    | A            | 20                             | T111A342M100AS       | 0.3                                | 2                                                      | 0324                                                      | 0544       | 0764        | 0984         | 3172                       | 4172        | *            | T213A342M100(1)S                               |
| 0.0041                                                    | A            | 10                             | T111A412K100AS       | 0.3                                | 2                                                      | 0325                                                      | 0545       | 0765        | 0985         | 3173                       | 4173        | *            | T213A412K100(1)S                               |
| 0.005                                                     | A            | 10                             | T111A502K100AS       | 0.3                                | 2                                                      | 0326                                                      | 0546       | 0766        | 0986         | 3174                       | 4174        | *            | T213A502K100(1)S                               |
| 0.005                                                     | A            | 20                             | T111A502M100AS       | 0.3                                | 2                                                      | 0327                                                      | 0547       | 0767        | 0987         | 3175                       | 4175        | *            | T213A502M100(1)S                               |
| 0.006                                                     | A            | 10                             | T111A602K100AS       | 0.3                                | 2                                                      | 0328                                                      | 0548       | 0768        | 0988         | 3176                       | 4176        | *            | T213A602K100(1)S                               |
| 0.0075                                                    | A            | 10                             | T111A752K100AS       | 0.3                                | 2                                                      | 0329                                                      | 0549       | 0769        | 0989         | 3177                       | 4177        | *            | T213A752K100(1)S                               |
| 0.0075                                                    | A            | 20                             | T111A752M100AS       | 0.3                                | 2                                                      | 0330                                                      | 0550       | 0770        | 0990         | 3178                       | 4178        | *            | T213A752M100(1)S                               |
| 0.009                                                     | A            | 10                             | T111A902K100AS       | 0.3                                | 2                                                      | 0331                                                      | 0551       | 0771        | 0991         | 3179                       | 4179        | *            | T213A902K100(1)S                               |
| 0.011                                                     | A            | 10                             | T111A113K100AS       | 0.3                                | 2                                                      | 0332                                                      | 0552       | 0772        | 0992         | 3180                       | 4180        | *            | T213A113K100(1)S                               |
| 0.011                                                     | A            | 20                             | T111A113M100AS       | 0.3                                | 2                                                      | 0333                                                      | 0553       | 0773        | 0993         | 3181                       | 4181        | *            | T213A113M100(1)S                               |
| 0.013                                                     | A            | 10                             | T111A133K100AS       | 0.3                                | 2                                                      | 0334                                                      | 0554       | 0774        | 0994         | 3182                       | 4182        | *            | T213A133K100(1)S                               |
| 0.016                                                     | A            | 10                             | T111A163K100AS       | 0.3                                | 2                                                      | 0335                                                      | 0555       | 0775        | 0995         | 3183                       | 4183        | *            | T213A163K100(1)S                               |
| 0.016                                                     | A            | 20                             | T111A163M100AS       | 0.3                                | 2                                                      | 0336                                                      | 0556       | 0776        | 0996         | 3184                       | 4184        | *            | T213A163M100(1)S                               |
| 0.019                                                     | A            | 10                             | T111A193K100AS       | 0.3                                | 2                                                      | 0337                                                      | 0557       | 0777        | 0997         | 3185                       | 4185        | *            | T213A193K100(1)S                               |
| 0.023                                                     | A            | 10                             | T111A233K100AS       | 0.3                                | 2                                                      | 0338                                                      | 0558       | 0778        | 0998         | 3186                       | 4186        | *            | T213A233K100(1)S                               |
| 0.023                                                     | A            | 20                             | T111A233M100AS       | 0.3                                | 2                                                      | 0339                                                      | 0559       | 0779        | 0999         | 3187                       | 4187        | *            | T213A233M100(1)S                               |
| 0.028                                                     | A            | 10                             | T111A283K100AS       | 0.3                                | 2                                                      | 0340                                                      | 0560       | 0780        | 1000         | 3188                       | 4188        | *            | T213A283K100(1)S                               |
| 0.034                                                     | A            | 10                             | T111A343K100AS       | 0.3                                | 2                                                      | 0341                                                      | 0561       | 0781        | 1001         | 3189                       | 4189        | *            | T213A343K100(1)S                               |
| 0.034                                                     | A            | 20                             | T111A343M100AS       | 0.3                                | 2                                                      | 0342                                                      | 0562       | 0782        | 1002         | 3190                       | 4190        | *            | T213A343M100(1)S                               |
| 0.041                                                     | A            | 10                             | T111A413K100AS       | 0.3                                | 2                                                      | 0343                                                      | 0563       | 0783        | 1003         | 3191                       | 4191        | *            | T213A413K100(1)S                               |
| 0.05                                                      | A            | 10                             | T111A503K100AS       | 0.3                                | 2                                                      | 0344                                                      | 0564       | 0784        | 1004         | 3192                       | 4192        | *            | T213A503K100(1)S                               |
| 0.05                                                      | A            | 20                             | T111A503M100AS       | 0.3                                | 2                                                      | 0345                                                      | 0565       | 0785        | 1005         | 3193                       | 4193        | *            | T213A503M100(1)S                               |
| 0.06                                                      | A            | 10                             | T111A603K100AS       | 0.3                                | 2                                                      | 0346                                                      | 0566       | 0786        | 1006         | 3194                       | 4194        | *            | T213A603K100(1)S                               |
| 0.075                                                     | A            | 10                             | T111A753K100AS       | 0.3                                | 2                                                      | 0347                                                      | 0567       | 0787        | 1007         | 3195                       | 4195        | *            | T213A753K100(1)S                               |
| 0.075                                                     | A            | 20                             | T111A753M100AS       | 0.3                                | 2                                                      | 0348                                                      | 0568       | 0788        | 1008         | 3196                       | 4196        | *            | T213A753M100(1)S                               |
| 0.09                                                      | A            | 10                             | T111A903K100AS       | 0.3                                | 2                                                      | 0349                                                      | 0569       | 0789        | 1009         | 3197                       | 4197        | *            | T213A903K100(1)S                               |
| 0.11                                                      | A            | 10                             | T111A114K100AS       | 0.3                                | 2                                                      | 0350                                                      | 0570       | 0790        | 1010         | 3198                       | 4198        | *            | T213A114K100(1)S                               |
| 0.11                                                      | A            | 20                             | T111A114M100AS       | 0.3                                | 2                                                      | 0351                                                      | 0571       | 0791        | 1011         | 3199                       | 4199        | *            | T213A114M100(1)S                               |
| 0.13                                                      | A            | 10                             | T111A134K100AS       | 0.3                                | 2                                                      | 0352                                                      | 0572       | 0792        | 1012         | 3200                       | 4200        | *            | T213A134K100(1)S                               |
| 0.16                                                      | A            | 10                             | T111A164K100AS       | 0.3                                | 2                                                      | 0353                                                      | 0573       | 0793        | 1013         | 3201                       | 4201        | *            | T213A164K100(1)S                               |
| 0.16                                                      | A            | 20                             | T111A164M100AS       | 0.3                                | 2                                                      | 0354                                                      | 0574       | 0794        | 1014         | 3202                       | 4202        | *            | T213A164M100(1)S                               |
| 0.19                                                      | A            | 10                             | T111A194K100AS       | 0.3                                | 2                                                      | 0355                                                      | 0575       | 0795        | 1015         | 3203                       | 4203        | *            | T213A194K100(1)S                               |
| 0.23                                                      | A            | 10                             | T111A234K100AS       | 0.3                                | 2                                                      | 0356                                                      | 0576       | 0796        | 1016         | 3204                       | 4204        | *            | T213A234K100(1)S                               |
| 0.23                                                      | A            | 20                             | T111A234M100AS       | 0.3                                | 2                                                      | 0357                                                      | 0577       | 0797        | 1017         | 3205                       | 4205        | *            | T213A234M100(1)S                               |
| 0.28                                                      | A            | 10                             | T111A284K100AS       | 0.3                                | 2                                                      | 0358                                                      | 0578       | 0798        | 1018         | 3206                       | 4206        | *            | T213A284K100(1)S                               |
| 0.34                                                      | B            | 10                             | T111B344K100AS       | 0.3                                | 2                                                      | 0359                                                      | 0579       | 0799        | 1019         | 3207                       | 4207        | *            | T213B344K100(1)S                               |
| 0.34                                                      | B            | 20                             | T111B344M100AS       | 0.3                                | 2                                                      | 0360                                                      | 0580       | 0800        | 1020         | 3208                       | 4208        | *            | T213B344M100(1)S                               |
| 0.41                                                      | B            | 10                             | T111B414K100AS       | 0.4                                | 2                                                      | 0361                                                      | 0581       | 0801        | 1021         | 3209                       | 4209        | *            | T213B414K100(1)S                               |
| 0.5                                                       | B            | 10                             | T111B504K100AS       | 0.5                                | 2                                                      | 0362                                                      | 0582       | 0802        | 1022         | 3210                       | 4210        | *            | T213B504K100(1)S                               |
| 0.5                                                       | B            | 20                             | T111B504M100AS       | 0.5                                | 2                                                      | 0363                                                      | 0583       | 0803        | 1023         | 3211                       | 4211        | *            | T213B504M100(1)S                               |
| 0.6                                                       | B            | 10                             | T111B604K100AS       | 0.5                                | 3                                                      | 0364                                                      | 0584       | 0804        | 1024         | 3212                       | 4212        | *            | T213B604K100(1)S                               |
| 0.75                                                      | B            | 10                             | T111B754K100AS       | 0.7                                | 3                                                      | 0365                                                      | 0585       | 0805        | 1025         | 3213                       | 4213        | *            | T213B754K100(1)S                               |
| 0.75                                                      | B            | 20                             | T111B754M100AS       | 0.7                                | 3                                                      | 0366                                                      | 0586       | 0806        | 1026         | 3214                       | 4214        | *            | T213B754M100(1)S                               |
| 0.9                                                       | B            | 10                             | T111B904K100AS       | 0.7                                | 3                                                      | 0367                                                      | 0587       | 0807        | 1027         | 3215                       | 4215        | *            | T213B904K100(1)S                               |
| 1.1                                                       | B            | 10                             | T111B115K100AS       | 0.9                                | 3                                                      | 0368                                                      | 0588       | 0808        | 1028         | 3216                       | 4216        | *            | T213B115K100(1)S                               |
| 1.1                                                       | B            | 20                             | T111B115M100AS       | 0.9                                | 3                                                      | 0369                                                      | 0589       | 0809        | 1029         | 3217                       | 4217        | *            | T213B115M100(1)S                               |
| 1.3                                                       | B            | 10                             | T111B135K100AS       | 1.1                                | 3                                                      | 0370                                                      | 0590       | 0810        | 1030         | 3218                       | 4218        | *            | T213B135K100(1)S                               |

(1) To complete T213 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 6.

\*Note: D failure rate — Not QPL for 5168 thru 5218

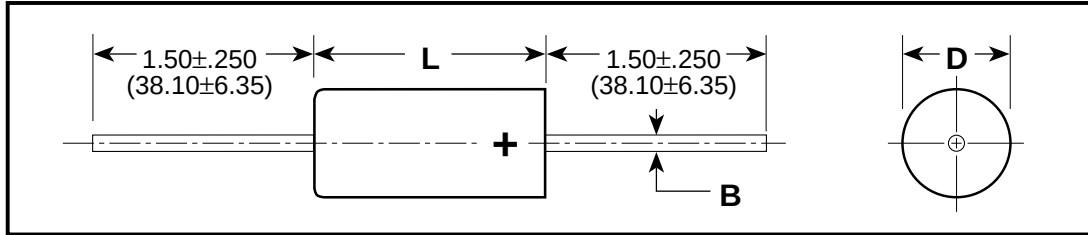
KEMET ultra-miniature T222 Series solid tantalum capacitors are designed especially for miniaturization.

The T222 Series capacitors employ a unique glass-to-metal compression end seal which has no protruding eyelet. This flush end seal construction makes T222 Series capacitors ideally suited for all miniature high density packaging applications. The capacitors con-

sist of a dry porous tantalum pellet hermetically sealed in a solder coated metal case with solder coated alloy 52 and solder coated nickel leads.

The T222 series is approved to MIL-PRF-39003/2, all ratings and failure rates.

### CAPACITOR OUTLINE DRAWINGS



### DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED                       |                                           | INSULATED                |                                           | B<br>WIRE<br>DIAMETER                    |
|-----------|-----------------------------------|-------------------------------------------|--------------------------|-------------------------------------------|------------------------------------------|
|           | D<br>$\pm 0.005$<br>( $\pm .13$ ) | L                                         | D                        | L                                         |                                          |
| A         | .085 (2.16)                       | .245 + .015 (6.22 + .38)<br>- .010 (-.25) | .090 ± .009 (2.29 ± .23) | .250 + .031 (6.35 + .79)<br>- .015 (-.38) | .016 + .005 (.41 + .13)<br>- .001 (-.03) |
| B         | .127 (3.23)                       | .375 ± .015 (.53 ± .38)                   | .138 ± .010 (3.51 ± .25) | .390 ± .015 (9.91 ± .38)                  | .016 + .005 (.41 + .13)<br>- .001 (-.03) |

### ORDERING INFORMATION

**TANTALUM** — T

**SERIES (CSR09)** — 222

**CASE SIZE** — A / B

**PICOFARAD CODE** — A 225  
First two digits represent significant figures.  
3rd digit specifies no. of zeros to follow.

**CAPACITANCE TOLERANCE** — K  
M —  $\pm 20$  K —  $\pm 10$  J —  $\pm 5$

**VOLTAGE** — 010  
at 85°C

**LEAD MATERIAL** — S  
S — Standard  
Positive: Alloy 52 (solder coated)  
Negative: Solder coated nickel

**FAILURE RATE LEVEL\*\***

**GRADED**  
B — 0.1%/k hrs.  
C — 0.01%/k hrs.  
D — 0.001%/k hrs.  
.

**EXPONENTIAL**  
M — 1%/k hrs.  
P — 0.1%/k hrs.  
R — 0.01%/k hrs.  
S — 0.001%/k hrs.

**\*Part Number Example: T222A225K010BS (14 digits - no spaces)**

**SPECIFICATION**  
All capacitors are sleeved unless specified.

**\*\*Failure Rates apply only to military products**  
**For Military Ordering, see page 4.**

### CSR09 CAPACITOR MARKINGS PER MIL-PRF-39003

|        |                                                                                            |
|--------|--------------------------------------------------------------------------------------------|
| 39003  | — Military specification number                                                            |
| 02 - K | — Specification sheet number and trademark                                                 |
| 2961J  | — Nonsignificant dash number and "J" for JAN                                               |
| +333   | — Polarity, date code (1st digit indicates year and the next two digits indicate the week) |
| XX     | — and lot symbol                                                                           |

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                                  | CASE<br>SIZE                                   | CAPACITANCE<br>TOLERANCE<br>±%                      | KEMET T222 SERIES                                                                                                                                                                                    |                                                                    |                                                        | MIL-PRF-39003 (CSR09) CAPACITORS                                             |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |
|--------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
|                                                                    |                                                |                                                     | KEMET<br>PART NUMBER                                                                                                                                                                                 | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX.                                 | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.)                    |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |
|                                                                    |                                                |                                                     |                                                                                                                                                                                                      |                                                                    |                                                        | MIL-PRF-39003/2D<br>EXPONENTIAL                                              |                                                                              |                                                                              |                                                                              | MIL-PRF-39003/2D<br>GRADED                                                   |                                                                              |                                                                              |
|                                                                    |                                                |                                                     |                                                                                                                                                                                                      |                                                                    |                                                        | M<br>(1.0)                                                                   | P<br>(0.1)                                                                   | R<br>(0.01)                                                                  | S<br>(0.001)                                                                 | B<br>(0.1)                                                                   | C<br>(0.01)                                                                  | D<br>(0.001)                                                                 |
| 6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C                     |                                                |                                                     |                                                                                                                                                                                                      |                                                                    |                                                        |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |
| 2.7<br>2.7                                                         | A<br>A                                         | 5<br>10                                             | T222A275J006(1)S<br>T222A275K006(1)S                                                                                                                                                                 | 0.6<br>0.6                                                         | 6<br>6                                                 | 1001<br>0001                                                                 | 1061<br>0061                                                                 | 1121<br>0121                                                                 | 1181<br>0181                                                                 | 2001<br>2002                                                                 | 3001<br>3002                                                                 | 4001<br>4002                                                                 |
| 18.0<br>18.0                                                       | B<br>B                                         | 5<br>10                                             | T222B186J006(1)S<br>T222B186K006(1)S                                                                                                                                                                 | 1.4<br>1.4                                                         | 6<br>6                                                 | 1002<br>0002                                                                 | 1062<br>0062                                                                 | 1122<br>0122                                                                 | 1182<br>0182                                                                 | 2003<br>2004                                                                 | 3003<br>3004                                                                 | 4003<br>4004                                                                 |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C                    |                                                |                                                     |                                                                                                                                                                                                      |                                                                    |                                                        |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |
| 1.8<br>1.8<br>2.2<br>2.2                                           | A<br>A<br>A<br>A                               | 5<br>10<br>5<br>10                                  | T222A185J010(1)S<br>T222A185K010(1)S<br>T222A225J010(1)S<br>T222A225K010(1)S                                                                                                                         | 0.6<br>0.6<br>0.6<br>0.6                                           | 6<br>6<br>6<br>6                                       | 1007<br>0007<br>1008<br>0008                                                 | 1067<br>0067<br>1068<br>0068                                                 | 1127<br>0127<br>1128<br>0128                                                 | 1187<br>0187<br>1188<br>0188                                                 | 2005<br>2006<br>2007<br>2008                                                 | 3005<br>3006<br>3007<br>3008                                                 | 4005<br>4006<br>4007<br>4008                                                 |
| 10.0<br>10.0<br>12.0<br>12.0<br>15.0<br>15.0                       | B<br>B<br>B<br>B<br>B<br>B                     | 5<br>10<br>5<br>10<br>5<br>10                       | T222B106J010(1)S<br>T222B106K010(1)S<br>T222B126J010(1)S<br>T222B126K010(1)S<br>T222B156J010(1)S<br>T222B156K010(1)S                                                                                 | 2.0<br>2.0<br>2.0<br>2.0<br>2.0<br>2.0                             | 6<br>6<br>6<br>6<br>6<br>6                             | 1009<br>0009<br>1010<br>0010<br>1011<br>0011                                 | 1069<br>0069<br>1070<br>0070<br>1071<br>0071                                 | 1129<br>0129<br>1130<br>0130<br>1131<br>0131                                 | 1189<br>0189<br>1190<br>0190<br>1191<br>0191                                 | 2009<br>2010<br>2011<br>2012<br>2013<br>2014                                 | 3009<br>3010<br>3011<br>3012<br>3013<br>3014                                 | 4009<br>4010<br>4011<br>4012<br>4013<br>4014                                 |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C                   |                                                |                                                     |                                                                                                                                                                                                      |                                                                    |                                                        |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |
| 1.0<br>1.0<br>1.2<br>1.2<br>1.5<br>1.5                             | A<br>A<br>A<br>A<br>A<br>A                     | 5<br>10<br>5<br>10<br>5<br>10                       | T222A105J015(1)S<br>T222A105K015(1)S<br>T222A125J015(1)S<br>T222A125K015(1)S<br>T222A155J015(1)S<br>T222A155K015(1)S                                                                                 | 0.6<br>0.6<br>0.6<br>0.6<br>0.6<br>0.6                             | 6<br>6<br>6<br>6<br>6<br>6                             | 1012<br>0012<br>1013<br>0013<br>1014<br>0014                                 | 1072<br>0072<br>1073<br>0073<br>1074<br>0074                                 | 1132<br>0132<br>1133<br>0133<br>1134<br>0134                                 | 1192<br>0192<br>1193<br>0193<br>1194<br>0194                                 | 2015<br>2016<br>2017<br>2018<br>2019<br>2020                                 | 3015<br>3016<br>3017<br>3018<br>3019<br>3020                                 | 4015<br>4016<br>4017<br>4018<br>4019<br>4020                                 |
| 8.2<br>8.2                                                         | B<br>B                                         | 5<br>10                                             | T222B825J015(1)S<br>T222B825K015(1)S                                                                                                                                                                 | 1.8<br>1.8                                                         | 6<br>6                                                 | 1015<br>0015                                                                 | 1075<br>0075                                                                 | 1135<br>0135                                                                 | 1195<br>0195                                                                 | 2021<br>2022                                                                 | 3021<br>3022                                                                 | 4021<br>4022                                                                 |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C                   |                                                |                                                     |                                                                                                                                                                                                      |                                                                    |                                                        |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |
| 0.56<br>0.56<br>0.68<br>0.68<br>0.82<br>0.82<br>1.0<br>1.0         | A<br>A<br>A<br>A<br>A<br>A<br>A<br>A           | 5<br>10<br>5<br>10<br>5<br>10<br>5<br>10            | T222A564J020(1)S<br>T222A564K020(1)S<br>T222A684J020(1)S<br>T222A684K020(1)S<br>T222A824J020(1)S<br>T222A824K020(1)S<br>T222A105J020(1)S<br>T222A105K020(1)S                                         | 0.6<br>0.6<br>0.6<br>0.6<br>0.6<br>0.6<br>0.6<br>0.6               | 3<br>3<br>3<br>3<br>3<br>3<br>3<br>3                   | 1016<br>0016<br>1017<br>0017<br>1018<br>0018<br>1019<br>0019                 | 1076<br>0076<br>1077<br>0077<br>1078<br>0078<br>1079<br>0079                 | 1136<br>0136<br>1137<br>0137<br>1138<br>0138<br>1139<br>0139                 | 1196<br>0196<br>1197<br>0197<br>1198<br>0198<br>1199<br>0199                 | 2023<br>2024<br>2025<br>2026<br>2027<br>2028<br>2029<br>2030                 | 3023<br>3024<br>3025<br>3026<br>3027<br>3028<br>3029<br>3030                 | 4023<br>4024<br>4025<br>4026<br>4027<br>4028<br>4029<br>4030                 |
| 3.3<br>3.3<br>3.9<br>3.9<br>4.7<br>4.7<br>5.6<br>5.6<br>6.8<br>6.8 | B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B | 5<br>10<br>5<br>10<br>5<br>10<br>5<br>10<br>5<br>10 | T222B335J020(1)S<br>T222B335K020(1)S<br>T222B395J020(1)S<br>T222B395K020(1)S<br>T222B475J020(1)S<br>T222B475K020(1)S<br>T222B565J020(1)S<br>T222B565K020(1)S<br>T222B685J020(1)S<br>T222B685K020(1)S | 1.0<br>1.0<br>2.0<br>2.0<br>2.0<br>2.0<br>2.0<br>2.0<br>2.0<br>2.0 | 3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3         | 1020<br>0020<br>1021<br>0021<br>1022<br>0022<br>1023<br>0023<br>1024<br>0024 | 1080<br>0080<br>1081<br>0081<br>1082<br>0082<br>1083<br>0083<br>1084<br>0084 | 1140<br>0140<br>1141<br>0141<br>1142<br>0142<br>1143<br>0143<br>1144<br>0144 | 1200<br>0200<br>1201<br>0201<br>1202<br>0202<br>1203<br>0203<br>1204<br>0204 | 2031<br>2032<br>2033<br>2034<br>2035<br>2036<br>2037<br>2038<br>2039<br>2040 | 3031<br>3032<br>3033<br>3034<br>3035<br>3036<br>3037<br>3038<br>3039<br>3040 | 4031<br>4032<br>4033<br>4034<br>4035<br>4036<br>4037<br>4038<br>4039<br>4040 |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C                   |                                                |                                                     |                                                                                                                                                                                                      |                                                                    |                                                        |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |                                                                              |
| 0.33<br>0.33<br>0.39<br>0.39<br>0.47<br>0.47                       | A<br>A<br>A<br>A<br>A<br>A                     | 5<br>10<br>5<br>10<br>5<br>10                       | T222A334J035(1)S<br>T222A334K035(1)S<br>T222A394J035(1)S<br>T222A394K035(1)S<br>T222A474J035(1)S<br>T222A474K035(1)S                                                                                 | 0.6<br>0.6<br>0.6<br>0.6<br>0.6<br>0.6                             | 3<br>3<br>3<br>3<br>3<br>3                             | 1025<br>0025<br>1026<br>0026<br>1027<br>0027                                 | 1085<br>0085<br>1086<br>0086<br>1087<br>0087                                 | 1145<br>0145<br>1146<br>0146<br>1147<br>0147                                 | 1205<br>0205<br>1206<br>0206<br>1207<br>0207                                 | 2041<br>2042<br>2043<br>2044<br>2045<br>2046                                 | 3041<br>3042<br>3043<br>3044<br>3045<br>3046                                 | 4041<br>4042<br>4043<br>4044<br>4045<br>4046                                 |
| 2.2<br>2.2<br>2.7<br>2.7                                           | B<br>B<br>B<br>B                               | 5<br>10<br>5<br>10                                  | T222B225J035(1)S<br>T222B225K035(1)S<br>T222B275J035(1)S<br>T222B275K035(1)S                                                                                                                         | 1.4<br>1.4<br>1.4<br>1.4                                           | 3<br>3<br>3<br>3                                       | 1028<br>0028<br>1029<br>0029                                                 | 1088<br>0088<br>1089<br>0089                                                 | 1148<br>0148<br>1149<br>0149                                                 | 1208<br>0208<br>1209<br>0209                                                 | 2047<br>2048<br>2049<br>2050                                                 | 3047<br>3048<br>3049<br>3050                                                 | 4047<br>4048<br>4049<br>4050                                                 |

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 24.

**Bold Face** lines indicate popular part types and values



## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                       | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T222 SERIES       |                                    |                                                        | MIL-PRF-39003 (CSR09) CAPACITORS |             |             |              |                            |             |              |
|---------------------------------------------------------|--------------|--------------------------------|-------------------------|------------------------------------|--------------------------------------------------------|----------------------------------|-------------|-------------|--------------|----------------------------|-------------|--------------|
|                                                         |              |                                | KEMET<br>PART NUMBER    | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE            |             |             |              |                            |             |              |
|                                                         |              |                                |                         |                                    |                                                        | FAILURE RATE LEVEL (%/1000 HRS.) |             |             |              |                            |             |              |
|                                                         |              |                                |                         |                                    |                                                        | MIL-PRF-39003/2D<br>EXPONENTIAL  |             |             |              | MIL-PRF-39003/2D<br>GRADED |             |              |
|                                                         |              |                                |                         |                                    |                                                        | M<br>(1.0)                       | P<br>(0.1)  | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |
| <b>50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |                                                        |                                  |             |             |              |                            |             |              |
| 0.22                                                    | A            | 5                              | T222A224J050(1)S        | 0.6                                | 3                                                      | 1030                             | 1090        | 1150        | 1210         | 2051                       | 3051        | 4051         |
| 0.22                                                    | A            | 10                             | T222A224K050(1)S        | 0.6                                | 3                                                      | 0030                             | 0090        | 0150        | 0210         | 2052                       | 3052        | 4052         |
| 0.27                                                    | A            | 5                              | T222A274J050(1)S        | 0.6                                | 3                                                      | 1031                             | 1091        | 1151        | 1211         | 2053                       | 3053        | 4053         |
| <b>0.27</b>                                             | <b>A</b>     | <b>10</b>                      | <b>T222A274K050(1)S</b> | <b>0.6</b>                         | <b>3</b>                                               | <b>0031</b>                      | <b>0091</b> | <b>0151</b> | <b>0211</b>  | <b>2054</b>                | <b>3054</b> | <b>4054</b>  |
| 1.5                                                     | B            | 5                              | T222B155J050(1)S        | 1.4                                | 3                                                      | 1032                             | 1092        | 1152        | 1212         | 2055                       | 3055        | 4055         |
| 1.5                                                     | B            | 10                             | T222B155K050(1)S        | 1.4                                | 3                                                      | 0032                             | 0092        | 0152        | 0212         | 2056                       | 3056        | 4056         |
| 1.8                                                     | B            | 5                              | T222B185J050(1)S        | 1.4                                | 3                                                      | 1033                             | 1093        | 1153        | 1213         | 2057                       | 3057        | 4057         |
| <b>1.8</b>                                              | <b>B</b>     | <b>10</b>                      | <b>T222B185K050(1)S</b> | <b>1.4</b>                         | <b>3</b>                                               | <b>0033</b>                      | <b>0093</b> | <b>0153</b> | <b>0213</b>  | <b>2058</b>                | <b>3058</b> | <b>4058</b>  |
| <b>75 VOLT RATING AT 85°C — 50 VOLT RATING AT 125°C</b> |              |                                |                         |                                    |                                                        |                                  |             |             |              |                            |             |              |
| 0.047                                                   | A            | 5                              | T222A473J075(1)S        | 0.6                                | 3                                                      | 1034                             | 1094        | 1154        | 1214         | 2059                       | 3059        | 4059         |
| 0.047                                                   | A            | 10                             | T222A473K075(1)S        | 0.6                                | 3                                                      | 0034                             | 0094        | 0154        | 0214         | 2060                       | 3060        | 4060         |
| 0.056                                                   | A            | 5                              | T222A563J075(1)S        | 0.6                                | 3                                                      | 1035                             | 1095        | 1155        | 1215         | 2061                       | 3061        | 4061         |
| 0.056                                                   | A            | 10                             | T222A563K075(1)S        | 0.6                                | 3                                                      | 0035                             | 0095        | 0155        | 0215         | 2062                       | 3062        | 4062         |
| 0.068                                                   | A            | 5                              | T222A683J075(1)S        | 0.6                                | 3                                                      | 1036                             | 1096        | 1156        | 1216         | 2063                       | 3063        | 4063         |
| 0.068                                                   | A            | 10                             | T222A683K075(1)S        | 0.6                                | 3                                                      | 0036                             | 0096        | 0156        | 0216         | 2064                       | 3064        | 4064         |
| 0.082                                                   | A            | 5                              | T222A823J075(1)S        | 0.6                                | 3                                                      | 1037                             | 1097        | 1157        | 1217         | 2065                       | 3065        | 4065         |
| 0.082                                                   | A            | 10                             | T222A823K075(1)S        | 0.6                                | 3                                                      | 0037                             | 0097        | 0157        | 0217         | 2066                       | 3066        | 4066         |
| 0.10                                                    | A            | 5                              | T222A104J075(1)S        | 0.6                                | 3                                                      | 1038                             | 1098        | 1158        | 1218         | 2067                       | 3067        | 4067         |
| <b>0.10</b>                                             | <b>A</b>     | <b>10</b>                      | <b>T222A104K075(1)S</b> | <b>0.6</b>                         | <b>3</b>                                               | <b>0038</b>                      | <b>0098</b> | <b>0158</b> | <b>0218</b>  | <b>2068</b>                | <b>3068</b> | <b>4068</b>  |
| 0.12                                                    | A            | 5                              | T222A124J075(1)S        | 0.6                                | 3                                                      | 1039                             | 1099        | 1159        | 1219         | 2069                       | 3069        | 4069         |
| 0.12                                                    | A            | 10                             | T222A124K075(1)S        | 0.6                                | 3                                                      | 0039                             | 0099        | 0159        | 0219         | 2070                       | 3070        | 4070         |
| 0.15                                                    | A            | 5                              | T222A154J075(1)S        | 0.6                                | 3                                                      | 1040                             | 1100        | 1160        | 1220         | 2071                       | 3071        | 4071         |
| 0.15                                                    | A            | 10                             | T222A154K075(1)S        | 0.6                                | 3                                                      | 0040                             | 0100        | 0160        | 0220         | 2072                       | 3072        | 4072         |
| 0.18                                                    | A            | 5                              | T222A184J075(1)S        | 0.6                                | 3                                                      | 1041                             | 1101        | 1161        | 1221         | 2073                       | 3073        | 4073         |
| 0.18                                                    | A            | 10                             | T222A184K075(1)S        | 0.6                                | 3                                                      | 0041                             | 0101        | 0161        | 0221         | 2074                       | 3074        | 4074         |
| 0.22                                                    | B            | 5                              | T222B224J075(1)S        | 0.6                                | 3                                                      | 1042                             | 1102        | 1162        | 1222         | 2075                       | 3075        | 4075         |
| 0.22                                                    | B            | 10                             | T222B224K075(1)S        | 0.6                                | 3                                                      | 0042                             | 0102        | 0162        | 0222         | 2076                       | 3076        | 4076         |
| 0.27                                                    | B            | 5                              | T222B274J075(1)S        | 0.6                                | 3                                                      | 1043                             | 1103        | 1163        | 1223         | 2077                       | 3077        | 4077         |
| 0.27                                                    | B            | 10                             | T222B274K075(1)S        | 0.6                                | 3                                                      | 0043                             | 0103        | 0163        | 0223         | 2078                       | 3078        | 4078         |
| 0.33                                                    | B            | 5                              | T222B334J075(1)S        | 0.6                                | 3                                                      | 1044                             | 1104        | 1164        | 1224         | 2079                       | 3079        | 4079         |
| 0.33                                                    | B            | 10                             | T222B334K075(1)S        | 0.6                                | 3                                                      | 0044                             | 0104        | 0164        | 0224         | 2080                       | 3080        | 4080         |
| 0.39                                                    | B            | 5                              | T222B394J075(1)S        | 0.6                                | 3                                                      | 1045                             | 1105        | 1165        | 1225         | 2081                       | 3081        | 4081         |
| 0.39                                                    | B            | 10                             | T222B394K075(1)S        | 0.6                                | 3                                                      | 0045                             | 0105        | 0165        | 0225         | 2082                       | 3082        | 4082         |
| 0.47                                                    | B            | 5                              | T222B474J075(1)S        | 0.6                                | 3                                                      | 1046                             | 1106        | 1166        | 1226         | 2083                       | 3083        | 4083         |
| 0.47                                                    | B            | 10                             | T222B474K075(1)S        | 0.6                                | 3                                                      | 0046                             | 0106        | 0166        | 0226         | 2084                       | 3084        | 4084         |
| 0.56                                                    | B            | 5                              | T222B564J075(1)S        | 0.6                                | 3                                                      | 1047                             | 1107        | 1167        | 1227         | 2085                       | 3085        | 4085         |
| 0.56                                                    | B            | 10                             | T222B564K075(1)S        | 0.6                                | 3                                                      | 0047                             | 0107        | 0167        | 0227         | 2086                       | 3086        | 4086         |
| 0.68                                                    | B            | 5                              | T222B684J075(1)S        | 0.6                                | 3                                                      | 1048                             | 1108        | 1168        | 1228         | 2087                       | 3087        | 4087         |
| 0.68                                                    | B            | 10                             | T222B684K075(1)S        | 0.6                                | 3                                                      | 0048                             | 0108        | 0168        | 0228         | 2088                       | 3088        | 4088         |
| 0.82                                                    | B            | 5                              | T222B824J075(1)S        | 0.7                                | 3                                                      | 1049                             | 1109        | 1169        | 1229         | 2089                       | 3089        | 4089         |
| 0.82                                                    | B            | 10                             | T222B824K075(1)S        | 0.7                                | 3                                                      | 0049                             | 0109        | 0169        | 0229         | 2090                       | 3090        | 4090         |
| 1.0                                                     | B            | 5                              | T222B105J075(1)S        | 0.9                                | 3                                                      | 1050                             | 1110        | 1170        | 1230         | 2091                       | 3091        | 4091         |
| 1.0                                                     | B            | 10                             | T222B105K075(1)S        | 0.9                                | 3                                                      | 0050                             | 0110        | 0170        | 0230         | 2092                       | 3092        | 4092         |
| 1.2                                                     | B            | 5                              | T222B125J075(1)S        | 0.9                                | 3                                                      | 1051                             | 1111        | 1171        | 1231         | 2093                       | 3093        | 4093         |
| 1.2                                                     | B            | 10                             | T222B125K075(1)S        | 0.9                                | 3                                                      | 0051                             | 0111        | 0171        | 0231         | 2094                       | 3094        | 4094         |

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 24.

**Bold Face** lines indicate popular part types and values



KEMET standard MIL case hermetically sealed T140 Series (Extended Capacitance Range) are compact, ruggedly built, designed for miniaturized circuitry, and are especially suited for coupling, bypass, filtering and R-C timing circuits. They exhibit excellent stability, low DC leakage current, dissipation factor, and ESR/impedance over a wide temperature and frequency range.

Available in standard EIA capacitance values from .82-1200  $\mu\text{F}$  in  $\pm 20\%$ ,  $\pm 10\%$ , and  $\pm 5\%$  tolerances and working voltages from 6-60 VDC.

Included in the following Series table is a complete listing of CSR23 qualified MIL-C-39003/3 capacitors.

## DIMENSIONS — INCHES &amp; (MILLIMETERS)

| CASE SIZE | UNINSULATED                     |                                 | INSULATED                       |                                 | B<br>$\pm 0.002$<br>(.05) | C<br>MAX.        |
|-----------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------|------------------|
|           | D<br>$\pm 0.005$<br>$\pm (.13)$ | L<br>$\pm 0.031$<br>$\pm (.79)$ | D<br>$\pm 0.010$<br>$\pm (.25)$ | L<br>$\pm 0.031$<br>$\pm (.79)$ |                           |                  |
| A         | 0.125<br>(3.18)                 | 0.250<br>(6.35)                 | 0.135<br>(3.43)                 | 0.286<br>(7.26)                 | 0.020<br>(.51)            | 0.422<br>(10.72) |
| B         | 0.175<br>(4.45)                 | 0.438<br>(11.13)                | 0.185<br>(4.70)                 | 0.474<br>(12.04)                | 0.020<br>(.51)            | 0.610<br>(15.49) |
| C         | 0.279<br>(7.09)                 | 0.650<br>(16.51)                | 0.289<br>(7.34)                 | 0.686<br>(17.42)                | 0.025<br>(.64)            | 0.822<br>(20.88) |
| D         | 0.341<br>(8.66)                 | 0.750<br>(19.05)                | 0.351<br>(8.92)                 | 0.786<br>(19.96)                | 0.025<br>(.64)            | 0.922<br>(23.42) |

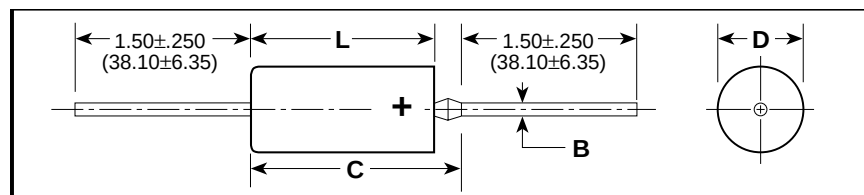
## MARKING INFORMATION\*

## A, B, C &amp; D CASES

|                   |                                                                  |
|-------------------|------------------------------------------------------------------|
| +K 10%            | — Polarity, Manufacturer's Identification and Capacitance Tol.   |
| 5R6 $\mu\text{F}$ | — Normal Capacitance — ( $\mu\text{F}$ ) ("R" indicates decimal) |
| 10V               | — Voltage                                                        |
| 0312              | — Date Code (e.g.: (0312))                                       |

\* For Military Marking, see page 4.

## CAPACITOR OUTLINE DRAWINGS



Effective September 30, 2005, the KEMET T140 Series is RoHS compliant by ordering the "T" (100% tin) end termination in the 14th position of the part number.

