# **SIDACtor Device**



DO-214AA *SIDACtor* solid state protection devices protect telecommunications equipment such as modems, line cards, fax machines, and other CPE.

*SIDACtor* devices are 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).

#### **Electrical Parameters**

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>T</sub> Volts	I <sub>DRM</sub> µAmps	I <sub>S</sub> mAmps	I <sub>T</sub> Amps	I <sub>H</sub> mAmps	C <sub>O</sub> pF
P0080S_	6	25	4	5	800	2.2	50	100
P0220S_	15	32	4	5	800	2.2	50	50
P0300S_	25	40	4	5	800	2.2	50	110
P0640S_	58	77	4	5	800	2.2	150	50
P0720S_	65	88	4	5	800	2.2	150	50
P0900S_	75	98	4	5	800	2.2	150	50
P1100S_	90	130	4	5	800	2.2	150	40
P1300S_	120	160	4	5	800	2.2	150	40
P1500S_	140	180	4	5	800	2.2	150	40
P1800S_	170	220	4	5	800	2.2	150	30
P2300S_	190	260	4	5	800	2.2	150	30
P2600S_	220	300	4	5	800	2.2	150	30
P3100S_	275	350	4	5	800	2.2	150	30
P3500S_	320	400	4	5	800	2.2	150	30

<sup>\*</sup> For individual "SA", "SB", and "SC" 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<sub>DRM</sub> is measured at I<sub>DRM</sub>.
- V<sub>S</sub> is measured at 100 V/μs.
- 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 for "SA" and "SB" product. "SC" capacitance
  is approximately 2x the listed value. The off-state capacitance of the P0080SB is equal to the "SC" device.

## **Surge Ratings**

Series	l <sub>PP</sub> 2x10 μs Amps	I <sub>PP</sub> 8x20 μs Amps	I <sub>PP</sub> 10x160 μs Amps	I <sub>PP</sub> 10x560 μs Amps	I <sub>PP</sub> 10x1000 μs Amps	I <sub>TSM</sub> 60 Hz Amps	di/dt Amps/µs
Α	150	150	90	50	45	20	500
В	250	250	150	100	80	30	500
С	500	400	200	150	100	50	500

t<sub>r</sub> = rise time to peak value t<sub>d</sub> = decay time to half value

Half Value

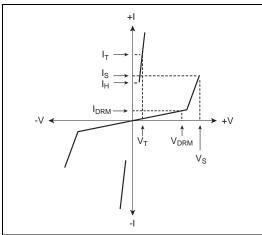
t - Time (µs)

Peak

Value Waveform  $= t_r \times t_d$ 

## **Thermal Considerations**

Package	Symbol	Parameter	Value	Unit
DO-214AA	TJ	Operating Junction Temperature Range	-40 to +150	°C
	Ts	Storage Temperature Range	-65 to +150	°C
	$R_{ hetaJA}$	Thermal Resistance: Junction to Ambient	90	°C/W



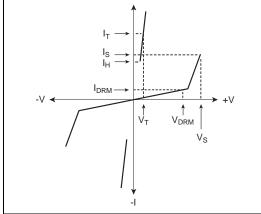
t<sub>r</sub> x t<sub>d</sub> Pulse Wave-form

Ipp - Peak Pulse Current - %Ipp

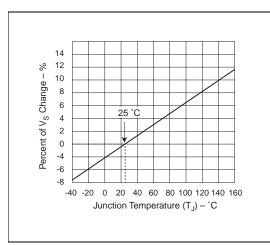
100

50

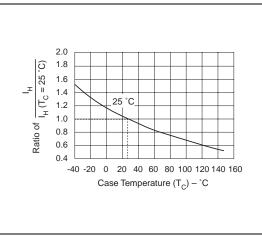
0  $0^{t_r}$ 



V-I Characteristics



Normalized V<sub>S</sub> Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature