

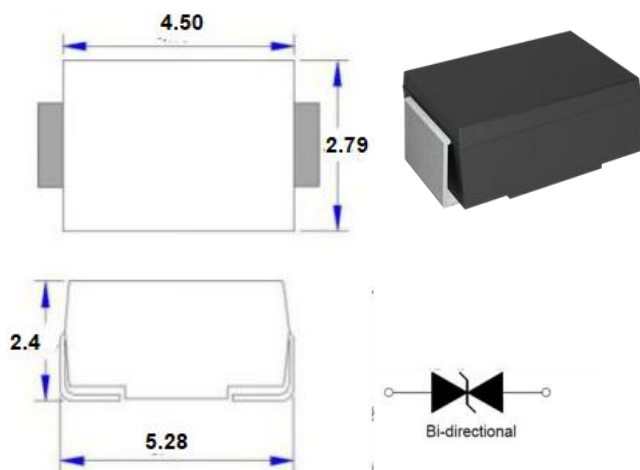
Description

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

Features

- 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 transmission equipment
- Meets MSL level 1, per J-STD-020

Dimensions & Symbol (Unit: mm Max)



Mechanical Characteristics

Package: SMA/DO-214AA

- Case Material: "Green" Molding Compound.
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Standard Packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.07g
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

- SLIC Line Card
- T1/E1 Trunk & Line Card
- DBX Branch Exchange Switches
- FCC Part 68 Customer Premise Equipment
- Line Interface Modem
- xDSL Architecture Interface

Marking Information



Details marking code reference customer approval list

Ordering Information

| Out line | Reel (pcs) | Per carton (pcs) | Reel diameters (mm) |
|----------|------------|------------------|---------------------|
| Taping | 5K | 80K | 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 |

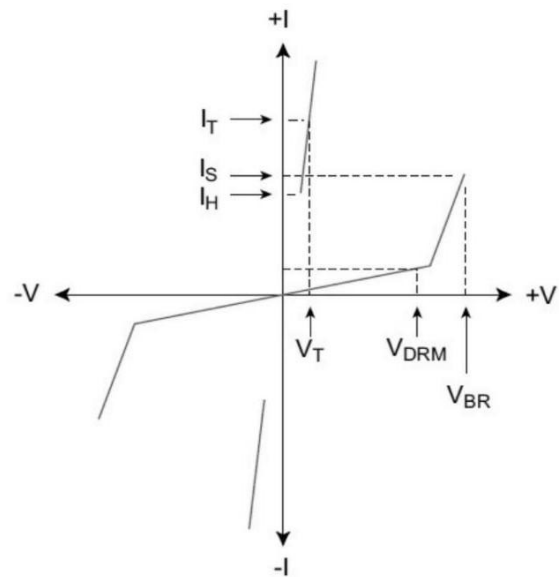
Part Number Code

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

↑ ↑
 V_{DRM} SMA

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 | 200 | 150 | 90 | 75 |

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 |
| P0080TB | 6 | 5 | 25 | 800 | 4 | 2.2 | 50 | 20 |
| P0300TB | 25 | 5 | 40 | 800 | 4 | 2.2 | 70 | 40 |
| P0640TB | 58 | 5 | 77 | 800 | 4 | 2.2 | 50 | 100 |
| P0720TB | 65 | 5 | 88 | 800 | 4 | 2.2 | 50 | 100 |
| P0900TB | 75 | 5 | 98 | 800 | 4 | 2.2 | 45 | 100 |
| P1100TB | 90 | 5 | 130 | 800 | 4 | 2.2 | 45 | 100 |
| P1300TB | 120 | 5 | 160 | 800 | 4 | 2.2 | 45 | 100 |
| P1500TB | 140 | 5 | 180 | 800 | 4 | 2.2 | 40 | 100 |
| P1800TB | 170 | 5 | 220 | 800 | 4 | 2.2 | 40 | 100 |
| P2000TB | 180 | 5 | 220 | 800 | 4 | 2.2 | 40 | 100 |
| P2300TB | 190 | 5 | 260 | 800 | 4 | 2.2 | 35 | 100 |
| P2600TB | 220 | 5 | 300 | 800 | 4 | 2.2 | 35 | 100 |
| P3100TB | 275 | 5 | 350 | 800 | 4 | 2.2 | 30 | 100 |
| P3500TB | 320 | 5 | 400 | 800 | 4 | 2.2 | 30 | 100 |
| P4000TB | 360 | 5 | 460 | 800 | 4 | 2.2 | 30 | 100 |
| P4500TB | 400 | 5 | 540 | 800 | 4 | 2.2 | 30 | 100 |
| P5000TB | 500 | 5 | 600 | 800 | 4 | 2.2 | 30 | 100 |

