

SMD Aluminum Electrolytic Capacitor

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 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)



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 ($\Phi 4 \sim \Phi 10$)	0.35	0.30	0.24	0.20	0.16	0.14	0.14	0.12	0.10
(Max.) ($\Phi 12.5$)	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							
$\Phi 4 \sim \Phi 10$	Z(-25°C)/Z(20°C)	7	4	3	2	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
(Max.)	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

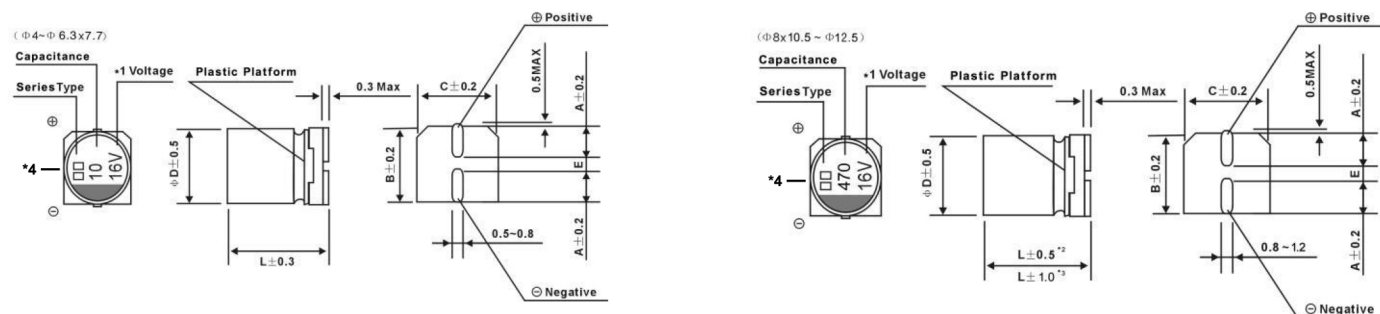
After leaving capacitors under no load at 85°C for 1000 hours,
They meet the specified value for load life characteristics listed above.

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] *2 Applicable to $\Phi 8 \times 10.5 \sim \Phi 10$ *3 Applicable to $\Phi 12.5$ *4 Surface Marking Types: jbS, jS, CS, XS (mm)

$\Phi D \times L$	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

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

STANDARD SIZE

WV Cap.(μF)		4 0G	6.3 0J	10 1A	16 1C	25 1E
4.7	4R7	--	--	--	--	4x5.4
10	100	--	--	--	4x5.4	18
15	150	--	--	--	4x5.4	25
22	220	--	4x5.4	20	4x5.4	20
33	330	4x5.4	18	22	5x5.4	27
47	470	4x5.4	24	23	5x5.4	20
56	560	4x5.4	27	32	6.3x5.4	25
68	680	5x5.4	31	41	6.3x5.4	27
100	101	5x5.4	43	40	6.3x5.4	28
150	151	6.3x5.4	50	50	6.3x5.4	31
220	221	6.3x5.4	52	55	6.3x5.4	30
330	331	6.3x7.7	100	105	6.3x7.7	30
470	471	6.3x7.7	105	120	8x6.5	48
680	681	8x10.5	210	230	8x6.5	48
1000	102	8x10.5	230	290	10x10.5	52
1500	152	10x10.5	315	410	12.5x13.5	56
2200	222	10x10.5	340	650	12.5x13.5	60

WV Cap.(μF)		35 1V	50 1H	63 1J	100 2A
0.1	0R1	--	4x5.4	2	--
0.22	R22	--	4x5.4	4	--
0.33	R33	--	4x5.4	4	--
0.47	R47	--	4x5.4	5	--
1	010	--	4x5.4	8	4x5.4
1.5	1R5	--	4x5.4	9	6.3x5.4
2.2	2R2	--	4x5.4	11	5x5.4
3.3	3R3	4x5.4	13	12	6.3x5.4
4.7	4R7	4x5.4	15	14	6.3x7.7
10	100	4x5.4	18	20	5x5.4
22	220	5x5.4	25	28	6.3x5.4
33	330	6.3x5.4	34	42	6.3x7.7
47	470	6.3x5.4	46	51	8x6.5
56	560	6.3x7.7	55	60	8x10.5
68	680	6.3x7.7	78	85	10x10.5
100	101	8x10.5	80	119	12.5x13.5
150	151	8x10.5	160	170	--
220	221	10x10.5	175	200	--
330	331	10x10.5	220	220	--
470	471	12.5x13.5	310	--	--
680	681	12.5x13.5	600	--	--

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