

# LED Panel Controller

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Sheet: Mechanical

File: Mechanical.sch

### 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
- \* Change PGOOD LEDs sheet to use +3.3V\_PGL global power

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

### Title:

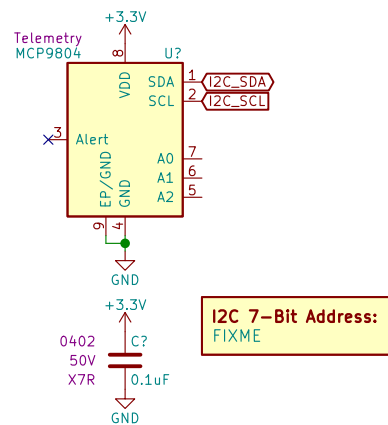
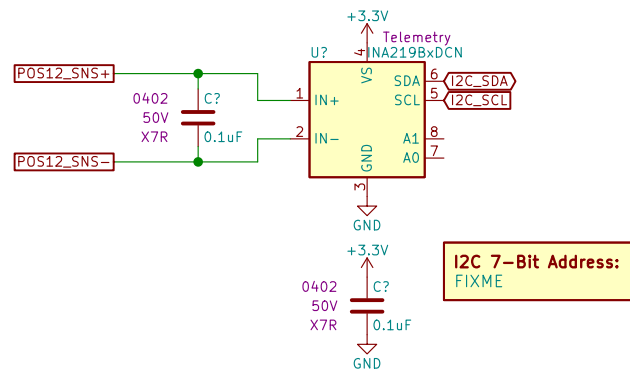
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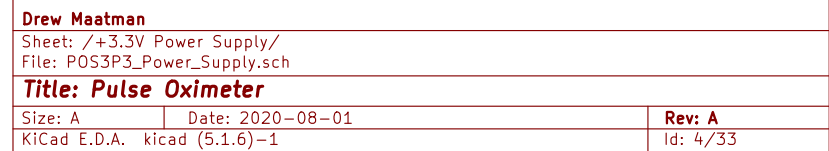
Drew Maatman

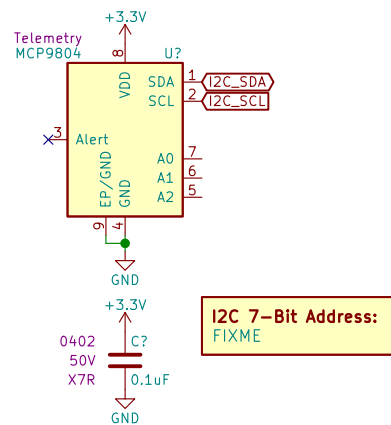
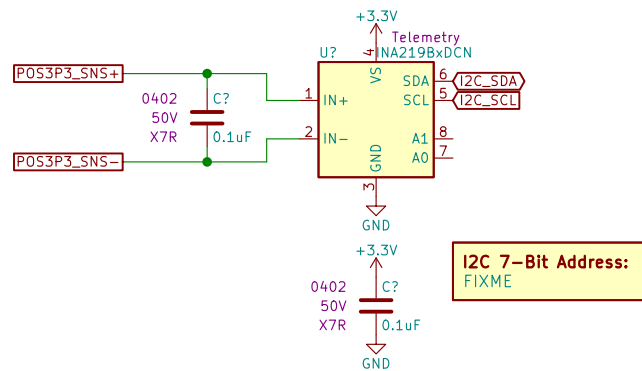
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**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
KiCad E.D.A. kicad (5.1.6)-1

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Id: 3/33





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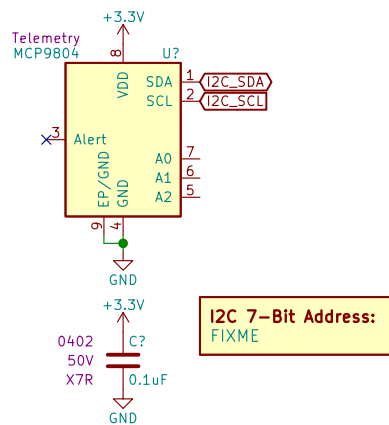
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File: POS5\_Telemetry.sch

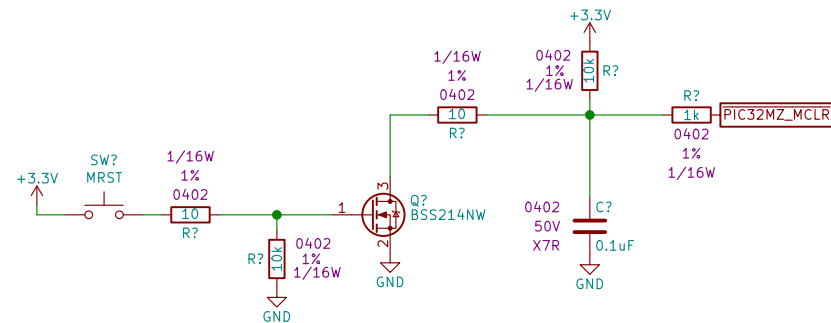
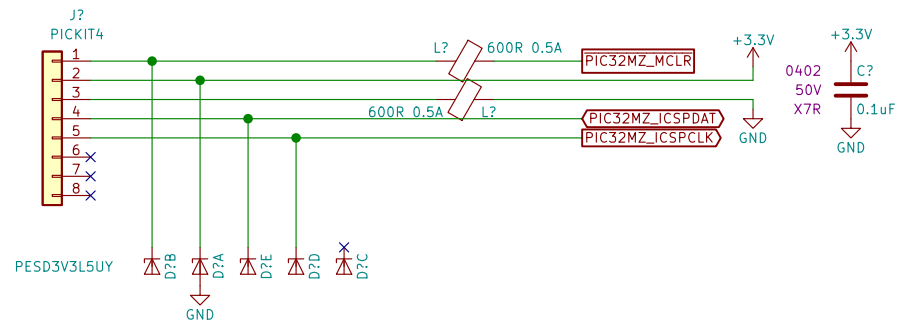
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Size: A	Date: 2020-08-01
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Rev: A

Id: 7/33



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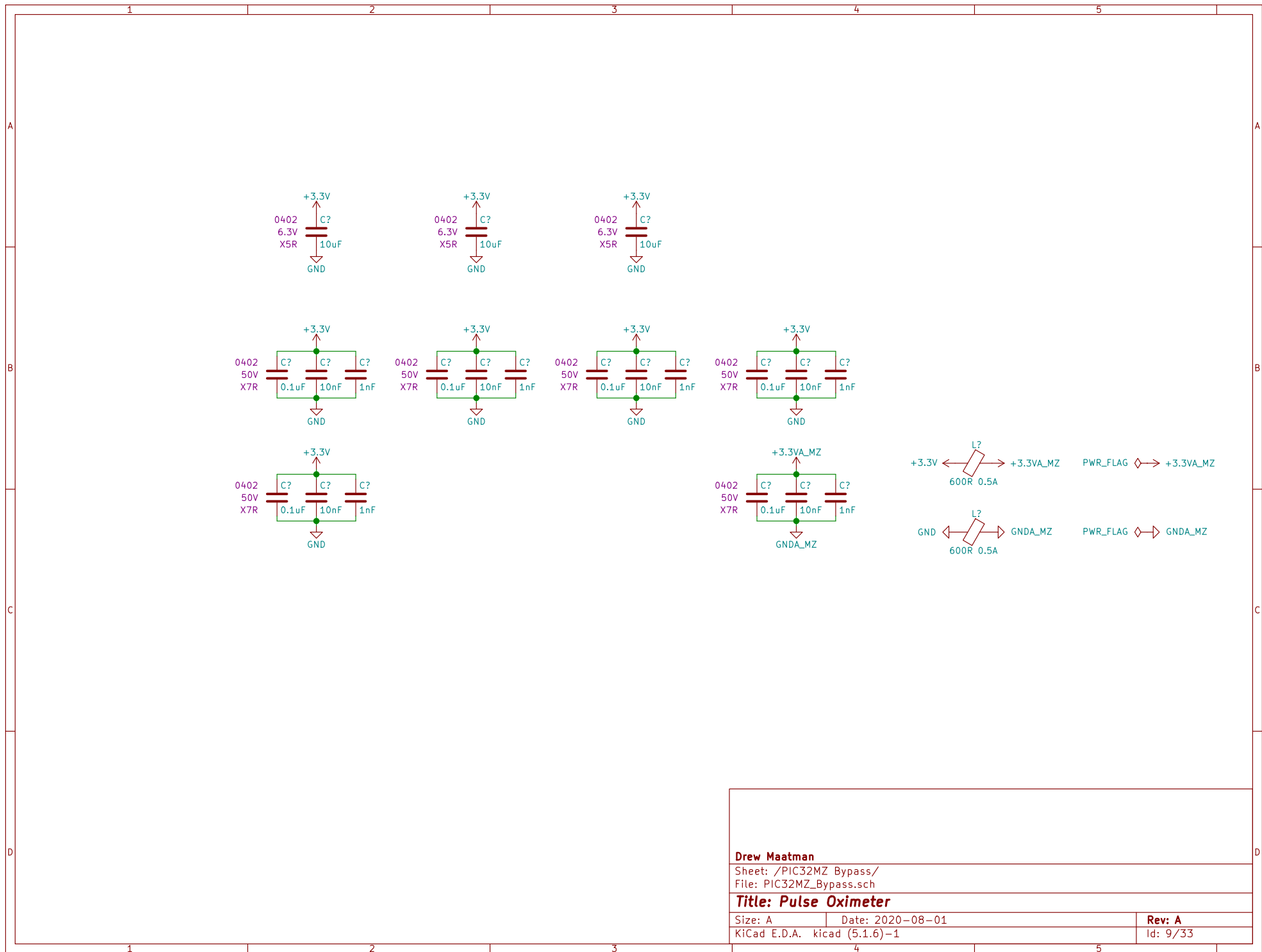
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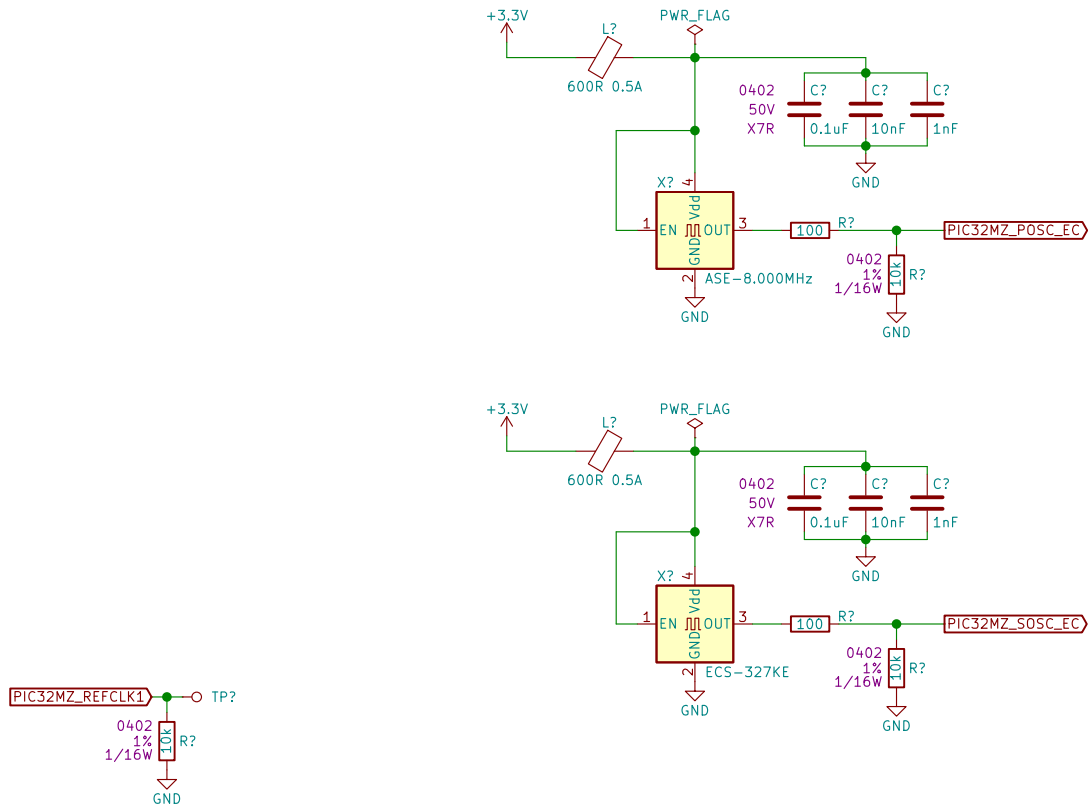
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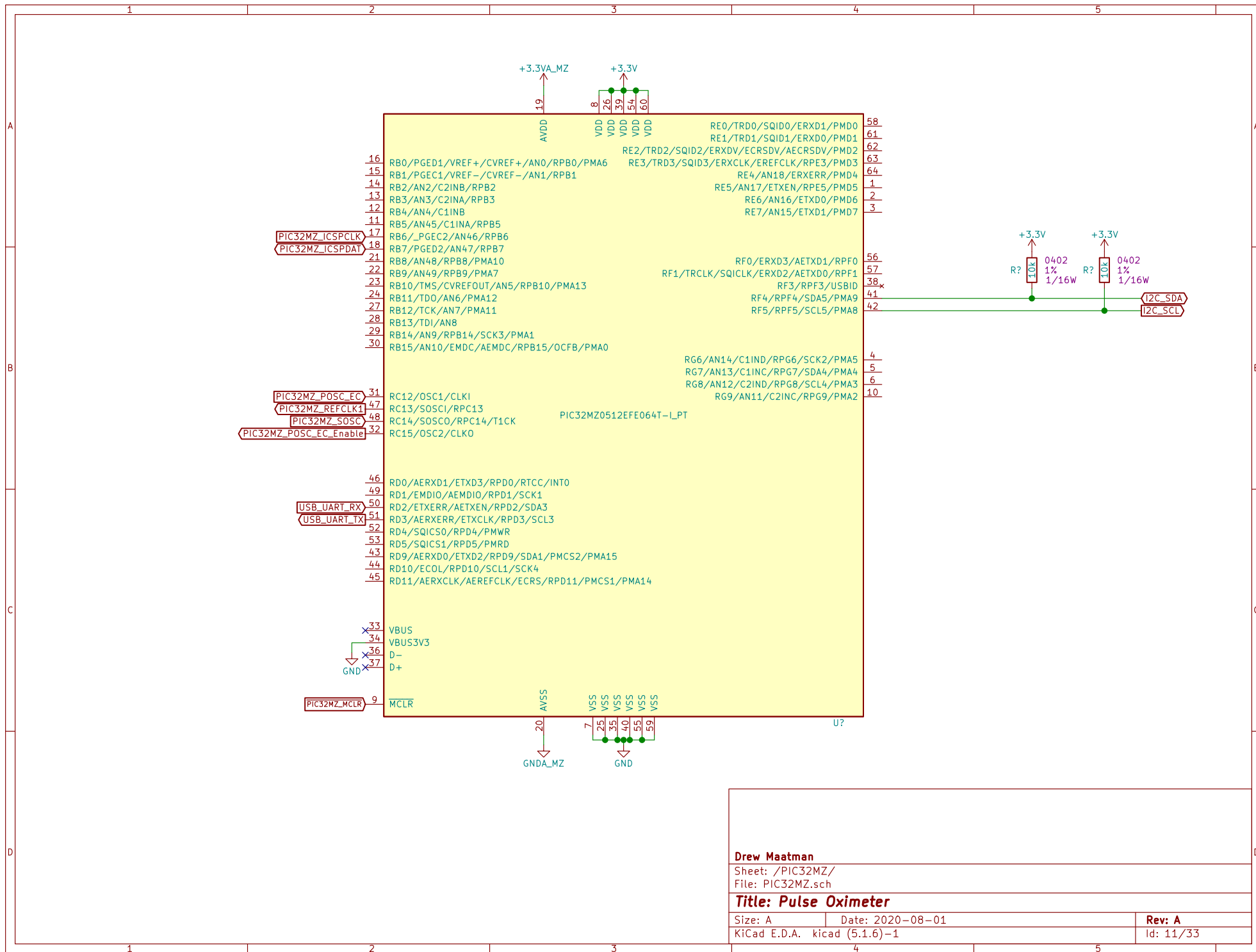
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**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
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Sheet: /PIC32MZ/  
File: PIC32MZ.sch

