

### 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 $\mu\text{s}$ )
- RoHS Compliant

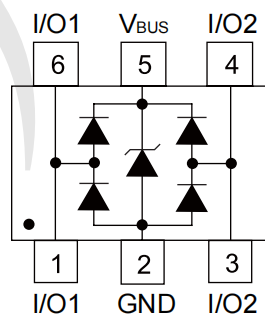
### Mechanical Characteristics

- 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 : 3000pcs/7Inch Tape & Reel

### 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

### Dimensions and Pin Configuration



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

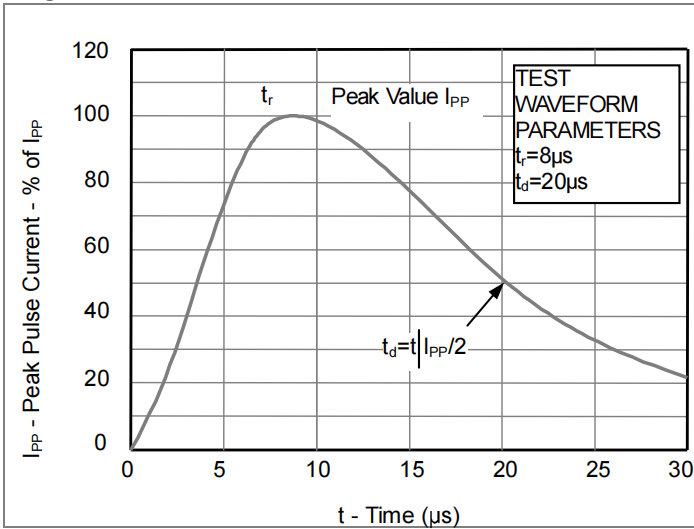
| Parameter                                                      | Symbol | Value       | Unit |
|----------------------------------------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)                                      | Ppk    | 150         | W    |
| Peak Pulse Current (8/20μs)                                    | Ipp    | 6           | A    |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | VESD   | ±30<br>±30  | kV   |
| Operating Temperature Range                                    | TJ     | -55 to +125 | °C   |
| Storage Temperature Range                                      | Tstg   | -55 to +150 | °C   |

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

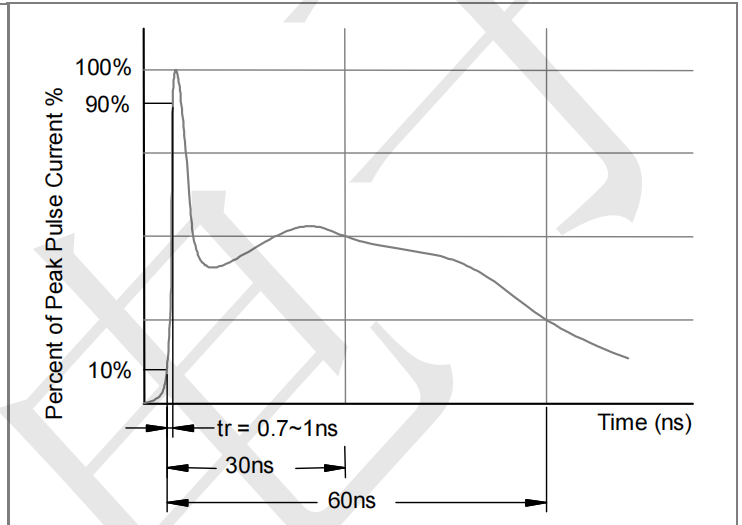
| Parameter               | Symbol | Min | Typ | Max  | Unit | Test Condition             |
|-------------------------|--------|-----|-----|------|------|----------------------------|
| Reverse Working Voltage | VRWM   |     |     | 5    | V    |                            |
| Breakdown Voltage       | VBR    | 6   |     |      | V    | IT = 1mA                   |
| Reverse Leakage Current | IR     |     |     | 0.08 | uA   | VRWM =5V                   |
| Clamping Voltage        | VC     |     |     | 15   | V    | Ipp = 1A (8 x 20μs pulse)  |
| Clamping Voltage        | VC     |     |     | 24   | V    | Ipp = 6A (8 x 20us pulse)  |
| Junction Capacitance    | CJ     |     | 0.3 | 0.5  | pF   | VR = 0V, f = 1MHz IO to IO |

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

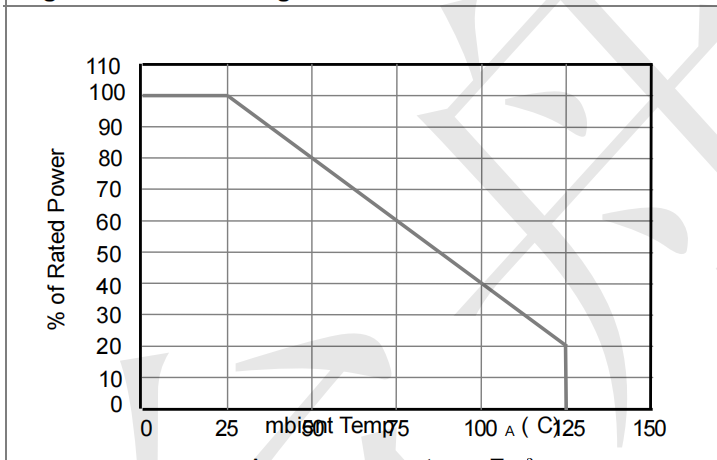
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



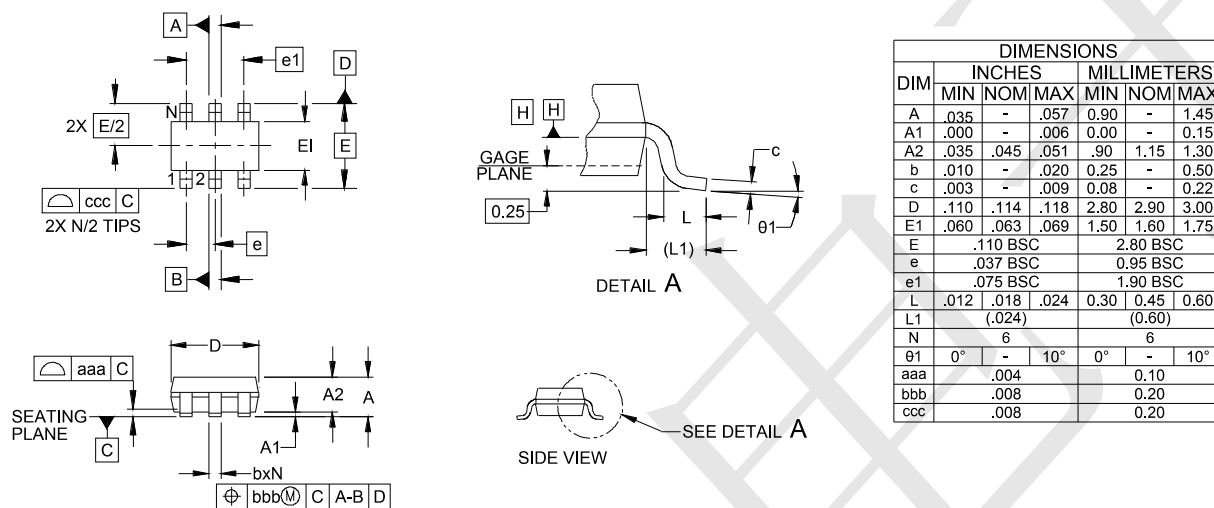
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



## Outline Drawing - SOT23-6



## Land Pattern - SOT23-6

