

## Features

- 500 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- Bidirectional Configuration
- Protects One Power or I/O Port
- ESD Protection > 40 kilovolts
- Low Clamping Voltages
- Ultra Low Capacitance: 1.0 pF Typical

## 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(Surge): 20A, 8/20 $\mu s$

## Mechanical Characteristics

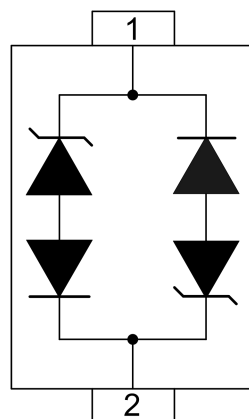
- Molded JEDEC SOD-323 package
- Weight 10 milligrams (Approximate)
- Flammability rating UL 94V-0
- 8mm Tape and Reel Per EIA Standard 481
- Device Marking: Marking Code
- RoHS Compliant

## Applications

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



## PIN Configuration



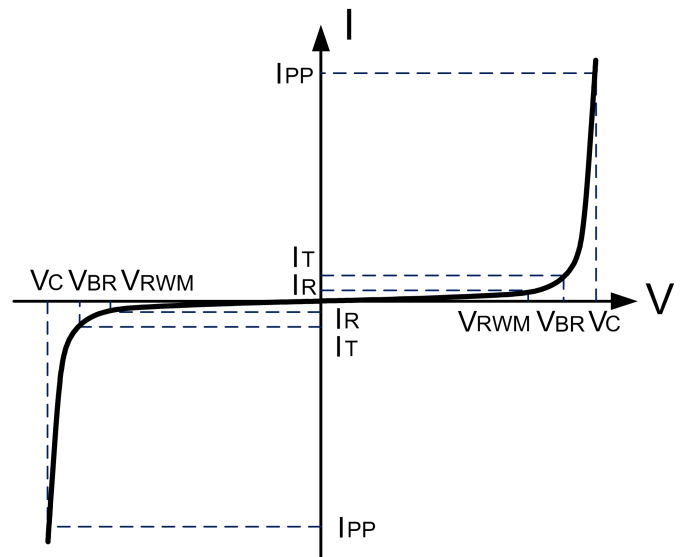
**BIDIRECTIONAL**

## Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ ) - See Figure 1	$P_{PP}$	500	Watts
Operating Temperature	$T_J$	-55 to + 150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

## Electrical Parameters (T=25 $^{\circ}C$ )

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum 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)	RATED STAND-OFF VOLTAGE $V_{WM}$ (Volts)	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{BR}$ (Volts)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_P = 1A$ $V_C$ (Volts)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @8/20 $\mu s$ $V_C$ @ $I_{PP}$	MAXIMUM LEAKAGE CURRENT @ $V_{WM}$ $I_d$ ( $\mu A$ )	TYPICAL CAPACITANCE @0V, 1 MHz C(pF)
DW08DLC-B-S	8.0	8.5	13.4	26.8V @ 20.0A	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.

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## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

