



Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 40 to 200V

Forward Current - 10.0A

FEATURES

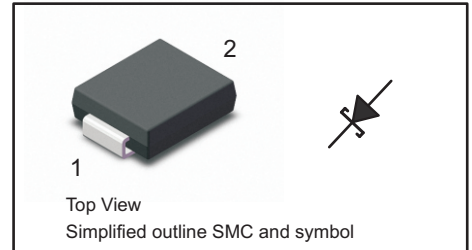
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz

PINNING

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



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 | SS1040C | SS1045C | SS1060C | SS10100C | SS10150C | SS10200C | Units |
|---|--|----------------|---------|---------|----------|----------|----------|------------------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 40 | 45 | 60 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V _{RMS} | 28 | 32 | 42 | 70 | 105 | 140 | V |
| Maximum DC Blocking Voltage | V _{DC} | 40 | 45 | 60 | 100 | 150 | 200 | V |
| Maximum Average Forward Rectified Current @ Fig.1 | I _{F(AV)} | 10 | | | | | | A |
| Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 150 | | | | | | A |
| Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 300 | | | | | | A |
| I ² t Rating for fusing (3ms≤t≤8.3ms) | I ² t | 93.3 | | | | | | A ² S |
| Max Instantaneous Forward Voltage at 10 A | V _F | 0.55 | | 0.75 | 0.85 | 0.90 | 0.92 | V |
| Maximum DC Reverse Current at Rated DC Reverse Voltage T _a = 25°C T _a =100°C | I _R | 0.5 50 | | | | | | mA |
| Typical Junction Capacitance ⁽¹⁾ | C _j | 445 | | 380 | 280 | | 165 | pF |
| Typical Thermal Resistance ⁽²⁾ | R _{θJA} R _{θJC} R _{θJL} | 37 10 13 | | | | | | °C/W |
| Operating Junction Temperature Range | T _j | -55 ~ +125 | | | | | | °C |
| Storage Temperature Range | T _{slg} | -55 ~ +150 | | | | | | °C |

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

(2) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.



