

### Surface Mount Schottky Barrier Diode

**(Pb)** Lead(Pb)-Free

#### Features:

- \* Low Forward Voltage Drop
- \* Guard Ring Construction for Transient Protection
- \* High Conductance

#### Mechanical Data:

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

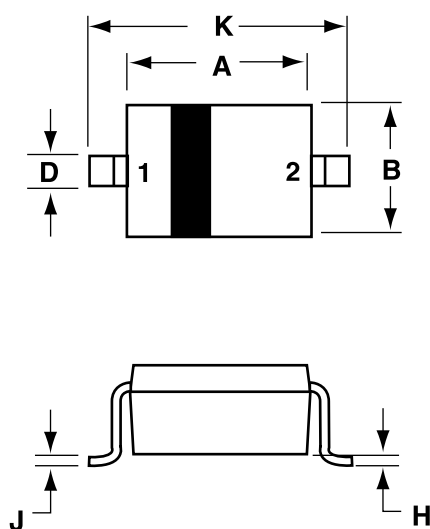
**SCHOTTKY DIODE**  
**500m AMPERES**  
**20 VOLTS**



**SOD-323**

### SOD-323 Outline Demensions

Unit:mm



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

PIN 1.CATHODE  
2.ANODE


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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	V
Average Rectified Output Current	$I_O$	500	mA
Peak Forward Surge Current	$I_{FSM}$	2.0	A
Power Dissipation	$P_d$	250	mW
Thermal Resistance junction to Ambient	$R_{\theta JA}$	426	$^{\circ}\text{C/W}$
Operating Temperature Range	$T_J$	+125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +125	$^{\circ}\text{C}$

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

Characteristic	Symbol	Value	Unit
Reverse Breakdown Voltage $I_R=250\mu\text{A}$	$V_{(BR)R}$	20	V
Forward Voltage $I_F=0.1\text{A}$ $I_F=0.5\text{A}$	$V_F$	0.31 0.43	V
Reverse Current $V_R=10\text{V}$ $V_R=20\text{V}$	$I_R$	100 250	$\mu\text{A}$
Capacitance between terminals $V_R=0\text{V}$ , $f=1.0\text{MHz}$	$C_T$	170	pF

**Device Marking**

Item	Marking	Equivalent Circuit diagram
B0520WS	SD	

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

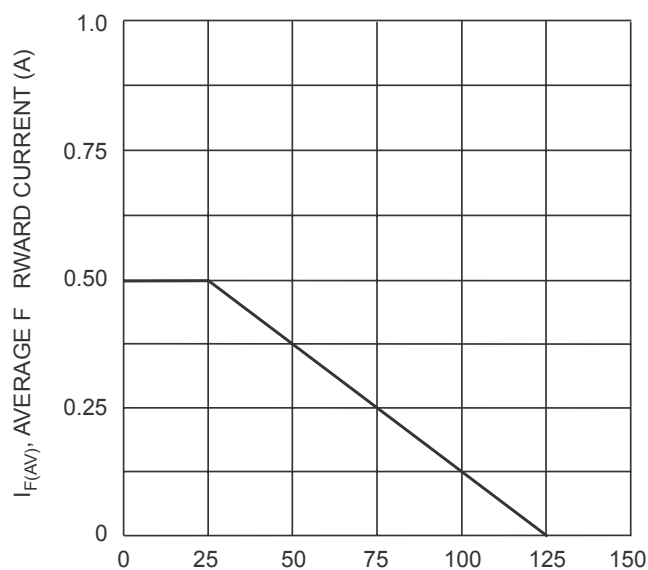


Fig. 1 Forward Current Derating Curve

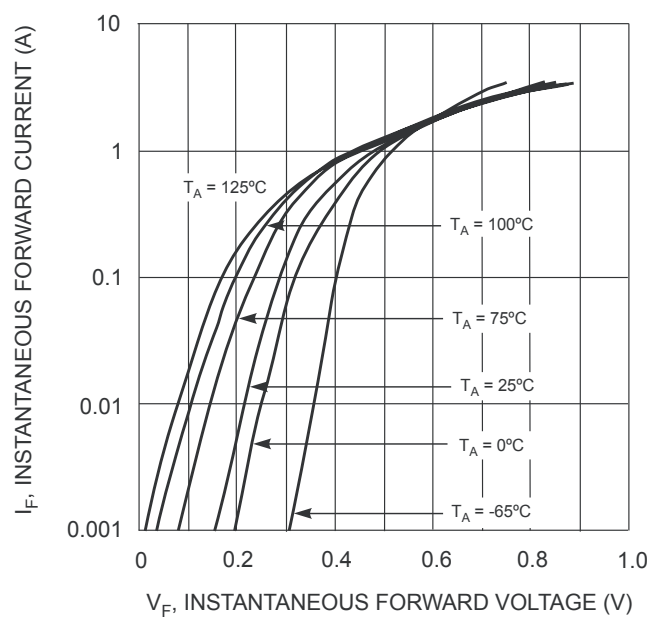


Fig. 2 Typical Forward Characteristics

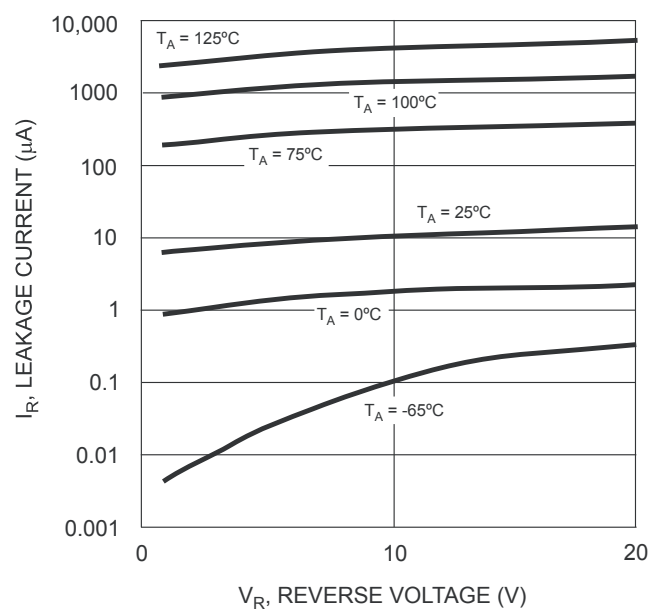


Fig. 3 Typical Reverse Characteristics

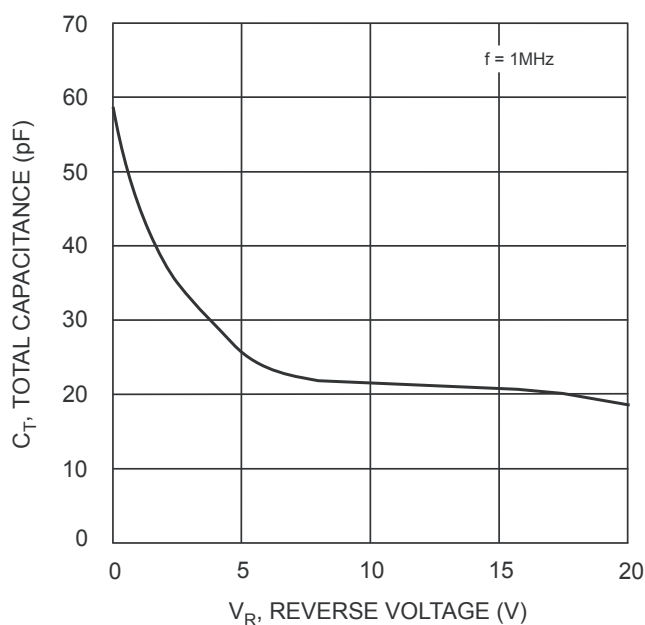


Fig. 4 Typ. Total Capacitance vs Reverse Voltage