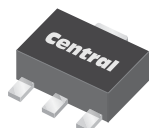


BCX51  
BCX52  
BCX53

**SURFACE MOUNT  
PNP SILICON TRANSISTOR**



**SOT-89 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR BCX51, BCX52, and BCX53 types are PNP Silicon Transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high current general purpose amplifier applications.

**MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE**

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

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

SYMBOL	BCX51	BCX52	BCX53	UNITS
$V_{CBO}$	45	60	100	V
$V_{CEO}$	45	60	80	V
$V_{EBO}$		5.0		V
$I_C$		1.0		A
$I_{CM}$		1.5		A
$I_B$		100		mA
$I_{BM}$		200		mA
$P_D$		1.3		W
$T_J, T_{stg}$		-65 to +150		$^\circ\text{C}$
$\theta_{JA}$		96		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=30\text{V}$			100	nA
$I_{CBO}$	$V_{CB}=30\text{V}, T_A=125^\circ\text{C}$			10	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$			100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$ (BCX51)	45			V
$BV_{CBO}$	$I_C=100\mu\text{A}$ (BCX52)	60			V
$BV_{CBO}$	$I_C=100\mu\text{A}$ (BCX53)	100			V
$BV_{CEO}$	$I_C=10\text{mA}$ (BCX51)	45			V
$BV_{CEO}$	$I_C=10\text{mA}$ (BCX52)	60			V
$BV_{CEO}$	$I_C=10\text{mA}$ (BCX53)	80			V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.5	V
$V_{BE(ON)}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$			1.0	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=5.0\text{mA}$	40			
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=150\text{mA}$	63		250	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=150\text{mA}$ (BCX51-10, BCX52-10, BCX53-10)	63		160	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=150\text{mA}$ (BCX51-16, BCX52-16, BCX53-16)	100		250	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	25			
$f_T$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$		50		MHz

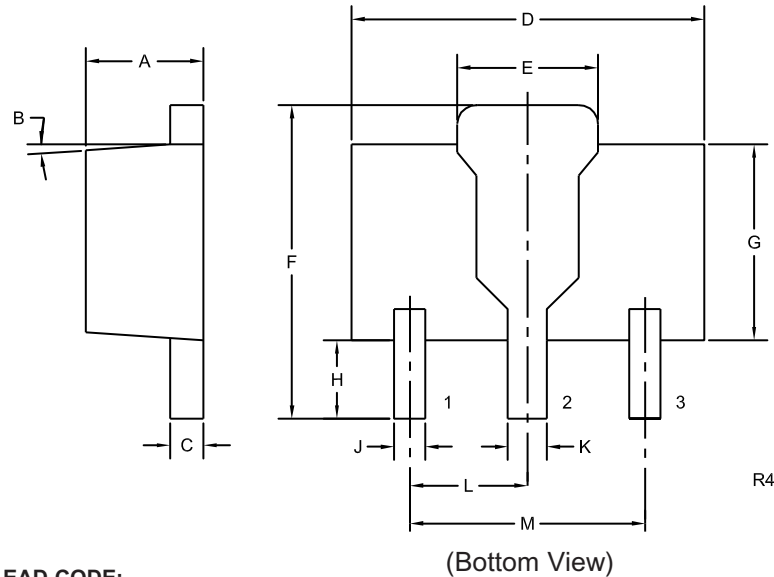
R5 (20-November 2009)

BCX51  
BCX52  
BCX53



**SURFACE MOUNT  
PNP SILICON TRANSISTOR**

**SOT-89 CASE - MECHANICAL OUTLINE**



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

DEVICE	MARKING CODE
BCX51	AA
BCX51-10	AC
BCX51-16	AD
BCX52	AE
BCX52-10	AG
BCX52-16	AM
BCX53	AH
BCX53-10	AK
BCX53-16	AL

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.014	0.018	0.35	0.46
D	0.173	0.185	4.40	4.70
E	0.064	0.074	1.62	1.87
F	0.146	0.177	3.70	4.50
G	0.090	0.106	2.29	2.70
H	0.028	0.051	0.70	1.30
J	0.014	0.019	0.36	0.48
K	0.017	0.023	0.44	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R4)

R5 (20-November 2009)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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