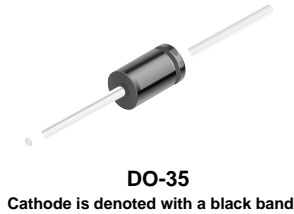


1N/FDLL 914/A/B / 916/A/B / 4148 / 4448

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 | 1.0 | A |
| | Pulse Width = 1.0 microsecond | 4.0 | A |
| T _{STG} | Storage Temperature Range | -65 to + 175 | °C |
| T _J | Operating Junction Tempera | -65 to + 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

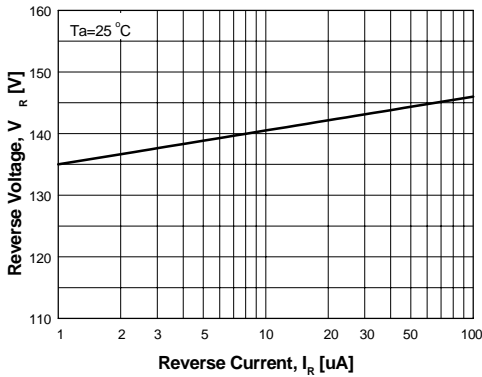


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100μA

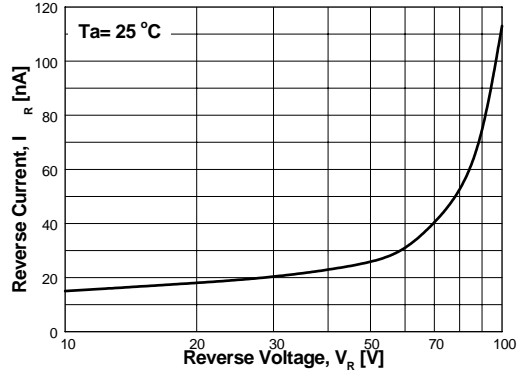


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100V

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

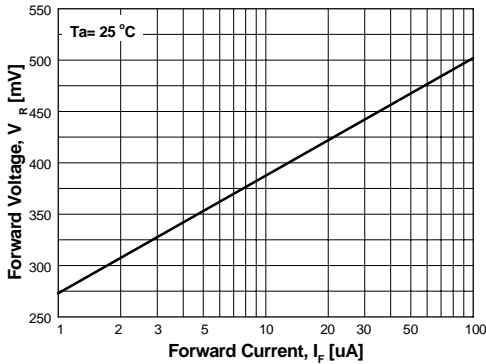


Figure 3. Forward Voltage vs Forward Current
VF - 1 to 100μA

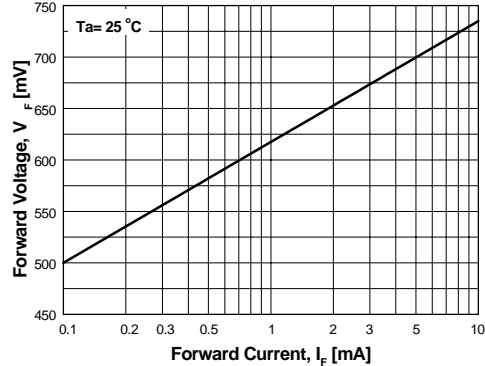


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10mA

Typical Characteristics (Continued)

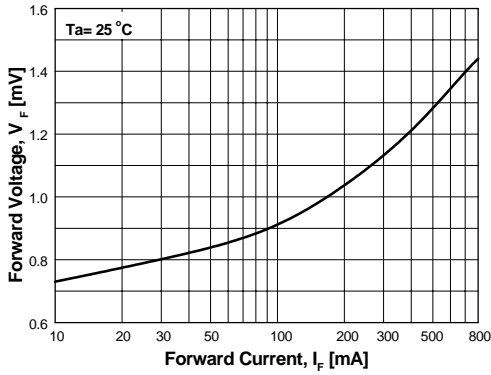


Figure 5. Forward Voltage vs Forward Current
VF - 10 to 800mA

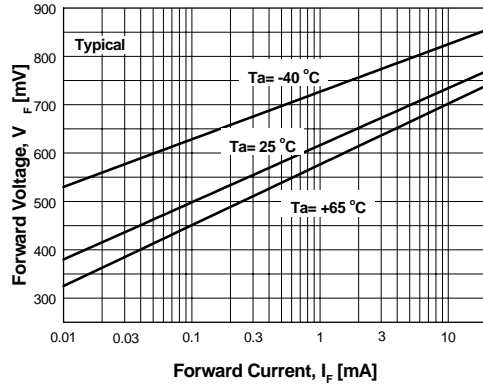


Figure 6. Forward Voltage vs Ambient Temperature
VF - 0.01 - 20 mA (- 40 to +65°C)

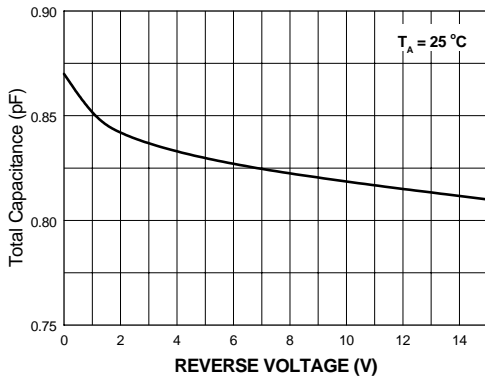


Figure 7. Total Capacitance

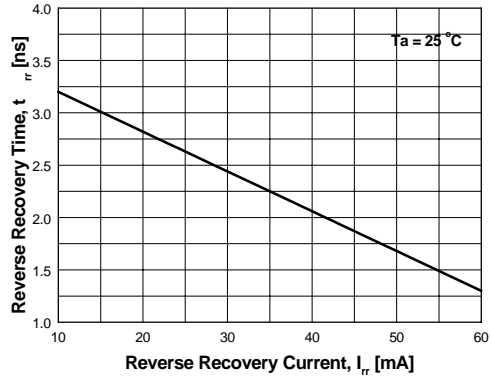


Figure 8. Reverse Recovery Time vs Reverse Recovery Current
IF = 10mA , IRR = 1.0 mA , Rloop = 100 Ohms

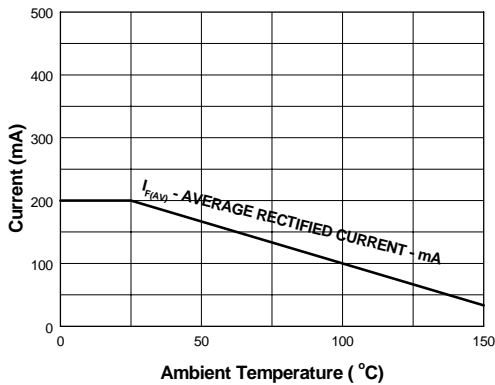


Figure 9. Average Rectified Current ($I_{F(AV)}$) vs Ambient Temperature (T_A)

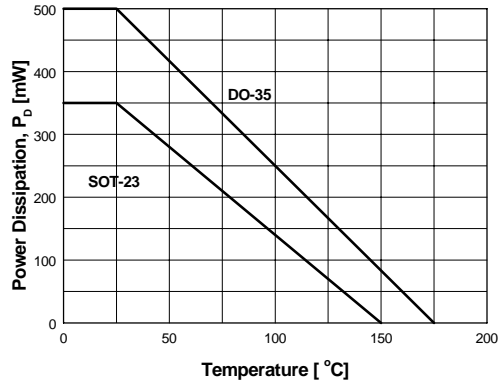


Figure 10. Power Derating Curve

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| Programmable Active Droop™ | | | | |

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Rev. I22