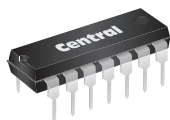


MPQ6700

**SILICON
COMPLEMENTARY
QUAD TRANSISTOR**



TO-116 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPQ6700 is comprised of two 2N3904 (NPN) chips and two 2N3906 (PNP) chips to be used as dual complementary pairs for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

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

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation (per transistor)
Power Dissipation (total package)
Operating and Storage Junction Temperature
Thermal Resistance (total package)

SYMBOL

V_{CBO}	40
V_{CEO}	40
V_{EBO}	5.0
I_C	200
P_D	500
P_D	2.0
T_J, T_{stg}	-65 to +150
Θ_{JA}	62.5

UNITS

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

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$		50	nA
I_{EBO}	$V_{EB}=4.0\text{V}$		50	nA
BV_{CBO}	$I_C=10\mu\text{A}$	40		V
BV_{CEO}	$I_C=10\text{mA}$	40		V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.25	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.90	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=0.1\text{mA}$	30		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=1.0\text{mA}$	50		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	70		
f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	200		MHz
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=100\text{kHz}$		4.5	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=100\text{kHz}$ (NPN)		8.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=100\text{kHz}$ (PNP)		10	pF

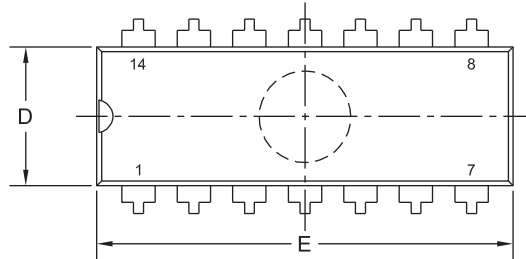
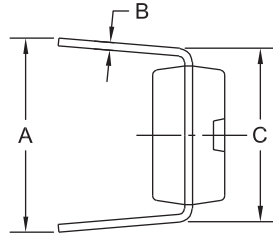
R1 (7-February 2014)

MPQ6700

**SILICON
COMPLEMENTARY
QUAD TRANSISTOR**

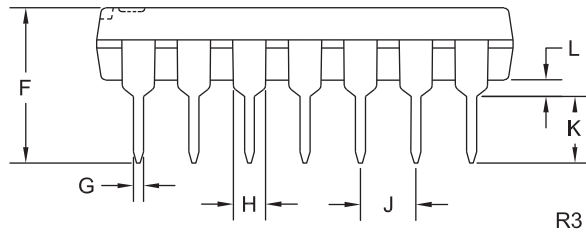


TO-116 CASE - MECHANICAL OUTLINE

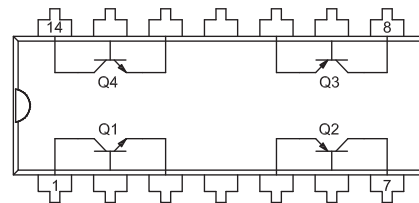


DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.310	0.390	7.9	9.9
B	0.008	0.014	0.2	0.4
C	0.310		7.9	
D	0.240	0.260	6.1	6.6
E	0.740	0.760	18.8	19.3
F	-	0.300	-	7.6
G	0.014	0.022	0.4	0.6
H	0.050		1.3	
J	0.100		2.5	
K	0.125	0.150	3.2	3.8
L	0.015	-	0.4	-

TO-116 (REV: R3)



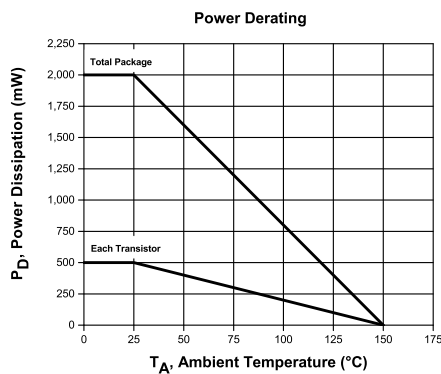
PIN CONFIGURATION



LEAD CODE:

- | | |
|------------------|-------------------|
| 1) Collector Q1 | 8) Collector Q3 |
| 2) Base Q1 | 9) Base Q3 |
| 3) Emitter Q1 | 10) Emitter Q3 |
| 4) No Connection | 11) No Connection |
| 5) Emitter Q2 | 12) Emitter Q4 |
| 6) Base Q2 | 13) Base Q4 |
| 7) Collector Q2 | 14) Collector Q4 |

