

Silicon NPN Transistor

CBCP68

25V / 1A

DATASHEET

OEM – Central Semiconductor Corp.

Source: Central Databook 2004

**CBCP68 NPN
CBCP69 PNP**

**SILICON COMPLEMENTARY
SMALL SIGNAL TRANSISTORS**



Central™

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR, CBCP68, CBCP69 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 CODE: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL		UNITS
Collector-Emitter Voltage	V _{CES}	25	V
Collector-Emitter Voltage	V _{CEO}	20	V
Emitter-Base Voltage	V _{EBO}	5.0	V
Collector Current	I _C	1.0	A
Collector Current-Peak	I _{CM}	2.0	A
Base Current	I _B	100	mA
Base Current Peak	I _{BM}	200	mA
Power Dissipation	P _D	2.0	W
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 to +150	°C
Thermal Resistance	θ _{JA}	62.5	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{CBO}	V _{CB} =25V			10	µA
I _{CBO}	V _{CB} =25V, T _A =150°C			1.0	mA
I _{EBO}	V _{EB} =5.0V			10	µA
BV _{CBO}	I _C =10µA	25			V
BV _{CEO}	I _C =10mA	20			V
BV _{EBO}	I _E =1.0µA	5.0			V
V _{CE(SAT)}	I _C =1.0A, I _B =100mA			0.5	V
V _{BE(ON)}	V _{CE} =10V, I _C =5.0mA		0.6		V
V _{BE(ON)}	V _{CE} =1.0V, I _C =1.0A			1.0	V
h _{FE}	V _{CE} =10V, I _C =5.0mA	50			
h _{FE}	V _{CE} =1.0V, I _C =500mA	85		375	
h _{FE}	V _{CE} =1.0V, I _C =1.0A	60			
f _T	V _{CE} =5.0V, I _C =10mA, f=20MHz	65			MHz
C _{ob}	V _{CB} =5.0V, I _E =0, f=450kHz		25		pF

For Typical Electrical Characteristic Data for CBCP68 & CBCP69, please see Process CP314 & CP714 on pages 844 & 871.

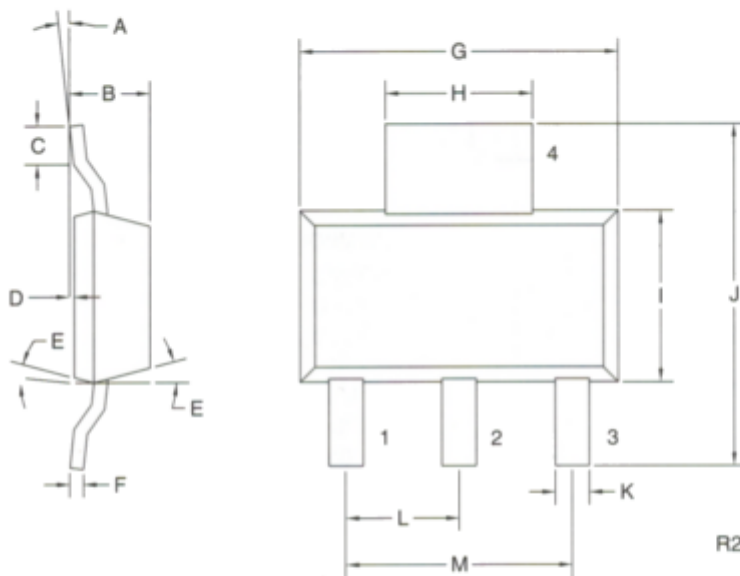
R3 (26-September 2002)



CBCP68 NPN
CBCP69 PNP

SILICON COMPLEMENTARY
SMALL SIGNAL TRANSISTORS

MECHANICAL OUTLINE - SOT-223



LEAD CODE:

- 1) BASE
- 2) COLLECTOR
- 3) EMITTER
- 4) COLLECTOR

MARKING CODE:

FULL PART NUMBER

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	7°	0°	7°
B	0.063	0.067	1.60	1.70
C	0.022		0.55	
D	0.001	0.004	0.03	0.10
E	15°		15°	
F	0.009	0.013	0.23	0.33
G	0.248	0.264	6.30	6.71
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.71
J	0.264	0.287	6.71	7.29
K	0.024	0.031	0.61	0.79
L	0.091		2.31	
M	0.181		4.60	

SOT-223 (REV: R2)

R3 (26-September 2002)