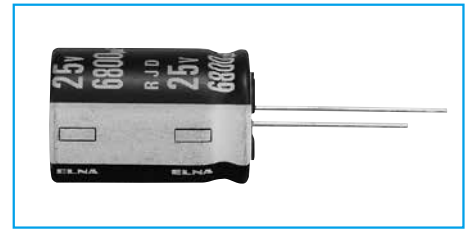


## 105°C Use, miniature, High-Reliability, Low ESR Capacitors

GREEN CAP Low ESR 105°C 8000hours Anti-cleaning solvent

- Smaller and higher ripple current than RJB series.
- Guarantees 8000 hours at 105°C.  
( $\phi 5$  to  $6.3$ : 2000 hours;  $\phi 8$ : 3000 hours;  $\phi 10$ : 5000 hours)



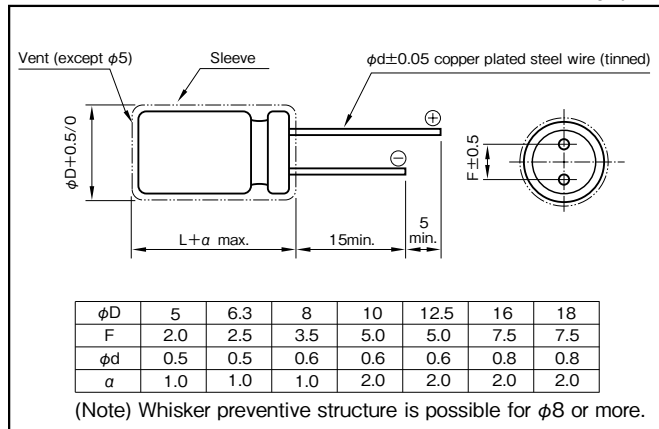
Marking color : White print on a black sleeve

### Specifications

Item	Performance																																								
Category temperature range (°C)	-55 to +105																																								
Tolerance at rated capacitance (%)	$\pm 20$ (20°C, 120Hz)																																								
Leakage current ( $\mu A$ ) (max.)	0.01 CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance ( $\mu F$ ), V : Rated voltage (V) (20°C)																																								
Tangent of loss angle ( $\tan \delta$ )	<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>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td><math>\tan \delta</math> (max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> </tr> </tbody> </table> <p>0.02 is added to every 1000<math>\mu F</math> increase over 1000<math>\mu F</math>. (20°C, 120Hz)</p>	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100	$\tan \delta$ (max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.10	0.08	0.08																				
Rated voltage (V)	6.3	10	16	25	35	50	63	80	100																																
$\tan \delta$ (max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.10	0.08	0.08																																
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>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Impedance ratio (max.)</td> <td>Z-55°C/Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table> <p>(120Hz)</p>	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100	Impedance ratio (max.)	Z-55°C/Z+20°C	3	3	3	3	3	3	3	3																				
Rated voltage (V)	6.3	10	16	25	35	50	63	80	100																																
Impedance ratio (max.)	Z-55°C/Z+20°C	3	3	3	3	3	3	3	3																																
Endurance (105°C) (Applied ripple current)	<table border="1"> <thead> <tr> <th>Test time</th> <th><math>\phi 5</math> &amp; <math>6.3</math></th> <th><math>\phi 8</math></th> <th><math>\phi 10</math></th> <th><math>\phi 12.5</math> or more</th> </tr> </thead> <tbody> <tr> <td>Leakage current</td> <td colspan="4">: 2000 hours</td> </tr> <tr> <td>Percentage of capacitance change</td> <td colspan="4">: 3000 hours</td> </tr> <tr> <td>Tangent of the loss angle</td> <td colspan="4">: 5000 hours</td> </tr> <tr> <td></td> <td colspan="4">: 8000 hours</td> </tr> <tr> <td></td> <td colspan="4">The initial specified value or less</td> </tr> <tr> <td></td> <td colspan="4">Within <math>\pm 20\%</math> of initial value</td> </tr> <tr> <td></td> <td colspan="4">200% or less of the initial specified value</td> </tr> </tbody> </table>	Test time	$\phi 5$ & $6.3$	$\phi 8$	$\phi 10$	$\phi 12.5$ or more	Leakage current	: 2000 hours				Percentage of capacitance change	: 3000 hours				Tangent of the loss angle	: 5000 hours					: 8000 hours					The initial specified value or less					Within $\pm 20\%$ of initial value					200% or less of the initial specified value			
Test time	$\phi 5$ & $6.3$	$\phi 8$	$\phi 10$	$\phi 12.5$ or more																																					
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	Within $\pm 20\%$ of initial value																																								
	200% or less of the initial specified value																																								
Shelf life (105°C)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment : According to JIS C5101-4 4.1																																								
Applicable standards	JIS C5101 - 1,- 4 (IEC 60384 - 1,- 4)																																								

