



HBR20200

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	20 (2×10) A
V_{RRM}	200 V
T_j	175 °C
$V_{F(max)}$	0.75V (@ $T_j=125^{\circ}C$)

用途

- 高频开关电源
- 低压续流电路和保护电路

APPLICATIONS

- High frequency switch power supply
- Free wheeling diodes, polarity protection applications

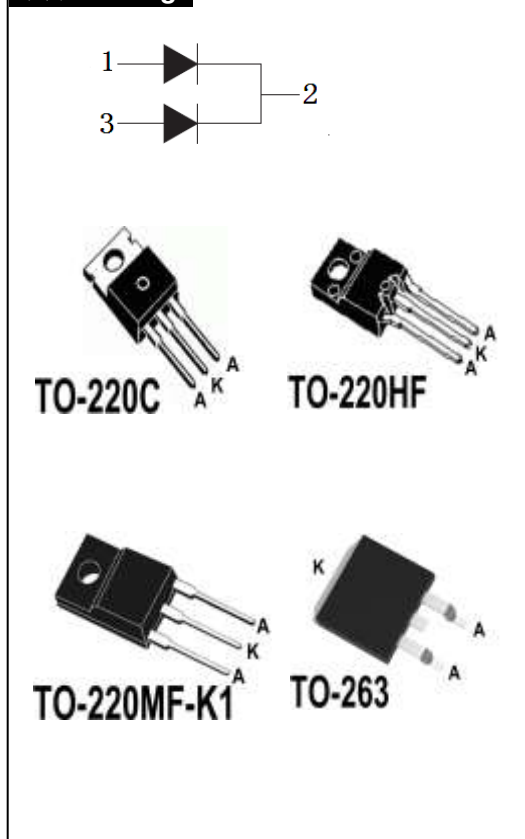
产品特性

- 共阴结构
- 低功耗，高效率
- 良好的高温特性
- 有过压保护环，高可靠性
- 环保（RoHS）产品

FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product

封装 Package



订货信息 ORDER MESSAGE

订 货 型 号 Order codes				印 记 Marking	封 装 Package
有卤-条管 Halogen-Tube	无卤-条管 Halogen Free-Tube	有卤-编带 Halogen-Reel	无卤-编带 Halogen Free-Reel		
HBR20200-C-B	HBR20200-C-BR	N/A	N/A	HBR20200	TO-220C
HBR20200-FA-B	HBR20200-FA-BR	N/A	N/A	HBR20200	TO-220HF
HBR20200-F1-B	HBR20200-F1-BR	N/A	N/A	HBR20200	TO-220MF-K1
HBR20200-S-B	HBR20200-S-BR	HBR20200-S-A	HBR20200-S-AR	HBR20200	TO-263

**绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃)**

项 目 Parameter			符 号 Symbol	数 值 Value	单 位 Unit
最大反向重复峰值电压 Repetitive peak reverse voltage			V_{RRM}	200	V
最大直流阻断电压 Maximum DC blocking voltage			V_{DC}	200	V
正向平均整流电流 Average forward current	$T_C=150^{\circ}\text{C}$ (TO-220C/TO-263)	整个器件 per device	$I_{F(AV)}$	20	A
	$T_C=125^{\circ}\text{C}$ (TO-220HF/220MF-K1)	单 侧 per diode		10	
正向峰值浪涌电流 Surge non repetitive forward current (额定负载 8.3ms 半正弦波—按 JEDEC 方法) 8.3 ms single half-sine-wave (JEDEC Method)			I_{FSM}	200	A
最高结温 Maximum junction temperature			T_j	175	℃
储存温度 Storage temperature range			T_{STG}	-40~+150	℃

电特性 ELECTRICAL CHARACTERISTICS

项 目 Parameter	测试条件 Tests conditions		最小值 Value(min)	典型值 Value(typ)	最大值 Value(max)	单位 Unit
V_{RRM}	$T_j=25^{\circ}\text{C}$	$I_R=0.5\text{mA}$	200			V
I_R	$T_j=25^{\circ}\text{C}$	$V_R=V_{RRM}$			10	μA
	$T_j=125^{\circ}\text{C}$				6	mA
V_F	$T_j=25^{\circ}\text{C}$	$I_F=10\text{A}$		0.83	0.93	V
	$T_j=125^{\circ}\text{C}$			0.68	0.75	V

