

## 10A SCHOTTKY BARRIER RECTIFIER

### General Description

MBR1060CT Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

### Features

- Common Cathode
- Multilayer Metal -Silicon Potential Structure
- High Current Capability, High Efficiency
- RoHS Compliant

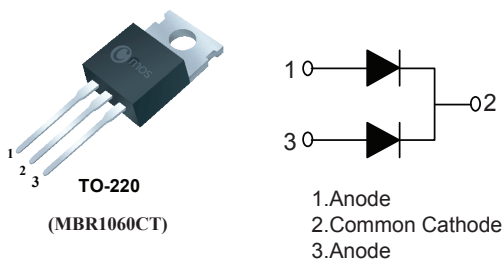
### Product Summary

| $V_{RRM}$ | $V_F$ | $I_{F(AV)}$ |
|-----------|-------|-------------|
| 60V       | 0.7V  | 10A         |

### Applications

- DC/DC converter
- Switched Mode Power Supplies (SMPS)
- Low Voltage High Frequency Invers Circuit

### TO-220 Pin Configuration



### Absolute Maximum Ratings

| Symbol      | Parameter                                                                               | Rating                    | Units |
|-------------|-----------------------------------------------------------------------------------------|---------------------------|-------|
| $V_{RRM}$   | Peak Repetitive Reverse Voltage                                                         | 60                        | V     |
| $I_{F(AV)}$ | Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle         | 5 (Per Leg)<br>10 (Total) | A     |
| $I_{FSM}$   | Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method) | 190x2                     | A     |
| $T_J$       | Operating Junction Temperature                                                          | 125                       | °C    |
| $T_{STG}$   | Storage Temperature                                                                     | -40 to 150                | °C    |

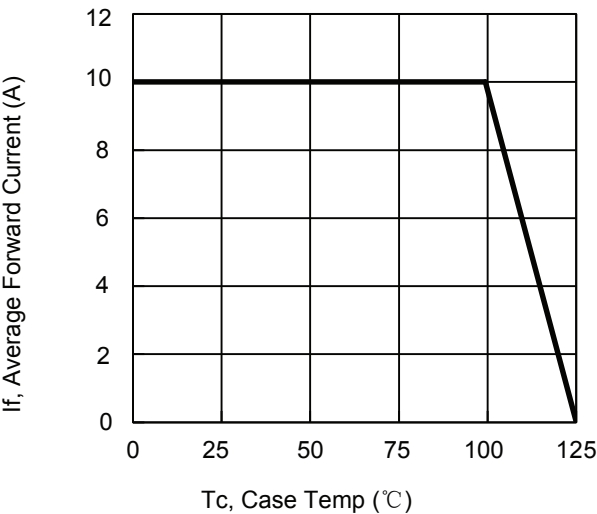
### Thermal Data

| Symbol          | Parameter                                     | Typ. | Max. | Unit |
|-----------------|-----------------------------------------------|------|------|------|
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case(Per Leg) | 2    | ---  | °C/W |

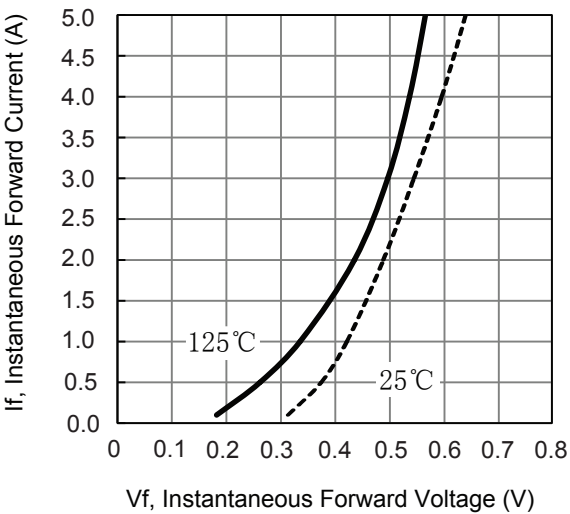
Electrical Characteristics

| Symbol         | Parameter                         | Conditions                                                         | Min. | Typ. | Max. | Unit |
|----------------|-----------------------------------|--------------------------------------------------------------------|------|------|------|------|
| V <sub>F</sub> | Forward Voltage Drop per diode    | I <sub>F</sub> =5A (I <sub>FAV</sub> =5Ax2) , T <sub>C</sub> =25℃  | ---  | 0.64 | 0.7  | V    |
|                |                                   | I <sub>F</sub> =5A (I <sub>FAV</sub> =5Ax2) , T <sub>C</sub> =125℃ | ---  | ---  | 0.65 |      |
| I <sub>R</sub> | Reverse Leakage Current per diode | V <sub>R</sub> =60V , T <sub>C</sub> =25℃                          | ---  | ---  | 0.1  | mA   |
|                |                                   | V <sub>R</sub> =60V , T <sub>C</sub> =125℃                         | ---  | ---  | 15   | mA   |

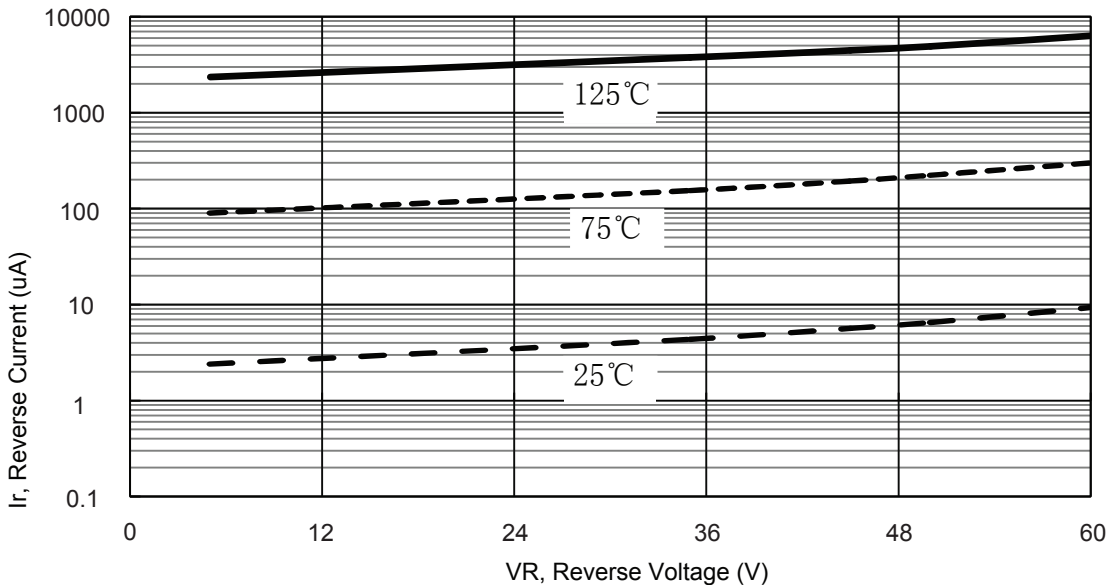
Typical Performance Characteristics



Current derating curve, per element



The forward voltage and forward current curve



The reverse leak current and the reverse voltage (single-device) curve

This product has been designed and qualified for the consumer market.  
Cmos assumes no liability for customers' product design or applications.  
Cmos reserves the right to improve product design, functions and reliability without notice.