

**MBC10JH THRU MBC10MH**
**FEATURES**

- \* Halogen-free type
- \* Internal structure with GPRC (glass passivated rectifier chip) inside
- \* Compliance to RoHS product
- \* Lead less chip form, no lead damage
- \* Low power loss, High efficiency
- \* High current capability
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

**APPLICATION**

- \* AC/DC Power Supply
- \* Communication Equipment

**MECHANICAL DATA**

**Case :** Packed with FRP substrate and epoxy underfilled

**Terminals :** Pure Tin plated (Lead-Free),  
solderable per MIL-STD-750, Method 2026.

**Polarity :** Laser marking symbols

**Weight :** 0.07 gram

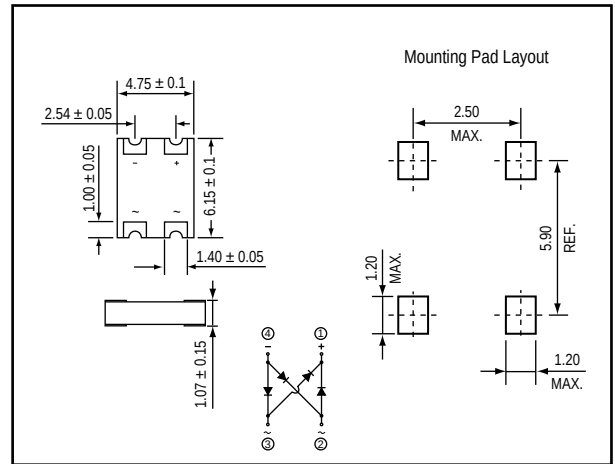
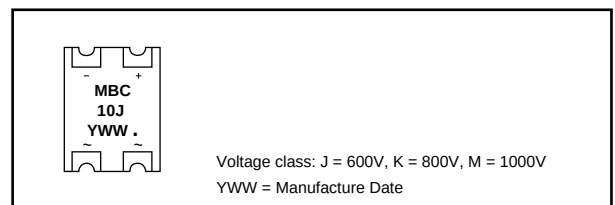
**PACKING**

- \* 5,000 pieces per 13" (330mm ± 2mm) reel
- \* 2 reels per box
- \* 5 boxes per carton

