

Transient Voltage Suppressor

Features

- 350 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): 10A, 8/20 μs

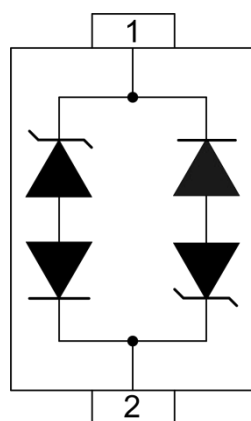
Mechanical Characteristics

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

Applications

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

PIN Configuration



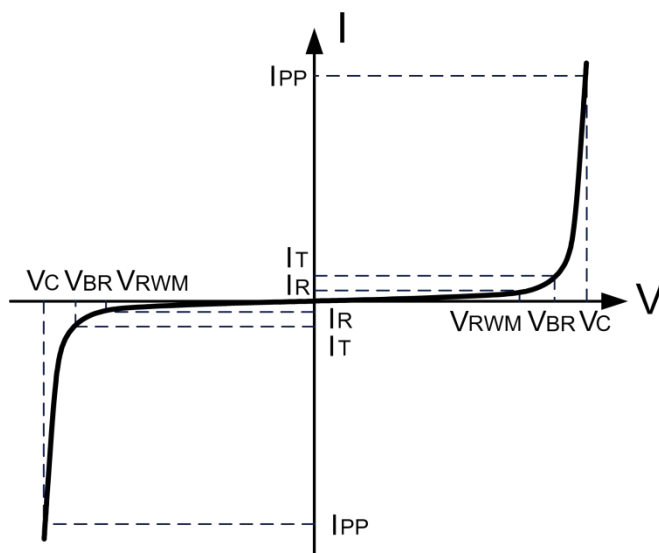
BIDIRECTIONAL

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$) - See Figure 1	P_{PP}	350	Watts
Operating Temperature	T_J	-55 to + 150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°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)	DEVICE MARKING	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 (μA)	TYPICAL CAPACITANCE @ 0V, 1 MHz C (pF)
CSE15BLS323	BB	15.0	16.7	24.0	31.8V @ 10.0A	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

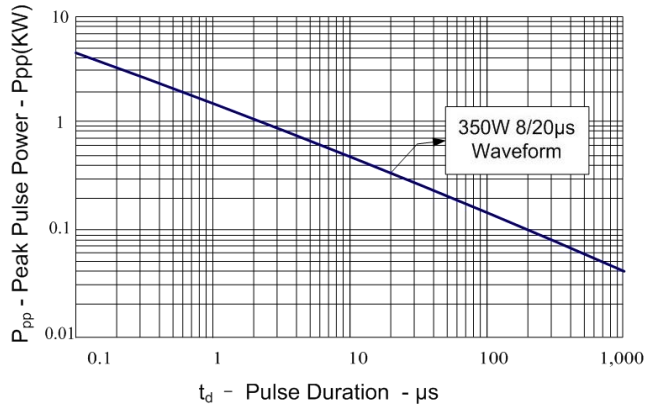


Figure 2: Power Derating Curve

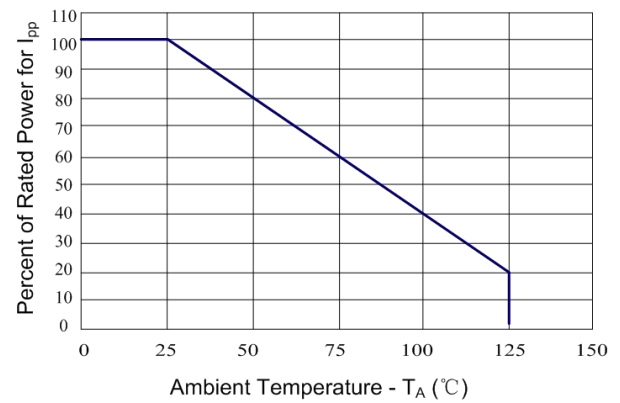


Figure 3: Clamping Voltage vs. Peak Pulse Current

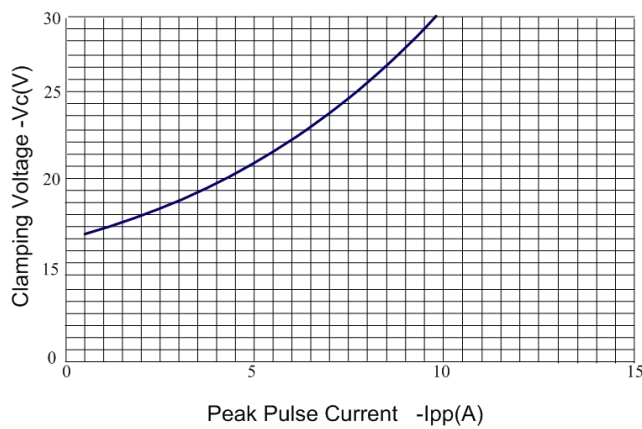


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

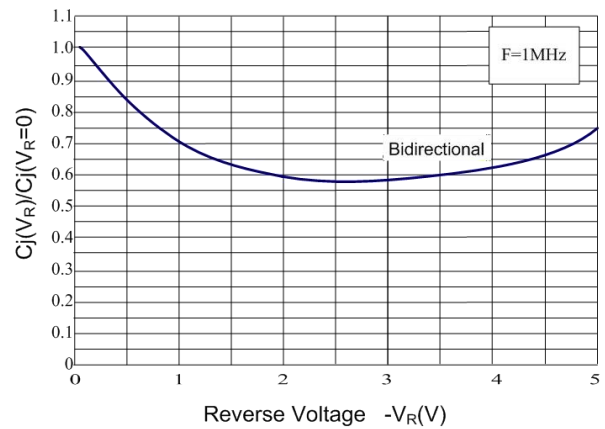
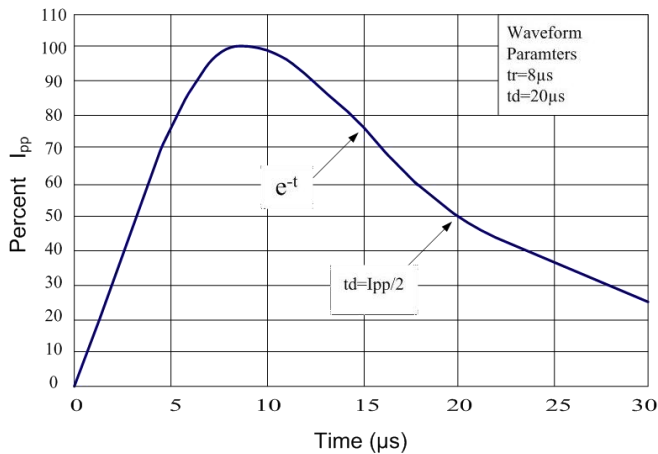

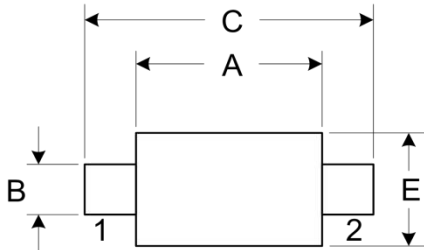
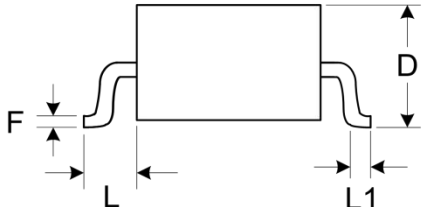
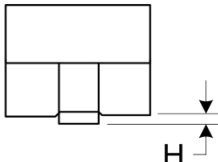
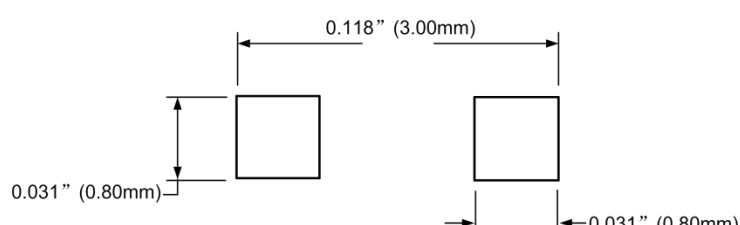


Figure 5: Pulse Waveform



R1

Outline Drawing – SOD-323

Package Drawing SOD-323		 SOD-323																																																				
<div>PACKAGE OUTLINE</div>   		DIMENSIONS																																																				
		<table><tr><th rowspan="2">SYMBOL</th><th colspan="2">MILLIMETER</th><th colspan="2">INCHES</th></tr><tr><th>MIN</th><th>MAX</th><th>MIN</th><th>MAX</th></tr><tr><td>A</td><td>1.60</td><td>1.80</td><td>0.063</td><td>0.071</td></tr><tr><td>B</td><td>0.25</td><td>0.35</td><td>0.010</td><td>0.014</td></tr><tr><td>C</td><td>2.50</td><td>2.70</td><td>0.098</td><td>0.106</td></tr><tr><td>D</td><td>0.00</td><td>1.00</td><td>0.000</td><td>0.039</td></tr><tr><td>E</td><td>1.20</td><td>1.40</td><td>0.047</td><td>0.055</td></tr><tr><td>F</td><td>0.08</td><td>0.15</td><td>0.003</td><td>0.006</td></tr><tr><td>L</td><td colspan="2">0.475 REF</td><td colspan="2">0.019REF</td></tr><tr><td>L1</td><td>0.25</td><td>0.40</td><td>0.010</td><td>0.016</td></tr><tr><td>H</td><td>0.00</td><td>0.10</td><td>0.000</td><td>0.004</td></tr></table>	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
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<div>MOUNTING PAD</div> 		<div>Notes</div> <div>1. Controlling Dimensions in Millimeters. 2. Dimensions are exclusive of mold flash and metal burrs.</div>																																																				

Package Information

Qty: 3k/Reel

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