



HBR10100V

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	10 (2x5) 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

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

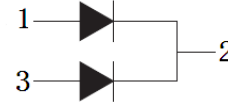
APPLICATIONS

- 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

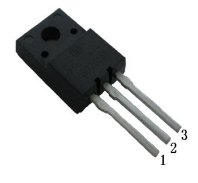
封装 Package



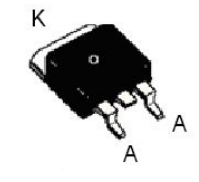
TO-220



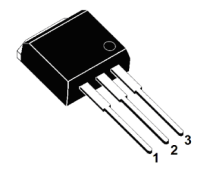
TO-220HF



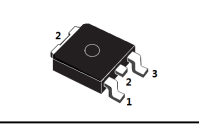
TO-263



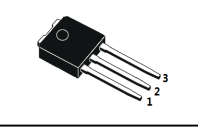
TO-262



DPAKM



IPAKM



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
HBR10100VZ	HBR10100V	TO-220	否 NO	条管 Tube	1.98 g(typ)
HBR10100VZR	HBR10100V	TO-220	是 YES	条管 Tube	1.98 g(typ)
HBR10100VHF	HBR10100V	TO-220HF	否 NO	条管 Tube	1.70 g(typ)
HBR10100VHFR	HBR10100V	TO-220HF	是 YES	条管 Tube	1.70 g(typ)
HBR10100VS	HBR10100V	TO-263	否 NO	条管 Tube	1.90 g(typ)
HBR10100VSR	HBR10100V	TO-263	是 YES	条管 Tube	1.90 g(typ)
HBR10100VS	HBR10100V	TO-263	否 NO	编带 Reel	1.90 g(typ)
HBR10100VSR	HBR10100V	TO-263	是 YES	编带 Reel	1.90 g(typ)
HBR10100VB	HBR10100V	TO-262	否 NO	条管 Tube	1.70 g(typ)
HBR10100VBR	HBR10100V	TO-262	是 YES	条管 Tube	1.70 g(typ)
HBR10100VVM	HBR10100V	IPAKM	否 NO	条管 Tube	0.38 g(typ)
HBR10100VVMR	HBR10100V	IPAKM	是 YES	条管 Tube	0.38 g(typ)
HBR10100VRM	HBR10100V	DPAKM	否 NO	编带 Reel	0.33 g(typ)
HBR10100VRMR	HBR10100V	DPAKM	是 YES	编带 Reel	0.33 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)}	10	A
T _C =150℃ (TO-220/263/262/ IPAKM/DPAKM) T _C =125℃ (TO-220HF)		5	
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}			20	μA
	T _j =125℃				10	mA
V _F	T _j =25℃	I _F =5A		0.68	0.72	V
	T _j =125℃			0.60	0.65	V
	T _j =25℃	I _F =10A		0.78	0.82	V
	T _j =125℃			0.70	0.76	V

热特性 THERMAL CHARACTERISTICS

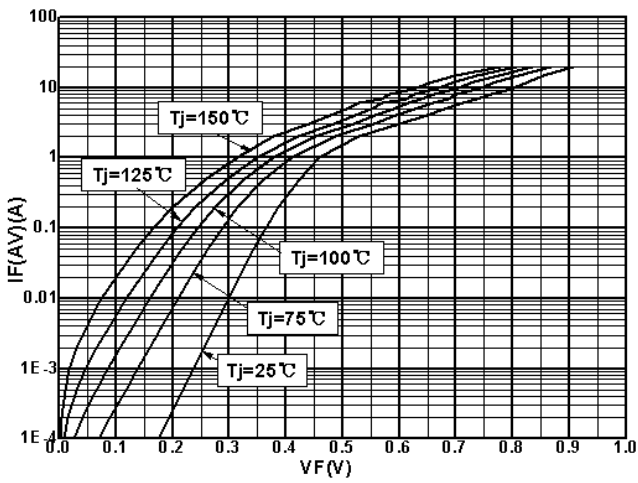
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	TO-220		1.9	℃/W
	TO-263		1.9	
	TO-262	R _{th(j-c)}	1.9	
	IPAKM		2.5	
	DPAKM		2.5	
	TO-220HF		3.5	



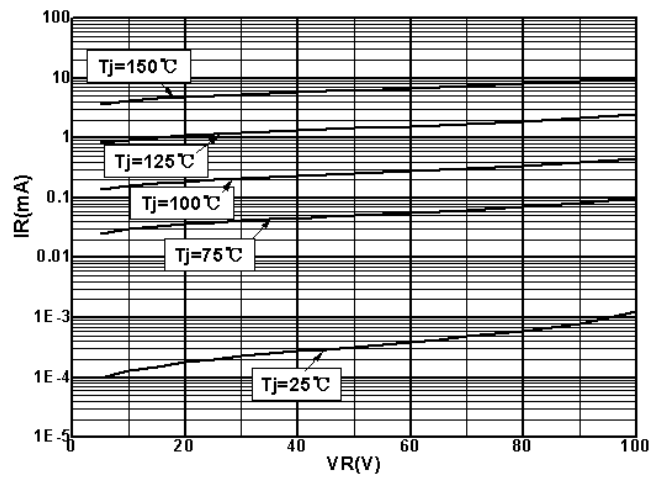


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

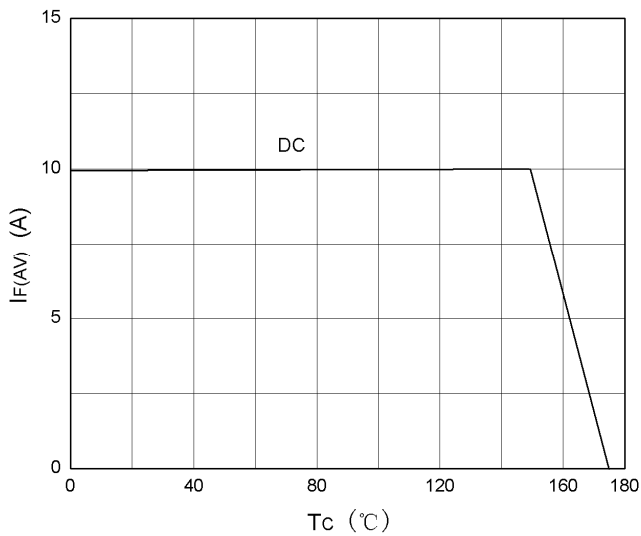
IF vs VF



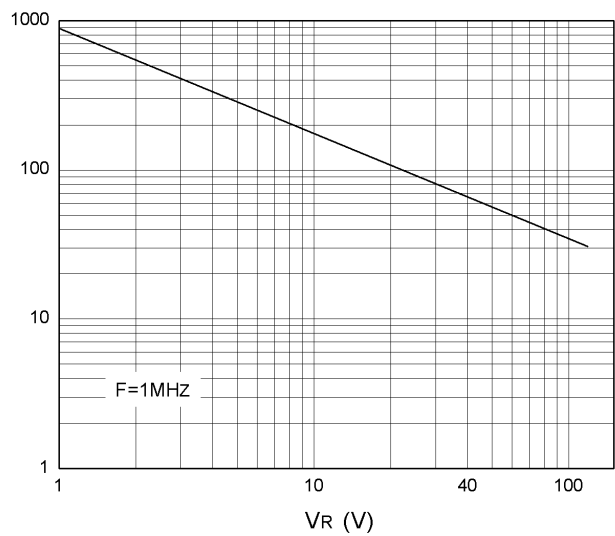
IR vs VR

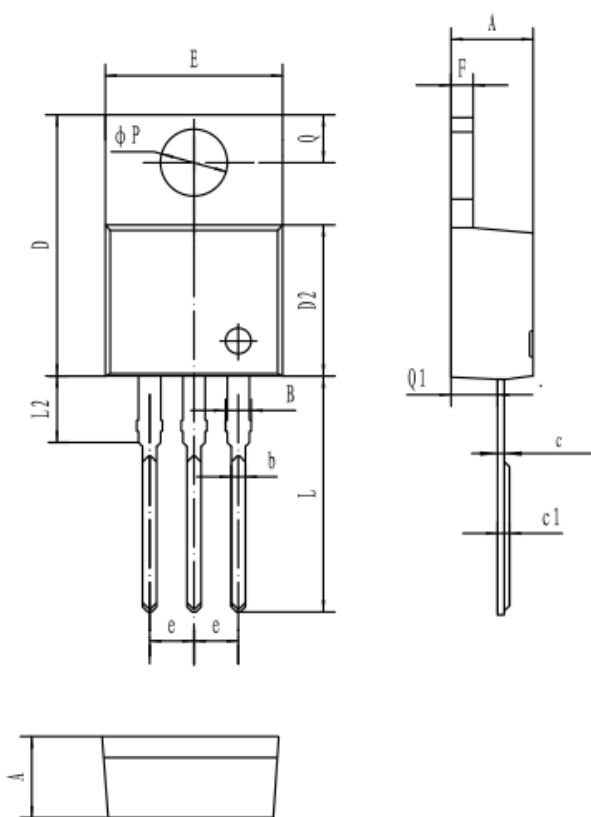


IF(AV) vs Tc



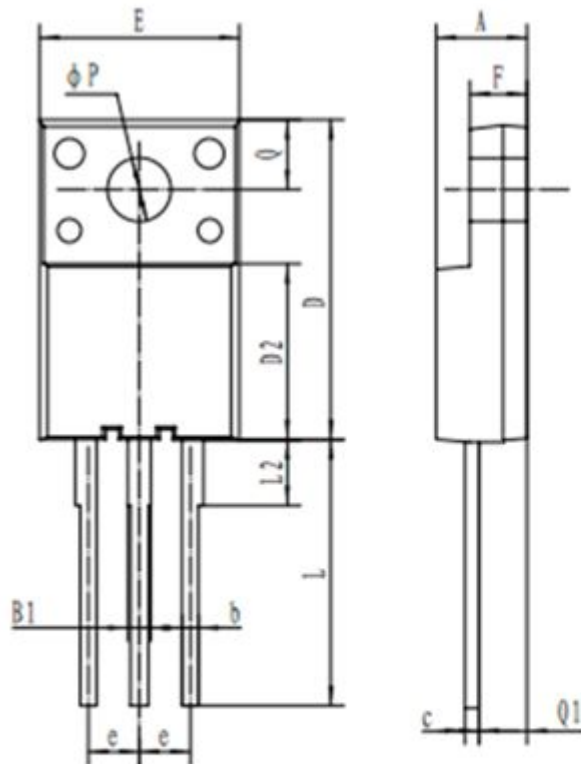
CT vs VR





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

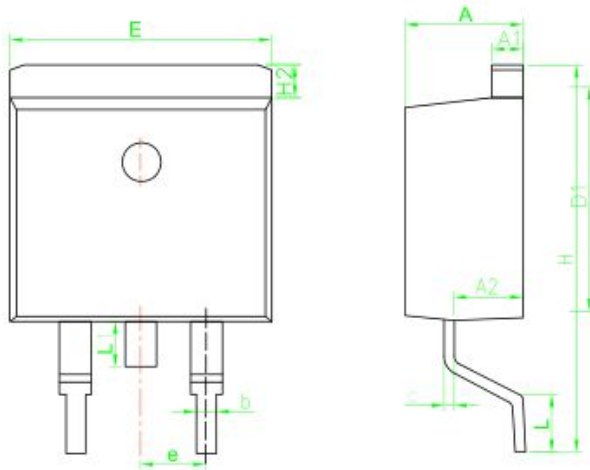




外形尺寸 PACKAGE MECHANICAL DATA

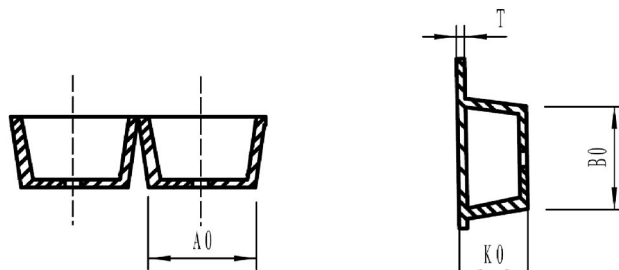
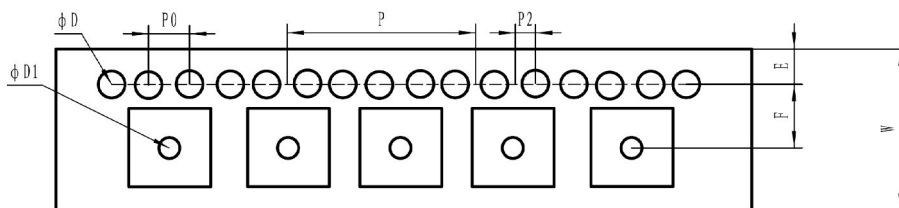
TO-263

单位 Unit : mm



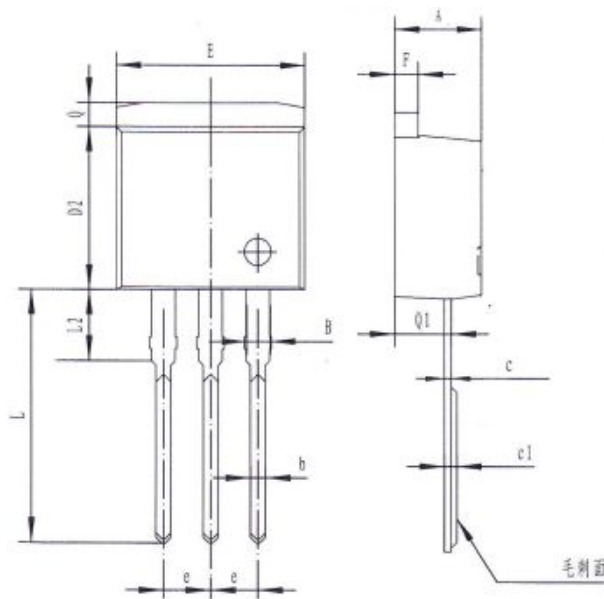
SYMBOL	MM	
	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70

