

# VFD Clock Logic Board

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Consider adding net ties on all current sense shunt resistors for net isolation

**Drew Maatman**

Sheet: /

File: VFD\_Clock.sch

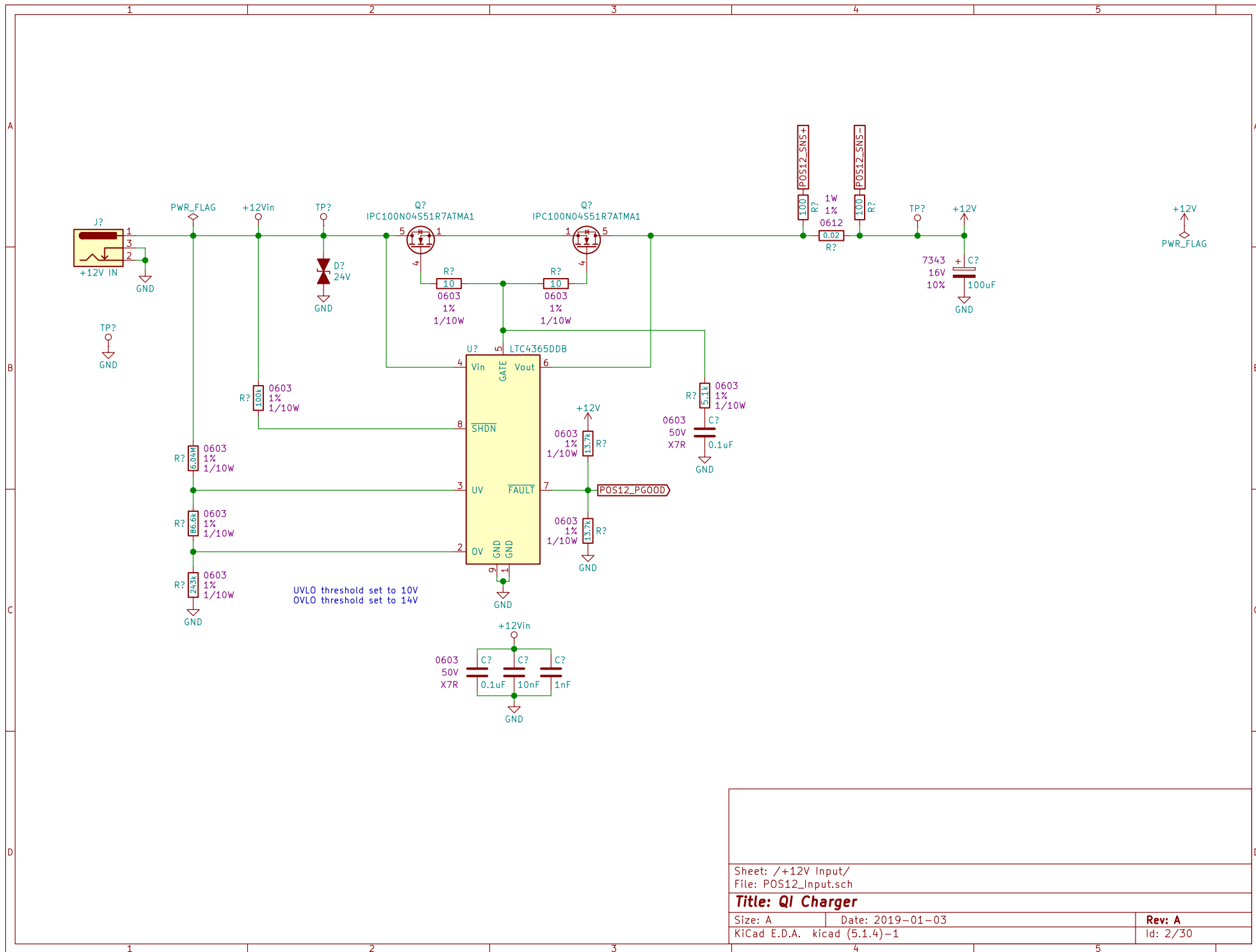
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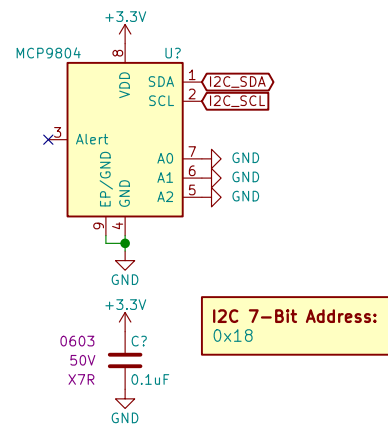
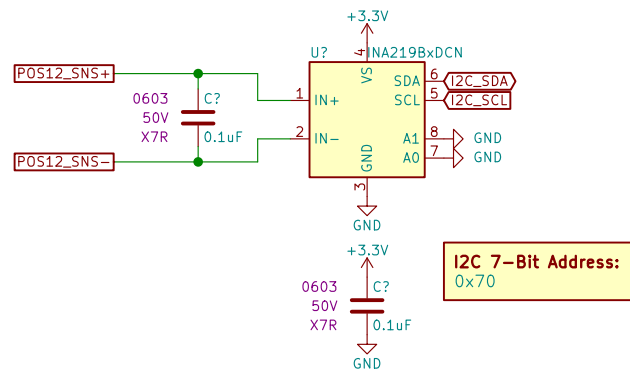
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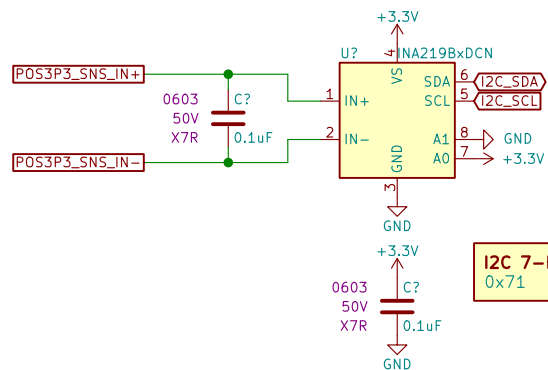
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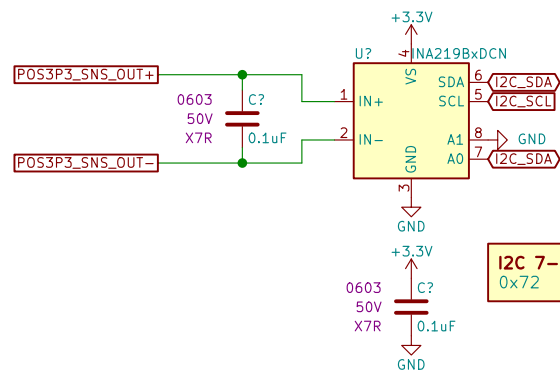
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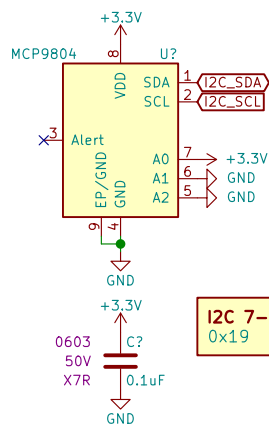
Rev: A  
Id: 4/30



**I2C 7-Bit Address:**  
0x71



**I2C 7-Bit Address:**  
0x72



**I2C 7-Bit Address:**  
0x19

Sheet: /+3.3V Telemetry/  
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**Title:**

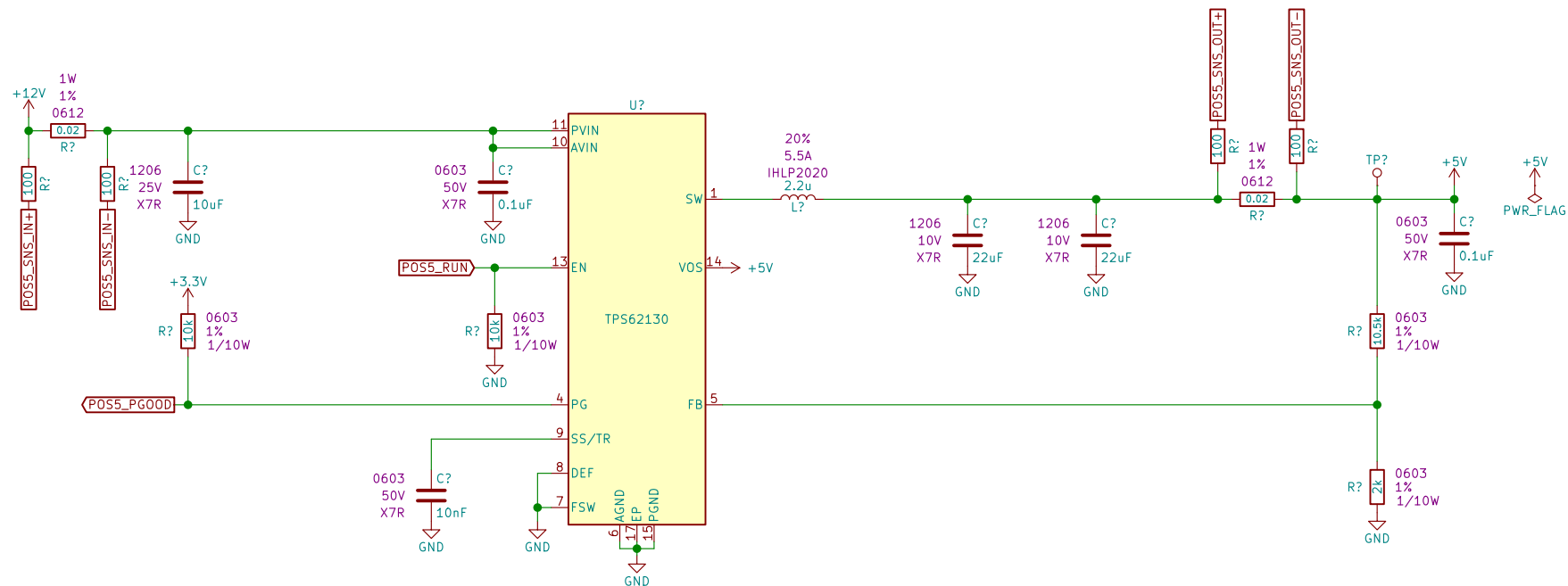
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**Rev:**

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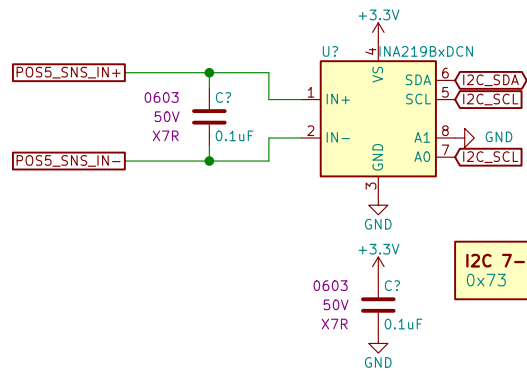


