

TOSHIBA Transistor Silicon PNP Epitaxial Type

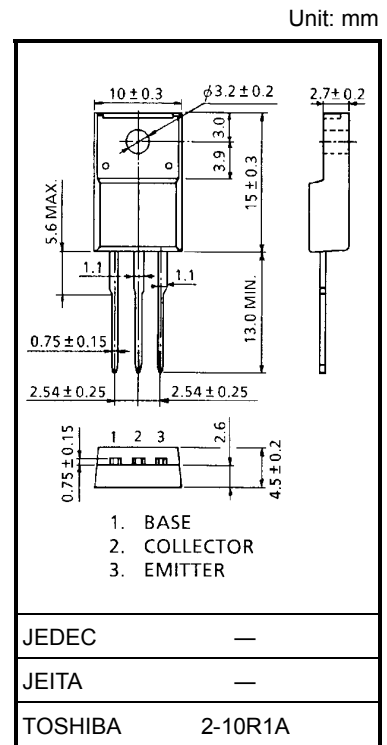
# 2SA1837

Power Amplifier Applications  
Driver Stage Amplifier Applications

- High transition frequency:  $f_T = 70$  MHz (typ.)
- Complementary to 2SC4793

### Maximum Ratings (Tc = 25°C)

| Characteristics             | Symbol    | Rating     | Unit |
|-----------------------------|-----------|------------|------|
| Collector-base voltage      | $V_{CB0}$ | -230       | V    |
| Collector-emitter voltage   | $V_{CEO}$ | -230       | V    |
| Emitter-base voltage        | $V_{EBO}$ | -5         | V    |
| Collector current           | $I_C$     | -1         | A    |
| Base current                | $I_B$     | -0.1       | A    |
| Collector power dissipation | $P_C$     | Ta = 25°C  | 2.0  |
|                             |           | Tc = 25°C  | 20   |
| Junction temperature        | $T_j$     | 150        | °C   |
| Storage temperature range   | $T_{stg}$ | -55 to 150 | °C   |

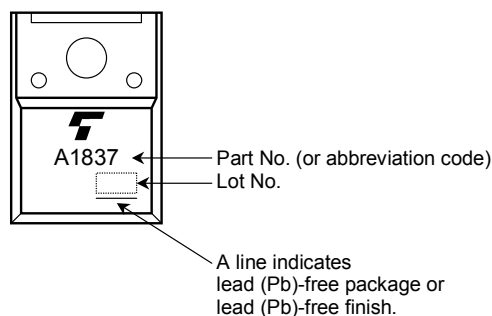


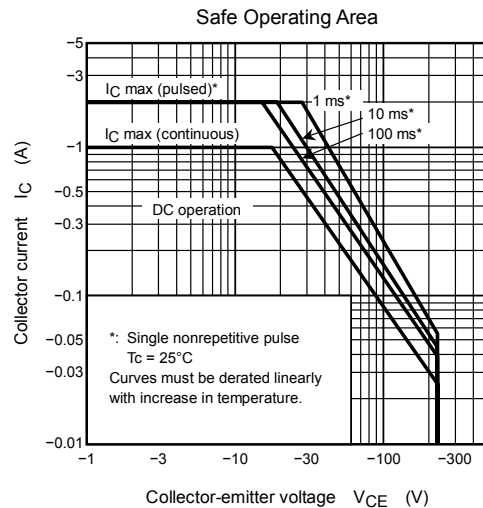
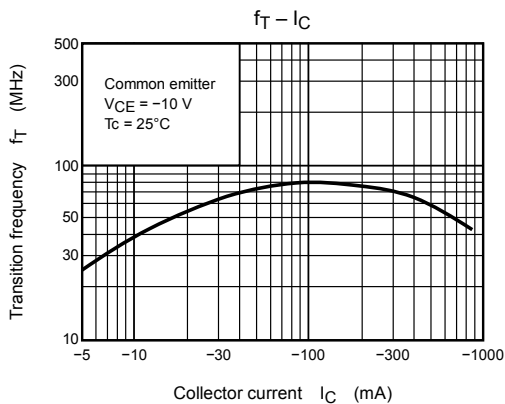
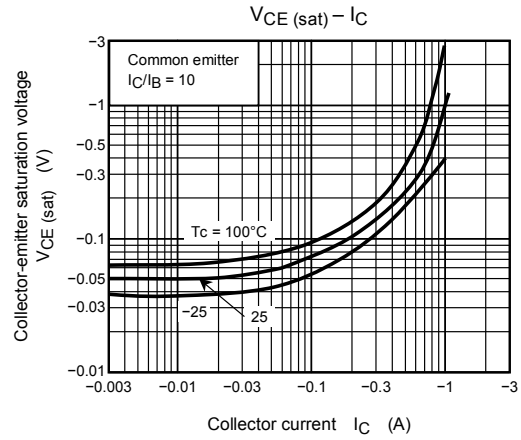
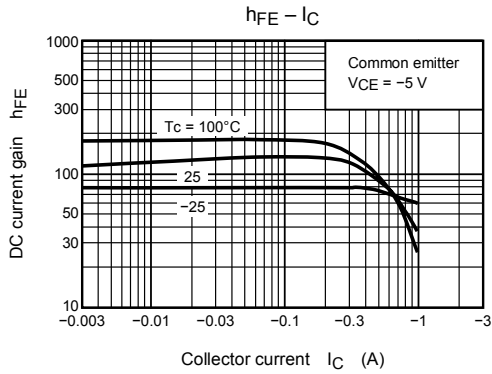
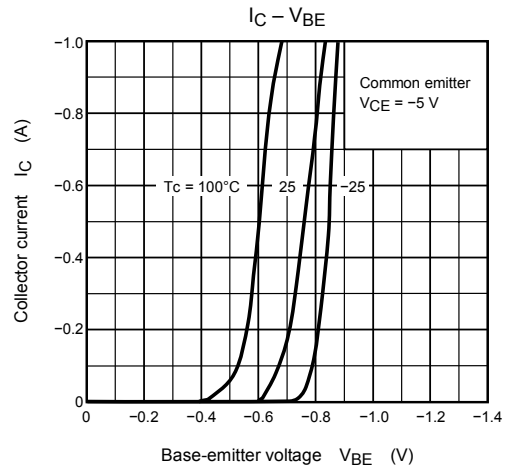
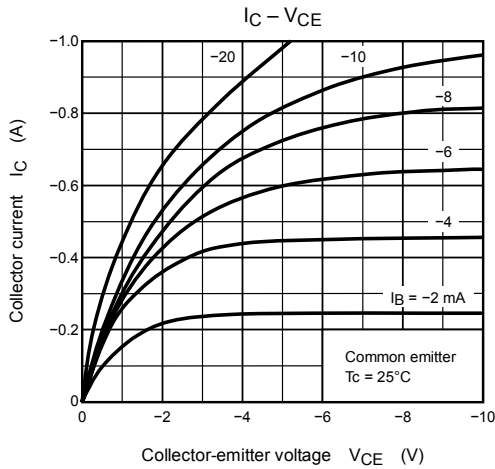
Weight: 1.7 g (typ.)

### Electrical Characteristics (Tc = 25°C)

| Characteristics                      | Symbol        | Test Condition                            | Min  | Typ. | Max  | Unit |
|--------------------------------------|---------------|---|------|------|------|------|
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -230$ V, $I_E = 0$              | —    | —    | -1.0 | μA   |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5$ V, $I_C = 0$                | —    | —    | -1.0 | μA   |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -10$ mA, $I_B = 0$                 | -230 | —    | —    | V    |
| DC current gain                      | $h_{FE}$      | $V_{CE} = -5$ V, $I_C = -100$ mA          | 100  | —    | 320  |      |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500$ mA, $I_B = -50$ mA           | —    | —    | -1.5 | V    |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE} = -5$ V, $I_C = -500$ mA          | —    | —    | -1.0 | V    |
| Transition frequency                 | $f_T$         | $V_{CE} = -10$ V, $I_C = -100$ mA         | —    | 70   | —    | MHz  |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -10$ V, $I_C = 0$ , $f = 1$ MHz | —    | 30   | —    | pF   |

### Marking





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