

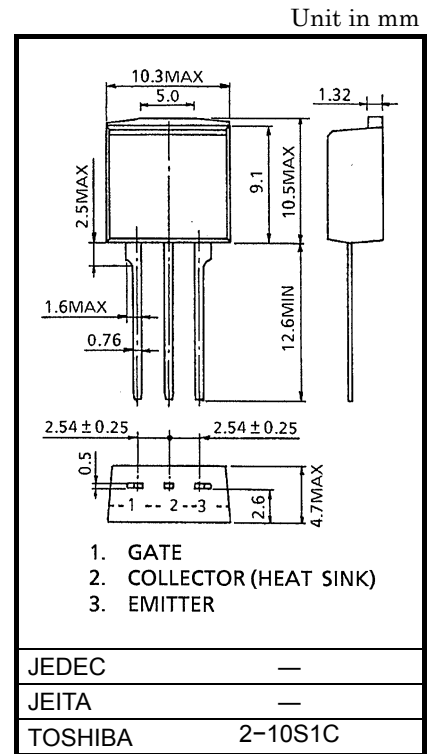
GT25G101

STROBE FLASH APPLICATIONS

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

ABSOLUTE 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 | 25 | A |
| | 1ms | I_{CP} | 170 | |
| Collector Power Dissipation | Ta=25°C | P_C | 1.3 | W |
| | Tc=25°C | P_C | 75 | |
| Junction Temperature | | T_j | 150 | °C |
| Storage Temperature Range | | T_{stg} | -55~150 | °C |

