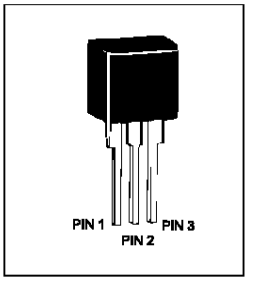
Balanced Three Chip TO-220 SIDACtor



The three chip modified TO-220 SIDACtor is a balanced solid state protection device designed for telecommunications systems that reference Tip and Ring to earth ground. Applications include any piece of transmission equipment that requires balanced protection.

The SIDACtor is used to help equipment 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 pins 1-2, 3-2	V_{DRM} Volts pins 1-3	V_S Volts pins 1-3	V_T Volts	I_{DRM} µAmps	I_S mAmps	I_T Amps	I_H mAmps	C_O pF
P1553A_	130	180	130	180	10	5	800	1	150	40
P1803A_	150	210	150	210	10	5	800	1	150	40
P2103A_	170	250	170	250	10	5	800	1	150	40
P2353A_	200	270	200	270	10	5	800	1	150	40
P2703A_	230	300	230	300	10	5	800	1	150	30
P3203A_	270	350	270	350	10	5	800	1	150	30
P3403A_	300	400	300	400	10	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 (Pin 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.
- Designed to meet balance requirements of GTS 8700 and GR 974.

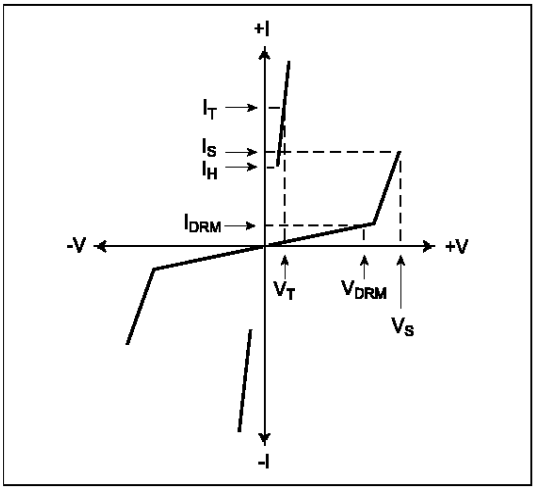
Surge Ratings

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

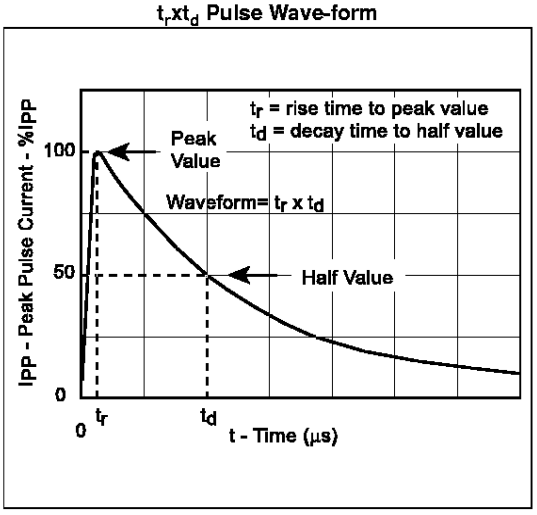
Thermal Considerations

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

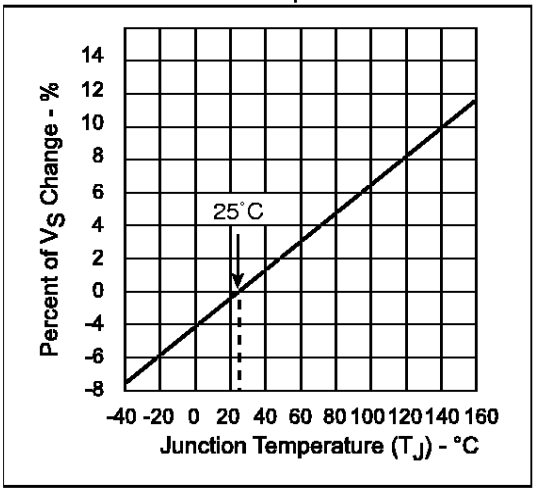
V-I Characteristics



t_rxt_d Pulse Wave-form



Normalized V_S Change vs. Junction Temperature



Normalized DC Holding Current vs. Case Temperature