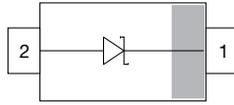




## Small Signal Schottky Diodes



### FEATURES

- For general purpose applications
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications
- The SD101 series is a metal-on-silicon Schottky barrier device which is protected by a PN junction guarding
- 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.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### 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

PARTS TABLE						
PART	ORDERING CODE	AEC-Q101 QUALIFIED	TYPE MARKING	CIRCUIT CONFIGURATION	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
SD101AWS	SD101AWS-G3-08	No	1A	Single	3000 (8 mm tape on 7" reel)	15 000
	SD101AWS-HG3_A-08	Yes			10 000 (8 mm tape on 13" reel)	10 000
	SD101AWS-G3-18	No				
	SD101AWS-HG3_A-18	Yes				
SD101BWS	SD101BWS-G3-08	No	1B	Single	3000 (8 mm tape on 7" reel)	15 000
	SD101BWS-HG3_A-08	Yes			10 000 (8 mm tape on 13" reel)	10 000
	SD101BWS-G3-18	No				
	SD101BWS-HG3_A-18	Yes				
SD101CWS	SD101CWS-G3-08	No	1C	Single	3000 (8 mm tape on 7" reel)	15 000
	SD101CWS-HG3_A-08	Yes			10 000 (8 mm tape on 13" reel)	10 000
	SD101CWS-G3-18	No				
	SD101CWS-HG3_A-18	Yes				

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION		PART	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage			SD101AWS	V <sub>RRM</sub>	60	V
			SD101BWS	V <sub>RRM</sub>	50	V
			SD101CWS	V <sub>RRM</sub>	40	V
Power dissipation <sup>(1)</sup>				P <sub>tot</sub>	150	mW
Forward continuous current <sup>(1)</sup>				I <sub>F</sub>	30	mA
Maximum single cycle surge	10 μs square wave			I <sub>FSM</sub>	2	A

#### Note

<sup>(1)</sup> Infinite heatsink



THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction lead	Infinite heatsink	R <sub>thJL</sub>	650	K/W
Maximum junction temperature		T <sub>j</sub>	125	°C
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C
Operating temperature range		T <sub>op</sub>	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	MAX.	UNIT
Reverse breakdown voltage	I <sub>R</sub> = 10 μA	SD101AWS	V <sub>(BR)</sub>	60		V
		SD101BWS	V <sub>(BR)</sub>	50		V
		SD101CWS	V <sub>(BR)</sub>	40		V
Leakage current	V <sub>R</sub> = 50 V	SD101AWS	I <sub>R</sub>		200	nA
	V <sub>R</sub> = 40 V	SD101BWS	I <sub>R</sub>		200	nA
	V <sub>R</sub> = 30 V	SD101CWS	I <sub>R</sub>		200	nA
Forward voltage drop	I <sub>F</sub> = 1 mA	SD101AWS	V <sub>F</sub>		410	mV
		SD101BWS	V <sub>F</sub>		400	mV
		SD101CWS	V <sub>F</sub>		390	mV
	I <sub>F</sub> = 15 mA	SD101AWS	V <sub>F</sub>		1000	mV
		SD101BWS	V <sub>F</sub>		950	mV
		SD101CWS	V <sub>F</sub>		900	mV
Diode capacitance	V <sub>R</sub> = 0 V, f = 1 MHz	SD101AWS	C <sub>D</sub>		2	pF
		SD101BWS	C <sub>D</sub>		2.1	pF
		SD101CWS	C <sub>D</sub>		2.2	pF
Reverse recovery time	I <sub>F</sub> = I <sub>R</sub> = 5 mA, recover to 0.1 I <sub>R</sub>		t <sub>rr</sub>		1	ns



## TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

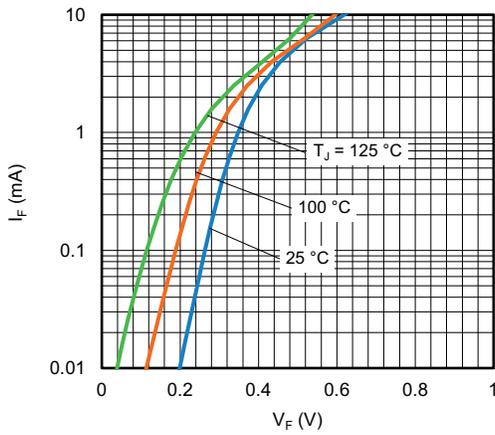


Fig. 1 - Typical Forward Current vs. Forward Voltage

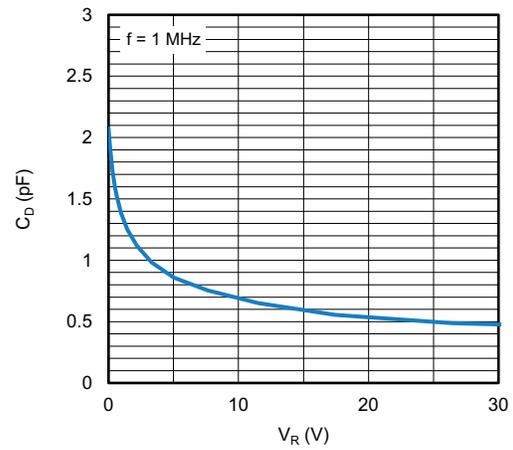


Fig. 3 - Typical Capacitance vs. Reverse Voltage

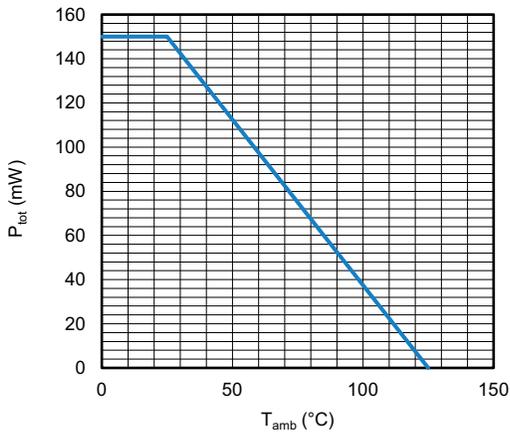


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

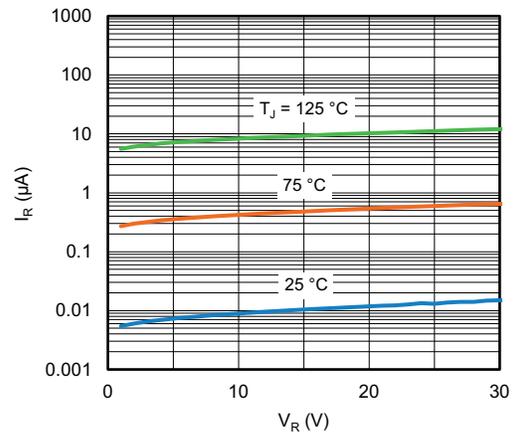
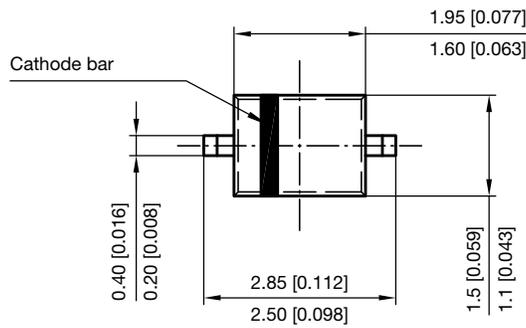
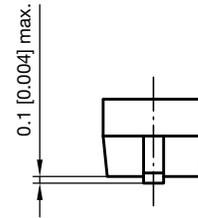
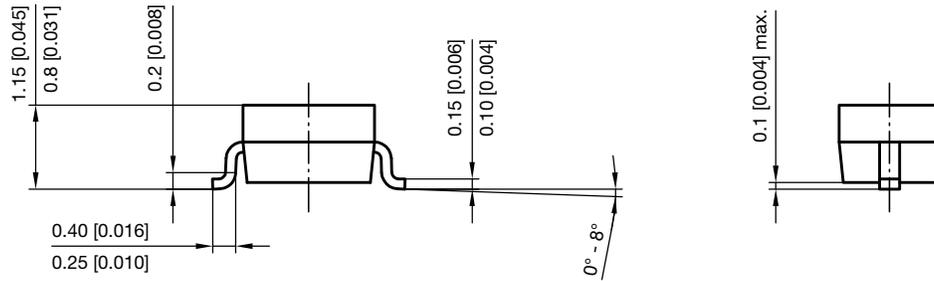


