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# 2SB0766G

## Silicon PNP epitaxial planar type

For low-frequency output amplification

Complementary to 2SD0874G

### ■ Features

- Large collector power dissipation  $P_C$
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

| Parameter                             | Symbol    | Rating      | Unit             |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | $V_{CBO}$ | -60         | V                |
| Collector-emitter voltage (Base open) | $V_{CEO}$ | -50         | V                |
| 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 *         | $P_C$     | 1           | W                |
| Junction temperature                  | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage temperature                   | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

### ■ Package

- Code  
MiniP3-F2
- Pin Name  
1: Base  
2: Collector  
3: Emitter

### ■ Marking Symbol: B

Note) \*: Print circuit board: Copper foil area of 1 cm<sup>2</sup> or more, and the board thickness of 1.7 mm for the collector portion.

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

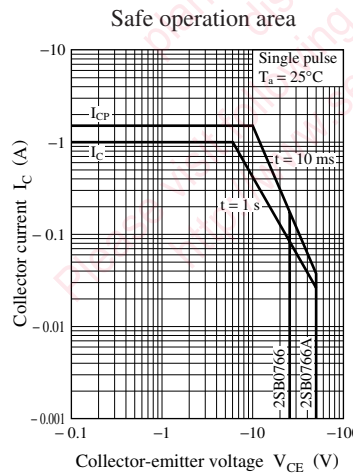
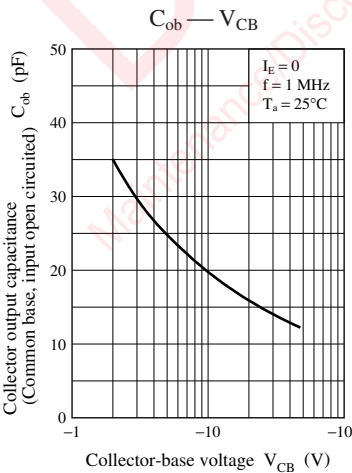
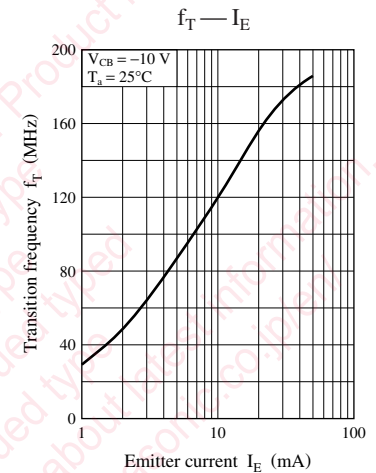
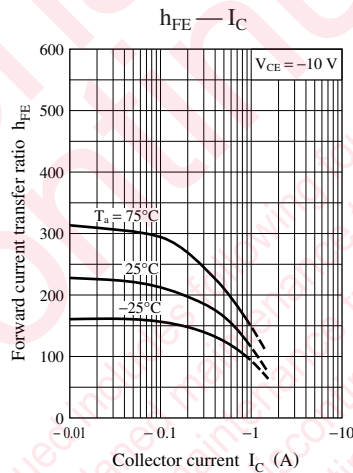
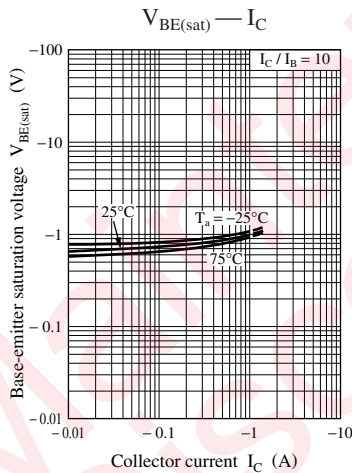
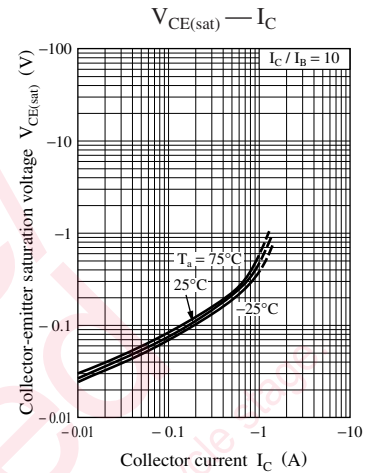
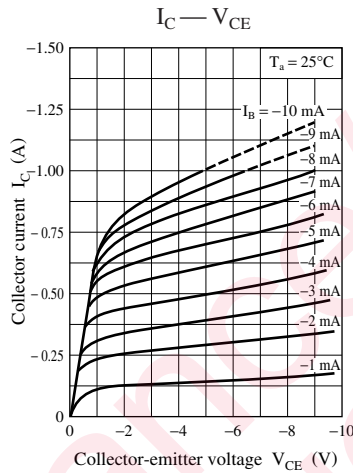
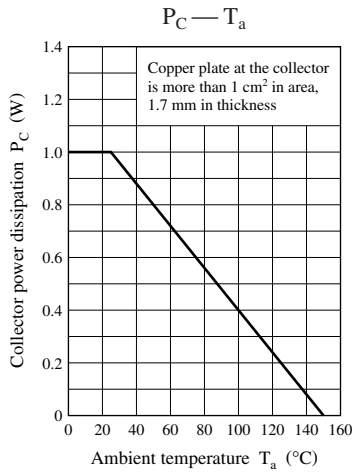
| Parameter   | Symbol        | Conditions   | Min | Typ   | Max   | Unit          |
|---|---------------|--|-----|-------|-------|---------------|
| Collector-base voltage (Emitter open)                               | $V_{CBO}$     | $I_C = -10 \mu\text{A}$ , $I_E = 0$                                      | -60 |       |       | V             |
| Collector-emitter voltage (Base open)                               | $V_{CEO}$     | $I_C = -2 \text{ mA}$ , $I_B = 0$  | -50 |       |       | V             |
| 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 *1                                   | $h_{FE1}$ *2  | $V_{CE} = -10 \text{ V}$ , $I_C = -500 \text{ mA}$                       | 85  |       | 340   | —             |
|   | $h_{FE2}$     | $V_{CE} = -5 \text{ V}$ , $I_C = -1 \text{ A}$                           | 50  |       |       |               |
| Collector-emitter saturation voltage *1                             | $V_{CE(sat)}$ | $I_C = -500 \text{ mA}$ , $I_B = -50 \text{ mA}$                         |     | -0.2  | -0.4  | V             |
| Base-emitter saturation voltage *1                                  | $V_{BE(sat)}$ | $I_C = -500 \text{ mA}$ , $I_B = -50 \text{ mA}$                         |     | -0.85 | -1.20 | 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. \*1: Pulse measurement

