

### Features

- Ultra low capacitance: 0.5pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 20\text{kV}$
    - Contact discharge:  $\pm 15\text{kV}$
  - IEC61000-4-5 (Lightning)4A (8/20  $\mu\text{s}$ )
- RoHS Compliant
- Lead Finish: NiPdAu

### Mechanical Characteristics

- Package: SOT23-3
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

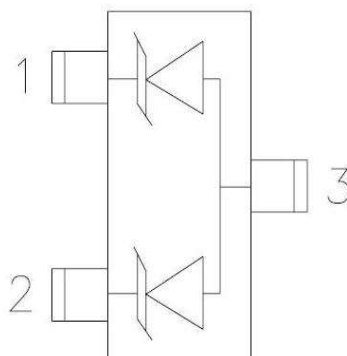
### Applications

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

### Ordering Information

| Part Number    | Qty per Reel | Reel Size |
|----------------|--------------|-----------|
| PESD5V0U1UT-TP | 3000         | 7"        |

### Dimensions and Pin Configuration



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

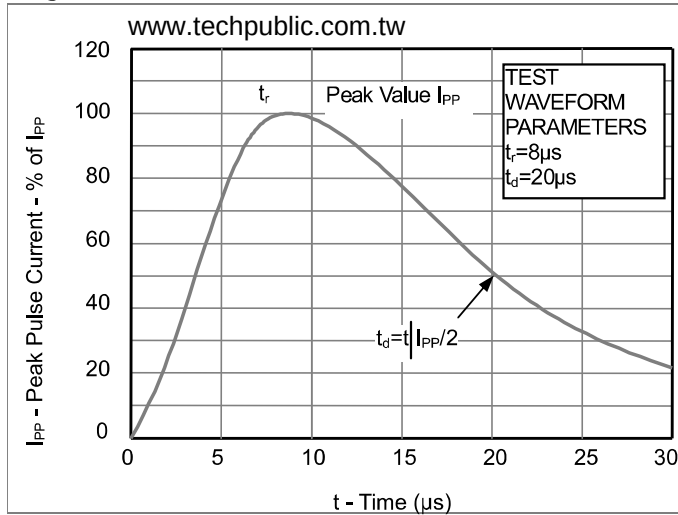
| Parameter                       | Symbol | Value       | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)       | Ppk    | 100         | W    |
| Peak Pulse Current (8/20μs)     | IPP    | 4           | A    |
| ESD per IEC 61000-4-2 (Air)     | VESD   | ± 20        | kV   |
| ESD per IEC 61000-4-2 (Contact) |        | ± 15        |      |
| Operating Temperature Range     | TJ     | -55 to +125 | °C   |
| Storage Temperature Range       | Tstg   | -55 to +150 | °C   |

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

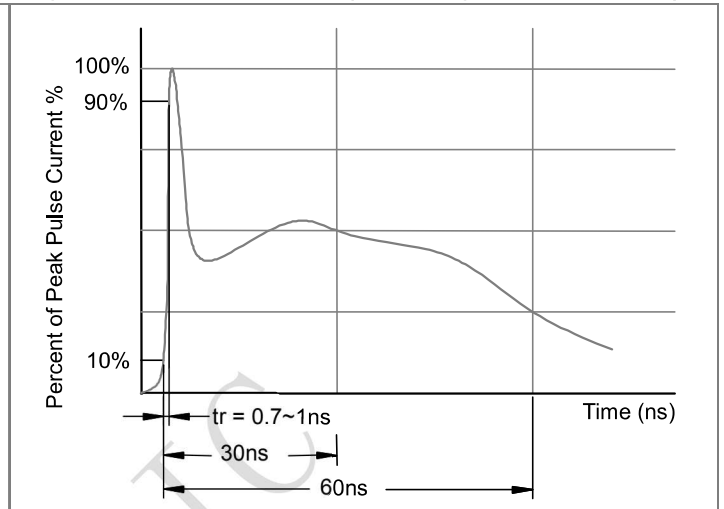
| Parameter               | Symbol | Min | Typ | Max  | Unit | Test Condition                                 |
|-------------------------|--------|-----|-----|------|------|------------------------------------------------|
| Reverse Working Voltage | VRWM   |     |     | 5    | V    |                                                |
| Breakdown Voltage       | VBR    | 6   |     |      | V    | IT = 1mA                                       |
| Reverse Leakage Current | IR     |     |     | 0.08 | μA   | VRWM = 5V                                      |
| Forward Voltage         | VF     |     | 0.8 | 1.2  | V    | IF = 10mA                                      |
| Clamping Voltage        | VC     |     |     | 15   | V    | IPP = 1A (8 x 20μs pulse)                      |
| Clamping Voltage        | VC     |     |     | 23   | V    | IPP = 4 A (8 x 20μs pulse)                     |
| Junction Capacitance    | CJ     |     | 0.5 | 0.7  | pF   | VR=0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3 |
| Junction Capacitance    | CJ     |     |     | 0.5  | pF   | VR=0, f=1MHz, Pin 1 to Pin 2                   |

