

## Features

- \* 2500W peak pulse power (8/20 $\mu$ s)
- \* Protects one data or power line
- \* Operating voltage: 4.5V
- \* 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) 160A (8/20 $\mu$ s)

## 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

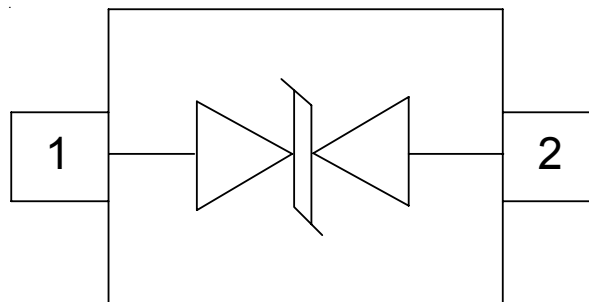
## Applications

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

## Ordering Information

| Part Number | Qty per Reel | Reel Size |
|-------------|--------------|-----------|
| TPE4V5KHC   | 3000         | 7"        |

## Dimensions and Pin Configuration



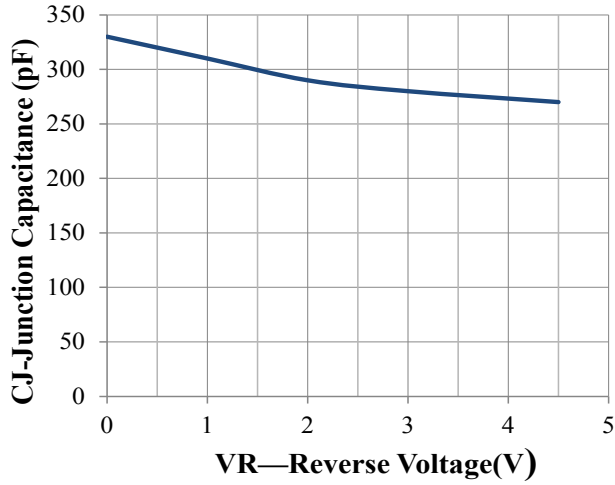
**Absolute Maximum Ratings** (Tamb=25°C unless otherwise specified)

| Parameter                       | Symbol | Value       | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs)       | Ppk    | 2500        | W    |
| Peak Pulse Current (8/20μs)     | IPP    | 160         | 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   |

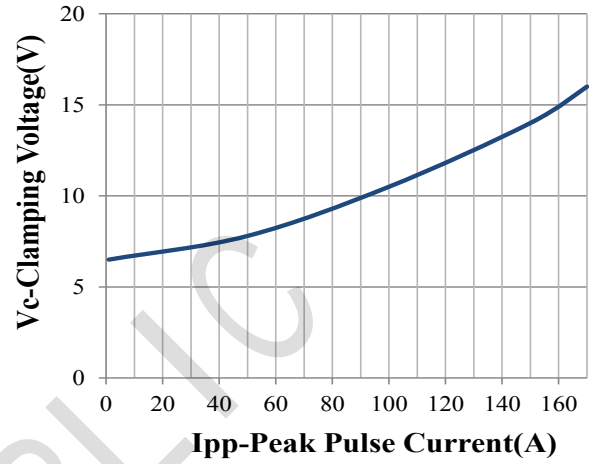
**Electrical Characteristics** (TA=25°C unless otherwise specified)

| Parameter               | Symbol     | Min | Typ | Max | Unit | Test Condition               |
|-------------------------|------------|-----|-----|-----|------|------------------------------|
| Reverse Working Voltage | $V_{RWM}$  |     |     | 4.5 | V    |                              |
| Breakdown Voltage       | $V_{BR}$   | 4.7 |     |     | V    | $I_T=1mA$                    |
| Leakage Current         | $I_{Leak}$ |     |     | 0.8 | uA   | $V_{RWM}=4.5V$               |
| Clamping Voltage        | $V_C$      |     | 11  |     | V    | $I_{PP}=100A, T_p=8/20\mu s$ |
| Clamping Voltage        | V          |     |     | 15  | V    | $I = 160A, T_p=8/20\mu s$    |
| Junction Capacitance    | $C_J$      |     | 320 |     | pF   | $V_R=0V, f=1MHz$             |

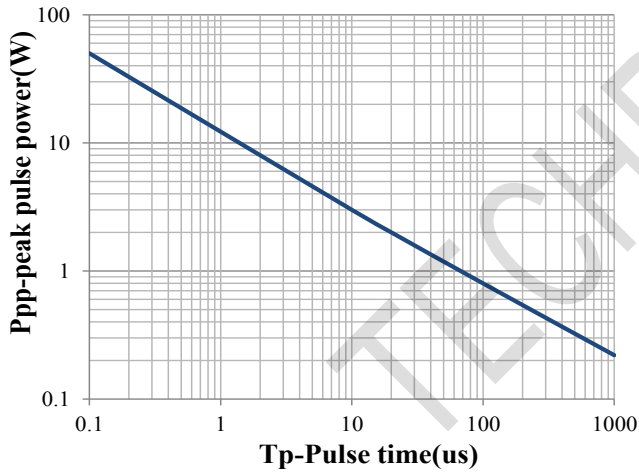
## Characteristic Curves



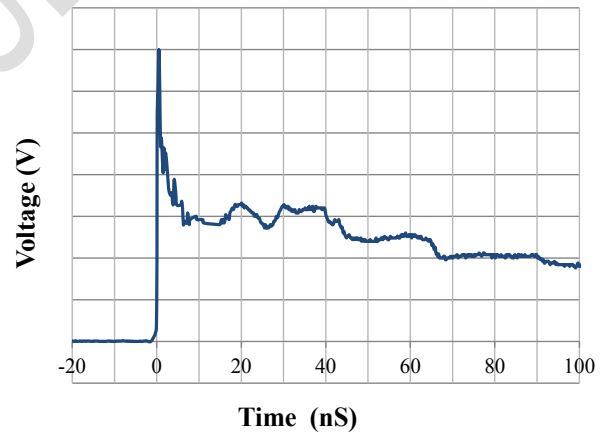
Junction Capacitance vs. Reverse Voltage



