

Description

- General small signal amplifier

Features

- Low collector saturation voltage : $V_{CE(sat)} = -0.15V(\text{Max.})$
- Extremely small size package: $0.8 \times 0.6 \times 0.4 \text{ mm}$ Typ.
- Complementary pair with NT331

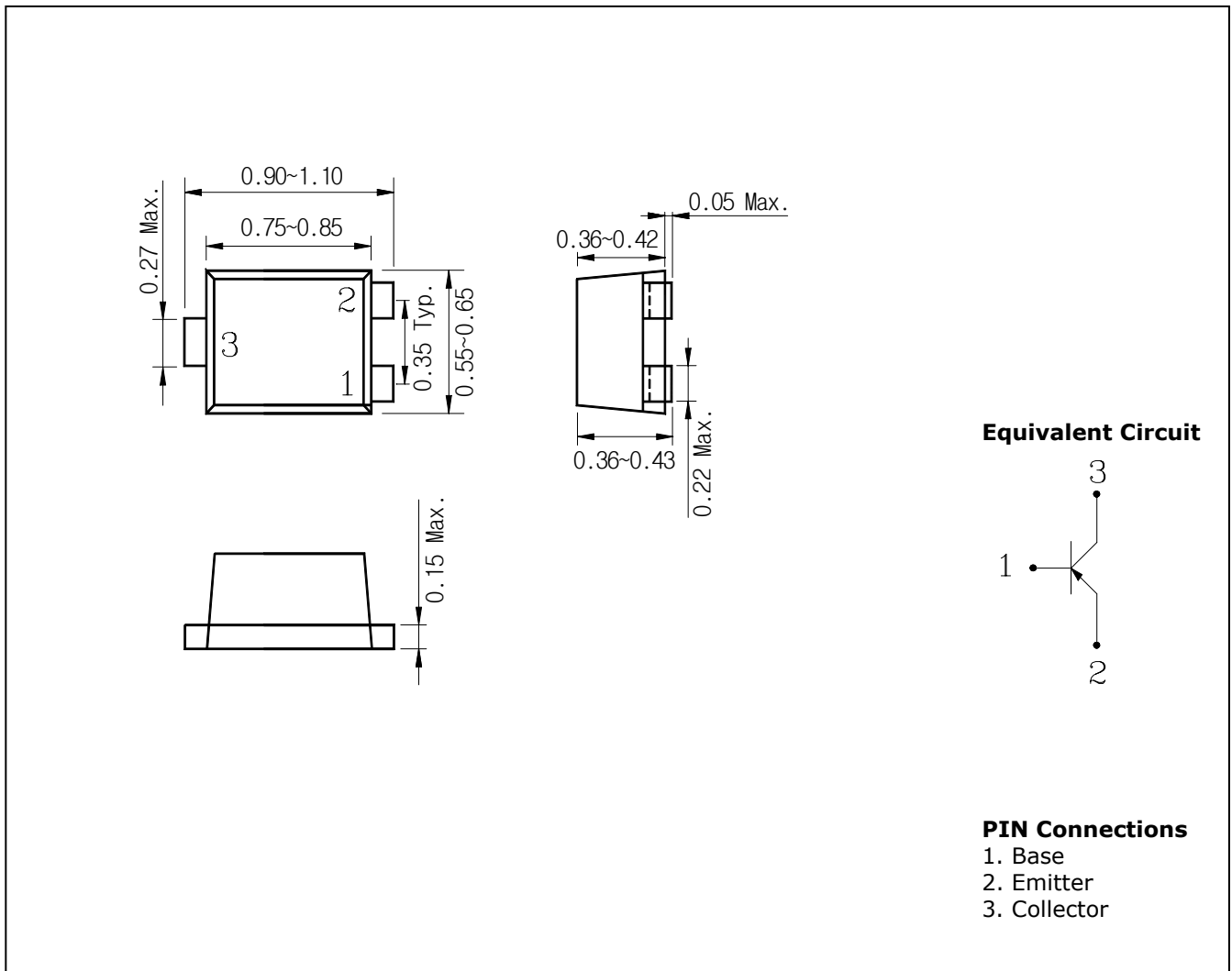
Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| NT332 | P□ | SOT-923 |

