

MBRB2045

Rev. A May.-2021



DATA SHEET

/ Revised record

A	2021.05.26	ALL	MCC-MBRBL2045 MBRB2045		

/ Descriptions

TO-263

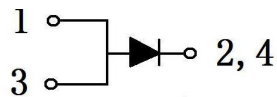
Schottky Barrier Diode in a TO-263 Plastic Package.

/ Features

Low power loss, high efficiency.

/ Applications

For use in low voltage,high frequency inverters, free wheeling, and polarity protection applications.

/ Equivalent Circuit**/ Pinning**

PIN1 Anode

PIN 2 4 Cathode

PIN 3 Anode

/ h_{FE} Classifications & Marking

See Marking Instructions.

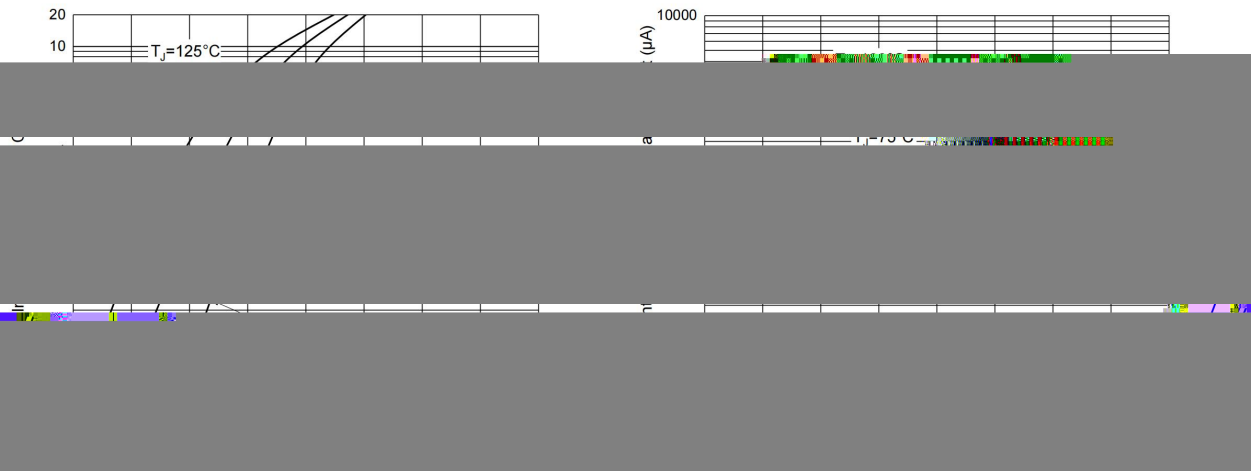
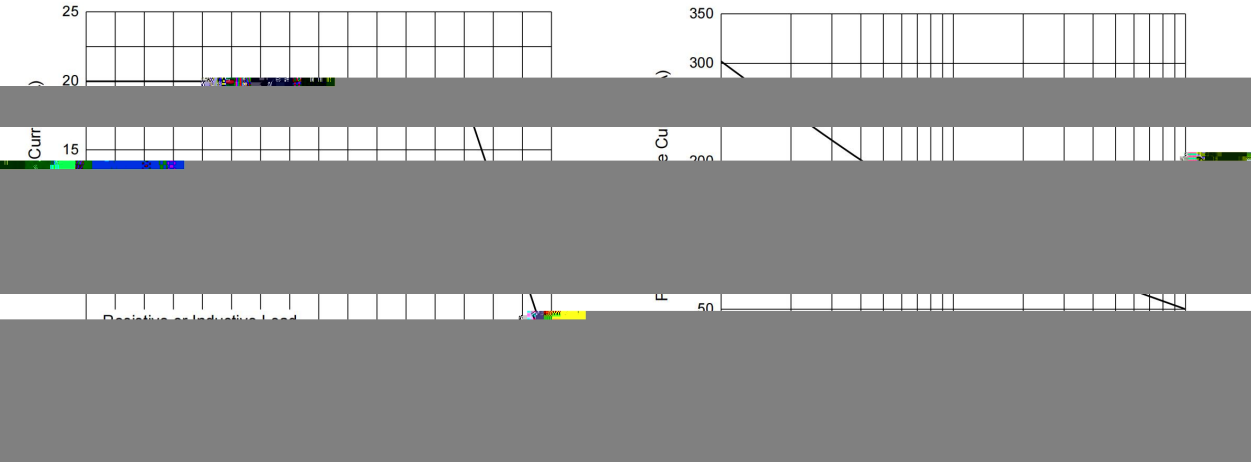
/ Absolute Maximum Ratings Ta = 25

Parameter	Symbol	Rating	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum Average forward current	$I_{F(AV)}$	20	A
Peak Forward Surge Current	I_{FSM}	300	A
Thermal Resistance Junction to Case	$R_{\theta Jc}$	1.5	$^{\circ}C/W$
Operating junction and storage temperature range	T_{stg}	-55~+150	$^{\circ}C$

