

**/ Descriptions**

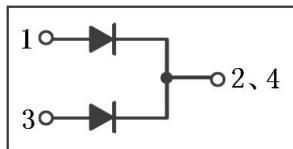
TO-263 Plastic package Schottky diode .

**/ Features**

Low forward voltage drop,low power losses,High efficiency operation.

**/ Applications**

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

**/ Equivalent Circuit****/ Pinning**

PIN1 Anode    PIN 2 4 Cathode    PIN 3 Anode

**/  $h_{FE}$  Classifications & Marking**

See Marking Instructions.

**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                                                                             | Symbol                             | Rating   | Unit |
|---------------------------------------------------------------------------------------|------------------------------------|----------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Reverse Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_{DC}$ | 45       | V    |
| RMS Reverse Voltage                                                                   | $V_{RMS}$                          | 31.5     | V    |
| Average forward rectified Current                                                     | $I_{F(AV)}$                        | 2 10     | A    |
| Non Repetitive Peak Surge Current                                                     | $I_{FSM}$                          | 200      | A    |
| Thermal Resistance Junction to Case                                                   | $R_{Jc}$                           | 2.2      | /W   |
| Junction and Storage Temperature Range                                                | $T_j T_{stg}$                      | -55~+150 |      |

**/ Electrical Characteristics(Ta=25 )**

| Parameter                     | Symbol          | Test Conditions          | Min | Typ | Max  | Unit |
|-------------------------------|-----------------|--------------------------|-----|-----|------|------|
| Reverse Voltage               | $V_{(BR)R}$     | $I_R = 1mA$ $T_a = 25$   | 45  |     |      | V    |
| Peak Forward Voltage          | $V_{FM}$        | $I_F = 5.0A$ $T_a = 25$  |     |     | 0.60 | V    |
|                               |                 | $I_F = 5.0A$ $T_a = 125$ |     |     | 0.50 | V    |
|                               |                 | $I_F = 10A$ $T_a = 25$   |     |     | 0.70 | V    |
|                               |                 | $I_F = 10A$ $T_a = 125$  |     |     | 0.60 | V    |
| Instantaneous Reverse Current | $I_R$<br>Note 1 | $V_R = 45V$ $T_a = 25$   |     |     | 100  | uA   |
|                               |                 | $V_R = 45V$ $T_a = 125$  |     |     | 15   | mA   |

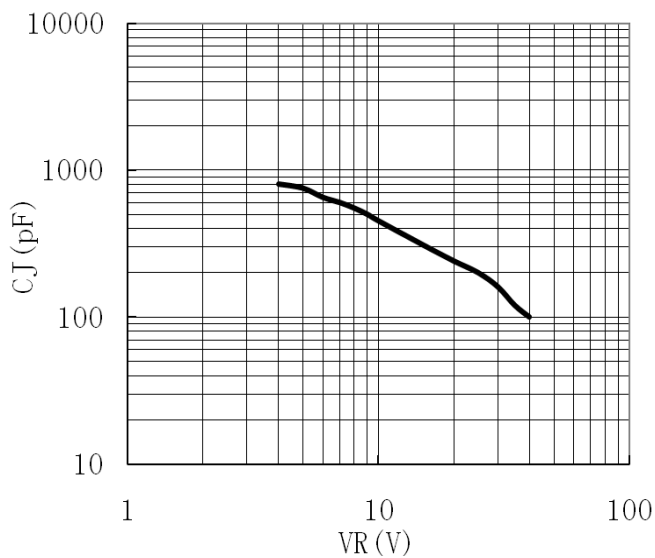
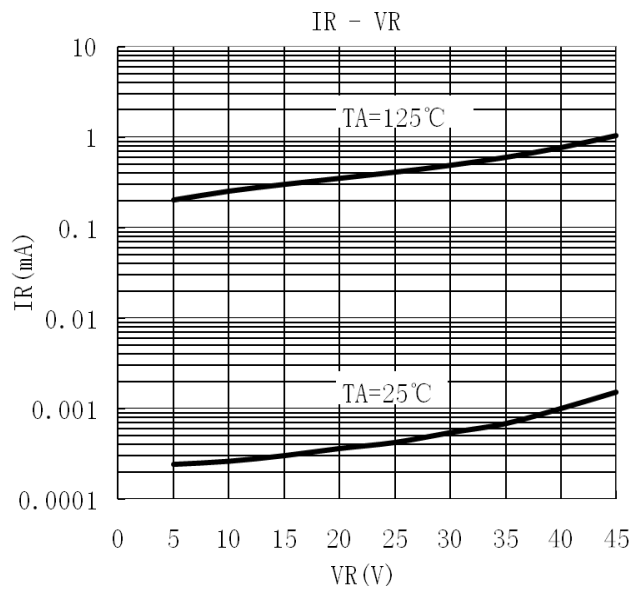
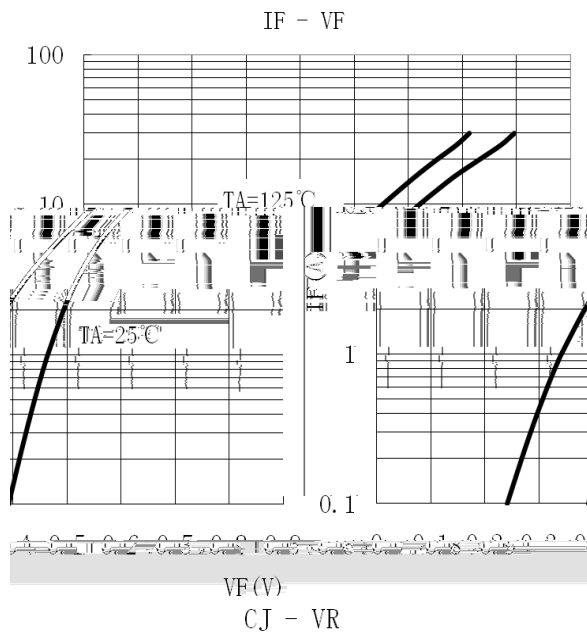
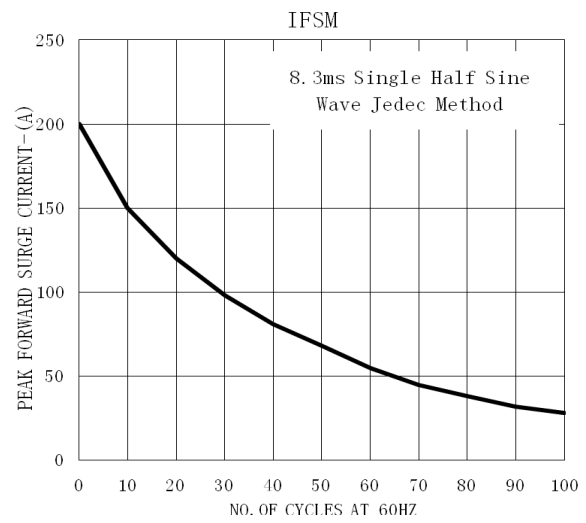
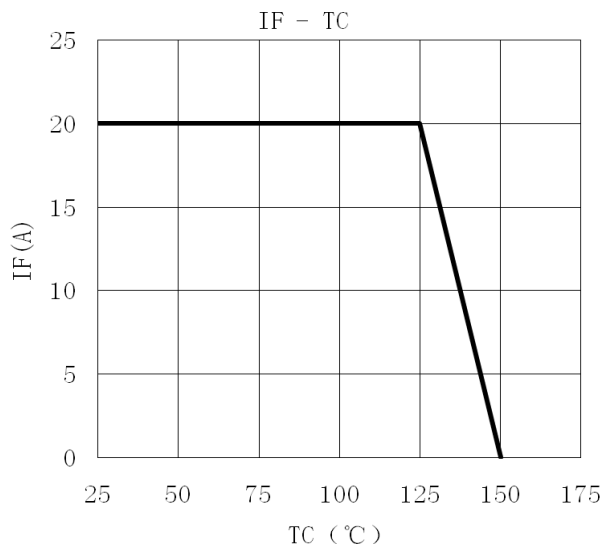
/Notes

/Short duration pulse test used to minimize self-heating effect.

/ Unless otherwise noted, values for the parameters of a single chip.



/ Electrical Characteristic Curve



/ Package Dimensions

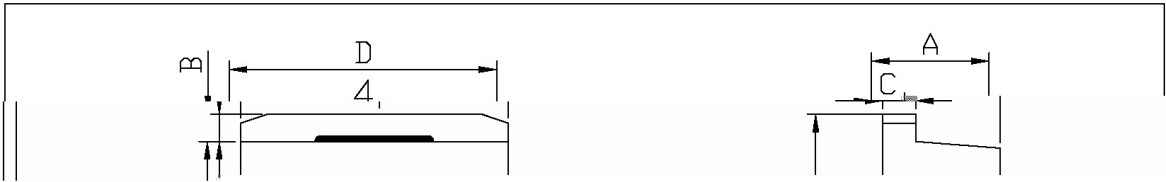


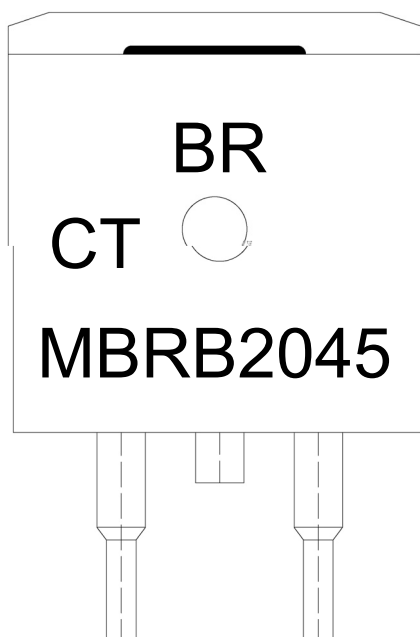
图 1 MBRB2045CT 封装尺寸图

单位: mm

| Symbol         | Dimensions in Millimeters |       | Symbol         | Dimensions in Millimeters |      |
|----------------|---------------------------|-------|----------------|---------------------------|------|
|                | Min                       | Max   |                | Min                       | Max  |
| A              | 4.30                      | 4.70  | E <sub>L</sub> | 0.00                      | 0.10 |
| B              | 1.00                      | 1.40  | e <sub>1</sub> | 2.34                      | 2.54 |
| b <sub>2</sub> | 0.70                      | 0.90  | e <sub>2</sub> | 4.88                      | 5.08 |
| b <sub>1</sub> | 1.15                      | 1.35  | L <sub>1</sub> | 1.50                      | 1.60 |
| b <sub>2</sub> | 0.40                      | 0.60  | L <sub>2</sub> | 2.24                      | 2.54 |
| C              | 1.20                      | 1.40  | L <sub>3</sub> | 1.20                      | 1.40 |
| D              | 9.80                      | 10.20 |                |                           |      |



/ Marking Instructions



BR

MBRB2045

CT

Note:

BR: Company Code

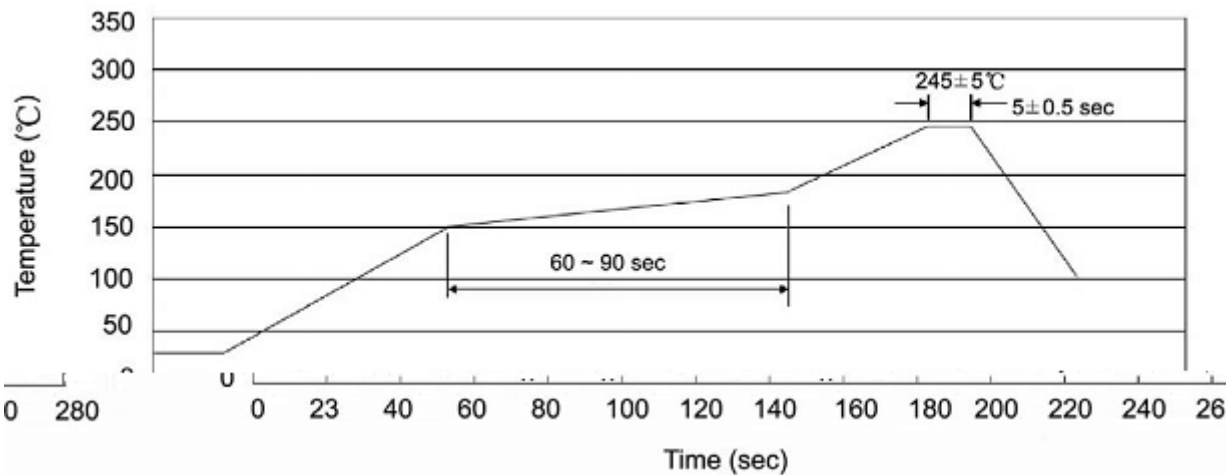
MBRB2045: Product Type.

CT: Internal Structure

\*\*\*\*: Lot No. Code, code change with Lot No.



( ) /



Note:

- |   |     |     |    |          |                                         |
|---|-----|-----|----|----------|-----------------------------------------|
| 1 | 25  | 150 | 60 | 90sec;   | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 245 | 5   | 5  | 0.5sec;  | 2.Peak Temp.:245 5 , Duration:5 0.5sec. |
| 3 |     |     | 2  | 10 /sec. | 3. Cooling Speed: 2~10 /sec.            |

### / Resistance to Soldering Heat Test Conditions

260 5      10 1 sec.      Temp.:260±5      Time:10±1 sec

### / Packaging SPEC.

/ REEL

| Package Type | Units |  |  |  |  | Dimension (unit mm <sup>3</sup> ) |  |  |
|--------------|-------|--|--|--|--|-----------------------------------|--|--|
|              |       |  |  |  |  |                                   |  |  |
|              |       |  |  |  |  |                                   |  |  |

/ TUBE

| Package Type | Units |  |  |  |  | Dimension (unit mm <sup>3</sup> ) |  |  |
|--------------|-------|--|--|--|--|-----------------------------------|--|--|
|              |       |  |  |  |  |                                   |  |  |