

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

MPQ2222
MPQ2222A

NPN SILICON QUAD TRANSISTOR

TO-116 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPQ2222, MPQ2222A types are comprised of four independent Silicon NPN Transistors mounted in a 14 PIN DIP, designed for general purpose amplifier and switching applications.

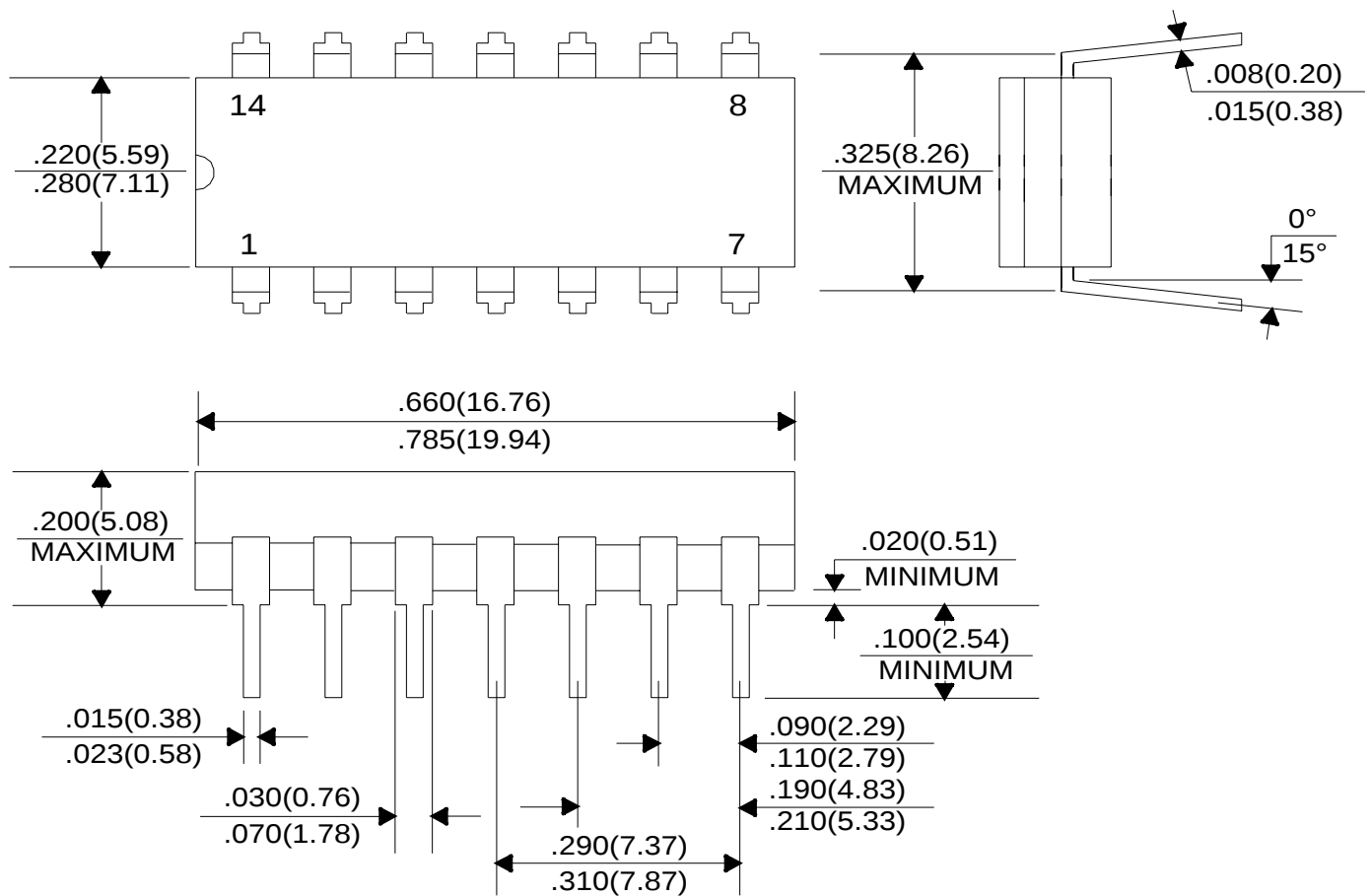
MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	500	mA
Power Dissipation (Each Transistor)	P_D	650	mW
Power Dissipation (Total Package)	P_D	1.9	W
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$
Thermal Resistance (Total Package)	Θ_{JA}	66	$^{\circ}\text{C/W}$

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

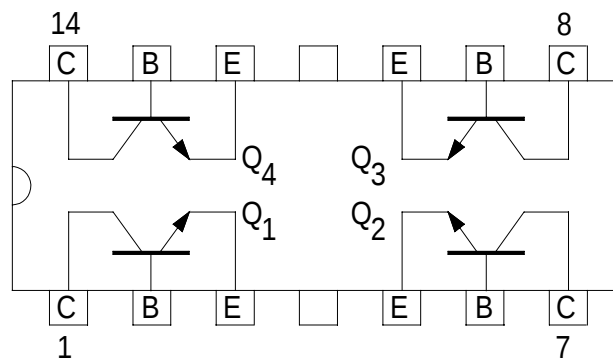
SYMBOL	TEST CONDITIONS	MPQ2222		MPQ2222A		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=50\text{V}$		50			nA
I_{CBO}	$V_{CB}=60\text{V}$			10		nA
I_{EBO}	$V_{EB}=3.0\text{V}$		100		100	nA
BV_{CBO}	$I_C=10\mu\text{A}$	60		75		V
BV_{CEO}	$I_C=10\text{mA}$	40		40		V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0		6.0		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.4		0.3	V
$V_{CE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$		1.6			V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$				1.0	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.3	0.6	1.2	V
$V_{BE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$		2.6			V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$				2.0	V
h_{FE}	$V_{CE}=10\text{V}, I_C=100\mu\text{A}$			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		75		
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	100	300	
h_{FE}	$V_{CE}=10\text{V}, I_C=300\text{mA}$	30				
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$			40		
f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	200		200		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		8.0		8.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		30		30	pF
t_r	$V_{CC}=30\text{V}, V_{BE}=0.5, I_C=150\text{mA}, I_{B1}=15\text{mA}$				35	ns
t_s	$V_{CC}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$				285	ns

TO-116 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

PIN CONFIGURATION



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