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

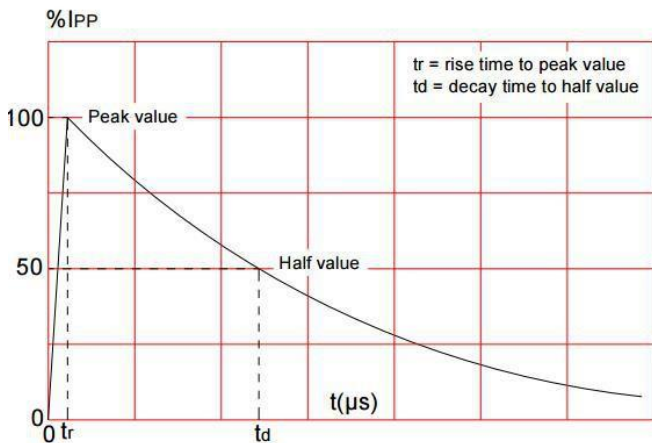


FIG.2: Reflow condition

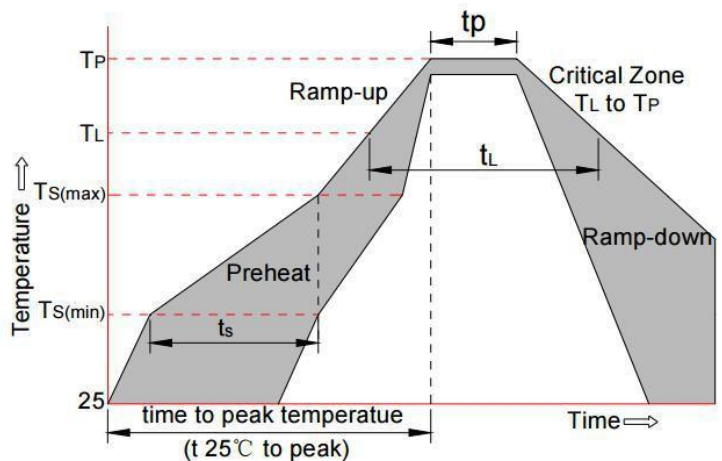


FIG.3: Normalized Vs change vs. junction temperature

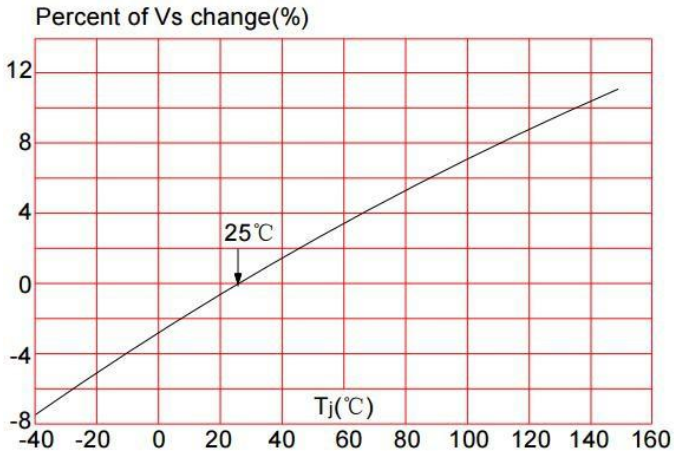
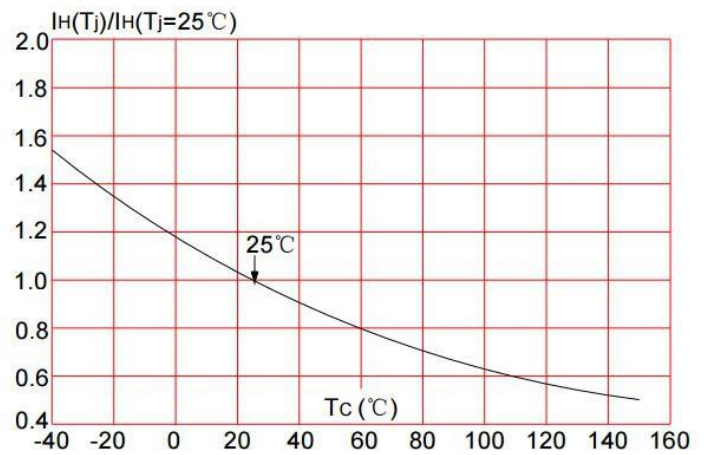
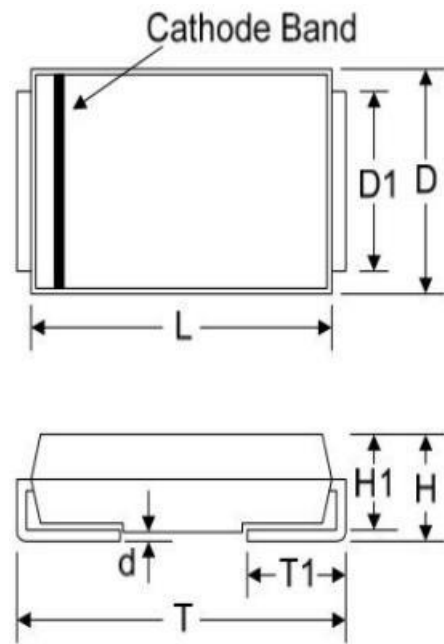


FIG.4: Normalized DC holding current vs. case temperature



Package Mechanical Data

| Ref.(mm) | Millimeters | |
|----------|-------------|-------|
| | Min. | Max. |
| D | 2.50 | 2.79 |
| D1 | 1.20 | 1.70 |
| L | 3.99 | 4.50 |
| T | 4.93 | 5.28 |
| T1 | 0.76 | 1.52 |
| d | 0 | 0.203 |
| H | 1.98 | 2.4 |
| H1 | 1.98 | 2.2 |



Contact Information

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