

A

B

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Realistic View

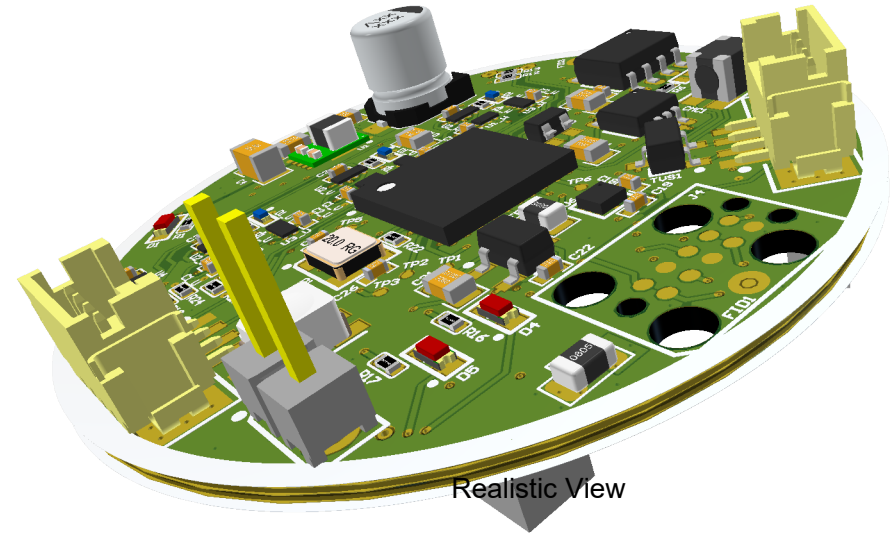
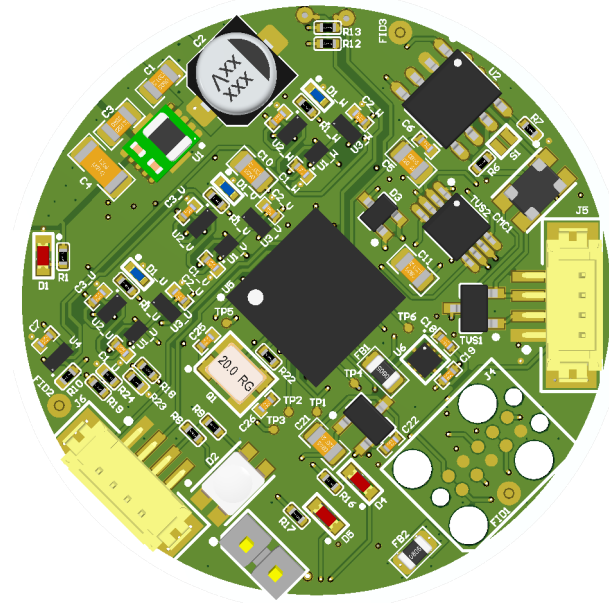
1

2

3

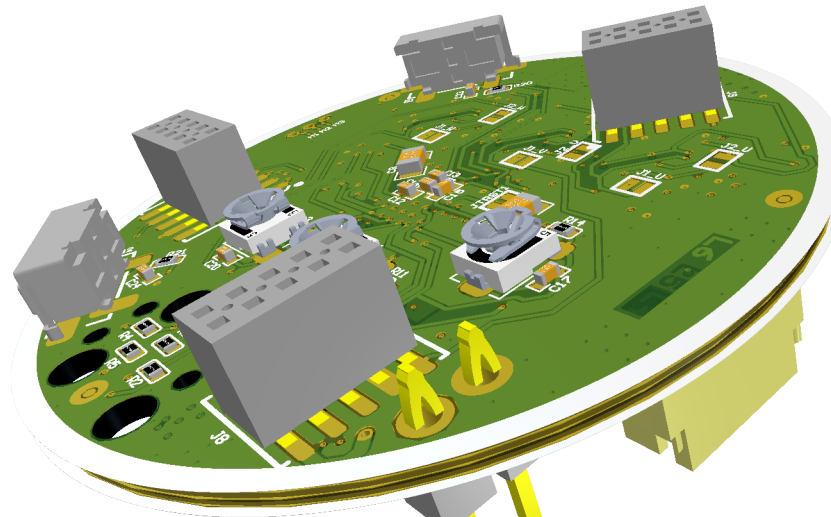
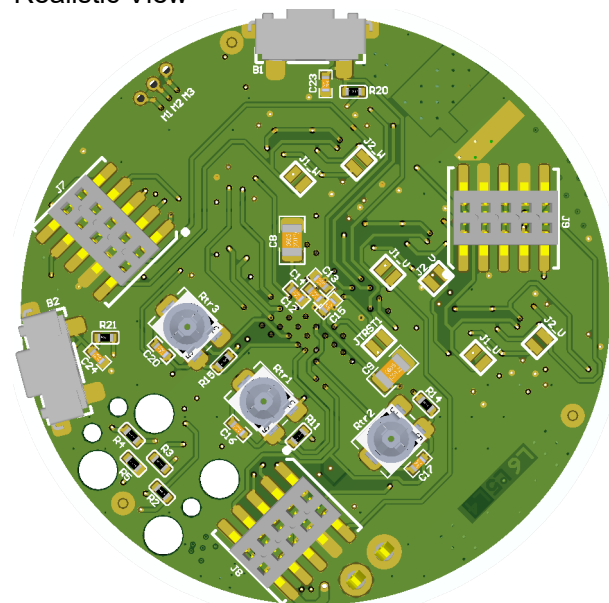
4

