

M1

B³

Double Sided R1

4X4 Patch Array

TX1

4X4 HM

M2

606-Patch
RX

S1

U2

C1

C7

CPL

C3

C5

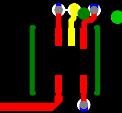
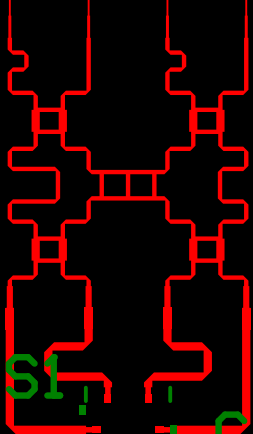
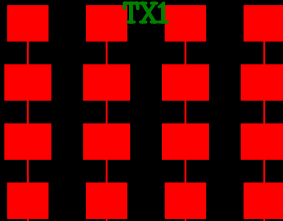
U1

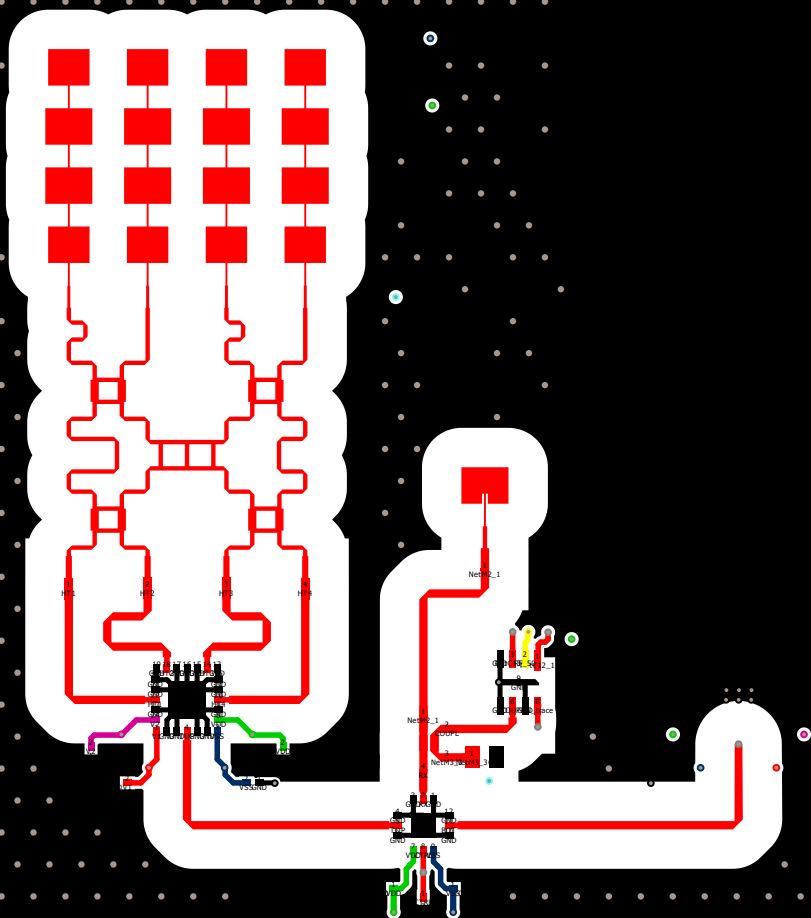
R1

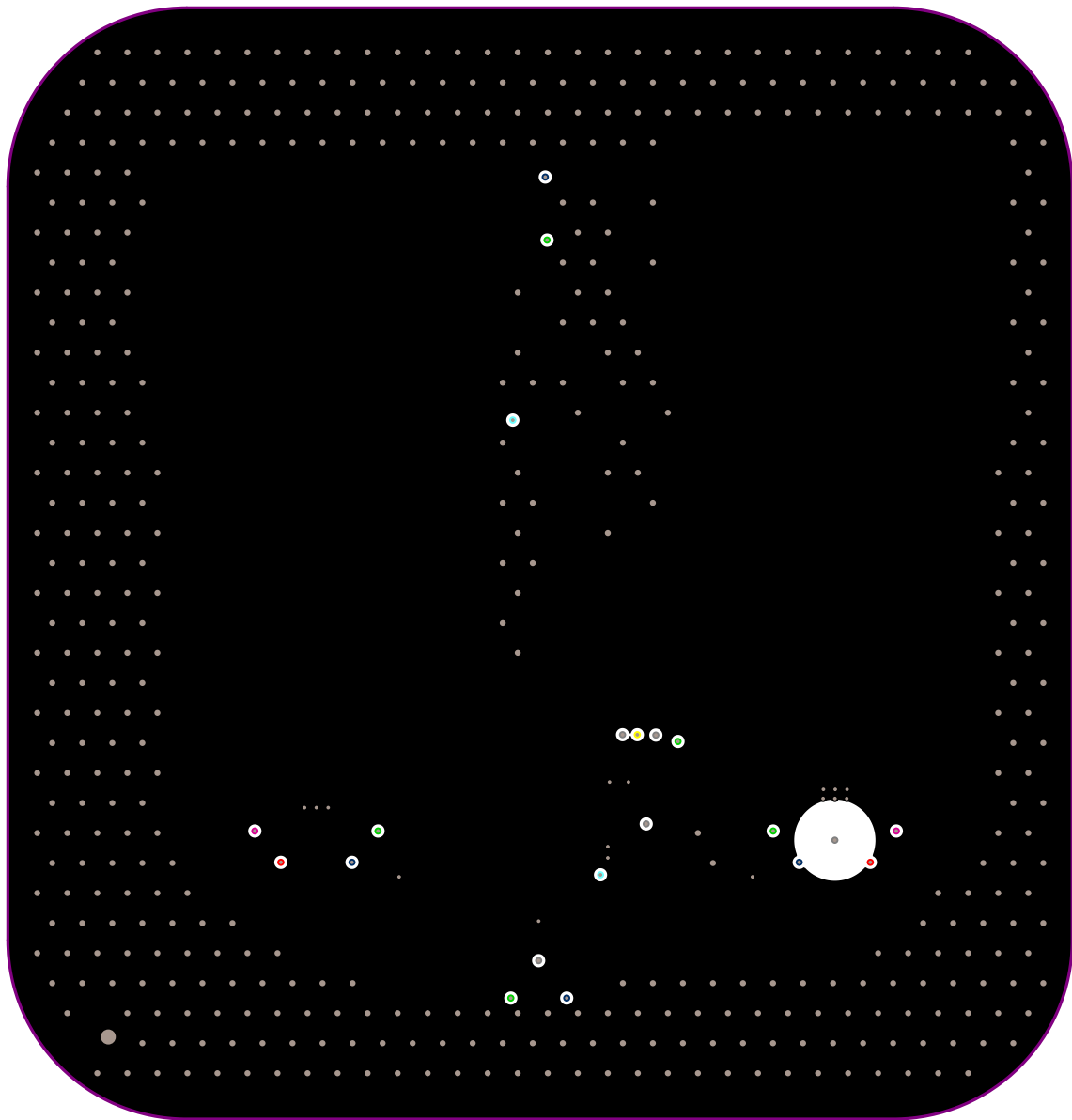