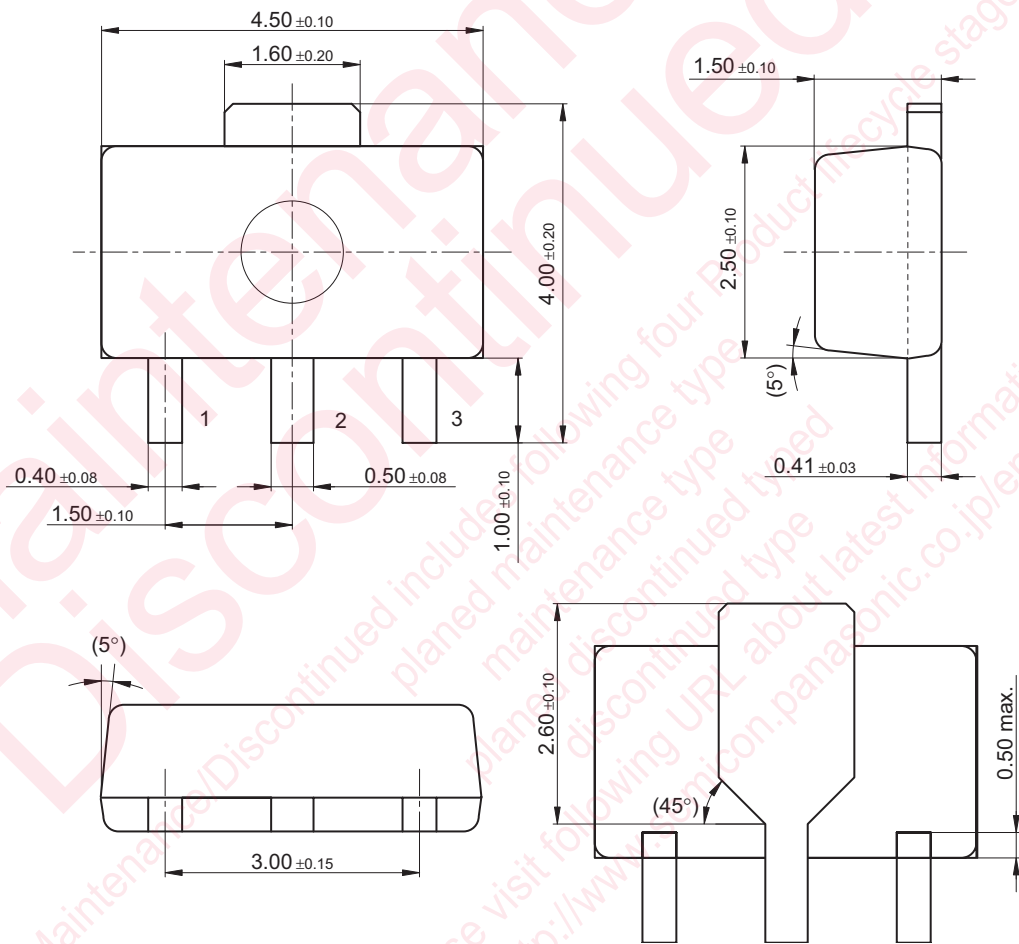
\*2: Rank classification

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



MiniP3-F2

Unit: mm



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