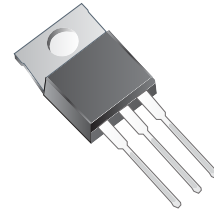


MBR2030CT-G Thru. MBR20150CT-G

Voltage: 30 to 150 V

Current: 20.0 A

RoHS Device

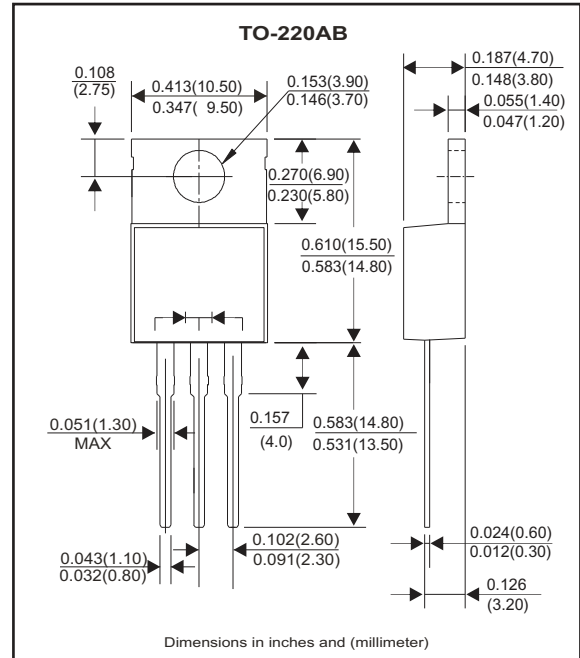


Features

- Metal of silicon rectifier, majority carrier conduction.
- Guard ring for transient protection.
- Low power loss, high efficiency.
- High current capability, low VF.
- High surge capacity.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

Mechanical Data

- Case: TO-220AB, molded plastic
- Epoxy: UL 94-V0 rate flame retardant.
- Polarity: As marked on the body.
- Mounting position: Any
- Weight: 2.24 grams



Electrical Characteristics (at TA=25°C unless otherwise noted)

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

| Parameter | Symbol | MBR 2030CT-G | MBR 2040CT-G | MBR 2050CT-G | MBR 2060CT-G | MBR 2080CT-G | MBR 20100CT-G | MBR 20150CT-G | Unit |
|--|-------------------|-------------------------------|--------------|--------------|--------------|--------------|---------------|---------------|------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 30 | 40 | 50 | 60 | 80 | 100 | 150 | V |
| Maximum RMS Voltage | V _{RMS} | 21 | 28 | 35 | 42 | 56 | 70 | 105 | V |
| Maximum DC Blocking Voltage | V _{DC} | 30 | 40 | 50 | 60 | 80 | 100 | 150 | V |
| Maximum Average Forward Rectified Current (See Fig.1) | I _(AV) | 20.0 | | | | | | | A |
| Peak Forward Surge Current , 8.3ms Single Half Sine-Wave Super Imposed On Rated Load(JEDEC Method) | I _{FSM} | 150 | | | | | | | A |
| Peak Forward Voltage (Note 1) | V _F | IF=10A@ T _J = 25°C | - | 0.80 | 0.85 | 0.95 | | | V |
| | | IF=10A@ T _J =125°C | 0.57 | 0.70 | 0.75 | 0.85 | | | |
| | | IF=20A@ T _J = 25°C | 0.84 | 0.95 | 0.95 | 1.05 | | | |
| | | IF=20A@ T _J =125°C | 0.72 | 0.85 | 0.85 | 0.95 | | | |
| Maximum DC Reverse Current at Rate DC Blocking Voltage | I _R | @ T _J = 25°C | 0.10 | 0.10 | 0.10 | 0.10 | | | mA |
| | | @ T _J = 125°C | 15.0 | 10.0 | 7.50 | 5.00 | | | |
| Typical Junction Capacitance (Note2) | C _J | 400 | 320 | | | | | | pF |
| Typical Thermal Resistance (Note3) | R _{θJC} | 1.50 | | | | 3.50 | | | °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +175 | | | | | | | °C |

NOTES:

1. 300us pulse width, 2% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to case.

RATING AND CHARACTERISTIC CURVES (MBR2030CT-G Thru. MBR20150CT-G)

