

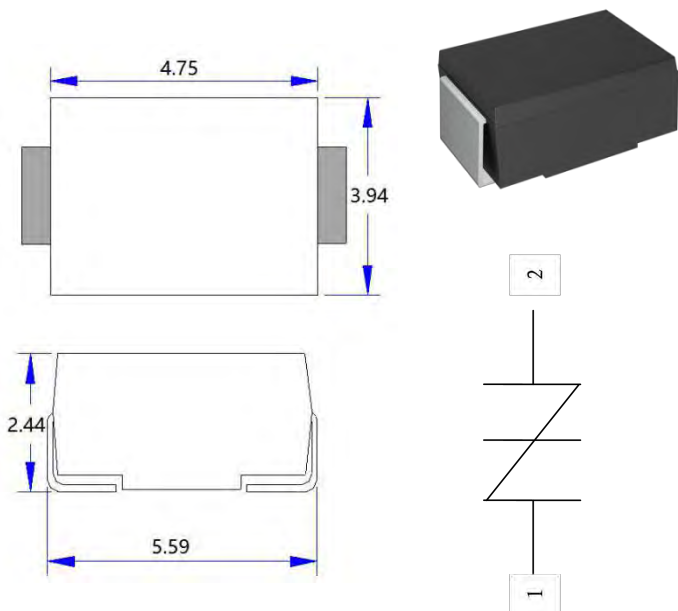
Description

PXXXXSB series thyristors are a type of semi-conduct component. They are designed in applications, modems, telephones, line cards, answering machines, FAX machines, SLICs, T1/E1, xDSL, PBXs and more.

Features

- For surface mounted applications to optimize board space
- Low profile package
- Bidirectional crowbar protection
- Low leakage current : $I = 5\mu A$ max
- Low on-state voltage
- Low Capacitance
- Solid-state silicon technology
- Eliminates overvoltage caused by fast rising transients

Dimensions & Symbol (Unit: mm Max)



Mechanical Characteristics

Package: SMB/DO-214AA

- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Standard Packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.10g
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

- TIA-968-A/B
- ITU K.20/21 Enhanced Level*
- ITU K.20/21 Basic Level*
- GR 1089 Inter-building*
- GR 1089 Intra-building
- IEC 61000-4-5 2nd edition
- YD/T 1082 YD/T 993 YD/T 950

Ordering Information

Out line	Reel (pcs)	Per carton (pcs)	Reel diameters (mm)
Taping	3K	48K	330

Absolute Maximum Ratings (TA=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T _{stg}	-60 to +150	°C
Operating junction temperature range	T _j	-40 to +150	°C
Repetitive peak pulse current	I _{PP}	50	A

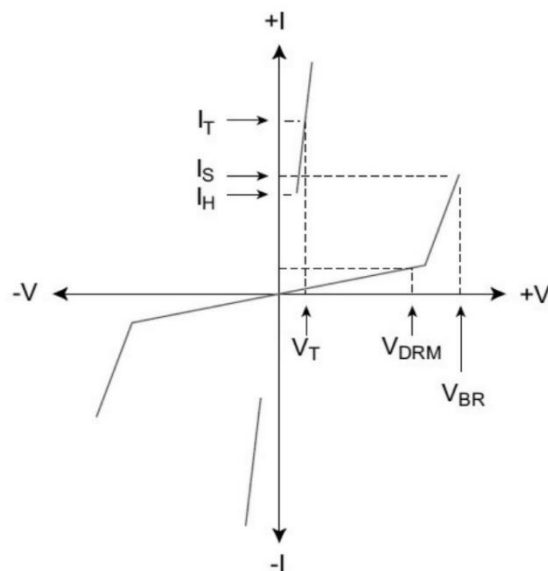
Part Number Code

Series code: P SIDActor → **P** **XXXX** **S** **B** ← Surge: 10/700uS 4KV

↑ ↑
 V_{DRM} SMB

Electrical Parameters & V-I Curve

Symbol	Parameter
V _{DRM}	Peak off-state voltage
I _{DRM}	Off-state current
V _S	Switching voltage
I _S	Switching current
V _T	On-state voltage
I _T	On-state current
I _H	Holding current
C _O	Off-state capacitance



Surge Ratings

Series	I _{PP} (A) min			
	2×10us	8×20us	5×320us	10×1000us
A	250	250	125	80

Electrical Characteristics (TA=25°C)

Type	V _{DRM}	I _{DRM}	V _S	I _S	V _T	I _T	C _O	I _H
	Min.	Max.	Max.	Max.	Max.		Typ.	Typ.
	V	μA	V	mA	V	A	pF	mA
P0080SB	6	5	25	800	4	2.2	50	50
P0300SB	25	5	40	800	4	2.2	70	50
P0640SB	58	5	77	800	4	2.2	50	150
P0720SB	65	5	88	800	4	2.2	50	150
P0900SB	75	5	98	800	4	2.2	45	150
P1100SB	90	5	130	800	4	2.2	45	150
P1300SB	120	5	160	800	4	2.2	45	150
P1500SB	140	5	180	800	4	2.2	40	150
P1800SB	170	5	220	800	4	2.2	40	150
P2000SB	180	5	220	800	4	2.2	40	150
P2300SB	190	5	260	800	4	2.2	35	150
P2600SB	220	5	300	800	4	2.2	35	150
P3100SB	275	5	350	800	4	2.2	30	150
P3500SB	320	5	400	800	4	2.2	30	150
P4000SB	360	5	460	800	4	2.2	30	150
P4500SB	420	5	540	800	4	2.2	30	150
P5000SB	500	5	600	800	4	2.2	30	150

Notes:

- All measurements are made at an ambient temperature of 25°C. I_{PP} applies to -40°C through +85°C temperature range.
- Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias and is typical value.

