

# SMD Aluminum Electrolytic Capacitor – JCL

## FEATURES

- Wide temperature range -55~+105°C.
- Load life of 3000~5000 hours.
- Comply with the RoHS directive.



## SPECIFICATIONS

Operating Temperature	-55°C ~+105°C
Voltage Range	6.3V~100V.DC
Capacitance Range	0.1 ~ 1500 μF
Capacitance Tolerance	±20% at 120Hz, 20°C
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°C

Rated Voltage (V)		6.3	10	16	25	35	50~100
Tan δ (Max.)	Φ4~Φ10	0.28	0.24	0.20	0.16	0.13	0.12
	Φ12.5~Φ16	0.38	0.34	0.30	0.26	0.22	0.18

### Stability At Low Temp.

Measurement Frequency: 120Hz

Rated Voltage (V)		6.3	10	16	25	35	50	63	100
Impedance Ratio ZT/Z20 (Max.)	Φ4~Φ10	Z(-25°C)/ Z(20°C)	3	3	2	2	2	2	2
		Z(-55°C)/ Z(20°C)	8	5	4	3	3	3	3
	Φ12.5~Φ16	Z(-25°C)/ Z(20°C)	5	4	3	2	2	2	2
		Z(-55°C)/ Z(20°C)	12	10	8	5	4	3	3

### Load Life

After 5000 hrs. (3000 hrs. for Φ4~Φ6.3\*5.4&Φ8\*6.2) application of the rated voltage at 105°C. They meet the characteristics listed below.

Capacitance Change	Within ±30% of initial value
Dissipation Factor	300% or less of initial specified value
Leakage Current	Initial specified value or less

### Shelf Life

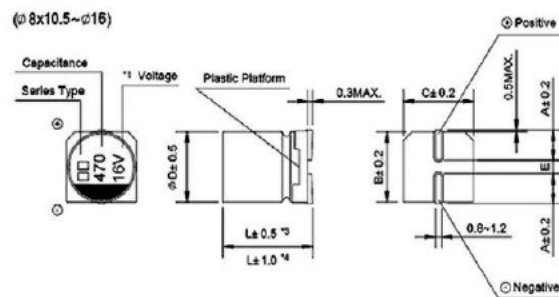
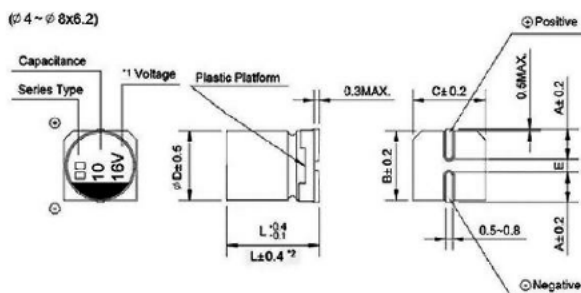
After leaving capacitors under no load at 105°C for 1000 hours, They meet the specified value for load life characteristics listed above.

### Resistance to Soldering Heat

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

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]

\*2 Applicable to Φ6.3\*7.7

\*3 Applicable to Φ8\*10.5~Φ10

\*4 Applicable to Φ12.5~Φ16.

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### DIMENSIONS(Unit: mm)

ØD×L	4×5.8	5×5.8	6.3×5.8	6.3×7.7	8×6.2	8×10.5	10×10.5	10×13.5	12.5×13.5/16	16×16.5
<b>A</b>	2.0	2.2	2.6	2.6	3.4	3.0	3.3	3.3	4.9	5.8
<b>B</b>	4.3	5.3	6.6	6.6	8.4	8.4	10.4	10.4	13.0	17.0
<b>C</b>	4.3	5.3	6.6	6.6	8.4	8.4	10.4	10.4	13.0	17.0
<b>E±0.2</b>	1.0	1.4	1.9	1.9	2.3	3.1	4.7	4.7	4.7	6.4
<b>L</b>	5.8	5.8	5.8	7.7	6.2	10.5	10.5	13.5	13.5/16	16.5

### DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV		6.3		10		16		25	
Cap. (µF)		0J		1A		1C		1E	
10	100					4×5.8	18	5×5.8	27
22	220	4×5.8	22	5×5.8	30	5×5.8	30	6.3×5.8	44
33	330	5×5.8	35	5×5.8	36	6.3×5.8	48	6.3×5.8	50
47	470	5×5.8	38	6.3×5.8	50	6.3×5.8	50	6.3×7.7 (8×6.2)	63 (63_
100	101	6.3×5.8	69	6.3×7.7 (8×6.2)	81 (81)	6.3×7.7 (8×6.2)	81 (81)	8×10.5	116
150	151	6.3×7.7 (8×6.2)	85 (85)	8×10.5	125	8×10.5	125	10×10.5	320
220	221	6.3×7.7 (8×6.2)	120 (120)	8×10.5	141	10×10.5	216	10×10.5	320
330	331	8×10.5	290	10×10.5	290	10×10.5	290	10×10.5	320
470	471	10×10.5	320	10×10.5	320	10×10.5	320	12.5×13.5 (10×13.5)	400 (350)
680	681	10×10.5	320	10×10.5	320	10×13.5	420	12.5×13.5	415
1000	102	10×10.5	410	10×13.5	390	12.5×13.5	550	12.5×13.5	460
1500	152	10×13.5	450	12.5×13.5	480	12.5×13.5	650	12.5×16	700
2200	222	12.5×13.5	680	12.5×16 (12.5×13.5)	750 (510)	16×16.5	800		
3300	332	12.5×16 (12.5×13.5)	850 (800)	16×16.5	800			Case Size	Ripple Current

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### DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Cap. (µF)		35		50		63		100	
		1V		1H		1J		2A	
0.1	0R1			4×5.8	1.0				
0.22	R22			4×5.8	2.6				
0.33	R33			4×5.8	3.2				
0.47	R47			4×5.8	5				
1	010			4×5.8	8				
2.2	2R2			4×5.8	12				
3.3	3R3			4×5.8	17			6.3×7.7 (8×6.2)	30 (30)
4.7	4R7	4×5.8	16	5×5.8	22			8×10.5	50
10	100	5×5.8	27	6.3×5.8	32	6.3×7.7 (8×6.2)	45 (45)	8×10.5	55
22	220	6.3×5.8	44	6.3×7.7 (8×6.2)	58 (58)	8×10.5	65	10×10.5	70
33	330	6.3×7.7 (8×6.2)	57 (57)	8×10.5	140	10×10.5	80	10×10.5	80
47	470	8×10.5	92	10×10.5	310	10×10.5	90	12.5×13.5 (10×13.5)	250 (150)
100	101	10×10.5	151	10×10.5	310	10×13.5	150	12.5×13.5	300
150	151	10×10.5	290	10×10.5	310			16×16.5	600
220	221	10×10.5	375	12.5×13.5 (10×13.5)	340 (320)	12.5×13.5	470		
330	331	12.5×13.5 (10×13.5)	380 (375)	12.5×16 (12.5×13.5)	600 (500)	16×16.5 (12.5×16)	650 (550)		
470	471	12.5×13.5	520	16×16.5	700				
680	681	12.5×13.5	550						
1000	102	16×16.5 (12.5×16)	750 (600)						
								Case Size	Ripple Current

Case Size ØD×L(mm), ripple current(mA rms) at 105°C 120Hz

### FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency		50Hz	120Hz	300Hz	1KHz	10KHz~	
Coefficient	Ø 4~ Ø 10	0.70	1.00	1.17	1.36	1.50	
	Ø 12.5~ Ø 16	~68µF	0.75	1.00	1.35	1.57	2.00
		100~470µF	0.80	1.00	1.23	1.34	1.50
		680~3300µF	0.85	1.00	1.10	1.13	1.15