

# MBR3020CT THRU MBR30200C

30.0 AMP SCHOTTKY BARRIER RECTIFIE



## **FEATURES**

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Good for switching mode application

#### MECHANICAL DATA

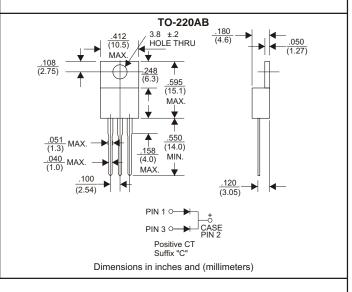
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: As Marked
- \* Mounting position: Any

## VOLTAGE RANGE

20 to 200 Volts

#### CURRENT

30.0 Amperes



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwies specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| TYPE NUMBER  | MBR3020CT | MBR3045CT       | MBR3060CT | MBR3080CT | MBR30100C1 | MBR30150CT | MBR30200C1 | UNITS |
|--|-----------|-----------------|-----------|-----------|------------|------------|------------|-------|
| Maximum Recurrent Peak Reverse Voltage                   | 20        | 45              | 60        | 80        | 100        | 150        | 200        | V     |
| Maximum RMS Voltage                                      | 14        | 32              | 42        | 56        | 70         | 105        | 140        | V     |
| Maximum DC Blocking Voltage                              | 20        | 45              | 60        | 80        | 100        | 150        | 200        | V     |
| Maximum Average Forward Rectified Current                |           |                 |           |           |            |            |            |       |
| at Tc=125°C  |           | 30              |           |           |            |            |            |       |
| Peak Forward Surge Current, 8.3 ms single half sine-wave |           |                 |           |           |            |            |            |       |
| superimposed on rated load (JEDEC method)                |           | 250             |           |           |            |            |            | Α     |
| Maximum Instantaneous Forward Voltage at 30A             | C         | 0.55 0.7        |           | 0.85      |            | 0.92       |            | V     |
| Maximum DC Reverse Current Ta=25°C                       |           | 0.2             |           |           |            |            |            |       |
| at Rated DC Blocking Voltage Ta=100°C                    |           | 50              |           |           |            |            |            |       |
| Typical Junction Capacitance (Note1)                     |           | 570             |           |           |            |            |            | pF    |
| Typical Thermal Resistance RθJC (Note 2)                 |           | 2.5             |           |           |            |            | °C/W       |       |
| Operating Temperature Range T <sub>J</sub>               |           | -65 —+150       |           |           |            |            |            | °C    |
| Storage Temperature Range Tstg                           |           | -65 <del></del> |           |           |            |            |            |       |

#### NOTES

- 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
- 2. Thermal Resistance Junction to Case.

#### RATING AND CHARACTERISTIC CURVES (MBR3020CT THRU MBR30200CT)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

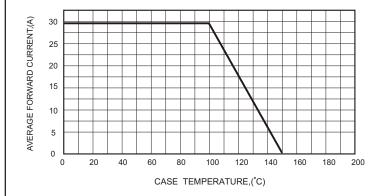


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

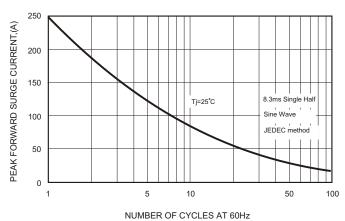


FIG.4-TYPICAL JUNCTION CAPACITANCE

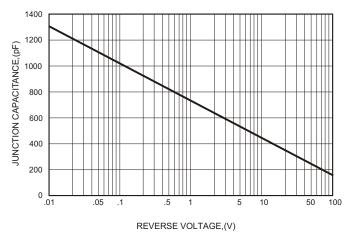


FIG.2-TYPICAL FORWARD

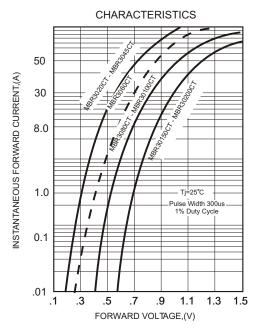
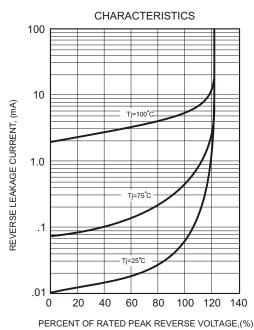


FIG.5 - TYPICAL REVERSE



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NTSB30U100CT-1G SS0503SH-TL-E VS-6CWQ10FNHM3 CRG04(T5L,TEMQ) ACDBA1100LR-HF ACDBA1200-HF ACDBA2100-HF
ACDBA240-HF ACDBA3100-HF CDBQC0530L-HF ACDBA260LR-HF ACDBA1100-HF MA4E2502L-1246 10BQ060-M3/5BT
NRVB130LSFT1G CRS08TE85LQM PMAD1108-LF