

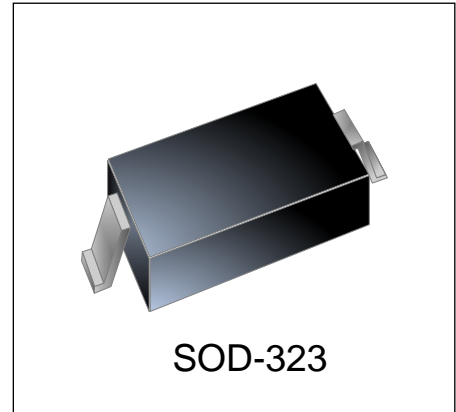


### Features

- 450 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 3.3 V
- Low Leakage Current
- Response Time is Typically  $< 1$  ns

### 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) 30A (8/20 $\mu s$ )



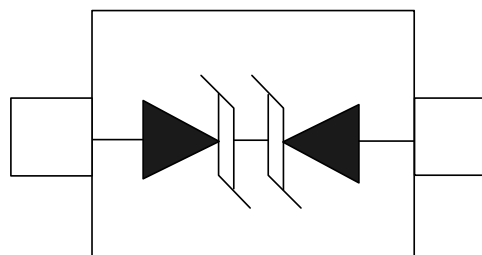
### Mechanical Characteristics

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

### Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

### Schematic & PIN Configuration

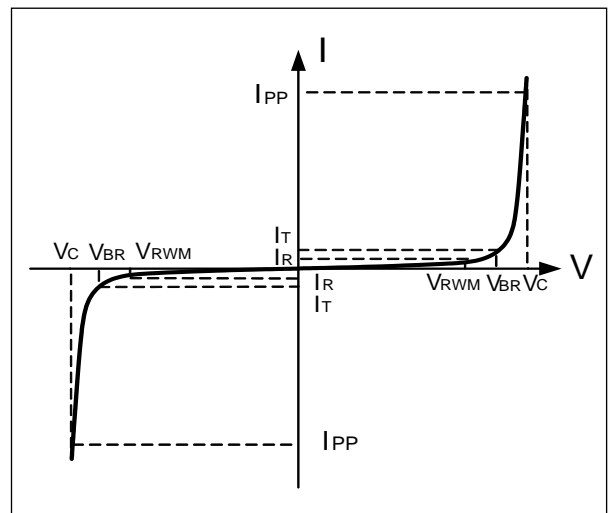


SOD-323 (Top View)

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	450	W
Electrostatic discharge Voltage	$V_{ESD}$	$\pm 30$ (contact)	kV
		$\pm 30$ (air)	
Operating Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

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

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 @ $I_F$

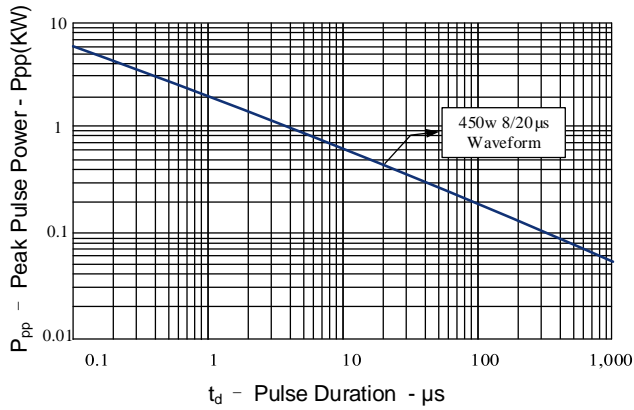


### Electrical Characteristics

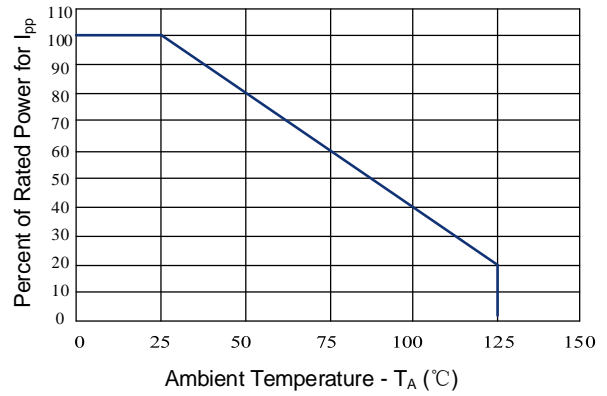
DW03D-B-S						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	4.0			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 3.3V, T = 25^{\circ}C$			200	nA
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			30	A
Clamping Voltage	$V_C$	$I_{PP} = 30A, t_p = 8/20\mu s$			15	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		37	40	pF