**Title: Pulse Oximeter**

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Rev: A  
Id: 11/33

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Title:

Size: ADate: 2020-09-08

KiCad E.D.A.    kicad (5.1.6)-1

Rev:

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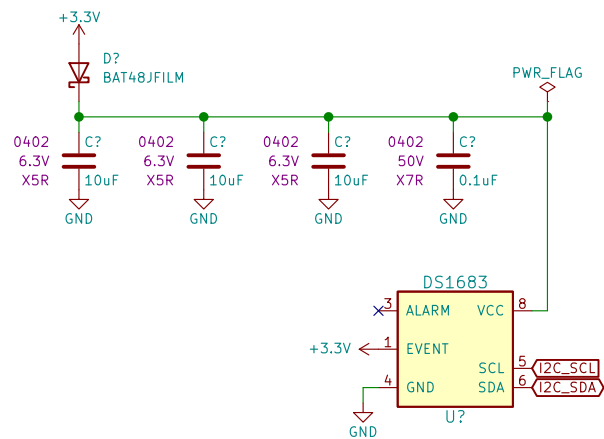
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Size: ADate: 2020-09-08

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Size: A	Date: 2020-09-08	Rev:
KiCad E.D.A. kicad (5.1.6)-1		Id: 13/33



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

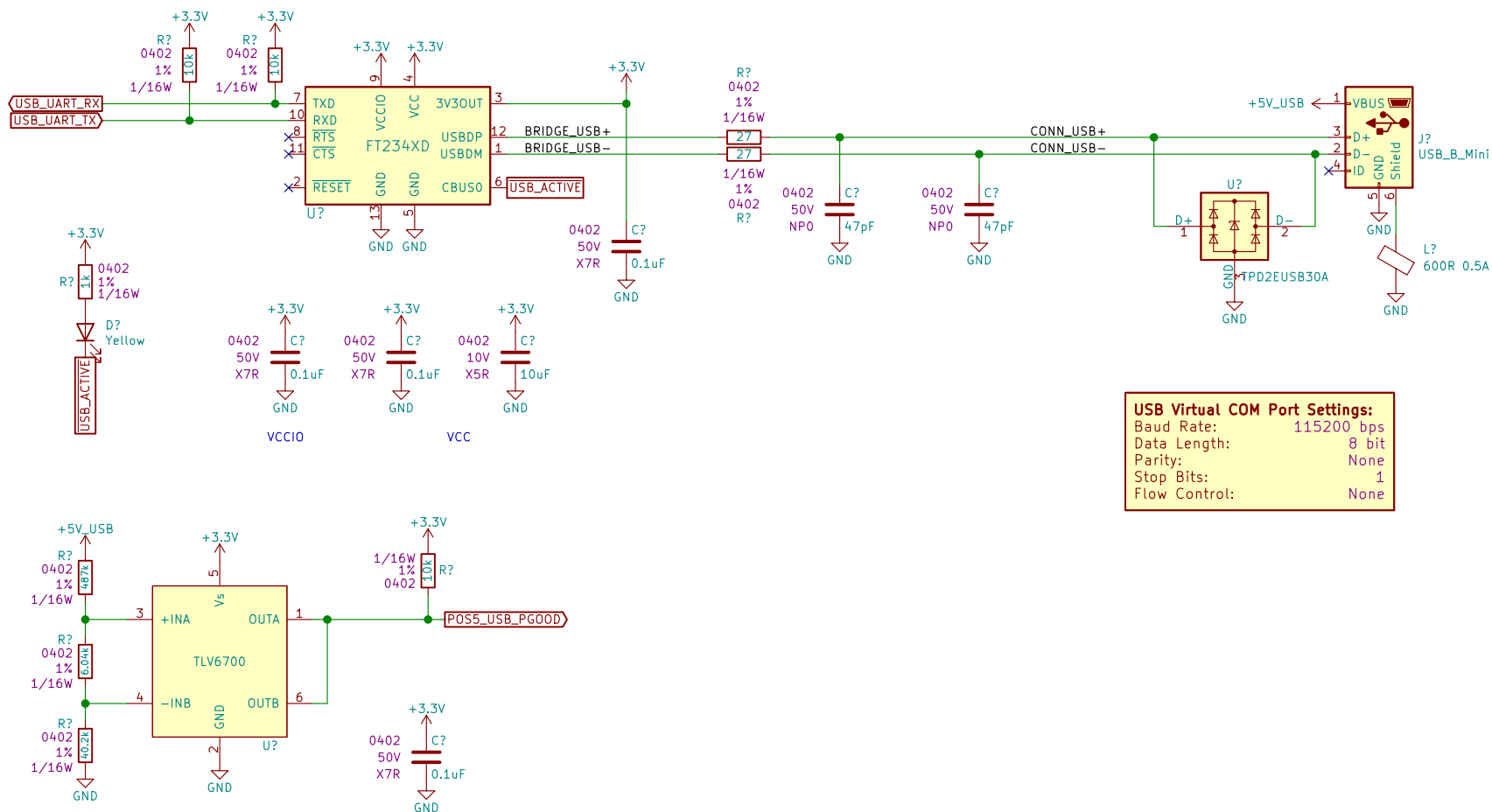
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Sheet: /Time of Flight/  
File: Time\_of\_Flight.sch

