

# LED Panel Controller

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TODO:

- \* Determine actual +12V current draw, reevaluate input protection
- \* Determine image size, external flash size
- \* Determine +5V current draw, decide on converter
- \* Determine +3.3V Current Draw, decide on converter
- \* Remove high frequency PIC32MZ bypass caps
- \* Add PIC32MZ SOSC oscillator
- \* Add +5V\_USB capacitance/ESD?
- \* Figure out panel connectors
- \* Figure out panel level shifting
- \* Figure out SPI flash circuit
- \* Figure out screen modes/mode LEDs
- \* Draw SD card sheet
- \* Draw WiFi module sheet
- \* Draw I2C boost sheet with LTC1694
- \* Determine what will be configurable, add hardstraps
- \* What will pushbuttons do?
- \* What PIC32MZ SKU will we use? Should be highest memory

Sheet: /  
File: LED\_Panel\_Controller.sch

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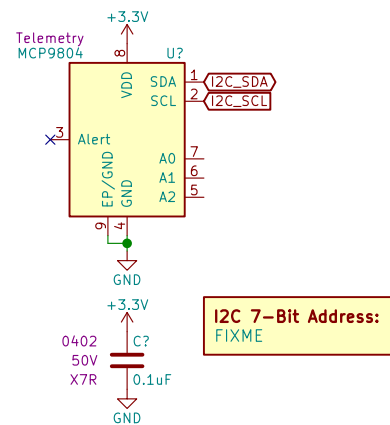
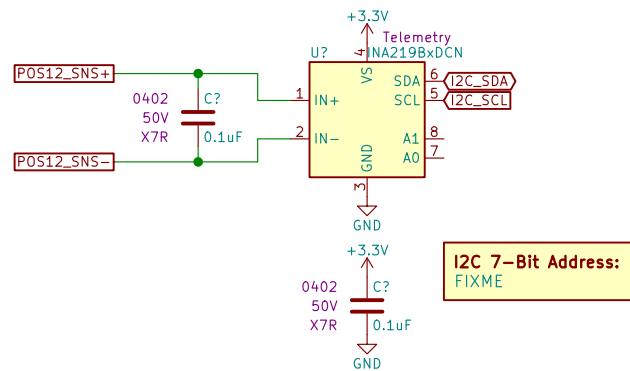
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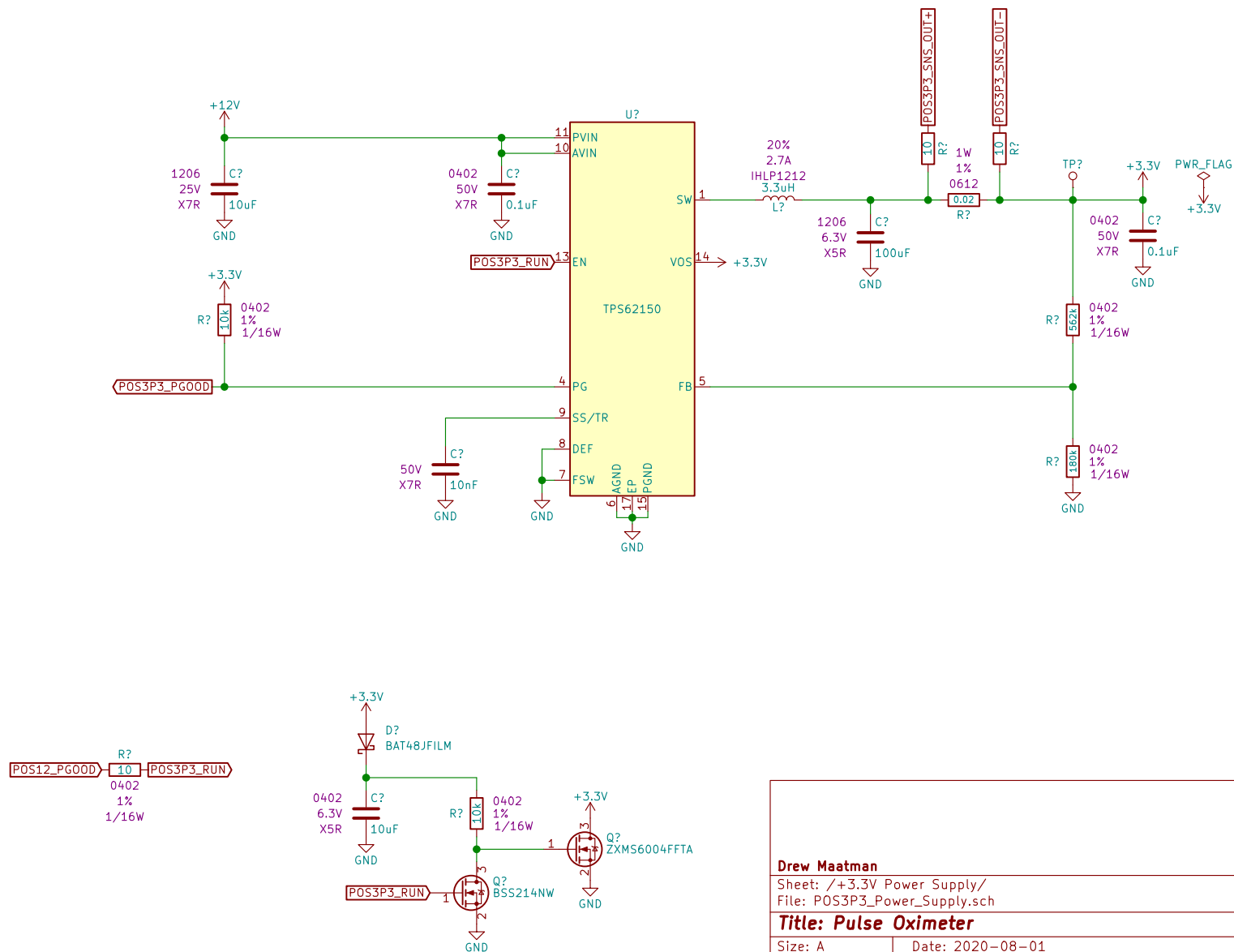
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Rev: A  
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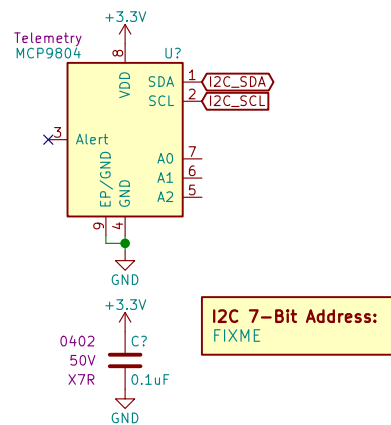
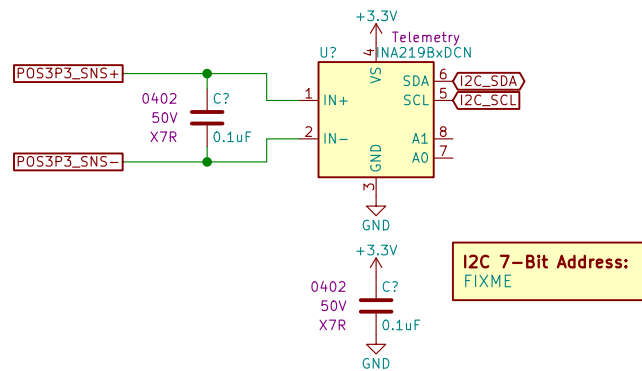
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**Title: Pulse Oximeter**

