

# MBRD5100

Rev.E May.-2016

## 描述 / Descriptions

TO-252 塑封封装 肖特基二极管。  
Schottky diode in a TO-252 Plastic Package.

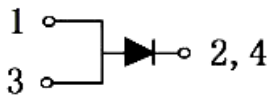
## 特征 / Features

高正向浪涌能力，超低正向压降，优良的高温稳定性。  
High Forward Surge Capability, Ultra Low Forward Voltage Drop, Excellent High Temperature Stability.

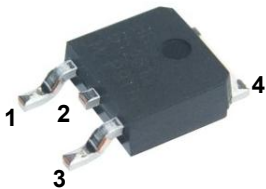
## 用途 / Applications

用于开关电源、转换器、续流二极管、反向电池保护。  
For Switching power supply, Converters, Free-Wheeling diodes, and Reverse battery protection.

## 内部等效电路 / Equivalent Circuit



## 引脚排列 / Pinning



PIN1 : Anode

PIN 2,4 : 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)**

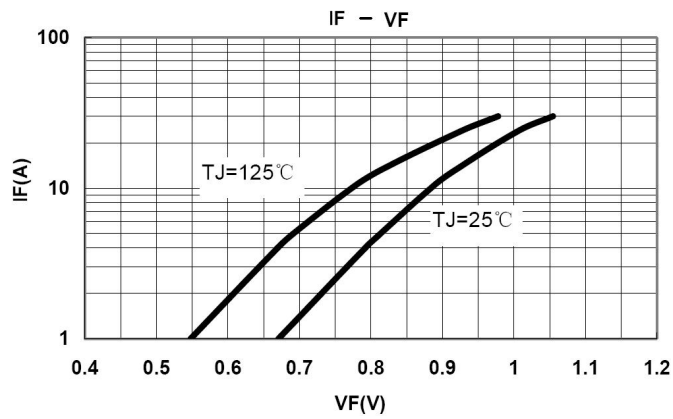
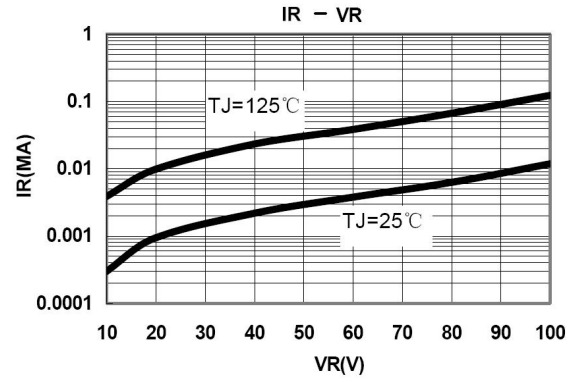
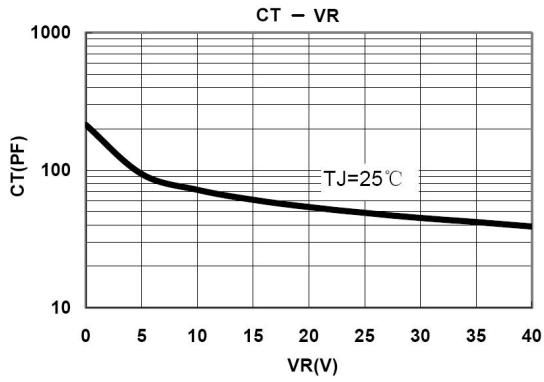
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Average Rectified Forward Current (50% duty cycle @ $T_C = 105^\circ\text{C}$ )	$I_{F(AV)}$	5.0	A
Non Repetitive Peak Surge Current	$I_{FSM}$	120	A
Junction Temperature Range	$T_j$	-55~150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	25	°C/W

