

# BRMBR20100CTQ

Rev.A Apr.-2022

## 描述 / Descriptions

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

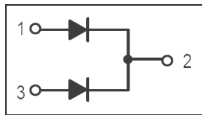
## 特征 / Features

损耗低，效率高，符合 AEC-Q101 标准高可靠性要求，无卤产品。  
Low power loss, high efficiency, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

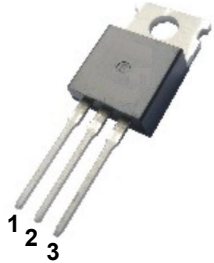
## 用途 / Applications

用于高频、低压、大电流整流二极管，续流二极管，保护二极管，满足汽车应用的严格要求。  
For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications, Meet the stringent requirements of automotive 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

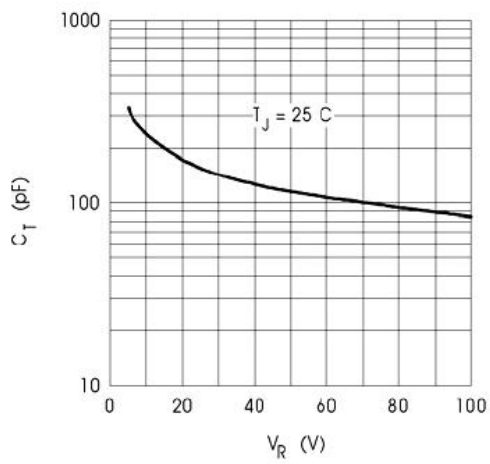
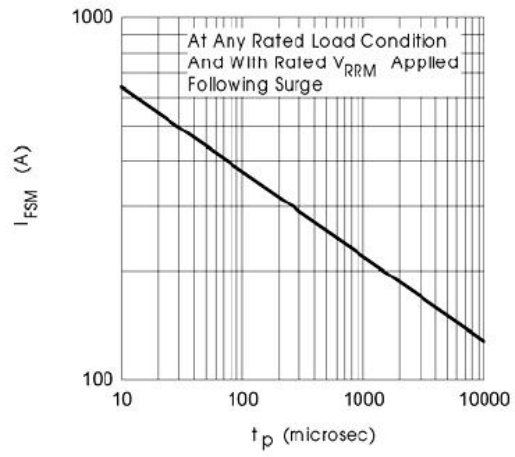
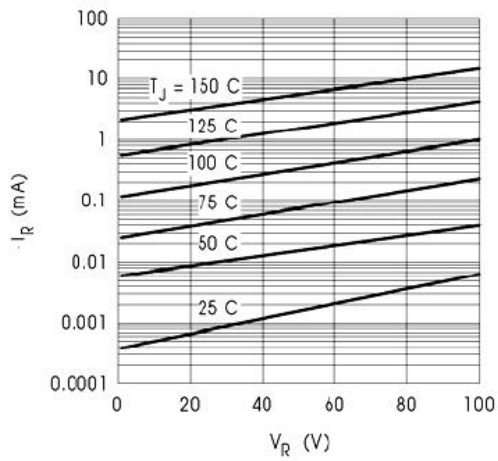
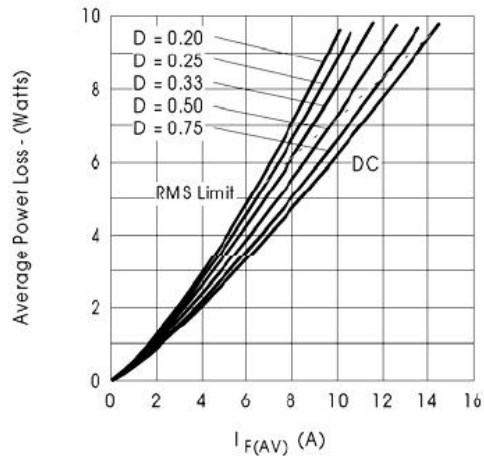
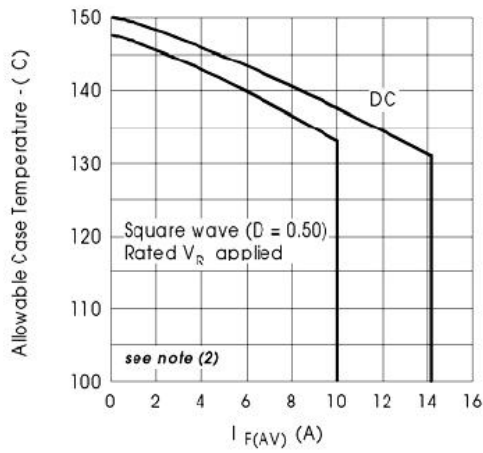
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	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	$I_{RRM}$	0.5	A
Thermal Resistance Junction to Case	$R_{\theta Jc}$	2.0	°C/W
Junction Temperature Range	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°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	$V_F$	$I_F=10A(T_C=25^\circ C)$			0.8	V
		$I_F=10A(T_C=125^\circ C)$			0.7	V
		$I_F=20A(T_C=25^\circ C)$			0.95	V
		$I_F=20A(T_C=125^\circ C)$			0.85	V
Instantaneous Reverse Current	$I_R$	$V_R=100V(T_C=25^\circ C)$			0.15	mA
		$V_R=100V(T_C=125^\circ C)$			150	mA
Voltage Rate of Change	dv/dt				10000	V/ $\mu$ s