C11

C9

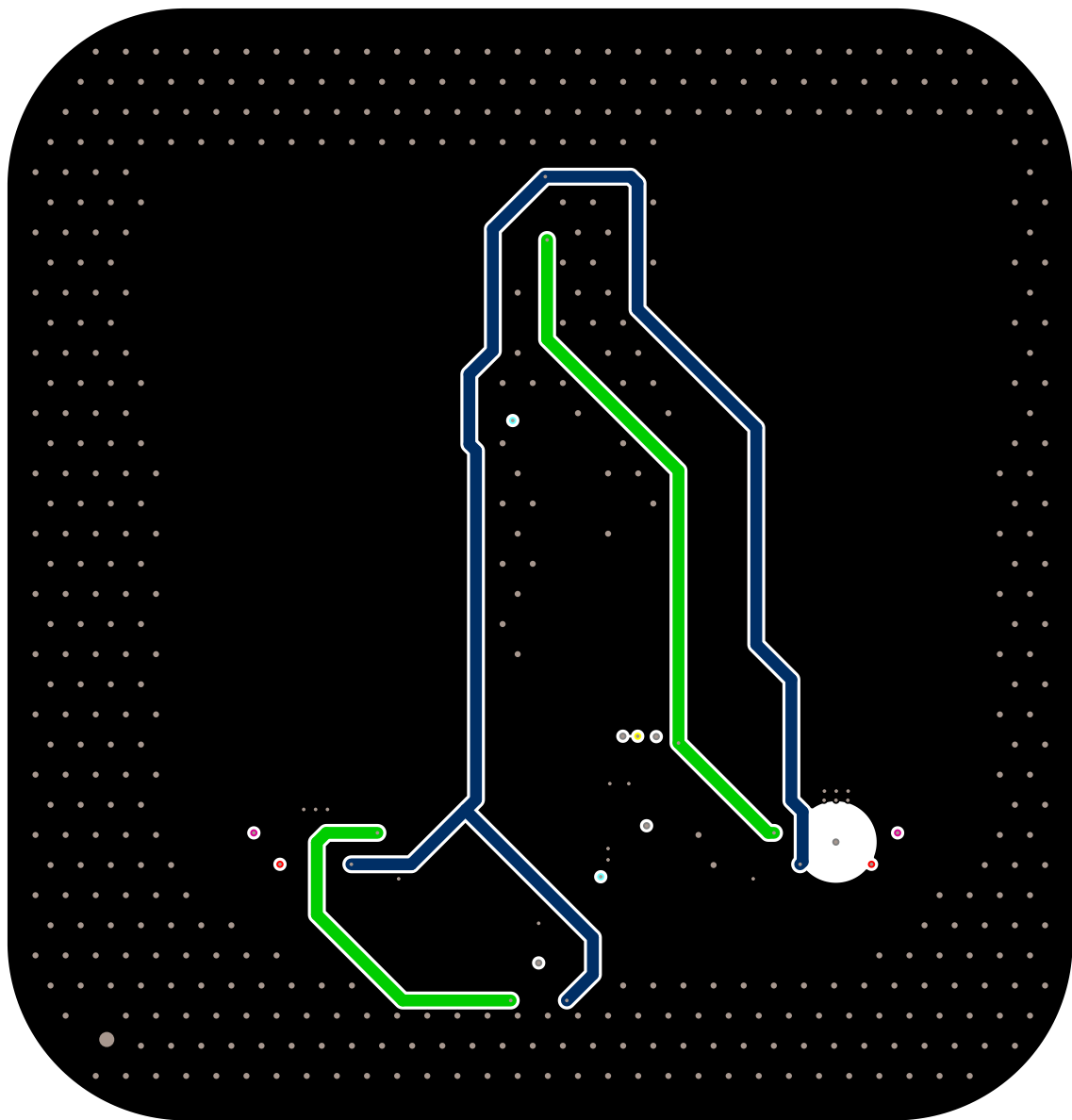
C10

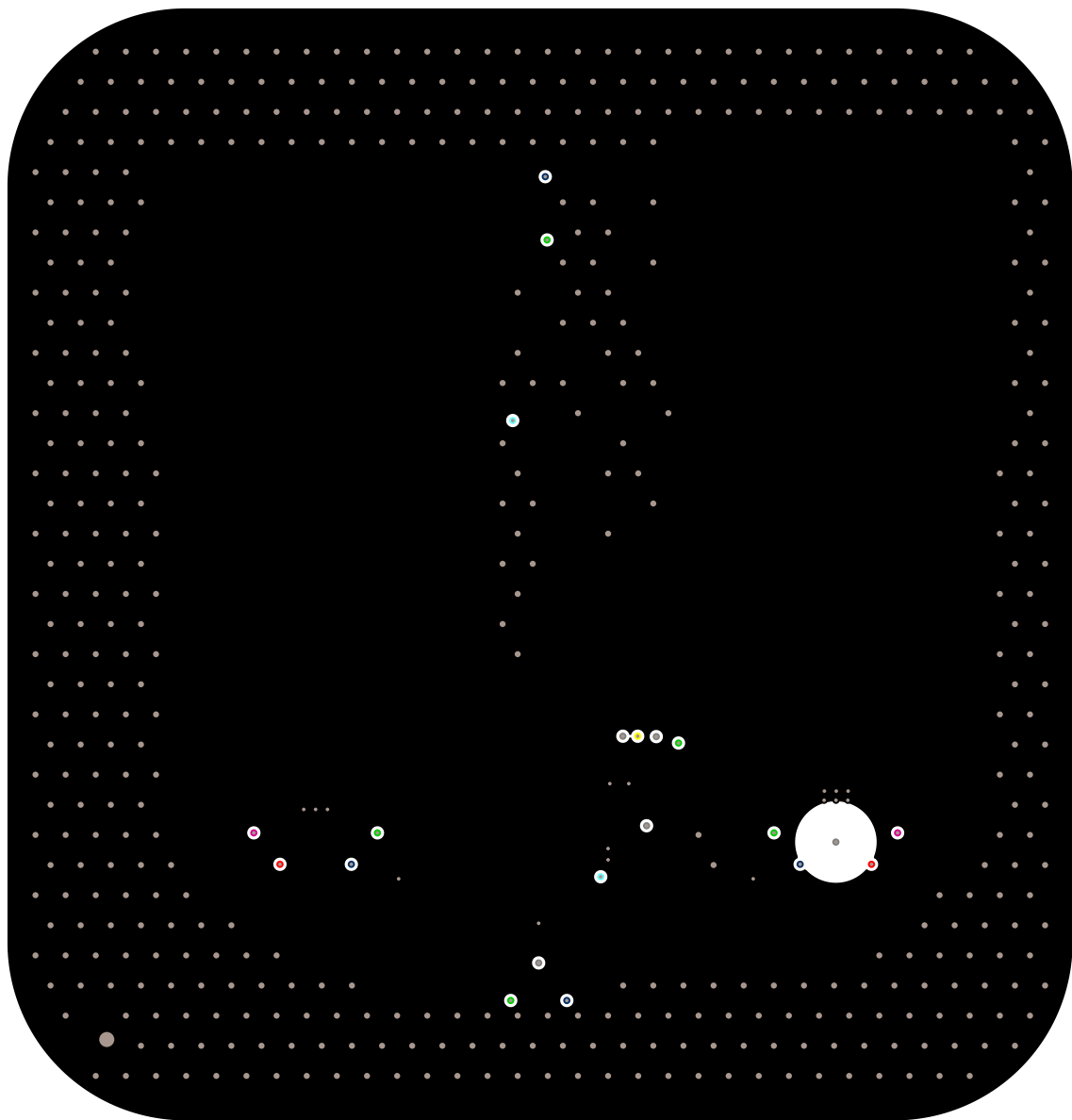




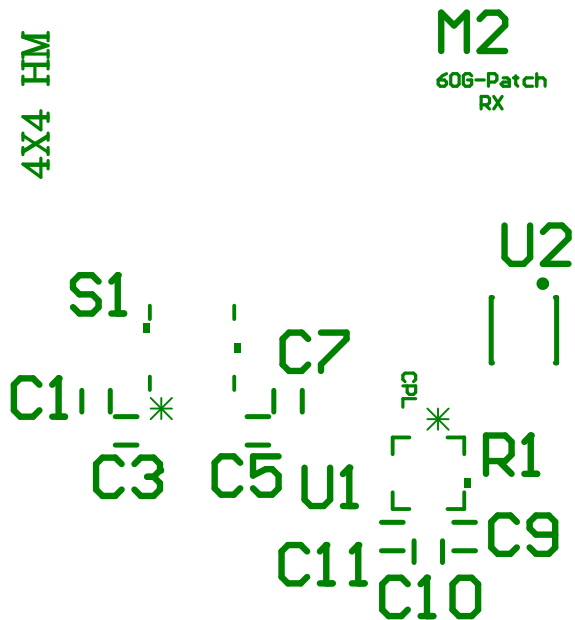








M1 B³
Double Sided R1
4X4 Patch Array
TX1



M4

4X4 Patch Array
TXS

MH 4X4

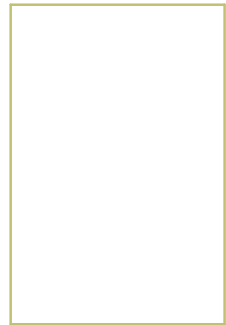
C2₁ L₁ *