□: h_{FE} rank

Outline Dimensions

unit : mm



Absolute Maximum Ratings

(Ta=25°C)

| Characteristic | Symbol | Rating | Unit |
|-----------------------------|-----------|---------|------|
| Collector-base voltage | V_{CBO} | -20 | V |
| Collector-emitter voltage | V_{CEO} | -20 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -50 | mA |
| Collector power dissipation | P_C | 50 | mW |
| Junction temperature | T_J | 150 | °C |
| Storage temperature range | T_{stg} | -55~150 | °C |

Electrical Characteristics

(Ta=25°C)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|--|------|------|-------|------|
| Collector-emitter breakdown voltage | BV_{CEO} | $I_C = -1\text{mA}, I_B = 0$ | -20 | - | - | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -20\text{V}, I_E = 0$ | - | - | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5\text{V}, I_C = 0$ | - | - | -0.1 | μA |
| DC current gain | h_{FE}^* | $V_{CE} = -6\text{V}, I_C = -2\text{mA}$ | 120 | - | 400 | - |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -50\text{mA}, I_B = -5\text{mA}$ | - | - | -0.15 | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = -6\text{V}, I_C = -2\text{mA}$ | - | -0.7 | -0.9 | V |
| Transition frequency | f_T | $V_{CE} = -10\text{V}, I_C = -10\text{mA}$ | - | 200 | - | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$ | - | 4 | - | pF |

