TS13E CDHEA

FEATURES

- Super low ESR, high ripple current
- Load life of 2000 hours at 105℃

◆ Specifications

ITEMS	CHARACTERISTICS
Category Temperature Range (℃)	-55 ~ +105
Rated Voltage Range	2.5 ~ 25V
Capacitance Tolerance (20℃, 120Hz)	±20%
Leakage Current	I≤0.2CV or 500μA whichever is greater Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20℃

Dissipation Factor (20℃, 120Hz)

Rated Voltage (V	2.5	4	6.3	6.8	7.5	10	12	16	20	25
tanδ (Max.)	0.08					0.12				

Low Temperature Characteristics (Max. Impedance Ratio)

Z(-25℃)/Z(+20℃)	≦1.25	(100KHz)
Z(-55℃)/Z(+20℃)	≦1.25	

Endurence

The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 2000 hours at 105℃.

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℃ after application of rated voltage for 1000 hours at 60℃, 90% ~ 95% RH.

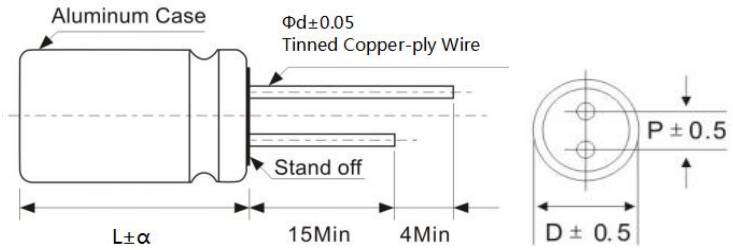
Appearance	No significant damage
Capacitance change	≦±20% of the initial value
D.F.(tanδ)	≦150% of the specified value
ESR	≦150% of the specified value
Leakage current	≦The specified value

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℃ 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

Dimensions mm



ΦD	5	6.3	8	10
P	2.0	2.5	3.5	5.0
Φd	0.5	0.6	0.6	0.6

α	(L < 16) 1.0
	(16≦L < 22) 1.5
	(L≧22) 2.0

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◆ 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℃, 100 KHz	Leakage Current (μA)	Rated Ripple Current (mArms/105℃/100kHz)
2.5	560	5x8	12	500	4100
		6.3x8	8	500	5100
	680	6.3x8	8	500	5100
		8x9	8	500	5900
	820	6.3x8	8	500	5200
		8x9	8	500	5900
	1000	8x9	8	500	5900
		8x12	8	500	6100
	1200	8x9	8	600	5900
		8x12	8	600	6100
	1500	8x12	8	750	6100
4	560	6.3x8	8	500	5100
		8x9	8	500	5900
	680	6.3x8	8	544	5100
		8x9	8	544	5900
	820	6.3x9	8	656	5200
		8x9	8	656	5900
	1000	6.3x12	8	800	5500
		8x9	8	800	5900
	1200	6.3x12	8	960	5500
		8x9	8	960	5900
6.3	220	5x8	12	500	3900
	270	5x8	12	500	3900
	330	5x9.5	12	500	4100
		6.3x8.5	10	500	4450
	390	5x9.5	12	500	4510
		6.3x8	10	500	4800
	470	5x9.5	12	592	4510
		6.3x8.5	8	592	4900
	560	6.3x8.5	8	706	5100
		8x9.5	8	706	5900
	680	6.3x8.5	8	857	5100
		8x9	8	857	5900
	820	6.3x9.5	8	1033	5200
		6.3x11.5	8	1033	5500
		8x9.5	8	1033	5900
	1000	6.3x11.5	8	1260	5500
		8x9.5	8	1260	5900
		8x12	8	1260	6100
	1200	8x9	8	1512	5900
		8x12	8	1512	6100
	1500	8x12	8	1890	6100
		10x12.5	8	1890	6200
	2200	10x12.5	8	2772	6200

