

### Features

- Ultra low capacitance: 0.5pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 3-pin leadless package
- Up to 2-line protects
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 25\text{kV}$
  - IEC61000-4-5 (Lightning) 4A (8/20 $\mu\text{s}$ )
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

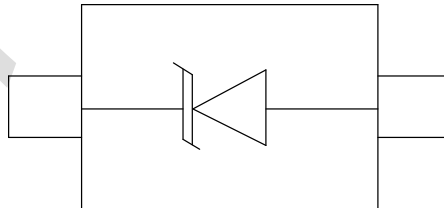
### Mechanical Characteristics

- Package: SOD-923(0402)
- Ultra low leakage: nA level
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Shipping Qty :8000 Or 10000 /7Inch Tape & Reel

### Applications

- Mobile Phones and Accessories
- Battery Protection
- USB VBus
- Power Line Protection
- Hand Held Portable Applications

### Dimensions and Pin Configuration



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

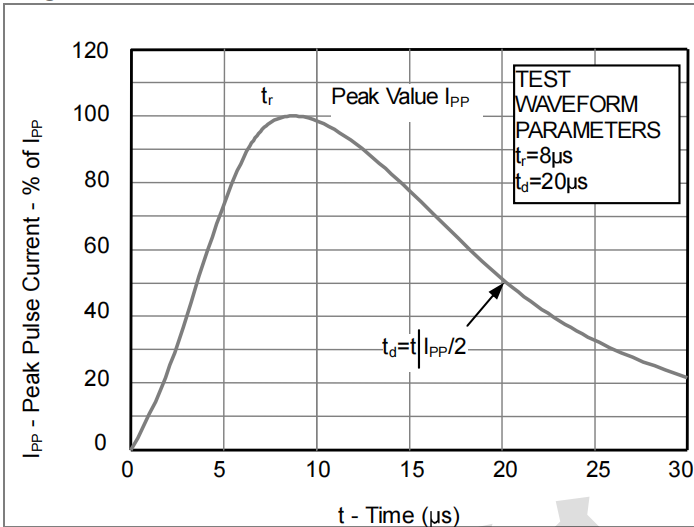
| Parameter                       | Symbol | Value       | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)       | Ppk    | 80          | W    |
| Peak Pulse Current (8/20μs)     | IPP    | 4.5         | A    |
| ESD per IEC 61000-4-2 (Air)     | VESD   | ±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)

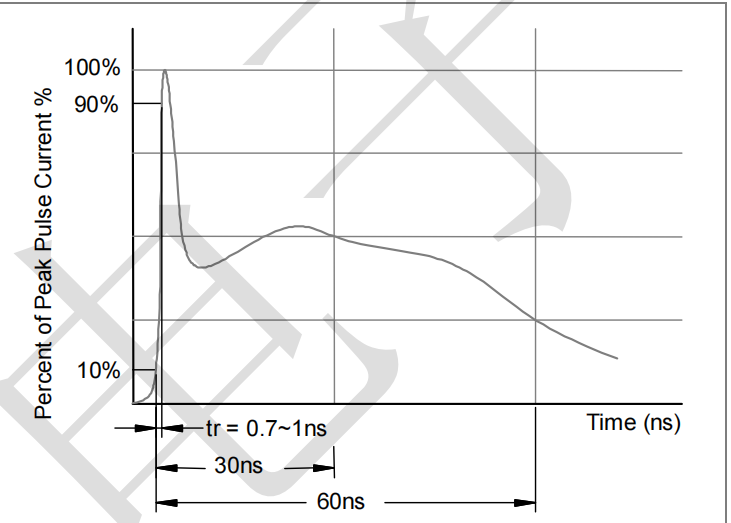
| Parameter               | Symbol | Test Condition                           | Min | Typ | Max  | Unit |
|-------------------------|--------|------------------------------------------|-----|-----|------|------|
| Reverse Working Voltage | VRWM   |                                          |     |     | 5    | V    |
| Breakdown Voltage       | VBR    | IT = 1mA(Pin1-Pin2)                      | 5.4 | 6.7 | 8.5  | V    |
| Reverse Leakage Current | IR     | VRWM = 5.0V(Pin2-Pin1)                   |     |     | 0.08 | μA   |
| Clamping Voltage        | VC     | IPP = 1A (8 x 20us pulse)<br>(Pin1-Pin2) |     |     | 9    | V    |
| Clamping Voltage        | VC     | IPP = 4A (8 x 20us pulse)<br>(Pin1-Pin2) |     |     | 15   | V    |
| Junction Capacitance    | CJ     | VR = 0V, f = 1MHz                        |     | 0.5 |      | pF   |

### Characteristic Curves

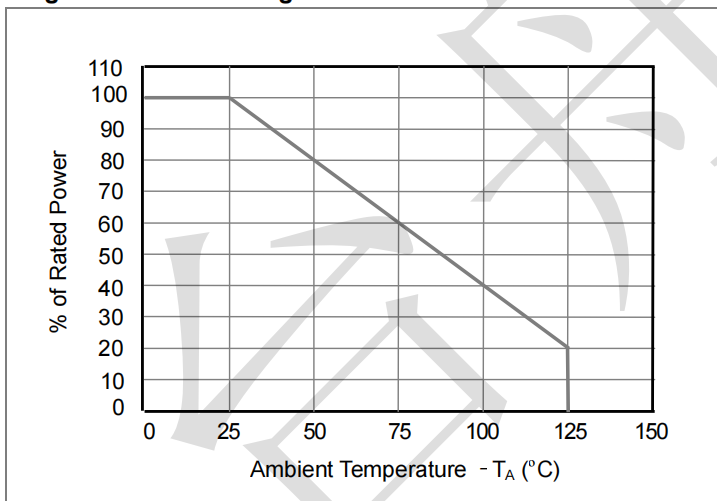
**Fig1. 8/20 $\mu$ s Pulse Waveform**



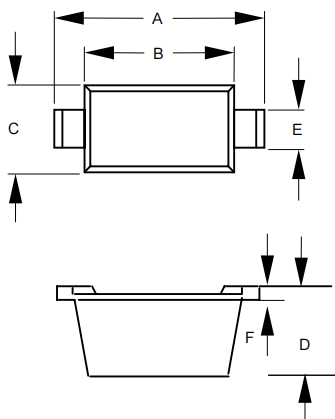
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



## Outline Drawing - SOD-923(0402)



| DIMENSIONS |        |      |      |      |      |
|------------|--------|------|------|------|------|
| DIM        | INCHES |      | MM   |      | NOTE |
|            | MIN    | MAX  | MIN  | MAX  |      |
| A          | .037   | .041 | 0.95 | 1.05 |      |
| B          | .030   | .033 | 0.75 | 0.85 |      |
| C          | .022   | .026 | 0.55 | 0.65 |      |
| D          | .014   | .017 | 0.36 | 0.43 |      |
| E          | .006   | .010 | 0.15 | 0.25 |      |
| F          | .003   | .007 | 0.07 | 0.17 |      |

## Land Pattern - SOD-923(0402)

