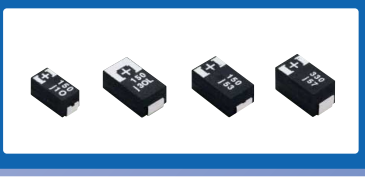
TPB Series Standard Products

Feature

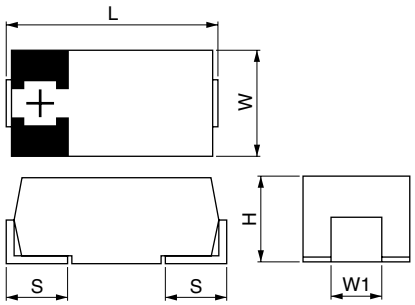
TPB series are the standard products corresponding to the diversification of the needs.



Specifications

Items	Condition	Characteristics		
Operating Temperature range	—	–55 to +105 (°C)		
Rated capacitance range	120Hz/20°C	47 to 1000 (μF)		
Capacitance tolerance	120Hz/20°C	M:±20%		
Rated voltage	—	2.5 to 10.0 (V.DC)		
Dissipation Factor (D.F.)	120Hz/20°C	≤ 8.0 or 10.0 or 15.0 (%)		
Leakage current	Rated voltage applied, after 5 minutes	≤ 0.1CV (μA)		
Equivalent series resistance (E.S.R. mΩmax.)	100kHz/20°C	Please see the attached characteristics list		
Temperature characteristics of Impedance ratio	100kHz/+20°C	–55°C	$Z/Z_{20°C}$	1.0 to 2.0
		+105°C	$Z/Z_{20°C}$	0.6 to 1.0
Endurance	105°C,2000h, rated voltage applied	ΔC/C		Within±20% of the initial value
		D.F.		≤ 1.5 times the initial limit
		L.C.		≤ The initial limit
Damp heat (Steady state)	60°C,90 to 95%RH,500h, No voltage applied	ΔC/C		Within+50%,–20% of the initial value (2R5TPB1000M)
				Within+40%, –20% of the initial value (Except for the above model)
		D.F.		≤ 1.5 times the initial limit
		L.C.		≤ 3 times the initial limit
Surge	105°C,1000 cycles, 1kΩdischarge resistance, surge voltage applied	ΔC/C		Within±5% of the initial value
		D.F.		≤ The initial limit
		L.C.		≤ 3 times the initial limit

Dimensions



(unit: mm)

Size code	L*1 (±0.2)	W (±0.2)	H (±0.2)	S (±0.2)	W1 (±0.1)
C	6.0	3.2	2.8	1.3	1.8
D3L	7.3	4.3	2.8	1.3	2.4
D3	7.3	4.3	3.1	1.3	2.4
D4	7.3	4.3	3.8	1.3	2.4

★1 ±0.3:D3L,D4

Size List

μF \ RV (SV)	2.5 (3.2)	4.0 (5.0)	6.3 (8.0)	8.0 (10.0)	10.0 (13.0)
47					C
68					C
82				C	
100			C		D3,D3L
150		C	C,D3,D3L		D3L
220	C	C,D3,D3L	D3L		D3L,D4
330	D3,D3L	D3L	D3L,D4		D4
470	D3L	D4,D3L	D4		
680	D4,D3L	D4			
1000	D4				

Characteristics List

Size code	SANYO Part number	Rated Voltage (V)	Rated Temperature (°C)	Rated Capacitance (μF)	D.F. (%max.)	L.C. (μA) max./5min.	E.S.R. (mΩmax.) 100kHz/20°C	Maximum allowable ripple current (mArms) 100kHz*1	MSL	
									Reflow Temp. ≤ 260°C	Reflow Temp. ≤ 250°C
C	10TPB68MC	10.0	105	68	8.0	68.0	55	1500	3	2a
	10TPB47MC	10.0	105	47	8.0	47.0	55	1500		
	8TPB82MC	8.0	105	82	8.0	65.6	45	1700		
	6TPB150MC	6.3	105	150	8.0	94.5	45	1700		
	6TPB100MC	6.3	105	100	8.0	63.0	45	1700		
	4TPB220MC	4.0	105	220	8.0	88.0	45	1700		
	4TPB150MC	4.0	105	150	8.0	60.0	45	1700		
	2R5TPB220MC	2.5	105	220	8.0	55.0	45	1700		
D3L	10TPB220ML	10.0	105	220	10.0	220.0	40	2000		
	10TPB150ML	10.0	105	150	10.0	150.0	40	2000		
	10TPB100ML	10.0	105	100	8.0	100.0	55	1900		
	6TPB330ML	6.3	105	330	10.0	207.9	40	2000		
	6TPB220ML	6.3	105	220	10.0	138.6	40	2000		
	6TPB150ML	6.3	105	150	8.0	94.5	55	1900		
	4TPB470ML	4.0	105	470	10.0	188.0	40	2000		
	4TPB330ML	4.0	105	330	10.0	132.0	40	2000		
	4TPB220ML	4.0	105	220	8.0	88.0	55	1900		
	2R5TPB680ML	2.5	105	680	10.0	170.0	40	2000		
	2R5TPB470ML	2.5	105	470	10.0	117.5	40	2000		
	2R5TPB330ML	2.5	105	330	8.0	82.5	55	1900		
D3	10TPB100M	10.0	105	100	8.0	100.0	55	1900		
	6TPB150M	6.3	105	150	8.0	94.5	55	1900		
	4TPB220M	4.0	105	220	8.0	88.0	65	1500		
	2R5TPB330M	2.5	105	330	8.0	82.5	65	1500		
D4	10TPB330M	10.0	105	330	10.0	330.0	35	3000		
	10TPB220M	10.0	105	220	10.0	220.0	40	3000		
	6TPB470M	6.3	105	470	15.0	296.1	35	3000		
	6TPB330M	6.3	105	330	10.0	207.9	40	3000		
	4TPB680M	4.0	105	680	15.0	272.0	35	3000		
	4TPB470M	4.0	105	470	10.0	188.0	40	3000		
	2R5TPB1000M	2.5	105	1000	15.0	250.0	30	3000		
	2R5TPB680M	2.5	105	680	10.0	170.0	40	3000		

*1 100k to 500kHz,45°C