## RATINGS &amp; PART NUMBER REFERENCE

| CAPACITANCE<br>μF                              | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T140           |                                    |                                                   | MIL-PRF-39003 (CSR23) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER           |
|------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|----------------------------------------------------------|
|                                                |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                          |
|                                                |              |                                |                      |                                    |                                                   | MIL-PRF-39003/3F<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/3F<br>GRADED |             |              |                  |                                                          |
|                                                |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                          |
| 6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                          |
| 8.2                                            | A            | 10, 20                         | T140A825(1)006AS     | 0.9                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                          |
| 10.0                                           | A            | 10                             | T140A106K006AS       | 0.9                                | 6                                                 | 0101                                                      | 0201       | 0301        | 0401         | 2001                       | 3001        | 4001         | T242A106K006(2)S | T242A106M006(2)S<br>T242A126K006(2)S<br>T242A126M006(2)S |
| 10.0                                           | A            | 20                             | T140A106M006AS       | 0.9                                | 6                                                 | 0102                                                      | 0202       | 0302        | 0402         | 2002                       | 3002        | 4002         | T242A106M006(2)S |                                                          |
| 12.0                                           | A            | 10                             | T140A126K006AS       | 1.0                                | 6                                                 | 0103                                                      | 0203       | 0303        | 0403         | 2003                       | 3003        | 4003         | T242A126K006(2)S |                                                          |
| 12.0                                           | A            | 20                             | T140A126M006AS       | 1.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                          |
| 68.0                                           | B            | 10, 20                         | T140B686(1)006AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  | T242B107K006(2)S<br>T242B107M006(2)S<br>T242B107M006(2)S |
| 82.0                                           | B            | 10, 20                         | T140B826(1)006AS     | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                          |
| 100.0                                          | B            | 10                             | T140B107K006AS       | 6.0                                | 6                                                 | 0104                                                      | 0204       | 0304        | 0404         | 2004                       | 3004        | 4004         | T242B107K006(2)S |                                                          |
| 100.0                                          | B            | 20                             | T140B107M006AS       | 6.0                                | 6                                                 | 0105                                                      | 0205       | 0305        | 0405         | 2005                       | 3005        | 4005         | T242B107M006(2)S |                                                          |
| 220.0                                          | C            | 10, 20                         | T140C227(1)006AS     | 10.0                               | 8                                                 |                                                           |            |             |              |                            |             |              |                  | T242C337K006(2)S<br>T242C337M006(2)S<br>T242C397K006(2)S |
| 270.0                                          | C            | 10, 20                         | T140C277(1)006AS     | 10.0                               | 8                                                 |                                                           |            |             |              |                            |             |              |                  |                                                          |
| 330.0                                          | C            | 10                             | T140C337K006AS       | 10.0                               | 8                                                 | 0106                                                      | 0206       | 0306        | 0406         | 2006                       | 3006        | 4006         | T242C337K006(2)S |                                                          |
| 330.0                                          | C            | 20                             | T140C337M006AS       | 10.0                               | 8                                                 | 0107                                                      | 0207       | 0307        | 0407         | 2007                       | 3007        | 4007         | T242C337M006(2)S |                                                          |
| 390.0                                          | C            | 10                             | T140C397K006AS       | 10.0                               | 10                                                | 0108                                                      | 0208       | 0308        | 0408         | 2008                       | 3008        | 4008         | T242C397K006(2)S | T242C477K006(2)S<br>T242C477M006(2)S<br>T242C477M006(2)S |
| 390.0                                          | C            | 20                             | T140C397M006AS       | 10.0                               | 10                                                |                                                           |            |             |              |                            |             |              |                  |                                                          |
| 470.0                                          | C            | 10                             | T140C477K006AS       | 10.0                               | 10                                                | 0109                                                      | 0209       | 0309        | 0409         | 2009                       | 3009        | 4009         | T242C477K006(2)S |                                                          |
| 470.0                                          | C            | 20                             | T140C477M006AS       | 10.0                               | 10                                                | 0110                                                      | 0210       | 0310        | 0410         | 2010                       | 3010        | 4010         | T242C477M006(2)S |                                                          |
| 560.0                                          | D            | 10, 20                         | T140D567(1)006AS     | 20.0                               | 10                                                |                                                           |            |             |              |                            |             |              |                  | T242D687K006(2)S<br>T242D687M006(2)S<br>T242D827K006(2)S |
| 680.0                                          | D            | 10                             | T140D687K006AS       | 20.0                               | 10                                                | 0111                                                      | 0211       | 0311        | 0411         | 2011                       | 3011        | 4011         | T242D687K006(2)S |                                                          |
| 680.0                                          | D            | 20                             | T140D687M006AS       | 20.0                               | 10                                                | 0112                                                      | 0212       | 0312        | 0412         | 2012                       | 3012        | 4012         | T242D687M006(2)S |                                                          |
| 820.0                                          | D            | 10                             | T140D827K006AS       | 20.0                               | 10                                                | 0113                                                      | 0213       | 0313        | 0413         | 2013                       | 3013        | 4013         | T242D827K006(2)S |                                                          |
| 820.0                                          | D            | 20                             | T140D827M006AS       | 20.0                               | 10                                                |                                                           |            |             |              |                            |             |              |                  | T242D108K006(2)S<br>T242D108M006(2)S<br>T242D108M006(2)S |
| 1000.0                                         | D            | 10                             | T140D108K006AS       | 20.0                               | 10                                                | 0114                                                      | 0214       | 0314        | 0414         | 2014                       | 3014        | 4014         | T242D108K006(2)S |                                                          |
| 1000.0                                         | D            | 20                             | T140D108M006AS       | 20.0                               | 10                                                | 0115                                                      | 0215       | 0315        | 0415         | 2015                       | 3015        | 4015         | T242D108M006(2)S |                                                          |
| 1200.0                                         | D            | 20                             | T140D128M006AS       | 20.0                               | 10                                                |                                                           |            |             |              |                            |             |              |                  |                                                          |

(1) To complete T140 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

For ordering information, see page 4 (Military) and Page 6.



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T140 SERIES — POLAR TYPE & T242 (CSR23)

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T140           |                                     |                                                   | MIL-PRF-39003 (CSR23) CAPACITORS                          |            |             |              |                            |             |              |  |                                                |  |                  |
|--------------------------------------------------|--------------|--------------------------------|----------------------|-------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|--|------------------------------------------------|--|------------------|
|                                                  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C,<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |  |                  |
|                                                  |              |                                |                      |                                     |                                                   | MIL-PRF-39003/3F<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/3F<br>GRADED |             |              |  |                                                |  |                  |
|                                                  |              |                                |                      |                                     |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |  |                                                |  |                  |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C  |              |                                |                      |                                     |                                                   |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 5.6                                              | A            | 10, 20                         | T140A565(1)010AS     | 1.0                                 | 4                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 6.8                                              | A            | 10                             | T140A685K010AS       | 1.0                                 | 6                                                 | 0116                                                      | 0216       | 0316        | 0416         | 2016                       | 3016        | 4016         |  |                                                |  | T242A685K010(2)S |
| 6.8                                              | A            | 20                             | T140A685M010AS       | 1.0                                 | 6                                                 | 0117                                                      | 0217       | 0317        | 0417         | 2017                       | 3017        | 4017         |  |                                                |  | T242A685M010(2)S |
| 8.2                                              | A            | 10                             | T140A825K010AS       | 1.2                                 | 6                                                 | 0118                                                      | 0218       | 0318        | 0418         | 2018                       | 3018        | 4018         |  |                                                |  | T242A825K010(2)S |
| 8.2                                              | A            | 20                             | T140A825M010AS       | 1.2                                 | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 47.0                                             | B            | 10                             | T140B476K010AS       | 4.0                                 | 6                                                 | 0119                                                      | 0219       | 0319        | 0419         | 2019                       | 3019        | 4019         |  |                                                |  | T242B476K010(2)S |
| 47.0                                             | B            | 20                             | T140B476M010AS       | 4.0                                 | 6                                                 | 0120                                                      | 0220       | 0320        | 0420         | 2020                       | 3020        | 4020         |  |                                                |  | T242B476M010(2)S |
| 56.0                                             | B            | 10                             | T140B566K010AS       | 5.0                                 | 6                                                 | 0121                                                      | 0221       | 0321        | 0421         | 2021                       | 3021        | 4021         |  |                                                |  | T242B566K010(2)S |
| 56.0                                             | B            | 20                             | T140B566M010AS       | 5.0                                 | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 68.0                                             | B            | 10                             | T140B686K010AS       | 6.0                                 | 6                                                 | 0122                                                      | 0222       | 0322        | 0422         | 2022                       | 3022        | 4022         |  |                                                |  | T242B686K010(2)S |
| 68.0                                             | B            | 20                             | T140B686M010AS       | 6.0                                 | 6                                                 | 0123                                                      | 0223       | 0323        | 0423         | 2023                       | 3023        | 4023         |  |                                                |  | T242B686M010(2)S |
| 82.0                                             | B            | 10                             | T140B826K010AS       | 7.0                                 | 6                                                 | 0124                                                      | 0224       | 0324        | 0424         | 2024                       | 3024        | 4024         |  |                                                |  | T242B826K010(2)S |
| 82.0                                             | B            | 20                             | T140B826M010AS       | 7.0                                 | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 150.0                                            | C            | 10, 20                         | T140C157(1)010AS     | 8.0                                 | 8                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 180.0                                            | C            | 10, 20                         | T140C187(1)010AS     | 8.0                                 | 8                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 220.0                                            | C            | 10                             | T140C227K010AS       | 12.0                                | 8                                                 | 0125                                                      | 0225       | 0325        | 0425         | 2025                       | 3025        | 4025         |  |                                                |  | T242C227K010(2)S |
| 220.0                                            | C            | 20                             | T140C227M010AS       | 12.0                                | 8                                                 | 0126                                                      | 0226       | 0326        | 0426         | 2026                       | 3026        | 4026         |  |                                                |  | T242C227M010(2)S |
| 270.0                                            | C            | 10                             | T140C277K010AS       | 13.0                                | 8                                                 | 0127                                                      | 0227       | 0327        | 0427         | 2027                       | 3027        | 4027         |  |                                                |  | T242C277K010(2)S |
| 270.0                                            | C            | 20                             | T140C277M010AS       | 13.0                                | 8                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 330.0                                            | D            | 10, 20                         | T140D337(1)010AS     | 16.0                                | 8                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 390.0                                            | D            | 10                             | T140D397K010AS       | 16.0                                | 10                                                | 0128                                                      | 0228       | 0328        | 0428         | 2028                       | 3028        | 4028         |  |                                                |  | T242D397K010(2)S |
| 390.0                                            | D            | 20                             | T140D397M010AS       | 16.0                                | 10                                                |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 470.0                                            | D            | 10                             | T140D477K010AS       | 16.0                                | 10                                                | 0129                                                      | 0229       | 0329        | 0429         | 2029                       | 3029        | 4029         |  |                                                |  | T242D477K010(2)S |
| 470.0                                            | D            | 20                             | T140D477M010AS       | 16.0                                | 10                                                | 0130                                                      | 0230       | 0330        | 0430         | 2030                       | 3030        | 4030         |  |                                                |  | T242D477M010(2)S |
| 560.0                                            | D            | 10                             | T140D567K010AS       | 20.0                                | 10                                                | 0131                                                      | 0231       | 0331        | 0431         | 2031                       | 3031        | 4031         |  |                                                |  | T242D567K010(2)S |
| 560.0                                            | D            | 20                             | T140D567M010AS       | 20.0                                | 10                                                |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C |              |                                |                      |                                     |                                                   |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 3.9                                              | A            | 10, 20                         | T140A395(1)015AS     | 1.0                                 | 4                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 4.7                                              | A            | 10                             | T140A475K015AS       | 1.0                                 | 4                                                 | 0132                                                      | 0232       | 0332        | 0432         | 2032                       | 3032        | 4032         |  |                                                |  | T242A475K015(2)S |
| 4.7                                              | A            | 20                             | T140A475M015AS       | 1.0                                 | 4                                                 | 0133                                                      | 0233       | 0333        | 0433         | 2033                       | 3033        | 4033         |  |                                                |  | T242A475M015(2)S |
| 5.6                                              | A            | 10                             | T140A565K015AS       | 1.3                                 | 4                                                 | 0134                                                      | 0234       | 0334        | 0434         | 2034                       | 3034        | 4034         |  |                                                |  | T242A565K015(2)S |
| 5.6                                              | A            | 20                             | T140A565M015AS       | 1.3                                 | 4                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 27.0                                             | B            | 10, 20                         | T140B276(1)015AS     | 3.0                                 | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 33.0                                             | B            | 10                             | T140B336K015AS       | 5.0                                 | 6                                                 | 0135                                                      | 0235       | 0335        | 0435         | 2035                       | 3035        | 4035         |  |                                                |  | T242B336K015(2)S |
| 33.0                                             | B            | 20                             | T140B336M015AS       | 5.0                                 | 6                                                 | 0136                                                      | 0236       | 0336        | 0436         | 2036                       | 3036        | 4036         |  |                                                |  | T242B336M015(2)S |
| 39.0                                             | B            | 10                             | T140B396K015AS       | 5.3                                 | 6                                                 | 0137                                                      | 0237       | 0337        | 0437         | 2037                       | 3037        | 4037         |  |                                                |  | T242B396K015(2)S |
| 39.0                                             | B            | 20                             | T140B396M015AS       | 5.3                                 | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 82.0                                             | C            | 10, 20                         | T140C826(1)015AS     | 8.0                                 | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 100.0                                            | C            | 10, 20                         | T140C107(1)015AS     | 10.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 120.0                                            | C            | 10, 20                         | T140C127(1)015AS     | 10.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 150.0                                            | C            | 10                             | T140C157K015AS       | 15.0                                | 8                                                 | 0138                                                      | 0238       | 0338        | 0438         | 2038                       | 3038        | 4038         |  |                                                |  | T242C157K015(2)S |
| 150.0                                            | C            | 20                             | T140C157M015AS       | 15.0                                | 8                                                 | 0139                                                      | 0239       | 0339        | 0439         | 2039                       | 3039        | 4039         |  |                                                |  | T242C157M015(2)S |
| 180.0                                            | C            | 10                             | T140C187K015AS       | 15.0                                | 8                                                 | 0140                                                      | 0240       | 0340        | 0440         | 2040                       | 3040        | 4040         |  |                                                |  | T242C187K015(2)S |
| 180.0                                            | C            | 20                             | T140C187M015AS       | 15.0                                | 8                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 220.0                                            | D            | 10                             | T140D227K015AS       | 20.0                                | 8                                                 | 0141                                                      | 0241       | 0341        | 0441         | 2041                       | 3041        | 4041         |  |                                                |  | T242D227K015(2)S |
| 220.0                                            | D            | 20                             | T140D227M015AS       | 20.0                                | 8                                                 | 0142                                                      | 0242       | 0342        | 0442         | 2042                       | 3042        | 4042         |  |                                                |  | T242D227M015(2)S |
| 270.0                                            | D            | 10                             | T140D277K015AS       | 20.0                                | 8                                                 | 0143                                                      | 0243       | 0343        | 0443         | 2043                       | 3043        | 4043         |  |                                                |  | T242D277K015(2)S |
| 270.0                                            | D            | 20                             | T140D277M015AS       | 20.0                                | 8                                                 |                                                           |            |             |              |                            |             |              |  |                                                |  |                  |
| 330.0                                            | D            | 10                             | T140D337K015AS       | 20.0                                | 8                                                 | 0144                                                      | 0244       | 0344        | 0444         | 2044                       | 3044        | 4044         |  |                                                |  | T242D337K015(2)S |
| 330.0                                            | D            | 20                             | T140D337M015AS       | 20.0                                | 8                                                 | 0145                                                      | 0245       | 0345        | 0445         | 2045                       | 3045        | 4045         |  |                                                |  | T242D337M015(2)S |

(1) To complete T140 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF                                | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T140           |                                    |                                                   | MIL-PRF-39003 (CSR23) CAPACITORS                          |            |             |              |                            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|------------------------------------------------|
|                                                  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |                                                |
|                                                  |              |                                |                      |                                    |                                                   | MIL-PRF-39003/3F<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/3F<br>GRADED |             |              |                  |                                                |
|                                                  |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.7                                              | A            | 10                             | T140A275K020AS       | 0.8                                | 4                                                 | 0146                                                      | 0246       | 0346        | 0446         | 2046                       | 3046        | 4046         | T242A275K020(2)S |                                                |
| 2.7                                              | A            | 20                             | T140A275M020AS       | 0.8                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 3.3                                              | A            | 10                             | T140A335K020AS       | 1.0                                | 4                                                 | 0147                                                      | 0247       | 0347        | 0447         | 2047                       | 3047        | 4047         | T242A335K020(2)S |                                                |
| 3.3                                              | A            | 20                             | T140A335M020AS       | 1.0                                | 4                                                 | 0148                                                      | 0248       | 0348        | 0448         | 2048                       | 3048        | 4048         | T242A335M020(2)S |                                                |
| 3.9                                              | A            | 10                             | T140A395K020AS       | 1.2                                | 4                                                 | 0149                                                      | 0249       | 0349        | 0449         | 2049                       | 3049        | 4049         | T242A395K020(2)S |                                                |
| 3.9                                              | A            | 20                             | T140A395M020AS       | 1.2                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 18.0                                             | B            | 10                             | T140B186K020AS       | 3.0                                | 6                                                 | 0150                                                      | 0250       | 0350        | 0450         | 2050                       | 3050        | 4050         | T242B186K020(2)S |                                                |
| 18.0                                             | B            | 20                             | T140B186M020AS       | 3.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 22.0                                             | B            | 10                             | T140B226K020AS       | 3.0                                | 6                                                 | 0151                                                      | 0251       | 0351        | 0451         | 2051                       | 3051        | 4051         | T242B226K020(2)S |                                                |
| 22.0                                             | B            | 20                             | T140B226M020AS       | 3.0                                | 6                                                 | 0152                                                      | 0252       | 0352        | 0452         | 2052                       | 3052        | 4052         | T242B226M020(2)S |                                                |
| 27.0                                             | B            | 10                             | T140B276K020AS       | 4.0                                | 6                                                 | 0153                                                      | 0253       | 0353        | 0453         | 2053                       | 3053        | 4053         | T242B276K020(2)S |                                                |
| 27.0                                             | B            | 20                             | T140B276M020AS       | 4.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 56.0                                             | C            | 10                             | T140C566K020AS       | 7.0                                | 6                                                 | 0154                                                      | 0254       | 0354        | 0454         | 2054                       | 3054        | 4054         | T242C566K020(2)S |                                                |
| 56.0                                             | C            | 20                             | T140C566M020AS       | 7.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 68.0                                             | C            | 10                             | T140C686K020AS       | 8.0                                | 6                                                 | 0155                                                      | 0255       | 0355        | 0455         | 2055                       | 3055        | 4055         | T242C686K020(2)S |                                                |
| 68.0                                             | C            | 20                             | T140C686M020AS       | 8.0                                | 6                                                 | 0156                                                      | 0256       | 0356        | 0456         | 2056                       | 3056        | 4056         | T242C686M020(2)S |                                                |
| 82.0                                             | C            | 10                             | T140C826K020AS       | 10.0                               | 6                                                 | 0157                                                      | 0257       | 0357        | 0457         | 2057                       | 3057        | 4057         | T242C826K020(2)S |                                                |
| 82.0                                             | C            | 20                             | T140C826M020AS       | 10.0                               | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 100.0                                            | C            | 10                             | T140C107K020AS       | 12.0                               | 6                                                 | 0158                                                      | 0258       | 0358        | 0458         | 2058                       | 3058        | 4058         | T242C107K020(2)S |                                                |
| 100.0                                            | C            | 20                             | T140C107M020AS       | 12.0                               | 6                                                 | 0159                                                      | 0259       | 0359        | 0459         | 2059                       | 3059        | 4059         | T242C107M020(2)S |                                                |
| 120.0                                            | C            | 10                             | T140C127K020AS       | 12.0                               | 6                                                 | 0160                                                      | 0260       | 0360        | 0460         | 2060                       | 3060        | 4060         | T242C127K020(2)S |                                                |
| 120.0                                            | C            | 20                             | T140C127M020AS       | 12.0                               | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 150.0                                            | D            | 10                             | T140D157K020AS       | 15.0                               | 8                                                 | 0161                                                      | 0261       | 0361        | 0461         | 2061                       | 3061        | 4061         | T242D157K020(2)S |                                                |
| 150.0                                            | D            | 20                             | T140D157M020AS       | 15.0                               | 8                                                 | 0162                                                      | 0262       | 0362        | 0462         | 2062                       | 3062        | 4062         | T242D157M020(2)S |                                                |
| 180.0                                            | D            | 10                             | T140D187K020AS       | 15.0                               | 8                                                 | 0163                                                      | 0263       | 0363        | 0463         | 2063                       | 3063        | 4063         | T242D187K020(2)S |                                                |
| 180.0                                            | D            | 20                             | T140D187M020AS       | 15.0                               | 8                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 30 VOLT RATING AT 85°C — 20 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.2                                              | A            | 10, 20                         | T140A125(1)030AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.5                                              | A            | 10, 20                         | T140A155(1)030AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 1.8                                              | A            | 10, 20                         | T140A185(1)030AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.2                                              | A            | 10, 20                         | T140A225(1)030AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 2.7                                              | A            | 10, 20                         | T140A275(1)030AS     | 1.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 12.0                                             | B            | 10, 20                         | T140B126(1)030AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 15.0                                             | B            | 10, 20                         | T140B156(1)030AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 18.0                                             | B            | 10, 20                         | T140B186(1)030AS     | 3.0                                | 4                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 33.0                                             | C            | 10, 20                         | T140C336(1)030AS     | 6.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 39.0                                             | C            | 10, 20                         | T140C396(1)030AS     | 6.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 47.0                                             | C            | 10, 20                         | T140C476(1)030AS     | 7.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 56.0                                             | C            | 10, 20                         | T140C566(1)030AS     | 7.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 68.0                                             | C            | 10, 20                         | T140C686(1)030AS     | 7.0                                | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 82.0                                             | D            | 10, 20                         | T140D826(1)030AS     | 10.0                               | 6                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |
| 100.0                                            | D            | 10, 20                         | T140D107(1)030AS     | 10.0                               | 8                                                 |                                                           |            |             |              |                            |             |              |                  |                                                |

