



HBR10150

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	10 (2x5) A
V_{RRM}	150 V
T_j	175 °C
$V_{F(max)}$	0.72V (@ $T_j=125^{\circ}C$)

用途

- 高频开关电源
- 低压续流电路和保护电路

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

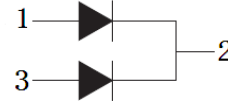
APPLICATIONS

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

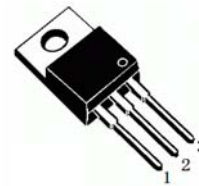
FEATURES

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

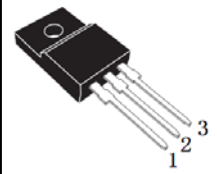
封装 Package



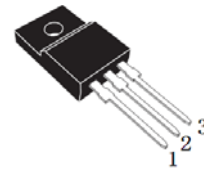
T0-220



T0-220F



T0-220BF



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
HBR10150Z	HBR10150	T0-220	否 NO	条管 Tube	1.98 g(typ)
HBR10150ZR	HBR10150	T0-220	是 YES	条管 Tube	1.98 g(typ)
HBR10150F	HBR10150	T0-220F	否 NO	条管 Tube	1.70 g(typ)
HBR10150FR	HBR10150	T0-220F	是 YES	条管 Tube	1.70 g(typ)
HBR10150BF	HBR10150	T0-220BF	否 NO	条管 Tube	1.70 g(typ)
HBR10150BFR	HBR10150	T0-220BF	是 YES	条管 Tube	1.70 g(typ)
HBR10150HF	HBR10150	T0-220HF	否 NO	条管 Tube	1.70 g(typ)
HBR10150HFR	HBR10150	T0-220HF	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}	150	V
最大直流阻断电压 Maximum DC blocking voltage	V_{DC}	150	V
正向平均整流电流 Average forward current	$I_{F(AV)}$	$T_C=150^\circ\text{C}$ (TO-220) $T_C=125^\circ\text{C}$ (TO-220F TO-220BF TO-220HF)	整个器件 per device 单 侧 per diode
		10 5	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}	80	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	$T_j=25^\circ\text{C}$	$V_R=V_{RRM}$			10	μA
	$T_j=125^\circ\text{C}$				4.5	mA
V_F	$T_j=25^\circ\text{C}$	$I_F=5\text{A}$		0.81	0.9	V
	$T_j=125^\circ\text{C}$			0.67	0.72	V
	$T_j=25^\circ\text{C}$	$I_F=10\text{A}$		0.89	0.95	V
	$T_j=125^\circ\text{C}$			0.76	0.8	V

热特性 THERMAL CHARACTERISTICS

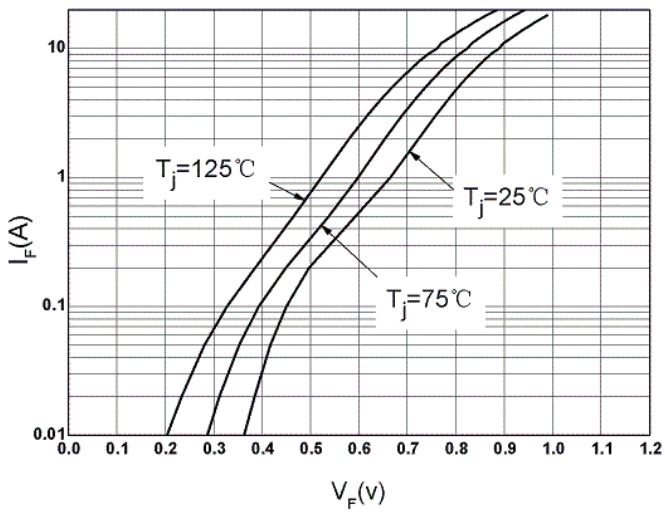
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	$R_{th(j-c)}$	TO-220	2.2	℃/W
		TO-220F	4.7	
		TO-220BF	4.7	
		TO-220HF	4.7	



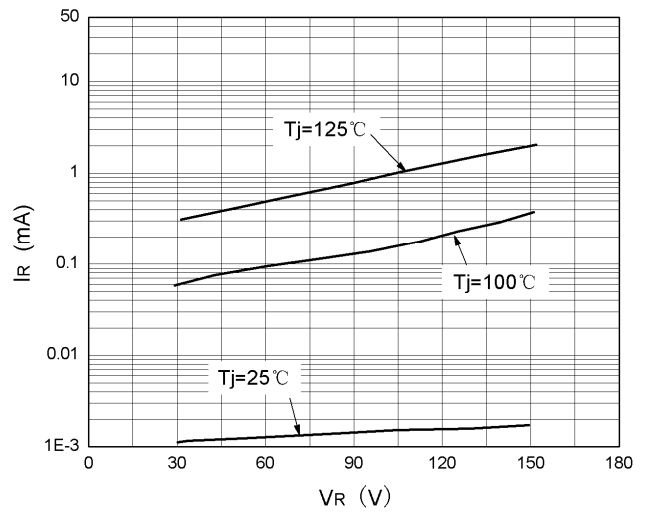


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

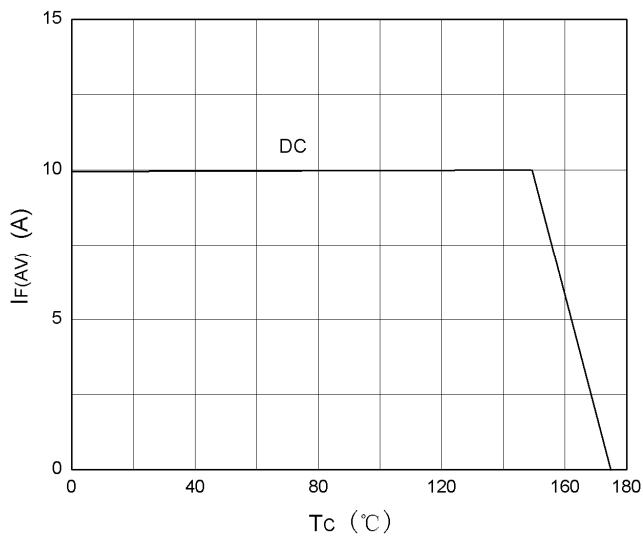
I_F vs V_F



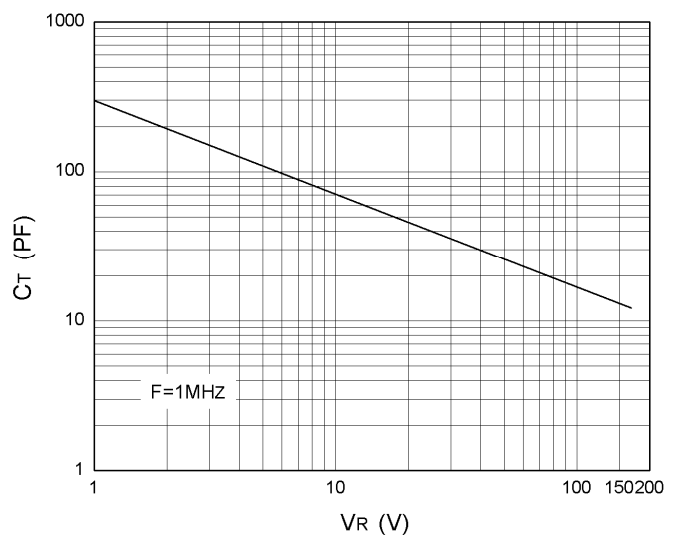
I_R vs V_R

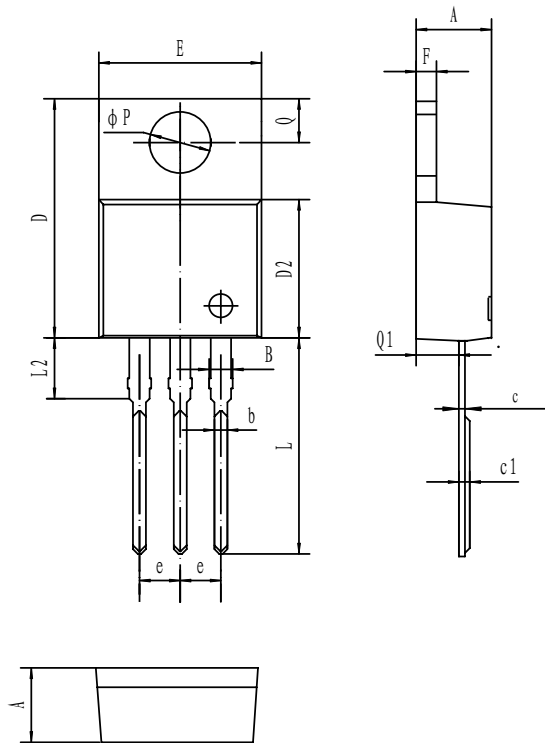


$I_{F(AV)}$ vs T_c



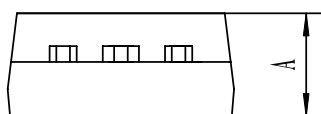
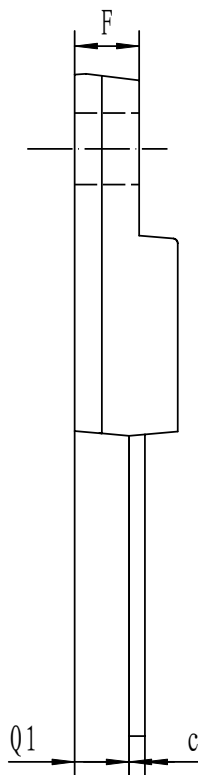
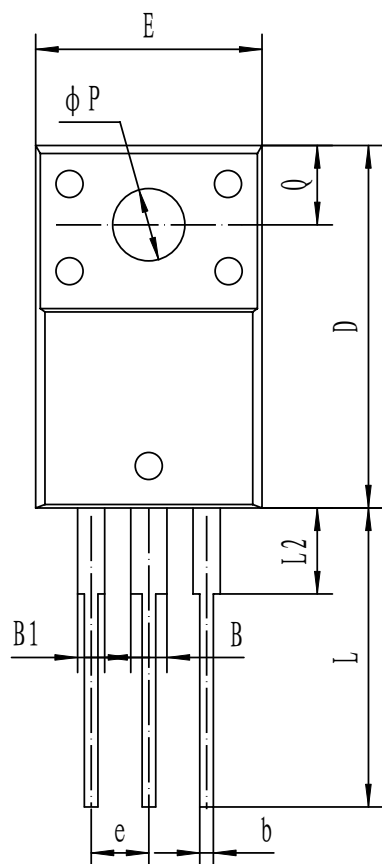
C_T vs V_R