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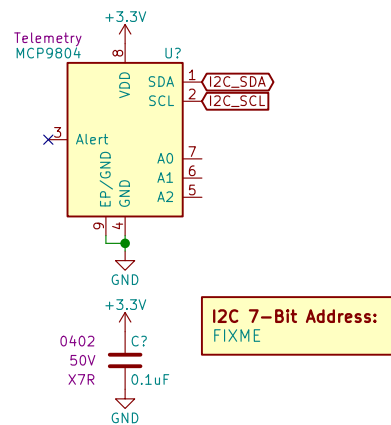
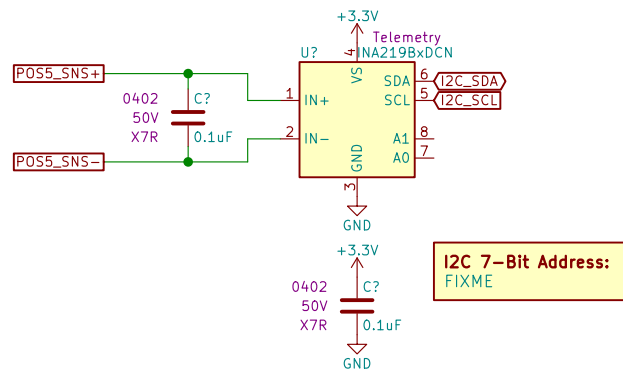
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Sheet: /+5V Telemetry/

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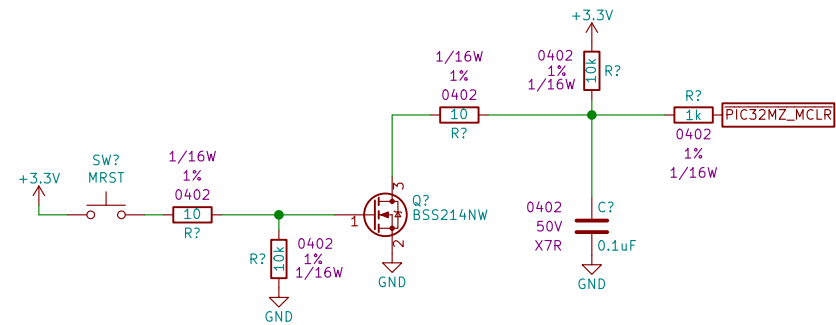
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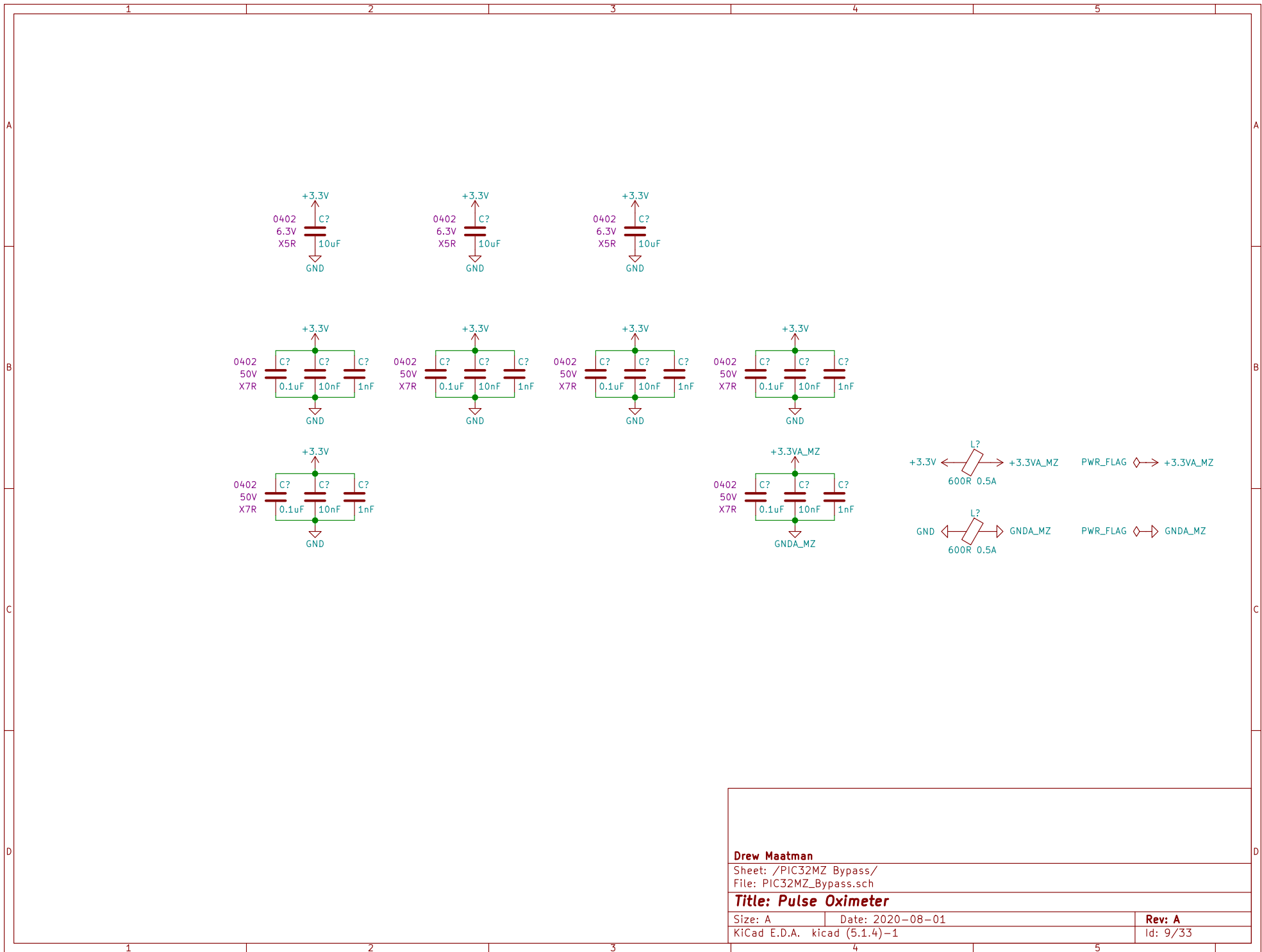


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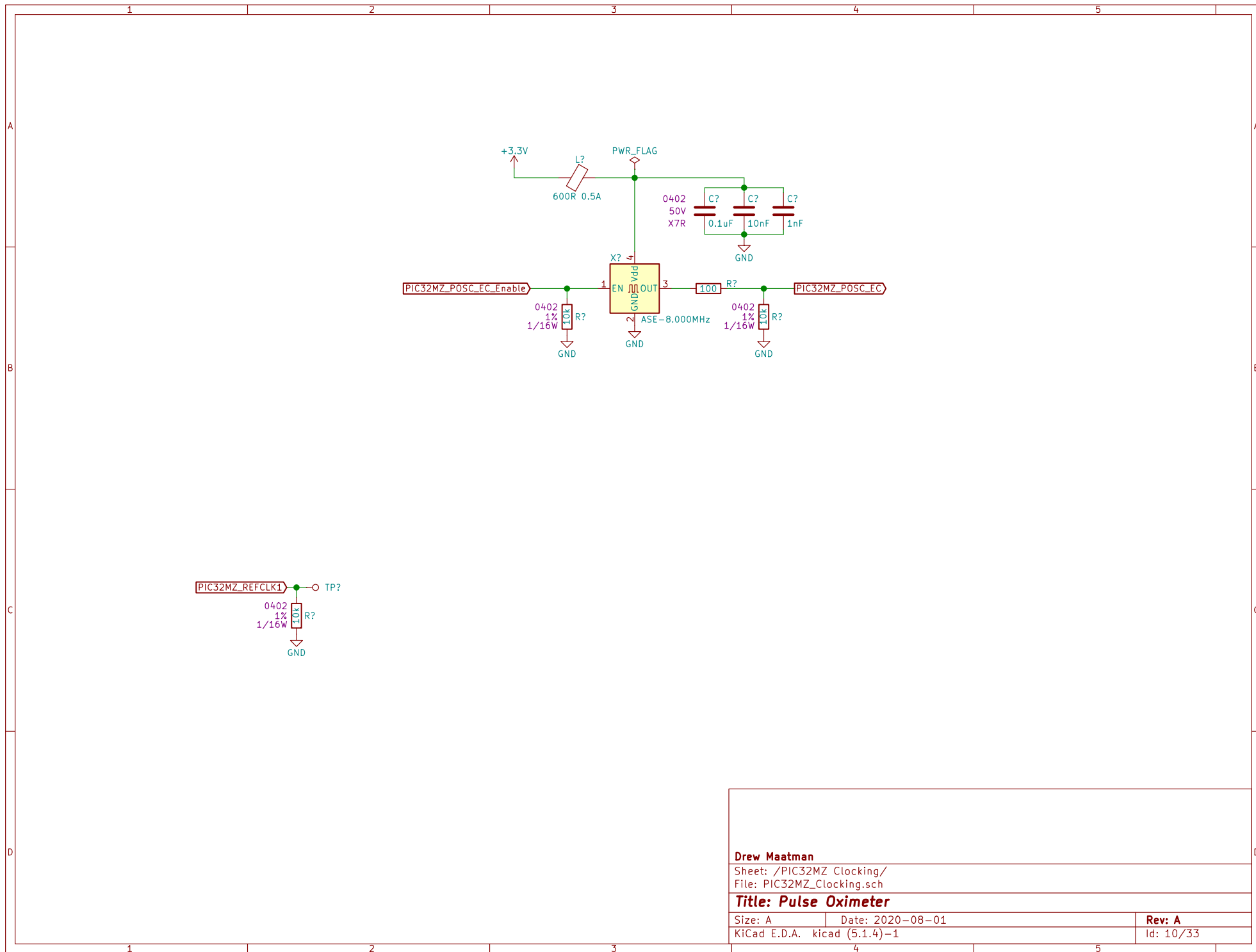
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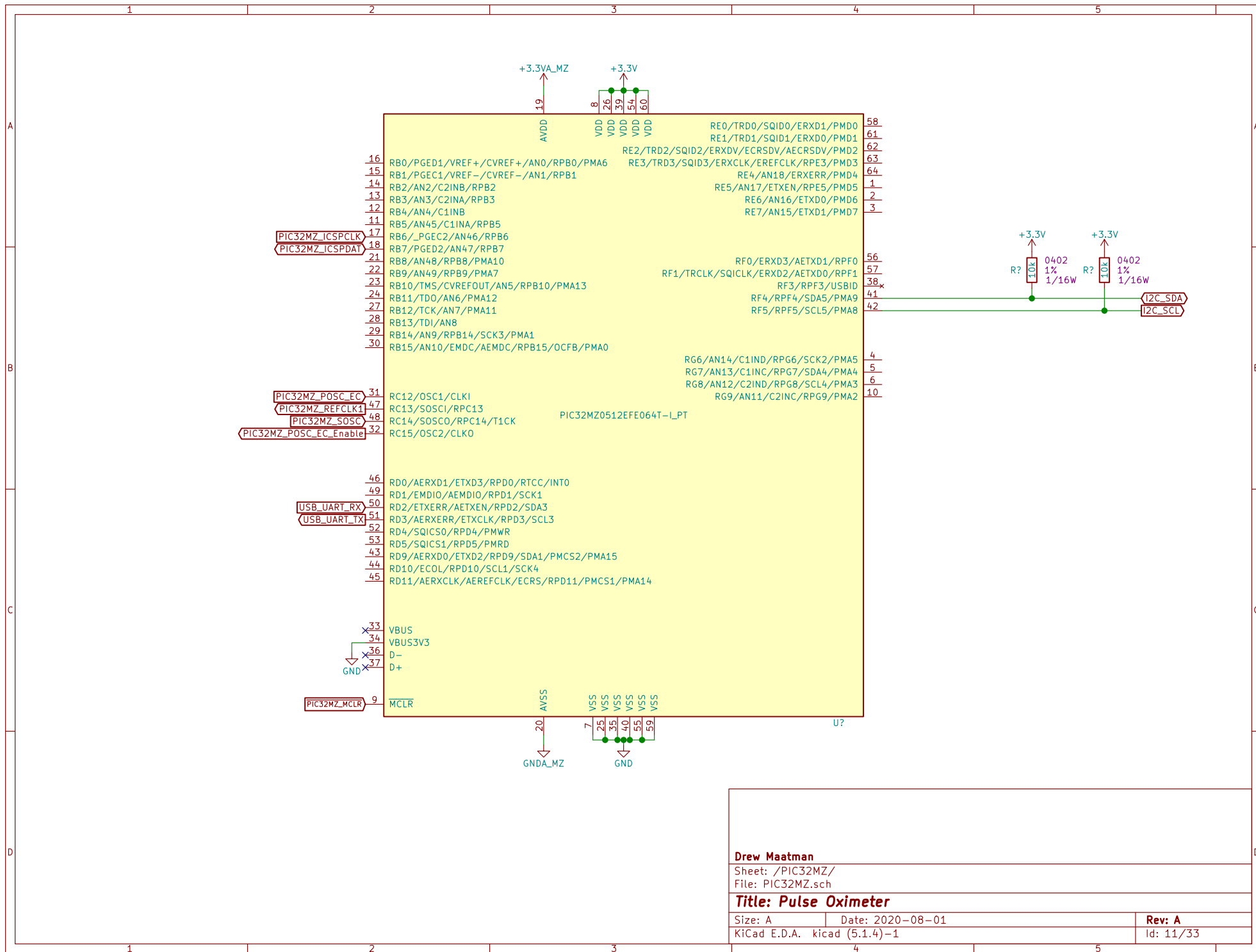
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Size: A Date: 2020-08-01  
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Sheet: /PIC32MZ/