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

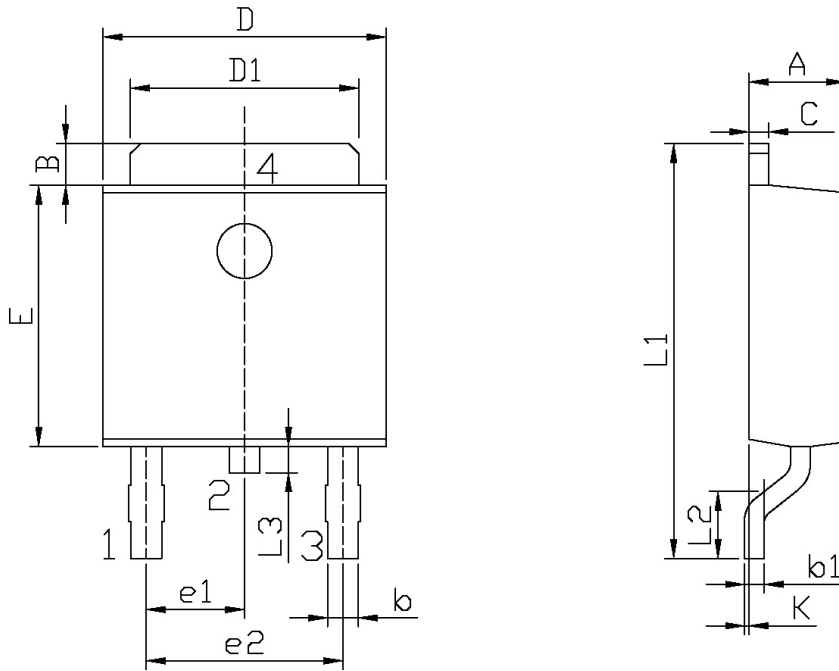
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Forward Voltage	$V_F$	$I_F=5\text{A}$ $T_J=25^\circ\text{C}$			0.85	V
		$I_F=5\text{A}$ $T_J=125^\circ\text{C}$			0.70	V
Instantaneous Reverse Current	$I_R$	$V_R=100\text{V}$ $T_J=25^\circ\text{C}$			1.0	mA
		$V_R=100\text{V}$ $T_J=125^\circ\text{C}$			10	mA

\*Pulse Width < 300μs, Duty Cycle <2%

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

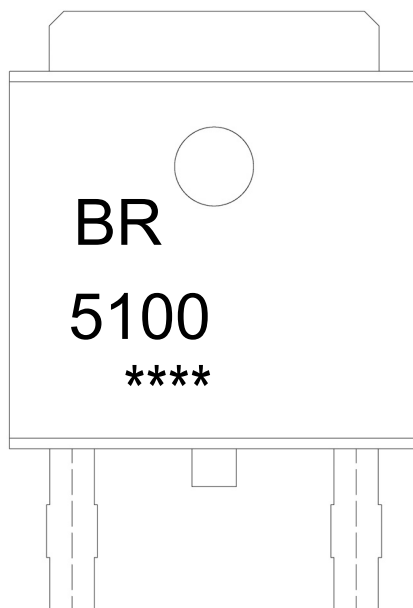


单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	2.20	2.40	E	5.95	6.25
B	0.95	1.25	e1	2.24	2.34
b	0.50	0.70	e2	4.43	4.73
b1	0.45	0.55	L1	9.45	9.95
C	0.45	0.55	L2	1.25	1.75
D	6.45	6.75	L3	0.60	0.90
D1	5.10	5.50	K	0.00	0.10

TO-252

**印章说明 / Marking Instructions**



说明：

BR： 为公司代码

5100： 为产品型号

\*\*\*\*： 为生产批号代码，随生产批号变化。

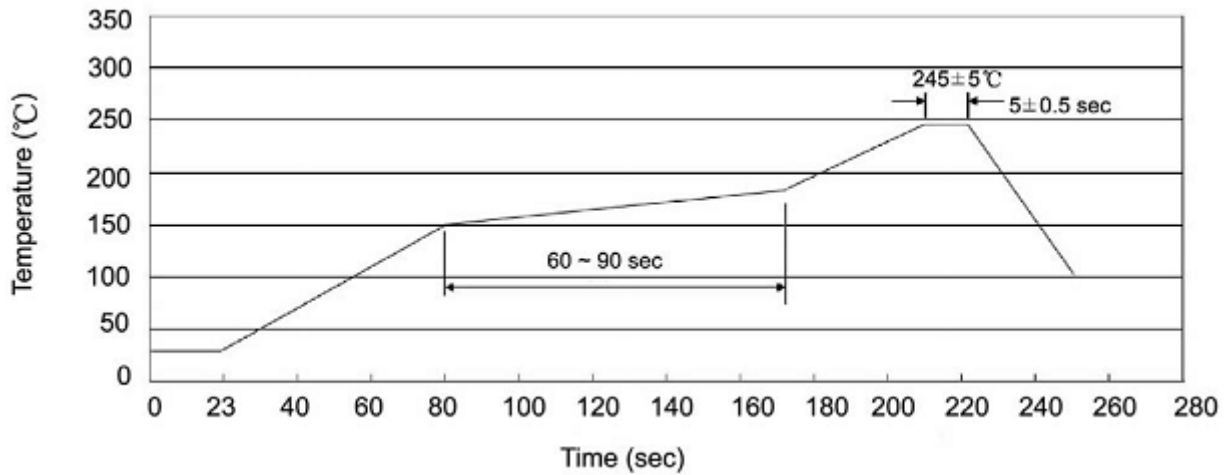
Note:

BR: Company Code

5100 : Product Type.

\*\*\*\*: 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 245±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.:245±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：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

**包装规格 / Packaging SPEC.**

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	5	25,000	13" × 16	360×360×50	385×257×392

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-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

**使用说明 / Notices**