



# 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

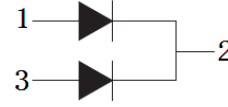
### APPLICATIONS

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

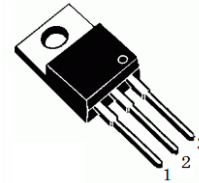
### FEATURES

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

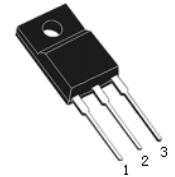
## 封装 Package



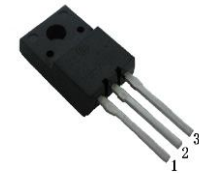
TO-220



TO-220MF-K1



TO-220HF



## 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		
HBR10150-CA-B	HBR10150-CA-BR	N/A	N/A	HBR10150	TO-220
HBR10150-FA-B	HBR10150-FA-BR	N/A	N/A	HBR10150	TO-220HF
HBR10150-F1-B	HBR10150-F1-BR	N/A	N/A	HBR10150	TO-220MF-K1



**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	$V_{RRM}$	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	$I_{F(AV)}$	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)	$I_{FSM}$	120	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
$I_R$	$T_j=25^\circ\text{C}$			10	$\mu\text{A}$
	$T_j=125^\circ\text{C}$			4.5	mA
$V_F$	$T_j=25^\circ\text{C}$		0.81	0.9	V
	$T_j=125^\circ\text{C}$		0.67	0.72	V
	$T_j=25^\circ\text{C}$		0.89	0.95	V
	$T_j=125^\circ\text{C}$		0.76	0.8	V

**热特性 THERMAL CHARACTERISTICS**

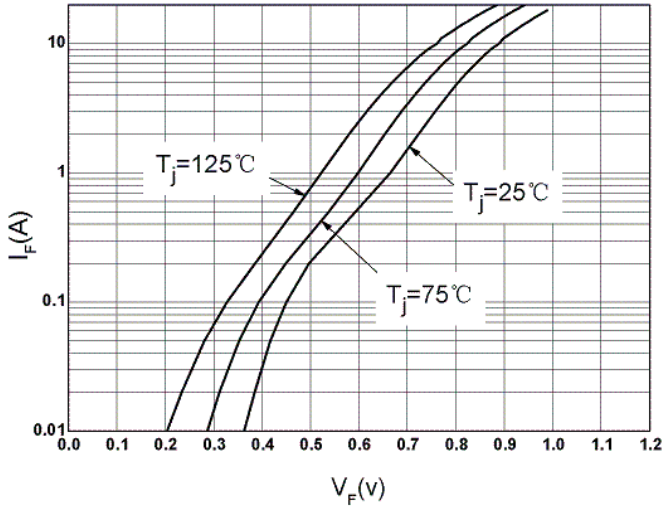
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	$R_{th(j-c)}$		2.2 4.7 4.7	$^\circ\text{C/W}$



