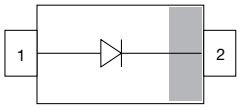
Small Signal Fast Switching Diode





LINKS TO ADDITIONAL RESOURCES

3D Models | Models | Marking | Parametric Search | Order Samples

FEATURES

- Silicon epitaxial planar diode
- For general purpose and switching
- 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

AUTOMOTIVE GRADE Available

Pb-free

e3

RoHS COMPLIANT

MECHANICAL DATA

Case: SOD-123

Weight: approx. 10.6 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
1N4150W	1N4150W-E3-08	no	AM	Single	3 000 (8 mm tape on 7" reel)	15 000
	1N4150W-HE3_A-08	yes				
	1N4150W-E3-18	no			10 000 (8 mm tape on 13" reel)	10 000
	1N4150W-HE3_A-18	yes				

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V_{RRM}	50	V
Maximum average forward rectified current (1)	f ≥ 50 Hz	$I_{F(AV)}$	300	mA
Power dissipation	On FR-4 board with recommended soldering footprint	P_{tot}	310	mW
	Infinite heat sink		410	mW

Note

(1) Infinite heatsink

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	According to JEDEC® 51-3 on FR-4 board with recommended soldering footprint	R_{thJA}	400	K/W
Thermal resistance junction to lead	Infinite heat sink	R_{thJL}	300	K/W
Maximum junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	-65 to +150	°C
Operating temperature range		T_{op}	-55 to +150	°C

