

## Features

- \* 400W peak pulse power (8/20 $\mu$ s)
- \* Protects one data or power line
- \* Operating voltage: 3.3V
- \* 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
  - IEC61000-4-4 (EFT) 80A (5/50ns)
  - IEC61000-4-5 (SURGE)35 A (8/20us)

## Mechanical Characteristics

- \* Package: SOD-323
- \* Ultra low leakage: nA level
- \* Case Material: "Green" Molding Compound.
- \* UL Flammability Classification Rating 94V-0
- \* Moisture Sensitivity: Level 3 per J-STD-020

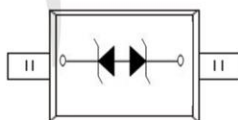
## Applications

- \* Cellular Handsets and Accessories
- \* Personal Digital Assistants
- \* Notebooks and Handhelds
- \* Portable Instrumentation
- \* Peripherals

## Ordering Information

| Part Number | Qty per Reel | Reel Size |
|-------------|--------------|-----------|
| PESD3V3L1BA | 3000         | 7"        |

## Dimensions and Pin Configuration



Marking:(3 $\epsilon$  ,03B, )

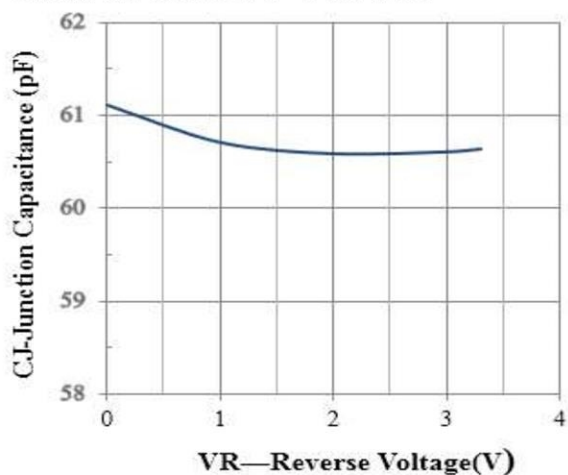
**Absolute Maximum Ratings** (Tamb=25°C unless otherwise specified)

| Parameter                       | Symbol | Value       | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)       | Ppk    | 400         | W    |
| Peak Pulse Current (8/20μs)     | IPP    | 35          | 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   |

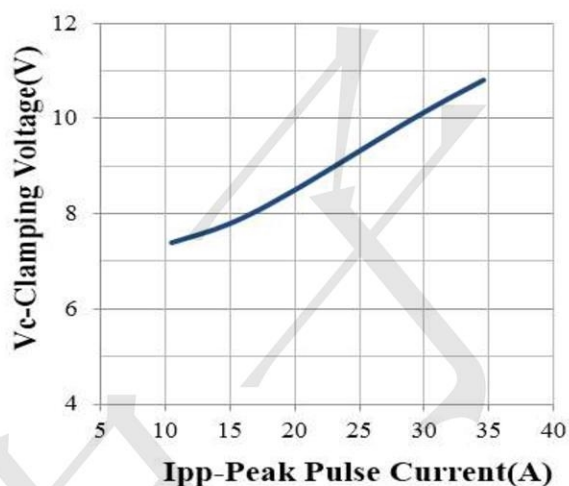
**Electrical Characteristics** (TA=25°C unless otherwise specified)

| Parameter               | Symbol            | Min | Typ | Max  | Unit | Test Condition                               |
|-------------------------|-------------------|-----|-----|------|------|----------------------------------------------|
| Reverse Working Voltage | V <sub>RWM</sub>  |     |     | 3.3  | V    |                                              |
| Breakdown Voltage       | V <sub>BR</sub>   | 4.0 |     | 6.0  | V    | I <sub>T</sub> =1mA                          |
| Leakage Current         | I <sub>Leak</sub> |     |     | 200  | nA   | V <sub>RWM</sub> =3.3V                       |
| Clamping Voltage        | V <sub>C</sub>    |     |     | 8.5  | V    | I <sub>PP</sub> =20A, T <sub>p</sub> =8/20μs |
| Clamping Voltage        | V <sub>C</sub>    |     |     | 12.0 | V    | I <sub>PP</sub> =35A, T <sub>p</sub> =8/20μs |
| Dynamic Resistance      | R <sub>DYN</sub>  |     | 0.1 |      | Ω    | TLP=0.2/100ns                                |
| Junction Capacitance    | C <sub>J</sub>    |     |     | 70   | pF   | V <sub>R</sub> =0V, f=1MHz                   |

