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# **DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTA06 and CMPTA56 are complementary silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose and switching applications.



CMPTA06 NPN CMPTA56 PNP

SURFACE MOUNT

COMPLEMENTARY

SILICON TRANSISTORS

MARKING	CODES:	CMPTA06:	C1G
		CMPTA56:	C2G

MAXIMUM RATINGS: (T <sub>A</sub> =25°C)	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CBO</sub>	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	80	V
Emitter-Base Voltage	V <sub>EBO</sub>	4.0	V
Continuous Collector Current	IС	500	mA
Continuous Base Current	۱ <sub>B</sub>	100	mA
Peak Base Current	I <sub>BM</sub>	200	mA
Power Dissipation	PD	350	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +175	°C
Thermal Resistance	$\Theta_{JA}$	429	°C/W

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =80V		100	nA
I <sub>CBO</sub>	V <sub>CB</sub> =80V, T <sub>A</sub> =150°C		20	μΑ
ICEO	V <sub>CE</sub> =60V		100	nA
BVCEO	I <sub>C</sub> =1.0mA	80		V
BVEBO	Ι <sub>Ε</sub> =100μΑ	4.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA		0.25	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =100mA		1.20	V
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =10mA	100		
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =100mA	100		
fT	V <sub>CE</sub> =2.0V, I <sub>C</sub> =10mA, f=100MHz (CMPTA06)	100		MHz
fT	V <sub>CE</sub> =1.0V, I <sub>C</sub> =100mA, f=100MHz(CMPTA56)	50		MHz

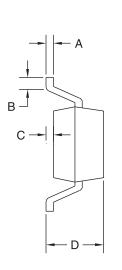
R6 (1-February 2010)

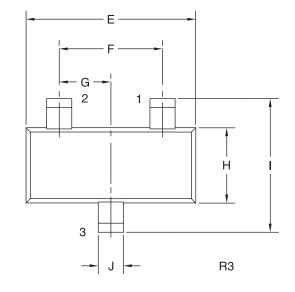




### SURFACE MOUNT COMPLEMENTARY SILICON TRANSISTORS

# SOT-23 CASE - MECHANICAL OUTLINE





LEAD CODE:
1) Base
2) Emitter
3) Collector

MARKING CODES: CMPTA06: C1G CMPTA56: C2G

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
А	0.003	0.007	0.08	0.18
В	0.006	-	0.15	-
С	-	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	
Н	0.047	0.055	1.19	1.40
	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R6 (1-February 2010)

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# **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

#### **DESIGNER SUPPORT/SERVICES**

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities

ss your design challenges.

· Custom product packing

- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- · Application and design sample kits

Custom bar coding for shipments

Custom product and package development

## **REQUESTING PRODUCT PLATING**

- 1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
- If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

## CONTACT US

## **Corporate Headquarters & Customer Support Team**

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