

# MBRF20100CT

Rev.G Feb.-2023

## / Descriptions

TO-220F

Schottky Barrier Diode in a TO-220F Plastic Package.

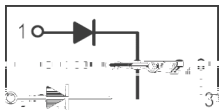
## / Features

Low power loss,high efficiency.

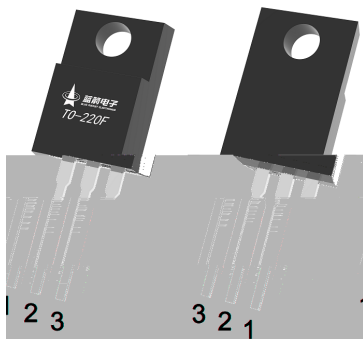
## / Applications

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

## / Equivalent Circuit



## / Pinning



PIN1 Anode    PIN 2 Cathode    PIN 3 Anode

## / Marking

See Marking Instructions

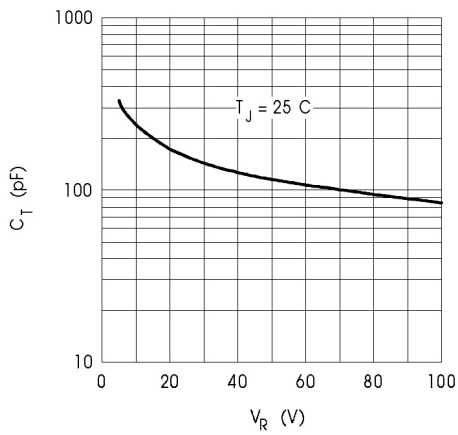
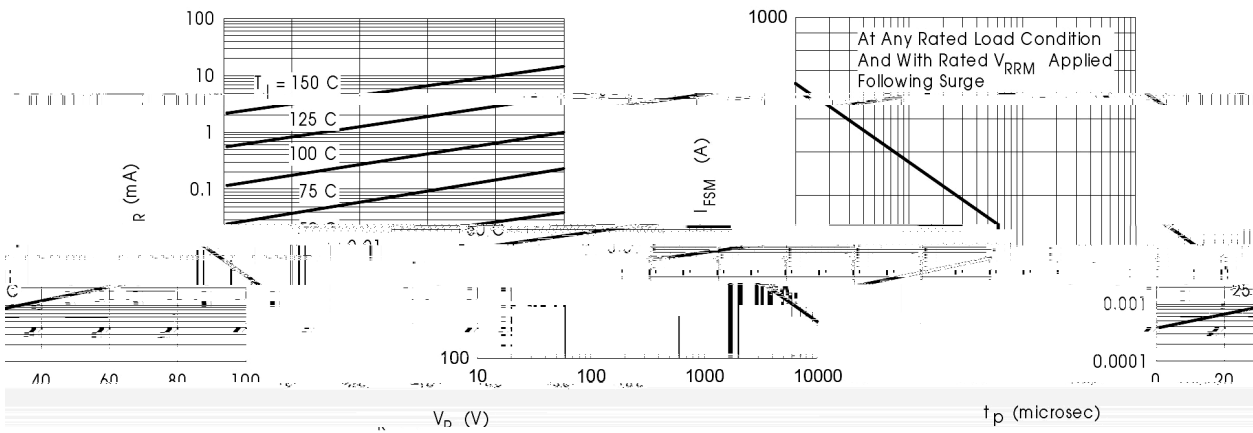
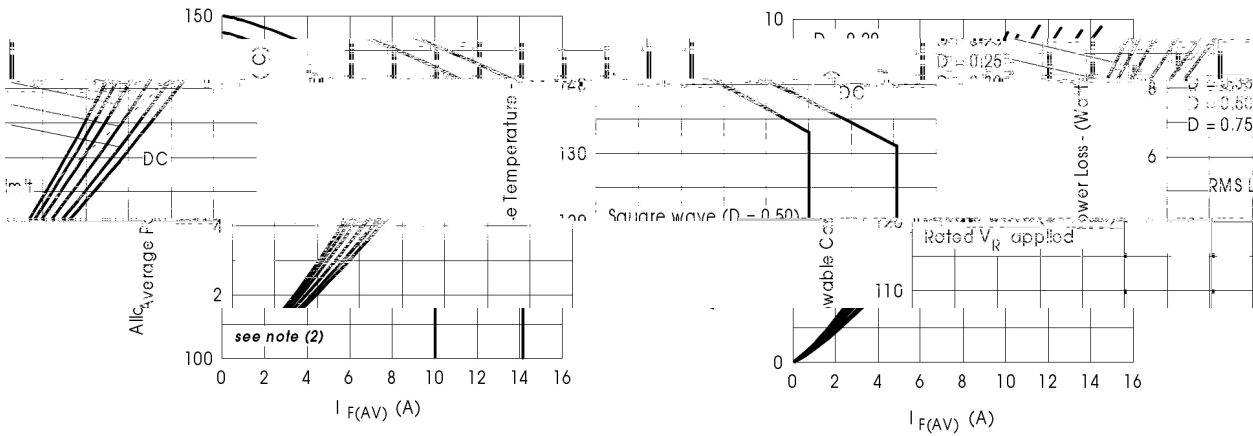
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	V
Reverse forward current	$I_{FRM}$	20	A
Average Forward Current	$I_{F(AV)}$	10	A
Average Forward Current ( total )	$I_{F(AV)}$ ( total )	20	A
Non Repetitive Peak Surge Current	$I_{FSM}$	150	A
Peak Repetitive Reverse Current	$I_{RRM}$	0.5	A
Thermal Resistance Junction to Case	$R_{\theta Jc}$	3.5	°C/W
Junction Temperature Range	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

