

# High Conductance, Low Leakage Diode

## FDH300 / FDH300A / FDLL300A / FDH333 / FDLL333

### ABSOLUTE MAXIMUM RATINGS

( $T_A = 25^\circ\text{C}$  unless otherwise noted) (Note 1) (Note 2)

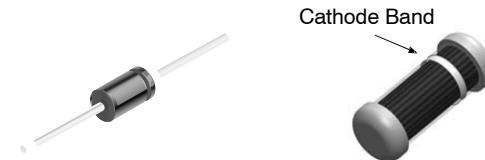
Symbol	Parameter	Value	Units
$W_{IV}$	Working Inverse Voltage	125	V
$I_O$	Average Rectified Current	200	mA
$I_F$	DC Forward Current	500	mA
$i_f$	Recurrent Peak Forward Current	600	mA
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current Pulse Width = 1.0 s Pulse Width = 1.0 $\mu\text{s}$	1.0 4.0	A
$T_{STG}$	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.

1. These ratings are based on a maximum junction temperature of  $175^\circ\text{C}$ .
2. These are steady-state limits. **onsemi** should be consulted on applications involving pulsed or low-duty-cycle operations.

### THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Units
$P_D$	Total Device Dissipation	500	mW
	Derate Above $25^\circ\text{C}$	3.33	mW/ $^\circ\text{C}$
$R_{\theta,JA}$	Thermal Resistance, Junction to Ambient	300	$^\circ\text{C}$



AXIAL LEAD  
(DO-35)  
CASE 017AG

MiniMELF / SOD-80  
(LL-34)  
CASE 100AD

Cathode is denoted  
with a black band

(The placement of the  
expansion gap has  
no relationship to the  
location of the cathode  
terminal)

### MARKING DIAGRAM

#### LL-34 COLOR BAND MARKING

DEVICE	1ST BAND
FDLL300A	WHITE
FDLL300A	WHITE

-1st band denotes cathode  
terminal and has wider width

### ORDERING INFORMATION

See detailed ordering, marking and shipping information in the package dimensions section on page 2 of this data sheet.

# FDH300 / FDH300A / FDLL300A / FDH333 / FDLL333

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

Symbol	Parameter		Condition	Min	Max	Unit	
$V_R$	Breakdown Voltage		$I_R = 100 \mu\text{A}$	150	–	V	
$V_F$	Forward Voltage	FDH300 / FDH300A / FDLL300A	$I_F = 1.0 \text{ mA}$	–	680	mV	
		FDH300	$I_F = 5.0 \text{ mA}$	–	750	mV	
		FDH300A / FDLL300A	$I_F = 5.0 \text{ mA}$	–	760	mV	
		FDH300 / FDH300A / FDLL300A	$I_F = 10 \text{ mA}$	–	800	mV	
		FDH300	$I_F = 50 \text{ mA}$	–	880	mV	
		FDH300A / FDLL300A	$I_F = 50 \text{ mA}$	–	890	mV	
		FDH300 / FDH300A / FDLL300A	$I_F = 100 \text{ mA}$	–	920	mV	
		FDH300 / FDH300A / FDLL300A	$I_F = 200 \text{ mA}$	–	1.0	V	
		FDH333 / FDLL333	$I_F = 50 \text{ mA}$	800	890	mV	
			$I_F = 100 \text{ mA}$	830	940	mV	
$I_R$	Reverse Current		$I_F = 150 \text{ mA}$	860	970	mV	
			$I_F = 200 \text{ mA}$	0.87	1.05	V	
			$I_F = 250 \text{ mA}$	0.88	1.08	V	
			$I_F = 300 \text{ mA}$	0.90	1.15	V	
$C_O$	Diode Capacitance		$V_R = 0, f = 1.0 \text{ MHz}$	–	6.0	pF	

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.

