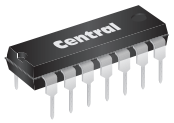
MPQ6700

SILICON
COMPLEMENTARY
QUAD TRANSISTOR



TO-116 CASE

www.centralsemi.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°C)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Continuous Collector Current	I_C	200	mA
Power Dissipation (per transistor)	P_D	500	mW
Power Dissipation (total package)	P_D	2.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance (total package)	Θ_{JA}	62.5	°C/W

ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (T_A=25°C)

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

R1 (7-February 2014)

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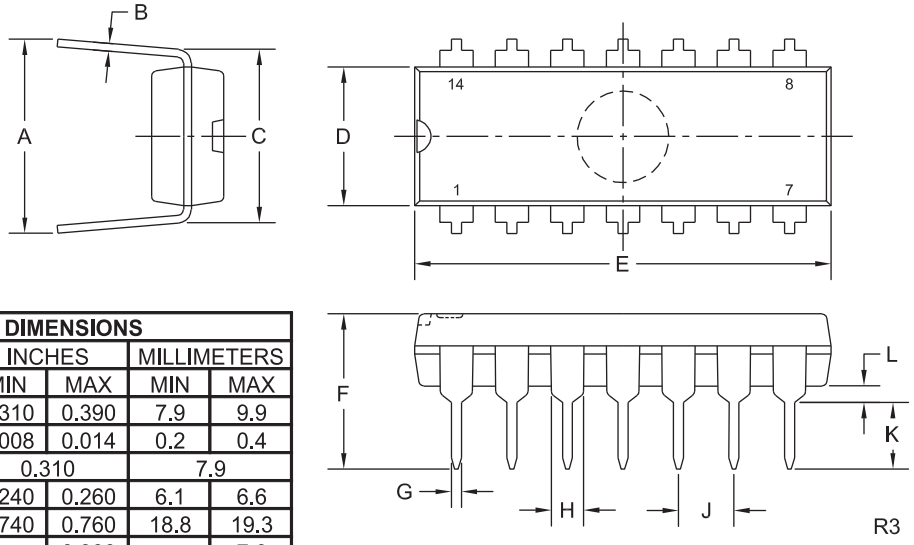
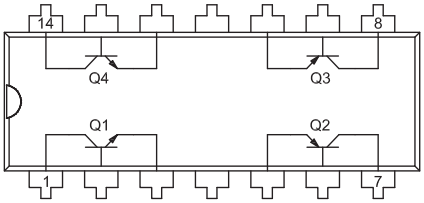
TO-116 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

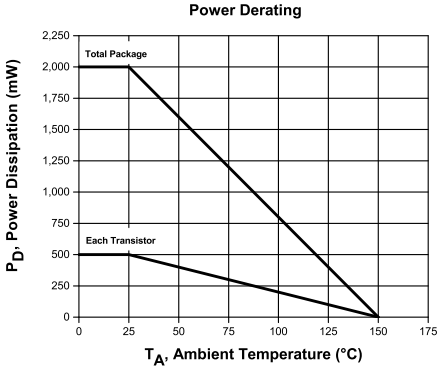
PIN CONFIGURATION



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



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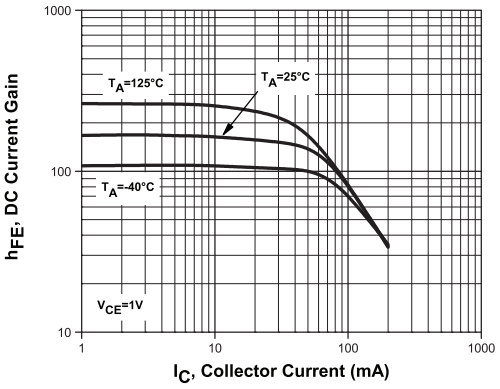
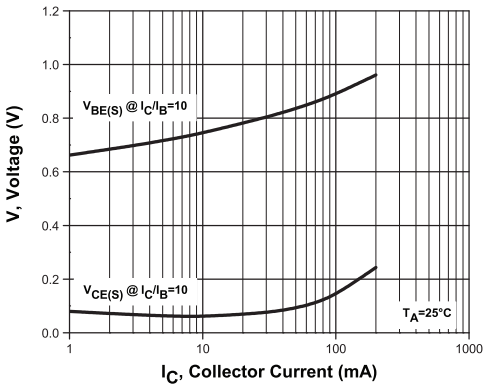
NPN TYPICAL ELECTRICAL CHARACTERISTICS

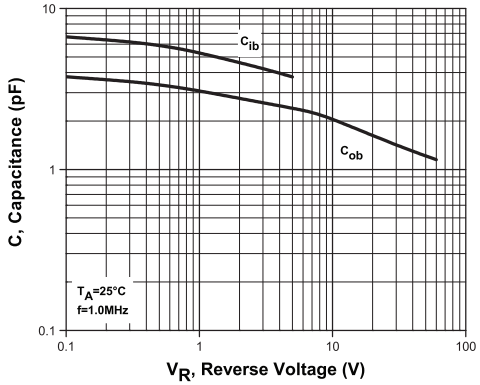
DC Current Gain



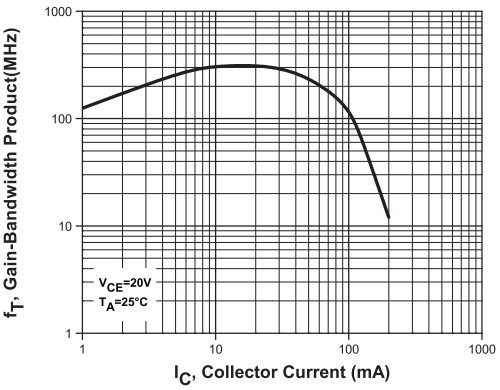
"ON" Voltage



Capacitance



Current Gain-Bandwidth Product



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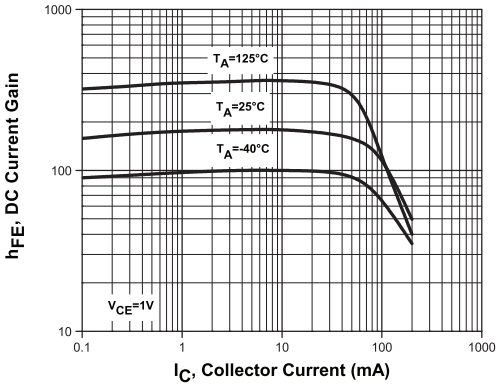
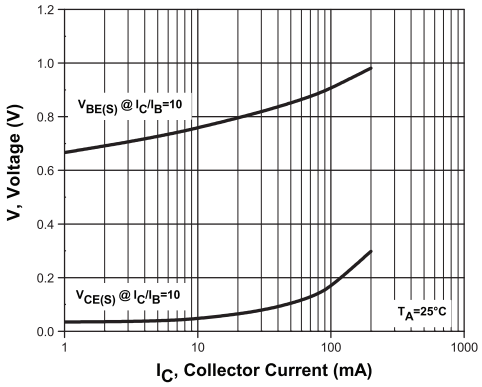
PNP TYPICAL ELECTRICAL CHARACTERISTICS

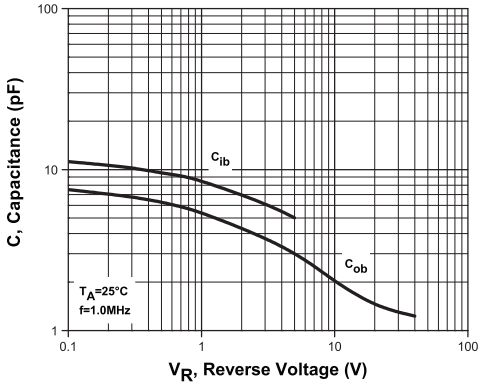
DC Current Gain



"ON" Voltage



Capacitance



Current Gain-Bandwidth Product