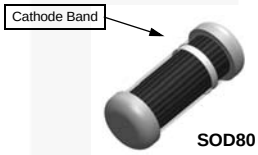
FAIRCHILD SEMICONDUCTOR®

April 2013

FDH / FDLL 300 / A / 333
High Contraction Low Leakage 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
FDLL300	WHITE
FDLL300A	WHITE
FDLL333	WHITE

-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		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	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

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Electrical Characteristics

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

Symbol	Parameter		Test Conditions	Min.	Max.	Units
V_R	Breakdown Voltage		I_R= 100 µA	150		V
V_F	ForwardVoltage	FDH / FDLL 300 / A	I_F= 1.0 mA		680	mV
		FDH / FDLL 300	I_F= 5.0 mA		750	mV
		FDH / FDLL 300A	I_F= 5.0 mA		760	mV
		FDH / FDLL 300 / A	I_F= 10 mA		800	mV
		FDH / FDLL 300	I_F= 50 mA		880	mV
		FDH / FDLL 300A	I_F= 50 mA		890	mV
		FDH / FDLL 300 / A	I_F= 100 mA		920	mV
		FDH / FDLL 300 / A	I_F= 200 mA		1.0	V
		FDH / FDLL 333	I_F= 50 mA	800	890	mV
			I_F= 100 mA	830	940	mV
			I_F= 150 mA	860	970	mV
			I_F= 200 mA	0.87	1.05	V
			I_F= 250 mA	0.88	1.08	V
			I_F= 300 mA	0.9	1.15	V
I_R	Reverse Leakage	FDH / FDLL 300 / A	V_R= 125 V		1.0	**n**A
			V_R= 125 V, T_A= 150°C		3.0	**µ**A
		FDH / FDLL 333	V_R= 125 V		3.0	**n**A
			V_R= 125 V, T_A= 100°C		500	**n**A
C_O	Diode Capacitance		V_R = 0, f = 1.0 MHz		6.0	pF

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Physical Dimensions

SOD-80

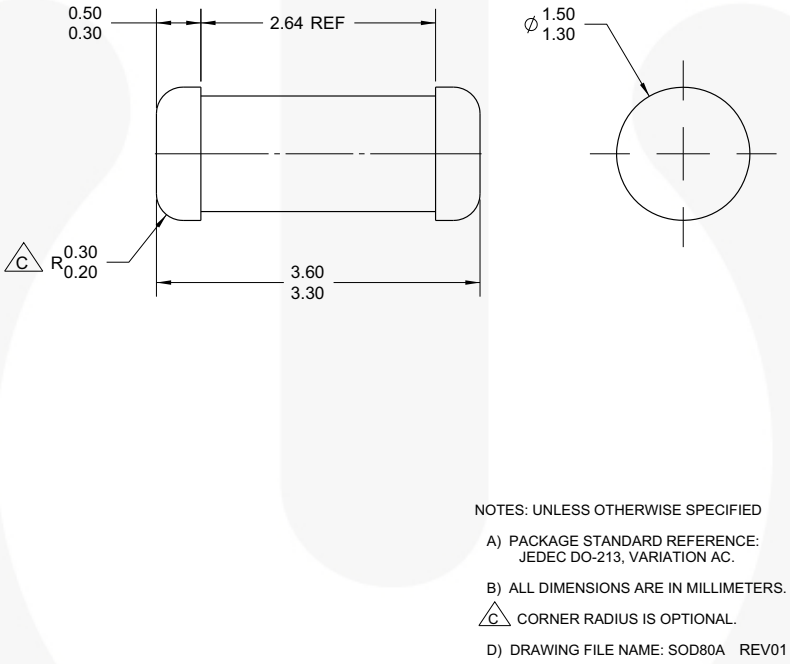

Figure 1. 2-TERMINAL, SOD-80, JEDEC DO-213AC, MINI-MELF

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Physical Dimensions (Continued)

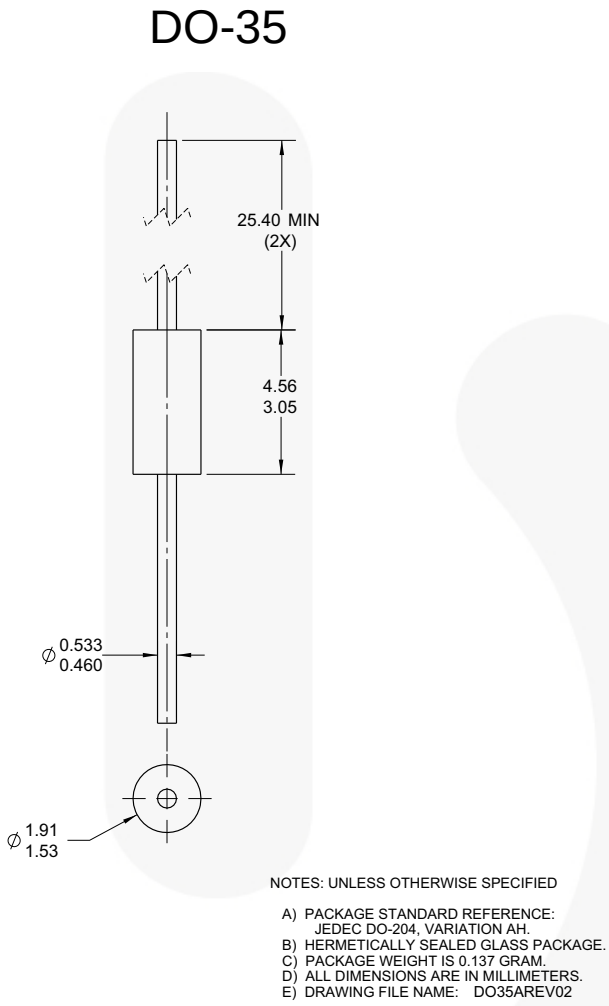

Figure 2. AXIAL LEADED, GLASS, JEDEC DO204, VARIATION AH (ACTIVE)

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