

Schottky Barrier Rectifiers



Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 175°C junction temperature. Typical application are in switching mode power supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

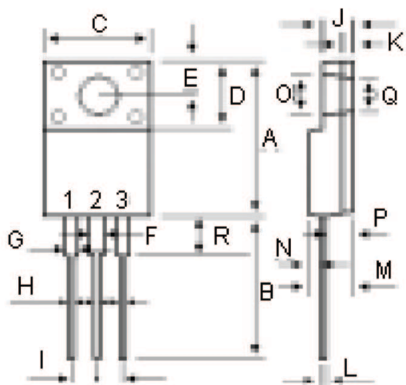
Switch mode Full Plastic Dual Schottky Barrier Power Rectifiers



Features:

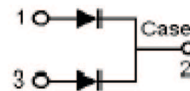
- Low forward voltage.
- Low switching noise.
- High current capacity.
- Guarantee reverse avalanche.
- Guard-ring for stress protection.
- Low power loss and high efficiency.
- 175°C operating junction temperature.
- Low stored charge majority carrier conduction.
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-O

20 Amperes
200 Volts
ITO-220AB



Dimensions : Millimetres

| DIM | MILLIMETERS | |
|-----|-------------|-------|
| | MIN | MAX |
| A | 15.05 | 15.15 |
| B | 13.35 | 13.45 |
| C | 10.00 | 10.10 |
| D | 6.55 | 6.65 |
| E | 2.65 | 2.75 |
| F | 1.55 | 1.65 |
| G | 1.15 | 1.25 |
| H | 0.55 | 0.65 |
| I | 2.50 | 2.60 |
| J | 3.00 | 3.20 |
| K | 1.10 | 1.20 |
| L | 0.55 | 0.65 |
| M | 4.40 | 4.60 |
| N | 1.15 | 1.25 |
| O | 3.35 | 3.45 |
| P | 2.65 | 2.75 |
| Q | 3.15 | 3.25 |



Common Cathode

Part Number Table

| Description | Part Number |
|-----------------------------|-------------|
| Schottky Barrier Rectifiers | MBRF20200CT |

Mechanical Data:

Case : JEDEC ITO-220AB moulded plastic body.
 Terminals : Plated lead, solderable per MIL-STD-750, method 2026.
 Maximum mounting Torque : 5 in-lbs.
 Weight : 1.7g approximately.

Maximum Ratings

| Characteristic | Symbol | MBRF20200C | Units |
|---|---------------------------------|-------------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 200 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 140 | |
| Average Rectifier Forward Current Total Device (Rated V_R), $T_C = 125^\circ\text{C}$ | $I_{F(AV)}$ | 10 20 | |
| Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz) | I_{FM} | 20 | A |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz) | I_{FSM} | 150 | |
| Operating and Storage Junction Temperature Range | T_J, T_{STG} | -65 to +175 | $^\circ\text{C}$ |

Thermal Resistances

| | | | |
|---|-----------------|-----|--------------------|
| Typical Thermal Resistance junction to case | $R_{\theta jc}$ | 3.8 | $^\circ\text{C/W}$ |
|---|-----------------|-----|--------------------|

