



# 10F20HF3

## 主要参数 MAIN CHARACTERISTICS

|            |                 |
|------------|-----------------|
| $I_F(AV)$  | 10 (2×5) A      |
| $V_{RRM}$  | 200 V           |
| $t_{rr}$   | 20 ns (典型值 typ) |
| $V_F(max)$ | 0.9 V (典型值 typ) |

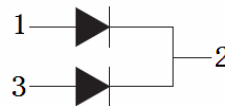
## 用途

- 开关电源
- UPS

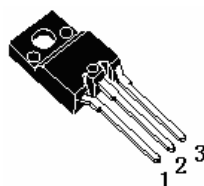
## APPLICATIONS

- Switch power supply
- UPS

## 封装 Package



T0-220HF



## 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<br>Order codes | 印记<br>Marking | 封装<br>Package | 包装<br>Packaging | 器件重量<br>Device Weight |
|---------------------|---------------|---------------|-----------------|-----------------------|
| 10F20HF3            | 10F20HF3      | TO-220HF      | 条管 Tube         | 2.10 g(typ)           |



绝对最大额定值 ABSOLUTE RATINGS ( $T_c=25^{\circ}\text{C}$ )

| 项 目<br>Parameter                                                                  |                                         |                                        | 符 号<br>Symbol | 数 值<br>Value  | 单 位<br>Unit        |
|-----------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------|---------------|---------------|--------------------|
| 最大反向重复峰值电压<br>Repetitive peak reverse voltage                                     |                                         |                                        | $V_{RRM}$     | 200           | V                  |
| 正向平均整流电流<br>Average forward current                                               | $T_c=100^{\circ}\text{C}$<br>(TO-220HF) | 整个器件<br>per device<br>单 侧<br>per diode | $I_{F(AV)}$   | 10<br>5       | A                  |
| 峰值单脉冲浪涌电流<br>Peak one Cycle Surge Forward Current(Non-Repetitive) $t=10\text{ms}$ |                                         |                                        | $I_{FSM}$     | 50            | A                  |
| 结温<br>Junction Temperature                                                        |                                         |                                        | $T_j$         | $-55\sim+150$ | $^{\circ}\text{C}$ |
| 储存温度<br>Storage temperature range                                                 |                                         |                                        | $T_{STG}$     | $-55\sim+150$ | $^{\circ}\text{C}$ |

电特性 ELECTRICAL CHARACTERISTICS ( $T_c=25^{\circ}\text{C}$  unless otherwise specified)

| 项 目<br>Parameter | 测试条件<br>Tests conditions                                              |                                                      | 最小值<br>Value(min) | 典型值<br>Value(typ) | 最大值<br>Value(max) | 单位<br>Unit |
|------------------|-----------------------------------------------------------------------|------------------------------------------------------|-------------------|-------------------|-------------------|------------|
| V <sub>RRM</sub> | I <sub>R</sub> =50μA                                                  |                                                      | 200               |                   |                   | V          |
| I <sub>R</sub>   | T <sub>j</sub> =25℃                                                   | V <sub>R</sub> =V <sub>RRM</sub>                     |                   |                   | 10                | μA         |
|                  | T <sub>j</sub> =125℃                                                  |                                                      |                   |                   | 200               | μA         |
| V <sub>F</sub>   | T <sub>j</sub> =25℃                                                   | I <sub>F</sub> =5A                                   |                   | 0.90              | 1.1               | V          |
|                  | T <sub>j</sub> =125℃                                                  |                                                      |                   | 0.86              |                   | V          |
| trr              | I <sub>F</sub> =1A, V <sub>R</sub> =30V, di <sub>F</sub> /dt=-200A/μs |                                                      |                   | 20                | 30                | ns         |
|                  | T <sub>j</sub> =25℃                                                   | I <sub>F</sub> =5A                                   |                   | 28                |                   | ns         |
|                  | T <sub>j</sub> =125℃                                                  | V <sub>R</sub> =100V<br>di <sub>F</sub> /dt=-200A/μs |                   | 40                |                   | ns         |

