

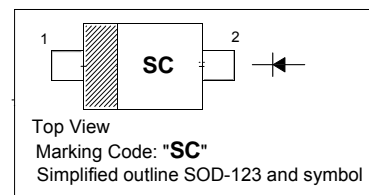
## Surface Mount Schottky Barrier Diode

### Features

- Very low forward voltage
- High Current Capability

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RRM}$	20	V
Working Peak Reverse Voltage	$V_{RWM}$	20	V
DC Reverse Voltage	$V_R$	20	V
Average Rectified Forward Current	$I_{F(AV)}$	0.5	A
Non-Repetitive Peak Forward Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	$I_{FSM}$	5.5	A
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	340	$^\circ\text{C/W}$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	150	$^\circ\text{C/W}$
Junction Temperature	$T_j$	- 65 to + 150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

<sup>1)</sup> Following any rated load condition and with rated  $V_{RRM}$  applied.

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$ at $I_F = 0.5\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$ at $I_F = 0.1\text{ A}$ , $T_j = 100\text{ }^\circ\text{C}$ at $I_F = 0.5\text{ A}$ , $T_j = 100\text{ }^\circ\text{C}$	$V_F$	0.375 0.44 0.26 0.36	V
Reverse Current at $V_R = 10\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$ at $V_R = 20\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$ at $V_R = 10\text{ V}$ , $T_j = 100\text{ }^\circ\text{C}$ at $V_R = 20\text{ V}$ , $T_j = 100\text{ }^\circ\text{C}$	$I_R$	40 150 3 7	$\mu\text{A}$ $\mu\text{A}$ mA mA
Total Capacitance at $V_R = 5\text{ V}$ (test signal range 100 KHz to 1 MHz), $T_j = 25\text{ }^\circ\text{C}$	$C_{tot}$	110	pF

