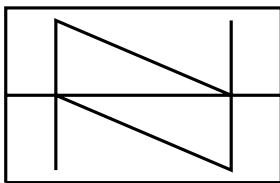


Description

The PXXXXSBseries are thyristor surge suppressor (TSS) designed to protect telecommunication equipment against lightning and transients induced by AC power lines. These devices can be used on central office equipment, PBX, DSU, OCU and other telecommunication equipment. The bidirectional configuration provides protection for both positive and negative transients and the discrete surface mount package allows for individual placement of the device on line cards or other locations where multiple component devices do not offer the versatile in board trace layout.

This series can be used to provide protection in accordance with industry standards such as FCC Part 68, AN-SI C62.41, UL 1459, GR-1089-CORE, IEC 61000-2, IEC 61000-4 and IEC 61000-4-5 requirements.

Device Schematic

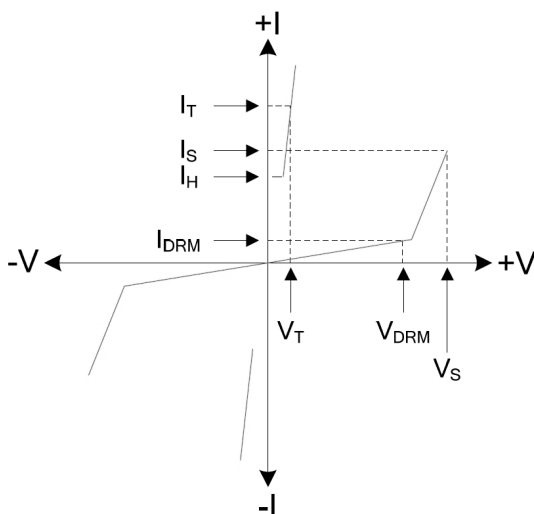


Device Schematic



SMB

Device Schematic



Features

- * Peak Off-State Voltage: 6V~320V
- * RoHS Compliant
- * Package: DO-214AA
- * Cannot be damaged by voltage
- * Eliminate hysteresis and heat dissipation typically found with
- * clamping devices
- * Eliminate voltage overshoot caused by fast -rising transients
- * Are non-degenerative
- * Will not fatigue
- * Have low capacitance, making them ideal for high-speed

Application

- * T1/E1 Trunk & Line Card
- * RS-485/RS-232/RS-422
- * Video/audio line

Ordering Information

Part Number	Packaging	Reel Size
PXXXXSB	3000/Tape & Reel	13 inch
PXXXXSB	500/Tape & Reel	7 inch

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Series	I _{pp} @2/10μs (A)	I _{pp} @8/20μs (A)	I _{pp} @10/160μs (A)	I _{pp} @10/560μs (A)	I _{pp} @10/1000μs (A)
PxxxxSB	300	300	150	100	80

Part Number	V _{DRM} (V)	V _S (V)	I _H (mA)	I _S (mA)	I _{DRM} (μA)	V _T (V)	I _T (A)	C _j @2V, 1MHz (pF)
P0080SB	6	25	50	800	5	4	2.2	60
P0300SB	25	40	50	800	5	4	2.2	60
P0640SB	58	77	150	800	5	4	2.2	60
P0720SB	65	88	150	800	5	4	2.2	60
P0900SB	75	98	150	800	5	4	2.2	60
P1100SB	90	130	150	800	5	4	2.2	60
P1300SB	120	160	150	800	5	4	2.2	40
P1500SB	140	180	150	800	5	4	2.2	40
P1800SB	170	220	150	800	5	4	2.2	40
P2300SB	190	260	150	800	5	4	2.2	30
P2600SB	220	300	150	800	5	4	2.2	30
P3100SB	275	350	150	800	5	4	2.2	30
P3500SB	320	400	150	800	5	4	2.2	30

Notes:

I_s:Switching Current – maximum current required to switch to on state

I_{DRM}:Leakage Current – maximum peak off-state current measured at V_{DRM}

I_H:Holding Current – minimum current required to maintain on state

I_{PP}:Peak Pulse Current – maximum rated peak impulse current

I_T:On-state Current – maximum rated continuous on-state current

V_{DRM}:Peak Off-state Voltage – maximum voltage that can be applied while maintaining off state

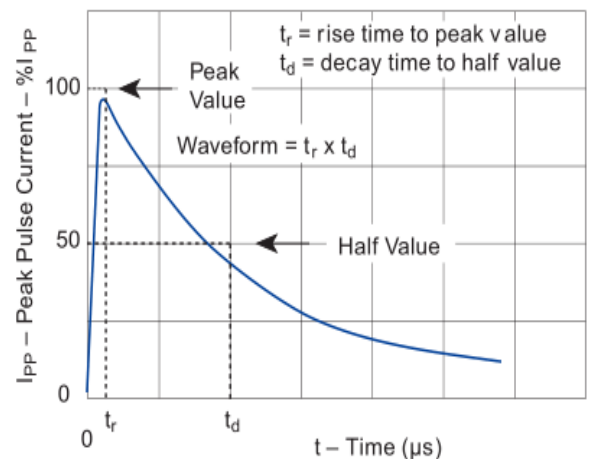
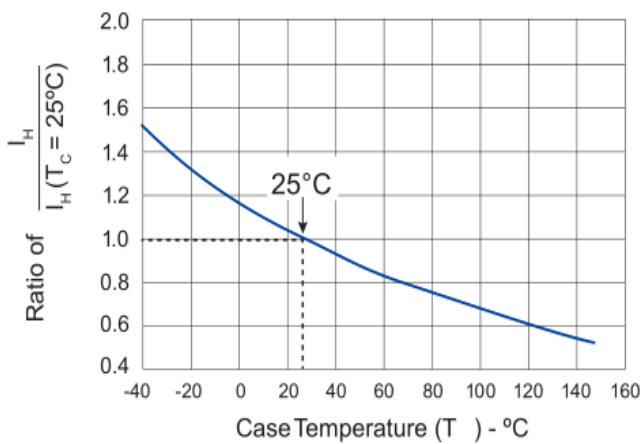
V_T:On-state Voltage – maximum voltage measured at rated on-state current

