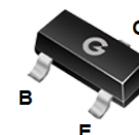
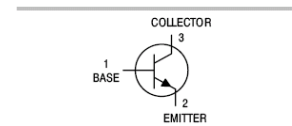


Features

- High current gain
- Low collector-emitter saturation voltage
- Complement to TBCX71

HF



SOT-23

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

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BCX70G	SOT-23	3000 pcs / Tape & Reel	AG
BCX70H	SOT-23	3000 pcs / Tape & Reel	AH
BCX70J	SOT-23	3000 pcs / Tape & Reel	AJ
BCX70K	SOT-23	3000 pcs / Tape & Reel	AK

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

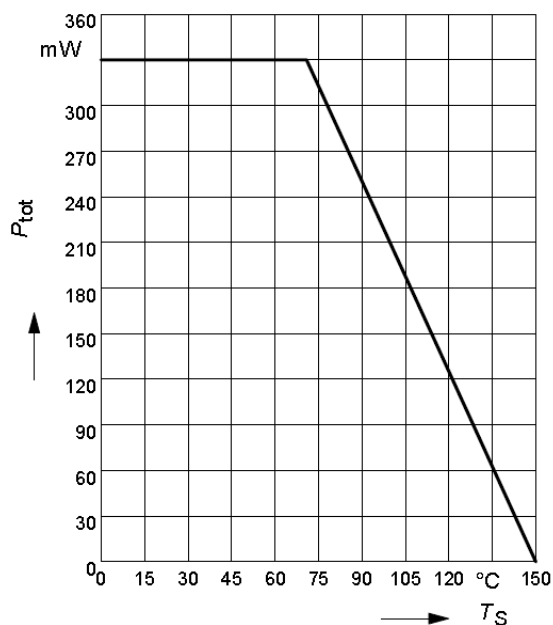
Parameter	Symbol	Value	Unit
Power Dissipation	P _D	0.33	W
Thermal Resistance Junction-to-Air	R _{θJA}	357	°C/W
Thermal Resistance Junction-to-Case	R _{θJC}	250	°C/W
Junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

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

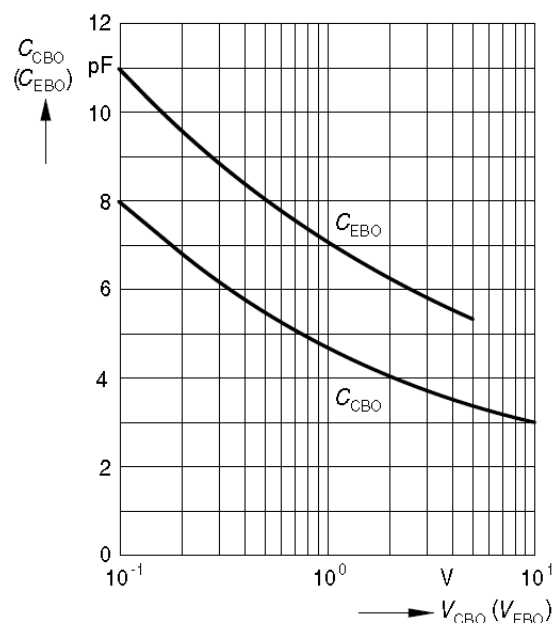
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	45	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	45	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\mu\text{A}, I_C = 0$	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}	$V_{CE} = 5\text{V}, I_C = 10\mu\text{A}$				
		BCX70G	20			
		BCX70H	20	-	-	-
		BCX70J	40			
		BCX70K	100			
		$V_{CE} = 5\text{V}, I_C = 2\text{mA}$				
		BCX70G	120		220	
		BCX70H	180	-	310	-
		BCX70J	250		460	
		BCX70K	380		630	
		$V_{CE} = 1\text{V}, I_C = 50\text{mA}$				
		BCX70G	50			
		BCX70H	70	-	-	-
		BCX70J	90			
		BCX70K	100			
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	$V_{BE(ON)}$	$I_C = 2\text{mA}, V_{CE} = 5\text{V}$	-	-	0.75	V
Current-Gain—Bandwidth Product	f_T	$V_{CE} = 5\text{V}, I_C = 20\text{mA}$ $f = 100\text{MHz}$	-	250	-	MHz
Collector-base Capacitance	C_{CB}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	3	-	pF

