

2SD2134

Silicon NPN epitaxial planar type

For low-frequency driver , high power amplification
Complementary to 2SB1414

■ Features

- Excellent collector current I_C characteristics of forward current transfer ratio h_{FE}
- High transition frequency f_T
- A complementary pair with 2SB1414, is optimum for the driver-stage of a 60 W to 100 W output amplifier.

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | 150 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 150 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | 5 | V |
| Collector current | I_C | 1 | A |
| Peak collector current | I_{CP} | 1.5 | A |
| Collector power dissipation | P_C | 1.5 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

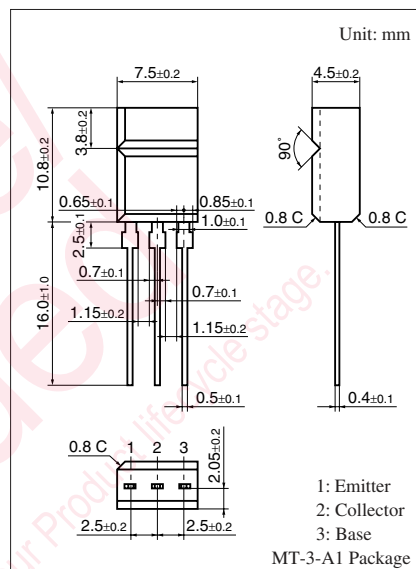
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

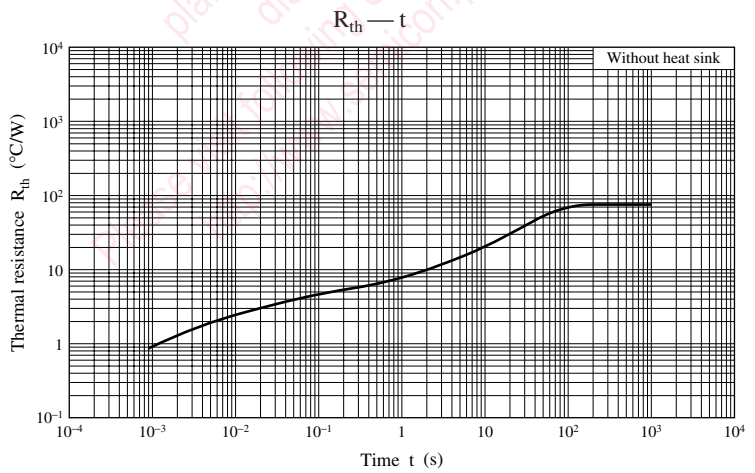
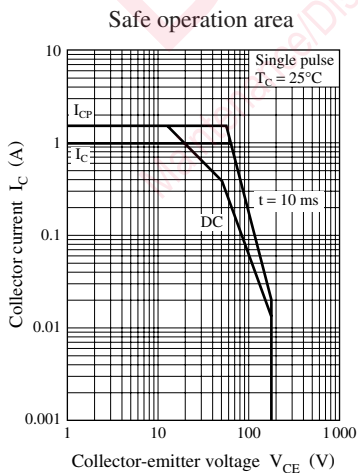
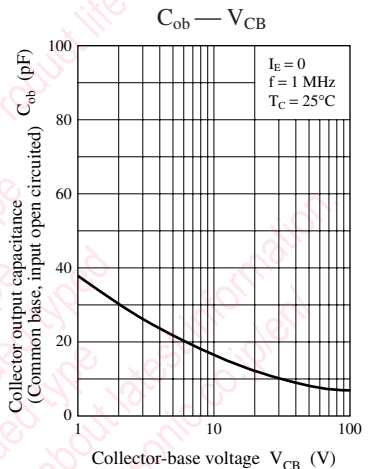
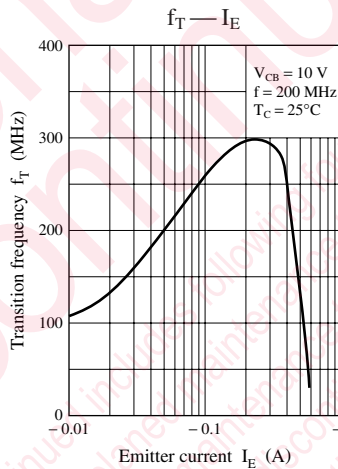
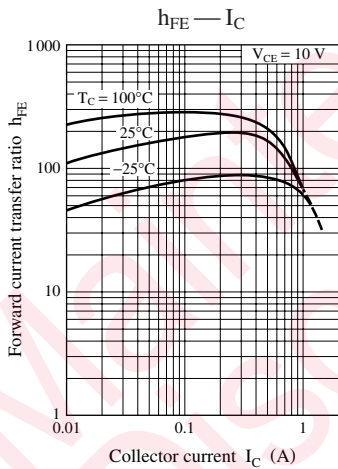
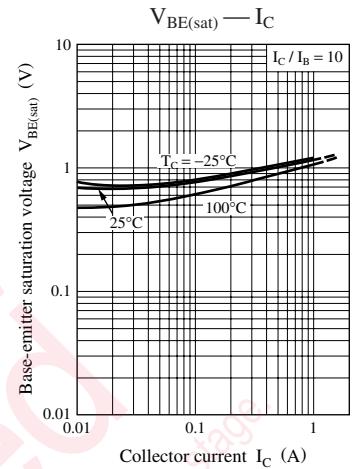
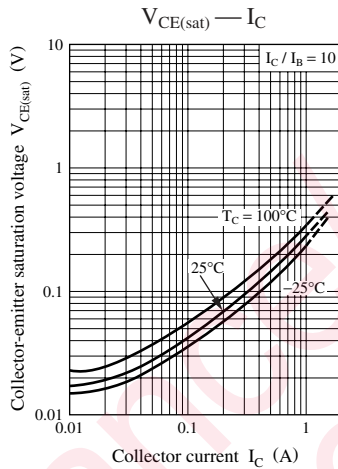
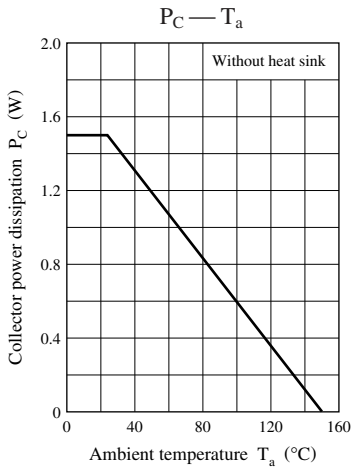
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|--|-----|-----|-----|------|
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 100 \mu\text{A}, I_B = 0$ | 150 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 10 \mu\text{A}, I_C = 0$ | 5 | | | V |
| Forward current transfer ratio | h_{FE1}^* | $V_{CE} = 10 \text{ V}, I_C = 150 \text{ mA}$ | 90 | | 220 | — |
| | h_{FE2} | $V_{CE} = 5 \text{ V}, I_C = 500 \text{ mA}$ | 50 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$ | | 0.5 | 2.0 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$ | | 1.0 | 2.0 | V |
| Transition frequency | 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} | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ | | 20 | | pF |

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

2. *: Rank classification

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





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