

# Solid Tantalum Chip Capacitor



3.2 x 1.60 x 1.6mm  
3.5 x 2.80 x 1.9mm  
2.0 x 1.25 x 1.1mm

ATCC-211(A, B, P) Series



**RoHS**  
Compliant

## FEATURES:

- Meets EIA-535BAAC standard
- Large capacitance in small size
- Exceptional stability in wide temperature range

## APPLICATIONS:

- Widely used in PC, cell phones, notebooks and A/V products
- Noise suppression for power supply circuit
- Filtering for Audio circuit, blocking DC bias into earphone
- Power compensation for CPU to run at speed
- Energy storage for LED driving circuit

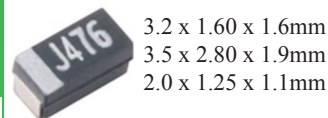
## ELECTRICAL SPECIFICATIONS:

|                        |   |
|------------------------|---|
| Abracon P/N:           | ATCC-211(A, B, P) Series                          |
| Operating Temperature: | -55°C to +125°C (Including self temperature rise) |
| Storage Temperature:   | -10°C ~ +40°C and 70% R.H. max.                   |

| Part Number       | Dimensions | Rated DC Voltage @ 85°C | Nominal Capacitance | Max Leakage Current 25°C | Max Dissipation Factor @25°C 120Hz | Max Equivalent Series Resistance @25°C 100kHz | Capacitance Code |
|-------------------|------------|-------------------------|---------------------|--------------------------|------------------------------------|---|------------------|
| Units             | —          | V                       | μF                  | μA                       | %                                  | Ω   | —                |
| Symbol            | A, B, P    | V <sub>R</sub>          | C                   | I <sub>O</sub> Max       | tan δ Max                          | ESR Max                                       | —                |
| ATCC-211A-004-107 | A          | 4.0                     | 100.0               | 4.0                      | 18.0                               | 5.0   | 107              |
| ATCC-211B-004-227 | B          | 4.0                     | 220.0               | 8.8                      | 18.0                               | 0.5   | 227              |
| ATCC-211P-006-106 | P          | 6.3                     | 10.0                | 0.6                      | 8.0                                | 10.0  | 106              |
| ATCC-211A-006-226 | A          | 6.3                     | 22.0                | 1.3                      | 6.0                                | 4.0   | 226              |
| ATCC-211A-006-336 | A          | 6.3                     | 33.0                | 2.1                      | 8.0                                | 4.5   | 336              |
| ATCC-211A-006-476 | A          | 6.3                     | 47.0                | 3.0                      | 8.0                                | 3.5   | 476              |
| ATCC-211B-006-107 | B          | 6.3                     | 100.0               | 6.3                      | 10.0                               | 3.0   | 107              |
| ATCC-211P-010-106 | P          | 10.0                    | 10.0                | 1.0                      | 15.0                               | 10.0  | 106              |
| ATCC-211A-010-106 | A          | 10.0                    | 10.0                | 1.0                      | 6.0                                | 4.0   | 106              |
| ATCC-211A-010-226 | A          | 10.0                    | 22.0                | 2.2                      | 8.0                                | 4.0   | 226              |
| ATCC-211B-010-107 | B          | 10.0                    | 100.0               | 10.0                     | 15.0                               | 1.5   | 107              |
| ATCC-211P-016-105 | P          | 16.0                    | 1.0                 | 0.5                      | 6.0                                | 25.0  | 105              |
| ATCC-211A-016-475 | A          | 16.0                    | 4.7                 | 0.8                      | 6.0                                | 6.0   | 475              |
| ATCC-211A-016-106 | A          | 16.0                    | 10.0                | 1.6                      | 8.0                                | 7.0   | 106              |
| ATCC-211B-016-106 | B          | 16.0                    | 10.0                | 1.6                      | 6.0                                | 2.8   | 106              |
| ATCC-211B-016-226 | B          | 16.0                    | 22.0                | 3.5                      | 8.0                                | 2.2   | 226              |
| ATCC-211A-025-475 | A          | 25.0                    | 4.7                 | 1.2                      | 8.0                                | 6.0   | 475              |
| ATCC-211B-025-475 | B          | 25.0                    | 4.7                 | 1.2                      | 6.0                                | 2.0   | 475              |
| ATCC-211B-025-106 | B          | 25.0                    | 10.0                | 2.5                      | 6.0                                | 3.0   | 106              |
| ATCC-211A-035-104 | A          | 35.0                    | 0.1                 | 0.5                      | 4.0                                | 20.0  | 104              |
| ATCC-211A-035-105 | A          | 35.0                    | 1.0                 | 0.5                      | 4.0                                | 10.0  | 105              |
| ATCC-211B-035-335 | B          | 35.0                    | 3.3                 | 1.2                      | 6.0                                | 3.5   | 335              |
| ATCC-211B-035-475 | B          | 35.0                    | 4.7                 | 1.6                      | 6.0                                | 2.0   | 475              |
| ATCC-211B-050-225 | B          | 50.0                    | 2.2                 | 1.1                      | 6.0                                | 2.0   | 225              |



