

MBCR10JLH THRU MBCR10MLH
Low VF Bridge Rectifier

● **FEATURES**

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

● **APPLICATION**

- * AC/DC Power Supply
- * Communication Equipment

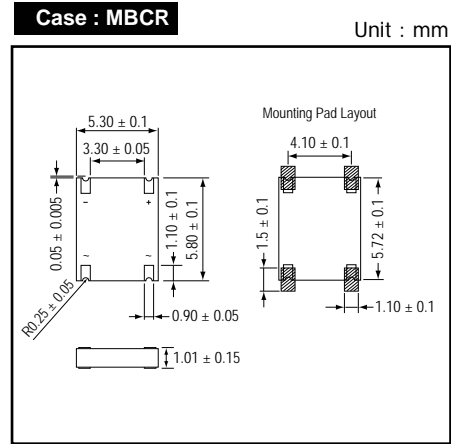
● **MECHANICAL DATA**

Case : Packed with FRP substrate and epoxy underfilled
Terminals : Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.
Polarity : Laser Cathode band marking
Weight : 0.07 gram

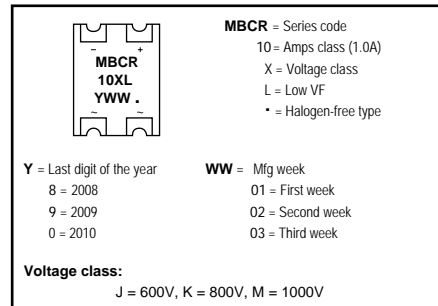
● **PACKING**

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

● **OUTLINE DIMENSIONS**



● **MARKING**



Absolute Maximum Ratings (Ta = 25 °C)

| ITEM | Symbol | Conditions | Rating | | | Unit |
|-------------------------------------|---------|-----------------------------|-------------|-----------|-----------|------|
| | | | MBCR10JLH | MBCR10KLH | MBCR10MLH | |
| 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 | 45 | | | A |
| Operating 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 | - | 0.92 | 0.95 | V |
| Repetitive peak reverse current | IRRM | VR = Max. VRRM , Ta = 25 °C | - | 0.08 | 5 | uA |
| Current squared time | I ² t | t < 8.3ms , Ta = 25 °C | - | 8.4 | - | A ² s |
| Junction capacitance | Cj | VR = 4V, f = 1.0 MHz | - | 25 | - | pF |
| Thermal resistance | Rth(JA) | Junction to ambient (NOTE) | - | 95 | - | °C/W |
| | Rth(JL) | Junction to lead (NOTE) | - | 20 | - | |

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

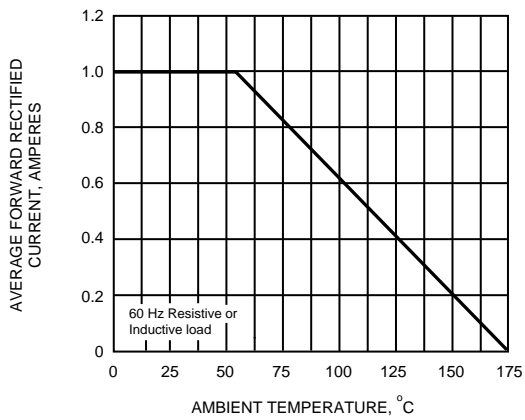


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

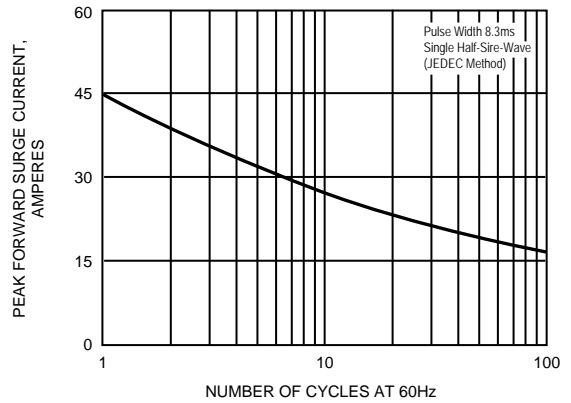


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

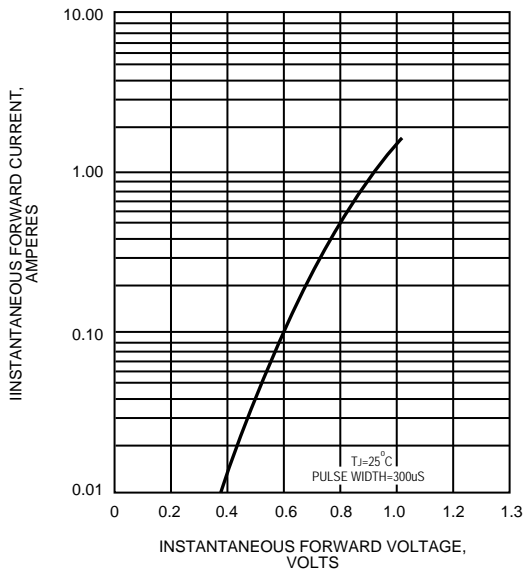


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

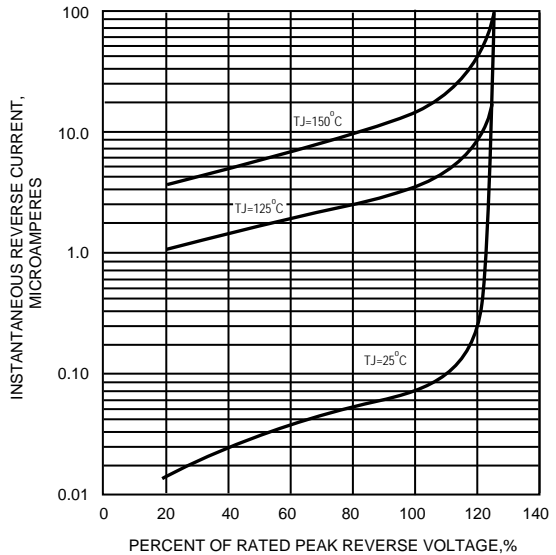


FIG.5 - TYPICAL JUNCTION CAPACITANCE

