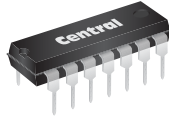


MPQ2222
MPQ2222A

NPN SILICON QUAD TRANSISTOR



TO-116 CASE

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPQ2222 and MPQ2222A types are comprised of four independent NPN silicon 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
Thermal Resistance (total package)

SYMBOL	MPQ2222	MPQ2222A	UNITS
V_{CBO}	60	75	V
V_{CEO}	40	40	V
V_{EBO}	5.0	6.0	V
I_C		500	mA
P_D		650	mW
P_D		1.9	W
T_J, T_{stg}		-65 to +150	$^\circ\text{C}$
Θ_{JA}		66	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MPQ2222		MPQ2222A		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=50\text{V}$	-	50	-	-	nA
I_{CBO}	$V_{CB}=60\text{V}$	-	-	-	10	nA
I_{EBO}	$V_{EB}=3.0\text{V}$	-	100	-	100	nA
BV_{CBO}	$I_C=10\mu\text{A}$	60	-	75	-	V
BV_{CEO}	$I_C=10\text{mA}$	40	-	40	-	V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0	-	6.0	-	V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	0.4	-	0.3	V
$V_{CE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$	-	1.6	-	-	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	-	-	1.0	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	1.3	0.6	1.2	V
$V_{BE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$	-	2.6	-	-	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	-	-	2.0	V
h_{FE}	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	-	-	35	-	
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	-	75	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	100	300	
h_{FE}	$V_{CE}=10\text{V}, I_C=300\text{mA}$	30	-	-	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$	-	-	40	-	
f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	200	-	200	-	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	-	8.0	-	8.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$	-	30	-	30	pF
t_r	$V_{CC}=30\text{V}, V_{BE}=0.5\text{V}, I_C=150\text{mA}, I_{B1}=15\text{mA}$	-	-	-	35	ns
t_s	$V_{CC}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$	-	-	-	285	ns

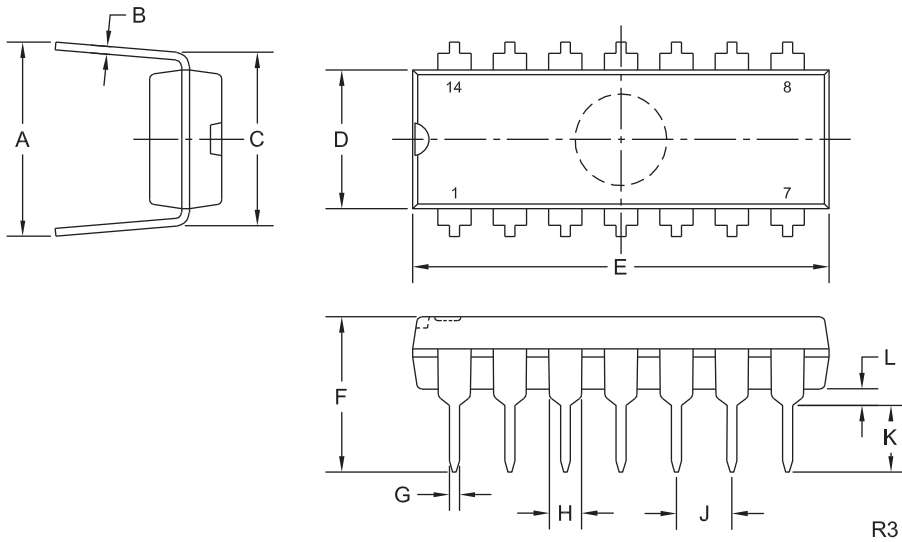
R2 (30-January 2012)

MPQ2222
MPQ2222A

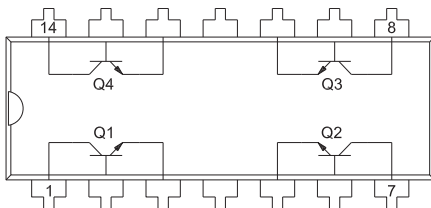
NPN SILICON QUAD TRANSISTOR



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

SYMBOL	DIMENSIONS		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)

R2 (30-January 2012)

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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