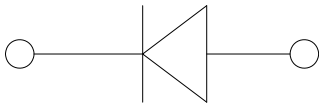
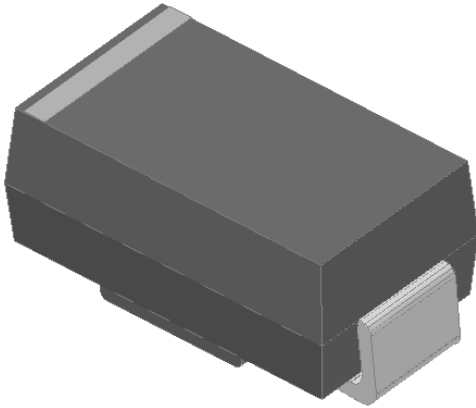


## Surface Mount Schottky Rectifier



## Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

## Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

## Mechanical Data

- **Package:** DO-214AC (SMA)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

## 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 | SS5150 | 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>   | 150        |      |      |      |       |       |        |       | 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.

# SS52A THRU SS520

## ■ Characteristics (Typical)

FIG1:  $I_o$ -TL Curve

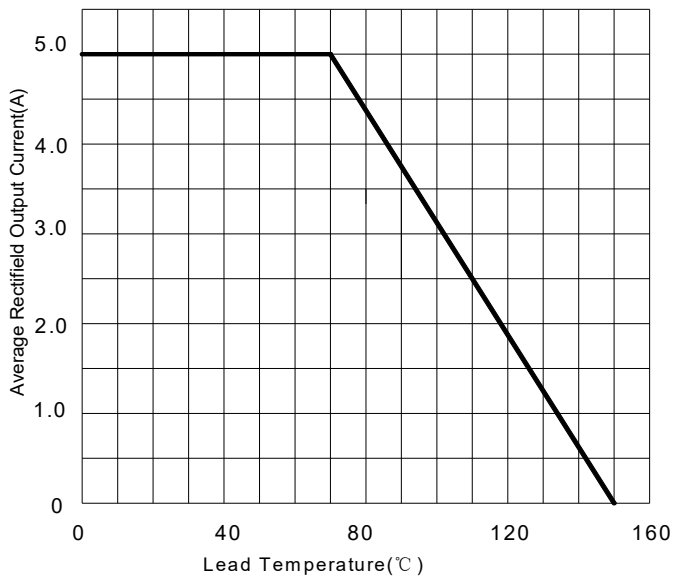


FIG2: Surge Forward Current Capability

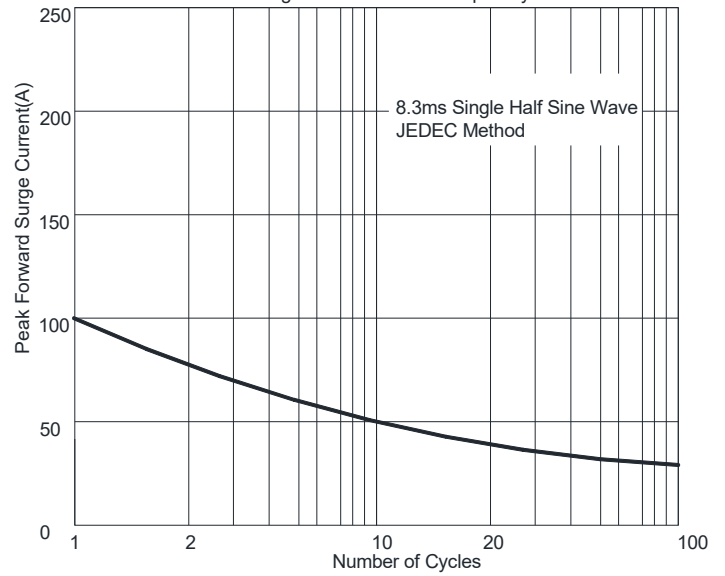


FIG3: TYPICAL FORWARD CHARACTERISTICS

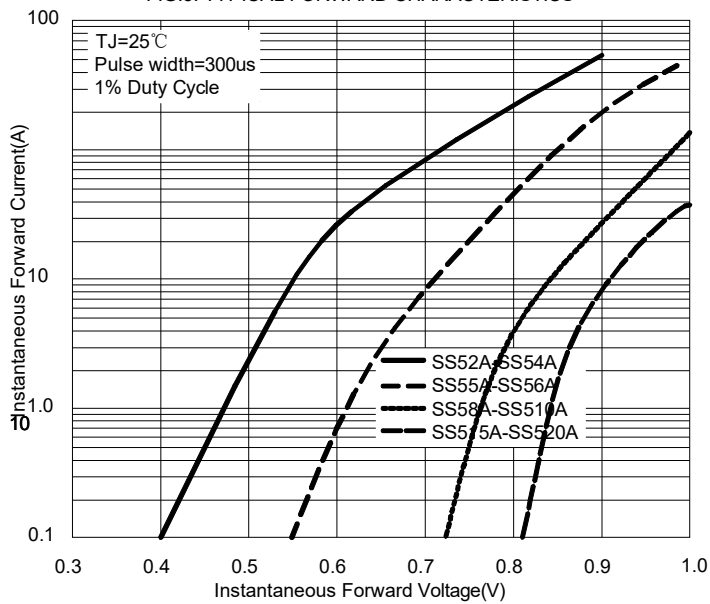
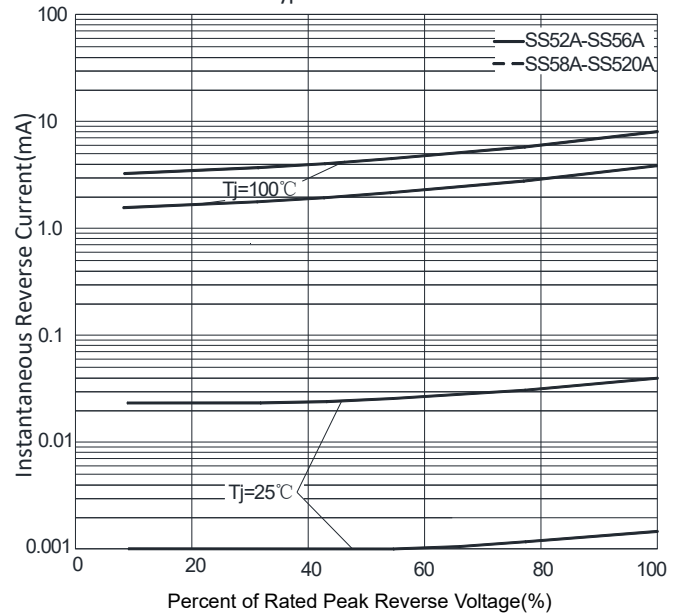


FIG4: Typical Reverse Characteristics



## ■ Characteristics (Typical)

Fig.1 Forward Current Derating Curve

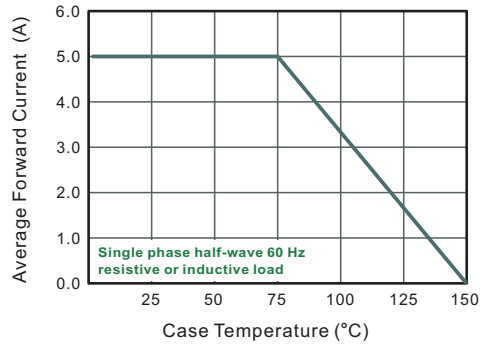


Fig.2 Typical Reverse Characteristics

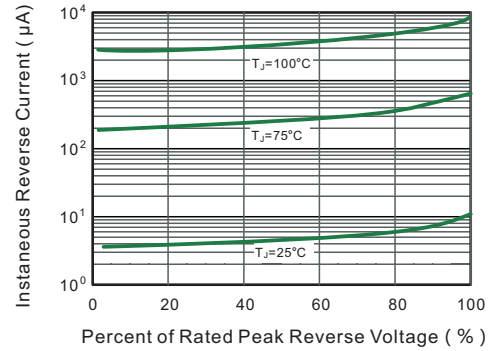


Fig.3 Typical Forward Characteristic

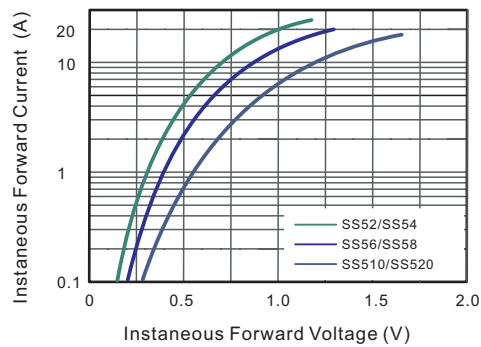


Fig.4 Typical Junction Capacitance

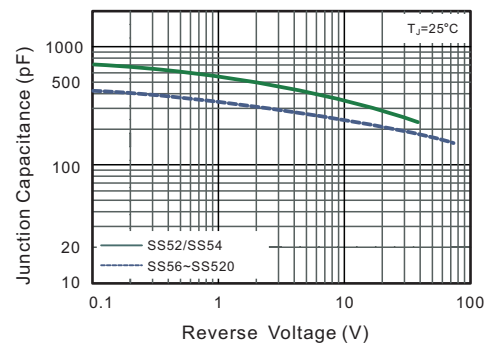


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

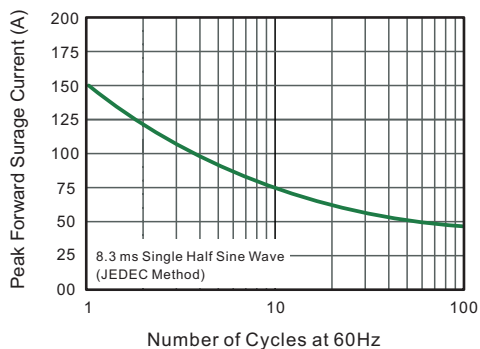
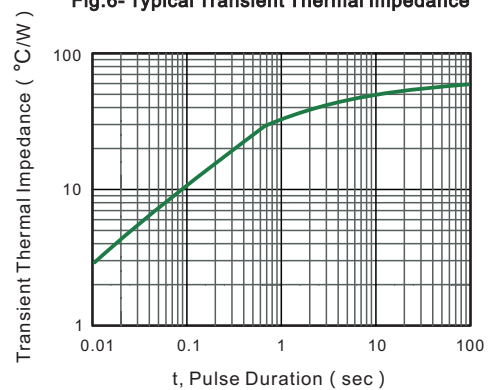


Fig.6- Typical Transient Thermal Impedance

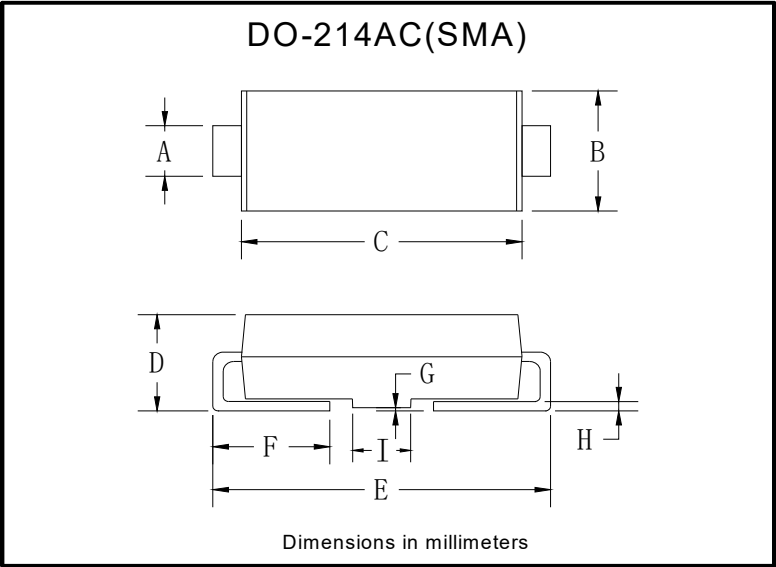


# SS52 THRU SS520

## ■ Ordering Information (Example)

| P/N        | PKG           | QTY  |
|------------|---------------|------|
| SS52-SS520 | SMA(DO-214AC) | 2000 |

## ■ Outline Dimensions



| DO-214AC(SMA) |      |      |
|---------------|------|------|
| Dim           | Min  | Max  |
| A             | 1.25 | 1.58 |
| B             | 2.40 | 2.83 |
| C             | 4.00 | 4.75 |
| D             | 1.90 | 2.30 |
| E             | 4.93 | 5.28 |
| F             | 0.76 | 1.41 |
| G             | 0.05 | 0.20 |
| H             | 0.15 | 0.31 |
| I             | 1.70 | 2.10 |