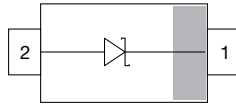
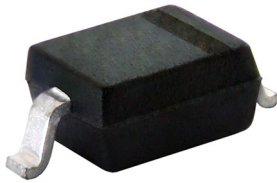




Small Signal Schottky Diodes



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-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3_A - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see 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-E3-08	No	1A	Single	3000 (8 mm tape on 7" reel)	15 000
	SD101AWS-HE3_A-08	Yes			10 000 (8 mm tape on 13" reel)	10 000
	SD101AWS-E3-18	No				
	SD101AWS-HE3_A-18	Yes				
SD101BWS	SD101BWS-E3-08	No	1B	Single	3000 (8 mm tape on 7" reel)	15 000
	SD101BWS-HE3_A-08	Yes			10 000 (8 mm tape on 13" reel)	10 000
	SD101BWS-E3-18	No				
	SD101BWS-HE3_A-18	Yes				
SD101CWS	SD101CWS-E3-08	No	1C	Single	3000 (8 mm tape on 7" reel)	15 000
	SD101CWS-HE3_A-08	Yes			10 000 (8 mm tape on 13" reel)	10 000
	SD101CWS-E3-18	No				
	SD101CWS-HE3_A-18	Yes				

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

Note

⁽¹⁾ 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 ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

