

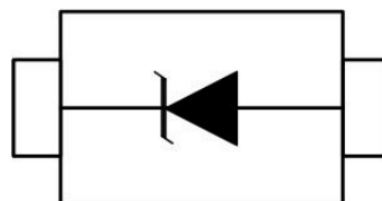
### Features

- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 15\text{kV}$
    - Contact discharge:  $\pm 8\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 12A (8/20 $\mu\text{s}$ )
- RoHS Compliant

### Dimensions SOD-323



### Pin Configuration



### Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

### Mechanical Characteristics

- Package: SOD-323
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch

### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

| Parameter                              | Symbol           | Value       | Unit |
|----------------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20 $\mu\text{s}$ ) | P <sub>pp</sub>  | 500         | W    |
| ESD per IEC 61000-4-2 (Air)            | V <sub>ESD</sub> | $\pm 15$    | Kv   |
| ESD per IEC 61000-4-2 (Contact)        |                  | $\pm 8$     |      |
| Operating Temperature Range            | T <sub>J</sub>   | -55 to +125 | °C   |
| Storage Temperature Range              | T <sub>STJ</sub> | -55 to +150 | °C   |

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

| Part Number | Device Marking | $V_{RWM}$<br>(V) | $V_{BR}$<br>(V) | $I_T$<br>(mA) | $V_C$<br>@1A | $V_C$ |      | $I_R$<br>$\mu A$<br>(Max) | C<br>(Pf)<br>(Typ.) |
|-------------|----------------|------------------|-----------------|---------------|--------------|-------|------|---------------------------|---------------------|
|             |                |                  |                 |               |              | (Max) | (@A) |                           |                     |
| UM3311W     | 31W            | 3.3              | 3.5             | 1             | 7.5          | 20    | 25   | 1                         | 75                  |

