

**Surface Mount Schottky Barrier Rectifier**

**Reverse Voltage - 20 to 200 V**

**Forward Current - 5 A**

**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
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆Case: DO-214AA/SMB
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 0.095g / 0.003oz

**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 %

**Pinning**

| 1.Cathode                                                                           | 2.Anode |
|-------------------------------------------------------------------------------------|---------|
|  |         |
| <b>DO-214AA/SMB</b>                                                                 |         |

**Marking Code**

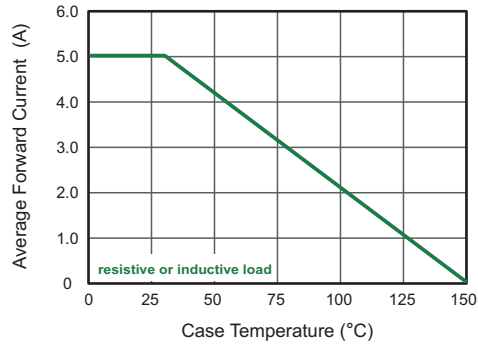
|               |                  |
|---------------|------------------|
| <b>SS52B</b>  | <b>YFW SS52</b>  |
| <b>SS54B</b>  | <b>YFW SS54</b>  |
| <b>SS56B</b>  | <b>YFW SS56</b>  |
| <b>SS58B</b>  | <b>YFW SS58</b>  |
| <b>SS510B</b> | <b>YFW SS510</b> |
| <b>SS512B</b> | <b>YFW SS512</b> |
| <b>SS515B</b> | <b>YFW SS515</b> |
| <b>SS520B</b> | <b>YFW SS520</b> |

| Parameter                                                                                                                      | Symbols                                                  | SS52B           | SS54B | SS56B | SS58B | SS510B | SS512B | SS515B | SS520B | Units                 |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|-------|-------|-------|--------|--------|--------|--------|-----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                                                        | <b>V<sub>RRM</sub></b>                                   | 20              | 40    | 60    | 80    | 100    | 120    | 150    | 200    | <b>V</b>              |
| Maximum RMS voltage                                                                                                            | <b>V<sub>RMS</sub></b>                                   | 14              | 28    | 42    | 56    | 70     | 84     | 105    | 140    | <b>V</b>              |
| Maximum DC Blocking Voltage                                                                                                    | <b>V<sub>DC</sub></b>                                    | 20              | 40    | 60    | 80    | 100    | 120    | 150    | 200    | <b>V</b>              |
| Maximum Average Forward Rectified Current                                                                                      | <b>I<sub>F(AV)</sub></b>                                 | 5.0             |       |       |       |        |        |        |        | <b>A</b>              |
| Peak Forward Surge Current,8.3ms<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method)                         | <b>I<sub>FSM</sub></b>                                   | 120             |       |       |       |        |        |        |        | <b>A</b>              |
| Peak Forward Surge Current,1.0ms<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method)                         | <b>I<sub>FSM</sub></b>                                   | 240             |       |       |       |        |        |        |        | <b>A</b>              |
| I <sup>2</sup> t Rating for fusing (3ms≤t≤8.3ms)                                                                               | <b>I<sup>2</sup>t</b>                                    | 59.7            |       |       |       |        |        |        |        | <b>A<sup>2</sup>S</b> |
| Maximum Instantaneous Forward Voltage at 5 A                                                                                   | <b>V<sub>F</sub></b>                                     | 0.55            |       | 0.70  | 0.85  |        | 0.95   |        |        | <b>V</b>              |
| Maximum Instantaneous Reverse Current   T <sub>A</sub> = 25°C<br>at Rated DC Reverse Voltage            T <sub>A</sub> = 100°C | <b>I<sub>R</sub></b>                                     | 1.0<br>50       |       |       |       |        |        |        |        | <b>mA</b>             |
| Typical Junction Capacitance <sup>(1)</sup>                                                                                    | <b>C<sub>j</sub></b>                                     | 270             |       | 220   | 160   |        | 100    |        | 80     | <b>pF</b>             |
| 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 |       |       |       |        |        |        |        | <b>°C/W</b>           |
| Operating Junction Temperature Range                                                                                           | <b>T<sub>j</sub></b>                                     | -55 ~ +150      |       |       |       |        |        |        |        | <b>°C</b>             |
| Storage Temperature Range                                                                                                      | <b>T<sub>stg</sub></b>                                   | -55 ~ +150      |       |       |       |        |        |        |        | <b>°C</b>             |

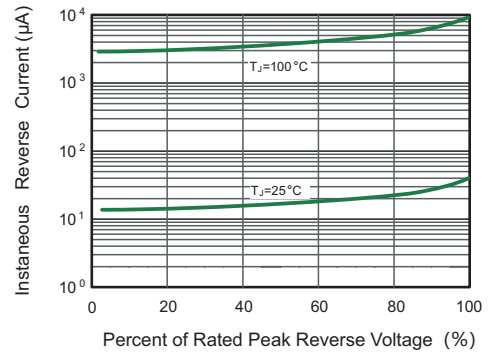
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

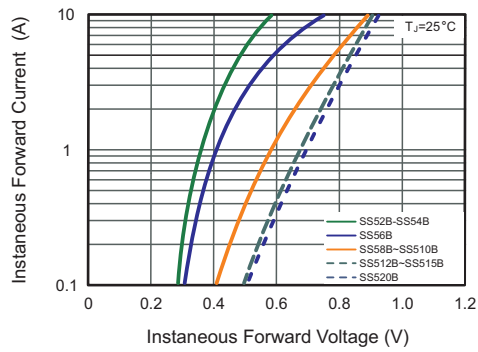
**Fig.1 Forward Current Derating Curve**



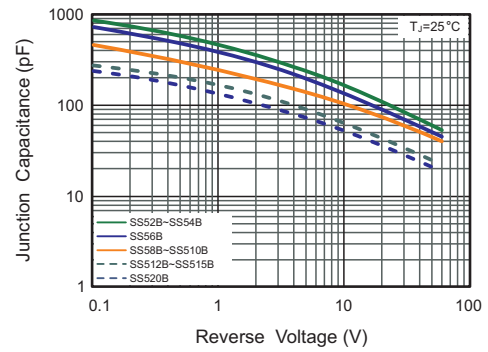
**Fig.2 Typical Reverse Characteristics**



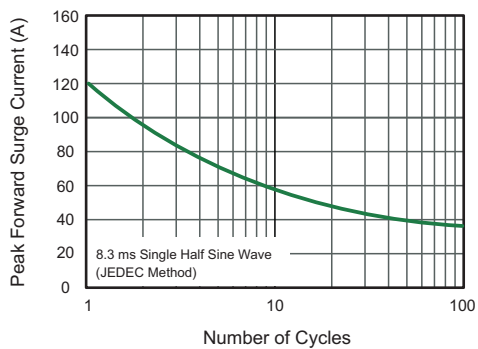
**Fig.3 Typical Forward Characteristic**



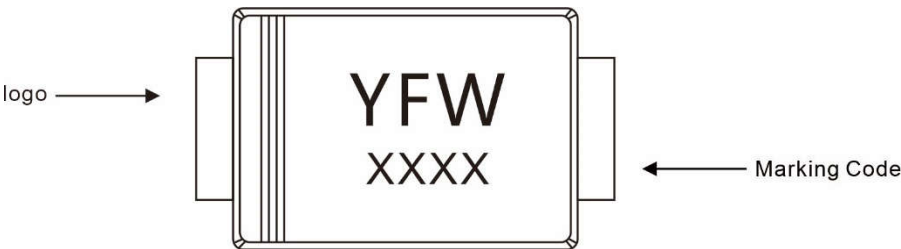
**Fig.4 Typical Junction Capacitance**



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



Marking Diagram



Ordering information

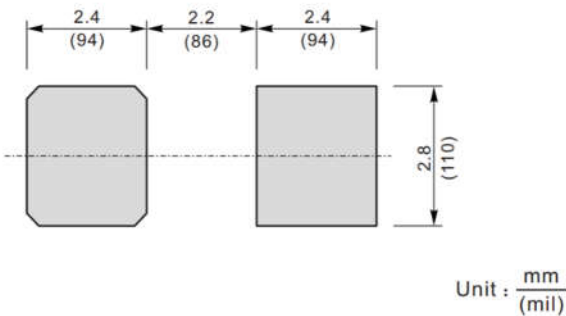
| Package      | Packing Description | Packing Quantity             |
|--------------|---------------------|------------------------------|
| DO-214AA SMB | Tape/Reel, 13" reel | 3000PCS/Reel 30000PCS/Carton |

Package Dimensions

DO-214AA SMB

| Dim.           | Millimeter(mm) |       | mil  |      |
|----------------|----------------|-------|------|------|
|                | Min.           | Max.  | Min. | Max. |
| A              | 2.13           | 2.44  | 84   | 96   |
| E              | 4.06           | 4.70  | 160  | 185  |
| D              | 3.3            | 3.94  | 130  | 155  |
| E <sub>1</sub> | 5.08           | 5.59  | 200  | 220  |
| A <sub>1</sub> | 0.05           | 0.20  | 2.0  | 7.9  |
| L              | 0.8            | 1.5   | 32   | 59   |
| C              | 0.152          | 0.305 | 6    | 12   |
| b              | 1.9            | 2.2   | 75   | 87   |

The recommended mounting pad size



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