

SM4001 THRU SM4007

SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER



康 比 電 子
HORNBY ELECTRONIC

REVERSE VOLTAGE: 50 to 1000 VOLTS

FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- High temperature soldering : 250°C /10 seconds at terminals

MECHANICAL DATA

Case: Molded plastic, MELF

Epoxy: UL 94V-O rate flame retardant

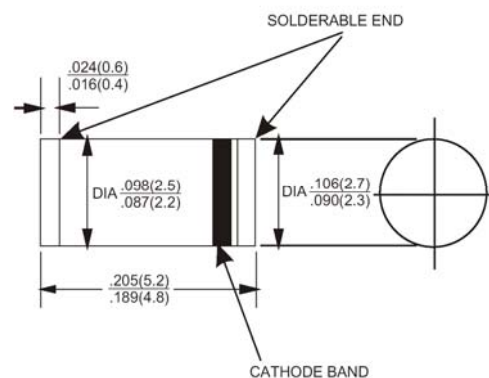
Terminals: Solder plated, solderable per MIL-STD-750, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.005 ounce, 0.12 gram

MELF



Dimensions in inches and (millimeters)

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%.

	Symbols	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	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 $T_A=75^{\circ}\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amp
Maximum Forward Voltage at 1.0A	V_F	1.1							Volts
Maximum Reverse Current at $T_A=25^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_A=125^{\circ}\text{C}$	I_R	5.0 200							μAmp
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50							$^{\circ}\text{C/W}$
Typical Thermal Resistance (Note 3)	$R_{\theta JT}$	20							$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +175							$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +175							$^{\circ}\text{C}$

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to ambient, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

3- Thermal resistance from junction to terminal, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Forward Current Derating Curve

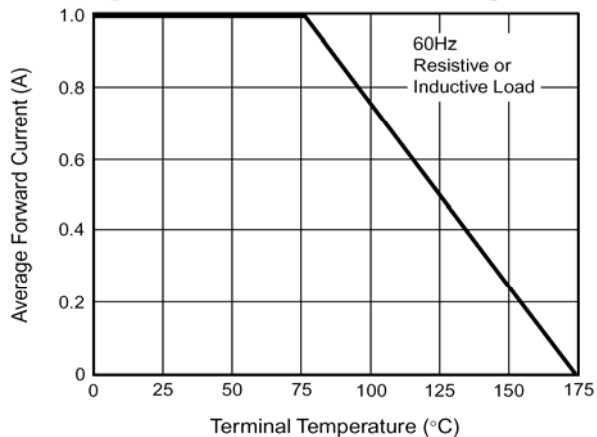


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

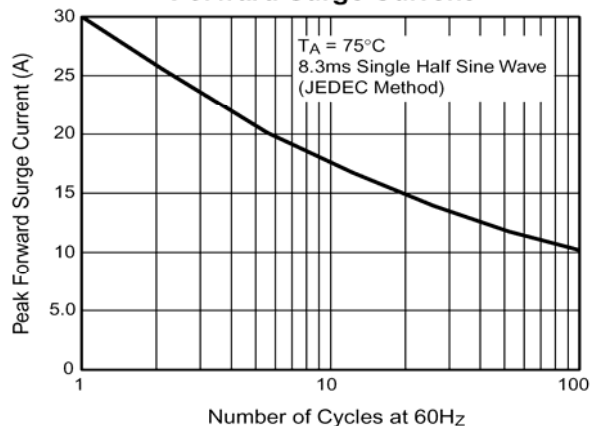


Fig. 3 - Typical Instantaneous Forward Characteristics

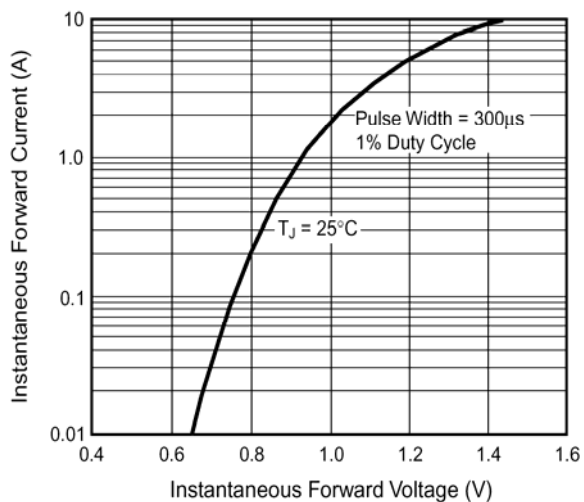


Fig. 4 - Typical Reverse Characteristics

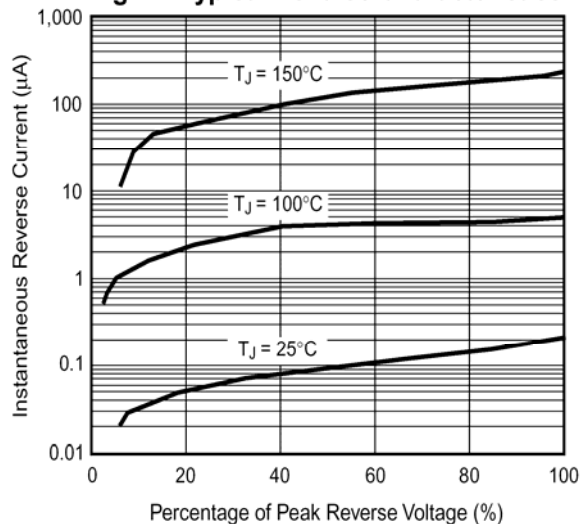


Fig. 5 - Typical Junction Capacitance

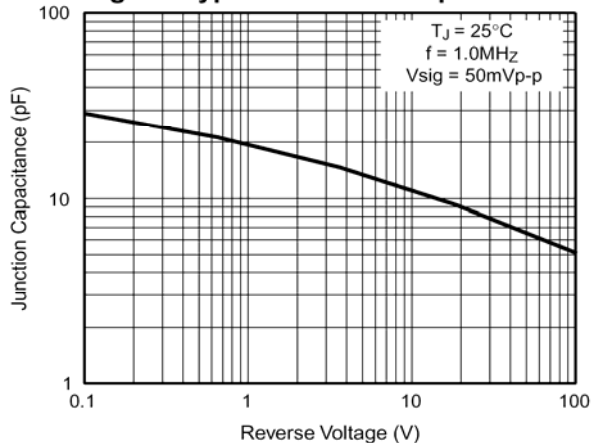


Fig. 6 - Typical Transient Thermal Impedance