File: PIC32MZ.sch

Title: Pulse Oximeter

Size: A Date: 2020-08-01

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Title:

Size: A      Date: 2020-09-08      Rev:

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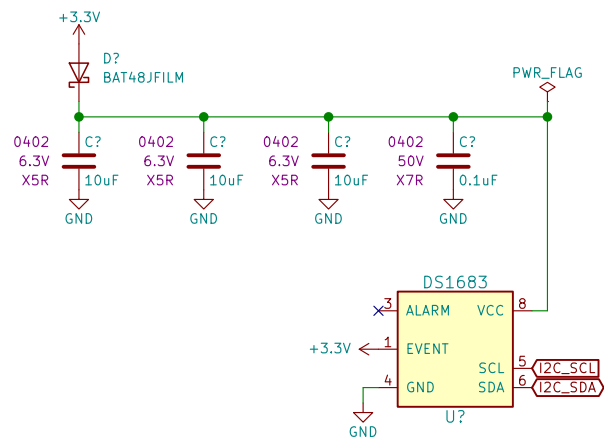
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Size: A	Date: 2020-09-08	Rev:
KiCad E.D.A. kicad (5.1.4)-1		Id: 13/33



**I2C 7-Bit Address:**  
0x6B

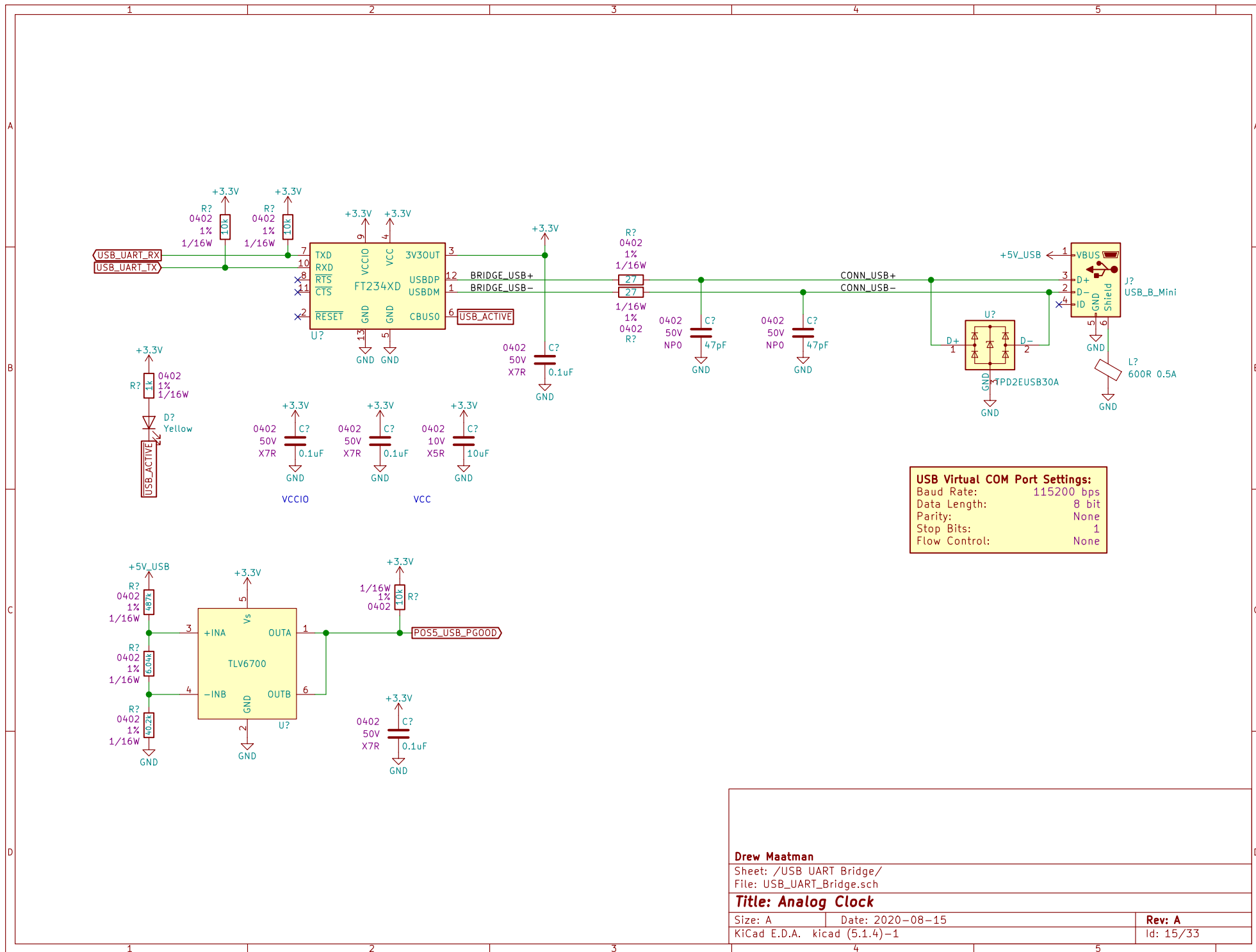
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Sheet: /Time of Flight/  
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**Title: Pulse Oximeter**

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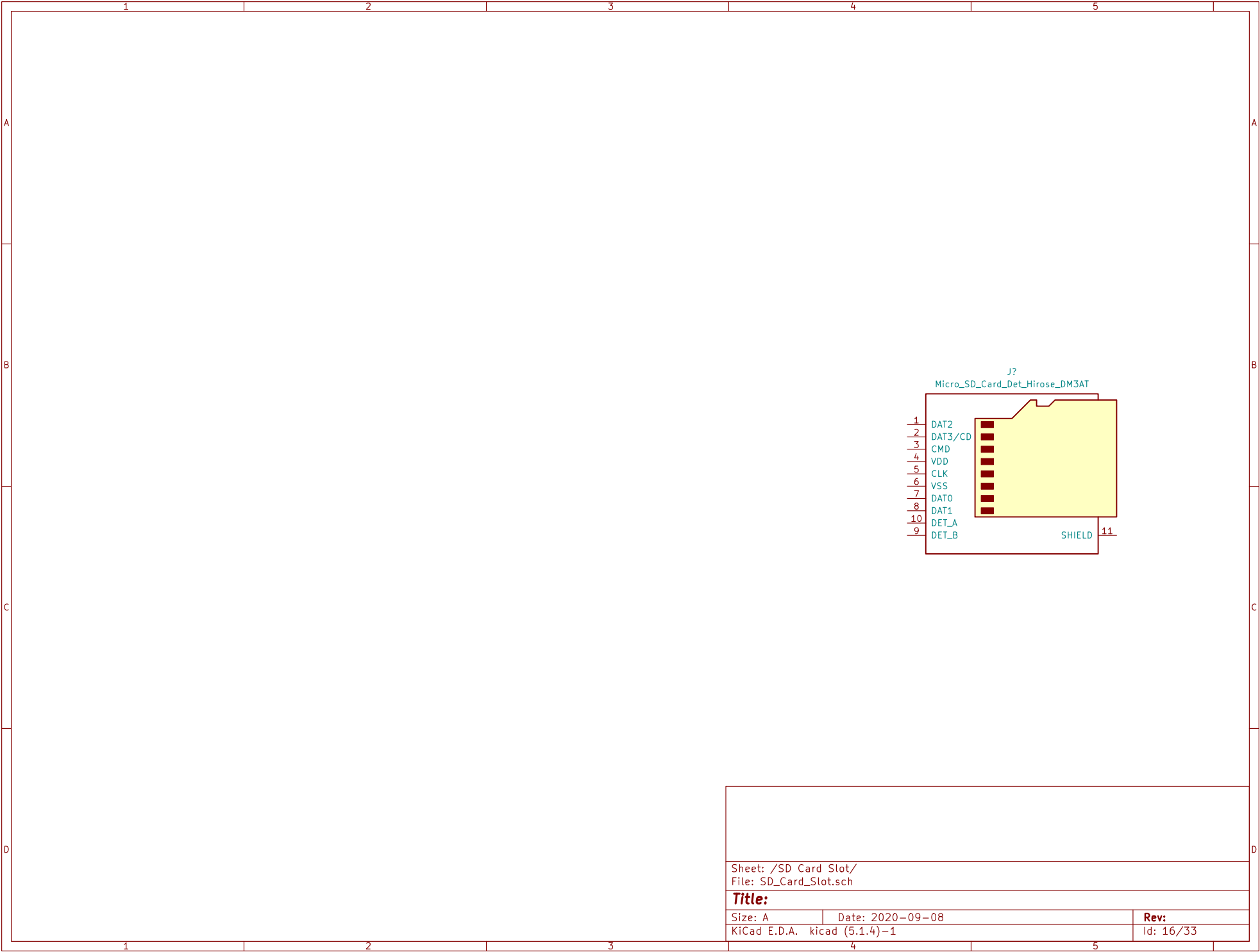
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**Title: Analog Clock**

