

# ALG

## Aluminum Polymer Capacitors

### High Temperature



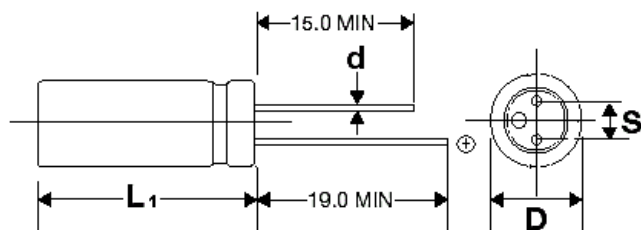
#### FEATURES

Ultra Low ESR – Small size – High temperature – High ripple current – stable with temperature – High frequency

#### APPLICATIONS

Industrial power supplies – Medical equipment – automotive

|                                                             |              |                                                                                                                                         |    |                                  |      |    |  |
|-------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------|------|----|--|
| Operating Temperature Range                                 |              | -55°C to +125°C                                                                                                                         |    |                                  |      |    |  |
| Capacitance Tolerance                                       |              | +20% at 120 Hz, 20°C                                                                                                                    |    |                                  |      |    |  |
| Surge Voltage                                               | WVDC         | 16                                                                                                                                      | 25 | 35                               | 50   | 63 |  |
|                                                             | 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 and ripple current 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 60°C with rated voltage applied at 90-95% R.H.                                                                            |    |                                  |      |    |  |
|                                                             |              | 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 |      |    |  |
| 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 |    |  |
|                                                             |              | .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

**ILLINOIS CAPACITOR**

Your Global Source for World-Class Capacitors

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# ALG

**+ 125°C Highest capacitance &  
Voltage, Low ESR**

| Capacitance<br>( $\mu$ F) | WVDC | IC PART NUMBER | Maximum<br>ESR ( $\Omega$ )<br>120 Hz,<br>+20°C | Maximum<br>ESR (m $\Omega$ )<br>100 kHz,<br>+20°C | Leakage<br>Current<br>( $\mu$ A) | Maximum<br>RMS<br>Ripple<br>Current<br>(mA)<br>100 kHz,<br>+105°C | Dims DxL<br>(mm) |
|---------------------------|------|----------------|-------------------------------------------------|---------------------------------------------------|----------------------------------|-------------------------------------------------------------------|------------------|
| 47                        | 50   | 476ALG050MFBJ  | 4.2328                                          | 27                                                | 470                              | 2700                                                              | 8x12             |
| 47                        | 63   | 476ALG063MFBJ  | 4.2328                                          | 27                                                | 592                              | 2700                                                              | 8x12             |
| 82                        | 50   | 826ALG050MFBJ  | 2.4261                                          | 27                                                | 820                              | 2700                                                              | 8x12             |
| 82                        | 63   | 826ALG063MGBJ  | 2.4261                                          | 25                                                | 1033                             | 2900                                                              | 10x12            |
| 100                       | 35   | 107ALG035MFBJ  | 1.9894                                          | 23                                                | 700                              | 3400                                                              | 8x12             |
| 100                       | 50   | 107ALG050MFBJ  | 1.9894                                          | 27                                                | 1000                             | 2700                                                              | 8x12             |
| 100                       | 63   | 107ALG063MFBJ  | 1.9894                                          | 27                                                | 1260                             | 2700                                                              | 8x12             |
| 120                       | 50   | 127ALG050MGBJ  | 1.6579                                          | 25                                                | 1200                             | 3100                                                              | 10x12            |
| 150                       | 35   | 157ALG035MFBJ  | 1.3263                                          | 23                                                | 1050                             | 3400                                                              | 8x12             |
| 150                       | 63   | 157ALG063MGBJ  | 1.3253                                          | 25                                                | 1890                             | 2900                                                              | 10x12            |
| 220                       | 25   | 227ALG025MFBJ  | 0.9043                                          | 16                                                | 1350                             | 4750                                                              | 8x12             |
| 220                       | 35   | 227ALG035MFBJ  | 0.9043                                          | 23                                                | 1540                             | 3400                                                              | 8x12             |
| 220                       | 35   | 227ALG035MGBJ  | 0.9043                                          | 21                                                | 1540                             | 3900                                                              | 10x12            |
| 220                       | 50   | 227ALG050MGBJ  | 0.9043                                          | 25                                                | 2200                             | 3100                                                              | 10x12            |
| 330                       | 35   | 337ALG035MGBJ  | 0.6029                                          | 21                                                | 2310                             | 3900                                                              | 10x12            |
| 470                       | 16   | 477ALG016MFBJ  | 0.42328                                         | 11                                                | 1504                             | 5100                                                              | 8x12             |
| 470                       | 25   | 477ALG025MFBJ  | 0.42328                                         | 16                                                | 2350                             | 4750                                                              | 8x12             |
| 470                       | 25   | 477ALG025MGBJ  | 0.42328                                         | 14                                                | 2350                             | 5050                                                              | 10x12            |
| 680                       | 25   | 687ALG025MGBJ  | 0.2926                                          | 14                                                | 3400                             | 5050                                                              | 10x12            |
| 820                       | 16   | 827ALG016MFBF  | 0.24261                                         | 11                                                | 2624                             | 5100                                                              | 8x12             |
| 1200                      | 16   | 128ALG016MGBJ  | 0.16579                                         | 11                                                | 3840                             | 6100                                                              | 10x12            |
| 1500                      | 16   | 158ALG016MGBJ  | 0.13253                                         | 11                                                | 4800                             | 6100                                                              | 10x12            |