

Features

- 400W peak pulse power (8/20 μ s)
- Ultra low leakage: nA level
- Operating voltage: 7V or 12V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 30 kV
 - Contact discharge: ± 30 kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 17A (8/20 μ s)
- RoHS Compliant

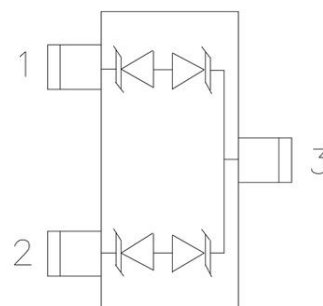
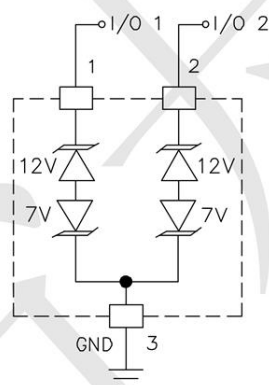
Mechanical Characteristics

- Package: SOT-23
- 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/7Inch Tape & Reel

Applications

- Wireless System
- Networks
- Portable Instrumentation
- RS485 Ports

Dimensions and Pin Configuration



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

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs) | Ppk | 400 | W |
| Peak Pulse Current (8/20μs) | Ipp | 17 | 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 | Pin 1 to 3 and 2 to 3 (12V TVS) | | | Pin 3 to 1 and 3 to 2 (7V TVS) | | | Unit | Test Condition |
|-------------------------|--------|---------------------------------------|-----|------|--------------------------------------|-----|-----|------|--|
| | | Min | Typ | Max | Min | Typ | Max | | |
| Reverse Working Voltage | VRWM | | | 12 | | | 7 | V | |
| Breakdown Voltage | VBR | 13.3 | | | 7.5 | | | V | IT = 1mA |
| Reverse Leakage Current | IR | | | 0.05 | | | 2.0 | uA | VR = VRWM |
| Clamping Voltage | VC | | | 20 | | | 10 | V | I _{PP} = 5A (8 x 20μs pulse) |
| Clamping Voltage | VC | | | 26 | | | 12 | V | I _{PP} = 17A (8 x 20μs pulse) |
| Junction Capacitance | CJ | | | 75 | | | 75 | pF | VR = 0V, f = 1MHz |

