

Mycroft Mark 2

SJ201-Raspberry Pi 4 Daughterboard

Sheet: xmos

XMOS
Microphone
Array

File: xmos.sch

USB

I2S

Sheet: Power

Power

File: Power.sch

Sheet: RaspberryPi

Raspberry Pi
& USB Hub

File: RaspberryPi.sch

MPI DSI
Connector

Sheet: AudioAmp

I2S to Line Out
&
Audio Amplifier

File: AudioAmp.sch

Sheet: Monitor

Monitor
& Touch

File: monitor.sch

H1
MountingHole
H2
MountingHole
H3
MountingHole
H4
MountingHole



Mycroft

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File: Mycroft - Mark 2.sch

Title:

Size: A Date: 2020-10-02
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Rev: 0.67c
Id: 1/6

Typical Application Circuit

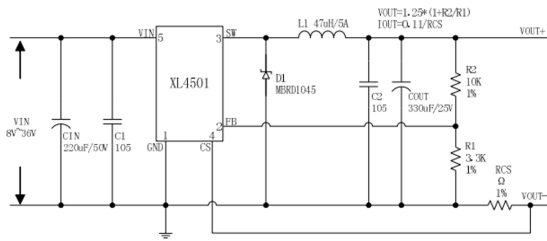
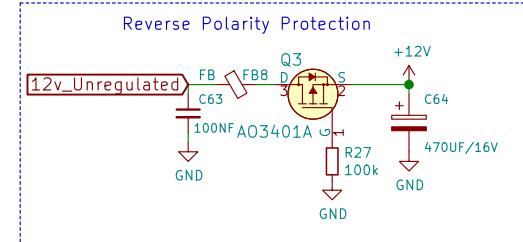
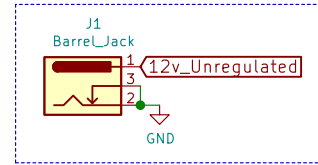
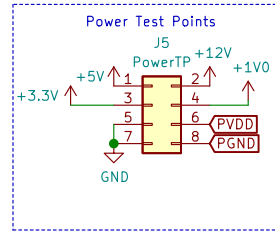


Figure4. XL4501 Typical Application Circuit

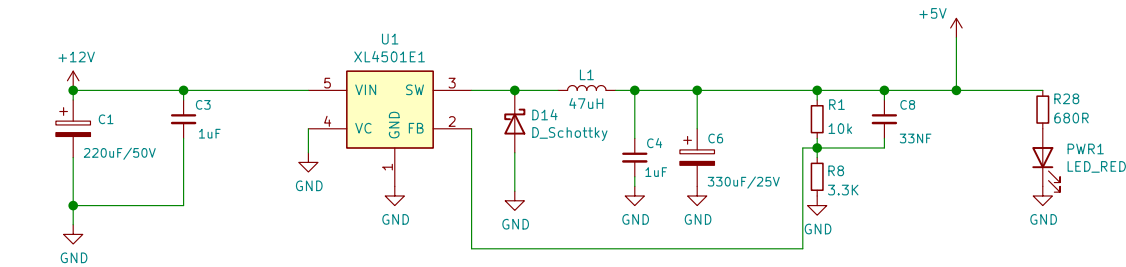
Reference Diagram

Power

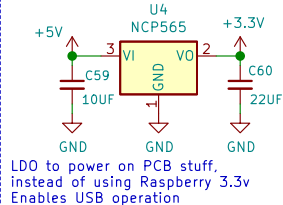


VIN=8V ~ 36V, VOUT=5V/5A

FB Resistor
VOUT=1.25*(1+R2/R1)

