RJB MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

ELNA®

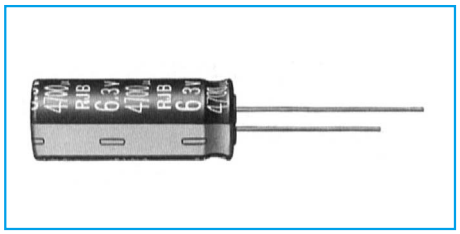
105°C Use, Miniature, High-Reliability, Low Impedance Capacitors

GREEN CAP | Low Impedance | 105°C 5000hours | Anti-cleaning solvent

- Smaller and higher ripple current than RJH Series.
- Guarantees 5000 hours at 105°C.
  (φ 5 to 6.3 : 2000 hours ; φ 8 to 10 : 3000 hours)

Miniaturized • Low impedance

RJB ⇦ RJJ



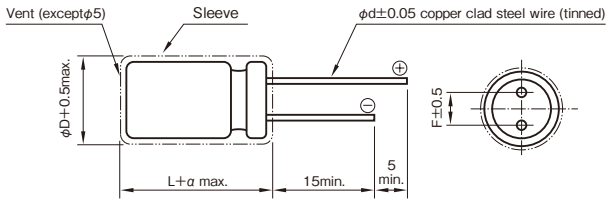
Marking color : White print on a black sleeve

Specifications

Item	Performance
Category temperature range (℃)	−55 to +105
Tolerance at rated capacitance (%)	±20 (20℃,120Hz)
Leakage current (μA)	Less than 0.01CV + 2 (after 2 minutes) C : Rated capacitance (μF) ; V : Rated voltage (V) (20℃)
Tangent of loss angle (tanδ)	Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 tanδ (max.): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 / 0.08 / 0.07 0.02 is added to every 1000μF increase over 1000μF. (20℃,120Hz)
Characteristics at high and low temperature	Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 Impedance ratio (max.) Z−55℃/Z+20℃: 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 (120Hz)
Endurance (105℃) (Applied ripple current)	Test time: 5000 hours (φ5 to 6.3 : 2000 hours) (φ8 to 10 : 3000 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
Shelf life (105℃)	Test time: 1000 hours Leakage current: The initial specified value or less Percentage of capacitance change: Within ±15% of initial value Tangent of the loss angle: 150% or less of the initial specified value Voltage application treatment
Applicable standards	JIS C5101-1, -4 1998 (IEC 60384-1 1992, -4 1985)

Outline Drawing

Unit : mm



φD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.0	1.0	1.0	2.0	2.0	2.0	2.0

• The electric characteristics are described on page 142.

Coefficient of Frequency for Rated Ripple Current

Rated capacitance (μF) \ Frequency (Hz)	120	1k	10k	100k
0.47 to 180	0.40	0.75	0.90	1
220 to 390	0.50	0.85	0.95	1
470 to 1800	0.60	0.88	0.96	1
2200 to 3900	0.75	0.90	0.98	1
4700 to 10000	0.85	0.95	1	1

Part numbering system (example : 10V1000μF)

RJB	—	10	V	102	M	H4	#
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	

NOTE
Design, Specifications are subject to change without notice.
Ask factory for technical specifications before purchase and/or use.

Standard Ratings

Rated voltage (V) / Item / Rated capacitance (μF)	6.3					10					16				
	Case	Casing symbol	Impedance (Ω)		Rated ripple current	Case	Casing symbol	Impedance (Ω)		Rated ripple current	Case	Casing symbol	Impedance (Ω)		Rated ripple current
	φD×L (mm)		20℃	−10℃	(mArms)	φD×L (mm)		20℃	−10℃	(mArms)	φD×L (mm)		20℃	−10℃	(mArms)
100	—	—	—	—	—	5×11.5	E3	0.65	1.3	181	—	—	—	—	—
220	—	—	—	—	—	6.3×11.5	F3	0.32	0.64	290	—	—	—	—	—
330	6.3×11.5	F3	0.32	0.64	290	8×12	G3	0.17	0.34	555	8×12	G3	0.17	0.34	555
470	8×12	G3	0.17	0.34	555	8×12	G3	0.17	0.34	555	10×12.5	H3	0.12	0.24	760
680	8×12	G3	0.17	0.34	555	10×12.5	H3	0.12	0.24	760	10×16	H4	0.080	0.16	1050
1000	10×12.5	H3	0.12	0.24	760	10×16	H4	0.080	0.16	1050	10×20	H5	0.062	0.124	1220
2200	10×25	H6	0.052	0.104	1440	12.5×20	I5	0.042	0.084	1690	12.5×25	I6	0.034	0.068	1950
3300	12.5×20	I5	0.042	0.084	1690	12.5×25	I6	0.034	0.068	1950	16×25	J6	0.028	0.056	2560
4700	12.5×30	I7	0.030	0.060	2310	16×25	J6	0.028	0.056	2560	16×31.5	J7	0.025	0.050	3010
6800	16×25	J6	0.028	0.056	2560	16×31.5	J7	0.025	0.050	3010	—	—	—	—	—
10000	16×31.5	J7	0.025	0.050	3010	—	—	—	—	—	—	—	—	—	—

Rated voltage (V) / Item / Rated capacitance (μF)	25					35					50				
	Case	Casing symbol	Impedance (Ω)		Rated ripple current	Case	Casing symbol	Impedance (Ω)		Rated ripple current	Case	Casing symbol	Impedance (Ω)		Rated ripple current
	φD×L (mm)		20℃	−10℃	(mArms)	φD×L (mm)		20℃	−10℃	(mArms)	φD×L (mm)		20℃	−10℃	(mArms)
22	—	—	—	—	—	—	—	—	—	—	5×11.5	E3	0.95	1.9	170
33	—	—	—	—	—	5×11.5	E3	0.65	1.3	181	6.3×11.5	F3	0.46	0.92	260
47	5×11.5	E3	0.65	1.3	181	6.3×11.5	F3	0.32	0.64	290	6.3×11.5	F3	0.46	0.92	260
100	6.3×11.5	F3	0.32	0.64	290	8×12	G3	0.17	0.34	555	8×12	G3	0.21	0.42	485
150	—	—	—	—	—	—	—	—	—	—	10×12.5	H3	0.19	0.38	615
220	8×12	G3	0.17	0.34	555	10×12.5	H3	0.12	0.24	760	10×16	H4	0.16	0.32	850
330	10×12.5	H3	0.12	0.24	760	10×16	H4	0.080	0.16	1050	10×20	H5	0.085	0.17	1050
470	10×16	H4	0.080	0.16	1050	10×20	H5	0.062	0.124	1220	12.5×20	I5	0.060	0.12	1500
680	10×20	H5	0.062	0.124	1220	12.5×20	I5	0.042	0.084	1690	12.5×25	I6	0.045	0.090	1832
1000	12.5×20	I5	0.042	0.084	1690	12.5×25	I6	0.034	0.068	1950	16×25	J6	0.038	0.076	2240
2200	16×25	J6	0.028	0.056	2560	16×31.5	J7	0.025	0.050	3010	—	—	—	—	—
3300	16×31.5	J7	0.025	0.050	3010	—	—	—	—	—	—	—	—	—	—

Rated voltage (V) / Item / Rated capacitance (μF)	63					100				
	Case	Casing symbol	Impedance (Ω)		Rated ripple current	Case	Casing symbol	Impedance (Ω)		Rated ripple current
	φD×L (mm)		20℃	−10℃	(mArms)	φD×L (mm)		20℃	−10℃	(mArms)
3.3	—	—	—	—	—	5×11.5	E3	1.9	7.6	57
4.7	5×11.5	E3	1.2	3.6	120	5×11.5	E3	1.9	7.6	57
10	5×11.5	E3	1.2	3.6	120	6.3×11.5	F3	1.1	4.4	78
22	6.3×11.5	F3	0.55	1.7	148	8×12	G3	0.53	2.1	275
33	6.3×11.5	F3	0.55	1.7	148	10×12.5	H3	0.47	1.9	319
47	8×12	G3	0.32	0.96	360	10×16	H4	0.32	1.3	424
100	10×12.5	H3	0.23	0.69	448	12.5×20	I5	0.13	0.52	805
220	10×20	H5	0.12	0.36	676	16×25	J6	0.081	0.32	1290
330	12.5×20	I5	0.075	0.23	979	16×25	J6	0.081	0.32	1290
470	12.5×25	I6	0.065	0.20	1180	16×31.5	J7	0.059	0.23	1630
1000	16×31.5	J7	0.042	0.13	1890	—	—	—	—	—

