



HBR20100V

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	20 (2×10) A
V_{RRM}	100 V
T_j	175 °C
$V_{F(max)}$	0.58V (@ $T_j=125^{\circ}C$)

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

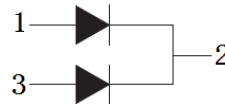
产品特性

- 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

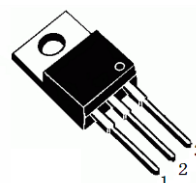
FEATURES

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

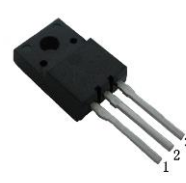
封装 Package



TO-220



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		
HBR20100V-CA-B	HBR20100V-CA-BR	N/A	N/A	HBR20100V	TO-220
HBR20100V-FA-B	HBR20100V-FA-BR	N/A	N/A	HBR20100V	TO-220HF



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}	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	$I_{F(AV)}$	$T_c=150^\circ\text{C}$ (TO-220) 整个器件 per device	20
		$T_c=125^\circ\text{C}$ (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	$T_j=25^\circ\text{C}$	$V_R=V_{RRM}$			50	μA
	$T_j=125^\circ\text{C}$				30	mA
V_F	$T_j=25^\circ\text{C}$	$I_F=10\text{A}$		0.66	0.70	V
	$T_j=125^\circ\text{C}$			0.54	0.58	V
	$T_j=25^\circ\text{C}$	$I_F=15\text{A}$		0.73	0.78	V
	$T_j=125^\circ\text{C}$			0.60	0.65	V

热特性 THERMAL CHARACTERISTICS

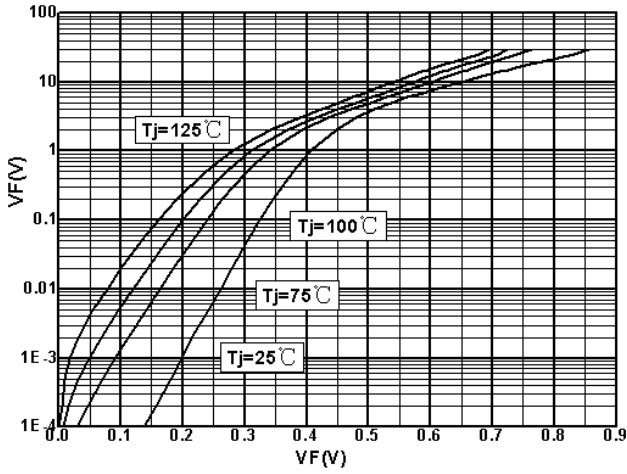
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	TO-220		1.9	$^\circ\text{C}/\text{W}$
	TO-220HF		2.5	



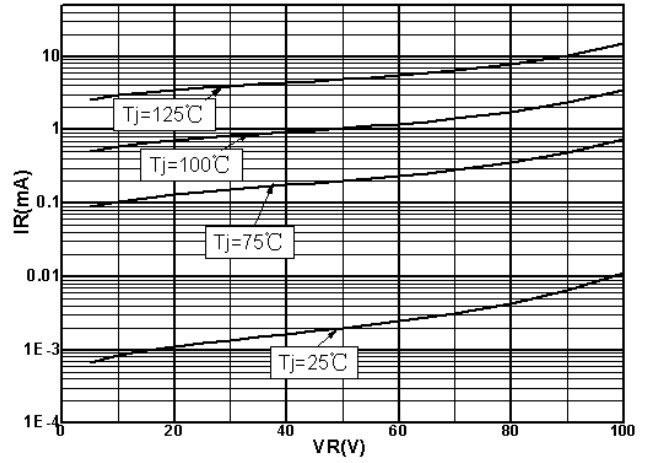


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

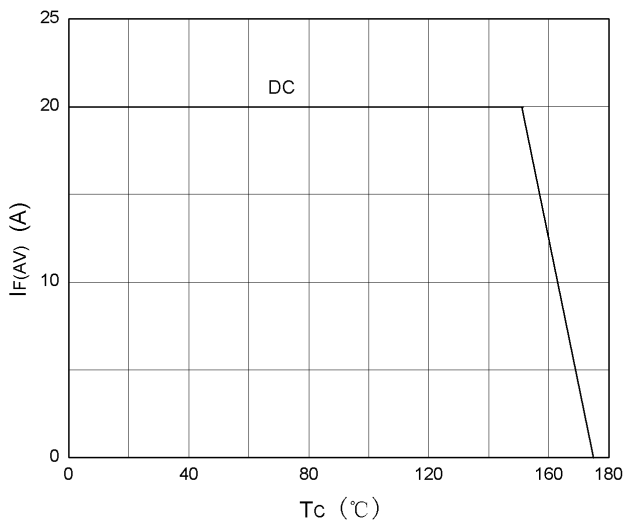
IF vs VF



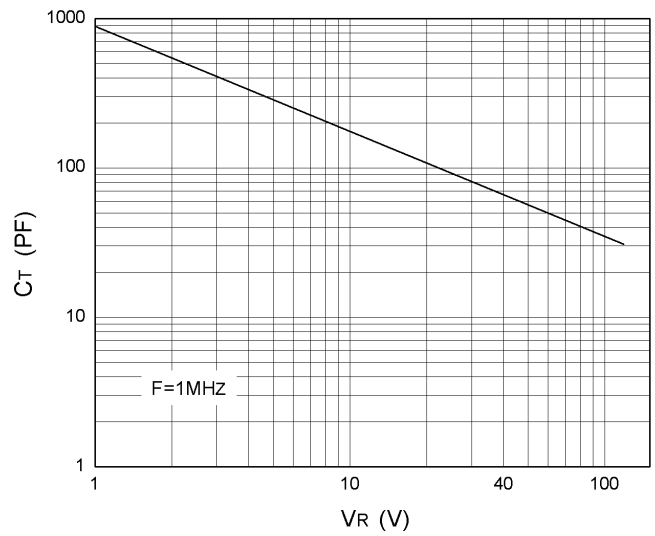
IR vs VR



IF(AV) vs Tc

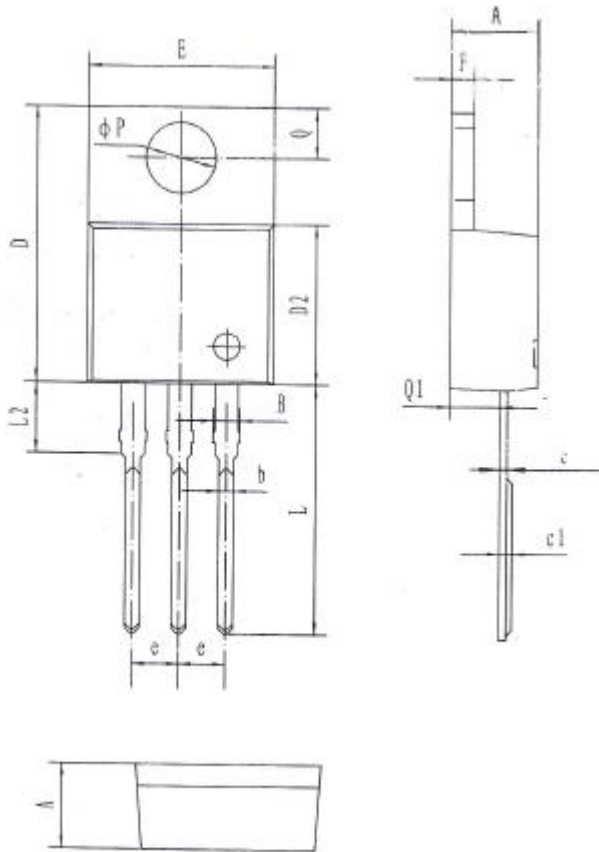


Ct vs VR



外形尺寸PACKAGE MECHANICAL DATA
TO-220

单位 Unit : mm

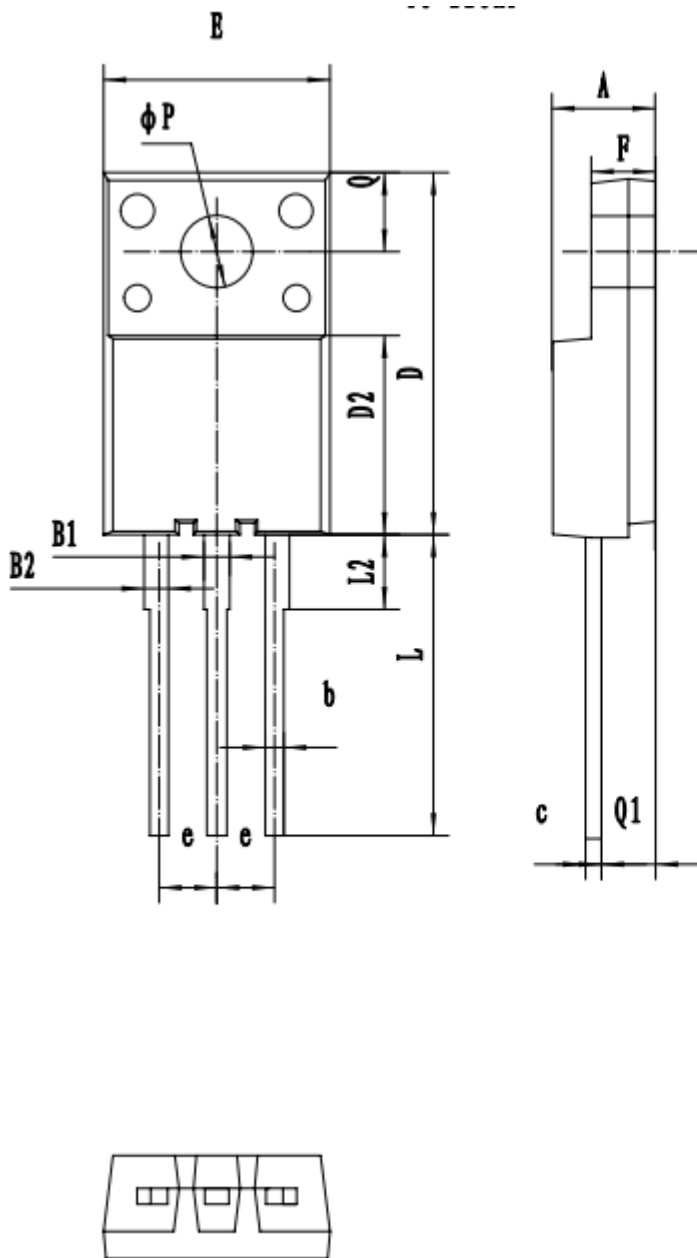


符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00



**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
B2	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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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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