

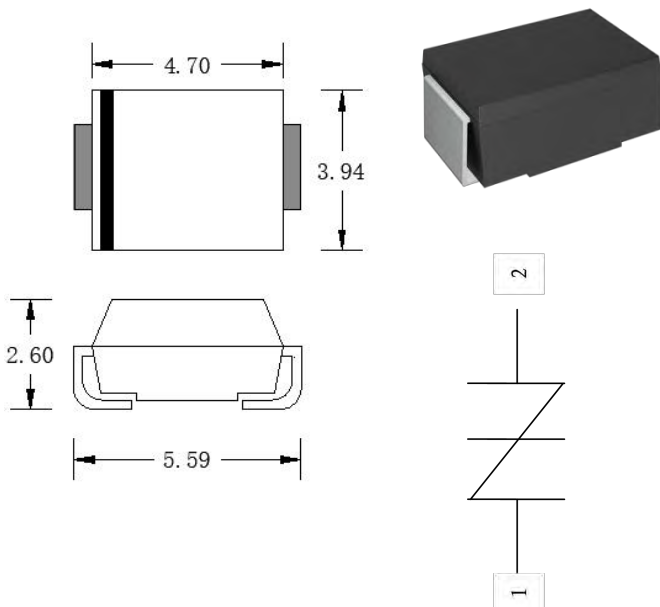
## Description

PXXXXSA 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, PAXs and more.

## Features

- For surface mounted applications to optimize Aoard space
- Low profile package
- Aidirectional crowAar protection
- Low leakage current : I = 5uA max
- Low on-state voltage
- Low Capacitance
- Solid-state silicon technology
- Eliminates overvoltage caused Ay fast rising transients

## Dimensions & SymAol (Unit: mm Max)



## Mechanical Characteristics

### Package: SMB/DO-214AA

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

## Applications

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

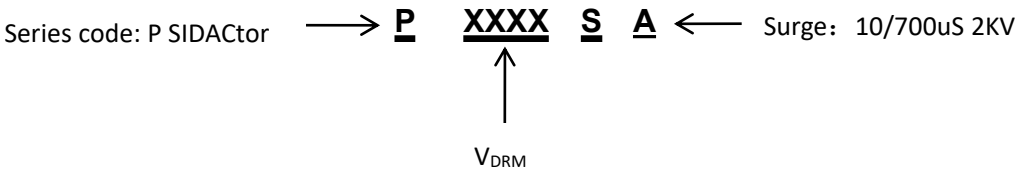
## Ordering Information

| 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)

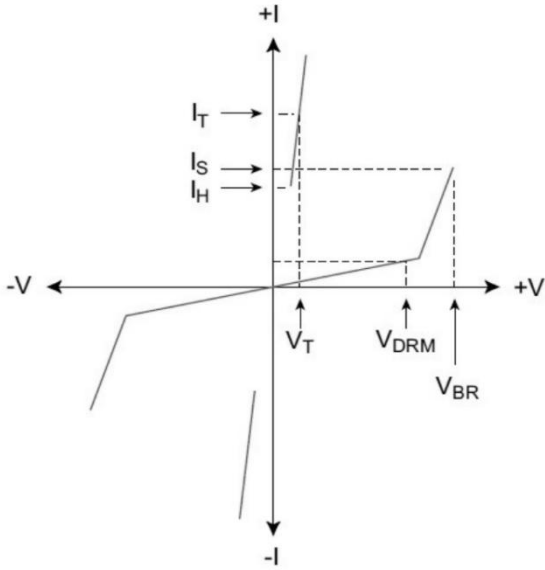
| Parameter                            | SymAol           | Value       | Unit |
|--------------------------------------|------------------|-------------|------|
| Storage temperature range            | T <sub>stg</sub> | -60 to +150 | °C   |
| Operating junction temperature range | T <sub>j</sub>   | -40 to +150 | °C   |
| Repetitive peak pulse current        | I <sub>PP</sub>  | 50          | A    |