C2₄ C₆
2S₁

C₁₂ = R2
C₈ C₆

R3 C₁₄ = R4
C₁₃ C₁₂

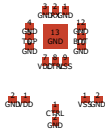
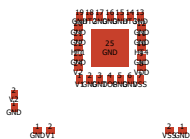
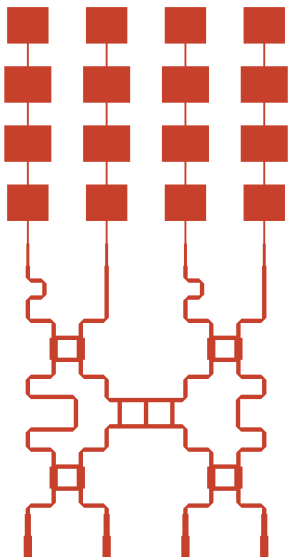
11
VDD
VSS
END
EN
END

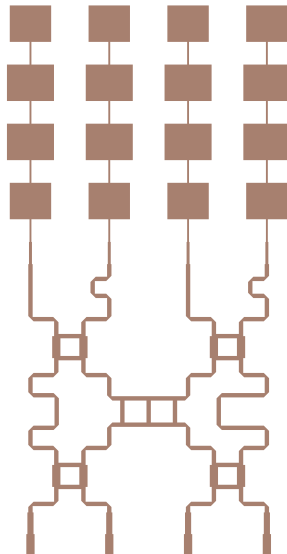
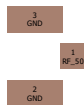
V1
V2
END
CTRL
END



