

Features

- 800 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Unidirectional 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) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lighting) 20A (8/20 μs)



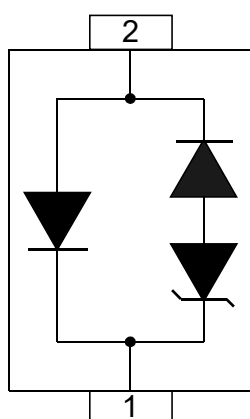
Mechanical Characteristics

- 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



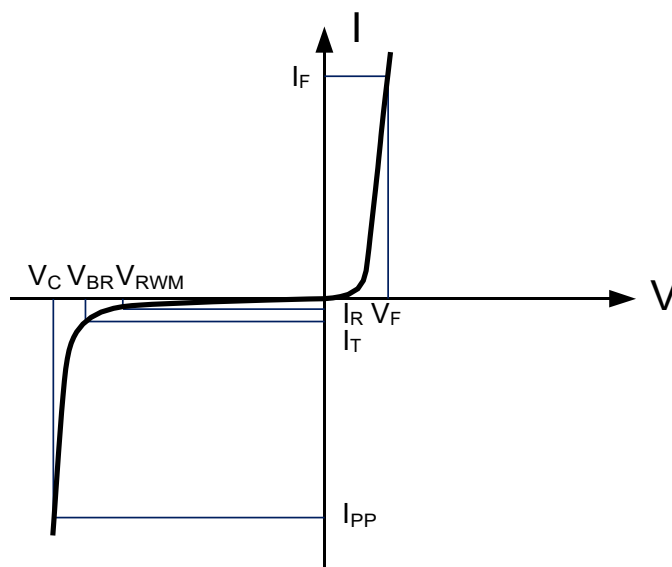
UNIDIRECTIONAL

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$) - See Figure 1	P_{PP}	800	Watts
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)	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 μs V_C @ IPP	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_d (μA)	TYPICAL CAPACITANCE @0V, 1 MHz C(pF)
CSE5.0ULS323	5.0	6.0	9.8	30V @ 20.0A	1	1

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

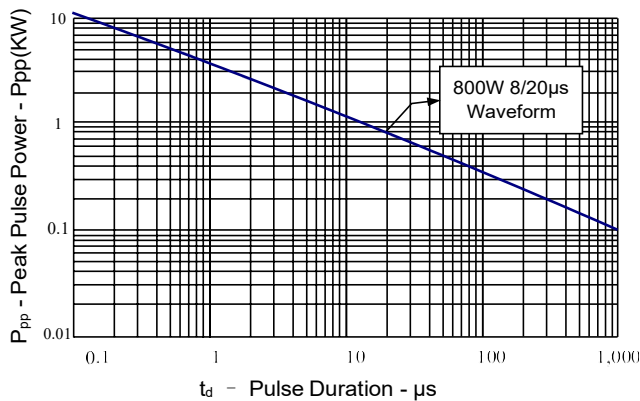


Figure 2: Power Derating Curve

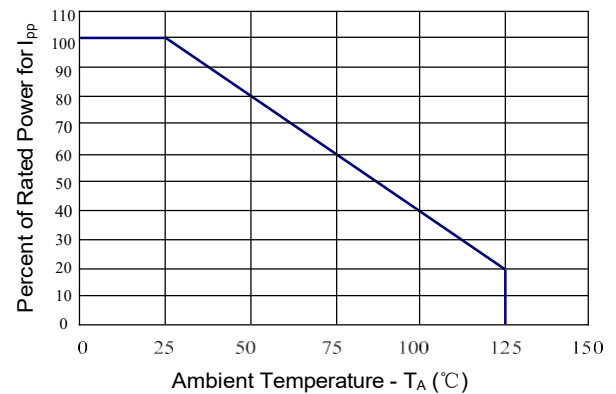


Figure 3: Clamping Voltage vs. Peak Pulse Current

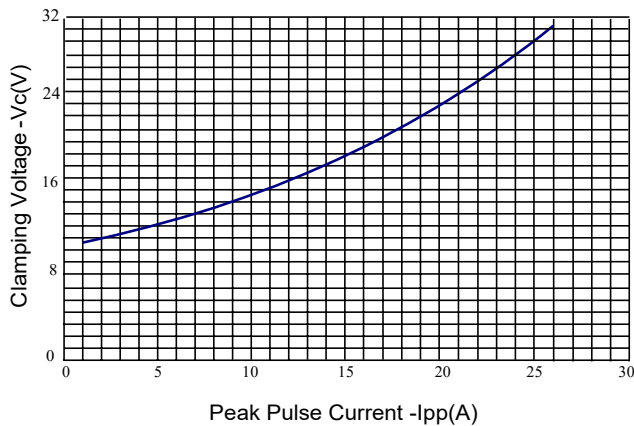


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

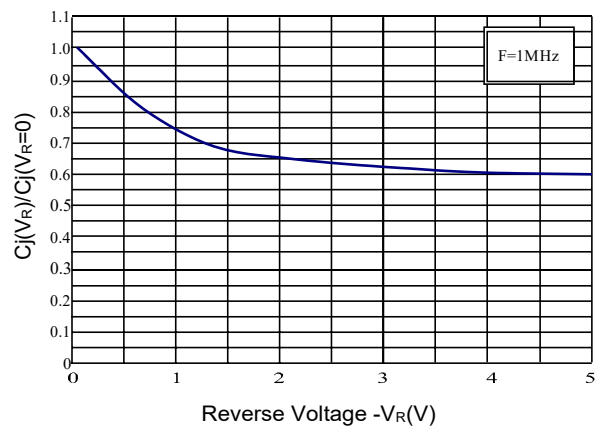


Figure 5: Pulse Waveform

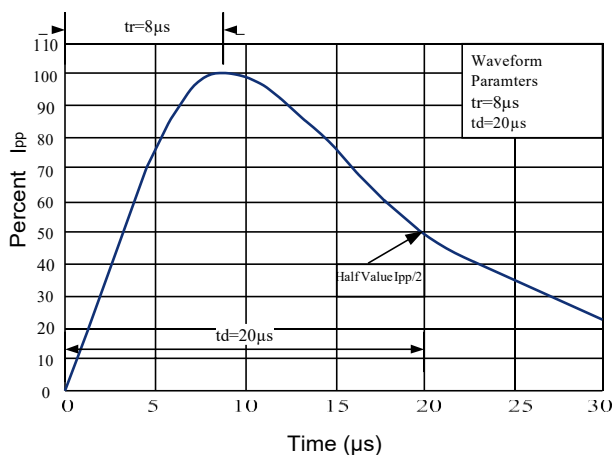
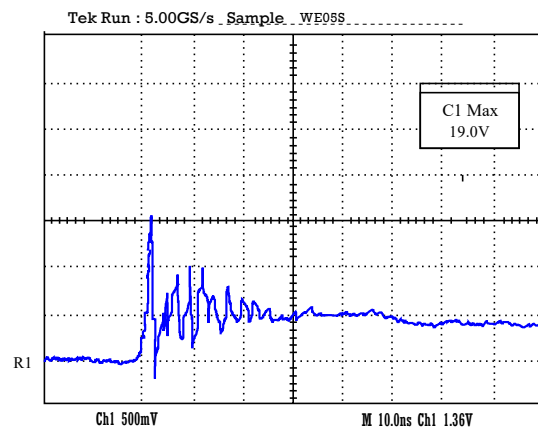
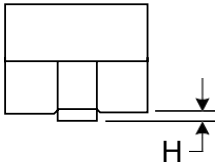
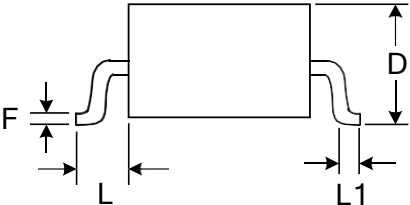
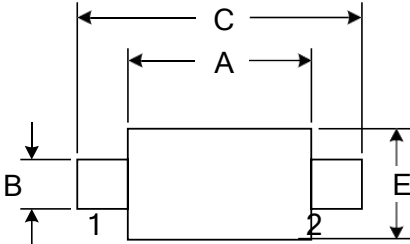
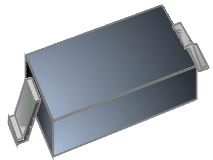
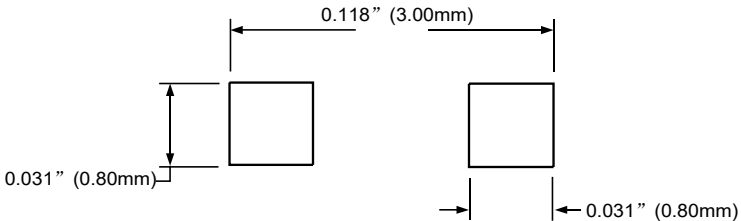


Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD-323

PACKAGE OUTLINE 	 SOD-323 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	0.000	0.004
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MOUNTING PAD 	Notes 1. Controlling Dimensions in Millimeters. 2. Dimensions are exclusive of mold flash and metal burrs.																																																						

Package Information

Qty: 3k/Reel

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