



# SS22F THRU SS220F

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage -20V to 200V

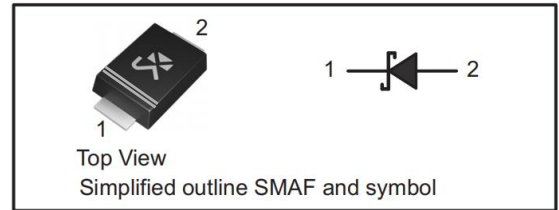
Forward Current -2.0A

### 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>22F | SS<br>24F | SS<br>245F | SS<br>26F | SS<br>28F | SS<br>210F | SS<br>212F | SS<br>215F | SS<br>220F | 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> | 2.0       |           |            |           |           |            |            |            |            | A    |
| Peak Forward Surge Current,8.3ms<br>Single Half Sine-wave Superimposed<br>On Rated Load(JEDEC method) |                       | I <sub>FSM</sub>   | 50        |           |            |           |           |            |            |            |            | A    |
| Peak Forward Surge Current,1.0ms<br>Single Half Sine-wave Superimposed<br>On Rated Load(JEDEC method) |                       | I <sub>FSM</sub>   | 100       |           |            |           |           |            |            |            |            | A    |
| I²t Rating for fusing (3ms≤8.3ms)                                                                     |                       | I²t                | 10.3      |           |            |           |           |            |            |            |            | A²S  |
| Max Instantaneous Forward Voltage at 2A                                                               |                       | 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°C | I <sub>R</sub>     | 0.5       |           |            |           | 0.3       |            |            |            |            | mA   |
|                                                                                                       | T <sub>a</sub> =100°C |                    | 5         |           |            |           | 3         |            |            |            |            |      |
| Typical Junction Capacitance <sup>(1)</sup>                                                           |                       | C <sub>j</sub>     | 93        |           |            | 70        | 53        |            | 40         |            | 35         | pF   |
| Typical Thermal Resistance <sup>(2)</sup>                                                             |                       | R <sub>θJA</sub>   | 100       |           |            |           |           |            |            |            |            | °C/W |
|                                                                                                       |                       | R <sub>θJC</sub>   | 20        |           |            |           |           |            |            |            |            |      |
|                                                                                                       |                       | R <sub>θJL</sub>   | 30        |           |            |           |           |            |            |            |            |      |
| 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"(5×5mm) copper pad areas



