

MBR20200CT

Rev.1 Nov.-2023

描述 / Descriptions

TO-220 塑封封装 肖特基二极管。
Schottky Barrier Diode in a TO-220 Plastic Package.

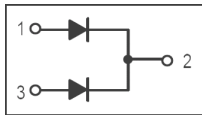
特征 / Features

损耗低，效率高。
Low power loss, high efficiency.

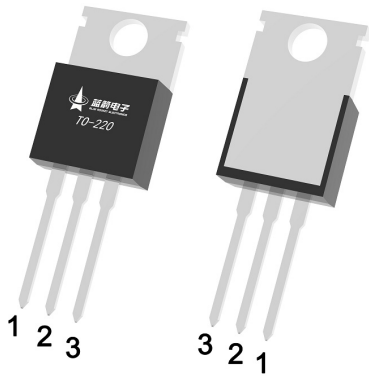
用途 / Applications

用于高频、低压、大电流整流二极管，续流二极管，保护二极管。
For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1: Anode PIN 2: Cathode PIN 3: Anode

印章代码 / Marking

见印章说明。
See Marking Instructions.

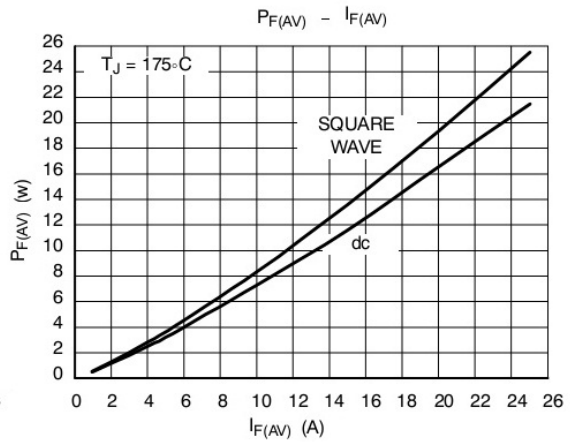
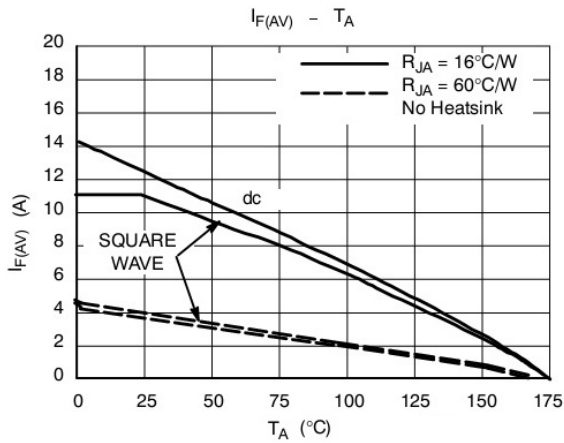
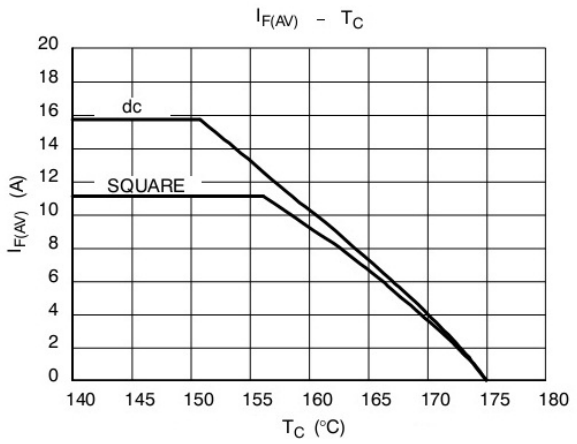
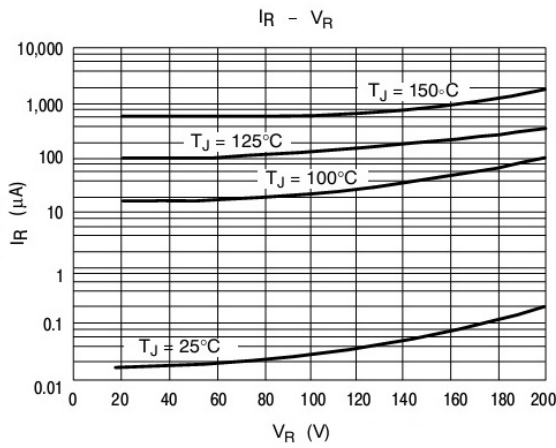
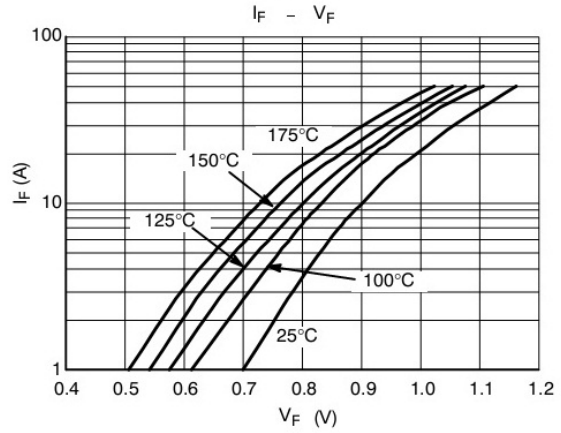
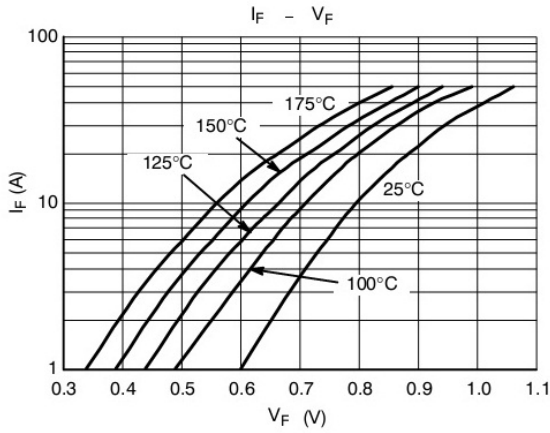
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|---|--------------------|--------------|------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 200 | V |
| Working Peak Reverse Voltage | V_{RWM} | 200 | V |
| Peak Repetitive Forward Current | I_{FRM} | 20 | A |
| Average Rectified Forward Current | $I_{F(AV)}$ | 10 | A |