### Outline Drawing

Unit : mm



### Coefficient of Frequency for Rated Ripple Current

Rated Capacitance ( $\mu F$ ) \ Frequency (Hz)	50 · 60	120	300	1k	10k · 100k
56 or less	0.20	0.30	0.50	0.80	1
68 to 330	0.55	0.65	0.75	0.85	1
390 to 1000	0.70	0.75	0.80	0.90	1
1200 to 18000	0.80	0.85	0.90	0.95	1

### Product code system : 25V10000 $\mu F$ (\*For general product)

RS*	RJD	103	M	1T	K40		T
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Lead-forming and packing code	Additional code

- If it is whisker preventive structure, should change "T" into "G".
- For details, refer to the various "Product Code System" pages.

## Standard Ratings

Rated voltage(V) Item	6.3 (1J)					10 (1L)					16 (1E)				
	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mA rms)	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mA rms)	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mA rms)
			20°C	-10°C				20°C	-10°C				20°C	-10°C	
22	—	—	—	—	—	—	—	—	—	—	5 × 11.5	C11	0.50	1.0	182
33	—	—	—	—	—	—	—	—	—	—	5 × 11.5	C11	0.50	1.0	182
47	—	—	—	—	—	—	—	—	—	—	5 × 11.5	C11	0.50	1.0	182
82	—	—	—	—	—	—	—	—	—	—	5 × 11.5	C11	0.50	1.0	182
100	—	—	—	—	—	5 × 11.5	C11	0.50	1.0	182	6.3 × 11.5	D11	0.25	0.50	295
150	5 × 11.5	C11	0.50	1.0	182	—	—	—	—	—	6.3 × 11.5	D11	0.25	0.50	295
180	—	—	—	—	—	6.3 × 11.5	D11	0.25	0.50	295	8 × 12	E12	0.117	0.234	567
220	—	—	—	—	—	6.3 × 11.5	D11	0.25	0.50	295	8 × 12	E12	0.117	0.234	567
330	6.3 × 11.5	D11	0.25	0.50	295	8 × 12	E12	0.117	0.234	567	8 × 12	E12	0.117	0.234	567
390	—	—	—	—	—	—	—	—	—	—	8 × 12	E12	0.117	0.234	567
470	8 × 12	E12	0.117	0.234	567	8 × 12	E12	0.117	0.234	567	8 × 15	E15	0.085	0.170	733
											10 × 12.5	F12	0.090	0.180	764
560	8 × 12	E12	0.117	0.234	567	8 × 12	E12	0.117	0.234	567	8 × 20	E20	0.065	0.130	996
680	8 × 12	E12	0.117	0.234	567	—	—	—	—	—	8 × 15	E15	0.085	0.170	733
											10 × 12.5	F12	0.090	0.180	764
820	—	—	—	—	—	8 × 15	E15	0.085	0.170	733	8 × 20	E20	0.065	0.130	996
						10 × 12.5	F12	0.090	0.180	764	10 × 16	F16	0.068	0.136	1060
1000	8 × 15	E15	0.085	0.170	733	8 × 20	E20	0.065	0.130	996	10 × 16	F16	0.068	0.136	1060
	10 × 12.5	F12	0.090	0.180	764	10 × 12.5	F12	0.090	0.180	764	10 × 20	F20	0.052	0.104	1230
1200	10 × 12.5	F12	0.090	0.180	764	8 × 20	E20	0.065	0.130	996	10 × 20	F20	0.052	0.104	1230
