



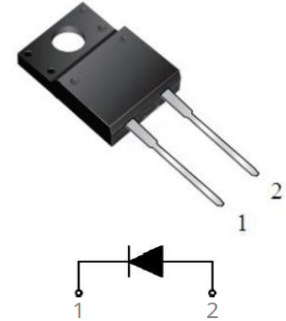
# 20F60HF

## 主要参数 MAIN CHARACTERISTICS

|           |       |
|-----------|-------|
| IF(AV)    | 20A   |
| VRRM      | 600 V |
| VF(typ)   | 1.5V  |
| trr (typ) | 30ns  |

## 封装 Package

TO-220HF-2L



## 用途

- 吸收回路
- 开关电源
- UPS
- 高频开关器件并联二极管

## APPLICATIONS

- Snubber diode
- Switch power supply
- UPS
- Antiparalle Diode for high frequency switching devices

## 产品特性

- 低功耗, 高效率
- 高浪涌电流
- 高可靠性
- 环保 (RoHS) 产品

## FEATURES

- Low power loss, high efficiency
- High surge current capability
- High reliability
- RoHS product

## 订货信息 ORDER MESSAGE

| 订货型号 Order codes      |                            | 印记<br>Marking | 封装<br>Package |
|-----------------------|----------------------------|---------------|---------------|
| 有卤-条管<br>Halogen-Tube | 无卤-条管<br>Halogen Free-Tube |               |               |
| 20F60HF-FL-B          | 20F60HF-FL-BR              | 20F60HF       | TO-220HF-2L   |

**绝对最大额定值 ABSOLUTE RATINGS (Tc=25°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 <sub>RRM</sub>   | 600          | V           |
| 正向平均整流电流<br>Average forward Current T <sub>C</sub> =100°C                   | I <sub>F(AV)</sub> | 20           | A           |
| 峰值单脉冲浪涌电流<br>Peak one Cycle Surge Forward<br>Current(Non-Repetitive) t=10ms | I <sub>FSM</sub>   | 200          | 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          |
| 安装扭矩 Torque (to heatsink)   | Torque             | 4.0-6.0      | Kg • cm     |

**电特性 ELECTRICAL CHARACTERISTICS (Tc=25°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>R</sub>   | I <sub>R</sub> =50μA  |                                  | 600                 | 700                 | -                   | V           |
| I <sub>R</sub>   | T <sub>j</sub> =25°C  | V <sub>R</sub> =V <sub>RRM</sub> | -                   | -                   | 10                  | μA          |
|                  | T <sub>j</sub> =125°C   |                                  | -                   | -                   | 200                 | μA          |
| V <sub>F</sub>   | T <sub>j</sub> =25°C  | I <sub>F</sub> =20A              | -                   | 1.5                 | 1.9                 | V           |
|                  | T <sub>j</sub> =125°C   |                                  | -                   | -                   | 1.7                 | V           |
| T <sub>rr</sub>  | I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A                              |                                  | -                   | 30                  | 45                  | ns          |
| T <sub>rr</sub>  |   |                                  | -                   | 101.5               | -                   | ns          |
| Q <sub>rr</sub>  | I <sub>F</sub> =20A, V <sub>R</sub> =400V, di <sub>F</sub> /dt=300A/μs<br>T <sub>j</sub> =25°C  |                                  | -                   | 237.27              | -                   | nc          |
| I <sub>RM</sub>  |   |                                  | -                   | 4.48                | -                   | A           |
| T <sub>rr</sub>  |   |                                  | -                   | 128.2               | -                   | ns          |
| Q <sub>rr</sub>  | I <sub>F</sub> =20A, V <sub>R</sub> =400V, di <sub>F</sub> /dt=300A/μs<br>T <sub>j</sub> =125°C |                                  | -                   | 854.34              | -                   | nc          |
| I <sub>RM</sub>  |   |                                  | -                   | 10.84               | -                   | A           |

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

| 项 目<br>Parameter                                  | 符 号<br>Symbol        | 最 大 值<br>Value(max) | 单 位<br>Unit |
|---|----------------------|---------------------|-------------|
| 结到管壳的热阻<br>Thermal Resistance Junction to Case    | R <sub>th(j-c)</sub> | 3.5                 | °C/W        |
| 结到环境的热阻<br>Thermal Resistance Junction to ambient | R <sub>th(j-A)</sub> | 60                  | °C/W        |





