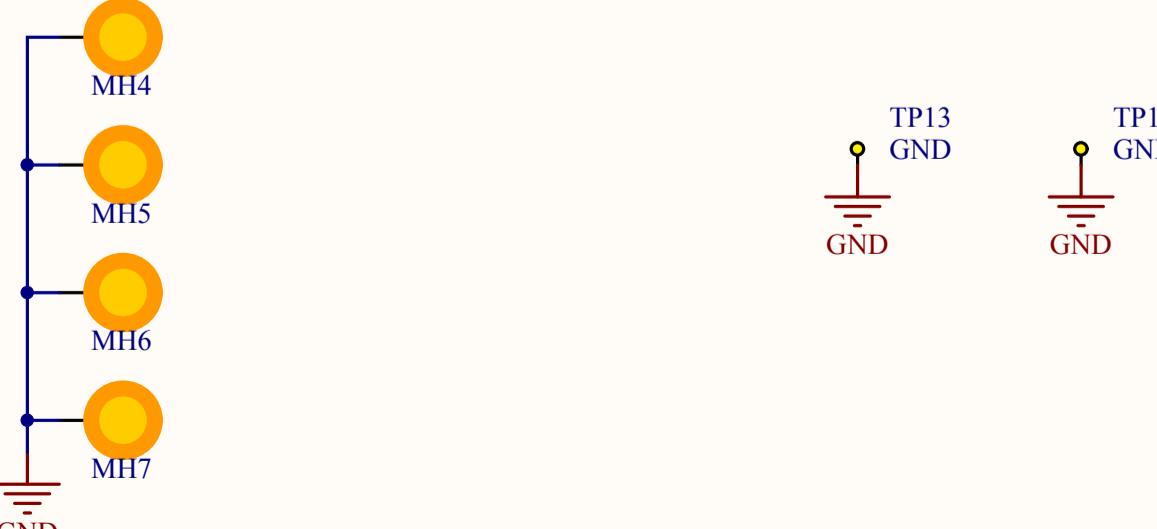
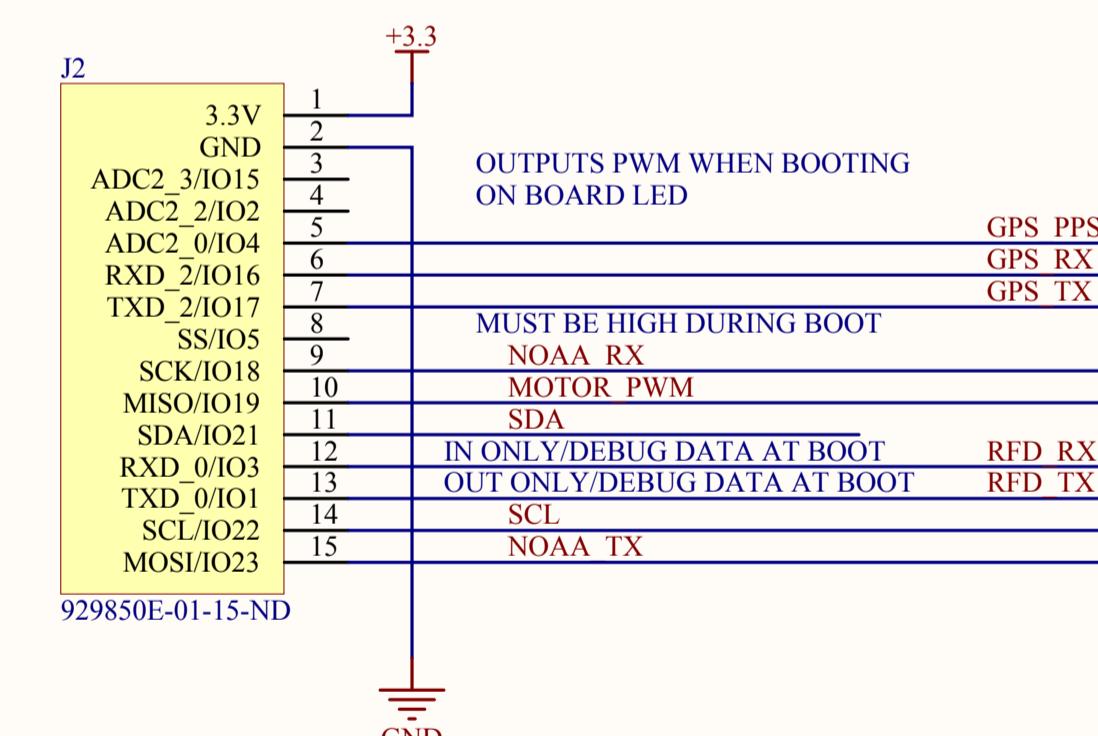
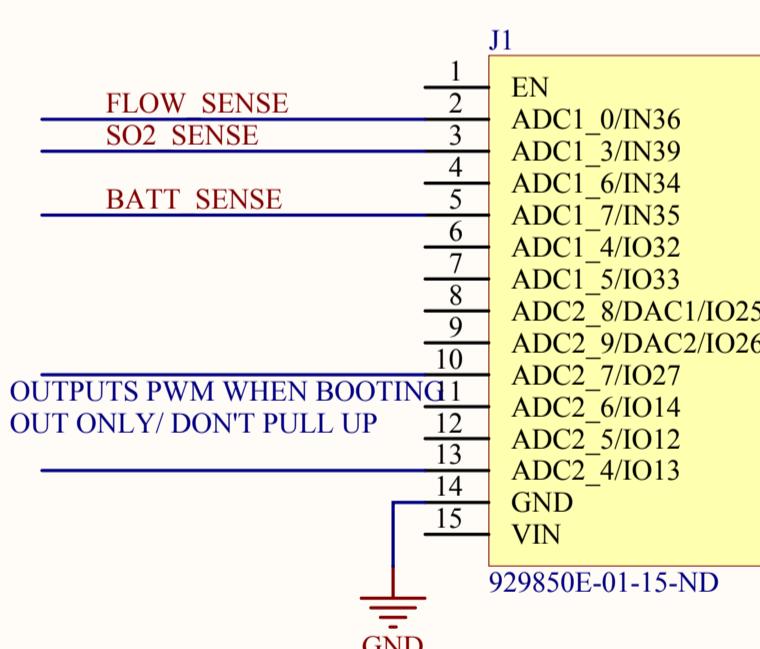


external connectors
DONE Analog SO₂ gas 9V vin?
DONE I2C CO₂ (3.3V version)
DONE NOAA serial port
DONE Air pump (PWM output)
DONE Future air pump (5V + I2C)
DONE Flow Meter

I2C
IO21 SDA
IO22 SCL

USE ONLY ADC1, ADC2 doesn't work with WiFi enabled
ADC HAS SHIT LINEARITY
Flow meter pin 12
SO₂ pin 26
NC??? pin 34

U12
ESP32 DEVKIT V1 MODULE
ESP32-DEVKIT_V1



CONFIDENTIAL DOCUMENT DUPLICATION PROHIBITED
THIS DOCUMENT CONTAINS INFORMATION AND OR DATA, WHICH IS PROPRIETARY AND CONFIDENTIAL TO SENSIBLE ROBOTICS LLC. THIS INFORMATION AND OR DATA, IS TO BE USED ONLY FOR THE BENEFIT OF THE SUPPLIER, AND IS NOT TO BE USED FOR THE BENEFIT OF OTHER PARTIES WITHOUT WRITTEN CONSENT.

