

## 1. Descriptions

· General small signal amplifier

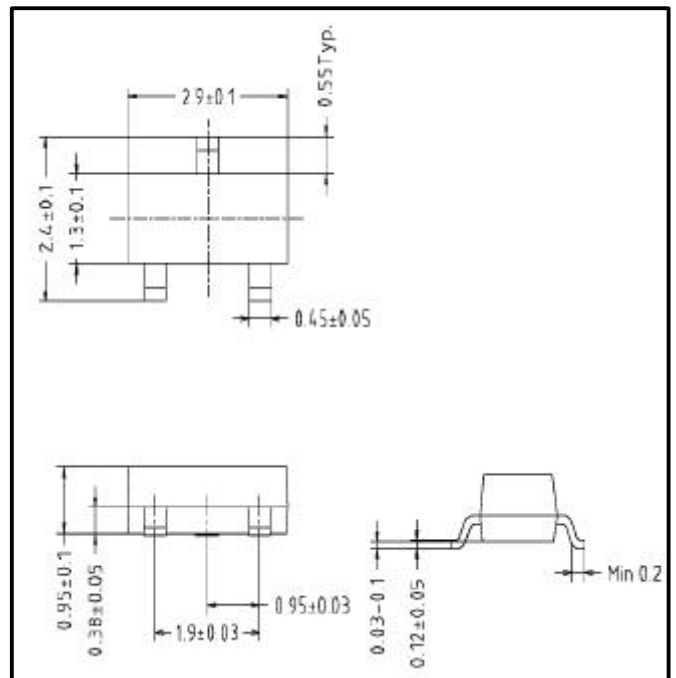
## 2. Features

- Low collector saturation voltage  
 $V_{CE(sat)} = \text{Max. } 0.4\text{V}$
- Low output capacitance  
 $C_{ob} = \text{Typ. } 2\text{pF}$
- Complementary to the SSA1037

## 3. Ordering Information

| Device  | Marking | Package |
|---------|---------|---------|
| SSC2412 | DA      | SOT-23  |

:  $h_{FE}$  Rank



SOT-23 Package Outline Dimension

## 4. Maximum ratings (Ta=25 )

| Characteristic            | Symbol    | Ratings | Unit |
|---------------------------|-----------|---------|------|
| Collector-Base voltage    | $V_{CBO}$ | 50      | V    |
| Collector-Emitter voltage | $V_{CEO}$ | 50      | V    |
| Emitter-Base voltage      | $V_{EBO}$ | 5       | V    |
| Collector current         | $I_C$     | 150     | mA   |
| Collector dissipation     | $P_C$     | 200     | mW   |
| Junction temperature      | $T_J$     | 150     | °C   |
| Storage temperature       | $T_{stg}$ | -55~150 | °C   |

## 5. Electrical Characteristics (Ta=25 )

| Characteristic                       | Symbol        | Test Condition  | Min. | Typ. | Max. | Unit          |
|--------------------------------------|---------------|---|------|------|------|---------------|
| Collector-Base breakdown voltage     | $BV_{CBO}$    | $I_C = 50\mu\text{A}, I_E = 0$  | 50   | -    | -    | V             |
| Collector-Emitter breakdown voltage  | $BV_{CEO}$    | $I_C = 1\text{mA}, I_B = 0$   | 50   | -    | -    | V             |
| Emitter-Base breakdown voltage       | $BV_{EBO}$    | $I_E = 50\mu\text{A}, I_C = 0$  | 5    | -    | -    | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 30\text{V}, I_E = 0$  | -    | -    | 0.5  | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 4\text{V}, I_C = 0$   | -    | -    | 0.5  | $\mu\text{A}$ |
| DC current gain                      | $h_{FE}^*$    | $V_{CE} = 6\text{V}, I_C = 1\text{mA}$  | 70   | -    | 700  | -             |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 50\text{mA}, I_B = 5\text{mA}$   | -    | -    | 0.4  | V             |
| Transistion frequency                | $f_T$         | $V_{CE} = 12\text{V}, I_C = 2\text{mA}$   | -    | 180  | -    | MHz           |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = 12\text{V}, I_E = 0, f = 1\text{MHz}$                                   | -    | 2    | -    | pF            |
| Noise figure                         | NF            | $V_{CE} = 6\text{V}, I_C = 0.1\text{mA}, f = 1\text{KHz}, R_g = 10\text{K}\Omega$ | -    | 1    | 10   | dB            |

