



# SS52G THRU SS520G

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage -20V to 200V Forward Current -5.0A

### Features

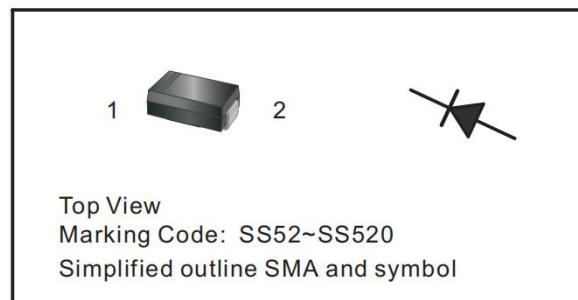
- Metal silicon junction,majority carrier conduction
- For surface mounted applications
- Low power loss,high efficiency
- High forward surge current capability
- For use in low voltage,high frequency inverters, free wheeling,and polarity protection applications

### MECHANICAL DATA

- Case : SMA
- Terminals : Solderable per MIL-STD-750,Method 2026
- Approx.Weight : 60mg/0.0021oz

### 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 52G          | SS 54G | SS 56G | SS 58G | SS 510G | SS 512G | SS 515G | SS 520G | Unit |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|--------|--------|--------|---------|---------|---------|---------|------|
| Maximum Repetitive Peak Reverse Voltage                                                             | V <sub>RRM</sub>                                         | 20              | 40     | 60     | 80     | 100     | 120     | 150     | 200     | V    |
| Maximum RMS Voltage                                                                                 | V <sub>RMS</sub>                                         | 14              | 28     | 42     | 56     | 70      | 84      | 105     | 140     | V    |
| Maximum DC Blocking Voltage                                                                         | V <sub>DC</sub>                                          | 20              | 40     | 60     | 80     | 100     | 120     | 150     | 200     | V    |
| Maximum Average Forward Rectified Current                                                           | I <sub>F(AV)</sub>                                       | 5.0             |        |        |        |         |         |         |         | A    |
| Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed On Rated Load(JEDEC method)     | I <sub>FSM</sub>                                         | 120             |        |        |        |         |         |         |         | A    |
| Max Instantaneous Forward Voltage at 5A                                                             | V <sub>F</sub>                                           | 0.55            |        | 0.70   | 0.85   |         | 0.95    |         |         | V    |
| Maximum DC Reverse Current T <sub>a</sub> = 25°C at Rated DC Reverse Voltage T <sub>a</sub> = 100°C | I <sub>R</sub>                                           | 1.0<br>50       |        |        |        |         |         |         |         | mA   |
| Typical Junction Capacitance <sup>(1)</sup>                                                         | C <sub>j</sub>                                           | 270             |        | 220    | 160    |         | 100     |         | 80      | pF   |
| Typical Thermal Resistance <sup>(2)</sup>                                                           | R <sub>θJA</sub><br>R <sub>θJC</sub><br>R <sub>θJL</sub> | 100<br>20<br>25 |        |        |        |         |         |         |         | °C/W |
| Operating Junction Temperature Range                                                                | T <sub>j</sub>                                           | -55~+125        |        |        |        |         |         |         |         | °C   |
| Storage Temperature Range                                                                           | T <sub>stg</sub>                                         | -55~+150        |        |        |        |         |         |         |         | °C   |

(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

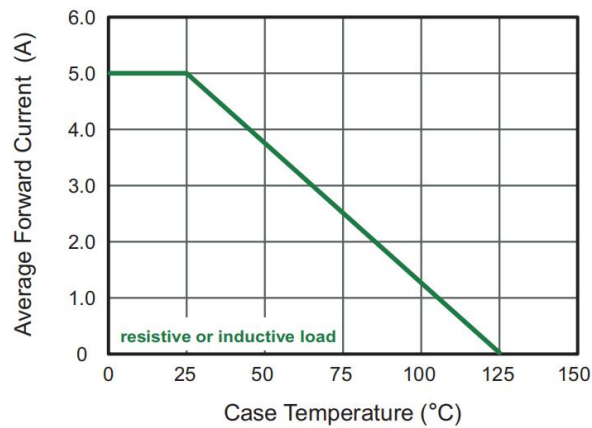


Fig.2 Typical Reverse Characteristics

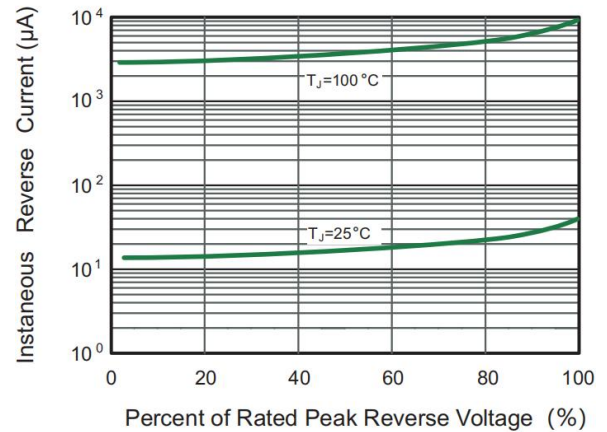


Fig.3 Typical Forward Characteristic

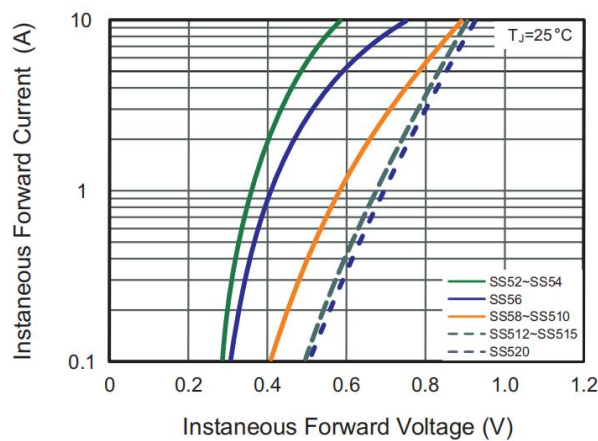


Fig.4 Typical Junction Capacitance

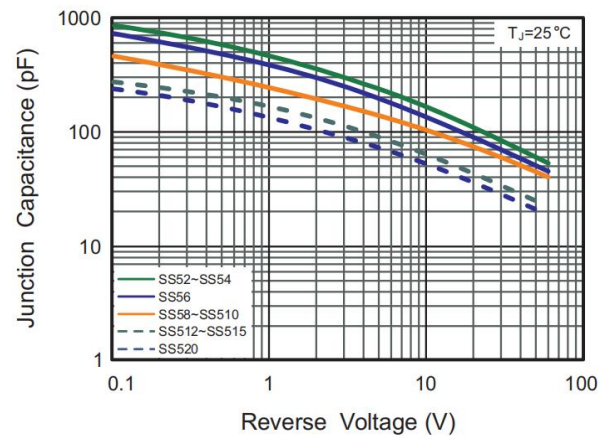
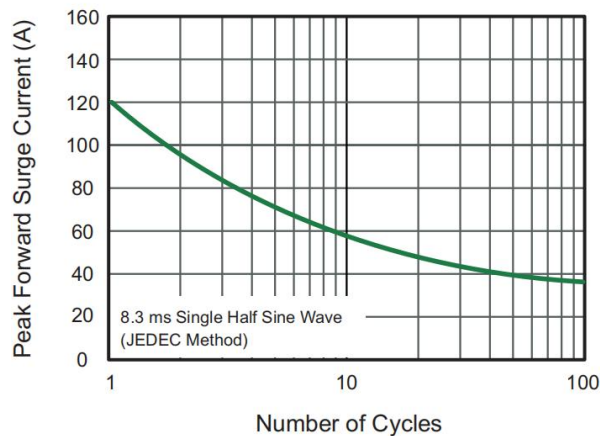


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



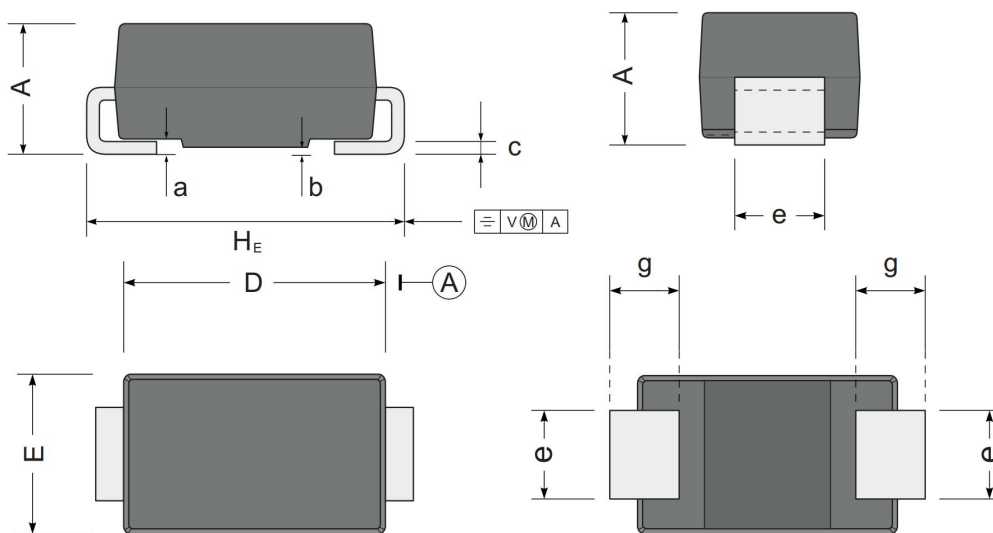


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## Package Information

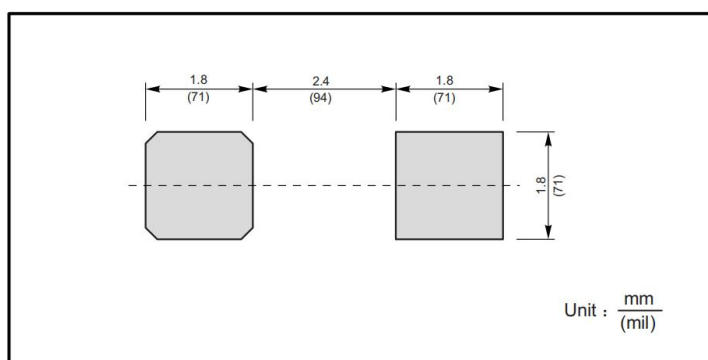
### SMA

### 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 |
|-------------|--------------|
| SS52G       | SS52         |
| SS54G       | SS54         |
| SS56G       | SS56         |
| SS58G       | SS58         |
| SS510G      | SS510        |
| SS512G      | SS512        |
| SS515G      | SS515        |
| SS520G      | SS520        |