

Description

- Audio power amplifier application

Features

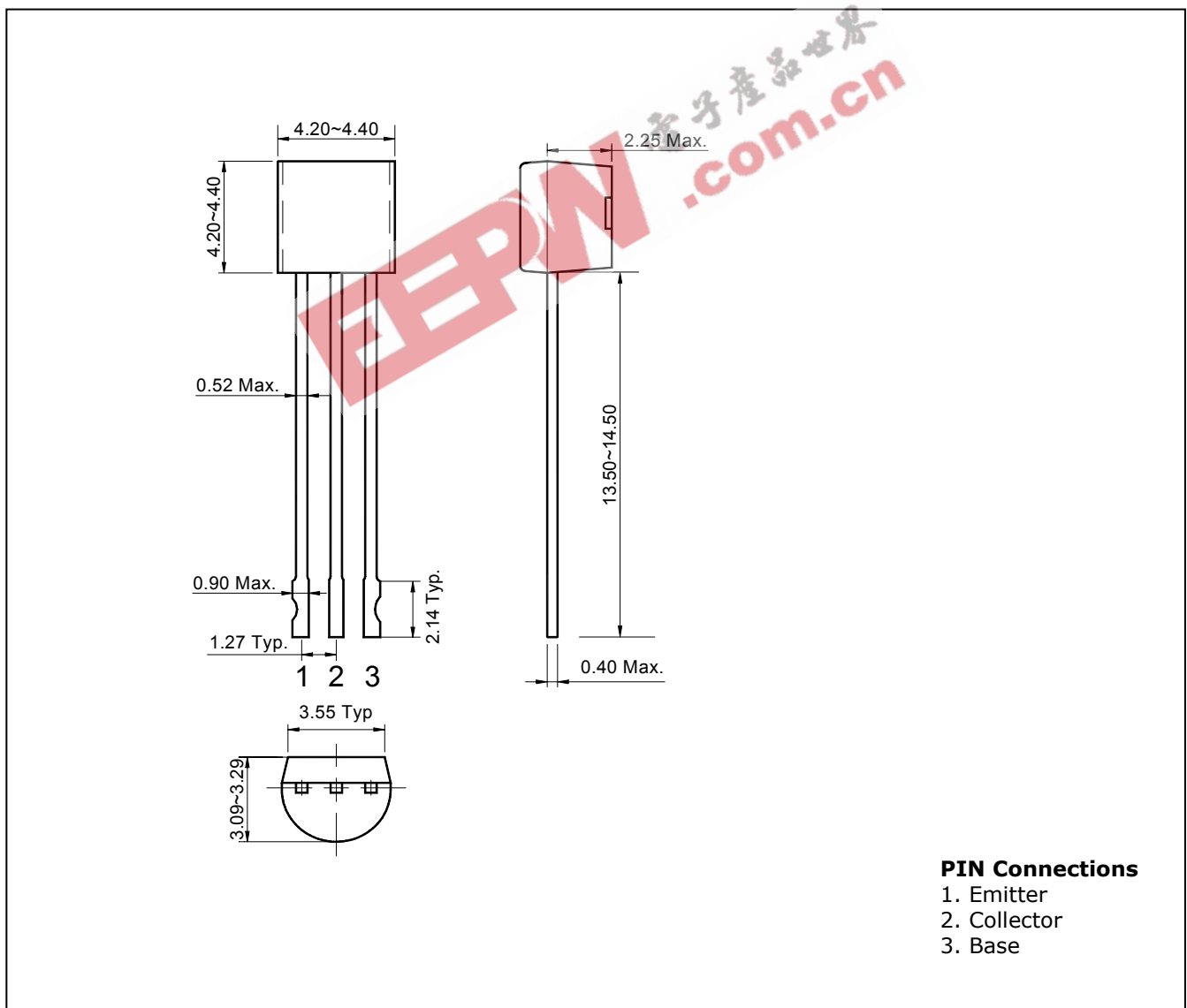
- High h_{FE} : $h_{FE}=100\sim320$
- Complementary pair with 2SC5344N

Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| 2SA1981N | A1981 | TO-92N |

Outline Dimensions

unit : mm



Absolute Maximum Ratings

(Ta=25°C)

| Characteristic | Symbol | Rating | Unit |
|-----------------------------|-----------|---------|------|
| Collector-base voltage | V_{CBO} | -35 | V |
| Collector-emitter voltage | V_{CEO} | -30 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -800 | mA |
| Collector power dissipation | P_C | 400 | 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} | $I_C = -1\text{mA}$, $I_B = 0$ | -30 | - | - | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -35\text{V}$, $I_E = 0$ | - | - | -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}^* | $V_{CE} = -1\text{V}$, $I_C = -100\text{mA}$ | 100 | - | 320 | - |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500\text{mA}$, $I_B = -20\text{mA}$ | - | - | -0.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = -1\text{V}$, $I_C = -100\text{mA}$ | - | -0.73 | -0.95 | V |
| Transition frequency | f_T | $V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$ | - | 200 | - | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ | - | 19 | - | pF |

