



# CHENMKO ENTERPRISE CO.,LTD

*Halogens free devices*

## SURFACE MOUNT

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 70 - 100 Volts CURRENT 3.0 Amperes

**SBM37GP**

**THRU**

**SBM310GP**

#### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* For surface mounted applications
- \* Low profile package
- \* Built-in strain relief
- \* Metal silicon junction, majority carrier conduction
- \* Low power loss, high efficiency
- \* High current capability, low forward voltage drop
- \* High surge capability
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

#### MECHANICAL DATA

**Case:** JEDEC SMB molded plastic

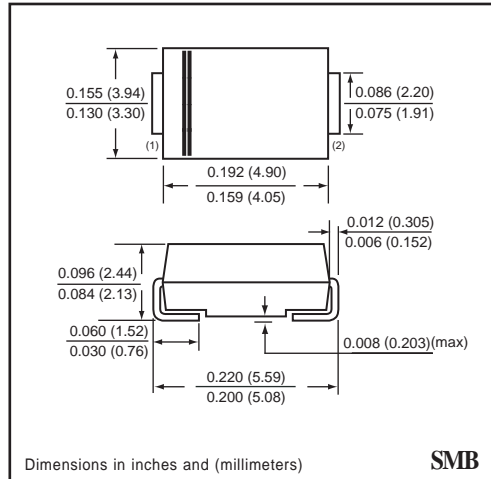
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.003 ounce 0.093 gram



SMB



Dimensions in inches and (millimeters)

SMB

#### 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	SBM37GP	SBM38GP	SBM39GP	SBM310GP	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	70	80	90	100	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	49	56	63	70	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	70	80	90	100	Volts
Maximum Average Forward Rectified Current	I <sub>O</sub>	3.0				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	50				Amps
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	110				pF
Typical Thermal Resistance (Note 1)	R <sub>θJL</sub>	17				°C / W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-65 to +150				°C

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

CHARACTERISTICS	SYMBOL	SBM37GP	SBM38GP	SBM39GP	SBM310GP	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC	V <sub>F</sub>	0.75		0.80		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	0.5				mAmps
	@ TA = 100°C	10				mAmps

NOTES : 1. Thermal Resistance ( Junction to Lead ) : PC Board Mounted on 0.2 X 0.2" ( 5 X 5mm ) copper pad area.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.

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## RATING CHARACTERISTIC CURVES ( SBM37GP THRU SBM310GP )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

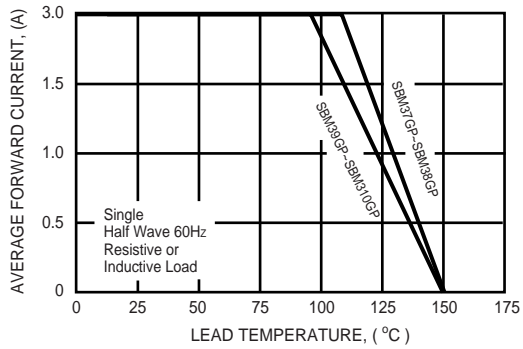


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

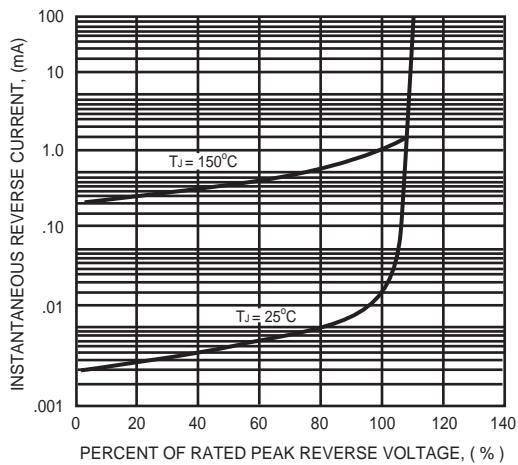


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

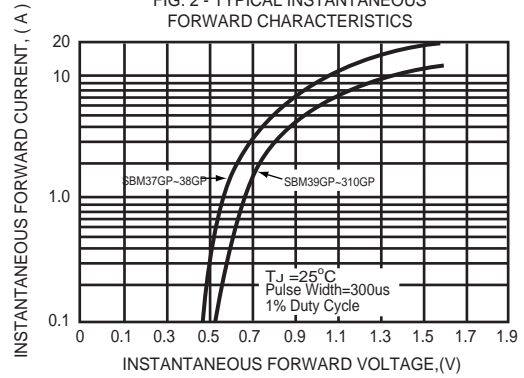


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

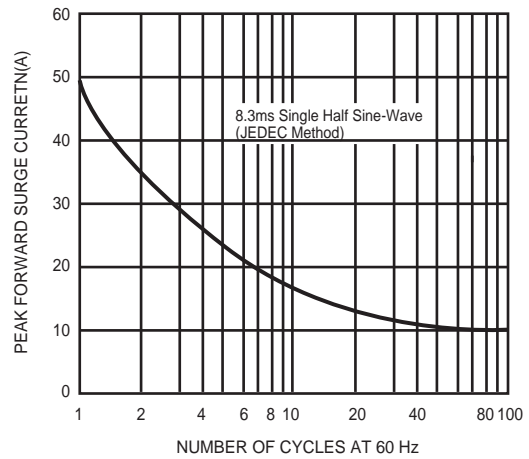


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

