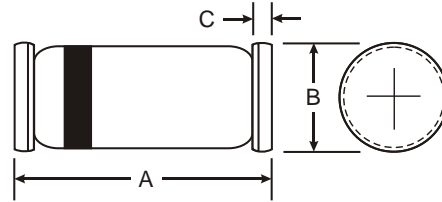


Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- General Purpose Rectification
- Silicon Epitaxial Planar Construction
- **Lead Free Finish, RoHS Compliant (Note 2)**

Mechanical Data

- Case: MiniMELF
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Sn97.5Ag2.5. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Cathode Band Only
- Weight: 0.05 grams (approximate)



| MiniMELF | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 3.30 | 3.70 |
| B | 1.30 | 1.60 |
| C | 0.28 | 0.50 |
| All Dimensions in mm | | |

Maximum Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | LL4148 | LL4448 | Unit |
|--|--|-------------|--------|-------------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 100 | | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 75 | | V |
| RMS Reverse Voltage | V _{R(RMS)} | 53 | | V |
| Forward Continuous Current (Note 1) | I _{FM} | 300 | 500 | mA |
| Average Rectified Output Current (Note 1) | I _O | 150 | | mA |
| Non-Repetitive Peak Forward Surge Current @ t = 1.0s @ t = 1.0μs | I _{FSM} | 1.0 2.0 | | A |
| Power Dissipation (Note 1) Derate Above 25°C | P _d | 500 1.68 | | mW mW/°C |
| Thermal Resistance, Junction to Ambient Air (Note 1) | R _{JA} | 300 | | K/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +175 | | °C |

Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|------------------------------|-----------------|------|-----------------------|----------------|--|
| Maximum Forward Voltage | V _{FM} | 0.62 | 1.0 0.72 1.0 | V | I _F = 10mA I _F = 5.0mA I _F = 100mA |
| Maximum Peak Reverse Current | I _{RM} | | 5.0 50 30 25 | μA μA nA | V _R = 75V V _R = 70V, T _J = 150°C V _R = 20V, T _J = 150°C V _R = 20V |
| Capacitance | C _j | | 4.0 | pF | V _R = 0, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | | 4.0 | ns | I _F = 10mA to I _R = 1.0mA V _R = 6.0V, R _L = 100 |

- Notes: 1. Valid provided that device terminals are kept at ambient temperature.
2. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied where applicable, see EU Directive Annex notes 5 and 7.

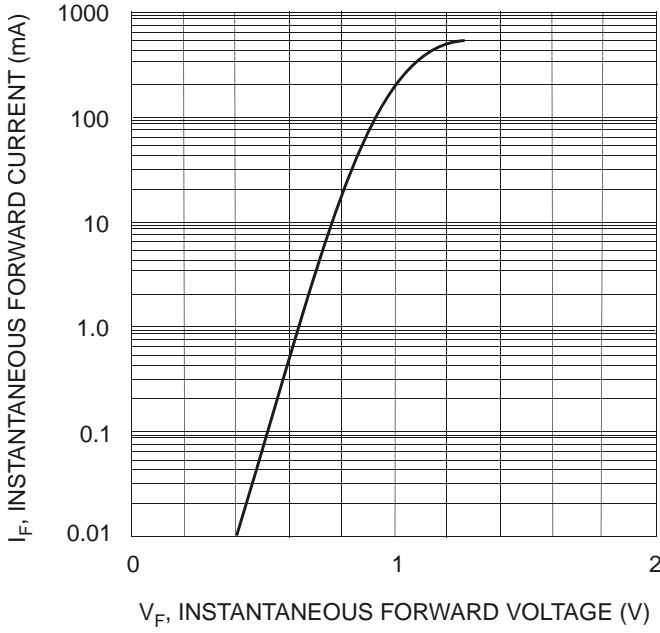


Fig. 1 Forward Characteristics

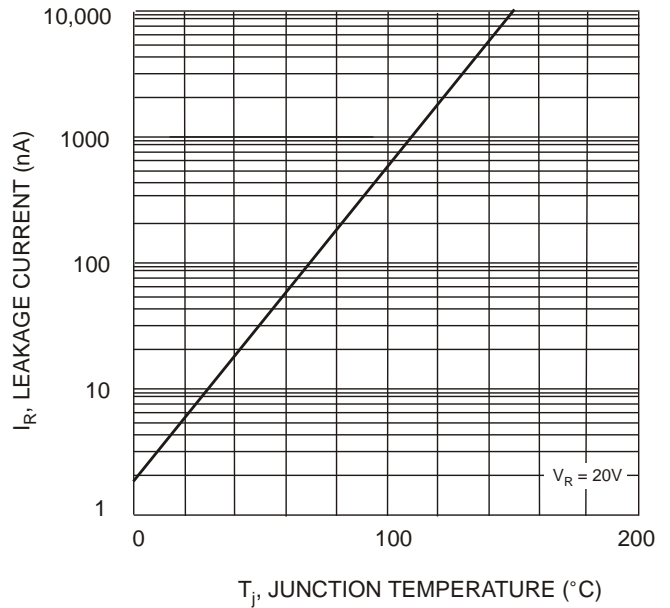


Fig. 2, Leakage Current vs Junction Temperature

Ordering Information (Note 3)

| Device | Packaging | Shipping |
|-----------|-----------|---------------------------|
| LL4148-7 | MiniMELF | 2.5K/Tape & Reel, 7- inch |
| LL4148-13 | MiniMELF | 10K/Tape & Reel, 13-inch |
| LL4448-7 | MiniMELF | 2.5K/Tape & Reel, 7- inch |

Notes: 3. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

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