

Features

- Low operating voltage: 5V
- Ultra low capacitance: 0.5pF typical
- Ultra low leakage: nA level
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - – IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 25\text{kV}$
 - – IEC61000-4-5 (Lightning)4A (8/20 μs)
- RoHS Compliant
- Lead Finish: NiPdAu

Mechanical Characteristics

- Package: SOD323
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

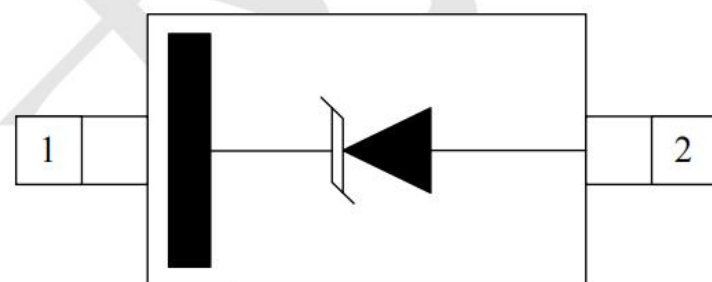
Applications

- Serial ATA
- PCI Express
- Desktops, Servers and Notebooks
- Cellular Phones
- MDDI Ports
- USB2.0/3.0 Power and Data Line Protection
- Display Ports
- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interfaces (DVI)

Ordering Information

| Part Number | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
| TPESD7371HT1G | 3000 | 7" |

Dimensions and Pin Configuration



SOD-323
(Top View)

Marking: 1Tx

1t = Device code
x = Month code

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs) | Ppk | 65 | W |
| Peak Pulse Current (8/20μs) | Ipp | 4 | A |
| ESD per IEC 61000-4-2 (Air) | VESD | ±30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±25 | |
| Operating Temperature Range | TJ | -55 to +125 | °C |
| Storage Temperature Range | Tstg | -55 to +150 | °C |

Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|--------|-----|-----|------|------|-----------------------------------|
| Reverse Working Voltage | VRWM | | | 5 | V | |
| Breakdown Voltage | VBR | 6.5 | 7.5 | 9.0 | V | IT = 1mA |
| Reverse Leakage Current | IR | | | 0.08 | μA | VRWM = 5V |
| Clamping Voltage | VC | | | 10 | V | Ipp=1A(8x 20us pulse) |
| Clamping Voltage | VC | | | 14 | V | Ipp=4A(8x 20us pulse) |
| Junction Capacitance | CJ | | 0.5 | 0.9 | pF | VR = 0V, f = 1MHz, Pin 1 to Pin 2 |

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

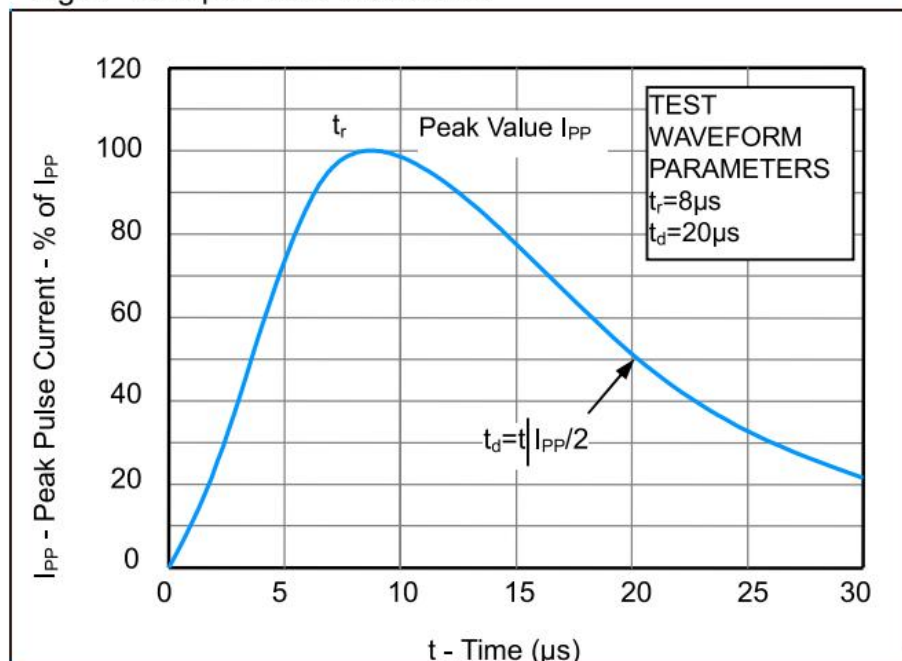


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

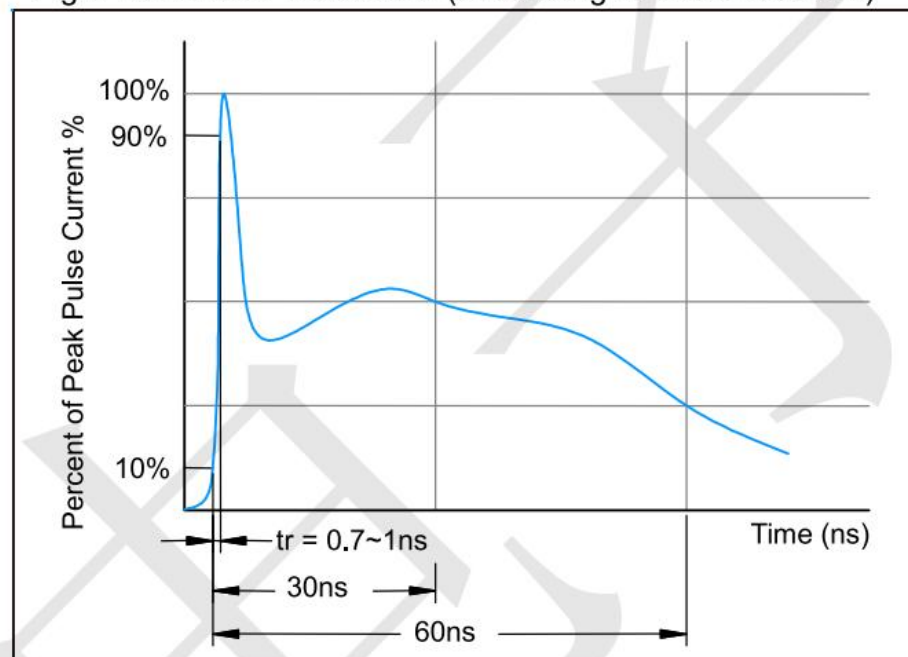
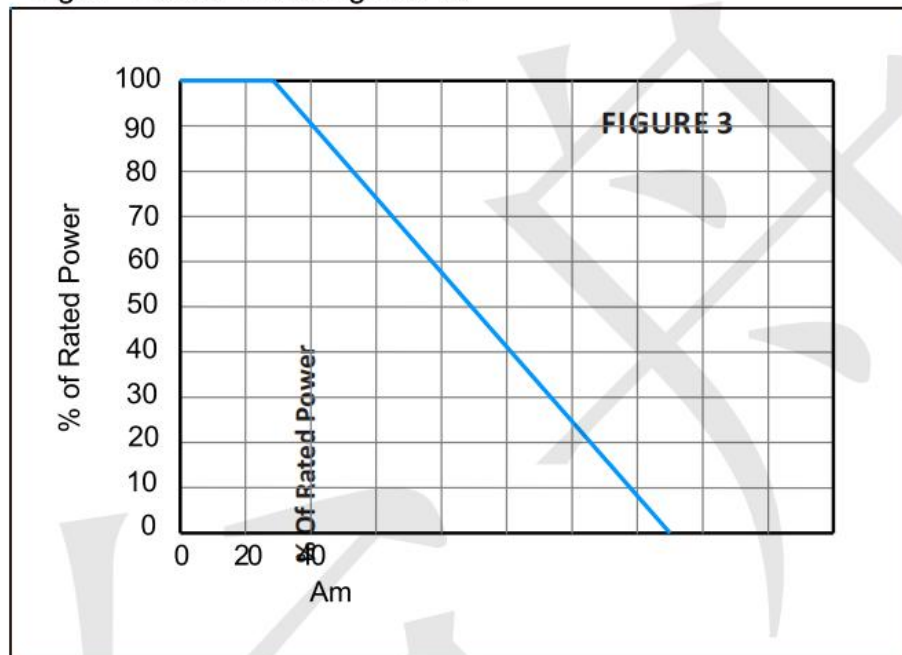
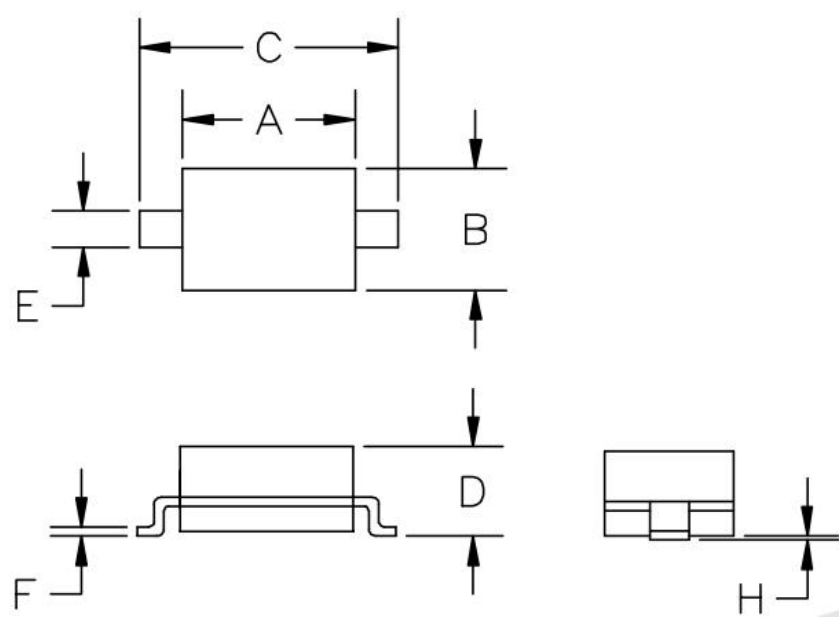


Fig3. Power Derating Curve

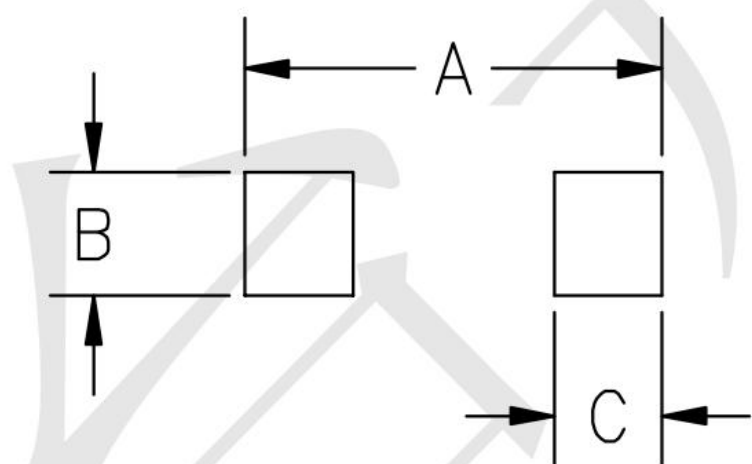


Outline Drawing - SOD-323



| SYM | DIMENSIONS | | | |
|-----|-------------|------|--------|-------|
| | MILLIMETERS | | INCHES | |
| | MIN | MAX | MIN | MAX |
| A | 1.50 | 1.80 | 0.060 | 0.071 |
| B | 1.20 | 1.40 | 0.045 | 0.054 |
| C | 2.30 | 2.70 | 0.090 | 0.107 |
| D | - | 1.10 | - | 0.043 |
| E | 0.30 | 0.40 | 0.012 | 0.016 |
| F | 0.10 | 0.25 | 0.004 | 0.010 |
| H | - | 0.10 | - | 0.004 |

Land Pattern - SOD-323



| SYM | DIMENSIONS | |
|-----|-------------|--------|
| | MILLIMETERS | INCHES |
| A | 3.15 | 0.120 |
| B | 0.80 | 0.031 |
| C | 0.80 | 0.031 |

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