

GT25J102

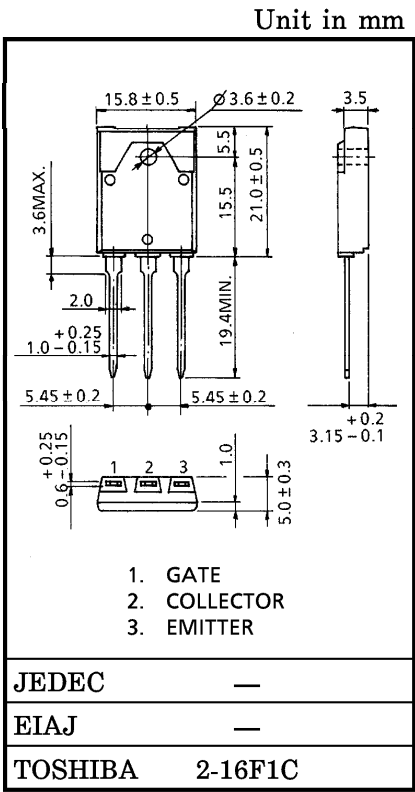
HIGH POWER SWITCHING APPLICATIONS

MOTOR CONTROL APPLICATIONS

- High Input Impedance
- High Speed :  $t_f=0.35\mu s$  (Max.)
- Low Saturation Voltage :  $V_{CE(sat)}=4.0V$  (Max.)
- Enhancement-Mode

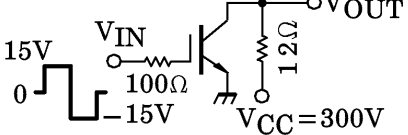
MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC                             |     | SYMBOL    | RATING   | UNIT |
|--------------------------------------------|-----|-----------|----------|------|
| Collector-Emitter Voltage                  |     | $V_{CES}$ | 600      | V    |
| Gate-Emitter Voltage                       |     | $V_{GES}$ | $\pm 20$ | V    |
| Collector Current                          | DC  | $I_C$     | 25       | A    |
|                                            | 1ms | $I_{CP}$  | 50       |      |
| Collector Power Dissipation<br>(Tc = 25°C) |     | $P_C$     | 80       | W    |
| Junction Temperature                       |     | $T_j$     | 150      | °C   |
| Storage Temperature Range                  |     | $T_{stg}$ | -55~150  | °C   |



Weight : 5.8g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC                       |               | SYMBOL        | TEST CONDITION                                                                       | MIN. | TYP. | MAX.      | UNIT    |
|--------------------------------------|---------------|---------------|--------------------------------------------------------------------------------------|------|------|-----------|---------|
| Gate Leakage Current                 |               | $I_{GES}$     | $V_{GE} = \pm 20V, V_{CE} = 0$                                                       | —    | —    | $\pm 500$ | nA      |
| Collector Cut-off Current            |               | $I_{CES}$     | $V_{CE} = 600V, V_{GE} = 0$                                                          | —    | —    | 1.0       | mA      |
| Gate-Emitter Cut-off Voltage         |               | $V_{GE(OFF)}$ | $V_{CE} = 5V, I_C = 25mA$                                                            | 3.0  | —    | 6.0       | V       |
| Collector-Emitter Saturation Voltage |               | $V_{CE(sat)}$ | $I_C = 25A, V_{GE} = 15V$                                                            | —    | 3.0  | 4.0       | V       |
| Input Capacitance                    |               | $C_{ies}$     | $V_{CE} = 10V, V_{GE} = 0, f = 1MHz$                                                 | —    | 1400 | —         | pF      |
| Switching Time                       | Rise Time     | $t_r$         |  | —    | 0.3  | —         | $\mu s$ |
|                                      | Turn-on Time  | $t_{on}$      |                                                                                      | —    | 0.4  | —         |         |
|                                      | Fall Time     | $t_f$         |                                                                                      | —    | 0.15 | 0.35      |         |
|                                      | Turn-off Time | $t_{off}$     |                                                                                      | —    | 0.5  | —         |         |

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