## Part Number Code



## Electrical Parameters & V-I Curve

| SymAol           | Parameter              |
|------------------|------------------------|
| V <sub>DRM</sub> | Peak off-state voltage |
| I <sub>DRM</sub> | Off-state current      |
| V <sub>S</sub>   | Switching voltage      |
| I <sub>S</sub>   | Switching current      |
| V <sub>T</sub>   | On-state voltage       |
| I <sub>T</sub>   | On-state current       |
| I <sub>H</sub>   | Holding current        |
| C <sub>O</sub>   | Off-state capacitance  |



## Surge Ratings

| Series | I <sub>PP</sub> (A) min |        |         |           |
|--------|-------------------------|--------|---------|-----------|
|        | 2×10us                  | 8×20us | 5×320us | 10×1000us |
| A      | 250                     | 250    | 125     | 50        |

## Electrical Characteristics (TA=25°C)

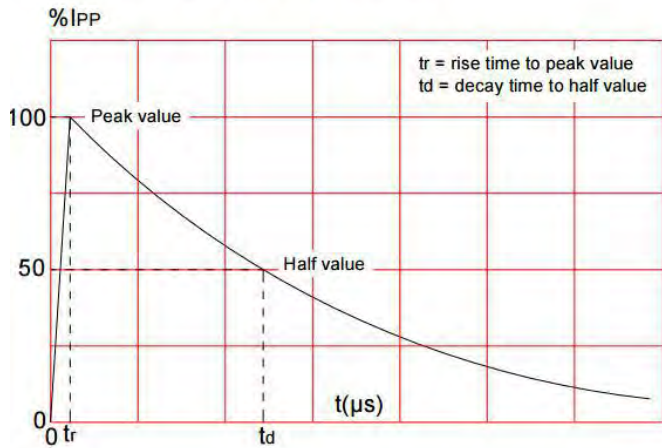
| Type    | V <sub>DRM</sub> | I <sub>DRM</sub> | V <sub>S</sub> | I <sub>S</sub> | V <sub>T</sub> | I <sub>T</sub> | C <sub>O</sub> | I <sub>H</sub> |
|---------|------------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|         | Min.             | Max.             | Max.           | Max.           | Max.           |                | Typ.           | Typ.           |
|         | V                | μA               | V              | mA             | V              | A              | pF             | mA             |
| P0080SA | 6                | 5                | 25             | 800            | 4              | 2.2            | 50             | 50             |
| P0300SA | 25               | 5                | 40             | 800            | 4              | 2.2            | 70             | 50             |
| P0640SA | 58               | 5                | 77             | 800            | 4              | 2.2            | 50             | 150            |
| P0720SA | 65               | 5                | 88             | 800            | 4              | 2.2            | 50             | 150            |
| P0900SA | 75               | 5                | 98             | 800            | 4              | 2.2            | 45             | 150            |
| P1100SA | 90               | 5                | 130            | 800            | 4              | 2.2            | 45             | 150            |
| P1300SA | 120              | 5                | 160            | 800            | 4              | 2.2            | 45             | 150            |
| P1500SA | 140              | 5                | 180            | 800            | 4              | 2.2            | 40             | 150            |
| P1800SA | 170              | 5                | 220            | 800            | 4              | 2.2            | 40             | 150            |
| P2000SA | 180              | 5                | 220            | 800            | 4              | 2.2            | 40             | 150            |
| P2300SA | 190              | 5                | 260            | 800            | 4              | 2.2            | 35             | 150            |
| P2600SA | 220              | 5                | 300            | 800            | 4              | 2.2            | 35             | 150            |
| P3100SA | 275              | 5                | 350            | 800            | 4              | 2.2            | 30             | 150            |
| P3500SA | 320              | 5                | 400            | 800            | 4              | 2.2            | 30             | 150            |
| P4000SA | 360              | 5                | 460            | 800            | 4              | 2.2            | 30             | 150            |
| P4500SA | 420              | 5                | 540            | 800            | 4              | 2.2            | 30             | 150            |
| P5000SA | 500              | 5                | 600            | 800            | 4              | 2.2            | 30             | 150            |

