

# 2SA1034, 2SA1035

## Silicon PNP epitaxial planar type

For low-frequency and low-noise amplification  
Complementary to 2SC2405, 2SC2406

### ■ 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<br>(Emitter open) | 2SA1034   | -35         | V                |
|  | 2SA1035   | -55         |                  |
| Collector-emitter voltage<br>(Base open) | 2SA1034   | -35         | V                |
|  | 2SA1035   | -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 $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

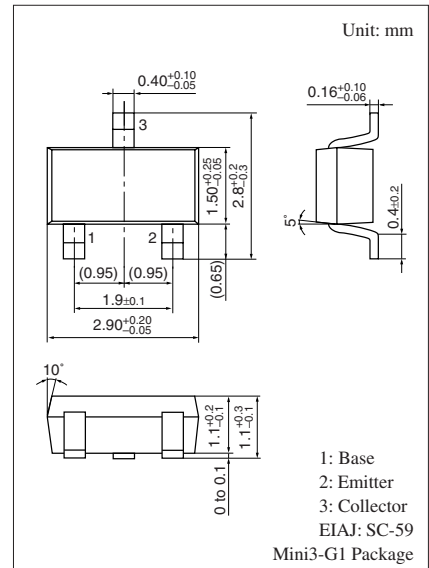
| Parameter                                    | Symbol        | Conditions   | Min | Typ  | Max  | Unit          |
|--|---------------|--|-----|------|------|---------------|
| Collector-base voltage<br>(Emitter open)     | 2SA1034       | $I_C = -10 \mu\text{A}, I_E = 0$   | -35 |      |      | V             |
|  | 2SA1035       |  | -55 |      |      |               |
| Collector-emitter voltage<br>(Base open)     | 2SA1034       | $I_C = -2 \text{ mA}, I_B = 0$   | -35 |      |      | V             |
|  | 2SA1035       |  | -55 |      |      |               |
| Emitter-base voltage (Collector open)        | $V_{EBO}$     | $I_E = -10 \mu\text{A}, I_C = 0$   | -5  |      |      | V             |
| Base-emitter voltage *1                      | $V_{BE}$      | $V_{CE} = -1 \text{ V}, I_C = -100 \text{ mA}$   |     | -0.7 | -1.0 | V             |
| Collector-base cutoff current (Emitter open) | $I_{CBO}$     | $V_{CB} = -10 \text{ V}, I_E = 0$  |     |      | -0.1 | $\mu\text{A}$ |
| Collector-emitter cutoff current (Base open) | $I_{CEO}$     | $V_{CE} = -10 \text{ V}, I_B = 0$  |     |      | -1   | $\mu\text{A}$ |
| Forward current transfer ratio *2            | $h_{FE}$      | $V_{CE} = -5 \text{ V}, I_C = -2 \text{ mA}$   | 180 |      | 700  | —             |
| Collector-emitter saturation voltage *1      | $V_{CE(sat)}$ | $I_C = -100 \text{ mA}, I_B = -10 \text{ mA}$  |     |      | -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            | $V_{CE} = -10 \text{ V}, I_C = -1 \text{ mA}, G_V = 80 \text{ dB}$<br>$R_g = 100 \text{ k}\Omega, \text{Function} = \text{FLAT}$ |     |      | 150  | mV            |

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

2. \*1: Pulse measurement

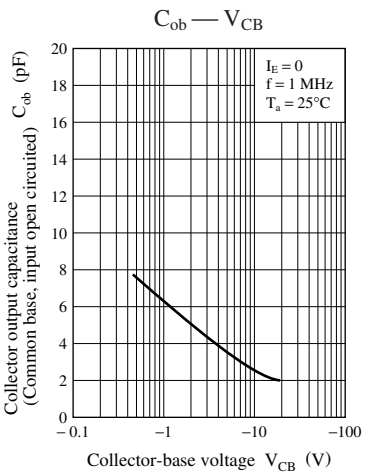
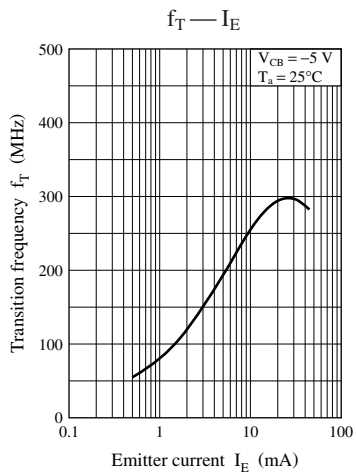
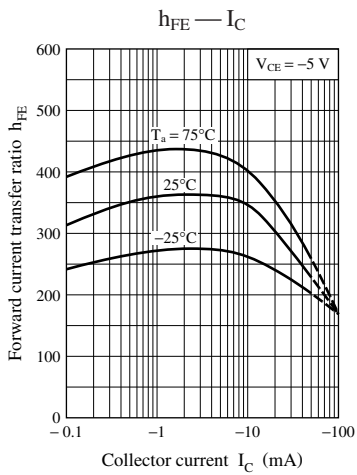
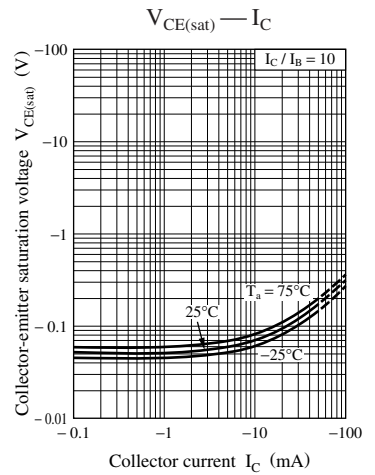
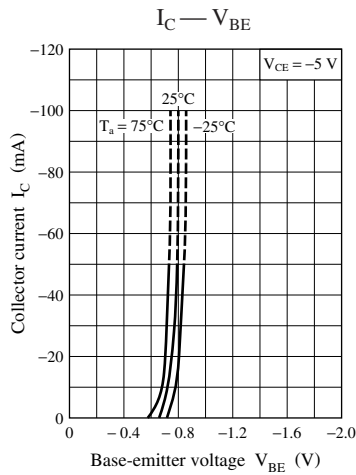
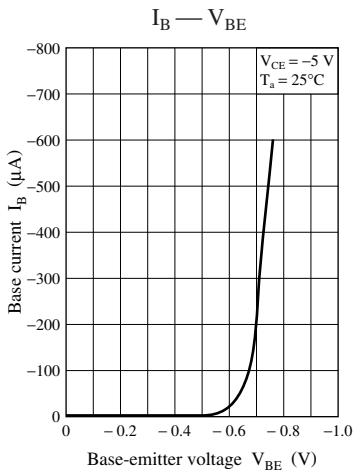
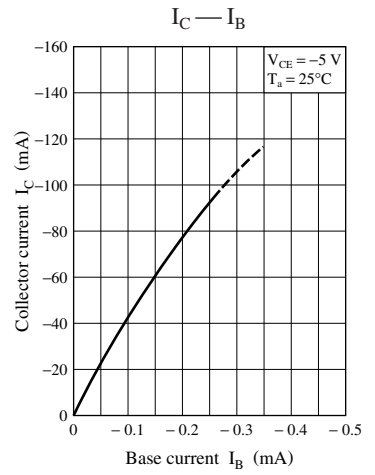
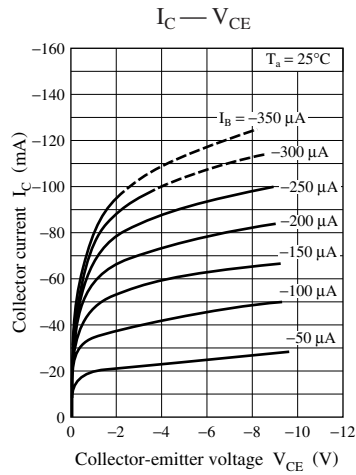
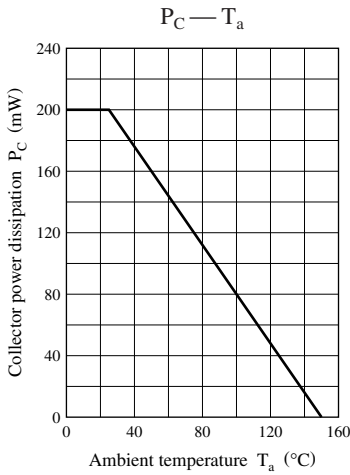
\*2: Rank classification

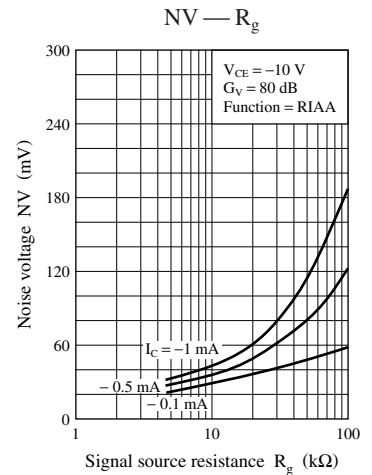
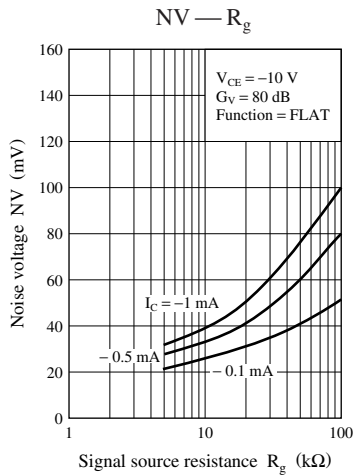
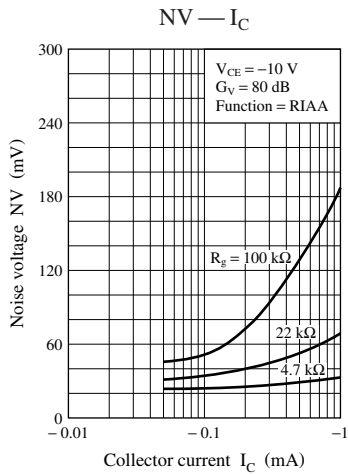
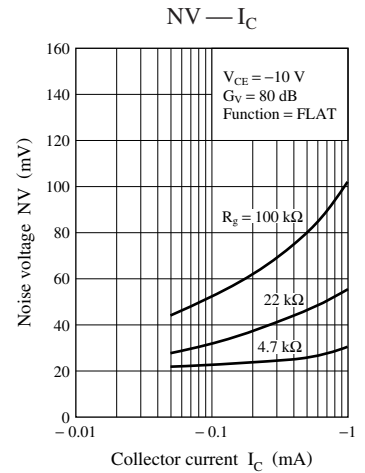
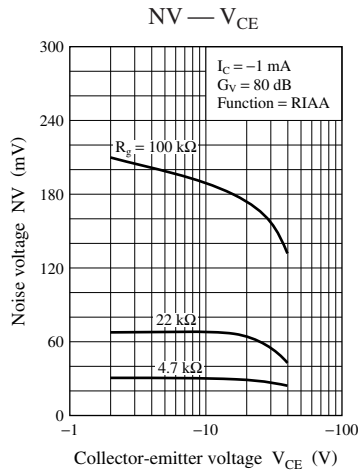
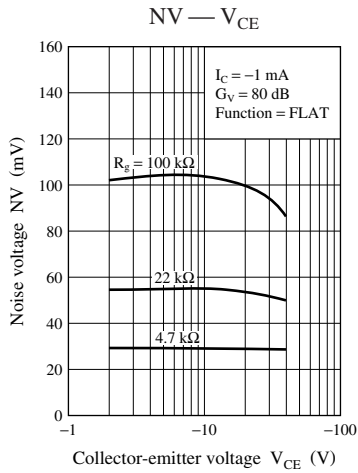
| Rank     | R          | S          | T          |
|----------|------------|------------|------------|
| $h_{FE}$ | 180 to 360 | 260 to 520 | 360 to 700 |



### Marking Symbol:

- 2SA1034: F
- 2SA1035: H





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