

A

B

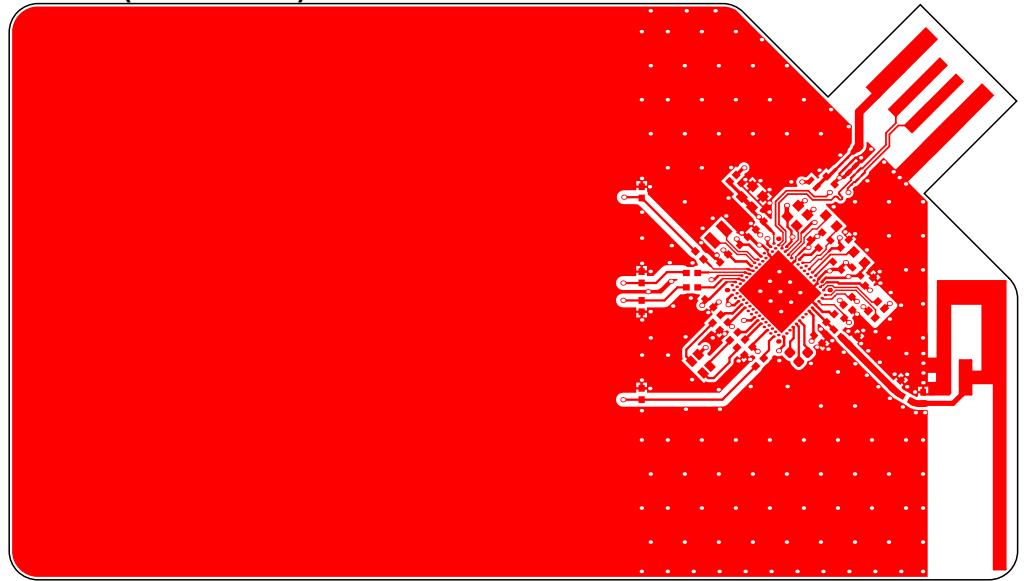
C

D

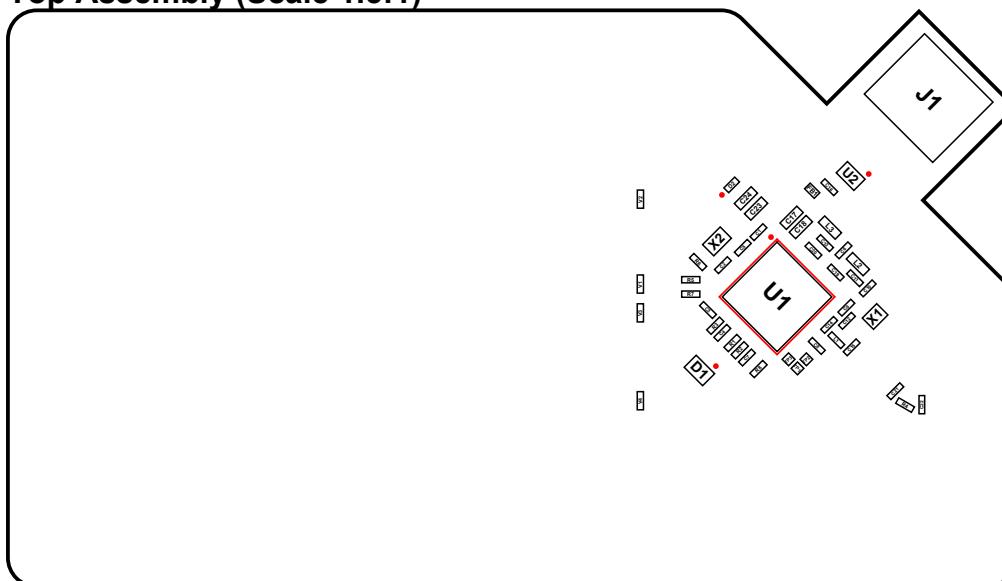
E

F

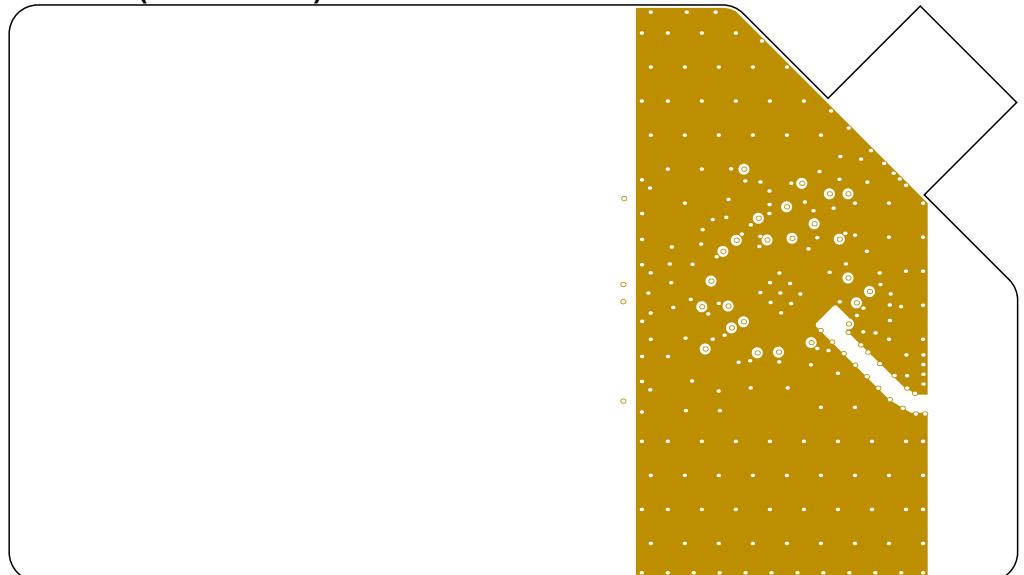
