

#### ■ FEATURES

- Long life, 105°C, 10,000 hours assured
- High permissible Ripple Current
- Ideal for high power lighting and power supply

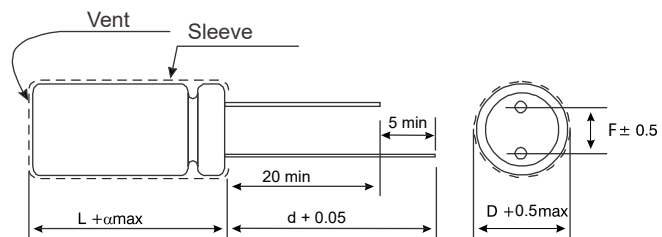
#### ■ SPECIFICATIONS

Items	Performance								
Life	at 105 °C 10,000 Hours								
Operating Temp.	-40 °C ~ +105 °C								
Capacitance Tolerance	20%								
Leakage Current (at 20 °C, after 1 minute)	$I = 0.03CV + 25\mu A$								
Dissipation Factor (Tan $\delta$ at 120Hz, 20°C)	Rated Voltage	160	200	250	350	400	450	500	
	Tan $\delta$ (max)	0.15	0.12	0.12	0.15	0.15	0.20	0.20	
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.								
	Rated Voltage		160	200	250	350	400	450	500
	Impedance Ratio	Z (-40°C) / Z (+20°C)	7	5	5	7	7	7	7
Load Life Test	Test Time	10,000 hrs							
	Capacitance Change	Within $\pm 30\%$ of initial value							
	Dissipation Factor	Not more than 300% of specified value							
	Leakage Current	Within specified value							
Shelf Life Test	Test Time	1,000 hours							
	Capacitance Change	Within $\pm 20\%$ of initial value							
	Dissipation Factor	Less than 200% of specified value							
	Leakage Current	Within specified value							
Ripple Current & Frequency Multipliers	Cap ( $\mu F$ ) \diagdown Freq. (Hz)	120	1k	10k	100k				
	<100 $\mu F$	1.00	1.75	2.25	2.5				
	$\geq 100 \mu F$	1.00	1.67	2.05	2.25				
Other Standards	JIS C 5101-4								

#### ■ LEAD SPACING AND DIAMETER SPECIFICATIONS

Unit: mm

D	10	12.5	16	18
F	5.0	7.5		
d	0.6	0.8		
$\alpha$	$L < 16; \pm 1.5$	$16 \leq L < 25; \pm 2.0$	$L \geq 25; +2.5$	



### ■ DIMENSIONS AND PERMISSIBLE RIPPLE CURRENT

Dimension: D×L(mm)

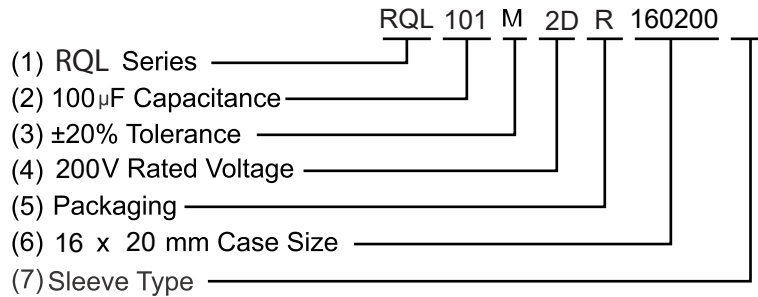
Ripple Current: mA/rms at 100K Hz 105°C

UR (Surge Voltage)	Rated Capacitance	Rated Ripple Current 105	Size DXL
(V)	(µF)	(mA <sub>rms</sub> )	(mm)
160V (2C)	47	312	12.5x20
	56	352	12.5x20
	68	480	12.5x20
	82	512	12.5x20
		523	16x20
	100	652	12.5x25
		635	16x25
	150	770	16x20
		790	16x25
	220	1010	16x25
1035		18x25	
330	1405	18x30	
	1850	18x40	
200V (2D)	33	268	12.5x20
	39	312	12.5x20
	47	392	12.5x20
	68	472	12.5x20
		486	12.5x25
	82	555	16x20
		633	16x20
	100	656	16x25
		842	16x25
	150	856	16x30
		872	18x25
		1052	18x25
	220	1070	18x30
		1430	18x35
330	1465	18x40	
	250 (2E)	33	326
39		346	12.5x20
47		392	12.5x20
		405	12.5x25
68		530	16x20
82		548	16x20
		568	16x30
100		675	16x25
	705	18x25	
150	855	18x25	
220	1120	18x30	
	1150	18x40	

UR (Surge Voltage)	Rated Capacitance	Rated Ripple Current 105	Size DXL
(V)	(µF)	(mA <sub>rms</sub> )	(mm)
350 (2V)	22	265	12.5x20
	33	365	16x20
	39	386	16x20
	47	435	16x20
		446	16x25
	68	570	16x25
		560	18x20
	70	570	18x25
		82	620
	100	710	18x25
		735	18x30
	120	826	18x30
	150	980	18x35
	180	1250	18x40
400 (2G)	10	145	10x20
	15	225	12.5x20
	22	262	12.5x20
		273	12.5x25
	33	370	16x20
	39	408	16x25
	47	475	16x25
		460	18x20
	56	482	16x30
		522	10x50
	68	602	12.5x40
		592	18x25
	82	626	12.5x45
		612	18x25
631		18x30	
100	792	12.5x50	
	767	18x30	
	786	18x35	
120	877	18x35	
150	982	18x40	
180	1350	18x50	