FIG.1- Forward Current Derating Curve

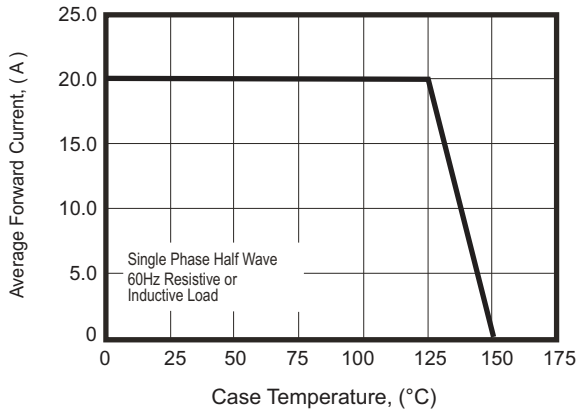


FIG.2- Maximum Non-Repetitive Surge Current

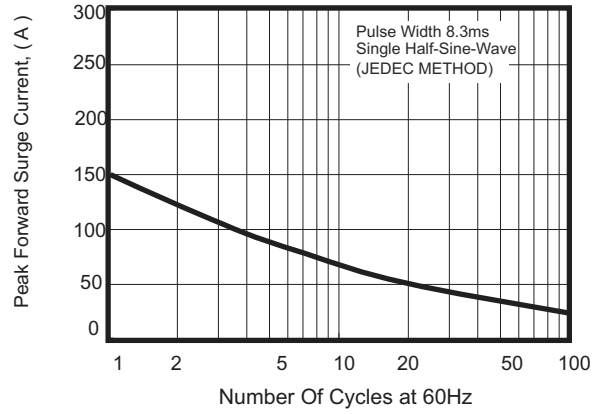


FIG.3- Typical Revers Characteristics

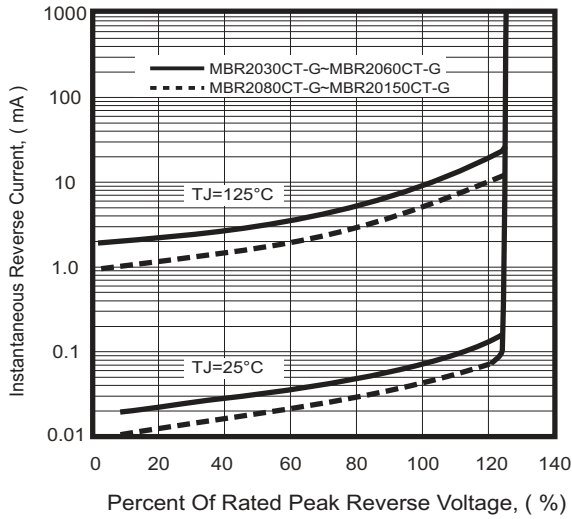


FIG.4- Typical Forward Characteristics

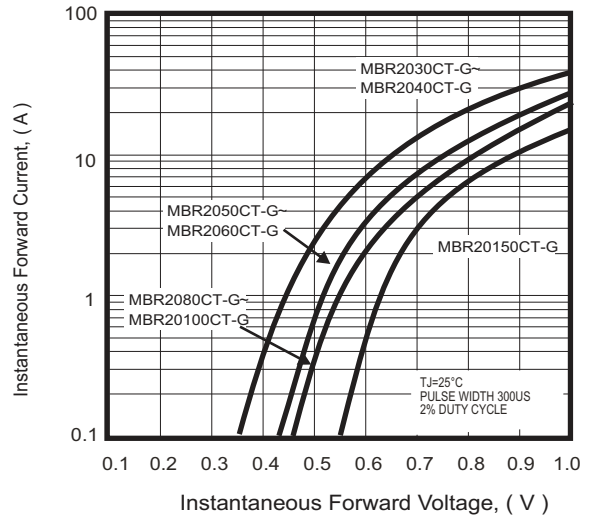
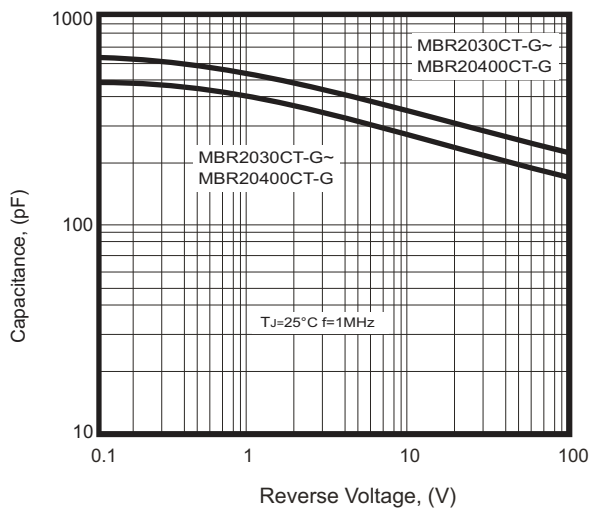
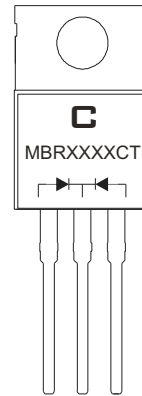


FIG.5- Typical Junction Capacitance



Marking Code

| Part Number | Marking code |
|--------------|--------------|
| MBR2030CT-G | MBR2030CT |
| MBR2040CT-G | MBR2040CT |
| MBR2050CT-G | MBR2050CT |
| MBR2060CT-G | MBR2060CT |
| MBR2080CT-G | MBR2080CT |
| MBR20100CT-G | MBR20100CT |
| MBR20150CT-G | MBR20150CT |



XXXX = Product type marking code
 C = Comchip Logo

Standard Packaging

| Case Type | TUBE PACK | |
|-----------|-----------------|----------------|
| | TUBE (pcs) | BOX (pcs) |
| TO-220AB | 50 | 8,000 |