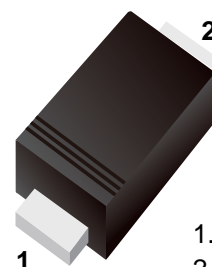


Surface Mount Schottky Barrier Rectifiers

■ 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



1.Cathode
2.Anode

■ Simplified outline(SOD-123FL)

Top View 

■ Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

| Parameter | Symbols | MBR0580 | Units |
|--|-----------------|------------|---------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 60 | V |
| Maximum RMS voltage | V_{RMS} | 42 | V |
| Maximum DC Blocking Voltage | V_{DC} | 60 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 1.0 | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 40 | A |
| Max Instantaneous Forward Voltage at 1 A | V_F | 0.70 | V |
| Maximum DC Reverse Current $T_a = 25^{\circ}C$ at Rated DC Reverse Voltage $T_a = 100^{\circ}C$ | I_R | 0.3 10 | mA |
| Typical Junction Capacitance ¹⁾ | C_j | 80 | pF |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ | 115 | $^{\circ}C/W$ |
| Operating Junction Temperature Range | T_j | -55 ~ +125 | $^{\circ}C$ |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | $^{\circ}C$ |

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

2) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

Fig.1 Forward Current Derating Curve

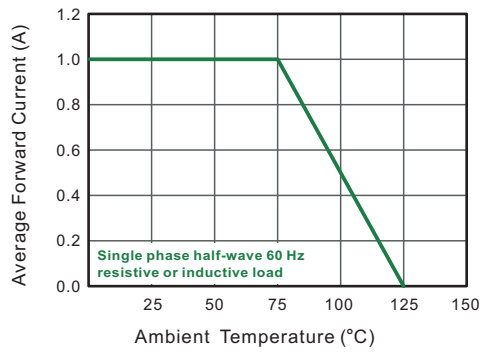


Fig.2 Typical Reverse Characteristics

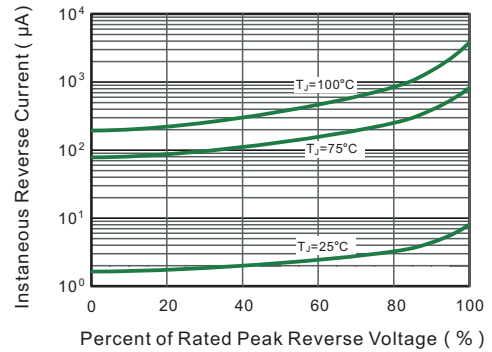


Fig.3 Typical Forward Characteristic

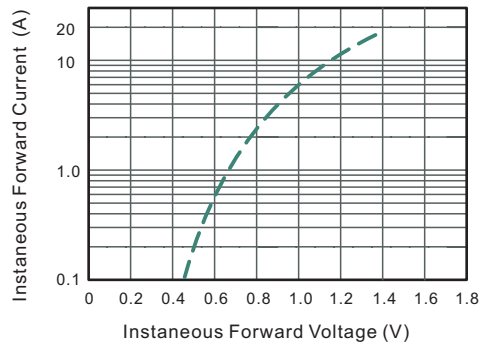


Fig.4 Typical Junction Capacitance

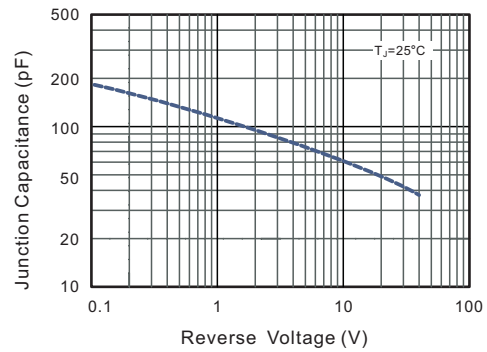


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

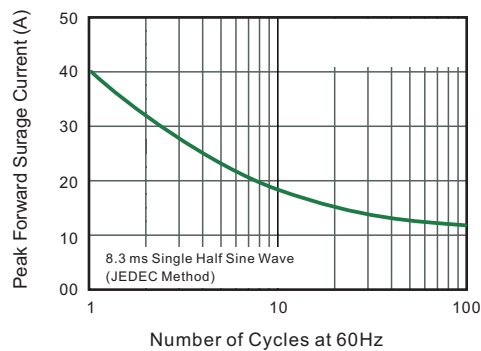
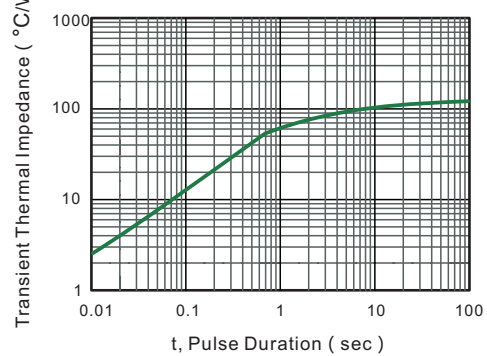
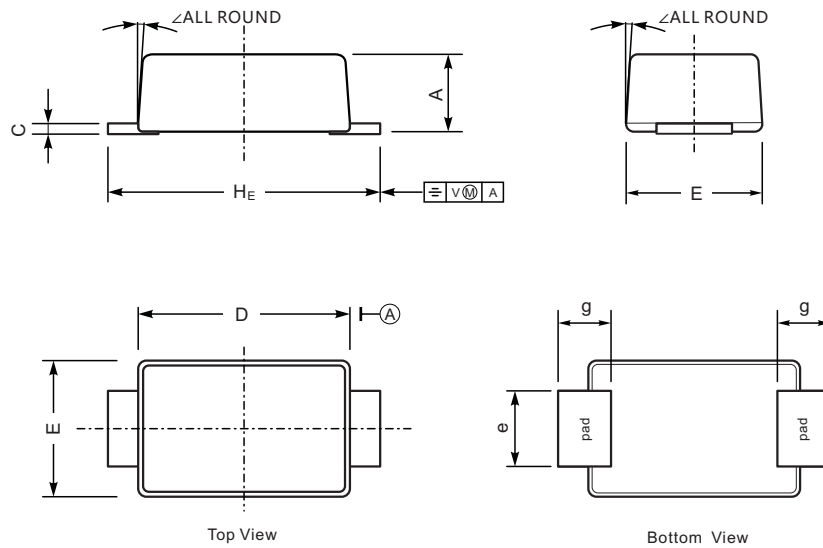


Fig.6- Typical Transient Thermal Impedance

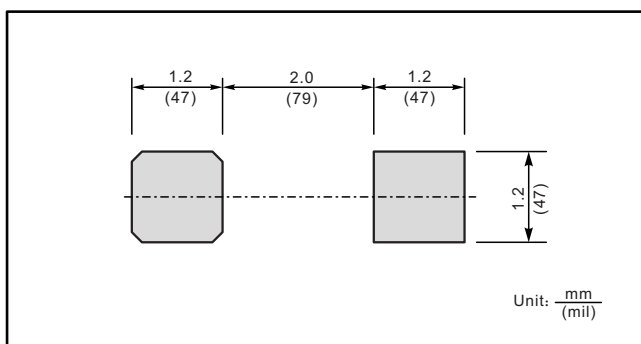


■ SOD-123FL



| 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



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