



# SD101A thru SD101C

Small-Signal Diode  
Schottky Diodes

## Features

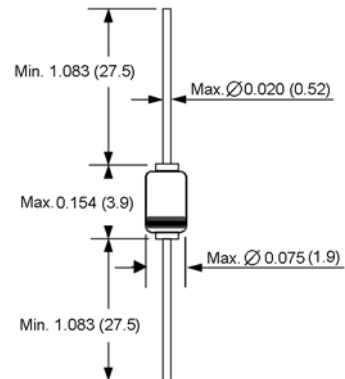
- ◆ For general purpose applications
- ◆ The LL101 series is a metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- ◆ The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications.
- ◆ These diodes are also available in the MiniMELF case with type designations LL101A thru LL101C.



DO-204AH (DO-35 Glass)

## Mechanical Data

- ◆ Case: DO-35 Glass Case
- ◆ Weight: approx. 0.13g



Dimensions in inches and (millimeters)

## Maximum Ratings and Thermal Characteristics

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

Parameter	Symbol	Value	Unit
Peak inverse voltage SD101A SD101B SD101C	$V_{RRM}$	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
Thermal resistance junction to ambient air	$R_{\theta JA}$	0.3 <sup>(1)</sup>	°C/mW
Junction temperature	$T_J$	125 <sup>(1)</sup>	°C
Storage temperature range	$T_S$	-55 to +150 <sup>(1)</sup>	°C

**Notes:** 1. Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

## Electrical Characteristics

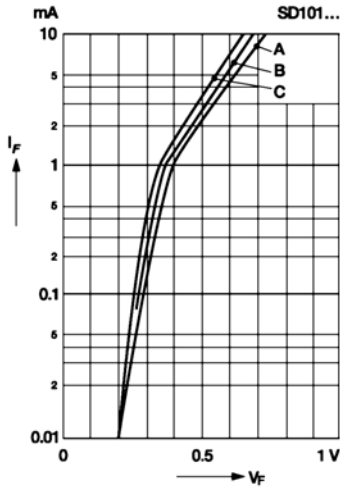
( $T_j=25^\circ\text{C}$  unless otherwise noted.)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit	
Reverse breakdown voltage	SD101A SD101B SD101C	$V_{(BR)R}$	$I_R=10\mu\text{A}$	60 50 40	- - -	- - -	Volts
Leakage current	SD101A SD101B SD101C	$I_R$	$V_R=50\text{V}$ $V_R=40\text{V}$ $V_R=30\text{V}$	- - -	- - -	200 200 200	nA
Forward voltage drop	SD101A SD101B SD101C	$V_F$	$I_F=1\text{mA}$	- - -	- - -	0.41 0.4 0.39	Volt
			$I_F=15\text{mA}$	- - -	- - -	1.0 0.95 0.9	Volt
Junction capacitance	SD101A SD101B SD101C	$C_{tot}$	$V_R=0\text{V}$ , $f=1\text{MHz}$	- - -	- - -	2.0 2.1 2.2	pF
Reverse recovery time		$t_{rr}$	$I_F=I_R=5\text{mA}$ , recover to $0.1I_R$	-	-	1	ns

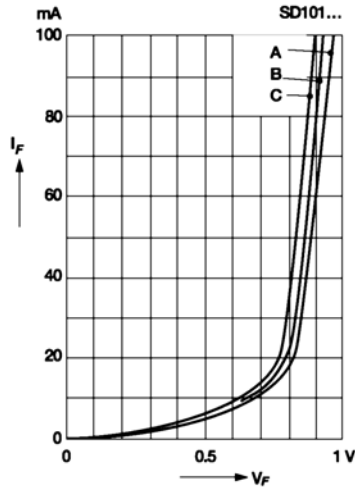
# RATINGS AND CHARACTERISTIC CURVES

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

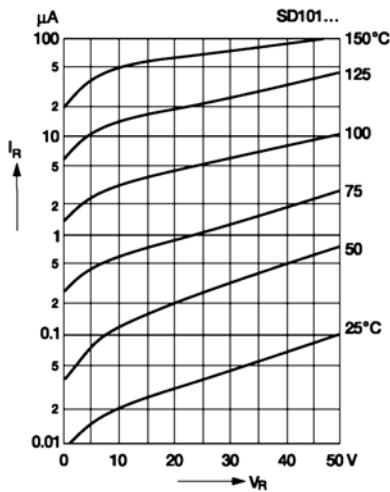
**Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier**



**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**

