



## Features

- 430 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(Surge) 13.5A (8/20 $\mu s$ )



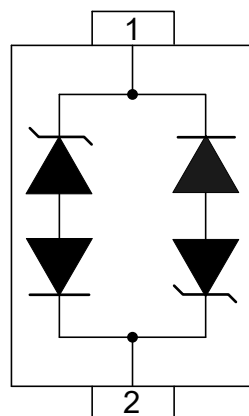
## Mechanical Characteristics

- 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

- xDSL, VDSL
- Cellular Phones
- Handheld - Wireless Systems
- Personal Digital Assistant (PDA)
- USB Interface

## PIN Configuration



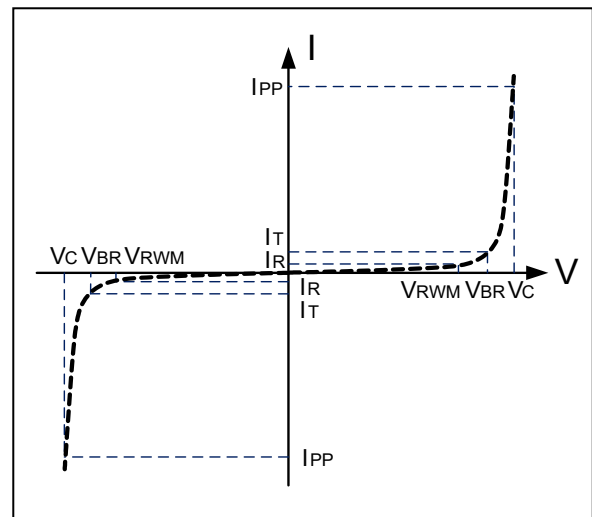
**BIDIRECTIONAL**

## Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ ) - See Figure 1	$P_{PP}$	430	W
Peak Pulse Current ( $t_p=8/20\mu s$ )	$I_{PP}$	13.5	A
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) @ IPP= 1A $V_C$ (Volts)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @8/20 $\mu s$ $V_C$ @ IPP	MAXIMUM LEAKAGE CURRENT @ $V_{WM}$ $I_d$ (nA)	TYPICAL CAPACITANCE @0V, 1 MHz C(pF)
DW12DLC-BN-S	12.0	15.8	16.0	32 V @13.5A	200	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

