

皖江工学院

WANJIANG UNIVERSITY OF TECHNOLOGY



电子技术课程设计报告

所在院系：电气信息工程学院

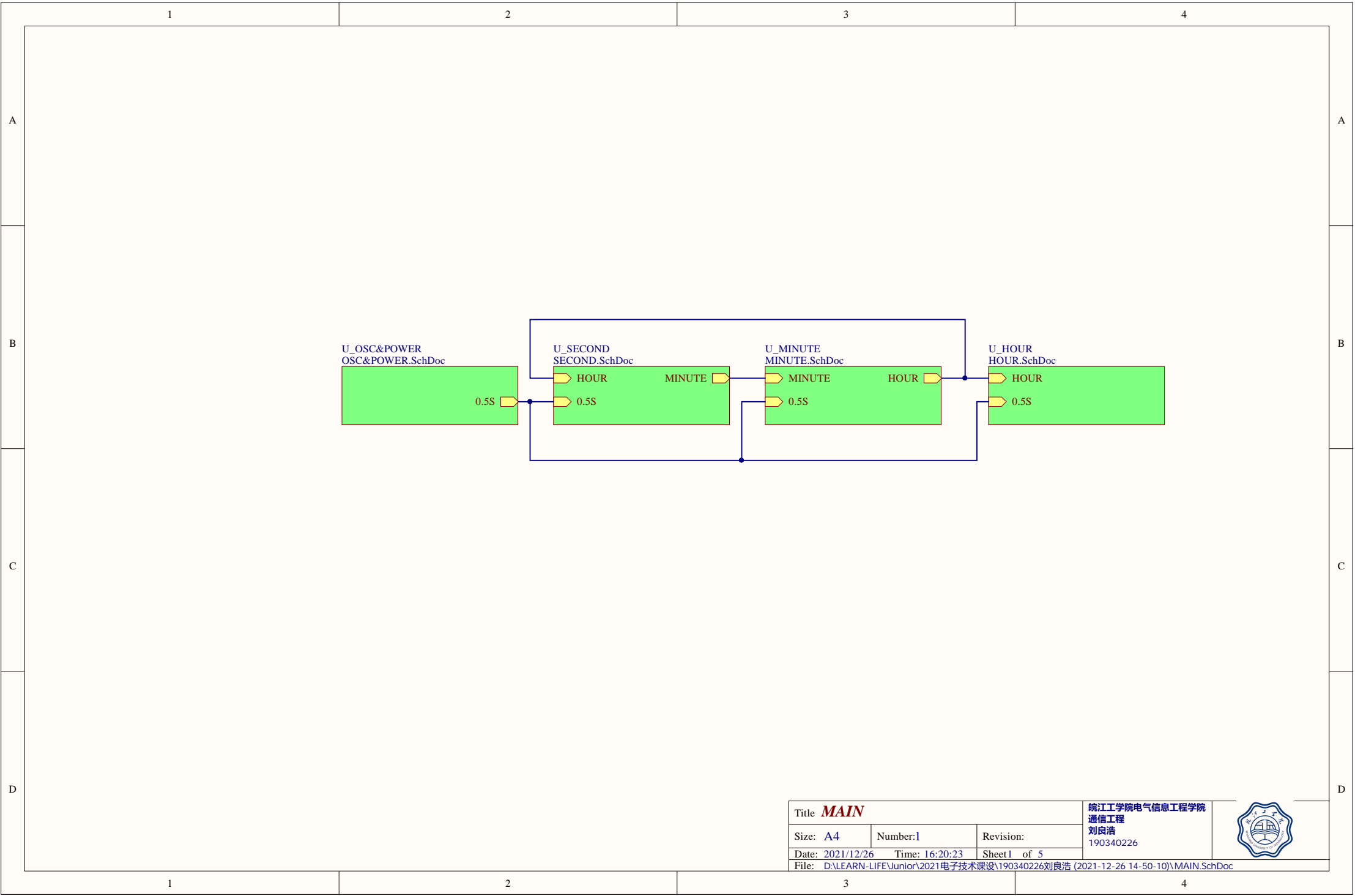
专业班级：19 通信二班

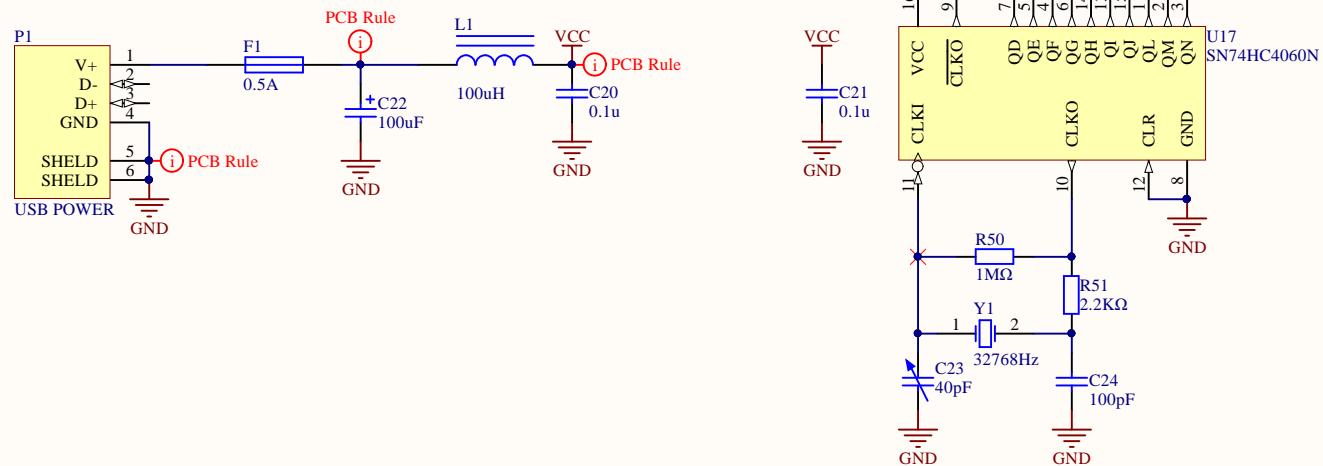
学 号：190340226


姓 名：刘良浩

指导老师：纪萍

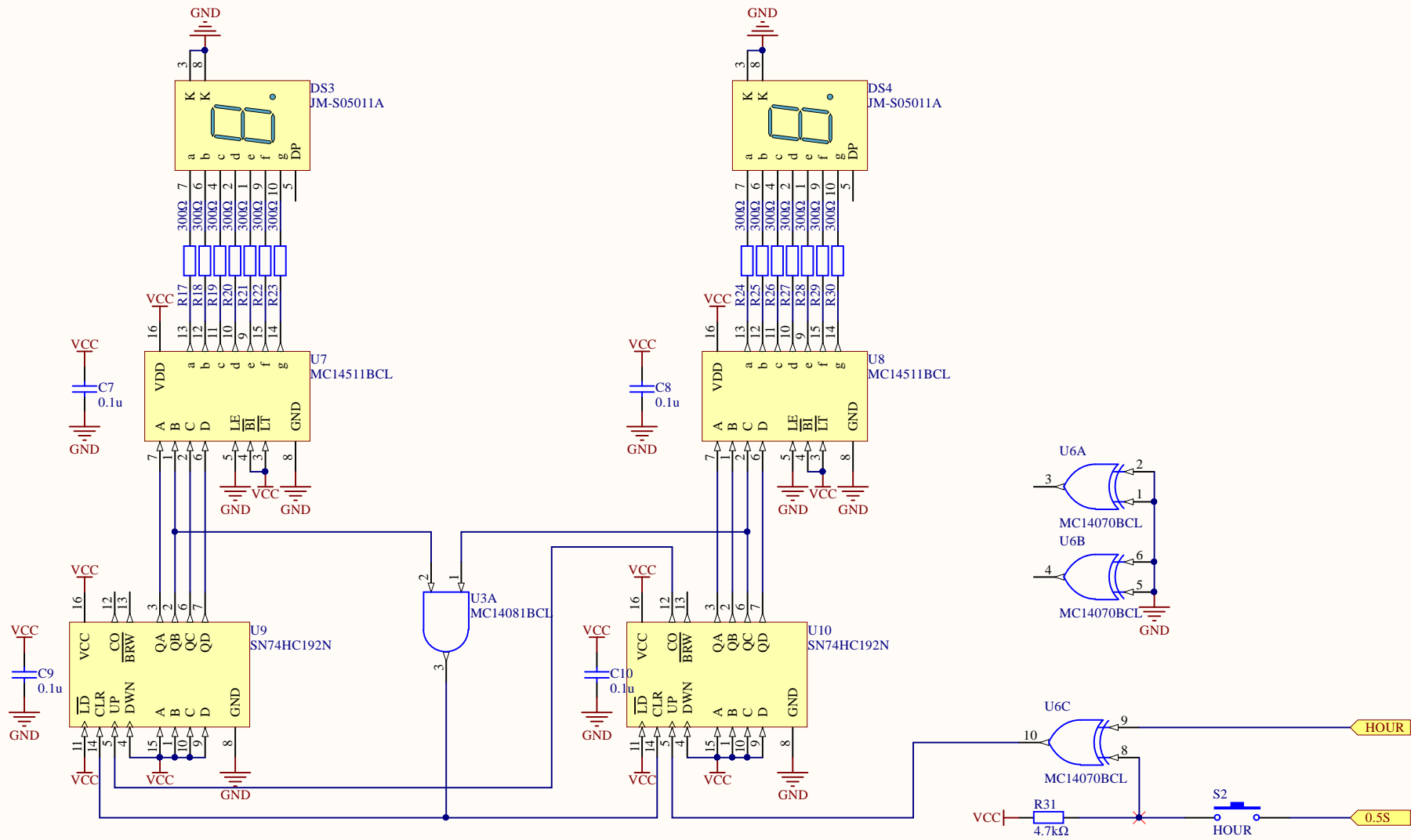
2021 年 12 月



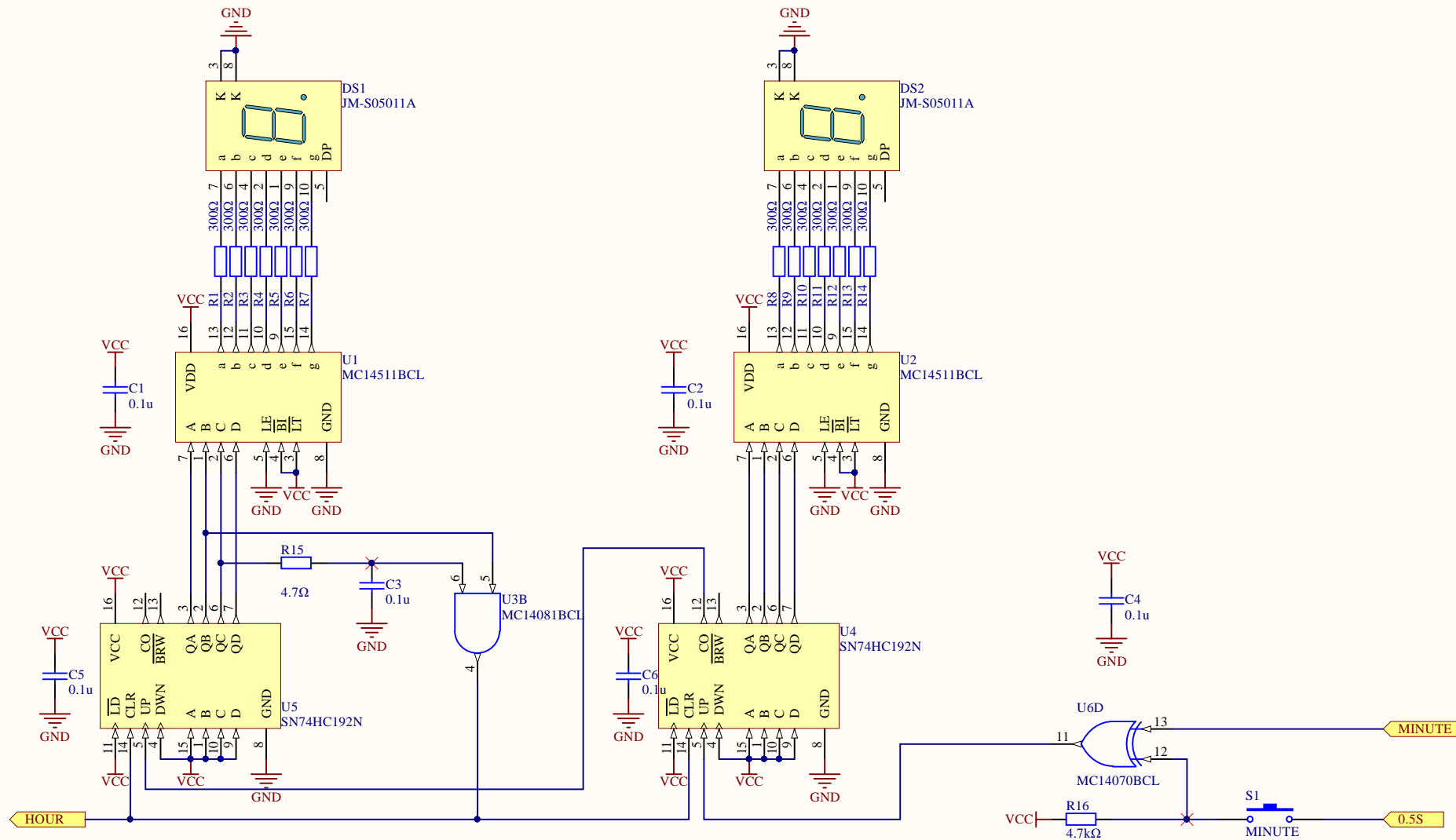



Title <i>OSC&POWER</i>			皖江工学院电气信息工程学院 通信工程 刘良浩 190340226	
Size: A4	Number: 2	Revision:		
Date: 2021/12/26	Time: 16:20:23	Sheet 2 of 5		
File: D:\LEARN-LIFE\Junior\2021电子技术课设\190340226刘良浩 (2021-12-26 14-50-10)\OSC&POWER.SchDoc				





Title <i>HOUR</i>			皖江工学院电气信息工程学院 通信工程 刘良浩 190340226	
Size: <i>A4</i>	Number:3	Revision:		
Date: <i>2021/12/26</i>	Time: 16:20:23	Sheet 3 of 5		
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Title <i>MINUTE</i>			皖江工学院电气信息工程学院 通信工程 刘良浩 190340226	
Size: A4	Number:4	Revision:		
Date: 2021/12/26	Time: 16:20:23	Sheet4 of 5		
File: D:\LEARN-LIFE\Junior\2021电子技术课设\190340226刘良浩 (2021-12-26 14-50-10)\MINUTE.SchDoc				



