

## Description

- General small signal amplifier

## Features

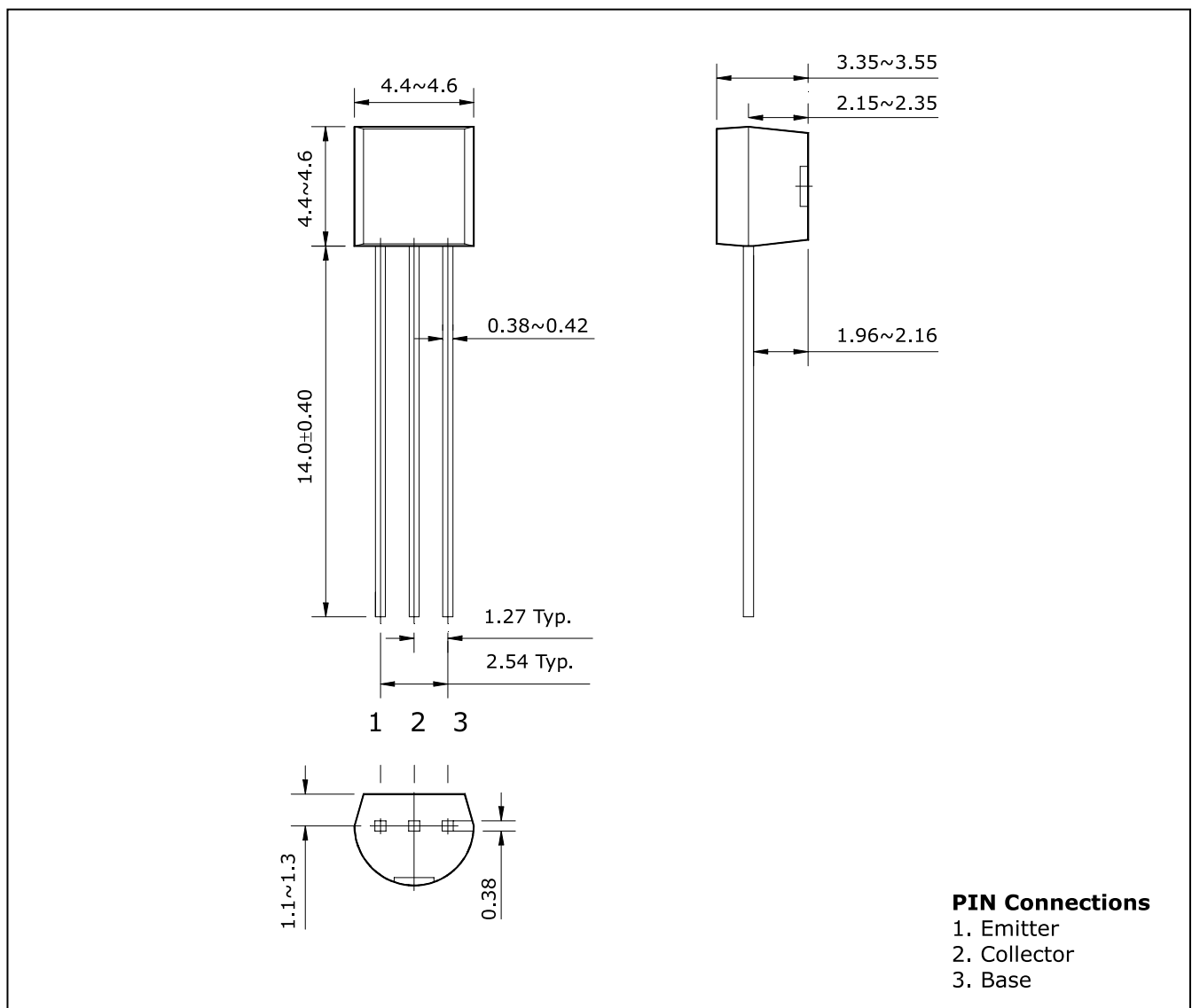
- Low collector saturation voltage :  $V_{CE(sat)}=0.25V(\text{Max.})$
- Low output capacitance :  $C_{ob}=2pF(\text{Typ.})$
- Complementary pair with 2SA1980

## Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| 2SC5343  | C5343   | TO-92        |

## Outline Dimensions

unit : mm



## Absolute maximum ratings

Ta=25°C

| Characteristic            | Symbol    | Ratings | Unit |
|---------------------------|-----------|---------|------|
| Collector-Base voltage    | $V_{CBO}$ | 60      | V    |
| Collector-Emitter voltage | $V_{CEO}$ | 50      | V    |
| Emitter-Base voltage      | $V_{EBO}$ | 5       | V    |
| Collector current         | $I_C$     | 150     | mA   |
| Collector dissipation     | $P_C$     | 625     | mW   |
| Junction temperature      | $T_j$     | 150     | °C   |
| Storage temperature       | $T_{stg}$ | -55~150 | °C   |

## Electrical Characteristics

Ta=25°C

| Characteristic                       | Symbol        | Test Condition                                | Min. | Typ. | Max. | Unit    |
|--------------------------------------|---------------|---|------|------|------|---------|
| Collector-Base breakdown voltage     | $BV_{CBO}$    | $I_C=100\mu A, I_E=0$                         | 60   | -    | -    | V       |
| Collector-Emitter breakdown voltage  | $BV_{CEO}$    | $I_C=1mA, I_B=0$                              | 50   | -    | -    | V       |
| Emitter-Base breakdown voltage       | $BV_{EBO}$    | $I_E=10\mu A, I_C=0$                          | 5    | -    | -    | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=60V, I_E=0$                           | -    | -    | 0.1  | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5V, I_C=0$                            | -    | -    | 0.1  | $\mu A$ |
| DC current gain                      | $h_{FE}^*$    | $V_{CE}=6V, I_C=2mA$                          | 70   | -    | 700  | -       |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100mA, I_B=10mA$                         | -    | -    | 0.25 | V       |
| Transistion frequency                | $f_T$         | $V_{CE}=10V, I_C=1mA$                         | 80   | -    | -    | MHz     |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1MHz$                   | -    | 2    | 3.5  | pF      |
| Noise figure                         | NF            | $V_{CE}=6V, I_C=0.1mA, f=1KHz, R_g=10K\Omega$ | -    | -    | 10   | dB      |

