

TPC series has low profile and low ESR.  
 TPC series is ideal for designing thinner and smaller products.  
 B1 size is miniaturized, low profile version of TPC series.



## Specifications

Items	Condition	Specifications					
Rated voltage (V)	—	2.5	4.0	6.3	8.0	10	12.5
Surge voltage (V)	—	2.9	4.6	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 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 <sub>20°C</sub>	0.6 to 2.0			
		+105°C	Z/Z <sub>20°C</sub>	0.6 to 2.0			
Endurance	105°C, 2,000h, 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			

POSCAP

Line-up

Guidelines and precautions for use

Series system diagram

Image of case size

Products list

Explanation of part numbers

Packing specifications

Marking

Recommended land pattern dimension

Recommended soldering condition

Fundamental structure

Characteristics

Reliability

TPU

TPH

TPG

TPSF

TPC

TPE

TPB

TPL-TPLF

TPF

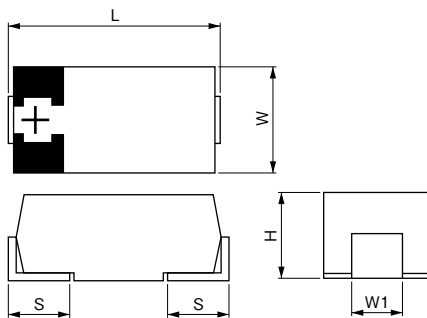
TA

TV

TH

TQC

## 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

## Size list

RV : Rated voltage

μF \ RV	2.5	4.0	6.3	8.0	10	12.5
10						B1
15						B1
22				B1		
33			B1		B1	
47		B1	B1			
56	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 (mΩmax) 100kHz/20°C	Maximum allowable ripple current (mA <sub>rms</sub> ) 100kHz※1	MSL	
											Reflow temp. ≤ 260°C	Reflow temp. ≤ 250°C
B1	12TPC15M	12.5	85	15	10	105	10.0	18.8	80	800	3	3
	12TPC10M	12.5	85	10	10	105	10.0	12.5	80	800	3	3
	10TPC33MB	10	85	33	8.0	105	10.0	33.0	70	1000	3	3
	8TPC22M	8.0	85	22	6.3	105	10.0	17.6	70	1000	3	3
	6TPC47MB	6.3	85	47	5.0	105	10.0	29.6	70	1000	3	3
	<b>6TPC47M</b>	6.3	85	47	5.0	105	10.0	29.6	55	1100	3	3
	6TPC33M	6.3	85	33	5.0	105	10.0	20.8	70	1000	3	3
	4TPC47M	4.0	85	47	3.2	105	10.0	18.8	70	1000	3	3
	2R5TPC56M	2.5	85	56	2.0	105	10.0	14.0	70	1000	3	3
D2	10TPC100M	10	105	100	10	105	10.0	100.0	45	1700	3	2a
	10TPC68M	10	105	68	10	105	10.0	68.0	45	1700	3	2a
	8TPC150M	8.0	105	150	8.0	105	10.0	120.0	40	1900	3	2a
	6TPC330MA	6.3	85	330	5.0	105	10.0	207.9	40	1900	3	2a
	6TPC150M	6.3	105	150	6.3	105	10.0	94.5	40	1900	3	2a
	6TPC100M	6.3	105	100	6.3	105	10.0	63.0	45	1700	3	2a

Please refer to page 65 for the compensation coefficient of maximum allowable ripple current.

※1 100k to 500kHz,45°C

**POSCAP**POSCAP  
Line-upGuidelines and  
precautions  
for use

Selection guide

Series system  
diagram  
Image of  
case size  
Products list  
Explanation of  
part numbers  
Packing  
specifications

Technical data

Marking  
Recommended  
land pattern  
dimension  
Recommended  
soldering  
condition  
Fundamental  
structure  
Characteristics  
Reliability

Surface mount type

TPU  
TPH  
TPG  
TPSF  
**TPC**  
TPE  
TPB  
TPL·TPLF  
TPF  
TA  
TV  
TH  
TQC

※ Red letters : New models