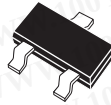




CMPT3904 CMPT3904G* NPN
CMPT3906 CMPT3906G* PNP

COMPLEMENTARY SILICON TRANSISTORS



SOT-23 CASE

* Device is **Halogen Free** by design

CentralTM Semiconductor Corp.

DESCRIPTION:

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

MARKING CODES: CMPT3904: C1A
CMPT3906: C2A
CMPT3904G*: CG1
CMPT3906G*: CG2

MAXIMUM RATINGS: (T_A=25°C)

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

SYMBOL

V_{CBO}
V_{CEO}
V_{EBO}
I_C
P_D
T_J, T_{stg}
θ_{JA}

CMPT3904 CMPT3904G*

60
40
6.0

CMPT3906 CMPT3906G*

40
40
5.0

UNITS

V
V
V
mA
mW
°C
°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C)

SYMBOL

TEST CONDITIONS

I_{CEV} V_{CE}=30V, V_{EB}=3.0V
I_{BL} V_{CE}=30V, V_{EB}=3.0V
BV_{CBO} I_C=10μA
BV_{CEO} I_C=1.0mA
BV_{EBO} I_E=10μA
V_{CE}(SAT) I_C=10mA, I_B=1.0mA
V_{CE}(SAT) I_C=50mA, I_B=5.0mA
V_{BE}(SAT) I_C=10mA, I_B=1.0mA
V_{BE}(SAT) I_C=50mA, I_B=5.0mA
h_{FE} V_{CE}=1.0V, I_C=0.1mA
h_{FE} V_{CE}=1.0V, I_C=1.0mA
h_{FE} V_{CE}=1.0V, I_C=10mA
h_{FE} V_{CE}=1.0V, I_C=50mA
h_{FE} V_{CE}=1.0V, I_C=100mA

CMPT3904 CMPT3904G*

MIN	MAX
-	50
-	50
60	-
40	-
6.0	-
-	0.20
-	0.30
0.65	0.85
-	0.95
40	-
70	-
100	300
60	-
30	-

CMPT3906 CMPT3906G*

MIN	MAX
-	50
-	50
40	-
40	-
5.0	-
-	0.25
-	0.40
0.65	0.85
-	0.95
60	-
80	-
100	300
60	-
30	-

UNITS

nA
nA
V
V
V
V
V
V
V
V
V
V
V
V
V

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

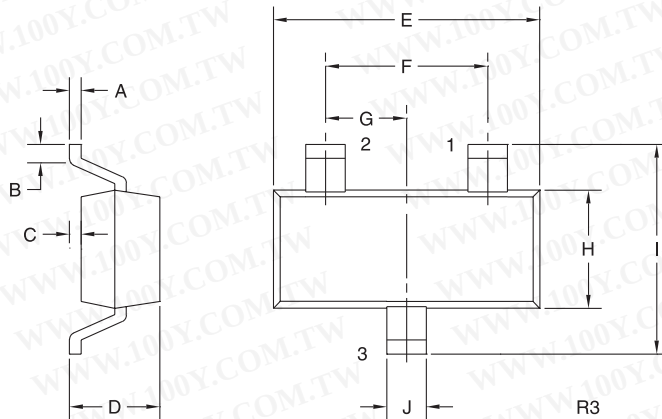
R6 (23-January 2009)

COMPLEMENTARY SILICON TRANSISTORS

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

SYMBOL	TEST CONDITIONS	CMPT3904 CMPT3904G*		CMPT3906 CMPT3906G*		UNITS
		MIN	MAX	MIN	MAX	
f_T	$V_{CE}=20\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$	300	-	250	-	MHz
C_{ob}	$V_{CB}=5.0\text{V}$, $I_E=0$, $f=1.0\text{MHz}$	-	4.0	-	4.5	pF
C_{ib}	$V_{BE}=0.5\text{V}$, $I_C=0$, $f=1.0\text{MHz}$	-	8.0	-	10	pF
h_{ie}	$V_{CE}=10\text{V}$, $I_C=1.0\text{mA}$, $f=1.0\text{kHz}$	1.0	10	2.0	12	$k\Omega$
h_{re}	$V_{CE}=10\text{V}$, $I_C=1.0\text{mA}$, $f=1.0\text{kHz}$	0.5	8.0	0.1	10	$\times 10^{-4}$
h_{fe}	$V_{CE}=10\text{V}$, $I_C=1.0\text{mA}$, $f=1.0\text{kHz}$	100	400	100	400	
h_{oe}	$V_{CE}=10\text{V}$, $I_C=1.0\text{mA}$, $f=1.0\text{kHz}$	1.0	40	3.0	60	μS
NF	$V_{CE}=5.0\text{V}$, $I_C=100\mu\text{A}$, $R_S=1.0\text{k}\Omega$ $f=10\text{Hz}$ to 15.7kHz	-	5.0	-	4.0	dB
t_d	$V_{CC}=3.0\text{V}$, $V_{BE}=0.5$, $I_C=10\text{mA}$, $I_{B1}=1.0\text{mA}$	-	35	-	35	ns
t_r	$V_{CC}=3.0\text{V}$, $V_{BE}=0.5$, $I_C=10\text{mA}$, $I_{B1}=1.0\text{mA}$	-	35	-	35	ns
t_s	$V_{CC}=3.0\text{V}$, $I_C=10\text{mA}$, $I_{B1}=I_{B2}=1.0\text{mA}$	-	200	-	225	ns
t_f	$V_{CC}=3.0\text{V}$, $I_C=10\text{mA}$, $I_{B1}=I_{B2}=1.0\text{mA}$	-	50	-	75	ns

SOT-23 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	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)

LEAD CODE:

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

MARKING CODES: CMPT3904: C1A

CMPT3906: C2A

CMPT3904G*: CG1

CMPT3906G*: CG2

* Device is **Halogen Free** by design

R6 (23-January 2009)

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