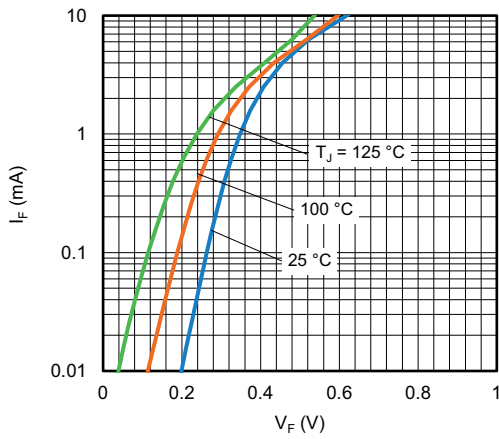


Fig. 1 - Typical Forward Current vs. Forward Voltage

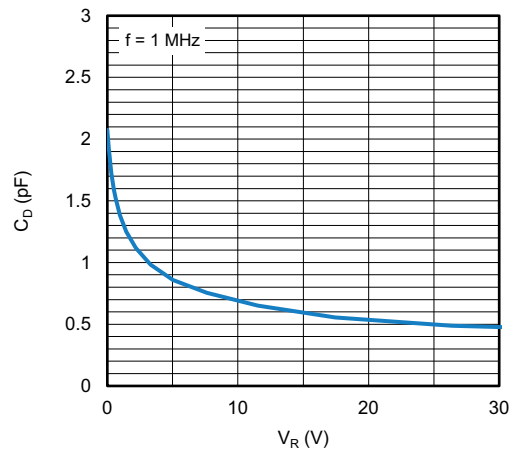


Fig. 3 - Typical Capacitance vs. Reverse Voltage

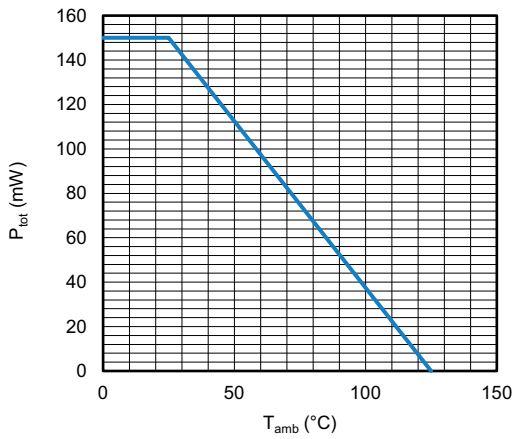


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

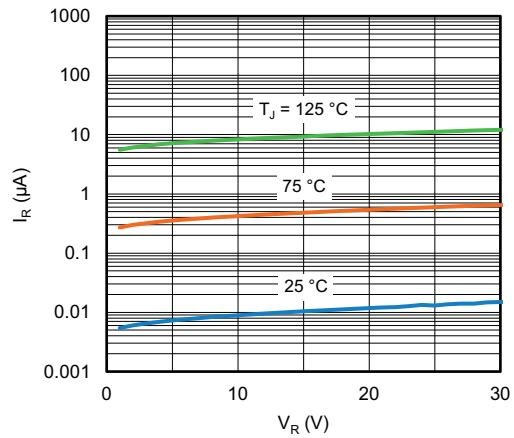
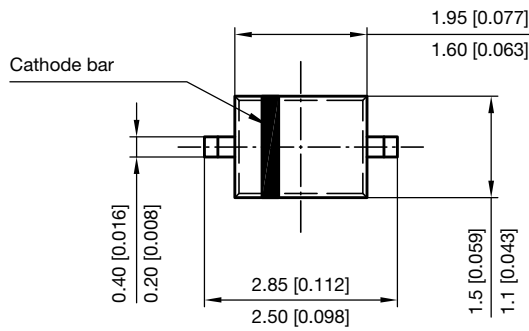
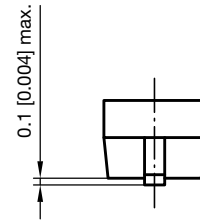
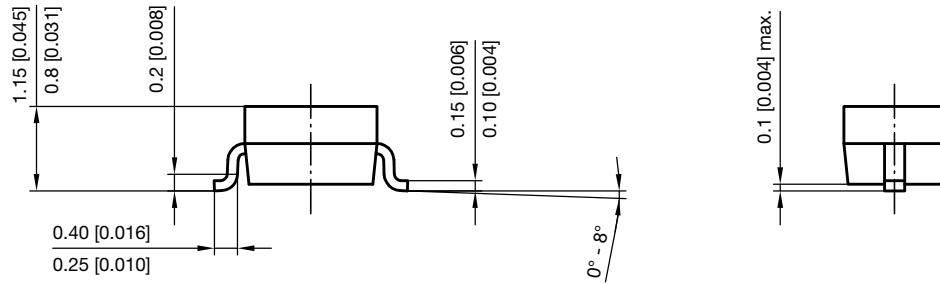


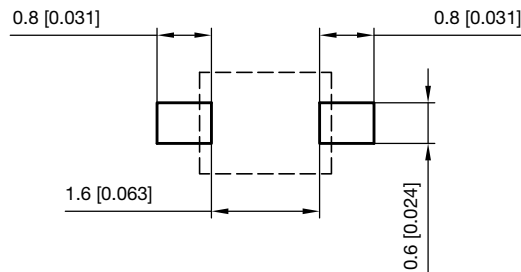
Fig. 4 - Typical Reverse Leakage vs. Reverse Voltage



PACKAGE DIMENSIONS in millimeters (inches) SOD-323



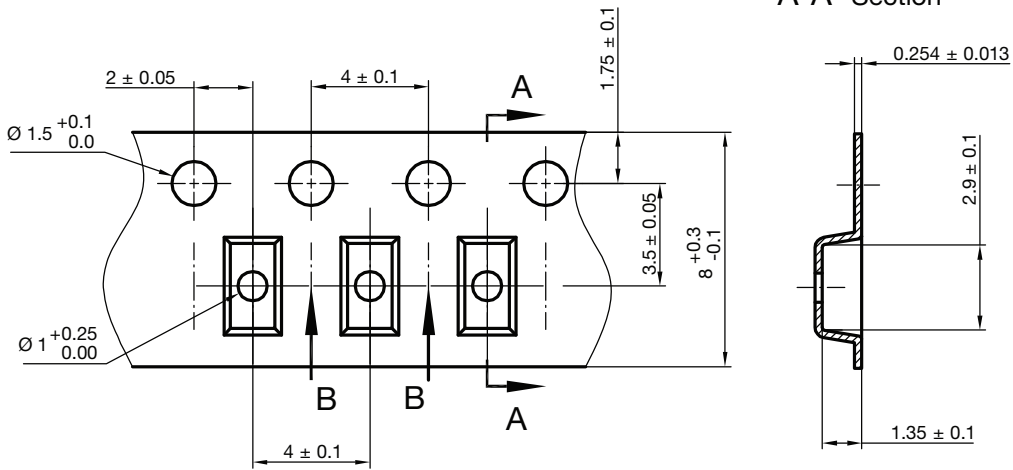
Footprint recommendation:



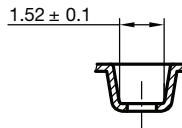
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 Rev. 6 - Date: 23.Sept.2016
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CARRIER TAPE SOD-323

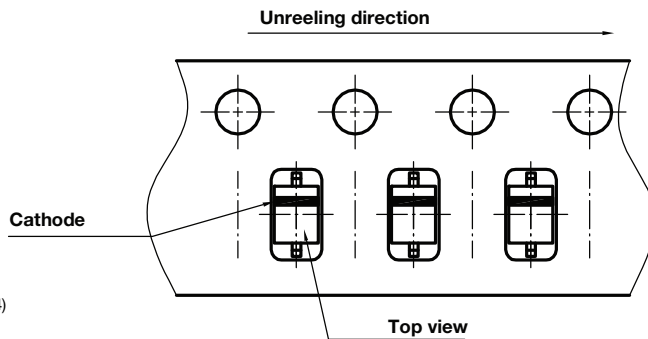


B-B Section



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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