

# TS13CP



## FEATURES

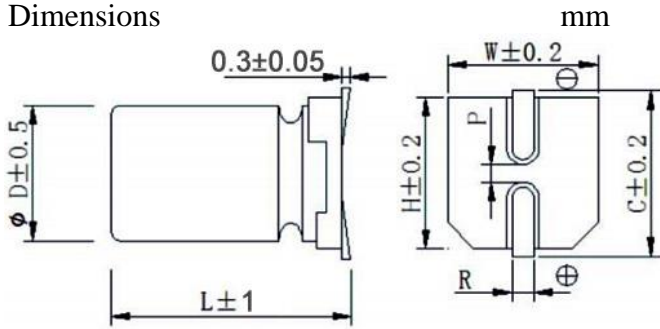
- Low ESR, High ripple current, miniaturized
- SMD type: lead free reflow soldering condition at 250°C peak correspondence

## ◆ Specifications

I T E M S		C H A R A C T E R I S T I C S	
Category Temperature Range (°C)	-55 ~ +105		
Rated Voltage Range	2.5 ~ 100V		
Capacitance Tolerance (20°C, 120Hz)	±20%		
Leakage Current	Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20°C		
	2.5V ~ 25V	35V~100V	
	I≤0.2CV or 500μA whichever is greater		I≤0.1CV or 299μA whichever is greater
Dissipation Factor (20°C, 120Hz)	Rated Voltage (V)	2.5V~6.3V	10V~100V
	tanδ (Max.)	0.08	0.12
Low Temperature Characteristics (Max. Impedance Ratio)	Z(-25°C)/Z(+20°C)	≤ 1.25	(100KHz)
	Z(-55°C)/Z(+20°C)	≤ 1.25	
Endurance	The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 2000 hours at 105°C.		
	Appearance	No significant damage	
	Capacitance change	≤ ±20% of the initial value	
	D.F.(tanδ)	≤ 150% of the specified value	
	ESR	≤ 150% of the specified value	
	Leakage current	≤ The specified value	
Damp Heat (Steady State)	The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 1000 hours at 60°C, 90% ~ 95% RH.		
	Appearance	No significant damage	
	Capacitance change	≤ ±20% of the initial value	
	D.F.(tanδ)	≤ 150% of the specified value	
	ESR	≤ 150% of the specified value	
	Leakage current	≤ The specified value	
Surge Voltage	Surge Voltage=Rated voltage × 1.15(V) The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds.		
	Appearance	No significant damage	
	Capacitance change	≤ ±20% of the initial value	
	D.F.(tanδ)	≤ 150% of the specified value	
	ESR	≤ 150% of the specified value	
	Leakage current	≤ The specified value	
Resistance to Soldering Heat	Measurement for solder temperature profile shall be made at the capacitor top and the terminal.		
	Capacitance change	≤ ±10% of the initial value	
	D.F.(tanδ)	≤ 130% of the specified value	
	ESR	≤ 130% of the specified value	
	Leakage current	≤ The specified value	

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Dimensions



ΦD	W	H	C	R	P
5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	6.5	6.5	7.2	0.5~0.8	2.2
8	8.3	8.3	9.0	0.7~1.1	3.1
10	10.3	10.3	11.0	0.7~1.1	4.5

## ◆ RATED RIPPLE CURRENT COEFFICIENT

Frequency(Hz)	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f < 500kHz
Coefficient	0.05	0.30	0.70	1.00