A

B

C

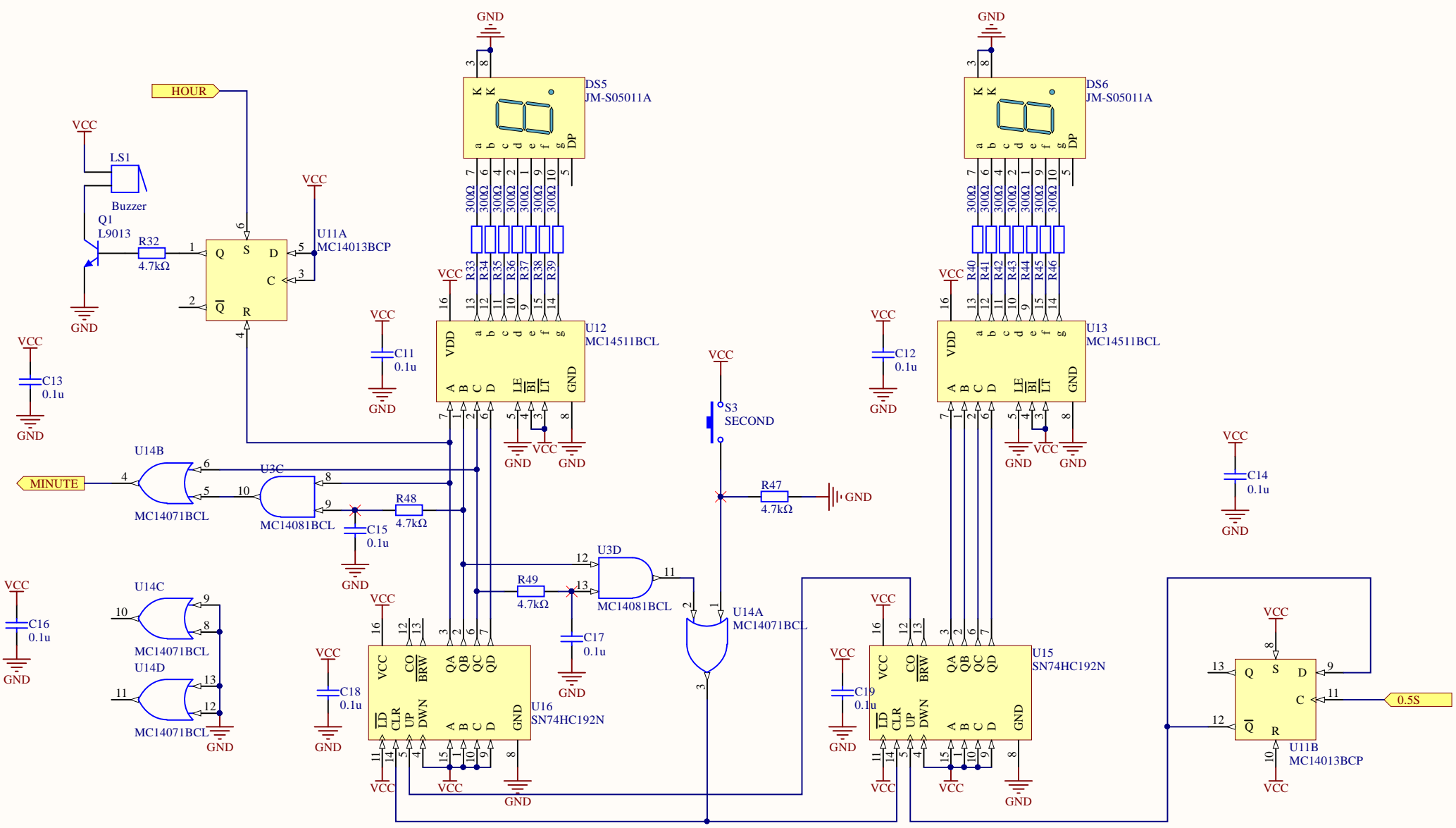
D

A

B

C

D

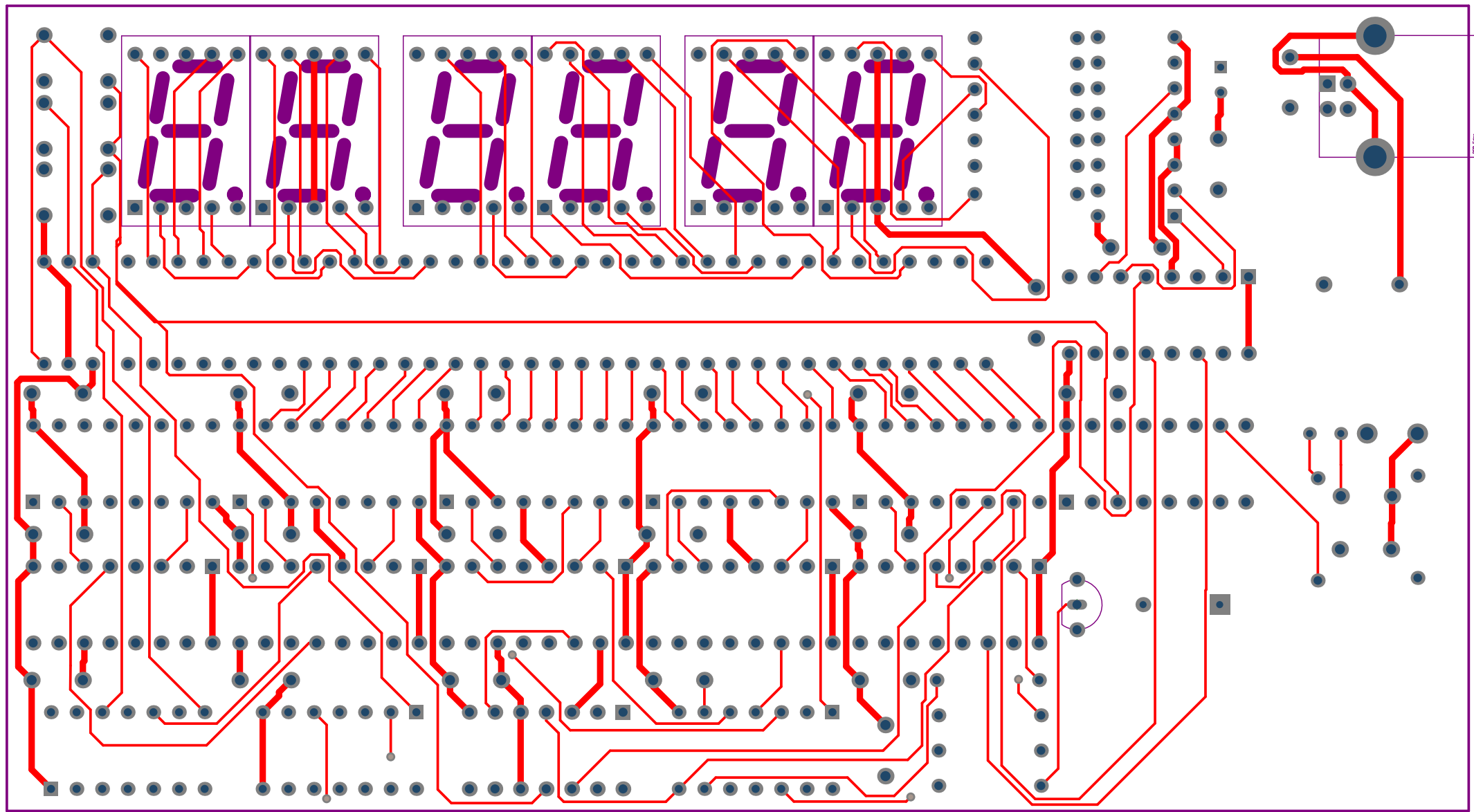


Title SECOND			皖江工学院电气信息工程学院 通信工程 刘良浩 190340226	
Size: A4	Number: 5	Revision:		
Date: 2021/12/26	Time: 16:20:23	Sheet 5 of 5		
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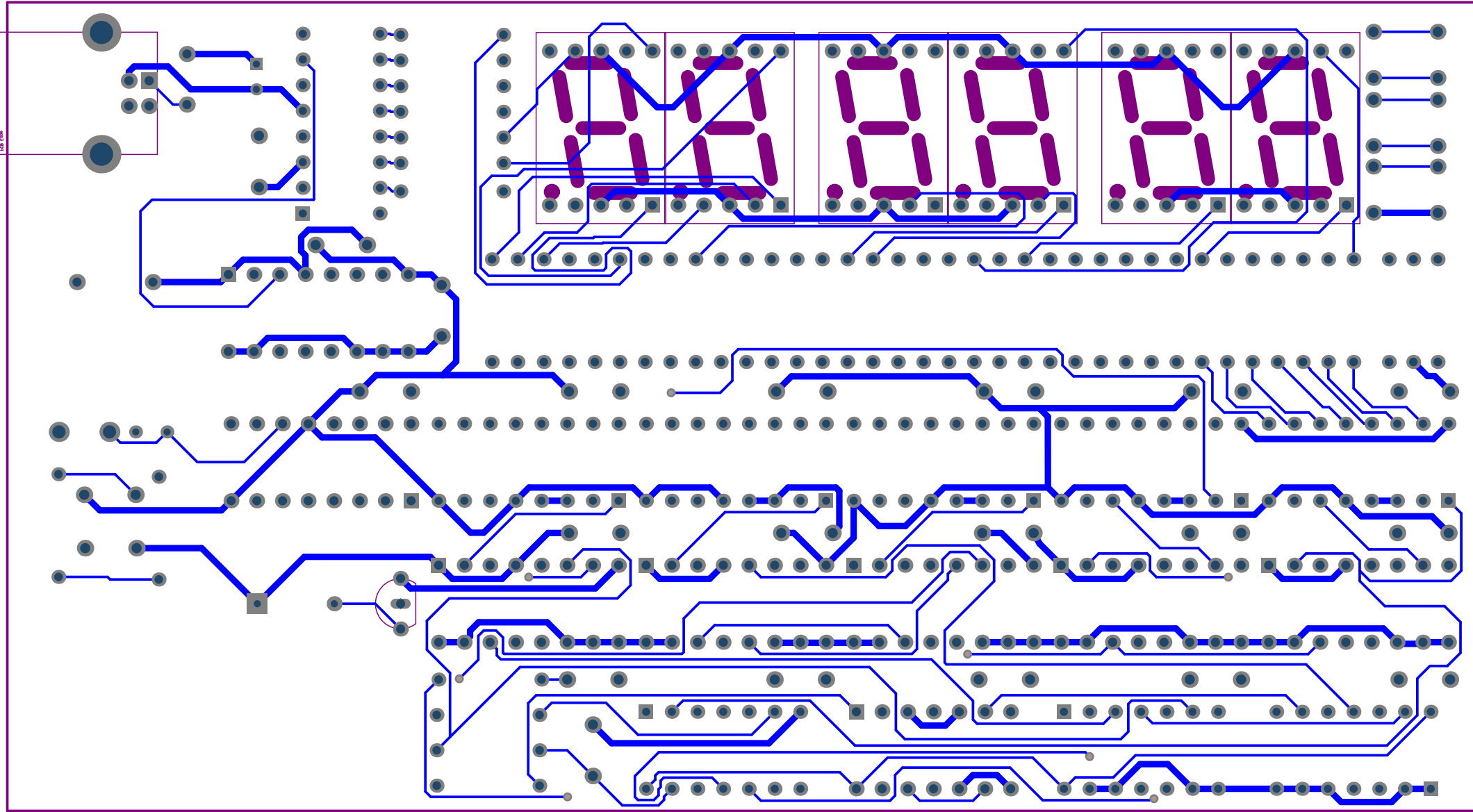


