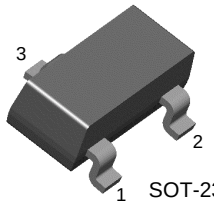
FAIRCHILD
SEMICONDUCTOR®

BCX70H

General Purpose Transistor



SOT-23

1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

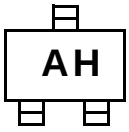
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	45	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	200	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	-55 ~ 150	°C

• Refer to KST3904 for graphs

Electrical Characteristics T_a=25°C unless otherwise noted

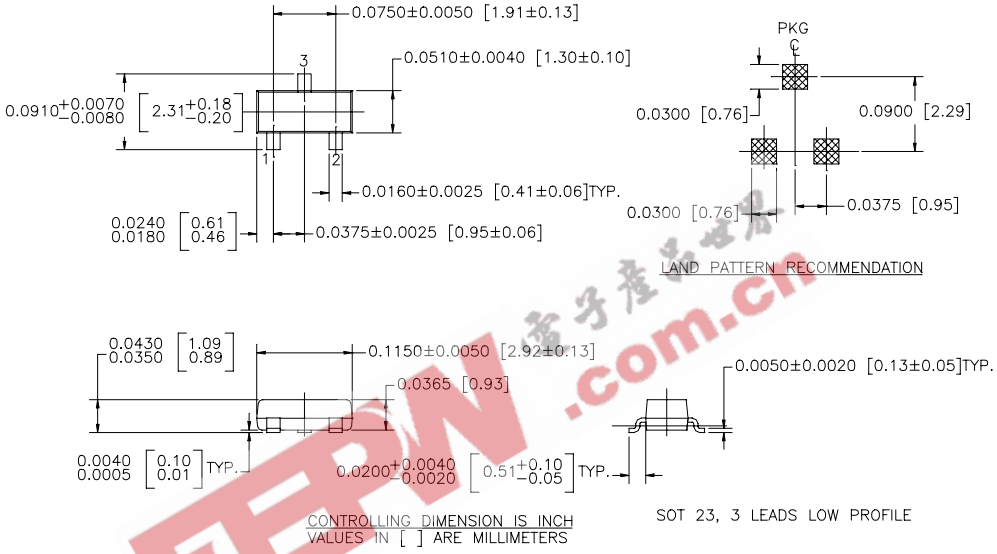
Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=2.0mA, I_B=0	45		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=1.0μA, I_C=0	5		V
I_{CES}	Collector Cut-off Current	V_{CE}=32V, V_{BE}=0		20	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}=4V, I_C=0		20	nA
h_{FE}	DC Current Gain	V_{CE}=5V, I_C=10μA V_{CE}=5V, I_C=2.0mA V_{CE}=1V, I_C=50mA	20 180 70	 310	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=10mA, I_B=0.25mA I_C=50mA, I_B=1.25mA		0.35 0.55	V V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C=10mA, I_B=0.25mA I_C=50mA, I_B=1.25mA	0.6 0.7	0.85 1.05	V V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}=5V, I_C=2.0mA	0.55	0.75	V
f_T	Current Gain Bandwidth Product	V_{CE}=5V, I_C=10mA, f=100MHz	125		MHz
C_{ob}	Output Capacitance	V_{CE}=10V, I_E=0, f=1MHz		4.5	pF
NF	Noise Figure	V_{CE}=5V, I_C=0.2mA R_S=2KΩ, f=1KHz		6	dB
t_{ON}	Turn On Time	I_C=10mA, I_{B1}=1.0mA		150	ns
t_{OFF}	Turn Off Time	V_{BB}=3.6V, I_{B2}=1.0mA R_1=R_2=5KΩ, R_L=990Ω		800	ns

Marking



Package Dimensions

SOT-23



NOTE : UNLESS OTHERWISE SPECIFIED

1. STANDARD LEAD FINISH 150 MICROINCHES / 3.81 MICROMETERS MINIMUM TIN / LEAD (SOLDER) ON ALLOY 42
2. REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE G, DATED JUL 1993

Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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