

Vishay Semiconductors

AUTOMOTIVE GRADE

RoHS

COMPLIANT

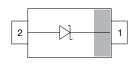
HALOGEN FREE

GREEN

(5-2008)

Small Signal Schottky Diodes





LINKS TO ADDITIONAL RESOURCES











MECHANICAL DATA

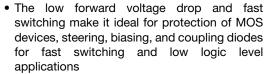
Case: SOD-323

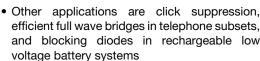
Weight: approx. 4 mg

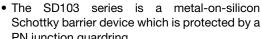
Packaging codes/options:

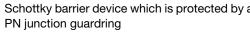
18/10K per 13" reel (8 mm tape), 10K/box 08/3K per 7" reel (8 mm tape), 15K/box

FEATURES









- For general purpose applications
- AEC-Q101 qualified available
- Molding compound meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level (MSL) 1
- Base P/N-G3 RoHS-compliant, commercial grade
- Base P/N-HG3_A RoHS-compliant, AEC-Q101 qualified (part number available on request)
- Material categorization: for definitions of compliance please see www.vishav.com/doc?99912

PARTS TABLE							
PART	ORDERING CODE	AEC-Q101 QUALIFIED	TYPE MARKING	CIRCUIT CONFIGURATION	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY	
	SD103AWS-G3-08	No			3000	15 000	
SD103AWS	SD103AWS-HG3_A-08	Yes	6S	Single	(8 mm tape on 7" reel)		
3D103AW3	SD103AWS-G3-18	No	65	Sirigle	10 000	10 000	
	SD103AWS-HG3_A-18	Yes			(8 mm tape on 13" reel)	10 000	
	SD103BWS-G3-08	No	- 7S		3000	15 000	
SD103BWS	SD103BWS-HG3_A-08	Yes		Single	(8 mm tape on 7" reel)	13 000	
2D103BM2	SD103BWS-G3-18	No		Single		10 000	
	SD103BWS-HG3_A-18	Yes			(8 mm tape on 13" reel)	10 000	
	SD103CWS-G3-08	No			3000	15 000	
SD103CWS	SD103CWS-HG3_A-08	Yes	8S	Single	(8 mm tape on 7" reel)	15 000	
	SD103CWS-G3-18	No		Sirigle	10 000	10 000	
	SD103CWS-HG3_A-18	Yes	•		(8 mm tape on 13" reel)	10 000	

PACKAGE					
PACKAGE NAME WEIGHT		MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS	
SOD-323	4 mg	UL 94 V-0	MSL 1 (according J-STD-020)	Peak temperature max. 260 °C	



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ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
		SD103AWS	V_{RRM}	40	V	
Repetitive peak reverse voltage		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 _{FSM}	2	Α	

Note

⁽¹⁾ Infinite heatsink

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction lead	Infinite heatsink	R _{thJL}	500	K/W	
Maximum junction temperature		T _j	125	°C	
Storage temperature range		T _{stg}	-65 to +150	°C	
Operating temperature range		T _{op}	-55 to +125	°C	

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	TYP.	MAX.	UNIT
	V _R = 30 V	SD103AWS	I _R		5	μA
Leakage current	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
Forward voltage 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

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

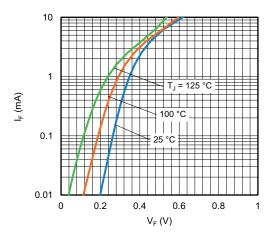


Fig. 1 - Typical Forward Current vs. Forward Voltage

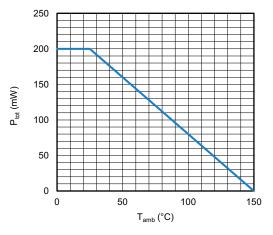


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

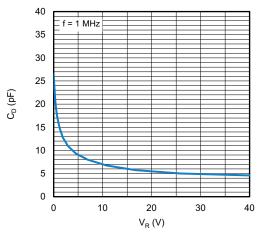


Fig. 3 - Typical Capacitance vs. Reverse Voltages

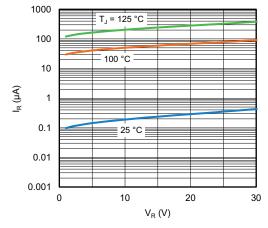
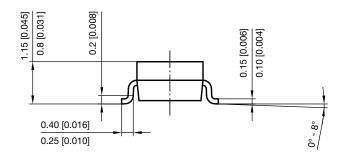
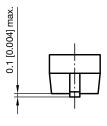


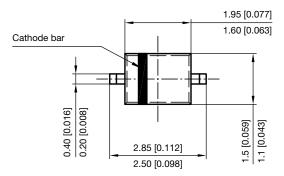
Fig. 4 - Typical Reverse Leakage vs. Reverse Voltage

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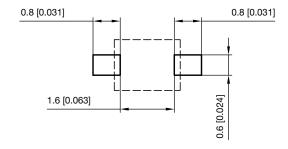
PACKAGE DIMENSIONS in millimeters (inches) SOD-323







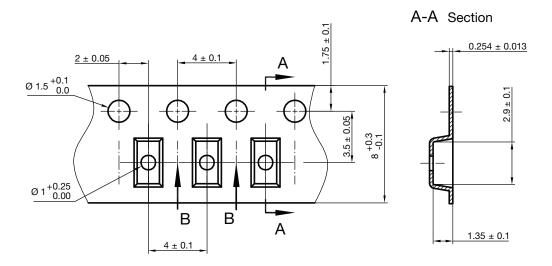
Footprint recommendation:



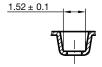
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CARRIER TAPE SOD-323

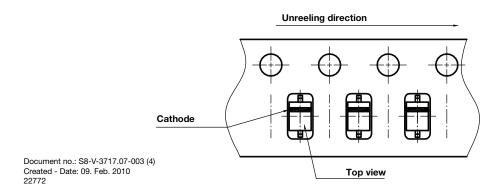


B-B Section



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ORIENTATION IN CARRIER TAPE SOD-323





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