

2SC2295

Silicon NPN epitaxial planar type

For high-frequency amplification

Complementary to 2SA1022

■ 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} | 5 | V |
| Collector current | I_C | 30 | mA |
| Collector power dissipation | P_C | 200 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

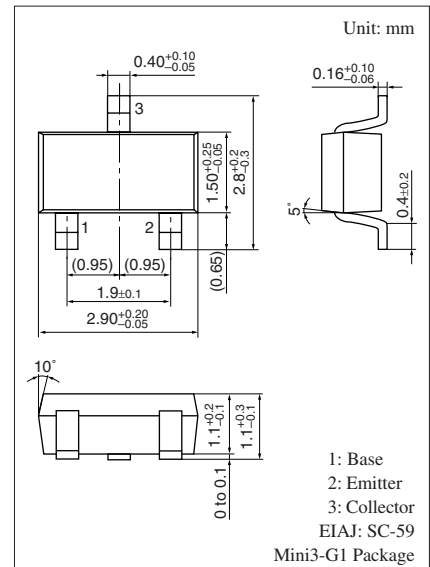
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|-----------|---|-----|-----|-----|---------------|
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 10\text{ V}, I_E = 0$ | | | 0.1 | μA |
| Forward current transfer ratio * | h_{FE} | $V_{CB} = 10\text{ V}, I_E = -1\text{ mA}$ | 70 | | 220 | — |
| Transition frequency | f_T | $V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 200\text{ MHz}$ | 150 | 250 | | MHz |
| Noise figure | NF | $V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 5\text{ MHz}$ | | 2.8 | 4.0 | dB |
| Reverse transfer impedance | Z_{rb} | $V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 2\text{ MHz}$ | | 22 | 50 | Ω |
| Reverse transfer capacitance (Common emitter) | C_{re} | $V_{CB} = 10\text{ V}, I_E = -1\text{ mA}, f = 10.7\text{ MHz}$ | | 0.9 | 1.5 | pF |

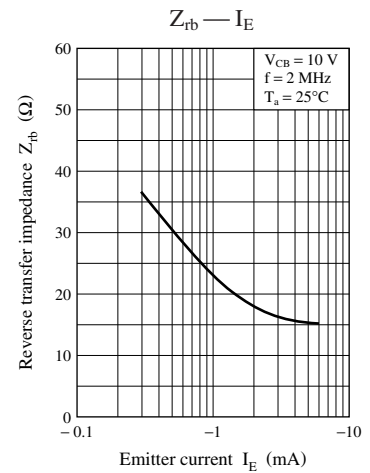
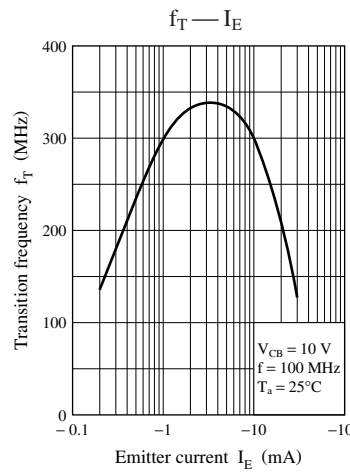
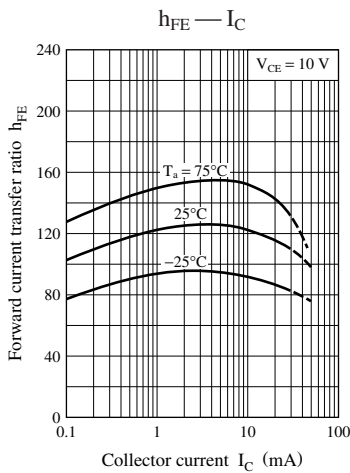
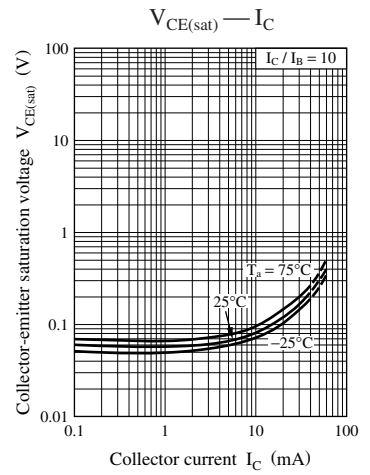
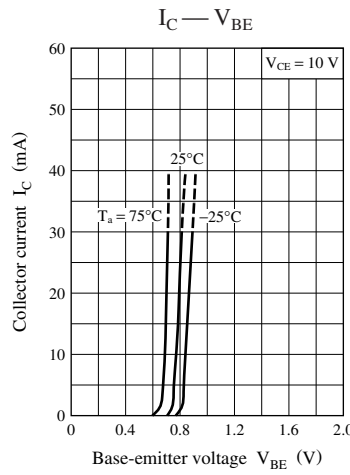
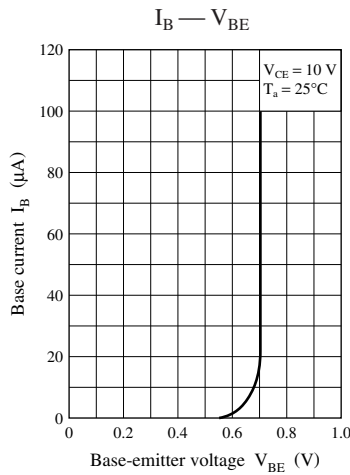
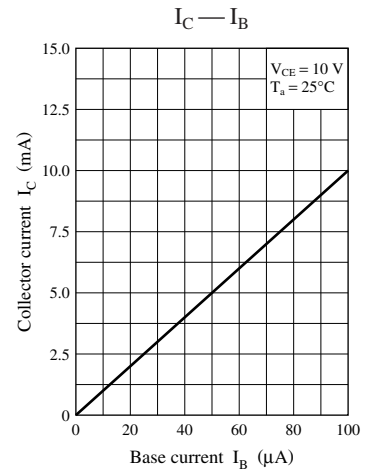
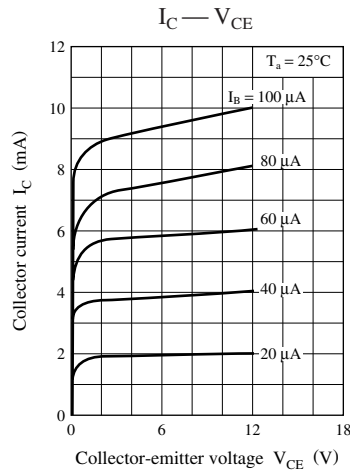
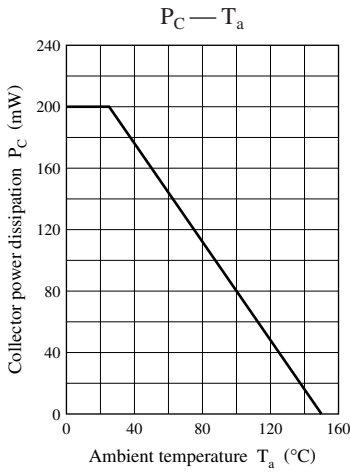
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

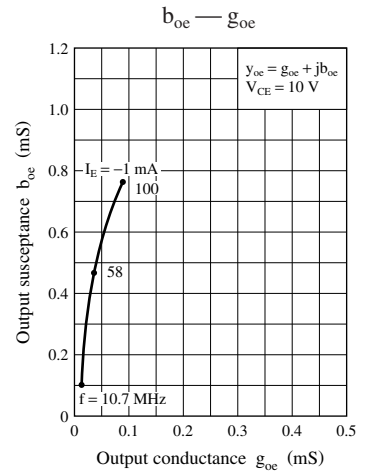
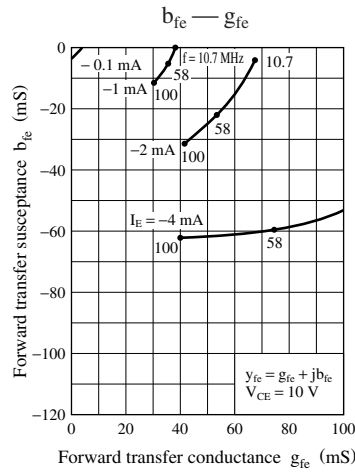
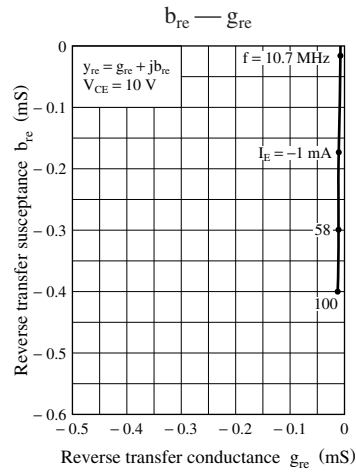
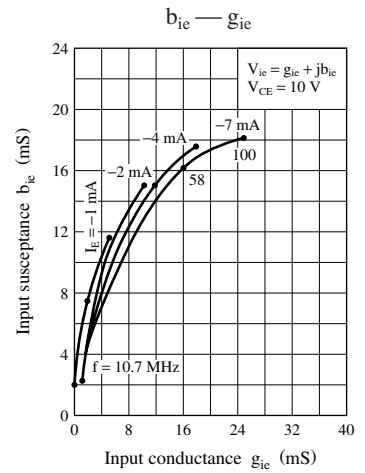
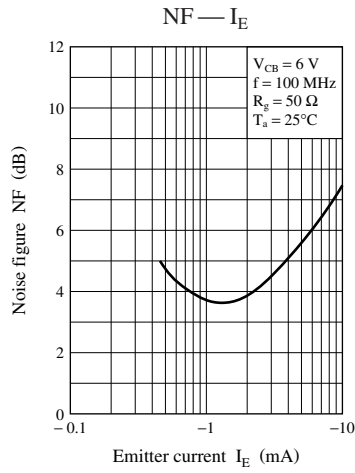
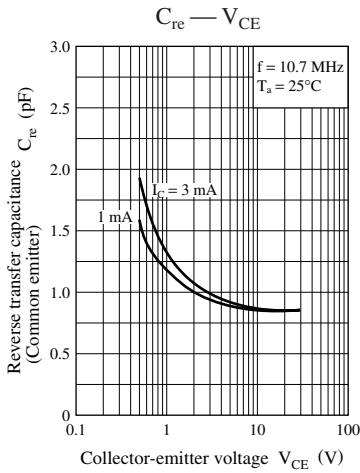
2. *: Rank classification

| Rank | B | C |
|----------|-----------|------------|
| h_{FE} | 70 to 140 | 110 to 220 |



Marking Symbol: V





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