



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

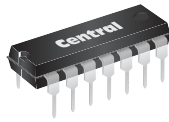
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



MPQ6002
MPQ6502

**SILICON QUAD
COMPLEMENTARY TRANSISTORS**



TO-116 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPQ6002 and MPQ6502 types are silicon complementary pair transistors, mounted in a 14 pin DIP package, designed 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} 60
 V_{CEO} 30
 V_{EBO} 5.0
 I_C 500
 P_D 650
 P_D 1.25
 T_J, T_{stg} -65 to +150
 θ_{JA} 100

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	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=50\text{V}$			30	nA
I_{EBO}	$V_{EB}=3.0\text{V}$			30	nA
BV_{CBO}	$I_C=10\mu\text{A}$	60			V
BV_{CEO}	$I_C=10\text{mA}$	30			V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.4	V
$V_{CE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$			1.4	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			1.3	V
$V_{BE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$			2.0	V
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	50			
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	75			
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100			
h_{FE}	$V_{CE}=10\text{V}, I_C=300\text{mA}$	30			
f_T	$V_{CE}=20\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	200			MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			8.0	pF
C_{ib}	$V_{EB}=2.0\text{V}, I_C=0, f=1.0\text{MHz}$			30	pF
t_{on}	$V_{CC}=30\text{V}, V_{BE}=0.5\text{V}, I_C=150\text{mA}, I_{B1}=15\text{mA}$		30		ns
t_{off}	$V_{CC}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$		225		ns

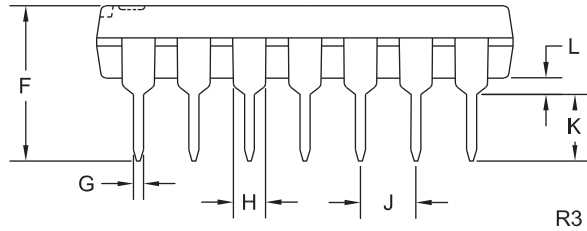
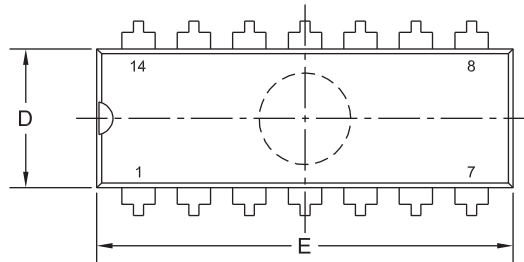
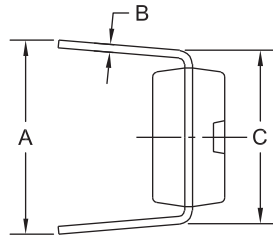
R1 (8-April 2013)

**MPQ6002
MPQ6502**

**SILICON QUAD
COMPLEMENTARY TRANSISTORS**



TO-116 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	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	-

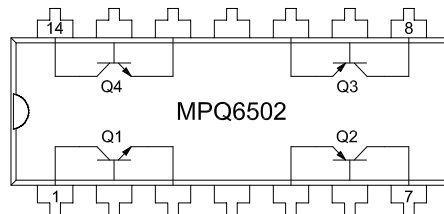
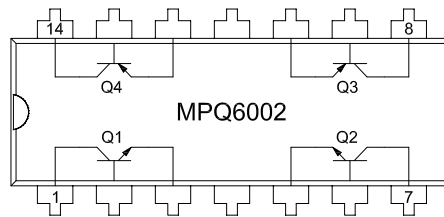
TO-116 (REV: R3)

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

PIN CONFIGURATIONS



R1 (8-April 2013)

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

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

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