

# S2A THRU S2M

## 1.5 AMPS. SURFACE MOUNT RECTIFIERS

**Voltage Range**  
50 to 1000 Volts  
**Current**  
1.5 Amperes

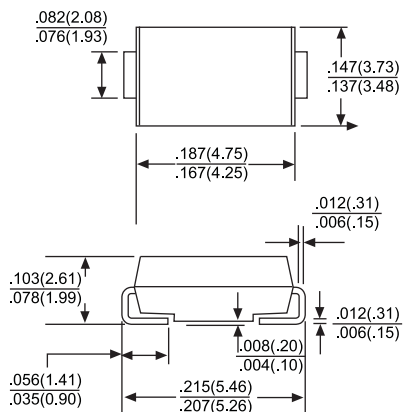
### SMB/DO-214AA

#### Features

- For surface mounted application
- Class passivated junction chip.
- Low forward voltage drop
- High current capability
- Easy pick and place
- High surge current capability
- Plastic material used carriers Underwriters Laboratory Classification 94V-O
- High temperature soldering:  
250°C/ 10 seconds at terminals

#### Mechanical Data

- Case: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Packaging: 12mm tape per EIA STD RS-481
- Weight: 0.093 gram



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| Type Number  |                    | S2A         | S2B | S2D | S2G | S2J | S2K | S2M  | UNITS    |
|--|--------------------|-------------|-----|-----|-----|-----|-----|------|----------|
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>   | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | v        |
| Maximum RMS Voltage  | V <sub>RMS</sub>   | 35          | 70  | 140 | 280 | 420 | 560 | 700  | v        |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>    | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | v        |
| Maximum Average Forward Rectified Current at T <sub>L</sub> =100°C                                       | I <sub>F(AV)</sub> | 1.5         |     |     |     |     |     |      | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)       | I <sub>FSM</sub>   | 50          |     |     |     |     |     |      | A        |
| Maximum Instantaneous Forward Voltage @ 1.5A   | V <sub>F</sub>     | 1.15        |     |     |     |     |     |      | v        |
| Maximum DC Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 125°C | I <sub>R</sub>     | 5.0<br>125  |     |     |     |     |     |      | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)   | T <sub>RR</sub>    | 2.0         |     |     |     |     |     |      | uS       |
| Typical Junction Capacitance (Note 2)  | C <sub>J</sub>     | 30          |     |     |     |     |     |      | pF       |
| Operating Junction Temperature Range   | T <sub>J</sub>     | -55 to +150 |     |     |     |     |     |      | °C       |
| Storage Temperature Range  | T <sub>STG</sub>   | -55 to +150 |     |     |     |     |     |      | °C       |

NOTES: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A  
2. Measured at 1MHz and Applied V<sub>R</sub>=4.0 Volts

# RATING AND CHARACTERISTIC CURVES S2A THRU S2M

FIG.1- MAXIMUM FORWARD CURRENT  
DERATING CURVE

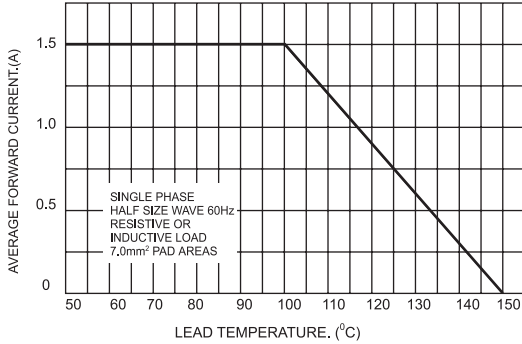


FIG.2-MAXIMUM NON-REPETITIVE FORWARD  
SURGE CURRENT

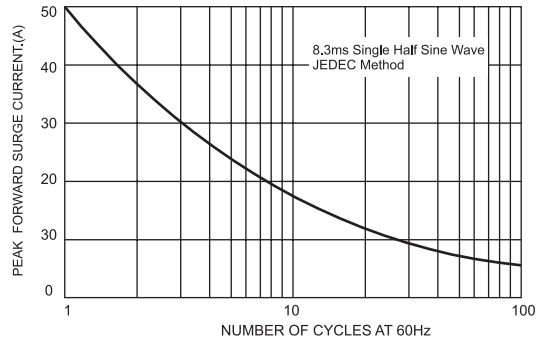


FIG.3-TYPICAL FORWARD CHARACTERISTICS

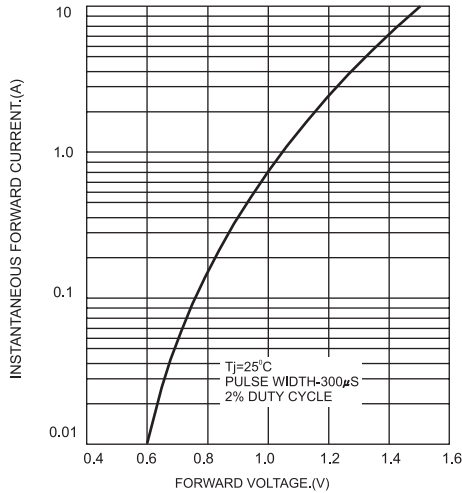


FIG.4-TYPICAL REVERSE CHARACTERISTICS

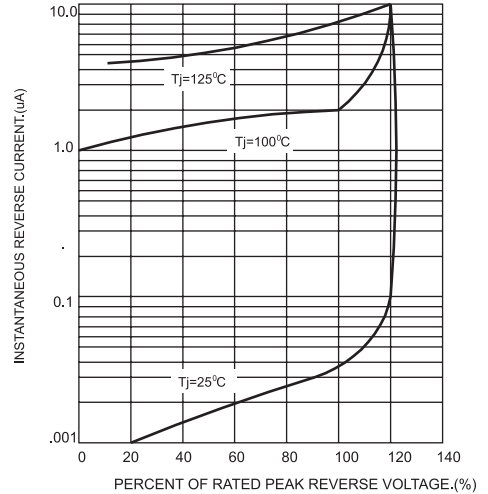


FIG.5-TYPICAL JUNCTION CAPACITANCE

