

## Features

- Planar Die Construction
- Small Surface Mount Package
- Ideally Suited for Automated Assembly Processes
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **PPAP Capable (Note 4)**

## Mechanical Data

- Case: SOD323
- Case Material: Molded Plastic.  
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Solderable per MIL-STD-202, Method 208 **Ⓔ3**
- Lead-Free Plating (Matte Tin Finish Annealed over Alloy 42 Leadframe). Polarity: Cathode Band
- Weight: 0.004 grams (Approximate)



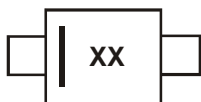
Top View

## Ordering Information (Note 5)

Part Number	Compliance	Case	Packaging
MMSZ5232BSQ-7-F	Automotive	SOD-323	3000/Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
  2. See <https://www.diodes.com/quality/lead-free/> 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. Automotive products are AEC-Q101 qualified and are PPAP capable. Refer to <https://www.diodes.com/quality/>.
  5. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

## Marking Information



XX = Product Type Marking Code  
(See Electrical Characteristics Table)

### Date Code Key

Year	2018	2019	2020	2021	2022	...	2025	2026	2027	2028
Code	F	G	H	I	J	...	M	N	O	P

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

### Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 6) @ I <sub>F</sub> = 10mA	V <sub>F</sub>	0.9	V

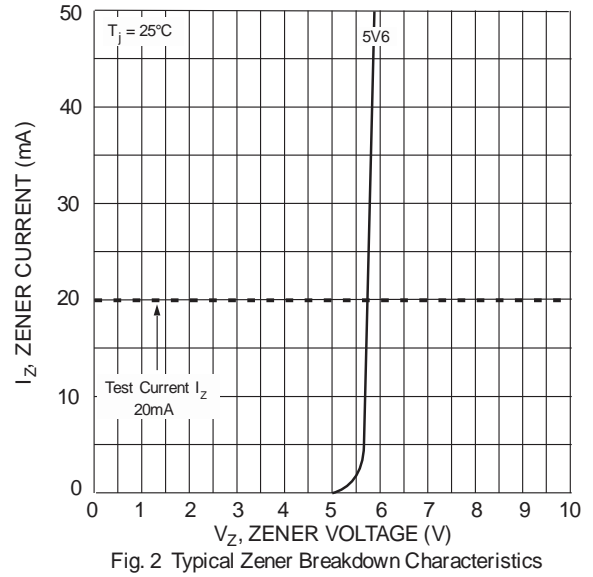
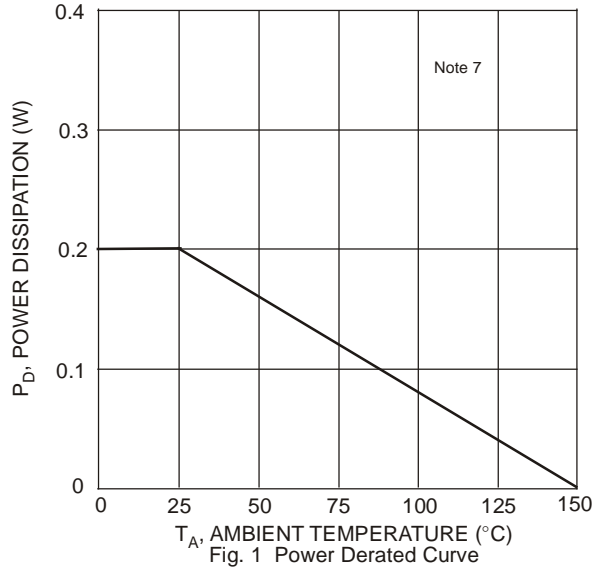
### Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 7)	P <sub>D</sub>	200	mW
Thermal Resistance, Junction to Ambient Air (Note 7)	R <sub>θJA</sub>	625	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

### Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Type Number	Marking Code	Zener Voltage Range (Note 8)			Test Current	Maximum Zener Impedance (Note 9)		Maximum Reverse Leakage Current (Note 8)		Typical Capacitance C @ V <sub>R</sub> = 0 f = 1 MHz
		V <sub>Z</sub> @ I <sub>ZT</sub>				Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub> = 0.25mA	I <sub>R</sub>	@ V <sub>R</sub>	
		Nom (V)	Min (V)	Max (V)	mA	Ω		μA	V	pF
MMSZ5232BSQ	E2	5.6	5.32	5.88	20	11	1600	5.0	3.0	85

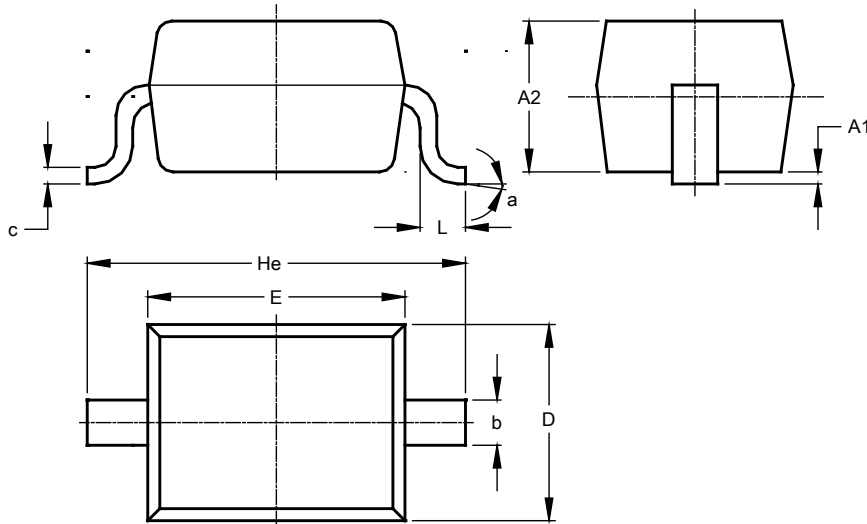
- Notes:
- 6. Short duration pulse test used to minimize self-heating effect.
  - 7. Part mounted on FR-4 PCB with recommended pad layout, which can be found at <https://www.diodes.com/package-outlines.html>.
  - 8. Short duration pulse test used to minimize self-heating effect.
  - 9. f = 1KHz.



## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD323**

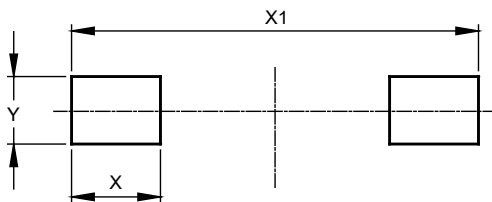


SOD323			
Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD323**



Dimensions	Value (in mm)
X	0.590
X1	2.700
Y	0.450

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