



# SS32G THRU SS320G

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage -20V to 200V

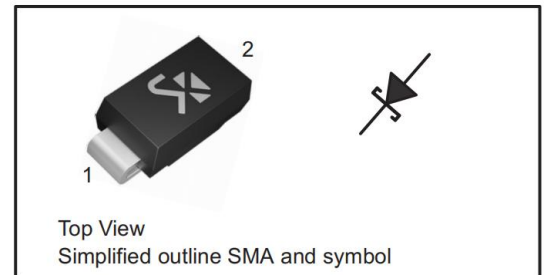
Forward Current -3.0A

### 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<br>32G | SS<br>34G | SS<br>345G | SS<br>36G | SS<br>38G | SS<br>310G | SS<br>312G | SS<br>315G | SS<br>320G | Unit             |
|-------------------------------------------------------------------------------------------------------|----------------------|--------------------|-----------|-----------|------------|-----------|-----------|------------|------------|------------|------------|------------------|
| Maximum Repetitive Peak Reverse Voltage                                                               |                      | V <sub>RRM</sub>   | 20        | 40        | 45         | 60        | 80        | 100        | 120        | 150        | 200        | V                |
| Maximum RMS Voltage                                                                                   |                      | V <sub>RMS</sub>   | 14        | 28        | 32         | 42        | 56        | 70         | 84         | 105        | 140        | V                |
| Maximum DC Blocking Voltage                                                                           |                      | V <sub>DC</sub>    | 20        | 40        | 45         | 60        | 80        | 100        | 120        | 150        | 200        | V                |
| Maximum Average Forward Rectified Current@Fig.1                                                       |                      | I <sub>F(AV)</sub> | 3.0       |           |            |           |           |            |            |            |            | A                |
| Peak Forward Surge Current,8.3ms<br>Single Half Sine-wave Superimposed<br>On Rated Load(JEDEC method) |                      | I <sub>FSM</sub>   | 80        |           |            |           |           |            |            |            |            | A                |
| Peak Forward Surge Current,1.0ms<br>Single Half Sine-wave Superimposed<br>On Rated Load(JEDEC method) |                      | I <sub>FSM</sub>   | 160       |           |            |           |           |            |            |            |            | A                |
| I <sup>2</sup> t Rating for fusing (3ms≤8.3ms)                                                        |                      | I <sup>2</sup> t   | 26.5      |           |            |           |           |            |            |            |            | A <sup>2</sup> S |
| Max Instantaneous Forward Voltage at 3A                                                               |                      | V <sub>F</sub>     | 0.55      |           |            | 0.70      | 0.85      |            | 0.95       |            |            | V                |
| Maximum DC Reverse Current<br>at Rated DC Reverse Voltage                                             | T <sub>a</sub> = 25℃ | I <sub>R</sub>     | 0.5       |           |            |           | 0.3       |            |            |            |            | mA               |
|                                                                                                       | T <sub>a</sub> =100℃ |                    | 5         |           |            |           | 3         |            |            |            |            |                  |
| Typical Junction Capacitance <sup>(1)</sup>                                                           |                      | C <sub>j</sub>     | 135       |           |            | 107       | 83        |            | 68         |            | 50         | pF               |
| Typical Thermal Resistance <sup>(2)</sup>                                                             |                      | R <sub>θJA</sub>   | 100       |           |            |           |           |            |            |            |            | ℃/W              |
|                                                                                                       |                      | R <sub>θJC</sub>   | 20        |           |            |           |           |            |            |            |            |                  |
|                                                                                                       |                      | R <sub>θJL</sub>   | 25        |           |            |           |           |            |            |            |            |                  |
| Operating Junction Temperature Range                                                                  |                      | T <sub>j</sub>     | -55~+125  |           |            |           |           |            |            |            |            | ℃                |
| Storage Temperature Range                                                                             |                      | T <sub>stg</sub>   | -55~+150  |           |            |           |           |            |            |            |            | ℃                |

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

(2) P.C.B. mounted with 0.2"x0.2" (5x5mm) copper pad areas



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## Typical Characteristics

Fig.1 Forward Current Derating Curve

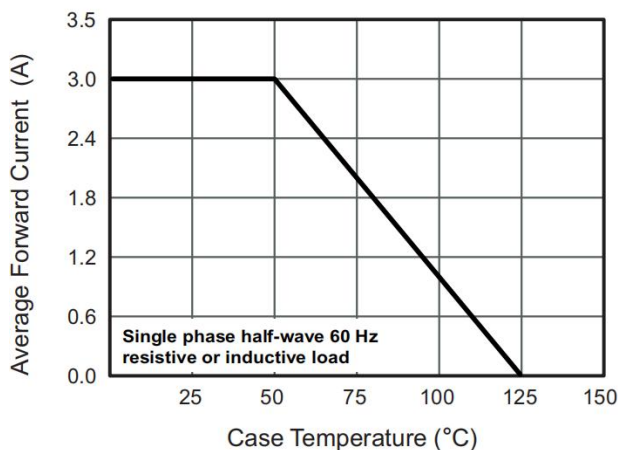


Fig.2 Typical Reverse Characteristics

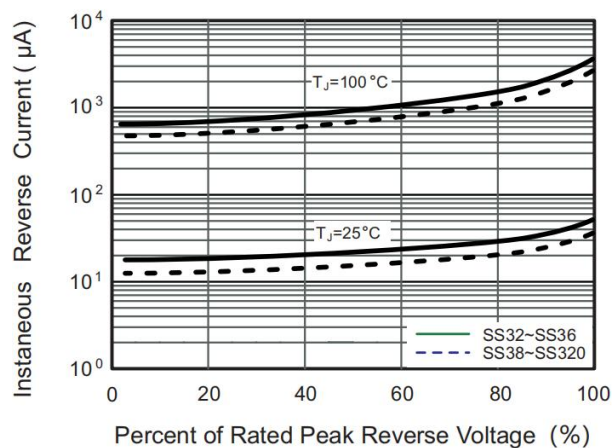


Fig.3 Typical Forward Characteristic

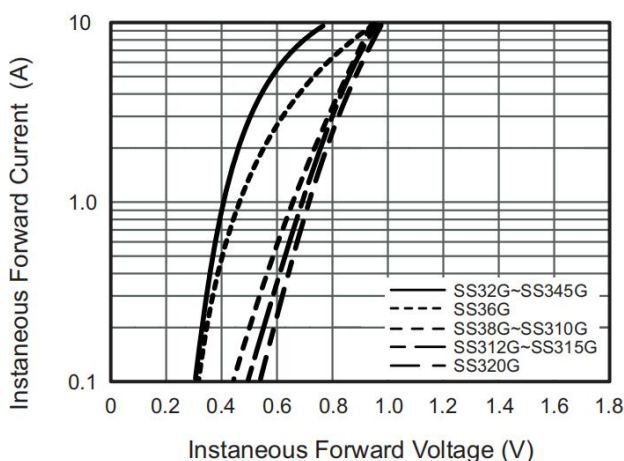


Fig.4 Typical Junction Capacitance

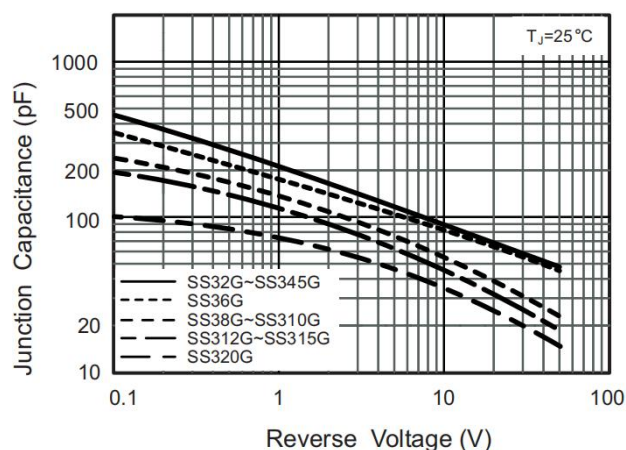
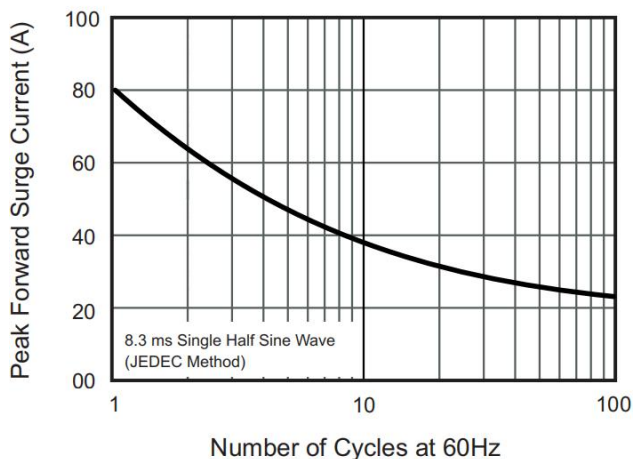


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



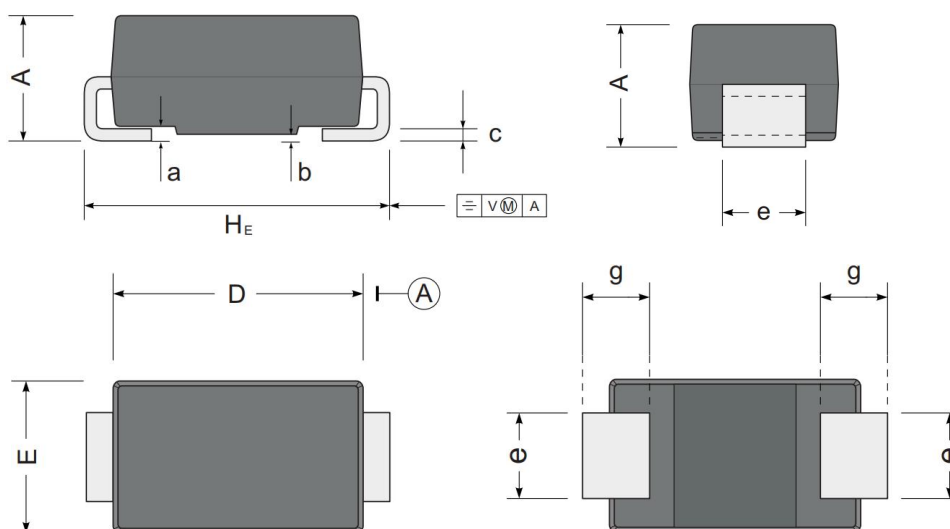


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## Package Information

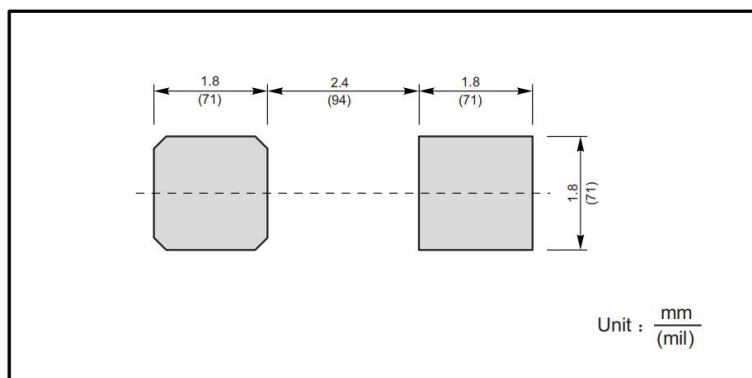
### SMA

### Dimensions in mm



| UNIT |     | A   | D   | E   | H <sub>E</sub> | 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 |
|-------------|--------------|
| SS32G       | SS32         |
| SS34G       | SS34         |
| SS345G      | SS345        |
| SS36G       | SS36         |
| SS38G       | SS38         |
| SS310G      | SS310        |
| SS312G      | SS312        |
| SS315G      | SS315        |
| SS320G      | SS320        |



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