



# 30F60UA3

## 主要参数 MAIN CHARACTERISTICS

|                |        |
|----------------|--------|
| $I_{F(AV)}$    | 15×2 A |
| $V_{RRM}$      | 600 V  |
| $V_F(typ)$     | 1.95V  |
| $t_{rr} (typ)$ | 28ns   |

## 用途

- UPS
- 开关电源
- PFC
- 逆变焊机

## APPLICATIONS

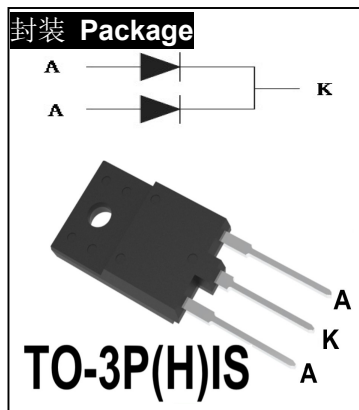
- UPS
- Switch power supply
- PFC
- Inversion Welder

## 产品特性

- 低正向压降
- 低 IRM 和 Qrr
- 高可靠性
- 环保（RoHS）产品

## FEATURES

- Low Forward Voltage
- Low IRM and reverse recovery charge
- 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 |                |                |
| 30F60UA3-GA-B         | 30F60UA3-GA-BR             | 30F60UA3       | TO-3P(H)IS     |



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                           |             | $V_{RRM}$     | 600          | V                  |
| 最大反向工作峰值电压<br>Working Peak Reverse Voltage                              |             | $V_{RWM}$     | 600          | V                  |
| 平均正向整流电流 $T_c=100^{\circ}\text{C}$<br>Average Forward Rectified Current | Per Package | $I_{F(AV)}$   | 30           | A                  |
|                                                                         | Per Diode   |               | 15           |                    |
| 非重复浪涌正向电流<br>Non-Repetitive Surge Forward Current $t=8.3\text{ms}$      |             | $I_{FSM}$     | 160          | A                  |
| 最高工作结温<br>Maximum operating junction temperature                        |             | $T_j$         | 175          | $^{\circ}\text{C}$ |
| 储存温度<br>Storage temperature range                                       |             | $T_{STG}$     | -55~+175     | $^{\circ}\text{C}$ |

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

| 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℃                                                    | V <sub>R</sub> =V <sub>RRM</sub> |                   |                   | 10                | μA         |
|                  | T <sub>j</sub> =150℃                                                   |                                  |                   | 40                | 400               | μA         |
| V <sub>F</sub>   | T <sub>j</sub> =25℃                                                    | I <sub>F</sub> =15A              |                   | 1.95              | 2.2               | V          |
|                  | T <sub>j</sub> =150℃                                                   |                                  |                   | 1.4               | 1.7               | V          |
| C <sub>j</sub>   | V <sub>R</sub> = 4.0V, f = 1.0 MHz                                     |                                  |                   | 100               |                   | pF         |
| T <sub>rr</sub>  | I <sub>F</sub> =0.5A,I <sub>R</sub> =1.0A,I <sub>RR</sub> =0.25A       |                                  |                   | 24                | 30                | ns         |
| T <sub>rr</sub>  | I <sub>F</sub> =1A, V <sub>R</sub> =30V, di <sub>F</sub> /dt=-200A/μs  |                                  |                   | 28                | 45                | ns         |
| T <sub>rr</sub>  | I <sub>F</sub> =15A, V <sub>R</sub> =400V, di <sub>F</sub> /dt=100A/μs |                                  |                   | 120               |                   | ns         |
| I <sub>RM</sub>  | T <sub>j</sub> =125℃                                                   |                                  |                   | 3.1               | 5.0               | A          |

## 热特性 THERMAL CHARACTERISTICS

| 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 | Per Package | $R_{th(j-c)}$ | 2.7               | $^{\circ}\text{C}/\text{W}$ |
|                                                | Per Diode   |               | 3.5               |                             |





