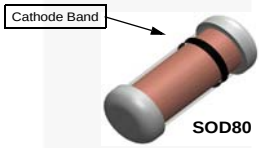
June 2015

1N/FDLL 914/A/B / 916/A/B / 4148 / 4448
Small Signal Diode

DO-35
Cathode is denoted with a black band



LL-34
THE PLACEMENT OF THE EXPANSION GAP HAS NO RELATIONSHIP TO THE LOCATION OF THE CATHODE TERMINAL

SOD-80 COLOR BAND MARKING

DEVICE	1ST BAND
FDLL914	BLACK
FDLL914A	BLACK
FDLL914B	BLACK
FDLL4148	BLACK
FDLL4448	BLACK

-1st band denotes cathode terminal and has wider width

Ordering Information

Part Number	Marking	Package	Packing Method
1N914	914	DO-204AH (DO-35)	Bulk
1N914_T50A	914	DO-204AH (DO-35)	Ammo
1N914TR	914	DO-204AH (DO-35)	Tape and Reel
1N914ATR	914A	DO-204AH (DO-35)	Tape and Reel
1N914B	914B	DO-204AH (DO-35)	Bulk
1N914BTR	914B	DO-204AH (DO-35)	Tape and Reel
1N916	916	DO-204AH (DO-35)	Bulk
1N916A	916A	DO-204AH (DO-35)	Bulk
1N916B	916B	DO-204AH (DO-35)	Bulk
1N4148	4148	DO-204AH (DO-35)	Bulk
1N4148TA	4148	DO-204AH (DO-35)	Ammo
1N4148_T26A	4148	DO-204AH (DO-35)	Ammo
1N4148_T50A	4148	DO-204AH (DO-35)	Ammo
1N4148TR	4148	DO-204AH (DO-35)	Tape and Reel
1N4148_T50R	4148	DO-204AH (DO-35)	Tape and Reel
1N4448	4448	DO-204AH (DO-35)	Bulk
1N4448TR	4448	DO-204AH (DO-35)	Tape and Reel
FDLL914	Black	SOD-80	Tape and Reel
FDLL914A	Black	SOD-80	Tape and Reel
FDLL914B	Black	SOD-80	Tape and Reel
FDLL4148	Black	SOD-80	Tape and Reel
FDLL4148_D87Z	Black	SOD-80	Tape and Reel
FDLL4448	Black	SOD-80	Tape and Reel
FDLL4448_D87Z	Black	SOD-80	Tape and Reel

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	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage		100	V
I_O	Average Rectified Forward Current		200	mA
I_F	DC Forward Current		300	mA
I_f	Recurrent Peak Forward Current		400	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 Range		-55 to +175	°C

Note:

1. These ratings are limiting values above which the serviceability of the diode may be impaired.

Thermal Characteristics

Symbol	Parameter	Max.	Unit
		1N/FDLL 914/A/B / 916/A/B / 4148 / 4448	
P_D	Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	300	°C/W

Electrical Characteristics(2)

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

Symbol	Parameter		Conditions	Min.	Max.	Unit
V_R	Breakdown Voltage		I_R= 100 µA	100		V
			I_R= 5.0 µA	75		V
V_F	Forward Voltage	914B / 4448	I_F= 5.0 mA	0.62	0.72	V
		916B	I_F= 5.0 mA	0.63	0.73	V
		914 / 916 / 4148	I_F= 10 mA		1.0	V
		914A / 916A	I_F= 20 mA		1.0	V
		916B	I_F= 20 mA		1.0	V
		914B / 4448	I_F= 100 mA		1.0	V
I_R	Reverse Leakage		V_R= 20 V		0.025	µA
			V_R= 20 V, T_A= 150°C		50	µA
			V_R= 75 V		5.0	µA
C_T	Total Capacitance	916/916A/916B/4448	V_R = 0, f = 1.0 MHz		2.0	pF
		914/914A/914B/4148	V_R = 0, f = 1.0 MHz		4.0	pF
t_{rr}	Reverse Recovery Time		I_F = 10 mA, V_R = 6.0 V (600 mA) I_{rr} = 1.0 mA, R_L = 100 Ω		4.0	ns

Note:

2. Non-recurrent square wave P_W= 8.3 ms.

Typical Performance Characteristics

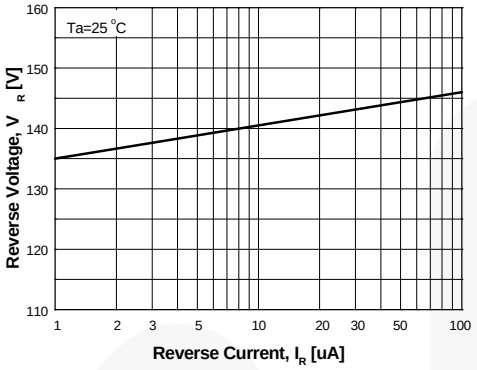


Figure 1. Reverse Voltage vs. Reverse Current
B_V - 1.0 to 100 µA

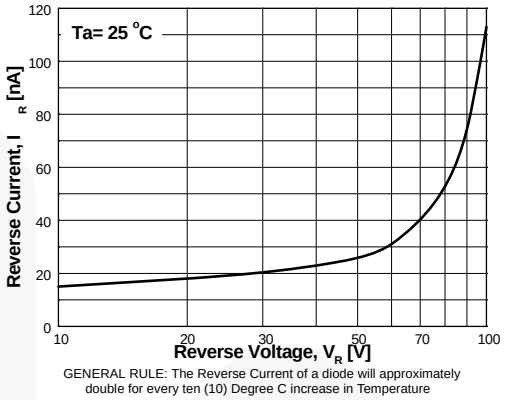


Figure 2. Reverse Current vs. Reverse Voltage
I_R - 10 to 100 V

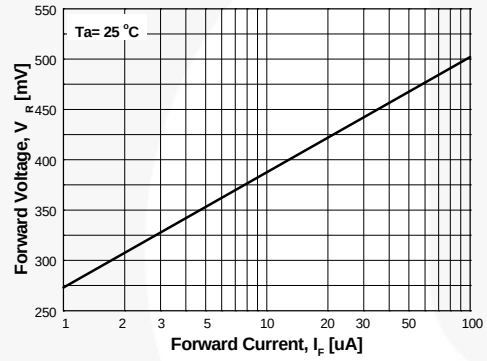


Figure 3. Forward Voltage vs. Forward Current
V_F - 1 to 100 µA

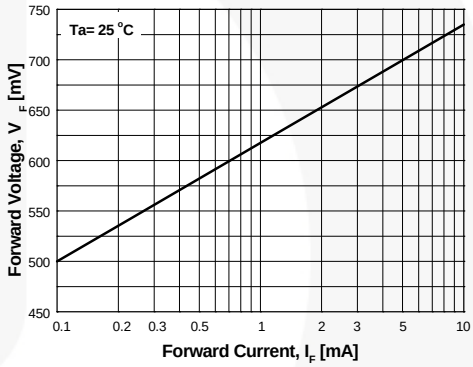


Figure 4. Forward Voltage vs. Forward Current
V_F - 0.1 to 10 mA

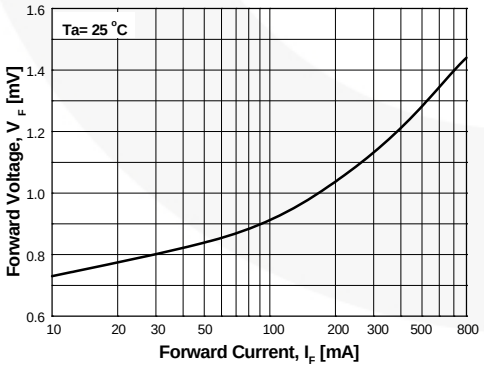


Figure 5. Forward Voltage vs. Forward Current
V_F - 10 to 800 mA

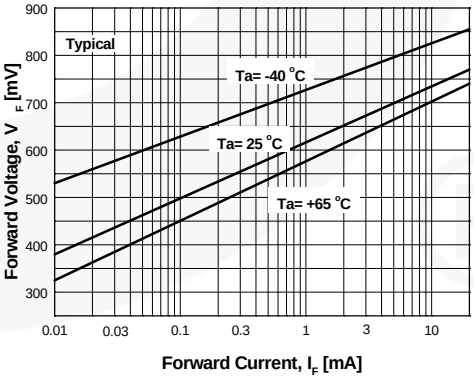


Figure 6. Forward Voltage vs. Ambient Temperature
V_F - 0.01 - 20 mA (- 40 to +65°C)

Typical Performance Characteristics (Continued)

