

RPL Series

Features

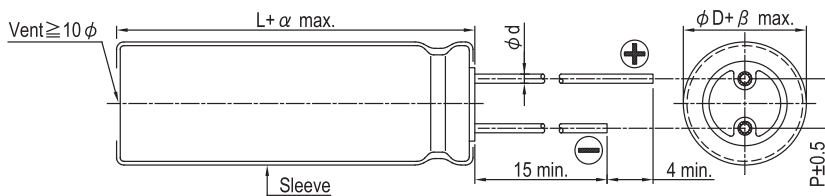
- 105°C, 5,000 hours assured
- 10 φ ~ 18 φ with large permissible ripple current
- Slim type included
- RoHS compliant



Specifications

Items	Performance																								
	400V		420 ~ 450V																						
Category Temperature Range	-40°C ~ +105°C		-25°C ~ +105°C																						
Capacitance Tolerance	±20% (at 120 Hz, 20°C)																								
Leakage Current (at 20°C)	<table border="1"> <tr> <td>Time</td> <td colspan="4">after 5 minutes</td> </tr> <tr> <td rowspan="2">Leakage Current</td> <td>CV ≤ 1,000</td> <td colspan="3">CV > 1,000</td> </tr> <tr> <td>I = 0.03CV + 15(µA)</td> <td colspan="3">I = 0.02CV + 25(µA)</td> </tr> </table> <p>Where, C = rated capacitance in µF, V = rated DC working voltage in V</p>					Time	after 5 minutes				Leakage Current	CV ≤ 1,000	CV > 1,000			I = 0.03CV + 15(µA)	I = 0.02CV + 25(µA)								
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Tanδ (at 120 Hz, 20°C)	<table border="1"> <tr> <td>Rated Voltage</td> <td>400</td> <td>420</td> <td colspan="2">450</td> </tr> <tr> <td>Tanδ (max)</td> <td>0.24</td> <td>0.24</td> <td colspan="2">0.24</td> </tr> </table>					Rated Voltage	400	420	450		Tanδ (max)	0.24	0.24	0.24											
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Low Temperature Characteristics (at 120 Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <tr> <td colspan="2">Rated Voltage</td> <td>400</td> <td>420</td> <td colspan="2">450</td> </tr> <tr> <td rowspan="2">Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>5</td> <td>6</td> <td colspan="2">6</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>6</td> <td>-</td> <td colspan="2">-</td> </tr> </table>					Rated Voltage		400	420	450		Impedance Ratio	Z(-25°C)/Z(+20°C)	5	6	6		Z(-40°C)/Z(+20°C)	6	-	-				
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Shelf Life Test	<table border="1"> <tr> <td>Test Time</td> <td colspan="4">1,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td colspan="4">Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td colspan="4">Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td colspan="4">Within specified value</td> </tr> </table> <p>* 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).</p>					Test Time	1,000 Hrs				Capacitance Change	Within ±20% of initial value				Tanδ	Less than 200% of specified value				Leakage Current	Within specified value			
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Ripple Current and Frequency Multipliers	<table border="1"> <tr> <td>Frequency (Hz)</td> <td>60</td> <td>120</td> <td>500</td> <td>1k</td> <td>10k up</td> </tr> <tr> <td>Multipliers</td> <td>0.80</td> <td>1.00</td> <td>1.25</td> <td>1.40</td> <td>1.50</td> </tr> </table>					Frequency (Hz)	60	120	500	1k	10k up	Multipliers	0.80	1.00	1.25	1.40	1.50								
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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	2.0			
β	0.5			



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

Dimension and Permissible Ripple Current

Rated Voltage (V _{DC})	Cap. (μF)	10 φ		12.5 φ		16 φ		18 φ					
		φ D×L	Ripple Current		φ D×L	Ripple Current		φ D×L	Ripple Current				
			120 Hz	100k Hz		120 Hz	100k Hz		120 Hz	100k Hz			
400V (2G)	33	10×35	320	480									
	39	10×40	380	570	12.5×30	380	570						
	47	10×45	425	638									
	56	10×50	490	735	12.5×35	475	713						
	68				12.5×40	550	825	16×31.5	530	795			
	82				12.5×45	615	923	16×35.5	605	908			
	100							16×40	740	1,110			
	120							16×45	795	1,193	18×35.5	730	1,095
	150						16×50	865	1,300	18×45	910	1,365	
420V (2P)	33	10×40	350	525									
	39	10×45	390	585	12.5×30	380	570						
	47	10×50	445	668	12.5×35	410	615						
	56				12.5×40	490	735	16×31.5	475	713			
	68				12.5×45	560	840	16×35.5	550	825			
	82				12.5×50	625	938	16×40	630	945			
	100							16×45	750	1,125	18×35.5	675	1,013
	120							16×50	865	1,298	18×40	810	1,238
	150									18×45	825	1,215	
										18×45	950	1,425	
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450V (2W)	33	10×45	315	475	12.5×30	350	525						
	39	10×50	360	545	12.5×35	400	600						
	47				12.5×40	425	683	16×31.5	455	683			
	56				12.5×45	500	750	16×35.5	560	750			
	68				12.5×50	540	810	16×40	590	885			
	82							16×35.5	530	795			
	100							16×45	675	1,013	18×35.5	645	968
	120							16×50	785	1,178	18×40	740	1,110
	150									18×35.5	685	1,025	
										18×45	825	1,238	
										18×40	790	1,185	
										18×50	950	1,425	

Remark: Other sizes and specification are available, please contact us for detail.

Part Numbering System

RPL Series 33μF ±20% 450V Bulk Package Gas Type 10 φ ×45L General Purpose

RPL **330** **M** **2W** **BK** - **1045**

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.

Radial