

2SK3003

External dimensions 1 FM20

Absolute Maximum Ratings (Ta = 25°C)

| Symbol | Ratings | Unit |
|---------------------------|----------------------------|------|
| V _{DSS} | 200 | V |
| V _{GSS} | ±20 | V |
| I _D | ±18 | A |
| I _D (pulse) *1 | ±72 | A |
| P _D | 35 (T _c = 25°C) | W |
| E _{AS} *2 | 120 | mJ |
| I _{AS} | 18 | A |
| T _{ch} | 150 | °C |
| T _{stg} | -55 to +150 | °C |

* 1: P_w ≤ 100μs, duty cycle ≤ 1%

* 2: V_{DD} = 25V, L = 650μH, I_L = 18A, unclamped, R_G = 50Ω, See Figure 1 on Page 5.

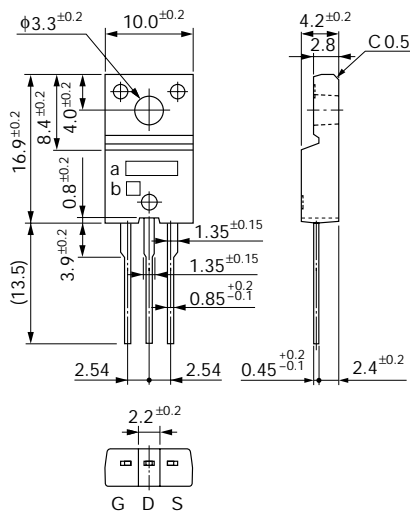
Electrical Characteristics (Ta = 25°C)

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

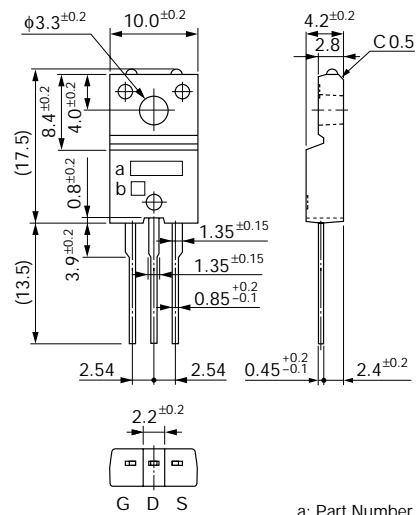
External dimensions (Unit: mm)

① FM20 (TO-220F)

General product



UL approved product

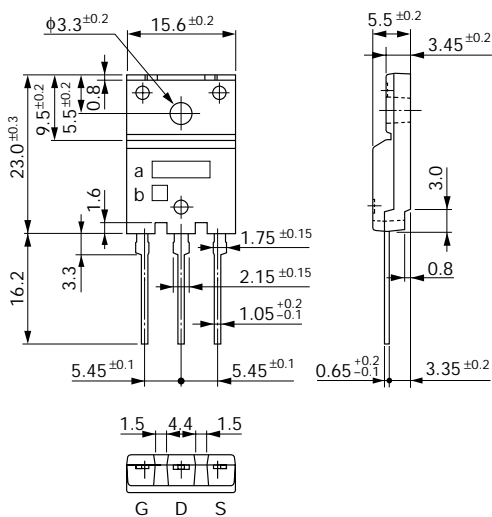


a: Part Number
b: Lot Number

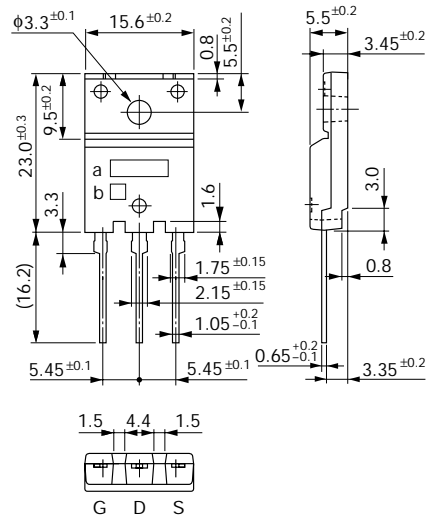
Weight: Approx 2.0g

② FM100 (TO-3PF)

General product



UL approved product



a: Part Number
b: Lot Number

Weight: Approx 6.5g