SD103AWS, SD103BWS, SD103CWS

Vishay Semiconductors

Small Signal Schottky Diodes



DESIGN SUPPORT TOOLS click logo to get started



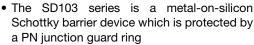
MECHANICAL DATA

Case: SOD-323

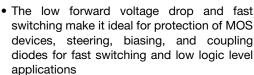
Weight: approx. 4.3 mg
Packaging codes/options:

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

FEATURES









- For general purpose applications
- AEC-Q101 qualified available
- Base P/N-E3 RoHS-compliant, commercial grade
- Base P/N-HE3 RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

PARTS TABLE					
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS	
SD103AWS	SD103AWS-E3-08 or SD103AWS-E3-18	Single	S6	Tape and reel	
	SD103AWS-HE3-08 or SD103AWS-HE3-18	Single	50		
SD103BWS	SD103BWS-E3-08 or SD103BWS-E3-18	Cinalo	S7		
	SD103BWS-HE3-08 or SD103BWS-HE3-18	Single	5/		
SD103CWS	SD103CWS-E3-08 or SD103CWS-E3-18	Single	S8		
	SD103CWS-HE3-08 or SD103CWS-HE3-18	Sirigle	30		

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

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 _{stg}	-55 to +150	°C		

Note

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



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

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

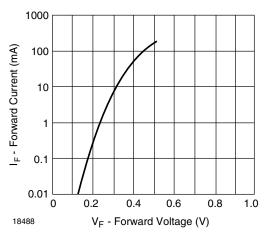


Fig. 1 - Typical Variation of Forward Current vs. Forward Voltage

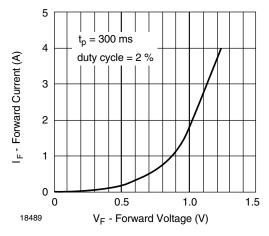


Fig. 2 - Typical High Current Forward Conduction Curve

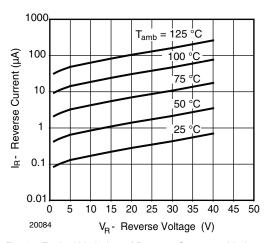


Fig. 3 - Typical Variation of Reverse Current at Various Temperatures

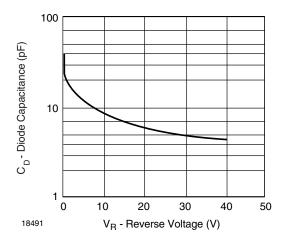


Fig. 4 - Diode Capacitance vs. Reverse Voltage

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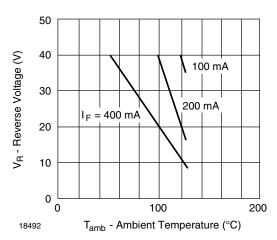
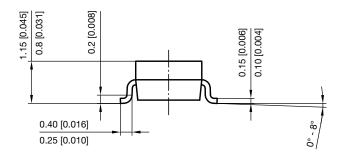
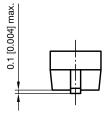
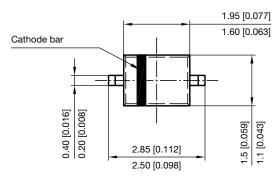


Fig. 5 - Blocking Voltage Deration vs. Temperature at Various Average Forward Currents

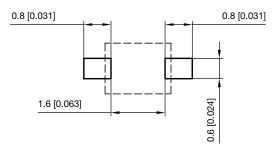
PACKAGE DIMENSIONS in millimeters (inches): SOD-323







Footprint recommendation:



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