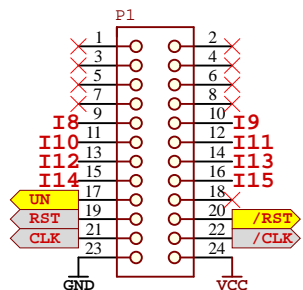
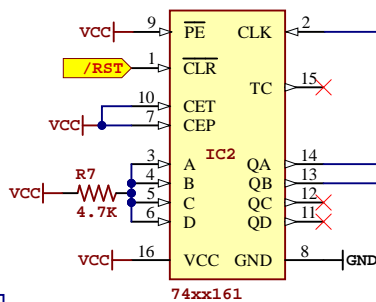


INPUT Data Connector



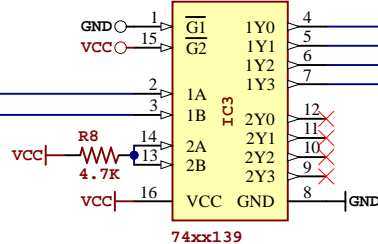
This counter, don't need load and always is counting. So CET, CET is connected to VCC and /PE is connected to VCC too to disable load.

DIGIT Counter



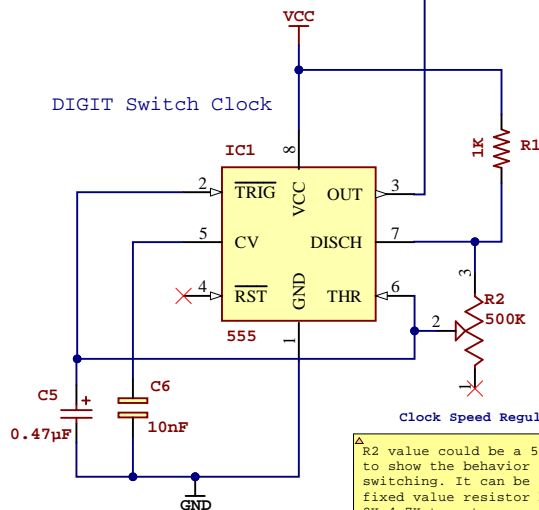
Counter control digit switch from D1 to D4. Output weight goes from QA to QD.

DIGIT Switcher



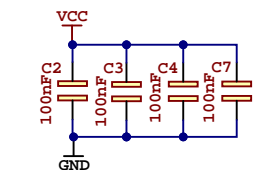
Digit selection must be synchronizing with the decoder addresses A8, A9 and the decoding code. In our case selection goes from Y3 (Dig1) to Y0 (Dig4)

DIGIT Switch Clock



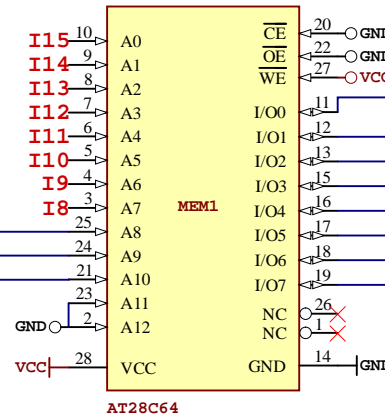
Clock Speed Regulator

R2 value could be a 500k in order to show the behavior of digit switching. It can be replaced by a fixed value resistor between 2K-4.7K to set a constant speed for a digit switch at a good rate. A recommended value to a fixed resistor could be 3.3K

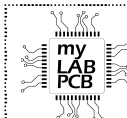
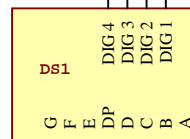


Decoupling Capacitors

Digit Decoder Address Bits



"UN" signal sets the behavior of display to 2's complement representation. LOW by default.

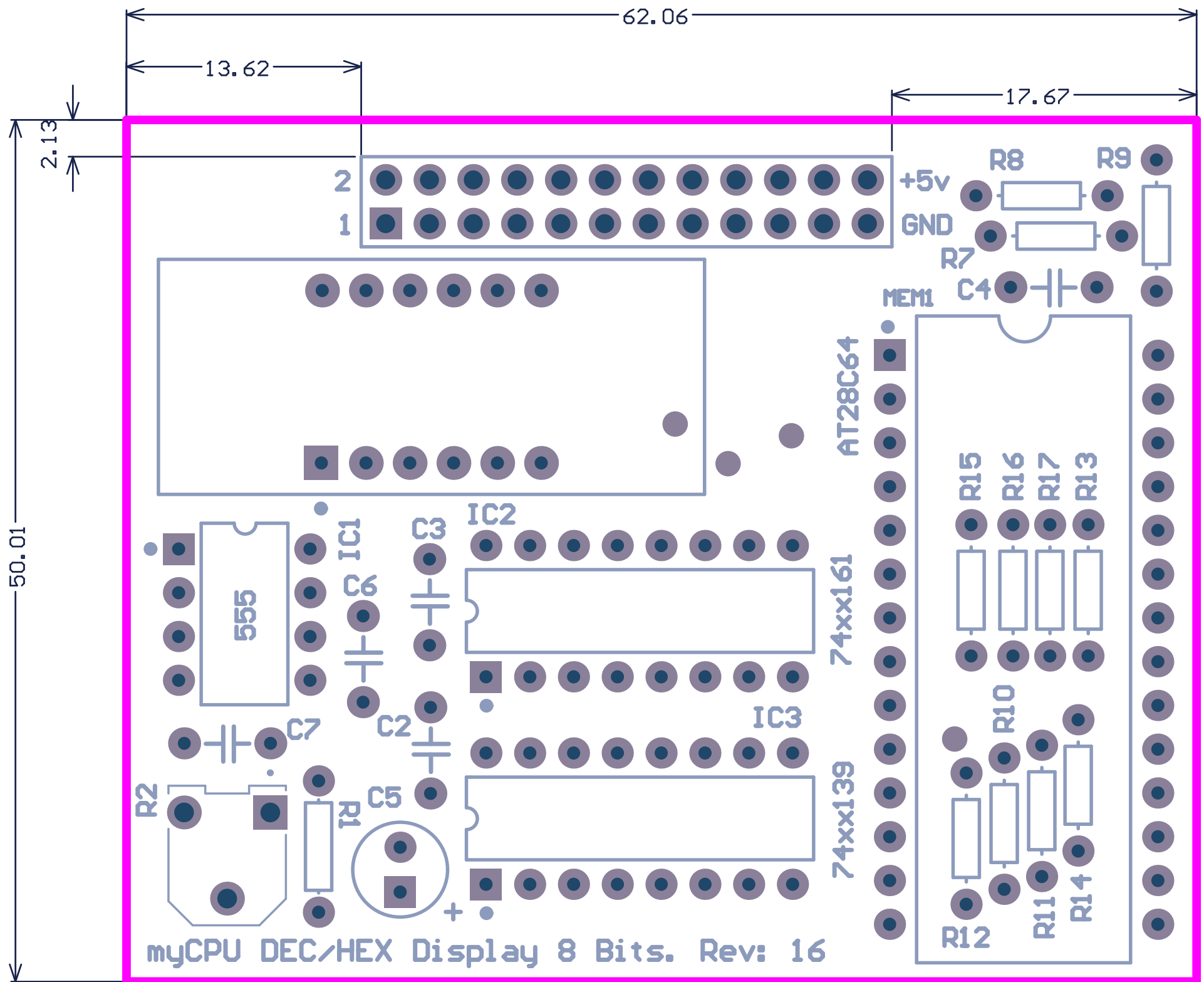


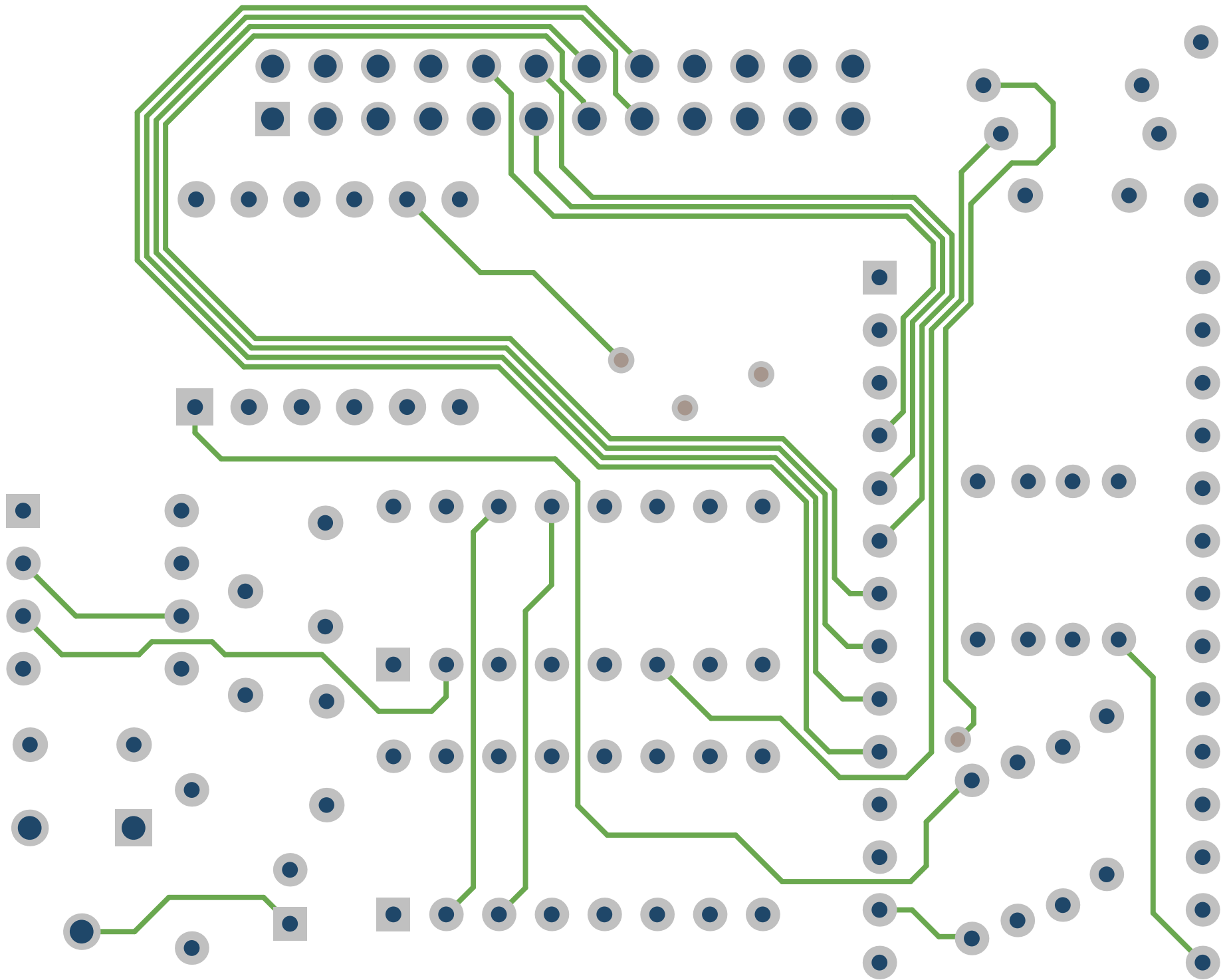
Project: myCPU DEC/HEX Display 4 Digit 8 bit

Revision: 16

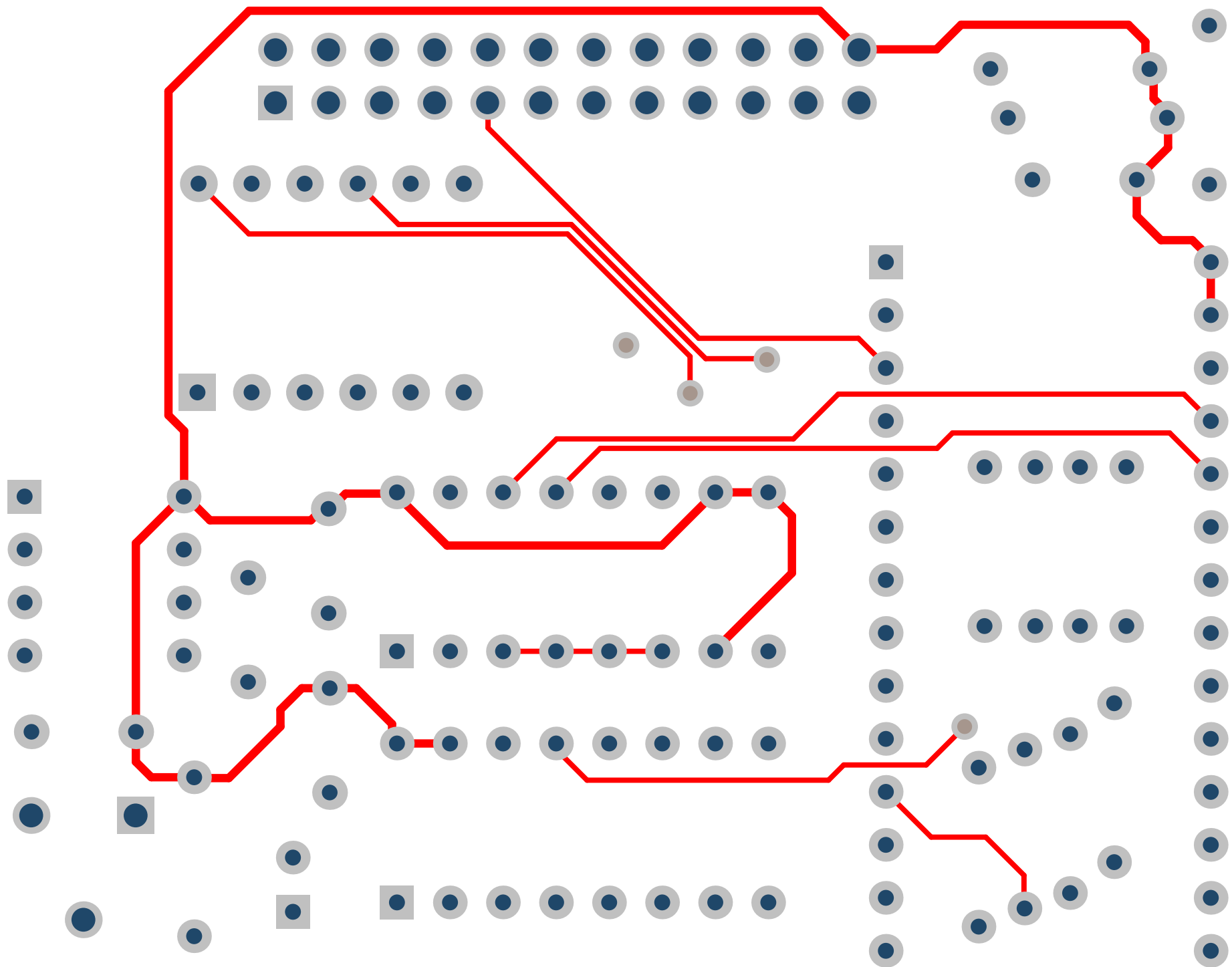
Date: 16-Jun-24

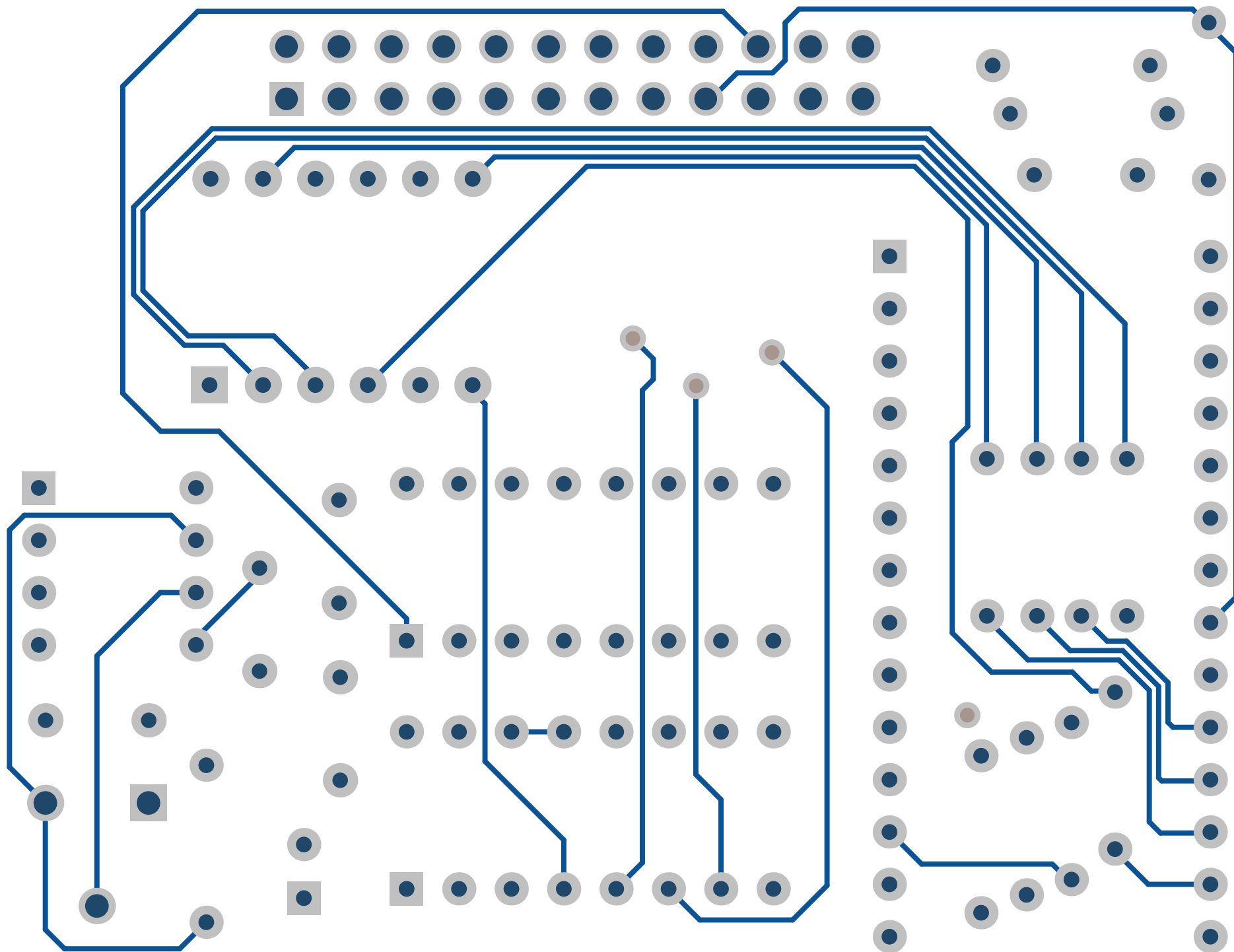
Author: Rafa Hernández













Bill of Materials

myCPU DEC/HEX Display 4 Digit 8 bit

Description	Value	Q
Ceramic capacitor	100nF	4
Electrolytic capacitor 16v/50v	0.47μF	1
Ceramic capacitor	10nF	1
Display 7 segments 4 digits, common cathode, size 0.36"	Red	1
555 Timer	555	1
4-Bit sync counter	74xx161	1
Decoder/Demultiplexer Dual 2-to-4	74xx139	1
EEProm 64K, 8K x 8 bits	AT28C64	1
Pin Header, THT, pitch 2.54mm, Dual Row, Vertical	24p	1
Resistor Axial	1K	1
Variable resistor, Horizontal, 3 pins	500K	1
Resistor Axial	4.7K	2
Resistor Axial	330	1
Resistor Axial	680	8



Assembly List

myCPU DEC/HEX Display 4 Digit 8 bit

Designator	Description	Value
C2	Ceramic or tantalum capacitor	100nF
C3	Ceramic or tantalum capacitor	100nF
C4	Ceramic or tantalum capacitor	100nF
C5	Electrolytic capacitor 16v/50v	0.47µF
C6	Ceramic or tantalum capacitor	10nF
C7	Ceramic or tantalum capacitor	100nF
DS1	Display 7 segments 4 digits, common cathode, size 0.36"	Red
IC1	555 Timer	555
IC2	4-Bit sync counter	74xx161
IC3	Decoder/Demultiplexer Dual 2-to-4	74xx139
MEM1	EEProm 64K, 8K x 8 bits	AT28C64
P1	Pin Header, THT, pitch 2.54mm, Dual Row, Vertical, 24p	24p
R1	Resistor Axial	1K
R2	Variable resistor, Horizontal, 3 pins	500K
R7	Resistor Axial	4.7K
R8	Resistor Axial	4.7K
R9	Resistor Axial	330Ω
R10	Resistor Axial	680Ω
R11	Resistor Axial	680Ω
R12	Resistor Axial	680Ω
R13	Resistor Axial	680Ω
R14	Resistor Axial	680Ω
R15	Resistor Axial	680Ω
R16	Resistor Axial	680Ω
R17	Resistor Axial	680Ω