

TOSHIBA

GT25G102

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N-CHANNEL IGBT

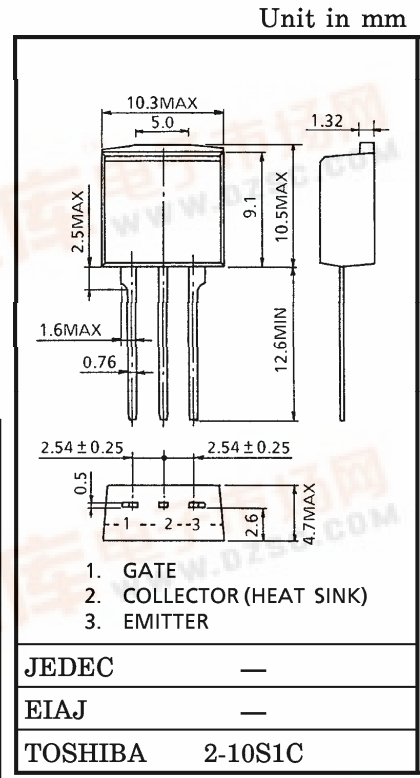
GT25G102

STROBE FLASH APPLICATIONS

- High Input Impedance
- Low Saturation Voltage : $V_{CE(sat)} = 8V$ (Max.) ($I_C = 150A$)
- Enhancement-Mode
- 12V Gate Drive

MAXIMUM RATINGS ($T_a = 25^\circ C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|--------------------|----------|------------|
| Collector-Emitter Voltage | V_{CES} | 400 | V |
| Gate-Emitter Voltage | V_{GES} | ± 20 | V |
| Collector Current | DC | I_C | 25 |
| | 1ms | I_{CP} | 150 |
| Collector Power Dissipation | $T_a = 25^\circ C$ | P_C | 1.3 |
| | $T_c = 25^\circ C$ | P_C | 75 |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^\circ C$ |



Weight : 1.5g

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|---------------|--|------|------|-----------|----------------|
| Gate Leakage Current | I_{GES} | $V_{GE} = \pm 20V, V_{CE} = 0$ | — | — | ± 100 | nA |
| Collector Cut-off Current | I_{CES} | $V_{CE} = 400V, V_{GE} = 0$ | — | — | 10 | μA |
| Gate-Emitter Cut-off Voltage | $V_{CE(OFF)}$ | $I_C = 1mA, V_{CE} = 5V$ | 2 | — | 5 | V |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 150A, V_{GE} = 12V$ (Pulsed) | — | 4 | 8 | V |
| Input Capacitance | C_{ies} | $V_{CE} = 10V, V_{GE} = 0, f = 1MHz$ | — | 2600 | — | pF |
| Switching Time | Rise Time | $V_{IN} : t_r \leq 100ns$ $t_f \leq 100ns$ Duty cycle $\leq 1\%$ | — | 0.1 | 0.5 | μs |
| | Turn-on Time | | — | 0.15 | 0.5 | |
| | Fall Time | | — | 4.0 | 6.0 | |
| | Turn-off Time | | — | 4.5 | 7.0 | |
| Thermal Resistance | $R_{th(j-c)}$ | — | — | — | 1.66 | $^\circ C / W$ |

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