



# SS1045CG THRU SS10100CG

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 45 to 100V

Forward Current - 10.0A

## FEATURES

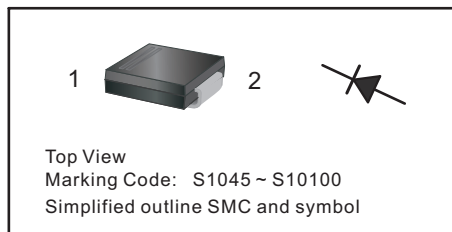
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## 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         | SS1045CG   | SS1060CG | SS10100CG | Units         |
|----------------------------------------------------------------------------------------------------|-----------------|------------|----------|-----------|---------------|
| Maximum Repetitive Peak Reverse Voltage                                                            | $V_{RRM}$       | 45         | 60       | 100       | V             |
| Maximum RMS voltage                                                                                | $V_{RMS}$       | 32         | 42       | 70        | V             |
| Maximum DC Blocking Voltage                                                                        | $V_{DC}$        | 45         | 60       | 100       | V             |
| Maximum Average Forward Rectified Current                                                          | $I_{F(AV)}$     | 10.0       |          |           | 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 @10.0 A                                                          | $V_F$           | 0.55       | 0.75     | 0.90      | V             |
| Maximum DC Reverse Current $T_j = 25^{\circ}C$<br>at Rated DC Reverse Voltage $T_j = 100^{\circ}C$ | $I_R$           | 0.5<br>50  |          |           | mA            |
| Typical Thermal Resistance                                                                         | $R_{\theta JA}$ | 20         |          |           | $^{\circ}C/W$ |
| Operating Junction Temperature Range                                                               | $T_j$           | -55 ~ +150 |          |           | $^{\circ}C$   |
| Storage Temperature Range                                                                          | $T_{stg}$       | -55 ~ +150 |          |           | $^{\circ}C$   |

( 1 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



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Fig.1 Forward Current Derating Curve

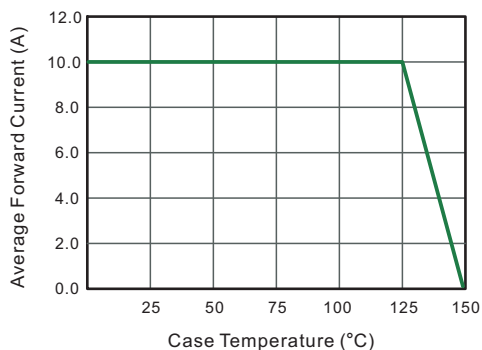


Fig.2 Typical Reverse Characteristics

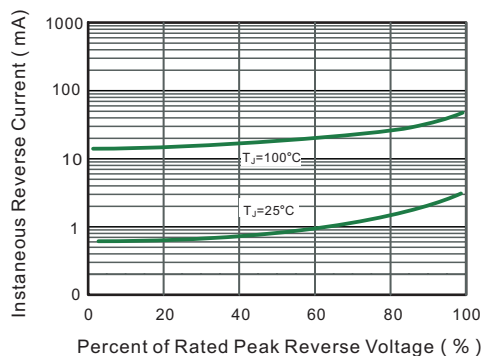


Fig.3 Typical Forward Characteristic

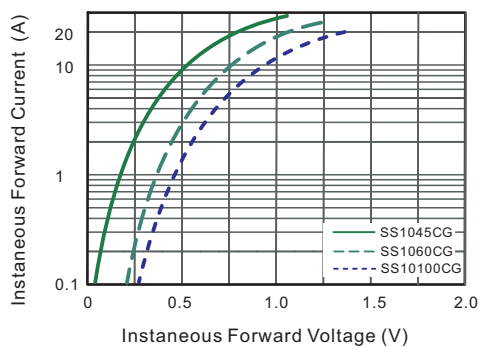


Fig.4- Typical Transient Thermal Impedance

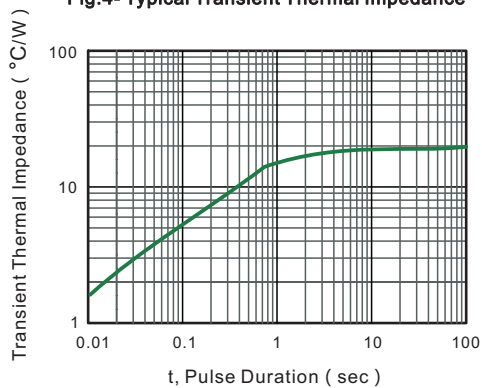
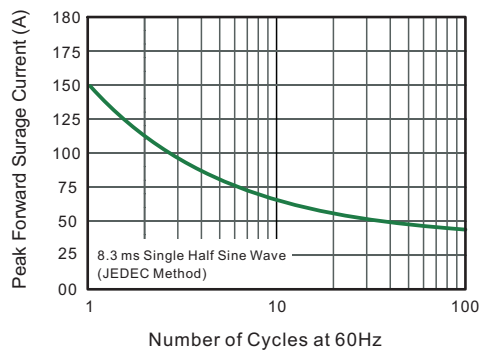


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



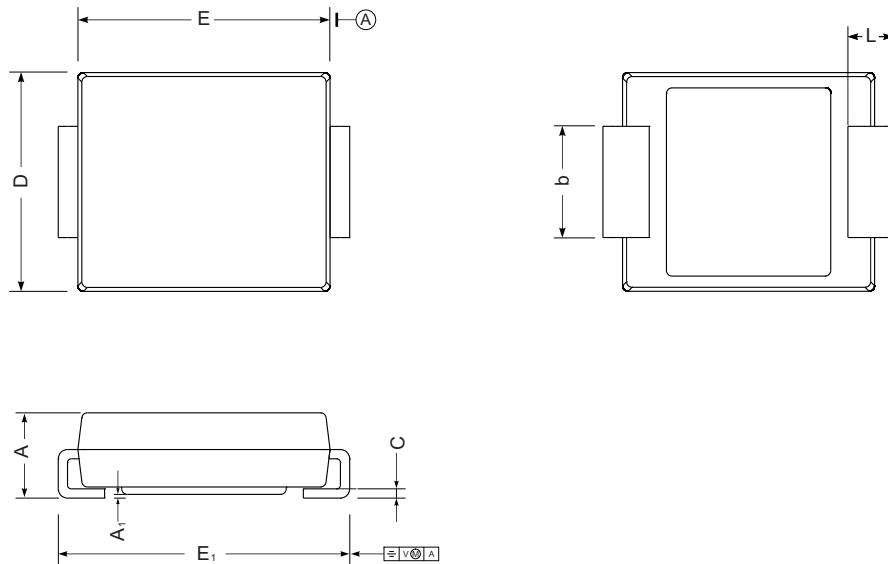


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## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

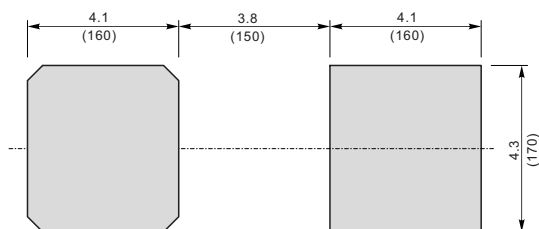
SMC



SMC mechanical data

| UNIT |     | A    | E   | D   | E <sub>1</sub> | A <sub>1</sub> | 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



Unit:  $\frac{\text{mm}}{(\text{mil})}$

## Marking

| Type number | Marking code |
|-------------|--------------|
| SS1045CG    | S1045        |
| SS1060CG    | S1060        |
| SS10100CG   | S10100       |