(1) To complete T140 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

**Bold Face** lines indicate popular part types and values.

**T140/T242 Series Tantalum  
Hermetically Sealed**



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003

## T140 SERIES — POLAR TYPE & T242 (CSR23)

### RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T140           |                                    |                                                   | MIL-PRF-39003 (CSR23) CAPACITORS                          |            |             |              |            |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--------------------------------------------------|--------------|--------------------------------|----------------------|------------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|------------|-------------|--------------|------------------|------------------------------------------------|
|                                                  |              |                                | KEMET<br>PART NUMBER | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSIPATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |            |             |              |                  |                                                |
|                                                  |              |                                |                      |                                    |                                                   | MIL-PRF-39003/3F<br>EXPONENTIAL                           |            |             |              |            |             |              |                  |                                                |
|                                                  |              |                                |                      |                                    |                                                   | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1) | C<br>(0.01) | D<br>(0.001) |                  |                                                |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |            |             |              |                  |                                                |
| 1.2                                              | A            | 10, 20                         | T140A125(1)035AS     | 0.6                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 1.5                                              | A            | 10, 20                         | T140A155(1)035AS     | 0.8                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 1.8                                              | A            | 10                             | T140A185K035AS       | 1.0                                | 4                                                 | 0164                                                      | 0264       | 0364        | 0464         | 2064       | 3064        | 4064         | T242A185K035(2)S |                                                |
| 1.8                                              | A            | 20                             | T140A185M035AS       | 1.0                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 8.2                                              | B            | 10                             | T140B825K035AS       | 3.0                                | 4                                                 | 0165                                                      | 0265       | 0365        | 0465         | 2065       | 3065        | 4065         | T242B825K035(2)S |                                                |
| 8.2                                              | B            | 20                             | T140B825M035AS       | 3.0                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 10.0                                             | B            | 10                             | T140B106K035AS       | 3.0                                | 4                                                 | 0166                                                      | 0266       | 0366        | 0466         | 2066       | 3066        | 4066         | T242B106K035(2)S |                                                |
| 10.0                                             | B            | 20                             | T140B106M035AS       | 3.0                                | 4                                                 | 0167                                                      | 0267       | 0367        | 0467         | 2067       | 3067        | 4067         | T242B106M035(2)S |                                                |
| 27.0                                             | C            | 10, 20                         | T140C276(1)035AS     | 7.0                                | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 33.0                                             | C            | 10                             | T140C336K035AS       | 8.0                                | 6                                                 | 0168                                                      | 0268       | 0368        | 0468         | 2068       | 3068        | 4068         | T242C336K035(2)S |                                                |
| 33.0                                             | C            | 20                             | T140C336M035AS       | 8.0                                | 6                                                 | 0169                                                      | 0269       | 0369        | 0469         | 2069       | 3069        | 4069         | T242C336M035(2)S |                                                |
| 39.0                                             | C            | 10                             | T140C396K035AS       | 10.0                               | 6                                                 | 0170                                                      | 0270       | 0370        | 0470         | 2070       | 3070        | 4070         | T242C396K035(2)S |                                                |
| 39.0                                             | C            | 20                             | T140C396M035AS       | 10.0                               | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 47.0                                             | C            | 10                             | T140C476K035AS       | 10.0                               | 6                                                 | 0171                                                      | 0271       | 0371        | 0471         | 2071       | 3071        | 4071         | T242C476K035(2)S |                                                |
| 47.0                                             | C            | 20                             | T140C476M035AS       | 10.0                               | 6                                                 | 0172                                                      | 0272       | 0372        | 0472         | 2072       | 3072        | 4072         | T242C476M035(2)S |                                                |
| 56.0                                             | D            | 10                             | T140D566K035AS       | 12.0                               | 6                                                 | 0173                                                      | 0273       | 0373        | 0473         | 2073       | 3073        | 4073         | T242D566K035(2)S |                                                |
| 56.0                                             | D            | 20                             | T140D566M035AS       | 12.0                               | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 68.0                                             | D            | 10                             | T140D686K035AS       | 12.0                               | 6                                                 | 0174                                                      | 0274       | 0374        | 0474         | 2074       | 3074        | 4074         | T242D686K035(2)S |                                                |
| 68.0                                             | D            | 20                             | T140D686M035AS       | 12.0                               | 6                                                 | 0175                                                      | 0275       | 0375        | 0475         | 2075       | 3075        | 4075         | T242D686M035(2)S |                                                |
| 82.0                                             | D            | 10, 20                         | T140D826(1)035AS     | 20.0                               | 8                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 100.0                                            | D            | 10, 20                         | T140D107(1)035AS     | 20.0                               | 8                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |            |             |              |                  |                                                |
| 1.2                                              | A            | 10                             | T140A125K050AS       | 0.6                                | 4                                                 | 0176                                                      | 0276       | 0376        | 0476         | 2076       | 3076        | 4076         | T242A125K050(2)S |                                                |
| 1.2                                              | A            | 20                             | T140A125M050AS       | 0.6                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 1.5                                              | A            | 10                             | T140A155K050AS       | 0.8                                | 4                                                 | 0177                                                      | 0277       | 0377        | 0477         | 2077       | 3077        | 4077         | T242A155K050(2)S |                                                |
| 1.5                                              | A            | 20                             | T140A155M050AS       | 0.8                                | 4                                                 | 0178                                                      | 0278       | 0378        | 0478         | 2078       | 3078        | 4078         | T242A155M050(2)S |                                                |
| 5.6                                              | B            | 10                             | T140B565K050AS       | 2.5                                | 4                                                 | 0179                                                      | 0279       | 0379        | 0479         | 2079       | 3079        | 4079         | T242B565K050(2)S |                                                |
| 5.6                                              | B            | 20                             | T140B565M050AS       | 2.5                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 6.8                                              | B            | 10                             | T140B685K050AS       | 2.5                                | 4                                                 | 0180                                                      | 0280       | 0380        | 0480         | 2080       | 3080        | 4080         | T242B685K050(2)S |                                                |
| 6.8                                              | B            | 20                             | T140B685M050AS       | 2.5                                | 4                                                 | 0181                                                      | 0281       | 0381        | 0481         | 2081       | 3081        | 4081         | T242B685M050(2)S |                                                |
| 22.0                                             | C            | 10                             | T140C226K050AS       | 7.0                                | 6                                                 | 0182                                                      | 0282       | 0382        | 0482         | 2082       | 3082        | 4082         | T242C226K050(2)S |                                                |
| 22.0                                             | C            | 20                             | T140C226M050AS       | 7.0                                | 6                                                 | 0183                                                      | 0283       | 0383        | 0483         | 2083       | 3083        | 4083         | T242C226M050(2)S |                                                |
| 27.0                                             | C            | 10                             | T140C276K050AS       | 8.0                                | 6                                                 | 0184                                                      | 0284       | 0384        | 0484         | 2084       | 3084        | 4084         | T242C276K050(2)S |                                                |
| 27.0                                             | C            | 20                             | T140C276M050AS       | 8.0                                | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 33.0                                             | D            | 10                             | T140D336K050AS       | 10.0                               | 6                                                 | 0185                                                      | 0285       | 0385        | 0485         | 2085       | *           | *            | T242D336K050(2)S |                                                |
| 33.0                                             | D            | 20                             | T140D336M050AS       | 10.0                               | 6                                                 | 0186                                                      | 0286       | 0386        | 0486         | 2086       | *           | *            | T242D336M050(2)S |                                                |
| 39.0                                             | D            | 10                             | T140D396K050AS       | 10.0                               | 6                                                 | 0187                                                      | 0287       | 0387        | 0487         | 2087       | *           | *            | T242D396K050(2)S |                                                |
| 39.0                                             | D            | 20                             | T140D396M050AS       | 10.0                               | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 47.0                                             | D            | 20                             | T140D476M050AS       | 10.0                               | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 60 VOLT RATING AT 85°C — 40 VOLT RATING AT 125°C |              |                                |                      |                                    |                                                   |                                                           |            |             |              |            |             |              |                  |                                                |
| 0.82                                             | A            | 10, 20                         | T140A824(1)060AS     | 0.5                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 1.0                                              | A            | 10, 20                         | T140A105(1)060AS     | 0.5                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 4.7                                              | B            | 10, 20                         | T140B475(1)060AS     | 3.0                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 5.6                                              | B            | 10, 20                         | T140B565(1)060AS     | 3.0                                | 4                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 15.0                                             | C            | 10, 20                         | T140C156(1)060AS     | 5.0                                | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 18.0                                             | C            | 10, 20                         | T140C186(1)060AS     | 6.0                                | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 22.0                                             | C            | 10, 20                         | T140C226(1)060AS     | 7.0                                | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 27.0                                             | D            | 10, 20                         | T140D276(1)060AS     | 10.0                               | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |
| 33.0                                             | D            | 10, 20                         | T140D336(1)060AS     | 10.0                               | 6                                                 |                                                           |            |             |              |            |             |              |                  |                                                |

(1) To complete T140 Series Part Number, insert Capacitance Tolerance Symbol in the 9th Character as shown on Page 6.

(2) To complete the T242 Series Part Number, insert Failure Rate Symbol in the 13th Character.

\*Note: C Failure Rate not QPL for -3085 thru 3087

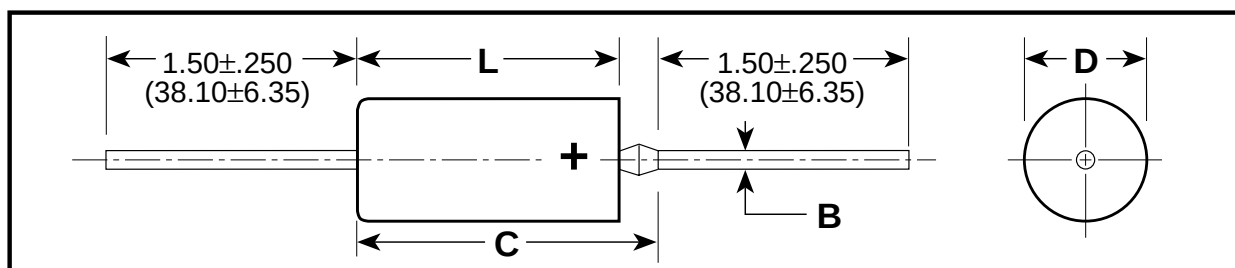
D Failure Rate not QPL for -4085 thru 4087

**Bold Face** lines indicate popular part types and values.

Available from 1.2  $\mu$ F to 1000  $\mu$ F, 6VDC to 50 VDC, these high capacitance-to-volume ratio, hermetically sealed solid tantalum capacitors are offered in standard MIL style A, B, C, and D cases. They meet or exceed the environmental and mechanical requirements of MIL-C-39003. Designed to operate from -55°C to +125°C, they exhibit

exceptionally low DC leakage, dissipation factor and impedance characteristics. They are ideal for coupling, bypass, filtering and timing circuits, and are excellent substitutes for wet tantalums in low voltage applications. They are available in style CSR33 (T252 Series) per MIL-PRF-39003/06.

### CAPACITOR OUTLINE DRAWINGS



### DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED                       |                                   | INSULATED                         |                                   | B<br>$\pm 0.002$<br>( $\pm .05$ ) | C<br>MAX.     |
|-----------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|
|           | D<br>$\pm 0.005$<br>( $\pm .13$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) | D<br>$\pm 0.010$<br>( $\pm .25$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) |                                   |               |
| A         | 0.125 (3.18)                      | 0.250 (6.35)                      | 0.135 (3.43)                      | 0.286 (7.26)                      | 0.020 (.51)                       | 0.422 (10.72) |
| B         | 0.175 (4.45)                      | 0.438 (11.13)                     | 0.185 (4.70)                      | 0.474 (12.04)                     | 0.020 (.51)                       | 0.610 (15.49) |
| C         | 0.279 (7.09)                      | 0.650 (16.51)                     | 0.289 (7.34)                      | 0.686 (17.42)                     | 0.025 (.64)                       | 0.822 (20.88) |
| D         | 0.341 (8.66)                      | 0.750 (19.05)                     | 0.351 (8.92)                      | 0.786 (19.96)                     | 0.025 (.64)                       | 0.922 (23.42) |

### ORDERING INFORMATION

**TANTALUM** — T

**SERIES** — 252  
252 — CSR33

**CASE SIZE** — A / B / C / D

**PICOFARAD CODE** — 125  
First two digits represent significant figures.  
3rd digit specifies no. of zeros to follow.

**CAP. TOLERANCE** — K  
M —  $\pm 20\%$   
K —  $\pm 10\%$   
J —  $\pm 5\%$

**SPECIFICATION**  
All capacitors are sleeved unless specified.

**LEAD MATERIAL**  
S — Standard

**FAILURE RATE\*\* GRADED**  
B — 0.1%/k hrs.  
C — 0.01%/k hrs.  
D — 0.001%/k hrs.

**EXPONENTIAL**  
M — 1%/k hrs.  
P — 0.1%/k hrs.  
R — 0.01%/k hrs.  
S — 0.001%/k hrs.

**VOLTAGE RATING**  
At 85°C

**\*Part Number Example: T252A125K050MS (14 digits - no spaces)**

For Military Marking Information, see page 4.





# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003 T252 (CSR33) SERIES

## RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF      | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T252 SERIES                  |                                                        |                                                           |            |             |              | MIL-PRF-39003 (CSR33) CAPACITORS |             |              |                                                |  |
|------------------------|--------------|--------------------------------|------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------------|-------------|--------------|------------------------------------------------|--|
|                        |              |                                | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                                  |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |  |
|                        |              |                                |                                    |                                                        | MIL-PRF-39003/6C<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/6C<br>GRADED       |             |              |                                                |  |
|                        |              |                                |                                    |                                                        | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                       | C<br>(0.01) | D<br>(0.001) |                                                |  |
| 6 VOLT RATING AT 85°C  |              |                                |                                    |                                                        |                                                           |            |             |              |                                  |             |              |                                                |  |
| 10.0                   | A            | 10                             | 0.5                                | 6                                                      | 0001                                                      | 0101       | 0201        | 0301         | 2001                             | 3001        | 4001         | T252A106K006(1)S                               |  |
| 10.0                   | A            | 20                             | 0.5                                | 6                                                      | 0002                                                      | 0102       | 0202        | 0302         | 2002                             | 3002        | 4002         | T252A106M006(1)S                               |  |
| 12.0                   | A            | 10                             | 0.5                                | 6                                                      | 0003                                                      | 0103       | 0203        | 0303         | 2003                             | 3003        | 4003         | T252A126K006(1)S                               |  |
| 100.0                  | B            | 10                             | 1.0                                | 8                                                      | 0004                                                      | 0104       | 0204        | 0304         | 2004                             | 3004        | 4004         | T252B107K006(1)S                               |  |
| 100.0                  | B            | 20                             | 1.0                                | 8                                                      | 0005                                                      | 0105       | 0205        | 0305         | 2005                             | 3005        | 4005         | T252B107M006(1)S                               |  |
| 330.0                  | C            | 10                             | 2.0                                | 8                                                      | 0006                                                      | 0106       | 0206        | 0306         | 2006                             | 3006        | 4006         | T252C337K006(1)S                               |  |
| 330.0                  | C            | 20                             | 2.0                                | 8                                                      | 0007                                                      | 0107       | 0207        | 0307         | 2007                             | 3007        | 4007         | T252C337M006(1)S                               |  |
| 390.0                  | C            | 10                             | 2.0                                | 10                                                     | 0008                                                      | 0108       | 0208        | 0308         | 2008                             | 3008        | 4008         | T252C397K006(1)S                               |  |
| 470.0                  | C            | 10                             | 2.0                                | 10                                                     | 0009                                                      | 0109       | 0209        | 0309         | 2009                             | 3009        | 4009         | T252C477K006(1)S                               |  |
| 470.0                  | C            | 20                             | 2.0                                | 10                                                     | 0010                                                      | 0110       | 0210        | 0310         | 2010                             | 3010        | 4010         | T252C477M006(1)S                               |  |
| 680.0                  | D            | 10                             | 5.0                                | 10                                                     | 0011                                                      | 0111       | 0211        | 0311         | 2011                             | 3011        | 4011         | T252D687K006(1)S                               |  |
| 680.0                  | D            | 20                             | 5.0                                | 10                                                     | 0012                                                      | 0112       | 0212        | 0312         | 2012                             | 3012        | 4012         | T252D687M006(1)S                               |  |
| 820.0                  | D            | 10                             | 5.0                                | 10                                                     | 0013                                                      | 0113       | 0213        | 0313         | 2013                             | 3013        | 4013         | T252D827K006(1)S                               |  |
| 1000.0                 | D            | 10                             | 5.0                                | 10                                                     | 0014                                                      | 0114       | 0214        | 0314         | 2014                             | 3014        | 4014         | T252D108K006(1)S                               |  |
| 1000.0                 | D            | 20                             | 5.0                                | 10                                                     | 0015                                                      | 0115       | 0215        | 0315         | 2015                             | 3015        | 4015         | T252D108M006(1)S                               |  |
| 10 VOLT RATING AT 85°C |              |                                |                                    |                                                        |                                                           |            |             |              |                                  |             |              |                                                |  |
| 6.8                    | A            | 10                             | .5                                 | 6                                                      | 0016                                                      | 0116       | 0216        | 0316         | 2016                             | 3016        | 4016         | T252A685K010(1)S                               |  |
| 6.8                    | A            | 20                             | .5                                 | 6                                                      | 0017                                                      | 0117       | 0217        | 0317         | 2017                             | 3017        | 4017         | T252A685M010(1)S                               |  |
| 8.2                    | A            | 10                             | .5                                 | 6                                                      | 0018                                                      | 0118       | 0218        | 0318         | 2018                             | 3018        | 4018         | T252A825K010(1)S                               |  |
| 47.0                   | B            | 10                             | 1.0                                | 6                                                      | 0019                                                      | 0119       | 0219        | 0319         | 2019                             | 3019        | 4019         | T252B476K010(1)S                               |  |
| 47.0                   | B            | 20                             | 1.0                                | 6                                                      | 0020                                                      | 0120       | 0220        | 0320         | 2020                             | 3020        | 4020         | T252B476M010(1)S                               |  |
| 56.0                   | B            | 10                             | 1.0                                | 6                                                      | 0021                                                      | 0121       | 0221        | 0321         | 2021                             | 3021        | 4021         | T252B566K010(1)S                               |  |
| 68.0                   | B            | 10                             | 1.0                                | 6                                                      | 0022                                                      | 0122       | 0222        | 0322         | 2022                             | 3022        | 4022         | T252B686K010(1)S                               |  |
| 68.0                   | B            | 20                             | 1.0                                | 6                                                      | 0023                                                      | 0123       | 0223        | 0323         | 2023                             | 3023        | 4023         | T252B686M010(1)S                               |  |
| 82.0                   | B            | 10                             | 1.0                                | 6                                                      | 0024                                                      | 0124       | 0224        | 0324         | 2024                             | 3024        | 4024         | T252B826K010(1)S                               |  |
| 220.0                  | C            | 10                             | 1.0                                | 8                                                      | 0025                                                      | 0125       | 0225        | 0325         | 2025                             | 3025        | 4025         | T252C227K010(1)S                               |  |
| 220.0                  | C            | 20                             | 1.0                                | 8                                                      | 0026                                                      | 0126       | 0226        | 0326         | 2026                             | 3026        | 4026         | T252C227M010(1)S                               |  |
| 270.0                  | C            | 10                             | 2.0                                | 8                                                      | 0027                                                      | 0127       | 0227        | 0327         | 2027                             | 3027        | 4027         | T252C277K010(1)S                               |  |
| 390.0                  | D            | 10                             | 2.0                                | 10                                                     | 0028                                                      | 0128       | 0228        | 0328         | 2028                             | 3028        | 4028         | T252D397K010(1)S                               |  |
| 470.0                  | D            | 10                             | 4.0                                | 10                                                     | 0029                                                      | 0129       | 0229        | 0329         | 2029                             | 3029        | 4029         | T252D477K010(1)S                               |  |
| 470.0                  | D            | 20                             | 4.0                                | 10                                                     | 0030                                                      | 0130       | 0230        | 0330         | 2030                             | 3030        | 4030         | T252D477M010(1)S                               |  |
| 560.0                  | D            | 10                             | 4.0                                | 10                                                     | 0031                                                      | 0131       | 0231        | 0331         | 2031                             | 3031        | 4031         | T252D567K010(1)S                               |  |
| 15 VOLT RATING AT 85°C |              |                                |                                    |                                                        |                                                           |            |             |              |                                  |             |              |                                                |  |
| 4.7                    | A            | 10                             | .5                                 | 4                                                      | 0032                                                      | 0132       | 0232        | 0332         | 2032                             | 3032        | 4032         | T252A475K015(1)S                               |  |
| 4.7                    | A            | 20                             | .5                                 | 4                                                      | 0033                                                      | 0133       | 0233        | 0333         | 2033                             | 3033        | 4033         | T252A475M015(1)S                               |  |
| 5.6                    | A            | 10                             | .5                                 | 4                                                      | 0034                                                      | 0134       | 0234        | 0334         | 2034                             | 3034        | 4034         | T252A565K015(1)S                               |  |
| 33.0                   | B            | 10                             | 1.0                                | 6                                                      | 0035                                                      | 0135       | 0235        | 0335         | 2035                             | 3035        | 4035         | T252B336K015(1)S                               |  |
| 33.0                   | B            | 20                             | 1.0                                | 6                                                      | 0036                                                      | 0136       | 0236        | 0336         | 2036                             | 3036        | 4036         | T252B336M015(1)S                               |  |
| 39.0                   | B            | 10                             | 1.0                                | 6                                                      | 0037                                                      | 0137       | 0237        | 0337         | 2037                             | 3037        | 4037         | T252B396K015(1)S                               |  |
| 150.0                  | C            | 10                             | 1.0                                | 8                                                      | 0038                                                      | 0138       | 0238        | 0338         | 2038                             | 3038        | 4038         | T252C157K015(1)S                               |  |
| 150.0                  | C            | 20                             | 1.0                                | 8                                                      | 0039                                                      | 0139       | 0239        | 0339         | 2039                             | 3039        | 4039         | T252C157M015(1)S                               |  |
| 180.0                  | C            | 10                             | 2.0                                | 8                                                      | 0040                                                      | 0140       | 0240        | 0340         | 2040                             | 3040        | 4040         | T252C187K015(1)S                               |  |
| 220.0                  | D            | 10                             | 2.0                                | 8                                                      | 0041                                                      | 0141       | 0241        | 0341         | 2041                             | 3041        | 4041         | T252D227K015(1)S                               |  |
| 220.0                  | D            | 20                             | 2.0                                | 8                                                      | 0042                                                      | 0142       | 0242        | 0342         | 2042                             | 3042        | 4042         | T252D227M015(1)S                               |  |
| 270.0                  | D            | 10                             | 2.0                                | 8                                                      | 0043                                                      | 0143       | 0243        | 0343         | 2043                             | 3043        | 4043         | T252D277K015(1)S                               |  |
| 330.0                  | D            | 10                             | 2.0                                | 8                                                      | 0044                                                      | 0144       | 0244        | 0344         | 2044                             | 3044        | 4044         | T252D337K015(1)S                               |  |
| 330.0                  | D            | 20                             | 2.0                                | 8                                                      | 0045                                                      | 0145       | 0245        | 0345         | 2045                             | 3045        | 4045         | T252D337M015(1)S                               |  |

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 31.

