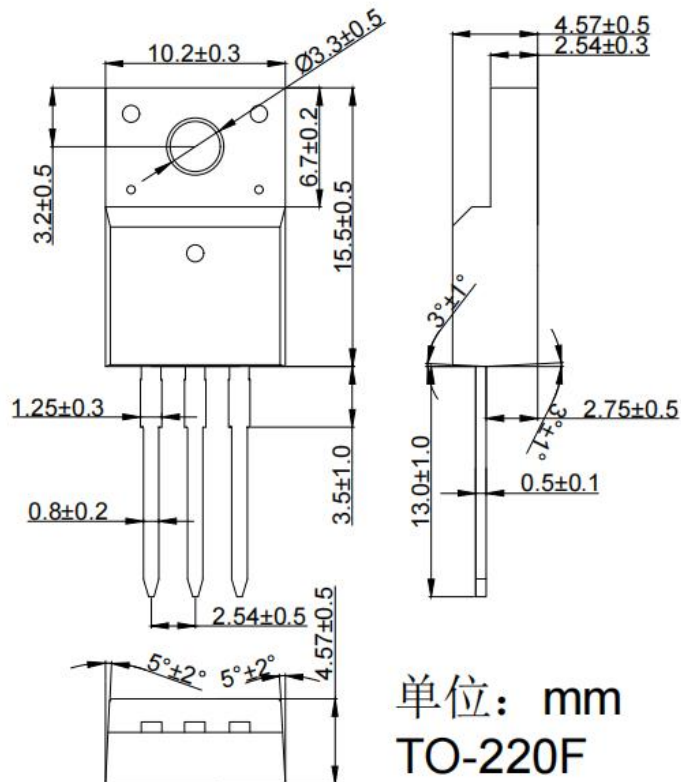
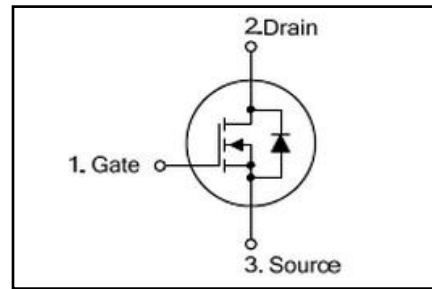
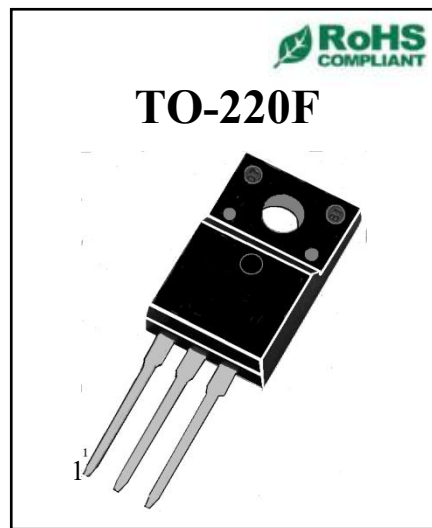


◆ **Features:**

- ◇ Fast switching speed  
开关速度快
- ◇ High input impedance and low level drive  
高输入阻抗和低电平驱动
- ◇ Avalanche energy tested  
雪崩能量测试
- ◇ Improved dv/dt capability, high ruggedness  
提高 dv/dt 能力, 高耐用性

◆ **Applications**

- ◇ High efficiency switch mode power supplies  
高效率开关电源
- ◇ Power factor correction  
功率因数校正
- ◇ Electronic lamp ballast  
电子整流器



### ◆ Absolute Maximum Ratings (Tc=25°C)

| Symbol           | Parameters                                       | Ratings | Unit |
|------------------|--------------------------------------------------|---------|------|
| V <sub>DSS</sub> | Drain-Source Voltage<br>漏源电压                     | 700     | V    |
| V <sub>GS</sub>  | Gate-Source Voltage-Continuous<br>栅源电压           | ±30     | V    |
| I <sub>D</sub>   | Drain Current-Continuous (Note 2)<br>漏极持续电流      | 10      | A    |
| I <sub>DM</sub>  | Drain Current-Single Plused (Note 1)<br>漏极单次脉冲电流 | 38      | A    |
| P <sub>D</sub>   | Power Dissipation (Note 2)<br>功率损耗               | 50      | W    |
| T <sub>j</sub>   | Max.Operating junction temperature<br>最大结温       | 150     | °C   |

