

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) 9A (8/20 μs)
- ◆ RoHS Compliant

Ordering Information

| Part Number | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
| TPPESD5V0L2BT | 10000 | 7" |

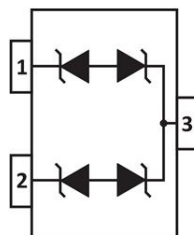
Mechanical Characteristics

- ◆ 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

Applications

- ◆ Cellular Handsets and Accessories
- ◆ Notebooks and Handhelds
- ◆ Portable Instrumentation
- ◆ Set Top Box
- ◆ Industrial Controls

Dimensions and Pin Configuration



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

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-------------|------|
| Peak Pulse Current (8/20μs) | I _{pp} | 9 | A |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ±30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±30 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

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

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|------------------|-----|-----|------|------|---|
| Reverse Working Voltage | V _{RWM} | | | 5 | V | |
| Breakdown Voltage | V _{BR} | 5.6 | | 8.4 | V | I _T = 1mA |
| Reverse Leakage Current | I _R | | | 0.06 | μA | V _{RWM} = 5V |
| Clamping Voltage | V _C | | | 6 | V | I _{pp} =1A(8x 20us pulse) |
| Clamping Voltage | V _C | | | 10 | V | I _{pp} =9A (8x 20us pulse) |
| Junction Capacitance | C _J | | 15 | 20 | pF | V _R =0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3 |
| Junction Capacitance | C _J | | 7 | | pF | V _R =0, f=1MHz, Pin1 to Pin 2 or Pin 2 to Pin1 |

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

Fig1. 8/20 μs Pulse Waveform

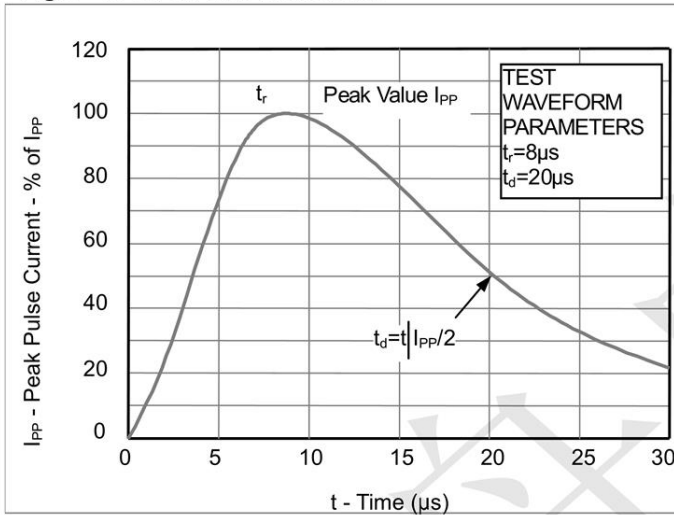


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

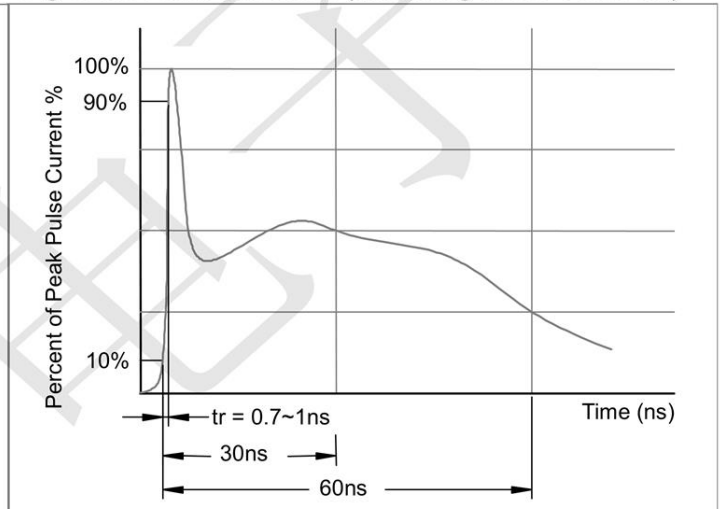
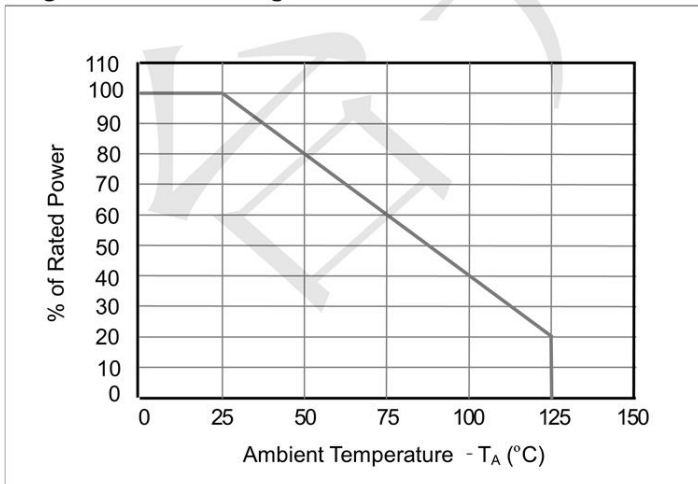
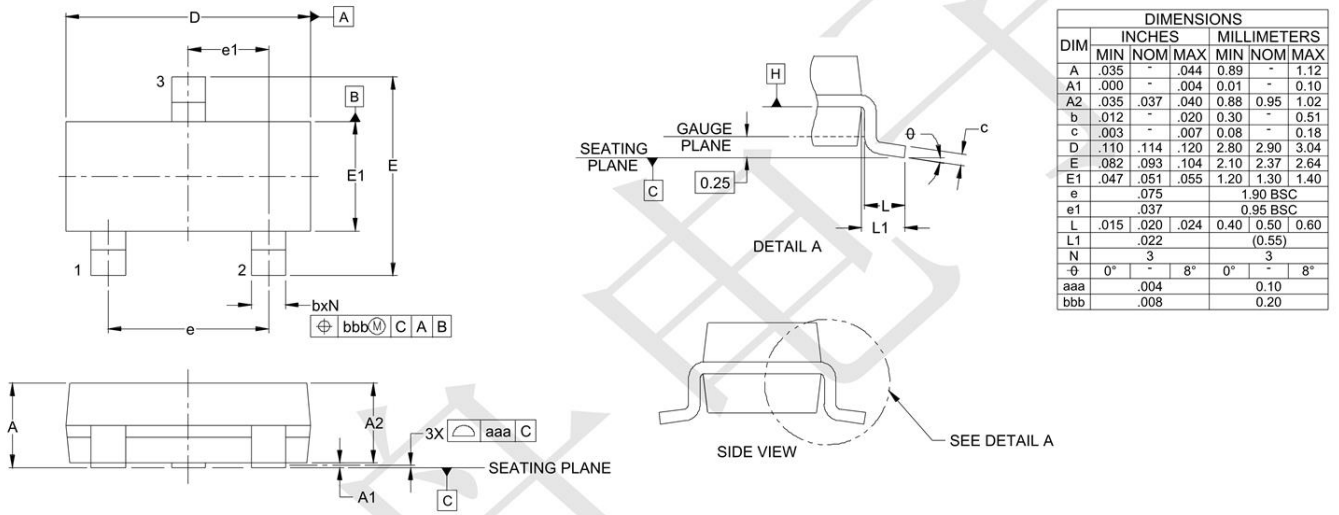


Fig3. Power Derating Curve



Outline Drawing - SOT23



Land Pattern - SOT23

