



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT GLASS PASSIVATED HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

HBM31PT

THRU

HBM38PT

Lead free devices

FEATURES

- * For surface mounted applications
- * Low forward voltage, high current capability
- * Low leakage current
- * Metallurgically bonded construction
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Glass passivated junction
- * High temperature soldering guaranteed : 260°C/10 seconds at terminals

MECHANICAL DATA

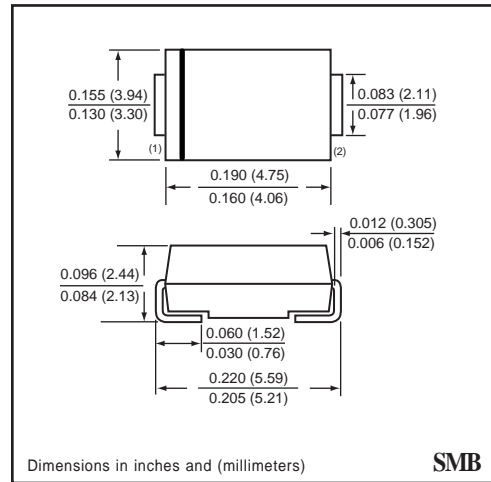
Case: JEDEC SMB molded plastic
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Weight: 0.003 ounces, 0.093 gram

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%.



SMB



SMB

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	HBM31PT	HBM32PT	HBM33PT	HBM34PT	HBM35PT	HBM36PT	HBM37PT	HBM38PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current T _L = 90°C	I _o	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	90								Amps
Typical Junction Capacitance (Note 1)	C _J	70				50				pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150								°C

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

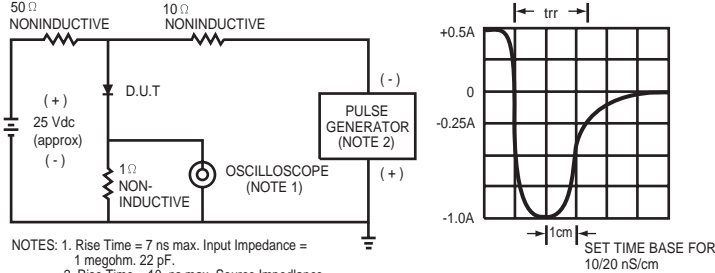
CHARACTERISTICS	SYMBOL	HBM31PT	HBM32PT	HBM33PT	HBM34PT	HBM35PT	HBM36PT	HBM37PT	HBM38PT	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC	V _F	1.0		1.3		1.5		1.7		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C	I _R	5.0								uAmps
Maximum Full Load Reverse Current Average, Full Cycle at TA = 55°C		100								uAmps
Maximum Reverse Recovery Time (Note 2)	t _{rr}	50				70				nSec

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts
 2. Test Conditions : I_F = 0.5 A, I_R = -1.0 A, I_{RR} = -0.25 A

2002-5

RATING CHARACTERISTIC CURVES (HBM31PT THRU HBM38PT)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7 ns max. Input Impedance = 1 megohm. 22 pF.
2. Rise Time = 10 ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

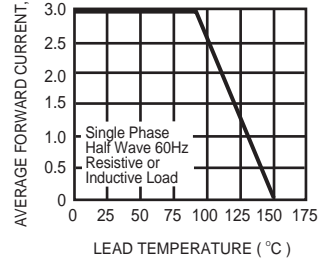


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

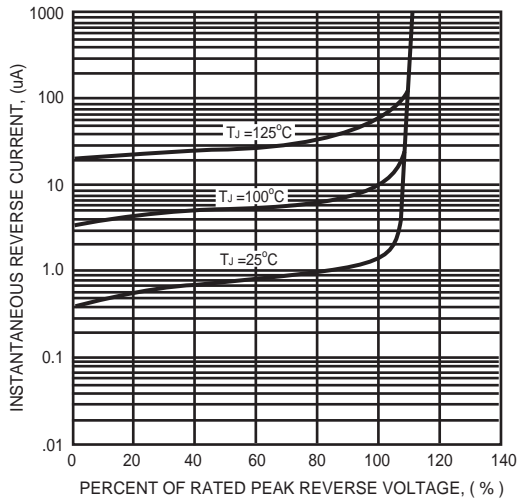


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

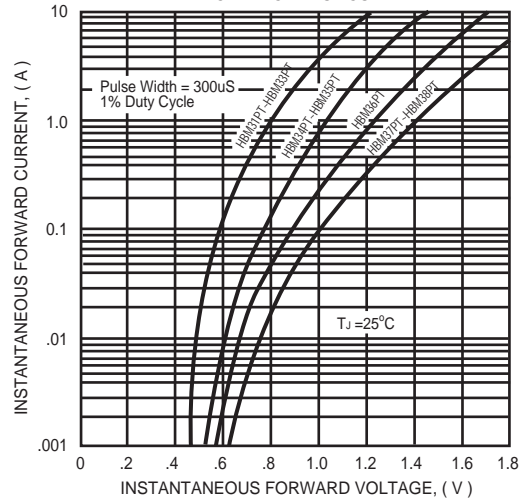


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

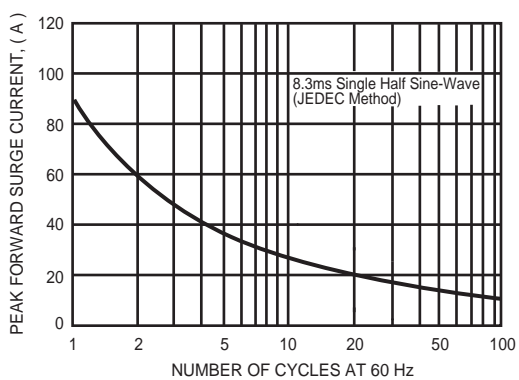


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

