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# MBR2020CT THRU MBR20100CT

## Features

- Meatl of Silicon Rectifier, Majority Conductor
- Guard ring for transient protection
- Low Forward Voltage Drop
- High Current Capability, High Efficiency
- Low Power Loss

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

| Catalog Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|----------------|----------------------------------------|---------------------|-----------------------------|
| MBR2020CT      | 20V                                    | 14V                 | 20V                         |
| MBR2030CT      | 30V                                    | 21V                 | 30V                         |
| MBR2035CT      | 35V                                    | 24.5V               | 35V                         |
| MBR2040CT      | 40V                                    | 28V                 | 40V                         |
| MBR2045CT      | 45V                                    | 31.5V               | 45V                         |
| MBR2060CT      | 60V                                    | 42V                 | 60V                         |
| MBR2080CT      | 80V                                    | 56V                 | 80V                         |
| MBR20100CT     | 100V                                   | 70V                 | 100V                        |

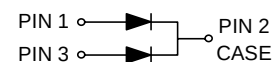
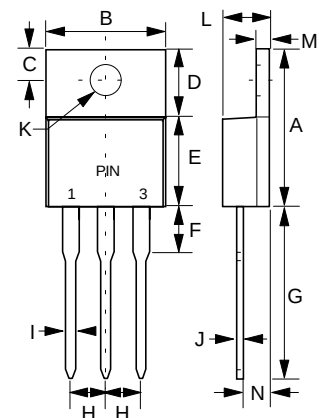
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                         |             |        |                           |
|---------------------------------------------------------|-------------|--------|---------------------------|
| Average Forward Current                                 | $I_{F(AV)}$ | 20 A   | $T_A = 120^\circ\text{C}$ |
| Peak Forward Surge Current                              | $I_{FSM}$   | 150A   | 8.3ms, half sine          |
| Maximum Instantaneous Forward Voltage                   | $V_F$       |        |                           |
| 2020CT~2045CT                                           |             | .70V   | $I_{FM} = 10A;$           |
| 2060CT                                                  |             | .80V   | $T_A = 25^\circ\text{C}$  |
| 2080CT~20100CT                                          |             | .85V   |                           |
| 2020CT~2045CT                                           |             | .84V   | $I_{FM} = 20A;$           |
| 2060CT                                                  |             | .95V   | $T_A = 25^\circ\text{C}$  |
| 2080CT~20100CT                                          |             | .95V   |                           |
| 2020CT~2045CT                                           |             | .72V   | $I_{FM} = 20A;$           |
| 2060CT                                                  |             | .85V   | $T_A = 125^\circ\text{C}$ |
| 2080CT~20100CT                                          |             | .85V   |                           |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       |        |                           |
| 2020CT~2045CT                                           |             | 0.1mA  | $T_A = 25^\circ\text{C}$  |
| 2060CT~20100CT                                          |             | 0.15mA |                           |
| 2020CT~2045CT                                           |             | 50mA   | $T_A = 125^\circ\text{C}$ |
| 2060CT~20100CT                                          |             | 150mA  |                           |