V_S:Switching Voltage – maximum voltage prior to switching to on state

Thermal Considerations

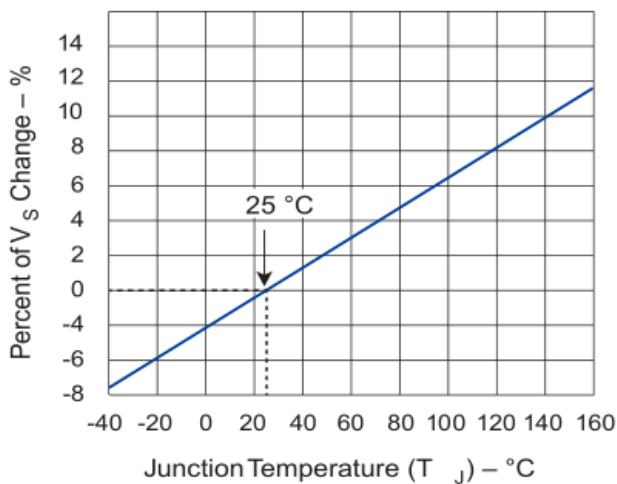
Package(DO-214AC)	Symbol	Parameter	Value	Unit
	TJ	Operating Junction Temperature	-55 to +125	°C
	Tstg	Storage Temperature Range	-55 to +150	°C
	R _{θJA}	Junction to Ambient on printed circuit	90	°C/W

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

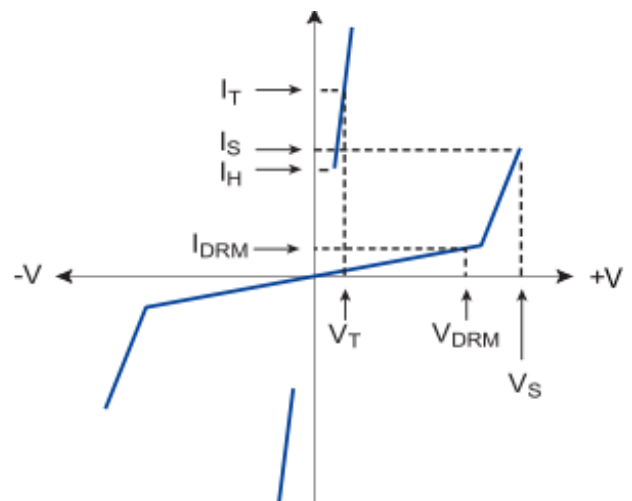


Normalized DC Holding Current vs. Case Temperature

T r x T d Pulse Waveform

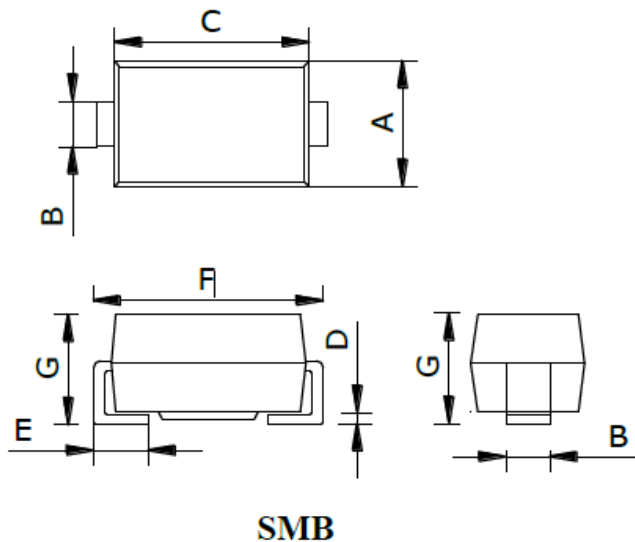


Normalized V_S Change vs. Junction Temperature



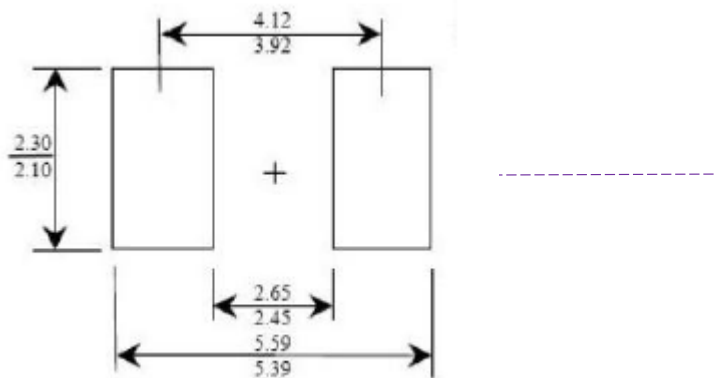
V-I Characteristics

DO-214AA (SMB) Package Outline Drawing (Dimensions in millimeters)



DIM	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.30	3.60	3.94	0.130	0.142	0.155
B	1.80	2.00	2.21	0.071	0.079	0.087
C	4.05	4.45	5.30	0.159	0.175	0.209
D	0.051	0.20	0.203	0.002	0.007	0.008
E	0.76	1.14	1.52	0.030	0.045	0.060
F	5.08	5.25	5.59	0.200	0.207	0.220
G	2.05	2.30	2.45	0.081	0.091	0.096

Suggested Land Pattern



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