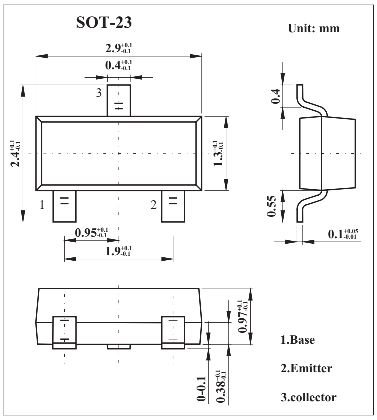
# PNP Silicon Epitaxial Transistor

# 2SA811A



## ■ Features

- ● High DC current gain.

## ■ Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-base voltage | $V_{CBO}$ | -120 | V |
| Collector-emitter voltage | $V_{CEO}$ | -120 | V |
| Emitter-base voltage | $V_{EBO}$ | -5 | V |
| Collector current | $I_C$ | -50 | mA |
| Total power dissipation | $P_T$ | 200 | mW |
| Junction temperature | $T_j$ | 150 | ℃ |
| Storage temperature | $T_{stg}$ | -55 to +150 | ℃ |

## ■ Electrical Characteristics Ta = 25℃

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector cutoff current | $I_{CBO}$ | $V_{CB}$ = -120V, $I_E$=0 | | | -50 | nA |
| Emitter cutoff current | $I_{EBO}$ | $V_{EB}$ = -5V, $I_C$=0 | | | -50 | nA |
| DC current gain * | $h_{FE}$ | $V_{CE}$ = -6V , $I_C$ = -1mA | 135 | 500 | 900 | |
| | | $V_{CE}$ = -6V , $I_C$ = -0.1mA | 100 | 500 | | |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C$ = -10mA , $I_B$ = -1mA | | -0.09 | -0.30 | V |
| Base-emitter voltage * | $V_{BE}$ | $V_{CE}$ = -6V , $I_C$ = -1mA | -0.55 | -0.61 | -0.65 | V |
| Gain bandwidth product | $f_T$ | $V_{CE}$ = -6V , $I_E$ = 1mA | 50 | 90 | | MHz |
| Output capacitance | $C_{ob}$ | $V_{CB}$ = -30V , $I_E$ = 0 , f = 1.0MHz | | 2.0 | 3.0 | pF |

* Pulse test: tp ⩽ 350 μs; d ⩽ 0.02.

## ■ $h_{FE}$ Classification

| Marking | C15 | C16 | C17 | C18 |
|---|---|---|---|---|
| hFE | 135～270 | 200～400 | 300～600 | 450～900 |