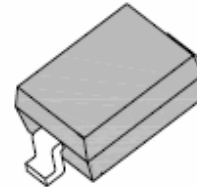


Two Terminals Schottky Barrier Diode

Features

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



SOD-123



Mechanical Data

Case:	SOD-123, molded plastic
Terminals:	Solderable per MIL-STD-202, Method 208
Polarity	Color band denotes cathode
Weight:	Approx. 0.008 grams

Maximum Ratings and Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	MBR0520	Unit	Conditions
V_{RRM}	Maximum Peak Repetitive Reverse Voltage	20	V	
V_{RWM}	Working Peak Reverse Voltage	20	V	
V_{DC}	Maximum DC Blocking Voltage	20	V	
V_{R(RMS)}	RMS Reverse Voltage	14	V	
I_{F(AV)}	Maximum Average Forward Rectified Current (refer Fig.1)	0.5	A	
I_{FSM}	Peak Forward Surge Current	5.5	A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)
T_J, T_{STG}	Operating and Storage Junction Temperature	-55 to +125	°C	

Two Terminals Schottky Barrier Diode

MBR0520

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	Min.	Max.	Unit	Conditions
V_{(BR)R}	Minimum Reverse Breakdown Voltage (Note 2)	20	-	V	IR=250μA
V_F	Maximum Instantaneous Forward Voltage (Note 2)	-	0.300	V	IF=0.1A, Tj=25°C
		-	0.385		IF=0.5A, Tj=25°C
		-	0.220		IF=0.1A, Tj=100°C
		-	0.330		IF=0.5A, Tj=100°C
IR	Maximum Instantaneous Reverse Current at rated DC Blocking Voltage (Note 2)	-	75	μA	VR=10V, Tj=25°C
		-	250		VR=20V, Tj=25°C
C_J	Junction Capacitance	170		pF	VR=0V, f=1MHz
RθJA	Typical Thermal Resistance Junction to Ambient (Note 1)	244		K / W	

