HxxxD3xVxBL Series

Bi-directional ESD Protection Diodes

Peak Pulse Power - 350 Watts

Description

The HxxxD3xVxBL series are low capacitance bidirectional electro static discharge (ESD) protection diodes in small surface-mounted device (SMD) plastic packages designed to protect one data line from the damage caused by ESD.

Features

- 1 Channel of ESD Protection (Bi-directional)
- Peak Pulse Power :Ppp = 350W (tp=8/20 us)
- Reverse Working Voltage : 3.3V thru 36V
- Low Leakage Current
- Low Clamping Voltage
- Low Capacitance :0.8pF (Typ)
- IEC 61000-4-2 (ESD) :±27kV(Contact) / ±30kV(Air)

Applications

- Ethernet - 10/100/1000 Base T
- Handheld - Wireless Systems
- USB Interface

Mechanical Data

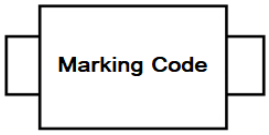
- Case: SOD323 Package
- Case Material: “Green” Molding Compound UL Flammability Classification Rating 94V-0
- Component in accordance to RoHS
- Terminals:Matte tin plated,solderable per MIL-STD-750, method 2026
- Halogen Free

Note: Products with logo HY or hy are made by HY Electronic (Cayman) Limited.

Ordering Information

- Package :SOD323
- Reel Size :7 (inches)
- Quantity Per Reel :3,000/Tape & Reel
- Quantity One Box :45,000/Tape & Reel
- Quantity One Carton :180,000/Tape & Reel

Marking Information



"CC" =3.3V Product Type Marking Code

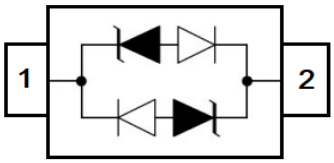
"AC" =5V Product Type Marking Code

See marking code of Page 2

Package Outline

SOD323 Top View

Device Schematic & PIN Configuration



Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Absolute Ratings

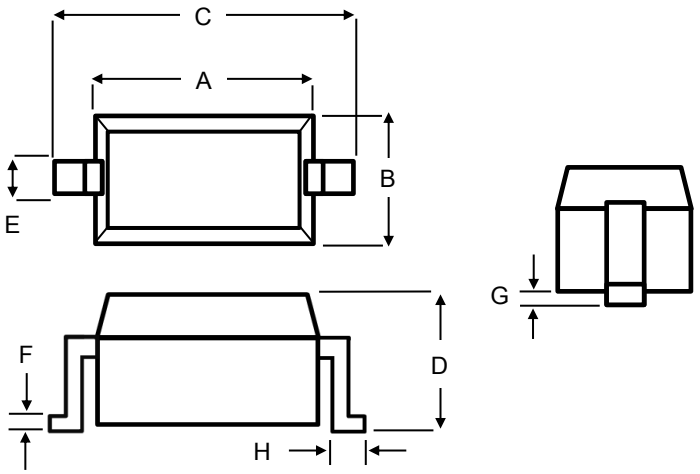
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation (8/20 us)	P_{PP}	350	W
ESD Protection- Contact (Standard IEC 61000-4-2)	V_{ESD}	±27	k V
ESD Protection- Air (Standard IEC 61000-4-2)		±30	
Operating Temperature Range	T_J	-55 to +125	° C
Storage Temperature Range	T_{STG}	-55 to +150	° C
Soldering Temperature, t max =10s	T_L	260	° C

Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Electrical Characteristics

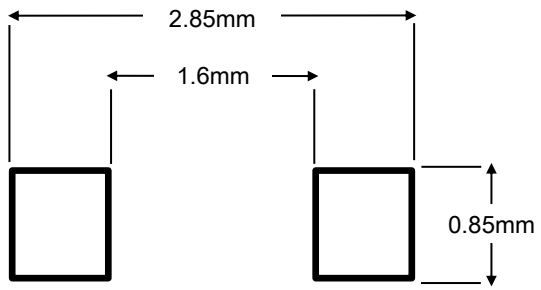
Part Number	Marking Code	Reverse Working Voltage(Max) V_{RWM}(V)	Reverse Breakdown Voltage(Min) V_B(V) @I_T=1mA	Reverse Current(Max) I_R(uA) @V_R=V_{RWM}	Reverse Clamping Voltage(Max) V_C(V) @I_{PP}=1A	Reverse Clamping Voltage(Max) V_C(V) @I_{PP}=Max.	Peak Pulse Current(Max) I_{PP}(A)	Junction Capacitance(Typ) Cj(pF) @V_R=0V,F=1MHz
H20D33V3BL	CC	3.3	4	5	7	20	20	0.8
H18D35V0BL	AC	5	6	1	9.8	20	18	0.8
H18D38V0BL	BC	8	8.5	1	13.4	24	18	0.8
H12D312VBL	DC	12	13.3	1	19	28.6	12	0.8
H10D315VBL	EC	15	16.7	1	24	31.8	10	0.8
H07D318VBL	FC	18	20	1	35	53	7	0.8
H06D324VBL	HC	24	26.7	1	43	56	6	0.8
H4A5D336VBL	IC	36	40	1	60	75	4.5	0.8