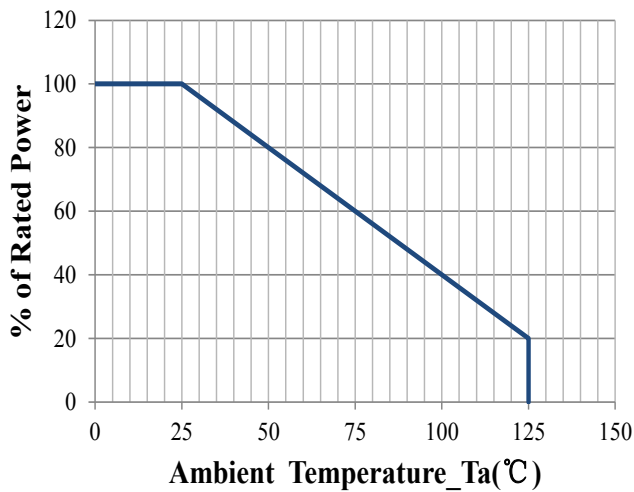
Clamping Voltage vs. Peak Pulse Current



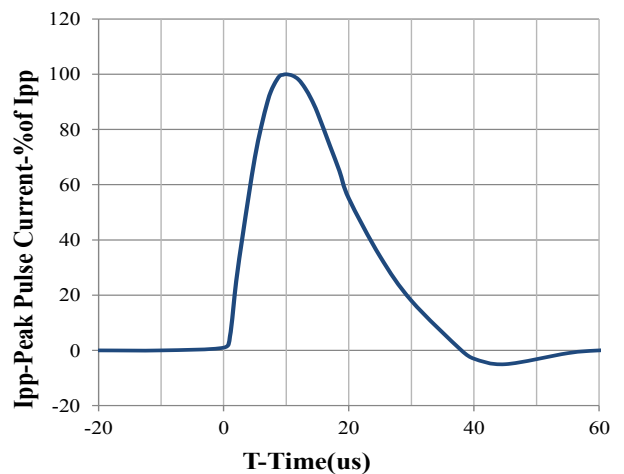
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

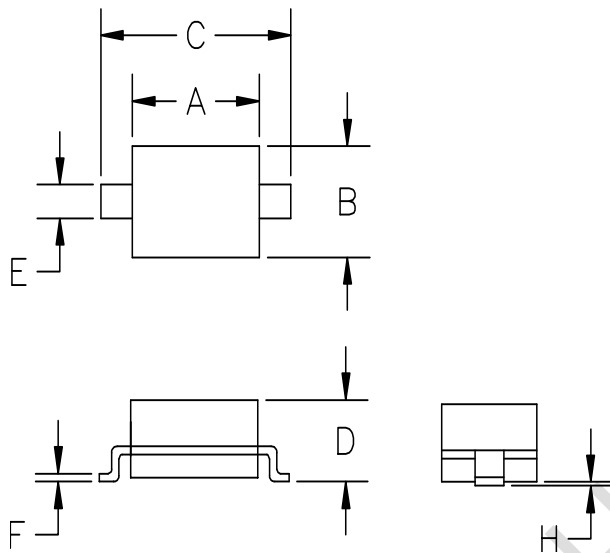


Power Derating Curve



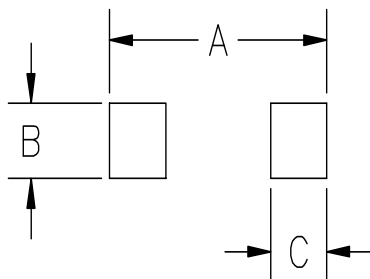
8 X 20us Pulse Waveform

## 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  |

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:*

*Click to view products by [TECH PUBLIC](#) manufacturer:*

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [DESD5V0U1BB-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE39CA-TP](#) [P6KE8.2A](#)  
[SA110CA](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#) [SMBJ33CATR](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD105-B1-02EL E6327](#) [ESD112-B1-02EL E6327](#) [ESD119B1W01005E6327XTSA1](#) [ESD5V0L1B02VH6327XTSA1](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-HF](#)  
[3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [DESD5V0U1BL-7B](#) [DRTR5V0U4SL-7](#)  
[SCM1293A-04SO](#) [ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [SMF8.0A-TP](#) [SMLJ45CA-TP](#) [SMQA1000T1G](#) [CEN955 W/DATA](#) [82350120560](#)  
[VESD12A1A-HD1-GS08](#) [CPDUR5V0R-HF](#) [CPDQC5V0U-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [IP4042CX5/LF,135](#) [D1213A-01LP4-7B](#) [D1213A-02WL-7](#) [1SMB33CAT3G-XYZ](#) [MMAD1108/TR13](#) [5KP100A](#) [5KP15A](#)