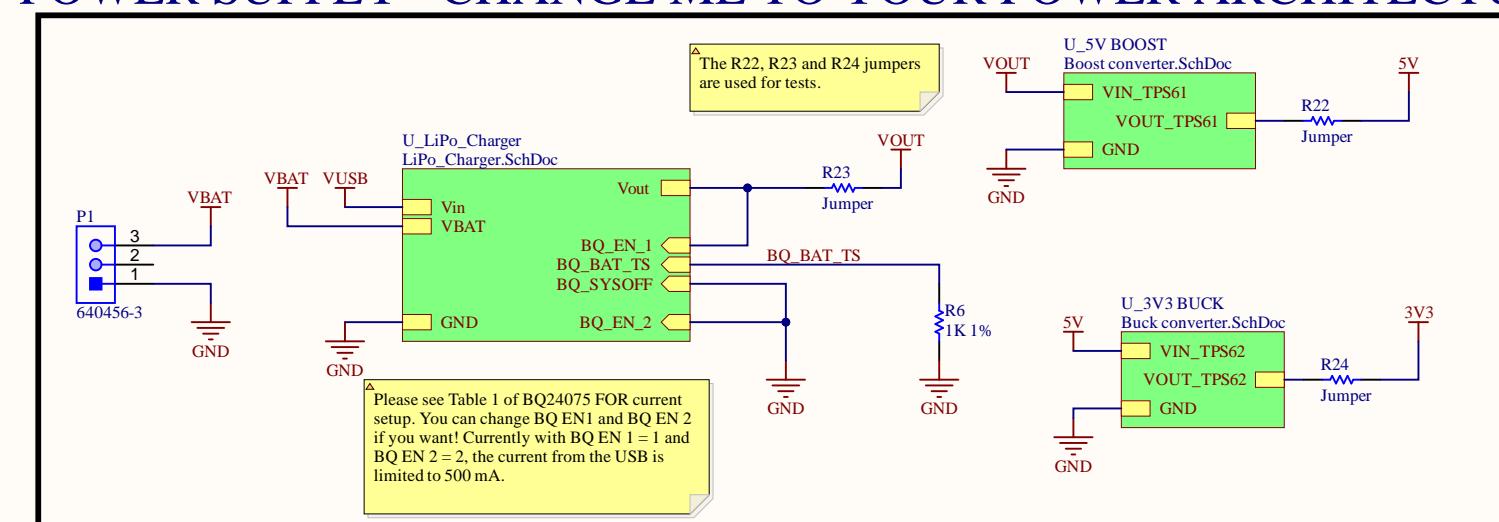


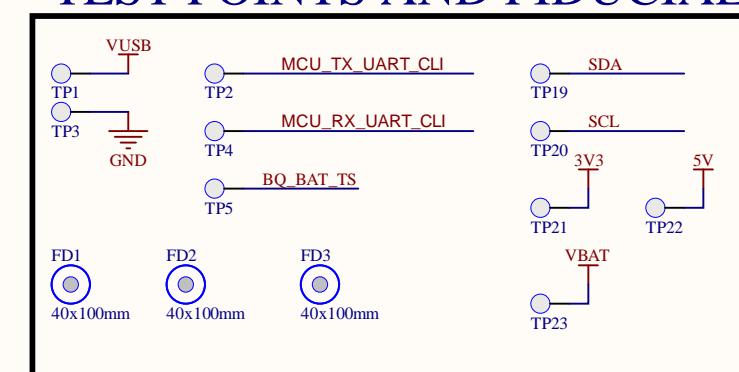
POWER SUPPLY - CHANGE ME TO YOUR POWER ARCHITECTURE



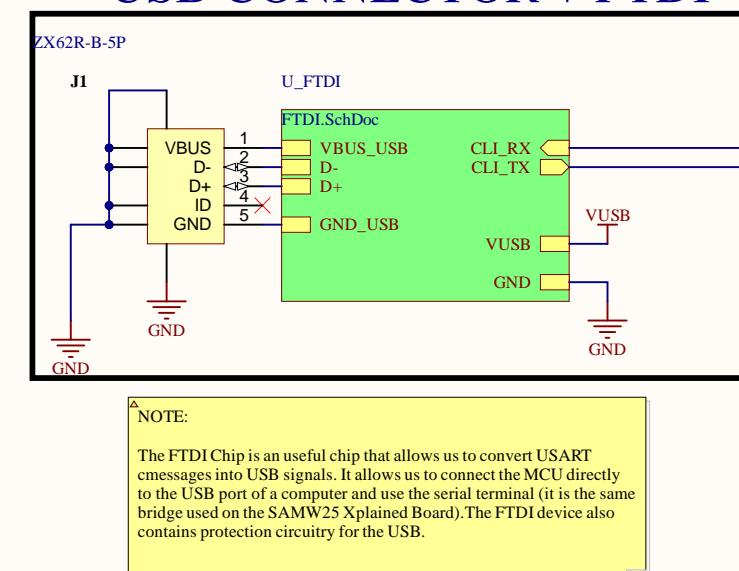
NOTES

Section to add version notes or any other general information

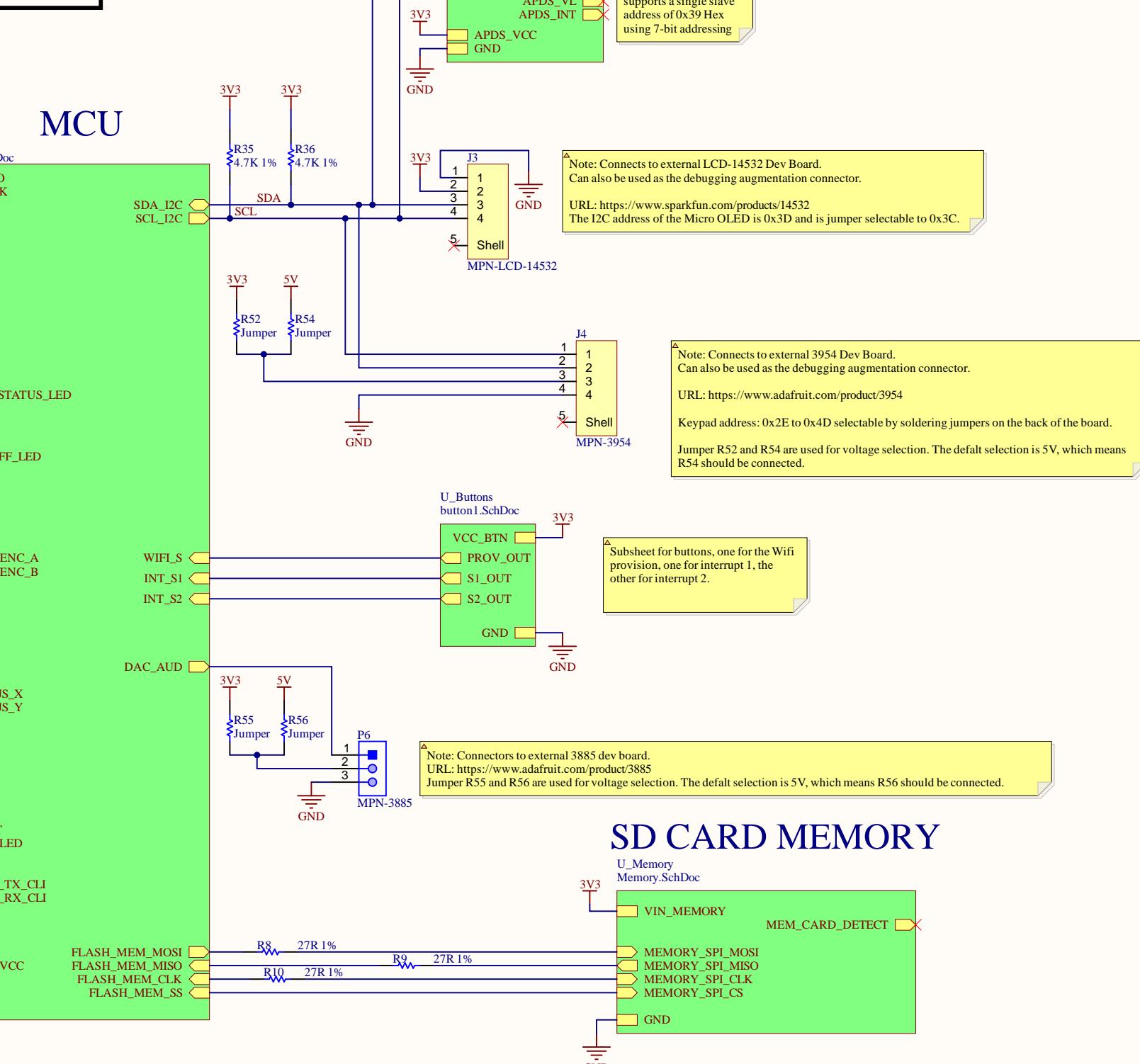
TEST POINTS AND FIDUCIALS



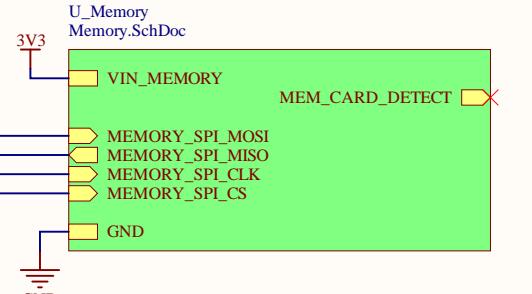
USB CONNECTOR + FTDI



MCU



SD CARD MEMORY



APPROVALS		DATE	PROJECT			
ENG:	RTZ, HYW	02/15/22	SimonSayG	Practical Engineering 42 South 33rd St Engineering, Philadelphia UNIVERSITY OF PHILADELPHIA 19104		
DSN:	RTZ, HYW	02/15/22	PROJECT REVISION:	DOCUMENT REVISION: DESIGN ITEM: 1.0		
CHK:	RTZ, HYW	02/15/22	TITLE			
REFERENCE DOCUMENTS		MAIN				
BOM:	*	ASSY DWG: TBD				
FAB DWG: TBD		SIZE	CAGE CODE	DWG NO.		
PCB DWG: TBD		C	TBD	TBD		
SCALE		NA	FILE NAME	MAIN.SchDoc		
SHEET 1 OF 11				REV *		