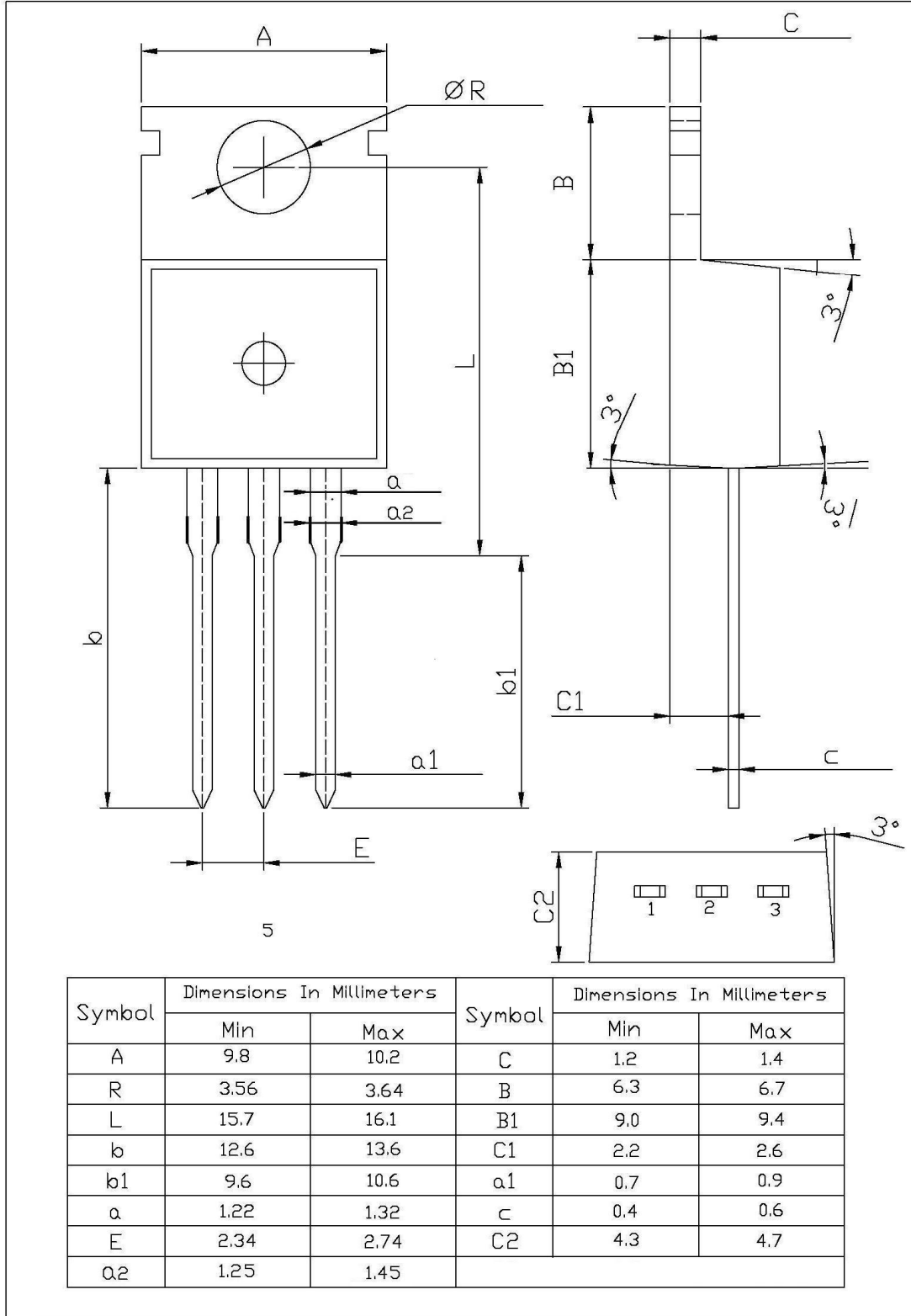
**电参数曲线图 / Electrical Characteristic Curve**



