

### Features

- 350W peak pulse power (8/20 $\mu$ s)
- Ultra low capacitance: 1.0 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
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

### Applications

- USB Ports
- SIM Ports
- Smart Phones
- Wireless Systems
- Set-top box and digital TV
- Digital video interface (DVI)
- Ethernet 10/100/1000 Base T

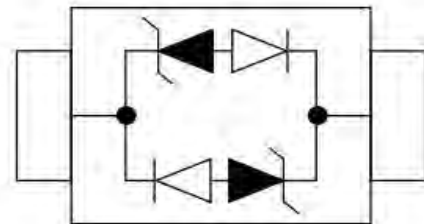
### Mechanical Characteristics

- 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
- Quantity per reel: 3,000pcs
- Reel size: 7 inch
- Device Marking: DC

### Dimensions SOD-323



### Pin Configuration



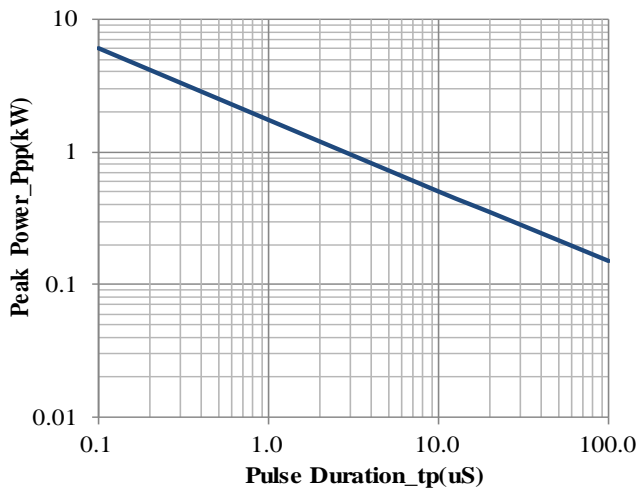
### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter                       | Symbol           | Value       | Unit |
|---------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20 $\mu$ s) | Ppp              | 350         | W    |
| ESD per IEC 61000-4-2 (Air)     | V <sub>ESD</sub> | $\pm 30$    | KV   |
| ESD per IEC 61000-4-2 (Contact) |                  | $\pm 30$    |      |
| Operating Temperature Range     | T <sub>J</sub>   | -45 to +85  | °C   |
| Storage Temperature Range       | T <sub>STJ</sub> | -55 to +150 | °C   |

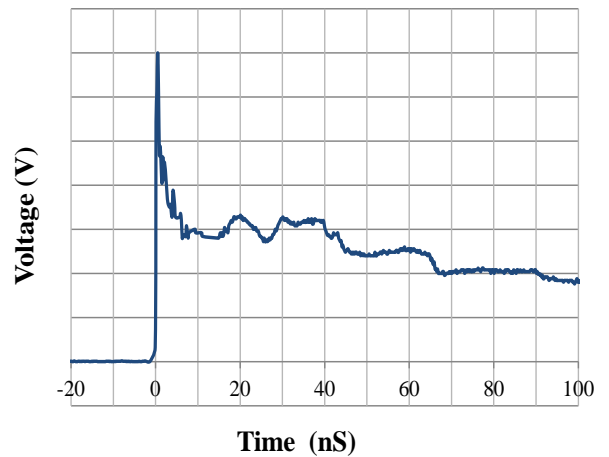
## Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter               | Symbol    | Test Condition                                     | Min  | Typ | Max  | Unit          |
|-------------------------|-----------|--|------|-----|------|---------------|
| Reverse Working Voltage | $V_{RWM}$ |  |      |     | 12.0 | V             |
| Breakdown Voltage       | $V_{BR}$  | $I_T = 1\text{mA}$                                 | 13.3 |     |      | V             |
| Reverse Leakage Current | $I_R$     | $V_{RWM} = 12\text{V}$                             |      |     | 0.2  | $\mu\text{A}$ |
| Clamping Voltage        | $V_C$     | $I_{PP} = 1\text{A}$ (8 x 20 $\mu\text{s}$ pulse)  |      |     | 18   | V             |
| Clamping Voltage        | $V_C$     | $I_{PP} = 12\text{A}$ (8 x 20 $\mu\text{s}$ pulse) |      |     | 29   | V             |
| Junction Capacitance    | $C_J$     | $V_R = 0\text{V}$ , $f = 1\text{MHz}$              |      | 1   |      | pF            |

