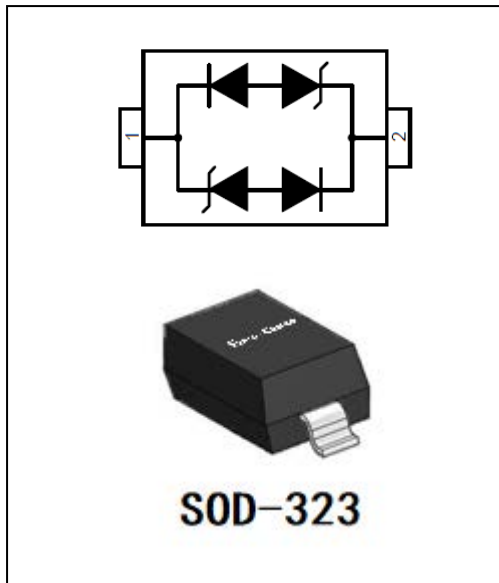


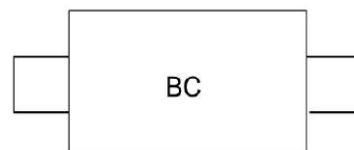
## 1-Line Low Capacitance Bi-directional TVS Diode



### Features

- 350W peak pulse power (8/20 $\mu$ s)
- Ultra low capacitance: 1pF typical
- Ultra low leakage: nA level
- Operating voltage: 8V
- 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
  - IEC61000-4-5 (Lightning) 18A (8/20 $\mu$ s)
- Compliant

### Marking Information



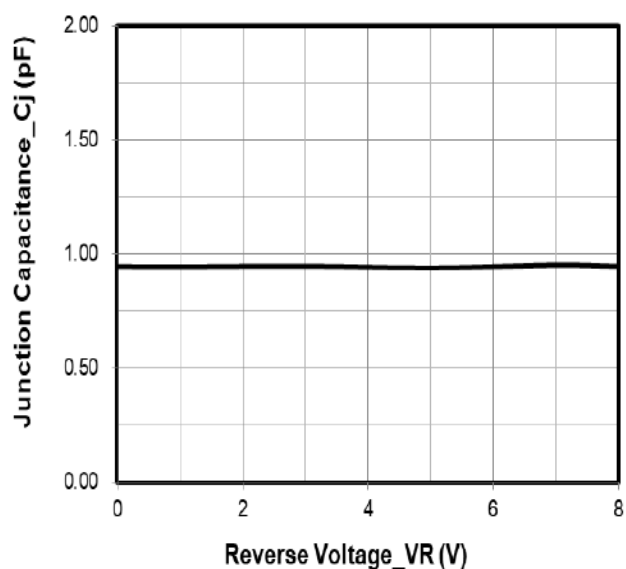
### Maximum Ratings

| PARAMETER                                                      | SYMBOL | VALUE                | UNIT         |
|----------------------------------------------------------------|--------|----------------------|--------------|
| Peak Pulse Power (8/20 $\mu$ s)                                | Ppk    | 350                  | W            |
| Peak Pulse Current (8/20 $\mu$ s)                              | IPP    | 18                   | A            |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | VESD   | $\pm 30$<br>$\pm 30$ | KV           |
| Operating Temperature Range                                    | TJ     | -55 to +125          | $^{\circ}$ C |
| Storage Temperature Range                                      | Tstg   | -55 to +150          | $^{\circ}$ C |

