



Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200V

Forward Current - 2.0A

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 |



Top View
Simplified outline SMB and symbol

MECHANICAL DATA

- Case : SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.055g / 0.002oz

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 | SS22B | SS24B | SS26B | SS28B | SS210B | SS212B | SS215B | SS220B | 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)} | 2.0 | | | | | | | | A | | | | | |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 55 | | | 45 | | | 45 | | | | | | | |
| Max Instantaneous Forward Voltage at 2 A | V _F | 0.55 | | 0.70 | | 0.85 | | 0.95 | | V | | | | | |
| Maximum DC Reverse Current T _a = 25°C at Rated DC Reverse Voltage T _a = 100°C | I _R | 0.5 5 | | 0.3 3 | | | | | | mA | | | | | |
| Typical Junction Capacitance ⁽¹⁾ | C _j | 220 | | | 110 | | | 110 | | pF | | | | | |
| Typical Thermal Resistance ⁽²⁾ | R _{θJA} | 60 | | | | | | | | °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

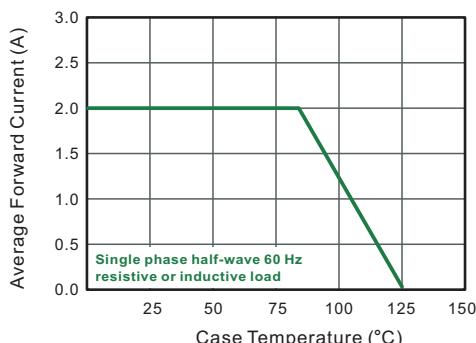


Fig.2 Typical Reverse Characteristics

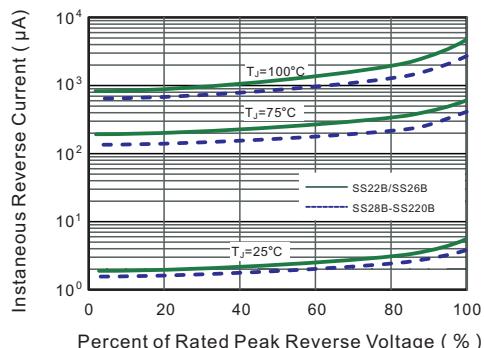


Fig.3 Typical Forward Characteristic

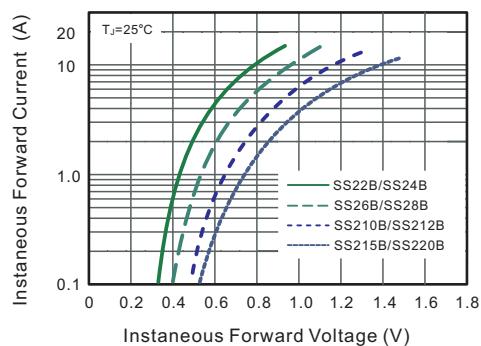


Fig.4 Typical Junction Capacitance

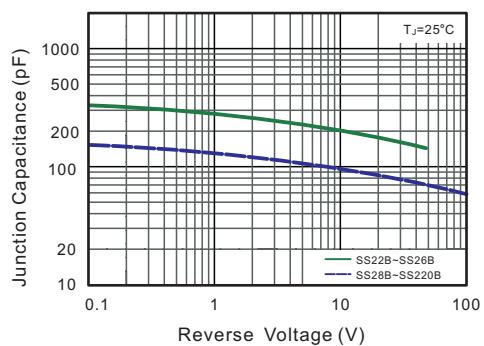


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

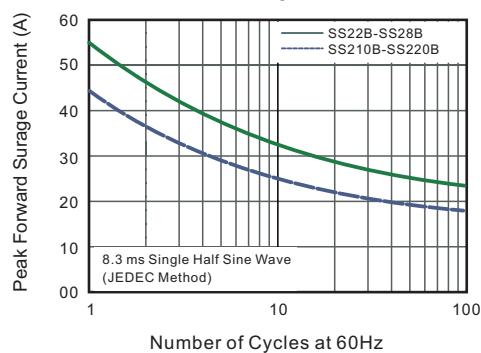
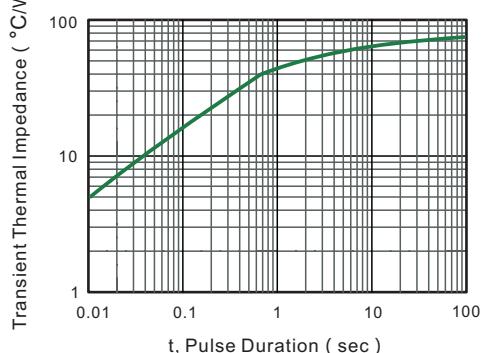


Fig.6- Typical Transient Thermal Impedance

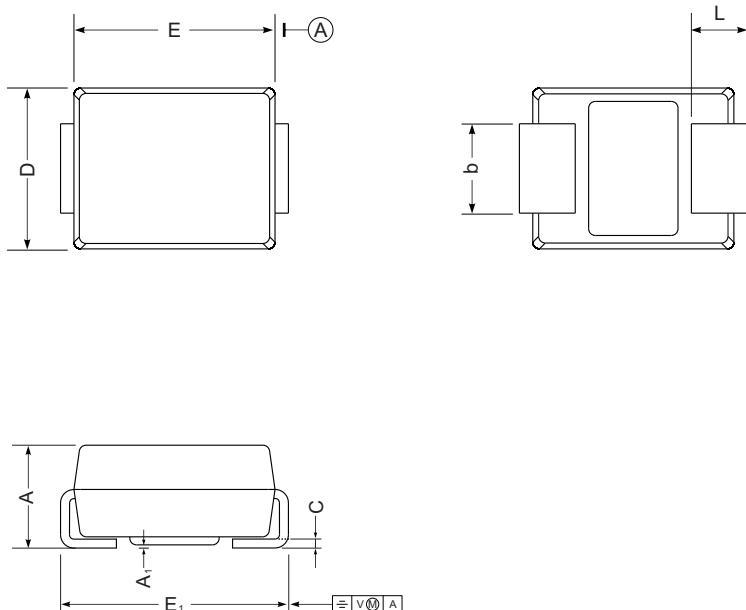




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

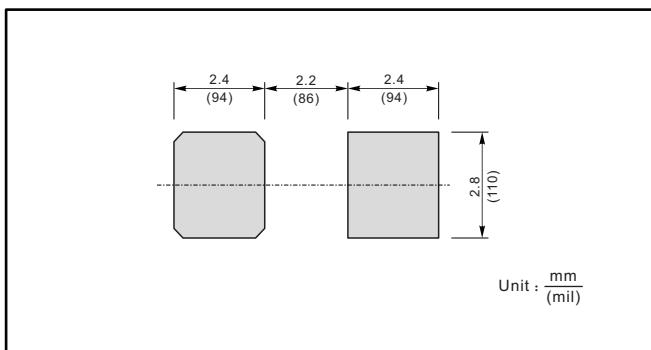
SMB



SMB mechanical data

| UNIT | | A | E | D | E_1 | A_1 | L | C | b |
|------|-----|------|------|------|-------|-------|-----|-------|-----|
| mm | max | 2.44 | 4.70 | 3.94 | 5.59 | 0.20 | 1.5 | 0.305 | 2.2 |
| | min | 2.13 | 4.06 | 3.3 | 5.08 | 0.05 | 0.8 | 0.152 | 1.9 |
| mil | max | 96 | 185 | 155 | 220 | 7.9 | 59 | 12 | 87 |
| | min | 84 | 160 | 130 | 200 | 2.0 | 32 | 6 | 75 |

The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| SS22B | SS22 |
| SS24B | SS24 |
| SS26B | SS26 |
| SS28B | SS28 |
| SS210B | SS210 |
| SS212B | SS212 |
| SS215B | SS215 |
| SS220B | SS220 |