

## PNP General Purpose Transistors

## BCX71H/J/K

## ■ Features

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

■ 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	$V_{EB0}$	-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	$^\circ\text{C}$
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating ambient temperature	$R_{amb}$	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient *	$R_{th\ j-a}$	500	K/W

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

## BCX71H/J/K

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	ICBO	IE = 0; VCB = -45 V			-20	nA
	ICBO	IE = 0; VCB = -45 V; Tamb = 150 °C			-20	μA
Emitter cutoff current	IEBO	IC = 0; VEB = -4 V			-20	nA
DC current gain	BCX71H	IC = -10 μA; VCE = -5 V	30			
	BCX71J		40			
	BCX71K		100			
DC current gain	BCX71H	IC = -2 mA; VCE = -5 V	180		310	
	BCX71J		250		460	
	BCX71K		380		630	
DC current gain	BCX71H	IC = -50 mA; VCE = -1 V; *	80			
	BCX71J		100			
	BCX71K		110			
Collector-emitter saturation voltage	VCE(sat)	IC = -10 mA; IB = -0.25 mA	-60		-250	mV
		IC = -50 mA; IB = -1.25 mA; *	-120		-550	mV
Base to emitter saturation voltage	VBE(sat)	IC = -10 mA; IB = -0.25 mA	-600		-850	mV
		IC = -50 mA; IB = -1.25 mA; *	-680		-1050	mV
Base to emitter voltage	VBE	IC = -2 mA; VCE = -5 V	-600	-650	-750	mV
Collector capacitance	CC	IE = IE = 0; VCB = -10 V; f = 1 MHz		4.5		pF
Emitter capacitance	Ce	IC = IC = 0; VEB = -0.5 V; f = 1 MHz		11		pF
Transition frequency	fT	IC = -10 mA; VCE = -5 V; f = 100 MHz	100			MHz
Noise figure	NF	IC = -200 μA; VCE = -5 V; Rs = 2 kΩ; f = 1 kHz; B = 200 Hz		2	6	dB

\* Pulse test: tp ≤ 300 μs; d ≤ 0.02.

## ■ hFE Classification

TYPE	BCX71H	BCX71J	BCX71K
Marking	BH	BJ	BK