



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

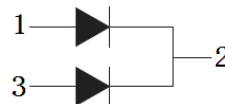
产品特性

- 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

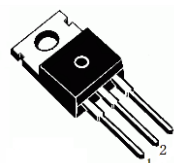
FEATURES

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

封装 Package



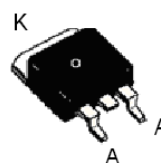
T0-220C



T0-220HF



T0-263



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-S-B	HBR20200-S-BR	HBR20200-S-A	HBR20200-S-AR	HBR20200	TO-263



**绝对最大额定值 ABSOLUTE RATINGS** ($T_c=25^{\circ}\text{C}$)

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)	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	$^{\circ}\text{C}$
储存温度 Storage temperature range			T_{STG}	-40~+150	$^{\circ}\text{C}$

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
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

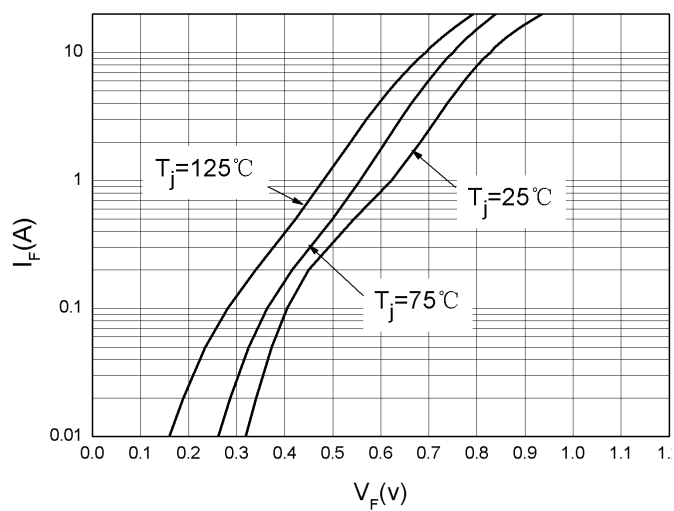
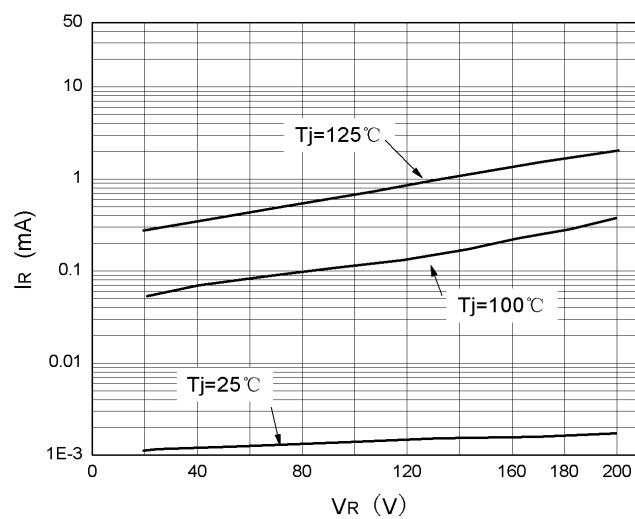
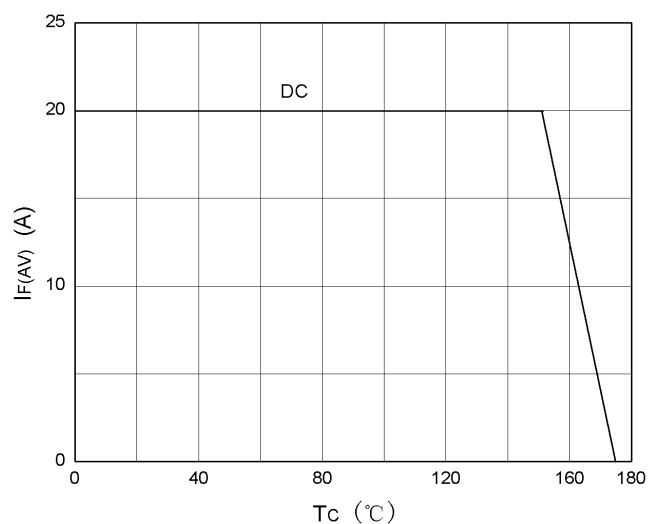
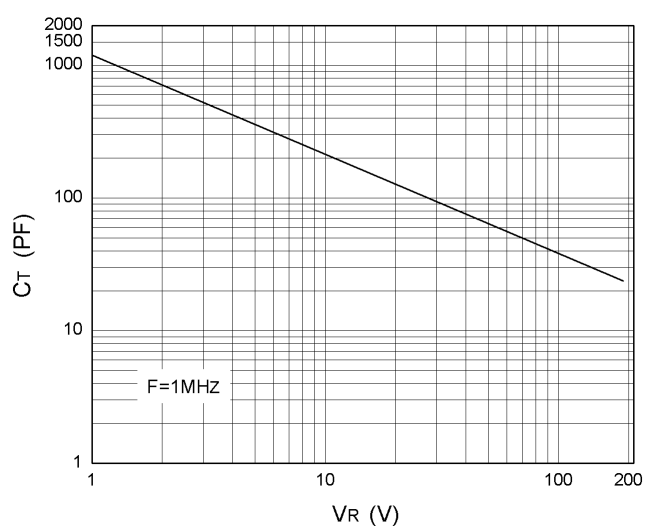
热特性 THERMAL CHARACTERISTICS

