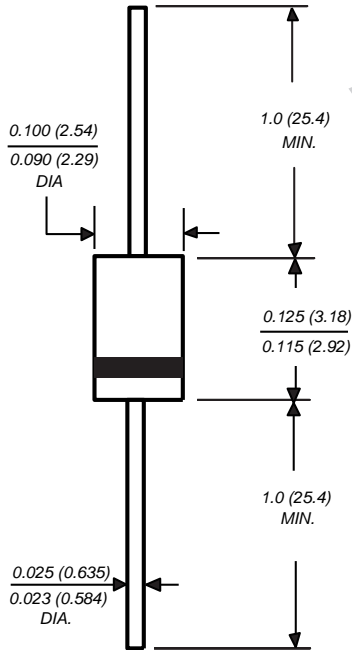


Miniature Schottky Barrier Rectifiers

Reverse Voltage 20 to 60V
Forward Current 0.6A

Case Style MPG06



Extended Voltage Range

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection

Mechanical Data

Case: Molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed:
 250°C/10 seconds 0.375" (9.5mm) lead length,
 5lbs. (2.3kg) tension

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0064oz., 0.181g

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

| Parameter | Symbol | SB020 | SB030 | SB040 | SB050 | SB060 | Unit |
|--|--------------------------------------|-------------|-------|-------|-------------|-------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | V |
| Maximum RMS voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | V |
| Maximum DC blocking voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | V |
| Maximum average forward rectified current at 0.375" (9.5mm) lead length (See Fig. 1) | I _{F(AV)} | 0.6 | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 20 | | | | | A |
| Typical thermal resistance ⁽²⁾ | R _{θJA} R _{θJL} | 80 20 | | | | | °C/W |
| Operating junction temperature range | T _J | -65 to +125 | | | -65 to +150 | | °C |
| Storage temperature range | T _{STG} | -65 to +150 | | | | | °C |

Electrical Characteristics (T_A = 25°C unless otherwise noted)

| | | | | | | | |
|---|----------------|------|--|------|--|---|----|
| Maximum instantaneous forward voltage at 0.6A ⁽¹⁾ | V _F | 0.55 | | 0.70 | | V | |
| Maximum instantaneous reverse current at rated DC blocking voltage ⁽¹⁾ | I _R | 0.5 | | | | | mA |
| | | 10 | | 5.0 | | | |

Notes:

(1) Pulse test: 300μs pulse width, 1% duty cycle

(2) Thermal resistance junction to lead P.C.B. mounted 0.375" (9.5mm) lead length

SB020 thru SB060



Vishay Semiconductors
formerly General Semiconductor

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

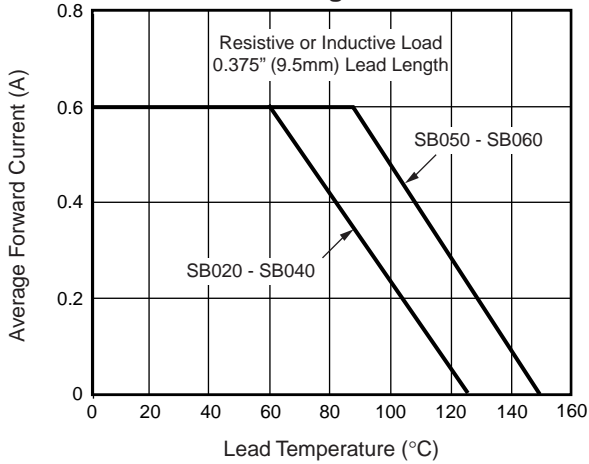


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

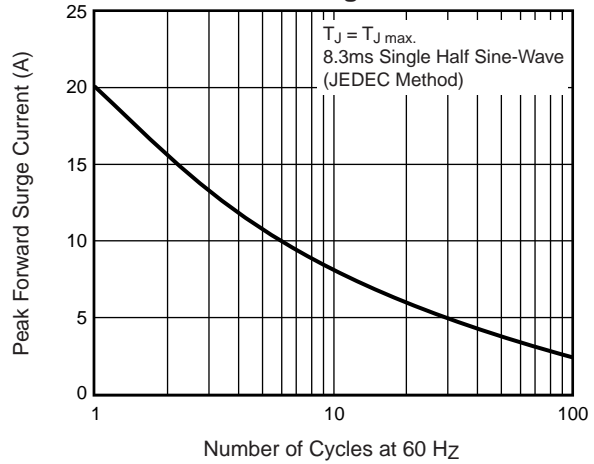


Fig. 3 – Typical Instantaneous Forward Characteristics

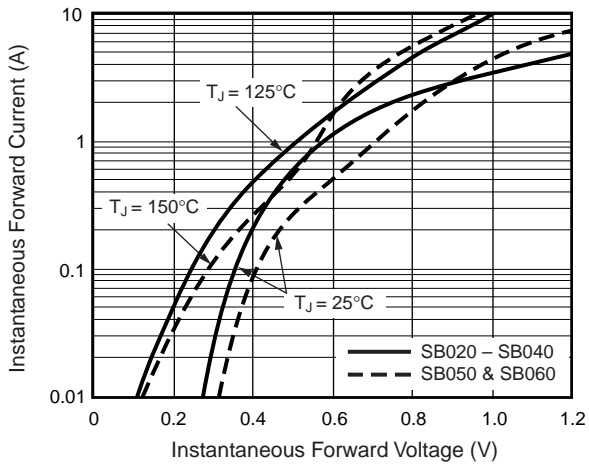


Fig. 4 – Typical Reverse Leakage Characteristics

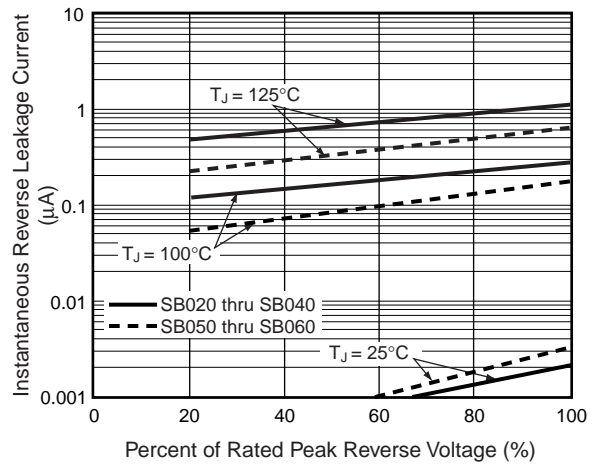


Fig. 5 – Typical Junction Capacitance

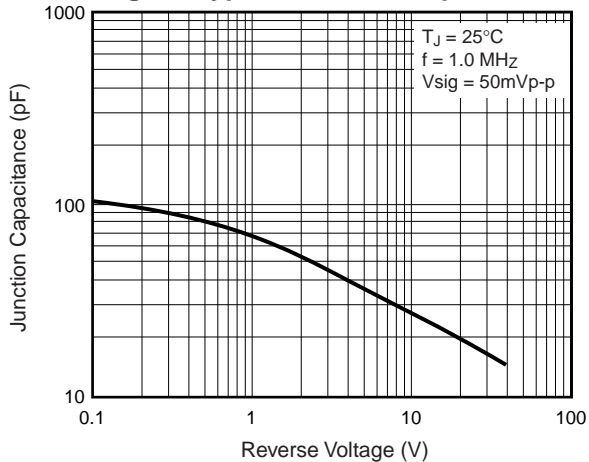


Fig. 6 – Transient Thermal Impedance

