

Description

Fast Delivery Time

PXXX0TA Series are micro capacitance SIDACtor Protection Thyristor designed to protect telecommunications equipment such as ADSL Modems,Router, , Telephone, CCTV Camera,Digital Video Record,Video Capture Card,Twisted-pair video transmitter,CATV Splitter.....Etc.

PXXX0TA Series SIDACtor Protection Thyristor are used to enable equipment to meet various regulatory requirements including GR 1089, ITU K.20/21,IEC 61000-4-5, YD/T 1082,YD/T 993,YD/T 950,TIA-968-A ,TIA-968-B



Features

Compared to surge suppression using other technologies, PXXX0TA Series devices offer absolute surge protection regardless of the surge current available and the rate of applied voltage (dv/dt). PXXX0TA Series devices:

- 100% Lead-Free(RoHs Compliant)
- 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
- Have low capacitance, making them ideal for high-speed transmission equipment

Electrical Characteristics

| Parameter | Definition |
|-------------|--|
| V_{DRM} | Peak Off-state Voltage — maximum voltage that can be applied while maintaining off state |
| V_S | Switching Voltage — maximum voltage prior to switching to on state |
| I_H | Holding Current — minimum current required to maintain on state |
| I_S | Switching Current — maximum current required to switch to on state |
| I_T | On-state Current — maximum rated continuous on-state current |
| V_T | On-state Voltage — maximum voltage measured at rated on-state current |
| Capacitance | Off-state Capacitance — typical capacitance measured in off state |
| I_{DRM} | Leakage Current — maximum peak off-state current measured at V_{DRM} |
| I_{PP} | Peak Pulse Current — maximum rated peak impulse current |
| I_{TSM} | Peak One-cycle Surge Current — maximum rated one-cycle AC current |
| di/dt | Rate of Rise of Current — maximum rated value of the acceptable rate of rise in current over time |

Electrical Characteristics



| Part Number | Marking | V_{DRM} @ $I_{DRM}=5\mu A$ | V_S @100V/ μs | I_H | I_S | I_T | V_T @ $I_T=2.2Amps$ | Capacitance @1MHz,2V bias |
|----------------|---------|---------------------------------|-------------------------|--------|--------|-------|--------------------------|------------------------------|
| | | V_{min} | V_{max} | mA min | mA max | A max | V_{max} | pF |
| P0080TA | P008A | 6 | 25 | 50 | 800 | 2.2 | 4 | 30 |
| P1800TA | P18A | 170 | 220 | 150 | 800 | 2.2 | 4 | 40 |
| P2300TA | P23A | 190 | 260 | 150 | 800 | 2.2 | 4 | 35 |
| P2600TA | P26A | 220 | 300 | 150 | 800 | 2.2 | 4 | 35 |
| P3100TA | P31A | 275 | 350 | 150 | 800 | 2.2 | 4 | 30 |
| P3500TA | P35A | 320 | 400 | 150 | 800 | 2.2 | 4 | 30 |

Notes:

-All measurements are made at an ambient temperature of 25°C .Ipp applies to -40°C through +85°C temperature range .

-Off-state capacitance(C_o) is typical value.

*For surge ratings,see next page.