13

12





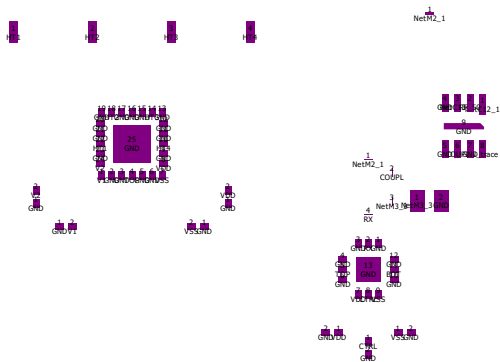
Net:V1_P00

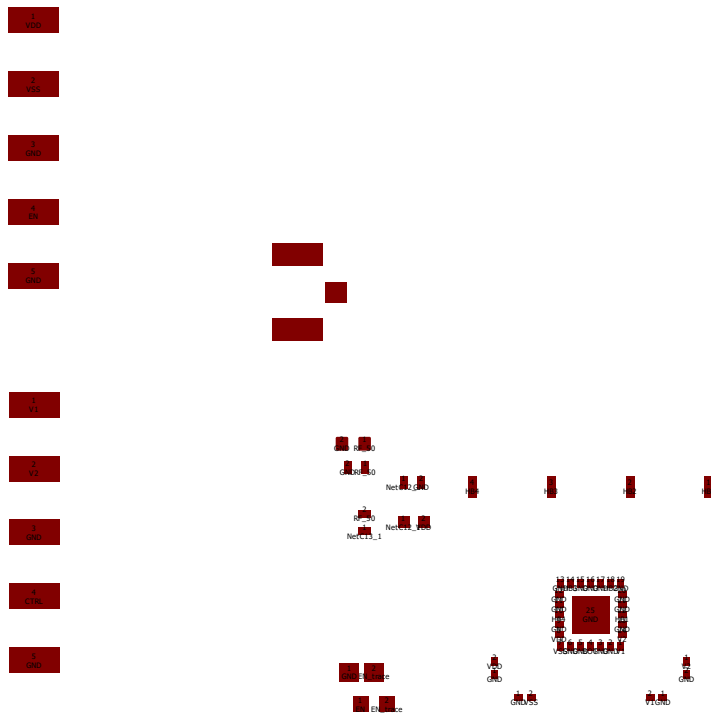
1 2
GND GND

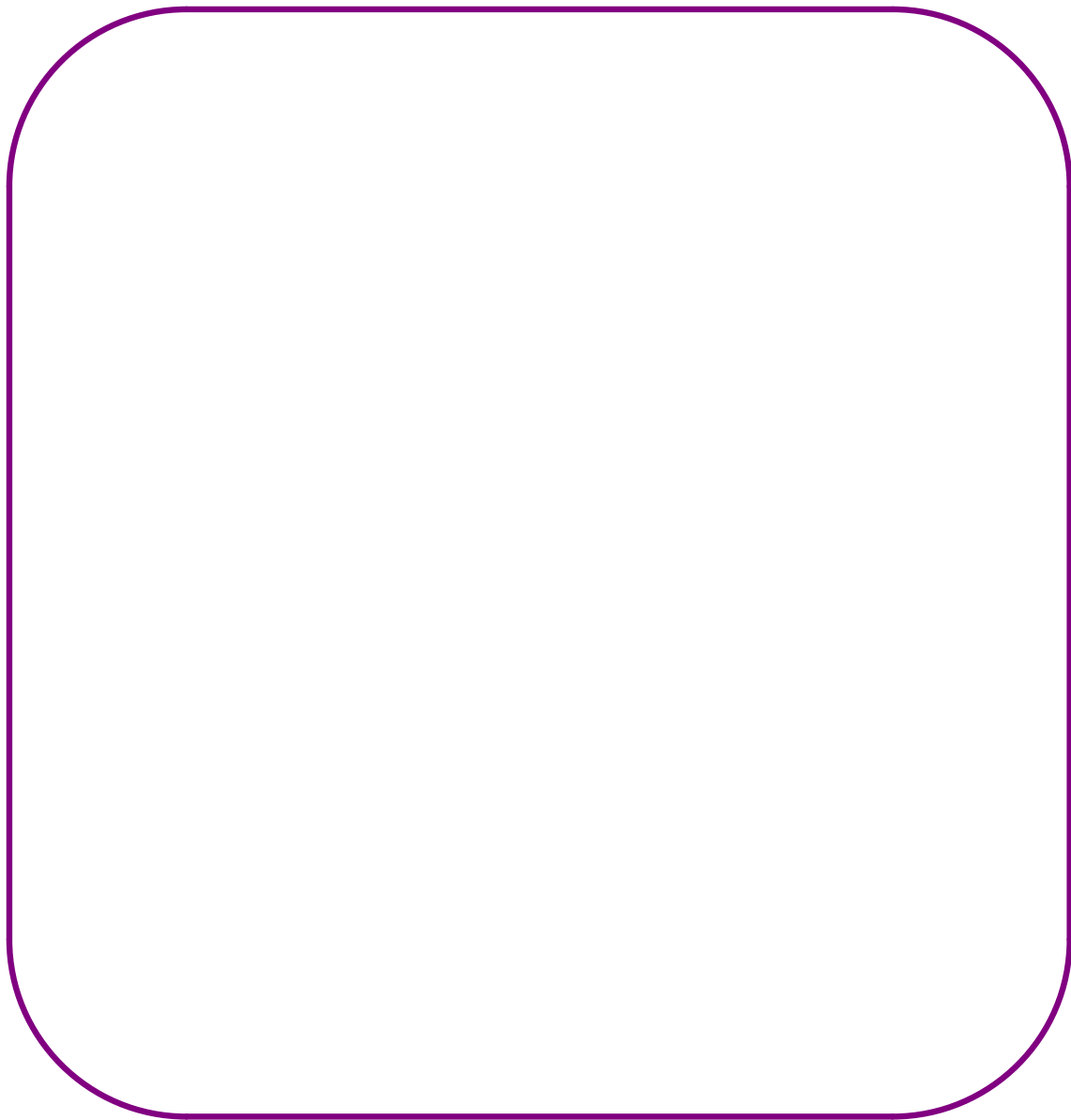
VDD
GND
GND

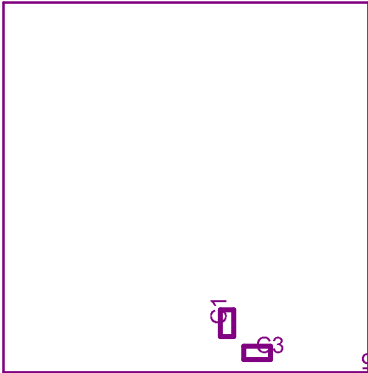
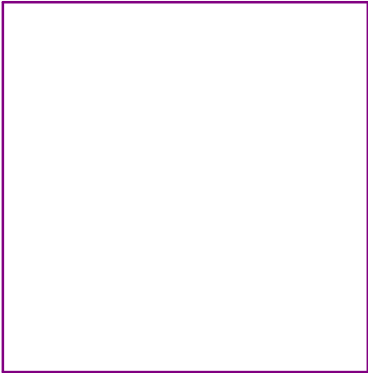
13 14 15 16 17 18 19
GND GND GND GND
GND 25 GND
GND GND GND
VDD VDD VDD VDD
VDD GND GND