	10 × 16	F16	0.068	0.136	1060	10 × 16	F16	0.068	0.136	1060	10 × 25	F25	0.045	0.090	1450
1500	8 × 20	E20	0.065	0.130	996	10 × 20	F20	0.052	0.104	1230	10 × 25	F25	0.045	0.090	1450
	10 × 16	F16	0.068	0.136	1060	12.5 × 15	G15	0.062	0.124	1210	10 × 30	F30	0.035	0.070	1830
1800	12.5 × 15	G15	0.062	0.124	1210	10 × 20	F20	0.052	0.104	1230	—	—	—	—	—
						10 × 25	F25	0.045	0.090	1450					
2200	10 × 20	F20	0.052	0.104	1230	10 × 25	F25	0.045	0.090	1450	10 × 30	F30	0.035	0.070	1830
	10 × 25	F25	0.045	0.090	1450	12.5 × 20	G20	0.038	0.076	1700	12.5 × 20	G20	0.038	0.076	1700
											16 × 16	J16	0.043	0.086	1700
2700	10 × 25	F25	0.045	0.090	1450	10 × 30	F30	0.035	0.070	1830	12.5 × 25	G25	0.030	0.060	1950
						12.5 × 20	G20	0.038	0.076	1700	18 × 16	K16	0.038	0.076	2010
3300	10 × 30	F30	0.035	0.070	1830	12.5 × 25	G25	0.030	0.060	1950	12.5 × 30	G30	0.025	0.050	2330
	12.5 × 20	G20	0.038	0.076	1700						16 × 20	J20	0.029	0.058	2230
3900	12.5 × 25	G25	0.030	0.060	1950	12.5 × 25	G25	0.030	0.060	1950	12.5 × 35	G35	0.022	0.044	2620
						18 × 16	K16	0.038	0.076	2010	16 × 20	J20	0.029	0.058	2230
4700	12.5 × 25	G25	0.030	0.060	1950	12.5 × 30	G30	0.025	0.050	2330	12.5 × 40	G40	0.017	0.034	3160
	18 × 16	K16	0.038	0.076	2010	16 × 20	J20	0.029	0.058	2230	16 × 25	J25	0.022	0.044	2650
											18 × 20	K20	0.028	0.056	2500
5600	12.5 × 30	G30	0.025	0.050	2330	12.5 × 35	G35	0.022	0.044	2620	16 × 25	J25	0.022	0.044	2650
	16 × 20	J20	0.029	0.058	2230						16 × 31.5	J31	0.018	0.036	3210
6800	12.5 × 35	G35	0.022	0.044	2620	12.5 × 40	G40	0.017	0.034	3160	18 × 25	K25	0.020	0.040	3000
						16 × 25	J25	0.022	0.044	2650					
8200	12.5 × 40	G40	0.017	0.034	3160	16 × 31.5	J31	0.018	0.036	3210	18 × 35.5	K35	0.015	0.030	3960
	16 × 25	J25	0.022	0.044	2650										
	18 × 20	K20	0.028	0.056	2500	18 × 25	K25	0.020	0.040	3000					
10000	16 × 31.5	J31	0.018	0.036	3210	16 × 40	J40	0.015	0.030	3880	18 × 40	K40	0.014	0.028	4300
	18 × 25	K25	0.020	0.040	3000	18 × 35.5	K35	0.015	0.030	3960					
12000	18 × 25	K25	0.020	0.040	3000	—	—	—	—	—	—	—	—	—	—
15000	18 × 35.5	K35	0.015	0.030	3960	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—
18000	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 105°C , 100kHz ; ESR : 100kHz

NOTE : Design, Specifications are subject to change without notice.  
It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.

## Standard Ratings

Rated voltage(V) Rated capacitance (μF) Item	25 (1T)					35 (1G)					50 (1U)				
	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mAmps)	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mAmps)	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mAmps)
			20°C	-10°C				20°C	-10°C				20°C	-10°C	
10	5 × 11.5	C11	0.50	1.0	182	5 × 11.5	C11	0.50	1.0	182	5 × 11.5	C11	0.90	1.8	173
22	5 × 11.5	C11	0.50	1.0	182	5 × 11.5	C11	0.50	1.0	182	5 × 11.5	C11	0.90	1.8	173
27	5 × 11.5	C11	0.50	1.0	182	5 × 11.5	C11	0.50	1.0	182	5 × 11.5	C11	0.90	1.8	173
33	5 × 11.5	C11	0.50	1.0	182	5 × 11.5	C11	0.50	1.0	182	6.3 × 11.5	D11	0.40	0.80	285
47	5 × 11.5	C11	0.50	1.0	182	6.3 × 11.5	D11	0.25	0.50	295	6.3 × 11.5	D11	0.40	0.80	285
56	5 × 11.5	C11	0.50	1.0	182	6.3 × 11.5	D11	0.25	0.50	295	6.3 × 11.5	D11	0.40	0.80	285
82	6.3 × 11.5	D11	0.25	0.50	295	6.3 × 11.5	D11	0.25	0.50	295	8 × 12	E12	0.19	0.38	508
100	6.3 × 11.5	D11	0.25	0.50	295	8 × 12	E12	0.117	0.234	567	8 × 15	E15	0.155	0.31	636
150	8 × 12	E12	0.117	0.234	567	8 × 12	E12	0.117	0.234	567	10 × 12.5	F12	0.17	0.34	628
180	—	—	—	—	—	8 × 12	E12	0.117	0.234	567	10 × 12.5	F12	0.17	0.34	628
220	8 × 12	E12	0.117	0.234	567	8 × 15	E15	0.085	0.170	733	10 × 16	F16	0.119	0.238	850
270	8 × 12	E12	0.117	0.234	567	8 × 15	E15	0.085	0.170	733	10 × 20	F20	0.081	0.162	1120
330	8 × 12	E12	0.117	0.234	567	10 × 12.5	F12	0.090	0.180	764	10 × 20	F20	0.081	0.162	1120
	10 × 12.5	F12	0.090	0.180	764	8 × 20	E20	0.065	0.130	996	10 × 20	F20	0.081	0.162	1120
390	8 × 15	E15	0.085	0.170	733	10 × 16	F16	0.068	0.136	1060	12.5 × 15	G15	0.09	0.18	1170
	8 × 15	E15	0.085	0.170	733	8 × 20	E20	0.065	0.130	996	—	—	—	—	—
470	8 × 15	E15	0.085	0.170	733	10 × 16	F16	0.068	0.136	1060	—	—	—	—	—
	10 × 12.5	F12	0.090	0.180	764	10 × 20	F20	0.052	0.104	1230	12.5 × 20	G20	0.057	0.114	1540
560	8 × 20	E20	0.065	0.130	996	10 × 20	F20	0.052	0.104	1230	12.5 × 25	G25	0.042	0.084	1910
	10 × 16	F16	0.068	0.136	1060	12.5 × 15	G15	0.062	0.124	1210	—	—	—	—	—
680	10 × 16	F16	0.068	0.136	1060	10 × 25	F25	0.045	0.090	1450	18 × 20	K20	0.034	0.068	2420
820	10 × 20	F20	0.052	0.104	1230	12.5 × 20	G20	0.038	0.076	1700	12.5 × 30	G30	0.038	0.076	2290
	12.5 × 15	G15	0.062	0.124	1210	—	—	—	—	—	18 × 20	K20	0.034	0.068	2420
1000	10 × 25	F25	0.045	0.090	1450	10 × 30	F30	0.035	0.070	1830	16 × 25	J25	0.031	0.062	2450
	12.5 × 20	G20	0.038	0.076	1700	12.5 × 20	G20	0.038	0.076	1700	18 × 20	K20	0.034	0.068	2420
1200	12.5 × 20	G20	0.038	0.076	1700	12.5 × 25	G25	0.030	0.060	1950	18 × 25	K25	0.029	0.058	2750
	—	—	—	—	—	18 × 16	K16	0.038	0.076	2010	—	—	—	—	—
1500	10 × 30	F30	0.035	0.070	1830	12.5 × 30	G30	0.025	0.050	2330	16 × 31.5	J31	0.027	0.054	3100
	16 × 16	J16	0.043	0.086	1700	16 × 20	J20	0.029	0.058	2230	18 × 25	K25	0.029	0.058	2750
1800	12.5 × 25	G25	0.030	0.060	1950	12.5 × 35	G35	0.022	0.044	2620	16 × 35.5	J35	0.023	0.046	3530
	18 × 16	K16	0.038	0.076	2010	16 × 20	J20	0.029	0.058	2230	18 × 31.5	K31	0.025	0.050	3200
2200	12.5 × 30	G30	0.025	0.050	2330	12.5 × 40	G40	0.017	0.034	3160	16 × 40	J40	0.020	0.040	3830
	16 × 20	J20	0.029	0.058	2230	16 × 25	J25	0.022	0.044	2650	18 × 35.5	K35	0.022	0.044	3670
2700	12.5 × 35	G35	0.022	0.044	2620	18 × 20	K20	0.028	0.056	2500	—	—	—	—	—
	18 × 25	K25	0.020	0.040	3000	16 × 31.5	J31	0.018	0.036	3210	18 × 40	K40	0.018	0.036	4160
3300	12.5 × 40	G40	0.017	0.034	3160	18 × 25	K25	0.020	0.040	3000	—	—	—	—	—
	16 × 25	J25	0.022	0.044	2650	18 × 31.5	K31	0.016	0.032	3660	—	—	—	—	—
3900	18 × 20	K20	0.028	0.056	2500	18 × 35.5	K35	0.015	0.030	3960	—	—	—	—	—
	—	—	—	—	—	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—
4700	18 × 25	K25	0.020	0.040	3000	18 × 35.5	K35	0.015	0.030	3960	—	—	—	—	—
	—	—	—	—	—	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—
5600	18 × 35.5	K35	0.015	0.030	3960	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—
6800	18 × 35.5	K35	0.015	0.030	3960	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—
8200	—	—	—	—	—	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—
10000	18 × 40	K40	0.014	0.028	4300	—	—	—	—	—	—	—	—	—	

