

LLSD101A - 101C

SURFACE MOUNT SCHOTTKY BARRIER DIODE

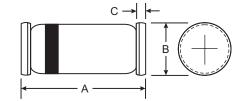
Features

 NOT RECOMMENDED FOR NEW DESIGNS, — PLEASE USE SD101AW - SD101CW

- 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 | | |
| Α | 3.30 | 3.70 | |
| В | 1.30 | 1.60 | |
| С | 0.28 0.50 | | |
| All Dimensions in mm | | | |

Maximum Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | LLSD101A | LLSD101B | LLSD101C | Unit |
|--|--|-------------|----------|----------|---------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 60 | 50 | 40 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 42 | 35 | 28 | V |
| Forward Continuous Current (Note 1) | I _{FM} | 15 | | , | mA |
| Non-Repetitive Peak Forward Surge Current @ t ≤ 1 @ t = 1 | IECM | 50 2.0 | | | mA A |
| Power Dissipation (Note 1) | | 400 | | | mW |
| Thermal Resistance, Junction to Ambient Air (Note 1) | | 375 | | | °C/W |
| Operating Temperature Range | | -55 to +125 | | | °C |
| Storage Temperature Range | | -55 to +150 | | | °C |

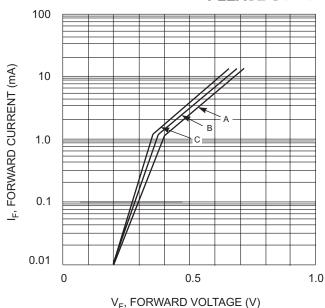
Electrical Characteristics @ $T_A = 25^{\circ}C$ unless otherwise specified

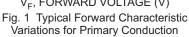
| Characteristic | | Symbol | Min | Max | Unit | Test Condition |
|-------------------------------|--|-----------------|-----|--|------|---|
| Forward Voltage Drop (Note 2) | LLSD101A LLSD101B LLSD101C LLSD101A LLSD101B LLSD101C | V _F | _ | 0.41 0.40 0.39 1.00 0.95 0.90 | V | I _F = 1.0mA I _F = 1.0mA I _F = 1.0mA I _F = 15mA I _F = 15mA I _F = 15mA |
| Reverse Current (Note 2) | LLSD101A LLSD101B LLSD101C | I _R | _ | 200 | nA | V _R = 50V V _R = 40V V _R = 30V |
| Total Capacitance | LLSD101A LLSD101B LLSD101C | СТ | _ | 2.0 2.1 2.2 | pF | V _R = 0V, f = 1.0MHz |
| Reverse Recovery Time | | t _{rr} | _ | 1.0 | ns | $I_F = I_R = 5.0 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$ |

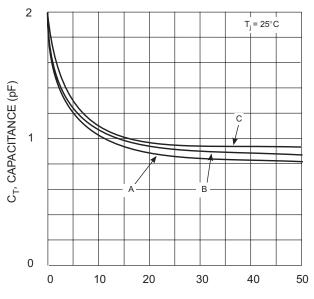
- Note: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
 - 2. Short duration test pulse used to minimize self-heating effect.
 - 3. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied where applicable, see EU Directive Annex Notes 5 and 7.



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 $V_{\rm R}$, REVERSE VOLTAGE (V) 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:

 $4. \quad \text{For packaging details, visit our website at http://www.diodes.com/datasheets/ap02007.pdf.} \\$

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