

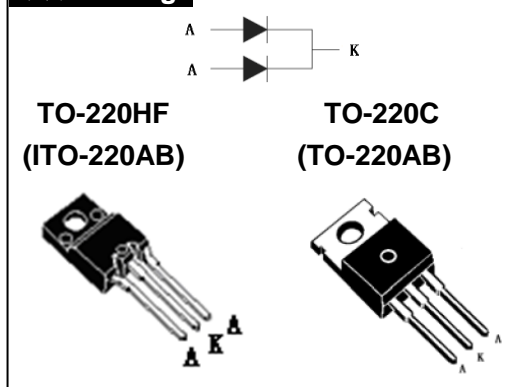


# 12F20HF3/12F20C3

## 主要参数 MAIN CHARACTERISTICS

$I_F(AV)$	$5 \times 2 A$
$V_{RRM}$	200 V
$V_F(\text{typ})$	0.91V
$T_{rr}(\text{typ})$	18ns

## 封装 Package



## 用途

- 开关电源
- 马达驱动电路

## APPLICATIONS

- Switch power supply
- Motor drives

## 产品特性

- 低正向压降
- 低功耗, 高效率
- 高可靠性

## FEATURES

- Low forward voltage drop
- Low power loss, high efficiency
- High reliability

## 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		
12F20HF3-FA-B	12F20HF3-FA-BR	12F20HF3	TO-220HF
12F20C3-C-B	12F20C3-C-BR	12F20C3	TO-220C



**绝对最大额定值 ABSOLUTE RATINGS (Tc=25°C)**

项 目 Parameter	符 号 Symbol	数 值 Value	单 位 Unit
反向重复峰值电压 Peak Repetitive Reverse Voltage	$V_{RRM}$	200	V
平均正向整流电流 T <sub>C</sub> =100°C Average Forward Rectified Current	Per Diode	5	A
	Per Package	10	
非重复浪涌正向电流 Non-Repetitive Surge Forward Current t=8.3ms	$I_{FSM}$	60	A
结温 Junction Temperature	$T_j$	-55~+150	°C
存储温度 Storage temperature range	$T_{STG}$	-55~+150	°C

**电特性 ELECTRICAL CHARACTERISTICS (Tc=25°C unless otherwise specified)**

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
$V_R$	$I_R = 50\mu A$	200	-	-	V
$I_R$	$T_j = 25^\circ C$	-	-	10	$\mu A$
	$T_j = 125^\circ C$	-	-	200	$\mu A$
$V_F$	$T_j = 25^\circ C$	-	0.91	1.0	V
	$T_j = 125^\circ C$	-	-	1.0	V
$T_{rr}$	$I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$	-		35	ns
$T_{rr}$	$I_F = 1A, V_R = 30V, di_F/dt = -200A/\mu s$	-	18	28	ns

**热特性 THERMAL CHARACTERISTICS (maximum) Per Diode**

项 目 Parameter	符 号 Symbol	封 装 Package	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal Resistance Junction to Case	$R_{th(j-c)}$	TO-220C	2.5	°C/W
		TO-220HF	5	





