

## Features

- \* 140W peak pulse power (8/20 $\mu$ s)
- \* Protects one data or power line
- \* Operating voltage: 5V
- \* Ultra low clamping voltage
- \* Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30$ kV  
Contact discharge:  $\pm 30$ kV
  - IEC61000-4-5 (SURGE) 10A (8/20us)

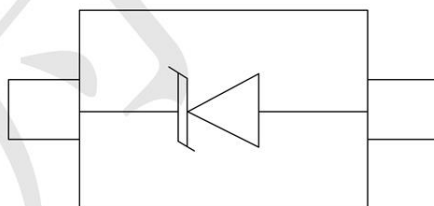
## Mechanical Characteristics

- \* 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 /7Inch Tape & Reel

## Applications

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

## Dimensions and Pin Configuration



**SOD923**

**Marking: B\* Or G\***

**\* =Wafer tracking no**

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

| Parameter                       | Symbol | Value       | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)       | Ppk    | 140         | W    |
| Peak Pulse Current (8/20μs)     | IPP    | 10          | 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 | Test Condition                            | Min | Typ | Max  | Unit |
|-------------------------|--------|-------------------------------------------|-----|-----|------|------|
| Reverse Working Voltage | VRWM   |                                           |     |     | 5    | V    |
| Breakdown Voltage       | VBR    | IT = 1mA(Pin1-Pin2)                       | 6   |     |      | 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)  |     |     | 8    | V    |
| Clamping Voltage        | VC     | IPP = 10A (8 x 20us pulse)<br>(Pin1-Pin2) |     |     | 15   | V    |
| Junction Capacitance    | CJ     | VR = 0V, f = 1MHz                         |     |     | 90   | pF   |

## Characteristic Curves

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

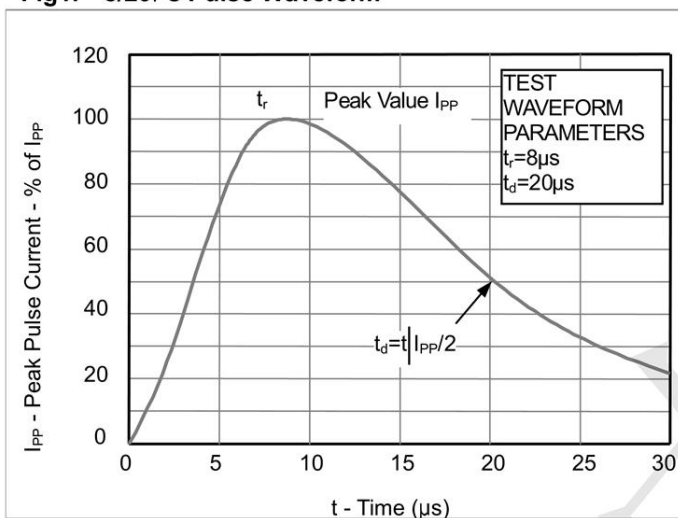


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

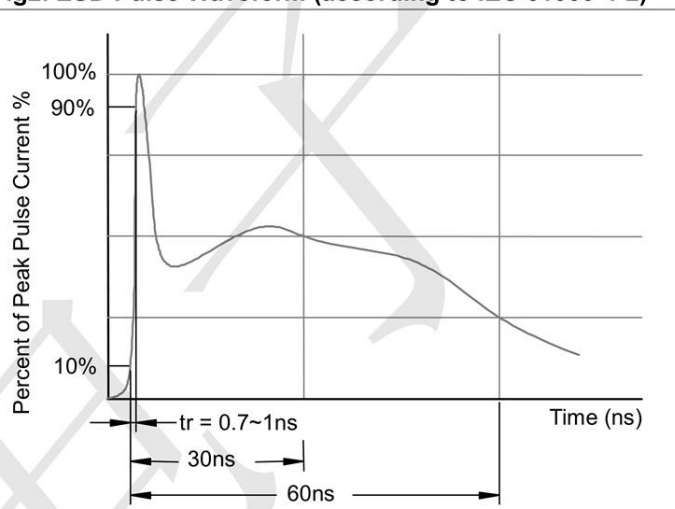
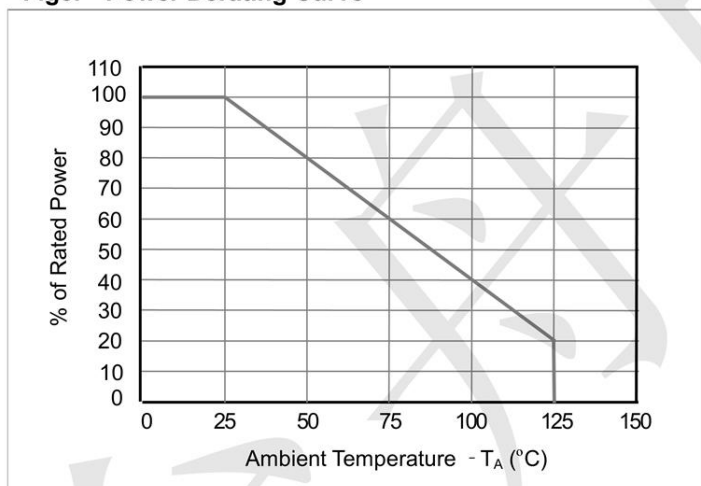
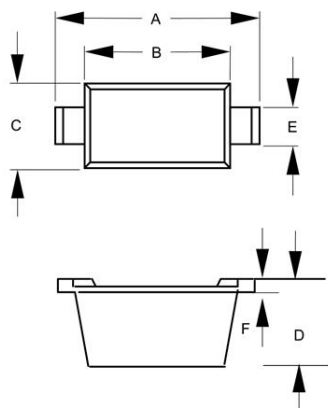


Fig3. Power Derating Curve



## 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)

