



HBR30100V

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	30 (2×15) A
V_{RRM}	100 V
T_j	175 °C
$V_{F(max)}$	0.65V (@ $T_j=125^{\circ}C$)

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

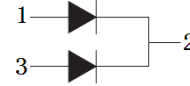
产品特性

- 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

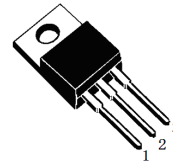
FEATURES

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

封装 Package



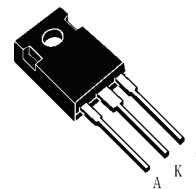
TO-220



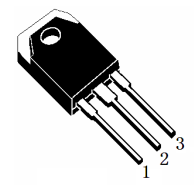
TO-220HF



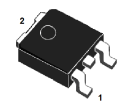
TO-247



TO-3PB



TO-263



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
HBR30100VZ	HBR30100V	TO-220	否 NO	条管 Tube	1.98 g(typ)
HBR30100VZR	HBR30100V	TO-220	是 YUS	条管 Tube	1.98 g(typ)
HBR30100VHF	HBR30100V	TO-220HF	否 NO	条管 Tube	1.70 g(typ)
HBR30100VHFR	HBR30100V	TO-220HF	是 YUS	条管 Tube	1.70 g(typ)
HBR30100VS	HBR30100V	TO-263	否 NO	条管 Tube	1.90 g(typ)
HBR30100VSR	HBR30100V	TO-263	是 YES	条管 Tube	1.90 g(typ)
HBR30100VS	HBR30100V	TO-263	否 NO	编带 Reel	1.90 g(typ)
HBR30100VSR	HBR30100V	TO-263	是 YES	编带 Reel	1.90 g(typ)
HBR30100VAB	HBR30100V	TO-3PB	否 NO	条管 Tube	5.20 g(typ)
HBR30100VABR	HBR30100V	TO-3PB	是 YES	条管 Tube	5.20 g(typ)
HBR30100VW	HBR30100V	TO-247	否 NO	条管 Tube	5.40 g(typ)
HBR30100VWR	HBR30100V	TO-247	是 YES	条管 Tube	5.40 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/TO-263/ TO-3PB/TO-247)	整个器件 per device	30	A
		T _C =125℃ (TO-220HF)	单 侧 per diode	15	
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}	300	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}			50	μA
	T _j =125℃				30	mA
V _F	T _j =25℃	I _F =5A		0.55	0.62	V
	T _j =125℃			0.46	0.50	V
	T _j =25℃	I _F =10A		0.64	0.68	V
	T _j =125℃			0.54	0.58	V
	T _j =25℃	I _F =15A		0.71	0.78	V
	T _j =125℃			0.58	0.65	V

热特性 THERMAL CHARACTERISTICS

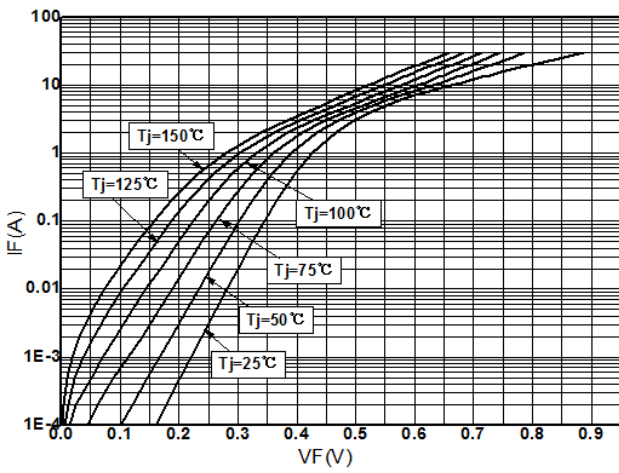
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	TO-220		1.8	℃/W
	TO-263		1.8	
	TO-220HF	R _{th(j-c)}	3.0	
	TO-3PB		2.0	
	TO-247		2.0	



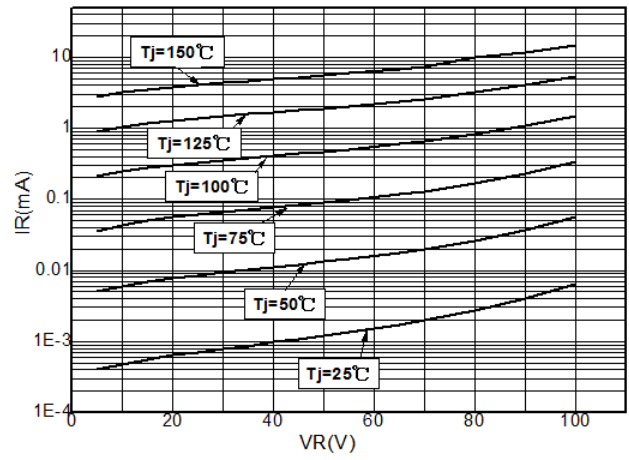


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

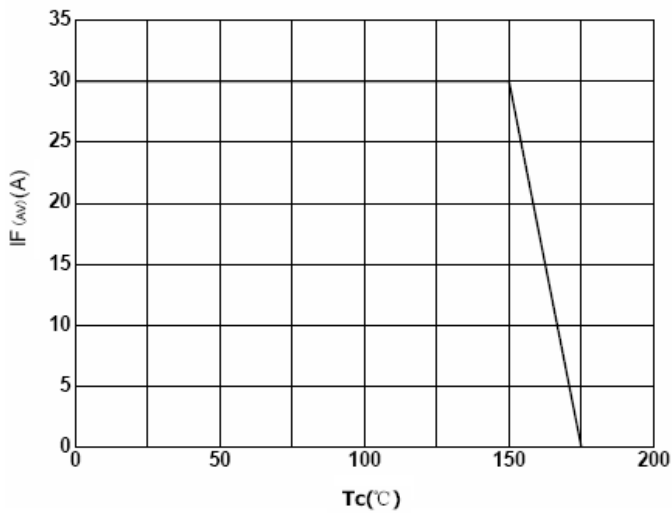
IF vs VF



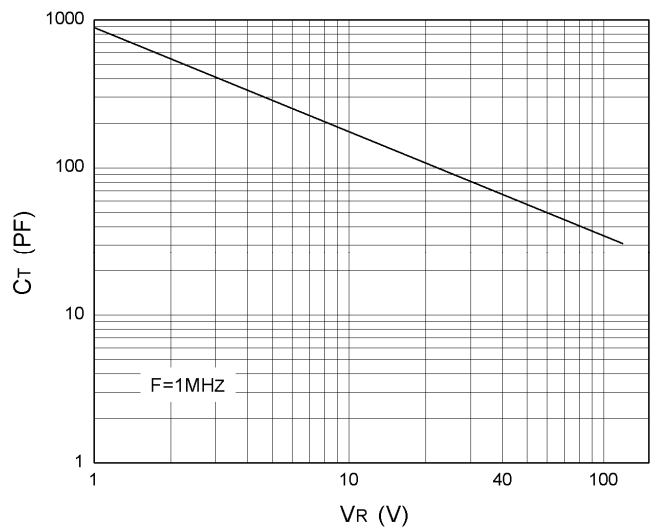
IR vs VR

