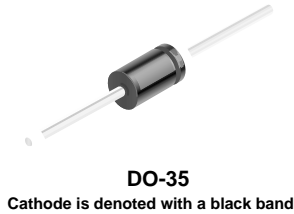


1N/FDLL 914/A/B / 916/A/B / 4148 / 4448

Small Signal Diode



LL-34 COLOR BAND MARKING

DEVICE	1ST BAND	2ND BAND
FDLL914	BLACK	BROWN
FDLL914A	BLACK	GRAY
FDLL914B	BROWN	BLACK
FDLL916	BLACK	RED
FDLL916A	BLACK	WHITE
FDLL916B	BROWN	BROWN
FDLL4148	BLACK	BROWN
FDLL4448	BROWN	BLACK

-1st band denotes cathode terminal and has wider width

Absolute Maximum Ratings* T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
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 second Pulse Width = 1.0 microsecond	1.0	A
		4.0	A
T _{STG}	Storage Temperature Range	-65 to +200	°C
T _J	Operating Junction Temperature	175	°C

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

NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Max.	Units
		1N/FDLL 914/A/B / 4148 / 4448	
P _D	Power Dissipation	500	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	300	°C/W

Electrical Characteristics* T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Units
V _R	Breakdown Voltage	I _R = 100μA I _R = 5.0μA	100 75		V V
V _F	Forward Voltage	1N914B/4448 I _F = 5.0mA 1N916B I _F = 5.0mA 1N914/916/4148 I _F = 10mA 1N914A/916A I _F = 20mA 1N916B I _F = 20mA 1N914B/4448 I _F = 100mA	620 630	720 730 1.0 1.0 1.0 1.0	mV mV V V V V
I _R	Reverse Leakage	V _R = 20V V _R = 20V, T _A = 150°C V _R = 75V		25 50 5.0	nA μA μA
C _T	Total Capacitance	V _R = 0, f = 1.0MHz V _R = 0, f = 1.0MHz		2.0 4.0	pF pF
t _{rr}	Reverse Recovery Time	I _F = 10mA, V _R = 6.0V (600mA) I _{rr} = 1.0mA, R _L = 100Ω		4.0	ns

* Non-recurrent square wave PW = 8.3ms

Typical Characteristics

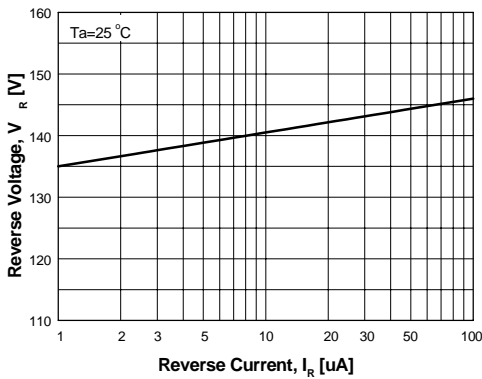


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100μA

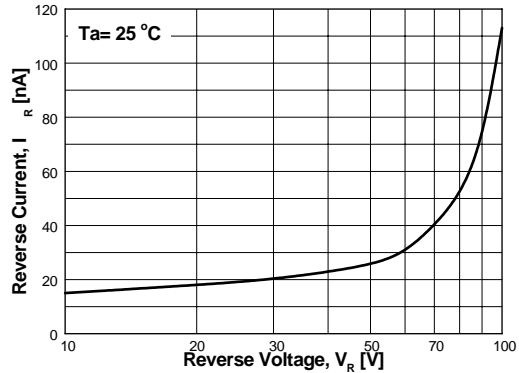


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100V

GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

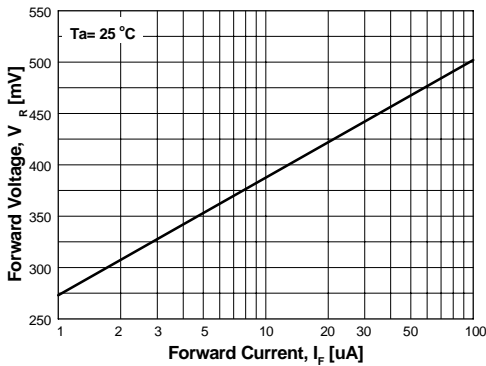


Figure 3. Forward Voltage vs Forward Current
VF - 1 to 100μA

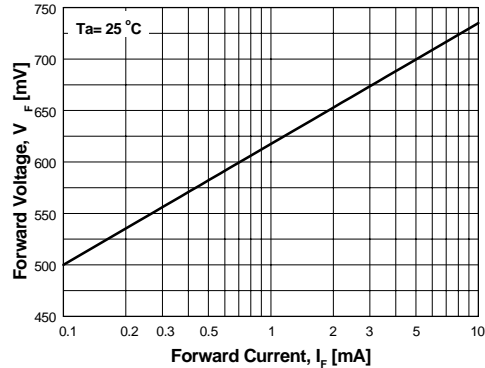


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10mA

Typical Characteristics (Continued)