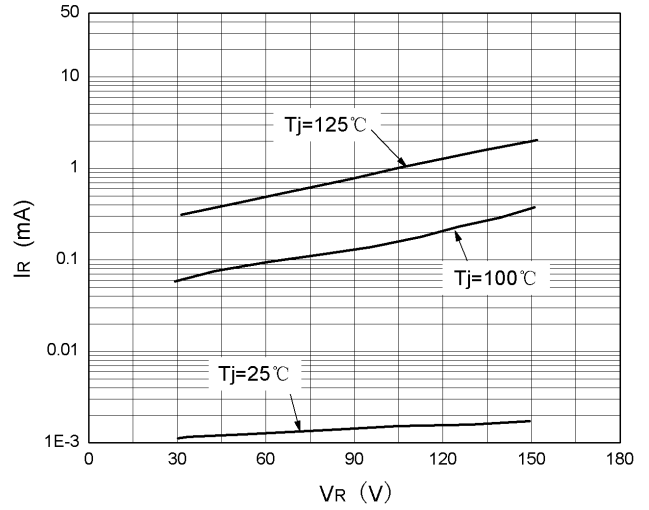


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

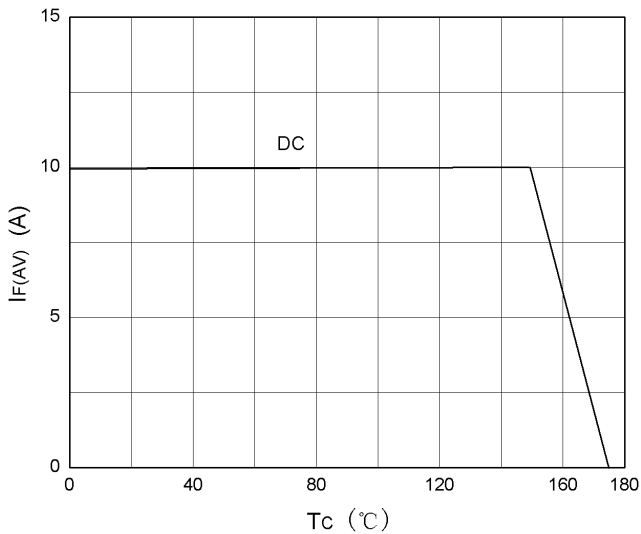
IF vs VF



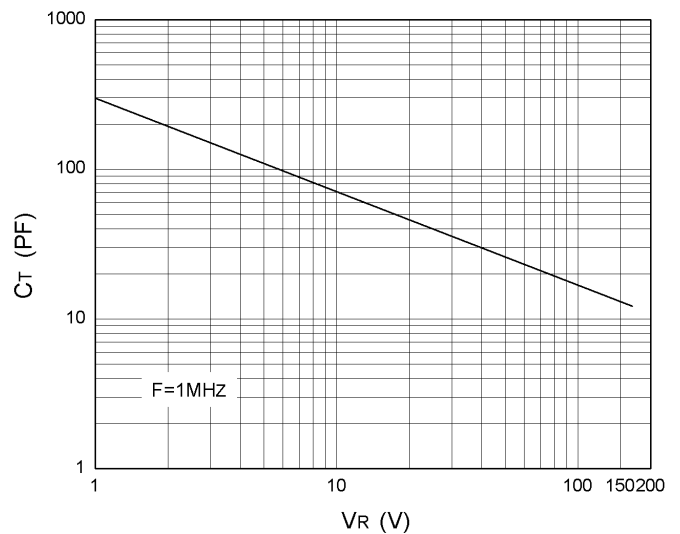
IR vs VR



IF(AV) vs Tc

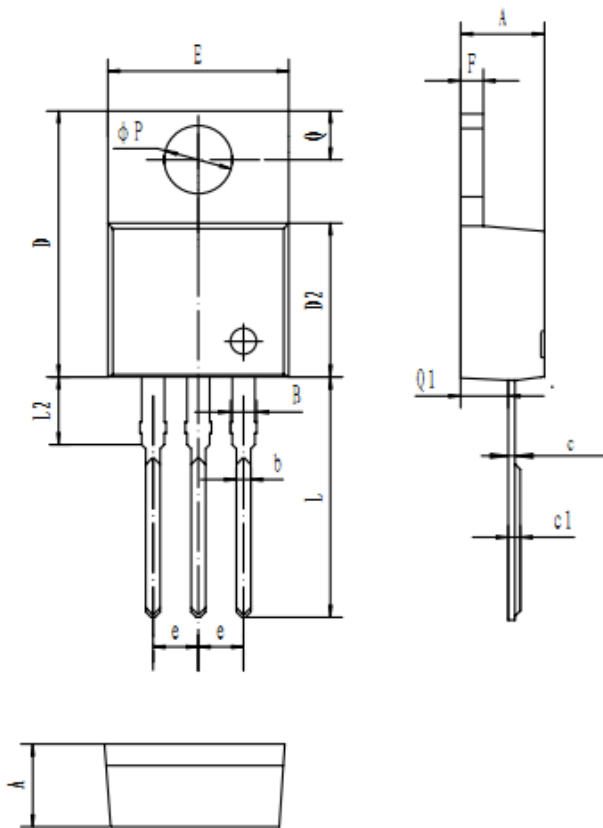


CT vs VR



外形尺寸 PACKAGE MECHANICAL DATA  
TO-220

单位 Unit : mm



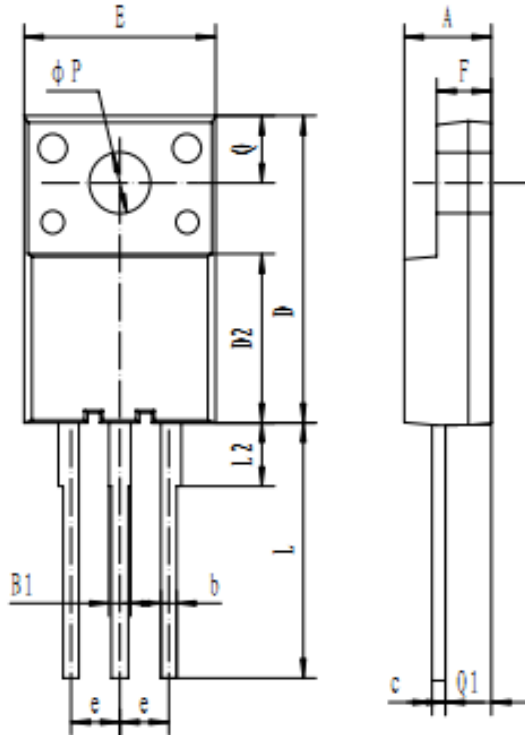
符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00





外形尺寸 PACKAGE MECHANICAL DATA  
TO-220HF

单位 Unit : mm



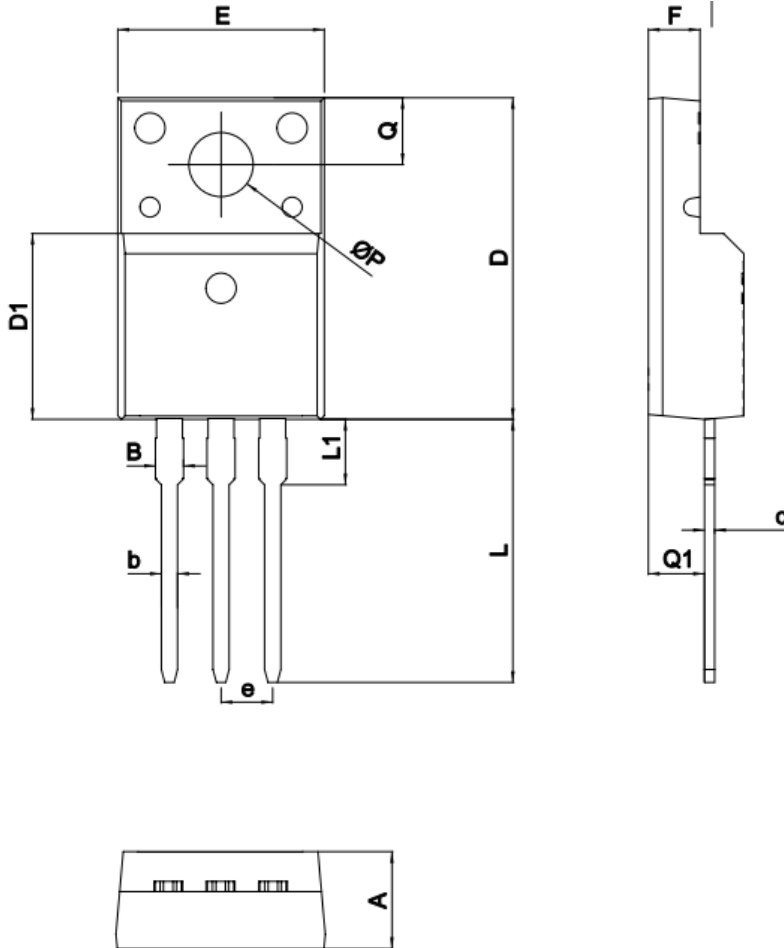
符号 Symbol	Min	Max
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.70
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54(typ)	
F	2.3	3.3
L	12.0	14.0
L2	3.1	3.5
$\phi P$	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5





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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- 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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**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](http://www.hwdz.com.cn)

**市场营销部**

地址: 吉林省吉林市深圳街 99 号

邮编: 132013

电话: 86-432-64675588

64675688

64678411-3098/3099

传真: 86-432-64671533

**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](http://www.hwdz.com.cn)

**MARKET DEPARTMENT**

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

Post Code: 132013

Tel: 86-432-64675588

64675688

64678411-3098/3099

Fax: 86-432-64671533

