

# Small Signal Diode

## 1N91x, 1N4x48, FDLL914, FDLL4x48

### ORDERING INFORMATION

| Part Number | Marking | Package          | Packing Method |
|-------------|---------|------------------|----------------|
| 1N914       | 914     | DO 204AH (DO 35) | Bulk           |
| 1N914 T50A  | 914     | DO 204AH (DO 35) | Ammo           |
| 1N914TR     | 914     | DO 204AH (DO 35) | Tape and Reel  |
| 1N914ATR    | 914A    | DO 204AH (DO 35) | Tape and Reel  |
| 1N914B      | 914B    | DO 204AH (DO 35) | Bulk           |
| 1N914BTR    | 914B    | DO 204AH (DO 35) |                |

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## ABSOLUTE MAXIMUM RATINGS (Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted) (Note 1)

| Rating                                    | Symbol    | Value                           | Unit             |   |
|---|-----------|---------------------------------|------------------|---|
| Maximum Repetitive Reverse Voltage        | $V_{RRM}$ | 100                             | V                |   |
| Average Rectified Forward Current         | $I_O$     | 200                             | mA               |   |
| DC Forward Current                        | $I_F$     | 300                             | mA               |   |
| Recurrent Peak Forward Current            | $I_f$     | 400                             | mA               |   |
| Non repetitive Peak Forward Surge Current | $I_{FSM}$ | Pulse Width = 1.0 s             | 1.0              | A |
|   |           | Pulse Width = 1.0 $\mu\text{s}$ | 4.0              | A |
| Storage Temperature Range                 | $T_{STG}$ | 65 to +200                      | $^\circ\text{C}$ |   |
| Operating Junction Temperature Range      | $T_J$     | 55 to +175                      | $^\circ\text{C}$ |   |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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

## THERMAL CHARACTERISTICS

| Parameter                               | Symbol          | Max | Unit             |
|---|-----------------|-----|------------------|
| Power Dissipation                       | $P_D$           | 500 | mW               |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 300 | $^\circ\text{C}$ |

## ELECTRICAL CHARACTERISTICS (Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted) (Note 2)

| Symbol | Parameter         | Conditions                                    | Min                    | Max   | Unit          |   |
|--------|-------------------|---|------------------------|-------|---------------|---|
| $V_R$  | Breakdown Voltage | $I_R = 100 \mu\text{A}$                       | 100                    |       | V             |   |
|        |                   | $I_R = 5.0 \mu\text{A}$                       | 75                     |       | V             |   |
| $V_F$  | Forward Voltage   | 914B / 4448                                   | $I_F = 5.0 \text{ mA}$ | 0.62  | 0.72          | V |
|        |                   | 916B  | $I_F = 5.0 \text{ mA}$ | 0.63  | 0.73          | V |
|        |                   | 914 / 916 / 4148                              | $I_F = 10 \text{ mA}$  |       | 1.0           | V |
|        |                   | 914A / 916A                                   | $I_F = 20 \text{ mA}$  |       | 1.0           | V |
|        |                   | 916B  | $I_F = 20 \text{ mA}$  |       | 1.0           | V |
|        |                   | 914B / 4448                                   | $I_F = 100 \text{ mA}$ |       | 1.0           | V |
| $I_R$  | Reverse Leakage   | $V_R = 20 \text{ V}$                          |                        | 0.025 | $\mu\text{A}$ |   |
|        |                   | $V_R = 20 \text{ V}, T_A = 150^\circ\text{C}$ |                        | 50    | $\mu\text{A}$ |   |
|        |                   | $V_R = 75 \text{ V}$                          |                        | 5.0   | $\mu\text{A}$ |   |

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## TYPICAL PERFORMANCE CHARACTERISTICS

