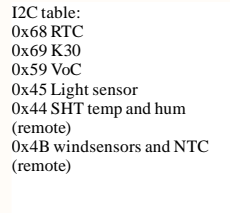
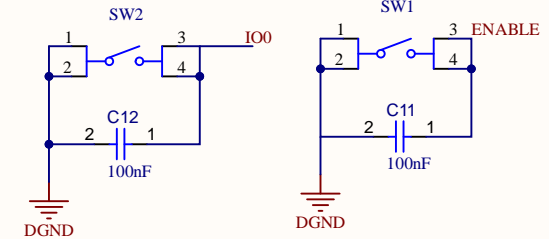


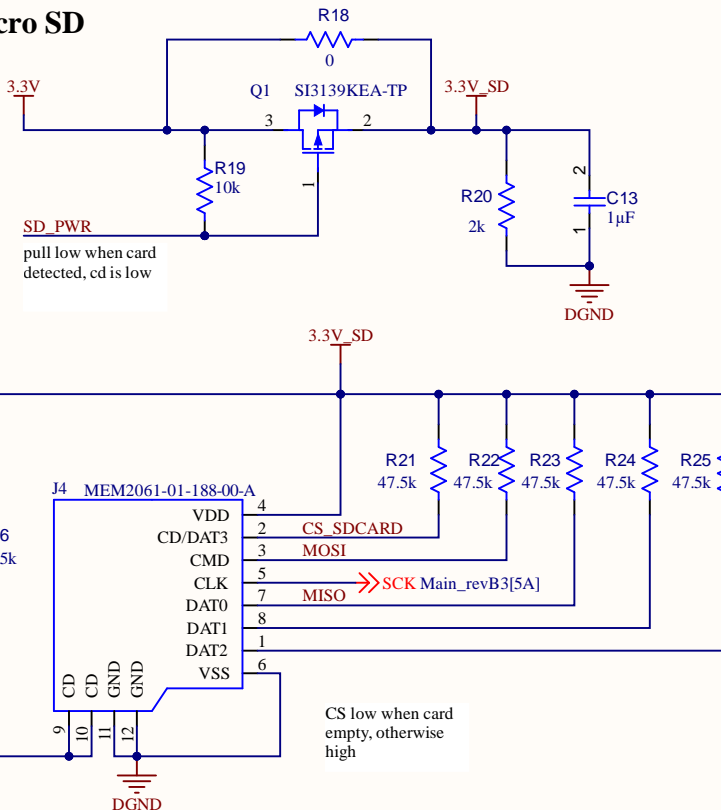
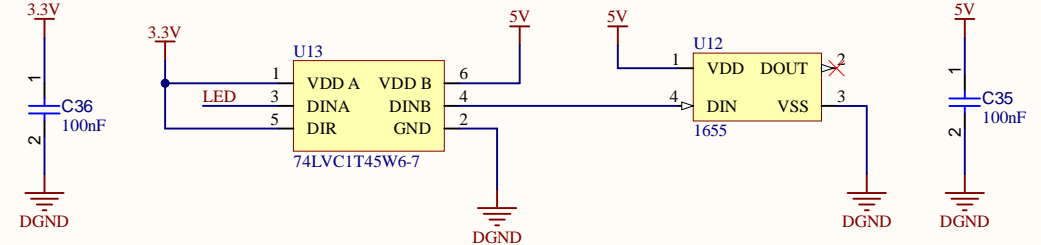
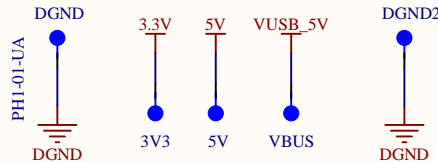
Thermal paste under



RESET

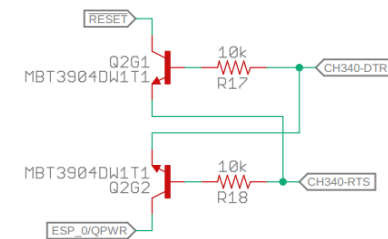


Remove pullups on breakout boards if mounting new sensors



Pin	Run	Bootloader	Default
I00	1	0	1
I02	x	0	0
I05	1	x	1
I012	0	0	0
I015	x	x	1

IO12 = MDTI, IO15 = MDT0



If DTR is LOW, toggling RTS from HIGH to LOW resets to run mode.
If RTS is HIGH, toggling DTR from LOW to HIGH resets to bootloader.

Title		
Size A3	Number	Revision
Date:	11-13-2024	Sheet of
File:	C:\Users\...\Main_revB3.SchDoc	Drawn By:

VOC Sensor

pin 7, GND die pad should be soldered to PCB for mech stability.

