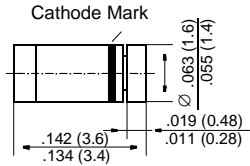


LL101A THRU LL101C

Schottky Diodes

MiniMELF



Dimensions in inches and (millimeters)

FEATURES

- ◆ For general purpose applications.
- ◆ The LL101 series is a metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring. The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications.
- ◆ This diode is also available in the DO-35 case with type designation SD101A, B, C, and in the SOD-123 case with type designation SD101AW, SD101BW, SD101CW.



MECHANICAL DATA

Case: MiniMELF Glass Case (SOD-80)

Weight: approx. 0.05 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

| | Symbol | Value | Unit |
|---|---|---|-------------|
| Peak Inverse Voltage | LL101A LL101B LL101C | V_{RRM} 60 V_{RRM} 50 V_{RRM} 40 | V V V |
| Power Dissipation (Infinite Heatsink) | P_{tot} | 400 ¹⁾ | mW |
| Max. Single Cycle Surge 10 μ s Square Wave | I_{FSM} | 2 | A |
| Junction Temperature | T_j | 125 | °C |
| Storage Temperature Range | T_S | -55 to +150 | °C |

¹⁾ Valid provided that electrodes are kept at ambient temperature.

LL101A THRU LL101C

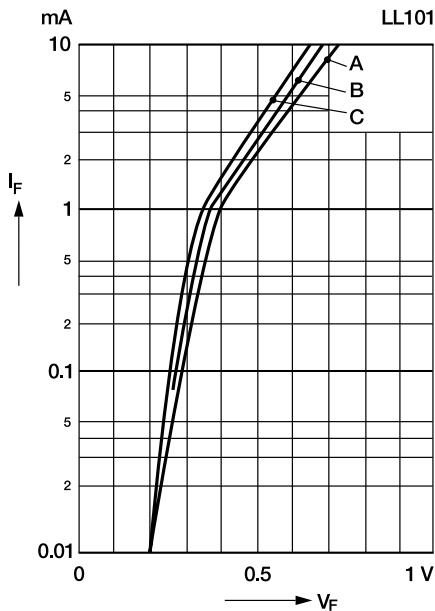
ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

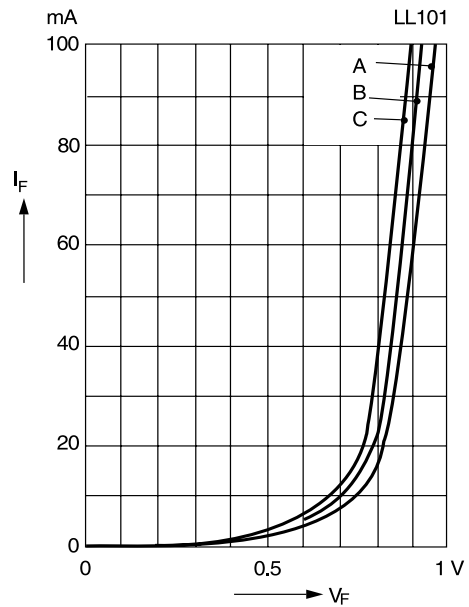
| | | Symbol | Min. | Typ. | Max. | Unit |
|--|---------------|-------------|------|------|------|------|
| Reverse Breakdown Voltage at $I_R = 10 \mu A$ | LL101A | $V_{(BR)R}$ | 60 | — | — | V |
| | LL101B | $V_{(BR)R}$ | 50 | — | — | V |
| | LL101C | $V_{(BR)R}$ | 40 | — | — | V |
| | | | | | | |
| Leakage Current at $V_R = 50 V$ at $V_R = 40 V$ at $V_R = 30 V$ | LL101A | I_R | — | — | 200 | nA |
| | LL101B | I_R | — | — | 200 | nA |
| | LL101C | I_R | — | — | 200 | nA |
| | | | | | | |
| Forward Voltage Drop at $I_F = 1 mA$ at $I_F = 15 mA$ | LL101A | V_F | — | — | 0.41 | V |
| | LL101B | V_F | — | — | 0.4 | V |
| | LL101C | V_F | — | — | 0.39 | V |
| | LL101A | V_F | — | — | 1 | V |
| | LL101B | V_F | — | — | 0.95 | V |
| | LL101C | V_F | — | — | 0.9 | V |
| | | | | | | |
| Junction Capacitance at $V_R = 0 V$, $f = 1 MHz$ | LL101A | C_{tot} | — | — | 2.0 | pF |
| | LL101B | C_{tot} | — | — | 2.1 | pF |
| | LL101C | C_{tot} | — | — | 2.2 | pF |
| | | | | | | |
| Reverse Recovery Time at $I_F = I_R = 5 mA$, recover to $0.1 I_R$ | | t_{rr} | — | — | 1 | ns |

RATINGS AND CHARACTERISTIC CURVES LL101A THRU LL101C

Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier

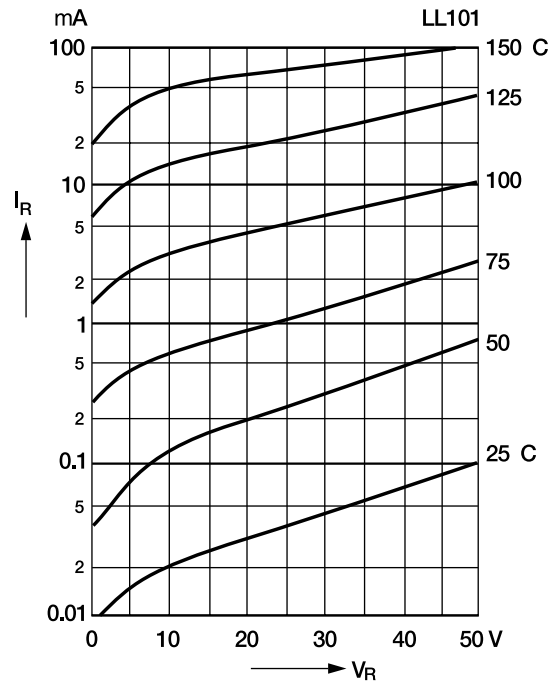


Typical forward conduction curve of combination Schottky barrier and PN junction guard ring



RATINGS AND CHARACTERISTIC CURVES LL101A THRU LL101C

Typical variation of reverse current
at various temperatures



Typical capacitance curve as a
function of reverse voltage