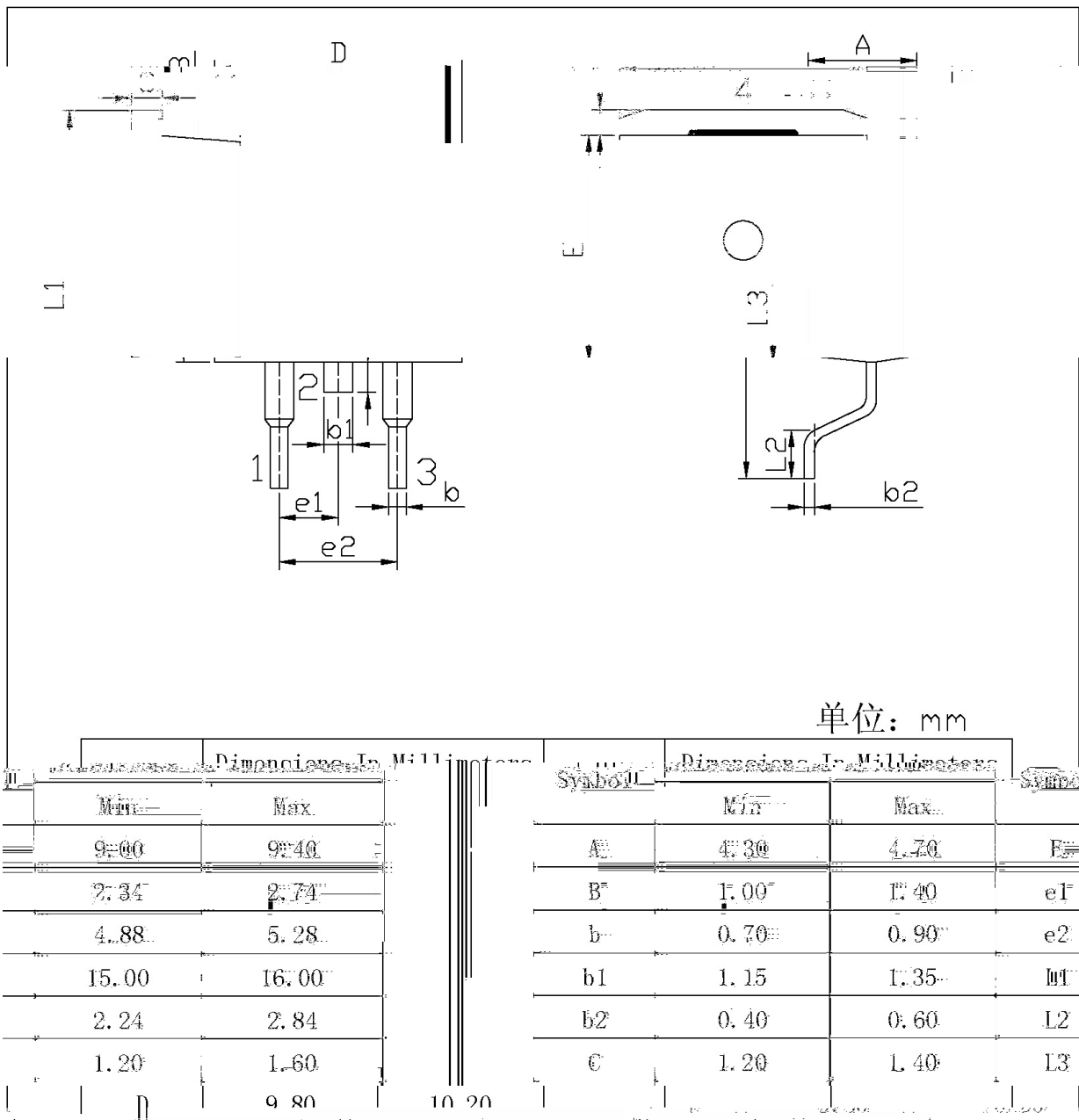
/ Electrical Characteristics Ta = 25

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakdown voltage	V_{BR}	$I_R = 100 \mu A$	45			V
Forward Voltage	V_F	$I_F = 3A (T_A = 25^{\circ}C)$		0.36	0.39	V
		$I_F = 10A (T_A = 25^{\circ}C)$		0.43	0.48	V
		$I_F = 20A (T_A = 25^{\circ}C)$		0.49	0.53	V
		$I_F = 15A (T_A = 125^{\circ}C)$			0.47	V
Instantaneous Reverse Current	I_R	$V_R = 45V (T_A = 25^{\circ}C)$			60	μA
		$V_R = 10V (T_A = 25^{\circ}C)$			30	μA
		$V_R = 45V (T_A = 75^{\circ}C)$			1	mA

/ Electrical Characteristic Curve

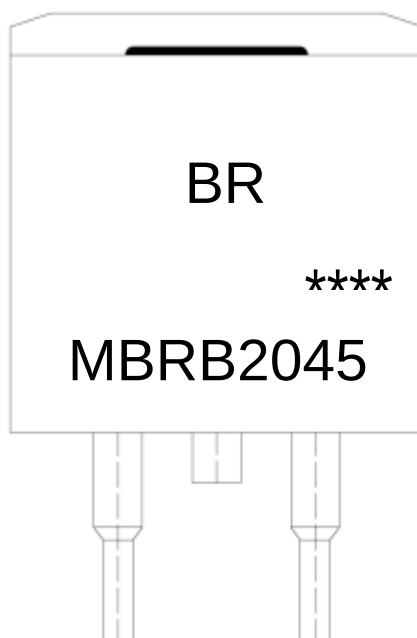


/ Package Dimensions



-253

/ Marking nstructions



BR

MBRB2045

Note:

BR:

Company Code

MBRB2045

Product Type Code.

****:

Lot No. Code, code change with Lot No.

/ Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

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

/ Resistance to Soldering Heat Test Conditions

260±5°C 10±1 sec. Temp.:260±5°C Time:10±1 sec

/ Packaging SPEC

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	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