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◆ STANDARD RATINGS

Rated Voltage	Rated Capacitance (μF)	Case Size ΦDxL (mm)	ESR (mΩ) at 20℃, 100 KHz	Leakage Current (μA)	Rated Ripple Current (mArms/105℃/100kHz)
7.5	270	5x8	12	500	3630
	330	6.3x8	10	500	4100
	390	6.3x8	10	585	4100
	470	6.3x8	10	705	4100
	560	6.3x8	10	840	4500
	680	6.3x12	10	1020	4500
		8x9	8	1020	4800
	820	6.3x12	10	1230	4500
		8x9	8	1230	4800
	1000	8x9	8	1500	4800
		8x12	8	1500	5100
	1200	8x12	8	1800	5100
		10x12.5	8	1800	5500
	1500	10x12.5	8	2250	5500
10	220	5x8	15	500	3100
		6.3x8	12	500	3500
	270	6.3x8	12	540	3500
	330	6.3x8	12	660	3750
		8x9	10	660	3800
	390	6.3x8	12	780	3750
		6.3x12	12	780	3900
	470	6.3x8	12	940	3850
		8x9	10	940	3950
	560	6.3x12	12	1120	3900
		8x9	10	1120	3950
	680	6.3x12	12	1360	4100
		8x9	10	1360	4200
	820	8x9	10	1640	4200
		8x12	8	1640	4500
	1000	8x12	8	2000	4500
		10x12.5	8	2000	5200
	1200	10x12.5	8	2400	5200
	1500	10x12.5	8	3000	5200
12	220	5x9	15	528	2690
		6.3x8	13	528	2900
	270	6.3x8	13	648	2900
	330	5x9.5	7	396	4800
		6.3x8	13	792	2900
	390	6.3x8	13	936	2900
	470	6.3x12	13	1128	3500
		8x9	12	1128	3800
	560	6.3x12	13	1344	3500
		8x9	12	1344	3800
	680	6.3x8.5	7	816	5100
		8x9	12	1632	3800
	820	8x12	11	1968	4100
	1000	8x12	11	2400	4100
		10x12.5	10	2400	4800
	1200	10x12.5	10	2880	4800
	1500	10x12.5	10	3600	4800

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◆ STANDARD RATINGS

Rated Voltage	Rated Capacitance (μF)	Case Size ΦDxL (mm)	ESR (mΩ) at 20℃, 100 KHz	Leakage Current (μA)	Rated Ripple Current (mArms/105℃/100kHz)
16	100	5x7.5	15	500	2100
	150	5x8	15	500	2100
		6.3x8	13	500	2900
	180	5x9	15	576	2690
		6.3x8	13	576	2900
	220	6.3x8.5	13	704	2900
		6.3x12	13	704	3500
		8x9	12	704	3500
	270	6.3x8.5	13	864	2900
		8x9	12	864	3500
		8x12	11	864	3790
	330	6.3x8.5	13	1056	2900
		6.3x11.5	13	1056	3500
		8x9	12	1056	3500
	470	6.3x11.5	13	1504	3500
		8x9.5	12	1504	3500
		8x12	7	752	5100
	560	6.3x12	13	1792	3500
		8x12	12	1792	3500
	680	8x12	11	2176	4800
	820	8x12	11	2624	4800
	1000	10x12	10	3200	5100
25	68	6.3x8	25	500	2100
		8x9	20	500	2690
	82	6.3x8	25	500	2100
		8x9	20	500	2690
	100	6.3x8.5	25	500	2100
		8x9	18	500	2690
		8x12	18	500	2900
	150	8x9	18	750	2690
		8x12	18	750	2900
	180	8x12	18	900	2900
	220	8x12	18	1100	2900
	270	10x12.5	15	1350	3500
	330	10x12.5	15	1650	3500
	470	10x12	15	2350	3500
35	100	6.3x8.5	10	350	2900
	470	10x12	10	1645	4900

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.