CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

nichicon

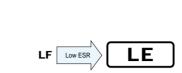


Radial Lead Type, Ultra-low ESR

series



- Ultra-low ESR, High ripple current.
- •Load life of 2000 hours at 105°C.
- Radial lead type :
- Lead free flow soldering condition correspondence
- Compliant to the RoHS directive (2002/95/EC).





Specifications

| Item | Performance Characteristics | | | | | | | |
|--|--|---|---|--|--|--|--|--|
| Category Temperature Range | -55 to +105°C | | | | | | | |
| Rated Voltage Range | 2.5 to 6.3V | | | | | | | |
| Rated Capacitance Range | 470 to 1500µF | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | | |
| Tangent of loss angle (tan δ) | Less than or equal to the specified value at 120Hz, 20°C | | | | | | | |
| ESR (* 1) | Less than or equal to the specified value at 100kHz, 20°C | | | | | | | |
| Leakage Current (* 2) | Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C | | | | | | | |
| Temperature Characteristics (Max.Impedance Ratio) | Z+105°C / Z+20°C ≤ 1.25 (100kHz) Z-55°C / Z+20°C ≤ 1.25 | | | | | | | |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C. | | Within ± 20% of the initial capacitance value (** 3) 150% or less than the initial specified value 150% or less than the initial specified value Less than or equal to the initial specified value | | | | | |
| Damp Heat (Steady State) | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 60°C, 90% RH. | Capacitance change tan δ ESR (* 1) Leakage current (* 2) | Within \pm 20% of the initial capacitance value (\approx 3) 150% or less than the initial specified value 150% or less than the initial specified value Less than or equal to the initial specified value | | | | | |
| Resistance to Soldering Heat | After soldering the capacitor under the soldering conditions prescribed here as preheat at 150 to 200°C for 60 to 180 seconds and peak temperature at 265°C for 10 seconds or less, the capacitor shall meet the specifications listed at right, provided that its temperature profile is measured at both of terminal ends facing the soldering side. | $\begin{tabular}{lllllllllllllllllllllllllllllllllll$ | Within ± 10% of the initial capacitance value (* 3) 130% or less than the initial specified value 130% or less than the initial specified value Less than or equal to the initial specified value | | | | | |
| Marking | Navy blue print on the case top | | | | | | | |

* 1 ESR should be measured at both of the terminal ends closest to the capacitor body.

* 2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

Voltage

Code

2.5

е

4

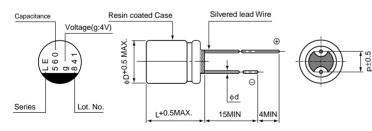
g

6.3

j

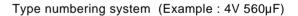
* 3 Initial value : The value before test of examination of resistance to soldering.

Dimensions



| | | | (mm) |
|------|--------------------|--------|-----------|
| Size | $\phi 8 \times 9L$ | φ8×12L | φ10 × 13L |
| φD | 8.0 | 8.0 | 10.0 |
| L | 8.5 | 11.5 | 12.5 |
| Р | 3.5 | 3.5 | 5.0 |
| φd | 0.6 | 0.6 | 0.6 |

Please refer to page 20 about the end seal configulation.



| $\frac{1}{P} \frac{2}{L}$ | ³ 4 E 0 | <u> </u> | 6 5 | 7 6 | 9 Μ ∏ | 10 C | 11 0 | 12 1 | |
|---------------------------|-----------------------|----------|--------|--------|-----------------|---------|---------|---------|-----------------------------|
| | | | | | | | | | Size code |
| | | | | | | | | | Configuration |
| | | | | | | | | | Capacitance toleranc (±20%) |
| | | | | | | | | | Rated capacitance (560µF) |
| | | | | | | | | | Rated voltage (4V) |
| | | | | | | | | | Series name |
| | | | | | | | | | Туре |



Standard Ratings

| Rated Voltage (V) Code | Surge Voltage (V) | Rated Capacitance (µF) | Case Size ∳D × L (mm) | tan δ | Leakage Current (µA) | ESR (mΩ) (at 100kHz 20°C) | Rated Ripple (mArms) | Part Number |
|------------------------------|----------------------|---------------------------|--------------------------|-------|-------------------------|------------------------------|-------------------------|--------------|
| | 2.8 | 560 | 8 × 9 | 0.08 | 280 | 5 | 6100 | PLE0E561MCO1 |
| 2.5 (0E) | | 820 | ▲ 8×9 | 0.08 | 410 | 5 | 6300 | PLE0E821MCO6 |
| | | 820 | 8×12 | 0.08 | 410 | 5 | 6600 | PLE0E821MDO1 |
| | | 1000 | 10×13 | 0.08 | 500 | 5 | 7100 | PLE0E102MDO1 |
| | | 1500 | 10×13 | 0.08 | 750 | 5 | 7300 | PLE0E152MDO1 |
| | 4.6 | 560 | 8 × 9 | 0.08 | 448 | 5 | 6000 | PLE0G561MCO1 |
| 4 (0G) | | 680 | 8×12 | 0.08 | 544 | 5 | 6500 | PLE0G681MDO1 |
| | | 820 | 10×13 | 0.08 | 656 | 5 | 7000 | PLE0G821MDO1 |
| | | 1200 | 10×13 | 0.08 | 960 | 5 | 7200 | PLE0G122MDO1 |
| 6.3 (0J) | 7.2 | 470 | 8×12 | 0.08 | 592 | 5 | 6400 | PLE0J471MDO1 |
| | | 680 | 10×13 | 0.08 | 857 | 5 | 6700 | PLE0J681MDO1 |
| | | 820 | 10×13 | 0.08 | 1033 | 5 | 6800 | PLE0J821MDO1 |

Rated ripple current (mArms) at 105°C 100kHz

No marked, 1 will be put at 12th digit of type numbering system. ▲ : In this case, 6 will be put at 12th digit of type numbering system.

• Taping specifications are given in page 20, 21, 22.

• Please refer to page 3 for the minimum order quantity.

