

### Transistor

#### Silicon NPN Epitaxial Planar Type

#### Power Amplifier, Driver Stage Applications

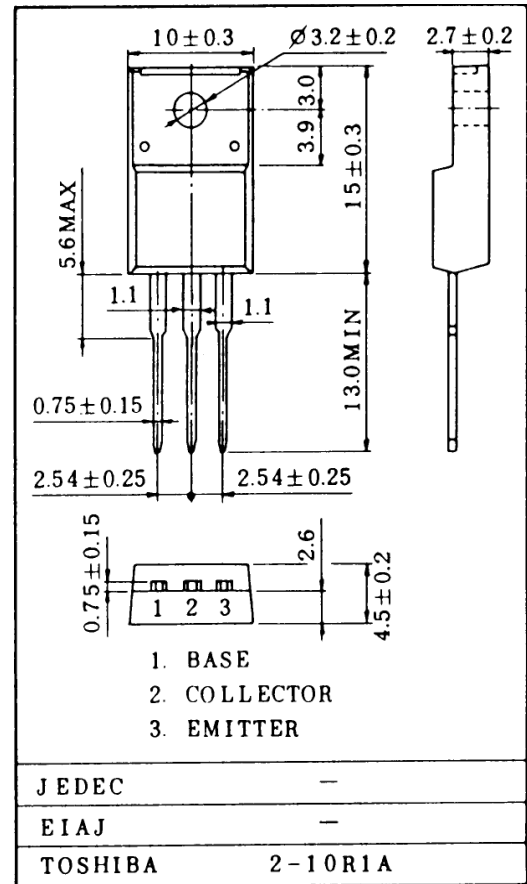
#### Features

- High Transistion:  $f_T = 100\text{MHz}$
- Complementary to 2SA1837

#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| CHARACTERISTIC              | SYMBOL                   | RATING    | UNIT             |
|-----------------------------|--------------------------|-----------|------------------|
| Collector-Base Voltage      | $V_{CB0}$                | 230       | V                |
| Collector-Emitter Voltage   | $V_{CE0}$                | 230       | V                |
| Collector-Base Voltage      | $V_{EB0}$                | 5         | V                |
| Collector Current           | $I_C$                    | 1         | mA               |
| Base Current                | $I_B$                    | 0.1       | mA               |
| Collector Power Dissipation | $T_a = 25^\circ\text{C}$ | $P_C$ 2.0 | mW               |
|                             | $T_C = 25^\circ\text{C}$ | 20        |                  |
| Junction Temperature        | $T_j$                    | 150       | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$                | -55 ~ 125 | $^\circ\text{C}$ |

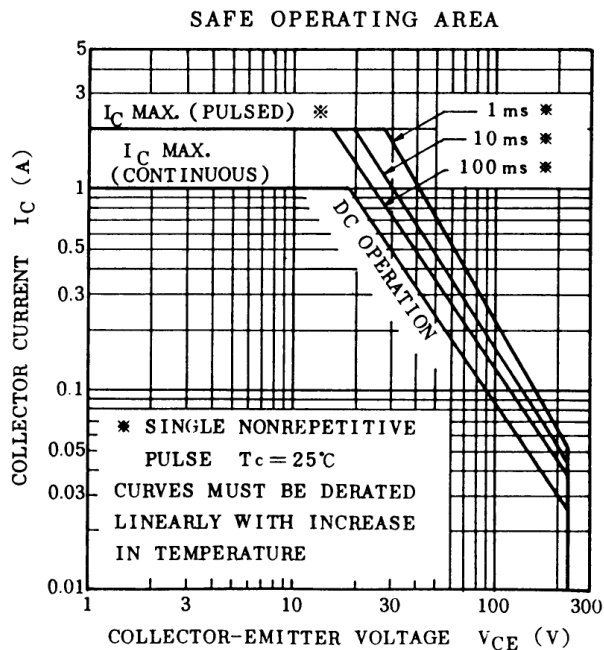
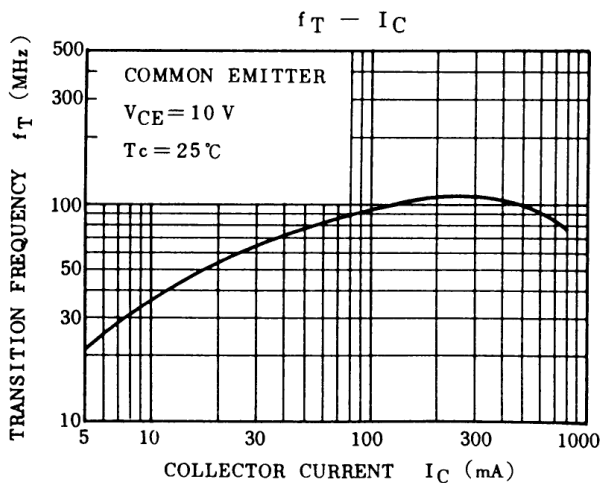
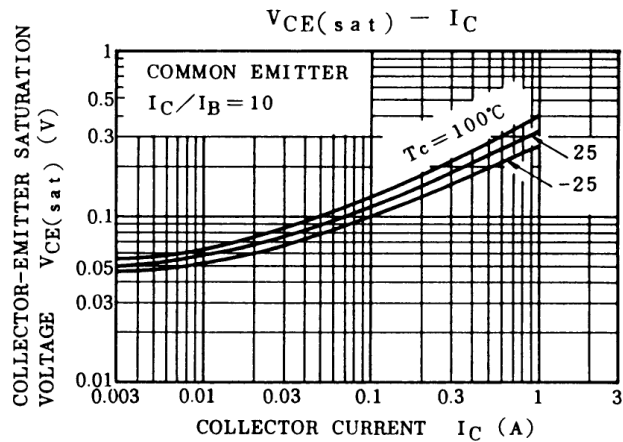
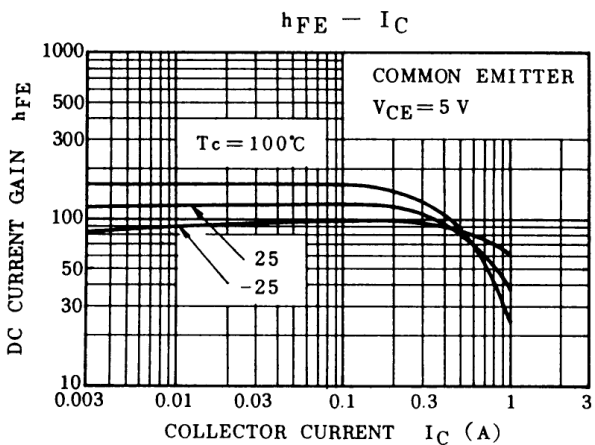
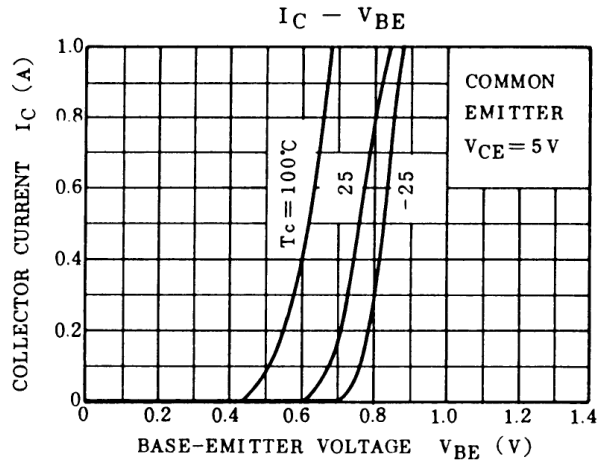
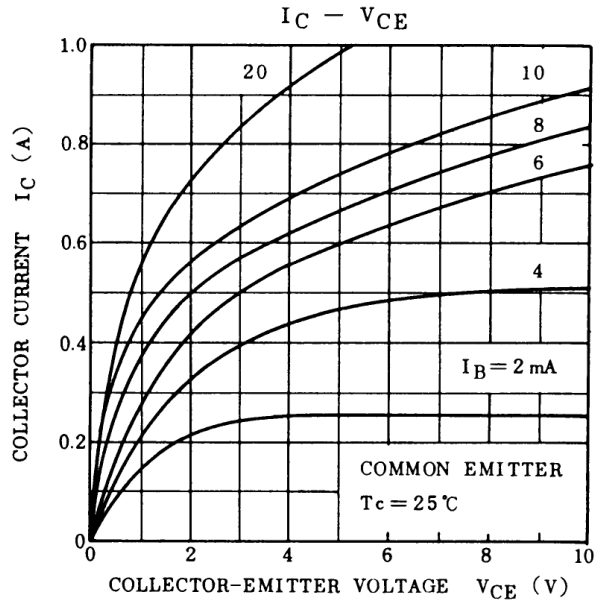
Unit in mm



Weight : 1.7g

#### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| CHARACTERISTIC                        | SYMBOL         | TEST CONDITION  | MIN. | TYP. | MAX. | UNIT          |
|---------------------------------------|----------------|---|------|------|------|---------------|
| Collector Cut-off Current             | $I_{CB0}$      | $V_{CB} = 230\text{V}, I_E = 0$                           | —    | —    | 1.0  | $\mu\text{A}$ |
| Emitter Cut-off Current               | $I_{EB0}$      | $V_{EB} = 5\text{V}, I_C = 0$                             | —    | —    | 1.0  | $\mu\text{A}$ |
| Collector-Emmitter Breakdown Voltage  | $V_{(BR) CE0}$ | $I_C = 10\text{mA}, I_B = 0$                              | 230  | —    | —    | V             |
| DC Current Gain                       | $h_{FE}$       | $V_{CE} = 5\text{V}, I_C = 100\text{mA}$                  | 100  | —    | 320  |               |
| Collector-Emmitter Saturation Voltage | $V_{CE(sat)}$  | $I_C = 500\text{mA}, I_B = 50\text{mA}$                   | —    | —    | 1.5  | V             |
| Base-Emitter Voltage                  | $V_{BE}$       | $V_{CE} = 5\text{V}, I_C = 500\text{mA}, f = 1\text{MHz}$ | —    | —    | 1.0  | $\mu\text{F}$ |
| Transistion Frequency                 | $f_T$          | $V_{CE} = 10\text{V}, I_C = 100\text{mA}$                 | —    | 100  | —    | MHz           |
| Collector Output Capacitance          | $C_{ob}$       | $V_{CB} = 10\text{V}, I_C = 0, f = 1\text{MHz}$           | —    | 20   | —    | $\mu\text{F}$ |



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