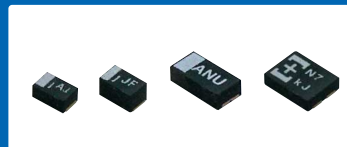


# TPU Series Small Size · Low Profile Products Face Down Terminal Type

## Feature

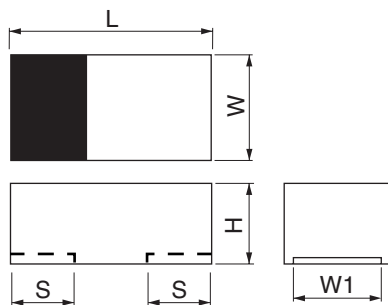
TPU series has a real advantage in size-sensitive applications using a face down terminal structure.



## Specifications

Items	Condition	Characteristics		
Operating Temperature range	—	-55 to +85 (°C)		
Rated capacitance range	120Hz/20°C	10 to 100 (μF)		
Capacitance tolerance	120Hz/20°C	M:±20%		
Rated voltage	—	2.5 to 10.0 (V.DC)		
Dissipation Factor (D.F.)	120Hz/20°C	≤ 10.0 (%)		
Leakage current	Rated voltage applied, after 5 minutes	Please see the attached characteristics list		
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 <sub>20°C</sub>	1.0 to 2.0
		+85°C	Z/Z <sub>20°C</sub>	0.6 to 1.0
Endurance	85°C, 1000h, 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+40%, -20% of the initial value	
		D.F.	≤ 1.5 times the initial limit	
		L.C.	≤ 3 times the initial limit	
Surge	85°C, 1000 times, 1kΩ discharge 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 (±0.1)*1	W (±0.1)*1	H (±0.1)	S (±0.1)*1	W1 (±0.1)
S08	2.0	1.25	0.8	0.5	0.9
S11	2.0	1.25	1.1	0.5	0.9
A09	3.2	1.6	0.9	0.8	1.2
B09	3.5	2.8	0.9	0.8	2.2

\*1 ±0.2: A09, B09

## Size List

RV (sV)	2.5 (3.2)	3.15 (4.0)	4.0 (5.0)	6.3 (8.0)	8.0 (10.0)	10.0 (13.0)
10				S08		
15			S08			
22	S08			S11		
33			S11		B09	A09
47	S11			A09, B09		
68			A09, B09			
100	A09	A09				

## Characteristics List

Size code	SANYO Part number	Rated Voltage (V)	Rated Temperature (°C)	Rated Capacitance (μF)	Category Voltage (V)	Category Temperature (°C)	D.F. (%max.)	L.C. (μA) max./5min.	E.S.R. (mΩmax.) 100kHz/20°C	Maximum allowable ripple current (mA) 100kHz*1	MSL	
											Reflow Temp. ≤ 260°C	Reflow Temp. ≤ 250°C
S08	6TPU10M	6.3	85	10	6.3	85	10.0	6.3	250	400	Under evaluation	3
	4TPU15M	4.0	85	15	4.0	85	10.0	6.0	250	400		
	2R5TPU22M	2.5	85	22	2.5	85	10.0	5.5	250	400		
S11	6TPU22MSK	6.3	85	22	6.3	85	10.0	13.9	150	510		
	4TPU33MSK	4.0	85	33	4.0	85	10.0	13.2	150	510		
	2R5TPU47MSK	2.5	85	47	2.5	85	10.0	11.8	150	510		
A09	10TPU33MAI	10.0	85	33	10.0	85	10.0	33.0	150	510		
	6TPU47MAI	6.3	85	47	6.3	85	10.0	29.6	150	510		
	4TPU68MAI	4.0	85	68	4.0	85	10.0	27.2	150	510		
	3TPU100MAI	3.15	85	100	3.15	85	10.0	31.5	150	510		
B09	2R5TPU100MAI	2.5	85	100	2.5	85	10.0	25.0	150	510		
	8TPU33MBI	8.0	85	33	8.0	85	10.0	26.4	70	800		
	6TPU47MBI	6.3	85	47	6.3	85	10.0	29.6	70	800		
	4TPU68MBI	4.0	85	68	4.0	85	10.0	27.2	70	800		

\*1 100k to 500kHz, 45°C