145 (mm)

80 (mm)



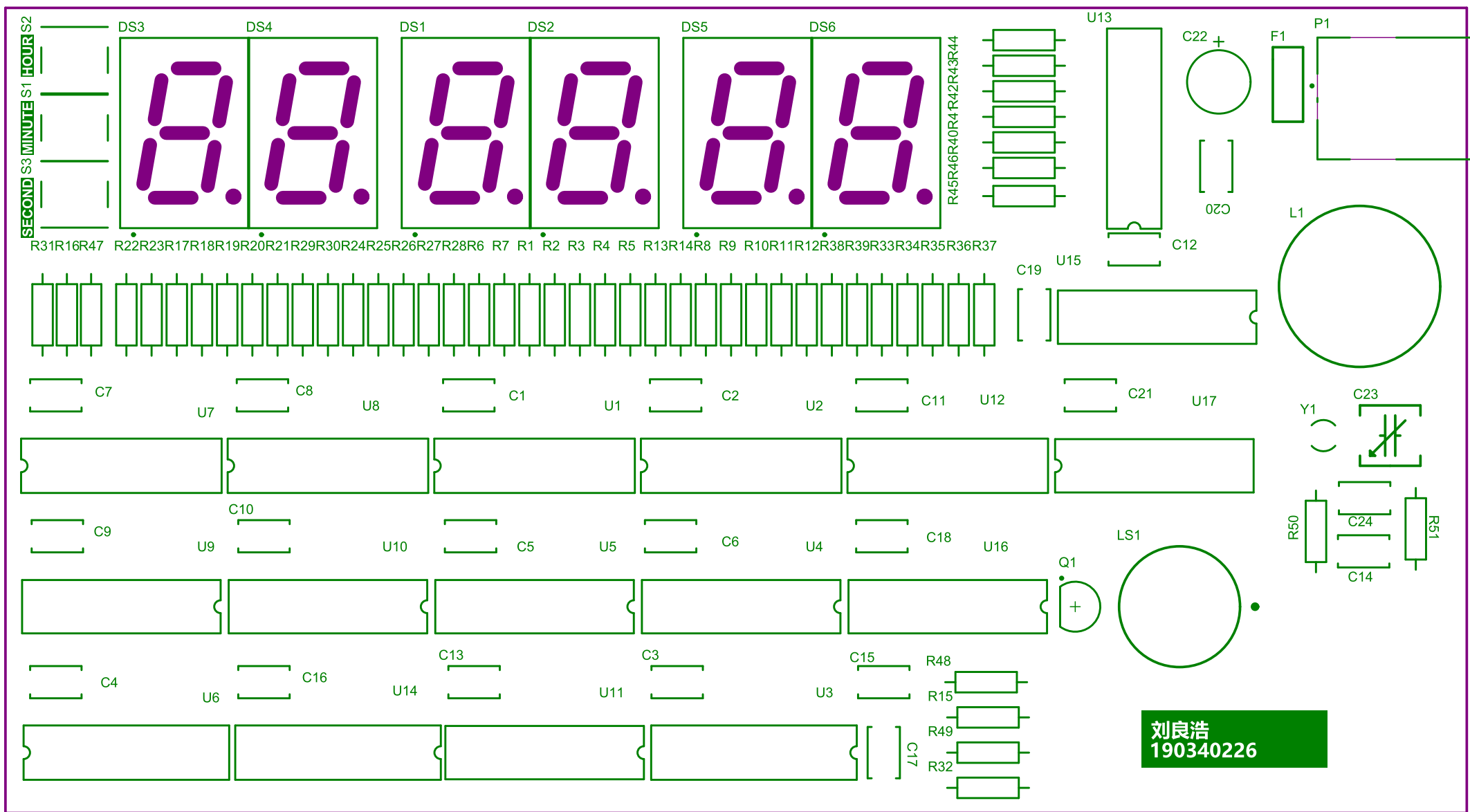
← 145 mm →



80 mm

145 (mm)

80 (mm)



Comment	Description	Designator	Footprint	LibRef	Quantity	Value
Cap	Capacitor	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21	CAPR5.08-5.1x3.2	Cap	21	0.1u
Cap Pol1	Polarized Capacitor (Radial)	C22	CAP 6.3*5.5	Cap Pol1	1	100uF
Cap Var	Variable or Adjustable Capacitor	C23	CAPVR	Cap Var	1	40pF
Cap	Capacitor	C24	CAPR5.08-5.1x3.2	Cap	1	100pF
JM-S05011A	14.2 mm General Purpose Blue 7-Segment Display: CC, RH DP, Gray Surface	DS1, DS2, DS3, DS4, DS5, DS6	H	Dpy Blue-CC	6	
0.5A	Fuse	F1	PTC fuse0.5A	Fuse 1	1	
Inductor Iron	Magnetic-Core Inductor	L1	PNS1619	Inductor Iron	1	100uH
Buzzer		LS1	TMB12A05	Buzzer1	1	
USB POWER	USB typeB	P1	USB2.5-2H4F	USB typeB	1	
L9013	NPN Bipolar Transistor	Q1	TO-92A	NPN	1	
Res2	Resistor	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46	AXIAL-0.4	Res2	42	300Ω