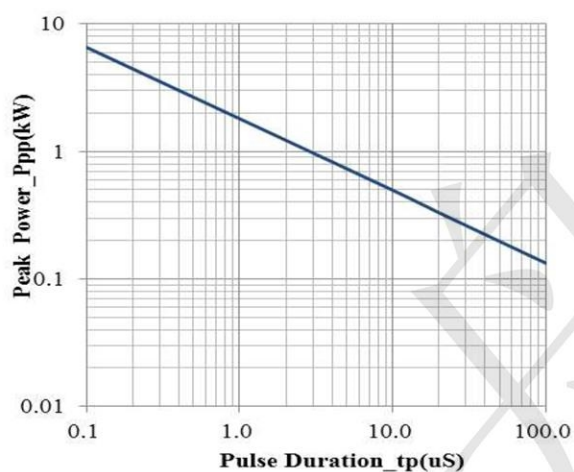
## Characteristic Curves



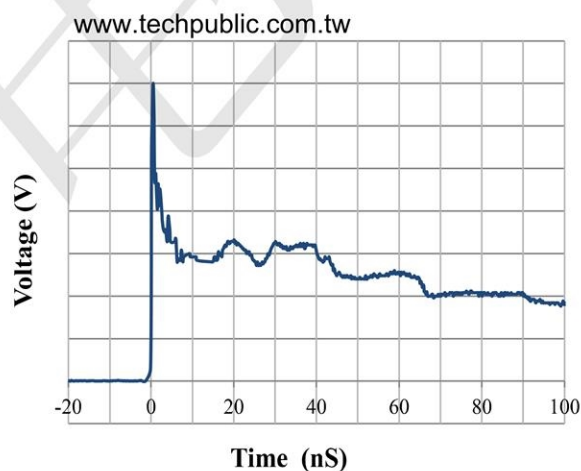
Junction Capacitance vs. Reverse Voltage



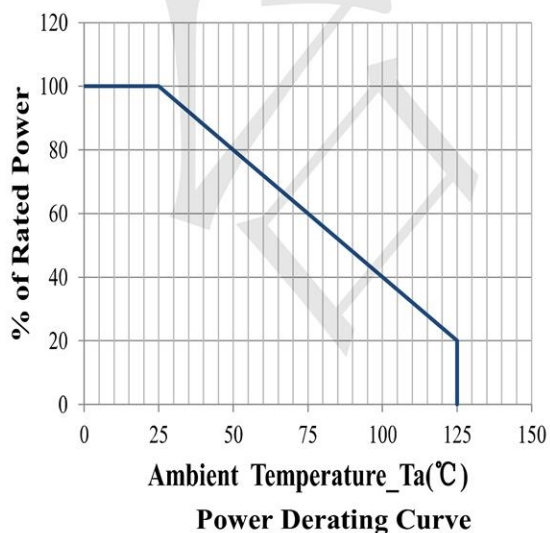
Clamping Voltage vs. Peak Pulse Current



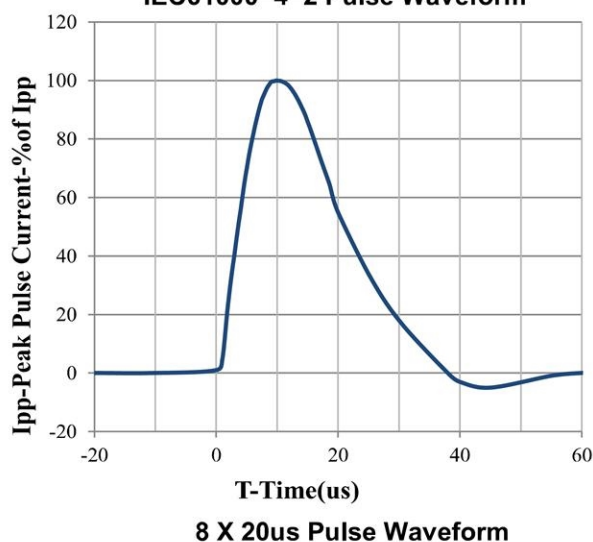
Peak Pulse Power vs. Pulse Time



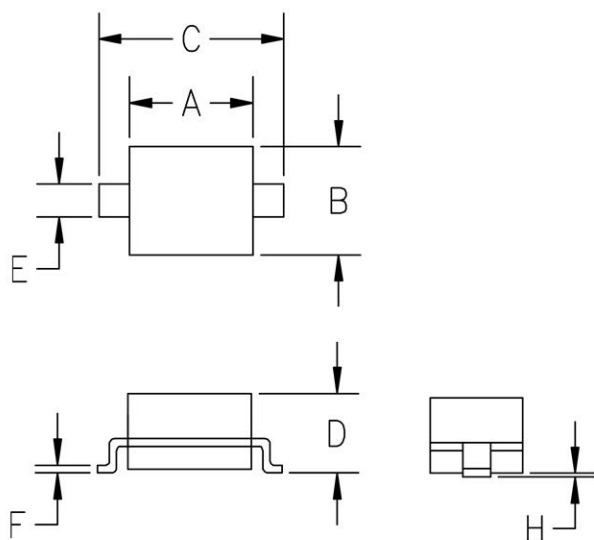
IEC61000-4-2 Pulse Waveform



Power Derating Curve

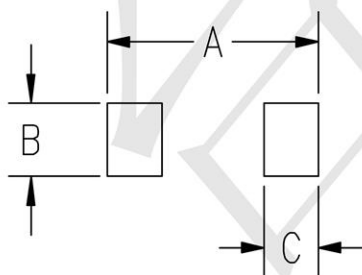


## Outline Drawing - SOD323



| 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 - SOD323



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