



RXQ Series

Features

- 105°C, 8,000 ~ 10,000 hours assured
- Suitable for switching power supplies, UPS, Ballast
- Smaller case size current
- RoHS Compliance

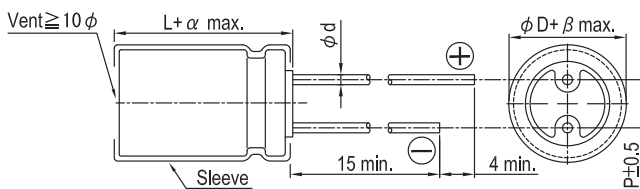


Sleeve & Marking Color: Black & Golden

Specifications

Items	Performance																						
	Category Temperature Range	160 ~ 400V -40°C ~ +105°C	450V -25°C ~ +105°C																				
Capacitance Tolerance	±20% (at 120Hz, 20°C)																						
Leakage Current (at 20°C)	<table border="1"> <thead> <tr> <th>Time</th> <th colspan="2">after 5 minutes</th> </tr> </thead> <tbody> <tr> <td>Leakage Current</td> <td>CV ≤ 1,000 I = 0.03CV + 15(μA)</td> <td>CV &gt; 1,000 I = 0.02CV + 25(μA)</td> </tr> </tbody> </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)															
Time	after 5 minutes																						
Leakage Current	CV ≤ 1,000 I = 0.03CV + 15(μA)	CV > 1,000 I = 0.02CV + 25(μA)																					
Tanδ (at 120Hz, 20°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> </tr> </tbody> </table>		Rated Voltage	160	200	250	350	400	450	Tanδ (max)	0.20	0.20	0.20	0.24	0.24	0.24							
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 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Impedance Ratio Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>5</td> <td>5</td> <td>6</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>-</td> </tr> </tbody> </table>		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	-
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	<table border="1"> <thead> <tr> <th>Test Time</th> <td>8,000 Hrs for φ D = 10mm; 10,000 Hrs for φ D ≥ 12.5mm</td> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </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 8,000 / 10,000 hours at 105°C.</p>		Test Time	8,000 Hrs for φ D = 10mm; 10,000 Hrs for φ D ≥ 12.5mm	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 200% of specified value	Leakage Current	Within specified value													
Test Time	8,000 Hrs for φ D = 10mm; 10,000 Hrs for φ D ≥ 12.5mm																						
Capacitance Change	Within ±20% of initial value																						
Tanδ	Less than 200% of specified value																						
Leakage Current	Within specified value																						
Shelf Life Test	<table border="1"> <thead> <tr> <th>Test Time</th> <td>1,000 Hrs</td> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </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													
Test Time	1,000 Hrs																						
Capacitance Change	Within ±20% of initial value																						
Tanδ	Less than 200% of specified value																						
Leakage Current	Within specified value																						
Ripple Current and Frequency Multipliers	<table border="1"> <thead> <tr> <th>Cap. (μF)</th> <th colspan="4">Frequency (Hz)</th> </tr> <tr> <th></th> <th>120</th> <th>1k</th> <th>10k</th> <th>100k up</th> </tr> </thead> <tbody> <tr> <td>6.8 ~ 82</td> <td>1.00</td> <td>1.75</td> <td>2.25</td> <td>2.50</td> </tr> <tr> <td>100 up</td> <td>1.00</td> <td>1.67</td> <td>2.05</td> <td>2.25</td> </tr> </tbody> </table>		Cap. (μF)	Frequency (Hz)					120	1k	10k	100k up	6.8 ~ 82	1.00	1.75	2.25	2.50	100 up	1.00	1.67	2.05	2.25	
Cap. (μF)	Frequency (Hz)																						
	120	1k	10k	100k up																			
6.8 ~ 82	1.00	1.75	2.25	2.50																			
100 up	1.00	1.67	2.05	2.25																			

Diagram of Dimensions

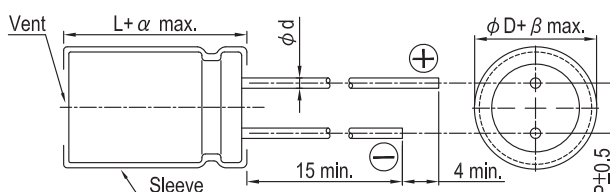


Lead Spacing and Diameter

φ D	10	12.5	16	18
P	5.0	5.0	7.5	7.5
φ d	0.6		0.8	
α	L < 20: 1.5, L ≥ 20: 2.0			
β	0.5			

