

TPU series is designed with size-sensitive applications in mind by using a face down terminal structure.

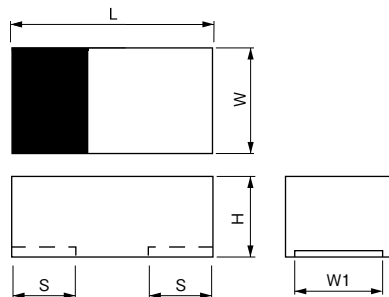


Specifications

Items	Condition	Specifications			
Rated voltage (V)	—	2.5	4.0	6.3	10
Surge voltage (V)	—	2.9	4.6	7.2	12
Category temperature range (°C)	—	-55 to +85			
Capacitance tolerance (%)	120Hz/20°C	M : ±20			
Rated capacitance range (μF)	120Hz/20°C	4.7 to 150			
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		
		+85°C Z/Z _{20°C}	0.6 to 2.0		
Endurance	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	85°C, 1,000 cycles, 1kΩ discharge resistance, surge voltage applied	ΔC/C	Within±5% of the initial value		
		DF	Within the initial limit		
		LC	≤ 3 times of the initial limit		

(unit: mm)

Dimensions



Size code	L ±0.1*1	W ±0.1*1	H ±0.1	S ±0.1*1	W1 ±0.1
S09	2.0	1.25	0.9	0.5	0.9
S11	2.0	1.25	1.1	0.5	0.9
B09	3.5	2.8	0.9	0.8	2.2

*1 ±0.2:B09

Size list

RV : Rated voltage

μF \ RV	2.5	4.0	6.3	10
4.7				S09
10			S09	
22			S09	
33			S11	
47	S09	S11	S09	
68	S11	S09		
100	S09			
150			B09	

TPU 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 _{rms}) 100kHz*1	MSL	
S09	10TPU4R7MSI	10	85	4.7	10	85	10.0	4.7	300	360	3	3
	6TPU47MSI	6.3	85	47	6.3	85	10.0	59.2	150	510	—	3
	6TPU22MSI	6.3	85	22	6.3	85	10.0	27.7	150	510	—	3
	6TPU10MSI	6.3	85	10	6.3	85	10.0	6.3	250	400	—	3
	4TPU68MSI	4.0	85	68	4.0	85	10.0	54.4	150	510	—	3
	ETPU100MSI	2.5	85	100	2.5	85	10.0	50.0	150	510	—	3
S11	2R5TPU47MSI	2.5	85	47	2.5	85	10.0	23.5	150	510	—	3
	6TPU33MSK	6.3	85	33	6.3	85	10.0	41.6	150	510	—	3
	4TPU47MSK	4.0	85	47	4.0	85	10.0	37.6	150	510	—	3
	2R5TPU68MSK	2.5	85	68	2.5	85	10.0	34.0	150	510	—	3
B09	6TPU150MBI	6.3	85	150	6.3	85	10.0	94.5	100	670	3	3

*1 100k to 500kHz, 45°C