

RL series Super Low ESR & High Ripple Current

- Super Low ESR, High ripple current
 - Load life of 2000 hours at 105°C
 - Compliant to the RoHS2.0 directive
 - Suitable for Motherboard, Server Board, VGA
- 具有超低 ESR 和超大纹波电流,产品满足 RoHS2.0 指令,适合用于计算机主板、显卡、手机充电器等。



◇ Specifications

Items	Characteristics	
Operating Temp. Range	-55°C ~ +105°C	
Capacitance Range	270 ~ 4700μF	
Capacitance Tolerance	M : ±20%	
Rated Voltage Range	2.5V ~ 14V DC	
Dissipation Factor	Not to exceed the value specified	
Leakage Current	Not to exceed the value specified (after 2 minutes)	
ESR (100K~300KHz)	Not to exceed the value specified	
Endurance 105°C , 2000h , at rated voltage	Capacitance Change	Within ±20% of the value before test
	Dissipation Factor	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	Leakage current	Not to exceed the value specified
Moisture Resistance Stored at 60°C , RH90 ~ 95% , 1000h	Capacitance Change	Within ±20% of the value before test
	Dissipation Factor	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	Leakage Current	Not to exceed the value specified

◇ Dimensions (Unit:mm)

Φ6.3mm						Φ8mm~Φ10mm							
Plastic coating Aluminum. Case													
Lead Wire (+)													
Stand-off													
ΦD	L+αMax					L+αMax					F		
15Min						15Min						4Min	
4Min						4Min						4Min	
ΦD±0.5max.	6.3					8			10				
L	8	9	10	11	12	8	11.5	13	10	12.5	13		
α	1.0					1.0			1.0				
F±0.5	2.5					3.5			5.0				
Φd±0.05	0.5					0.6							

✧ Capacitance List

W.V (S.V) SIZE	2.5 (2.9)	4 (4.6)	6.3 (7.2)	7.5 (8.6)	10 (12)	12 (14)	14 (16)
6.3×8	680 ~ 1200μF	560 ~ 820μF	330 ~ 680μF	470 ~ 680μF	330 ~ 560μF	330 ~ 560μF	270 ~ 470μF
6.3×9			560 ~ 820μF	560 ~ 820μF	390 ~ 560μF	390 ~ 560μF	330 ~ 560μF
6.3×10			680 ~ 1000μF	680 ~ 1000μF	470 ~ 680μF	470 ~ 680μF	390 ~ 560μF
6.3×11			820 ~ 1200μF	820 ~ 1200μF	560 ~ 820μF	560 ~ 820μF	470 ~ 680μF
6.3×12			820 ~ 1200μF	820 ~ 1200μF	560 ~ 820μF	560 ~ 820μF	560 ~ 820μF
8×8	1000 ~ 1800μF	680 ~ 1200μF	560 ~ 1200μF		470 ~ 820μF		
8×11.5	1200 ~ 2700μF	1000 ~ 1800μF	820 ~ 1500μF		680 ~ 1200μF		
8×13			1200 ~ 1800μF		820 ~ 1200μF		
10×10			820 ~ 1800μF		680 ~ 1200μF		
10×12.5	1800 ~ 4700μF	1500 ~ 2700μF	1200 ~ 2700μF		1000 ~ 1800μF		
10×13			1500 ~ 3300μF		1200 ~ 2200μF		