MARKING: FULL PART NUMBER



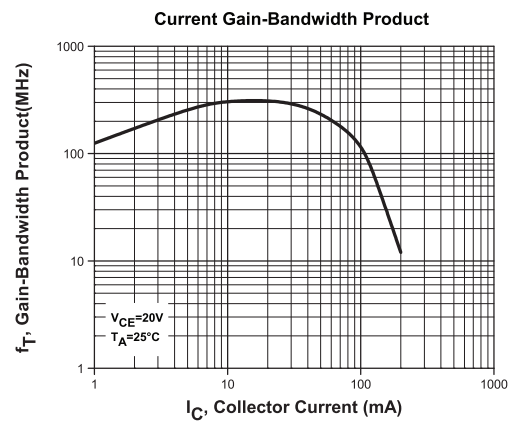
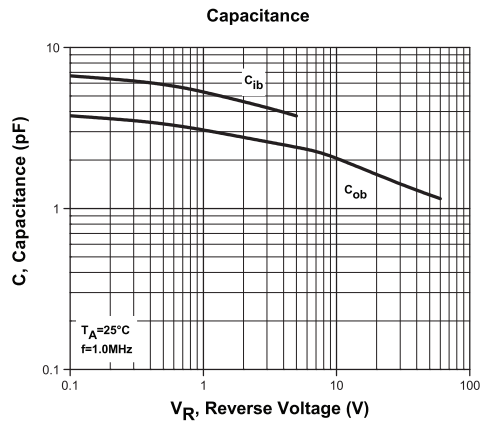
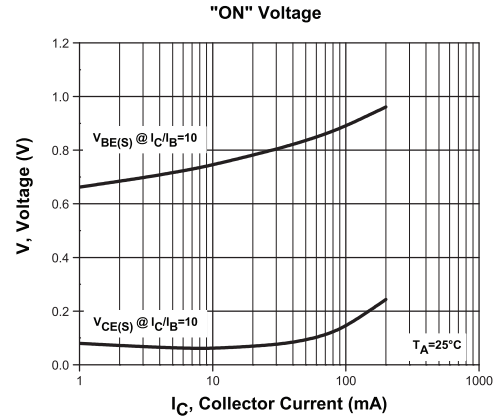
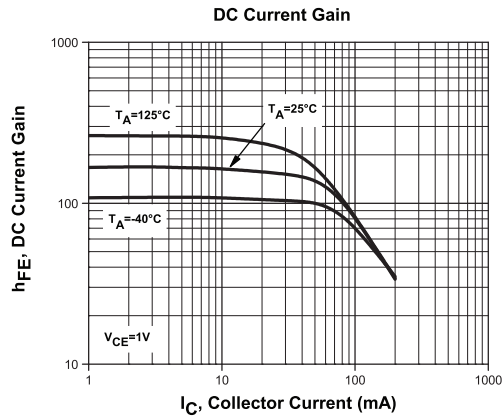
R1 (7-February 2014)

MPQ6700

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QUAD TRANSISTOR



NPN TYPICAL ELECTRICAL CHARACTERISTICS



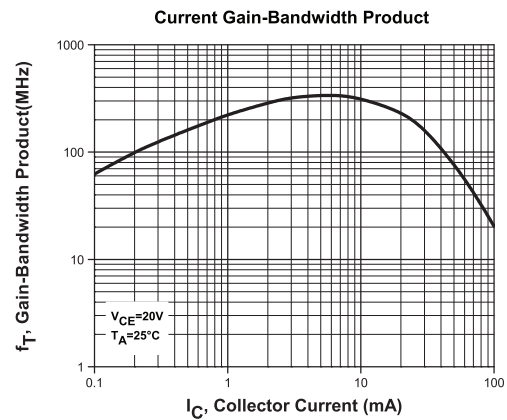
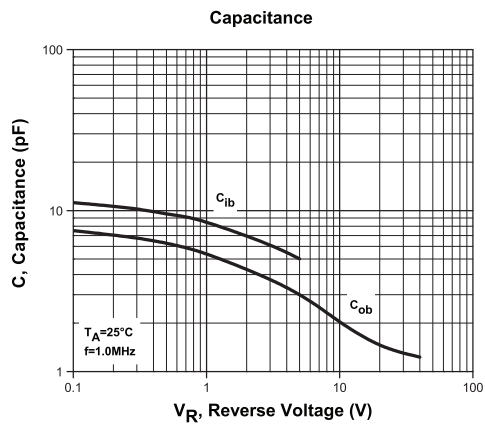
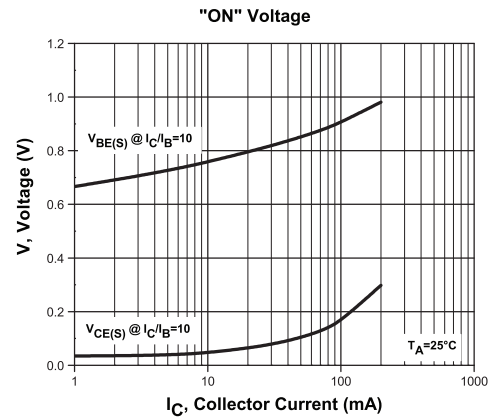
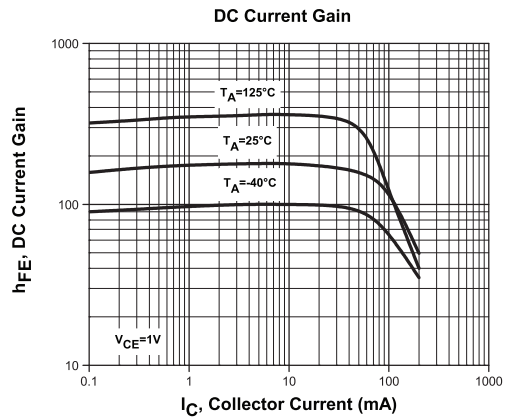
R1 (7-February 2014)

MPQ6700

SILICON
COMPLEMENTARY
QUAD TRANSISTOR



PNP TYPICAL ELECTRICAL CHARACTERISTICS



R1 (7-February 2014)