

SMD Polymer Aluminum Solid Electrolytic Capacitor – JCQ

FEATURES

- Low ESR, High ripple current, long life, miniaturized
- SMD type: lead free reflow soldering condition at 260°C peak correspondence



SPECIFICATIONS

| | | | |
|---|---|-------------------------------|--|
| Category Temperature Range (°C) | -55°C ~ +105°C | | |
| Rated Voltage Range (V) | 2.5V ~ 100V.DC | | |
| Capacitance Tolerance (+20°C, 120Hz) | ±20% | | |
| Leakage Current | Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20°C | | |
| | 2.5V ~ 25V | 35V~100V | |
| | I≤0.2CV or 500 μA whichever is greater | | I≤0.1CV or 299 μA whichever is greater |
| Dissipation Factor | Rated Voltage (V) | 2.5V~6.3V | 10V~100V |
| | tanδ (Max.) | 0.08 | 0.12 |
| | | | (20°C, 120Hz) |
| Low Temperature Characteristics (Max. Impedance Ratio) | Z(-25°C)/Z(+20°C) | ≤1.25 | |
| | Z(-55°C)/Z(+20°C) | ≤1.25 | |
| | | | (100KHz) |
| Endurance | The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 5000 hours at 105°C. | | |
| | Appearance | No significant damage | |
| | Capacitance change | ≅ ±20% of the initial value | |
| | D.F.(tanδ) | ≅ 150% of the specified value | |
| | ESR | ≅ 150% of the specified value | |
| | Leakage current | ≅ The specified value | |
| Damp Heat (Steady State) | The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 1000 hours at 60°C, 90% ~ 95% RH. | | |
| | Appearance | No significant damage | |
| | Capacitance change | ≅ ±20% of the initial value | |
| | D.F.(tanδ) | ≅ 150% of the specified value | |
| | ESR | ≅ 150% of the specified value | |
| | Leakage current | ≅ The specified value | |
| Surge Voltage | Surge Voltage=Rated voltage × 1.15(V) | | |
| | The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds. | | |
| | Appearance | No significant damage | |
| | Capacitance change | ≅ ±20% of the initial value | |
| | D.F.(tanδ) | ≅ 150% of the specified value | |
| | ESR | ≅ 150% of the specified value | |
| | Leakage current | ≅ The specified value | |
| Resistance to Soldering heat | Measurement for solder temperature profile shall be made at the capacitor top and the terminal. | | |
| | Capacitance change | ≅ ±10% of the initial value | |
| | D.F.(tanδ) | ≅ 130% of the specified value | |
| | ESR | ≅ 130% of the specified value | |
| | Leakage current | ≅ The specified value | |

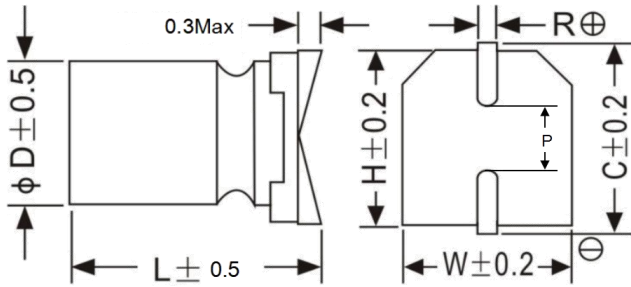
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Rated Ripple Current Coefficient

| | | | | |
|-------------|--------------|--------------|----------------|-----------------|
| Frequency | 120Hz≤f<1KHz | 1KHz≤f<10KHz | 10KHz≤f<100KHz | 100KHz≤f<500KHz |
| Coefficient | 0.05 | 0.30 | 0.70 | 1.00 |

DIMENSIONS (mm)



| ΦD | W | H | C | R | P |
|-----|------|------|------|---------|-----|
| 5 | 5.3 | 5.3 | 5.9 | 0.5~0.8 | 1.4 |
| 6.3 | 6.5 | 6.5 | 7.2 | 0.5~0.8 | 2.2 |
| 8 | 8.3 | 8.3 | 9.0 | 0.7~1.1 | 3.1 |
| 10 | 10.3 | 10.3 | 11.0 | 0.7~1.1 | 4.5 |