Gas Sampler			Top	
ENGINEER Mike Licitra				
SCH #	SCHNum	REV		
PCB FAB #	FABNum			
PCB ASSY #	ASMNum	0		
DATE 1/30/2024	11:00:19 AM		SIZE Tabloid	SHEET 1 OF 12
FILE Gas_Sampler-Top.SchDoc				

Sensible Robotics

Sensible Robotics LLC
120 E Church Ave Suite B
Ridgecrest CA 93555

A

A

B

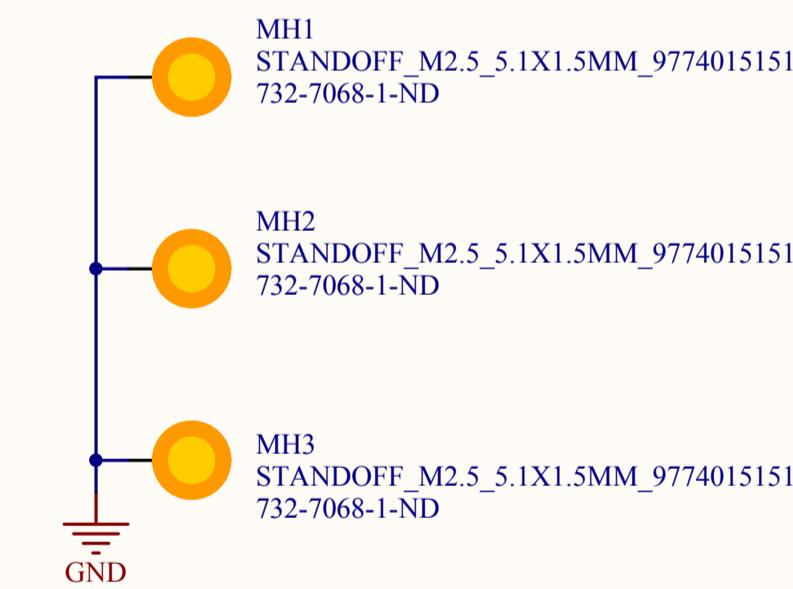
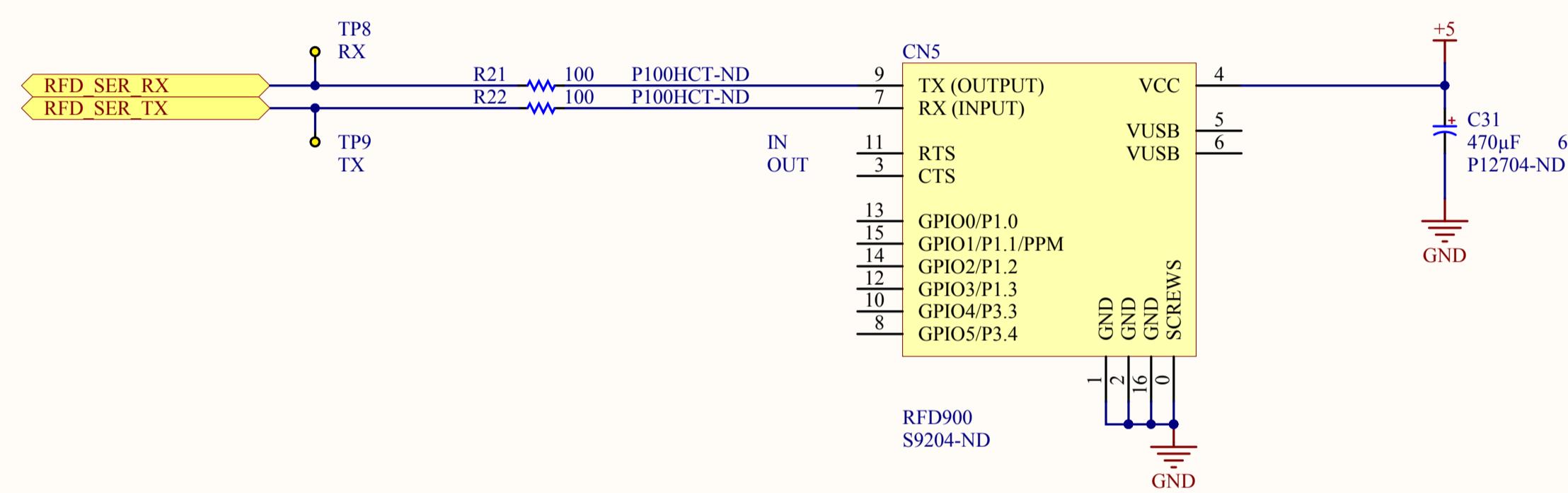
B

C

C

D

D

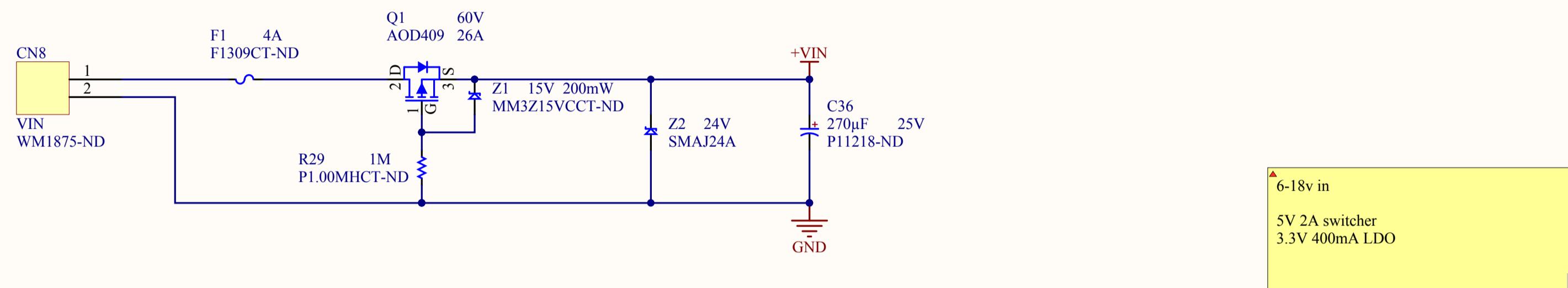


**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**
THIS DOCUMENT CONTAINS
INFORMATION AND OR DATA, WHICH IS
PROPRIETARY AND CONFIDENTIAL TO
SENSIBLE ROBOTICS LLC. THIS
INFORMATION AND OR DATA, IS TO BE
USED ONLY FOR THE BENEFIT OF THE
SUPPLIER, AND IS NOT TO BE USED FOR
THE BENEFIT OF OTHER PARTIES
WITHOUT WRITTEN CONSENT.