UR (Surge Voltage)	Rated Capacitance	Rated Ripple Current 105	Size DXL
(V)	(µF)	(mA <sub>rms</sub> )	(mm)
450 (2W)	10	186	12.5x20
	15	249	12.5x25
	22	296	16x20
	33	415	10x40
		395	16x25
		386	18x20
	39	430	10x45
		420	18x25
	47	510	12.5x40
		498	18x25
	56	555	12.5x40
	68	642	18x30
	82	728	12.5x50
		725	18x35
100	810	18x40	
120	1050	18x45	
500 (2H)	10	205	12.5x25
	15	271	12.5x30
	22	280	16x25
	27	276	12.5x40
		264	18x30
	39	465	10x50
		450	18x30
	47	5540	12.5x45
		525	18x30
	56	575	12.5x45
	68	670	18x35
	82	758	12.5x55
		752	18x40
	100	860	18x50

■ **HOW TO MAKE A PART NUMBER**



1. Series: **RQL**

2. Capacitance: Rated capacitance in µF is represented by a three digit number. The first two digits are the significant figures of the nominal capacitance and the third digit indicates the number of zeros following these figures. The decimal point is represented by the capital letter R. Please refer to the following example.

µF	10	47	100	470
Part Number	100	470	101	471

3. Tolerance: (20% IS Typical)

Code	M
Tolerance	± 20%

4. Rated Voltage: Voltage in volts (V) is represented by a two digit code showing the rated working voltage indicated as follows:

Voltage (WV)	160	200	250	350	400	450	500
Code	2C	2D	2E	2V	2G	2W	2H

5. Lead Forming & Package

Code	Lead Description	Packaging
BC	Bending Cut	Bulk Packing
BK	Straight Lead	Bulk Packing
CC	Lead Cutting	Bulk Packing
FC	Lead Forming & Cutting	Bulk Packing
SD	Cathode Lead Beading	Bulk Packing

6. Can Size

Diameter (mm)x16 & Length (mm)x20. Can Size 160200, represents 16mm diameter by 20mm length.

7. Sleeve Type\* = (Omit) PVC Sleeve

P = PET Sleeve

\*Note: All standard RFE Aluminum Electrolytic Capacitors are Lead (Pb) free and RoHS compliant. PET sleeve is available for those companies that also require PVC free product.

■ **RADIAL FORMING**

Lead Forming & Cutting Specifications for Radial Type (Unit: mm)

Forming Method	Code	Shape	Dimensions																																																																																
Forming Cut (4 ~ 8 )	FC		<table border="1"> <thead> <tr> <th>D x L</th> <th>d</th> <th>F</th> <th>F'</th> <th>H</th> </tr> </thead> <tbody> <tr><td>3 x 5</td><td>0.40</td><td>1.0</td><td>5.0</td><td>5.0</td></tr> <tr><td>4 x 5</td><td>0.45</td><td>1.5</td><td>5.0</td><td>5.0</td></tr> <tr><td>5 x 5</td><td>0.45</td><td>2.0</td><td>5.0</td><td>5.0</td></tr> <tr><td>6.3 ~ 8 x 5</td><td>0.45</td><td>2.5</td><td>5.0</td><td>5.0</td></tr> <tr><td>4 x 7</td><td>0.45</td><td>1.5</td><td>5.0</td><td>5.0</td></tr> <tr><td>5 x 7 ~ 11</td><td>0.5</td><td>2.0</td><td>5.0</td><td>5.0</td></tr> <tr><td>6 x 7 ~ 15</td><td>0.5</td><td>2.5</td><td>5.0</td><td>5.0</td></tr> <tr><td>8 x 7 ~ 9</td><td>0.5</td><td>3.5</td><td>5.0</td><td>5.0</td></tr> <tr><td>8 x 11.5 ~ 20</td><td>0.6</td><td>3.5</td><td>5.0</td><td>5.0</td></tr> <tr><td>10</td><td>0.6</td><td>5.0</td><td>-</td><td>4.5</td></tr> <tr><td>12.5</td><td>0.6</td><td>5.0</td><td>-</td><td>4.5</td></tr> <tr><td>16</td><td>0.8</td><td>7.5</td><td>-</td><td>4.5</td></tr> <tr><td>18</td><td>0.8</td><td>7.5</td><td>-</td><td>4.5</td></tr> <tr><td>22</td><td>1.0</td><td>10.0</td><td>-</td><td>4.5</td></tr> <tr><td>25</td><td>1.0</td><td>12.5</td><td>-</td><td>4.5</td></tr> </tbody> </table>	D x L	d	F	F'	H	3 x 5	0.40	1.0	5.0	5.0	4 x 5	0.45	1.5	5.0	5.0	5 x 5	0.45	2.0	5.0	5.0	6.3 ~ 8 x 5	0.45	2.5	5.0	5.0	4 x 7	0.45	1.5	5.0	5.0	5 x 7 ~ 11	0.5	2.0	5.0	5.0	6 x 7 ~ 15	0.5	2.5	5.0	5.0	8 x 7 ~ 9	0.5	3.5	5.0	5.0	8 x 11.5 ~ 20	0.6	3.5	5.0	5.0	10	0.6	5.0	-	4.5	12.5	0.6	5.0	-	4.5	16	0.8	7.5	-	4.5	18	0.8	7.5	-	4.5	22	1.0	10.0	-	4.5	25	1.0	12.5	-	4.5
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