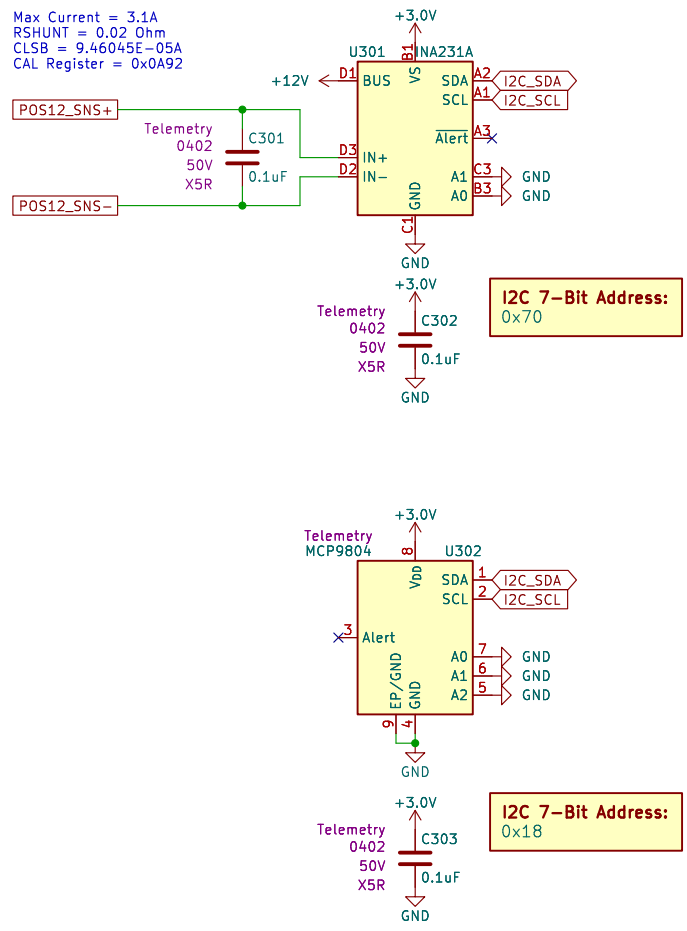


| | | | | | |
|---|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| | 1 | 2 | 3 | 4 | 5 |
| | <h1>Thermal Camera</h1> <p>https://github.com/drewsum/Thermal_Camera</p> | | | | |
| A | 01. Table of Contents | | | | |
| | 02. POS12 Input | POS12_Input | 14. Battery Management | Battery Management | 26. Upstream USB Port |
| | 03. POS12 Telemetry | POS12 Telemetry | 15. PIC32MZ DA Programming | PIC32MZ DA Programming | 27. PGOOD LEDs |
| | 04. POS3P0 Power Supply | POS3P0 Power Supply | 16. PIC32MZ DA Clocking | PIC32MZ DA Clocking | 28. Status LEDs |
| | 05. POS3P0 Telemetry | POS3P0 Telemetry | 17. PIC32MZ DA Power | PIC32MZ DA Power | 29. Capacitive Touch |
| B | 06. POS1P8 Power Supply | POS1P8 Power Supply | 18. PIC32MZ DA 1 | PIC32MZ DA 1 | 30. Mechanical |
| | 07. POS1P8 Telemetry | POS1P8 Telemetry | 19. PIC32MZ DA 2 | PIC32MZ DA 2 | |
| | 08. POS2P8 Power Supply | POS2P8 Power Supply | 20. External Storage | External Storage | |
| | 09. POS2P8 Telemetry | POS2P8 Telemetry | 21. Graphic LCD | Graphic LCD | |
| | 10. POS1P2 Power Supply | POS1P2 Power Supply | 22. USB UART | USB UART | |
| C | 11. POS1P2 Telemetry | POS1P2 Telemetry | 23. Elapsed Time Counter | Elapsed Time Counter | |
| | 12. LCD Backlight Power Supply | LCD Backlight Power Supply | 24. FLIR Lepton Sensor | FLIR Lepton Sensor | |
| | 13. LCD Backlight Telemetry | LCD Backlight Telemetry | 25. USB Hub | USB Hub | |
| D | | | | | |
| | | | | <div>Drew Maatman and Michael Laffin</div> <div>Sheet: /</div> <div>File: Thermal_Camera.kicad_sch</div> <div>Title: Thermal Camera</div> <div>Size: ADate: 2024-05-24</div> <div>KiCad E.D.A. 8.0.1-rc1Rev: PRELIM</div> <div>Id: 1/30</div> | |
| | 1 | 2 | 3 | 4 | 5 |



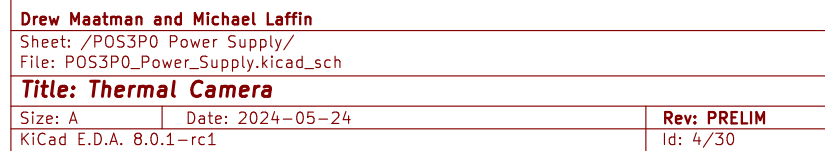
Drew Maatman and Michael Laffin

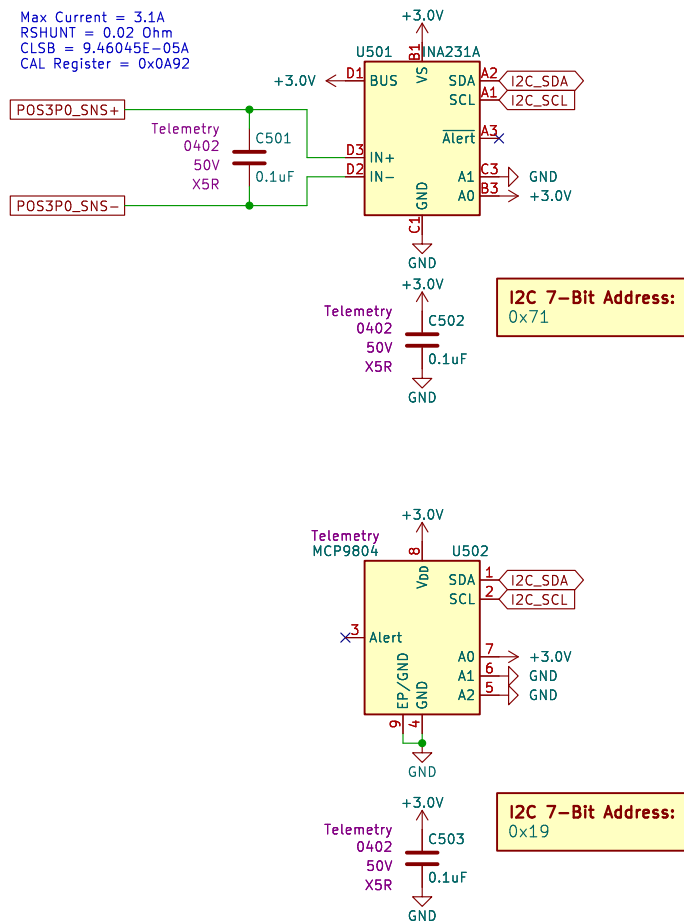
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Title: Thermal Camera

Size: A Date: 2024-05-24
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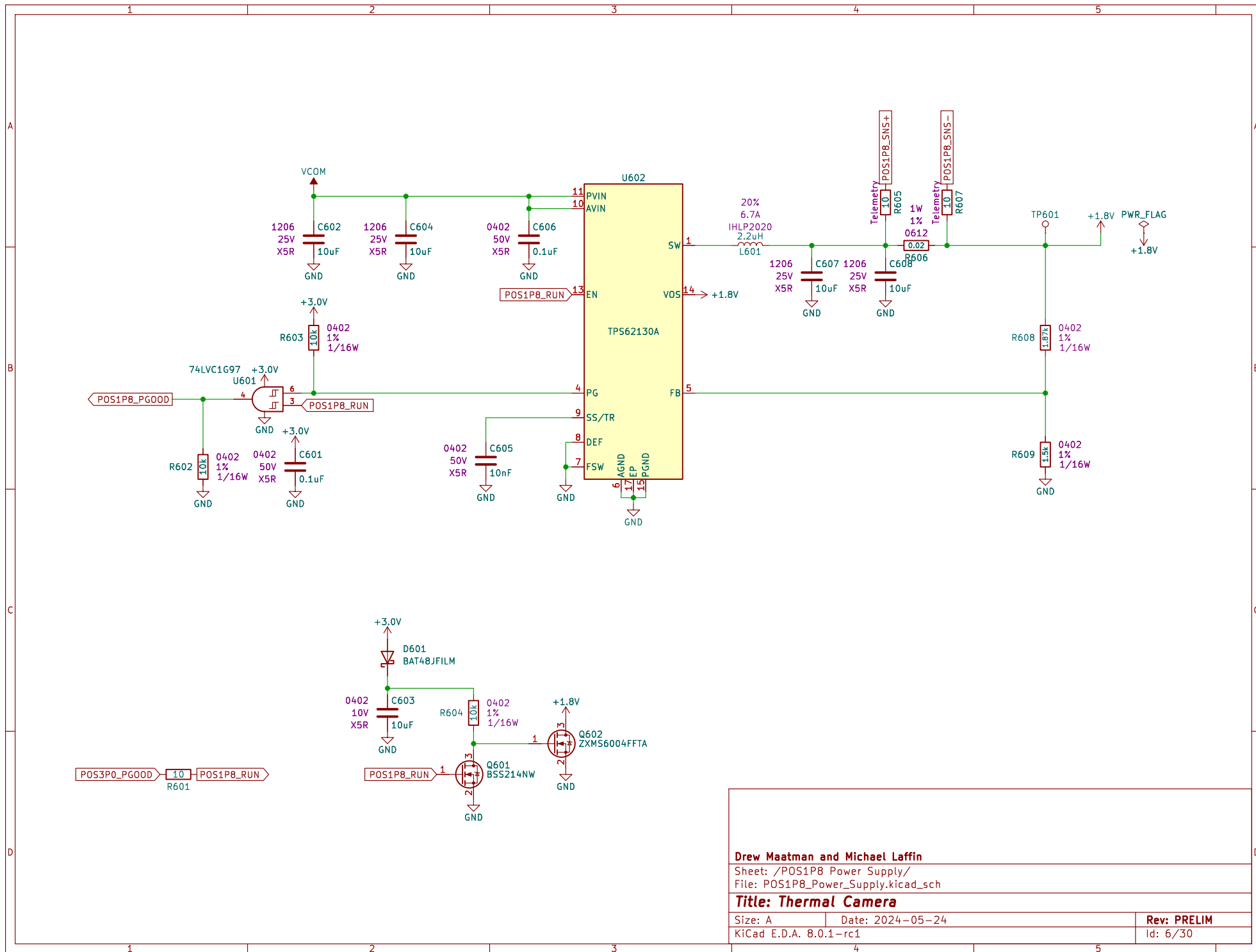
Drew Maatman and Michael Laffin

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Size: A Date: 2024-05-24
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Sheet: /POS1P8 Power Supply/

File: POS1P8_Power_Supply.kicad_sch

Title: Thermal Camera

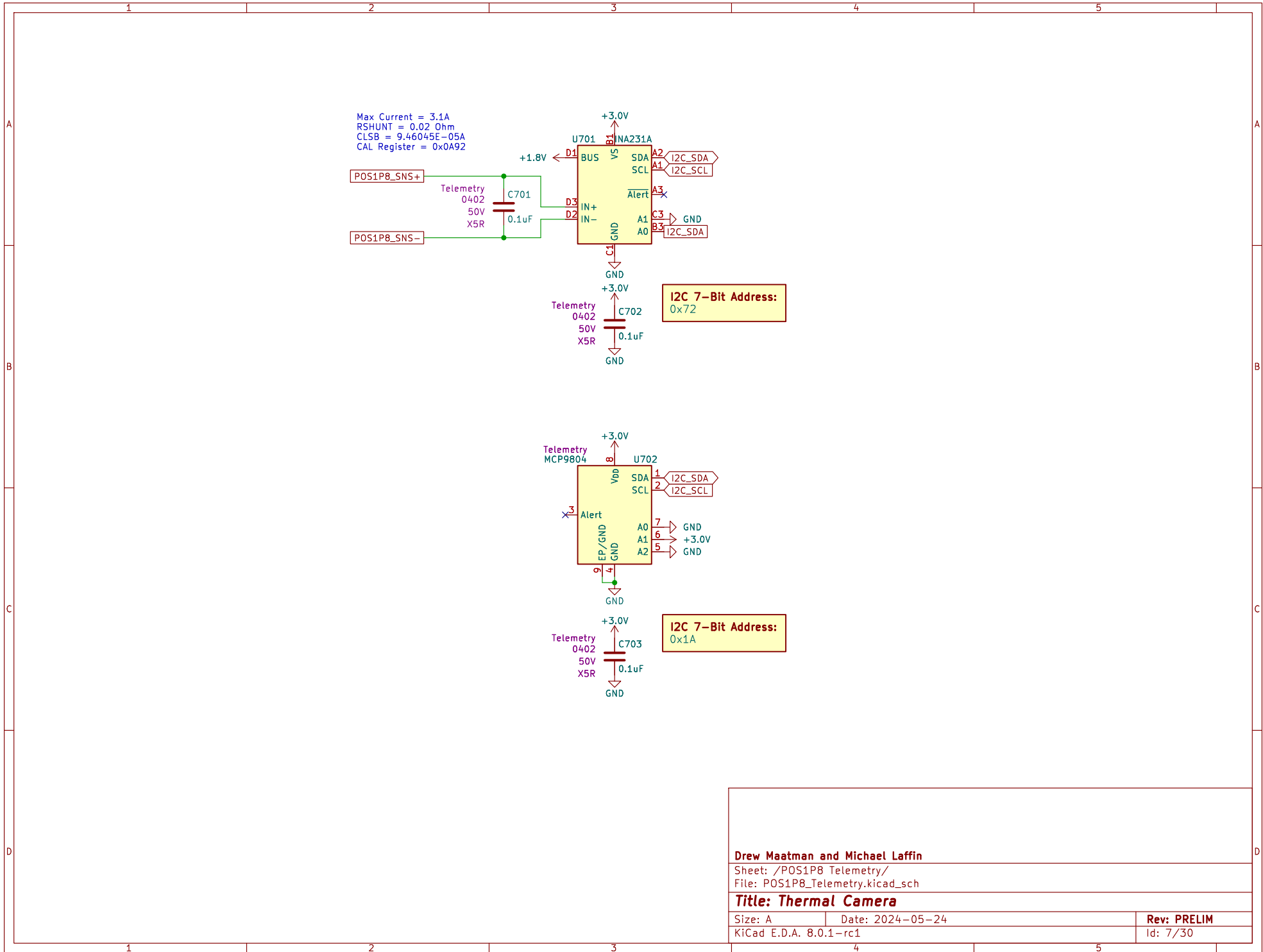
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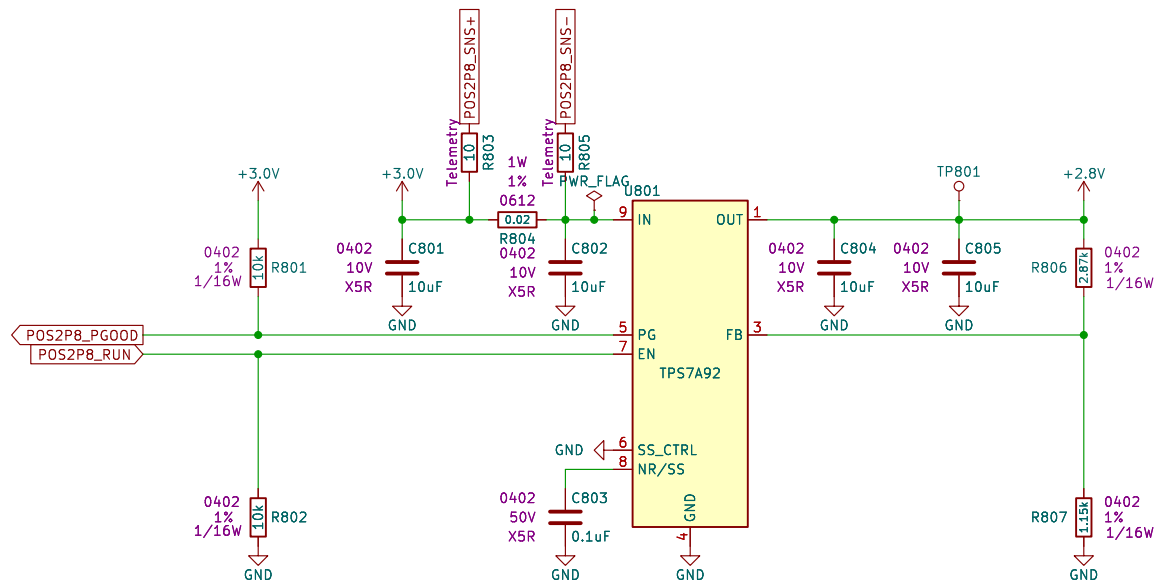
Date: 2024-05-24

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Sheet: /POS2P8 Power Supply/

File: POS2P8_Power_Supply.kicad_sch

Title: Thermal Camera

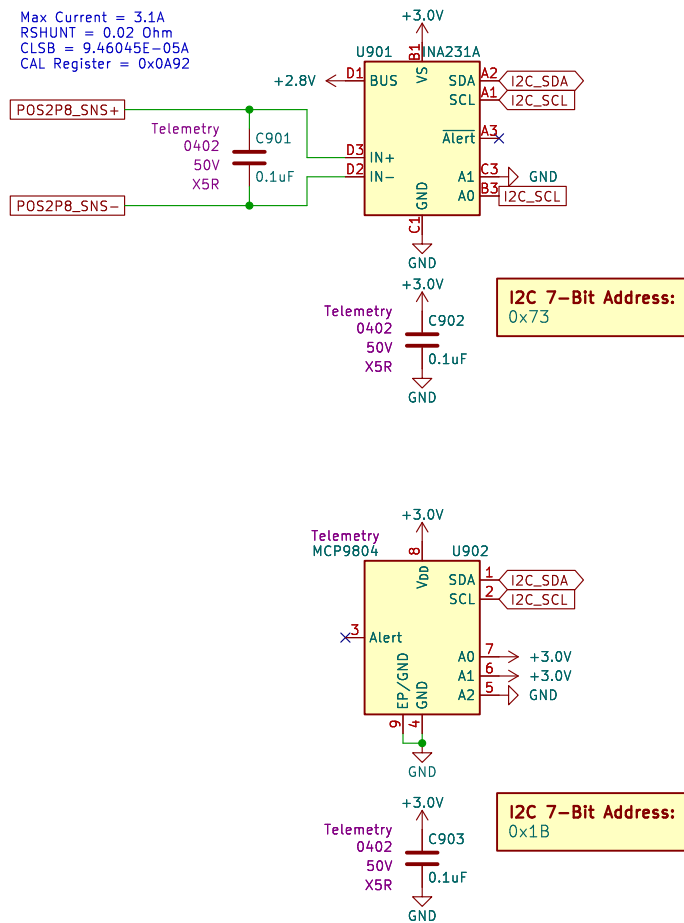
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Date: 2024-05-24

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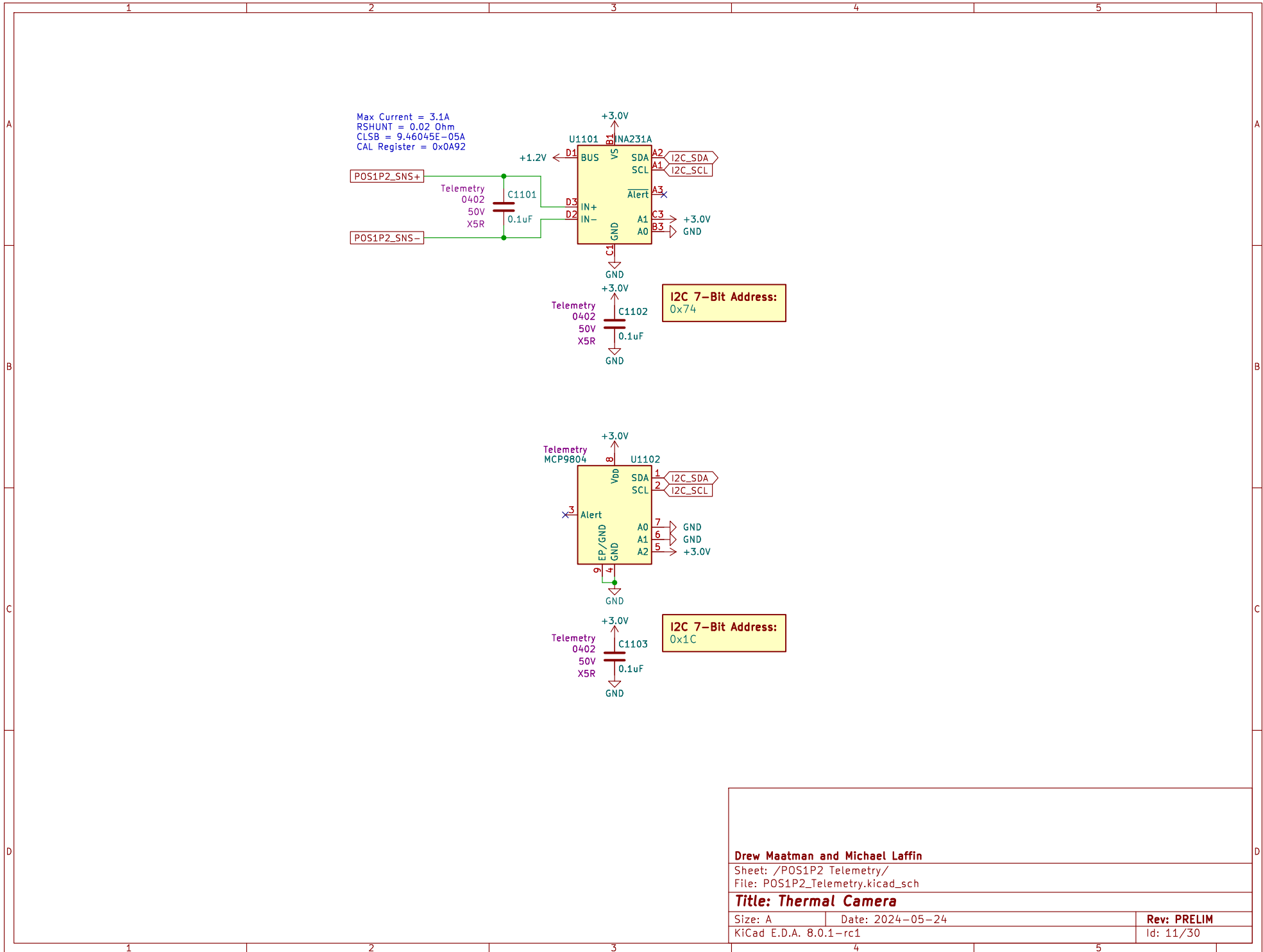
Drew Maatman and Michael Laffin

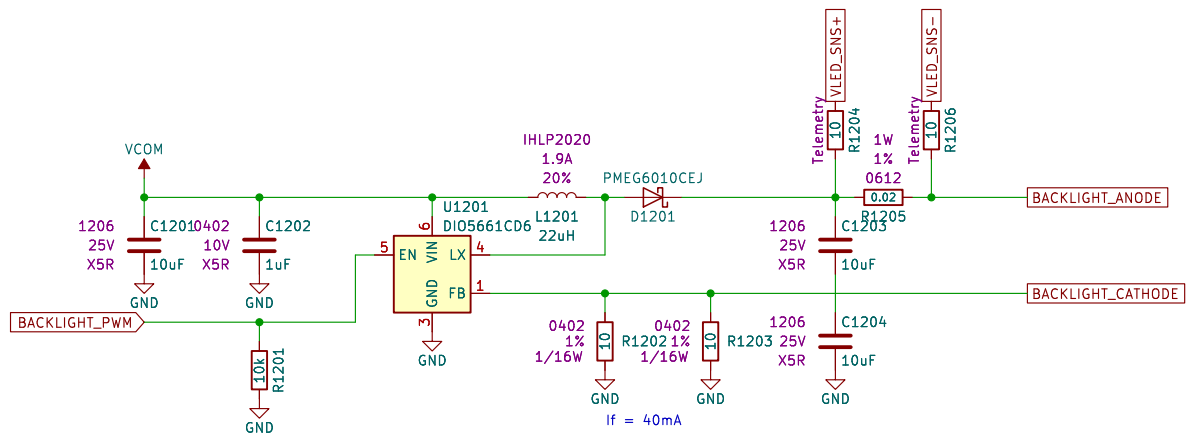
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File: POS2P8_Telemetry.kicad_sch

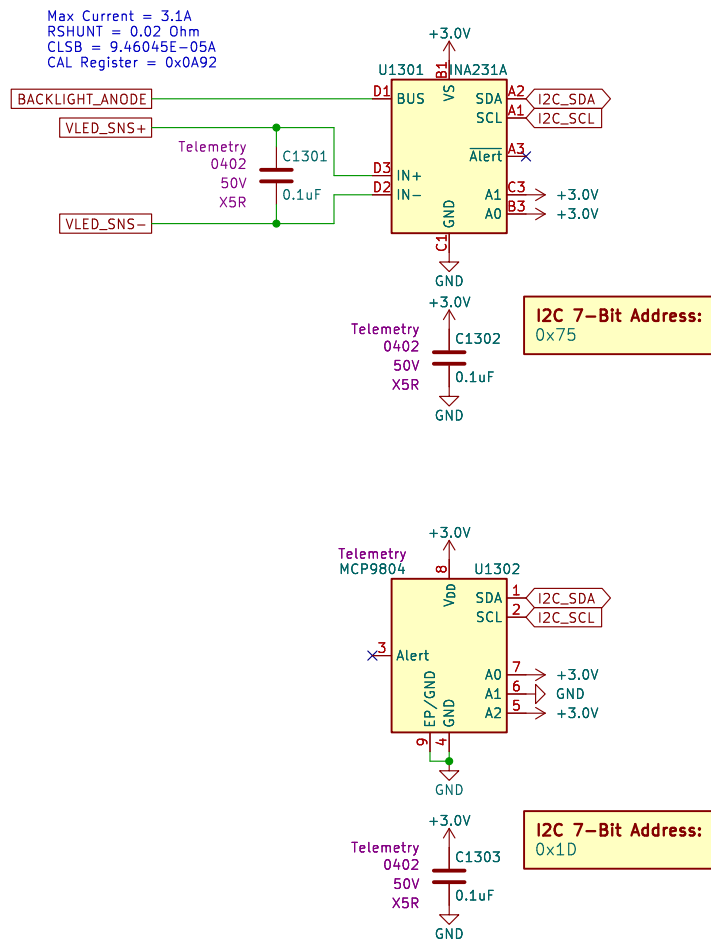
Title: Thermal Camera

Size: A Date: 2024-05-24
KiCad E.D.A. 8.0.1-rc1

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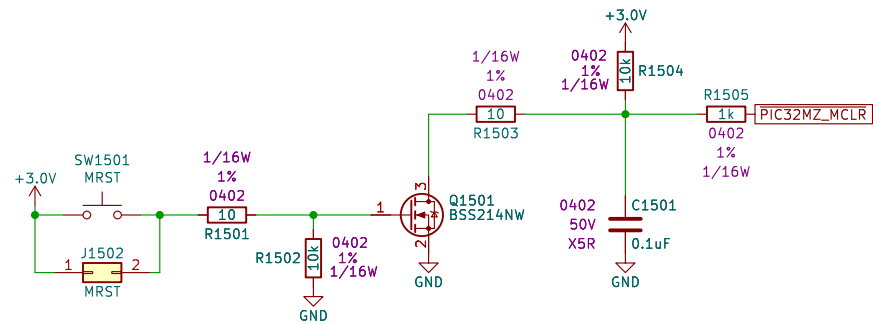
Drew Maatman and Michael Laffin