Sheet: /+5V Power Supply/  
File: POS5\_Power\_Supply.sch

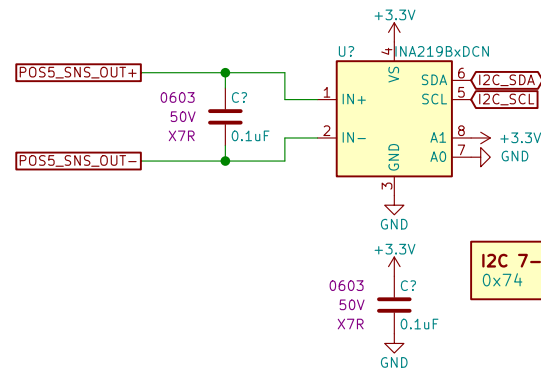
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Size: A Date: 2019-01-03  
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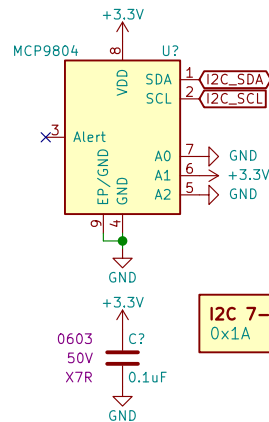
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**I2C 7-Bit Address:**  
0x73



**I2C 7-Bit Address:**  
0x74



**I2C 7-Bit Address:**  
0x1A

Sheet: /+5V Telemetry/  
File: POS5\_Telemetry.sch

**Title:**

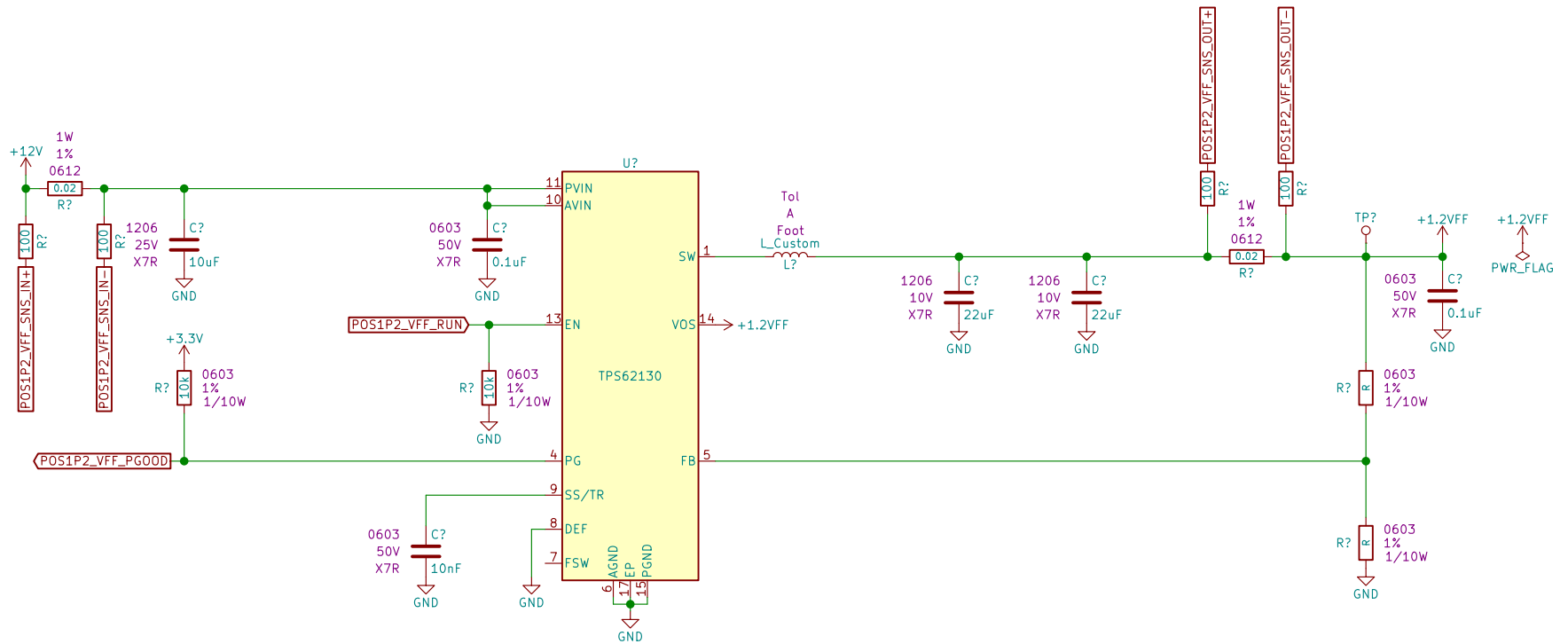
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**Rev:**

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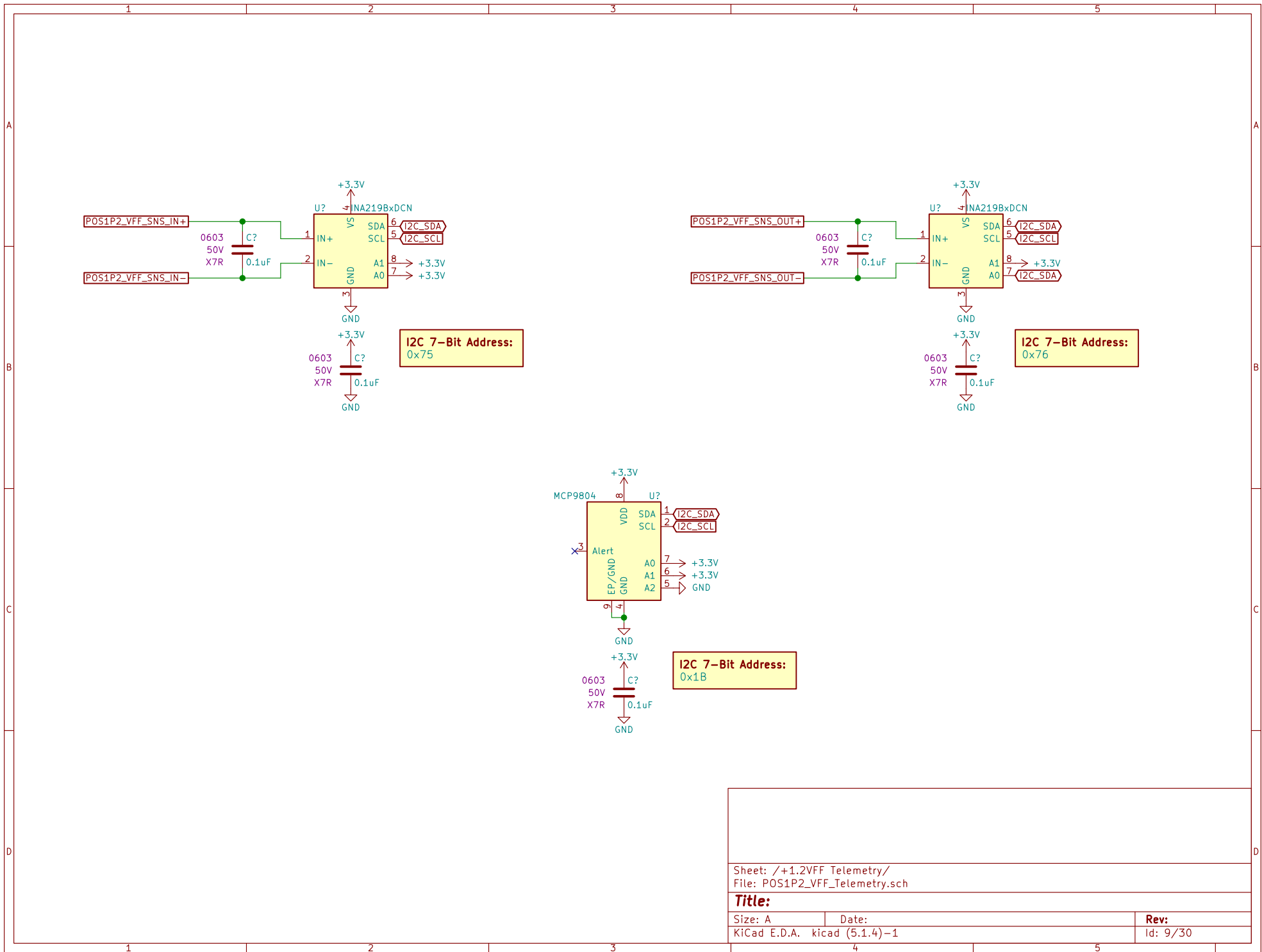
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# **Title: QI Charger**

Size: A Date: 2019-01-03  
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**Anode/Grid +60V, 50mA Power Supply**