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

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

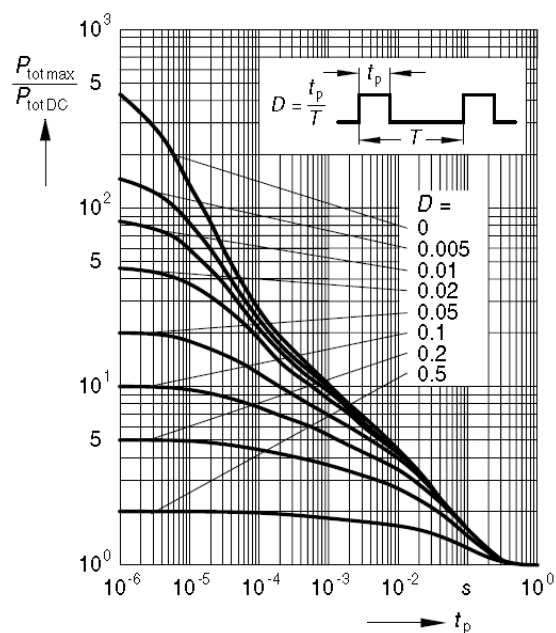


Collector-base capacitance $C_{CB} = f(V_{CBO})$
Emitter-base capacitance $C_{EB} = f(V_{EBO})$



