

2SC2405, 2SC2406

Silicon NPN epitaxial planar type

For low-frequency and low-noise amplification
Complementary to 2SA1034 and 2SA1035

■ Features

- Low noise voltage NV
- High forward current transfer ratio h_{FE}
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

| Parameter | Symbol | Rating | Unit | |
|--|-----------|-------------|------------------|---|
| Collector-base voltage (Emitter open) | 2SC2405 | V_{CBO} | 35 | V |
| | 2SC2406 | | 55 | |
| Collector-emitter voltage (Base open) | 2SC2405 | V_{CEO} | 35 | V |
| | 2SC2406 | | 55 | |
| Emitter-base voltage (Collector open) | V_{EBO} | 5 | V | |
| Collector current | I_C | 50 | mA | |
| Peak collector current | I_{CP} | 100 | mA | |
| Collector power dissipation | P_C | 200 | mW | |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ | |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ | |

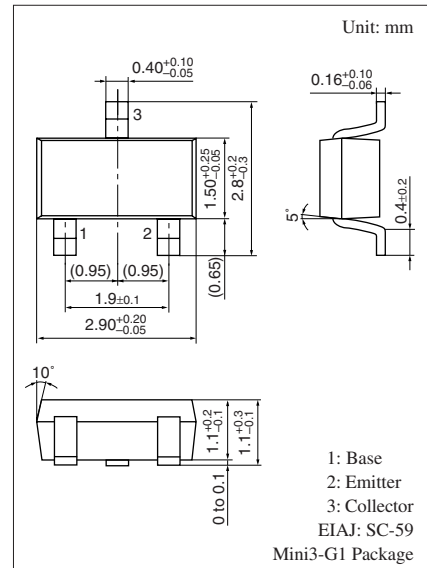
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--|---------------|--|-----|-----|-----|---------------|
| Collector-base voltage (Emitter open) | 2SC2405 | $I_C = 10 \mu\text{A}, I_E = 0$ | 35 | | | V |
| | 2SC2406 | | 55 | | | |
| Collector-emitter voltage (Base open) | 2SC2405 | $I_C = 2 \text{mA}, I_B = 0$ | 35 | | | V |
| | 2SC2406 | | 55 | | | |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 10 \mu\text{A}, I_C = 0$ | 5 | | | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = 1 \text{V}, I_C = 100 \text{mA}$ | | 0.7 | 1.0 | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 10 \text{V}, I_E = 0$ | | | 0.1 | μA |
| Collector-emitter cutoff current (Base open) | I_{CEO} | $V_{CE} = 10 \text{V}, I_B = 0$ | | | 1 | μA |
| Forward current transfer ratio * | h_{FE} | $V_{CE} = 5 \text{V}, I_C = 2 \text{mA}$ | 180 | | 700 | — |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 100 \text{mA}, I_B = 10 \text{mA}$ | | | 0.6 | V |
| Transition frequency | f_T | $V_{CB} = 5 \text{V}, I_E = -2 \text{mA}, f = 200 \text{MHz}$ | | 200 | | MHz |
| Noise voltage | NV | $V_{CE} = 10 \text{V}, I_C = 1 \text{mA}, G_v = 80 \text{dB}$ $R_g = 100 \text{k}\Omega, \text{Function} = \text{FLAT}$ | | 110 | | mV |

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

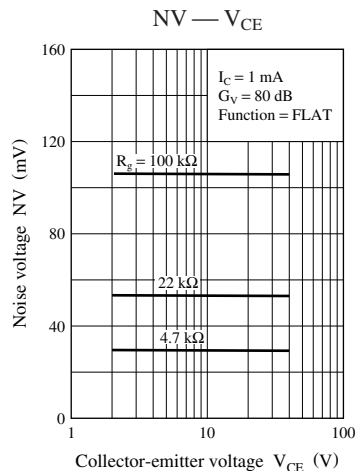
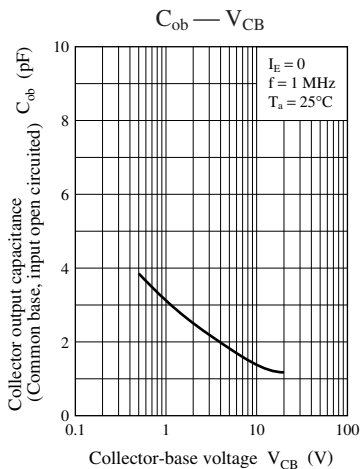
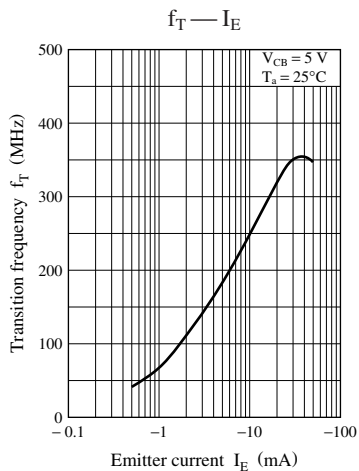
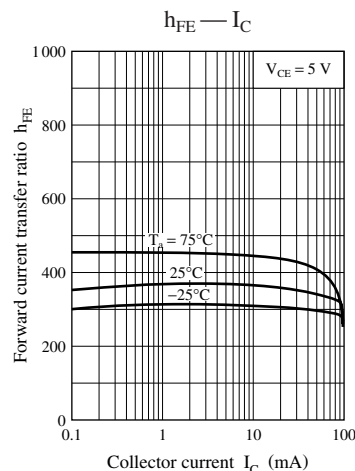
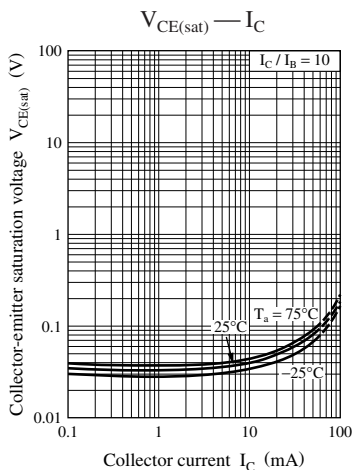
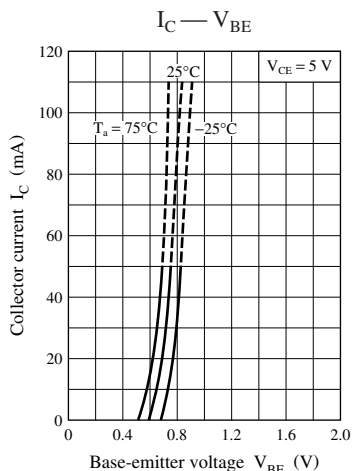
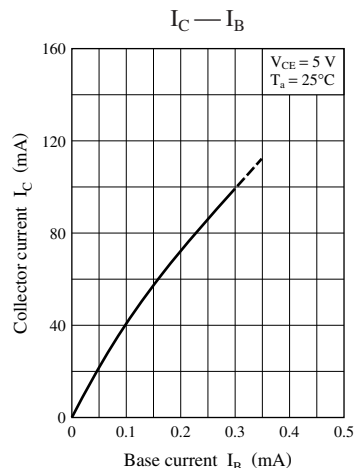
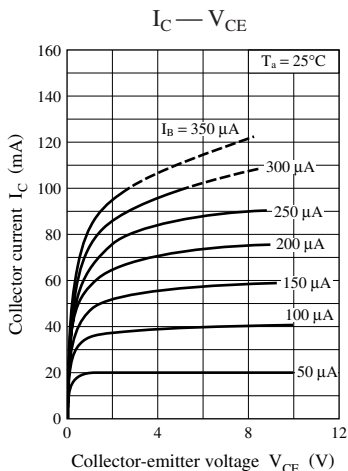
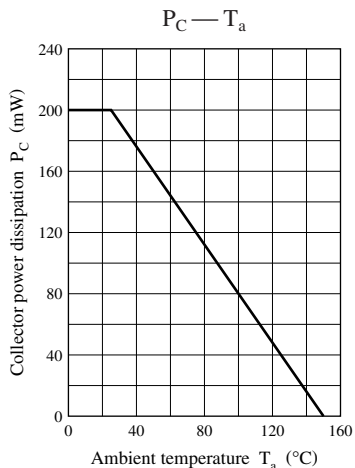
2. *: Rank classification

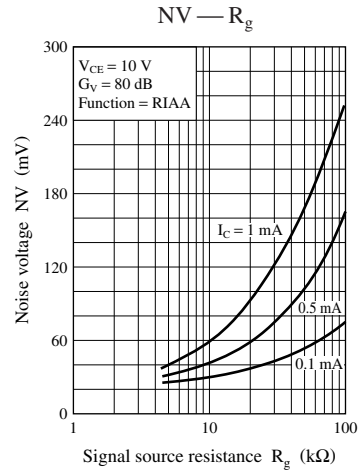
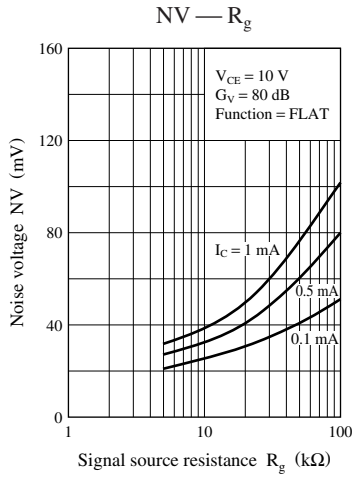
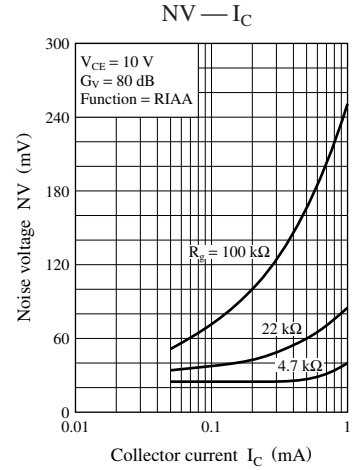
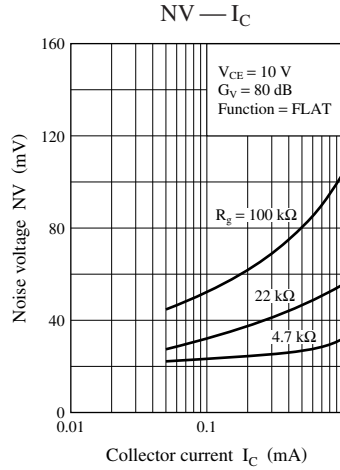
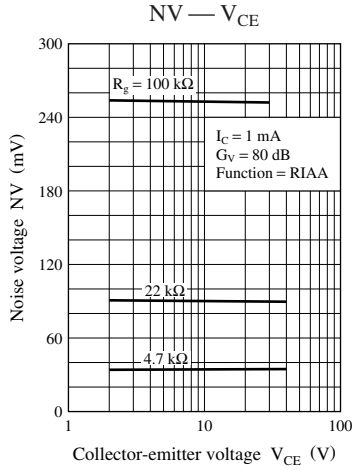
| Rank | R | S | T | |
|----------------|------------|------------|------------|----|
| h_{FE} | 180 to 360 | 260 to 520 | 360 to 700 | |
| Marking symbol | 2SC2405 | SR | SS | ST |
| | 2SC2406 | TR | TS | TT |



Marking Symbol:

- 2SC2405: S
- 2SC2406: T





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