

2SC2404

Silicon NPN epitaxial planar type

For high-frequency amplification

■ Features

- Optimum for RF amplification of FM/AM radios
- High transition frequency f_T
- 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) | V_{CBO} | 30 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 20 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | 3 | V |
| Collector current | I_C | 15 | mA |
| Collector power dissipation | P_C | 150 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

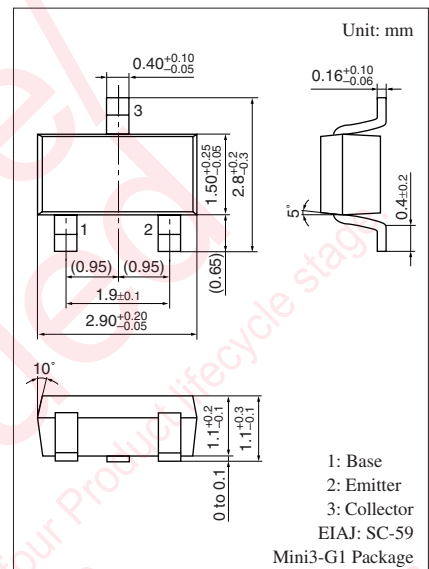
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|-----------|---|-----|------|-----|------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = 10 \mu\text{A}$, $I_E = 0$ | 30 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 10 \mu\text{A}$, $I_C = 0$ | 3 | | | V |
| Base-emitter voltage | V_{BE} | $V_{CB} = 6 \text{ V}$, $I_E = -1 \text{ mA}$ | | 0.72 | | V |
| Forward current transfer ratio * | h_{FE} | $V_{CB} = 6 \text{ V}$, $I_E = -1 \text{ mA}$ | 65 | | 260 | — |
| Transition frequency | f_T | $V_{CB} = 6 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 100 \text{ MHz}$ | 450 | 650 | | MHz |
| Reverse transfer capacitance (Common emitter) | C_{re} | $V_{CB} = 6 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 10.7 \text{ MHz}$ | | 0.8 | 1.0 | pF |
| Power gain | G_P | $V_{CB} = 6 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 100 \text{ MHz}$ | | 24 | | dB |
| Noise figure | NF | $V_{CB} = 6 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 100 \text{ MHz}$ | | 3.3 | | dB |

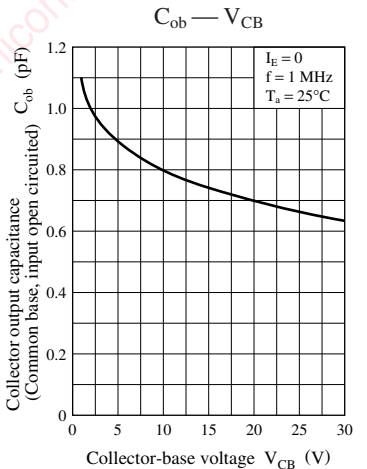
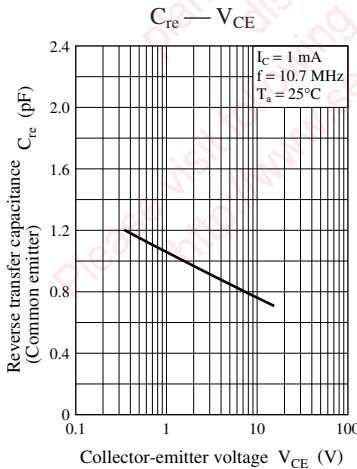
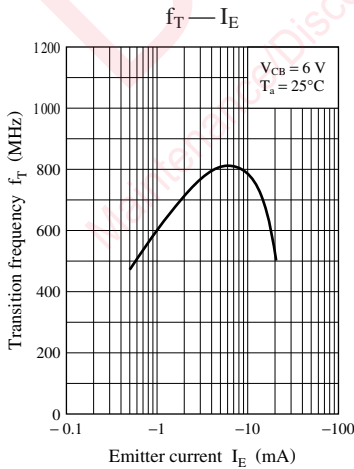
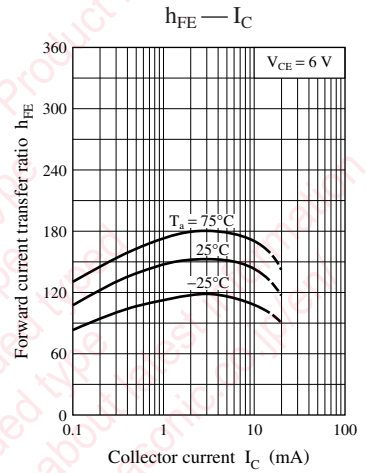
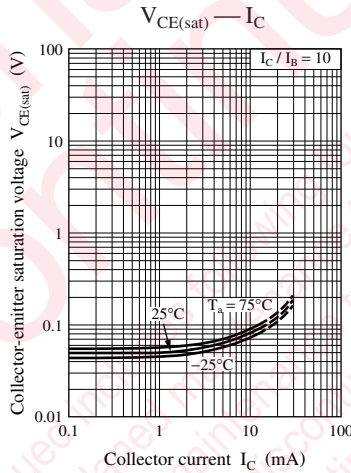
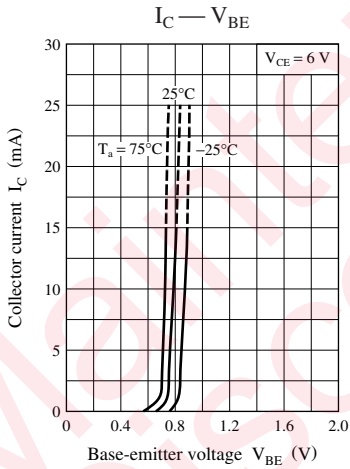
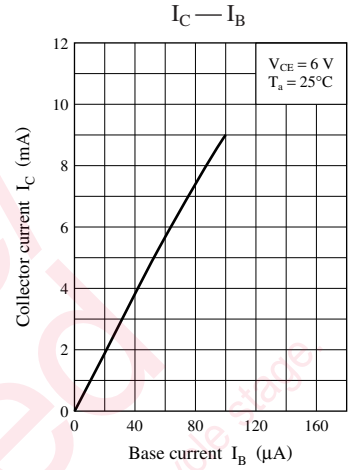
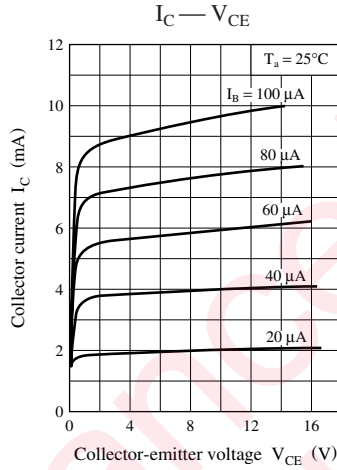
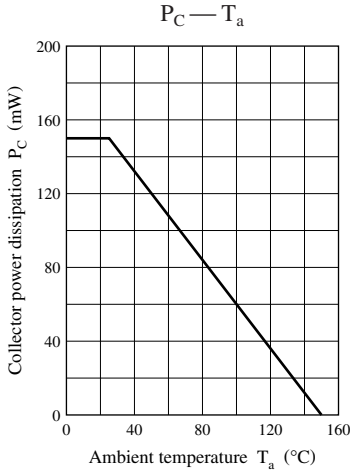
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

