

### 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.

#### Features

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* 175 °C Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- \* ESD: 4KV(Min.) Human-Body Model



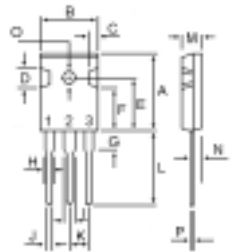
\* In compliance with EU RoHs 2002/95/EC directives

#### SCHOTTKY BARRIER RECTIFIERS

**20 AMPERES  
200 VOLTS**



TO-3P



### MAXIMUM RATINGS

| Characteristic   | Symbol                          | MBR20200PT  | Unit |
|--|---------------------------------|-------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                 | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 200         | V    |
| RMS Reverse Voltage  | $V_{R(RMS)}$                    | 140         | V    |
| Average Rectifier Forward Current (per diode)<br>Total Device (Rated $V_R$ , $T_C=125$ )               | $I_{F(AV)}$                     | 10<br>20    | A    |
| Peak Repetitive Forward Current<br>(Rate $V_R$ , Square Wave, 20kHz)                                   | $I_{FM}$                        | 20          | A    |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz) | $I_{FSM}$                       | 150         | A    |
| Operating and Storage Junction Temperature Range   | $T_J, T_{STG}$                  | -65 to +175 |      |

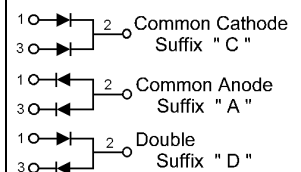
### THERMAL RESISTANCES

|   |                 |     |    |
|---|-----------------|-----|----|
| Typical Thermal Resistance junction to case | $R_{\theta jc}$ | 3.2 | /w |
|---|-----------------|-----|----|

### ELECTRIAL CHARACTERISTICS

| Characteristic   | Symbol | MBR20200PT   | Unit |
|--|--------|--------------|------|
| Maximum Instantaneous Forward Voltage<br>( $I_F=10$ Amp $T_C=25$ )<br>( $I_F=10$ Amp $T_C=125$ )           | $V_F$  | 0.95<br>0.85 | V    |
| Maximum Instantaneous Reverse Current<br>( Rated DC Voltage, $T_C=25$ )<br>( Rated DC Voltage, $T_C=125$ ) | $I_R$  | 0.01<br>10   | mA   |

| DIM | MILLIMETERS |       |
|-----|-------------|-------|
|     | MIN         | MAX   |
| A   | 20.63       | 22.38 |
| B   | 15.38       | 16.20 |
| C   | 1.90        | 2.70  |
| D   | 5.10        | 6.10  |
| E   | 14.81       | 15.22 |
| F   | 11.72       | 12.84 |
| G   | 4.20        | 4.50  |
| H   | 1.82        | 2.46  |
| I   | 2.92        | 3.23  |
| J   | 0.89        | 1.53  |
| K   | 5.26        | 5.66  |
| L   | 18.50       | 21.50 |
| M   | 4.68        | 5.36  |
| N   | 2.40        | 2.80  |
| O   | 3.25        | 3.65  |
| P   | 0.55        | 0.70  |



# MBR20200PT

