

2SB0819 (2SB819)

Silicon PNP epitaxial planar type

For low-frequency output amplification

Complementary to 2SD1051

■ Features

- High collector-emitter voltage (Base open) V_{CEO}
- Large collector power dissipation P_C
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

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

| 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 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Note) *: Print circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

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

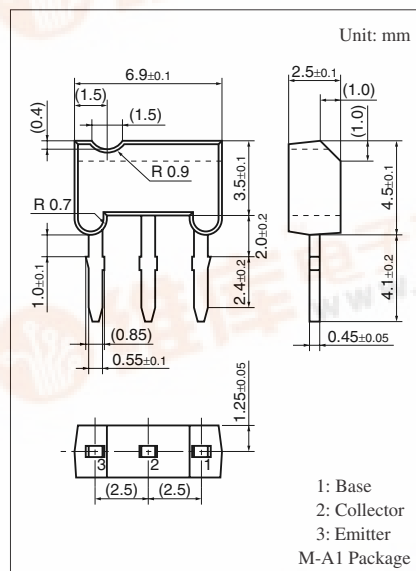
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|---|-----|-----|------|---------------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = -1 \text{ mA}$, $I_E = 0$ | -50 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = -2 \text{ mA}$, $I_B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

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

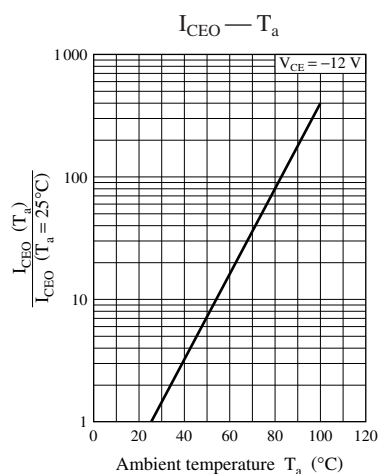
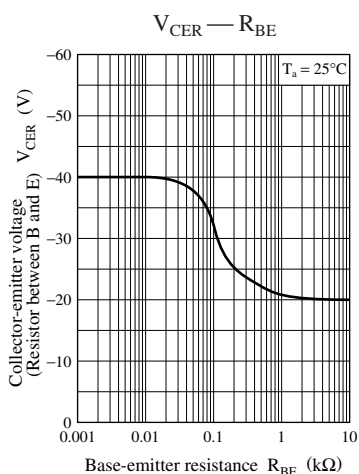
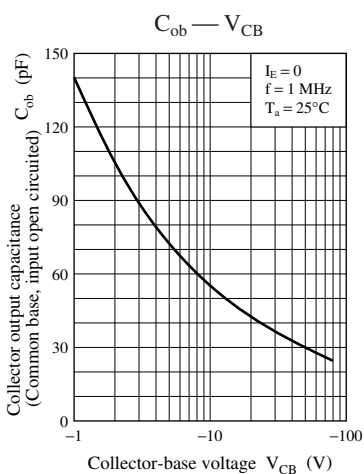
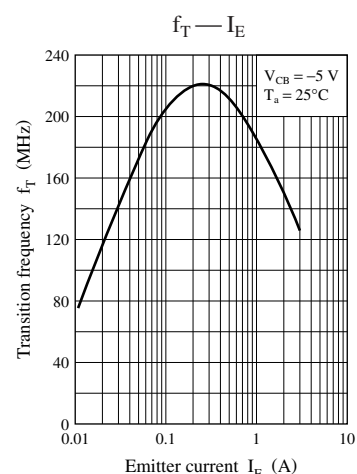
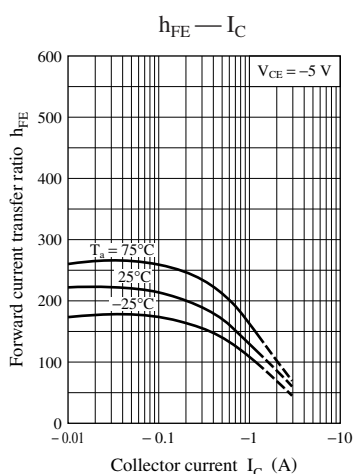
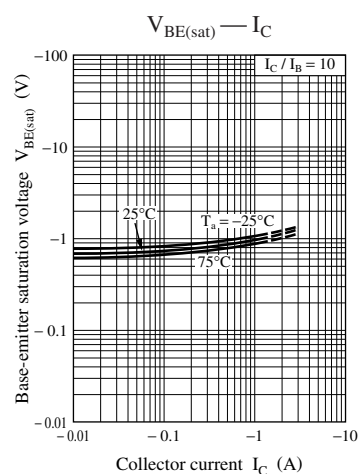
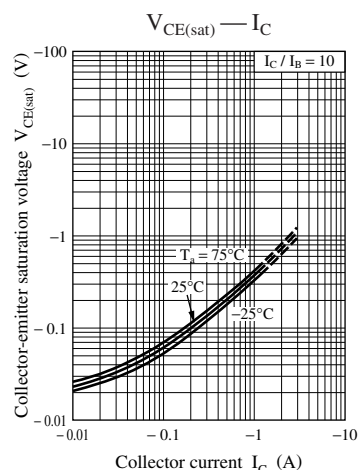
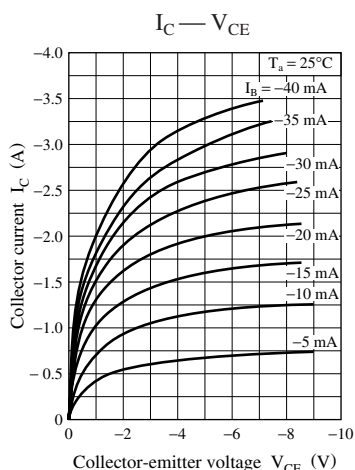
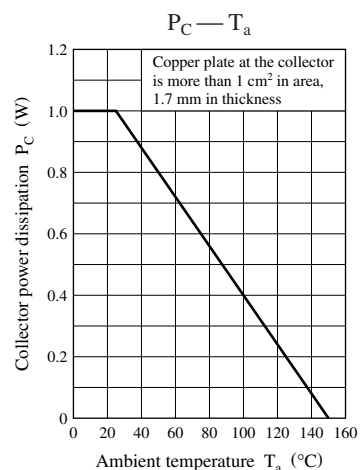
2. *1: Pulse measurement

*2: Rank classification

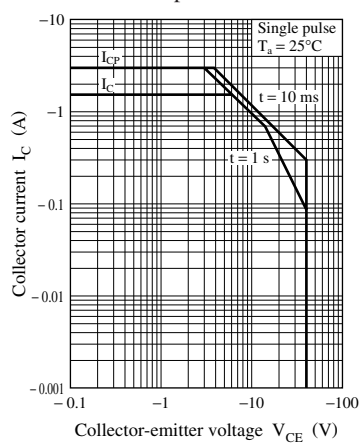
| Rank | Q | R |
|-----------|---|------------|
| 80 to 160 | | 120 to 220 |



Note) The part number in the parenthesis shows conventional part number.



Safe operation area



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