/ 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

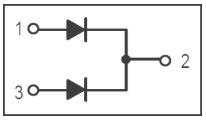
AEC-Q101

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

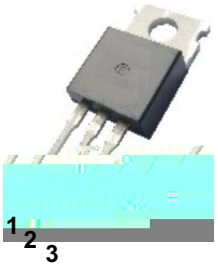
/ Applications

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

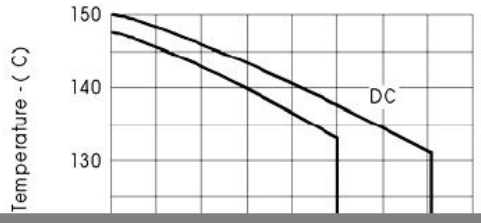
/ Absolute Maximum Ratings(Ta=25)

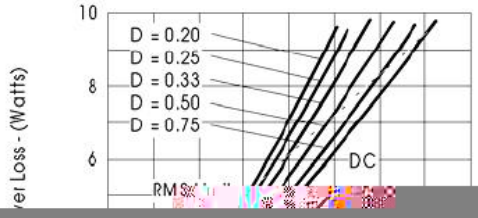
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Peak Repetitive Forward Current	I_{FRM}	20	A
Average Rectified Forward Current	$I_{F(AV)}$	10	A
	$I_{F(AV)(total)}$	20	A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	150	A
Repetitive Peak Reverse Surge Current	I_{RRM}	0.5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

/ Electrical Characteristics(Ta=25)

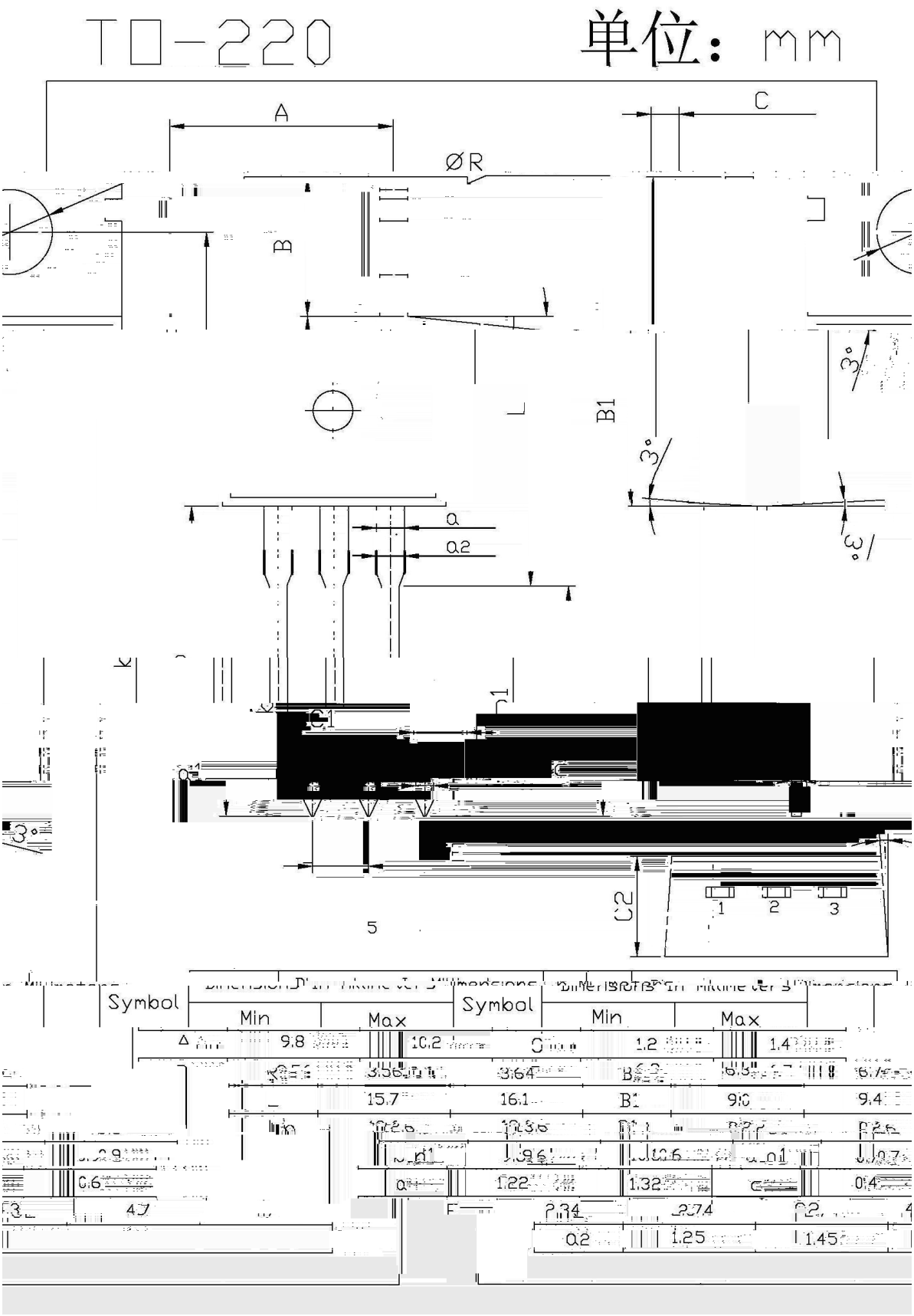
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=10A(T_C=25℃)			0.8	V
		I_F=10A(T_C=125℃)			0.7	V
		I_F=20A(T_C=25℃)			0.95	V
		I_F=20A(T_C=125℃)			0.85	V
Instantaneous Reverse Current	I_R	V_R=100V(T_C=25℃)			0.15	mA
		V_R=100V(T_C=125℃)			150	mA
Voltage Rate of Change	dv/dt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

/ Electrical Characteristic Curve

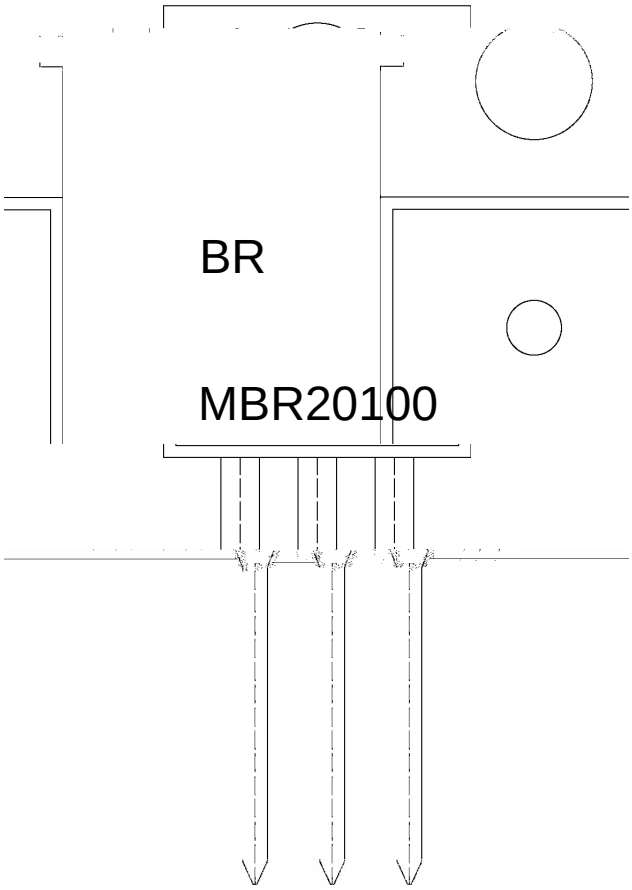




/ Package Dimensions



/ Marking Instructions



BR

Q

MBR20100

CT:

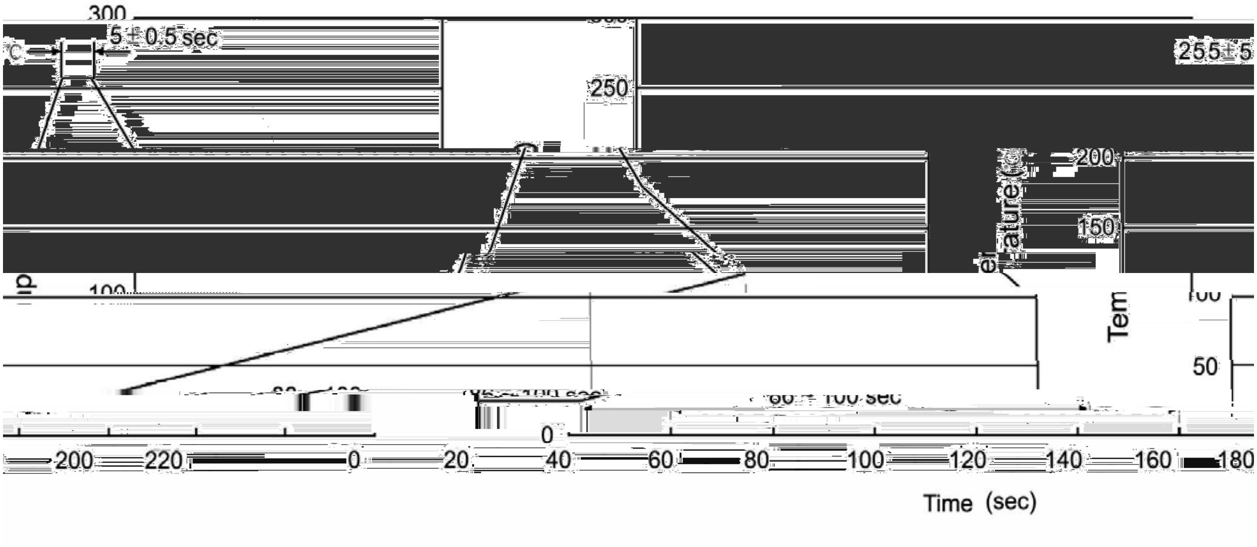
****

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
MBR20100	Product Type
CT:	Internal Structure
****:	Lot No. Code, code change with Lot No

C

( ) / 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

/ Packagin