

RGL Series

Features

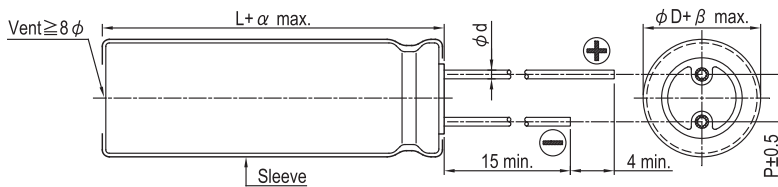
- 105°C, for general purposes
- $8\phi \sim 18\phi$ with large permissible ripple current
- Slim type included
- RoHS compliant



Specifications

Items	Performance																								
Category Temperature Range	400V -40°C ~ +105°C		420 ~ 450V -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>Leakage Current</td> <td colspan="2">CV ≤ 1,000 I = 0.03CV + 15(μA)</td> <td colspan="2">CV > 1,000 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 I = 0.03CV + 15(μA)		CV > 1,000 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	-	-				
Rated Voltage		400	420	450																					
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Endurance	<table border="1"> <tr> <td>Test Time</td> <td colspan="4">2,000 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 the rated voltage applied with rated ripple current for 2,000 hours at 105°C.</p>					Test Time	2,000 Hrs				Capacitance Change	Within ±20% of initial value				Tanδ	Less than 200% of specified value				Leakage Current	Within specified value			
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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>0.8</td> <td>1.00</td> <td>1.25</td> <td>1.45</td> <td>1.50</td> </tr> </table>					Frequency (Hz)	60	120	500	1k	10k up	Multipliers	0.8	1.00	1.25	1.45	1.50								
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Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

	8	10	12.5	16	18
φD	8	10	12.5	16	18
P	3.5	5.0	5.0	7.5	7.5
φd	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 Voltage (V _{DC})	Cap. (μF)	8 φ		10 φ		12.5 φ		16 φ		18 φ						
		φ D×L	Ripple Current		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		120 Hz	100k Hz			
400V (2G)	15	8×30	190	285												
	22	8×35	250	375												
	27	8×40	300	450	10×30	245	370									
	33	8×45	350	525	10×35	295	445									
	39	8×50	390	585	10×40	345	515									
	47				10×45	400	600									
	56				10×50	450	675	12.5×30	470	705						
	68							12.5×35	540	810						
	82							12.5×40	620	930						
	100															
	120										16×35.5	800	1,200			
	150										16×40	840	1,260			
180										16×45	940	1,410	18×35.5	920	1,380	
220										16×50	1,050	1,575	18×40	1,060	1,590	
													18×45	1,200	1,800	
420V (2P)	15	8×30	195	293												
	22	8×35	255	383												
	27	8×45	320	480	10×30	245	370									
	33	8×50	370	555	10×35	295	445									
	39				10×40	345	515									
	47				10×45	400	600									
	56				10×50	450	675	12.5×30	470	705						
	68							12.5×35	540	810						
	82							12.5×45	630	945						
	100							12.5×50	730	1,095	16×35.5	730	1,095			
	120										16×40	840	1,260	18×35.5	850	1,275
	150										16×45	885	1,330	18×35.5	920	1,380
180										16×50	1030	1,545	18×40	960	1,440	
220													18×45	1,100	1,650	
													18×50	1,220	1,830	
450V (2W)	15	8×30	195	293												
	22	8×40	270	405	10×30	225	330									
	27	8×45	320	480	10×35	265	400									
	33	8×50	370	555	10×40	315	475									
	39				10×45	360	545	12.5×30	400	600						
	47				10×50	420	625	12.5×35	460	690						
	56							12.5×40	520	780						
	68							12.5×45	580	870						
	82							12.5×50	660	990	16×35.5	660	990			
	100										16×40	750	1,125			
	120										16×45	840	1,260	18×35.5	820	1,230
	150										16×50	980	1,470	18×45	995	1,490
180													18×50	1,140	1,710	

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

Part Numbering System

RGL Series 22μF ±20% 450V Bulk Package Gas Type 10 φ ×30L General Purpose

RGL **220** **M** **2W** **BK** - **1030**
 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