High Surge Current (D-rated) *SIDACtor* Device

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

These *SIDACtor* devices withstand simultaneous surges incurred in GR 1089 lightning tests. (See "First Level Lightning Surge Test" on page 4-5.) Surge ratings are twice that of a device with a C surge rating. This allows a discrete surface mount version of Littelfuse's patented "Y" configuration. (US Patent 4,905,119)

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_{DRM} Volts	V_S Volts	V_T Volts	I_{DRM} µAmps	I_S mAmps	I_T Amps ***	I_H mAmps	C_O pF
P0080SD **	6	25	4	5	800	2.2	50	200
P0300SD **	25	40	4	5	800	2.2	50	220
P0640SD **	58	77	4	5	800	2.2	50	100
P0720SD **	65	88	4	5	800	2.2	50	100
P0900SD **	75	98	4	5	800	2.2	50	100
P1100SD	90	130	4	5	800	2.2	50	80
P1300SD	120	160	4	5	800	2.2	50	80
P1500SD	140	180	4	5	800	2.2	50	80
P1800SD	170	220	4	5	800	2.2	50	60
P2300SD	190	260	4	5	800	2.2	50	60
P2600SD	220	300	4	5	800	2.2	50	60
P3100SD	275	350	4	5	800	2.2	50	60
P3500SD	320	400	4	5	800	2.2	50	60

* For surge ratings, see table below.
** Contact factory for release date.
*** The 2.2 A version cannot be used to meet 4.4 A requirements.

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.
- Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias and is a typical value.

Surge Ratings

Series	I_{PP} 2x10 µs Amps	I_{PP} 8x20 µs Amps	I_{PP} 10x160 µs Amps	I_{PP} 10x560 µs Amps	I_{PP} 10x1000 µs Amps	I_{TSM} 60 Hz Amps	di/dt Amps/µs
D	1000	800	400	300	200	50	1000

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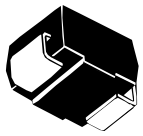
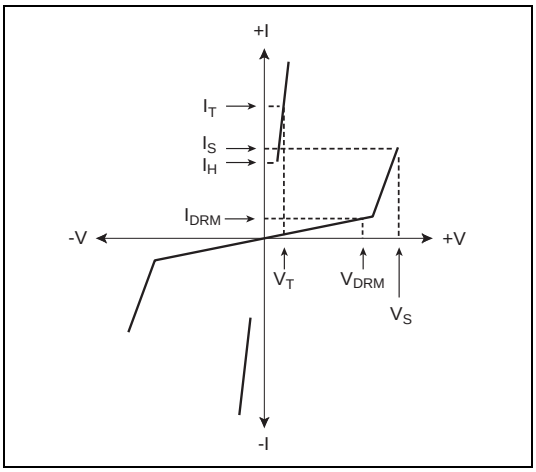
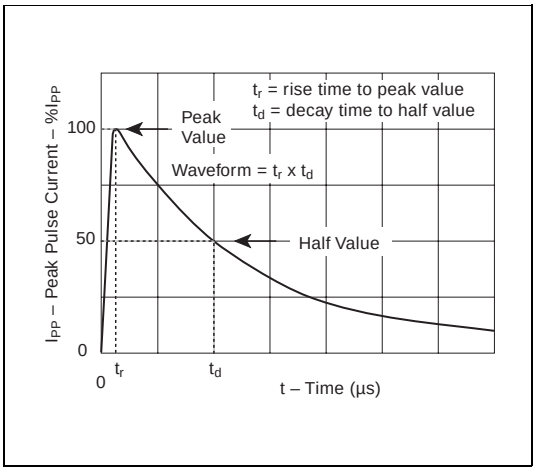
Thermal Considerations

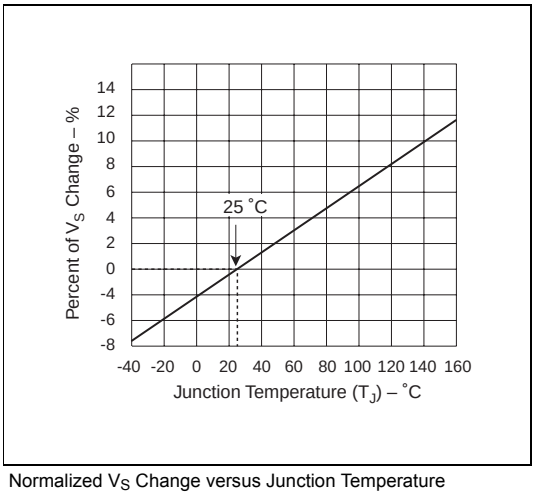
Package	Symbol	Parameter	Value	Unit
DO-214AA 	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	90	°C/W



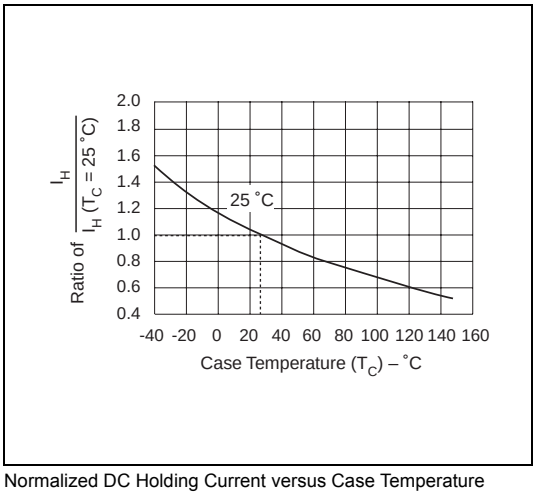
V-I Characteristics



t_r x t_d Pulse Wave-form



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature