

CMPTA06 NPN
CMPTA56 PNP

**SURFACE MOUNT
COMPLEMENTARY
SILICON TRANSISTORS**



SOT-23 CASE



www.centrasemi.com

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.

**MARKING CODES: CMPTA06: C1G
CMPTA56: C2G**

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

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

SYMBOL

V_{CB0} 80
 V_{CEO} 80
 V_{EBO} 4.0
 I_C 500
 I_B 100
 I_{BM} 200
 P_D 350
 T_J, T_{stg} -65 to +175
 θ_{JA} 429

UNITS

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

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=80\text{V}$		100	nA
I_{CBO}	$V_{CB}=80\text{V}, T_A=150^\circ\text{C}$		20	μA
I_{CEO}	$V_{CE}=60\text{V}$		100	nA
BV_{CEO}	$I_C=1.0\text{mA}$	80		V
BV_{EBO}	$I_E=100\mu\text{A}$	4.0		V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		0.25	V
$V_{BE(ON)}$	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$		1.20	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	100		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	100		
f_T	$V_{CE}=2.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ (CMPTA06)	100		MHz
f_T	$V_{CE}=1.0\text{V}, I_C=100\text{mA}, f=100\text{MHz}$ (CMPTA56)	50		MHz

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODES:

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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)

R6 (1-February 2010)