Gas Sampler			Radio	
ENGINEER Mike Licitra			Sensible Robotics	
SCH #	SCHNum	REV		
PCB FAB #	FABNum			
PCB ASSY #	ASMNum	0		
DATE 1/30/2024	11:00:19 AM		SIZE Tabloid	SHEET 2 OF 12
FILE Gas_Sampler-RFD_Radio.SchDoc				

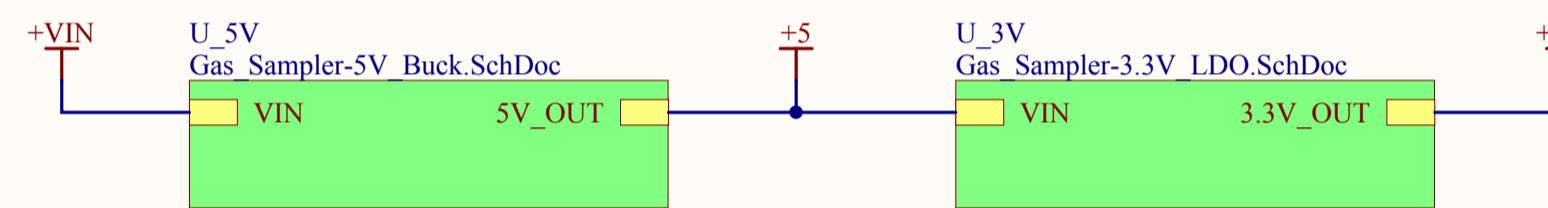
A

A



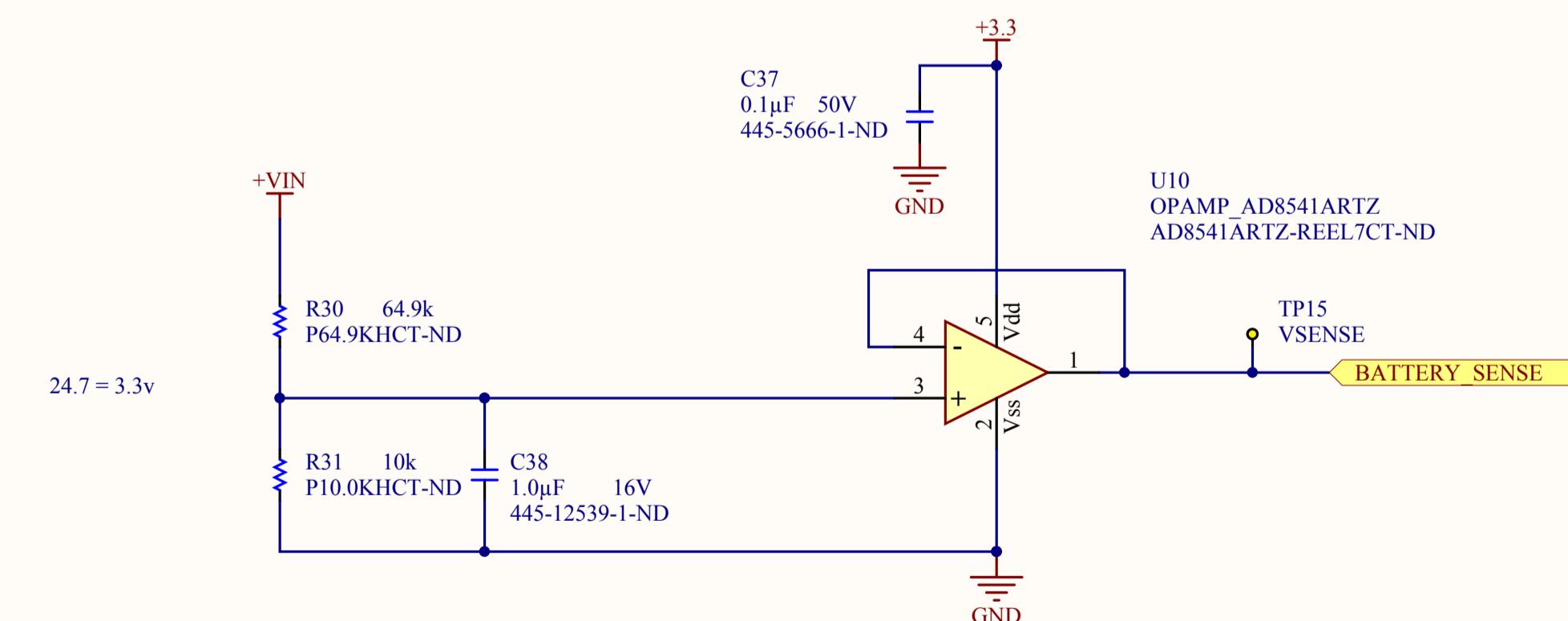
B

B



C

C



D

D

**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**
THIS DOCUMENT CONTAINS
INFORMATION AND OR DATA, WHICH IS
PROPRIETARY AND CONFIDENTIAL TO
SENSIBLE ROBOTICS LLC. THIS
INFORMATION AND OR DATA, IS TO BE
USED ONLY FOR THE BENEFIT OF THE
SUPPLIER, AND IS NOT TO BE USED FOR
THE BENEFIT OF OTHER PARTIES
WITHOUT WRITTEN CONSENT.

Gas Sampler			Vin
ENGINEER Mike Licitra			Sensible Robotics
SCH #	SCHNum	REV	Sensible Robotics LLC 120 E Church Ave Suite B Ridgecrest CA 93555
PCB FAB #	FABNum		
PCB ASSY #	ASMNum	0	
DATE 1/30/2024	11:00:19 AM		SIZE Tabloid
			SHEET 3 OF 12
FILE Gas_Sampler-Vin.SchDoc			

A

A

B

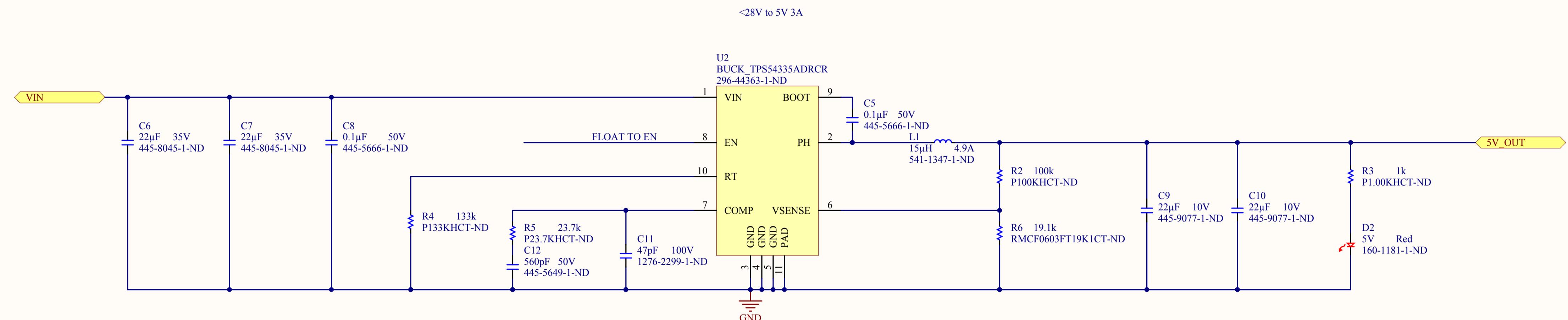
B

C

C

D

D


**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**

THIS DOCUMENT CONTAINS INFORMATION AND OR DATA, WHICH IS PROPRIETARY AND CONFIDENTIAL TO SENSIBLE ROBOTICS LLC. THIS INFORMATION AND OR DATA, IS TO BE USED ONLY FOR THE BENEFIT OF THE SUPPLIER, AND IS NOT TO BE USED FOR THE BENEFIT OF OTHER PARTIES WITHOUT WRITTEN CONSENT.

Gas Sampler 5V Buck

ENGINEER Mike Licitra

**Sensible
Robotics**

Sensible Robotics LLC
120 E Church Ave Suite B
Ridgecrest CA 93555

SCH #	SCHNum	REV
PCB FAB #	FABNum	
PCB ASSY #	ASMNum	0
DATE	1/30/2024 11:00:19 AM	SIZE Tabloid
FILE Gas_Sampler-5V_Buck.SchDoc		

A

A

B

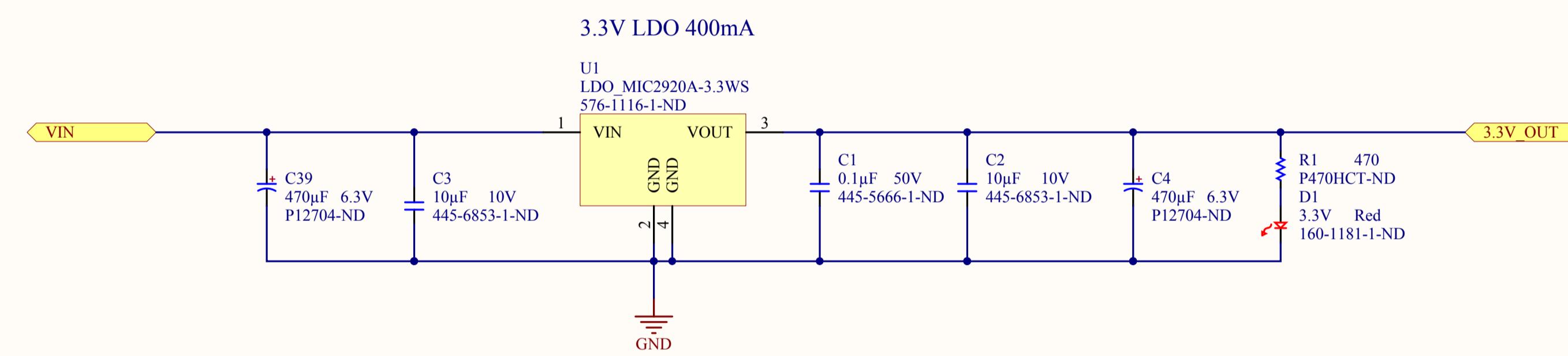
B

C

C

D

D


**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**

THIS DOCUMENT CONTAINS INFORMATION AND OR DATA, WHICH IS PROPRIETARY AND CONFIDENTIAL TO SENSIBLE ROBOTICS LLC. THIS INFORMATION AND OR DATA, IS TO BE USED ONLY FOR THE BENEFIT OF THE SUPPLIER, AND IS NOT TO BE USED FOR THE BENEFIT OF OTHER PARTIES WITHOUT WRITTEN CONSENT.

Gas Sampler 3.3V LDO

ENGINEER Mike Licitra

**Sensible
Robotics**

SCH #	SCHNum	REV	
PCB FAB #	FABNum		
PCB ASSY #	ASMNum	0	
DATE	1/30/2024	11:00:19 AM	
FILE	Gas_Sampler-3.3V_LDO.SchDoc		

A

A

B

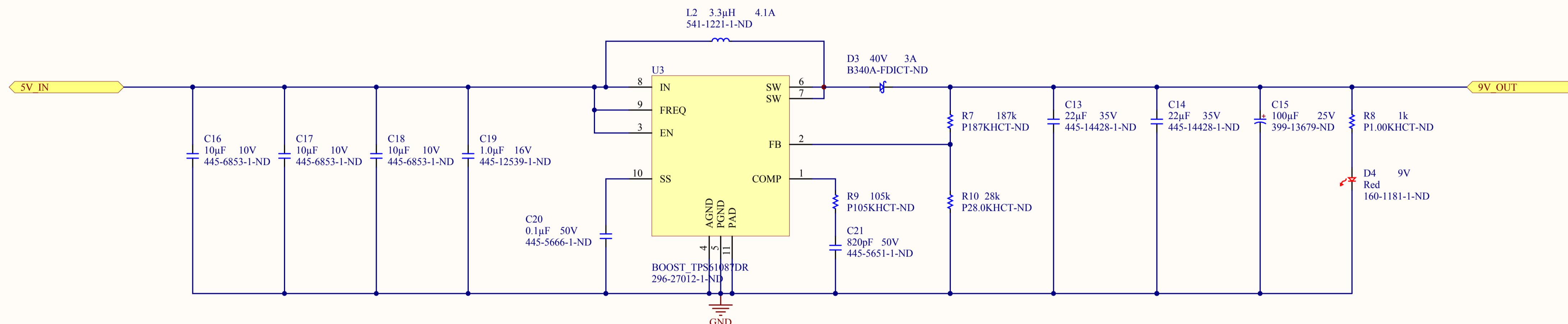
B

C

C

D

D


**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**

THIS DOCUMENT CONTAINS INFORMATION AND OR DATA, WHICH IS PROPRIETARY AND CONFIDENTIAL TO SENSIBLE ROBOTICS LLC. THIS INFORMATION AND OR DATA, IS TO BE USED ONLY FOR THE BENEFIT OF THE SUPPLIER, AND IS NOT TO BE USED FOR THE BENEFIT OF OTHER PARTIES WITHOUT WRITTEN CONSENT.