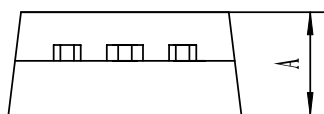
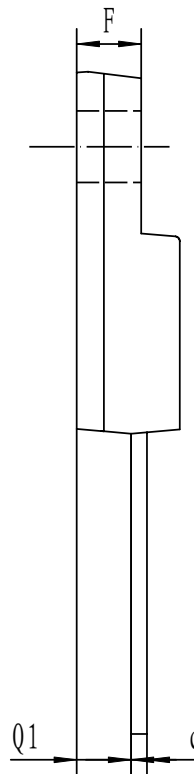
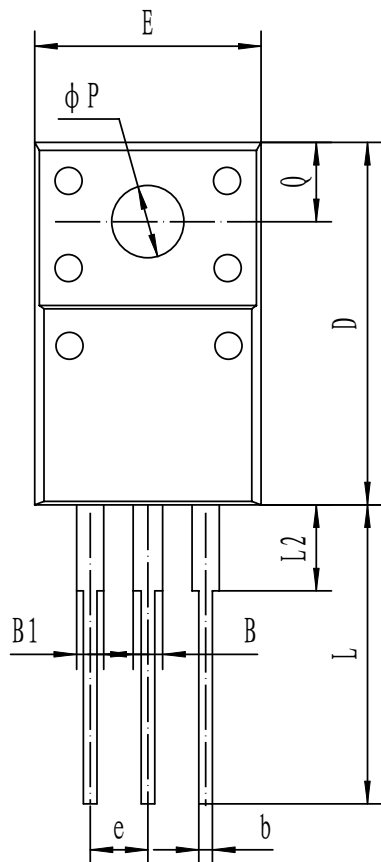
符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00





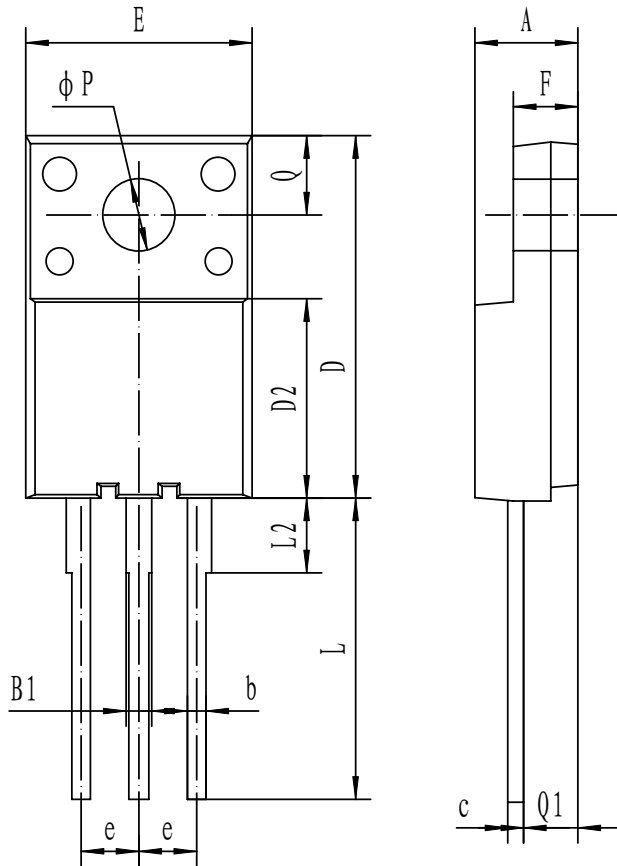
符号 Symbol	Min	Max
A	4.3	4.7
B	1.5	1.75
B1	1.1	1.35
b	0.5	0.75
c	0.5	0.75
D	14.5	15.5
E	9.96	10.36
e	2.54 (typ)	
F	2.8	3.2
L	12.7	13.7
L2	3.6	4.0
ΦP	3.3	3.7
Q	2.5	2.9
Q1	2.5	2.9



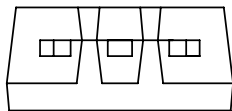


符号 Symbol	Min	Typ	Max
A	4.3	4.5	4.7
B	1.1	1.3	1.5
B1	1.0	1.2	1.4
b	0.55	0.65	0.75
c	0.5	0.6	0.75
D	14.5	15	15.5
E	9.7	10	10.3
e		2.54	
F	2.5	2.7	2.9
L	12.5	13.0	13.5
L2	3.5	4.0	4.5
ΦP	3.0	3.2	3.4
Q	2.8	3.0	3.2
Q1	2.4	2.6	2.8





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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- 2.购买时请认清公司商标,如有疑问请与公司本部联系。
- 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
2010-02-03	200911H	201002I	Added TO-220HF.