编带 REEL

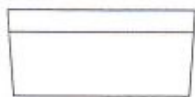


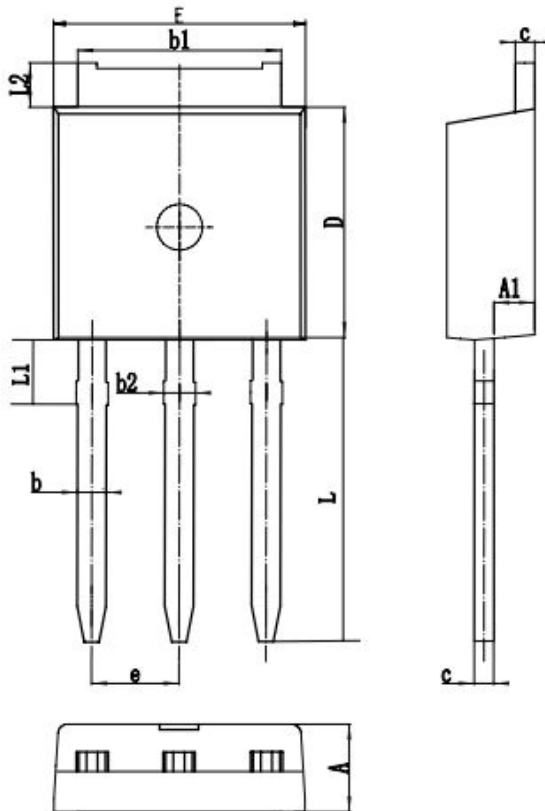
产品尺寸规格 (UNIT: mm)					
规格	W	A0	E	F	D
尺寸	24 ± 0.3	10.9 ± 0.2	1.75 ± 0.2	11.5 ± 0.2	1.5 + 0.2/-0.1
规格	D1	P0	P2	P	T
尺寸	1.5 + 0.2/-0.1	4 ± 0.2	2 ± 0.2	16 ± 0.2	0.35 ± 0.05
规格	K0	B0			
尺寸	4.9 ± 0.2	16.0 ± 0.2			





