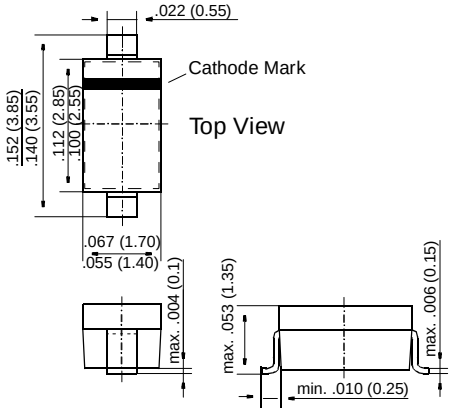
SD101AW THRU SD101CW

Schottky Diodes

SOD-123



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 MiniMELF case with type designation LL101A thru LL101C and in the DO-35 case with type designations SD101A thru SD101C.

MECHANICAL DATA

Case: SOD-123 Plastic Case
Weight: approx. 0.01 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Value	Unit
Peak Inverse Voltage	**SD101AW**	V_{RRM}	60	V
	SD101BW	V_{RRM}	50	V
	SD101CW	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[2)]	°C
Storage Temperature Range		T_S	–65 to +150[2)]	°C

[2)] Valid provided that electrodes are kept at ambient temperature

GENERAL SEMICONDUCTOR®

SD101AW THRU SD101CW

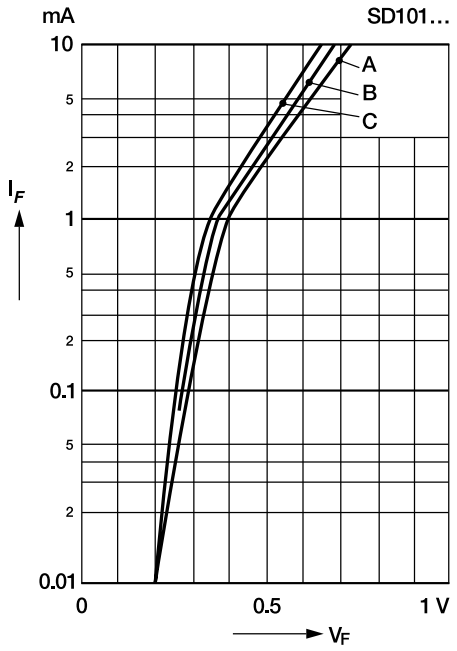
ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

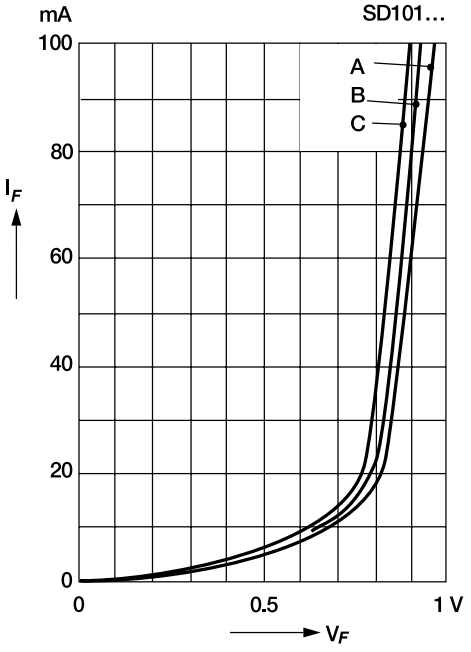
		Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at I_R = 10 µA	**SD101AW**	$V_{(BR)R}$	60	–	–	V
	SD101BW	$V_{(BR)R}$	50	–	–	V
	SD101CW	$V_{(BR)R}$	40	–	–	V
Leakage Current at V_R = 50 V	**SD101AW**	I_R	–	–	200	nA
at V_R = 40 V	**SD101BW**	I_R	–	–	200	nA
at V_R = 30 V	**SD101CW**	I_R	–	–	200	nA
Forward Voltage Drop at I_F = 1 mA	**SD101AW**	V_F	–	–	0.41	V
	SD101BW	V_F	–	–	0.4	V
	SD101CW	V_F	–	–	0.39	V
at I_F = 15 mA	**SD101AW**	V_F	–	–	1	V
	SD101BW	V_F	–	–	0.95	V
	SD101CW	V_F	–	–	0.9	V
Junction Capacitance at V_R = 0 V, f = 1 MHz	**SD101AW**	C_{tot}	–	–	2.0	pF
	SD101BW	C_{tot}	–	–	2.1	pF
	SD101CW	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 [2]	K/mW

[2] Valid provided that leads are kept at ambient temperature (SOD-123)

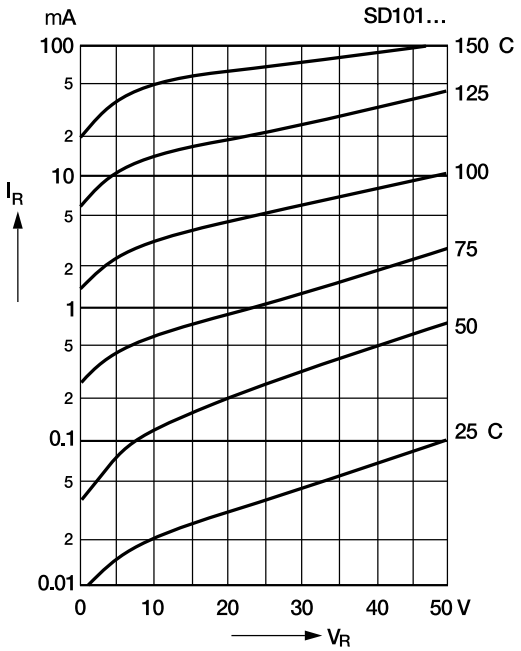
Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



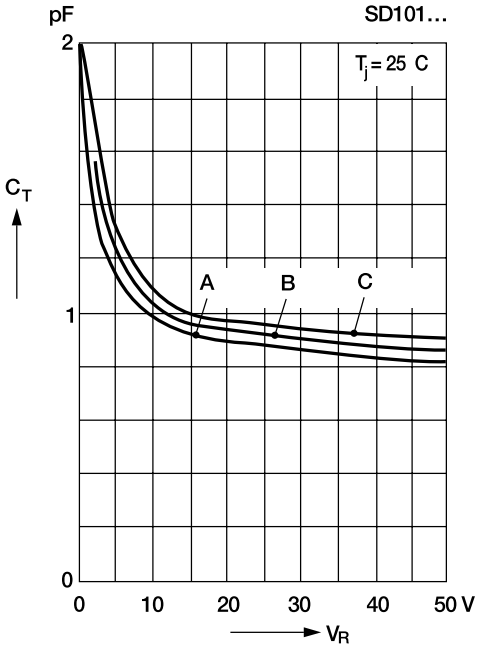
Typical forward conduction curve of combination Schottky barrier and PN junction guard ring



Typical variation of reverse current at various temperatures



Typical capacitance curve as a function of reverse voltage



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