

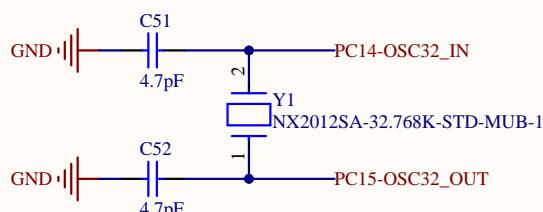
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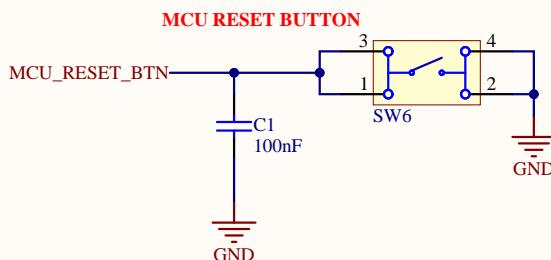
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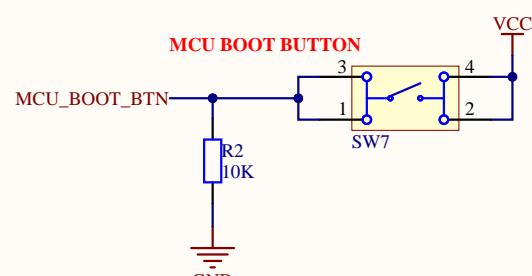
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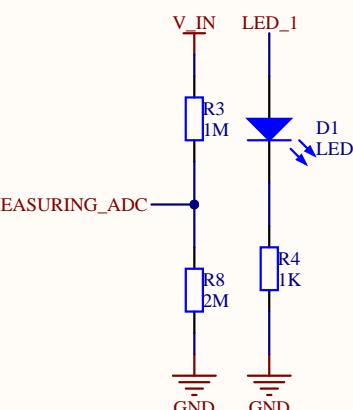
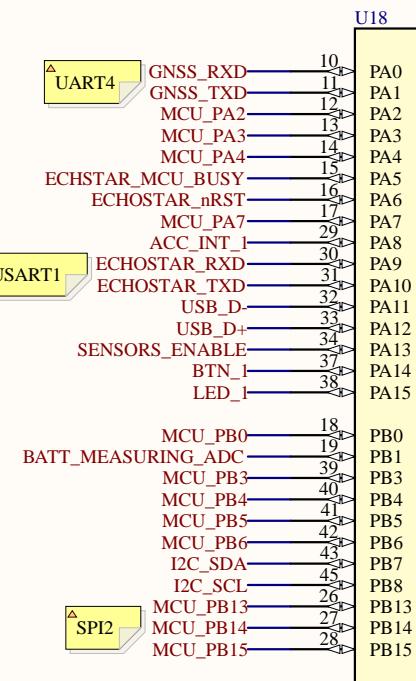
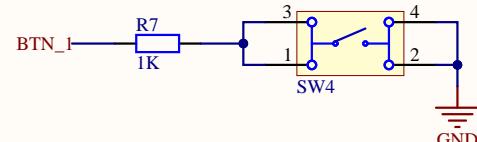
B



C



D



Title

Size

A

Number

Revision

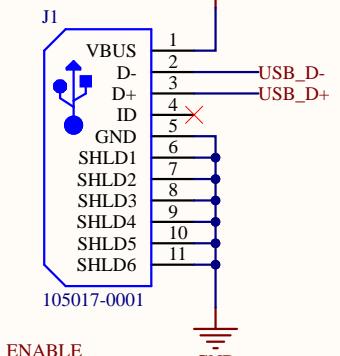
Date: 2/02/2024

Sheet of

File: C:\Users...\MCU.SchDoc

Drawn By:

PROGRAMMING USB V_USB



A

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1

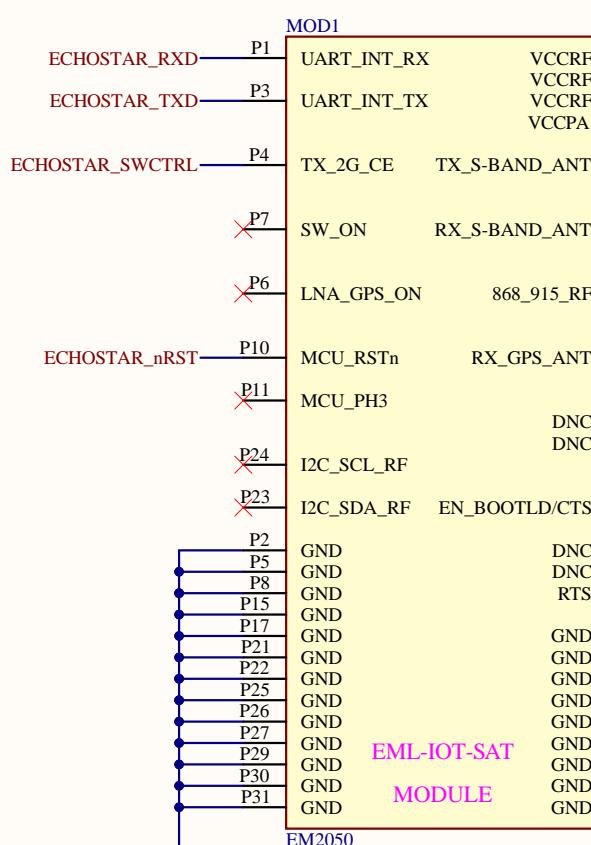
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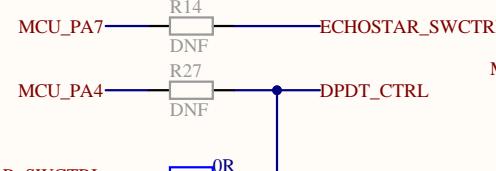
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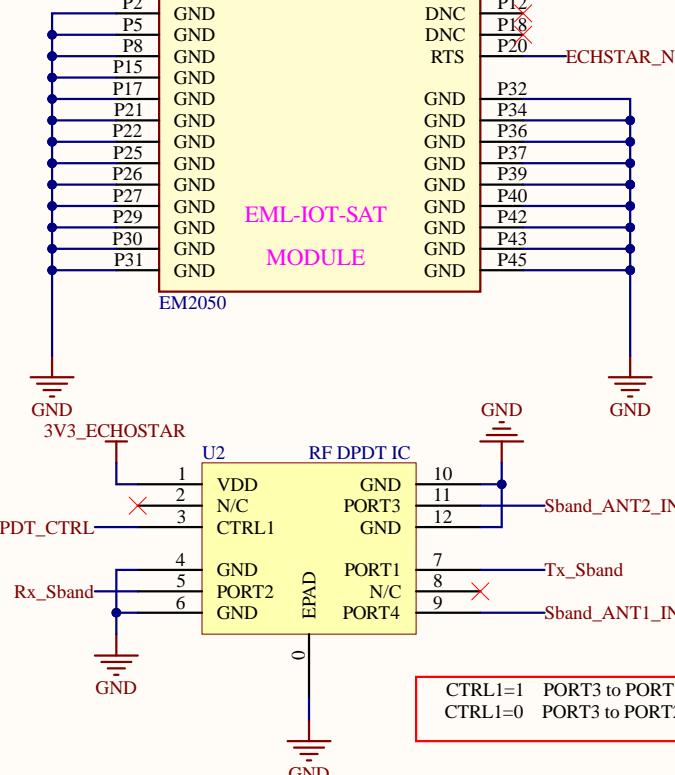


3V3_ECHOSTAR

R14 & R27 together make an option of MCU manipulation of the SBand RF Switch controlling signal (E.g. reversing).