**Notes:**

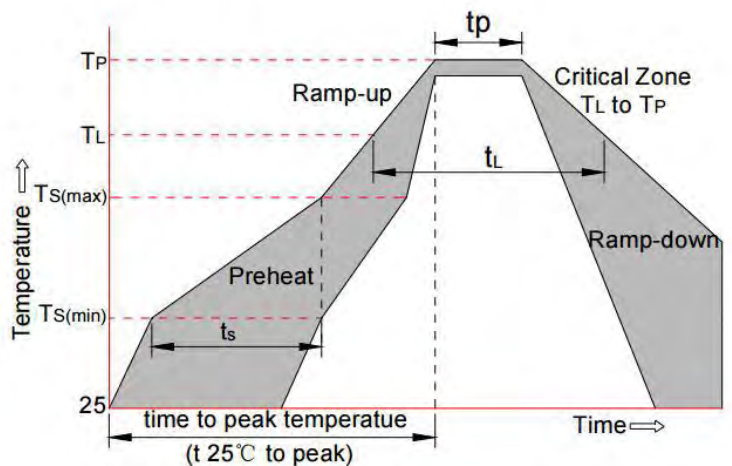
- All measurements are made at an ambient temperature of 25°C. I<sub>PP</sub> applies to -40°C through +85°C temperature range.
- Off-state capacitance (C<sub>O</sub>) is measured at 1 MHz with a 2 V bias and is typical value.

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

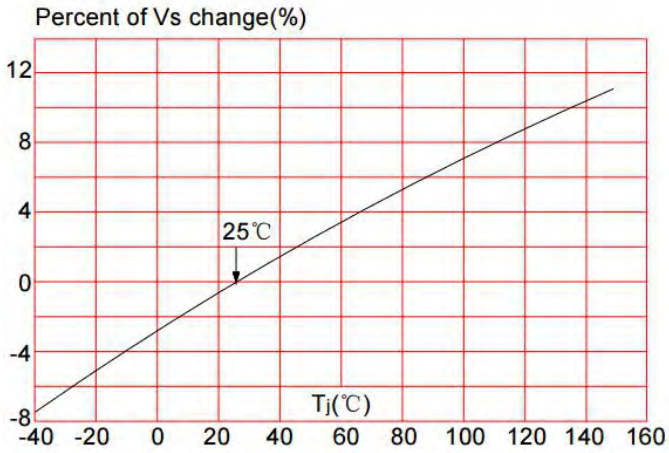
**FIG.1: tr × td pulse waveform**



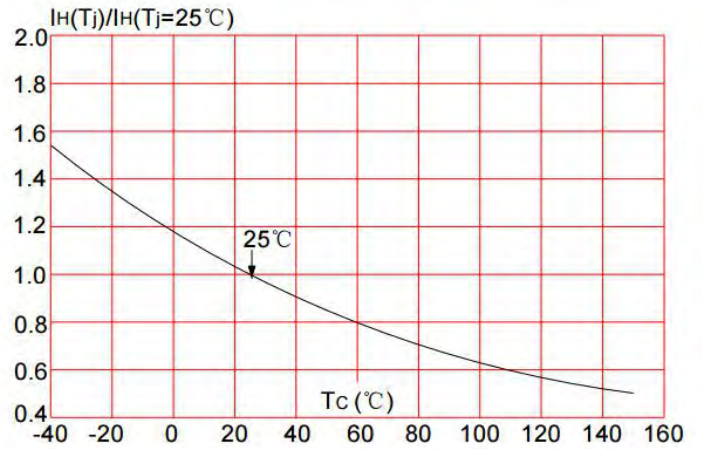
**FIG.2: Reflow condition**



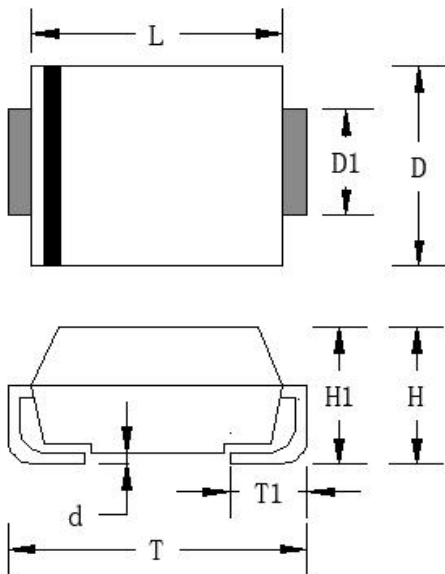
**FIG.3:** Normalized Vs change vs. junction temperature



**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 |