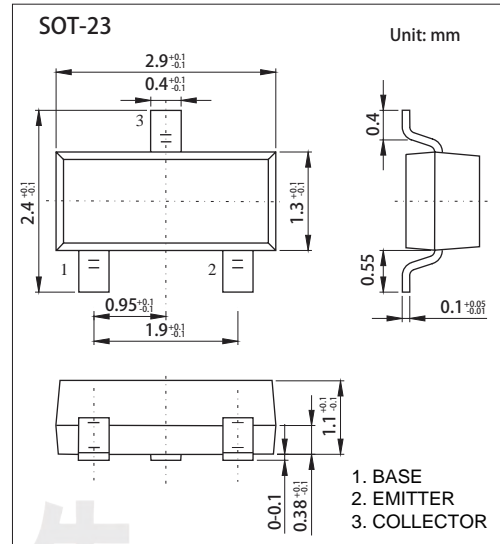


## PNP Transistors S9012

### ■ Features

- High Collector Current
- Excellent hFE Linearity
- Complementary to S9013



### ■ Absolute Maximum Ratings Ta = 25°C

| Parameter                                   | Symbol           | Rating     | Unit |
|---|------------------|------------|------|
| Collector - Base Voltage                    | V <sub>CB0</sub> | -40        | V    |
| Collector - Emitter Voltage                 | V <sub>CEO</sub> | -25        |      |
| Emitter - Base Voltage                      | V <sub>EB0</sub> | -5         |      |
| Collector Current - Continuous              | I <sub>C</sub>   | -500       | mA   |
| Collector Power Dissipation                 | P <sub>C</sub>   | 300        | mW   |
| Thermal Resistance From Junction To Ambient | R <sub>θJA</sub> | 416        | °C/W |
| Junction Temperature                        | T <sub>J</sub>   | 150        | °C   |
| Storage Temperature                         | T <sub>stg</sub> | -55 to 150 |      |

# Transistor

## PNP Transistors S9012

### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter                            | Symbol        | Testconditions   | Min | Typ | Max  | Unit          |
|--------------------------------------|---------------|--|-----|-----|------|---------------|
| Collector- base breakdown voltage    | $V_{CB0}$     | $I_C = -100 \mu\text{A}, I_E = 0$                              | -40 |     |      | V             |
| Collector- emitter breakdown voltage | $V_{CEO}$     | $I_C = -1 \text{mA}, I_B = 0$                                  | -25 |     |      |               |
| Emitter - base breakdown voltage     | $V_{EBO}$     | $I_E = -100 \mu\text{A}, I_C = 0$                              | -5  |     |      |               |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -40 \text{V}, I_E = 0$                               |     |     | -0.1 | $\mu\text{A}$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = -20 \text{V}, I_B = 0$                               |     |     | -0.1 |               |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5 \text{V}, I_C = 0$                                |     |     | -0.1 |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500 \text{mA}, I_B = -50 \text{mA}$                    |     |     | -0.6 | V             |
| Base - emitter saturation voltage    | $V_{BE(sat)}$ | $I_C = -500 \text{mA}, I_B = -50 \text{mA}$                    |     |     | -1.2 |               |
| DC current gain                      | $h_{FE}$      | $V_{CE} = -1 \text{V}, I_C = -50 \text{mA}$                    | 120 |     | 400  |               |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -10 \text{V}, I_E = 0, f = 1 \text{MHz}$             |     |     | 5    | pF            |
| Transition frequency                 | $f_T$         | $V_{CE} = -6 \text{V}, I_C = -20 \text{mA}, f = 30 \text{MHz}$ | 150 |     |      | MHz           |

### ■ Classification of $h_{FE}$

| Rank    | L       | H       | J       |
|---------|---------|---------|---------|
| Range   | 120-200 | 200-350 | 300-400 |
| Marking | 2T1     |         |         |

## PNP Transistors S9012

### ■ Typical Characteristics