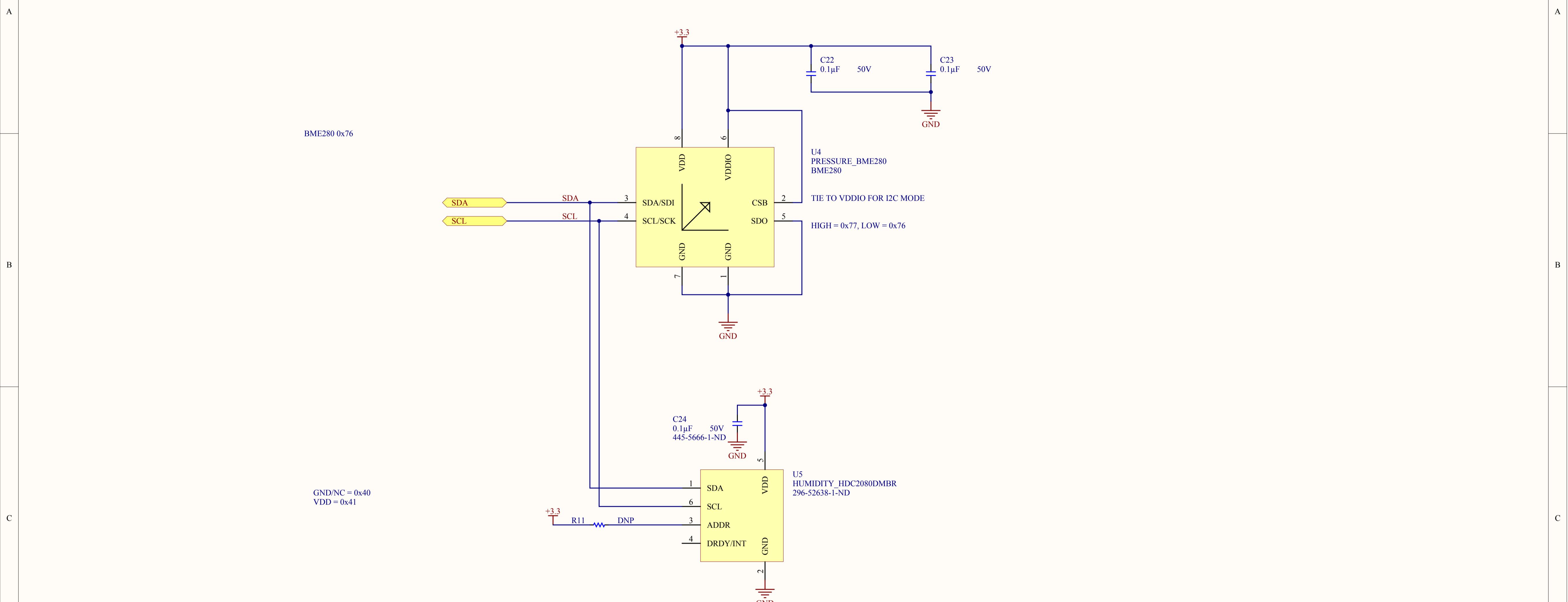
Gas Sampler 9V Boost

ENGINEER Mike Licitra

Sensible**Robotics**Sensible Robotics LLC
120 E Church Ave Suite B
Ridgecrest CA 93555SCH # SChNum
PCB FAB # FABNum
PCB ASSY # ASMNumREV
0

DATE 1/30/2024 11:00:19 AM SIZE Tabloid SHEET 6 OF 12

FILE Gas_Sampler-9V_Boost.SchDoc



**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**
THIS DOCUMENT CONTAINS
INFORMATION AND OR DATA, WHICH IS
PROPRIETARY AND CONFIDENTIAL TO
SENSIBLE ROBOTICS LLC. THIS
INFORMATION AND OR DATA, IS TO BE
USED ONLY FOR THE BENEFIT OF THE
SUPPLIER, AND IS NOT TO BE USED FOR
THE BENEFIT OF OTHER PARTIES
WITHOUT WRITTEN CONSENT.

Gas Sampler BME 280		
ENGINEER Mike Licitra		Sensible Robotics
SCH #	SCHNum	REV
PCB FAB #	FABNum	0
PCB ASSY #	ASMNum	
DATE 1/30/2024 11:00:19 AM	SIZE Tabloid	SHEET 7 OF 12
FILE Gas_Sampler-BME_280.SchDoc		

