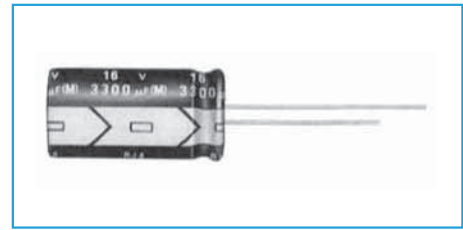
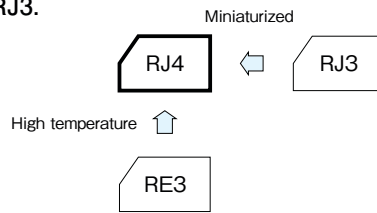


## 105°C Miniature Capacitors

GREEN CAP 105°C 2000hours Anti-cleaning solvent 250V Max.

- Case size is one rank smaller than Series RJ3.
- Guarantees 2000 hours at 105°C. (φ5 to φ8 : 1000 hours)



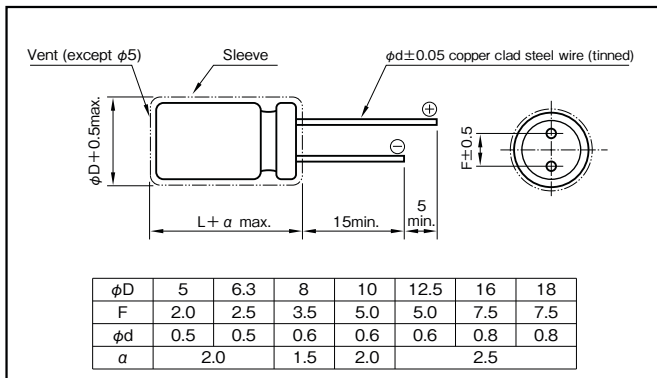
Marking color : White print on a black sleeve

### Specifications

Item	Performance																																																																									
Category temperature range (°C)	-55 to +105	-40 to +105																																																																								
Rated voltage (V)	6.3 to 100	160 to 450																																																																								
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)																																																																									
Leakage current (µA)	Less than 0.03CV or 4 whichever is larger (after 1 minute) Less than 0.01CV or 3 whichever is larger (after 2 minutes)	CV ≤ 1000 : Less than 0.1CV+40 (after 1 minute) CV > 1000 : Less than 0.04CV+100 (after 1 minute)																																																																								
	C : Rated capacitance (µF) ; V : Rated voltage (V) (20°C)																																																																									
Tangent of loss angle (tanδ)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>6.3</th><th>10</th><th>16</th><th>25</th><th>35</th><th>50</th><th>63</th><th>100</th><th>160</th><th>200</th><th>250</th><th>315</th><th>350</th><th>400</th><th>450</th> </tr> </thead> <tbody> <tr> <td>tan δ (max.)</td> <td>0.28</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</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><td>0.24</td> </tr> </tbody> </table> <p>0.02 is added to every 1000µF increase over 1000µF. (20°C, 120Hz)</p>														Rated voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400	450	tan δ (max.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.20	0.20	0.24	0.24	0.24	0.24																												
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Characteristics at high and low temperature	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>6.3</th><th>10</th><th>16</th><th>25</th><th>35</th><th>50</th><th>63</th><th>100</th><th>160 to 250</th><th>315 to 450</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Impedance ratio (max.)</td> <td>Z-25°C/Z+20°C</td> <td>5</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>4</td><td>4</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>10</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>15</td><td>10</td> </tr> </tbody> </table> <p>(120Hz)</p>														Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 to 250	315 to 450	Impedance ratio (max.)	Z-25°C/Z+20°C	5	4	3	2	2	2	2	4	4	Z-40°C/Z+20°C	10	8	6	4	3	3	3	15	10																												
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Endurance (105°C) (Applied ripple current)	<table border="1"> <thead> <tr> <th>Test time</th> <td colspan="14">2000 hours (φ5 to φ8 : 1000 hours)</td> </tr> <tr> <th>Leakage current</th> <td colspan="14">The initial specified value or less</td> </tr> <tr> <th>Percentage of capacitance change</th> <td colspan="14">Within ±20% of initial value</td> </tr> <tr> <th>Tangent of the loss angle</th> <td colspan="14">200% or less of the initial specified value</td> </tr> </thead> </table>														Test time	2000 hours (φ5 to φ8 : 1000 hours)														Leakage current	The initial specified value or less														Percentage of capacitance change	Within ±20% of initial value														Tangent of the loss angle	200% or less of the initial specified value													
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Shelf life (105°C)	Test time : 1000 hours ; other items are the same as those for the endurance. Voltage application treatment																																																																									
Applicable standards	JIS C5101-1, -4 1998 (IEC 60384-1 1992, -4 1985)																																																																									

### Outline Drawing

Unit : mm



### Coefficient of Frequency for Rated Ripple Current

Rated voltage (V)	Rated capacitance (µF)	Frequency (Hz)				
		50 - 60	120	1k	10k	100k
6.3 to 100	1 to 47	0.8	1	1.5	1.7	2.0
	100 to 220	0.8	1	1.2	1.3	1.4
	330 to 1000	0.8	1	1.2	1.2	1.3
	2200 to 22000	0.8	1	1.1	1.1	1.1
160 to 450	1 to 330	0.8	1	1.3	1.4	1.6

### Part numbering system (example : 16V2200µF)

RJ4	—	16	V	222	M	I5	#	□	—	□
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Optional symbol			Taping/Forming symbol

### Casing symbol

Size φD×L (mm)	Casing Symbol	Size φD×L (mm)	Casing Symbol
5×11	E3	12.5×25	I6
6.3×11	F3	16×25	J6
8×11.5	G3	16×31.5	J7
10×12.5	H3	16×35.5	J8
10×16	H4	18×31.5	K7
10×20	H5	18×35.5	K8
12.5×20	I5	18×40	K9

Standard Ratings

Rated voltage (V)	Item	6.3			10			16			25			35			50			63			100		
		Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current
		φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	199	15	—	—	—	5×11	133	15	
2.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	90.5	22	—	—	—	5×11	60.3	21	
3.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	60.3	27	—	—	—	5×11	40.2	29	
4.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	42.4	32	—	—	—	5×11	28.2	32	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	19.9	47	5×11	16.6	46	6.3×11	13.3	54	
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	9.05	70	5×11	7.54	71	6.3×11	6.03	93	
33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	6.03	90	6.3×11	5.03	100	8×11.5	4.02	130	
47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	4.24	115	6.3×11	3.53	120	10×12.5	2.82	165	
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5×11	3.98	105	6.3×11	3.32	115	6.3×11	2.65	141	
220	5×11	2.11	140	6.3×11	1.81	166	6.3×11	1.51	190	8×11.5	1.21	247	10×12.5	1.06	314	10×12.5	0.91	314	10×16	0.75	335	12.5×25	0.60	440	
330	6.3×11	1.41	195	6.3×11	1.21	210	8×11.5	1.01	271	10×12.5	0.81	360	10×12.5	0.70	384	10×16	0.60	421	10×20	0.50	510	12.5×25	0.40	540	
470	6.3×11	0.99	232	8×11.5	0.85	325	8×11.5	0.71	323	10×12.5	0.57	429	10×16	0.50	470	12.5×20	0.42	628	12.5×20	0.35	640	16×25	0.28	715	
1000	8×11.5	0.47	398	10×12.5	0.40	457	10×16	0.33	560	10×20	0.27	705	12.5×20	0.23	857	12.5×25	0.20	1000	16×25	0.17	930	18×40	0.13	985	
2200	10×20	0.23	720	10×20	0.20	761	12.5×20	0.17	961	12.5×25	0.14	1180	16×25	0.12	1380	16×35.5	0.11	1660	—	—	—	—	—	—	
3300	10×20	0.16	882	12.5×20	0.14	1010	12.5×25	0.12	1200	16×25	0.10	1440	16×35.5	0.09	1780	18×35.5	0.08	1990	—	—	—	—	—	—	
4700	12.5×20	0.12	1120	12.5×25	0.11	1250	16×25	0.09	1490	16×31.5	0.08	1880	18×35.5	0.07	2120	—	—	—	—	—	—	—	—	—	
6800	12.5×25	0.09	1380	16×25	0.08	1570	16×35.5	0.07	1830	18×35.5	0.06	2330	—	—	—	—	—	—	—	—	—	—	—	—	
10000	16×25	0.07	1750	16×35.5	0.07	1910	18×35.5	0.06	2220	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15000	16×35.5	0.06	2040	18×35.5	0.06	2190	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22000	18×40	0.05	2390	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Rated voltage (V)	Item	160			200			250			315			350			400			450			
		Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	
		φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	φD×L (mm)	(Ω)	(mA <sub>rms</sub> )	
0.47	6.3×11	706	11	6.3×11	706	11	6.3×11	706	11	6.3×11	847	11	6.3×11	847	11	6.3×11	847	11	8×11.5	847	13		
1	6.3×11	332	16	6.3×11	332	16	6.3×11	332	16	6.3×11	398	16	6.3×11	398	16	6.3×11	398	16	8×11.5	398	18		
2.2	6.3×11	151	23	6.3×11	151	23	6.3×11	151	23	8×11.5	181	27	8×11.5	181	27	8×11.5	181	27	10×12.5	181	31		
3.3	6.3×11	101	28	6.3×11	101	28	8×11.5	101	34	10×12.5	121	38	10×12.5	121	38	10×12.5	121	38	10×16	121	42		
4.7	6.3×11	70.6	34	8×11.5	70.6	40	8×11.5	70.6	40	10×12.5	84.7	45	10×12.5	84.7	45	10×16	84.7	50	10×20	84.7	54		
10	8×11.5	33.2	58	10×12.5	33.2	66	10×16	33.2	74	10×20	39.8	79	10×20	39.8	79	12.5×20	39.8	87	12.5×20	39.8	87		
22	10×16	15.1	107	10×20	15.1	120	12.5×20	15.1	130	12.5×20	18.1	129	12.5×25	18.1	140	12.5×25	18.1	140	16×25	18.1	160		
33	10×20	10.1	143	12.5×20	10.1	160	12.5×25	10.1	172	16×25	12.1	196	16×25	12.1	196	16×25	12.1	196	16×31.5	12.1	215		
47	12.5×20	7.06	188	12.5×20	7.06	188	12.5×25	7.06	205	16×25	8.47	234	16×25	8.47	234	16×31.5	8.47	256	16×35.5	8.47	269		
100	12.5×25	3.32	299	16×25	3.32	342	16×31.5	3.32	374	18×31.5	3.98	401	18×31.5	3.98	401	—	—	—	—	—	—	—	—
220	16×31.5	1.51	554	18×35.5	1.51	624	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
330	18×35.5	1.01	764	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 105°C, 120Hz ; ESR. : 20°C, 120Hz