R28, in the other hand, take the direct Sband RF Switch controlling signal.



Title

Size

A

Number

Revision

Date:

2/02/2024

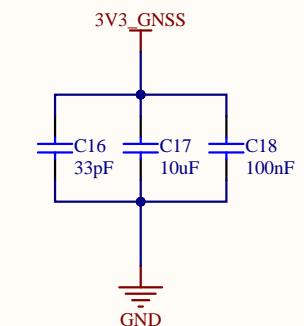
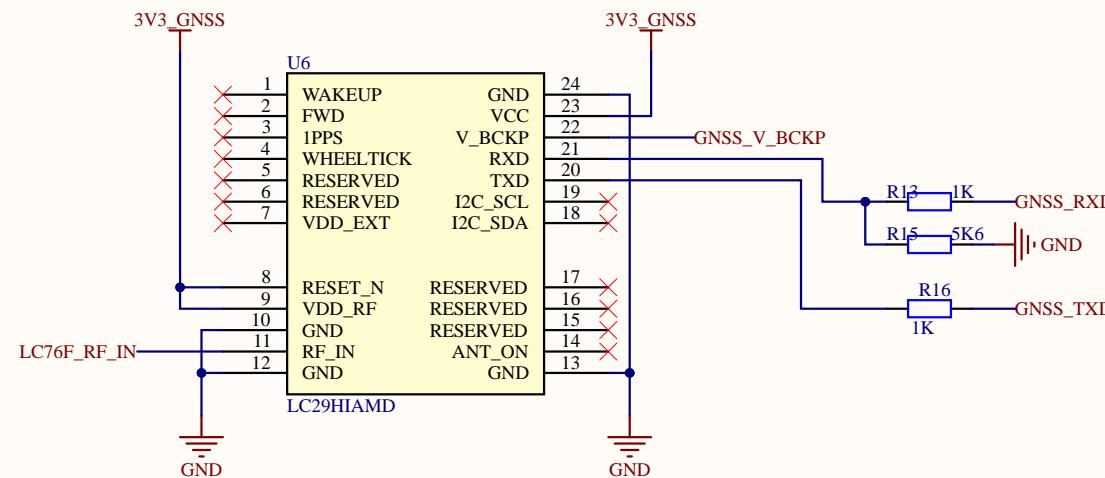
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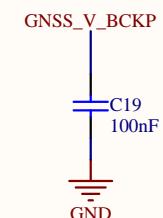
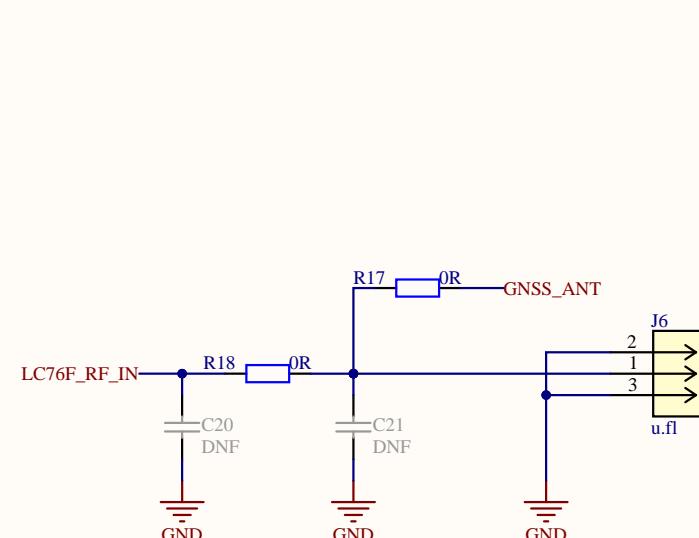
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Drawn By:

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C

Title

Size
A

Number	Revision
Date: 2/02/2024	Sheet of
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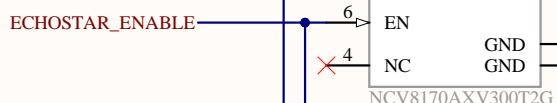
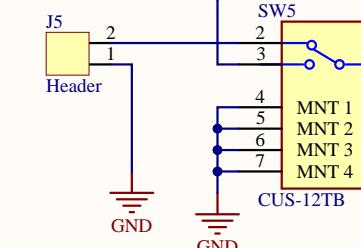
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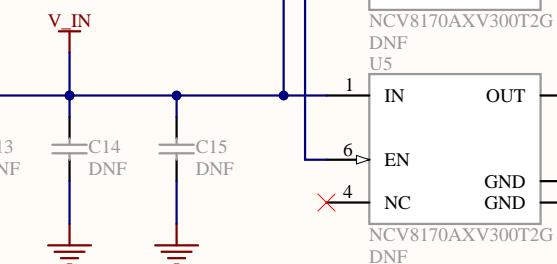
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A

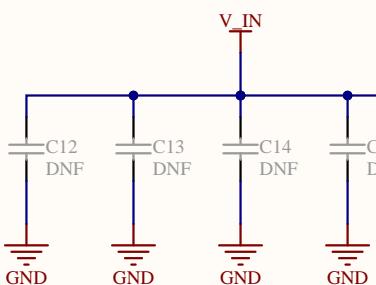
POWER INPUT

3V3_ECHOSTAR



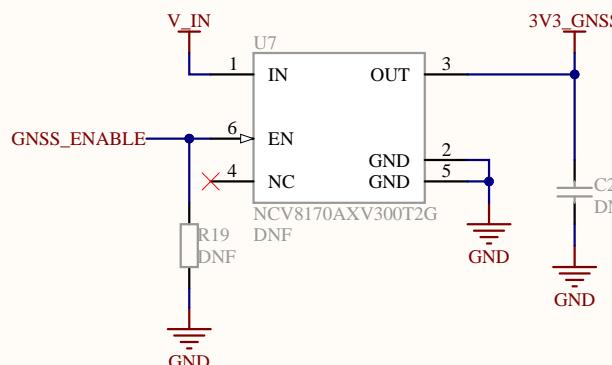
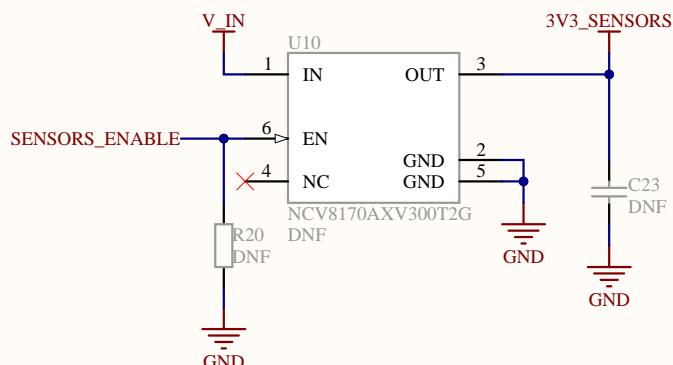
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B



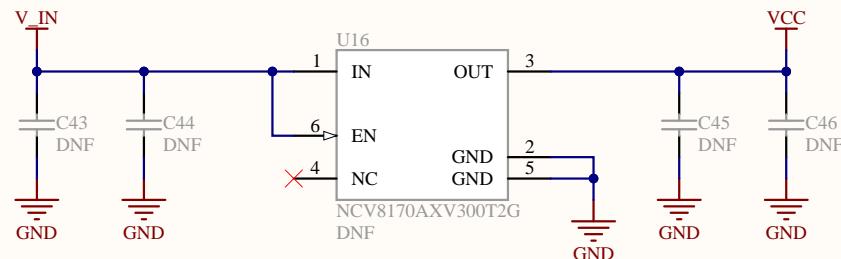
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Title		
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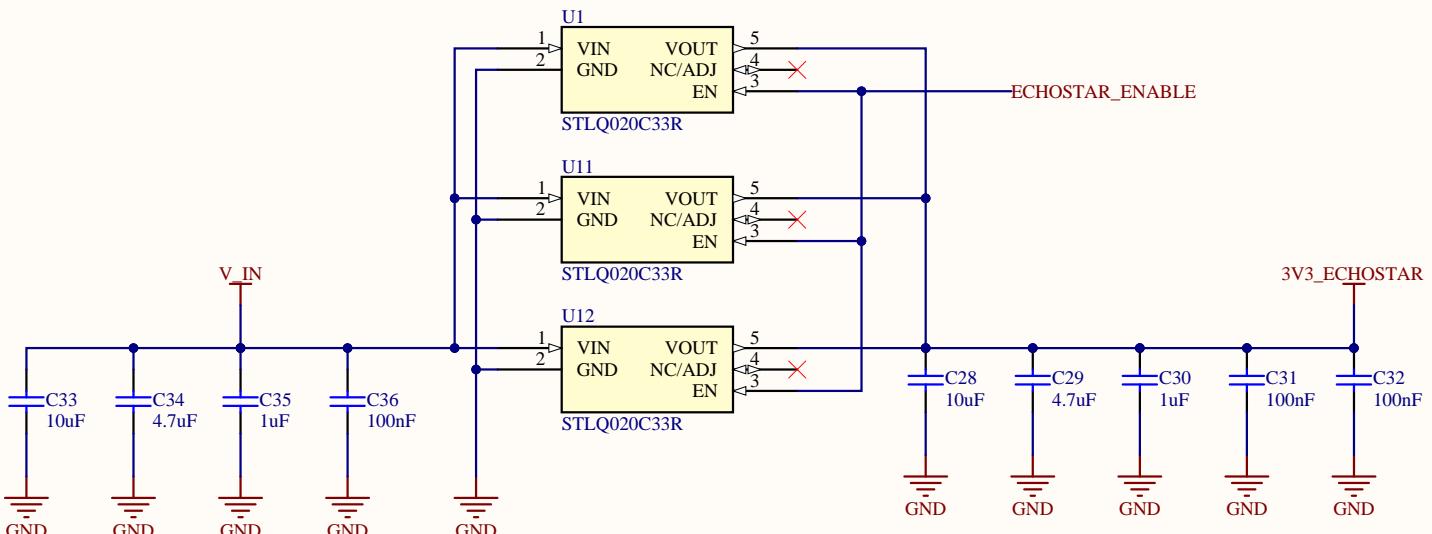
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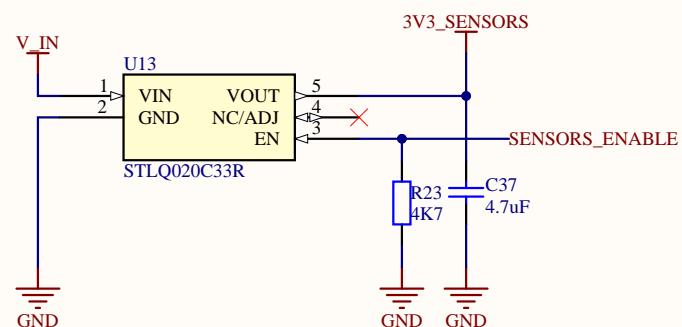
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A



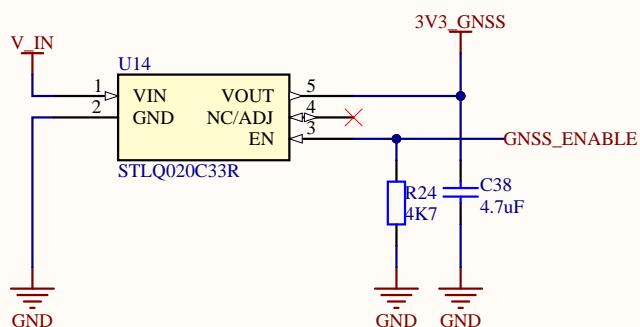
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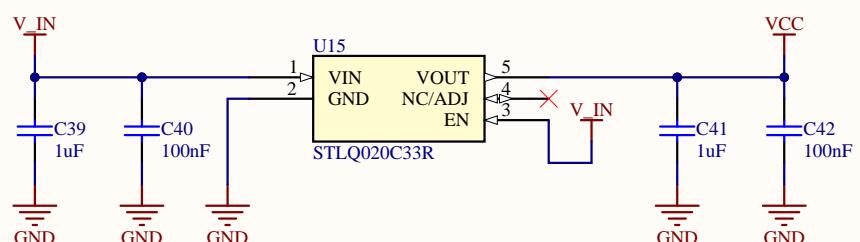
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Title

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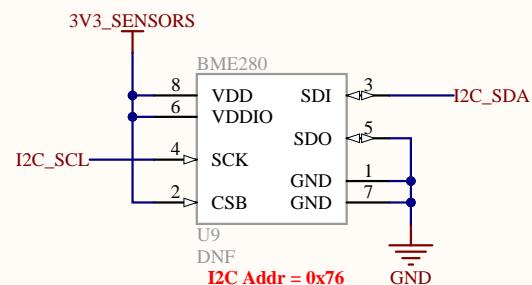
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Date: 2/02/2024

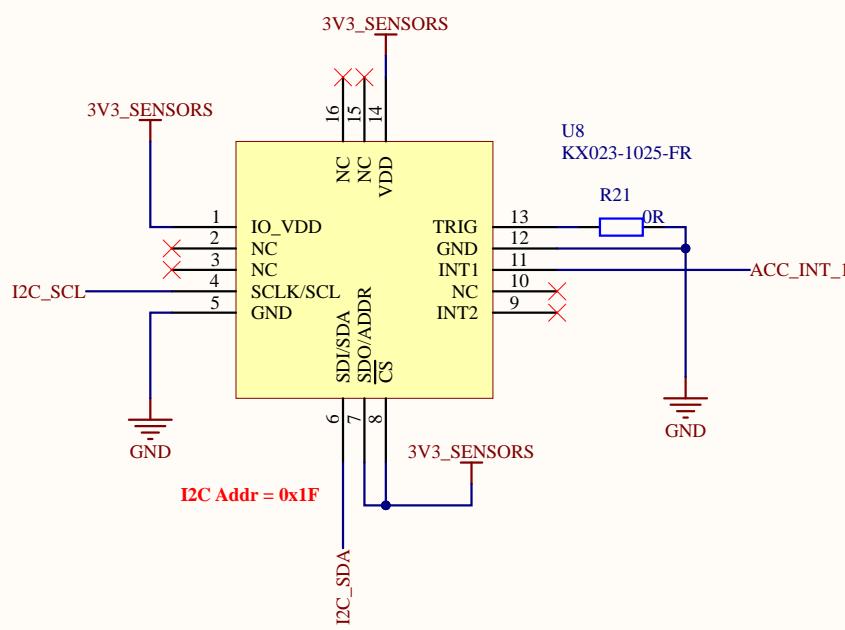
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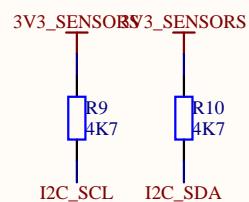
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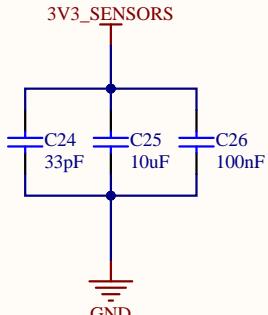
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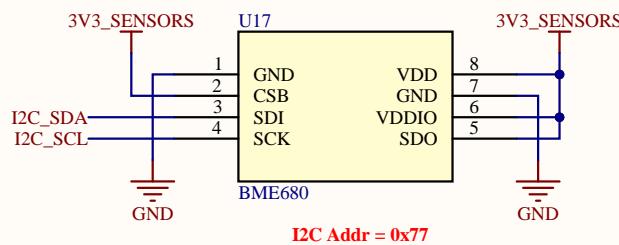
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C