## ◆ STANDARD RATINGS

Rated Voltage	Rated Capacitance (μF)	Case Size ΦDxL (mm)	ESR (mΩ) at 20°C, 100 KHz	Leakage Current (μA)	Rated Ripple Current (mA <sub>rms</sub> /105°C/100kHz)
6.3	220	5x7	35	500	3100
	330	5x7	35	500	3100
		6.3x9	35	500	3500
	390	5x10	35	500	3500
	470	6.3x7.4	35	592	3800
	560	6.3x9	35	706	3800
	680	6.3x9	25	857	4300
	820	6.3x9	25	1033	4800
	1000	6.3x12	25	1260	4800
		8x12	25	1260	5100
1200	8x12	25	1512	5100	
1500	8x12	25	1890	5100	
2200	10x12	25	2772	5500	
10	100	5x8	35	500	2350
	220	6.3x9	35	500	2900
	330	6.3x9	35	660	3600
	470	6.3x9	35	940	3600
	560	6.3x9	35	1120	3600
	680	8x12	25	1360	4200
	820	8x12	25	1640	4500
		8x12	25	2000	4500
	1000	10x12	25	2000	4500
		8x12	25	3000	4800
1500	10x12	25	3000	4800	

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◆ STANDARD RATINGS

Rated Voltage	Rated Capacitance (μF)	Case Size ΦDxL (mm)	ESR (mΩ) at 20°C, 100 KHz	Leakage Current (μA)	Rated Ripple Current (mArms/105°C/100kHz)
16	100	5x8	50	500	2100
		6.3x9	40	500	2690
	220	8x8	40	704	2900
		6.3x9	40	704	2690
	270	6.3x9	40	864	2690
		8x8	40	864	2900
	330	6.3x9	40	1056	2690
	470	8x9	30	1504	3500
		6.3x12	30	1054	3500
	560	8x12	30	1792	3500
	680	8x12	30	2176	3900
	820	8x12	30	2624	3900
		10x12	30	2624	4100
	1000	8x12	30	3200	3900
10x12		30	3200	4100	
1200	10x12	30	3200	4100	
1500	10x12	30	4800	4500	
20	100	6.3x9	50	500	2100
	220	6.3x9	50	880	2690
	220	8x10	45	880	2900
	560	8x12	40	2240	3500
		10x12	40	2240	3500
25	100	6.3x7.4	50	500	2100
	150	6.3x9	50	750	2690
	220	6.3x9	50	1100	2500
	270	6.3x12	50	1350	2900
		8x12	50	1350	3100
	330	8x10	45	1650	3500
		6.3x12	45	1650	3500
		8x12	45	1650	3500
	470	8x12	45	2350	3100
		10x12	45	2350	3500
	560	8x12	45	2800	3500
	680	8x12	45	3400	3800
	820	10x12	40	4100	4100
1000	10x12	40	5000	4100	
30	470	8x12	45	2820	3100
	680	10x12.5	40	4080	4100

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◆ STANDARD RATINGS

Rated Voltage	Rated Capacitance (μF)	Case Size ΦDxL (mm)	ESR (mΩ) at 20°C, 100 KHz	Leakage Current (μA)	Rated Ripple Current (mA <sub>rms</sub> /105°C/100kHz)
35	47	6.3x7.4	80	299	1410
	68	6.3x9	80	299	1410
	100	6.3x9	80	350	1690
		8x10	55	350	1900
	8x12	55	350	2690	
	150	6.3x12	70	525	2350
	220	8x12	55	770	3100
	330	10x12	50	1155	3500
470	10x12	50	1645	4100	
50	22	5x8	100	299	800
		6.3x9	100	299	850
	68	8x10	60	340	1500
	100	8x12	60	500	1500
		10x12	55	500	2100
220	10x12	55	1100	2100	
63	33	8x12	60	299	1300
	47	8x10	60	299	1300
		8x12	60	299	1300
	56	8x10	60	353	1300
	100	8x12	60	630	1800
		10x12	55	630	2100
220	10x12	55	1386	2690	
100	10	8x10	8x10	90	850
	22	8x12	8x12	60	1550
	68	10x12	10x12	60	1780

Note: Reflow soldering can only be used for SMD Conductive Polymer Aluminum Solid Electrolytic Capacitor.

Radial Conductive Polymer Aluminum Solid Electrolytic Capacitor are not suitable for reflow soldering, but only for wave soldering.

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