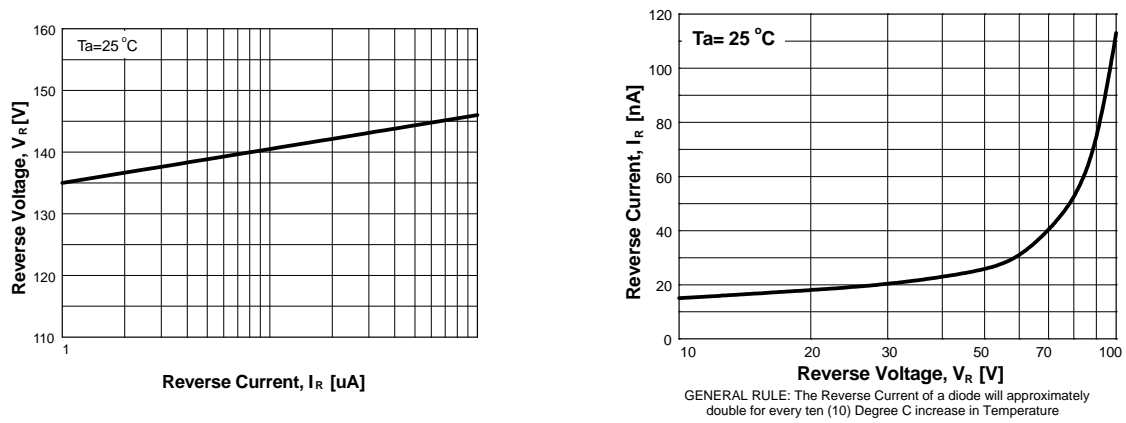


Figure 1. Reverse Voltage vs. Reverse Current  
 $B_V - 1.0$  to  $100 \mu\text{A}$

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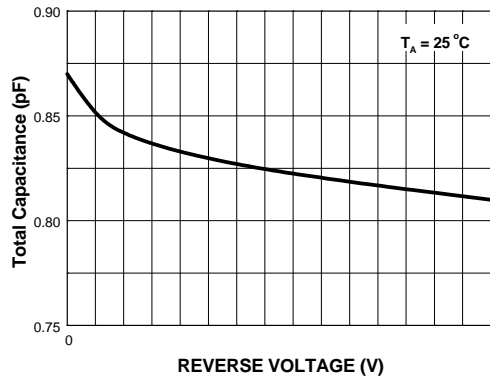


Figure 7. Total Capacitance

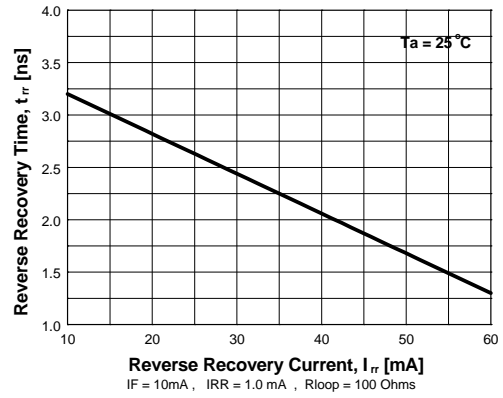
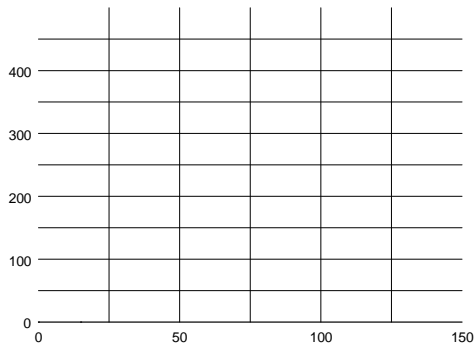


