

MBR0540

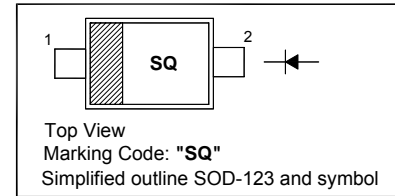
Surface Mount Schottky Barrier Diode

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 ¹⁾	$R_{\theta JL}$	118	$^\circ\text{C/W}$
Thermal Resistance Junction to Ambient ²⁾	$R_{\theta JA}$	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	$^\circ\text{C}$

¹⁾ Device mounted on FR-4 PCB 0.013 mm.

²⁾ 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	μA μA mA mA

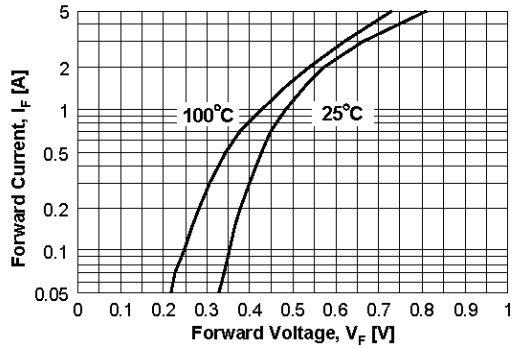


Figure 1. Forward Voltage Characteristics

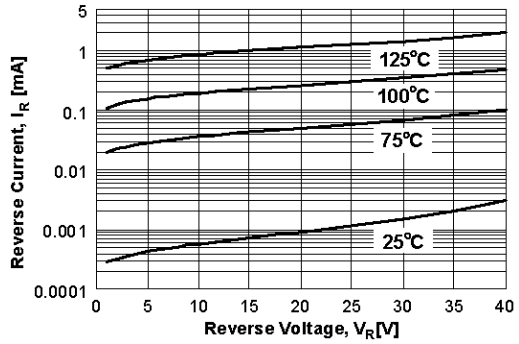


Figure 2. Reverse Current vs Reverse Voltage

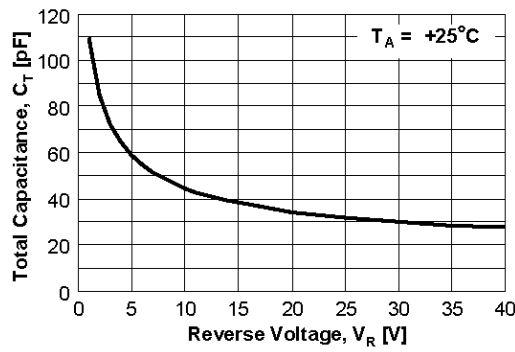


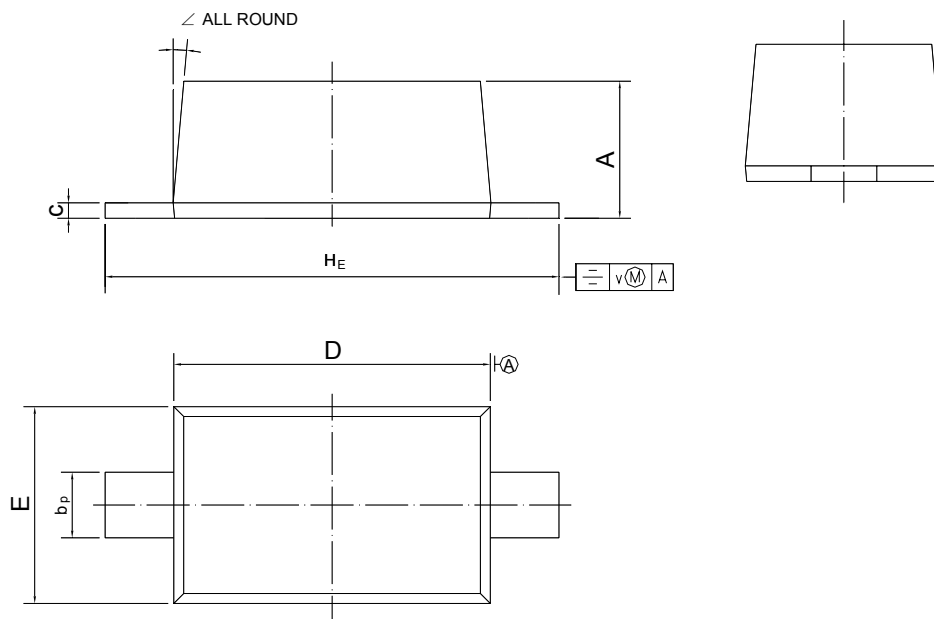
Figure 3. Total Capacitance

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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b _p	c	D	E	H _E	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°