

## Description

- Medium power amplifier

## Features

- Large collector current :  $I_{CMax} = -500mA$
- Suitable for low-Voltage operation because of its low saturation voltage
- Complementary pair with 2SC5342U

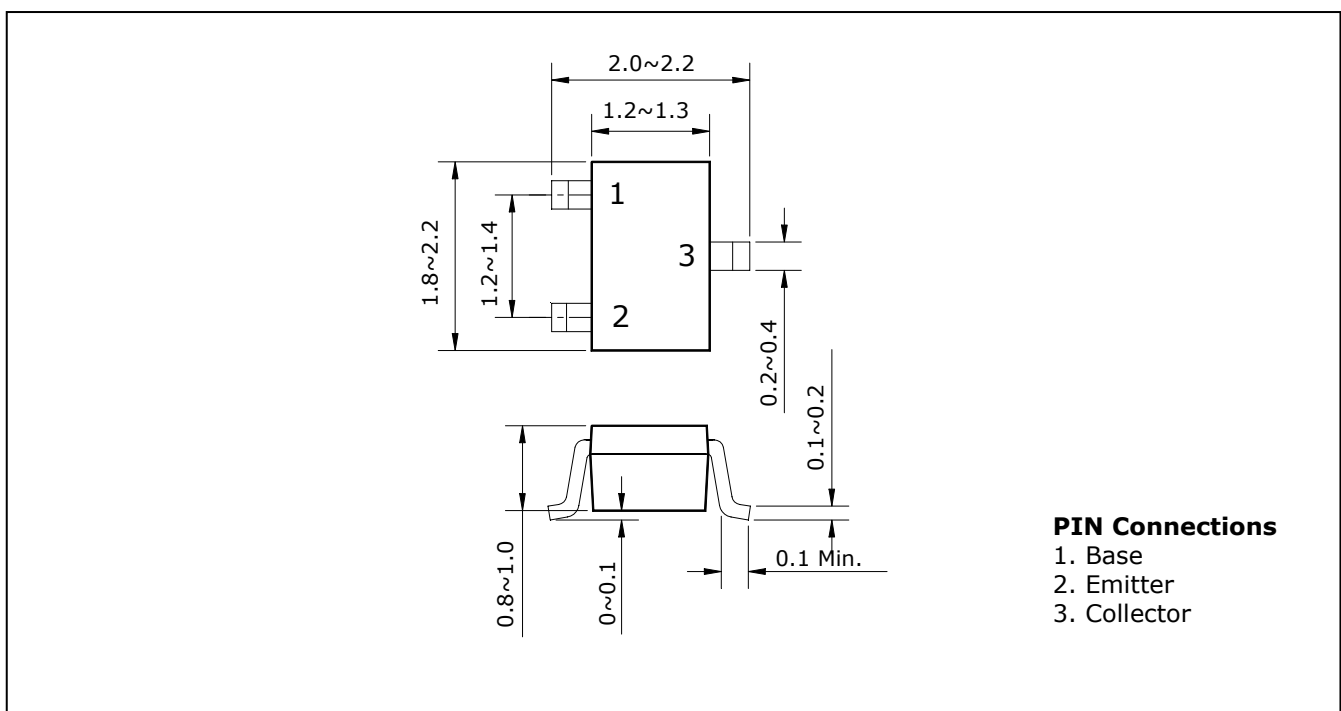
## Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| 2SA1979U | A□      | 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  | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5V, I_C = 0$           | -    | -    | -0.1  | $\mu A$ |
| DC current gain                      | $h_{FE}^*$    | $V_{CE} = -1V, I_C = -100mA$      | 70   | -    | 240   | -       |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100mA, I_B = -10mA$       | -    | -    | -0.25 | V       |
| Transistor frequency                 | $f_T$         | $V_{CE} = -6V, I_C = -20mA$       | -    | 200  | -     | MHz     |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -6V, I_E = 0, f = 1MHz$ | -    | 7.5  | -     | pF      |

