

# ALUMINUM ELECTROLYTIC CAPACITORS

Suntan®

CHIP TYPE SERIES

DISCONTINUED

# TS13C6

## FEATURES

- Wide temperature range -55°C ~ 105°C with load life of 2000~3000 hours.



Fig 1



Fig 2



Fig 3

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

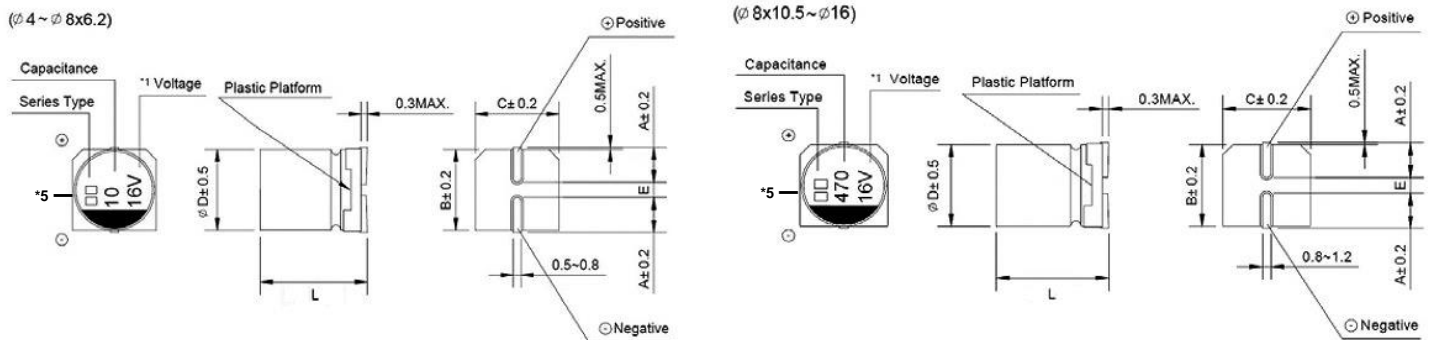
Fig 3 : Diameter: ≥12.5mm

## Long Life Assurance

### ◆ Specifications

ITEMS		PERFORMANCE CHARACTERISTICS							
Operating Temperature Range	-55°C ~ +105°C								
Voltage Range	6.3~50V								
Capacitance Range	0.1~1500μF								
Capacitance Tolerance	±20% at 120Hz, 20°C								
Leakage Current	leakage current (Ø4~Ø10) ≤0.01CV or 3 μ A, whichever is greater(after 2 minutes' application of rated voltage) leakage current (Ø12.5~Ø16) ≤0.03CV or 4 μ A, 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	
	Tan δ (MAX)	Ø4~Ø10	0.28	0.24	0.20	0.16	0.13	0.12	
Ø12.5~Ø16		0.38	0.34	0.30	0.26	0.22	0.18		
Stability at Low Temperature	Measurement frequency : 120Hz								
	Rated voltage (V)		6.3	10	16	25	35	50	
	Impedance ratio ZT / Z20 (MAX)	Ø4~Ø10	Z(-25°C) / Z(20°C)	3	3	2	2	2	2
			Z(-55°C) / Z(20°C)	8	5	4	3	3	3
	Ø12.5~Ø16	Z(-25°C) / Z(20°C)	5	4	3	2	2	2	
		Z(-55°C) / Z(20°C)	12	10	8	5	4	3	
Load Life	After 3000 hours*( 2000 hours for Ø4~Ø6.3 and Ø 8*6.2) application of rated voltage at 105°C , they meet the characteristics listed at right		Capacitance Change	Within ± 25% of initial value					
			Leakage Current	Initial specified value or less					
			Tan δ	200% or less of initial specified value					
Self 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 restored at room temperature, they meet the characteristics listed at right.		Capacitance Change	Within ± 10% of initial value					
			Tan δ	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]

\*5 Markings: Su6, S6, EL, VL

# TS13C6

◆ DIMENSIONS(Unit:mm)

ØD×L	4×5.4	5×5.8	6.3×5.4	6.3×7.7	8×6.2	8×10.5	10×10.5	10×13.5	12.5×13.5	12.5×16	16×16.5
<b>A</b>	2.0	2.2	2.6	2.6	3.4	3.0	3.3	3.3	4.9	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	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	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	4.7	6.4
<b>L</b>	5.8±0.6	5.8±0.6	5.8±0.6	7.7±0.6	6.2±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

◆ DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV/V	6.3		10		16		25		35		50		
Cap/μF	0J		1A		1C		1E		1V		1H		
0.1	0R1											4×5.4	1
0.22	R22											4×5.4	2
0.33	R33											4×5.4	3
0.47	R47											4×5.4	5
1	010											4×5.4	10
2.2	2R2											4×5.4	16
3.3	3R3											4×5.4	16
4.7	4R7							4×5.4	13	4×5.4	14	5×5.8	23
10	100	--	--	--	--	4×5.4	18	5×5.8	20	5×5.8	21	6.3×5.4	35
22	220	4×5.4	22	5×5.8	25	5×5.8	27	6.3×5.4	36	6.3×5.4	38	6.3×7.7 (8×6.2)	70 (70)
33	330	5×5.8	27	5×5.8	30	6.3×5.4	40	6.3×5.4	60	6.3×7.7 (8×6.2)	84 (84)	8×10.5	90
47	470	5×5.8	33	6.3×5.4	41	6.3×5.4	48	6.3×7.7 (8×6.2)	90 (91)	8×10.5	98	8×10.5	90
100	101	6.3×5.4	50	6.3×5.4 (8×6.2)	53 (110)	6.3×5.4	60	8×10.5	130	8×10.5	130	10×10.5	100
150	151	6.3×5.4	55	6.3×7.7	105	6.3×7.7	95	8×10.5	140	10×10.5	315	10×10.5	100
220	221	6.3×7.7	100	8×10.5	210	8×10.5	210	10×10.5	190	10×10.5	315	10×13.5 (10×10.5)	250 (100)
330	331	8×10.5	210	8×10.5	210	8×10.5	210	10×10.5	315	10×10.5	315	12.5×13.5	400
470	471	8×10.5	210	10×10.5	315	10×10.5	315	10×10.5	315	12.5×13.5 (10×13.5)	500 (360)	16×16.5 (12.5×16)	650 (500)
680	681	8×10.5	210	10×10.5	315	10×10.5	315	10×13.5	380	12.5×13.5	500		
1000	102	10×10.5	315	10×13.5 (10×10.5)	360 (315)	12.5×13.5 (10×13.5) (10×10.5)	450 (350) (315)	12.5×13.5	550	16×16.5 (12.5×16)	700 (550)		
1500	152	10×13.5 (10×10.5)	450 (315)	12.5×13.5	500	12.5×13.5	500	12.5×16	800				
2200	222	12.5×13.5	620	12.5×16 (12.5×13.5)	650 (600)	16×16.5	900	16×16.5	1000				
3300	332	12.5×16	750	16×16.5	950							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	0.1~100μF	0.70	1.00	1.17	1.50	
		150~1500μF	0.85	1.00	1.08	1.30	
	Ø 12.5~ Ø 16	~470μF	0.75	1.00	1.35	1.57	2.00
		680~3300μF	0.85	1.00	1.23	1.34	1.50

Note: Specification are subject to change without notice. For more detail and update, please visit our website.