

2SB1398

Silicon PNP epitaxial planar type

For low-frequency power amplification

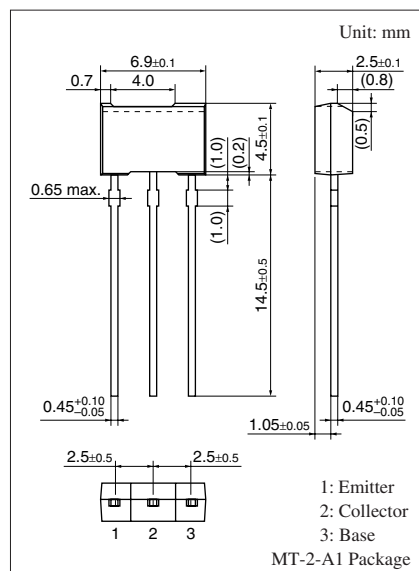
■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Large collector current I_C
- Allowing supply with the radial taping

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | -30 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | -25 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | -7 | V |
| Collector current | I_C | -5 | A |
| Peak collector current | I_{CP} | -8 | 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 cm^2 or more, and the board thickness of 1.7 mm for the collector portion



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

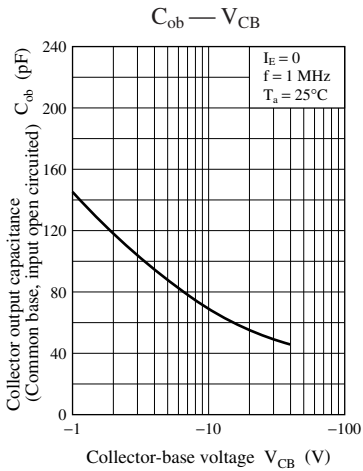
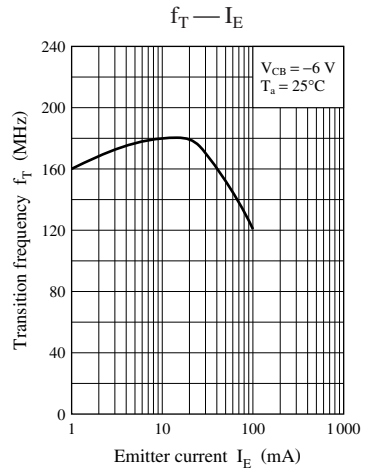
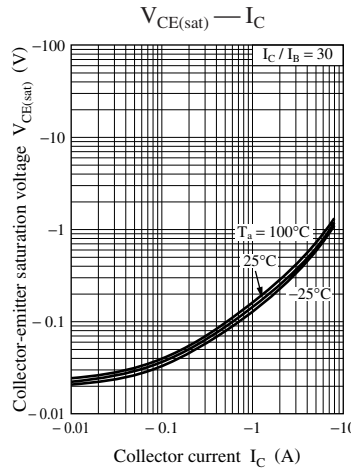
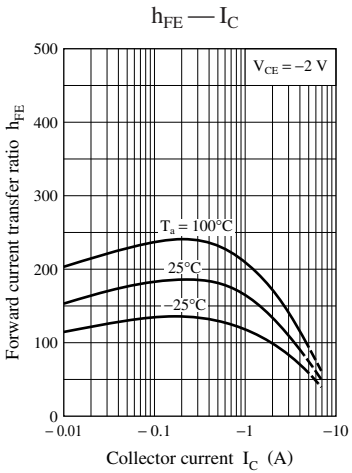
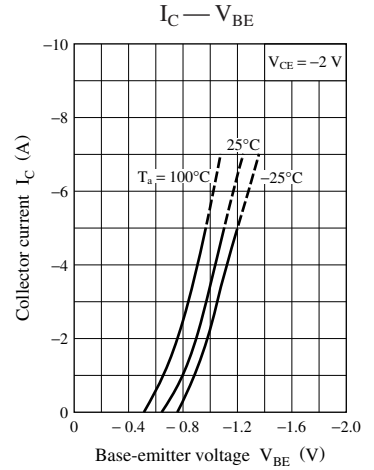
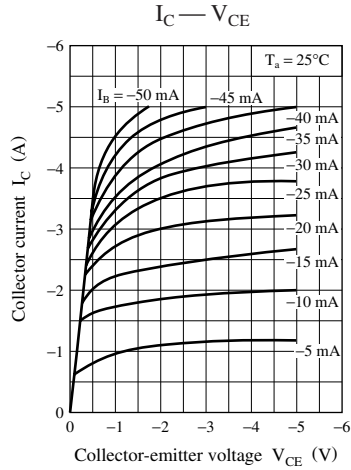
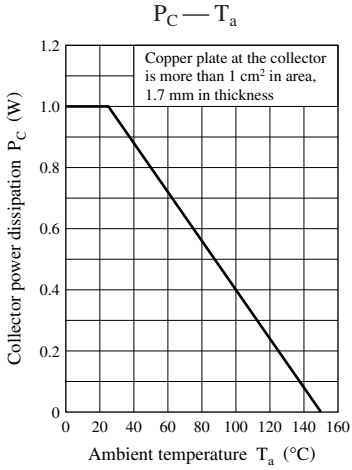
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|--|-----|-----|------|------|
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = -1\text{ mA}$, $I_B = 0$ | -25 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = -10\ \mu\text{A}$, $I_C = 0$ | -7 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = -10\text{ V}$, $I_E = 0$ | | | -100 | nA |
| Emitter-base cutoff current (Collector open) | I_{EBO} | $V_{EB} = -5\text{ V}$, $I_C = 0$ | | | -100 | nA |
| Forward current transfer ratio *1, 2 | h_{FE} | $V_{CE} = -2\text{ V}$, $I_C = -2\text{ A}$ | 90 | | 205 | — |
| Collector-emitter saturation voltage *1 | $V_{CE(sat)}$ | $I_C = -3\text{ A}$, $I_B = -0.1\text{ A}$ | | | -1 | V |
| Transition frequency | f_T | $V_{CB} = -6\text{ V}$, $I_E = 50\text{ mA}$, $f = 200\text{ MHz}$ | | 120 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = -20\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$ | | | 85 | 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 | P | Q |
|----------|-----------|------------|
| h_{FE} | 90 to 135 | 120 to 205 |



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