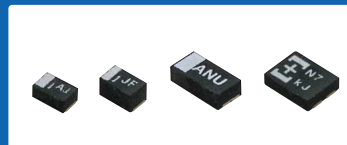


TPU Series Small Size · Low Profile Products Face Down Terminal Type

Feature

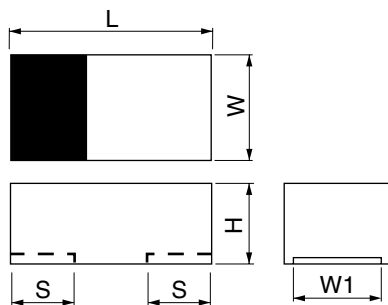
TPU series has a real advantage in size-sensitive applications using a face down terminal structure.



Specifications

Items	Condition	Characteristics	
Operating Temperature range	—	-55 to +85 (°C)	
Rated capacitance range	120Hz/20°C	10 to 68 (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	≤ 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
		+85°C Z/Z _{20°C}	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

μF	RV (sV)	2.5 (3.2)	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			B09			

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
S08	6TPU10M	6.3	85	10	10.0	6.3	250	400	Under evaluation	3
	4TPU15M	4.0	85	15	10.0	6.0	250	400		
	2R5TPU22M	2.5	85	22	10.0	5.5	250	400		
S11	6TPU22MSK	6.3	85	22	10.0	13.9	150	510		
	4TPU33MSK	4.0	85	33	10.0	13.2	150	510		
A09	2R5TPU47MSK	2.5	85	47	10.0	11.8	150	510		
	10TPU33MAI	10.0	85	33	10.0	33.0	150	510		
B09	6TPU47MAI*2	6.3	85	47	10.0	29.6	150	510		
	8TPU33MBI	8.0	85	33	10.0	26.4	70	800		
	6TPU47MBI	6.3	85	47	10.0	29.6	70	800		
	4TPU68MBI	4.0	85	68	10.0	27.2	70	800		

*1 100k to 500kHz, 45°C *2 Under development