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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diodes
- Electrical data identical with the device 1N4151
- AEC-Q101 qualified
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

- Extreme fast switches

MECHANICAL DATA

Case: MiniMELF SOD-80

Weight: approx. 31 mg

Cathode band color: black

Packaging codes/options:

GS18/10K per 13" reel (8 mm tape), 10K/box

GS08/2.5 per 7" reel (8 mm tape), 12.5K/box

PARTS TABLE

| PART | ORDERING CODE | TYPE MARKING | INTERNAL CONSTRUCTION | REMARKS |
|--------|----------------------------|--------------|-----------------------|---------------|
| LL4151 | LL4151-GS18 or LL4151-GS08 | - | Single diode | Tape and reel |

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

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|---------------------------------|-----------------------|-------------|-------|------|
| Repetitive peak reverse voltage | | V_{RRM} | 75 | V |
| Reverse voltage | | V_R | 50 | V |
| Peak forward surge current | $t_p = 1 \mu\text{s}$ | I_{FSM} | 2 | A |
| Repetitive peak forward current | | I_{FRM} | 500 | mA |
| Forward continuous current | | I_F | 300 | mA |
| Average forward current | $V_R = 0$ | $I_{F(AV)}$ | 150 | mA |
| Power dissipation | | P_{tot} | 500 | mW |

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

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|--|---------------------------------------|------------|---------------|--------------------|
| Thermal resistance junction to ambient air | On PC board 50 mm x 50 mm x 1.6 mm | R_{thJA} | 500 | K/W |
| Junction temperature | | T_j | 175 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | - 65 to + 175 | $^{\circ}\text{C}$ |

| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | |
|--|--|------------|------|-------|------|---------------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | $I_F = 50\text{ mA}$ | V_F | | 0.880 | 1 | V |
| Reverse current | $V_R = 50\text{ V}$ | I_R | | | 50 | nA |
| | $V_R = 50\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$ | I_R | | | 50 | μA |
| Breakdown voltage | $I_R = 5\text{ }\mu\text{A}, t_p/T = 0.01,$ $t_p = 0.3\text{ ms}$ | $V_{(BR)}$ | 75 | | | V |
| Diode capacitance | $V_R = 0, f = 1\text{ MHz},$ $V_{HF} = 50\text{ mV}$ | C_D | | | 2 | pF |
| Reverse recovery time | $I_F = I_R = 10\text{ mA},$ $i_R = 1\text{ mA}$ | t_{rr} | | | 4 | ns |
| | $I_F = 10\text{ mA}, V_R = 6\text{ V},$ $i_R = 0.1 \times I_R, R_L = 100\text{ }\Omega$ | t_{rr} | | | 2 | ns |

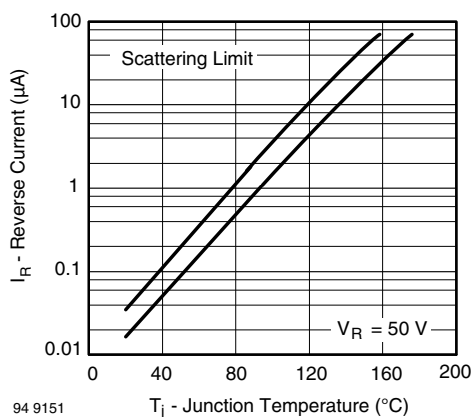
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Reverse Current vs. Junction Temperature

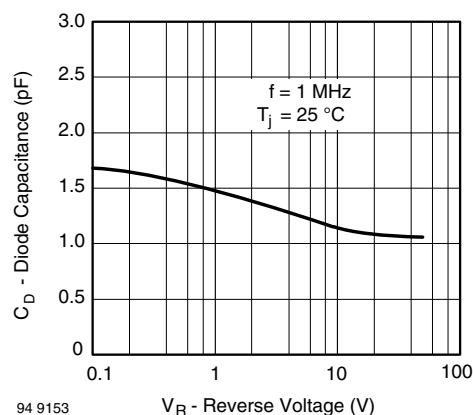


Fig. 3 - Diode Capacitance vs. Reverse Voltage

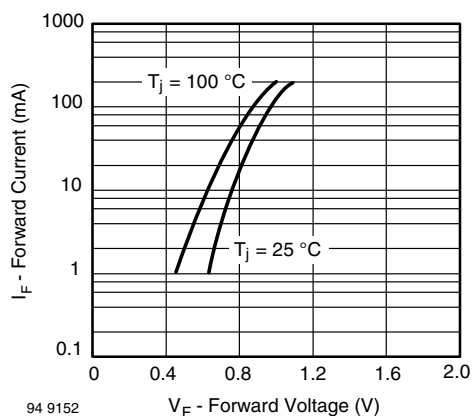
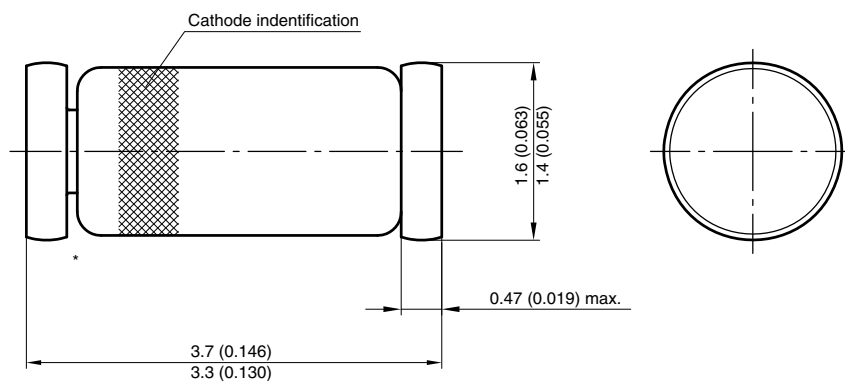
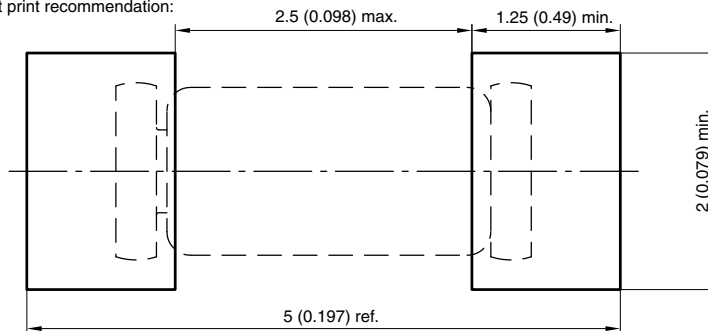


Fig. 2 - Forward Current vs. Forward Voltage

PACKAGE DIMENSIONS in millimeters (inches): **MiniMELF SOD-80**


* The gap between plug and glass can be either on cathode or anode side

Foot print recommendation:



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