

### Absolute Maximum Ratings (Ta = 25°C)

| Symbol                    | Ratings        | Unit |
|---------------------------|----------------|------|
| V <sub>DSS</sub>          | 200            | V    |
| V <sub>GSS</sub>          | ±20            | V    |
| I <sub>D</sub>            | ±18            | A    |
| I <sub>D</sub> (pulse) *1 | ±72            | A    |
| P <sub>D</sub>            | 35 (Tc = 25°C) | W    |
| E <sub>AS</sub> *2        | 120            | mJ   |
| I <sub>AS</sub>           | 18             | A    |
| T <sub>ch</sub>           | 150            | °C   |
| T <sub>stg</sub>          | -55 to +150    | °C   |

\*1: P<sub>w</sub> ≤ 100μs, duty cycle ≤ 1%

\*2: V<sub>DD</sub> = 25V, L = 650μH, I<sub>L</sub> = 18A, unclamped, R<sub>G</sub> = 50Ω, See Figure 1 on Page 5.

### Electrical Characteristics (Ta = 25°C)

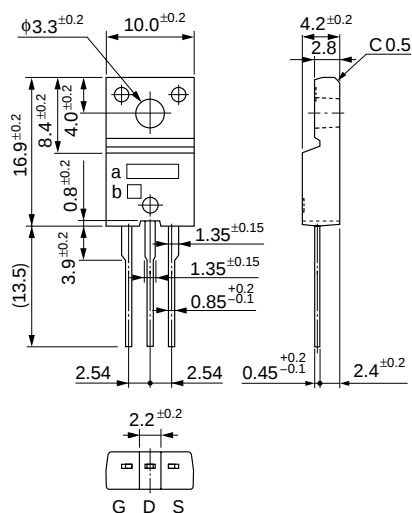
| Symbol               | Ratings |     |      | Unit | Conditions                                                                                                          |
|----------------------|---------|-----|------|------|---------------------------------------------------------------------------------------------------------------------|
|                      | min     | typ | max  |      |                                                                                                                     |
| V <sub>(BR)DSS</sub> | 200     |     |      | V    | I <sub>D</sub> = 100μA, V <sub>GS</sub> = 0V                                                                        |
| I <sub>GSS</sub>     |         |     | ±100 | nA   | V <sub>GS</sub> = ±20V                                                                                              |
| I <sub>DSS</sub>     |         |     | 100  | μA   | V <sub>DS</sub> = 200V, V <sub>GS</sub> = 0V                                                                        |
| V <sub>TH</sub>      | 2.0     |     | 4.0  | V    | V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA                                                                         |
| Re <sub>(yfs)</sub>  | 7       | 11  |      | S    | V <sub>DS</sub> = 10V, I <sub>D</sub> = 9A                                                                          |
| R <sub>DS(on)</sub>  |         | 130 | 175  | mΩ   | V <sub>GS</sub> = 10V, I <sub>D</sub> = 9A                                                                          |
| C <sub>iss</sub>     |         | 850 |      | pF   | V <sub>DS</sub> = 10V, f = 1.0MHz, V <sub>GS</sub> = 0V                                                             |
| C <sub>oss</sub>     |         | 550 |      | pF   |                                                                                                                     |
| C <sub>rss</sub>     |         | 250 |      | pF   |                                                                                                                     |
| t <sub>d(on)</sub>   |         | 20  |      | ns   | I <sub>D</sub> = 9A, V <sub>DD</sub> ÷ 100V, R <sub>L</sub> = 11.1Ω, V <sub>GS</sub> = 10V, See Figure 2 on Page 5. |
| t <sub>r</sub>       |         | 50  |      | ns   |                                                                                                                     |
| t <sub>d(off)</sub>  |         | 65  |      | ns   |                                                                                                                     |
| t <sub>f</sub>       |         | 80  |      | ns   |                                                                                                                     |
| V <sub>SD</sub>      |         | 1.0 | 1.5  | V    | I <sub>SD</sub> = 18A, V <sub>GS</sub> = 0V                                                                         |
| t <sub>rr</sub>      |         | 500 |      | ns   | I <sub>SD</sub> = ±100mA                                                                                            |

Not Recommended for New Designs

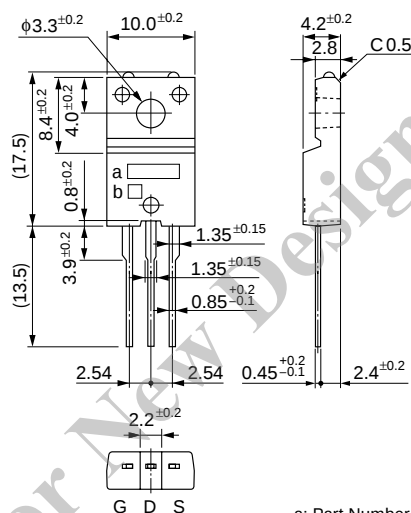
# External dimensions (Unit: mm)

## ① FM20 (TO-220F)

General product



UL approved product

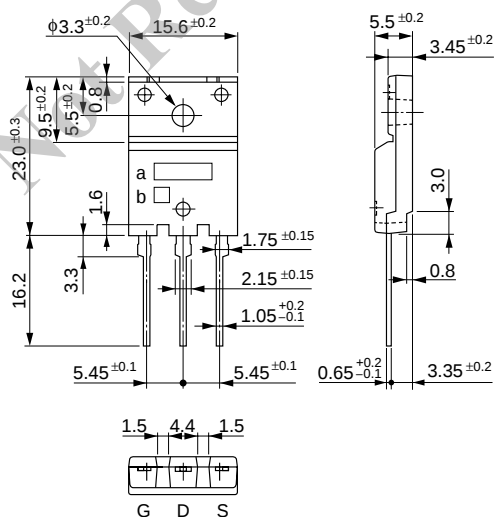


a: Part Number  
b: Lot Number

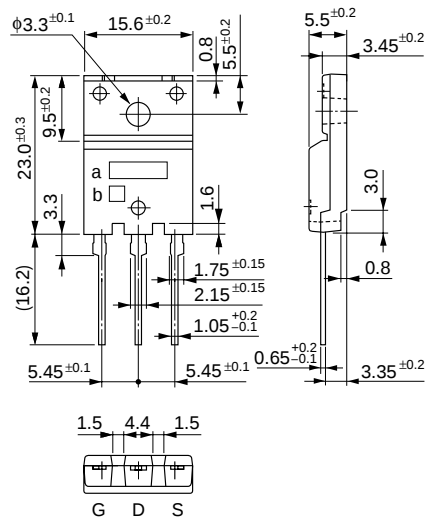
Weight: Approx 2.0g

## ② FM100 (TO-3PF)

General product



UL approved product



a: Part Number  
b: Lot Number

Weight: Approx 6.5g