Fig.1 Forward Current Derating Curve

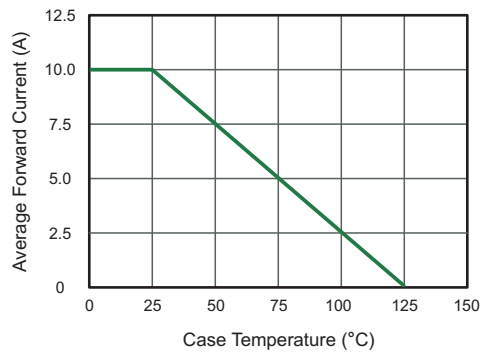


Fig.2 Typical Reverse Characteristics

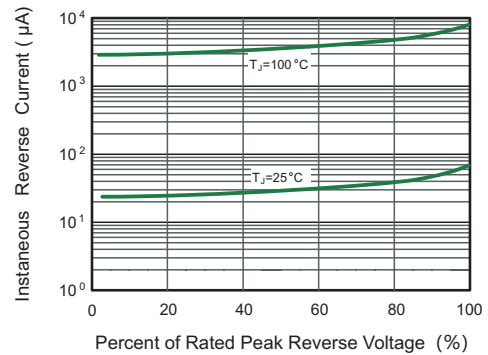


Fig.3 Typical Forward Characteristic

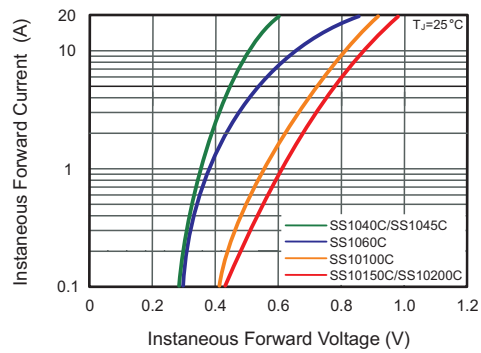


Fig.4 Typical Junction Capacitance

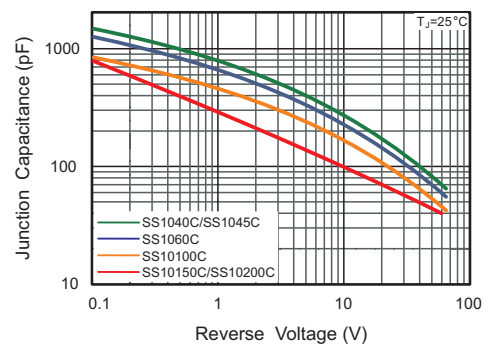
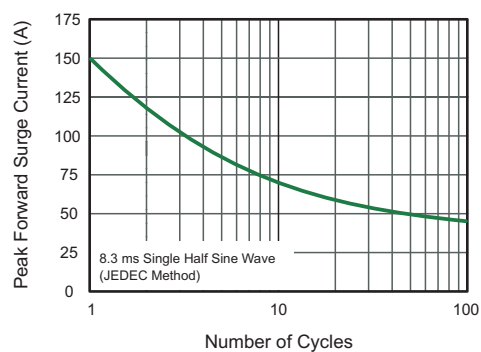


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

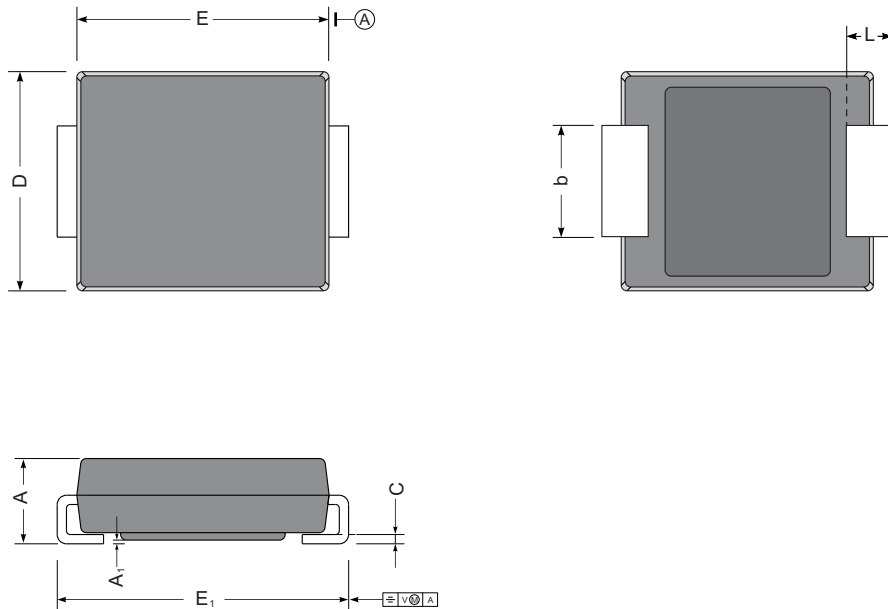




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

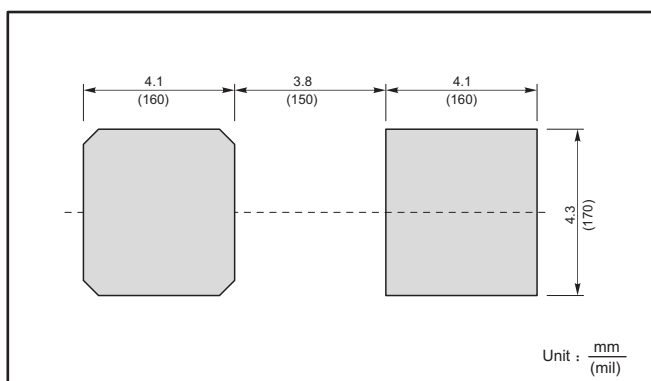
SMC



SMC mechanical data

| UNIT | | A | E | D | E ₁ | A ₁ | C | L | b |
|------|-----|------|-----|-----|----------------|----------------|------|-----|------|
| mm | max | 2.62 | 7.0 | 6.2 | 8.0 | 0.21 | 0.31 | 1.6 | 3.25 |
| | min | 2.00 | 6.5 | 5.6 | 7.6 | 0.05 | 0.15 | 0.9 | 2.75 |
| mil | max | 103 | 276 | 244 | 315 | 8.3 | 12 | 63 | 128 |
| | min | 79 | 256 | 220 | 299 | 2.0 | 5.9 | 35 | 108 |

The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| SS1040C | S1040 |
| SS1045C | S1045 |
| SS1060C | S1060 |
| SS10100C | S10100 |
| SS10150C | S10150 |
| SS10200C | S10200 |



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