RL

Radial Lead Type

series

Super low ESR, High ripple current
Large capacitance, Small size
Load life of 3,000h at 105°C

LEAD FREE

Halogen Less

RoHS COMPLIANT

Specifications

Items	Characteristics	
Temperature range	-55 to +105°C	
Rated voltage range	2.5 to 16Vdc	
Capacitance range	100 to 3,500μF	
Capacitance tolerance	±20% [M] (at 20°C, 120Hz)	
Tangent of loss angle	Less than or equal to the value of Standard Ratings (at 20°C, 120Hz)	
Leakage current	Less than or equal to the value of Standard Ratings (at 20°C, after 2 minutes)	
ESR	Less than or equal to the value of Standard Ratings	
Characteristics of impedance	$Z_{+105°C}/Z_{+20°C} \leq 1.25$, $Z_{-55°C}/Z_{+20°C} \leq 1.25$ at 100kHz	
Endurance	105°C, 3,000 hrs at rated voltage	
	Appearance	No significant damage
	Capacitance change	Within±20% of the initial value
	Tangent of loss angle (tanδ)	≤150% of the initial specified value
	ESR(mΩ)	≤150% of the initial specified value
	Leakage current	≤The initial specified value
Damp Heat (Steady State)	60°C, 90 to 95% RH, 1,000 hrs, No-applied Voltage	
	Appearance	No significant damage
	Capacitance change	Within±20% of the initial value
	Tangent of loss angle (tanδ)	≤150% of the initial specified value
	ESR(mΩ)	≤150% of the initial specified value
	Leakage current	≤The initial specified value
Resistance to soldering heat	Flow method (260±5°C, 10s)	
	Appearance	No significant damage
	Capacitance change	Within±10% of the initial value
	Tangent of loss angle (tanδ)	≤130% of the initial specified value
	ESR(mΩ)	≤130% of the initial specified value
	Leakage current	≤The initial specified value

* In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C

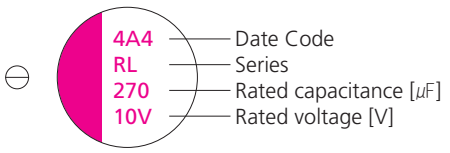
Size List

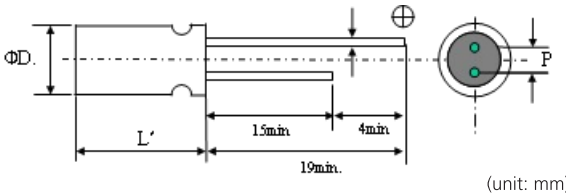
(unit: mm)

μF \ RV (SV)	2.5 (2.9)	4 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)
100					6.3×6 / 6.3×9
150					8×7
180					8×9 / 8×11.5
220	5×9		6.3×6		8×7
270				8×7	6.3×9 / 8×9 8×11.5
330	5×9 6.3×9			8×7	8×9 / 8×11.5 10×11.5
470	5×9		6.3×9 / 8×9 8×11.5		10×11.5
560	5×9 / 6.3×9 8×9	6.3×9 / 8×9 8×11.5	6.3×9 8×9		
680		8×11.5	10×11.5	8×9	
820	6.3×9 / 8×7 8×9 / 8×11.5	10×11.5	8×9 8×11.5		
1000	8×9	8×9 10×11.5	8×9	8×11.5	10×11.5
1200		8×9	8×11.5	10×11.5	
1500	8×9		10×11.5		
2700	10×11.5				
3500	10×11.5				

RV: Rated Voltage [V] SV: Surge Voltage [V] (at room temperature)

Marking and Dimensions





(unit: mm)

Size	ØD±0.5	L	L'	P±0.5	Ød
5×9	5.0	9.0	L max.	2.0	0.6
6.3×6	6.3	6.0		2.5	0.45
8×7	8.0	7.0		3.5	0.45
6.3×9	6.3	9.0		2.5	0.6
8×9	8.0	9.0		3.5	0.6
8×11.5	8.0	11.5	L + 1.0 max.	3.5	0.6
10×11.5	10.0	11.5		5.0	0.6