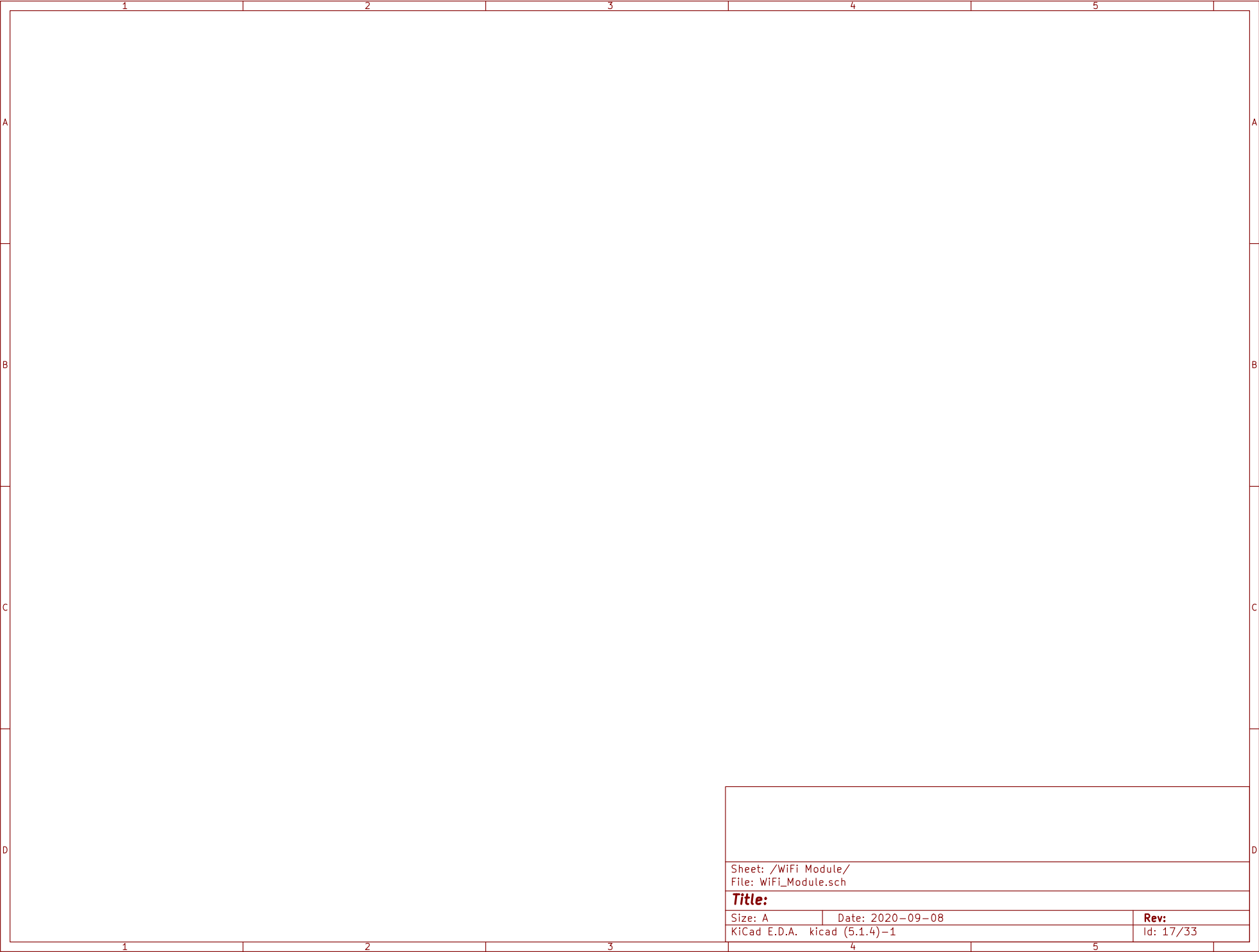
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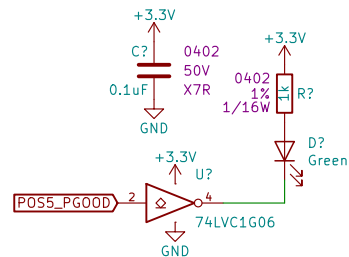
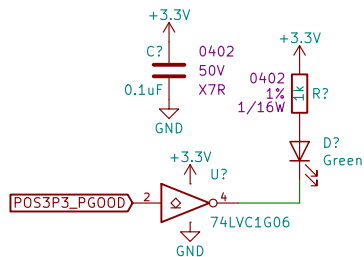
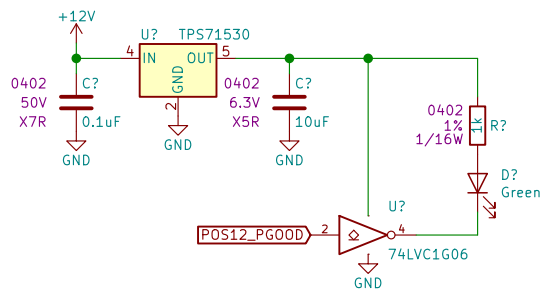