## 特征曲线 ELECTRICAL CHARACTERISTICS (curves)

Fig.1 TYPICAL FORWARD CHARACTERISTICS

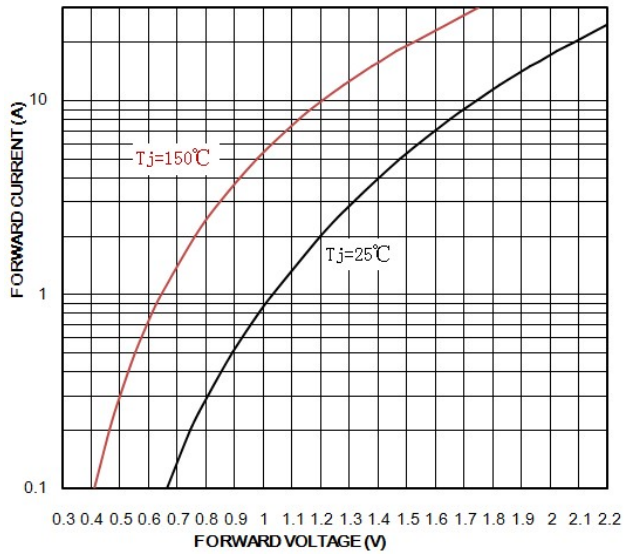


Fig.2 TYPICAL REVERSE CHARACTERISTICS

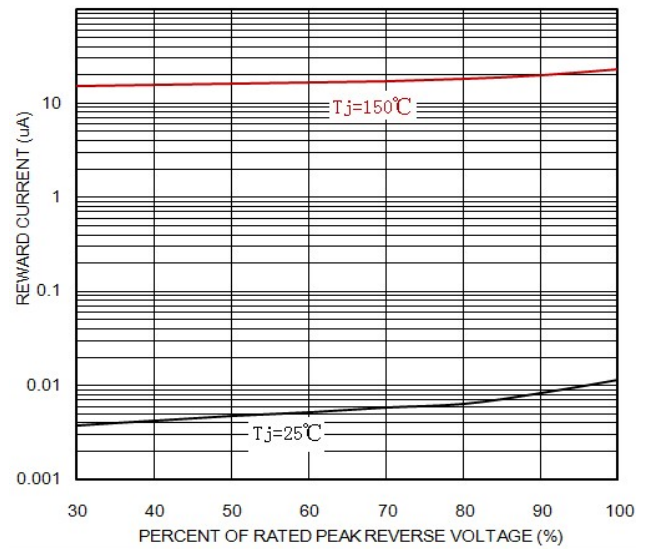


Fig.3 FORWARD CURRENT DERATING CURVE

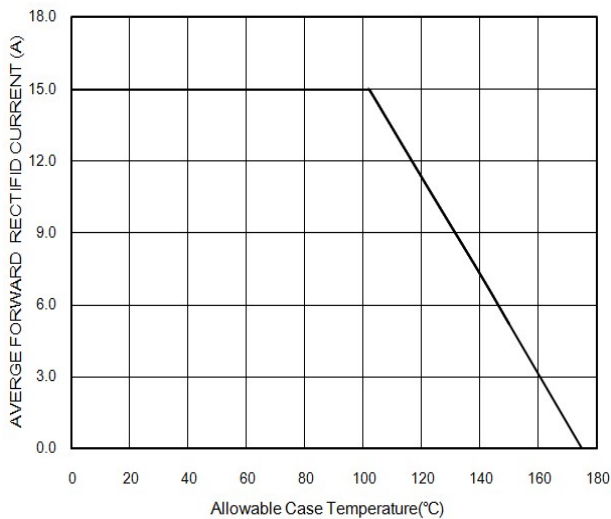
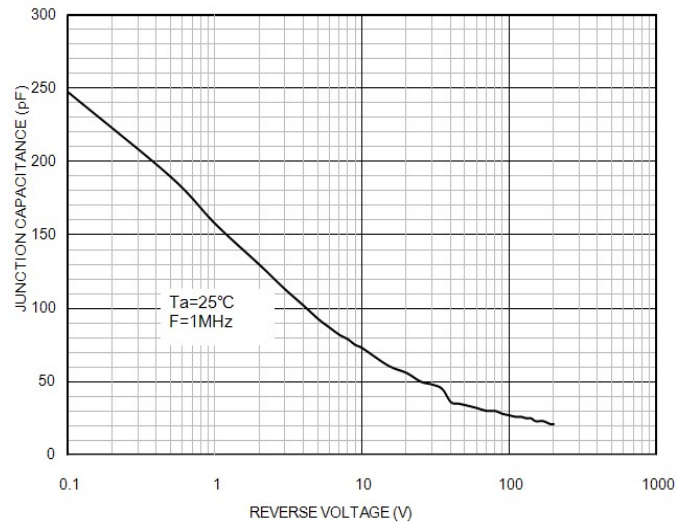
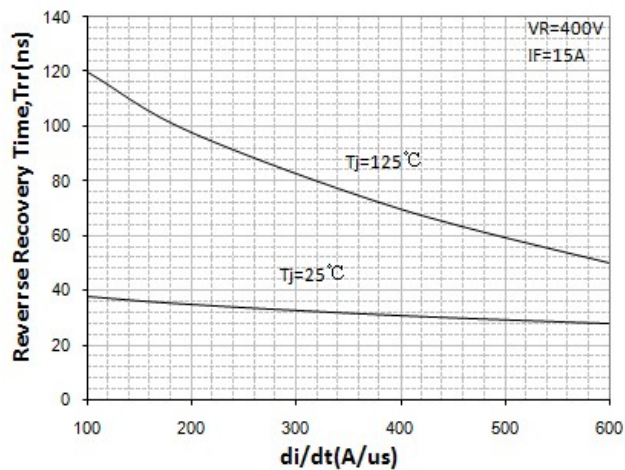
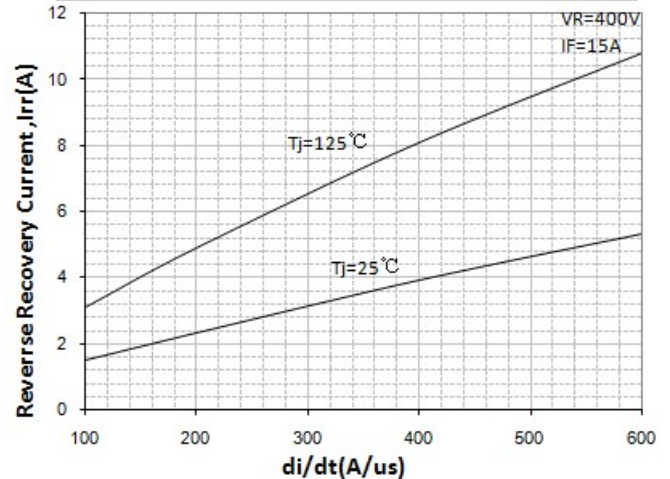


