

MMPQ3906
SURFACE MOUNT
PNP SILICON
QUAD TRANSISTOR



CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MMPQ3906, consisting of four transistors and available in the SOIC-16 surface mount package, is designed for general purpose amplifier and switching applications.

MAXIMUM RATINGS: (T_A=25°C)

Collector-Base Voltage
 Collector-Emitter Voltage
 Emitter-Base Voltage
 Continuous Collector Current
 Power Dissipation
 Operating and Storage
 Junction Temperature
 Thermal Resistance (Total Package)
 Thermal Resistance (Each Transistor)

| SYMBOL | | UNITS |
|-----------------------------------|-------------|-------|
| V _{CB0} | 40 | V |
| V _{CEO} | 40 | V |
| V _{EBO} | 5.0 | V |
| I _C | 200 | mA |
| P _D | 1000 | mW |
| T _J , T _{stg} | -55 to +150 | °C |
| θ _{JA} | 125 | °C/W |
| θ _{JA} | 240 | °C/W |

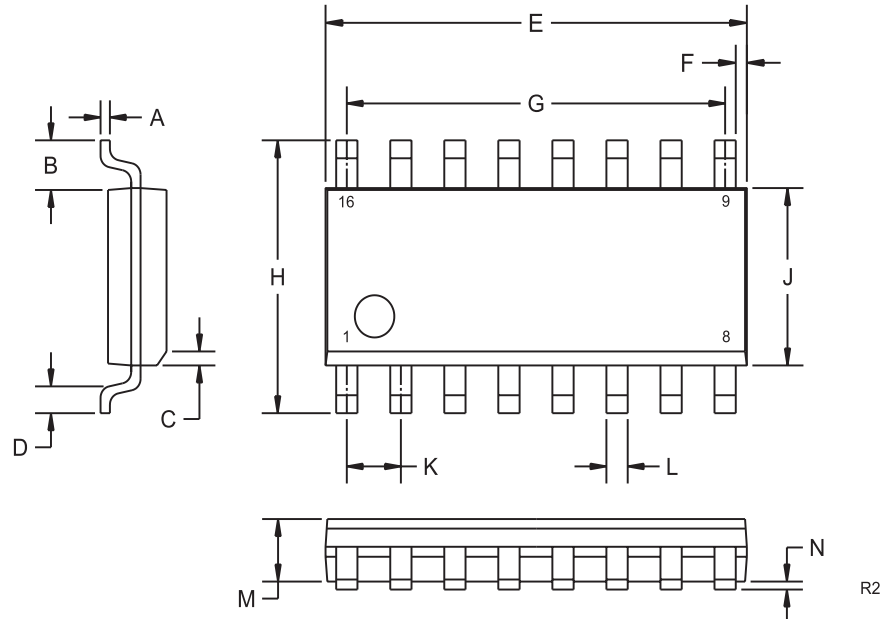
ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|----------------------|--|------|-----|------|-------|
| I _{CEV} | V _{CE} =30V, V _{EB} =3.0V | | | 50 | nA |
| BV _{CB0} | I _C =10μA | 40 | | | V |
| BV _{CEO} | I _C =1.0mA | 40 | | | V |
| BV _{EBO} | I _E =10μA | 5.0 | | | V |
| V _{CE(SAT)} | I _C =10mA, I _B =1.0mA | | | 0.25 | V |
| V _{CE(SAT)} | I _C =50mA, I _B =5.0mA | | | 0.40 | V |
| V _{BE(SAT)} | I _C =10mA, I _B =1.0mA | 0.65 | | 0.85 | V |
| V _{BE(SAT)} | I _C =50mA, I _B =5.0mA | | | 0.95 | V |
| h _{FE} | V _{CE} =1.0V, I _C =0.1mA | 60 | | | |
| h _{FE} | V _{CE} =1.0V, I _C =1.0mA | 80 | | | |
| h _{FE} | V _{CE} =1.0V, I _C =10mA | 100 | | 300 | |
| h _{FE} | V _{CE} =1.0V, I _C =50mA | 60 | | | |
| h _{FE} | V _{CE} =1.0V, I _C =100mA | 30 | | | |
| f _T | V _{CE} =20V, I _C =10mA, f=100MHz | | 450 | | MHz |
| C _{ib} | V _{EB} =0.5V, f=100kHz | | 8.0 | | pF |
| C _{ob} | V _{CB} =5.0V, f=100kHz | | 3.0 | | pF |
| NF | V _{CE} =5.0V, I _C =100μA, R _S =1.0kΩ, f=10Hz to 15.7kHz | | 2.5 | | dB |
| t _d | V _{CC} =3.0V, V _{BE} =0.5V, I _C =10mA, I _{B1} =1.0mA | | 15 | | ns |
| t _r | V _{CC} =3.0V, V _{BE} =0.5V, I _C =10mA, I _{B1} =1.0mA | | 20 | | ns |
| t _s | V _{CC} =3.0V, I _C =10mA, I _{B1} = I _{B2} =1.0mA | | 110 | | ns |
| t _f | V _{CC} =3.0V, I _C =10mA, I _{B1} = I _{B2} =1.0mA | | 40 | | ns |

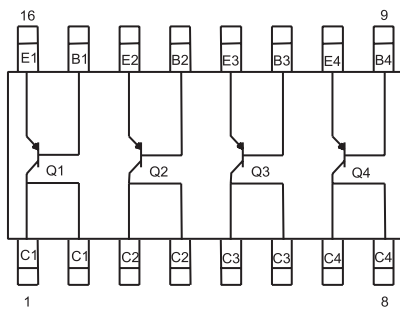
R0 (7-November 2001)



SOIC-16 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



| SYMBOL | DIMENSIONS | | DIMENSIONS | |
|--------|------------|--------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.007 | 0.010 | 0.19 | 0.25 |
| B | 0.041 | | 1.04 | |
| C | 0.010 | 0.020 | 0.25 | 0.50 |
| D | 0.020 | 0.035 | 0.50 | 0.90 |
| E | 0.386 | 0.394 | 9.80 | 10.00 |
| F | 0.010 | | 0.25 | |
| G | 0.350 | | 8.89 | |
| H | 0.228 | 0.244 | 5.80 | 6.20 |
| J | 0.150 | 0.157 | 3.80 | 4.00 |
| K | 0.050 | | 1.27 | |
| L | 0.0138 | 0.0201 | 0.35 | 0.51 |
| M | 0.0531 | 0.0689 | 1.35 | 1.75 |
| N | 0.0039 | 0.0098 | 0.10 | 0.25 |

SOIC-16 (REV:R2)