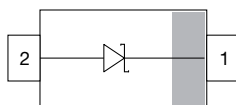
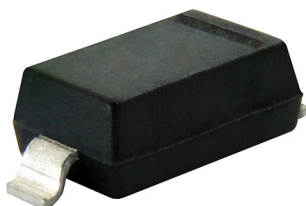


## Small Signal Fast Switching Diode



### FEATURES

- Silicon epitaxial planar diode
- Fast switching diode
- AEC-Q101 qualified available
- 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](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### 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
1N4448WS	1N4448WS-E3-08	No	3A	Single	3000 (8 mm tape on 7" reel)	15 000
	1N4448WS-HE3_A-08	Yes				
	1N4448WS-E3-18	No			10 000 (8 mm tape on 13" reel)	10 000
	1N4448WS-HE3_A-18	Yes				

### 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

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		$V_R$	75	V
Repetitive peak reverse voltage		$V_{RRM}$	100	V
Continuous forward current <sup>(1)</sup>		$I_F$	250	mA
Average rectified current half wave rectification with resistive load <sup>(1)</sup>	$f \geq 50\text{ Hz}$	$I_{F(AV)}$	150	mA
Surge current <sup>(1)</sup>	$t < 1\text{ s}$ and $T_j = 25\text{ °C}$	$I_{FSM}$	350	mA
Power dissipation <sup>(1)</sup>		$P_{tot}$	200	mW

#### Note

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

### THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to lead	Infinite heatsink	$R_{thJL}$	625	K/W
Junction temperature		$T_j$	150	°C
Storage temperature		$T_{stg}$	-65 to +150	°C
Operating temperature		$T_{op}$	-55 to +150	°C

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100\text{ mA}$	$V_F$			1	V
	$I_F = 5\text{ mA}$	$V_F$	0.62		0.72	V
Leakage current	$V_R = 20\text{ V}$	$I_R$			25	nA
	$V_R = 75\text{ V}$	$I_R$			2	$\mu\text{A}$
	$V_R = 20\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	$I_R$			50	$\mu\text{A}$
Capacitance	$V_F = V_R = 0\text{ V}$				1.5	pF
Reverse recovery time	$I_F = 10\text{ mA}, i_R = 1\text{ mA}, V_R = 6\text{ V}, R_L = 100\text{ }\Omega$	$t_{rr}$			4	ns

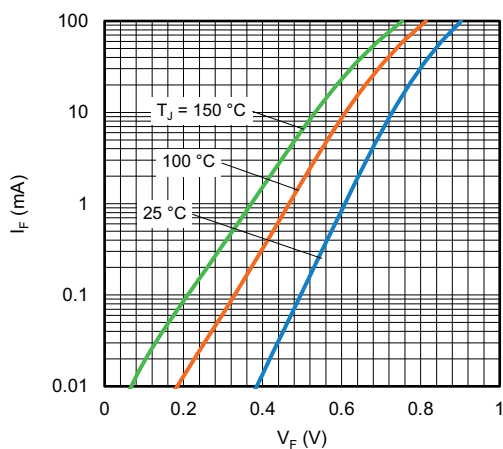
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Typical Forward Current vs. Forward Voltage

