

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


RoHS
COMPLIANT

DESIGN SUPPORT TOOLS

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3D
Models
Available

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V_{RRM}	50	V
Maximum average forward rectified current		$I_{F(AV)}$	200	mA
Maximum power dissipation ⁽¹⁾		P_{tot}	410	mW

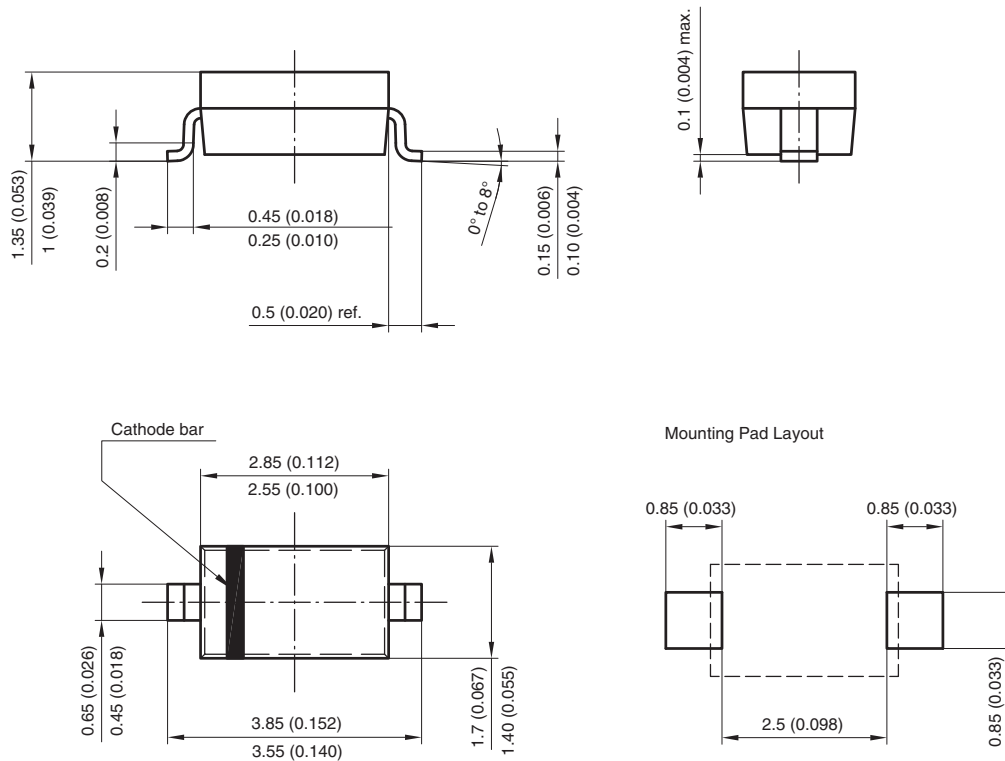
THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air ⁽¹⁾		R_{thJA}	375	K/W
Maximum junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65 to +150	$^{\circ}\text{C}$
Operating temperature range		T_{op}	-55 to +150	$^{\circ}\text{C}$

Note

⁽¹⁾ Valid provided that electrodes are kept at ambient temperature

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	μA
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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