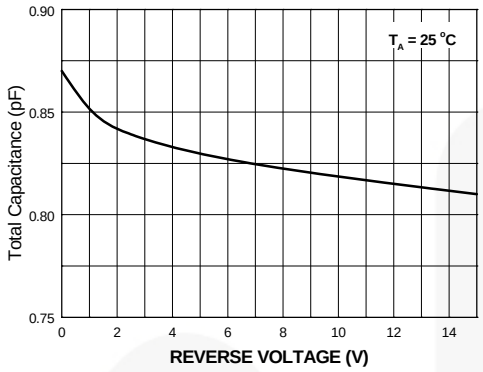


Figure 7. Total Capacitance

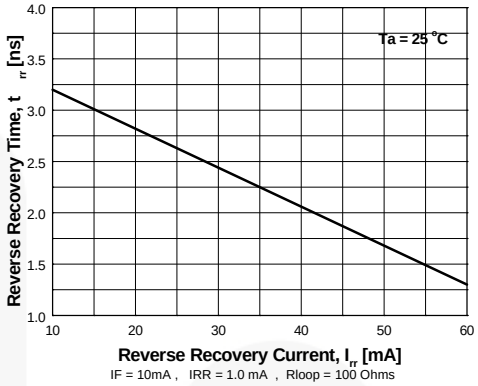


Figure 8. Reverse Recovery Time vs. Reverse Recovery Current

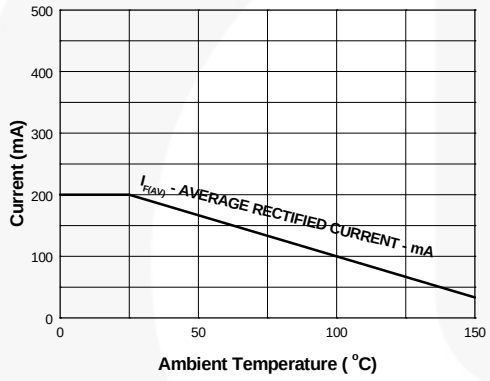


Figure 9. Average Rectified Current ($I_{F(AV)}$) vs. Ambient Temperature (T_A)