Sheet: /LCD Backlight Telemetry/
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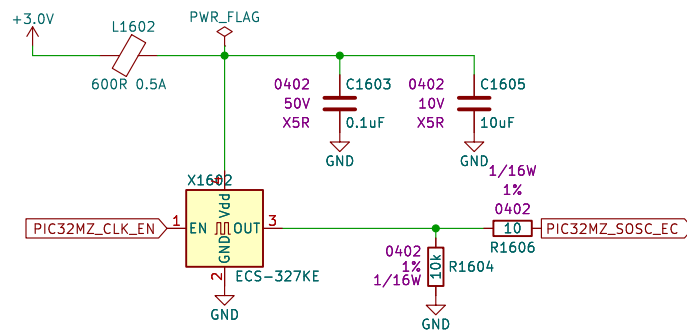
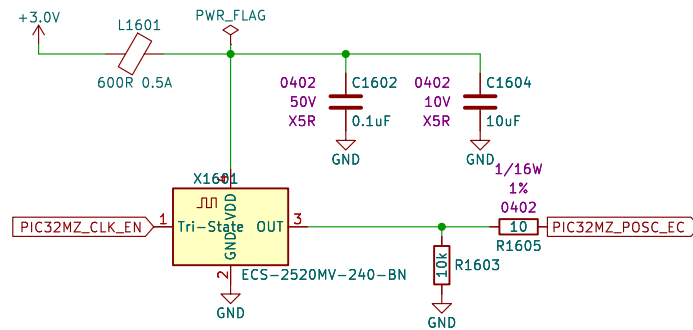
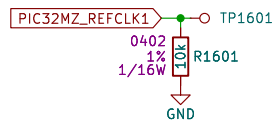
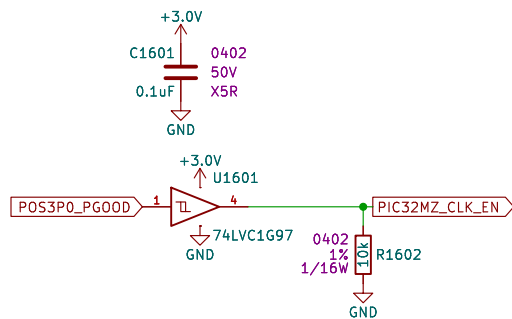
Title: Thermal Camera

Size: A Date: 2024-05-24
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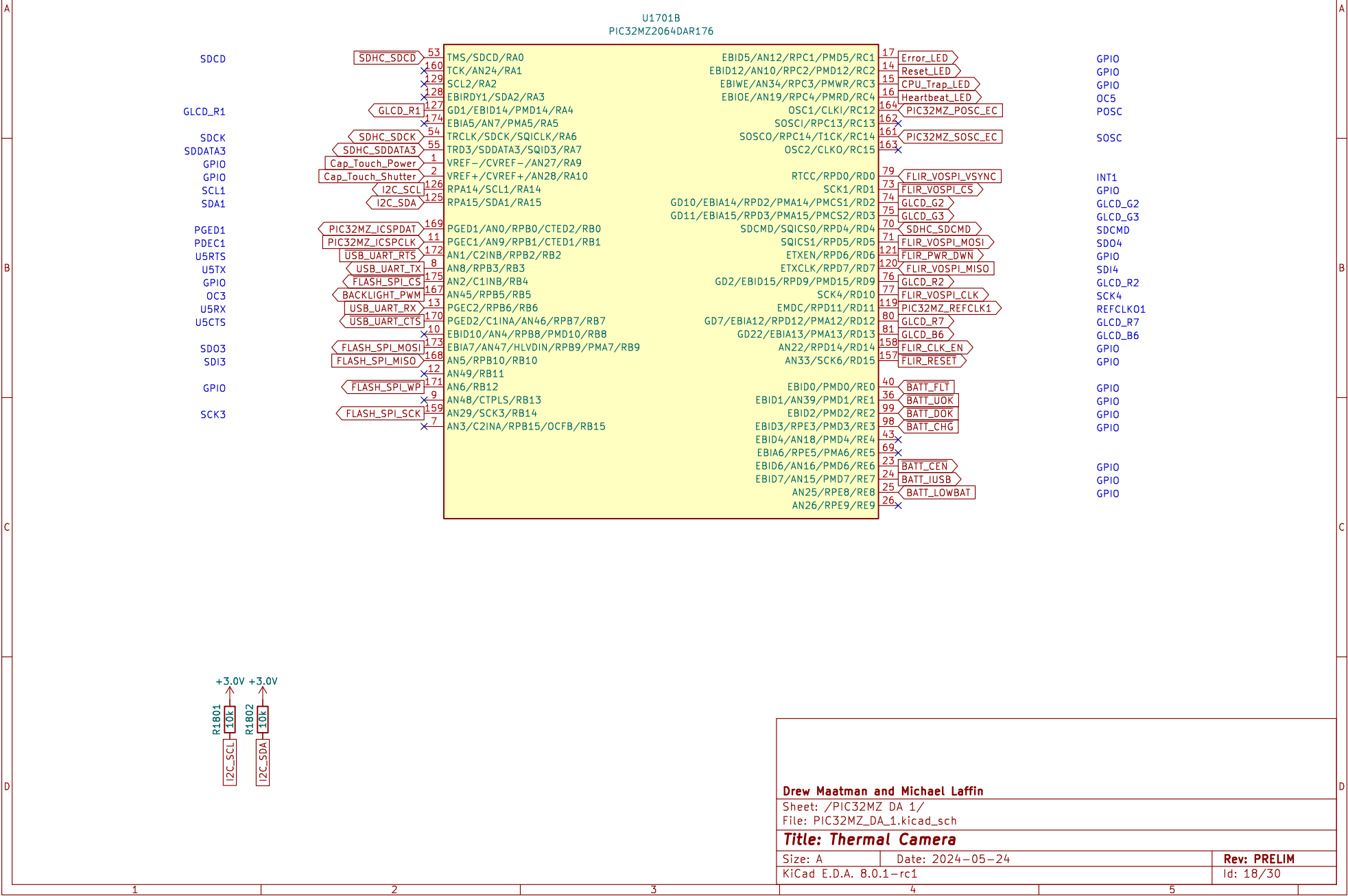
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Title: Thermal Camera

Size: A Date: 2024-05-24
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See TABLE 36-1:RGB COLOR MAPPING for Graphic LCD Pin Mapping



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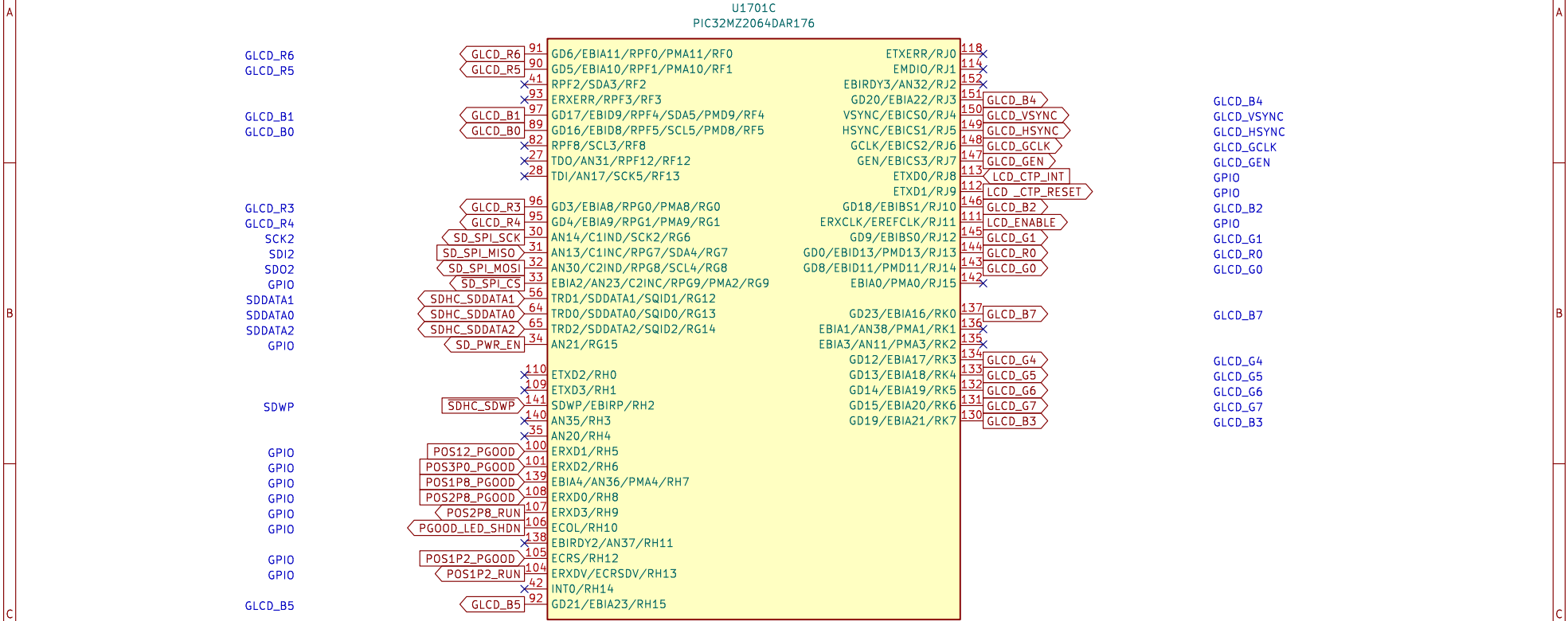
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Title: Thermal Camera

Size: A Date: 2024-05-24
KiCad E.D.A. 8.0.1-rc1

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See TABLE 36-1:RGB COLOR MAPPING for Graphic LCD Pin Mapping



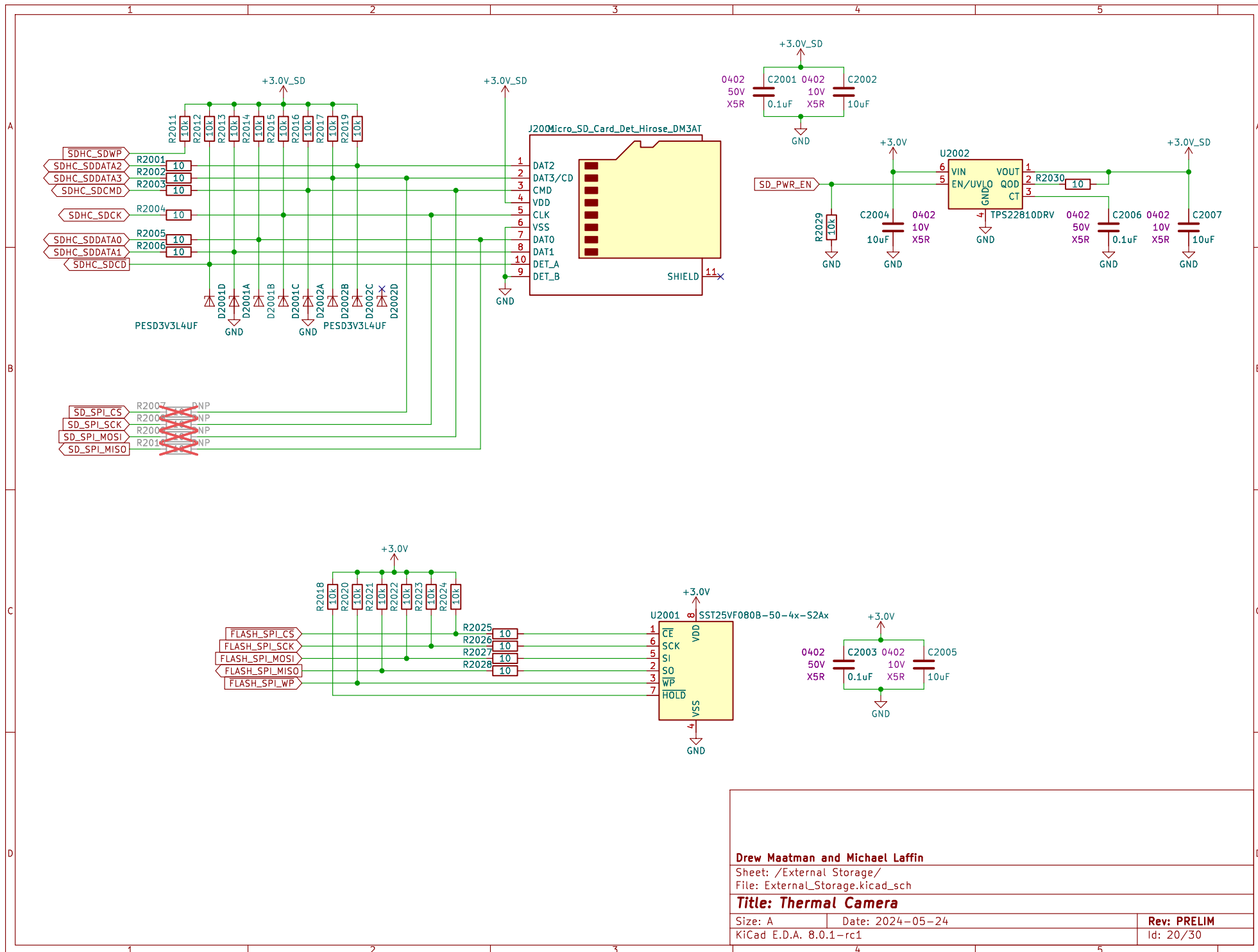
Drew Maatman and Michael Laffin

Sheet: /PIC32MZ DA 2/
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Title: Thermal Camera

Size: A Date: 2024-05-24
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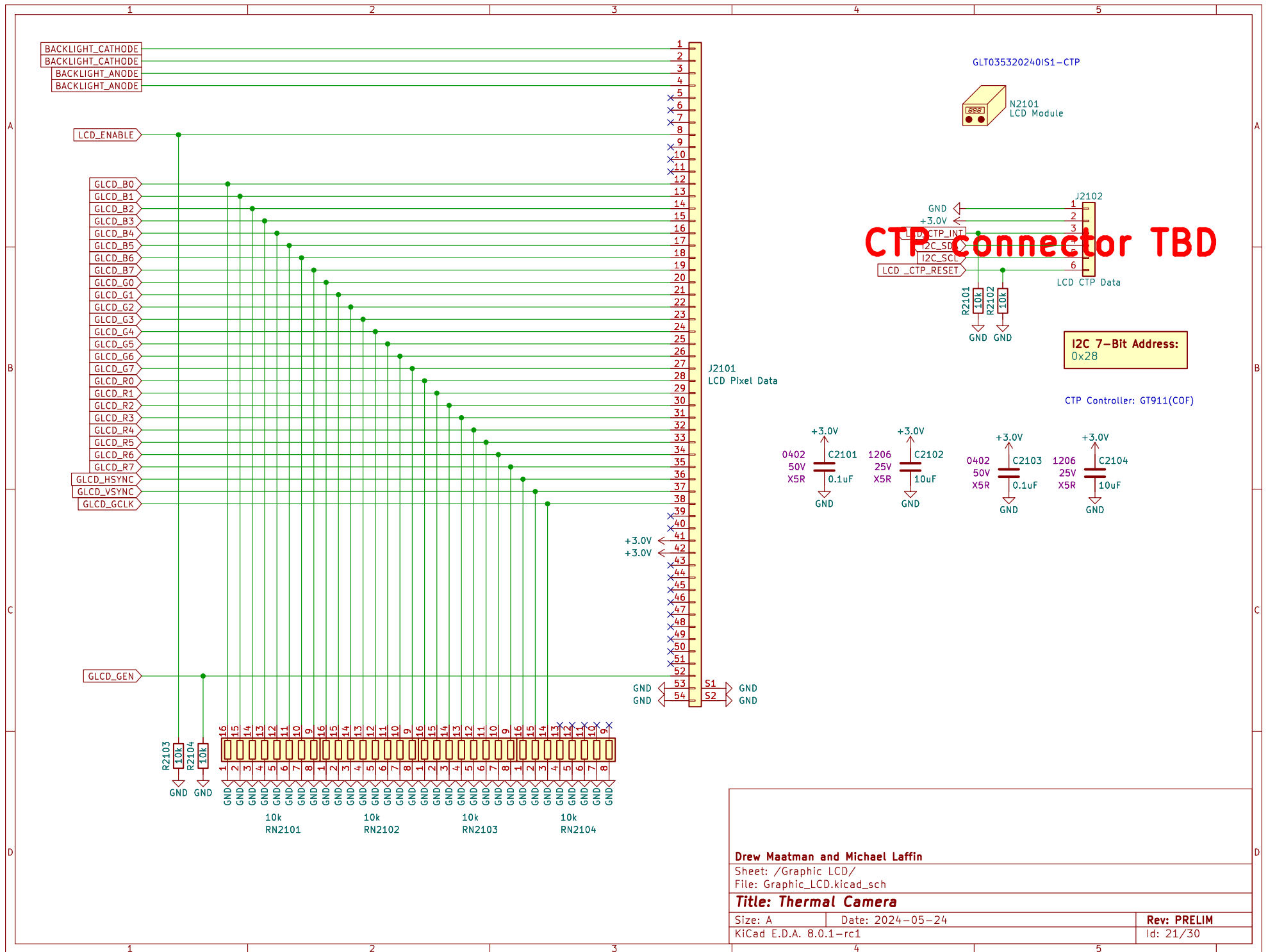
Drew Maatman and Michael Laffin

