

SD103AWS-G, SD103BWS-G, SD103CWS-G

Vishay Semiconductors

Small Signal Schottky Diodes



DESIGN SUPPORT TOOLS click logo to get started



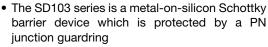
MECHANICAL DATA

Case: SOD-323

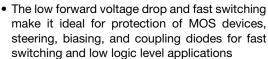
Weight: approx. 4.0 mg
Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box 08/3K per 7" reel (8 mm tape), 15K/box

FEATURES









- Other applications are click suppression, efficient full wave bridges in telephone subsets, and blocking diodes in rechargeable low voltage battery systems
- For general purpose applications
- AEC-Q101 qualified available
- Base P/N-G3 green, commercial grade
- Base P/N-HG3 green, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see <u>www.vishav.com/doc?99912</u>

PARTS TABLE					
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS	
SD103AWS-G	SD103AWS-G3-08 or SD103AWS-G3-18	Cinglo	Z 6	Tape and reel	
	SD103AWS-HG3-08 or SD103AWS-HG3-18	Single			
SD103BWS-G	SD103BWS-G3-08 or SD103BWS-G3-18	Cingle	Z 7		
	SD103BWS-HG3-08 or SD103BWS-HG3-18	Single	21		
SD103CWS-G	SD103CWS-G3-08 or SD103CWS-G3-18	Cinale	70		
	SD101CWS-HG3-08 or SD101CWS-HG3-18	Single	Z8		

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
		SD103AWS-G	V_{RRM}	40	V	
Repetitive peak reverse voltage		SD103BWS-G	V_{RRM}	30	V	
		SD103CWS-G	V_{RRM}	20	V	
Forward continuous current (1)			I _F	350	mA	
Single cycle surge	10 μs square wave		I _{FSM}	2	А	
Power dissipation (1)			P _{tot}	200	mW	

Note

(1) Valid provided that electrodes are kept at ambient temperature

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air (1)		R _{thJA}	500	K/W	
Junction temperature		Tj	125	°C	
Operating temperature range		T _{op}	-55 to +125	°C	
Storage temperature range		T _{sta}	-55 to +150	°C	

Note

⁽¹⁾ Valid provided that electrodes are kept at ambient temperature

www.vishay.com

Vishay Semiconductors

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
	V _R = 30 V	SD103AWS-G	I _R			5	μA
Leakage current	V _R = 20 V	SD103BWS-G	I _R			5	μA
	V _R = 10 V	SD103CWS-G	I _R			5	μA
Forward voltage drop	$I_F = 20 \text{ mA}$		V_{F}			370	mV
Torward voitage drop	I _F = 200 mA		V_{F}			600	mV
Diode capacitance	$V_R = 0 V$, $f = 1 MHz$		C_D		50		pF
Reverse recovery time	$I_F = I_R = 50$ mA to 200 mA, recover to 0.1 I_R		t _{rr}		10		ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

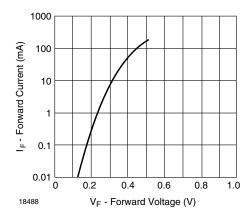


Fig. 1 - Typical Variation of Forward Current vs. Forward Voltage

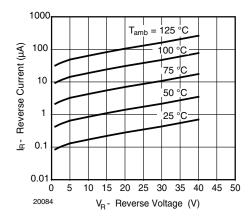


Fig. 3 - Typical Variation of Reverse Current at Various Temperatures

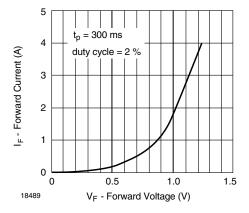


Fig. 2 - Typical High Current Forward Conduction Curve

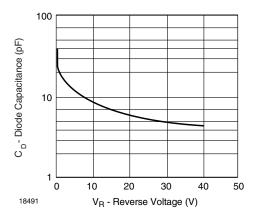


Fig. 4 - Diode Capacitance vs. Reverse Voltage

Vishay Semiconductors

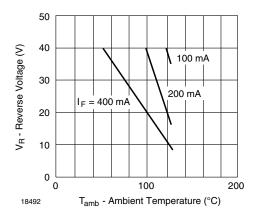
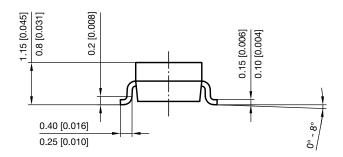
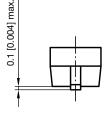
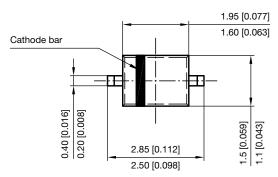


Fig. 5 - Blocking Voltage Deration vs. Temperature at Various Average Forward Currents

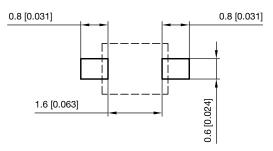
PACKAGE DIMENSIONS in millimeters (inches): SOD-323







Footprint recommendation:



Document no.: S8-V-3910.02-001 (4) Created - Date: 24.August.2004 Rev. 6 - Date: 23.Sept.2016

Rev. 1.6, 01-Jun-17 3 Document Number: 81142

Legal Disclaimer Notice



Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.