L1-SIG (Scale 1.5:1)



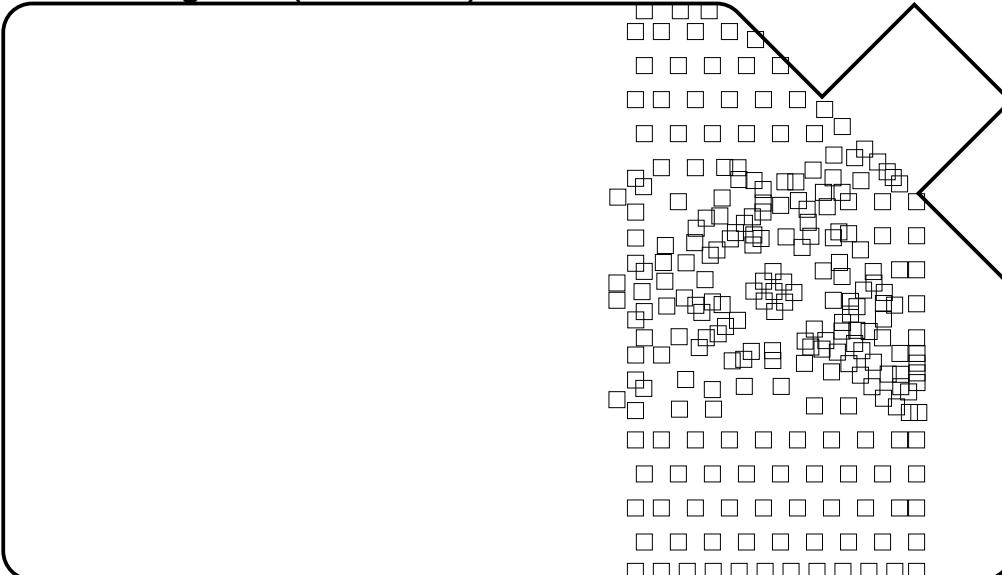
Top Assembly (Scale 1.5:1)



L2-GND (Scale 1.5:1)



Drill Drawing View (Scale 1.5:1)