Res2	Resistor	R15	AXIAL-0.4	Res2	1	4.7Ω
Res2	Resistor	R16, R31, R32, R47, R48, R49	AXIAL-0.4	Res2	6	4.7kΩ
Res2	Resistor	R50	AXIAL-0.4	Res2	1	1MΩ
Res2	Resistor	R51	AXIAL-0.4	Res2	1	2.2KΩ
MINUTE	Switch	S1	PB-SMALL	SW-PB	1	
HOURL	Switch	S2	PB-SMALL	SW-PB	1	
SECOND	Switch	S3	PB-SMALL	SW-PB	1	
MC14511BCL	BCD-to-7-Segment Latch/Decoder/Driver	U1, U2, U7, U8, U12, U13	620-10	MC14511BCL	6	
MC14081BCL	Quad 2-Input AND Gate	U3	632-08	MC14081BCL	1	
SN74HC192N	Synchronous 4-Bit Up/Down Counter (Dual Clock with Clear)	U4, U5, U9, U10, U15, U16	N016D	SN74HC192N	6	
MC14070BCL	Quad XOR Gate	U6	632-08	MC14070BCL	1	
MC14013BCP	Dual D-Type Flip-Flop	U11	646-06	MC14013BCP	1	
MC14071BCL	Quad 2-Input OR Gate	U14	632-08	MC14071BCL	1	
SN74HC4060N	14-Stage Asynchronous Binary Counter and Oscillator	U17	N016	SN74HC4060N	1	
XTAL	Crystal Oscillator	Y1	BCY-W2/D3.1	XTAL	1	32768Hz