



HBR20100A

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	20 (2×10) A
V_{RRM}	100 V
T_j	175 °C
$V_{F(max)}$	0.68V (@ $T_j=125^{\circ}C$)

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

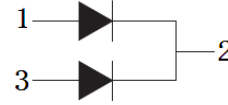
产品特性

- 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

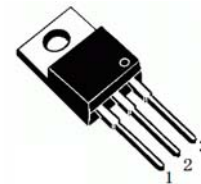
FEATURES

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

封装 Package



T0-220



T0-220HF



订货信息 ORDER MESSAGE

订货型号 Order codes	印记 Marking	封装 Package	无卤素 Halogen Free	包装 Packaging	器件重量 Device Weight
HBR20100AZ	HBR20100A	TO-220	否 NO	条管 Tube	1.98 g(typ)
HBR20100AZR	HBR20100A	TO-220	是 YES	条管 Tube	1.98 g(typ)
HBR20100AHF	HBR20100A	TO-220HF	否 NO	条管 Tube	1.70 g(typ)
HBR20100AHFR	HBR20100A	TO-220HF	是 YES	条管 Tube	1.70 g(typ)





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}	100	V
最大直流阻断电压 Maximum DC blocking voltage	V _{DC}	100	V
正向平均整流电流 Average forward current	I _{F(AV)}	T _C =150℃ (TO-220) T _C =125℃ (TO-220HF)	整个器件 per device 单 侧 per diode
		20 10	A
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}	150	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
I _R	T _J =25℃	V _R =V _{RRM}			10	μA
	T _J =125℃				5	mA
V _F	T _J =25℃	I _F =10A		0.75	0.80	V
	T _J =125℃			0.62	0.68	V

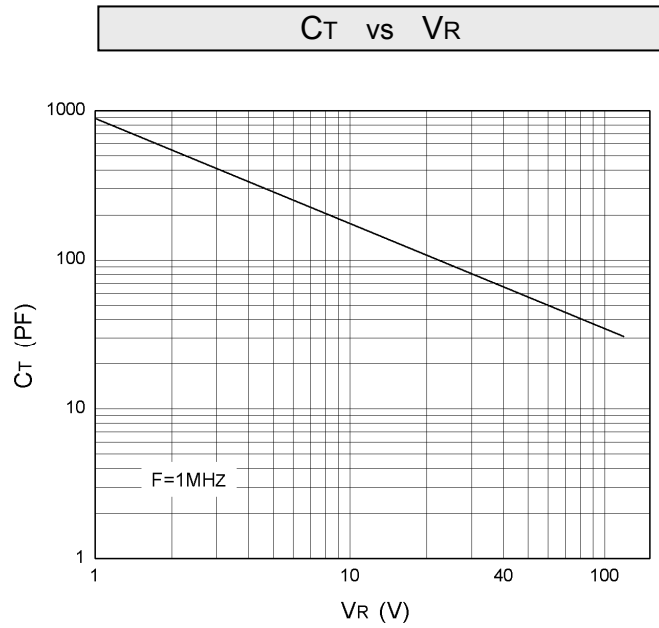
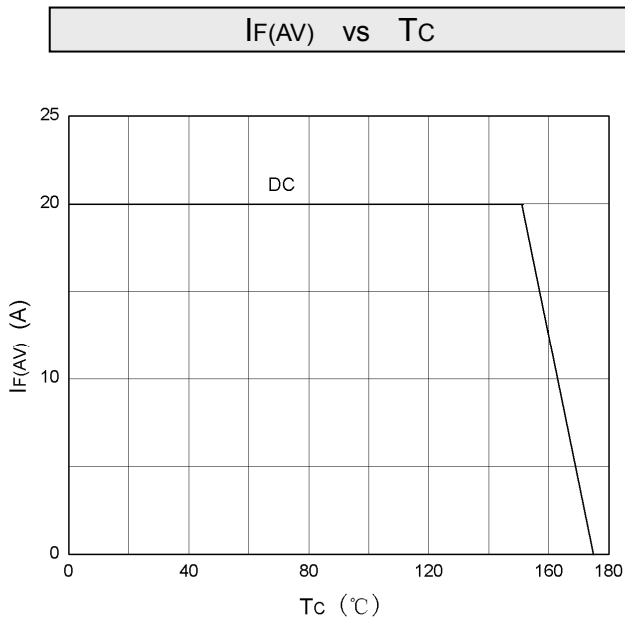
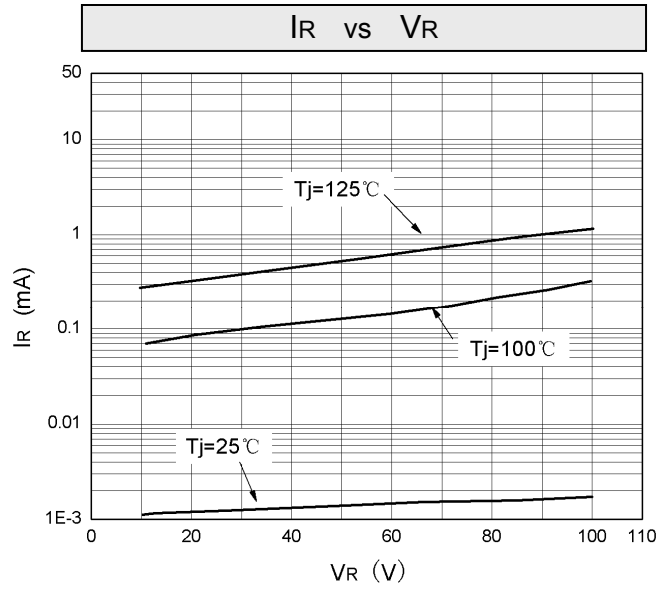
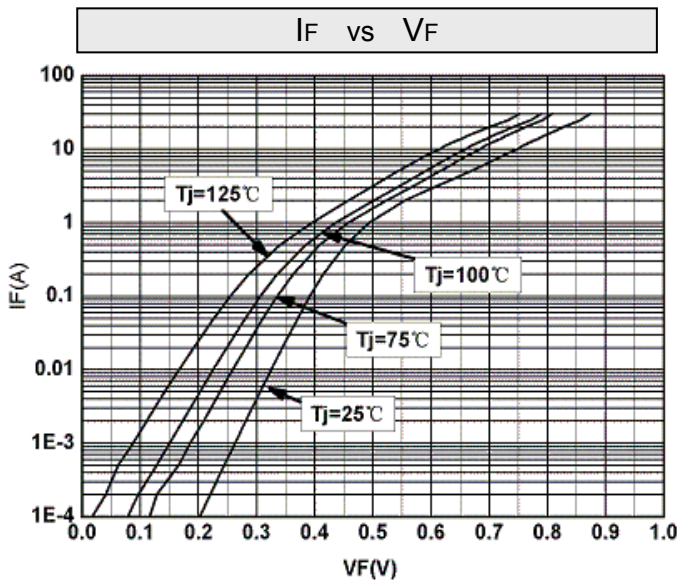
热特性 THERMAL CHARACTERISTICS

