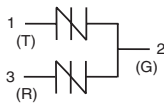


High Surge Current Three-pin *SIDACtor*® Device

RoHS

Littelfuse®



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 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
P6002ADL	550	700	5.5	5	800	2.2	50

* "L" in part number indicates RoHS compliance. For non-RoHS compliant device, delete "L" from part number. For surge ratings, see table below.



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
P3100ADL	280	360	5.5	5	800	2.2	150

* "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. 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.

Surge Ratings in Amps

Series	I _{PP}		I _{TSM} 50 / 60 Hz	di/dt Amps/μs
	8x20 * 1.2x50 **	10x1000 * 10x1000 **		
	Amps	Amps	Amps	Amps/μs
D	1000	250	120	500

* Current waveform in μs

** Voltage waveform in μs

Note: P6002AD is shown. P3100AD has no center lead.

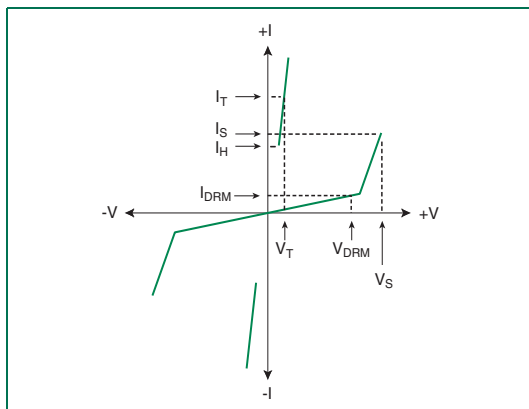
SIDACtor Devices

Thermal Considerations

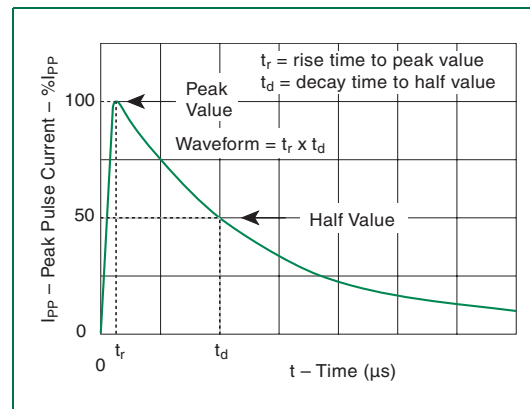
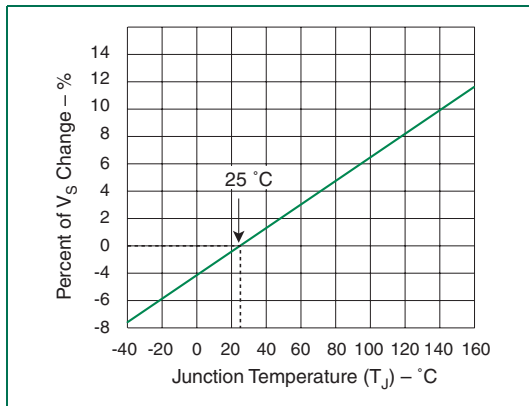
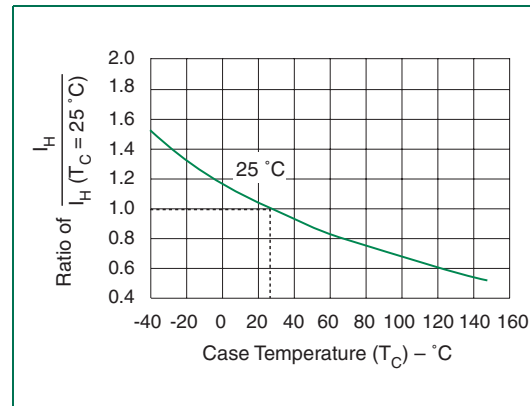
Package	Symbol	Parameter	Value	Unit
Modified TO-220 	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	60	°C/W

Capacitance Values

Part Number	pF	
	MIN	MAX
P6002ADL	60	200
P3100ADL	100	150

 Note: Off-state capacitance (C_0) is measured at 1 MHz with a 2 V bias.


V-I Characteristics


 $t_r \times t_d$ Pulse Waveform

 Normalized V_S Change versus Junction Temperature


Normalized DC Holding Current versus Case Temperature