

2SD2216J

Silicon NPN epitaxial planar type

For general amplification

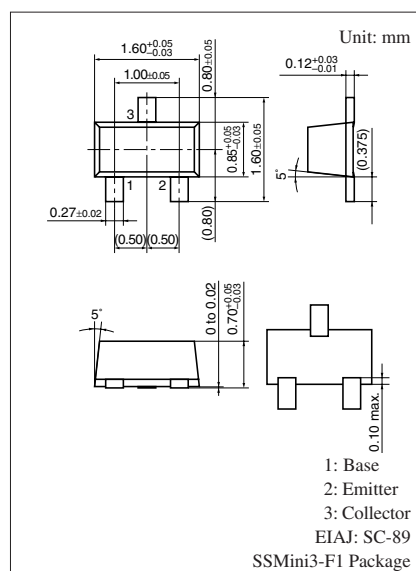
Complementary to 2SB1462J

■ Features

- High forward current transfer ratio h_{FE}
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | 60 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 50 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | 7 | V |
| Collector current | I_C | 100 | mA |
| Peak collector current | I_{CP} | 200 | mA |
| Collector power dissipation | P_C | 125 | mW |
| Junction temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

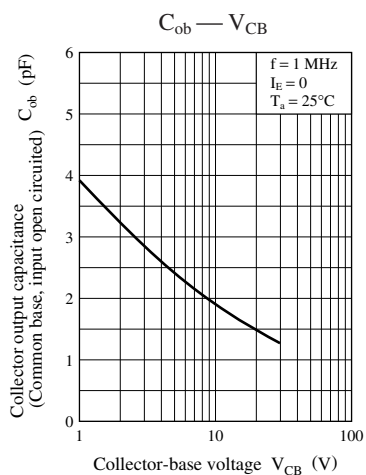
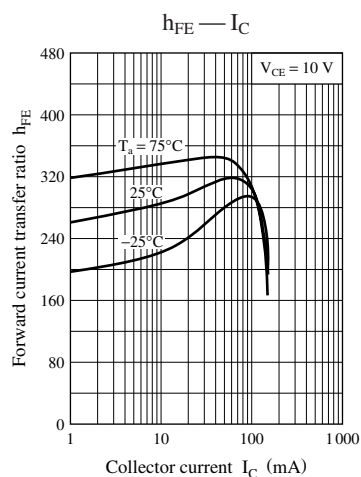
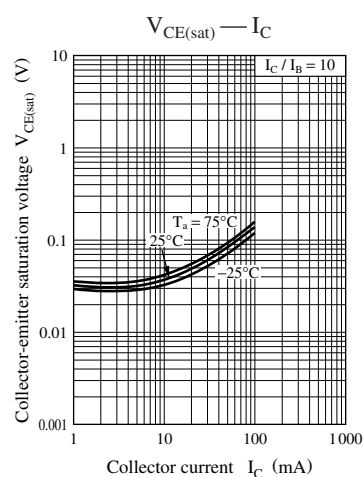
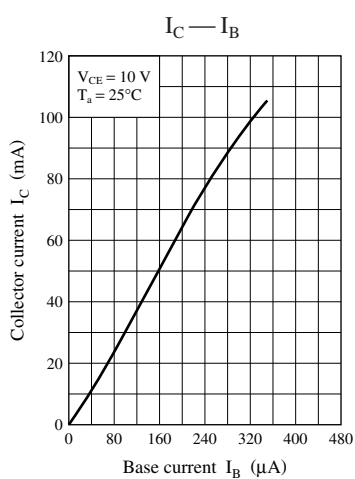
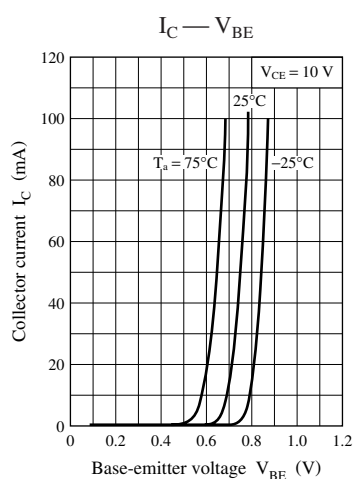
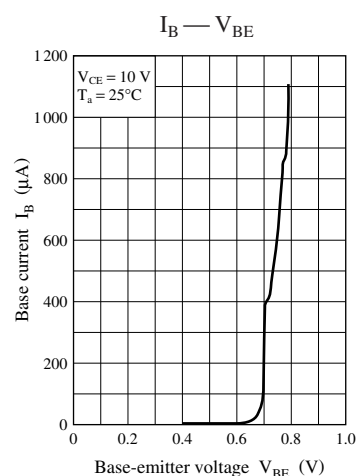
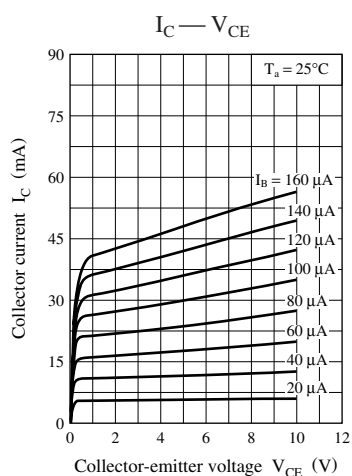
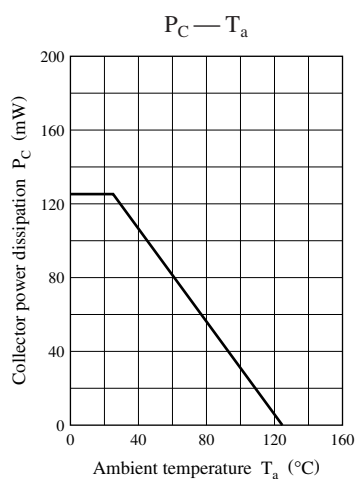


Marking Symbol: Y

■ 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} | $I_C = 10\ \mu\text{A}$, $I_E = 0$ | 60 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 2\ \text{mA}$, $I_B = 0$ | 50 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 10\ \mu\text{A}$, $I_C = 0$ | 7 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 20\ \text{V}$, $I_E = 0$ | | | 0.1 | μA |
| Collector-emitter cutoff current (Base open) | I_{CEO} | $V_{CE} = 10\ \text{V}$, $I_B = 0$ | | | 100 | μA |
| Forward current transfer ratio | h_{FE1} | $V_{CE} = 10\ \text{V}$, $I_C = 2\ \text{mA}$ | 180 | | 390 | — |
| | h_{FE2} | $V_{CE} = 2\ \text{V}$, $I_C = 100\ \text{mA}$ | 90 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 100\ \text{mA}$, $I_B = 10\ \text{mA}$ | | 0.1 | 0.3 | V |
| Transition frequency | f_T | $V_{CB} = 10\ \text{V}$, $I_E = -2\ \text{mA}$, $f = 200\ \text{MHz}$ | | 150 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = 10\ \text{V}$, $I_E = 0$, $f = 1\ \text{MHz}$ | | 3.5 | | pF |

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



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