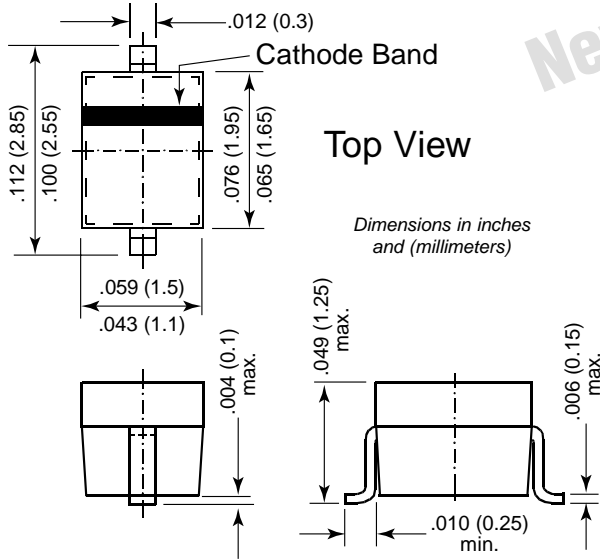


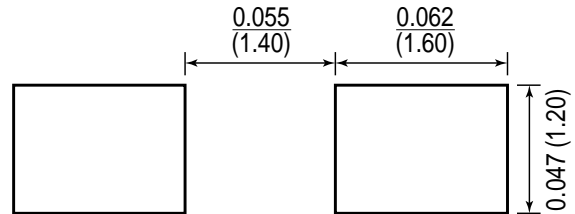


### SOD-323



New Product

### Mounting Pad Layout



## Features

- For general purpose applications.
- The SD103 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.
- This diode is also available in the MiniMELF case with the type designations LL103A to LL103C, DO-35 case with the type designations SD103A to SD103C and SOD-123 case with type designations SD103AW to SD103CW.

## Mechanical Data

**Case:** SOD-323 plastic case

**Weight:** approximately 0.004g

**Marking** SD103AWS = S6

**Code:** SD103BWS = S7

SD103CWS = S8

### Packaging Codes/Options:

D5/10K per 13" reel (8mm tape), 30K/box

D6/3K per 7" reel (8mm tape), 30K/box

## Maximum Ratings and Thermal Characteristics (T<sub>C</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Inverse Voltage	SD103AWS SD103BWS SD103CWS	40 30 20	V
Power Dissipation (Infinite Heat Sink)	P <sub>tot</sub>	150 <sup>(1)</sup>	mW
Maximum Single Cycle Surge 10μs Square Wave	I <sub>FSM</sub>	2	A
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	650 <sup>(1)</sup>	°C/W
Junction Temperature	T <sub>j</sub>	125 <sup>(1)</sup>	°C
Storage Temperature Range	T <sub>s</sub>	-55 to +150 <sup>(1)</sup>	°C

**Note:**

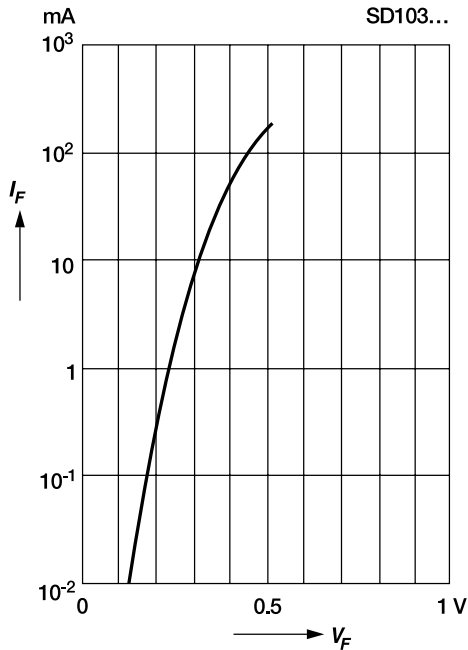
(1) Valid provided that electrodes are kept at ambient temperature