## 热特性 Thermal Characteristics

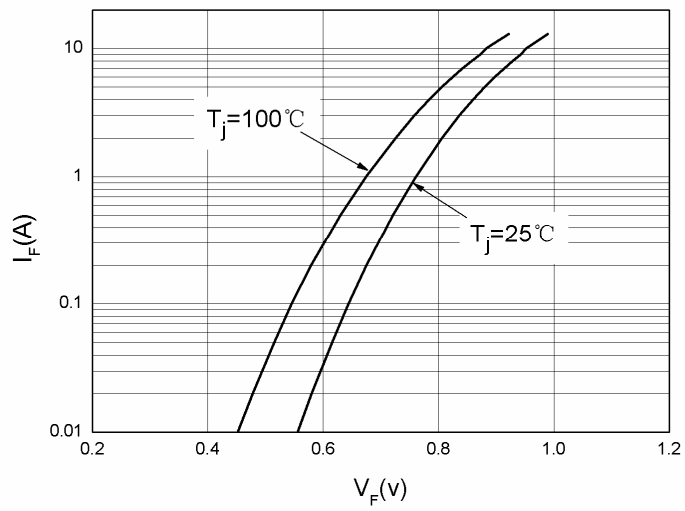
| 项 目<br>Parameter                                    | 符 号<br>Symbol | 最小值<br>Value(min) | 最大值<br>Value(max) | 单 位<br>Unit                 |
|-----------------------------------------------------|---------------|-------------------|-------------------|-----------------------------|
| 结到管壳的热阻<br>Thermal resistance from junction to case | $R_{th(j-c)}$ |                   | 4.0               | $^{\circ}\text{C}/\text{W}$ |



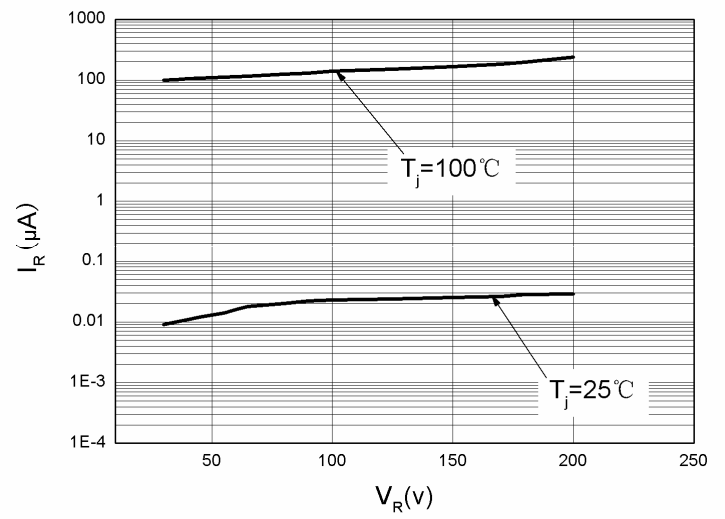


## 特征曲线 Electrical characteristics (curves)

IF vs VF



IR vs VR



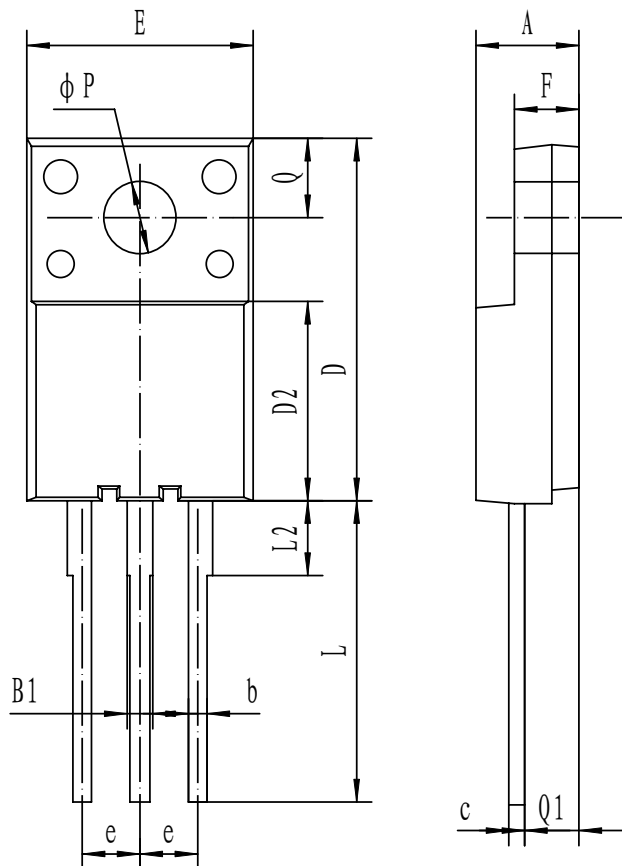


10F20HF3

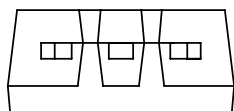
外形尺寸 PACKAGE MECHANICAL DATA

TO-220HF

单位 Unit : mm



| 符 号<br>Symbol | Min       | Max   |
|---------------|-----------|-------|
| A             | 4.0       | 5.0   |
| B1            | 0.87      | 1.27  |
| b             | 0.72      | 0.92  |
| c             | 0.5       | 0.70  |
| 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             | 12.0      | 14.0  |
| L2            | 3.1       | 3.5   |
| ΦP            | 3.0       | 3.4   |
| Q             | 3.15      | 3.55  |
| Q1            | 2.2       | 2.5   |



**注意事项**

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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。
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