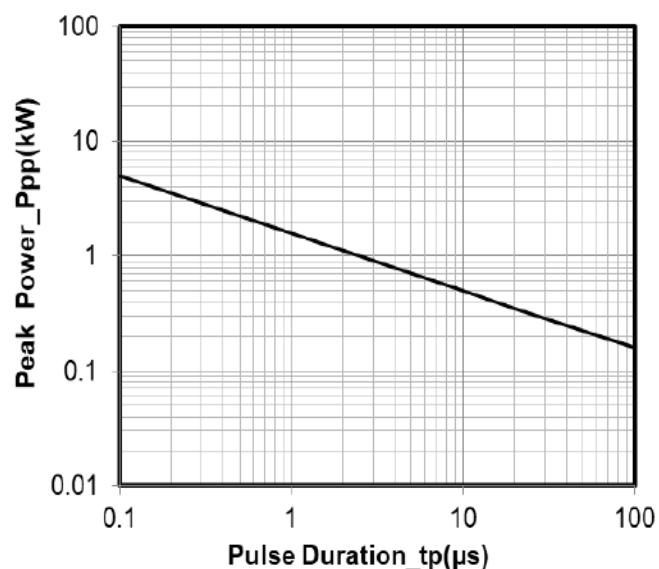
## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER               | SYMBOL           | UNIT | CONDITIONS                           | MIN | TYP | MAX  |
|-------------------------|------------------|------|--------------------------------------|-----|-----|------|
| Reverse Working Voltage | V <sub>RWM</sub> | V    |                                      |     |     | 8    |
| Breakdown Voltage       | V <sub>BR</sub>  | V    | I <sub>T</sub> = 1mA                 | 8.5 |     | 10   |
| Reverse Leakage Current | I <sub>R</sub>   | μA   | V <sub>RWM</sub> = 8V                |     |     | 0.2  |
| Clamping Voltage        | V <sub>C</sub>   | V    | I <sub>PP</sub> = 1A (8/20μs pulse)  |     |     | 9    |
| Clamping Voltage        | V <sub>C</sub>   | V    | I <sub>PP</sub> = 18A (8/20μs pulse) |     |     | 19.5 |
| Junction Capacitance    | C <sub>J</sub>   | pF   | V <sub>R</sub> = 0V, f = 1MHz        |     | 1   |      |

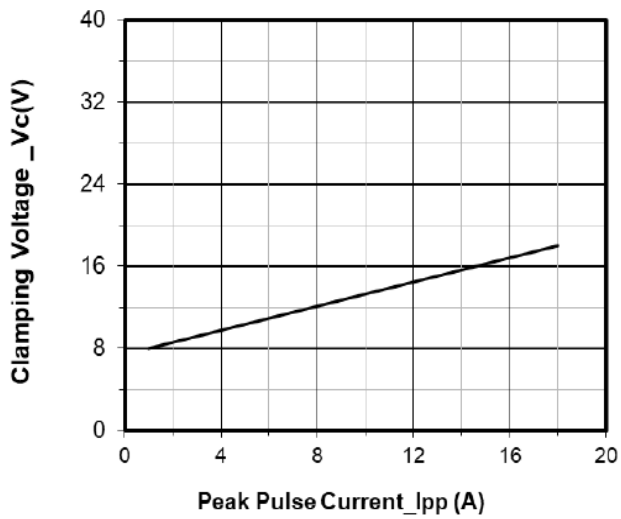
## ■ Characteristics (Typical)



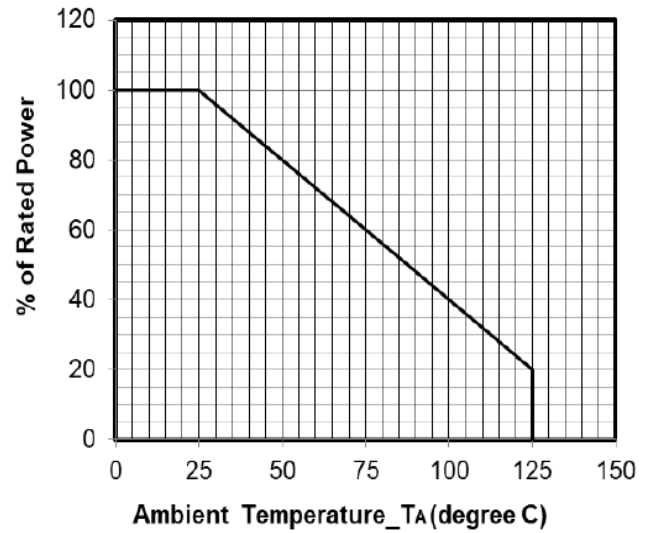
Junction Capacitance vs. Reverse Voltage



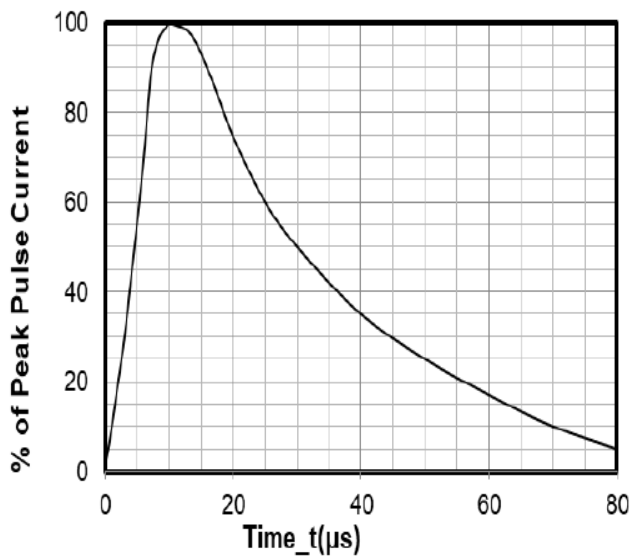
Peak Pulse Power vs. Pulse Time



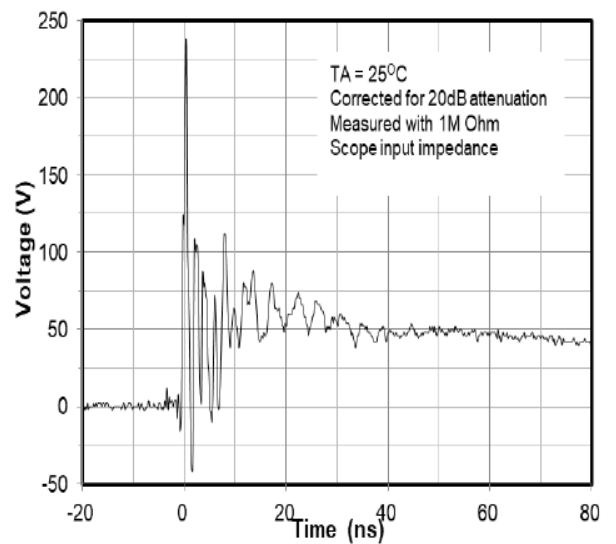
**Clamping Voltage vs. Peak Pulse Current**



**Power Derating Curve**

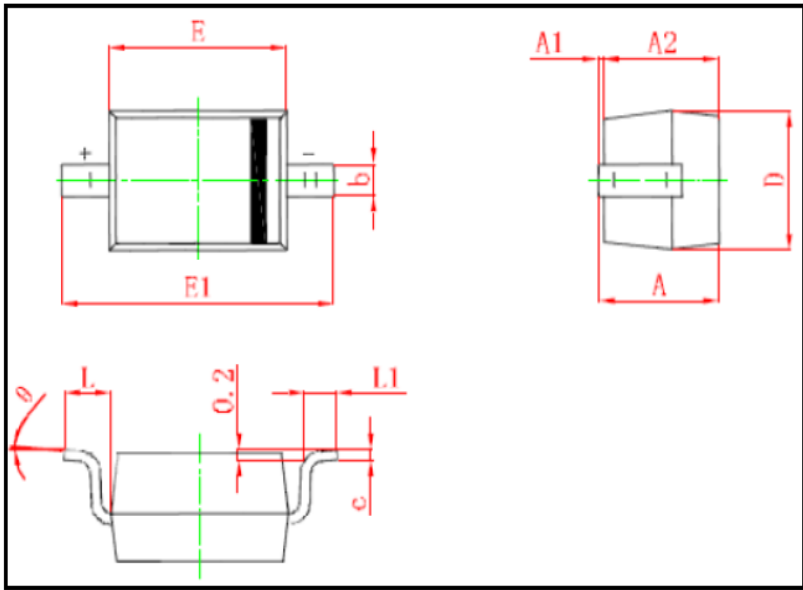


**8 X 20μS Pulse Waveform**



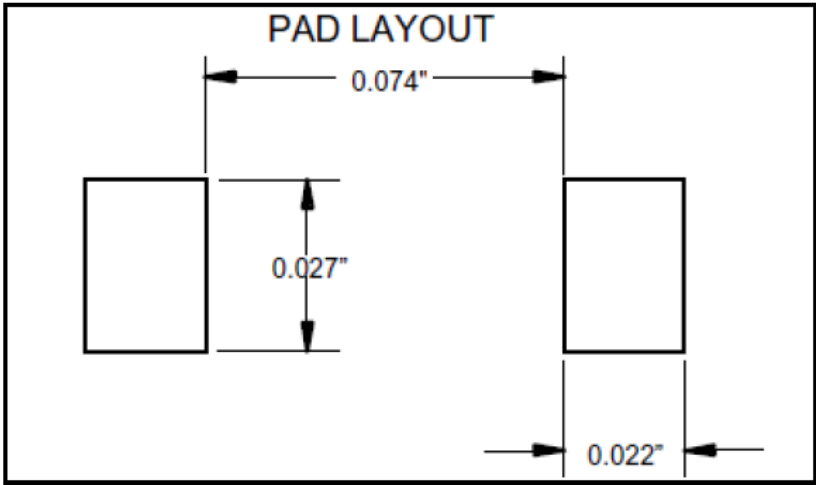
**ESD Clamping Voltage**  
**8 kV Contact per IEC61000-4-2**

■ 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



Unit: inches

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