

Features

- Protects one data or power line
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 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

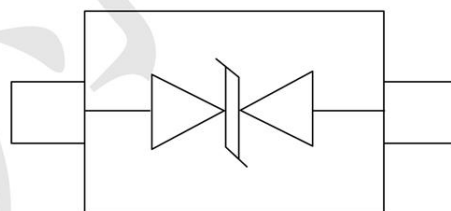
Mechanical Characteristics

- Package: SOD-523
- 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
- Shipping Qty :3000pcs/7InchTape & Reel

Applications

- Cellular Handsets & Accessories
- Digital Visual Interface (DVI)
- Display Port
- MDDI Ports
- USB Ports
- PCI Express
- Serial ATA

Dimensions and Pin Configuration



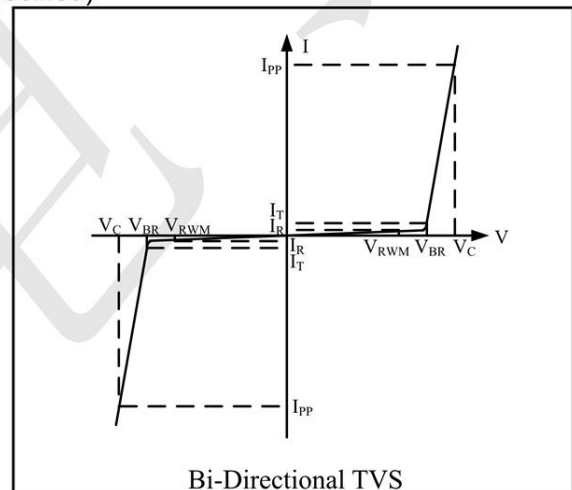
Marking:5C

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

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs) | Ppk | 80 | W |
| Peak Pulse Current (8/20μs) | IPP | 8 | A |
| ESD per IEC 61000-4-2 (Air) | VESD | ±30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±30 | |
| Operating Temperature Range | TJ | -55 to +125 | °C |
| Storage Temperature Range | Tstg | -55 to +150 | °C |

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

| Symbol | Parameter |
|------------------|--|
| V _{RWM} | Nominal Reverse Working Voltage |
| I _R | Reverse Leakage Current @ V _{RWM} |
| V _{BR} | Reverse Breakdown Voltage @ I _T |
| I _T | Test Current for Reverse Breakdown |
| V _C | Clamping Voltage @ I _{PP} |
| I _{PP} | Maximum Peak Pulse Current |
| C _{ESD} | Parasitic Capacitance |
| V _R | Reverse Voltage |
| f | Small Signal Frequency |



| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|--------|-----|-----|-----|------|-------------------|
| Reverse Working Voltage | VRWM | | | 5 | V | |
| Breakdown Voltage | VBR | 6 | | 8 | V | IT = 1mA |
| Reverse Leakage Current | IR | | | 0.2 | μA | VRWM = 5V |
| Clamping Voltage | VC | | | 8 | V | IPP = 1A |
| Clamping Voltage | VC | | | 10 | V | IPP = 8A |
| Junction Capacitance | CJ | | | 20 | pF | VR = 0V, f = 1MHz |

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

Fig1. 8/20 μs Pulse Waveform

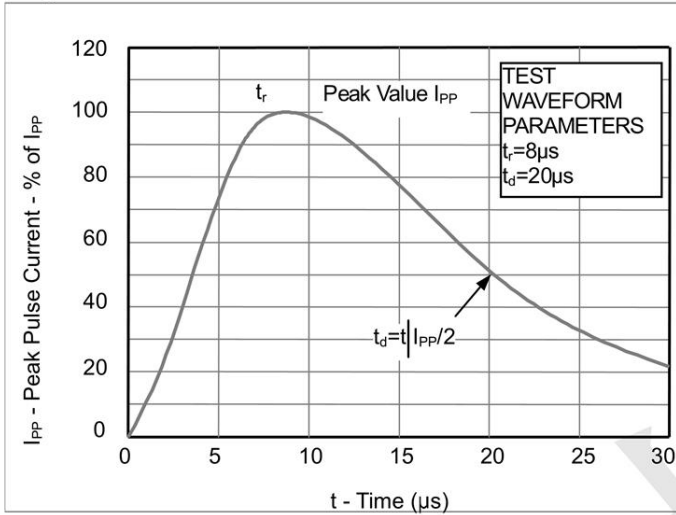


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

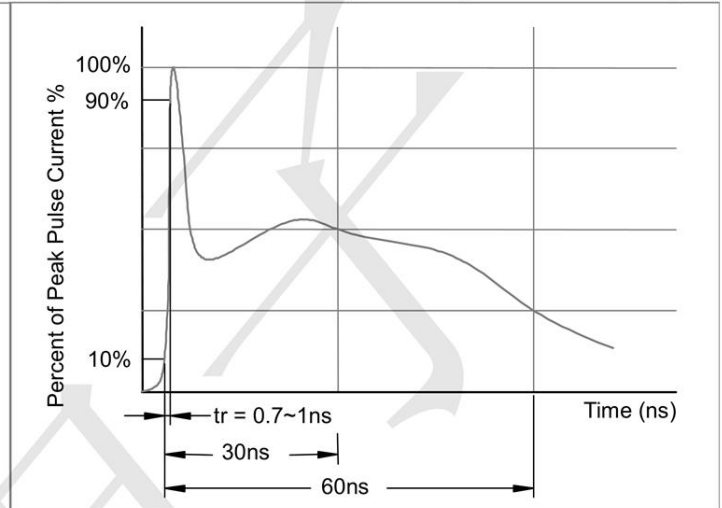
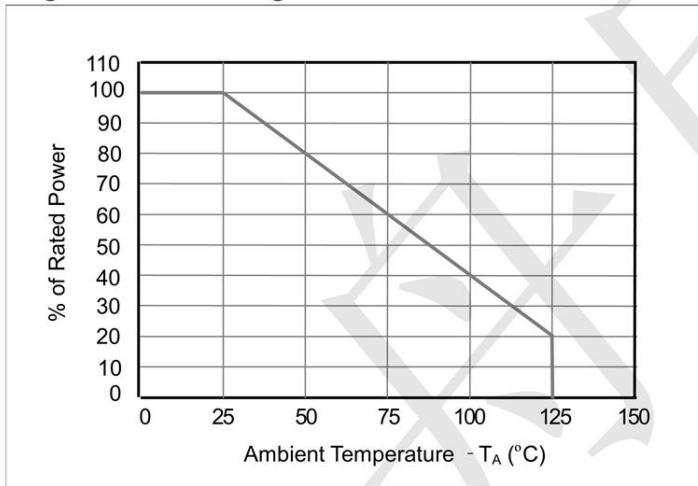
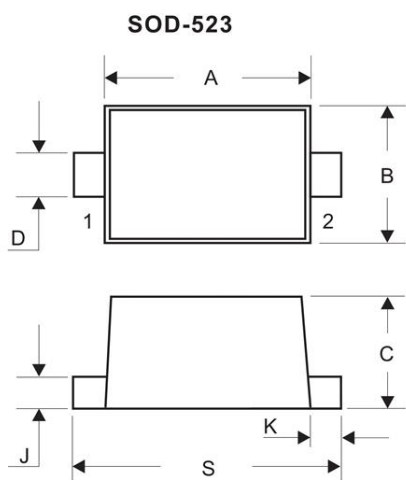


Fig3. Power Derating Curve



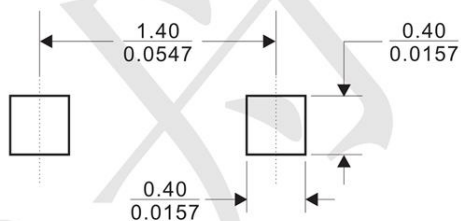
Outline Drawing - SOD-523



| DIM | Millimeters | | Inches | |
|-----|-------------|------|--------|--------|
| | Min | Max | Min | Max |
| A | 1.10 | 1.30 | 0.043 | 0.051 |
| B | 0.70 | 0.90 | 0.028 | 0.035 |
| C | 0.50 | 0.70 | 0.020 | 0.028 |
| D | 0.25 | 0.35 | 0.010 | 0.014 |
| J | 0.07 | 0.20 | 0.0028 | 0.0079 |
| K | 0.15 | 0.25 | 0.006 | 0.010 |
| S | 1.50 | 1.70 | 0.059 | 0.067 |

Land Pattern - SOD-523

Recommended Mounting Pad Layout



Dimensions in (millimeters)
 inches