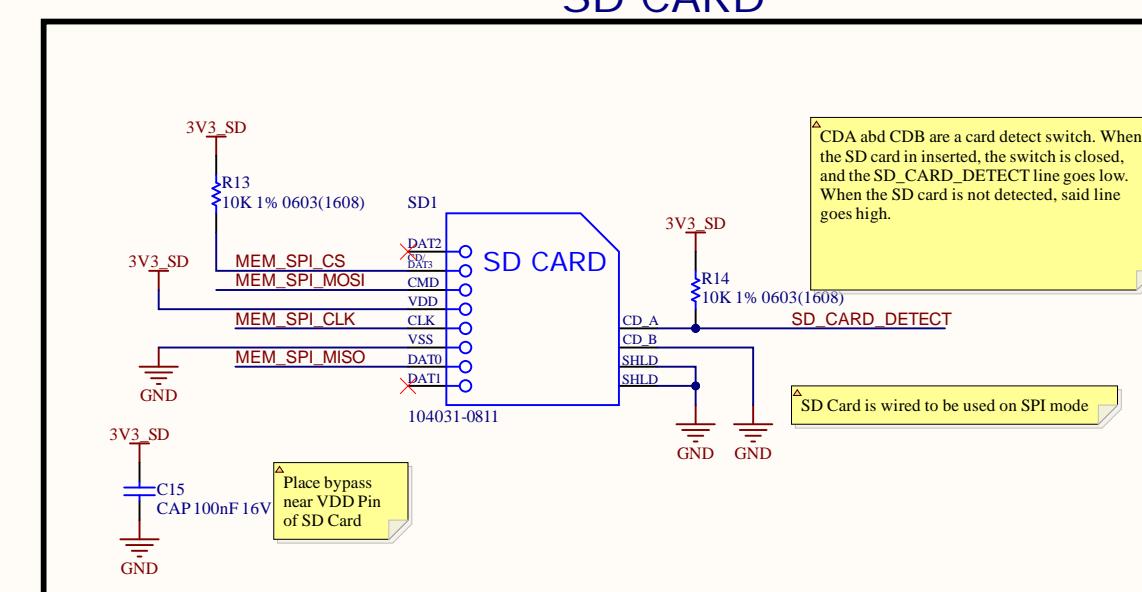
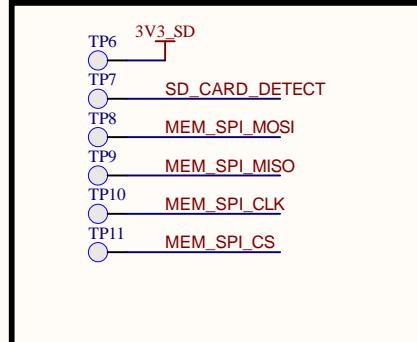
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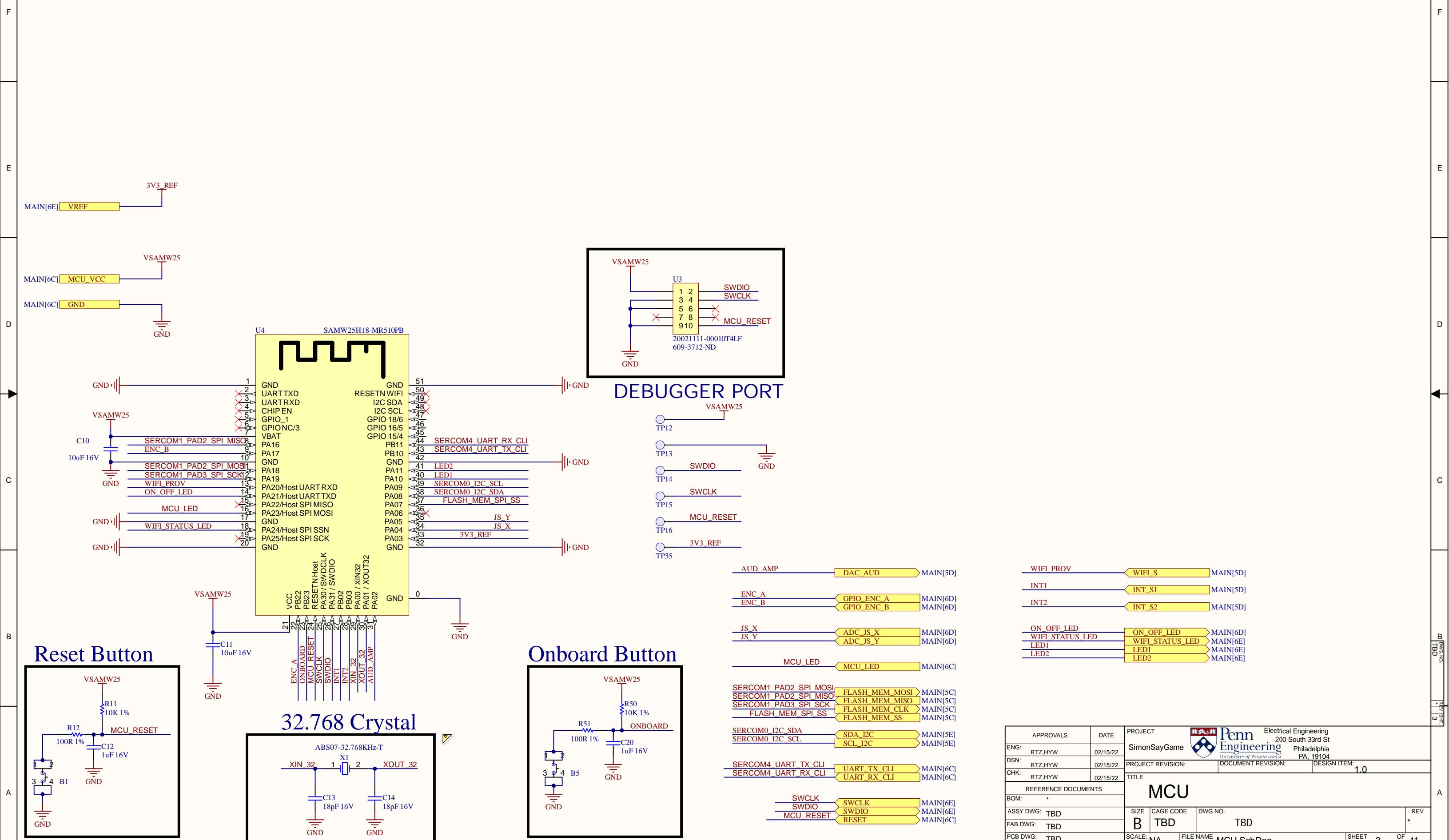
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TESTPOINTS



APPROVALS	DATE	PROJECT	Electrical Engineering		
ENG: RTZ_HYW	02/15/22	SimonSayGame	Penn	Engineering	200 South 33rd St
DSN: RTZ_HYW	02/15/22		UNIVERSITY OF PENNSYLVANIA		Philadelphia PA, 19104
CHK: RTZ_HYW	02/15/22	PROJECT REVISION:	DOCUMENT REVISION:	DESIGN ITEM:	1.0
REFERENCE DOCUMENTS					
BOM:	*	ASSY DWG:	TBD	SIZE	CAGE CODE
FAB DWG:	TBD	PCB DWG:	TBD	DWG NO.	REV.
PCB DWG:	TBD	SCALE: NA	FILE NAME: Memory.SchDoc	SHEET 2	OF 11



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REVISION	DESCRIPTION	DATE	APPROVED

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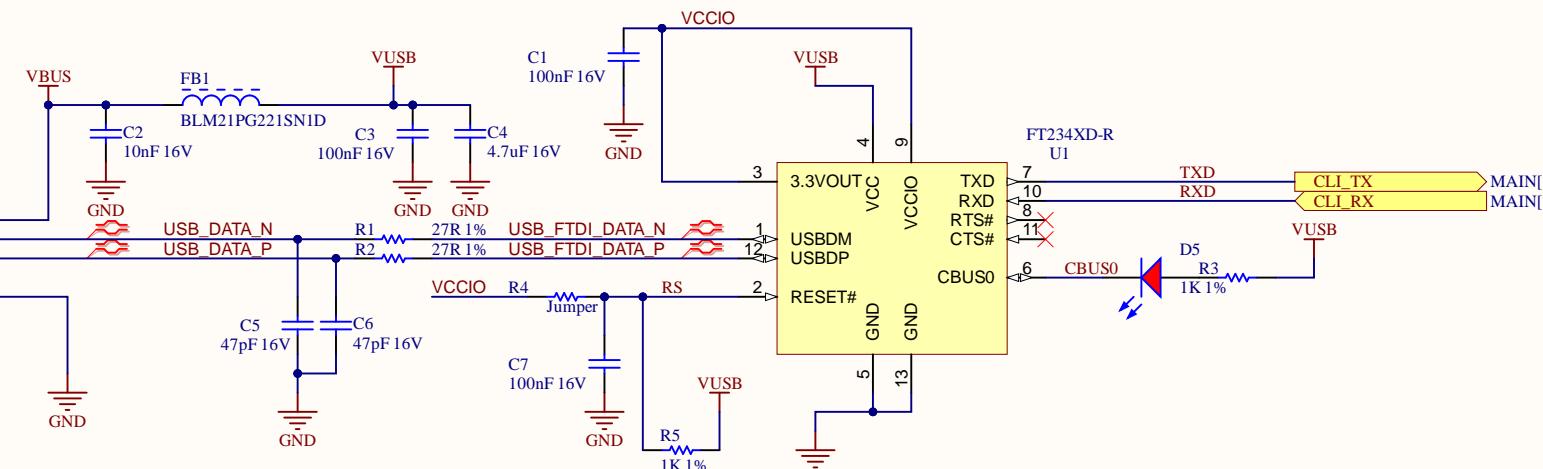
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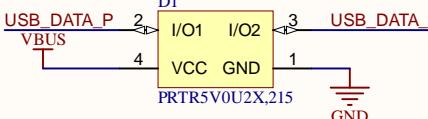
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FTDI CHIP



USB ESD PROTECTIO



APPROVALS	DATE	PROJECT	 Penn Engineering <small>UNIVERSITY OF PENNSYLVANIA</small>		Electrical Engineering 200 South 33rd St Philadelphia PA, 19104
ENG: RTZ, HYW	02/15/22	SimonSayGame			
DSN: RTZ, HYW	02/15/22	PROJECT REVISION:	DOCUMENT REVISION:	DESIGN ITEM: *	
CHK: RTZ, HYW	02/15/22	TITLE			
FTDI CHIP					
REFERENCE DOCUMENTS BOM: *					
ASSY DWG: TBD		SIZE	CAGE CODE	DWG NO.	REV
FAB DWG: TBD		B	TBD	TBD	*
PCB DWG: TBD		SCALE: *	FILE NAME	FTDI SchDoc	SHEET 4 OF 11

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REVISION	DESCRIPTION	DATE	APPROVED

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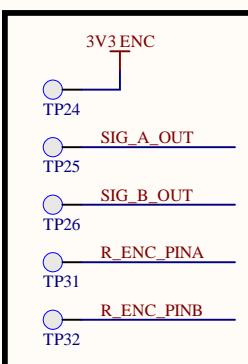
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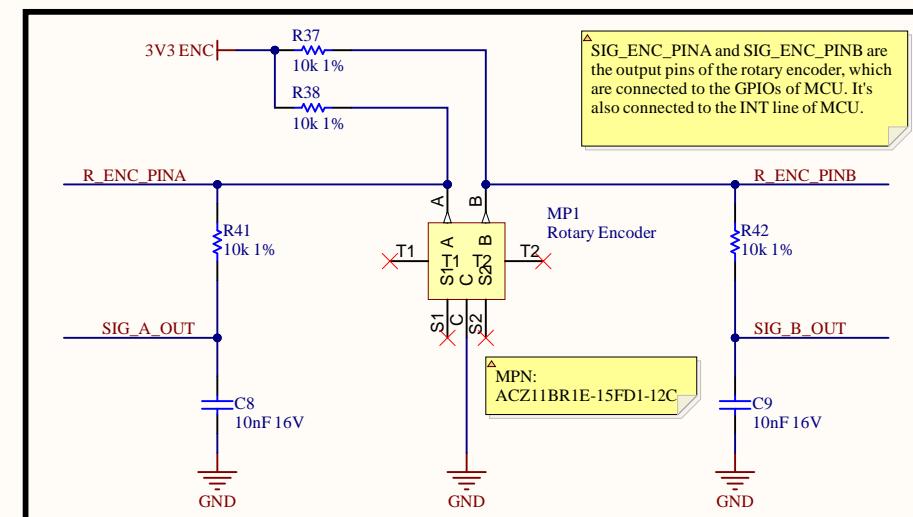
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MAIN[6D] < ENC_PINB > SIG_B_OUT

3V3 ENC
MAIN[6D] < ENC_VIN >
MAIN[6D] < GND >

Testpoints



Rotary Encoder



APPROVALS	DATE	PROJECT	Penn Engineering
ENG: RTZ_HYW	02/15/22	SimonSayGame	200 South 33rd St
DSN: RTZ_HYW	02/15/22		Philadelphia PA, 19104
CHK: RTZ_HYW	02/15/22	PROJECT REVISION:	DOCUMENT REVISION: DESIGN ITEM: 1.0
REFERENCE DOCUMENTS			
BOM: *		TITLE	ROTARY ENCODER
ASSY DWG: TBD		SIZE	CAGE CODE DWG NO.
FAB DWG: TBD		B	TBD
PCB DWG: TBD		SCALE: NA	FILE NAME: Rotary Encoder.SchDoc SHEET 6 OF 11

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TBD	DWG. NO.	* REV.	7	SHT.	REVISION	DESCRIPTION	DATE	APPROVED

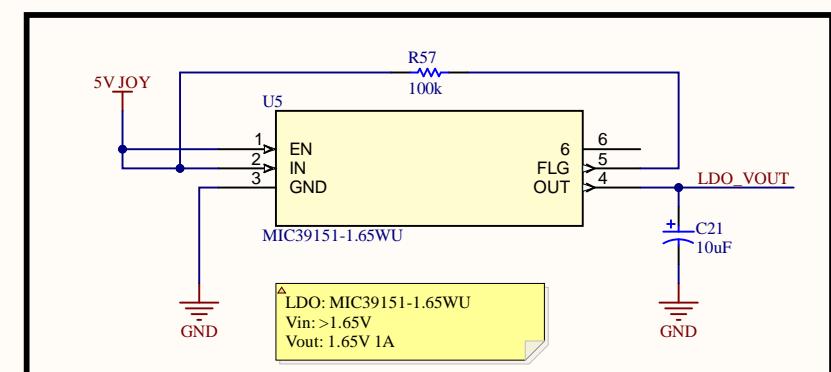
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MAIN[6D] JS_X ANG_X_AXIS

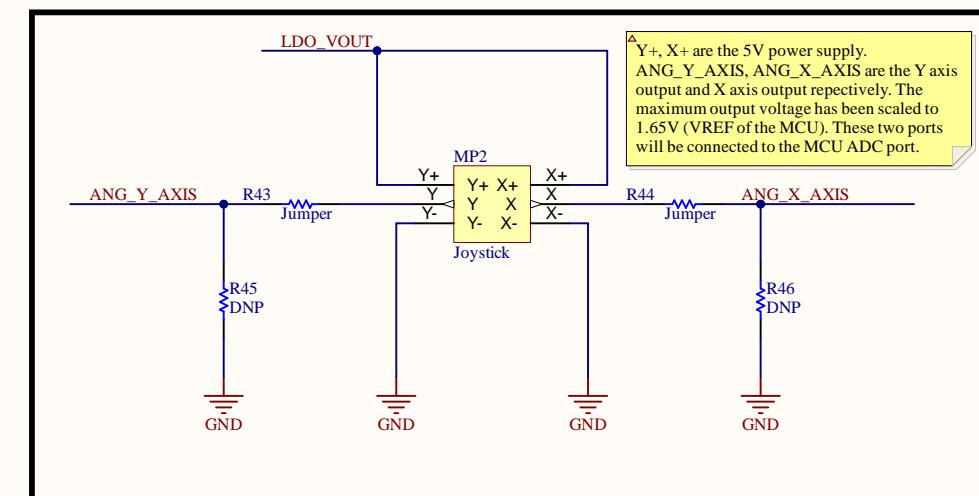
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MAIN[6C] JS_5V

