

Surface Mount Schottky Barrier Diodes

(Pb) Lead(Pb)-Free

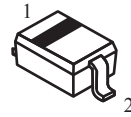
Features:

- *Low Forward Voltage
- *Very Small Conduction Losses
- *Schottky Barrier Diodes Encapsulated in a SOD-123 Package

Description:

These schottky barrier diodes are designed for high speed switching applications circuit protection, and voltage clamping, Extremely low forward voltage reduces conduction loss, Miniature surface mount package is excellent for hand held and portable applications where space is limited.

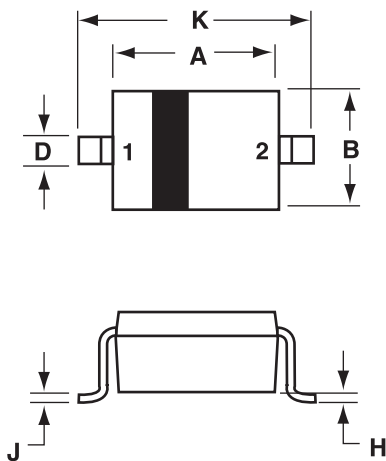
**SMALL SIGNAL
SCHOTTKY DIODES
500m AMPERES
20 VOLTS**



SOD-123

SOD-123 Outline Dimensions

Unit:mm



SOD-123		
Dim	Min	Max
A	2.55	2.85
B	1.40	1.80
C	0.95	1.35
D	0.50	0.70
E	0.30 REF	
H	-	0.10
J	-	0.15
K	3.55	3.85

**PIN 1. CATHODE
2. ANODE**


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

Characteristic	Symbol	B0520W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	20	V
RMS Reverse Voltage	VR(RMS)	14	V
Average Rectified Output Current	IF(AV)	500	mA
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimpose on rated load (JEDEC Method)	IFSM	5.5	A
Typical thermal Resistance junction to Ambient Note (1)	R θ JA	244	K/W
Operating & Storage Temperature Range	T _J T _{STG}	-55 to +125	$^{\circ}\text{C}$

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

Characteristic	Symbol	Min	Max	Unit
Minimum Reverse Breakdown Voltage(2) (I _R =250 μ A)	V _{(BR)R}	20	-	V
Forward Voltage Note(2) I _F =0.1A T _j =25 $^{\circ}\text{C}$ I _F =0.5A T _j =25 $^{\circ}\text{C}$ I _F =0.1A T _j =100 $^{\circ}\text{C}$ I _F =0.5A T _j =100 $^{\circ}\text{C}$	V _F	- - - -	0.350 0.430 0.285 0.385	V
Reverse Current Note(2) V _R =10V T _j =25 $^{\circ}\text{C}$ V _R =20V T _j =25 $^{\circ}\text{C}$	I _R	- -	75 250	μA_{dc}
Junction capacitance f=1MHZ V _R =0VDC	C _j	-	170	PF

Device Marking

Item	Marking	Equivalent Circuit diagram
B0520W	BB , SD	

- Note: 1. Valid provided that leads are kept at ambient temperature.
2. Pulse Test : Pulse width = 300 μs , Duty Cycle 2%

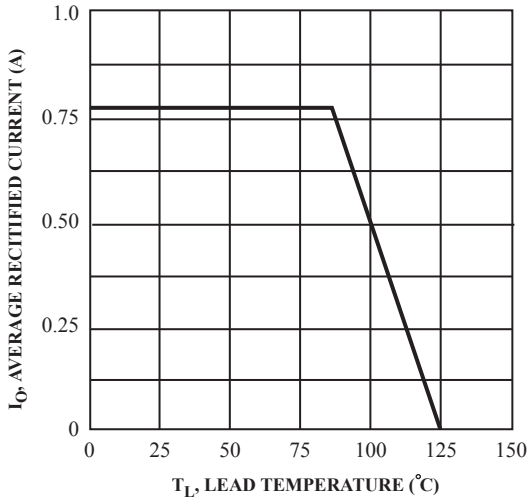


FIG. 1 Forward Current Derating Curve

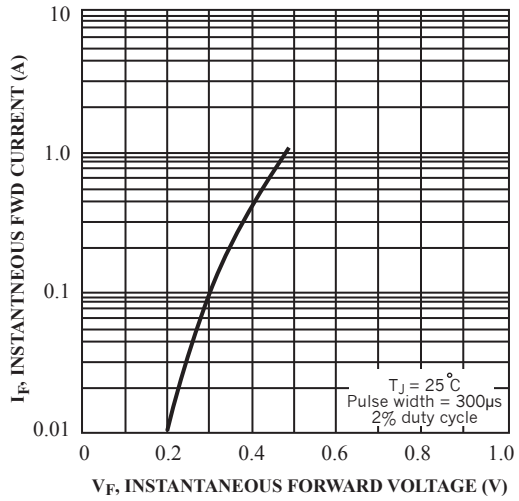


Fig. 2 Typical Forward Characteristics

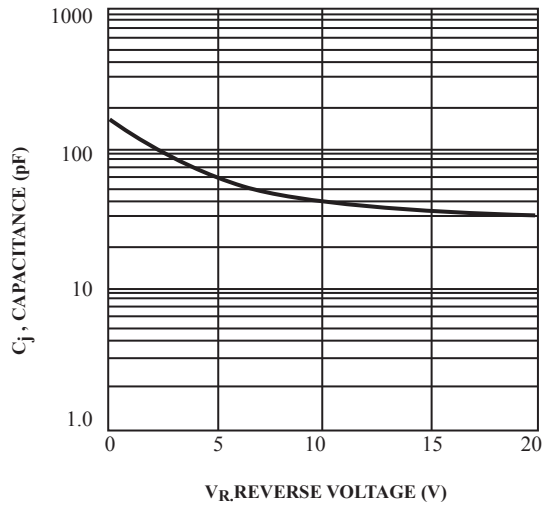


Fig. 3 Typ, Junction Capacitance vs. Reverse Voltage