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF      | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T252 SERIES                  |                                                        |                                                           |            |             |              | MIL-PRF-39003 (CSR33) CAPACITORS |             |              |                  |                                                |  |
|------------------------|--------------|--------------------------------|------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------------|-------------|--------------|------------------|------------------------------------------------|--|
|                        |              |                                | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>120Hz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                                  |             |              |                  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |  |
|                        |              |                                |                                    |                                                        | MIL-PRF-39003/6C<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/6C<br>GRADED       |             |              |                  |                                                |  |
|                        |              |                                |                                    |                                                        | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                       | C<br>(0.01) | D<br>(0.001) |                  |                                                |  |
| 20 VOLT RATING AT 85°C |              |                                |                                    |                                                        |                                                           |            |             |              |                                  |             |              |                  |                                                |  |
| 2.7                    | A            | 10                             | .5                                 | 4                                                      | 0046                                                      | 0146       | 0246        | 0346         | 2046                             | 3046        | 4046         | T252A275K020(1)S |                                                |  |
| 3.3                    | A            | 10                             | .5                                 | 4                                                      | 0047                                                      | 0147       | 0247        | 0347         | 2047                             | 3047        | 4047         | T252A335K020(1)S |                                                |  |
| 3.3                    | A            | 20                             | .5                                 | 4                                                      | 0048                                                      | 0148       | 0248        | 0348         | 2048                             | 3048        | 4048         | T252A335M020(1)S |                                                |  |
| 3.9                    | A            | 10                             | .5                                 | 4                                                      | 0049                                                      | 0149       | 0249        | 0349         | 2049                             | 3049        | 4049         | T252A395K020(1)S |                                                |  |
| 18.0                   | B            | 10                             | 1.0                                | 6                                                      | 0050                                                      | 0150       | 0250        | 0350         | 2050                             | 3050        | 4050         | T252B186K020(1)S |                                                |  |
| 22.0                   | B            | 10                             | 1.0                                | 6                                                      | 0051                                                      | 0151       | 0251        | 0351         | 2051                             | 3051        | 4051         | T252B226K020(1)S |                                                |  |
| 22.0                   | B            | 20                             | 1.0                                | 6                                                      | 0052                                                      | 0152       | 0252        | 0352         | 2052                             | 3052        | 4052         | T252B226M020(1)S |                                                |  |
| 27.0                   | B            | 10                             | 1.0                                | 6                                                      | 0053                                                      | 0153       | 0253        | 0353         | 2053                             | 3053        | 4053         | T252B276K020(1)S |                                                |  |
| 56.0                   | C            | 10                             | 1.0                                | 6                                                      | 0054                                                      | 0154       | 0254        | 0354         | 2054                             | 3054        | 4054         | T252C566K020(1)S |                                                |  |
| 68.0                   | C            | 10                             | 1.0                                | 6                                                      | 0055                                                      | 0155       | 0255        | 0355         | 2055                             | 3055        | 4055         | T252C686K020(1)S |                                                |  |
| 68.0                   | C            | 20                             | 1.0                                | 6                                                      | 0056                                                      | 0156       | 0256        | 0356         | 2056                             | 3056        | 4056         | T252C686M020(1)S |                                                |  |
| 82.0                   | C            | 10                             | 1.0                                | 6                                                      | 0057                                                      | 0157       | 0257        | 0357         | 2057                             | 3057        | 4057         | T252C826K020(1)S |                                                |  |
| 100.0                  | C            | 10                             | 1.0                                | 6                                                      | 0058                                                      | 0158       | 0258        | 0358         | 2058                             | 3058        | 4058         | T252C107K020(1)S |                                                |  |
| 100.0                  | C            | 20                             | 1.0                                | 6                                                      | 0059                                                      | 0159       | 0259        | 0359         | 2059                             | 3059        | 4059         | T252C107M020(1)S |                                                |  |
| 120.0                  | C            | 10                             | 1.0                                | 6                                                      | 0060                                                      | 0160       | 0260        | 0360         | 2060                             | 3060        | 4060         | T252C127K020(1)S |                                                |  |
| 150.0                  | D            | 10                             | 2.0                                | 8                                                      | 0061                                                      | 0161       | 0261        | 0361         | 2061                             | 3061        | 4061         | T252D157K020(1)S |                                                |  |
| 150.0                  | D            | 20                             | 2.0                                | 8                                                      | 0062                                                      | 0162       | 0262        | 0362         | 2062                             | 3062        | 4062         | T252D157M020(1)S |                                                |  |
| 180.0                  | D            | 10                             | 2.0                                | 8                                                      | 0063                                                      | 0163       | 0263        | 0363         | 2063                             | 3063        | 4063         | T252D187K020(1)S |                                                |  |
| 35 VOLT RATING AT 85°C |              |                                |                                    |                                                        |                                                           |            |             |              |                                  |             |              |                  |                                                |  |
| 1.8                    | A            | 10                             | .5                                 | 4                                                      | 0064                                                      | 0164       | 0264        | 0364         | 2064                             | 3064        | 4064         | T252A185K035(1)S |                                                |  |
| 8.2                    | B            | 10                             | 1.0                                | 6                                                      | 0065                                                      | 0165       | 0265        | 0365         | 2065                             | 3065        | 4065         | T252B825K035(1)S |                                                |  |
| 10.0                   | B            | 10                             | 1.0                                | 6                                                      | 0066                                                      | 0166       | 0266        | 0366         | 2066                             | 3066        | 4066         | T252B106K035(1)S |                                                |  |
| 10.0                   | B            | 20                             | 1.0                                | 6                                                      | 0067                                                      | 0167       | 0267        | 0367         | 2067                             | 3067        | 4067         | T252B106M035(1)S |                                                |  |
| 33.0                   | C            | 10                             | 1.0                                | 6                                                      | 0068                                                      | 0168       | 0268        | 0368         | 2068                             | 3068        | 4068         | T252C336K035(1)S |                                                |  |
| 33.0                   | C            | 20                             | 1.0                                | 6                                                      | 0069                                                      | 0169       | 0269        | 0369         | 2069                             | 3069        | 4069         | T252C336M035(1)S |                                                |  |
| 39.0                   | C            | 10                             | 1.0                                | 6                                                      | 0070                                                      | 0170       | 0270        | 0370         | 2070                             | 3070        | 4070         | T252C396K035(1)S |                                                |  |
| 47.0                   | C            | 10                             | 1.0                                | 6                                                      | 0071                                                      | 0171       | 0271        | 0371         | 2071                             | 3071        | 4071         | T252C476K035(1)S |                                                |  |
| 47.0                   | C            | 20                             | 1.0                                | 6                                                      | 0072                                                      | 0172       | 0272        | 0372         | 2072                             | 3072        | 4072         | T252C476M035(1)S |                                                |  |
| 56.0                   | D            | 10                             | 2.0                                | 6                                                      | 0073                                                      | 0173       | 0273        | 0373         | 2073                             | 3073        | 4073         | T252D566K035(1)S |                                                |  |
| 68.0                   | D            | 10                             | 2.0                                | 6                                                      | 0074                                                      | 0174       | 0274        | 0374         | 2074                             | 3074        | 4074         | T252D686K035(1)S |                                                |  |
| 68.0                   | D            | 20                             | 2.0                                | 6                                                      | 0075                                                      | 0175       | 0275        | 0375         | 2075                             | 3075        | 4075         | T252D686M035(1)S |                                                |  |
| 50 VOLT RATING AT 85°C |              |                                |                                    |                                                        |                                                           |            |             |              |                                  |             |              |                  |                                                |  |
| 1.2                    | A            | 10                             | .5                                 | 4                                                      | 0076                                                      | 0176       | 0276        | 0376         | 2076                             | 3076        | 4076         | T252A125K050(1)S |                                                |  |
| 1.5                    | A            | 10                             | .5                                 | 4                                                      | 0077                                                      | 0177       | 0277        | 0377         | 2077                             | 3077        | 4077         | T252A155K050(1)S |                                                |  |
| 1.5                    | A            | 20                             | .5                                 | 4                                                      | 0078                                                      | 0178       | 0278        | 0378         | 2078                             | 3078        | 4078         | T252A155M050(1)S |                                                |  |
| 5.6                    | B            | 10                             | 1.0                                | 4                                                      | 0079                                                      | 0179       | 0279        | 0379         | 2079                             | 3079        | 4079         | T252B565K050(1)S |                                                |  |
| 6.8                    | B            | 10                             | 1.0                                | 6                                                      | 0080                                                      | 0180       | 0280        | 0380         | 2080                             | 3080        | 4080         | T252B685K050(1)S |                                                |  |
| 6.8                    | B            | 20                             | 1.0                                | 6                                                      | 0081                                                      | 0181       | 0281        | 0381         | 2081                             | 3081        | 4081         | T252B685M050(1)S |                                                |  |
| 22.0                   | C            | 10                             | 1.0                                | 6                                                      | 0082                                                      | 0182       | 0282        | 0382         | 2082                             | 3082        | 4082         | T252C226K050(1)S |                                                |  |
| 22.0                   | C            | 20                             | 1.0                                | 6                                                      | 0083                                                      | 0183       | 0283        | 0383         | 2083                             | 3083        | 4083         | T252C226M050(1)S |                                                |  |
| 27.0                   | C            | 10                             | 1.0                                | 6                                                      | 0084                                                      | 0184       | 0284        | 0384         | 2084                             | 3084        | 4084         | T252C276K050(1)S |                                                |  |
| 33.0                   | D            | 10                             | 1.0                                | 6                                                      | 0085                                                      | 0185       | 0285        | 0385         | 2085                             | *           | *            | T252D336K050(1)S |                                                |  |
| 33.0                   | D            | 20                             | 1.0                                | 6                                                      | 0086                                                      | 0186       | 0286        | 0386         | 2086                             | *           | *            | T252D336M050(1)S |                                                |  |
| 39.0                   | D            | 10                             | 1.0                                | 6                                                      | 0087                                                      | 0187       | 0287        | 0387         | 2087                             | *           | *            | T252D396K050(1)S |                                                |  |

(1) To complete Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 31.

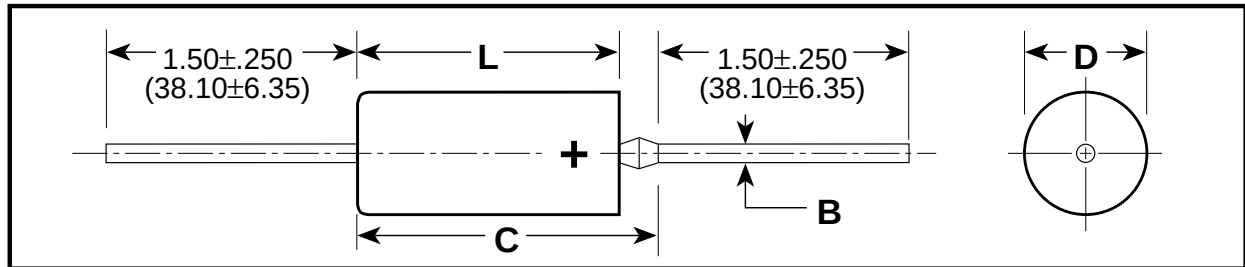
\*NOTE: C Failure rate not QPL for -3085 thru 3087.

D Failure rate not QPL for -4085 thru 4087.

KEMET's T262 (CSR21) per MIL-C-39003/09 hermetically sealed solid tantalum capacitors are similar to KEMET's popular T212 (CSR13 per MIL-PRF-39003/01) capacitors shown on page 6, but offer higher ripple current handling capability and exhibit exceptionally low Equivalent Series Resistance (ESR).

The T262 Series is ideal for filtering applications and in military power supplies where low ESR is essential. T262s are 100% surge current tested and their dissipation factor is screened at 1kHz. Available in C & D case sizes only, 5.6 to 330  $\mu$ F, 6 to 50 VDC.

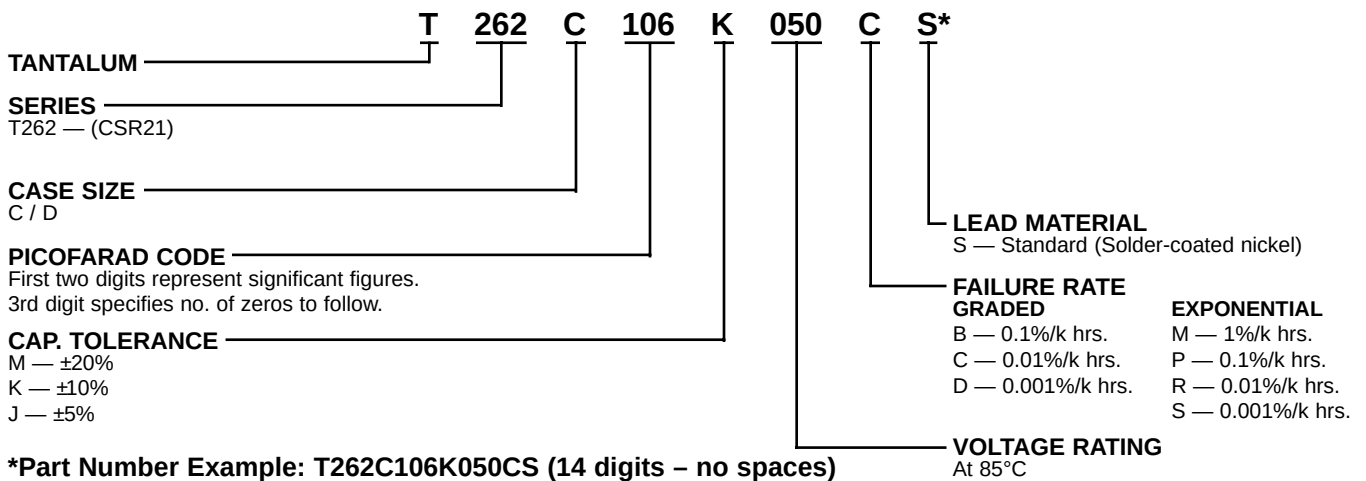
## CAPACITOR OUTLINE DRAWINGS



## DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED                       |                                   | INSULATED                         |                                   | B<br>$\pm 0.002$<br>( $\pm .05$ ) | C<br>MAX.     |
|-----------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|
|           | D<br>$\pm 0.005$<br>( $\pm .13$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) | D<br>$\pm 0.010$<br>( $\pm .25$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) |                                   |               |
| C         | 0.279 (7.09)                      | 0.650 (16.51)                     | 0.289 (7.34)                      | 0.686 (17.42)                     | 0.025 (.64)                       | 0.822 (20.88) |
| D         | 0.341 (8.66)                      | 0.750 (19.05)                     | 0.351 (8.92)                      | 0.786 (19.96)                     | 0.025 (.64)                       | 0.922 (23.42) |

## ORDERING INFORMATION



For Military Marking Information, see page 4.