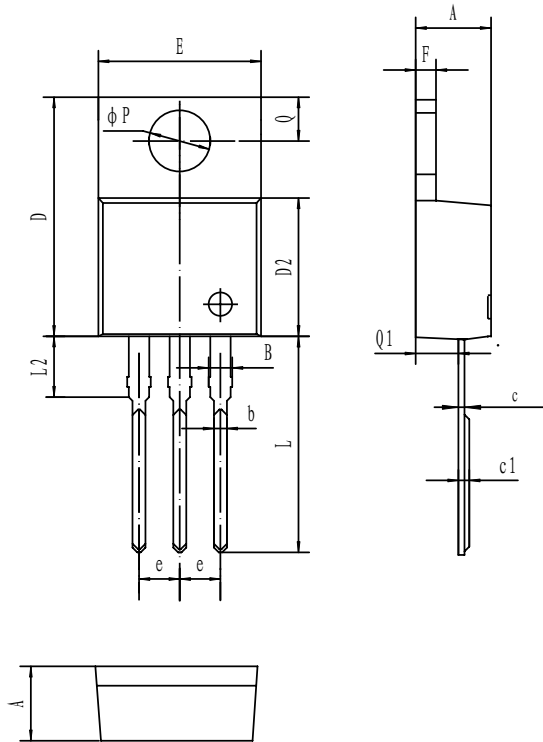
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	R _{th(j-c)}	TO-220	1.9	℃/W
		TO-220HF	2.5	





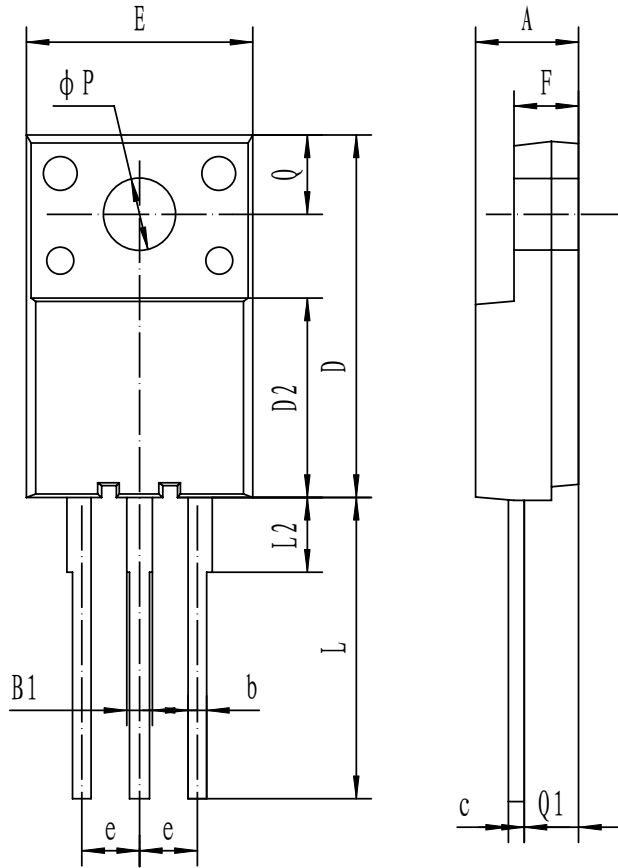
特征曲线 ELECTRICAL CHARACTERISTICS (curves)



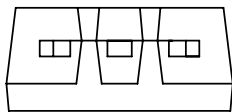


符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00





符号 Symbol	Min	Max
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.70
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	12.0	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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- 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

NOTE

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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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附录 (Appendix): 修订记录 (Revision History)

日期 Date	旧版本 Last Rev.	新版本 New Rev.	修订内容 Description of Changes
2010-03-08	200911D	201003E	1. Deleted TO-220F and TO-220BF; 2. Added TO-220HF.

