上海晟芯微电子有限公司

Shanghai Senchip Microelectronics Co., Ltd

Transient Voltage Suppressor

SS05DLC-B

Features

- 350 Watts Peak Pulse Power per Line (tp = 8/20μs)
- Unidirectional & Bidirectional Configuration
- Replacement for MLV (0805)
- Protects One Power or I/O Port
- ESD Protection > 40 kilovolts
- Low Clamping Voltages
- Available in Multiple Voltage Types Ranging from 3V to 24V
- ULTRA LOW CAPACITANCE: 3pF Typical

SOD-323

IEC COMPATIBILITY (EN61000-4)

- **IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**
- **IEC 61000-4-5(Surge): 12A, 8/20μs - Level 1(Line-Ground) & Level 2(Line-Line)**

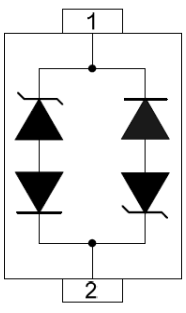
Mechanical Characteristics

- 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/WEEE Compliant

Applications

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

Schematic & PIN Configuration

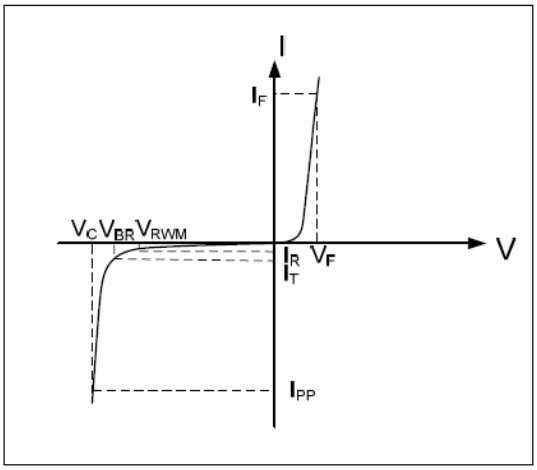


BIDIRECTIONAL

Absolute Maximum Rating			
Rating	**Symbol**	**Value**	**Units**
Peak Pulse Power（t_p=8/20μs）- See Figure 1	P_{PP}	350	Watts
Operating Temperature	T_J	-55 to + 150	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Parameters (T=25℃)

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) @ IP = 1A V_C(Volts)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @8/20μs VC @ IPP	MAXIMUM LEAKAGE CURRENT @V_{WM} Id(μA)	TYPICAL CAPACITANCE @0V, 1 MHz C(pF)
SS05DLC-B	05B	5.0	6.0	9.8	18.3V @ 17.0A	1	3

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

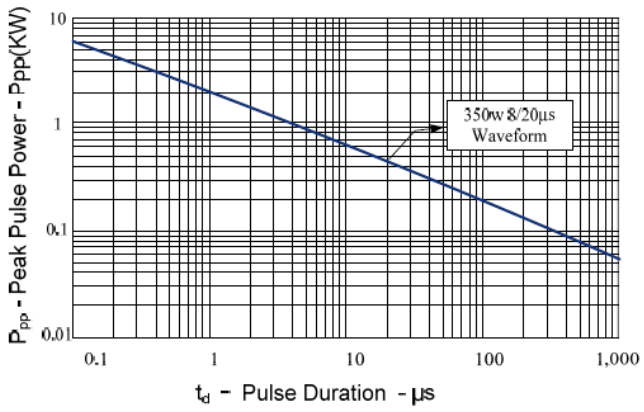


Figure 2: Power Derating Curve

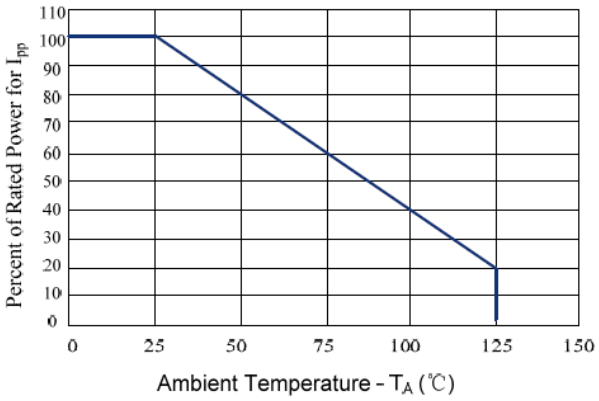


Figure 3: Clamping Voltage vs. Peak Pulse Current

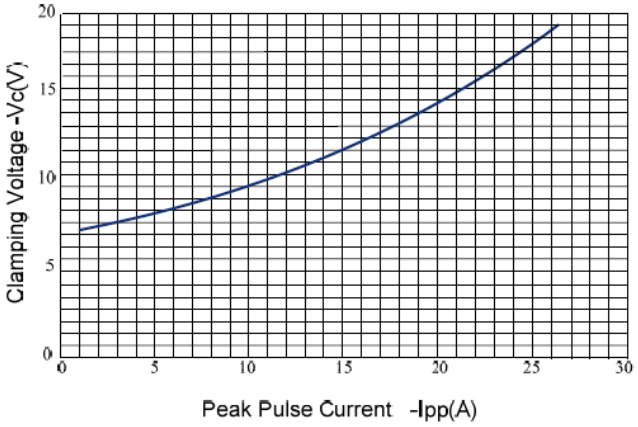


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

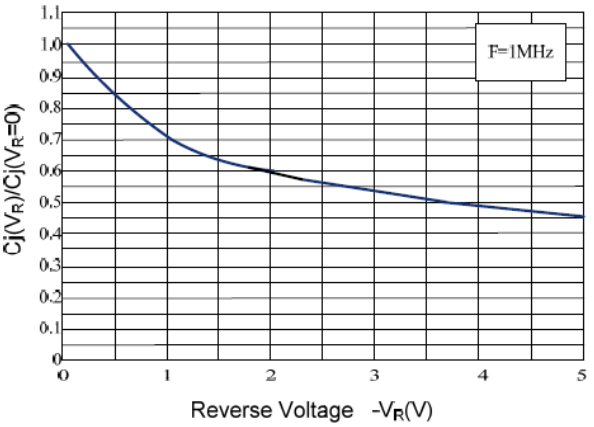


Figure 5: Pulse Waveform

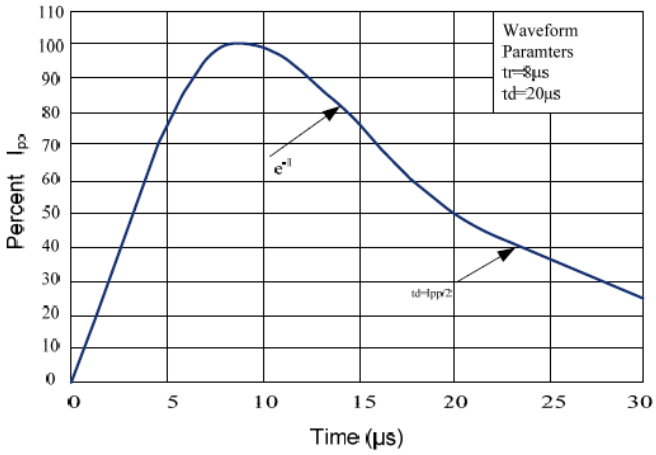
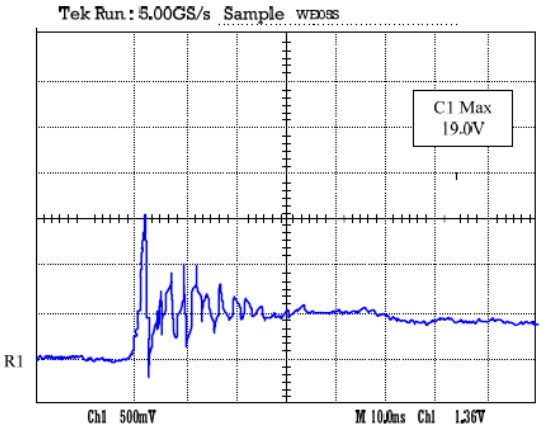
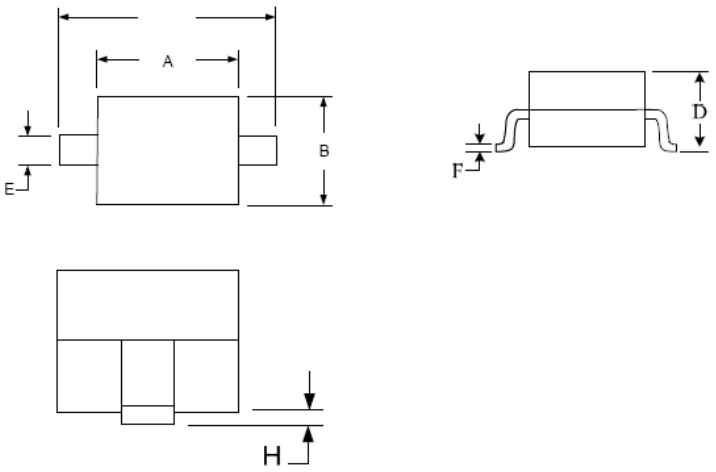


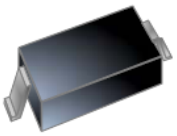
Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD-323

PACKAGE OUTLINE



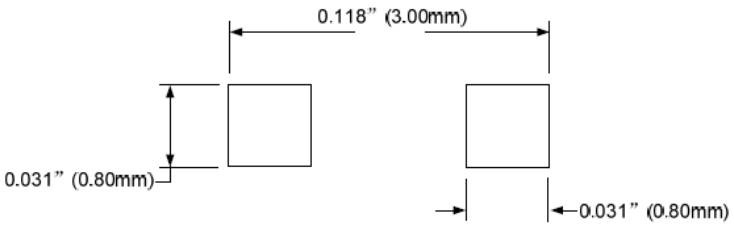


SOD-323

DIMENSIONS

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

1. Controlling Dimensions in Millimeters.
2. Dimensions are exclusive of mold flash and metal burrs.

TAPE & REEL ORDERING NOMENCLATURE

1. Surface mount product is taped and reeled in accordance with EIA-481.

CONTACT INFORMATION

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