

PL series Low ESR $\leq 9m\Omega$

Features

- ◆ Very Low ESR at high frequency range.
- ◆ Very Large permissible ripple current.



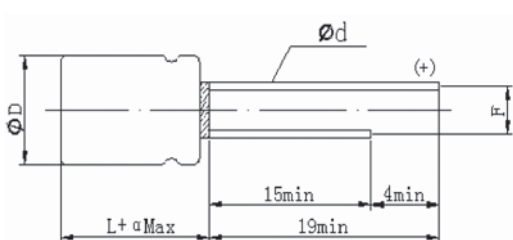
Specifications

Item	Performance Characteristics	
Operating Temperature Range	-55~+105°C	
Rated Voltage Range	2.5~16 VDC	
Capacitance Range	180 to 3500 μ F	
Capacitance Tolerance	$\pm 20\%$ (120Hz, +20°C)	
Leakage Current (+20°C, max.)	$\leq 0.2CV$ (μ A, after 2 minutes)	
Dissipation Factor (tan δ , at 20°C, 120Hz)	Not to exceed the value specified	
ESR (100K~300KHz)	Not to exceed the value specified	
Endurance 105°C, 2000h, at rated voltage	Capacitance	Within $\pm 20\%$ of the value before test
	Leakage current	Not to exceed the value specified
	ESR	Not to exceed 150% of the value specified
	Dissipation Factor	Not to exceed 150% of the value specified
Moisture Resistance Stored at 60°C, RH90~95%, 1000h	Capacitance	Within $\pm 20\%$ of the value before test
	Leakage current	Not to exceed the value specified
	ESR	Not to exceed 150% of the value specified
	Dissipation Factor	Not to exceed 150% of the value specified

Frequency Coefficient for Ripple Current

Frequency	120Hz $\leq$ freq. < 1KHz	1KHz $\leq$ freq. < 10KHz	10KHz $\leq$ freq. < 100KHz	100KHz $\leq$ freq. < 300KHz
Coefficient	0.05	0.3	0.7	1

Diagram of Dimensions:(unit:mm)



$\phi D \times L$	$\phi D + 0.5\text{max.}$	α	$F \pm 0.5$	$\phi d \pm 0.05$
8x8	8.0	1.0	3.5	0.6
8x11.5	8.0	1.5	3.5	0.6
10x12.5	10.0	1.5	5.0	0.6

Dimensions & Characteristics

φ DxL(mm)

W.V. (V)	Capacitance (μF)	L.C. (μA, 2min)	tg δ (120Hz, 20°C)	ESR (mΩ, 100KHz)	Maximum Permissible Ripple Current(mA, r.m.s)	Size φ DxL(mm)
2.5	560	280	0.08	9	6100	8x8
						8x11.5
	680	340	0.08	9	6100	8x8
						8x11.5
	820	410	0.08	9	6100	8x8
						8x11.5
	1000	500	0.08	9	6100	8x8
						8x11.5
	1200	600	0.08	9	6100	8x8
						8x11.5
	1500	750	0.08	9	6100	8x8
						8x11.5
4	2000	1000	0.08	9	6100	8x11.5
					6640	10x12.5
	2500	1250	0.08	9	6640	10x12.5
	2700	1350	0.08	9	6640	10x12.5
	3000	1500	0.08	9	6640	10x12.5
	3300	1650	0.08	9	6640	10x12.5
	3500	1750	0.08	9	6640	10x12.5
	560	224	0.08	9	6100	8x8
						8x11.5
	680	272	0.08	9	6100	8x8
						8x11.5
	820	328	0.08	9	6100	8x8
6.3						8x11.5
						10x12.5
	1000	800	0.08	9	6100	8x8
						8x11.5
	1200	960	0.08	9	6100	8x11.5
					6640	10x12.5
	1500	1200	0.08	9	6100	8x11.5
						10x12.5
	2000	1600	0.08	9	6640	10x12.5
	2500	1500	0.08	9	6640	10x12.5
	180	226.8	0.07	9	6100	8x8
						8x11.5
	220	277	0.07	9	6100	8x8
						8x11.5
	270	340.2	0.07	9	6100	8x8
						8x11.5
	330	416	0.07	9	6100	8x8
						8x11.5
	390	491.4	0.08	9	6100	8x11.5
	470	592	0.08	9	6100	8x8
						8x11.5
	560	705.6	0.08	9	6100	8x8
						8x11.5
	680	428.4	0.08	9	6100	8x8
						8x11.5
	820	516.6	0.10	9	6100	8x8
					6100	8x11.5
					6100	8x8
	1000	630	0.10	9	6100	8x11.5
					6640	10x12.5
					6100	8x11.5
	1200	756	0.10	9	6640	10x12.5
					6100	8x11.5
	1500	945	0.10	9	6640	10x12.5
	2000	1260	0.10	9	6640	10x12.5
	2200	1336	0.10	9	6640	10x12.5
	2500	1575	0.10	9	6640	10x12.5

