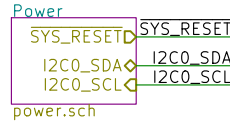
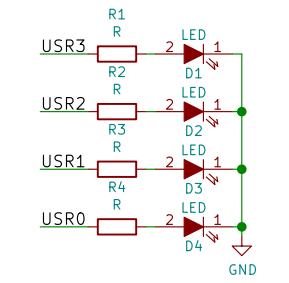


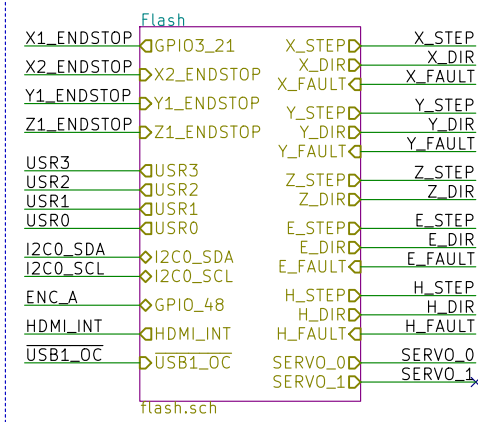
## Power



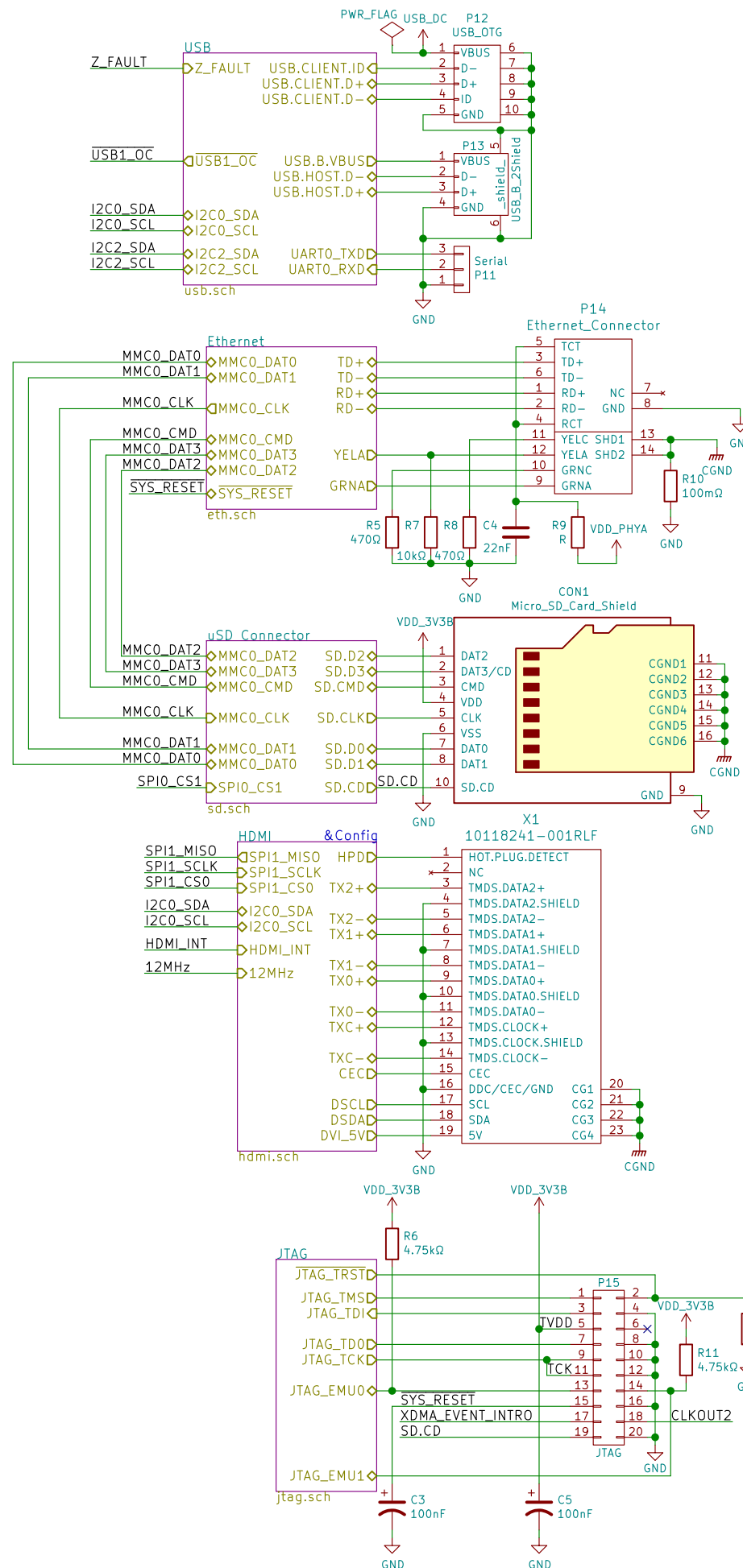
## User LEDs



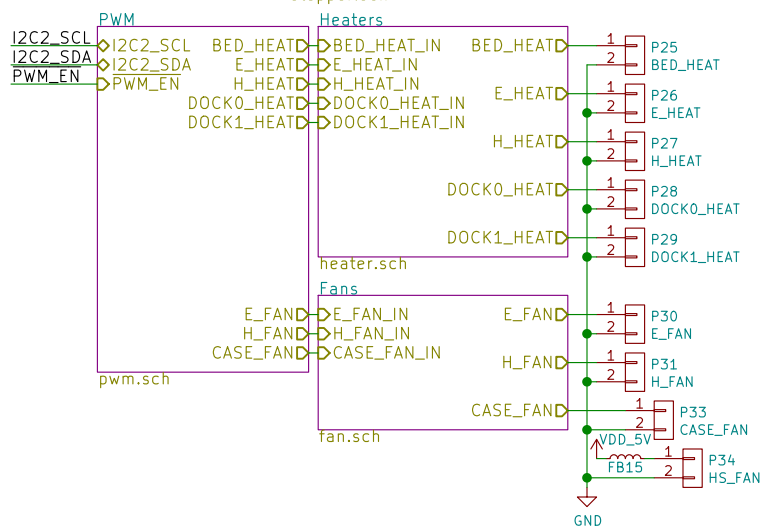
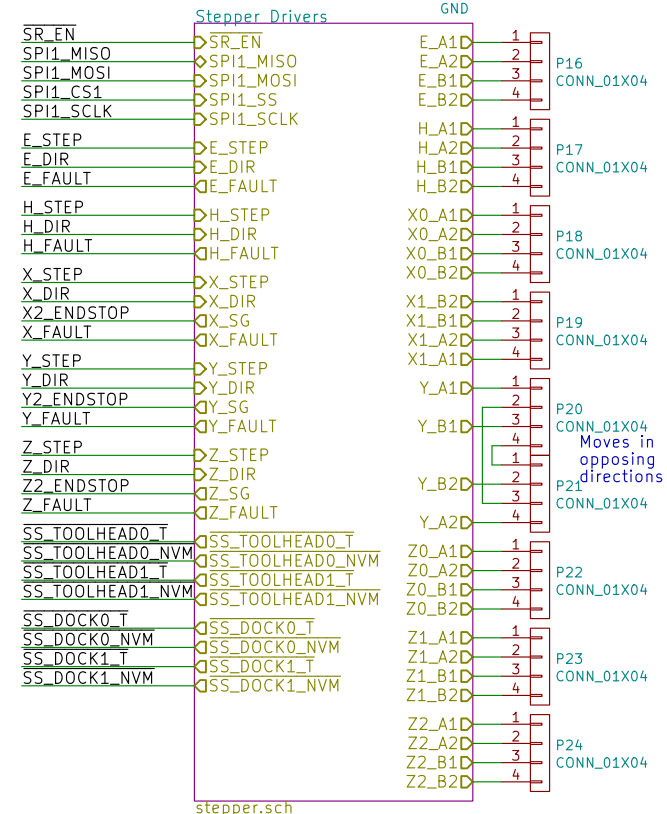
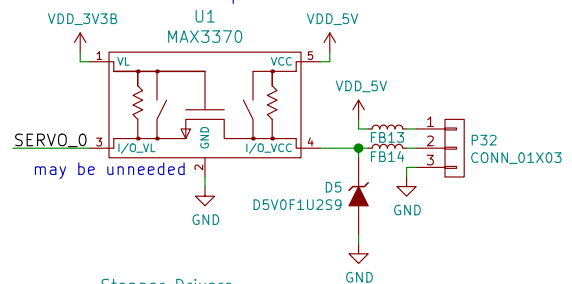
## eMMC