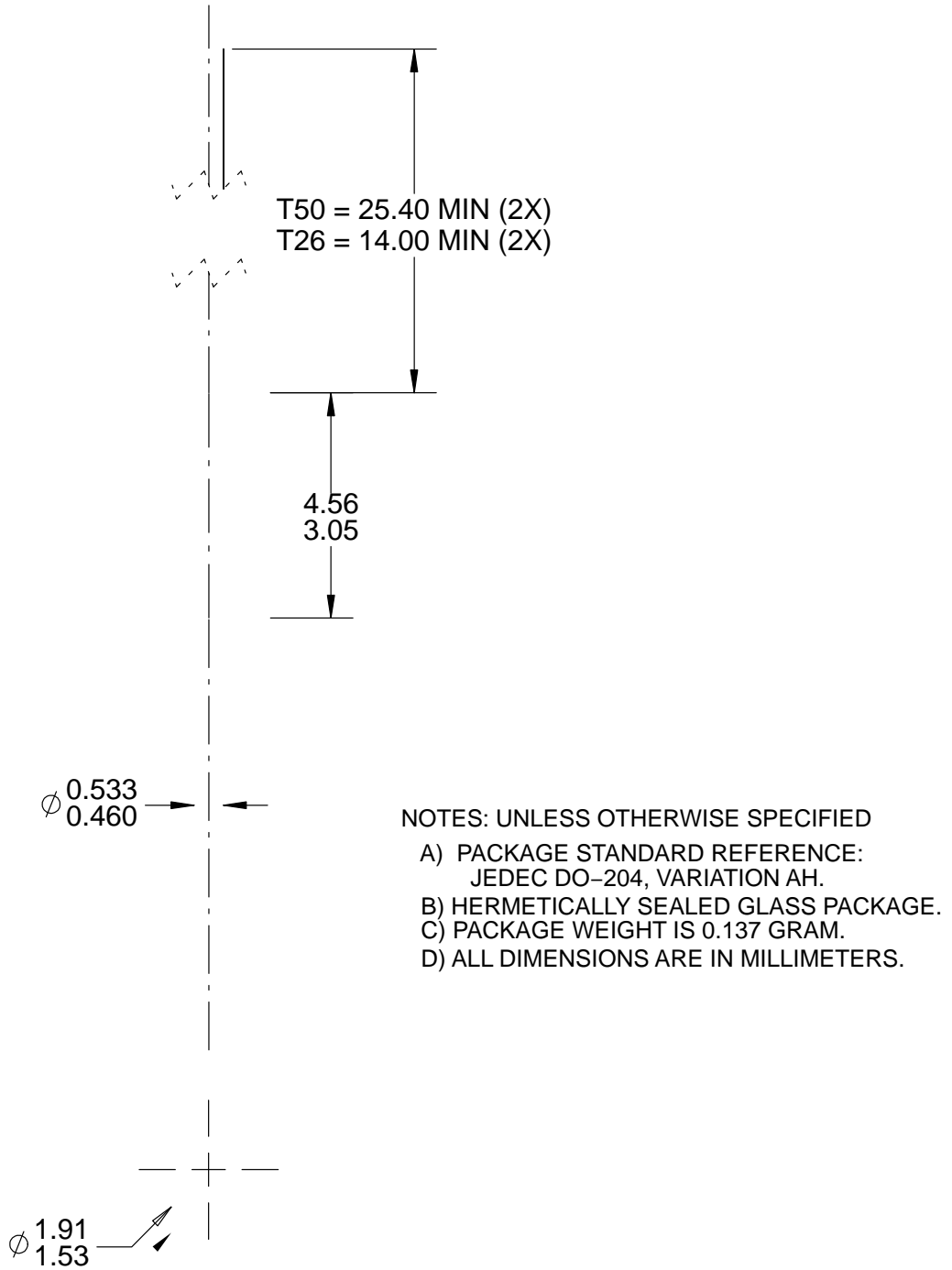
Figure 8. Reverse Recovery Time vs. Reverse Recovery Current





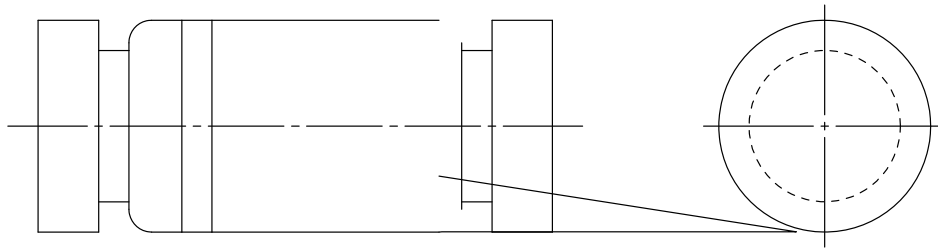
**AXIAL LEAD**  
**CASE 017AG**  
**ISSUE 0**

DATE 31 AUG 2016



**MiniMELF / SOD 80**  
CASE 100AD  
ISSUE O

DATE 30 APR 2012



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