

# SD101A - SD101C

## FEATURES :

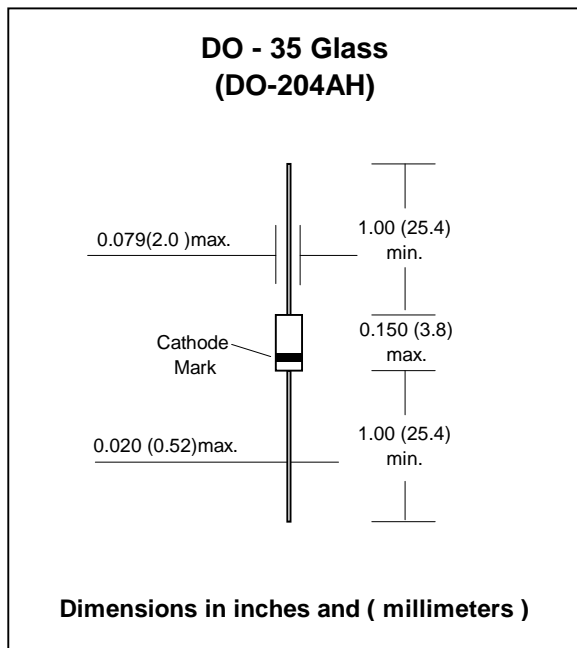
- For general purpose applications
- The LL101 series is a metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and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

## MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

# SCHOTTKY BARRIER DIODES



## Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	SD101A	60	V
	SD101B	50	
	SD101C	40	
Maximum Single Cycle Surge 10ms Square Wave	$I_{FSM}$	2	A
Power Dissipation (Infinite Heatsink)	$P_D$	400 <sup>(1)</sup>	mW
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

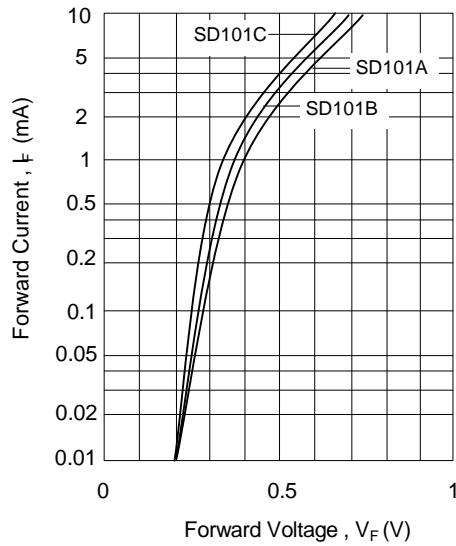
Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

## Electrical Characteristics ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

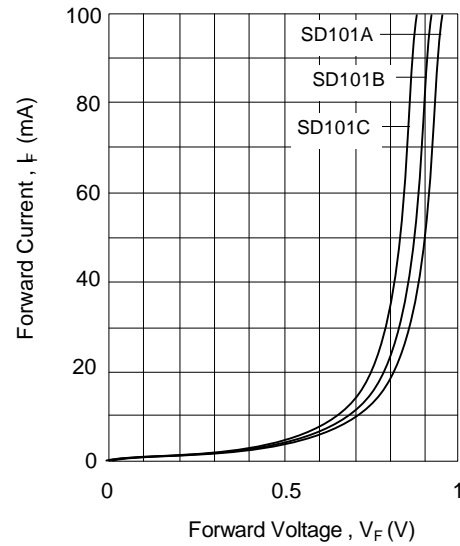
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	SD101A	$I_R = 10 \mu\text{A}$	60	-	-	V
	SD101B		50	-	-	
	SD101C		40	-	-	
Reverse Current	SD101A	$V_R = 50 \text{ V}$	-	-	200	nA
	SD101B	$V_R = 40 \text{ V}$	-	-	200	
	SD101C	$V_R = 30 \text{ V}$	-	-	200	
Forward Voltage Drop	SD101A SD101B SD101C	$I_F = 1 \text{ mA}$	-	-	0.41	V
			-	-	0.4	
			-	-	0.39	
	SD101A SD101B SD101C	$I_F = 15 \text{ mA}$	-	-	1.0	
			-	-	0.95	
			-	-	0.9	
Reverse Recovery Time	$T_{rr}$	$I_F = I_R = 5 \text{ mA}$ , recover to $0.1 I_R$	-	-	1	ns

### RATING AND CHARACTERISTIC CURVES ( SD101A - SD101C )

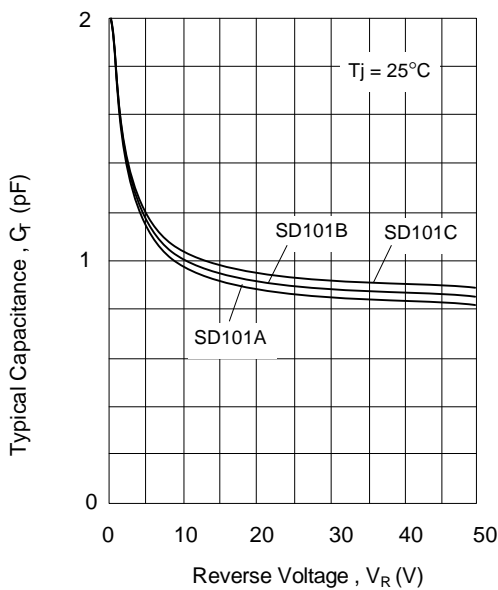
Typical variation of forward current and forward voltage for primary conduction through the schottky barrier



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