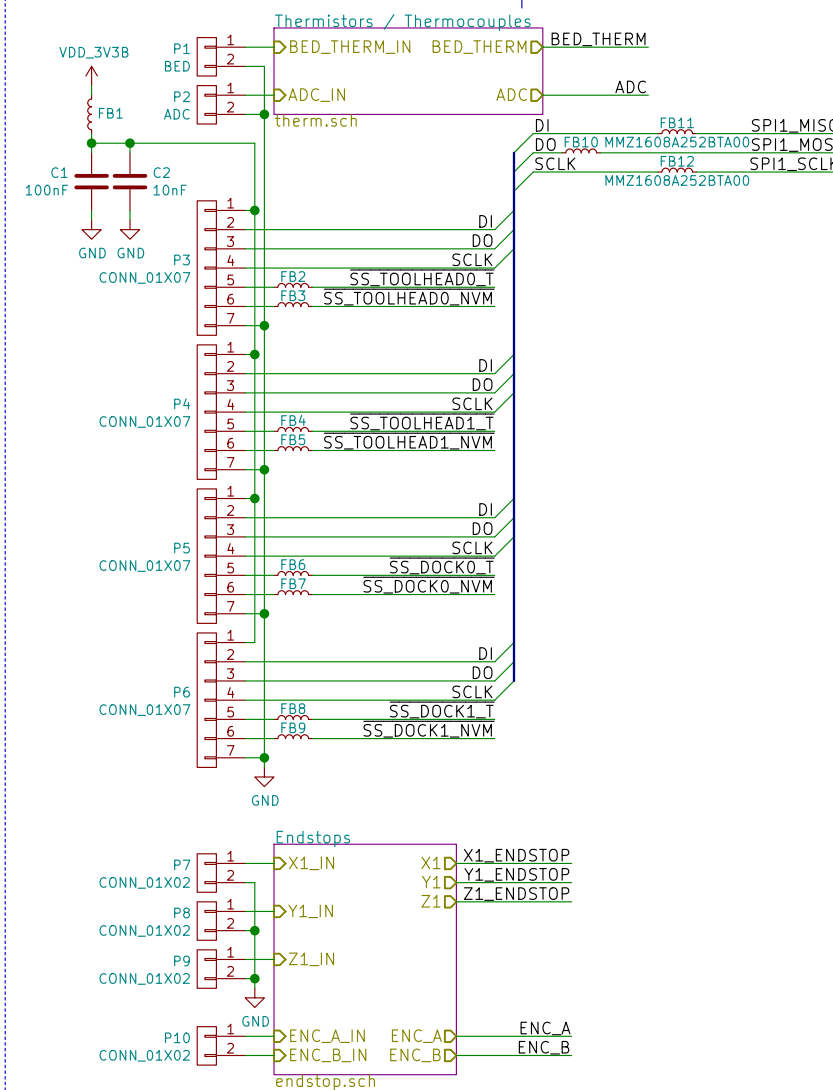
## Interfaces



## Output



## Feedback Input



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Sheet: /

File: KiMBo.sch

Title: KiMBo

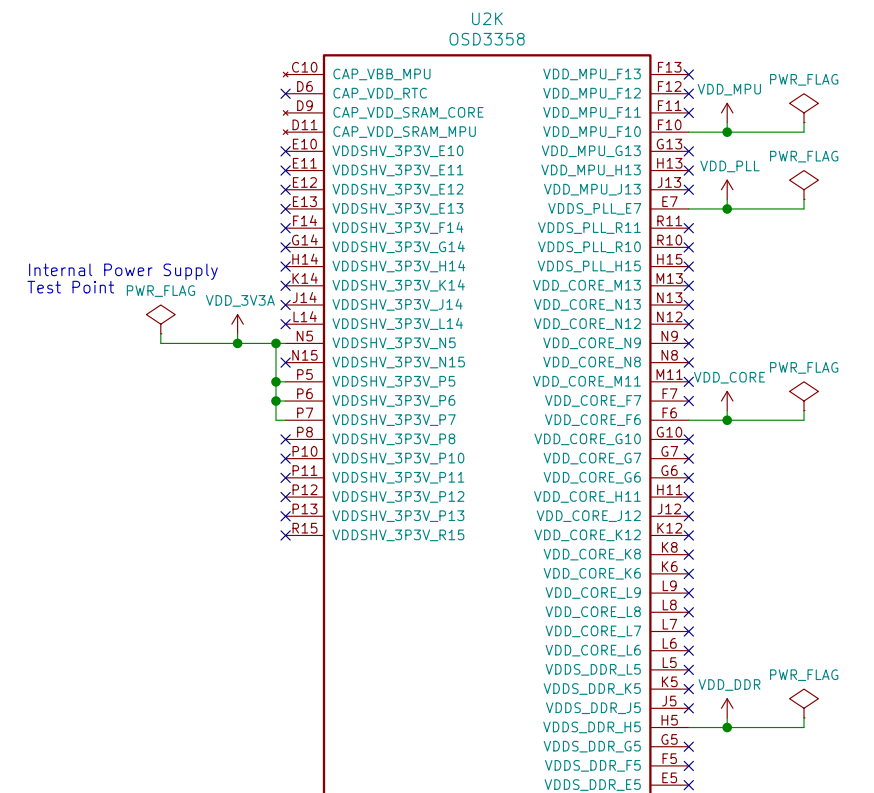
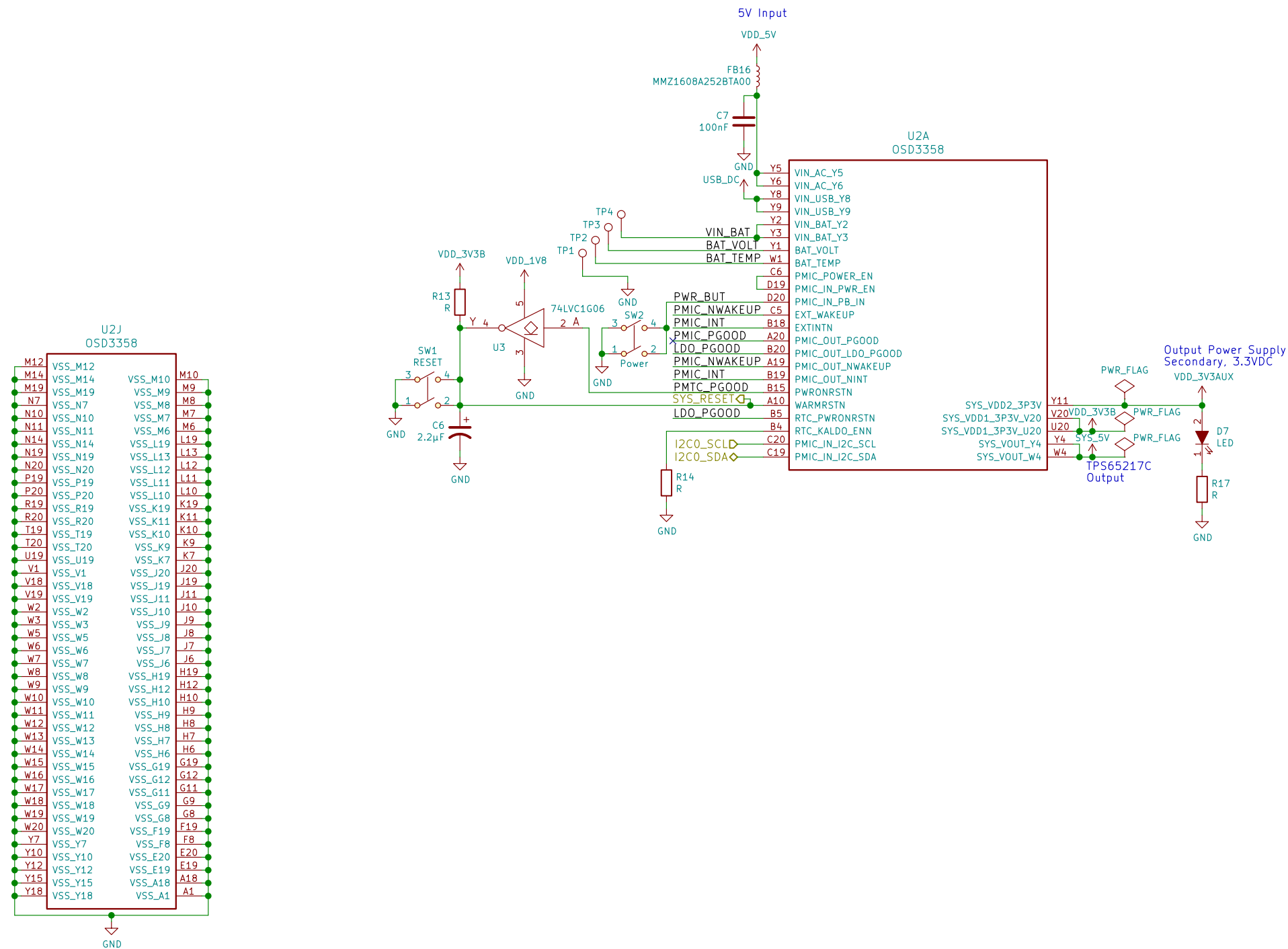