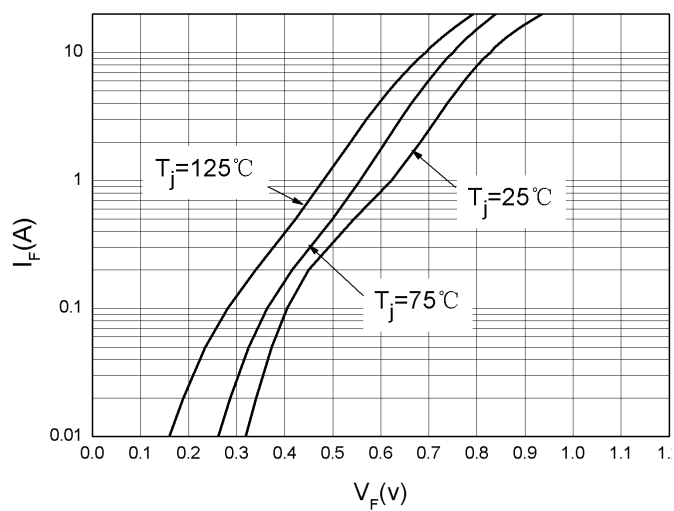
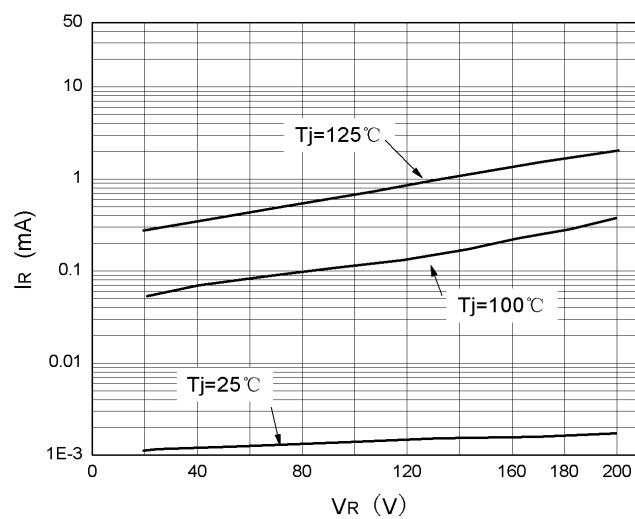
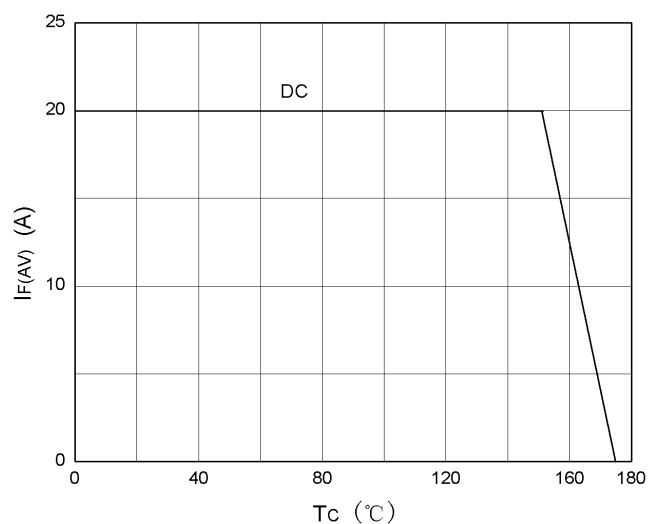
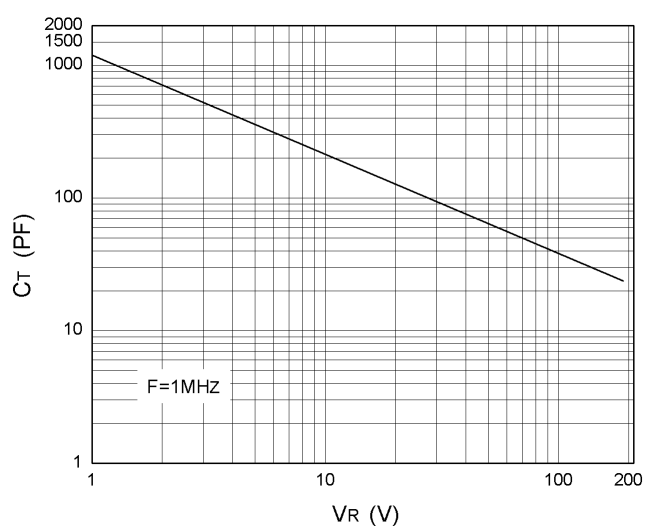
热特性 THERMAL CHARACTERISTICS

