



# S3AB THRU S3MB

## SURFACE MOUNT GENERAL RECTIFIER

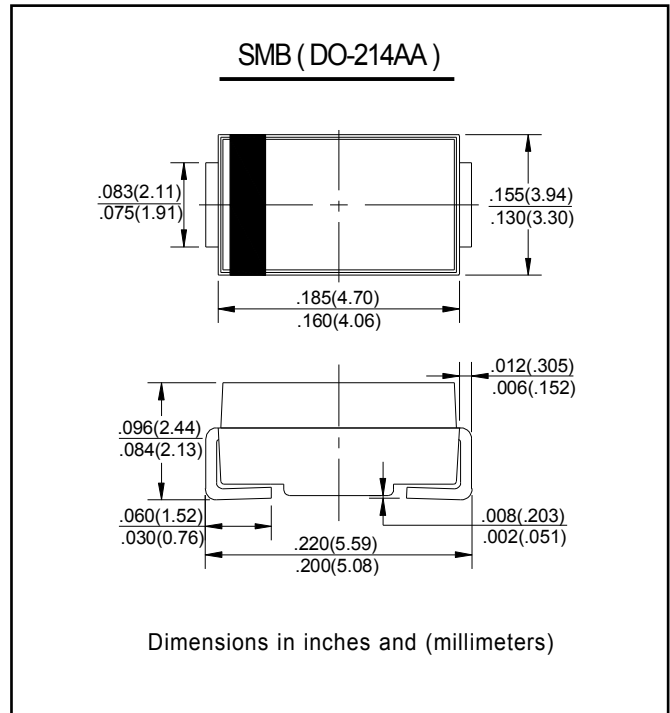
Reverse Voltage - 50 to 1000 Volts    Forward Current - 3.0 Ampere

### FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC SMB/DO-214AA molded plastic body  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.005 ounce, 0.138 grams



### Maximum Ratings and Electrical Characteristics @<sub>T<sub>A</sub></sub> = 25°C unless otherwise specified

| Characteristic  | Symbol                            | S3AB          | S3BB | S3DB | S3GB | S3JB | S3KB | S3MB | Unit |      |
|---|-----------------------------------|---------------|------|------|------|------|------|------|------|------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  |               |      |      |      |      |      |      |      |      |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  | 50            | 100  | 200  | 400  | 600  | 800  | 1000 | V    |      |
| DC Blocking Voltage   | V <sub>R</sub>                    |               |      |      |      |      |      |      |      |      |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 35            | 70   | 140  | 280  | 420  | 560  | 700  | V    |      |
| Average Rectified Output Current @ <sub>T<sub>L</sub></sub> = 75°C  | I <sub>o</sub>                    | 3.0           |      |      |      |      |      |      |      | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method)     | I <sub>FSM</sub>                  | 100           |      |      |      |      |      |      |      | A    |
| Forward Voltage @ <sub>I<sub>F</sub></sub> = 3.0A   | V <sub>FM</sub>                   | 1.10          |      |      |      |      |      |      |      | V    |
| Peak Reverse Current @ <sub>T<sub>A</sub></sub> = 25°C<br>At Rated DC Blocking Voltage @ <sub>T<sub>A</sub></sub> = 125°C | I <sub>RM</sub>                   | 5.0<br>250    |      |      |      |      |      |      |      | μA   |
| Typical Junction Capacitance (Note 2)   | C <sub>j</sub>                    | 60            |      |      |      |      |      |      |      | pF   |
| Typical Thermal Resistance (Note 3)   | R <sub>θJL</sub>                  | 13            |      |      |      |      |      |      |      | °C/W |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub> | -55 to +150°C |      |      |      |      |      |      |      | °C   |

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A,  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
 3. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.



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## RATINGS AND CHARACTERISTIC CURVES

