

Description

- General small signal amplifier

Features

- Low collector saturation voltage : $V_{CE}=0.25V(\text{Max.})$
- Low output capacitance : $C_{ob}=2pF(\text{Typ.})$
- Complementary pair with 2SA1980U

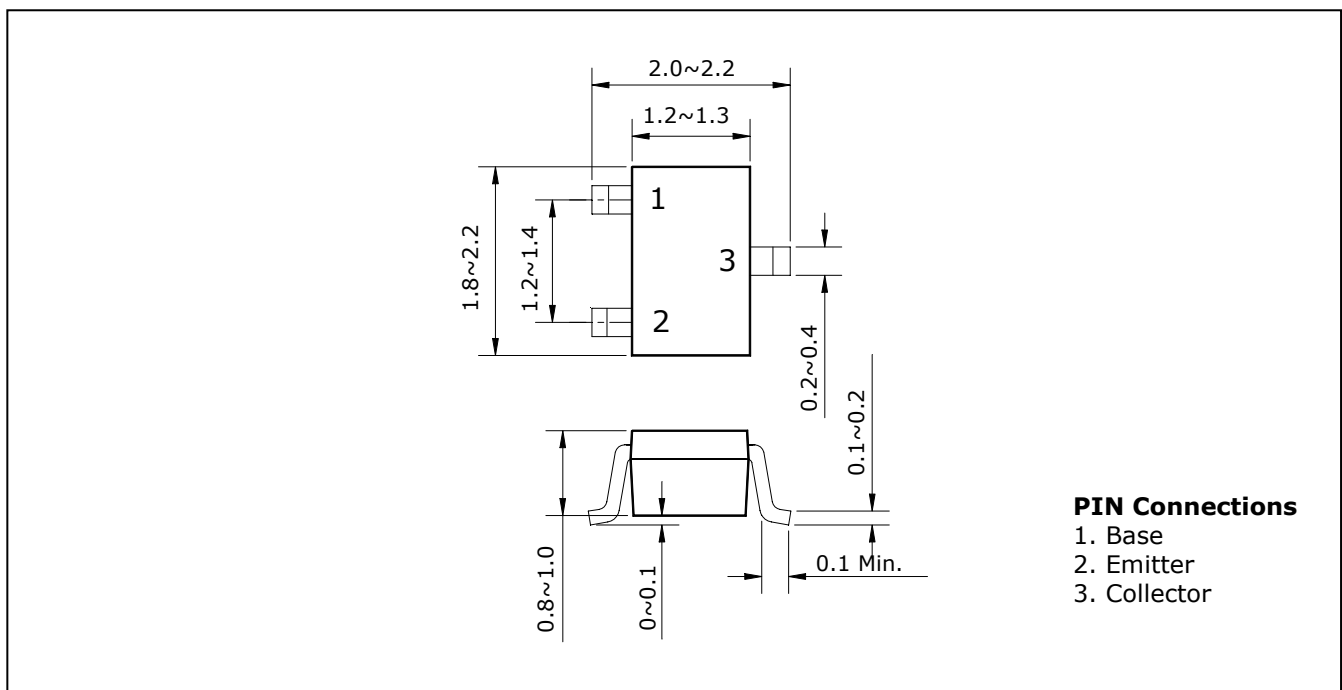
Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| 2SC5343U | D□ | SOT-323 |

□ : h_{FE} rank

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 | 200 | 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 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | - | - | 0.1 | μA |
| 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 |
| Transition 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 $P_C - T_a$