项 目 Parameter		符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	TO-220C	$R_{th(j-c)}$		1.8	℃/W
	TO-263			1.8	
	TO-220HF			3.5	
	TO-220MF-K1			3.5	





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

 I_F vs V_F  I_R vs V_R  $I_{F(AV)}$ vs T_C  C_T vs V_R 

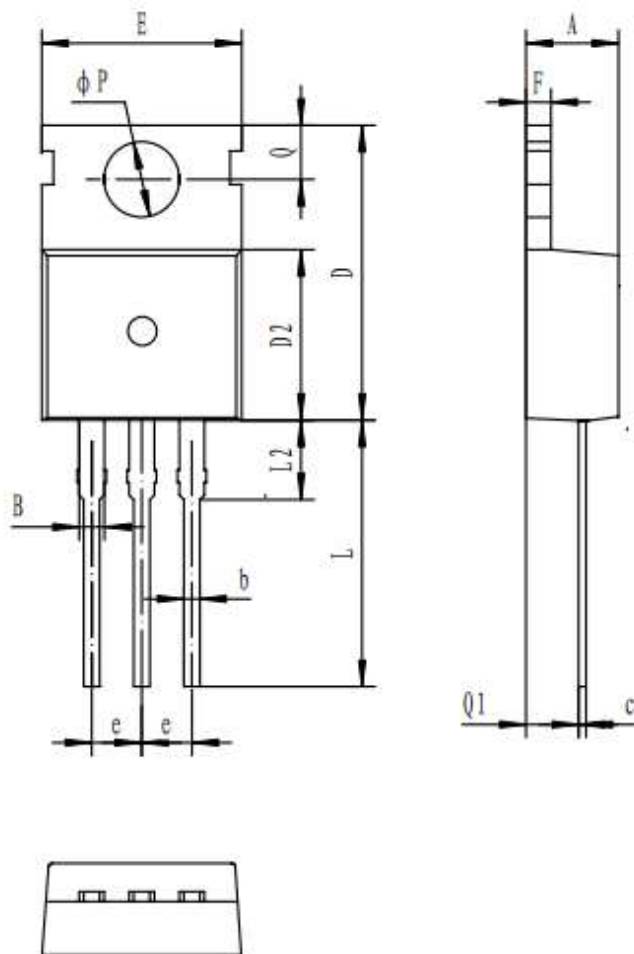


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外形尺寸 PACKAGE MECHANICAL DATA

TO-220C

单位 Unit : mm



符号 symbol	MIN	MAX
A	4.30	4.70
B	1.10	1.40
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	9.00	9.40
E	9.70	10.10
e	2.39	2.69
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
Q	2.60	3.00
Q1	2.20	2.60
P	3.50	3.80



