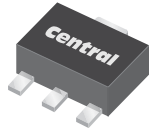


CBCX68 SERIES NPN  
CBCX69 SERIES PNP

SURFACE MOUNT  
COMPLEMENTARY SILICON  
SMALL SIGNAL TRANSISTORS



SOT-89 CASE



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CBCX68 and CBCX69 series types are complementary silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring high current capability.

**MARKING: FULL PART NUMBER**

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

Collector-Emitter 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**

$V_{CES}$   
 $V_{CEO}$   
 $V_{EBO}$   
 $I_C$   
 $I_{CM}$   
 $I_B$   
 $I_{BM}$   
 $P_D$   
 $T_J, T_{stg}$   
 $\theta_{JA}$

25  
20  
5.0  
1.0  
2.0  
100  
200  
1.2  
-65 to +150  
104

**UNITS**

V  
V  
V  
A  
A  
mA  
mA  
W  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=25\text{V}$			100	nA
$I_{CBO}$	$V_{CB}=25\text{V}, T_A=150^\circ\text{C}$			10	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$			10	$\mu\text{A}$
$BV_{CBO}$	$I_C=10\mu\text{A}$	25			V
$BV_{CEO}$	$I_C=10\text{mA}$	20			V
$BV_{EBO}$	$I_E=1.0\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$			0.5	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_C=5.0\text{mA}$		0.6		V
$V_{BE(ON)}$	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$			1.0	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=5.0\text{mA}$	50			
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$ (CBCX68, CBCX69)	85		375	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$ (CBCX68-16, CBCX69-16)	100		250	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$ (CBCX68-25, CBCX69-25)	160		400	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$	60			
$f_T$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=20\text{MHz}$	65			MHz

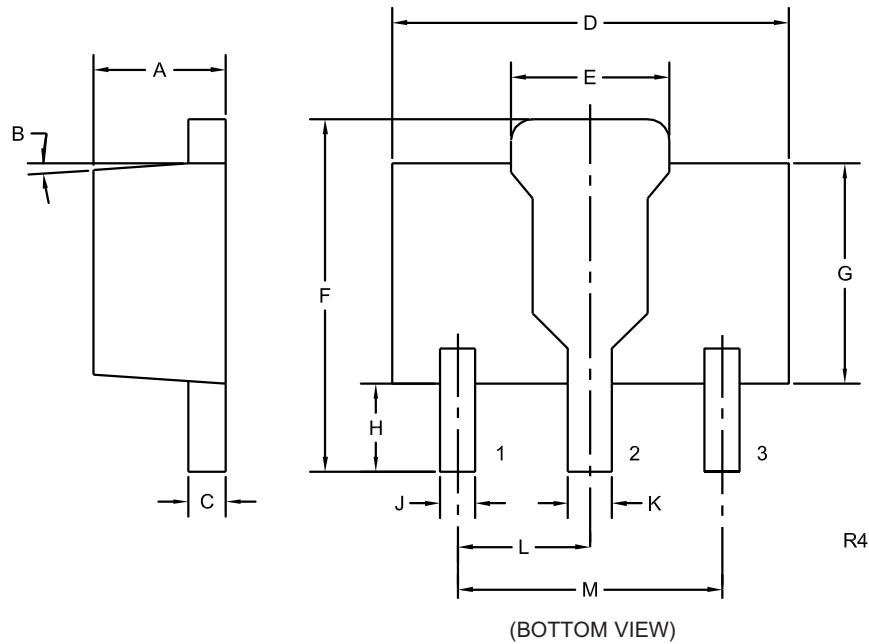
R10 (4-January 2010)

CBCX68 SERIES NPN  
 CBCX69 SERIES PNP

SURFACE MOUNT  
 COMPLEMENTARY SILICON  
 SMALL SIGNAL TRANSISTORS



SOT-89 CASE - MECHANICAL OUTLINE



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

**MARKING:**  
 FULL PART NUMBER

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)

R10 (4-January 2010)