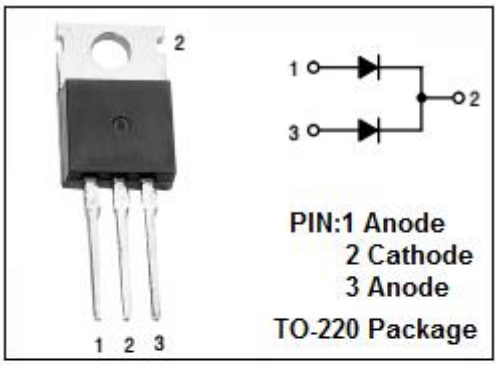
# Schottky Barrier Rectifier — MBR30120CT




## FEATURES

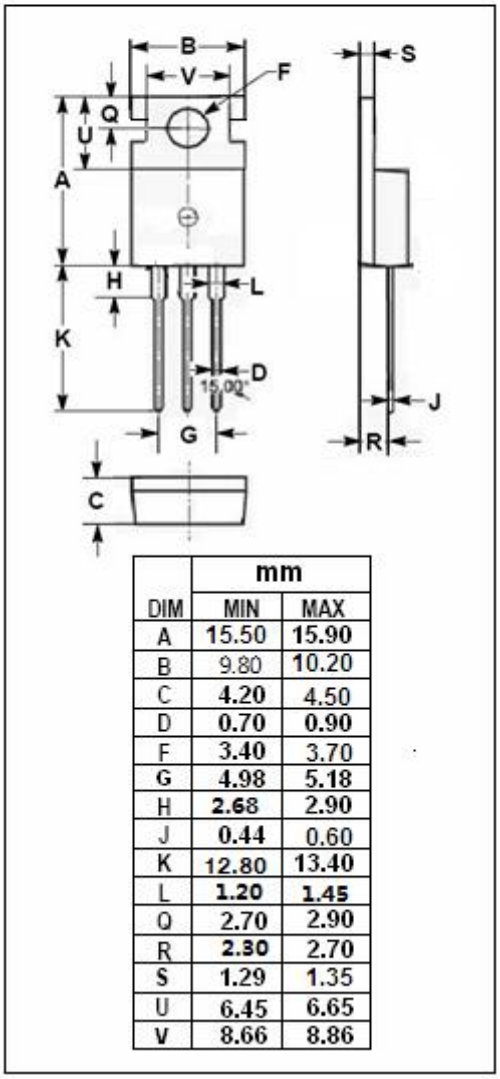
- Low Power Loss,High Efficiency
- Guard ring for transient protection
- High Surge Capability,High Current Capability
- 100% tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## 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 | 120 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 30 | A |
| $I_{FSM}$ | Non-repetitive Peak Surge Current<br>8.3ms single half sine-wave superimposed on rated load conditions | 200 | A |
| $T_J$ | Junction Temperature | -55~175 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |
| dv/dt | Voltage Rate of Change (Rated $V_R$) | 10,000 | V/μs |




| DIM | mm MIN | mm MAX |
|---|---|---|
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

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### THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 2.0 | ℃/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 |
| $I_R$ | Maximum Instantaneous Reverse Current | $V_R$= $V_{RWM;}$Tc= 25℃ | 1 | mA |
| | | $V_R$= $V_{RWM;}$Tc= 125℃ | 15 | |

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