



RQL Series

Features

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

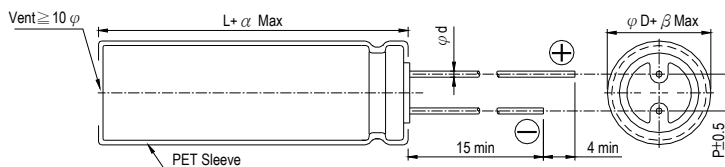


Sleeve & Marking Color: Black & Golden

Specifications

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

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 & Permissible Ripple Current

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

V. DC	Cap. (μF)	10 ϕ				12.5 ϕ			16 ϕ			18 ϕ		
		$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current		$\phi D \times L$
			120 Hz	100k Hz		120 Hz	100k Hz		120 Hz	100k Hz		120 Hz	100k Hz	
400V (2G)	33	10×40	315	475										
	39	10×45	360	545										
	47	10×50	420	630	12.5×30	440	660							
	56				12.5×35	500	750							
	68				12.5×40	580	870	16×31.5	530	795				
	82				12.5×50	625	935	16×35.5	615	920				
	100							16×40	715	1,070				
	120							16×40	800	1,200	18×35.5 18×40	790 870	1,185 1,305	
	150							16×45	915	1,375	18×45	985	1,475	
420V (2P)	33	10×40	370	555										
	39	10×45	410	615	12.5×30	390	585							
	47	10×50	465	700	12.5×35	450	675							
	56				12.5×40	520	780	16×31.5	500	750				
	68				12.5×45	580	870	16×35.5	580	870				
	82				12.5×50	660	990	16×35.5 16×40	730 675	1,095 1,010				
	100							16×40 16×45	750 755	1,125 1,130	18×35.5	725	1,085	
	120										18×40 18×45	835 880	1,250 1,320	
	150										18×50	1,030	1,550	
450V (2W)	33	10×45	330	495	12.5×30	370	555							
	39	10×50	380	570	12.5×35	420	630							
	47				12.5×40	480	720							
	53				12.5×45	500	750							
	56				12.5×45	530	795	16×31.5	510	765				
	68				12.5×50	620	930	16×35.5	590	885				
	82							16×40	615	920	18×35.5	645	965	
	100							16×45	715	1,070	18×40	750	1,125	
	120										18×45	835	1,250	
	150										18×50	975	1,465	

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

Part Numbering System

RQL series	39 μF	±20%	450V	Bulk Package	Gas Type	10 ϕ × 50L	Pb-free and PET coating case
RQL	390	M	2W	BK	-	1050	
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration & Package	Rubber Type	Case Size	Lead Wire and Coating Type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 10.

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