A

A

B

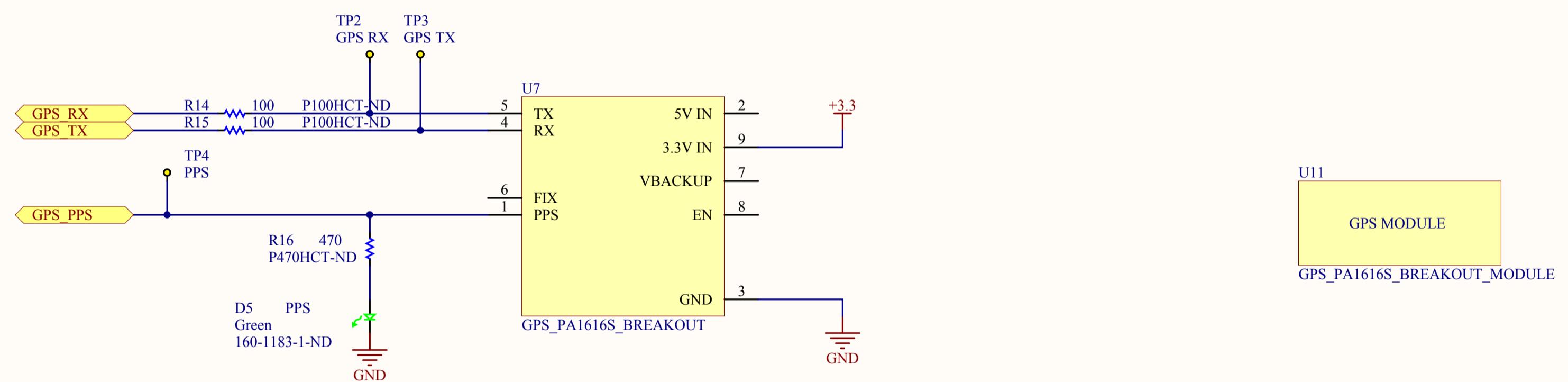
B

C

C

D

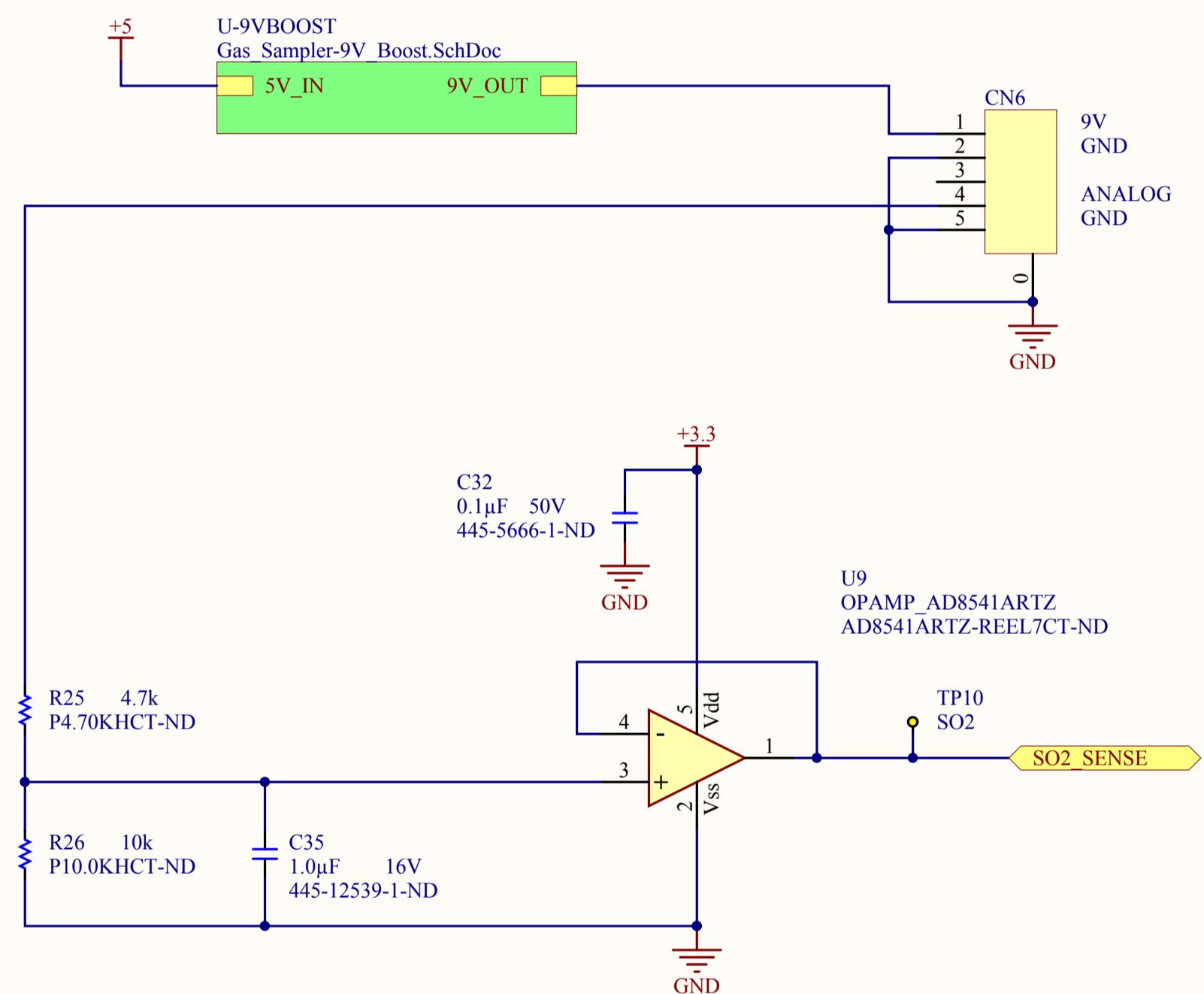
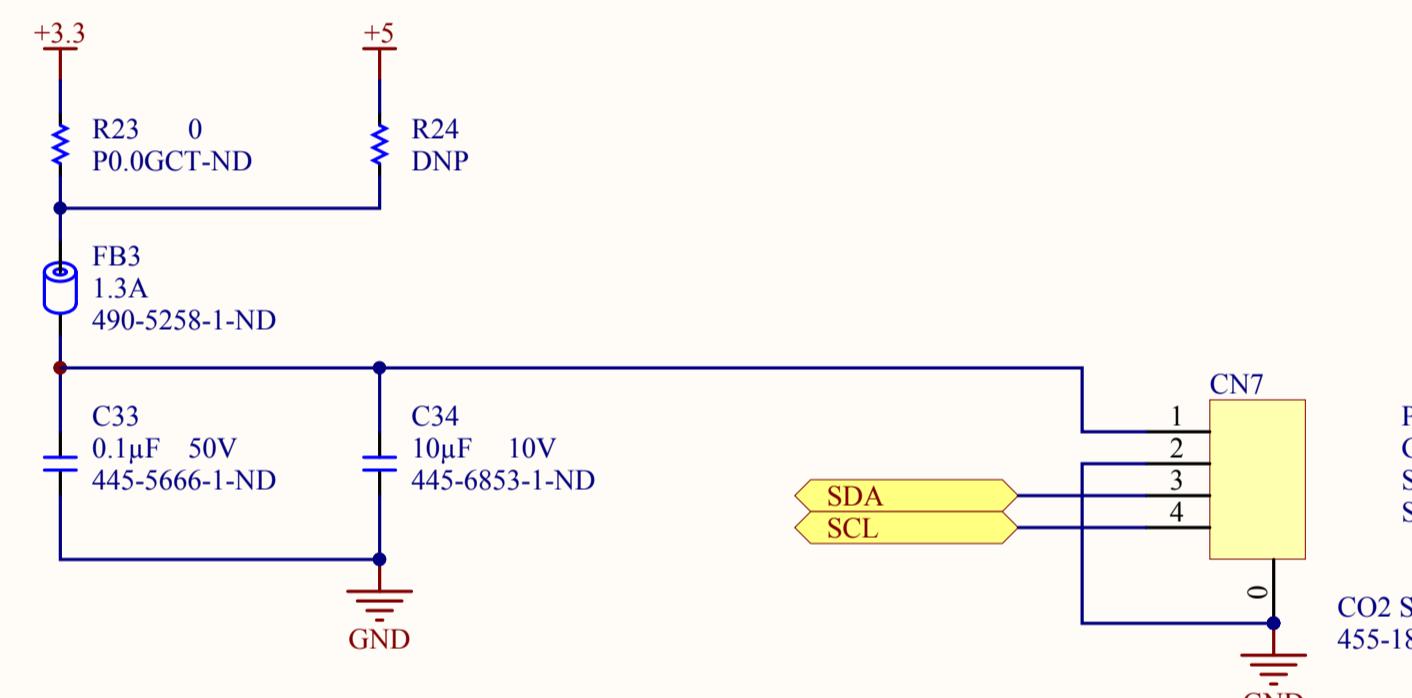
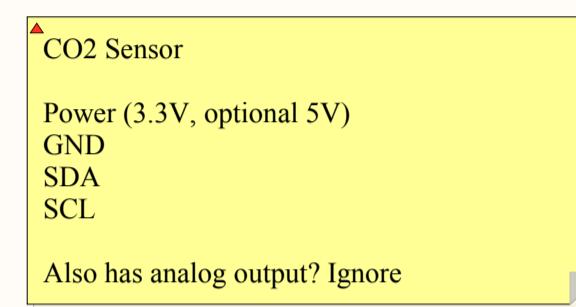
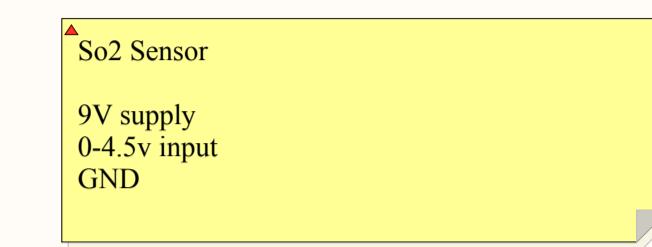
D



**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**
THIS DOCUMENT CONTAINS
INFORMATION AND OR DATA, WHICH IS
PROPRIETARY AND CONFIDENTIAL TO
SENSIBLE ROBOTICS LLC. THIS
INFORMATION AND OR DATA, IS TO BE
USED ONLY FOR THE BENEFIT OF THE
SUPPLIER, AND IS NOT TO BE USED FOR
THE BENEFIT OF OTHER PARTIES
WITHOUT WRITTEN CONSENT.