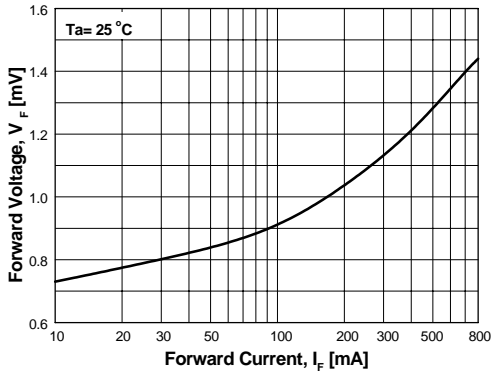


Figure 5. Forward Voltage vs Forward Current
VF - 10 to 800mA

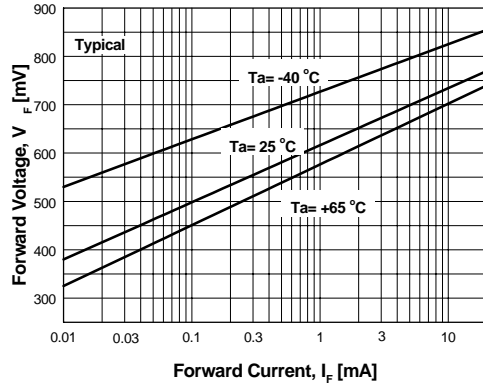


Figure 6. Forward Voltage vs Ambient Temperature
VF - 0.01 - 20 mA (- 40 to +65°C)

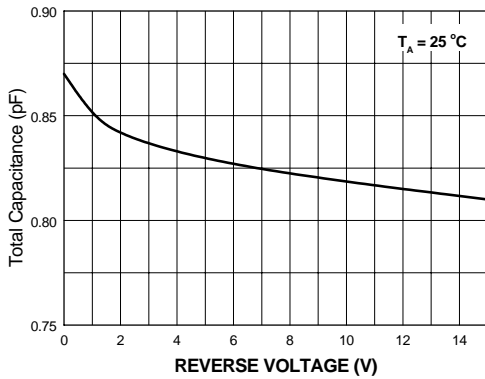


Figure 7. Total Capacitance

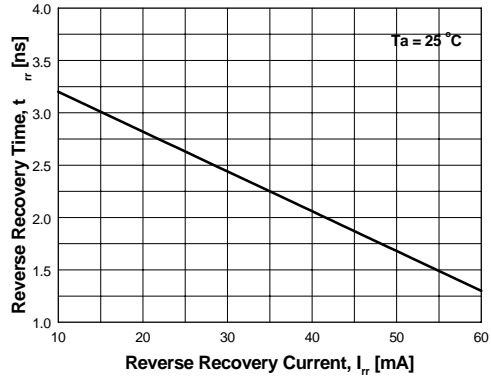


Figure 8. Reverse Recovery Time vs Reverse Recovery Current
IF = 10mA , IRR = 1.0 mA , Rloop = 100 Ohms

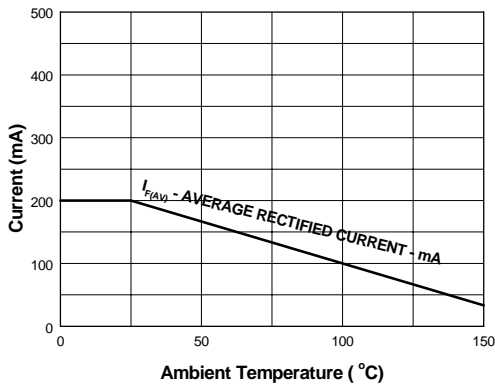


Figure 9. Average Rectified Current ($I_{F(AV)}$) vs Ambient Temperature (T_A)

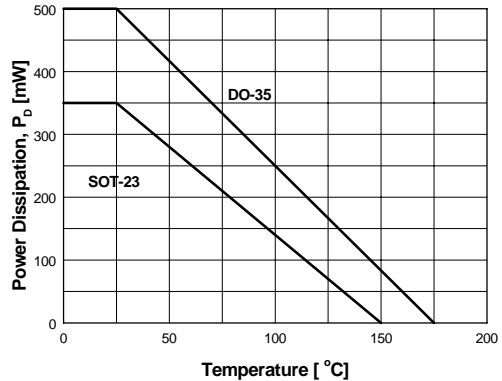


Figure 10. Power Derating Curve

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Programmable Active Droop™				

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

Rev. I22

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1N914B

High Conductance Fast Diode

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Product status/pricing/packageing

BUY

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
1N914B	Full Production	Full Production	\$0.0116	DO-35	2	BULK	Line 1: \$Y (Fairchild logo) Line 2: 91 Line 3: 4B
1N914BTR	Full Production	Full Production	\$0.0116	DO-35	2	TAPE REEL	Line 1: \$Y (Fairchild logo) Line 2: 91 Line 3: 4B
1N914BTR_NL	Full Production	Full Production	N/A	DO-35	2	TAPE REEL	Line 1: \$Y (Fairchild logo) Line 2: 91 Line 3: 4B
1N914B_S62Z	Full Production		N/A	DO-35	2	BULK	Line 1: \$Y (Fairchild logo)

		 Full Production					Line 2: 91 Line 3: 4B
1N914B_T50A	Full Production	 Full Production	N/A	DO-35	2	AMMO	Line 1: \$Y (Fairchild logo) Line 2: 91 Line 3: 4B
1N914B_T50R	Full Production	 Full Production	N/A	DO-35	2	TAPE REEL	Line 1: \$Y (Fairchild logo) Line 2: 91 Line 3: 4B

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

Package marking information for product 1N914B is available. [Click here for more information](#).

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Models

Package & leads	Condition	Temperature range	Vcc range	Software version	Revision date
PSPICE					
DO-35-2	Electrical	25°C	N/A	N/A	N/A
	Electrical	-40°C to 65°C	0V to 4V	OrCAD 10.3	May 31, 2007

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Qualification Support

Click on a product for detailed qualification data

Product
1N914B
1N914BTR
1N914BTR_NL
1N914B_S62Z

[1N914B_T50A](#)

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