

# TS13CQ



## FEATURES

- Low ESR, High ripple current, long life, miniaturized
- SMD type: lead free reflow soldering condition at 260°C peak correspondence

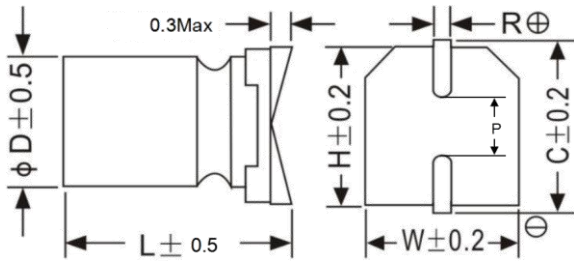
## ◆ Specifications

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 5000 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		

# TS13CQ

Dimensions

mm



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 (mArms/105°C/100kHz)
2.5	470	6.3x9	18	500	4100
	560	6.3x9	18	500	4100
	680	6.3x9	18	500	4100
	820	6.3x9	18	500	4100
4	560	6.3x9	18	500	4100
	680	6.3x9	18	544	4100
	820	6.3x9	18	656	4100
	1000	6.3x9	18	800	4100
	1200	6.3x9	18	960	4100
6.3	220	6.3x7	30	500	3500
	330	6.3x7	25	500	3500
	470	6.3x7	25	592	3500
	560	6.3x7	25	706	3500
	680	6.3x9	18	857	3800
	820	6.3x9	18	1033	3800
	1000	8x9.8	15	1260	4100
	1500	10x13.6	15	1890	4800
10	220	6.3x7	30	500	2650
	330	6.3x7	30	660	2650
	470	6.3x7	30	940	2700
	560	6.3x9	20	1120	2900
	680	8x9.8	18	1360	3500
	820	8x12.6	18	1640	4100
		10x10.5	15	1640	4100
	1000	8x12.6	18	2000	4100
	1500	10x13.6	15	2000	4500

# TS13CQ

◆ 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)
16	47	6.3x7	50	500	2100
	68	6.3x7	40	500	2100
	100	6.3x7	40	500	2100
	220	6.3x7	30	704	2100
		8x9.8	25	704	2690
	330	6.3x7	30	1056	2260
		8x9.8	25	1056	2900
		8x12.6	20	1056	3500
	470	8x9.8	25	1504	2900
		8x12.6	20	1504	3500
	680	8x12.6	20	2176	3500
820	8x12.6	20	2624	3500	
1000	8x12.6	20	3200	3500	
1500	10x13.6	15	4800	4100	
25	47	6.3x7	50	500	1950
	100	6.3x7	45	500	1950
		6.3x9	40	500	2100
	220	6.3x9	40	1100	2100
		8x9.8	30	1100	2690
	270	6.3x10	35	1350	2400
	330	8x9.8	30	1650	2690
	470	8x12.6	25	2350	3100
		10x10.5	30	2350	3100
	680	8x12.6	25	3400	3100
		10x13.6	20	3400	3800
820	10x13.6	20	4100	3800	
1000	10x13.6	20	5000	3800	
35	47	6.3x7	80	299	1410
	100	6.3x7	80	350	1516
		6.3x9	80	350	1950
		8x9.8	50	350	2450
	150	6.3x10	70	525	2100
	220	8x9.8	50	770	2450
		8x12.6	50	770	2910
	330	8x12.6	50	1155	2910
		10x13.6	40	1155	3640
470	10x13.6	40	1155	3640	

# TS13CQ

◆ 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)
50	22	6.3x9	100	299	850
	33	6.3x9	100	299	850
	47	6.3x9	80	299	920
		8x9.8	60	299	1200
		8x12.6	60	299	1500
	100	8x9.8	60	500	1320
		8x12.6	60	500	1550
		10x13.6	55	500	2100
150	8x12.6	60	750	1550	
220	10x13.6	55	1100	2100	
63	10	6.3x9	110	299	750
	22	6.3x9	110	299	750
	33	6.3x9	100	299	820
		8x9.8	60	299	1100
	47	8x9.8	60	299	1100
		8x12.6	60	299	1300
	82	8x12.6	60	517	1550
	100	8x12.6	60	630	1550
10x13.6		55	630	1800	
150	10x13.6	55	945	1800	
80	10	6.3x9	120	299	550
	22	6.3x9	120	299	600
		8x9.8	70	299	950
	33	8x9.8	70	299	950
		8x12.6	70	299	1300
	47	8x12.6	70	376	1300
	56	8x12.6	70	448	1400
	68	10x13.6	50	544	1750
100	10x13.6	50	800	1750	
100	10	6.3x9	120	299	550
	22	8x9.8	80	299	950
		8x12.6	70	299	1300
	33	8x12.6	70	330	1300
	47	10x13.6	50	470	1700
	68	10x13.6	50	680	1750

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.