

# High Conductance, Low Leakage Diode

## FDH300 / FDH300A / FDLL300A / FDH333 / FDLL333

### ABSOLUTE MAXIMUM RATINGS

(T<sub>A</sub> = 25°C unless otherwise noted) (Note 1) (Note 2)

Symbol	Parameter	Value	Units
W <sub>IV</sub>	Working Inverse Voltage	125	V
I <sub>O</sub>	Average Rectified Current	200	mA
I <sub>F</sub>	DC Forward Current	500	mA
i <sub>f</sub>	Recurrent Peak Forward Current	600	mA
I <sub>FSM</sub>	Non-Repetitive Peak Forward Surge Current Pulse Width = 1.0 s Pulse Width = 1.0 μs	1.0 4.0	A
T <sub>STG</sub>	Storage Temperature Range	-65 to +200	°C
T <sub>J</sub>	Operating Junction Temperature	175	°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 175°C.
- These are steady-state limits. onsemi should be consulted on applications involving pulsed or low-duty-cycle operations.

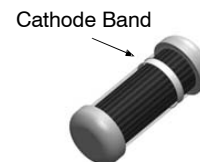
### THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Units
P <sub>D</sub>	Total Device Dissipation	500	mW
	Derate Above 25°C	3.33	mW/°C
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	300	°C



AXIAL LEAD  
(DO-35)  
CASE 017AG

Cathode is denoted  
with a black band



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

(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 <sub>R</sub>	Breakdown Voltage		I <sub>R</sub> = 100 μA	150	–	V
V <sub>F</sub>	Forward Voltage	FDH300 / FDH300A / FDLL300A	I <sub>F</sub> = 1.0 mA	–	680	mV
		FDH300	I <sub>F</sub> = 5.0 mA	–	750	mV
		FDH300A / FDLL300A	I <sub>F</sub> = 5.0 mA	–	760	mV
		FDH300 / FDH300A / FDLL300A	I <sub>F</sub> = 10 mA	–	800	mV
		FDH300	I <sub>F</sub> = 50 mA	–	880	mV
		FDH300A / FDLL300A	I <sub>F</sub> = 50 mA	–	890	mV
		FDH300 / FDH300A / FDLL300A	I <sub>F</sub> = 100 mA	–	920	mV
		FDH300 / FDH300A / FDLL300A	I <sub>F</sub> = 200 mA	–	1.0	V
		FDH333 / FDLL333	I <sub>F</sub> = 50 mA	800	890	mV
			I <sub>F</sub> = 100 mA	830	940	mV
			I <sub>F</sub> = 150 mA	860	970	mV
			I <sub>F</sub> = 200 mA	0.87	1.05	V
			I <sub>F</sub> = 250 mA	0.88	1.08	V
			I <sub>F</sub> = 300 mA	0.90	1.15	V
I <sub>R</sub>	Reverse Current	FDH300 / FDH300A / FDLL300A	V <sub>R</sub> = 125 V	–	1.0	nA
			V <sub>R</sub> = 125 V, T <sub>A</sub> = 150°C	–	3.0	μA
		FDH333 / FDLL333	V <sub>R</sub> = 125 V	–	3.0	nA
			V <sub>R</sub> = 125 V, T <sub>A</sub> = 100°C	–	500	nA
C <sub>O</sub>	Diode Capacitance		V <sub>R</sub> = 0, f = 1.0 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.