\* :  $h_{FE}$  rank / O : 70~140, Y : 120~240

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

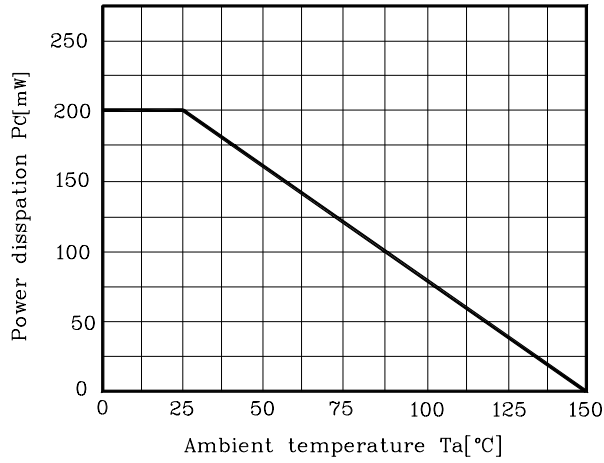


Fig. 2  $I_C - V_{BE}$

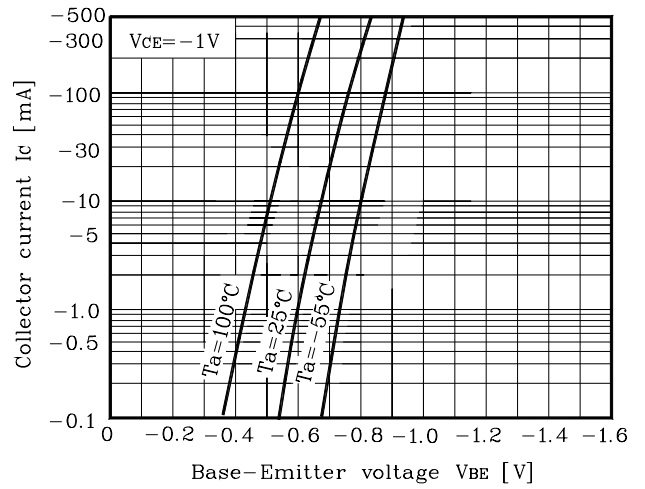


Fig. 3  $I_C - V_{CE}$

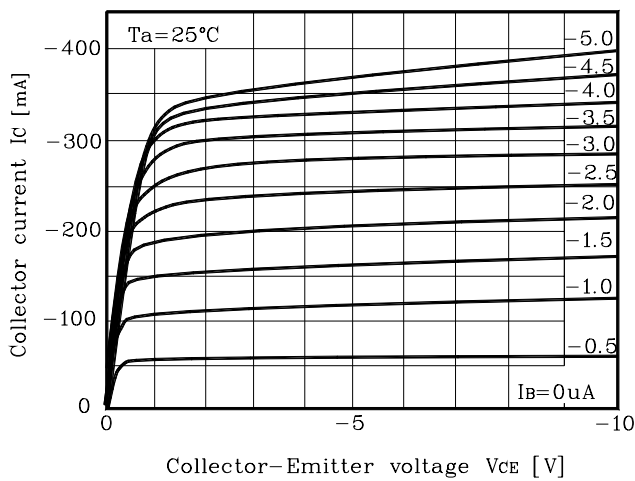


Fig. 4  $V_{CE(sat)} - I_C$

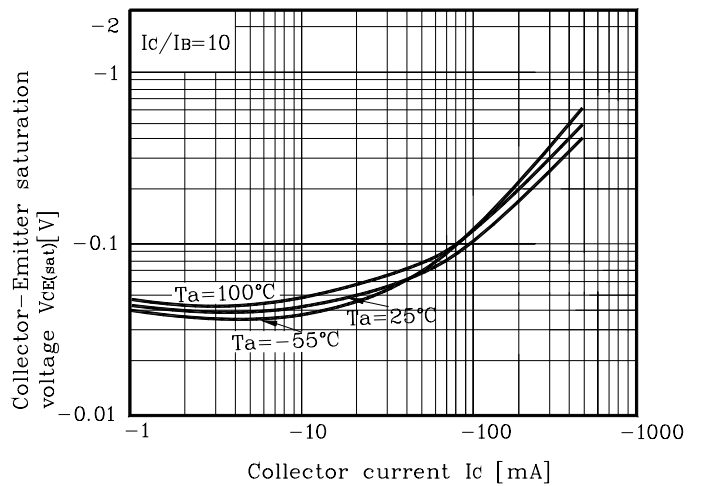


Fig. 5  $h_{FE} - I_C$

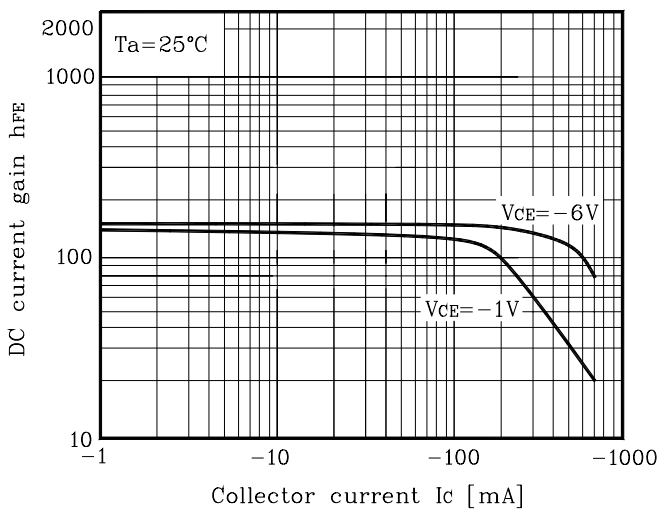
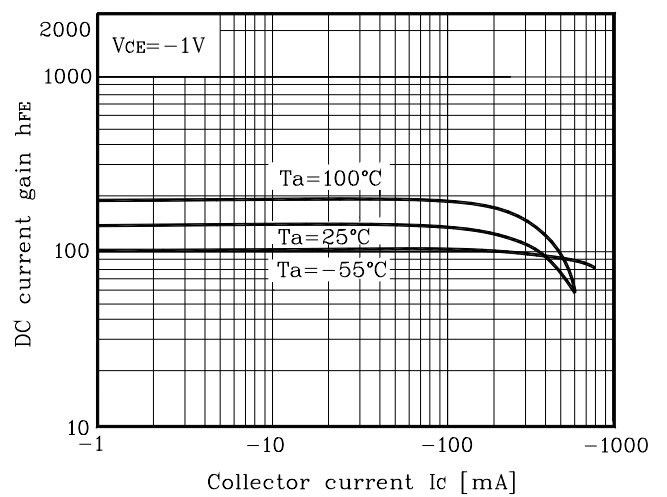


Fig. 6  $h_{FE} - I_C$



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