



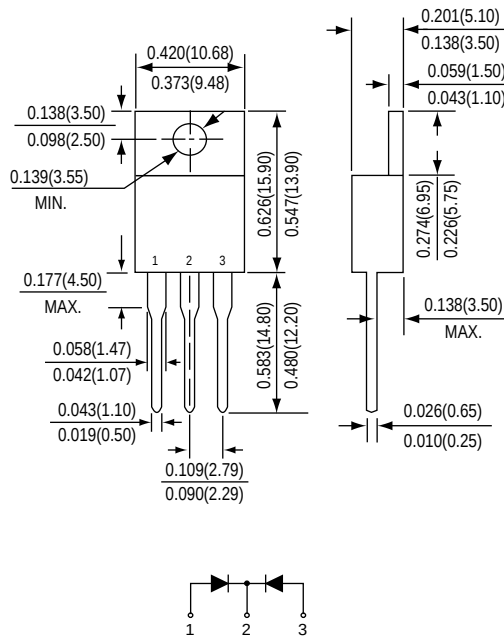
# MBR30100CTSH

## SCHOTTKY BARRIER RECTIFIER

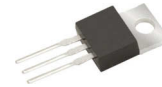
Reverse Voltage - 100 Volts

Forward Current - 30 Amperes

### TO-220AB



\*Dimensions in inches and (millimeters)



### FEATURES

- \* Halogen-free type
- \* Compliance to RoHS product
- \* Low power loss & high efficiency
- \* High surge capability
- \* 30 Amperes total (15 Amperes per diode leg)
- \* High surge current capability
- \* Epitaxial construction
- \* Plastic Material-UL Recognition Flammability Classification 94V-0

### MECHANICAL DATA

**Case :** JEDEC TO-220AB molded plastic body

**Terminals :** Plated Leads, solderable per  
MIL-STD-750, Method 2026

**Polarity :** Molded on body

**Mounting Position :** Any

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| Ratings at 25 °C ambient temperature unless otherwise specified.                                 | SYMBOLS | MBR30100CTSH | UNITS  |
|--------------------------------------------------------------------------------------------------|---------|--------------|--------|
| Maximum repetitive peak reverse voltage                                                          | VRRM    | 100          | Volts  |
| Maximum RMS voltage                                                                              | VRMS    | 70           |        |
| Maximum DC blocking voltage                                                                      | VDC     | 100          |        |
| Maximum average forward rectified current                                                        | I (AV)  | 30           | Amps   |
| Peak repetitive forward current (rated VR, square wave, 20KHz)                                   | IFM     | 30           | Amps   |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM    | 275          | Amps   |
| Maximum instantaneous forward voltage<br>@ IF= 15 A<br>Tj=25°C<br>Tj=125°C                       | VF      | 0.86<br>0.67 | Volts  |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>@ Tj=25°C<br>@ Tj=125°C            | IR      | 0.01<br>10   | mA     |
| Typical junction capacitance (Note)                                                              | CJ      | 350          | pF     |
| Typical thermal resistance                                                                       | R θJA   | 15           | °C / W |
| Operating junction temperature                                                                   | TJ      | 150          | °C     |
| Storage temperature range                                                                        | TSTG    | -55 to +175  | °C     |

Note : Measured at 1.0MHz and applied reverse voltage of 4.0V.