**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
KiCad E.D.A. kicad (5.1.6)-1

**Rev: A**  
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Sheet: /USB UART Bridge/  
File: USB\_UART\_Bridge.sch

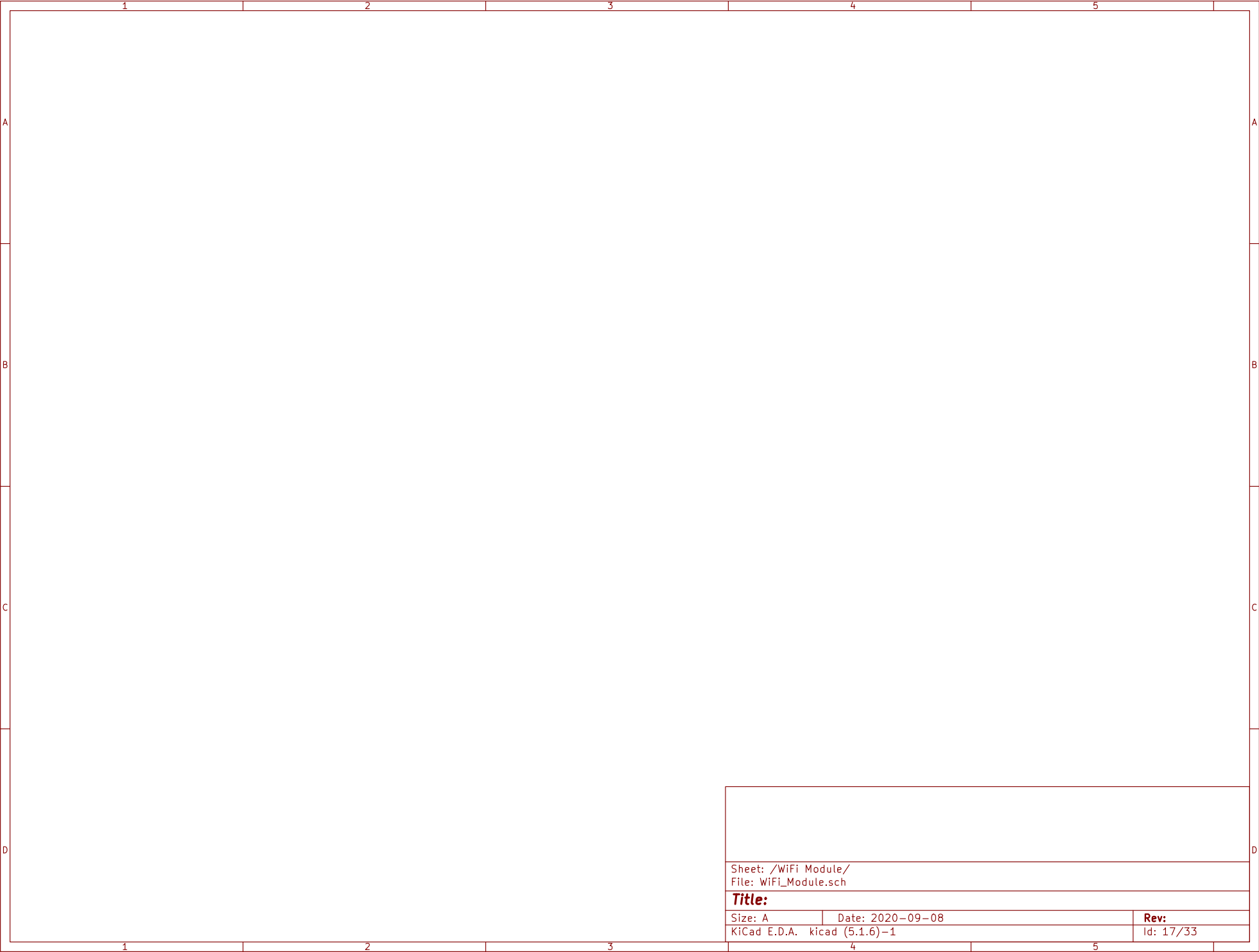
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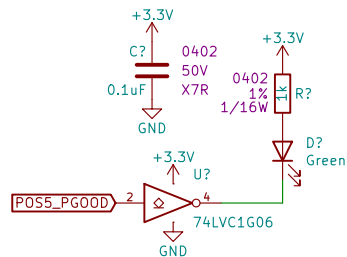
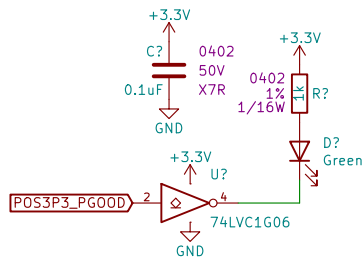
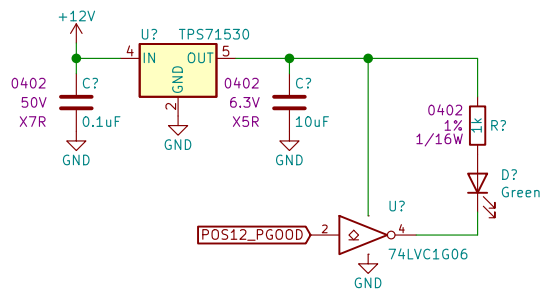
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**Rev: A**  
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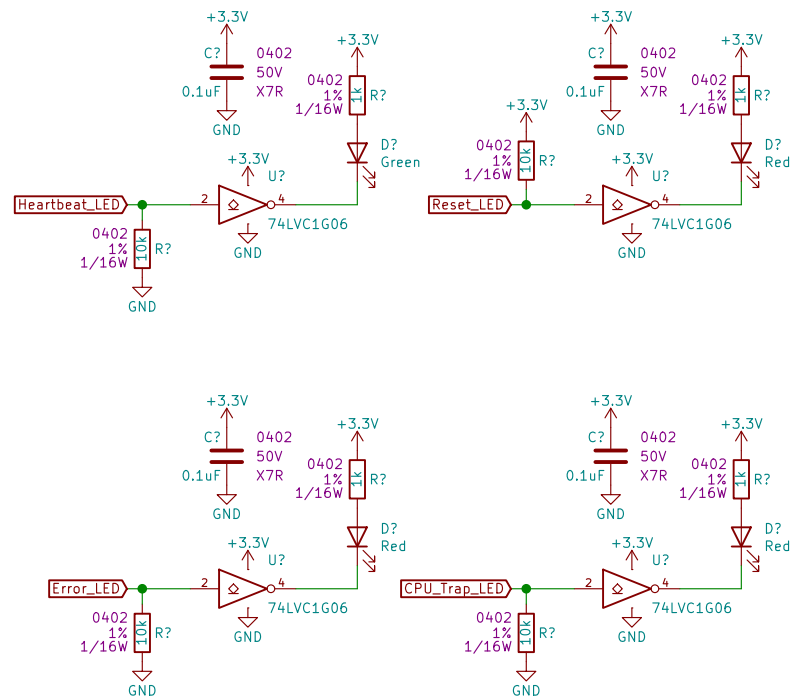
**Drew Maatman**

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File: PGOOD\_LEDs.sch

**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
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**Rev: A**  
Id: 18/33



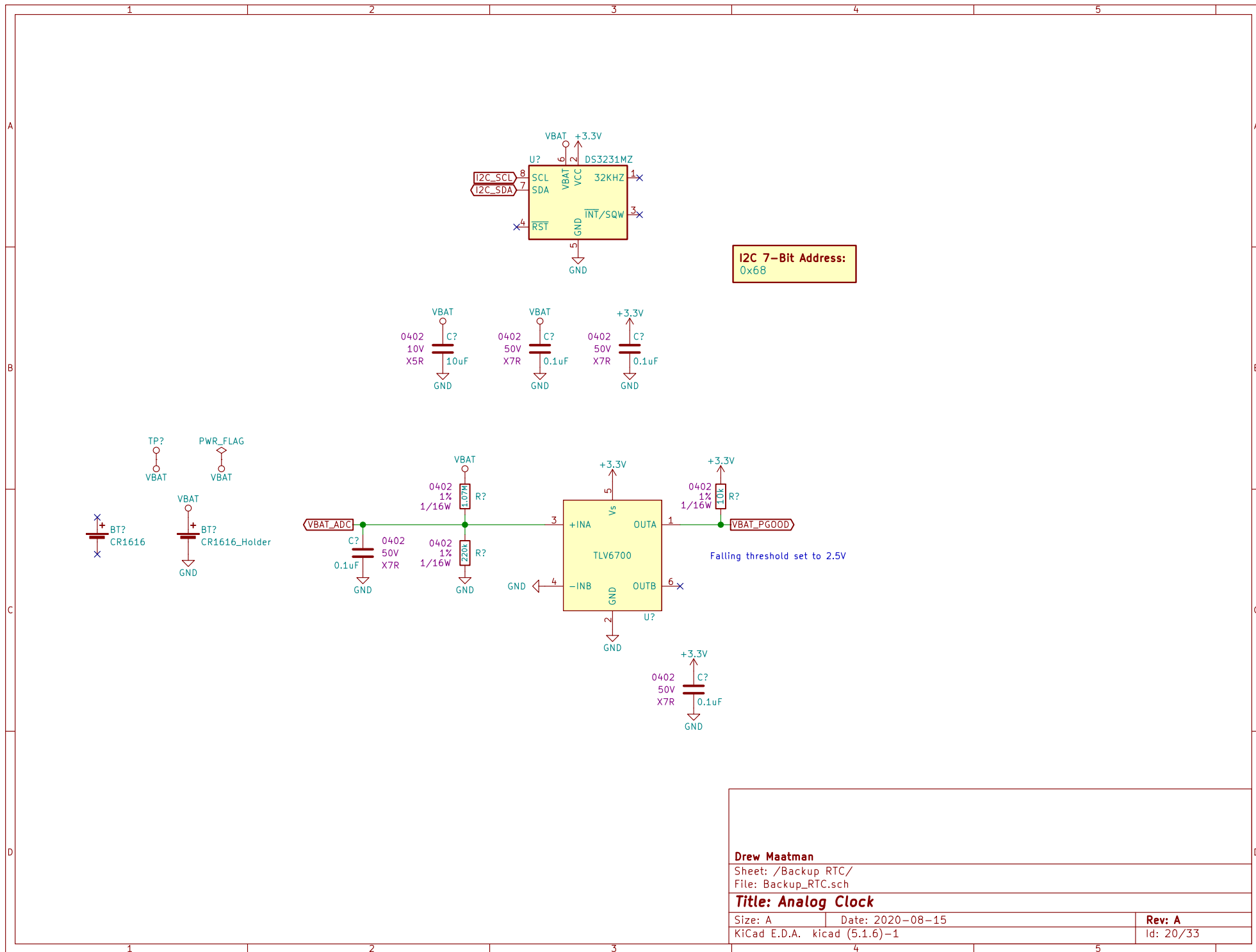
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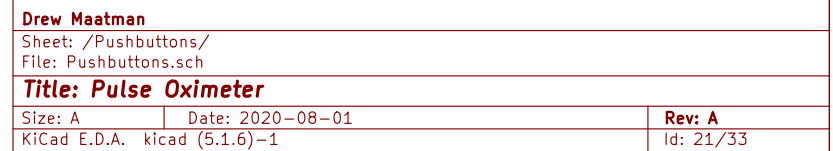
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**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
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**Rev: A**  
Id: 19/33





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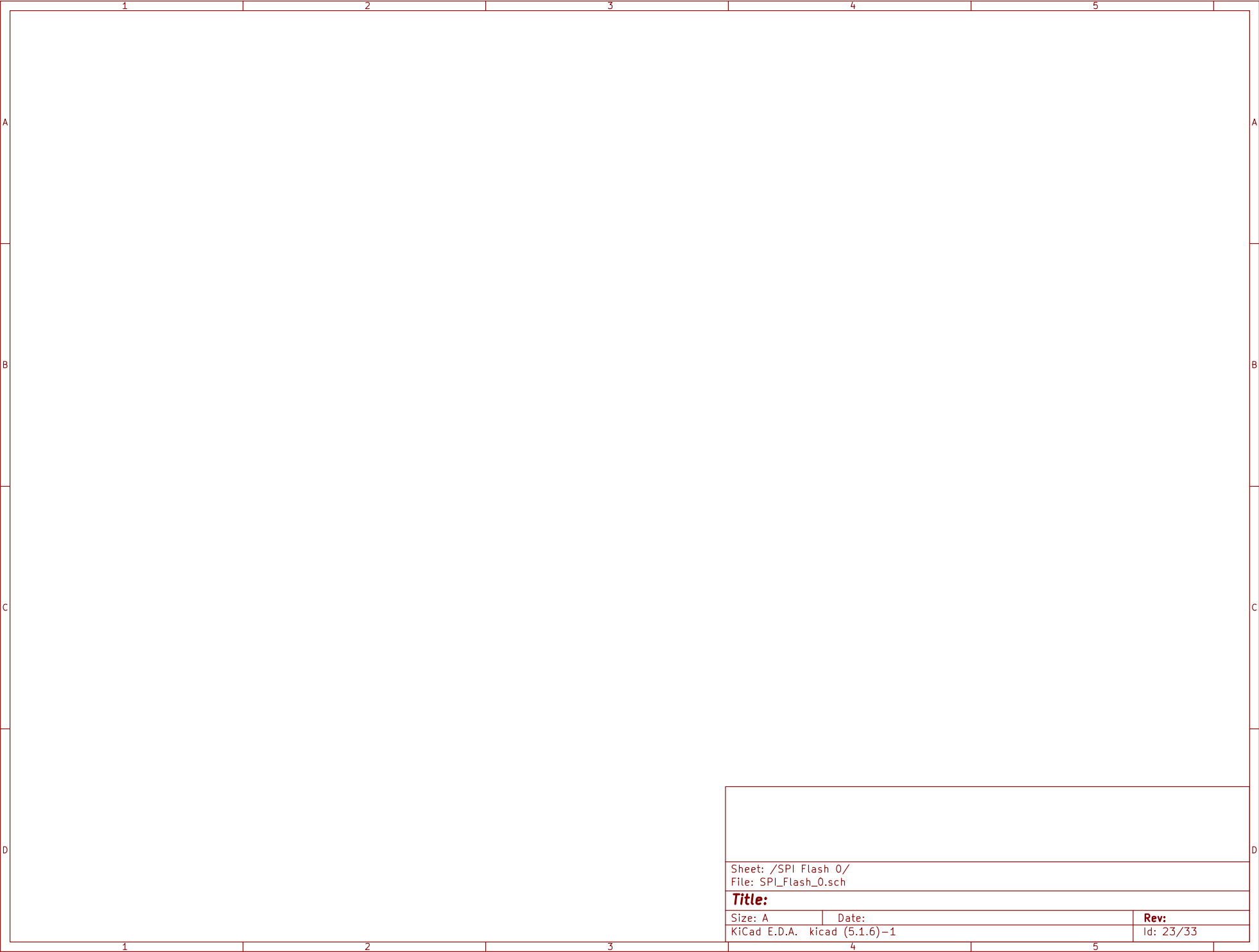
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File: Mode\_LEDs.sch