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

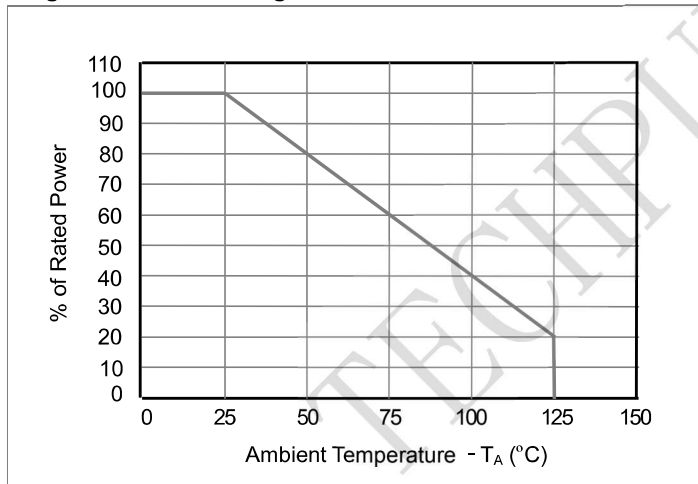
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



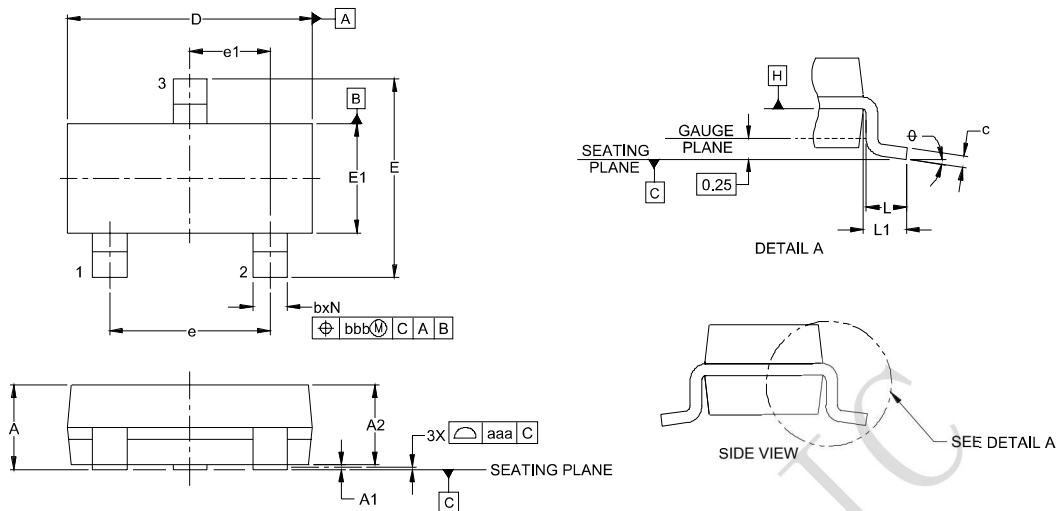
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



## Outline Drawing - SOT23



## Land Pattern - SOT23