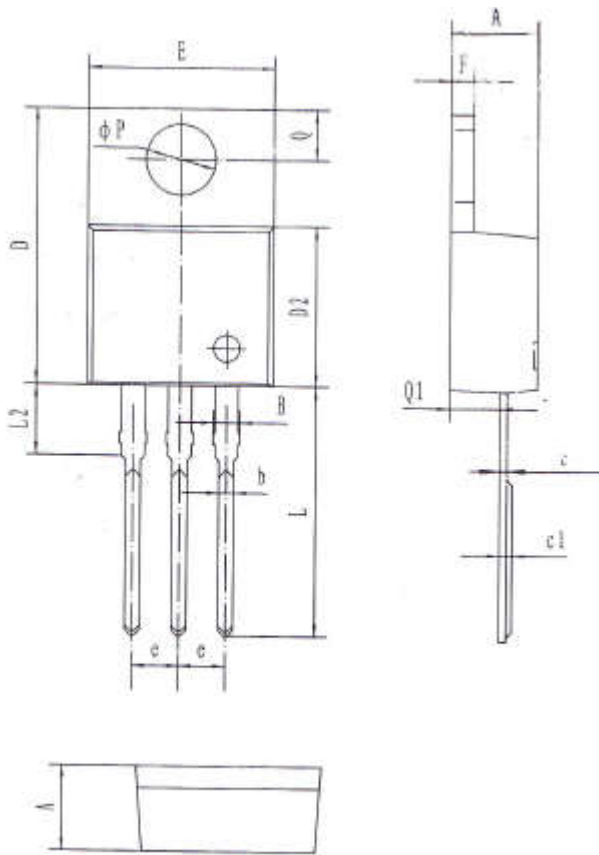


IF(AV) vs Tc



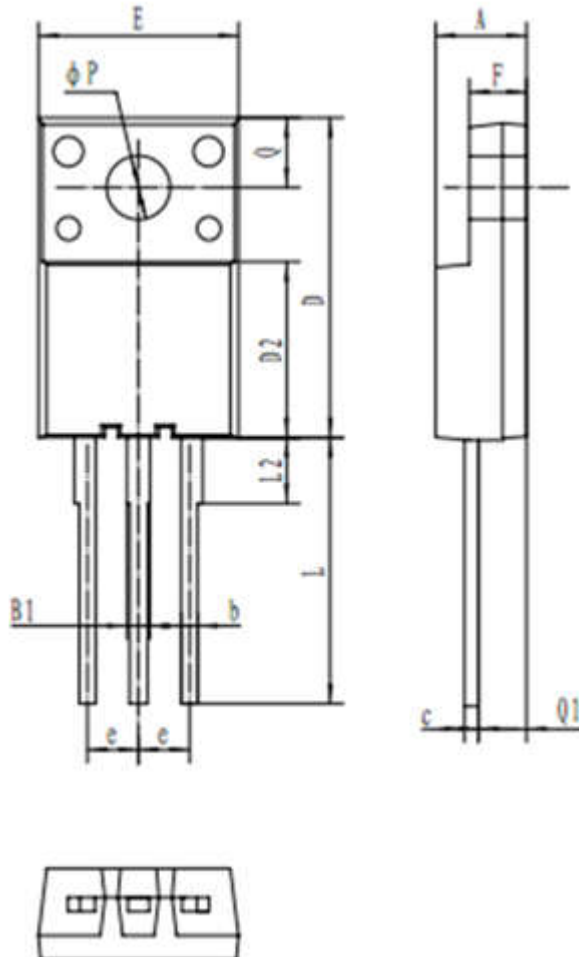
CT vs VR





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	0.7
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

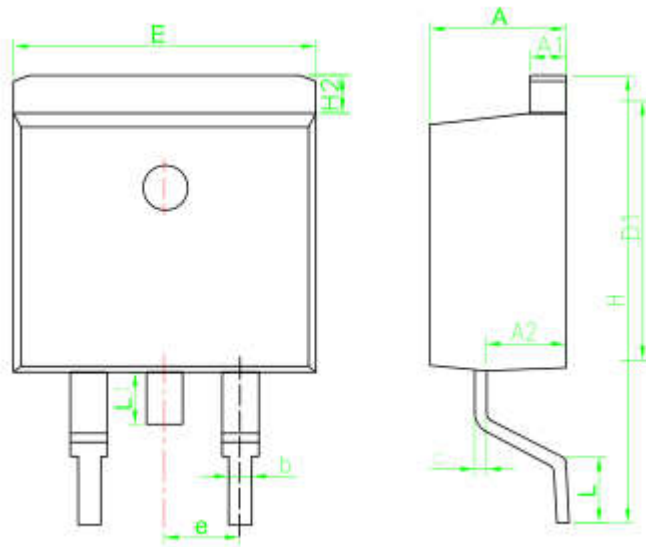




外形尺寸 PACKAGE MECHANICAL DATA

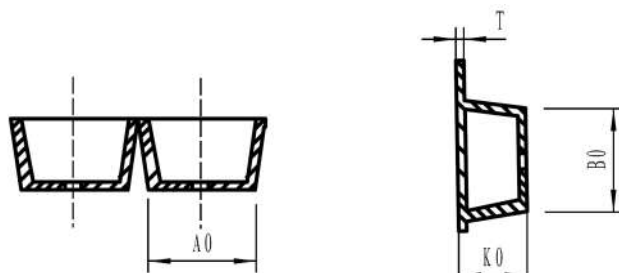
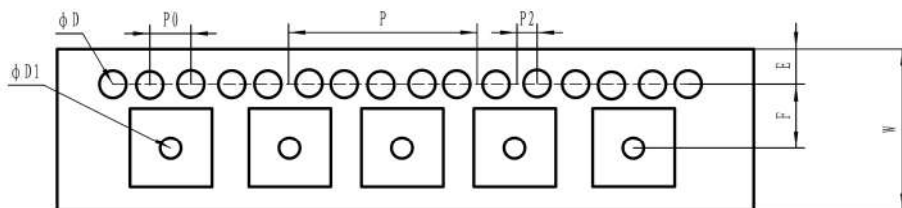
TO-263

单位 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

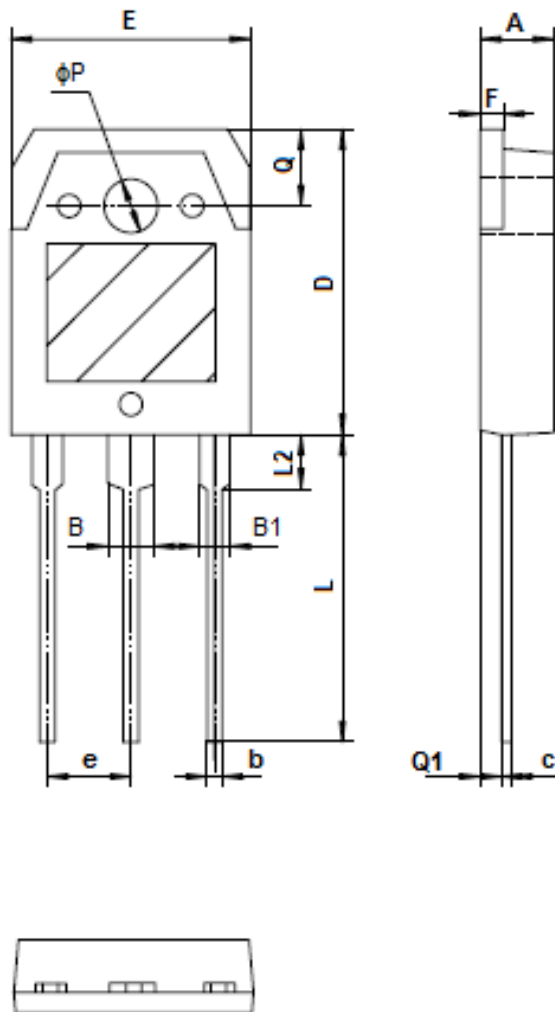


产品尺寸规格 (UNIT:mm)					
规格	W	A0	E	F	D
尺寸	24 ± 0.3	10.9 ± 0.2	1.75 ± 0.2	11.5 ± 0.2	1.5 +0.2/-0.1
规格	D1	P0	P2	P	T
尺寸	1.5 +0.2/-0.1	4 ± 0.2	2 ± 0.2	16 ± 0.2	0.35 ± 0.05
规格	K0	B0			
尺寸	4.9 ± 0.2	16.0 ± 0.2			



