

Features

- 500 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Bidirectional Configuration
- Protects One Power or I/O Port
- Low Clamping Voltages
- Ultra Low Capacitance: 1.0 pF Typical

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 9A (8/20 μs)



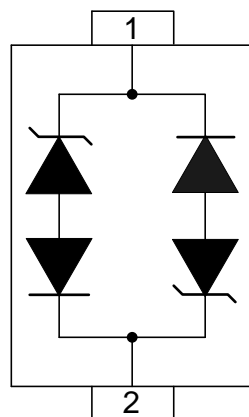
Mechanical Characteristics

- Molded JEDEC SOD-323 package
- Weight 10 milligrams (Approximate)
- Flammability rating UL 94V-0
- 8mm Tape and Reel Per EIA Standard 481
- Device Marking: Marking Code
- RoHS Compliant

Applications

- Ethernet - 10/100/1000 Base T
- Cellular Phones
- Handheld - Wireless Systems
- Personal Digital Assistant (PDA)
- USB Interface

PIN Configuration



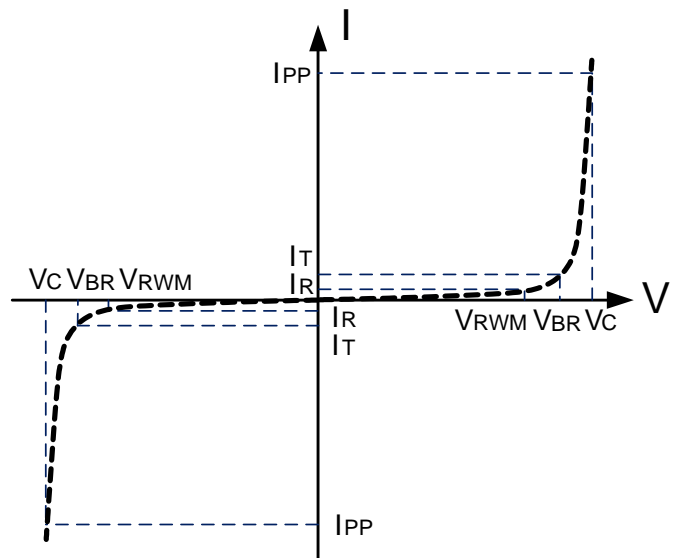
BIDIRECTIONAL

Absolute Maximum Rating

| Rating | Symbol | Value | Units |
|---|-----------|--------------|-------|
| Peak Pulse Power ($t_p=8/20\mu s$) - See Figure 1 | P_{PP} | 500 | Watts |
| Peak Pulse Current ($t_p =8/20\mu s$) | I_{pp} | 9 | 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

| PART NUMBER (See Note 1 & Note 2) | DEVICE MARKING | RATED STAND-OFF VOLTAGE V_{WM} (Volts) | MINIMUM BREAKDOWN VOLTAGE @ 1mA V_{BR} (Volts) | MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_{PP} = 1A$ V_C (Volts) | MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @8/20 μs V_C @ I_{PP} | MAXIMUM LEAKAGE CURRENT @ V_{WM} I_d (μA) | TYPICAL CAPACITANCE @0V, 1 MHz C (pF) |
|--------------------------------------|----------------|---|--|--|---|--|---|
| DW24DLC-B-S | CB | 24.0 | 26.7 | 33.0 | 54.0V @ 9.0A | 1 | 1 |

Note 1: Part numbers with an additional “B” suffix are bidirectional devices

Note 2: For Bidirectional Devices Only: Electrical characteristics apply in both directions.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

