

FDLL4150 Small Signal Diode



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:

1. 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	$\text{mW}/^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	$^\circ\text{C}/\text{W}$

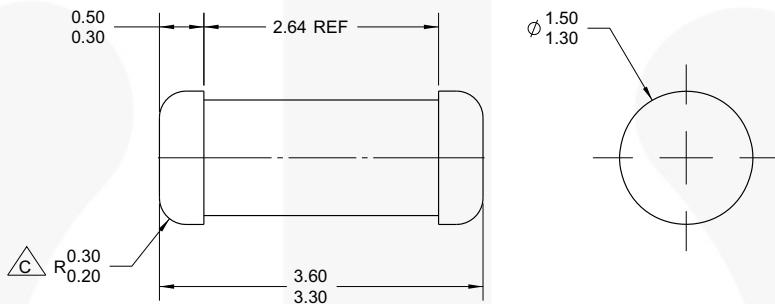
Electrical Characteristics

Values 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.
- △ 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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