# S1AW THRU S1MW

1.0AMP Surface Mount Rectifier

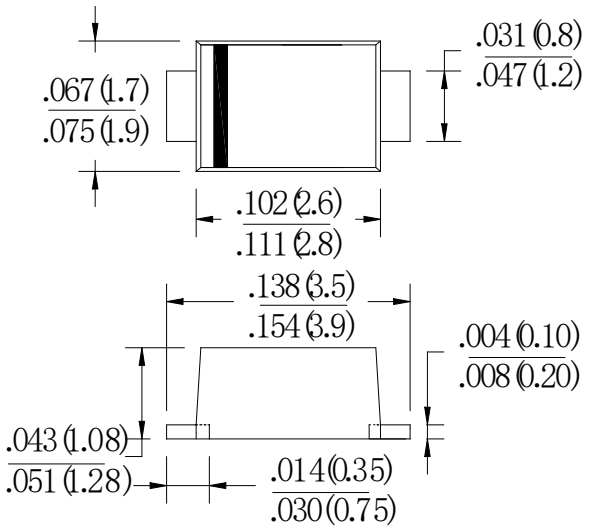
## Features

- Glass passivated die construction
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed: 260℃/10 seconds,0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension
- Plastic material-UL flammability 94V-0

## Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any

Case: SOD-123FL




Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

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

| TYPE NUMBER | SYMBOL | S1AW | S1BW | S1DW | S1GW | S1JW | S1KW | S1MW | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current @$T_L$ =75℃ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| $I^2t$ Rating for Fusing (t < 8.3ms) | $I^2t$ | 3.735 | | | | | | | $A^2s$ |
| Maximum Instantaneous Forward Voltage at 1 A | $V_{FM}$ | 1.1 | | | | | | | V |
| Peak Reverse Current @$T_A$ =25℃<br>At Rated DC Blocking Voltage @$T_A$ =125℃ | $I_R$ | 5.0<br>200 | | | | | | | uA |
| Typical Junction Capacitance (Note 1) | $C_J$ | 10 | | | | | | | pF |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$ | 180 | | | | | | | ℃/W |
| Operating and Storage Temperature Range | $T_J$,$T_{STG}$ | -55to+150 | | | | | | | ℃ |

Note:1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.
2. Measured on P.C.Board with 0.2×0.2”(5.0×5.0mm)Copper Pad Area

Fig. 1 Typical Forward Current Derating Curve

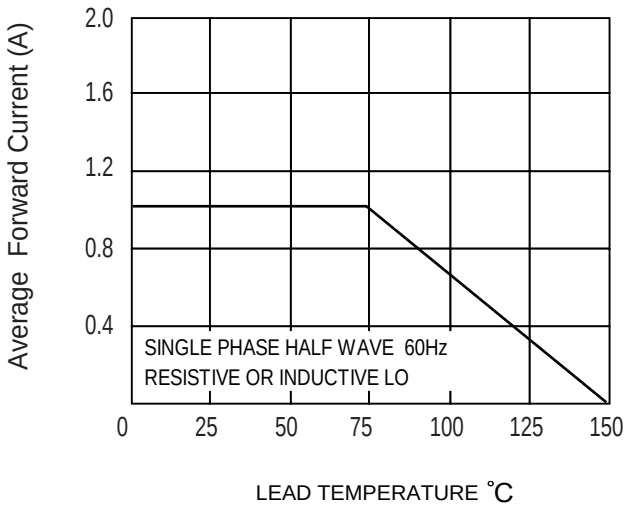



Fig. 2 Typical Instantaneous Forward Characteristics

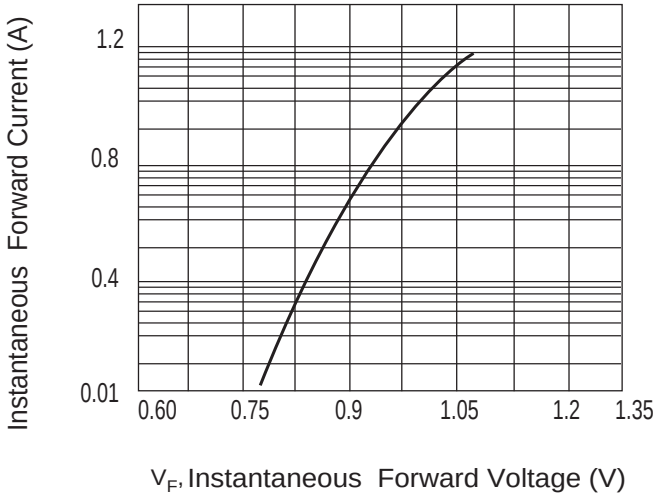



Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

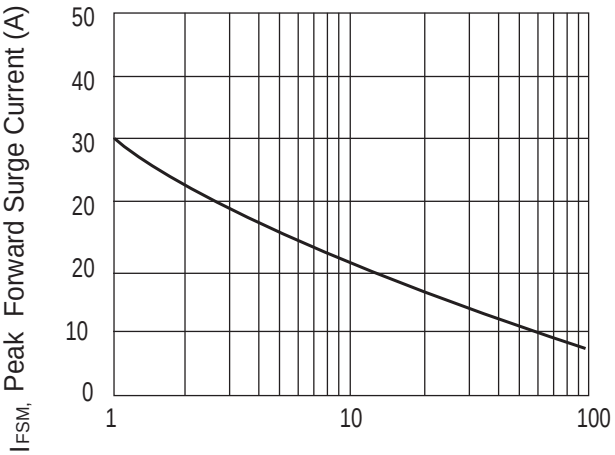



Fig.4 Typical Reverse Chracteristics

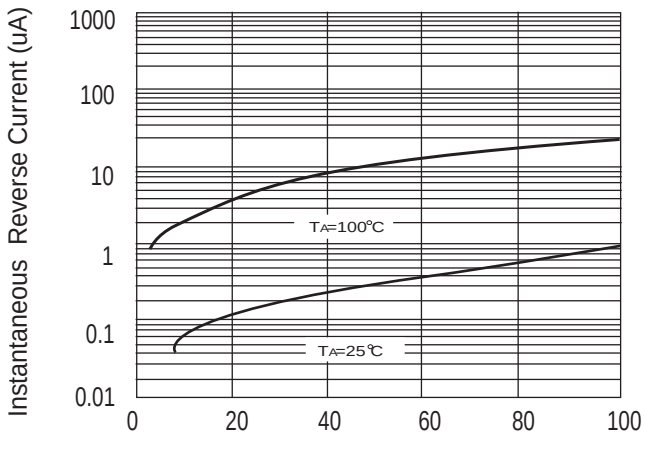



Fig.5 Typical Capacitance