

## SURFACE MOUNT REVERSE VOLTAGE - 50 to 1000 Volts **GLASS PASSIVATED RECTIFIERS** FORWARD CURRENT - 1.0 Ampere FEATURES **SMA** • Glass passivated chip • For surface mounted applications Low reverse leakage current .065(1.65) .114(2.90) • Low forward voltage drop .049(1.25) .093(2.35) High current capability ١. Plastic material has UL flammability .181(4.60) classification 94V-0 .157(4.00) .012(.305) .006(.152) .103(2.62) MECHANICAL DATA .079(2.00) •Case: Molded Plastic 1 Polarity: Indicated by cathode band .060(1.52) .008(.203) •Weight: 0.002 ounces,0.053 grams .030(0.76) .002(.051) .208(5.28) Mounting position: Any .188(4.80) 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%

| CHARACTERISTICS   | SYMBOL | S1A         | S1B | S1D | S1G | S1J | S1K | S1M  | UNIT |
|---|--------|-------------|-----|-----|-----|-----|-----|------|------|
| Maximum Recurrent Peak Reverse Voltage  | Vrrm   | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V    |
| Maximum RMS Voltage   | Vrms   | 35          | 70  | 140 | 280 | 420 | 560 | 700  | V    |
| Maximum DC Blocking Voltage   | VDC    | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V    |
| Maximum Average Forward<br>Rectified Current @TL=100 °C   | I(AV)  | 1.0         |     |     |     |     |     |      | А    |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed On Rated Load (JEDEC Method) | IFSM   | 30          |     |     |     |     |     |      | A    |
| Maximum Forward Voltage at 1.0A DC  | VF     | 1.1         |     |     |     |     | V   |      |      |
| Maximum DC Reverse Current @TJ=25°C   at Rated DC Blocking Voltage @TJ=125°C                            | lr     | 5.0<br>100  |     |     |     |     |     |      | μA   |
| Typical Junction Capacitance (Note1)  | CJ     | 10          |     |     |     |     |     |      | pF   |
| Typical Thermal Resistance (Note2)  | Rejc   | 30          |     |     |     |     |     |      | ℃/W  |
| Operating Temperature Range   | TJ     | -55 to +150 |     |     |     |     |     |      | °C   |
| Storage Temperature Range   | Tstg   | -55 to +150 |     |     |     |     |     |      | °C   |

NOTES:1.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance junction to case.

## **RATING AND CHARACTERISTIC CURVES** S1A thru S1M

TJ=25°C

1.0

INSTANTANEOUS FORWARD VOLTAGE, VOLTS

0.6 0.8

0.01

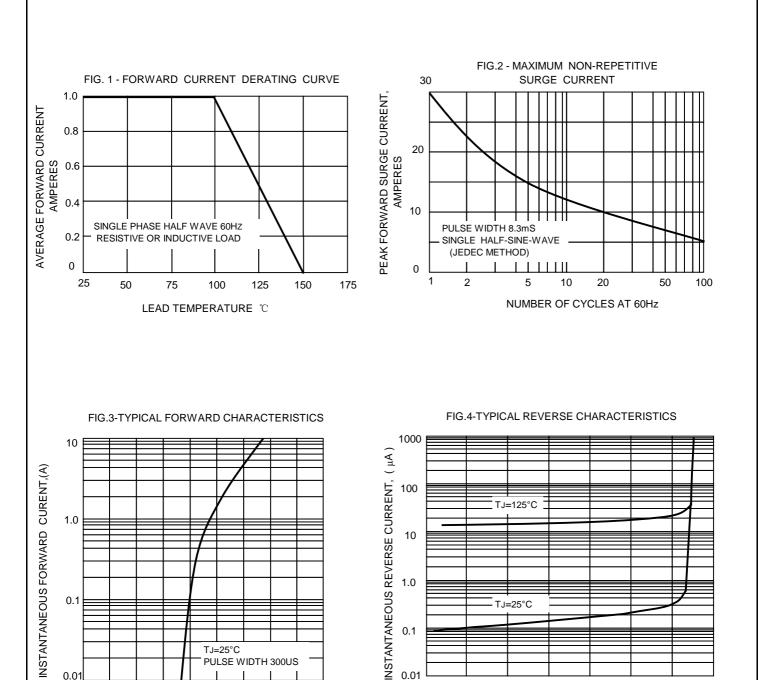
0

0.2 0.4

PULSE WIDTH 300US

1.2 1.4 1.6

1.8



120

140

0.01

0

20

40

60

80

PERCENT RATED PEAK REVERSE VOLTAGE,(%)

100