



/ Descriptions

TO-263

Schottky Barrier Diode in a TO-263 Plastic Package.

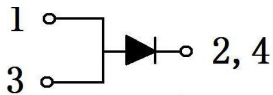
/ Features

Low power loss, high efficiency.

/ 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.



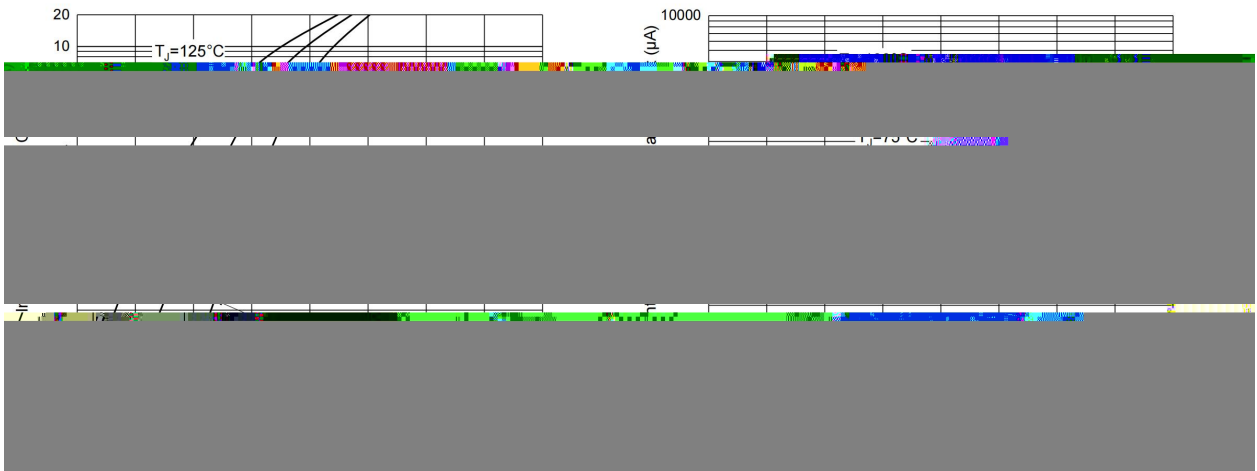
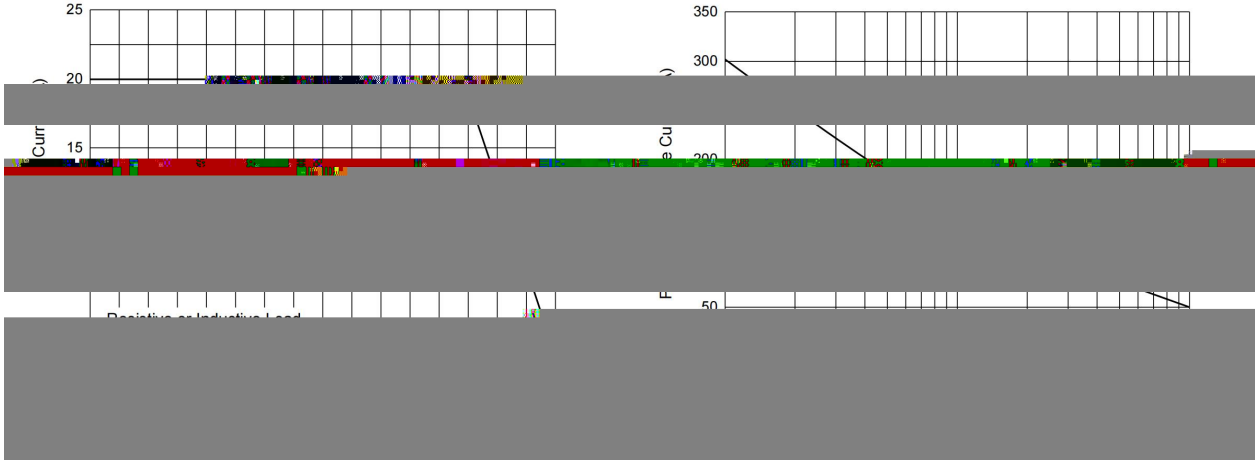
/ Absolute Maximum Ratings(Ta=25)

| Parameter | Symbol | Rating | Unit |
|--|-------------|----------|------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 45 | V |
| Maximum RMS Voltage | V_{RMS} | 31.5 | V |
| Maximum Average forward current | $I_{F(AV)}$ | 20 | A |
| Peak Forward Surge Current | I_{FSM} | 300 | A |
| Thermal Resistance Junction to Case | R_{Jc} | 1.5 | °C/W |
| Operating junction and storage temperature range | T_{stg} | -55~+150 | °C |

