

# MBRF40200CT

Rev.E Mar.-2016

## 描述 / Descriptions

TO-220F 塑封封装 肖特基二极管。

TO-220F Plastic package Schottky diode .

## 特征 / Features

低正向压降，低功耗，效率高。

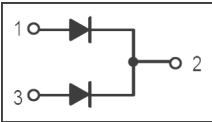
Low forward voltage drop, low power losses, High efficiency operation.

## 用途 / Applications

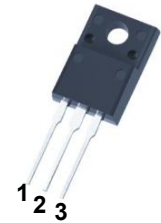
用于高频、低压、大电流整流二极管，续流二极管，保护二极管。

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

## 放大及印章代码 / $h_{FE}$ Classifications & 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 Working Peak Reverse Voltage DC Reverse Voltage	$V_{RRM}$ $V_{RWM}$ $V_{DC}$	200	V
RMS Reverse Voltage	$V_{RMS}$	140	V
Average forward rectified Current	$I_{F(AV)}$	40	A
Non Repetitive Peak Surge Current	$I_{FSM}$	320	A
Thermal Resistance Junction to Case	$R_{\theta Jc}$	4.5	°C/W
Junction and Storage Temperature Range	$T_j T_{stg}$	-40~+175	°C

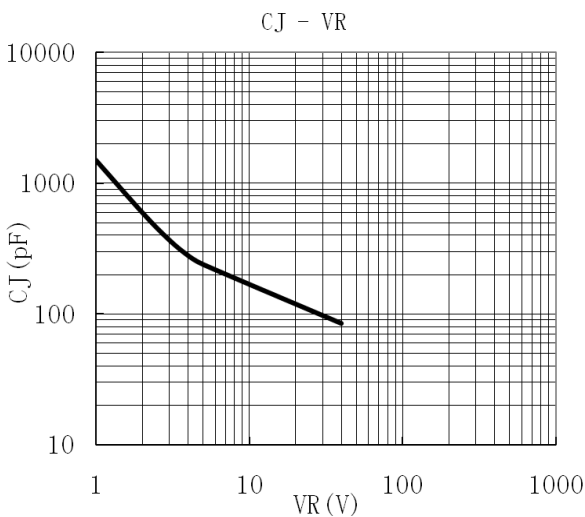
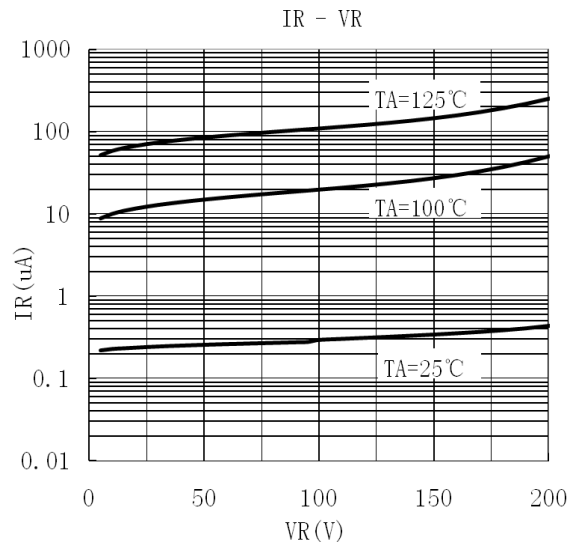
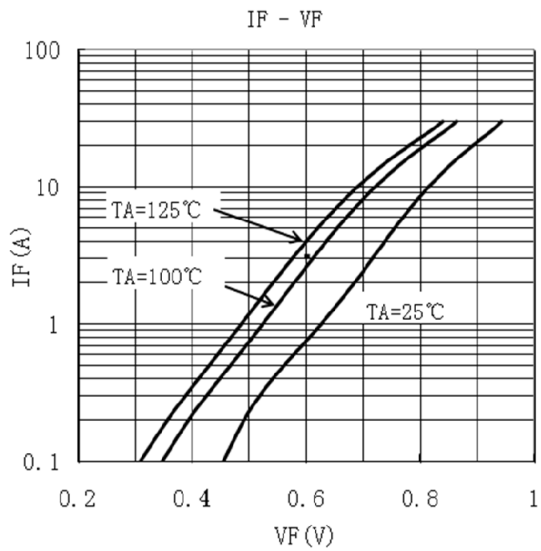
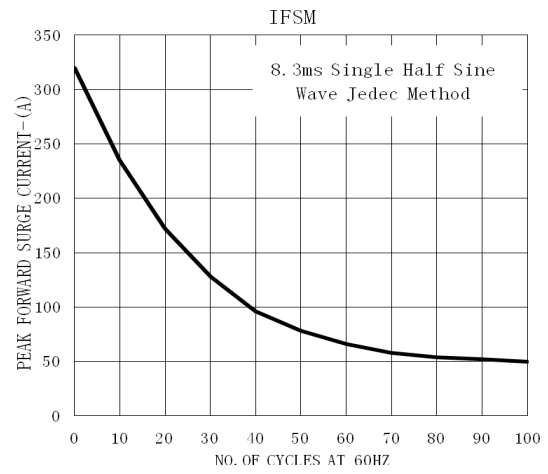
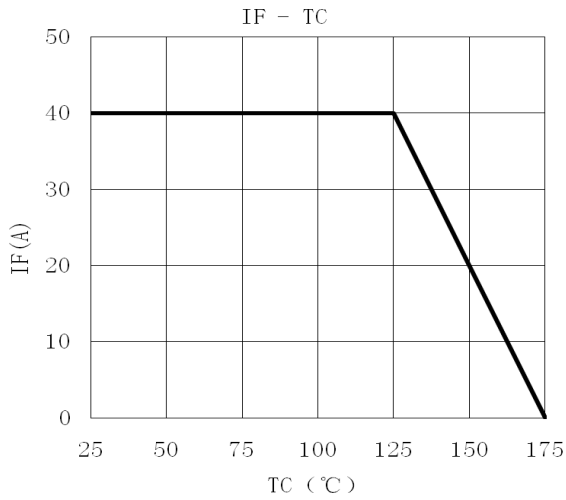
**电性能参数 / Electrical Characteristics(Ta=25°C)**

