

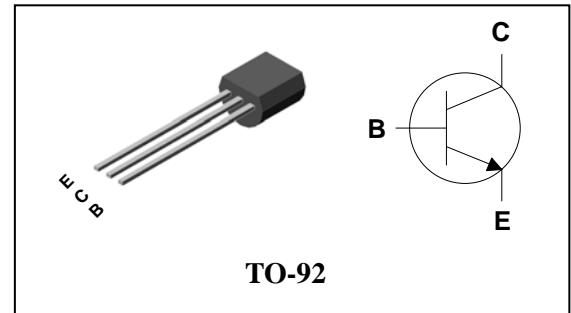
Description

- 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

PIN Connection



Ordering Information

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

Absolute maximum ratings

 $T_a=25^\circ\text{C}$

| 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 | 500 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 ~ 150 | $^\circ\text{C}$ |

Electrical Characteristics

 $T_a=25^\circ\text{C}$

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

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

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

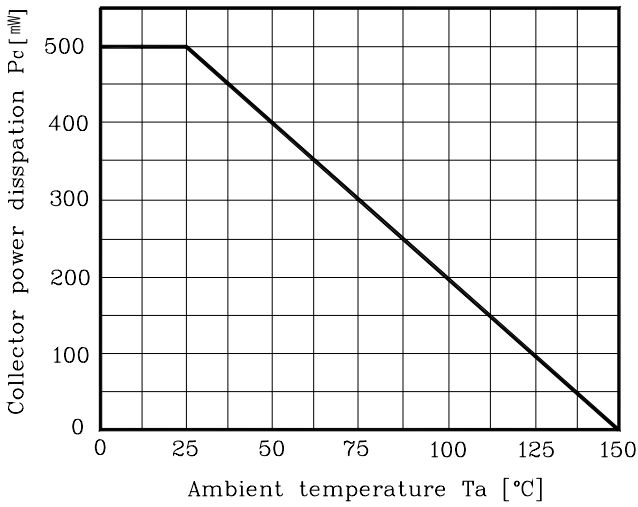


Fig. 2 $I_C - V_{BE}$

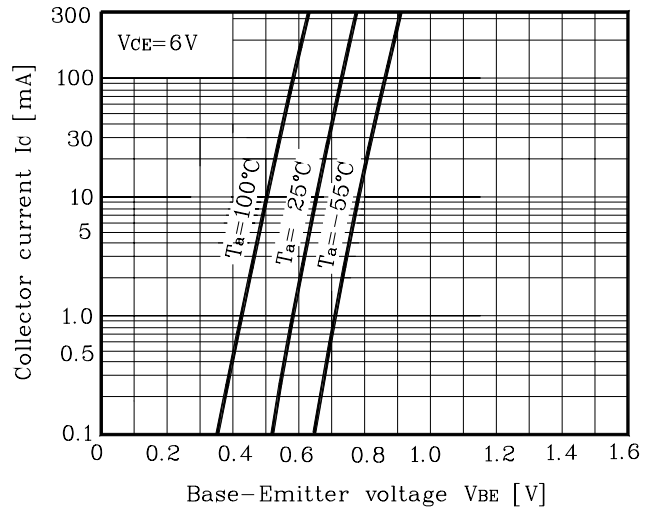