**RATINGS & PART NUMBER REFERENCE**

| CAPACITANCE<br>μF                                | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T262 SERIES                  |                                                        |                                |                                               | MIL-PRF-39003/09 (CSR21) CAPACITORS                       |            |             |              |                            |             |              |                  |  |  | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|--------------------------------------------------|--------------|--------------------------------|------------------------------------|--------------------------------------------------------|--------------------------------|-----------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------|--|--|------------------------------------------------|
|                                                  |              |                                | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>1 kHz | MAX. ESR<br>Ω@25°C,<br>100 kHz | MAX. RIPPLE<br>CURRENT<br>Arms@25°C<br>40 kHz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              |                  |  |  |                                                |
|                                                  |              |                                |                                    |                                                        |                                |                                               | MIL-PRF-39003/9D<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/9D<br>GRADED |             |              |                  |  |  |                                                |
|                                                  |              |                                |                                    |                                                        |                                |                                               | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                  |  |  |                                                |
| 6 VOLT RATING AT 85°C — 4 VOLT RATING AT 125°C   |              |                                |                                    |                                                        |                                |                                               |                                                           |            |             |              |                            |             |              |                  |  |  |                                                |
| 150.0                                            | C            | 5                              | 4.5                                | 10                                                     | .065                           | 3.3                                           | 0001                                                      | 0101       | 0201        | 0301         | 2001                       | 3001        | 4001         | T262C157J006(1)S |  |  |                                                |
| 150.0                                            | C            | 10                             | 4.5                                | 10                                                     | .065                           | 3.3                                           | 0002                                                      | 0102       | 0202        | 0302         | 2002                       | 3002        | 4002         | T262C157K006(1)S |  |  |                                                |
| 150.0                                            | C            | 20                             | 4.5                                | 10                                                     | .065                           | 3.3                                           | 0003                                                      | 0103       | 0203        | 0303         | 2003                       | 3003        | 4003         | T262C157M006(1)S |  |  |                                                |
| 180.0                                            | C            | 5                              | 5.5                                | 10                                                     | .060                           | 3.4                                           | 0004                                                      | 0104       | 0204        | 0304         | 2004                       | 3004        | 4004         | T262C187J006(1)S |  |  |                                                |
| 180.0                                            | C            | 10                             | 5.5                                | 10                                                     | .060                           | 3.4                                           | 0005                                                      | 0105       | 0205        | 0305         | 2005                       | 3005        | 4005         | T262C187K006(1)S |  |  |                                                |
| 270.0                                            | D            | 5                              | 6.5                                | 10                                                     | .050                           | 4.1                                           | 0006                                                      | 0106       | 0206        | 0306         | 2006                       | 3006        | 4006         | T262D277J006(1)S |  |  |                                                |
| 270.0                                            | D            | 10                             | 6.5                                | 10                                                     | .050                           | 4.1                                           | 0007                                                      | 0107       | 0207        | 0307         | 2007                       | 3007        | 4007         | T262D277K006(1)S |  |  |                                                |
| 330.0                                            | D            | 5                              | 7.5                                | 12                                                     | .045                           | 4.3                                           | 0008                                                      | 0108       | 0208        | 0308         | 2008                       | 3008        | 4008         | T262D337J006(1)S |  |  |                                                |
| 330.0                                            | D            | 10                             | 7.5                                | 12                                                     | .045                           | 4.3                                           | 0009                                                      | 0109       | 0209        | 0309         | 2009                       | 3009        | 4009         | T262D337K006(1)S |  |  |                                                |
| 330.0                                            | D            | 20                             | 7.5                                | 12                                                     | .045                           | 4.3                                           | 0010                                                      | 0110       | 0210        | 0310         | 2010                       | 3010        | 4010         | T262D337M006(1)S |  |  |                                                |
| 10 VOLT RATING AT 85°C — 7 VOLT RATING AT 125°C  |              |                                |                                    |                                                        |                                |                                               |                                                           |            |             |              |                            |             |              |                  |  |  |                                                |
| 82.0                                             | C            | 5                              | 4.0                                | 8                                                      | .085                           | 2.9                                           | 0011                                                      | 0111       | 0211        | 0311         | 2011                       | 3011        | 4011         | T262C826J010(1)S |  |  |                                                |
| 82.0                                             | C            | 10                             | 4.0                                | 8                                                      | .085                           | 2.9                                           | 0012                                                      | 0112       | 0212        | 0312         | 2012                       | 3012        | 4012         | T262C826K010(1)S |  |  |                                                |
| 100.0                                            | C            | 5                              | 5.0                                | 8                                                      | .075                           | 3.0                                           | 0013                                                      | 0113       | 0213        | 0313         | 2013                       | 3013        | 4013         | T262C107J010(1)S |  |  |                                                |
| 100.0                                            | C            | 10                             | 5.0                                | 8                                                      | .075                           | 3.0                                           | 0014                                                      | 0114       | 0214        | 0314         | 2014                       | 3014        | 4014         | T262C107K010(1)S |  |  |                                                |
| 100.0                                            | C            | 20                             | 5.0                                | 8                                                      | .075                           | 3.0                                           | 0015                                                      | 0115       | 0215        | 0315         | 2015                       | 3015        | 4015         | T262C107M010(1)S |  |  |                                                |
| 120.0                                            | C            | 5                              | 6.0                                | 8                                                      | .070                           | 3.2                                           | 0016                                                      | 0116       | 0216        | 0316         | 2016                       | 3016        | 4016         | T262C127J010(1)S |  |  |                                                |
| 120.0                                            | C            | 10                             | 6.0                                | 8                                                      | .070                           | 3.2                                           | 0017                                                      | 0117       | 0217        | 0317         | 2017                       | 3017        | 4017         | T262C127K010(1)S |  |  |                                                |
| 180.0                                            | D            | 5                              | 9.0                                | 8                                                      | .060                           | 3.7                                           | 0018                                                      | 0118       | 0218        | 0318         | 2018                       | 3018        | 4018         | T262D187J010(1)S |  |  |                                                |
| 180.0                                            | D            | 10                             | 9.0                                | 8                                                      | .060                           | 3.7                                           | 0019                                                      | 0119       | 0219        | 0319         | 2019                       | 3019        | 4019         | T262D187K010(1)S |  |  |                                                |
| 220.0                                            | D            | 5                              | 10.0                               | 10                                                     | .055                           | 3.9                                           | 0020                                                      | 0120       | 0220        | 0320         | 2020                       | 3020        | 4020         | T262D227J010(1)S |  |  |                                                |
| 220.0                                            | D            | 10                             | 10.0                               | 10                                                     | .055                           | 3.9                                           | 0021                                                      | 0121       | 0221        | 0321         | 2021                       | 3021        | 4021         | T262D227K010(1)S |  |  |                                                |
| 220.0                                            | D            | 20                             | 10.0                               | 10                                                     | .055                           | 3.9                                           | 0022                                                      | 0122       | 0222        | 0322         | 2022                       | 3022        | 4022         | T262D227M010(1)S |  |  |                                                |
| 15 VOLT RATING AT 85°C — 10 VOLT RATING AT 125°C |              |                                |                                    |                                                        |                                |                                               |                                                           |            |             |              |                            |             |              |                  |  |  |                                                |
| 56.0                                             | C            | 5                              | 4.0                                | 6                                                      | .100                           | 2.6                                           | 0023                                                      | 0123       | 0223        | 0323         | 2023                       | 3023        | 4023         | T262C566J015(1)S |  |  |                                                |
| 56.0                                             | C            | 10                             | 4.0                                | 6                                                      | .100                           | 2.6                                           | 0024                                                      | 0124       | 0224        | 0324         | 2024                       | 3024        | 4024         | T262C566K015(1)S |  |  |                                                |
| 68.0                                             | C            | 5                              | 5.0                                | 6                                                      | .095                           | 2.7                                           | 0025                                                      | 0125       | 0225        | 0325         | 2025                       | 3025        | 4025         | T262C686J015(1)S |  |  |                                                |
| 68.0                                             | C            | 10                             | 5.0                                | 6                                                      | .095                           | 2.7                                           | 0026                                                      | 0126       | 0226        | 0326         | 2026                       | 3026        | 4026         | T262C686K015(1)S |  |  |                                                |
| 68.0                                             | C            | 20                             | 5.0                                | 6                                                      | .095                           | 2.7                                           | 0027                                                      | 0127       | 0227        | 0327         | 2027                       | 3027        | 4027         | T262C686M015(1)S |  |  |                                                |
| 120.0                                            | D            | 5                              | 9.0                                | 8                                                      | .070                           | 3.5                                           | 0028                                                      | 0128       | 0228        | 0328         | 2028                       | 3028        | 4028         | T262D127J015(1)S |  |  |                                                |
| 120.0                                            | D            | 10                             | 9.0                                | 8                                                      | .070                           | 3.5                                           | 0029                                                      | 0129       | 0229        | 0329         | 2029                       | 3029        | 4029         | T262D127K015(1)S |  |  |                                                |
| 150.0                                            | D            | 5                              | 10.0                               | 8                                                      | .065                           | 3.6                                           | 0030                                                      | 0130       | 0230        | 0330         | 2030                       | 3030        | 4030         | T262D157J015(1)S |  |  |                                                |
| 150.0                                            | D            | 10                             | 10.0                               | 8                                                      | .065                           | 3.6                                           | 0031                                                      | 0131       | 0231        | 0331         | 2031                       | 3031        | 4031         | T262D157K015(1)S |  |  |                                                |
| 150.0                                            | D            | 20                             | 10.0                               | 8                                                      | .065                           | 3.6                                           | 0032                                                      | 0132       | 0232        | 0332         | 2032                       | 3032        | 4032         | T262D157M015(1)S |  |  |                                                |
| 20 VOLT RATING AT 85°C — 13 VOLT RATING AT 125°C |              |                                |                                    |                                                        |                                |                                               |                                                           |            |             |              |                            |             |              |                  |  |  |                                                |
| 27.0                                             | C            | 5                              | 2.5                                | 5                                                      | .145                           | 2.2                                           | 0033                                                      | 0133       | 0233        | 0333         | 2033                       | 3033        | 4033         | T262C276J020(1)S |  |  |                                                |
| 27.0                                             | C            | 10                             | 2.5                                | 5                                                      | .145                           | 2.2                                           | 0034                                                      | 0134       | 0234        | 0334         | 2034                       | 3034        | 4034         | T262C276K020(1)S |  |  |                                                |
| 33.0                                             | C            | 5                              | 3.5                                | 5                                                      | .130                           | 2.3                                           | 0035                                                      | 0135       | 0235        | 0335         | 2035                       | 3035        | 4035         | T262C336J020(1)S |  |  |                                                |
| 33.0                                             | C            | 10                             | 3.5                                | 5                                                      | .130                           | 2.3                                           | 0036                                                      | 0136       | 0236        | 0336         | 2036                       | 3036        | 4036         | T262C336K020(1)S |  |  |                                                |
| 33.0                                             | C            | 20                             | 3.5                                | 5                                                      | .130                           | 2.3                                           | 0037                                                      | 0137       | 0237        | 0337         | 2037                       | 3037        | 4037         | T262C336M020(1)S |  |  |                                                |
| 39.0                                             | C            | 5                              | 4.0                                | 5                                                      | .120                           | 2.4                                           | 0038                                                      | 0138       | 0238        | 0338         | 2038                       | 3038        | 4038         | T262C396J020(1)S |  |  |                                                |
| 39.0                                             | C            | 10                             | 4.0                                | 5                                                      | .120                           | 2.4                                           | 0039                                                      | 0139       | 0239        | 0339         | 2039                       | 3039        | 4039         | T262C396K020(1)S |  |  |                                                |
| 47.0                                             | C            | 5                              | 4.5                                | 6                                                      | .110                           | 2.5                                           | 0040                                                      | 0140       | 0240        | 0340         | 2040                       | 3040        | 4040         | T262C476J020(1)S |  |  |                                                |
| 47.0                                             | C            | 10                             | 4.5                                | 6                                                      | .110                           | 2.5                                           | 0041                                                      | 0141       | 0241        | 0341         | 2041                       | 3041        | 4041         | T262C476K020(1)S |  |  |                                                |
| 47.0                                             | C            | 20                             | 4.5                                | 6                                                      | .110                           | 2.5                                           | 0042                                                      | 0142       | 0242        | 0342         | 2042                       | 3042        | 4042         | T262C476M020(1)S |  |  |                                                |
| 56.0                                             | D            | 5                              | 5.5                                | 6                                                      | .100                           | 2.9                                           | 0043                                                      | 0143       | 0243        | 0343         | 2043                       | 3043        | 4043         | T262D566J020(1)S |  |  |                                                |
| 56.0                                             | D            | 10                             | 5.5                                | 6                                                      | .100                           | 2.9                                           | 0044                                                      | 0144       | 0244        | 0344         | 2044                       | 3044        | 4044         | T262D566K020(1)S |  |  |                                                |
| 68.0                                             | D            | 5                              | 7.0                                | 6                                                      | .095                           | 3.0                                           | 0045                                                      | 0145       | 0245        | 0345         | 2045                       | 3045        | 4045         | T262D686J020(1)S |  |  |                                                |
| 68.0                                             | D            | 10                             | 7.0                                | 6                                                      | .095                           | 3.0                                           | 0046                                                      | 0146       | 0246        | 0346         | 2046                       | 3046        | 4046         | T262D686K020(1)S |  |  |                                                |
| 68.0                                             | D            | 20                             | 7.0                                | 6                                                      | .095                           | 3.0                                           | 0047                                                      | 0147       | 0247        | 0347         | 2047                       | 3047        | 4047         | T262D686M020(1)S |  |  |                                                |
| 82.0                                             | D            | 5                              | 8.0                                | 6                                                      | .085                           | 3.1                                           | 0048                                                      | 0148       | 0248        | 0348         | 2048                       | 3048        | 4048         | T262D826J020(1)S |  |  |                                                |
| 82.0                                             | D            | 10                             | 8.0                                | 6                                                      | .085                           | 3.1                                           | 0049                                                      | 0149       | 0249        | 0349         | 2049                       | 3049        | 4049         | T262D826K020(1)S |  |  |                                                |
| 100.0                                            | D            | 5                              | 10.0                               | 8                                                      | .075                           | 3.3                                           | 0050                                                      | 0150       | 0250        | 0350         | 2050                       | 3050        | 4050         | T262D107J020(1)S |  |  |                                                |
| 100.0                                            | D            | 10                             | 10.0                               | 8                                                      | .075                           | 3.3                                           | 0051                                                      | 0151       | 0251        | 0351         | 2051                       | 3051        | 4051         | T262D107K020(1)S |  |  |                                                |
| 100.0                                            | D            | 20                             | 10.0                               | 8                                                      | .075                           | 3.3                                           | 0052                                                      | 0152       | 0252        | 0352         | 2052                       | 3052        | 4052         | T262D107M020(1)S |  |  |                                                |

(1) To complete the T262 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 34.



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003 T262 (CSR21) SERIES

## RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF                                | CASE<br>SIZE | CAPACITANCE<br>TOLERANCE<br>±% | KEMET T262 SERIES                  |                                                        |                                |                                               | MIL-PRF-39003/09 (CSR21) CAPACITORS                       |            |             |              |                            |             |              |                                                |
|--------------------------------------------------|--------------|--------------------------------|------------------------------------|--------------------------------------------------------|--------------------------------|-----------------------------------------------|-----------------------------------------------------------|------------|-------------|--------------|----------------------------|-------------|--------------|------------------------------------------------|
|                                                  |              |                                | D.C.<br>LEAKAGE<br>μA@25°C<br>MAX. | MAX.<br>DISSI-<br>PATION<br>FACTOR<br>%@25°C,<br>1 kHz | MAX. ESR<br>Ω@25°C,<br>100 kHz | MAX. RIPPLE<br>CURRENT<br>Arms@25°C<br>40 kHz | DASH NUMBER REFERENCE<br>FAILURE RATE LEVEL (%/1000 HRS.) |            |             |              |                            |             |              | KEMET<br>EQUIVALENT<br>MILITARY<br>PART NUMBER |
|                                                  |              |                                |                                    |                                                        |                                |                                               | MIL-PRF-39003/9D<br>EXPONENTIAL                           |            |             |              | MIL-PRF-39003/9D<br>GRADED |             |              |                                                |
|                                                  |              |                                |                                    |                                                        |                                |                                               | M<br>(1.0)                                                | P<br>(0.1) | R<br>(0.01) | S<br>(0.001) | B<br>(0.1)                 | C<br>(0.01) | D<br>(0.001) |                                                |
| 35 VOLT RATING AT 85°C — 23 VOLT RATING AT 125°C |              |                                |                                    |                                                        |                                |                                               |                                                           |            |             |              |                            |             |              |                                                |
| 22.0                                             | C            | 5                              | 4.0                                | 4                                                      | .160                           | 2.1                                           | 0053                                                      | 0153       | 0253        | 0353         | 2053                       | 3053        | 4053         | T262C226J035(1)S                               |
| 22.0                                             | C            | 10                             | 4.0                                | 4                                                      | .160                           | 2.1                                           | 0054                                                      | 0154       | 0254        | 0354         | 2054                       | 3054        | 4054         | T262C226K035(1)S                               |
| 22.0                                             | C            | 20                             | 4.0                                | 4                                                      | .160                           | 2.1                                           | 0055                                                      | 0155       | 0255        | 0355         | 2055                       | 3055        | 4055         | T262C226M035(1)S                               |
| 27.0                                             | D            | 5                              | 4.5                                | 4                                                      | .145                           | 2.4                                           | 0056                                                      | 0156       | 0256        | 0356         | 2056                       | 3056        | 4056         | T262D276J035(1)S                               |
| 27.0                                             | D            | 10                             | 4.5                                | 4                                                      | .145                           | 2.4                                           | 0057                                                      | 0157       | 0257        | 0357         | 2057                       | 3057        | 4057         | T262D276K035(1)S                               |
| 33.0                                             | D            | 5                              | 5.5                                | 5                                                      | .130                           | 2.5                                           | 0058                                                      | 0158       | 0258        | 0358         | 2058                       | 3058        | 4058         | T262D336J035(1)S                               |
| 33.0                                             | D            | 10                             | 5.5                                | 5                                                      | .130                           | 2.5                                           | 0059                                                      | 0159       | 0259        | 0359         | 2059                       | 3059        | 4059         | T262D336K035(1)S                               |
| 33.0                                             | D            | 20                             | 5.5                                | 5                                                      | .130                           | 2.5                                           | 0060                                                      | 0160       | 0260        | 0360         | 2060                       | 3060        | 4060         | T262D336M035(1)S                               |
| 39.0                                             | D            | 5                              | 7.0                                | 5                                                      | .120                           | 2.6                                           | 0061                                                      | 0161       | 0261        | 0361         | 2061                       | 3061        | 4061         | T262D396J035(1)S                               |
| 39.0                                             | D            | 10                             | 7.0                                | 5                                                      | .120                           | 2.6                                           | 0062                                                      | 0162       | 0262        | 0362         | 2062                       | 3062        | 4062         | T262D396K035(1)S                               |
| 47.0                                             | D            | 5                              | 8.0                                | 5                                                      | .110                           | 2.7                                           | 0063                                                      | 0163       | 0263        | 0363         | 2063                       | 3063        | 4063         | T262D476J035(1)S                               |
| 47.0                                             | D            | 10                             | 8.0                                | 5                                                      | .110                           | 2.7                                           | 0064                                                      | 0164       | 0264        | 0364         | 2064                       | 3064        | 4064         | T262D476K035(1)S                               |
| 47.0                                             | D            | 20                             | 8.0                                | 5                                                      | .110                           | 2.7                                           | 0065                                                      | 0165       | 0265        | 0365         | 2065                       | 3065        | 4065         | T262D476M035(1)S                               |
| 50 VOLT RATING AT 85°C — 33 VOLT RATING AT 125°C |              |                                |                                    |                                                        |                                |                                               |                                                           |            |             |              |                            |             |              |                                                |
| 5.6                                              | C            | 5                              | 2.2                                | 3                                                      | .300                           | 1.5                                           | 0066                                                      | 0166       | 0266        | 0366         | 2066                       | 3066        | 4066         | T262C565J050(1)S                               |
| 5.6                                              | C            | 10                             | 2.2                                | 3                                                      | .300                           | 1.5                                           | 0067                                                      | 0167       | 0267        | 0367         | 2067                       | 3067        | 4067         | T262C565K050(1)S                               |
| 6.8                                              | C            | 5                              | 2.2                                | 3                                                      | .275                           | 1.6                                           | 0068                                                      | 0168       | 0268        | 0368         | 2068                       | 3068        | 4068         | T262C685J050(1)S                               |
| 6.8                                              | C            | 10                             | 2.2                                | 3                                                      | .275                           | 1.6                                           | 0069                                                      | 0169       | 0269        | 0369         | 2069                       | 3069        | 4069         | T262C685K050(1)S                               |
| 6.8                                              | C            | 20                             | 2.2                                | 3                                                      | .275                           | 1.6                                           | 0070                                                      | 0170       | 0270        | 0370         | 2070                       | 3070        | 4070         | T262C685M050(1)S                               |
| 8.2                                              | C            | 5                              | 2.5                                | 3                                                      | .250                           | 1.6                                           | 0071                                                      | 0171       | 0271        | 0371         | 2071                       | 3071        | 4071         | T262C825J050(1)S                               |
| 8.2                                              | C            | 10                             | 2.5                                | 3                                                      | .250                           | 1.6                                           | 0072                                                      | 0172       | 0272        | 0372         | 2072                       | 3072        | 4072         | T262C825K050(1)S                               |
| 10.0                                             | C            | 5                              | 2.5                                | 3                                                      | .230                           | 1.7                                           | 0073                                                      | 0173       | 0273        | 0373         | 2073                       | 3073        | 4073         | T262C106J050(1)S                               |
| 10.0                                             | C            | 10                             | 2.5                                | 3                                                      | .230                           | 1.7                                           | 0074                                                      | 0174       | 0274        | 0374         | 2074                       | 3074        | 4074         | T262C106K050(1)S                               |
| 10.0                                             | C            | 20                             | 2.5                                | 3                                                      | .230                           | 1.7                                           | 0075                                                      | 0175       | 0275        | 0375         | 2075                       | 3075        | 4075         | T262C106M050(1)S                               |
| 12.0                                             | C            | 5                              | 3.0                                | 3                                                      | .210                           | 1.8                                           | 0076                                                      | 0176       | 0276        | 0376         | 2076                       | 3076        | 4076         | T262C126J050(1)S                               |
| 12.0                                             | C            | 10                             | 3.0                                | 3                                                      | .210                           | 1.8                                           | 0077                                                      | 0177       | 0277        | 0377         | 2077                       | 3077        | 4077         | T262C126K050(1)S                               |
| 15.0                                             | C            | 5                              | 4.0                                | 3                                                      | .190                           | 1.9                                           | 0078                                                      | 0178       | 0278        | 0378         | 2078                       | 3078        | 4078         | T262C156J050(1)S                               |
| 15.0                                             | C            | 10                             | 4.0                                | 3                                                      | .190                           | 1.9                                           | 0079                                                      | 0179       | 0279        | 0379         | 2079                       | 3079        | 4079         | T262C156K050(1)S                               |
| 15.0                                             | C            | 20                             | 4.0                                | 3                                                      | .190                           | 1.9                                           | 0080                                                      | 0180       | 0280        | 0380         | 2080                       | 3080        | 4080         | T262C156M050(1)S                               |
| 18.0                                             | C            | 5                              | 4.5                                | 4                                                      | .175                           | 2.0                                           | 0081                                                      | 0181       | 0281        | 0381         | 2081                       | 3081        | 4081         | T262C186J050(1)S                               |
| 18.0                                             | C            | 10                             | 4.5                                | 4                                                      | .175                           | 2.0                                           | 0082                                                      | 0182       | 0282        | 0382         | 2082                       | 3082        | 4082         | T262C186K050(1)S                               |
| 22.0                                             | D            | 5                              | 5.5                                | 4                                                      | .160                           | 2.3                                           | 0083                                                      | 0183       | 0283        | 0383         | 2083                       | 3083        | 4083         | T262D226J050(1)S                               |
| 22.0                                             | D            | 10                             | 5.5                                | 4                                                      | .160                           | 2.3                                           | 0084                                                      | 0184       | 0284        | 0384         | 2084                       | 3084        | 4084         | T262D226K050(1)S                               |
| 22.0                                             | D            | 20                             | 5.5                                | 4                                                      | .160                           | 2.3                                           | 0085                                                      | 0185       | 0285        | 0385         | 2085                       | 3085        | 4085         | T262D226M050(1)S                               |

(1) To complete the T262 Series Part Number, insert Failure Rate Symbol in the 13th Character as shown on Page 34.



