

/ Descriptions

H	2018-10				
A	2022-4-13	all	BR Q AEC-Q101 , Q		

/ Descriptions

TO-220

Schottky Barrier Diode in a TO-220 Plastic Package.

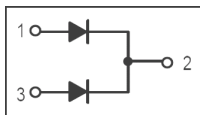
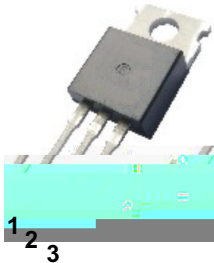
/ Features

AEC-Q101

Low power loss, high efficiency, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

For use in low voltage,high frequency inverters, free wheeling, and polarity protection applications,
Meet the stringent requirements of automotive applications.

/ Equivalent Circuit**/ Pinning**

PIN1: Anode PIN 2: Cathode PIN 3: Anode

/ Marking

See Marking Instructions

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

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Peak Repetitive Forward Current	I_{FRM}	20	A
Average Rectified Forward Current	$I_{F(AV)}$	10	A
	$I_{F(AV)(total)}$	20	A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	150	A
Repetitive Peak Reverse Surge Current	I_{RRM}	0.5	A
Thermal Resistance Junction to Case	$R_{\theta JC}$	2.0	$^\circ\text{C/W}$
Junction Temperature Range	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

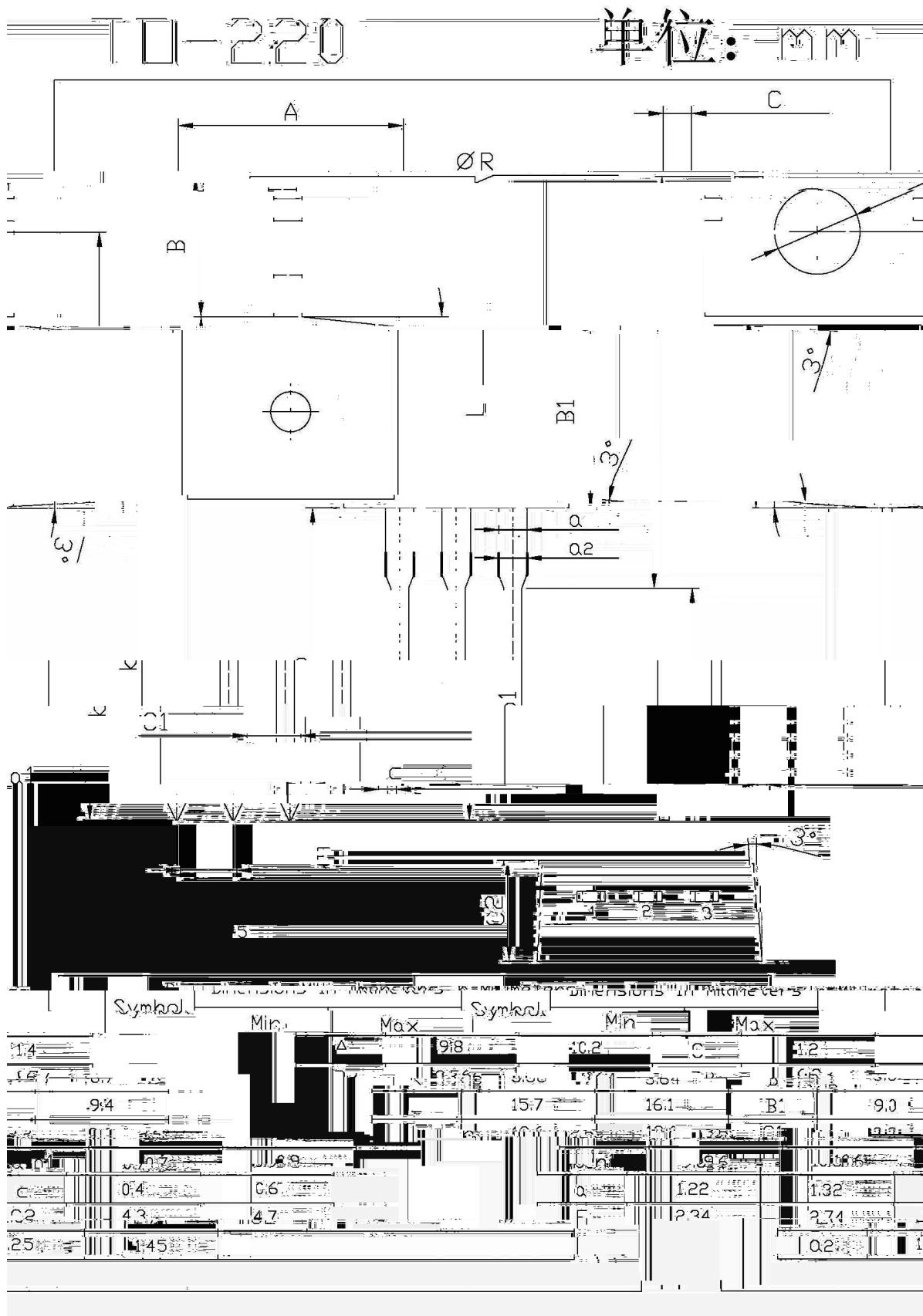
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=10\text{A}(T_C=25^\circ\text{C})$			0.8	V
		$I_F=10\text{A}(T_C=125^\circ\text{C})$			0.7	V
		$I_F=20\text{A}(T_C=25^\circ\text{C})$			0.95	V
		$I_F=20\text{A}(T_C=125^\circ\text{C})$			0.85	V
Instantaneous Reverse Current	I_R	$V_R=100\text{V}(T_C=25^\circ\text{C})$			0.15	mA
		$V_R=100\text{V}(T_C=125^\circ\text{C})$			150	mA
Voltage Rate of Change	dv/dt				10000	V/ μs