U1 SGP41-D-R4

Address 0x59
16 bits
100-400kHz

I2C Bus Management

Address items from remote board:
 (0x4B) 1001011 for front windsensor and NTC
 0x44 for SHT temp and humidity

Buffer and Level Shifter for line driver

K30 level shifter

PM Sensor Plantower 5003

Connector to module

5V

3.3V

R10
10k

J2

8 6 5 4 3 2 7

VCC SET RX
RESET TX
NC TX
GND NC

53261-0871

DGND

PLNTWR_RX
PLNTWR_TX

Enclosure is connected to ground
 5V is for fan, but output is 3v3
 Set pin 3 high for continuous ops
 Set pin 6 low for reset
 NOTE: Plantower connector cable is flipped
 on one end, not straight through

K30 - 030-8-0006

Connector to module

J3

R/5V
Y/SDA
B/SCL
BLK/GND

S4B-PH-K-S

Address 0x69

5V

R43 5.1k

R44 5.1k

SDA_K30

SCL_K30

DGND

<https://rmtplusstoragesenseair.blob.core.windows.net/docs/Dev/publicerat/TDE4700.pdf>

Light Sensor

Set by ADDR pin
set high for address
1000101 (0x45)

Microphone - i2S

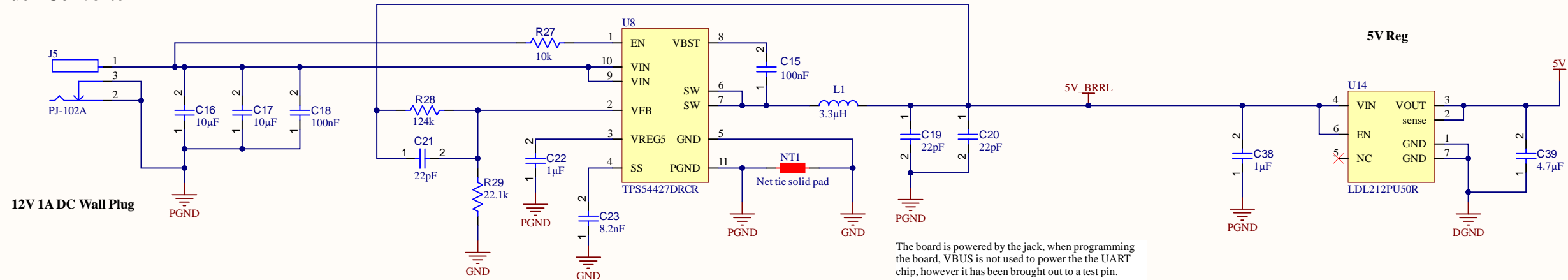
The diagram shows the ICS-43434 microphone module (U5) connected to a 3.3V supply and a 3.3V output. The module has pins for VDD, WS, LR, SCK, SD, and GND. The connections are as follows:

- VDD (Pin 5):** Connected to a 3.3V supply.
- WS (Pin 1):** Connected to a 3.3V supply through a 10k resistor (R14).
- LR (Pin 2):** Connected to the CS_MIC signal.
- SCK (Pin 4):** Connected to the BCLK signal.
- SD (Pin 6):** Connected to a 3.3V supply through a 100k resistor (R13).
- GND (Pin 3):** Connected to a common ground point.

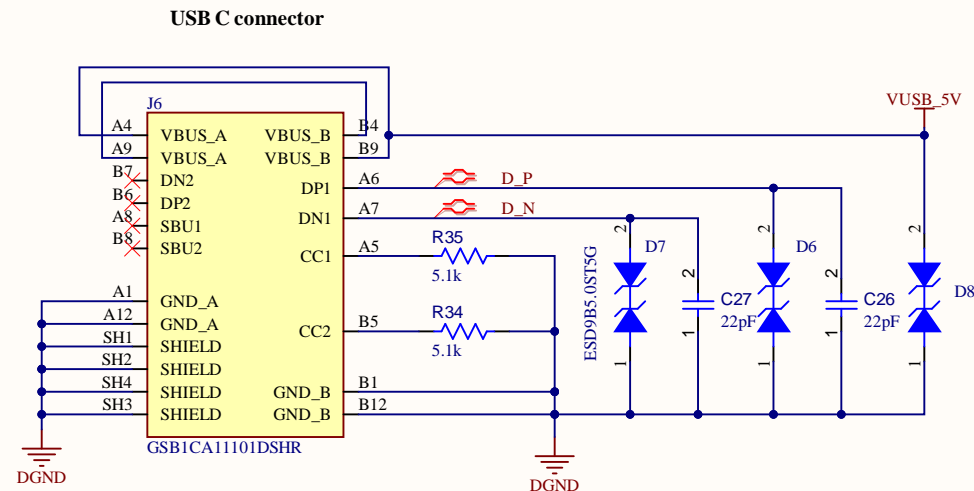
The output of the module is connected to a 3.3V supply through a 100nF capacitor (C6).

