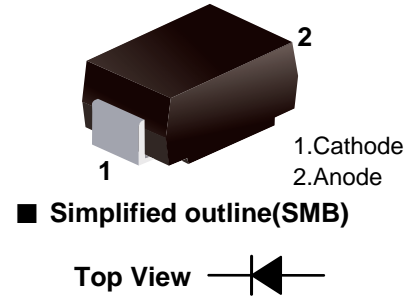


■ **Surface Mount Schottky Barrier Rectifier**

■ **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



■ **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 | SS52B | SS54B | SS56B | SS58B | SS510B | SS512B | SS515B | SS520B | Units |
|---|-----------------|------------|-----------|-------|-------|--------|--------|--------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 28 | 42 | 56 | 70 | 84 | 105 | 140 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 5.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 150 | | | | | | | | A |
| Max Instantaneous Forward Voltage at 5 A | V_F | 0.55 | 0.70 | | 0.85 | | | | V | |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$ | I_R | 1.0 50 | 0.3 25 | | | | | mA | | |
| Typical Junction Capacitance ⁽¹⁾ | C_j | 500 | 300 | | | | | pF | | |
| Typical Thermal Resistance ⁽²⁾ | $R_{\theta JA}$ | 50 | | | | | | | | °C/W |
| Operating Junction Temperature Range | T_j | -55 ~ +150 | | | | | | | | °C |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | | | | | °C |

(1) Measured at 1MHz 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

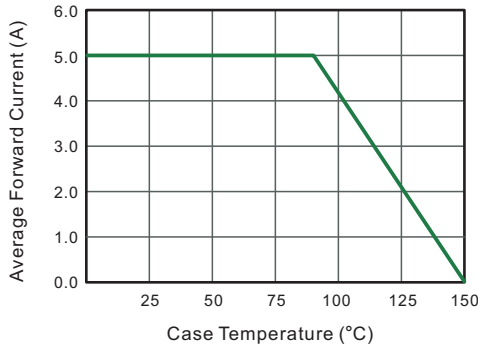


Fig.2 Typical Reverse Characteristics

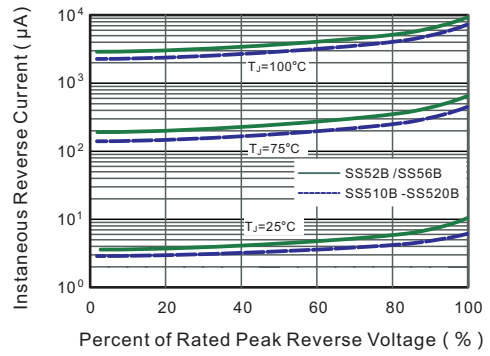


Fig.3 Typical Forward Characteristic

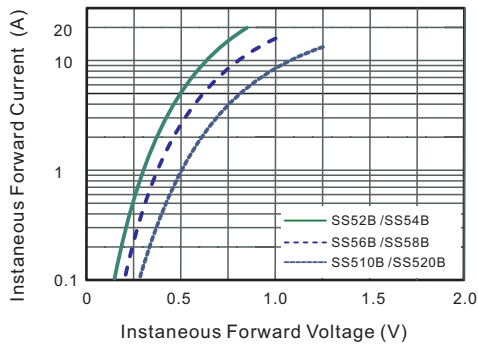


Fig.4 Typical Junction Capacitance

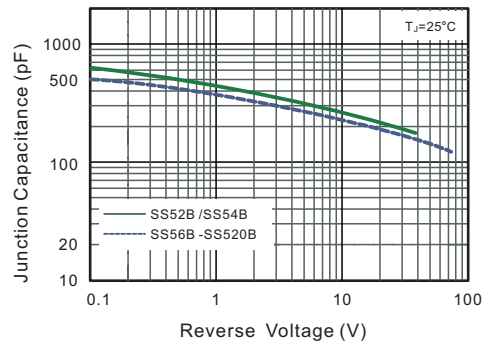


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

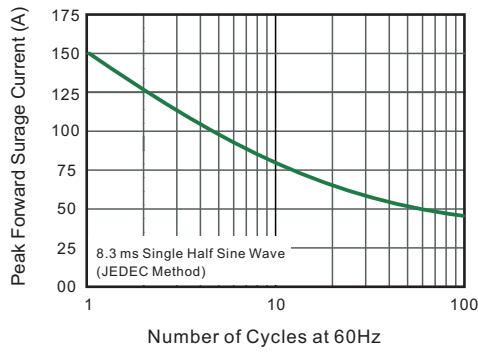
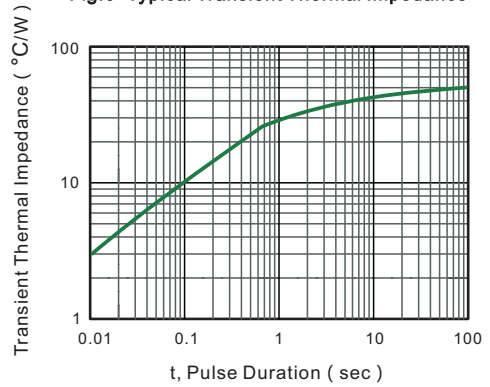
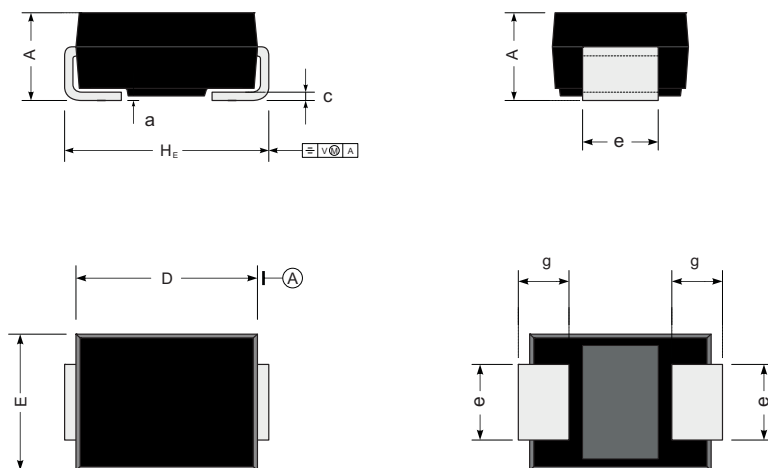


Fig.6- Typical Transient Thermal Impedance



■ SMB



| UNIT | | A | D | E | H _E | a | c | e | g |
|------|-----|------|------|------|----------------|------|-------|-----|-----|
| mm | max | 2.44 | 4.83 | 3.94 | 5.59 | 0.21 | 0.305 | 2.2 | 1.5 |
| | min | 2.13 | 4.32 | 3.3 | 5.08 | 0.05 | 0.152 | 1.8 | 0.9 |
| mil | max | 96 | 190 | 155 | 220 | 8.3 | 12 | 87 | 59 |
| | min | 83 | 170 | 130 | 200 | 2.0 | 6 | 71 | 35 |

The recommended mounting pad size

