

2SB1592

Silicon PNP epitaxial planar type

For low-frequency power amplification

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | -30 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | -25 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | -11 | V |
| Collector current | I_C | -3 | A |
| Peak collector current | I_{CP} | -10 | A |
| Collector power dissipation | P_C | 1.0 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

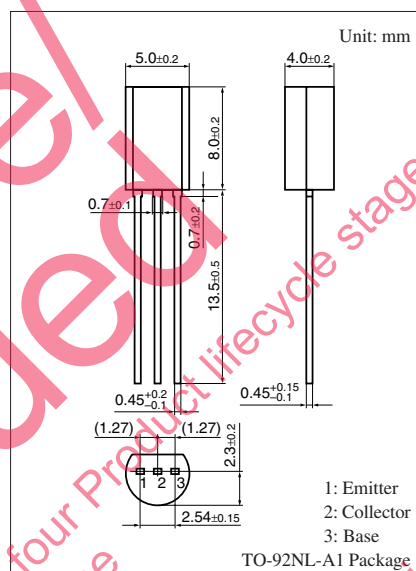
Note) *: Pulse width ≤ 1 ms, 1 shot

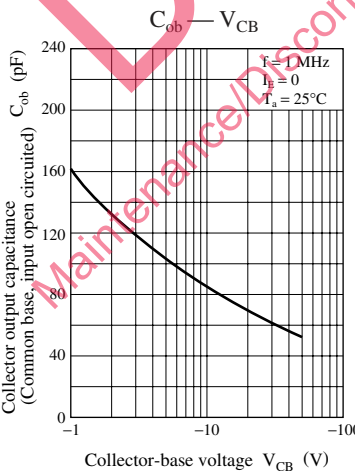
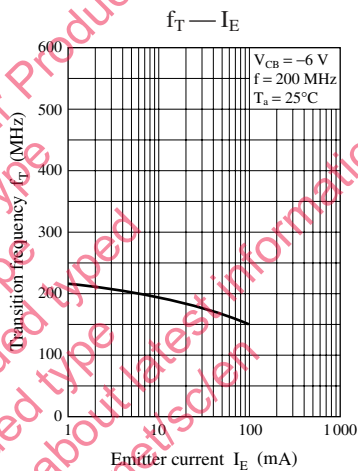
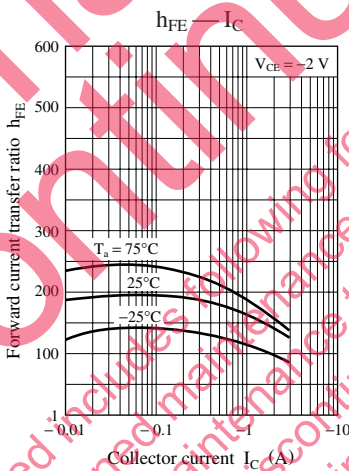
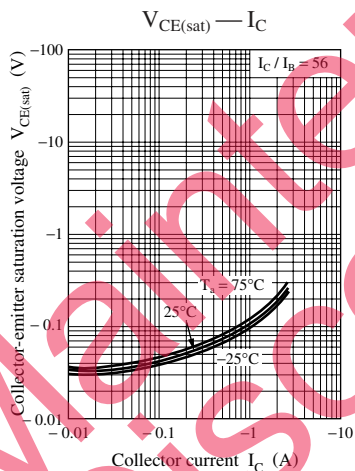
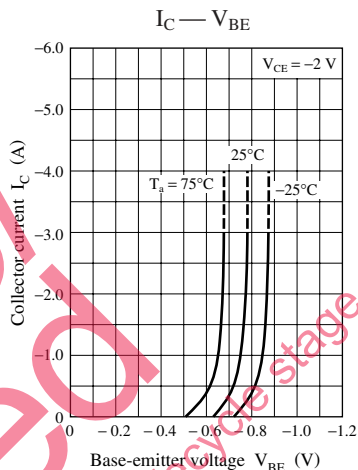
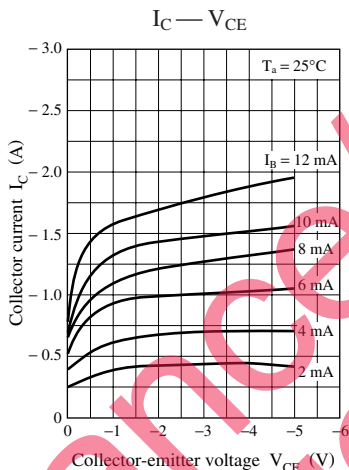
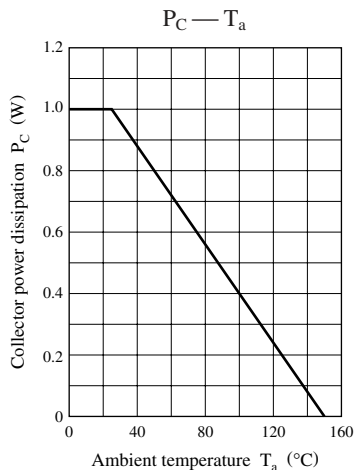
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|---|-----|-------|-------|------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = -10 \mu\text{A}$, $I_E = 0$ | -30 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = -1 \text{ mA}$, $I_B = 0$ | -25 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = -10 \mu\text{A}$, $I_C = 0$ | -11 | | | V |
| Forward current transfer ratio | h_{FE} | $V_{CE} = -2 \text{ V}$, $I_C = -1.4 \text{ A}$ | 130 | | 450 | — |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C = -1.4 \text{ A}$, $I_B = -25 \text{ mA}$ | | -0.16 | -0.22 | V |
| Transition frequency | f_T | $V_{CB} = -6 \text{ V}$, $I_E = 50 \text{ mA}$, $f = 200 \text{ MHz}$ | | 150 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$ | | | 85 | pF |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Pulse measurement





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