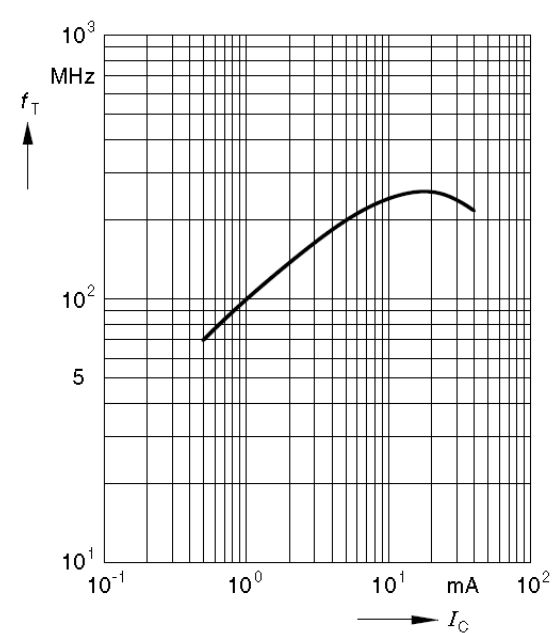
Permissible pulse load

$$P_{\text{totmax}} / P_{\text{totDC}} = f(t_p)$$



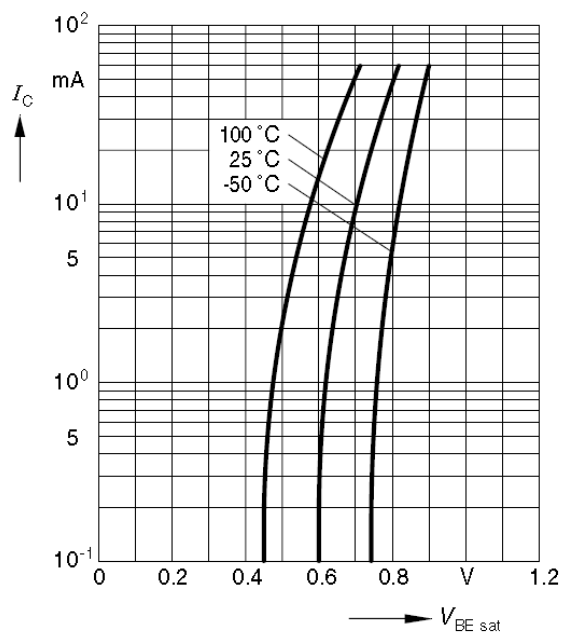
Transition frequency $f_T = f(I_C)$

$$V_{CE} = 5V$$



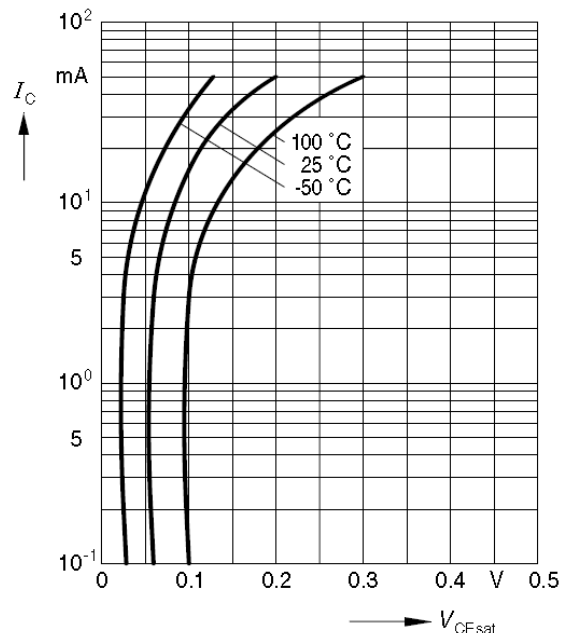
Base-emitter saturation voltage

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



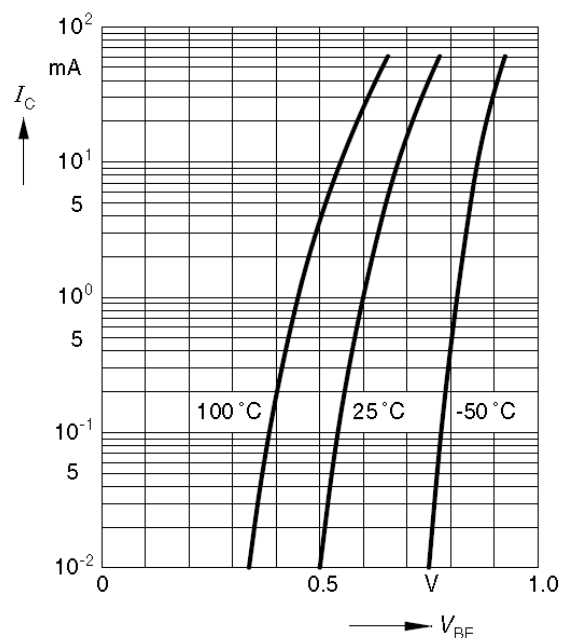
Collector-emitter saturation voltage

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



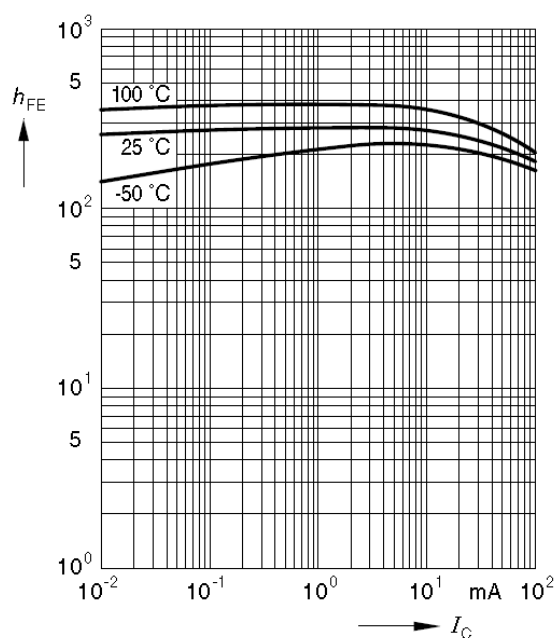
Collector current $I_C = f(V_{BE})$

$$V_{CE} = 5V$$

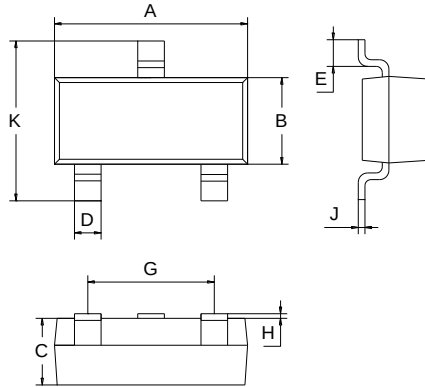


DC current gain $h_{FE} = f(I_C)$

$$V_{CE} = 5V$$



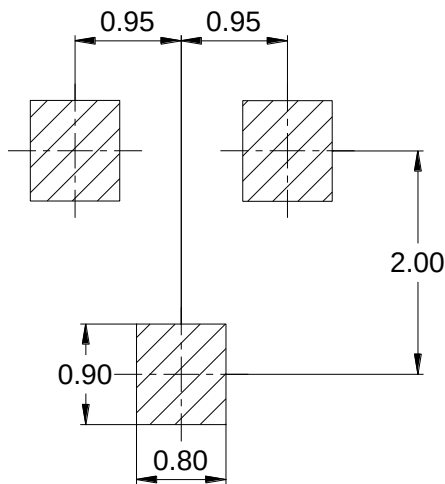
Package Outline Dimensions (Unit: mm)



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



IMPORTANT NOTICE

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) herein to make corrections, modifications, improvements, or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others.