



Features

- 450 Watts peak pulse power per line($t_p=8/20\mu s$)
- Replacement for MLV (0805)
- Protects one power or I/O port
- Low clamping voltage
- Applied to the type 3V and 36V
- 61000-4-2 (ESD): Air 30kV, Contact 30kV



RoHS
COMPLIANT

SOD-323

Applications

- Laptop computers
- Cellular phones
- Digital cameras
- Personal digital assistant (PDA)



Mechanical Characteristics

- Molded JEDEC SOD-323
- Weight 6 milligrams (Approximate)

Maximum Ratings ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

| Items | Symbol | Value | Unit |
|---|-----------|--|------------------|
| Peak pulse power($t_p=8/20\mu s$) at $T_L=25\text{ }^\circ\text{C}$ | P_{PP} | 450 | W |
| Operating temperature range | T_j | -55 $^\circ\text{C}$ to 125 $^\circ\text{C}$ | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 $^\circ\text{C}$ to 150 $^\circ\text{C}$ | $^\circ\text{C}$ |

**Standard capacitance TVS diode
(For ESD protection)****Electrical Characteristics**

| Part Number | Device Marking | Rated Stand-off Voltage V_{WM} Volts | Minimum Breakdown Voltage @ 1mA V (BR) Volts | Typical Clamping Voltage (See Fig.2) @ $I_{PP}=1A$ V_c Volts | Maximum Clamping Voltage (See Fig.2) @ 8/20 μ s V_c @ I_{PP} | Maximum Leakage Current @ V_{WM} I_D μ A | Typical Capacitance @ 0V, 1MHz C_J pF |
|-------------|----------------|--|--|--|--|--|---|
| SD03C | 3C | 3.3 | 4.00 | 6.5 | 9.7V @ 46.7A | 40.0 | 200 |
| SD05C | 5C | 5.0 | 6.20 | 7.3 | 10.8V @ 41.7A | 30.0 | 175 |
| SD08C | 8C | 8.0 | 8.89 | 10.5 | 15.7V @ 28.7A | 20.0 | 125 |
| SD08.5C | 8.5C | 8.5 | 9.44 | 11.2 | 17.1V @ 26.4A | 10.0 | 110 |
| SD09C | 9C | 9.0 | 10.0 | 11.8 | 18.2V @ 24.8A | 4.0 | 105 |
| SD10C | 10C | 10 | 11.1 | 13.1 | 19.4V @ 23.3A | 2.0 | 95 |
| SD11C | 11C | 11 | 12.2 | 14.3 | 21.1V @ 21.4A | 0.1 | 85 |
| SD12C | 12C | 12 | 13.3 | 15.6 | 22.9V @ 19.7A | 0.1 | 80 |
| SD13C | 13C | 13 | 14.4 | 16.8 | 24.8V @ 18.2A | 0.1 | 75 |
| SD14C | 14C | 14 | 15.6 | 18.2 | 25.8V @ 17.5A | 0.1 | 70 |
| SD15C | 15C | 15 | 16.7 | 19.5 | 26.8V @ 16.8A | 0.1 | 65 |
| SD16C | 16C | 16 | 17.8 | 20.7 | 28.0V @ 16.1A | 0.1 | 60 |
| SD17C | 17C | 17 | 18.9 | 22.1 | 29.2V @ 15.4A | 0.1 | 50 |
| SD18C | 18C | 18 | 20.0 | 23.4 | 32.4V @ 13.9A | 0.1 | 47 |
| SD20C | 20C | 20 | 22.2 | 25.8 | 33.5V @ 13.5A | 0.1 | 45 |
| SD22C | 22C | 22 | 24.4 | 28.3 | 36.9V @ 12.2A | 0.1 | 42 |
| SD24C | 24C | 24 | 26.7 | 30.9 | 40.2V @ 11.2A | 0.1 | 40 |
| SD26C | 26C | 26 | 28.9 | 33.6 | 43.5V @ 10.4A | 0.1 | 37 |
| SD28C | 28C | 28 | 31.1 | 36.1 | 46.8V @ 9.7A | 0.1 | 35 |
| SD30C | 30C | 30 | 33.3 | 38.6 | 51.0V @ 8.9A | 0.1 | 32 |
| SD33C | 33C | 33 | 36.7 | 42.4 | 57.0V @ 7.9A | 0.1 | 30 |
| SD36C | 36C | 36 | 40.0 | 46.7 | 63.6V @ 7.1A | 0.1 | 27 |



