

# SIDACtor® Device



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

*SIDACtor* devices enable equipment to comply with 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
P0080S_L	6	25	4	5	800	2.2	50
P0220S_L	15	32	4	5	800	2.2	50
P0300S_L	25	40	4	5	800	2.2	50
P0640S_L	58	77	4	5	800	2.2	150
P0720S_L	65	88	4	5	800	2.2	150
P0900S_L	75	98	4	5	800	2.2	150
P1100S_L	90	130	4	5	800	2.2	150
P1300S_L	120	160	4	5	800	2.2	150
P1500S_L	140	180	4	5	800	2.2	150
P1800S_L	170	220	4	5	800	2.2	150
P2100S_L	180	240	4	5	800	2.2	150
P2300S_L	190	260	4	5	800	2.2	150
P2600S_L	220	300	4	5	800	2.2	150
P3100S_L	275	350	4	5	800	2.2	150
P3500S_L	320	400	4	5	800	2.2	150

\* "L" in part number indicates RoHS compliance. For non-RoHS compliant device, delete "L" from part number.  
For individual "SA", "SB", and "SC" 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.


## Surge Ratings in Amps

Series	I <sub>PP</sub>									I <sub>TSM</sub> 50 / 60 Hz	di/dt
	0.2x310 *	2x10 *	8x20 *	10x160 *	10x560 *	5x320 *	10x360 *	10x1000 *	5x310 *		
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps		
A	20	150	150	90	50	75	75	45	75	20	500
B	25	250	250	150	100	100	125	80	100	30	500
C	50	500	400	200	150	200	175	100	200	30	500

\* Current waveform in μs

\*\* Voltage waveform in μs

**Thermal Considerations**

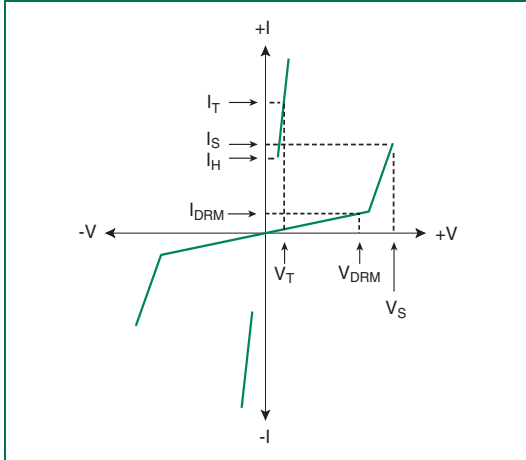
Package	Symbol	Parameter	Value	Unit
	T <sub>J</sub>	Operating Junction Temperature Range	-40 to +150	°C
	T <sub>S</sub>	Storage Temperature Range	-65 to +150	°C
	R <sub>θJA</sub>	Thermal Resistance: Junction to Ambient	90	°C/W

**Capacitance Values**

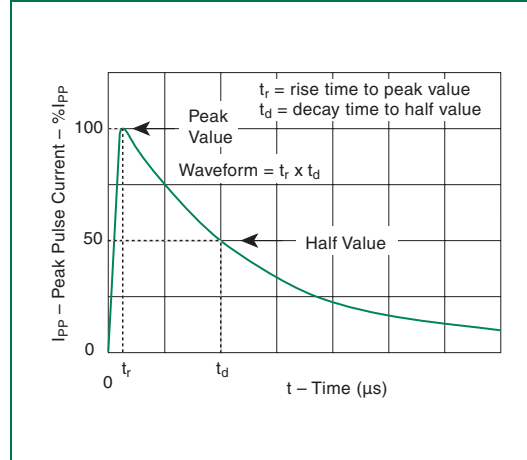
Part Number *	pF	
	MIN	MAX
P0080S[A/B]L	25	150
P0080SCL	35	260
P0220SAL	25	150
P0220SBL	25	150
P0220SCL	30	240
P0300S[A/B]L	15	140
P0300SCL	25	250
P0640S[A/B]L	40	60
P0640SCL	55	155
P0720SAL	35	60
P0720SBL	35	75
P0720SCL	50	150
P0900SAL	35	55
P0900SBL	35	70
P0900SCL	45	140
P1100SAL	30	50
P1100SBL	30	70
P1100SCL	45	115
P1300SAL	25	45
P1300SBL	25	60
P1300SCL	40	105
P1500SAL	25	40
P1500SBL	25	55
P1500SCL	35	95
P1800SAL	25	35
P1800SBL	25	50
P1800SCL	35	90
P2100S[A/B]L	20	35
P2100SCL	30	90
P2300SAL	25	35
P2300SBL	25	50
P2300SCL	30	80
P2600SAL	20	35
P2600SBL	20	45
P2600SCL	30	80
P3100SAL	20	35
P3100SBL	20	45
P3100SCL	30	70
P3500SAL	20	35
P3500SBL	20	40
P3500SCL	25	65

\* [A/B] in part number indicates that values are for both A and B surge ratings.  
 Note: Off-state capacitance (C<sub>0</sub>) is measured at 1 MHz with a 2 V bias.

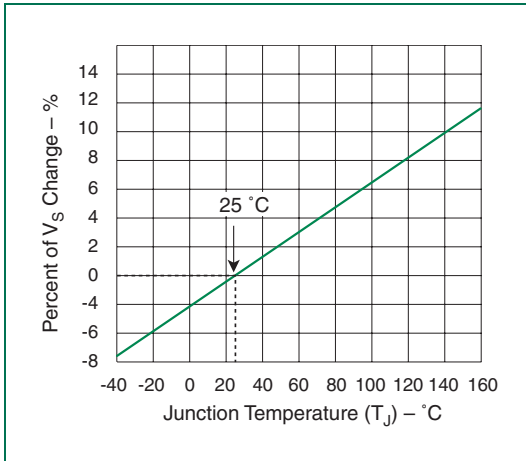
SIDACtor Devices



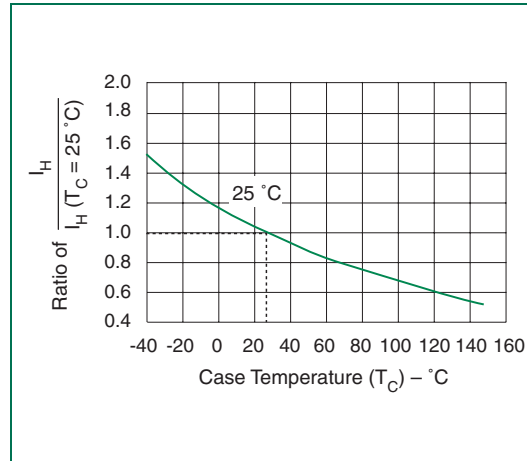
V-I Characteristics



$t_r \times t_d$  Pulse Waveform



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature