



# CHENMKO ENTERPRISE CO.,LTD

## SURFACE MOUNT

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 - 40 Volts CURRENT 1.0 Ampere

Halogens free devices

**SBM12LGP  
THRU  
SBM14LGP**

**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

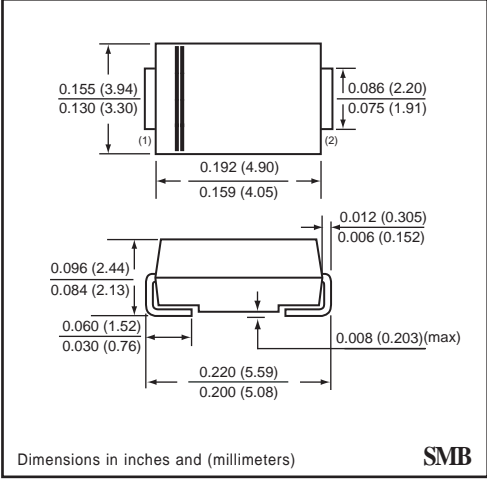
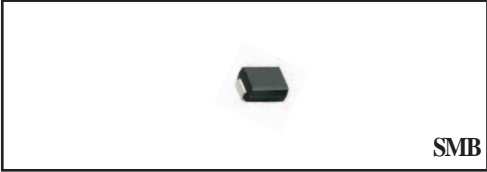
**MECHANICAL DATA**

**Case:** JEDEC SMB molded plastic

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

**Polarity:** Color band denotes cathode end

**Weight:** 0.002 ounce 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  | SBM12LGP    | SBM13LGP | SBM14LGP | UNITS  |
|---|---------|-------------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM    | 20          | 30       | 40       | Volts  |
| Maximum RMS Voltage   | VRMS    | 14          | 21       | 28       | Volts  |
| Maximum DC Blocking Voltage   | Vdc     | 20          | 30       | 40       | Volts  |
| Maximum Average Forward Rectified Current   | Io      | 1.0         |          |          | Amps   |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM    | 50          |          |          | Amps   |
| Typical Junction Capacitance (Note 2)   | CJ      | 110         |          |          | pF     |
| Typical Thermal Resistance (Note 1)   | R θJL   | 25          |          |          | °C / W |
| Operating and Storage Temperature Range   | TJ,TSTG | -65 to +125 |          |          | °C     |

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

| CHARACTERISTICS   | SYMBOL       | SBM12LGP | SBM13LGP | SBM14LGP | UNITS |
|---|--------------|----------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 1.0 A DC               | VF           | 0.38     |          |          | Volts |
| Maximum Average Reverse Current<br>at Rated DC Blocking Voltage | @ TA = 25°C  | 1.0      |          |          | mAmps |
|   | @ TA = 100°C | 40       |          |          | 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.

# RATING CHARACTERISTIC CURVES ( SBM12LGP THRU SBM14LGP )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

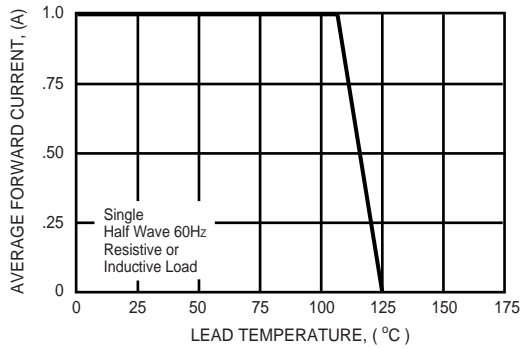


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

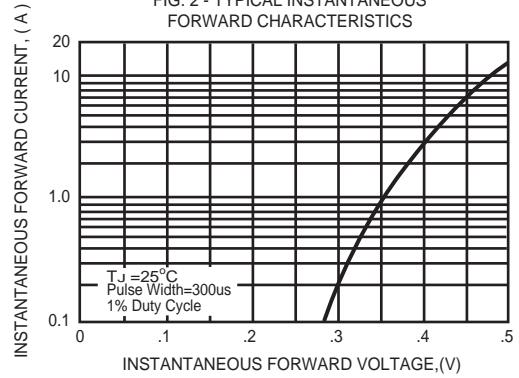


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

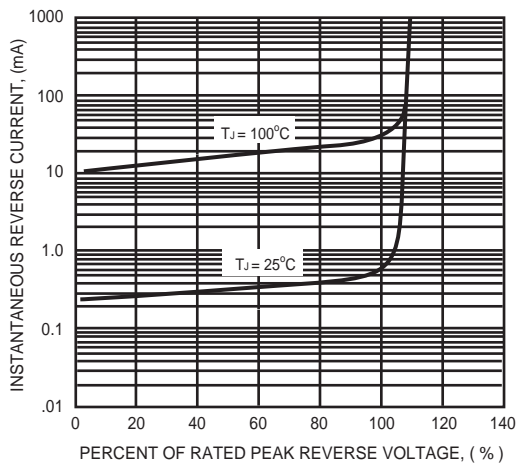


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

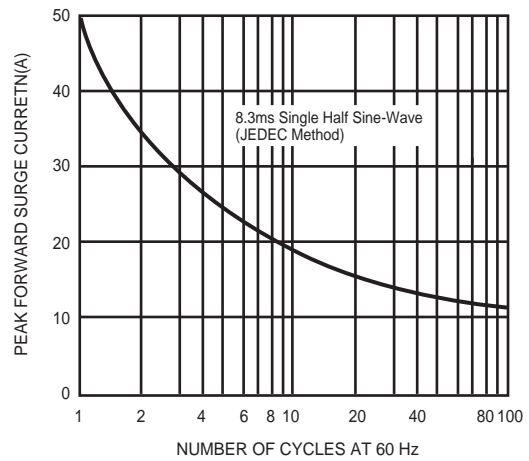


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

