

E

D

C

B

A

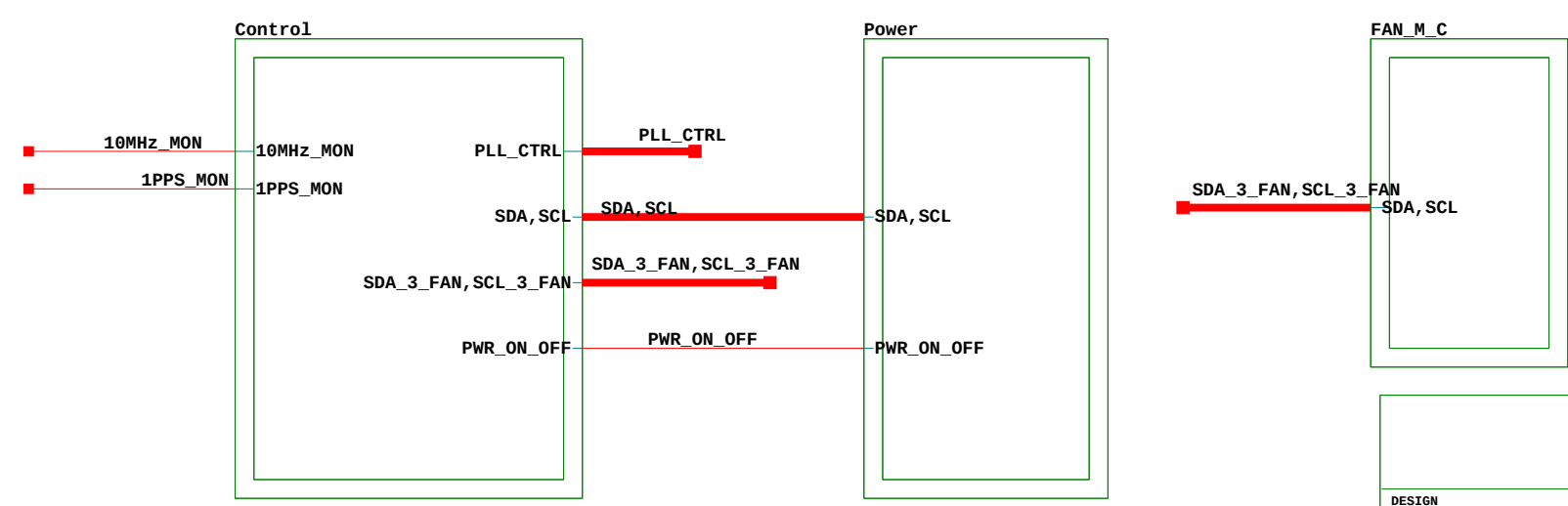
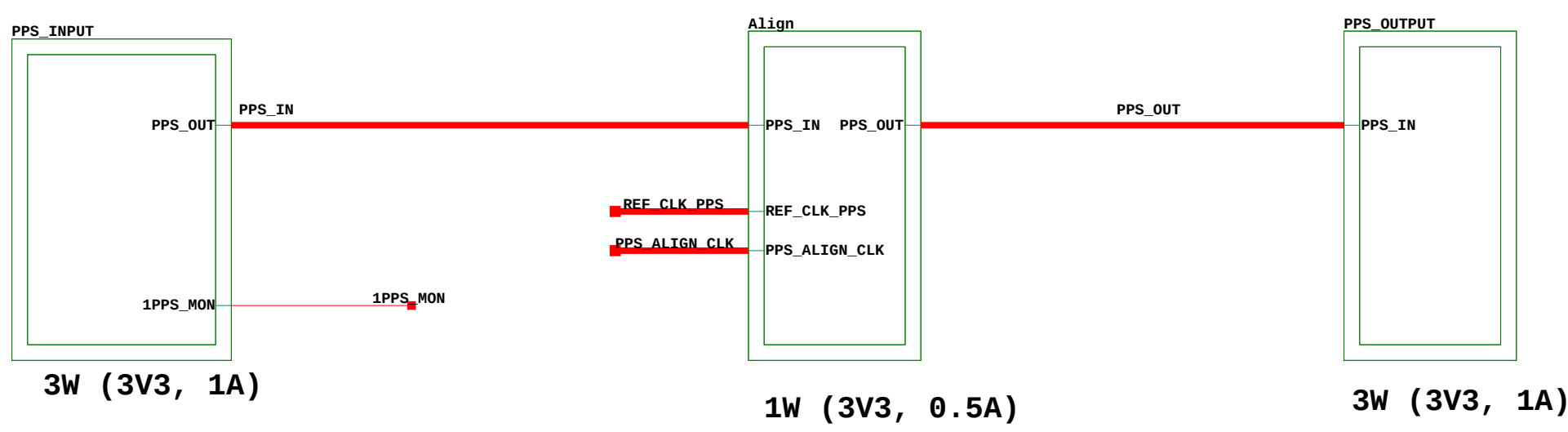
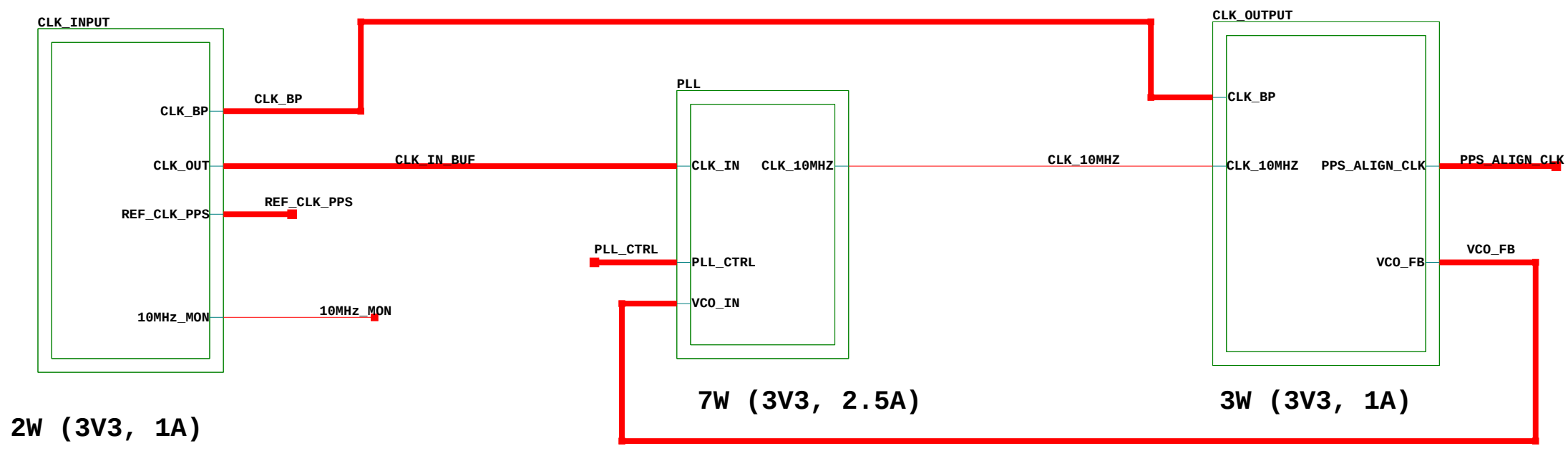
1

2

3

4

5



E

D

C

B

A

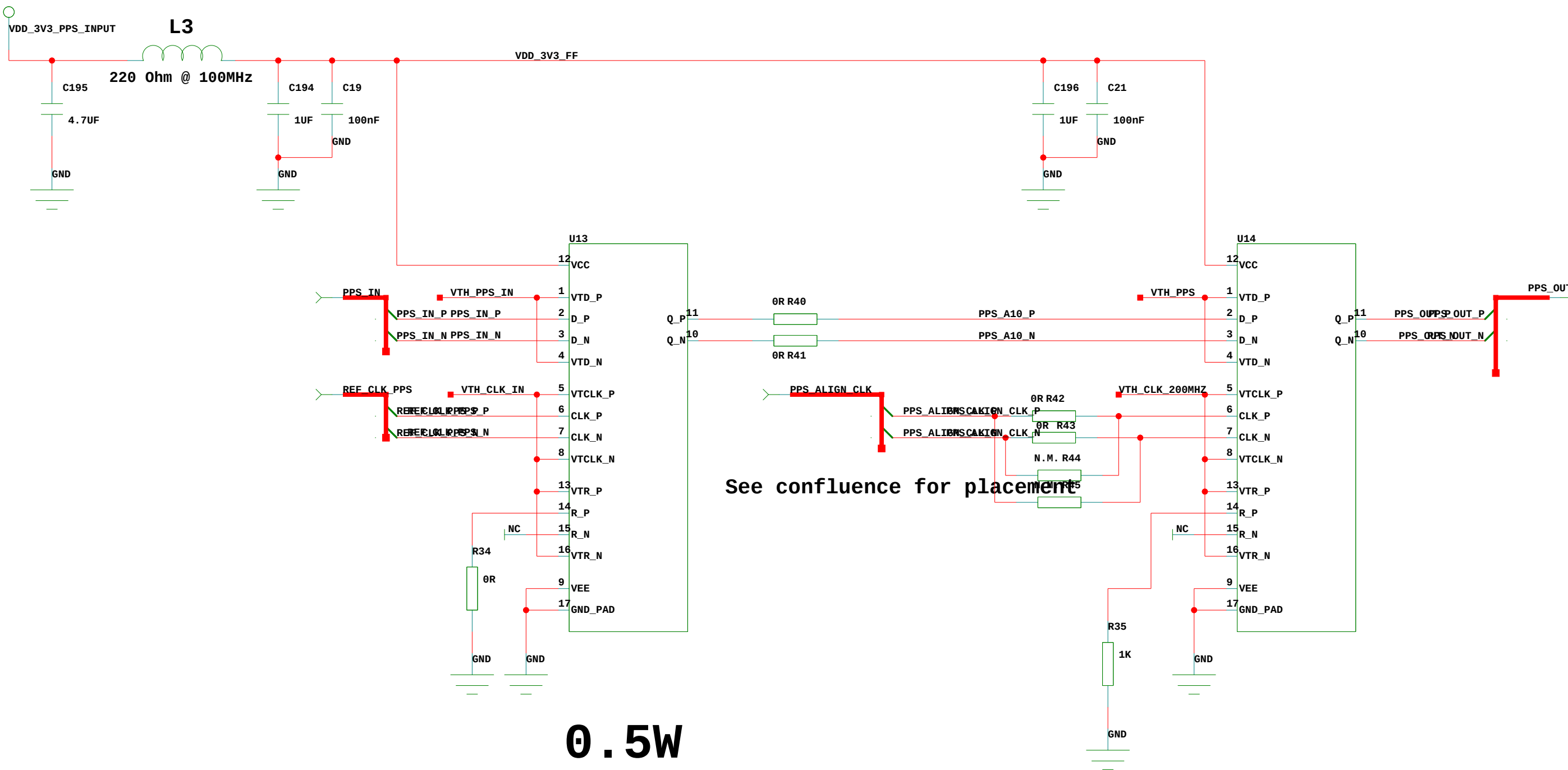
1

2

3

4

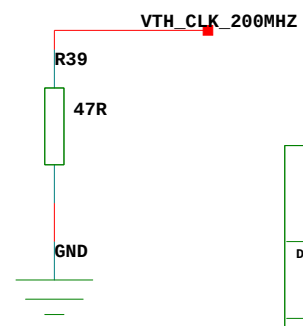
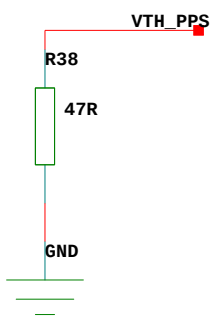
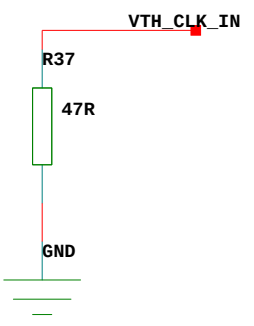
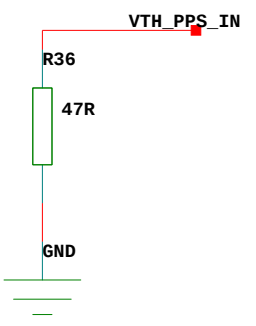
5



See confluence for placement

0.5W

0.5W



ASTRON			
PPS Alignment circuit			
DESIGN			
SIZE	Filename	Align	REV 2.1
6ijs / Sieds	SHEET 2 of 22	DATE	30/06/2022:13:20

E

D

C

B

A

1

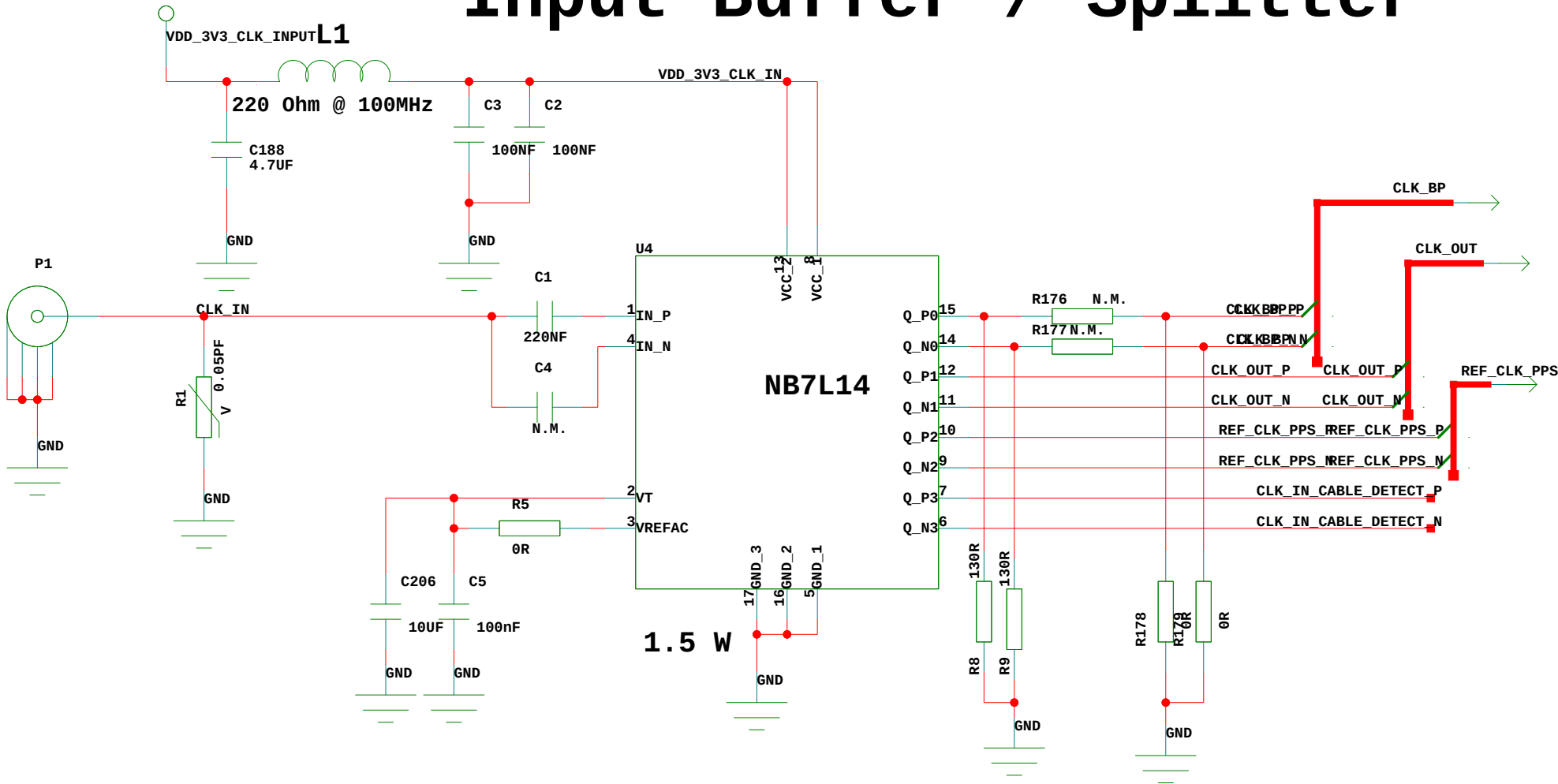
2

3

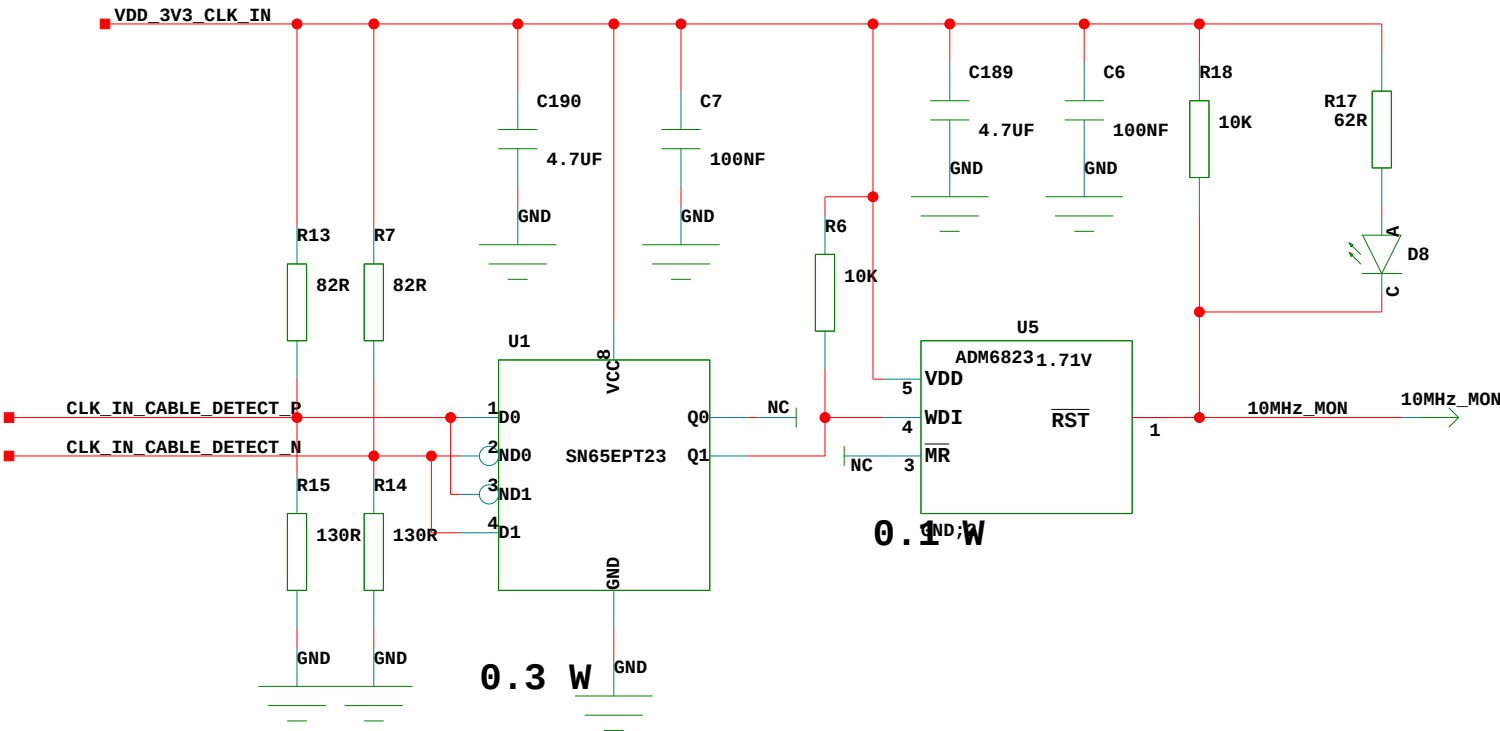
4

5

Input Buffer / Splitter



Input Monitoring Circuit



ASTRON

DESIGN				10MHz Clock input circuit			
SIZE	Filename	CLK_INPUT			REV	2.1	
DRAWN BY		SHEET		DATE		30/06/2022:13:20	
Gijls / Sieds		3 of 22					

E

D

C

B

A

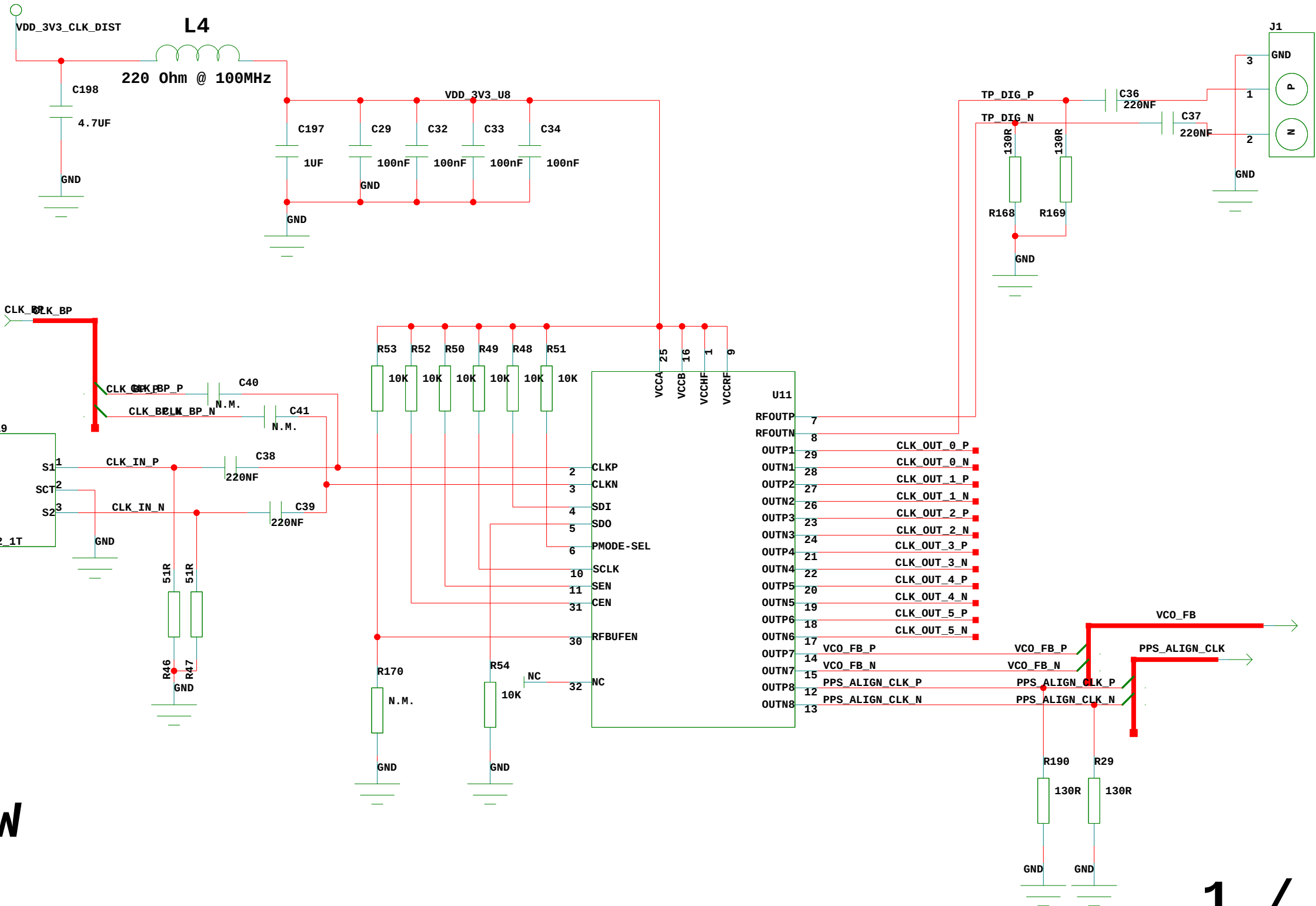
1

2

3

4

5



1.5W

1 / 2

SMA Measurepoint + Signal input to bypass all circuitry

1.5W

ASTRON

Clock Output Splitter

DESIGN			
Clock Output Splitter			
SIZE	Filename	REV	
A3		2.1	
DRAWN BY		SHEET	DATE
Gijls / Sieds		4 of 22	30/06/2022:13:20

