

Features

- ◆ Ultra low capacitance: 17pF typical
- ◆ 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)
 - IEC61000-4-5 (Lightning) : 8 A(8/20 μs)
- ◆ ROHS Compliant

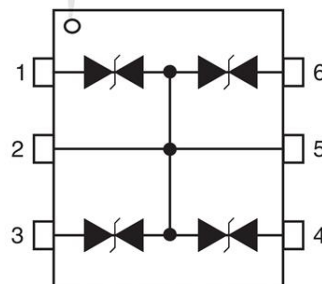
Mechanical Characteristics

- ◆ Package: SOT23-6
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: "Green" Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020
- ◆ Shipping Qty :3000/7Inch Tape & Reel

Applications

- ◆ Computers
- ◆ Printers
- ◆ Communication systems
- ◆

Dimensions and Pin Configuration



Marking: BS77 Or 6V1B

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)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|--------|-----|-----|------|------|-----------------------|
| Reverse Working Voltage | VRWM | | | 5 | V | |
| Breakdown Voltage | VBR | 6.1 | | 8.4 | V | It = 1mA |
| Reverse Leakage Current | IR | | | 0.08 | uA | VRWM = 5V |
| Clamping Voltage | VC | | | 6 | V | Ipp=1A(8x 20us pulse) |
| Clamping Voltage | VC | | | 11 | V | Ipp=8A(8x 20us pulse) |
| Junction Capacitance | CJ | | 17 | 20 | pF | VR = 0V, f = 1MHz |

