

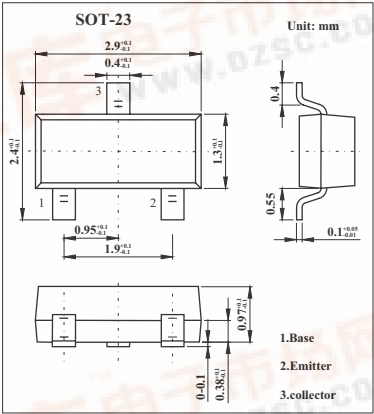
SMD Type

Transistors

PNP General Purpose Transistors
BCF29,BCF30

■ Features

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



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	-32	V
Collector-emitter voltage	V _{CEO}	-32	V
Emitter-base voltage	V _{EB0}	-5	V
Collector current	I _C	-100	mA
Peak collector current	I _{CM}	-200	mA
Peak base current	I _{BM}	-100	mA
Total power dissipation *	P _{tot}	250	mW
Storage temperature	T _{stg}	-65 to +150	℃
Junction temperature	T _j	150	℃
Operating ambient temperature	R _{amb}	-65 to +150	℃
Thermal resistance from junction to ambient *	R _{th j-a}	500	K/W

* Transistor mounted on an FR4 printed-circuit board.

BCF29,BCF30■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	$I_E = 0; V_{CB} = -32\text{ V}$			-100	nA
	ICBO	$I_E = 0; V_{CB} = -32\text{ V}; T_j = 100^\circ\text{C}$			-10	μA
Emitter cutoff current	IEBO	$I_C = 0; V_{EB} = -5\text{ V}$			-100	nA
DC current gain	hFE	$I_C = -10\text{ }\mu\text{A}; V_{CE} = -5\text{ V}$		90		
				150		
DC current gain	hFE	$I_C = -2\text{ mA}; V_{CE} = -5\text{ V}$	120		260	
			215		500	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\text{ mA}; I_B = -0.5\text{ mA}$		-80	-300	mV
		$I_C = -50\text{ mV}; I_B = -2.5\text{ mA}$		-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	$I_C = -200\text{ }\mu\text{A}; V_{CE} = -5\text{ V}; R_s = 2\text{ k}\Omega;$ $f = 1\text{ kHz}; B = 200\text{ Hz}$		1	4	dB

■ hFE Classification

TYPE	BCF29	BCF30
Marking	C7p	C8p