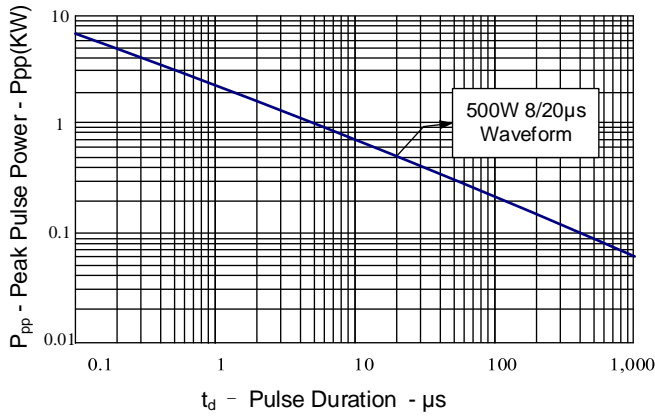


Figure 2: Power Derating Curve

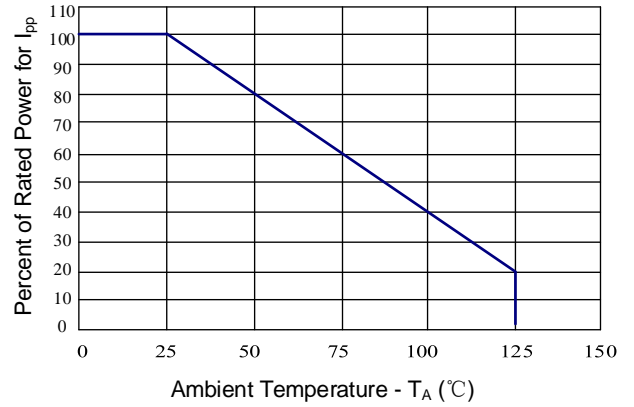


Figure 3: Clamping Voltage vs. Peak Pulse Current

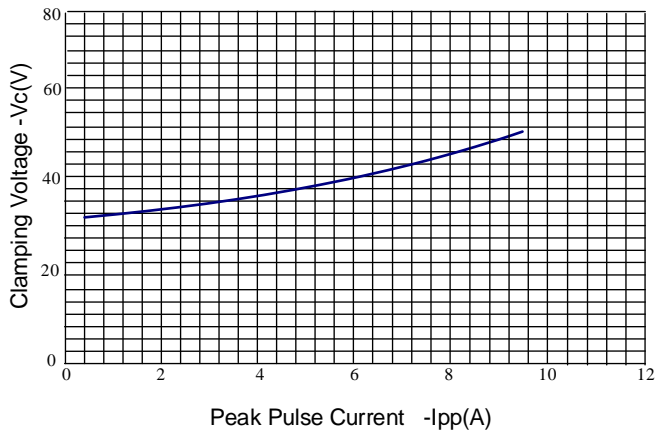


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

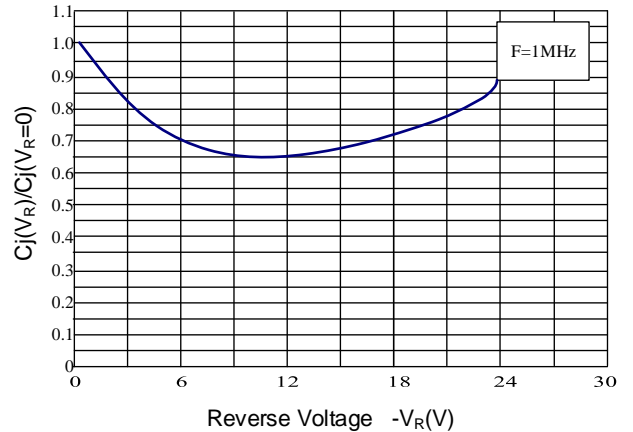
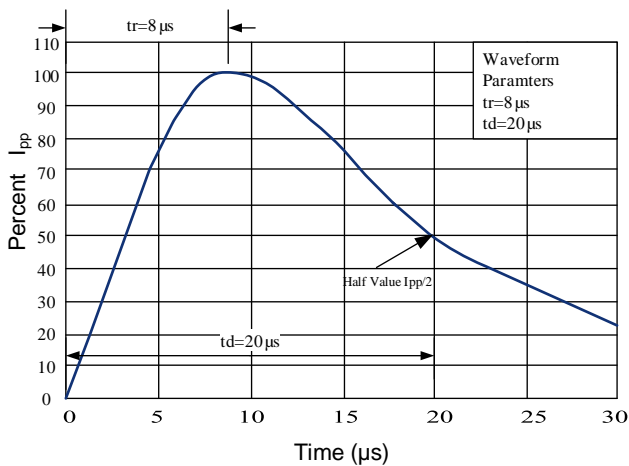
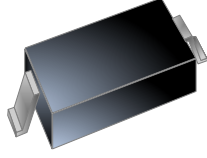
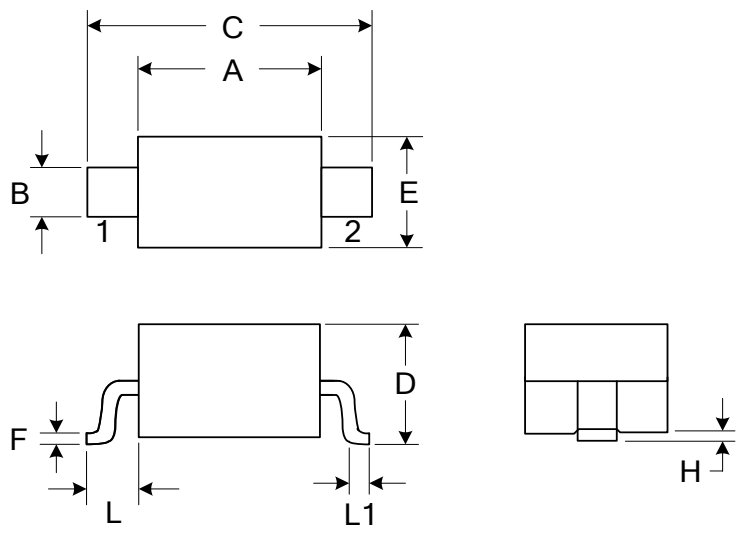
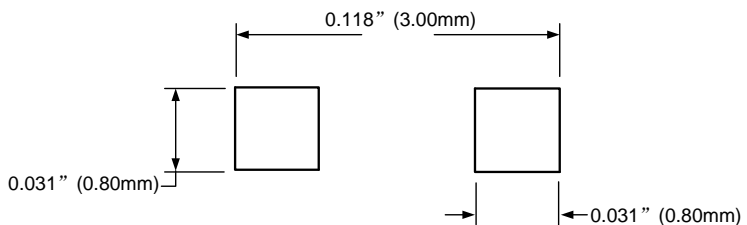


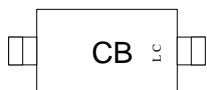
Figure 5: Pulse Waveform



Outline Drawing – SOD-323

| PACKAGE OUTLINE | |  SOD-323 | | | |
|---|------------|---|----------|-------|--|
|  | | DIMENSIONS | | | |
| 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 | | Notes 1. Controlling Dimensions in Millimeters. 2. Dimensions are exclusive of mold flash and metal burrs. | | | |
|  | | | | | |

Marking Codes

| | |
|--------------|---|
| Part Number | DW24DLC-B-S |
| Marking Code |  |

Package Information

Qty: 3k/Reel