

Surface Mount Schottky Barrier Rectifier

Reverse Voltage -20V to 200V

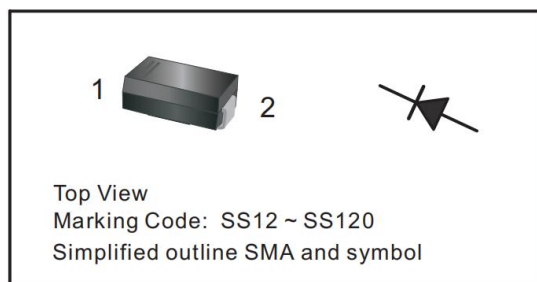
Forward Current -1.0A

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

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 | | Symbol | SS 12G | SS 14G | SS 16G | SS 18G | SS 110G | SS 112G | SS 115G | SS 120G | Unit |
|---|-----------------------|--------------------|----------|--------|--------|--------|---------|---------|---------|---------|------------------|
| 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 |
| Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed On Rated Load(JEDEC method) | | I _{FSM} | 50 | | | | | | | | A |
| I ² t Rating for fusing (3ms≤8.3ms) | | I ² t | 2.6 | | | | | | | | A ² S |
| Max Instantaneous Forward Voltage at 1A | | V _F | 0.55 | | 0.70 | 0.85 | | | | 0.90 | V |
| Maximum DC Reverse Current at Rated DC Reverse Voltage | T _a = 25°C | I _R | 0.3 | | | 0.2 | | 0.1 | | | mA |
| | T _a =100°C | | 10 | | | 5 | | 2 | | | |
| Typical Junction Capacitance ⁽¹⁾ | | C _j | 55 | 41 | 33 | 32 | | 19 | | 16 | pF |
| Typical Thermal Resistance ⁽²⁾ | | R _{θJA} | 100 | | | | | | | | °C/W |
| | | R _{θJC} | 20 | | | | | | | | |
| | | R _{θJL} | 25 | | | | | | | | |
| 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 4V D.C

(2) P.C.B. mounted with 2.0"x2.0" (5x5cm) copper pad areas

Typical Characteristics

Fig.1 Forward Current Derating Curve

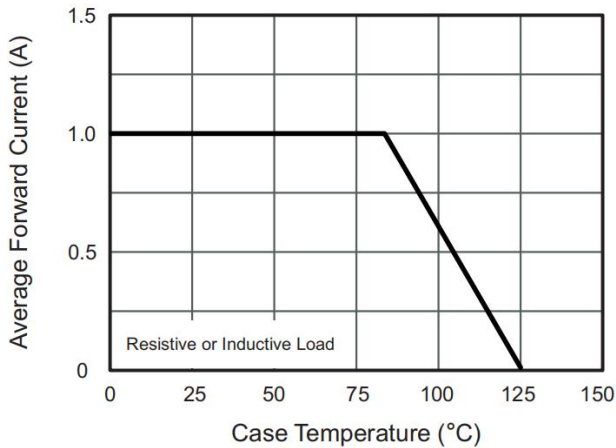


Fig.2 Typical Reverse Characteristics

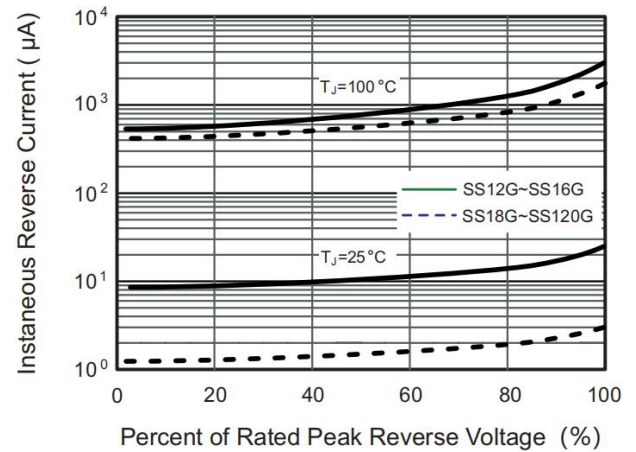


Fig.3 Typical Forward Characteristic

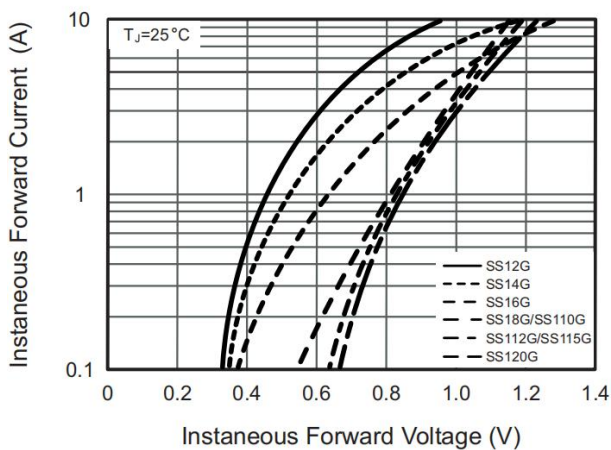


Fig.4 Typical Junction Capacitance

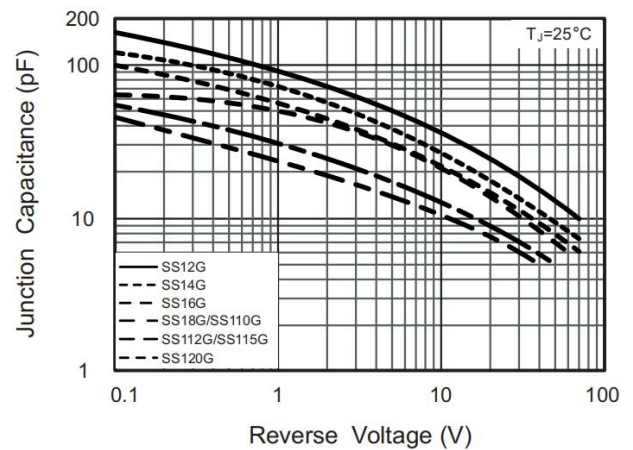
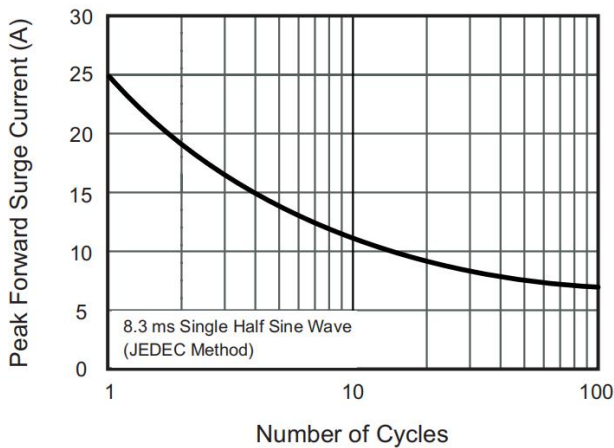


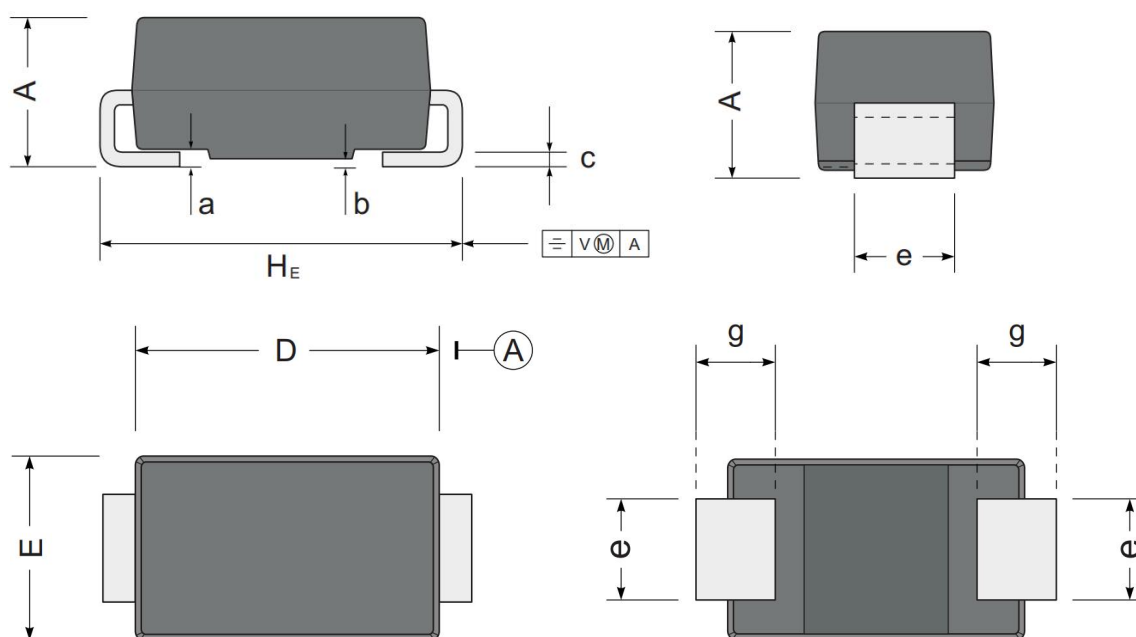
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Information

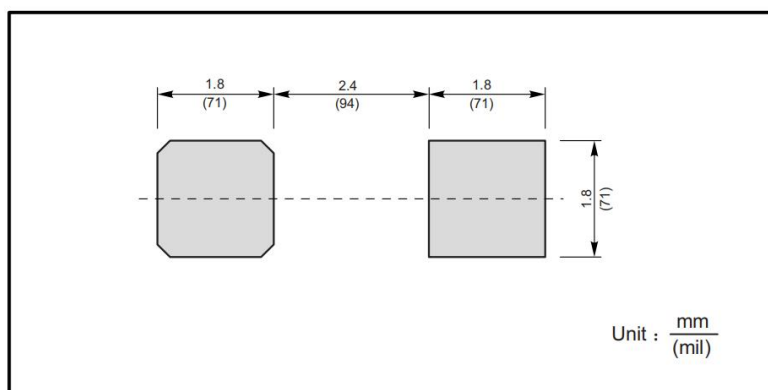
SMA

Dimensions in mm



| UNIT | | A | D | E | H _E | c | e | g | b | a |
|------|-----|-----|-----|-----|----------------|------|-----|-----|------|-----|
| mm | max | 2.2 | 4.5 | 2.7 | 5.2 | 0.31 | 1.6 | 1.5 | 0.2 | 0.3 |
| | min | 1.9 | 4.0 | 2.3 | 4.7 | 0.15 | 1.3 | 0.9 | 0.05 | |
| mil | max | 87 | 181 | 106 | 205 | 12 | 63 | 59 | 7.9 | 12 |
| | min | 75 | 157 | 91 | 185 | 6 | 51 | 35 | 2 | |

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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