Characteristics Curves

Fig.1 Power Derating Curve

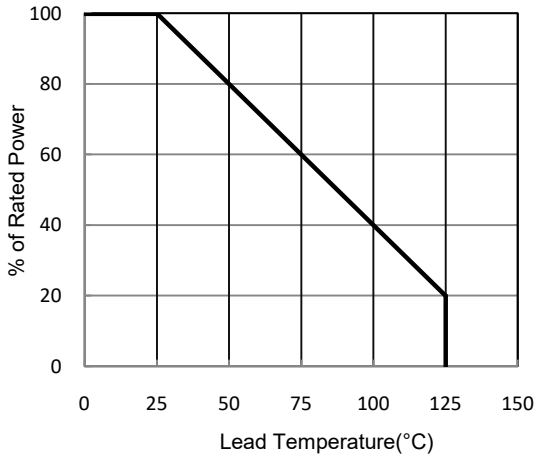


Fig 2. Peak Pulse Power vs. Pulse Time

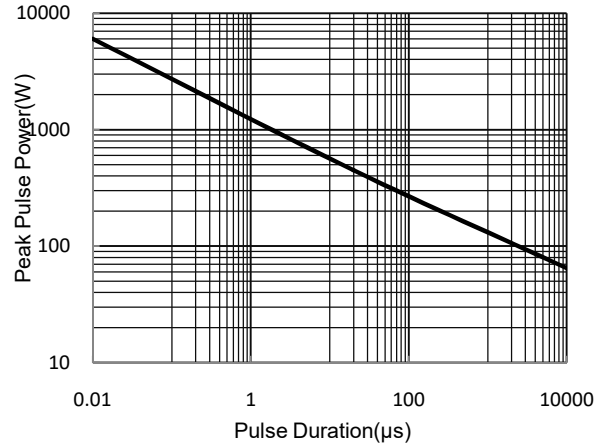
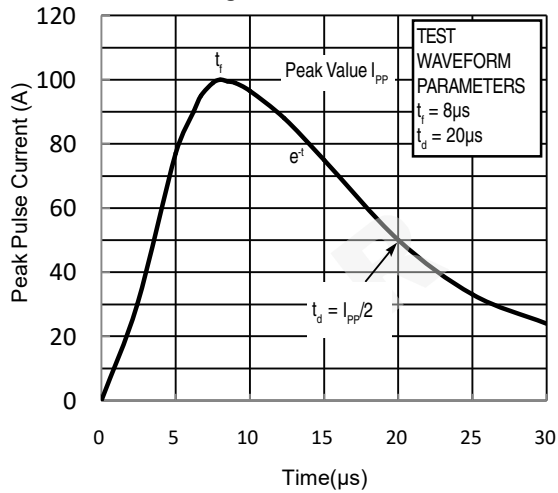


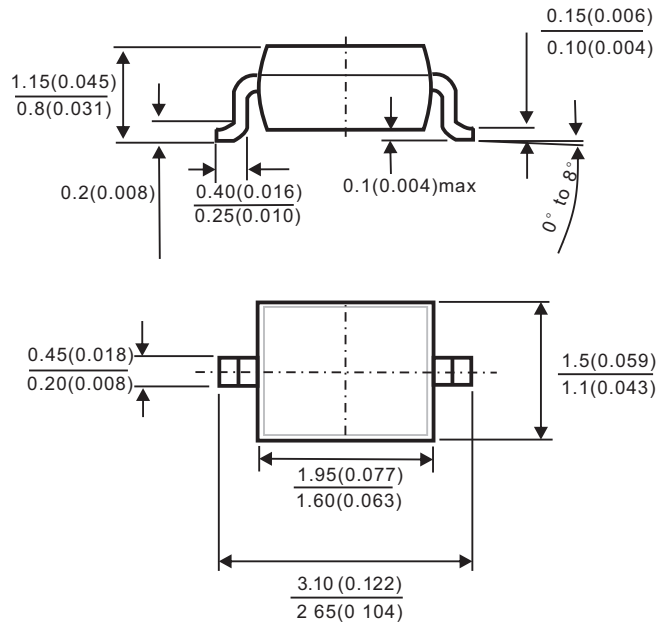
Fig3. Pulse Wave Form



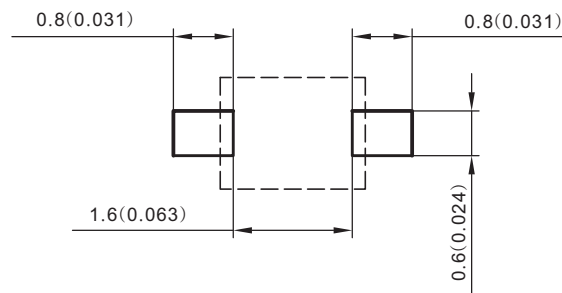


Package Outline

SOD-323



Footprint recommendation:



Package dimensions in millimeters (inches)

Ordering Information

| Outline | Reel (PCS) | Per Carton (PCS) | Reel Diameters (mm) |
|---------|------------|------------------|---------------------|
| Taping | 3,000 | 240,000 | 178/7" |

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