A

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A

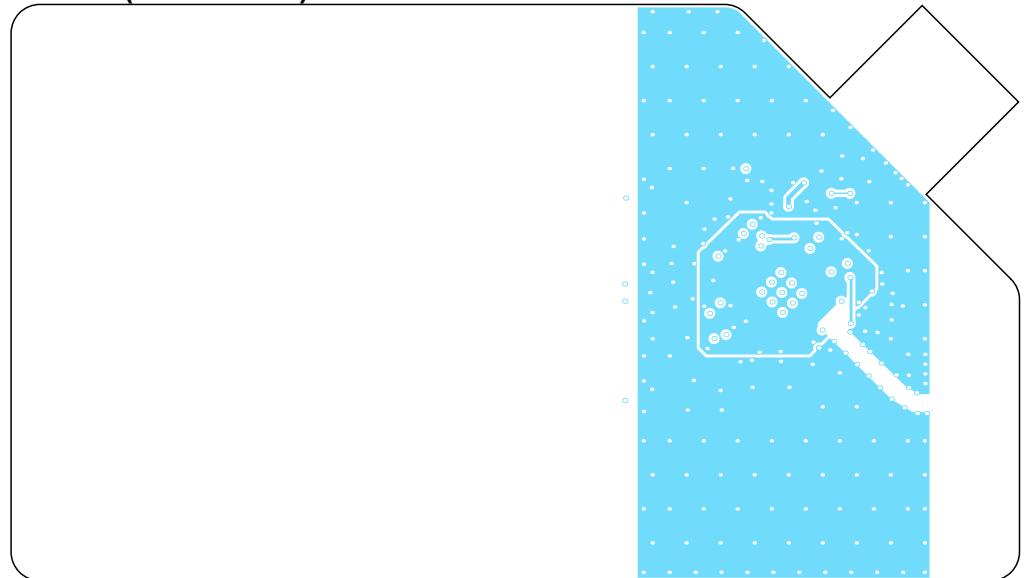
B

C

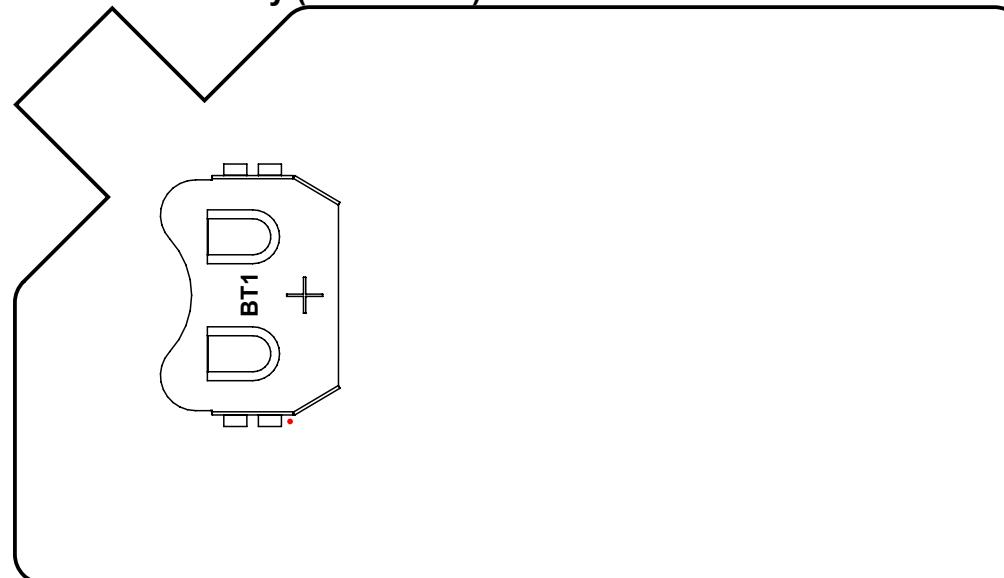
D

E

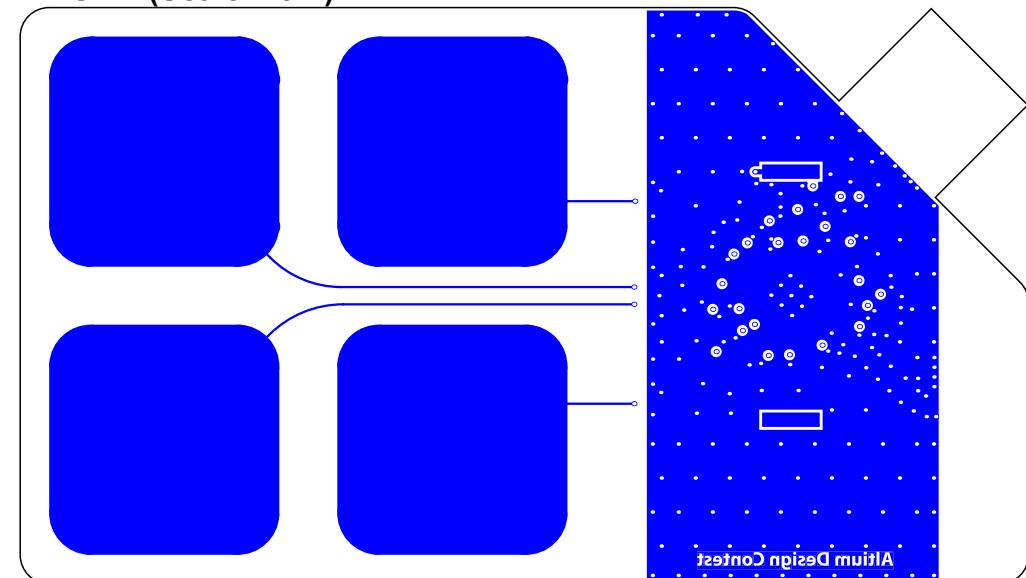
**L3-SIG (Scale 1.5:1)**



**Bottom Assembly (Scale 1.5:1)**



**L4-GND (Scale 1.5:1)**



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## Layer Stack Legend

	Material	Layer	Thickness	Dielectric Material	Type	Gerber
1	Top Overlay				Legend	GTO
	Surface Material	Top Solder	0.0100mm	Solder Resist	Solder Mask	GTS
	Copper	L1-SIG	0.0350mm		Signal	GTL
	Prepreg		0.0994mm	7628	Dielectric	
	Copper	L2-GND	0.0152mm		Signal	G1
2			1.9000mm	FR-4	Dielectric	
	Copper	L3-SIG	0.0152mm		Signal	G2
	Prepreg		0.0994mm	7628	Dielectric	
	Copper	L4-GND	0.0350mm		Signal	GBL
	Surface Material	Bottom Solder	0.0100mm	Solder Resist	Solder Mask	GBS
		Bottom Overlay			Legend	GBO
	Total thickness: 2.2192mm					

## Notes:

1. Soldermask color: Black
2. Silkscreen color: White
3. Surface finish: ENIG 1U"
4. Board thickness per layer stackup
5. Impedance-controlled transmission lines shall be adjusted by the manufacturer when a different stackup is used
6. Vias without soldermask opening shall be plugged

## Drill Table

Symbol	Count	Hole Size	Plated	Via / Pad	Hole Tolerance
□	240	0.30mm	Plated	Via	
	240 Total				

## Transmission Line Structure Table

Transmission Line	Target Impedance	Calculated Impedance	Trace layer	Wide Trace Width	Narrow Trace Width	Gap	Reference layers	Clearance	Target Tolerance
Diff Coated Coplanar Waveguide With Ground	90	90.02	L1-SIG	0.15mm	0.15mm	0.15mm	L2-GND	0.15mm	10%
Coated Coplanar Waveguide With Ground	50	49.98	L1-SIG	0.59mm	0.59mm		L4-GND	0.13mm	10%
Diff Coated Coplanar Waveguide With Ground	90	90.02	L4-GND	0.15mm	0.15mm	0.15mm	L3-SIG	0.15mm	10%
Coated Coplanar Waveguide With Ground	50	49.98	L4-GND	0.59mm	0.59mm		L1-SIG	0.13mm	10%

A

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## Bill Of Materials

Line #	Designator	Name	Quantity
1	BT1	3028	1
2	C1, C2, C3, C4, C7, C8, C9, C10, C19	0.1µF	9
3	C5	2.2µF	1
4	C6, C11, C13, C16, C20	1.0µF	5
5	C12	2.2nF	1
6	C14	0.7pF	1
7	C15, C21, C22	DNP	3
8	C17, C18	4.7µF	2
9	C23, C24	22µF	2
10	D1	LTST-C19HE1WT	1
11	D2	CFSH05-20L	1
12	FB1	BLM15PX121SN1D	1
13	L1	2.2nH	1
14	L2, L3	10µH	2
15	R1	56R	1
16	R2, R3	22R	2
17	R4	0R	1
18	R5, R6, R7, R8	470R	4
19	U1	nRF5340-QKAA	1
20	U2	TPD4E05U06	1
21	V1, V2, V3, V4	LXES15AAA1-133	4
22	X1	32MHz	1
23	X2	32.768kHz	1

## Programming Testpads