Unit: mm

The case size of 16×20, 18×20 and 18×25 are suitable for below diagram:





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

Dimension and Permissible Ripple Current

Cap. ( $\mu$ F)	Contents	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
6.8											10×16	110	275	10×16	110	275
10		10×12.5	100	250	10×16	125	313	10×20	140	350	10×20	140	350	10×20	140	350
22		10×16 10×20	170 200	425 500	10×20	200	500	10×20	200	500	12.5×20	260	650	12.5×20	260	650
33		10×20	250	625	10×20	260	650	12.5×20	320	800	16×20	360	900	16×20	360	900
47		10×20	300	750	12.5×20	390	975	12.5×20	390	975	16×20	430	1,075	16×25 18×20	470 450	1,175 1,125
68		12.5×20	470	1,175	12.5×20	470	1,175	16×20	520	1,300	16×25 18×20	560 550	1,400 1,375	18×25	585	1,463
82		12.5×20	510	1,275	16×20	550	1,375	16×20	550	1,375	18×25	610	1,525	18×25	610	1,525
100		12.5×25 16×20	620 630	1,395 1,418	16×20	630	1,418	16×25	680	1,530	18×25	700	1,575	18×31.5	765	1,721
120											18×31.5	830	1,868	18×35.5	865	1,946
150		16×25	770	1,733	16×25	840	1,890	18×25	860	1,935	18×35.5	960	2,160	18×40	985	2,216
220		16×31.5	1,020	2,295	18×25	1,050	2,363	18×31.5	1,130	2,543						
330		18×35.5	1,390	3,128	18×35.5	1,430	3,218									

Cap. ( $\mu$ F)	Contents	450V (2W)		
		$\phi D \times L$	Ripple Current	
			120 Hz	100k Hz
6.8		10×20	110	275
10		12.5×20	180	450
22		16×20	290	725
33		16×25 18×20	390 380	975 950
47		18×25	480	1,200
68		18×31.5	630	1,575
82		18×35.5	715	1,788
100		18×40	800	1,800

Part Numbering System

RXQ Series    10 $\mu$ F     $\pm$ 20%    450V    Bulk Package    Gas Type    12.5  $\phi$  × 20L    Pb-free and PET sleeve

**RXQ**    **100**    **M**    **2W**    **BK**    -    **1320**

Series Name    Capacitance    Capacitance Tolerance    Rated Voltage    Lead Configuration & Package    Rubber Type    Case Size    Lead Wire and Sleeve type

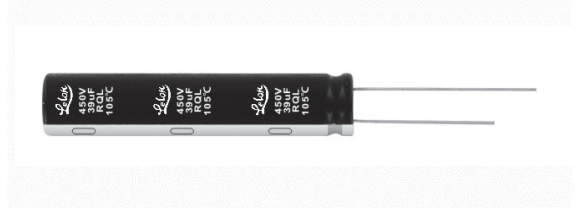
Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 13.

Radial

## RQL Series

### Features

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

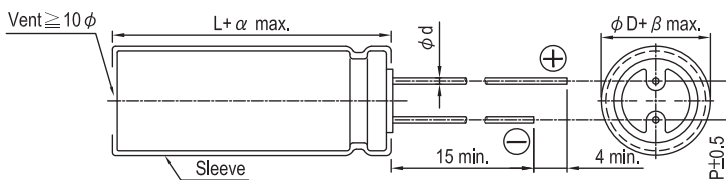


Sleeve & Marking Color: Black & Golden

### Specifications

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

### Diagram of Dimensions



Lead Spacing and Diameter

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			

Unit: mm



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

Dimension and Permissible Ripple Current

Rated Voltage $V_{DC}$	Cap. ( $\mu F$ )	10 $\phi$		12.5 $\phi$		16 $\phi$			18 $\phi$				
		$\phi D \times L$	Ripple Current		$\phi D \times L$	Ripple Current		Ripple Current		$\phi D \times L$	Ripple Current		
			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 16×45	800 840	1,200 1,260	18×35.5 18×40	790 870	1,185 1,305
	150							16×50	990	1,485	18×45	985	1,475
										18×50	1,120	1,685	
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							16×50	865	1,300	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							16×50	820	1,230	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 $\mu F$	$\pm 20\%$	450V	Bulk Package	Gas Type	10 $\phi$ ×50L	Pb-free and PET sleeve
<b>RQL</b>	<b>390</b>	<b>M</b>	<b>2W</b>	<b>BK</b>	-	<b>1050</b>	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration & Package	Rubber Type	Case Size	Lead Wire and Sleeve type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 13.

Radial

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А