

## Description

- Medium power amplifier

## Features

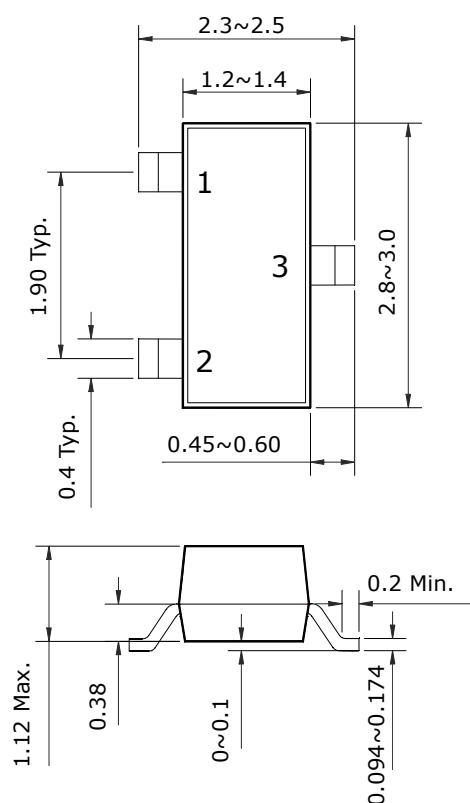
- Large collector current :  $I_C=500\text{mA}$
- Low collector saturation voltage enabling low-voltage operation
- Complementary pair with 2SA1979S

## Ordering Information

| Type NO.          | Marking | Package Code |
|-------------------|---------|--------------|
| 2SC5342S          | BA□     | SOT-23       |
| □ : $h_{FE}$ rank |         |              |

## Outline Dimensions

unit : mm



### PIN Connections

1. Base
2. Emitter
3. Collector

**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       |
| Transition frequency                 | $f_T$         | $V_{CE}=6V, I_E=-20mA$     | -    | 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  $P_C - T_a$

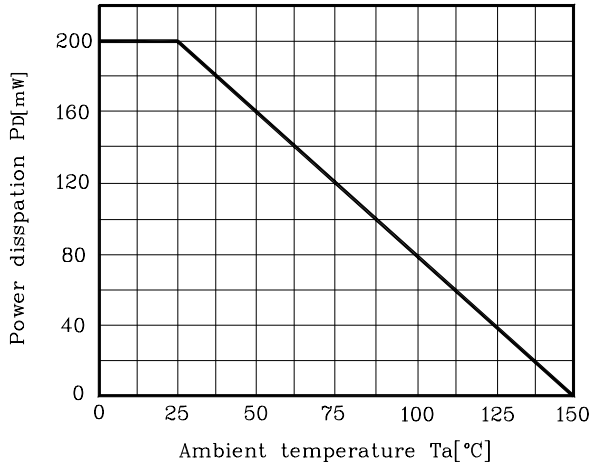


Fig. 2  $I_C - V_{BE}$

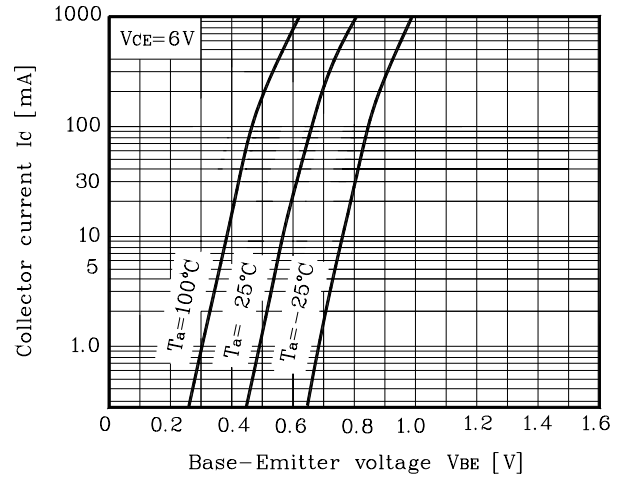


Fig. 3  $I_C - V_{CE}$

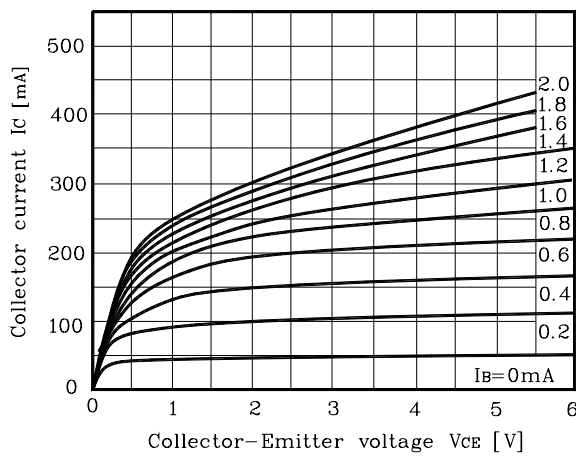


Fig. 4  $V_{CE(SAT)} - I_C$

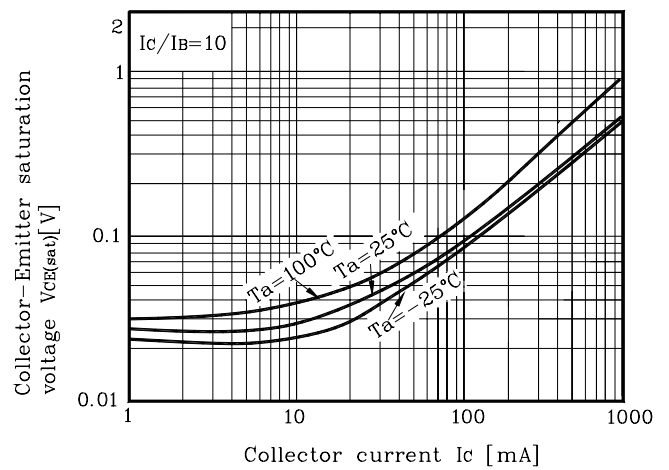
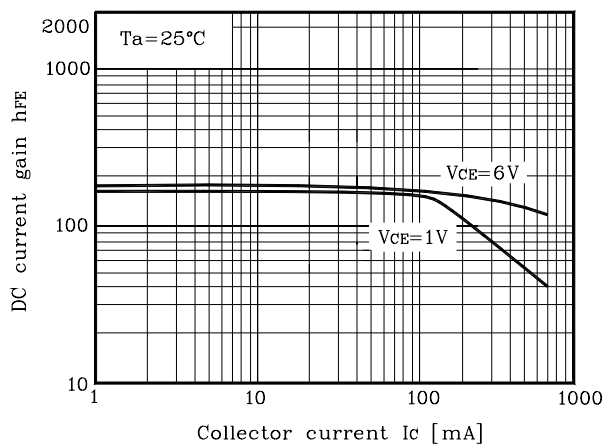


Fig. 5  $h_{FE} - I_C$



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