

# 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 | $^\circ\text{C}$ |

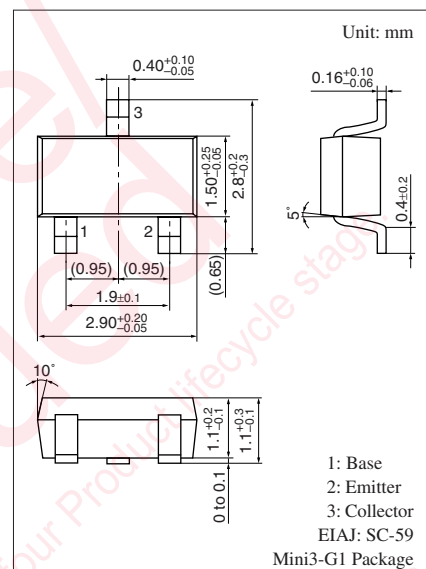
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| 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 | $\mu\text{A}$ |
| 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  | $\Omega$      |
| 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            |

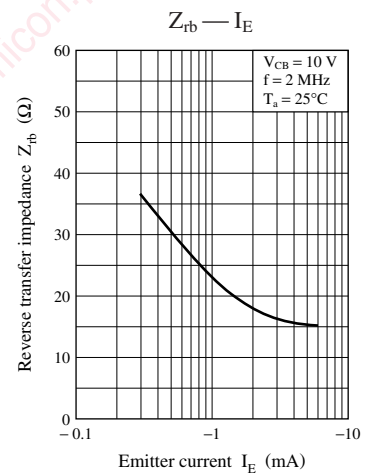
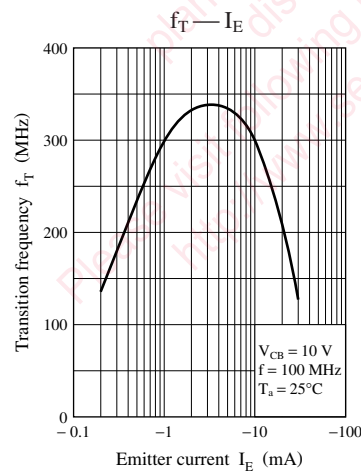
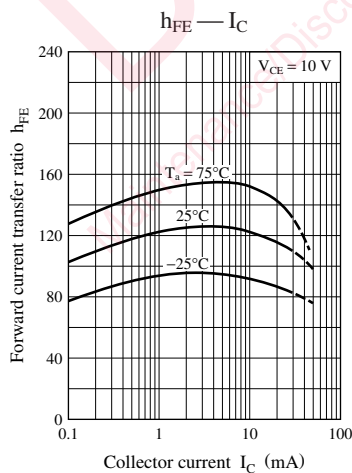
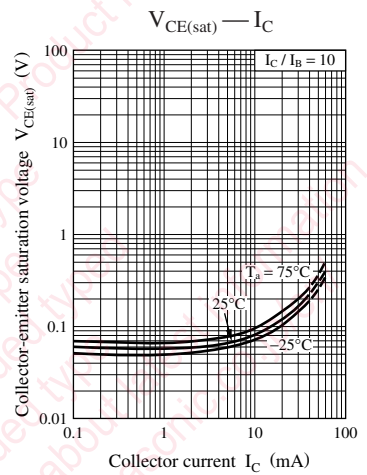
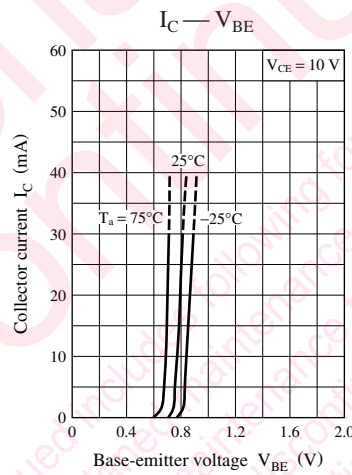
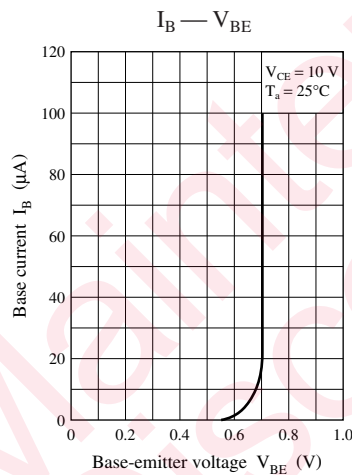
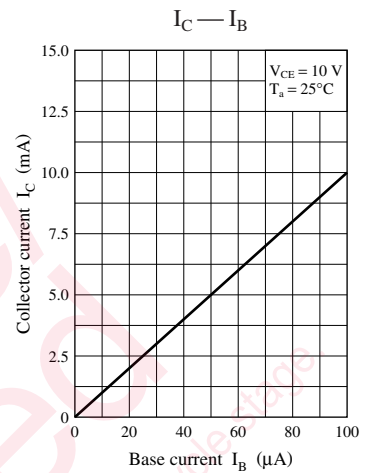
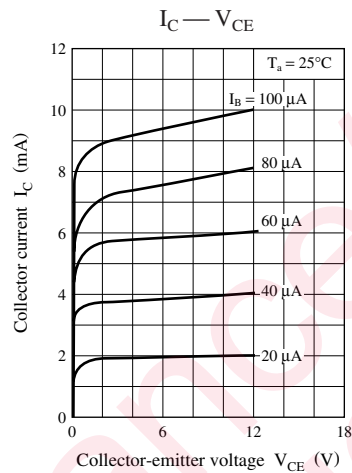
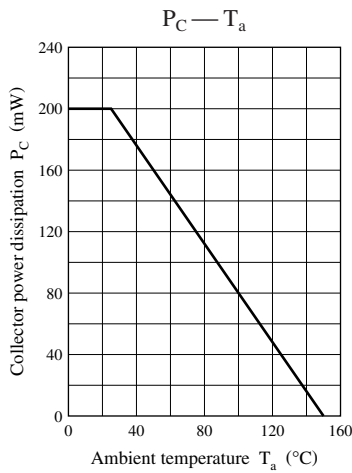
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

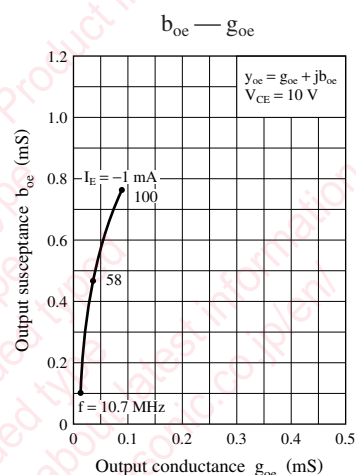
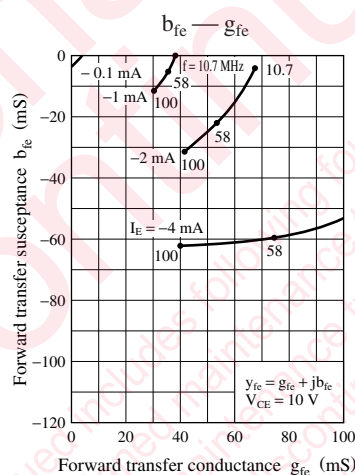
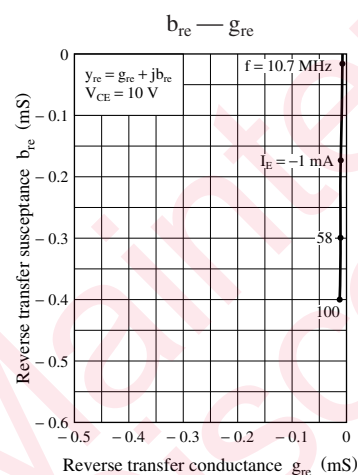
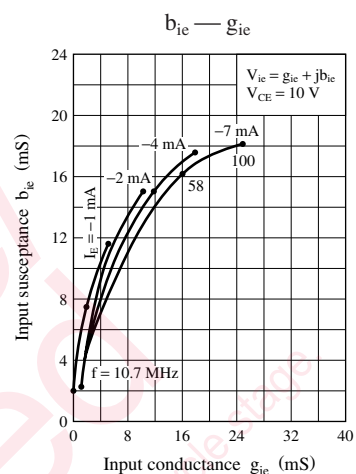
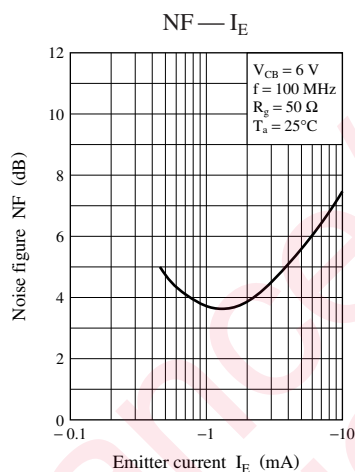
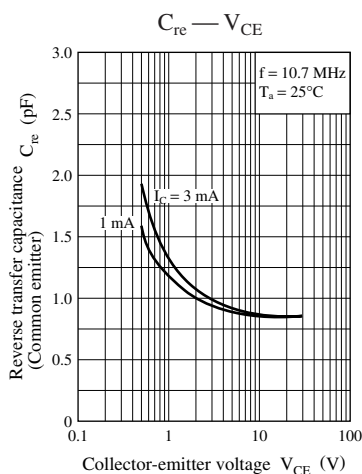
2. \*: Rank classification

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



Marking Symbol: V





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