

描述 / Descriptions

TO-277 塑封封装 肖特基二极管。

Schottky Barrier Diode in a TO-277 Plastic Package.

特征 / Features

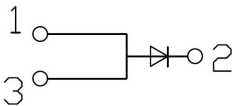
低正向压降，低功耗，高效率。无卤产品。

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

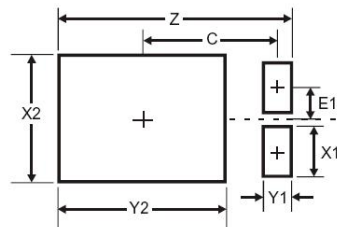
用途 / Applications

用于高频逆变器，开关电源，续流二极管，OR-ing 二极管，DC-DC 转换器和电池反向保护。

For use in high frequency inverters, switching power supplies, freewheeling diodes, OR-ing diode, dc-to-dc converters and reverse battery protection.

内部等效电路 / Equivalent Circuit**引脚排列 / Pinning**

PIN1 : Anode PIN 2 : Cathode PIN 3 : Anode



Dimensions	Value (in mm)
Z	6.6
X1	1.4
X2	3.6
Y1	0.8
Y2	4.7
C	3.87
E1	0.9

Suggested Pad layout

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 Blocking Voltage	V_{RM} V_{RSM} V_{DC}	100	V
RMS Voltage	V_{RMS}	71	V
Average Rectified Forward Current	$I_{F(AV)}$	1×5	A
Non Repetitive Peak Surge Current	I_{FSM}	120	A
Thermal Resistance Junction to Air (Note 1)	$R_{\theta JA}$	110	°C/W
Junction and Storage Temperature Range	T_J 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
Breakdown Voltage	V_{BR}	$I_R=200\mu A$	100			V
Forward Voltage	V_F	$I_F=5A(Ta=25^\circ C)$		0.74	0.79	V
		$I_F=5A(Ta=100^\circ C)$		0.64	0.68	V
		$I_F=5A(Ta=125^\circ C)$		0.60	0.64	V
		$I_F=10A(Ta=25^\circ C)$		0.81	0.89	V
		$I_F=10A(Ta=125^\circ C)$		0.68	0.73	V
Instantaneous Reverse Current	I_R (Note 2)	$V_R=100V(Ta=25^\circ C)$		0.002	0.2	mA
		$V_R=100V(Ta=100^\circ C)$		0.5	5.0	
		$V_R=100V(Ta=125^\circ C)$		2.0	20	

注/Notes:

1. FR-4 PCB, 2盎司铜, 最低建议焊盘布局。

FR-4 PCB, 2oz. Copper, minimum recommended pad layout per.

