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

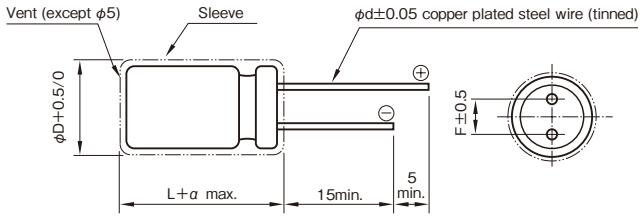
Marking color : White print on a black sleeve

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.

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.

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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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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