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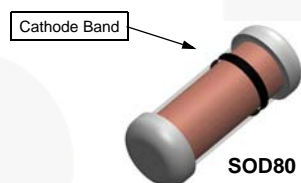
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FDLL4150

Small Signal Diode



LL-34

THE PLACEMENT OF THE EXPANSION GAP
HAS NO RELATIONSHIP TO THE LOCATION
OF THE CATHODE TERMINAL

LL-34 COLOR BAND MARKING

| DEVICE | 1ST BAND |
|----------|----------|
| FDLL4150 | BLACK |

-1st band denotes cathode terminal
and has wider width

Absolute Maximum Ratings⁽¹⁾

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------------|---------------------------------|------------------|
| W_{IV} | Working Inverse Voltage | 50 | V |
| I_O | Average Rectified Forward Current | 200 | mA |
| I_F | DC Forward Current | 400 | mA |
| i_F | Recurrent Peak Forward Current | 600 | mA |
| I_{FSM} | Non-repetitive Peak Forward Current | Pulse Width = 1.0 s | A |
| | | Pulse Width = 1.0 μs | A |
| T_{STG} | Storage Temperature Range | -65 to +200 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | 175 | $^\circ\text{C}$ |

Note:

- These ratings are limiting values above which the serviceability of any semiconductor device may be impaired. These ratings are based on a maximum junction temperature of 200°C . These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

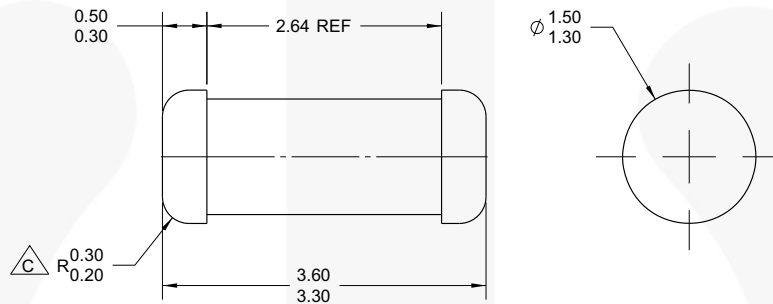
| Symbol | Parameter | Max. | Units |
|-----------------|---|----------------|---------------------------|
| | | 1N / FDLL 4150 | |
| P_D | Power Dissipation | 500 | mW |
| | Derate above 25°C | 3.33 | mW/ $^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 300 | $^\circ\text{C}/\text{W}$ |

Electrical CharacteristicsValues are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Test Conditions | Min. | Max. | Units |
|----------|-----------------------|--|------|------|---------------|
| B_V | Breakdown Voltage | $I_R = 5.0\ \mu\text{A}$ | 75 | | V |
| I_R | Reverse Current | $V_R = 50\ \text{V}$ | | 100 | nA |
| | | $V_R = 50\ \text{V}, T_A = 150^\circ\text{C}$ | | 100 | μA |
| V_F | Forward Voltage | $I_F = 1.0\ \text{mA}$ | 540 | 620 | mV |
| | | $I_F = 10\ \text{mA}$ | 660 | 740 | mV |
| | | $I_F = 50\ \text{mA}$ | 760 | 860 | mV |
| | | $I_F = 100\ \text{mA}$ | 820 | 920 | mV |
| | | $I_F = 200\ \text{mA}$ | 0.87 | 1.0 | V |
| C_O | Diode Capacitance | $V_R = 0, f = 1.0\ \text{MHz}$ | | 2.5 | pF |
| t_{rr} | Reverse Recovery Time | $I_F = I_R = 10\ \text{mA} - 200\ \text{mA}, R_L = 100\ \Omega$ | | 4.0 | nS |
| | | $I_F = I_R = 200\ \text{mA} - 400\ \text{mA}, R_L = 100\ \Omega$ | | 6.0 | nS |
| T_{FR} | Forward Recovery Time | $I_F = 200\ \text{mA}, V_{FR} = 1.0\ \text{V}$ | | 10 | nS |

Physical Dimensions

SOD-80



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE:
JEDEC DO-213, VARIATION AC.

B) ALL DIMENSIONS ARE IN MILLIMETERS.

$\triangle C$ CORNER RADIUS IS OPTIONAL.

D) DRAWING FILE NAME: SOD80A REV01

Figure 1. 2-TERMINAL, SOD-80, JEDEC DO-213AC, MINI-MELF

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|--------------------------|-----------------------|---|
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