

# 2SB1592

Silicon PNP epitaxial planer type

For low-frequency amplification

## Features

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

## Absolute Maximum Ratings (Ta=25°C)

| Parameter                    | Symbol     | Ratings    | Unit |
|------------------------------|------------|------------|------|
| Collector to base voltage    | $V_{CBO}$  | -30        | V    |
| Collector to emitter voltage | $V_{CEO}$  | -25        | V    |
| Emitter to base voltage      | $V_{EBO}$  | -11        | V    |
| Peak collector current       | $I_{CP}^*$ | -10        | A    |
| Collector current            | $I_C$      | -3         | A    |
| Collector power dissipation  | $P_C$      | 1          | W    |
| Junction temperature         | $T_j$      | 150        | °C   |
| Storage temperature          | $T_{stg}$  | -55 ~ +150 | °C   |

\* Applied are shot pulse of ≤1ms width

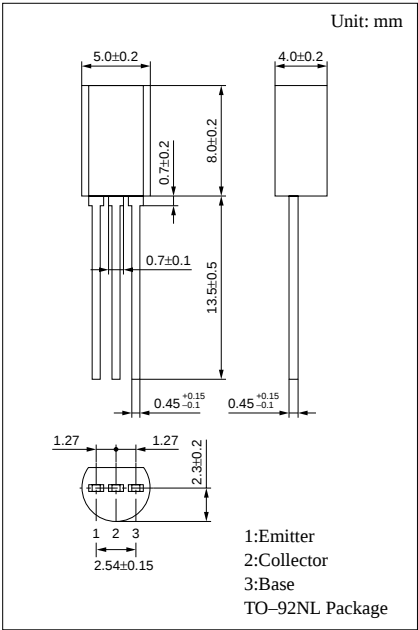
## Electrical Characteristics (Ta=25°C)

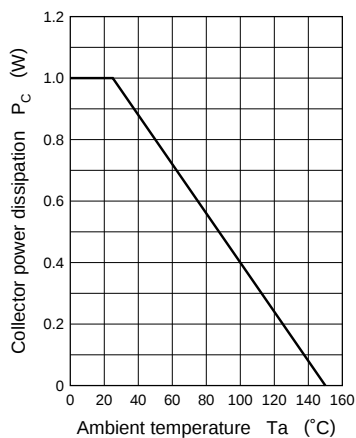
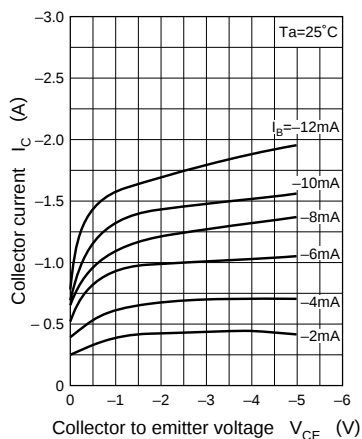
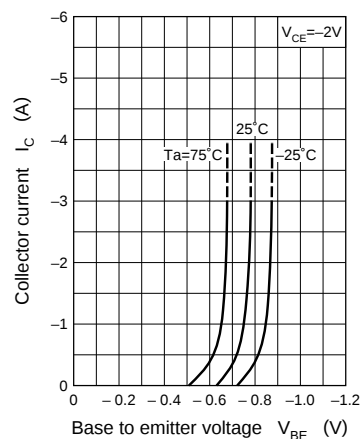
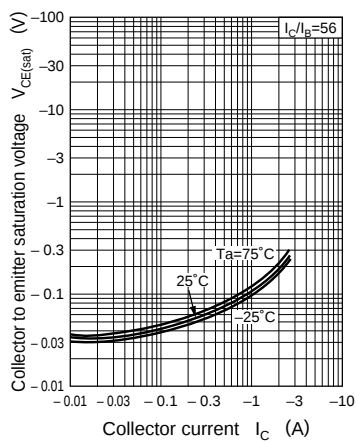
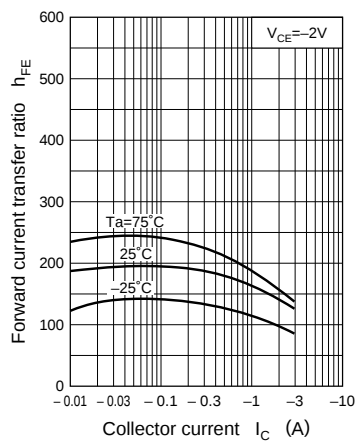
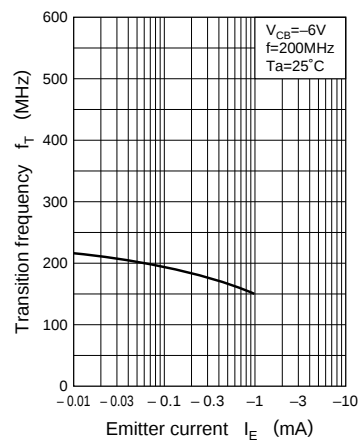
| Parameter                               | Symbol        | Conditions                             | min | typ   | max   | Unit |
|-----------------------------------------|---------------|----------------------------------------|-----|-------|-------|------|
| Collector to base voltage               | $V_{CBO}$     | $I_C = -10\mu A, I_E = 0$              | -30 |       |       | V    |
| Collector to emitter voltage            | $V_{CEO}$     | $I_C = -1mA, I_B = 0$                  | -25 |       |       | V    |
| Emitter to base voltage                 | $V_{EBO}$     | $I_E = -10\mu A, I_C = 0$              | -11 |       |       | V    |
| Forward current transfer ratio          | $h_{FE}^{*1}$ | $V_{CE} = -2V, I_C = -1.4A^{*2}$       | 90  |       | 450   |      |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -1.4A, I_B = -25mA^{*2}$        |     | -0.16 | -0.22 | V    |
| Transition frequency                    | $f_T$         | $V_{CB} = -6V, I_E = 50mA, f = 200MHz$ |     | 150   |       | MHz  |
| Collector output capacitance            | $C_{ob}$      | $V_{CB} = -10V, I_E = 0, f = 1MHz$     |     |       | 85    | pF   |

\*2 Pulse measurement

\*1  $h_{FE}$  Rank classification

| Rank     | Q        | R         |
|----------|----------|-----------|
| $h_{FE}$ | 90 ~ 180 | 130 ~ 450 |



$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 