FAIRCHILD

SEMICONDUCTOR

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

DO-35

Cathode is denoted with a black

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

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 terminal athode and has wider width

Absolute Maximum Ratings* Ta=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 4.0	AA
T _{STG}	Storage Temperature Range	-65 to + 175	°C
TJ	Operating Junction Tempera	-65 to + 175	°C

NOTES:

These ratings are based on a maximum junction temperature of 200 degrees C.
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	
Cymbol	i arameter	1N/FDLL 914/A/B / 4148 / 4448	onits	
P _D	Power Dissipation	500	mW	
$R_{ hetaJA}$	Thermal Resistance, Junction to Ambient	300	°C/W	



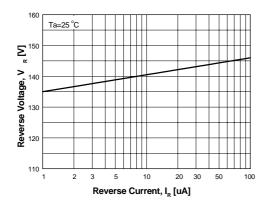
January 2007

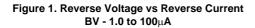
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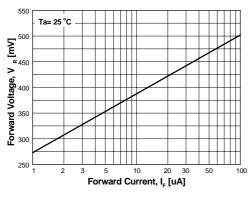
Symbol	Parameter	Test Conditions	Min.	Max.	Units
V _R	Breakdown Voltage	I _R = 100μA I _R = 5.0μA	100 75		V V
VF	1N916 1N914/916/414 1N914A/916 1N916		620 630	720 730 1.0 1.0 1.0 1.0	mV mV V V V
I _R	Reverse Leakage	$V_{R} = 20V$ $V_{R} = 20V$, $T_{A} = 150^{\circ}C$ $V_{R} = 75V$		25 50 5.0	nA μA μA
CT	Total Capacitance 1N916A/B/4448 1N914A/B/4148	V _R = 0, f = 1.0MHz V _R = 0, f = 1.0MHz		2.0 4.0	pF pF
t _{rr}	Reverse Recovery Time	$I_F = 10mA, V_R = 6.0V (600mA)$ $I_{rr} = 1.0mA, R_L = 100\Omega$		4.0	ns

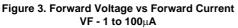
* Non-recurrent square wave PW = 8.3ms

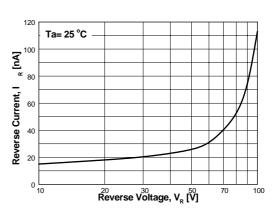
Typical Characteristics



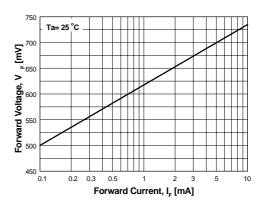


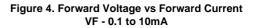


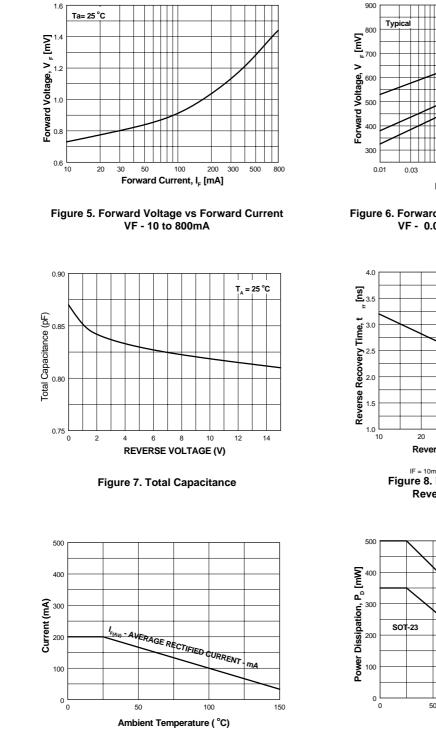




GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature Figure 2. Reverse Current vs Reverse Voltage IR - 10 to 100V







Typical Characteristics (Continued)



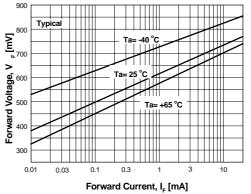
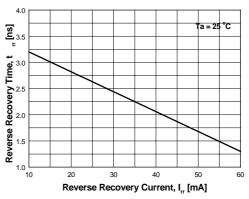


Figure 6. Forward Voltage vs Ambient Temperature VF - 0.01 - 20 mA (- 40 to +65°C)



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

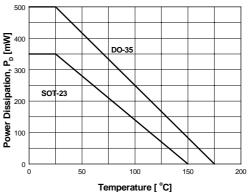


Figure 10. Power Derating Curve



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