

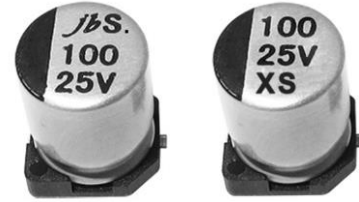
SMD Aluminum Electrolytic Capacitor – JCS

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	0.1 ~ 10000 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) ≤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)		4	6.3	10	16	25	35	50	63	100
Tan δ (Max.)	Φ4~Φ10	0.35	0.30	0.24	0.20	0.16	0.14	0.14	0.12	0.10
	Φ12.5	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10

Stability At Low Temp.

Measurement Frequency: 120Hz

Rated Voltage (V)		4	6.3	10	16	25	35	50~100
Impedance Ratio ZT/Z20 (Max.)	Φ4~Φ10	Z(-25°C)/ Z(20°C)	7	4	3	2	2	2
		Z(-40°C)/ Z(20°C)	15	8	6	4	4	3
	Φ12.5	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 ± 20% of initial value (Within ± 30% of initial value for 4V)
Dissipation Factor	200% or less of initial specified value
Leakage Current	Initial specified value or less

Shelf Life

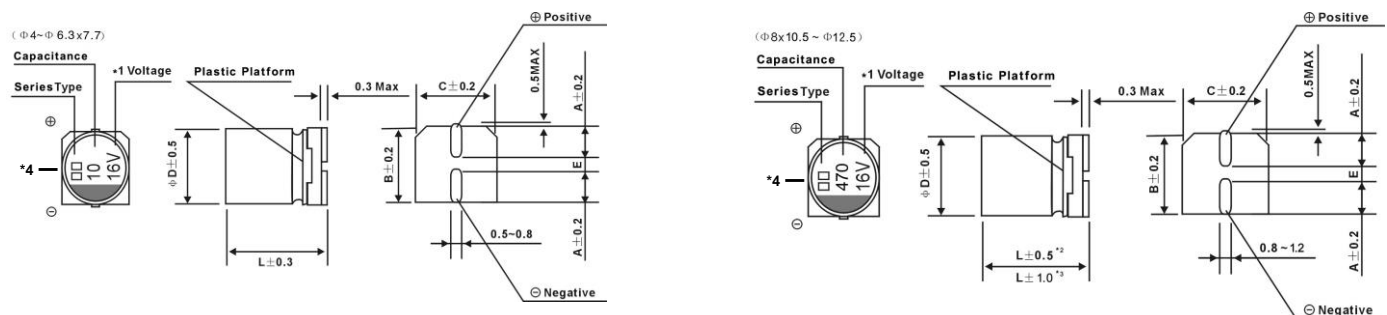
After leaving capacitors under no load at 85°C for 1000 hours, They meet the specified value for load life characteristics listed above.

Resistance to Soldering Heat

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

Capacitance Change	Within ± 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 Applicable to Φ8x10.5~Φ10 *3 Applicable to Φ12.5 *4 Surface Marking Types: jbs, js, CS, XS (mm)

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

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FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Coefficient	Frequency		50Hz	120Hz	300Hz	1KHz	10KHz~
	Φ4~Φ10	0.1~68μF	0.70	1.00	1.17	1.36	1.50
		100~3300μF	0.85	1.00	1.08	1.20	1.30
Φ12.5	~68μF	0.75	1.00	1.35	1.57	2.00	
	100~680μF	0.8	1.00	1.23	1.34	1.50	
	1000~10000μF	0.85	1.00	1.10	1.13	1.15	

