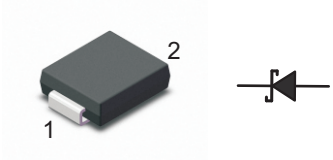
Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 20 to 200V
Forward Current - 5.0A

**PINNING**

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




Top View
Simplified outline SMC and symbol

## 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

### 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 | SS52 CA | SS54 CA | SS56 CA | SS58 CA | SS510 CA | SS512 CA | SS515 CA | SS520 CA | 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 @ Fig.1 | $I_{F(AV)}$ | 5 | | | | | | | | A |
| Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$ | 100 | | | | | | | | A |
| Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$ | 200 | | | | | | | | A |
| $I^2t$ Rating for fusing (3ms≤t≤8.3ms) | $I^2t$ | 41.5 | | | | | | | | $A^2S$ |
| Max Instantaneous Forward Voltage at 5 A | $V_F$ | 0.55 | | 0.70 | 0.85 | | 0.95 | | | V |
| Maximum DC Reverse Current $T_a$ = 25°C<br>at Rated DC Reverse Voltage $T_a$ =100°C | $I_R$ | 1<br>50 | | | | | | | | mA |
| Typical Junction Capacitance (1) | $C_j$ | 200 | | 160 | 125 | | 60 | | | pF |
| Typical Thermal Resistance (2) | $R_{\theta JA}$<br>$R_{\theta JC}$<br>$R_{\theta JL}$ | 37<br>10<br>13 | | | | | | | | °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 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.

**Fig.1 Forward Current Derating Curve**

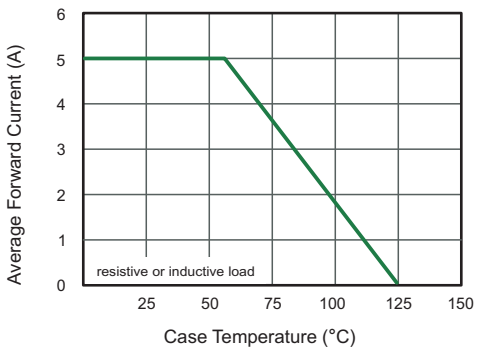



**Fig.2 Typical Reverse Characteristics**

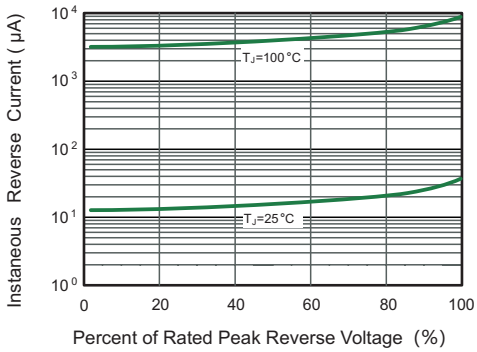



**Fig.3 Typical Forward Characteristic**

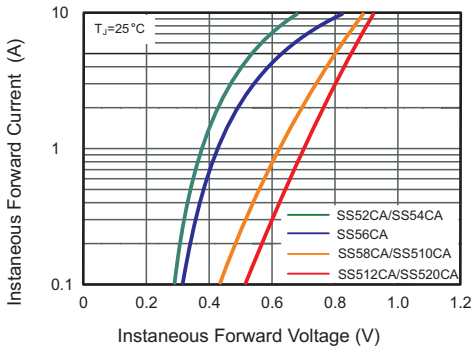



**Fig.4 Typical Junction Capacitance**

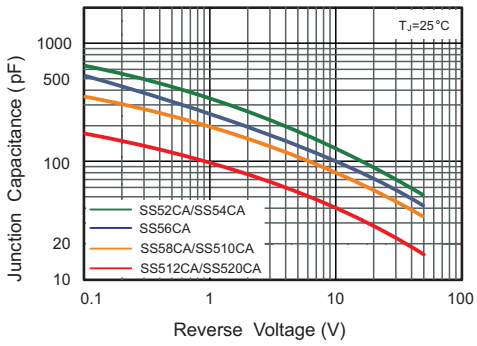
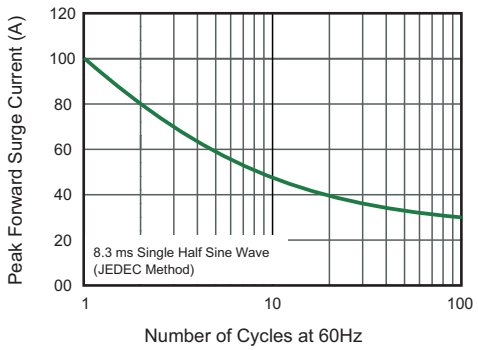
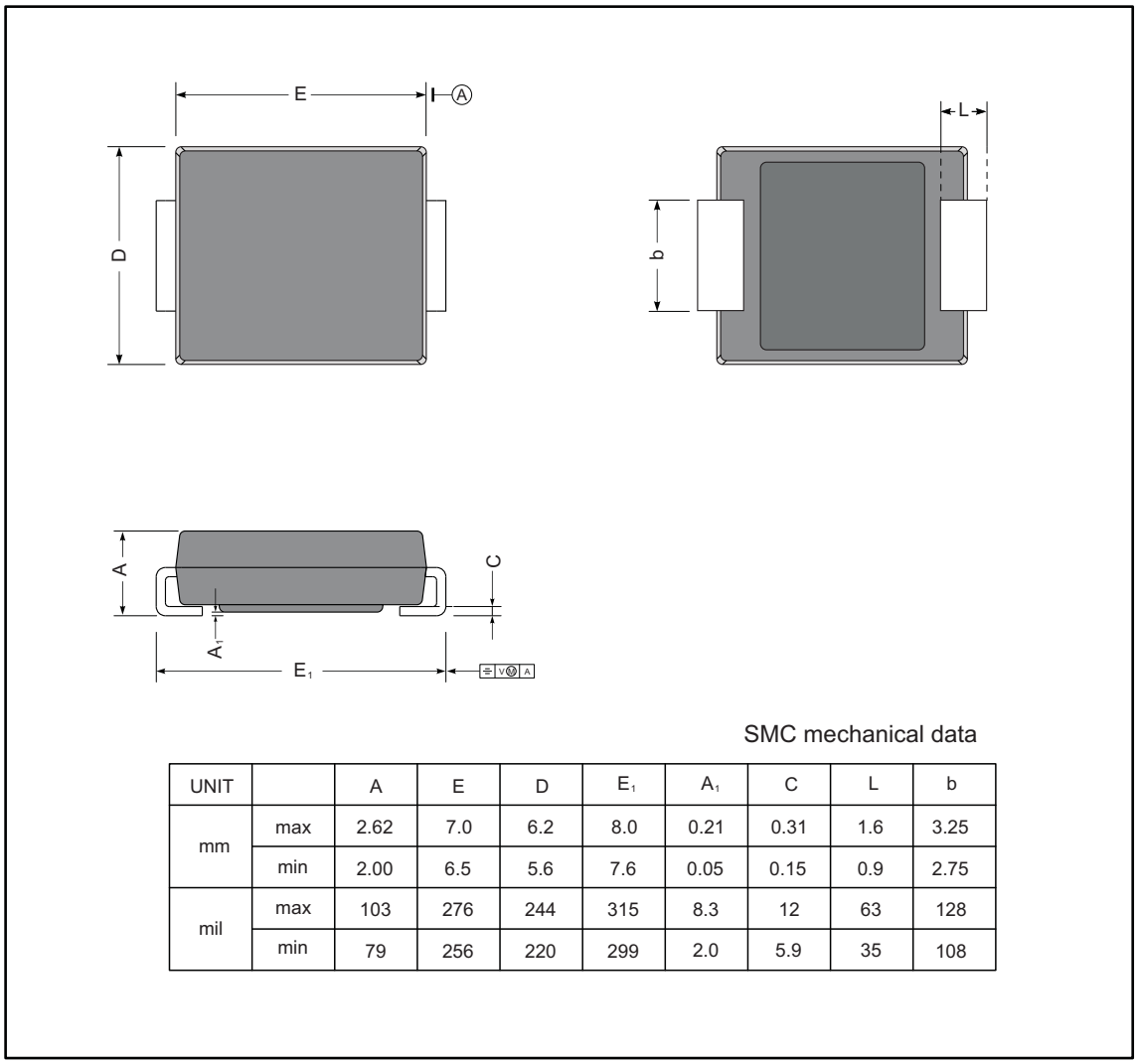



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



## PACKAGE OUTLINE

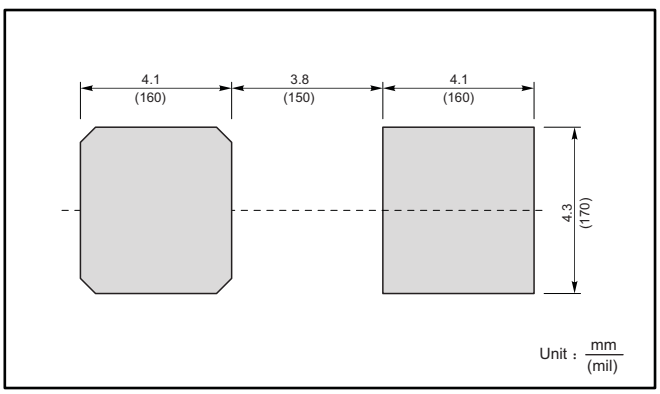
**Plastic surface mounted package; 2 leads** SMC




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 |
|---|---|
| SS52CA | SS52A |
| SS54CA | SS54A |
| SS56CA | SS56A |
| SS58CA | SS58A |
| SS510CA | SS510A |
| SS512CA | SS512A |
| SS515CA | SS515A |
| SS520CA | SS520A |

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