

# 2SB0621 (2SB621), 2SB0621A (2SB621A)

## Silicon PNP epitaxial planar type

For low-frequency driver amplification

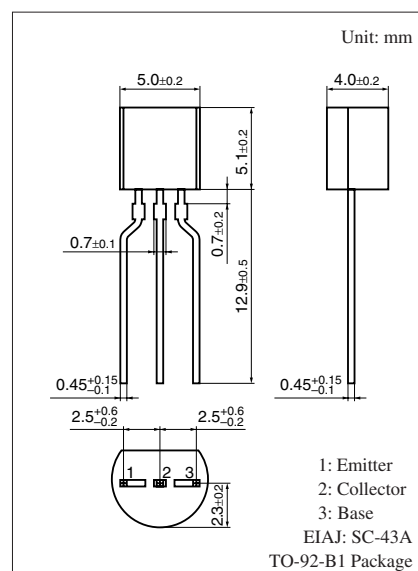
Complementary to 2SD0592 (2SD592), 2SD0592A (2SD592A)

### ■ Features

- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- High transition frequency  $f_T$

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

| Parameter                                |          | Symbol    | Rating      | Unit |
|------------------------------------------|----------|-----------|-------------|------|
| Collector-base voltage<br>(Emitter open) | 2SB0621  | $V_{CBO}$ | -30         | V    |
|                                          | 2SB0621A |           | -60         |      |
| Collector-emitter voltage<br>(Base open) | 2SB0621  | $V_{CEO}$ | -25         | V    |
|                                          | 2SB0621A |           | -50         |      |
| Emitter-base voltage (Collector open)    |          | $V_{EBO}$ | -5          | V    |
| Collector current                        |          | $I_C$     | -1          | A    |
| Peak collector current                   |          | $I_{CP}$  | -1.5        | A    |
| Collector power dissipation              |          | $P_C$     | 750         | mW   |
| Junction temperature                     |          | $T_j$     | 150         | °C   |
| Storage temperature                      |          | $T_{stg}$ | -55 to +150 | °C   |



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

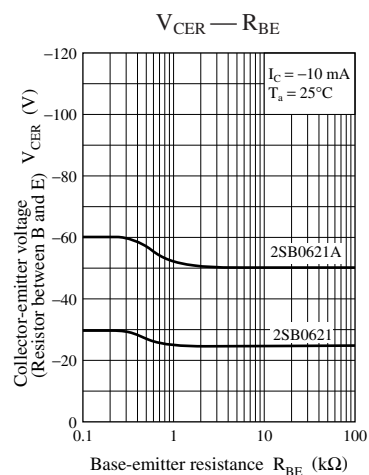
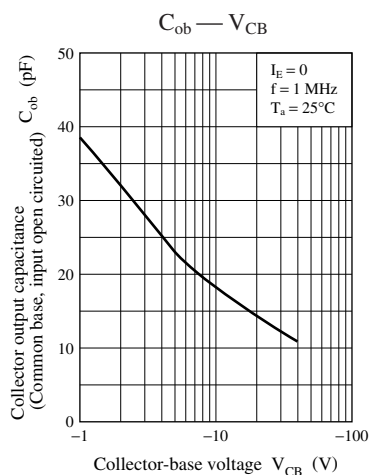
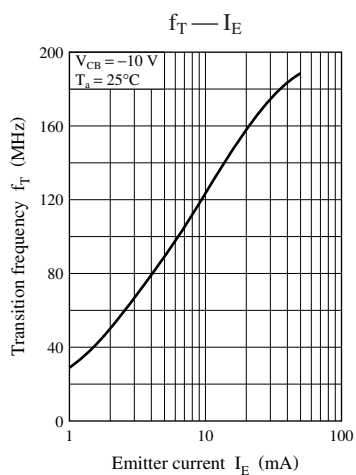
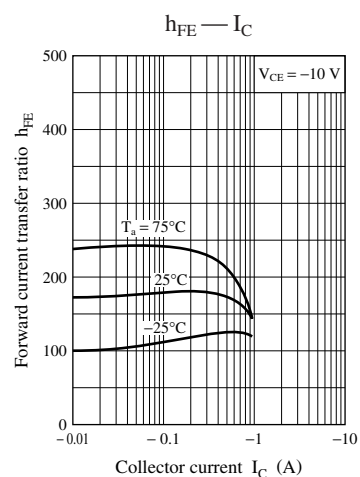
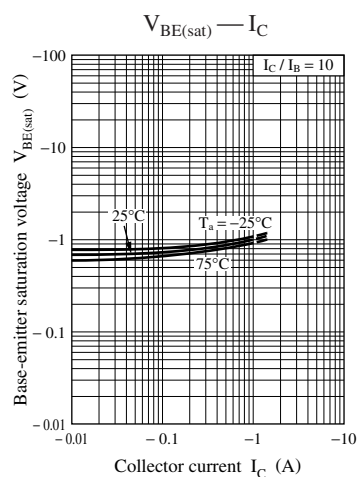
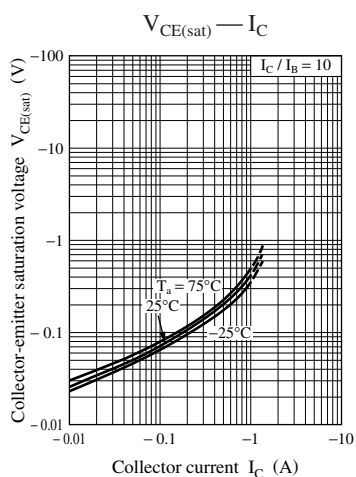
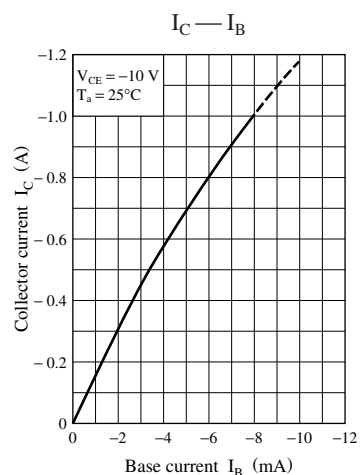
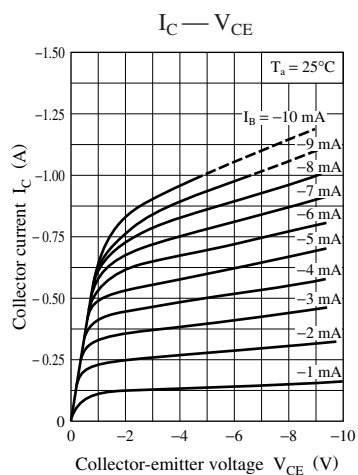
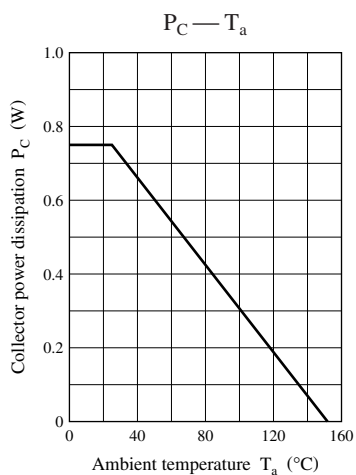
| Parameter                                                           | Symbol                   | Conditions                                                                                     | Min                               | Typ   | Max  | Unit          |
|---------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------|-----------------------------------|-------|------|---------------|
| Collector-base voltage<br>(Emitter open)                            | 2SB0621<br>2SB0621A      | $V_{CBO}$                                                                                      | $I_C = -10\ \mu\text{A}, I_E = 0$ | -30   |      | V             |
|                                                                     |                          |                                                                                                |                                   | -60   |      |               |
| Collector-emitter voltage<br>(Base open)                            | 2SB0621<br>2SB0621A      | $V_{CEO}$                                                                                      | $I_C = -2\ \text{mA}, I_B = 0$    | -25   |      | V             |
|                                                                     |                          |                                                                                                |                                   | -50   |      |               |
| Emitter-base voltage (Collector open)                               | $V_{EBO}$                | $I_E = -10\ \mu\text{A}, I_C = 0$                                                              | -5                                |       |      | V             |
| Collector-base cutoff current (Emitter open)                        | $I_{CBO}$                | $V_{CB} = -20\ \text{V}, I_E = 0$                                                              |                                   |       | -0.1 | $\mu\text{A}$ |
| Forward current transfer ratio                                      | $h_{FE1}^*$<br>$h_{FE2}$ | $V_{CE} = -10\ \text{V}, I_C = -500\ \text{mA}$<br>$V_{CE} = -5\ \text{V}, I_C = -1\ \text{A}$ | 85                                |       | 340  | —             |
|                                                                     |                          |                                                                                                | 50                                |       |      | —             |
| Collector-emitter saturation voltage                                | $V_{CE(sat)}$            | $I_C = -500\ \text{mA}, I_B = -50\ \text{mA}$                                                  |                                   | -0.2  | -0.4 | V             |
| Base-emitter saturation voltage                                     | $V_{BE(sat)}$            | $I_C = -500\ \text{mA}, I_B = -50\ \text{mA}$                                                  |                                   | -0.85 | -1.2 | V             |
| Transition frequency                                                | $f_T$                    | $V_{CB} = -10\ \text{V}, I_E = 50\ \text{mA}, f = 200\ \text{MHz}$                             |                                   | 200   |      | MHz           |
| Collector output capacitance<br>(Common base, input open circuited) | $C_{ob}$                 | $V_{CB} = -10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$                                           |                                   | 20    | 30   | pF            |

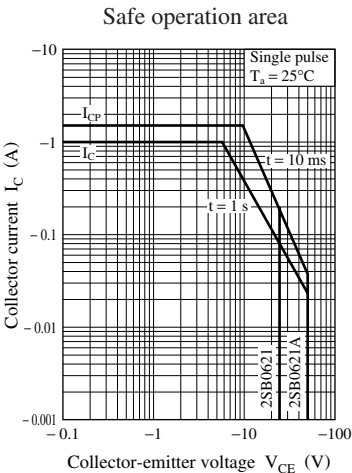
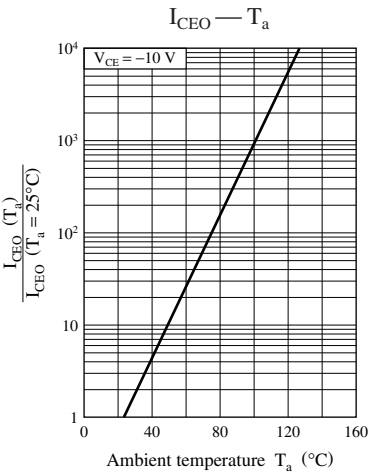
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

| Rank      | Q         | R          | S          |
|-----------|-----------|------------|------------|
| $h_{FE1}$ | 85 to 170 | 120 to 240 | 170 to 340 |

Note) The part numbers in the parenthesis show conventional part number.





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