

# SMN1A - SMN1M

**PRV : 50 - 1000 Volts**  
**Io : 1.0 Ampere**

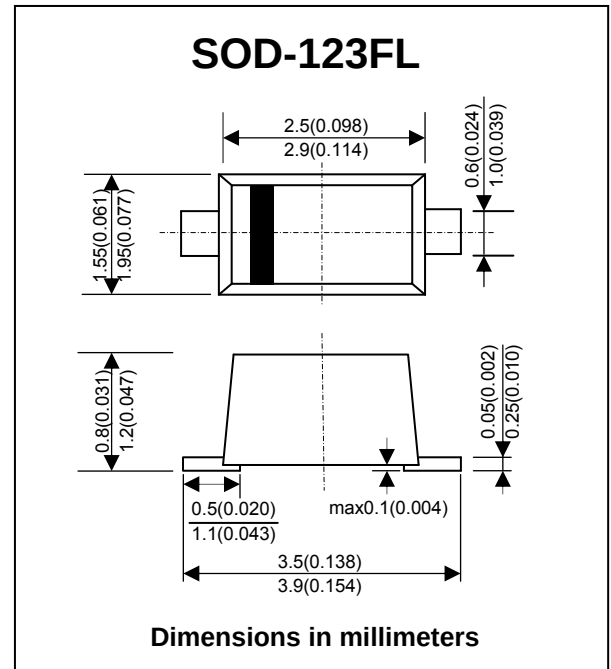
## FEATURES :

- \* Glass passivated junction chip
- \* High current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb Free / RoHS Compliant**

## MECHANICAL DATA :

- \* Case: JEDEC SOD-123FL, molded plastic over passivated chip
- \* Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: Color band denotes cathode end
- \* Mounting position : Any
- \* Weight: 0.02 gram (Approximate)

## GLASS PASSIVATED JUNCTION SILICON SURFACE MOUNT



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

| RATING                                                                                                                            | SYMBOL      | SMN1A         | SMN1B | SMN1D | SMN1G | SMN1J | SMN1K | SMN1M | UNIT               |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------|-------|-------|-------|-------|-------|--------------------|
| Marking                                                                                                                           |             | NA            | NB    | ND    | NG    | NJ    | NK    | NM    |                    |
| Maximum Repetitive Peak Reverse Voltage                                                                                           | $V_{RRM}$   | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | V                  |
| Maximum RMS Voltage                                                                                                               | $V_{RMS}$   | 35            | 70    | 140   | 280   | 420   | 560   | 700   | V                  |
| Maximum DC Blocking Voltage                                                                                                       | $V_{DC}$    | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | V                  |
| Maximum Average Forward Current $T_a = 75\text{ }^{\circ}\text{C}$                                                                | $I_{F(AV)}$ | 1.0           |       |       |       |       |       |       | A                  |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method)                            | $I_{FSM}$   | 30            |       |       |       |       |       |       | A                  |
| Maximum Forward Voltage at $I_F = 1.0\text{ Amp.}$                                                                                | $V_F$       | 1.0           |       |       |       |       |       |       | V                  |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at rated DC Blocking Voltage $T_a = 100\text{ }^{\circ}\text{C}$ | $I_R$       | 5.0           |       |       |       |       |       |       | $\mu\text{A}$      |
|                                                                                                                                   | $I_{R(H)}$  | 50            |       |       |       |       |       |       | $\mu\text{A}$      |
| Typical Junction Capacitance (Note1)                                                                                              | $C_J$       | 8.0           |       |       |       |       |       |       | pF                 |
| Operation Junction Temperature Range                                                                                              | $T_J$       | - 55 to + 150 |       |       |       |       |       |       | $^{\circ}\text{C}$ |
| Storage Temperature Range                                                                                                         | $T_{STG}$   | - 55 to + 150 |       |       |       |       |       |       | $^{\circ}\text{C}$ |

**Note :** (1) Measured at 1.0 MHz and applied reverse voltage of 4.0Vbc.

## RATING AND CHARACTERISTIC CURVES ( SMN1A - SMN1M )

FIG.1 - DERATING CURVE CURRENT

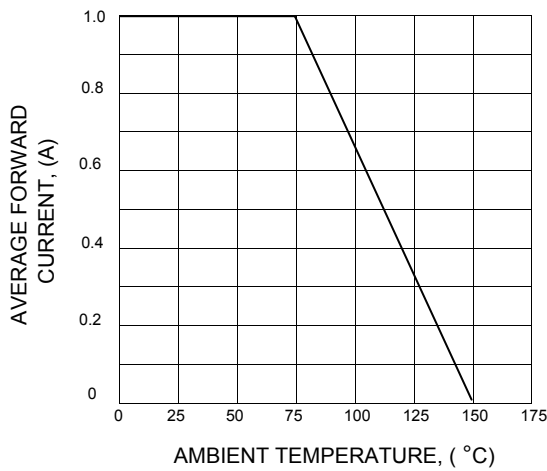


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

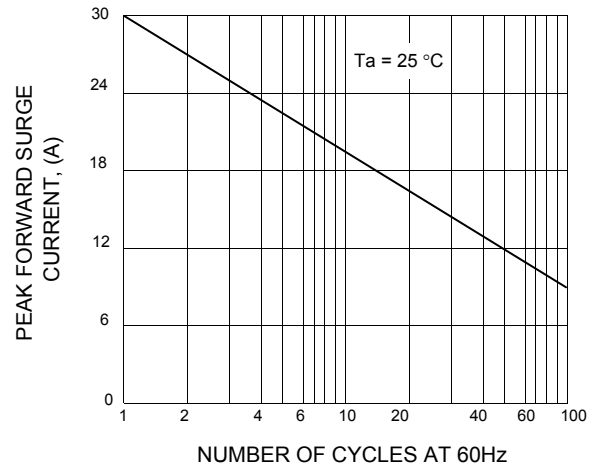


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

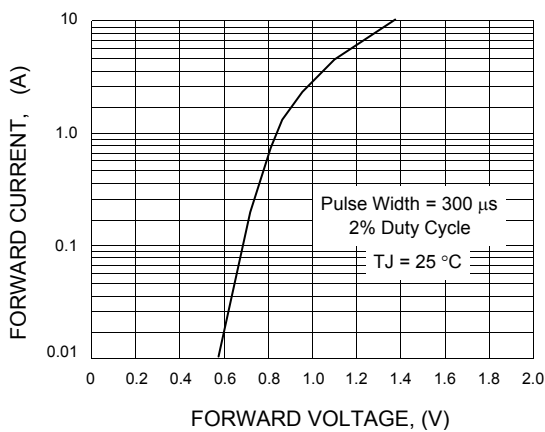


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