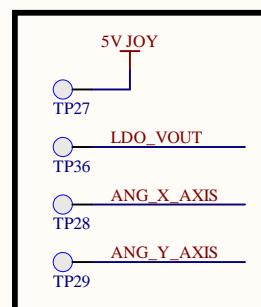
MAIN[6C] GND

5V_JOY

Joy Stick



Testpoints



APPROVALS	DATE	PROJECT	Electrical Engineering		
ENG: RTZ_HYW	02/15/22	SimonSayGame	Penn	Engineering	200 South 33rd St
DSN: RTZ_HYW	02/15/22		Engineering	UNIVERSITY OF PENNSYLVANIA	Philadelphia PA, 19104
CHK: RTZ_HYW	02/15/22				
REFERENCE DOCUMENTS					
BOM:	*	ASSY DWG:	TBD	CAGE CODE	DWG NO.
FAB DWG:	TBD	PCB DWG:	TBD	REV	*
PCB DWG:	TBD	SCALE: NA	FILE NAME: Joystick.SchDoc	SHEET	7 OF 11

JOYSTICK

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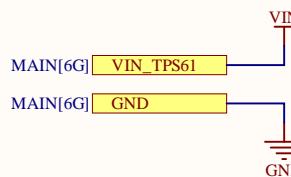
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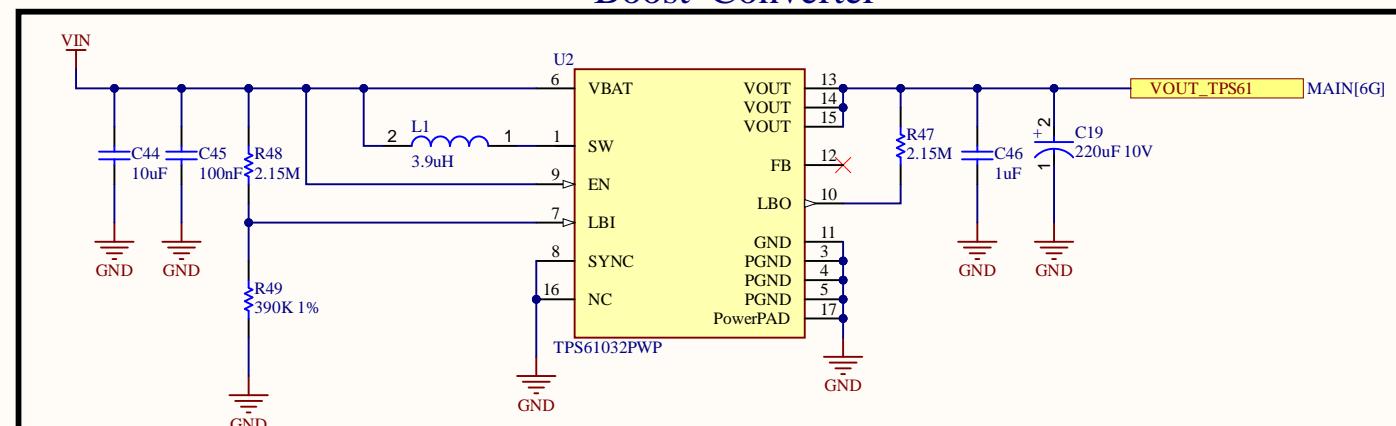
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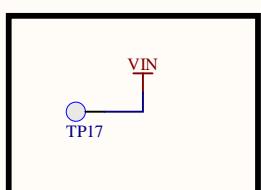


Boost Converter



TPS61032PWP
VIN: 3.3V to 4.2V
OUT: 5V up to 1A

Testpoints



APPROVALS	DATE	PROJECT	BOOST CONVERTER		
ENG: RTZ_HYW	02/15/22	SimonSayGame	Penn Engineering	Electrical Engineering	200 South 33rd St
DSN: RTZ_HYW	02/15/22		UNIVERSITY OF PENNSYLVANIA	Philadelphia	PA, 19104
CHK: RTZ_HYW	02/15/22	PROJECT REVISION:	DOCUMENT REVISION:	DESIGN ITEM:	1.0
REFERENCE DOCUMENTS					
BOM: *		ASSY DWG: TBD	SIZE	CAGE CODE	DWG NO.
		FAB DWG: TBD	B	TBD	TBD
		PCB DWG: TBD	SCALE: NA	FILE NAME	Boost converter.SchDoc

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TBD	DWG. NO.	* REV.	9	SHT.
REVISION	DESCRIPTION	DATE	APPROVED	

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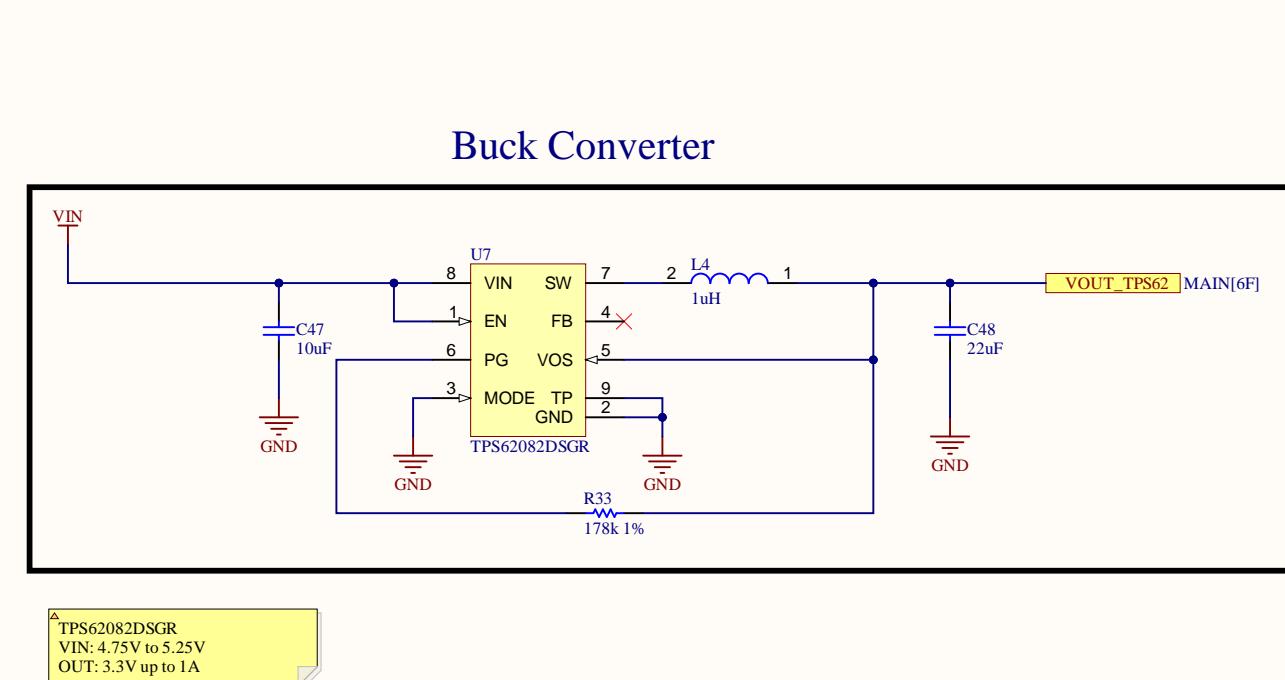
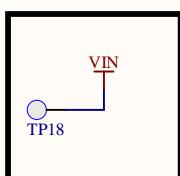
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Testpoint



APPROVALS	DATE	PROJECT	Electrical Engineering		
ENG: RTZ_HYW	02/15/22	SimonSayGame	Penn	Engineering	200 South 33rd St
DSN: RTZ_HYW	02/15/22		UNIVERSITY OF PENNSYLVANIA	Philadelphia	PA, 19104
CHK: RTZ_HYW	02/15/22	PROJECT REVISION:	DOCUMENT REVISION:	DESIGN ITEM:	1.0
TITLE					
BUCK CONVERTER					
REFERENCE DOCUMENTS		SIZE	CAGE CODE	DWG NO.	REV
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ASSY DWG: TBD					
FAB DWG: TBD					
PCB DWG: TBD					
SCALE: NA	FILE NAME	Buck converter.SchDoc	SHEET	9	OF 11

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REVISION	DESCRIPTION	DATE	APPROVED	

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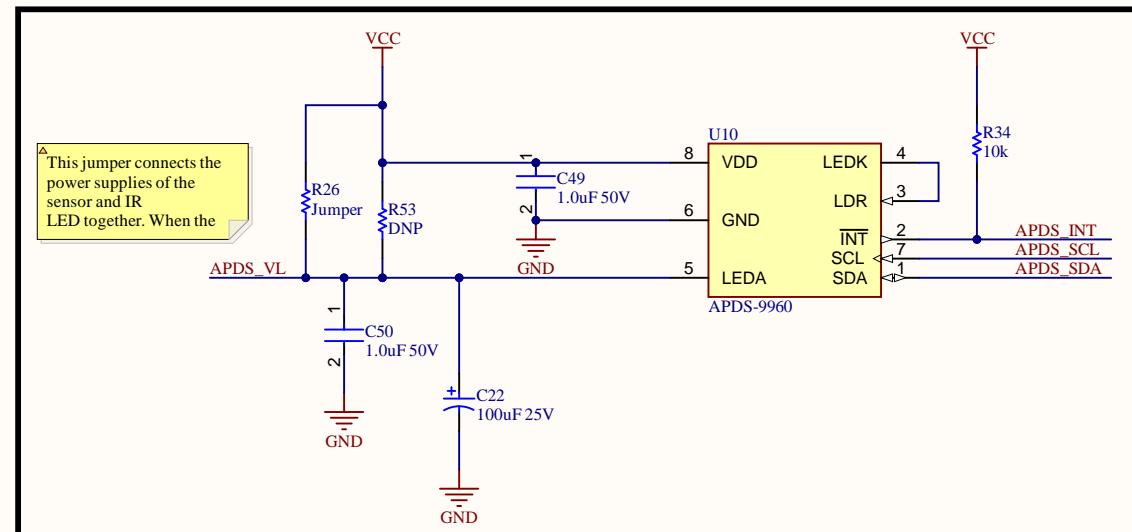
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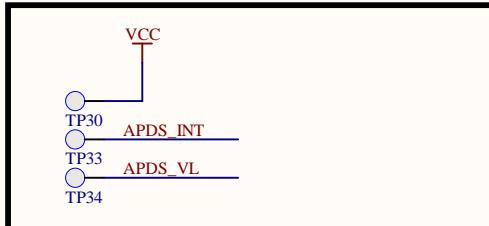
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Gesture Sensor



Testpoint



APPROVALS	DATE	PROJECT	Penn Engineering		
ENG: RTZ_HYW	02/15/22	SimonSayGame	200 South 33rd St	Philadelphia	PA, 19104
DSN: RTZ_HYW	02/15/22	PROJECT REVISION:	DOCUMENT REVISION:	DESIGN ITEM:	1.0
CHK: RTZ_HYW	02/15/22	TITLE			
REFERENCE DOCUMENTS					
BOM: *	ASSY DWG: TBD	SIZE	CAGE CODE	DWG NO.	REV
	FAB DWG: TBD	B	TBD	TBD	*
	PCB DWG: TBD	SCALE: NA	FILE NAME	Gesture_Sensor.SchDoc	SHEET 10 OF 11

