

# MBR0520W

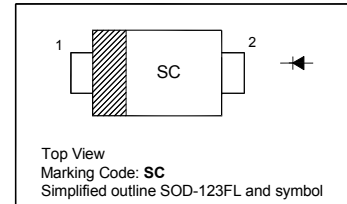
## Surface Mount Schottky Barrier Diode

### Features

- Very low forward voltage
- High Current Capability

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

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
Peak Forward Surge Current (8.3 ms Single Half Sine-wave)	$I_{FSM}$	20	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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ A}$ , $T_j = 25^\circ\text{C}$ at $I_F = 0.5\text{ A}$ , $T_j = 25^\circ\text{C}$ at $I_F = 0.1\text{ A}$ , $T_j = 100^\circ\text{C}$ at $I_F = 0.5\text{ A}$ , $T_j = 100^\circ\text{C}$	$V_F$	0.375 0.44 0.26 0.36	V
Reverse Current at $V_R = 10\text{ V}$ , $T_j = 25^\circ\text{C}$ at $V_R = 20\text{ V}$ , $T_j = 25^\circ\text{C}$ at $V_R = 10\text{ V}$ , $T_j = 100^\circ\text{C}$ at $V_R = 20\text{ V}$ , $T_j = 100^\circ\text{C}$	$I_R$	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), $T_j = 25^\circ\text{C}$	$C_{tot}$	110	pF

**TOP DYNAMIC**



Dated: 13/07/2015 Rev: 04

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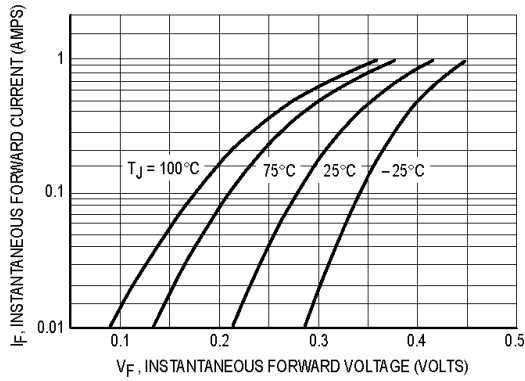


Figure 1. Typical Forward Voltage

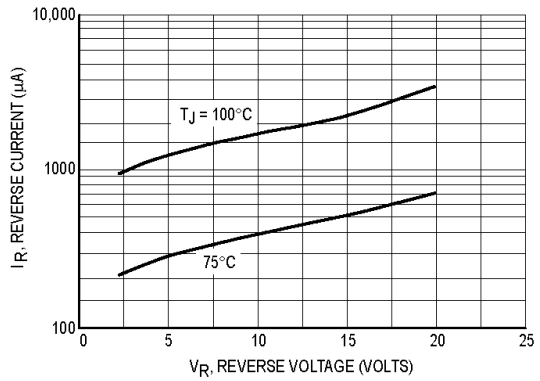


Figure 2. Typical Reverse Current

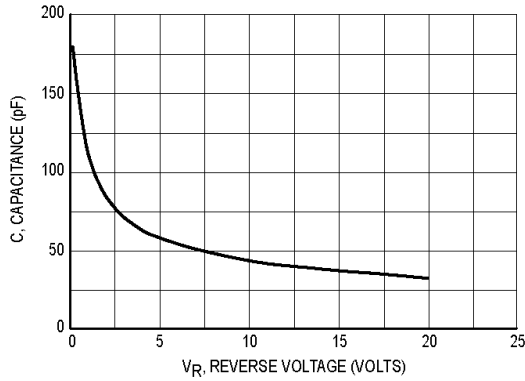


Figure 3. Typical Capacitance

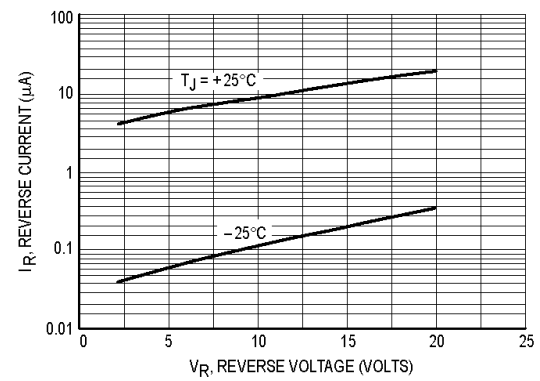


Figure 4. Typical Reverse Current

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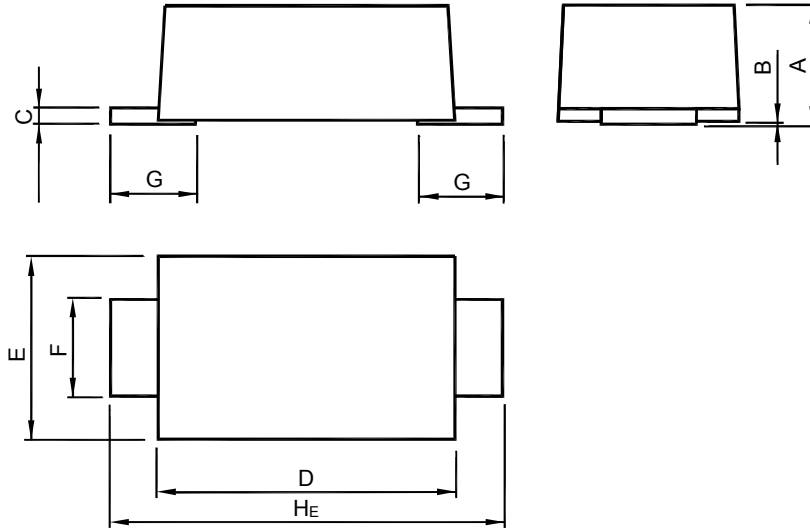


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## PACKAGE OUTLINE

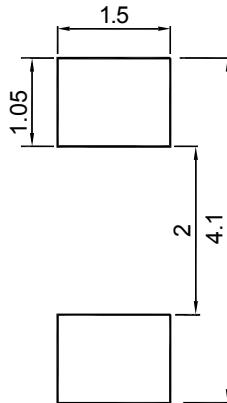
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H <sub>E</sub>
mm	1.08	0.1	0.2	2.9	1.9	1.1	0.9	3.9
	0.88	0	0.1	2.6	1.7	0.8	0.7	3.5

## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

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