



RLD Series

Features

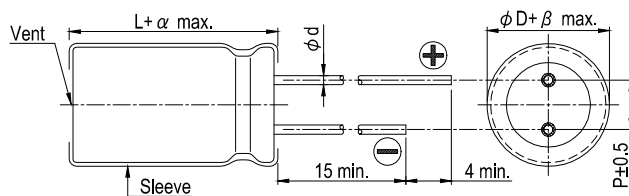
- 105°C, 10,000 ~ 12,000 hours assured
- 10 ϕ ~ 18 ϕ with large permissible ripple current
- Suitable for switching power supplies, UPS, Ballast
- Smaller case size current
- RoHS compliant



Specifications

Items	Performance								
Category Temperature Range	160 ~ 400V				450 ~ 500V				
	-40℃ ~ +105℃				-25℃ ~ +105℃				
Capacitance Tolerance	± 20% (at 120 Hz, 20℃)								
Leakage Current (at 20℃)	Time		after 5 minutes						
	Leakage Current		CV ≤ 1,000 I = 0.03CV + 15(μA)		CV > 1,000 I = 0.02CV + 25(μA)				
			Where, C = rated capacitance in μF, V = rated DC working voltage in V						
Tanδ (at 120 Hz, 20℃)	Rated Voltage	160	200	250	350	400	450	500	
	Tanδ (max.)	0.20	0.20	0.20	0.24	0.24	0.24	0.24	
Low Temperature Characteristics (at 120 Hz)	Impedance ratio shall not exceed the values given in the table below.								
	Rated Voltage		160	200	250	350	400	450	500
	Impedance Ratio	Z(-25℃) / Z(+20℃)	3	3	3	5	5	6	6
		Z(-40℃) / Z(+20℃)	6	6	6	6	6	-	-
Endurance	Test Time		10,000 Hrs for L ≤ 20 mm 12,000 Hrs for L ≥ 25 mm						
	Capacitance Change		Within ± 20% of initial value						
	Tanδ		Less than 200% of specified value						
	Leakage Current		Within specified value						
	* The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied with rated ripple current for 10,000 ~ 12,000 hours at 105℃.								
Shelf Life Test	Test Time		1,000 Hrs						
	Capacitance Change		Within ± 20% of initial value						
	Tanδ		Less than 200% of specified value						
	Leakage Current		Less than 500% of specified value						
	* The above specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1).								
Ripple Current and Frequency Multipliers	Frequency (Hz)		120	1k	10k	100k up			
	Cap. (μF)								
	< 100		1.00	1.75	2.25	2.50			
	≥ 100		1.00	1.67	2.05	2.25			

Diagram of Dimensions



Lead Spacing and Diameter				Unit: mm
ϕD	10	12.5	16	18
P	5.0	5.0	7.5	7.5
ϕd	0.6		0.8	
α	L<20: 1.5, L $\geq$ 2.0			
β	0.5			



Dimension: $\phi D \times L(\text{mm})$
Ripple Current: mA/rms at 105°C

Dimension and Permissible Ripple Current

Rated Volt. (V _{DC}) Contents Cap.(μF)	160V (2C)			200V (2D)			250V (2E)			350V (2V)			400V (2G)		
	$\phi D \times L$	Ripple Current 120 Hz	100k Hz	$\phi D \times L$	Ripple Current 120 Hz	100k Hz	$\phi D \times L$	Ripple Current 120 Hz	100k Hz	$\phi D \times L$	Ripple Current 120 Hz	100k Hz	$\phi D \times L$	Ripple Current 120 Hz	100k Hz
10													10×16	125	313
12										10×16	135	338			
18													10×20	180	450
22							10×16	200	500	10×20	200	500	10×25	215	538
27				10×16	200	500				10×25	240	600	10×35	270	675
33							10×20	240	600	10×35	300	750	10×40 12.5×25	310 355	775 888
39	10×16	245	613												
47				10×20	290	725	10×25	315	788	12.5×30 10×45	450 385	1,125 963	10×50 12.5×35	400 480	1,000 1,200
56	10×20	315	788	10×25	345	863	12.5×25	460	1,150	10×50 12.5×35	440 525	1,100 1,313	12.5×40 16×25	540 515	1,350 1,288
68	10×25	375	938	10×35	425	1,063	10×35 12.5×25	430 510	1,075 1,275	12.5×40 16×25	595 565	1,488 1,413	18×25 12.5×45	580 620	1,450 1,550
82	10×30	445	1,113	12.5×25	565	1,413	10×45 12.5×30	515 590	1,288 1,475	12.5×45 16×31.5	675 670	1,688 1,675	16×35.5	685	1,713
100	10×35	520	1,170	10×45 12.5×30	565 660	1,271 1,485	10×50 12.5×35	585 700	1,316 1,575	16×35.5	755	1,699	16×40 18×35.5	785 790	1,766 1,778
120	10×40 12.5×25	595 680	1,339 1,700	10×50 12.5×35	640 765	1,440 1,721	12.5×40 16×25	795 755	1,789 1,699	16×45 18×31.5	870 840	1,958 1,890	16×50 18×40	890 880	2,003 1,980
150	10×50 12.5×35	715 850	1,609 1,913	12.5×40 16×25	880 840	1,980 1,890	12.5×45 18×25	920 865	2,070 1,946	18×40	985	2,216	18×45	1,000	2,250
180	16×25	920	2,070	16×31.5 18×25	995 950	2,239 2,138	16×35.5	1,015	2,284	18×45	1,090	2,453			
220	16×31.5 18×25	1,100 1,050	2,475 2,363	16×35.5 18×31.5	1,125 1,135	2,531 2,554	16×40 18×31.5	1,160 1,135	2,610 2,554	18×50	1,220	2,745			
270	16×35.5 18×31.5	1,240 1,255	2,790 2,824	16×40 18×35.5	1,280 1,300	2,880 2,925	16×50 18×40	1,330 1,320	2,993 2,970						
330	16×40 18×35.5	1,420 1,435	3,195 3,229	16×50 18×40	1,470 1,510	3,308 3,398	18×45	1,485	3,341						
390	16×45 18×40	1,575 1,590	3,544 3,578	18×45	1,610	3,623	18×50	1,625	3,656						
470	16×50 18×45	1,760 1,770	3,960 3,983												
560	18×50	1,945	4,376												

Rated Volt. (V _{DC}) Contents Cap.(μF)	450V (2W)			500V (2H)		
	$\phi D \times L$	Ripple Current 120 Hz	100k Hz	$\phi D \times L$	Ripple Current 120 Hz	100k Hz
6.8	10×16	125	313			
12	10×20	150	375	12.5×20	135	338
15	10×25	185	463	12.5×25	165	413
22	10×35	250	625	12.5×35	220	550
27	10×40 12.5×25	290 340	725 850	12.5×40	260	650
33	12.5×30	400	1,000	12.5×45	285	713
47	12.5×40 16×25	525 500	1,313 1,250	16×31.5	360	900
56	12.5×50 16×31.5	605 585	1,513 1,463	16×35.5	420	1,050
68	16×35.5 18×31.5	660 660	1,650 1,650	16×40	490	1,225
82	16×45 18×35.5	760 755	1,900 1,888	18×35.5	540	1,350
100	16×50 18×40	855 845	1,924 1,901	18×45	660	1,485
120	18×45	945	2,126			

Part Numbering System

RLD Series 15 μF $\pm 20\%$ 450V Bulk Package Flat Type 10 ϕ ×25L General Purpose
RLD **150** **M** **2W** **BK** **F** **1025**
 Series Name Capacitance Capacitance Tolerance Rated Voltage Lead Configuration and Package Rubber Type Case Size Application

Note: For more details, please refer to "Part Numbering System - Radial Type" on page 139.