

Mycroft Mark 2 rev 6

SJ201-Raspberry Pi 4 Daughterboard

Sheet: xmos

XMOS
Microphone
Array

File: xmos.sch

I2S & I2C

I2S

Sheet: Power

Power

File: Power.sch

Sheet: RaspberryPi

Raspberry Pi

File: RaspberryPi.sch

Sheet: AudioAmp

Audio Amplifier

File: AudioAmp.sch

I2S & I2C

USB

I2C

MIPI DSI
Connector

Sheet: Monitor

Monitor,
Touch

File: monitor.sch

Sheet: MCU

MCU & Fan

File: MCU.sch

Sheet: Coral Processor

Coral
Processor

File: Coral.sch

Logos & Mounting Holes



OpenHardware1

SJ-201-R6

Mycroft AI

Sheet: /

File: SJ-201-R6.sch

Title: SJ-201-R6

Size: A Date: 2020-12-30

KiCad E.D.A. kicad (5.1.8)-1

Rev: Rev6 - v1

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Typical Application Circuit

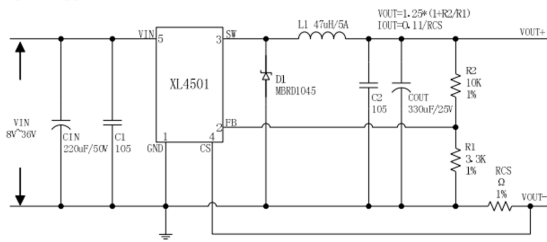
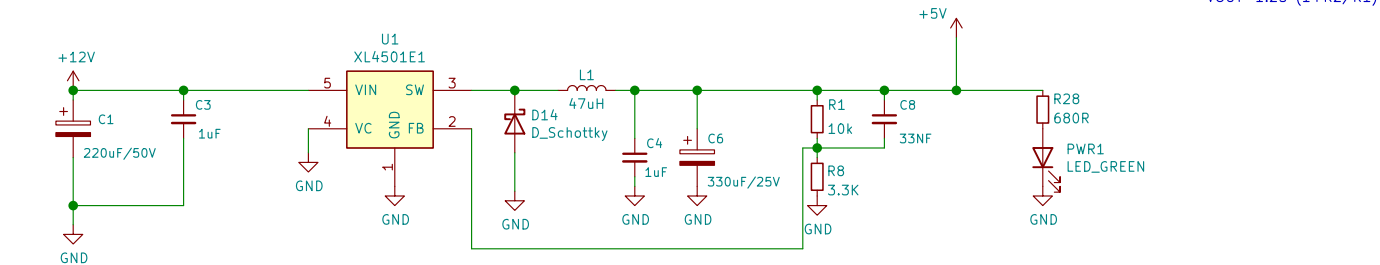


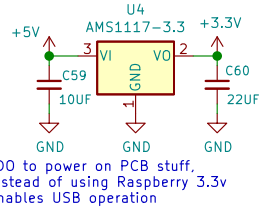
Figure4. XL4501 Typical Application Circuit

