

## Schottky Barrier Rectifier

## MBR1645CT

## FEATURES

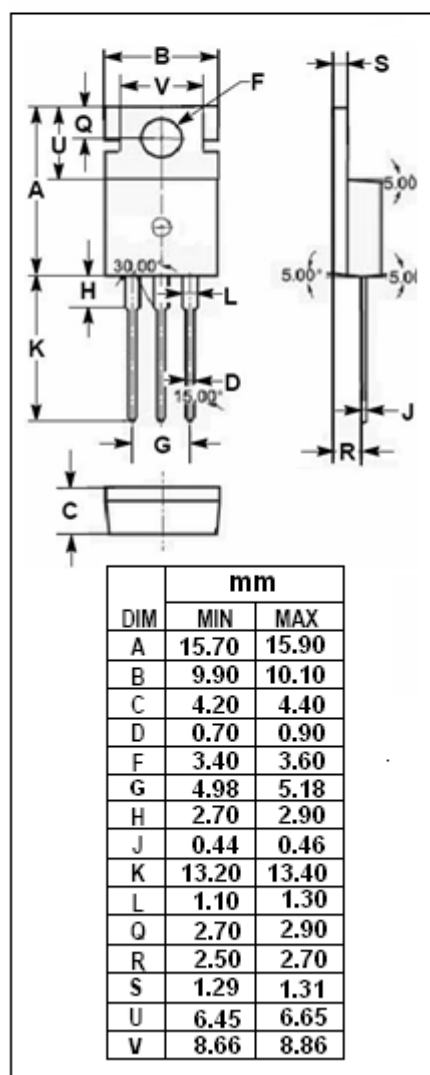
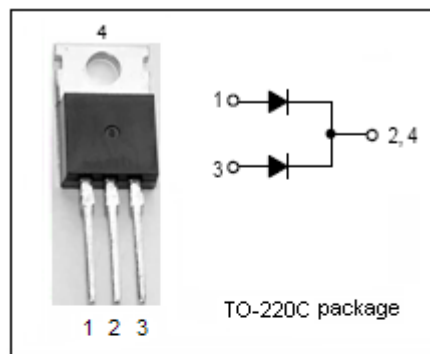
- Low Forward Voltage
- 170°C Operating Junction Temperature
- Guaranteed Reverse Avalanche
- Low Power Loss/High Efficiency
- High Surge Capacity
- Low Stored Charge Majority Carrier Conduction

## MECHANICAL CHARACTERISTICS

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds

ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

| SYMBOL      | PARAMETER                                                                                                | VALUE   | UNIT             |
|-------------|----------------------------------------------------------------------------------------------------------|---------|------------------|
| $V_{RRM}$   | DC Blocking Voltage                                                                                      | 45      | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current<br>(Rated $V_R$ ) $T_C=100^\circ\text{C}$                              | 16      | A                |
| $I_{FSM}$   | Nonrepetitive Peak Surge Current<br>8.3ms single half sine-wave superimposed<br>on rated load conditions | 210     | A                |
| $T_J$       | Junction Temperature                                                                                     | 170     | $^\circ\text{C}$ |
| $T_{stg}$   | Storage Temperature Range                                                                                | -50~170 | $^\circ\text{C}$ |



**Schottky Barrier Rectifier****MBR1645CT****THERMAL CHARACTERISTICS**

| SYMBOL        | PARAMETER                            | MAX | UNIT                        |
|---------------|--------------------------------------|-----|-----------------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 2.0 | $^{\circ}\text{C}/\text{W}$ |

**ELECTRICAL CHARACTERISTICS**(Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle $\leq$ 2%)

| SYMBOL | PARAMETER                             | CONDITIONS                                  | MAX  | UNIT          |
|--------|---------------------------------------|---------------------------------------------|------|---------------|
| $V_F$  | Maximum Instantaneous Forward Voltage | $I_F=8\text{A}$ ; $T_C=25^{\circ}\text{C}$  | 0.69 | V             |
| $I_R$  | Maximum Instantaneous Reverse Current | $V_R=45\text{V}$ , $T_C=25^{\circ}\text{C}$ | 20   | $\mu\text{A}$ |