



Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diode
- For general purpose and switching
- AEC-Q101 qualified
- 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

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 | INTERNAL CONSTRUCTION | REMARKS |
| 1N4150W | 1N4150W-E3-08 or 1N4150W-E3-18 | A4 | Single diode | Tape and reel |
| | 1N4150W-HE3-08 or 1N4150W-HE3-18 | | | |

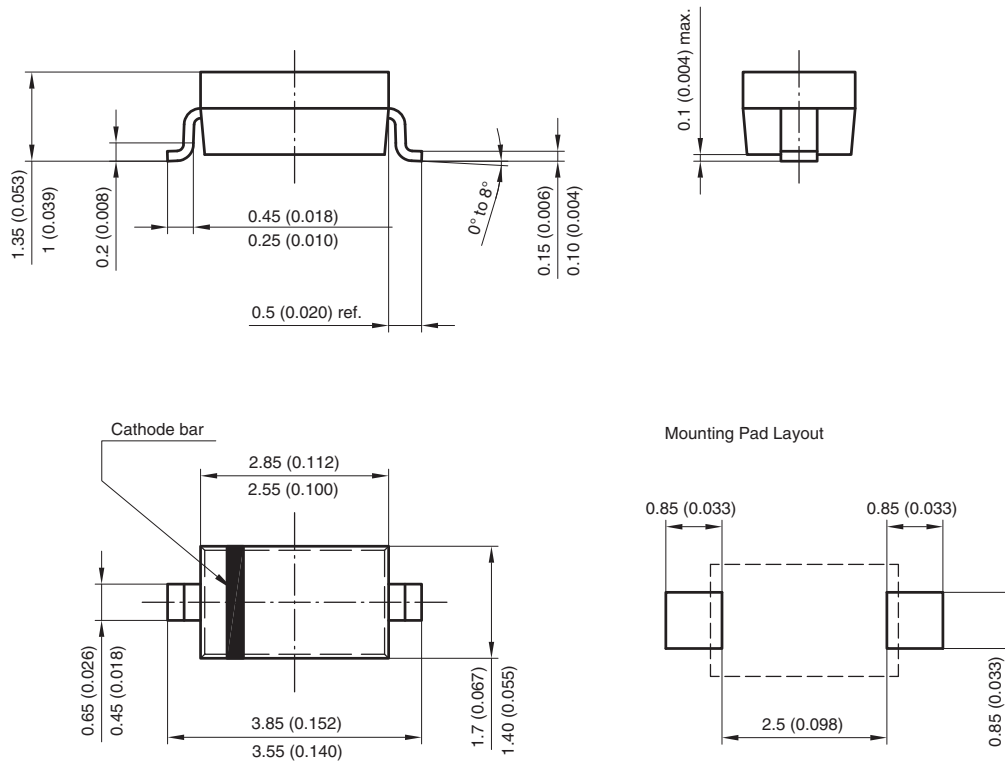
| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified) | | | | |
|---|----------------|--------------------|-------|------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Repetitive peak reverse voltage | | V _{RRM} | 50 | V |
| Maximum average forward rectified current |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

| THERMAL CHARACTERISTICS (T _{amb} = 25 °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 | °C |
| Storage temperature range | | T _{stg} | - 65 to + 150 | °C |
| Operating temperature range | | T _{op} | - 55 to + 150 | °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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