Fig.4 TYPICAL JUNCTION CAPACITANCE

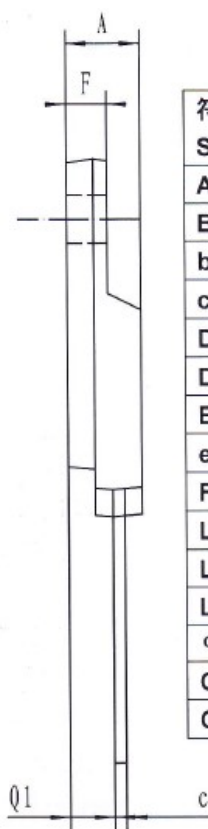
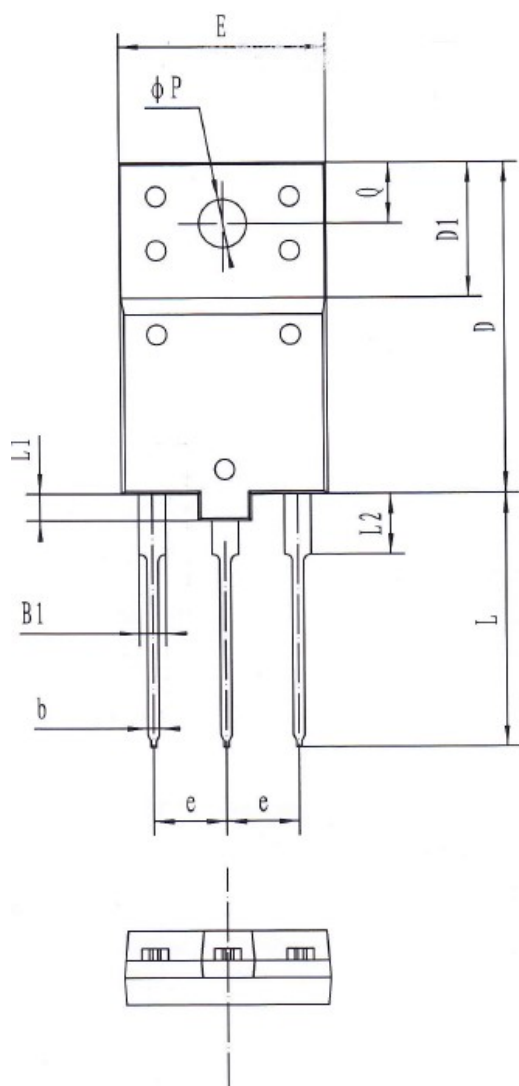
Fig.5 Reverse recovery time versus  $dI_F/dt$ Fig.6 Peak reverse recovery current versus  $dI_F/dt$ 



外形尺寸 PACKAGE MECHANICAL DATA

TO-3P(H)IS

单位 Unit : mm



| 符 号<br>Symbol | Min        | Max  |
|---------------|------------|------|
| A             | 5.2        | 5.8  |
| B1            | 1.8        | 2.2  |
| b             | 0.75       | 1.05 |
| c             | 0.8        | 1.1  |
| D             | 24.0       | 25.0 |
| D1            | 9.8        | 10.2 |
| E             | 15.0       | 16.0 |
| e             | 5.45 (typ) |      |
| F             | 2.7        | 3.3  |
| L             | 18.5       | 19.5 |
| L1            | 1.8        | 2.2  |
| L2            | 4.3        | 4.7  |
| ΦP            | 3.4        | 3.8  |
| Q             | 4.3        | 4.7  |
| Q1            | 3.1        | 3.5  |





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