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 TO-263 TO-220HF	$R_{th(j-c)}$		1.8 1.8 3.5	$^{\circ}\text{C/W}$





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

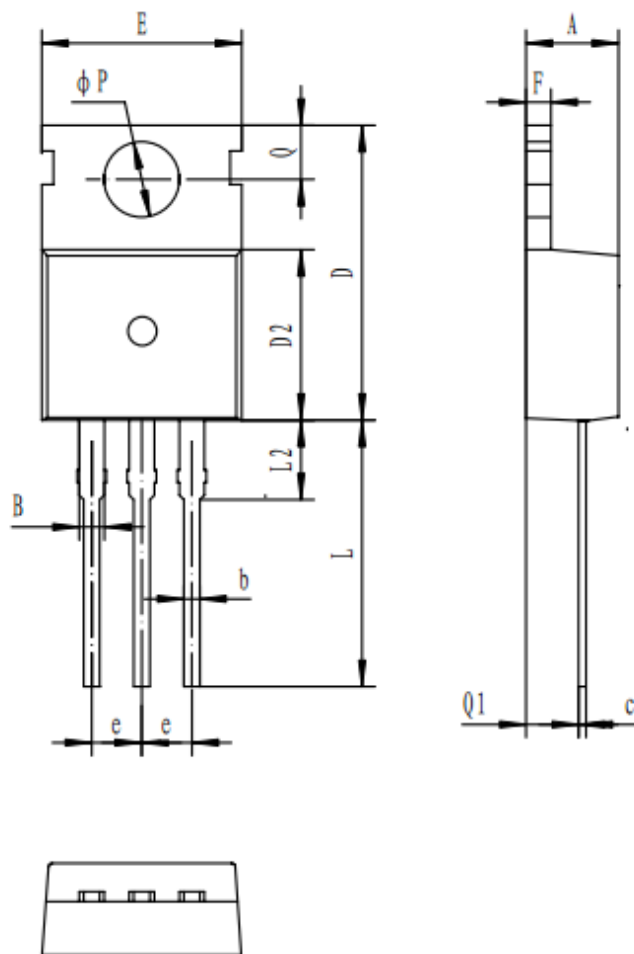
 I_F vs V_F  I_R vs V_R  $I_{F(AV)}$ vs T_C  C_T vs V_R 



