# SMD Aluminum Electrolytic Capacitor – JCC

## FEATURES

- Low leakage current (0.5~3.3μA Max.)
- Low cost for replacement of some tantalum applications
- Comply with the RoHS directive


## SPECIFICATIONS

| | |
|---|---|
| Operating Temperature | -40℃ ~ +85℃ |
| Voltage Range | 6.3V ~ 50V.DC |
| Capacitance Range | 0.1 ~ 220μF |
| Capacitance Tolerance | ±20% at 120Hz, 20℃ |
| Leakage Current | Leakage current≤0.002CV or 0.5μA, whichever is greater<br>(After 2 minutes' application of rated voltage) |
| Dissipation Factor (Tan δ) | Measurement Frequency: 120Hz, Temperature: 20℃ |

| Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
|---|---|---|---|---|---|---|
| Surge Voltage (V) | 8.0 | 13 | 20 | 32 | 44 | 63 |
| Tan δ (Max.) | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.1 |

Stability At Low Temp. — Measurement Frequency: 120Hz

| Rated Voltage (V) | | 6.3 | 10 | 16,25 | 35,50 |
|---|---|---|---|---|---|
| Impedance Ratio | Z (-25℃) / Z(20℃) | 4 | 3 | 2 | 2 |
| ZT / Z20 (Max.) | Z (-40℃) / Z(20℃) | 8 | 6 | 4 | 3 |

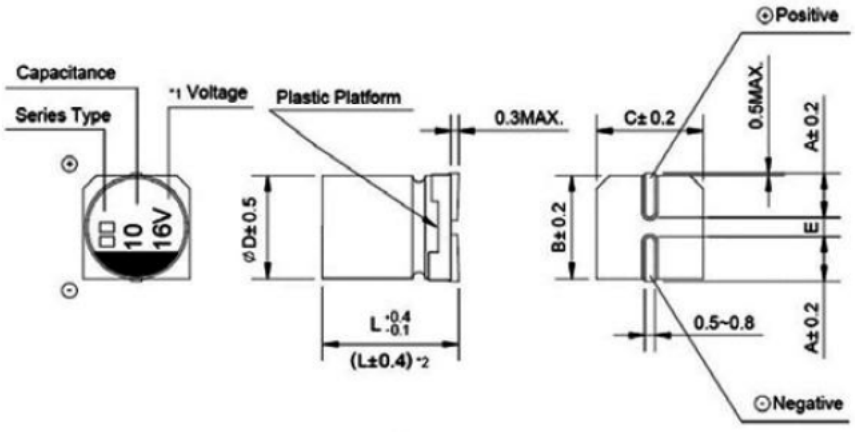
Load Life — After 2000 hours application of rated voltage at 85℃, Capacitors meet the characteristics requirements listed below.

| | |
|---|---|
| Capacitance Change | Within ± 25% of initial value |
| Dissipation Factor | 200% or less of initial specified value |
| Leakage Current | Initial specified value or less |

Resistance to Soldering Heat — After reflow soldering and restored at room temperature, they meet the characteristics listed below.

| | |
|---|---|
| Capacitance Change | Within ± 10% of initial value |
| Dissipation Factor | Initial specified value or less |
| Leakage Current | Initial specified value or less |

## DRAWING (Unit: mm)




*1 Voltage mark for 6.3V is [6V]

*2 Applicable toΦ6.3*

| ΦDxL | 4x5.4 | 5x5.4 | 6.3x5.4 | 6.3x7.7 |
|---|---|---|---|---|
| A | 2.0 | 2.2 | 2.6 | 2.6 |
| B | 4.3 | 5.3 | 6.6 | 6.6 |
| C | 4.3 | 5.3 | 6.6 | 6.6 |
| E±0.2 | 1.0 | 1.4 | 1.9 | 1.9 |
| L | 5.4 | 5.4 | 5.4 | 7.7 |