5



Realistic View

Realistic View



TITLE	ASSEMBLY SHEET
DOC NAME	ASSEMBLY.PCBDwf
VARIANT	[All Variants]
SCALE	1:1
DOC UNITS	Millimeters
DATE	6/2/2020



A

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A

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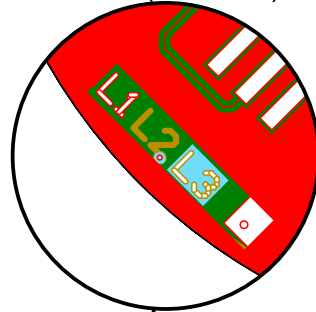
1

Layer Stack Legend

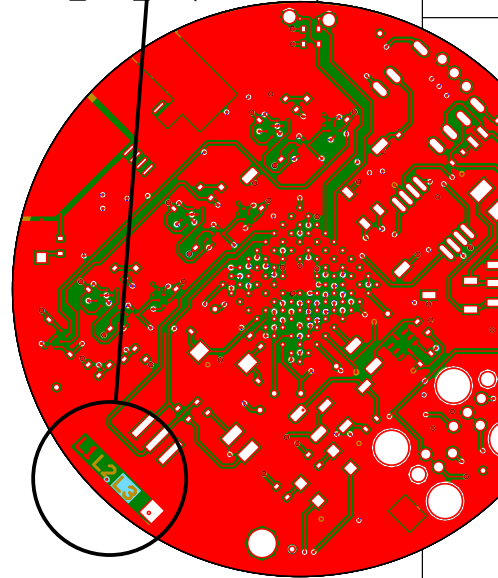
Material	Layer	Thickness	Dielectric Material	Type	Gerber
Top Overlay	Top Overlay			Legend	GTO
Surface Material	Top Solder	0.01mm	Solder Resist	Solder Mask	GTS
CF-004	TOP_SIG_L1	0.04mm		Signal	GTL
Core		0.13mm	FR-4	Dielectric	
CF-004	TOP_GND_L2	0.04mm		Internal Plane	GP1
Prepreg		0.13mm	FR-4	Dielectric	
CF-004	MID_PWR_L3	0.04mm		Signal	G1
Core		0.25mm	FR-4	Dielectric	
CF-004	MID_PWR_L4	0.04mm		Signal	G2
Prepreg		0.13mm	FR-4	Dielectric	
CF-004	BOT_GND_L5	0.04mm		Internal Plane	GP2
Core		0.13mm	FR-4	Dielectric	
CF-004	BOT_SIG_L6	0.04mm		Signal	GBL
Surface Material	Bottom Solder	0.01mm	Solder Resist	Solder Mask	GBS
Bottom Overlay	Bottom Overlay			Legend	GBO
Total thickness: 0.99mm					

Layer stack up mark check

DETAIL A (Scale 4:1)



TOP\_SIG\_L1 (Scale 2:1)



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E

View from Top side (Scale 4:1)

I2C SDA

I2C SCL

MAVLINK (USART)

CAN BUS

JTAG

PWM IN

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2

3

4

5

A

B

C

D

E

View from Bottom side (Scale 4:1)

B USER

U CTRL

W CTRL

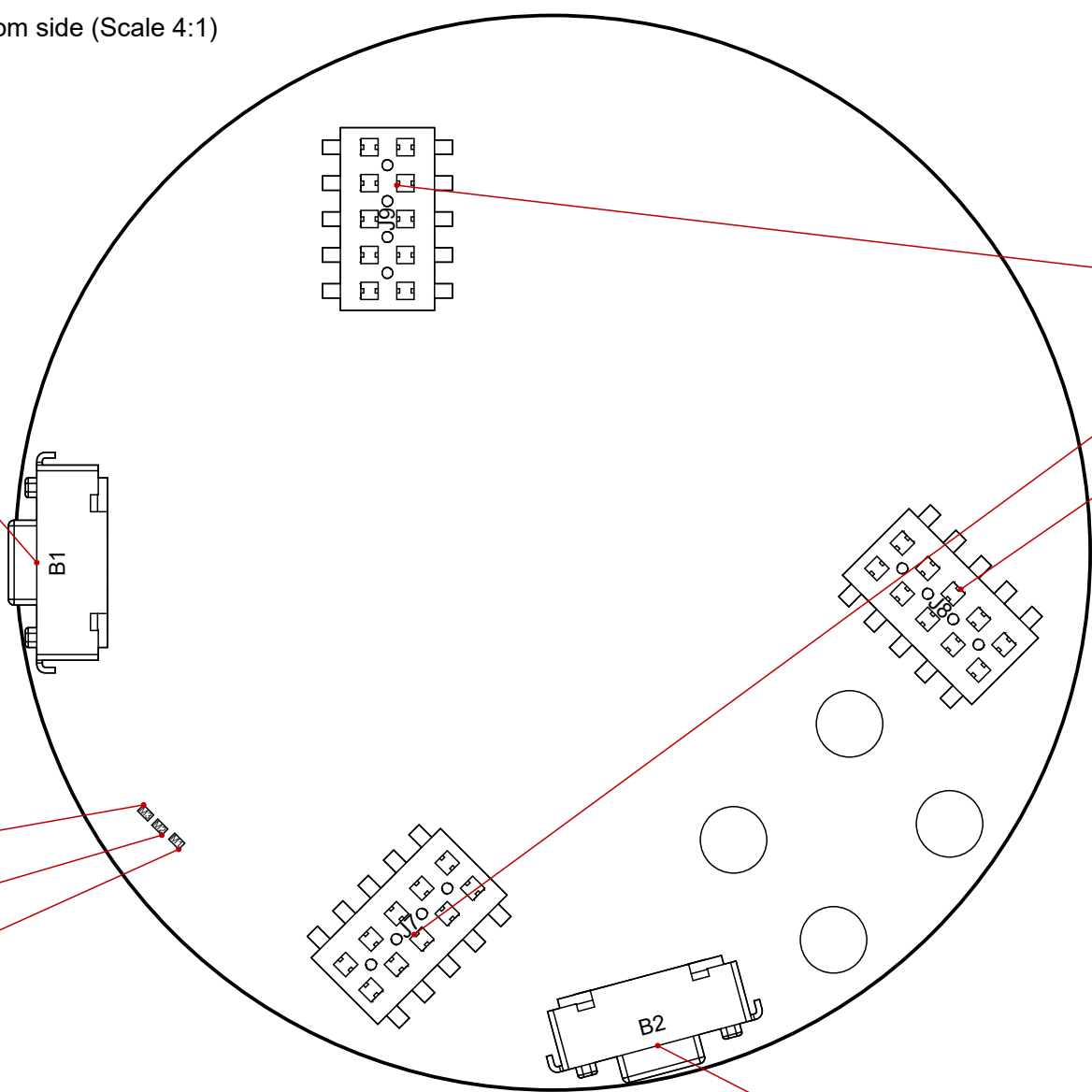
V CTRL

ENC SLCT

ENC B

ENC A

B RST



A

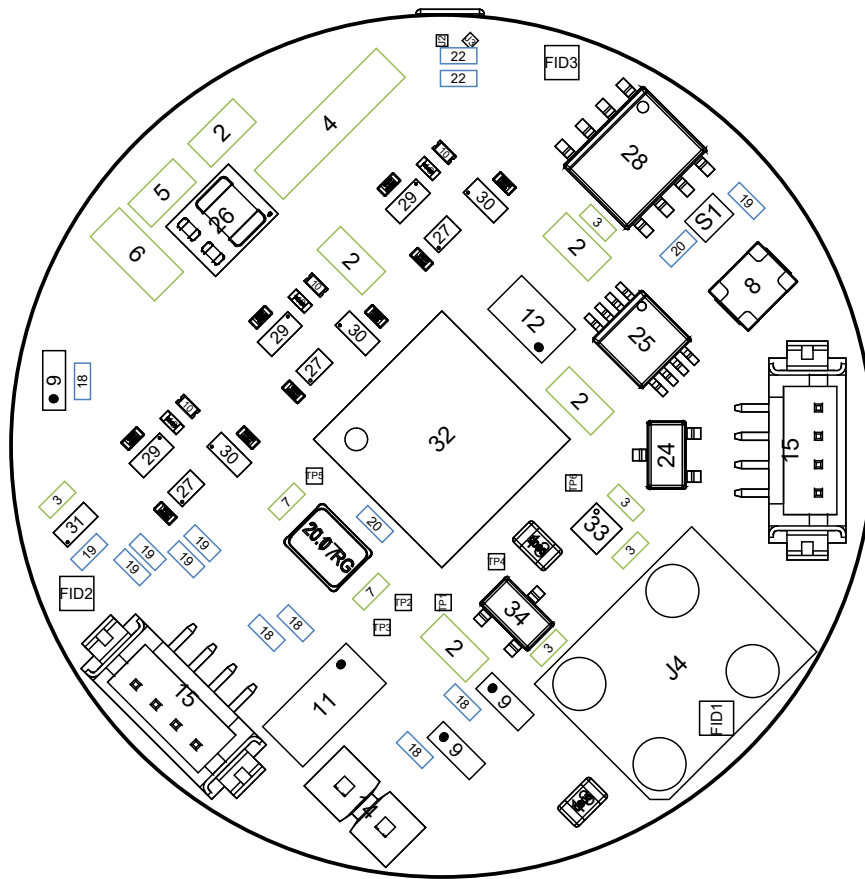
B

C

D

E

View from Top side (Scale 3)



## Bill Of Materials

Line #	Designator	Comment	Quantity
1	B1, B2	PUSH BUTT SINGLE SIDE	2
2	C1, C5, C8, C9, C10, C11, C21	2.2uF	7
3	C1_U, C1_V, C1_W, C2_U, C2_V, C2_W, C3_U, C3_V, C3_W, C6, C7, C12, C13, C14, C15, C18, C19, C22, C23, C24	100nF	20
4	C2	10uF	1
5	C3	10uF	1
6	C4	22uF	1
7	C16, C17, C20, C25, C26	47pF	5
8	CMC1	TCM0403S	1
9	D1, D4, D5	LED 0603	3
10	D1_U, D1_V, D1_W	0402	3
11	D2	PLCC	1
12	D3	SOD523	1
13	FB1, FB2	0.525u	2
14	J1	PHT-102-01-S-S	1
15	J5, J6	DF13C-4P-1.25V	2
16	J7, J8, J9	FLE-105-G-DV	3
17	Q1	OSC NX2016	1
18	R1, R1_U, R1_V, R1_W, R8, R9, R16, R17	330	8
19	R2, R3, R4, R5, R7, R10, R18, R19, R20, R21, R23, R24	100K	12
20	R6, R22	120	2
21	R11, R14, R15	1K	3
22	R12, R13	10K	2
23	Rtr1, Rtr2, Rtr3	10K	3
24	TVS1	SOT23	1
25	TVS2	MSOP8	1
26	U1	MICROSIP	1
27	U1_U, U1_V, U1_W	DSGBA6	3
28	U2	SOIC8	1
29	U2_U, U2_V, U2_W	DSBGA8	3
30	U3_U, U3_V, U3_W	DSGBA8	3
31	U4	DSBGA8	1
32	U5	STM32 TFBGA 100	1
33	U6	QFN8	1
34	U7	SOT23	1

A

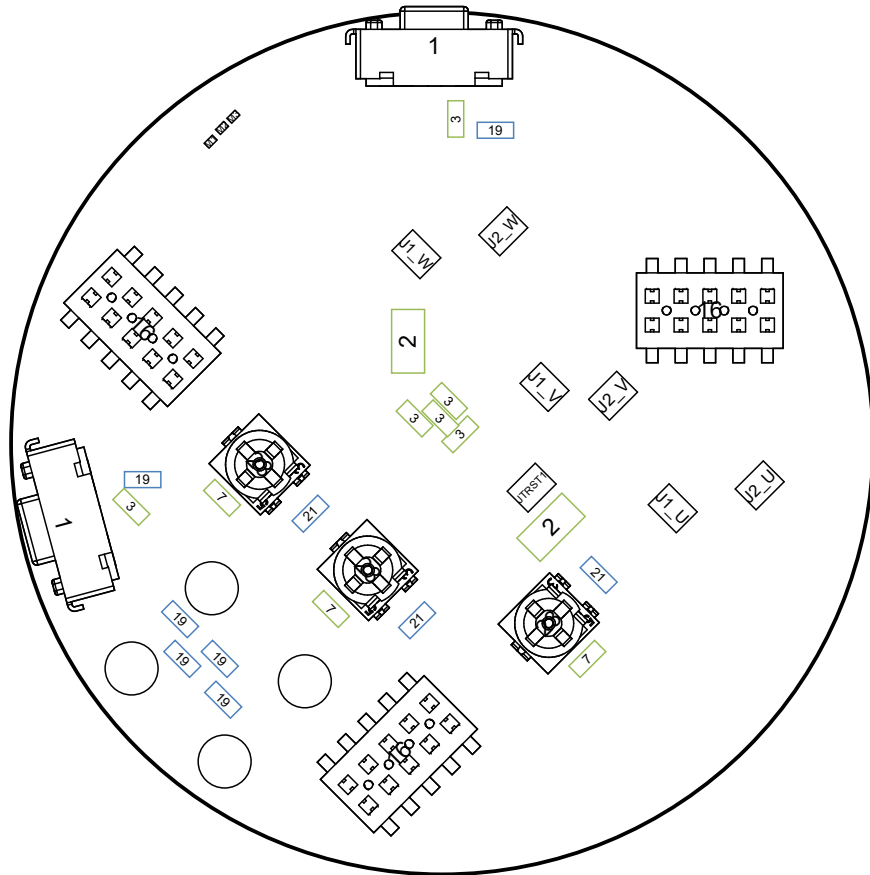
B

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E

View from Bottom side (Scale 3)



Bill Of Materials

Line #	Designator	Comment	Quantity
1	B1, B2	PUSH BUTT SINGLE SIDE	2
2	C1, C5, C8, C9, C10, C11, C21	2.2uF	7
3	C1_U, C1_V, C1_W, C2_U, C2_V, C2_W, C3_U, C3_V, C3_W, C6, C7, C12, C13, C14, C15, C18, C19, C22, C23, C24	100nF	20
4	C2	10uF	1
5	C3	10uF	1
6	C4	22uF	1
7	C16, C17, C20, C25, C26	47pF	5
8	CMC1	TCM0403S	1
9	D1, D4, D5	LED 0603	3
10	D1_U, D1_V, D1_W	0402	3
11	D2	PLCC	1
12	D3	SOD523	1
13	FB1, FB2	0.525u	2
14	J1	PHT-102-01-S-S	1
15	J5, J6	DF13C-4P-1.25V	2
16	J7, J8, J9	FLE-105-G-DV	3
17	Q1	OSC NX2016	1
18	R1, R1_U, R1_V, R1_W, R8, R9, R16, R17	330	8
19	R2, R3, R4, R5, R7, R10, R18, R19, R20, R21, R23, R24	100K	12
20	R6, R22	120	2
21	R11, R14, R15	1K	3
22	R12, R13	10K	2
23	Rtr1, Rtr2, Rtr3	10K	3
24	TVS1	SOT23	1
25	TVS2	MSOP8	1
26	U1	MICROSIP	1
27	U1_U, U1_V, U1_W	DSGBA6	3
28	U2	SOIC8	1
29	U2_U, U2_V, U2_W	DSBGA8	3
30	U3_U, U3_V, U3_W	DSGBA8	3
31	U4	DSBGA8	1
32	U5	STM32 TFBGA 100	1
33	U6	QFN8	1
34	U7	SOT23	1

