

Features:

- Schottky barrier chip
- Guard ring for over voltage protection
- Low power loss, high efficiency
- Low reverse leakage current
- High surge current capability
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters mode power supplies, freewheeling diode and polarity protection application

Mechanical Data:

| | |
|-------------------|---|
| Case | : TO-220AB Type, molded plastic |
| Terminals | : Pure tin plated, lead solderable per MIL-STD-750, method 2026 |
| Polarity | : As marked on the body |
| Weight | : 1.9 grams |
| Mounting Position | : Any |
| Reverse Voltage | : 40 to 100 Volts |
| Forward Current | : 16 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 | MBR1640CT | MBR1645CT | MBR16100CT | Unit |
|---|-----------------|-------------|-----------|------------|--------------------|
| Max. Recurrent Peak Reverse Voltage | V_{RRM} | 40 | 45 | 100 | V |
| Max. RMS Voltage | V_{RMS} | 28 | 31.5 | 70 | |
| Max. DC Blocking Voltage | V_{DC} | 40 | 45 | 100 | |
| Max. Average Forward | $I_{F(AV)}$ | 16 | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method) | I_{FSM} | 150 | | | |
| Max. Forward Voltage at 8A per leg | V_F | 0.7 | | 0.85 | V |
| Max. DC Reverse Current at $T_J = 25^\circ\text{C}$ Rated DC Blocking Voltage at $T_J = 125^\circ\text{C}$ | I_R | 0.15 15 | | 0.1 7.5 | mA |
| Typical Thermal Resistance, Junction to Case | $R_{\theta JC}$ | 2 | | | $^\circ\text{C/W}$ |
| Operating Temperature Range | T_J | -55 to +150 | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | $^\circ\text{C}$ |

Notes:

1. Mounted on 14mm × 14mm pad areas, 1oz. FR4 P.C.B
2. Free air, mounted on recommended copper pad area
3. Pulse test: 300 μs pulse width, 1% duty cycle
4. Pulse test: Pulse width $\leq 40\text{ms}$

Ratings and Characteristic Curves

Fig-1. Forward Current Derating Curve

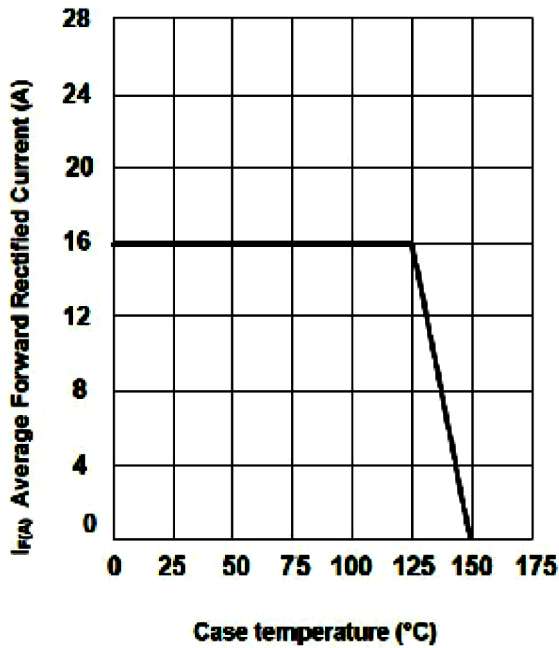


Fig-2. Typical Instantaneous forward Characteristic

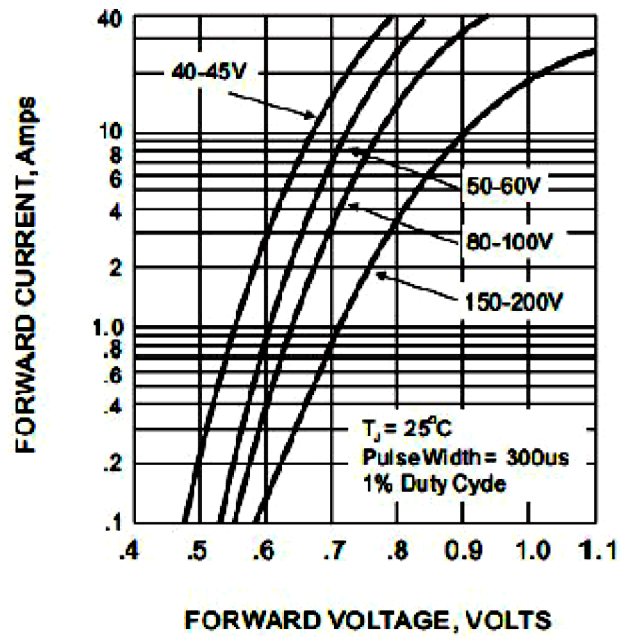


Fig-3. Typical Reverse Characteristics

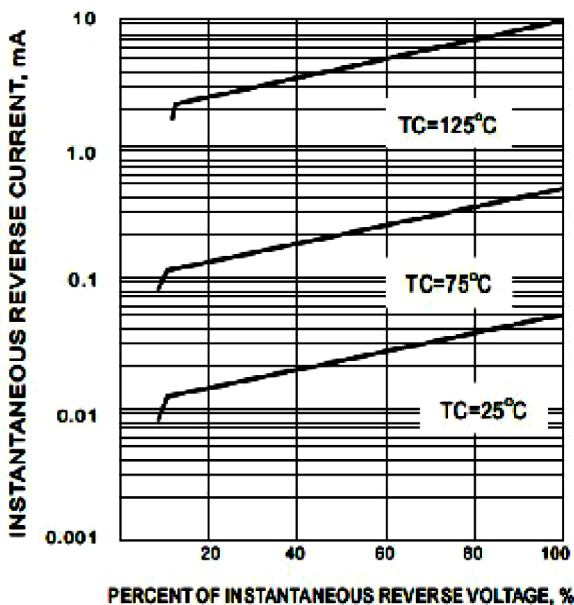
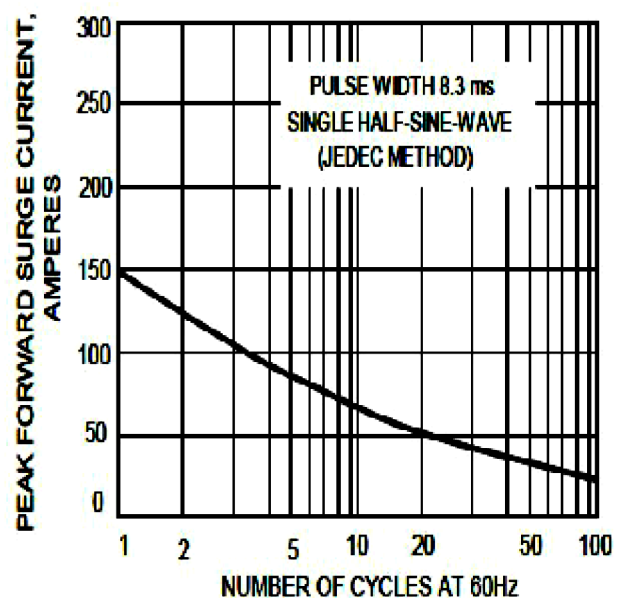
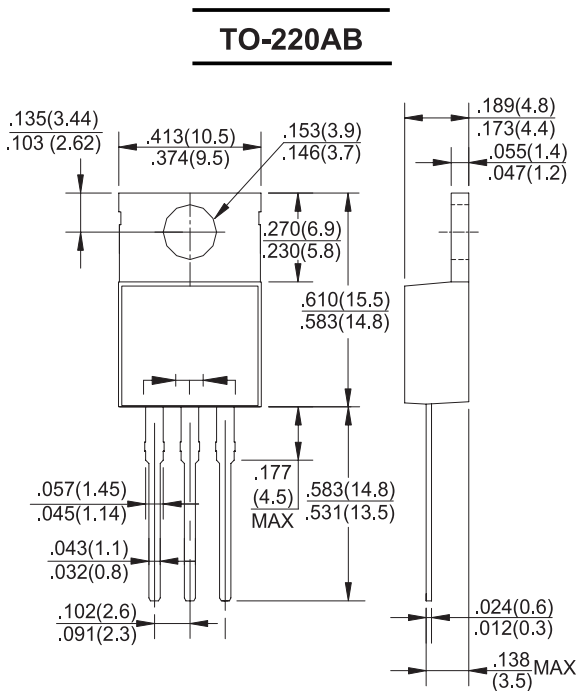


Fig-4. Max. Non-Repetitive Surge Current



Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

| Description | Part Number |
|-----------------------------|-------------|
| Schottky Barrier Rectifiers | MBR1640CT |
| | MBR1645CT |
| | MBR16100CT |

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