

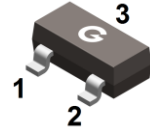
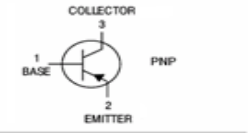
Features

- High current gain
- Low collector-emitter saturation voltage
- Complement to BCX70

HF

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BCX71G	SOT-23	3000 pcs / Tape & Reel	BG
BCX71H	SOT-23	3000 pcs / Tape & Reel	BH
BCX71J	SOT-23	3000 pcs / Tape & Reel	BJ
BCX71K	SOT-23	3000 pcs / Tape & Reel	BK

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-45	V
Collector-Emitter Breakdown Voltage	V _{CEO}	-45	V
Emitter-Base Breakdown Voltage	V _{EBO}	-5	V
Collector Current (Continuous)	I _C	-100	mA
Peak Collector Current	I _{CM}	-200	mA
Peak Base Current	I _{BM}	-200	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T _A = 25°C)	P _D	0.33	W
Thermal Resistance Junction-to-Air	R _{θJA}	357	°C/W
Thermal Resistance Junction-to-Case	R _{θJC}	250	°C/W
Junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

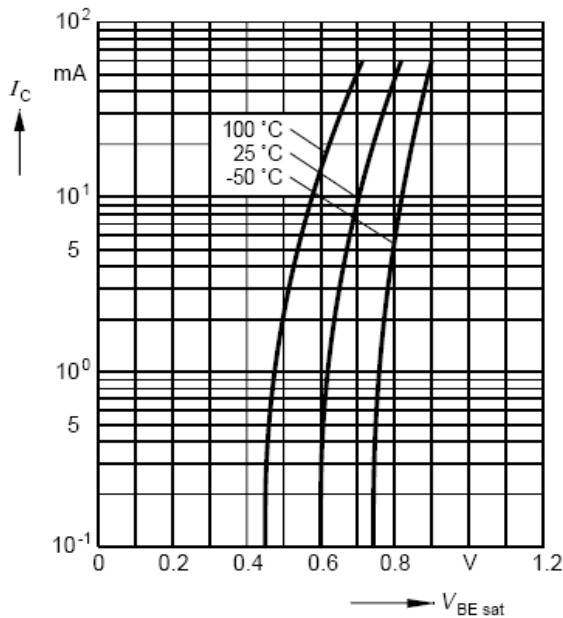
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}$, $I_E = 0$	-45	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}$, $I_B = 0$	-45	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -1\mu\text{A}$, $I_C = 0$	-5	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -45\text{V}$, $I_E = 0$	-	-	-20	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -4\text{V}$, $I_C = 0$	-	-	-20	nA
DC Current Gain	h_{FE}	$V_{CE} = -5\text{V}$, $I_C = -10\mu\text{A}$				
		BCX71G	20	-	-	-
		BCX71H	30	-	-	-
		BCX71J	40	-	-	-
		BCX71K	100	-	-	-
		$V_{CE} = -5\text{V}$, $I_C = -2\text{mA}$				
		BCX71G	120	-	220	-
		BCX71H	180	-	310	-
		BCX71J	250	-	460	-
		BCX71K	380	-	630	-
		$V_{CE} = -1\text{V}$, $I_C = -50\text{mA}$				
		BCX71G	60	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}$, $I_B = -0.25\text{mA}$	-	-	-0.25	V
		$I_C = -50\text{mA}$, $I_B = -1.25\text{mA}$	-	-	-0.55	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -10\text{mA}$, $I_B = -0.25\text{mA}$	-	-	-0.85	V
		$I_C = -50\text{mA}$, $I_B = -1.25\text{mA}$	-	-	-1.05	V
Base-emitter Voltage	$V_{BE(ON)}$	$I_C = -10\mu\text{A}$, $V_{CE} = -5\text{V}$	-	-0.52	-	V
		$I_C = -2\text{mA}$, $V_{CE} = -5\text{V}$	-0.55	-0.65	-0.75	V
		$I_C = -50\text{mA}$, $V_{CE} = -1\text{V}$	-	-0.78	-	V
Current-Gain—Bandwidth Product	f_T	$V_{CE} = -5\text{V}$, $I_C = -20\text{mA}$ $f = 100\text{MHz}$	-	250	-	MHz

