

SMD Aluminum Electrolytic Capacitor – JCS

FEATURES

- Designed for surface mounting on high density circuit board.
- Emboss carrier tape packing system is available for automatic insertion.

SPECIFICATIONS

Operating Temperature: -40°C ~ +85°C
 Voltage Range: 4V ~ 100V.DC
 Capacitance Range: 1 ~ 10000 μ F
 Capacitance Tolerance: $\pm 20\%$ at 120Hz, 20°C
 Leakage Current: Leakage current ($\Phi 4 \sim \Phi 10$) $\leq 0.01CV$ or $3\mu A$, whichever is greater (After 2 minutes application of rated voltage)
 Leakage current ($\Phi 12.5$) $\leq 0.03CV$ or $4\mu A$, whichever is greater (After 1 minutes application of rated voltage)



Fig 1

Fig 2

Fig 3

Note: Fig 1 & 2: Diameter 4 ~ 10mm

Fig 3 : Diameter: ≥ 12.5 mm

Dissipation Factor (Tan δ)

Measurement Frequency: 120Hz, Temperature: 20°C

Rated Voltage (V)		4	6.3	10	16	25	35	50	63	100
Tan δ (Max.)	$\Phi 4 \sim \Phi 10$	0.35	0.32	0.26	0.20	0.18	0.16	0.14	0.14	0.14
	$\Phi 12.5$	0.42	0.42	0.38	0.30	0.28	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	50~100
Impedance Ratio ZT/Z20 (Max.)	$\Phi 4 \sim \Phi 10$	Z(-25°C)/Z(20°C)	7	4	4	3	2	2
		Z(-40°C)/Z(20°C)	15	8	6	4	4	3
	$\Phi 12.5$	Z(-25°C)/Z(20°C)	7	5	4	3	2	2
		Z(-40°C)/Z(20°C)	17	12	10	8	5	4

Load Life

After 2000 hours application of rated voltage at 85°C, Capacitors meet the characteristics requirements listed below.

Capacitance Change	Within $\pm 20\%$ of initial value (Within $\pm 30\%$ of initial value for 4V)
Dissipation Factor	200% or less of initial specified value
Leakage Current	Initial specified value or less

Shelf Life

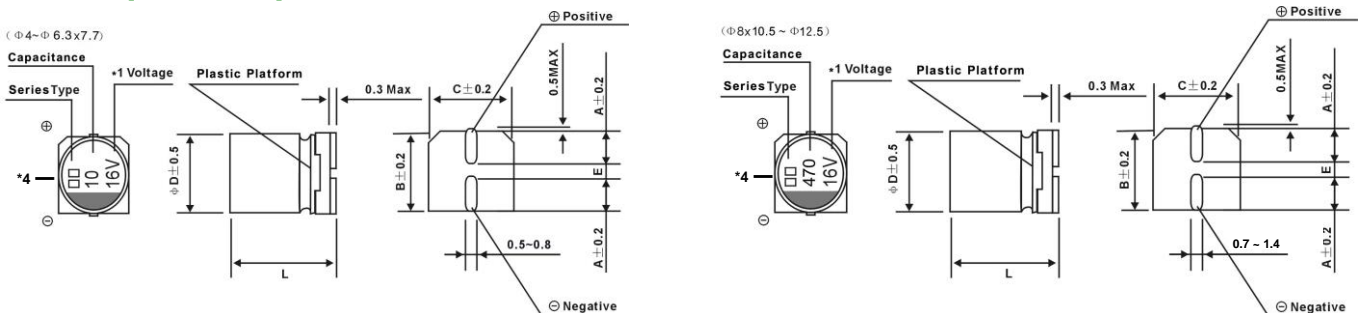
After leaving capacitors under no load at 85°C for 1000 hours, They meet the specified value for load life characteristics listed above.

Resistance to Soldering Heat

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

Capacitance Change	Within $\pm 10\%$ 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]
 *4 Surface Marking Types: jbS, jS, CS, XS

Φ DxL	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x6.5	8x10.5	10x10.5	10x13.5	12.5x13.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0
E	1.0 \pm 0.2	1.3 \pm 0.2	2.2 \pm 0.2	2.2 \pm 0.2	3.1 \pm 0.2	3.1 \pm 0.2	4.4 \pm 0.2	4.4 \pm 0.2	4.8 \pm 0.6
L	5.4 \pm 0.6	5.4 \pm 0.6	5.4 \pm 0.6	7.7 \pm 0.6	6.5 \pm 0.6	10.5 \pm 0.6	10.5 \pm 0.6	13.5 \pm 1.0	13.5 \pm 1.0

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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