$h_{FE}$  Rank : O = 70~140 , Y=120~240 , G=200~400 , L=300~700

## 6. Electrical Characteristics Curves

Fig 1.  $P_c - T_a$

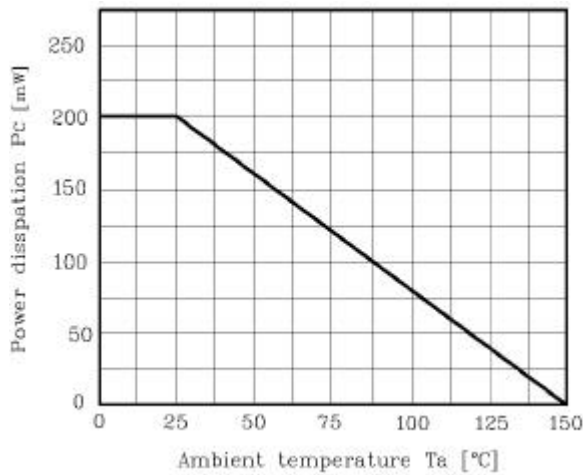


Fig 2.  $I_c - V_{BE}$

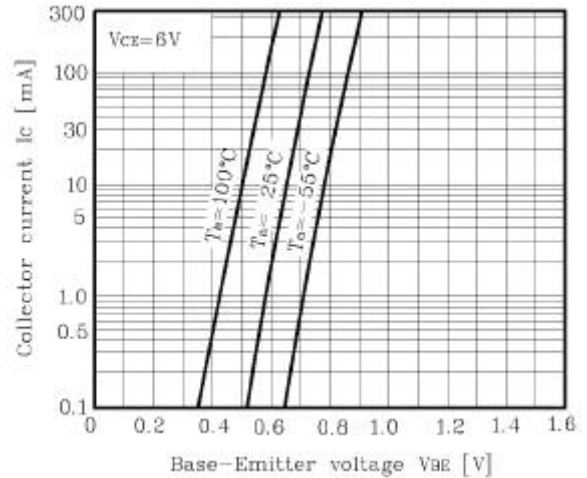


Fig 3.  $I_c - V_{CE}$

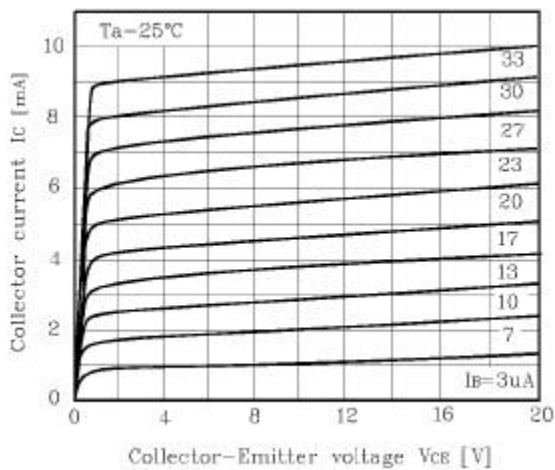


Fig 4.  $V_{CE(sat)} - I_c$

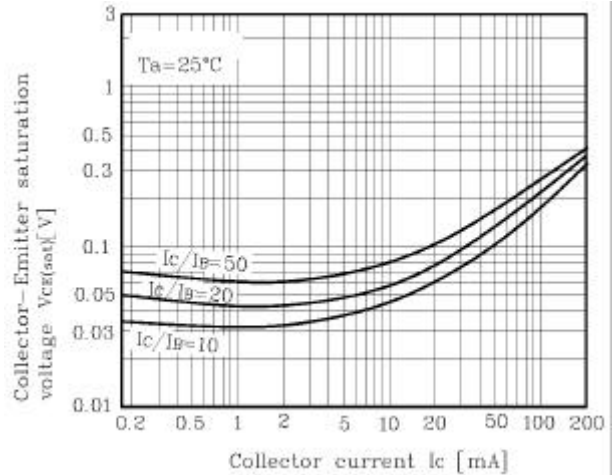


Fig 5.  $h_{FE} - I_c$

