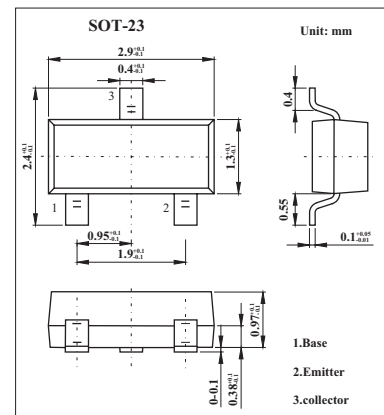


## PNP General Purpose Transistors

## BCW29,BCW30

## ■ Features

- Low current (max. 100 mA).
- Low voltage (max. 32 V).



## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	-32	V
Collector-emitter voltage	V <sub>CEO</sub>	-32	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current	I <sub>C</sub>	-100	mA
Peak collector current	I <sub>CM</sub>	-200	mA
Peak base current	I <sub>BM</sub>	-200	mA
Total power dissipation	P <sub>tot</sub>	250	mW
Storage temperature	T <sub>stg</sub>	-65 to +150	°C
Junction temperature	T <sub>j</sub>	150	°C
Operating ambient temperature	R <sub>amb</sub>	-65 to +150	°C
Thermal resistance from junction to ambient *	R <sub>th j-a</sub>	500	K/W

\* Transistor mounted on an FR4 printed-circuit board.

**BCW29,BCW30**■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$I_E = 0; V_{CB} = -32\text{ V}$			-100	nA
	$I_{CBO}$	$I_E = 0; V_{CB} = -32\text{ V}; T_j = 100^\circ\text{C}$			-10	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$I_C = 0; V_{EB} = -5\text{ V}$			-100	nA
DC current gain	$h_{FE}$	$I_C = -2\text{ mA}; V_{CE} = -5\text{ V}$	120		260	
			215		500	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\text{ mA}; I_B = -0.5\text{ mA}$		-80		mV
		$I_C = -50\text{ mA}; I_B = -2.5\text{ mA}$		-150		mV
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10\text{ mA}; I_B = -0.5\text{ mA}$		-720		mV
		$I_C = -50\text{ mA}; I_B = -2.5\text{ mA}$		-810		mV
Base to emitter voltage	$V_{BE}$	$I_C = -2\text{ mA}; V_{CE} = -5\text{ V}$	-600		-750	mV
Collector capacitance	$C_C$	$I_E = I_C = 0; V_{CB} = -10\text{ V}; f = 1\text{ MHz}$		4.5		pF
Transition frequency	$f_T$	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$	100			MHz
Noise figure	NF	$I_C = -200\text{ }\mu\text{A}; V_{CE} = -5\text{ V}; R_s = 2\text{ k}\Omega;$ $f = 1\text{ kHz}; B = 200\text{ Hz}$			10	dB

## ■ hFE Classification

TYPE	BCW29	BCW30
Marking	C1	C2