



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SURFACE MOUNT

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 - 60 Volts CURRENT 1.0 Ampere

SBM12GP

THRU

SBM16GP

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

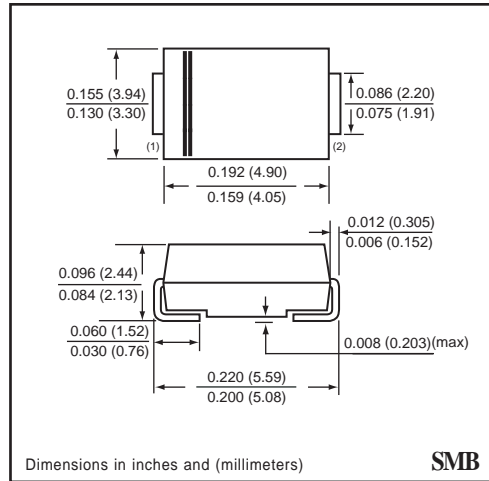
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

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	SBM12GP	SBM13GP	SBM14GP	SBM15GP	SBM16GP	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	1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	40					Amps
Typical Junction Capacitance (Note 2)	C _J	110					pF
Typical Thermal Resistance (Note 1)	R _{θJL}	22					°C / W
Operating Temperature Range	T _J	-65 to +125			-65 to +150		°C
Storage Temperature Range	T _{STG}	-65 to +150					°C

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

CHARACTERISTICS	SYMBOL	SBM12GP	SBM13GP	SBM14GP	SBM15GP	SBM16GP	UNITS
Maximum Instantaneous Forward Voltage at 1.0 A DC	V _F	0.50			0.70		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 (SBM12GP THRU SBM16GP)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

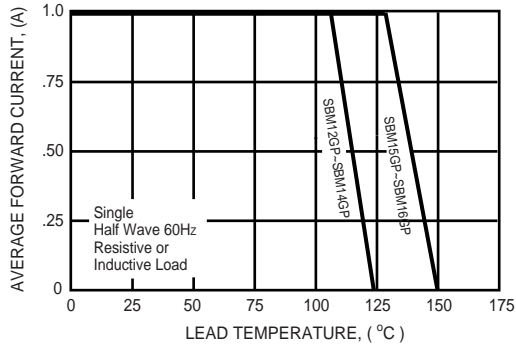


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

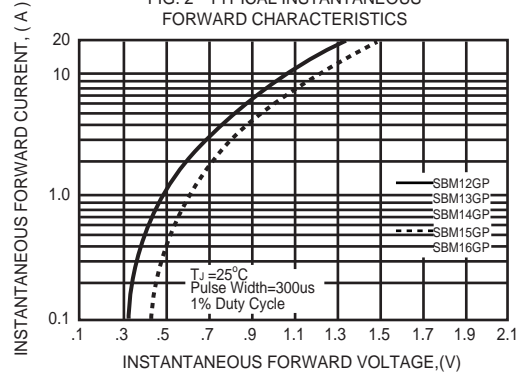


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

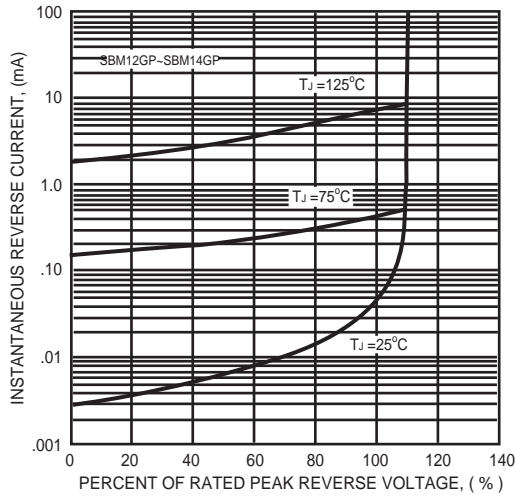


FIG. 3B - TYPICAL REVERSE CHARACTERISTICS

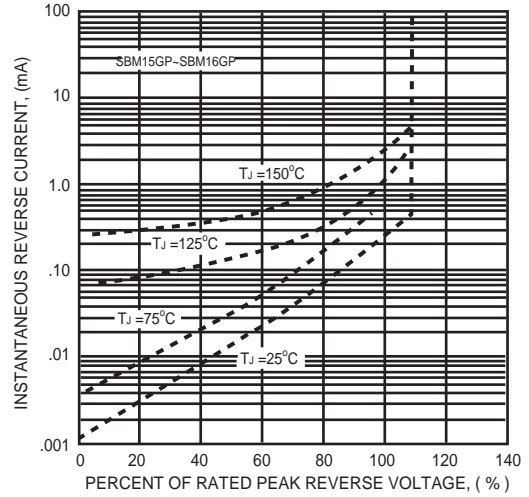


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

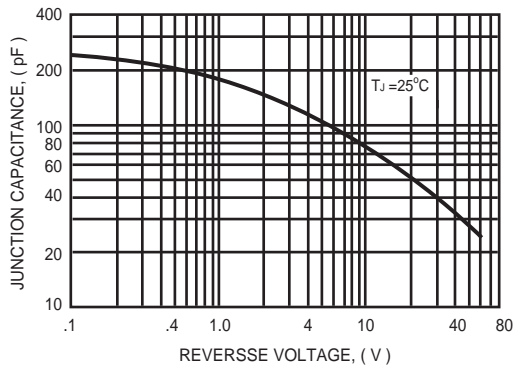


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

