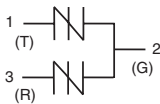


## Two-chip *SIDACtor*® Device



The two-chip *SIDACtor* design provides a through-hole technology protection solution. It is intended for telecom applications that do not require a balanced solution. For primary protection applications, devices with higher holding current and integrated failsafe options are available.

*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).

SIDACtor Devices

### Electrical Parameters

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	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
	Pins 1-2, 3-2		Pins 1-3						
P0602A_L	25	40	50	80	4	5	800	2.2	50
P1402A_L	58	77	116	154	4	5	800	2.2	150
P1602A_L	65	95	130	190	4	5	800	2.2	150
P2202A_L	90	130	180	260	4	5	800	2.2	150
P2702A_L	120	160	240	320	4	5	800	2.2	150
P3002A_L	140	180	280	360	4	5	800	2.2	150
P3602A_L	170	220	340	440	4	5	800	2.2	150
P4202A_L	190	250	380	500	4	5	800	2.2	150
P4802A_L	220	300	440	600	4	5	800	2.2	150
P6002A_L	275	350	550	700	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 "AA", "AB", and "AC" surge ratings, see table below.

#### General Notes:

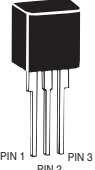
- All measurements are made at an ambient temperature of 25 °C. I<sub>PP</sub> applies to -40 °C through +85 °C temperature range.
- I<sub>PP</sub> is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACtor* devices are bi-directional. All electrical parameters and 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 *		
	0.5x700 **	2x10 **	1.2x50 **	10x160 **	10x560 **	9x720 **	10x360 **	10x1000 **	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	50	500

\* Current waveform in μs  
\*\* Voltage waveform in μs

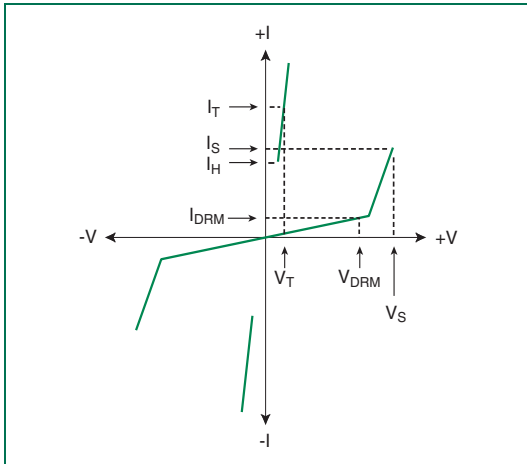
**Thermal Considerations**

Package	Symbol	Parameter	Value	Unit
Modified TO-220 	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	50	°C/W

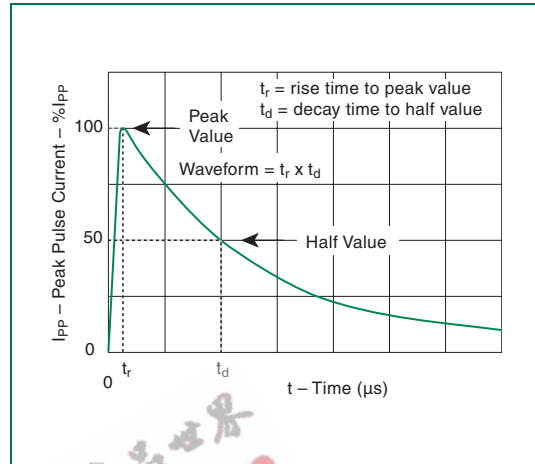
**Capacitance Values**

Part Number	pF Pin 1-2 / 3-2 Tip-Ground, Ring-Ground		pF Pin 1-3 Tip-Ring	
	MIN	MAX	MIN	MAX
P0602AAL	15	145	10	90
P0602ABL	15	250	10	145
P0602ACL	25	250	10	145
P1402AAL	40	60	20	35
P1402ABL	40	155	20	90
P1402ACL	55	155	30	90
P1602AAL	35	60	20	35
P1602ABL	35	145	20	85
P1602ACL	45	145	25	85
P2202AAL	30	50	15	30
P2202ABL	30	115	15	65
P2202ACL	45	115	25	65
P2702AAL	25	45	15	25
P2702ABL	25	105	15	60
P2702ACL	40	105	20	60
P3002AAL	25	40	15	25
P3002ABL	25	95	15	55
P3002ACL	35	95	20	55
P3602AAL	25	35	10	20
P3602ABL	25	90	10	50
P3602ACL	35	90	15	50
P4202AAL	25	35	10	20
P4202ABL	25	85	10	50
P4202ACL	30	85	15	50
P4802AAL	20	35	10	20
P4802ABL	20	85	10	50
P4802ACL	30	85	15	50
P6002AAL	20	35	10	20
P6002ABL	20	80	10	45
P6002ACL	30	80	15	45

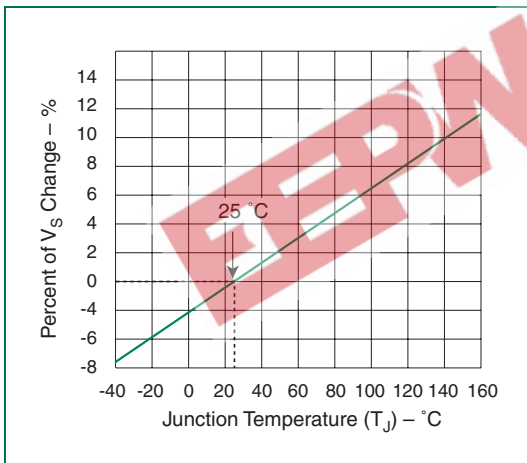
 Note: Off-state capacitance (C<sub>O</sub>) is measured at 1 MHz with a 2 V bias.



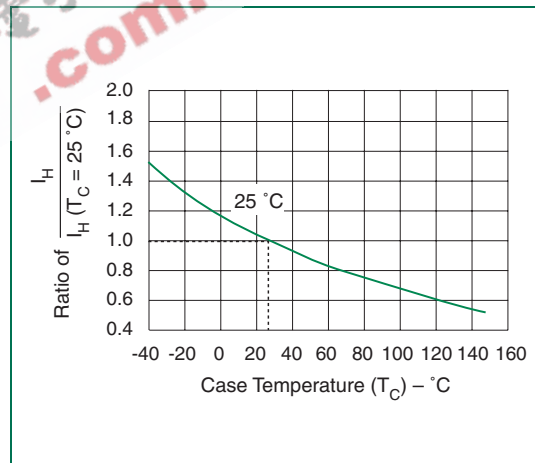
V-I Characteristics



$t_r \times t_d$  Pulse Waveform



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

SIDACtor Devices