



# CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

## SURFACE MOUNT

GLASS PASSIVATED SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 1.0 Ampere

SM4001GP

THRU

SM4007GP

### FEATURES

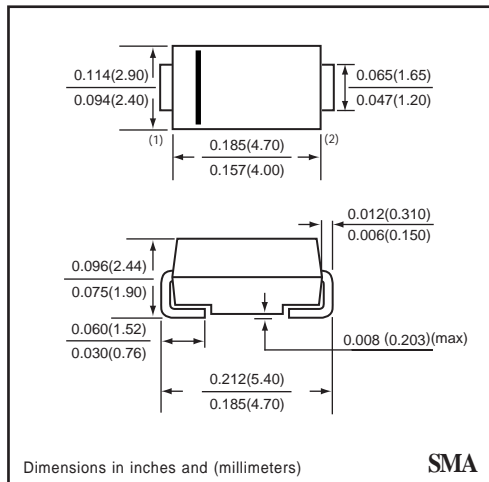
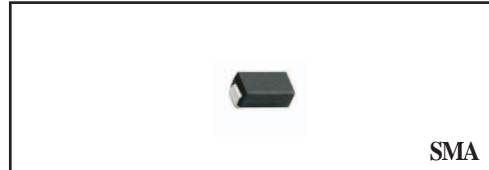
- \* Low leakage current
- \* Ideal for surface mounted applications
- \* Metallurgically bonded construction
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Glass passivated junction
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC SMA molded plastic  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Indicated by cathode band  
**Weight:** 0.002 ounces, 0.064 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.



### MAXIMUM RATINGS ( At TA = 25°C unless otherwise noted )

RATINGS		SYMBOL	SM4001GP	SM4002GP	SM4003GP	SM4004GP	SM4005GP	SM4006GP	SM4007GP	UNITS	
Maximum Recurrent Peak Reverse Voltage		V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage		V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage		V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current TL = 110°C		I <sub>O</sub>	1.0							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		I <sub>FSM</sub>					30				Amps
Typical Junction Capacitance (Note 1)		C <sub>J</sub>					15				pF
Maximum Thermal Resistance	(Note 2)	R <sub>θJL</sub>					20				°C / W
	(Note 3)	R <sub>θJA</sub>					50				°C / W
Operating and Storage Temperature Range		T <sub>J</sub> , T <sub>STG</sub>					-65 to +175			°C	

### ELECTRICAL CHARACTERISTICS ( At TA = 25°C unless otherwise noted )

CHARACTERISTICS		SYMBOL	SM4001GP	SM4002GP	SM4003GP	SM4004GP	SM4005GP	SM4006GP	SM4007GP	UNITS	
Maximum Instantaneous Forward Voltage at 1.0 A DC		V <sub>F</sub>					1.0				Volts
Maximum Full Load Reverse Current, Full cycle Average at TA = 75°C		I <sub>R</sub>					30				uAmps
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C						5.0				uAmps
	@ TA = 125°C						50				uAmps

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
 2. Thermal Resistance Junction to terminal, 6.0 mm<sup>2</sup> copper pads to each terminal  
 3. Thermal Resistance Junction to ambient, 6.0 mm<sup>2</sup> copper pads to each terminal

2009-06

# RATING CHARACTERISTIC CURVES ( SM4001GP THRU SM4007GP )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

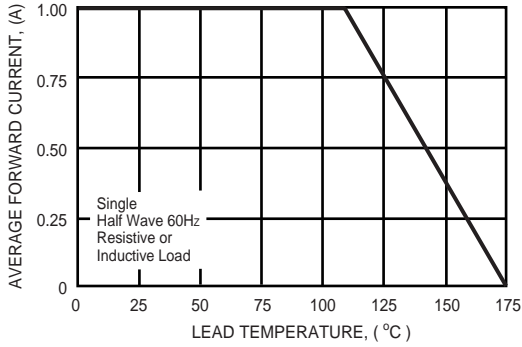


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

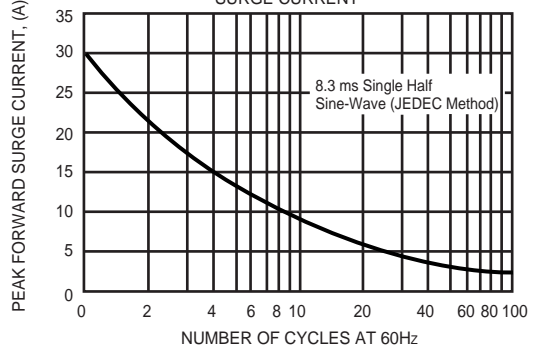


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

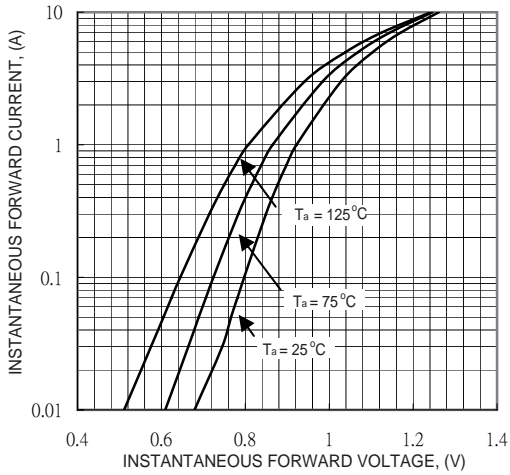


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

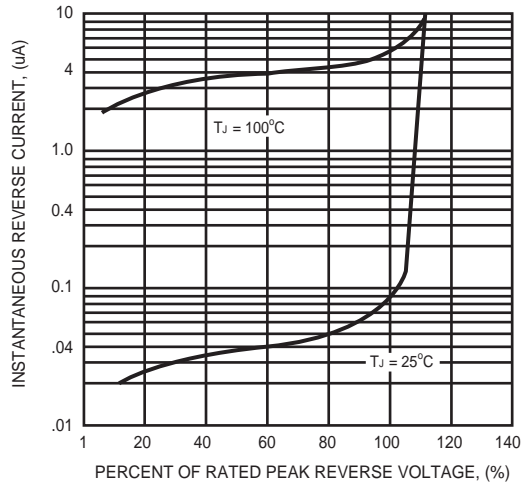


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

