Balanced Three-chip MicroCapacitance (MC) *SIDACtor* Device

The balanced three-chip TO-220 MC *SIDACtor* solid state device protects telecommunication equipment in high-speed applications that are sensitive to load values and that require a lower capacitance. C_O values for the MC are 40% lower than a standard AC part.

This MC *SIDACtor* series is used to enable equipment to meet various regulatory requirements including GR 1089, ITU K.20, K.21, and K.45, IEC 60950, UL 60950, and TIA-968-A (formerly known as FCC Part 68) without the need of series resistors.

Electrical Parameters

Part Number *	V_{DRM} Volts	V_S Volts	V_{DRM} Volts	V_S Volts	V_T Volts	I_{DRM} µAmps	I_S mAmps	I_T Amps	I_H mAmps	C_O pF
	Pins 1-2, 2-3		Pins 1-3							
P1553AC MC	130	180	130	180	8	5	800	2.2	150	40
P1803AC MC	150	210	150	210	8	5	800	2.2	150	40
P2103AC MC	170	250	170	250	8	5	800	2.2	150	40
P2353AC MC	200	270	200	270	8	5	800	2.2	150	40
P2703AC MC	230	300	230	300	8	5	800	2.2	150	30
P3203AC MC	270	350	270	350	8	5	800	2.2	150	30
P3403AC MC	300	400	300	400	8	5	800	2.2	150	30
P5103AC MC	420	600	420	600	8	5	800	2.2	150	30

* For surge ratings, see table below.

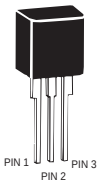
General Notes:

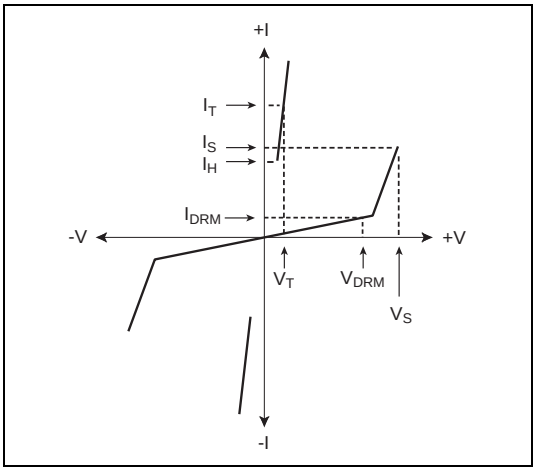
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACtor* devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- V_{DRM} is measured at I_{DRM}.
- V_S is measured at 100 V/µs.
- Special voltage (V_S and V_{DRM}) and holding current (I_H) requirements are available upon request.
- Off-state capacitance (C_O) is measured between Pins 1-2 and 3-2 at 1 MHz with a 2 V bias.
- Device is designed to meet balance requirements of GTS 8700 and GR 974.

Surge Ratings

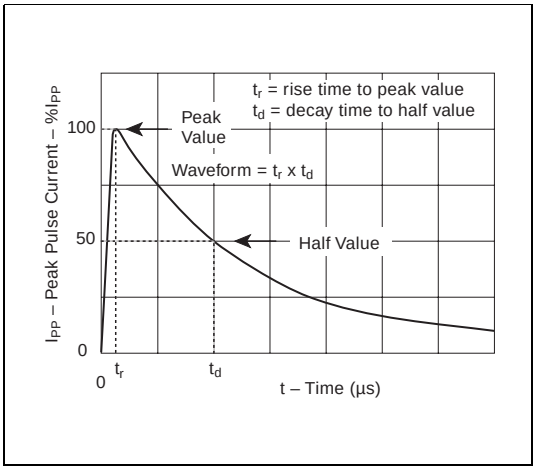
Series	I_{PP} 2x10 µs Amps	I_{PP} 8x20 µs Amps	I_{PP} 10x160 µs Amps	I_{PP} 10x560 µs Amps	I_{PP} 10x1000 µs Amps	I_{TSM} 60 Hz Amps	di/dt Amps/µs
C	500	400	200	150	100	50	500

Thermal Considerations

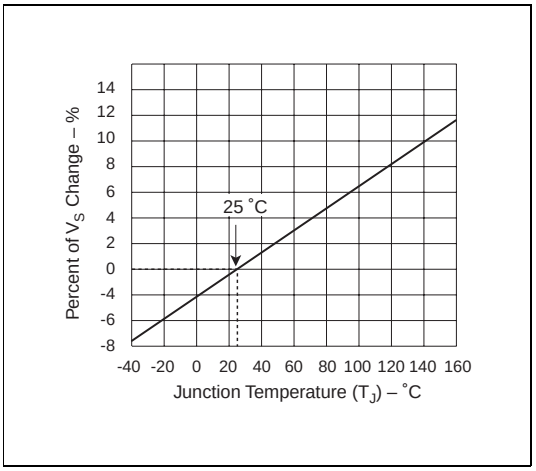
Package	Symbol	Parameter	Value	Unit
Modified TO-220 	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	50	°C/W



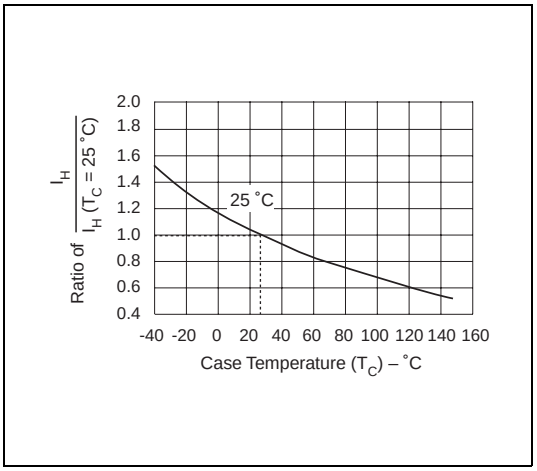
V-I Characteristics



t_r x t_d Pulse Wave-form



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature