

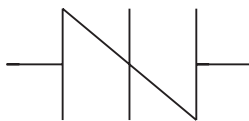
Description

P0300SD 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 : $I = 5\mu\text{A max}$
- Low on-state voltage
- Solid-state silicon technology
- Eliminates overvoltage caused by fast rising transients

Symbol



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: 0.950g
- Terminal Connections: See Diagram Below
- Marking Information: P03D YYWW(Date Code)

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

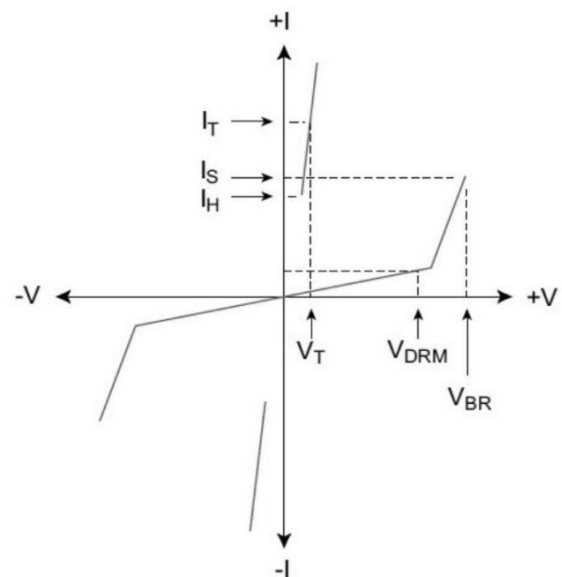
| Out line | Reel (pcs) | Per carton (pcs) | Reel diameters (mm) |
|----------|------------|------------------|---------------------|
| Taping | 3K | | 330 |

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(10/700uS) | I _{PP} | 200 | A |

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 |



Electrical Characteristics (TA=25°C)

| Part Number | I _{DRM} @V _{DRM} | | V _S ^① @I _S | | V _T @I _T | | I _H | C _O ^② |
|-------------|------------------------------------|------------------|---|-----|--------------------------------|-----|----------------|-----------------------------|
| | μA | V | V | mA | V | A | mA | pF |
| | max | PIN1-2 PIN2-1 | max | max | max | max | min | max |
| P0300SD | 5 | 25 | 40 | 800 | 4 | 2.2 | 50 | 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

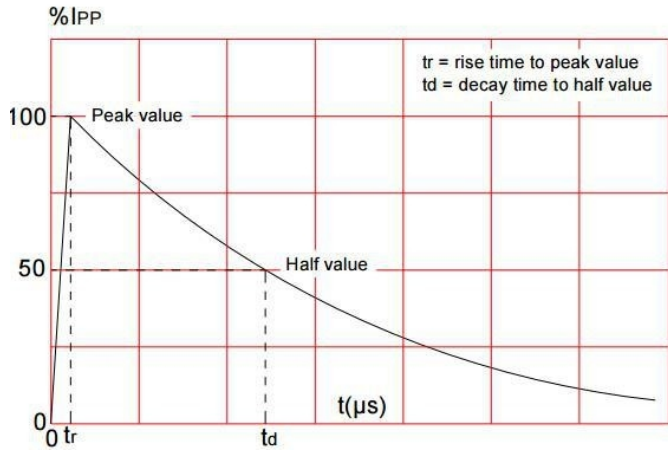


FIG.2: Reflow condition

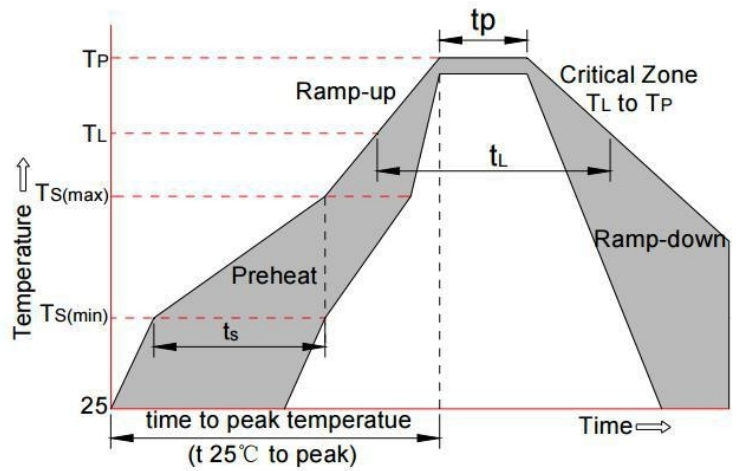


FIG.3: Normalized Vs change vs. junction temperature

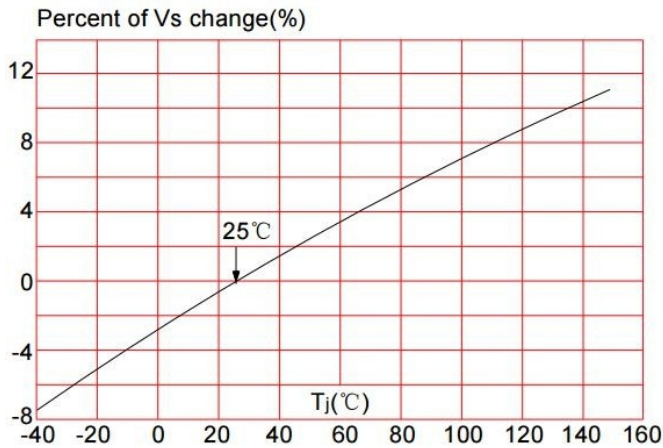
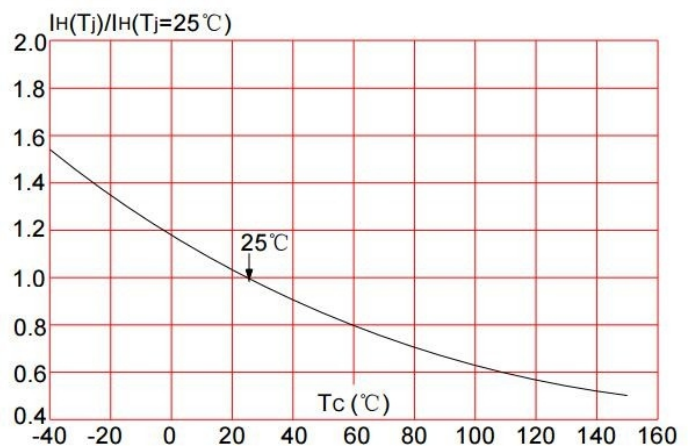


FIG.4: Normalized DC holding current vs. case temperature



Package Mechanical Data

| Dimension | Inches | | Millimeters | |
|-----------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.134 | 0.155 | 3.40 | 3.94 |
| B | 0.205 | 0.22 | 5.21 | 5.59 |
| C | 0.075 | 0.083 | 1.90 | 2.11 |
| D | 0.166 | 0.185 | 4.22 | 4.70 |
| E | 0.036 | 0.056 | 0.91 | 1.42 |
| F | 0.073 | 0.087 | 1.85 | 2.2 |
| G | 0.002 | 0.008 | 0.05 | 0.20 |
| H | 0.077 | 0.094 | 1.95 | 2.40 |
| J | 0.043 | 0.053 | 1.09 | 1.35 |
| K | 0.008 | 0.014 | 0.20 | 0.35 |
| L | 0.039 | 0.049 | 0.99 | 1.24 |

