

# ALUMINUM ELECTROLYTIC CAPACITORS

Suntan®

CHIP TYPE SERIES

# TS13CX

## FEATURES

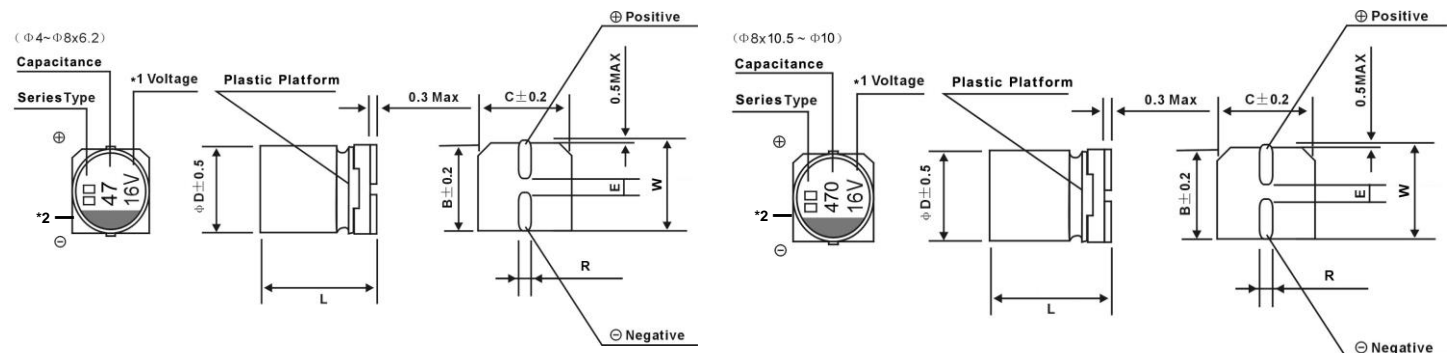
- 105°C 2,000hours
- Miniaturized, Extra Low Impedance
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB



## ◆ Specifications

ITEMS PERFORMANCE CHARACTERISTICS									
Rated Voltage (V)	-		6.3	10	16	25	35	50	
Surge Voltage (V)	Room temperature		7.3	11.5	18.4	28.8	40.3	57.5	
Category Temperature Range (°C)	-		-55 to +105						
Capacitance Tolerance (%)	120Hz/20°C		M : ±20						
Dissipation Factor (Tan δ)	tan δ (max) 120Hz/+20°C	Φ4 to Φ6.3	0.26	0.19	0.16	0.14	0.12	0.10	
		Φ8 to Φ10	0.32	0.21	0.18	0.16	0.12	0.10	
Leakage Current (LC)	μA/after 2minutes (max)		The greater value of either 0.01CV or 3μA						
Impedance Ratio at Low Temperature	Based on the value at 120Hz, +20°C	-25°C	Z/Z20°C	4	3	2	2	2	2
		-55°C	Z/Z20°C	8	5	4	3	3	3
Endurance	After applying rated working voltage for 2000 hours at +105°C ± 2°C, and then being stabilized at +20°C, capacitors shall meet the following limits	ΔC/C	Within ±30% of the initial value						
		tan δ	Less than 200% of the specified value						
		LC	Within the initial limit						
Shelf Life	-		After storage for 1000 h at +105°C ± 2°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet the limits specified in endurance						
Resistance to Soldering Heat	After reflow soldering and then being stabilized at +20°C, capacitors shall meet the following limits	ΔC/C	Within ±10% of the initial value						
		tan δ	Within the initial limit						
		LC	Within the initial limit						

## ◆ Chip type



\*1 Voltage mark for 6.3V is [6V] or [6.3V]

\*2 Markings: SuX, SX, RX, VD

ΦDxL	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x6.5	8x10.5	10x10.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3
E±0.2	1.0	1.3	2.2	2.2	3.1	3.1	4.4
L±0.6	5.4	5.4	5.4	7.7	6.5	10.5	10.5
R	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.7 to 1.0	0.7 to 1.0	0.1 to 1.4
W	5.1	6.1	7.3	7.3	9.2	9.2	11.2

# TS13CX

◆ Standard size & Maximum permissible ripple current & Impedance

Cap/uF \ WV		6.3			10			16		
		0J			1A			1C		
47	470	--	--	--	--	--	--	4x5.4	1.25	160
68	680	--	--	--	4x5.4	1.25	160	5x5.4	0.76	240
100	101	4x5.4	1.25	160	--	--	--	5x5.4	0.76	240
150	151	--	--	--	5x5.4	0.76	240	6.3x5.4	0.36	300
220	221	5x5.4	0.76	240	6.3x5.4	0.36	300	6.3x5.4	0.36	300
330	331	6.3x5.4	0.36	300	6.3x7.7	0.26	600	6.3x7.7	0.26	600
470	471	6.3x7.7	0.26	600	6.3x7.7	0.26	600	8x6.5	0.16	600
680	681	6.3x7.7	0.26	600	--	--	--	8x10.5	0.16	850
820	821	--	--	--	--	--	--	8x10.5	0.16	850
1000	102	--	--	--	8x10.5	0.16	850	10x10.5	0.08	1190
1200	122	--	--	--	--	--	--	10x10.5	0.08	1190
1500	152	8x10.5	0.16	850	10x10.5	0.08	1190	Case size	Impedance (Ω)	Rated ripple current
2200	222	10x10.5	0.08	1190	--	--	--			

Cap/uF \ WV		25			35			50		
		1E			1V			1H		
10	100	--	--	--	--	--	--	4x5.4 (5x5.4)	2.60 (1.18)	85 (165)
22	220	4x5.4	1.25	160	4x5.4	1.25	160	5x5.4	1.18	165
33	330	4x5.4	1.25	160	5x5.4	0.76	240	--	--	--
47	470	5x5.4	0.76	240	5x5.4	0.76	240	6.3x5.4	0.74	195
68	680	5x5.4	0.76	240	6.3x5.4	0.36	300	--	--	--
100	101	6.3x5.4	0.36	300	6.3x5.4	0.36	300	6.3x7.7	0.40	350
150	151	6.3x7.7	0.26	600	6.3x7.7	0.26	600	--	--	--
220	221	6.3x7.7	0.26	600	--	--	--	8x10.5	0.24	670
330	331	--	--	--	8x10.5	0.16	850	10x10.5	0.18	900
390	391	8x10.5	0.16	850	8x10.5	0.16	850	--	--	--
470	471	8x10.5	0.16	850	10x10.5	0.08	1190	--	--	--
560	561	8x10.5	0.16	850	10x10.5	0.08	1190	--	--	--
680	681	--	--	--	10x10.5	0.08	1190	--	--	--
820	821	10x10.5	0.08	1190	--	--	--	Case size	Impedance (Ω)	Rated ripple current
1000	102	10x10.5	0.08	1190	--	--	--			

Case size: ΦDxL(mm)  
 Impedance(Ω)max at 100kHz, +20℃  
 Rated ripple current mA rms (100kHz, +105℃)

◆ Frequency coefficient Factor of Rated Ripple current

Frequency: F(Hz)		50Hz	120Hz	1kHz	10kHz ≤
Capacitance: C (μF)	C ≤ 470	0.50	0.65	0.85	1.00
	C > 470	0.55	0.70	0.90	1.00

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