## Characteristic Curves

Fig1. 8/20 $\mu s$  Pulse Waveform

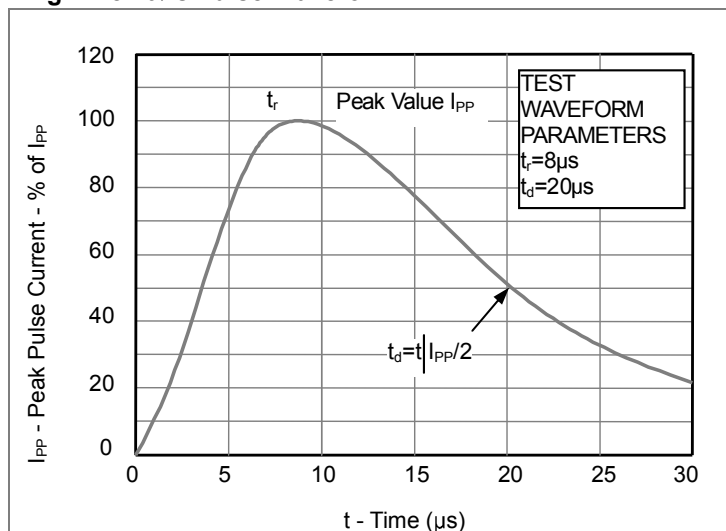


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

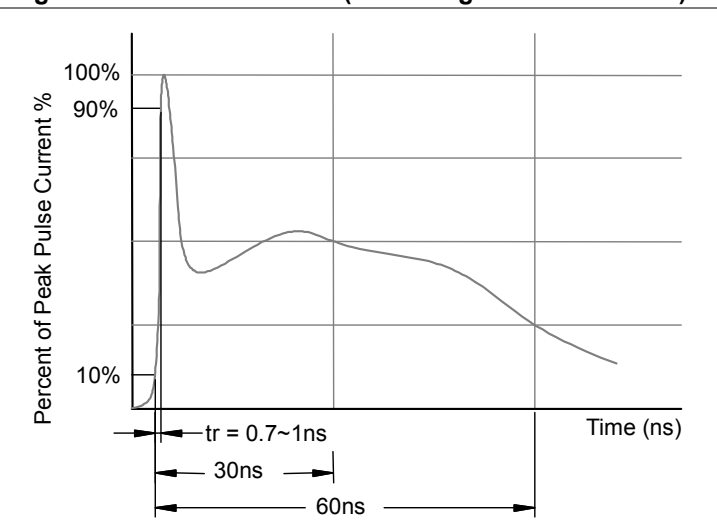
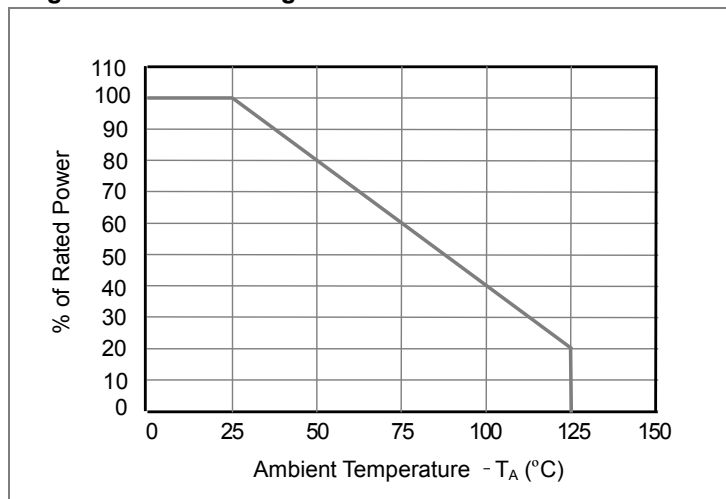
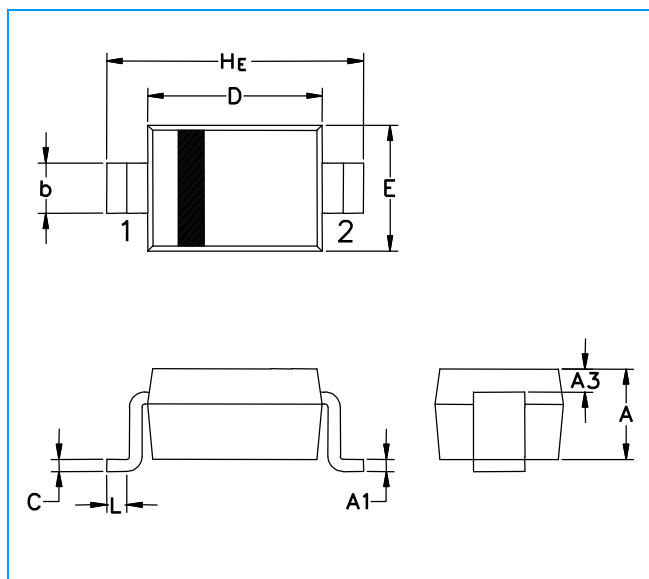


Fig3. Power Derating Curve

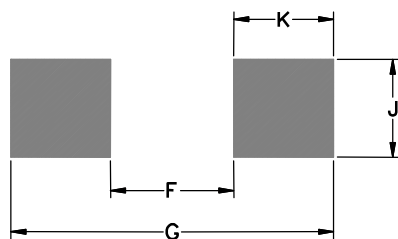


## SOD-323 Package Outline & Dimensions



| Symbol               | Millimeters |      |       | Inches    |       |       |
|----------------------|-------------|------|-------|-----------|-------|-------|
|                      | Min.        | Nom. | Max.  | Min.      | Nom.  | Max.  |
| <b>A</b>             | 0.80        | 0.90 | 1.00  | 0.031     | 0.035 | 0.040 |
| <b>A1</b>            | 0.00        | 0.05 | 0.10  | 0.000     | 0.002 | 0.004 |
| <b>A3</b>            | 0.15 REF    |      |       | 0.006 REF |       |       |
| <b>b</b>             | 0.25        | 0.32 | 0.40  | 0.010     | 0.012 | 0.016 |
| <b>C</b>             | 0.089       | 0.12 | 0.177 | 0.003     | 0.005 | 0.007 |
| <b>D</b>             | 1.60        | 1.70 | 1.80  | 0.062     | 0.066 | 0.070 |
| <b>E</b>             | 1.15        | 1.25 | 1.35  | 0.045     | 0.049 | 0.053 |
| <b>L</b>             | 0.08        |      |       | 0.003     |       |       |
| <b>H<sub>E</sub></b> | 2.30        | 2.50 | 2.70  | 0.090     | 0.098 | 0.105 |

### Soldering Footprint



| Symbol   | Millimeters | Inches |
|----------|-------------|--------|
| <b>F</b> | 1.60        | 0.063  |
| <b>G</b> | 2.85        | 0.112  |
| <b>J</b> | 0.83        | 0.033  |
| <b>K</b> | 0.63        | 0.025  |