\*Pulse Test: Pulse Width 300μsec, Duty Cycle 2%

## 20 Amp Schottky Barrier Rectifier 20 to 100 Volts

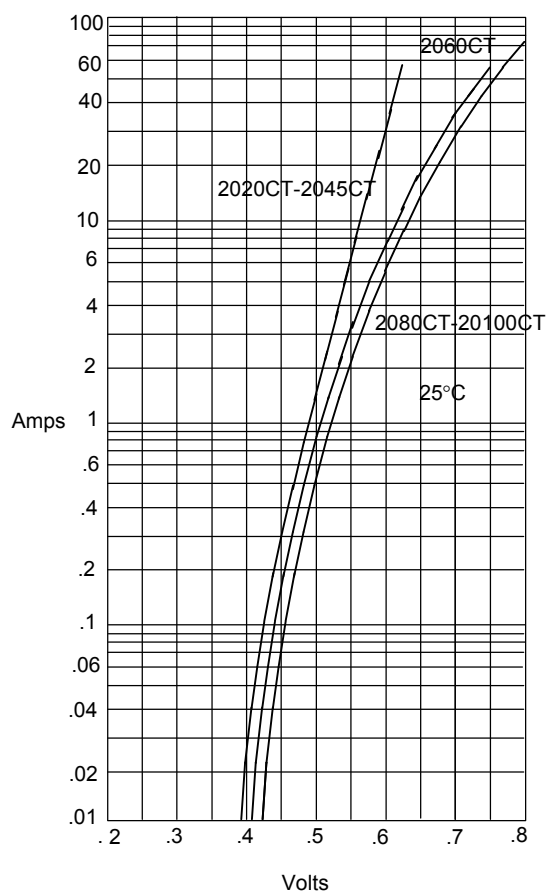
## TO-220AB



| DIM | INCHES |      | MM    |       | NOTE |
|-----|--------|------|-------|-------|------|
|     | MIN    | MAX  | MIN   | MAX   |      |
| A   | .560   | .625 | 14.22 | 15.88 |      |
| B   | .380   | .420 | 9.65  | 10.67 |      |
| C   | .100   | .135 | 2.54  | 3.43  |      |
| D   | .230   | .270 | 5.84  | 6.86  |      |
| E   | .380   | .420 | 9.65  | 10.67 |      |
| F   | -----  | .250 | ----- | 6.35  |      |
| G   | .500   | .580 | 12.70 | 14.73 |      |
| H   | .090   | .110 | 2.29  | 2.79  |      |
| I   | .020   | .045 | 0.51  | 1.14  |      |
| J   | .012   | .025 | 0.30  | 0.64  |      |
| K   | .139   | .161 | 3.53  | 4.09  | Ø    |
| L   | .140   | .190 | 3.56  | 4.83  |      |
| M   | .045   | .055 | 1.14  | 1.40  |      |
| N   | .080   | .115 | 2.03  | 2.92  |      |

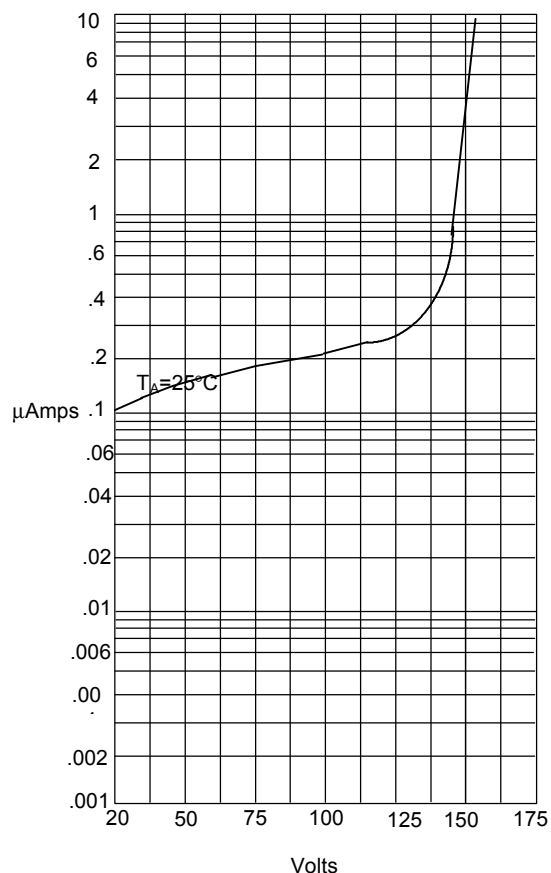
# MBR2020CT thru MBR20100CT

Figure 1  
Typical Forward Characteristics



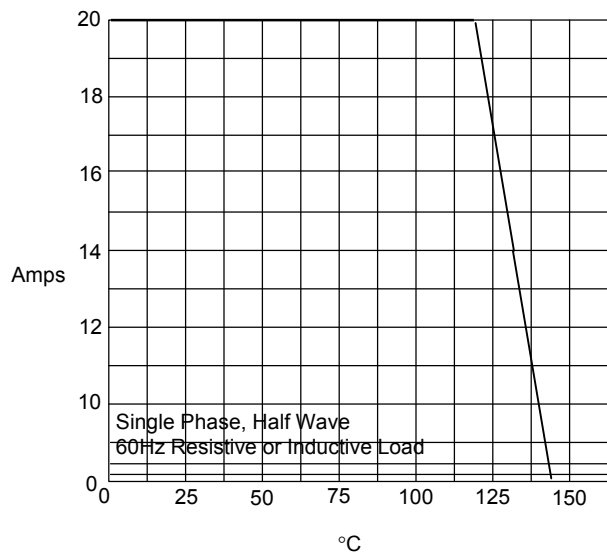
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



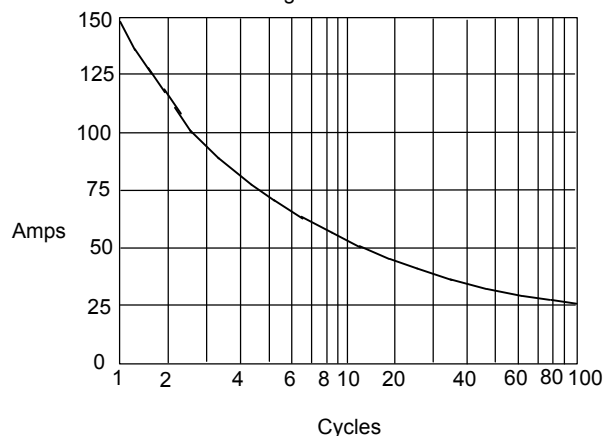
Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles