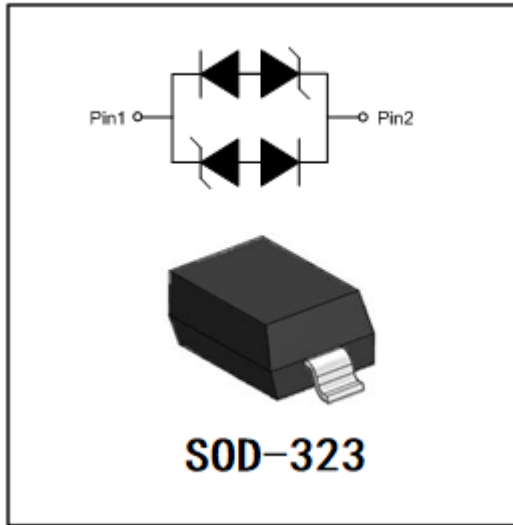


1-Line Low Capacitance Bi-directional TVS Diode



Features

- 350W peak pulse power (8/20 μ s)
- Ultra low capacitance: 1pF typical
- Ultra low leakage: nA level
- Operating voltage: 12V
- Low clamping voltage
- Protects one power line or data line
- RoHS Compliant

Mechanical Characteristics

- Package: SOD-323
- Moisture Sensitivity: Level 1 per J-STD-020
- Case Material: "Green" Molding Compound
- Marking Information: See Below



Maximum Ratings

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|------------------|----------------------|------|
| Peak Pulse Power (8/20 μ s) | Ppk | 350 | W |
| Peak Pulse Current (8/20 μ s) | I _{PP} | 14 | A |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V _{ESD} | ± 30 ± 30 | KV |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

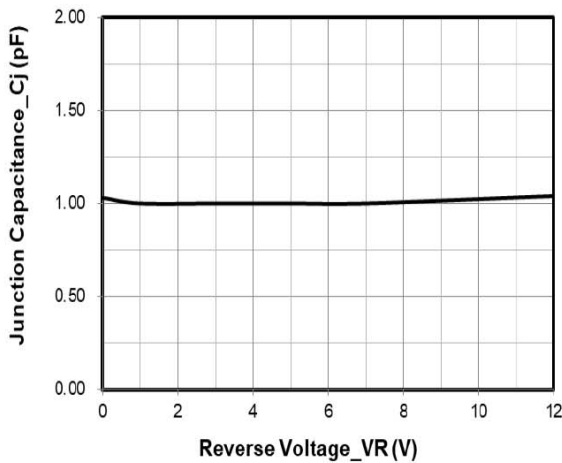
Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | CONDITIONS | MIN | TYP | MAX |
|-------------------------|------------------|---------|--|------|-----|-----|
| Reverse Working Voltage | V _{RWM} | V | | | | 12 |
| Breakdown Voltage | V _{BR} | V | I _T = 1mA | 13.3 | | |
| Reverse Leakage Current | I _R | μ A | V _{RWM} = 12V | | | 0.2 |
| Clamping Voltage | V _C | V | I _{PP} = 1A (8/20 μ s pulse) | | | 18 |
| Clamping Voltage | V _C | V | I _{PP} = 14A (8/20 μ s pulse) | | | 25 |
| Junction Capacitance | C _J | pF | V _R = 0V, f = 1MHz | | 1 | 1.5 |

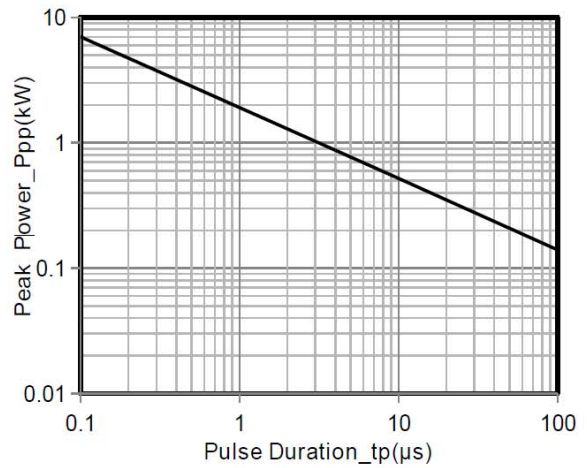


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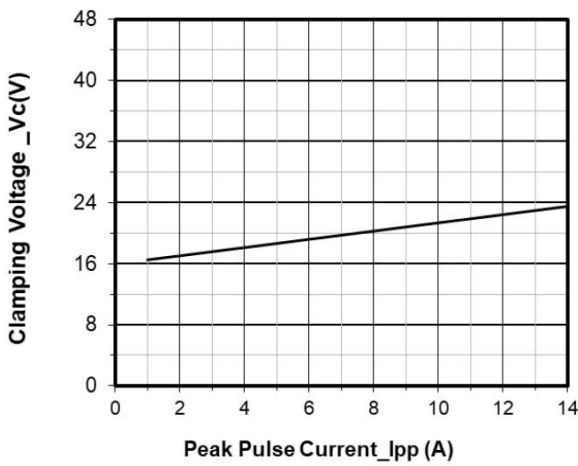
■ Characteristics (Typical)