A

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A

B

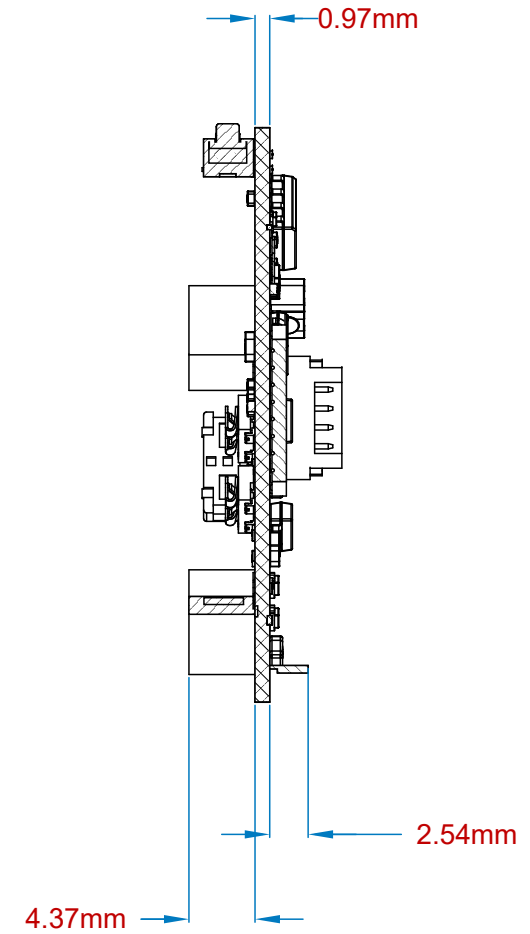
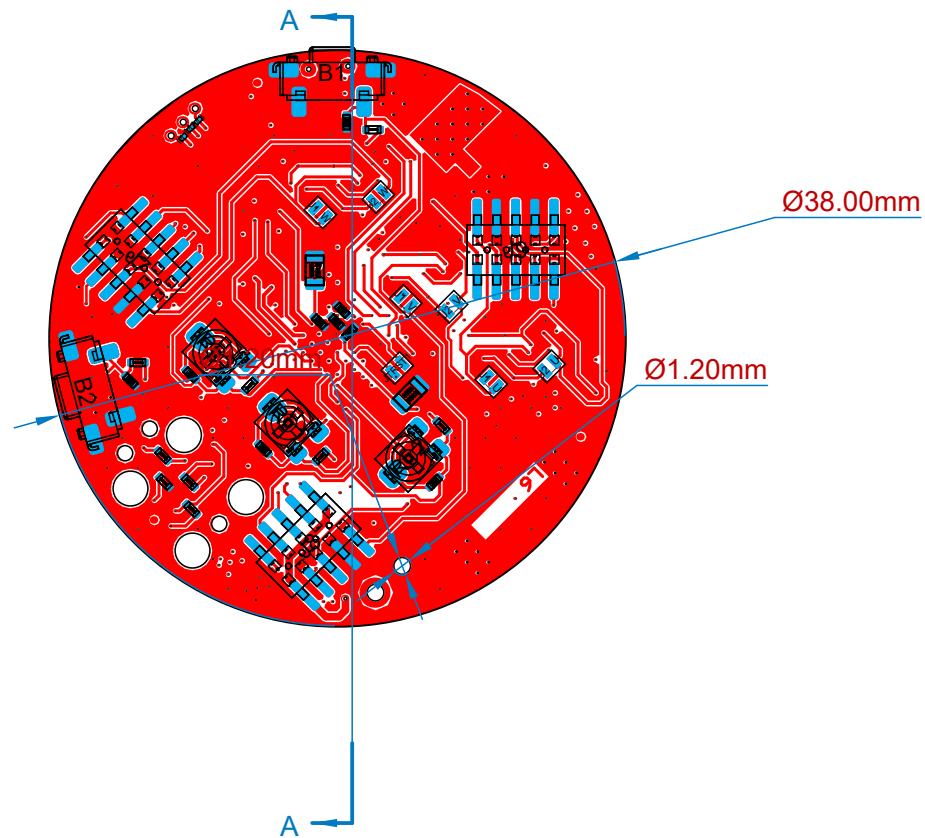
C

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## SECTION A-A (Scale 2:1)

View from Bottom side (Scale 2:1)



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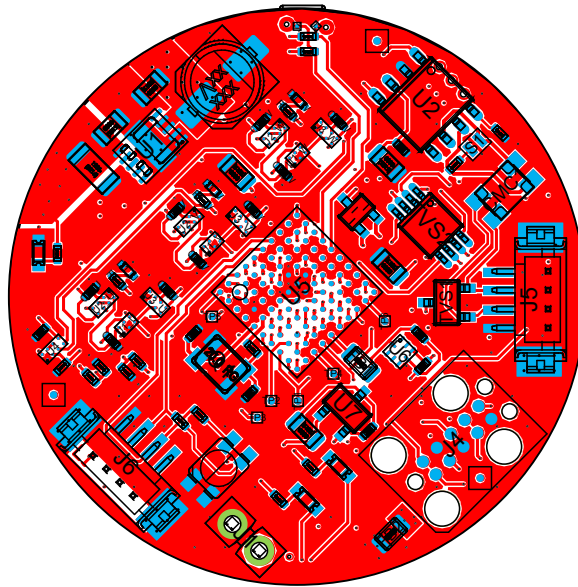
4

4

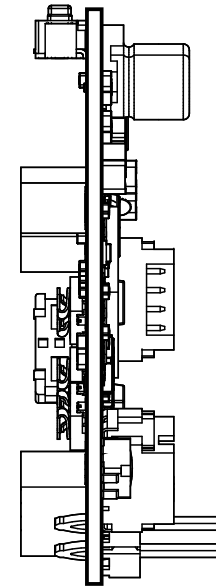
5

5

View from Top side (Scale 2:1)



View from Left side (Scale 2:1)





A

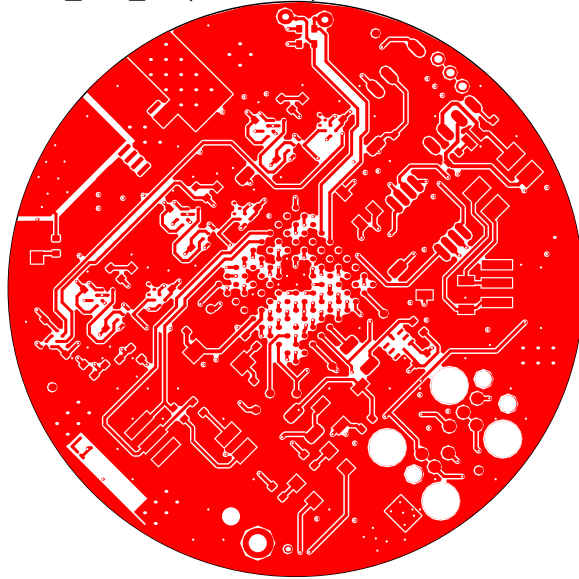
B

C

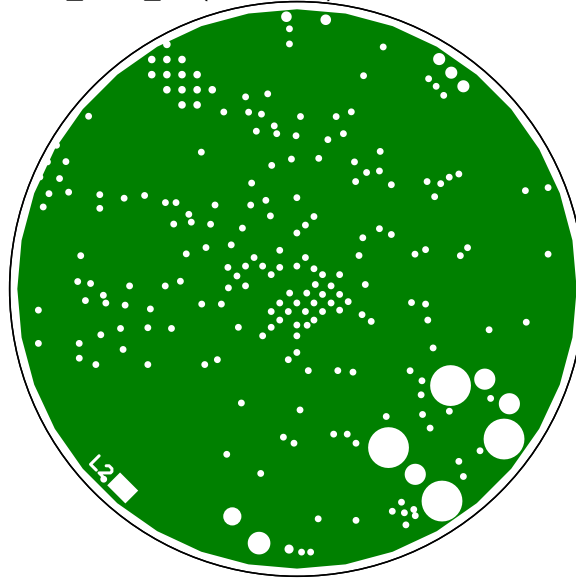
D

E

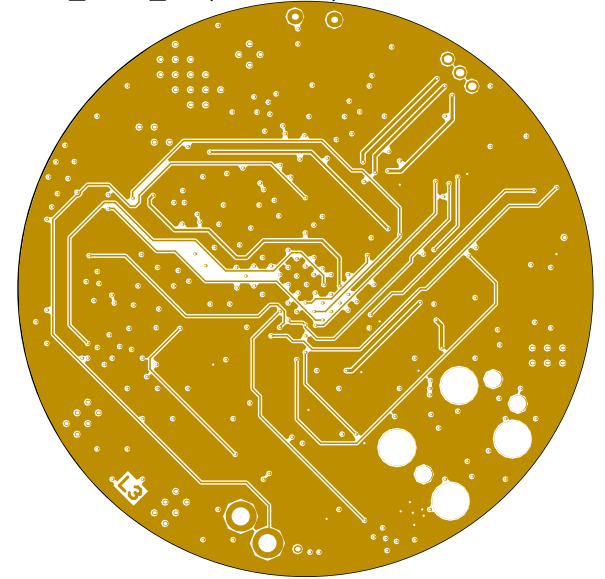
TOP\_SIG\_L1 (Scale 2:1)



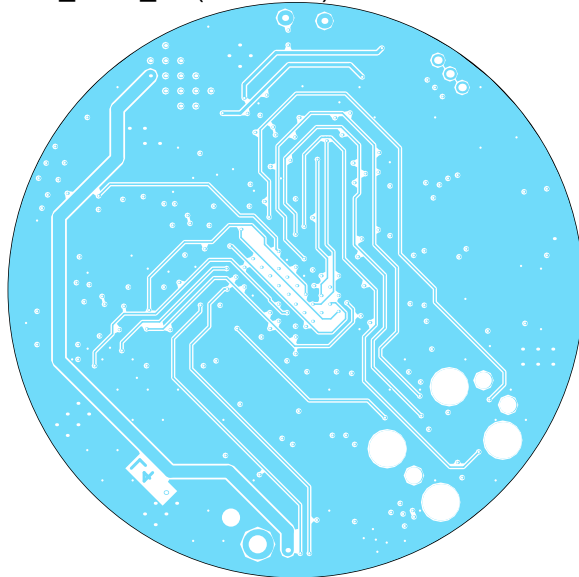
TOP\_GND\_L2 (Scale 2:1)



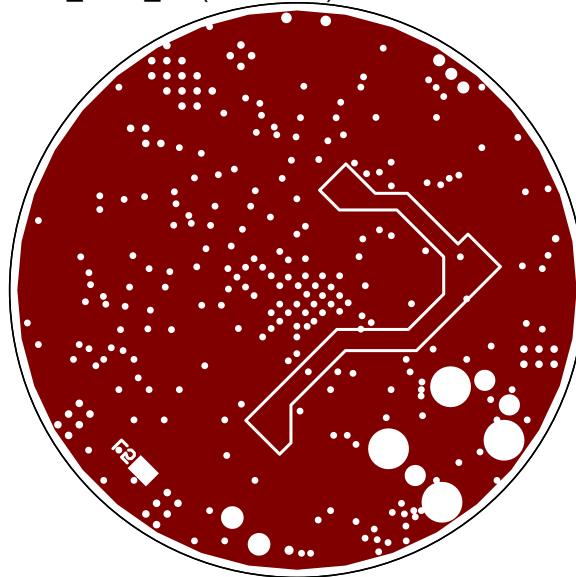
MID\_PWR\_L3 (Scale 2:1)



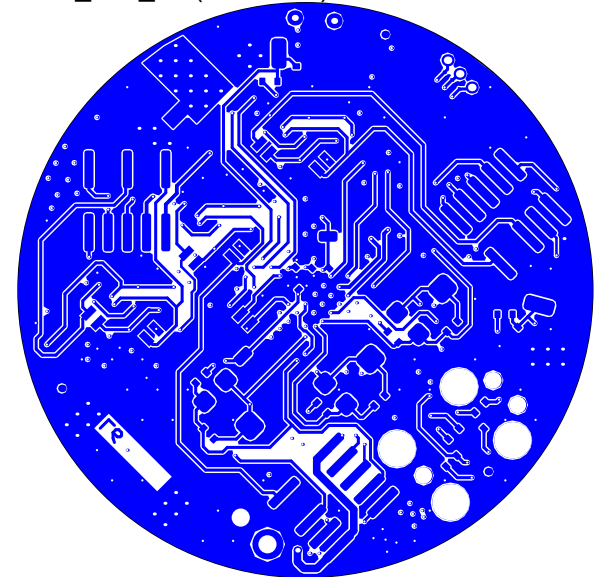
MID\_PWR\_L4 (Scale 2:1)



BOT\_GND\_L5 (Scale 2:1)



BOT\_SIG\_L6 (Scale 2:1)



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A		B		C		D		E	
1									1
2									2
3									3
4									4
5									5
A		B		C		D		E	