Title:

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Rev:Id: 22/33

Sheet: /Mode LEDs/ File: Mode_LEDs.sch		
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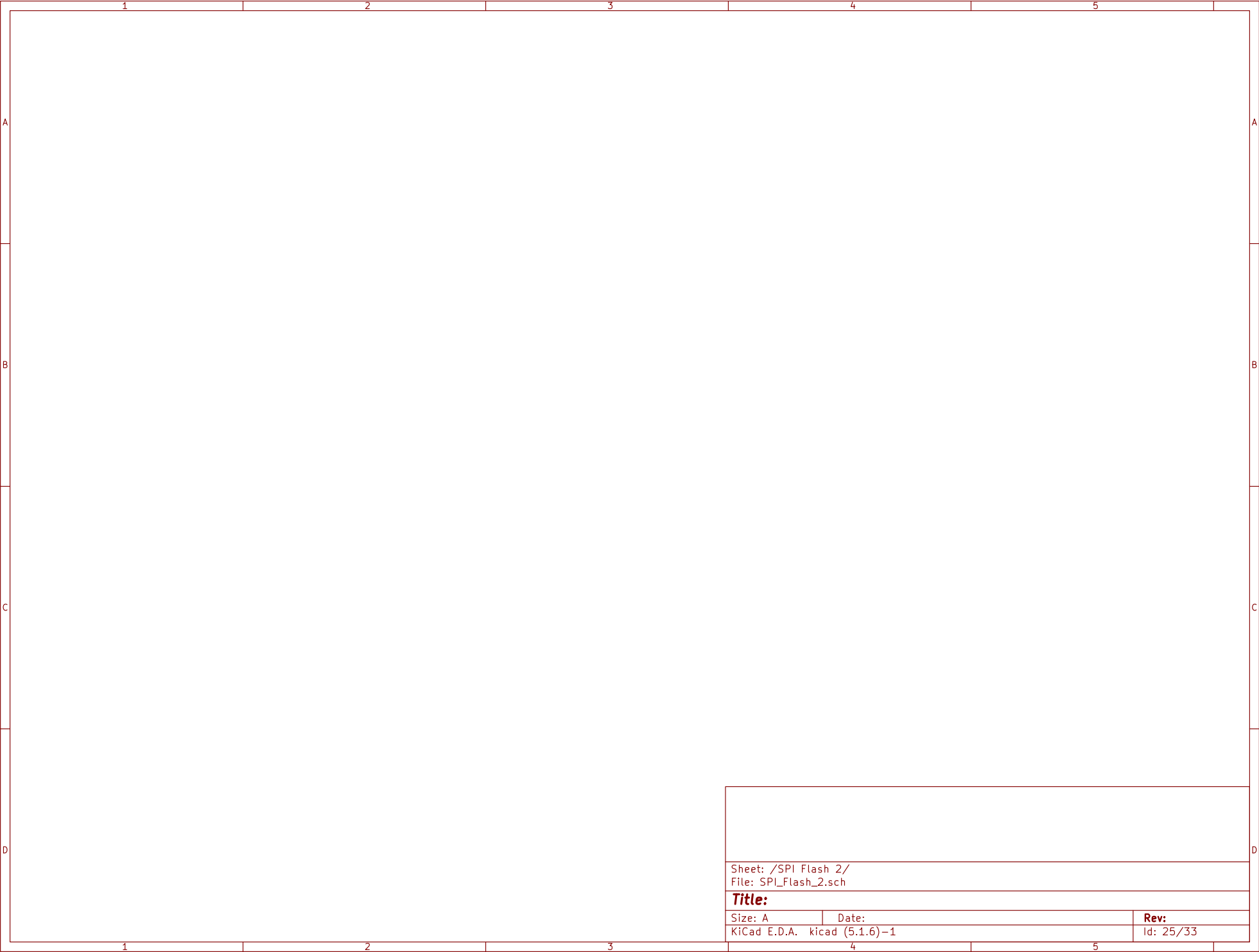
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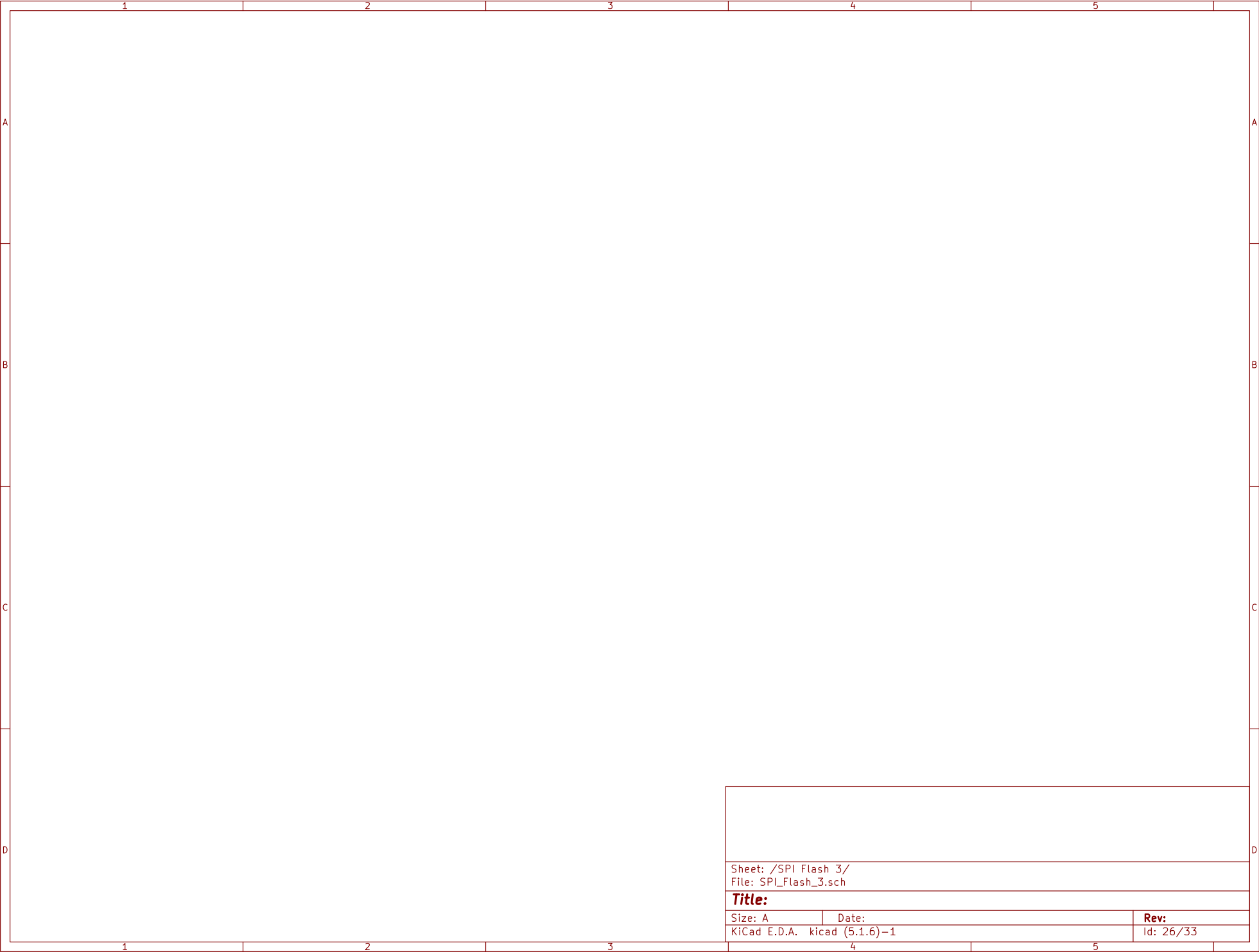
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Rev:Id: 24/33

