



东沃电子
DOWOSEMI

DW03D3BC-B-E

Order Code: DW03D3BC-B-E

Transient Voltage Suppressor

Features

- 100 Watts peak pulse power ($t_p = 8/20\mu s$)
- Protects one I/O or power line
- Replacement for MLV(0805)
- Low clamping voltage
- Working voltage: 3.3V
- Low leakage current
- Solid-state silicon-avalanche technology



SOD-323

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A ($8/20\mu s$)

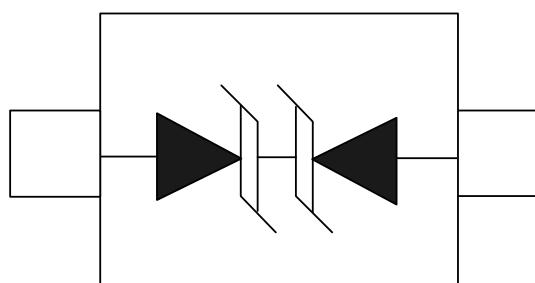
Mechanical Characteristics

- JEDEC SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

Schematic & PIN Configuration



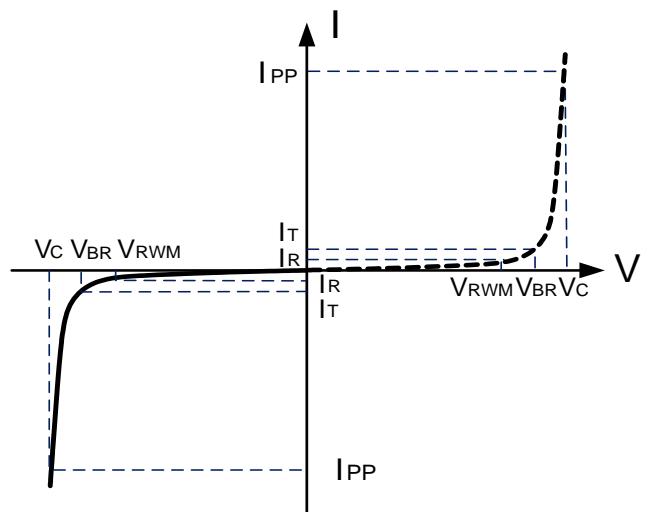
SOD-323 (Top View)

Absolute Maximum Rating

| Rating | Symbol | Value | Units |
|--|-----------|--------------|-------|
| Peak Pulse Power ($t_p = 8/20\mu s$) | P_{PP} | 100 | Watts |
| Maximum Peak Pulse Current ($t_p = 8/20\mu s$) | I_{PP} | 6 | A |
| Operating Temperature | T_J | -55 to + 125 | °C |
| Storage Temperature | T_{STG} | -55 to +150 | °C |

Electrical Parameters (T=25°C)

| Symbol | Parameter |
|-----------|-------------------------------------|
| I_{PP} | Reverse Peak Pulse Current |
| V_C | Clamping Voltage @ I_{PP} |
| V_{RWM} | Working Peak Reverse Voltage |
| I_R | Reverse Leakage Current @ V_{RWM} |
| V_{BR} | Breakdown Voltage @ I_T |
| I_T | Test Current |
| I_F | Forward Current |
| V_F | Forward Voltage @ I_F |



Electrical Characteristics

| DW03D3BC-B-E | | | | | | |
|---------------------------|-----------|---|---------|---------|---------|---------------|
| Parameter | Symbol | Conditions | Minimum | Typical | Maximum | Units |
| Reverse Stand-Off Voltage | V_{RWM} | | | | 3.3 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1\text{mA}$ | 4.0 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM}=3.3\text{V}, T=25^\circ\text{C}$ | | | 1 | μA |
| Clamping Voltage | V_C | $I_{PP}=6\text{A}, t_p=8/20\mu\text{s}$ | | | 14 | V |
| Junction Capacitance | C_j | $V_R = 0\text{V}, f = 1\text{MHz}$ | | 13 | 15 | pF |

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

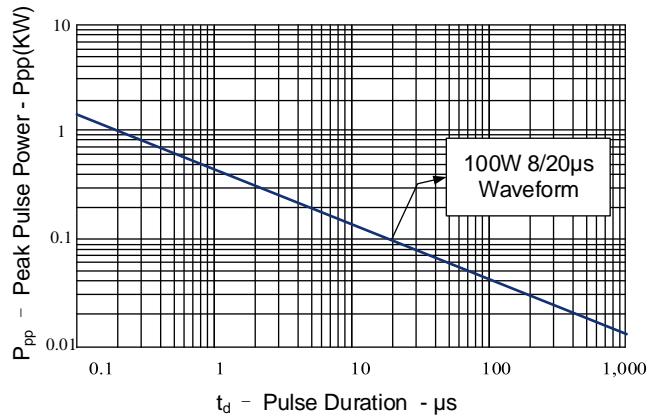


Figure 2: Power Derating Curve

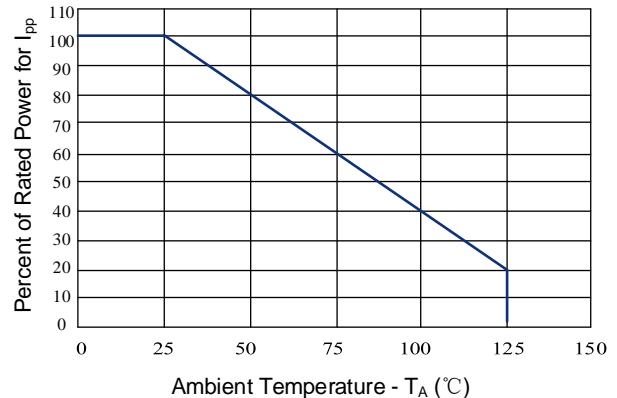


Figure 3: Clamping Voltage vs. Peak Pulse Current

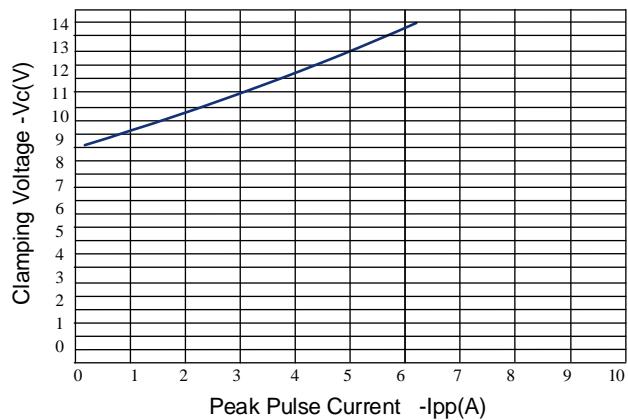


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

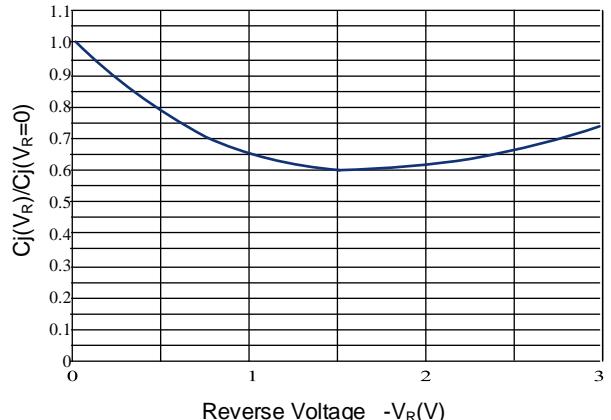


Figure 5: Pulse Waveform

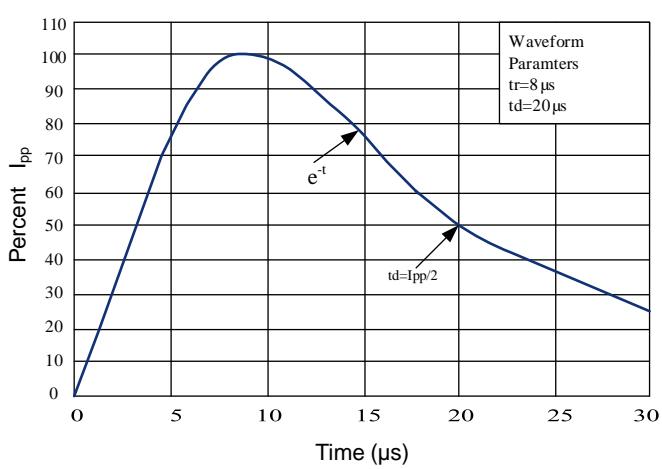
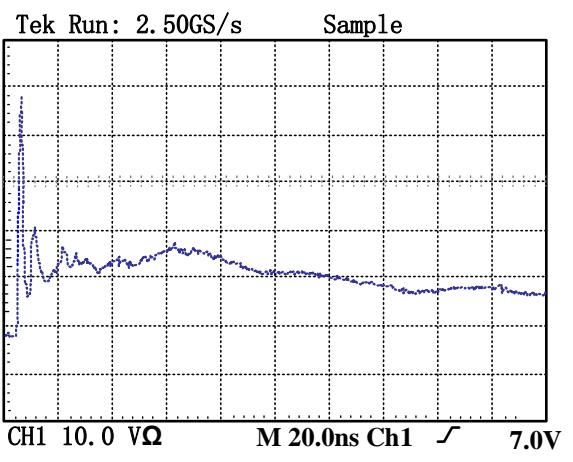


Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD323

| PACKAGE OUTLINE | | SOD-323 | | | |
|-----------------|------------|---------|----------|-------|--|
| SYMBOL | MILLIMETER | | INCHES | | |
| | MIN | MAX | MIN | MAX | |
| A | 1.60 | 1.80 | 0.063 | 0.071 | |
| B | 0.25 | 0.35 | 0.010 | 0.014 | |
| C | 2.50 | 2.70 | 0.098 | 0.106 | |
| D | 0.00 | 1.00 | 0.000 | 0.039 | |
| E | 1.20 | 1.40 | 0.047 | 0.055 | |
| F | 0.08 | 0.15 | 0.003 | 0.006 | |
| L | 0.475 REF | | 0.019REF | | |
| L1 | 0.25 | 0.40 | 0.010 | 0.016 | |
| H | 0.00 | 0.10 | 0.000 | 0.004 | |

| MOUNTING PAD |
|--|
| <p>0.118" (3.00mm)</p> <p>0.031" (0.80mm)</p> <p>0.031" (0.80mm)</p> |

Notes

1. Controlling Dimensions in Millimeters.
2. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes



Package Information

Qty: 3k/Reel