

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



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

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

Small Signal Diode

Absolute Maximum Ratings * $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	100	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current		
	Pulse Width = 1.0 second	1.0	A
	Pulse Width = 1.0 microsecond	4.0	A
T_{STG}	Storage Temperature Range	-65 to +200	$^\circ\text{C}$
T_J	Operating Junction Temperature	175	$^\circ\text{C}$

* 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
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	$^\circ\text{C/W}$

Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Units
V _R	Breakdown Voltage	I _R = 100μA	100		V
		I _R = 5.0μA	75		V
V _F	Forward Voltage	1N914B/4448 1N916B I _F = 5.0mA	620	720	mV
		1N914/916/4148 I _F = 5.0mA	630	730	mV
		1N914A/916A I _F = 10mA		1.0	V
		1N916B I _F = 20mA		1.0	V
		1N914B/4448 I _F = 20mA		1.0	V
		1N914B/4448 I _F = 100mA		1.0	V
I _R	Reverse Leakage	V _R = 20V		25	nA
		V _R = 20V, T _A = 150°C		50	μA
		V _R = 75V		5.0	μA
C _T	Total Capacitance	1N916A/B/4448 V _R = 0, f = 1.0MHz		2.0	pF
		1N914A/B/4148 V _R = 0, f = 1.0MHz		4.0	pF
t _{rr}	Reverse Recovery Time	I _F = 10mA, V _R = 6.0V (600mA) I _{rr} = 1.0mA, R _L = 100Ω		4.0	ns

Typical Characteristics

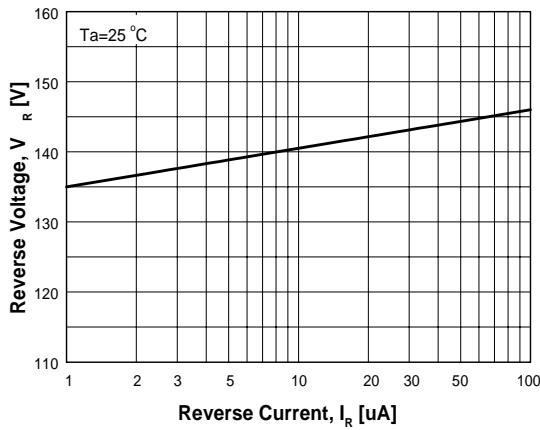


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100μA

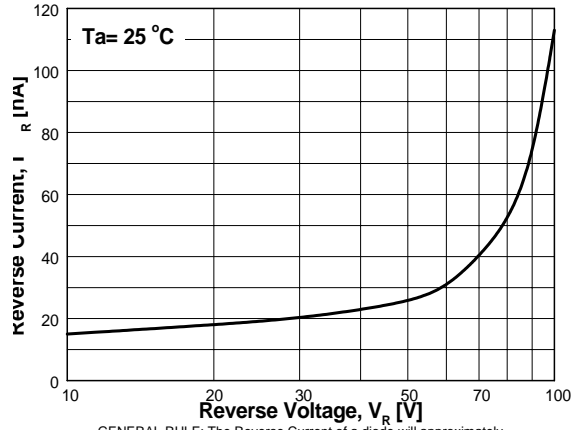


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100V
GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

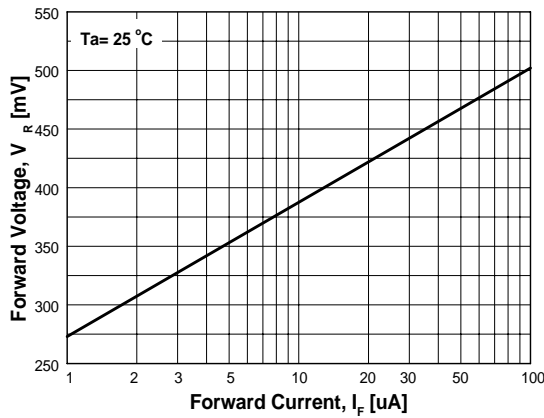


Figure 3. Forward Voltage vs Forward Current
VF - 1 to 100μA

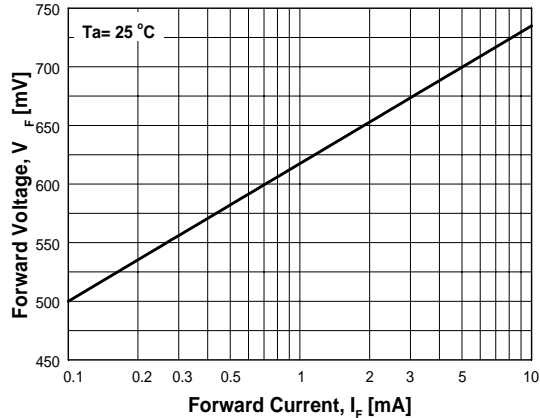


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10mA

Typical Characteristics (Continued)

