

Surface Mount Schottky Barrier Rectifier  
Reverse Voltage - 20 to 200 V Forward Current - 1.0A

## Features

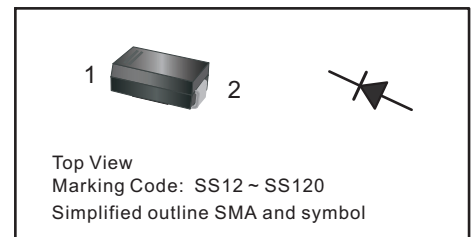
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 70mg / 0.0025oz

## 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         | SS12<br>G  | SS14<br>G | SS16<br>G | SS18<br>G | SS110<br>G | SS112<br>G | SS115<br>G | SS120<br>G | 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  | $I_{F(AV)}$     | 1.0        |           |           |           |            |            |            |            | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)            | $I_{FSM}$       | 25         |           |           |           |            |            |            |            | A     |
| Max Instantaneous Forward Voltage at 1 A   | $V_F$           | 0.55       |           | 0.70      |           | 0.85       |            | 0.90       |            | V     |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$<br>at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$ | $I_R$           | 0.3<br>10  |           |           | 0.2<br>5  |            |            | 0.1<br>2   |            | mA    |
| Typical Junction Capacitance <sup>(1)</sup>  | $C_j$           | 110        |           |           | 80        |            |            |            |            | pF    |
| Typical Thermal Resistance <sup>(2)</sup>  | $R_{\theta JA}$ | 90         |           |           |           |            |            |            |            | °C/W  |
| Operating Junction Temperature Range   | $T_j$           | -55 ~ +125 |           |           |           |            |            |            |            | °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

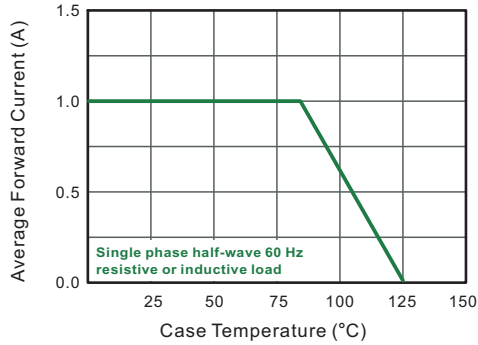


Fig.2 Typical Reverse Characteristics

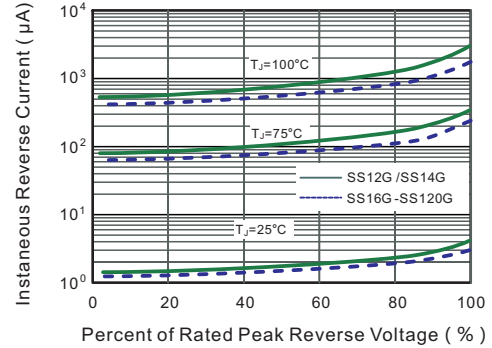


Fig.3 Typical Forward Characteristic

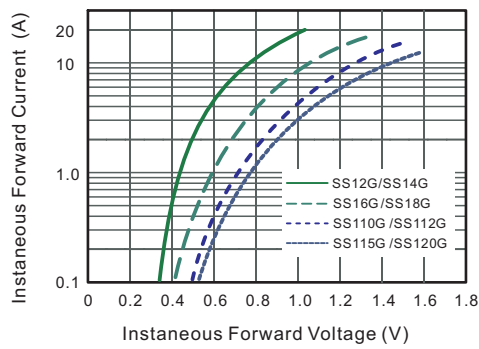


Fig.4 Typical Junction Capacitance

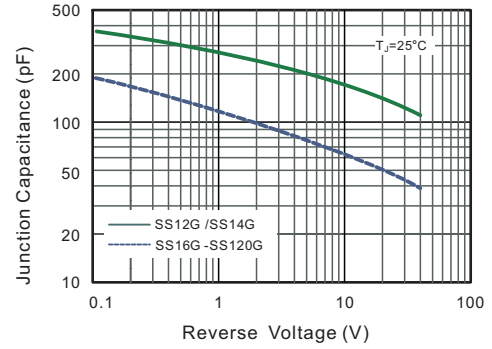


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

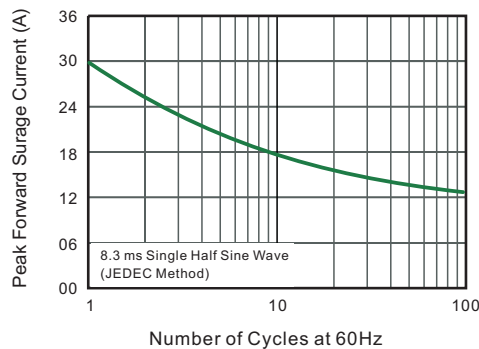
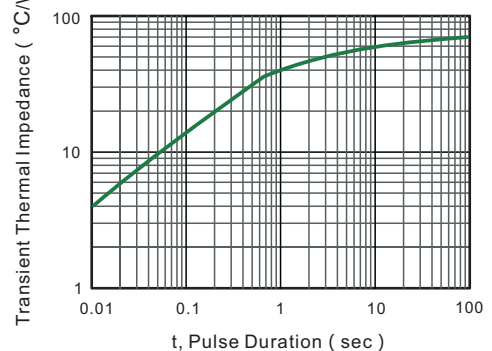


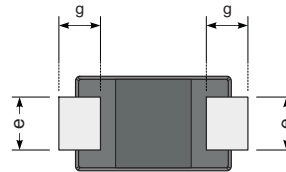
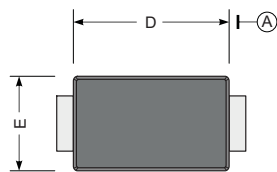
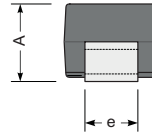
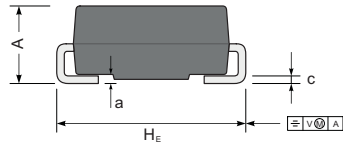
Fig.6- Typical Transient Thermal Impedance



## PACKAGE OUTLINE

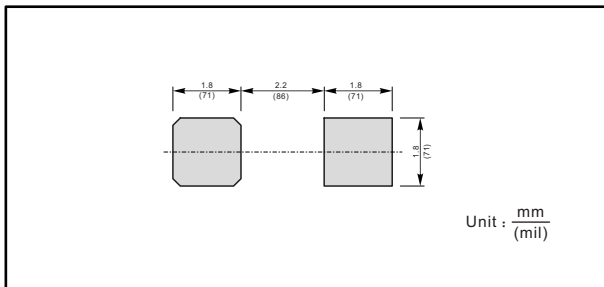
Plastic surface mounted package; 2 leads

SMA



| UNIT |     | A   | D   | E   | H <sub>E</sub> | c    | e   | g   | a   |
|------|-----|-----|-----|-----|----------------|------|-----|-----|-----|
| mm   | max | 2.2 | 4.5 | 2.7 | 5.2            | 0.31 | 1.6 | 1.5 | 0.3 |
|      | min | 1.9 | 4.0 | 2.3 | 4.7            | 0.15 | 1.3 | 0.9 |     |
| mil  | max | 87  | 181 | 106 | 205            | 12   | 63  | 59  | 12  |
|      | min | 75  | 157 | 91  | 185            | 6    | 51  | 35  |     |

### The recommended mounting pad size



### Marking

| Type number | Marking code |
|-------------|--------------|
| SS12G       | SS12         |
| SS14G       | SS14         |
| SS16G       | SS16         |
| SS18G       | SS18         |
| SS110G      | SS110        |
| SS112G      | SS112        |
| SS115G      | SS115        |
| SS120G      | SS120        |

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