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

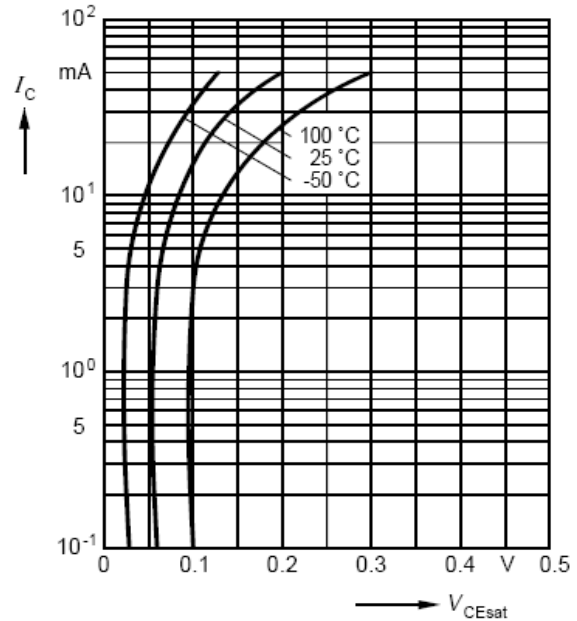
Base-emitter saturation voltage

$$I_C = f(V_{BEsat}), h_{FE} = 40$$

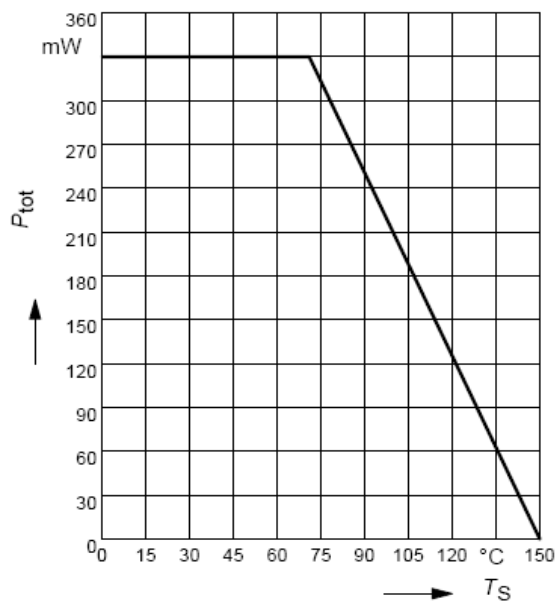


Collector-emitter saturation voltage

$$I_C = f(V_{CEsat}), h_{FE} = 40$$

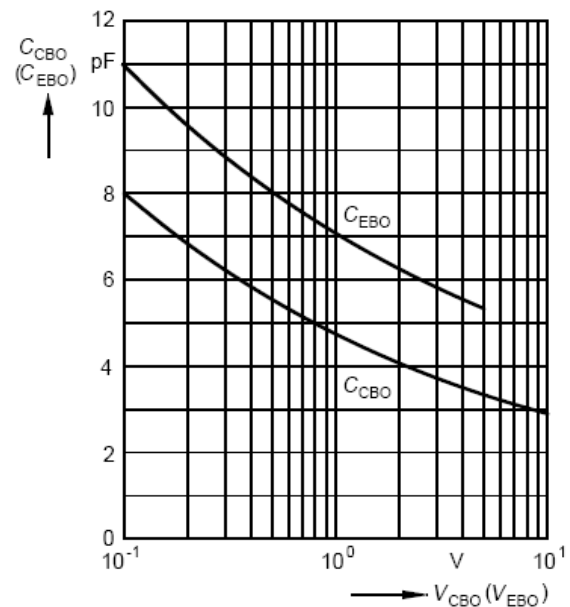


Total power dissipation $P_{tot} = f(T_S)$

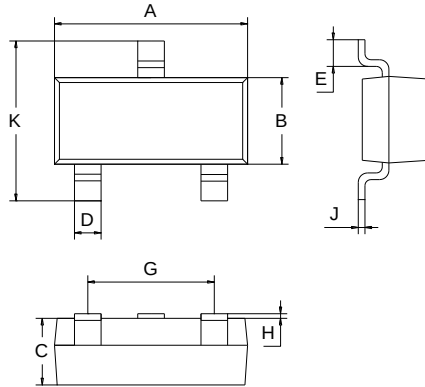


Collector-base capacitance $C_{CB} = f(V_{CBO})$

Emitter-base capacitance $C_{EB} = f(V_{EBO})$



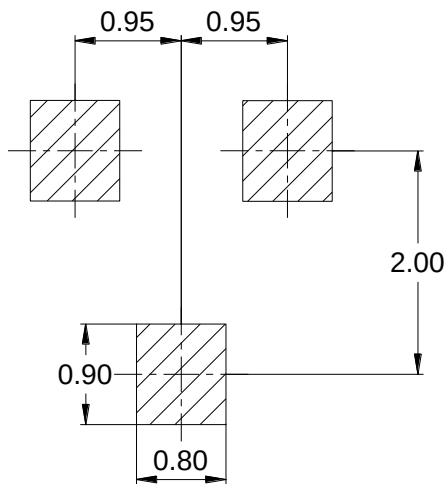
Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23



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