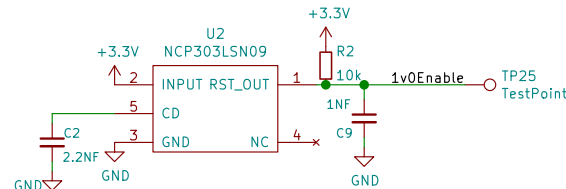


3.3v LDO Regulator

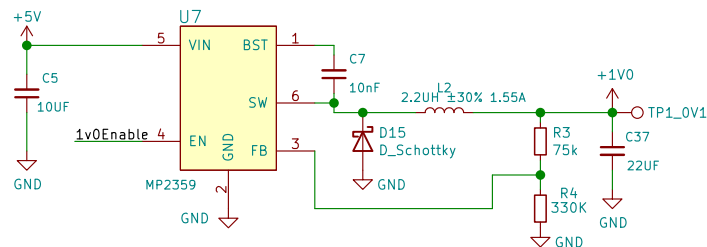


LDO to power on PCB stuff,
instead of using Raspberry 3.3v
Enables USB operation

Power on Delay 1v0 Buck



1.0v Buck for XM05



$$VFB = 0.6V$$

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

Power Converter
Mycroft

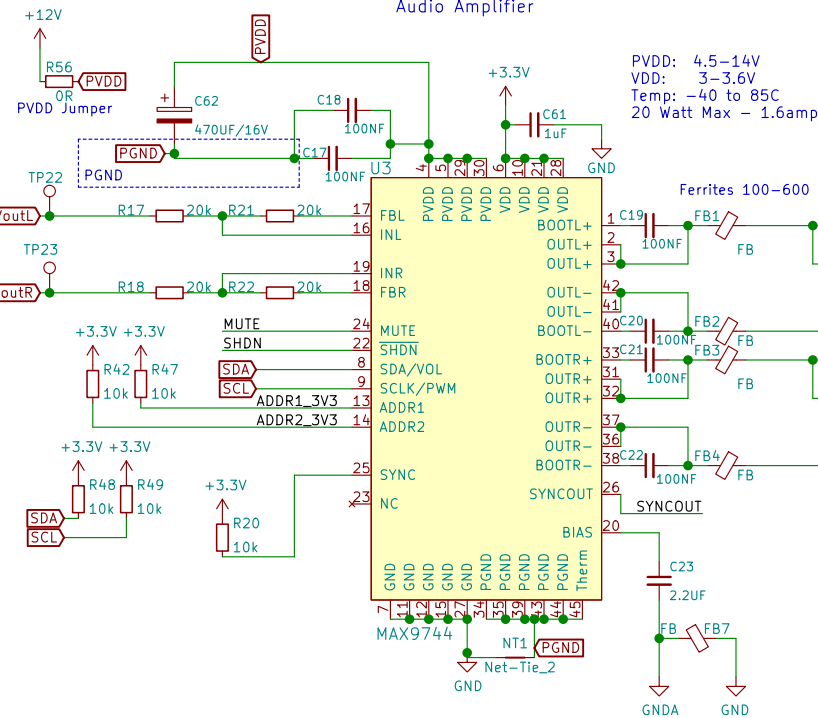
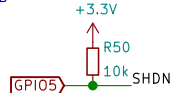
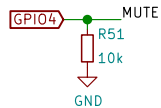
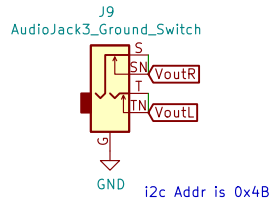
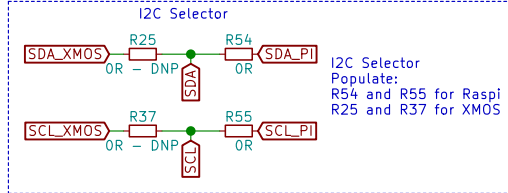
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File: Power.sch

Title: Power

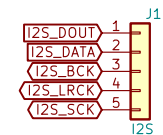
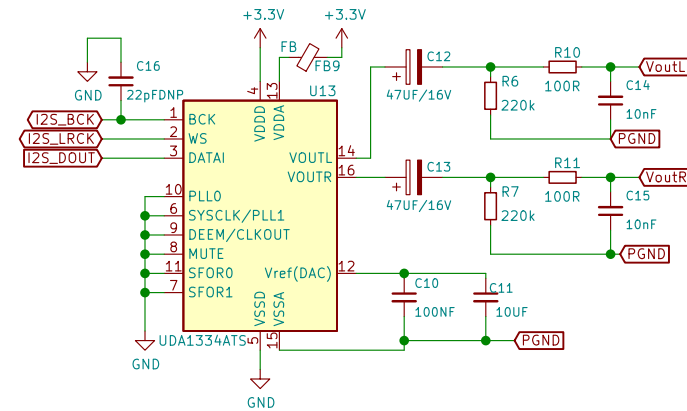
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Audio Amp & USB Sound Card