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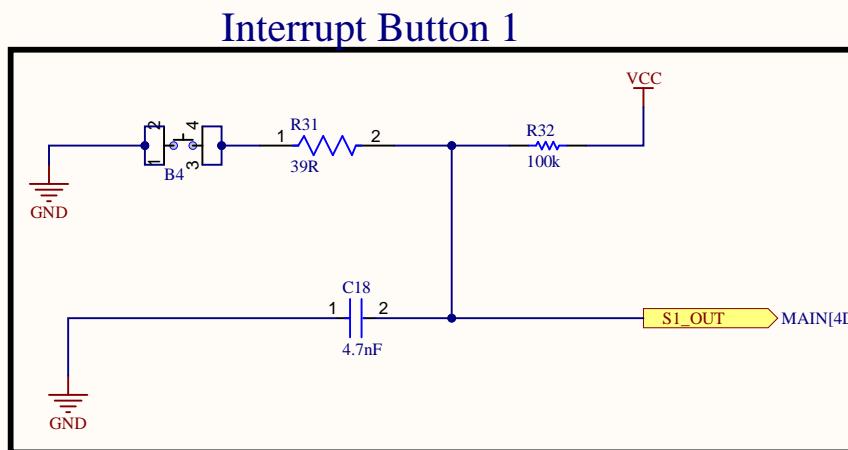
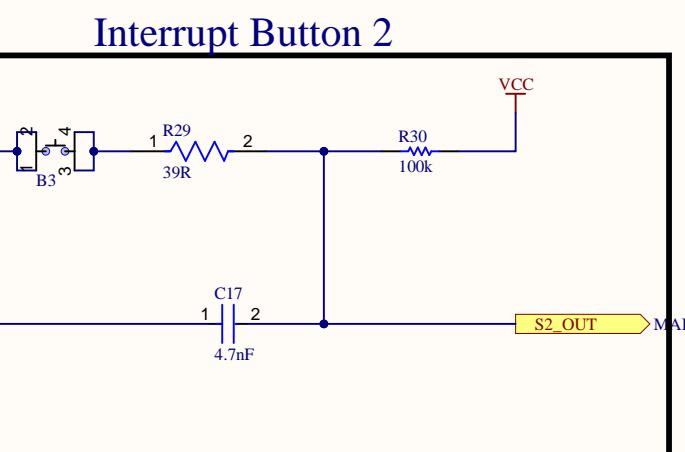
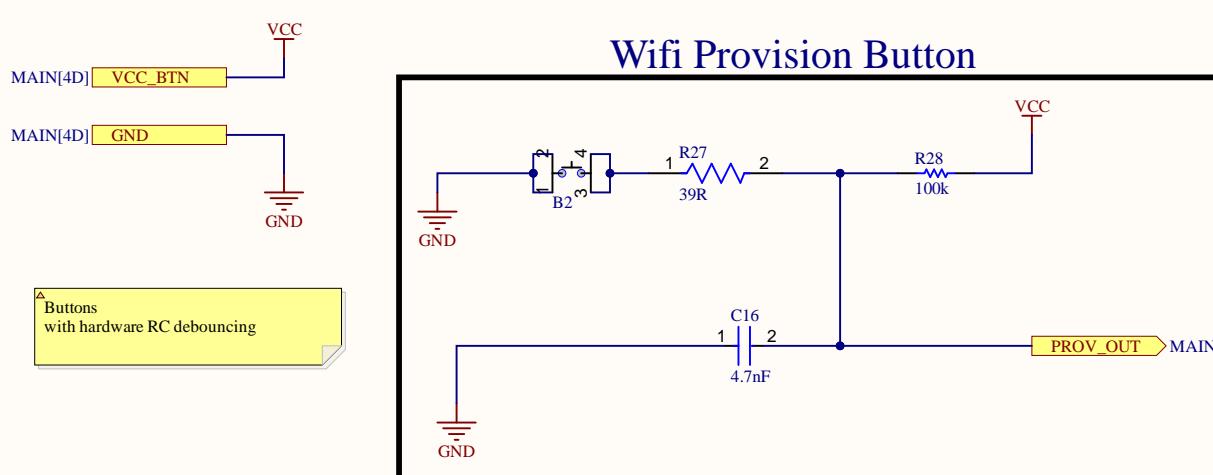
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APPROVALS	DATE	PROJECT	Electrical Engineering		
ENG: RTZ_HYW	02/15/22	SimonSayGame	Penn	Engineering	200 South 33rd St
DSN: RTZ_HYW	02/15/22		University of Pennsylvania		Philadelphia PA, 19104
CHK: RTZ_HYW	02/15/22				DESIGN ITEM: 1.0
TITLE					
BUTTONS					
REFERENCE DOCUMENTS	*	SIZE	CAGE CODE	DWG NO.	REV
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ASSY DWG:	TBD				
FAB DWG:	TBD				
PCB DWG:	TBD				
SCALE:	NA	FILE NAME	button1.SchDoc	SHEET	11 OF 11

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REV STATUS OF SHEETS	REV	*	REV	.lfe
SHEET				

REVISIONS		DESCRIPTION	DATE	APPROVED

Manufacturing Notes

Four (4) Layers

Dimensions: 60mm x 60mm

Thickness: 0.062"

Material: FR4

All layers are unmirrored - should be able to "see straight through"

Scoring: none

Finished Thickness : 0.062 inches

Surface Finish : ENEPIG

Gold Fingers : No

Outer Layer Finish Copper : 1 Oz

Inner Copper : 0.5 oz Inners

Number of Holes Per Board: 269

Minimum Hole Size : 0.008 Inches or more

Minimum Trace (Outer layer) : 0.006 Inches

Minimum Space (Outer layer) : 0.006 Inches

Minimum Trace (Inner layer) : 0.006 Inches

Minimum Space (Inner layer) : 0.006 Inches

Solder Mask : Yes, Solder Mask Sides : Top and Bottom

Solder Mask Color : Green

Solder Mask Type : LPI

Solder Mask Finish : Standard (Semi-Gloss)

Silk Screen : Yes

Silk Screen Sides : Both

Silk Screen Color : White

Internal Slots : None

Counter Sink : No

Counter Bore : No

Edge Plating : No

Route and Retain : Yes

Scoring : Yes

Controlled Impedance : None

Controlled Dielectric : No

Thru-Hole Via in Pad : No

Thickness Tolerance : Plus or Minus 10%

Logo Allowed : In copper or silk screen

UL Marking Required : Yes

Rohs Marking : Yes

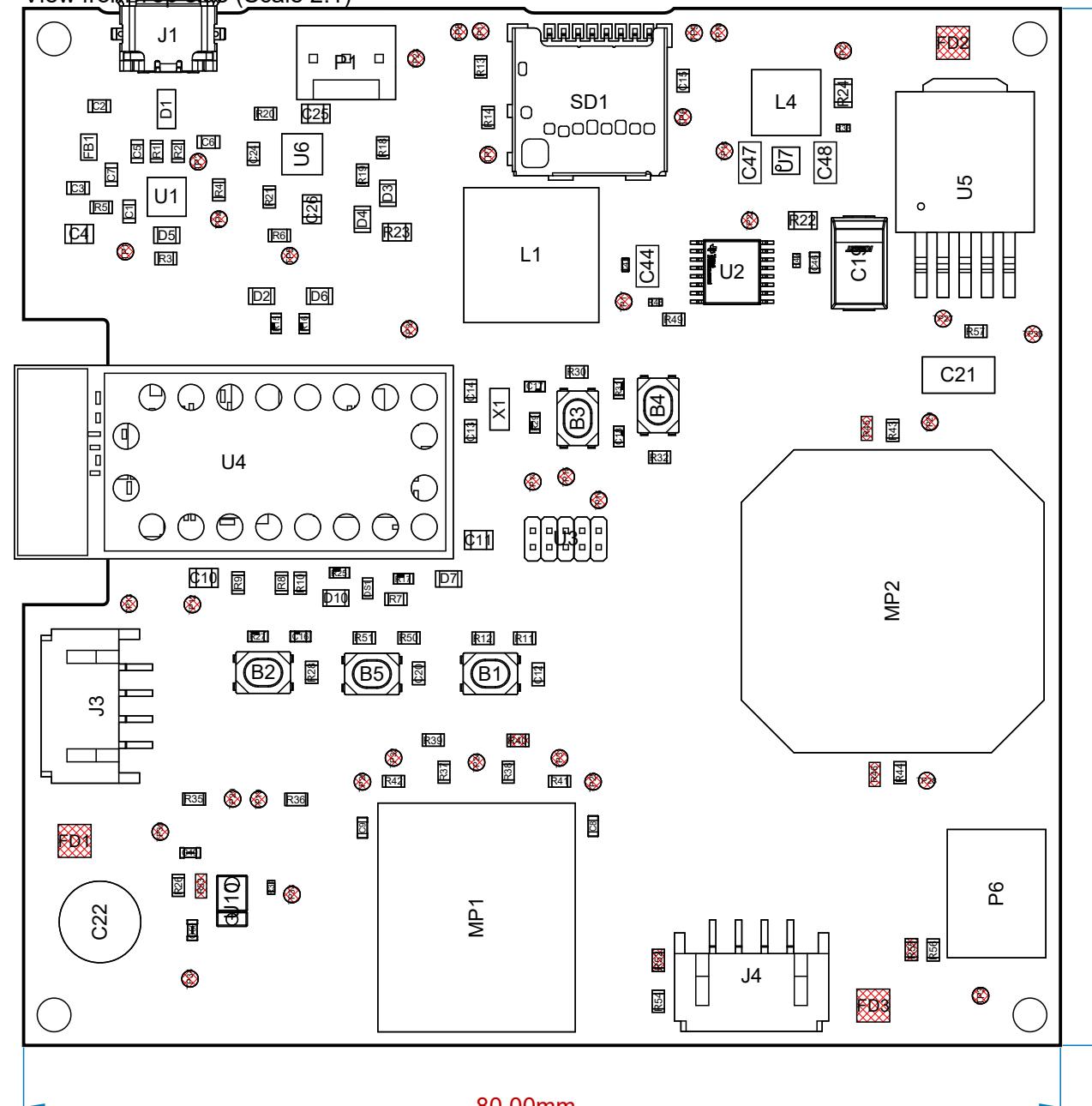
ITAR? : No

Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
Surface Material	Top Overlay			Legend	GTO
Copper	Top Solder	0.03mm(1mil)	Solder Resist	Solder Mask	GTS
	Top Layer	0.04mm(2mil)		Signal	GTL
Prepreg		0.33mm(13mil)	PP-006	Dielectric	
CF-004	GroundPlane	0.02mm(1mil)		Signal	G1
		0.71mm(28mil)	Core-009	Dielectric	
Core	PowerPlane	0.02mm(1mil)		Signal	G2
CF-004		0.33mm(13mil)	PP-006	Dielectric	
Prepreg	Bottom Layer	0.04mm(2mil)		Signal	GBL
Copper				Solder Mask	GBS
Surface Material	Bottom Solder	0.03mm(1mil)	Solder Resist	Legend	GBO
	Bottom Overlay				

Total thickness: 1.53mm(60mil)

View from Top side (Scale 2:1)



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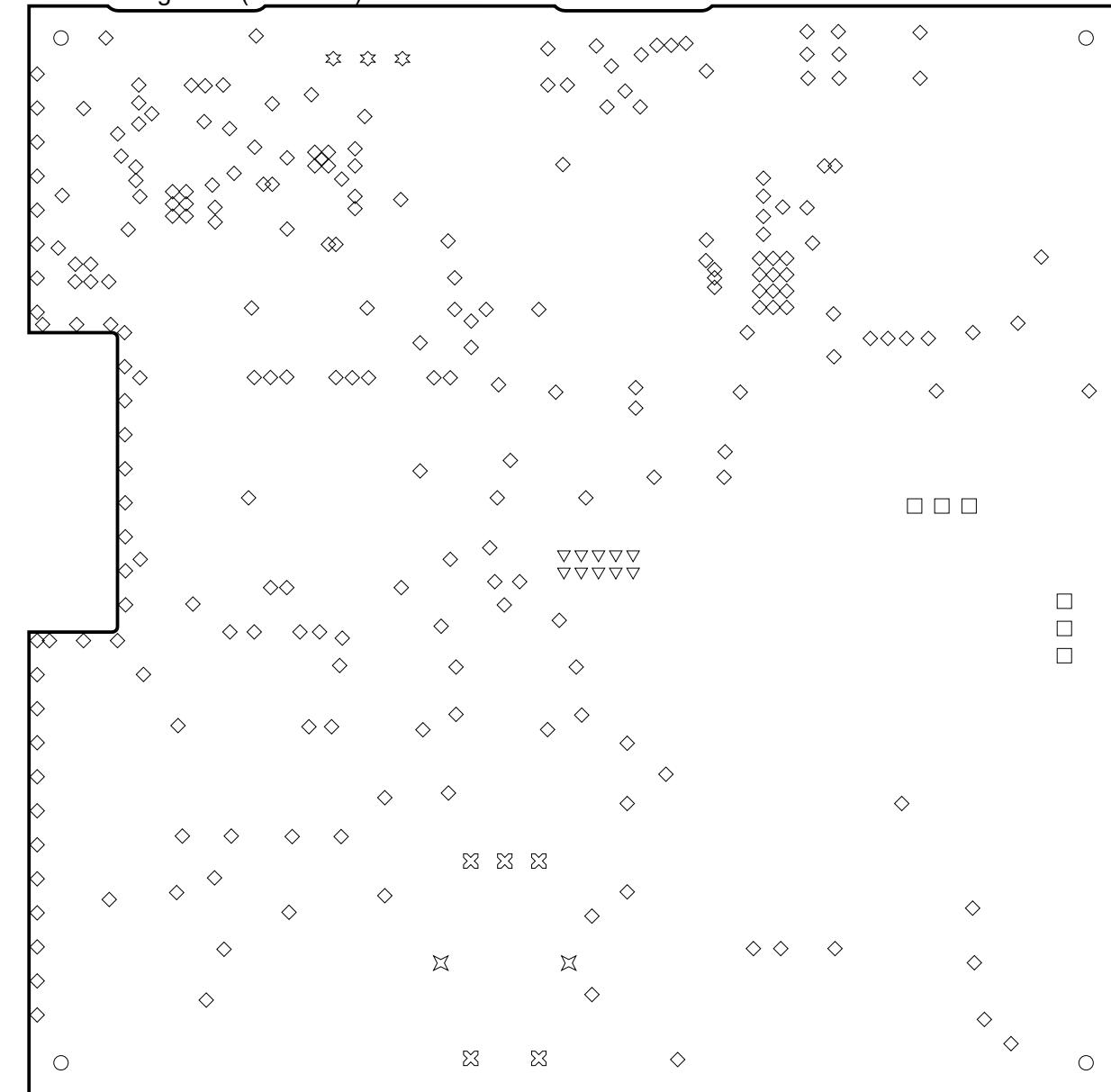
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REV STATUS OF SHEETS	REV	DWG NO:		*	REV: .lfe
		SHEET			