D



C

D

Title

Size
A

Number

Revision

Date: 2/02/2024

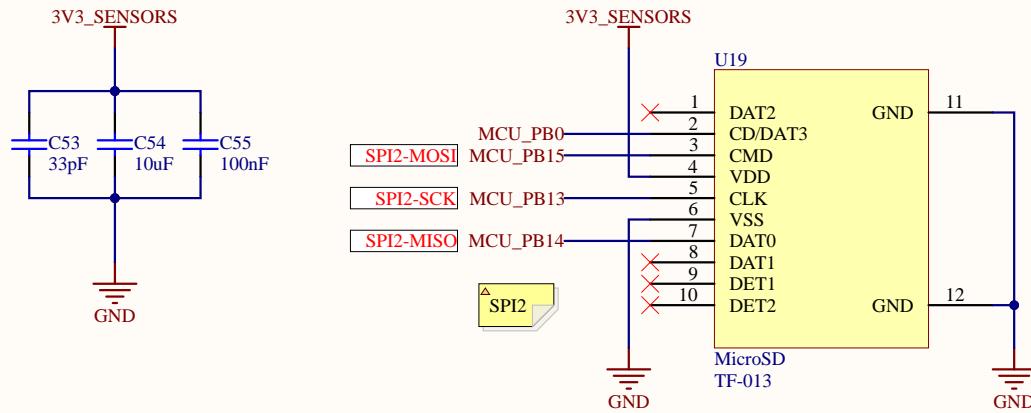
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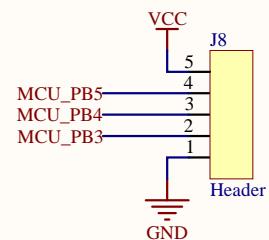
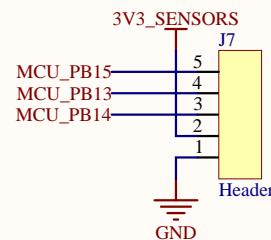
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Title

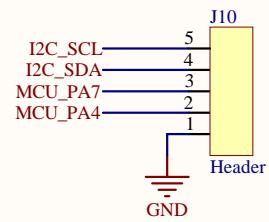
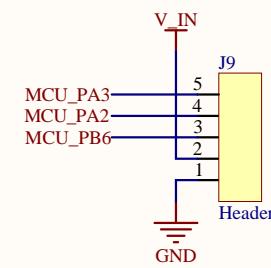
Size A	Number	Revision
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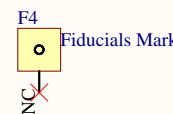
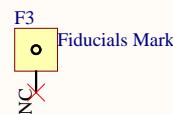
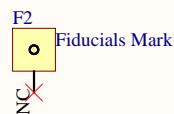
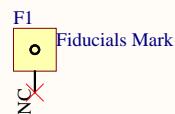
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Title

Size
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Number

Revision

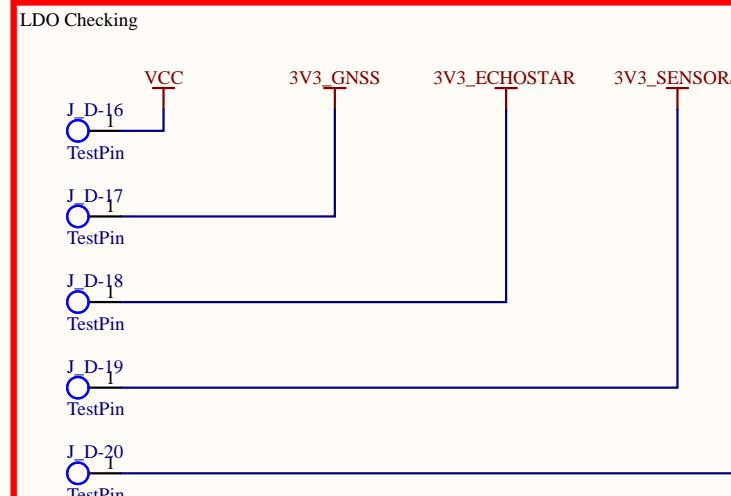
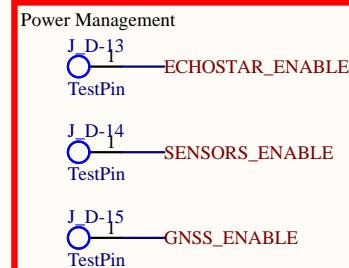
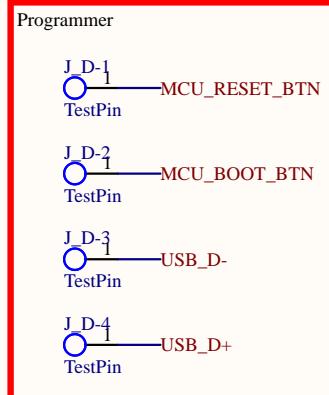
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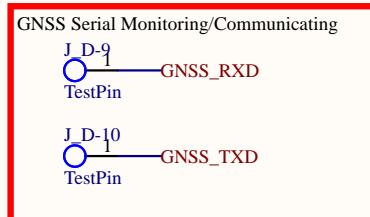
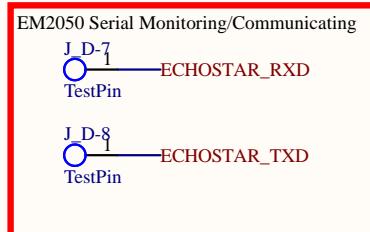
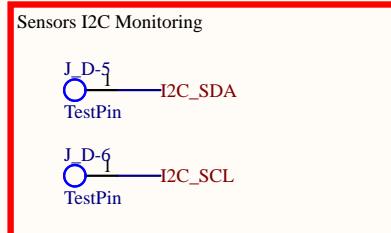
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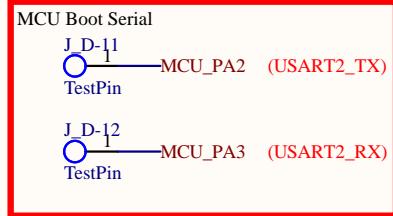
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C



Title

Size

A

Number

Revision

Date:

2/02/2024

Sheet of

File:

C:\Users\.\TestPoints.SchDoc

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A

B

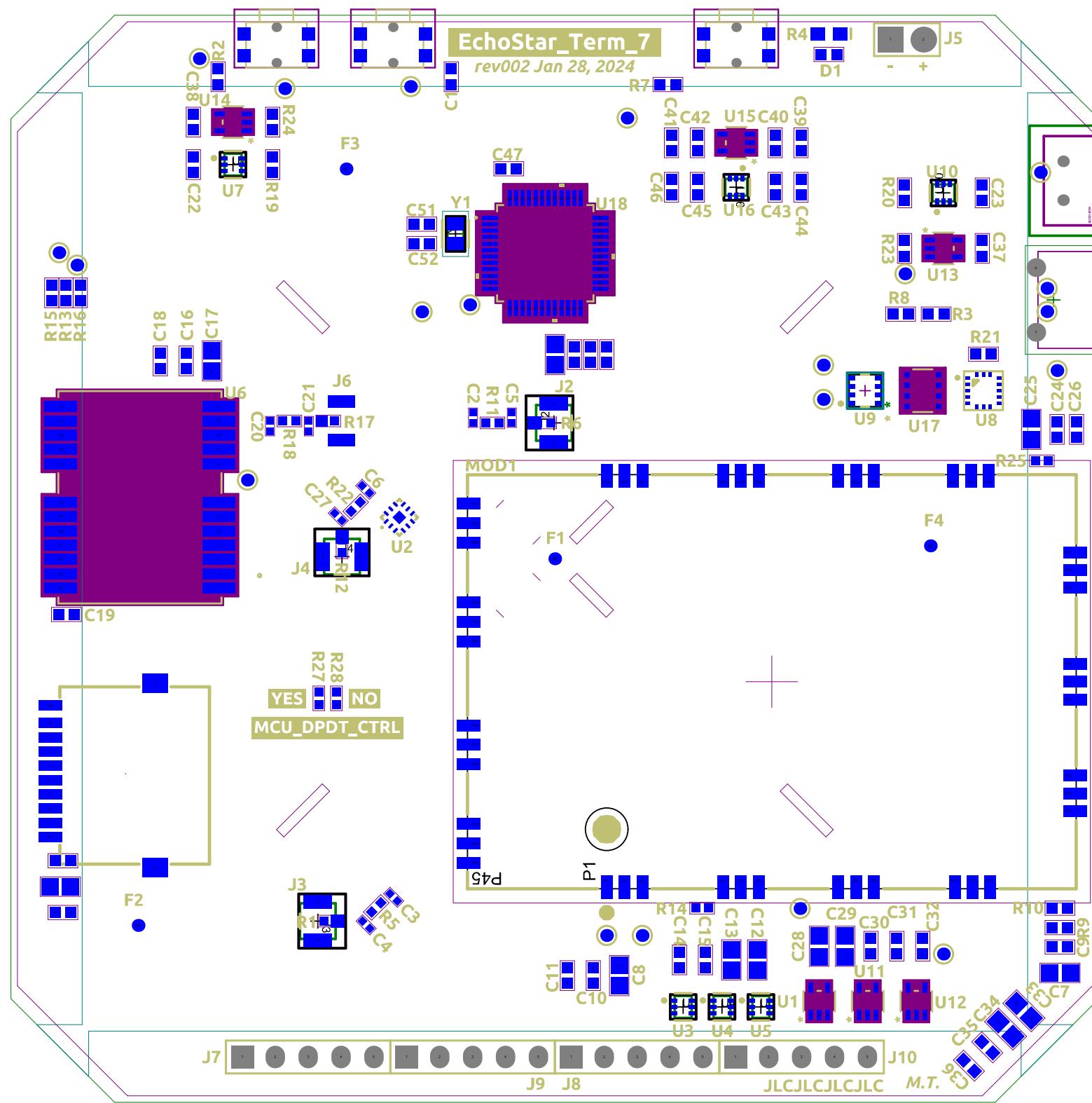
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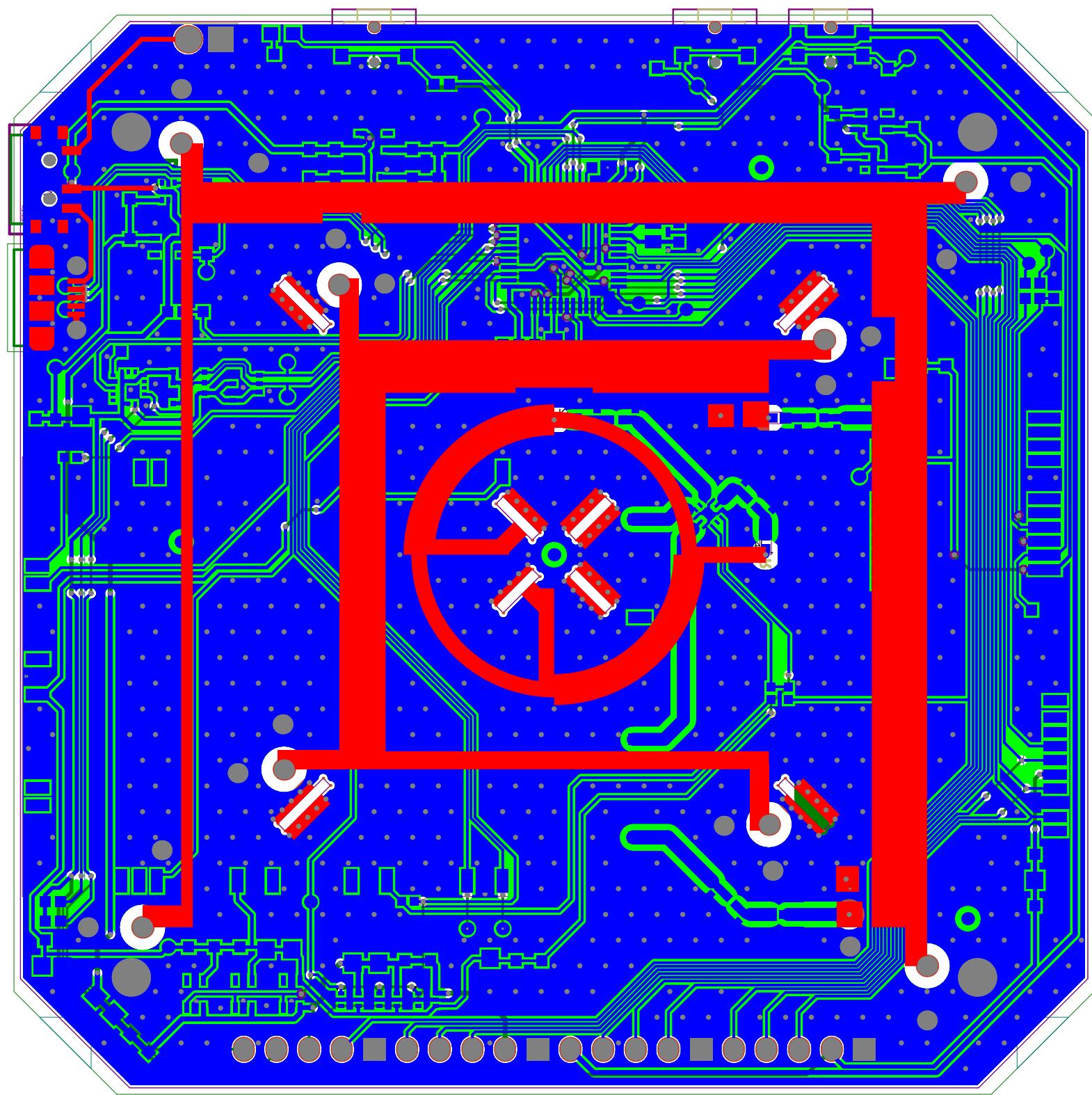
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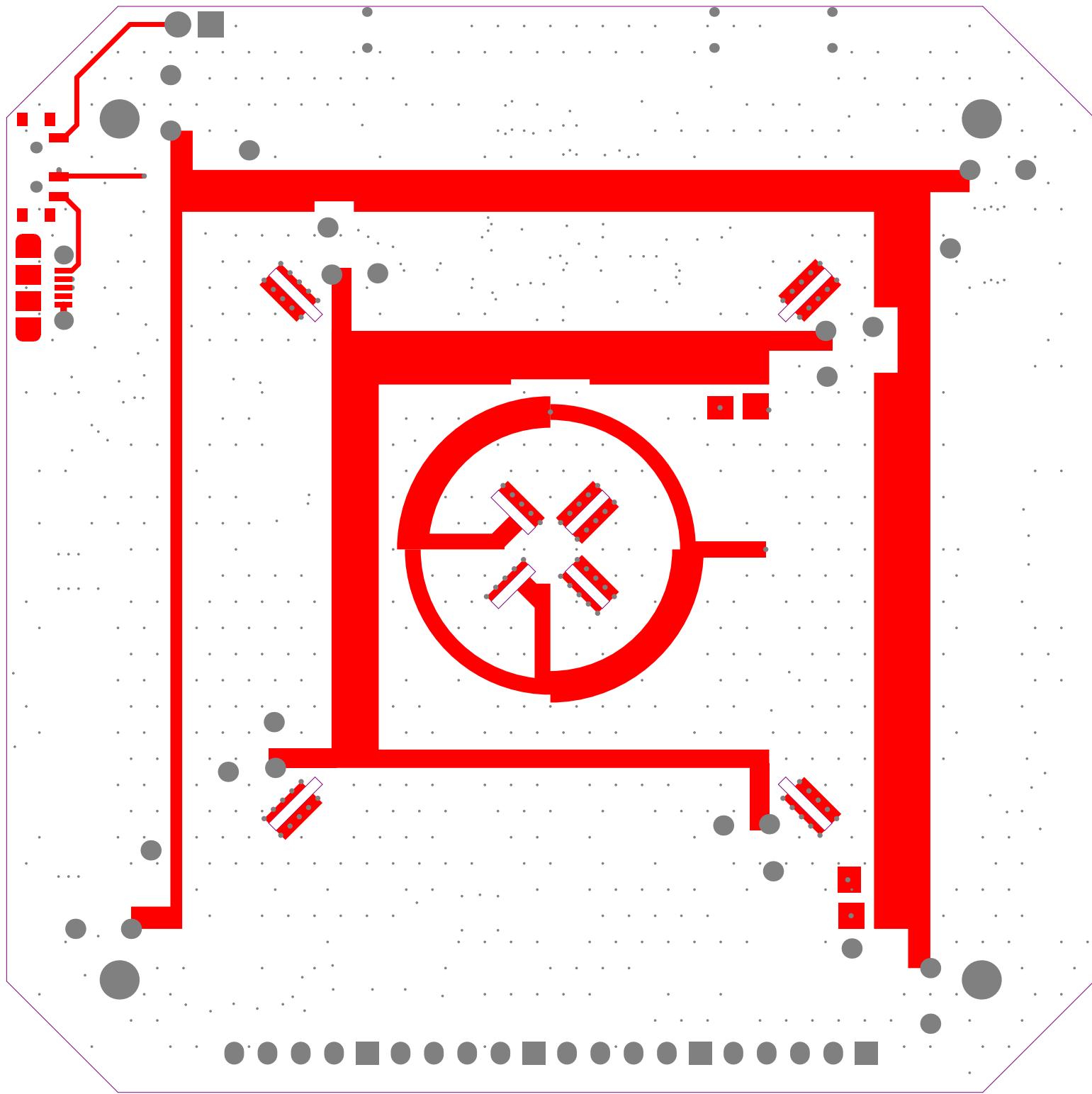
Comment	Description	Designator	Footprint	LibRef	Quantity	Value	Manufacture	Manufacturer	Manufacturer Packaging 1	Manufacturer P/N	Manufacturer Part Number	Manufacturer URL
Cap	Capacitor SMD	C1, C18, C19, C26, C31, C32, C36, C40, C42, C50, C55	rhc_603_smd_small	Cap	11	100nF						
Cap	Capacitor SMD	C2, C3, C4, C5, C6, C20, C21, C27	rhc_402_smd_small	Cap	8	DNF						
Cap	Capacitor SMD	C7, C8, C12, C13	rhc_605_smd_small	Cap	4	DNF						
Cap	Capacitor SMD	C9, C10, C11, C14, C15, C22, C23, C43, C44, C45, C46	rhc_603_smd_small	Cap	11	DNF						
Cap	Capacitor SMD	C16, C24, C53	rhc_603_smd_small	Cap	3	33pF						
Cap	Capacitor SMD	C17, C25, C28, C33, C54	rhc_805_smd_small	Cap	5	10uF						
Cap	Capacitor SMD	C29, C34	rhc_805_smd_small	Cap	2	4.7uF						
Cap	Capacitor SMD	C30, C35, C39, C41	rhc_603_smd_small	Cap	4	1uF						
Cap	Capacitor SMD	C37, C38	rhc_603_smd_small	Cap	2	4.7uF						
Cap	Capacitor SMD	C47, C48	rhc_603_smd_small	Cap	2	2.2uF						
Cap	Capacitor SMD	C49	rhc_603_smd_small	Cap	1	10uF						
Cap	Capacitor SMD	C51, C52	rhc_603_smd_small	Cap	2	4.7pF						
LED	LED	D1	OD1609-0403	LED	1							
Fiducials Mark		F1, F2, F3, F4	Fiducial_JLCPCB_2D	Fiducials	4							
105017-0001	Micro-USB B Receptacle, Right Angle, Bottom Mount, Surface Mount, With Solder Tabs, -30 to 85 degC, 5-Pin USB, RoHS, Tape and Reel	J1	USB-MICRO-B_V	CMP-2000-05827-1	1		Molex					http://www.molex.com/
U.FL-R-SMT-1(10)	CONN U.FL.RCP7 STR 50 OHM SMD	J2, J3, J4	FP-U_FL-R-SMT-1_10- MFG	CMP-2000-05152-3	3	DNF						
Header	Header 1x2Pin 2.54mm	J5	Header 1x2Pin 2.54mm	Header 1x2Pin 2.54mm	1							
u.fl	No Description Available	J6	uFL Connector	U.FL-R-SMT	1	Value						
Header	Header 1x5Pin 2.54mm	J7, J8, J9, J10	HEADER 1X5PIN 2.54mm	Header 1x5Pin 2.54mm	4							
TestPin	Test contact for pogo pins	J-D-1, J-D-2, J-D-3, J-D-4, J-D-5, J-D-6, J-D-7, J-D-8, J-D-9, J-D-10, J-D-11, J-D- 12, J-D-13, J-D-14, J-D-15, J-D-16, J-D- 17, J-D-18, J-D-19, J-D-20	TestPin_1mm	TestPin_1mm	20							
Inductor small symbol	Inductor	L1	rhc_805_smd_small	Inductor_small	1	2.2uH						
IOT SAT module	Echostar Mobile IOT SATModule - Basic version	MOD1	EM2050	EM2050	1	EM2050	Echostar Mobile Ltd		EM2050			
Resistor	Resistor SMD - IEC symbol version	R1, R5, R6, R11, R12, R17, R18, R22, R25, R28	rhc_402_smd	Resistor	10	0R						
Resistor	Resistor SMD - IEC symbol version	R2	rhc_603_smd_small	Resistor	1	10K						
Resistor	Resistor SMD - IEC symbol version	R3	rhc_603_smd_small	Resistor	1	1M						
Resistor	Resistor SMD - IEC symbol version	R4, R7, R13, R16	rhc_603_smd_small	Resistor	4	1K						
Resistor	Resistor SMD - IEC symbol version	R8	rhc_603_smd_small	Resistor	1	2M						
Resistor	Resistor SMD - IEC symbol version	R9, R10, R23, R24	rhc_603_smd_small	Resistor	4	4K7						
Resistor	Resistor SMD - IEC symbol version	R14, R27	rhc_402_smd	Resistor	2	DNF						
Resistor	Resistor SMD - IEC symbol version	R15	rhc_603_smd_small	Resistor	1	5K6						
Resistor	Resistor SMD - IEC symbol version	R19, R20	rhc_603_smd_small	Resistor	2	DNF						
Resistor	Resistor SMD - IEC symbol version	R21	rhc_603_smd_small	Resistor	1	0R						
43633045822	WS-TASU J-Bend J- Bend SMD Tact Switch with base design 4.7x3.5 mm side push	SW4, SW6, SW7	43633045822	43633045822	3			Wuerth Elektronik				
CUS-12TB	SWITCH SLIDE SPDT 200mA 4V	SW5	FP-CUS-12TB-MFG	CMP-71745-00005-2	1							
STLQ020C33R	No Description Available	U1, U11, U12, U13, U14, U15	SOT323-5L_STM	STLQ020C33R	6							
RF DPDT IC	RF Switch IC DPDT 3 GHz 50Ohm 12-GFN (2x2)	U2	SKY13396-397LF	SKY13396-397LF	1							
NCV8170AXV300T2G	IC REG LINEAR 3V 150mA SOT56-3	U3, U4, U5, U7, U10, U16	FP-463A-MFG	CMP-07128-000037-1	6	DNF						
LC29HAMD	Modules GNSS / GPS	U6	LC29D_QWS	LC29HAMD	1							
KX023-1025-FR	Accelerometer X, Y, Z Axis 2g, 4g, 8g 0.39Hz ~ 800Hz 16- bit (3x3)	U8	KX023-1025-FR	KX023-1025-FR	1		Kionix Inc.					
BME280		U9	Bosch_BME280_0	BME280	1	DNF						
BME680	No Description Available	U17	LGAB_BME680_BOS	BME680	1							
STM32U585CIT6Q	No Description Available	U18	LOQP48-7x7mm_STM	STM32U585CIT6Q	1							
MicroSD	-20°C ~ +60°C 1.8mm MicroSD SD Card Connectors ROHS	U19	TF-013_1	TF-013	1			Korean Hroparts Elec				
NX2012SA-32.768K- STD-MU8-1	CRYSTAL 32.7680KHZ 12.5PF SMD	Y1	FP-NX2012SA-MFG	CMP-200220-000019- 1	1							

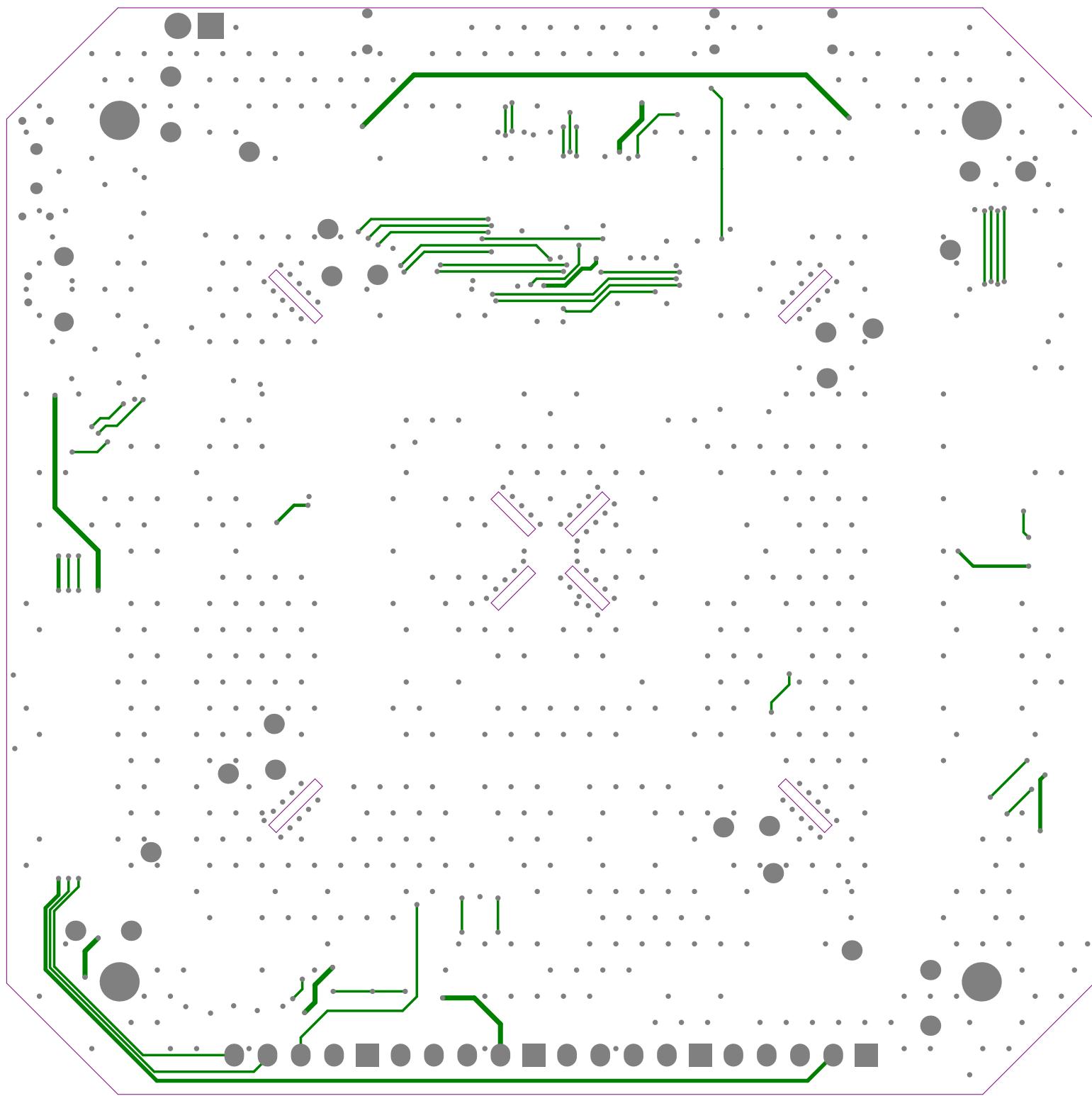
Board Stack Report

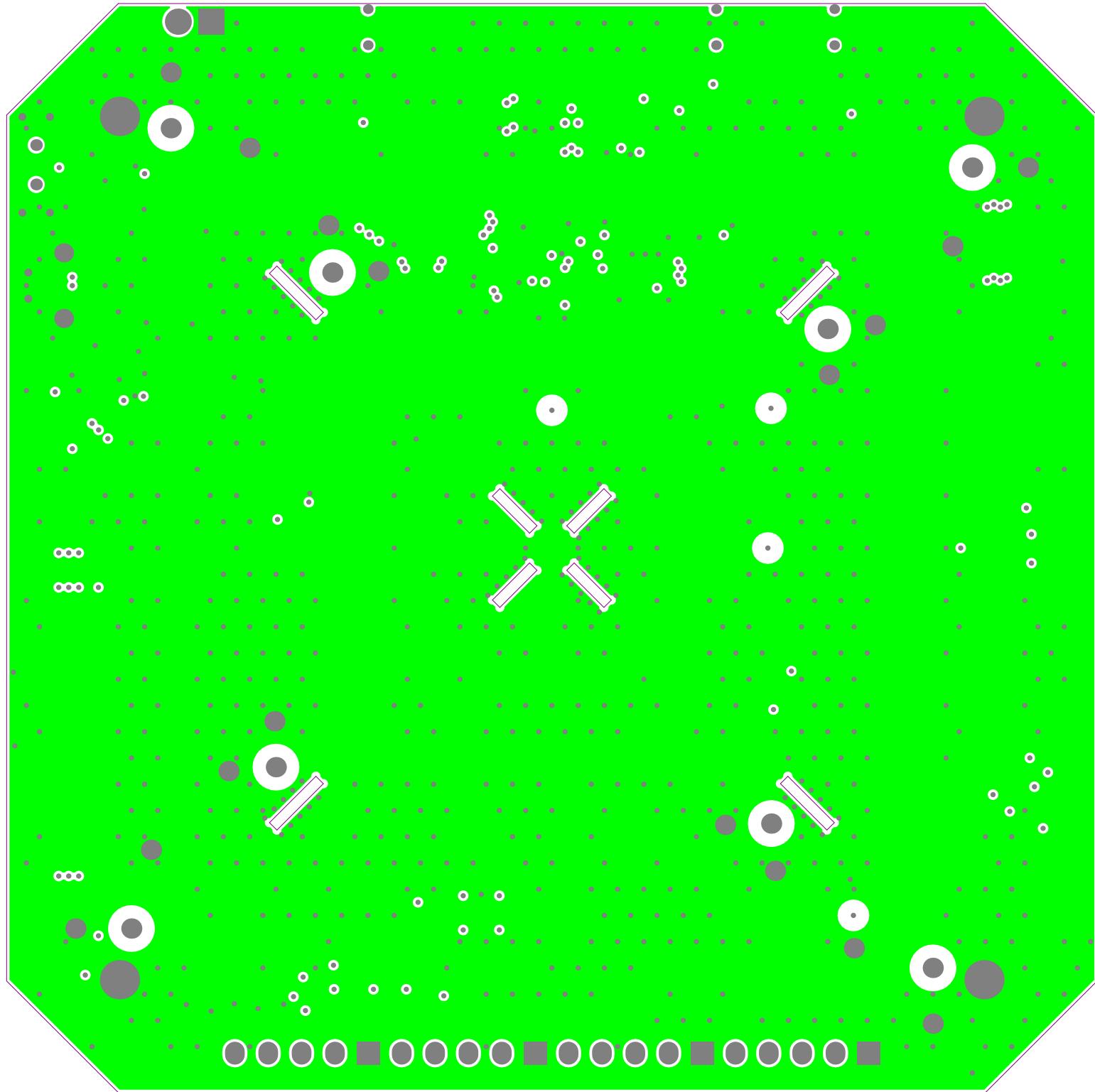
Stack Up		Layer Stack				
Layer	Board Layer Stack	Stack0	Name	Material	Thickness	Constant
1			Top Paste			
2			Top Overlay			
3			Top Mask	Solder Resist	0.015mm	3.8
4			Top Copper	Copper	0.035mm	
5			Dielectric 1	7628	0.200mm	4.6
6			Signal Layer 1	Copper	0.018mm	
7			Core	FR-4	0.465mm	4.5
8			Signal Layer 2	Copper	0.018mm	
9			Dielectric 2	7628	0.200mm	4.6
10			Bottom Copper	Copper	0.035mm	
11			Bottom Mask	Solder Resist	0.015mm	3.8
12			Bottom Overlay			
13			Bottom Paste			
	Height : 1.000mm		Height : 0.785mm			

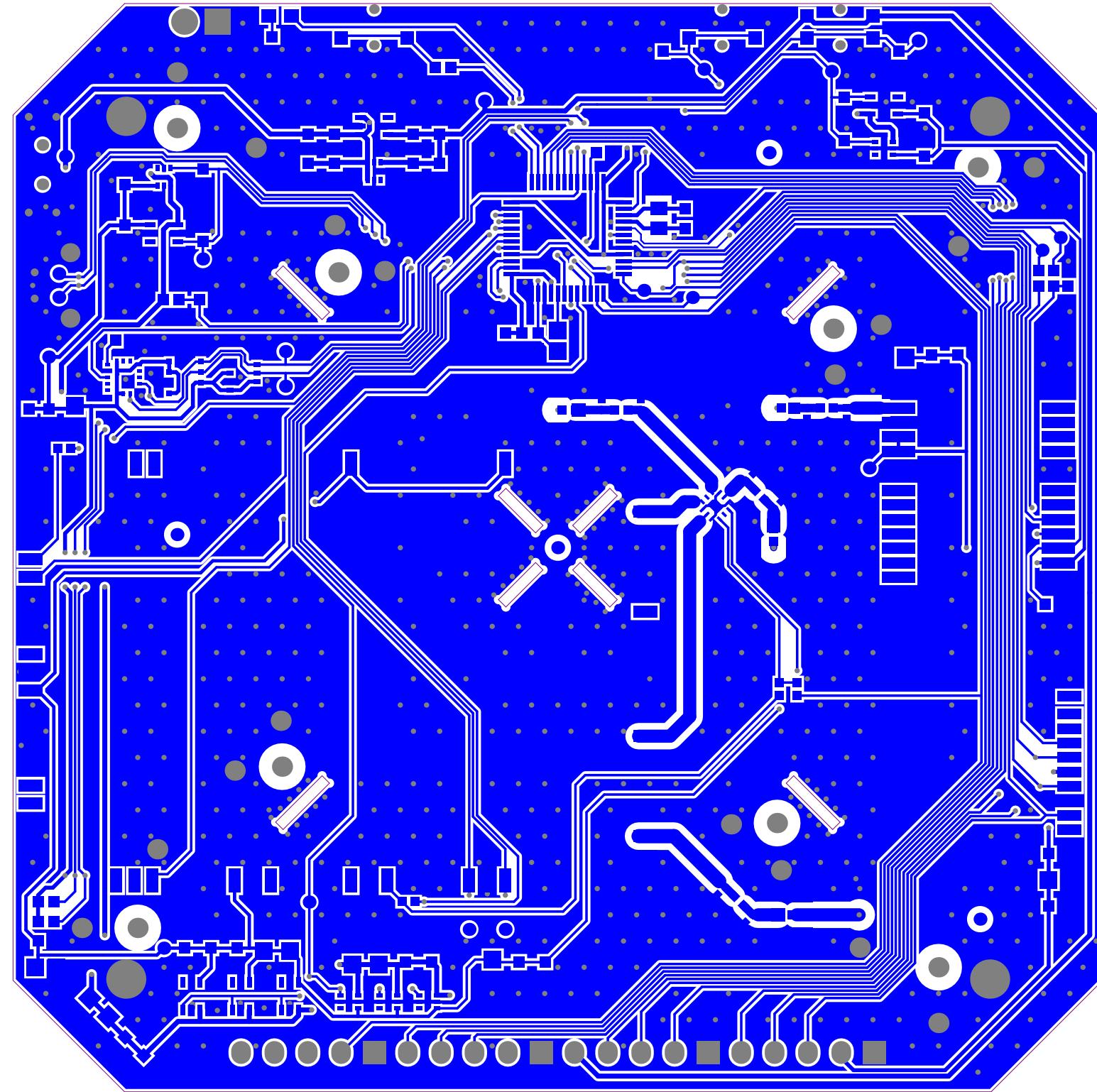












EchoStar_Term_7
rev002 Jan 28, 2024

USER

13

1000

SW5

BATTERY

USB

J1

51

SDA

PAY

PA4

GND

PA3

PA2

四三六

1

GND

VCC

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PB4

PB3

GND

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PBR

PB14 303

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3V3_SENSORS

