SIDACtor® Device

RoHS

Littelfuse

TO-92 *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).

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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
P0080E_L	6	25	4	5	800	2.2	50
P0300E_L	25	40	4	5	800	2.2	50
P0640E_L	58	77	4	5	800	2.2	150
P0720E_L	65	88	4	5	800	2.2	150
P0900E_L	75	98	4	5	800	2.2	150
P1100E_L	90	130	4	5	800	2.2	150
P1300E_L	120	160	4	5	800	2.2	150
P1500E_L	140	180	4	5	800	2.2	150
P1800E_L	170	220	4	5	800	2.2	150
P2300E_L	190	260	4	5	800	2.2	150
P2600E_L	220	300	4	5	800	2.2	150
P3100E_L	275	350	4	5	800	2.2	150
P3500E_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 "EA", "EB", and "EC" 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
	0.2x310 * 0.5x700 **	2x10 * 2x10 **	8x20 * 1.2x50 **	10x160 * 10x160 **	10x560 * 10x560 **	5x320 * 9x720 **	10x360 * 10x360 **	10x1000 * 10x1000 **	5x310 * 10x700 **		
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/µs
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

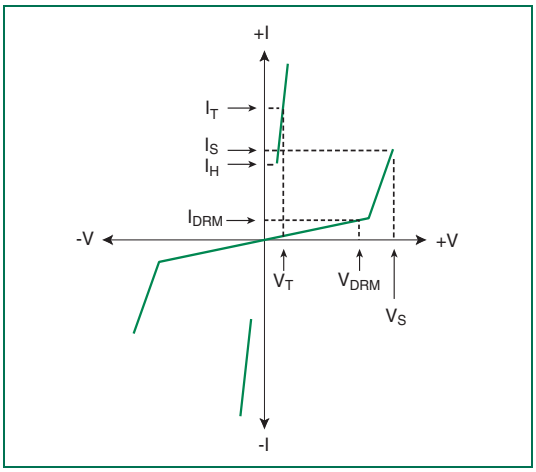
Thermal Considerations

Package	Symbol	Parameter	Value	Unit
TO-92 	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

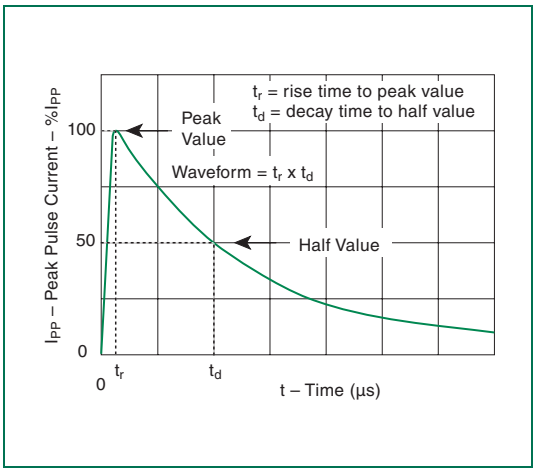
Capacitance Values

Part Number *	pF	
	MIN	MAX
P0080E[A/B]L	25	150
P0080ECL	35	260
P0300E[A/B]L	15	140
P0300ECL	25	250
P0640E[A/B]L	40	60
P0640ECL	55	155
P0720EAL	35	60
P0720EBL	35	75
P0720ECL	50	150
P0900EAL	35	55
P0900EBL	35	70
P0900ECL	45	140
P1100EAL	30	50
P1100EBL	30	70
P1100ECL	45	115
P1300EAL	25	45
P1300EBL	25	60
P1300ECL	40	105
P1500EAL	25	40
P1500EBL	25	55
P1500ECL	35	95
P1800EAL	25	35
P1800EBL	25	50
P1800ECL	35	90
P2300EAL	25	35
P2300EBL	25	50
P2300ECL	30	80
P2600EAL	20	35
P2600EBL	20	45
P2600ECL	30	80
P3100EAL	20	35
P3100EBL	20	45
P3100ECL	30	70
P3500EAL	20	35
P3500EBL	20	40
P3500ECL	25	65

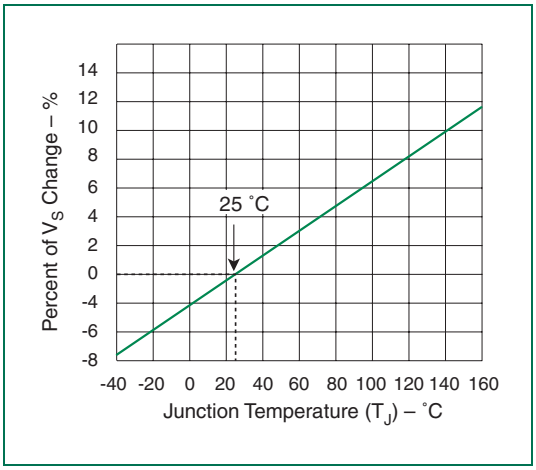
* [A/B] in part number indicates that values are for both A and B surge ratings.
Note: Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias.



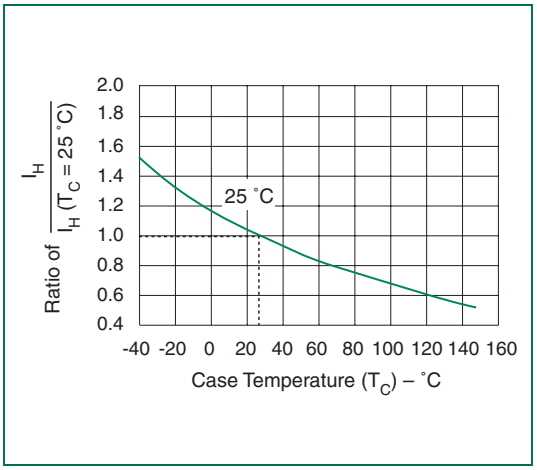
V-I Characteristics



t_r x t_d Pulse Waveform



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature