

Features

- Ultra low leakage: nA level
- 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)
 - IEC61000-4-5 (Lightning) 6A (8/20 μs)
- RoHS Compliant

Mechanical Characteristics

- Package: SOT-143
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0



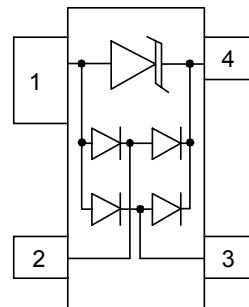
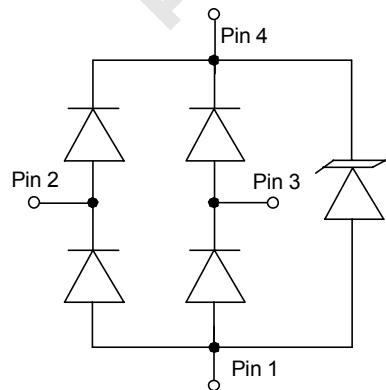
Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Ordering Information

| Part Number | Qty per Reel | Reel Size |
|-------------|--------------|-----------|
| SR05 | 3000 | 7" |

Dimensions and Pin Configuration



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

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs) | Ppk | 150 | W |
| Peak Pulse Current (8/20μs) | Ipp | 6 | 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)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|--------|-----|-----|-----|------|---------------------------------------|
| Reverse Working Voltage | VRWM | | | 5 | V | |
| Breakdown Voltage | VBR | 6 | | | V | IT = 1mA |
| Reverse Leakage Current | IR | | | 0.1 | uA | VRWM =5V |
| Clamping Voltage | VC | | | 15 | V | I _{PP} = 1A (8 x 20μs pulse) |
| Clamping Voltage | VC | | | 25 | V | I _{PP} = 6A (8 x 20μs pulse) |
| Junction Capacitance | CJ | | 0.3 | 0.5 | pF | VR = 0V, f = 1MHz |

Fig1. 8/20 μ s Pulse Waveform

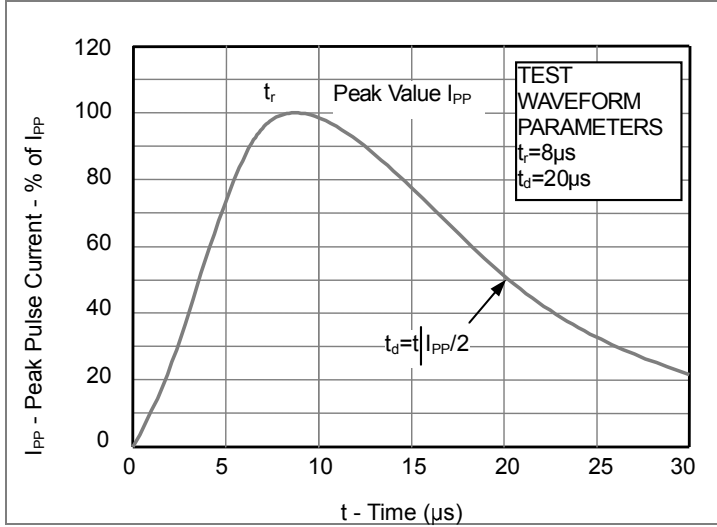


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

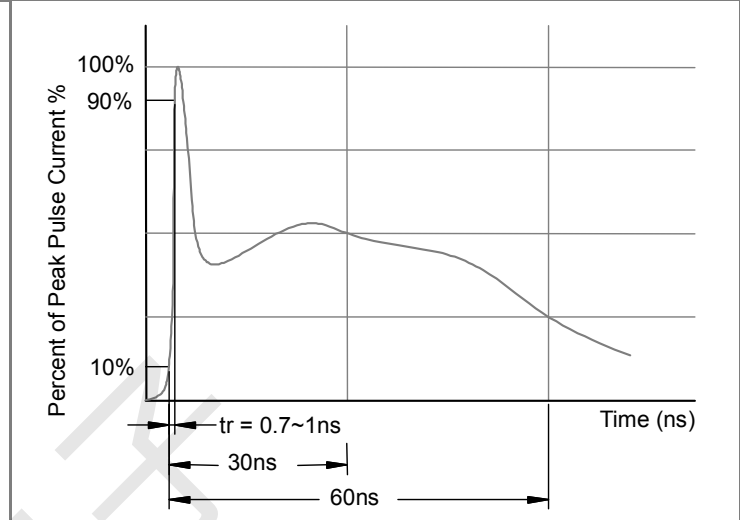
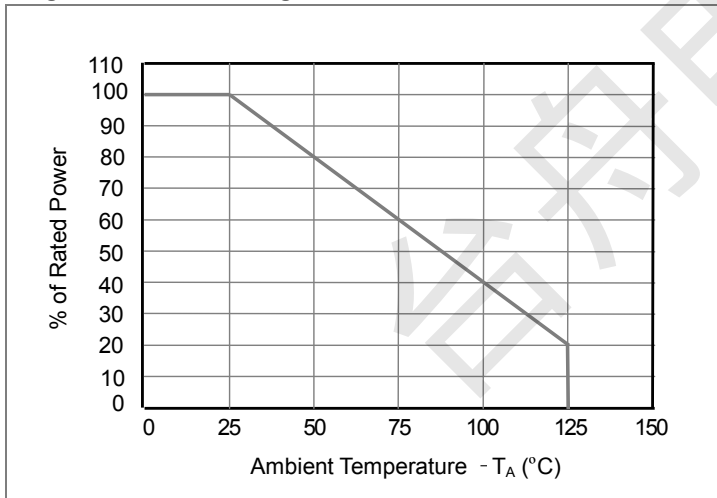
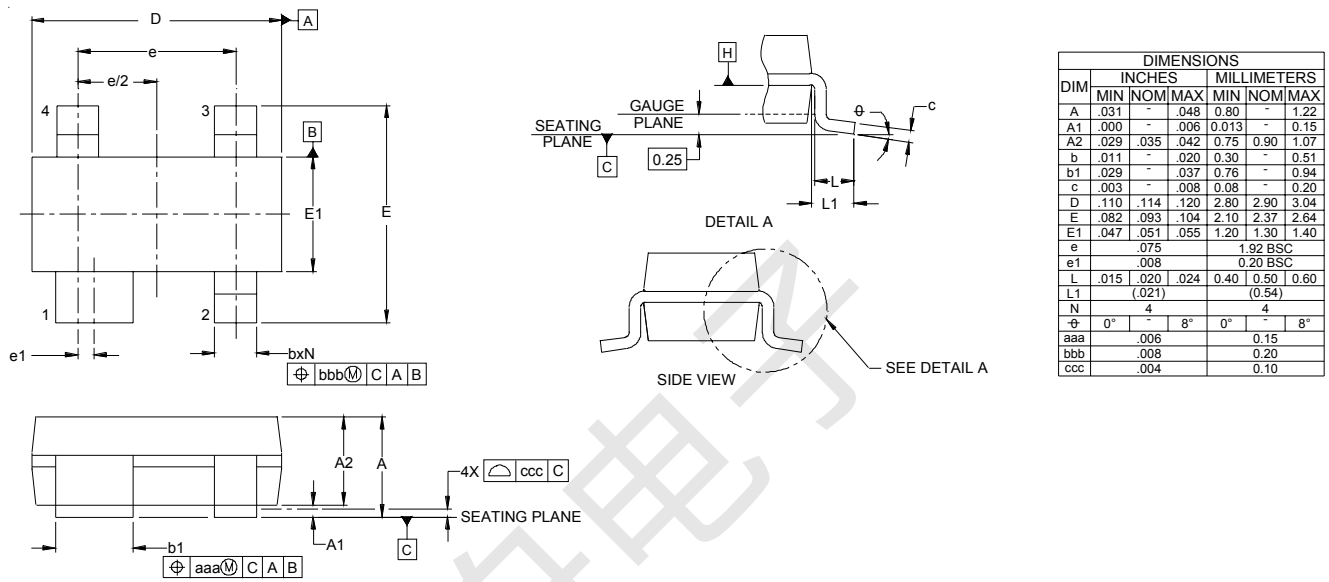


Fig3. Power Derating Curve



Outline Drawing - SOT-143



Land Pattern -SOT-143

