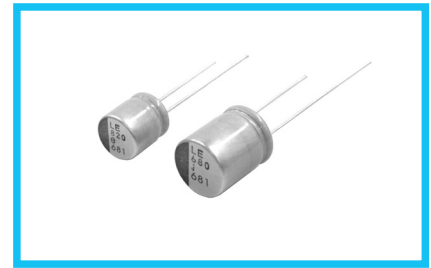


## LE series Radial Lead Type, Ultra-low ESR



- 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 (2011/65/EU).



### Specifications

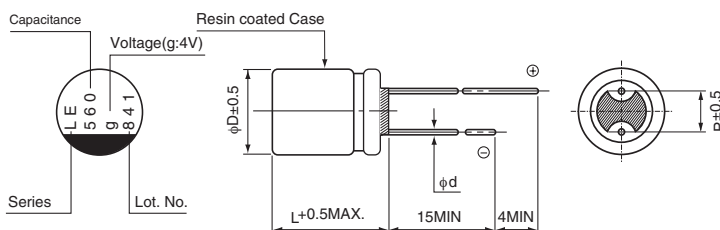
| Item  | Performance Characteristics  |                       |  |
|---|--|-----------------------|--|
| Category Temperature Range                        | -55 to +105°C  |                       |  |
| Rated Voltage Range                               | 2.5 to 6.3V  |                       |  |
| Rated 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)<br>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.   | Capacitance change    | Within ± 20% of the initial capacitance value (※3) |
|   |  | tan δ                 | 150% or less than the initial specified value      |
|   |  | ESR (※ 1)             | 150% or less than the initial specified value      |
|   |  | Leakage current (※ 2) | 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    | Within ± 20% of the initial capacitance value (※3) |
|   |  | tan δ                 | 150% or less than the initial specified value      |
|   |  | ESR (※ 1)             | 150% or less than the initial specified value      |
|   |  | Leakage current (※ 2) | 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. | Capacitance change    | Within ± 10% of the initial capacitance value (※3) |
|   |  | tan δ                 | 130% or less than the initial specified value      |
|   |  | ESR (※ 1)             | 130% or less than the initial specified value      |
|   |  | Leakage current (※ 2) | 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.

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

### Dimensions

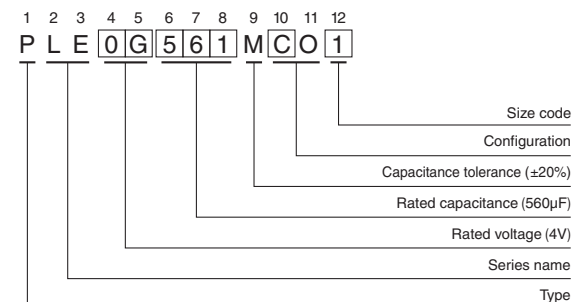


| Size | φ8 × 9L | φ8 × 12L | φ10 × 13L |
|------|---------|----------|-----------|
| φD   | 8.0     | 8.0      | 10.0      |
| L    | 8.5     | 11.5     | 12.5      |
| P    | 3.5     | 3.5      | 5.0       |
| φd   | 0.6     | 0.6      | 0.6       |

#### Voltage

| V    | 2.5 | 4 | 6.3 |
|------|-----|---|-----|
| Code | e   | g | j   |

### Type numbering system (Example : 4V 560μF)



Please refer to page 20 about the end seal configuration.

**LE** series

## ■ Standard Ratings

| Rated Voltage<br>(V)<br>Code | Surge Voltage<br>(V) | Rated Capacitance<br>( $\mu$ F) | Case Size<br>$\phi$ D $\times$ L (mm) | $\tan \delta$ | Leakage Current<br>( $\mu$ A) | ESR (m $\Omega$ )<br>(at 100kHz 20°C) | Rated Ripple<br>(mA <sub>rms</sub> ) | Part Number  |
|------------------------------|----------------------|---------------------------------|---------------------------------------|---------------|-------------------------------|---------------------------------------|--------------------------------------|--------------|
| 2.5<br>(0E)                  | 2.8                  | 560                             | 8 $\times$ 9                          | 0.08          | 280                           | 5                                     | 6100                                 | PLE0E561MCO1 |
|                              |                      | 820                             | ▲ 8 $\times$ 9                        | 0.08          | 410                           | 5                                     | 6300                                 | PLE0E821MCO6 |
|                              |                      | 820                             | 8 $\times$ 12                         | 0.08          | 410                           | 5                                     | 6600                                 | PLE0E821MDO1 |
|                              |                      | 1000                            | 10 $\times$ 13                        | 0.08          | 500                           | 5                                     | 7100                                 | PLE0E102MDO1 |
|                              |                      | 1500                            | 10 $\times$ 13                        | 0.08          | 750                           | 5                                     | 7300                                 | PLE0E152MDO1 |
| 4<br>(0G)                    | 4.6                  | 560                             | 8 $\times$ 9                          | 0.08          | 448                           | 5                                     | 6000                                 | PLE0G561MCO1 |
|                              |                      | 680                             | 8 $\times$ 12                         | 0.08          | 544                           | 5                                     | 6500                                 | PLE0G681MDO1 |
|                              |                      | 820                             | 10 $\times$ 13                        | 0.08          | 656                           | 5                                     | 7000                                 | PLE0G821MDO1 |
|                              |                      | 1200                            | 10 $\times$ 13                        | 0.08          | 960                           | 5                                     | 7200                                 | PLE0G122MDO1 |
| 6.3<br>(0J)                  | 7.2                  | 470                             | 8 $\times$ 12                         | 0.08          | 592                           | 5                                     | 6400                                 | PLE0J471MDO1 |
|                              |                      | 680                             | 10 $\times$ 13                        | 0.08          | 857                           | 5                                     | 6700                                 | PLE0J681MDO1 |
|                              |                      | 820                             | 10 $\times$ 13                        | 0.08          | 1033                          | 5                                     | 6800                                 | PLE0J821MDO1 |

Rated ripple current (mA<sub>rms</sub>) 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.

- Please refer to page 20, 21, 22 about the formed or taped product spec.
- Please refer to page 3 for the minimum order quantity.