

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CE0}	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

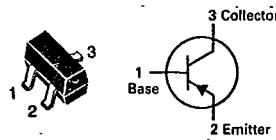
Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate,** $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

*FR-5 = $1.0 \times 0.75 \times 0.062$ in.**Alumina = $0.4 \times 0.3 \times 0.024$ 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

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage ($I_C = 2.0$ mAdc, $I_B = 0$)	$V_{(BR)CE0}$	45	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 1.0$ μ Adc, $I_C = 0$)	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current ($V_{CE} = 32$ Vdc) ($V_{CE} = 32$ Vdc, $T_A = 150^\circ\text{C}$)	I_{CES}	—	20	nAdc μ Adc
ON CHARACTERISTICS				
DC Current Gain ($I_C = 10$ μ Adc, $V_{CE} = 5.0$ Vdc)	h_{FE}	—	—	—
BCX71GL		40	—	—
BCX71JL		100	—	—
BCX71KL		—	—	—
($I_C = 2.0$ mAdc, $V_{CE} = 5.0$ Vdc)		120	220	—
BCX71GL		250	460	—
BCX71JL		380	630	—
BCX71KL		—	—	—
($I_C = 50$ mAdc, $V_{CE} = 1.0$ Vdc)		60	—	—
BCX71GL		100	—	—
BCX71JL		110	—	—
BCX71KL		—	—	—
($I_C = 2.0$ mAdc, $V_{CE} = 5.0$ Vdc, $f = 1.0$ kHz)		125	250	—
BCX71GL		250	500	—
BCX71JL		350	700	—
BCX71KL		—	—	—
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, $R_S = 2.0$ k Ω , $f = 1.0$ 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, $R_1 = R_2 = 5.0$ k Ω , $R_L = 990$ Ω)	t_{off}	—	800	ns