

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 40 V

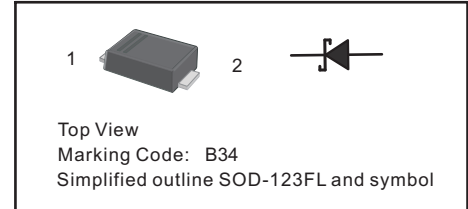
Forward Current - 3.0A

Features

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current 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-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg/0.00048oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter | Symbols | MBR340F | Units |
|---|-----------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 40 | V |
| Maximum RMS voltage | V_{RMS} | 28 | V |
| Maximum DC Blocking Voltage | V_{DC} | 40 | V |
| Maximum Average Forward Rectified Current at $T_c = 100\text{ °C}$ | $I_{F(AV)}$ | 3 | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | I_{FSM} | 50 | A |
| Maximum Instantaneous Forward Voltage at 3 A | V_F | 0.45 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ °C}$ $T_a = 100\text{ °C}$ | I_R | 1.0 20 | mA |
| Typical Junction Capacitance ⁽¹⁾ | C_j | 230 | pF |
| Typical Thermal Resistance ⁽²⁾ | $R_{\theta JA}$ | 80 | °C/W |
| Operating Junction Temperature Range | T_j | -55 ~ +125 | °C |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | °C |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

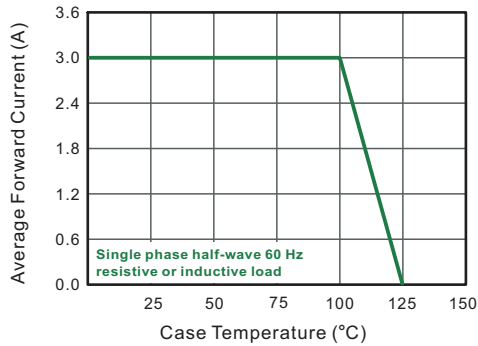


Fig.2 Typical Reverse Characteristics

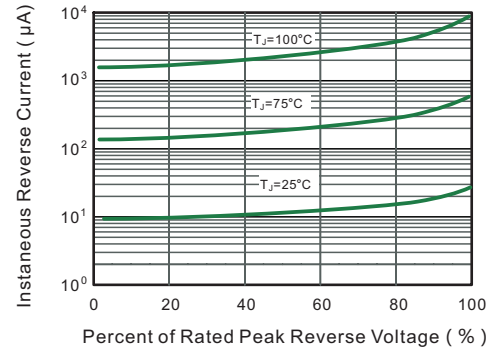


Fig.3 Typical Forward Characteristic

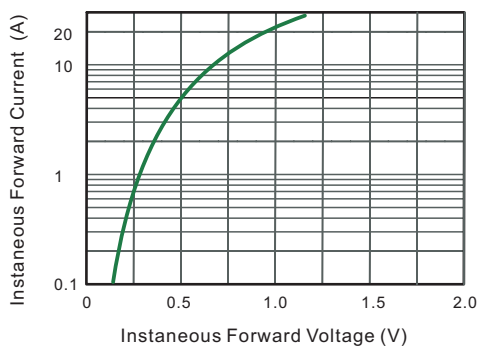


Fig.4 Typical Junction Capacitance

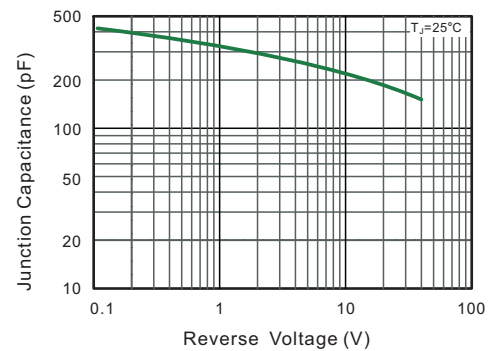


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

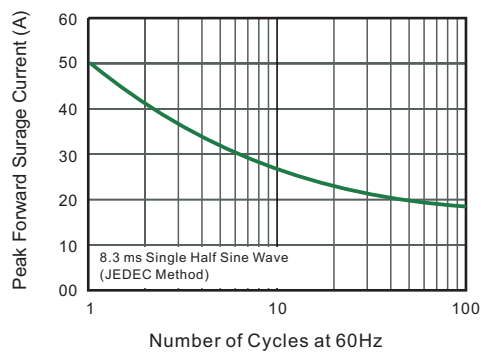
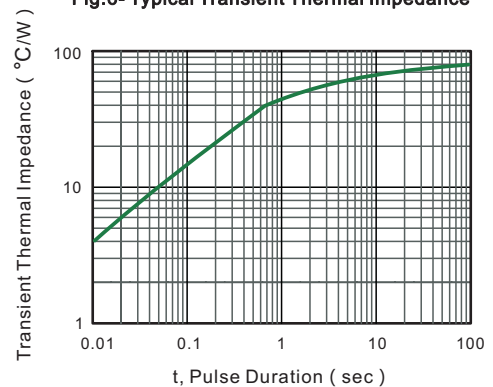


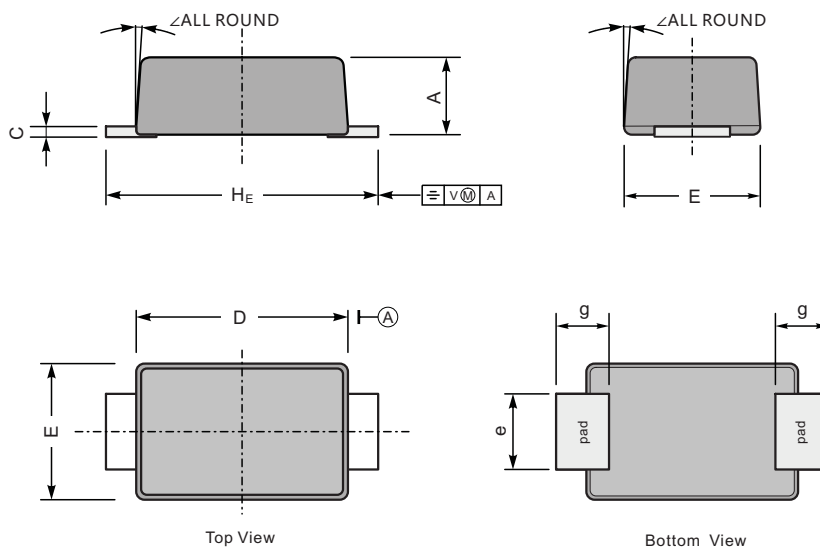
Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

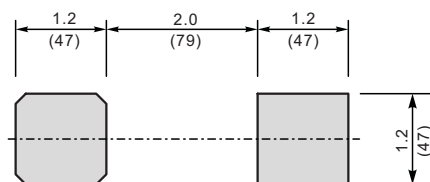
Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT | | A | C | D | E | e | g | H_E | \angle |
|------|-----|-----|------|-----|-----|-----|-----|-------|----------|
| mm | max | 1.1 | 0.20 | 2.9 | 1.9 | 1.1 | 0.9 | 3.8 | 7° |
| | min | 0.9 | 0.12 | 2.6 | 1.7 | 0.8 | 0.7 | 3.5 | |
| mil | max | 43 | 7.9 | 114 | 75 | 43 | 35 | 150 | |
| | min | 35 | 4.7 | 102 | 67 | 31 | 28 | 138 | |

The recommended mounting pad size



Unit: $\frac{\text{mm}}{\text{(mil)}}$