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

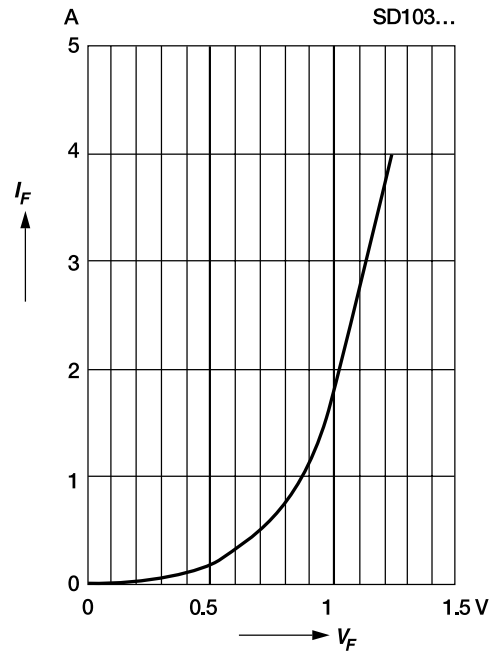
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 30V	—	—	5	μA
		V <sub>R</sub> = 20V	—	—	5	
		V <sub>R</sub> = 10V	—	—	5	
Forward Voltage Drop	V <sub>F</sub>	I <sub>F</sub> = 20mA	—	—	0.37	V
		I <sub>F</sub> = 200mA	—	—	0.6	
Junction Capacitance	C <sub>tot</sub>	V <sub>R</sub> = 0V f = 1MHz	—	50	—	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = I <sub>R</sub> = 50mA to 200mA recover to 0.1I <sub>R</sub>	—	10	—	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

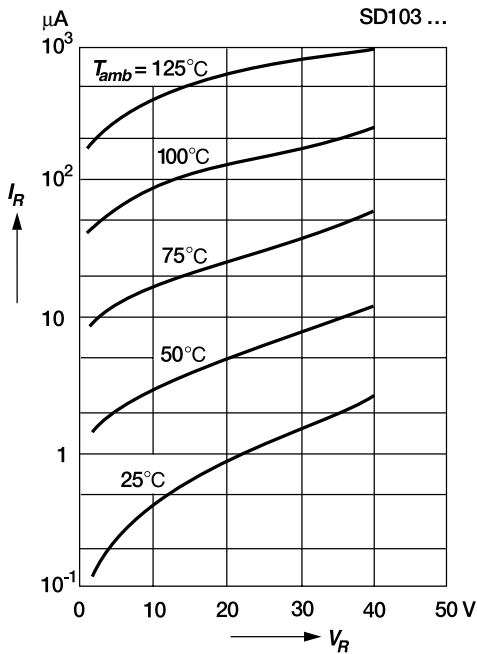


Typical high current forward conduction curve  
t<sub>p</sub> = 300 ms, duty cycle = 2%

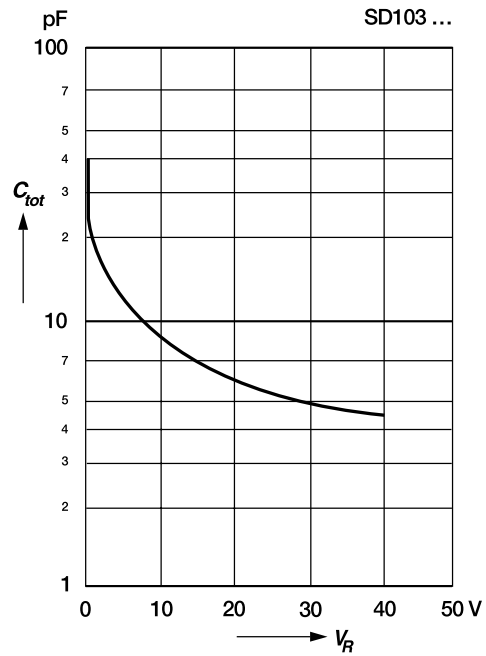


### Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

**Typical variation of reverse current at various temperatures**



**Typical capacitance versus reverse voltage**



**Blocking voltage deration versus temperature at various average forward currents**

