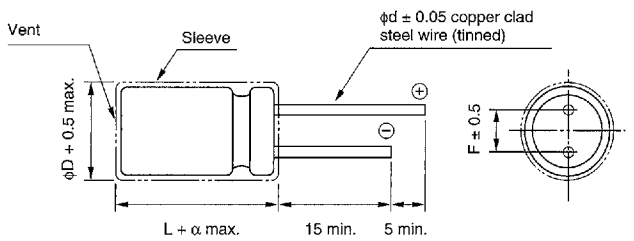
RKA Miniature Aluminum Electrolytic Capacitors

Series RKA 130°C, High-Reliability, Long-Life Capacitors

- Maintenance-free capacitors, 130°C 4000 hr. guaranteed (equivalent to 75°C, 20 years) case dia. 10 mm or smaller 2000 hr. guaranteed.
- For switching power supplies requiring high-reliability and long-life.

Outline Drawing

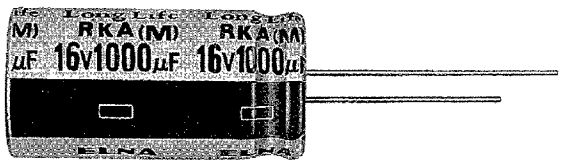


Lead spacing and wire diameter

φD	8	10	12.5	16	18
F	3.5	5.0		7.5	
φd	0.6			0.8	
α	2.0				

Unit: mm

Photo



Specifications

No.	Item	Performance	
1	Temperature range (°C)	−55 to +130	−40 to +130
2	Rated voltage (V)	10 to 100	160 to 250
3	Leakage current (μA)	Less than 0.02 CV +2 (after five minutes) C: Capacitance (μF), V: Voltage (V)	Less than 0.03 CV +10 (after five minutes) C: Capacitance (μF), V: Voltage (V)
4	Capacitance tolerance (%)	±20 (20°C, 120 Hz)	±20 (20°C, 120 Hz)
5	Tangent of loss angle (tan δ)	Rated voltage (V): 10, 16, 25, 35, 50, 63, 100 tan δ: 0.20, 0.17, 0.17, 0.12, 0.10, 0.10, 0.10 0.02 is added to each 1000 μF increase over 1000 μF. (20°C, 120 Hz)	Rated voltage (V): 160, 200, 250 tan δ: 0.15, 0.15, 0.15 (20°C, 120 Hz)
6	Stability at low temperature	Capacitance change: −40°C: Within ±30% of value at +20°C Impedance ratio: Z−40°C/Z+20°C: 3 or less (120 Hz)	Capacitance change: −25°C: Within ±30% of value at +20°C Impedance ratio: Z−25°C/Z+20°C: 3 or less (120 Hz)
7	Endurance (130°C)	Test time: 4000 hrs (φ10 or less is 2000 hrs) Leakage current: Initial specified value or less Change in capacitance: Within ±30% of initial value tan δ: 300% or less of initial specified value	
8	Max. storage temp. (130°C)	Test time: 1000 hrs Leakage current: Initial specified value or less Change in capacitance: Within ±15% of initial value tan δ: 150% or less of initial specified value Pretreatment performed (JIS C 5102).	
9	Applicable Standards	JIS C 5102 and JIS C 5141.	

Coefficients of Frequency for Ripple Current

Capacitance (μF) \ Frequency (Hz)	50	60	120	1 k	10 k	100 k
10 to 100	—	—	1	1.15	1.25	1.3
160 to 250	0.75	0.80	1	—	—	—

Coefficients of Temperature for Ripple Current

Temperature (°C)	+85 or less	+105	+130
Coefficients	2.05	1.60	1

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Case size by working voltage & capacitance (in mm)

(mm)

WV(V) / Cap.(μF)	10	16	25	35	50	63	100	160	200	250
2.2						8 x 18				10 x 18
3.3						8 x 18			10 x 18	10 x 22
4.7					8 x 18	8 x 18		10 x 22	12.5 x 25	12.5 x 25
10					10 x 18	10 x 18		12.5 x 25	16 x 25	16 x 25
22			8 x 18	8 x 18	10 x 18	10 x 18	12.5 x 25	16 x 31.5	16 x 31.5	18 x 31.5
33		8 x 18	8 x 18	10 x 18	10 x 18	10 x 18	16 x 25	16 x 35.5	18 x 35.5	18 x 40
47	8 x 18	10 x 18	10 x 18	10 x 18	10 x 22	10 x 22	16 x 31.5	18 x 35.5	18 x 40	
100	10 x 18	10 x 18	10 x 22	12.5 x 25	12.5 x 25	16 x 25	18 x 40			
220	10 x 18	12.5 x 25	12.5 x 25	16 x 25	16 x 31.5	16 x 31.5				
330	10 x 22	12.5 x 25	16 x 25	16 x 25						
470	12.5 x 25	16 x 25	16 x 25	16 x 31.5						
1000	16 x 25	16 x 31.5	18 x 35.5							
2200	18 x 35.5	18 x 40								

Standard Ratings

ELNA PART NO. / WV (V)	CAP. (μF)	SIZE (ϕ x L) (mm)	tan δ	Ripple Current (mArms)
10 V				
RKA-10V470MX	47	8 x 18	0.20	110
RKA-10V101MX	100	10 x 18	0.20	180
RKA-10V221MX	220	10 x 18	0.20	270
RKA-10V331MX	330	10 x 22	0.20	350
RKA-10V471MX	470	12.5 x 25	0.20	400
RKA-10V102MX	1000	16 x 25	0.20	870
RKA-10V222MX	2200	18 x 35.5	0.22	1590
16 V				
RKA-16V330MX	33	8 x 18	0.17	100
RKA-16V470MX	47	10 x 18	0.17	140
RKA-16V101MX	100	10 x 18	0.17	200
RKA-16V221MX	220	12.5 x 25	0.17	350
RKA-16V331MX	330	12.5 x 25	0.17	470
RKA-16V471MX	470	16 x 25	0.17	650
RKA-16V102MX	1000	16 x 31.5	0.17	1040
RKA-16V222MX	2200	18 x 40	0.19	1810
25 V				
RKA-25V220MX	22	8 x 18	0.17	80
RKA-25V330MX	33	8 x 18	0.17	100
RKA-25V470MX	47	10 x 18	0.17	120
RKA-25V101MX	100	10 x 22	0.17	210
RKA-25V221MX	220	12.5 x 25	0.17	380
RKA-25V331MX	330	16 x 25	0.17	550
RKA-25V471MX	470	16 x 25	0.17	650
RKA-25V102MX	1000	18 x 35.5	0.17	1170
35 V				
RKA-35V220MX	22	8 x 18	0.12	100
RKA-35V330MX	33	10 x 18	0.12	120
RKA-35V470MX	47	10 x 18	0.12	140
RKA-35V101MX	100	12.5 x 25	0.12	250
RKA-35V221MX	220	16 x 25	0.12	460
RKA-35V331MX	330	16 x 25	0.12	650
RKA-35V471MX	470	16 x 31.5	0.12	770
50 V				
RKA-50V4R7MX	4.7	8 x 18	0.10	50
RKA-50V100MX	10	10 x 18	0.10	80
RKA-50V220MX	22	10 x 18	0.10	120
RKA-50V330MX	33	10 x 18	0.10	150
RKA-50V470MX	47	10 x 22	0.10	190
RKA-50V101MX	100	12.5 x 25	0.10	340
RKA-50V221MX	220	16 x 31.5	0.10	630
63 V				
RKA-63V2R2MX	2.2	8 x 18	0.10	35
RKA-63V3R3MX	3.3	8 x 18	0.10	40
RKA-63V4R7MX	4.7	8 x 18	0.10	50
RKA-63V100MX	10	10 x 18	0.10	80
RKA-63V220MX	22	10 x 18	0.10	120
RKA-63V330MX	33	10 x 18	0.10	150
RKA-63V470MX	47	10 x 22	0.10	190
RKA-63V101MX	100	16 x 25	0.10	390
RKA-63V221MX	220	16 x 31.5	0.10	630
100 V				
RKA-100V220MX	22	12.5 x 25	0.10	130
RKA-100V330MX	33	16 x 25	0.10	230
RKA-100V470MX	47	16 x 31.5	0.10	300
RKA-100V101MX	100	18 x 40	0.10	510
160 V				
RKA-160V4R7M	4.7	10 x 22	0.15	25
RKA-160V100M	10	12.5 x 25	0.15	45
RKA-160V220M	22	16 x 31.5	0.15	80
RKA-160V330M	33	16 x 35.5	0.15	110
RKA-160V470M	47	18 x 35.5	0.15	140
200 V				
RKA-200V3R3M	3.3	10 x 18	0.15	20
RKA-200V4R7M	4.7	12.5 x 25	0.15	30
RKA-200V100M	10	16 x 25	0.15	50
RKA-200V220M	22	16 x 31.5	0.15	80
RKA-200V330M	33	18 x 35.5	0.15	120
RKA-200V470M	47	18 x 40	0.15	140
250 V				
RKA-250V2R2M	2.2	10 x 18	0.15	15
RKA-250V3R3M	3.3	10 x 22	0.15	20
RKA-250V4R7M	4.7	12.5 x 25	0.15	30
RKA-250V100M	10	16 x 25	0.15	50
RKA-250V220M	22	18 x 31.5	0.15	90
RKA-250V330M	33	18 x 40	0.15	120

Note: Allowable Ripple Current 120 Hz at 130°C

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