### ◆ Electrical characteristics (Tc=25°C unless otherwise noted)

| Symbol                        | Parameters                                        | Min | Typ | Max | Units | Conditions                                                          |
|-------------------------------|---------------------------------------------------|-----|-----|-----|-------|---------------------------------------------------------------------|
| <b>Static Characteristics</b> |                                                   |     |     |     |       |                                                                     |
| B <sub>VDS</sub>              | Drain-Source Breakdown Voltage<br>漏极击穿电压 (Note 1) | 700 | --  | --  | V     | I <sub>D</sub> =250μA,<br>V <sub>GS</sub> =0V, T <sub>J</sub> =25°C |
| V <sub>GS(th)</sub>           | Gate Threshold Voltage<br>栅极开启电压                  | 2.0 | --  | 4.0 | V     | V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA            |
| R <sub>DS(on)</sub>           | Drain-Source On-Resistance<br>漏源导通电阻              | --  | 1.0 | --  | Ω     | V <sub>GS</sub> =10V, I <sub>D</sub> =1A                            |
| I <sub>GSS</sub>              | Gate-Body Leakage Current<br>栅极漏电流                | --  | --  | ±90 | nA    | V <sub>GS</sub> =±32V, V <sub>DS</sub> =0                           |
| G <sub>fs</sub>               | Forward Transconductance<br>正向跨导                  | --  | 9.5 | --  | S     | V <sub>DS</sub> =15V, I <sub>D</sub> =5A                            |

| Switching Characteristics |                                                                          |    |             |            |               |                                                       |
|---------------------------|--------------------------------------------------------------------------|----|-------------|------------|---------------|-------------------------------------------------------|
| $T_{d(on)}$               | Turn-On Delay Time<br>开启延迟时间                                             | -- | <b>23</b>   | --         | ns            | $V_{DS}=325V, I_D=10A,$<br>$R_G=25\Omega$ (Note 2)    |
| $T_r$                     | Rise Time<br>上升时间                                                        | -- | <b>25</b>   | --         | ns            |                                                       |
| $T_{d(off)}$              | Turn-Off Delay Time<br>关闭延迟时间                                            | -- | <b>64</b>   | --         | ns            |                                                       |
| $T_f$                     | Fall Time<br>下降时间                                                        | -- | <b>28</b>   | --         | ns            |                                                       |
| $Q_g$                     | Total Gate Charge<br>栅极总电荷                                               | -- | <b>44</b>   | --         | nC            | $V_{DS}=520V,$<br>$V_{GS}=10V,$<br>$I_D=10A$ (Note 2) |
| $Q_{gs}$                  | Gate-Source Charge<br>栅源极电荷                                              | -- | <b>6.7</b>  | --         | nC            |                                                       |
| $Q_{gd}$                  | Gate-Drain Charge<br>栅漏极电荷                                               | -- | <b>18.5</b> | --         | nC            |                                                       |
| Dynamic Characteristics   |                                                                          |    |             |            |               |                                                       |
| $C_{iss}$                 | Input Capacitance<br>输入电容                                                | -- | <b>1570</b> | --         | pF            | $V_{DS}=25V, V_{GS}=0,$<br>$f=1MHz$                   |
| $C_{oss}$                 | Output Capacitance<br>输出电容                                               | -- | <b>136</b>  | --         | pF            |                                                       |
| $C_{rss}$                 | Reverse Transfer Capacitance<br>反向传输电容                                   | -- | <b>10.5</b> | --         | pF            |                                                       |
| $I_S$                     | Continuous Drain-Source Diode<br>Forward Current (Note 2)<br>二极管导通正向持续电流 | -- | --          | <b>10</b>  | A             |                                                       |
| $V_{SD}$                  | Diode Forward On-Voltage<br>二极管正向导通电压                                    | -- | --          | <b>1.4</b> | V             | $I_S=10A, V_{GS}=0$                                   |
| $R_{th(j-c)}$             | Thermal Resistance, Junction to<br>Case<br>结到外壳的热阻                       | -- | --          | <b>2.5</b> | $^{\circ}C/W$ |                                                       |

Note 1: Repetitive Rating : Pulse width limited by maximum junction temperature

Note 2: Pulse test: PW  $\leq$  300us , duty cycle  $\leq$  2%.