



### 500mW SURFACE MOUNT ZENER DIODE

## **Features**

- Planar Die Construction
- 500mW Power Dissipation
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Lead, Halogen and Antimony Free, RoHS Compliant
- "Green" Device (Note 4)
- Qualified to AEC-Q101 Standards for High Reliability

## **Mechanical Data**

- Case: SOD-123
- 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
- · Polarity: Cathode Band
- Marking Information: See Page 2
- Ordering Information: See Page 2
- · Weight: 0.01 grams (approximate)



Top View

# **Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit	
Forward Voltage (Note 3)	@ I <sub>F</sub> = 10mA	V <sub>F</sub>	0.9	V	

## **Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1) @T <sub>L</sub> = 75°C	P <sub>D</sub>	500	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{ heta JA}$	350	°C/W
Thermal Resistance, Junction to Lead (Note 2)	$R_{ heta JL}$	150	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

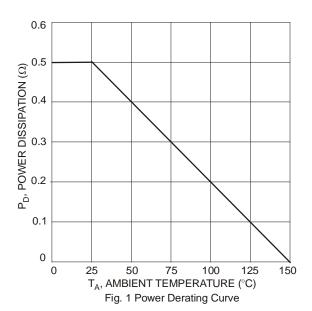
## **Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

_	_	Zener V	oltage Range	(Note 3)	Test Current	Maximu Impedanc			n Reverse rent (Note 3)
Type Number	Type Code	V <sub>Z</sub> @ I <sub>ZT</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>	@ <b>V</b> <sub>R</sub>
		Nom (V)	Min (V)	Max (V)	mA	2	2	μΑ	V
MMSZ5263B	M8	56	53.20	58.80	2.2	150	1300	0.1	43

Notes

- 1. Device mounted on FR-4 substrate, single-sided, PC boards, with minimum recommended pad layout.
- Thermal Resistance measurement obtained via infrared scan method.
  Short duration pulse test used to minimize self-heating effect.
- 4. No purposefully added lead. Halogen and Antimony Free.
- 5. f = 1KHz.





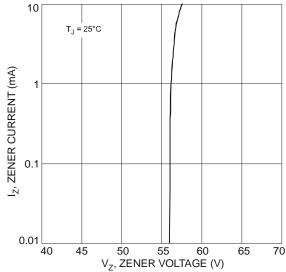


Fig. 2 Typical Zener Breakdown Characteristics

# Ordering Information (Note 5)

Part Number	Packaging	Shipping
MMSZ5263B-7-F	SOD-123	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

# **Marking Information**



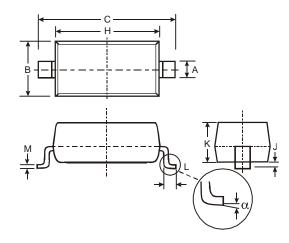
M8 = Product Type Marking Code (See Electrical Characteristics Table) YM = Date Code Marking

Y = Year (ex: W = 2009) M = Month (ex: 9 = September)

Date Code Key

Year	2009	9	2010		2011	20	12	2013		2014		2015
Code	W		Χ		Υ		7	Α		В		С
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D

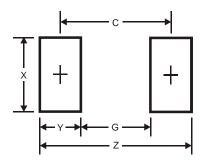
# **Package Outline Dimensions**



SOD-123							
Dim	Dim Min Max						
Α	0.55 Typ						
В	1.40 1.70						
C	3.55 3.85						
Н	2.55 2.85						
7	0.00	0.10					
K	1.00 1.35						
L	0.25 0.40						
М	0.10 0.15						
α	0	8°					
All Dimensions in mm							



# **Suggested Pad Layout**



Dimensions	Value (in mm)
Z	4.9
G	2.5
Х	0.7
Υ	1.2
С	3.7

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