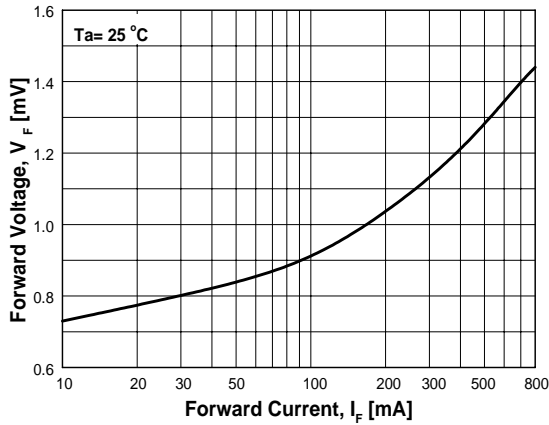


Figure 5. Forward Voltage vs Forward Current
VF - 10 to 800mA

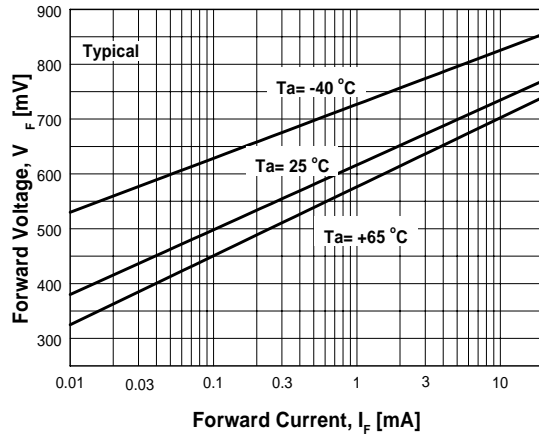


Figure 6. Forward Voltage vs Ambient Temperature
VF - 0.01 - 20 mA (- 40 to +65°C)

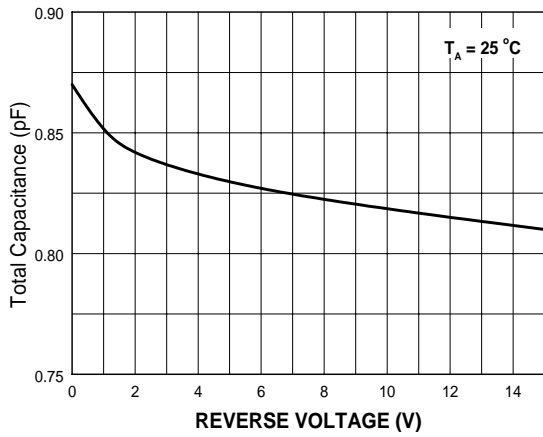


Figure 7. Total Capacitance

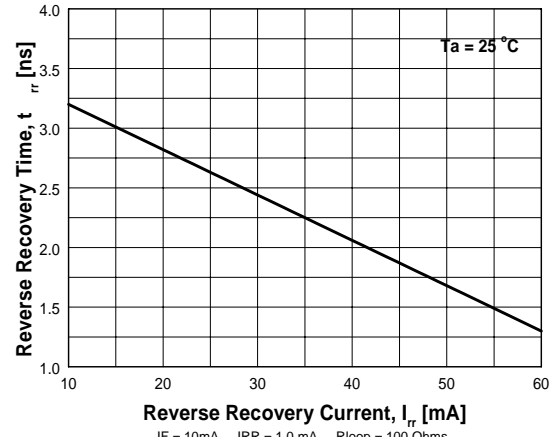


Figure 8. Reverse Recovery Time vs Reverse Recovery Current
IF = 10mA, IRR = 1.0 mA, Rloop = 100 Ohms

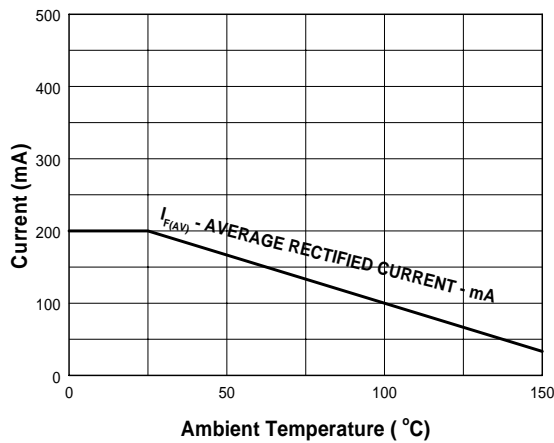


Figure 9. Average Rectified Current ($I_{F(AV)}$) vs Ambient Temperature (T_A)

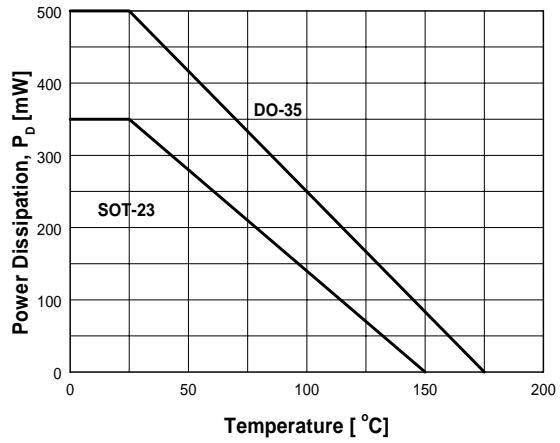


Figure 10. Power Derating Curve

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