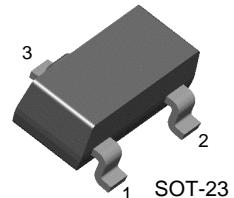


BCX70H

General Purpose Transistor



1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

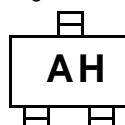
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	45	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	200	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	-55 ~ 150	°C

• Refer to KST3904 for graphs

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

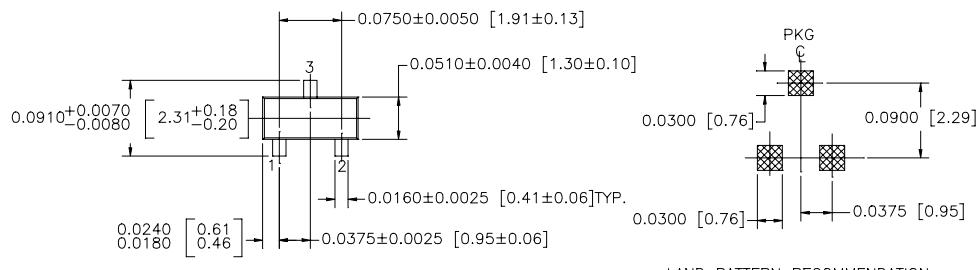
Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=2.0\text{mA}$, $I_B=0$	45		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=1.0\mu\text{A}$, $I_C=0$	5		V
I_{CES}	Collector Cut-off Current	$V_{CE}=32\text{V}$, $V_{BE}=0$		20	nA
I_{EBO}	Emitter Cut-off Current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

Marking

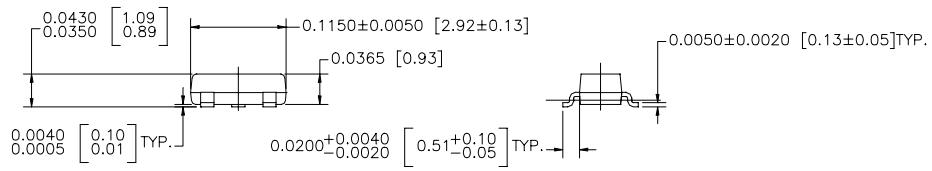


Package Dimensions

SOT-23



LAND PATTERN RECOMMENDATION



CONTROLLING DIMENSION IS INCH
VALUES IN [] ARE MILLIMETERS

SOT 23, 3 LEADS LOW PROFILE

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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Bottomless™	FAST®	LittleFET™	Power247™	SuperSOT™-3
CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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