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Rev:Id: 27/33

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Size: ADate:KICad E.D.A. kicad (5.1.6)–1

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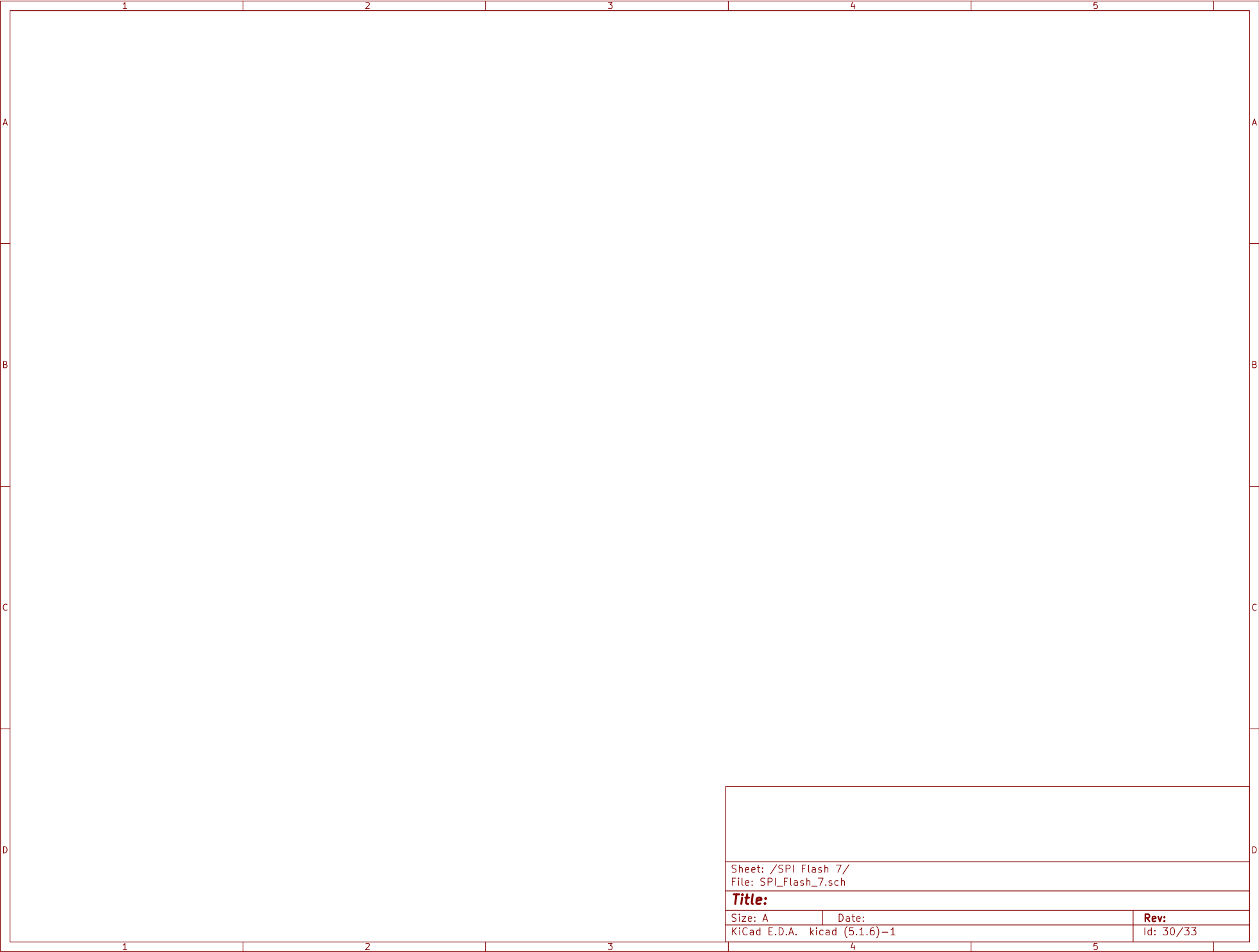
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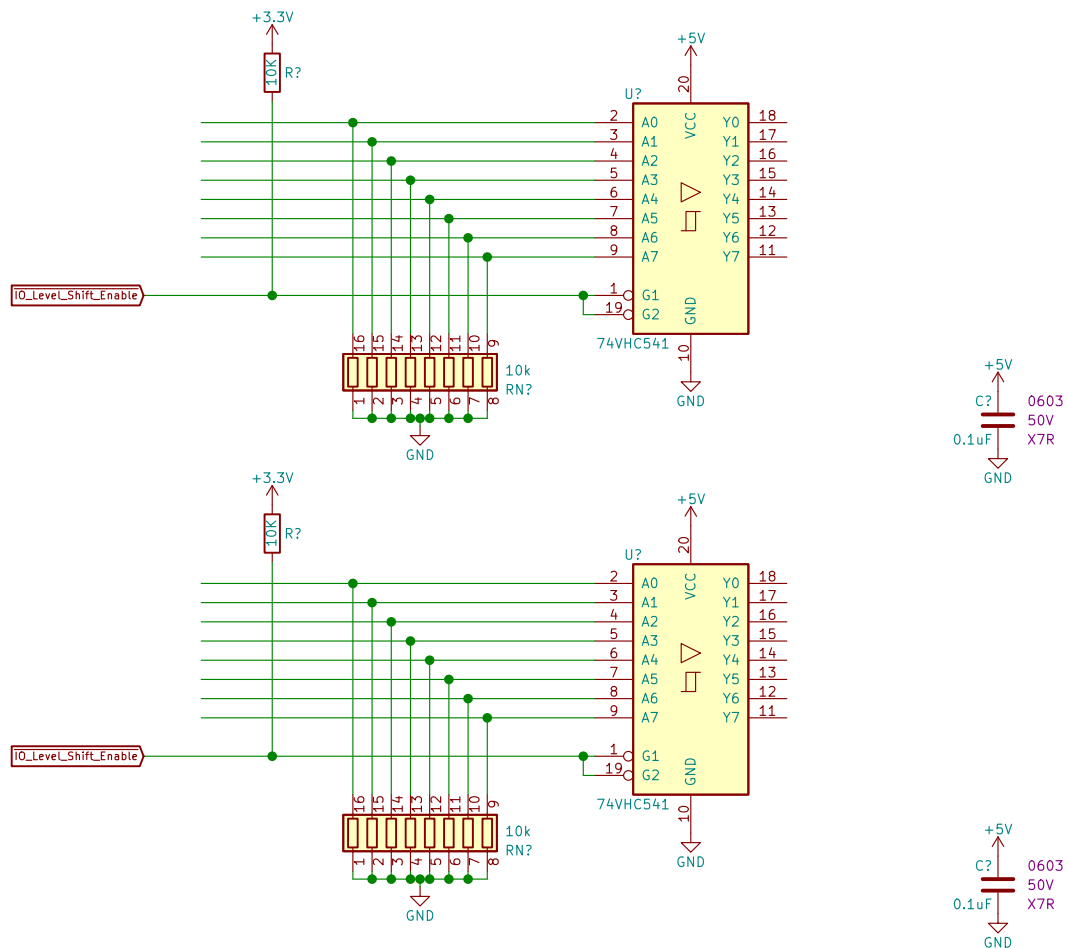
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# I/O Buffers