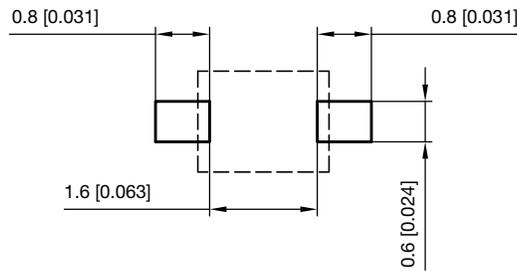
Fig. 4 - Typical Reverse Leakage vs. Reverse Voltage



## PACKAGE DIMENSIONS in millimeters (inches) SOD-323



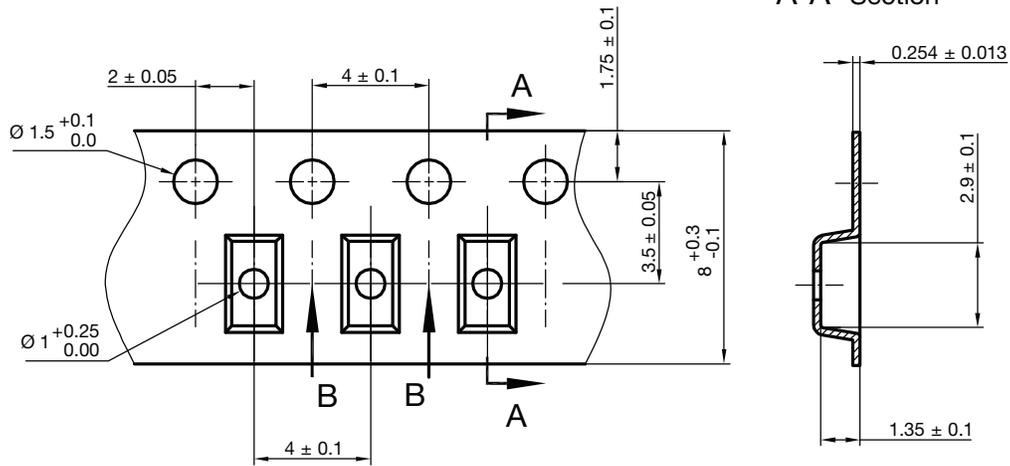
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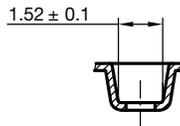
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 Rev. 6 - Date: 23.Sept.2016  
 22771



## CARRIER TAPE SOD-323

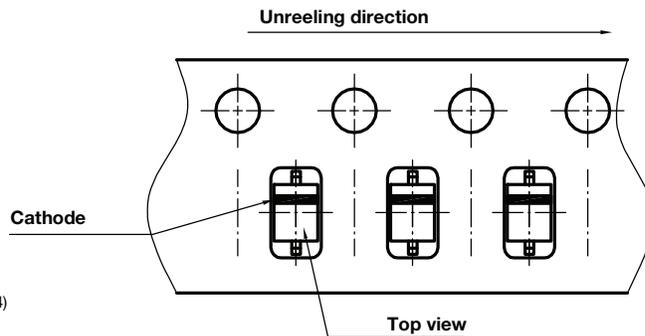


B-B Section



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Created - Date: 09. Feb. 2010  
22824

## ORIENTATION IN CARRIER TAPE SOD-323



Document no.: S8-V-3717.07-003 (4)  
Created - Date: 09. Feb. 2010  
22772



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