STANDARD RATINGS

| Rated Voltage | Rated Capacitance (μF) | Case Size ΦDxL (mm) | ESR (mΩ) at 20°C, 100 KHz | Leakage Current (μA) | Rated Ripple Current (mA rms/105°C/100kHz) |
|---------------|------------------------|---------------------|---------------------------|----------------------|--|
| 2.5 | 470 | 6.3x9 | 18 | 500 | 4100 |
| | 560 | 6.3x9 | 18 | 500 | 4100 |
| | 680 | 6.3x9 | 18 | 500 | 4100 |
| | 820 | 6.3x9 | 18 | 500 | 4100 |
| 4 | 560 | 6.3x9 | 18 | 500 | 4100 |
| | 680 | 6.3x9 | 18 | 544 | 4100 |
| | 820 | 6.3x9 | 18 | 656 | 4100 |
| | 1000 | 6.3x9 | 18 | 800 | 4100 |
| | 1200 | 6.3x9 | 18 | 960 | 4100 |
| 6.3 | 220 | 6.3x7 | 30 | 500 | 3500 |
| | 330 | 6.3x7 | 25 | 500 | 3500 |
| | 470 | 6.3x7 | 25 | 592 | 3500 |
| | 560 | 6.3x7 | 25 | 706 | 3500 |
| | 680 | 6.3x9 | 18 | 857 | 3800 |
| | 820 | 6.3x9 | 18 | 1033 | 3800 |
| | 1000 | 8x9.8 | 15 | 1260 | 4100 |
| | 1500 | 10x13.6 | 15 | 1890 | 4800 |
| 10 | 220 | 6.3x7 | 30 | 500 | 2650 |
| | 330 | 6.3x7 | 30 | 660 | 2650 |
| | 470 | 6.3x7 | 30 | 940 | 2700 |
| | 560 | 6.3x9 | 20 | 1120 | 2900 |
| | 680 | 8x9.8 | 18 | 1360 | 3500 |
| | 820 | 8x12.6 | 18 | 1640 | 4100 |
| | | 10x10.5 | 15 | 1640 | 4100 |
| | 1000 | 8x12.6 | 18 | 2000 | 4100 |
| 1500 | 10x13.6 | 15 | 2000 | 4500 | |

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STANDARD RATINGS

| Rated Voltage | Rated Capacitance (μF) | Case Size ΦDxL (mm) | ESR (mΩ) at 20°C, 100 KHz | Leakage Current (μA) | Rated Ripple Current (mArms/105°C/100kHz) | |
|---------------|------------------------|------------------------|------------------------------|----------------------|---|------|
| 16 | 47 | 6.3x7 | 50 | 500 | 2100 | |
| | 68 | 6.3x7 | 40 | 500 | 2100 | |
| | 100 | 6.3x7 | 40 | 500 | 2100 | |
| | 220 | 220 | 6.3x7 | 30 | 704 | 2100 |
| | | | 8x9.8 | 25 | 704 | 2690 |
| | 330 | 330 | 6.3x7 | 30 | 1056 | 2260 |
| | | | 8x9.8 | 25 | 1056 | 2900 |
| | | | 8x12.6 | 20 | 1056 | 3500 |
| | 470 | 470 | 8x9.8 | 25 | 1504 | 2900 |
| | | | 8x12.6 | 20 | 1504 | 3500 |
| | 680 | 680 | 8x12.6 | 20 | 2176 | 3500 |
| | 820 | 820 | 8x12.6 | 20 | 2624 | 3500 |
| 1000 | 1000 | 8x12.6 | 20 | 3200 | 3500 | |
| 1500 | 1500 | 10x13.6 | 15 | 4800 | 4100 | |
| 25 | 47 | 6.3x7 | 50 | 500 | 1950 | |
| | 100 | 100 | 6.3x7 | 45 | 500 | 1950 |
| | | | 6.3x9 | 40 | 500 | 2100 |
| | 220 | 220 | 6.3x9 | 40 | 1100 | 2100 |
| | | | 8x9.8 | 30 | 1100 | 2690 |
| | 270 | 270 | 6.3x10 | 35 | 1350 | 2400 |
| | 330 | 330 | 8x9.8 | 30 | 1650 | 2690 |
| | 470 | 470 | 8x12.6 | 25 | 2350 | 3100 |
| | | | 10x10.5 | 30 | 2350 | 3100 |
| | 680 | 680 | 8x12.6 | 25 | 3400 | 3100 |
| | | | 10x13.6 | 20 | 3400 | 3800 |
| | 820 | 820 | 10x13.6 | 20 | 4100 | 3800 |
| 1000 | 1000 | 10x13.6 | 20 | 5000 | 3800 | |
| 35 | 47 | 6.3x7 | 80 | 299 | 1410 | |
| | 100 | 100 | 6.3x7 | 80 | 350 | 1516 |
| | | | 6.3x9 | 80 | 350 | 1950 |
| | | | 8x9.8 | 50 | 350 | 2450 |
| | 150 | 150 | 6.3x10 | 70 | 525 | 2100 |
| | 220 | 220 | 8x9.8 | 50 | 770 | 2450 |
| | | | 8x12.6 | 50 | 770 | 2910 |
| | 330 | 330 | 8x12.6 | 50 | 1155 | 2910 |
| | | | 10x13.6 | 40 | 1155 | 3640 |
| | 470 | 470 | 10x13.6 | 40 | 1155 | 3640 |

