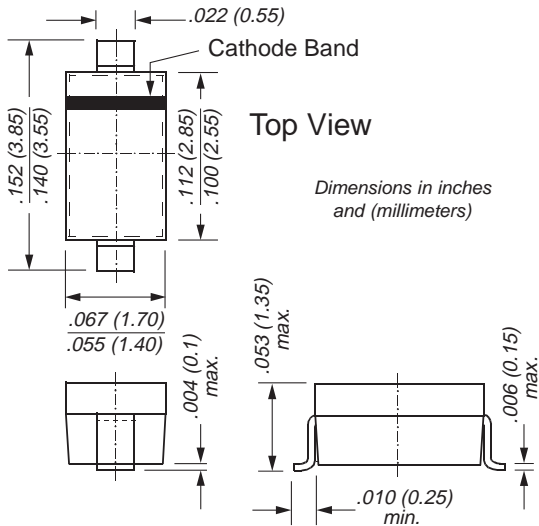




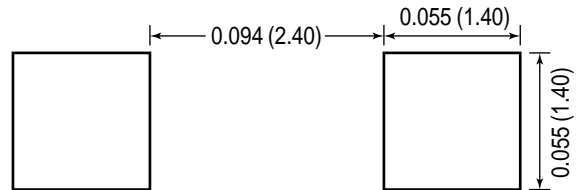
## Schottky Diodes



SOD-123



### Mounting Pad Layout



## Features

- For general purpose applications
- The SD101 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 Mini-MELF case with type designations LL101A thru LL101C, in the DO-35 case with type designations SD101A through SD101C and in the SOD-323 case with type designations SD101AWS through SD101CWS.

## Mechanical Data

**Case:** SOD-123 Plastic Case

**Weight:** approx. 0.01g

**Marking** SD101AW = SA

**Code:** SD101BW = SB

SD101CW = SC

### Packaging Codes/Options:

D3/10K per 13" reel (8mm tape), 30K/box

D4/3K per 7" reel (8mm tape), 30K/box

## Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit	
Peak Inverse Voltage	SD101AW SD101BW SD101CW	V <sub>RRM</sub>	60 50 40	V
Power Dissipation (Infinite Heatsink)	P <sub>tot</sub>	400 <sup>(1)</sup>	mW	
Maximum Single Cycle Surge 10 μs Square Wave	I <sub>FSM</sub>	2	A	
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	300 <sup>(1)</sup>	°C/W	
Junction Temperature	T <sub>j</sub>	125 <sup>(1)</sup>	°C	
Storage Temperature Range	T <sub>s</sub>	-65 to +150	°C	

**Note:** (1) Valid provided that electrodes are kept at ambient temperature.

# SD101AW thru SD101CW



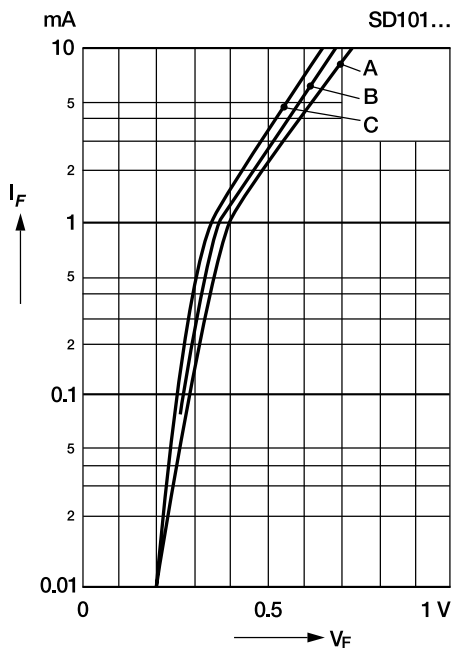
Vishay Semiconductors  
formerly General Semiconductor

## Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

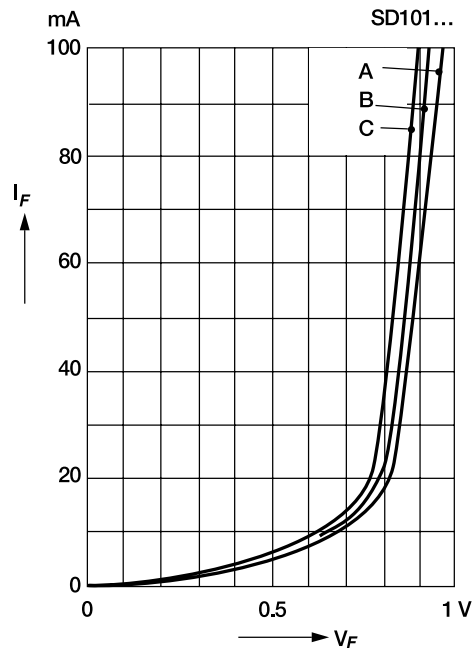
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	SD101AW	$I_R = 10\mu\text{A}$	60	—	—	V
	SD101BW		50	—	—	
	SD101CW		40	—	—	
Leakage Current	SD101AW	$V_R = 50\text{V}$	—	—	200	nA
	SD101BW	$V_R = 40\text{V}$	—	—	200	
	SD101CW	$V_R = 30\text{V}$	—	—	200	
Forward Voltage Drop	SD101AW	$I_F = 1\text{mA}$	—	—	0.41	V
	SD101BW		—	—	0.40	
	SD101CW		—	—	0.39	
	SD101AW	$I_F = 15\text{mA}$	—	—	1.0	
	SD101BW		—	—	0.95	
	SD101CW		—	—	0.90	
Junction Capacitance	SD101AW	$V_R = 0\text{V}, f = 1\text{MHz}$	—	—	2.0	pF
	SD101BW		—	—	2.1	
	SD101CW		—	—	2.2	
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 5\text{mA}$ , recover to $0.1I_R$	—	—	1	ns

## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

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



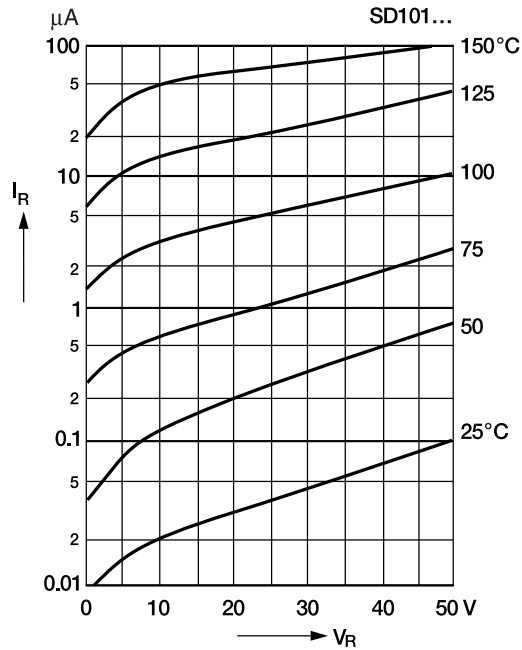
Typical forward conduction curve of combination Schottky barrier and PN junction guard ring





## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Typical variation of reverse current at various temperatures



Typical capacitance curve as a function of reverse voltage

