

# CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

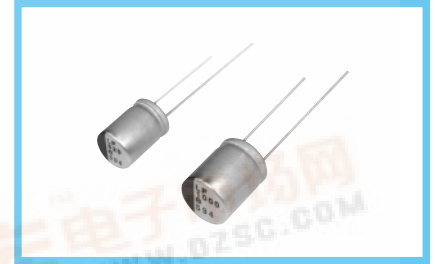
nichicon

**LF** Radial Lead Type, Standard series



**NEW**

- 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).

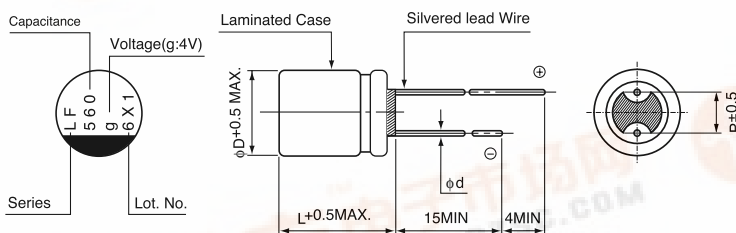


## Specifications

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 Impedance Ratio	Z+105°C / Z+20°C ≤ 1.25 (100kHz) Z-55°C / Z+20°C ≤ 1.25								
Endurance	After 2000 hours' application of rated voltage at 105°C, capacitors meet the specified value for life characteristics listed at right. <table border="1"> <tr><td>Capacitance change</td><td>Within ±20% of initial value (※ 3)</td></tr> <tr><td>tan δ</td><td>150% or less of the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>150% or less of the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Initial specified value or less</td></tr> </table>	Capacitance change	Within ±20% of initial value (※ 3)	tan δ	150% or less of the initial specified value	ESR (※ 1)	150% or less of the initial specified value	Leakage current (※ 2)	Initial specified value or less
Capacitance change	Within ±20% of initial value (※ 3)								
tan δ	150% or less of the initial specified value								
ESR (※ 1)	150% or less of the initial specified value								
Leakage current (※ 2)	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. <table border="1"> <tr><td>Capacitance change</td><td>Within ±20% of initial value (※ 3)</td></tr> <tr><td>tan δ</td><td>150% or less of the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>150% or less of the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Initial specified value or less</td></tr> </table>	Capacitance change	Within ±20% of initial value (※ 3)	tan δ	150% or less of the initial specified value	ESR (※ 1)	150% or less of the initial specified value	Leakage current (※ 2)	Initial specified value or less
Capacitance change	Within ±20% of initial value (※ 3)								
tan δ	150% or less of the initial specified value								
ESR (※ 1)	150% or less of the initial specified value								
Leakage current (※ 2)	Initial specified value or less								
Resistance to 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. <table border="1"> <tr><td>Capacitance change</td><td>Within ±10% of initial value (※ 3)</td></tr> <tr><td>tan δ</td><td>130% or less of the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>130% or less of the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Initial specified value or less</td></tr> </table>	Capacitance change	Within ±10% of initial value (※ 3)	tan δ	130% or less of the initial specified value	ESR (※ 1)	130% or less of the initial specified value	Leakage current (※ 2)	Initial specified value or less
Capacitance change	Within ±10% of initial value (※ 3)								
tan δ	130% or less of the initial specified value								
ESR (※ 1)	130% or less of the initial specified value								
Leakage current (※ 2)	Initial specified value or less								
Marking	Navy blue print on the case top								

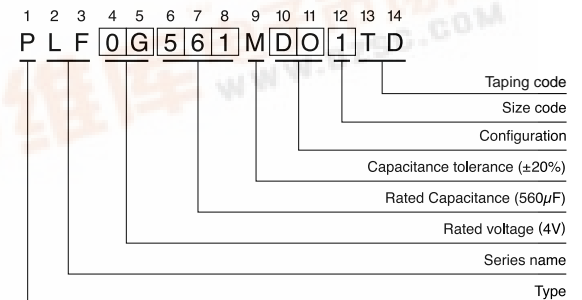
- ※ 1 ESR measurements should be made at a point on the terminal nearest the end seal of the capacitor.
- ※ 2 Conditioning : If there is doubt about the measured result, measurement should be made again after the rated voltage is applied for 120 minutes at the temperature of 105°C.
- ※ 3 Initial value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

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



## Voltage

V	2.5	4	6.3	10	16
Code	e	g	j	A	C

# CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS



LF series

## Standard ratings

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

No marked, [1] will be put at 12th digit of type numbering system.

Rated Ripple (mArms) at 105°C 100kHz

▲ : In this case, [6] will be put at 12th digit of type numbering system.

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