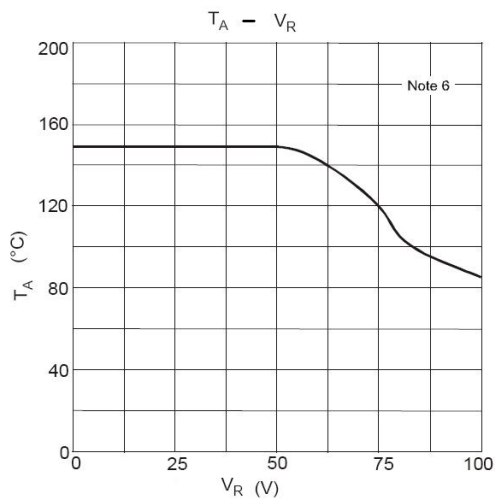
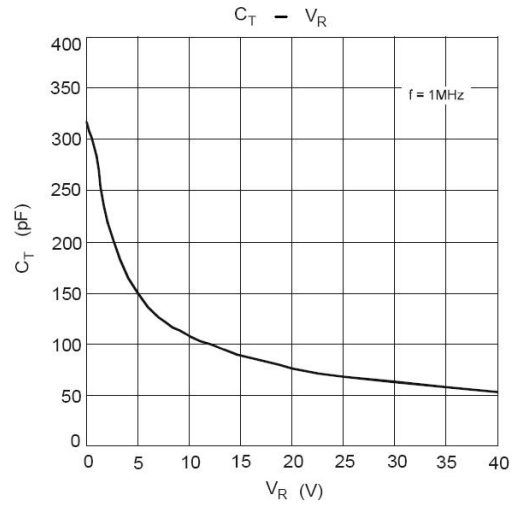
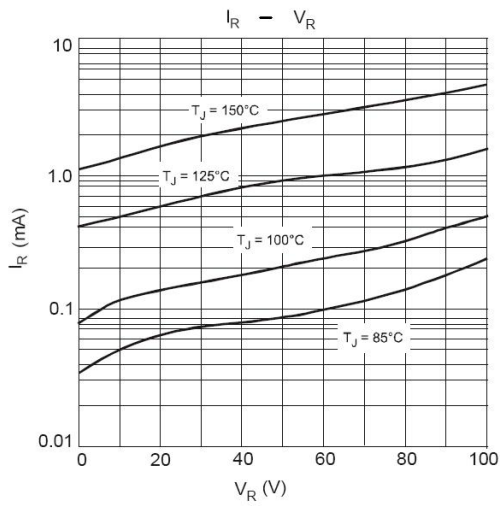
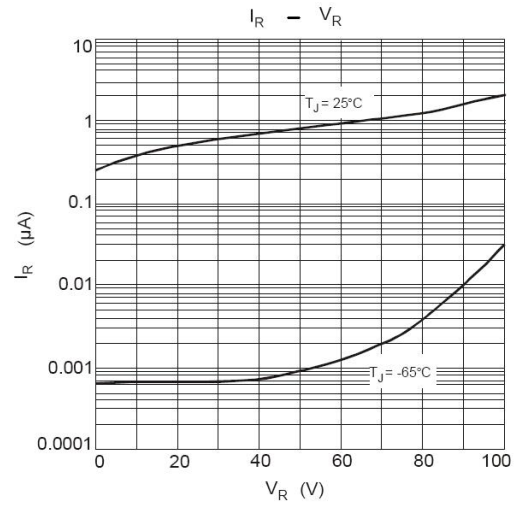
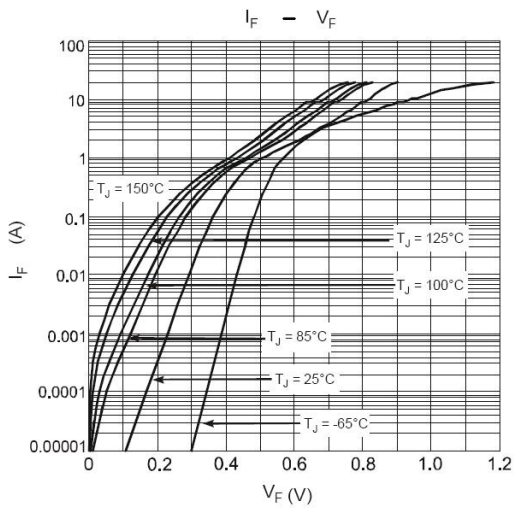
2. 使用极短的测试时间, 以尽量减少自热效应。

Short duration pulse test used to minimize self-heating effect.

