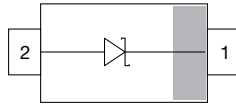
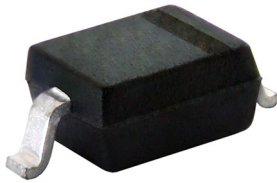




## Small Signal Schottky Diodes



### 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				
	SD101AWS-G3-18	No			10 000 (8 mm tape on 13" reel)	10 000
	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				
	SD101BWS-G3-18	No			10 000 (8 mm tape on 13" reel)	10 000
	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				
	SD101CWS-G3-18	No			10 000 (8 mm tape on 13" reel)	10 000
	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 ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction lead	Infinite heatsink	$R_{thJL}$	650	K/W
Maximum junction temperature		$T_j$	125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-65 to +150	$^{\circ}\text{C}$
Operating temperature range		$T_{op}$	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$	SD101AWS	$V_{(BR)}$	60		V
		SD101BWS	$V_{(BR)}$	50		V
		SD101CWS	$V_{(BR)}$	40		V
Leakage current	$V_R = 50\text{ V}$	SD101AWS	$I_R$		200	nA
	$V_R = 40\text{ V}$	SD101BWS	$I_R$		200	nA
	$V_R = 30\text{ V}$	SD101CWS	$I_R$		200	nA
Forward voltage drop	$I_F = 1\text{ mA}$	SD101AWS	$V_F$		410	mV
		SD101BWS	$V_F$		400	mV
		SD101CWS	$V_F$		390	mV
	$I_F = 15\text{ mA}$	SD101AWS	$V_F$		1000	mV
		SD101BWS	$V_F$		950	mV
		SD101CWS	$V_F$		900	mV
Diode capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	SD101AWS	$C_D$		2	pF
		SD101BWS	$C_D$		2.1	pF
		SD101CWS	$C_D$		2.2	pF
Reverse recovery time	$I_F = I_R = 5\text{ mA}$ , recover to $0.1\text{ }I_R$		$t_{rr}$		1	ns