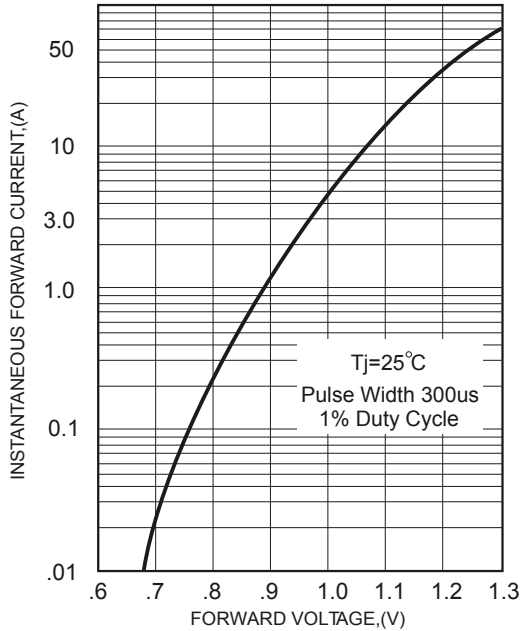


FIG.1-TYPICAL FORWARD CHARACTERISTICS

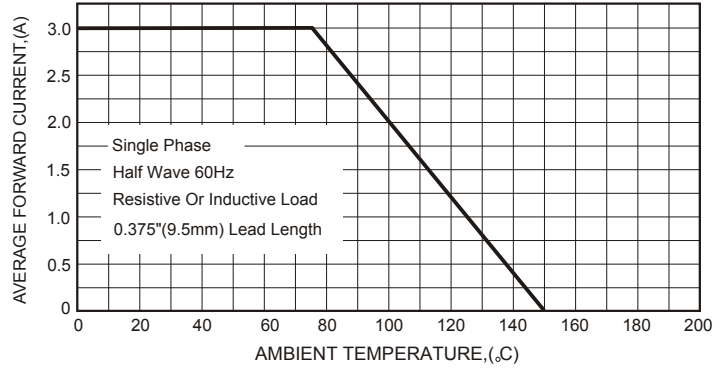


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

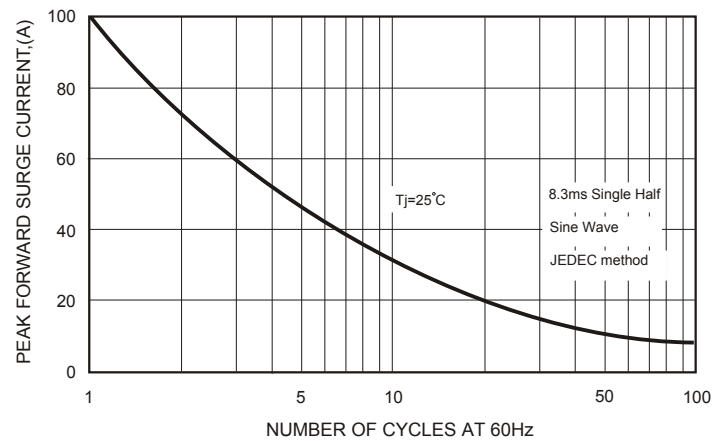


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

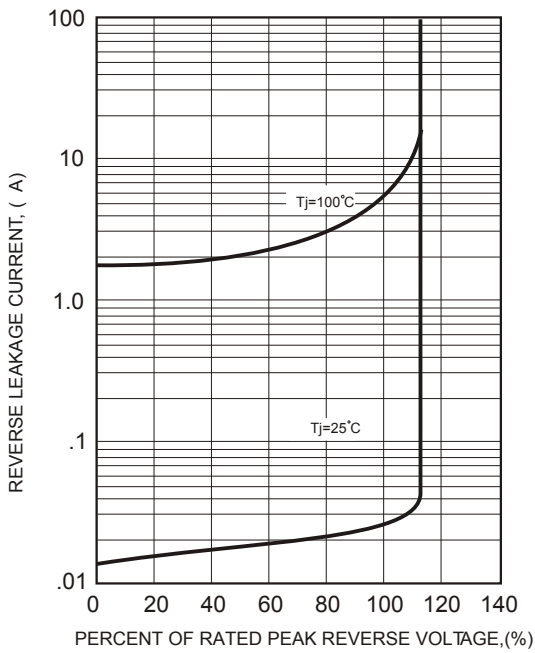


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

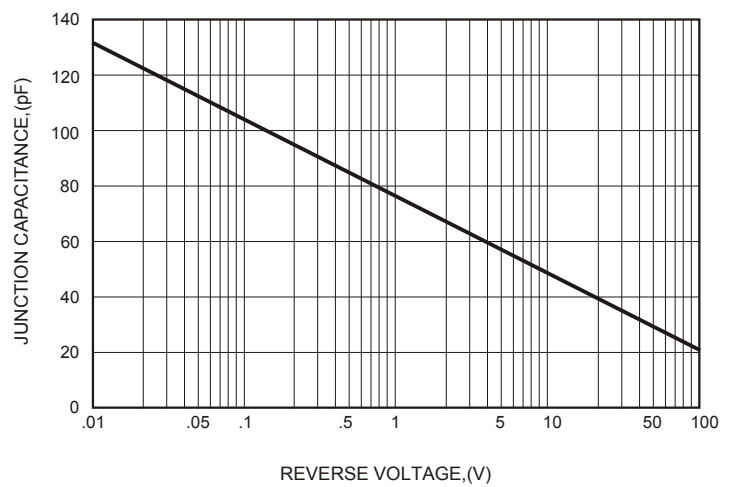


FIG.5-TYPICAL JUNCTION CAPACITANCE