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003 T216 (CSS13) & T256 (CSS33) SERIES

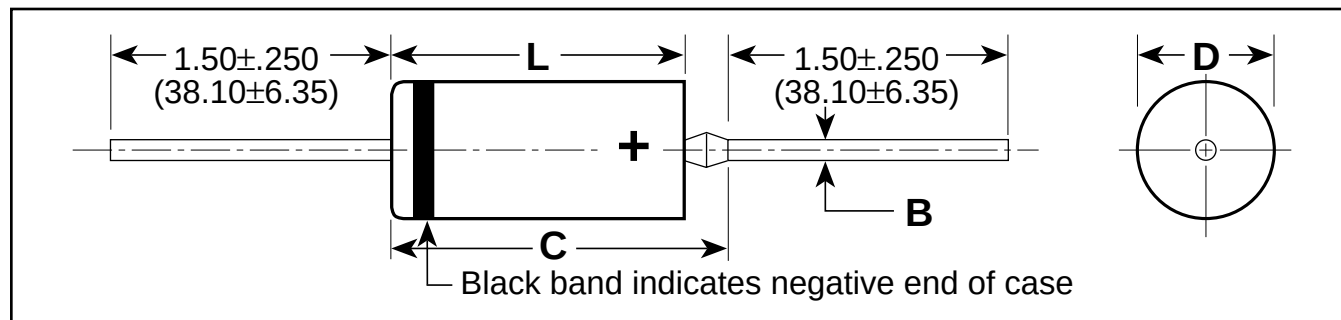


T216 and T256 are KEMET's new designation for MIL-Style CSS13 and CSS33 capacitors. The T216/T256 Series is qualified to all failure rates per MIL-PRF-39003/10. Products meeting this specification have passed rigorous test requirements and are used in space applications or other equally demanding environments.

The T216 is available in capacitance ratings from .15  $\mu$ F to 330  $\mu$ F; voltage ratings from 6 VDC to 75 VDC. The T256 is available in capacitance ratings from 1.2  $\mu$ F to 1000  $\mu$ F with voltage ratings of 6 VDC to 50 VDC.

These capacitors provide circuit designers an excellent choice for blocking, bypass, decoupling, filtering and timing applications.

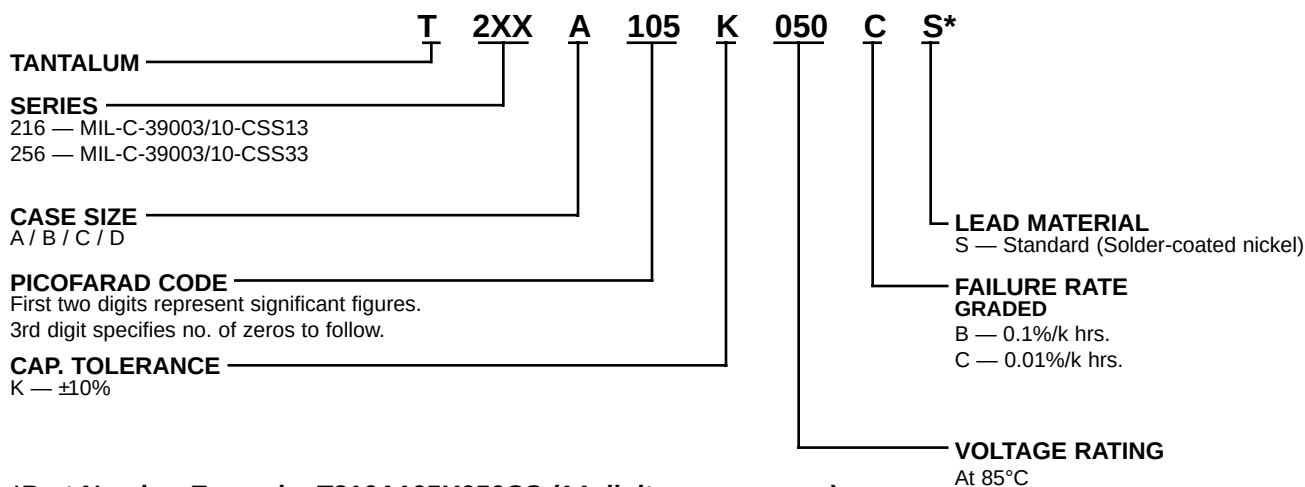
## CAPACITOR OUTLINE DRAWINGS



## DIMENSIONS — INCHES & (MILLIMETERS)

| CASE SIZE | UNINSULATED                       |                                   | INSULATED                         |                                   | B<br>$\pm 0.002$<br>( $\pm .05$ ) | C<br>MAX.     |
|-----------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|
|           | D<br>$\pm 0.005$<br>( $\pm .13$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) | D<br>$\pm 0.010$<br>( $\pm .25$ ) | L<br>$\pm 0.031$<br>( $\pm .79$ ) |                                   |               |
| A         | 0.125 (3.18)                      | 0.250 (6.35)                      | 0.135 (3.43)                      | 0.286 (7.26)                      | 0.020 (.51)                       | 0.422 (10.72) |
| B         | 0.175 (4.45)                      | 0.438 (11.13)                     | 0.185 (4.70)                      | 0.474 (12.04)                     | 0.020 (.51)                       | 0.610 (15.49) |
| C         | 0.279 (7.09)                      | 0.650 (16.51)                     | 0.289 (7.34)                      | 0.686 (17.42)                     | 0.025 (.64)                       | 0.822 (20.88) |
| D         | 0.341 (8.66)                      | 0.750 (19.05)                     | 0.351 (8.92)                      | 0.786 (19.96)                     | 0.025 (.64)                       | 0.922 (23.42) |

## ORDERING INFORMATION



\*Part Number Example: T216A105K050CS (14 digits – no spaces)

T216/T256 Series Tantalum  
Hermetically Sealed



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003 T216 (CSS13) & T256 (CSS33) SERIES

## MIL-PRF-39003/10 ORDERING INFORMATION

### M39003/10 — 3078S

Military Specification  
Document Number

S — designates sleeved  
U — designates unsleeved

Slash Sheet Number

MIL dash number signifies  
capacitance, voltage and failure  
rate (see ratings and part number  
tables).

## MARKING INFORMATION

### A CASE

|        |                                                                                                      |
|--------|------------------------------------------------------------------------------------------------------|
| 39003  | Military specification number                                                                        |
| 10 - K | Specification sheet number and trademark                                                             |
| 3078S  | Military dash number and "S" for sleeved                                                             |
| +J310  | Polarity, "J" for JAN date code (1st digit indicates year and the next two digits indicate the week) |
| XYA    | Lot, unique lot code                                                                                 |

### C & D CASE

|              |                                                                   |
|--------------|-------------------------------------------------------------------|
| M39003       | Military specification number                                     |
| 10-2049SJ    | Specification sheet number, military dash number and "J" for Jan. |
| +6.8 $\mu$ F | Positive terminal identifier and capacitance value                |
| 10% 35V      | Capacitance tolerance and voltage rating                          |
| 31433        | Source code                                                       |
| 0310 NAB K   | Date code, lot code, unique lot code, and trademark               |

### B CASE

|        |                                                                                          |
|--------|------------------------------------------------------------------------------------------|
| M39003 | Military specification number                                                            |
| 10 -   | Specification sheet number                                                               |
| 3082SJ | Military dash number and "J" for JAN                                                     |
| 31433  | Source code                                                                              |
| +310   | Polarity, date code (1st digit indicates year and the next two digits indicate the week) |
| NABK   | Lot code, unique lot code and trademark.                                                 |

NOTE: Marking will include S or U after the MIL dash number, a third letter following lot symbol or lot code designates a unique lot identifier, and a black band on negative end of case.

Black band on negative end.

## T216/(CSS13) RATINGS & PART NUMBER REFERENCE

| CAPACITANCE<br>μF       | KEMET T216 SERIES |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003 (CSS13) CAPACITORS |         |             |
|-------------------------|-------------------|---------------------------------------------------------|----------------------|----------------------|-----------------------|-------------------------|--------------------------|-------------------------------------|----------------------------------|---------|-------------|
|                         | CASE<br>SIZE      | KEMET EQUIVALENT<br>PART NUMBER FOR<br>CSS13 CAPACITORS | DC LEAKAGE           |                      |                       | MAX. DISSIPATION FACTOR |                          | MAX.<br>ESR Ω<br>@ 25°C,<br>100 kHz | DASH NUMBER REFERENCE            |         |             |
|                         |                   |                                                         | μA<br>@ +25°<br>MAX. | μA<br>@ +85°<br>MAX. | μA @<br>+125°<br>MAX. | % @ -55°C<br>+25°C MAX. | % @ -85°C<br>+125°C MAX. |                                     | FAILURE RATE LEVEL (%/1000 HRS)  |         |             |
|                         |                   |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003/10 GRADED          |         |             |
| B<br>(0.1)              |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         | C<br>(0.01) |
| 6 VOLT RATING AT 85° C  |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |             |
| 5.6                     | A                 | T216A565K006CS                                          | 0.3                  | 6.0                  | 7.5                   | 4                       | 4                        | 0.90                                | 2001(1)                          | 3001(1) |             |
| 6.8                     | A                 | T216A685K006CS                                          | 0.3                  | 6.0                  | 7.5                   | 6                       | 6                        | 0.80                                | 2002(1)                          | 3002(1) |             |
| 47.0                    | B                 | T216B476K006CS                                          | 1.5                  | 24.0                 | 30.0                  | 6                       | 6                        | 0.24                                | 2003(1)                          | 3003(1) |             |
| 56.0                    | B                 | T216B566K006CS                                          | 1.5                  | 24.0                 | 30.0                  | 6                       | 6                        | 0.24                                | 3004(1)                          | 3004(1) |             |
| 150.0                   | C                 | T216C157K006CS                                          | 4.5                  | 90.0                 | 113.0                 | 8                       | 8                        | 0.09                                | 2005(1)                          | 3005(1) |             |
| 180.0                   | C                 | T216C187K006CS                                          | 5.5                  | 110.0                | 138.0                 | 8                       | 8                        | 0.08                                | 3206(1)                          | 3006(1) |             |
| 270.0                   | D                 | T216D277K006CS                                          | 6.5                  | 130.0                | 163.0                 | 8                       | 8                        | 0.07                                | 2007(1)                          | 3007(1) |             |
| 330.0                   | D                 | T216D337K006CS                                          | 7.5                  | 150.0                | 188.0                 | 8                       | 8                        | 0.06                                | 2008(1)                          | 3008(1) |             |
| 10 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |             |
| 3.9                     | A                 | T216A395K010CS                                          | 0.3                  | 6.0                  | 7.5                   | 4                       | 4                        | 1.00                                | 2009(1)                          | 3009(1) |             |
| 4.7                     | A                 | T216A475K010CS                                          | 0.4                  | 7.0                  | 8.8                   | 4                       | 4                        | 0.90                                | 2010(1)                          | 3010(1) |             |
| 27.0                    | B                 | T216B276K010CS                                          | 2.0                  | 40.0                 | 50.0                  | 6                       | 6                        | 0.25                                | 2011(1)                          | 3011(1) |             |
| 33.0                    | B                 | T216B336K010CS                                          | 2.5                  | 50.0                 | 63.0                  | 6                       | 6                        | 0.24                                | 2012(1)                          | 3012(1) |             |
| 39.0                    | B                 | T216B396K010CS                                          | 2.5                  | 50.0                 | 63.0                  | 6                       | 6                        | 0.24                                | 2013(1)                          | 3013(1) |             |
| 82.0                    | C                 | T216C826K010CS                                          | 4.0                  | 80.0                 | 100.0                 | 6                       | 6                        | 0.12                                | 2014(1)                          | 3014(1) |             |
| 100.0                   | C                 | T216C107K010CS                                          | 5.0                  | 100.0                | 125.0                 | 8                       | 8                        | 0.11                                | 2015(1)                          | 3015(1) |             |
| 120.0                   | C                 | T216C127K010CS                                          | 6.0                  | 120.0                | 150.0                 | 8                       | 8                        | 0.10                                | 2016(1)                          | 3016(1) |             |
| 180.0                   | D                 | T216D187K010CS                                          | 9.0                  | 180.0                | 226.0                 | 8                       | 8                        | 0.08                                | 2017(1)                          | 3017(1) |             |
| 220.0                   | D                 | T216D227K010CS                                          | 10.0                 | 200.0                | 250.0                 | 8                       | 8                        | 0.07                                | 2018(1)                          | 3018(1) |             |

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.

## RATINGS &amp; PART NUMBER REFERENCE T216/(CSS13) (Cont'd)

| CAPACITANCE<br>μF       | KEMET T216 SERIES |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003 (CSS13) CAPACITORS |         |
|-------------------------|-------------------|---------------------------------------------------------|----------------------|----------------------|-----------------------|-------------------------|--------------------------|-------------------------------------|----------------------------------|---------|
|                         | CASE<br>SIZE      | KEMET EQUIVALENT<br>PART NUMBER FOR<br>CSS13 CAPACITORS | DC LEAKAGE           |                      |                       | MAX. DISSIPATION FACTOR |                          | MAX.<br>ESR Ω<br>@ 25°C,<br>100 kHz | DASH NUMBER REFERENCE            |         |
|                         |                   |                                                         | μA<br>@ +25°<br>MAX. | μA<br>@ +85°<br>MAX. | μA<br>@ +125°<br>MAX. | % @ -55°C<br>+25°C MAX. | % @ -85°C<br>+125°C MAX. |                                     | FAILURE RATE LEVEL (%/1000 HRS)  |         |
|                         |                   |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003/10 GRADED          |         |
|                         |                   |                                                         |                      |                      |                       |                         |                          | B<br>(0.1)                          | C<br>(0.01)                      |         |
| 15 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |
| 2.7                     | A                 | T216A275K015CS                                          | 0.3                  | 6.0                  | 7.5                   | 4                       | 4                        | 1.20                                | 2019(1)                          | 3019(1) |
| 3.3                     | A                 | T216A335K015CS                                          | 0.4                  | 8.0                  | 10.0                  | 4                       | 4                        | 1.00                                | 2020(1)                          | 3020(1) |
| 18.0                    | B                 | T216B186K015CS                                          | 2.0                  | 35.0                 | 44.0                  | 6                       | 6                        | 0.27                                | 2021(1)                          | 3021(1) |
| 22.0                    | B                 | T216B226K015CS                                          | 2.0                  | 40.0                 | 50.0                  | 6                       | 6                        | 0.26                                | 2022(1)                          | 3022(1) |
| 56.0                    | C                 | T216C566K015CS                                          | 4.0                  | 80.0                 | 100.0                 | 6                       | 6                        | 0.15                                | 2023(1)                          | 3023(1) |
| 68.0                    | C                 | T216C686K015CS                                          | 5.0                  | 100.0                | 125.0                 | 6                       | 6                        | 0.13                                | 2024(1)                          | 3024(1) |
| 120.0                   | D                 | T216D127K015CS                                          | 9.0                  | 180.0                | 226.0                 | 8                       | 8                        | 0.09                                | 2025(1)                          | 3025(1) |
| 150.0                   | D                 | T216D157K015CS                                          | 10.0                 | 220.0                | 250.0                 | 8                       | 8                        | 0.09                                | 2026(1)                          | 3026(1) |
| 20 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |
| 1.2                     | A                 | T216A125K020CS                                          | 0.3                  | 6.0                  | 7.5                   | 4                       | 4                        | 1.40                                | 2027(1)                          | 3027(1) |
| 1.5                     | A                 | T216A155K020CS                                          | 0.3                  | 6.0                  | 7.5                   | 4                       | 4                        | 1.30                                | 2028(1)                          | 3028(1) |
| 1.8                     | A                 | T216A185K020CS                                          | 0.3                  | 6.0                  | 7.5                   | 4                       | 4                        | 1.25                                | 2029(1)                          | 3029(1) |
| 2.2                     | A                 | T216A225K020CS                                          | 0.4                  | 8.0                  | 10.0                  | 4                       | 4                        | 1.20                                | 2030(1)                          | 3030(1) |
| 8.2                     | B                 | T216B825K020CS                                          | 1.0                  | 20.0                 | 25.0                  | 6                       | 6                        | 0.39                                | 2031(1)                          | 3031(1) |
| 10.0                    | B                 | T216B106K020CS                                          | 1.5                  | 30.0                 | 38.0                  | 6                       | 6                        | 0.35                                | 2032(1)                          | 3032(1) |
| 12.0                    | B                 | T216B126K020CS                                          | 1.8                  | 35.0                 | 44.0                  | 6                       | 6                        | 0.32                                | 2033(1)                          | 3033(1) |
| 15.0                    | B                 | T216B156K020CS                                          | 2.0                  | 40.0                 | 50.0                  | 6                       | 6                        | 0.29                                | 2034(1)                          | 3034(1) |
| 27.0                    | C                 | T216C276K020CS                                          | 2.5                  | 50.0                 | 63.0                  | 6                       | 6                        | 0.21                                | 2035(1)                          | 3035(1) |
| 33.0                    | C                 | T216C336K020CS                                          | 3.5                  | 70.0                 | 88.0                  | 6                       | 6                        | 0.19                                | 2036(1)                          | 3036(1) |
| 39.0                    | C                 | T216C396K020CS                                          | 4.0                  | 80.0                 | 100.0                 | 6                       | 6                        | 0.17                                | 2037(1)                          | 3037(1) |
| 47.0                    | C                 | T216C476K020CS                                          | 4.5                  | 90.0                 | 113.0                 | 6                       | 6                        | 0.16                                | 2038(1)                          | 3038(1) |
| 56.0                    | D                 | T216D566K020BS                                          | 5.5                  | 110.0                | 138.0                 | 6                       | 6                        | 0.13                                | 2039(1)                          | 3039(1) |
| 68.0                    | D                 | T216D686K020BS                                          | 7.0                  | 140.0                | 175.0                 | 6                       | 6                        | 0.12                                | 2040(1)                          | 3040(1) |
| 82.0                    | D                 | T216D826K020BS                                          | 8.0                  | 160.0                | 200.0                 | 6                       | 6                        | 0.11                                | 2041(1)                          | 3041(1) |
| 100.0                   | D                 | T216D107K020BS                                          | 10.0                 | 200.0                | 250.0                 | 8                       | 8                        | 0.10                                | 2042(1)                          | 3042(1) |
| 35 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |
| 5.6                     | B                 | T216B565K035BS                                          | 1.3                  | 25.0                 | 32.0                  | 4                       | 4                        | 0.47                                | 2043(1)                          | 3043(1) |
| 6.8                     | B                 | T216B685K035BS                                          | 1.5                  | 30.0                 | 38.0                  | 6                       | 6                        | 0.43                                | 2044(1)                          | 3044(1) |
| 22.0                    | C                 | T216C226K035BS                                          | 4.0                  | 40.0                 | 100.0                 | 6                       | 6                        | 0.25                                | 2045(1)                          | 3045(1) |
| 27.0                    | D                 | T216D276K035BS                                          | 4.5                  | 90.0                 | 113.0                 | 6                       | 6                        | 0.18                                | 2046(1)                          | 3046(1) |
| 33.0                    | D                 | T216D336K035BS                                          | 5.5                  | 110.0                | 138.0                 | 6                       | 6                        | 0.17                                | 2047(1)                          | 3047(1) |
| 39.0                    | D                 | T216D396K035BS                                          | 7.0                  | 140.0                | 175.0                 | 6                       | 6                        | 0.15                                | 2048(1)                          | 3048(1) |
| 47.0                    | D                 | T216D476K035BS                                          | 8.0                  | 160.0                | 200.0                 | 6                       | 6                        | 0.14                                | 2049(1)                          | 3049(1) |
| 50 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |
| 0.12                    | A                 | T216A124K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 6.50                                | 2067(1)                          | 3067(1) |
| 0.15                    | A                 | T216A154K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 5.50                                | 2068(1)                          | 3068(1) |
| 0.18                    | A                 | T216A184K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 5.00                                | 2069(1)                          | 3069(1) |
| 0.22                    | A                 | T216A224K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 4.00                                | 2070(1)                          | 3070(1) |
| 0.27                    | A                 | T216A274K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 3.50                                | 2071(1)                          | 3071(1) |
| 0.33                    | A                 | T216A334K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 3.30                                | 2072(1)                          | 3072(1) |
| 0.39                    | A                 | T216A394K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 3.20                                | 2073(1)                          | 3073(1) |
| 0.47                    | A                 | T216A474K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 3.00                                | 2074(1)                          | 3074(1) |
| 0.56                    | A                 | T216A564K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 2.50                                | 2075(1)                          | 3075(1) |
| 0.68                    | A                 | T216A684K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 1.80                                | 2076(1)                          | 3076(1) |
| 0.82                    | A                 | T216A824K050CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 1.60                                | 2077(1)                          | 3077(1) |
| 1.0                     | A                 | T216A105K050CS                                          | 0.4                  | 8.0                  | 10.0                  | 2                       | 4                        | 1.40                                | 2078(1)                          | 3078(1) |
| 1.2                     | B                 | T216B125K050CS                                          | 0.4                  | 9.0                  | 11.0                  | 4                       | 4                        | 1.20                                | 2079(1)                          | 3079(1) |
| 1.5                     | B                 | T216B155K050CS                                          | 0.6                  | 12.0                 | 15.0                  | 4                       | 4                        | 1.10                                | 2080(1)                          | 3080(1) |
| 1.8                     | B                 | T216B185K050CS                                          | 0.7                  | 14.0                 | 18.0                  | 4                       | 4                        | 0.92                                | 2081(1)                          | 3081(1) |
| 2.2                     | B                 | T216B225K050CS                                          | 0.8                  | 17.0                 | 22.0                  | 4                       | 4                        | 0.80                                | 2082(1)                          | 3082(1) |
| 2.7                     | B                 | T216B275K050CS                                          | 1.0                  | 20.0                 | 25.0                  | 4                       | 4                        | 0.68                                | 2083(1)                          | 3083(1) |
| 3.3                     | B                 | T216B335K050CS                                          | 1.2                  | 25.0                 | 32.0                  | 4                       | 4                        | 0.62                                | 2084(1)                          | 3084(1) |
| 3.9                     | B                 | T216B395K050CS                                          | 1.5                  | 30.0                 | 38.0                  | 4                       | 4                        | 0.56                                | 2085(1)                          | 3085(1) |
| 4.7                     | B                 | T216B475K050CS                                          | 1.7                  | 35.0                 | 44.0                  | 4                       | 4                        | 0.51                                | 2086(1)                          | 3086(1) |
| 5.6                     | C                 | T216C565K050CS                                          | 2.2                  | 45.0                 | 56.0                  | 4                       | 4                        | 0.44                                | 2087(1)                          | 3087(1) |
| 6.8                     | C                 | T216C685K050CS                                          | 2.2                  | 45.0                 | 56.0                  | 6                       | 6                        | 0.40                                | 2088(1)                          | 3088(1) |
| 8.2                     | C                 | T216C825K050CS                                          | 2.5                  | 50.0                 | 63.0                  | 6                       | 6                        | 0.36                                | 2089(1)                          | 3089(1) |
| 10.0                    | C                 | T216C106K050CS                                          | 2.5                  | 50.0                 | 63.0                  | 6                       | 6                        | 0.33                                | 2090(1)                          | 3090(1) |
| 12.0                    | C                 | T216C126K050BS                                          | 3.0                  | 60.0                 | 75.0                  | 6                       | 6                        | 0.30                                | 2091(1)                          | 3091(1) |
| 15.0                    | C                 | T216C156K050BS                                          | 4.0                  | 80.0                 | 100.0                 | 6                       | 6                        | 0.27                                | 2092(1)                          | 3092(1) |
| 18.0                    | C                 | T216C186K050BS                                          | 4.5                  | 90.0                 | 113.0                 | 6                       | 6                        | 0.25                                | 2093(1)                          | 3093(1) |
| 22.0                    | D                 | T216D226K050BS                                          | 5.5                  | 100.0                | 138.0                 | 6                       | 6                        | 0.20                                | 2094(1)                          | 3094(1) |

