

2SD2225

Silicon NPN epitaxial planar type

For low-frequency amplification

■ Features

- High collector-emitter voltage (Base open) V_{CEO} of 120 V
- Optimum for low-frequency driver amplification
- 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} | 120 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 120 | 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 $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

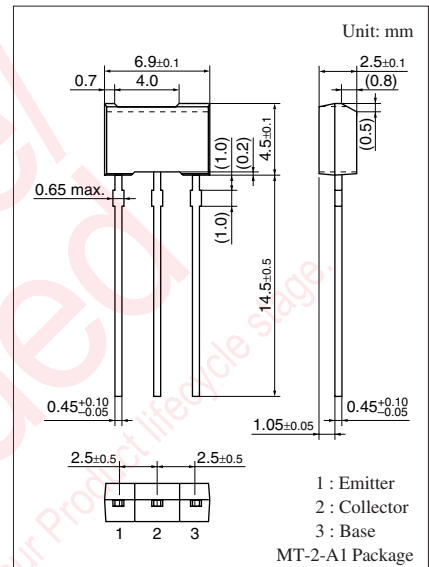
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|--|-----|------|------|------|
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 0.1 \text{ mA}, I_B = 0$ | 120 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_C = 10 \mu\text{A}, I_C = 0$ | 5 | | | V |
| Forward current transfer ratio *1 | h_{FE1} *2 | $V_{CE} = 10 \text{ V}, I_C = 150 \text{ mA}$ | 90 | | 330 | — |
| | h_{FE2} | $V_{CE} = 5 \text{ V}, I_C = 500 \text{ mA}$ | 50 | | | |
| | h_{FE3} | $V_{CE} = 5 \text{ V}, I_C = 100 \text{ mA}$ | 100 | | | |
| Collector-emitter saturation voltage *1 | $V_{CE(sat)}$ | $I_C = 300 \text{ mA}, I_B = 30 \text{ mA}$ | | 0.15 | 1.00 | V |
| Base-emitter saturation voltage *1 | $V_{BE(sat)}$ | $I_C = 300 \text{ mA}, I_B = 30 \text{ mA}$ | | 0.9 | 1.2 | V |
| Transition frequency *1 | f_T | $V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$ | | 200 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ | | 11.5 | 20.0 | pF |

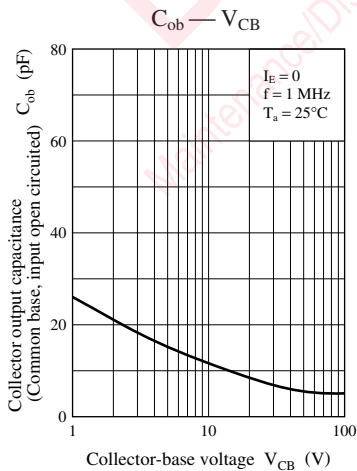
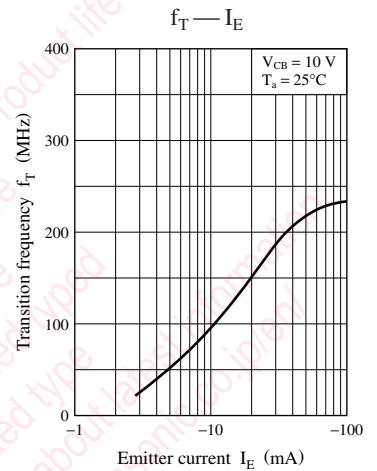
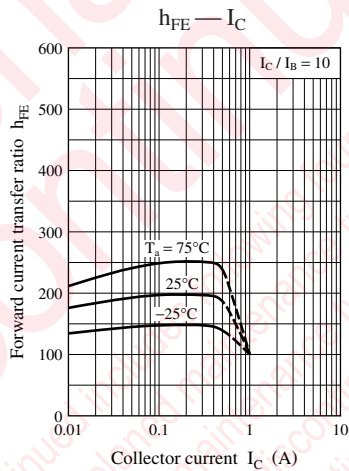
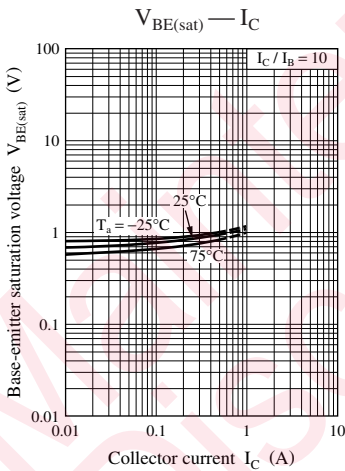
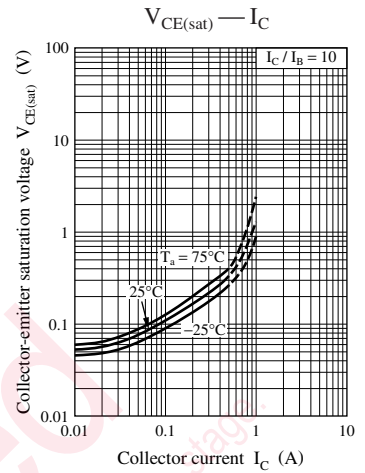
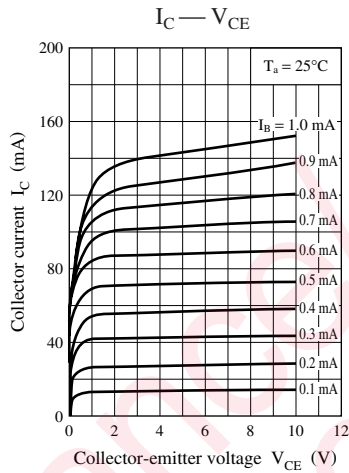
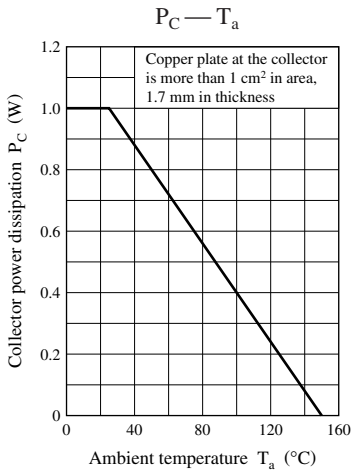
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *1: Pulse measurement

*2: Rank classification

| Rank | Q | R | S |
|-----------|-----------|------------|------------|
| h_{FE1} | 90 to 155 | 130 to 220 | 185 to 330 |





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