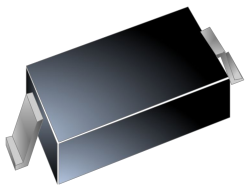
东沃电子
DOWOSEMI

DW03DLCX-B-S

Transient Voltage Suppressor

Features

- 260 Watts Peak Pulse Power per Line (tp = 8/20μs)
- Bidirectional Configuration
- Protects One Power or I/O Port
- ESD Protection > 40 kilovolts
- Low Working Voltage：3.0V
- Low Clamping Voltages
- Ultra Low Capacitance: 1.5 pF 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): 13A, 8/20μs**

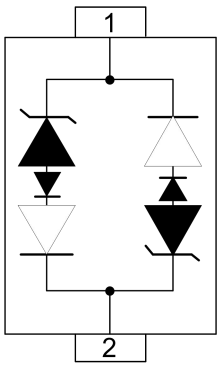
Mechanical Characteristics

- 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

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

PIN Configuration



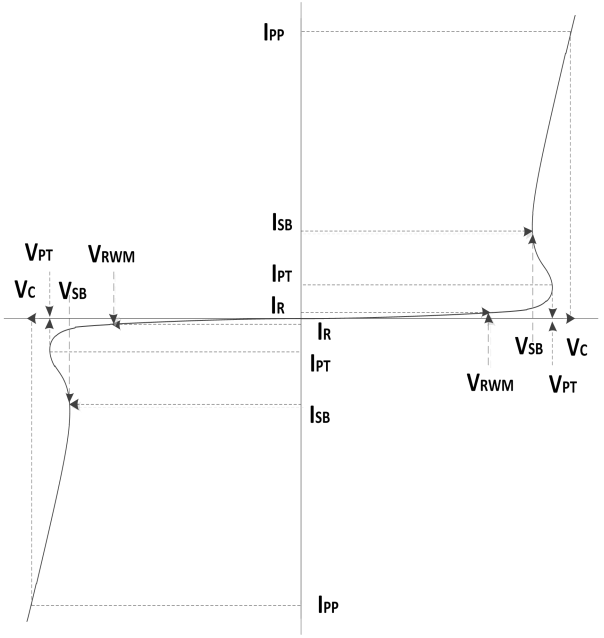
Bidirectional

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs) - See Figure 1	P_{PP}	260	Watts
Peak Pulse Current（t_p=8/20μs）	I_{PP}	13	A
Operating Temperature	T_J	-55 to + 150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

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_{PT}	Punch-through Breakdown Voltage @ I_T
V_{SB}	Snap-Back Voltage @ I_{SB}
I_{SB}	Snap-Back Current
I_{PT}	Test Current
V_{PTF}	Forward Punch-through Breakdown Voltage @ I_F
I_{PTF}	Forward Test Current



Electrical characteristics

DW03DLCX-B-S						
Parameter	**Symbol**	**Conditions**	**Minimum**	**Typical**	**Maximum**	**Units**
Reverse Stand-Off Voltage	V_{RWM}	See Note1			3.0	V
Punch-through Voltage	V_{PT}	I_{PT}=1μA	4.0			V
Snap-Back Voltage	V_{SB}	I_{SB}=50mA	3.0			V
Reverse Leakage Current	I_R	V_{RWM}=3.0V			1	μA
Clamping Voltage	Vc	I_{PP} = 13A, t_p = 8/20μs		20		V
Junction Capacitance	Cj	V_R = 0V, f = 1MHz		1.5	2.0	pF

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

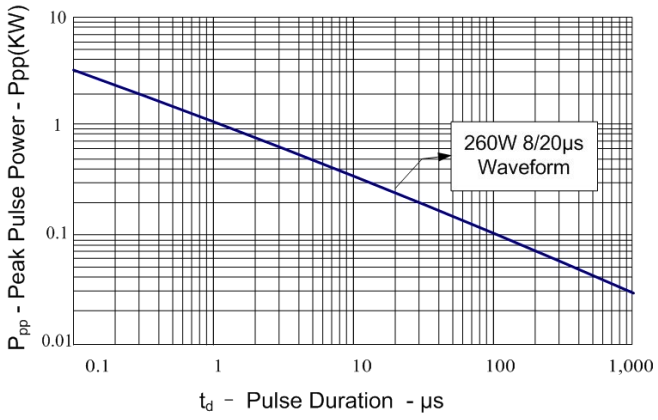


Figure 2: Power Derating Curve

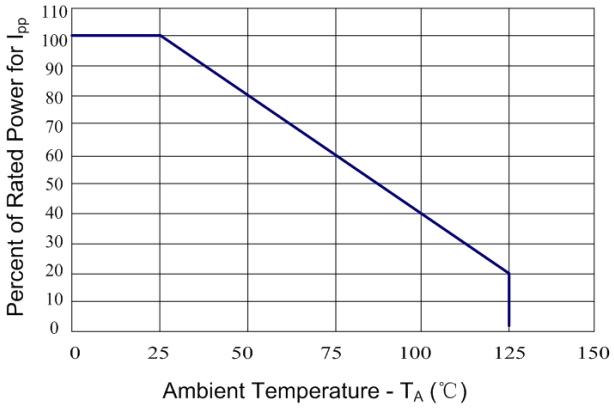


Figure 3: Clamping Voltage vs. Peak Pulse Current

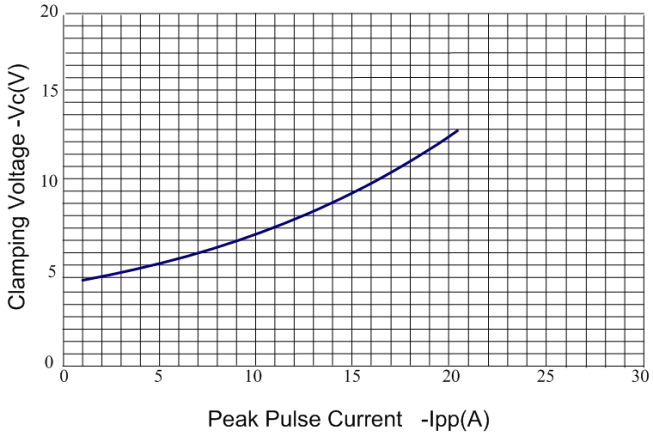


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

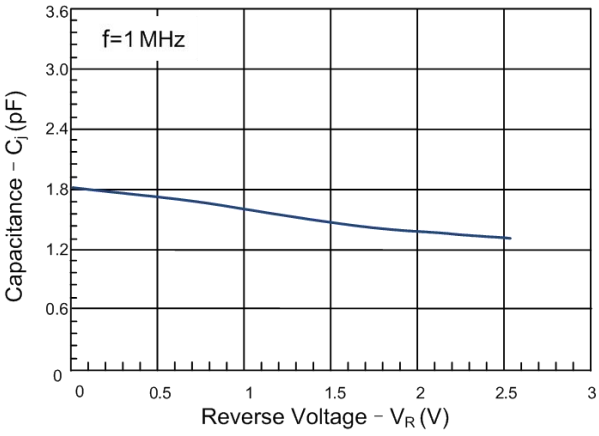


Figure 5: ESD Clamping(8kV Contact per IEC 61000-4-2)

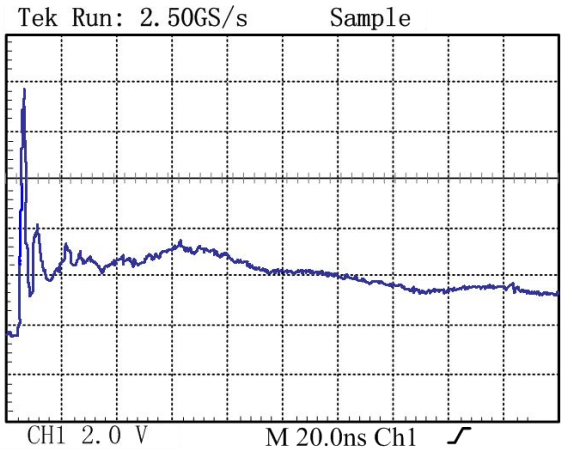
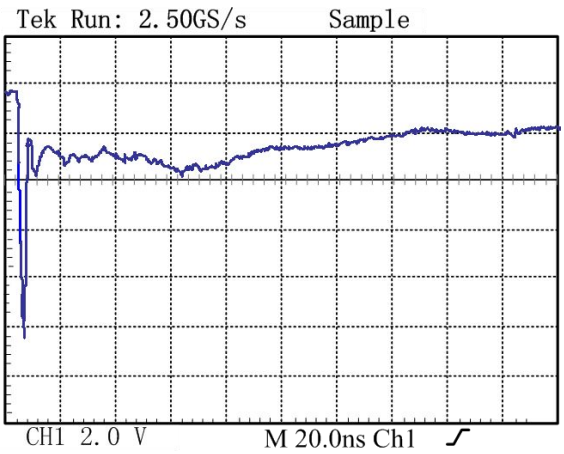
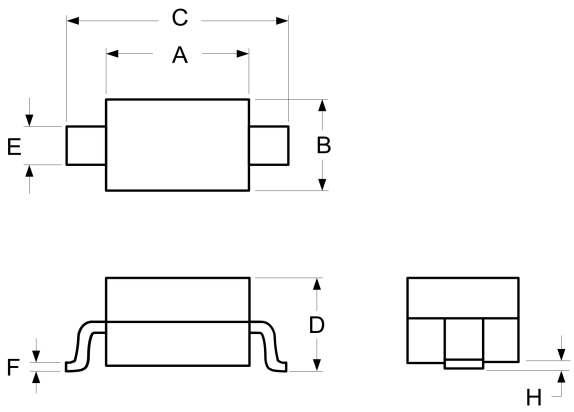


Figure 5: ESD Clamping(-8kV Contact per IEC 61000-4-2)



Outline Drawing – SOD323

PACKAGE OUTLINE

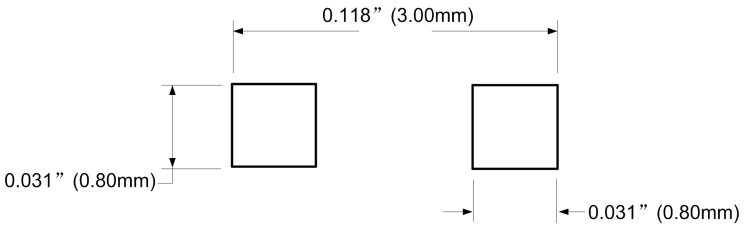


SOD-323

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



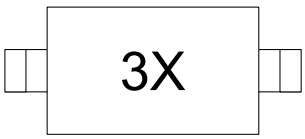
Notes

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.

Marking Codes



Package Information

Qty：3k/Reel