* : h_{FE} rank / O : 100~200, Y : 160~320

Electrical Characteristic Curves

Fig. 1 $P_c - T_a$

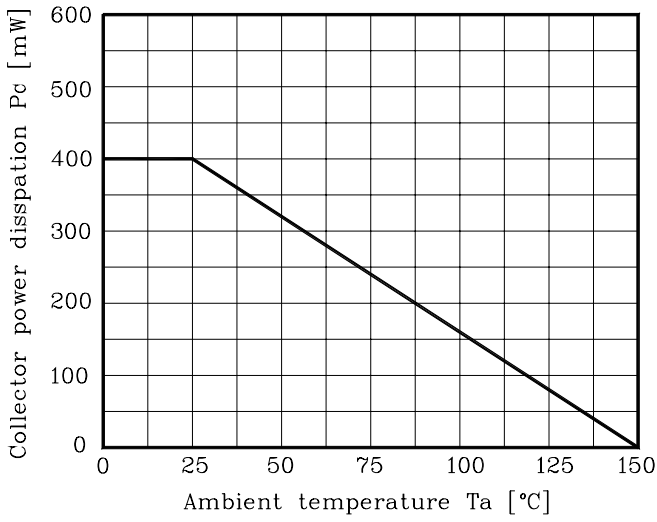


Fig. 2 $I_c - V_{BE}$

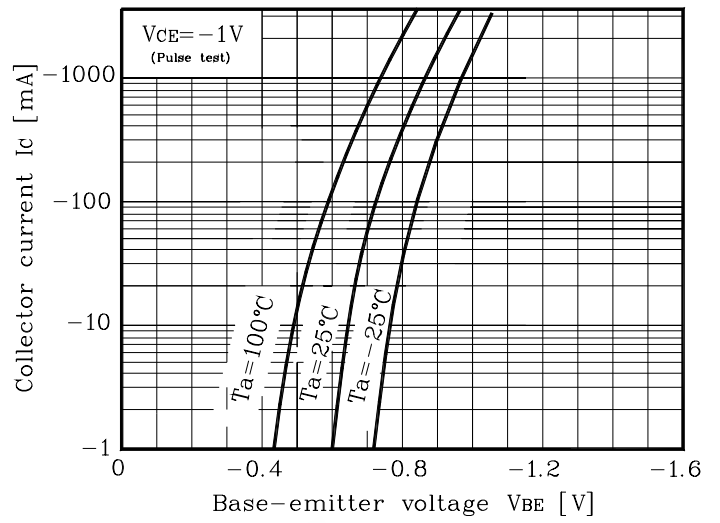


Fig. 3 $I_c - V_{CE}$

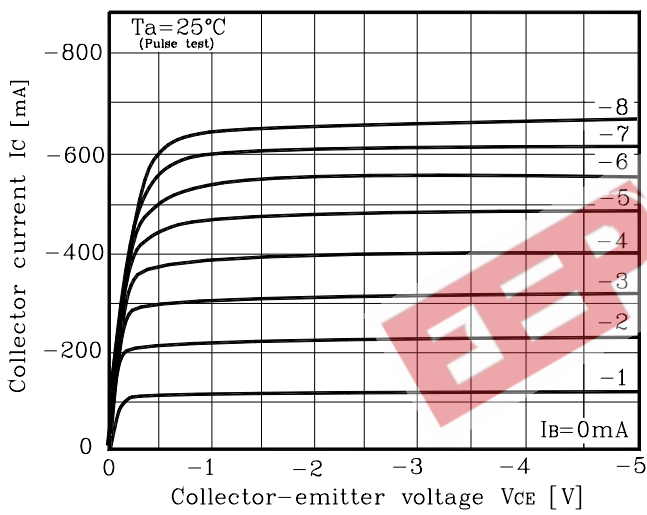


Fig. 4 $h_{FE} - I_c$

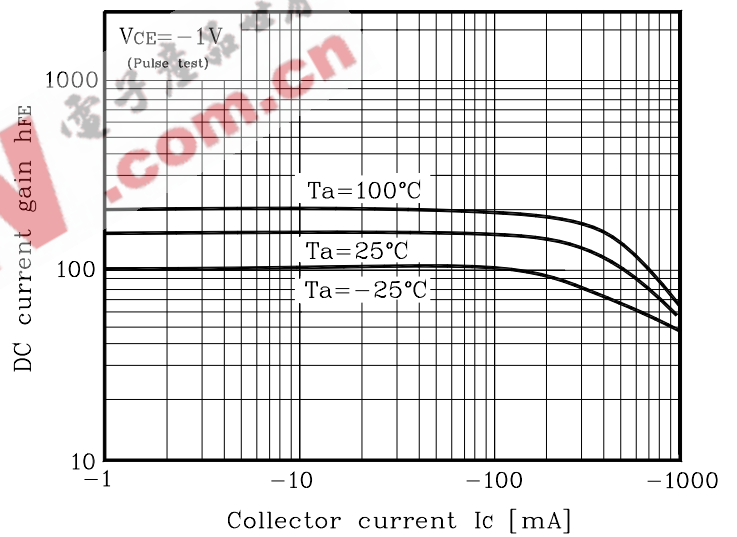
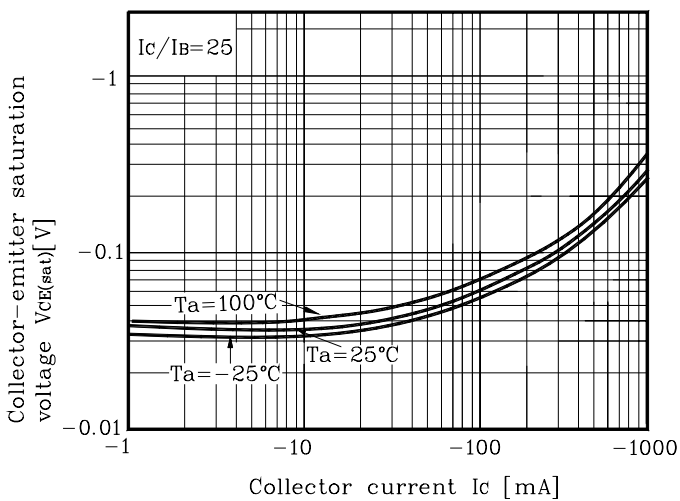


Fig. 5 $V_{CE(SAT)} - I_c$



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