

Description

- Medium power amplifier

Features

- Large collector current : $I_C=500\text{mA}$
- Low collector saturation voltage enabling low-voltage operation
- Complementary pair with 2SA1979U

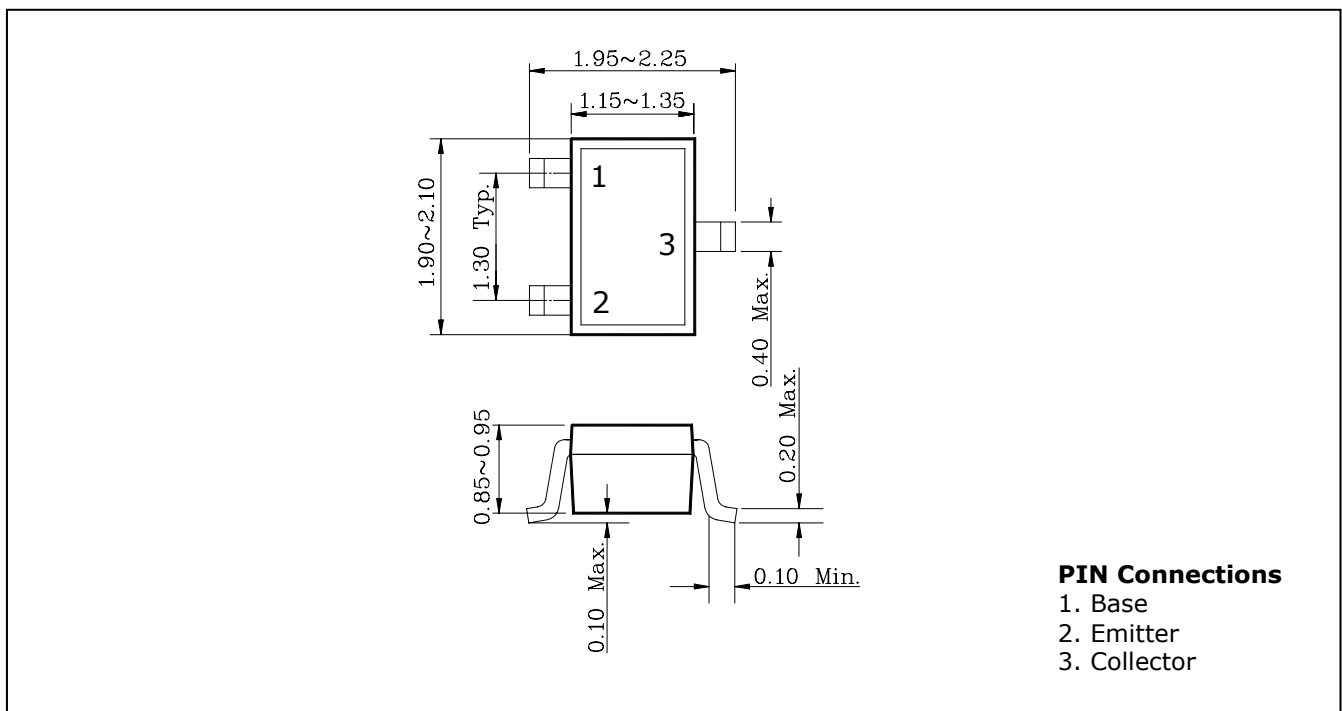
Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| 2SC5342U | B□ | SOT-323 |

□ : h_{FE} rank

Outline Dimensions

unit : mm



Absolute maximum ratings

(Ta=25°C)

| Characteristic | Symbol | Ratings | Unit |
|---------------------------|-----------|---------|------|
| Collector-Base voltage | V_{CBO} | 40 | V |
| Collector-Emitter voltage | V_{CEO} | 32 | V |
| Emitter-Base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 500 | 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} | $I_C=100\mu A, I_E=0$ | 40 | - | - | V |
| Collector-Emitter breakdown voltage | BV_{CEO} | $I_C=1mA, I_B=0$ | 32 | - | - | V |
| Emitter-Base breakdown voltage | BV_{EBO} | $I_E=10\mu A, I_C=0$ | 5 | - | - | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=40V, I_E=0$ | - | - | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | - | - | 0.1 | μA |
| DC current gain | h_{FE}^* | $V_{CE}=1V, I_C=100mA$ | 70 | - | 240 | - |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100mA, I_B=10mA$ | - | - | 0.25 | V |
| Transition frequency | f_T | $V_{CE}=6V, I_C=20mA$ | - | 300 | - | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=6V, I_E=0, f=1MHz$ | - | 7.0 | - | pF |