CLK_OUTPUT

E

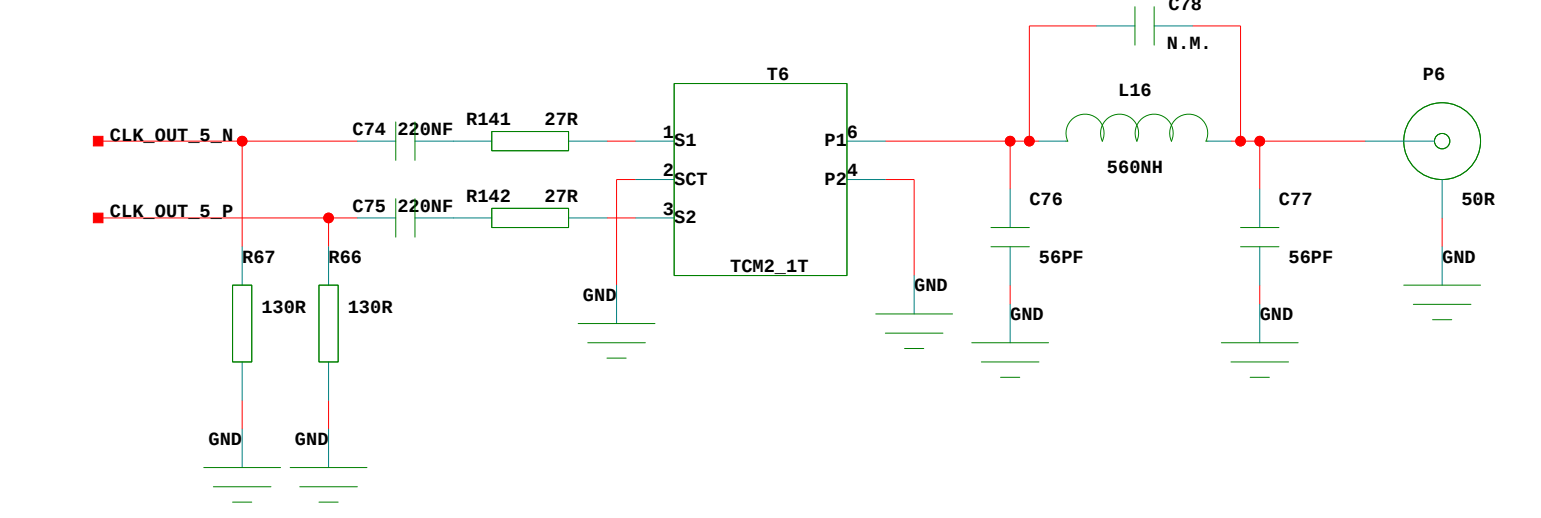
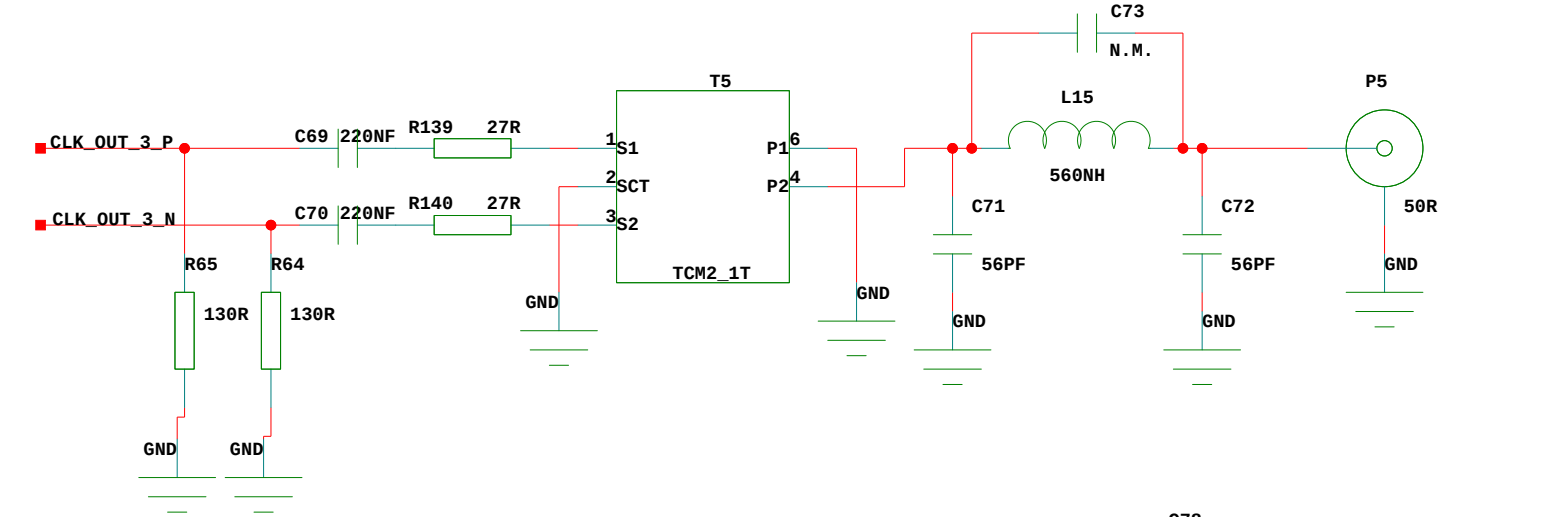
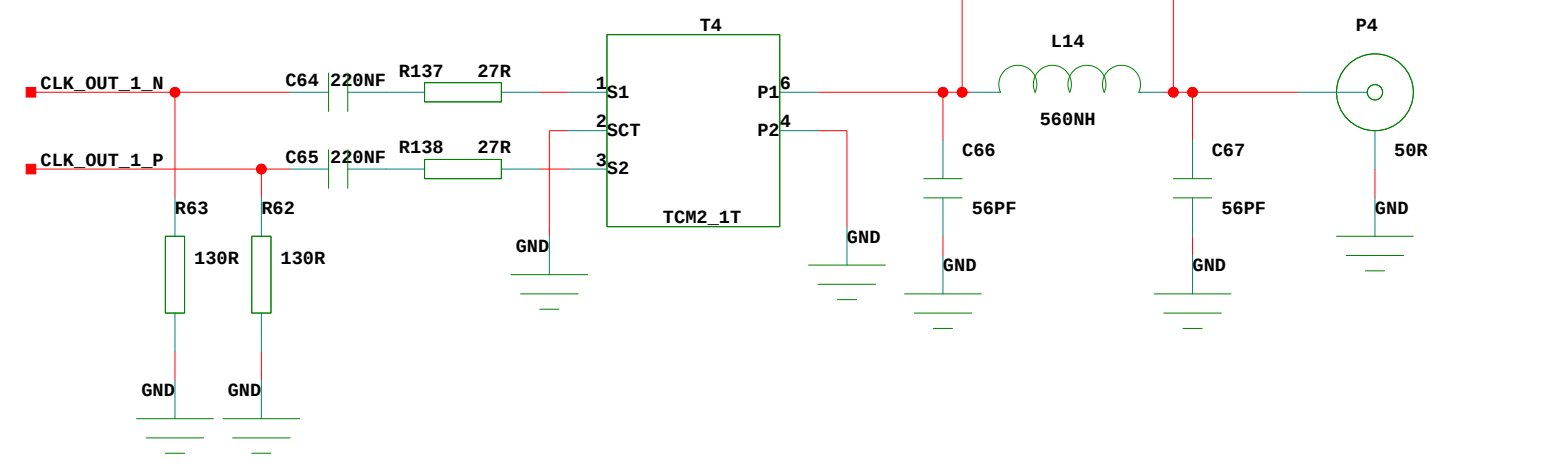
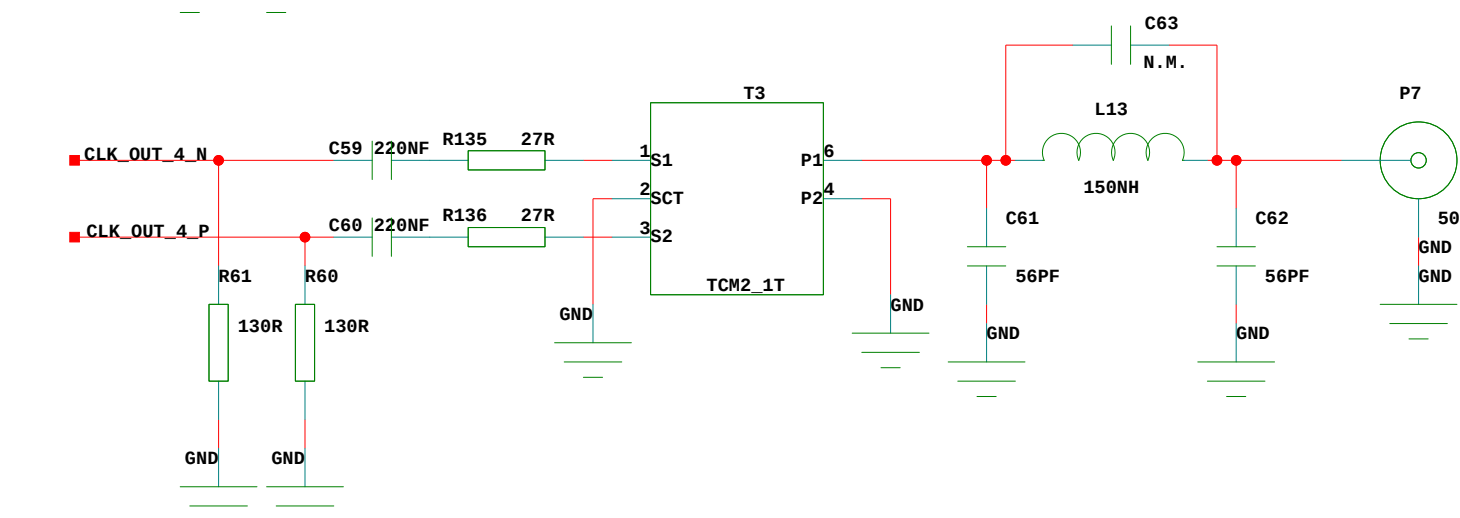
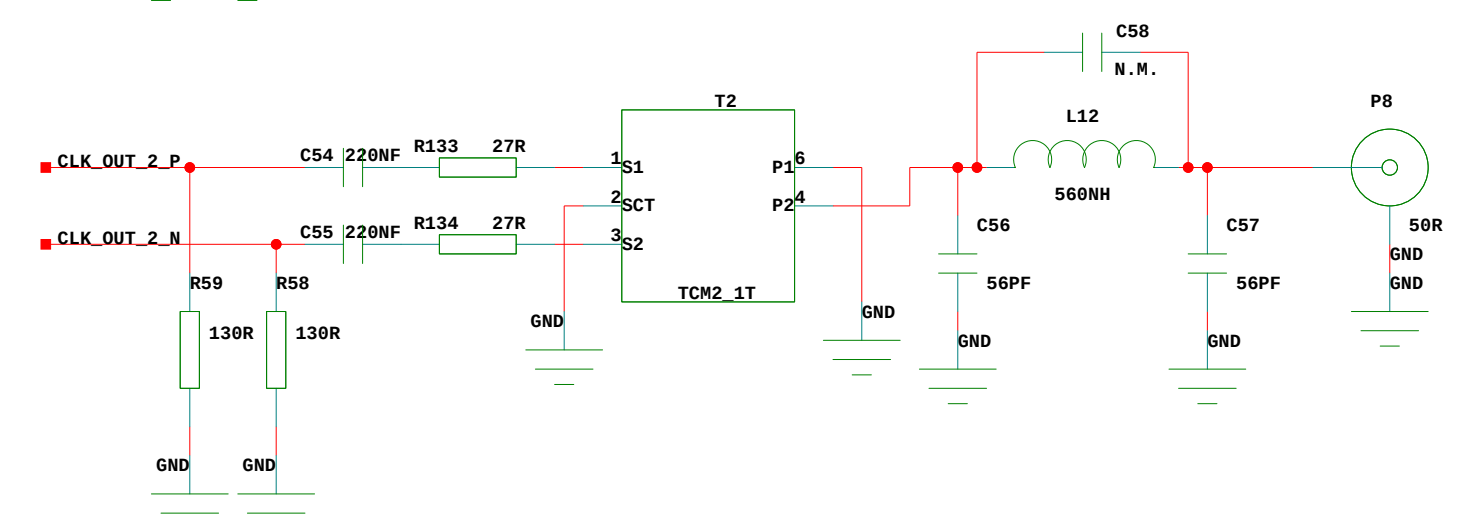
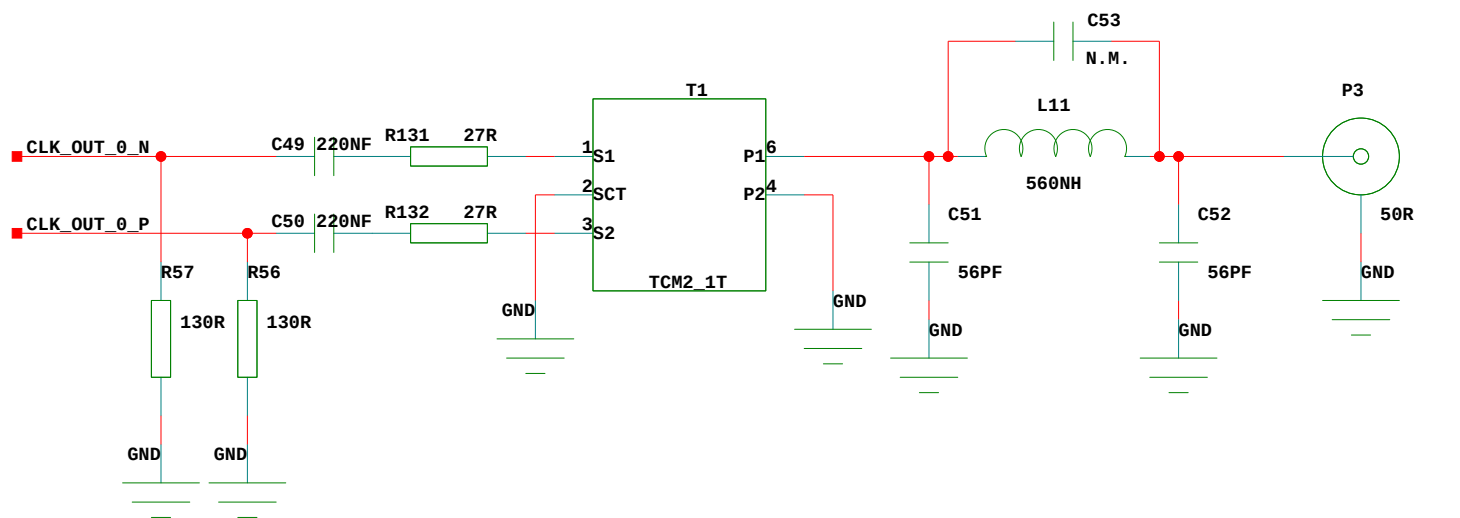
D

