

Small Signal Diode

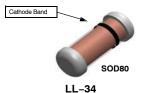
1N91x, 1N4x48, FDLL914, FDLL4x48

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



DO-35
Cathode is denoted with a black band



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
FDLL914B BLACK
FDLL914B BLACK
FDLL4448 BLACK
FDLL4448 BLACK

-1st band denotes cathode terminal and has wider width

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ABSOLUTE MAXIMUM RATINGS (Values are at $T_A = 25^{\circ}C$ unless otherwise noted) (Note 1)

Rating	Symbol	Value	Unit
Maximum Repetitive Reverse Voltage	V_{RRM}	100	V
Average Rectified Forward Current	I _O	200	mA
DC Forward Current	I _F	300	mA
Recurrent Peak Forward Current	I _f	400	mA
Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 s	I _{FSM}	1.0	Α
Pulse Width = 1.0 μs		4.0	Α
Storage Temperature Range	T _{STG}	-65 to +200	°C
Operating Junction Temperature Range	TJ	-55 to +175	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Power Dissipation	P_{D}	500	mW
Thermal Resistance, Junction-to-Ambient	$R_{ heta JA}$	300	°C

ELECTRICAL CHARACTERISTICS (Values are at $T_A = 25$ °C unless otherwise noted) (Note 2)

Symbol	Pai	rameter	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	μΑ
			V _R = 20 V, T _A = 150°C		50	μΑ
			V _R = 75 V		5.0	μΑ
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	- Fime	I_F = 10 mA, V_R = 6.0 V (600 mA) I_{rr} = 1.0 mA, R_L = 100 Ω		4.0	ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions. 2. Non-recurrent square wave $P_W = 8.3$ ms.

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

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TYPICAL PERFORMANCE CHARACTERISTICS

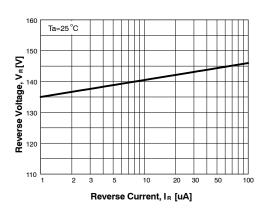


Figure 1. Reverse Voltage vs. Reverse Current B_V – 1.0 to 100 μA

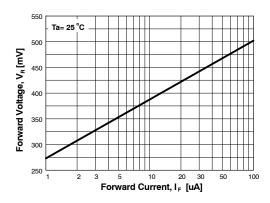


Figure 3. Forward Voltage vs. Forward Current V_F – 1 to 100 μA

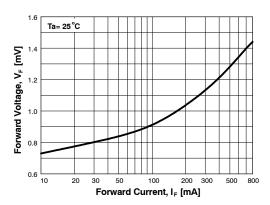


Figure 5. Forward Voltage vs. Forward Current $V_F - 10$ to 800 mA

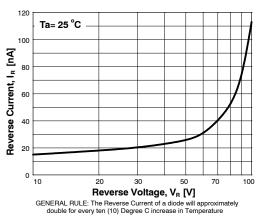


Figure 2. Reverse Current vs. Reverse Voltage

I_R – 10 to 100 V

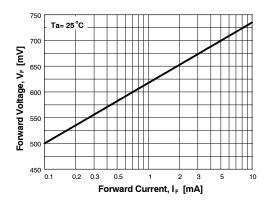


Figure 4. Forward Voltage vs. Forward Current V_F – 0.1 to 10 mA

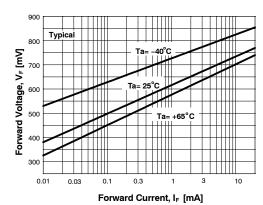


Figure 6. Forward Voltage vs. Ambient Temperature V_F - 0.01 - 20 mA (- 40 to +65°C)

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TYPICAL PERFORMANCE CHARACTERISTICS

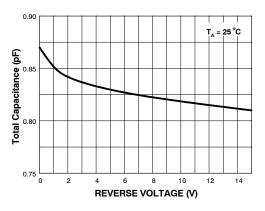


Figure 7. Total Capacitance

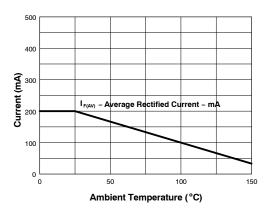


Figure 9. Average Rectified Current ($I_{F(AV)}$) vs. Ambient Temperature (T_A)

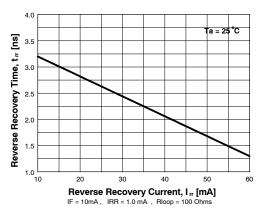


Figure 8. Reverse Recovery Time vs. Reverse Recovery Current

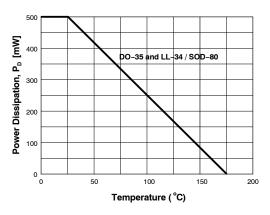
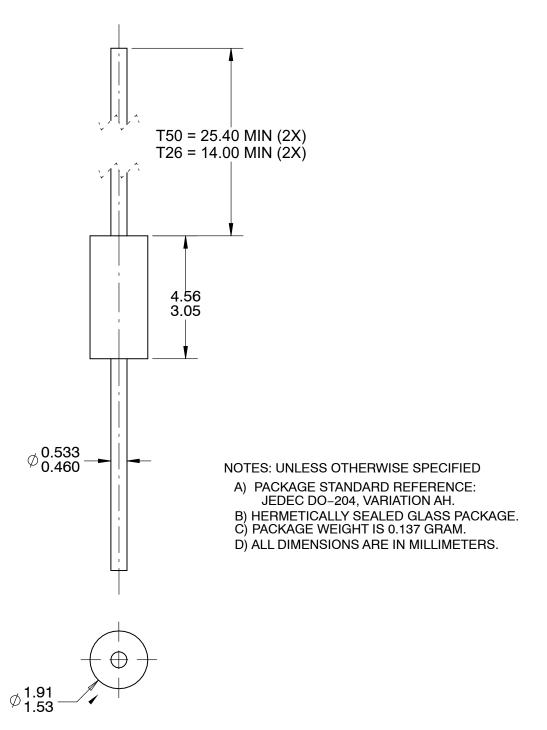


Figure 10. Power Derating Curve



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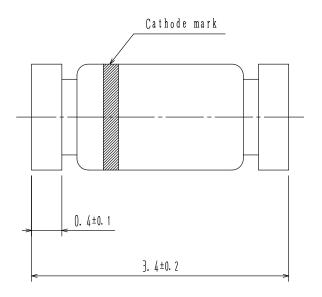
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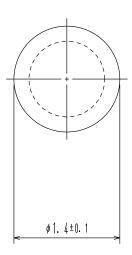
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NOTES: UNLESS OTHERWISE SPECIFIED

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