

2SD1272

Silicon NPN epitaxial planar type

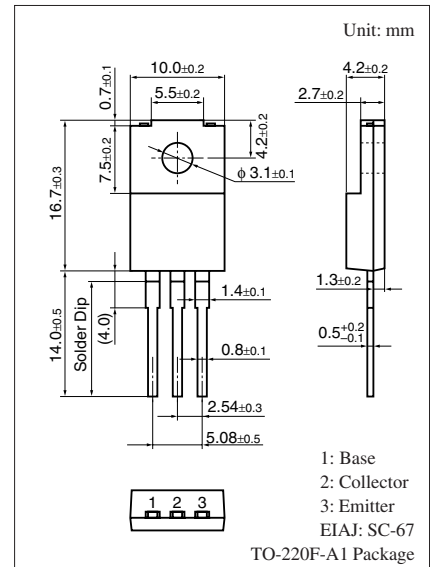
For high-speed switching and high current amplification ratio

■ Features

- High forward current transfer ratio h_{FE}
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Full-pack package which can be installed to the heat sink with one screw

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|--------------------------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | 200 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 150 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | 6 | V |
| Collector current | I_C | 2.5 | A |
| Peak collector current | I_{CP} | 1 | A |
| Collector power dissipation | $T_C = 25^\circ\text{C}$ | P_C | 40 |
| | | | 2.0 |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |



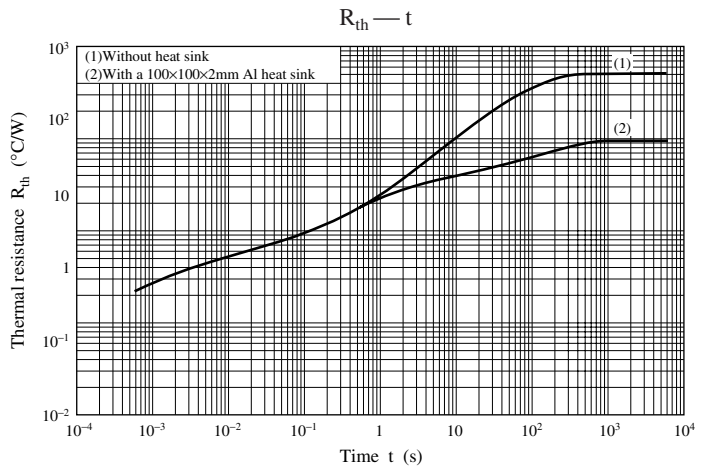
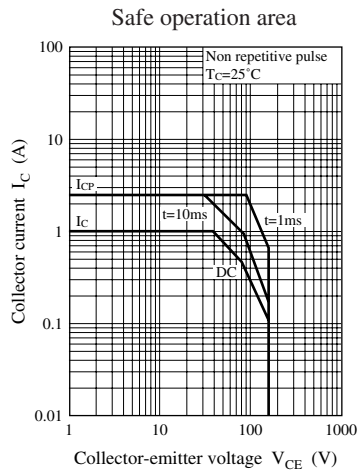
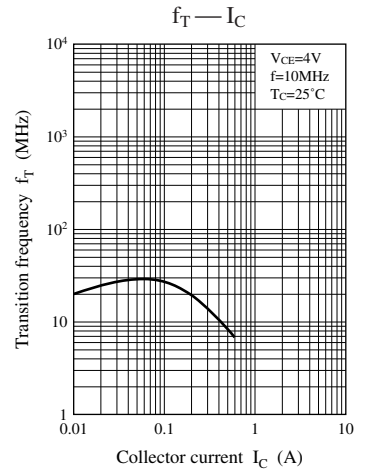
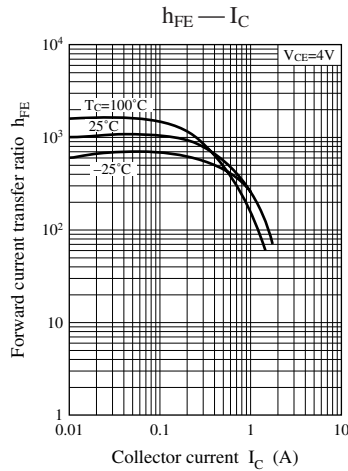
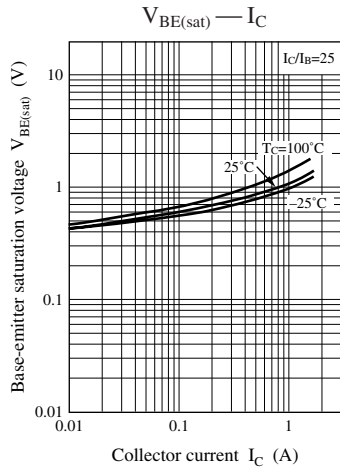
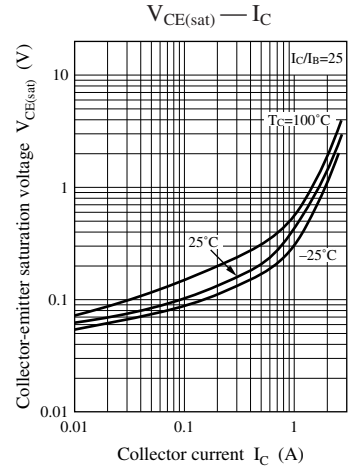
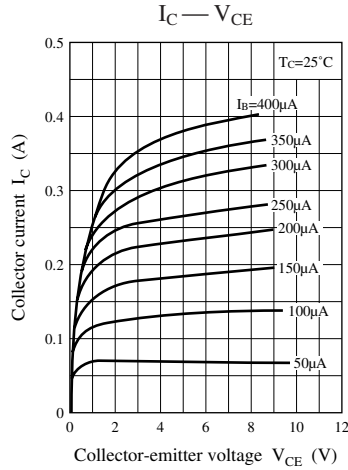
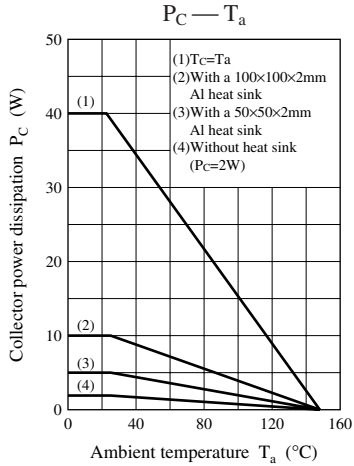
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--|---------------|--|-----|-----|------|---------------|
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 25\text{ mA}, I_B = 0$ | 150 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 200\text{ V}, I_E = 0$ | | | 100 | μA |
| Emitter-base cutoff current (Collector open) | I_{EBO} | $V_{EB} = 6\text{ V}, I_C = 0$ | | | 100 | μA |
| Forward current transfer ratio * | h_{FE} | $V_{CE} = 4\text{ V}, I_C = 0.2\text{ A}$ | 500 | | 2000 | — |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 0.5\text{ A}, I_B = 0.02\text{ A}$ | | | 1 | V |
| Transition frequency | f_T | $V_{CE} = 4\text{ V}, I_C = 0.1\text{ A}, f = 10\text{ MHz}$ | | 25 | | MHz |

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

2. *: Rank classification

| Rank | Q | P |
|----------|-------------|-------------|
| h_{FE} | 500 to 1200 | 800 to 2000 |



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