*: h_{FE} rank / Y : 120~240, G : 200~400

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

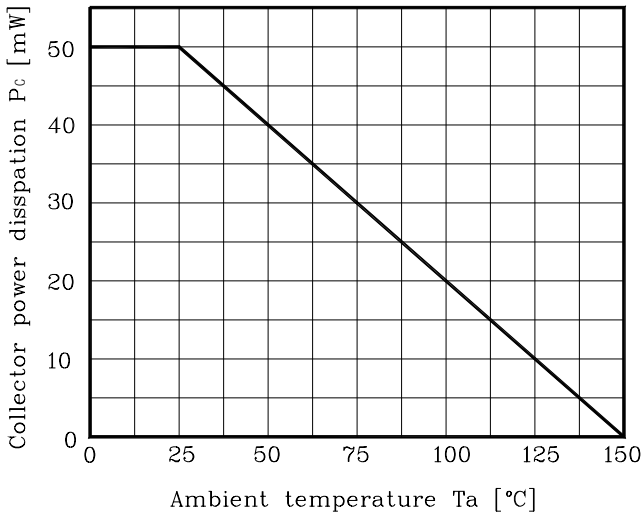


Fig. 2 $I_C - V_{BE}$

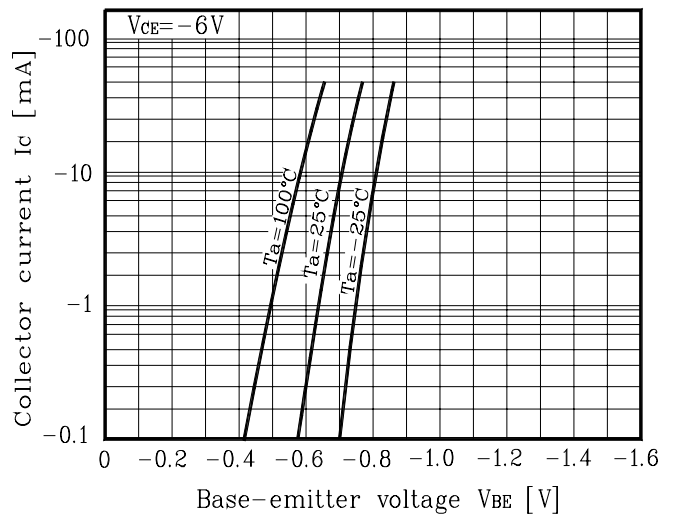


Fig. 3 $I_C - V_{CE}$

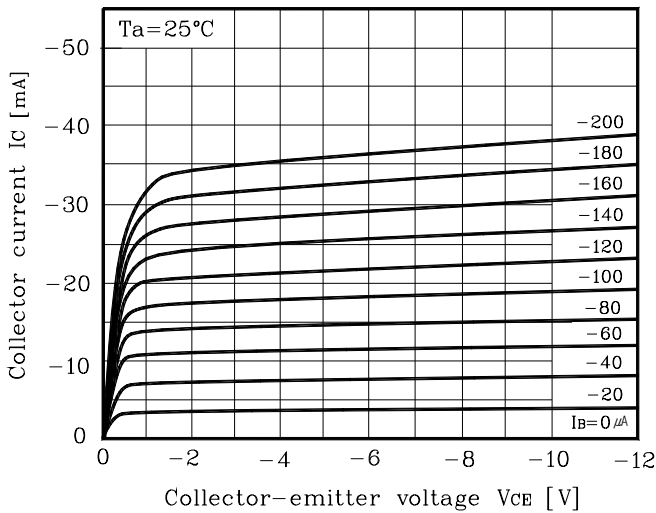


Fig. 4 $h_{FE} - I_C$

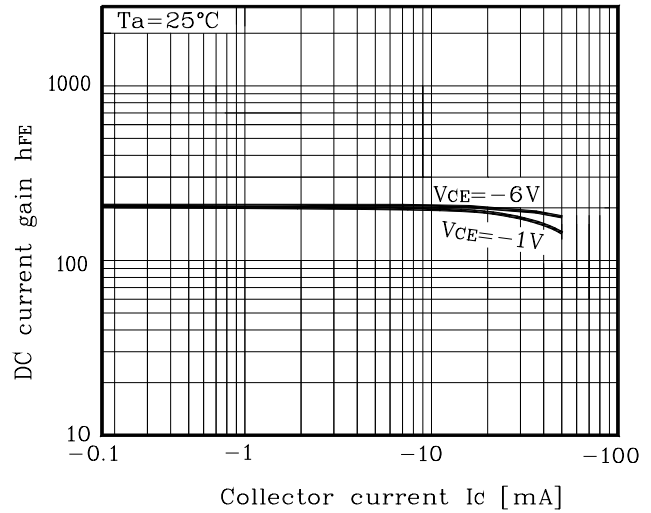


Fig. 5 $V_{CE(sat)} - I_C$

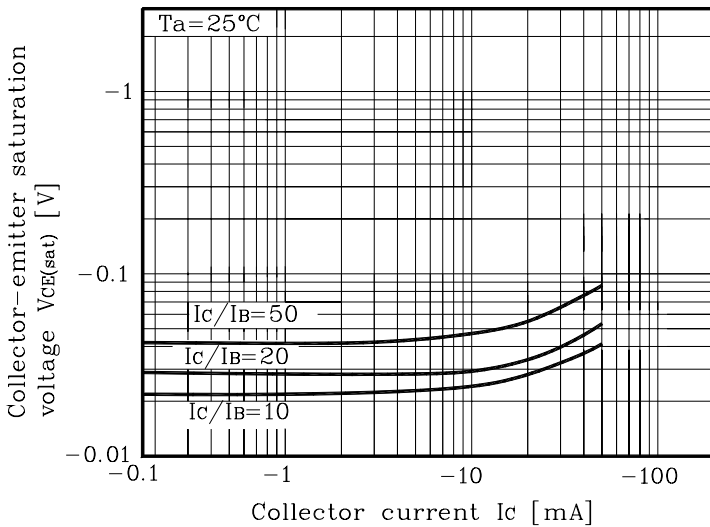
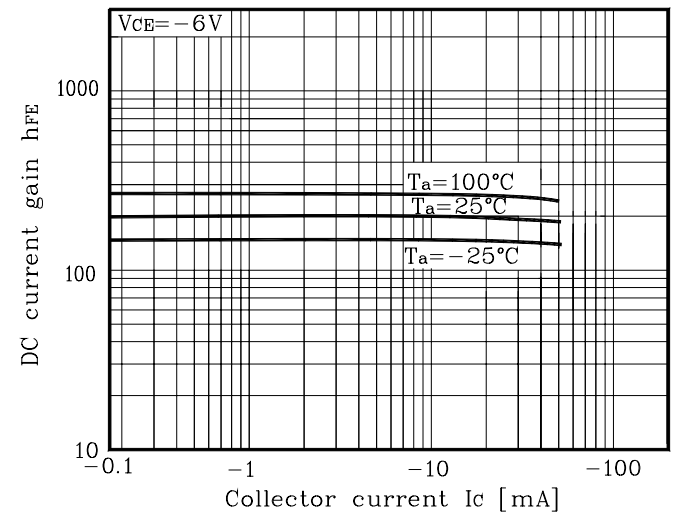


Fig. 6 $h_{FE} - I_C$



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