

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	45	V
Collector-Base Voltage	V _{CBO}	45	V
Emitter-Base Voltage	V _{EBO}	5.0	V
Collector Current — Continuous	I _C	100	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board,* T _A = 25°C Derate above 25°C	P _D	225 1.8	mW mW/°C
Thermal Resistance Junction to Ambient	R _{θJA}	556	°C/W
Total Device Dissipation Alumina Substrate,** T _A = 25°C Derate above 25°C	P _D	300 2.4	mW mW/°C
Thermal Resistance Junction to Ambient	R _{θJA}	417	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55 to +160	°C

*FR-5 = 1.0 x 0.75 x 0.062 in.

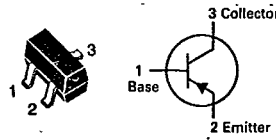
**Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

DEVICE MARKING

BCX71GL = BG; BCX71JL = BJ; BCX71KL = BK

BCX71GL, JL, KL

CASE 318-03, STYLE 6
SOT-23 (TO-236AB)



GENERAL PURPOSE
TRANSISTORS

PNP SILICON

T-27-09

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I _C = 2.0 mAdc, I _B = 0)	V _{(BR)CEO}	45	—	Vdc
Emitter-Base Breakdown Voltage (I _E = 1.0 μAdc, I _C = 0)	V _{(BR)EBO}	5.0	—	Vdc
Collector Cutoff Current (V _{CE} = 32 Vdc) (V _{CE} = 32 Vdc, T _A = 150°C)	I _{CES}	—	20 20	nAdc μAdc

ON CHARACTERISTICS

DC Current Gain (I _C = 10 μAdc, V _{CE} = 5.0 Vdc)	BCX71GL BCX71JL BCX71KL	h _{FE}	—	—	—
(I _C = 2.0 mAdc, V _{CE} = 5.0 Vdc)	BCX71GL BCX71JL BCX71KL	120 250 380	220 460 630	—	—
(I _C = 50 mAdc, V _{CE} = 1.0 Vdc)	BCX71GL BCX71JL BCX71KL	60 100 110	— — —	—	—
(I _C = 2.0 mAdc, V _{CE} = 5.0 Vdc, f = 1.0 kHz)	BCX71GL BCX71JL BCX71KL	125 250 350	250 500 700	—	—
Collector-Emitter Saturation Voltage (I _C = 10 mAdc, I _B = 0.25 mAdc) (I _C = 50 mAdc, I _B = 1.25 mAdc)	V _{CE(sat)}	— —	0.25 0.55	Vdc	—
Base-Emitter Saturation Voltage (I _C = 10 mAdc, I _B = 0.25 mAdc) (I _C = 50 mAdc, I _B = 1.25 mAdc)	V _{BE(sat)}	0.6 0.68	0.85 1.05	Vdc	—
Base-Emitter On Voltage (I _C = 2.0 mAdc, V _{CE} = 5.0 Vdc)	V _{BE(on)}	0.6	0.75	Vdc	—
Output Capacitance (V _{CE} = 10 Vdc, I _C = 0, f = 1.0 MHz)	C _{obo}	—	6.0	pF	—
Noise Figure (I _C = 0.2 mAdc, V _{CE} = 5.0 Vdc, R _S = 2.0 kΩ, f = 1.0 kHz, BW = 200 Hz)	NF	—	6.0	dB	—

SWITCHING CHARACTERISTICS

Turn-On Time (I _C = 10 mAdc, I _{B1} = 1.0 mAdc)	t _{on}	—	150	ns
Turn-Off Time (I _{B2} = 1.0 mAdc, V _{BB} = 3.6 Vdc, R ₁ = R ₂ = 5.0 kΩ, R _L = 990 Ω)	t _{off}	—	800	ns