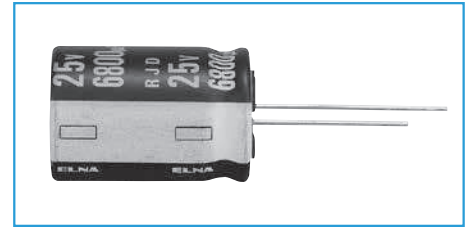


## 105°C Use, miniature, Hi-Reliability, Low ESR Capacitors

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)



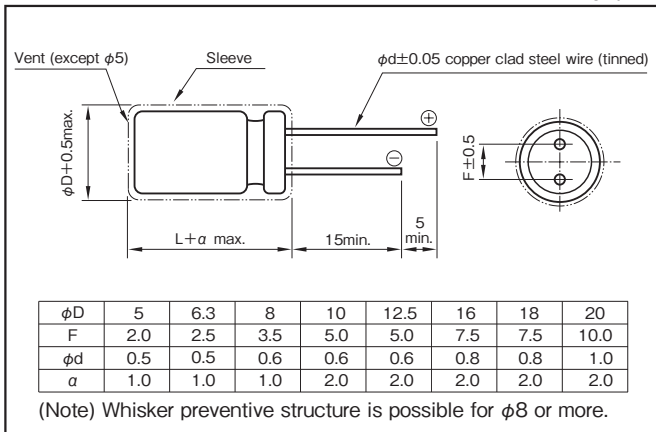
Marking color : White print on a black sleeve



### Specifications

Item	Performance										
Category temperature range (°C)	-55 to +105										
Tolerance at rated capacitance (%)	$\pm 20$ (20°C, 120Hz)										
Leakage current ( $\mu A$ )	Less than 0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance ( $\mu F$ ), V : Rated voltage (V) (20°C)										
Tangent of loss angle (tan $\delta$ )	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	
0.02 is added to every 1000 $\mu F$ increase over 1000 $\mu F$ . (20°C, 120Hz)											
Characteristics at high and low temperature	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	3
(120Hz)											
Endurance (105°C) (Applied ripple current)	Test time	$\phi 5$ & $6.3$ : 2000 hours $\phi 8$ : 3000 hours $\phi 10$ : 5000 hours $\phi 12.5$ to $\phi 20$ : 8000 hours									
	Leakage current	The initial specified value or less									
	Percentage of capacitance change	Within $\pm 20\%$ of initial value									
	Tangent of the loss angle	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										
Applicable standards	JIS C5101-1, -4 1998 (IEC 60384-1 1992, -4 1985)										

### Outline Drawing



### 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

### Part numbering system (example : 6.3V10000 $\mu F$ )

RJD	—	6	V	103	M	J7	#	—	
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol			Taping(Forming) symbol

If it is whisker preventive structure, should change “#” into “G”.



## Standard Ratings

Rated voltage(V)	Item	25					35					50				
		Case φD × L (mm)	Casing symbol	ESR (Ω max.)		Rated ripple current (mA rms)	Case φD × L (mm)	Casing symbol	ESR (Ω max.)		Rated ripple current (mA rms)	Case φD × L (mm)	Casing symbol	ESR (Ω max.)		Rated ripple current (mA rms)
				20°C	-10°C				20°C	-10°C				20°C	-10°C	
10	5 × 11.5	E3	0.50	1.0	182	5 × 11.5	E3	0.50	1.0	182	5 × 11.5	E3	0.90	1.8	173	
22	5 × 11.5	E3	0.50	1.0	182	5 × 11.5	E3	0.50	1.0	182	5 × 11.5	E3	0.90	1.8	173	
27	5 × 11.5	E3	0.50	1.0	182	5 × 11.5	E3	0.50	1.0	182	5 × 11.5	E3	0.90	1.8	173	
33	5 × 11.5	E3	0.50	1.0	182	5 × 11.5	E3	0.50	1.0	182	6.3 × 11.5	F3	0.40	0.80	285	
47	5 × 11.5	E3	0.50	1.0	182	6.3 × 11.5	F3	0.25	0.50	295	6.3 × 11.5	F3	0.40	0.80	285	
56	5 × 11.5	E3	0.50	1.0	182	6.3 × 11.5	F3	0.25	0.50	295	6.3 × 11.5	F3	0.40	0.80	285	
82	6.3 × 11.5	F3	0.25	0.50	295	6.3 × 11.5	F3	0.25	0.50	295	8 × 12	G3	0.19	0.38	508	
100	6.3 × 11.5	F3	0.25	0.50	295	8 × 12	G3	0.117	0.234	567	8 × 15	G4	0.155	0.31	636	
150	8 × 12	G3	0.117	0.234	567	8 × 12	G3	0.117	0.234	567	10 × 12.5	H3	0.17	0.34	628	
180	—	—	—	—	—	8 × 12	G3	0.117	0.234	567	10 × 12.5	H3	0.17	0.34	628	
220	8 × 12	G3	0.117	0.234	567	8 × 15	G4	0.085	0.170	733	10 × 16	H4	0.119	0.238	850	
270	8 × 12	G3	0.117	0.234	567	8 × 15	G4	0.085	0.170	733	10 × 20	H5	0.081	0.162	1120	
330	8 × 12	G3	0.117	0.234	567	10 × 12.5	H3	0.090	0.180	764	10 × 20	H5	0.081	0.162	1120	
	10 × 12.5	H3	0.090	0.180	764	8 × 20	G5	0.065	0.130	996	12.5 × 15	I4	0.09	0.18	1170	
390	8 × 15	G4	0.085	0.170	733	10 × 16	H4	0.068	0.136	1060	—	—	—	—	—	
	8 × 15	G4	0.085	0.170	733	8 × 20	G5	0.065	0.130	996	—	—	—	—	—	
470	10 × 12.5	H3	0.090	0.180	764	10 × 16	H4	0.068	0.136	1060	—	—	—	—	—	
	8 × 15	G4	0.085	0.170	733	10 × 20	H5	0.052	0.104	1230	12.5 × 20	I5	0.057	0.114	1540	
560	10 × 16	H4	0.068	0.136	1060	10 × 20	H5	0.052	0.104	1230	12.5 × 25	I6	0.042	0.084	1910	
	10 × 16	H4	0.068	0.136	1060	12.5 × 15	I4	0.062	0.124	1210	18 × 20	K5	0.034	0.068	2420	
680	10 × 16	H4	0.068	0.136	1060	10 × 25	H6	0.045	0.090	1450	18 × 20	K5	0.034	0.068	2420	
820	10 × 20	H5	0.052	0.104	1230	10 × 30	H7	0.035	0.070	1830	12.5 × 30	I7	0.038	0.076	2290	
	12.5 × 15	I4	0.062	0.124	1210	12.5 × 20	I5	0.038	0.076	1700	18 × 20	K5	0.034	0.068	2420	
1000	10 × 25	H6	0.045	0.090	1450	12.5 × 25	I6	0.030	0.060	1950	16 × 25	J6	0.031	0.062	2450	
	12.5 × 20	I5	0.038	0.076	1700	18 × 20	K5	0.034	0.068	2420	18 × 20	K5	0.034	0.068	2420	
1200	12.5 × 20	I5	0.038	0.076	1700	18 × 25	K6	0.029	0.058	2750	18 × 25	K6	0.029	0.058	2750	
	10 × 30	H7	0.035	0.070	1830	18 × 16	K4	0.038	0.076	2010	18 × 25	K6	0.029	0.058	2750	
1500	16 × 16	J4	0.043	0.086	1700	12.5 × 30	I7	0.025	0.050	2330	16 × 31.5	J7	0.027	0.054	3100	
	12.5 × 25	I6	0.030	0.060	1950	16 × 20	J5	0.029	0.058	2230	18 × 25	K6	0.029	0.058	2750	
1800	18 × 16	K4	0.038	0.076	2010	16 × 20	J5	0.029	0.058	2230	16 × 20	J5	0.029	0.058	2230	
	12.5 × 30	I7	0.025	0.050	2330	12.5 × 40	J9	0.017	0.034	3160	18 × 35.5	J8	0.023	0.046	3530	
2200	16 × 20	J5	0.029	0.058	2230	16 × 25	J6	0.022	0.044	2650	18 × 31.5	K7	0.025	0.050	3200	
	12.5 × 35	I8	0.022	0.044	2620	18 × 20	K5	0.028	0.056	2500	16 × 40	J9	0.020	0.040	3830	
2700	18 × 25	K6	0.020	0.040	3000	16 × 31.5	J7	0.018	0.036	3210	18 × 35.5	K8	0.022	0.044	3670	
	12.5 × 40	I9	0.017	0.034	3160	18 × 25	K6	0.020	0.040	3000	18 × 40	K9	0.018	0.036	4160	
3300	16 × 25	J6	0.022	0.044	2650	18 × 25	K6	0.020	0.040	3000	—	—	—	—	—	
	18 × 20	K5	0.028	0.056	2500	18 × 31.5	K7	0.016	0.032	3660	—	—	—	—	—	
3900	—	—	—	—	—	18 × 35.5	K8	0.015	0.030	3960	—	—	—	—	—	
	—	—	—	—	—	18 × 40	K9	0.014	0.028	4300	—	—	—	—	—	
4700	18 × 25	K6	0.020	0.040	3000	20 × 25	L6	0.019	0.038	3920	—	—	—	—	—	
	18 × 35.5	K8	0.015	0.030	3960	18 × 35.5	K8	0.015	0.030	3960	—	—	—	—	—	
5600	20 × 25	L6	0.019	0.038	3920	18 × 40	K9	0.014	0.028	4300	—	—	—	—	—	
	18 × 35.5	K8	0.015	0.030	3960	20 × 30	L7	0.018	0.036	4270	—	—	—	—	—	
6800	20 × 30	L7	0.018	0.036	4270	18 × 40	K9	0.014	0.028	4300	—	—	—	—	—	
	20 × 35.5	L8	0.014	0.028	5250	20 × 40	L9	0.013	0.026	5680	—	—	—	—	—	
8200	20 × 35.5	L8	0.014	0.028	5250	18 × 40	K9	0.014	0.028	4300	—	—	—	—	—	
	18 × 40	K9	0.014	0.028	4300	20 × 40	L9	0.013	0.026	5680	—	—	—	—	—	
10000	18 × 40	K9	0.014	0.028	4300	—	—	—	—	—	—	—	—	—	—	
	20 × 40	L9	0.013	0.026	5680	—	—	—	—	—	—	—	—	—	—	

