



## / Descriptions

TO-220

Schottky Barrier Diode in a TO-220 Plastic Package.

## / Features

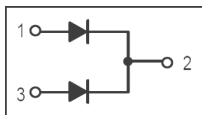
AEC-Q101

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

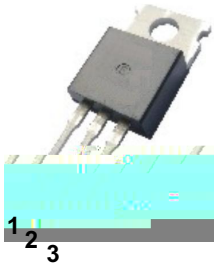
## / Applications

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

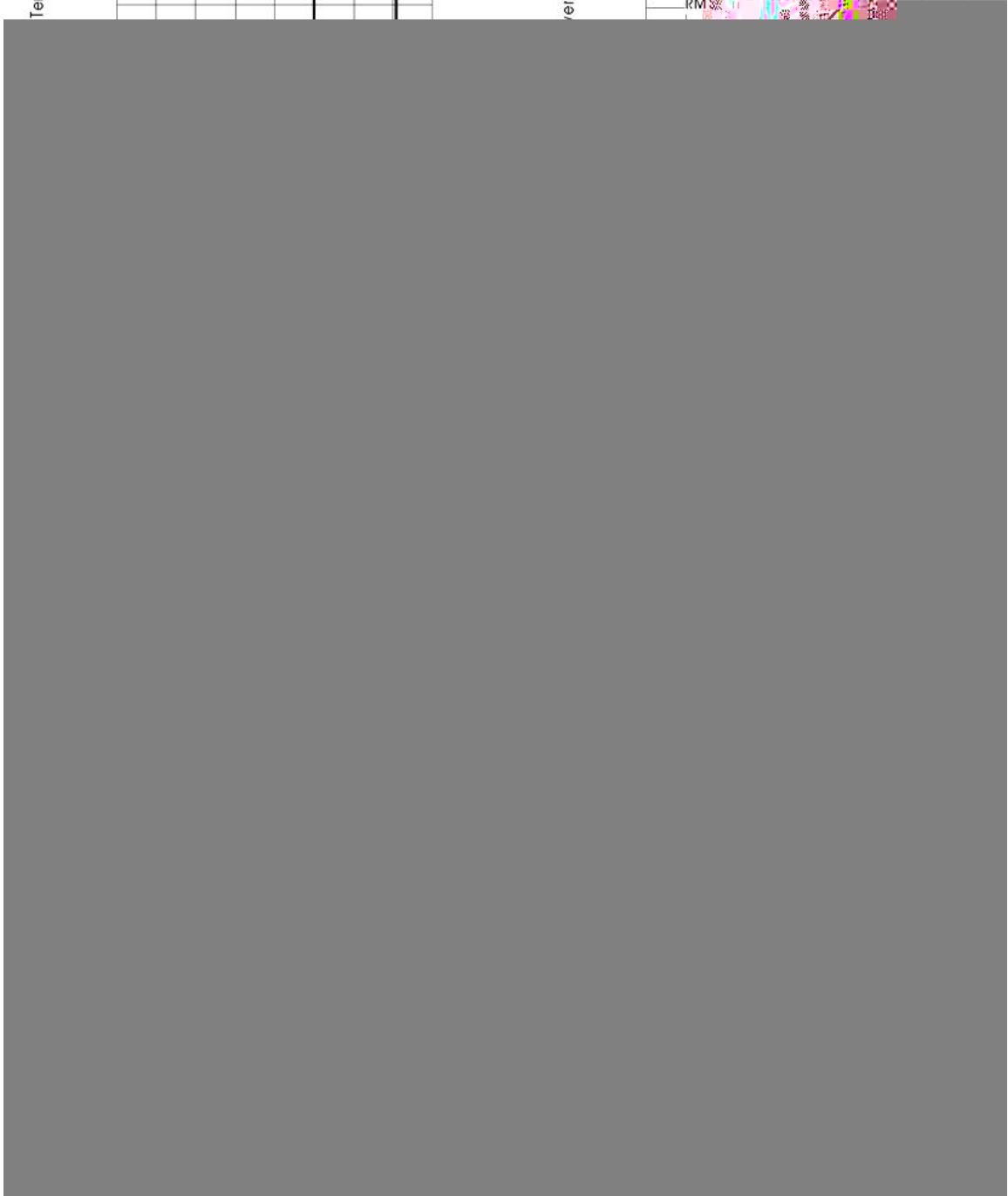
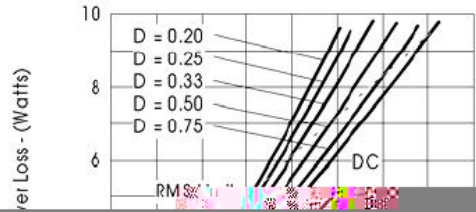
/ Absolute Maximum Ratings( $T_a=25$  )