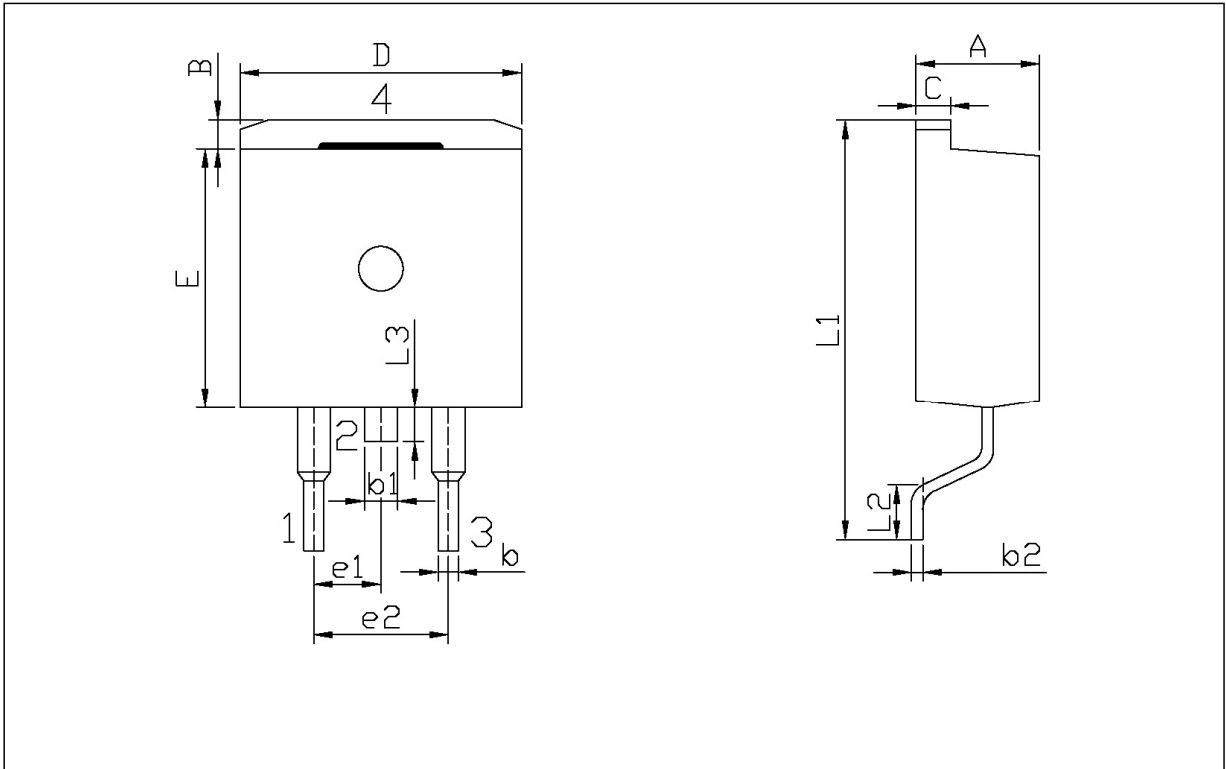
/ Electrical Characteristics(Ta=25)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------------------|----------|--------------------------------|-----|------|------|---------|
| Breakdown voltage | V_{BR} | $I_R = 100 \mu A$ | 45 | | | V |
| Forward Voltage | V_F | $I_F = 3A(T_A = 25^\circ C)$ | | 0.36 | 0.39 | V |
| | | $I_F = 10A(T_A = 25^\circ C)$ | | 0.43 | 0.48 | V |
| | | $I_F = 20A(T_A = 25^\circ C)$ | | 0.49 | 0.53 | V |
| | | $I_F = 15A(T_A = 125^\circ C)$ | | | 0.47 | V |
| Instantaneous Reverse Current | I_R | $V_R = 45V(T_A = 25^\circ C)$ | | | 60 | μA |
| | | $V_R = 10V(T_A = 25^\circ C)$ | | | 30 | μA |
| | | $V_R = 45V(T_A = 75^\circ C)$ | | | 1 | mA |

/ Electrical Characteristic Curve



/ Package Dimensions



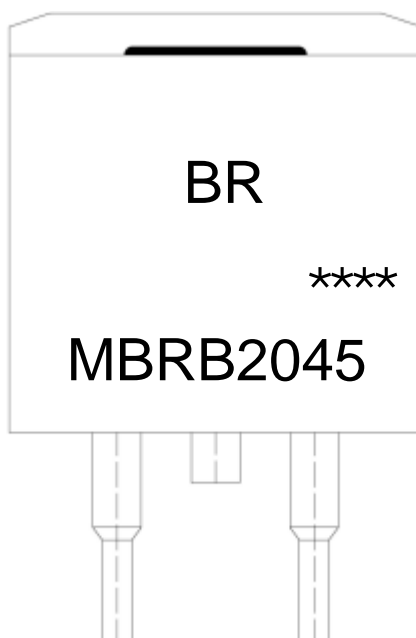
单位: mm

| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|-------|--------|---------------------------|-------|
| | Min | Max | | Min | Max |
| A | 4.30 | 4.70 | E | 9.00 | 9.40 |
| B | 1.00 | 1.40 | e1 | 2.34 | 2.74 |
| b | 0.70 | 0.90 | e2 | 4.88 | 5.28 |
| b1 | 1.15 | 1.35 | L1 | 15.00 | 16.00 |
| b2 | 0.40 | 0.60 | L2 | 2.24 | 2.84 |
| C | 1.20 | 1.40 | L3 | 1.20 | 1.60 |
| D | 9.80 | 10.20 | | | |

TU-253



/ Marking Instructions



BR

MBRB2045

Note:

BR: Company Code

MBRB2045 Product Type Code.

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



Temperature Profile for IR Reflow Soldering(Pb-Free)

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Note:

60 ~ 90sec;
 5±0.5sec;
 °C/sec.

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

Distance to Soldering Heat Test Conditions

10±1 sec.

Temp.:260±5°C

Time:10±1 sec

2.

| Units 包装数量 | Dimension 包装尺寸 (unit: mm ³) |
|------------|---|
| 只/盒 | 箱 |