Fig. 3 $I_C - V_{CE}$

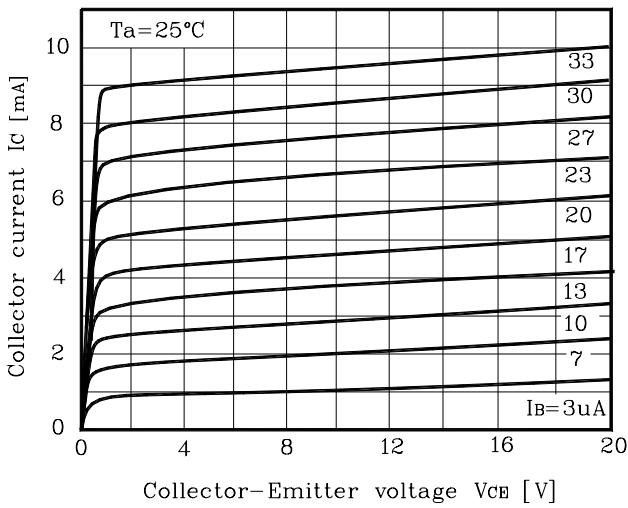


Fig. 4 $h_{FE} - I_C$

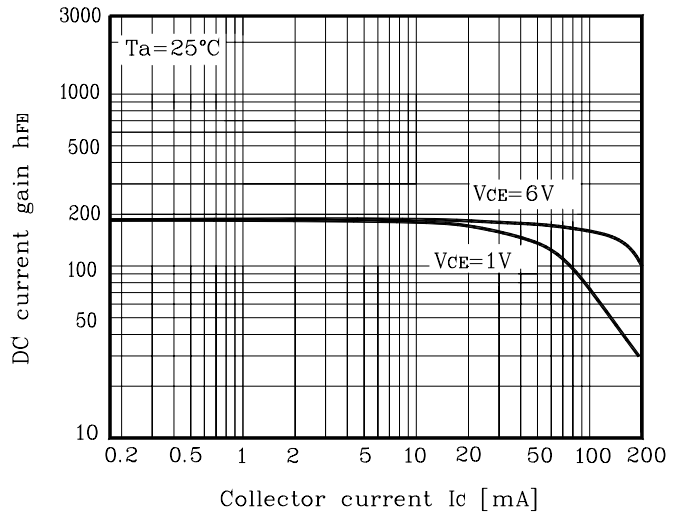
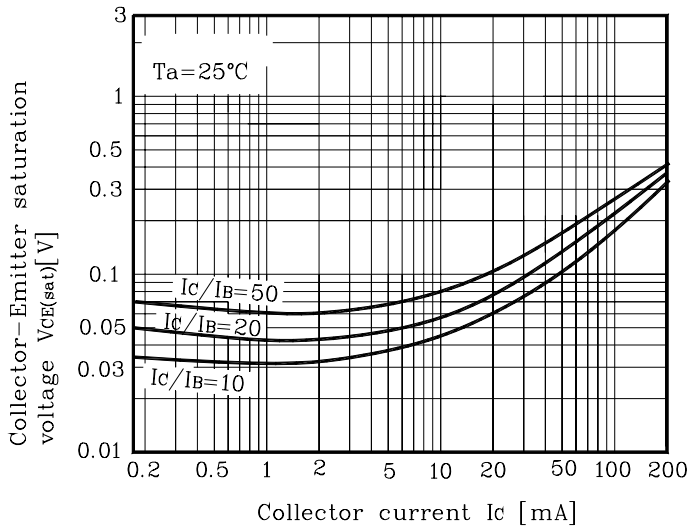
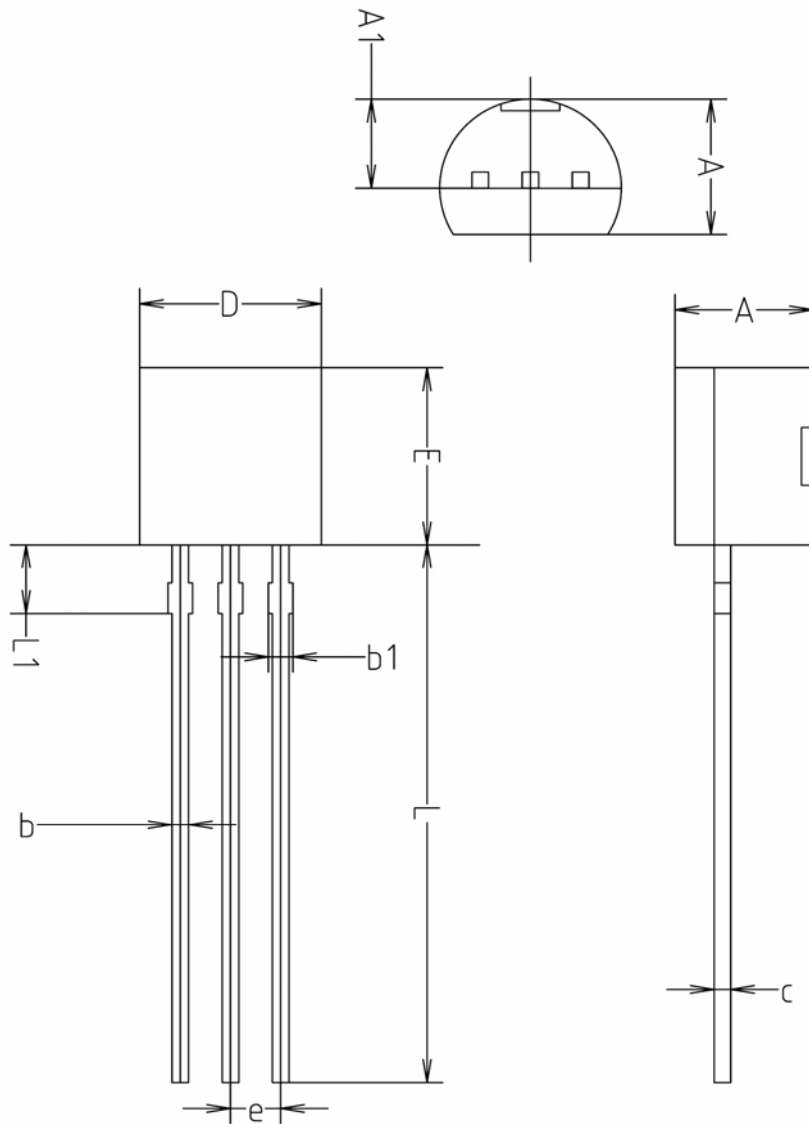


Fig. 5 $V_{CE(sat)} - I_C$



Outline Dimension



| SYMBOL | MILLMETERS(mm) | | |
|--------|----------------|---------|---------|
| | MINIMUM | NOMINAL | MAXIMUM |
| A | 3.40 | 3.50 | 3.66 |
| A1 | 2.46 | 2.51 | 2.59 |
| b | 0.39 | 0.44 | 0.53 |
| b1 | 0.39 | — | 0.63 |
| c | 0.35 | 0.42 | 0.47 |
| D | 4.48 | 4.60 | 4.70 |
| E | 4.48 | 4.60 | 4.70 |
| e | 1.17 | 1.27 | 1.37 |
| L | 13.70 | 14.00 | 14.77 |
| L1 | 1.55 | 1.70 | 2.15 |

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