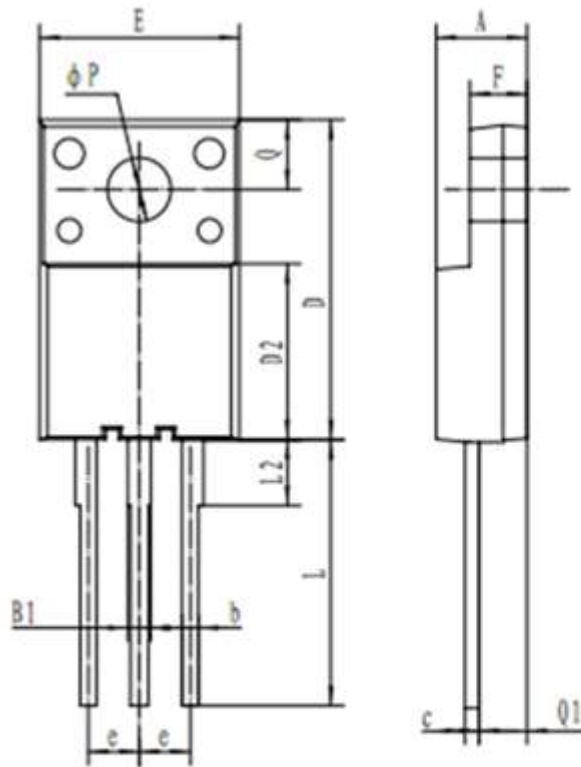


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外形尺寸 PACKAGE MECHANICAL DATA

TO-220HF

单位 Unit : mm



符号 symbol	MIN	MAX
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.7
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54 TYP	
F	2.3	3.3
L	13.0	14.0
L2	3.1	3.5
ϕp	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5



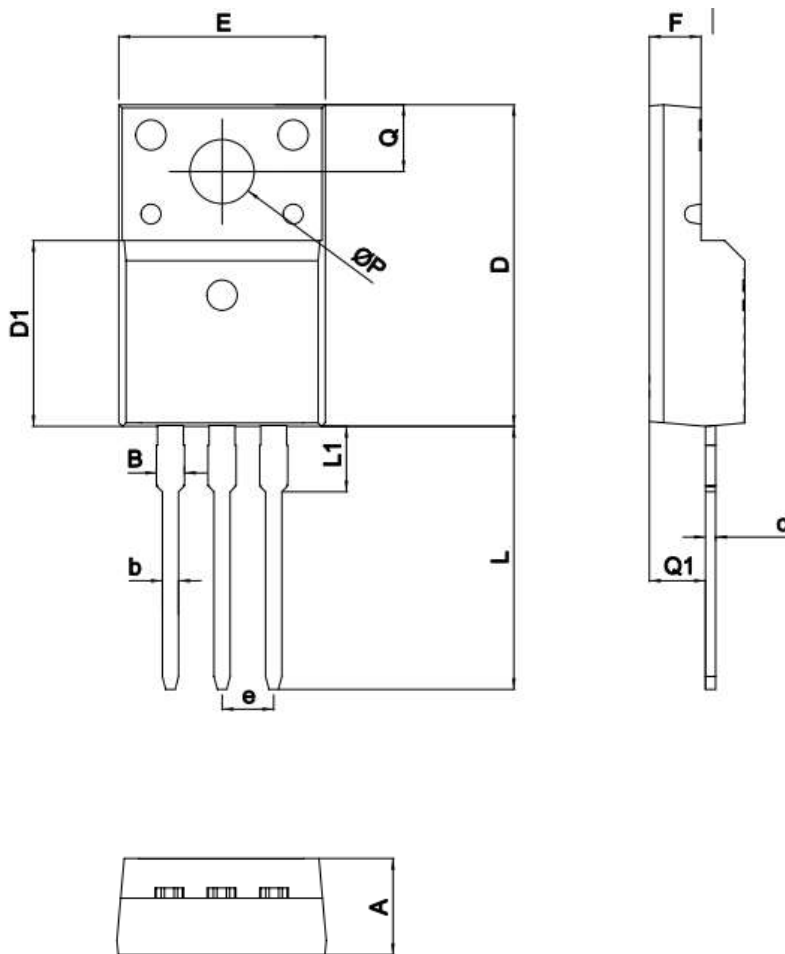


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外形尺寸 PACKAGE MECHANICAL DATA

