



MBR1630CT thru MBR16150CT

SCHOTTKY BARRIER RECTIFIERS

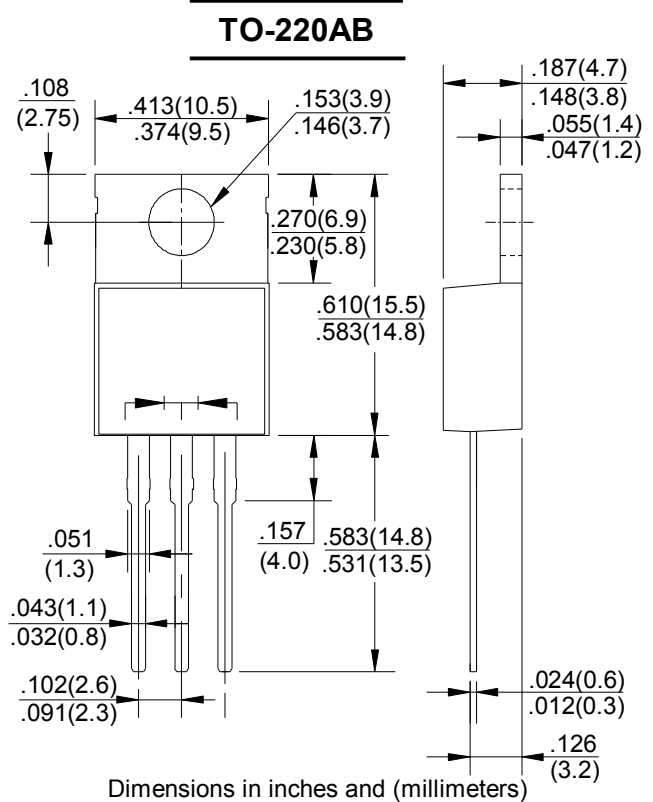
REVERSE VOLTAGE - 30 to 150Volts
FORWARD CURRENT - 16.0 Amperes

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
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any



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 | MBR 1630CT | MBR 1640CT | MBR 1650CT | MBR 1660CT | MBR 1680CT | MBR 16100CT | MBR 16150CT | 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 <sub(av)< sub=""></sub(av)<> | 16.0 | | | | | | | 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 (Note1) IF=8A @T _J =25°C IF=8A @T _J =125°C IF=16A @T _J =25°C IF=16A @T _J =125°C | V _F | 0.84 0.57 0.72 - | | 0.75 0.65 - | | 0.85 0.75 0.95 0.85 | | 1.05 0.92 - | V |
| Maximum DC Reverse Current at Rated DC Bolcking Voltage @T _J =25°C @T _J =125°C | I _R | | 0.3 10 | | | | 0.1 5.0 | | mA |
| Typical Junction Capacitance (Note2) | C _J | | 400 | | | | 200 | | pF |
| Typical Thermal Resistance (Note3) | R _{θJC} | | 3.0 | | | | | | °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 1.0 MHz and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to case.