Surge Ratings

SGS

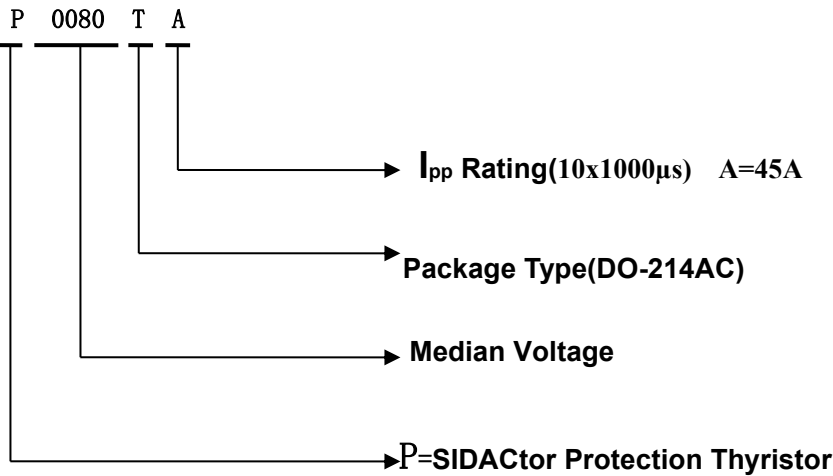
RoHS

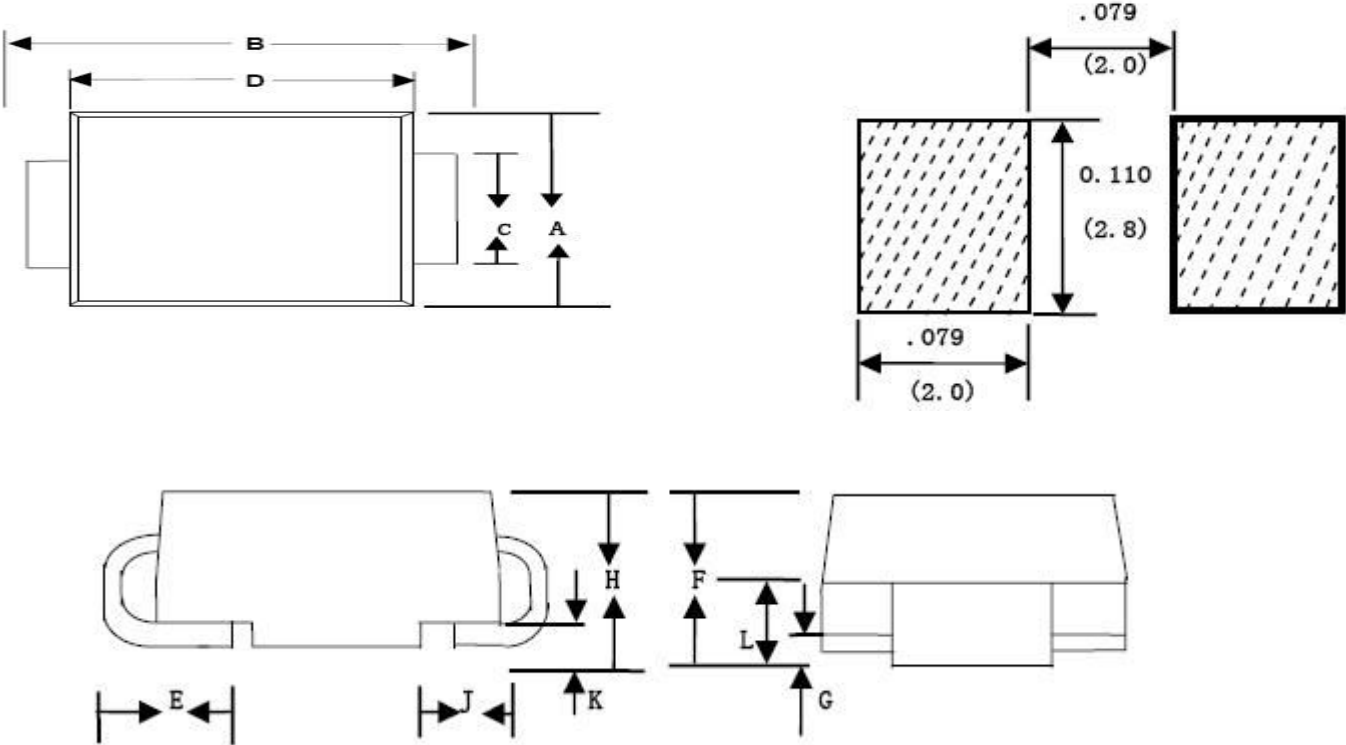
| | I _{pp} 2x10μs | I _{pp} 8x20μs | I _{pp} 10x160μs | I _{pp} 10x560μs | I _{pp} 10x1000μs | I _{pp} 5x320μs | I _{pp} 5x310μs | I _{pp} 10x360μs | I _{TSM} 50/60Hz | di/dt |
|--------|---------------------------|---------------------------|-----------------------------|-----------------------------|------------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|---------|
| Series | Amps | Amps | Amps | Amps | Amps | Amps | Amps | Amps | Amps | Amps/μs |
| A | 150 | 150 | 90 | 50 | 45 | 75 | 75 | 75 | 20 | 500 |

Thermal Considerations

| Package | DO-214AC/SMA | Symbol | Parameter | Value | Unit |
|---|--------------|------------------|---------------------------------------|-------------|-------|
|  | | T _J | Operating Junction Temperature Range | -40 to +150 | °C |
| | | T _S | Storage Temperature Range | -65 to +150 | °C |
| | | R _{θJA} | Junction to Ambient on prited circuit | 90 | °C /W |

Description of Part Number





| Dimension | Inches | | Millimeters | |
|-----------|--------|-------|-------------|------|
| | Min | Max | Min | Max |
| A | 0.098 | 0.114 | 2.50 | 2.90 |
| B | 0.188 | 0.208 | 4.80 | 5.28 |
| C | 0.055 | 0.062 | 1.40 | 1.60 |
| D | 0.157 | 0.181 | 4.00 | 4.60 |
| E | 0.030 | 0.060 | 0.76 | 1.52 |
| F | 0.078 | 0.096 | 2.00 | 2.44 |
| H | 0.080 | 0.104 | 2.05 | 2.64 |

