



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT GLASS PASSIVATED HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 1.0 Ampere

Lead free devices

HBM11PT

THRU

HBM18PT

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

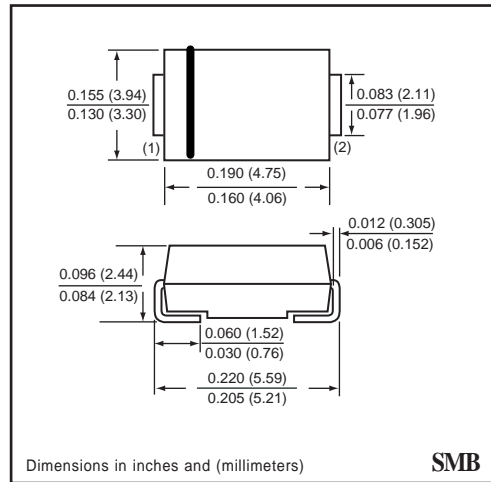
Case: JEDEC SMB molded plastic
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Weight: 0.003 ounces, 0.093 gram

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 | HBM11PT | HBM12PT | HBM13PT | HBM14PT | HBM15PT | HBM16PT | HBM17PT | HBM18PT | UNITS |
|---|----------|-------------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | Vdc | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current TL = 110°C | Io | 1.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 30 | | | | | | | | Amps |
| Typical Junction Capacitance (Note 1) | CJ | 15 | | | | 12 | | | | pF |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to +150 | | | | | | | | °C |

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

| CHARACTERISTICS | SYMBOL | HBM11PT | HBM12PT | HBM13PT | HBM14PT | HBM15PT | HBM16PT | HBM17PT | HBM18PT | UNITS |
|--|--------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 1.0 A DC | VF | 1.0 | | 1.3 | | 1.5 | | 1.7 | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C | IR | 5.0 | | | | | | | | uAmps |
| Maximum Full Load Reverse Current Average, Full Cycle at TA = 55°C | | 100 | | | | | | | | uAmps |
| Maximum Reverse Recovery Time (Note 2) | trr | 50 | | | | 70 | | | | nSec |

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts
 2. Test Conditions : IF = 0.5 A, IR = -1.0 A, IRR = -0.25 A

2002-5

RATING CHARACTERISTIC CURVES (HBM11PT THRU HBM18PT)

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

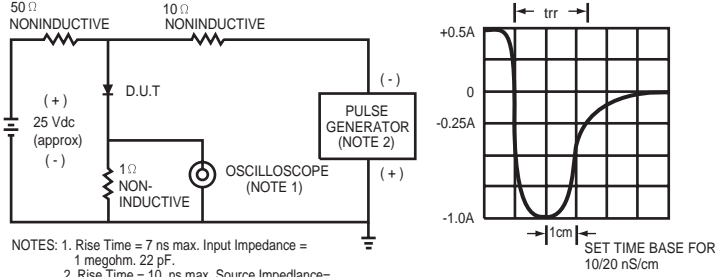


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

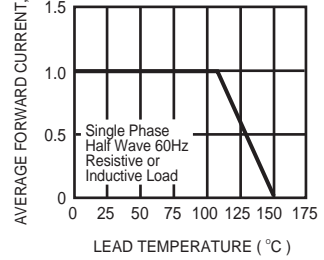


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

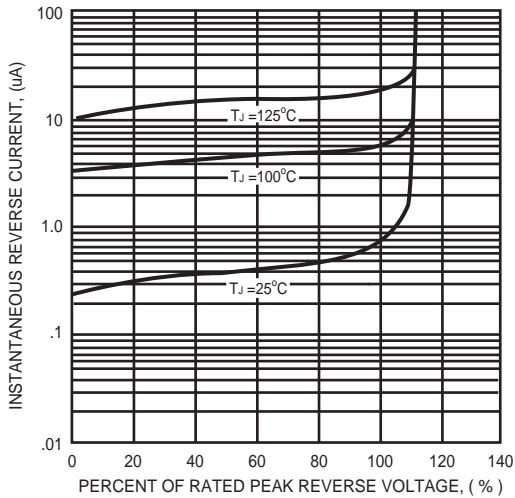


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

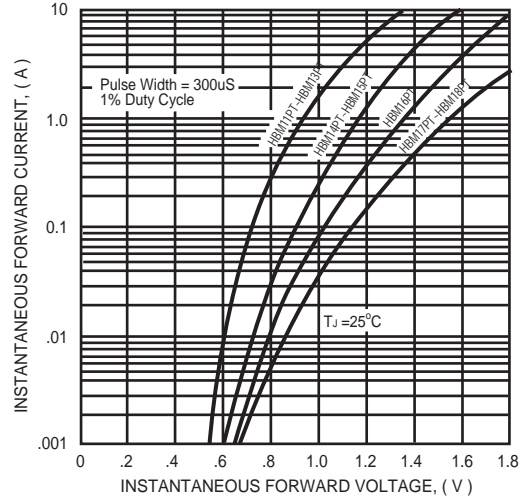


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

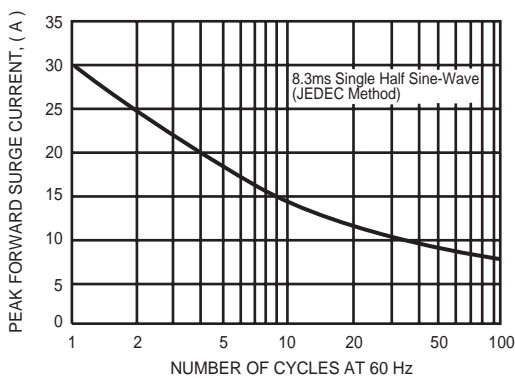


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