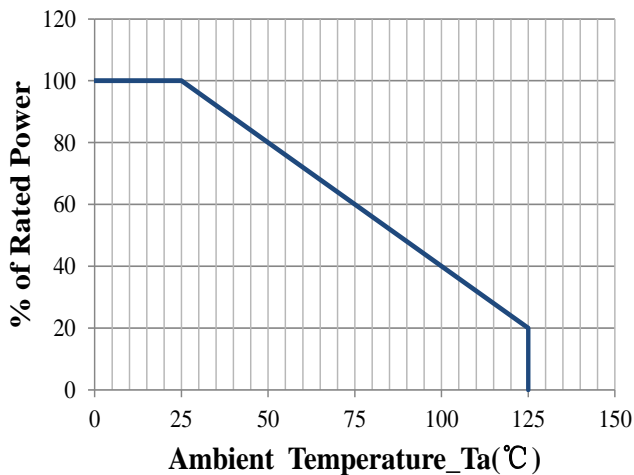
## Characteristic Curves



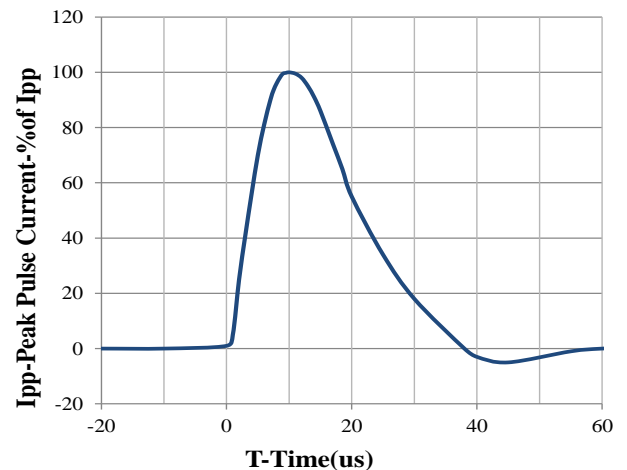
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

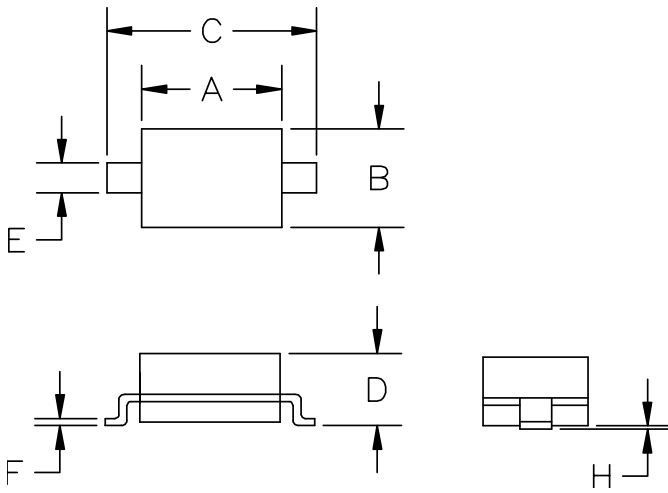


Power Derating Curve



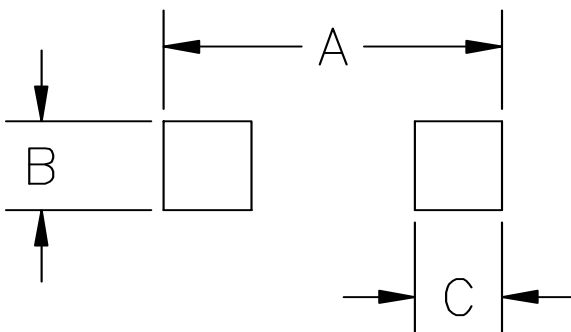
8 X 20us Pulse Waveform

## SOD-323 Package Outline Drawing



| 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 |

## Suggested Land Pattern



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

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