CATV Line Amplifiers/Power Inserters ME *SIDACtor* Device



This *SIDACtor* device is a 5000 A solid state protection device offered in a non-isolated TO-218 package. It protects equipment located in the severe surge environment of CATV (Community Antenna TV) applications.

In CATV line amplifiers and power inserters, this device can replace the gas tubes traditionally used for station protection because *SIDACtor* devices have much tighter voltage tolerances.

Electrical Parameters

Part Number *	V_{DRM} Volts	V_S Volts	V_T Volts	I_{DRM} µAmps	I_S mAmps	I_T Amps **	I_H mAmps	C_O pF
P1500ME	140	180	4	5	800	2.2/25	50	750
P1900ME	140	220	4	5	800	2.2/25	50	750
P2300ME	180	260	4	5	800	2.2/25	50	750

* For surge ratings, see table below.
** I_T is a free air rating; heat sink I_T rating is 25 A.

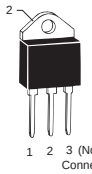
General Notes:
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACtor* devices are bi-directional. All electrical parameters and 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 at 1 MHz with a 2 V bias and is a typical value.

Surge Ratings

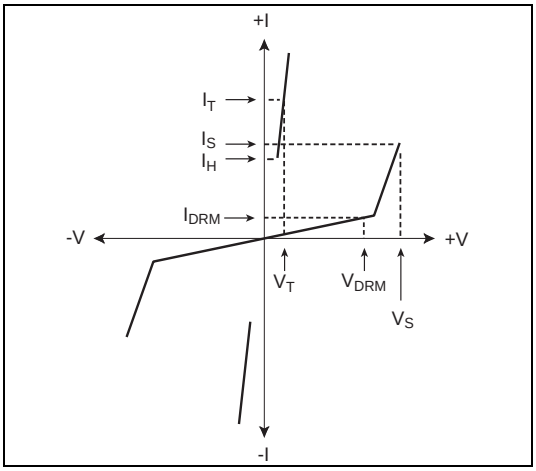
Series	I_{PP} 8x20 µs Amps	I_{TSM} 60 Hz Amps	di/dt Amps/µs
E	5000	400	630

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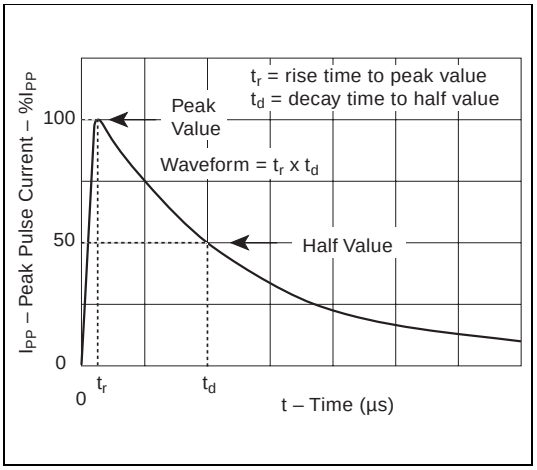
Thermal Considerations

Package	Symbol	Parameter	Value	Unit
TO-218 	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	T_C	Maximum Case Temperature	100	°C
	$R_{\theta JC}$ *	Thermal Resistance: Junction to Case	1.7	°C/W
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	56	°C/W

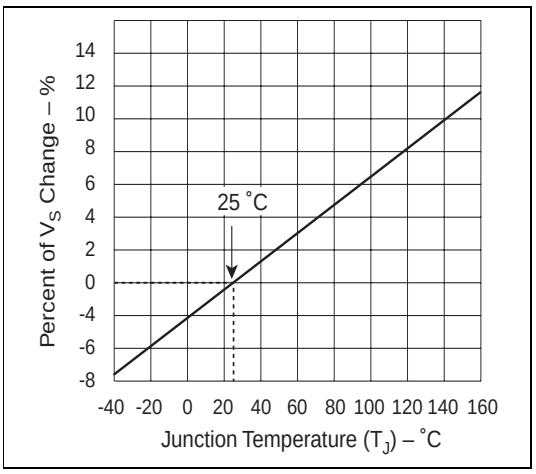
* $R_{\theta JC}$ rating assumes the use of a heat sink and on state mode for extended time at 25 A, with average power dissipation of 29.125 W.



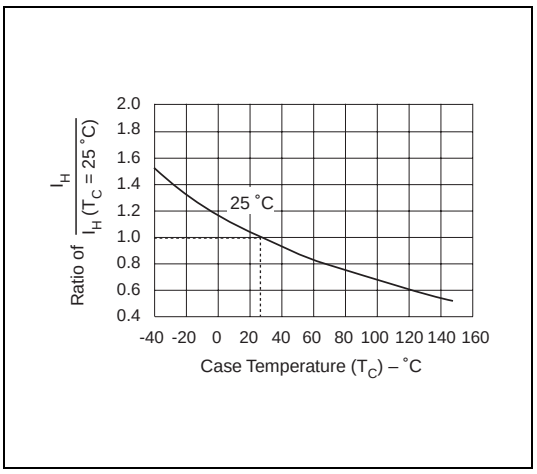
V-I Characteristics



t_r x t_d Pulse Wave-form



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature