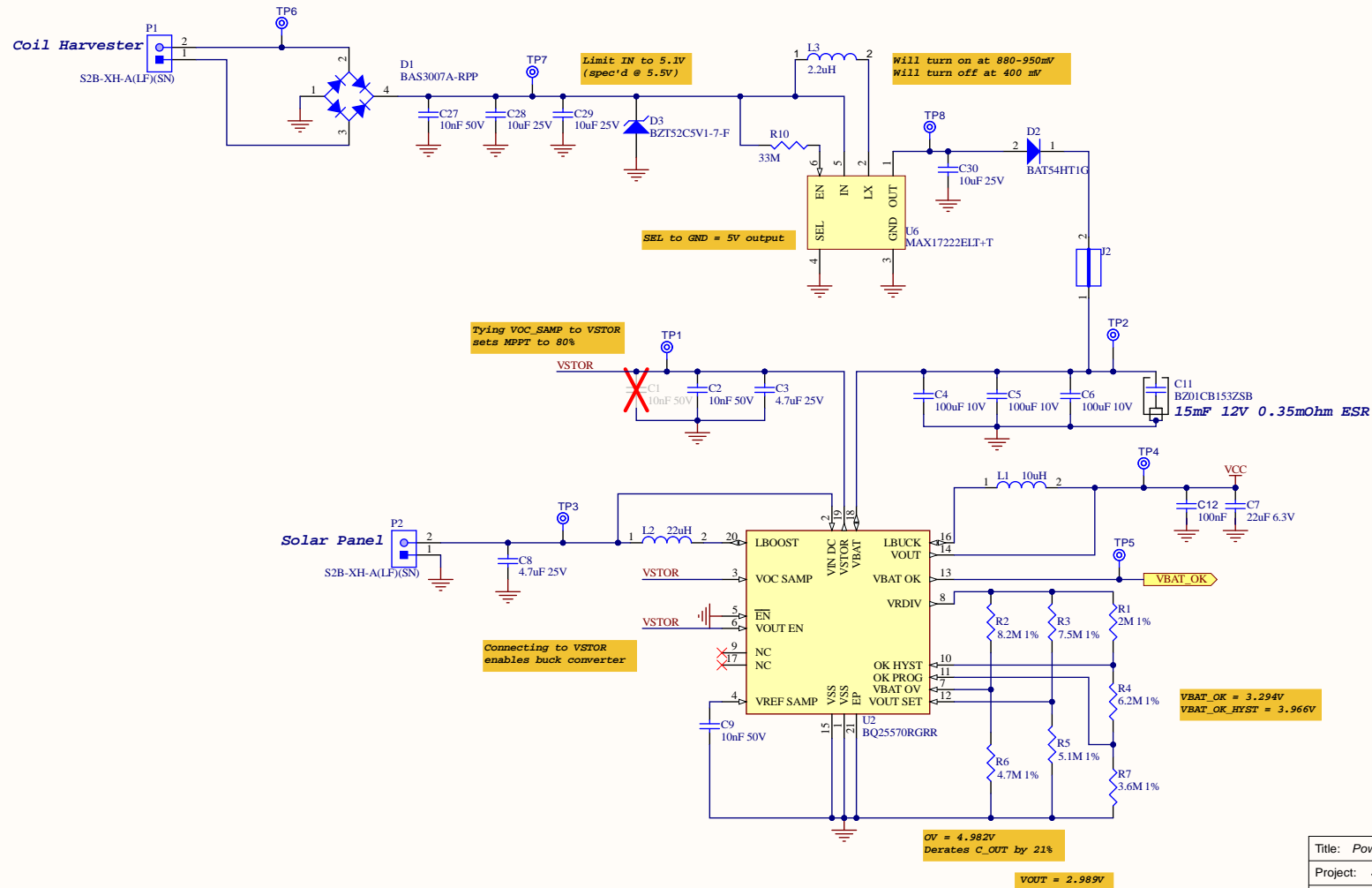



Title: <i>MCU</i>		Sheet 2 of 5	
Project: <i>Smart PPE</i>		Variant: <i>v0.0</i>	
Author: <i>Alexander Curtiss</i>		Date: <i>10/10/2020</i>	
E-Mail: <i>alexander.curtiss@u.northwestern.edu</i>			
<div>Ka Moamoa Northwestern University <a href="http://kamoamoa.eecs.northwestern.edu/">http://kamoamoa.eecs.northwestern.edu/</a></div>			