**/ Electrical Characteristics(Ta=25 )**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=10A(T_c=25^\circ C)$			0.85	V
		$I_F=10A(T_c=125^\circ C)$			0.7	V
		$I_F=20A(T_c=25^\circ C)$			0.95	V
		$I_F=20A(T_c=125^\circ C)$			0.85	V
Instantaneous Reverse Current	$I_R$	$V_R=100V(T_c=25^\circ C)$			0.15	mA
		$V_R=100V(T_c=125^\circ C)$			150	mA
Critical rate of rise of reverse voltage	dv/dt				10000	V/μs

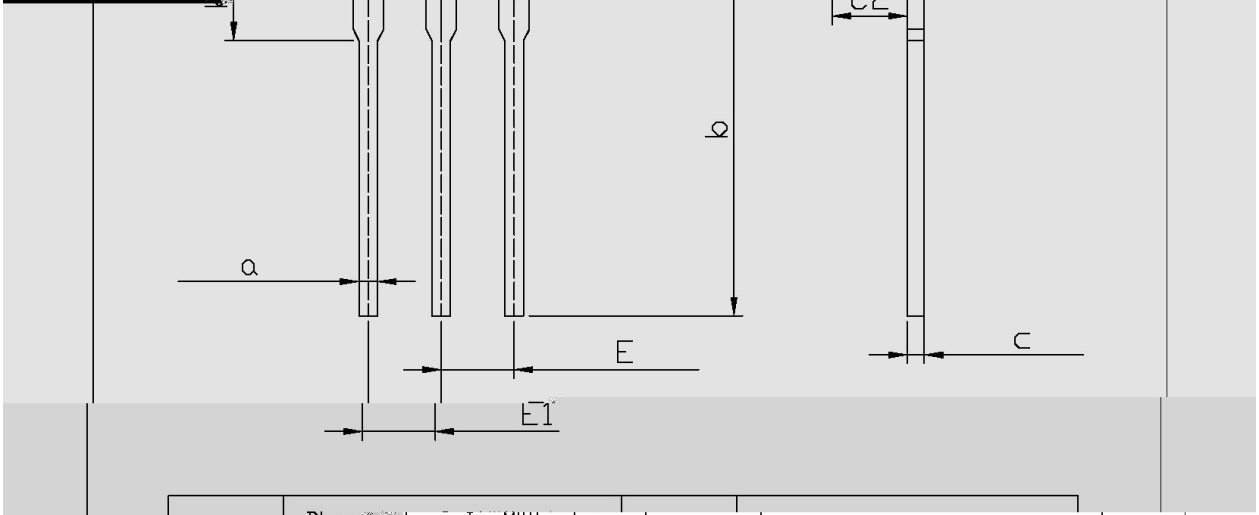
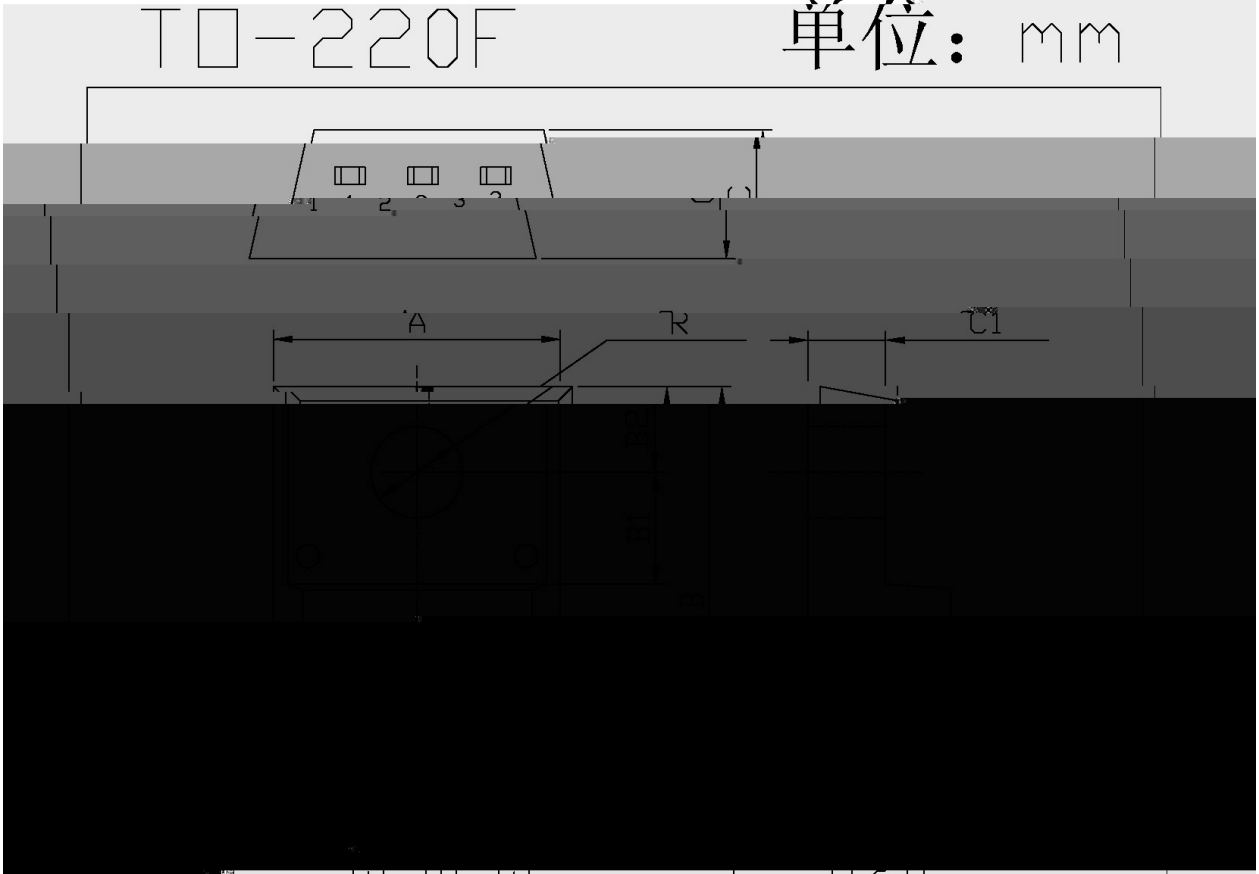
**/ Electrical Characteristic Curve**