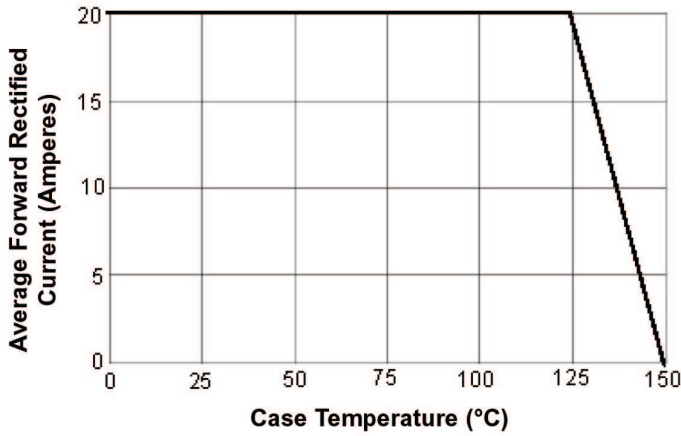
Electrical Characteristics

| Characteristic | Symbol | MBRF20200C | Units |
|--|--------|--------------|-------|
| Maximum Instantaneous Forward Voltage ($I_F = 10$ Amperes $T_C = 25^\circ\text{C}$) ($I_F = 10$ Amperes $T_C = 125^\circ\text{C}$) | V_F | 0.95 0.85 | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 125^\circ\text{C}$) | I_R | 0.01 10 | mA |

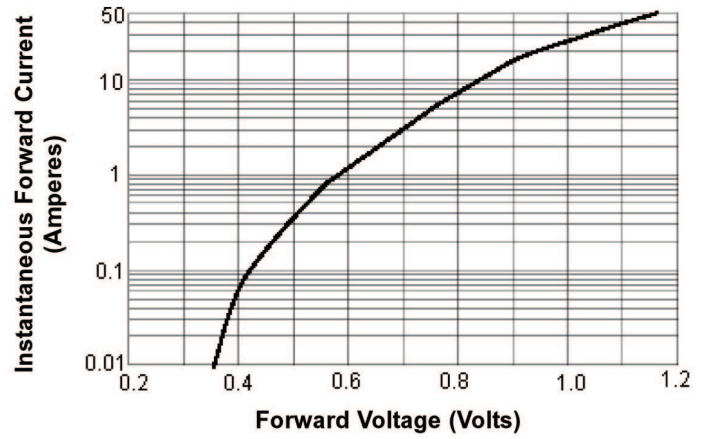
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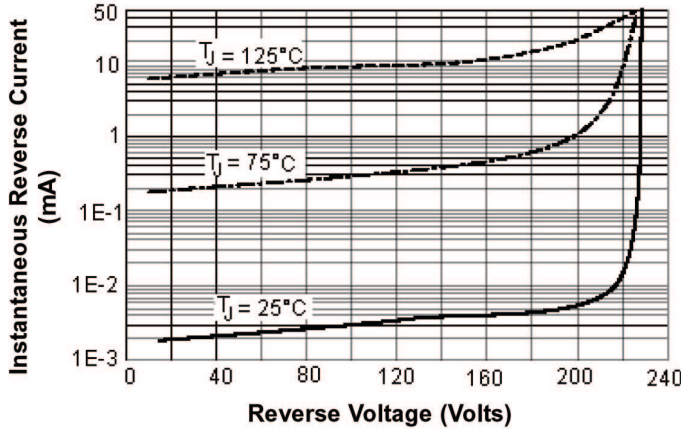
Forward Current Derating Curve



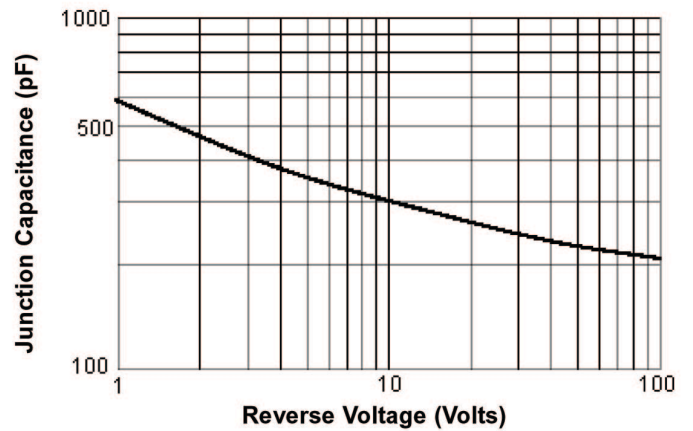
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Peak Forward Surge Current