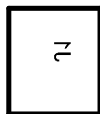
VDD
GND

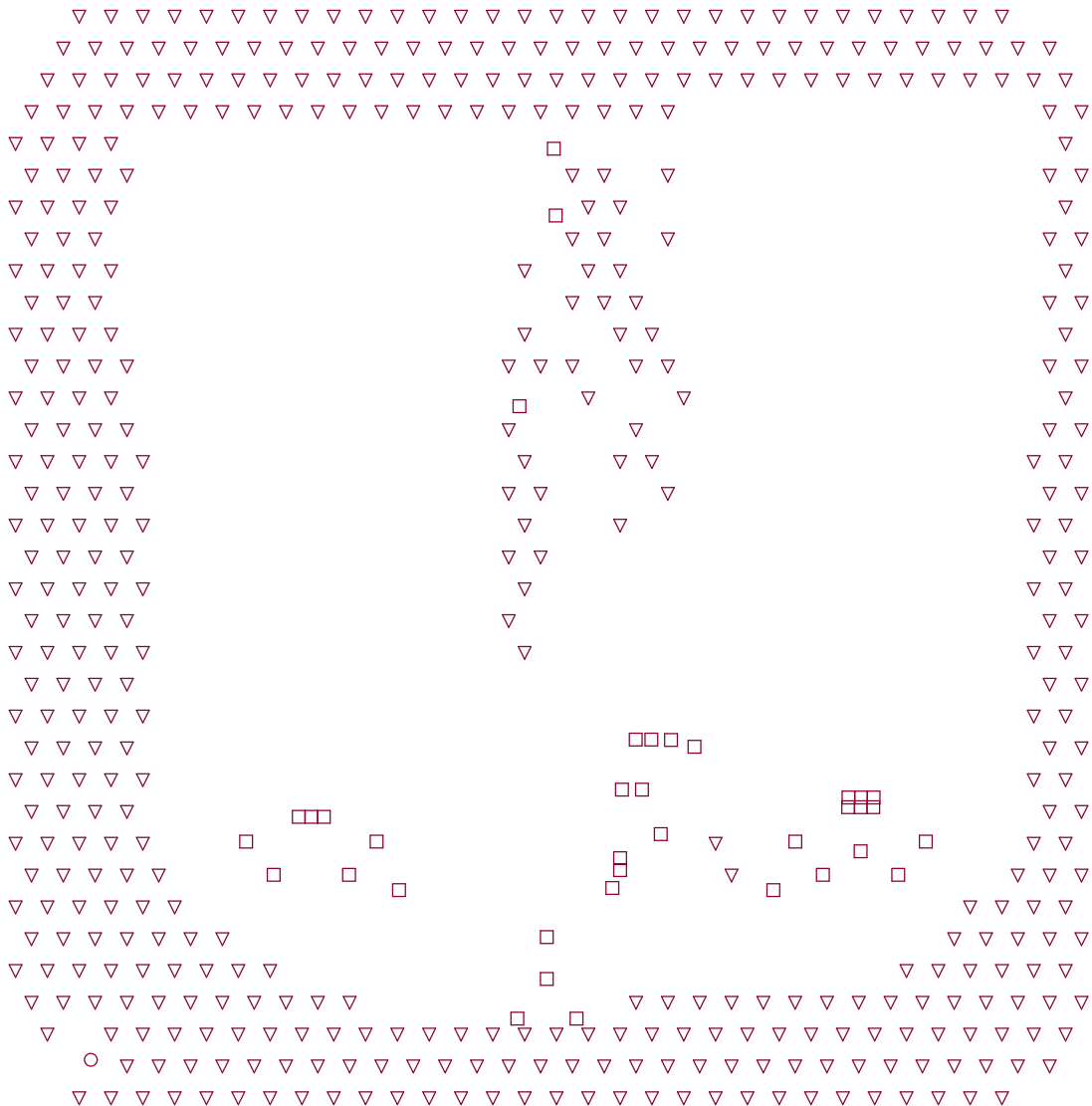


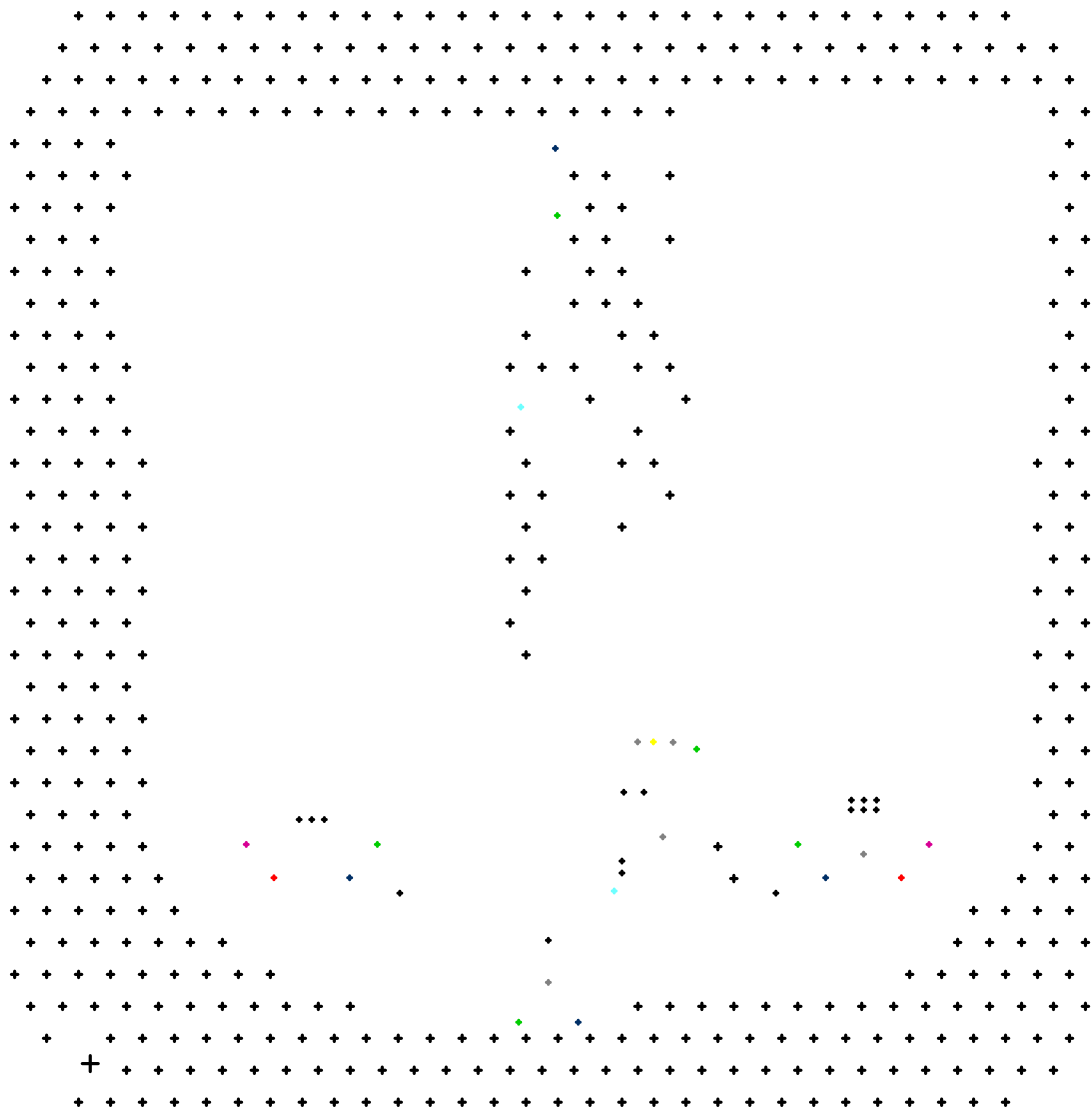




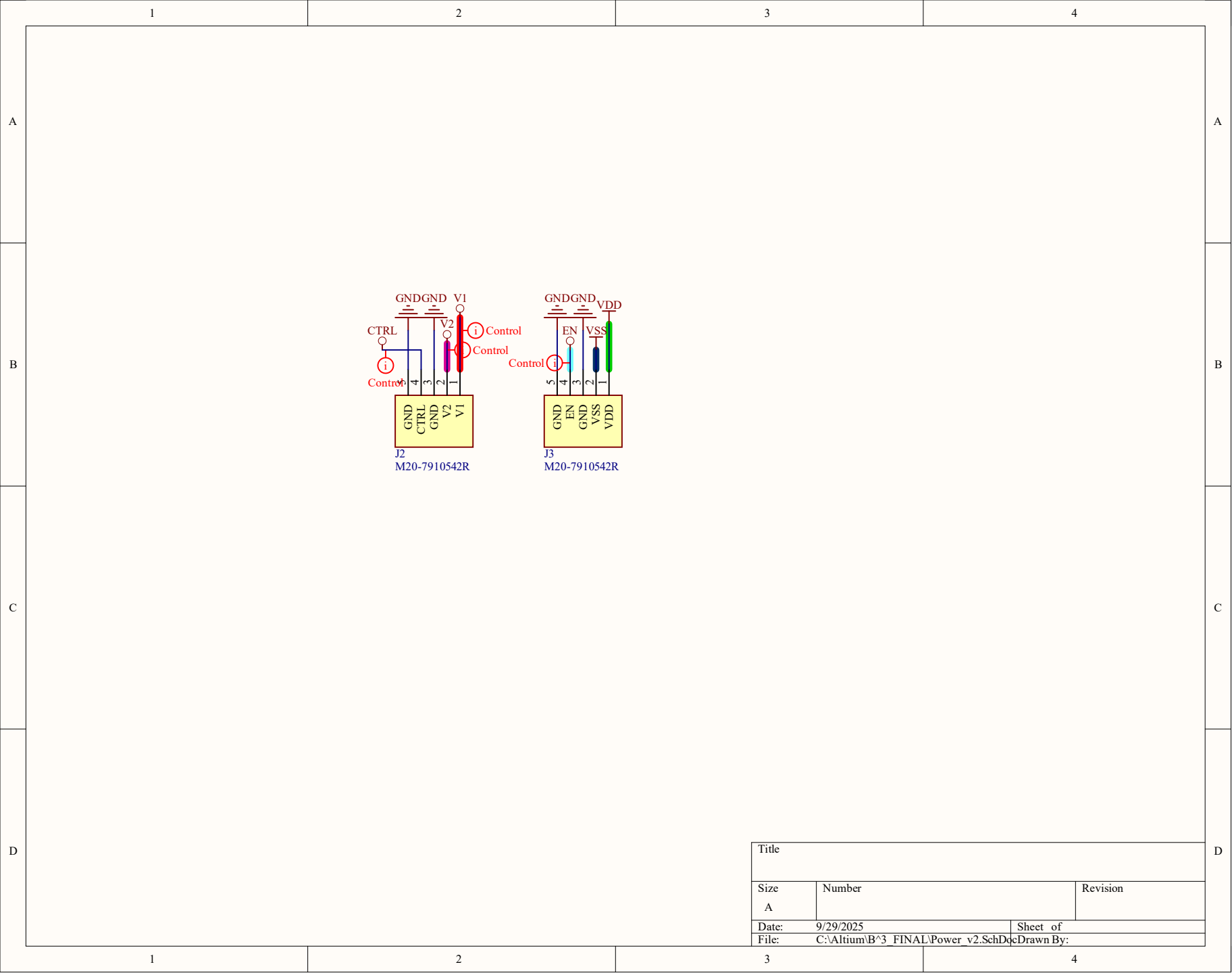