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

Fig.1 TYPICAL FORWARD CHARACTERISTICS

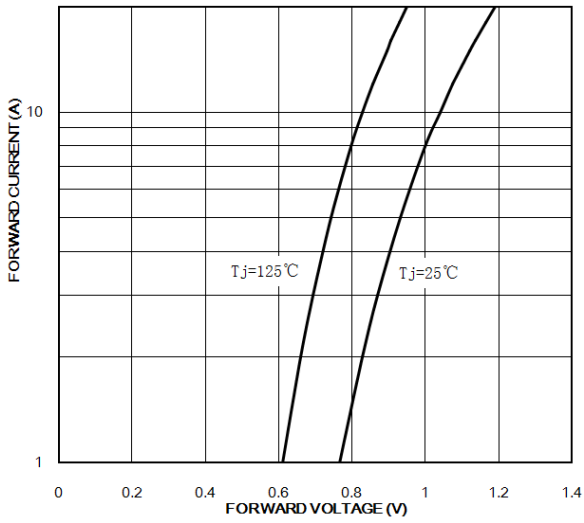


Fig.2 TYPICAL REVERSE CHARACTERISTICS

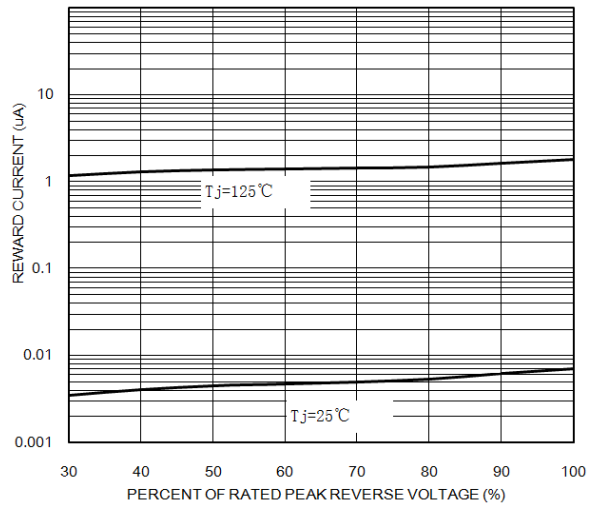


Fig.3 FORWARD CURRENT DERATING CURVE

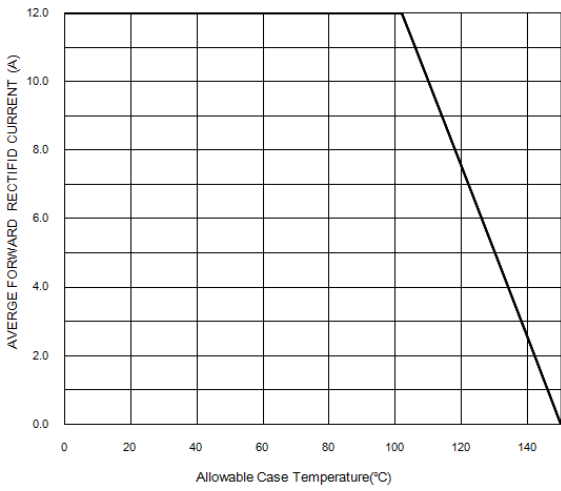
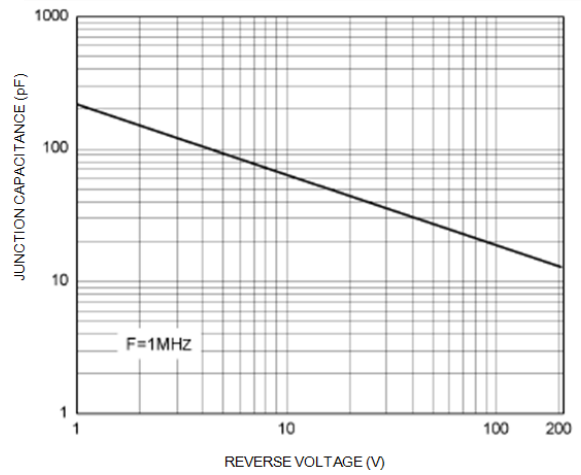


Fig.4 TYPICAL JUNCTION CAPACITANCE

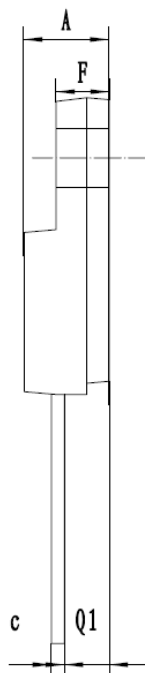
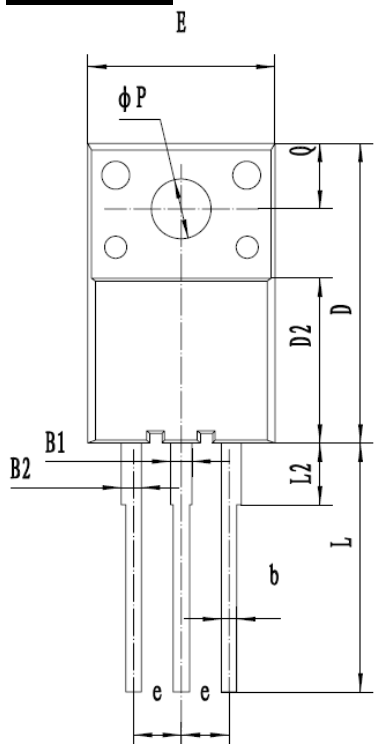




外形尺寸 PACKAGE MECHANICAL DATA

**TO-220HF**

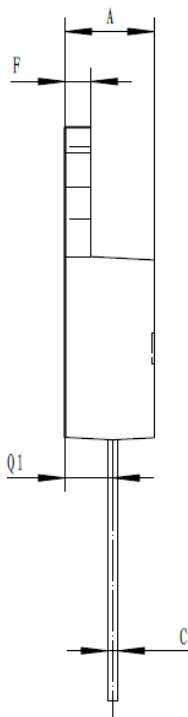
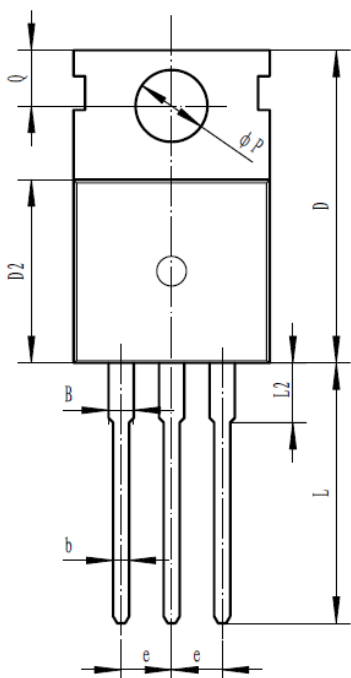
单位 Unit : mm



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

**TO-220C**

单位 Unit : mm



符号 symbol	MIN	MAX
A	4.30	4.70
B	1.22	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





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