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

Fig1. 8/20 μs Pulse Waveform

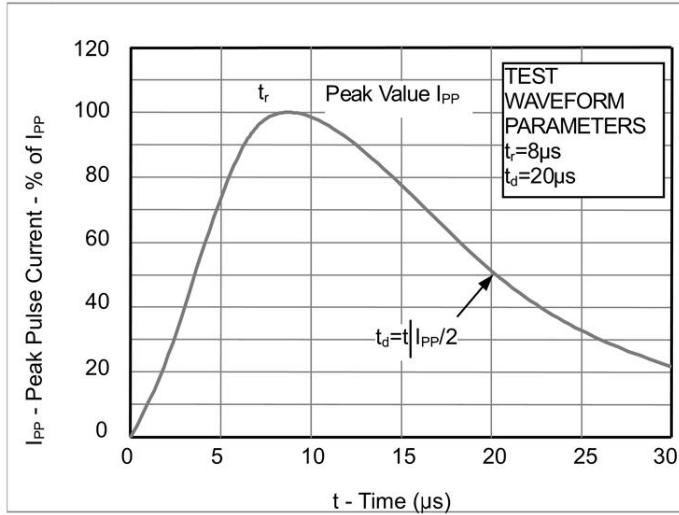


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

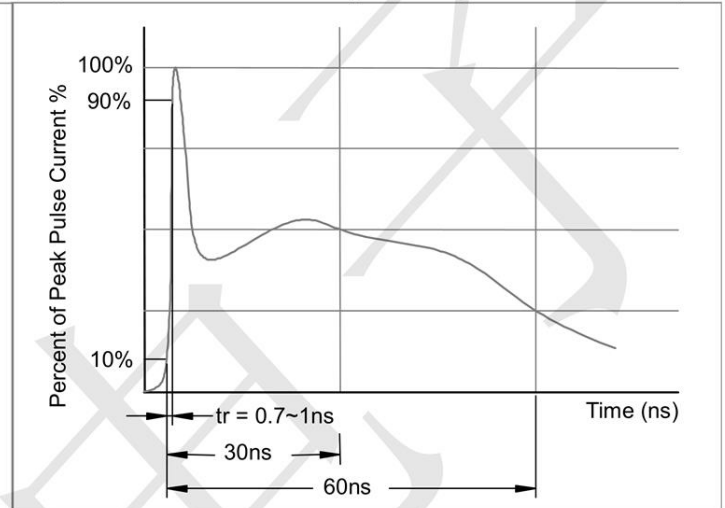
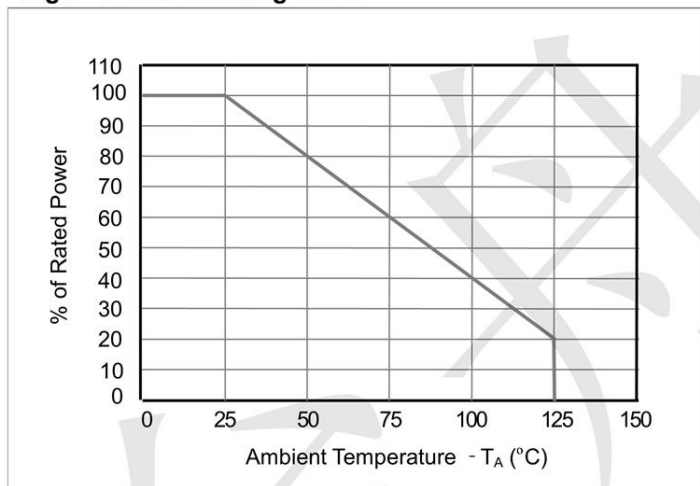
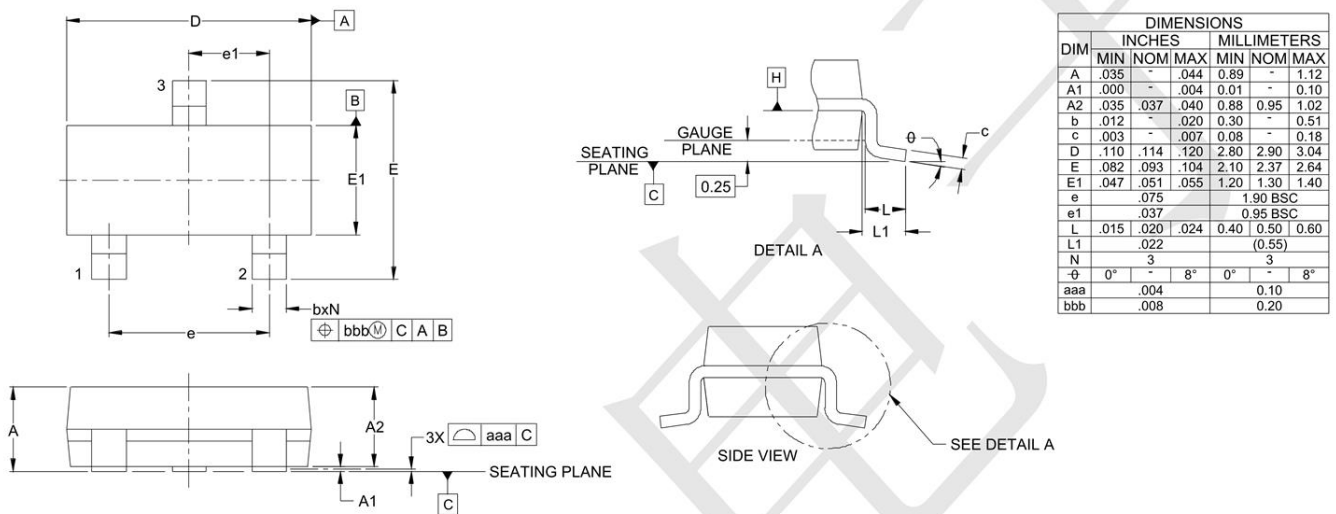


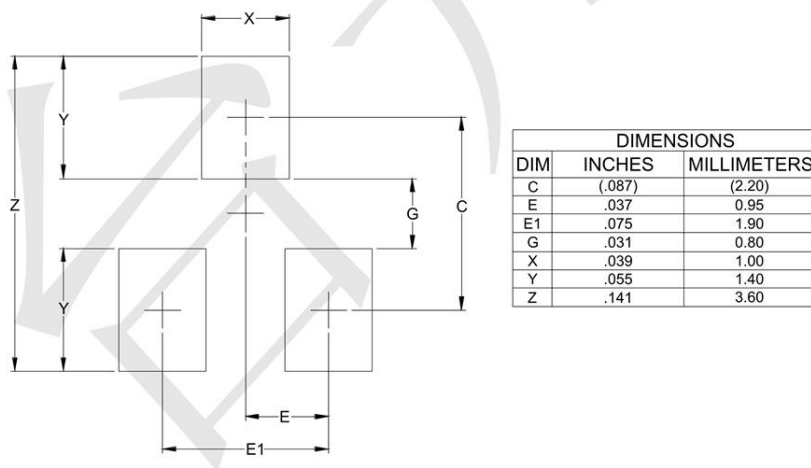
Fig3. Power Derating Curve



Outline Drawing - SOT23



Land Pattern - SOT23



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