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
Reverse Voltage	$V_{(BR)R}$	$I_R = 1mA$ $T_a = 25^\circ C$	200			V
Peak Forward Voltage	$V_{FM}$	$I_F = 5.0A$ $T_a = 25^\circ C$			0.82	V
		$I_F = 5.0A$ $T_a = 125^\circ C$			0.78	V
		$I_F = 20A$ $T_a = 25^\circ C$			0.95	V
		$I_F = 20A$ $T_a = 125^\circ C$			0.82	V
Instantaneous Reverse Current	$I_R$ (Note 1)	$V_R = 200V$ $T_a = 25^\circ C$			100	uA
		$V_R = 200V$ $T_a = 125^\circ C$			5	mA

注/Notes:

1. 使用极短的测试时间,以尽量减少自热效应。/Short duration pulse test used to minimize self-heating effect.
2. 除非特别注明,数值为一个芯片的参数。/ Unless otherwise noted, values for the parameters of a single chip

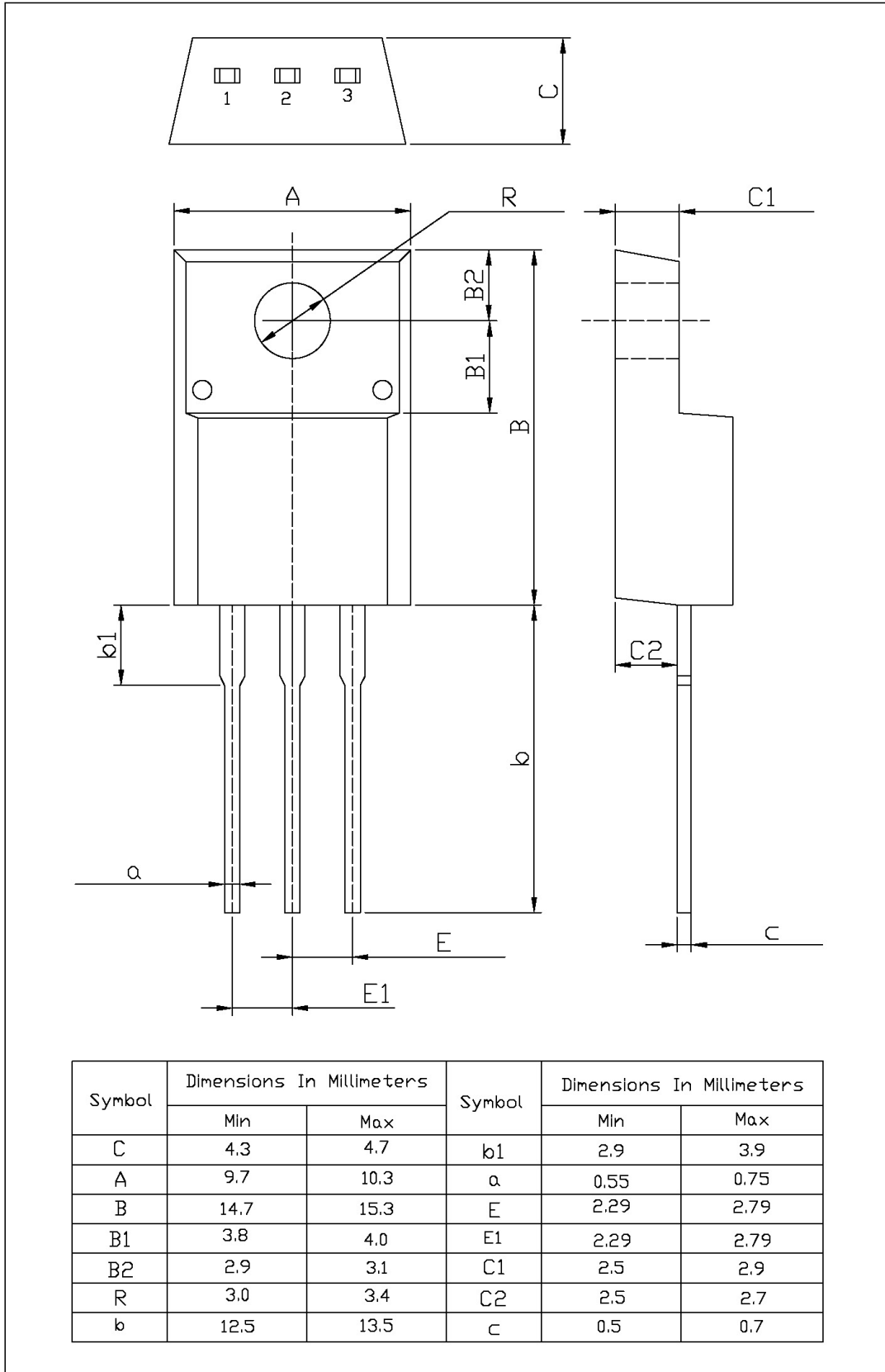
## 电参数曲线图 / Electrical Characteristic Curve



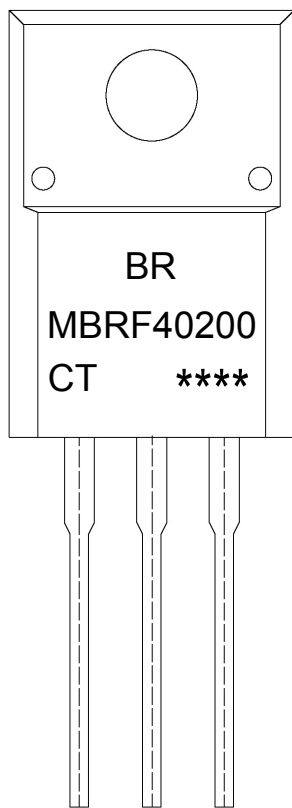
外形尺寸图 / Package Dimensions

TO-220F

单位: mm



## 印章说明 / Marking Instructions



说明：

BR： 为公司代码

MBRF40200： 为产品型号

CT： 为内部结构

\*\*\*\*： 为生产批号代码，随生产批号变化

Note:

BR: Company Code

MBRF40200: Product Type.

CT: Internal Structure

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

**回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow 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**