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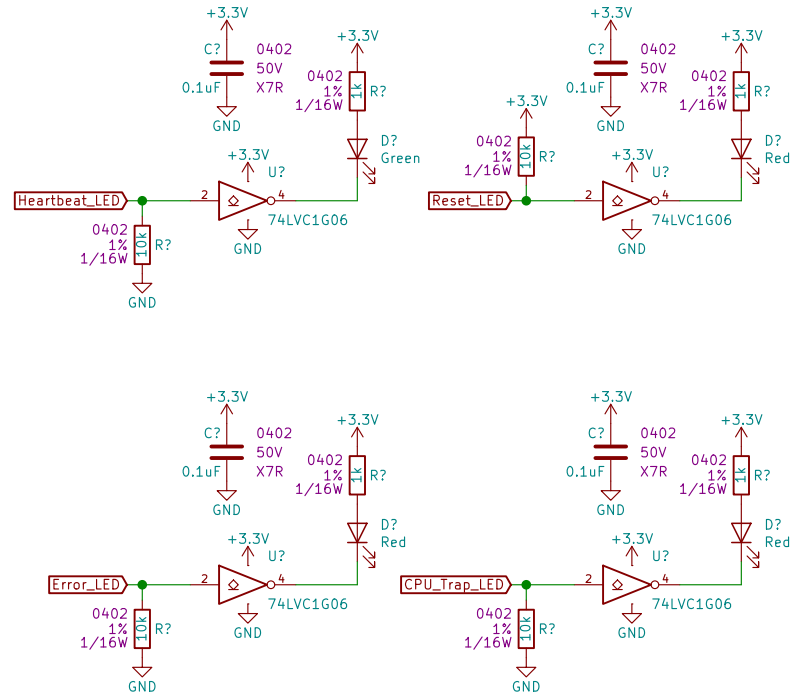
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File: PGOOD\_LEDs.sch

**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
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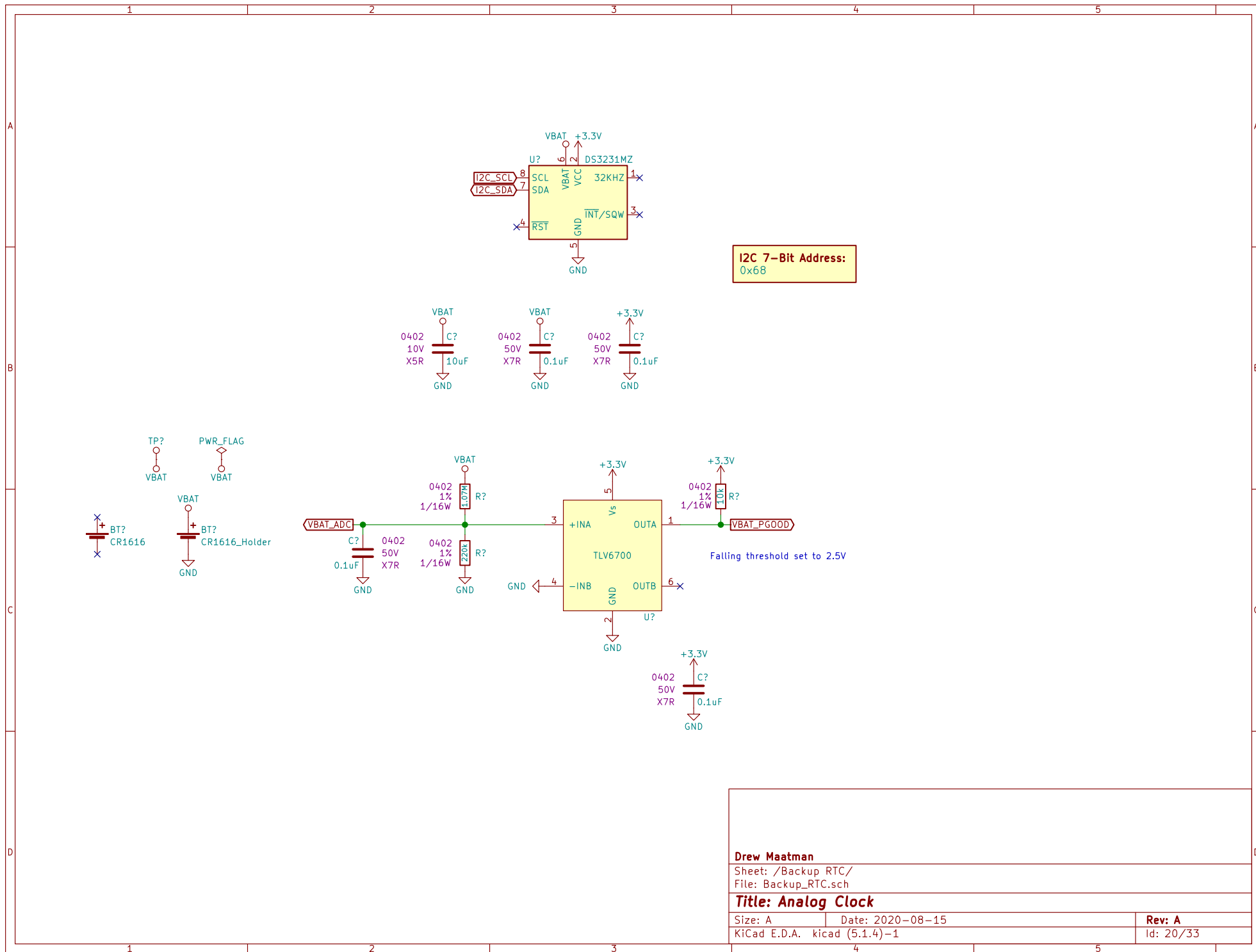
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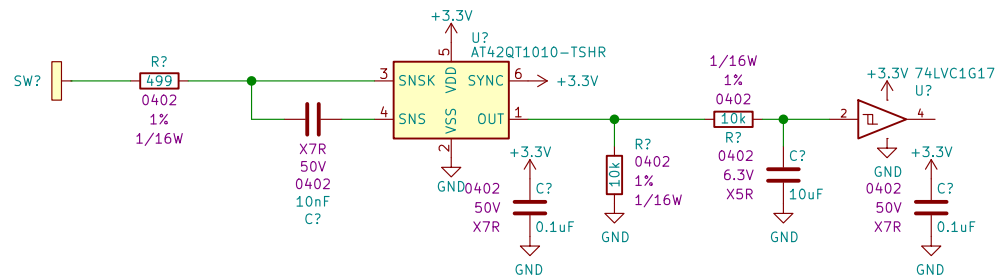
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**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
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Sheet: /Pushbuttons/  
File: Pushbuttons.sch