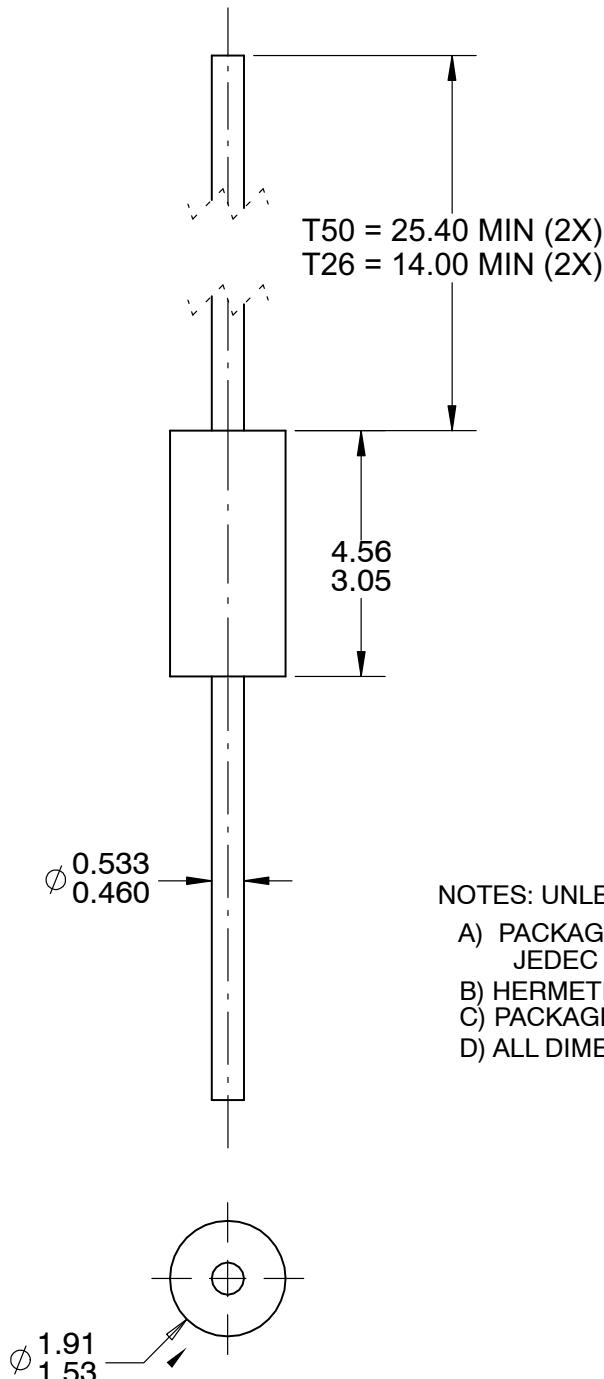
## DEVICE ORDERING INFORMATION

Part Number	Top Mark	Package	Shipping <sup>†</sup>
FDH300TR	H300	DO-204AH (DO-35)	Tape and Reel
FDH300A	H300A	DO-204AH (DO-35)	Bulk
FDH300ATR	H300A	DO-204AH (DO-35)	Tape and Reel
FDH333	H333	DO-204AH (DO-35)	Bulk
FDH333TR	H333	DO-204AH (DO-35)	Tape and Reel
FDLL300A	WHITE	SOD-80 2L	Tape and Reel
FDLL333	WHITE	SOD-80 2L	Tape and Reel

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

AXIAL LEAD  
CASE 017AG  
ISSUE O

DATE 31 AUG 2016

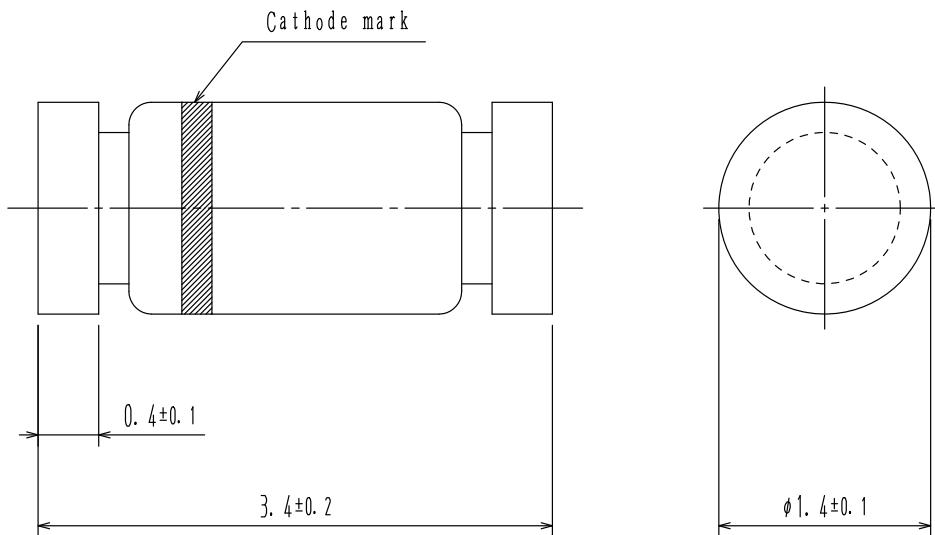


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MiniMELF / SOD-80  
CASE 100AD  
ISSUE O

DATE 30 APR 2012



## NOTES: UNLESS OTHERWISE SPECIFIED

- A) PACKAGE STANDARD REFERENCE:  
JEDEC DO-213, VARIATION AC.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) CORNER RADIUS IS OPTIONAL.
- D) DRAWING FILE NAME: SOD80A REV01

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