CATV Line Amplifiers/Power Inserters 3 kA SIDACtor® Device







This *SIDACtor* device is a 3000 A solid state protection device offered in a non-isolated TO-220 package. It protects equipment located in the severe surge environment of CATV (Community Antenna TV) systems and antenna locations.

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
P1500REL	140	180	4	5	800	2.2/25	50
P1900REL	140	220	4	5	800	2.2/25	50
P2300REL	180	260	4	5	800	2.2/25	50

^{* &}quot;L" in part number indicates RoHS compliance. For non-RoHS compliant device, delete "L" from part number. For surge ratings, see table below.

General Notes:

- All measurements are made at an ambient temperature of 25 °C. IPP applies to -40 °C through +85 °C temperature range.
- IPP 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.

Surge Ratings in Amps

	I _{PP} 8x20 * 1.2x50 **	I _{TSM} 50 / 60 Hz	di/dt	
Series	Amps	Amps	Amps/µs	
E	3000	400	500	

^{*} Current waveform in µs

^{**} I_T is a free air rating; heat sink I_T rating is 25 A.

^{**} Voltage waveform in μs



Thermal Considerations

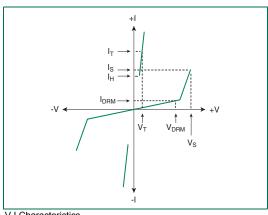
Package	Symbol	Parameter	Value	Unit
Pin2	TJ	Operating Junction Temperature Range	-40 to +150	°C
TO-220	Ts	Storage Temperature Range	-65 to +150	°C
	T _C	Maximum Case Temperature	100	°C
	R _{θJC} ∗	Thermal Resistance: Junction to Case	1.7	°C/W
Pin1	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	56	°C/W
Pin2				

^{*} ReJC 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.

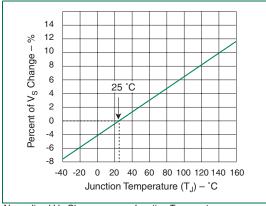
Capacitance Values

	pF		
Part Number	MIN	MAX	
P1500REL	260	650	
P1900REL	180	290	
P2300REL	170	270	

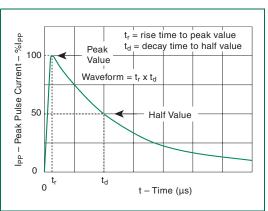
Note: Off-state capacitance (Co) is measured at 1 MHz with a 2 V bias.



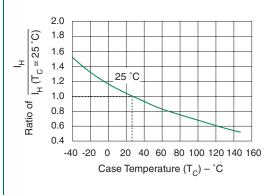
V-I Characteristics



Normalized V_S Change versus Junction Temperature



t_r x t_d Pulse Waveform



Normalized DC Holding Current versus Case Temperature