

MPQ6700
SILICON
COMPLEMENTARY
QUAD TRANSISTOR

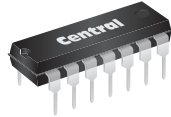


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DESCRIPTION:

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



TO-116 CASE

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		UNITS
V_{CB0}	40	V
V_{CEO}	40	V
V_{EBO}	5.0	V
I_C	200	mA
P_D	500	mW
P_D	2.0	W
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
θ_{JA}	62.5	$^\circ\text{C/W}$

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

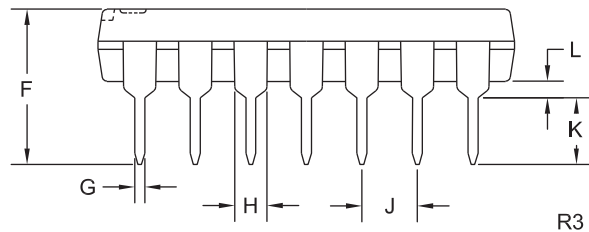
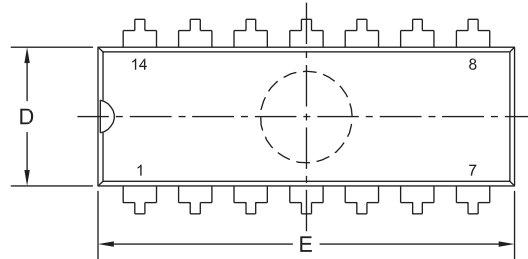
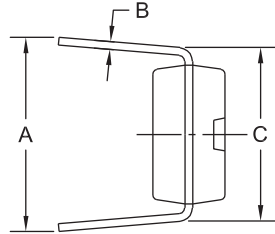
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$		50	nA
I_{EBO}	$V_{EB}=4.0\text{V}$		50	nA
BV_{CBO}	$I_C=10\mu\text{A}$	40		V
BV_{CEO}	$I_C=10\text{mA}$	40		V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.25	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		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

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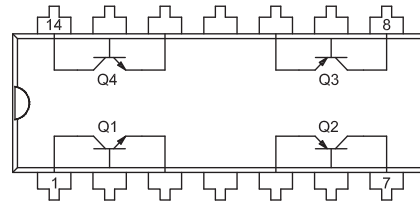
TO-116 CASE - MECHANICAL OUTLINE



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)

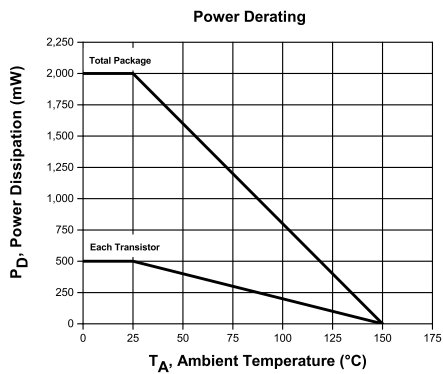
PIN CONFIGURATION



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

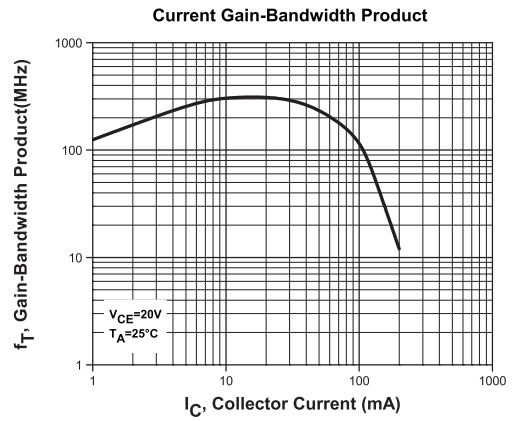
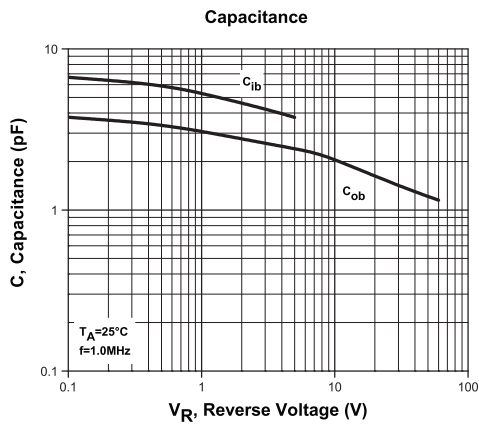
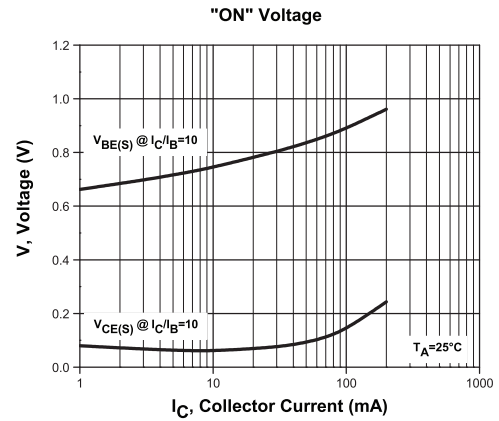
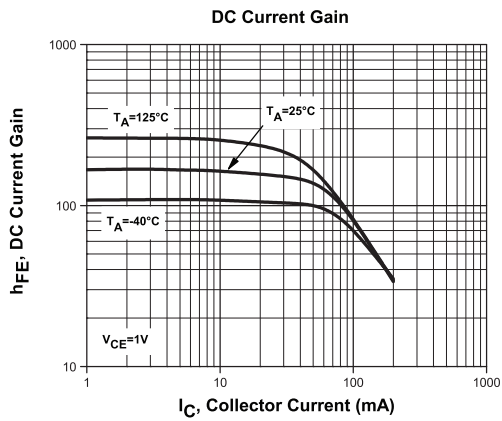


