

BCX70 SERIES
SURFACE MOUNT
NPN SILICON TRANSISTOR



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BCX70 Series types are NPN Silicon Transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for general purpose switching and amplifier applications.

MARKING CODES: BCX70G: AG
BCX70H: AH
BCX70J: AJ
BCX70K: AK

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Peak Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL		UNITS
V_{CB0}	45	V
V_{CEO}	45	V
V_{EBO}	5.0	V
I_C	100	mA
I_{CM}	200	mA
I_{BM}	200	mA
P_D	350	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
θ_{JA}	357	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=45\text{V}$			20	nA
I_{CBO}	$V_{CB}=45\text{V}, T_A=150^\circ\text{C}$			20	μA
I_{EBO}	$V_{EB}=4.0\text{V}$			20	nA
BV_{CBO}	$I_C=10\mu\text{A}$	45			V
BV_{CEO}	$I_C=10\text{mA}$	45			V
BV_{EBO}	$I_E=1.0\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=250\mu\text{A}$	0.05		0.35	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=1.25\text{mA}$	0.10		0.55	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=250\mu\text{A}$	0.60		0.85	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=1.25\text{mA}$	0.70		1.05	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	0.55		0.75	V
f_T	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100	250		MHz
C_c	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		1.7		pF
C_e	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		11		pF
NF	$V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_S=2.0\text{k}\Omega, f=1.0\text{kHz}, BW=200\text{Hz}$			6.0	dB

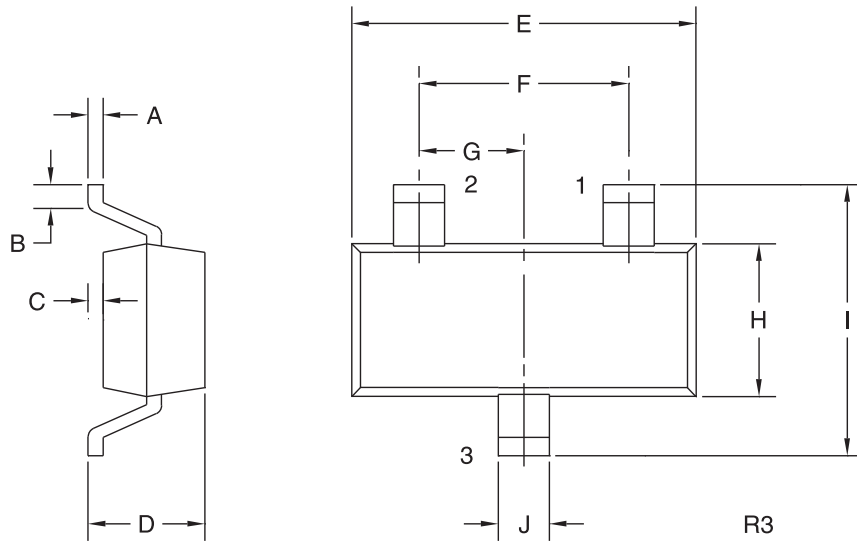
		BCX70G		BCX70H		BCX70J		BCX70K	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$			40		30		100	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	120	220	180	310	250	460	380	630
h_{FE}	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	50		70		90		100	

R2 (20-November 2009)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:
 1) BASE
 2) EMITTER
 3) COLLECTOR

DEVICE	MARKING CODE
BCX70G	AG
BCX70H	AH
BCX70J	AJ
BCX70K	AK

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R2 (20-November 2009)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

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