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## Test Conditions and equipment:

- Ambient Temperature:  $25 \pm 10^\circ\text{C}$
- Relative Humidity:  $50\% \pm 30\%$
- Air Pressure: 86kPa to 106kPa

Capacitance (C) & Dissipation Factor ( $\tan \delta$ ): HP4263B or equivalent,  $120 \pm 5\text{Hz}$ ,  $1V_{\text{rms}}$

Leakage Current ( $I_0$ ): TH2686 or equivalent

Equivalent Series Resistance (ESR): HP4263B or equivalent,  $100 \pm 5\text{kHz}$

Rated Voltage ( $V_R$ ): The maximum DC operating voltage for continuous duty at  $-55^\circ\text{C} \sim +85^\circ\text{C}$ .

Derated Voltage ( $V_C$ ): Capacitor may be operated at  $+125^\circ\text{C}$  with voltage derated to two-thirds of rated voltage  $V_R$ .

Surge voltage  $V_S$ : The maximum voltage to which capacitors may be subjected under any momentary conditions, including maximum AC pulse voltage, DC bias voltage and any momentary voltage.

|                           |      |      |       |       |       |       |       |                |
|---------------------------|------|------|-------|-------|-------|-------|-------|----------------|
| Rated Voltage ( $V_R$ )   | 4.0V | 6.3V | 10.0V | 16.0V | 25.0V | 35.0V | 50.0V | @-55°C ~ +85°C |
| Derated Voltage ( $V_C$ ) | 2.5V | 4.0V | 6.3V  | 10.0V | 16.0V | 20.0V | 32.0V | @+125°C        |
| Surge Voltage ( $V_S$ )   | 5.2V | 8.0V | 13.0V | 20.0V | 32.0V | 46.0V | 65.0V | @-55°C ~ +85°C |
| Surge Voltage ( $V_S$ )   | 3.4V | 5.0V | 8.0V  | 13.0V | 20.0V | 28.0V | 40.0V | @+125°C        |

## OPTIONS AND PART IDENTIFICATION

ATCC-211 - [ ] - [ ] - [ ] - [ ]

| Dimension Code     |
|--------------------|
| P: 2.0x1.25x1.1 mm |
| A: 3.2x1.6x1.6 mm  |
| B: 3.5x2.8x1.9 mm  |

| Rated Voltage Code |
|--------------------|
| 004: 4.0V          |
| 006: 6.3V          |
| 010: 10.0V         |
| 016: 16.0V         |
| 025: 25.0V         |
| 035: 35.0V         |
| 050: 50.0V         |

| Capacitance Code                |
|---------------------------------|
| Please refer to the table above |

| Capacitance Tolerance |
|-----------------------|
| K: $\pm 10\%$         |
| M: $\pm 20\%$         |

| Packaging  |
|--|
| T: Tape and Reel<br>(3k pcs/Reel for option P;<br>2k pcs/reel for A and B) |