Marquette University Senior Design 2018/2019 Group E44

Sheet: /Panel Level Shifters/

File: PanelLevelShifters.sch

**Title: Electronic Display Logic Board**

Size: A Date: 2018-12-15

KiCad E.D.A. kicad (5.1.6)-1

Rev: A

Id: 31/33

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Size: A

Date:

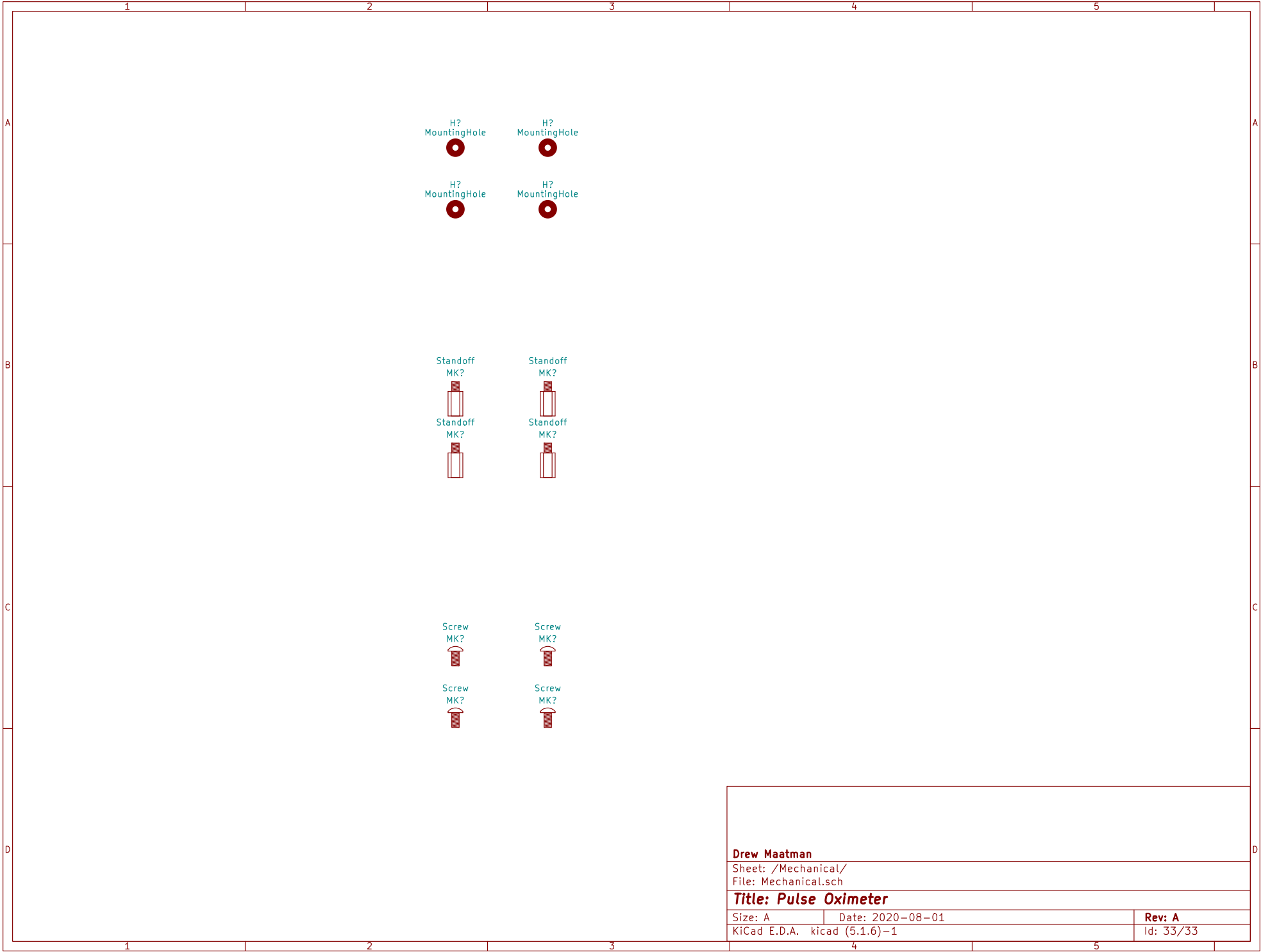
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Id: 32/33

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KiCad E.D.A. kicad (5.1.6)-1		Id: 32/33





Drew Maatman

Sheet: /Mechanical/  
File: Mechanical.sch

**Title: Pulse Oximeter**

Size: A Date: 2020-08-01  
KiCad E.D.A. kicad (5.1.6)-1

Rev: A  
Id: 33/33