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.



# TANTALUM HERMETICALLY SEALED / AXIAL — MIL-PRF-39003 T216 (CSS13) & T256 (CSS33) SERIES

## RATINGS & PART NUMBER REFERENCE T216/(CSS13) (Cont'd)

| CAPACITANCE<br>μF       | KEMET T216 SERIES |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003 (CSS13) CAPACITORS |         |
|-------------------------|-------------------|---------------------------------------------------------|----------------------|----------------------|-----------------------|-------------------------|--------------------------|-------------------------------------|----------------------------------|---------|
|                         | CASE<br>SIZE      | KEMET EQUIVALENT<br>PART NUMBER FOR<br>CSS13 CAPACITORS | DC LEAKAGE           |                      |                       | MAX. DISSIPATION FACTOR |                          | MAX.<br>ESR Ω<br>@ 25°C,<br>100 kHz | DASH NUMBER REFERENCE            |         |
|                         |                   |                                                         | μA<br>@ +25°<br>MAX. | μA<br>@ +85°<br>MAX. | μA<br>@ +125°<br>MAX. | % @ -55°C<br>+25°C MAX. | % @ -85°C<br>+125°C MAX. |                                     | FAILURE RATE LEVEL (%/1000 HRS)  |         |
|                         |                   |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003/10 GRADED          |         |
|                         |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |
| 75 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |         |
| 0.15                    | A                 | T216A154K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 4.4                                 | 2097(1)                          | 3097(1) |
| 0.18                    | A                 | T216A184K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 4.0                                 | 2098(1)                          | 3098(1) |
| 0.22                    | A                 | T216A224K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 3.5                                 | 2099(1)                          | 3099(1) |
| 0.27                    | A                 | T216A274K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 3.1                                 | 2100(1)                          | 3100(1) |
| 0.33                    | A                 | T216A334K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 2.8                                 | 2101(1)                          | 3101(1) |
| 0.39                    | A                 | T216A394K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 2.6                                 | 2102(1)                          | 3102(1) |
| 0.47                    | A                 | T216A474K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 2.4                                 | 2103(1)                          | 3103(1) |
| 0.56                    | A                 | T216A564K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 2.25                                | 2104(1)                          | 3104(1) |
| 0.68                    | A                 | T216A684K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 2.10                                | 2105(1)                          | 3105(1) |
| 0.82                    | B                 | T216B824K075CS                                          | 0.3                  | 5.0                  | 6.3                   | 2                       | 4                        | 1.47                                | 2106(1)                          | 3106(1) |
| 1.0                     | B                 | T216B105K075CS                                          | 0.4                  | 5.0                  | 6.3                   | 2                       | 4                        | 1.40                                | 2107(1)                          | 3107(1) |
| 1.2                     | B                 | T216B125K075CS                                          | 0.4                  | 5.0                  | 6.3                   | 4                       | 4                        | 1.33                                | 2108(1)                          | 3108(1) |
| 1.5                     | B                 | T216B155K075CS                                          | 0.6                  | 10.0                 | 13.0                  | 4                       | 4                        | 1.06                                | 2109(1)                          | 3109(1) |
| 1.8                     | B                 | T216B185K075CS                                          | 0.7                  | 10.0                 | 13.0                  | 4                       | 4                        | 0.92                                | 2110(1)                          | 3110(1) |
| 2.2                     | B                 | T216B225K075CS                                          | 0.8                  | 15.0                 | 19.0                  | 4                       | 4                        | 0.80                                | 2111(1)                          | 3111(1) |
| 2.7                     | B                 | T216B275K075BS                                          | 1.0                  | 15.0                 | 19.0                  | 4                       | 4                        | 0.68                                | 2112(1)                          | 3112(1) |
| 3.3                     | B                 | T216B335K075BS                                          | 1.2                  | 20.0                 | 25.0                  | 4                       | 4                        | 0.62                                | 2113(1)                          | 3113(1) |
| 3.9                     | B                 | T216B395K075BS                                          | 1.5                  | 20.0                 | 25.0                  | 4                       | 4                        | 0.56                                | 2114(1)                          | 3114(1) |
| 4.7                     | C                 | T216C475K075BS                                          | 3.0                  | 60.0                 | 75.0                  | 4                       | 4                        | 0.47                                | 2115(1)                          | 3115(1) |
| 5.6                     | C                 | T216C565K075BS                                          | 3.0                  | 60.0                 | 75.0                  | 4                       | 4                        | 0.44                                | 2116(1)                          | 3116(1) |
| 6.8                     | C                 | T216C685K075BS                                          | 5.0                  | 100.0                | 125.0                 | 6                       | 6                        | 0.44                                | 2117(1)                          | 3117(1) |
| 8.2                     | C                 | T216C825K075BS                                          | 5.0                  | 100.0                | 125.0                 | 6                       | 6                        | 0.36                                | 2118(1)                          | 3118(1) |
| 10.0                    | C                 | T216C106K075BS                                          | 5.0                  | 100.0                | 125.0                 | 6                       | 6                        | 0.33                                | 2119(1)                          | 3119(1) |
| 12.0                    | D                 | T216D126K075BS                                          | 5.0                  | 100.0                | 125.0                 | 6                       | 6                        | 0.26                                | 2120(1)                          | 3120(1) |
| 15.0                    | D                 | T216D156K075BS                                          | 7.0                  | 140.0                | 175.0                 | 6                       | 6                        | 0.23                                | 2121(1)                          | 3121(1) |

## T256/(CSS33) RATINGS AND PART NUMBER REFERENCE

| CAPACITANCE<br>μF       | KEMET T256 SERIES |                                                   |                |                |                 |                         |                       |                            | MIL-PRF-39003 (CSS33) CAPACITORS |         |
|-------------------------|-------------------|---------------------------------------------------|----------------|----------------|-----------------|-------------------------|-----------------------|----------------------------|----------------------------------|---------|
|                         | CASE SIZE         | KEMET EQUIVALENT PART NUMBER FOR CSS33 CAPACITORS | DC LEAKAGE     |                |                 | MAX. DISSIPATION FACTOR |                       | MAX. ESR Ω @ 25°C, 100 kHz | DASH NUMBER REFERENCE            |         |
|                         |                   |                                                   | μA @ +25° MAX. | μA @ +85° MAX. | μA @ +125° MAX. | % @ -55°C +25°C MAX.    | % @ -85°C +125°C MAX. |                            | FAILURE RATE LEVEL (%/1000 HRS)  |         |
|                         |                   |                                                   |                |                |                 |                         |                       |                            | MIL-PRF-39003/10 GRADED          |         |
|                         |                   | B (0.1)                                           | C (0.01)       |                |                 |                         |                       |                            |                                  |         |
| 6 VOLT RATING AT 85° C  |                   |                                                   |                |                |                 |                         |                       |                            |                                  |         |
| 10.0                    | A                 | T256A106K006CS                                    | 0.5            | 2.0            | 2.0             | 6                       | 6                     | 0.70                       | 2500(1)                          | 3500(1) |
| 12.0                    | A                 | T256A126K006CS                                    | 0.5            | 2.0            | 2.0             | 6                       | 6                     | 0.60                       | 2501(1)                          | 3501(1) |
| 100.0                   | B                 | T256B107K006CS                                    | 1.0            | 3.0            | 3.0             | 8                       | 8                     | 0.20                       | 2502(1)                          | 3502(1) |
| 330.0                   | C                 | T256B107K006CS                                    | 2.0            | 8.0            | 8.0             | 8                       | 8                     | 0.065                      | 2503(1)                          | 3503(1) |
| 390.0                   | C                 | T256C337K006BS                                    | 2.0            | 8.0            | 8.0             | 10                      | 10                    | 0.065                      | 2504(1)                          | 3504(1) |
| 470.0                   | C                 | T256C397K006BS                                    | 2.0            | 8.0            | 8.0             | 10                      | 10                    | 0.060                      | 2505(1)                          | 3505(1) |
| 680.0                   | D                 | T256D687K006CS                                    | 5.0            | 10.0           | 10.0            | 10                      | 10                    | 0.060                      | 2506(1)                          | 3506(1) |
| 820.0                   | D                 | T256D827K006CS                                    | 5.0            | 10.0           | 10.0            | 10                      | 10                    | 0.055                      | 2507(1)                          | 3507(1) |
| 1000.0                  | D                 | T256D108K006CS                                    | 5.0            | 10.0           | 10.0            | 10                      | 10                    | 0.050                      | 2508(1)                          | 3508(1) |
| 10 VOLT RATING AT 85° C |                   |                                                   |                |                |                 |                         |                       |                            |                                  |         |
| 6.8                     | A                 | T256A685K010CS                                    | 0.5            | 2.0            | 2.0             | 6                       | 6                     | 0.80                       | 2509(1)                          | 3509(1) |
| 8.2                     | A                 | T256A825K010CS                                    | 0.5            | 2.0            | 2.0             | 6                       | 6                     | 0.70                       | 2510(1)                          | 3510(1) |
| 47.0                    | B                 | T256B476K010CS                                    | 1.0            | 2.0            | 2.0             | 6                       | 6                     | 0.22                       | 2511(1)                          | 3511(1) |
| 56.0                    | B                 | T256B566K010CS                                    | 1.0            | 4.0            | 4.0             | 6                       | 6                     | 0.20                       | 2512(1)                          | 3512(1) |
| 68.0                    | B                 | T256B686K010CS                                    | 1.0            | 4.0            | 4.0             | 6                       | 6                     | 0.18                       | 2513(1)                          | 3513(1) |
| 82.0                    | B                 | T256B826K010CS                                    | 1.0            | 4.0            | 4.0             | 6                       | 6                     | 0.15                       | 2514(1)                          | 3514(1) |
| 220.0                   | C                 | T256C227K010BS                                    | 1.0            | 7.0            | 7.0             | 2                       | 2                     | 0.090                      | 2515(1)                          | 3515(1) |
| 270.0                   | C                 | T256C277K010BS                                    | 2.0            | 10.0           | 10.0            | 2                       | 2                     | 0.075                      | 2516(1)                          | 3516(1) |
| 390.0                   | D                 | T256D397K010CS                                    | 2.0            | 16.0           | 16.0            | 10                      | 10                    | 0.070                      | 2517(1)                          | 3517(1) |
| 470.0                   | D                 | T256D477K010CS                                    | 4.0            | 16.0           | 16.0            | 10                      | 10                    | 0.065                      | 2518(1)                          | 3518(1) |
| 560.0                   | D                 | T256D567K010CS                                    | 4.0            | 16.0           | 16.0            | 10                      | 10                    | 0.060                      | 2519(1)                          | 3519(1) |

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.

**RATINGS AND PART NUMBER REFERENCE T256/(CSS33) (Cont'd)**

| CAP<br>μF               | KEMET T256 SERIES |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003 (CSS33) CAPACITORS |             |
|-------------------------|-------------------|---------------------------------------------------------|----------------------|----------------------|-----------------------|-------------------------|--------------------------|-------------------------------------|----------------------------------|-------------|
|                         | CASE<br>SIZE      | KEMET EQUIVALENT<br>PART NUMBER FOR<br>CSS33 CAPACITORS | DC LEAKAGE           |                      |                       | MAX. DISSIPATION FACTOR |                          | MAX.<br>ESR Ω @<br>25°C, 100<br>kHz | DASH NUMBER REFERENCE            |             |
|                         |                   |                                                         | μA @<br>+25°<br>MAX. | μA @<br>+85°<br>MAX. | μA @<br>+125°<br>MAX. | % @ -55°C<br>+25°C MAX. | % @ -85°C +125°C<br>MAX. |                                     | FAILURE RATE LEVEL (%/1000 HRS)  |             |
|                         |                   |                                                         |                      |                      |                       |                         |                          |                                     | MIL-PRF-39003/10 GRADED          |             |
|                         |                   |                                                         |                      |                      |                       |                         |                          |                                     | B<br>(0.1)                       | C<br>(0.01) |
| 15 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |             |
| 4.7                     | A                 | T256A475K015CS                                          | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.90                                | 2520(1)                          | 3520(1)     |
| 5.6                     | A                 | T256A565K015CS                                          | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.80                                | 2521(1)                          | 3521(1)     |
| 33.0                    | B                 | T256B336K015CS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.24                                | 2522(1)                          | 3522(1)     |
| 39.0                    | B                 | T256B396K015CS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.22                                | 2523(1)                          | 3523(1)     |
| 150.0                   | C                 | T256C157K015BS                                          | 1.0                  | 7.0                  | 7.0                   | 8                       | 8                        | 0.10                                | 2524(1)                          | 3524(1)     |
| 180.0                   | C                 | T256C187K015BS                                          | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.09                                | 2525(1)                          | 3525(1)     |
| 220.0                   | D                 | T256D227K015BS                                          | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.07                                | 2526(1)                          | 3526(1)     |
| 270.0                   | D                 | T256D277K015BS                                          | 2.0                  | 16.0                 | 16.0                  | 8                       | 8                        | 0.065                               | 2527(1)                          | 3527(1)     |
| 330.0                   | D                 | T256D337K015BS                                          | 2.0                  | 16.0                 | 16.0                  | 8                       | 8                        | 0.060                               | 2528(1)                          | 3528(1)     |
| 20 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |             |
| 2.7                     | A                 | T256A275K020CS                                          | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 1.15                                | 2529(1)                          | 3529(1)     |
| 3.3                     | A                 | T256A335K020CS                                          | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.95                                | 2530(1)                          | 3530(1)     |
| 3.9                     | A                 | T256A395K020CS                                          | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.90                                | 2531(1)                          | 3531(1)     |
| 18.0                    | B                 | T256B186K020CS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.27                                | 2532(1)                          | 3532(1)     |
| 22.0                    | B                 | T256B226K020BS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.26                                | 2533(1)                          | 3533(1)     |
| 27.0                    | B                 | T256B276K020BS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.24                                | 2534(1)                          | 3534(1)     |
| 56.0                    | C                 | T256C566K020CS                                          | 1.0                  | 1.0                  | 10.0                  | 6                       | 6                        | 0.15                                | 2535(1)                          | 3535(1)     |
| 68.0                    | C                 | T256C686K020CS                                          | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.14                                | 2536(1)                          | 3536(1)     |
| 82.0                    | C                 | T256C826K020BS                                          | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.12                                | 2537(1)                          | 3537(1)     |
| 100.0                   | C                 | T256C107K020BS                                          | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.10                                | 2538(1)                          | 3538(1)     |
| 120.0                   | C                 | T256C127K020BS                                          | 1.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.09                                | 2539(1)                          | 3539(1)     |
| 150.0                   | D                 | T256D157K020BS                                          | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.08                                | 2540(1)                          | 3540(1)     |
| 180.0                   | D                 | T256D187K020BS                                          | 2.0                  | 10.0                 | 10.0                  | 8                       | 8                        | 0.07                                | 2541(1)                          | 3541(1)     |
| 35 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |             |
| 1.8                     | A                 | T256A185K035BS                                          | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.20                                | 2542(1)                          | 3542(1)     |
| 8.2                     | B                 | T256B825K035BS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.40                                | 2543(1)                          | 3543(1)     |
| 10.0                    | B                 | T256B106K035BS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.35                                | 2544(1)                          | 3544(1)     |
| 33.0                    | C                 | T256C336K035BS                                          | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.19                                | 2545(1)                          | 3545(1)     |
| 39.0                    | C                 | T256C396K035BS                                          | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.17                                | 2546(1)                          | 3546(1)     |
| 47.0                    | C                 | T256C476K035BS                                          | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.15                                | 2547(1)                          | 3547(1)     |
| 56.0                    | D                 | T256D566K035BS                                          | 2.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.13                                | 2548(1)                          | 3548(1)     |
| 68.0                    | D                 | T256D686K035BS                                          | 2.0                  | 10.0                 | 10.0                  | 6                       | 6                        | 0.12                                | 2549(1)                          | 3549(1)     |
| 50 VOLT RATING AT 85° C |                   |                                                         |                      |                      |                       |                         |                          |                                     |                                  |             |
| 1.2                     | A                 | T256A125K050BS                                          | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 1.30                                | 2550(1)                          | 3550(1)     |
| 1.5                     | A                 | T256A155KL050BS                                         | 0.5                  | 2.0                  | 2.0                   | 4                       | 4                        | 1.20                                | 2551(1)                          | 3551(1)     |
| 5.6                     | B                 | T256B565K050BS                                          | 1.0                  | 2.0                  | 2.0                   | 4                       | 4                        | 0.47                                | 2552(1)                          | 3552(1)     |
| 6.8                     | B                 | T256B685K050BS                                          | 1.0                  | 2.0                  | 2.0                   | 6                       | 6                        | 0.43                                | 2553(1)                          | 3553(1)     |
| 22.0                    | C                 | T256C226K050BS                                          | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.22                                | 2554(1)                          | 3554(1)     |
| 27.0                    | C                 | T256C276K050BS                                          | 1.0                  | 5.0                  | 5.0                   | 6                       | 6                        | 0.20                                | 2555(1)                          | 3555(1)     |
| 33.0                    | D                 | T256D336K050BS                                          | 1.0                  | 9.0                  | 9.0                   | 6                       | 6                        | 0.18                                | 2556(1)                          | 3556(1)     |
| 39.0                    | D                 | T256D396K050BS                                          | 1.0                  | 9.0                  | 9.0                   | 6                       | 6                        | 0.16                                | 2557(1)                          | 3557(1)     |

(1) To complete, insert S for sleeved or U for unsleeved, if "U" ordered also use C-0100.