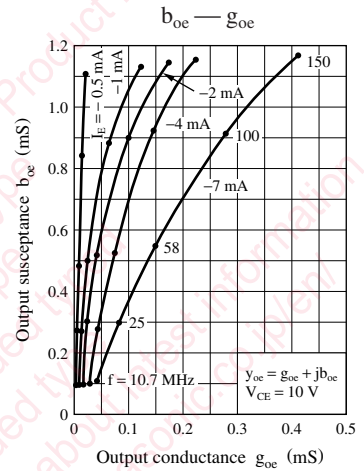
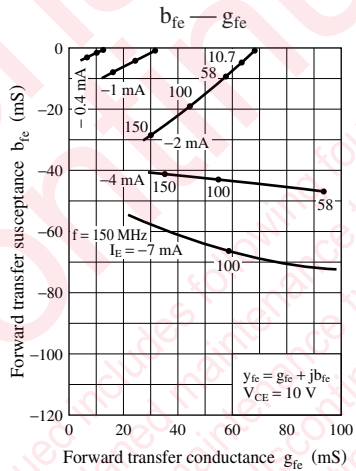
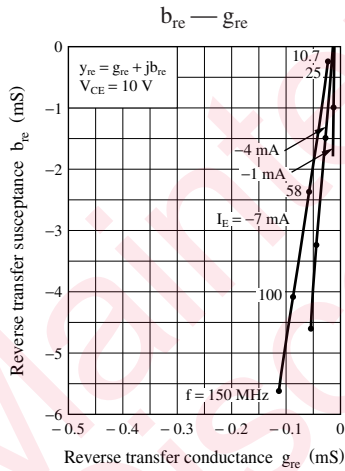
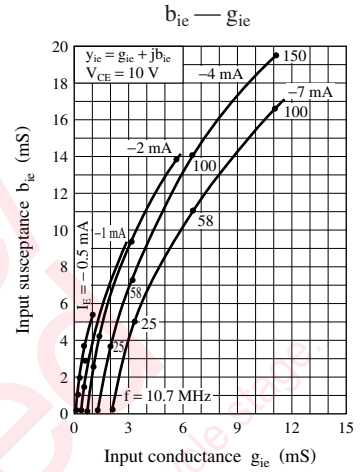
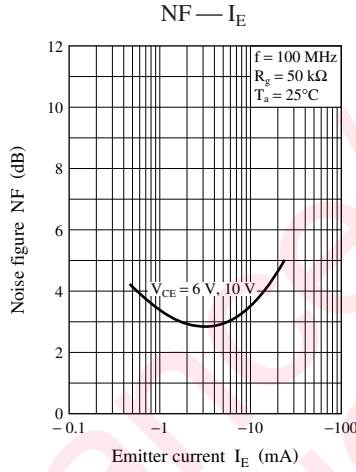
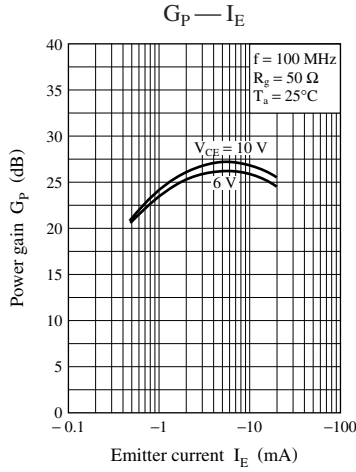
2. *: Rank classification

| Rank | C | D |
|----------|-----------|------------|
| h_{FE} | 65 to 160 | 100 to 260 |



Marking Symbol: U





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standard applications or general electronic equipment (such as office
and household appliances).

ng applications:

biles, traffic control equipment, combustion equipment, life support
reliability are required, or if the failure or malfunction of the prod-

k are subject to change without notice for modification and/or im-
use of the products, therefore, ask for the most up-to-date Product
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r-off and mode-switching. Otherwise, we will not be liable for any

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n the systems such as redundant design, arresting the spread of fire
al injury, fire, social damages, for example, by using the products.

own and characteristics change due to external factors (ESD, EOS,
mounting or at customer's process. When using products for which
shelf life and the elapsed time since first opening the packages.

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