

Features

- 400W peak pulse power (8/20 μ s)
- Ultra low capacitance: 0.6pF typical
- Ultra low leakage: nA level
- Low operating voltage: 3.3V
- Low clamping voltage
- Protects one power line or data line
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: ± 30 kV
Contact discharge: ± 30 kV
 - IEC61000-4-4 (EFT) 80A (5/50ns)
 - IEC61000-4-5 (Lightning) 20A (8/20)
- RoHS Compliant

Applications

- USB Ports
- Smart Phones
- Wireless Systems
- Ethernet 10/100/1000 Base T

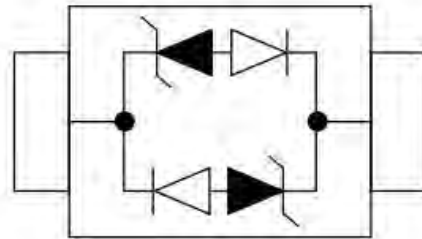
Mechanical Characteristics

- 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
- Terminal Connections: See Diagram Below
- Device Marking: CC

Dimensions SOD-323



Pin Configuration



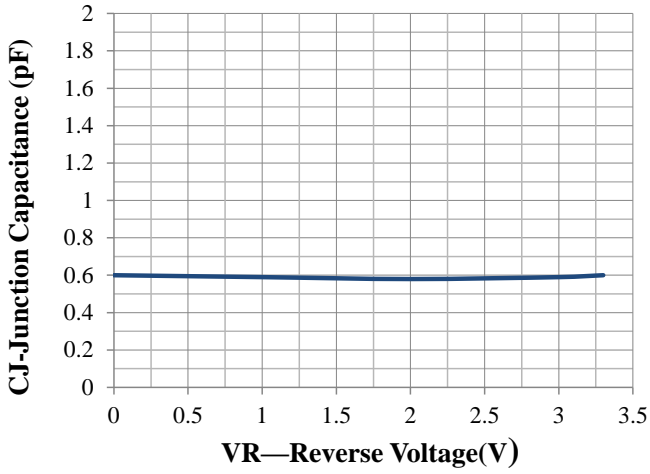
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20 μ s) | P _{pp} | 400 | W |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ± 30 | Kv |
| ESD per IEC 61000-4-2 (Contact) | | ± 30 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STJ} | -55 to +150 | °C |

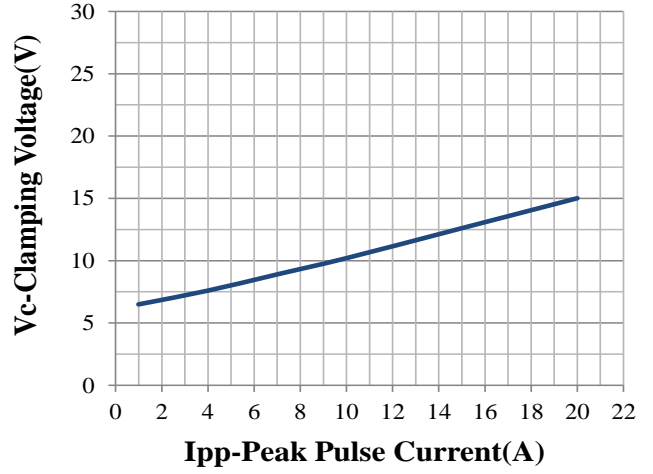
Electrical Characteristics (TA=25°C unless otherwise specified)

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|--------|------------------------------|---------------------|-----|-----|-----|------|
| VRWM | Reverse Working Peak Voltage | | | | 3.3 | V |
| VBR | Reverse Breakdown Voltage | IT = 1mA | 4 | | | V |
| IR | Reverse Leakage Current | VRWM = 3.3V | | | 0.2 | μA |
| VC | Clamping Voltage | IPP = 1 A (8/20μs) | | | 7 | V |
| VC | Clamping Voltage | IPP = 20 A (8/20μs) | | | 20 | V |
| CJ | Capacitance | VR = 0V, f = 1MHz | | 0.6 | | pF |

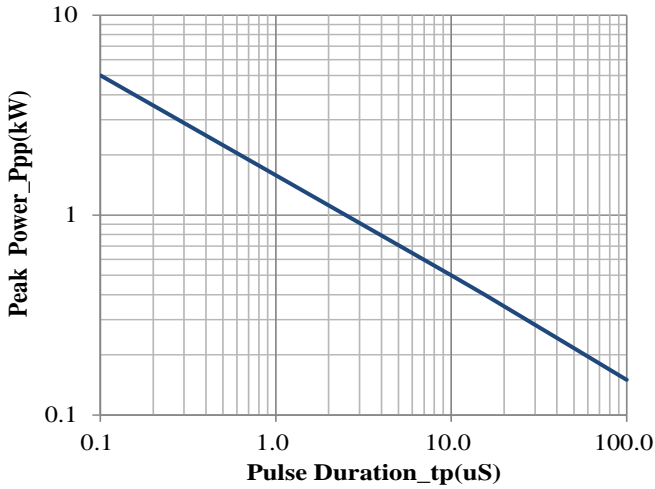
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



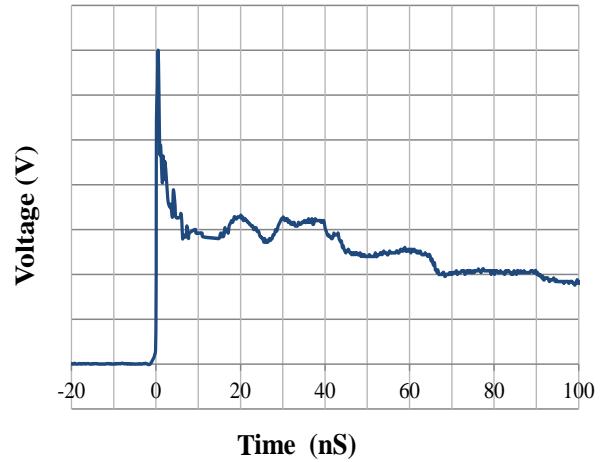
Junction Capacitance vs. Reverse Voltage



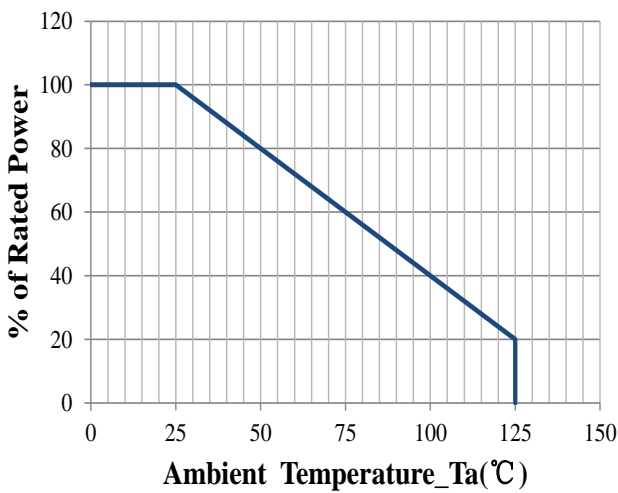
Clamping Voltage vs. Peak Pulse Current



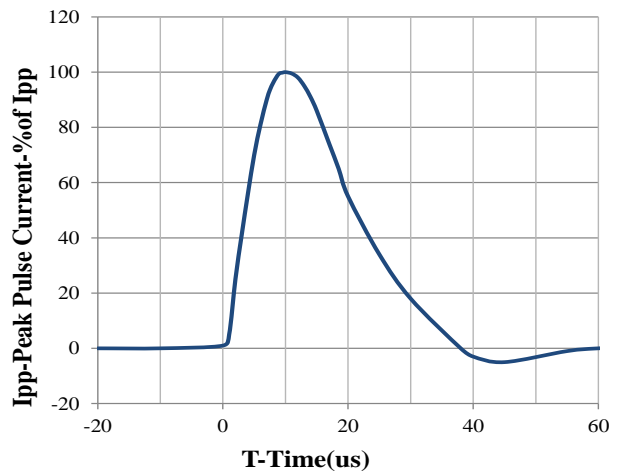
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

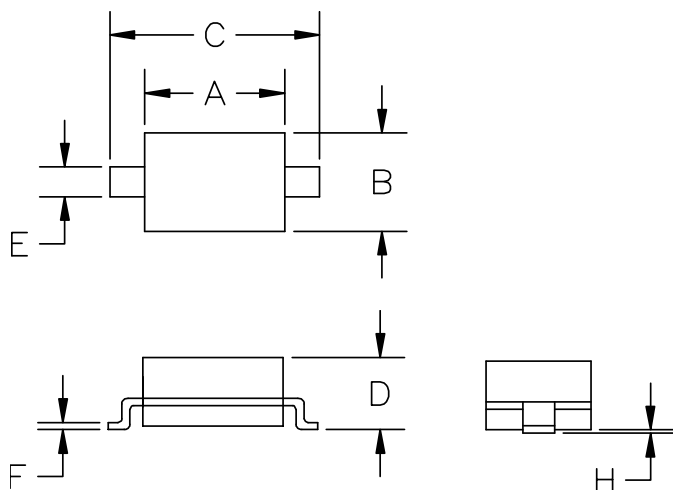


Power Derating Curve



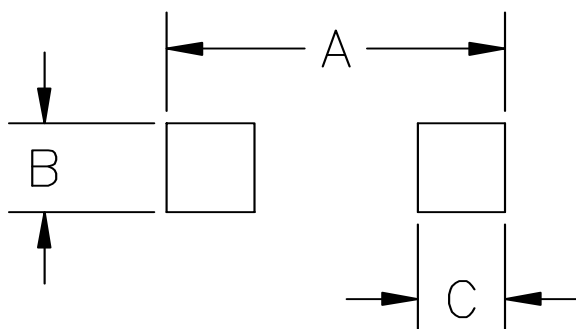
8 X 20us Pulse Waveform

SOD-323 Package Outline & Dimensions



| 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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