

1-Line Bi-directional TVS Diode

Features

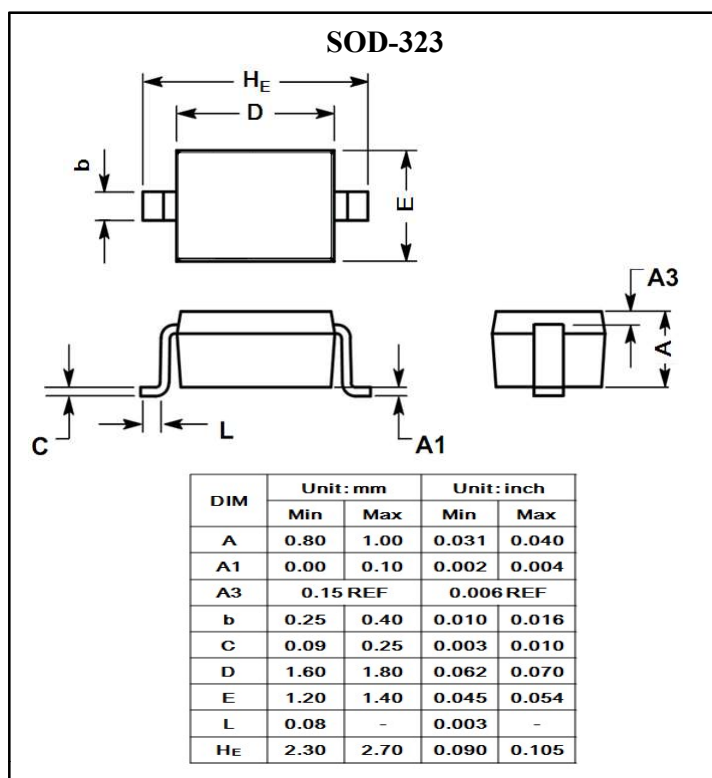
- 500W peak pulse power (8/20us)
- Protects one data or power line
- Ultra low leakage : nA level
- Operating voltage : 5V
- Ultra low clamping voltage
- JEDEC SOD-323 package
- Complies with following standards :
 - IEC 61000-4-2(ESD) immunity test
Air discharge : $\pm 30\text{kV}$, Contact discharge : $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

Mechanical Data

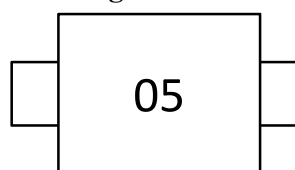
- Package : SOD-323
- Case Material : "Green" Molding Compound.
- Lead Finish : Matte Tin
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity : Level 3 per J-STD-020
- Terminal Connections : See Diagram Below
- Marking Information : See Below

Applications

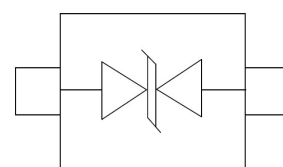
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Peripherals
- Desktop and Servers



Marking



05 = Device Marking Code



Circuit and Pin Schematic

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

| Parameter | Symbol | Value | Unit |
|--------------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20us) | Ppk | 500 | W |
| Peak Pulse Current (8/20us) | Ipp | 34 | A |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ± 30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ± 30 | |
| Operating Junction Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | °C |

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

| Characteristic | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|-------------------------|------------------|------|------|------|------|--------------------------------------|
| Reverse Working Voltage | V _{RWM} | - | - | 5.0 | V | |
| Breakdown Voltage | V _{BR} | 6.0 | - | - | V | I _T = 1mA, |
| Reverse Leakage Current | I _R | - | - | 1 | uA | V _{RWM} = 5V |
| Clamping Voltage | V _C | - | - | 9.5 | V | I _{pp} = 5A (8×20us pulse) |
| Clamping Voltage | V _C | - | - | 15 | V | I _{pp} = 34A (8×20us pulse) |
| Junction Capacitance | C _J | - | - | 200 | pF | f = 1MHz, V _R = 0V |

Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Power Derating Curve

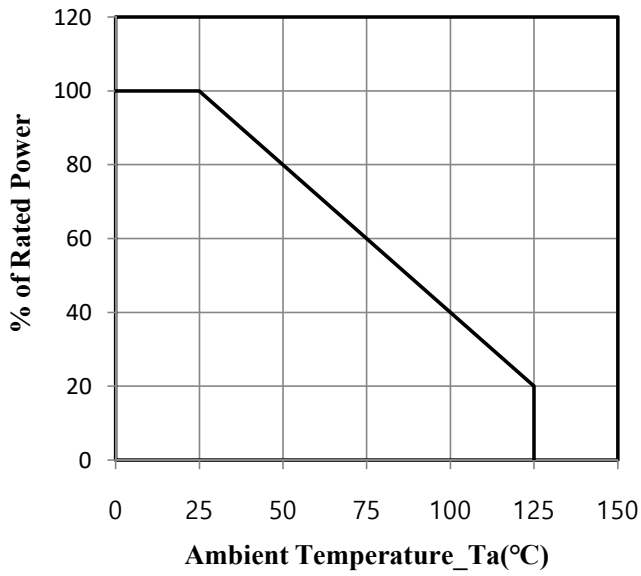


Fig.2 Peak Pulse Power vs. Pulse Time

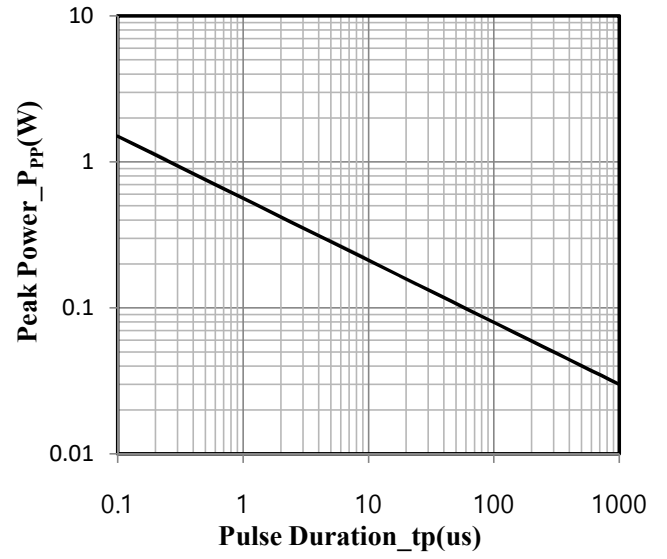


Fig.3 8 × 20µs Pulse Waveform