# Power Harvesting

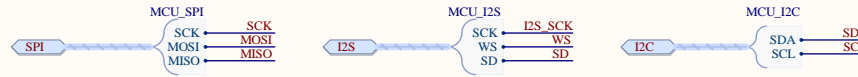


Title: Power		Sheet 3 of 5
Project: Smart PPE	Variant: v0.0	
Author: Alexander Curtiss	Date: 10/10/2020	
E-Mail: alexander.curtiss@u.northwestern.edu		
Ka Moamoa Northwestern University <a href="http://kamoamoa.eecs.northwestern.edu/">http://kamoamoa.eecs.northwestern.edu/</a>		

# Communication Buses

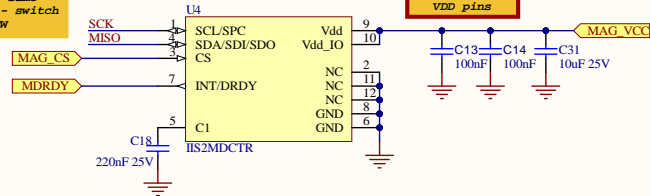
I2C pulled high on MCU

I2S SD pulled down on MCU



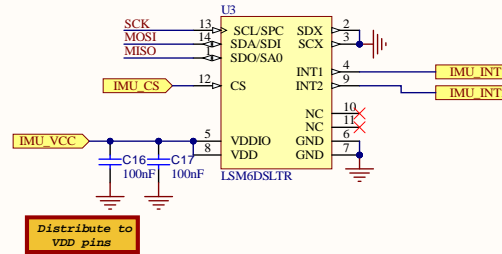
## Magnetometer

3-Wire SPI uses same bus - switch in SW



Distribute to VDD pins

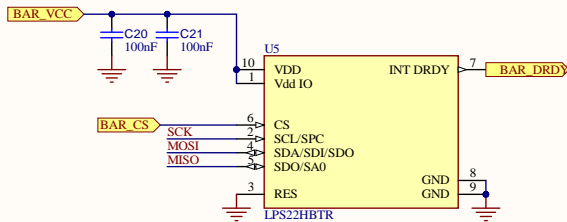
## IMU



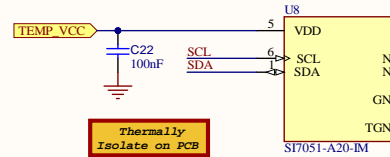
Distribute to VDD pins

## Barometer

Distribute to VDD pins

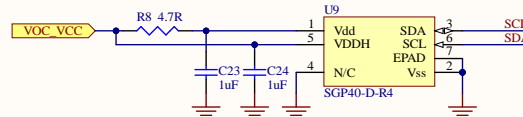


## Temperature

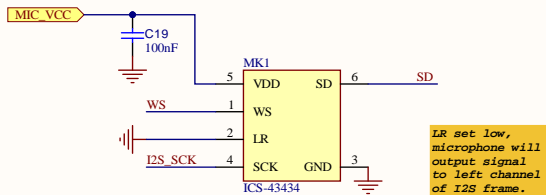


Thermally Isolate on PCB

## Air Quality

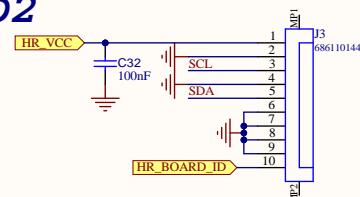



## Microphone



LR set low, microphone will output signal to left channel of I2S frame.

## PPM/SpO2



Title: <i>Sensors</i>		Sheet 4 of 5	
Project: <i>Smart PPE</i>		Variant: <i>v0.0</i>	
Author: <i>Alexander Curtiss</i>		Date: <i>10/10/2020</i>	
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A

B

C

D

A

B

C

D



# FRAM

