



SD103AW - SD103CW

SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- 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
- Leads: 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 3
- Ordering Information: See Page 2
- Weight: 0.01 grams (approximate)



Top View

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	SD103AW	SD103BW	SD103CW	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	40	30	20	٧
RMS Reverse Voltage	V _{R(RMS)}	28	21	14	V
Forward Continuous Current (Note 1)	I _{FM}		350		mA
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s	I _{FSM}		1.5		A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P _D	400	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +125	°C

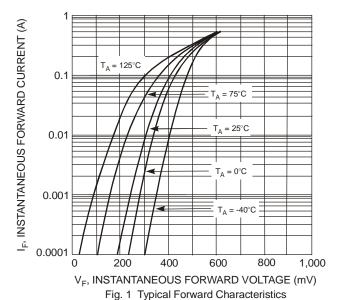
Electrical Characteristics @T_A = 25°C unless otherwise specified

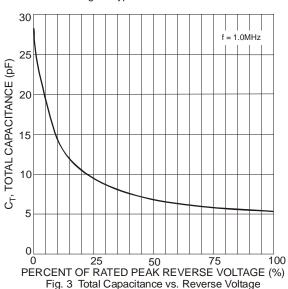
Characteristic		Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	SD103AW SD103BW SD103CW	V _{(BR)R}	40 30 20	_	_	V	$I_R = 100 \mu A$
Forward Voltage Drop		V _{FM}		_	0.37 0.60	V	$I_F = 20 \text{mA}$ $I_F = 200 \text{mA}$
Peak Reverse Current (Note 2)	SD103AW SD103BW SD103CW	I _{RM}	_	_	5.0	μА	$V_R = 30V$ $V_R = 20V$ $V_R = 10V$
Total Capacitance		CT	_	28	_	pF	$V_R = 0V$, $f = 1.0MHz$
Reverse Recovery Time		t _{rr}		10	_		$I_F = I_R = 200 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$

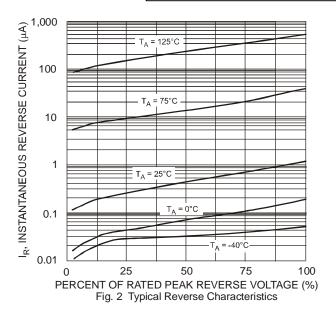
Notes: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.

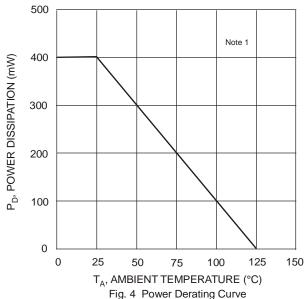
- 2. Short duration test pulse used to minimize self-heating effect.
- 3. No purposefully added lead. Halogen and Antimony Free.
- Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.











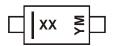
Ordering Information (Note 5)

Part Number	Case	Packaging
SD103AW-7-F	SOD-123	3000/Tape and Reel
SD103BW-7-F	SOD-123	3000/Tape and Reel
SD103CW-7-F	SOD-123	3000/Tape and Reel
SD103CW-13-F	SOD-123	10,000/Tape and Reel

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



Marking Information



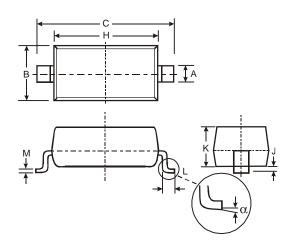
xx = Product Type Marking Code S4 = SD103AW S5 or S4 = SD103BW S6 or S5 or S4 = SD103CW YM = Date Code Marking

Y = Year (ex: T = 2006) M = Month (ex: 9 = September)

Date Code Key

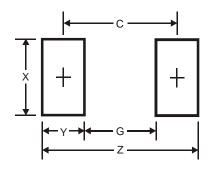
Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	J	K	L	М	N	Р	R	S	Т	U	V	W	Х	Υ	Z	Α	В	С
Month	Jar	1	Feb	Ма	r	Apr	May	/	Jun	Jul		Aug	Sep		Oct	Nov	,	Dec
Code	1		2	3		4	5		6	7		8	9		0	N		D

Package Outline Dimensions



SOD-123						
Dim	Min	Max				
Α	0.55 Typ					
В	1.40	1.70				
C	3.55	3.85				
Η	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 Di	nensions	s in mm				

Suggested Pad Layout



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

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