STANDARD SIZE

WV Cap.(μF)		4 0G		6.3 0J		10 1A		16 1C		25 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	4x5.4 5x5.4 6.3x5.4	25 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 6.3x5.4	43 50	5x5.4 6.3x5.4	40 50	5x5.4 6.3x5.4	40 53	6.3x5.4 8x6.5	60 100	6.3x5.4 6.3x7.7	80 91
150	151	6.3x5.4	52	6.3x5.4	55	6.3x5.4	62	6.3x7.7 8x6.5	80 120	6.3x7.7 8x10.5	100 140
220	221	6.3x5.4	57	6.3x5.4 6.3x7.7	67 105	6.3x5.4 6.3x7.7 8x6.5	67 88 105	6.3x7.7 8x6.5 8x10.5	86 105 150	8x10.5 10x7.7	175 160
330	331	6.3x7.7	100	6.3x7.7 8x6.5	105 105	6.3x7.7 8x10.5	135 195	8x10.5 10x7.7	195 175	8x10.5 10x10.5	220 220
470	471	6.3x7.7 8x6.5	105 105	6.3x7.7 8x10.5	120 230	6.3x7.7 8x10.5 10x10.5	120 210 232	8x10.5 10x10.5	270 280	10x10.5	280
680	681	8x10.5	210	8x10.5	230	8x10.5 10x10.5	230 270	10x10.5	315	10x10.5	245
1000	102	8x10.5 10x7.7	230 230	8x10.5 10x7.7 10x10.5	290 230 315	8x10.5 10x10.5	290 315	10x10.5 12.5x13.5	315 700	12.5x13.5	700
1500	152	10x10.5	315	10x10.5	410	10x10.5 12.5x13.5	335 485	12.5x13.5	580	--	--
2200	222	10x10.5	340	12.5x13.5	650	12.5x13.5	910	--	--	Case Size	Ripple Current

WV Cap.(μF)		35 1V		50 1H		63 1J		100 2A	
0.1	0R1	--	--	4x5.4	2	4x5.4	2	--	--
0.22	R22	--	--	4x5.4	4	4x5.4	4	--	--
0.33	R33	--	--	4x5.4	4	4x5.4	4	--	--
0.47	R47	--	--	4x5.4	5	4x5.4	5	--	--
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	5x5.4 6.3x5.4	12 14
3.3	3R3	4x5.4	13	4x5.4	12	5x5.4 6.3x5.4	12 30	6.3x5.4 6.3x7.7 8x6.5	23 32 30
4.7	4R7	4x5.4	15	4x5.4 5x5.4	14 19	5x5.4 6.3x5.4	18 23	5x5.4 6.3x5.4 6.3x7.7	15 21 35
10	100	4x5.4 5x5.4	18 25	5x5.4 6.3x5.4	20 28	6.3x5.4 6.3x7.7 8x6.5	24 39 25	6.3x5.4 6.3x7.7 8x10.5	25 35 77
22	220	5x5.4 6.3x5.4	34 29	6.3x5.4 6.3x7.7 8x6.5	42 51 70	6.3x7.7 8x6.5 8x10.5	48 55 98	8x10.5 10x10.5	84 126
33	330	6.3x5.4 8x6.5	46 85	6.3x5.4 6.3x7.7 8x6.5	60 60 70	8x10.5	112	10x10.5	133
47	470	6.3x5.4 6.3x7.7 8x6.5	55 78 85	6.3x7.7 8x6.5 8x10.5 10x10.5	63 85 119 170	8x10.5 10x10.5	119 160	10x10.5	140
56	560	6.3x7.7	65	6.3x7.7	90	10x10.5	210	--	--
68	680	6.3x7.7 8x6.5	69 90	8x6.5 8x10.5	70 110	10x10.5	140	--	--
100	101	6.3x7.7 8x10.5 10x7.7	80 80 160	8x10.5 10x10.5 10x7.7	145 175 160	10x10.5 12.5x13.5	196 495	12.5x13.5	405
150	151	8x10.5	175	10x10.5	200	--	--	--	--
220	221	8x10.5 10x10.5	185 250	10x10.5	220	12.5x13.5	560	--	--
330	331	10x10.5	300	12.5x13.5	630	--	--	--	--
470	471	10x10.5 12.5x13.5	310 580	--	--	--	--	--	--
680	681	12.5x13.5	600	--	--	--	--	Case size	Allowable ripple

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