RATING AND CHARACTERISTIC CURVES
MBR1630CT thru MBR16150CT



FIG. 1 – FORWARD CURRENT DERATING CURVE

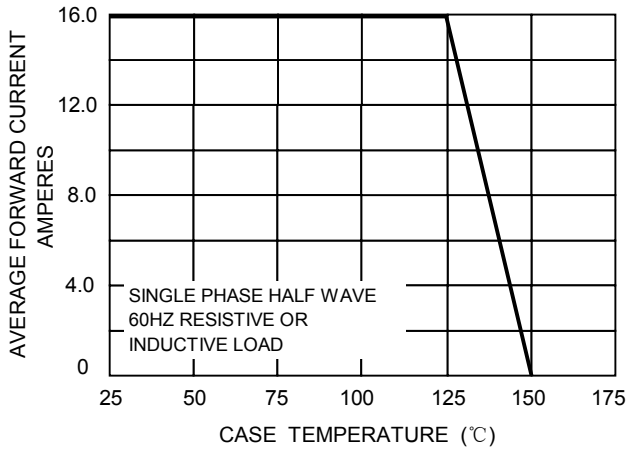


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

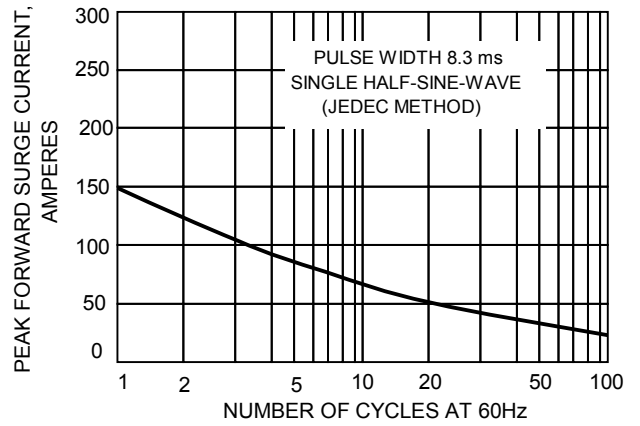


FIG.3-TYPICAL REVER CHARACTERISTICS

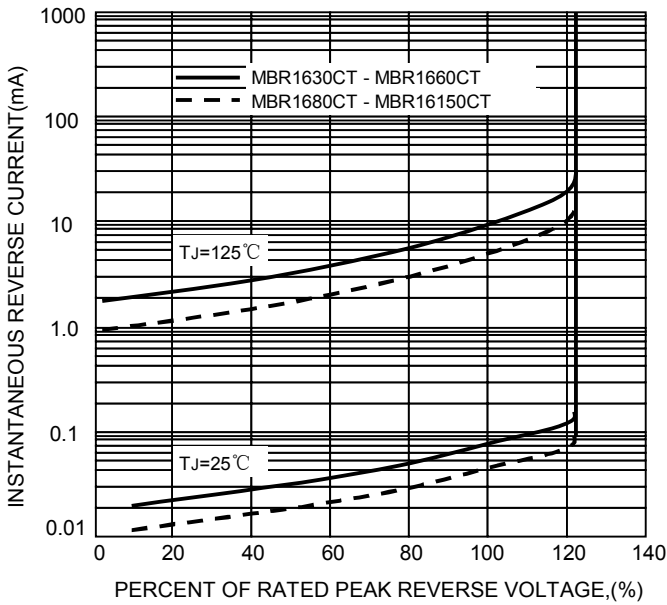


FIG.4-TYPICAL FORWARD CHARACTERISTICS

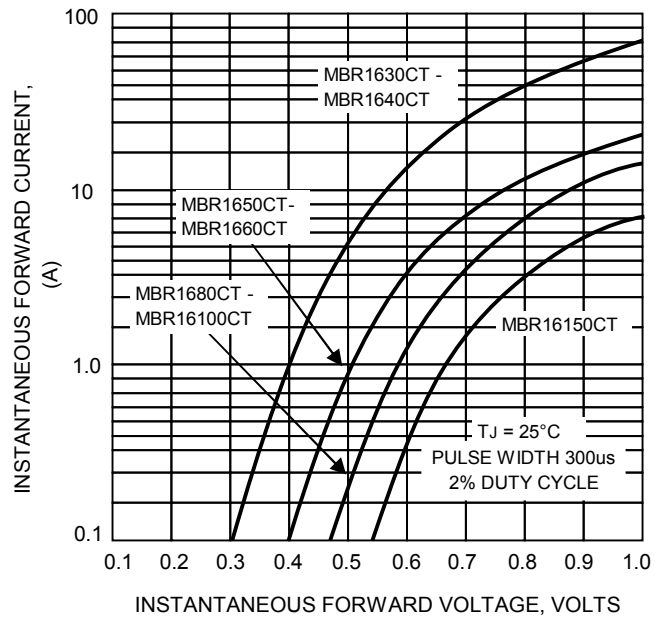


FIG.5 – TYPICAL JUNCTION CAPACITANCE

