

## RLD Series

### Features

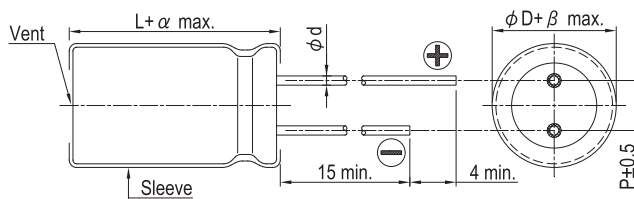
- 105°C, 12,000 hours assured
- 10 φ ~ 18 φ with large permissible ripple current
- Suitable for switching power supplies, UPS, Ballast
- Smaller case size current
- RoHS compliant



### Specifications

Items	Performance							
Category Temperature Range	160 ~ 400V				450V			
	-40°C ~ +105°C				-25°C ~ +105°C			
Capacitance Tolerance	±20% (at 120 Hz, 20°C)							
Leakage Current (at 20°C)	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°C)	Rated Voltage	160	200	250	350	400	450	
	Tanδ (max)	0.20	0.20	0.20	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
	Impedance Ratio	Z(-25°C)/Z(+20°C)	3	3	3	5	5	6
Z(-40°C)/Z(+20°C)		6	6	6	6	6	-	
Endurance	Test Time	12,000 Hrs						
	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°C after the rated voltage applied with rated ripple current for 12,000 hours at 105°C.							
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°C after exposing them for 1,000 hours at 105°C 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)	15 ~ 82	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

	10	12.5	16	18
φ D	10	12.5	16	18
P	5.0	5.0	7.5	7.5
φ d	0.6		0.8	
α	2.0			
β	0.5			



Dimension and Permissible Ripple Current

Dimension:  $\phi D \times L$ (mm)  
Ripple Current: mA/Rms at 105°C

Rated Volt. (V <sub>DC</sub> ) Contents Cap.( $\mu$ F)	160V (2C)			200V (2D)			250V (2E)			350V (2V)			400V (2G)		
	$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current	
		120 Hz	100k Hz		120 Hz	100k Hz		120 Hz	100k Hz		120 Hz	100k Hz		120 Hz	100k Hz
22															
27										10x25	240	600	10x25	215	538
33										10x35	300	750	10x35	270	675
47							10x25	315	788	10x40	310	775	10x40	310	775
56				10x25	345	863	12.5x30	385	963	12.5x25	355	888	12.5x25	355	888
68	10x25	375	938	10x35	425	1,063	10x50	440	1,100	10x50	440	1,100	10x50	440	1,100
82	10x30	445	1,113	12.5x25	565	1,413	12.5x35	525	1,313	12.5x40	595	1,488	12.5x40	580	1,450
100	10x35	520	1,170	12.5x30	660	1,485	12.5x45	675	1,688	12.5x45	675	1,688	12.5x45	620	1,550
120	10x40	595	1,339	12.5x35	765	1,721	12.5x50	795	1,789	16x25	565	1,413	16x25	580	1,450
150	12.5x25	680	1,700	16x25	840	1,890	16x25	755	1,699	16x25	565	1,413	16x25	580	1,450
180	10x50	715	1,609	16x25	840	1,890	16x25	755	1,699	16x25	565	1,413	16x25	580	1,450
220	12.5x35	850	1,913	18x25	950	2,138	18x25	865	1,946	16x35.5	755	1,699	16x35.5	685	1,713
270	16x25	920	2,070	16x31.5	995	2,239	16x31.5	865	1,946	16x35.5	755	1,699	16x35.5	685	1,713
330	16x31.5	1,100	2,475	18x25	950	2,138	18x25	865	1,946	16x35.5	755	1,699	16x35.5	685	1,713
390	18x25	1,050	2,363	18x31.5	1,125	2,531	18x31.5	1,160	2,610	16x40	870	1,958	16x40	785	1,766
470	16x35.5	1,240	2,790	18x31.5	1,135	2,554	18x31.5	1,135	2,554	18x31.5	840	1,890	18x31.5	790	1,778
560	18x31.5	1,255	2,824	18x35.5	1,300	2,925	18x35.5	1,320	2,970	18x35.5	755	1,699	18x35.5	790	1,778
680	18x35.5	1,255	2,824	18x40	1,280	2,880	18x40	1,330	2,993	18x40	985	2,216	18x40	890	2,003
820	18x40	1,420	3,195	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
1000	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
1200	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
1500	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
1800	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
2200	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
2700	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
3300	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
3900	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
4700	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980
5600	18x40	1,435	3,229	18x40	1,300	2,925	18x40	1,320	2,970	18x40	985	2,216	18x40	880	1,980

Rated Volt. (V <sub>DC</sub> ) Contents Cap.( $\mu$ F)	450V (2W)		
	$\phi D \times L$	Ripple Current	
		120 Hz	100k Hz
15	10x25	185	463
22	10x35	250	625
27	10x40	290	725
33	12.5x25	340	850
47	12.5x30	400	1,000
56	12.5x40	525	1,313
68	16x25	500	1,250
82	12.5x50	605	1,513
100	16x31.5	585	1,463
120	16x35.5	660	1,650
150	18x31.5	660	1,650
180	16x45	760	1,900
220	18x35.5	755	1,888
270	16x50	855	1,924
330	18x40	845	1,901
390	18x45	945	2,126
470			
560			

Radial

Part Numbering System

RLD Series    15  $\mu$ F     $\pm 20\%$     450V    Bulk Package    Flat Type    10  $\phi \times 25L$     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.