

# 2SB774

## Silicon PNP epitaxial planer type

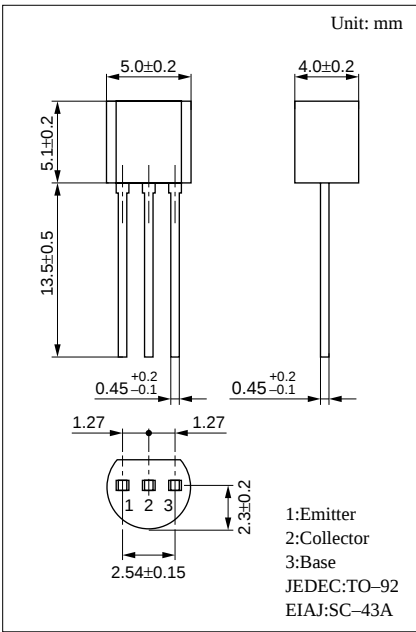
For low-frequency amplification

### Features

- High emitter to base voltage  $V_{EBO}$ .
- Protective diodes and resistances between emitter and base can be omitted.

### 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      | $V_{EBO}$ | -15        | V    |
| Peak collector current       | $I_{CP}$  | -200       | mA   |
| Collector current            | $I_C$     | -100       | mA   |
| Collector power dissipation  | $P_C$     | 400        | mW   |
| Junction temperature         | $T_j$     | 150        | °C   |
| Storage temperature          | $T_{stg}$ | -55 ~ +150 | °C   |

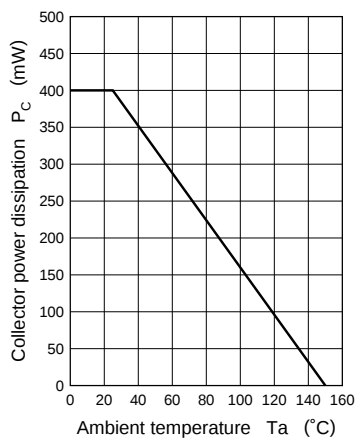
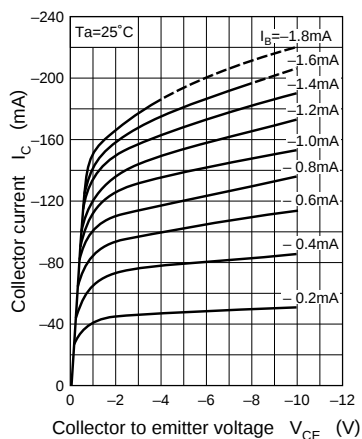
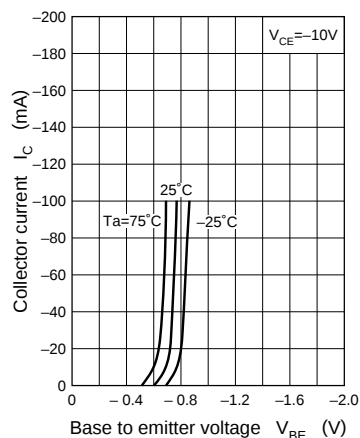
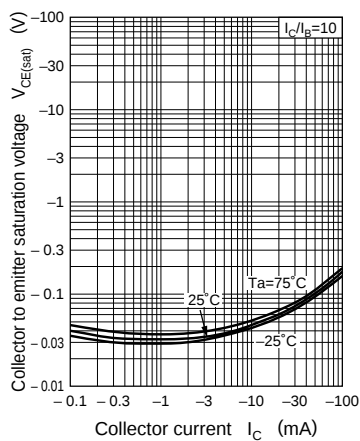
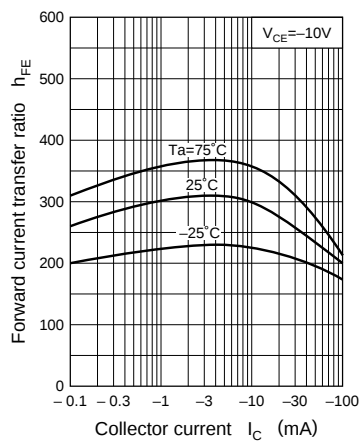
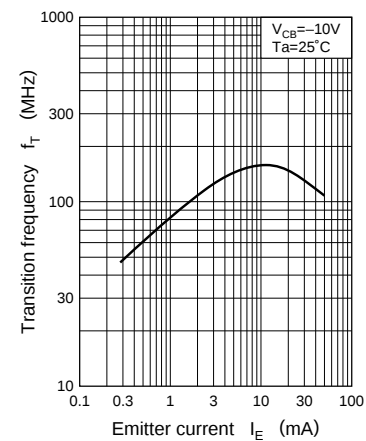


### Electrical Characteristics (Ta=25°C)

| Parameter                               | Symbol        | Conditions                             | min | typ | max  | Unit    |
|-----------------------------------------|---------------|----------------------------------------|-----|-----|------|---------|
| Collector cutoff current                | $I_{CBO}$     | $V_{CB} = -10V, I_E = 0$               |     |     | -1   | $\mu A$ |
|                                         | $I_{CEO}$     | $V_{CE} = -20V, I_B = 0$               |     |     | -100 | $\mu A$ |
| Collector to base voltage               | $V_{CBO}$     | $I_C = -10\mu A, I_E = 0$              | -30 |     |      | V       |
| Collector to emitter voltage            | $V_{CEO}$     | $I_C = -2mA, I_B = 0$                  | -25 |     |      | V       |
| Emitter to base voltage                 | $V_{EBO}$     | $I_E = -10\mu A, I_C = 0$              | -15 |     |      | V       |
| Forward current transfer ratio          | $h_{FE1}^*$   | $V_{CE} = -10V, I_C = -2mA$            | 210 |     | 460  |         |
|                                         | $h_{FE2}$     | $V_{CE} = -2V, I_C = -100mA$           | 90  |     |      |         |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100mA, I_B = -10mA$            |     |     | -0.5 | V       |
| Transition frequency                    | $f_T$         | $V_{CB} = -10V, I_E = 2mA, f = 200MHz$ |     | 150 |      | MHz     |
| Collector output capacitance            | $C_{ob}$      | $V_{CB} = -10V, I_E = 0, f = 1MHz$     |     | 4   |      | pF      |

\* $h_{FE1}$  Rank classification

| Rank      | R         | S         |
|-----------|-----------|-----------|
| $h_{FE1}$ | 210 ~ 340 | 290 ~ 460 |

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