Standard Ratings

Rated Voltage [Vdc]	Rated Capacitance [µF]	Size ØD x L [mm]	ESR (20°C,100kHz) [mΩ] [max.]	Rated Ripple Current (105°C,100kHz) [mArms]	Tangent of Loss Angel [max.]	Leakage Current [µA, max.]	Part Number
2.5	220	5 x 9	7	4180	0.10	500	2RL220MB9
	330	5 x 9	7	4180	0.10	500	2RL330MB9
	330	6.3 x 9	7	5600	0.10	500	2RL330MC9
	470	5 x 9	7	4180	0.10	500	2RL470MB9
	560	5 x 9	7	4180	0.10	500	2RL560MB9
	560	6.3 x 9	7	5600	0.10	500	2RL560MC9
	560	8 x 9	7	6100	0.10	500	2RL560MD9
	820	6.3 x 9	7	5600	0.10	500	2RL820MC9
	820	8 x 7	8	5300	0.10	500	2RL820MD7
	820	8 x 9	7	6100	0.10	500	2RL820MD9
	820	8 x11.5	7	6100	0.10	500	2RL820MD11
	1000	8 x 9	7	6100	0.10	500	2RL1000MD9
	1500	8 x 9	7	6100	0.10	750	2RL1500MD9
	2700	10 x 11.5	10	5560	0.10	1350	2RL2700ME11
	3500	10 x 11.5	10	5560	0.10	1750	2RL3500ME11
4	560	6.3 x 9	7	5600	0.10	500	4RL560MC9
	560	8 x 9	7	6100	0.10	500	4RL560MD9
	560	8 x 11.5	7	6100	0.10	500	4RL560MD11
	680	8 x 11.5	7	6100	0.10	544	4RL680MD11
	820	10 x 11.5	7	6640	0.10	656	4RL820ME11
	1000	8 x 9	7	6100	0.10	800	4RL1000MD9
	1000	10 x 11.5	7	6640	0.10	800	4RL1000ME11
	1200	8 x 9	7	6100	0.10	960	4RL1200MD9
6.3	220	6.3 x 6	18	2980	0.10	277	6RL220MC6
	470	6.3 x 9	7	5600	0.10	592	6RL470MC9
	470	8 x 9	7	5700	0.10	592	6RL470MD9
	470	8 x 11.5	7	5700	0.10	592	6RL470MD11
	560	6.3 x 9	7	5600	0.10	705	6RL560MC9
	560	8 x 9	7	5700	0.10	705	6RL560MD9
	680	10 x 11.5	7	6640	0.10	857	6RL680ME11
	820	8 x 9	7	5700	0.10	1033	6RL820MD9
	820	8 x 11.5	7	5700	0.10	1033	6RL820MD11
	1000	8 x 9	7	5700	0.10	1260	6RL1000MD9
	1200	8.x 11.5	7	5700	0.10	1512	6RL1000MD11
	1500	10 x 11.5	10	5560	0.10	1890	6RL1500ME11
10	150	6.3 x 6	26	2400	0.10	300	10RL150MC6
	270	8 x 7	22	3220	0.10	500	10RL270MD7
	330	8 x 7	22	3390	0.10	500	10RL330MD7
	680	8 x 9	9	5600	0.10	1360	10RL680MC9
	1000	8 x 11.5	10	6100	0.10	2000	10RL1000MD11
	1200	10 x 11.5	8	6100	0.10	2400	10RL1200ME11
16	100	6.3 x 6	24	2490	0.10	320	16RL100MC6
	100	6.3 x 9	10	4680	0.10	500	16RL100MC9
	150	8 x 7	22	3220	0.10	500	16RL150MD7
	180	8 x 9	10	5000	0.10	576	16RL180MD9
	180	8 x 11.5	16	4360	0.10	576	16RL180MD11
	220	8 x 7	13	4150	0.10	704	16RL220MD7
	270	6.3 x 9	10	4680	0.10	864	16RL270MC9
	270	8 x 9	10	5000	0.10	864	16RL270MD9
	270	8 x 11.5	11	5000	0.10	864	16RL270MD11
	330	8 x 9	11	4520	0.10	1056	16RL330MD9
	330	8 x 11.5	11	5000	0.10	1056	16RL330MD11
	330	10 x 11.5	8	6000	0.10	1056	16RL330ME11
	470	10 x 11.5	10	6100	0.10	1504	16RL470ME11
	1000	10 x 11.5	10	6100	0.10	3200	16RL1000ME11