Rated voltage(V)	Item	63					80					100				
		Case φD × L (mm)	Casing symbol	ESR (Ω max.)		Rated ripple current (mA rms)	Case φD × L (mm)	Casing symbol	ESR (Ω max.)		Rated ripple current (mA rms)	Case φD × L (mm)	Casing symbol	ESR (Ω max.)		Rated ripple current (mA rms)
				20°C	-10°C				20°C	-10°C				20°C	-10°C	
10	5 × 11.5	E3	1.1	2.2	162	5 × 11.5	E3	1.90	3.8	123	6.3 × 11.5	F3	1.1	2.2	186	
22	6.3 × 11.5	F3	0.54	1.1	265	8 × 12	G3	0.53	1.1	315	8 × 12	G3	0.53	1.1	315	
27	6.3 × 11.5	F3	0.54	1.1	265	—	—	—	—	—	—	—	—	—	—	
33	6.3 × 11.5	F3	0.54	1.1	265	8 × 12	G3	0.53	1.1	315	8 × 15	G4	0.35	0.70	423	
47	8 × 12	G3	0.32	0.64	406	8 × 15	G4	0.35	0.70	423	10 × 12.5	H3	0.47	0.94	392	
56	8 × 12	G3	0.32	0.64	406	10 × 12.5	H3	0.47	0.94	392	10 × 16	H4	0.32	0.64	520	
82	8 × 20	G5	0.17	0.34	682	10 × 16	H4	0.32	0.64	520	10 × 20	H5	0.25	0.50	640	
100	10 × 16	H4	0.17	0.34	710	10 × 20	H5	0.25	0.50	640	10 × 25	H6	0.155	0.31	636	
150	10 × 20	H5	0.12	0.24	920	12.5 × 20	I5	0.13	0.26	1010	12.5 × 25	I6	0.11	0.22	1200	
180	10 × 25	H6	0.10	0.20	1110	—	—	—	—	—	—	—	—	—	—	
220	12.5 × 20	I5	0.075	0.15	1340	12.5 × 25	I6	0.11	0.22	1200	12.5 × 30	I7	0.090	0.18	1440	
330	12.5 × 25	I6	0.065	0.13	1730	12.5 × 30	I7	0.090	0.18	1440	16 × 25	J6	0.090	0.18	1440	
470	12.5 × 30	I7	0.055	0.11	2110	16 × 31.5	J7	0.059	0.118	2100	16 × 35.5	J8	0.052	0.104	2340	
	16 × 25	J6	0.052	0.104	2180	18 × 25	K6	0.064	0.128	1980	18 × 31.5	K7	0.054	0.108	2350	
560	16 × 25	J6	0.052	0.104	2180	16 × 31.5	J7	0.059	0.118	2100	16 × 40	J9	0.045	0.090	2650	
	18 × 20	K5	0.058	0.116	2290	18 × 25	K6	0.064	0.128	1980	18 × 35.5	K8	0.044	0.088	2730	
680	16 × 31.5	J7	0.042	0.084	2710	16 × 35.5	J8	0.052	0.104	2340	16 × 40	J9	0.045	0.090	2650	
	18 × 25	K6	0.050	0.10	2610	18 × 31.5	K7	0.054	0.108	2350	18 × 35.5	K8	0.044	0.088	2730	
820	16 × 31.5	J7	0.042	0.084	2710	16 × 40	J9	0.045	0.090	2650	18 × 40	K9	0.039	0.078	3050	
	18 × 25	K6	0.050	0.10	2610	18 × 35.5	K8	0.044	0.088	2730	—	—	—	—	—	
1000	16 × 35.5	J8	0.036	0.072	2820	18 × 40	K9	0.039	0.078	3050	—	—	—	—	—	
	18 × 31.5	K7	0.042	0.084	3080	—	—	—	—	—	—	—	—	—	—	
1500	18 × 35.5	K8	0.035	0.070	3530	—	—	—	—	—	—	—	—	—	—	
1800	18 × 40	K9	0.032	0.064	3880	—	—	—	—	—	—	—	—	—	—	

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