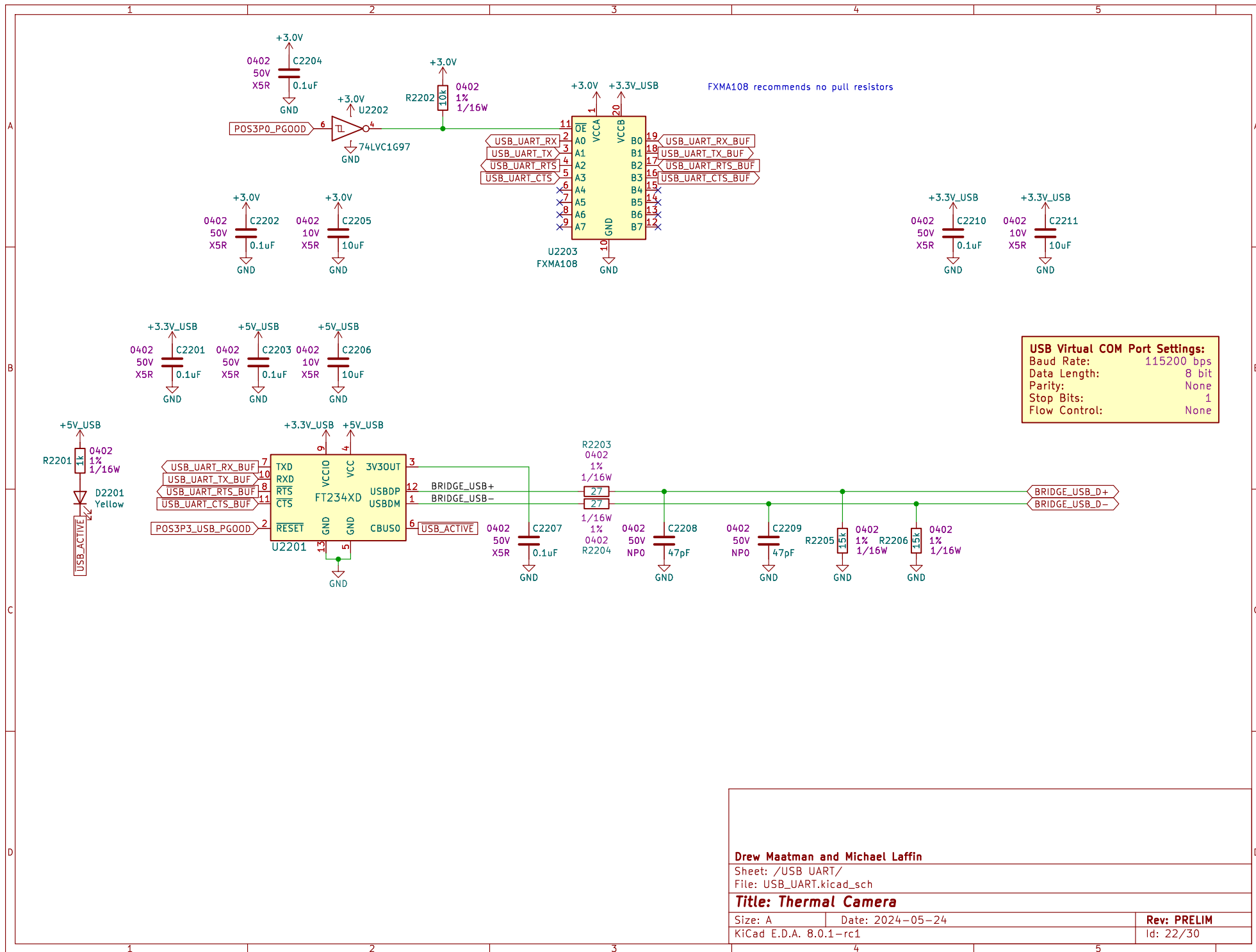
Sheet: /External Storage/
File: External_Storage.kicad_sch

Title: Thermal Camera

Size: A Date: 2024-05-24
KiCad E.D.A. 8.0.1-rc1

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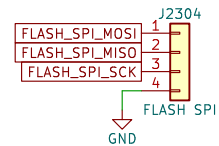
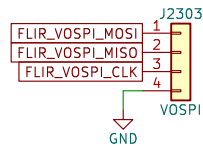
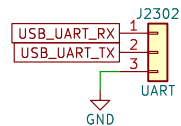
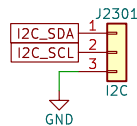
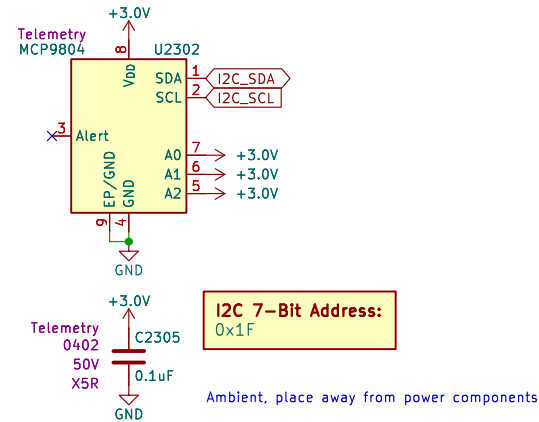
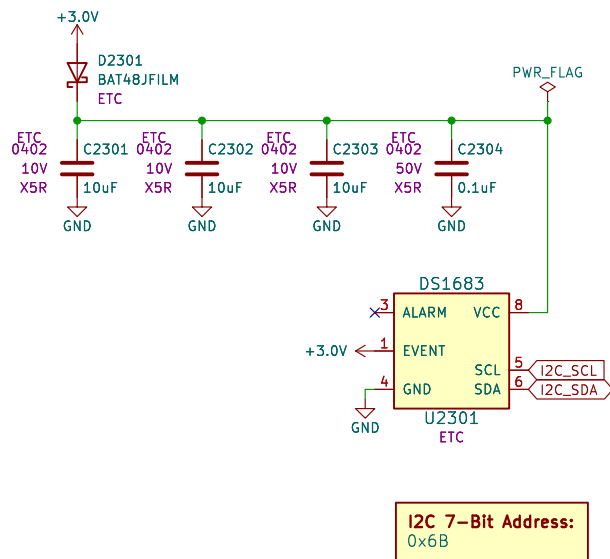
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Sheet: /USB UART/
File: USB_UART.kicad_sch

Title: Thermal Camera

Size: A Date: 2024-05-24
KiCad E.D.A. 8.0.1-rc1

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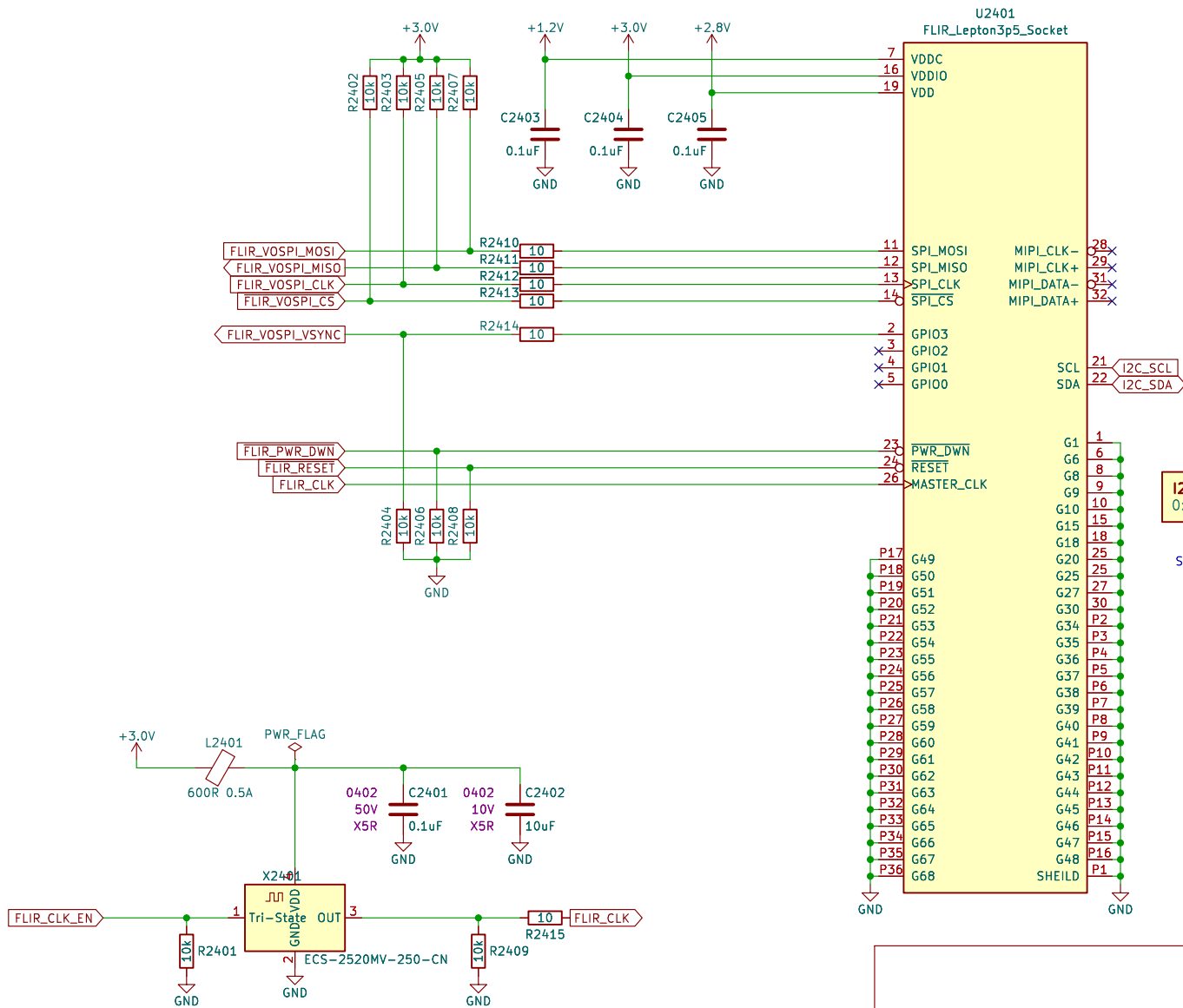
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Title: Thermal Camera

