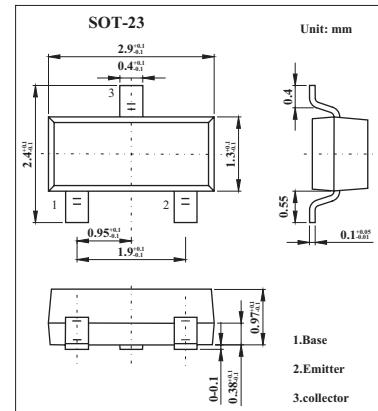


PNP General Purpose Transistors

BCX71H/J/K

■ Features

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



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	-45	V
Collector-emitter voltage	V _{CEO}	-45	V
Emitter-base voltage	V _{EBO}	-5	V
Collector current	I _C	-100	mA
Peak collector current	I _{CM}	-200	mA
Peak base current	I _{BM}	-200	mA
Total power dissipation	P _{tot}	250	mW
Storage temperature	T _{stg}	-65 to +150	°C
Junction temperature	T _j	150	°C
Operating ambient temperature	T _{amb}	-65 to +150	°C
Thermal resistance from junction to ambient *	R _{th j-a}	500	K/W

* Transistor mounted on an FR4 printed-circuit board.

BCX71H/J/K■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$I_E = 0; V_{CB} = -45 \text{ V}$			-20	nA
	I_{CBO}	$I_E = 0; V_{CB} = -45 \text{ V}; T_{amb} = 150^\circ\text{C}$			-20	μA
Emitter cutoff current	I_{EBO}	$I_C = 0; V_{EB} = -4 \text{ V}$			-20	nA
DC current gain	BCX71H	$I_C = -10 \mu\text{A}; V_{CE} = -5 \text{ V}$	30			
	BCX71J		40			
	BCX71K		100			
DC current gain	BCX71H	$I_C = -2 \text{ mA}; V_{CE} = -5 \text{ V}$	180		310	
	BCX71J		250		460	
	BCX71K		380		630	
DC current gain	BCX71H	$I_C = -50 \text{ mA}; V_{CE} = -1 \text{ V}; *$	80			
	BCX71J		100			
	BCX71K		110			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}; I_B = -0.25 \text{ mA}$	-60		-250	mV
		$I_C = -50 \text{ mA}; I_B = -1.25 \text{ mA}; *$	-120		-550	mV
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10 \text{ mA}; I_B = -0.25 \text{ mA}$	-600		-850	mV
		$I_C = -50 \text{ mA}; I_B = -1.25 \text{ mA}; *$	-680		-1050	mV
Base to emitter voltage	V_{BE}	$I_C = -2 \text{ mA}; V_{CE} = -5 \text{ V}$	-600	-650	-750	mV
Collector capacitance	C_C	$I_E = I_e = 0; V_{CB} = -10 \text{ V}; f = 1 \text{ MHz}$		4.5		pF
Emitter capacitance	C_e	$I_C = I_c = 0; V_{EB} = -0.5 \text{ V}; f = 1 \text{ MHz}$		11		pF
Transition frequency	f_T	$I_C = -10 \text{ mA}; V_{CE} = -5 \text{ V}; f = 100 \text{ MHz}$	100			MHz
Noise figure	NF	$I_C = -200 \mu\text{A}; V_{CE} = -5 \text{ V}; R_s = 2 \text{ k}\Omega; f = 1 \text{ kHz}; B = 200 \text{ Hz}$		2	6	dB

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

■ hFE Classification

TYPE	BCX71H	BCX71J	BCX71K
Marking	BH	BJ	BK