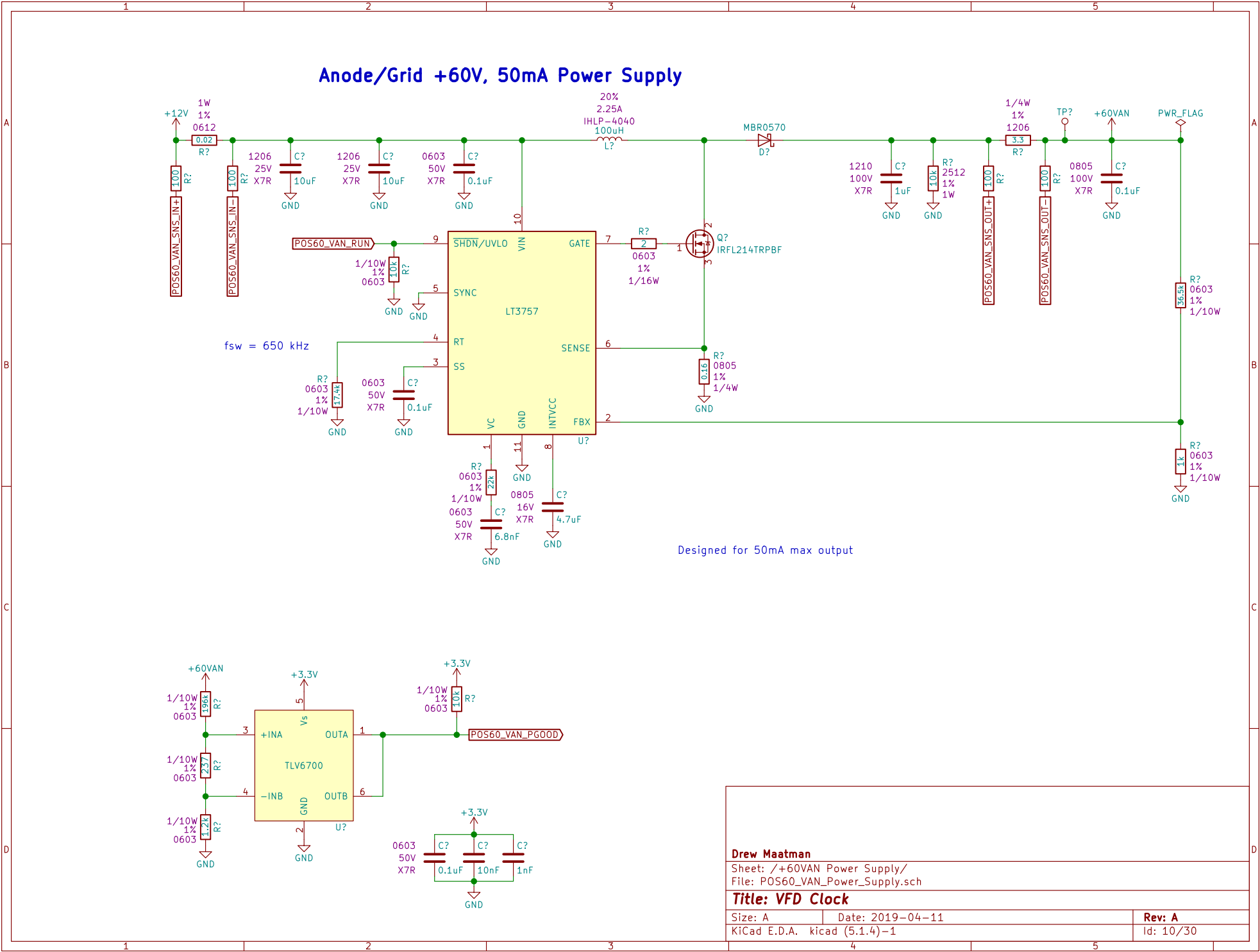
Designed for 50mA max output

**Drew Maatman**  
 Sheet: //+60VAN Power Supply/  
 File: POS60\_VAN\_Power\_Supply.sch  
**Title: VFD Clock**  
 Size: A Date: 2019-04-11 Rev: A  
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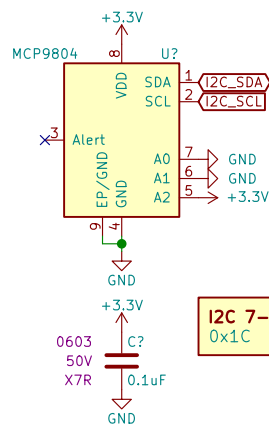
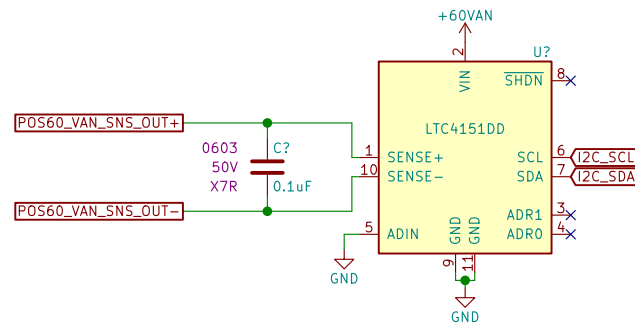
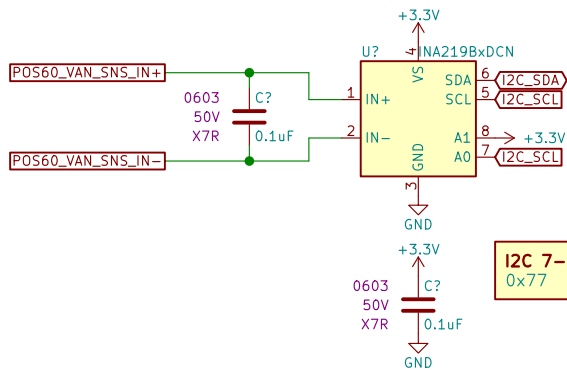
**Anode/Grid +60V, 50mA Power Supply**

Designed for 50mA max output

**Drew Maatman**  
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 File: POS60\_VAN\_Power\_Supply.sch  
**Title: VFD Clock**  
 Size: A Date: 2019-04-11 Rev: A  
 KiCad E.D.A. kicad (5.1.4)-1 Id: 10/30



Rev: A  
Id: 10/30

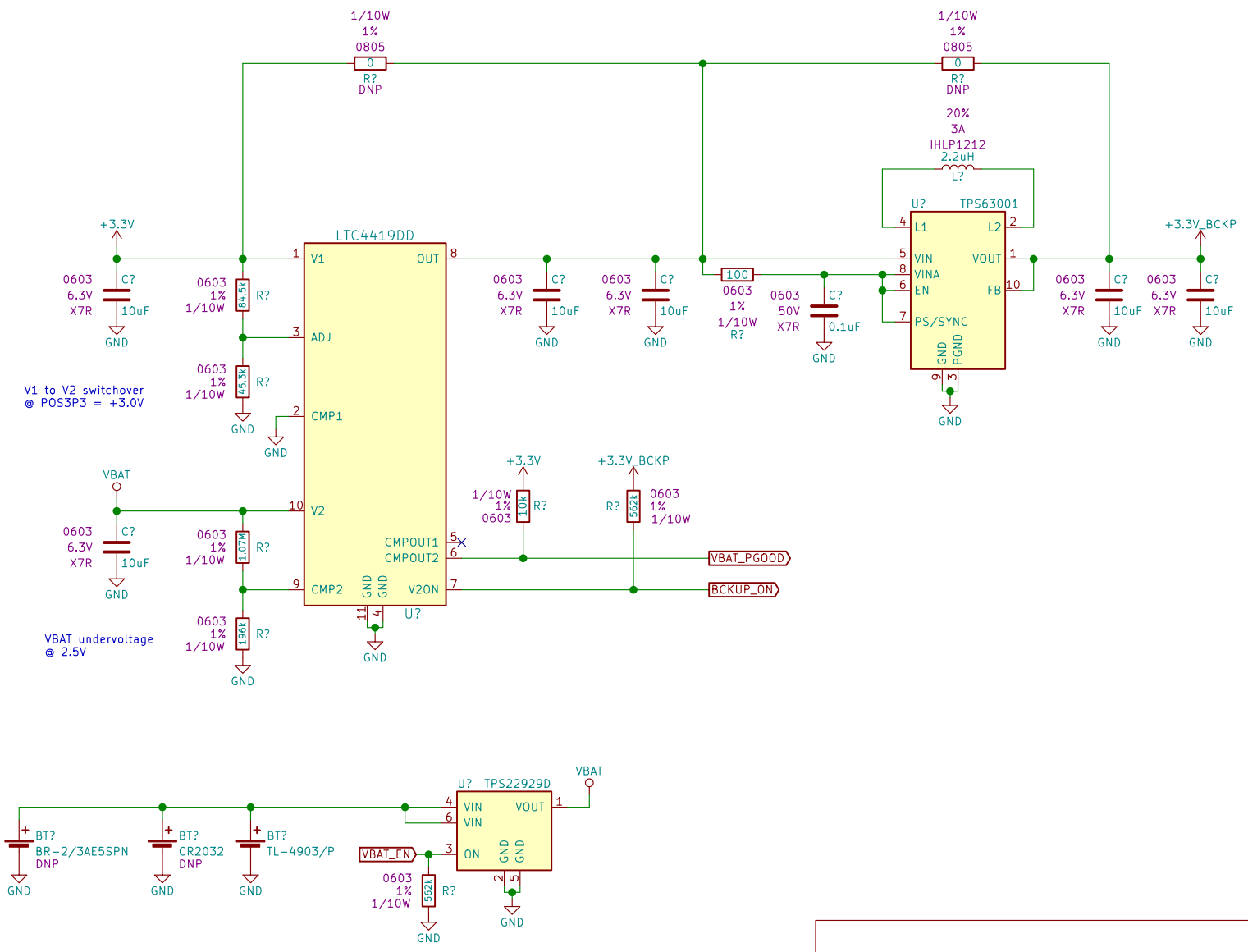


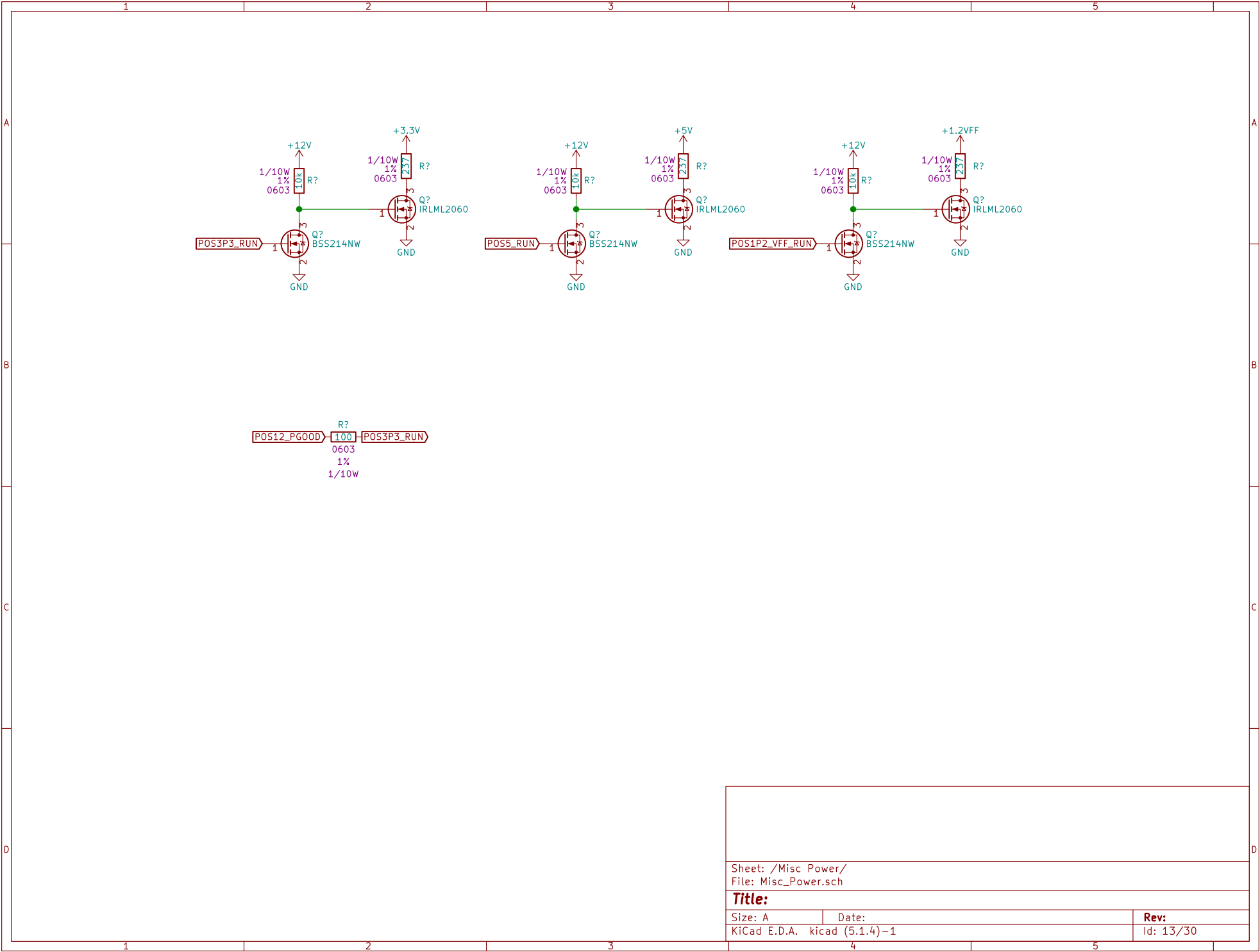
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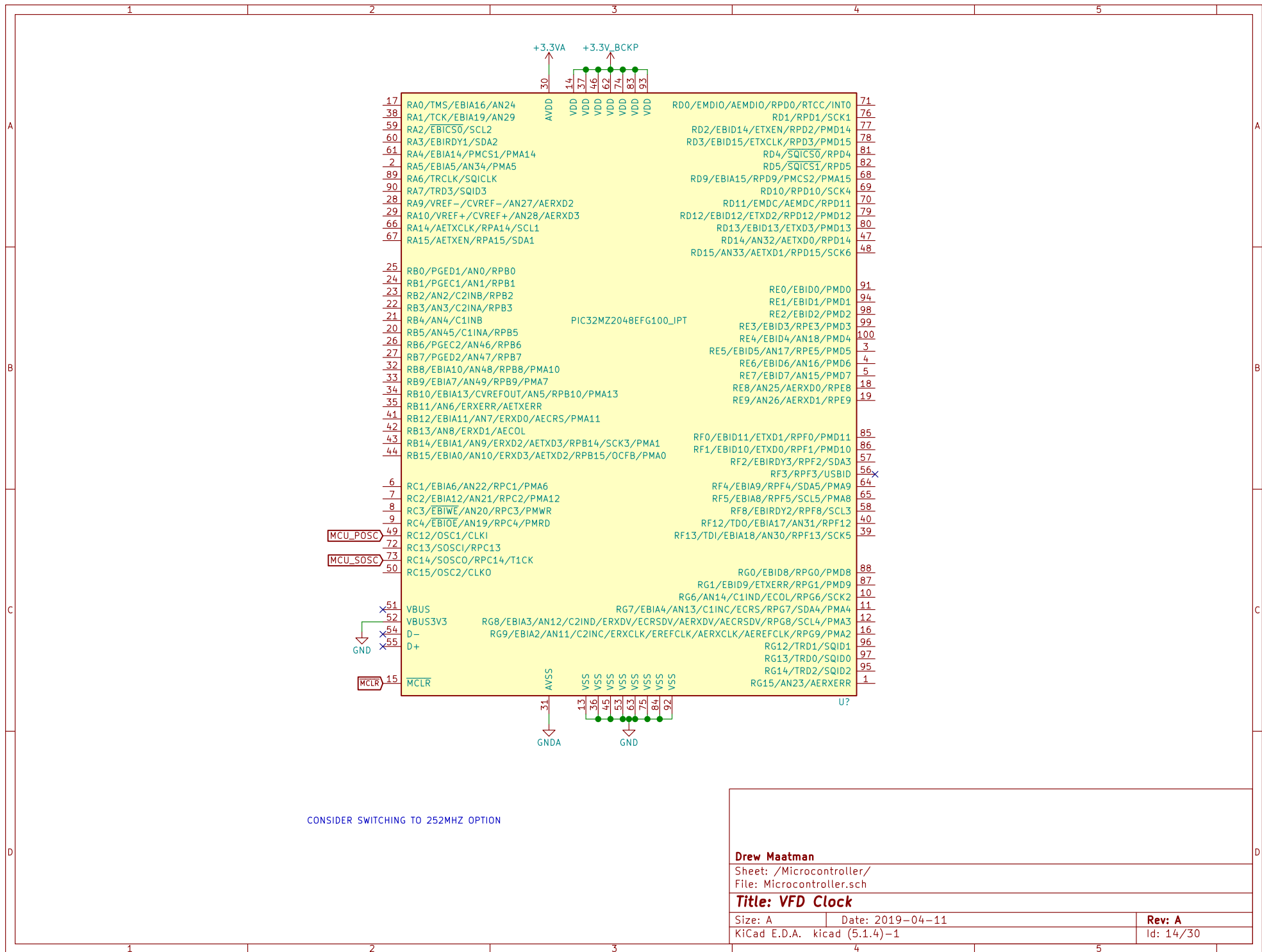
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Rev:  
Id: 11/30







CONSIDER SWITCHING TO 252MHZ OPTION