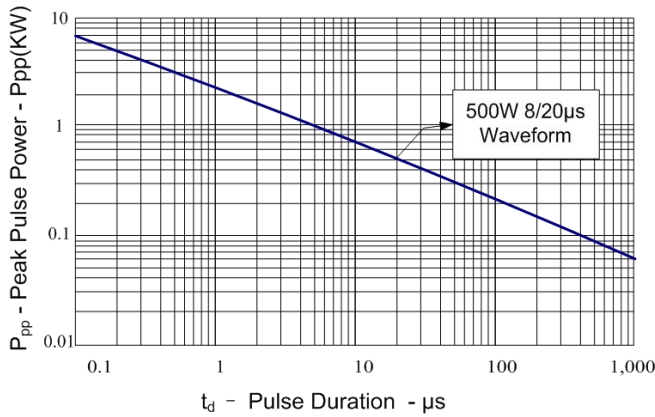


Figure 2: Power Derating Curve

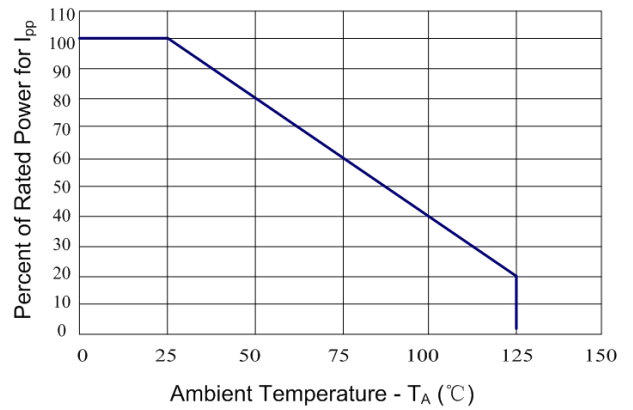


Figure 3: Clamping Voltage vs. Peak Pulse Current

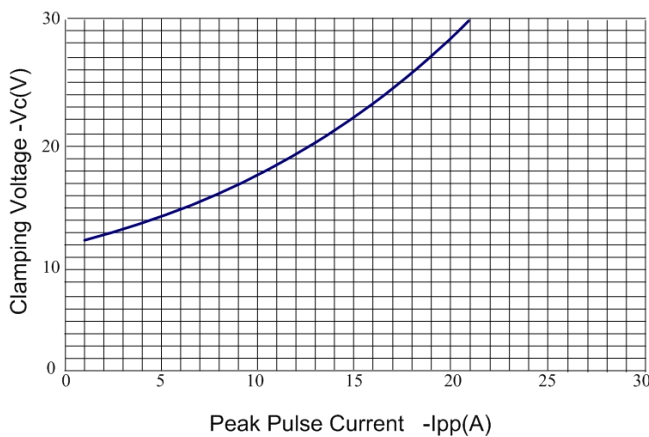


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

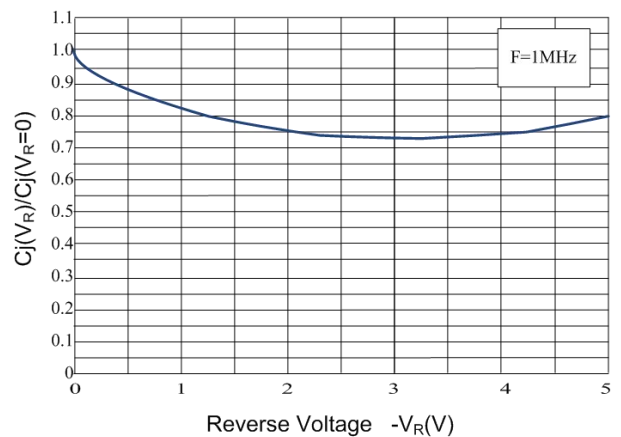


Figure 5: Pulse Waveform

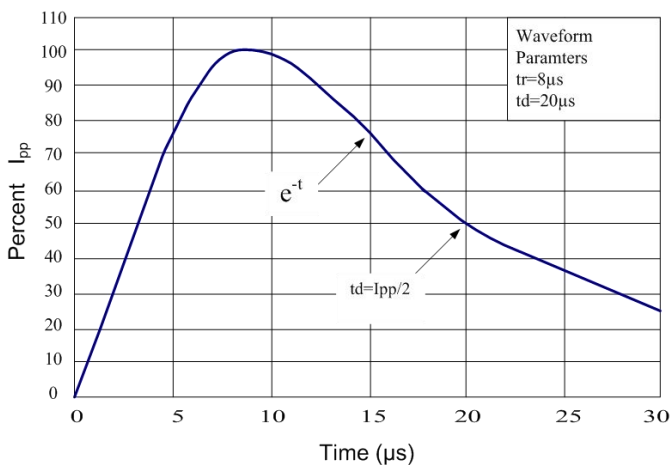
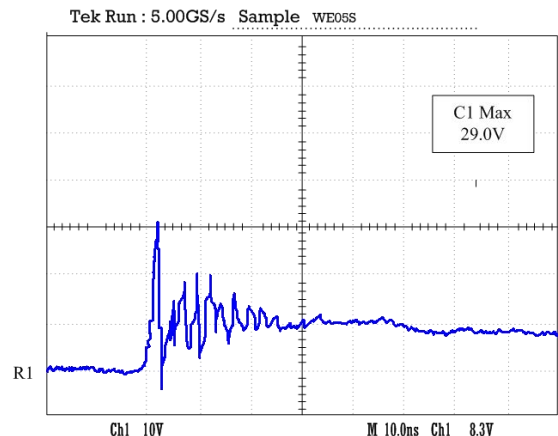

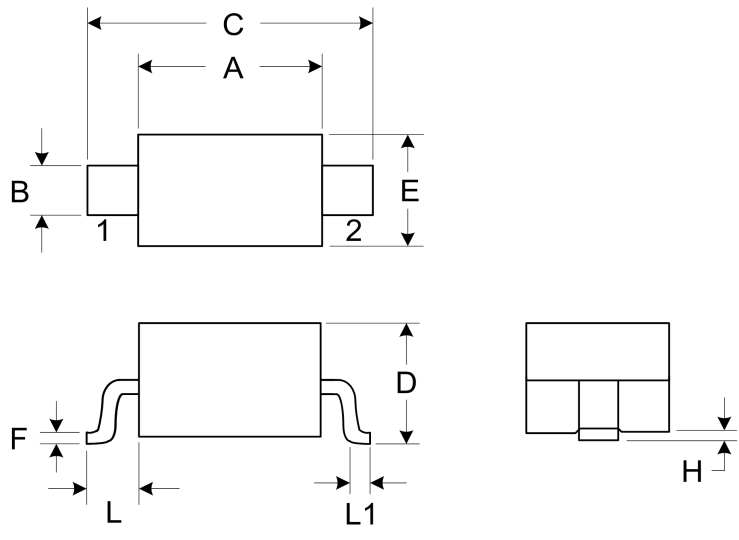
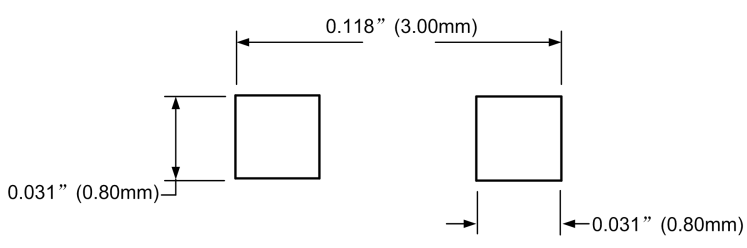


Figure 6: ESD Clamping (8kV Contact per IEC 61000-4-2)

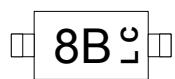




### Outline Drawing – SOD-323

PACKAGE OUTLINE		 <b>SOD-323</b>			
		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		<b>Notes</b> 1. Controlling Dimensions in Millimeters. 2. Dimensions are exclusive of mold flash and metal burrs.			
					

### Marking Codes

Part Number	DW08DLC-B-S
Marking Code	

### Package Information

Qty: 3k/Reel