



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 - 60 Volts CURRENT 5.0 Amperes

SBM52PT

THRU

SBM56PT

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

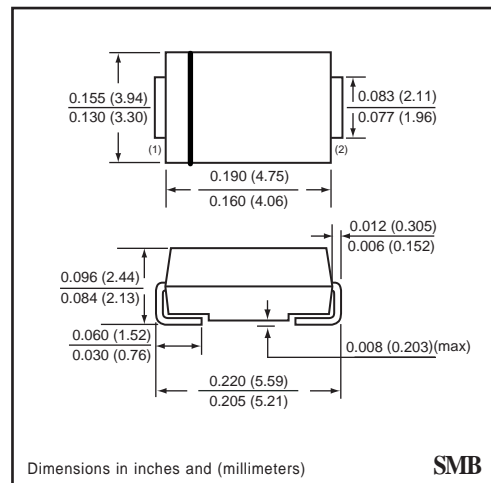
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

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 | SBM52PT | SBM53PT | SBM54PT | SBM55PT | SBM56PT | UNITS |
|---|-----------------------------------|-------------|---------|---------|---------|---------|--------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum Average Forward Rectified Current | I _O | 5.0 | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 125 | | | | | Amps |
| Typical Junction Capacitance (Note 2) | C _J | 300 | | | | | pF |
| Typical Thermal Resistance (Note 1) | R _{θJL} | 12 | | | | | °C / W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +125 | | | | | °C |

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

| CHARACTERISTICS | SYMBOL | SBM52PT | SBM53PT | SBM54PT | SBM55PT | SBM56PT | UNITS |
|---|----------------|---------|---------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 5.0 A DC | V _F | 0.55 | | | 0.70 | | Volts |
| Maximum Average Reverse Current | I _R | 0.5 | | | | | mAmps |
| at Rated DC Blocking Voltage | | 20 | | | | | mAmps |

NOTES : 1. Thermal Resistance (Junction to Lead) : PC Board Mounted on 0.55 X 0.55" (14 X 14mm) copper pad area.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.

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RATING CHARACTERISTIC CURVES (SBM52PT THRU SBM56PT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

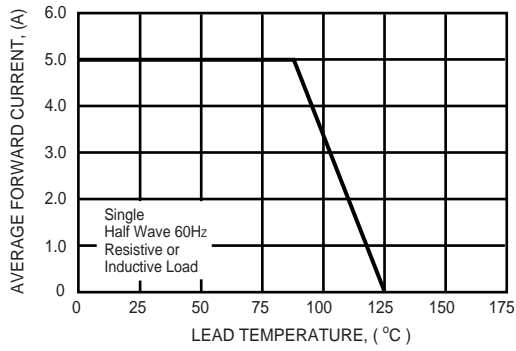


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

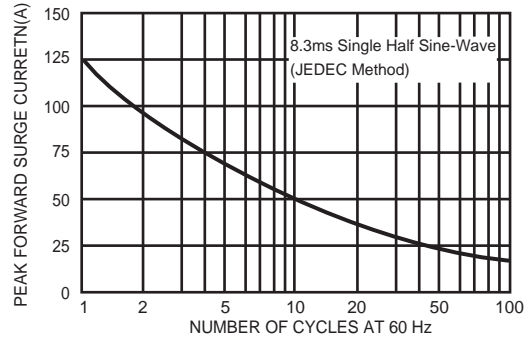


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

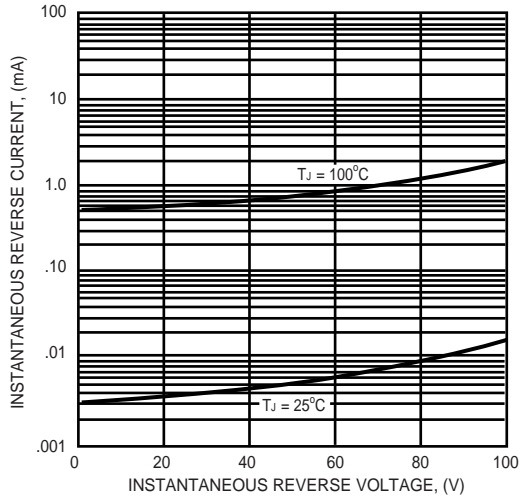


FIG. 4 - INSTANTANEOUS FORWARD CURRENT, (A)

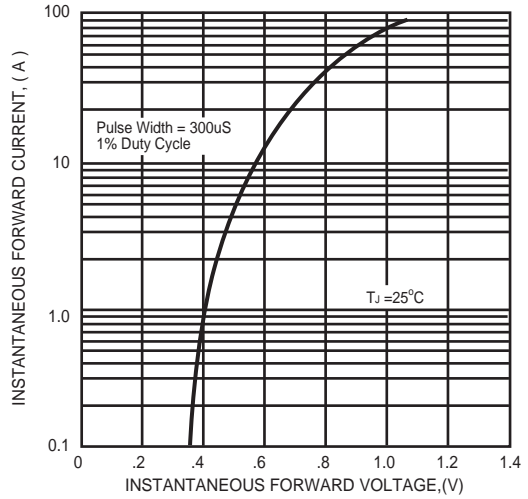


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