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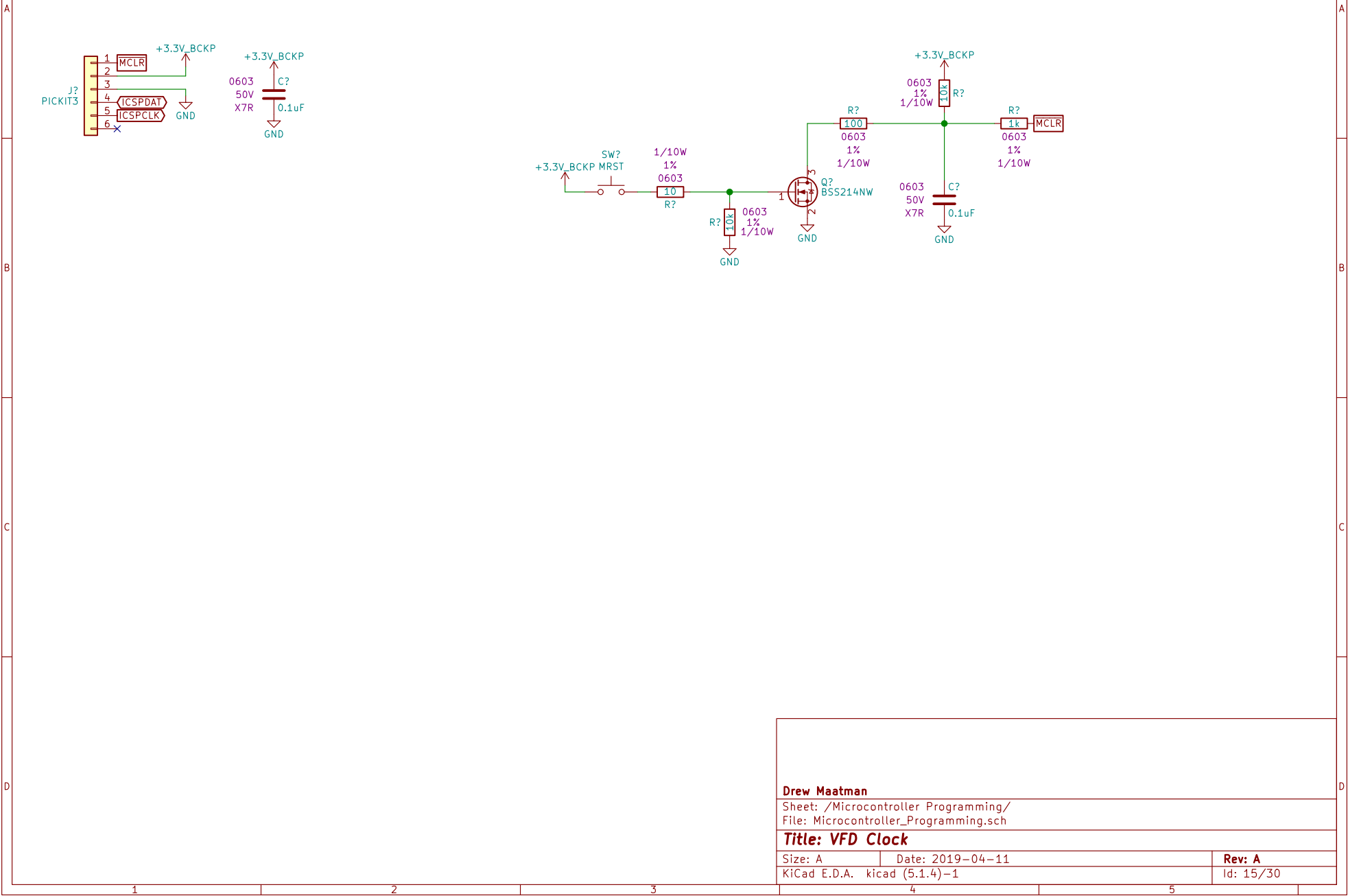
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Title: VFD Clock

Size: A Date: 2019-04-11  
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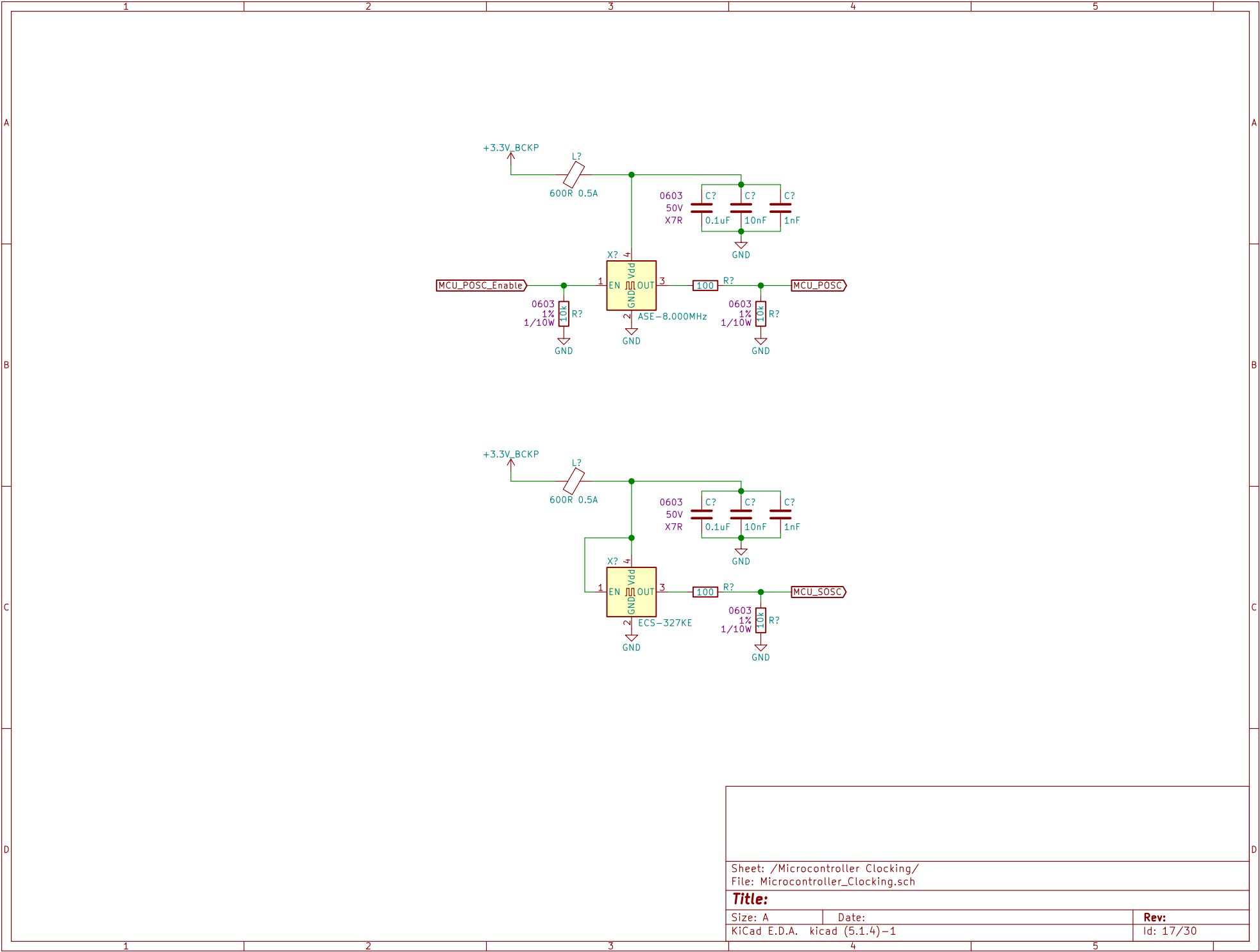
Rev: A  
Id: 14/30

Microcontroller Programming



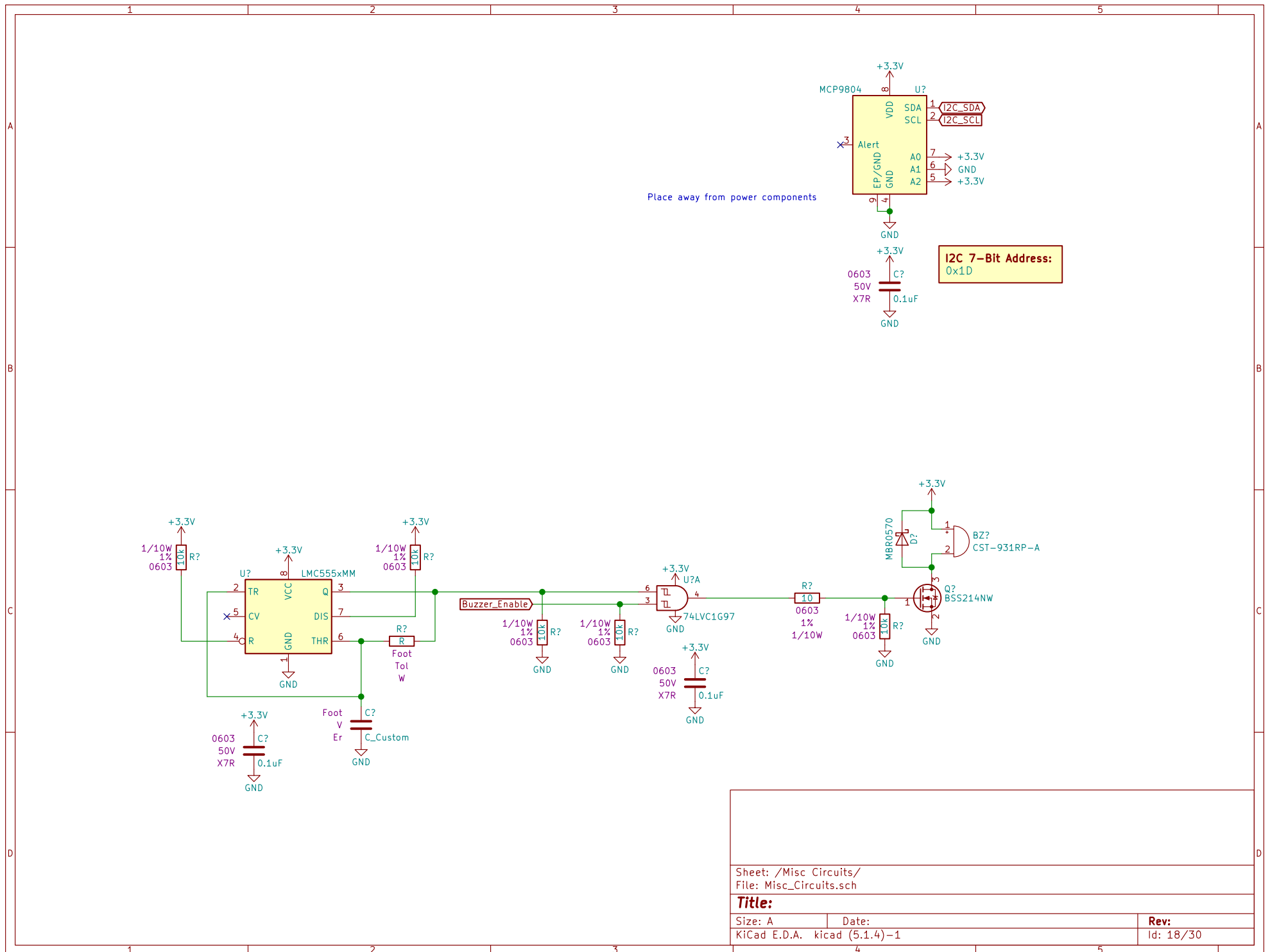


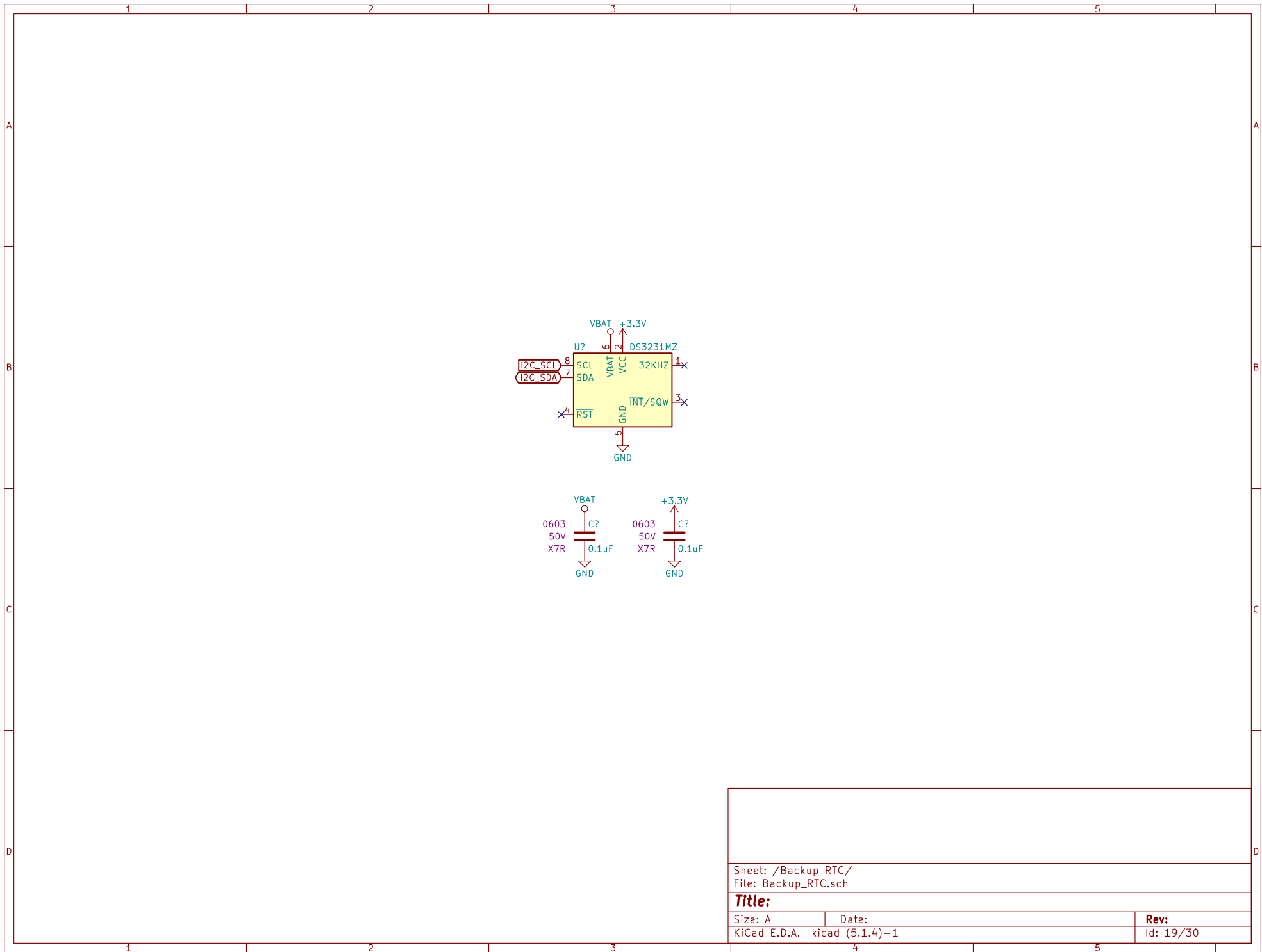




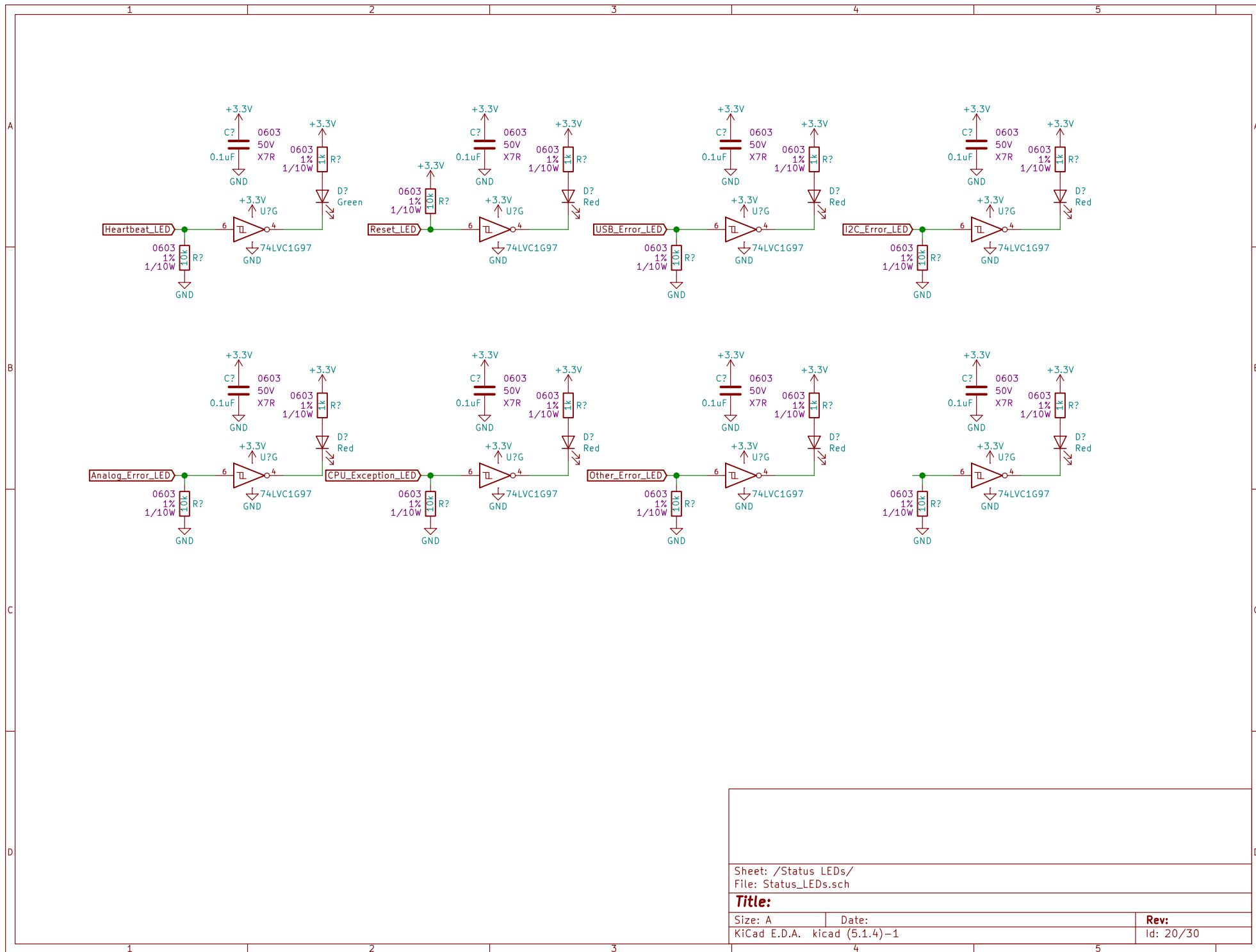
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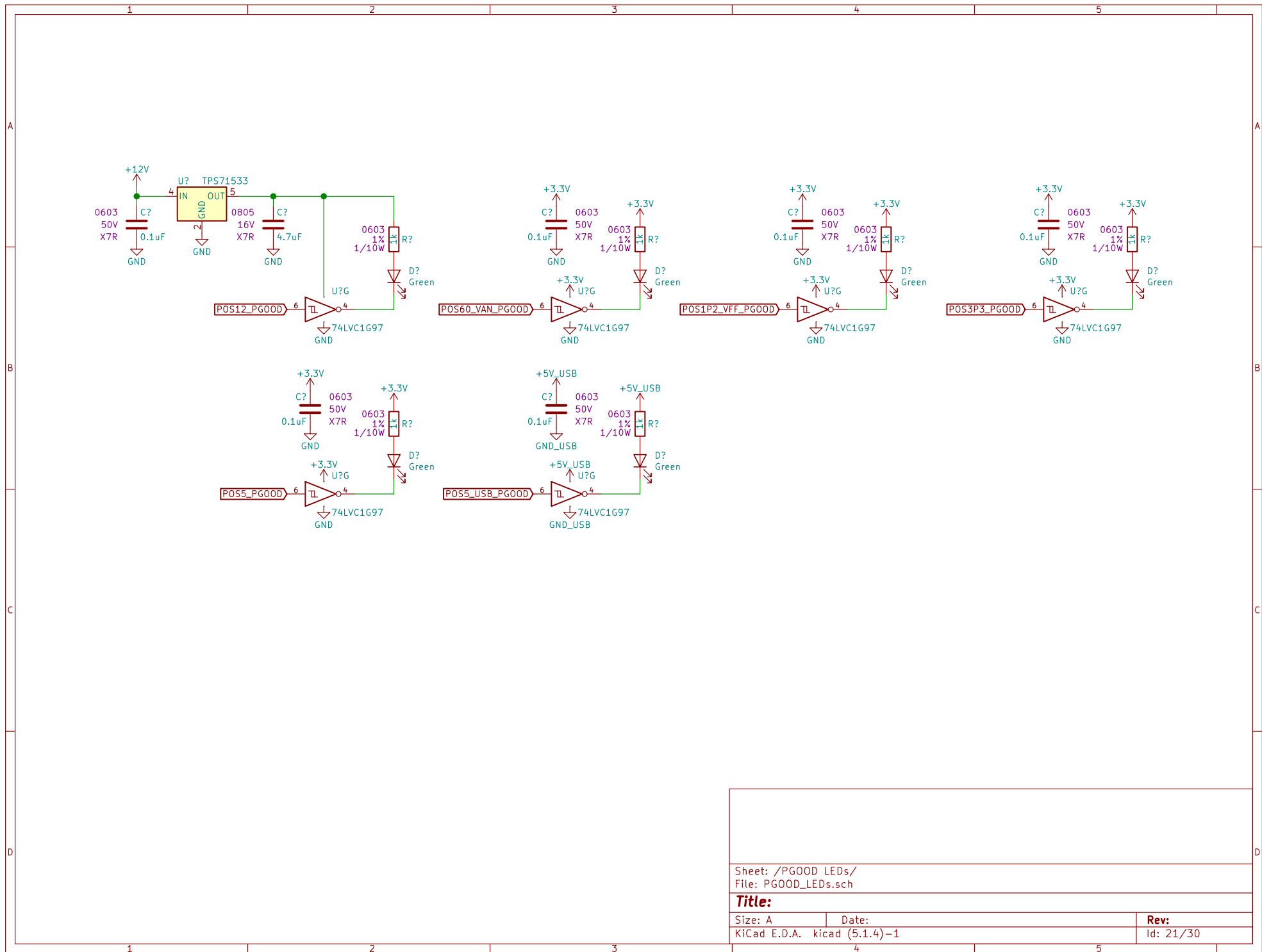
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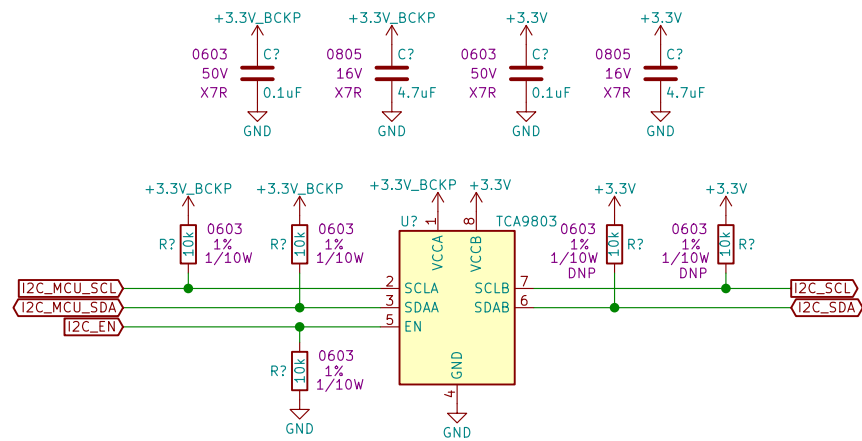




Sheet: /Backup_RTC/ File: Backup_RTC.sch		
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Size: A	Date:	Rev:
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Sheet: /I2C Buffer/  
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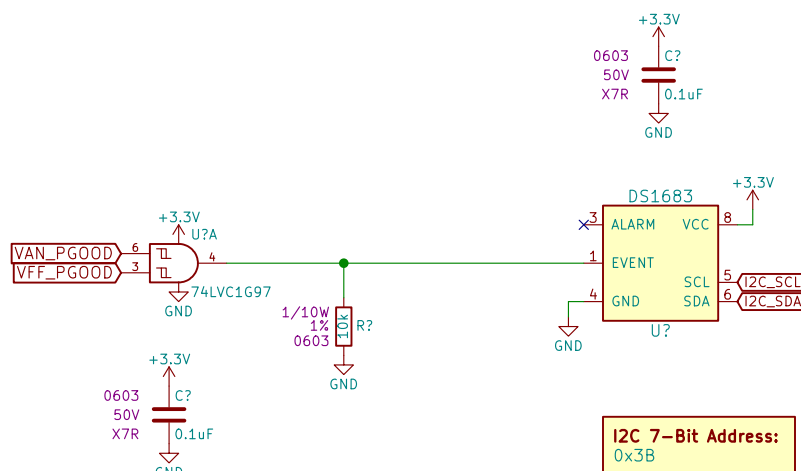
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**Rev:**

Id: 22/30



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

**Title:**

Size: A

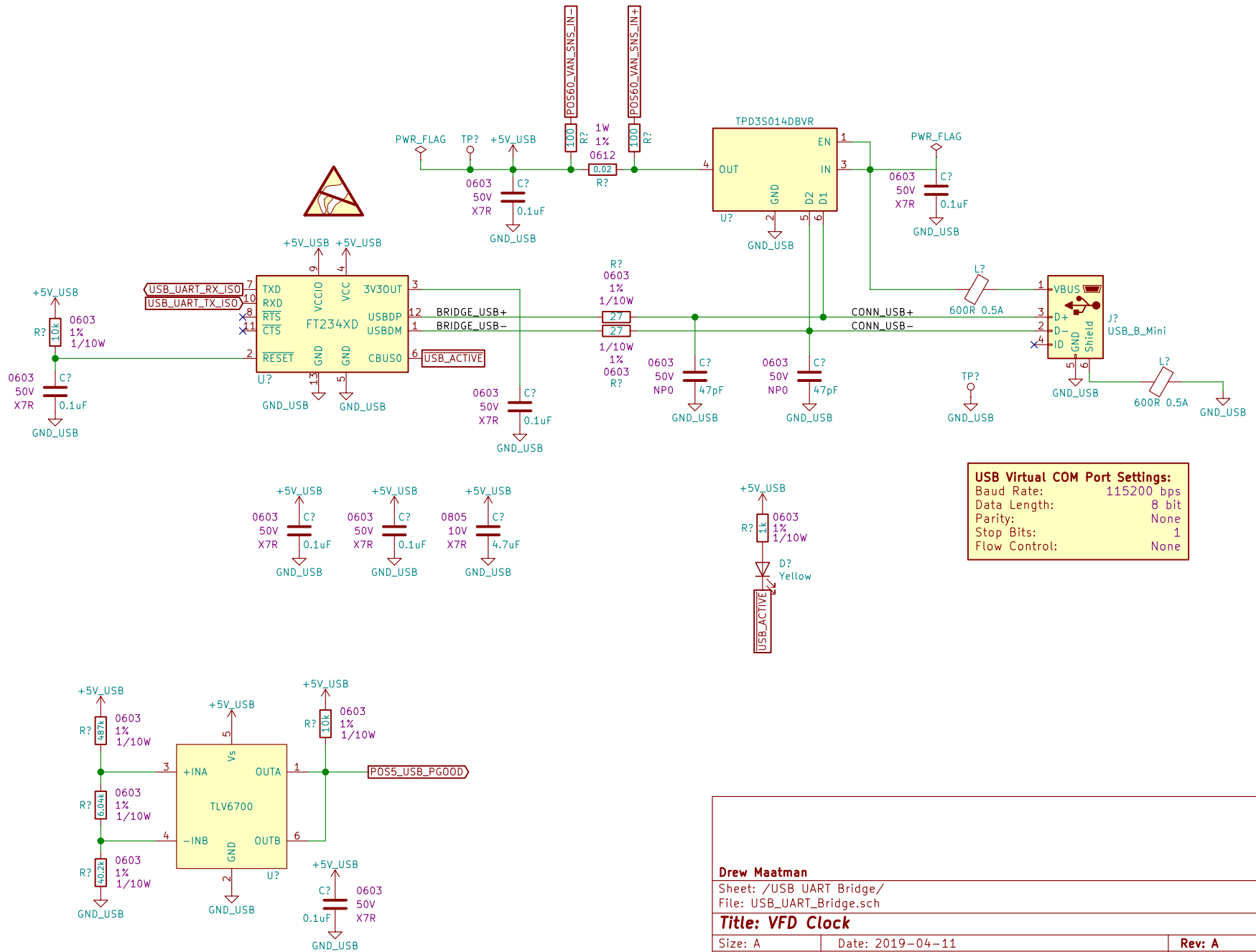
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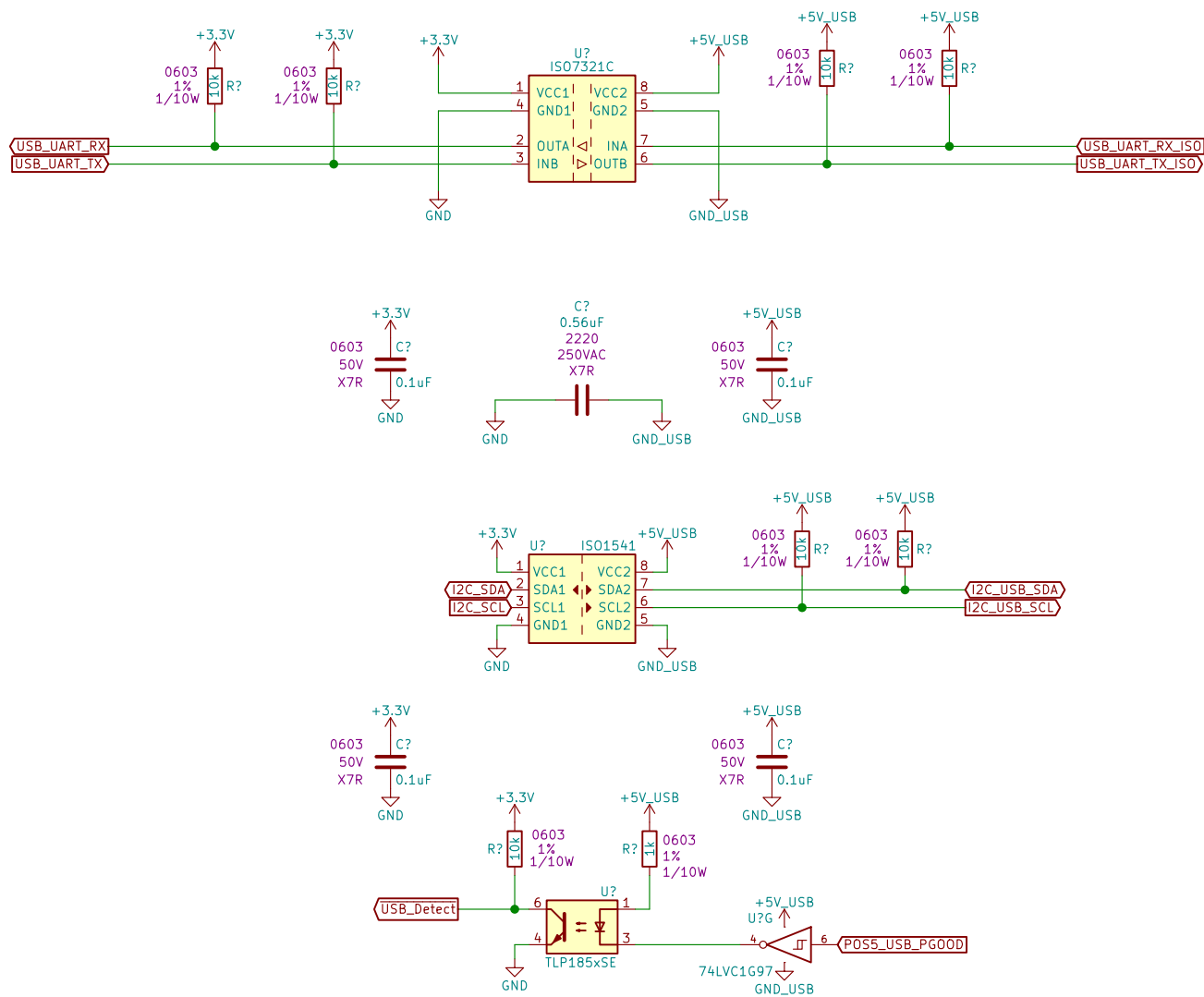
**Rev:**

Id: 23/30

## 11. USB UART Bridge







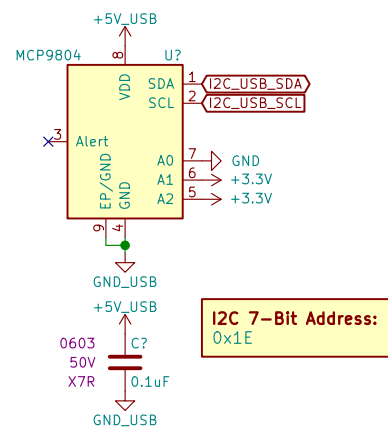
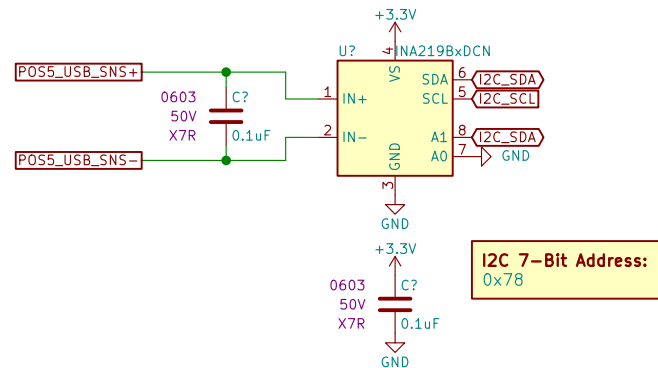
**Drew Maatman**

Sheet: /USB UART Isolation/  
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**Title: VFD Clock**

Size: A Date: 2019-04-11  
KiCad E.D.A. kicad (5.1.4)-1

**Rev: A**  
Id: 25/30



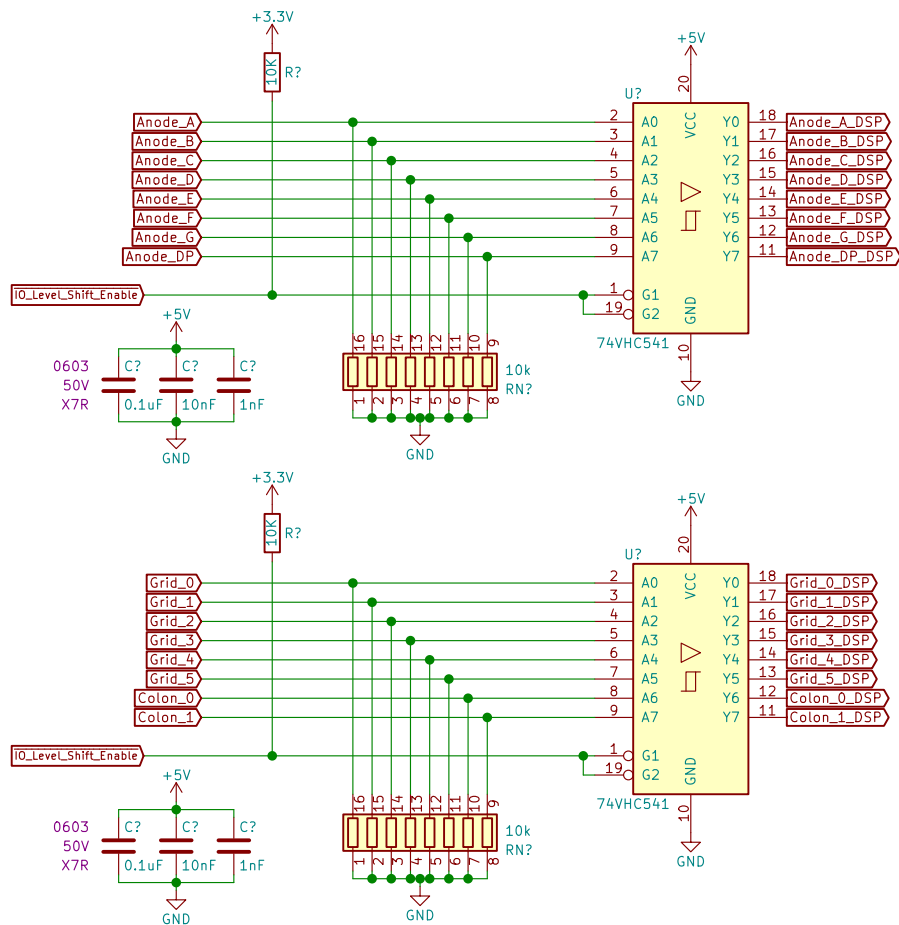
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**Title:**