TO-220MF-K1

单位 Unit : mm



SYMBOL	mm	
	MIN	MAX
A	4.5	4.9
B	1.22	1.47
b	0.7	0.9
c	0.45	0.60
D	15.6	16.1
D1	9.0	9.3
e	2.54TYPE	
E	9.9	10.4
F	2.3	2.8
L	12.6	13.3
L1	3.1	3.4
Q	3.2	3.4
Q1	2.6	2.9
ΦP	3.0	3.5

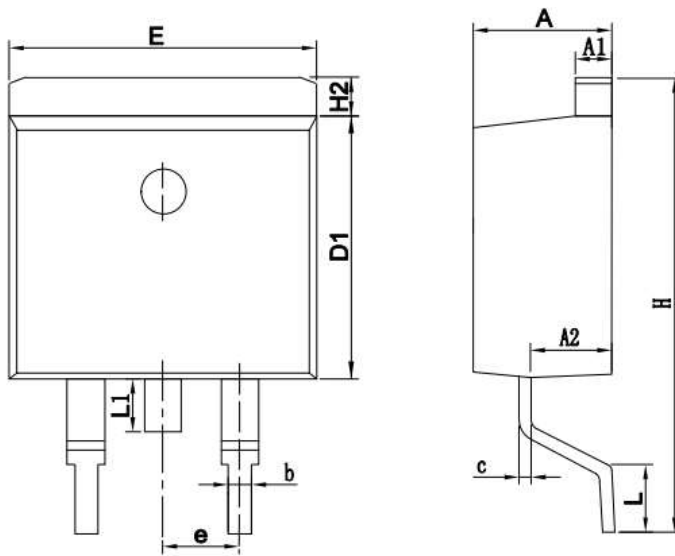


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外形尺寸 PACKAGE MECHANICAL DATA

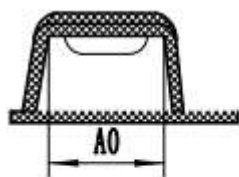
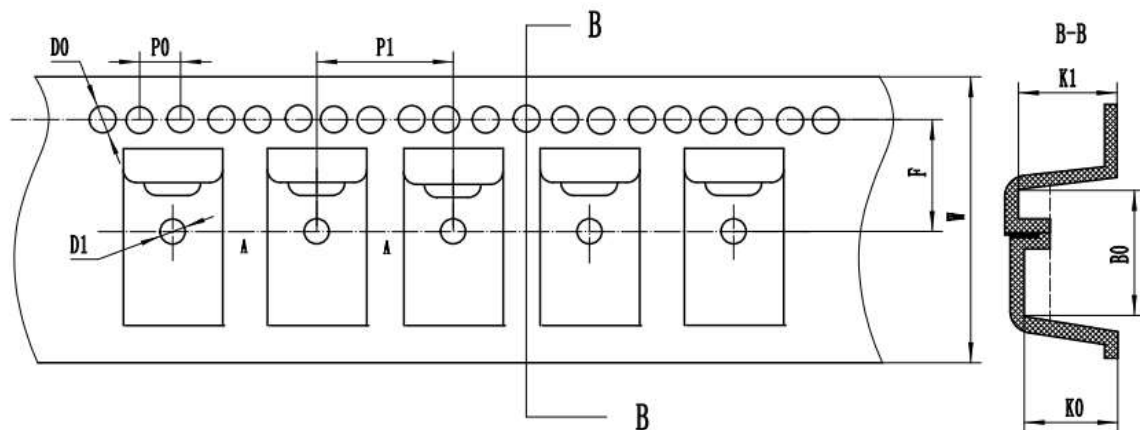
TO-263

单位 Unit : mm



SYMBOL	MM	
	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70

编带 REEL



A-A

Symbol	标准范围 (mm)
A0	10.60±0.20
B0	16.10±0.20
D0	1.55±0.10
D1	1.50±0.15
F	11.50±0.20
K0	4.85±0.20
K1	5.26±0.20
P0	4.00±0.20
P1	16.00±0.20
W	24.00±0.40



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3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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联系方式

吉林华微电子股份有限公司

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：www.hwdz.com.cn

CONTACT

JILIN SINO-MICROELECTRONICS CO., LTD.

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64678411

Fax: 86-432-64665812

Web Site: www.hwdz.com.cn