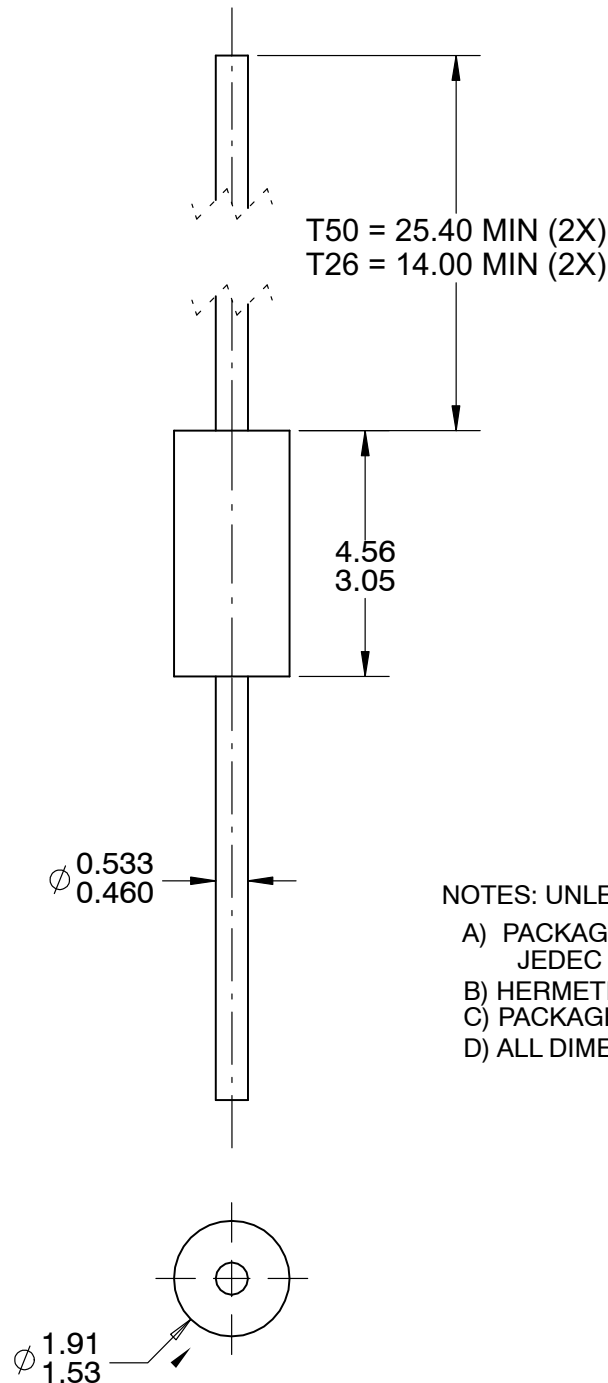
## DEVICE ORDERING INFORMATION

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



**NOTES: UNLESS OTHERWISE SPECIFIED**

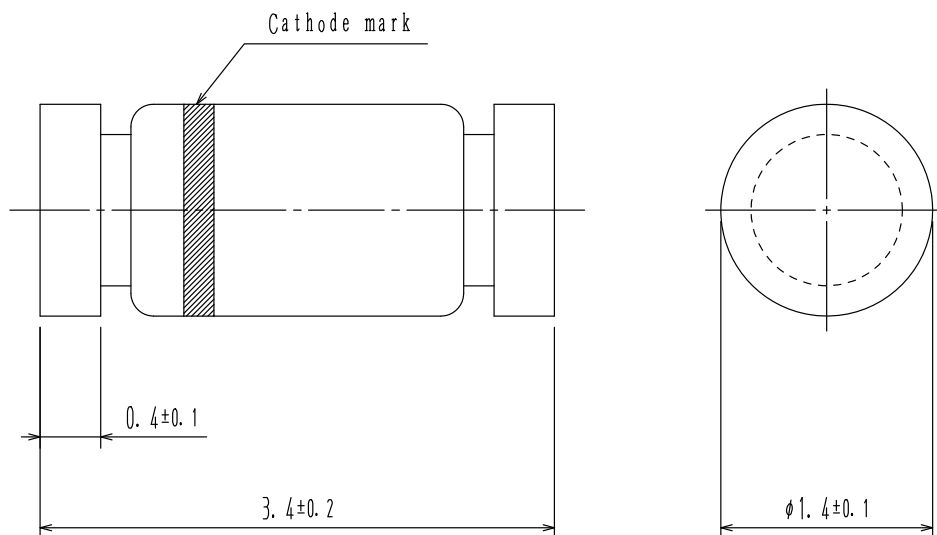
- A) PACKAGE STANDARD REFERENCE:  
JEDEC DO-204, VARIATION AH.
- B) HERMETICALLY SEALED GLASS PACKAGE.
- C) PACKAGE WEIGHT IS 0.137 GRAM.
- D) ALL DIMENSIONS ARE IN MILLIMETERS.

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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.

 CORNER RADIUS IS OPTIONAL.

D) DRAWING FILE NAME: SOD80A REV01

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