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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^{(1), (2)}

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 μs	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

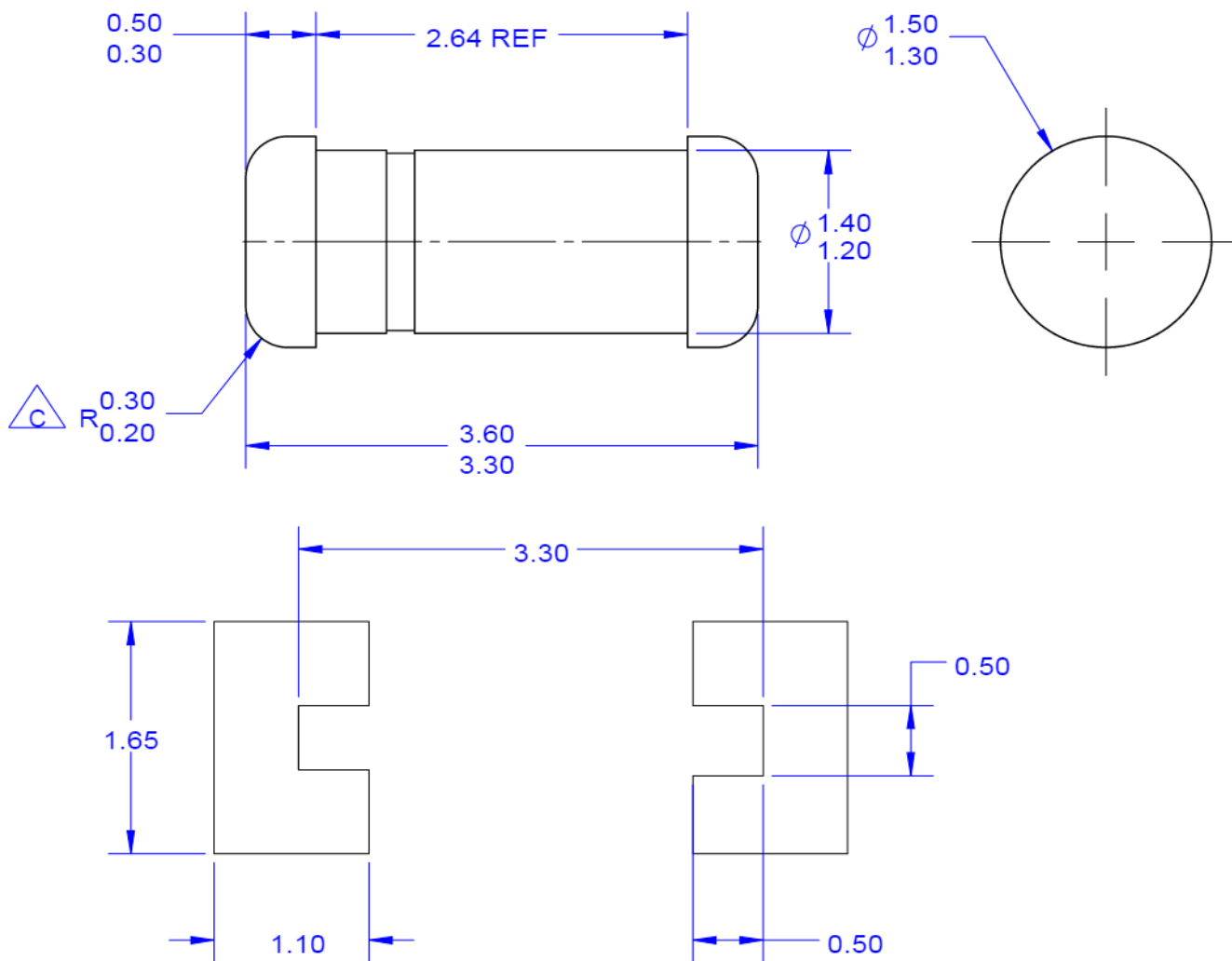
Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Max.	Unit
P_D	Total Device Dissipation	500	mW
	Derate Above 25°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	μA
		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.

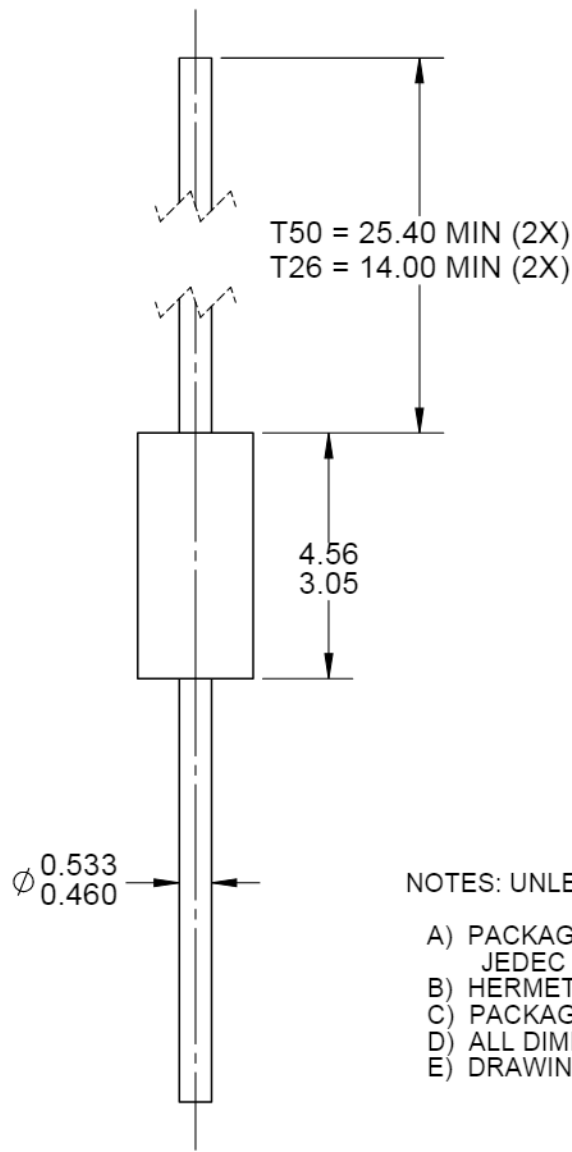
B) ALL DIMENSIONS ARE IN MILLIMETERS.

$\triangle C$ CORNER RADIUS IS OPTIONAL.

D) LAND PATTERN RECOMMENDATION PER IPC DI0MELF3414N

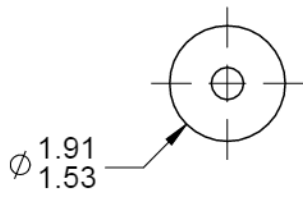
E) DRAWING FILE NAME: SOD80A REV3






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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