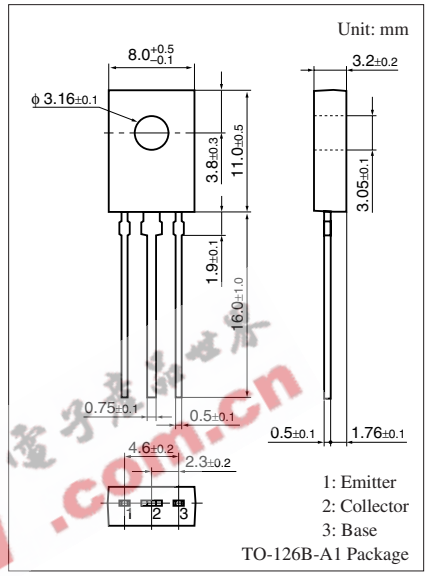
# 2SA0886 (2SA886)

## Silicon PNP epitaxial planar type

For low-frequency power amplification
Complementary to 2SC1847




### ■ Features

- Output of 4 W can be obtained by a complementary pair with 2SC1847
- TO-126B package which requires no insulation plate for installation to the heat sink

### ■ Absolute Maximum Ratings $T_a = 25°C$

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-base voltage (Emitter open) | $V_{CBO}$ | −50 | V |
| Collector-emitter voltage (Base open) | $V_{CEO}$ | −40 | V |
| Emitter-base voltage (Collector open) | $V_{EBO}$ | −5 | V |
| Collector current | $I_C$ | −1.5 | A |
| Peak collector current | $I_{CP}$ | −3 | A |
| Collector power dissipation | $P_C$ | 1.2 | W |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature | $T_{stg}$ | −55 to +150 | °C |

### ■ Electrical Characteristics $T_a = 25°C \pm 3°C$

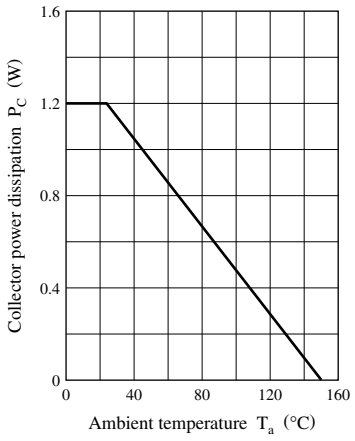
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector-base voltage (Emitter open) | $V_{CBO}$ | $I_C = -1$ mA, $I_E = 0$ | −50 | | | V |
| Collector-emitter voltage (Base open) | $V_{CEO}$ | $I_C = -2$ mA, $I_B = 0$ | −40 | | | V |
| Collector-base cutoff current (Emitter open) | $I_{CBO}$ | $V_{CB} = -20$ V, $I_E = 0$ | | | −1 | μA |
| Collector-emitter cutoff current (Base open) | $I_{CEO}$ | $V_{CE} = -10$ V, $I_B = 0$ | | | −100 | μA |
| Emitter-base cutoff current (Collector open) | $I_{EBO}$ | $V_{EB} = -5$ V, $I_C = 0$ | | | −10 | μA |
| Forward current transfer ratio * | $h_{FE}$ | $V_{CE} = -5$ V, $I_C = -1$ A | 80 | | 220 | — |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -1.5$ A, $I_B = -0.15$ A | | | −1.0 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -2$ A, $I_B = -0.2$ A | | | −1.5 | V |
| Transition frequency | $f_T$ | $V_{CB} = -5$ V, $I_E = 0.5$ A, f = 200 MHz | | 150 | | MHz |
| Collector output capacitance (Common base, input open circuited) | $C_{ob}$ | $V_{CB} = -20$ V, $I_E = 0$, f = 1 MHz | | 45 | | pF |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

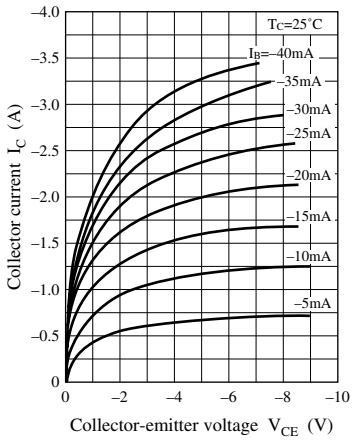
| Rank | Q | R |
|---|---|---|
| $h_{FE1}$ | 80 to 160 | 120 to 220 |

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

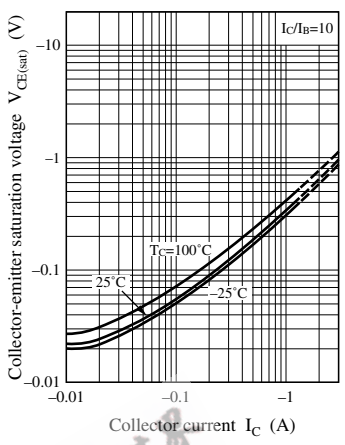
$P_C$ — $T_a$



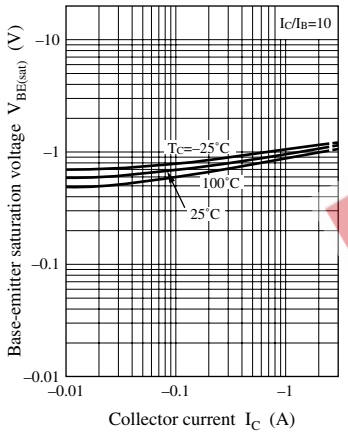

$I_C$ — $V_{CE}$



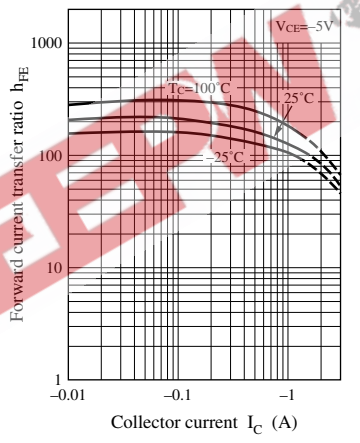

$V_{CE(sat)}$ — $I_C$



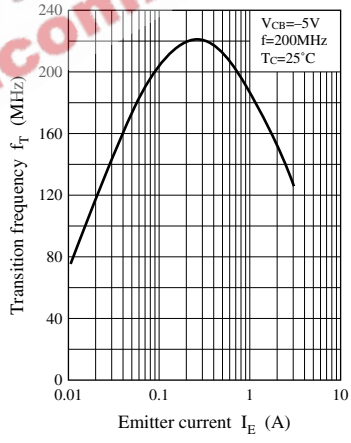

$V_{BE(sat)}$ — $I_C$



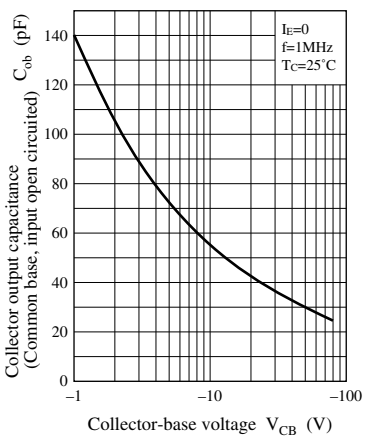

$h_{FE}$ — $I_C$



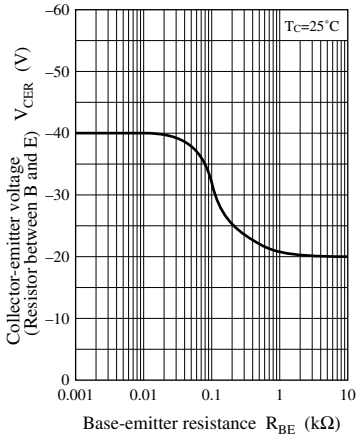

$f_T$ — $I_E$



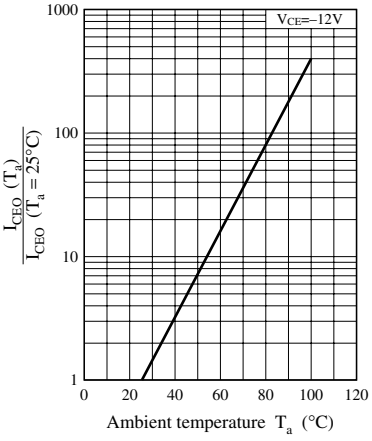

$C_{ob}$ — $V_{CB}$



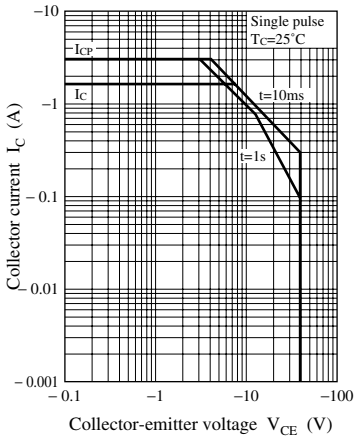

$V_{CER}$ — $R_{BE}$



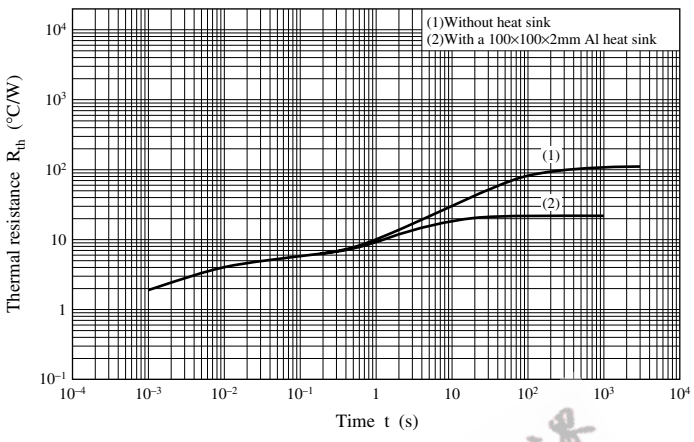

$I_{CEO}$ — $T_a$



Safe operation area




$R_{th}$ — t



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