

CBCP68 NPN
CBCP69 PNP

SURFACE MOUNT
COMPLEMENTARY
SMALL SIGNAL SILICON
TRANSISTORS



SOT-223 CASE



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CBCP68 and 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: 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} 25
 V_{CEO} 20
 V_{EBO} 5.0
 I_C 1.0
 I_{CM} 2.0
 I_B 100
 I_{BM} 200
 P_D 2.0
 T_J, T_{stg} -65 to +150
 θ_{JA} 62.5

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}	$V_{CB}=25\text{V}$			10	μA
I_{CBO}	$V_{CB}=25\text{V}, T_A=150^\circ\text{C}$			1.0	mA
I_{EBO}	$V_{EB}=5.0\text{V}$			10	μA
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}	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	85		375	
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
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=450\text{kHz}$		25		pF

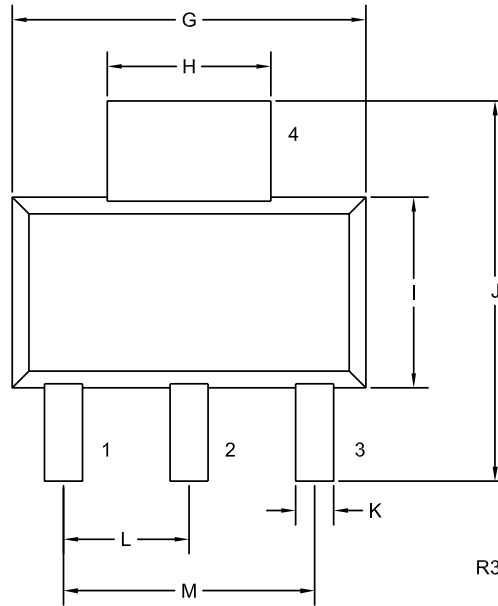
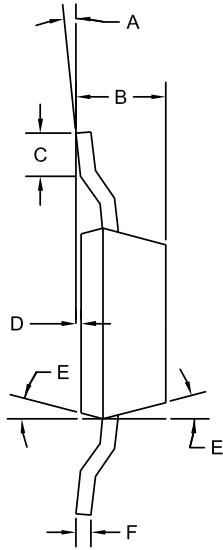
R5 (4-January 2010)

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING:

FULL PART NUMBER

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	10°	0°	10°
B	0.059	0.071	1.50	1.80
C	0.018	---	0.45	---
D	0.000	0.004	0.00	0.10
E	15°		15°	
F	0.009	0.014	0.23	0.35
G	0.248	0.264	6.30	6.70
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.70
J	0.264	0.287	6.70	7.30
K	0.024	0.033	0.60	0.85
L	0.091		2.30	
M	0.181		4.60	

SOT-223 (REV: R3)

R5 (4-January 2010)

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

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