

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 2SC5342SF

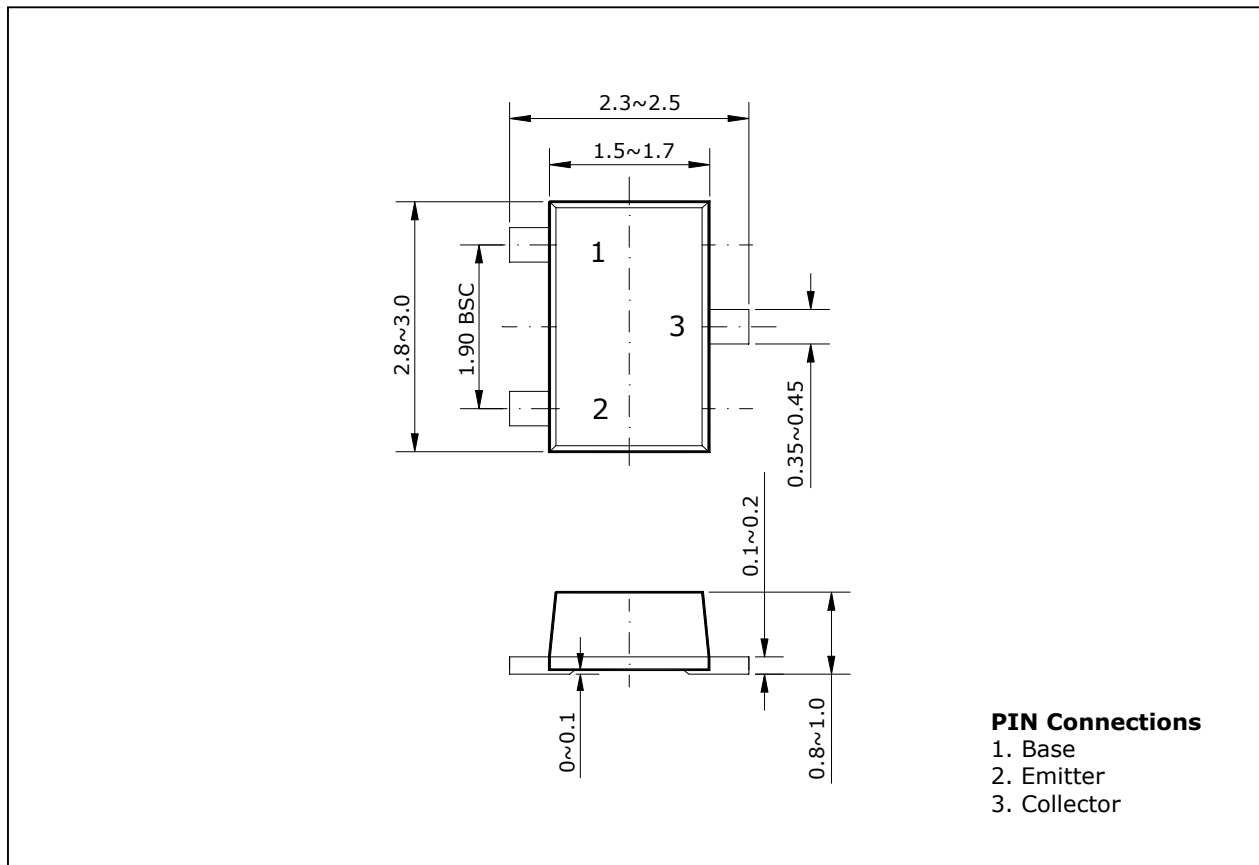
Ordering Information

| Type NO. | Marking | Package Code |
|-----------|---------|--------------|
| 2SA1979SF | AA□ | SOT-23F |

□ : 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 |
| 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 $P_C - T_a$