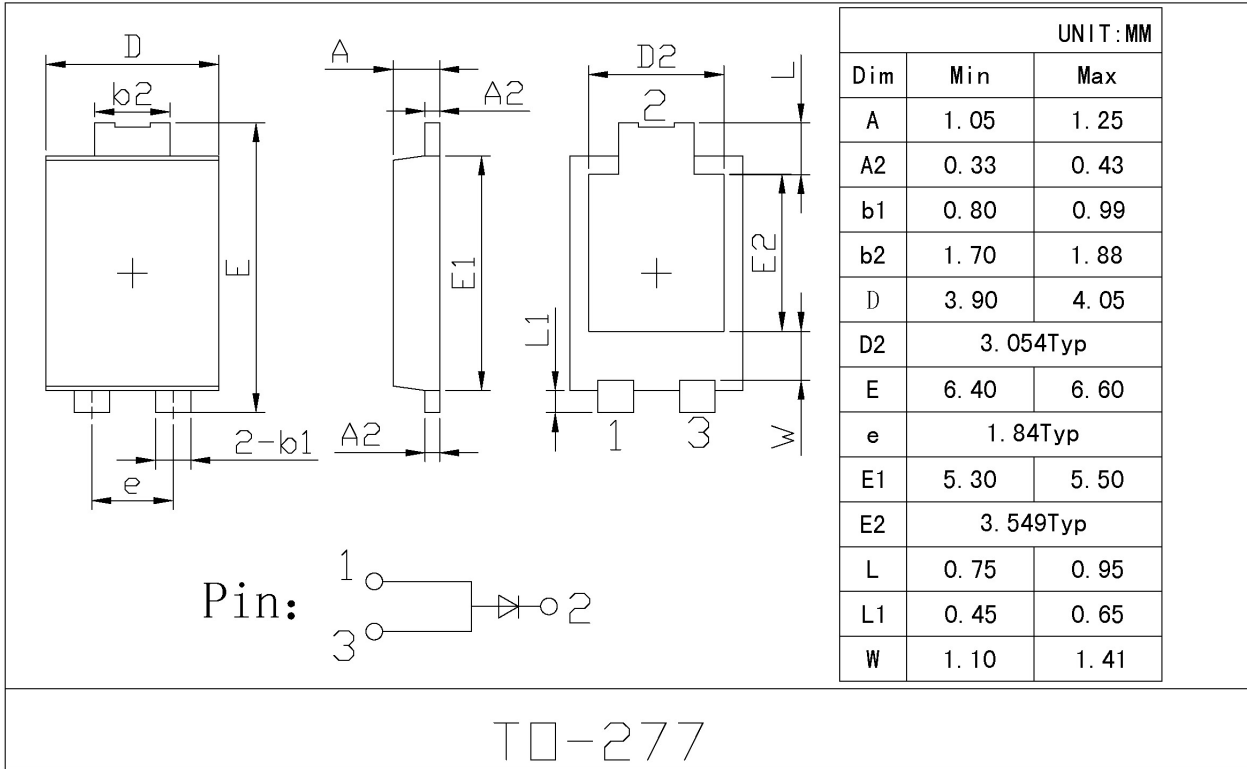
3. 除非特别注明, 数值为一个芯片的参数。

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



印章说明 / Marking Instructions



说明：

MBRE5100： 为产品型号

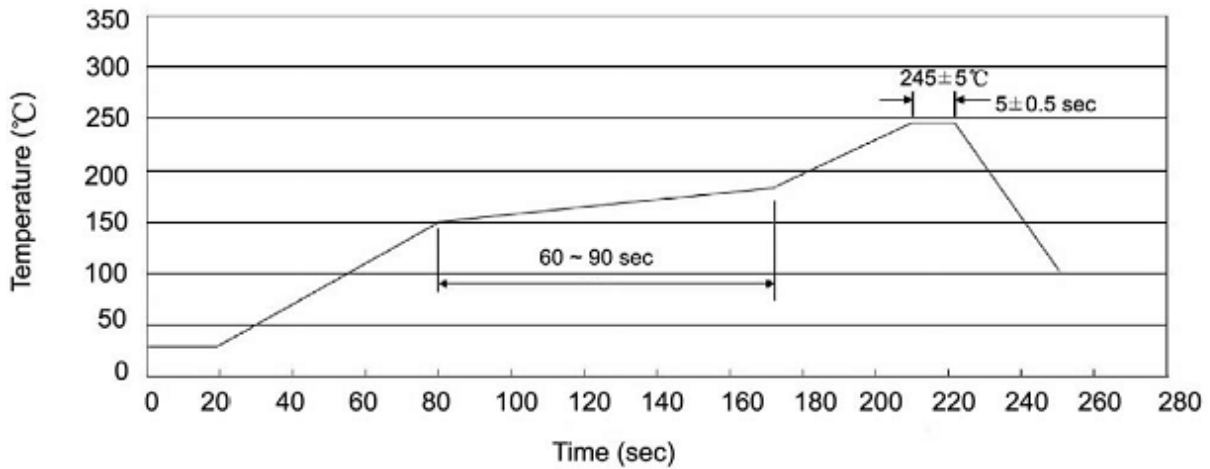
****： 为生产批号代码，随生产批号变化。

Note:

MBRE5100： 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 150~180°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:150~180°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 ³)		
	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-277	5,000	3	15,000	6	90,000	13" ×12	360×360×50	380×335×366

使用说明 / Notices