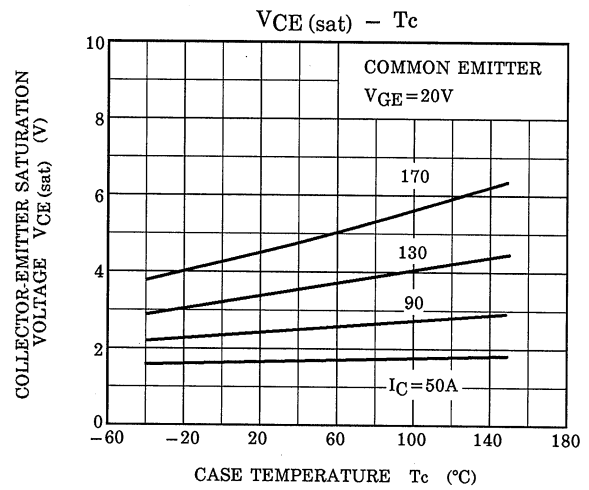
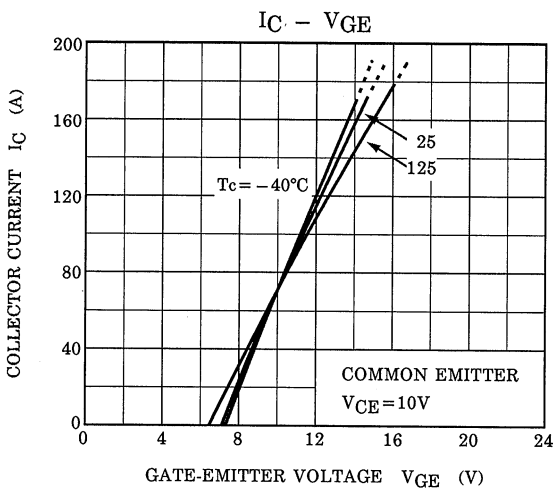
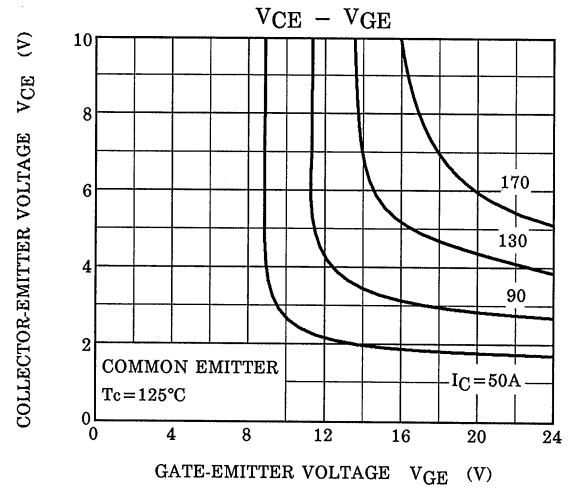
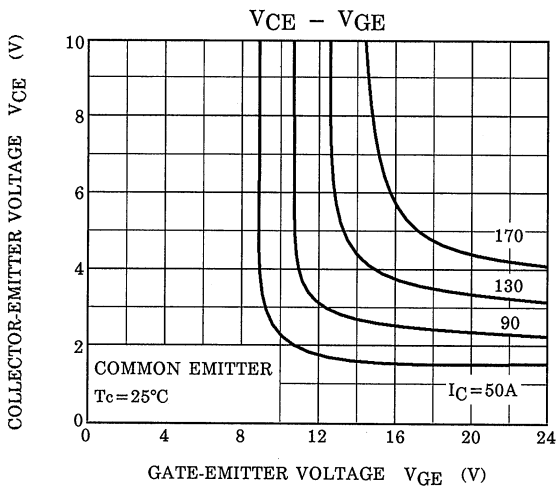
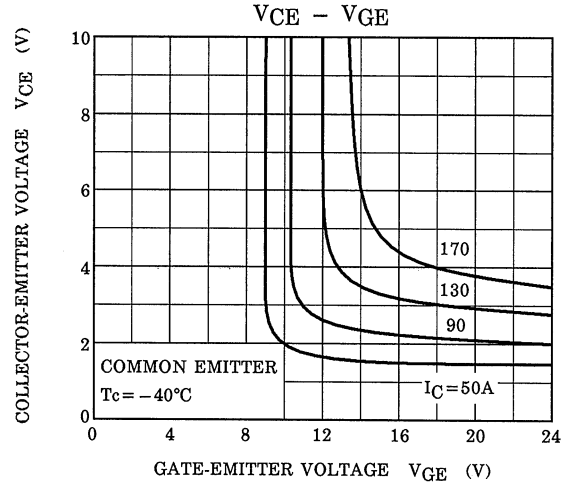
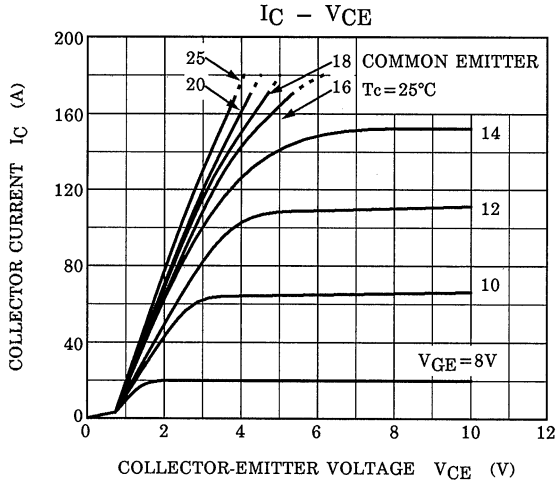


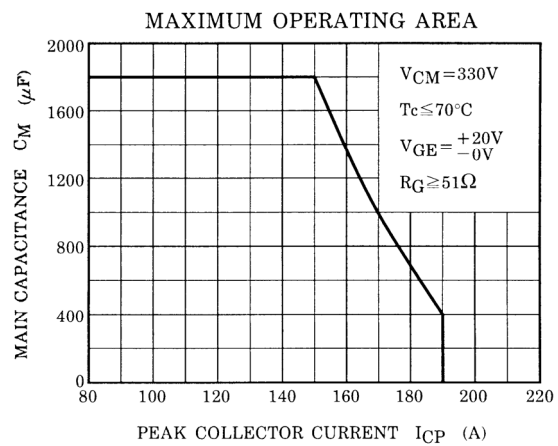
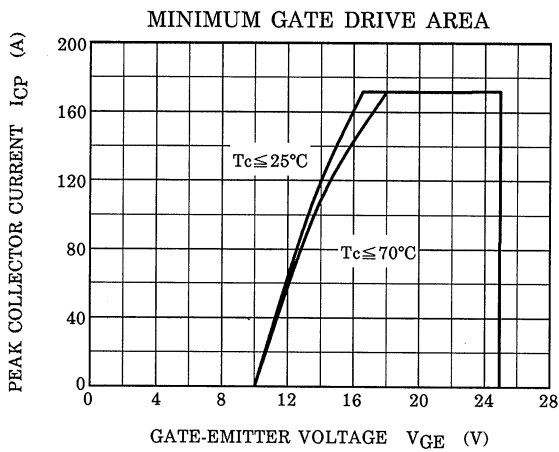
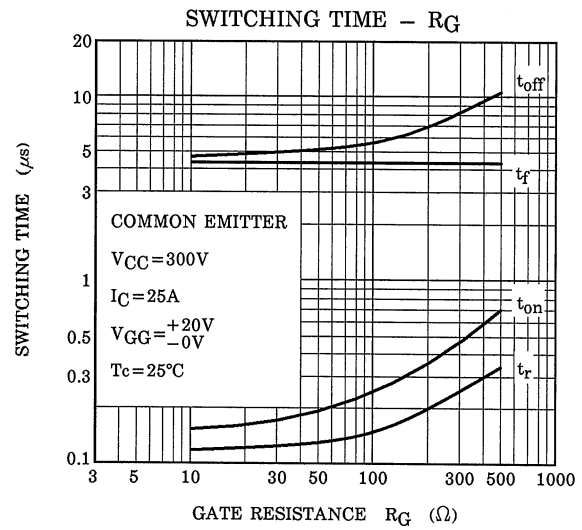
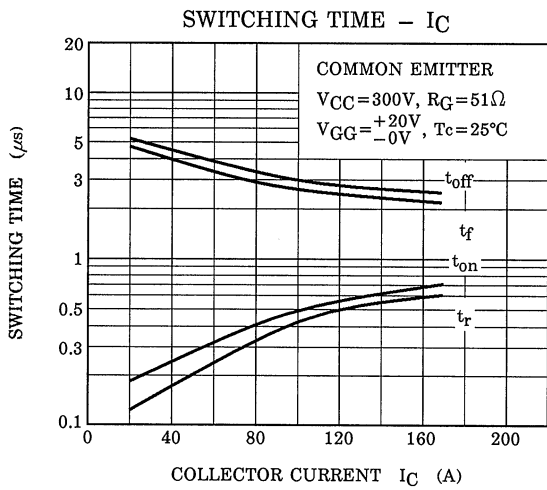
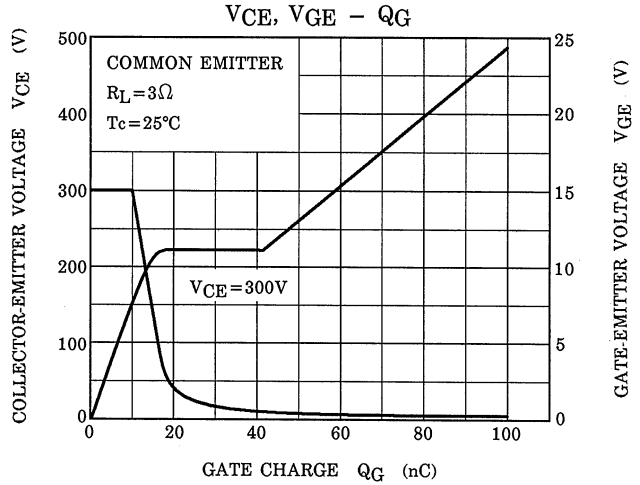
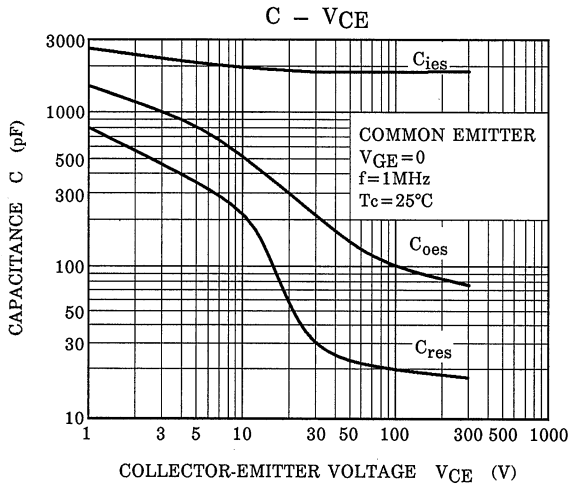
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

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 | | — | 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 | | $R_{th(j-c)}$ | — | — | — | 1.66 | °C / W |





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20070701-EN

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