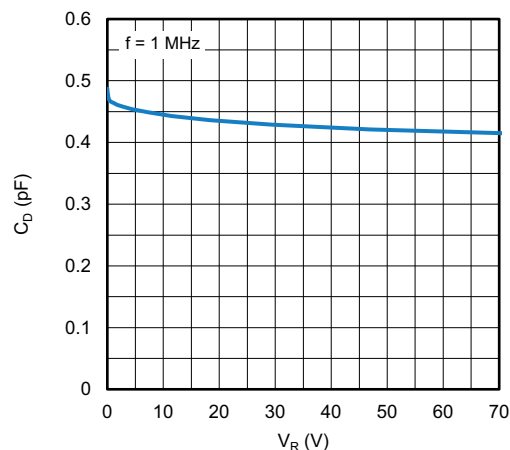


Fig. 3 - Typical Capacitance vs. Reverse Voltage

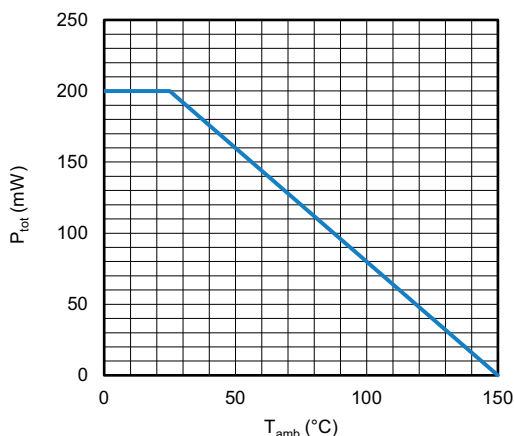


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

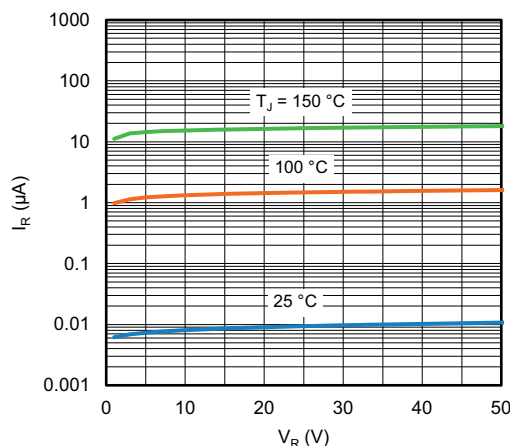
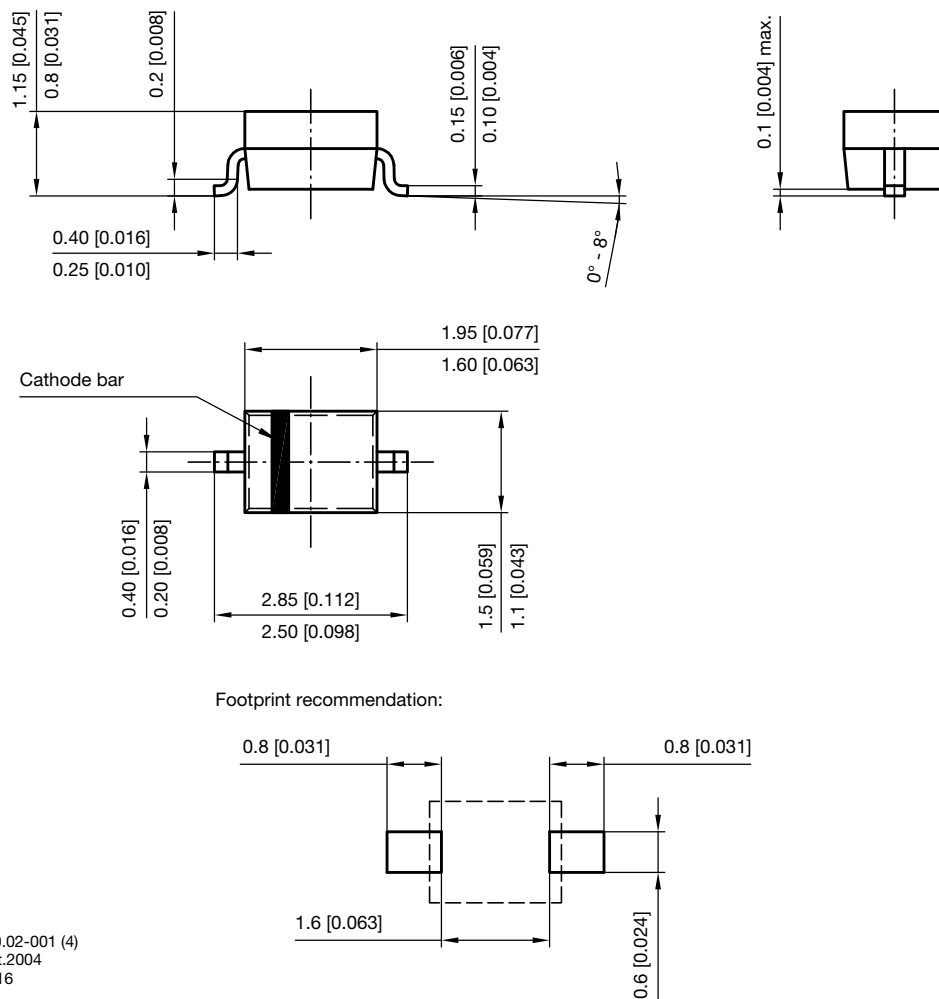


