



**THE DATASHEET OF  
P3100EA70**



## SIDACtor Device



TO-92 *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
P0080E_	6	25	4	5	800	2.2	50	100
P0300E_	25	40	4	5	800	2.2	50	110
P0640E_	58	77	4	5	800	2.2	150	50
P0720E_	65	88	4	5	800	2.2	150	50
P0900E_	75	98	4	5	800	2.2	150	50
P1100E_	90	130	4	5	800	2.2	150	40
P1300E_	120	160	4	5	800	2.2	150	40
P1500E_	140	180	4	5	800	2.2	150	40
P1800E_	170	220	4	5	800	2.2	150	30
P2300E_	190	260	4	5	800	2.2	150	30
P2600E_	220	300	4	5	800	2.2	150	30
P3100E_	275	350	4	5	800	2.2	150	30
P3500E_	320	400	4	5	800	2.2	150	30

\* For individual "EA", "EB", and "EC" 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/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 "EA" and "EB" product. "EC" capacitance is approximately 2x the listed value. The off-state capacitance of the P0080EB is equal to the "EC" device.

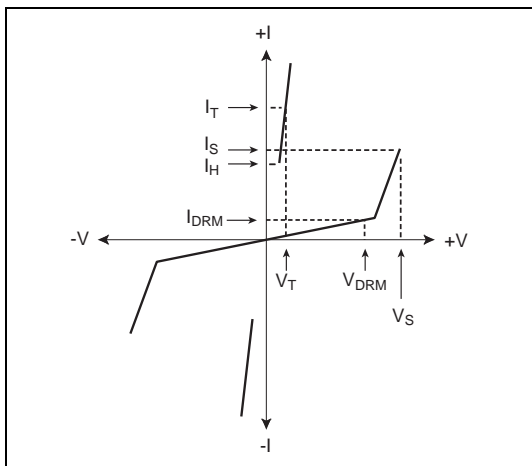
### Surge Ratings

Series	I <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
A	150	150	90	50	45	20	500
B	250	250	150	100	80	30	500
C	500	400	200	150	100	50	500

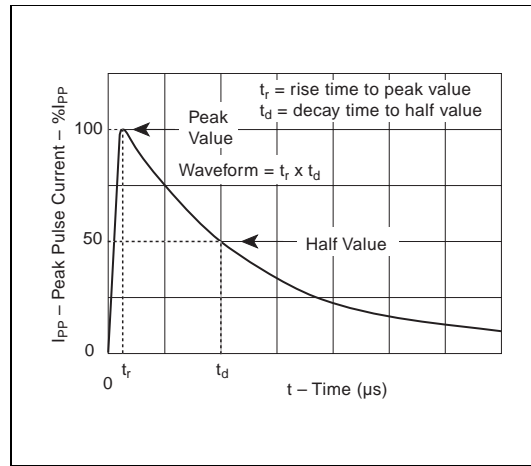
Thermal Considerations

Package	Symbol	Parameter	Value	Unit
 TO-92	$T_J$	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	90	$^{\circ}\text{C/W}$

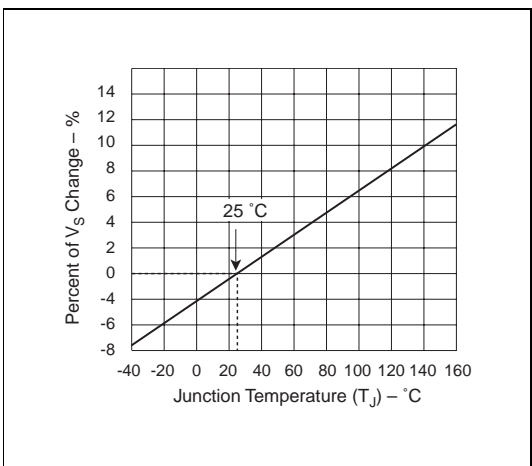
Data Sheets



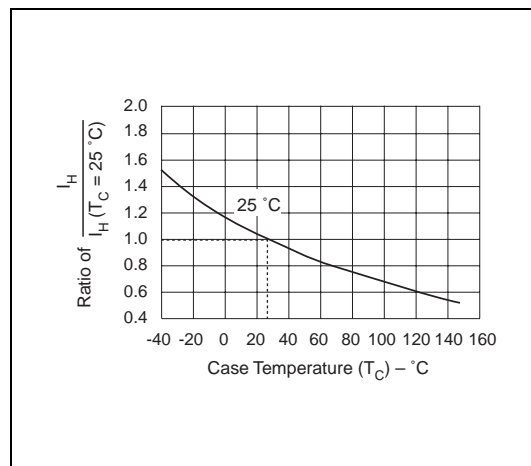
V-I Characteristics



$t_r \times t_d$  Pulse Wave-form



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

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