I2S to Line Out



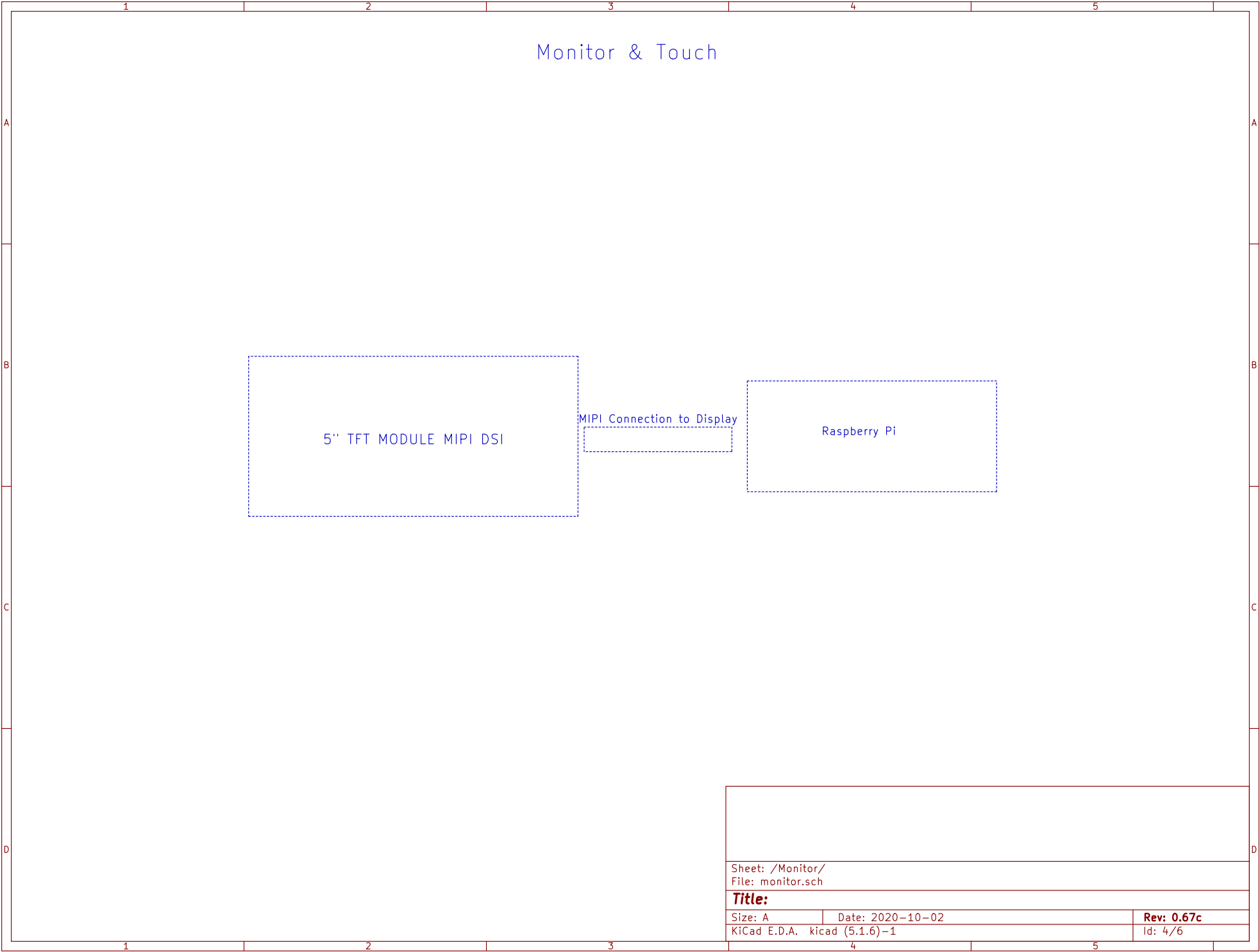
Mycroft

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File: AudioAmp.sch

