

MPQ7053

**SILICON
NPN/PNP COMPLEMENTARY
QUAD TRANSISTOR**



TO-116 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPQ7053 type is comprised of two independent silicon NPN transistors and two independent silicon PNP transistors mounted in a 14-pin DIP, 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

SYMBOL

V_{CBO}	250
V_{CEO}	250
V_{EBO}	5.0
I_C	500
P_D	750
P_D	1.7
T_J, T_{stg}	-65 to +150

UNITS

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

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

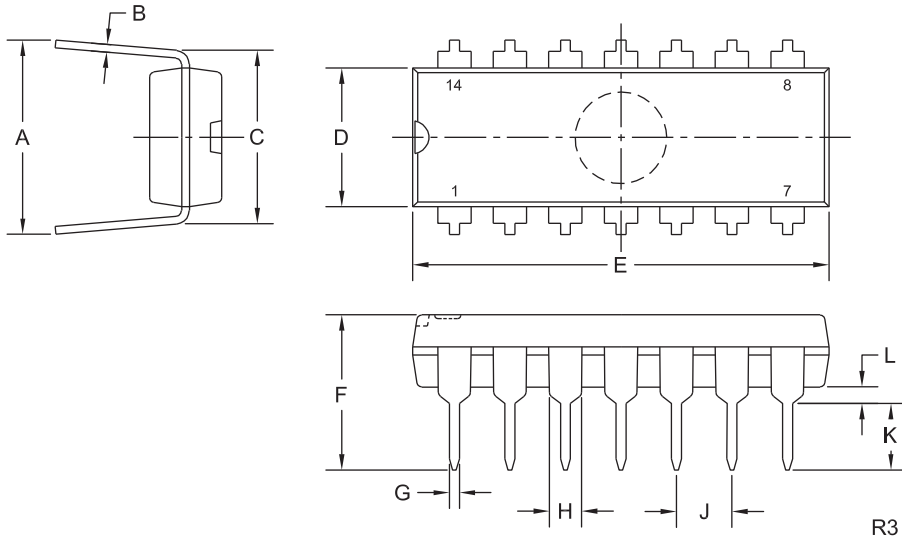
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=180\text{V}$		250	nA
I_{EBO}	$V_{EB}=3.0\text{V}$		100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	250		V
BV_{CEO}	$I_C=1.0\text{mA}$	250		V
BV_{EBO}	$I_E=100\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.70	V
$V_{BE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.90	V
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	25		
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	35		
h_{FE}	$V_{CE}=10\text{V}, I_C=30\text{mA}$	25		
f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	50		MHz
C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		6.0	pF
C_{ib}	$V_{EB}=3.0\text{V}, I_C=0, f=1.0\text{MHz}$ (NPN)		50	pF
C_{ib}	$V_{EB}=3.0\text{V}, I_C=0, f=1.0\text{MHz}$ (PNP)		75	pF

R0 (10-March 2014)

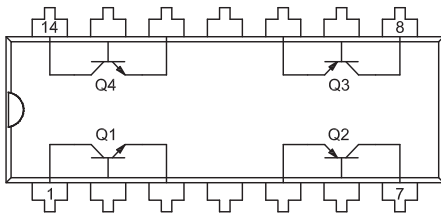
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TO-116 CASE - MECHANICAL OUTLINE



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 |

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)

MARKING: FULL PART NUMBER

R0 (10-March 2014)

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).

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