

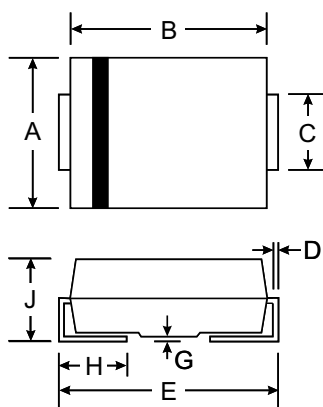
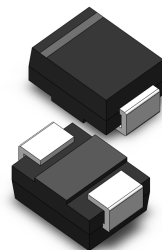
**VOLTAGE RANGE: 50 - 1000V**  
**CURRENT: 2.0 A**

### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

### Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)



| SMB(DO-214AA)        |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 3.30 | 3.94 |
| B                    | 4.06 | 4.70 |
| C                    | 1.91 | 2.21 |
| D                    | 0.15 | 0.31 |
| E                    | 5.00 | 5.59 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.00 | 2.62 |
| All Dimensions in mm |      |      |

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

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic                                                                                                        | Symbol                                                 | FS2A        | FS2B | FS2D | FS2G | FS2J | FS2K | FS2M | Unit |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|------|------|------|------|------|------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V    |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 35          | 70   | 140  | 280  | 420  | 560  | 700  | V    |
| Average Rectified Output Current @T <sub>L</sub> = 90°C                                                               | I <sub>O</sub>                                         | 2.0         |      |      |      |      |      |      | 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>                                       | 50          |      |      |      |      |      |      | A    |
| Forward Voltage @I <sub>F</sub> = 2.0A                                                                                | V <sub>FM</sub>                                        | 1.30        |      |      |      |      |      |      | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                   | I <sub>RM</sub>                                        | 5.0<br>300  |      |      |      |      |      |      | μA   |
| Reverse Recovery Time (Note 1)                                                                                        | t <sub>rr</sub>                                        | 150         |      |      |      | 250  | 500  |      | nS   |
| Typical Junction Capacitance (Note 2)                                                                                 | C <sub>j</sub>                                         | 50          |      |      |      |      |      |      | pF   |
| Typical Thermal Resistance (Note 3)                                                                                   | R <sub>θJL</sub>                                       | 20          |      |      |      |      |      |      | °C/W |
| Operating and Storage Temperature Range                                                                               | T <sub>j</sub> , T <sub>STG</sub>                      | -50 to +150 |      |      |      |      |      |      | °C   |

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See figure 5.  
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.

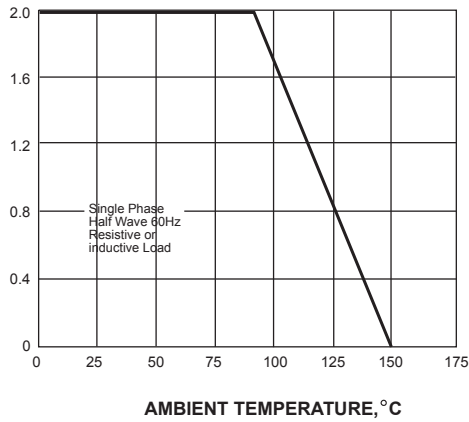


**SUNMATE**

## RATINGS AND CHARACTERISTIC CURVES FS2A THRU FS2M

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

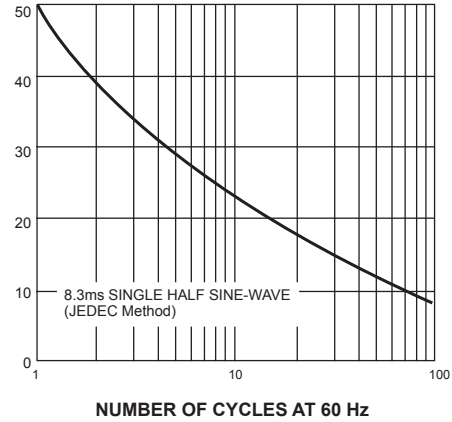
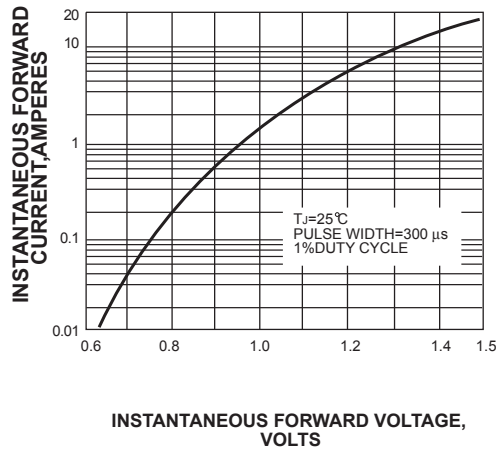


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

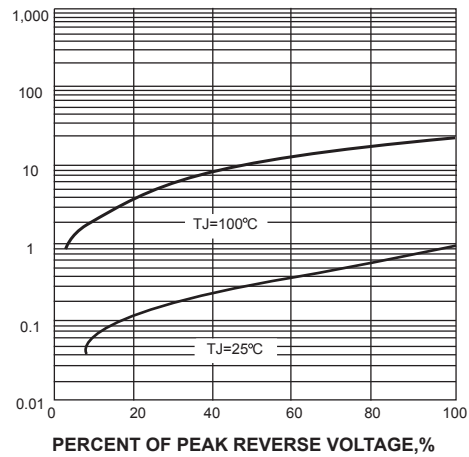
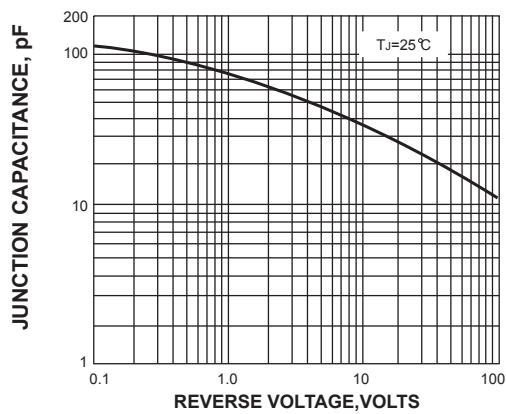


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

