

Surface mount type

TPC Series



RoHS compliance, Halogen free
Low profile: 1.1mm (B1)

Specifications

Items	Condition	Specifications			
Rated voltage (V)	—	6.3	8.0	10	12.5
Surge voltage (V)	—	7.2	9.2	12	14
Category temperature range (°C)	—	-55 to +105			
Capacitance tolerance (%)	120Hz/20°C	M : ±20			
Rated capacitance range (μF)	120Hz/20°C	10 to 470			
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 B2 size :105°C, 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 of the initial limit		
		LC	Within the initial limit		
Damp heat (Steady State)	60°C, 90 to 95%RH, 500h, No-applied voltage	ΔC/C	Within+40%, -20% of the initial value		
		DF	≤ 1.5 times of the initial limit		
		LC	≤ 3 times of the initial limit		
Surge	105°C, 1,000 cycles, 1kΩ discharge resistance, surge voltage applied ※Rated temp. 85°C products:85°C	ΔC/C	Within±5% of the initial value		
		DF	Within the initial limit		
		LC	≤ 3 times of the initial limit		

Marking and dimensions

(unit : mm)

Size code	L ±0.2	W ±0.2	H ±0.1	S ±0.2	W1 ±0.1
B1	3.5	2.8	1.1	0.8	2.2
D2	7.3	4.3	1.9	1.3	2.4

B1size

Rated capacitance※3
Anode (+)
Rated voltage※1

D2size

Rated capacitance
Anode (+)
Rated voltage※1

※1 The rated voltage is as follows.

R.V.	6.3	8.0	10	12.5
Mark	j	k	A	B

※2 Lot.No.shows roughly manufacturing date.

※3 The rated capacitance is as follows.

Capacitance(μF)	10	15	22	33	47
Mark	A7	E7	J7	N7	S7

Recommended land pattern dimension of PWB

(unit : mm)

Size code	a	b	c
B1	1.6	2.7	1.4
D2	2.4	2.9	3.7

Size list

RV:Rated voltage

RV μF	6.3	8.0	10.0	12.5
10				B1
15				B1
22		B1		
33	B1		B1	
47	B1			
68			D2	
100	D2		D2	
150	D2	D2		
330	D2			

TPC series characteristics list

Size code	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 rms) 100kHz※1	MSL	
											Reflow temp. ≤ 260°C	Reflow temp. ≤ 250°C
B1	12TPC15M	12.5	85	15	10	105	10	18.8	80	800	3	3
	12TPC10M	12.5	85	10	10	105	10	12.5	80	800	3	3
	8TPC22M	8.0	85	22	6.3	105	10	17.6	70	1000	3	3
	6TPC47MB	6.3	85	47	5.0	105	10	29.6	70	1000	3	3
	6TPC47M	6.3	85	47	5.0	105	10	29.6	55	1100	3	3
D2	10TPC100M	10	105	100	10	105	10	100.0	45	1700	3	2a
	10TPC68M	10	105	68	10	105	10	68.0	45	1700	3	2a
	8TPC150M	8.0	105	150	8.0	105	10	120.0	40	1900	3	2a
	6TPC330MA	6.3	85	330	5.0	105	10	207.9	40	1900	3	2a
	6TPC150M	6.3	105	150	6.3	105	10	94.5	40	1900	3	2a
	6TPC100M	6.3	105	100	6.3	105	10	63.0	45	1700	3	2a

※1 100k~500kHz,45°C