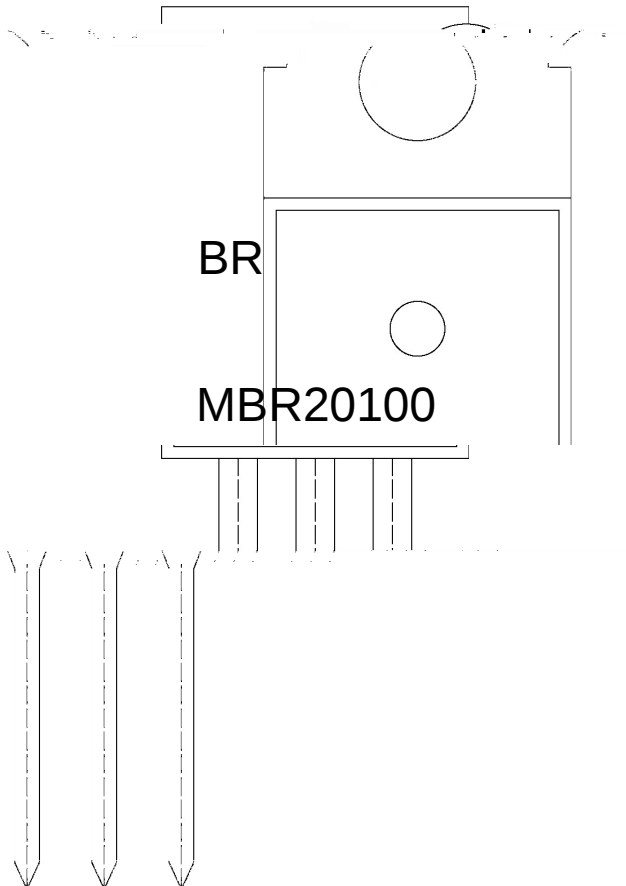
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

Q

MBR20100

CT:

Note:

BR: Company Code

Q: Automobile halogen-free product Code

MBR20100 Product Type

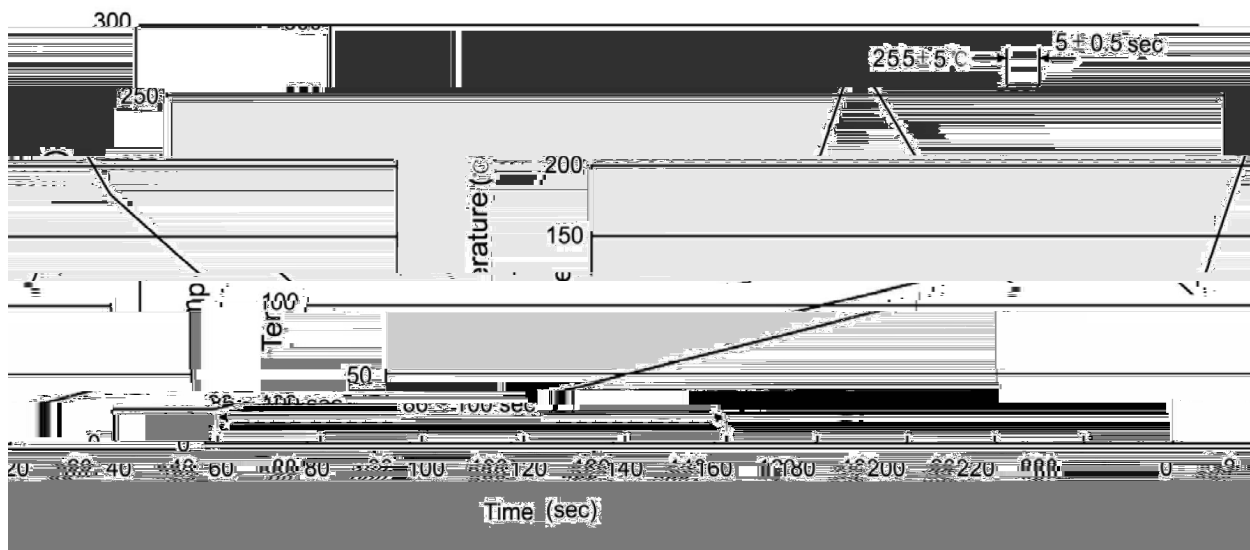
CT: Internal Structure

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

1

NoF

() / 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℃	Time:10±1 sec
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/ Packing in □