Size: A Date: 2024-05-24
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Power Supply Considerations:
VDDC: 1.20V (1.14V min, 1.26V max), 50mVpp max ripple, 110mA max draw
VDD: 2.80V (2.72V min, 2.88V max), 30mVpp max ripple, 16mA max draw
VDDIO: 2.8V min, 3.1V max, 50mVpp max ripple, 310mA max draw



I2C 7-Bit Address:
0x2A

See FLIR document #110-0144-04 for I2C register map



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Sheet: /FLIR Lepton Sensor/
File: FLIR_Lepton_Sensor.kicad_sch

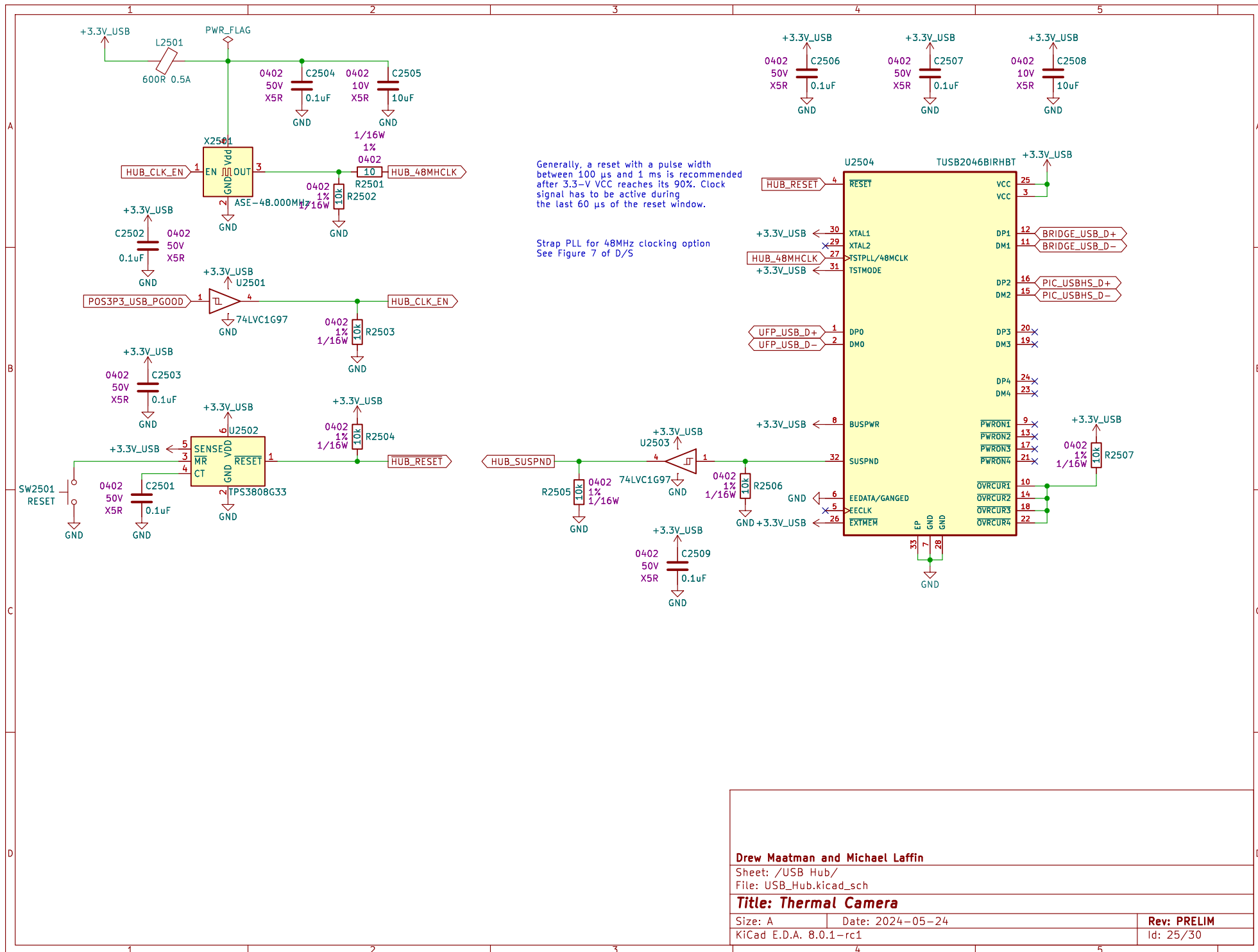
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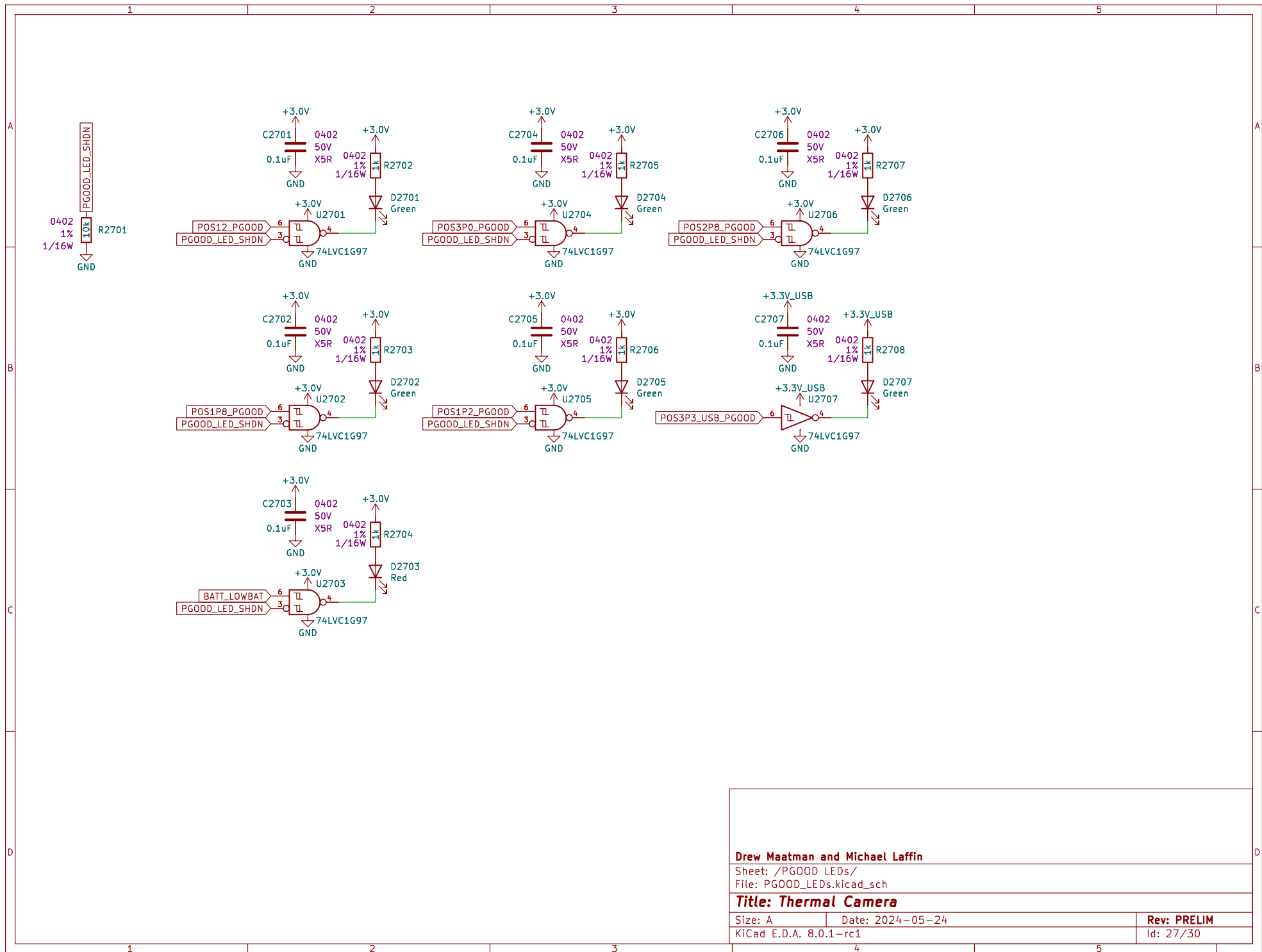
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| Size: A | Date: |
| KiCad E.D.A. 8.0.1-rc1 | |

