



**THE DATASHEET OF  
LLSD101A-7**

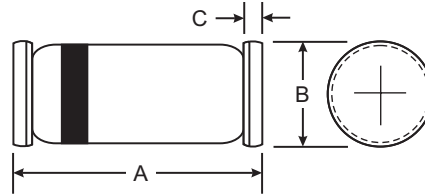


### Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Reverse Recovery Time
- Low Reverse Capacitance
- **Lead Free Finish, RoHS Compliant (Note 3)**

### Mechanical Data

- Case: MiniMELF
- Case Material: Glass. 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
- Ordering Information: See Last Page
- 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	LLSD101A	LLSD101B	LLSD101C	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	60	50	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	42	35	28	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	15			mA
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s @ t = 10μs	I <sub>FSM</sub>	50 2.0			mA A
Power Dissipation (Note 1)	P <sub>d</sub>	400			mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	375			°C/W
Operating Temperature Range	T <sub>j</sub>	-55 to +125			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150			°C

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Forward Voltage Drop (Note 2)	V <sub>F</sub>	—	0.41 0.40 0.39 1.00 0.95 0.90	V	I <sub>F</sub> = 1.0mA I <sub>F</sub> = 1.0mA I <sub>F</sub> = 1.0mA I <sub>F</sub> = 15mA I <sub>F</sub> = 15mA I <sub>F</sub> = 15mA
Reverse Current (Note 2)	I <sub>R</sub>	—	200	nA	V <sub>R</sub> = 50V V <sub>R</sub> = 40V V <sub>R</sub> = 30V
Total Capacitance	C <sub>T</sub>	—	2.0 2.1 2.2	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	1.0	ns	I <sub>F</sub> = I <sub>R</sub> = 5.0mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

Note: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

2. Short duration test pulse used to minimize self-heating effect.

3. 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.

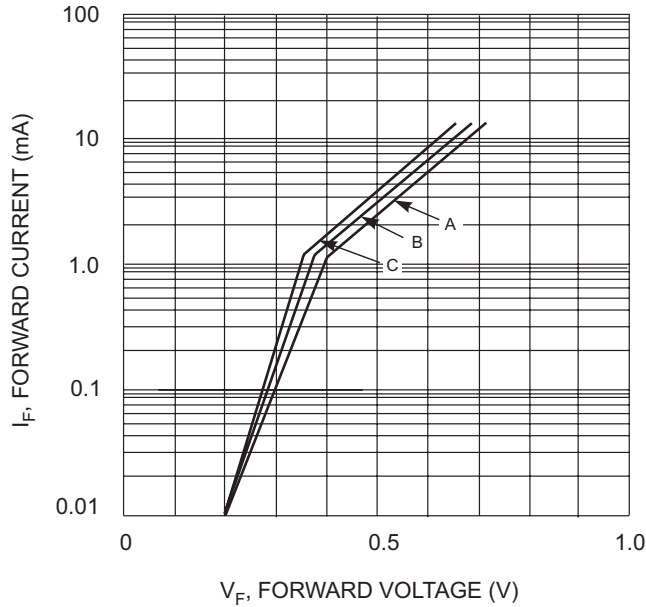


Fig. 1 Typical Forward Characteristic Variations for Primary Conduction

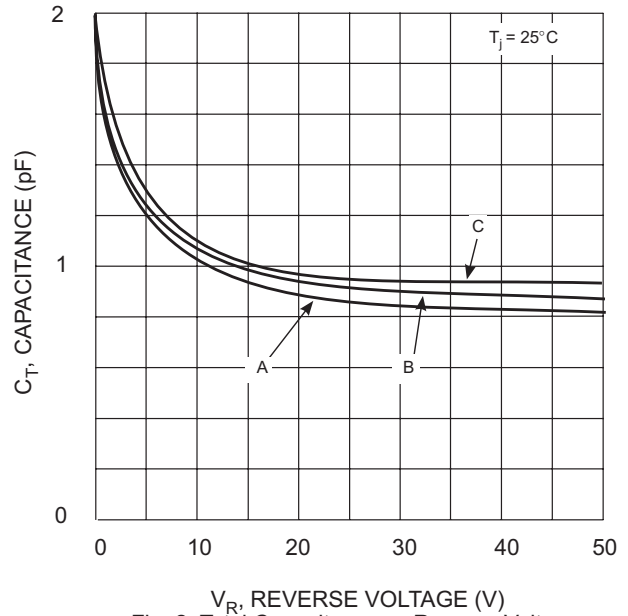


Fig. 2 Total Capacitance vs Reverse Voltage

**Ordering Information** (Note 4)

Device	Packaging	Shipping
LLSD101A-7	MiniMELF	2.5K/Tape & Reel, 7-inch
LLSD101A-13	MiniMELF	10K/Tape & Reel, 13-inch
LLSD101B-7	MiniMELF	2.5K/Tape & Reel, 7-inch
LLSD101B-13	MiniMELF	10K/Tape & Reel, 13-inch
LLSD101C-7	MiniMELF	2.5K/Tape & Reel, 7-inch
LLSD101C-13	MiniMELF	10K/Tape & Reel, 13-inch

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

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