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

Fig1. 8/20 μs Pulse Waveform

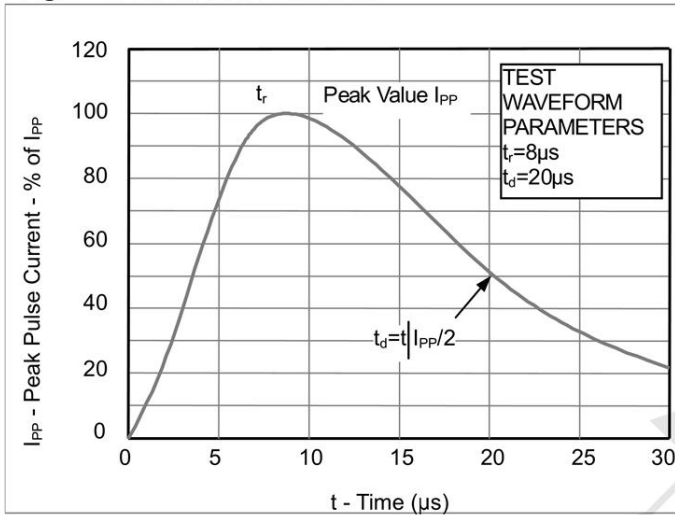


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

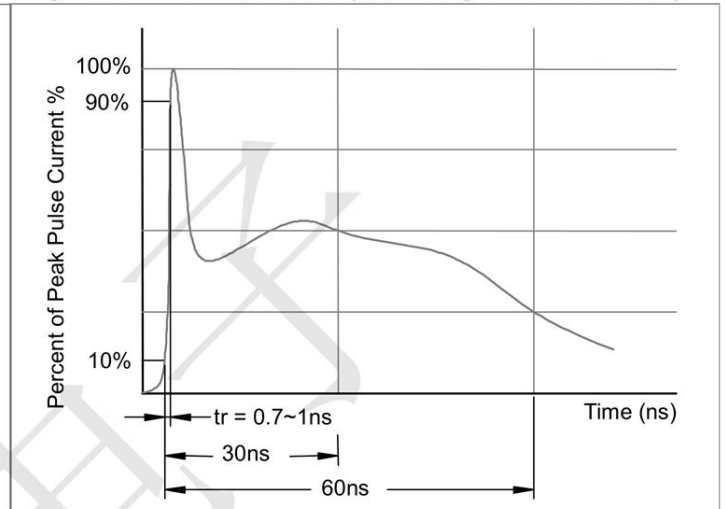
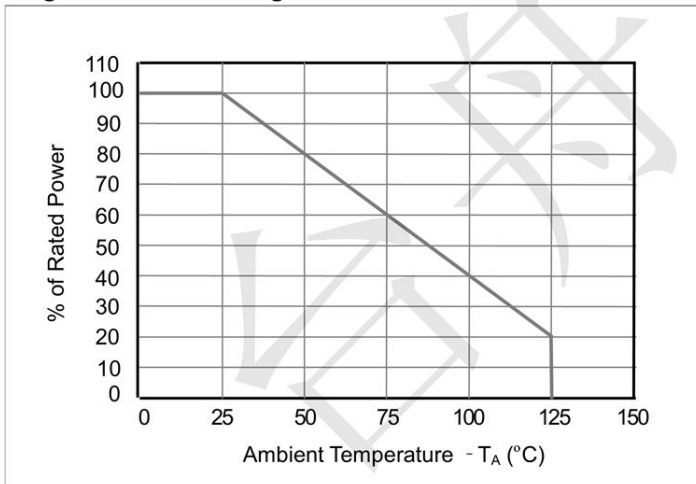
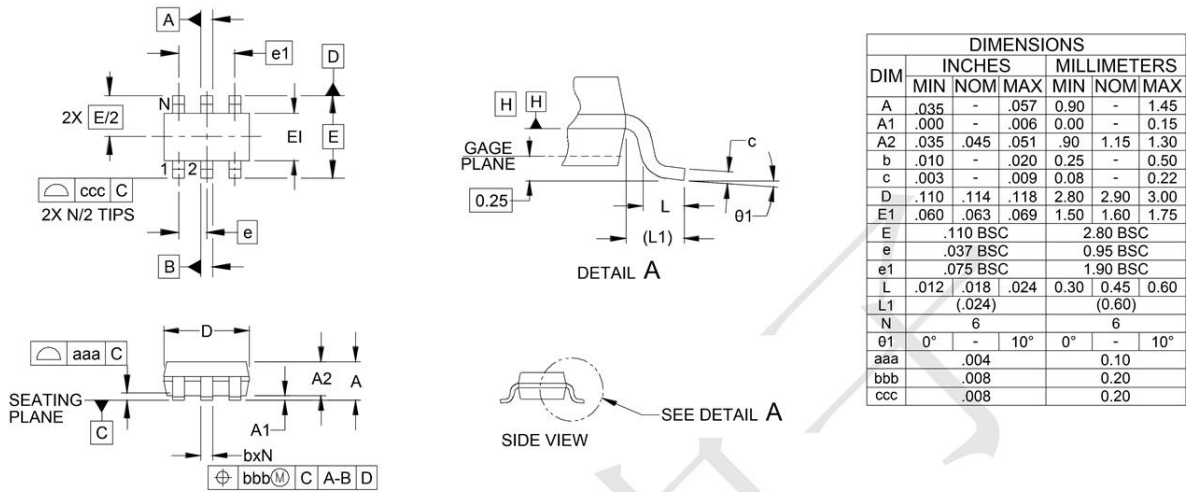


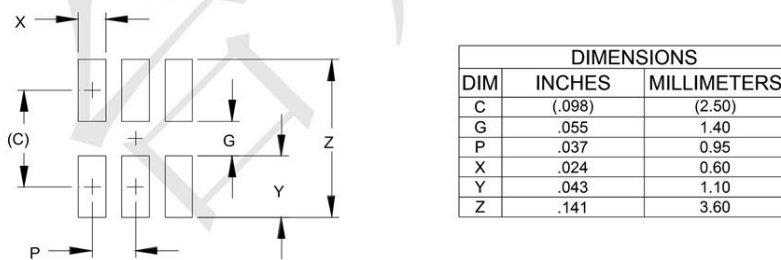
Fig3. Power Derating Curve



Outline Drawing - SOT23-6



Land Pattern - SOT23-6



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