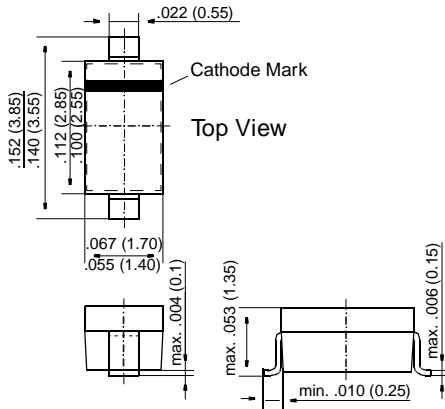


# SD101AW THRU SD101CW

## 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	<b>SD101AW</b>	$V_{RRM}$	60	V
	<b>SD101BW</b>	$V_{RRM}$	50	V
	<b>SD101CW</b>	$V_{RRM}$	40	V
Power Dissipation (Infinite Heat Sink)	$P_{tot}$	400 <sup>1) 2)</sup>	mW	
Max. Single Cycle Surge 10 $\mu$ s Square Wave	$I_{FSM}$	2	A	
Junction Temperature	$T_j$	125 <sup>2)</sup>	°C	
Storage Temperature Range	$T_S$	-65 to +150 <sup>2)</sup>	°C	

<sup>2)</sup> Valid provided that electrodes are kept at ambient temperature

# SD101AW THRU SD101CW

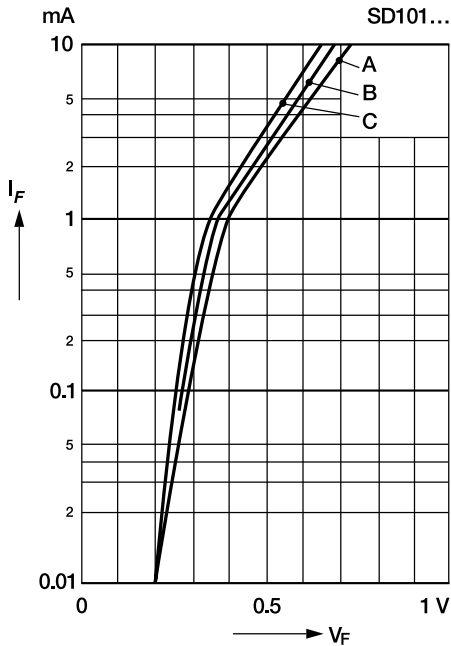
## ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

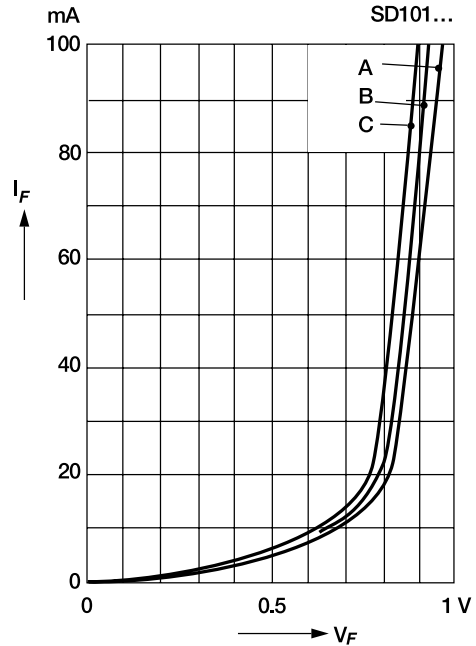
		Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10 \mu\text{A}$	<b>SD101AW</b>	$V_{(BR)R}$	60	–	–	V
	<b>SD101BW</b>	$V_{(BR)R}$	50	–	–	V
	<b>SD101CW</b>	$V_{(BR)R}$	40	–	–	V
Leakage Current at $V_R = 50 \text{ V}$ at $V_R = 40 \text{ V}$ at $V_R = 30 \text{ V}$	<b>SD101AW</b>	$I_R$	–	–	200	nA
	<b>SD101BW</b>	$I_R$	–	–	200	nA
	<b>SD101CW</b>	$I_R$	–	–	200	nA
Forward Voltage Drop at $I_F = 1 \text{ mA}$  at $I_F = 15 \text{ mA}$	<b>SD101AW</b>	$V_F$	–	–	0.41	V
	<b>SD101BW</b>	$V_F$	–	–	0.4	V
	<b>SD101CW</b>	$V_F$	–	–	0.39	V
	<b>SD101AW</b>	$V_F$	–	–	1	V
	<b>SD101BW</b>	$V_F$	–	–	0.95	V
	<b>SD101CW</b>	$V_F$	–	–	0.9	V
Junction Capacitance at $V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$	<b>SD101AW</b>	$C_{tot}$	–	–	2.0	pF
	<b>SD101BW</b>	$C_{tot}$	–	–	2.1	pF
	<b>SD101CW</b>	$C_{tot}$	–	–	2.2	pF
Reverse Recovery Time at $I_F = I_R = 5 \text{ mA}$ , recover to $0.1 I_R$		$t_{rr}$	–	–	1	ns
Thermal Resistance, Junction to Ambient Air		$R_{thJA}$	–	–	0.3 <sup>2)</sup>	K/mW
2) Valid provided that leads are kept at ambient temperature (SOD-123)						

# RATINGS AND CHARACTERISTIC CURVES SD101AW THRU SD101CW

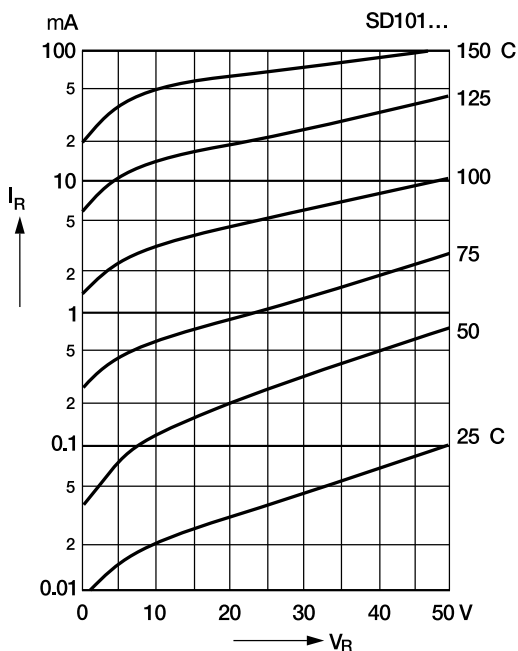
Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



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

