

Features

- ◆ 180W peak pulse power (8/20 μ s)
- ◆ Protects one data or power line
- ◆ Ultra low leakage: nA level
- ◆ Operating voltage: 24V
- ◆ Ultra low clamping voltage
- ◆ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 20 kV
 - Contact discharge: ± 15 kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ RoHS Compliant

Mechanical Characteristics

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

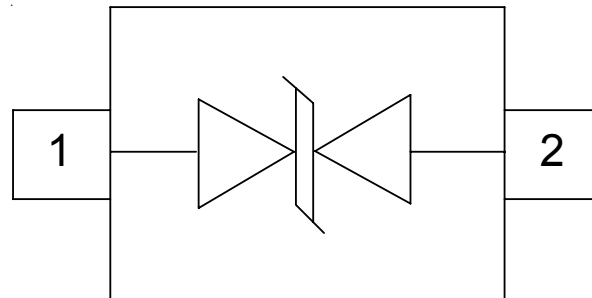
Applications

- ◆ Cellular Handsets and Accessories
- ◆ Personal Digital Assistants
- ◆ Notebooks and Handhelds
- ◆ Portable Instrumentation
- ◆ Peripherals
- ◆ Pagers Peripherals

Ordering Information

| Part Number | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
| TPPESD24VL1BA | 3000 | 7" |

Dimensions and Pin Configuration



Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-------------|------|
| ESD per IEC 61000-4-2 (Air) | VESD | ±20 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±15 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

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

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|------------------|-----|-----|-----|------|---|
| Reverse Working Voltage | V _{RWM} | | | 24 | V | |
| Breakdown Voltage | V _{BR} | 26 | | | V | I _T = 1mA |
| Reverse Leakage Current | I _R | | | 0.1 | μA | V _{RWM} = 24V |
| Clamping Voltage | V _C | | 33 | | V | I _{PP} = 1A (8 x 20μs pulse) |
| Clamping Voltage | V _C | | | 60 | V | I _{PP} = 3.5A (8 x 20μs pulse) |
| Peak Pulse Current | I _{PP} | | | 3.5 | A | t _p =8/20μs |
| Junction Capacitance | C _J | | 10 | | pF | V _R = 0V, f = 1MHz |

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

Fig1. 8/20 μs Pulse Waveform

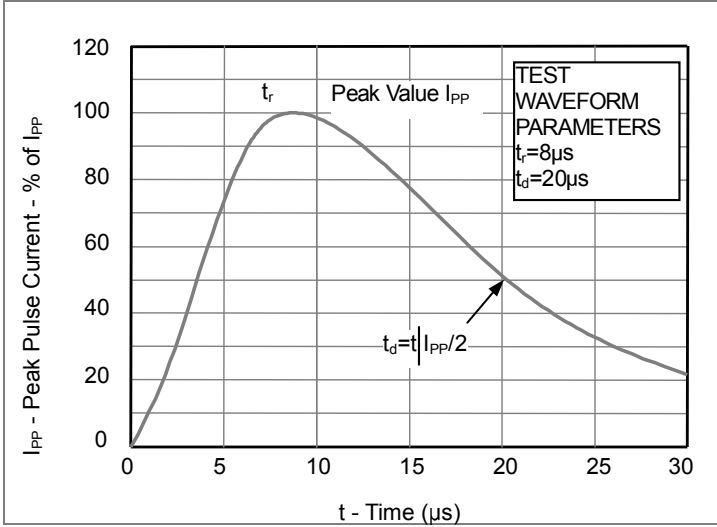


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

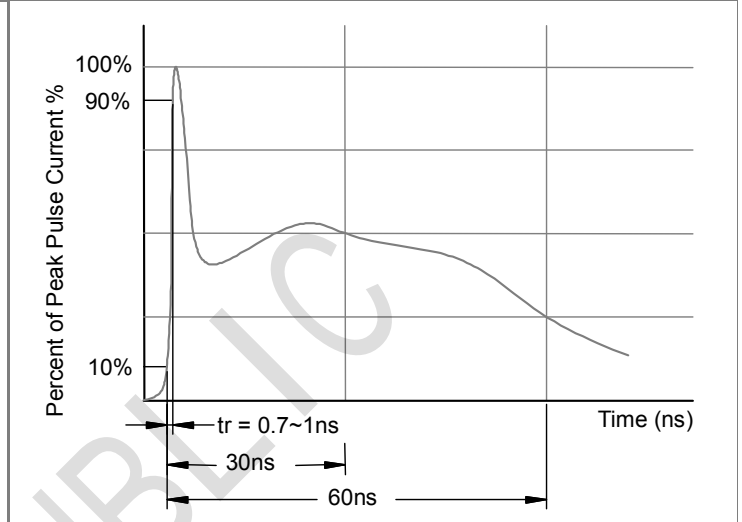
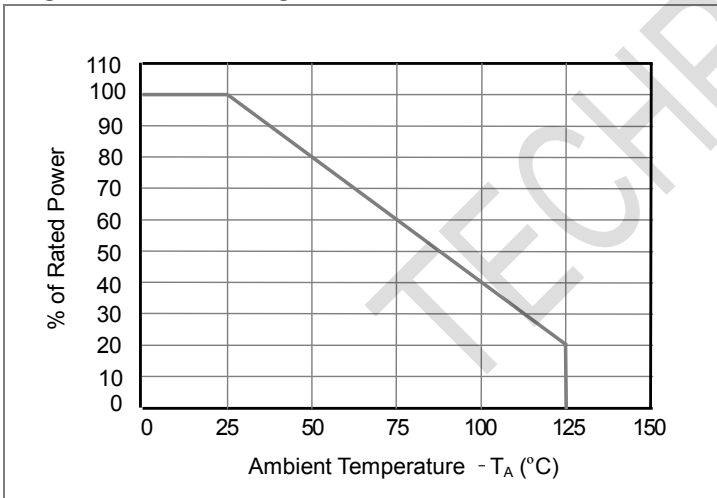
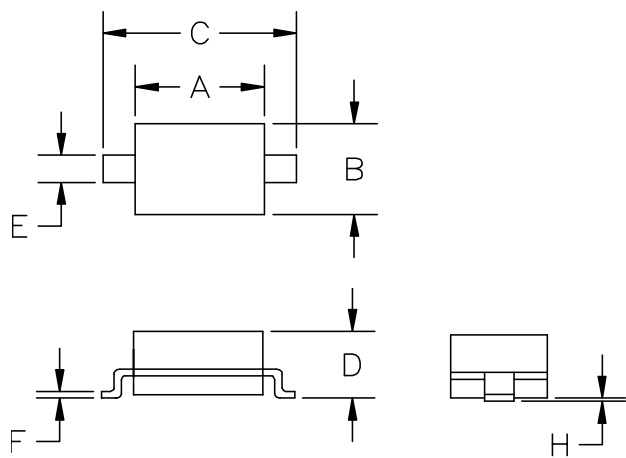


Fig3. Power Derating Curve

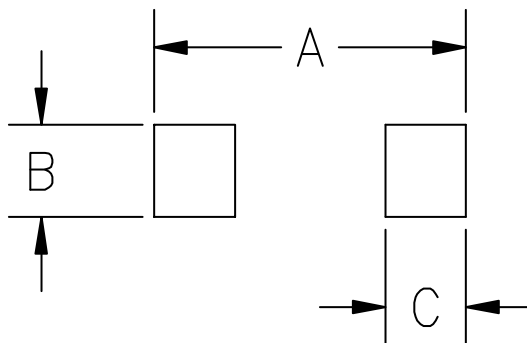


Outline Drawing - SOD-323



| 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 |