

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



DO-35



LL-34

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

**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

## High Conductance Fast Diode

Sourced from Process D3.

### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$W_{IV}$	Working Inverse Voltage	75	V
$I_O$	Average Rectified Current	200	mA
$I_F$	DC Forward Current	300	mA
$i_f$	Recurrent Peak Forward Current	400	mA
$i_{(surge)}$	Peak Forward Surge Current Pulse width = 1.0 second Pulse width = 1.0 microsecond	1.0 4.0	A 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 any semiconductor device 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

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		1N/FDLL 914/A/B / 4148 / 4448	
$P_D$	Total Device Dissipation Derate above 25°C	500	mW
		3.33	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	°C/W

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(continued)

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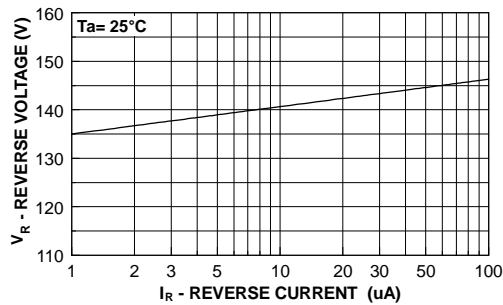
## Electrical Characteristics

TA = 25°C unless otherwise noted

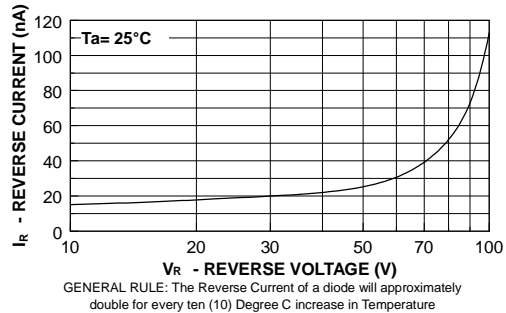
Symbol	Parameter	Test Conditions	Min	Max	Units	
B <sub>V</sub>	Breakdown Voltage	I <sub>R</sub> = 100 μA I <sub>R</sub> = 5.0 μA	100 75		V V	
I <sub>R</sub>	Reverse Current	V <sub>R</sub> = 20 V V <sub>R</sub> = 20 V, T <sub>A</sub> = 150°C V <sub>R</sub> = 75 V		25 50 5.0	nA μA μA	
V <sub>F</sub>	Forward Voltage	1N914B / 4448 1N916B 1N914 / 916 / 4148 1N914A / 916A 1N916B 1N914B / 4448	I <sub>F</sub> = 5.0 mA I <sub>F</sub> = 5.0 mA I <sub>F</sub> = 10 mA I <sub>F</sub> = 20 mA I <sub>F</sub> = 30 mA I <sub>F</sub> = 100 mA	620 630 720 730 1.0 1.0 1.0	mV mV V V V V	
C <sub>O</sub>	Diode Capacitance	1N916/A/B / 4448 1N914/A/B / 4148	V <sub>R</sub> = 0, f = 1.0 MHz V <sub>R</sub> = 0, f = 1.0 MHz		2.0 4.0	pF pF
T <sub>RR</sub>	Reverse Recovery Time	I <sub>F</sub> = 10 mA, V <sub>R</sub> = 6.0 V (60 mA), I <sub>tr</sub> = 1.0 mA, R <sub>L</sub> = 100 Ω		4.0	nS	

## Typical Characteristics

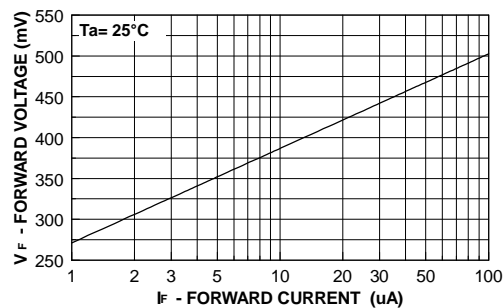
**REVERSE VOLTAGE vs REVERSE CURRENT**  
BV - 1.0 to 100 μA



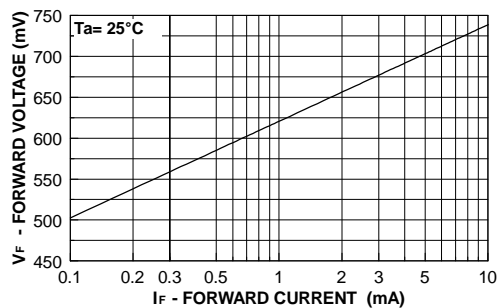
**REVERSE CURRENT vs REVERSE VOLTAGE**  
IR - 10 to 100 V



