

2SB1693

Silicon PNP epitaxial planar type

For general amplification

■ Features

- Large collector current I_C
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

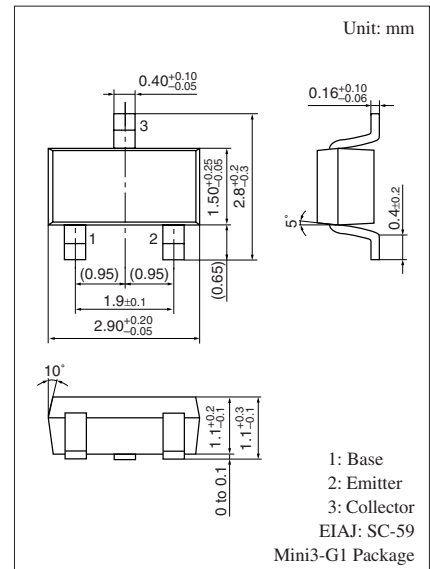
| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | -40 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | -20 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | -15 | V |
| Collector current | I_C | -0.5 | A |
| Peak collector current | I_{CP} | -1 | A |
| Collector power dissipation | P_C | 200 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

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

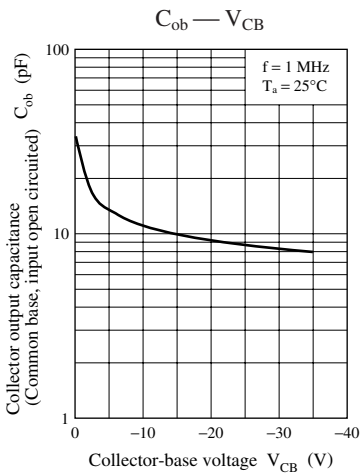
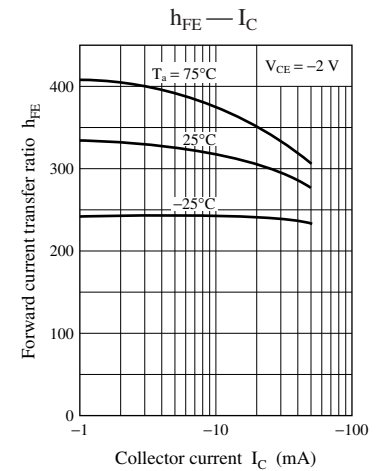
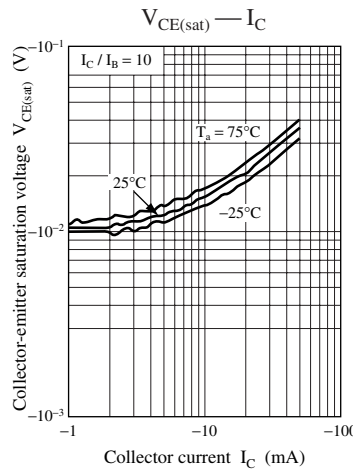
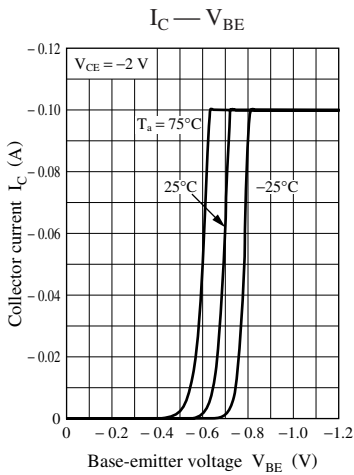
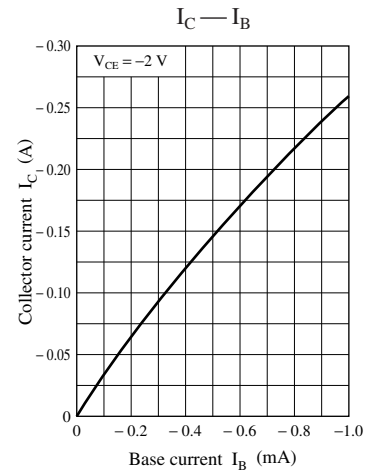
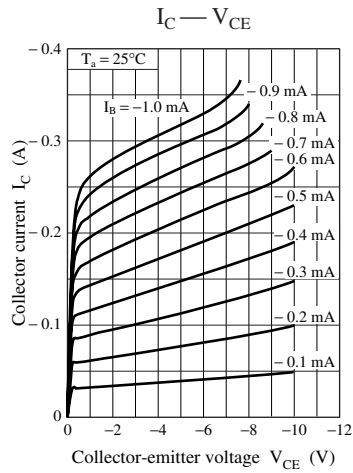
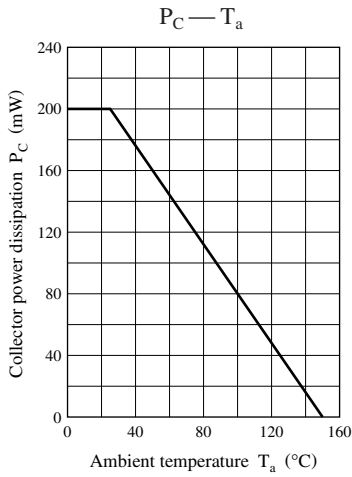
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|---|-----|------|------|------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = -10 \mu\text{A}$, $I_E = 0$ | -40 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = -2 \text{ mA}$, $I_B = 0$ | -20 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = -10 \mu\text{A}$, $I_C = 0$ | -15 | | | V |
| Forward current transfer ratio * | h_{FE1} | $V_{CE} = -2 \text{ V}$, $I_C = -100 \text{ mA}$ | 160 | | 560 | — |
| | h_{FE2} | $V_{CE} = -2 \text{ V}$, $I_C = -500 \text{ mA}$ | 100 | | | |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C = -100 \text{ mA}$, $I_B = -10 \text{ mA}$ | | -60 | -300 | mV |
| | | $I_C = -0.5 \text{ A}$, $I_B = -25 \text{ mA}$ | | -210 | -500 | |
| Transition frequency | f_T | $V_{CB} = -5 \text{ V}$, $I_E = 50 \text{ mA}$, $f = 200 \text{ MHz}$ | | 170 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$ | | 16 | | pF |

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

2. *: Pulse measurement



Marking Symbol: 3D



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