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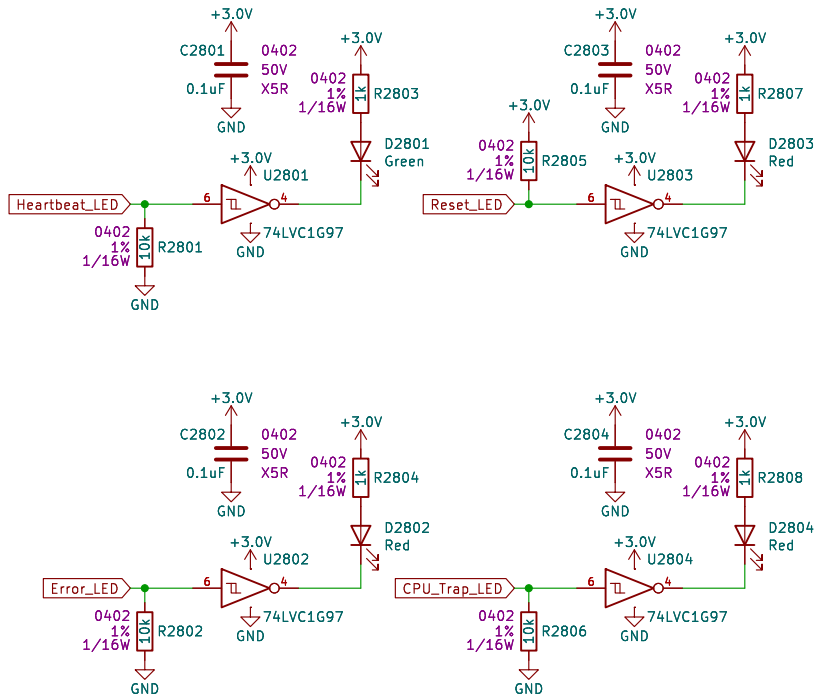
Drew Maatman and Michael Laffin

Sheet: /PGOOD LEDs/
File: PGGOOD_LEDs.kicad_sch

Title: Thermal Camera

Size: A Date: 2024-05-24
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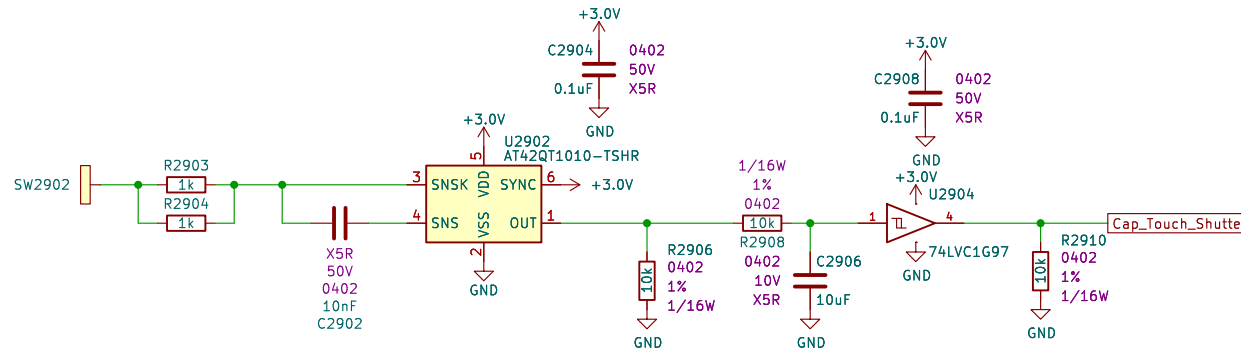
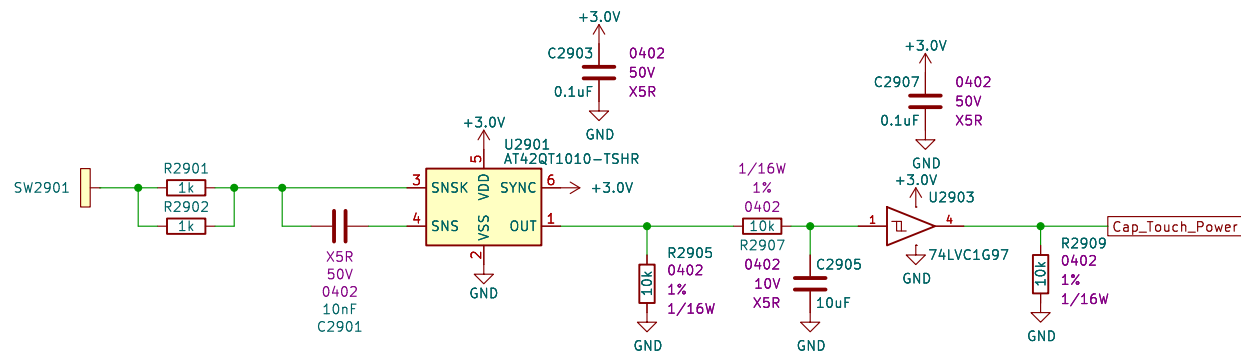
Drew Maatman and Michael Laffin

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Size: A Date: 2024-05-24
KiCad E.D.A. 8.0.1-rc1

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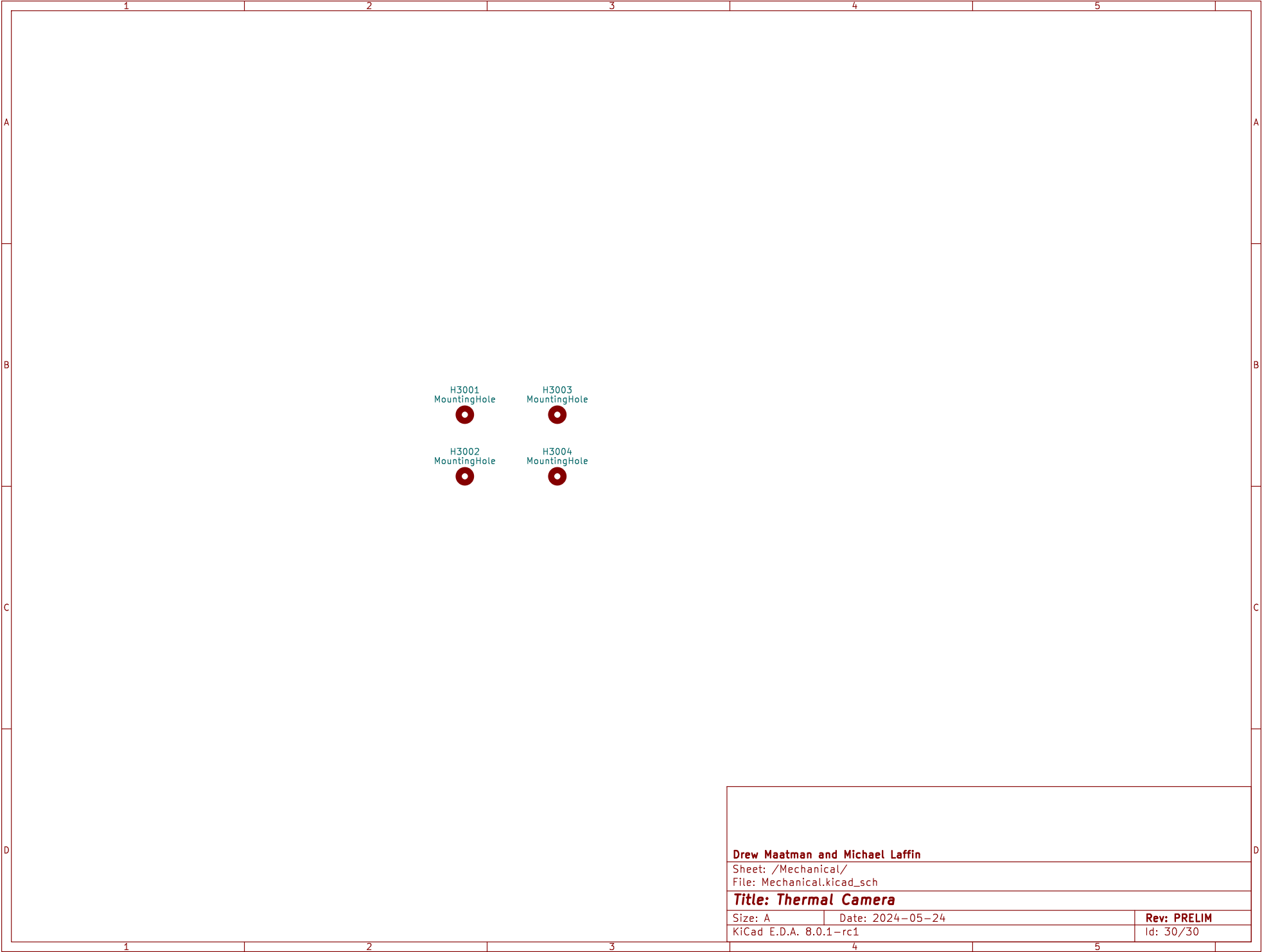
Drew Maatman and Michael Laffin

Sheet: /Capacitive Touch/
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Size: A Date: 2024-05-24
KiCad E.D.A. 8.0.1-rc1

Rev: PRELIM
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Sheet: /Mechanical/
File: Mechanical.kicad_sch

Title: Thermal Camera

| | | |
|------------------------|------------------|-------------|
| Size: A | Date: 2024-05-24 | Rev: PRELIM |
| KiCad E.D.A. 8.0.1-rc1 | | Id: 30/30 |