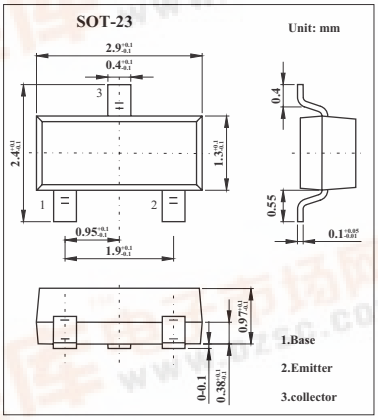
# PNP General Purpose Transistor

# 2PB710A




## Features

- High current (max. 500 mA)
- Low voltage (max. 50 V).

## Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-base voltage | $V_{CBO}$ | -60 | V |
| Collector-emitter voltage | $V_{CEO}$ | -50 | V |
| Emitter-base voltage | $V_{EBO}$ | -5 | V |
| Collector current (DC) | $I_C$ | -500 | mA |
| Peak collector current | $I_{CM}$ | -1 | A |
| Peak base current | $I_{BM}$ | -200 | mA |
| Total power dissipation Tamb≤25℃; * | $P_{tot}$ | 250 | mW |
| Storage temperature | $T_{stg}$ | -65 to +150 | ℃ |
| Junction temperature | $T_j$ | 150 | ℃ |
| Operating ambient temperature | $T_{amb}$ | -65 to +150 | ℃ |
| Thermal resistance from junction to ambient * | $R_{th\ j\text{-}a}$ | 500 | K/W |

* Transistor mounted on an FR4 printed-circuit board.

# 2PB710A

## ■ Electrical Characteristics Ta = 25℃

| Parameter | | Symbol | Testconditons | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| Collector cut-off current | | $I_{CBO}$ | $I_E$ = 0; $V_{CB}$ = -60 V | | | -10 | nA |
| | | | $I_E$ = 0; $V_{CB}$ = -60 V; $T_j$ = 150 ℃ | | | -5 | μA |
| Emitter cut-off current | | $I_{EBO}$ | $I_C$ = 0; $V_{EB}$ = -5 V | | | -10 | nA |
| DC current gain | 2PB710AQ | $h_{FE}$ | $I_C$ = -150 mA; $V_{CE}$ = -10 V* | 85 | | 170 | |
| | 2PB710AR | | | 120 | | 240 | |
| | 2PB710AS | | | 170 | | 340 | |
| DC current gain | | | $I_C$ = -500 mA; $V_{CE}$ = -10 V; * | 40 | | | |
| Collector-emitter saturation voltage | | $V_{CEsat}$ | $I_C$ = -300 mA; $I_B$ = -30 mA * | | | -600 | mV |
| Base-emitter saturation voltage | | $V_{BEsat}$ | $I_C$ = -300 mA; $I_B$ = -30 mA * | | | -1.5 | V |
| Collector capacitance | | $C_c$ | $I_E$ = $i_e$ = 0; $V_{CB}$ = -10 V; f = 1 MHz | | | 15 | pF |
| Transition frequency | 2PB710AQ | $f_T$ | $I_C$ = -50 mA; $V_{CE}$ = -10 V; f = 100 MHz* | 100 | | | MHz |
| | 2PB710AR | | | 120 | | | |
| | 2PB710AS | | | 140 | | | |

*. Pulse test: tp≤ 300 μs; δ≤ 0.02.

## ■ Marking

| Type Number | 2PB710AQ | 2PB710AR | 2PB710AS |
|---|---|---|---|
| Marking | DQ | DR | DS |