

2SD2565

Silicon NPN triple diffusion planar type

For high voltage-withstand switching

■ Features

- High collector-base voltage (Emitter open) V_{CB0}
- High collector-emitter voltage (Base open) V_{CEO}
- Large collector power dissipation P_C
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- 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_{CB0} | 400 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 400 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | 5 | V |
| Collector current | I_C | 0.5 | A |
| Peak collector current | I_{CP} | 1 | A |
| Collector power dissipation * | P_C | 1 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

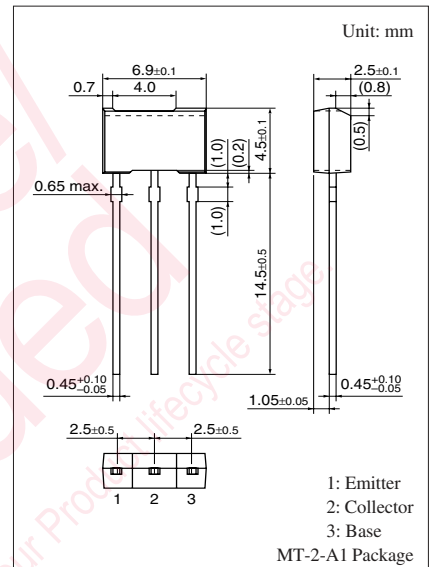
Note) *: Printed circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

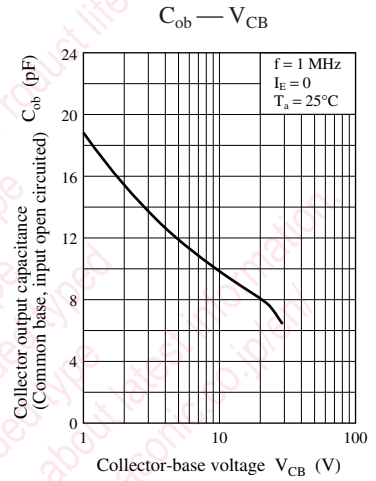
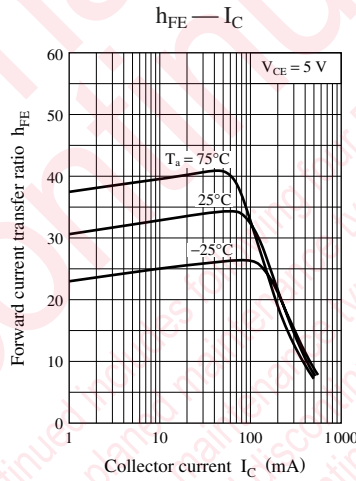
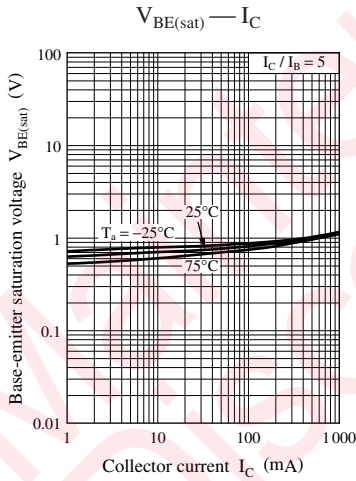
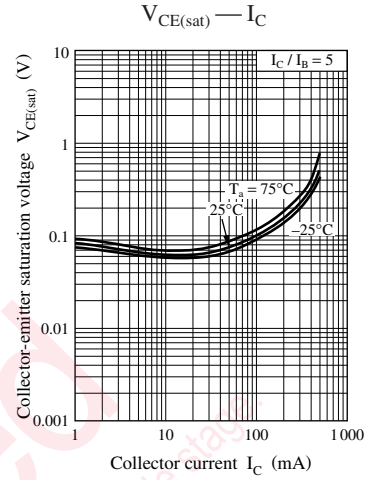
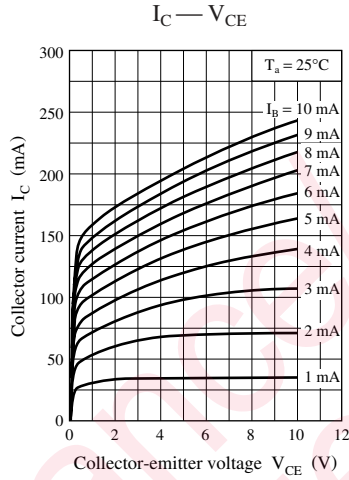
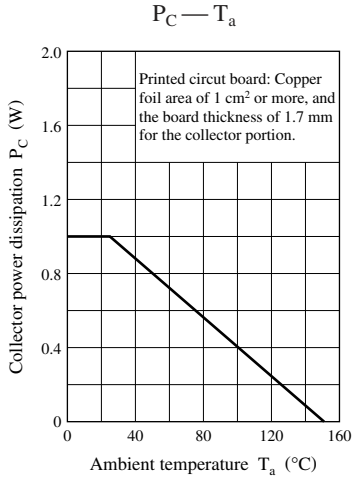
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|--|-----|-----|-----|---------------|
| Collector-base voltage (Emitter open) | V_{CB0} | $I_C = 100 \mu\text{A}$, $I_E = 0$ | 400 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 500 \mu\text{A}$, $I_B = 0$ | 400 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 100 \mu\text{A}$, $I_C = 0$ | 5 | | | V |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 5 \text{ V}$, $I_C = 30 \text{ mA}$ | 30 | | | — |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C = 250 \text{ mA}$, $I_B = 50 \text{ mA}$ | | | 1.5 | V |
| Base-emitter saturation voltage * | $V_{BE(sat)}$ | $I_C = 250 \text{ mA}$, $I_B = 50 \text{ mA}$ | | | 1.5 | V |
| Transition frequency | f_T | $V_{CB} = 30 \text{ V}$, $I_E = -20 \text{ mA}$, $f = 200 \text{ MHz}$ | | 30 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = 30 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$ | | 6 | 20 | pF |
| Turn-on time | t_{on} | $I_C = 100 \text{ mA}$ | | 0.8 | | μs |
| Storage time | t_{stg} | $I_{B1} = 10 \text{ mA}$, $I_{B2} = -10 \text{ mA}$ | | 3.7 | | μs |
| Fall time | t_f | $V_{CC} = 200 \text{ V}$ | | 0.6 | | μs |

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

2. *: Pulse measurement





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