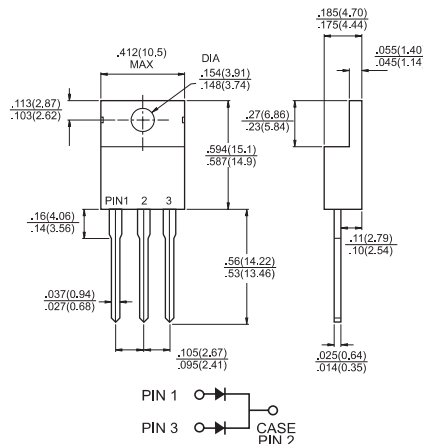


# MBR1035CT-MBR10200CT

10.0AMP. Schottky Barrier Rectifiers



## TO-220AB



## Features

- ✧ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case

## Mechanical Data

- ✧ Cases: JEDEC TO-220AB molded plastic body
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs. max
- ✧ Weight: 0.08 ounce, 2.24 grams

Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating 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%

| Type Number   | Symbol          | MBR 1035 CT                  | MBR 1045 CT                  | MBR 1050 CT                  | MBR 1060 CT                  | MBR 1090 CT | MBR 10100 CT | MBR 10150 CT | MBR 10200 CT | Units                     |   |
|---|-----------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------|--------------|--------------|--------------|---------------------------|---|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 35                           | 45                           | 50                           | 60                           | 90          | 100          | 150          | 200          | V                         |   |
| Maximum RMS Voltage   | $V_{RMS}$       | 24                           | 31                           | 35                           | 42                           | 63          | 70           | 105          | 140          | V                         |   |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 35                           | 45                           | 50                           | 60                           | 90          | 100          | 150          | 200          | V                         |   |
| Maximum Average Forward Rectified Current at $T_C=125^\circ\text{C}$  | $I_{(AV)}$      | 10                           |                              |                              |                              |             |              |              |              | A                         |   |
| Peak Repetitive Forward Current (Rated $V_R$ , Square Wave, 20KHz) at $T_C=125^\circ\text{C}$   | $I_{FRM}$       | 32                           |                              |                              |                              |             |              |              |              | A                         |   |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)  | $I_{FSM}$       | 120                          |                              |                              |                              |             |              |              |              | A                         |   |
| Peak Repetitive Reverse Surge Current (Note 1)  | $I_{RRM}$       | 1.0                          |                              |                              |                              |             |              |              | 0.5          | A                         |   |
| Maximum Instantaneous Forward Voltage at:<br>(Note 2)<br>$I_F=5\text{A}, T_C=25^\circ\text{C}$<br>$I_F=5\text{A}, T_C=125^\circ\text{C}$<br>$I_F=10\text{A}, T_C=25^\circ\text{C}$<br>$I_F=10\text{A}, T_C=125^\circ\text{C}$ | $V_F$           | 0.70<br>0.57<br>0.80<br>0.67 | 0.80<br>0.65<br>0.90<br>0.75 | 0.85<br>0.75<br>0.95<br>0.85 | 0.88<br>0.78<br>0.98<br>0.88 |             |              |              |              |                           | V |
| Maximum Instantaneous Reverse Current @ $T_C=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C=125^\circ\text{C}$ (Note 2)  | $I_R$           | 15                           |                              | 10                           | 0.1                          |             | 2.0          |              |              | mA<br>mA                  |   |
| Voltage Rate of Change (Rated $V_R$ )   | $dV/dt$         | 10,000                       |                              |                              |                              |             |              |              |              | V/ $\mu\text{s}$          |   |
| Maximum Typical Thermal Resistance (Note 3)   | $R_{\theta JC}$ | 1.5                          |                              |                              |                              |             |              |              |              | $^\circ\text{C}/\text{W}$ |   |
| Operating Junction Temperature Range  | $T_J$           | -65 to +150                  |                              |                              |                              |             |              |              |              | $^\circ\text{C}$          |   |
| Storage Temperature Range   | $T_{STG}$       | -65 to +175                  |                              |                              |                              |             |              |              |              | $^\circ\text{C}$          |   |

- Notes:
1. 2.0us Pulse Width,  $f=1.0\text{ KHz}$
  2. Pulse Test: 300us Pulse Width, 1% Duty Cycle
  3. Thermal Resistance from Junction to Case Per Leg, Mount on Heatsink Size of 2 in x 3 in x 0.25in Al-Plate.

# MBR1035CT-MBR10200CT

10.0AMP. Schottky Barrier Rectifiers



## RATINGS AND CHARACTERISTIC CURVES (MBR1035CT THRU MBR10200CT)

FIG.1- FORWARD CURRENT DERATING CURVE

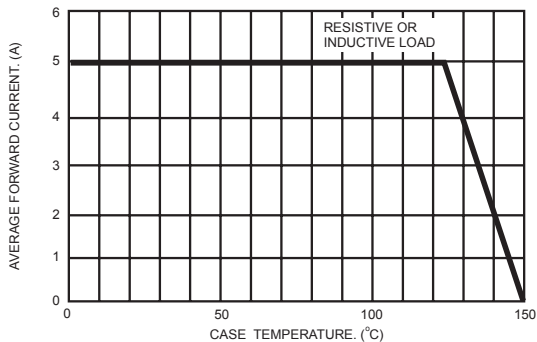


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

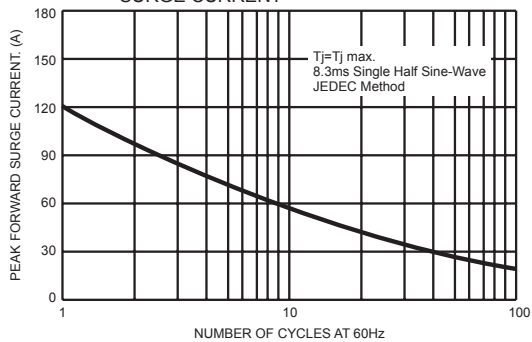


FIG.3- TYPICAL FORWARD CHARACTERISTICS

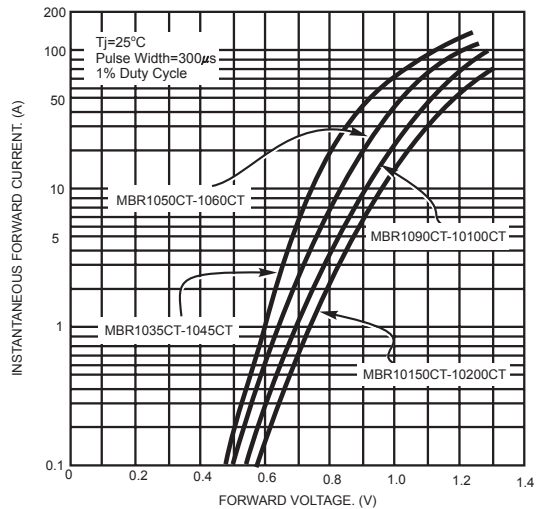


FIG.4- TYPICAL REVERSE CHARACTERISTICS

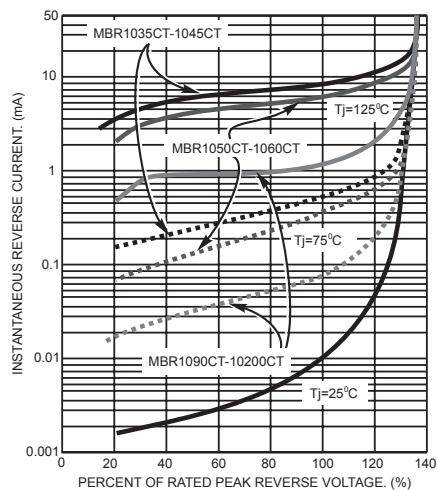


FIG.5- TYPICAL JUNCTION CAPACITANCE

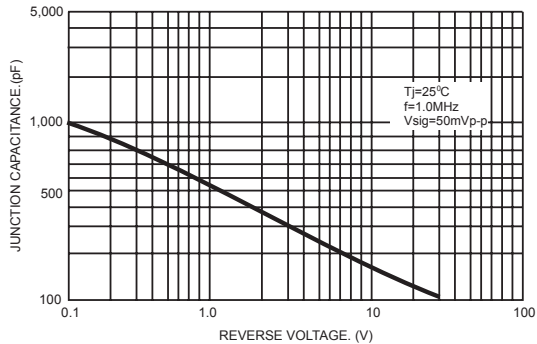
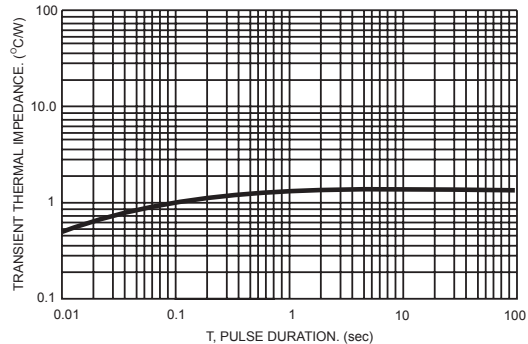


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Schottky Diodes & Rectifiers](#) category:*

*Click to view products by [LGE](#) manufacturer:*

Other Similar products are found below :

[CUS06\(Te85L,Q,M\)](#) [MA4E2039](#) [D1FH3-5063](#) [MBR0530L-TP](#) [MBR10100CT-BP](#) [MBR30H100MFST1G](#) [MMBD301M3T5G](#) [PMAD1103-LF](#) [PMAD1108-LF](#) [RB160M-50TR](#) [RB520S-30](#) [RB551V-30](#) [DD350N18K](#) [DZ435N40K](#) [DZ600N16K](#) [BAS16E6433HTMA1](#) [BAS 3010S-02LRH E6327](#) [BAT 54-02LRH E6327](#) [IDL02G65C5XUMA1](#) [NSR05F40QNXT5G](#) [NSVR05F40NXT5G](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SBAT54CWT1G](#) [SBM30-03-TR-E](#) [SBS818-TL-E](#) [SK32A-LTP](#) [SK33A-TP](#) [SK34A-TP](#) [SK34B-TP](#) [SMD1200PL-TP](#) [ACDBN160-HF](#) [SS3003CH-TL-E](#) [STPS30S45CW](#) [PDS3100Q-7](#) [GA01SHT18](#) [CRS10I30A\(Te85L,QM\)](#) [MBR1240MFST1G](#) [MBRB30H30CT-1G](#) [BAS28E6433HTMA1](#) [BAS 70-02L E6327](#) [HSB123JTR-E](#) [JANTX1N5712-1](#) [VS-STPS40L45CW-N3](#) [DD350N12K](#) [SB007-03C-TB-E](#) [SB10015M-TL-E](#) [SB1003M3-TL-E](#) [SK110-LTP](#)