

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

Features

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



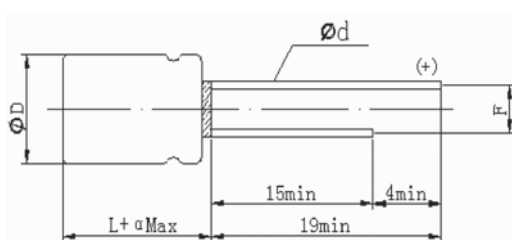
Specifications

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	$F \pm 0.5$	$\phi d \pm 0.05$
8 \times 8	8.0	1.0	3.5	0.6
8 \times 11.5	8.0	1.5	3.5	0.6
10 \times 12.5	10.0	1.5	5.0	0.6

Dimensions & Characteristics

φ D×L(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 D×L(mm)
2.5	560	280	0.08	9	6100	8×8 8×11.5
	680	340	0.08	9	6100	8×8 8×11.5
	820	410	0.08	9	6100	8×8 8×11.5
	1000	500	0.08	9	6100	8×8 8×11.5
	1200	600	0.08	9	6100	8×8 8×11.5
	1500	750	0.08	9	6100	8×8 8×11.5
	2000	1000	0.08	9	6100 6640	8×11.5 10×12.5
	2500	1250	0.08	9	6640	10×12.5
	2700	1350	0.08	9	6640	10×12.5
	3000	1500	0.08	9	6640	10×12.5
	3300	1650	0.08	9	6640	10×12.5
	3500	1750	0.08	9	6640	10×12.5
	4	560	224	0.08	9	6100
680		272	0.08	9	6100	8×8 8×11.5
820		328	0.08	9	6100	8×8 8×11.5 10×12.5
1000		800	0.08	9	6100	8×8 8×11.5
1200		960	0.08	9	6100 6640	8×11.5 10×12.5
1500		1200	0.08	9	6100	8×11.5 10×12.5
2000		1600	0.08	9	6640	10×12.5
2500		1500	0.08	9	6640	10×12.5
6.3		180	226.8	0.07	9	6100
	220	277	0.07	9	6100	8×8 8×11.5
	270	340.2	0.07	9	6100	8×8 8×11.5
	330	416	0.07	9	6100	8×8 8×11.5
	390	491.4	0.08	9	6100	8×8 8×11.5
	470	592	0.08	9	6100	8×8 8×11.5
	560	705.6	0.08	9	6100	8×8 8×11.5
	680	428.4	0.08	9	6100	8×8 8×11.5
	820	516.6	0.10	9	6100 6100	8×8 8×11.5
	1000	630	0.10	9	6100 6640	8×8 10×12.5
	1200	756	0.10	9	6100 6640	8×11.5 10×12.5
	1500	945	0.10	9	6100 6640	8×11.5 10×12.5
	2000	1260	0.10	9	6640	10×12.5
	2200	1336	0.10	9	6640	10×12.5
	2500	1575	0.10	9	6640	10×12.5

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

Conductive Polymer

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
680	680	0.10	9	5600	8x8	
				5600	8x11.5	
820	820	0.10	9	6100	10x12.5	
				5600	8x11.5	
1000	1000	0.10	9	6100	10x12.5	
				5600	8x11.5	
1200	1200	0.10	9	6100	10x12.5	
				6100	10x12.5	
1500	1500	0.10	9	6100	10x12.5	
				6100	10x12.5	
16	180	576	0.08	9	5600	8x11.5
					5600	8x11.5
	220	704	0.08	9	5600	8x11.5
					5600	8x11.5
	270	864	0.08	9	5600	8x11.5
					5600	8x11.5
	330	528	0.08	9	5600	8x11.5
					6100	10x12.5
	390	624	0.08	9	5600	8x11.5
					6100	10x12.5
	470	752	0.10	9	5600	8x11.5
					6100	10x12.5
	560	896	0.10	9	5600	8x11.5
					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	
				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