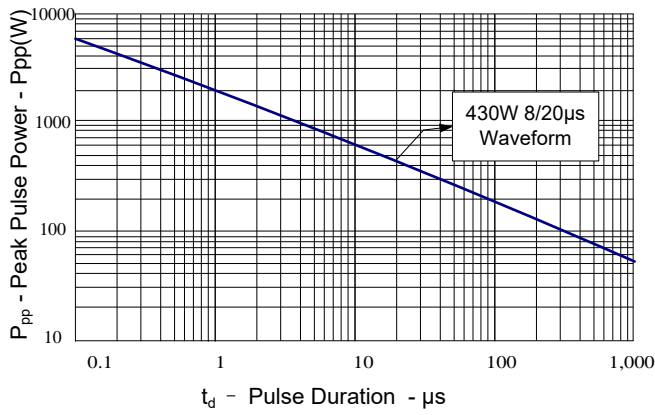


Figure 2: Power Derating Curve

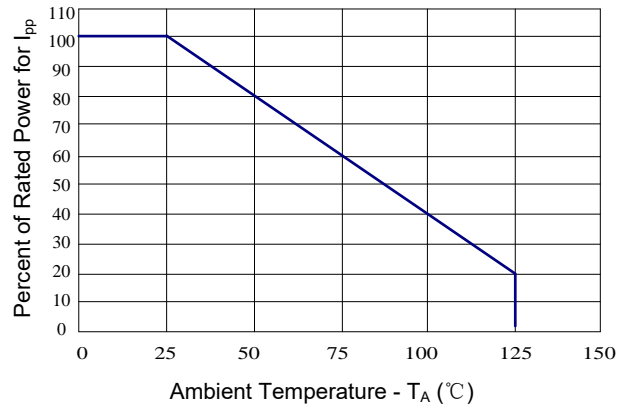


Figure 3: Clamping Voltage vs. Peak Pulse Current

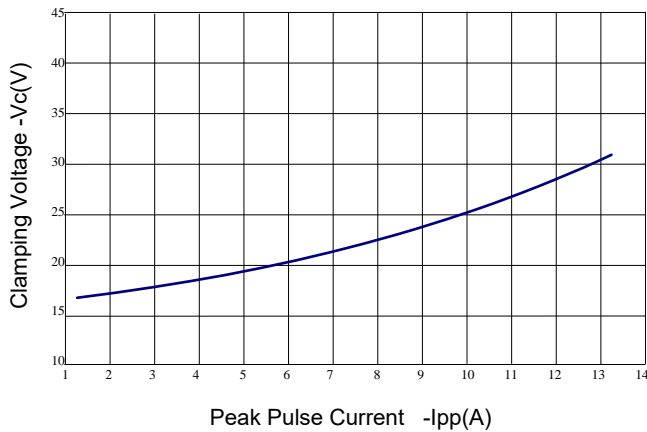


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

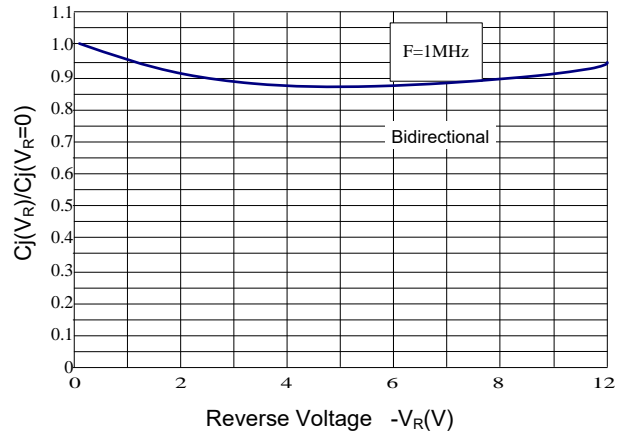
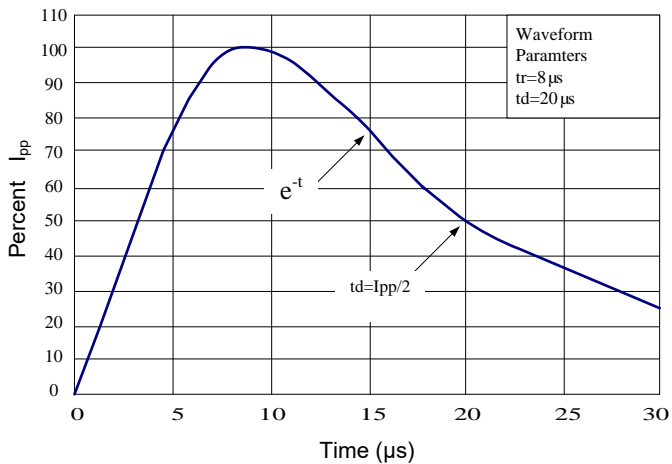
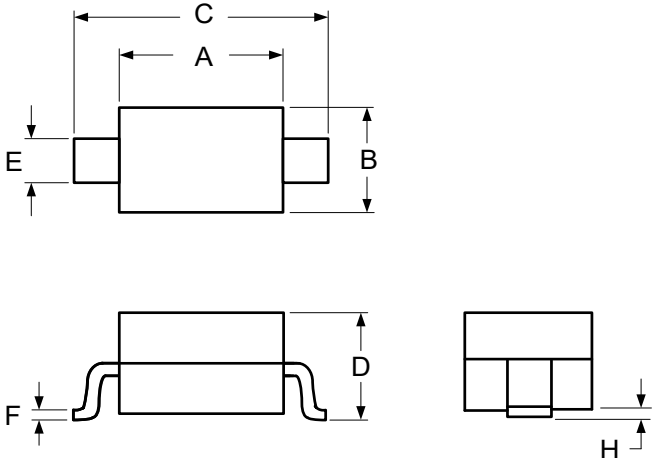


Figure 5: Pulse Waveform

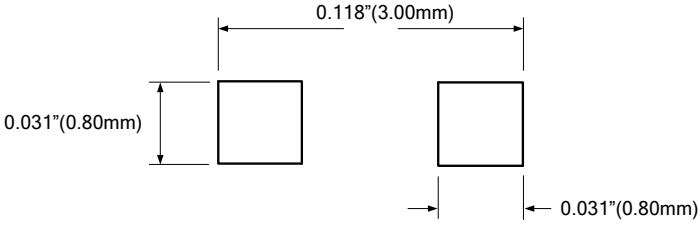


R1

## Outline Drawing – SOD-323

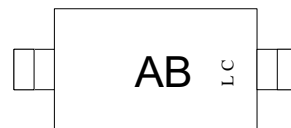
PACKAGE OUTLINE		DIMENSIONS			
 <p>Diagram showing top, side, and end views of the SOD-323 package with dimensions A, B, C, D, E, F, and H.</p>		<b>SOD-323</b>			
		SYMBOL	MILLIMETER		INCHES
		MIN	MAX	MIN	MAX
A		1.60	1.90	0.063	0.075
B		1.15	1.45	0.045	0.057
C		2.39	2.70	0.094	0.106
D		0.92	1.10	0.036	0.043
E		0.25	0.40	0.010	0.016
F		0.10	0.20	0.004	0.008
H		-	0.10	-	0.004

MOUNTING PAD		Notes
 <p>Diagram showing the mounting pad dimensions: 0.118" (3.00mm) width, 0.031" (0.80mm) height, and 0.031" (0.80mm) lead width.</p>		<p><b>Notes</b></p> <ol style="list-style-type: none"> <li>Controlling Dimensions in Millimeters.</li> <li>Dimensions are exclusive of mold flash and metal burrs.</li> </ol> <p><b>TAPE &amp; REEL ORDERING NOMENCLATURE</b></p> <ol style="list-style-type: none"> <li>Surface mount product is taped and reeled in accordance with EIA-481.</li> </ol>

## Marking Codes

Part Number	DW12DLC-BN-S
Marking Code	<div style="border: 1px solid black; padding: 5px; display: inline-block;">             AB LC           </div>



## Package Information

Qty: 3k/Reel