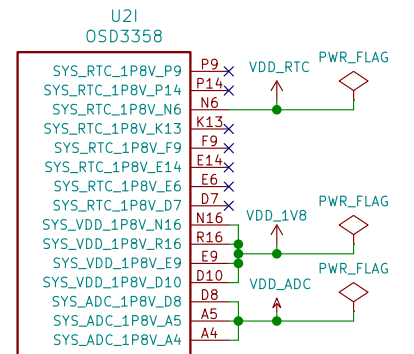
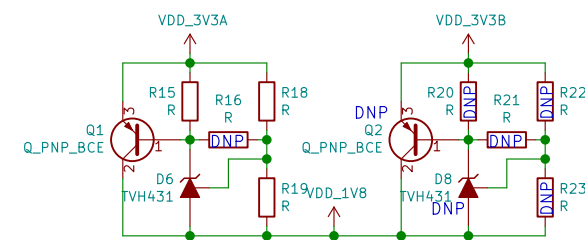
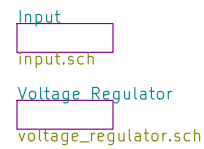
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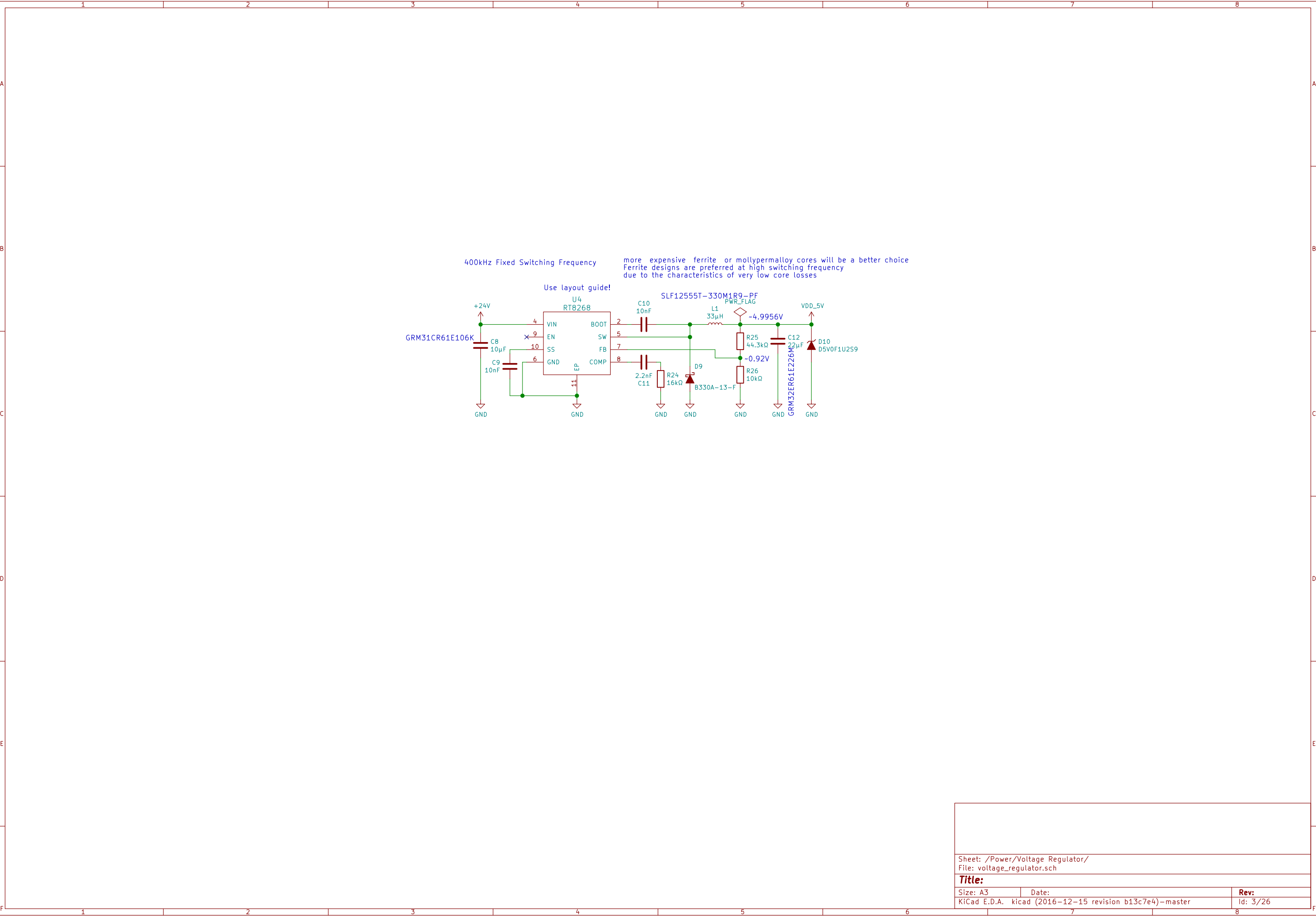
Date: 2017-03-07

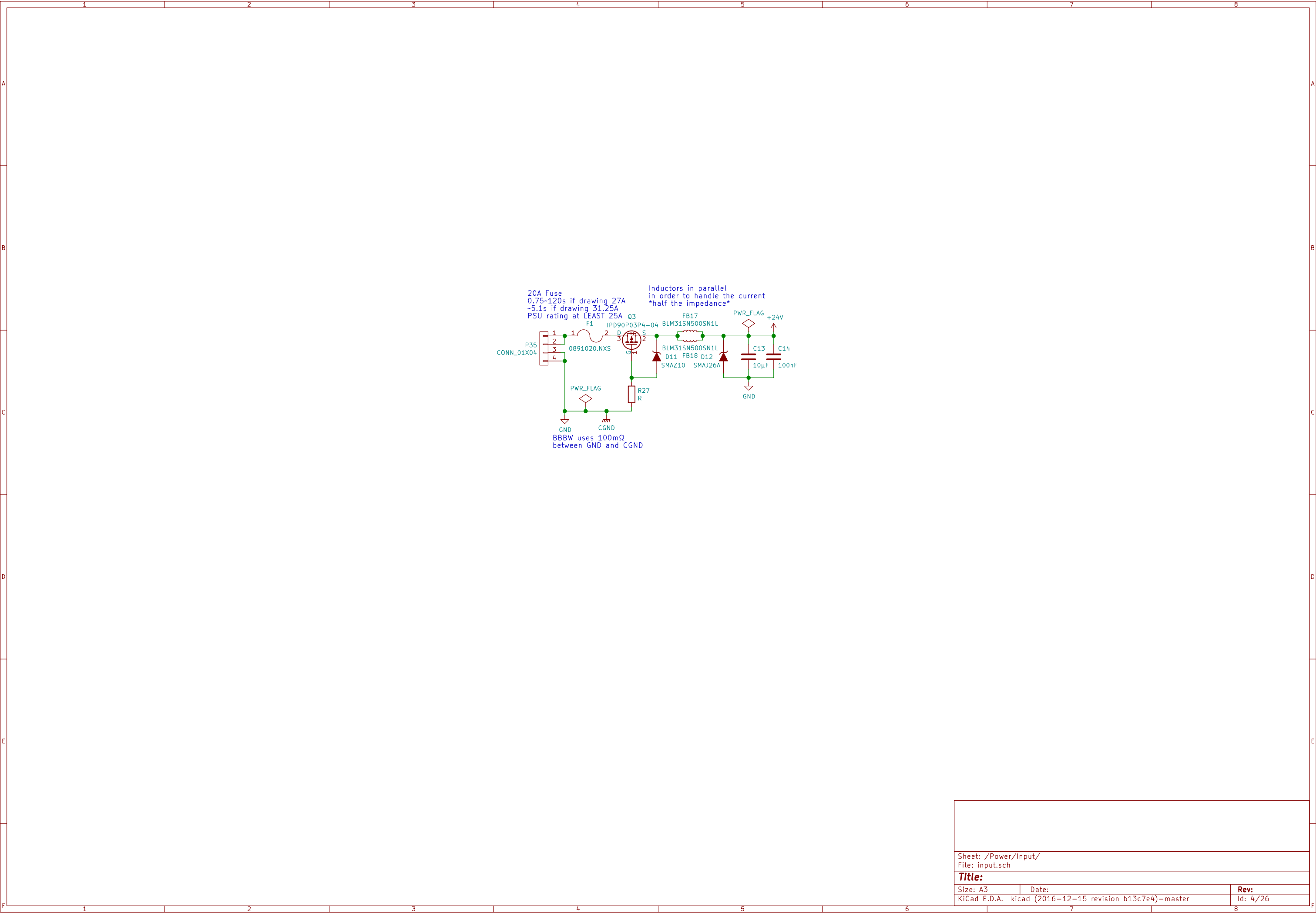
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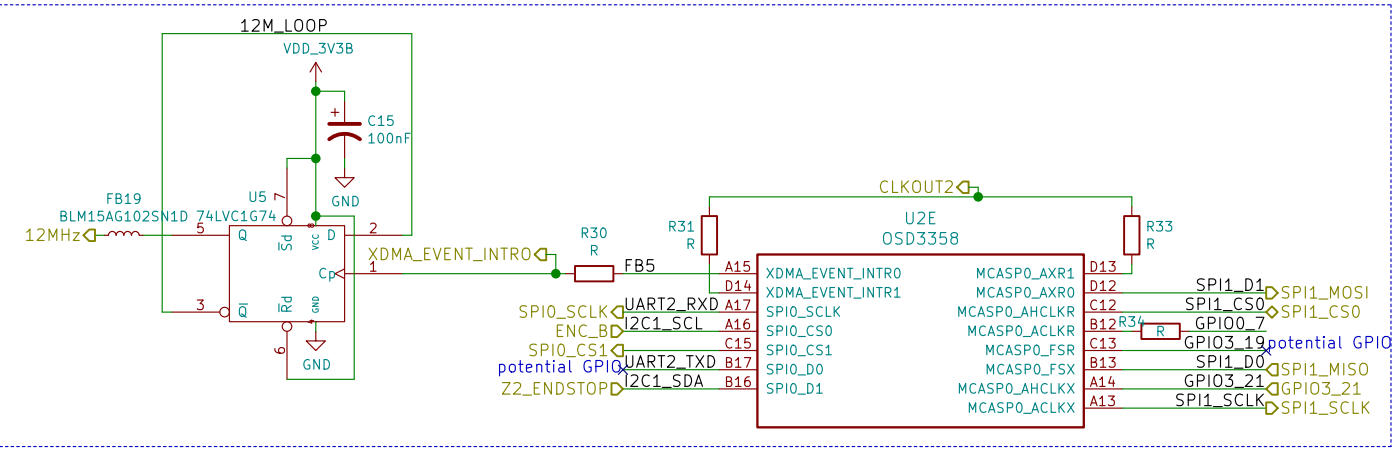
Id: 1/26