**Title: Pulse Oximeter**

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**Rev: A**  
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Rev:Id: 28/33

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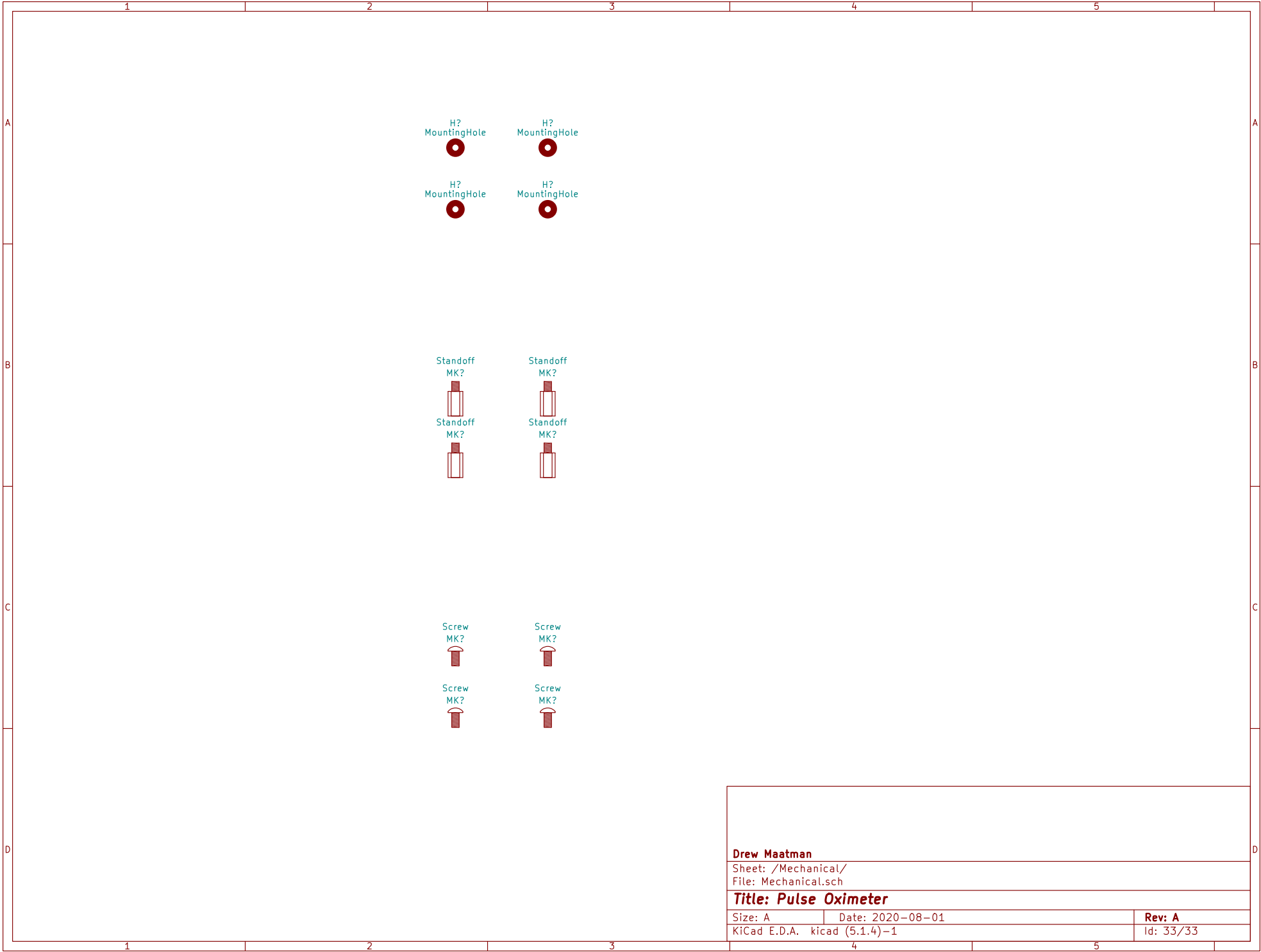
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Sheet: /Mechanical/  
File: Mechanical.sch

**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
KiCad E.D.A. kicad (5.1.4)-1

**Rev: A**  
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