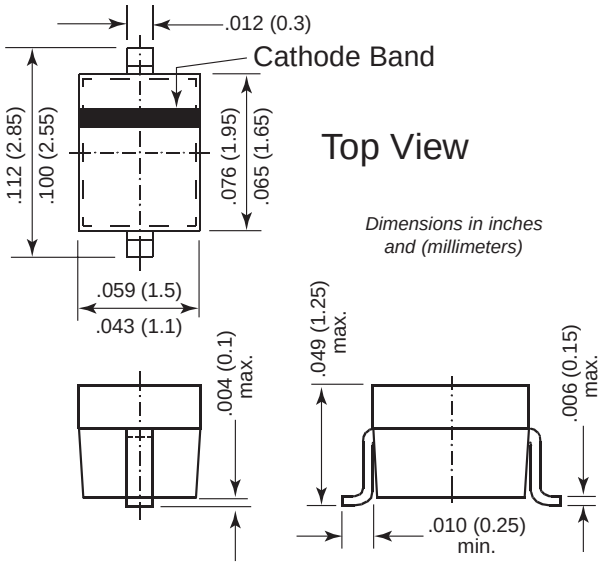
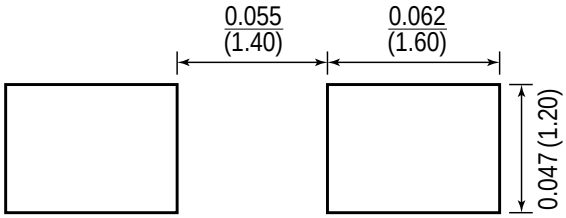
New Product

Schottky Diode

SOD-323



Mounting Pad Layout



Mechanical Data

Case: SOD-323 plastic case
Weight: approximately 0.004g
Marking Code: S1
Packaging Codes/Options:
D5/10K per 13” reel (8mm tape), 30K/box
D6/3K per 7” reel (8mm tape), 30K/box

Features

- Low turn-on voltage • Fast switching
- Microminiature plastic package
- This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharge.
- Ideal for protection of MOS devices, steering, biasing, and coupling diodes for fast switching and low logic level applications.

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

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	30	V
Forward Current	I_F	100	mA
Forward Surge Current, t_p = 10 ms	I_{FSM}	0.75	A
Power Dissipation T_C = 25°C	P_{tot}	250(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	–65 to +150	°C

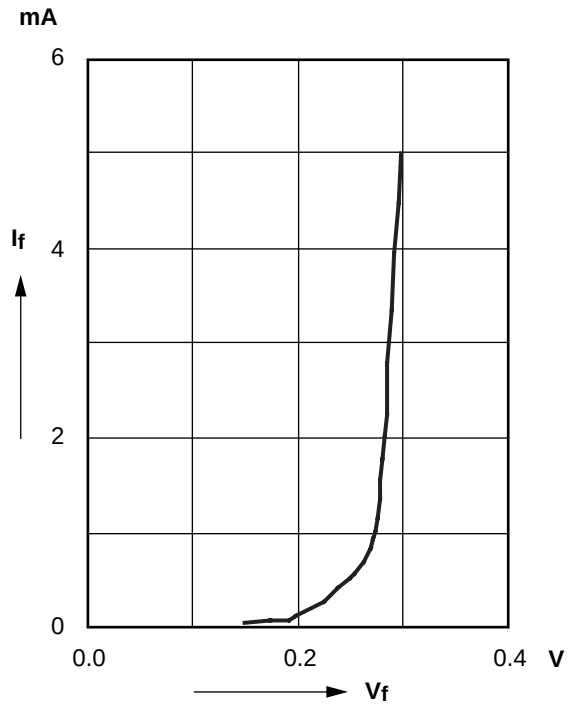
Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	BV_R	I_R = 100µA	30	—	—	V
Leakage Current	I_R	V_R = 25V	—	—	1000	nA
Forward Voltage	V_F	I_F = 2.0mA I_F = 15mA I_F = 50mA I_F = 100mA	— — — —	300 360 470 580	— — 550 800	mV
Junction Capacitance	C_{tot}	V_R = 10V, f = 1.0MHz	—	—	7.0	pF

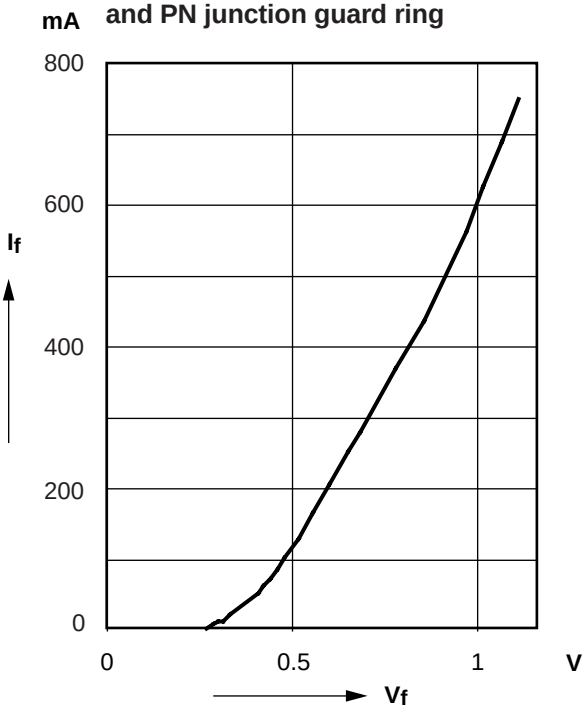
Note: (1) Valid provided that electrodes are kept at ambient temperature

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

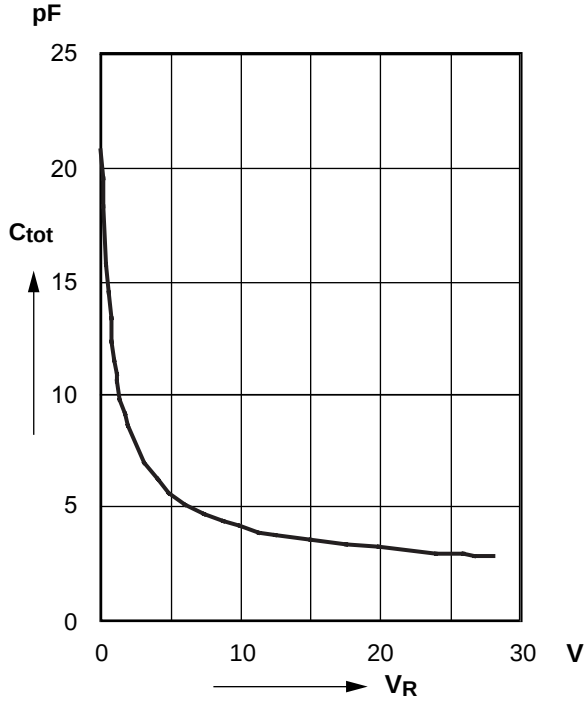
Typical variation of I_f for primary conduction thru the Schottky barrier



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



Typical capacitance versus reverse voltage



Typical variation of reverse current at various temperature