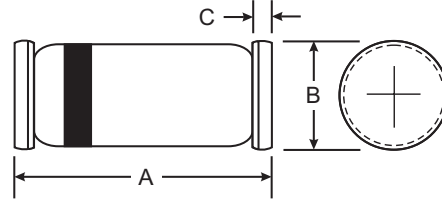


### Features

- 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 — Matte Tin. 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<sub>A</sub> = 25°C unless otherwise specified

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

### Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Maximum Forward Voltage	LL4148 LL4448 LL4448	— 0.62 —	1.0 0.72 1.0	V	I <sub>F</sub> = 10mA I <sub>F</sub> = 5.0mA I <sub>F</sub> = 100mA
Maximum Peak Reverse Current	I <sub>RM</sub>	—	5.0 50 30 25	μA μA μA nA	V <sub>R</sub> = 75V V <sub>R</sub> = 70V, T <sub>J</sub> = 150°C V <sub>R</sub> = 20V, T <sub>J</sub> = 150°C V <sub>R</sub> = 20V
Capacitance	C <sub>j</sub>	—	4.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	4.0	ns	I <sub>F</sub> = 10mA to I <sub>R</sub> = 1.0mA V <sub>R</sub> = 6.0V, R <sub>L</sub> = 100Ω

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

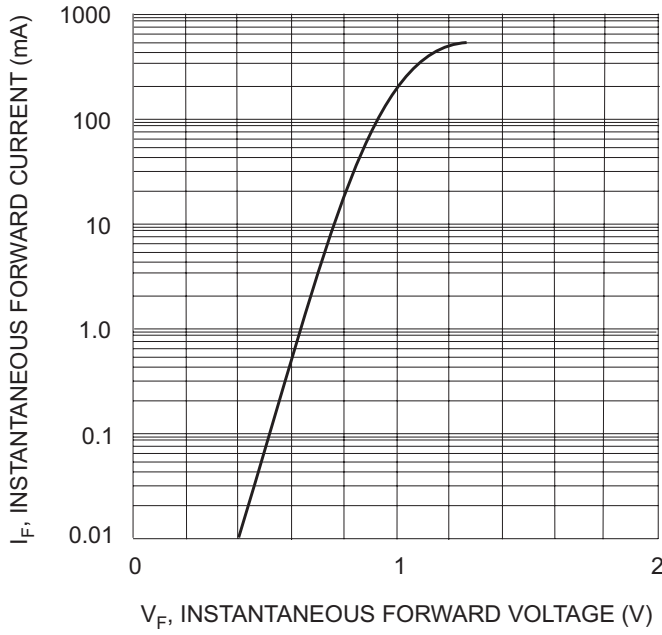


Fig. 1 Forward Characteristics

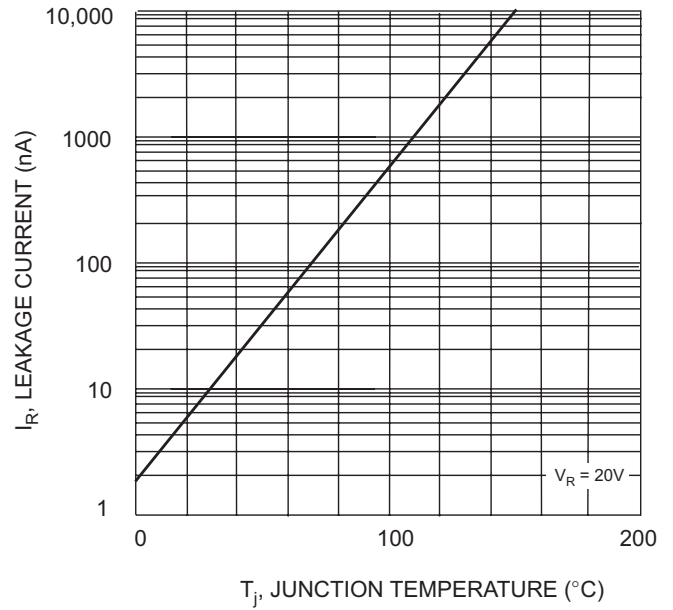


Fig. 2, Leakage Current vs Junction Temperature

**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>.