

2SC1846

Silicon NPN epitaxial planar type

For medium output power amplification

Complementary to 2SA0885

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Output of 3 W can be obtained by a complementary pair with 2SA0885
- TO-126B package which requires no insulation plate for installation to the heat sink

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | 45 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 35 | 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 | 1.2 | W |
| | | 5.0 * | |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Note) *: With a $100 \times 100 \times 2$ mm Al heat sink

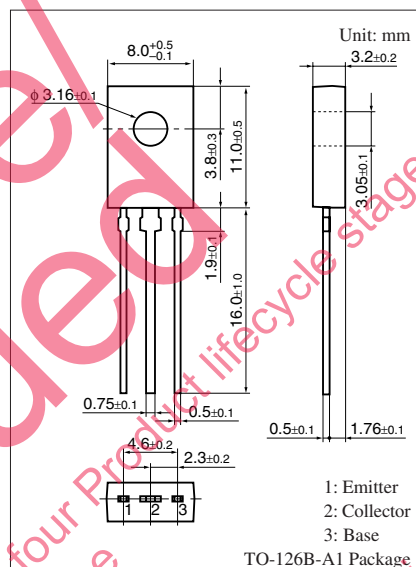
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

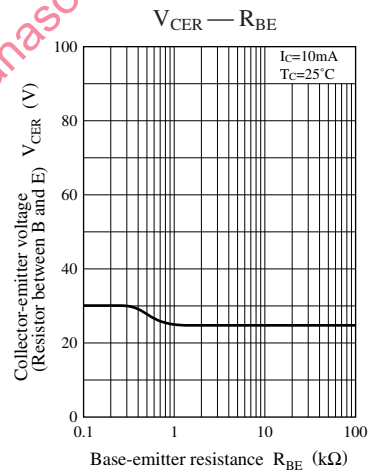
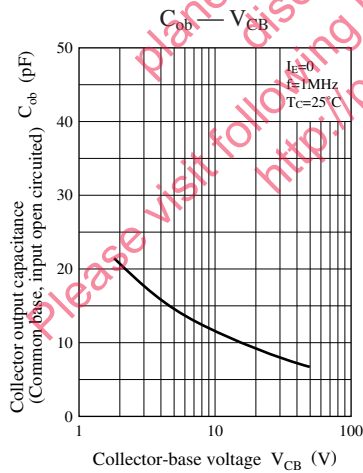
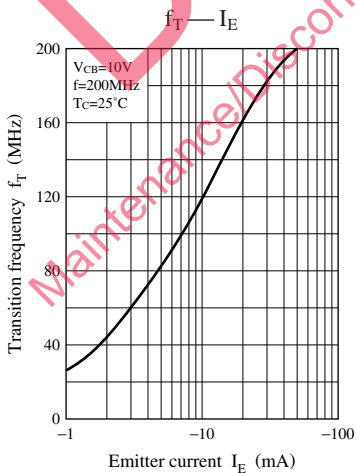
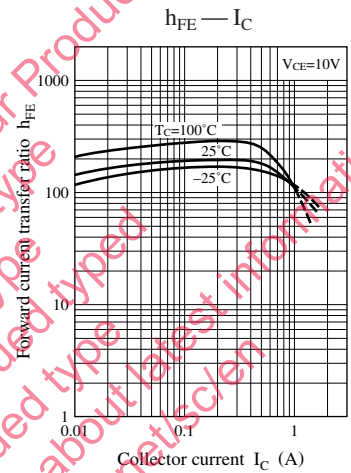
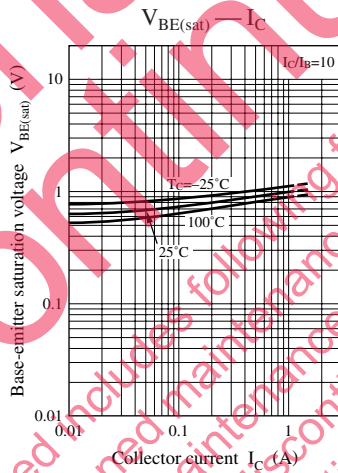
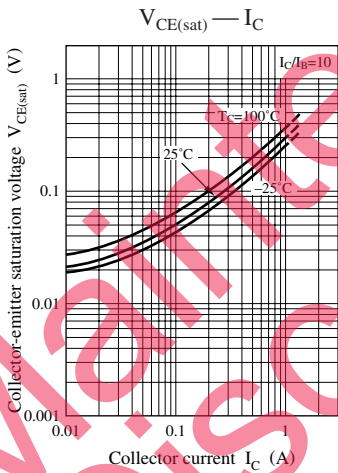
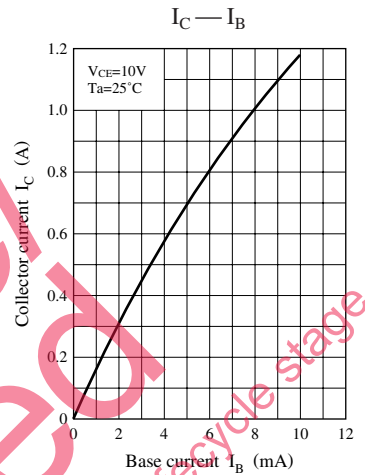
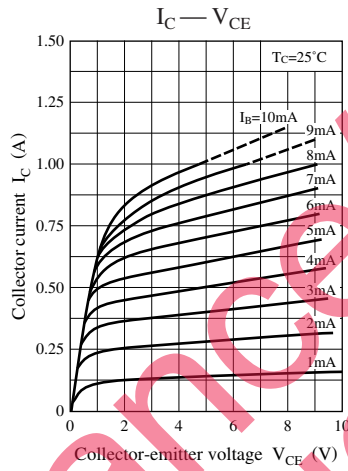
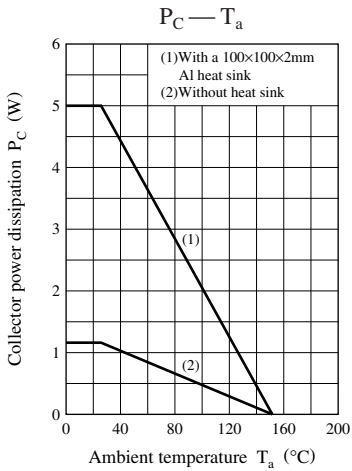
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|--|-----|-----|-----|---------------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = 1 \text{ mA}, I_E = 0$ | 45 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 2 \text{ mA}, I_B = 0$ | 35 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 20 \text{ V}, I_E = 0$ | | | 0.1 | μA |
| Collector-emitter cutoff current (Base open) | I_{CEO} | $V_{CE} = 20 \text{ V}, I_B = 0$ | | | 100 | μA |
| Emitter-base cutoff current (Collector open) | I_{EBO} | $V_{EB} = 5 \text{ V}, I_C = 0$ | | | 10 | μA |
| Forward current transfer ratio | h_{FE1} * | $V_{CE} = 10 \text{ V}, I_C = 500 \text{ mA}$ | 85 | | 340 | — |
| | h_{FE2} | $V_{CE} = 5 \text{ V}, I_C = 1 \text{ A}$ | 50 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$ | | | 0.5 | V |
| Transition frequency | f_T | $V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$ | | 200 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ | | | 20 | pF |

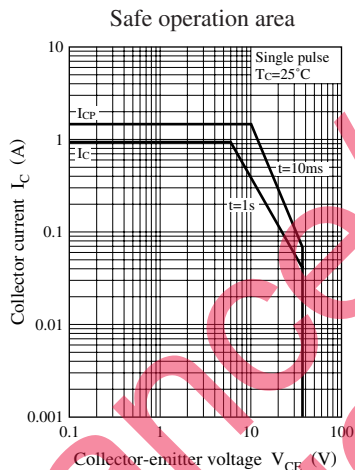
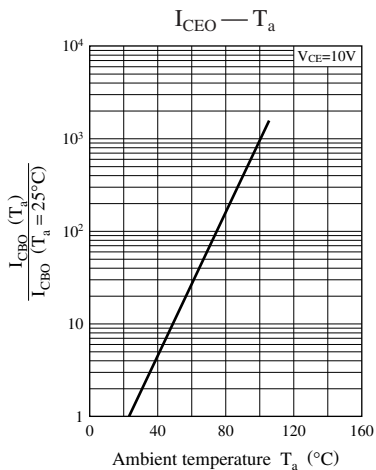
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

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







Maintenance/Discontinued

Maintenance/Discontinued includes following four Product lifecycle stage.
planned maintenance type
maintained maintenance type
planned discontinued type
discontinued type
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Maintenance/Discontinued includes following maintenance type
planned maintenance type
maintenance type
planned discontinued type
discontinued type
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