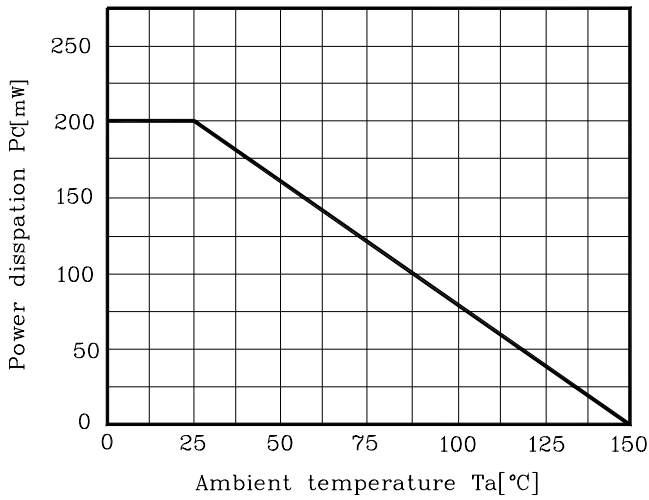


Fig. 2 $I_C - V_{BE}$

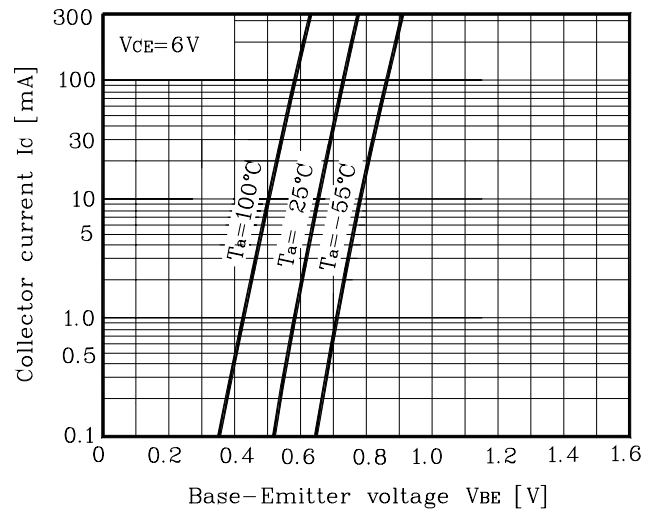


Fig. 3 $I_C - V_{CE}$

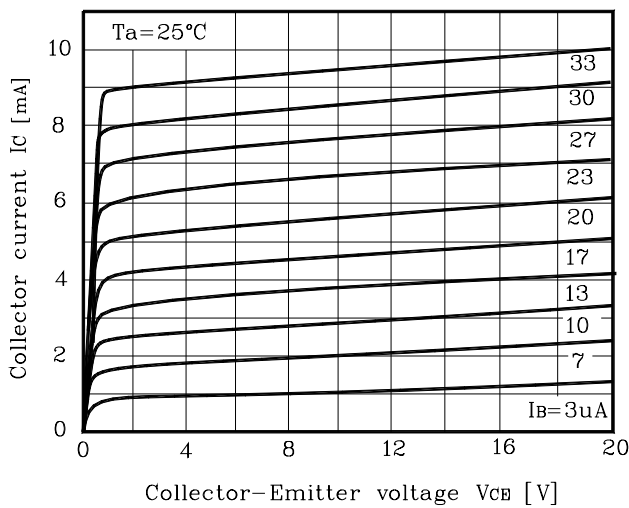


Fig. 4 $h_{FE} - I_C$

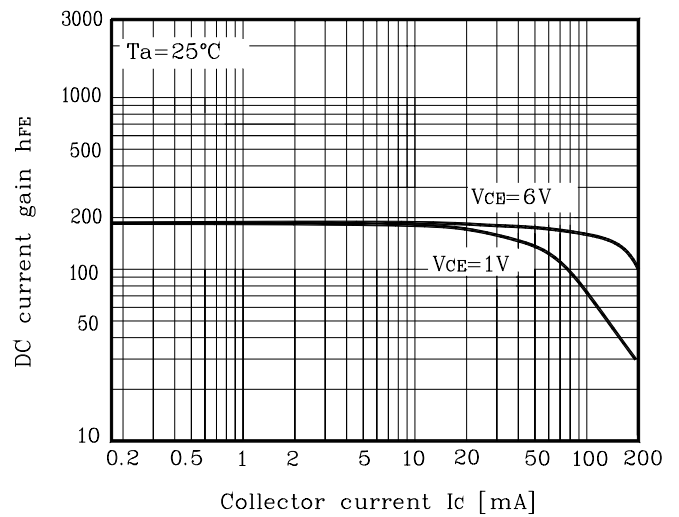
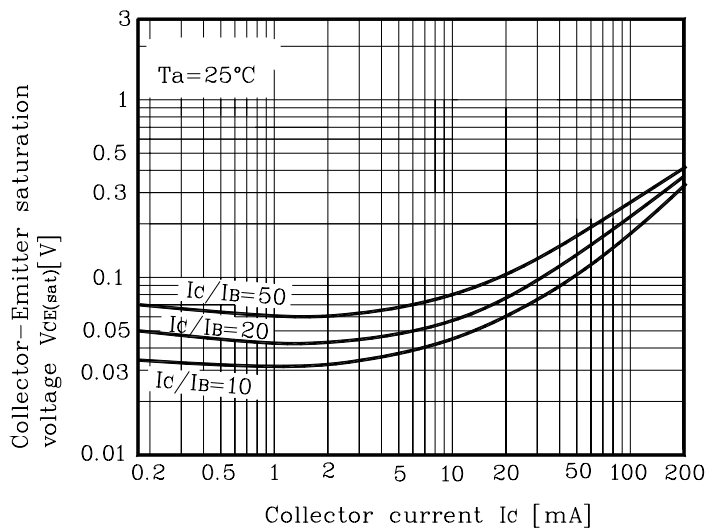


Fig. 5 $V_{CE(sat)} - I_C$



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