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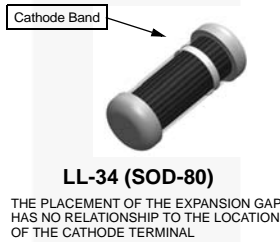
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February 2016

# FDH300 / FDH300A / FDLL300A / FDH333 / FDLL333 High Conductance Low Leakage Diode



LL-34 COLOR BAND MARKING	
DEVICE	1ST BAND
FDLL300A	WHITE
FDLL333	WHITE

-1st band denotes cathode terminal and has wider width

## Ordering Information

Part Number	Top Mark	Package	Packing Method
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

## Absolute Maximum Ratings<sup>(1), (2)</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	Unit
$W_{IV}$	Working Inverse Voltage	125	V
$I_O$	Average Rectified Forward 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	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	$^\circ\text{C}$

### Notes:

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

FDH300 / FDH300A / FDLL300A / FDH333 / FDLL333 — High Conductance Low Leakage Diode

## Thermal Characteristics

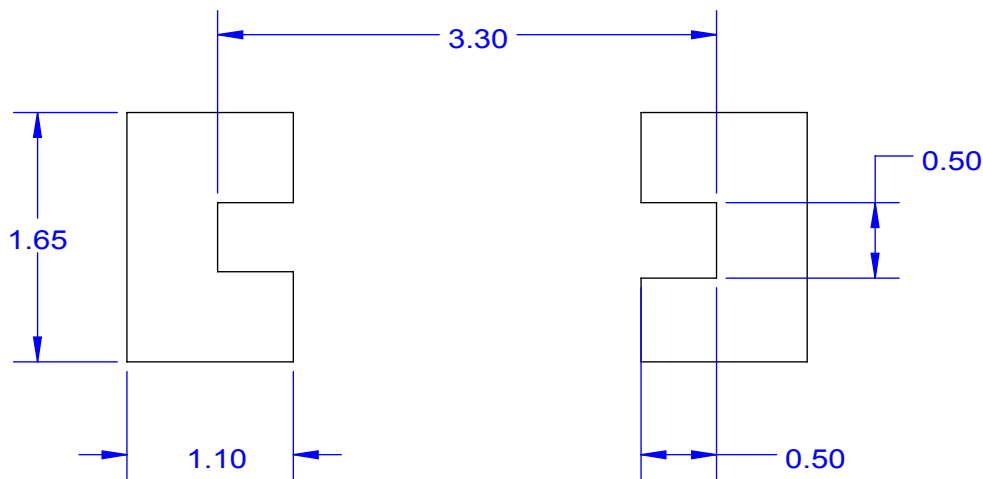
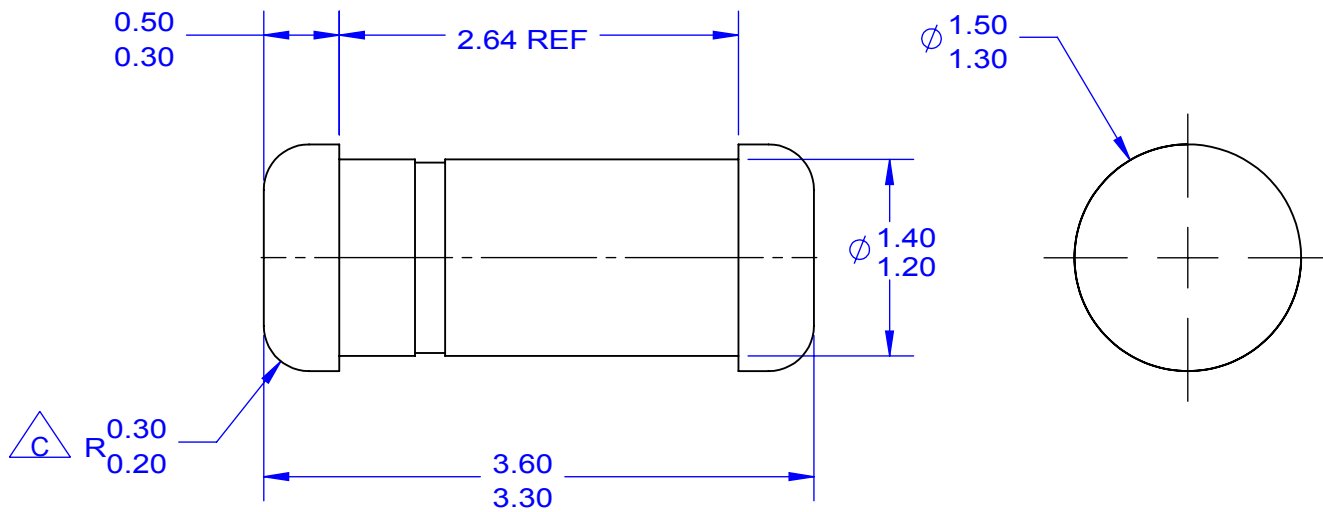
Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Max.	Unit
$P_D$	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	$^\circ\text{C}/\text{W}$

## Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Conditions	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
			$I_F = 150 \text{ mA}$	860	970	mV
$I_F = 200 \text{ mA}$	0.87		1.05	V		
$I_F = 250 \text{ mA}$	0.88		1.08	V		
$I_R$	Reverse Current	FDH300 / FDH300A / FDLL300A	$V_R = 125 \text{ V}$		1.0	nA
			$V_R = 125 \text{ V}, T_A = 150^\circ\text{C}$		3.0	$\mu\text{A}$
		FDH333 / FDLL333	$V_R = 125 \text{ V}$		3.0	nA
			$V_R = 125 \text{ V}, T_A = 100^\circ\text{C}$		500	nA
$C_O$	Diode Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		6.0	pF	



### LAND PATTERN RECOMMENDATION

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) LAND PATTERN RECOMMENDATION PER IPC DIOMELF3414N

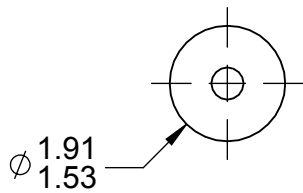
E) DRAWING FILE NAME: SOD80A REV3





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.
- E) DRAWING FILE NAME: DO35AREV03



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