ELNA — Miniature Aluminum Electrolytic Capacitors RJD series

Code in front of series have been extracted from product code, which describes the segment of products, such as type and features.

- Low ESR capacitors.
- Guaranteed 8000 hours at 105℃.
  (φ5 to 6.3 : 2000 hours ; φ8: 3000 hours; φ10: 5000 hours)
- Environmental : GREEN CAP™ , RoHS compliance.

Miniaturized
Low ESR

RJD ⇦ RJB

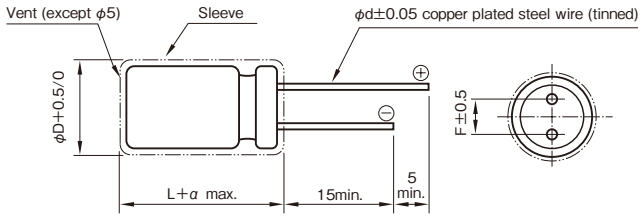
Marking color : White print on a black sleeve

Specifications

Item	Performance
Category temperature range (℃)	−55 to +105
Tolerance at rated capacitance (%)	±20 (20℃,120Hz)
Leakage current (μA) (max.)	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 / 0.10 / 0.08 / 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−55℃/Z+20℃: 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 (120Hz)
Endurance (105℃) (Applied ripple current)	Test time: φ5 & 6.3 : 2000 hours; φ8 : 3000 hours; φ10 : 5000 hours; φ12.5 or more : 8000 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 : 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



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

(Note) Whisker preventive structure is possible for φ8 or more.

Coefficient of Frequency for Rated Ripple Current

Rated Capacitance (μF) \ 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 : 25V10000μF (*For general product)

RS*	RJD	103	M	1T	K40	300	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.
・Lead-forming and packing code on this page are for lead long and standard packing products.
For standard packing, please refer to the "PACKING" page.

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Code in front of series have been extracted from product code, which describes the segment of products, such as type and features.

Standard Ratings

Rated voltage(V) / Item / Rated capacitance (μF)	6.3 (1J)					10 (1L)					16 (1E)				
	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)
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
						10 × 16	F16	0.068	0.136	1060					
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
											16 × 25	J25	0.022	0.044	2650
	18 × 16	K16	0.038	0.076	2010	16 × 20	J20	0.029	0.058	2230	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℃ , 100kHz ; ESR : 100kHz

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Code in front of series have been extracted from product code, which describes the segment of products, such as type and features.

Standard Ratings

Rated voltage(V) / Item / Rated capacitance (μF)	25 (1T)					35 (1G)					50 (1U)				
	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)
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
						10 × 12.5	F12	0.090	0.180	764					
330	8 × 12	E12	0.117	0.234	567	8 × 20	E20	0.065	0.130	996	10 × 20	F20	0.081	0.162	1120
	10 × 12.5	F12	0.090	0.180	764	10 × 16	F16	0.068	0.136	1060	12.5 × 15	G15	0.09	0.18	1170
390	8 × 15	E15	0.085	0.170	733	8 × 20	E20	0.065	0.130	996	—	—	—	—	—
						10 × 16	F16	0.068	0.136	1060					
470	8 × 15	E15	0.085	0.170	733	10 × 20	F20	0.052	0.104	1230	12.5 × 20	G20	0.057	0.114	1540
	10 × 12.5	F12	0.090	0.180	764										
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 × 25	J25	0.022	0.044	2650					
	16 × 20	J20	0.029	0.058	2230	18 × 20	K20	0.028	0.056	2500	18 × 35.5	K35	0.022	0.044	3670
2700	12.5 × 35	G35	0.022	0.044	2620	16 × 31.5	J31	0.018	0.036	3210	18 × 40	K40	0.018	0.036	4160
	18 × 25	K25	0.020	0.040	3000	18 × 25	K25	0.020	0.040	3000					
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 × 20	K20	0.028	0.056	2500	18 × 31.5	K31	0.016	0.032	3660					
3900	—	—	—	—	—	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) / Item / Rated capacitance (μF)	63 (4E)					80 (1R)					100 (1H)				
	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)	Case φD × L (mm)	Size code	ESR (Ω max.) 20℃	ESR (Ω max.) -10℃	Rated ripple current (mArms)
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 × 40	K40	0.032	0.064	3880	—	—	—	—	—
	18 × 31.5	K31	0.042	0.084	3080										
1500	18 × 35.5	K35	0.035	0.070	3530	—	—	—	—	—	—	—	—	—	—
1800	18 × 40	K40	0.032	0.064	3880	—	—	—	—	—	—	—	—	—	—

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

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It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.