| | $I_{F(AV)}(total)$ | 20 | A |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | 150 | A |
| Repetitive Peak Reverse Surge Current | I_{RRM} | 1.0 | A |
| Thermal Resistance Junction to Case | $R_{\theta JC}$ | 2.0 | °C/W |
| Junction Temperature Range | T_j | 175 | °C |
| Storage Temperature Range | T_{stg} | -65~175 | °C |

电性能参数 / Electrical Characteristics(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 测试条件 Test Conditions | 最小值 Min | 典型值 Typ | 最大值 Max | 单位 Unit |
|-------------------------------|--------------|---------------------------------|------------|------------|------------|------------|
| Forward Voltage | V_F | $I_F = 10A(T_j = 25^\circ C)$ | | 0.8 | 0.9 | V |
| | | $I_F = 10A(T_j = 125^\circ C)$ | | 0.66 | 0.8 | V |
| | | $I_F = 20A(T_j = 25^\circ C)$ | | 0.89 | 1.0 | V |
| | | $I_F = 20A(T_j = 125^\circ C)$ | | 0.76 | 0.9 | V |
| Instantaneous Reverse Current | I_R | $V_R = 200V(T_j = 25^\circ C)$ | | | 1.0 | mA |
| | | $V_R = 200V(T_j = 125^\circ C)$ | | 0.4 | 50 | mA |
| Voltage Rate of Change | dv/dt | | | | 10000 | V/ μ s |

