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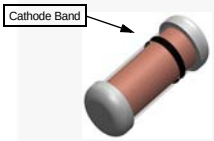
FAIRCHILD SEMICONDUCTOR®

April 2013

FDH 400 / FDLL 400
High Voltage General Purpose Diode

DO-35
Cathode is denoted with a black band



SOD80

LL-34

THE PLACEMENT OF THE EXPANSION GAP HAS NO RELATIONSHIP TO THE LOCATION OF THE CATHODE TERMINAL

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°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	°C
T_J	Operating Junction Temperature		175	°C

Note:

1. These ratings are limiting values above which the serviceability of the diode may be impaired.
   These ratings are bansed 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°C unless otherwise noted.

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

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

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

Physical Dimensions

SOD-80

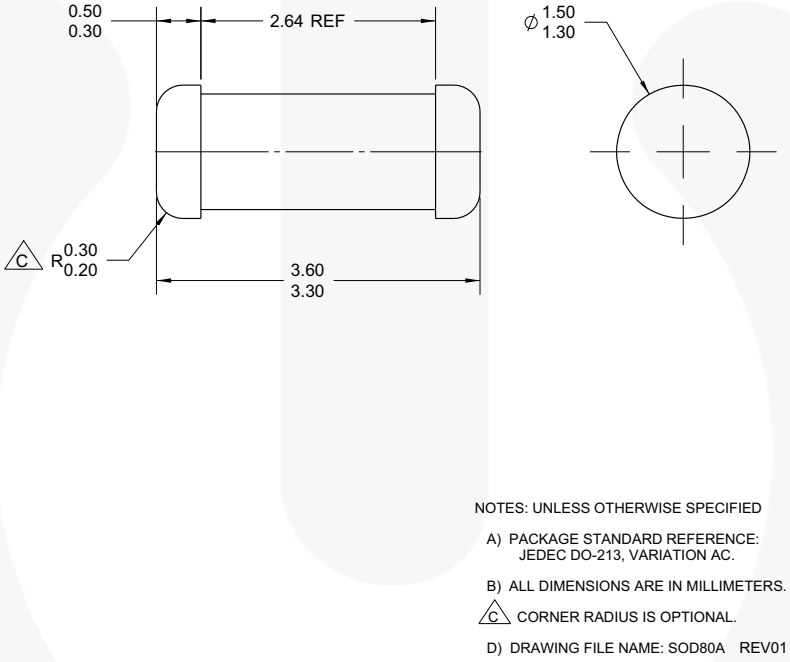


Figure 1. 2-TERMINAL, SOD-80, JEDEC DO-213AC, MINI-MELF

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Physical Dimensions (Continued)

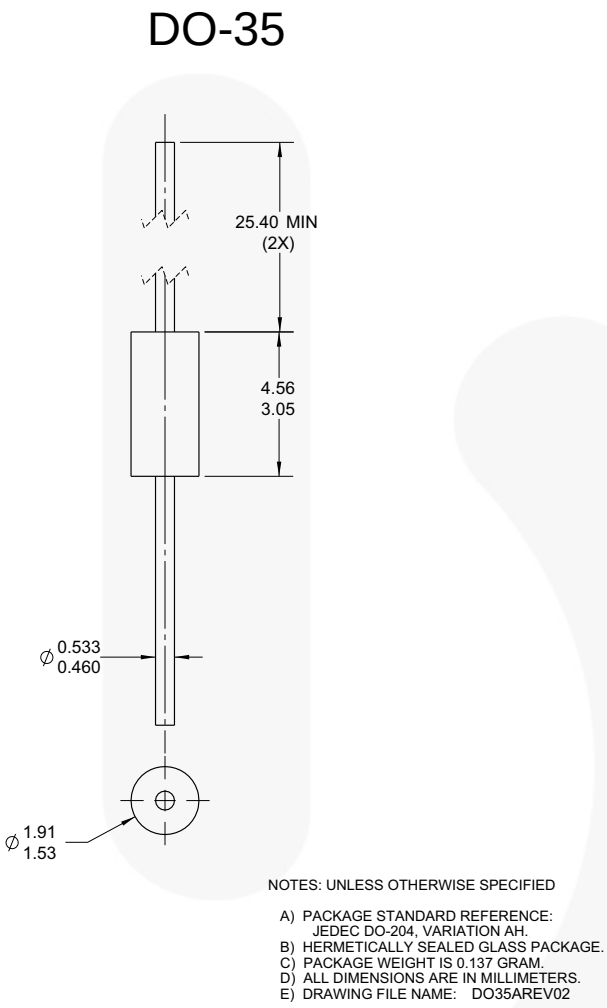

Figure 2. AXIAL LEADED, GLASS, JEDEC DO204, VARIATION AH (ACTIVE)

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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.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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