



## MBR2065CT

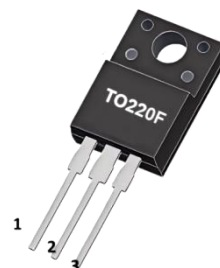
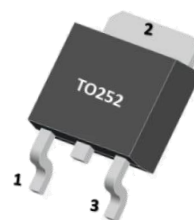
## SCHOTTKY BARRIER RECTIFIER

### DESCRIPTION

The MBR2065CT meet the ROHS and Green Product requirement with full function reliability approved.

### FEATURE

- \*High Surge Capacity
- \*For Use In Low Voltage,High Frequency Inverters, Free Wheeling and Polarity Protection Applications.
- \*Metal Silicon Junction,Majority Carrier Conduction.
- \*High Current Capacity,Low Forward Voltage Drop.
- \*Guard Ring for Over Voltage Protection.



1. ANODE
2. CATHODE
3. ANODE

### MARKING

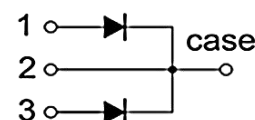


HY: HY LOGO

MBR2065CT=Device Code

XXXX=Date Code

Solid Dot=Green molding compound



### ABSOLUTE MAXIMUM RATINGS(TA=25°C, unless otherwise specified.)

| SYMBOL  | PARAMETER                                                        |         | VALUE      | UNIT |
|---------|------------------------------------------------------------------|---------|------------|------|
| VRRM    | Peak repetitive reverse voltage                                  |         | 65         | V    |
| VRWM    | Working peak reverse voltage                                     |         | 65         | V    |
| VR      | DC blocking voltage                                              |         | 65         | V    |
| VR(RMS) | RMS reverse voltage                                              |         | 45.5       | V    |
| IO      | Average rectified output current                                 |         | 20 (10*2)  | A    |
| IFSM    | Non-Repetitive peak forward surge current( 8.3ms half sine wave) |         | 150*2      | A    |
| Tj      | Junction temperature                                             |         | 150        | °C   |
| Tstg    | Storage temperature                                              |         | -55 ~ +150 | °C   |
| RθJA    | Thermal Resistance from Junction to Ambient                      | TO-252  | 100        | °C/W |
|         |                                                                  | TO-220F | 58         |      |
| RθJC    | Thermal Resistance From Junction To Case                         | TO-252  | 5          | °C/W |
|         |                                                                  | TO-220F | 3          |      |

Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.



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### ELECTRICAL CHARACTERISTICS (TA=25°C, unless otherwise specified)

| Parameter       | Symbol     | Test conditions | Min                | Typ  | Max  | Unit    |
|-----------------|------------|-----------------|--------------------|------|------|---------|
| Reverse voltage | $V_{(BR)}$ | $I_R=0.1mA$     | 65                 |      |      | V       |
| Reverse current | $I_R$      | $V_R=65V$       | $T_J=25^{\circ}C$  | 5    | 50   | $\mu A$ |
|                 |            |                 | $T_J=125^{\circ}C$ | 5.0  |      | mA      |
| Forward voltage | $V_F$      | $I_F=5A$        | $T_J=25^{\circ}C$  | 0.60 |      | V       |
|                 |            |                 | $T_J=125^{\circ}C$ | 0.54 |      | V       |
|                 |            | $I_F=10A$       | $T_J=25^{\circ}C$  | 0.72 | 0.75 | V       |
|                 |            |                 | $T_J=125^{\circ}C$ | 0.62 |      | V       |

