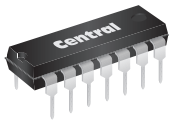
MPQ3904

SILICON
NPN QUAD TRANSISTOR



TO-116 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPQ3904 type is comprised of four independent silicon NPN transistors mounted in a 14-pin DIP, designed for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6.0	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

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=40V			50	nA
I_{EBO}	V_{EB}=4.0V			50	nA
BV_{CBO}	I_C=10μA	60			V
BV_{CEO}	I_C=1.0mA	40			V
BV_{EBO}	I_E=10μA	6.0			V
$V_{CE(SAT)}$	I_C=10mA, I_B=1.0mA			0.20	V
$V_{BE(SAT)}$	I_C=10mA, I_B=1.0mA			0.85	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	75			
f_T	V_{CE}=20V, I_C=10mA, f=100MHz	250			MHz
C_{ob}	V_{CB}=5.0V, I_E=0, f=140kHz			4.0	pF
C_{ib}	V_{EB}=0.5V, I_C=0, f=140kHz			8.0	pF
t_{on}	V_{BE}=0.5V, I_C=10mA, I_{B1}=1.0mA		37		ns
t_{off}	I_C=10mA, I_{B1}=I_{B2}=1.0mA		136		ns

R1 (24-April 2013)

MPQ3904

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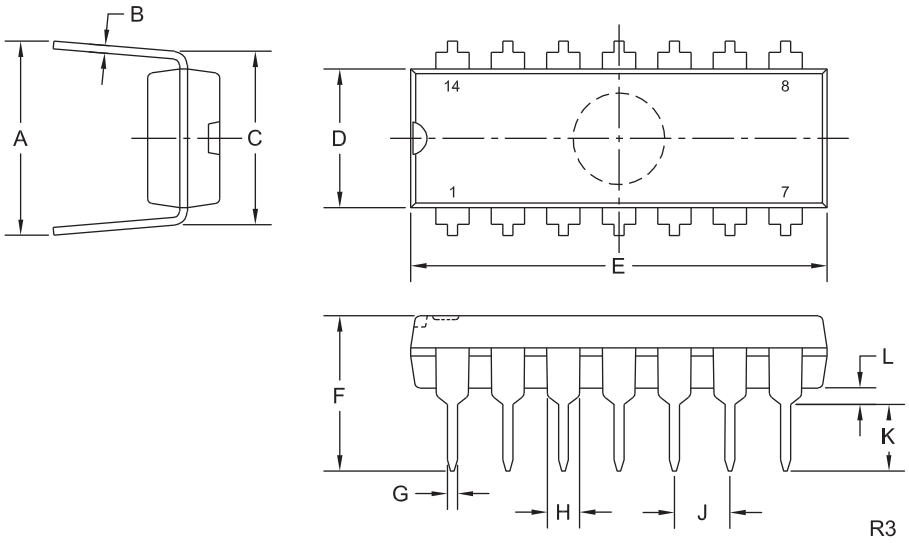
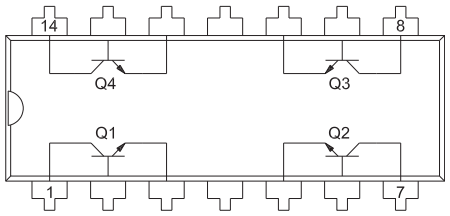
TO-116 CASE - MECHANICAL OUTLINE



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

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)

R1 (24-April 2013)

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Central's operations team provides the highest level of support to insure product is delivered on-time.

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- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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- 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

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
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