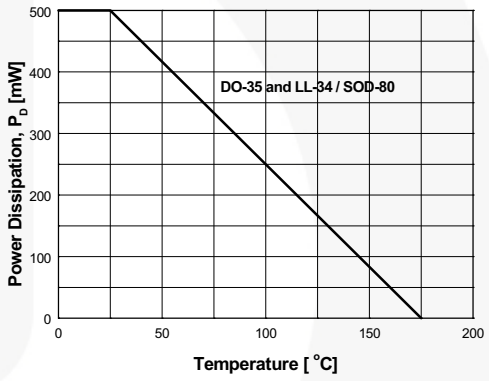


Figure 10. Power Derating Curve

Physical Dimensions

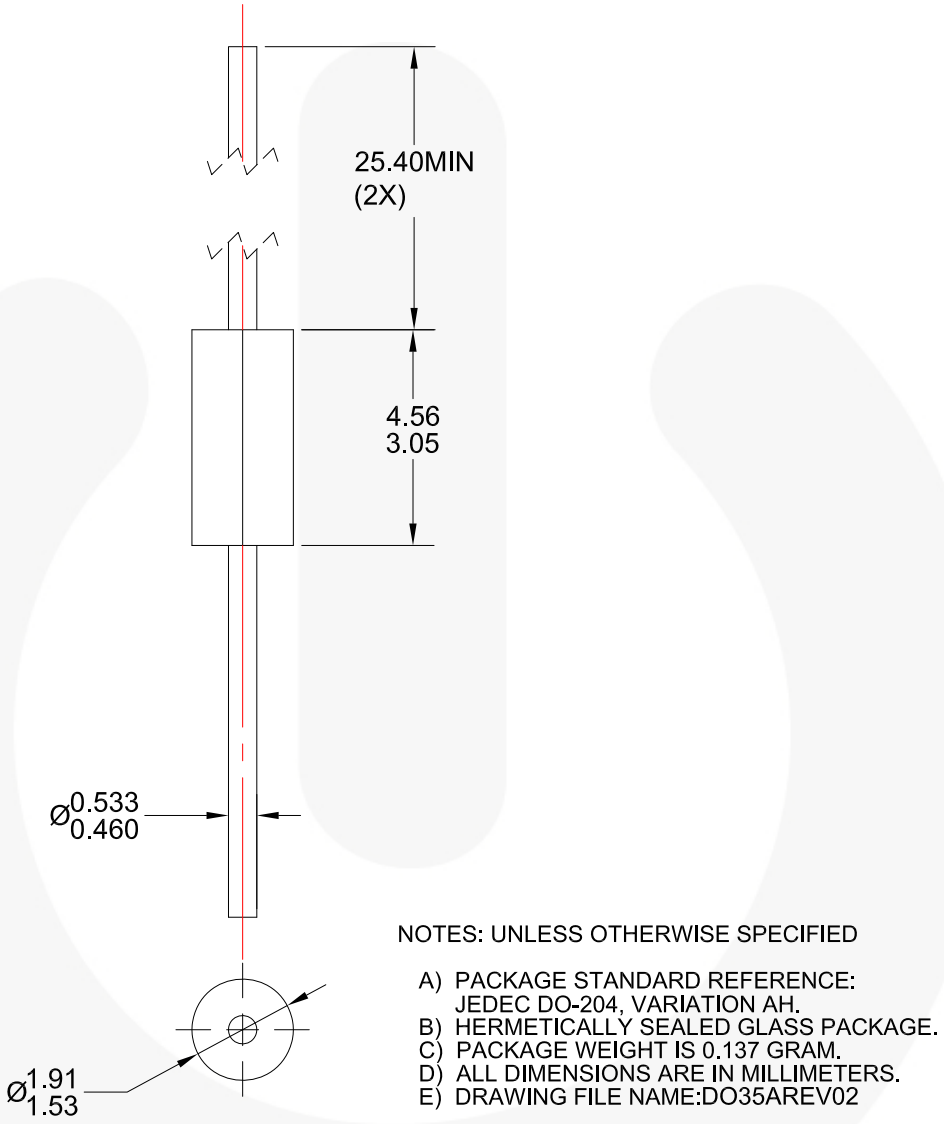
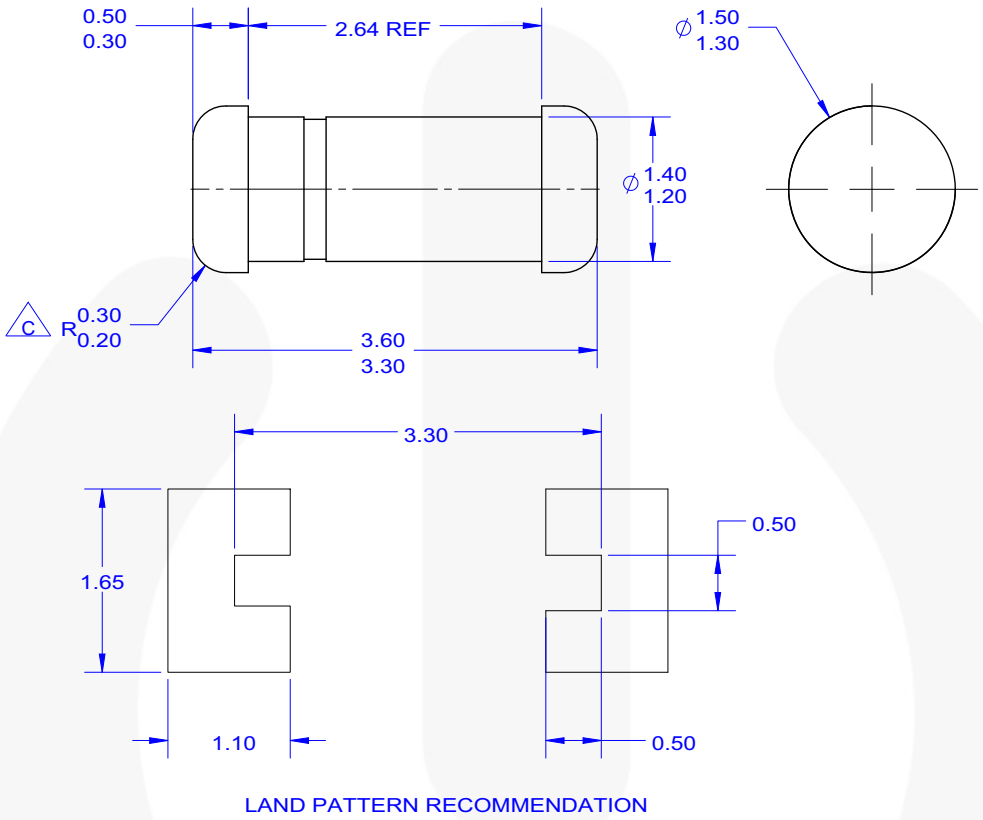


Figure 11. AXIAL LEADED, GLASS, JEDEC DO204, VARIATION AH, DO-204AH (DO-35)

Physical Dimensions (Continued)



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE:
JEDEC DO-213, VARIATION AC.

B) ALL DIMENSIONS ARE IN MILLIMETERS.

C CORNER RADIUS IS OPTIONAL.

D) LAND PATTERN RECOMMENDATION PER IPC DIOMELF3414N

E) DRAWING FILE NAME: SOD80A REV3

Figure 12. 2-TERMINAL, SOD-80, JEDEC DO-213AC, MINI-MELF

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