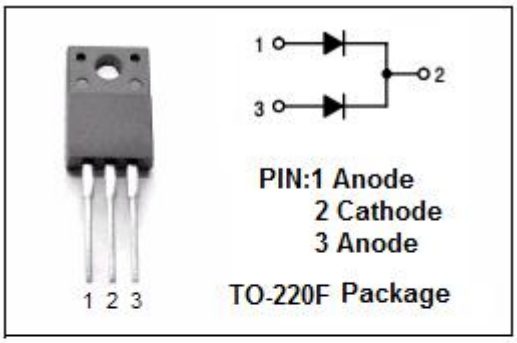
# Schottky Barrier Rectifier — MBR30200FCT

## FEATURES

- Plastic package used carriers Unerwriter Laboratory
- Metal silicon rectifier, majonty carrier conduction
- Low Power Loss,High Efficiency
- Guard ring for transient protection
- High Surge Capability,High Current Capability
- 100% tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

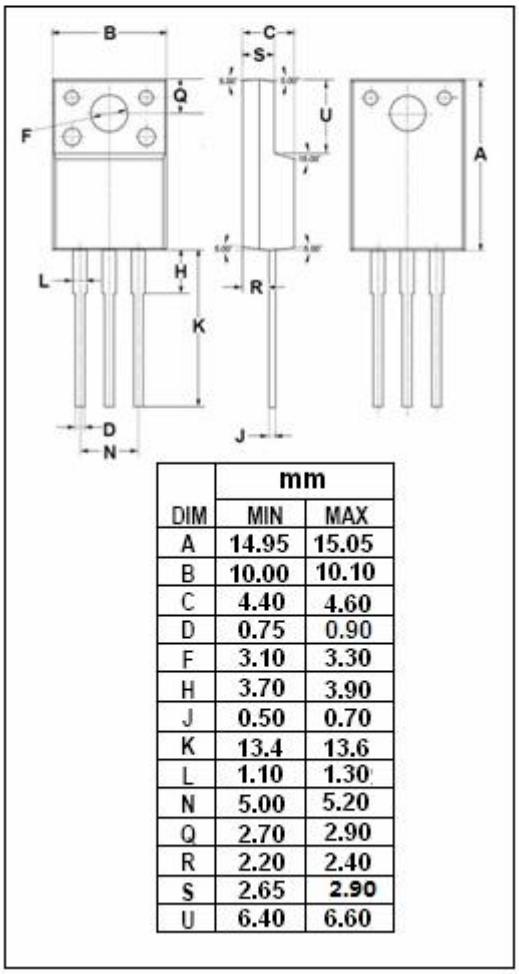



## APPLICATIONS

- For use in low voltage ,high frequency inverters,free wheeling and polarity protection applications.

## ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | 200 | V |
| $V_{R(RMS)}$ | RMS Reverse Voltag | 140 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 30 | A |
| $I_{FSM}$ | Nonrepetitive Peak Surge Current<br>8.3ms single half sine-wave superimposed on rated load conditions | 150 | A |
| $T_J$ | Junction Temperature | -55~150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |
| dv/dt | Voltage Rate of Change (Rated $V_R$) | 10,000 | V/μs |




| DIM | mm MIN | mm MAX |
|---|---|---|
| A | 14.95 | 15.05 |
| B | 10.00 | 10.10 |
| C | 4.40 | 4.60 |
| D | 0.75 | 0.90 |
| F | 3.10 | 3.30 |
| H | 3.70 | 3.90 |
| J | 0.50 | 0.70 |
| K | 13.4 | 13.6 |
| L | 1.10 | 1.30 |
| N | 5.00 | 5.20 |
| Q | 2.70 | 2.90 |
| R | 2.20 | 2.40 |
| S | 2.65 | 2.90 |
| U | 6.40 | 6.60 |

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## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 1.4 | ℃/W |

## ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μ s,Duty Cycle≤1%)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|---|---|---|---|---|
| $V_F$ | Maximum Instantaneous Forward Voltage | $I_F$= 15A ; Tc= 25℃ | 0.9 | V |
| | | $I_F$= 15A ; Tc= 125℃ | 0.7 | |
| $I_R$ | Maximum Instantaneous Reverse Current | $V_R$= $V_{RWM;}$Tc= 25℃ | 1 | mA |
| | | $V_R$= $V_{RWM;}$Tc= 125℃ | 6 | |