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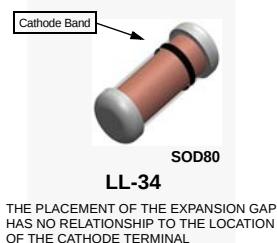
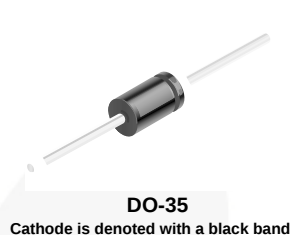
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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

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FDH 400 / FDLL 400

High Voltage General Purpose Diode



LL-34 COLOR BAND MARKING

DEVICE	1ST BAND
FDLL400	BLACK

-1st band denotes cathode terminal and has wider width

Absolute Maximum Ratings⁽¹⁾

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	Units
W_{IV}	Working Inverse Voltage	150	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 A
		Pulse Width = 1.0 μs	4.0 A
T_{STG}	Storage Temperature Range	-65 to +200	$^\circ\text{C}$
T_J	Operating Junction Temperature	175	$^\circ\text{C}$

Note:

- These ratings are limiting values above which the serviceability of the diode may be impaired. These ratings are based on a maximum junction temperature of 200°C . These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

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

Symbol	Parameter	Max.	Units
		FDH / FDLL 400	
P_D	Power Dissipation	500	mW
	Derate above 25°C	3.33	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	$^\circ\text{C}/\text{W}$

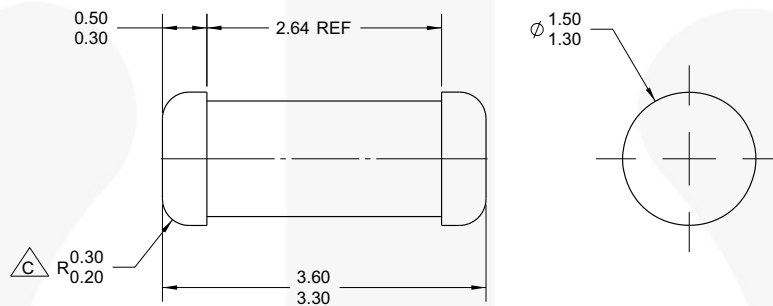
Electrical Characteristics

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

Symbol	Parameter		Test Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	FDH / FDLL 400	$I_R = 100\ \mu\text{A}$	200		V
V_F	Forward Voltage	FDH / FDLL 400	$I_F = 200\ \text{mA}$		1.0	V
			$I_F = 300\ \text{mA}$		1.1	V
I_R	Reverse Leakage	FDH / FDLL 400	$V_R = 150\ \text{V}$		100	nA
			$V_R = 150\ \text{V}, T_A = 150^\circ\text{C}$		100	μA
C_O	Diode Capacitance	FDH / FDLL 400	$V_R = 0, f = 1.0\ \text{MHz}$		2.0	pF
t_{rr}	Reverse Recovery Time	FDH / FDLL 400	$I_F = I_R = 30\ \text{mA}, I_{rr} = 3.0\ \text{mA}, R_L = 100\ \Omega$		50	ns

Physical Dimensions

SOD-80



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) DRAWING FILE NAME: SOD80A REV01

Figure 1. 2-TERMINAL, SOD-80, JEDEC DO-213AC, MINI-MELF

Package drawings are provided as a service to customers considering Fairchild components. Drawings may change in any manner without notice. Please note the revision and/or date on the drawing and contact a Fairchild Semiconductor representative to verify or obtain the most recent revision. Package specifications do not expand the terms of Fairchild's worldwide terms and conditions, specifically the warranty therein, which covers Fairchild products.

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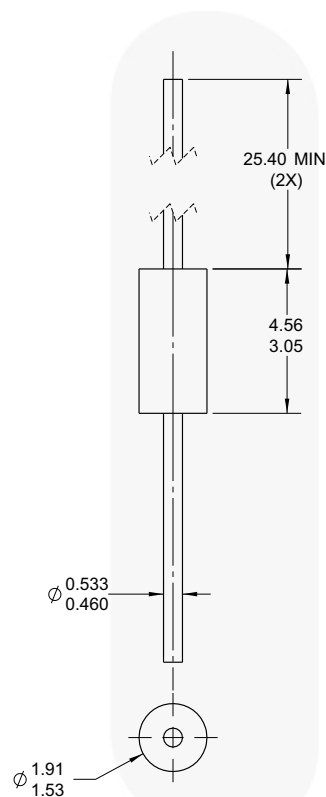
<http://www.fairchildsemi.com/packaging/>.

For current tape and reel specifications, visit Fairchild Semiconductor's online packaging area:

http://www.fairchildsemi.com/packaging/tr/SOD80A_tnr.pdf.

Physical Dimensions (Continued)

DO-35



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: DO35AREV02

Figure 2. AXIAL LEADED, GLASS, JEDEC DO204, VARIATION AH (ACTIVE)

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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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