符号 symbol	MIN	MAX
A	4.40	4.90
B	1.10	1.40
b	0.70	0.95
c	0.30	0.60
c1	0.33	0.63
D2	8.20	9.20
E	9.60	10.50
e	2.39	2.69
F	1.20	1.35
L	13.11	14.61
L2	3.55	4.05
Q	1.10	1.40
Q1	2.65	2.85





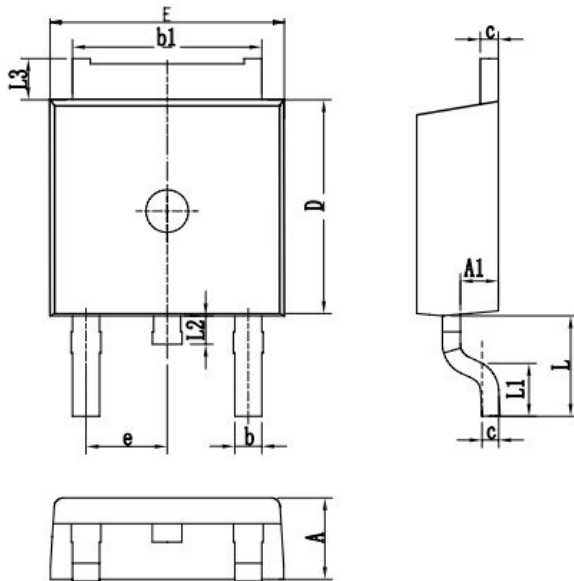
SYMBOL	mm	
	MIN	MAX
A	2.10	2.50
A1	0.80	1.20
b	0.66	0.96
b1	5.10	5.50
b2	0.85	1.25
c	0.40	0.62
D	5.85	6.45
E	6.30	6.90
e	2.286BSC	
L	9.00	9.60
L1	0.80	2.20
L2	0.67	1.07





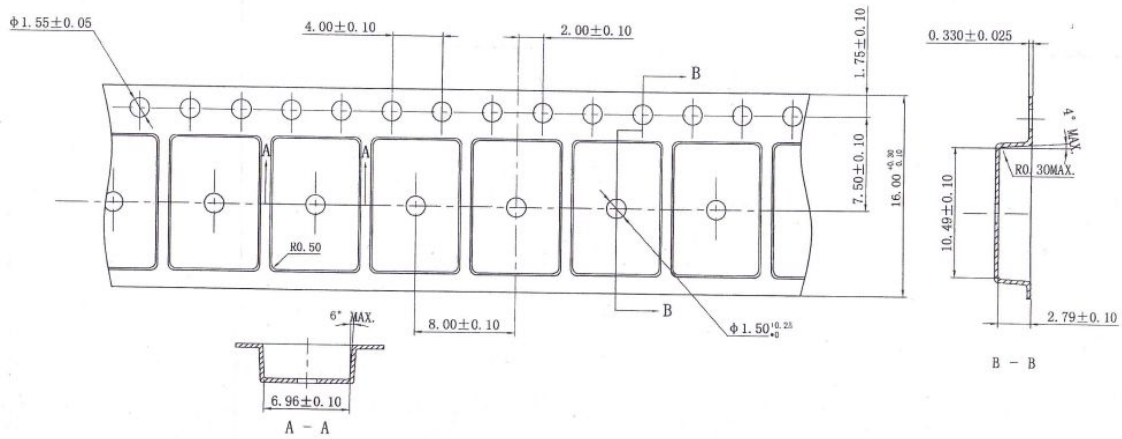
外形尺寸 PACKAGE MECHANICAL DATA
DPAKM

单位 Unit : mm



SYMBOL	mm	
	MIN	MAX
A	2.10	2.50
A1	0.80	1.20
b	0.66	0.96
b1	5.10	5.50
c	0.40	0.62
D	5.85	6.45
E	6.30	6.90
e	2.286BSC	
L	2.40	3.00
L1	0.85	1.45
L2	0.60	1.10
L3	0.67	1.07

编带 REEL



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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

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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
2015-10-16	201506A	201510B	<ol style="list-style-type: none"> 1. Revised IFSM. 2. Revised TO-220HF Package Mechanical Data. 3. Corrected the mistakes.