# Typical Characteristics

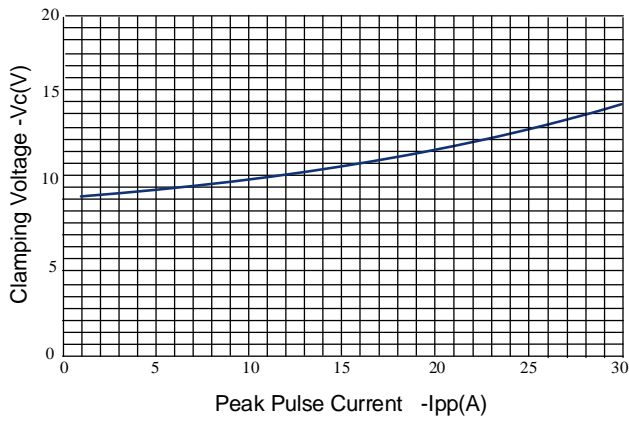
**Figure 1: Peak Pulse Power vs. Pulse Time**



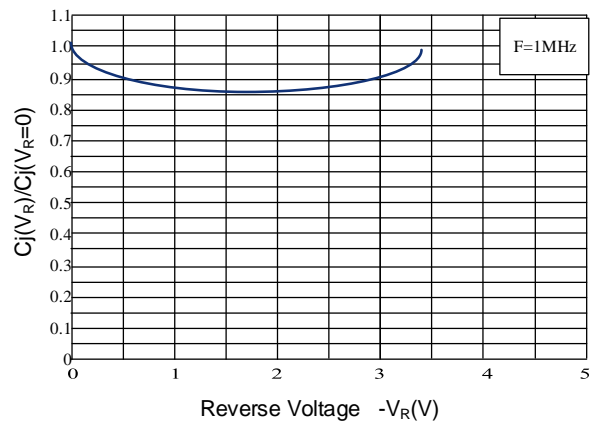
**Figure 2: Power Derating Curve**



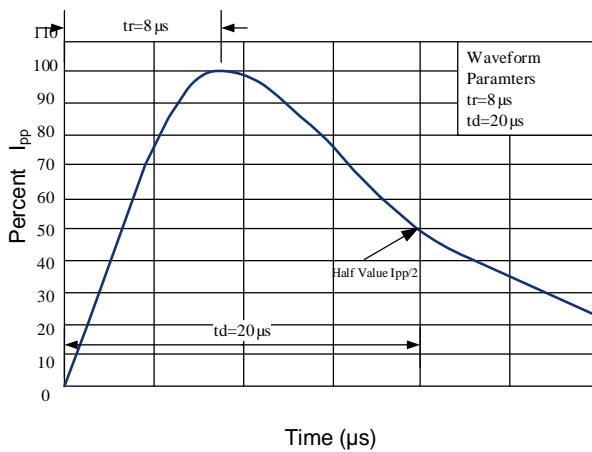
**Figure 3: Clamping Voltage vs. Peak Pulse Current**



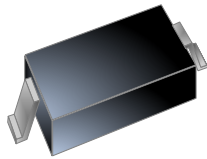
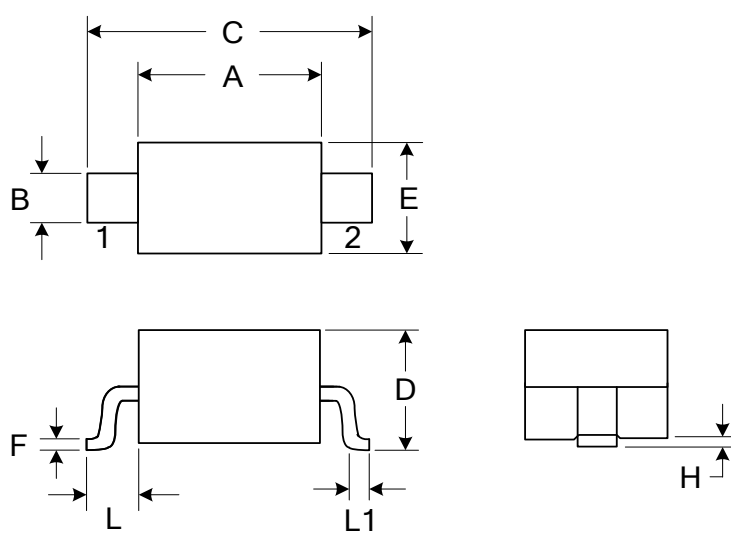
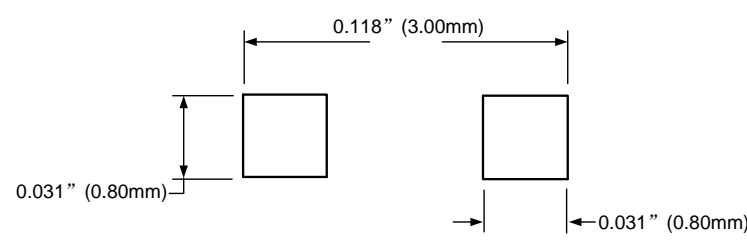
**Figure 4: Normalized Junction Capacitance vs. Reverse Voltage**



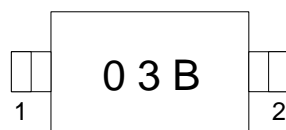
**Figure 5: Pulse Waveform**



# Outline Drawing – SOD-323

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

## Marking Codes



## Package Information

Qty: 3k/Reel

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