Package Outline Dimensions



SOD323 Package		
Dim	Min	Max
A	1.6	1.8
B	1.2	1.4
C	2.5	2.7
D	-	1.0
E	0.25	0.35
F	0.08	0.15
G	-	0.1
H	0.25	0.4
All Dimensions in mm		

Suggested Soldering Pad Layout



Rating and Characteristic Curves

FIG.1 - 8/20us Pulse Waveform According to IEC 61000-4-5

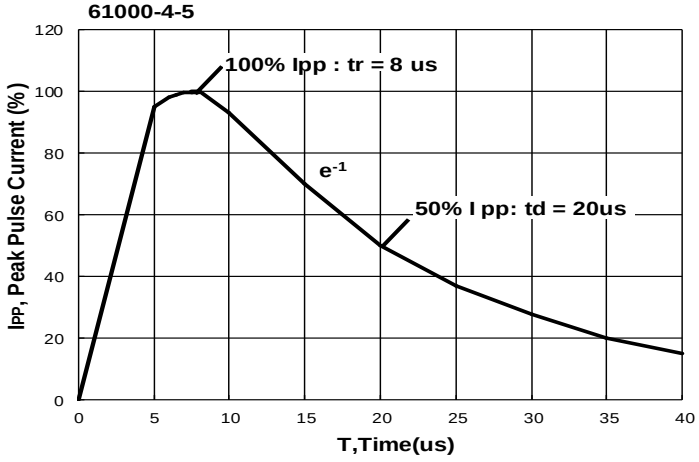


FIG.2 - Power Dissipation Versus Pulse Time

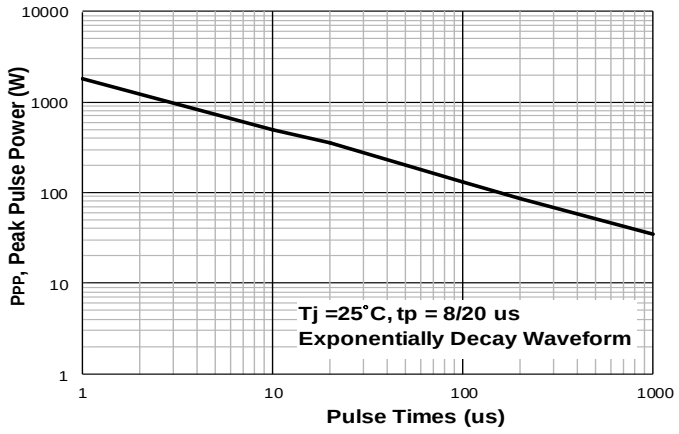


FIG.3 - Peak Pulse Power Versus Tj

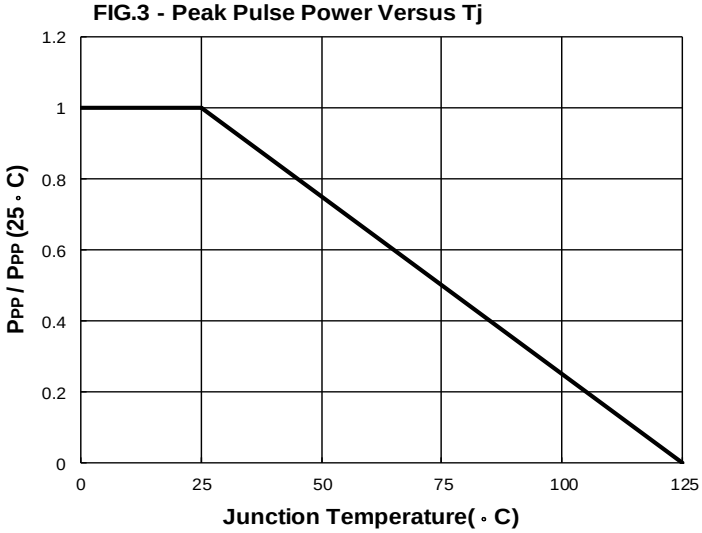
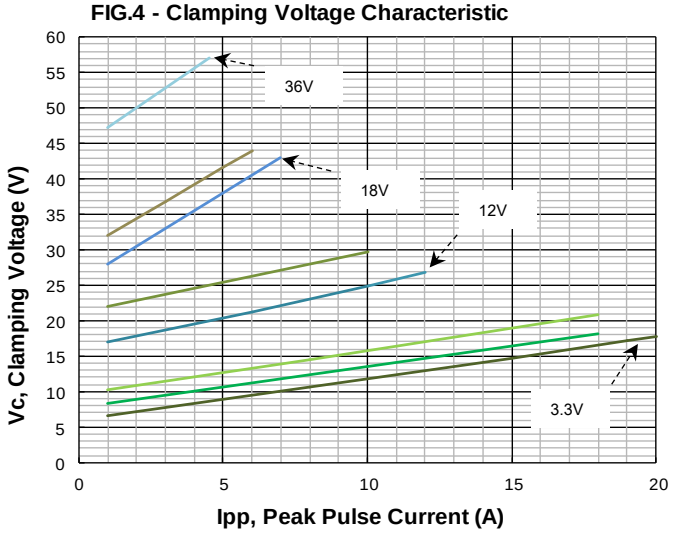


FIG.4 - Clamping Voltage Characteristic



The curve above is for reference only.

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