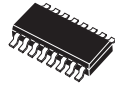


MMPQ3906
SURFACE MOUNT
PNP SILICON
QUAD TRANSISTOR



SOIC-16 CASE

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

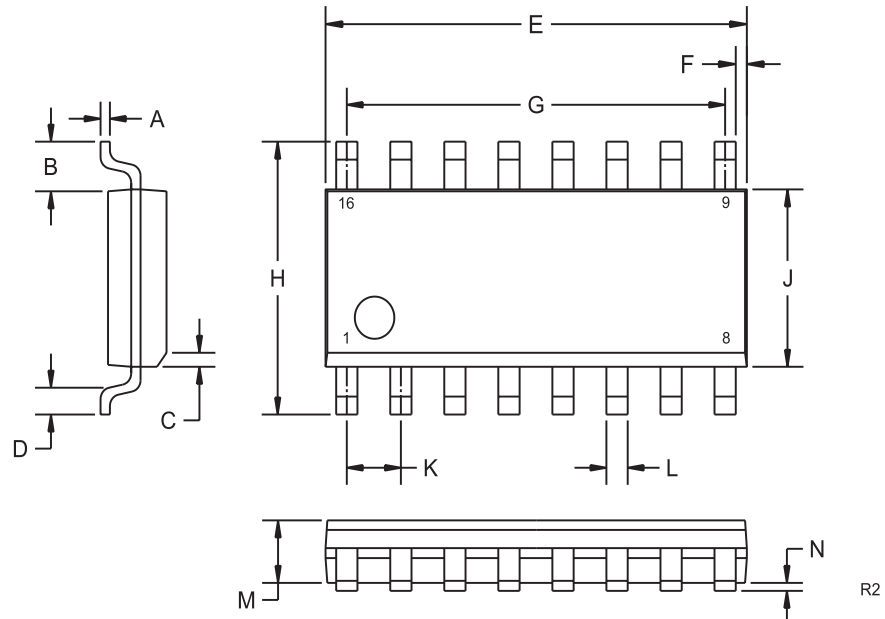
	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Continuous Collector Current	I_C	200	mA
Power Dissipation	P_D	1000	mW
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
Thermal Resistance (Total Package)	Θ_{JA}	125	$^\circ\text{C/W}$
Thermal Resistance (Each Transistor)	Θ_{JA}	240	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

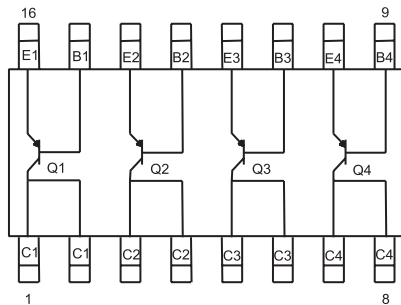
<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
I_{CEV}	$V_{CE}=30\text{V}, V_{EB}=3.0\text{V}$			50	nA
BV_{CBO}	$I_C=10\mu\text{A}$	40			V
BV_{CEO}	$I_C=1.0\text{mA}$	40			V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			0.25	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$			0.40	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	0.65		0.85	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$			0.95	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=0.1\text{mA}$	60			
h_{FE}	$V_{CE}=1.0\text{V}, I_C=1.0\text{mA}$	80			
h_{FE}	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	100		300	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	60			
h_{FE}	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	30			
f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$		450		MHz
C_{ib}	$V_{EB}=0.5\text{V}, f=100\text{kHz}$		8.0		pF
C_{ob}	$V_{CB}=5.0\text{V}, f=100\text{kHz}$		3.0		pF
NF	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}, R_S=1.0\text{k}\Omega, f=10\text{Hz to } 15.7\text{kHz}$		2.5		dB
t_d	$V_{CC}=3.0\text{V}, V_{BE}=0.5\text{V}, I_C=10\text{mA}, I_{B1}=1.0\text{mA}$		15		ns
t_r	$V_{CC}=3.0\text{V}, V_{BE}=0.5\text{V}, I_C=10\text{mA}, I_{B1}=1.0\text{mA}$		20		ns
t_s	$V_{CC}=3.0\text{V}, I_C=10\text{mA}, I_{B1}=I_{B2}=1.0\text{mA}$		110		ns
t_f	$V_{CC}=3.0\text{V}, I_C=10\text{mA}, I_{B1}=I_{B2}=1.0\text{mA}$		40		ns

R0 (7-November 2001)

SOIC-16 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	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)