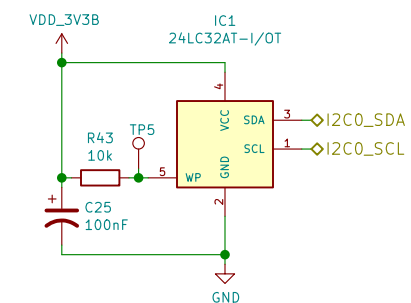
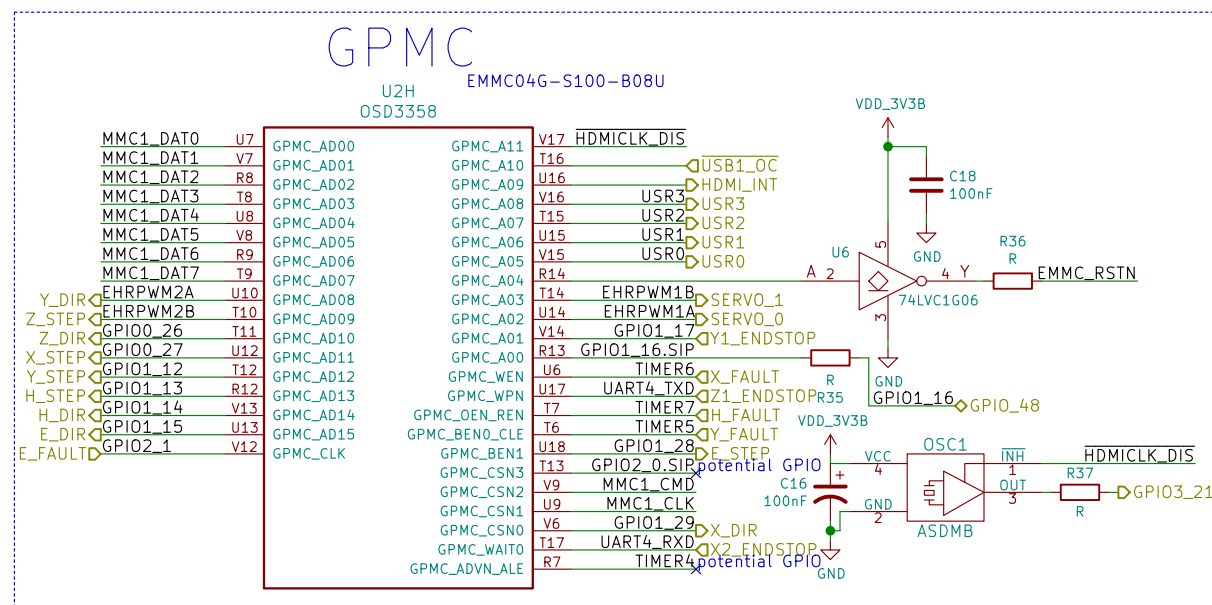
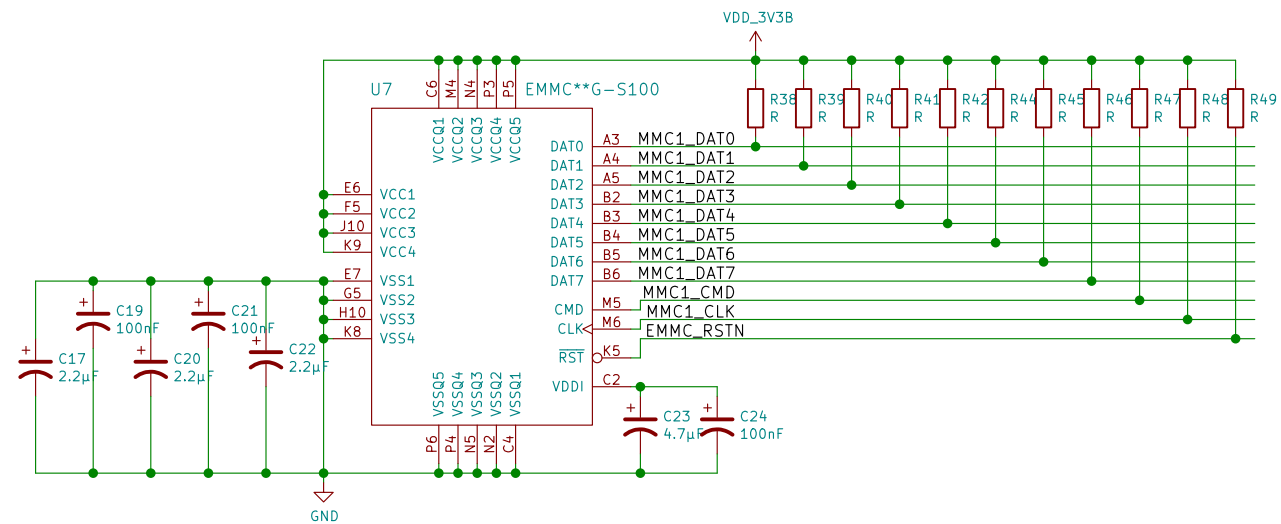


