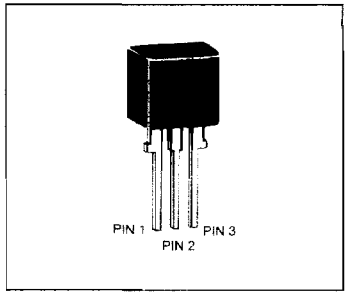
Balanced Three Chip TO-220 "AC" Series



The three chip TO-220 "AC" series SIDACtor is a 500A rated 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 and Bellcore 1089 compliance without the use of additional series resistance.

The "AC" series SIDACtor is used to help equipment meet various regulatory requirements including: Bellcore 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
P1553AC	130	180	130	180	10	5	800	1	150	80
P1803AC	150	210	150	210	10	5	800	1	150	80
P2103AC	170	250	170	250	10	5	800	1	150	80
P2353AC	200	270	200	270	10	5	800	1	150	80
P2703AC	230	300	230	300	10	5	800	1	150	60
P3203AC	270	350	270	350	10	5	800	1	150	60
P3403AC	300	400	300	400	10	5	800	1	150	60

Notes:

- All measurements are made at an ambient temperature of 25°C.
- 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 at 1MHz with a 2 volt bias and is a typical value.

Surge Ratings

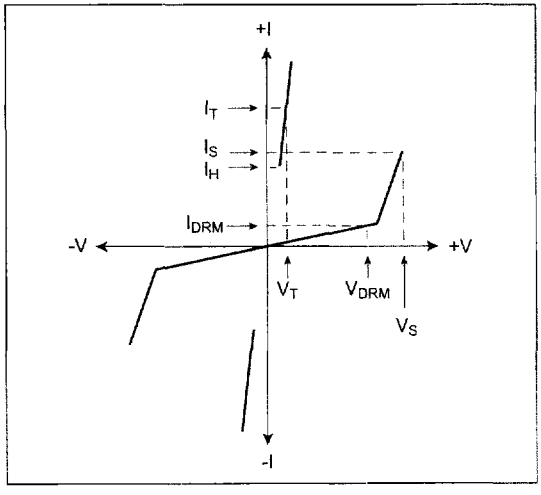
Series	I_{PP} 2x10µs Amps	I_{PP} 10x160µs Amps	I_{PP} 10x1000µs Amps	I_{TSM} 60Hz Amps	dI/dt Amps/µs
AC	500	200	100	60	500

Teccor Electronics, Inc.
(972) 580-7777

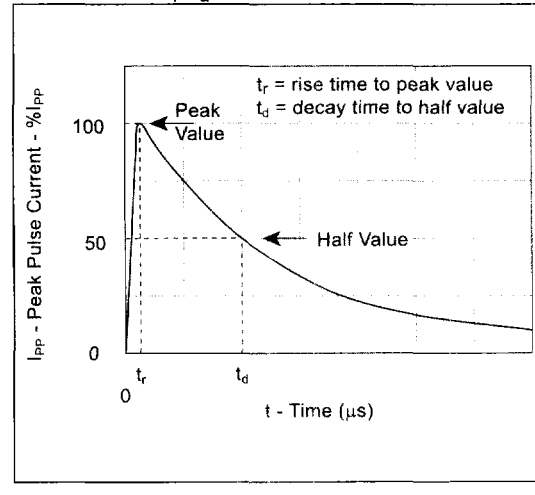
Thermal Considerations

Series	Symbol	Parameter	Value	Unit
AC	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

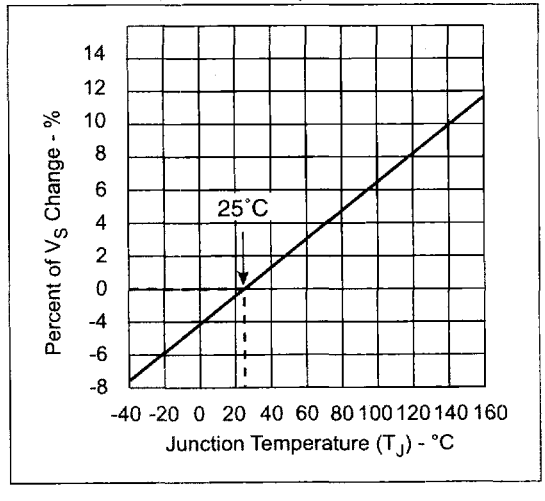
V-I Characteristics



t_rxt_d Pulse Wave-form



Normalized V_S Change vs. Junction Temperature



Normalized DC Holding Current vs. Case Temperature