Gas Sampler			GPS
ENGINEER Mike Licitra			Sensible Robotics
SCH #	SCHNum	REV	Sensible Robotics LLC 120 E Church Ave Suite B Ridgecrest CA 93555
PCB FAB #	FABNum	0	
PCB ASSY #	ASMNum		
DATE 1/30/2024 11:00:19 AM	SIZE Tabloid	SHEET 8 OF 12	
FILE Gas_Sampler-GPS.SchDoc			

A

SO2 SENSOR
455-1850-ND

B

C

D

CONFIDENTIAL DOCUMENT DUPLICATION PROHIBITED
THIS DOCUMENT CONTAINS INFORMATION AND OR DATA, WHICH IS PROPRIETARY AND CONFIDENTIAL TO SENSIBLE ROBOTICS LLC. THIS INFORMATION AND OR DATA, IS TO BE USED ONLY FOR THE BENEFIT OF THE SUPPLIER, AND IS NOT TO BE USED FOR THE BENEFIT OF OTHER PARTIES WITHOUT WRITTEN CONSENT.

Gas Sampler Sensors		
ENGINEER Mike Licitra		Sensible Robotics
SCH #	SCHNum	REV
PCB FAB #	FABNum	0
PCB ASSY #	ASMNum	
DATE 1/30/2024	11:00:19 AM	SIZE Tabloid
		SHEET 9 OF 12
FILE Gas_Sampler-Sensors.SchDoc		

