

# Small Signal Diode

## FDLL4150


MiniMELF/SOD-80  
CASE 100AD

### Features

- This is a Pb-Free and Halide Free Device

### ABSOLUTE MAXIMUM RATINGS

(Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.) (Notes 1 and 2)

Symbol	Parameter	Value	Unit
$W_{IV}$	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
		Pulse Width = 1.0 $\mu\text{s}$	4.0
$T_{STG}$	Storage Temperature Range	-65 to +200	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	175	$^\circ\text{C}$

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

- These ratings are based on a maximum junction temperature of  $200^\circ\text{C}$ .
- These are steady-state limits. **onsemi** should be consulted on applications involving pulsed or low-duty-cycle operations.

### THERMAL CHARACTERISTICS

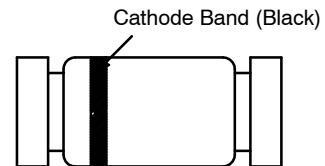
Symbol	Parameter	Max	Unit
		1N/FDLL4150	
$P_D$	Power Dissipation	500	mW
	Derate above $25^\circ\text{C}$	3.33	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	$^\circ\text{C}/\text{W}$

### ELECTRICAL CHARACTERISTICS (Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.)

Symbol	Parameter	Test Conditions	Min	Max	Unit
$B_V$	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	
		$I_F = 50 \text{ mA}$	760	860	
		$I_F = 100 \text{ mA}$	820	920	
		$I_F = 200 \text{ mA}$	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

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

### MARKING DIAGRAM



(–1st band denotes cathode terminal and has wider width)

### ORDERING INFORMATION

Device	Package	Shipping <sup>†</sup>
FDLL4150	MiniMELF/SOD-80 (Pb-Free/Halide Free)	2500 / Tape & Reel

<sup>†</sup>For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, [BRD8011/D](http://BRD8011/D).

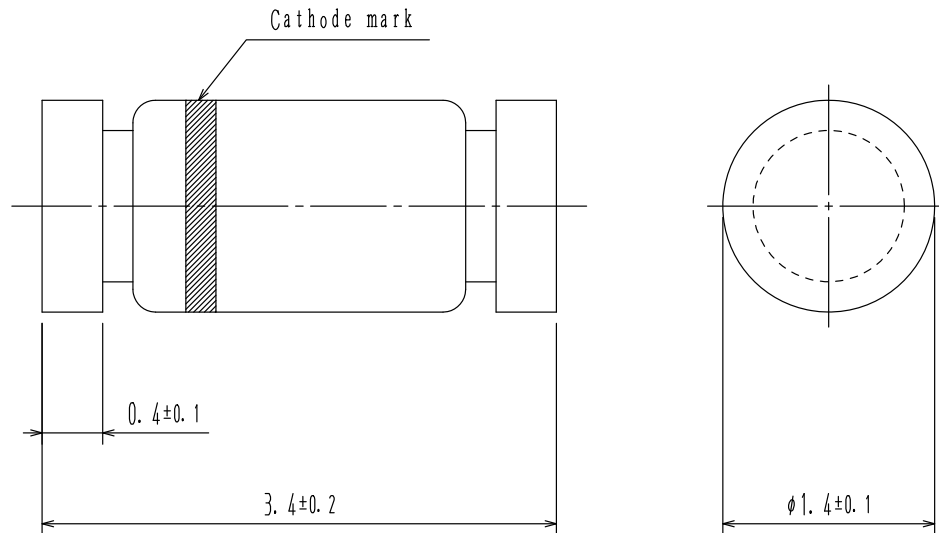
# MECHANICAL CASE OUTLINE

## PACKAGE DIMENSIONS



MiniMELF / SOD-80  
CASE 100AD  
ISSUE O

DATE 30 APR 2012



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

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