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

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

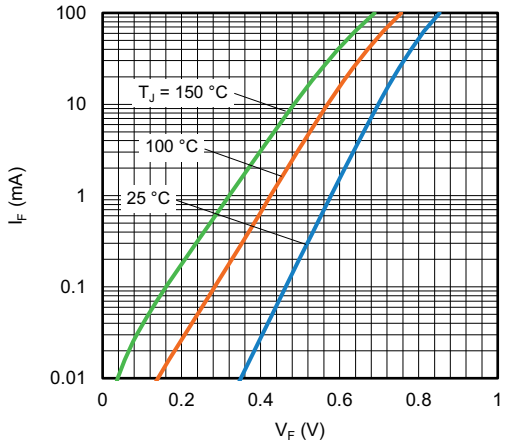


Fig. 1 - Typical Forward Current vs. Forward Voltage

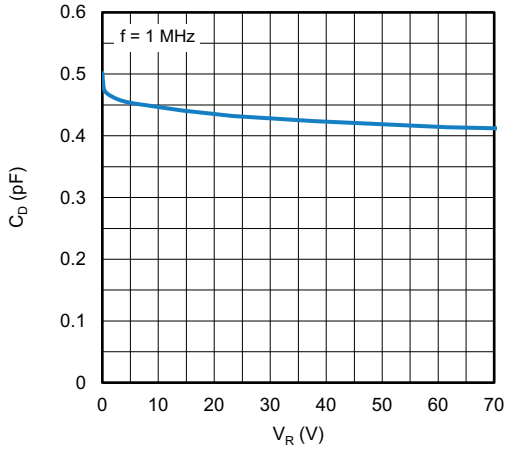


Fig. 3 - Typical Capacitance vs. Reverse Voltage

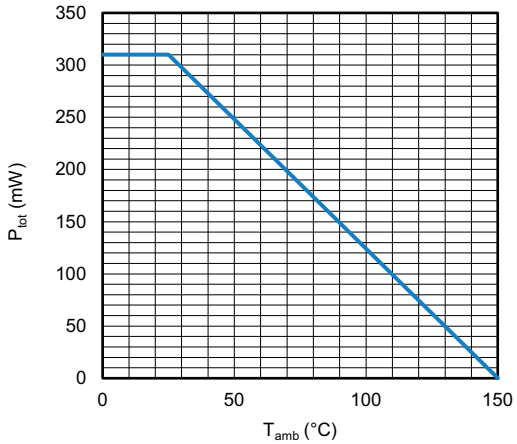


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

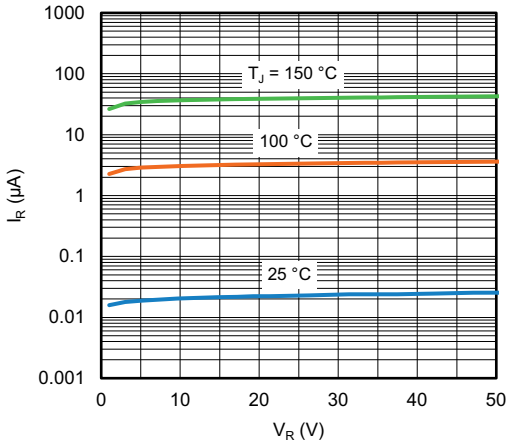
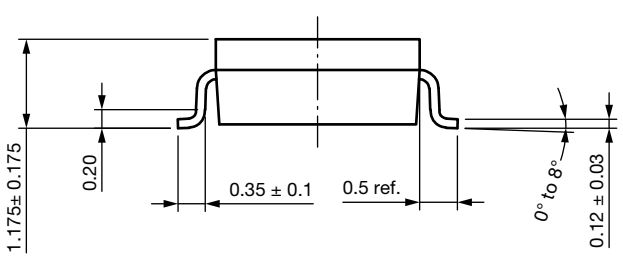
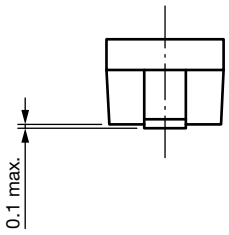


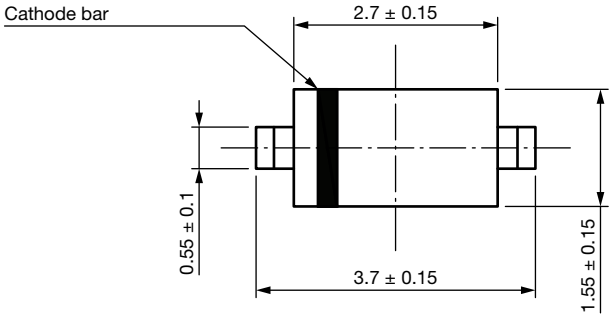
Fig. 4 - Typical Reverse Leakage Current vs. Reverse Voltage

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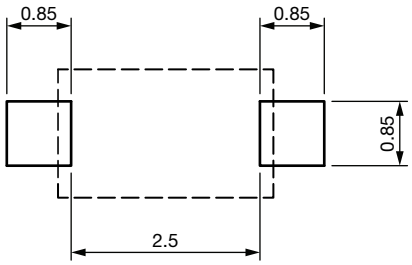
PACKAGE DIMENSIONS in millimeters (inches): **SOD-123**