ATD ELEKTRONIK s.r.o.
www.atd-elektronik.cz
E-mail: info@atd-elektronik.cz
Tel: + 420 379 723 915
Fax: + 420 379 725 868

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## FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

| Frequency | ~50Hz | 120Hz | 300Hz | 1KHz | 10KHz~ |
|---|---|---|---|---|---|
| Coefficient | 0.7 | 1.0 | 1.17 | 1.36 | 1.50 |

## DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT&ESR

| WV / Parameter / uF | | 6.3(0J) | | | 10(1A) | | | 16(1C) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Case Size ØDxL (mm) | E.S.R. (Ω) 20℃ 120Hz | Ripple current (mA rms) at 85℃ 120Hz | Case Size ØDxL (mm) | E.S.R (Ω) 20℃ 120Hz | Ripple current (mA rms) at 85℃ 120Hz | Case Size ØDxL (mm) | E.S.R. (Ω) 20℃ 120Hz | Ripple current (mA rms) at 85℃ 120Hz |
| 10 | 100 | | | | | | | 4×5.4 | 34.5 | 25 |
| 22 | 220 | 4×5.4 | 23.5 | 31 | 5×5.4 | 19.6 | 35 | 5×5.4 | 15.7 | 39 |
| 33 | 330 | 5×5.4 | 15.7 | 39 | 5×5.4 | 13.1 | 43 | 6.3×5.4 | 10.5 | 57 |
| 47 | 470 | 5×5.4 | 11.0 | 47 | 6.3×5.4 | 9.2 | 59 | 6.3×5.4 | 7.3 | 68 |
| 100 | 101 | 6.3×5.4 | 5.2 | 75 | 6.3×5.4 | 4.3 | 76 | 6.3×7.7 | 3.5 | 96 |
| 220 | 221 | 6.3×7.7 | 2.4 | 85 | | | | | | |

## DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT&ESR

| WV / Parameter / uF | | 25(1E) | | | 35(1V) | | | 50(1H) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Case Size ØDxL (mm) | E.S.R. (Ω) 20 ℃ 120Hz, | Ripple current (mA rms) at 85℃ 120Hz | Case Size ØDxL (mm) | E.S.R. (Ω) 20℃ 120Hz, | Ripple current (mA rms) at 85℃ 120Hz | Case Size ØDxL (mm) | E.S.R. (Ω) 20℃ 120Hz, | Ripple current (mA rms) at 85℃ 120Hz |
| 0.1 | 0R1 | | | | | | | 4×5.4 | 2156 | 1.0 |
| 0.22 | R22 | | | | | | | 4×5.4 | 980 | 2.3 |
| 0.33 | R33 | | | | | | | 4×5.4 | 653 | 3.5 |
| 0.47 | R47 | | | | | | | 4×5.4 | 459 | 5 |
| 1 | 010 | | | | | | | 4×5.4 | 216 | 10 |
| 2.2 | 2R2 | | | | | | | 4×5.4 | 98 | 15 |
| 3.3 | 3R3 | | | | | | | 4×5.4 | 65 | 18 |
| 4.7 | 4R7 | 4×5.4 | 64.2 | 19 | 4×5.4 | 55.1 | 20 | 5×5.4 | 46 | 23 |
| 10 | 100 | 5×5.4 | 30.2 | 28 | 5×5.4 | 25.9 | 30 | 6.3×5.4 | 22 | 34 |
| 22 | 220 | 6.3×5.4 | 13.7 | 52 | 6.3×5.4 | 11.8 | 54 | 6.3×7.7 | 9.8 | 85 |
| 33 | 330 | 6.3×5.4 | 9.1 | 63 | 6.3×7.7 | 7.8 | 105 | | | |
| 47 | 470 | 6.3×7.7 | 6.4 | 100 | 6.3×7.7 | 5.5 | 110 | | | |

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Fax: + 420 379 725 868