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	$R_{Jc}$	2.0	$^{\circ}C/W$
Junction Temperature Range	$T_j$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-55~150	$^{\circ}C$

/ Electrical Characteristics( $T_a=25$  )

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=10A(T_C=25^{\circ}C)$			0.8	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
Voltage Rate of Change	dv/dt				10000	V/ $\mu$ s

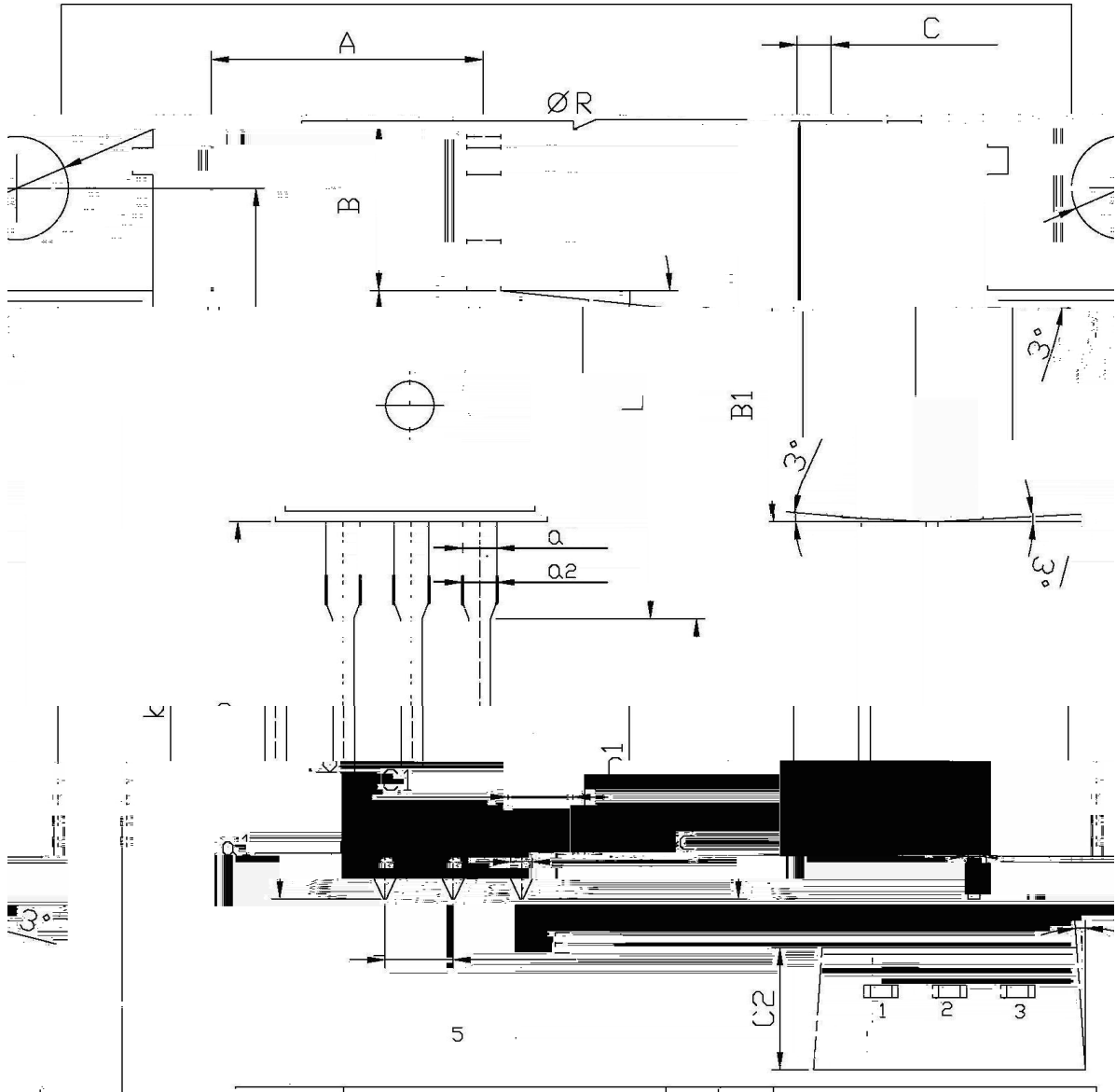
**/ Electrical Characteristic Curve**



/ Package Dimensions

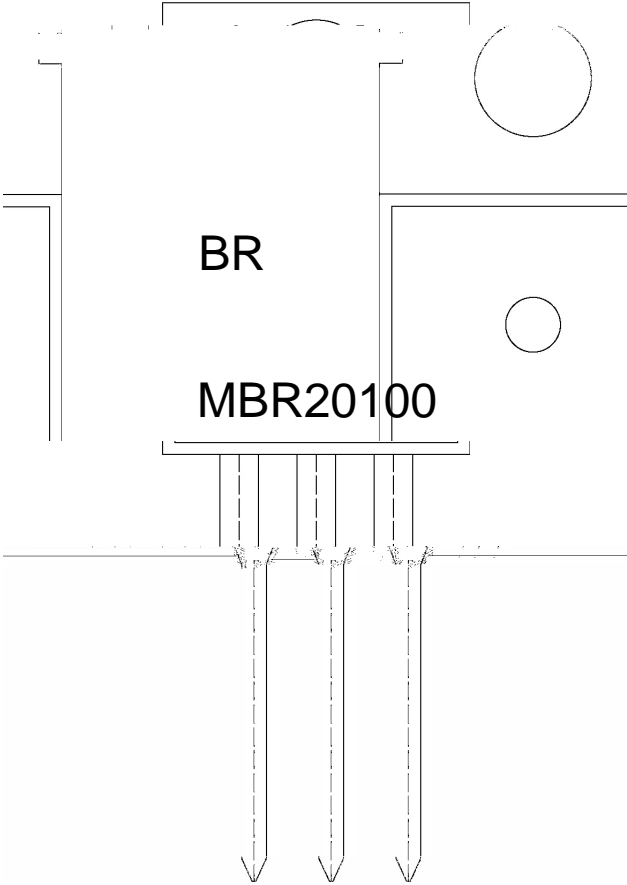
TO-220

单位: mm



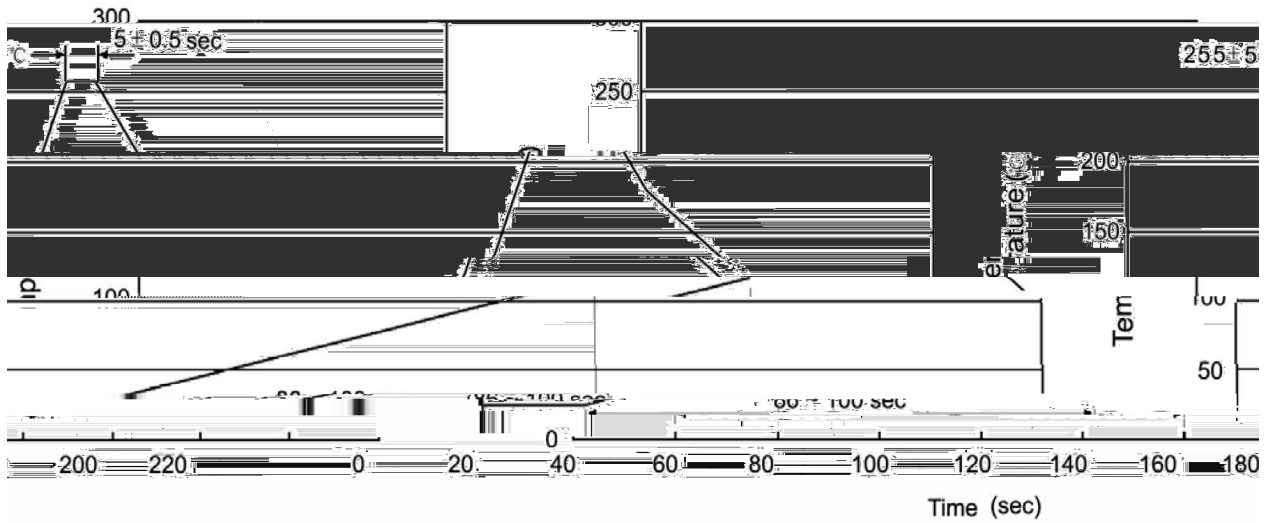
Symbol	Dimension D in millimeter (0.1mm)		Symbol	Dimension D in millimeter (0.1mm)	
	Min	Max		Min	Max
$\Delta$ Ann	9.8	10.2	$\phi$ Ann	1.2	1.4
$\phi$ Ann	3.56	3.64	B <sub>1</sub>	6.5	6.7
L	15.7	16.1	B <sub>2</sub>	9.0	9.4
Ann	0.25	0.35	D <sub>1</sub>	0.27	0.28
$\phi$ p1	1.96	1.96	D <sub>2</sub>	0.01	0.07
a	1.22	1.32	$\phi$ p2	0.4	0.4
$\phi$ p3	4.7	4.7	P <sub>1</sub>	0.34	0.374
$\phi$ p4	4.7	4.7	P <sub>2</sub>	0.2	0.2
$\phi$ p5	4.7	4.7	$\phi$ p6	0.2	0.2
$\phi$ p7	4.7	4.7	$\phi$ p8	0.2	0.2
$\phi$ p9	4.7	4.7	$\phi$ p10	0.2	0.2
$\phi$ p11	4.7	4.7	$\phi$ p12	0.2	0.2
$\phi$ p13	4.7	4.7	$\phi$ p14	0.2	0.2
$\phi$ p15	4.7	4.7	$\phi$ p16	0.2	0.2
$\phi$ p17	4.7	4.7	$\phi$ p18	0.2	0.2
$\phi$ p19	4.7	4.7	$\phi$ p20	0.2	0.2
$\phi$ p21	4.7	4.7	$\phi$ p22	0.2	0.2
$\phi$ p23	4.7	4.7	$\phi$ p24	0.2	0.2
$\phi$ p25	4.7	4.7	$\phi$ p26	0.2	0.2
$\phi$ p27	4.7	4.7	$\phi$ p28	0.2	0.2
$\phi$ p29	4.7	4.7	$\phi$ p30	0.2	0.2
$\phi$ p31	4.7	4.7	$\phi$ p32	0.2	0.2
$\phi$ p33	4.7	4.7	$\phi$ p34	0.2	0.2
$\phi$ p35	4.7	4.7	$\phi$ p36	0.2	0.2
$\phi$ p37	4.7	4.7	$\phi$ p38	0.2	0.2
$\phi$ p39	4.7	4.7	$\phi$ p40	0.2	0.2
$\phi$ p41	4.7	4.7	$\phi$ p42	0.2	0.2
$\phi$ p43	4.7	4.7	$\phi$ p44	0.2	0.2
$\phi$ p45	4.7	4.7	$\phi$ p46	0.2	0.2
$\phi$ p47	4.7	4.7	$\phi$ p48	0.2	0.2
$\phi$ p49	4.7	4.7	$\phi$ p50	0.2	0.2
$\phi$ p51	4.7	4.7	$\phi$ p52	0.2	0.2
$\phi$ p53	4.7	4.7	$\phi$ p54	0.2	0.2
