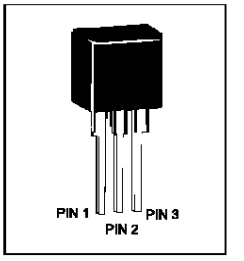
Two Chip TO-220 SIDACtor



The two chip modified TO-220 SIDACtor is a solid state protection device designed for telecommunications applications that reference Tip and Ring to earth ground but do not require balanced protection.

The SIDACtor is used to help meet various regulatory requirements including: GR 1089, ITU K.20 & K.21, IEC 950, UL 1459 & 1950 and FCC Part 68.

Electrical Parameters

Part Number*	V_{DRM} Volts pins 1-2, 3-2	V_S Volts	V_{DRM} Volts pins 1-3	V_S Volts	V_T Volts	I_{DRM} µAmps	I_S mAmps	I_T Amps	I_H mAmps	C_O pF
P0602A_	25	40	50	80	5	5	800	1	50	110
P1402A_	58	77	116	154	5	5	800	1	150	50
P1602A_	65	95	130	190	5	5	800	1	150	50
P2202A_	90	130	180	260	5	5	800	1	150	40
P2702A_	120	160	240	320	5	5	800	1	150	40
P3002A_	140	180	280	360	5	5	800	1	150	40
P3602A_	160	220	320	440	5	5	800	1	150	40
P4202A_	190	250	380	500	5	5	800	1	150	30
P4802A_	220	300	440	600	5	5	800	1	150	30
P6002A_	275	350	550	700	5	5	800	1	150	30

* For individual "AA", "AB" and "AC" surge ratings, see table below.

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 SIDACtors are bi-directional. All electrical parameters & surge ratings apply to forward and reverse polarities.
- V_{DRM} is measured at I_{DRM}.
- V_S is measured at 100V/µs.
- Special voltage (V_S & V_{DRM}) and holding current (I_H) requirements are available upon request.
- Off-state capacitance is measured between PINS 1-2 and 3-2 at 1MHz with a 2 volt bias and is a typical value for "AA" and "AB" product. "AC" capacitance is approximately 2x the listed value.

Surge Ratings

Series	I_{PP} 2x10µs Amps	I_{PP} 8x20µs Amps	I_{PP} 10x160µs Amps	I_{PP} 10x560µs Amps	I_{PP} 10x1000µs Amps	I_{TSM} 60Hz Amps	dI/dt Amps/µs
AA		150	100	50		20	500
AB		250	150	100		30	500
AC	500	400	200		100	60	500

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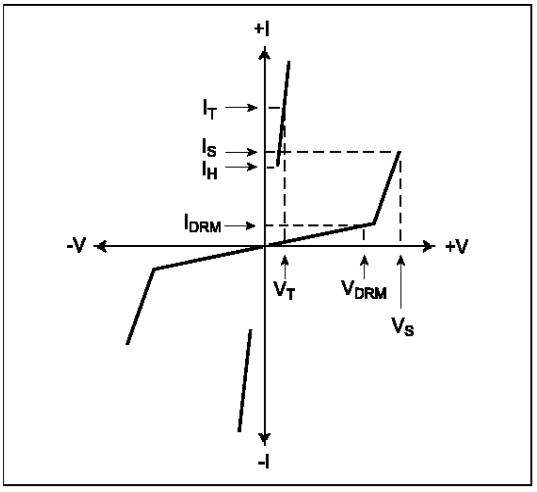
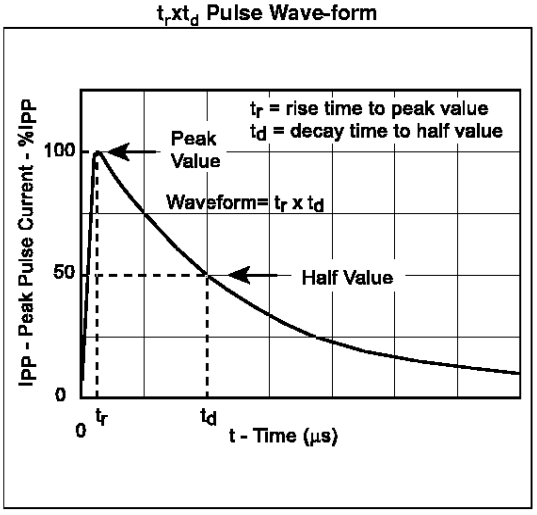
Thermal Considerations

Package	Symbol	Parameter	Value	Unit
Modified TO-220	T_j	Junction Temperature Range	-40 to +150	°C
	T_s	Storage Temperature Range	-65 to +150	°C
	T_c	Maximum Case Temperature	+115	°C
	$R_{\theta jc}$	Thermal Resistance: junction to case	+12	°C/W
	$R_{\theta ja}$	Thermal Resistance: junction to ambient	+50	°C/W

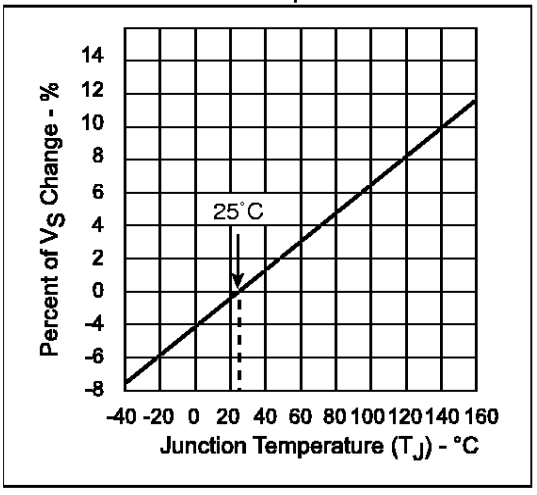
V-I Characteristics



t_rxt_d Pulse Wave-form



Normalized V_S Change vs. Junction Temperature



Normalized DC Holding Current vs. Case Temperature