

Reverse Voltage - 20 to 200 V

Forward Current - 5.0A

### Features

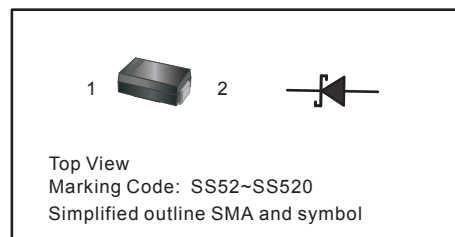
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### 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

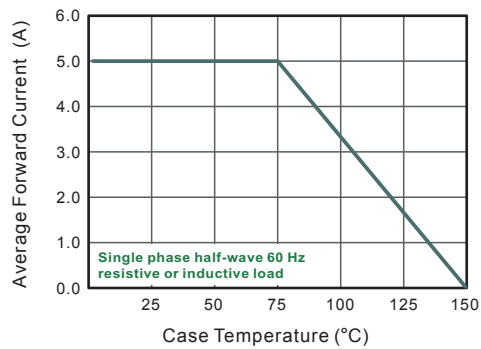
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

| Parameter                                                                                                 | Symbols            | SS52       | SS54 | SS56 | SS58 | SS510 | SS512 | SS515 | SS520 | Units |
|-----------------------------------------------------------------------------------------------------------|--------------------|------------|------|------|------|-------|-------|-------|-------|-------|
| 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<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method)    | I <sub>FSM</sub>   | 120        |      |      |      |       |       |       |       | A     |
| Max Instantaneous Forward Voltage at 5 A                                                                  | V <sub>F</sub>     | 0.55       |      | 0.70 |      | 0.85  |       |       |       | V     |
| Maximum DC Reverse Current   T <sub>a</sub> = 25°C<br>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>     | 500        |      | 300  |      |       |       |       |       | pF    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                 | R <sub>θJA</sub>   | 60         |      |      |      |       |       |       |       | °C/W  |
| Operating Junction Temperature Range                                                                      | T <sub>j</sub>     | -55 ~ +150 |      |      |      |       |       |       |       | °C    |
| Storage Temperature Range                                                                                 | T <sub>stg</sub>   | -55 ~ +150 |      |      |      |       |       |       |       | °C    |

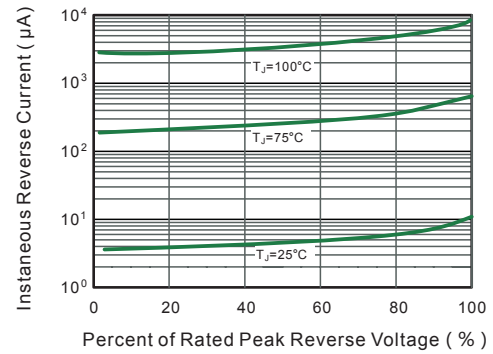
( 1 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

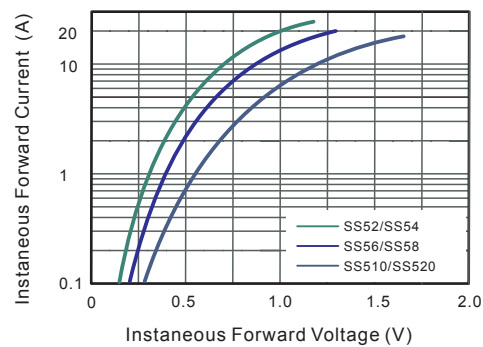
**Fig.1 Forward Current Derating Curve**



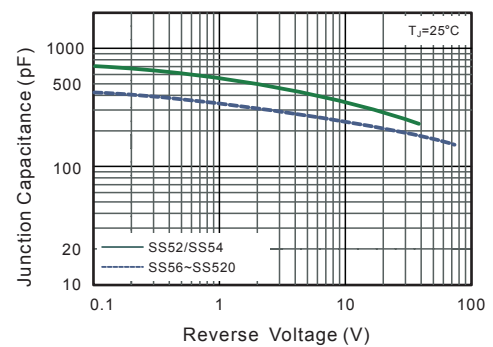
**Fig.2 Typical Reverse Characteristics**



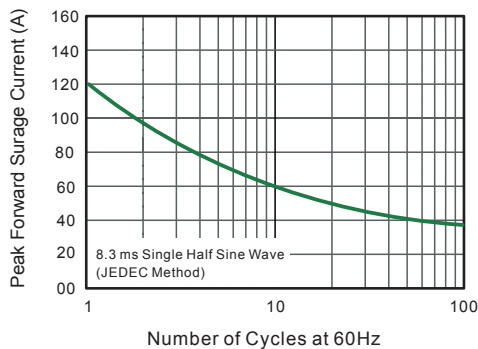
**Fig.3 Typical Forward Characteristic**



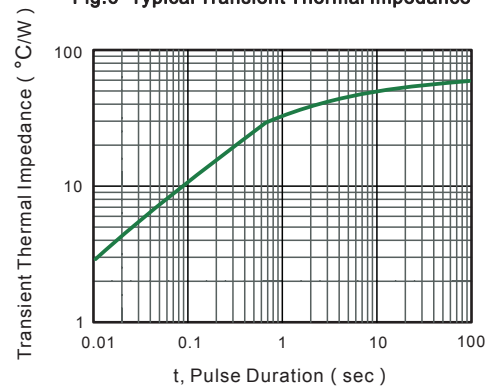
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

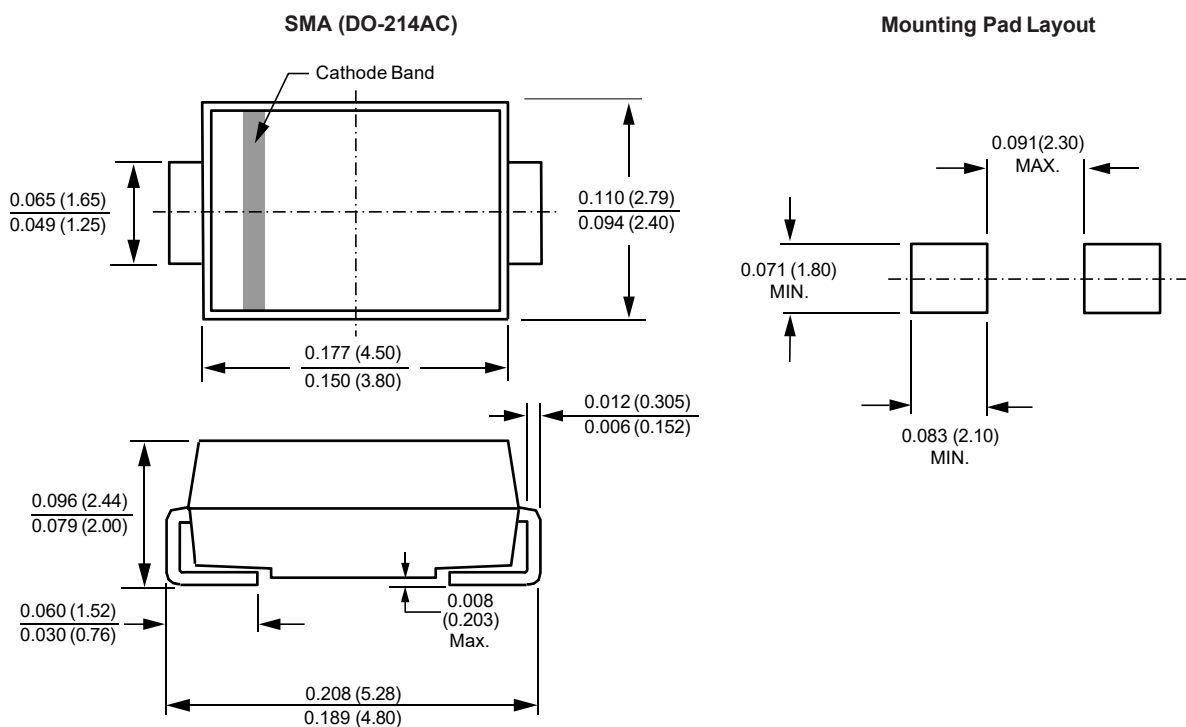


**Fig.6- Typical Transient Thermal Impedance**



### PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



### Ordering Information (Example)

| PREFERRED P/N   | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-----------------|----------------------|-------------------------|----------------------------|---------------|
| SS52 THRU SS520 | 5000                 | 10000                   | 80000                      | 13" reel      |

### Marking

| Type number | Marking code |
|-------------|--------------|
| SS52        | SS52         |
| SS54        | SS54         |
| SS56        | SS56         |
| SS58        | SS58         |
| SS510       | SS510        |
| SS512       | SS512        |
| SS515       | SS515        |
| SS520       | SS520        |