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

Two Terminals Schottky Barrier Diode

MBR0520

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

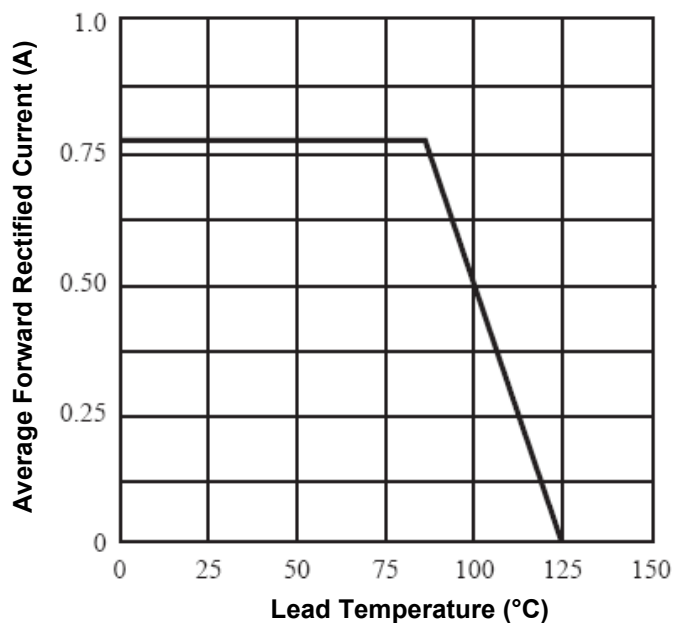


Fig.2- Typical Instantaneous Forward Characteristics

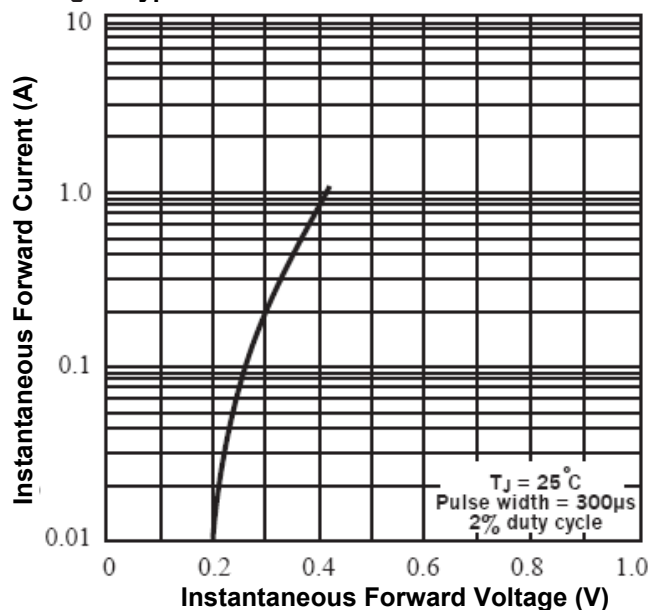
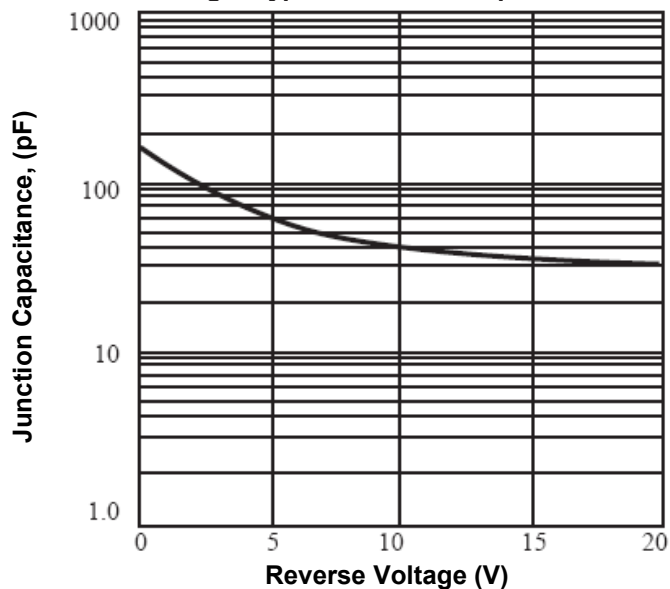


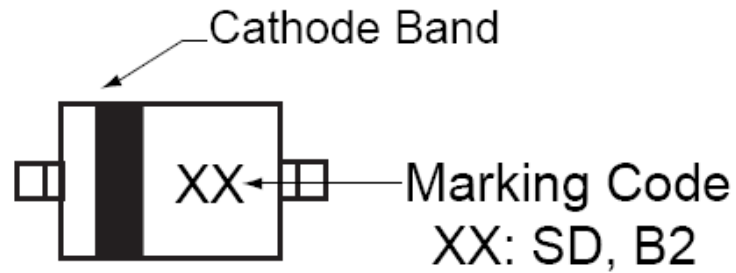
Fig.3-Typical Junction Capacitance



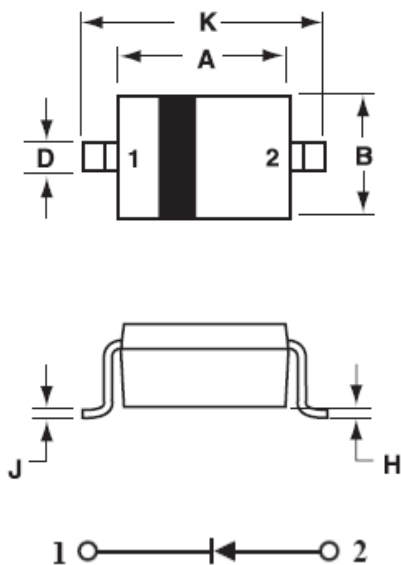
Two Terminals Schottky Barrier Diode

MBR0520

Marking Information



Dimensions in 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

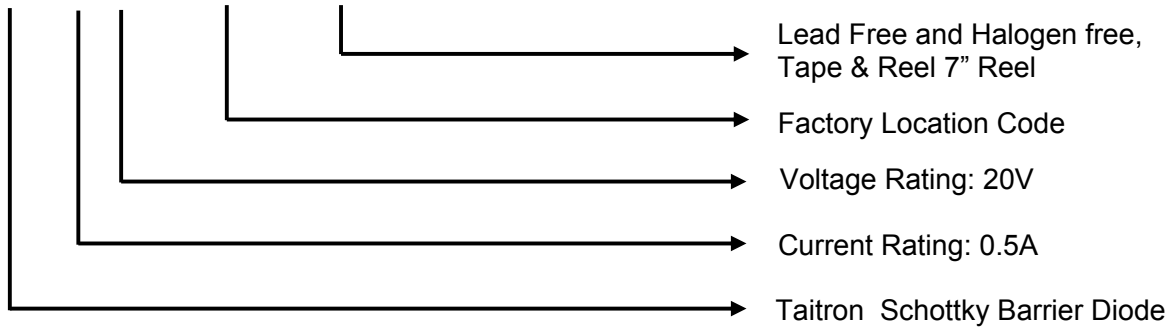
PIN 1. CATHODE
2. ANODE

Two Terminals Schottky Barrier Diode

MBR0520

Ordering Information

MBR 05 20 – XX – RG70



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