

CMPT8099 NPN  
CMPT8599 PNP

**SURFACE MOUNT  
COMPLEMENTARY  
SILICON TRANSISTORS**



**SOT-23 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPT8099 and CMPT8599 are complementary silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for general purpose audio amplifier applications.

**MARKING CODES: CMPT8099: CKB  
CMPT8599: C2W**

**MAXIMUM RATINGS: (T<sub>A</sub>=25°C)**

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

SYMBOL	CMPT8099	CMPT8599	UNITS
V <sub>CB0</sub>	80	80	V
V <sub>CEO</sub>	80	80	V
V <sub>EBO</sub>	6.0	5.0	V
I <sub>C</sub>		500	mA
P <sub>D</sub>		350	mW
T <sub>J</sub> , T <sub>stg</sub>		-65 to +150	°C
θ <sub>JA</sub>		357	°C/W

**ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C unless otherwise noted)**

SYMBOL	TEST CONDITIONS	CMPT8099		CMPT8599		UNITS
		MIN	MAX	MIN	MAX	
I <sub>CBO</sub>	V <sub>CB</sub> =80V		0.1		0.1	μA
I <sub>EBO</sub>	V <sub>BE</sub> =6.0V		0.1		-	μA
I <sub>EBO</sub>	V <sub>BE</sub> =4.0V		-		0.1	μA
BV <sub>CB0</sub>	I <sub>C</sub> =100μA	80		80		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA	80		80		V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	6.0		5.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =5.0mA		0.4		0.4	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA		0.3		0.3	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA	0.6	0.8	0.6	0.8	V
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA	100	300	100	300	
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA	100		100		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100mA	75		75		
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA, f=100MHz	150		150		MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz		6.0		4.5	pF
C <sub>ib</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz		25		30	pF

R5 (1-February 2010)

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**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Base
- 2) Emitter
- 3) Collector

**MARKING CODES:**

**CMPT8099: CKB**  
**CMPT8599: C2W**

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R5 (1-February 2010)