

## Surface Mount Schottky Barrier Diode

 Lead(Pb)-Free

### Features:

- \* Ultra high-speed switching
- \* Very low forward voltage
- \* Voltage clampingProtection circuits.

### Mechanical Data:

- \* Case: SOD-323
- \* Plastic Material –UL Recognition Flammability Classification 94V-0
- \* Leads: Solderable per MIL-STD-202, Method 208
- \* Polarity: Cathode Band
- \* Weight: 0.004 grams(approx.)

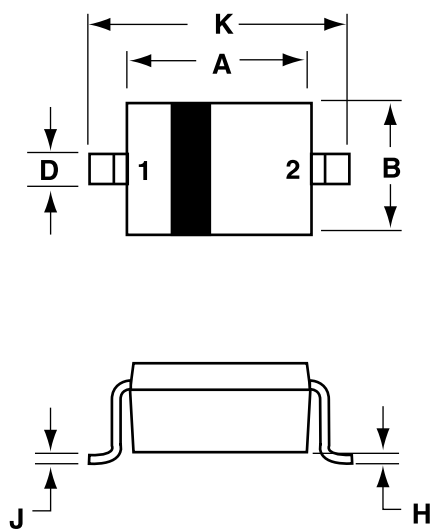
**SCHOTTKY DIODE**  
**1.0 AMPERES**  
**20 VOLTS**



**SOD-323**

## SOD-323 Outline Demensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
<b>A</b>	1.60	1.80
<b>B</b>	1.15	1.35
<b>C</b>	0.80	1.00
<b>D</b>	0.25	0.40
<b>E</b>	0.15 REF	
<b>H</b>	0.00	0.10
<b>J</b>	0.089	0.177
<b>K</b>	2.30	2.70

PIN 1.CATHODE  
2.ANODE

**Maximum Ratings** ( $T_A=25^{\circ}\text{C}$  Unless otherwise noted)


Characteristic	Symbol	Value	Unit
Continuous Reverse Voltage	$V_R$	20	V
Average Rectified Output Current	$I_O$	1.0	A
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	5.0	A
Thermal Resistance junction to Ambient	$R_{\theta JA}$	220 <sup>1</sup> 180 <sup>2</sup>	$^{\circ}\text{C}/\text{W}$ $^{\circ}\text{C}/\text{W}$
Operating Ambient temperature Range	$T_{amb}$	-65 to +125	$^{\circ}\text{C}$
Operating Temperature Range	$T_J$	+125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150	$^{\circ}\text{C}$

1. Device mounted on an FR4 printed-circuit board with Cu clad 10x10mm.
2. Device mounted on an FR4 printed-circuit board with Cu clad 40x40mm

**Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  Unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Forward Voltage $I_F=10\text{mA}$ $I_F=100\text{mA}$ $I_F=1000\text{mA}$	$V_F$	-	240 300 480	270 350 550	mV
Reverse Current $V_R=5\text{V}$ $V_R=8\text{V}$ $V_R=15\text{V}$	$I_R$	-	5 7 10	10 20 50	$\mu\text{A}$
Capacitance between terminals $V_R=5\text{V}$ , $f=1.0\text{MHz}$	$C_d$	-	19	25	pF

**Device Marking**

Item	Marking	Equivalent Circuit diagram
<b>B1020WS</b>	V2	

## Electrical Characteristic curves( $T_A=25^\circ\text{C}$ )

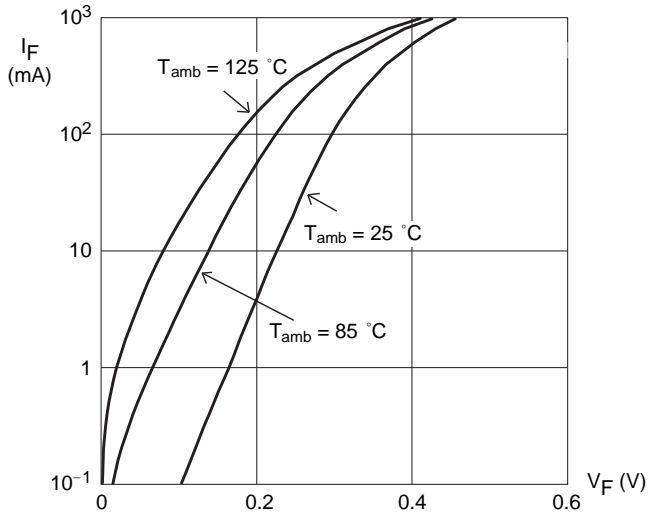


Fig.1 Forward current as a function of forward

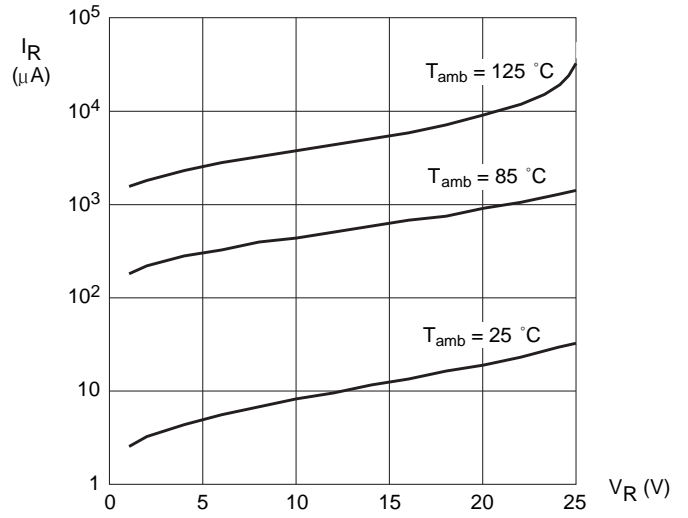


Fig.2 Reverse current as a function of reverse

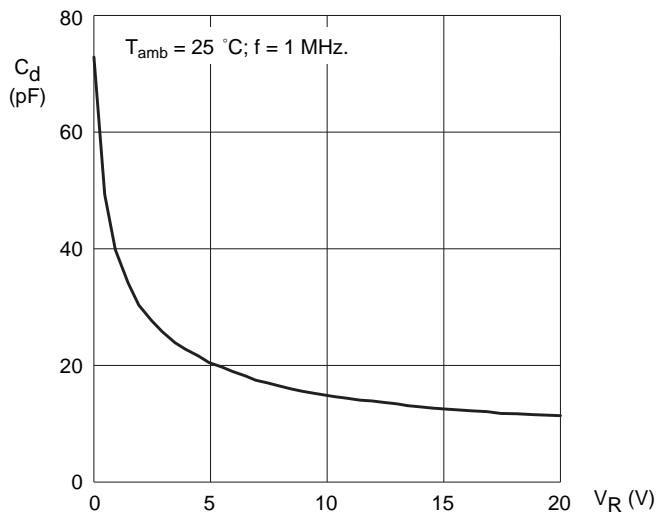


Fig.3 Diode capacitance as a function of reverse