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## Typical Characteristics

Fig.1 Forward Current Derating Curve

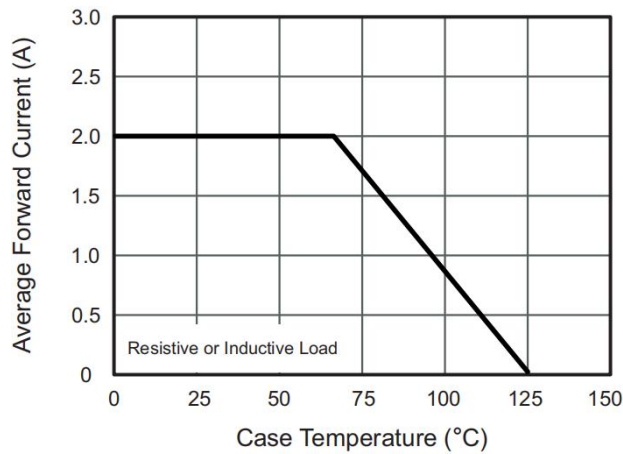


Fig.2 Typical Reverse Characteristics

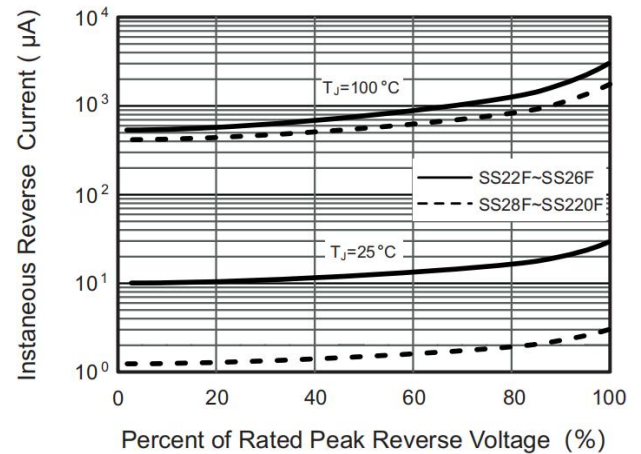


Fig.3 Typical Forward Characteristic

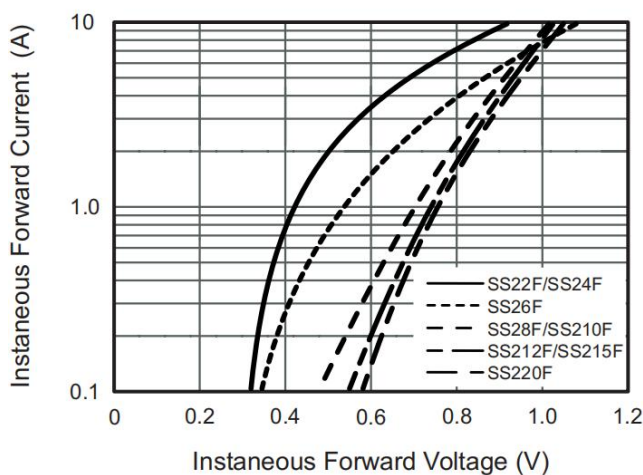


Fig.4 Typical Junction Capacitance

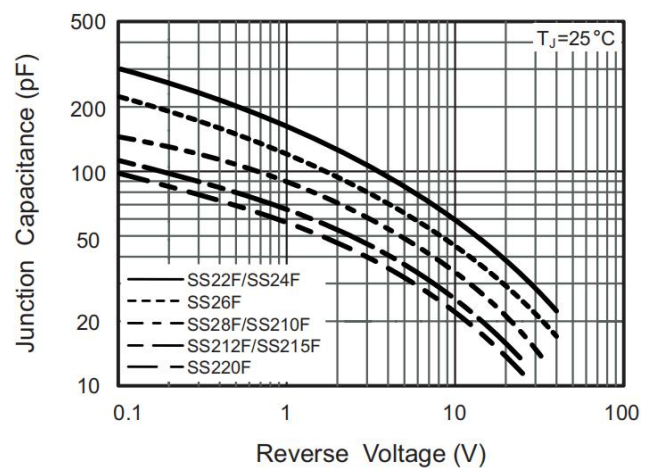
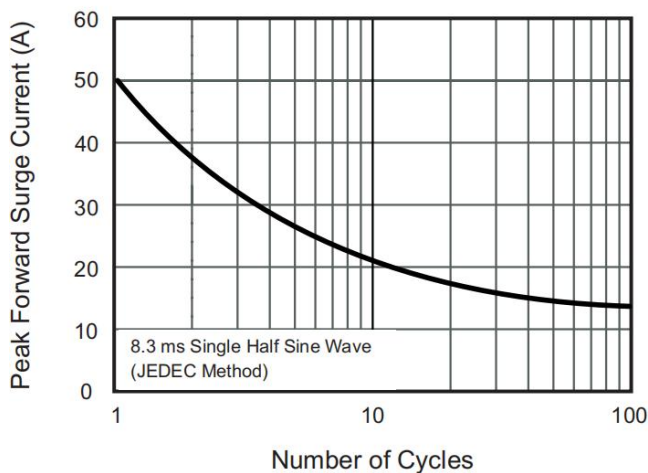


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



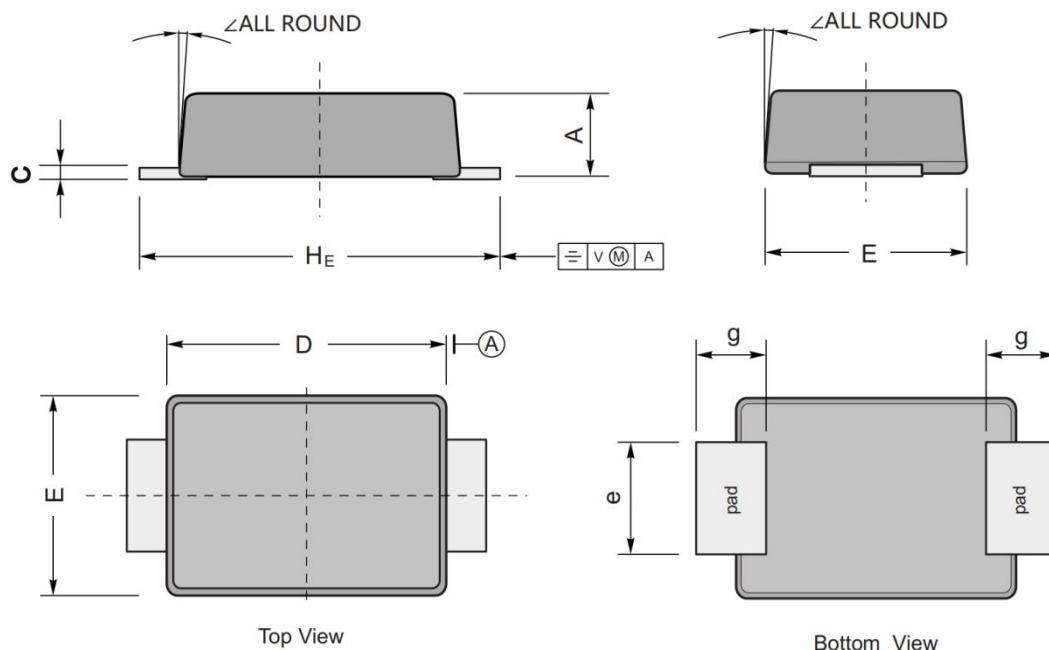


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## Package Information

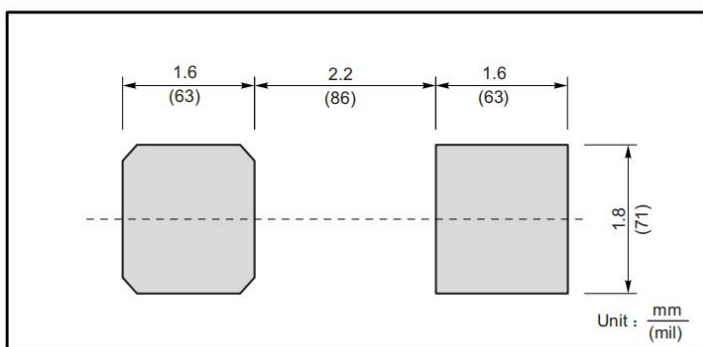
### SMAF

### Dimensions in mm



| UNIT |     | A   | C    | D   | E   | e   | g   | H <sub>E</sub> | ∠  |
|------|-----|-----|------|-----|-----|-----|-----|----------------|----|
| mm   | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9            | 7° |
|      | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4            |    |
| mil  | max | 47  | 7.9  | 146 | 106 | 63  | 47  | 193            |    |
|      | min | 35  | 4.7  | 130 | 94  | 51  | 31  | 173            |    |

### The recommended mounting pad size



### Marking

| Type number | Marking code |
|-------------|--------------|
| SS22F       | SS22         |
| SS24F       | SS24         |
| SS245F      | SS245        |
| SS26F       | SS26         |
| SS28F       | SS28         |
| SS210F      | SS210        |
| SS212F      | SS212        |
| SS215F      | SS215        |
| SS220F      | SS220        |



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