Foot print recommendation

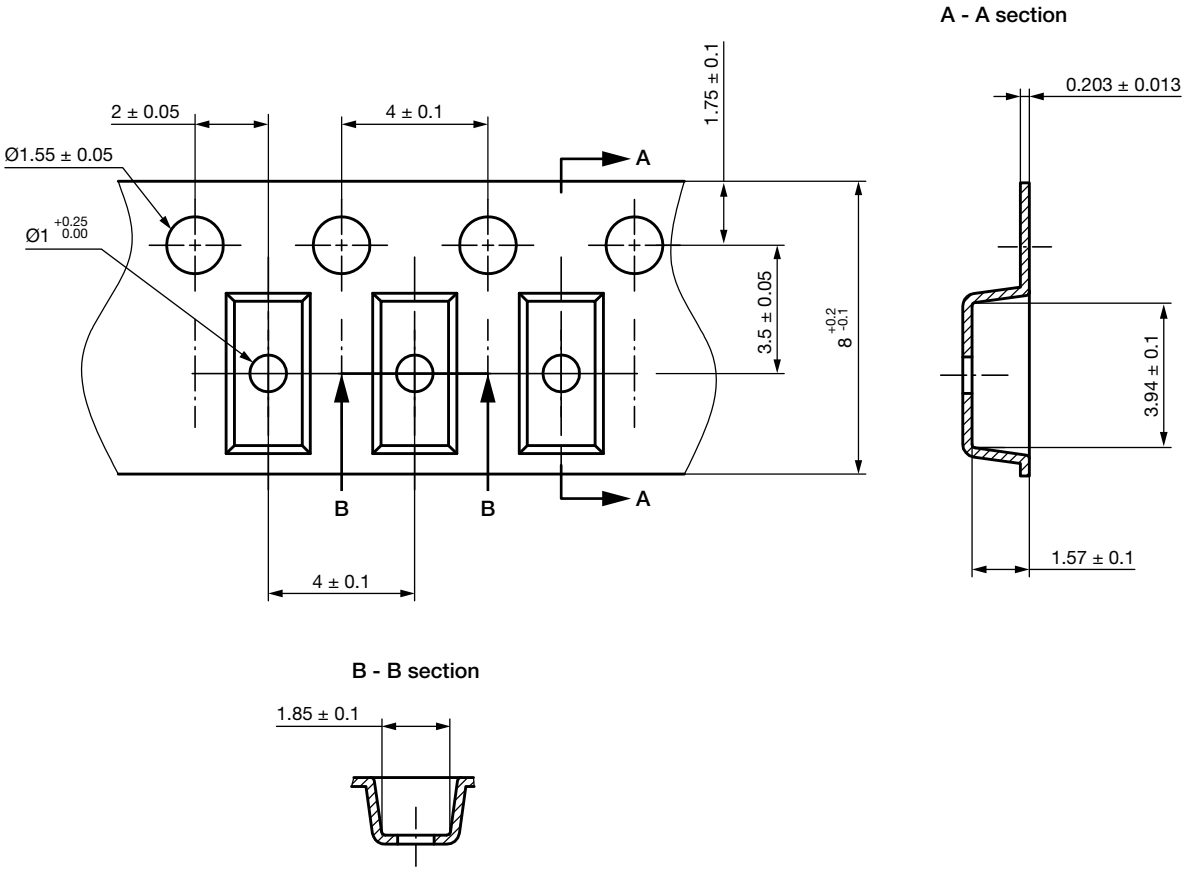


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23223

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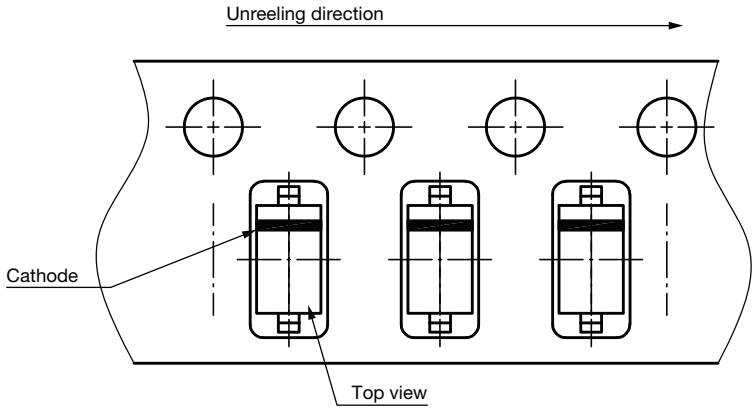
CARRIER TAPE SOD-123



Rev. 02 - Date: 21. Jan. 2014
Document no.: S8-V-3717.10-002 (4)

23224

ORIENTATION IN CARRIER TAPE SOD-123



Rev. 02 - Date: 07. Nov. 2022
Document no.: S8-V-3717.10-003 (4)

23225

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