\* :  $h_{FE}$  rank / O : 70 ~ 140, Y : 120 ~ 240, G : 200 ~ 400, L : 300 ~ 700

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

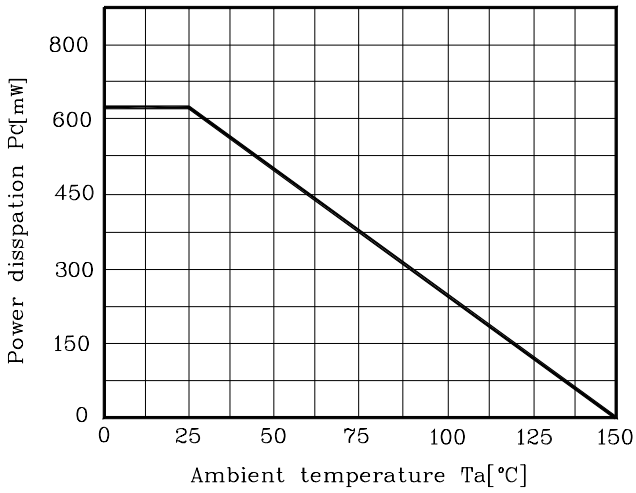


Fig. 2  $I_C - V_{BE}$

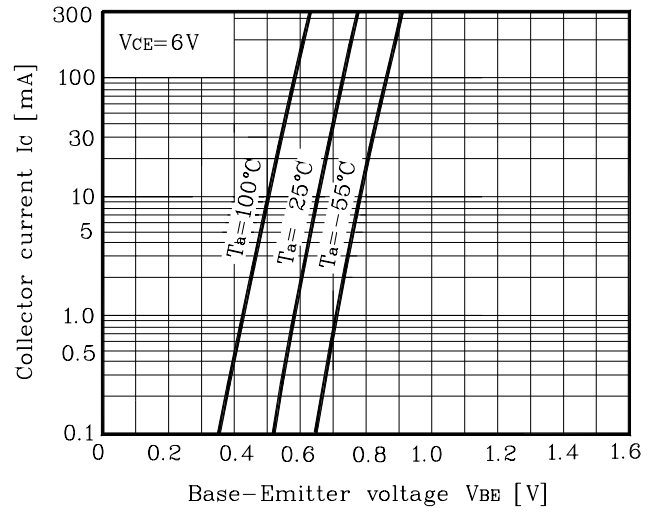


Fig. 3  $I_C - V_{CE}$

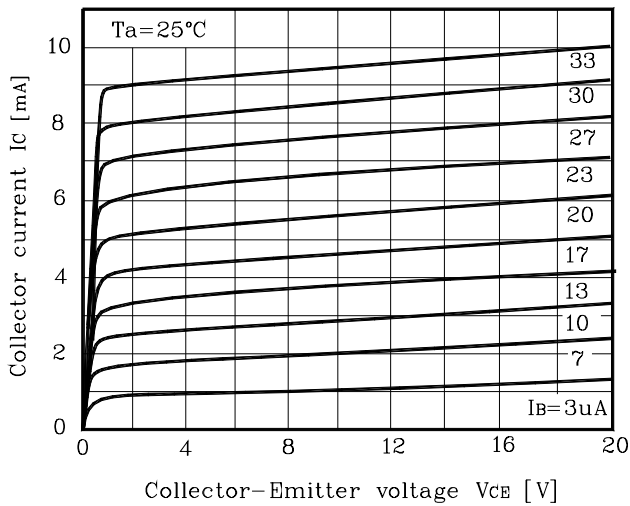


Fig. 4  $h_{FE} - I_C$

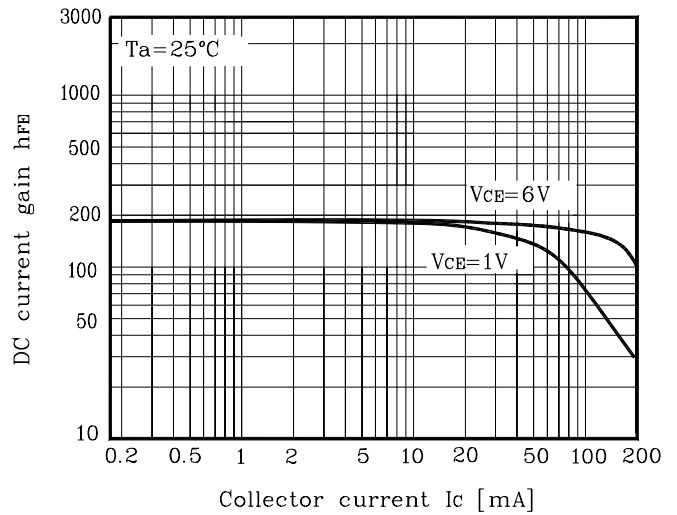
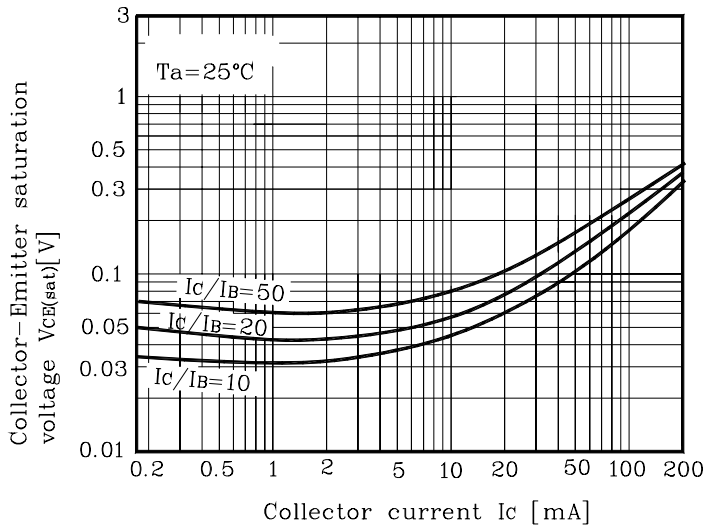


Fig. 5  $V_{CE(sat)} - I_C$



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