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

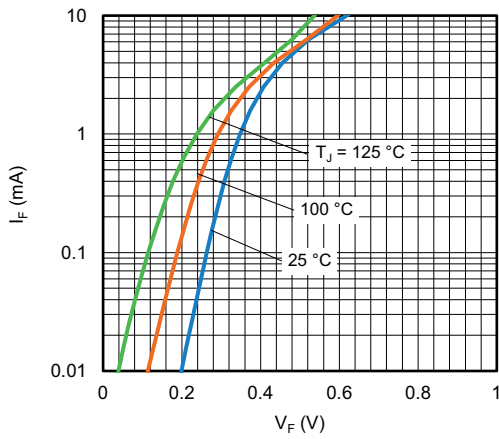


Fig. 1 - Typical Forward Current vs. Forward Voltage

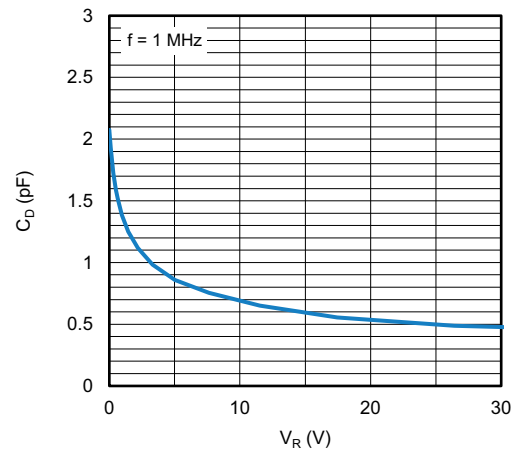


Fig. 3 - Typical Capacitance vs. Reverse Voltage

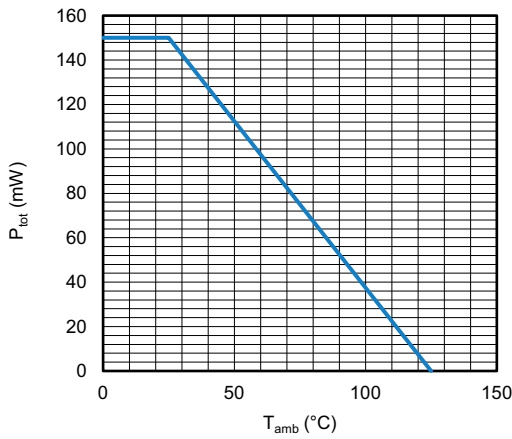


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

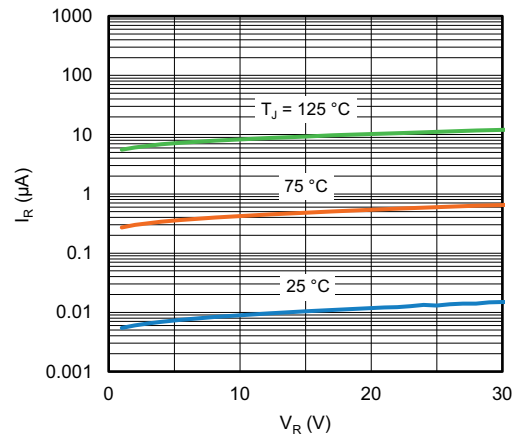
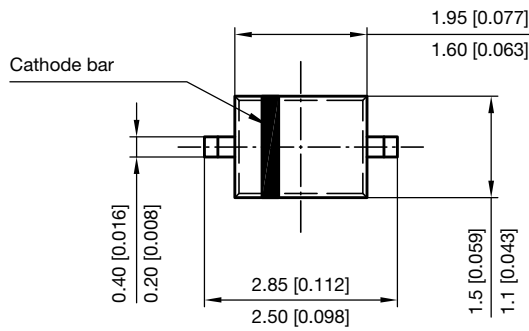
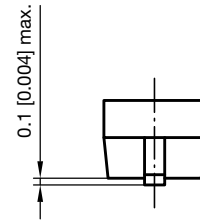
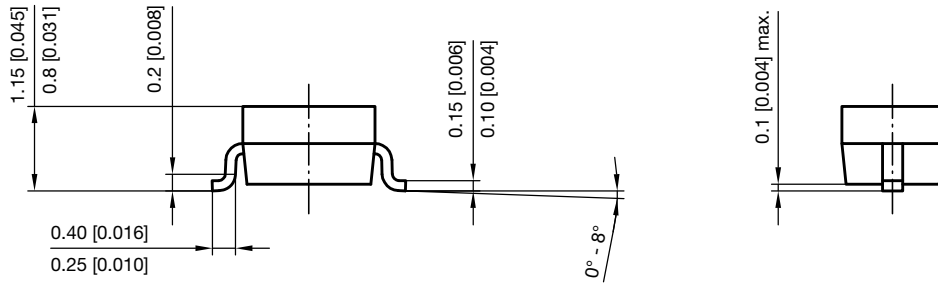


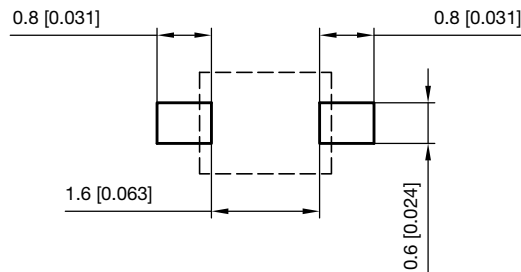
Fig. 4 - Typical Reverse Leakage vs. Reverse Voltage



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



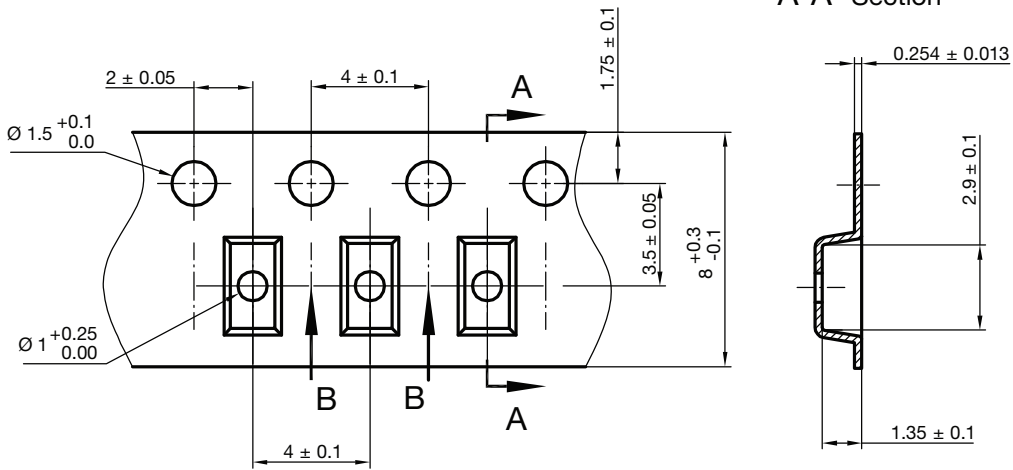
Footprint recommendation:



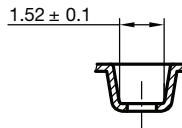
Document no.: S8-V-3910.02-001 (4)  
 Created - Date: 24.August.2004  
 Rev. 6 - Date: 23.Sept.2016  
 22771



## CARRIER TAPE SOD-323

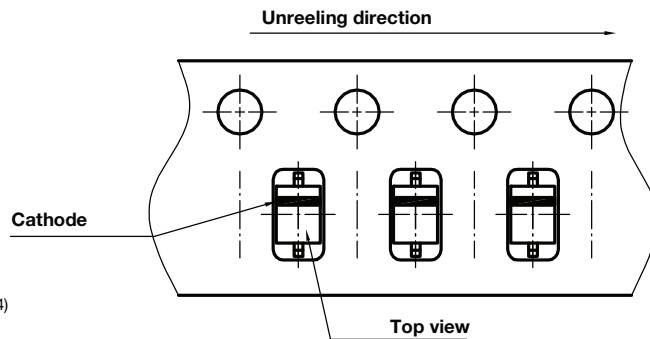


B-B Section



Document no.: S8-V-3717.07-002 (4)  
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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