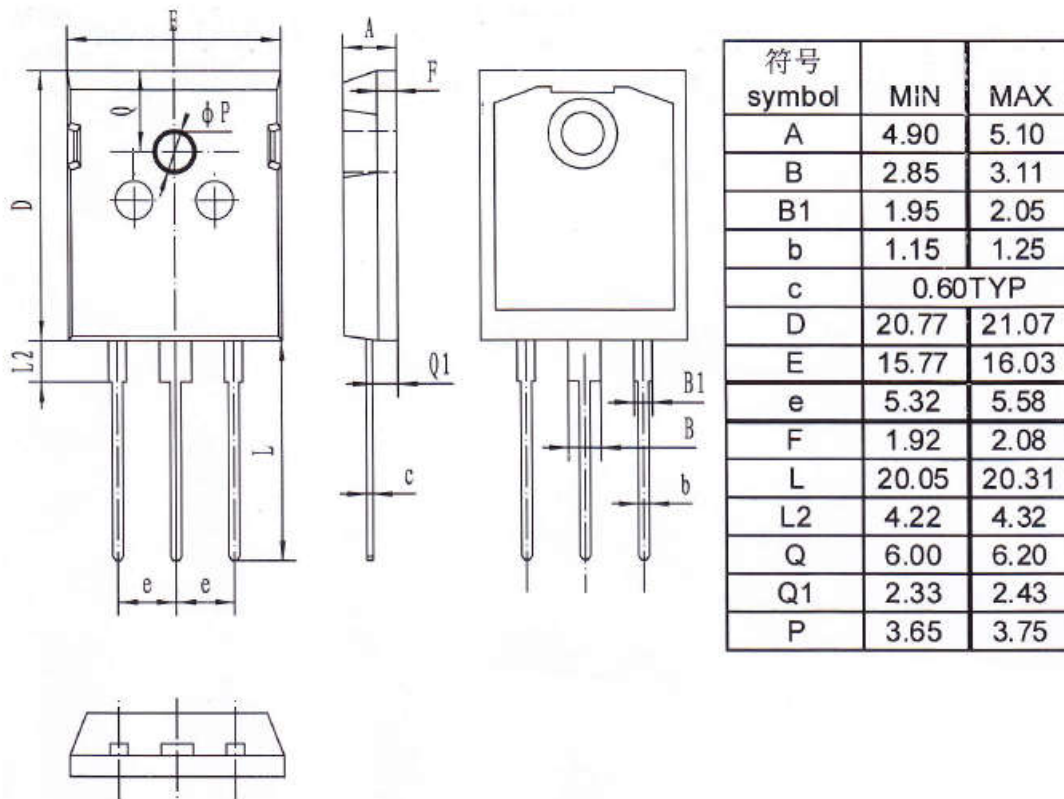
外形尺寸 PACKAGE MECHANICAL DATA
TO-3PB

单位 Unit : mm



符号 Symbol	MIN	MAX
A	4.60	5.00
B	2.90	3.20
B1	1.90	2.20
b	0.90	1.10
c	0.50	0.70
D	19.40	20.40
E	15.40	15.80
e	5.45(TYP)	
F	1.40	1.60
L	19.50	20.50
L2	3.30	3.70
Q	4.90	5.10
Q1	1.30	1.50
P	3.10	3.50





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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.
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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
2015-10-27	201504A	201510B	Revised TO-220HF Package Mechanical Data.
2016-5-24		201605C	Added TO-263 Spec.

