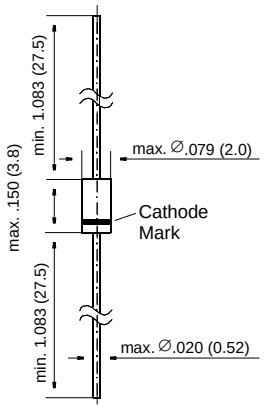
SD101A THRU SD101C

Schottky Diodes

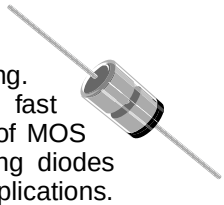
DO-35



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.



- These diodes are also available in the SOD-123 case with type designations SD101AW thru SD101CW and in the MiniMELF case with type designations LL101A thru LL101C.

MECHANICAL DATA

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Value	Unit
Peak Inverse Voltage	**SD101A**	V_{RRM}	60	V
	SD101B	V_{RRM}	50	V
	SD101C	V_{RRM}	40	V
Power Dissipation (Infinite Heat Sink)		P_{tot}	400[1) 2)]	mW
Max. Single Cycle Surge 10 μs Square Wave		I_{FSM}	2	A
Junction Temperature		T_j	125[1)]	°C
Storage Temperature Range		T_S	–55 to +150[1)]	°C

[1)] Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature

GENERAL SEMICONDUCTOR®

SD101A THRU SD101C

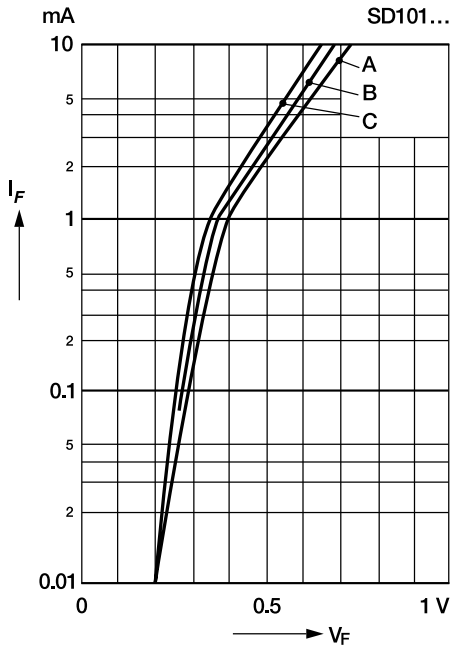
ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

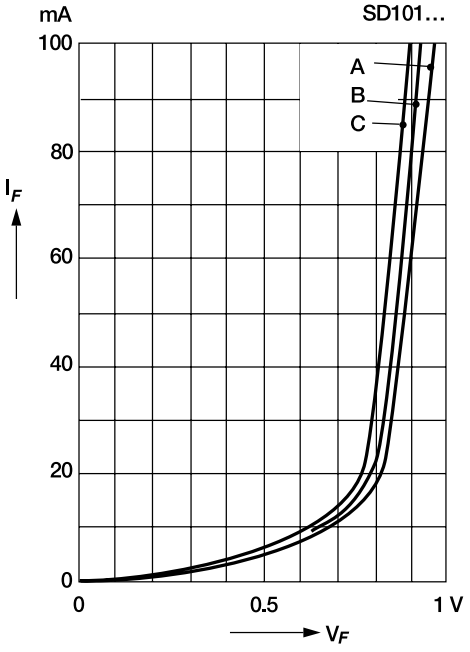
		Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at I_R = 10 µA	**SD101A**	$V_{(BR)R}$	60	–	–	V
	SD101B	$V_{(BR)R}$	50	–	–	V
	SD101C	$V_{(BR)R}$	40	–	–	V
Leakage Current at V_R = 50 V	**SD101A**	I_R	–	–	200	nA
at V_R = 40 V	**SD101B**	I_R	–	–	200	nA
at V_R = 30 V	**SD101C**	I_R	–	–	200	nA
Forward Voltage Drop at I_F = 1 mA	**SD101A**	V_F	–	–	0.41	V
	SD101B	V_F	–	–	0.4	V
	SD101C	V_F	–	–	0.39	V
at I_F = 15 mA	**SD101A**	V_F	–	–	1	V
	SD101B	V_F	–	–	0.95	V
	SD101C	V_F	–	–	0.9	V
Junction Capacitance at V_R = 0 V, f = 1 MHz	**SD101A**	C_{tot}	–	–	2.0	pF
	SD101B	C_{tot}	–	–	2.1	pF
	SD101C	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
Thermal Resistance, Junction to Ambient Air		R_{thJA}	–	–	0.3[1)]	K/mW

[1)] Valid provided that leads at a distance of 4 mm from case are kept ambient temperature

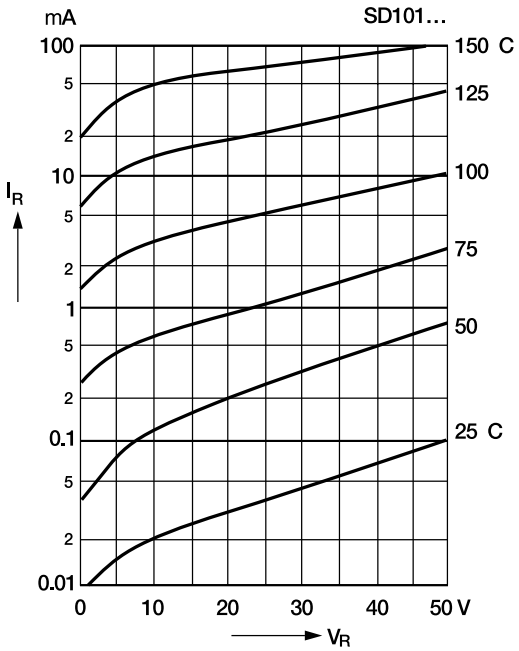
Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



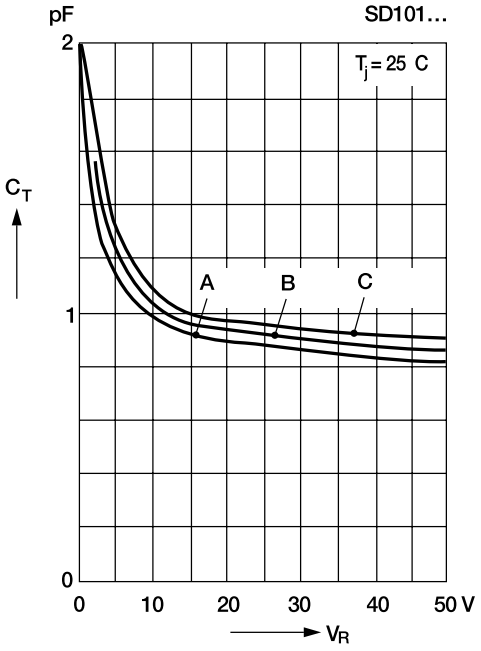
Typical forward conduction curve of combination Schottky barrier and PN junction guard ring



Typical variation of reverse current at various temperatures



Typical capacitance curve as a function of reverse voltage



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