



**DC COMPONENTS CO., LTD.**  
RECTIFIER SPECIALISTS

**S2AF  
THRU  
S2MF**

**TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts**      **CURRENT - 2.0 Amperes**

**FEATURES**

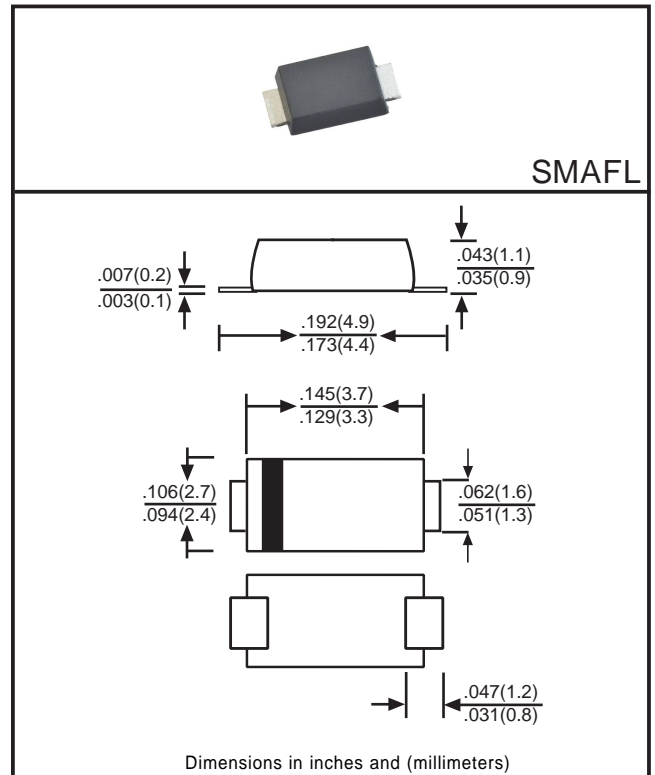
- \* Ideal for surface mounted applications
- \* Glass passivated junction
- \* Low leakage current

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rated flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.03 gram approx.

**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 current by 20%.



|   | SYMBOL                            | S2AF        | S2BF | S2DF | S2GF | S2JF | S2KF | S2MF | UNITS |
|---|-----------------------------------|-------------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                  | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum RMS Voltage   | V <sub>RMS</sub>                  | 35          | 70   | 140  | 280  | 420  | 560  | 700  | Volts |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                   | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum Average Forward Rectified Current at T <sub>A</sub> = 65°C                                | I <sub>O</sub>                    | 2.0         |      |      |      |      |      |      | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                  | 60          |      |      |      |      |      |      | Amps  |
| Maximum Instantaneous Forward Voltage at 2.0A DC  | V <sub>F</sub>                    | 1.1         |      |      |      |      |      |      | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | @ T <sub>A</sub> =25°C            | 5.0         |      |      |      |      |      |      | μAmps |
|   | @ T <sub>A</sub> =100°C           | 100         |      |      |      |      |      |      |       |
| Typical Junction Capacitance (Note 1)   | C <sub>J</sub>                    | 30          |      |      |      |      |      |      | pF    |
| Typical Thermal Resistance (Note 2)   | R <sub>θJA</sub>                  | 85          |      |      |      |      |      |      | °C/W  |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 |      |      |      |      |      |      | °C    |

Note 1: Measured at 1 MHz and applied reverse voltage of 4.0 volts.

Note 2: Typical thermal resistance from junction to ambient.