HBR20200

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



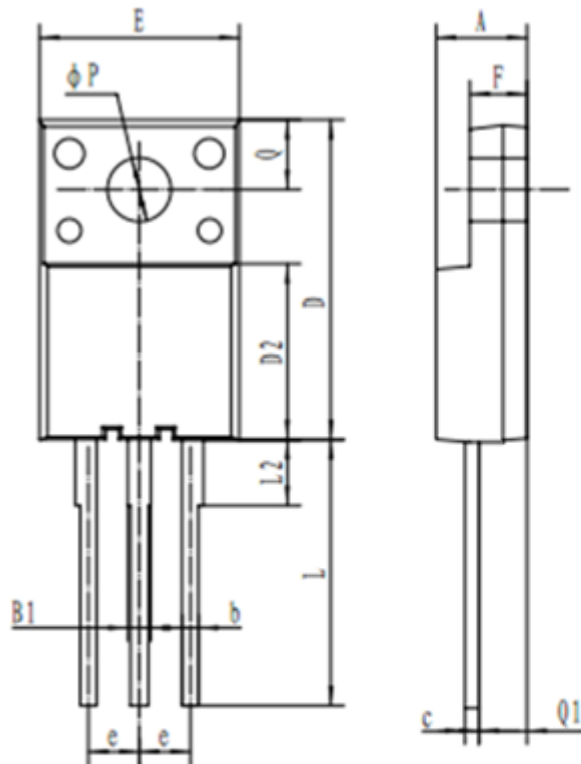


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外形尺寸 PACKAGE MECHANICAL DATA

TO-220HF

单位 Unit : mm



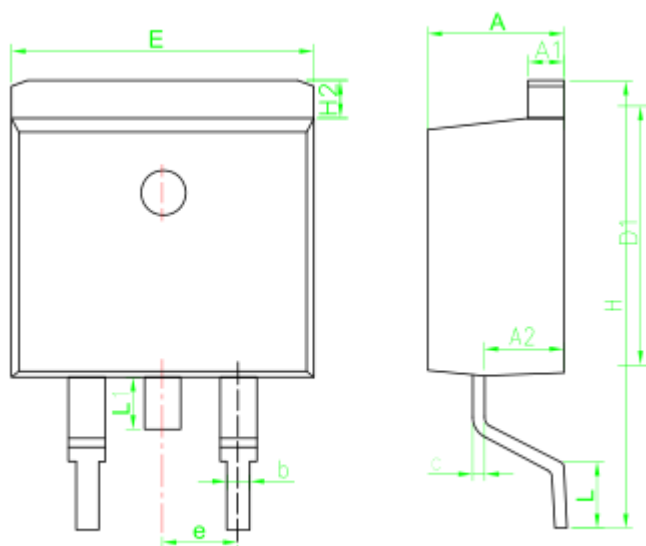
符号 symbol	MIN	MAX
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.7
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54 TYP	
F	2.3	3.3
L	13.0	14.0
L2	3.1	3.5
ϕp	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5



外形尺寸 PACKAGE MECHANICAL DATA

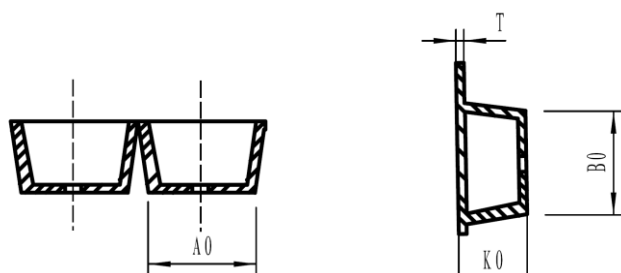
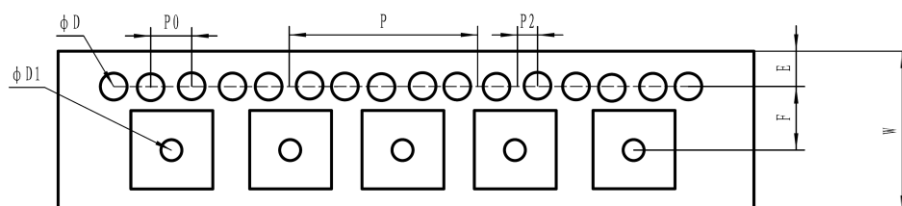
TO-263

単位 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



产品尺寸规格 (UNIT:mm)				
规格	W	A0	E	F
尺寸	24 ± 0.3	10.9 ± 0.2	1.75 ± 0.2	11.5 ± 0.2
规格	D1	P0	P2	P
尺寸	1.5 ± 0.2/-0.1	4 ± 0.2	2 ± 0.2	16 ± 0.2
规格	K0	B0		
尺寸	4.9 ± 0.2	16.0 ± 0.2		

**注意事项**

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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。
4. 本说明书如有版本变更不另外告知

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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