Fig. 4 - Typical Reverse Leakage Current vs. Reverse Voltage



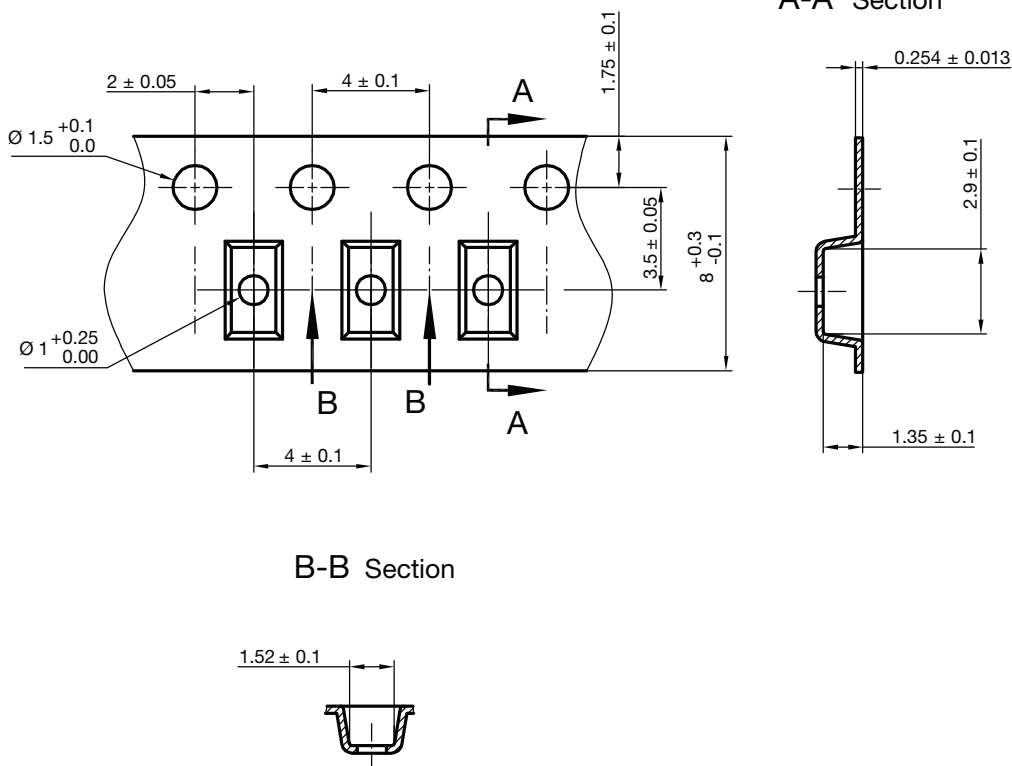
**PACKAGE DIMENSIONS** in millimeters (inches) **SOD-323**



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Rev. 6 - Date: 23.Sept.2016  
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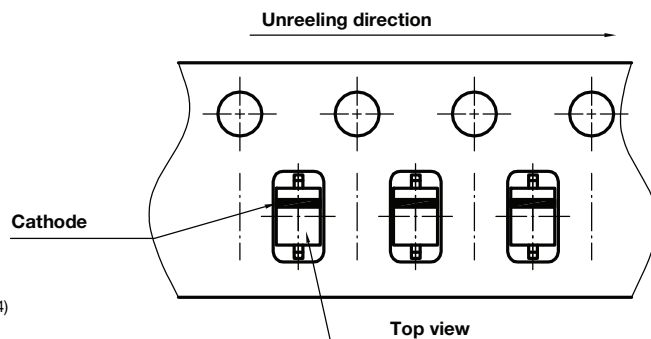


## CARRIER TAPE SOD-323



Document no.: S8-V-3717.07-002 (4)  
Created - Date: 09. Feb. 2010  
22824

## ORIENTATION IN CARRIER TAPE SOD-323



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Created - Date: 09. Feb. 2010  
22772



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