

## Features:

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low  $V_F$
- 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              | : ITO-220AB molded plastic |
| Polarity          | : As marked on the body    |
| Weight            | : 0.08 ounces, 2.24 grams  |
| Mounting Position | : Any                      |
| Reverse Voltage   | : 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          | Values                       | Unit |
|---|-----------------|------------------------------|------|
| Max. Recurrent Peak Reverse Voltage   | $V_{RRM}$       | 100                          | V    |
| Max. RMS Voltage  | $V_{RMS}$       | 70                           |      |
| Max. DC Blocking Voltage  | $V_{DC}$        | 100                          |      |
| Max. Average Forward Rectified Current (See Fig.1)  | $I_{(AV)}$      | 20                           | A    |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed on Rated Load (JEDEC Method)   | $I_{FSM}$       | 150                          |      |
| Peak Forward Voltage (Note 1)<br>$I_F = 10A @ T_J = 25^\circ C$<br>$I_F = 10A @ T_J = 125^\circ C$<br>$I_F = 20A @ T_J = 25^\circ C$<br>$I_F = 20A @ T_J = 125^\circ C$ | $V_F$           | 0.85<br>0.75<br>0.95<br>0.85 | V    |
| Max. DC Reverse Current at<br>Rated DC Blocking Voltage at<br>$T_J = 25^\circ C$<br>$T_J = 125^\circ C$   | $I_R$           | 0.1<br>7.5                   | mA   |
| Typical Junction Capacitance (Note 2)   | $C_J$           | 320                          | pF   |
| Typical Thermal Resistance (Note 3)   | $R_{\theta JC}$ | 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 1.0MHz 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

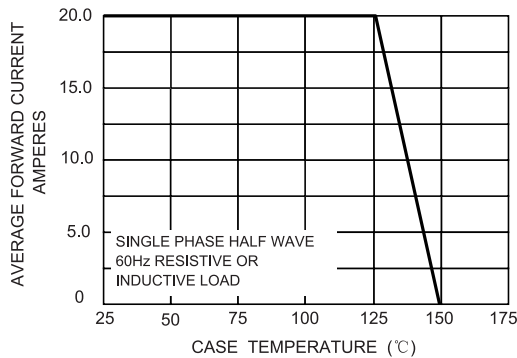


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

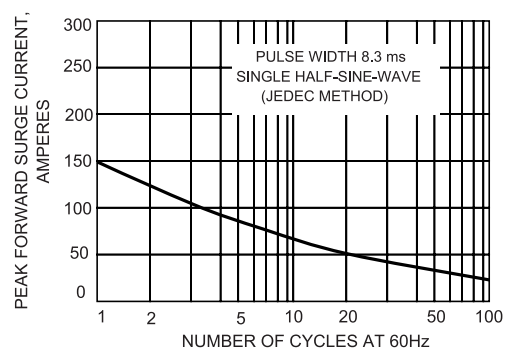


FIG.3-TYPICAL REVERSE CHARACTERISTICS

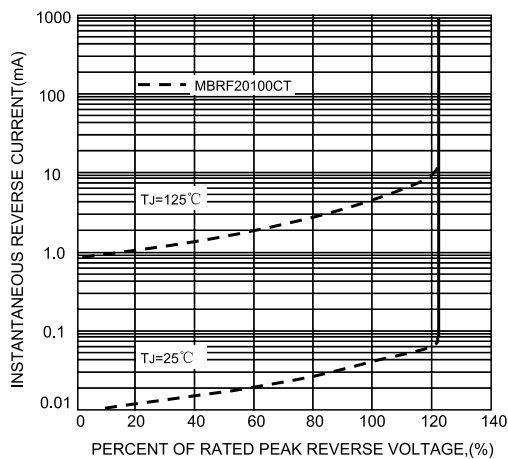


FIG.4-TYPICAL FORWARD CHARACTERISTICS

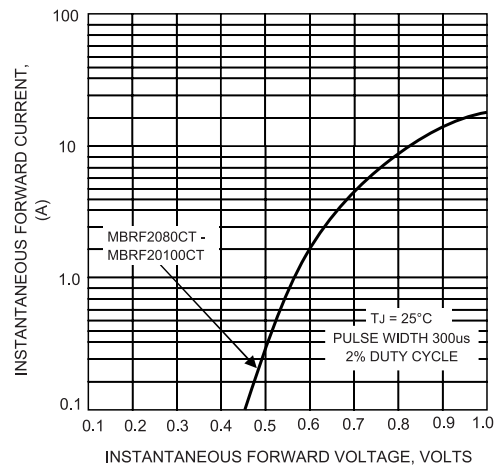
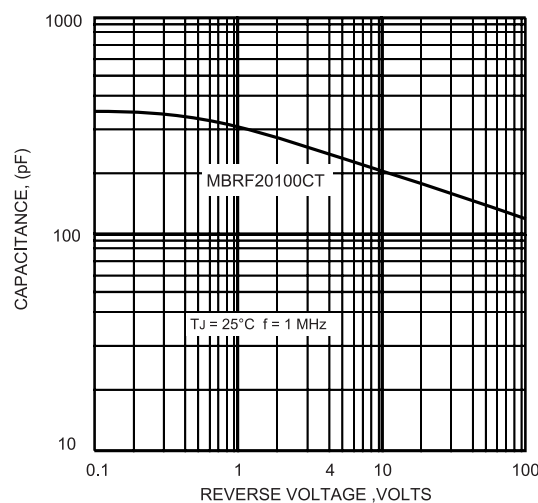
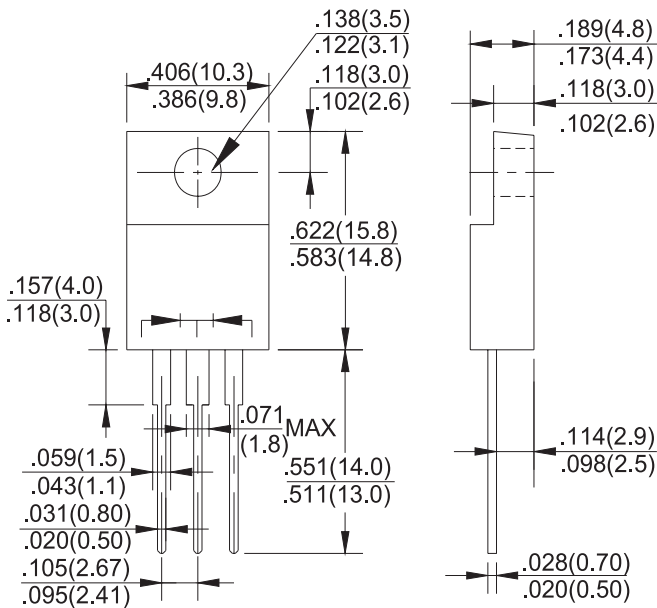


FIG.5 – TYPICAL JUNCTION CAPACITANCE



## Dimensions:

### ITO-220AB



Dimensions : Inches (Millimetres)

## Part Number Table

| Description                | Part Number |
|----------------------------|-------------|
| Schottky Barrier Rectifier | MBRF20100CT |

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