\*Pulse test: pulse width  $\leq 300\mu s$ , duty cycles  $\leq 2.0\%$

### TYPICAL CHARACTERISTICS

FIG.1: FORWARD CURRENT DERATING CURVE

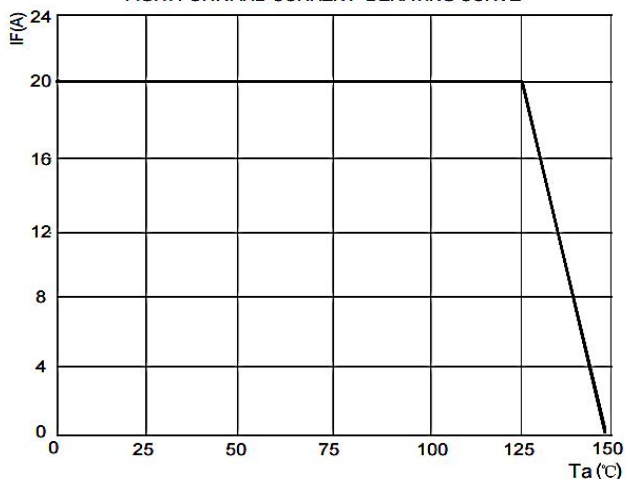


FIG.2: TYPICAL FORWARD CHARACTERISTICS

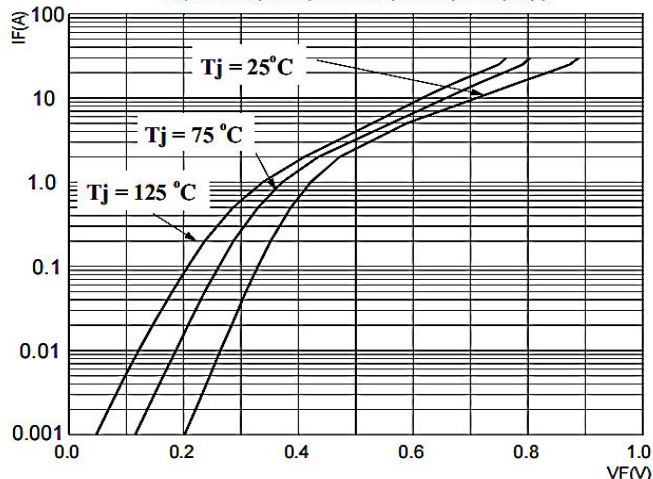


FIG.3: TOTAL CAPACITANCE DERATING CURVE

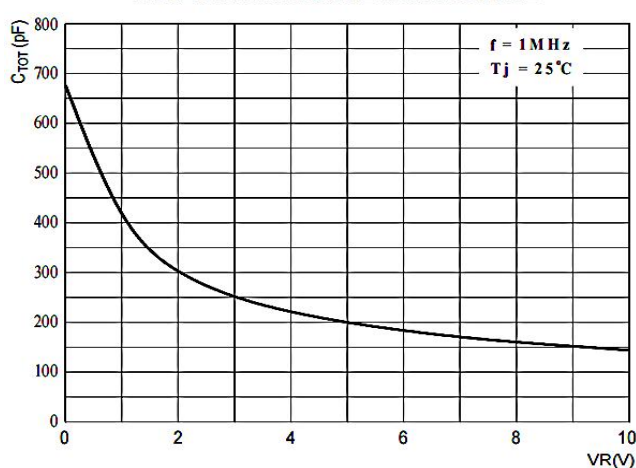
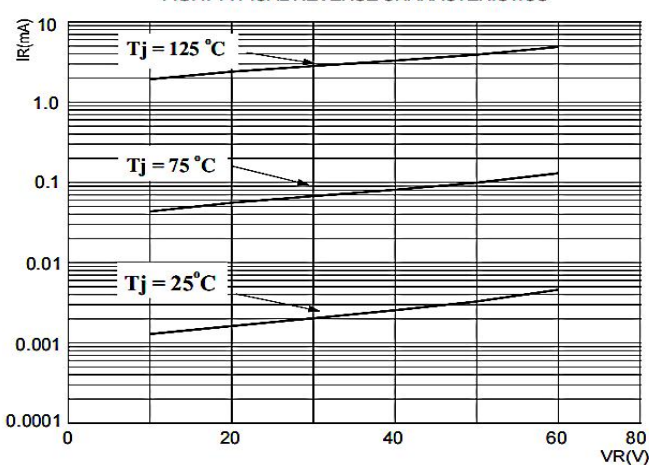


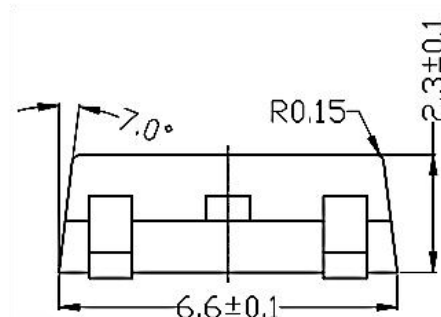
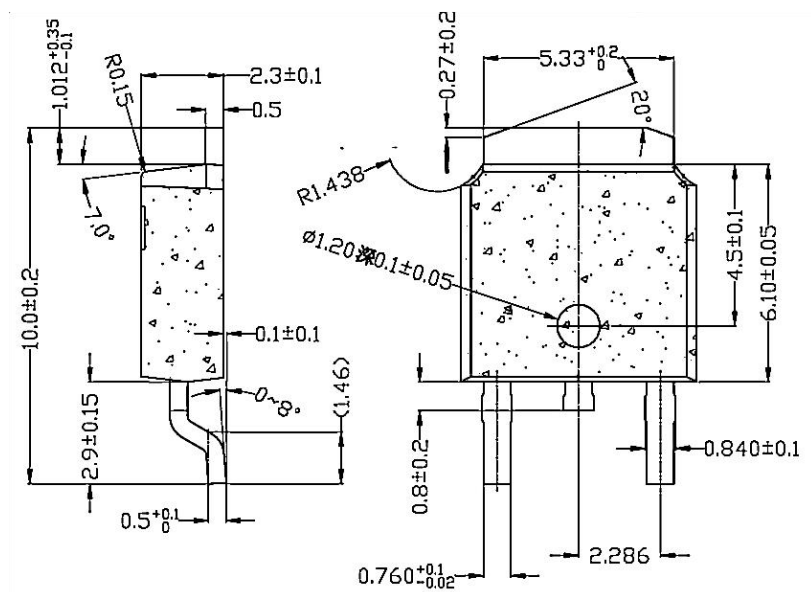
FIG.4: TYPICAL REVERSE CHARACTERISTICS



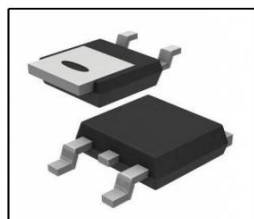
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## SCHOTTKY BARRIER RECTIFIER

## ■ TO - 252 Package Outline Dimensions



## ■ TO - 252 Packing Information



2500PC  
S/reel



2 Reel/BOX



### Outer box



### Inner box

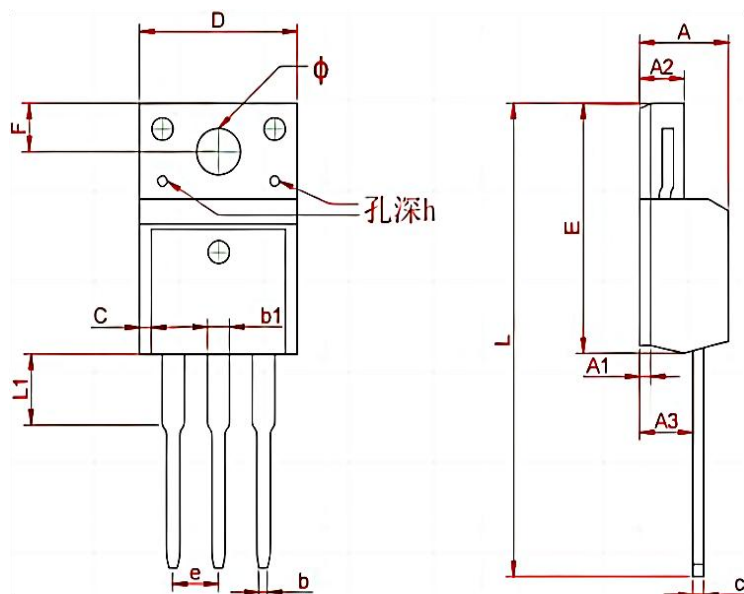
| Package version | Reel dimensions<br>$\Phi \times H$ (mm) | Per Reel (pcs) | Reels per box | Inner box dimensions<br>$L \times W \times H$ (mm) | Outer box (pcs) | Outer box dimensions<br>$L \times W \times H$ (mm) |
|-----------------|-----------------------------------------|----------------|---------------|----------------------------------------------------|-----------------|----------------------------------------------------|
| T0-252          | $\Phi 330 \times 20$                    | 2500           | 2             | 360*340*50                                         | 25000           | 375*375*280                                        |



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### TO - 220F Package Outline Dimensions



| Symbol | Dimensions In Millimeters |        | Dimensions In Inches |       |
|--------|---------------------------|--------|----------------------|-------|
|        | Min.                      | Max    | Min                  | Max   |
| A      | 4.300                     | 4.750  | 0.169                | 0.185 |
| A1     | 1.830 REF                 |        | 0.072 REF            |       |
| A2     | 2.300                     | 2.850  | 0.090                | 0.112 |
| A3     | 2.500                     | 2.900  | 0.098                | 0.114 |
| b      | 0.400                     | 0.420  | 0.016                | 0.016 |
| b1     | 1.220                     | 1.280  | 0.048                | 0.050 |
| C      | 0.690                     | 0.720  | 0.027                | 0.028 |
| c      | 0.490                     | 0.510  | 0.019                | 0.020 |
| D      | 9.960                     | 10.200 | 0.392                | 0.400 |
| E      | 15.000                    | 15.950 | 0.588                | 0.625 |
| e      | 2.574 TYP                 |        | 0.101TYP             |       |
| F      | 3.470 REF                 |        | 0.136 REF            |       |
| y      | 3.200 REF                 |        | 0.125 REF            |       |
| h      | 0.000                     | 0.300  | 0.000                | 0.012 |
| L      | 28.780                    | 28.900 | 1.128                | 1.133 |
| L1     | 2.990                     | 3.100  | 0.117                | 0.122 |

### TO - 220F Packing Information



50PCS



20 Tube



Outer Box

5 Inner  
Box



Inner Box

| Package version | Tube dimensions<br>LxWxH<br>(mm) | Per Tube<br>(pcs) | Tube per box | Inner box dimensions<br>LxWxH<br>(mm) | PCS/<br>Inner<br>box | Outer box dimensions<br>LxWxH(mm) | PCS/<br>Outer<br>box |
|-----------------|----------------------------------|-------------------|--------------|---------------------------------------|----------------------|-----------------------------------|----------------------|
| TO-220F         | 530*32*7                         | 50                | 20           | 580*155*50                            | 1000                 | 602*277*188                       | 5000                 |