Ratings And V-I Characteristics Curves (TA=25°C, unless otherwise noted)

FIG.1: tr × td pulse waveform

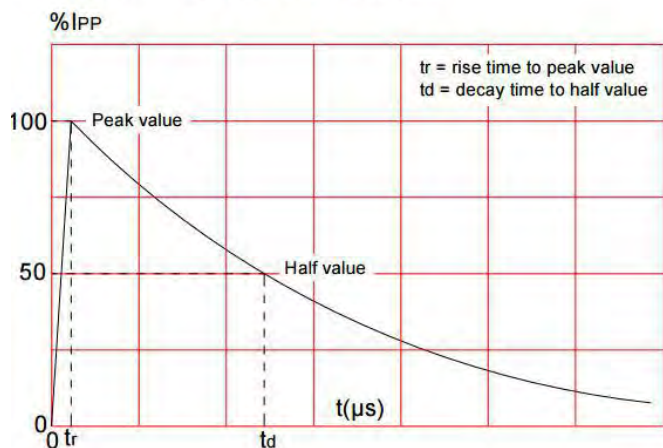


FIG.2: Reflow condition

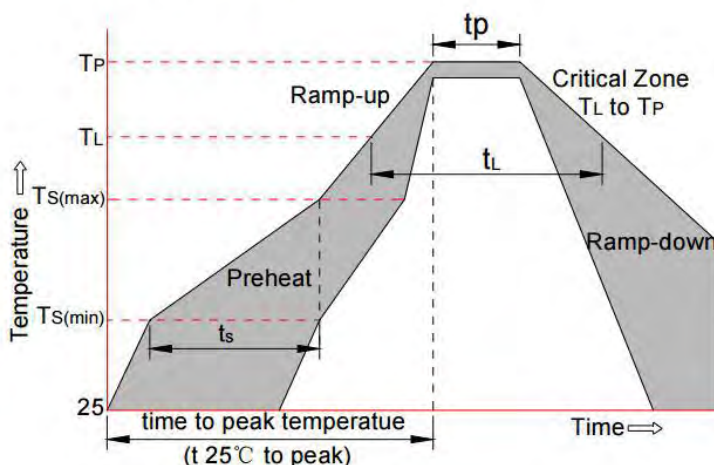


FIG.3: Normalized Vs change vs. junction temperature

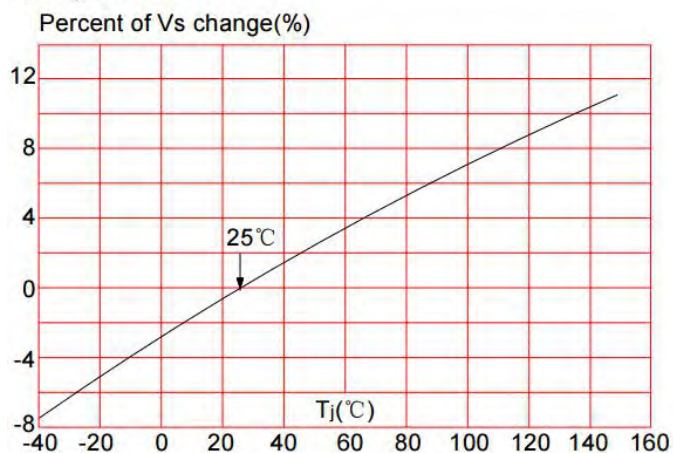
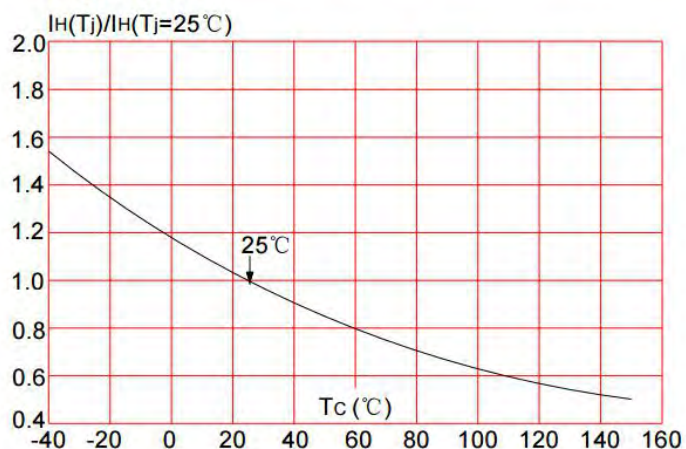
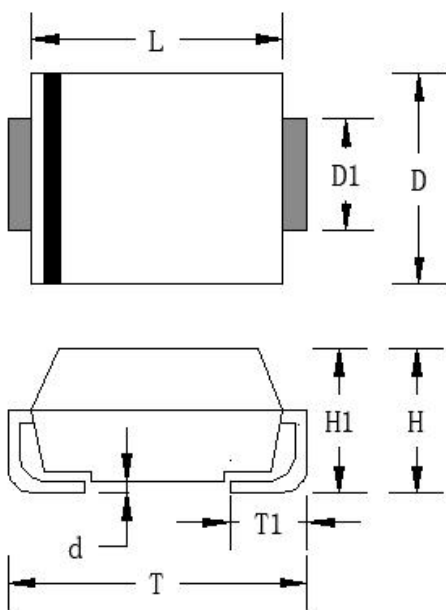


FIG.4: Normalized DC holding current vs. case temperature



Package Mechanical Data



Ref.(mm)	Millimeters	
	Min.	Max.
D	3.40	3.94
D1	1.90	2.10
L	4.22	4.70
T	5.21	5.59
T1	0.90	1.42
d	0	0.23
H	1.95	2.60
H1	2.0	2.34