Reference Diagram

VIN=8V ~ 16V, VOUT=5V/5A

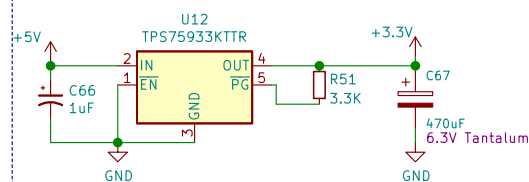


3.3v LDO Regulator

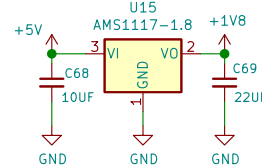


LDO to power on PCB stuff.
instead of using Raspberry 3.3v
Enables USB operation

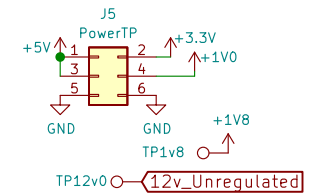
3.3v LDO High Power for Coral TPU



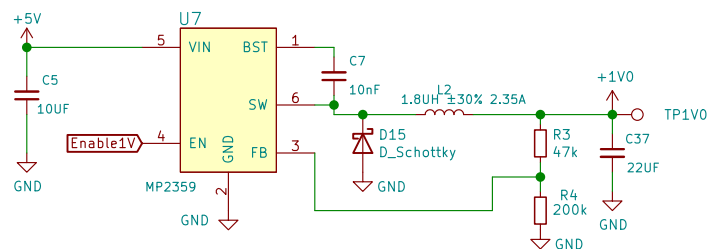
1.8v LDO Regulator



Power Test Points



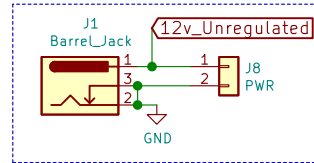
1.0v Buck for XM05



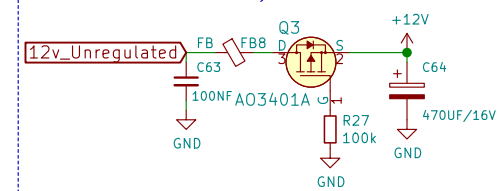
$$VFB = 0.6V$$

$$VO = 0.6 \times (1 + 30/47) = 0.98V$$

Power



Reverse Polarity Protection



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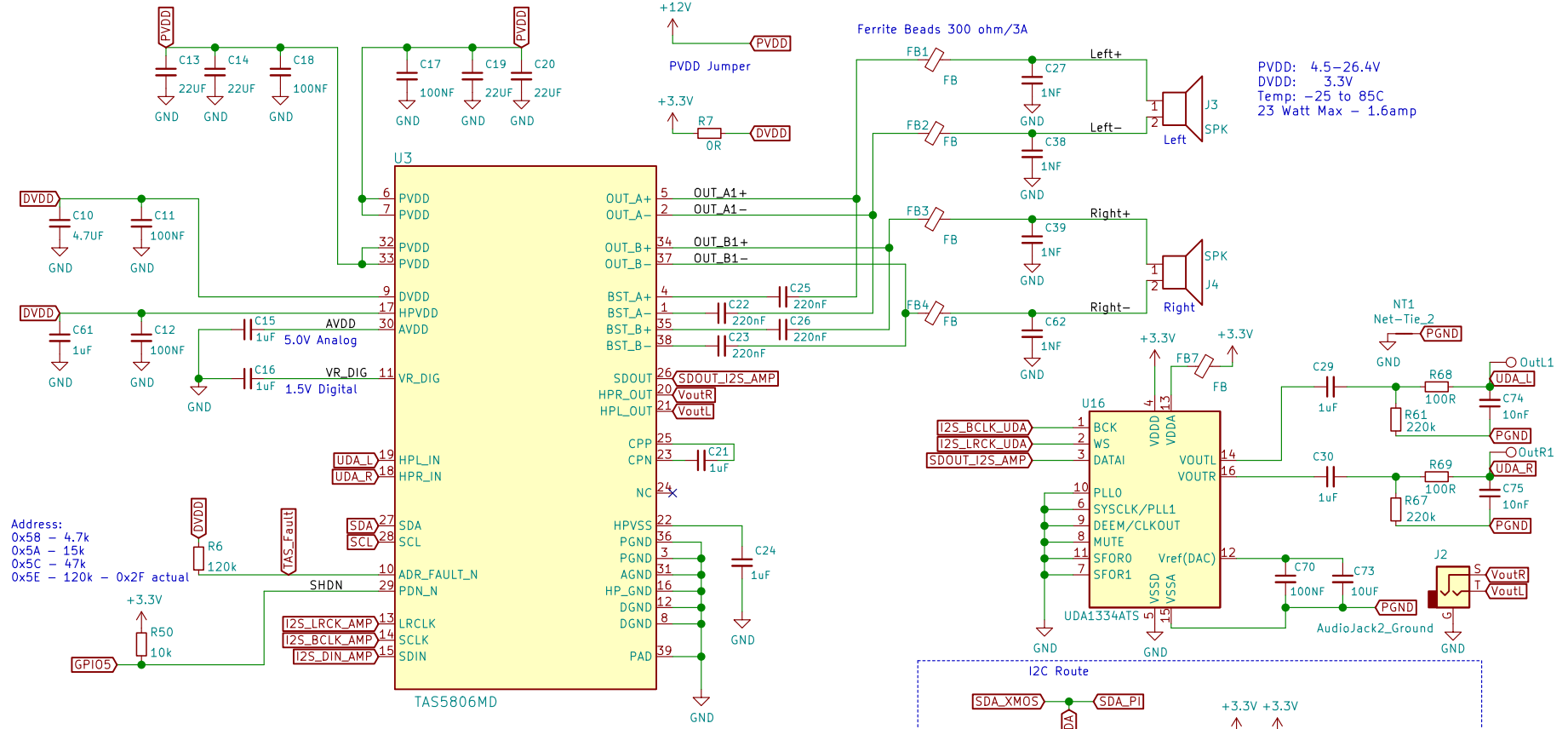
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Title: Power

