

# MBR0540

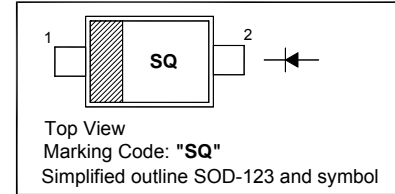
## Surface Mount Schottky Barrier Diode

### Features

- Low forward voltage
- High conductance

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

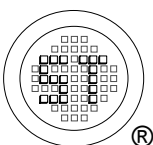
Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	40	V
Reverse Voltage	$V_R$	40	V
Average Rectified Forward Current	$I_{F(AV)}$	500	mA
Non-Repetitive Peak Forward Surge Current (Half Wave, Single Phase, 60 Hz)	$I_{FSM}$	5.5	A
Thermal Resistance Junction to Lead <sup>1)</sup>	$R_{\theta JL}$	118	$^\circ\text{C/W}$
Thermal Resistance Junction to Ambient <sup>2)</sup>	$R_{\theta JA}$	206	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_j$	- 65 to + 150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

<sup>1)</sup> Device mounted on FR-4 PCB 0.013 mm.

<sup>2)</sup> 1 inch" pad size (1 X 0.5 inch for each lead ) on FR4 board.

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

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.5\text{ A}$ at $I_F = 1\text{ A}$ at $I_F = 0.5\text{ A}$ , $T_a = 100\text{ }^\circ\text{C}$ at $I_F = 1\text{ A}$ , $T_a = 100\text{ }^\circ\text{C}$	$V_F$	0.51 0.62 0.46 0.61	V
Reverse Current at $V_R = 20\text{ V}$ at $V_R = 40\text{ V}$ at $V_R = 20\text{ V}$ , $T_a = 100\text{ }^\circ\text{C}$ at $V_R = 40\text{ V}$ , $T_a = 100\text{ }^\circ\text{C}$	$I_R$	10 20 5 13	$\mu\text{A}$ $\mu\text{A}$ mA mA



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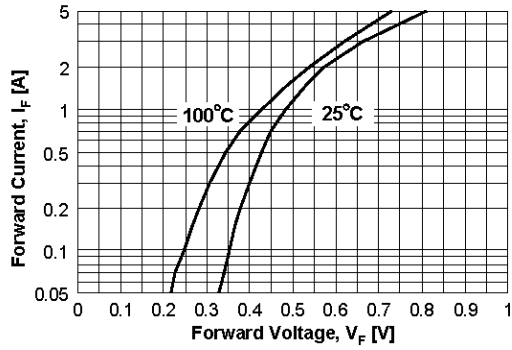


Figure 1. Forward Voltage Characteristics

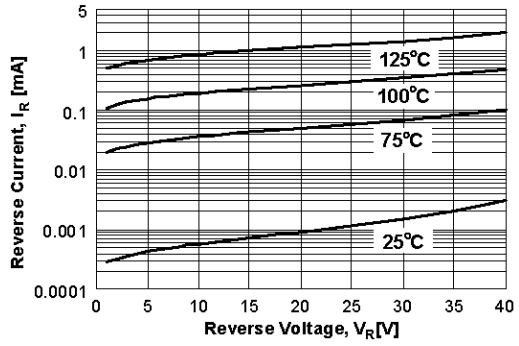


Figure 2. Reverse Current vs Reverse Voltage

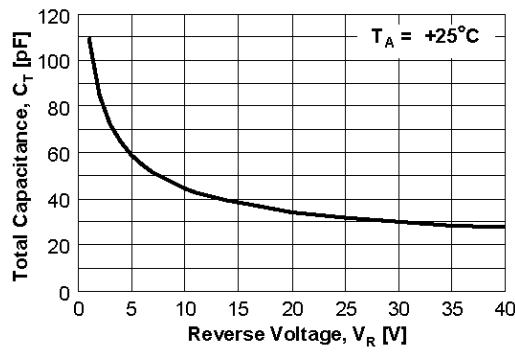
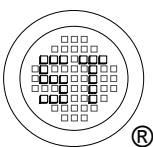


Figure 3. Total Capacitance

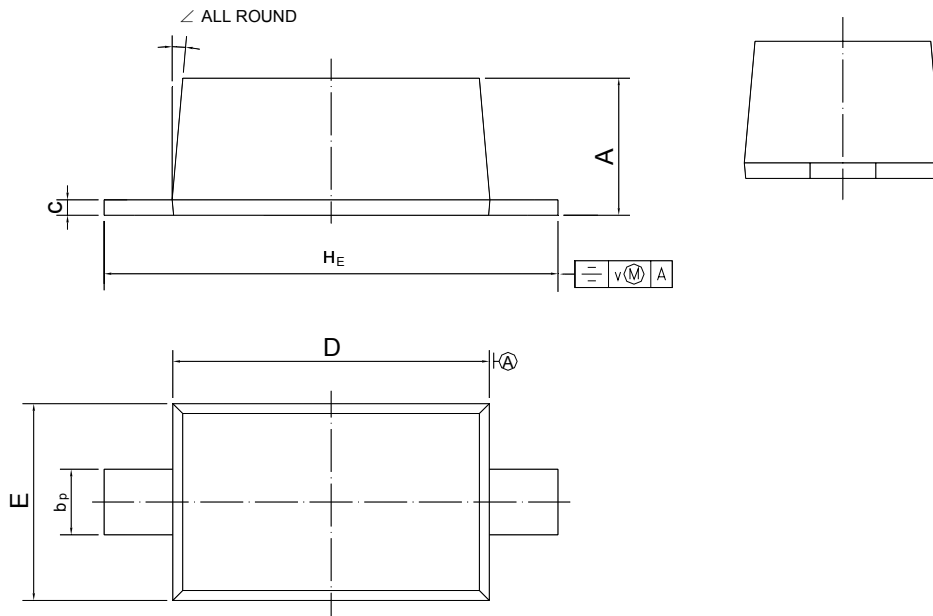


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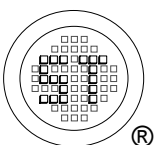
## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b <sub>p</sub>	c	D	E	H <sub>E</sub>	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°



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