C

B

A

$$F = 1 / (2 \cdot \pi \cdot 50 \cdot 22 \cdot 10^{-12}) = 144 \text{ MHz}$$
$$F = 1 / (2 \cdot \pi \cdot 50 \cdot 22 \cdot 10^{-12}) = 144 \text{ MHz}$$



ASTRON			
DESIGN		Clock output circuit	
SIZE	Filename	REV	
A3		CLK_OUTPUT 2.1	
DRAWN BY		SHEET	DATE
Gijls / Sieds		5 of 22	30/06/2022:13:20

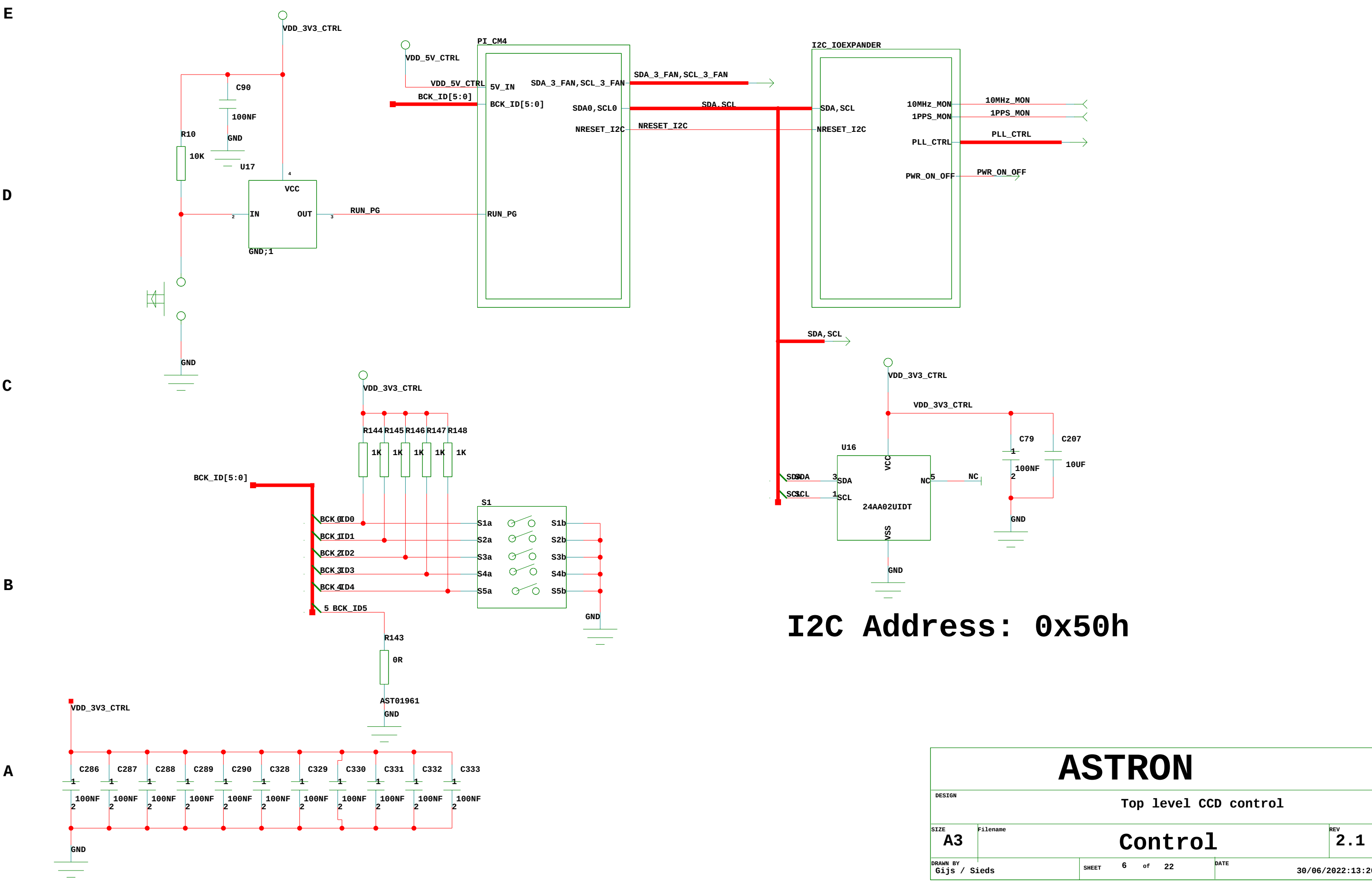
E

D

C

B

A



I2C Address: 0x50h

ASTRON			
Top level CCD control			
DESIGN	Control		
SIZE	Filename	REV	
A3		2.1	
DRAWN BY	Gijs / Sieds	SHEET	6 of 22
		DATE	30/06/2022:13:20