Rated voltage(V) Rated capacitance (μF) Item	63 (4E)					80 (1R)					100 (1H)				
	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mAmps)	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mAmps)	Case φD × L (mm)	Size code	ESR (Ω max.)		Rated ripple current (mAmps)
			20°C	-10°C				20°C	-10°C				20°C	-10°C	
10	5 × 11.5	C11	2.5	10	135	5 × 11.5	C11	2.5	10	135	6.3 × 11.5	D11	1.70	6.8	186
22	6.3 × 11.5	D11	1.2	4.8	225	8 × 12	E12	0.60	1.8	380	8 × 12	E12	0.70	2.1	315
27	6.3 × 11.5	D11	1.2	4.8	225	—	—	—	—	—	—	—	—	—	—
33	6.3 × 11.5	D11	1.2	4.8	225	8 × 12	E12	0.60	1.8	380	8 × 15	E15	0.51	1.53	423
47	8 × 12	E12	0.60	1.8	380	8 × 15	E15	0.45	1.4	470	10 × 12.5	F12	0.54	1.08	392
56	8 × 12	E12	0.60	1.8	380	10 × 12.5	F12	0.47	0.94	480	10 × 16	F16	0.37	0.74	520
82	8 × 20	E20	0.30	0.90	682	10 × 16	F16	0.32	0.64	620	10 × 20	F20	0.29	0.58	640
100	10 × 16	F16	0.32	0.64	620	10 × 20	F20	0.25	0.50	800	10 × 25	F25	0.20	0.40	820
150	10 × 20	F20	0.25	0.50	800	12.5 × 20	G20	0.075	0.15	1340	12.5 × 25	G25	0.11	0.22	1200
180	10 × 25	F25	0.18	0.36	960	—	—	—	—	—	—	—	—	—	—
220	12.5 × 20	G20	0.075	0.15	1340	12.5 × 25	G25	0.065	0.13	1730	12.5 × 30	G30	0.090	0.18	1450
330	12.5 × 25	G25	0.065	0.13	1730	12.5 × 30	G30	0.055	0.11	2110	16 × 25	J25	0.079	0.16	1650
470	12.5 × 30	G30	0.055	0.11	2110	16 × 31.5	J31	0.042	0.084	2710	16 × 35.5	J35	0.052	0.104	2340
	16 × 25	J25	0.052	0.104	2180	18 × 25	K25	0.050	0.10	2610	18 × 31.5	K31	0.054	0.108	2350
560	16 × 25	J25	0.052	0.104	2180	16 × 31.5	J31	0.042	0.084	2710	16 × 40	J40	0.045	0.090	2650
	18 × 20	K20	0.058	0.116	2290	18 × 25	K25	0.050	0.10	2610	18 × 35.5	K35	0.044	0.088	2730
680	16 × 31.5	J31	0.042	0.084	2710	16 × 35.5	J35	0.036	0.072	2820	16 × 40	J40	0.045	0.090	2650
	18 × 25	K25	0.050	0.10	2610	18 × 31.5	K31	0.042	0.084	3080	18 × 35.5	K35	0.044	0.088	2730
820	16 × 31.5	J31	0.042	0.084	2710	16 × 40	J40	0.032	0.064	3140	18 × 40	K40	0.039	0.078	3050
	18 × 25	K25	0.050	0.10	2610	18 × 35.5	K35	0.035	0.070	3530	—	—	—	—	—
1000	16 × 35.5	J35	0.036	0.072	2820	—	—	—	—	—	—	—	—	—	—
	18 × 31.5	K31	0.042	0.084	3080	18 × 40	K40	0.032	0.064	3880	—	—	—	—	—
1500	18 × 35.5	K35	0.035	0.070	3530	—	—	—	—	—	—	—	—	—	—
1800	18 × 40	K40	0.032	0.064	3880	—	—	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 105°C, 100kHz ; ESR : 100kHz

NOTE : Design, Specifications are subject to change without notice.  
It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.