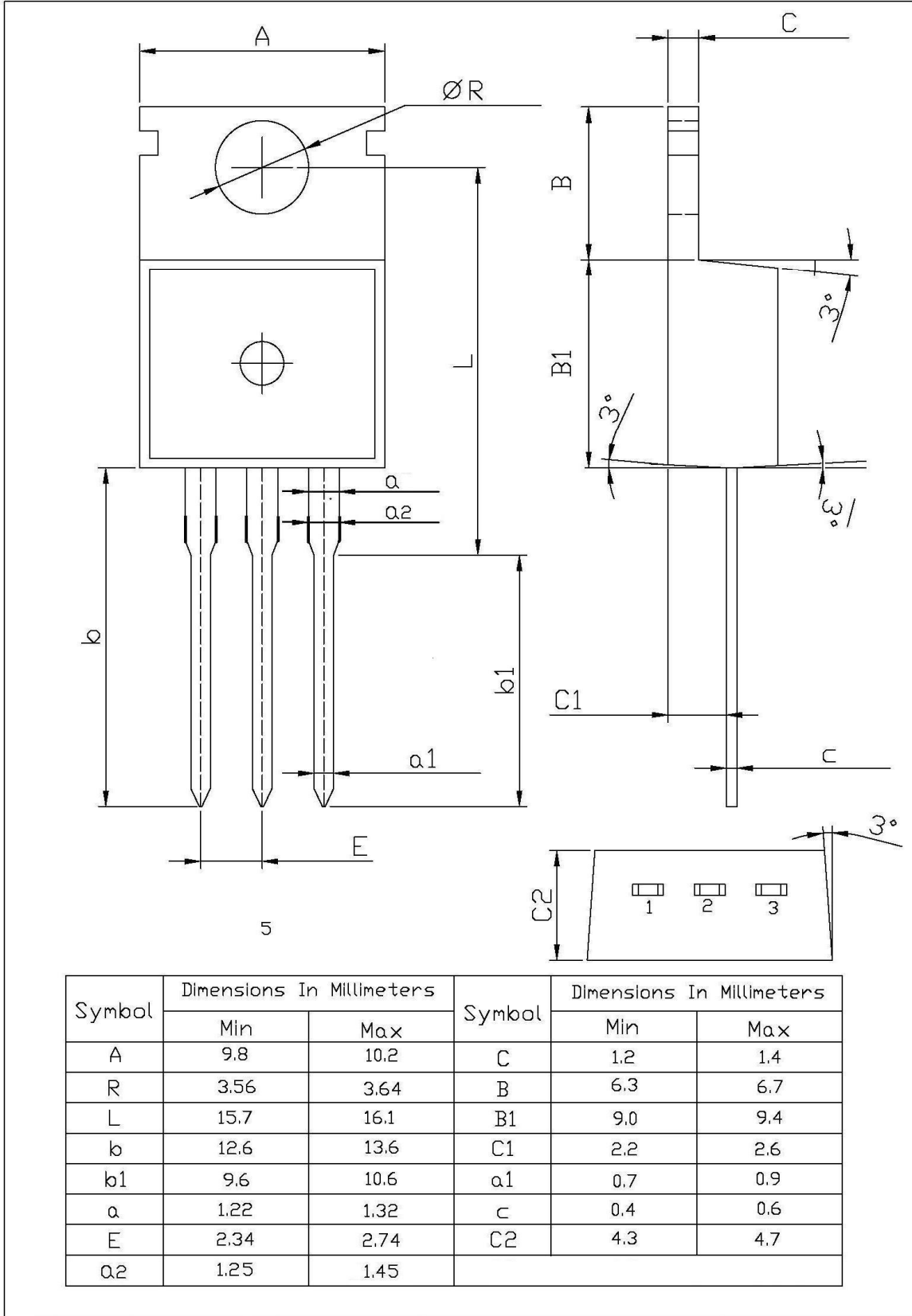
电参数曲线图 / Electrical Characteristic Curve