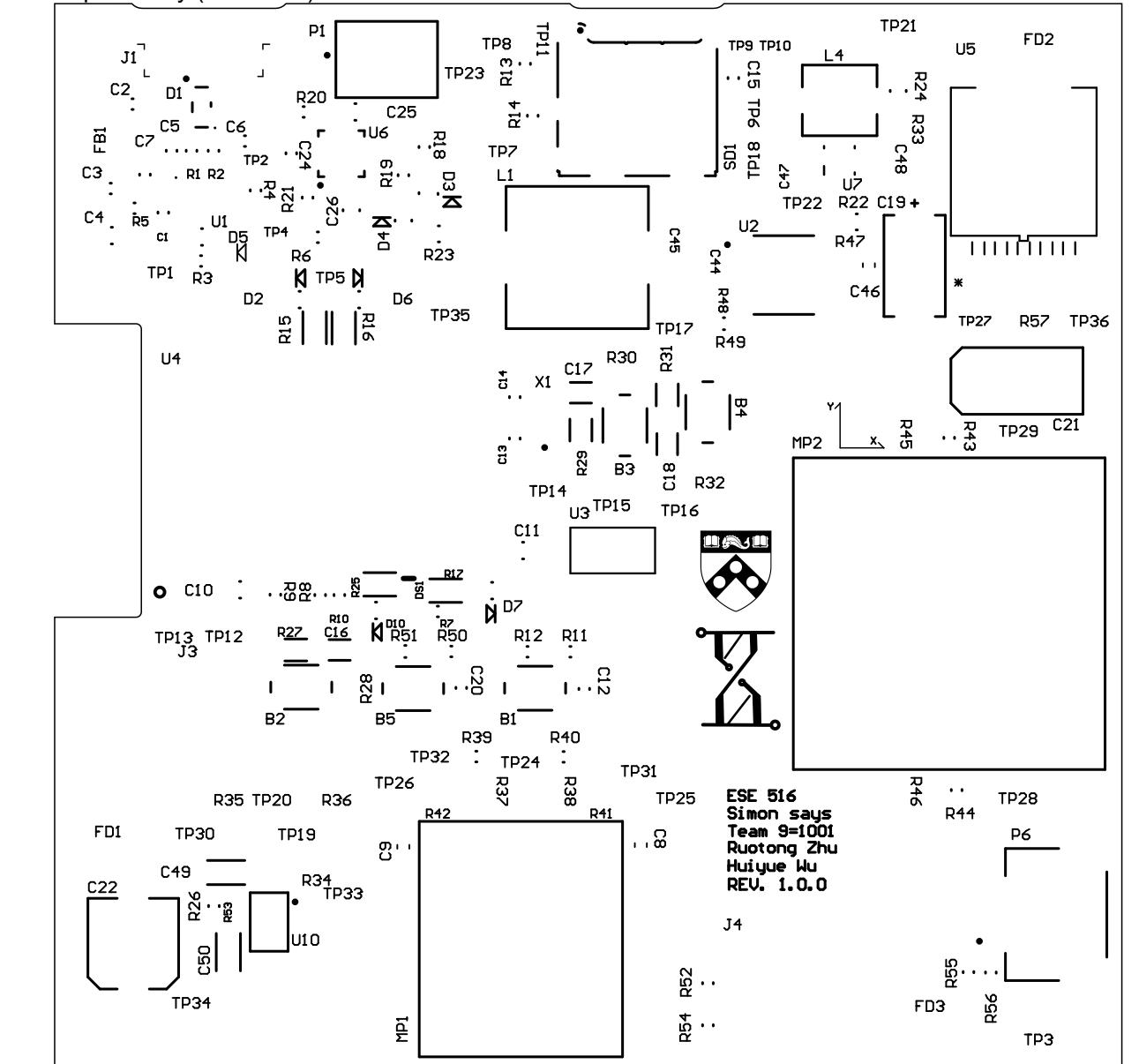
Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
◊	239	0.20mm	Plated	
▽	10	0.65mm	Plated	
□	6	0.90mm	Plated	
☒	5	1.20mm	Plated	
⊛	3	1.27mm	Plated	
☒	2	1.80mm	Plated	
○	4	2.70mm	Plated	
269 Total				

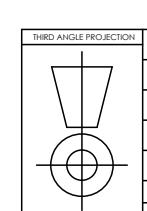
Drill Drawing View (Scale 2:1)



Top Overlay (Scale 2:1)



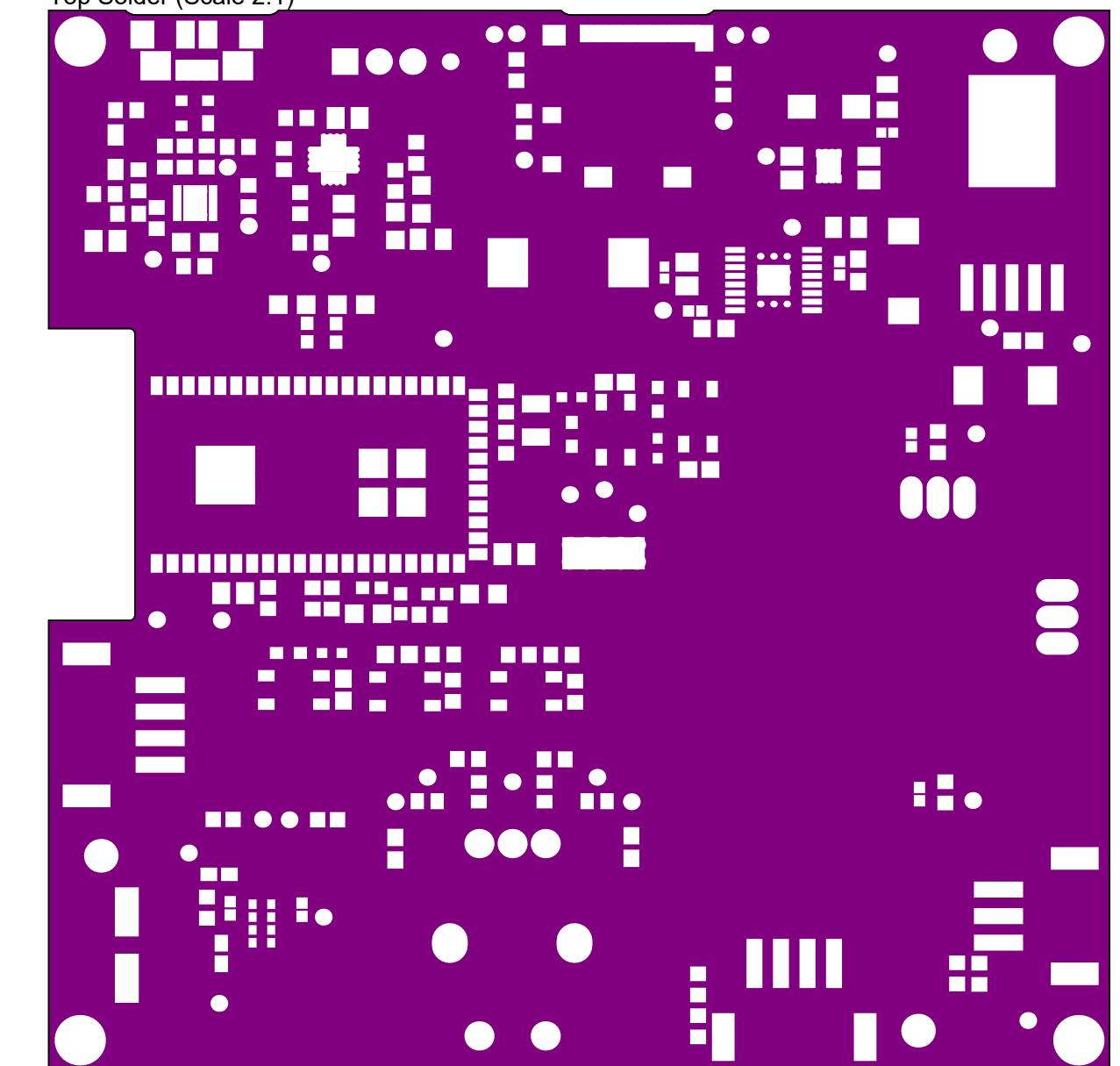
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EV. 1.0.0



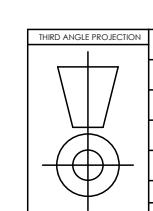
PART NO:				
APPROVALS	DATE	 <small>TM</small>		
ENGINEER:	HYW, RTZ	03/02/2022		
DESIGNER:	HYW, RTZ	03/02/2022		
CHECKER:	HYW, RTZ	03/02/2022		
Reference Documents				
BOM DOC:	ESE516_ExampleLayout			
ASSY DOC:	StarterBoardAssembly.P			
SCH DOC:	MAIN.SchDoc			
PCB DOC:	ESE516_PCB.PcbDoc			
DESIGN ITEM:		DESIGN ITEM REVISION:		
		.Item		.ItemRevision
TITLE:				
ESE 516 SimonSays				
SIZE:	CAGE CODE:	DWG NO:		
				REV:
B	*			
SCALE:	FILE NAME:	StarterBoardFabrication.PCBDwf		3 OF 10

REV STATUS OF SHEETS		REV	*	REV	.lfe	REVISIONS				
SHEET						ZONE	REV	DESCRIPTION	DATE	APPROVED

Top Solder (Scale 2:1)

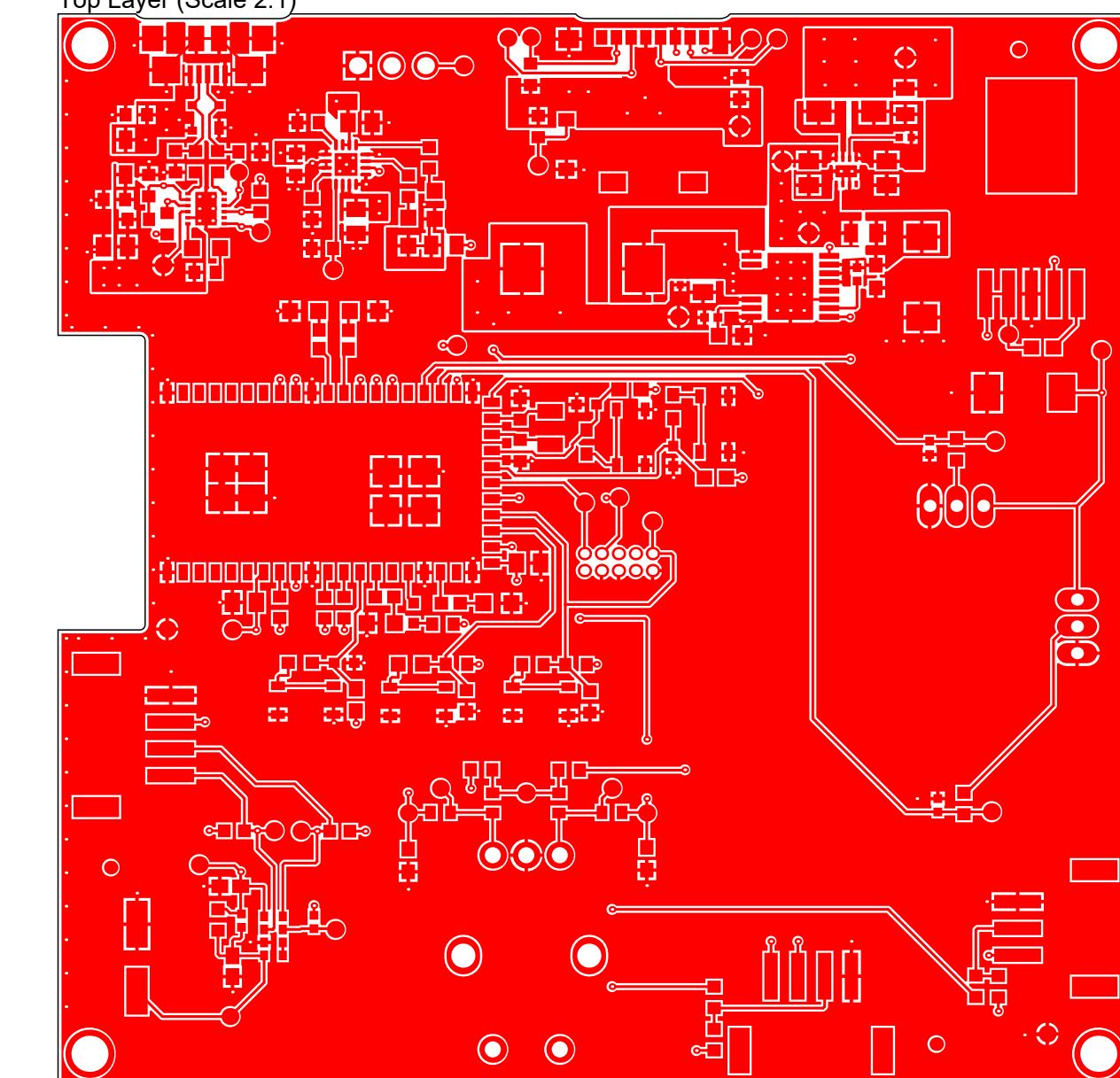


PART NO: *	APPROVALS	DATE		Electrical Engineering		
ENGINEER:	HYW, RTZ	03/02/2022		200 South 33rd St		
DESIGNER:	HYW, RTZ	03/02/2022		Philadelphia		
CHECKER:	HYW, RTZ	03/02/2022		PA, 19104		
DESIGN ITEM:	.Item	DESIGN ITEM REVISION:		.ItemRevision		
TITLE:	ESE 516 SimonSays					
SIZE:	CAGE CODE:	DWG NO:		REV:		
B	*					
SCALE:	FILE NAME:	StarterBoardFabrication.PCBDwf	Sheet:	4	of 10	



PART NO: *	APPROVALS	DATE		Electrical Engineering		
ENGINEER:	HYW, RTZ	03/02/2022		200 South 33rd St		
DESIGNER:	HYW, RTZ	03/02/2022		Philadelphia		
CHECKER:	HYW, RTZ	03/02/2022		PA, 19104		
DESIGN ITEM:	.Item	DESIGN ITEM REVISION:		.ItemRevision		
TITLE:	ESE 516 SimonSays					
SIZE:	CAGE CODE:	DWG NO:		REV:		
B	*					
SCALE:	FILE NAME:	StarterBoardFabrication.PCBDwf	Sheet:	4	of 10	

Top Layer (Scale 2)



PART N

APPROVALS	DATE	
ENGINEER: HYW, RTZ	03/02/2022	
DESIGNER:		

Electrical Engineering
200 South 33rd St
Philadelphia
PA 19104

DESIGN ITEM REVISION



Electrical Engineering
200 South 33rd St
Philadelphia
PA 19104

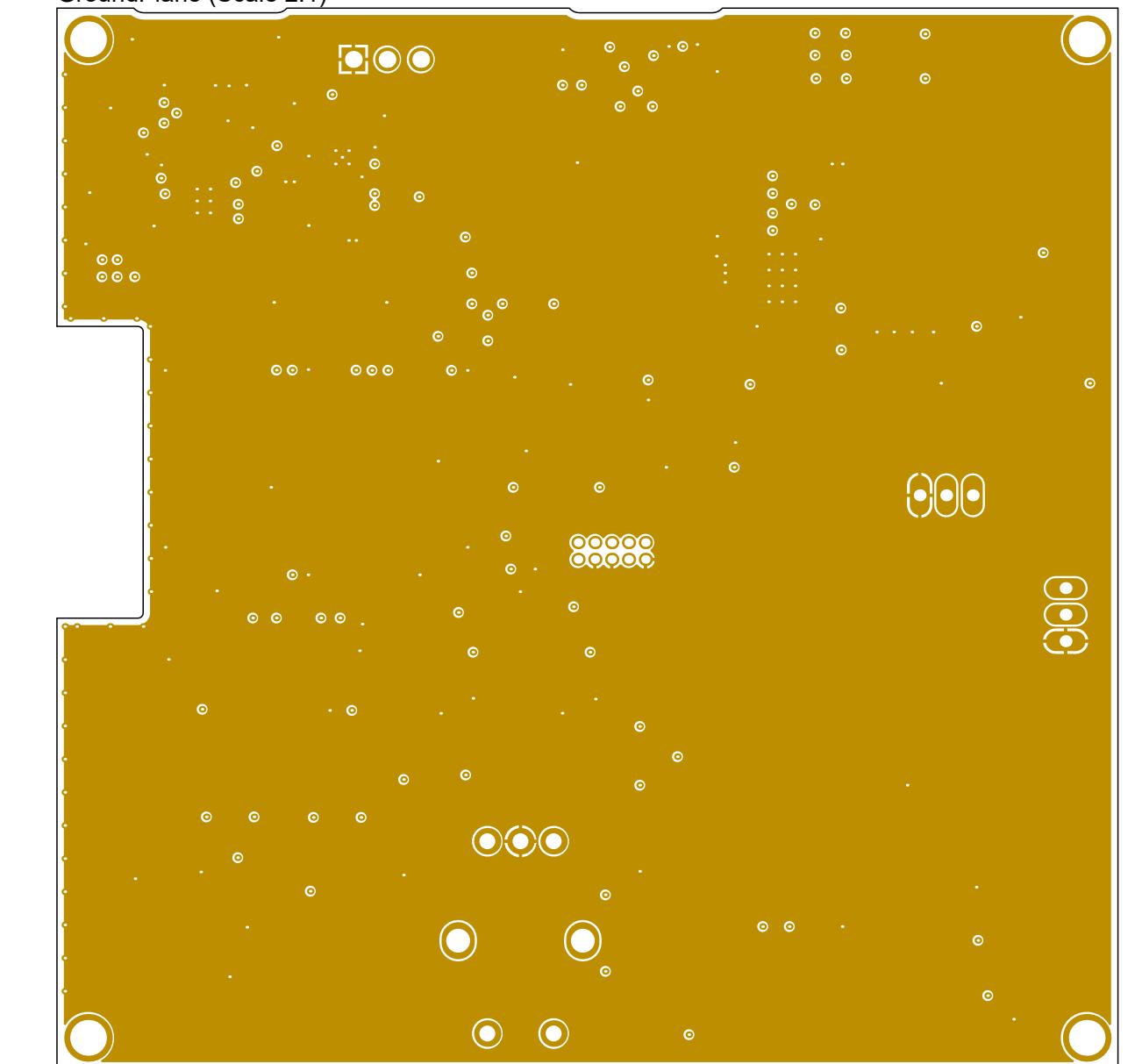
A symbol indicating Third Angle Projection, consisting of a vertical line with a horizontal crossbar, and a circle below it containing concentric arcs.

HYW, RTZ	03/02/2022	PA, 19104		
CHECKER:	HYW, RTZ	03/02/2022	DESIGN ITEM:	.Item
Reference Documents		DESIGN ITEM REVISION: .ItemRevision		
BOM DOC:	ESE516_ExampleLayout			
ASSY DOC:	StarterBoardAssembly.P			
SCH DOC:	MAIN.SchDoc			
PCB DOC:	ESE516_PCB.PcbDoc			
ESE 516 SimonSays				
SIZE:	CAGE CODE:	DWG NO:	REV:	
B	*			
SCALE:	FILE NAME:	StarterBoardFabrication_PCB.Dwf	SHEET:	5 OF 10

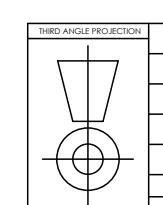
REV STATUS OF SHEETS	REV	*	REV
SHEET			.lfe

ZONE	REV	DESCRIPTION	DATE	APPROVED

GroundPlane (Scale 2:1)



PART NO: *	APPROVALS	DATE	
ENGINEER:	HYW, RTZ	03/02/2022	
DESIGNER:	HYW, RTZ	03/02/2022	
CHECKER:	HYW, RTZ	03/02/2022	
DESIGN ITEM:	.Item	DESIGN ITEM REVISION:	.ItemRevision
TITLE:	ESE 516 SimonSays		
SIZE:	CAGE CODE:	DWG NO:	REV:
B	*		
SCALE:	FILE NAME:	StarterBoardFabrication.PCBDwf	Sheet: 6 of 10



A

B

C

D

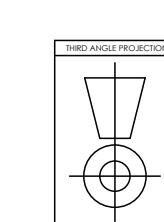
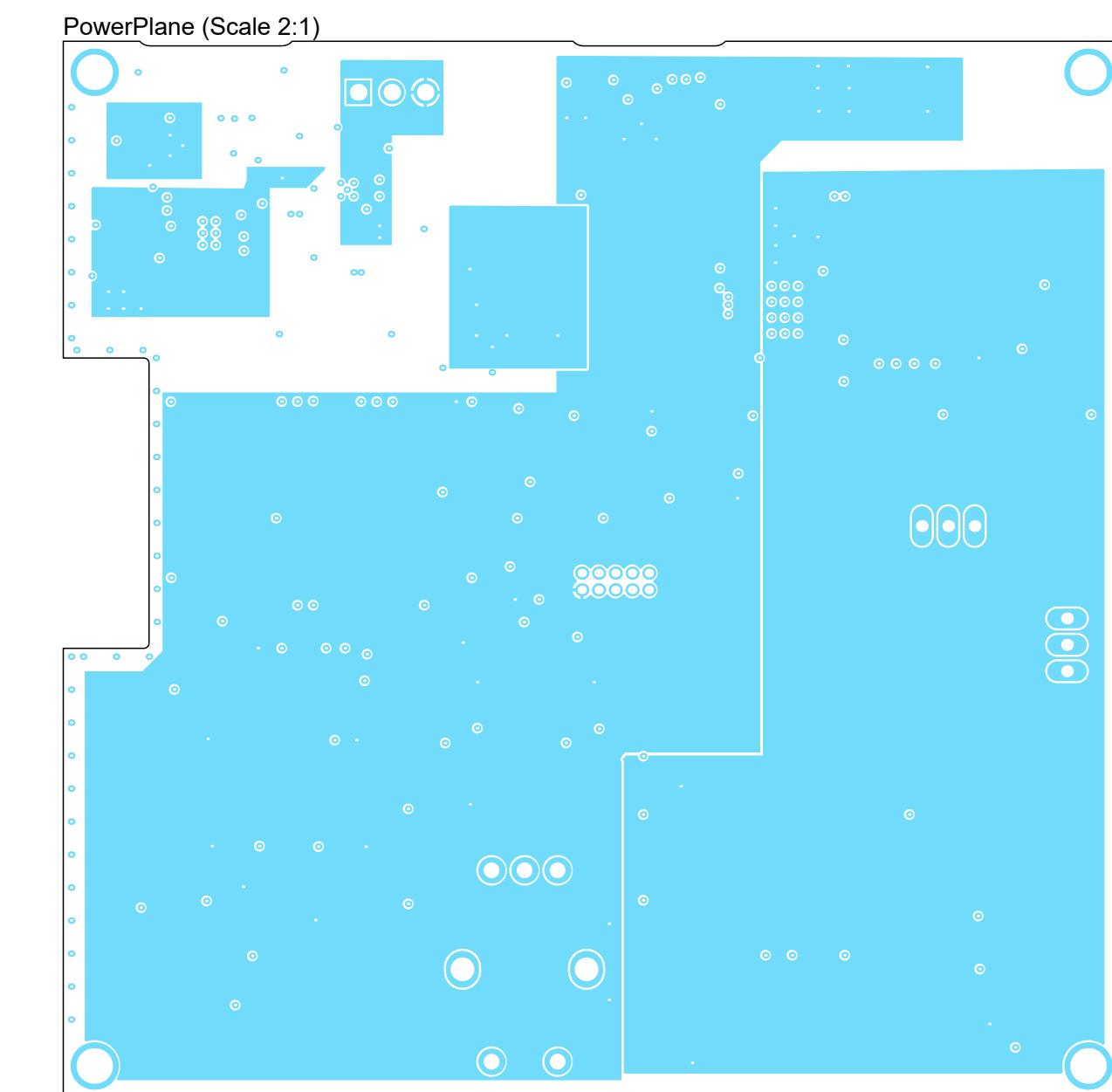
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REV STATUS OF SHEETS	REV	*	REV	.lfe
SHEET				

REVISIONS		DESCRIPTION	DATE	APPROVED



PART NO: *	APPROVALS	DATE	Altium Electrical Engineering 200 South 33rd St Philadelphia PA, 19104
ENGINEER:	HYW, RTZ	03/02/2022	
DESIGNER:	HYW, RTZ	03/02/2022	
CHECKER:	HYW, RTZ	03/02/2022	
DESIGN ITEM:	.Item	DESIGN ITEM REVISION:	.ItemRevision
BOM DOC:	ESE516_ExampleLayout	TITLE:	ESE 516
ASSY DOC:	StarterBoardAssembly.P		SimonSays
SCH DOC:	MAIN.SchDoc	SIZE:	CAGE CODE: * DWG NO: REV:
PCB DOC:	ESE516_PCB.PcbDoc	SCALE:	FILE NAME: StarterBoardFabrication.PCBDwf SHEET: 7 OF 10
APPLICATION			

A

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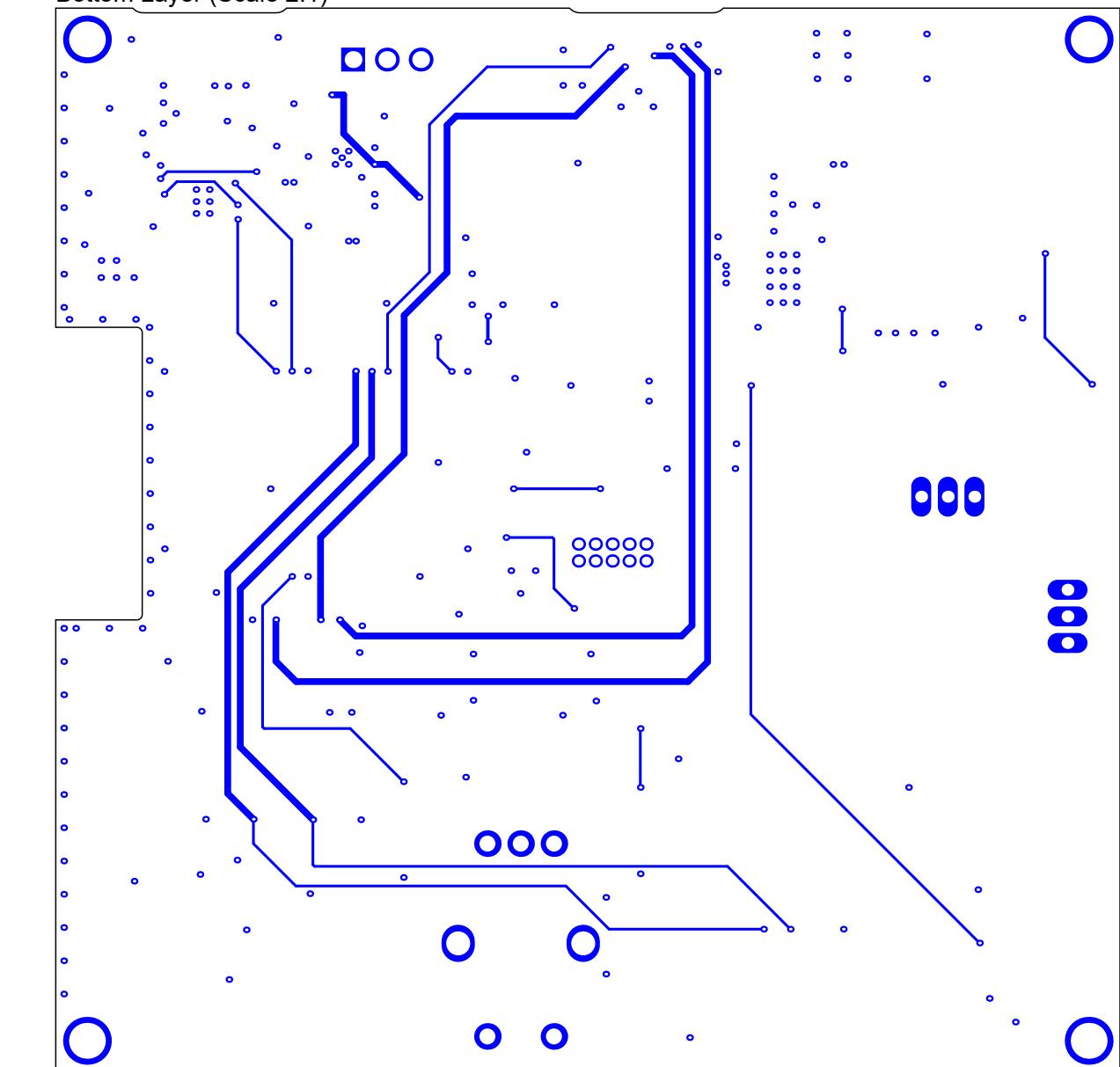
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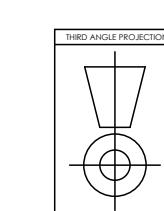
REV STATUS OF SHEETS	REV	*	REV	.lfe
SHEET				

REVISIONS		DESCRIPTION	DATE	APPROVED

Bottom Layer (Scale 2:1)



PART NO: *	APPROVALS	DATE	Altium Electrical Engineering 200 South 33rd St Philadelphia PA, 19104
ENGINEER:	HYW, RTZ	03/02/2022	
DESIGNER:	HYW, RTZ	03/02/2022	
CHECKER:	HYW, RTZ	03/02/2022	
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ASSY DOC:	StarterBoardAssembly.P		SimonSays
SCH DOC:	MAIN.SchDoc	SIZE:	CAGE CODE: * DWG NO: REV:
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APPLICATION			



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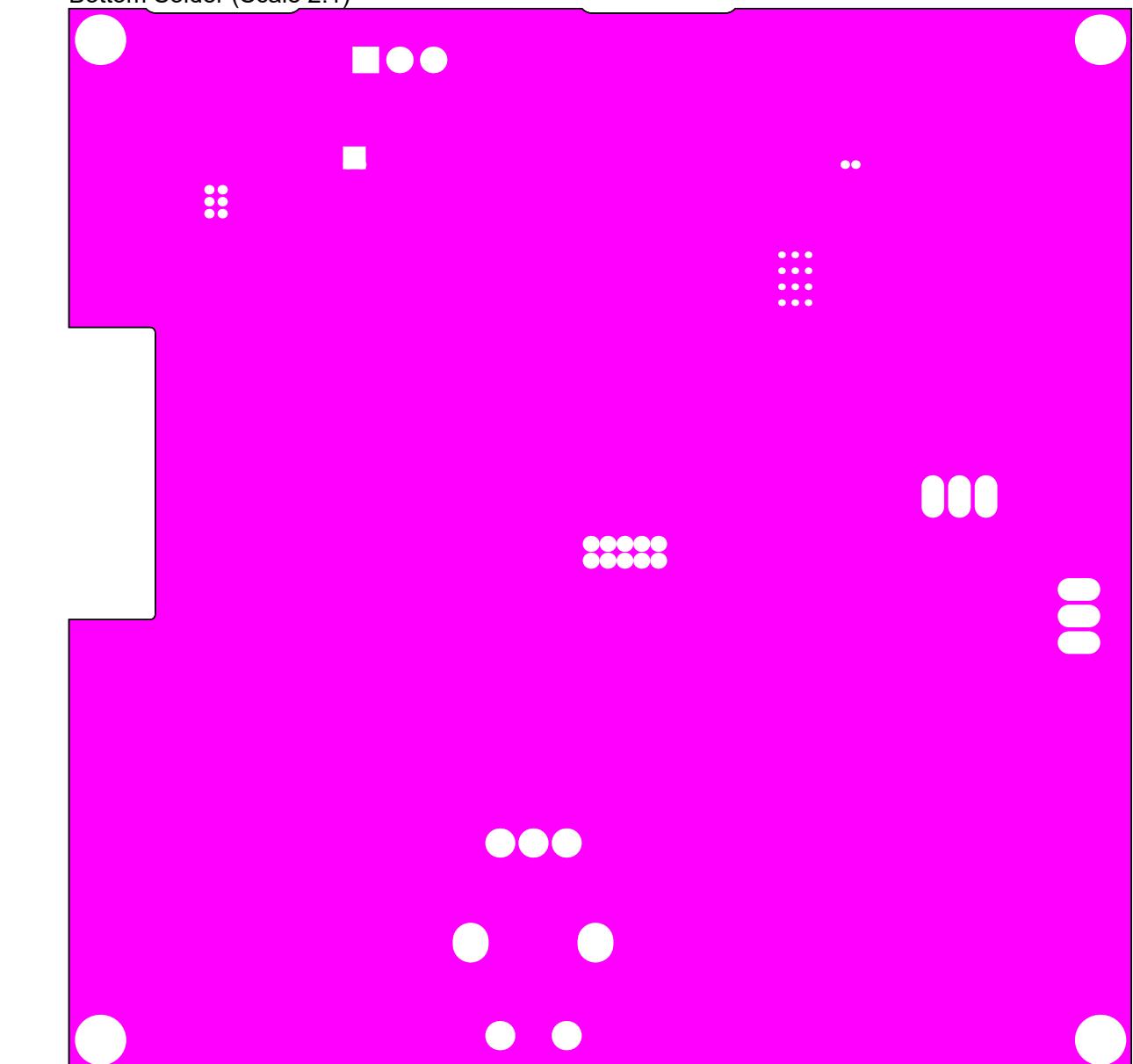
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REV STATUS OF SHEETS	REV SHEET	DWG NO:		*	REV: .lfe	ZONE	REV	REVISIONS				
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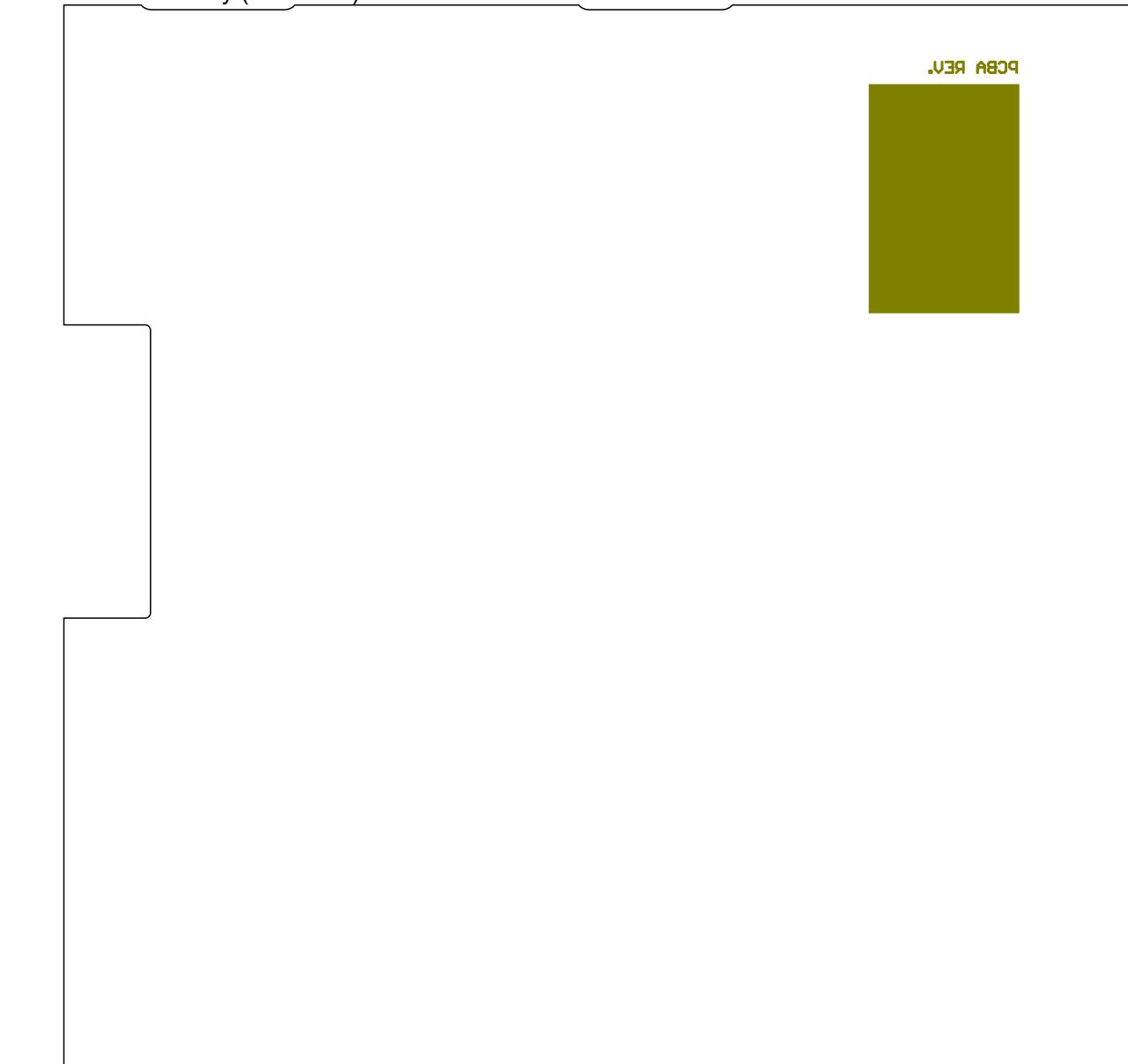
Bottom Solder (Scale 2:1)



PART NO: *	APPROVALS	DATE	Altium Electrical Engineering 200 South 33rd St Philadelphia PA, 19104
ENGINEER: HYW, RTZ	03/02/2022		
DESIGNER: HYW, RTZ	03/02/2022		
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DESIGN ITEM: .Item	DESIGN ITEM REVISION: .ItemRevision		
BOM DOC: ESE516_ExampleLayout	Reference Documents		
ASSY DOC: StarterBoardAssembly.P			
SCH DOC: MAIN.SchDoc			
PCB DOC: ESE516_PCB.PcbDoc			
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FILE NAME: StarterBoardFabrication.PCBDwf			
Sheet: 9	of 10		

REV STATUS OF SHEETS	REV SHEET	DWG NO:		*	REV: .lfe	
		ZONE	REV	DESCRIPTION	DATE	APPROVED

1 Bottom Overlay (Scale 2:1)



1

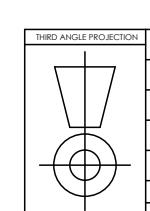
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3

4

4

PART NO: *	APPROVALS	DATE	
ENGINEER: HYW, RTZ	03/02/2022		
DESIGNER: HYW, RTZ	03/02/2022		
CHECKER: HYW, RTZ	03/02/2022		
DESIGN ITEM: .Item	DESIGN ITEM REVISION: .ItemRevision		
TITLE: ESE 516			
SimonSays			
SIZE: B	CAGE CODE: *	DWG NO:	REV: .lfe
SCALE: 10 OF 10	FILE NAME: StarterBoardFabrication.PCBDwf	SHEET: 10 OF 10	



APPLICATION

PCB DOC: ESE516_PCB.PcbDoc

NEXT ASSY

USED ON

SCH DOC: MAIN.SchDoc

ASSY DOC: StarterBoardAssembly.P

BOM DOC: ESE516_ExampleLayout

REFERENCE DOCUMENTS

CHECKER: HYW, RTZ

DATE: 03/02/2022

DESIGNER: HYW, RTZ

DATE: 03/02/2022

ENGINEER: HYW, RTZ

DATE: 03/02/2022

PART NO: *

APPROVALS

DATE

REV: .lfe

DWG NO:

FILE NAME:

STARTERBOARDFABRICATION.PCBDWF

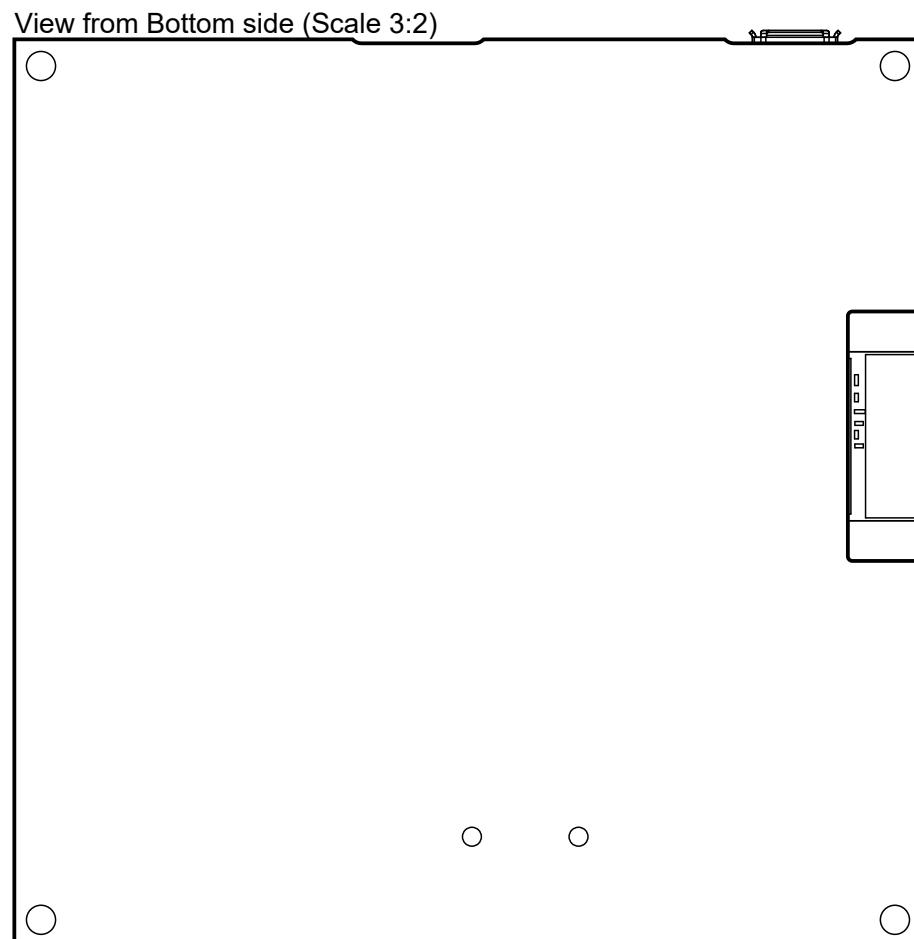
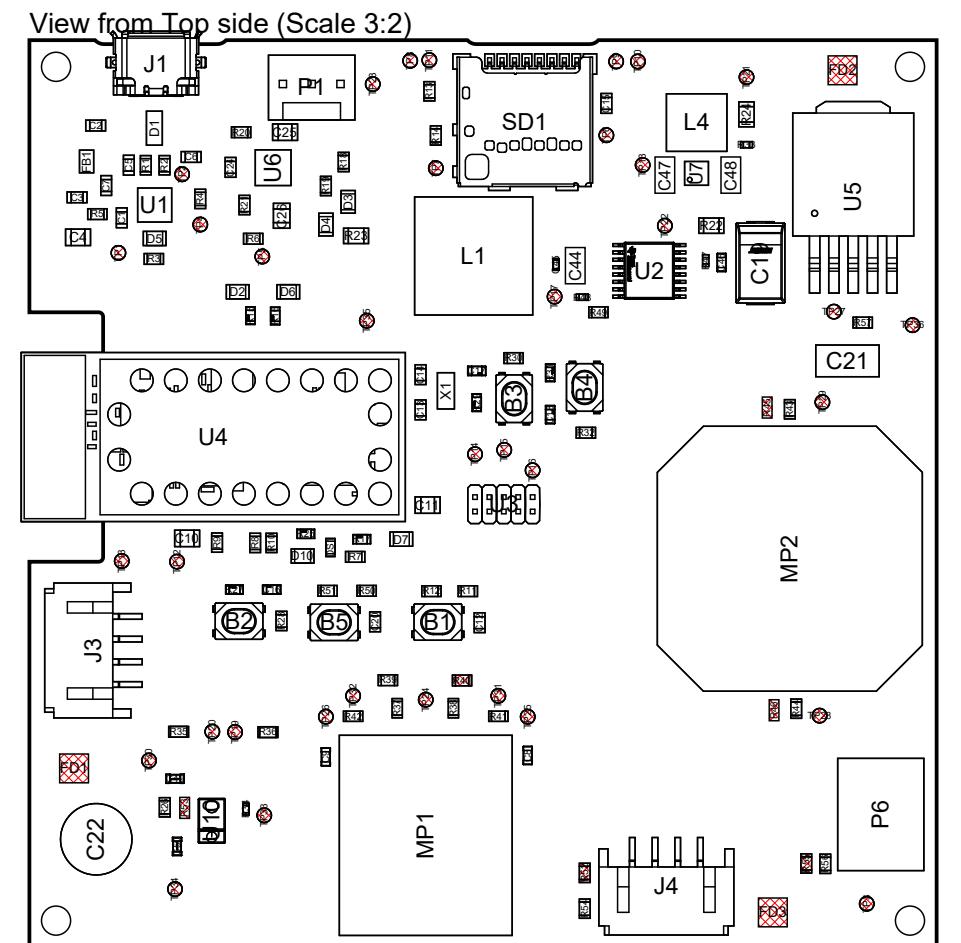
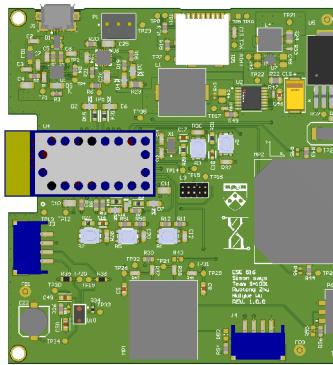
SHEET: 10 OF 10

Assembly Instruction

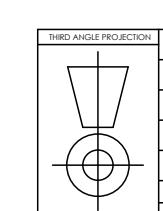
NOTES:

1. THIS ITEM IS ELECTROSTATIC SENSITIVE AND SHALL BE HANDLED ACCORDINGLY
2. WORKMANSHIP WILL CONFORM TO IPC-610 CLASS 2, IPC-7711 WILL APPLY TO ALL REQUIRED REWORK OR MODIFICATION
3. ASSEMBLY IS TO BE IDENTIFIED BY A LABEL INDICATING- SERIAL NUMBER PART NUMBER and REVISION VENDOR DATE CODE
4. THE SUPPLIED INSERTION DATA FOR THIS PCBA IS PROVIDED TO ASSIST PROGRAMMING, COMPONENT OFFSET AND ROTATION ARE RELATIVE TO THE ENGINEERING DESIGN ENVIRONMENT AND MAY NOT MATCH REEL PACKAGING OR FEED ORIENTATION, COMPONENTS, ESPECIALLY POLARIZED PARTS, MUST BE VERIFIED AGAINST THE ACTUAL PCBA DRAWING TO INSURE PROPER INSTALLATION

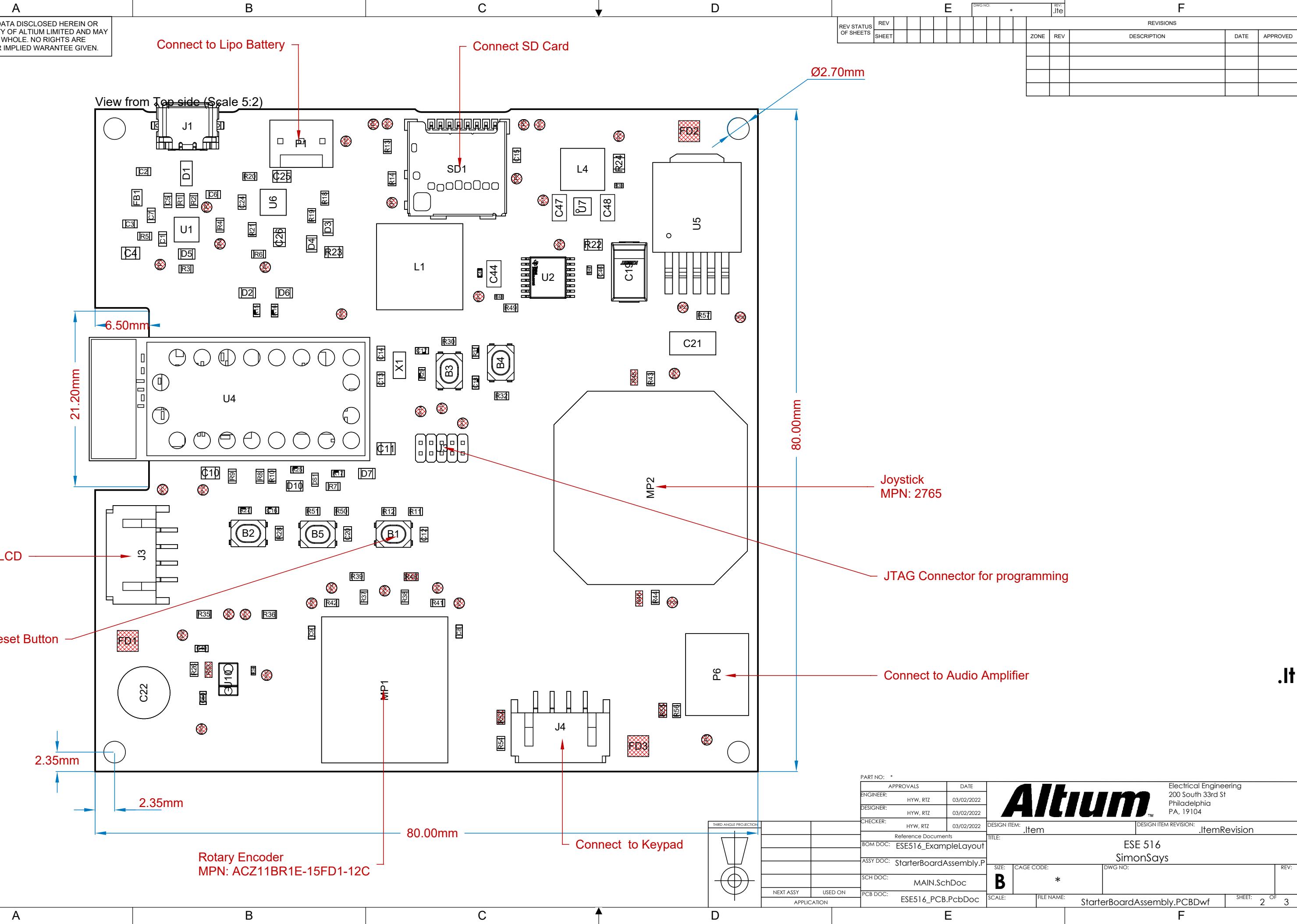
Realistic View



View from Right side (Scale 3:2)



PART NO: *		APPROVALS		DATE	Altium Electrical Engineering 200 South 33rd St Philadelphia PA, 19104
ENGINEER:	HYW, RTZ	DESIGNER:	HYW, RTZ	03/02/2022	
CHECKER:	HYW, RTZ	BOM DOC:	ESE516_ExampleLayout	03/02/2022	Reference Documents
ASSY DOC:	StarterBoardAssembly.P	SCH DOC:	MAIN.SchDoc		TITLE: ESE 516
NEXT ASSY	USED ON	PCB DOC:	ESE516_PCB.PcbDoc		SimonSays
APPLICATION		SCALE:	CAGE CODE: * DWG NO:	REV:	
A		FILE NAME:	StarterBoardAssembly.PCBDwf	1 OF 3	



REV STATUS OF SHEETS	REV SHEET	DWG NO. *		REV. .lfe	REVISIONS	
		ZONE	REV		DESCRIPTION	DATE

Bill Of Materials

Line #	Designator	Name	Quantity
	R15, R16, R17, R25	1k 1%	4
	C46	1uF	1
	C49, C50	1.0uF 50V	2
	L4	1uH	1
	R47, R48	2.15M	2
	L1	3.9uH	1
	R35, R36	4.7K 1%	2
	C16, C17, C18	4.7nF	3
	R34	10k	1
	R37, R38, R41, R42	10k 1%	4
	C8, C9	10nF 16V	2
	C21	10uF	1
	C44, C47	10uF	2
	C48	22uF	1
	R27, R29, R31	39R	3
	R28, R30, R32, R57	100k	4
	C45	100nF	1
	C22	100uF 25V	1
	R33	178k 1%	1
	C19	220uF 10V	1
	R49	390K 1%	1
	U10	APDS-9960	1
		Custom item 1	0
		Custom item 2	0
		Custom item 3	0
	MP2	Joystick	1
	U5	MIC39151-1.65WU	1
	P6	MPN-3885	1
	J4	MPN-3954	1
	J3	MPN-LCD-14532	1
	MP1	Rotary Encoder	1
	U2	TPS61032PWP	1
	U7	TPS62082DSGR	1
2	R20, R21	1K13 1%	2
3	R3, R5, R6, R7, R18, R19	1K 1%	6
4	C12, C20, C24	1uF 16V	3
5	C4, C25, C26	4.7uF 16V	3
6	R11, R13, R14, R50	10K 1%, 10K 1% 0603(1608)	4
7	C2	10nF 16V	1
8	C10, C11	10uF 16V	2
9	C13, C14	18pF 16V	2
11	R1, R2, R8, R9, R10	27R 1%	5
14	C5, C6	47pF 16V	2
16	C1, C3, C7, C15	100nF 16V, CAP 100nF 16V 0603(1608)	4
17	R12, R51	100R 1%	2
19	SD1	104031-0811	1
20	P1	640456-3	1
21	U3	20021111-00010T4LF	1
22	X1	ABS07-32.768KHz-T	1
24	FB1	BLM21PG221SN1D	1
25	U6	BQ24075RGTRG4	1
27	U1	FT234XD-R	1
28	R4, R26, R39, R43, R44, R54, R56	Jumper	7
29	R22, R23, R24	Jumper	3
30	D2, D3, D5, D6	LTST-C170CKT	4
31	D4, D7, D10	LTST-C170GKT	3
32	DS1	LTST-C191KGKT	1
34	D1	PRTR5V0U2X,215	1
35	B1, B2, B3, B4, B5	PTS810 SJK 250 SMTR LFS	5
36	U4	SAMW25H18-MR510PB	1
39	J1	ZX62R-B-5P	1

