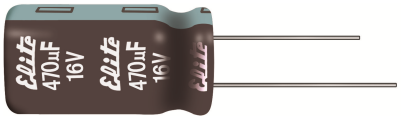
ALUMINUM ELECTROLYTIC CAPACITORS

EK Series

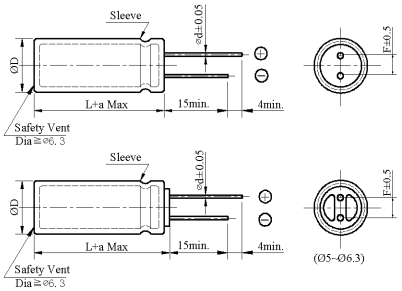
- **Miniaturized, Low ESR and Low impedance.**
- **Suitable for use in high ripple current capability.**



◆ SPECIFICATIONS

Item	Performance Characteristics
Category Temperature Range	-40 ~ +105℃
Working Voltage Range	6.3 ~ 50Vdc
Capacitance Range	0.10 ~ 6,800 μF
Capacitance Tolerance	±20% (at 25℃ and 120Hz)
Dissipation Factor (tanδ) (at 25℃, 120Hz)	Rated Voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tanδ(Max): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 The above values should be increased by 0.02 for every additional 1000μF
Leakage Current	I=0.03CV or 3μA whichever is greater I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for2 minutes.
Low Temperature Characteristics Impedance Ratio(MAX)	Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Z(-40℃)/Z(+20℃): 8 / 6 / 6 / 5 / 4 / 3 (at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 2,000~5,000 hours at 105°C Capacitance change: ≦ ±25% of the initial value Dissipation factor(tanδ): ≦ 200% of the specified value Leakage current: ≦ specified value Size / Life time (hours): ≦6.3Φ: 2,000; = 8 Φ: 3,000; = 10Φ: 4,000; ≧12.5Φ: 5,000
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25℃ after exposing them for 500 hours at 105℃ without voltage applied. Capacitance change: ≦ ±25% of the initial value Dissipation factor(tanδ): ≦ 200% of the specified value Leakage current: ≦ 200% of the specified value
Others	Conforms to JIS-C-5101-4 (1998), characteristic W.

◆ DIMENSIONS (mm)



ΦD	5	6.3	8	10	12.5 L< 35	12.5 L ≥ 35	16
ΦD	ΦD + 0.5 Max						
Φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0		7.5
a	L + 1.5 Max				≦ 35 L+1.5Max ≧ 40 L+2.0 Max		L + 1.5 Max

◆ PART NUMBERING SYSTEM(Example : 16V 2700μF)

E	K	1	C	2	7	2	M	N	N	1	2	3	0						

- Special Request
- Size code(1230 : 12.5×30)
- Lead length code
- Lead forming Type code
- Capacitance tolerance code(M:±20%)
- Capacitance code (2700μF)
- Voltage code (16V)
- Series code (EK)

EK Series

◆ **Case size & Permissible rated ripple current:**

Nominal Capacitance (uF)	6.3V			10V			16V		
	Case Size DΦ×L (mm)	Impedance @20℃ (Ωmax/100kHz)	Max. Rated ripple current @105℃ 100kHz (mA rms)	Case Size DΦ×L (mm)	Impedance @20℃ (Ωmax/100kHz)	Max. Rated ripple current @105℃ 100kHz (mA rms)	Case Size DΦ×L (mm)	Impedance @20℃ (Ωmax/100kHz)	Max. Rated ripple current @105℃ 100kHz (mA rms)
2.2							5×11	4.500	40
4.7							5×11	4.000	80
10							5×11	1.300	90
22	6.3×11	0.150	150	5×11	0.500	80	5×11	0.800	150
47							5×11	0.350	100
56							5×11	0.300	250
100				5×11	0.300	250	5×11	0.240	320
							6.3×11	0.150	350
120							6.3×11	0.130	405
150	5×11	0.300	250	5×11	0.380	300			
220	5×11	0.300	350	6.3×11	0.130	405	6.3×11	0.110	680
				8×11.5	0.072	520	8×11.5	0.090	720
330	6.3×11	0.130	405				8×11.5	0.072	760
470				8×11.5	0.072	760	8×11.5	0.056	995
							8×15	0.056	995
				10×12.5	0.053	1030	10×12.5	0.053	1030
							10×16	0.050	1080
560	8×11.5	0.072	760						
680				8×15	0.056	995	8×15	0.045	1200
							8×20	0.041	1250
				10×12.5	0.053	1030	10×16	0.038	1430
820	8×15	0.056	995						
1000				8×20	0.041	1250			
	10×12.5	0.053	1030	10×12.5	0.038	1410			
				10×16	0.038	1430	10×20	0.023	1820
1200	8×20	0.041	1250	10×20	0.023	1820	10×25	0.022	2150
	10×16	0.038	1430						
1500	10×20	0.023	1820	10×25	0.022	2150			
				12.5×20	0.021	2150	12.5×20	0.021	2360
2200	10×25	0.022	2150	10×30	0.021	2500	12.5×25	0.018	2770
2700	12.5×20	0.022	2200				12.5×30	0.016	3290
							16×20	0.018	3140
3300	12.5×20	0.021	2360	12.5×25	0.018	2770	12.5×35	0.015	3400
3900	12.5×25	0.018	2770	12.5×30	0.016	3290			
				16×20	0.018	3140	16×25	0.016	3460
4700	12.5×30	0.016	3290	12.5×35	0.015	3400			
5600	12.5×35	0.015	3400	16×25	0.016	3460			
	16×20	0.018	3140						
6800	16×25	0.016	3460						