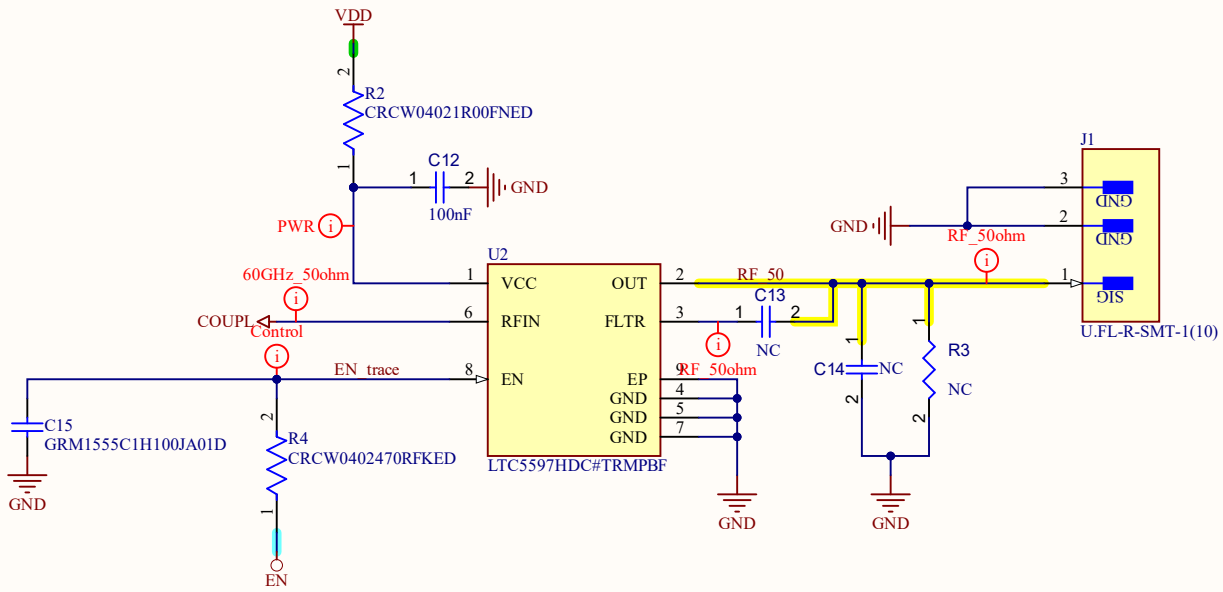




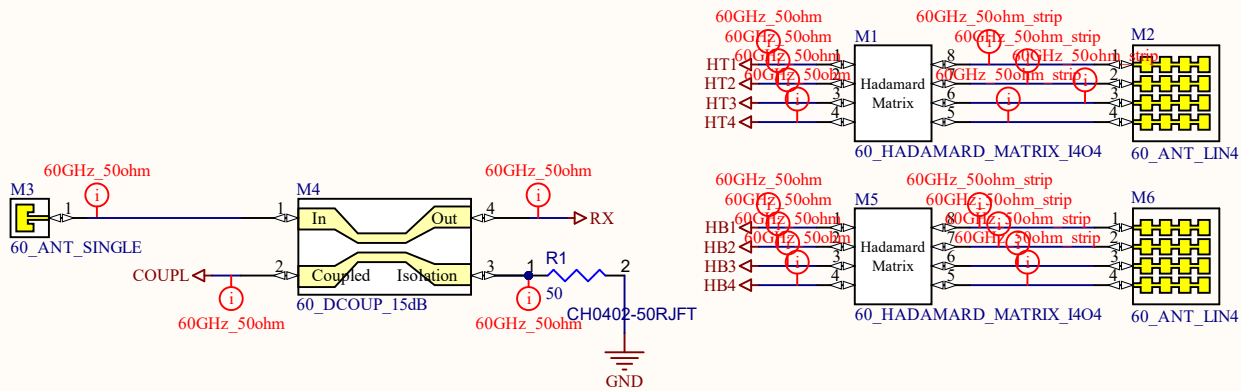








Title		
Size	Number	Revision
A		
Date:	9/29/2025	Sheet of
File:	C:\Altium\B^3_FINAL\RF_Active_v2.SchDoc	Drawn By:



Title		
Size	Number	Revision
Letter		
Date:	9/29/2025	Sheet of
File:	C:\Altium\..RF Passive_v2.SchDoc	Drawn By:

A

B

C

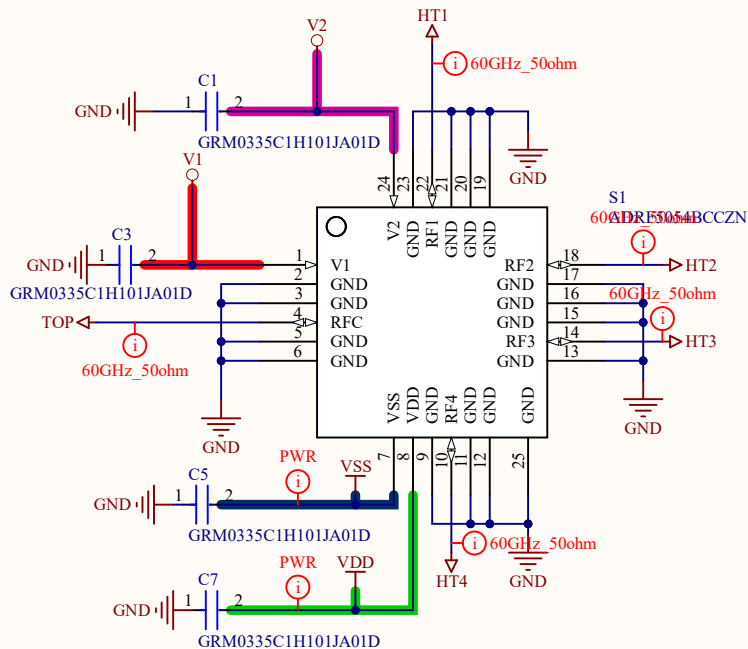
D

A

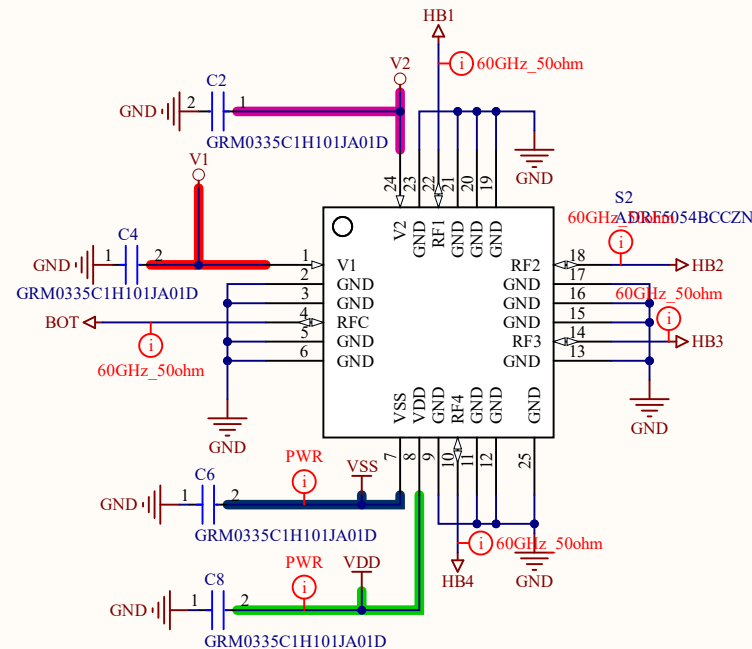
B

C

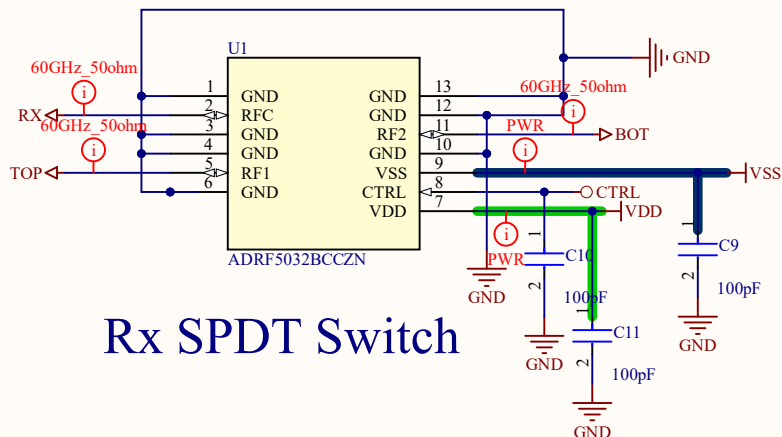
D



Top SP4T Switch



Bot SP4T Switch

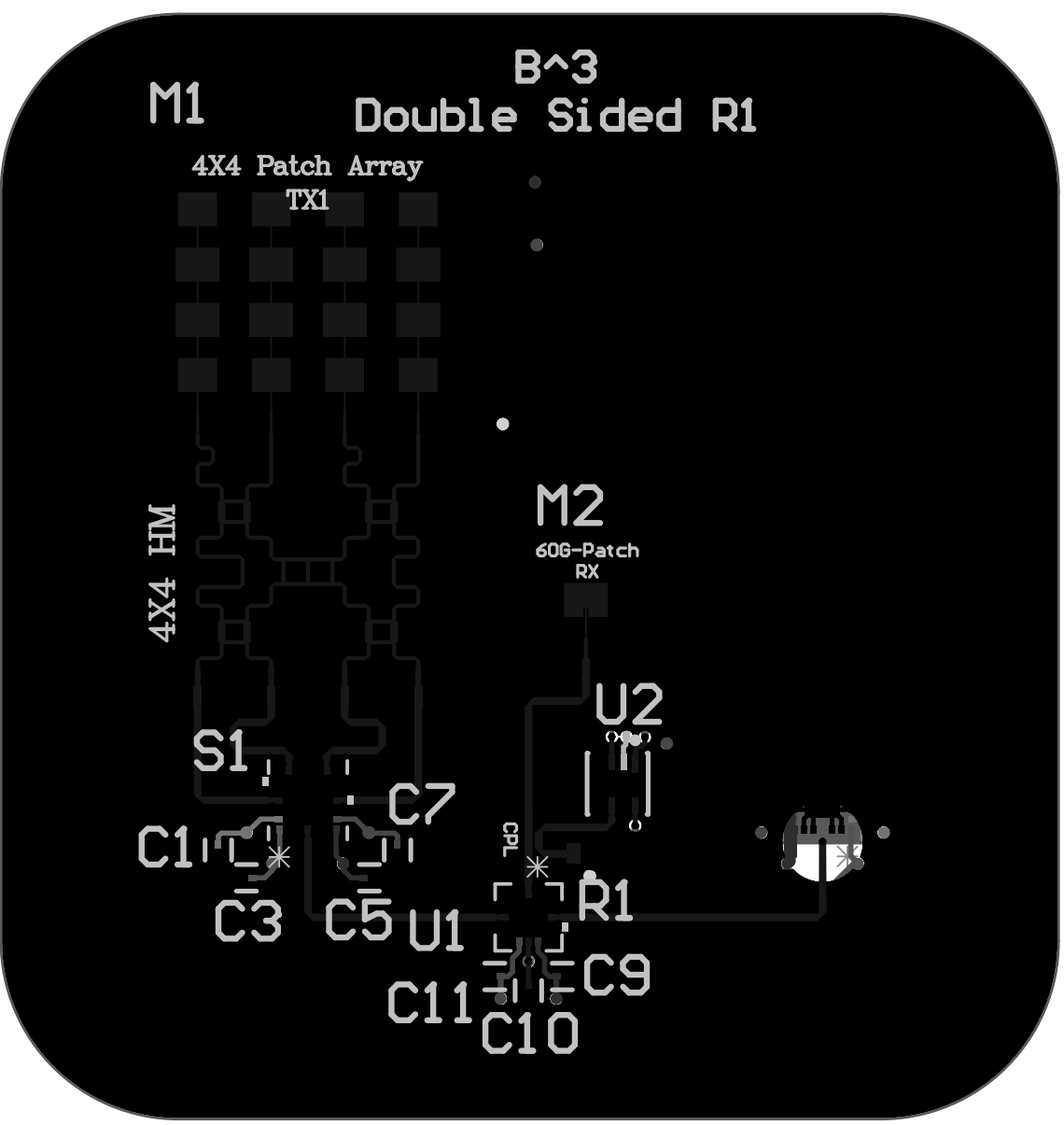


Rx SPDT Switch




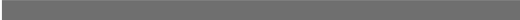











Rx SPDT switch chooses between top and bottom SP4T switches. For that, user should switch between CTRL high and low.

Title		
Size	Number	Revision
A		
Date:	9/29/2025	Sheet of
File:	C:\Altium\...\Switching Block v2.SchDoc	Drawn By:

Layer	Name	Material	Thickness	Constant	Board Layer Stack
	Top Overlay				
	Top Solder	Solder Resist	0.40mil	3.5	
1	Top Layer		0.35mil		
	Dielectric 1	Taconic TLX-8	5.00mil	2.55	
2	Layer 1	CF-004	0.69mil		
	Dielectric 2	FR-4	2.30mil	4.4	
3	Layer 2	CF-004	0.69mil		
	Dielectric 3	FR-4	8.00mil	4.4	
4	Layer 3	CF-004	0.69mil		
	Dielectric 4	FR-4	2.30mil	4.4	
5	Layer 4	CF-004	0.69mil		
	Dielectric 5	Taconic TLX-8	5.00mil	2.55	
6	Bottom Layer		0.35mil		
	Bottom Solder	Solder Resist	0.40mil	3.5	
	Bottom Overlay				



Board Stack Report

Stack Up		Layer Stack			
Layer	Board Layer Stack	Name	Material	Thickness	Constant
1		Top Overlay		0mil	
2		Top Solder	Solder Resist	0.4mil	3.5
3		Top Layer		0.354mil	
4		Dielectric 1	Taconic TLX-8	5mil	2.55
5		Layer 1	CF-004	0.689mil	
6		Dielectric 2	FR-4	2.3mil	4.4
7		Layer 2	CF-004	0.689mil	
8		Dielectric 3	FR-4	8mil	4.4
9		Layer 3	CF-004	0.689mil	
10		Dielectric 4	FR-4	2.3mil	4.4
11		Layer 4	CF-004	0.689mil	
12		Dielectric 5	Taconic TLX-8	5mil	2.55
13		Bottom Layer		0.354mil	
14		Bottom Solder	Solder Resist	0.4mil	3.5
15		Bottom Overlay		0mil	
	Height : 26.864mil				

M1 B^3 Double Sided R1

M1 B^3 Double Sided R1

4X4 Patch Array

TX1

4X4 HI HM

S1

C1

C3

C5

111

C1.1

C10



R1

C9

M2

60G-Patch RX

U2

9

M4

4X4 Patch Array

TX2

4X4 HM

J1

VDD

VSS

GND

EN

GND

J3

R3

C14

C13

V1

V2

GND

CTRL

GND

J2

C12

R2

C8

S2

C2

C4

C6

C15

R4

B³
Double Sided R1

4X4 Patch Array

TX1

4X4 HM

S1

C1

C3

C5

C7

C11

C10

CPL

U2

R1

C9

606-Patch
RX

R3



46



M4

4X4 Patch Array
TXS

4X4 MH

VDD
VSS
END
EN
END



R3
C14
C13
C12
R2
C8
R5



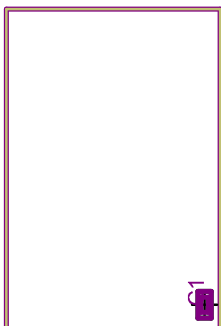
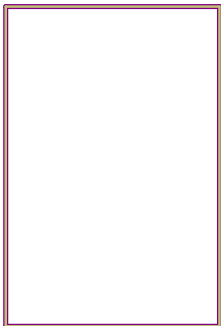
C2
C4
C6
C8
R2
R4
R6
R8
R10
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R22
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R56
R58
R60
R62
R64
R66
R68
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R84
R86
R88
R90
R92
R94
R96
R98
R100

V1
V2
END
CTRL
END

C15
R4
C12
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11

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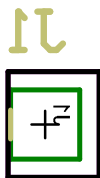
15

M4

4X4 Patch Array
TXS

4X4 MH

VDD
VSS
END
EN
END

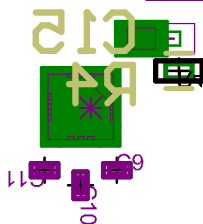


R3
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C13
C12
R2
C8
R5



C2
C4
C6
C8
R4
R5
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R93
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R95
R96
R97
R98
R99
R100

V1
V2
END
CTRL
END



13

15



M4

4X4 Patch Array
TXS

4X4 MH

VDD
VSS
END
EN
END



R3
C14
C13
C12
R2
C8
R5



C2
C4
C6
C8
R2
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R8
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R86
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R92
R94
R96
R98
R100

V1
V2
END
CTRL
END

R4
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C14
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C98
C100

13

15

M4

4X4 Patch Array
TXS

4X4 MH

VDD
VSS
END
EN
END



R3
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C12
R2
C8
R5



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V1
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CTRL
END

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