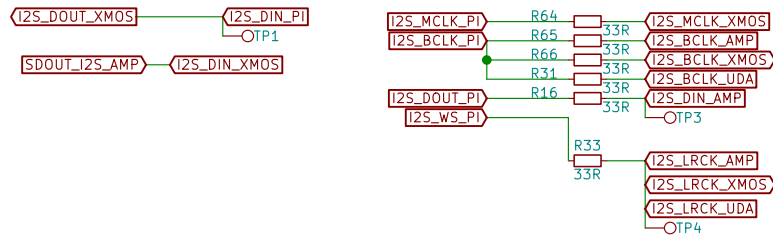
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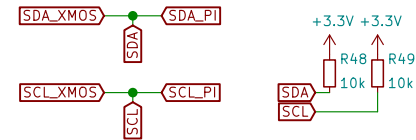
Audio Amplifier



I2S Selector



I2C Route



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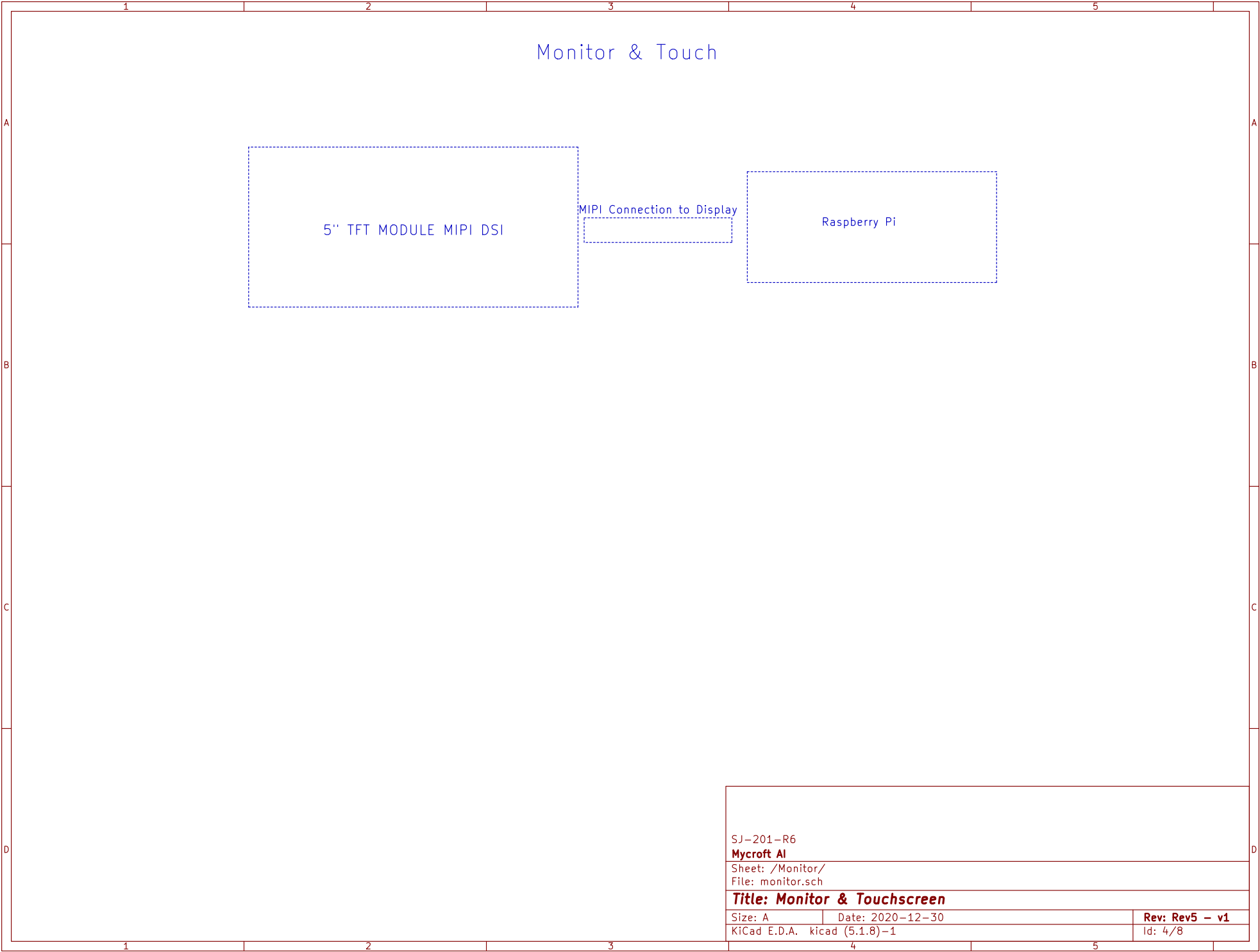
Mycroft AI

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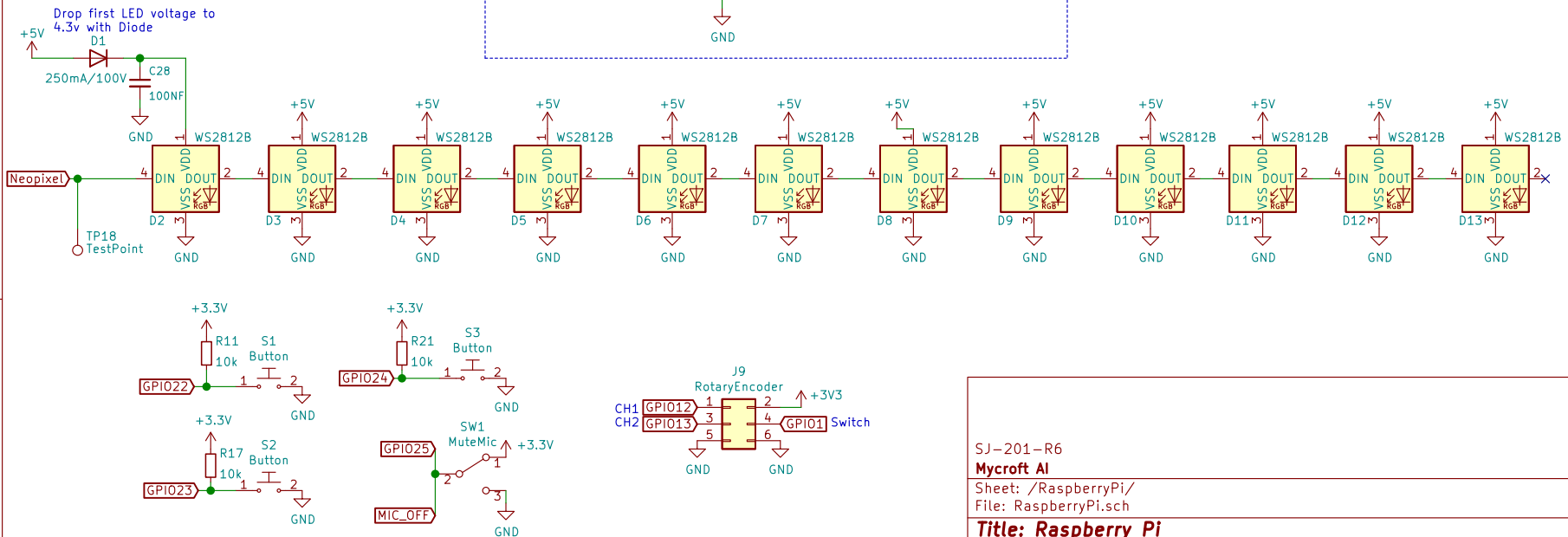
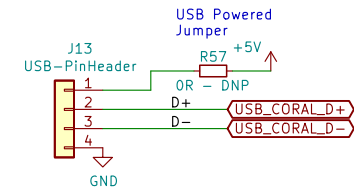
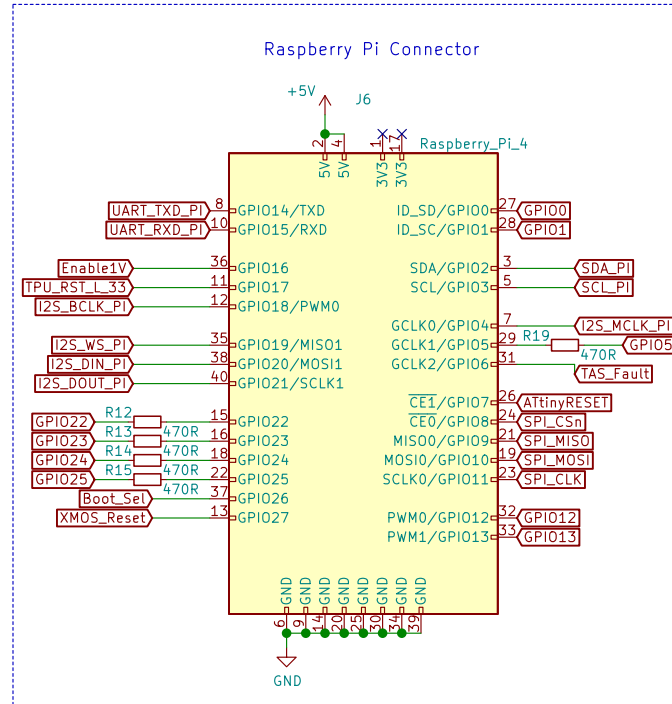
Title: Audio Amplifier

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Rev: Rev5 - v1
 Id: 3/8



Raspberry Pi



SJ-201-R6

Mycroft AI

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File: RaspberryPi.sch

Title: Raspberry Pi

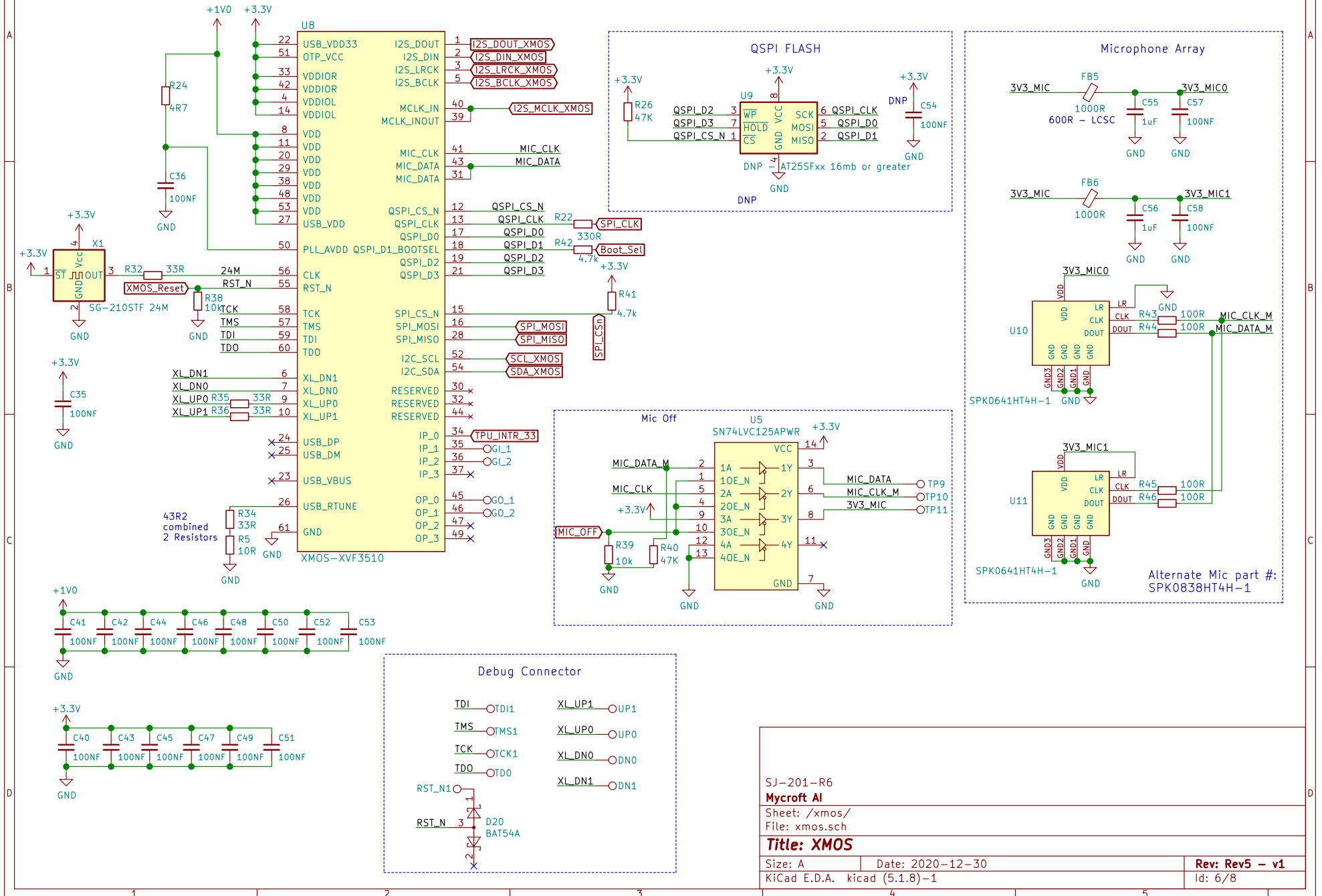
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Id: 5/8

XMOS Audio Processor



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Sheet: /xmos/

File: xmos.sch

Title: XMOS

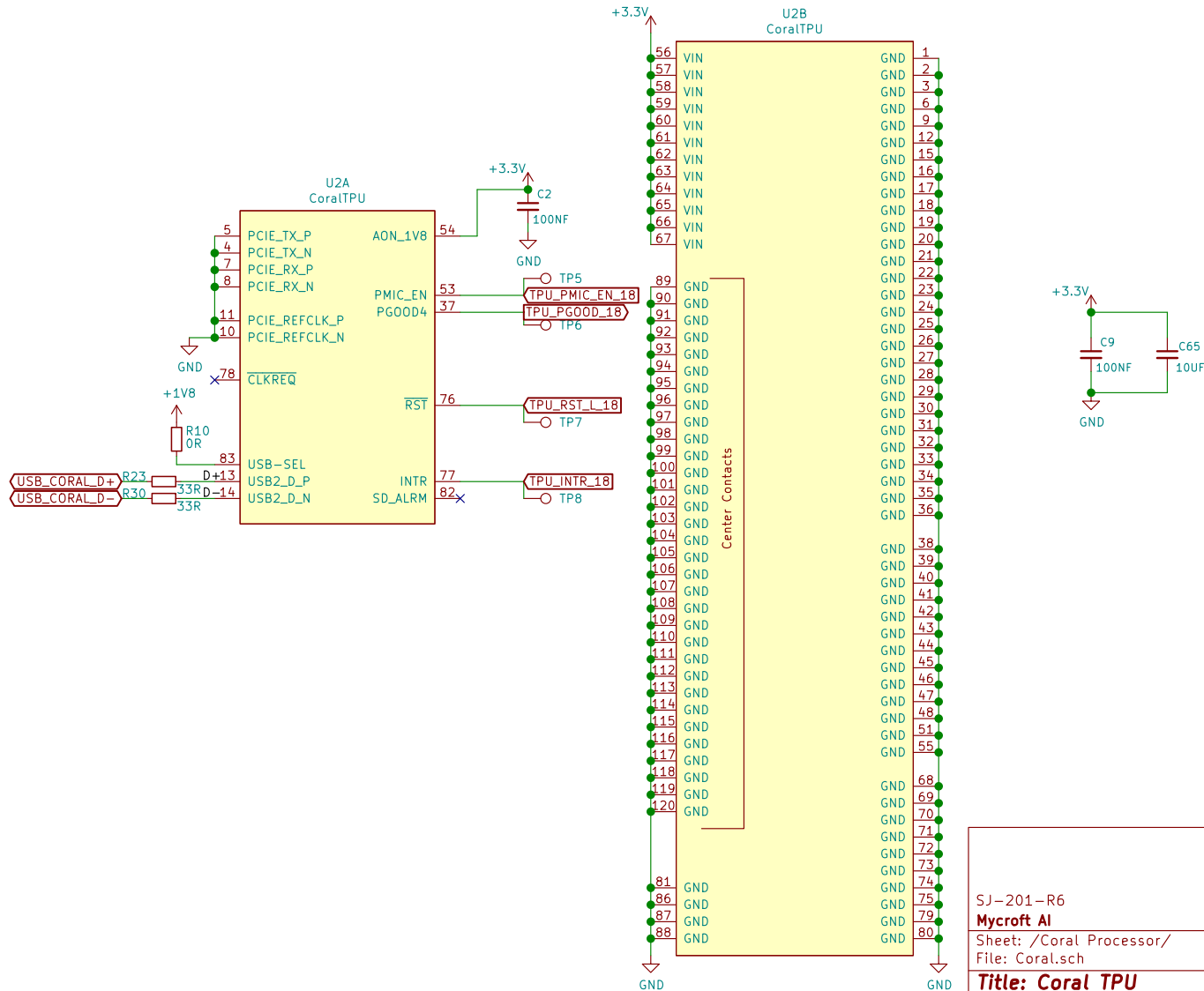
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Coral Processor



SJ-201-R6

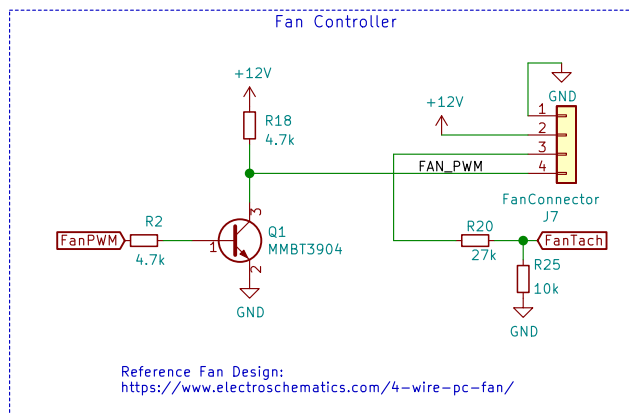
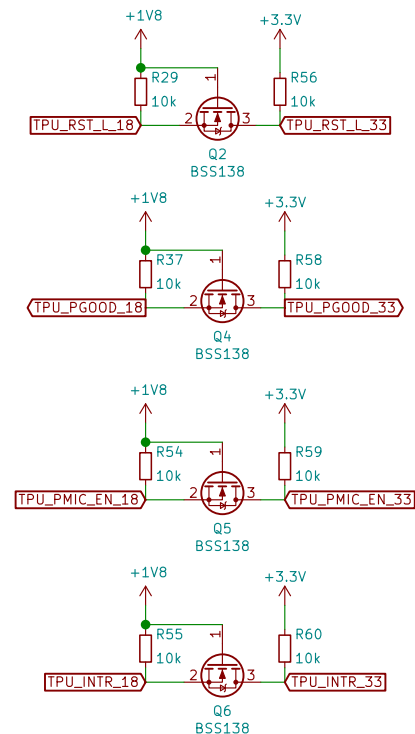
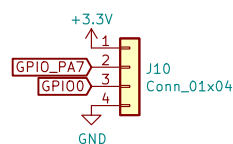
Mycroft AI

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File: Coral.sch

Title: Coral TPU

Size: A Date: 2020-12-30
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