

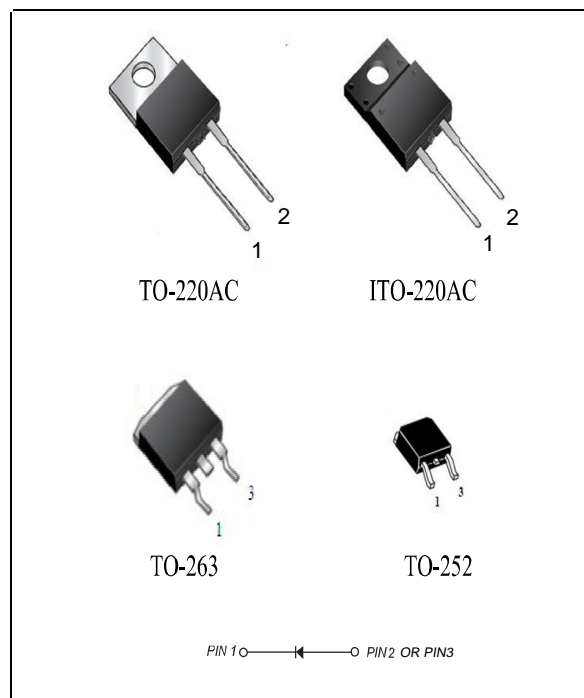
## MBR3020(F)~MBR30200(F) 30.0Amp Schottky Barrier Rectifiers

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C,MAX. for 10 seconds

### Mechanical Data

Case: (I)TO-220AC,TO-263,TO-252 molded plastic body  
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
Polarity: As marked  
Mounting Position: Any



### Maximum Ratings And Electrical Characteristics

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

|   | SYMBOLS         | MBR 3020(F) | MBR 3040(F) | MBR 3045(F) | MBR 3060(F) | MBR 30100(F) | MBR 30150(F) | MBR 30200(F) | UNITS |
|---|-----------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|-------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 20          | 40          | 45          | 60          | 100          | 150          | 200          | VOLTS |
| Maximum RMS voltage   | $V_{RMS}$       | 14          | 28          | 32          | 42          | 70           | 105          | 140          | VOLTS |
| Maximum DC blocking voltage   | $V_{DC}$        | 20          | 40          | 45          | 60          | 100          | 150          | 200          | VOLTS |
| Maximum average forward rectified current (see fig.1)   | $I_{(AV)}$      | 30.0        |             |             |             |              |              |              | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)       | $I_{FSM}$       | 200.0       |             |             |             |              |              |              | Amps  |
| Maximum instantaneous forward voltage at 30.0A  | $V_F$           | 0.55        | 0.60        | 0.70        | 0.85        | 0.95         |              | Volts        |       |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 0.15        |             |             | 0.1         |              |              | mA           |       |
|   |                 | 40.0        |             |             | 20.0        |              |              |              |       |
| Typical junction capacitance (NOTE 1)   | $C_J$           | 800         |             |             | 350         |              |              | pF           |       |
| Typical thermal resistance (NOTE 2)   | $R_{\theta JC}$ | 24          |             |             |             |              |              |              | °C/W  |
| Operating junction temperature range  | $T_J$           | -55 to +125 |             |             | -55 to +150 |              |              | °C           |       |
| Storage temperature range   | $T_{STG}$       | -55 to +150 |             |             |             |              |              |              | °C    |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to case