SMD Aluminum Electrolytic Capacitor – JCK

FEATURES

- Chip type, operating with wide temperature range -40~+105℃.
- Load Life of 1,000~2,000 hours
- Designed for surface mounting on high density circuit board.
- Emboss carrier tape packing system is available for automatic insertion.

Fig 1

Fig 2

Fig 3

Note: Fig 1 & 2: Diameter 4 ~10mm
Fig 3 : Diameter: ⩾12.5mm

SPECIFICATIONS

Operating Temperature	-40℃ ~ +105℃
Voltage Range	4V ~ 100V.DC
Capacitance Range	1 ~ 10000μF
Capacitance Tolerance	±20% at 120Hz, 20℃
Leakage Current	Leakage current (Φ4~Φ10) ≤0.01CV or 3μA, whichever is greater. (After 2 minutes application of rated voltage) Leakage current (Φ12.5~Φ16) ≤0.03CV or 4μA, whichever is greater. (After 1 minutes application of rated voltage)

Dissipation Factor (Tan δ)

Measurement Frequency: 120Hz, Temperature: 20℃

Rated Voltage (V)		4	6.3	10	16	25	35	50	63	100
Tan δ (Max.)	Φ4~Φ10	0.35	0.37	0.26	0.22	0.18	0.16	0.14	0.14	0.14
	Φ12.5~Φ16	0.42	0.42	0.38	0.32	0.30	0.22	0.18	0.16	0.16

Stability At Low Temp.

Measurement Frequency: 120Hz

Rated Voltage (V)			4	6.3	10	16	25	35	50~63	100
Impedance Ratio ZT/Z20 (Max.)	Φ4~Φ10	Z(-25℃)/ Z(20℃)	7	4	4	3	2	2	2	3
		Z(-40℃)/ Z(20℃)	15	12	8	6	4	3	3	4
	Φ12.5~Φ16	Z(-25℃)/ Z(20℃)	7	5	4	3	2	2	2	3
		Z(-40℃)/ Z(20℃)	17	12	10	8	5	4	3	4

Load Life

After 2000 hours (1000hrs. forΦ4~Φ6.3x5.8) application of rated voltage at 105℃, They meet the characteristics listed below.

Capacitance Change	within ± 20% of initial value for capacitors of 10V or more (within ± 30% of initial value for capacitors of 4V & 6.3V)
Dissipation Factor	200% or less of initial specified value
Leakage Current	Initial specified value or less

Self Life

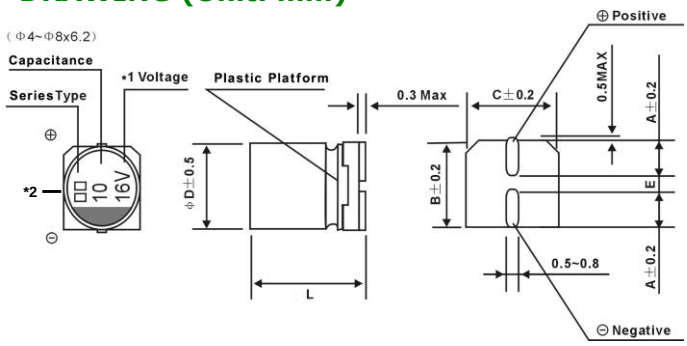
After leaving capacitors under no load at 105℃ for 1000 hours, They meet the specified value for load life characteristics listed above.

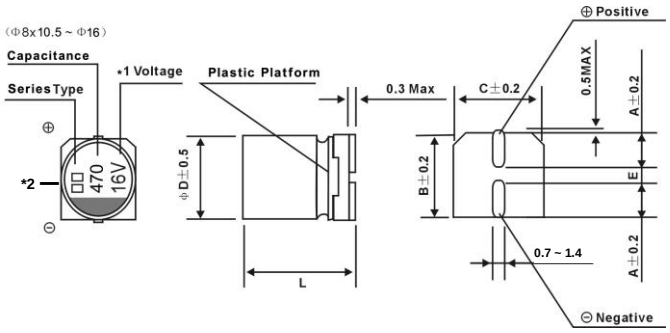
Resistance to Soldering Heat

After reflow soldering and restored at room temperature, they meet the characteristics listed below.

Capacitance Change	Within ± 10% of initial value
Dissipation Factor	Initial specified value or less
Leakage Current	Initial specified value or less

DRAWING (Unit: mm)





*1 Voltage mark for 6.3V is [6V] or [6.3V]

*2 Surface Marking Types: jbK, jK, CK, XT

(mm)

ΦDxL	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x6.5	8x10.5	10x10.5	10x13.5	12.5x13.5	12.5x16	16x16.5	16x21.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7	4.7	5.5	5.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0	17.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0	17.0
E	1.0±0.2	1.3±0.2	2.2±0.2	2.2±0.2	3.1±0.2	3.1±0.2	4.4±0.2	4.4±0.2	4.8±0.6	4.4±0.2	6.7±0.2	6.7±0.2
L	5.4±0.6	5.4±0.6	5.4±0.6	7.7±0.6	6.5±0.6	10.5±0.6	10.5±0.6	13.5±1.0	13.5±1.0	16.0±1.0	16.5±1.0	21.5±1.0

FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency		50Hz	120Hz	1KHz	10KHz~
Coefficient	≦1000uF	0.70	1.00	1.20	1.30
	>1000uF	0.80	1.00	1.10	1.20

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STANDARD SIZE

WV/V / Cap/μF		4		6.3		10		16		25	
		0G		0J		1A		1C		1E	
4.7	4R7	--	--	--	--	--	--	--	--	4x5.4	14
10	100	--	--	--	--	--	--	4x5.4	19	4x5.4 5x5.4	14 14
22	220	--	--	4x5.4	20	4x5.4 5x5.4	21 27	4x5.4 5x5.4	22 30	5x5.4 6.3x5.4	25 36
33	330	4x5.4 5x5.4	22 27	4x5.4 5x5.4	22 27	4x5.4 5x5.4	23 34	5x5.4 6.3x5.4	28 40	5x5.4 6.3x5.4	29 44
47	470	4x5.4 5x5.4	25 37	4x5.4 5x5.4	25 37	5x5.4 6.3x5.4	30 41	5x5.4 6.3x5.4	31 55	6.3x5.4 8x6.5	48 79
100	101	5x5.4 6.3x5.4	39 57	5x5.4 6.3x5.4	39 57	5x5.4 6.3x5.4	41 53	6.3x5.4 8x6.5	70 120	6.3x7.7 8x6.5 8x10.5	91 100 150
150	151	6.3x5.4	61	6.3x5.4	55	6.3x5.4	55	6.3x7.7	80	6.3x7.7 8x10.5	92 140
220	221	6.3x5.4	67	6.3x5.4 6.3x7.7	95 69	6.3x5.4 6.3x7.7 8x6.5	80 67 120	6.3x7.7 8x6.5 8x10.5	89 105 180	8x10.5 10x7.7	175 180
330	331	6.3x7.7	100	6.3x7.7 8x6.5 8x10.5	105 105 230	6.3x7.7 8x10.5	125 195	8x10.5 10x7.7	195 185	8x10.5 10x10.5	205 220
470	471	6.3x7.7	105	6.3x7.7 8x10.5	120 230	8x10.5 10x10.5 10x7.7	210 295 290	8x10.5 10x10.5	250 280	10x10.5	280
680	681	8x10.5	210	8x10.5	230	10x10.5	270	10x10.5	315	--	--
1000	102	8x10.5	230	8x10.5 10x10.5	290 315	10x10.5	315	10x10.5 10x13.5 12.5x13.5	315 390 500	12.5x13.5	580
1500	152	10x10.5	315	10x10.5	410	12.5c13.5	458	12.5x13.5	550	--	--
2200	222	--	--	12.5x13.5	620	12.5x13.5	680	--	--	Case Size	Ripple Current

WV/V / Cap/μF		35		50		63		100	
		1V		1H		1J		2A	
1	010	--	--	4x5.4	8	4x5.4	8	4x5.4	7
2.2	2R2	--	--	4x5.4	11	4x5.4	11	6.3x5.4	13
3.3	3R3	--	--	4x5.4	13	5x5.4 6.3x5.4	14 30	6.3x5.4 6.3x7.7	18 30
4.7	4R7	4x5.4	15	4x5.4 5x5.4	14 18	5x5.4 6.3x5.4	15 18	5x5.4 6.3x5.4 6.3x7.7	15 19 33
10	100	4x5.4 5x5.4	17 24	5x5.4 6.3x5.4	20 28	6.3x5.4 6.3x7.7 8x6.5	24 39 25	6.3x7.7 8x10.5	34 77
22	220	5x5.4 6.3x5.4	30 40	6.3x5.4 6.3x7.7 8x6.5	38 42 70	6.3x7.7 8x6.5 8x10.5	48 55 98	8x10.5 10x10.5	82 122
33	330	6.3x5.4 8x6.5	46 76	6.3x7.7 8x6.5	60 70	6.3x7.7 8x10.5	49 112	10x10.5	130
47	470	6.3x5.4 6.3x7.7 8x6.5	50 57 80	6.3x7.7 8x6.5 8x10.5	63 85 100	8x10.5 10x10.5	117 160	10x10.5 10x13.5 12.5x13.5	140 160 250
100	101	6.3x7.7 8x10.5 10x7.7	80 150 160	8x10.5 10x10.5 10x7.7	145 160 160	10x10.5 10x13.5 12.5x13.5	196 210 270	12.5x13.5	380
150	151	8x10.5	185	10x10.5	200	10x13.5	225	--	--
220	221	8x10.5 10x10.5	185 250	10x10.5 10x13.5	220 280	12.5x13.5	470	--	--
330	331	10x10.5 10x13.5	300 330	12.5x13.5	420	--	--	--	--
470	471	10x10.5 10x13.5 12.5x13.5	310 375 356	--	--	--	--	--	--
680	681	12.5x13.5	530	--	--	--	--	Case size	Allowable ripple

Allowable Ripple (mA ms) at 105℃ 120Hz

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