STANDARD SIZE

WV		4		6.3		10		16		25	
Cap.(μF)		0G		0J		1A		1C		1E	
4.7	4R7	--	--	--	--	--	--	--	--	4x5.4	13
10	100	--	--	--	--	--	--	4x5.4	18	4x5.4 5x5.4	14 20
15	150	--	--	--	--	--	--	4x5.4	25	5x5.4	27
22	220	--	--	4x5.4	20	4x5.4 5x5.4	20 25	4x5.4 5x5.4	20 27	5x5.4 6.3x5.4	25 36
33	330	4x5.4	18	4x5.4 5x5.4	22 27	4x5.4 5x5.4	22 30	5x5.4 6.3x5.4	28 31	5x5.4 6.3x5.4	29 44
47	470	4x5.4	24	4x5.4 5x5.4	23 30	5x5.4 6.3x5.4	30 49	5x5.4 6.3x5.4	30 48	6.3x5.4 8x6.5	48 80
56	560	4x5.4	27	5x5.4	32	6.3x5.4	40	6.3x5.4	52	6.3x5.4	48
68	680	5x5.4	31	5x5.4 6.3x5.4	41 43	6.3x5.4	50	6.3x5.4	56	6.3x5.4	50
100	101	5x5.4	39	5x5.4	40	5x5.4	40	6.3x5.4	60	6.3x5.4	80
				6.3x5.4	50	6.3x5.4	53	6.3x7.7	109	6.3x7.7	91
								8x6.5	100	8x10.5	100
150	151	6.3x5.4	52	6.3x5.4	55	6.3x5.4	62	6.3x7.7	80	6.3x7.7	100
								8x6.5	120	8x10.5	140
220	221	6.3x5.4	57	6.3x5.4	67	6.3x5.4	67	6.3x7.7	86	8x10.5	175
				6.3x7.7	105	6.3x7.7	88	8x6.5	105	10x7.7	160
						8x6.5	105	8x10.5	150		
330	331	6.3x7.7	100	6.3x7.7	105	6.3x7.7	135	8x10.5	195	8x10.5	220
				8x6.5	105	8x10.5	195	10x7.7	175	10x10.5	220
470	471	6.3x7.7	105	6.3x7.7	120	6.3x7.7	120	8x10.5	270	10x10.5	280
				8x10.5	230	8x10.5	210	10x10.5	280		
						10x10.5	232				
680	681	8x10.5	210	8x10.5	230	8x10.5 10x10.5	230 270	10x10.5	315	10x13.5	400
1000	102	8x10.5	230	8x10.5	290	10x10.5	315	10x10.5	315	12.5x13.5	580
				10x10.5	315			10x13.5	390		
								12.5x13.5	500		
1500	152	10x10.5	315	10x10.5	410	12.5x13.5	458	12.5x13.5	550	--	--
2200	222	--	--	12.5x13.5	620	12.5x13.5	680	--	--	Case Size	Ripple Current

Allowable Ripple (mA ms) at 85°C 120Hz

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STANDARD SIZE

WV Cap.(μF)		35		50		63		100	
		1V		1H		1J		2A	
1	010	--	--	4x5.4	8	4x5.4	8	4x5.4	8
1.5	1R5	--	--	4x5.4	9	4x5.4	9	6.3x5.4	12
2.2	2R2	--	--	4x5.4	11	4x5.4	11	6.3x5.4	14
3.3	3R3	--	--	4x5.4	12	5x5.4	12	6.3x5.4	23
						6.3x5.4	30	6.3x7.7	41
4.7	4R7	4x5.4	15	4x5.4	14	5x5.4	18	5x5.4	15
				5x5.4	19	6.3x5.4	23	6.3x5.4	21
						6.3x7.7	35	6.3x7.7	35
10	100	4x5.4	18	5x5.4	20	6.3x5.4	24	6.3x5.4	25
		5x5.4	25	6.3x5.4	28	6.3x7.7	39	6.3x7.7	35
						8x6.5	25	8x6.5	50
								8x10.5	90
22	220	5x5.4	34	6.3x5.4	42	6.3x7.7	48		
		6.3x5.4	29	6.3x7.7	51	8x6.5	55	8x10.5	84
				8x6.5	70	8x10.5	98	10x10.5	120
33	330	6.3x5.4	46	6.3x5.4	60	6.3x7.7	49	10x10.5	120
		8x6.5	85	6.3x7.7	60	8x10.5	112		
				8x6.5	70				
				6.3x7.7	63				
47	470	6.3x5.4	55	6.3x7.7	63			10x10.5	120
		6.3x7.7	78	8x6.5	85	8x10.5	119	10x13.5	160
		8x6.5	85	8x10.5	119	10x10.5	160	12.5x13.5	250
				10x10.5	170				
56	560	6.3x7.7	65	6.3x7.7	90	10x10.5	210	--	--
68	680	6.3x7.7	69	8x6.5	70	10x10.5	140	10x13.5	180
				8x10.5	110			12.5x13.5	300
100	101	6.3x7.7	80	8x10.5	145	10x10.5	196		
		8x10.5	80	10x10.5	175	10x13.5	210	12.5x13.5	380
		10x7.7	160			12.5x13.5	270		
150	151	8x10.5	175	10x10.5	200	--	--	--	--
220	221	8x10.5	185	10x10.5	220			--	--
		10x10.5	250	10x13.5	280	12.5x13.5	470		
330	331	10x10.5	300	10x13.5	295	--	--	--	--
		10x13.5	330	12.5x13.5	420				
470	471	10x10.5	324						
		10x13.5	375	--	--	--	--	--	--
		12.5x13.5	520						
680	681	12.5x13.5	530	--	--	--	--	Case size	Allowable ripple

Allowable Ripple (mA ms) at 85°C 120Hz

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