### 特征曲线 ELECTRICAL CHARACTERISTICS (curves)

Fig.1 TYPICAL FORWARD CHARACTERISTICS

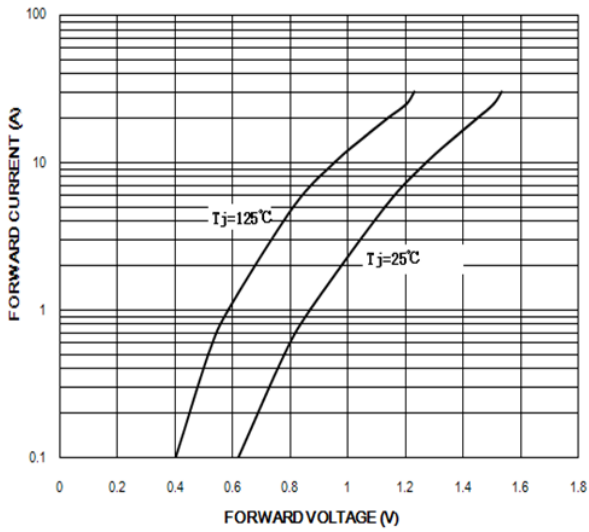


Fig.2 TYPICAL REVERSE CHARACTERISTICS

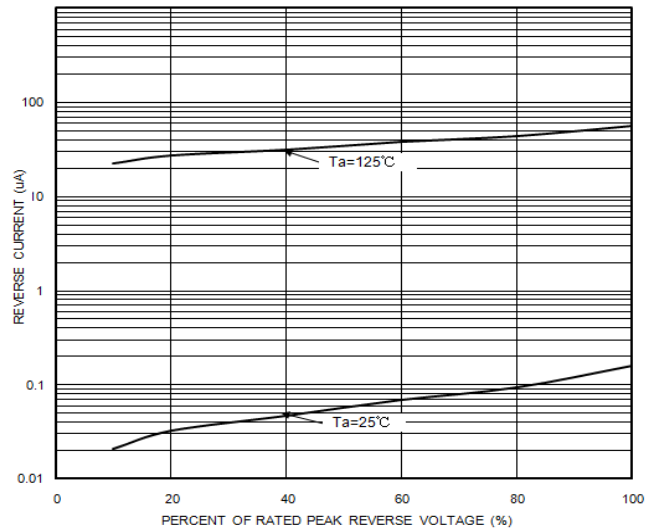


Fig.3 TYPICAL JUNCTION CAPACITANCE

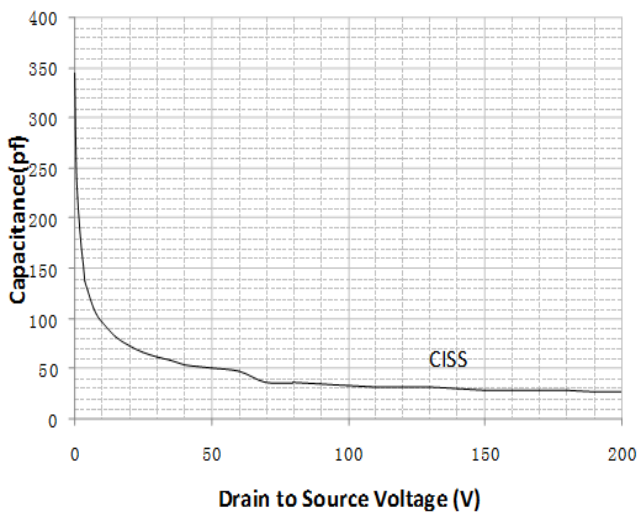
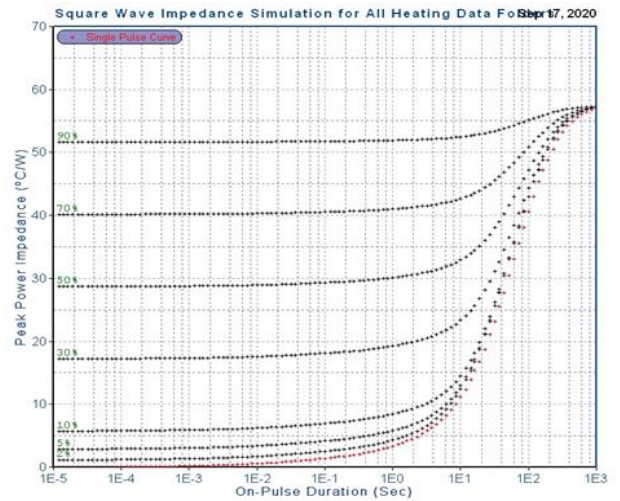
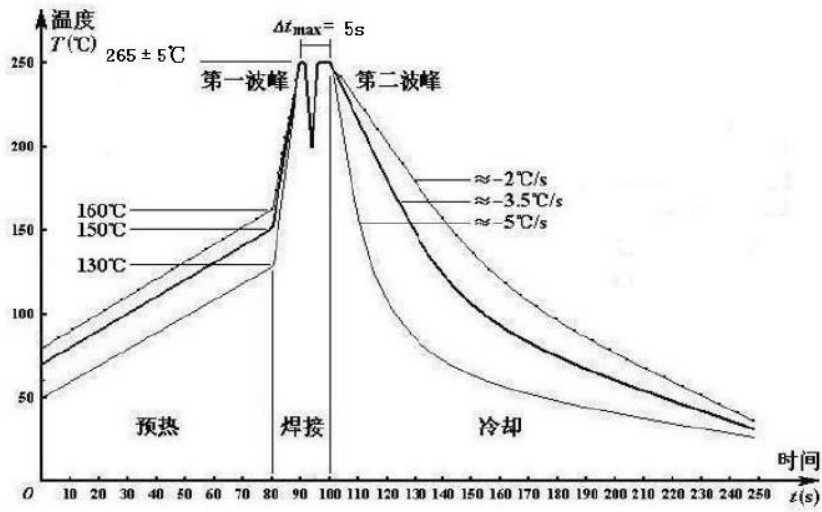