**FORWARD VOLTAGE vs FORWARD CURRENT**  
VF - 1 to 100 μA



**FORWARD VOLTAGE vs FORWARD CURRENT**  
VF - 0.1 to 100 mA



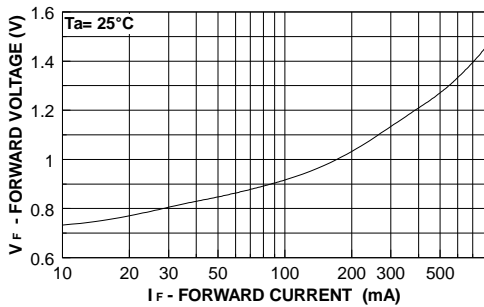
# High Conductance Fast Diode

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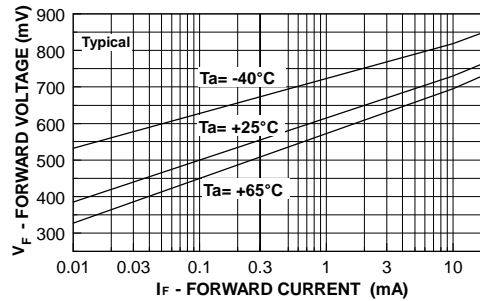
1N/FD/LL 914/A/B / 916/A/B / 4148 / 4448

## Typical Characteristics (continued)

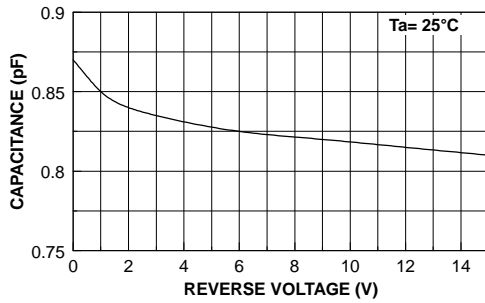
**FORWARD VOLTAGE vs FORWARD CURRENT**  
VF - 10 to 800 mA



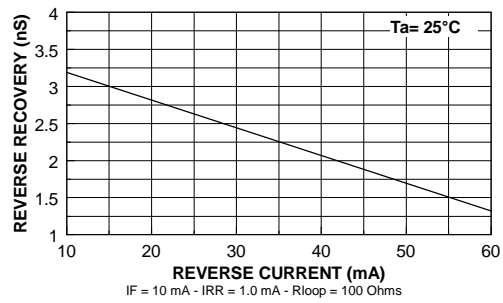
**VF - 0.01 - 20 mA (-40 to +65 Deg C)**  
**FORWARD VOLTAGE vs**  
**AMBIENT TEMPERATURE**



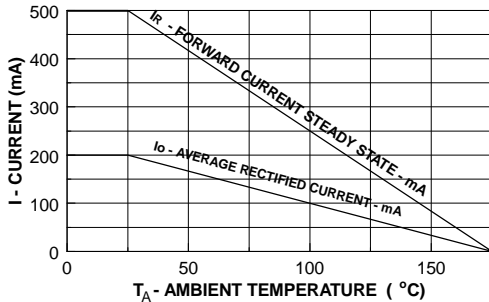
**CAPACITANCE vs REVERSE VOLTAGE**  
VR = 0.0 to 15 V



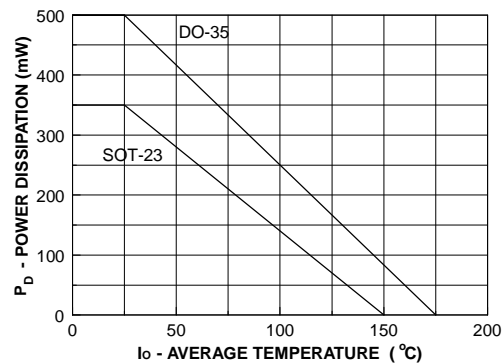
**REVERSE RECOVERY TIME vs**  
**REVERSE CURRENT**



**Average Rectified Current (Io) &**  
**Forward Current (IF) versus**  
**Ambient Temperature (TA)**



**POWER DERATING CURVE**



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