$\phi$ p55	4.7	4.7	$\phi$ p56	0.2	0.2
$\phi$ p57	4.7	4.7	$\phi$ p58	0.2	0.2
$\phi$ p59	4.7	4.7	$\phi$ p60	0.2	0.2
$\phi$ p61	4.7	4.7	$\phi$ p62	0.2	0.2
$\phi$ p63	4.7	4.7	$\phi$ p64	0.2	0.2
$\phi$ p65	4.7	4.7	$\phi$ p66	0.2	0.2
$\phi$ p67	4.7	4.7	$\phi$ p68	0.2	0.2
$\phi$ p69	4.7	4.7	$\phi$ p70	0.2	0.2
$\phi$ p71	4.7	4.7	$\phi$ p72	0.2	0.2
$\phi$ p73	4.7	4.7	$\phi$ p74	0.2	0.2
$\phi$ p75	4.7	4.7	$\phi$ p76	0.2	0.2
$\phi$ p77	4.7	4.7	$\phi$ p78	0.2	0.2
$\phi$ p79	4.7	4.7	$\phi$ p80	0.2	0.2
$\phi$ p81	4.7	4.7	$\phi$ p82	0.2	0.2
$\phi$ p83	4.7	4.7	$\phi$ p84	0.2	0.2
$\phi$ p85	4.7	4.7	$\phi$ p86	0.2	0.2
$\phi$ p87	4.7	4.7	$\phi$ p88	0.2	0.2
$\phi$ p89	4.7	4.7	$\phi$ p90	0.2	0.2
$\phi$ p91	4.7	4.7	$\phi$ p92	0.2	0.2
$\phi$ p93	4.7	4.7	$\phi$ p94	0.2	0.2
$\phi$ p95	4.7	4.7	$\phi$ p96	0.2	0.2
$\phi$ p97	4.7	4.7	$\phi$ p98	0.2	0.2
$\phi$ p99	4.7	4.7	$\phi$ p100	0.2	0.2

**/ 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

**( ) / 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

**/ Packagin**