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NPN TYPICAL ELECTRICAL CHARACTERISTICS

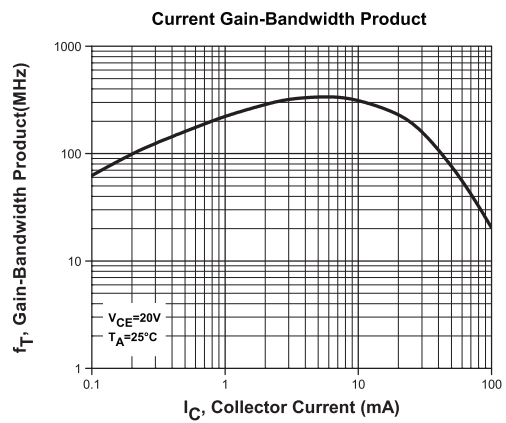
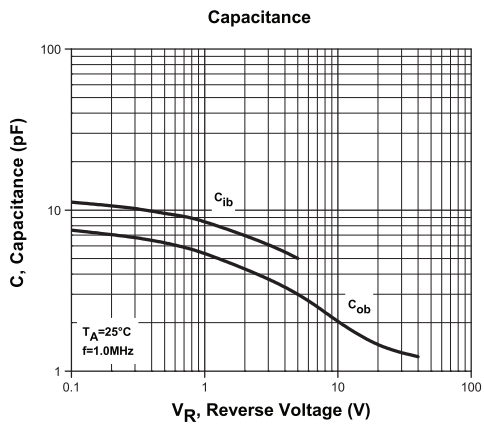
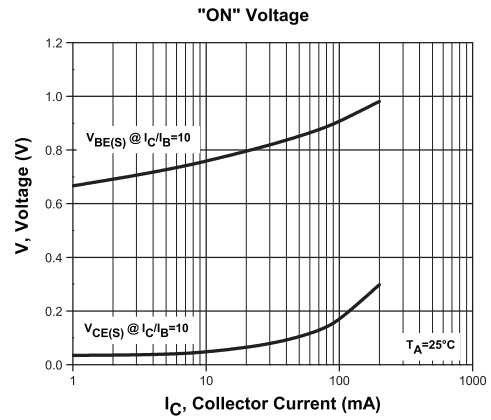
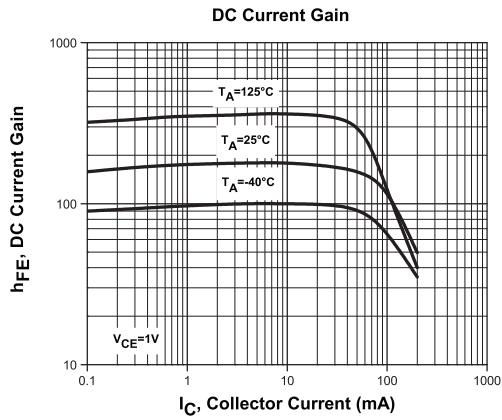


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PNP TYPICAL ELECTRICAL CHARACTERISTICS



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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
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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