

TOSHIBA INSULATED GATE BIPOLEAR TRANSISTOR SILICON N-CHANNEL IGBT

GT15G101

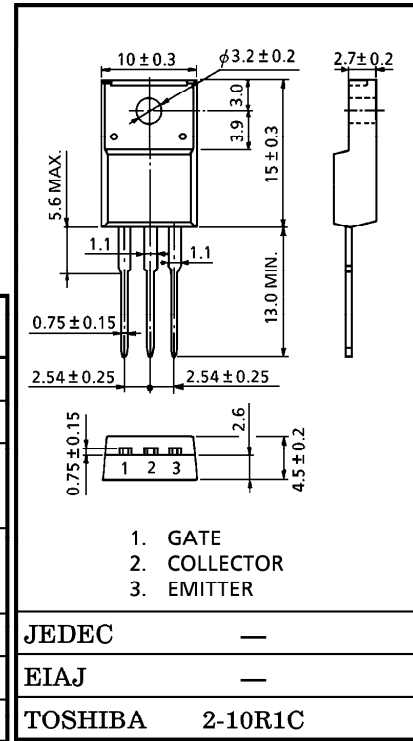
STROBE FLASH APPLICATIONS

- High Input Impedance
- Low Saturation Voltage : $V_{CE(sat)} = 8V$ (Max.) ($I_C = 170A$)
- Enhancement-Mode
- 20V Gate Drive

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|-----------|---------|------|
| Collector-Emitter Voltage | | V_{CES} | 400 | V |
| Gate-Emitter Voltage | | V_{GES} | ±25 | V |
| Collector Current | DC | I_C | 15 | A |
| | 1ms | I_{CP} | 170 | |
| Collector Power Dissipation | Ta = 25°C | P_C | 2.0 | W |
| | Tc = 25°C | P_C | 40 | |
| Junction Temperature | | T_j | 150 | °C |
| Storage Temperature Range | | T_{stg} | -55~150 | °C |
| Screw Torque | | — | 0.6 | N·m |

Unit in mm



Weight : 1.7g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT | |
|--------------------------------------|---------------|---------------|--|------|------|------|--------|-----|
| Gate Leakage Current | | I_{GES} | $V_{GE} = \pm 25V, V_{CE} = 0$ | — | — | ±100 | nA | |
| Collector Cut-off Current | | I_{CES} | $V_{CE} = 400V, V_{GE} = 0$ | — | — | 10 | μA | |
| Gate-Emitter Cut-off Voltage | | $V_{GE(OFF)}$ | $I_C = 1mA, V_{CE} = 5V$ | 4 | 5 | 7 | V | |
| Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ | $I_C = 170A, V_{GE} = 20V$ (Pulsed) | — | 5 | 8 | V | |
| Input Capacitance | | C_{ies} | $V_{CE} = 10V, V_{GE} = 0, f = 1MHz$ | — | 2000 | — | pF | |
| Switching Time | Rise Time | t_r | $V_{IN} : t_r \leq 100ns$ $t_f \leq 100ns$ Duty cycle $\leq 1\%$ | — | 0.1 | 0.5 | μs | |
| | Turn-on Time | t_{on} | | — | 0.15 | 0.5 | | |
| | Fall Time | t_f | | — | — | 4.0 | | 6.0 |
| | Turn-off Time | t_{off} | | — | — | 4.5 | | 7.0 |
| Thermal Resistance | | $R_{th(j-c)}$ | — | — | — | 3.12 | °C / W | |

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