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STANDARD RATINGS

| Rated Voltage | Rated Capacitance (μF) | Case Size ΦDxL (mm) | ESR (mΩ) at 20°C, 100 KHz | Leakage Current (μA) | Rated Ripple Current (mA _{rms} /105°C/100kHz) |
|---------------|------------------------|------------------------|------------------------------|----------------------|--|
| 50 | 22 | 6.3x9 | 100 | 299 | 850 |
| | 33 | 6.3x9 | 100 | 299 | 850 |
| | 47 | 6.3x9 | 80 | 299 | 920 |
| | | 8x9.8 | 60 | 299 | 1200 |
| | | 8x12.6 | 60 | 299 | 1500 |
| | 100 | 8x9.8 | 60 | 500 | 1320 |
| | | 8x12.6 | 60 | 500 | 1550 |
| | | 10x13.6 | 55 | 500 | 2100 |
| 150 | 8x12.6 | 60 | 750 | 1550 | |
| 220 | 10x13.6 | 55 | 1100 | 2100 | |
| 63 | 10 | 6.3x9 | 110 | 299 | 750 |
| | 22 | 6.3x9 | 110 | 299 | 750 |
| | 33 | 6.3x9 | 100 | 299 | 820 |
| | | 8x9.8 | 60 | 299 | 1100 |
| | 47 | 8x9.8 | 60 | 299 | 1100 |
| | | 8x12.6 | 60 | 299 | 1300 |
| | 82 | 8x12.6 | 60 | 517 | 1550 |
| | 100 | 8x12.6 | 60 | 630 | 1550 |
| 10x13.6 | | 55 | 630 | 1800 | |
| 150 | 10x13.6 | 55 | 945 | 1800 | |
| 80 | 10 | 6.3x9 | 120 | 299 | 550 |
| | 22 | 6.3x9 | 120 | 299 | 600 |
| | | 8x9.8 | 70 | 299 | 950 |
| | 33 | 8x9.8 | 70 | 299 | 950 |
| | | 8x12.6 | 70 | 299 | 1300 |
| | 47 | 8x12.6 | 70 | 376 | 1300 |
| | 56 | 8x12.6 | 70 | 448 | 1400 |
| | 68 | 10x13.6 | 50 | 544 | 1750 |
| 100 | 10x13.6 | 50 | 800 | 1750 | |
| 100 | 10 | 6.3x9 | 120 | 299 | 550 |
| | 22 | 8x9.8 | 80 | 299 | 950 |
| | | 8x12.6 | 70 | 299 | 1300 |
| | 33 | 8x12.6 | 70 | 330 | 1300 |
| | 47 | 10x13.6 | 50 | 470 | 1700 |
| | 68 | 10x13.6 | 50 | 680 | 1750 |

Note: Reflow soldering can only be used for SMD Conductive Polymer Aluminum Solid Electrolytic Capacitor. Radial Conductive Polymer Aluminum Solid Electrolytic Capacitor are not suitable for reflow soldering, but only for wave soldering.

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