



# 12F20C3/12F20HF3

## 主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	6x2 A
$V_R$	200 V
$T_j(max)$	150°C
$V_F(typ)$	0.93V
$T_{RR} (typ)$	18ns

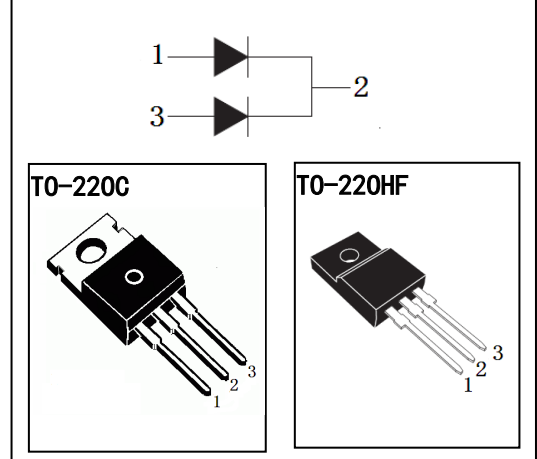
### 用途

- 开关电源
- 通用电路

### APPLICATIONS

- Switch power supply
- General circuits

### 封装 Package



### 产品特性

- 共阴结构
- 低功耗，高效率
- 高可靠性
- 环保（RoHS）产品

### FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High reliability
- RoHS product

## 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		
12F20C3-C-B	12F20C3-C-BR	N/A	N/A	12F20C3	TO-220C
12F20HF3-FA-B	12F20HF3F-FA-BR	N/A	N/A	12F20HF3	TO-220HF



**绝对最大额定值 ABSOLUTE RATINGS (Tc=25°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 <sub>RRM</sub>	200	V
正向平均整流电流 Average forward current	T <sub>C</sub> =100°C (TO-220C) T <sub>C</sub> =100°C (TO-220HF)	I <sub>F(AV)</sub>	12	A
	整个器件 per device 单 侧 per diode		6	
峰值单脉冲浪涌电流 Peak one Cycle Surge Forward Current(Non-Repetitive) t=10ms		I <sub>FSM</sub>	60	A
结温 Junction Temperature		T <sub>J</sub>	-50~+150	°C
储存温度 Storage temperature range		T <sub>STG</sub>	-50~+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 <sub>RRM</sub>	I <sub>R</sub> =50μA		200			V
I <sub>R</sub>	T <sub>j</sub> =25°C	V <sub>R</sub> =V <sub>RRM</sub>			50	μA
	T <sub>j</sub> =125°C				200	μA
V <sub>F</sub>	T <sub>j</sub> =25°C	I <sub>F</sub> =6A		0.93	1.1	V
	T <sub>j</sub> =125°C				1.0	V
T <sub>RR</sub>	I <sub>F</sub> =1A, V <sub>R</sub> =30V, di <sub>F</sub> /dt=-200A/μs			18	28	ns

**热特性 THERMAL CHARACTERISTICS**

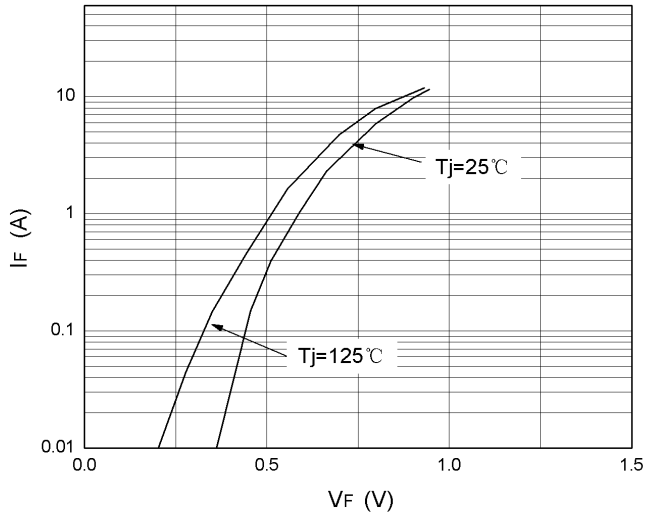
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	TO-220C		2.5	°C/W
	TO-220HF	R <sub>th(j-c)</sub>	5	



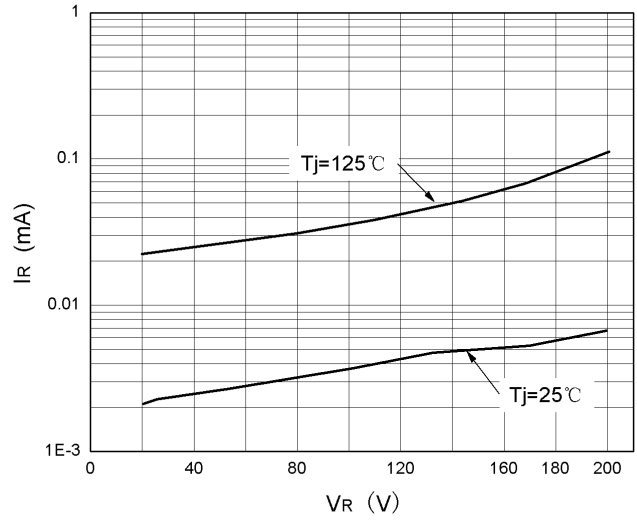


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

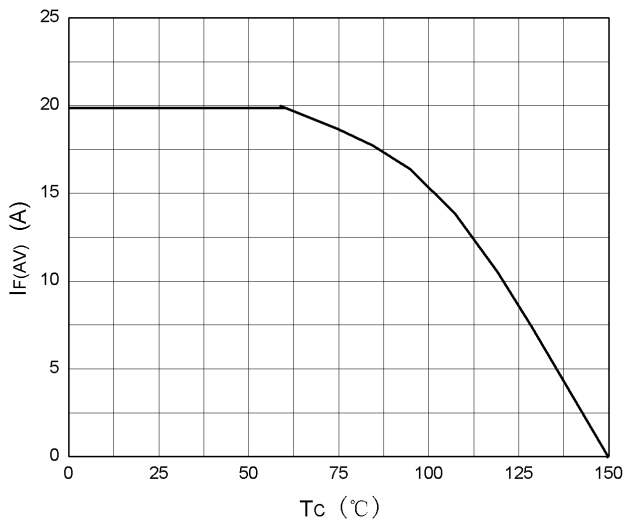
IF vs VF



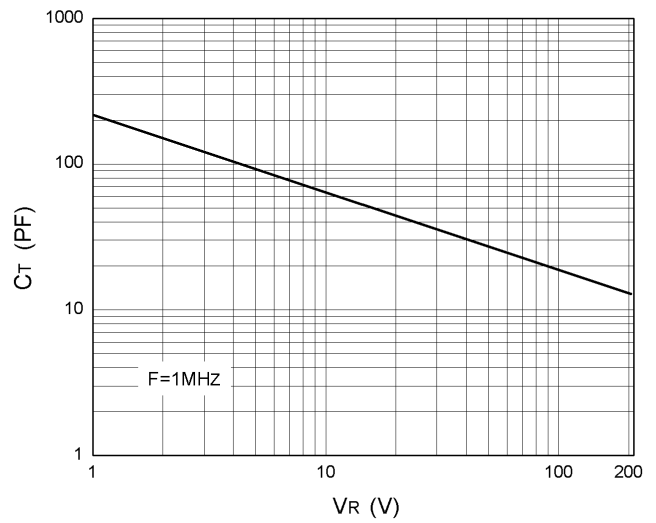
IR vs VR



IF(AV) vs Tc



CT vs VR

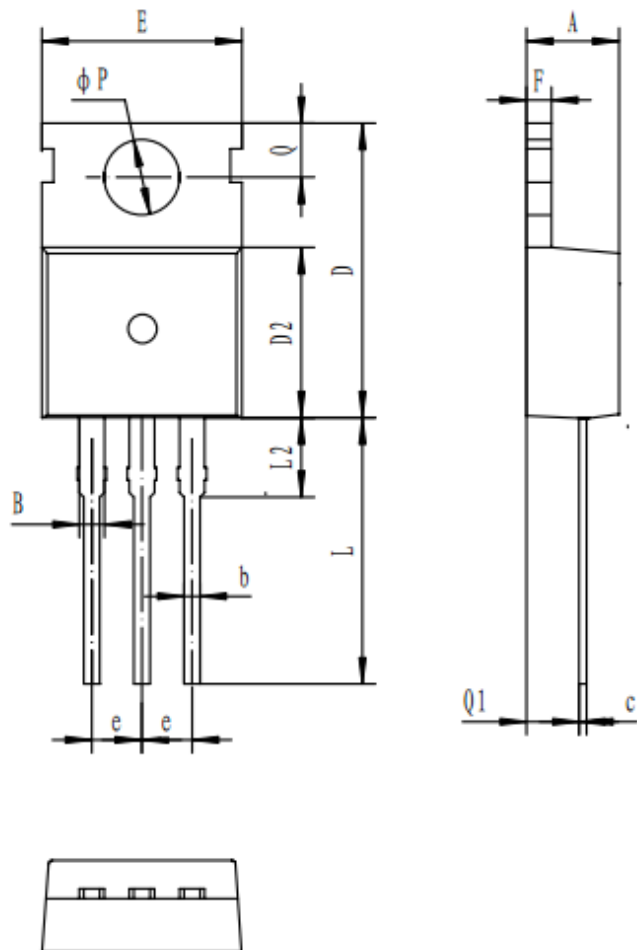




## 外形尺寸 PACKAGE MECHANICAL DATA

TO-220C

单位 Unit : mm



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

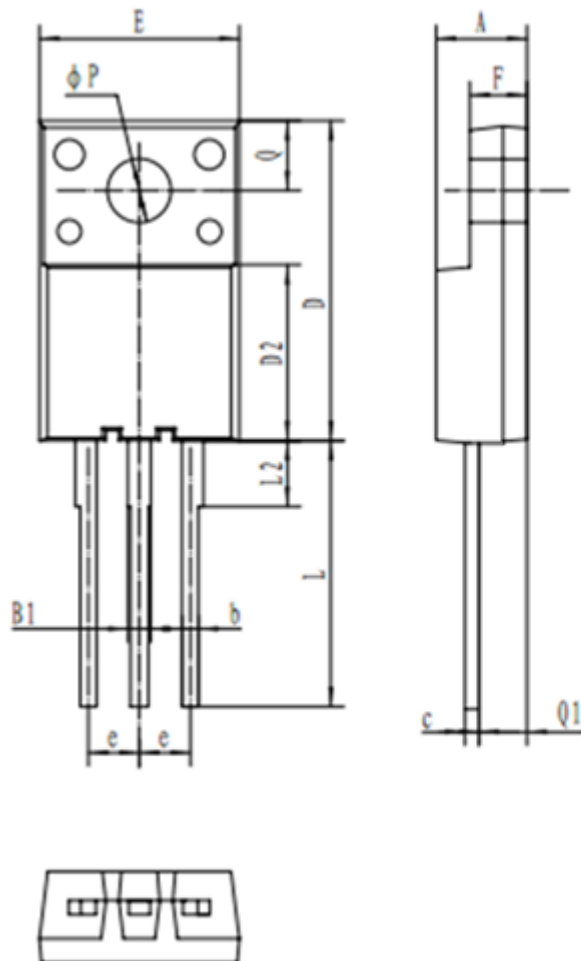




## 外形尺寸 PACKAGE MECHANICAL DATA

## TO-220HF

单位 Unit : mm



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
$\phi p$	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5





### 注意事项

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- 2.购买时请认清公司商标，如有疑问请与公司本部联系。
- 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

### NOTES

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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.

### 联系方式

#### 吉林华微电子股份有限公司

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：[www.hwdz.com.cn](http://www.hwdz.com.cn).

#### 市场营销部

地址：吉林省吉林市深圳街 99 号

邮编：132013

电话：86-432-64675588

64675688

64678411-3098/3099

传真：86-432-64671533

### CONTACT

#### JILIN SINO-MICROELECTRONICS CO.LTD.

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64678411

Fax: 86-432-64665812

Web Site: [www.hwdz.com.cn](http://www.hwdz.com.cn).

#### MARKET DEPARTMENT

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64675588

64675688

64678411-3098/3099

Fax: 86-432-64671533