Ripple Current (mA, rms) at 105°C, 100KHz

W.V. (V)	Capacitance (μ F)	L.C. (μ A,2min)	tg δ (120Hz,20°C)	ESR (m Ω ,100KHz)	Maximum Permissible Ripple Current(mA,r.m.s)	Size Φ DxL(mm)
10	180	360	0.07	9	6100	8x8
					5600	8x11.5
	220	440	0.08	9	6100	8x8
					5600	8x11.5
	270	540	0.08	9	6100	8x8
					5600	8x11.5
	330	660	0.08	9	6100	8x8
					5600	8x11.5
	390	780	0.08	9	6100	8x8
					5600	8x11.5
	470	940	0.08	9	6100	8x8
					5600	8x11.5
	560	560	0.10	9	6100	8x8
					5600	8x11.5
16	680	680	0.10	9	5600	8x8
					5600	8x11.5
	820	820	0.10	9	6100	8x11.5
					6100	10x12.5
	1000	1000	0.10	9	5600	8x11.5
					6100	10x12.5
	1200	1200	0.10	9	6100	10x12.5
					6100	10x12.5
	1500	1500	0.10	9	6100	10x12.5
					6100	10x12.5
	180	576	0.08	9	5600	8x11.5
	220	704	0.08	9	5600	8x11.5
	270	864	0.08	9	5600	8x11.5
					5600	8x11.5
	330	528	0.08	9	6100	10x12.5
					5600	8x11.5
	390	624	0.08	9	6100	10x12.5
					5600	8x11.5
	470	752	0.10	9	6100	10x12.5
					5600	8x11.5
	560	896	0.10	9	6100	10x12.5
					6100	10x12.5
	680	1000	0.10	9	6100	10x12.5
					6100	10x12.5
	820	1280	0.10	9	6100	10x12.5
					6100	10x12.5
	1000	1600	0.10	9	6100	10x12.5

Φ DxL(mm)

Size List

WV(SV) Cap(μ F)	2.5 (2.8)	4 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)
180			8x8/8x11.5	8x8/8x11.5	8x11.5
220			8x8/8x11.5	8x8/8x11.5	8x11.5
270			8x8/8x11.5	8x8/8x11.5	8x11.5
330			8x8/8x11.5	8x8/8x11.5	8x11.5/10x12.5
390			8x8/8x11.5	8x8/8x11.5	8x11.5/10x12.5
470			8x8/8x11.5	8x8/8x11.5	8x11.5/10x12.5
560	8x8/8x11.5	8x8/8x11.5	8x8/8x11.5	8x8/8x11.5	8x11.5/10x12.5
680	8x8/8x11.5	8x8/8x11.5	8x8/8x11.5	8x8/8x11.5/10x12.5	10x12.5
820	8x8/8x11.5	8x8/8x11.5/10x12.5	8x8/8x11.5	8x11.5/10x12.5	10x12.5
1000	8x8/8x11.5	8x8/8x11.5	8x8/8x11.5/10x12.5	8x11.5/10x12.5	10x12.5
1200	8x8/8x11.5	8x11.5/10x12.5	8x11.5/10x12.5	10x12.5	
1500	8x8/8x11.5	8x11.5/10x12.5	8x11.5/10x12.5	10x12.5	
2000	8x11.5/10x12.5	10x12.5	10x12.5		
2500	10x12.5	10x12.5	10x12.5		
2700	10x12.5				
3000	10x12.5				
3300	10x12.5				
3500	10x12.5				

Ripple Current (mA, rms) at 105°C 100KHz