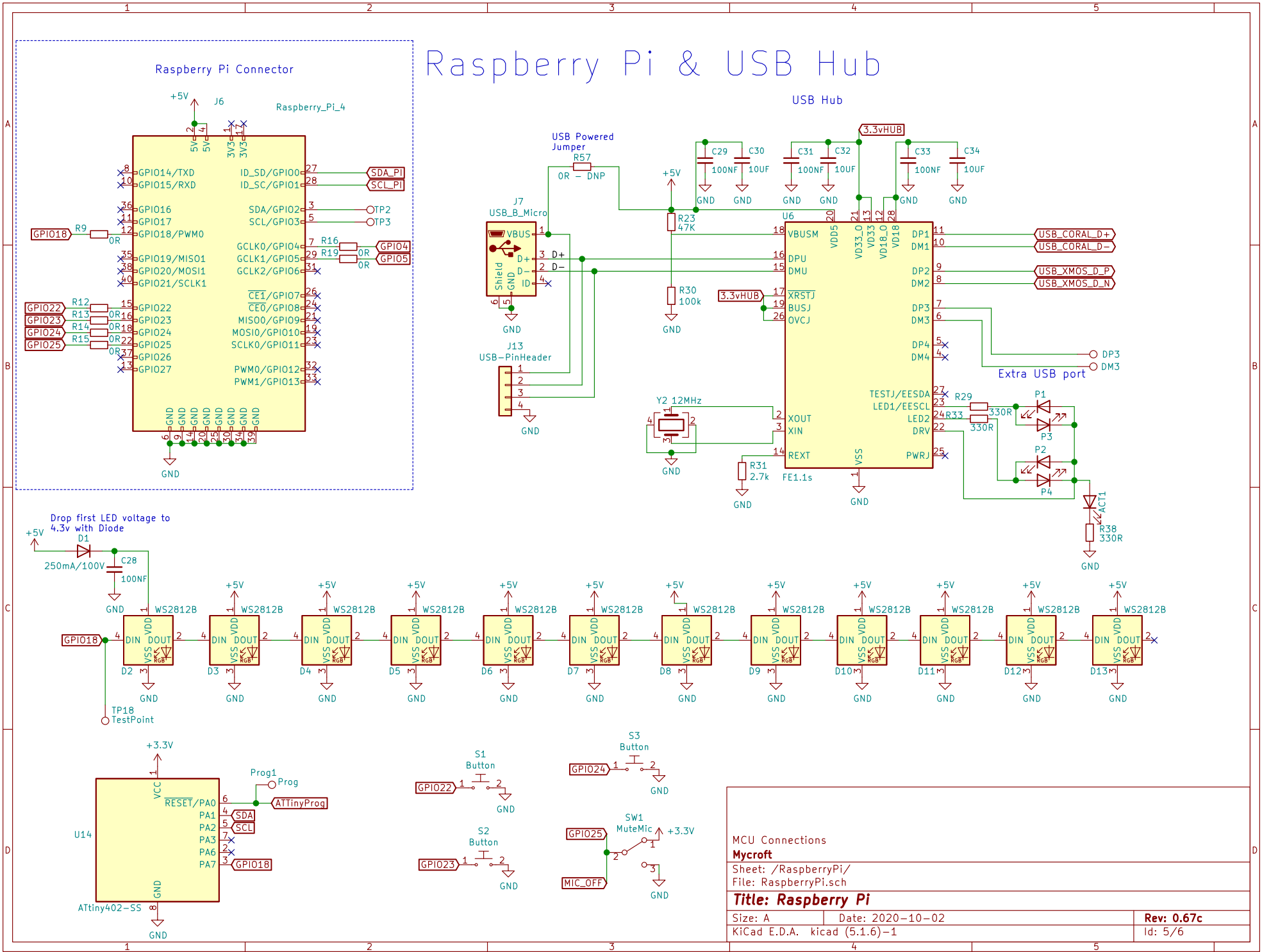
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XMOS Audio Processor

