

SMD Aluminum Electrolytic Capacitor – JCX

FEATURES

- 105°C 2,000hours.
- Miniaturized, Extra Low Impedance
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB



SPECIFICATIONS

Operating Temperature: -55°C ~ +105°C
 Voltage Range: 6.3V ~ 50V.DC
 Capacitance Range: 10 ~ 2200µF
 Capacitance Tolerance: ±20% at 120Hz, 20°C
 Leakage Current: The greater value of either 0.01CV or 3µAr µA/after 2minutes (max)

Dissipation Factor (Tan δ)

Measurement Frequency: 120Hz, Temperature: 20°C

| | | | | | | | |
|-------------------|------------|------|------|------|------|------|------|
| Rated Voltage (V) | | 6.3 | 10 | 16 | 25 | 35 | 50 |
| Surge voltage (V) | | 7.3 | 11.5 | 18.4 | 28.8 | 40.3 | 57.5 |
| Tan δ (Max.) | Φ4 to Φ6.3 | 0.26 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 |
| | Φ8 to Φ10 | 0.32 | 0.21 | 0.18 | 0.16 | 0.12 | 0.10 |

Stability At Low Temp.

Measurement Frequency: 120Hz, +20°C

| | | | | | | | |
|-------------------|-------|-----|----|----|----|----|----|
| Rated Voltage (V) | | 6.3 | 10 | 16 | 25 | 35 | 50 |
| Impedance Ratio | -25°C | 4 | 3 | 2 | 2 | 2 | 2 |
| ZT/Z 20°C (Max.) | -55°C | 8 | 5 | 4 | 3 | 3 | 3 |

Endurance

After applying rated working voltage for 2000h at +105°C±2°C, and then being stabilized at +20°C, capacitors shall meet the following limits.

| | |
|--------------------|---------------------------------------|
| Capacitance Change | Within ±30% of initial value |
| Dissipation Factor | Less than 200% of the specified value |
| Leakage Current | Within the initial limit |

Shelf Life

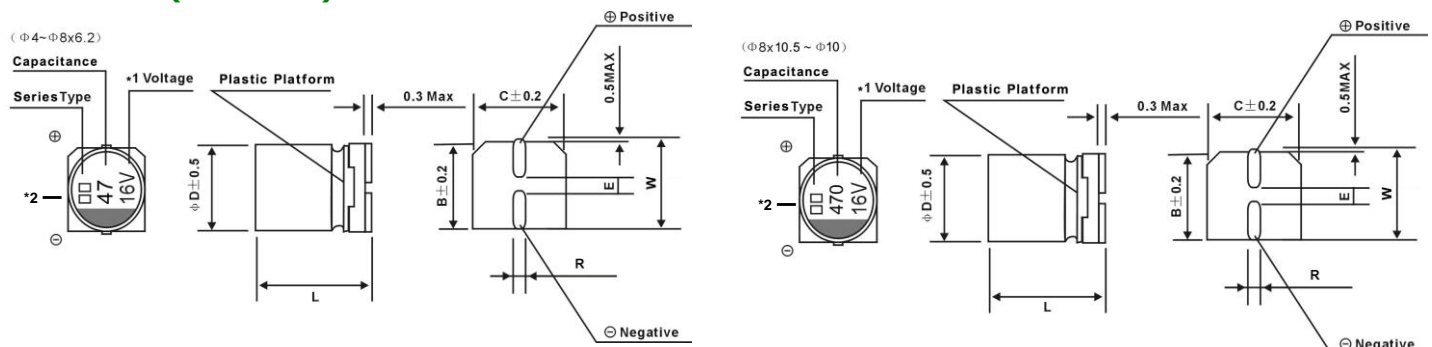
After storage for 1000h at +105°C±2°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet the limits specified in endurance.

Resistance to Soldering Heat

After reflow soldering and then being stabilized at +20°C, capacitors shall meet the following limits.

| | |
|--------------------|------------------------------|
| Capacitance Change | Within ±10% of initial value |
| Dissipation Factor | Within the initial limit |
| Leakage Current | Within the initial limit |

DRAWING (Unit: mm)



*1 Voltage mark for 6.3V is [6V] or [6.3V] *2 Surface Marking Types: jbX, jX, RX, VD

| ΦDxL | 4x5.4 | 5x5.4 | 6.3x5.4 | 6.3x7.7 | 8x6.5 | 8x10.5 | 10x10.5 |
|-------|------------|------------|------------|------------|------------|------------|------------|
| B | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 8.3 | 10.3 |
| C | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 8.3 | 10.3 |
| E±0.2 | 1.0 | 1.3 | 2.2 | 2.2 | 3.1 | 3.1 | 4.4 |
| L±0.6 | 5.4 | 5.4 | 5.4 | 7.7 | 6.5 | 10.5 | 10.5 |
| R | 0.5 to 0.8 | 0.5 to 0.8 | 0.5 to 0.8 | 0.5 to 0.8 | 0.7 to 1.0 | 0.7 to 1.0 | 0.1 to 1.4 |
| W | 5.1 | 6.1 | 7.3 | 7.3 | 9.2 | 9.2 | 11.2 |

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REQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

| Frequency: F(Hz) | | 50Hz | 120Hz | 1kHz | 10kHz \leq |
|--------------------------|--------------|------|-------|------|--------------|
| Capacitance: C(μ F) | C \leq 470 | 0.50 | 0.65 | 0.85 | 1.00 |
| | C>470 | 0.55 | 0.70 | 0.90 | 1.00 |

STANDARD SIZE

| WV | | 6.3 | | | 10 | | | 16 | | |
|--------------|-----|---------|------|------|---------|------|------|-------------------------------|--|---|
| Parameter | | 0J | | | 1A | | | 1C | | |
| Cap. μ F | | | | | | | | | | |
| 47 | 470 | -- | -- | -- | -- | -- | -- | 4x5.4 | 1.25 | 160 |
| 68 | 680 | -- | -- | -- | 4x5.4 | 1.25 | 160 | 5x5.4 | 0.76 | 240 |
| 100 | 101 | 4x5.4 | 1.25 | 160 | -- | -- | -- | 5x5.4 | 0.76 | 240 |
| 150 | 151 | -- | -- | -- | 5x5.4 | 0.76 | 240 | 6.3x5.4 | 0.36 | 300 |
| 220 | 221 | 5x5.4 | 0.76 | 240 | 6.3x5.4 | 0.36 | 300 | 6.3x5.4 | 0.36 | 300 |
| 330 | 331 | 6.3x5.4 | 0.36 | 300 | 6.3x7.7 | 0.26 | 600 | 6.3x7.7 | 0.26 | 600 |
| 470 | 471 | 6.3x7.7 | 0.26 | 600 | 6.3x7.7 | 0.26 | 600 | 8x6.5 | 0.16 | 600 |
| 680 | 681 | 6.3x7.7 | 0.26 | 600 | -- | -- | -- | 8x10.5 | 0.16 | 850 |
| 820 | 821 | -- | -- | -- | -- | -- | -- | 8x10.5 | 0.16 | 850 |
| 1000 | 102 | -- | -- | -- | 8x10.5 | 0.16 | 850 | 10x10.5 | 0.08 | 1190 |
| 1200 | 122 | -- | -- | -- | -- | -- | -- | 10x10.5 | 0.08 | 1190 |
| 1500 | 152 | 8x10.5 | 0.16 | 850 | 10x10.5 | 0.08 | 1190 | Case size: Φ DxL (mm) | Impedance (Ω) max at 100kHz, 20°C | Rated ripple current mArms (100kHz,105°C) |
| 2200 | 222 | 10x10.5 | 0.08 | 1190 | -- | -- | -- | | | |

| WV | | 25 | | | 35 | | | 50 | | |
|--------------|-----|---------|------|------|---------|------|------|-------------------------------|--|---|
| Parameter | | 1E | | | 1V | | | 1H | | |
| Cap. μ F | | | | | | | | | | |
| 10 | 100 | -- | -- | -- | -- | -- | -- | 4x5.4 (5x5.4) | 2.60 (1.18) | 85 (165) |
| 22 | 220 | 4x5.4 | 1.25 | 160 | 4x5.4 | 1.25 | 160 | 5x5.4 | 1.18 | 165 |
| 33 | 330 | 4x5.4 | 1.25 | 160 | 5x5.4 | 0.76 | 240 | -- | -- | -- |
| 47 | 470 | 5x5.4 | 0.76 | 240 | 5x5.4 | 0.76 | 240 | 6.3x5.4 | 0.74 | 195 |
| 68 | 680 | 5x5.4 | 0.76 | 240 | 6.3x5.4 | 0.36 | 300 | -- | -- | -- |
| 100 | 101 | 6.3x5.4 | 0.36 | 300 | 6.3x5.4 | 0.36 | 300 | 6.3x7.7 | 0.40 | 350 |
| 150 | 151 | 6.3x7.7 | 0.26 | 600 | 6.3x7.7 | 0.26 | 600 | -- | -- | -- |
| 220 | 221 | 6.3x7.7 | 0.26 | 600 | -- | -- | -- | 8x10.5 | 0.24 | 670 |
| 330 | 331 | -- | -- | -- | 8x10.5 | 0.16 | 850 | 10x10.5 | 0.18 | 900 |
| 390 | 391 | 8x10.5 | 0.16 | 850 | 8x10.5 | 0.16 | 850 | -- | -- | -- |
| 470 | 471 | 8x10.5 | 0.16 | 850 | 10x10.5 | 0.08 | 1190 | -- | -- | -- |
| 560 | 561 | 8x10.5 | 0.16 | 850 | 10x10.5 | 0.08 | 1190 | -- | -- | -- |
| 680 | 681 | -- | -- | -- | 10x10.5 | 0.08 | 1190 | -- | -- | -- |
| 820 | 821 | 10x10.5 | 0.08 | 1190 | -- | -- | -- | Case size: Φ DxL (mm) | Impedance (Ω) max at 100kHz, 20°C | Rated ripple current mArms (100kHz,105°C) |
| 1000 | 102 | 10x10.5 | 0.08 | 1190 | -- | -- | -- | | | |

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