(Note) Impedance : 100kHz ; Rated ripple current : 105℃, 100kHz

NOTE
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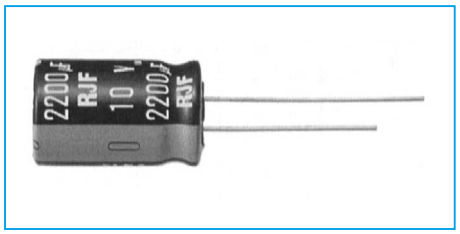
105°C Use, Miniature, High-Reliability, Extra Low Impedance Capacitors

GREEN CAP | Low Impedance | 105°C 5000hours | Anti-cleaning solvent

- Higher ripple current than RJB Series.

Low impedance

RJF ⇦ RJB



Marking color : White print on a black sleeve

Specifications

Item	Performance
Category temperature range (℃)	−40 to +105
Tolerance at rated capacitance (%)	±20 (20℃,120Hz)
Leakage current (µA)	Less than 0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance (µF) ; V : Rated voltage (V) (20℃)

Tangent of loss angle (tanδ)

Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
tanδ (max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08

0.02 is added to every 1000µF increase over 1000µF. (20℃,120Hz)

Characteristics at high and low temperature

Rated voltage (V)		6.3	10	16	25	35	50	63	80	100
Impedance ratio (max.)	Z−25℃/Z+20℃	2	2	2	2	2	2	2	2	2
	Z−40℃/Z+20℃	3	3	3	3	3	3	3	3	3

(120Hz)

Endurance (105℃) (Applied ripple current)

Test time	5L & 7L : 1000 hours φ5 & φ6.3 : 2000 hours (63 to 100WV:5000 hours) φ8 & φ10 : 3000 hours (63 to 100WV:7000 hours) φ12.5 to φ18 : 5000 hours (63 to 100WV:10000 hours)
Leakage current	The initial specified value or less
Percentage of capacitance change	Within ±25% of initial value
Tangent of the loss angle	200% or less of the initial specified value

Shelf life (105℃)

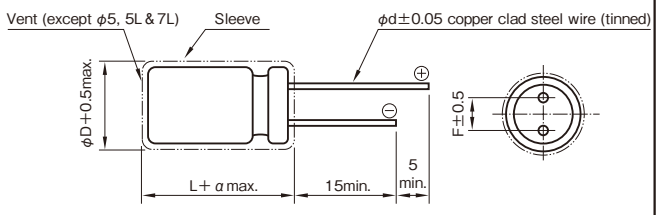
Test time	1000 hours
Leakage current	The initial specified value or less
Percentage of capacitance change	Within ±25% of initial value
Tangent of the loss angle	200% or less of the initial specified value

Voltage application treatment

Applicable standards	JIS C5101-1, -4 1998 (IEC 60384-1 1992, -4 1985)

Outline Drawing

Unit : mm



φD	4	5	6.3	8	10	12.5	16	18
F	1.5	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.45	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0

Coefficient of Frequency for Rated Ripple Current

Rated capacitance (µF) \ Frequency (Hz)	120	1k	10k	100k
5.6 to 180	0.40	0.75	0.90	1
220 to 390	0.50	0.85	0.94	1
470 to 1800	0.60	0.87	0.95	1
2200 to 3900	0.75	0.90	0.95	1
4700 to 6800	0.85	0.95	0.98	1

Part numbering system (example : 10V1000µF)

RJF	—	10	V	102	M	H4	#
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	

• The electric characteristics are described on page 142.

• The standard ratings are described on the next page.

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