



# CHENMKO ENTERPRISE CO.,LTD

## SURFACE MOUNT

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 70 - 100 Volts CURRENT 3.0 Amperes

**SBM37PT**

**THRU**

**SBM310PT**

Lead free devices

#### 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

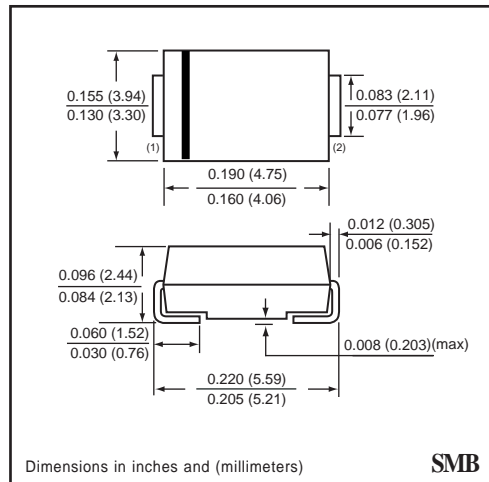
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**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  | SBM37PT     | SBM38PT | SBM39PT | SBM310PT | UNITS  |
|---|---------|-------------|---------|---------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM    | 70          | 80      | 90      | 100      | Volts  |
| Maximum RMS Voltage   | VRMS    | 49          | 56      | 63      | 70       | Volts  |
| Maximum DC Blocking Voltage   | VDC     | 70          | 80      | 90      | 100      | Volts  |
| Maximum Average Forward Rectified Current   | Io      | 3.0         |         |         |          | 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   | 17          |         |         |          | °C / W |
| Operating and Storage Temperature Range   | TJ,TSTG | -65 to +150 |         |         |          | °C     |

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

| CHARACTERISTICS                                   | SYMBOL | SBM37PT | SBM38PT | SBM39PT | SBM310PT | UNITS |
|---|--------|---------|---------|---------|----------|-------|
| Maximum Instantaneous Forward Voltage at 3.0 A DC | VF     | 0.75    |         | 0.80    |          | Volts |
| Maximum Average Reverse Current                   | IR     | 0.5     |         |         |          | mAmps |
| at Rated DC Blocking Voltage                      |        |         |         |         |          | 10    |

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 ( SBM37PT THRU SBM310PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

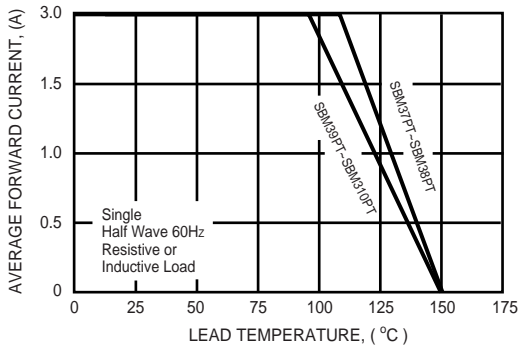


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

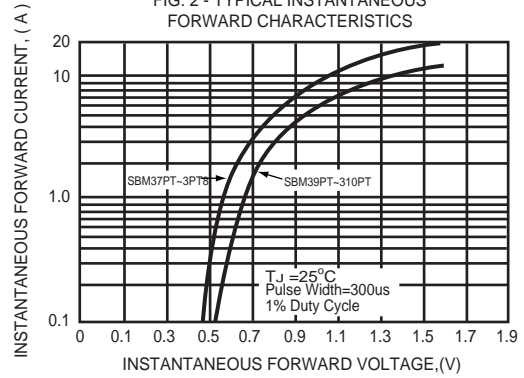


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

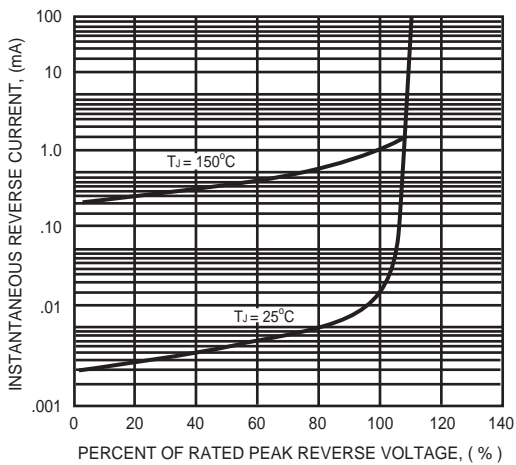


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

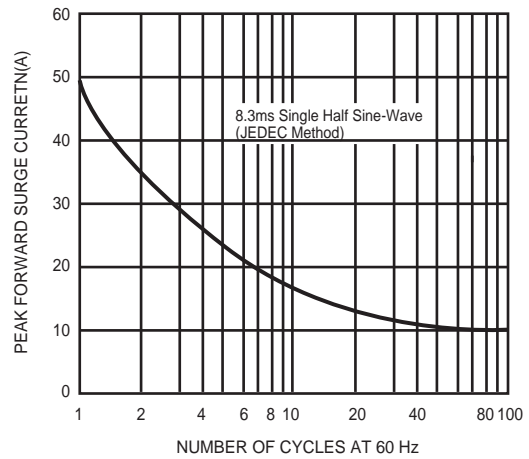


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