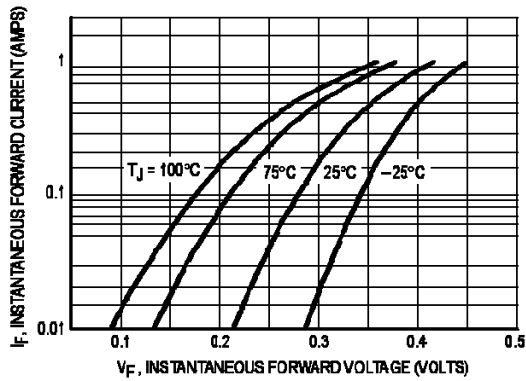


Figure 1. Typical Forward Voltage

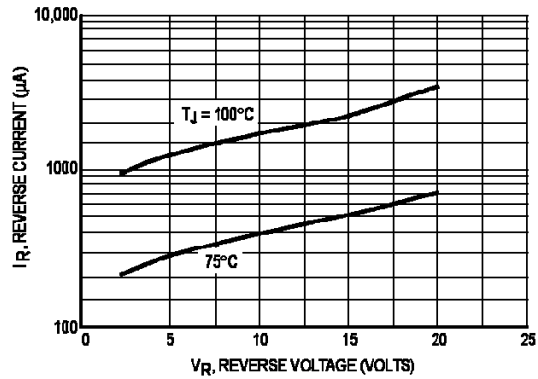


Figure 2. Typical Reverse Current

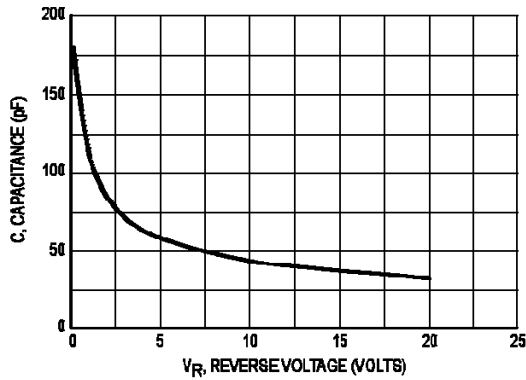


Figure 3. Typical Capacitance

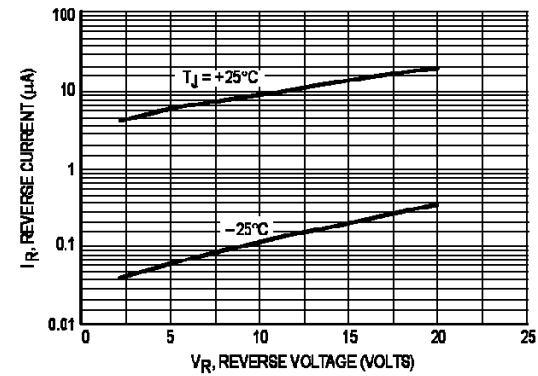


Figure 4. Typical Reverse Current

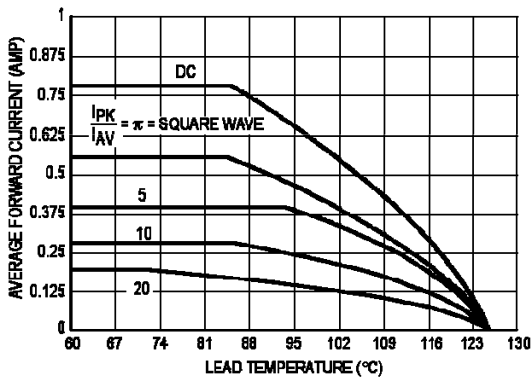


Figure 5. Current Derating (Lead)

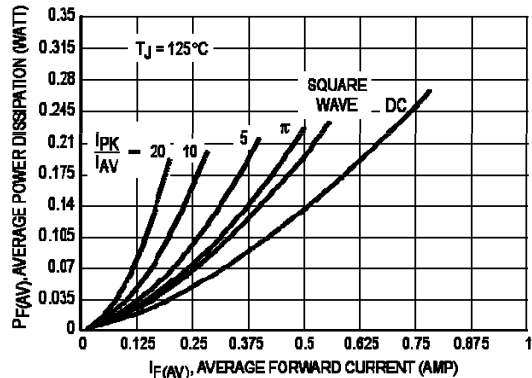


Figure 6. Power Dissipation



**CHINA BASE**  
INTERNATIONAL

**SOD-123**

**MBR0520**

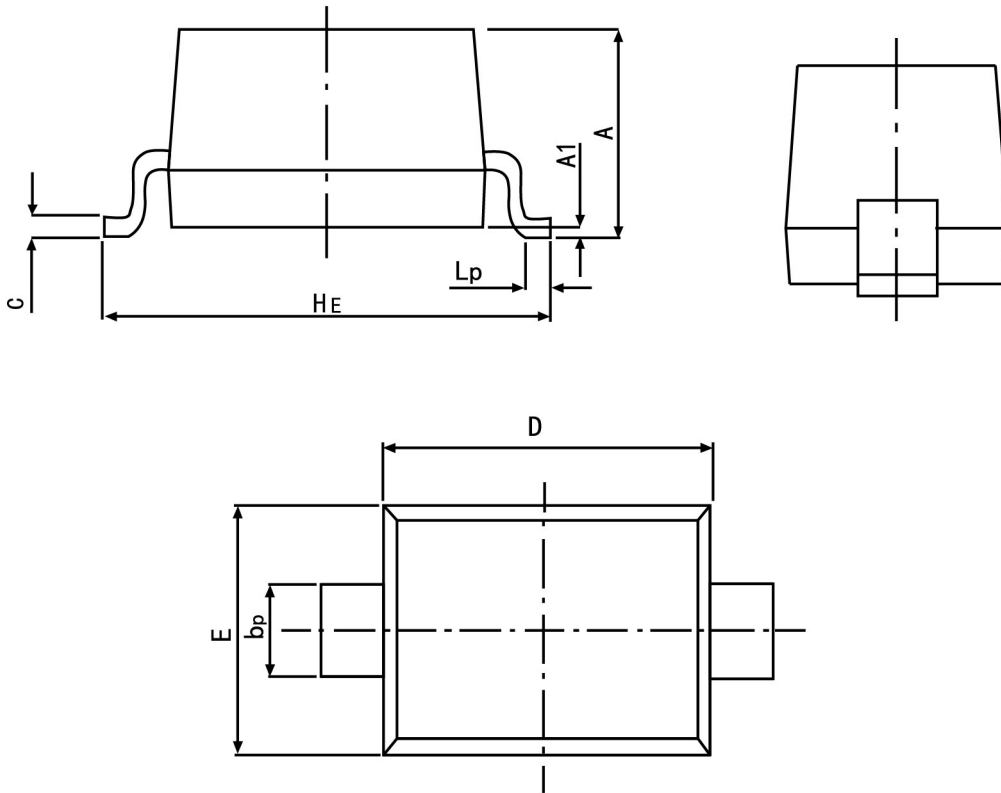


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**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-123



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.20
bp	0.50	0.60
C	0.100	0.135
D	2.55	2.75
E	1.55	1.65
HE	3.55	3.85
A1	0.01	0.10
Lp	0.20	0.50