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**Rev:**  
Id: 26/30

# I/O Buffers



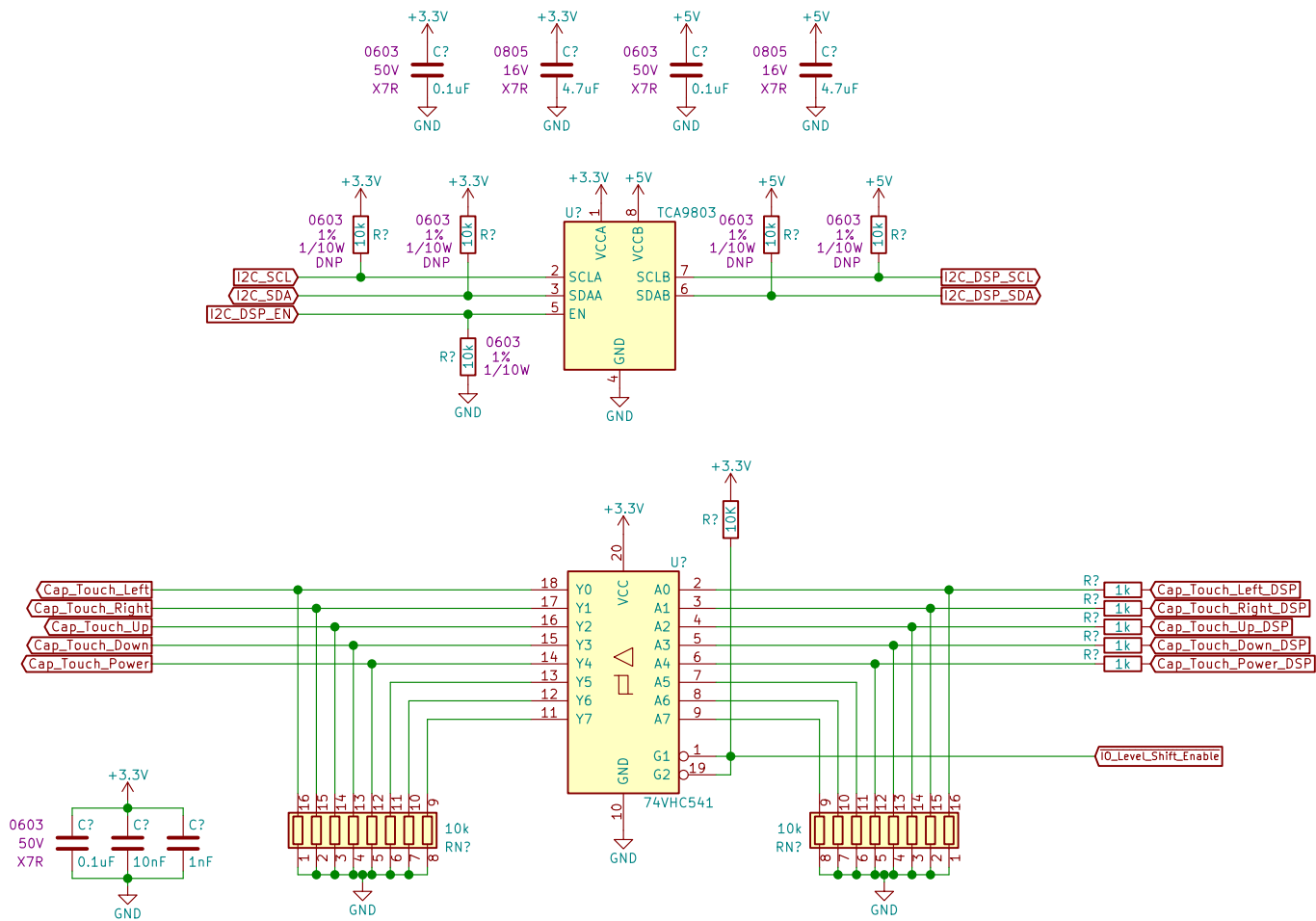
Marquette University Senior Design 2018/2019 Group E44

Sheet: /IO Buffers 1/  
File: IO\_Buffers\_1.sch

**Title: Electronic Display Logic Board**

Size: A Date: 2018-12-15  
KiCad E.D.A. kicad (5.1.4)-1

Rev: A  
Id: 27/30



Sheet: /IO Buffers 2/  
File: IO\_Buffers\_2.sch

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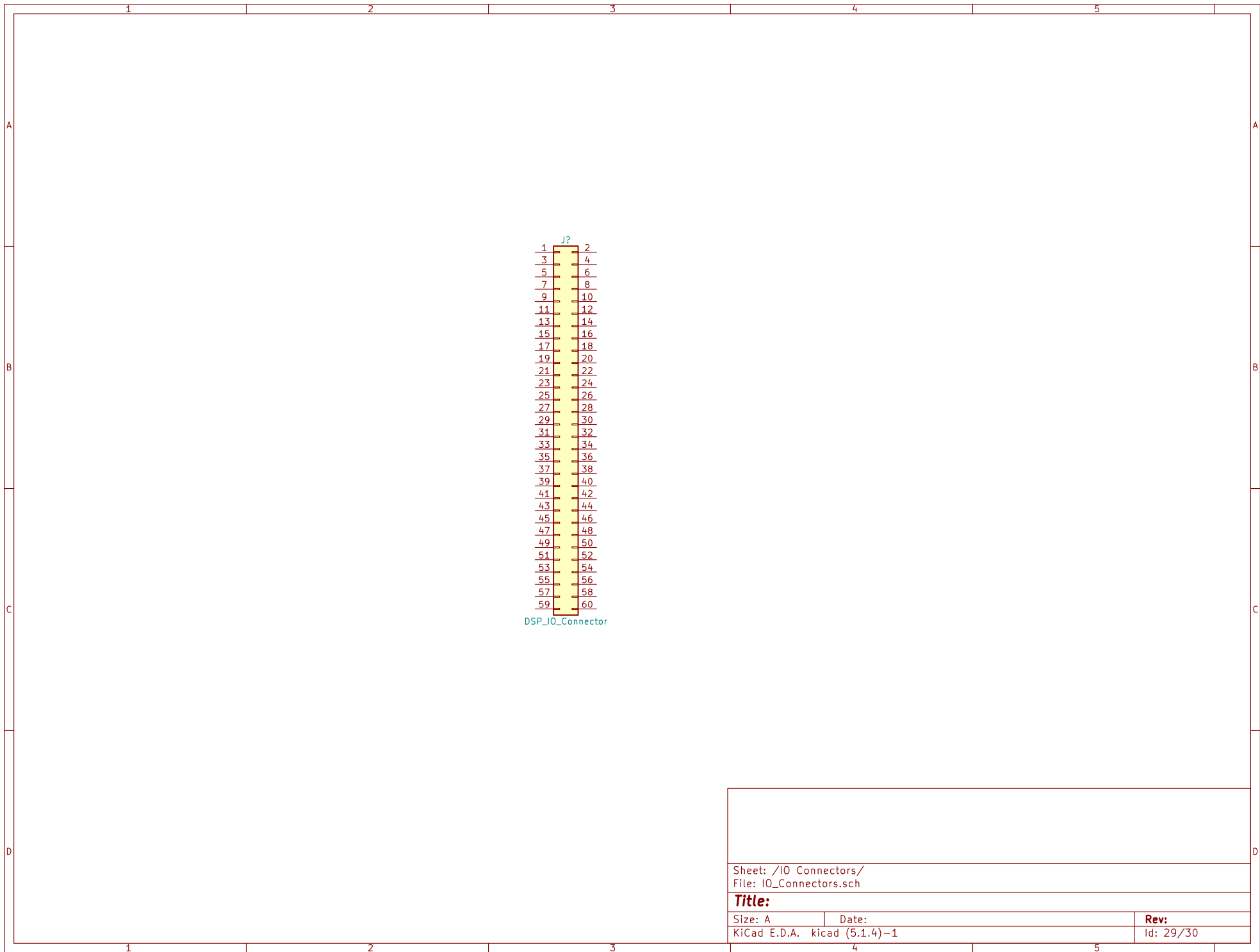
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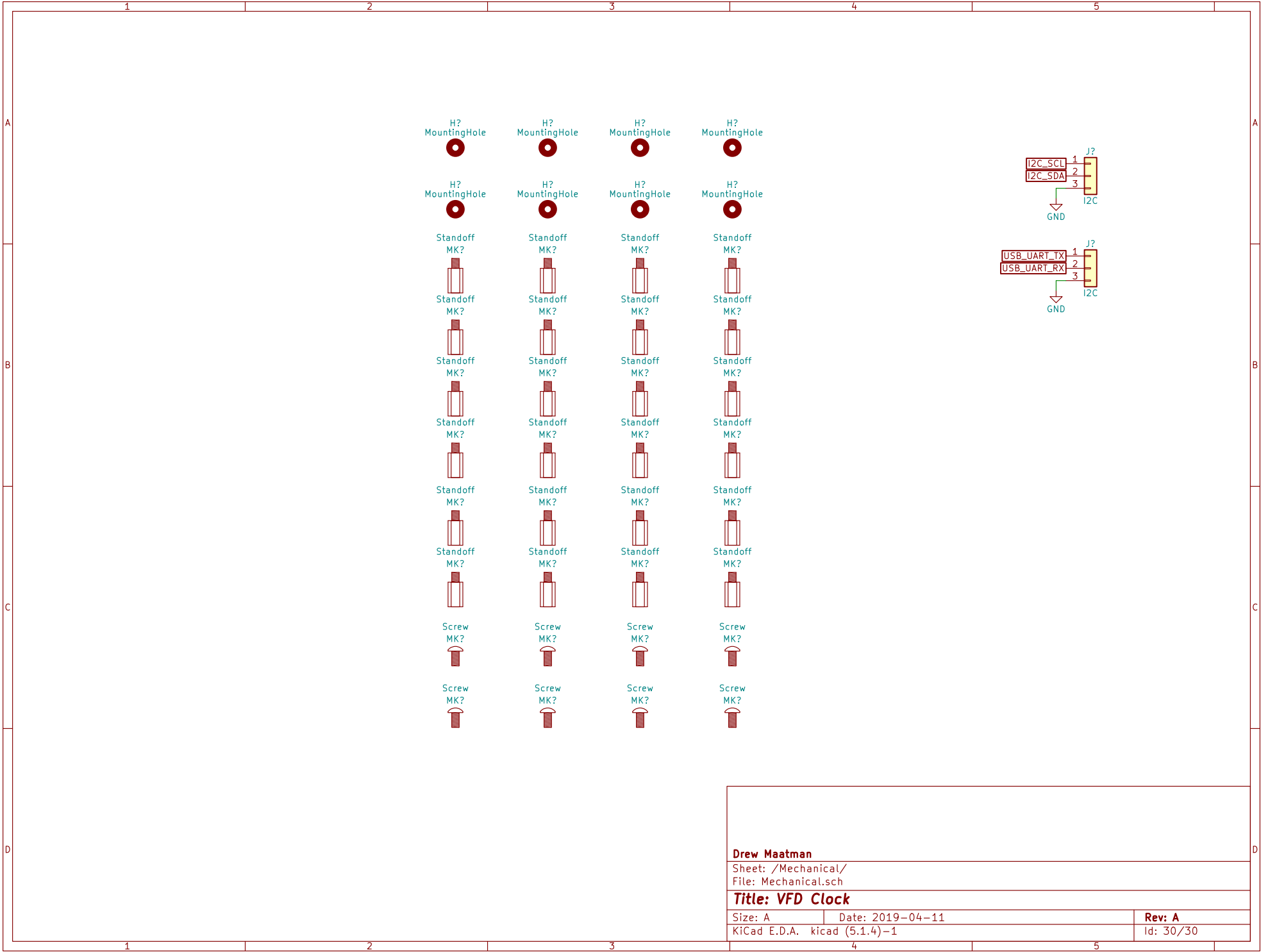
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KiCad E.D.A. kicad (5.1.4)-1

**Rev:**

Id: 28/30





Drew Maatman

Sheet: /Mechanical/  
File: Mechanical.sch

**Title: VFD Clock**

Size: A Date: 2019-04-11  
KiCad E.D.A. kicad (5.1.4)-1

Rev: A  
Id: 30/30