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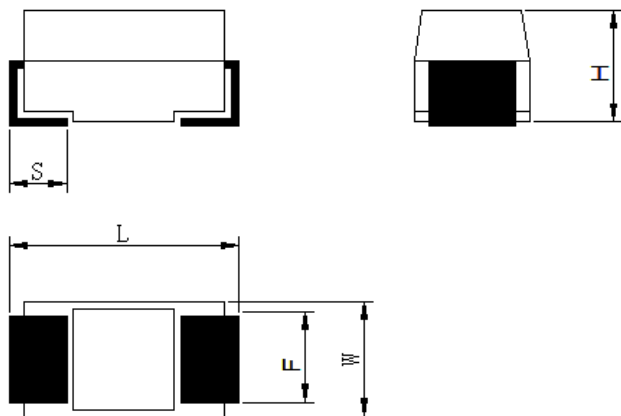


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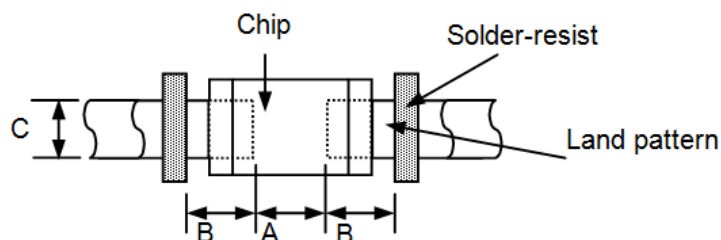


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## OUTLINE DIMENSIONS:



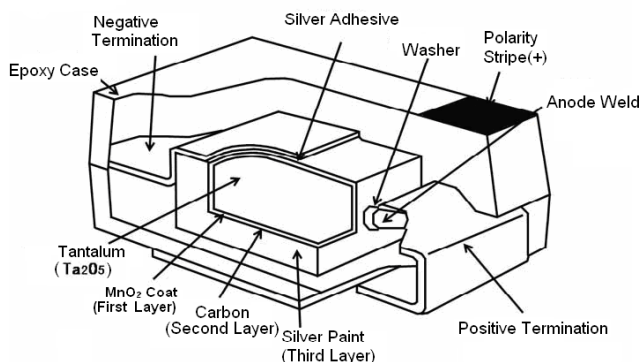
### Recommended Land Pattern



| Dimension Code | L        | W         | H        | F(±0.10) | S(±0.30) | A   | B    | C   |
|----------------|----------|-----------|----------|----------|----------|-----|------|-----|
| P              | 2.0±0.15 | 1.25±0.15 | 1.1±0.15 | 0.9      | 0.5      | 1.1 | 1.05 | 1.2 |
| A              | 3.2±0.20 | 1.6±0.20  | 1.6±0.20 | 1.2      | 0.8      | 1.1 | 1.35 | 1.5 |
| B              | 3.5±0.2  | 2.8±0.2   | 1.9±0.2  | 2.2      | 0.8      | 1.4 | 1.35 | 2.7 |

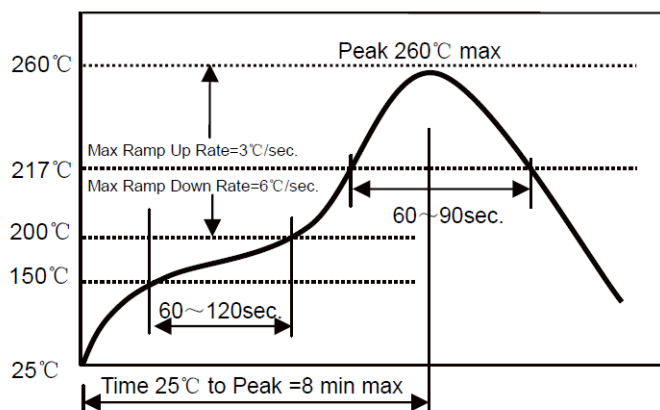
Dimensions: mm

## Materials



\*The Case is black molded

## REFLOW PROFILE:



- Δ Preheat condition: 150 ~200°C /60~120sec.
- Δ Allowed time above 217°C: 60~90sec.
- Δ Max temp: 260°C
- Δ Max time at max temp: 10sec.
- Δ Solder paste: Sn/3.0Ag/0.5Cu
- Δ Allowed Reflow time: 2x max