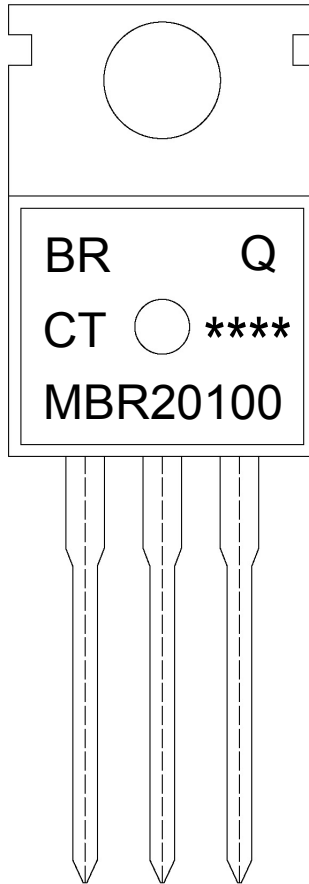
外形尺寸图 / Package Dimensions

TO-220

单位: mm



印章说明 / Marking Instructions



说明：

BR：            为公司代码

Q：             为汽车无卤产品标识

MBR20100：    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:

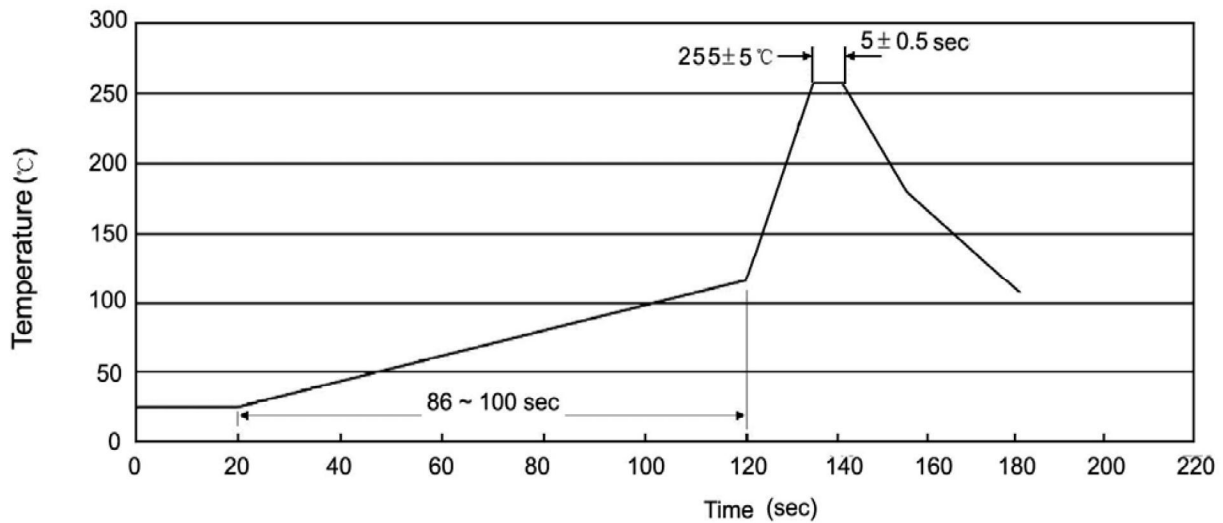
BR:             Company Code

Q:              Automobile halogen-free product Code

MBR20100：    Product Type

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 <sup>3</sup> )		
	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 <sup>3</sup> )		
	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**