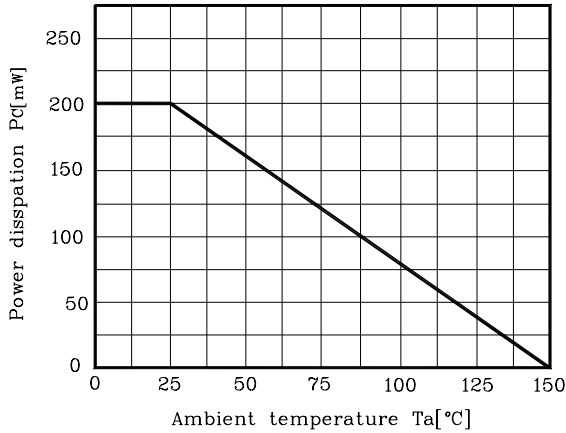


Fig. 2 $I_C - V_{BE}$

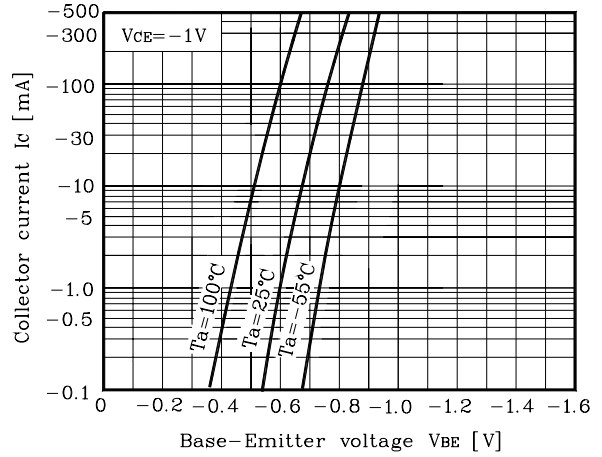


Fig. 3 $I_C - V_{CE}$

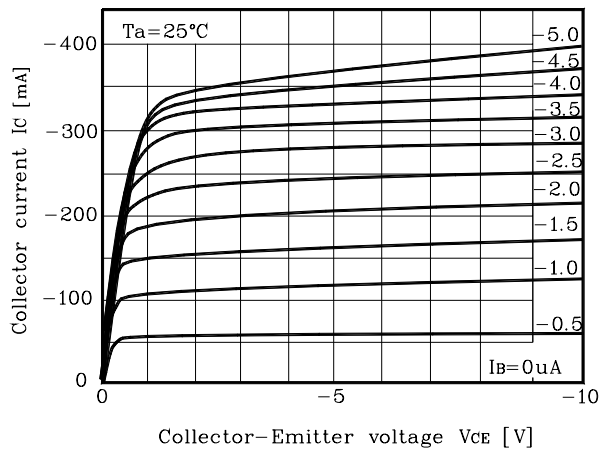


Fig. 4 $V_{CE(sat)} - I_C$

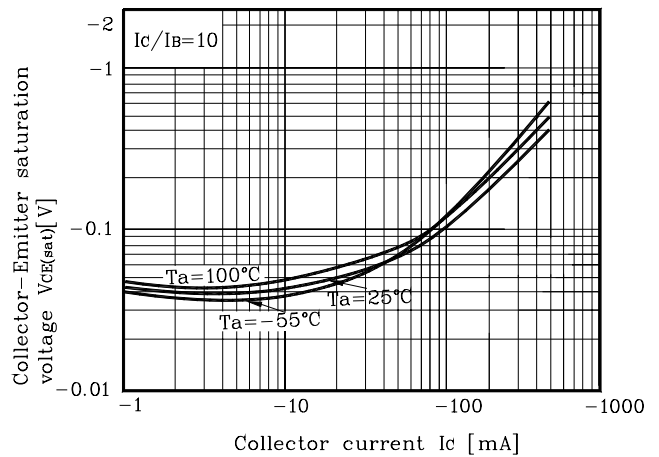


Fig. 5 $h_{FE} - I_C$

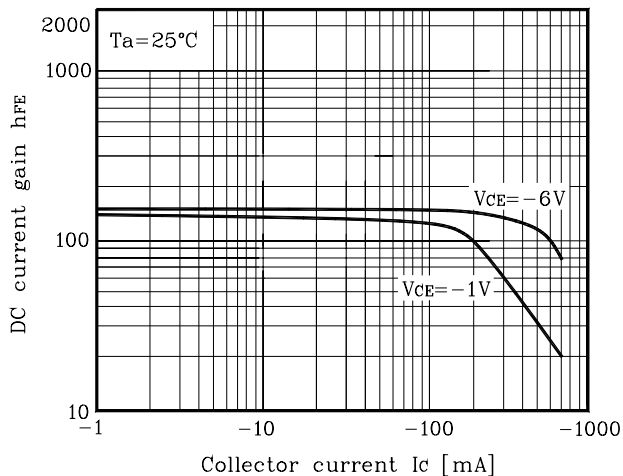
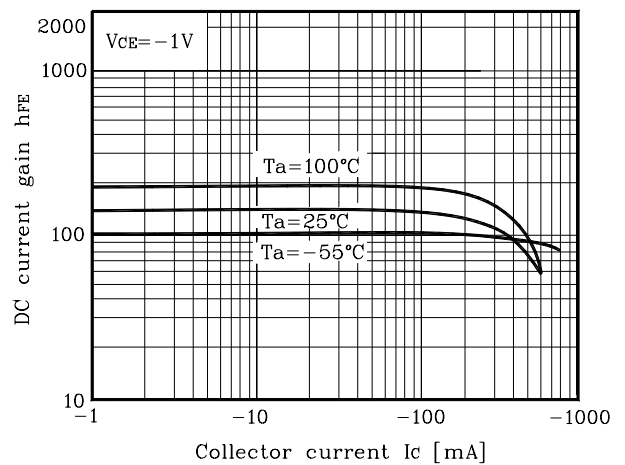


Fig. 6 $h_{FE} - I_C$



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