

/ Descriptions

TO-277

Schottky Barrier Diode in a TO-277 Plastic Package.

/ Features

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

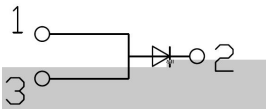
/ Applications

OR-ing

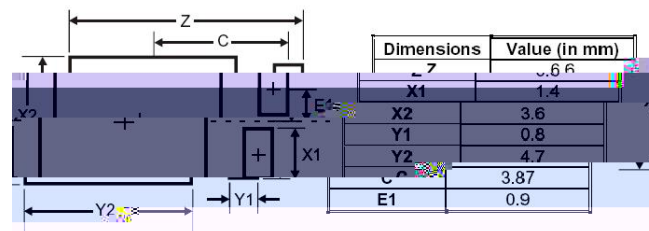
DC-DC

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

/ Equivalent Circuit



/ Pinning



PIN1 Anode PIN 2 Cathode PIN 3 Anode

Suggested Pad layout

/ h_{FE} Classifications & Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	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	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J T_{stg}	-65 175	$^\circ\text{C}$

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakdown Voltage	V_{BR}	$I_R=200\mu\text{A}$	100			V
Forward Voltage	V_F	$I_F=5\text{A}(T_a=25^\circ\text{C})$		0.74	0.79	V
		$I_F=5\text{A}(T_a=100^\circ\text{C})$		0.64	0.68	V
		$I_F=5\text{A}(T_a=125^\circ\text{C})$		0.60	0.64	V
		$I_F=10\text{A}(T_a=25^\circ\text{C})$		0.81	0.89	V
		$I_F=10\text{A}(T_a=125^\circ\text{C})$		0.68	0.73	V
Instantaneous Reverse Current	I_R Note 2	$V_R=100\text{V}(T_a=25^\circ\text{C})$		0.002	0.2	mA
		$V_R=100\text{V}(T_a=100^\circ\text{C})$		0.5	5.0	
		$V_R=100\text{V}(T_a=125^\circ\text{C})$		2.0	20	

/Notes

1. FR-4 PCB 2

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

2.

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

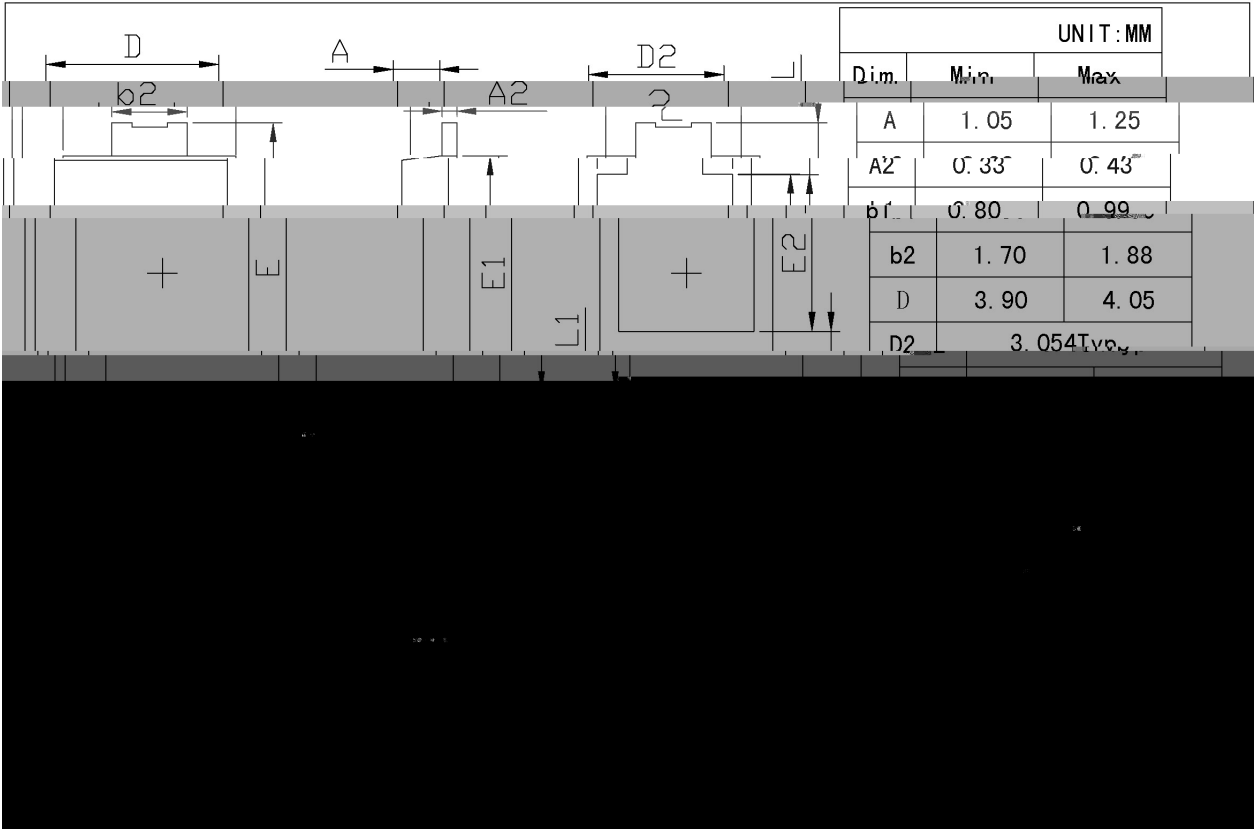
3.

Unless otherwise noted, values for the parameters of a single chip

/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



MBRE5100

Note:

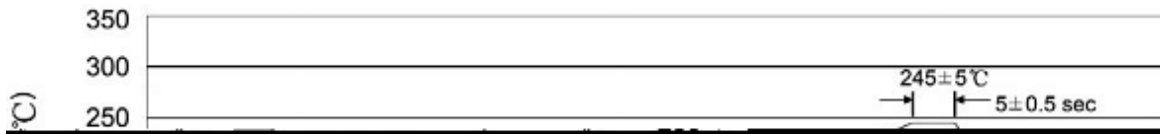
MBRE5100

Product Type.

****:

Lot No. Code, code change with Lot No.

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Note:

- | | | | | | |
|---|-------|-----|-----------|--------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | | 5±0.5sec; | | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5℃ Time:10±1 sec

/ Packaging SPEC.

/ 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

/ Notices