



# LL101A thru LL101C

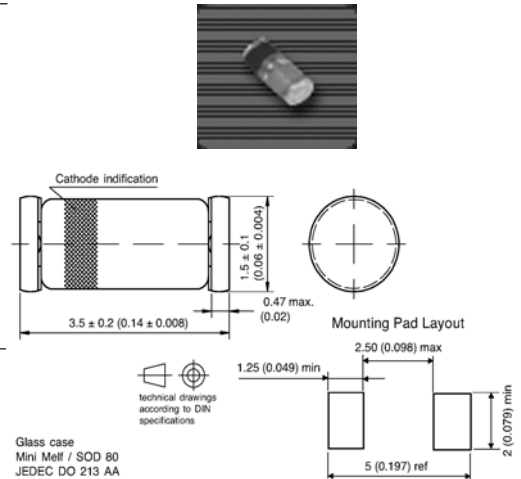
Small-Signal Diode  
Schottky Diodes

## 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.
- ◆ These diodes are also available in the DO-35 case with type designations SD101A thru SD101C.

## Mechanical Data

- ◆ Case: MiniMELF Glass Case (SOD-80)
- ◆ Weight: approx. 0.05g
- ◆ Cathode Band Color: Green



## Maximum Ratings and Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak inverse voltage	$V_{RRM}$	60 50 40	Volts
Power dissipation (Infinite heatsink)	$P_{tot}$	400 <sup>(1)</sup>	mW
Maximum single cycle surge 10 us square wave	$I_{FSM}$	2.0	Amps
Junction temperature	$T_j$	125	°C
Storage temperature range	$T_s$	-55 to +150	°C

**Notes:** 1. Valid provided that electrodes are kept at ambient temperature.

## Electrical Characteristics

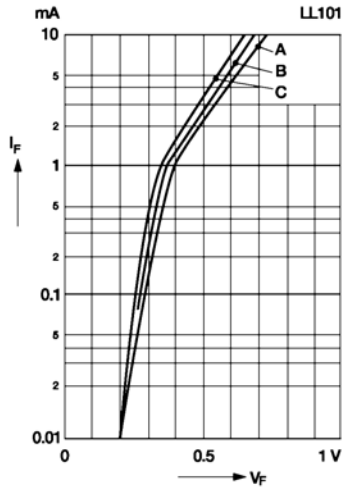
( $T_j=25^\circ\text{C}$  unless otherwise noted.)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit	
Reverse breakdown voltage	LL101A LL101B LL101C	$V_{(BR)R}$	$I_R=10\mu\text{A}$	60 50 40	- - -	- - -	Volts
Leakage current	LL101A LL101B LL101C	$I_R$	$V_R=50\text{V}$	- - -	- - -	200 200 200	nA
Forward voltage drop	LL101A LL101B LL101C	$V_F$	$I_F=1\text{mA}$	-	-	0.41	Volt
				-	-	0.4	
Forward voltage drop	LL101A LL101B LL101C	$V_F$	$I_F=15\text{mA}$	-	-	1.0	Volt
				-	-	0.95	
Junction capacitance	LL101A LL101B LL101C	$C_{tot}$	$V_R=0\text{V}$ , $f=1\text{MHz}$	-	-	2.0	pF
				-	-	2.1	
Reverse recovery time			$I_F=I_R=5\text{mA}$ , recover to $0.1I_R$	-	-	1	ns
				-	-	2.2	

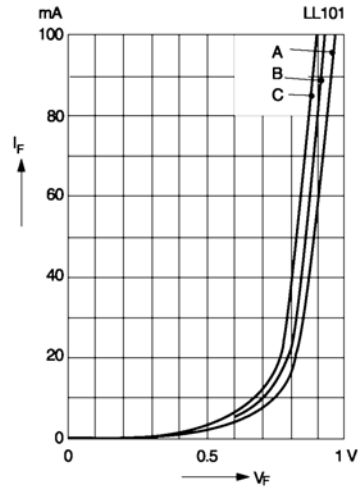
# RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

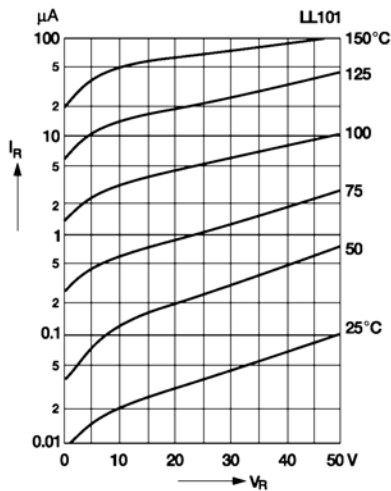
Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



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



Typical variation of reverse current at various temperatures



Typical capacitance curve as a function of reverse voltage

