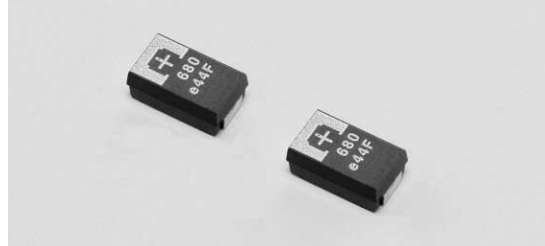


TPF Series

Low ESR High Capacitance Products

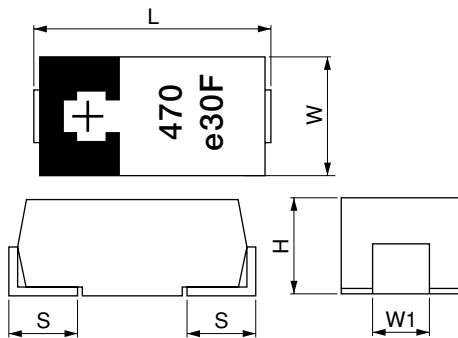
TPF series has low ESR and high capacitance at standard form.



Specifications

Items	Condition	Characteristics		
Operating Temperature range	—	−55 to +105 (°C)		
Rated capacitance range	120Hz/20°C	330 to 680 (μF)		
Capacitance tolerance	120Hz/20°C	M:±20%		
Rated voltage	—	2.5 (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
		+105°C	Z/Z _{20°C}	0.6 to 1.0
Endurance	105°C, 2000h, 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+50%, −20% of the initial value	
		D.F.	≤ 1.5 times the initial limit	
		L.C.	≤3 times the initial limit	
Surge	105°C, 1000 cycles, 1kΩdischarge 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) (D3L size)



Size code	L (±0.3)	W (±0.1)	H (±0.1)	S (±0.1)	W1 (±0.1)
D3L	7.3	4.3	2.8	1.3	2.4

Size List

μF	RV (SV)	2.5
		(3.2)
330		D3L
470		D3L
680		D3L

Characteristics List

Size code	SANYO Part number	Rated Voltage (V)	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
D3L	2R5TPF680M7L	2.5	680	10.0	170.0	7	4200	3	2a
	2R5TPF680M6L	2.5	680	10.0	170.0	6	4500		
	2R5TPF470M7L	2.5	470	10.0	117.5	7	4200		
	2R5TPF470M6L	2.5	470	10.0	117.5	6	4500		
	2R5TPF330M7L	2.5	330	10.0	82.5	7	4200		
	2R5TPF330M6L	2.5	330	10.0	82.5	6	4500		

※1:100k to 500kHz, 45°C