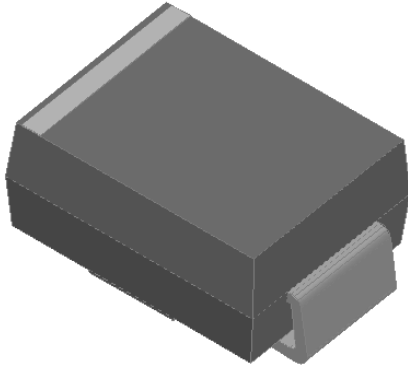


## Surface Mount Schottky Rectifier

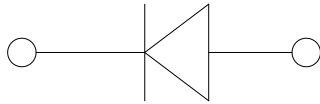


### Features

- 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-214AA (SMB)  
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

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT | SS52B     | SS53B | SS54B | SS55B | SS56B     | SS58B | SS510B | SS515B | SS520B |
|---|------------------|------|-----------|-------|-------|-------|-----------|-------|--------|--------|--------|
| Device marking code   |                  |      | SS52B     | SS53B | SS54B | SS55B | SS56B     | SS58B | SS510B | SS515B | SS520B |
| Repetitive peak reverse voltage   | VRRM             | V    | 20        | 30    | 40    | 50    | 60        | 80    | 100    | 150    | 200    |
| Average rectified output current @60Hz sine wave, resistance load, T <sub>a</sub> (FIG.1) | I <sub>O</sub>   | A    | 5.0       |       |       |       |           |       |        |        |        |
| Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>a</sub> =25°C   | I <sub>FSM</sub> | A    | 100       |       |       |       |           |       |        |        |        |
| Storage temperature   | T <sub>stg</sub> | °C   | -55 ~+150 |       |       |       |           |       |        |        |        |
| Junction temperature  | T <sub>j</sub>   | °C   | -55~+125  |       |       |       | -55 ~+150 |       |        |        |        |

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER  | SYMBOL           | UNIT | TEST CONDITIONS       | SS52B | SS53B | SS54B | SS55B | SS56B | SS58B | SS510B | SS515B | SS520B |
|--|------------------|------|-----------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode                         | V <sub>F</sub>   | V    | I <sub>FM</sub> =5.0A | 0.60  |       |       | 0.70  |       | 0.85  |        | 0.90   |        |
| Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM | I <sub>RRM</sub> | mA   | T <sub>a</sub> =25°C  | 0.5   |       |       |       | 0.1   |       |        |        |        |
|  |                  |      | T <sub>a</sub> =100°C | 10    |       |       |       | 5     |       |        |        |        |



# SS52B THRU SS520B

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER          | SYMBOL                           | UNIT | SS52B             | SS53B | SS54B | SS55B | SS56B | SS58B | SS510B | SS515B | SS520B |
|--------------------|----------------------------------|------|-------------------|-------|-------|-------|-------|-------|--------|--------|--------|
| Thermal resistance | R <sub>θJ-A</sub> <sup>(1)</sup> | °C/W | 58 <sup>(1)</sup> |       |       |       |       |       |        |        |        |
|                    | R <sub>θJ-L</sub> <sup>(1)</sup> |      | 20 <sup>(1)</sup> |       |       |       |       |       |        |        |        |

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

## ■ Characteristics(Typical)

FIG1: I<sub>o</sub>-T<sub>L</sub> Curve

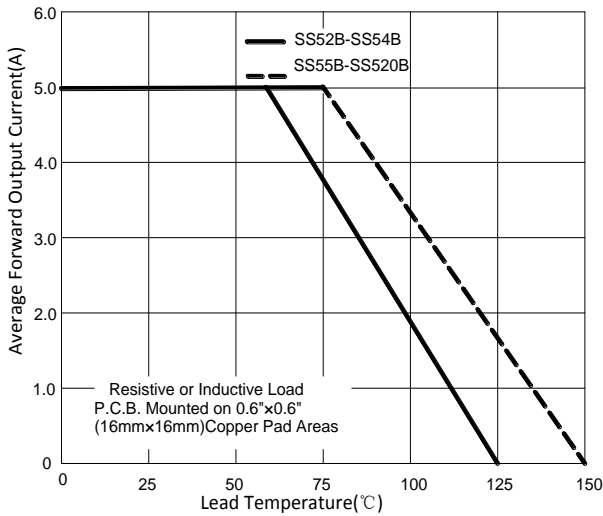


FIG2: Surge Forward Current Capability

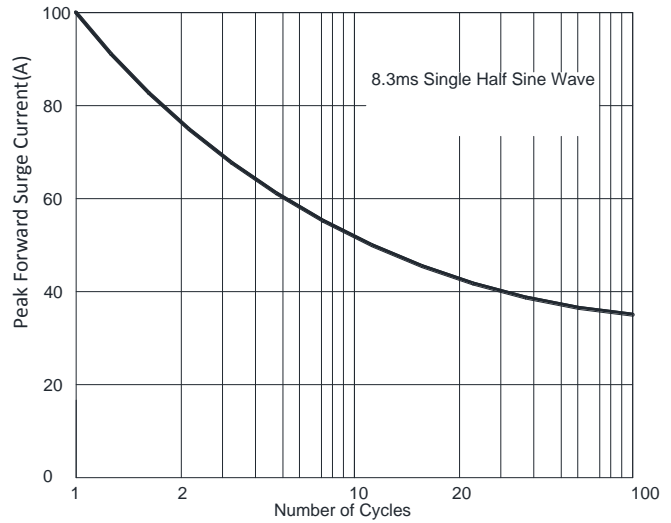


FIG3: Forward Voltage

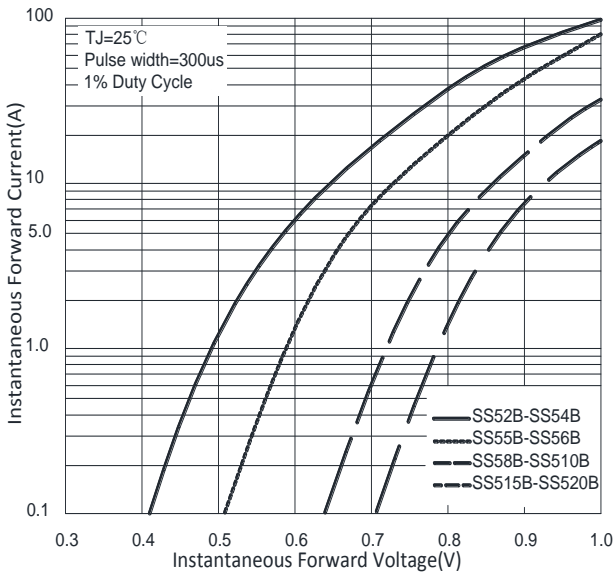
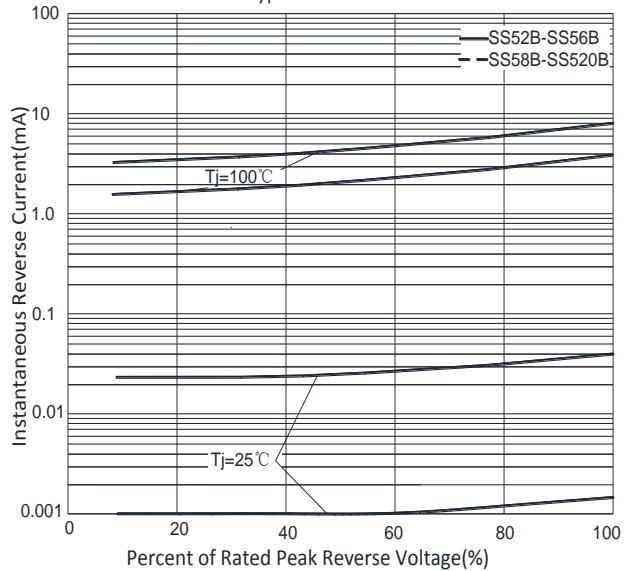


FIG4: Typical Reverse Characteristics



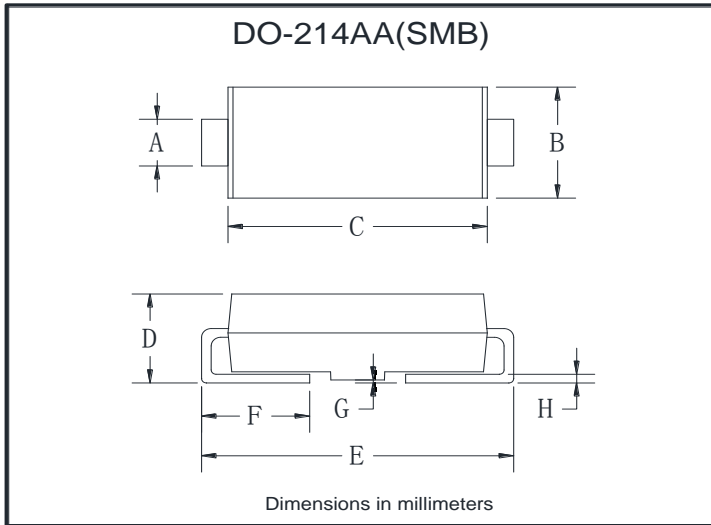


## SS52B THRU SS520B

### ■ Ordering Information (Example)

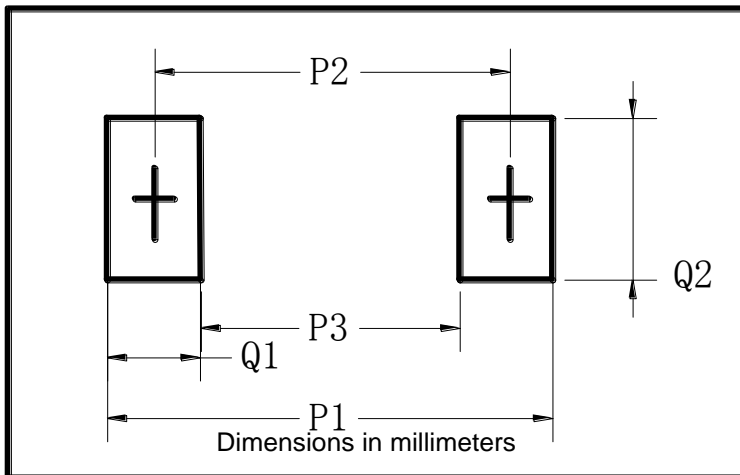
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| SS52B-SS520B  | F1           | Approximate 0.096 | 3000                 | 6000                    | 48000                      | 13" reel      |
| SS52B-SS520B  | F2           | Approximate 0.096 | 750                  | 3000                    | 24000                      | 7" reel       |
| SS52B-SS520B  | F3           | Approximate 0.096 | 500                  | 2000                    | 16000                      | 7" reel       |

### ■ Outline Dimensions



| DO-214AA(SMB) |      |      |
|---------------|------|------|
| Dim           | Min  | Max  |
| A             | 1.85 | 2.15 |
| B             | 3.30 | 3.94 |
| C             | 4.25 | 4.75 |
| D             | 1.99 | 2.61 |
| E             | 5.21 | 5.59 |
| F             | 0.90 | 1.41 |
| G             | 0.10 | 0.20 |
| H             | 0.15 | 0.31 |

### ■ Suggested pad layout



| DO-214AA(SMB) |             |
|---------------|-------------|
| Dim           | Millimeters |
| P1            | 6.8         |
| P2            | 4.3         |
| P3            | 1.8         |
| Q1            | 2.5         |
| Q2            | 2.3         |



## SS52B THRU SS520B

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