



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

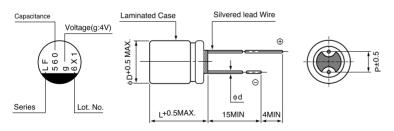


### ■Specifications

| -   |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| Item  | Performance Characteristics   |  |  |  |  |  |
| Category Temperature Range                        | −55 ~ +105°C  |  |  |  |  |  |
| Rated Voltage Range                               | 2.5 ~ 16V   |  |  |  |  |  |
| Rated Capacitance Range                           | 270 ~ 1000μF  |  |  |  |  |  |
| Capacitance Tolerance                             | ±20% at 120Hz, 20°C   |  |  |  |  |  |
| tan δ   | Not more than value of Standard ratings at 120Hz, 20°C  |  |  |  |  |  |
| ESR ( * 1)  | Not more than value of Standard ratings at 100kHz, 20°C   |  |  |  |  |  |
| Leakage Current ( * 2)                            | Not more than value of Standard ratings. After 2 minute's application of rated voltage. 20°C  |  |  |  |  |  |
| Characteristics of Temperature<br>Impedance Ratio | $Z+105^{\circ}C / Z+20^{\circ}C \le 1.25$ (100kHz)<br>$Z-55^{\circ}C / Z+20^{\circ}C \le 1.25$  |  |  |  |  |  |
| Endurance   | After 2000 hours' application of rated voltage at 105°C, capacitors meet the specified value for life characteristics listed at right.  | Capacitance change tan δ  ESR ( ** 1)  Leakage current ( ** 2) | Within ± 20% of initial value ( * 3) 150% or less of the initial specified value 150% or less of the initial specified value Initial specified value or less     |  |  |  |
| Damp Heat   | After 1000 hours' application of rated voltage at 60°C 90%RH, capacitors meet the specified value for life characteristics listed at right.   |  | Within ± 20% of initial value ( * 3) 150% or less of the initial specified value 150% or less of the initial specified value Initial specified value or less     |  |  |  |
| Resistance to<br>Soldering Heat                   | To comply with recommended conditions for reflow soldering. Pre-heating shall be done at 150 ~ 200°C and for 60 ~ 180 sec. Peak temp. is 265°C, within 10 sec. Measurement for solder temperature profile shall be made at a point on the terminal nearest where the terminals protrude through the soldering side of PC board. | Capacitance change tan δ ESR ( * 1) Leakage current ( * 2)     | Within ± 10% of initial value ( ** 3)  130% or less of the initial specified value  130% or less of the initial specified value  Initial specified value or less |  |  |  |
| Marking   | Navy blue print on the case top   |  |  |  |  |  |

- \* 1 ESR measurements should be made at a point on the terminal nearest the end seal of the capacitor.
- \*2 Conditioning: If there is doubt about the measured result, measurement should be made again after the rated voltage is applied for 120 minutes at the temperature of 105°C.
- lpha 3 Initial value : The value before test of examination of resistance to soldering.

#### Dimensions



(mm)

|      |         |          | (111111)  |  |
|------|---------|----------|-----------|--|
| Size | φ8 × 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       |  |

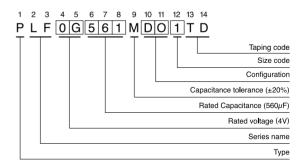
#### Voltage

| V    | 2.5 | 4 | 6.3 | 10 | 16 |
|------|-----|---|-----|----|----|
| Code | е   | g | j   | Α  | С  |

Please refer to page 21 about the end seal configulation.

## • Dimension table in next page.

# Type numbering system (Example : 4V $560\mu F$ )







## ■Standard ratings

| Rated Voltage (V) (code) | Rated Capacitance (µF) | Case Size<br>φD×L (mm) | tan δ | Leakage Current<br>(0.2CV)(μA) | ESR (mΩ)<br>(at 100kHz 20°C) | Rated ripple<br>(mArms) | Part Number  |
|--------------------------|------------------------|------------------------|-------|--------------------------------|------------------------------|-------------------------|--------------|
|                          | 560                    | 8×9                    | 0.08  | 280                            | 6                            | 4800                    | PLF0E561MCO1 |
|                          | 680                    | 8×12                   | 0.08  | 340                            | 6                            | 5700                    | PLF0E681MDO1 |
| 2.5<br>(0E)              | 820                    | ▲ 8×9                  | 0.08  | 410                            | 7                            | 5200                    | PLF0E821MCO6 |
| (0L)                     | 820                    | 8×12                   | 0.08  | 410                            | 6                            | 6200                    | PLF0E821MDO1 |
|                          | 1000                   | 10×13                  | 0.08  | 500                            | 6                            | 6500                    | PLF0E102MDO1 |
|                          | 560                    | <b>▲</b> 8×9           | 0.08  | 448                            | 7                            | 5200                    | PLF0G561MCO6 |
| 4                        | 560                    | 8×12                   | 0.08  | 448                            | 7                            | 5500                    | PLF0G561MDO1 |
| (0G)                     | 680                    | 8×12                   | 0.08  | 544                            | 6                            | 6200                    | PLF0G681MDO1 |
|                          | 820                    | 10×13                  | 0.08  | 656                            | 6                            | 6500                    | PLF0G821MDO1 |
|                          | 470                    | ▲ 8×9                  | 0.08  | 592                            | 7                            | 5200                    | PLF0J471MCO6 |
| 6.3<br>(0J)              | 470                    | 8×12                   | 0.08  | 592                            | 7                            | 5500                    | PLF0J471MDO1 |
| (03)                     | 680                    | 10×13                  | 0.08  | 857                            | 6                            | 6300                    | PLF0J681MDO1 |
| 10                       | 270                    | 8×12                   | 0.08  | 540                            | 8                            | 4900                    | PLF1A271MDO1 |
| (1A)                     | 470                    | 10×13                  | 0.08  | 940                            | 7                            | 5700                    | PLF1A471MDO1 |
| 16                       | 270                    | 8×12                   | 0.08  | 864                            | 9                            | 4800                    | PLF1C271MDO1 |
| (1C)                     | 470                    | 10×13                  | 0.08  | 1504                           | 9                            | 5000                    | PLF1C471MDO1 |

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.

Rated Ripple (mArms) at 105°C 100kHz

Taping specifications are given in page 24.Please refer to page 3 for the minimum order quantity.