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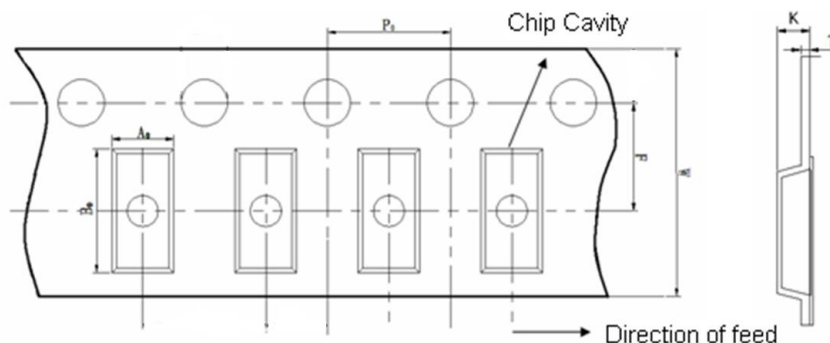
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2.0 x 1.25 x 1.1mm

## TAPE & REEL:

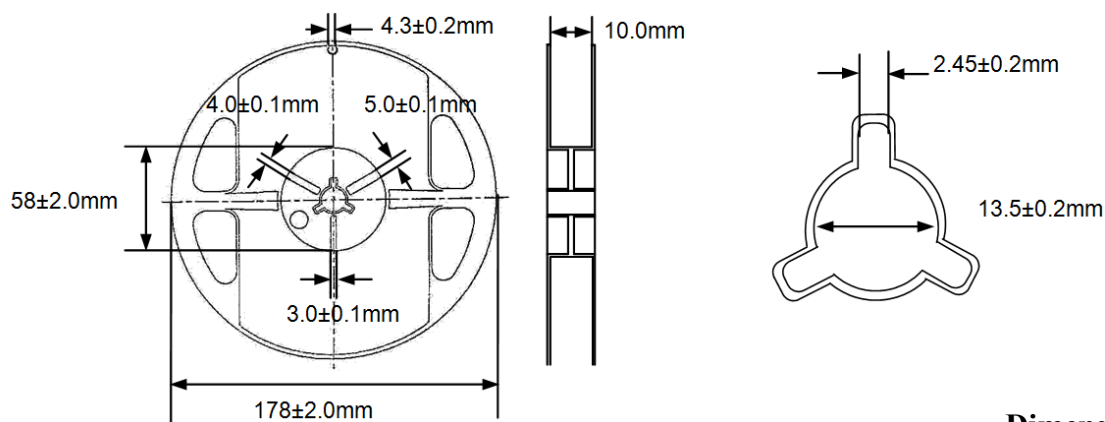
### Packaging

T: 3,000pcs / reel – Dimension Code P

2,000pcs / reel – Dimension Code A/B



| Dimension Code | A <sub>0</sub> | B <sub>0</sub> | W       | F        | P <sub>0</sub> | T Max | K Max |
|----------------|----------------|----------------|---------|----------|----------------|-------|-------|
| P              | 1.4±0.15       | 2.20±0.15      | 8.0±0.3 | 3.5±0.05 | 4.0±0.1        | 0.3   | 1.45  |
| A              | 1.90±0.20      | 3.50±0.20      | 8.0±0.3 | 3.5±0.05 | 4.0±0.1        | 0.3   | 2.1   |
| B              | 3.10±0.20      | 3.80±0.20      | 8.0±0.3 | 3.5±0.05 | 4.0±0.1        | 0.3   | 2.3   |



Dimension: mm

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