



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

**S1ABF
THRU
S1MBF**

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER
VOLTAGE RANGE - 50 to 1000 Volts **CURRENT - 1.0 Ampere**

FEATURES

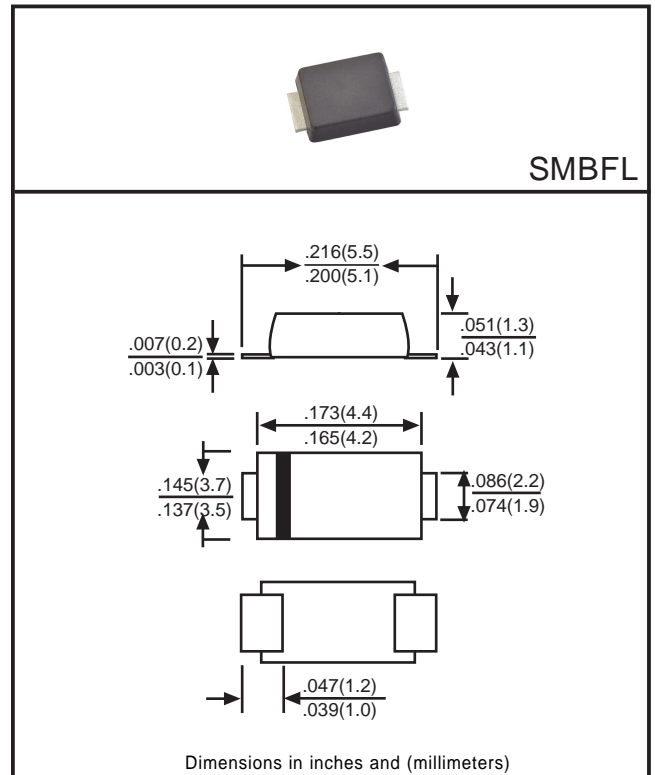
- * Ideal for surface mounted applications
- * Glass passivated junction
- * Low leakage current

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: 0.06 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 | S1ABF | S1BBF | S1DBF | S1GBF | S1JBF | S1KBF | S1MBF | UNITS |
|---|-----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at T _A = 65°C | I _O | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 30 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0A DC | V _F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @ T _A =25°C | 5.0 | | | | | | | μAmps |
| | @ T _A =100°C | 50 | | | | | | | |
| Typical Junction Capacitance (Note 1) | C _J | 15 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | R _{θJA} | 105 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -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 (S1ABF THRU S1MBF)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

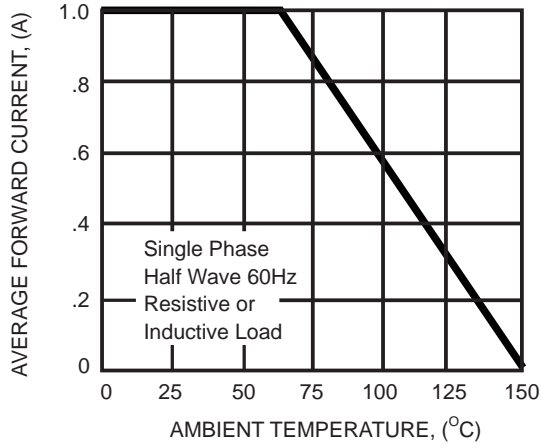


FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

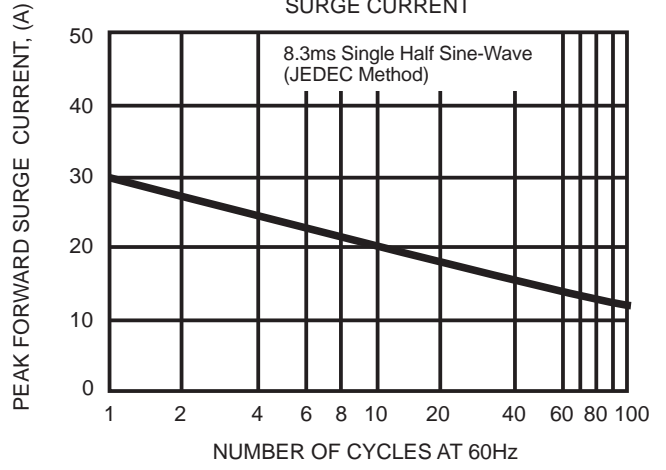


FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

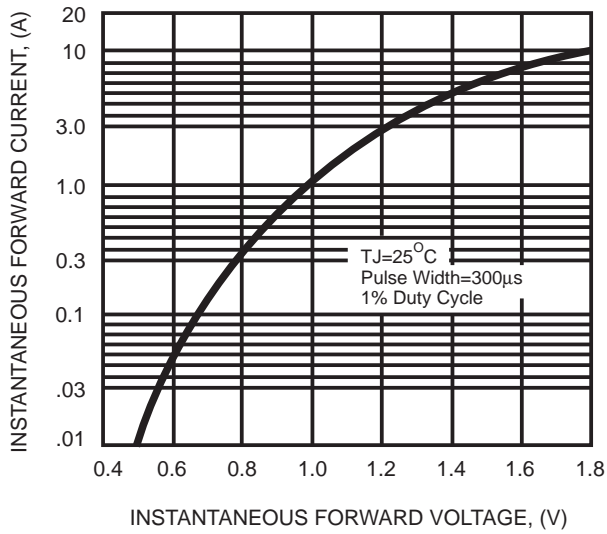


FIG. 4
TYPICAL REVERSE CHARACTERISTICS

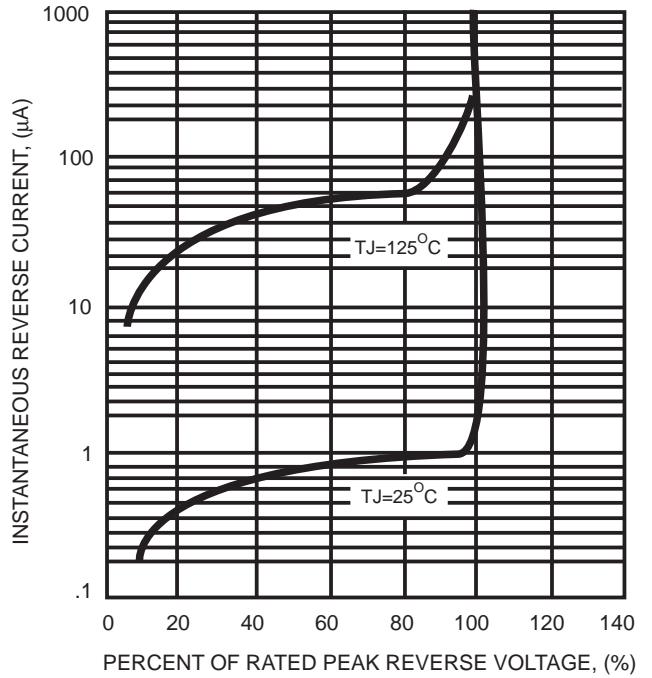
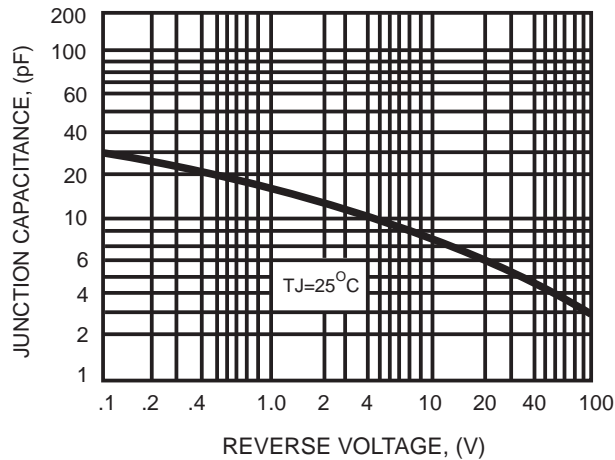


FIG. 5
TYPICAL JUNCTION CAPACITANCE



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