/ Package Dimensions

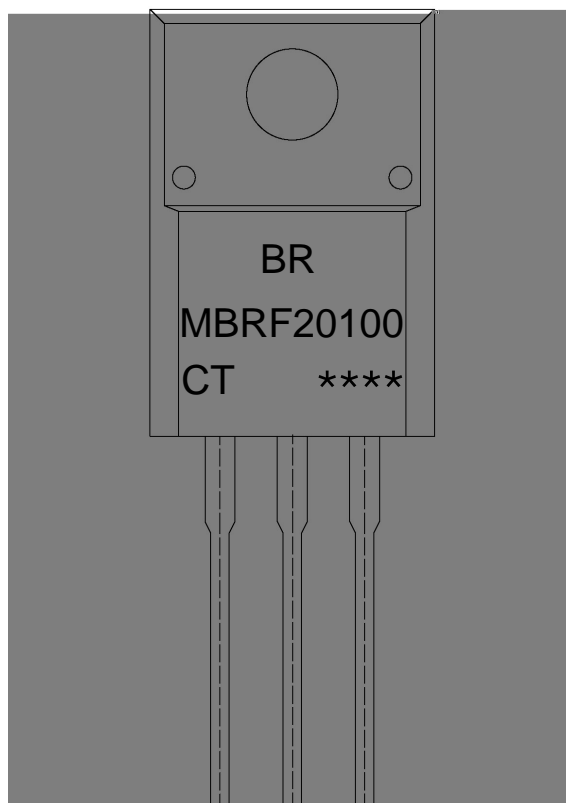
TO-220F

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
C	4.3	4.7	b1	2.9	3.9
A	9.7	10.3	a	0.55	0.75
B	14.7	15.3	E	2.29	2.79
B1	3.8	4.0	E1	2.29	2.79
B2	2.9	3.1	C1	2.5	2.9
R	3.0	3.4	C2	2.5	2.7
b	12.5	13.5	c	0.5	0.7

## / Marking Instructions



BR

MBRF20100

CT:

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Note:

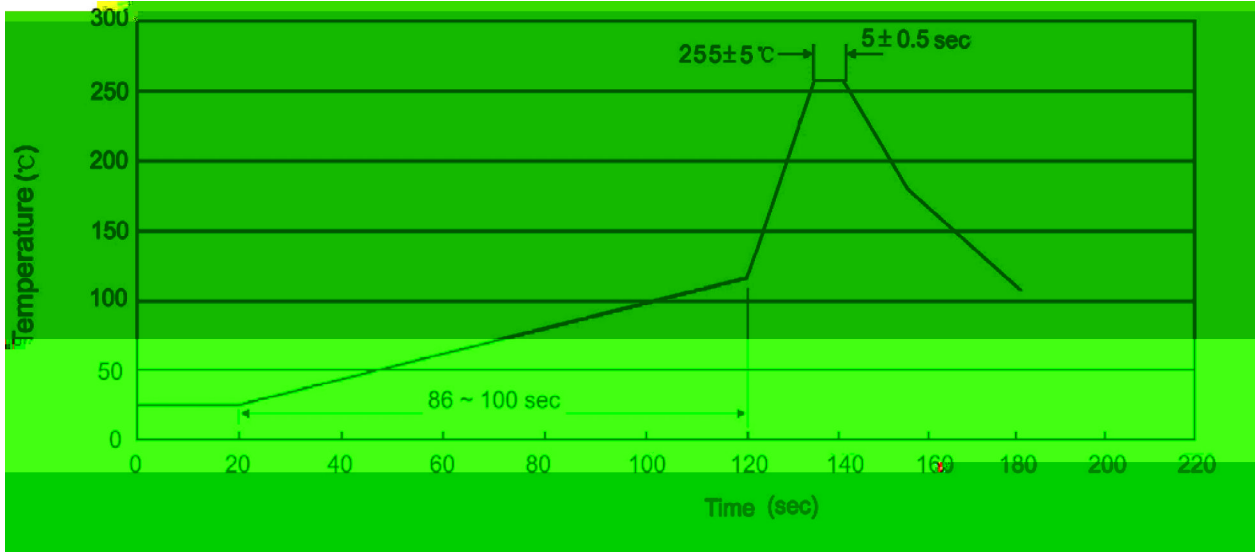
BR: Company Code

MBRF20100: Product Type

CT: Internal Structure

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

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |       |     |           |        |   |
|---|-------|-----|-----------|--------|---|
| 1 | 25    | 150 | 60        | 90sec; | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 255±5 |     | 5±0.5sec; |        | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |
| 3 |       | 2   | 10        | /sec.  | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

270±5                      10±1 sec.                      Temp.:270±5°C                      Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices