



#### SURFACE MOUNT SCHOTTKY BARRIER DIODE

### **Features**

- Low Forward Voltage Drop
- **Guard Ring Construction for Transient Protection**
- Fast Switching Time
- Low Reverse Capacitance
- Surface Mount Package Ideally Suited for Automated Insertion
- Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 3 and 4)

### **Mechanical Data**

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- 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		
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	60	V		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	42	V		
Forward Continuous Current	I <sub>F</sub>	15	mA		
Non-Repetitive Peak Forward Surge Current @ $t \le 1.0s$ @ $t = 10ms$	I <sub>FSM</sub>	50 2.0	mA A		

#### **Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	$P_{D}$	333	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{ heta JA}$	300	°C/W
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

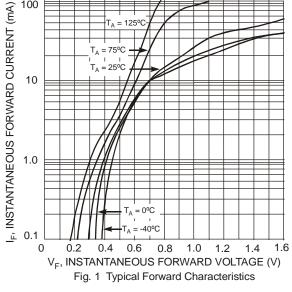
### Electrical Characteristics @TA = 25°C unless otherwise specified

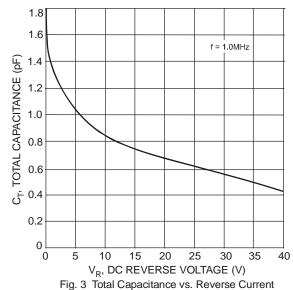
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	60	_	_	V	$I_R = 10\mu A$
Reverse Leakage Current (Note 2)	I <sub>RM</sub>	_	_	200	nA	V <sub>R</sub> = 50V
Forward Voltage Drop	V <sub>FM</sub>	_	_	0.41 1.0	V	I <sub>F</sub> = 1.0mA I <sub>F</sub> = 15mA
Total Capacitance	Ст	_	_	2.2	pF	$V_R = 0V$ , $f = 1.0MHz$
Reverse Recovery Time	t <sub>rr</sub>	_	_	1.0	ns	$I_F = I_R = 5.0 \text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$

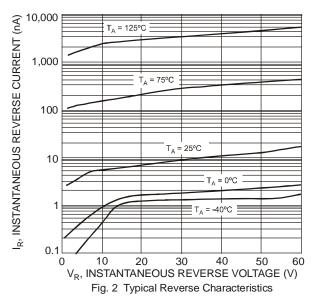
Notes:

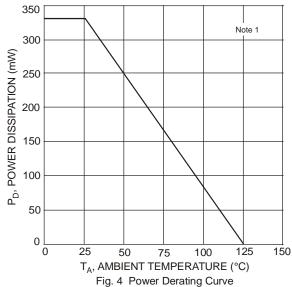
- Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
- Short duration pulse test used to minimize self-heating effect. No purposefully added lead. Halogen and Antimony Free.
- Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb<sub>2</sub>O<sub>3</sub> Fire Retardants.











### Ordering Information (Note 5)

ĺ	Part Number	Case	Packaging
	1N6263W-7-F	SOD-123	3000/Tape and Reel

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

# **Marking Information**



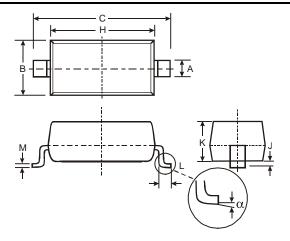
SB = Product Type Marking Code YM = Date Code Marking Y = Year (ex: T = 2006) M = Month (ex: 9 = September)

Date Code Key

Variation Date Col		4000	0000	0004	0000	0000	0004	2005	0000	0007	0000	0000	0040	0044	0040	0040	0044	0045
Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	J	K	L	М	Ν	Р	R	S	Т	U	٧	W	X	Υ	Z	Α	В	С
Month	Jar	1	Feb	Mai	r	Apr	May	,	Jun	Jul		Aug	Sep		Oct	Nov	,	Dec
Code	1		2	3		4	5		6	7		8	9		0	N		D

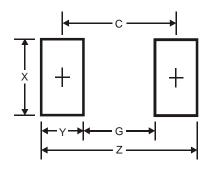


### **Package Outline Dimensions**



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

## **Suggested Pad Layout**



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

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