

TPE Series

Low ESR Products (C3,C2,B2 Size)

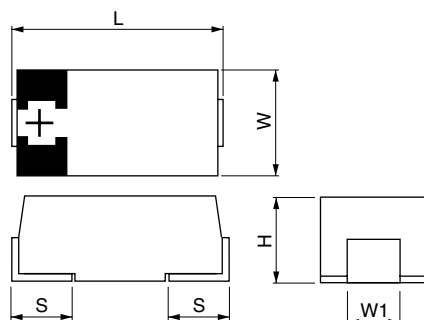


This products is the miniaturized version of TPE series.

Specifications

Items	Condition	Specifications					
Rated voltage (V)	—	2.0	2.5	4.0	6.3	8.0	10
Surge voltage (V)	—	2.6	3.2	5.0	8.0	10	13
Category temperature range (°C)	—	-55 to +105					
Capacitance tolerance (%)	120Hz/20°C	M : ±20					
Rated capacitance range (μF)	120Hz/20°C	47 to 330					
Dissipation Factor (DF)	120Hz/20°C	Please see the attached characteristics list					
Leakage current	Rated voltage applied, after 5 minutes	Please see the attached characteristics list					
Equivalent series resistance (ESR)	100kHz/20°C	Please see the attached characteristics list					
Characteristics of impedance ratio at high temp. and low temp.	100kHz/+20°C	-55°C	Z/Z _{20°C}	0.6 to 2.0			
		+105°C	Z/Z _{20°C}	0.6 to 2.0			
Endurance	105°C, 2,000h, (B2size:1,000h) rated voltage applied ★Rated temp. 85°C products: 85°C, 1,000h, rated voltage applied	ΔC/C		Within±20% of the initial value			
		DF		≤ 1.5 times the initial limit			
		LC		≤ The initial limit			
Damp heat (Steady State)	60°C, 90 to 95%RH, 500h, No-applied voltage	ΔC/C		Within+50%, -20% (2R5TPE220MDGB (MAZB,MAPB), 2R5TPE330MAZB, 2TPE330MIB (MFB,MAFB,MAFGB,MADGB), 2R5TPE330MFC2 (CC2,9C2))			
				Within+40%, -20% of the initial value (Except for the above model)			
		DF		≤ 1.5 times the initial limit			
Surge	105°C, 1,000 times, 1kΩ discharge resistance, surge voltage applied ★Rated temp 85°C products: 85°C, 1,000 times	ΔC/C		Within±5% of the initial value			
		DF		≤ The initial limit			
		LC		≤ 3 times the initial limit			

Dimensions



(unit: mm)

Size code	L ±0.2	W ±0.2	H ±0.1※1	S ±0.2	W1 ±0.1
B2	3.5	2.8	1.9	0.8	2.2
C2	6.0	3.2	1.8	1.3	1.8
C3	6.0	3.2	2.5	1.3	1.8

※1 ±0.2:C3

Size List

RV : Rated voltage

RV μF	2.0	2.5	4.0	6.3	8.0	10
47						B2
100			B2	B2	C2	
120				B2		
150		B2	B2	B2,C2		C3
180						C3
220		B2	B2,C2	C3		
330	B2	B2,C2				

■ TPE Series Characteristics List

Size code	SANYO Part number	Rated Voltage (V)	Rated Temperature (°C)	Rated Capacitance (μF)	Category Voltage (V)	Category Temperature (°C)	DF (%max)	LC (μA) max/5min.	ESR (mΩ max) 100kHz/20°C	Maximum allowable ripple current (mA Arms) 100kHz※1	MSL	
											Reflow Temp. ≤ 260°C	Reflow Temp. ≤ 250°C
B2	10TPE47MAZB	10	85	47	8.0	105	8.0	47.0	35	1400	3	3
	6TPE150MAZB	6.3	85	150	5.0	105	8.0	94.5	35	1400		
	6TPE120MAZB	6.3	85	120	5.0	105	8.0	75.6	35	1400		
	6TPE100MZB	6.3	105	100	6.3	105	8.0	63.0	35	1400		
	6TPE100MPB								25	1600		
	6TPE100MAZB	6.3	85	100	5.0	105	8.0	63.0	35	1400		
	4TPE220MAZB	4.0	85	220	3.2	105	8.0	88.0	35	1400		
	4TPE150MAZB	4.0	85	150	3.2	105	8.0	60.0	35	1400		
	4TPE150MAUB								30	1500		
	4TPE100MZB	4.0	105	100	4.0	105	8.0	40.0	35	1400		
	2R5TPE330MAZB	2.5	85	330	2.0	105	8.0	82.5	35	1400		
	2R5TPE220MZB	2.5	105	220	2.5	105	8.0	55.0	35	1400		
	2R5TPE220MPB								25	1600		
	2R5TPE220MLB								21	1700		
	2R5TPE220MIB	2.5	105	220	2.5	105	8.0	110.0	18	1800		
	2R5TPE220MFGB								15/300k	1800		
	2R5TPE220MDGB	2.5	105	220	2.5	105	8.0	110.0	13/300k	2000		
	2R5TPE220MAZB	2.5	85	220	2.0	105	8.0	55.0	35	1400		
	2R5TPE220MAPB								25	1600		
	2R5TPE220MAFB	2.5	85	220	2.0	105	8.0	110.0	15	2000		
	2R5TPE150MZB	2.5	105	150	2.5	105	8.0	37.5	35	1400		
	2TPE330MIB	2.0	105	330	2.0	105	8.0	132.0	18	1800		
	2TPE330MFB								15	2000		
	2TPE330MAFGB	2.0	85	330	1.8	105	8.0	132.0	15/300k	1800		
	2TPE330MAFB								15	2000		
	2TPE330MADGB								13/300k	2000		
C2	8TPE100MPC2	8.0	105	100	8.0	105	8.0	80.0	25	2200		
	6TPE150MPC2	6.3	105	150	6.3	105	8.0	94.5	25	2200		
	6TPE150MIC2								18	2600		
	4TPE220MPC2	4.0	105	220	4.0	105	8.0	88.0	25	2200		
	4TPE220MIC2								18	2600		
	4TPE220MFC2								15	2900		
	2R5TPE330MIC2	2.5	105	330	2.5	105	8.0	82.5	18	2600		
	2R5TPE330MFC2								15	2900		
	2R5TPE330MCC2								12	3300		
	2R5TPE330M9C2								9	3700		
C3	10TPE180MGC	10	105	180	10	105	10.0	180	55	1500	—	
	10TPE150MGC	10	105	150	10	105	10.0	150.0	55	1500	—	
	6TPE220MPC	6.3	105	220	6.3	105	8.0	138.6	25	2400	3	
	6TPE220MIC	6.3	105	220	6.3	105	8.0	138.6	18	2800		

Please refer to page 141 for the compensation coefficient of maximum allowable ripple current.

※1 100k to 500kHz, 45°C