Packing Options

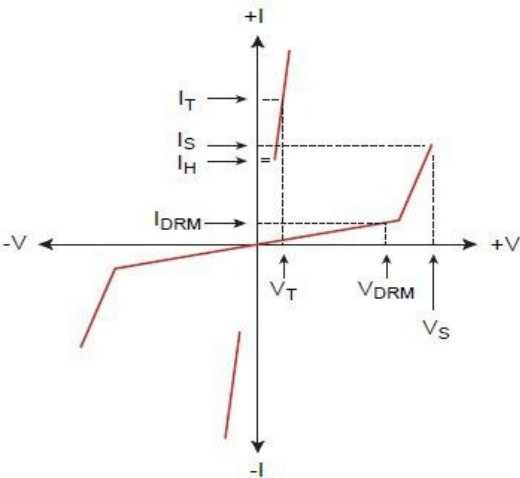
SGS

RoHS

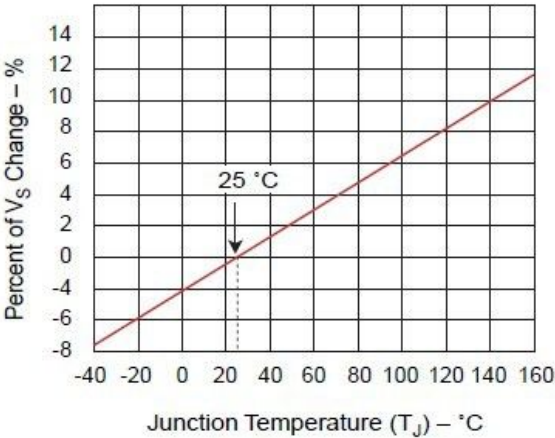
| Package Type | Description | Packing Quantity | Industry Standard |
|--------------|--------------------|------------------|-------------------|
| T | DO-214AC Reel Pack | 5000 PCS | EIA-481-D |

Characteristics Curve

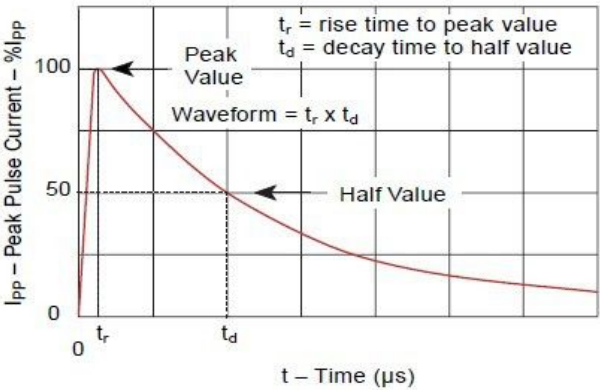
V-I Characteristics



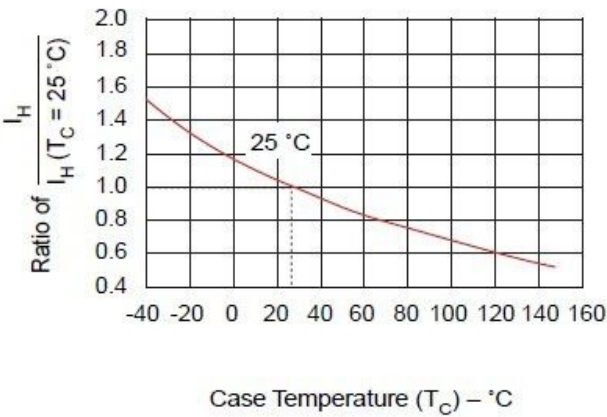
Normalized Vs Change Versus Junction Temperature



Tr x Td Pulse Waveform



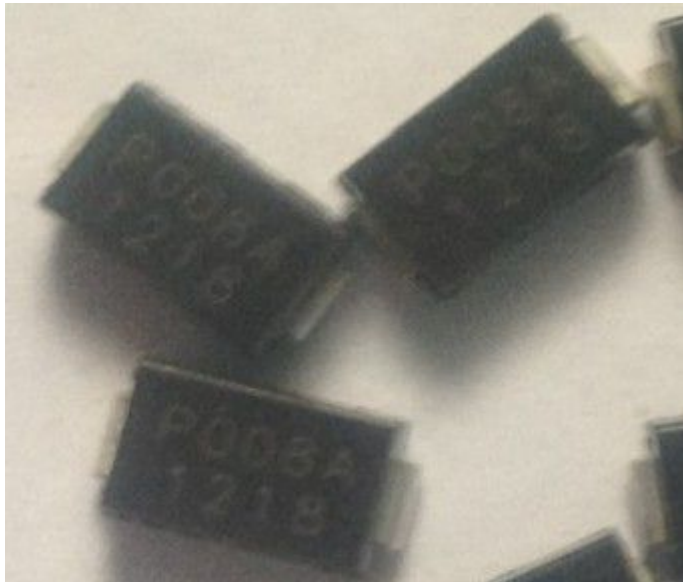
Normalized DC Holding Current Versus Case Temperature



Sample pictures

P0080TA (Marking: P008A)

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P2300TA(Marking: P23A)

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P3100TA (Marking: P31A)

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