



D55V0M1B2WS

55V BIDIRECTIONAL TVS DIODE

Features

- Provides ESD Protection per IEC 61000-4-2 Standard: Air ±30kV, Contact ±25kV
- 1 Channel of ESD Protection
- Ideal for 60V MOSFET Protection
- High Peak Pulse Current per IEC 61000-4-5 Standard
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

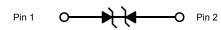
SOD323



Bottom View

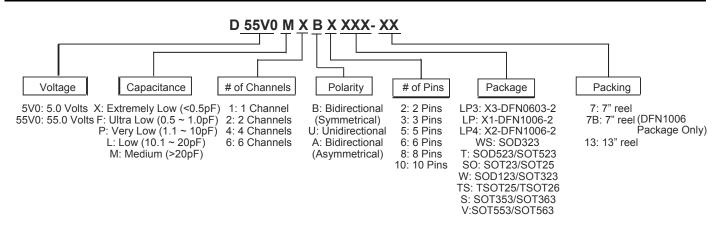
Mechanical Data

- Case: SOD323
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish annealed over Alloy 42 leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208 3
- Weight: 0.004 grams (approximate)



Device Schematic

Ordering Information (Note 4)



Product	Compliance	Marking	Reel size(inches)	Tape width(mm)	Quantity per reel
D55V0M1B2WS-7	Standard	1/1	7	8	3,000/Tape & Reel

Notes: 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.

2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.

3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

4. For packaging details, go to our website at http://www.diodes.com/products/packages.html.

Marking Information



I/I = Product Type Marking Code



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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P _{PP}	200	W	8/20µs, Per Figure 2
Peak Pulse Current	IPP	2	А	8/20µs, Per Figure 2
ESD Protection – Contact Discharge	$V_{ESD_Contact}$	±25	kV	IEC 61000-4-2 Standard
ESD Protection – Air Discharge	V_{ESD_Air}	±30	kV	IEC 61000-4-2 Standard

Thermal Characteristics

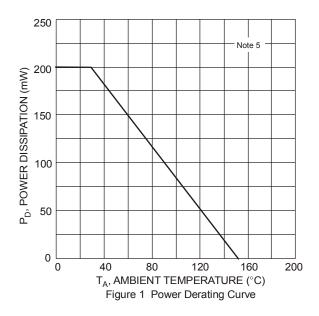
Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	PD	250	mW
Thermal Resistance, Junction to Ambient (Note 5)	R _{0JA}	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

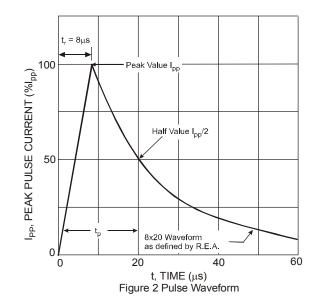
Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Conditions
Reverse Standoff Voltage	V _{RWM}	_	—	55	V	-
Channel Leakage Current (Note 6)	I _{RM}	_	—	100	nA	V _{RWM} = 55V
Clamping Voltage	V _{CL}			86 100	V	I _{PP} = 1A, t _p = 8/20μS I _{PP} = 2A, t _p = 8/20μS
Breakdown Voltage	V _{BR}	57	_	_	V	I _R = 1mA
Channel Input Capacitance	CT	_	14	25	pF	$V_R = 0V, f = 1MHz$

Notes: 5. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at http://www.diodes.com.

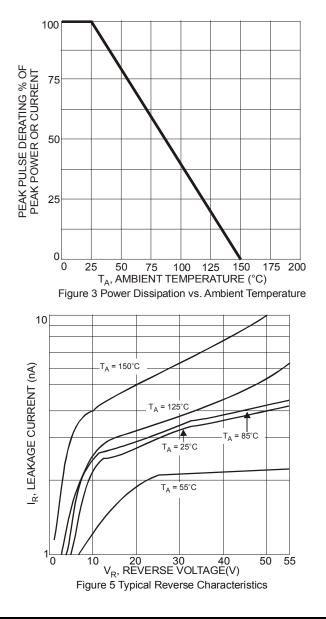
6. Short duration pulse test used to minimize self-heating effect.

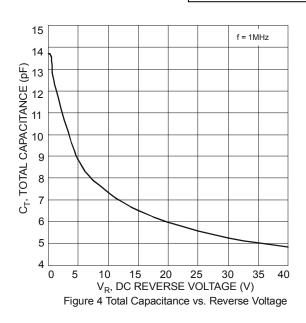






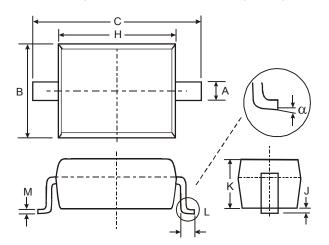
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Package Outline Dimensions

Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.

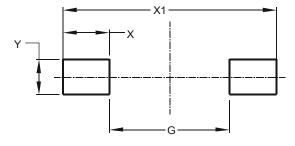


SOD323				
Dim	Min	Max		
Α	0.25	0.35		
В	1.20	1.40		
С	2.30	2.70		
Н	1.60	1.80		
J	0.00	0.10		
κ	1.0	1.1		
L	0.20	0.40		
М	0.10	0.15		
α	0°	8°		
All Dimensions in mm				



Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
G	1.520
Х	0.590
X1	2.700
Y	0.450

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