✧ Characteristics List

W.V. (V)	Capacitance (μF)	L.C. (μA,2min)	tgδ (120Hz,20°C)	ESR (mΩ,100kHz)	Rated Ripple Current(mA,r.m.s)	Size ΦD×L(mm)	Part Number
2.5	820	205	0.08	7	5400	6.3×8	PRL821M2R5E08□□□□□□
	1200	300	0.08	7	5600	8×8	PRL122M2R5F08□□□□□□
	2200	550	0.08	7	6100	8×11.5	PRL222M2R5F1A□□□□□□
	3300	825	0.08	7	6400	10×12.5	PRL332M2R5G1B□□□□□□
4	560	224	0.08	8	5400	6.3×8	PRL561M004E08□□□□□□
	1200	480	0.08	7	5600	8×8	PRL122M004F08□□□□□□
	1500	600	0.08	7	6100	8×11.5	PRL152M004F1A□□□□□□
	2200	880	0.08	7	6400	10×12.5	PRL222M004G1B□□□□□□
6.3	560	352.8	0.08	8	5300	6.3×8	PRL561M6R3E08□□□□□□
	820	516.6	0.08	7	5400	6.3×9	PRL821M6R3E09□□□□□□
	1000	630	0.08	7	5600	6.3×10	PRL102M6R3E10□□□□□□
	1200	756	0.08	7	5600	6.3×11	PRL122M6R3E11□□□□□□
	1200	756	0.08	7	5700	6.3×12	PRL122M6R3E12□□□□□□
	1000	630	0.08	7	5600	8×8	PRL102M6R3F08□□□□□□
	1200	756	0.08	7	6100	8×11.5	PRL122M6R3F1A□□□□□□
	1500	945	0.08	7	6200	8×13	PRL122M6R3F13□□□□□□
	1500	945	0.08	7	5800	10×10	PRL152M6R3G10□□□□□□
	2200	1000	0.08	7	6400	10×12.5	PRL222M6R3G1B□□□□□□
	3300	1000	0.08	7	6500	10×13	PRL222M6R3G13□□□□□□
	7.5	560	420	0.08	8	5300	6.3×8
680		510	0.08	7	5400	6.3×9	PRL681M7R5E09□□□□□□
820		615	0.08	7	5600	6.3×10	PRL821M7R5E10□□□□□□
1000		750	0.08	7	5600	6.3×11	PRL102M7R5E11□□□□□□
1200		900	0.08	7	5700	6.3×12	PRL122M7R5E12□□□□□□
10	470	470	0.08	8	5100	6.3×8	PRL471M010E08□□□□□□
	560	560	0.08	8	5200	6.3×9	PRL561M010E09□□□□□□
	680	680	0.08	8	5400	6.3×10	PRL681M010E10□□□□□□
	820	820	0.08	8	5400	6.3×11	PRL821M010E11□□□□□□
	820	820	0.08	8	5500	6.3×12	PRL821M010E12□□□□□□



W.V. (V)	Capacitance (μ F)	L.C. (μ A,2min)	tg δ (120Hz,20 $^{\circ}$ C)	ESR (m Ω ,100kHz)	Rated Ripple Current(mA,r.m.s)	Size Φ D \times L(mm)	Part Number
10	820	820	0.08	8	5400	8 \times 8	PRL821M010F08□□□□□□
	1000	1000	0.08	8	5900	8 \times 11.5	PRL102M010F1A□□□□□□
	1200	820	0.08	8	6000	8 \times 13	PRL122M010F13□□□□□□
	1000	1000	0.08	8	5600	10 \times 10	PRL102M010G10□□□□□□
	1500	1000	0.08	8	6200	10 \times 12.5	PRL152M010G1B□□□□□□
	2200	984	0.08	8	6300	10 \times 13	PRL222M010G13□□□□□□
12	470	564	0.08	15	4000	6.3 \times 8	PRL471M012E08□□□□□□
	560	672	0.08	12	4200	6.3 \times 9	PRL561M012E09□□□□□□
	560	672	0.08	10	4600	6.3 \times 10	PRL561M012E10□□□□□□
	820	984	0.08	10	5200	6.3 \times 11	PRL821M012E11□□□□□□
	820	984	0.08	9	5300	6.3 \times 12	PRL821M012E12□□□□□□
14	470	658	0.08	18	3900	6.3 \times 8	PRL471M014E08□□□□□□
	560	784	0.08	15	4100	6.3 \times 9	PRL561M014E09□□□□□□
	560	784	0.08	12	4500	6.3 \times 10	PRL561M014E10□□□□□□
	680	952	0.08	12	5100	6.3 \times 11	PRL681M014E11□□□□□□
	680	952	0.08	10	5200	6.3 \times 12	PRL681M014E12□□□□□□

* For the last 6 digits of the part number, please refer to the part number system on page 125.

✧ Frequency Coefficient for Ripple Current

Frequency	120Hz \leq freq.<1KHz	1KHz \leq freq.<10KHz	10KHz \leq freq.<50KHz	50KHz \leq freq.<100KHz	100KHz \leq freq.<300KHz
Coefficient (C \leq 1000 μ F)	0.05	0.3	0.7	0.85	1
Coefficient (3000 μ F \geq C>1000 μ F)	0.1	0.33	0.85	1	1
Coefficient (C>3000 μ F)	0.12	0.35	1	1	1