* : h_{FE} Rank / O : 70~140, Y : 120~240

Electrical Characteristic Curves

Fig. 1 $P_c - T_a$

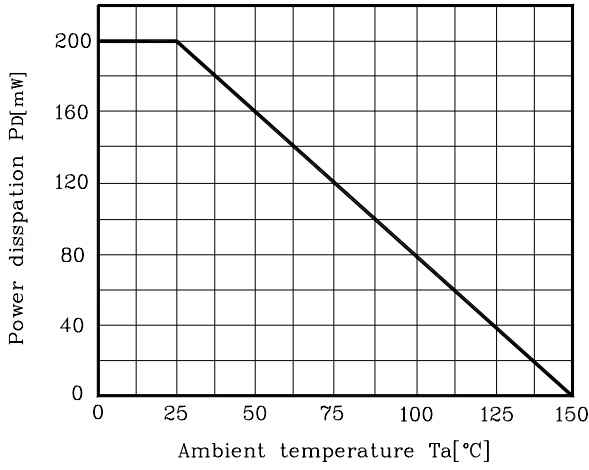


Fig. 2 $I_c - V_{BE}$

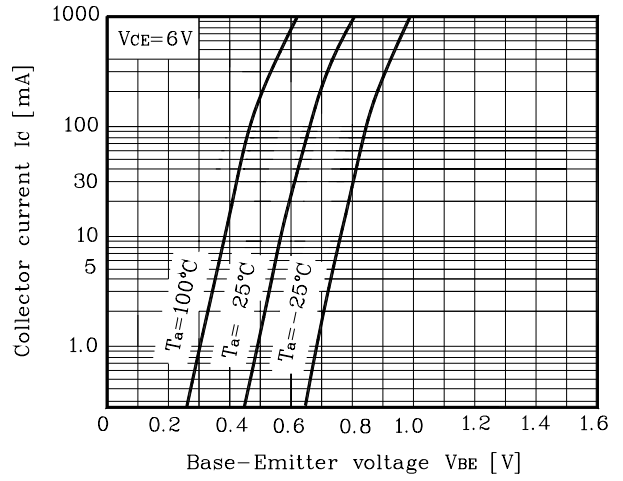


Fig. 3 $I_c - V_{CE}$

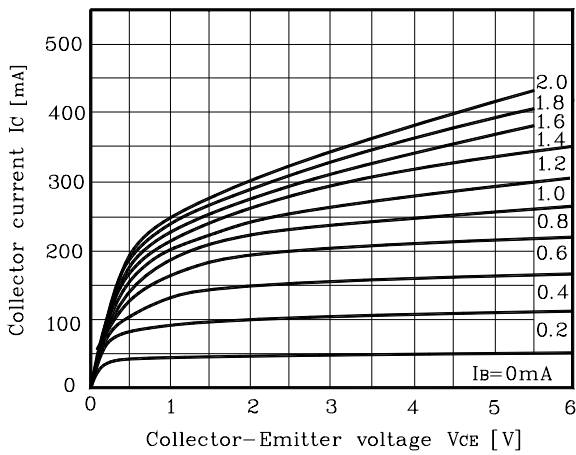


Fig. 4 $V_{CE(SAT)} - I_c$

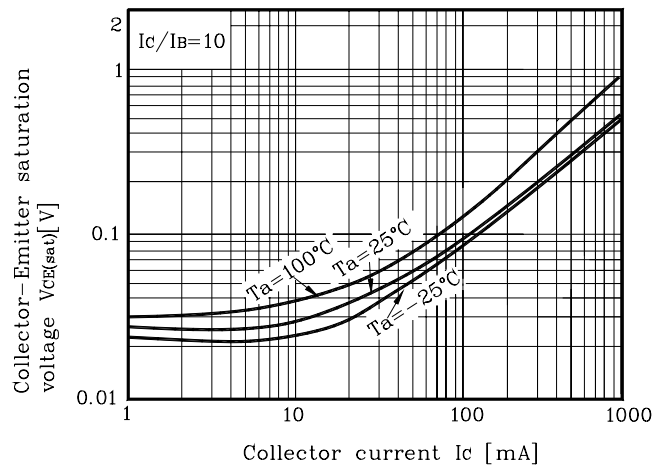
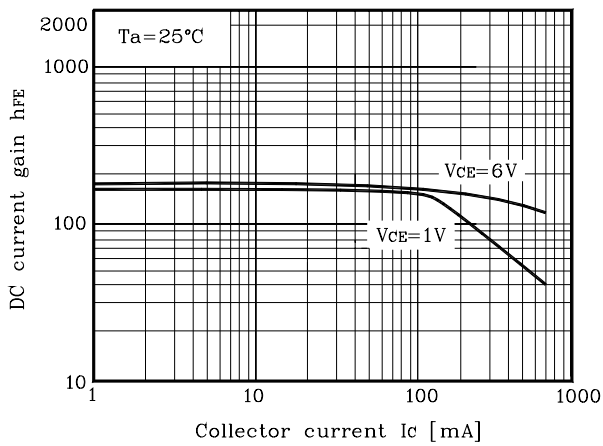


Fig. 5 $h_{FE} - I_c$



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