Title		
Size A3	Number	Revision
Date:	11-13-2024	Sheet of
File:	C:\Users\...\Sensors_revB3.SchDoc	Drawn By:

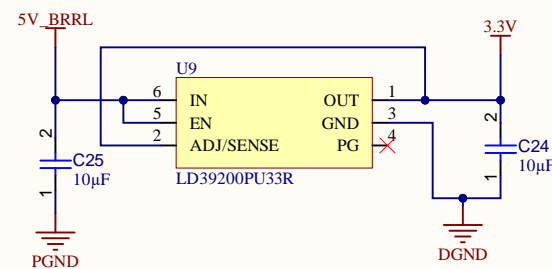
Buck Converter



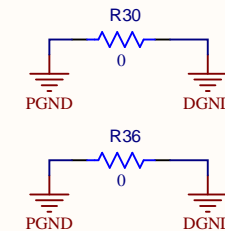
USB Power



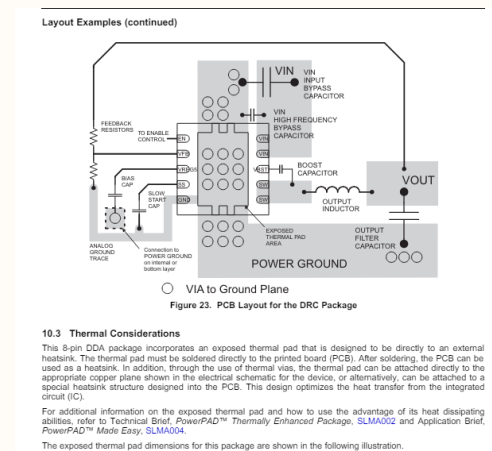
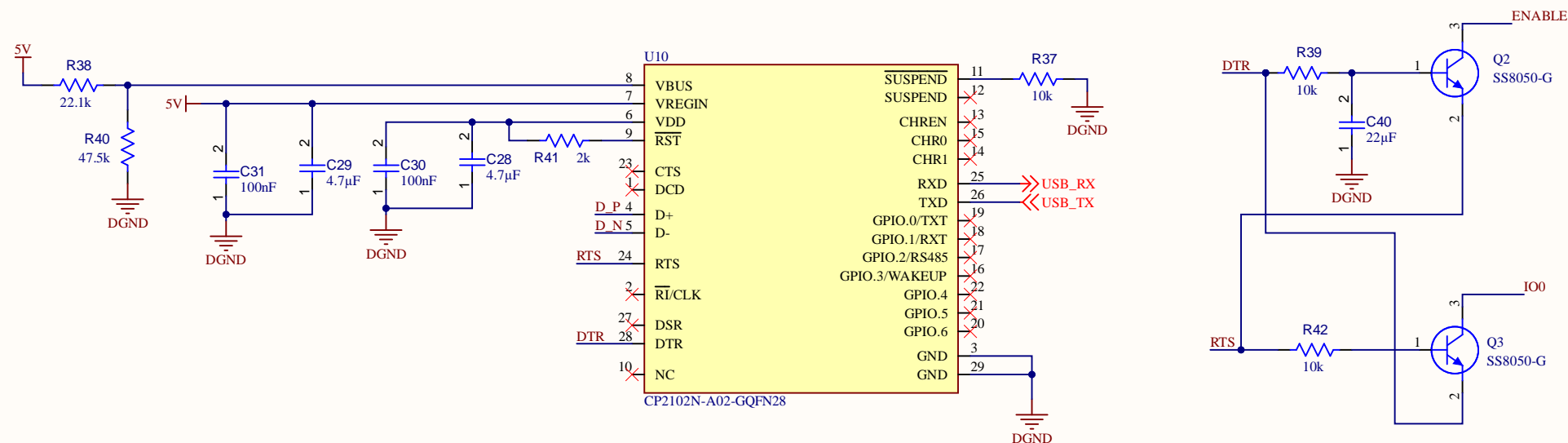
3V3 Reg



Thermal ground resistors



UART



Title			
Size	Number		Revision
A3			
Date:	11-13-2024		Sheet of
File:	C:\Users\...\Power_revB3.SchDoc		Drawn By: