



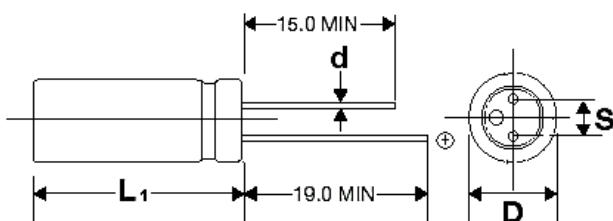
#### FEATURES

Small Size - High Temperature - Low ESR - High Ripple Current  
- Stable with Temperature - High Frequency

#### APPLICATIONS

Power Units - LED Lighting - Telecommunications

|                                                             |              |                                                                                                                                         |    |     |                                  |    |     |     |  |
|-------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------|----|-----|----------------------------------|----|-----|-----|--|
| Operating Temperature Range                                 |              | -55°C to +125°C                                                                                                                         |    |     |                                  |    |     |     |  |
| Capacitance Tolerance                                       |              | +20% at 120 Hz, 20°C                                                                                                                    |    |     |                                  |    |     |     |  |
| Surge Voltage                                               | WVDC         | 16                                                                                                                                      | 25 | 35  | 50                               | 63 | 100 | 160 |  |
|                                                             | SVDC         | 1.15 x rated WVDC                                                                                                                       |    |     |                                  |    |     |     |  |
| Dissipation Factor<br>120 Hz, 20°C                          |              | 12% MAX                                                                                                                                 |    |     |                                  |    |     |     |  |
| Leakage Current                                             |              | 2 Minutes                                                                                                                               |    |     |                                  |    |     |     |  |
|                                                             |              | See standard part listing                                                                                                               |    |     |                                  |    |     |     |  |
| Low Temperature<br>Stability<br>Impedance Ratio<br>(120 Hz) | -25°C/ +20°C | ≤1.15                                                                                                                                   |    |     |                                  |    |     |     |  |
|                                                             | -55°C/ +20°C | ≤1.25                                                                                                                                   |    |     |                                  |    |     |     |  |
| Load Life                                                   |              | 2000 hours( 1500 Hours for WVDC>35V) at 125°C with rated WVDC applied                                                                   |    |     |                                  |    |     |     |  |
|                                                             |              | Capacitance Change                                                                                                                      |    |     | ≤30% of initial measured value   |    |     |     |  |
|                                                             |              | Dissipation Factor                                                                                                                      |    |     | ≤300% of maximum specified value |    |     |     |  |
|                                                             |              | ESR                                                                                                                                     |    |     | ≤300% of maximum specified value |    |     |     |  |
|                                                             |              | Leakage Current                                                                                                                         |    |     | ≤100% of maximum specified value |    |     |     |  |
| Humidity test                                               |              | 1000 hours at 20°C with rated voltage applied at 90-95% R.H.                                                                            |    |     |                                  |    |     |     |  |
|                                                             |              | Capacitance Change                                                                                                                      |    |     | ≤20% of initial measured value   |    |     |     |  |
|                                                             |              | Dissipation Factor                                                                                                                      |    |     | ≤150% of maximum specified value |    |     |     |  |
|                                                             |              | ESR                                                                                                                                     |    |     | ≤150% of maximum specified value |    |     |     |  |
|                                                             |              | Leakage Current                                                                                                                         |    |     | ≤100% of maximum specified value |    |     |     |  |
| Surge Voltage test                                          |              | 1000 cycles at 125°C with rated surge voltage applied for 30 seconds through a 1kΩ resistor and discharged for 5 minutes and 30 seconds |    |     |                                  |    |     |     |  |
|                                                             |              | Capacitance Change                                                                                                                      |    |     | ≤20% of initial measured value   |    |     |     |  |
|                                                             |              | Dissipation Factor                                                                                                                      |    |     | ≤150% of maximum specified value |    |     |     |  |
|                                                             |              | ESR                                                                                                                                     |    |     | ≤150% of maximum specified value |    |     |     |  |
|                                                             |              | Leakage Current                                                                                                                         |    |     | ≤100% of maximum specified value |    |     |     |  |
| Failure Rate                                                |              | 0.5% /1000 hours Maximum (60% confidence level at 125°C)                                                                                |    |     |                                  |    |     |     |  |
| Ripple Current Multipliers                                  |              | Frequency (Hz)                                                                                                                          |    |     |                                  |    |     |     |  |
|                                                             |              | 120                                                                                                                                     | 1k | 10k | 100k-300K                        |    |     |     |  |
|                                                             |              | .05                                                                                                                                     | .3 | .7  | 1.0                              |    |     |     |  |



|       |     |     |
|-------|-----|-----|
| D+0.5 | 8   | 10  |
| S+0.5 | 3.5 | 5.0 |
| d     | 0.6 | 0.6 |

L<sub>1</sub>=L+1.5mm MAX

# AVG

**+125°C Highest capacitance & Voltage**

| Capacitance (μF) | WVDC | IC PART NUMBER | Maximum ESR (Ω)<br>120 Hz,<br>+20°C | Maximum ESR (mΩ)<br>100 kHz,<br>+20°C | Leakage Current (μA) | Maximum RMS Ripple Current (mA)<br>100 kHz,<br>+105°C | Dims DxL (mm) |
|------------------|------|----------------|-------------------------------------|---------------------------------------|----------------------|-------------------------------------------------------|---------------|
| 4.7              | 160  | 475AVG160MFBJ  | 42.3284                             | 130                                   | 150                  | 720                                                   | 8x12          |
| 6.8              | 160  | 685AVG160MFBJ  | 29.2564                             | 130                                   | 217                  | 720                                                   | 8x12          |
| 12               | 160  | 126AVG160MGBJ  | 16.5786                             | 130                                   | 384                  | 960                                                   | 10x12         |
| 15               | 100  | 156AVG100MFBJ  | 13.2629                             | 40                                    | 300                  | 1850                                                  | 8x12          |
| 22               | 100  | 226AVG100MFBJ  | 9.0429                              | 40                                    | 440                  | 1850                                                  | 8x12          |
| 33               | 100  | 336AVG100MGBJ  | 6.0286                              | 38                                    | 660                  | 2100                                                  | 10x12         |
| 47               | 35   | 476AVG035MFF   | 4.2328                              | 30                                    | 329                  | 2600                                                  | 8x8           |
| 47               | 50   | 476AVG050MFBJ  | 4.2328                              | 32                                    | 470                  | 2250                                                  | 8x12          |
| 47               | 100  | 476AVG100MGBJ  | 4.2328                              | 38                                    | 940                  | 2100                                                  | 10x12         |
| 68               | 35   | 686AVG035MFF   | 2.9256                              | 30                                    | 476                  | 2600                                                  | 8x8           |
| 68               | 50   | 686AVG050MFBJ  | 2.9256                              | 32                                    | 680                  | 2250                                                  | 8x12          |
| 82               | 50   | 826AVG050MFBJ  | 2.4261                              | 32                                    | 820                  | 2250                                                  | 8x12          |
| 82               | 63   | 826AVG063MFBJ  | 2.4261                              | 32                                    | 1033                 | 2100                                                  | 8x12          |
| 100              | 25   | 107AVG025MFF   | 1.9894                              | 24                                    | 500                  | 2900                                                  | 8x8           |
| 100              | 35   | 107AVG035MFBJ  | 1.9894                              | 26                                    | 700                  | 2950                                                  | 8x12          |
| 100              | 63   | 107AVG063MFBJ  | 1.9894                              | 32                                    | 1260                 | 2100                                                  | 8x12          |
| 120              | 50   | 127AVG050MFBJ  | 1.6579                              | 32                                    | 1200                 | 2250                                                  | 8x12          |
| 120              | 50   | 127AVG050MGBJ  | 1.6579                              | 28                                    | 1200                 | 2620                                                  | 10x12         |
| 150              | 25   | 157AVG025MFF   | 1.32629                             | 24                                    | 750                  | 2900                                                  | 8x8           |
| 150              | 35   | 157AVG035MFBJ  | 1.32629                             | 26                                    | 1050                 | 2950                                                  | 8x12          |
| 150              | 63   | 157AVG063MGBJ  | 1.32629                             | 28                                    | 1890                 | 2550                                                  | 10x12         |
| 180              | 35   | 187AVG035MFBJ  | 1.1052                              | 26                                    | 1260                 | 2950                                                  | 8x12          |
| 180              | 50   | 187AVG050MGBJ  | 1.1052                              | 28                                    | 1800                 | 2650                                                  | 10x12         |
| 180              | 63   | 187AVG063MGBJ  | 1.1052                              | 28                                    | 2268                 | 2550                                                  | 10x12         |
| 220              | 25   | 227AVG025MFBJ  | 0.90429                             | 18                                    | 1100                 | 4250                                                  | 8x12          |
| 220              | 35   | 227AVG035MGBJ  | 0.90429                             | 24                                    | 1540                 | 3400                                                  | 10x12         |
| 220              | 35   | 227AVG035MFBJ  | 0.90429                             | 26                                    | 1540                 | 2950                                                  | 8x12          |
| 220              | 50   | 227AVG050MGBJ  | 0.90429                             | 28                                    | 2200                 | 2620                                                  | 10x12         |
| 330              | 16   | 337AVG016MFF   | 0.60286                             | 15                                    | 1056                 | 4300                                                  | 8x8           |
| 330              | 25   | 337AVG025MFBJ  | 0.60286                             | 18                                    | 1650                 | 4250                                                  | 8x12          |
| 330              | 35   | 337AVG035MGBJ  | 0.60286                             | 24                                    | 2310                 | 3400                                                  | 10x12         |
| 390              | 35   | 397AVG035MGBJ  | 0.5101                              | 24                                    | 2730                 | 3400                                                  | 10x12         |
| 470              | 16   | 477AVG016MFBJ  | 0.42328                             | 13                                    | 1504                 | 4650                                                  | 8x12          |
| 470              | 16   | 477AVG016MFF   | 0.42328                             | 15                                    | 1504                 | 4300                                                  | 8x8           |
| 470              | 25   | 477AVG025MFBJ  | 0.42328                             | 18                                    | 2350                 | 4250                                                  | 8x12          |
| 470              | 25   | 477AVG025MGBJ  | 0.42328                             | 16                                    | 2350                 | 4700                                                  | 10x12         |
| 560              | 25   | 567AVG025MGBJ  | 0.3553                              | 16                                    | 2800                 | 4700                                                  | 10x12         |
| 680              | 25   | 687AVG025MGBJ  | 0.29256                             | 16                                    | 3400                 | 4700                                                  | 10x12         |
| 820              | 16   | 827AVG016MGBJ  | 0.24261                             | 12                                    | 2624                 | 5600                                                  | 10x12         |
| 820              | 16   | 827AVG016MFBJ  | 0.24261                             | 13                                    | 2624                 | 4650                                                  | 8x12          |
| 1000             | 16   | 108AVG016MGBJ  | 0.2                                 | 12                                    | 3200                 | 5600                                                  | 10x12         |
| 1200             | 16   | 128AVG016MGBJ  | 0.16579                             | 12                                    | 3840                 | 5600                                                  | 10x12         |
| 1500             | 16   | 158AVG016MGBJ  | 0.132629                            | 12                                    | 4800                 | 5600                                                  | 10x12         |