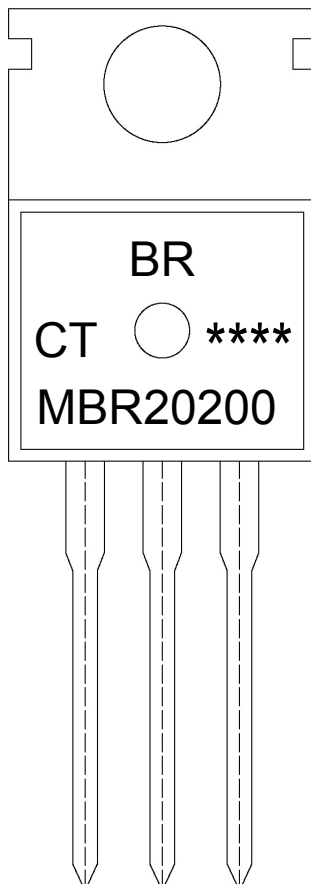
外形尺寸图 / Package Dimensions

T□-220

单位: mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

MBR20200： 为型号代码

CT: 为内部结构

****： 为生产批号代码，随生产批号变化

Note:

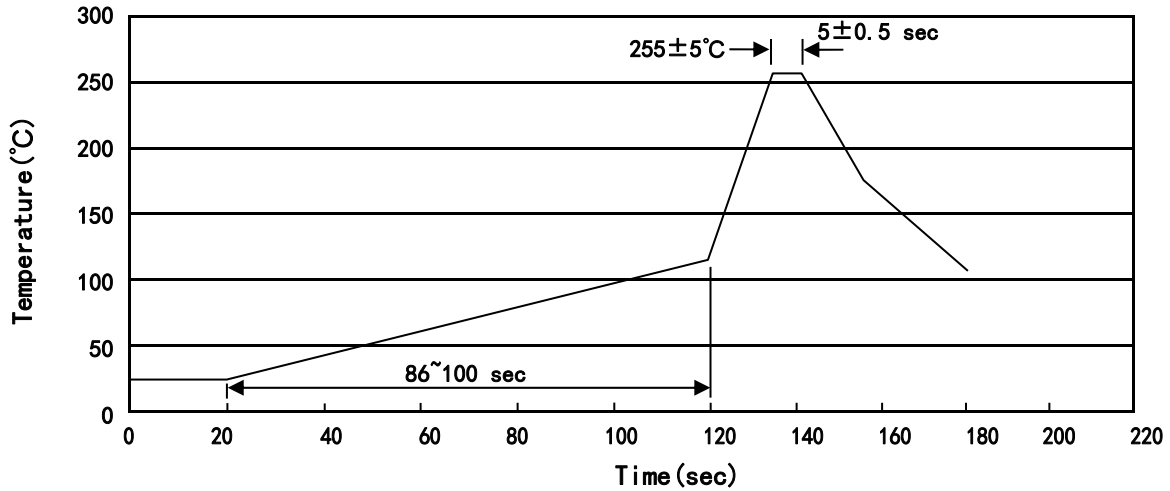
BR: Company Code

MBR20200： Product Type Code

CT: Internal Structure

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

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：270±5°C

时间：10±1 sec.

Temp.:270±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

散件包装 / BULK

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Bag 只/袋 | Bags/Inner Box 袋/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Bag 袋 | Inner Box 盒 | Outer Box 箱 |
| TO-220/F | 200 | 10 | 2,000 | 5 | 10,000 | 135×190 | 237×172×102 | 560×245×195 |

套管包装 / TUBE

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Tube 只/套管 | Tubes/Inner Box 套管/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Tube 套管 | Inner Box 盒 | Outer Box 箱 |
| TO-220/F | 50 | 20 | 1,000 | 5 | 5,000 | 532×31.4×5.5 | 555×164×50 | 575×290×180 |

使用说明 / Notices