



# HBR20200E

## 主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	20 (2×10) A
$V_{RRM}$	200 V
$T_j$	175 °C
$V_{F(max)}$	0.74V (@ $T_j=125^{\circ}C$ )

### 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

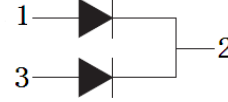
### APPLICATIONS

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

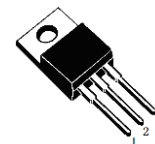
### FEATURES

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

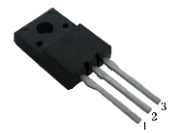
### 封装 Package



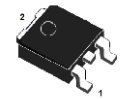
TO-220C



TO-220MF-K1



TO-263



## 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		
HBR20200E-C-B	HBR20200E-C-BR	N/A	N/A	HBR20200E	TO-220C
HBR20200E-F1-B	HBR20200E-F1-BR	N/A	N/A	HBR20200E	TO-220MF-K1
HBR20200E-S-B	HBR20200E-S-BR	HBR20200E-S-A	HBR20200E-S-AR	HBR20200E	TO-263





## 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	$V_{RRM}$	200	V
最大直流阻断电压 Maximum DC blocking voltage	$V_{DC}$	200	V
正向平均整流电流 Average forward current	$I_{F(AV)}$	$T_C=150^{\circ}C$ (TO-220C/263/)	整个器件 per device
		$T_C=125^{\circ}C$ (TO-220MF-K1)	单 侧 per diode
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)	$I_{FSM}$	275	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
$I_R$	$T_j=25^{\circ}C$	$V_R=V_{RRM}$			10	$\mu A$
	$T_j=125^{\circ}C$				5	mA
$V_F$	$T_j=25^{\circ}C$	$I_F=10A$		0.792	0.89	V
	$T_j=125^{\circ}C$			0.67	0.74	V

## 热特性 THERMAL CHARACTERISTICS

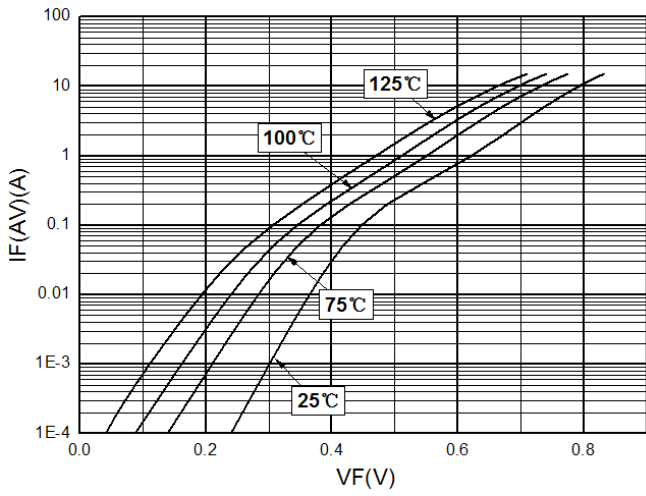
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	$R_{th(j-c)}$		2.0 2.0 3.5	℃/W
			TO-220C TO-263 TO-220MF-K1	



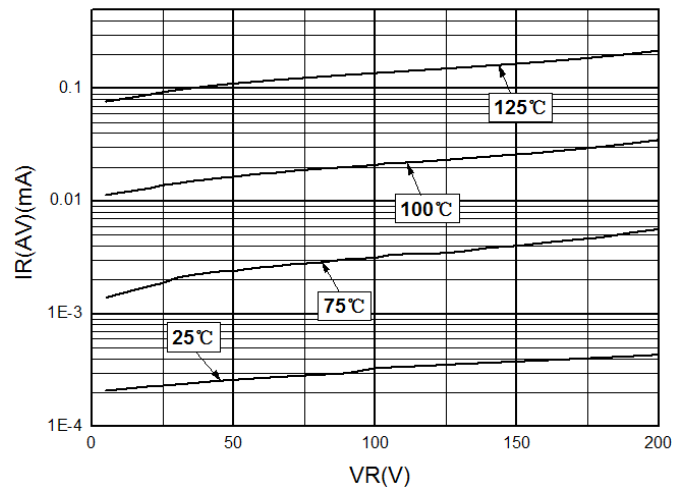


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

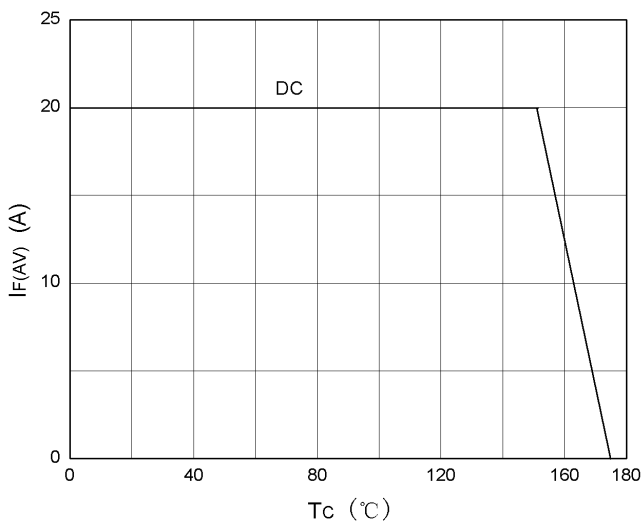
IF vs VF



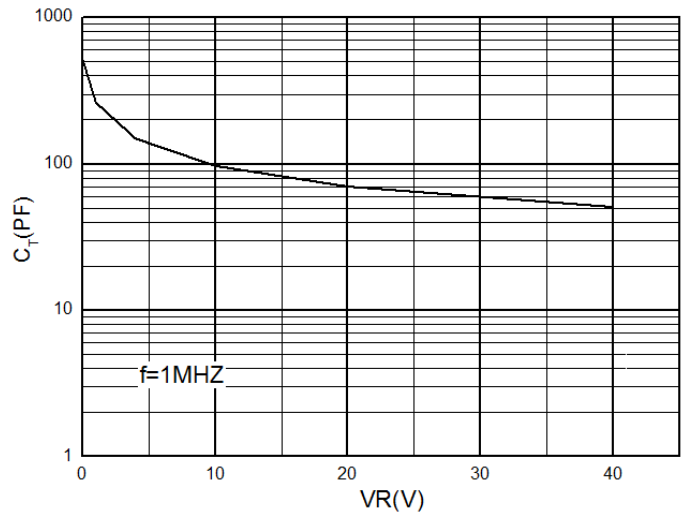
IR vs VR

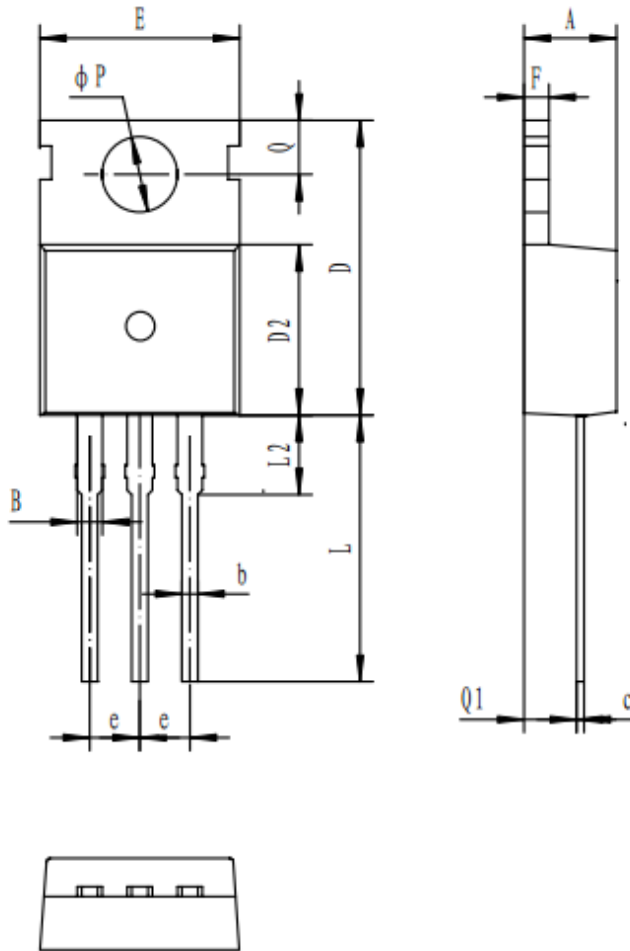


IF(AV) vs Tc



Ct vs VR





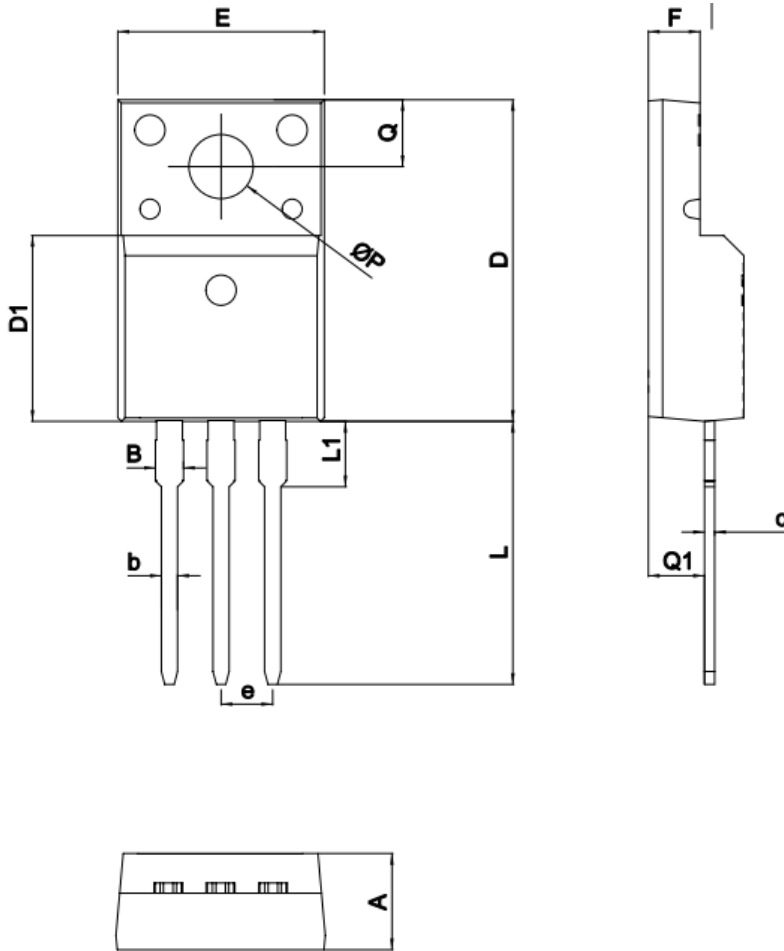
符号 symbol	MIN	MAX
A	4.30	4.70
B	1.10	1.40
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	9.00	9.40
E	9.70	10.10
e	2.39	2.69
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
Q	2.60	3.00
Q1	2.20	2.60
P	3.50	3.80





外形尺寸 PACKAGE MECHANICAL DATA  
TO-220MF-K1

单位 Unit : mm



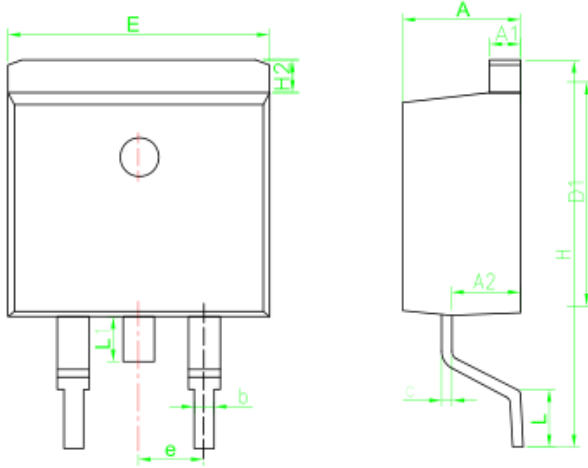
SYMBOL	mm	
	MIN	MAX
A	4.5	4.9
B	1.22	1.47
b	0.7	0.9
c	0.45	0.60
D	15.6	16.1
D1	9.0	9.3
e	2.54TYPE	
E	9.9	10.4
F	2.3	2.8
L	12.6	13.3
L1	3.1	3.4
Q	3.2	3.4
Q1	2.6	2.9
ΦP	3.0	3.5





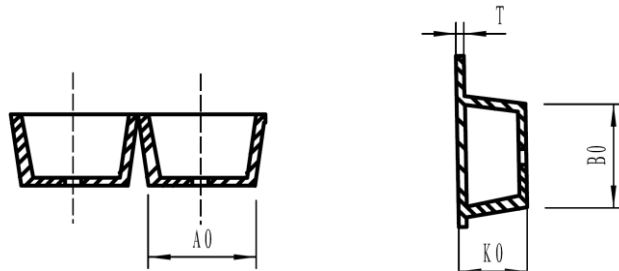
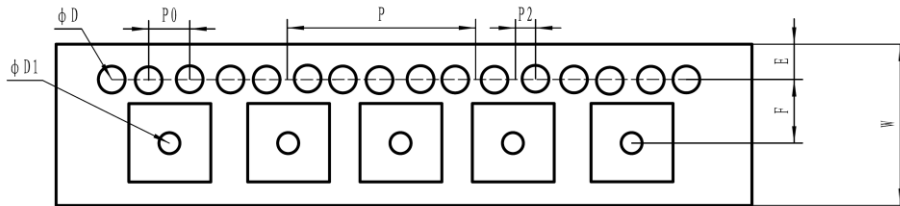
外形尺寸 PACKAGE MECHANICAL DATA  
TO-263

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			



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