A

A

B

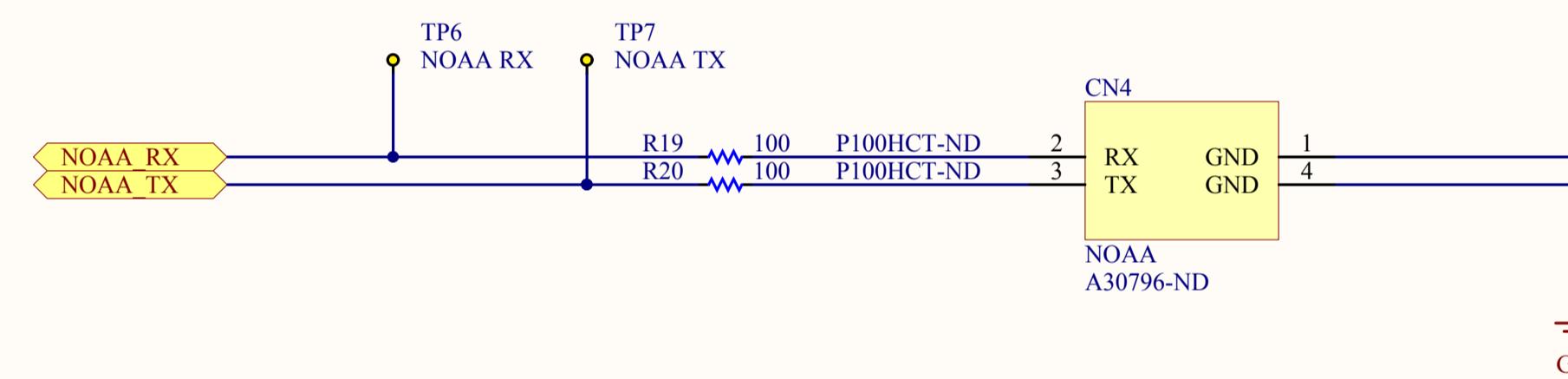
B

C

C

D

D

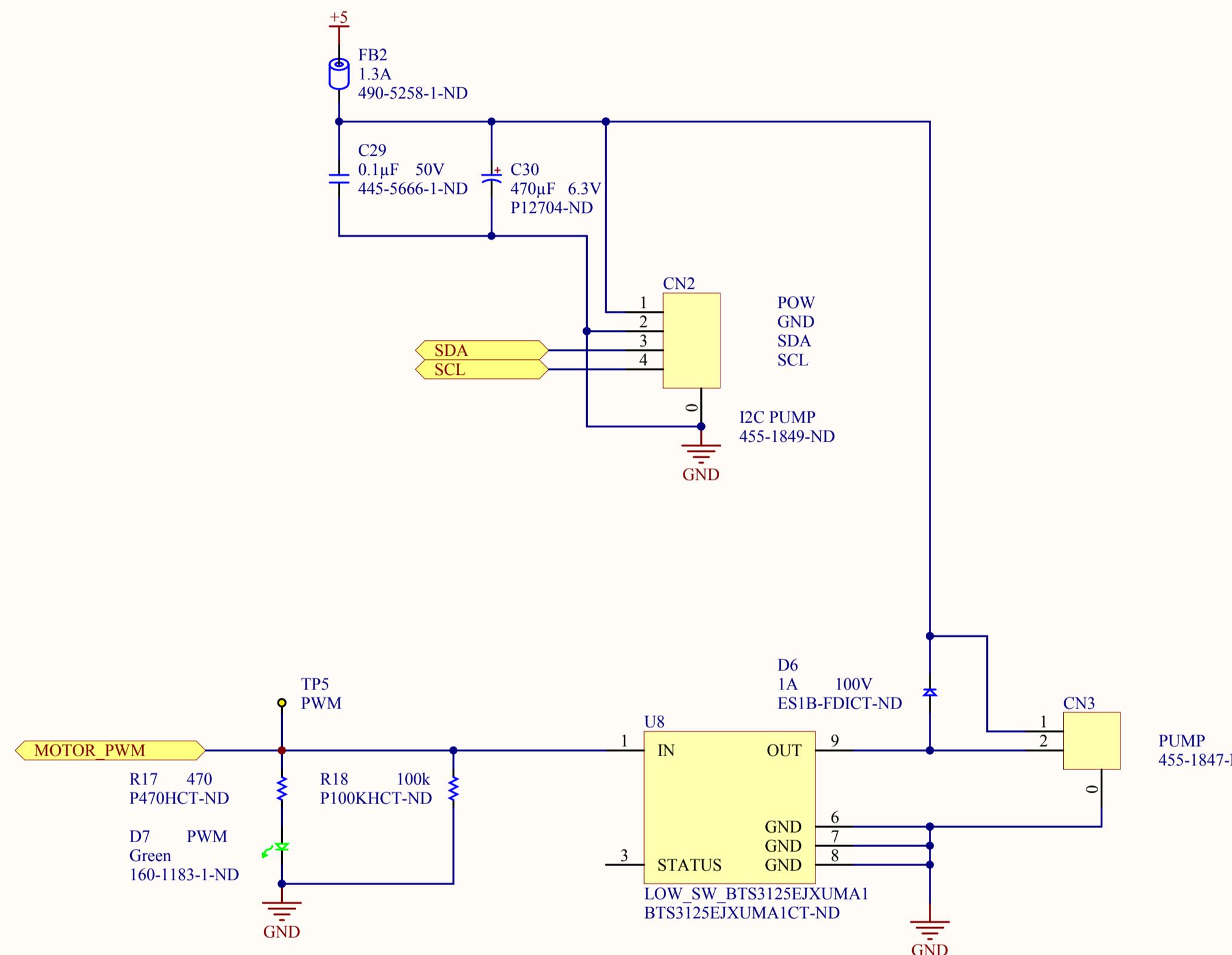


**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**
THIS DOCUMENT CONTAINS
INFORMATION AND OR DATA, WHICH IS
PROPRIETARY AND CONFIDENTIAL TO
SENSIBLE ROBOTICS LLC. THIS
INFORMATION AND OR DATA, IS TO BE
USED ONLY FOR THE BENEFIT OF THE
SUPPLIER, AND IS NOT TO BE USED FOR
THE BENEFIT OF OTHER PARTIES
WITHOUT WRITTEN CONSENT.

Gas Sampler		NOAA Connector	
ENGINEER Mike Licitra		Sensible Robotics	
SCH #	SCHNum	REV	
PCB FAB #	FABNum		0
PCB ASSY #	ASMNum		
DATE 1/30/2024 11:00:20 AM		SIZE Tabloid	SHEET 10 OF 12
FILE Gas_Sampler-NOAA_Conn.SchDoc			

A

A



B

B

C

C

D

D

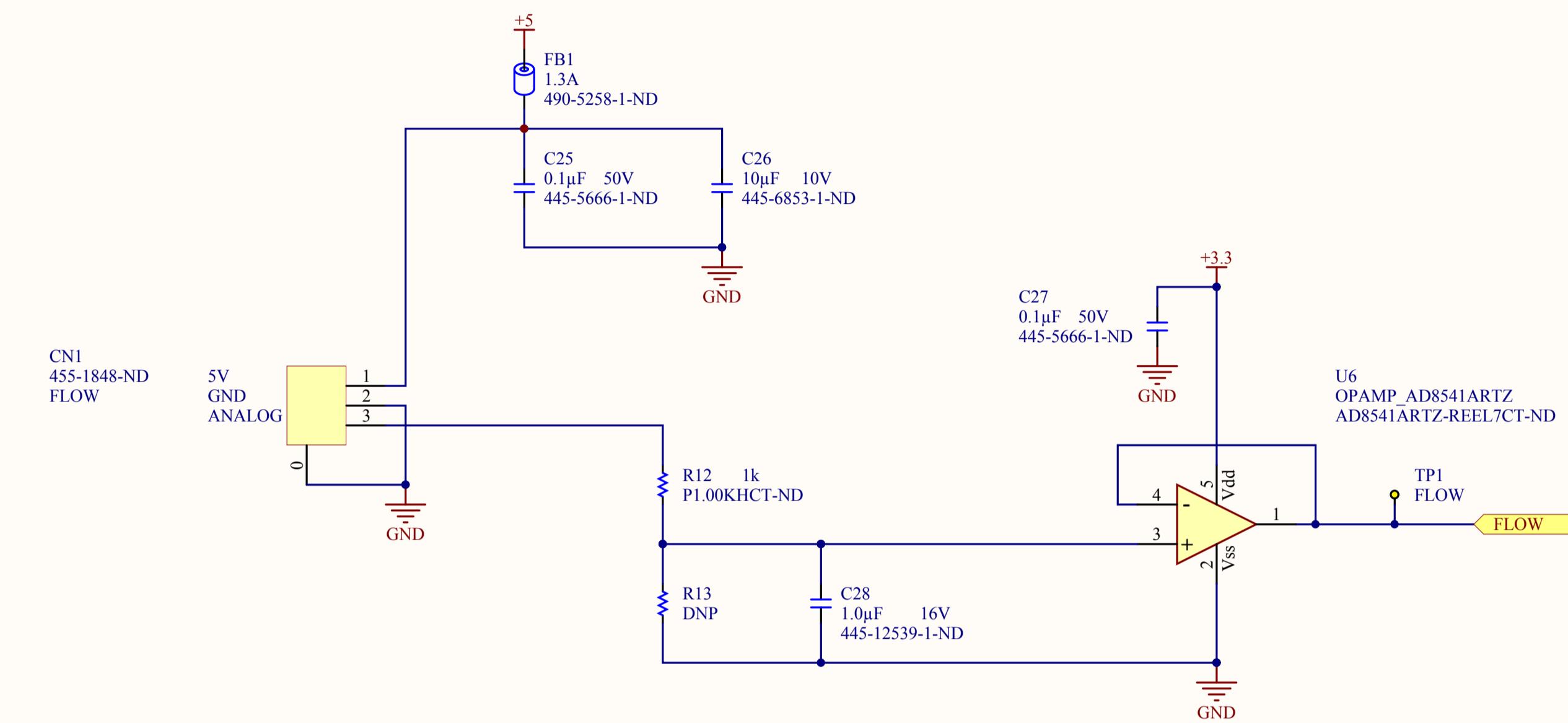
**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**

THIS DOCUMENT CONTAINS INFORMATION AND OR DATA, WHICH IS PROPRIETARY AND CONFIDENTIAL TO SENSIBLE ROBOTICS LLC. THIS INFORMATION AND OR DATA, IS TO BE USED ONLY FOR THE BENEFIT OF THE SUPPLIER, AND IS NOT TO BE USED FOR THE BENEFIT OF OTHER PARTIES WITHOUT WRITTEN CONSENT.

Gas Sampler		Pump Motor	
ENGINEER Mike Licitra		Sensible Robotics	
SCH #	SCHNum	REV	
PCB FAB #	FABNum		0
PCB ASSY #	ASMNum		
DATE 1/30/2024 11:00:20 AM		SIZE Tabloid	SHEET 11 OF 12
FILE Gas_Sampler-Motor.SchDoc			

A

A



B

B

C

C

D

D

**CONFIDENTIAL DOCUMENT
DUPLICATION PROHIBITED**
THIS DOCUMENT CONTAINS
INFORMATION AND OR DATA, WHICH IS
PROPRIETARY AND CONFIDENTIAL TO
SENSIBLE ROBOTICS LLC. THIS
INFORMATION AND OR DATA, IS TO BE
USED ONLY FOR THE BENEFIT OF THE
SUPPLIER, AND IS NOT TO BE USED FOR
THE BENEFIT OF OTHER PARTIES
WITHOUT WRITTEN CONSENT.

Gas Sampler		Flow Sensor
ENGINEER Mike Licitra		Sensible Robotics
SCH #	SCHNum	REV
PCB FAB #	FABNum	
PCB ASSY #	ASMNum	0
DATE 1/30/2024	11:00:20 AM	SIZE Tabloid
		SHEET 12 OF 12
FILE Gas_Sampler-Flow_Sensor.SchDoc		

SILVERLINING.NGO
JAN 2024

