

TSX Series

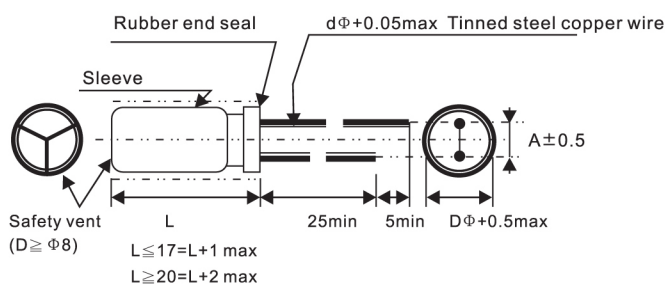
- 105°C, 2000~5000 hours LOW ESR series (紋波疊加)
- 因低電阻電解液有使用，實現了超低ESR超低阻抗



SPECIFICATIONS

Items	Characteristics							
Category								
Temperature Range	-55 to +105°C							
Rated Voltage Range	6.3v to 50Vdc							
Capacitance Tolerance	± 20% (M) (at 20°C ,120Hz)							
Leakage Current	I=0.01CV or 3 μ A , whichever is greater. Where, I :Max. Leakage current (μ A). C: Nominal capacitance (μ F) .V :Rated voltage(V) (at 20°C , after 2 minutes)							
Dissipation Factor (tan δ)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	
	tan δ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	
	For capacitance>1000uF .and 2% per another 1000uF						(at 20°C ,120Hz)	
Low Temperature Characteristics	Impedance ration max at 120Hz							
	Working voltage	6.3v	10v	16v	25v	35v	50v	
	Z-25°C/ Z+20°C	2	2	2	2	2	2	
	Z-40°C/ Z+20°C	3	3	3	3	3	3	
Load. Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the voltage is applied for the specific at 105°C							
	Capacitance change	≤ ±20% of the initial value					φ D	load life
	DF (tan δ)	≤200 % of the initial specified value					φ 5~6.3	2000
	Leakage current	≤ The initial specified value					φ 8~10	3000
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied.							
	Capacitance change	≤ ±20% of the initial value					φ 13~	5000
	DF (tan δ)	≤200 % of the initial specified value						
	Leakage current	≤ The initial specified value						
Ripple Current Multiplier	Temperature coefficient							
	Temperature(°C)	~55	60	70	85	105		
	Factor	2.20	2.10	2.00	1.75	1.00		
	Frequency coefficient							
	cap \ freq	60	120	1k	10k	100k		
	~100	0.30	0.40	0.75	0.90	1.00		
	100~1000	0.40	0.50	0.85	0.94	1.00		
	1000up	0.50	0.75	0.90	0.95	1.00		

Diagram: (Unit: mm)



Body Dia ΦD	5	6	8	10	13		16
					L ≤ 21	L ≥ 25	
Lead Dia φd	0.5			0.6	0.6	0.8	0.8
Lead Space A	2	2.5	3.5	5			7.5

◆ TSX series 高紋波 超低阻抗

● STANDARD RATING

Vdc Cap(μF) Item	6.3v			10v		
	Case size D*L(mm)	Ripple Current (mA/ms)	Impedance (Ω)	Case size D*L(mm)	Ripple Current (mA/ms)	Impedance (Ω)
100	5*11	220	0.35	5*11	250	0.30
150	5*11	250	0.30	5*11	300	0.220
220	6.3*11	300	0.13	6.3*11	405	0.130
330	6.3*11	400	0.13	6.3*11 8*12	430 560	0.130
470	8*12	650	0.072	8*12	760	0.073
680	8*12	830	0.059	8*16	995	0.056
820	8*16	995	0.056	8*20	1100	0.049
1000	10*12	1030	0.053	8*20 10*17	1250 1430	0.041 0.038
1200	10*17	1430	0.038	10*20	1820	0.023
1500	10*20	1850	0.023	10*25	2150	0.022
2200	10*25	2150	0.022	13*21	2360	0.021
3300	13*21	2360	0.021	13*25	2770	0.018
3900	13*25	2770	0.018	13*30	3200	0.016
4700	13*30	3300	0.016	13*36	3400	0.015
5600	16*25	3350	0.016	16*25	3500	0.015
6800	16*25	3450	0.016			

Maximum Ripple Current:(105°C 100KHz)

Maximum Impedance:(20°C 100KHz)

● STANDARD RATING

Vdc Cap(μF) Item	16v			25v		
	Case size D*L(mm)	Ripple Current (mA/ms)	Impedance (Ω)	Case size D*L(mm)	Ripple Current (mA/ms)	Impedance (Ω)
47	5*11	250	0.300	5*11	250	0.280
100	6.3*11	400	0.120	6.3*11	400	0.135
220	8*12	580	0.095	8*12	760	0.072
330	8*12	760	0.072	8*16 10*13	995 1030	0.056 0.053
470	8*16	990	0.051	8*20 10*17	1250 1450	0.040 0.038
680	8*20 10*17	1050 1250	0.041 0.038	10*20	1820	0.023
820	8*25	1560	0.030	10*25	2150	0.022
1000	10*20	1800	0.0230	13*20	2350	0.021
1500	10*25	2230	0.021	13*25	2770	0.018
2200	13*25	2750	0.018	13*36	3650	0.015
3300	13*36	3400	0.015	16*25	3700	0.015

Maximum Ripple Current:(105°C 100KHz)

Maximum Impedance:(20°C 100KHz)

Chip Type SMD
Miniature Type
General Purpose
High Frequency Low Impedance
High Voltage High Reliability
Non-polar Type
Large Size Snap-in
Large Size Screw
X Metallized Polypropylene Film Capacitors

◆TSX series 高紋波 超低阻抗

● STANDARD RATING

Vdc Cap(μF) Item	35v			50v		
	Case size D*L(mm)	Ripple Current (mA/ms)	Impedance (Ω)	Case size D*L(mm)	Ripple Current (mA/ms)	Impedance (Ω)
15	5*11	250	0.250	6.3*11	250	0.20
22	5*11	250	0.250	6.3*11	250	0.20
33	5*11	250	0.30	6.3*11	280	0.20
47	6.3*11	350	0.18	8*12	350	0.15
100	8*12	580	0.095	8*12	720	0.074
150	8*12	760	0.072	10*13	950	0.061
220	8*16	990	0.056	10*17	1350	0.042
330	10*17	1430	0.023	10*25	1850	0.028
470	10*20	1820	0.023	13*20	2050	0.027
560	10*25	2150	0.022	13*25	2400	0.023
680	13*20	2350	0.021	13*30	2850	0.021
820	13*25	2550	0.020	13*36	2950	0.019
1000	13*25	2770	0.018	16*25	3000	0.021
1200	13*30	3250	0.016			

Maximum Ripple Current:(105°C 100KHz)

Maximum Impedance:(20°C 100KHz)