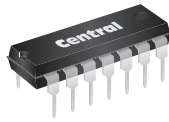


MPQ7053

**SILICON
NPN/PNP COMPLEMENTARY
QUAD TRANSISTOR**



www.centrasemi.com



TO-116 CASE

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: ($T_A=25^\circ\text{C}$)

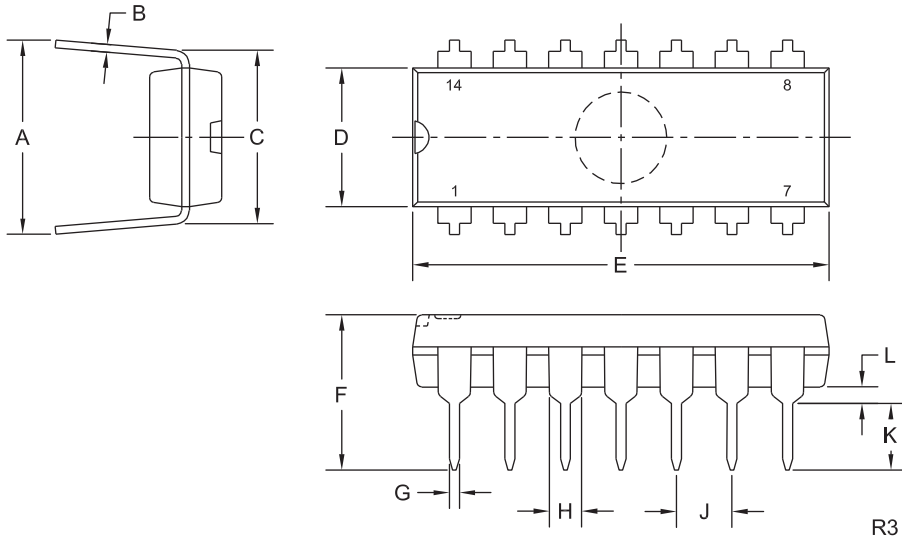
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|-----|------|-------|
| I_{CBO} | $V_{CB}=180\text{V}$ | | 250 | nA |
| I_{EBO} | $V_{EB}=3.0\text{V}$ | | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 250 | | V |
| BV_{CEO} | $I_C=1.0\text{mA}$ | 250 | | V |
| BV_{EBO} | $I_E=100\mu\text{A}$ | 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)

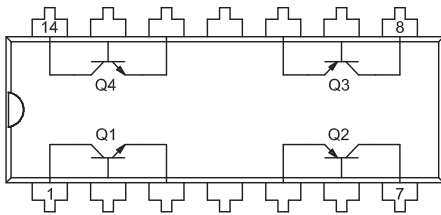
MPQ7053
SILICON
NPN/PNP COMPLEMENTARY
QUAD TRANSISTOR



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 |

| 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)