RJ3 MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

ELNA®

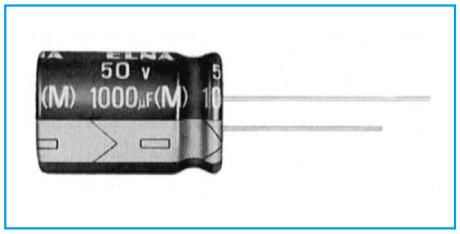
105°C Use, Standard Capacitors

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

• Guarantees 2000 hours at 105℃ (φ5～8 : 1000 hours).

Miniaturized: RJ4 ⇦ RJ3 ⇦ RJJ (Miniaturized)

High temperature: RJ3 ⇧ RE3



Marking color : White print on a black sleeve

Specifications

Item	Performance	
Category temperature range (℃)	−55 to +105	−40 to +105
Rated voltage (V)	6.3 to 100	160 to 450
Tolerance at rated capacitance (%)	±20 (20°C,120Hz)	±20 (20°C,120Hz)
Leakage current (μA)	Less than 0.01CV or 3 whichever is larger (after 2 minutes) (20°C)	CV≦1000 : Less than 0.1CV+40 (after 1 minute) CV>1000 : Less than 0.04CV+100 (after 1 minute) (20°C)
	C : Rated capacitance (μF) V : Rated voltage (V)	
Tangent of loss angle (tanδ)	0.02 is added to every 1000μF increase over 1000μF (20°C,120Hz)	(20°C,120Hz)
Characteristics at high and low temperature	(120Hz)	(120Hz)
Endurance (105℃) (Applied ripple current)	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	
Shelf life (105℃)	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)	

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 | 0.09 | 0.08

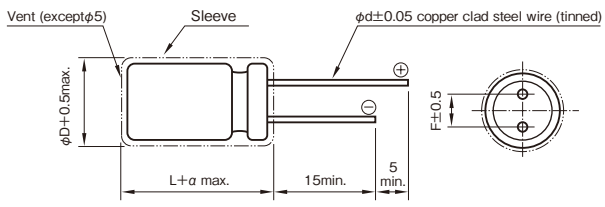
Rated voltage (V) | 160 | 200 | 250 | 315 | 350 | 400
tanδ (max.) | 0.15 | 0.15 | 0.15 | 0.20 | 0.20 | 0.20

Rated voltage (V) | | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100
Impedance ratio (max.) | Z−25℃/Z+20℃ | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2
| Z−55℃/Z+20℃ | 10 | 8 | 6 | 4 | 3 | 3 | 3 | 3

Rated voltage (V) | | 160 to 250 | 315 to 400
Impedance ratio (max.) | Z−25℃/Z+20℃ | 3 | 3
| Z−40℃/Z+20℃ | 8 | 6

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	1.5			2.0 (φ10,16L or less : 1.5)			

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	0.1 to 4.7	—	0.4	0.7	0.8	1
	10 to 47	—	0.5	0.8	0.9	1
	100 to 220	—	0.7	0.9	0.9	1
	330 to 1000	—	0.8	0.9	1.0	1
	2200 to 15000	—	0.9	1.0	1	1
160 to 400	0.47 to 220	0.8	1	1.3	1.4	1.6

Part numbering system (example : 63V1000μF)

RJ3 — 63 V 102 M J7 #

Series code	Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing 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	18×35.5	K8
10×20	H5	18×40	K9
12.5×20	I5		

NOTE
Design, Specifications are subject to change without notice.
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Standard Ratings

Rated voltage (V) / Item / Rated Capacitance (μF)	6.3				10				16				25			
	Case	ESR	Impedance	Rated ripple current	Case	ESR	Impedance	Rated ripple current	Case	ESR	Impedance	Rated ripple current	Case	ESR	Impedance	Rated ripple current
	φD×L (mm)	Ω	Ω	mArms	φD×L (mm)	Ω	Ω	mArms	φD×L (mm)	Ω	Ω	mArms	φD×L (mm)	Ω	Ω	mArms
4.7	—	—	—	—	—	—	—	—	—	—	—	—	5×11	49.4	3.0	85
10	—	—	—	—	—	—	—	—	5×11	26.5	2.5	92	5×11	23.2	2.5	92
22	—	—	—	—	5×11	14.3	2.5	92	5×11	12.1	1.9	105	5×11	10.6	1.9	105
33	5×11	11.1	2.5	105	5×11	9.55	1.9	105	5×11	8.04	1.5	120	5×11	7.04	1.5	120
47	5×11	7.77	1.5	120	5×11	6.71	1.5	120	5×11	5.65	1.2	130	5×11	4.94	1.2	130
100	5×11	3.65	1.2	130	5×11	3.15	1.2	130	6.3×11	2.65	0.58	220	6.3×11	2.32	0.58	220
220	6.3×11	1.66	0.87	180	6.3×11	1.43	0.58	220	8×11.5	1.21	0.47	290	8×11.5	1.06	0.39	315
330	6.3×11	1.11	0.58	220	8×11.5	0.96	0.47	265	8×11.5	0.81	0.39	315	10×12.5	0.70	0.23	500
470	8×11.5	0.78	0.39	315	8×11.5	0.67	0.39	315	10×12.5	0.57	0.23	500	10×16	0.50	0.18	615
1000	10×12.5	0.37	0.23	500	10×16	0.32	0.18	615	10×20	0.27	0.12	825	12.5×20	0.23	0.090	1050
2200	12.5×20	0.18	0.095	1000	12.5×20	0.16	0.090	1050	12.5×25	0.14	0.068	1300	16×25	0.12	0.056	1740
3300	12.5×20	0.13	0.090	1050	12.5×25	0.12	0.068	1300	16×25	0.10	0.056	1740	16×31.5	0.09	0.045	2110
4700	16×25	0.10	0.061	1670	16×25	0.09	0.056	1740	16×31.5	0.08	0.045	2110	18×35.5	0.07	0.036	2580
6800	16×25	0.08	0.056	1740	16×31.5	0.07	0.045	2110	18×35.5	0.06	0.036	2580	—	—	—	—
10000	16×31.5	0.06	0.045	2110	18×35.5	0.06	0.036	2580	—	—	—	—	—	—	—	—
15000	18×35.5	0.05	0.036	2580	—	—	—	—	—	—	—	—	—	—	—	—

Rated voltage (V) / Item / Rated Capacitance (μF)	35				50				63				100			
	Case	ESR	Impedance	Rated ripple current	Case	ESR	Impedance	Rated ripple current	Case	ESR	Impedance	Rated ripple current	Case	ESR	Impedance	Rated ripple current
	φD×L (mm)	Ω	Ω	mArms	φD×L (mm)	Ω	Ω	mArms	φD×L (mm)	Ω	Ω	mArms	φD×L (mm)	Ω	Ω	mArms
0.1	—	—	—	—	5×11	1659	18	10	—	—	—	—	—	—	—	—
0.22	—	—	—	—	5×11	754	13	15	—	—	—	—	—	—	—	—
0.33	—	—	—	—	5×11	503	10	18	—	—	—	—	—	—	—	—
0.47	—	—	—	—	5×11	353	7.0	23	—	—	—	—	5×11	282	13	30
1	—	—	—	—	5×11	166	4.9	35	—	—	—	—	5×11	133	11	45
2.2	—	—	—	—	5×11	75.4	4.2	53	—	—	—	—	5×11	60.3	9.2	60
3.3	—	—	—	—	5×11	50.3	3.9	65	—	—	—	—	5×11	40.2	7.2	67
4.7	5×11	42.4	2.5	92	5×11	35.3	3.6	82	5×11	31.8	5.8	74	5×11	28.2	6.3	75
10	5×11	19.9	1.9	105	5×11	16.6	2.7	100	5×11	14.9	3.6	95	6.3×11	13.3	3.3	110
22	5×11	9.05	1.5	120	5×11	7.54	1.9	125	6.3×11	6.79	2.1	130	8×11.5	6.03	1.4	165
33	5×11	6.03	1.2	130	6.3×11	5.03	1.1	195	6.3×11	4.52	1.7	160	10×12.5	4.02	0.94	305
47	6.3×11	4.24	0.58	220	6.3×11	3.53	0.90	245	8×11.5	3.18	1.2	305	10×16	2.82	0.68	320
100	8×11.5	1.99	0.39	315	8×11.5	1.66	0.50	385	10×12.5	1.49	0.65	395	12.5×20	1.33	0.28	585
220	10×12.5	0.91	0.23	500	10×16	0.75	0.27	505	10×20	0.68	0.32	505	16×25	0.60	0.16	1120
330	10×16	0.60	0.18	615	10×20	0.50	0.18	675	12.5×20	0.45	0.22	660	16×25	0.40	0.13	1290
470	10×20	0.42	0.12	825	12.5×20	0.35	0.12	895	12.5×25	0.32	0.16	850	16×31.5	0.28	0.11	1350
1000	12.5×25	0.20	0.068	1300	16×25	0.17	0.076	1495	16×31.5	0.15	0.098	1430	—	—	—	—
2200	16×31.5	0.11	0.045	2110	18×35.5	0.09	0.050	2190	—	—	—	—	—	—	—	—
3300	18×35.5	0.08	0.036	2580	—	—	—	—	—	—	—	—	—	—	—	—

(Note) ESR : 20℃, 120Hz ; Impedance : 20℃, 100kHz ; Rated ripple current : 105℃, 100kHz

Rated voltage (V) / Item / Rated Capacitance (μF)	160			200			250			315			350			400		
	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	mArms	φD×L (mm)	Ω	mArms	φD×L (mm)	Ω	mArms	φD×L (mm)	Ω	mArms	φD×L (mm)	Ω	mArms	φD×L (mm)	Ω	mArms
0.47	6.3×11	529	12	6.3×11	529	12	6.3×11	529	12	6.3×11	705	11	6.3×11	705	11	—	—	—
1	6.3×11	248	18	6.3×11	248	18	6.3×11	248	18	6.3×11	331	16	6.3×11	331	18	8×11.5	331	18
2.2	6.3×11	113	26	6.3×11	113	26	8×11.5	113	30	8×11.5	150	27	8×11.5	150	30	10×12.5	150	30
3.3	8×11.5	75.4	37	8×11.5	75.4	37	10×12.5	75.4	43	10×12.5	100	36	10×12.5	100	36	10×16	100	40
4.7	8×11.5	52.9	44	10×12.5	52.9	50	10×12.5	52.9	50	10×16	70.6	47	10×16	70.6	47	10×20	70.6	52
10	10×12.5	24.9	75	10×16	24.9	80	10×20	24.9	90	10×20	33.2	75	12.5×20	33.2	79	12.5×20	33.2	79
22	10×20	11.3	135	10×20	11.3	135	12.5×25	11.3	155	12.5×25	15.1	130	12.5×25	15.1	130	16×25	15.1	130
33	12.5×20	7.54	175	12.5×25	7.54	190	12.5×25	7.54	190	16×25	10.1	160	16×25	10.1	160	16×31.5	10.1	175
47	12.5×25	5.29	230	12.5×25	5.29	230	16×25	5.29	225	16×31.5	7.06	210	16×31.5	7.06	210	18×35.5	7.06	220
100	16×25	2.49	330	16×31.5	2.49	360	18×35.5	2.49	340	18×40	3.32	335	18×40	3.32	335	—	—	—
220	18×35.5	1.13	500	18×40	1.13	525	—	—	—	—	—	—	—	—	—	—	—	—

(Note) ESR : 20℃, 120Hz ; Rated ripple current : 105℃, 120Hz

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