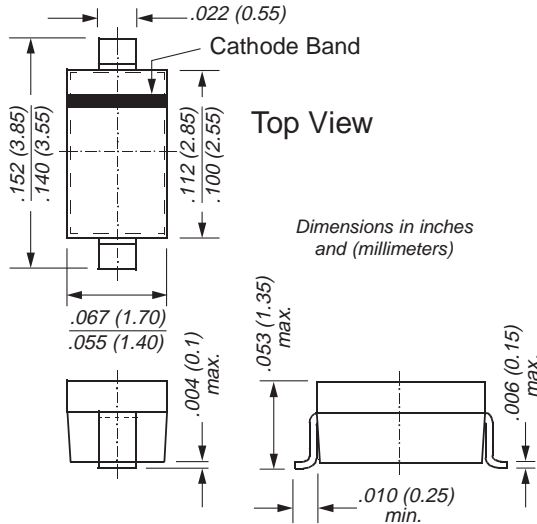


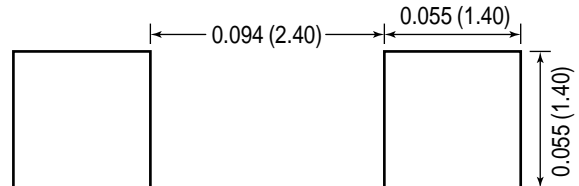


SOD-123

Schottky Diodes



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.
- Other applications are click suppression, efficient full wave bridges in telephone subsets, and blocking diodes in rechargeable low voltage battery systems.
- 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-323 case with type designations SD103AWS to SD103CWS.

Mechanical Data

Case: SOD-123 plastic case

Weight: approximately 0.01g

Marking SD103AW = S6

Code: SD103BW = S7

SD103CW = S8

Packaging Codes/Options:

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

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

Maximum Ratings and Thermal Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Inverse Voltage	SD103AW SD103BW SD103CW	40 30 20	V
Power Dissipation (Infinite Heat Sink)	P _{tot}	400 ⁽¹⁾	mW
Single Cycle Surge 10µs Square Wave	I _{FSM}	2	A
Thermal Resistance Junction to Ambient Air	R _{θJA}	300 ⁽¹⁾	°C/W
Junction Temperature	T _j	125 ⁽¹⁾	°C
Storage Temperature Range	T _s	-55 to +150 ⁽¹⁾	°C

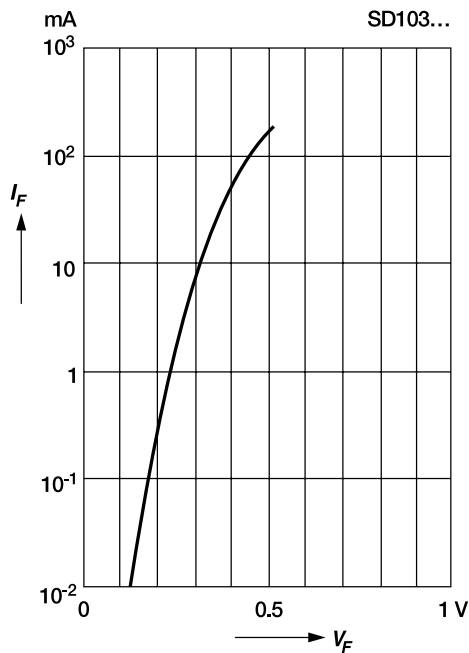
Note: (1) Valid provided that electrodes are kept at ambient temperature

Electrical Characteristics (T_J = 25°C unless otherwise noted)

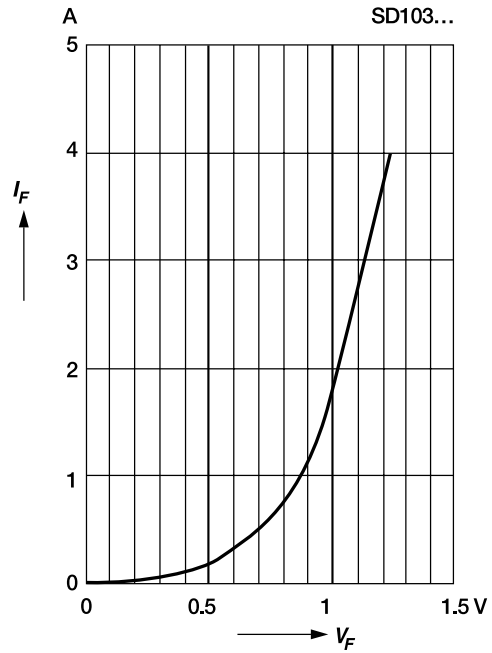
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Leakage Current	I _R	V _R = 30V	—	—	5	μA
		V _R = 20V	—	—	5	
		V _R = 10V	—	—	5	
Forward Voltage Drop	V _F	I _F = 20mA	—	—	0.37	V
		I _F = 200mA	—	—	0.6	
Junction Capacitance	C _{tot}	V _R = 0V f = 1MHz	—	50	—	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 50mA to 200mA recover to 0.1I _R	—	10	—	ns

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

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



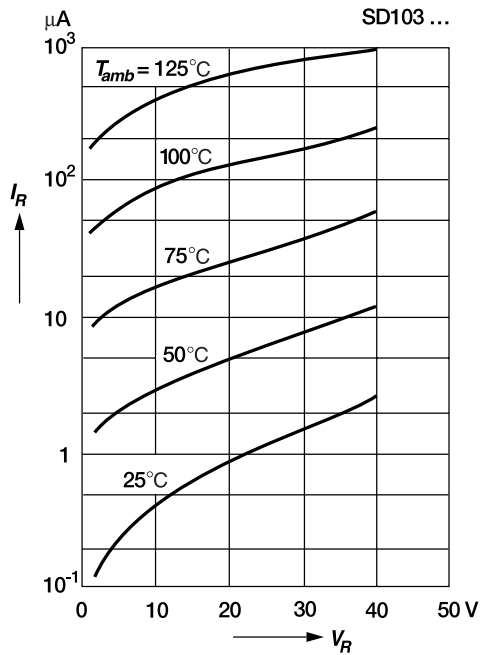
Typical high current forward conduction curve
t_p = 300 ms, duty cycle = 2%



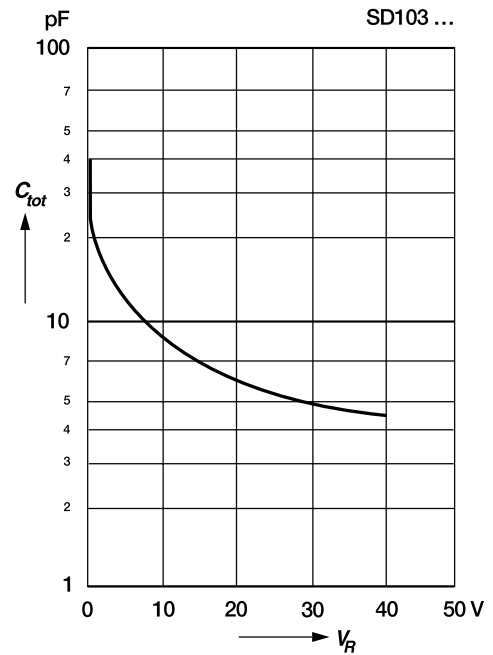


Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Typical variation of reverse current at various temperatures



Typical capacitance versus reverse voltage



Blocking voltage deration versus temperature at various average forward currents

