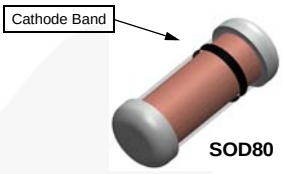
FAIRCHILD SEMICONDUCTOR®

April 2013

FDLL4151
Small Signal Diode



SOD80

Description

A general purpose diode that couples high forward conductance fast switching speed and high blocking voltages in a glass leadless LL-34 surface mount package. Placement of the expansion gap has no relationship to the location of the cathode terminal which is indicated by the first color band.

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
V_{RRM}	Maximum Repetitive Reverse Voltage		75	V
$I_{F(AV)}$	Average Rectified Forward Current		200	mA
I_{FSM}	Non-repetitive Peak Forward 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		-65 to +200	°C

Note:

1. These ratings are limiting values above which the serviceability of any semiconductor device 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

Symbol	Parameter	Value	Units
P_D	Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	350	°C/W

Electrical Characteristics

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

Symbol	Parameter	Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	I_R = 5 µA	75		V
V_F	Forward Voltage	I_F = 50 mA		1	V
I_R	Reverse Current	V_R = 50 V		50	nA
		V_R = 30 V, T_A = 150°C		50	µA
C_T	Total Capacitance	V_R = 0, f = 1.0 MHz		4	pF
t_{rr1}	Reverse Recovery Time	I_F = I_R = 10 mA, I_{RR} = 1 mA R_L = 100 Ω		4	ns
t_{rr2}	Reverse Recovery Time	V_R = 6 V, I_F = 10 mA, I_{RR} = 1 mA, R_L = 100 Ω		2	ns

Physical Dimensions

SOD-80

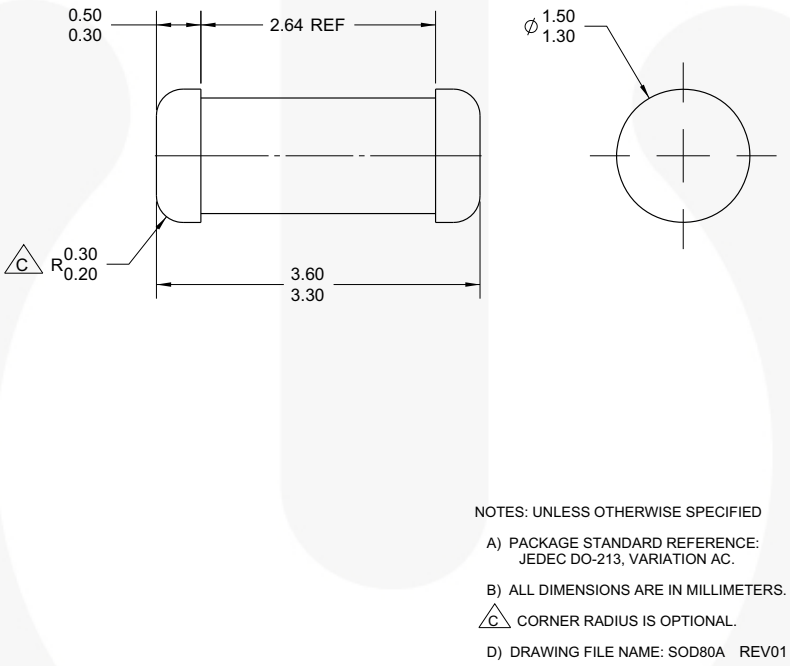


Figure 11. 2-TERMINAL, SOD-80, JEDEC DO-213AC, MINI-MELF

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