FAST SWITCHING SURFACE MOUNT DIODE

Features and Benefits

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- General Purpose Rectification
- Silicon Epitaxial Planar Construction
- **Lead Free Finish, RoHS Compliant (Note 1)**

Mechanical Data

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

Ordering Information (Note 2)

Part Number	Case	Packaging
LL4148-13	MiniMELF	10K/Tape & Reel, 13-inch
LL4448-7	MiniMELF	2.5K/Tape & Reel, 7-inch

Notes: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2). All applicable RoHS exemptions applied.
2. For Packaging Details, go to our website at http://www.diodes.com.

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 3)	I_{FM}	300	500	mA
Average Rectified Output Current (Note 3)	I_O	150		mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0s	I_{FSM}	1.0		A
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs	I_{FSM}	2.0		A
Power Dissipation (Note 3) Derate above 25°C	P_D	500 1.68		mW mW/°C
Thermal Resistance, Junction to Ambient Air (Note 3)	$R_{\theta JA}$	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
Forward Voltage	LL4148	V_F	-	1.0	V	I_F = 10mA
	LL4448		0.62	0.72		I_F = 5.0mA
	LL4448		-	1.0		I_F = 100mA
Maximum Peak Reverse Current (Note 4)		I_{RM}	-	5.0	μA	V_R = 75V
			-	50	μA	V_R = 75V, T_J = 150°C
			-	30	μA	V_R = 75V, T_J = 150°C
			-	25	nA	V_R = 75V
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 = 100Ω

Notes: 3. Valid provided that device terminals are kept at ambient Temperature.
4. Short duration pulse test used to minimize self-heating effect.

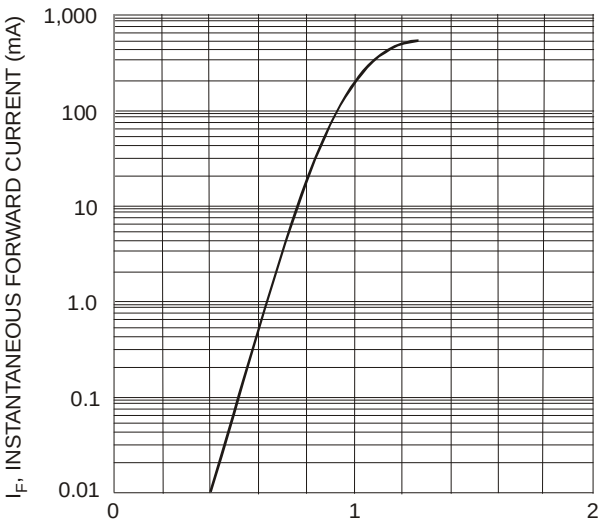

Fig. 1 Typical Forward Characteristics

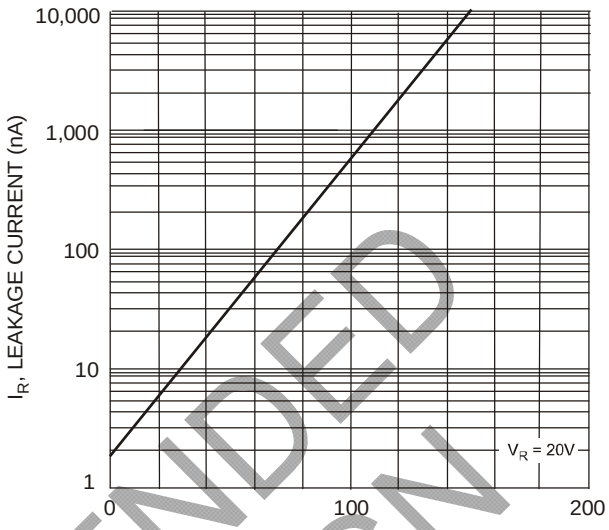

Fig. 2 Typical Leakage Current vs. Junction Temperature

Package Outline Dimensions

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

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