A



ASTRON

DESIGN

SIZE
A3

Filename

I2C_I0EXPANDER

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET 7 of 22

DATE _____

30/06/2022:13:20

E

D

C

B

A

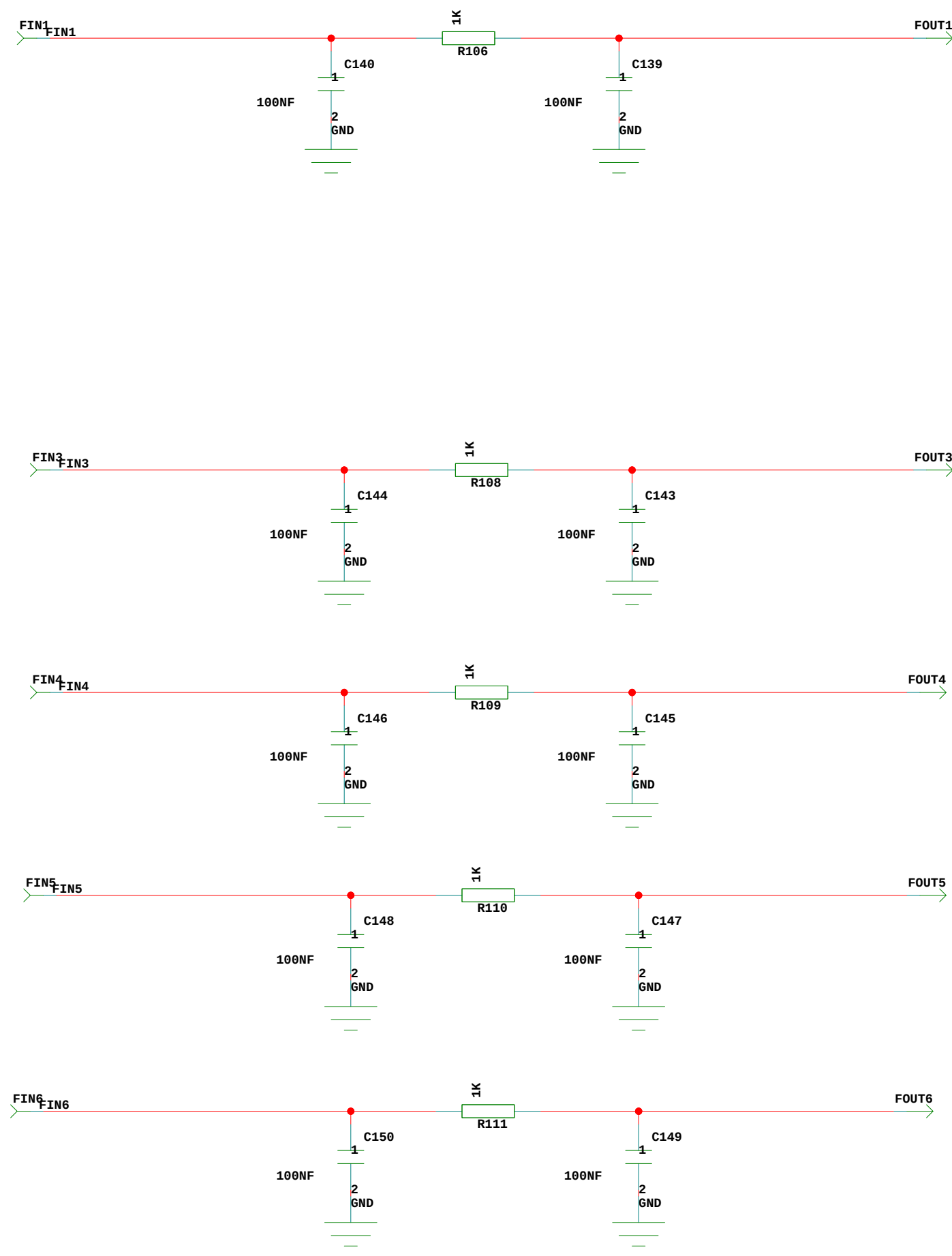
1

2

3

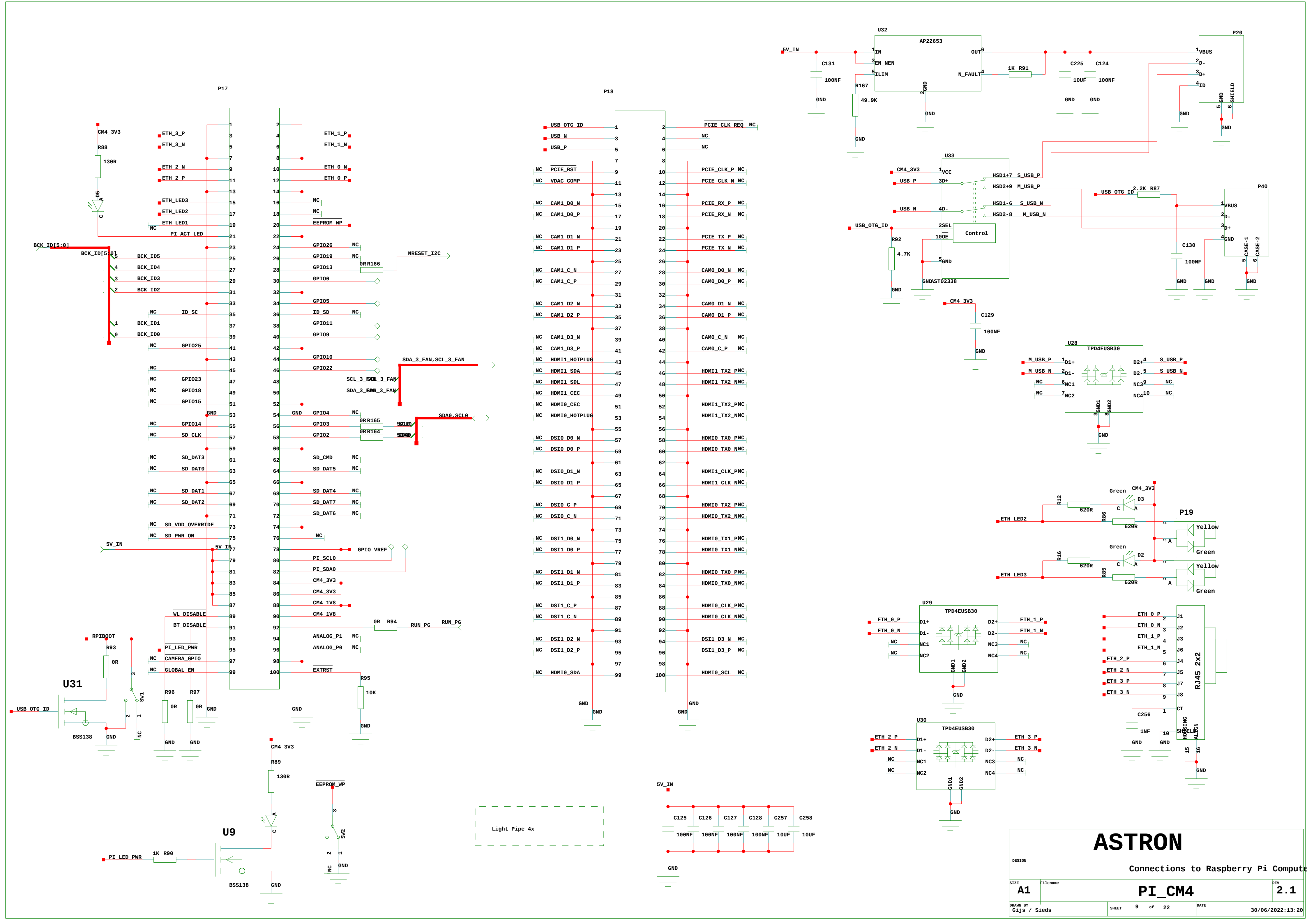
4

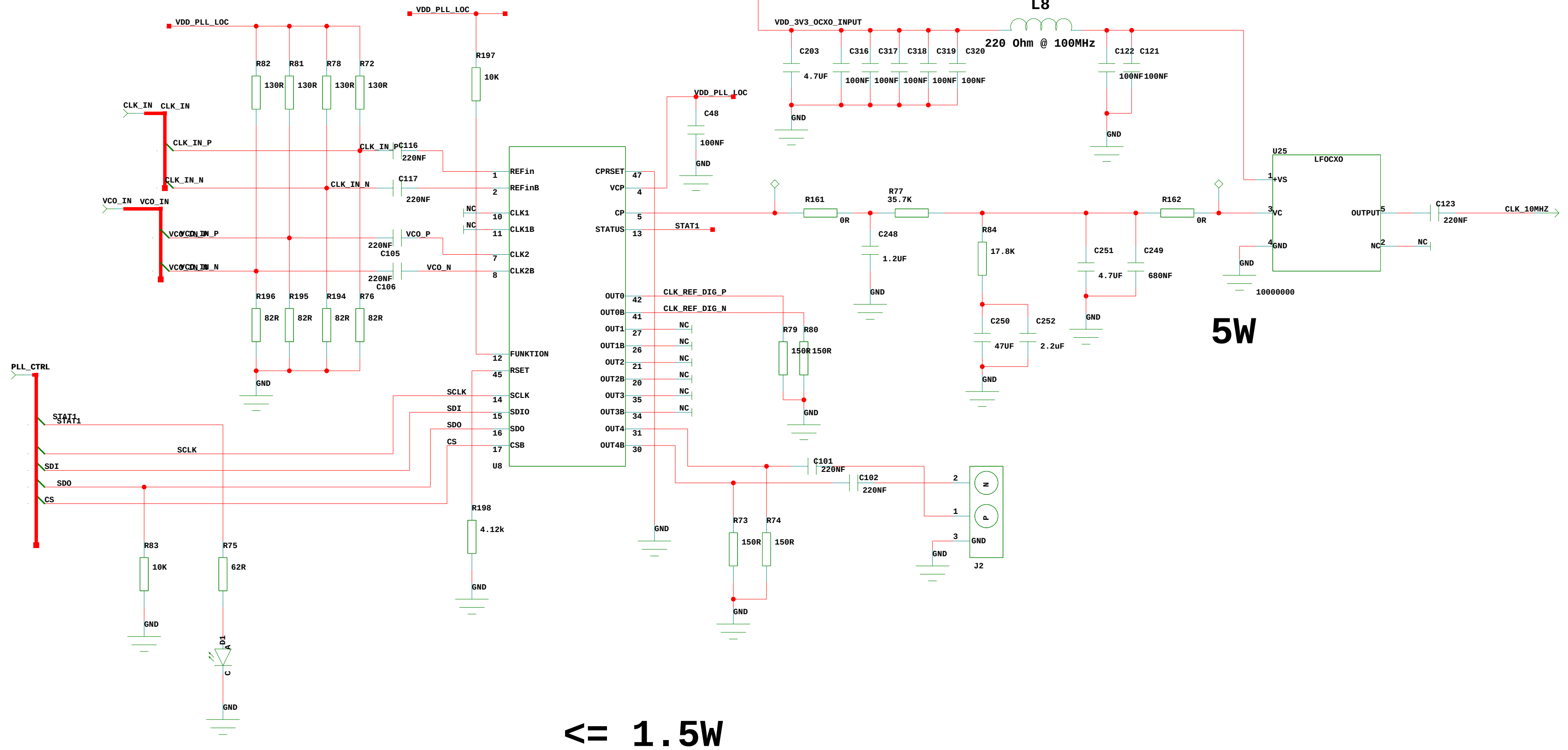
5



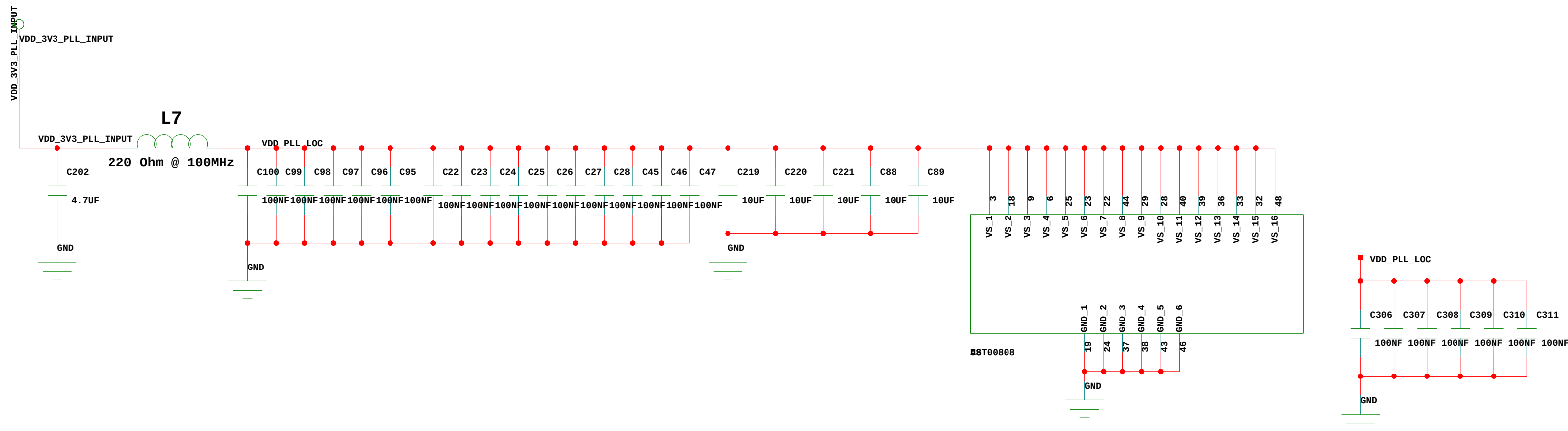
ASTRON

DESIGN				Filter PLL Signals			
SIZE	Filename	CRC_NETWORK				REV	2.1
DRAWN BY		SHEET		DATE			
Gijs / Sieds		8 of 22		30/06/2022:13:20			





<= 1.5W



Input Buffer / Splitter

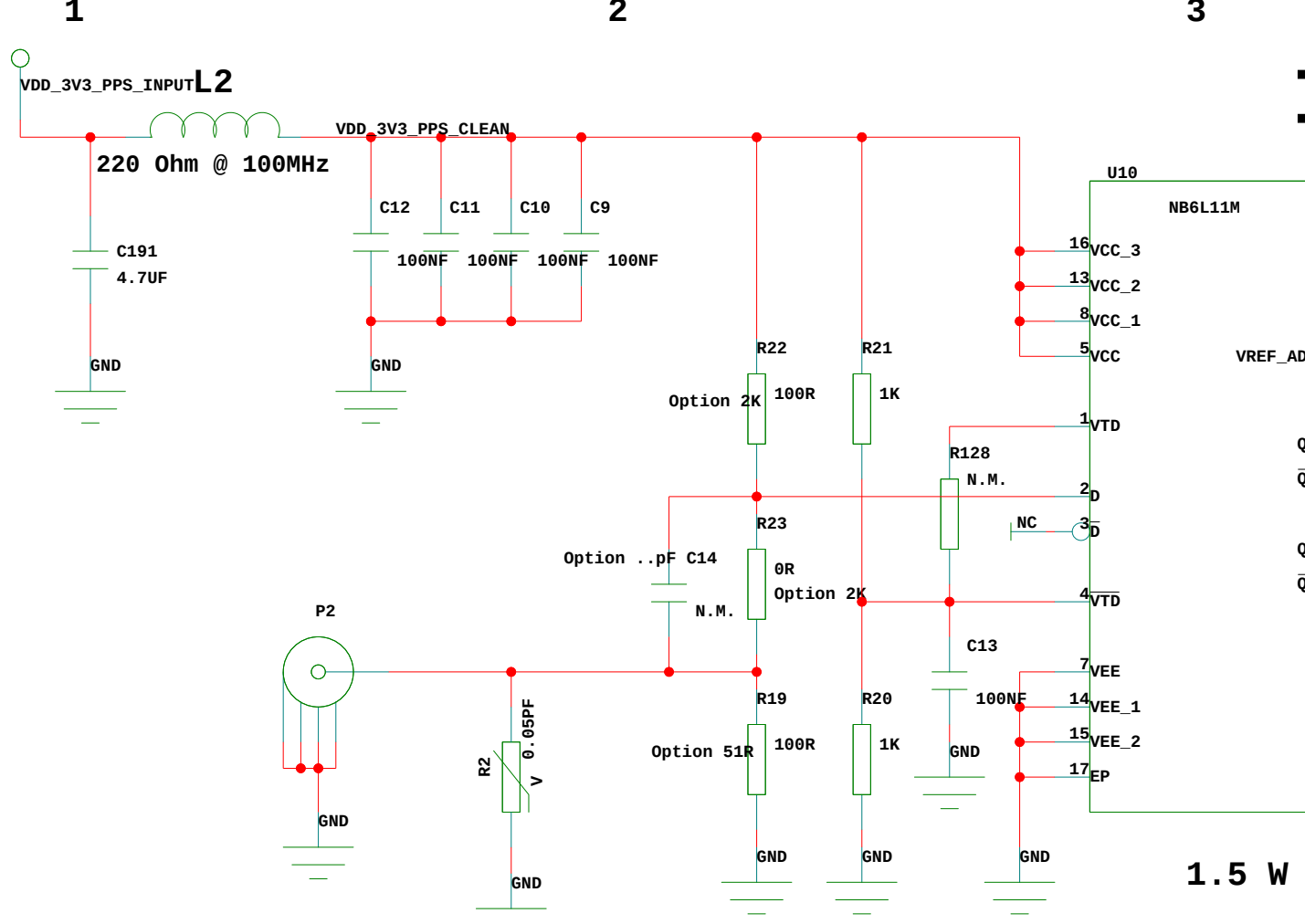
E

D

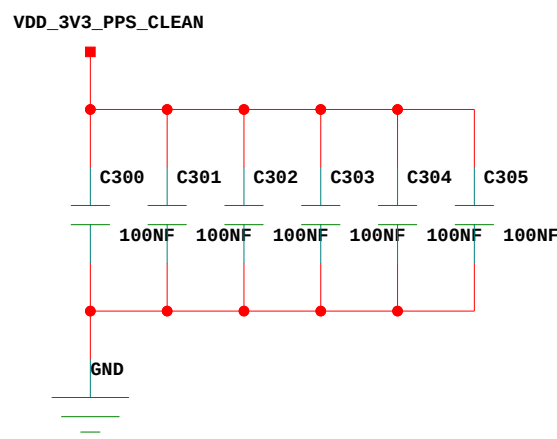
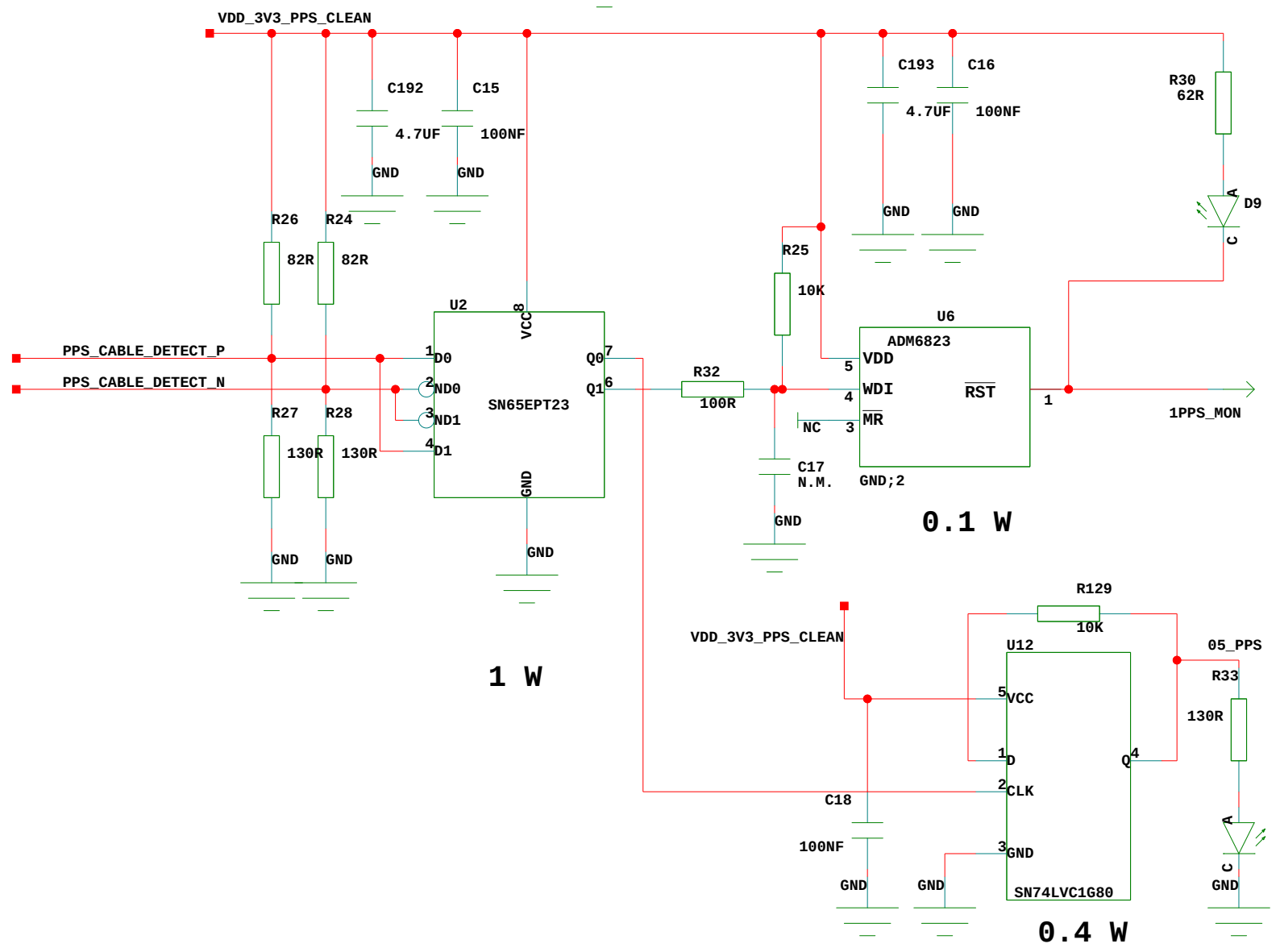
C

B

A

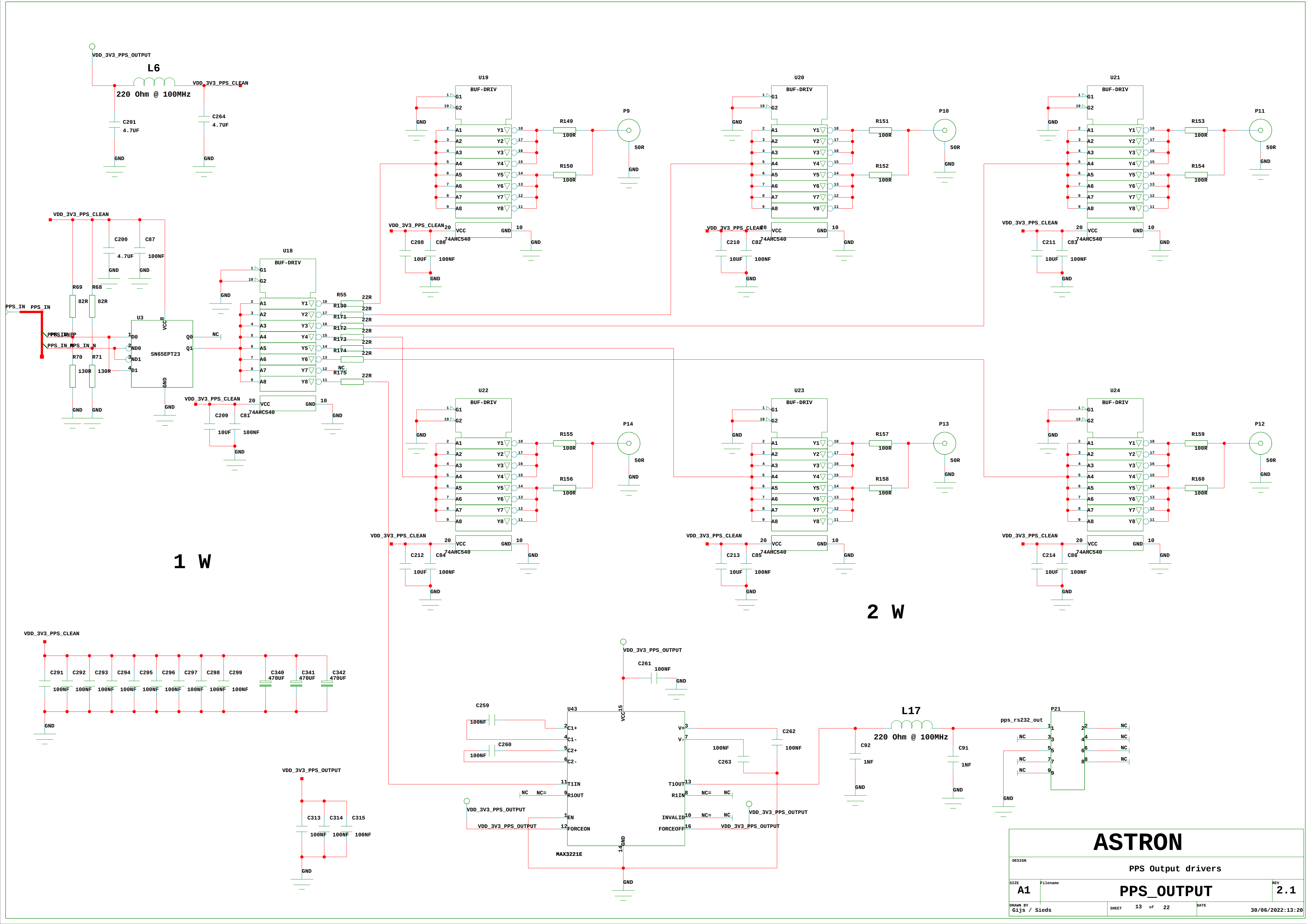


Input Monitoring Circuit



Light Pipe 4x
AST01672

ASTRON			
DESIGN PPS Input Circuit			
SIZE A3	Filename	PPS_INPUT	
DRAWN BY Gijls / Sieds	SHEET 12 of 22	DATE	30/06/2022:13:20
REV 2.1			



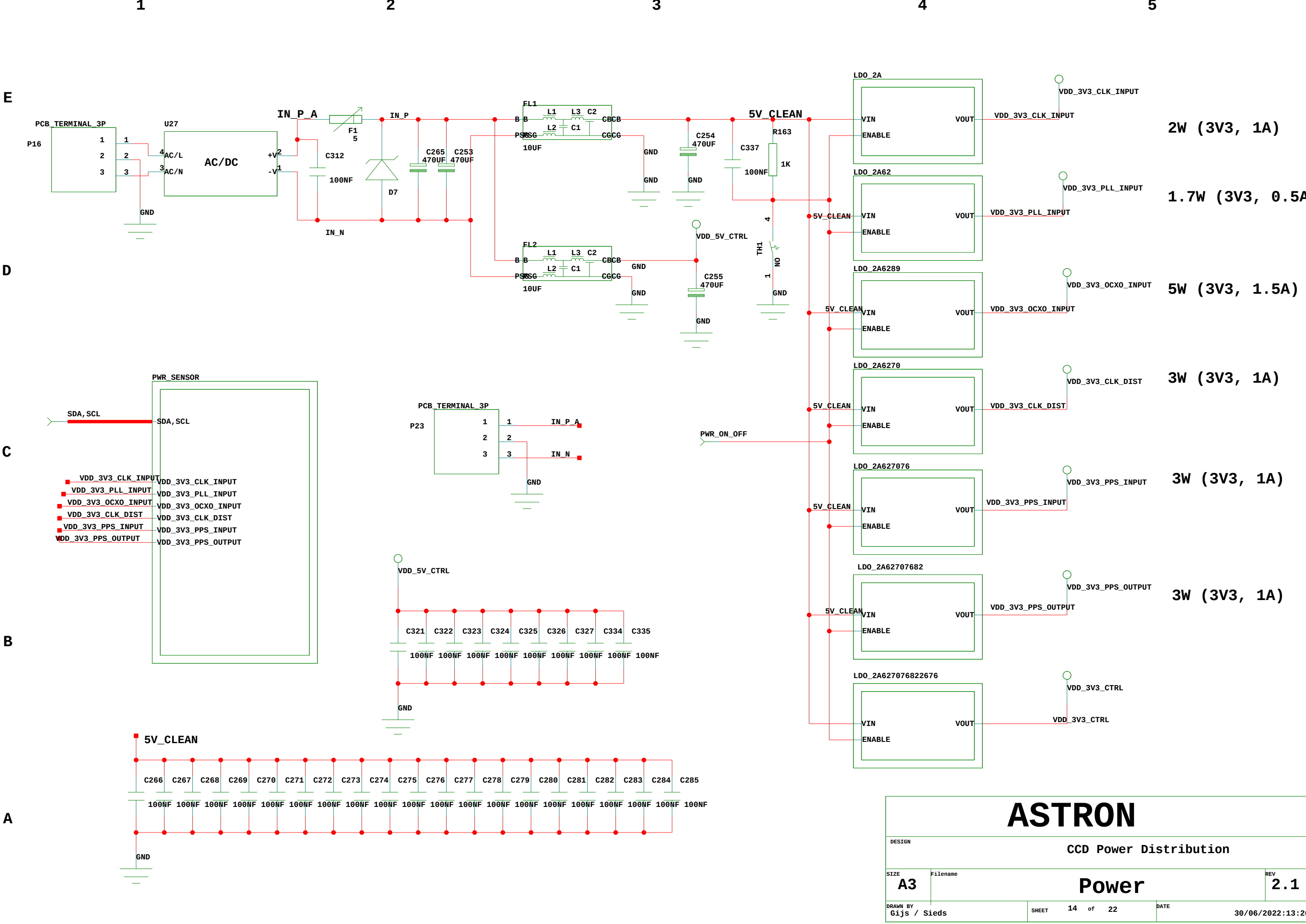
E

D

C

B

A



2W (3V3, 1A)

1.7W (3V3, 0.5A)

5W (3V3, 1.5A)

3W (3V3, 1A)

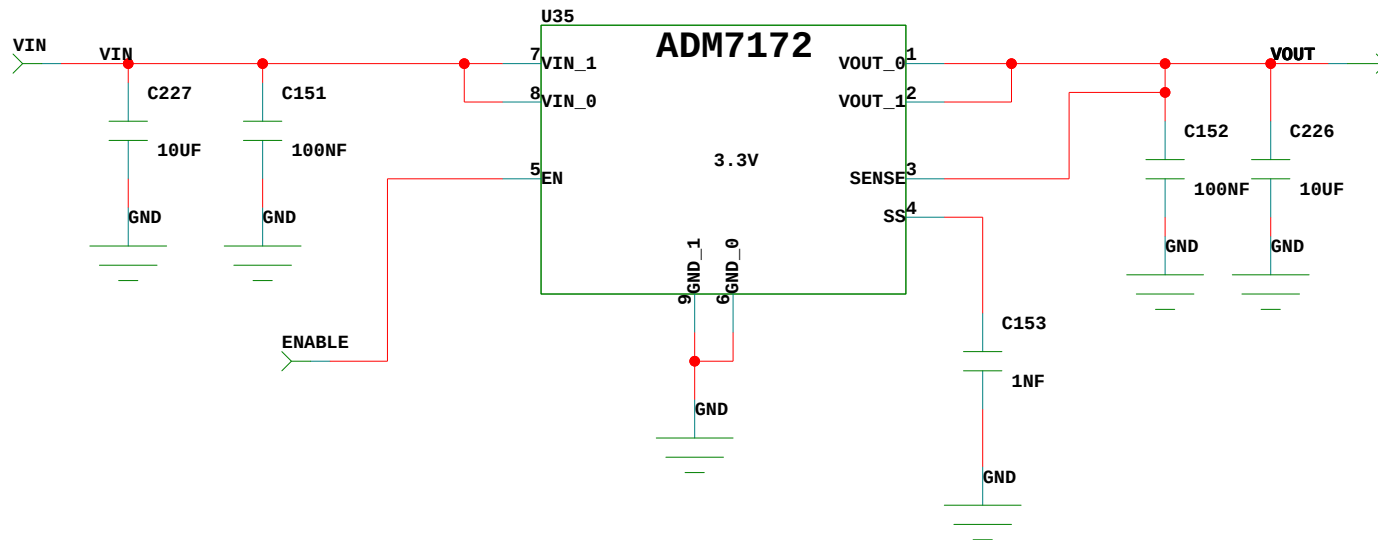
3W (3V3, 1A)

3W (3V3, 1A)

ASTRON

CCD Power Distribution

DESIGN	Power			REV	2.1
SIZE	A3	Filename			
DRAWN BY	Gijs / Sieds	SHEET	14 of 22	DATE	30/06/2022:13:20



Fixed 3V3

ASTRON

DESIGN

2A Low Noise LDO Circuit

SIZE
A1

Filename

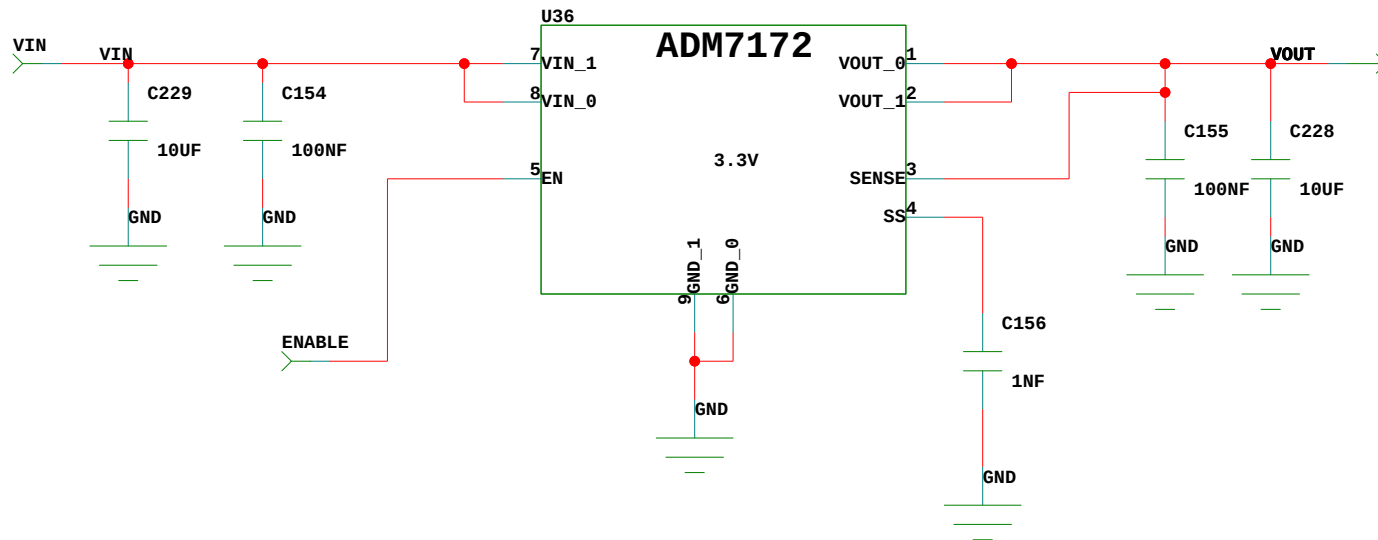
LDO_2A

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET **15** of **22**

DATE
30/06/2022:13:20



Fixed 3V3

ASTRON

DESIGN

2A Low Noise LDO Circuit

SIZE
A1

Filename

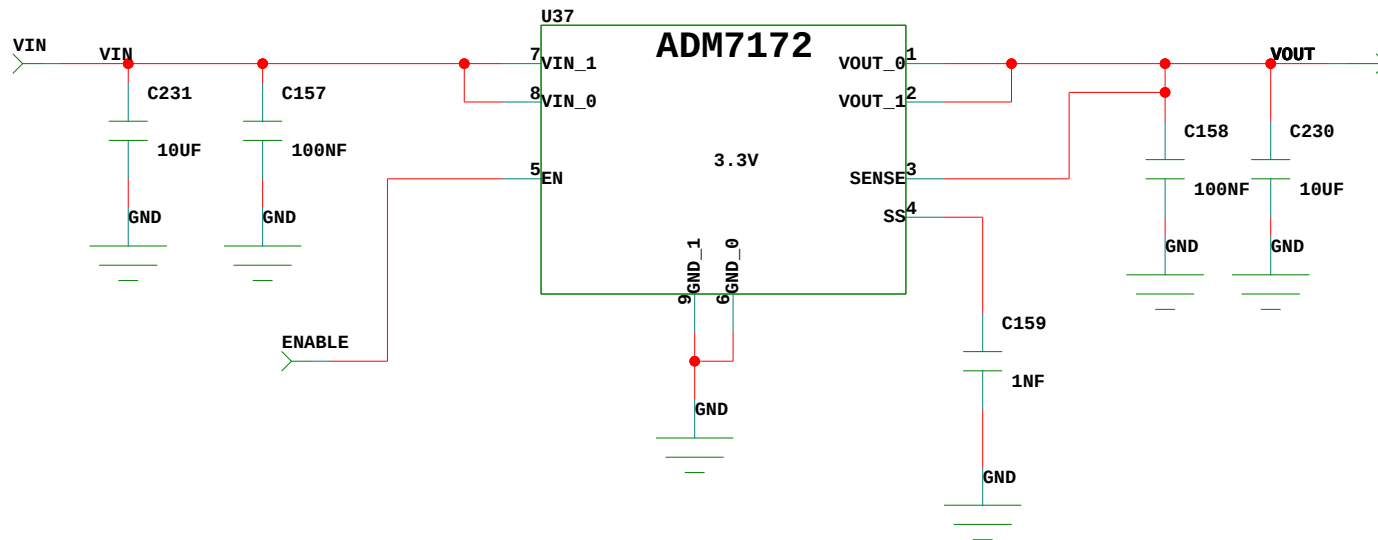
LDO_2A

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET **16** of **22**

DATE
30/06/2022:13:20



Fixed 3V3

ASTRON

DESIGN

2A Low Noise LDO Circuit

SIZE
A1

Filename

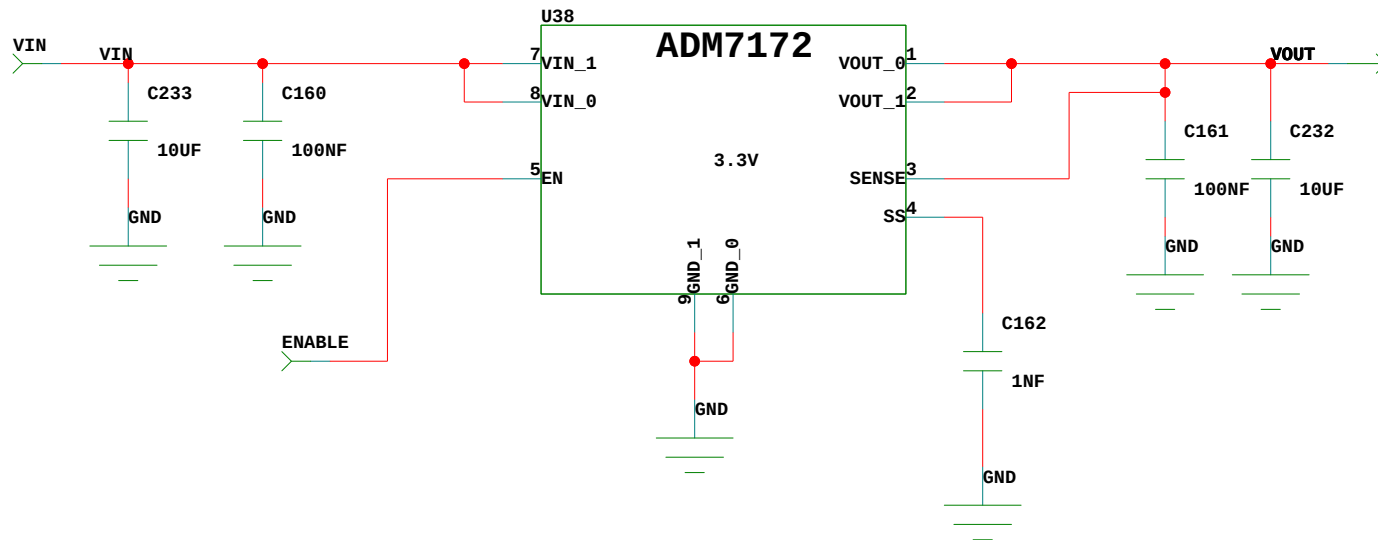
LDO_2A

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET 17 of 22

DATE 30/06/2022:13:20



Fixed 3V3

ASTRON

DESIGN

2A Low Noise LDO Circuit

SIZE
A1

Filename

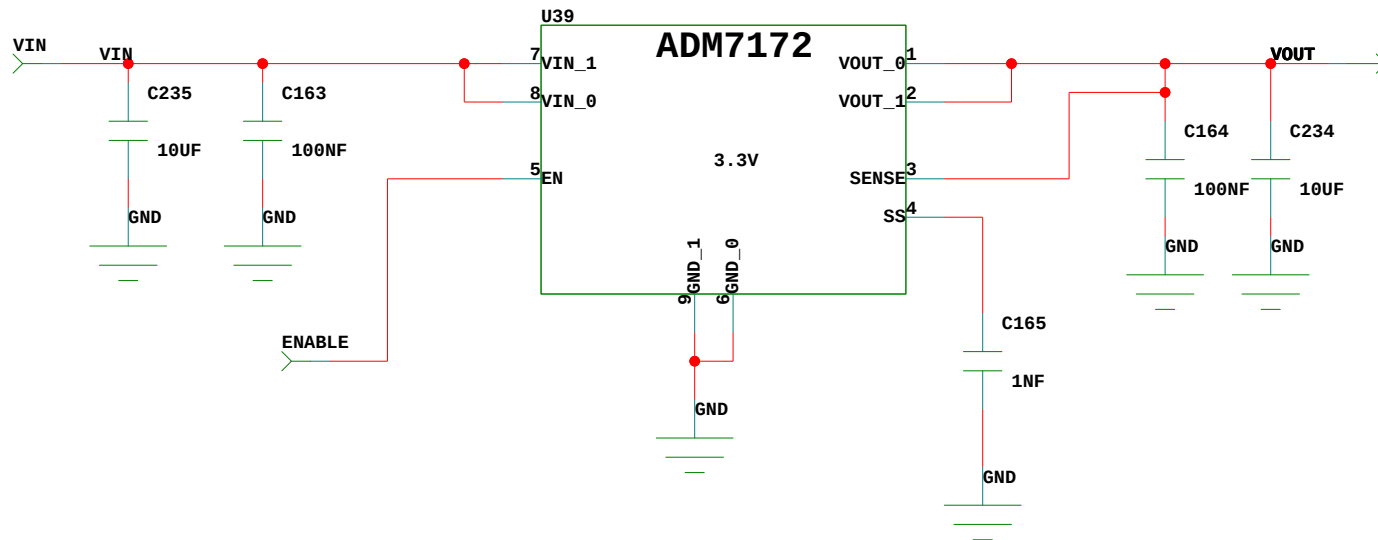
LDO_2A

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET 18 of 22

DATE
30/06/2022:13:20



Fixed 3V3

ASTRON

DESIGN

2A Low Noise LDO Circuit

SIZE
A1

Filename

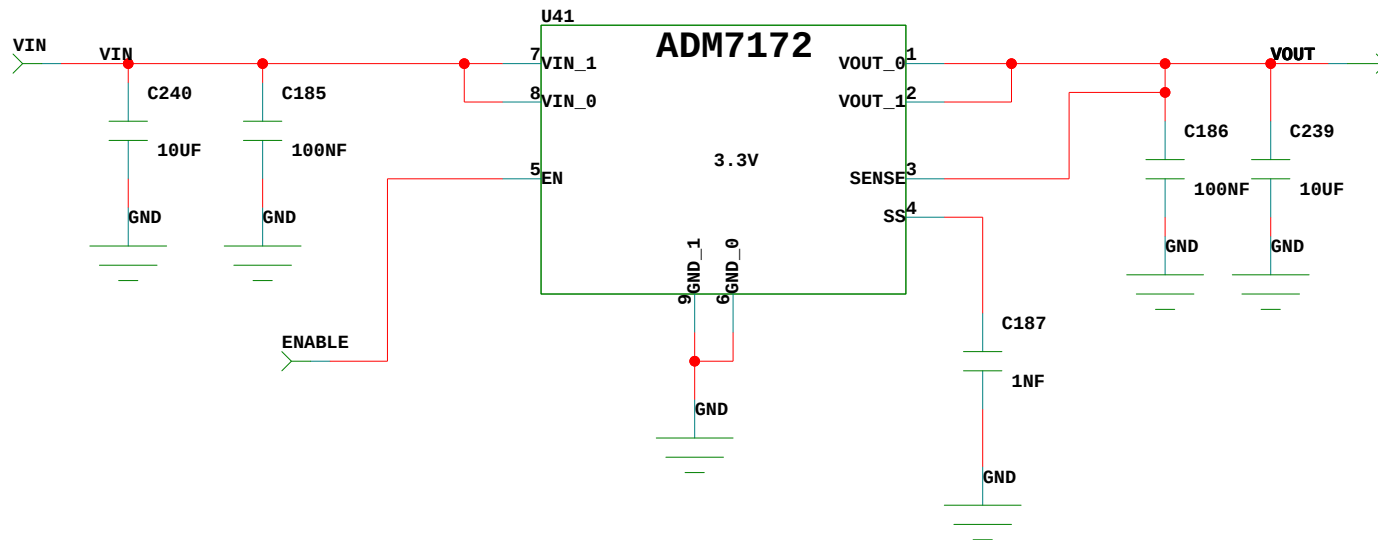
LDO_2A

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET **19** of **22**

DATE
30/06/2022:13:20



Fixed 3V3

ASTRON

DESIGN

2A Low Noise LDO Circuit

SIZE
A1

Filename

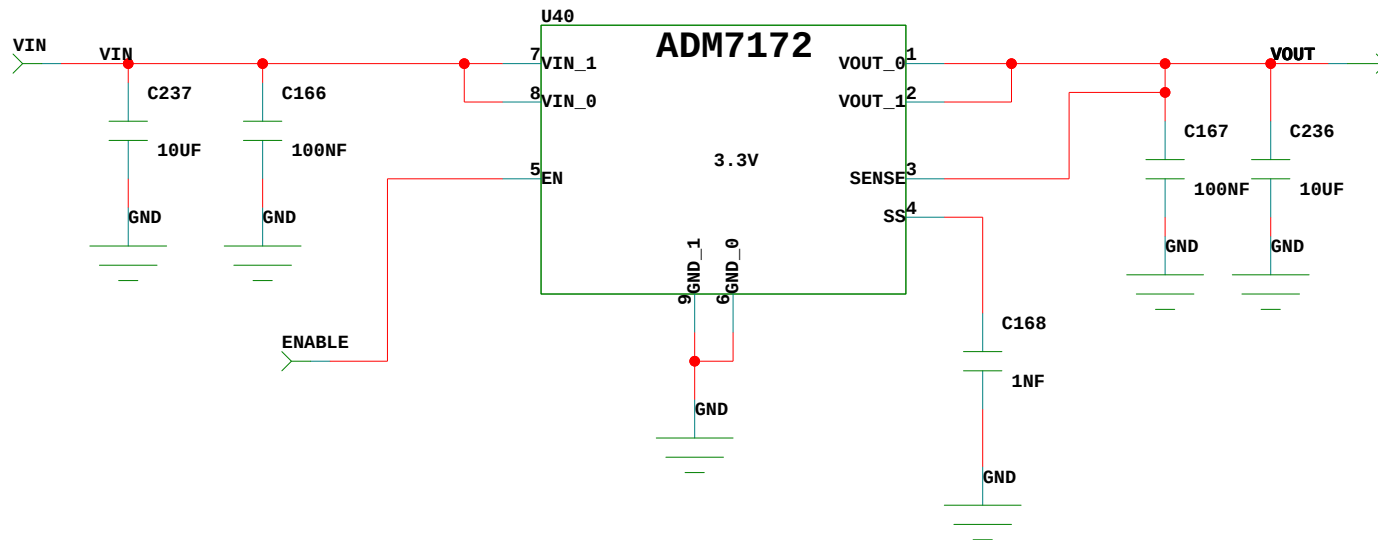
LDO_2A

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET **20** of **22**

DATE
30/06/2022:13:20



Fixed 3V3

ASTRON

DESIGN

2A Low Noise LDO Circuit

SIZE
A1

Filename

LDO_2A

REV
2.1

DRAWN BY
Gijs / Sieds

SHEET **21** of **22**

DATE
30/06/2022:13:20

