

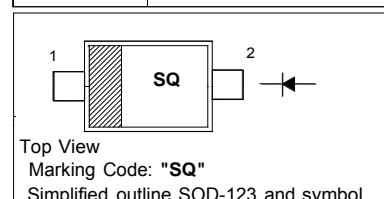
Surface Mount Schottky Barrier Diode

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 |

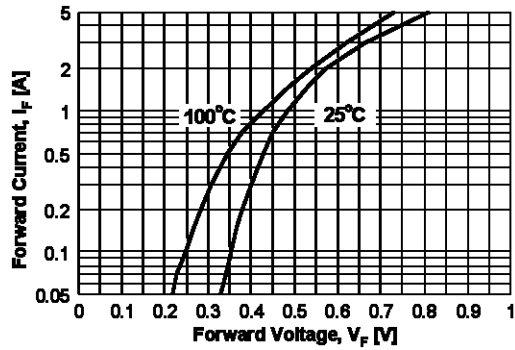


Figure 1. Forward Voltage Characteristics

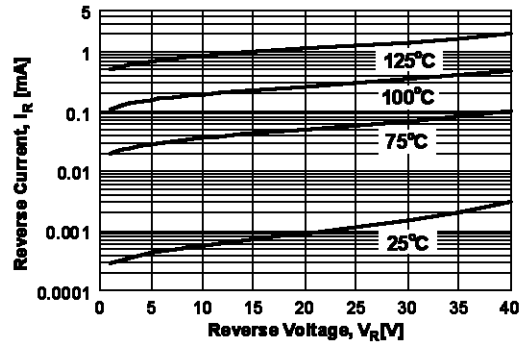


Figure 2. Reverse Current vs Reverse Voltage

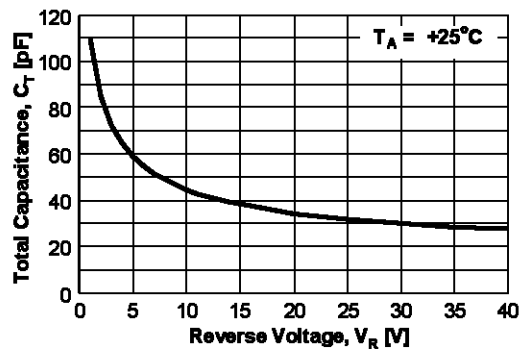


Figure 3. Total Capacitance



CHINA BASE
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SOD-123

MBR0540

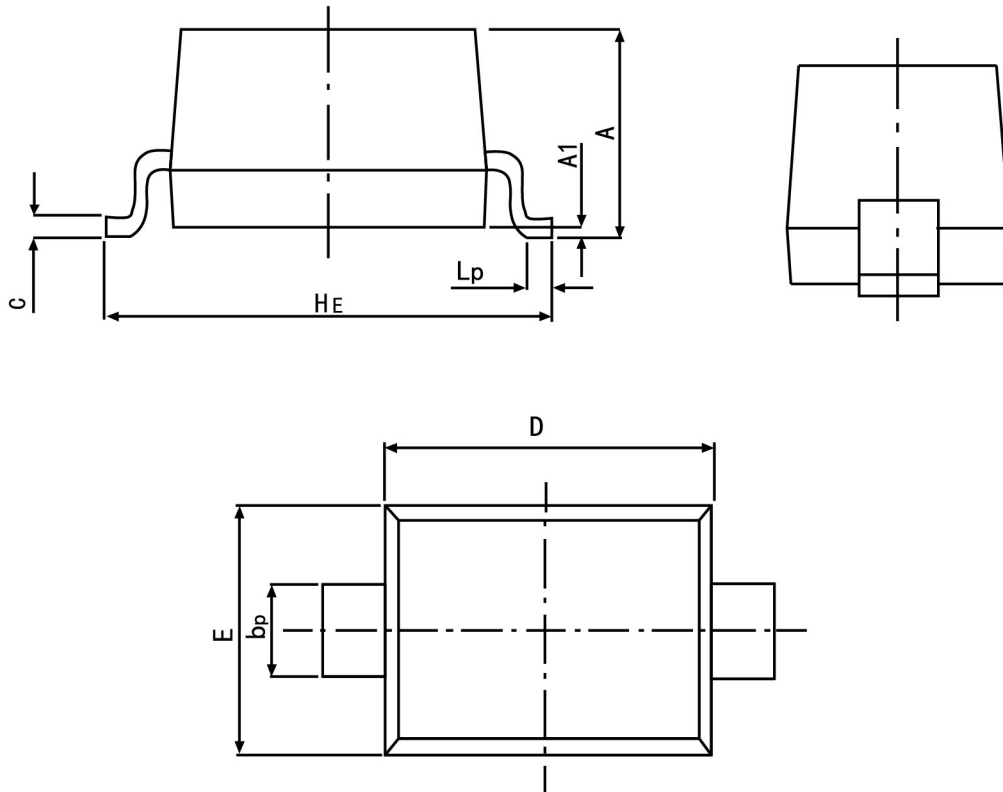


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PACKAGE OUTLINE

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 |

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