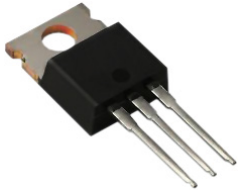


Schottky Barrier Rectifier



Features:

- Schottky barrier chip
- Guard ring for over voltage protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0

Mechanical Data:

| | |
|-------------------|---------------------------|
| Case | : TO-220AB molded plastic |
| Polarity | : As marked on the body |
| Weight | : 0.08 ounces, 2.24 grams |
| Mounting Position | : Any |
| Reverse Voltage | : 40 to 100 Volts |
| Forward Current | : 20 Amperes |

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Characteristics | Symbol | MBR2040CT | MBR2050CT | MBR2060CT | MBR20100CT | Unit |
|--|-------------------|----------------------|----------------------------|------------------------------|------------|------|
| Max. Recurrent Peak Reverse Voltage | V _{RRM} | 40 | 50 | 60 | 100 | V |
| Max. RMS Voltage | V _{RMS} | 28 | 35 | 42 | 70 | |
| Max. DC Blocking Voltage | V _{DC} | 40 | 50 | 60 | 100 | |
| Max. Average Forward Rectified Current | I _(AV) | 20 | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method) | I _{FSM} | 150 | | | | |
| Peak Forward Voltage (Note1) I _F =10A @T _J =25°C I _F =10A @T _J =125°C I _F =20A @T _J =25°C I _F =20A @T _J =125°C | V _F | 0.57 0.84 0.72 | 0.8 0.7 0.95 0.85 | 0.85 0.75 0.95 0.85 | | V |
| Max. DC Reverse Current T _J =25°C Rated DC Blocking Voltage T _J =125°C | I _R | 0.1 15 | 0.1 10 | 0.1 7.5 | | mA |
| Typical Junction Capacitance (Note 2) | C _J | 400 | 320 | | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJC} | 1.5 | | | 3.5 | °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +175 | | | | °C |

Notes:

1. 300µs pulse width, 2% duty cycle.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to case.
4. The typical data above is for reference only

Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

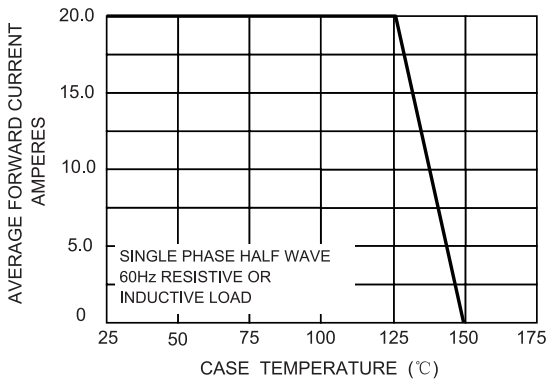


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

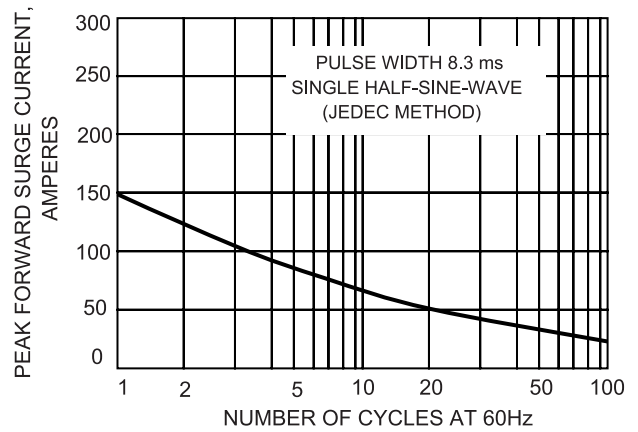


FIG.3-TYPICAL REVERES CHARACTERISTICS

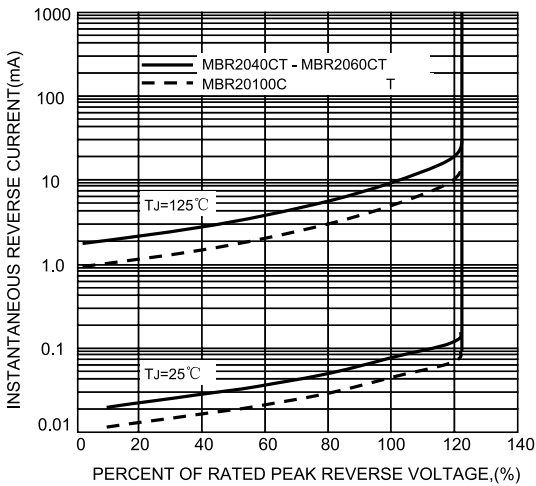


FIG.4-TYPICAL FORWARD CHARACTERISTICS

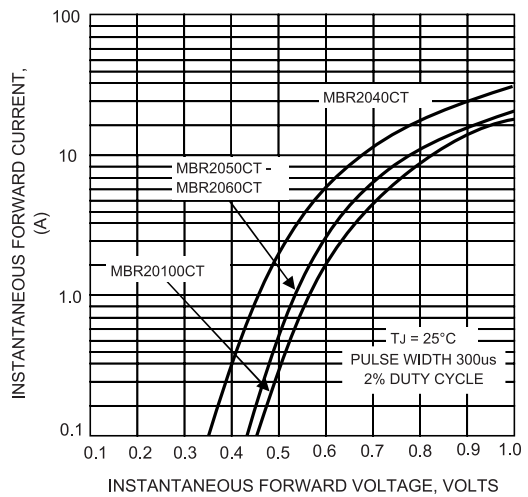
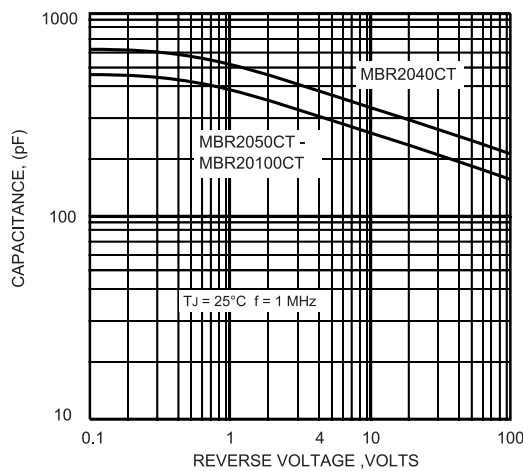
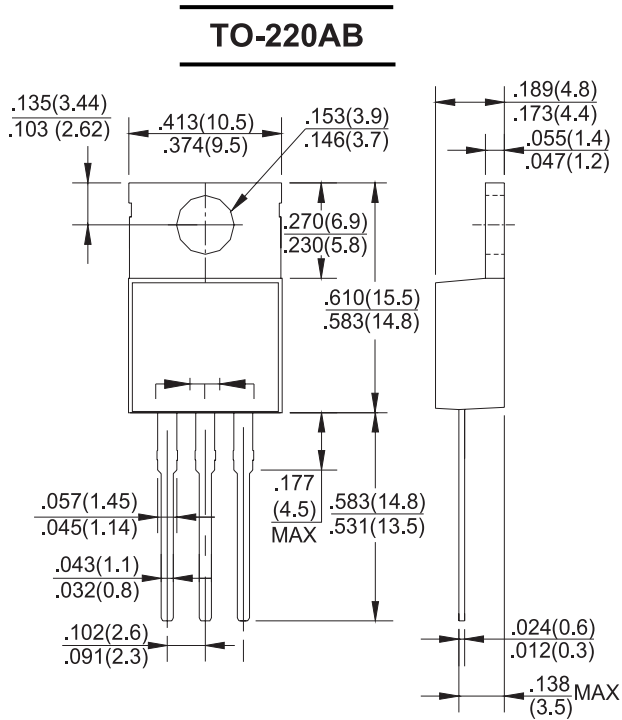


FIG.5 – TYPICAL JUNCTION CAPACITANCE



Schottky Barrier Rectifier

Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

| Description | Part Number |
|-----------------------------|-------------|
| Schottky Barrier Rectifiers | MBR2040CT |
| | MBR2050CT |
| | MBR2060CT |
| | MBR20100CT |

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