Fig.4 Transient Thermal Response Curve  $R_{th(j-A)}$



## 焊接曲线

## wave soldering

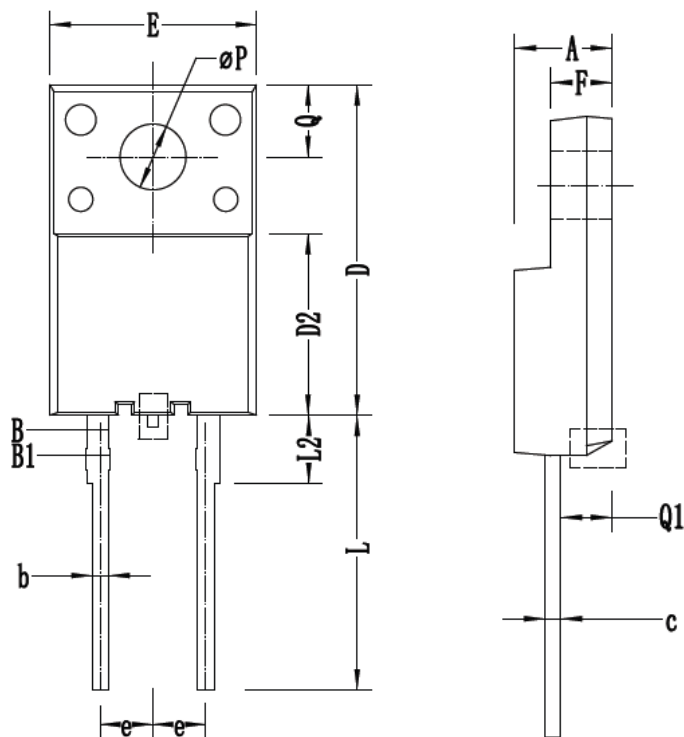




外形尺寸 PACKAGE MECHANICAL DATA

**TO-220HF2L**

单位 Unit : mm



| mm     |         |       |
|--------|---------|-------|
| SYMBOL | MIN     | MAX   |
| A      | 4.00    | 5.00  |
| B1     | 0.87    | 1.27  |
| B      | 0.82    | 1.22  |
| b      | 0.72    | 0.92  |
| c      | 0.50    | 0.70  |
| D      | 15.00   | 16.50 |
| D2     | 7.80    | 9.40  |
| E      | 9.62    | 10.62 |
| e      | 2.54TYP |       |
| F      | 2.30    | 3.30  |
| L      | 12.00   | 14.00 |
| L2     | 3.10    | 3.50  |
| ΦP     | 3.00    | 3.40  |
| Q      | 3.15    | 3.55  |
| Q1     | 2.20    | 2.50  |

注:

1. 虚框区域表示: 塑封体下方有、无余留, 塑封体背面有、无台阶, 均为我司受控外形;





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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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