# RATING AND CHARACTERISTIC CURVES (S2AF THRU S2MF)

FIG. 1  
TYPICAL FORWARD CURRENT  
DERATING CURVE

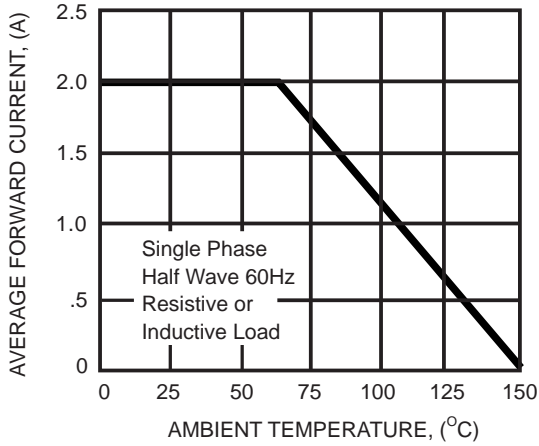


FIG. 2  
MAXIMUM NON-REPETITIVE FORWARD  
SURGE CURRENT

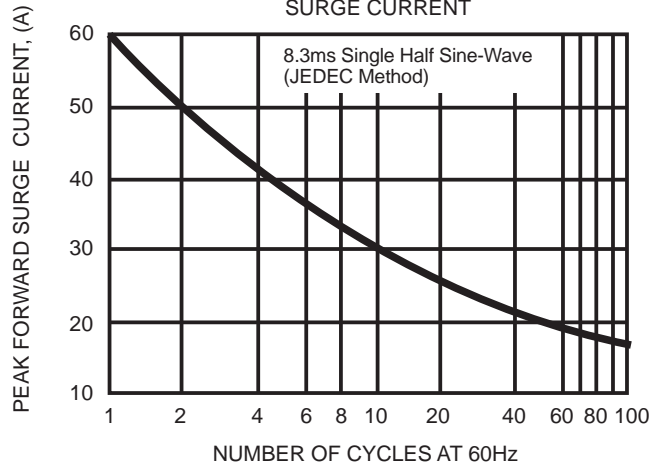


FIG. 3  
TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

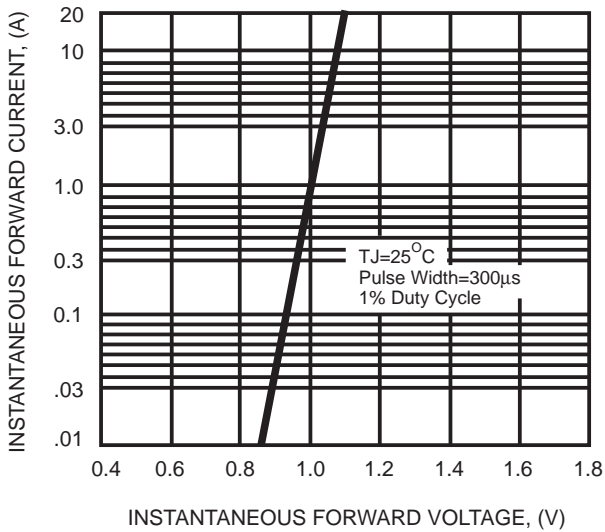


FIG. 4  
TYPICAL REVERSE CHARACTERISTICS

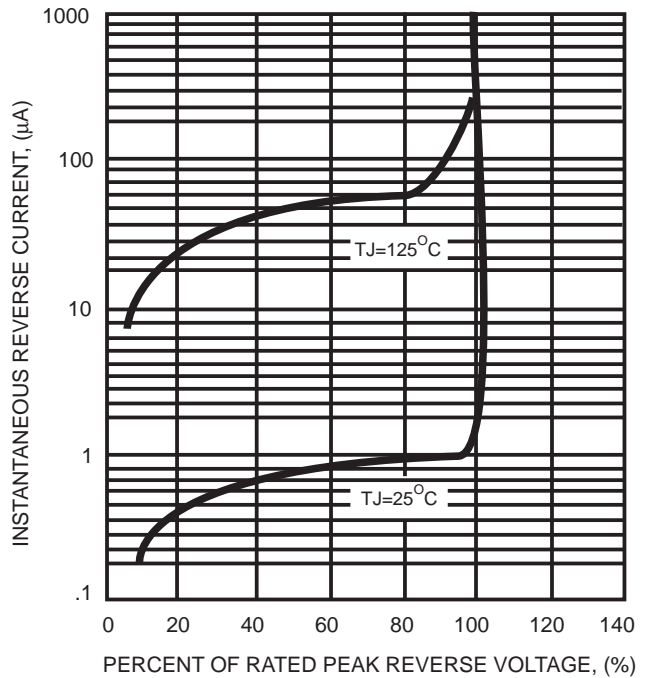
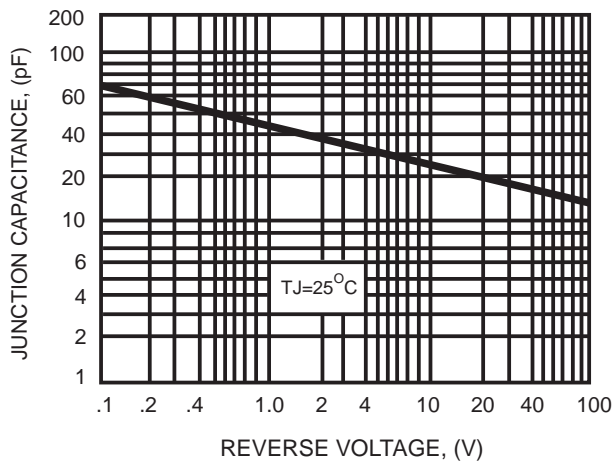


FIG. 5  
TYPICAL JUNCTION CAPACITANCE



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