CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 - 60 Volts CURRENT 5.0 Amperes

SBM52PT

THRU

SBM56PT

Lead free devices

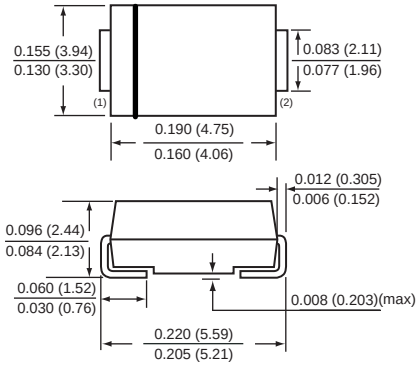
FEATURES

* 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 RATINGES (At T_A = 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)	$R_{\theta JL}$	12					°C / W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +125					°C

ELECTRICAL CHARACTERISTICS (At T_A = 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	@ T_A = 25°C	I_R	0.5					mAmps
at Rated DC Blocking Voltage	@ T_A = 100°C		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

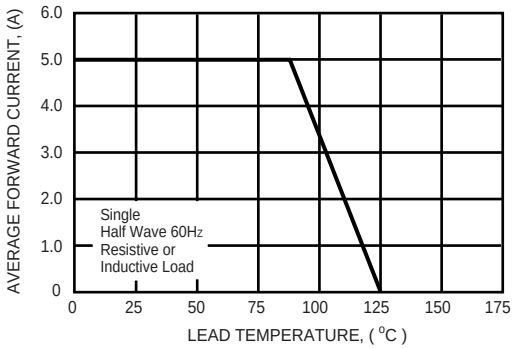

FIG. 2 - MAXIMUM NON-REPETIVE FORWARD SURGE CURRENT

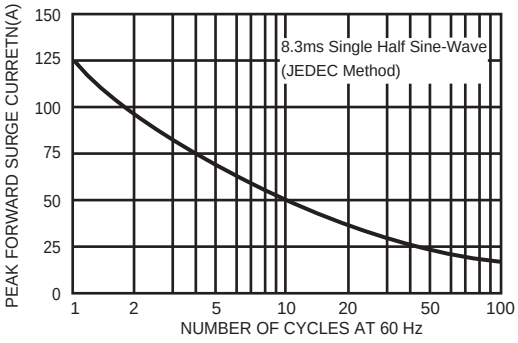

FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

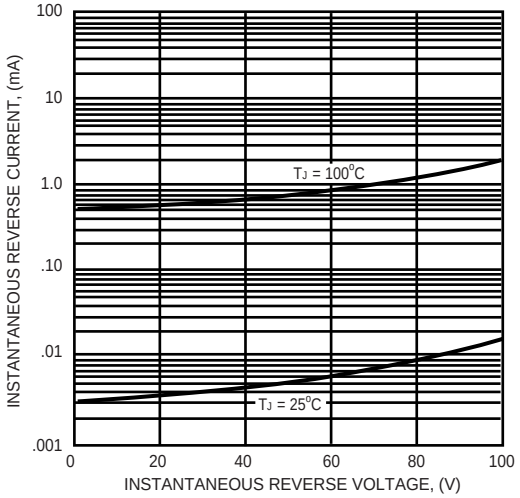

FIG. 4 - INSTANTANEOUS FORWARD CURRENT, (A)

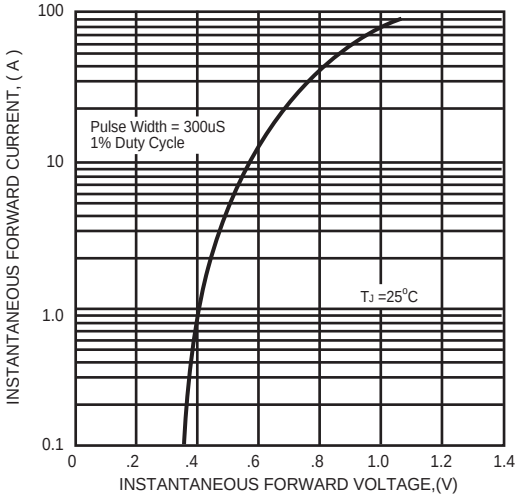

FIG. 5 - TYPICAL JUNCTION CAPACITANCE