



# Small Signal Fast Switching Diode



### FEATURES

- Silicon epitaxial planar diode
- For general purpose and switching
- AEC-Q101 qualified available
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - 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

### DESIGN SUPPORT TOOLS

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### MECHANICAL DATA

Case: SOD-123

Weight: approx. 10.3 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	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
1N4150W	1N4150W-E3-08 or 1N4150W-E3-18	A4	Single	Tape and reel
	1N4150W-HE3-08 or 1N4150W-HE3-18			

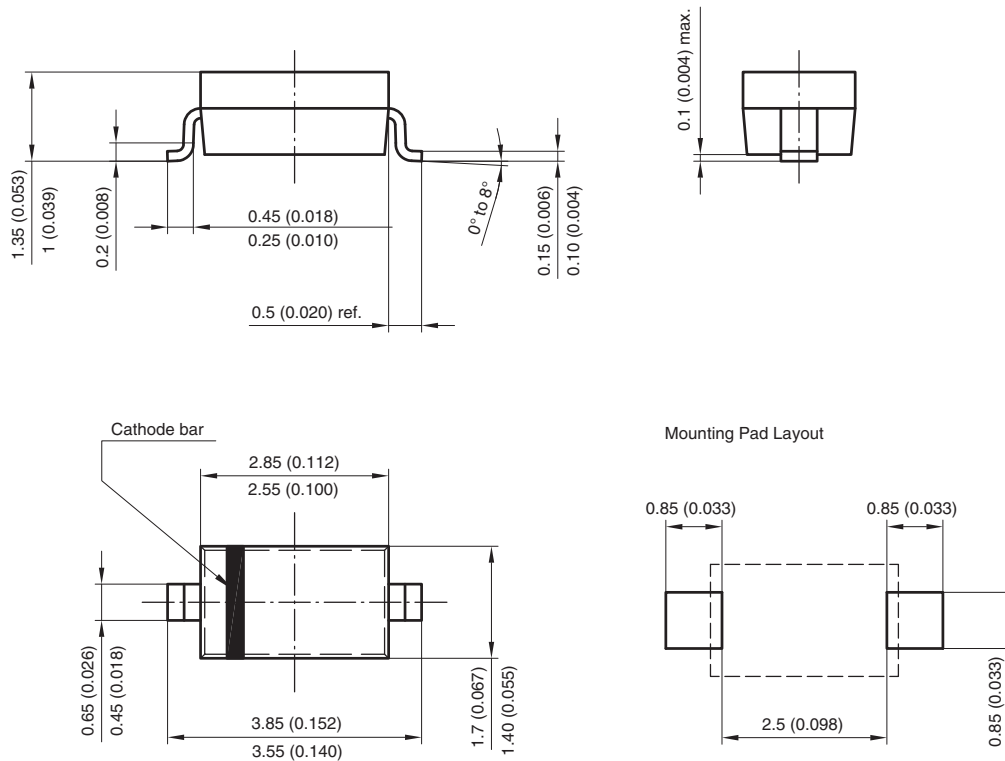
ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V <sub>RRM</sub>	50	V
Maximum average forward rectified current		I <sub>F(AV)</sub>	200	mA
Maximum power dissipation <sup>(1)</sup>		P <sub>tot</sub>	410	mW

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air <sup>(1)</sup>		R <sub>thJA</sub>	375	K/W
Maximum junction temperature		T <sub>j</sub>	150	°C
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C
Operating temperature range		T <sub>op</sub>	-55 to +150	°C

#### Note

<sup>(1)</sup> Valid provided that electrodes are kept at ambient temperature

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 1\text{ mA}$	$V_F$	0.540		0.620	V
	$I_F = 10\text{ mA}$	$V_F$	0.660		0.740	V
	$I_F = 50\text{ mA}$	$V_F$	0.760		0.860	V
	$I_F = 100\text{ mA}$	$V_F$	0.820		0.920	V
	$I_F = 200\text{ mA}$	$V_F$	0.870		1	V
Reverse current	$V_R = 50\text{ V}$	$I_R$			100	nA
	$V_R = 50\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			100	$\mu\text{A}$
Diode capacitance	$V_R = 0, f = 1\text{ MHz}, V_{HF} = 50\text{ mV}$	$C_D$			2.5	pF
Reverse recovery time	$I_F = I_R = (10\text{ to }100)\text{ mA}$ $i_R = 0.1 \times I_R, R_L = 100\text{ }\Omega$	$t_{rr}$			4	ns

**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-123**


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