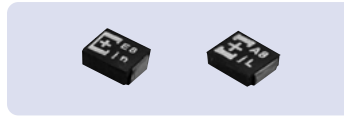


TPG Series



Small size
High capacitance

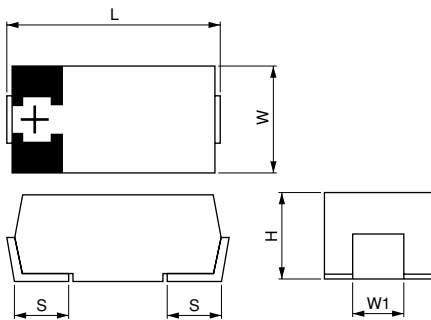
TPG series is high capacitance model of the small size . low profile product.
Suitable for the miniaturization design of the electronics device.



Specifications

Items	Condition	Specifications					
Rated voltage (V)	—	2.5	4.0	6.3	8.0	10	12.5
Surge voltage (V)	—	3.2	5.0	8.0	10	13	16
Category temperature range (°C)	—	-55 to +105					
Capacitance tolerance (%)	120Hz/20°C	M: ±20					
Rated capacitance range (μF)	120Hz/20°C	30 to 220					
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			
		+105°C	Z/Z _{20°C}	0.6 to 2.0			
Endurance	85°C, 1,000h, rated voltage applied or 105°C, 1,000h, category voltage applied	ΔC/C	Within±20% of the initial value				
		DF	≤ 1.5 times of the initial limit				
		LC	≤ 1.5 times of 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	≤ The initial limit				
		LC	≤ 3 times of the initial limit				

Dimensions



(unit: mm)

Size code	L ^{+0.3} _{-0.1}	W ^{+0.3} _{-0.1}	H ^{+0.1}	S ^{+0.2}	W1 ^{+0.1}
B1G	3.5	2.8	1.1	0.8	2.2
B15G	3.5	2.8	1.4	0.8	2.2

Size list

RV : Rated voltage

RV	2.5	4.0	6.3	8.0	10	12.5
μF						
33					B1G	B1G
47				B1G	B1G	
68			B1G			
100			B1G			
150			B15G			
220	B1G	B15G				

TPG 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	
											Reflow temp. ≤ 260°C	Reflow temp. ≤ 250°C
B15G	6TPG150M	6.3	85	150	5.0	105	10.0	94.5	70	1000	3	3
	4TPG220M	4.0	85	220	3.2	105	10.0	88.0	70	1000	3	3
B1G	12TPG33M	12.5	85	33	10	105	10.0	41.3	70	1000	3	3
	10TPG47M	10	85	47	8.0	105	10.0	47.0	70	1000	3	3
	10TPG33M	10	85	33	8.0	105	10.0	33.0	70	1000	3	3
	8TPG47M	8.0	85	47	6.4	105	10.0	37.6	70	1000	3	3
	6TPG100M	6.3	85	100	5.0	105	10.0	63.0	70	1000	3	3
	6TPG100MG	6.3	85	100	5.0	105	10.0	63.0	55	1100	3	3
	6TPG68M	6.3	85	68	5.0	105	10.0	42.8	70	1000	3	3
	2R5TPG220M	2.5	85	220	2.0	105	10.0	55.0	70	1000	3	3

Please refer to page 71 for the compensation coefficient of maximum allowable ripple current.

※1 100k to 500kHz, 45°C