

## Features

- \* 350W peak pulse power (8/20 $\mu$ s)
- \* Low operating :5V
- \* Ultra low capacitance: 0.8 pF typical
- \* Ultra low leakage: nA level
- \* Low clamping voltage
- \* Protects one power line or data line
- \* Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30$ kV  
Contact discharge:  $\pm 30$ kV
  - IEC61000-4-5 (Lightning) 18A (8/20 $\mu$ s)
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- \* RoHS Compliant

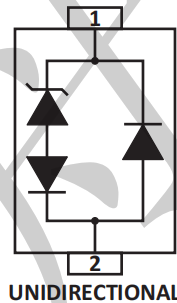
## Mechanical Characteristics

- \* Package: SOD.323
- \* Lead Finish: Matte Tin
- \* Case Material: “Green” Molding Compound.
- \* UL Flammability Classification Rating 94V-0
- \* Moisture Sensitivity: Level 3 per J-STD-020
- \* Terminal Connections: See Diagram Below
- \* Shipping Qty :3000pcs/7Inch Tape & Reel

## Applications

- \* Ethernet 10/100/1000 Base T
- \* SMART Phones
- \* Handheld - Wireless Systems
- \* Portable Instrumentation
- \* USB Interface

## Dimensions and Pin Configuration



**Marking:05**

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

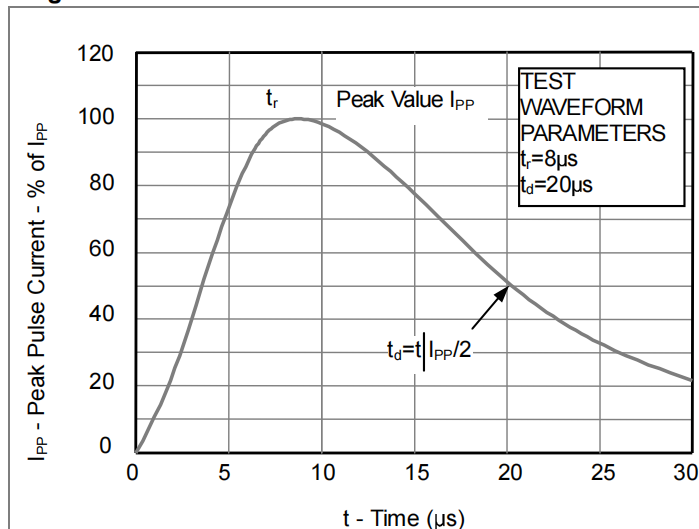
| Parameter                       | Symbol | Value       | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)       | Ppk    | 350         | W    |
| Peak Pulse Current (8/20μs)     | IPP    | 18          | A    |
| ESD per IEC 61000-4-2 (Air)     | VESD   | ±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)

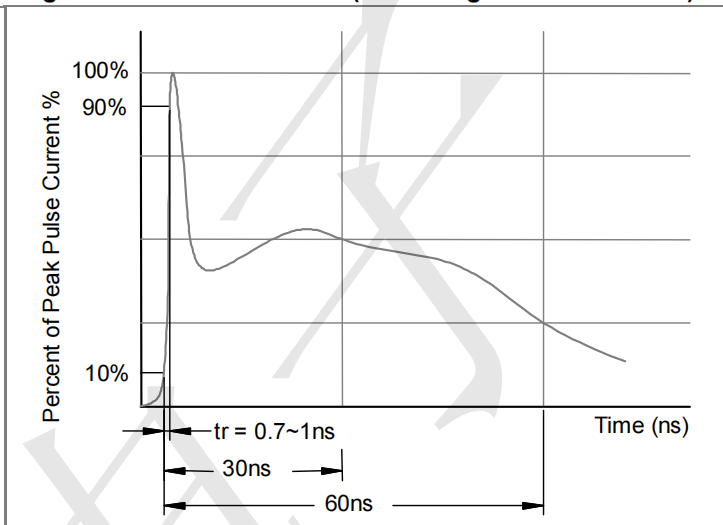
| Parameter               | Symbol | Test Condition             | Min | Typ | Max | Unit |
|-------------------------|--------|----------------------------|-----|-----|-----|------|
| Reverse Working Voltage | VRWM   |                            |     |     | 5.0 | V    |
| Breakdown Voltage       | VBR    | IT = 1mA                   | 6   |     |     | V    |
| Reverse Leakage Current | IR     | VRWM = 5V                  |     |     | 0.2 | μA   |
| Clamping Voltage        | VC     | IPP = 1A (8 x 20μs pulse)  |     |     | 9   | V    |
| Clamping Voltage        | VC     | IPP = 18A (8 x 20us pulse) |     | 16  |     | V    |
| Junction Capacitance    | CJ     | VR = 0V, f = 1MHz          |     | 0.8 |     | pF   |

### Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

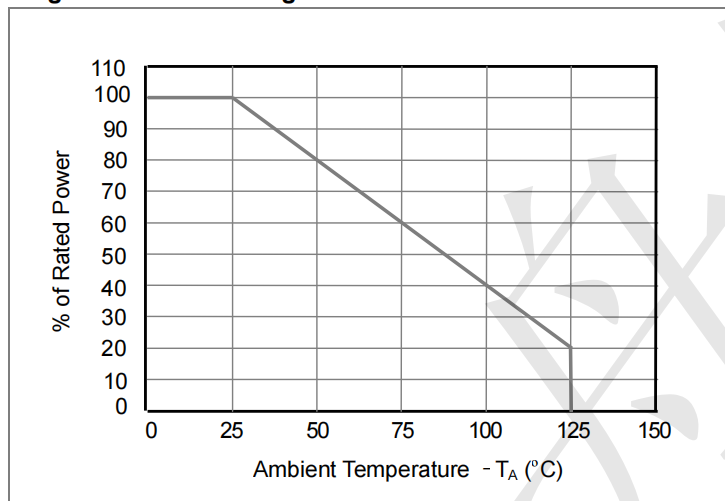
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



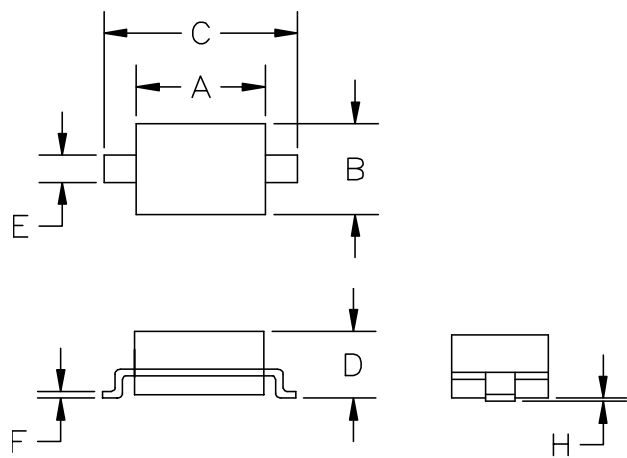
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**

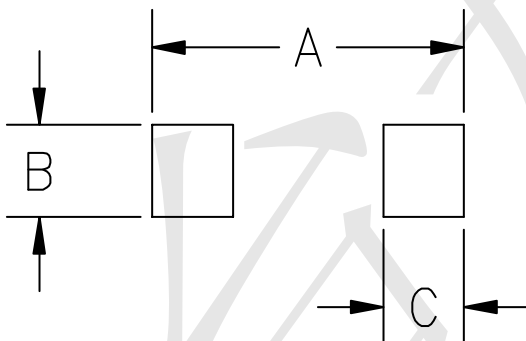


## Outline Drawing - SOD-323



| SYM | DIMENSIONS  |      |        |       |
|-----|-------------|------|--------|-------|
|     | MILLIMETERS |      | INCHES |       |
|     | MIN         | MAX  | MIN    | MAX   |
| A   | 1.50        | 1.80 | 0.060  | 0.071 |
| B   | 1.20        | 1.40 | 0.045  | 0.054 |
| C   | 2.30        | 2.70 | 0.090  | 0.107 |
| D   | -           | 1.10 | -      | 0.043 |
| E   | 0.30        | 0.40 | 0.012  | 0.016 |
| F   | 0.10        | 0.25 | 0.004  | 0.010 |
| H   | -           | 0.10 | -      | 0.004 |

## Land Pattern - SOD-323



| SYM | DIMENSIONS  |        |
|-----|-------------|--------|
|     | MILLIMETERS | INCHES |
| A   | 3.15        | 0.120  |
| B   | 0.80        | 0.031  |
| C   | 0.80        | 0.031  |