**OUTLINE DIMENSIONS**

**Case : MBC**

Unit : mm

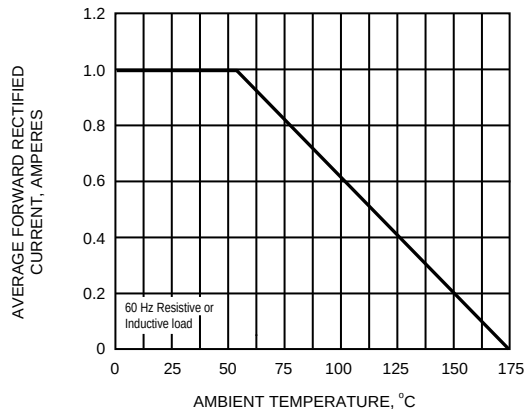
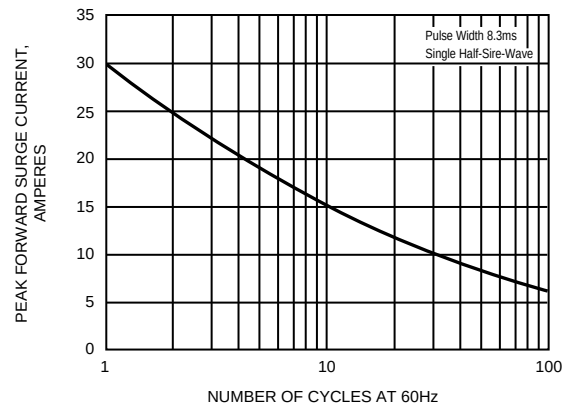
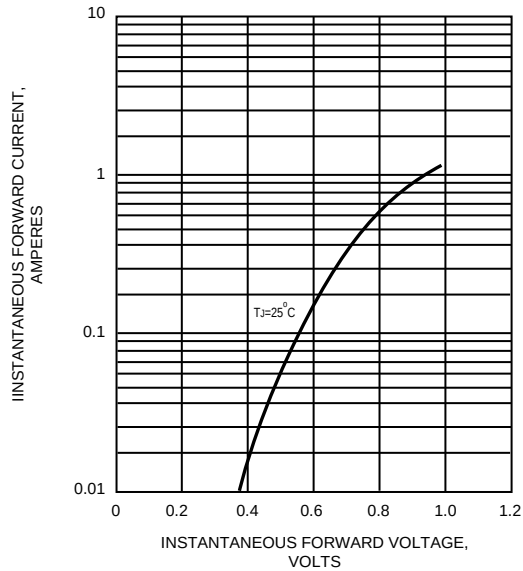
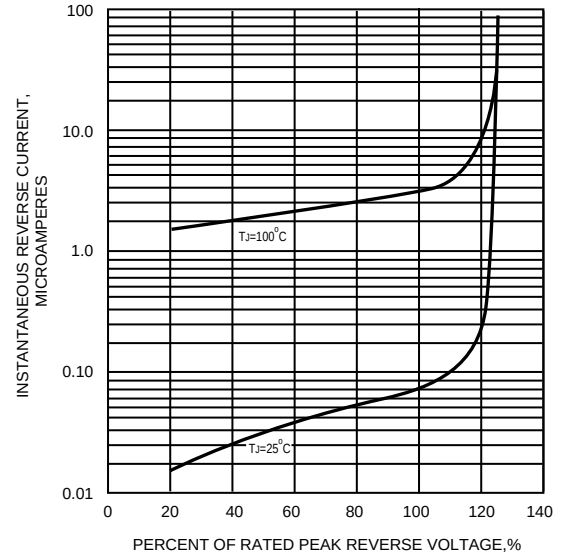

**MARKING**

**Absolute Maximum Ratings (Ta = 25 °C)**

| ITEM                                             | Symbol  | Conditions                  | Rating      |         |         | Unit |
|--------------------------------------------------|---------|-----------------------------|-------------|---------|---------|------|
|                                                  |         |                             | MBC10JH     | MBC10KH | MBC10MH |      |
| Repetitive peak reverse voltage                  | VRRM    |                             | 600         | 800     | 1000    | V    |
| Average forward current                          | IF(AV)  |                             | 1.0         |         |         | A    |
| Peak forward surge current                       | IFSM    | 8.3ms single half sine-wave | 30          |         |         | A    |
| Operating junction and storage temperature Range | Tj,TSTG |                             | -55 to +175 |         |         | °C   |

**Electrical characteristics (Ta = 25 °C)**

| ITEM                            | Symbol           | Conditions                  | Min. | Typ. | Max. | Unit             |
|---------------------------------|------------------|-----------------------------|------|------|------|------------------|
| Forward voltage                 | VF               | IF = 1.0A                   | -    | 0.95 | 1.00 | V                |
| Repetitive peak reverse current | IRRM             | VR = Max. VRRM , Ta = 25 °C | -    | 0.08 | 5    | uA               |
| Current squared time            | I <sup>2</sup> t | t < 8.3ms , Ta = 25 °C      | -    | 2.59 | -    | A <sup>2</sup> s |
| Junction capacitance            | Cj               | VR = 4V, f = 1.0 MHz        | -    | 25   | -    | pF               |
| Thermal resistance              | Rth(JA)          | Junction to ambient (NOTE)  | -    | 110  | -    | °C/W             |
|                                 | Rth(JL)          | Junction to lead (NOTE)     | -    | 15   | -    |                  |

NOTES : Thermal resistance, junction to ambient, measured on PC board with 5.0 x 5.0mm (0.03mm thick) land areas.

**FIG.1 - FORWARD CURRENT DERATING CURVE**

**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

**FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT**

**FIG.5 - TYPICAL JUNCTION CAPACITANCE**
