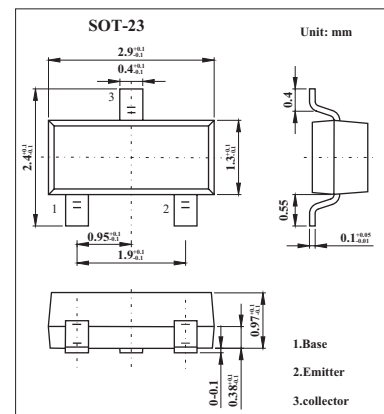


## PNP General Purpose Transistor

## 2PB709A

## ■ Features

- Low current (max. 100 mA)
- Low voltage (max. 45 V).

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-45	V
Collector-emitter voltage	$V_{CE0}$	-45	V
Emitter-base voltage	$V_{EB0}$	-6	V
Collector current (DC)	$I_C$	-100	mA
Peak collector current	$I_{CM}$	-200	mA
Peak base current	$I_{BM}$	-100	mA
Total power dissipation ( $T_{amb} \leq 25^\circ\text{C}; *$ )	$P_{tot}$	250	mW
Storage temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating ambient temperature	$T_{amb}$	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{th\ j-a}$	500	K/W

\* Transistor mounted on an FR4 PCB.

## 2PB709A

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

Parameter	Symbol	Testconditions	Min	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	I <sub>E</sub> = 0; V <sub>CB</sub> = -45 V		-10	nA
		I <sub>E</sub> = 0; V <sub>CB</sub> = -45 V; T <sub>j</sub> = 150 °C		-5	μA
Emitter cut-off current	I <sub>EBO</sub>	I <sub>C</sub> = 0; V <sub>EB</sub> = -5 V		-10	nA
DC current gain	2PB709AQ	I <sub>C</sub> = -2 mA; V <sub>CE</sub> = -10 V	160	260	
	2PB709AR		210	340	
	2PB709AS		290	460	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -100 mA; I <sub>B</sub> = -10 mA *		-500	mV
Collector capacitance	C <sub>c</sub>	I <sub>E</sub> = i <sub>e</sub> = 0; V <sub>CB</sub> = -10 V; f = 1 MHz		5	pF
Transition frequency	2PB709AQ	I <sub>C</sub> = -1 mA; V <sub>CE</sub> = -10 V; f = 100 MHz	60		MHz
	2PB709AR		70		
	2PB709AS		80		

\* Pulse test:  $t_p \leq 300 \mu\text{s}$ ;  $\delta \leq 0.02$ .

## ■ hFE Classification

TYPE	2PB709AQ	2PB709AR	2PB709AS
Marking	BQ	BR	BS