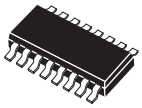
MMPQ2222A

SURFACE MOUNT
NPN SILICON
QUAD TRANSISTOR



SOIC-16 CASE

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.

MARKING CODE: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL		UNITS
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	°C
Thermal Resistance (Total Package)	Θ_{JA}	125	°C/W
Thermal Resistance (Each Transistor)	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_{CBO}	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

R1 (14-November 2002)

Central™
Semiconductor Corp.

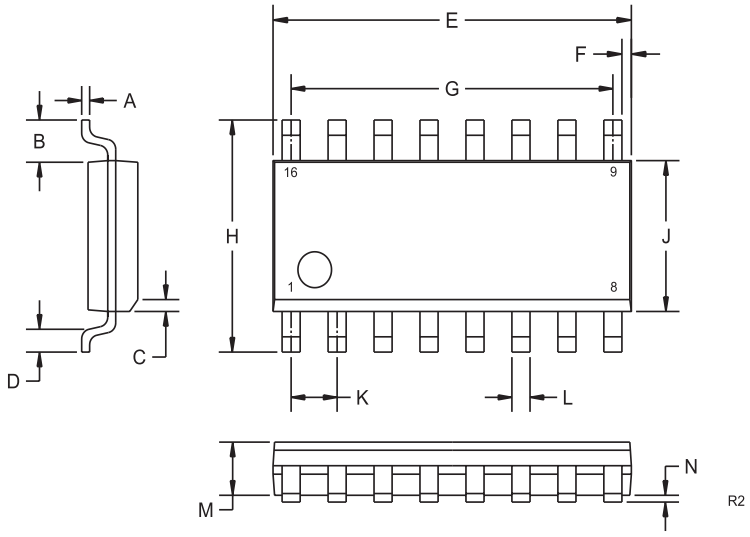
MMPQ2222A

SURFACE MOUNT
NPN SILICON
QUAD TRANSISTOR

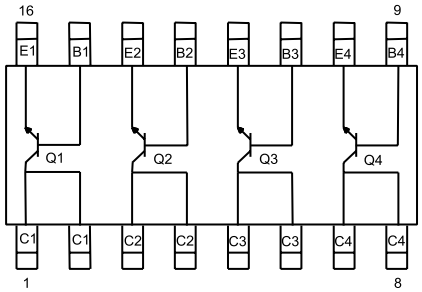
ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

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

SOIC-16 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



MARKING CODE: FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

R1 (14-November 2002)