

# SM4001 - SM4007

**PRV : 50 - 1000 Volts**

**Io : 1.0 Ampere**

## FEATURES :

- \* Glass Passivated Junction
- \* Hight Current Capability
- \* Low Forward voltage Drop
- \* Hight Reliability and Low Leakage
- \* For Surface Mount Application
- \* Plastic Material - UL Flammability Classification Rating 94 V-0
- \* **Pb / RoHS Free**

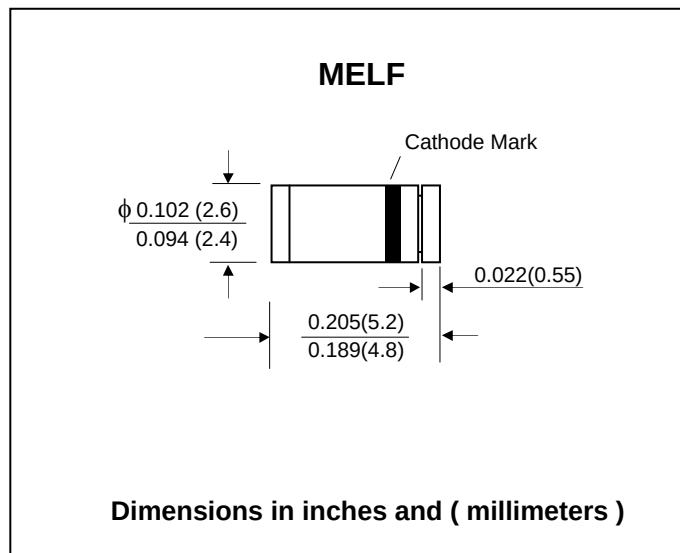
## Mechanical Data

- \* Case : MELF, Plastic
- \* Terminals : Solderable per MIL-STD-202, Method 208
- \* Polarity : Color band
- \* Approx Weight : 0.25 grams
- \* Mounting Position : Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Single phase, half wave, 60 Hz, resistive or inductive load  
For capacitive load, derate current by 20%

## SURFACE MOUNT GLASS PASSIVATED JUNCTION



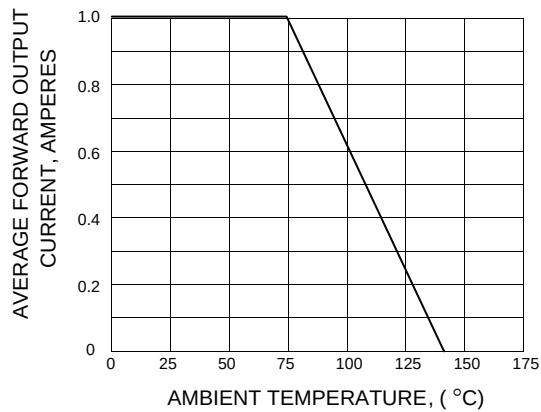
| RATING                                                                                                        | SYMBOL          | SM4001      | SM4002 | SM4003 | SM4004 | SM4005 | SM4006 | SM4007 | UNIT               |
|---------------------------------------------------------------------------------------------------------------|-----------------|-------------|--------|--------|--------|--------|--------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                                        | $V_{RRM}$       | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V                  |
| Maximum RMS Reverse Voltage                                                                                   | $V_{RMS}$       | 35          | 70     | 140    | 280    | 420    | 560    | 700    | V                  |
| Maximum DC Blocking Voltage                                                                                   | $V_R$           | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V                  |
| Maximum Average Forward Rectified Current                                                                     | $I_{F(AV)}$     | 1.0         |        |        |        |        |        |        | A                  |
| Peak Forward Surge Current 8.3ms single half sine wave Superimposed on rated load (JEDEC Method )             | $I_{FSM}$       | 30          |        |        |        |        |        |        | A                  |
| Maximum Forward Voltage at $I_F = 1.0$ A.                                                                     | $V_F$           | 1.1         |        |        |        |        |        |        | V                  |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$<br>at rated DC Blocking Voltage $T_a = 125^\circ\text{C}$ | $I_R$           | 5.0         |        |        |        |        |        |        | $\mu\text{A}$      |
|                                                                                                               |                 | 50          |        |        |        |        |        |        | $\mu\text{A}$      |
| Typical Thermal Resistance, Junction to Ambient                                                               | $R_{\theta JA}$ | 50          |        |        |        |        |        |        | $^\circ\text{C/W}$ |
| Typical Junction Capacitance (Note1)                                                                          | $C_J$           | 15          |        |        |        |        |        |        | pF                 |
| Operating and Storage Temperature Range                                                                       | $T_J, T_{STG}$  | -55 to +150 |        |        |        |        |        |        | $^\circ\text{C}$   |

### Note :

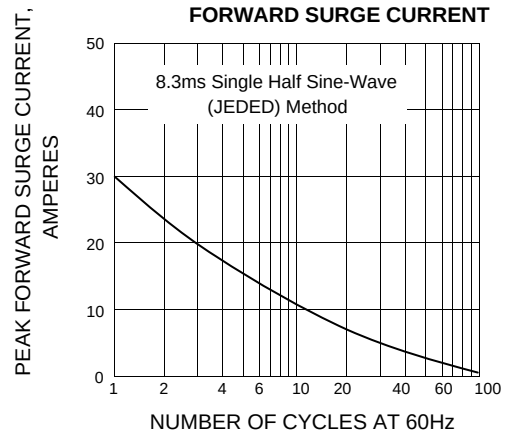
(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 V<sub>DC</sub>

## RATING AND CHARACTERISTIC CURVES ( SM4001 - SM4007 )

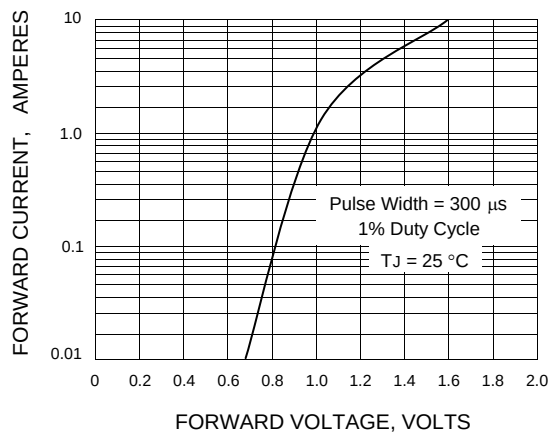
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

