LL101A - LL101C

SCHOTTKY BARRIER DIODES

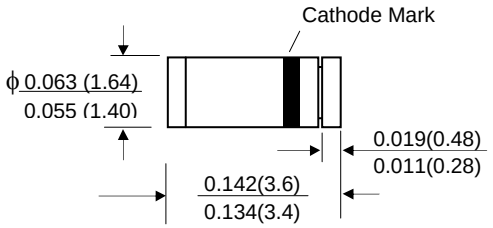
FEATURES :

- 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.
- Low capacitance
- Low leakage current
- This diode is also available in the DO-35 case with type designation SD101A, B, C
- Pb / RoHS Free

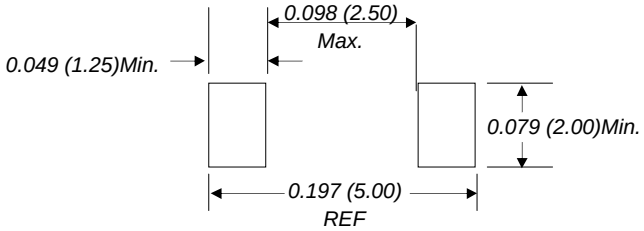
MECHANICAL DATA :

Case: MiniMELF Glass Case (SOD-80C)
Weight: approx. 0.05g

MiniMELF (SOD-80C)



Mounting Pad Layout



Dimensions in inches and (millimeters)

Maximum Ratings and Thermal Characteristics (Ta = 25 °C, unless otherwise specified.)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	LL101A LL101B LL101C	V_{RRM}	60 50 40	V
Maximum Forward Continuous Current		I_F	30	mA
Maximum Single Cycle Surge 10μs Square Wave		I_{FSM}	2	A
Power Dissipation (Infinite Heatsink)		P_D	400(1)	mW
Thermal Resistance Junction to Ambient Air (on PC board 50mm x 50mm x 1.6mm)		$R_{\theta JA}$	320	K/W
Junction Temperature		T_J	125	°C
Storage Temperature Range		T_{STG}	-65 to + 150	°C

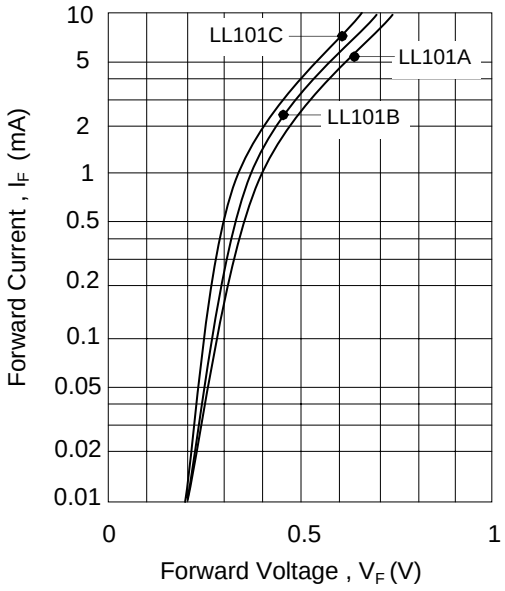
Note: (1) Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (Ta = 25 °C, unless otherwise specified)

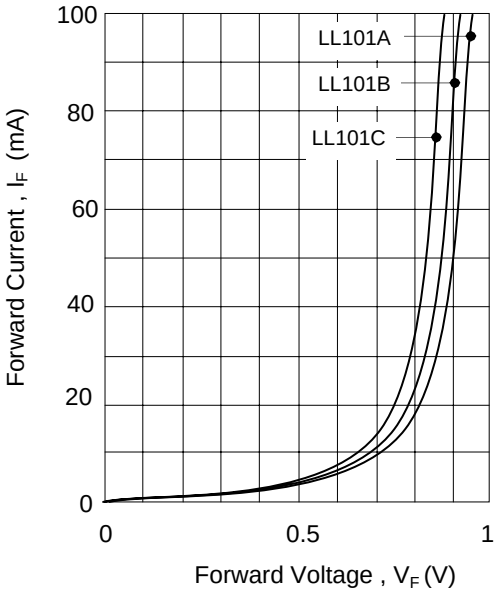
Parameter		Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	LL101A LL101B LL101C	$V_{(BR)R}$	I_R = 10 μA	60 50 40	- - -	- - -	V
Reverse Current	LL101A LL101B LL101C	I_R	V_R = 50 V V_R = 40 V V_R = 30 V	- - -	- - -	200 200 200	nA
Forward Voltage Drop	LL101A LL101B LL101C	V_F	I_F = 1mA	- - -	- - -	0.41 0.40 0.39	V
	LL101A LL101B LL101C		I_F = 15mA	- - -	- - -	1.00 0.95 0.90	
Junction Capacitance		C_J	V_R = 0 V, f = 1 MHz	-	2.7	-	pF
Reverse Recovery Time		Trr	I_F = I_R = 5mA , recover to 0.1I_R	-	-	1.0	ns

RATING AND CHARACTERISTIC CURVES (LL101A - LL101C)

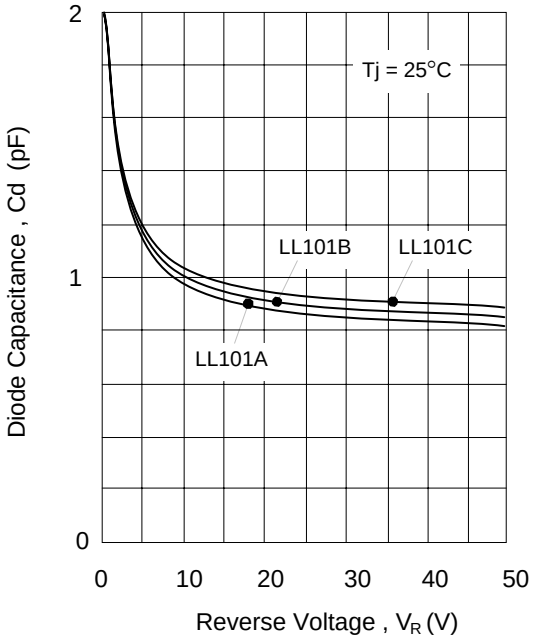
Typical variation of forward current and forward voltage for primary conduction through the schottky barrier



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



Typical capacitance curve as a function of reverse Voltage



Typical variation of reverse current at various temperatures