EK Series

◆ **Case size & Permissible rated ripple current:**

Nominal Capacitance (uF)	25V			35V			50V		
	Case Size DΦ×L (mm)	Impedance @20℃ (Ωmax/100kHz)	Max. Rated ripple current @105℃ 100kHz (mA rms)	Case Size DΦ×L (mm)	Impedance @20℃ (Ωmax/100kHz)	Max. Rated ripple current @105℃ 100kHz (mA rms)	Case Size DΦ×L (mm)	Impedance @20℃ (Ωmax/100kHz)	Max. Rated ripple current @105℃ 100kHz (mA rms)
0.1							5×11	20.000	38
0.22							5×11	15.000	40
0.33							5×11	12.000	45
0.47							5×11	4.000	50
1							5×11	3.600	100
2.2							5×11	3.600	140
4.7	5×11	1.200	100				5×11	3.600	140
10	5×11	1.200	100	5×11	0.800	170	5×11	0.900	180
22	5×11	1.000	120				5×11	0.750	238
33				5×11	0.300	250			
47	5×11	0.300	250				6.3×11	0.340	285
56				6.3×11	0.130	405	6.3×11	0.140	385
68									
100	6.3×11	0.130	405				8×11.5	0.074	724
120							8×15	0.061	950
150				8×11.5	0.072	760	10×12.5	0.061	979
180							8×20	0.046	1190
220	8×11.5	0.072	840	8×15	0.056	995	10×16	0.042	1370
				10×12.5	0.053	1030			
270				8×20	0.041	1250	10×20	0.030	1580
330	8×15	0.056	995						
	10×12.5	0.053	1030	10×16	0.038	1430	10×25	0.028	1870
470	8×20	0.041	1250						
	10×12.5	0.038	1300	10×16	0.030	1620			
	10×16	0.038	1430	10×20	0.023	1820			
	12.5×16	0.035	1480	12.5×16	0.033	1750	12.5×20	0.027	2050
560				10×25	0.022	2150	12.5×25	0.023	2410
680	10×16	0.028	1750				12.5×20	0.028	2700
	10×20	0.023	1820	12.5×20	0.021	2360	12.5×30	0.021	2860
820	10×25	0.022	2150				12.5×35	0.019	2960
							16×20	0.023	2730
1000	12.5×16	0.028	2250	12.5×20	0.050	2610			
	12.5×20	0.021	2360	12.5×25	0.018	2770	16×25	0.021	3010
1200				12.5×30	0.016	3290			
				16×20	0.018	3140			
1500	12.5×25	0.018	2770	12.5×35	0.015	3400			
1800	12.5×30	0.016	3290						
	16×20	0.018	3140	16×25	0.016	3460			
2200	12.5×35	0.015	3400						
2700	16×25	0.016	3460						

◆ **RIPPLE CURRENT MULTIPLIERS**

Frequency Multipliers

Vdc	Cap.(uF)	Frequency (Hz)			
		120	1K	10K	100K
6.3 ~50	0.10 ~ 68	0.30	0.55	0.80	1.00
	82 ~ 220	0.40	0.60	0.85	1.00
	330 ~ 820	0.50	0.65	0.90	1.00
	1000 ~ 6800	0.60	0.70	0.95	1.00