

BCX51  
BCX52  
BCX53

**SURFACE MOUNT  
PNP SILICON TRANSISTOR**



**SOT-89 CASE**

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

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

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

		<u>BCX51</u>	<u>BCX52</u>	<u>BCX53</u>	<u>UNITS</u>
Collector-Base Voltage	$V_{CBO}$	45	60	100	V
Collector-Emitter Voltage	$V_{CEO}$	45	60	80	V
Emitter-Base Voltage	$V_{EBO}$		5.0		V
Collector Current	$I_C$		1.0		A
Peak Collector Current	$I_{CM}$		1.5		A
Base Current	$I_B$		100		mA
Peak Base Current	$I_{BM}$		200		mA
Power Dissipation	$P_D$		1.2		W
Operating and Storage					
Junction Temperature	$T_J, T_{stg}$		-65 to +150		$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$		104		$^\circ\text{C/W}$

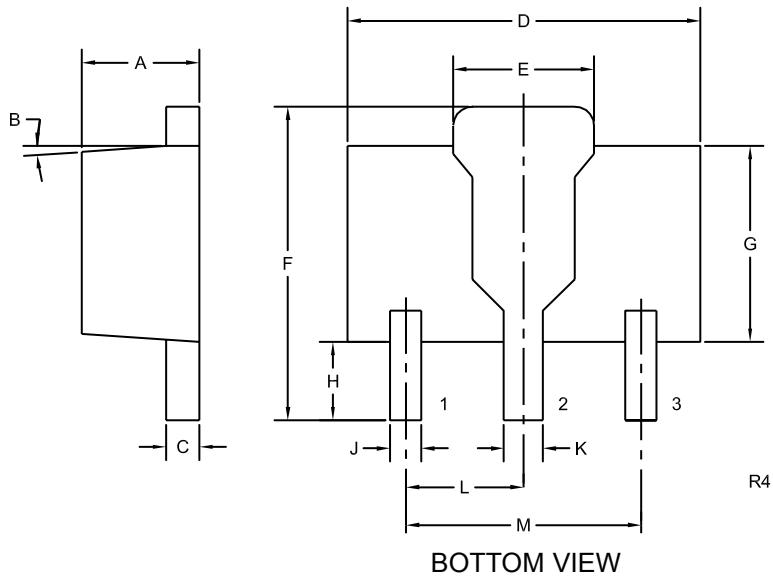
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$I_{CBO}$	$V_{CB}=30\text{V}$			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
$V_{BE(ON)}$	$V_{CE}=2.0\text{V}, I_B=500\text{mA}$			1.0	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=5.0\text{mA}$	63			
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=150\text{mA}$	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	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	40			
$f_T$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$		50		MHz

R3 (20-May 2004)

**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	DIMENSIONS			
	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)

R3 (20-May 2004)