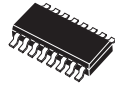


MMPQ2222A
SURFACE MOUNT
NPN SILICON
QUAD TRANSISTOR



SOIC-16 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MMPQ2222A, 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}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	500	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}	$V_{CE}=60\text{V}, V_{EB}=3.0\text{V}$			10	nA
I_{CBO}	$V_{CB}=60\text{V}$			10	nA
I_{CBO}	$V_{CB}=60\text{V}, T_A=125^\circ\text{C}$			10	μA
I_{EBO}	$V_{BE}=3.0\text{V}$			10	nA
BV_{CBO}	$I_C=10\mu\text{A}$	75			V
BV_{CEO}	$I_C=10\text{mA}$	40			V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0			V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.3	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.0	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	0.6		1.2	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			
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}, T_A=-55^\circ\text{C}$	35			
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100		300	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=150\text{mA}$	50			
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40			
f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$		300		MHz
C_{ib}	$V_{EB}=0.5\text{V}, f=100\text{kHz}$		20		pF
C_{ob}	$V_{CB}=10\text{V}, f=100\text{kHz}$		4.0		pF
NF	$V_{CE}=10\text{V}, I_C=100\mu\text{A}, R_S=1.0\text{k}\Omega, f=1.0\text{kHz}$			2.0	dB

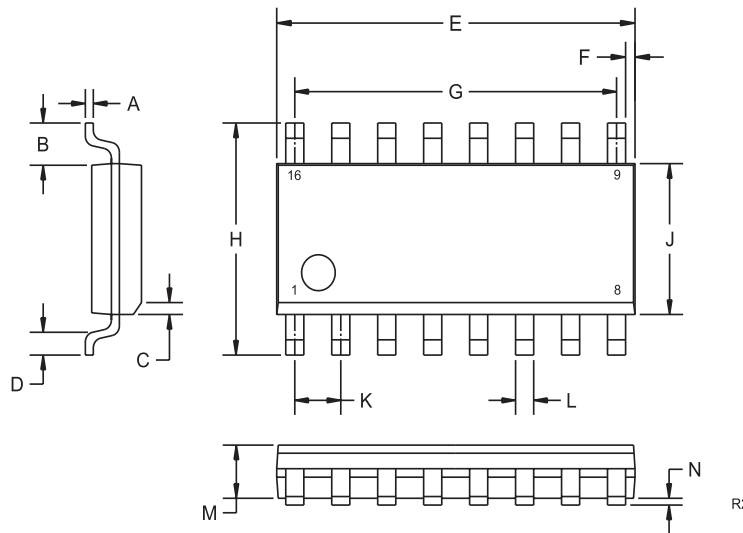
R0 (7-November 2001)

**SURFACE MOUNT
NPN SILICON
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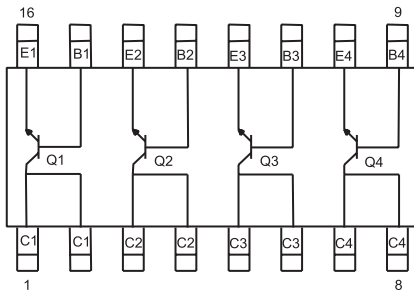
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
t_d	$V_{CC}=30\text{V}$, $V_{BE(\text{OFF})}=0.5\text{V}$, $I_C=150\text{mA}$, $I_{B1}=15\text{mA}$		8.0		ns
t_r	$V_{CC}=30\text{V}$, $V_{BE(\text{OFF})}=0.5\text{V}$, $I_C=150\text{mA}$, $I_{B1}=15\text{mA}$		20		ns
t_s	$V_{CC}=30\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$		180		ns
t_f	$V_{CC}=30\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$		40		ns

SOIC-16 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



SYMBOL	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)