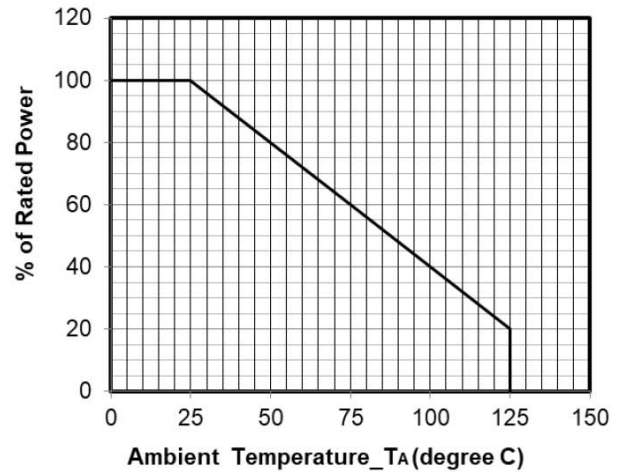
Junction Capacitance vs. Reverse Voltage



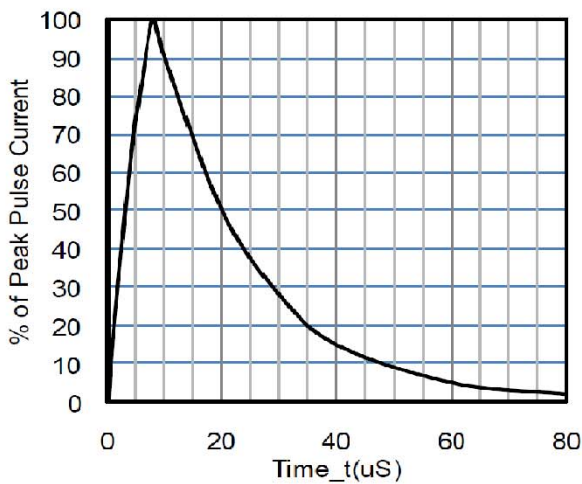
Peak Pulse Power vs. Pulse Time



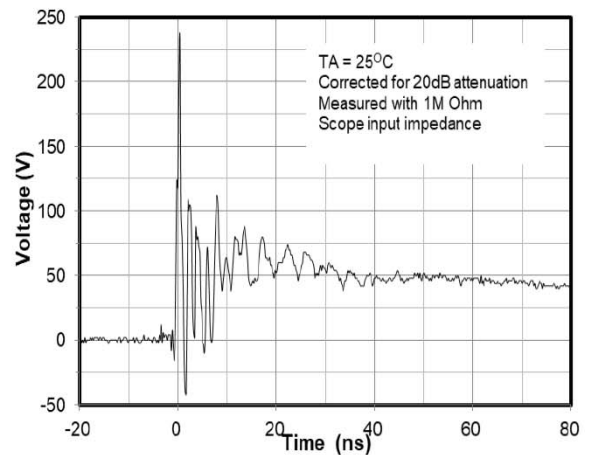
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 / 20μs Pulse Waveform



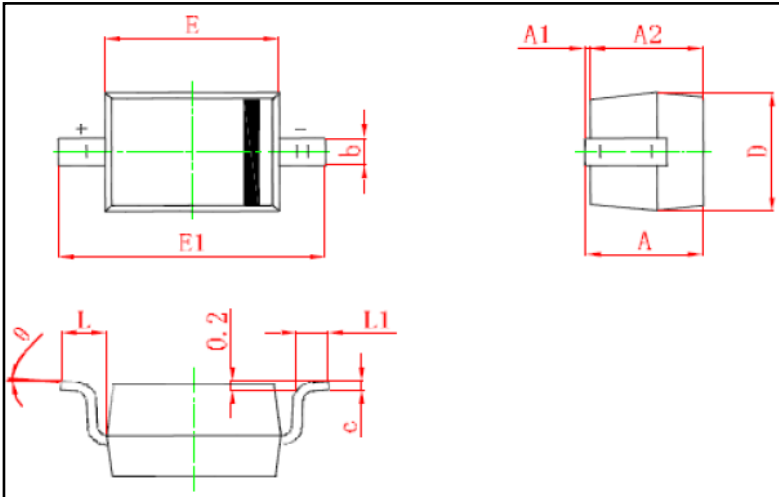
ESD Clamping Voltage

8 kV Contact per IEC61000-4-2



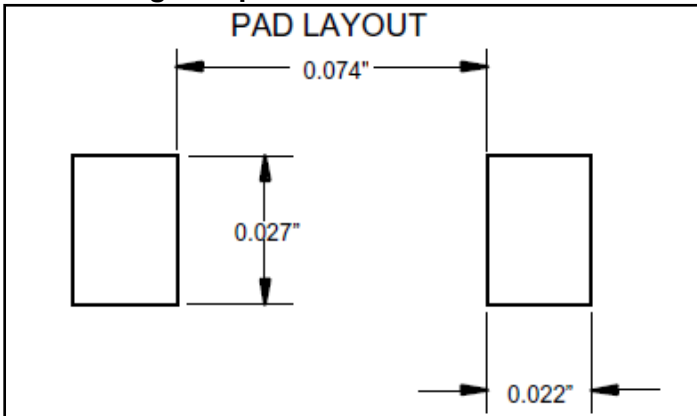
ESDSL12VD3BA

■ Outline Dimensions



| Symbol | Min. (mm) | Max. (mm) |
|----------|-----------|-----------|
| A | | 1.000 |
| A1 | 0.000 | 0.100 |
| A2 | 0.800 | 0.900 |
| b | 0.250 | 0.400 |
| c | 0.080 | 0.150 |
| D | 1.200 | 1.400 |
| E | 1.600 | 1.800 |
| E1 | 2.500 | 2.700 |
| L | 0.475REF | |
| L1 | 0.250 | 0.400 |
| θ | 0° | 8° |

■ Soldering Footprint





ESDSL12VD3BA

Disclaimer

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