

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON P CHANNEL IGBT

# GT20D201

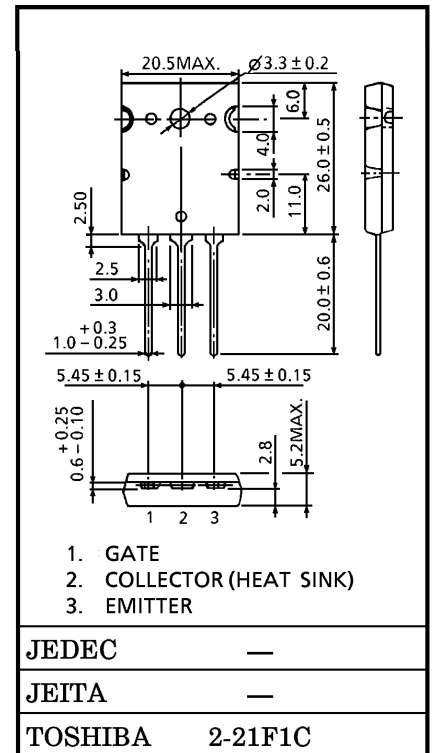
HIGH POWER AMPLIFIER APPLICATION

Unit in mm

- High Breakdown Voltage :  $V_{CES} = -250V$  (Min.)
- High Forward Transfer Admittance :  $|Y_{fe}| = 10S$  (Typ.)
- Complementary to GT20D101
- Enhancement-Mode

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

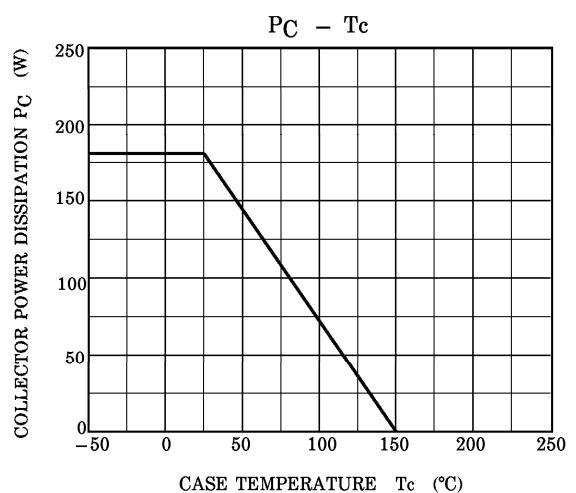
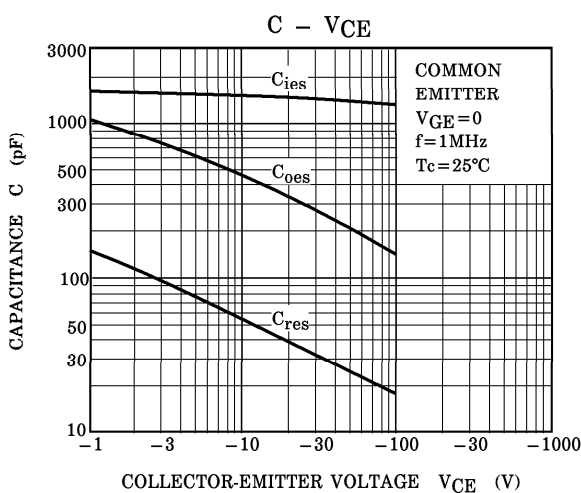
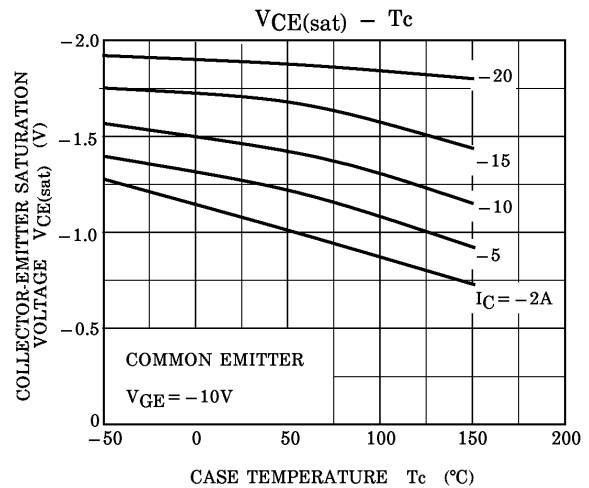
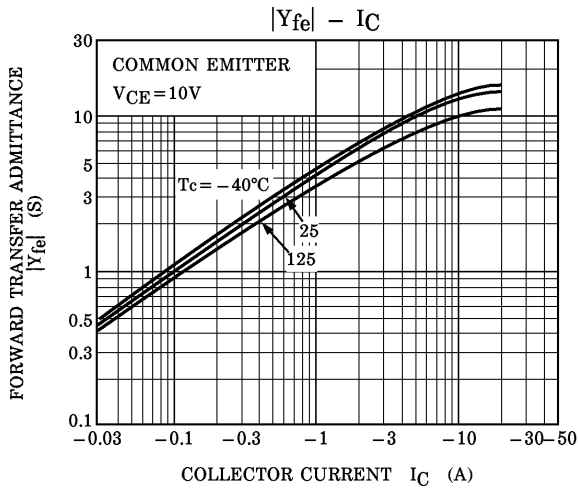
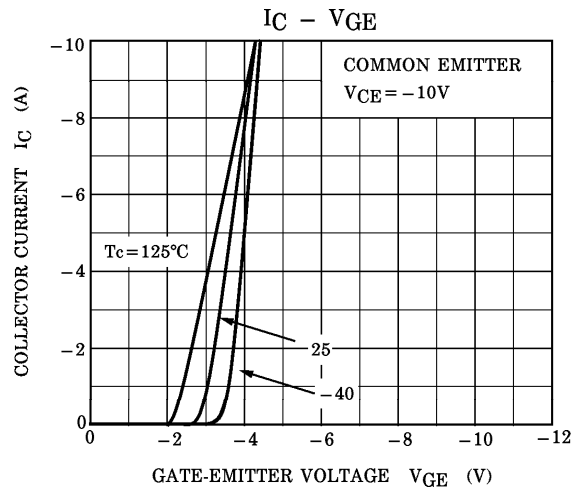
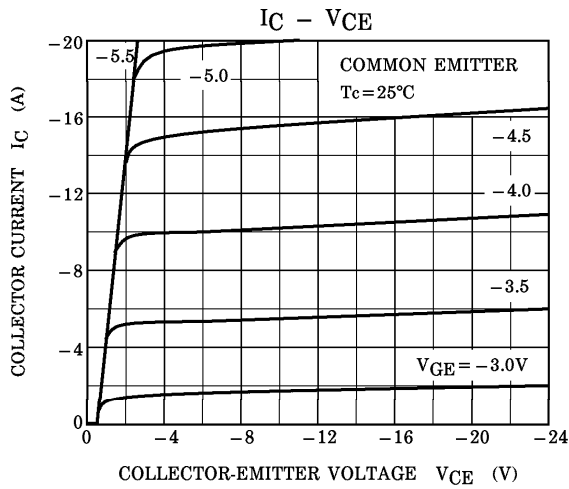
| CHARACTERISTIC  | SYMBOL    | RATING   | UNIT       |
|---|-----------|----------|------------|
| Collector-Emitter Voltage                             | $V_{CES}$ | -250     | V          |
| Gate-Emitter Voltage                                  | $V_{GES}$ | $\pm 20$ | V          |
| Collector Current                                     | $I_C$     | -20      | A          |
| Latch Up Current                                      | $I_L$     | -60      | A          |
| Collector Power Dissipation<br>( $T_c = 25^\circ C$ ) | $P_C$     | 180      | W          |
| Junction Temperature                                  | $T_j$     | 150      | $^\circ C$ |
| Storage Temperature Range                             | $T_{stg}$ | -55~150  | $^\circ C$ |

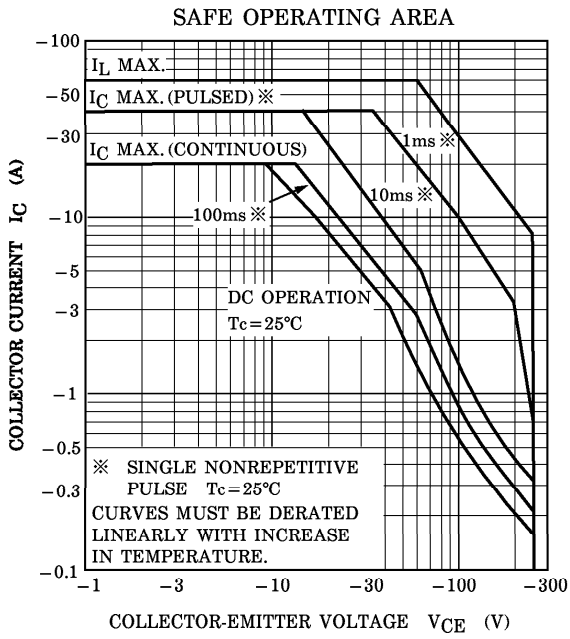


Weight : 9.75g

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

| CHARACTERISTIC                       | SYMBOL        | TEST CONDITION                         | MIN. | TYP. | MAX.     | UNIT    |
|--------------------------------------|---------------|--|------|------|----------|---------|
| Collector Cut-off Current            | $I_{CES}$     | $V_{CE} = -250V, V_{GE} = 0$           | —    | —    | -50      | $\mu A$ |
| Gate Leakage Current                 | $I_{GES}$     | $V_{GE} = \pm 20V, V_{CE} = 0$         | —    | —    | $\pm 10$ | $\mu A$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -15A, V_{GE} = -10V$            | —    | -1.7 | -3.0     | V       |
| Gate-Emitter Cut-off Voltage         | $V_{GE(OFF)}$ | $V_{CE} = -10V, I_C = -100mA$          | -1.4 | —    | -3.2     | V       |
| Forward Transfer Admittance          | $ Y_{fe} $    | $V_{CE} = -10V, I_C = -1A$             | —    | 3    | —        | S       |
|                                      | $ Y_{fe} $    | $V_{CE} = -10V, I_C = -10A$            | —    | 10   | —        |         |
| Input Capacitance                    | $C_{ies}$     | $V_{CE} = -10V, I_E = 0$<br>$f = 1MHz$ | —    | 1450 | —        | pF      |
| Output Capacitance                   | $C_{oes}$     | $V_{CE} = -10V, I_E = 0$<br>$f = 1MHz$ | —    | 450  | —        | pF      |
| Reverse Transfer Capacitance         | $C_{res}$     | $V_{CE} = -10V, I_E = 0$<br>$f = 1MHz$ | —    | 50   | —        | pF      |





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