

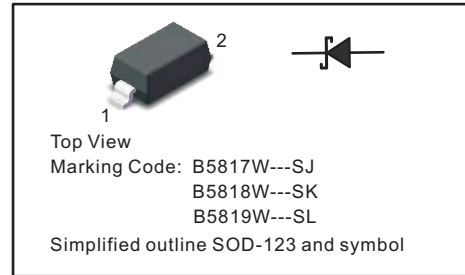
SCHOTTKY BARRIER DIODE

FEATURES

- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability
- low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



MECHANICAL DATA

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbols | B5817W | B5818W | B5819W | Units |
|--|----------------|--------------|---------------|------------|-------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 1 | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method) | I_{FSM} | 25 | | | A |
| Maximum Instantaneous Forward Voltage at 1 A at 3 A | V_F | 0.45 0.75 | 0.55 0.875 | 0.6 0.9 | V |
| Maximum Instantaneous Reverse Current at $T_A = 25^{\circ}C$ Rated DC Reverse Voltage $T_A = 100^{\circ}C$ | I_R | 1 10 | | | mA |
| Typical Junction Capacitance | C_j | 110 | | | pF |
| Storage and Operating Junction Temperature Range | T_j, T_{stg} | -55 ~ +125 | | | $^{\circ}C$ |

Fig.1 Forward Current Derating Curve

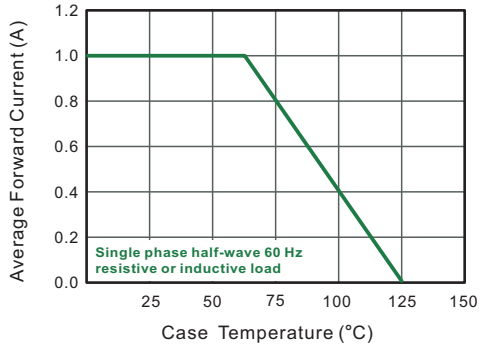


Fig.2 Typical Reverse Characteristics

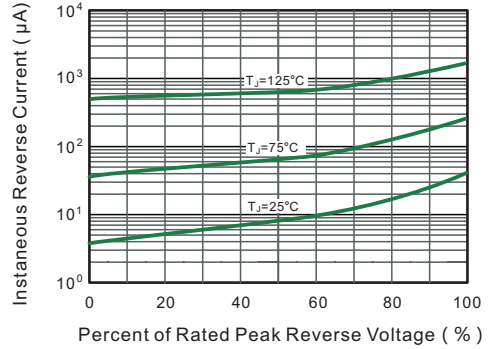


Fig.3 Typical Forward Characteristic

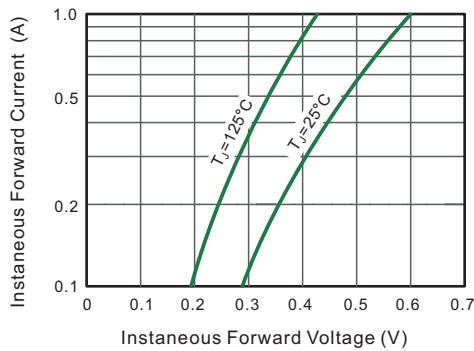


Fig.4 Typical Junction Capacitance

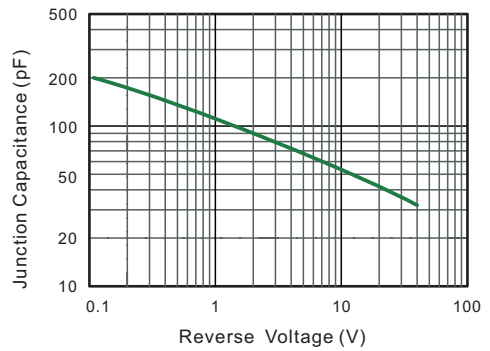
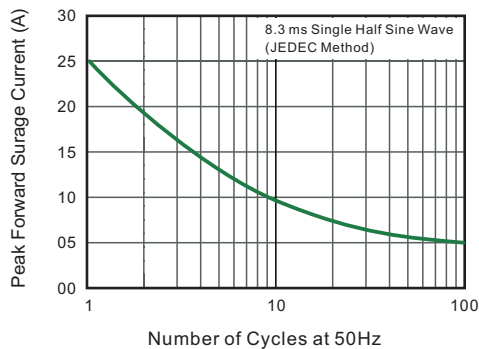


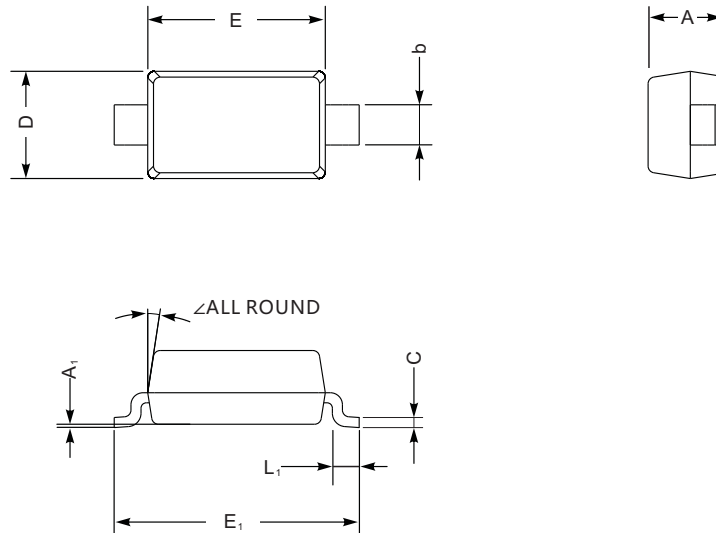
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

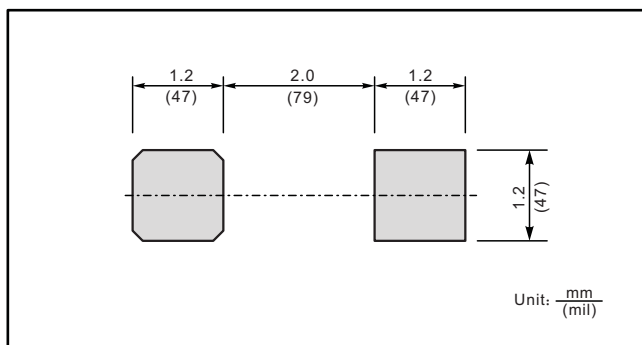
SOD-123



SOD-123 mechanical data

| UNIT | | A | C | D | E | E ₁ | L ₁ | b | A ₁ | ∠ |
|------|-----|-----|------|-----|-----|----------------|----------------|-----|----------------|----|
| mm | max | 1.3 | 0.22 | 1.8 | 2.8 | 3.9 | 0.45 | 0.7 | 0.2 | 9° |
| | min | 0.9 | 0.09 | 1.5 | 2.5 | 3.6 | 0.25 | 0.5 | — | |
| mil | max | 51 | 8.7 | 71 | 110 | 154 | 18 | 28 | 8 | |
| | min | 35 | 3.5 | 59 | 98 | 142 | 10 | 20 | — | |

The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| B5817W | SJ |
| B5818W | SK |
| B5819W | SL |

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