

# RV Series

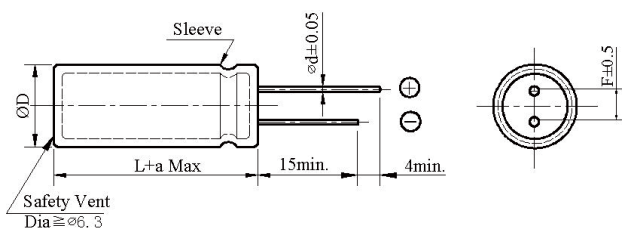
- Extremely miniaturized and high ripple current
- Load life 12,000~20,000 hours at 105°C;
- Suitable for output circuit and input circuit of LED driving power
- RoHS Compliant



## ◆ SPECIFICATIONS

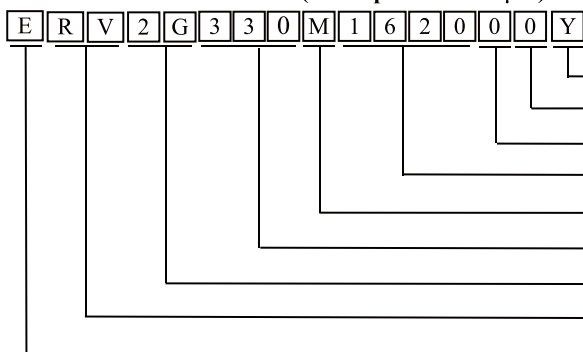
Item	Performance Characteristics																					
Category Temperature Range	-40 ~ +105°C																					
Working Voltage Range	160 ~ 450Vdc																					
Capacitance Range	1 ~ 68μF																					
Capacitance Tolerance	±20% (at 20°C and 120Hz)																					
Dissipation Factor (tanδ) (at 20°C, 120Hz)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>tanδ(Max)</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> </tr> </table>	Rated Voltage (V)	160	200	250	350	400	450	tanδ(Max)	0.24	0.24	0.24	0.24	0.24	0.24							
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Leakage Current	<table border="1"> <tr> <td>160~400Vdc</td> <td>450Vdc</td> </tr> <tr> <td><math>I \leq 0.03CV + 15\mu A</math> (2minutes)</td> <td><math>I \leq 0.03CV + 25\mu A</math> (2minutes)</td> </tr> </table> <p>I: Leakage current (μA) C: Rated capacitance (μF) V: Rated voltage (V)</p>	160~400Vdc	450Vdc	$I \leq 0.03CV + 15\mu A$ (2minutes)	$I \leq 0.03CV + 25\mu A$ (2minutes)																	
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Low Temperature Characteristics Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>5</td> <td>5</td> <td>8</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>8</td> <td>8</td> <td>8</td> <td>8</td> <td>8</td> <td>12</td> </tr> </table> <p>(at 120Hz)</p>	Rated Voltage (V)	160	200	250	350	400	450	Z(-25°C)/Z(+20°C)	3	3	3	5	5	8	Z(-40°C)/Z(+20°C)	8	8	8	8	8	12
	Rated Voltage (V)	160	200	250	350	400	450															
	Z(-25°C)/Z(+20°C)	3	3	3	5	5	8															
Z(-40°C)/Z(+20°C)	8	8	8	8	8	12																
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 12,000 to 20,000 hours at 105°C.																					
	<table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±30% of the initial value</td> <td>Size</td> <td>Life time (hours)</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 300% of the specified value</td> <td>6.3×9 6.3×12 8×9 10×9</td> <td>12,000</td> </tr> <tr> <td>Leakage current</td> <td>≒ specified value</td> <td>8×12 8×16 8×20 10×12</td> <td>15,000</td> </tr> <tr> <td></td> <td></td> <td>≥10×16</td> <td>20,000</td> </tr> </table>	Capacitance change	≒ ±30% of the initial value	Size	Life time (hours)	Dissipation factor(tanδ)	≒ 300% of the specified value	6.3×9 6.3×12 8×9 10×9	12,000	Leakage current	≒ specified value	8×12 8×16 8×20 10×12	15,000			≥10×16	20,000					
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Leakage current	≒ specified value	8×12 8×16 8×20 10×12	15,000																			
		≥10×16	20,000																			
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 20°C after the rated voltage applied for 1,000 hours at 105°C without voltage applied.																					
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## ◆ DIMENSIONS (mm)



ΦD	5	6.3	8	10	12.5	16	18
ΦD	ΦD +0.5 Max						
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
a	L+2.0 Max						

## ◆ PART NUMBER SYSTEM( Example : 400V 33μF )



## RV Series

◆ Case size & Permissible rated ripple current: (mA rms) at 105°C / 100KHz

Vdc μF	160		200		250	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
1.0	6.3×9	50	6.3×9	52	6.3×9	52
1.5	6.3×9	60	6.3×9	62	6.3×9	62
1.8	6.3×9	65	6.3×9	68	6.3×12	70
2.2	6.3×9	72	6.3×12	75	6.3×12	80
2.8	6.3×12	80	6.3×12	84	6.3×12	88
3.3	6.3×12	88	6.3×12	90	6.3×12	92
4.7	6.3×12	102	6.3×12	105	6.3×12	120
5.6	6.3×12	110	8×9	116	8×9	132
6.8	6.3×12	124	8×9	128	8×9	160
8.2	8×9	135	8×9	144	8×9	172
10	8×9	150	8×12	160	8×12	200
15	8×12	190	8×16	240	10×12	270
22	10×12	250	10×16	340	10×16	380
33	10×16	412	10×20	550	10×20	562
47	10×20	525	12.5×20	750	12.5×20	788
56	12.5×20	750	12.5×25	860	16×20	950
68	12.5×25	890	16×20	980	16×25	1100

Vdc μF	350		400		450	
	ΦD × L	RC	ΦD × L	RC	ΦD × L	RC
1.0	6.3×9	52	6.3×12	54	6.3×12	56
1.5	6.3×12	65	8×9	68	8×12	70
1.8	6.3×12	72	8×9	76	8×12	80
2.2	8×9	80	8×12	82	8×12	88
2.8	8×12	88	8×12	92	8×16	100
3.3	8×12	96	8×12	100	8×16	110
4.7	8×12	128	10×12	134	10×12	140
5.6	8×16	136	10×12	158	10×16	180
6.8	10×12	168	10×16	180	10×16	200
8.2	10×16	180	10×16	190	10×20	280
10	10×16	210	10×16	224	10×20	284
15	10×20	290	12.5×20	300	12.5×25	400
22	12.5×20	380	12.5×25	480	16×20	520
33	12.5×25	660	16×20	720	16×25	860
47	16×20	820	16×25	900	18×20	950

### ◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Frequency (Hz)				
	50	120	1K	10K	100K
160 ~ 450	0.45	0.50	0.80	0.90	1.00