

## CATV and HFC SIDACtor Device



This *SIDACtor* device is a 1000 A solid state protection device offered in a TO-220 package. It protects equipment located in the severe surge environment of Community Antenna TV (CATV) applications.

Used in Hybrid Fiber Coax (HFC) applications, this device replaces the gas tube traditionally used for station protection, because a *SIDACtor* device has a much tighter voltage tolerance.

### Electrical Parameters

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>T</sub> Volts	I <sub>DRM</sub> $\mu$ Amps	I <sub>S</sub> mAmps	I <sub>T</sub> Amps	I <sub>H</sub> mAmps	C <sub>O</sub> pF
								Pins 1-3
P1400AD	120	160	3	5	800	2.2	50	200
P1800AD	170	220	3	5	800	2.2	50	150

\* For surge ratings, see table below.

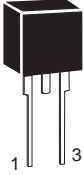
#### General Notes:

- All measurements are made at an ambient temperature of 25 °C. I<sub>PP</sub> applies to -40 °C through +85 °C temperature range.
- I<sub>PP</sub> 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<sub>DRM</sub> is measured at I<sub>DRM</sub>.
- V<sub>S</sub> is measured at 100 V/ $\mu$ s.
- Special voltage (V<sub>S</sub> and V<sub>DRM</sub>) and holding current (I<sub>H</sub>) requirements are available upon request.
- Off-state capacitance (C<sub>O</sub>) is measured at 1 MHz with a 2 V bias and is a typical value.

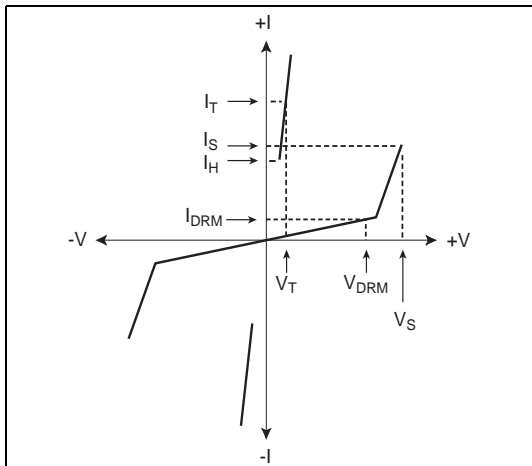
### Surge Ratings

Series	I <sub>PP</sub> 8x20 $\mu$ s Amps	I <sub>PP</sub> 10x1000 $\mu$ s Amps	I <sub>TSM</sub> 60 Hz Amps	di/dt Amps/ $\mu$ s
D	1000	250	120	500

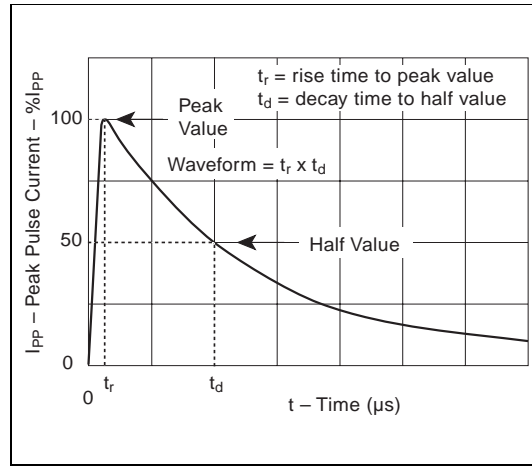
**Thermal Considerations**

Package	Symbol	Parameter	Value	Unit
Modified TO-220 	$T_J$	Operating Junction Temperature Range	-40 to +150	$^{\circ}\text{C}$
	$T_S$	Storage Temperature Range	-65 to +150	$^{\circ}\text{C}$
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	60	$^{\circ}\text{C/W}$

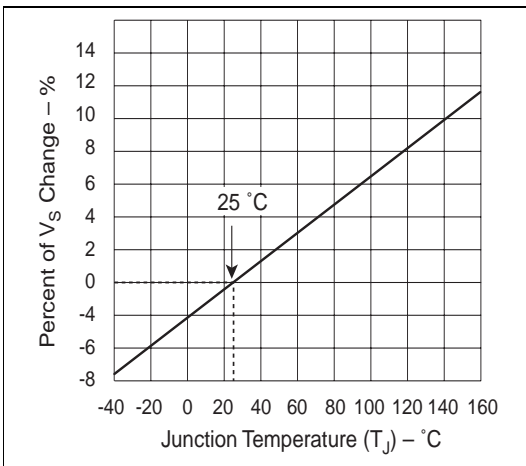
Data Sheets



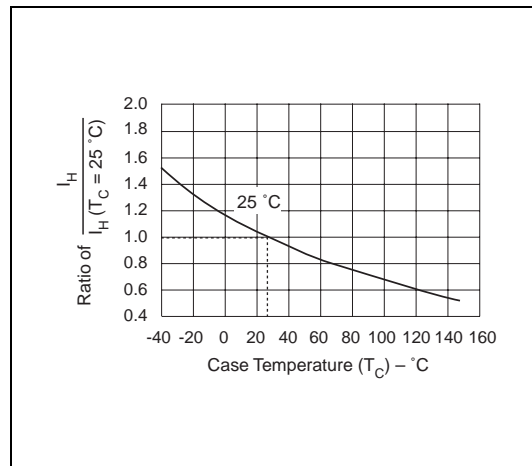
V-I Characteristics



$t_r \times t_d$  Pulse Wave-form



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature