

MMPQ2222A
SURFACE MOUNT
NPN SILICON
QUAD TRANSISTOR



Central™

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°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 _{CBO}	75	V
V _{CEO}	40	V
V _{EBO}	6.0	V
I _C	500	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} =60V, V _{EB} =3.0V			10	nA
I _{CBO}	V _{CB} =60V			10	nA
I _{CBO}	V _{CB} =60V, T _A =125°C			10	μA
I _{EBO}	V _{BE} =3.0V			10	nA
BV _{CB0}	I _C =10μA	75			V
BV _{CEO}	I _C =10mA	40			V
BV _{EBO}	I _E =10μA	6.0			V
V _{CE(SAT)}	I _C =150mA, I _B =15mA			0.3	V
V _{CE(SAT)}	I _C =500mA, I _B =50mA			1.0	V
V _{BE(SAT)}	I _C =150mA, I _B =15mA	0.6		1.2	V
V _{BE(SAT)}	I _C =500mA, I _B =50mA			2.0	V
h _{FE}	V _{CE} =10V, I _C =0.1mA	35			
h _{FE}	V _{CE} =10V, I _C =1.0mA	50			
h _{FE}	V _{CE} =10V, I _C =10mA	75			
h _{FE}	V _{CE} =10V, I _C =10mA, T _A =-55°C	35			
h _{FE}	V _{CE} =10V, I _C =150mA	100		300	
h _{FE}	V _{CE} =1.0V, I _C =150mA	50			
h _{FE}	V _{CE} =10V, I _C =500mA	40			
f _T	V _{CE} =20V, I _C =20mA, f=100MHz		300		MHz
C _{ib}	V _{EB} =0.5V, f=100kHz		20		pF
C _{ob}	V _{CB} =10V, f=100kHz		4.0		pF
NF	V _{CE} =10V, I _C =100μA, R _S =1.0kΩ, f=1.0kHz			2.0	dB

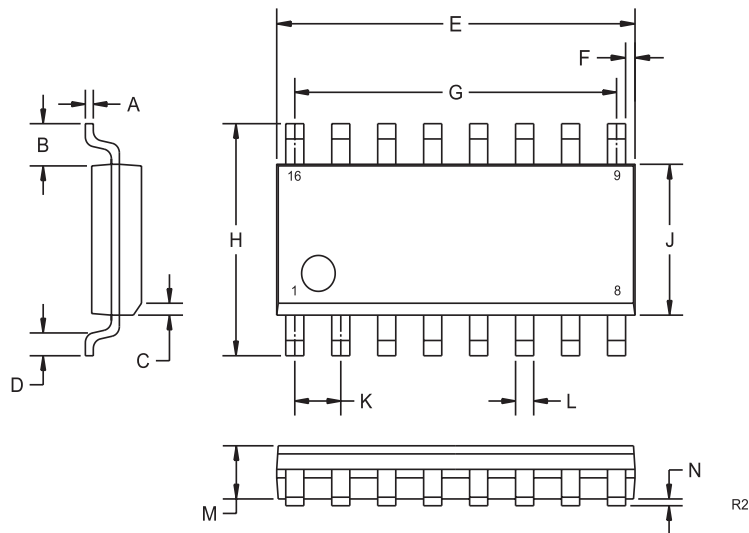
R0 (7-November 2001)

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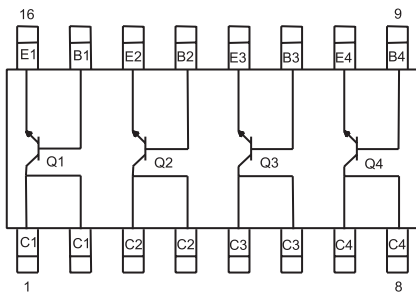
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

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