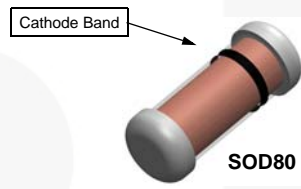


# FDLL4150

## 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<sup>(1)</sup>

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	1.0	A
		Pulse Width = 1.0 $\mu\text{s}$	4.0	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  $200^\circ\text{C}$ . 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 $25^\circ\text{C}$	3.33	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	$^\circ\text{C}/\text{W}$

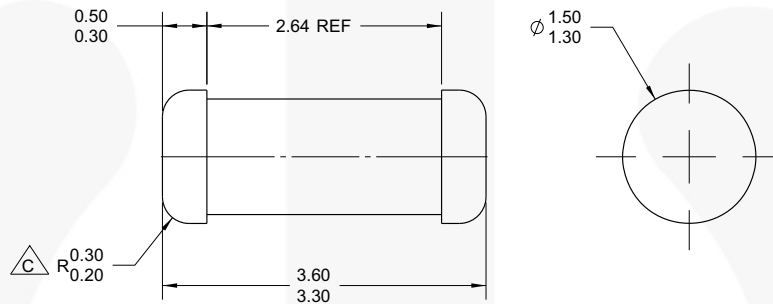
## Electrical Characteristics

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	$\mu\text{A}$
$V_F$	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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| AccuPower™  | F-PFS™   | PowerTrench®  |  |
| AX-CAP®*  | FRFET®   | PowerXS™  | TinyBoost™  |
| BitSiC™   | Global Power Resource <sup>SM</sup>            | Programmable Active Droop™  | TinyBuck™   |
| Build it Now™   | GreenBridge™                                   | QFET®   | TinyCalc™   |
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| ESBC™   | MicroFET™                                      | SPM®  |  |
|  | MicroPak™                                      | STEALTH™  | UHC®  |
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| FACT Quiet Series™  | MotionMax™                                     | SuperSOT™-6   | VXC™  |
| FACT®   | mWSaver™                                       | SuperSOT™-8   | VisualMax™  |
| FAST®   | OptoHi™  | SupreMOS®   | VoltagePlus™  |
| FastvCore™  | OPTOLOGIC®                                     | SyncFET™  | XS™   |
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