# RATINGS AND CHARACTERISTIC CURVES OF MBR30100CTSH

FIG.1 - FORWARD CURRENT DERATING CURVE

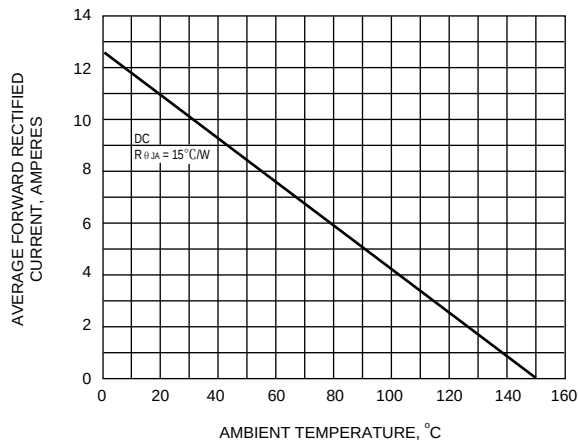


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

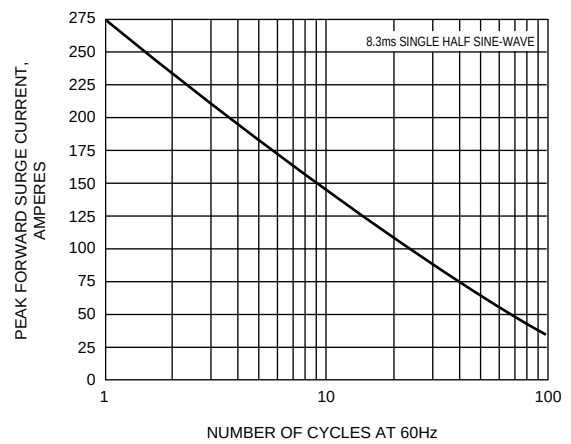


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

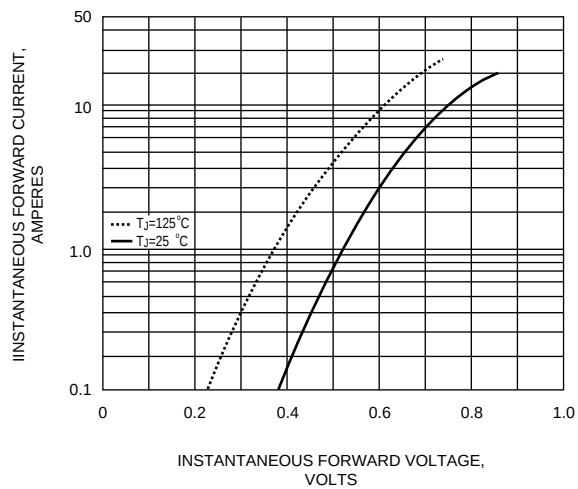


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

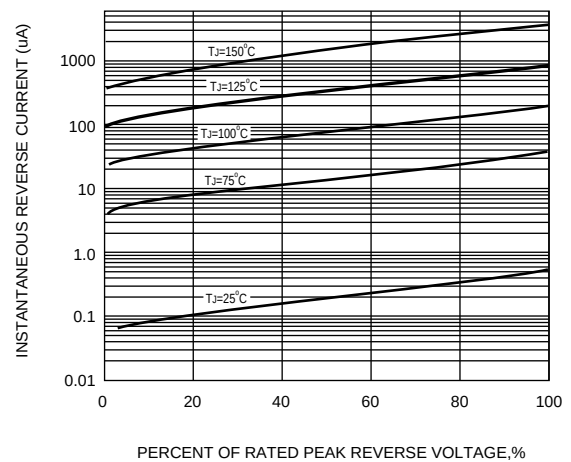
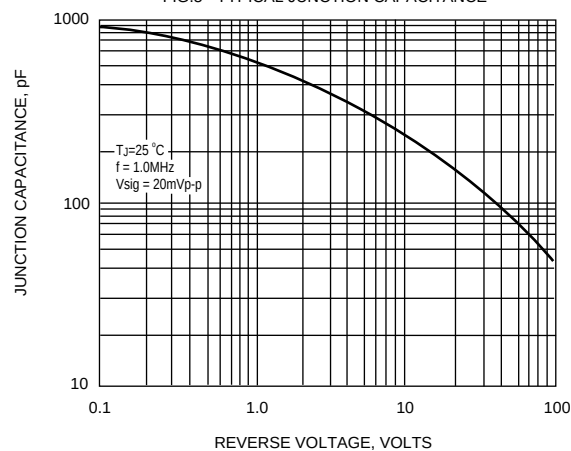


FIG.5 - TYPICAL JUNCTION CAPACITANCE



## PACKING INFORMATION

| Package  | Packing Qty.  |                     |                  | Inner Box Size<br>(mm) | Carton Size<br>(mm) |
|----------|---------------|---------------------|------------------|------------------------|---------------------|
|          | Tube<br>(pcs) | Inner box<br>(kpcs) | Carton<br>(kpcs) |                        |                     |
| TO-220AB | 50            | 4                   | 8                | 570 x 147 x 150        | 585 x 316 x 164     |