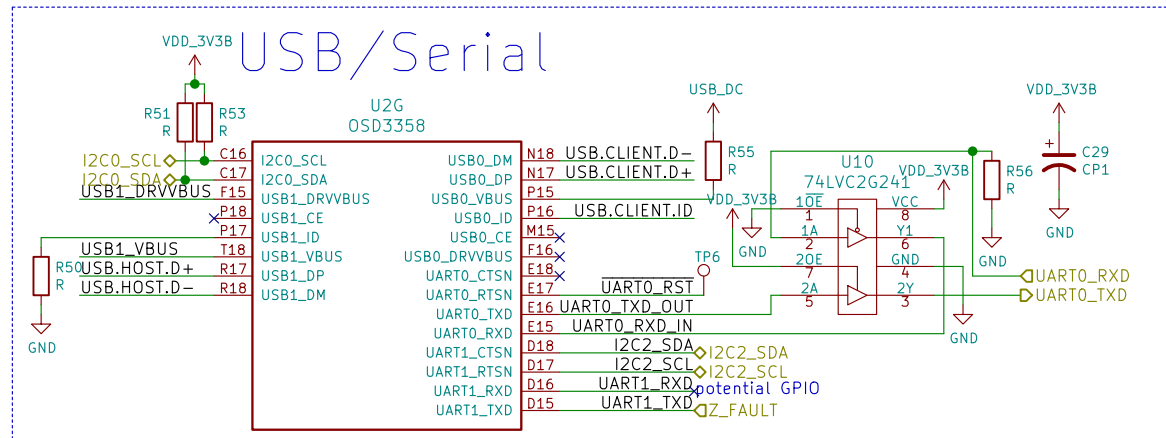




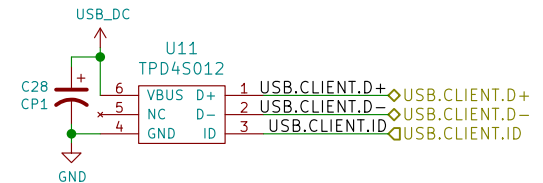
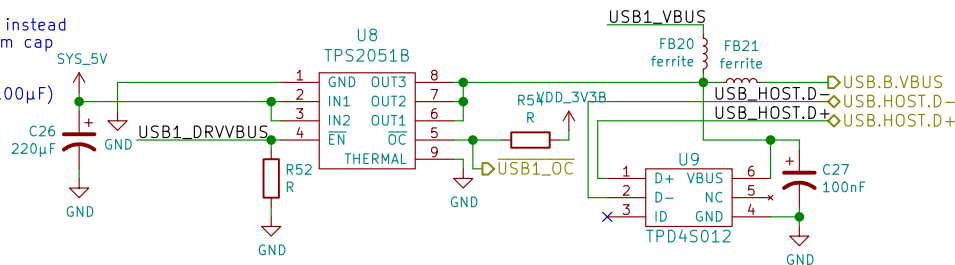
Unused







Used a tantalum cap instead of the large aluminium cap TAJD227M010RNJ instead of AVE107M06D16T-F (100µF)



Sheet: /USB/  
File: usb.sch

Title:

Size: A4

Date:

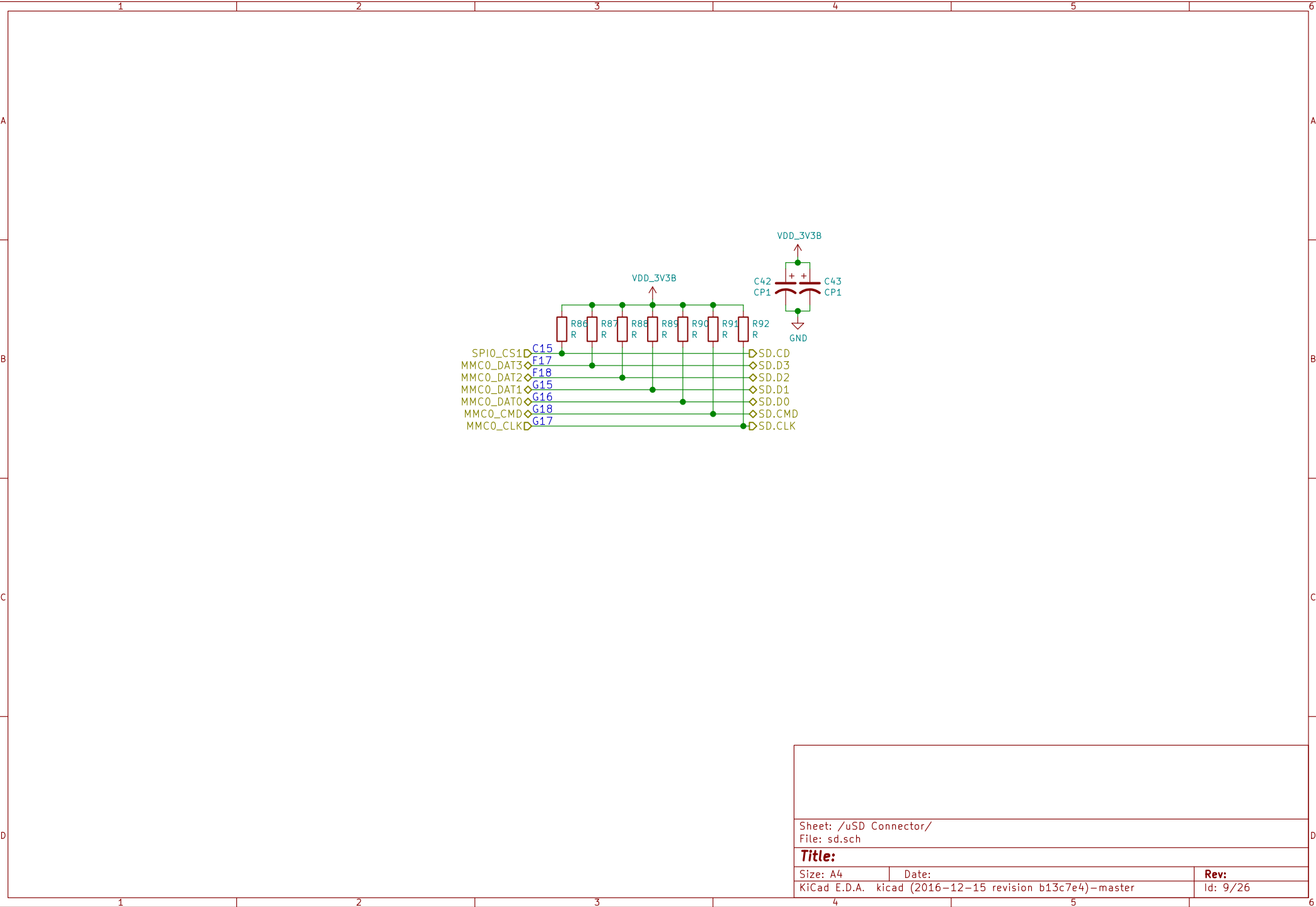
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Rev:

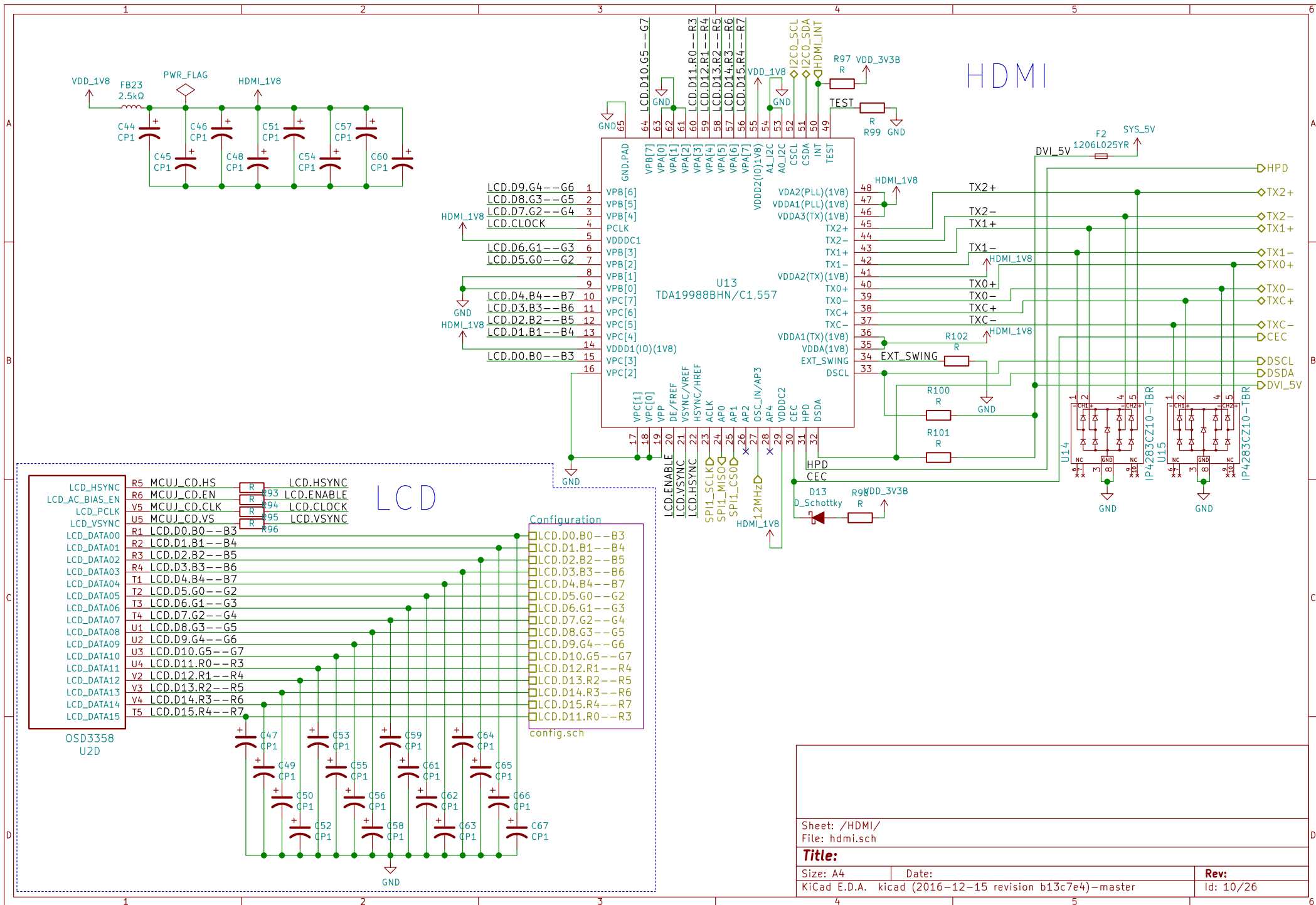
Id: 7/26

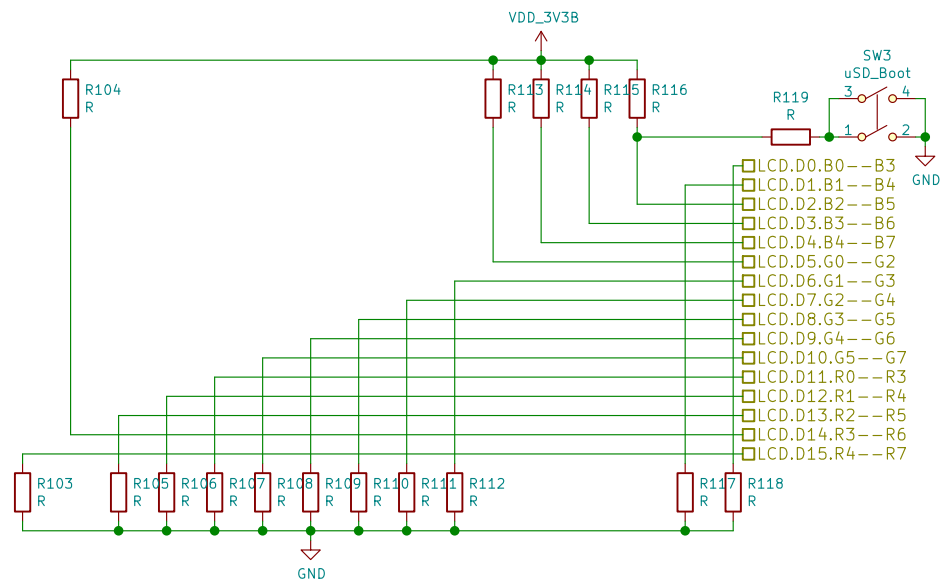






Sheet: /uSD Connector/ File: sd.sch		
Title:		
Size: A4	Date:	Rev:
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Sheet: /HDMI/Configuration/  
File: config.sch

**Title:**

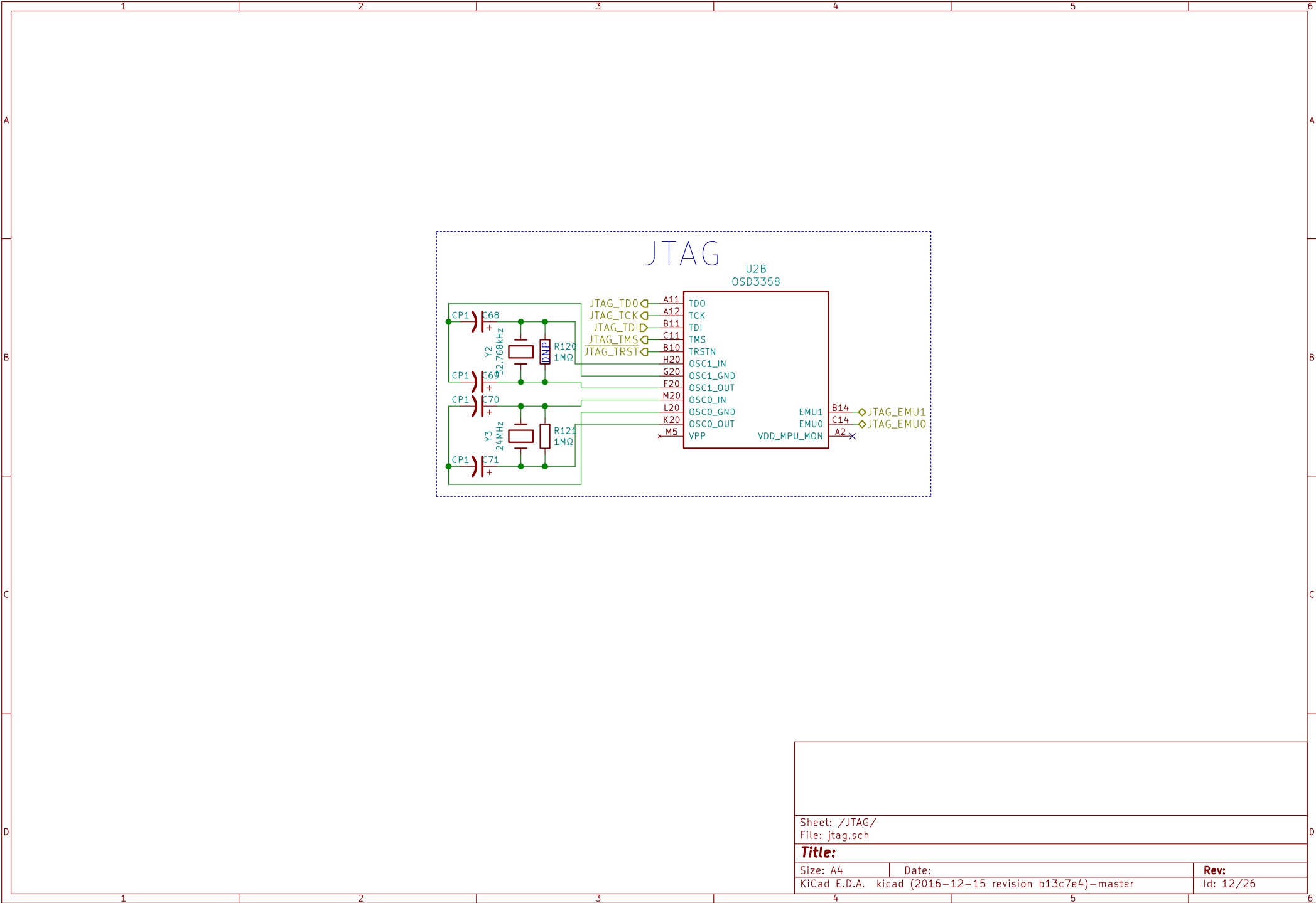
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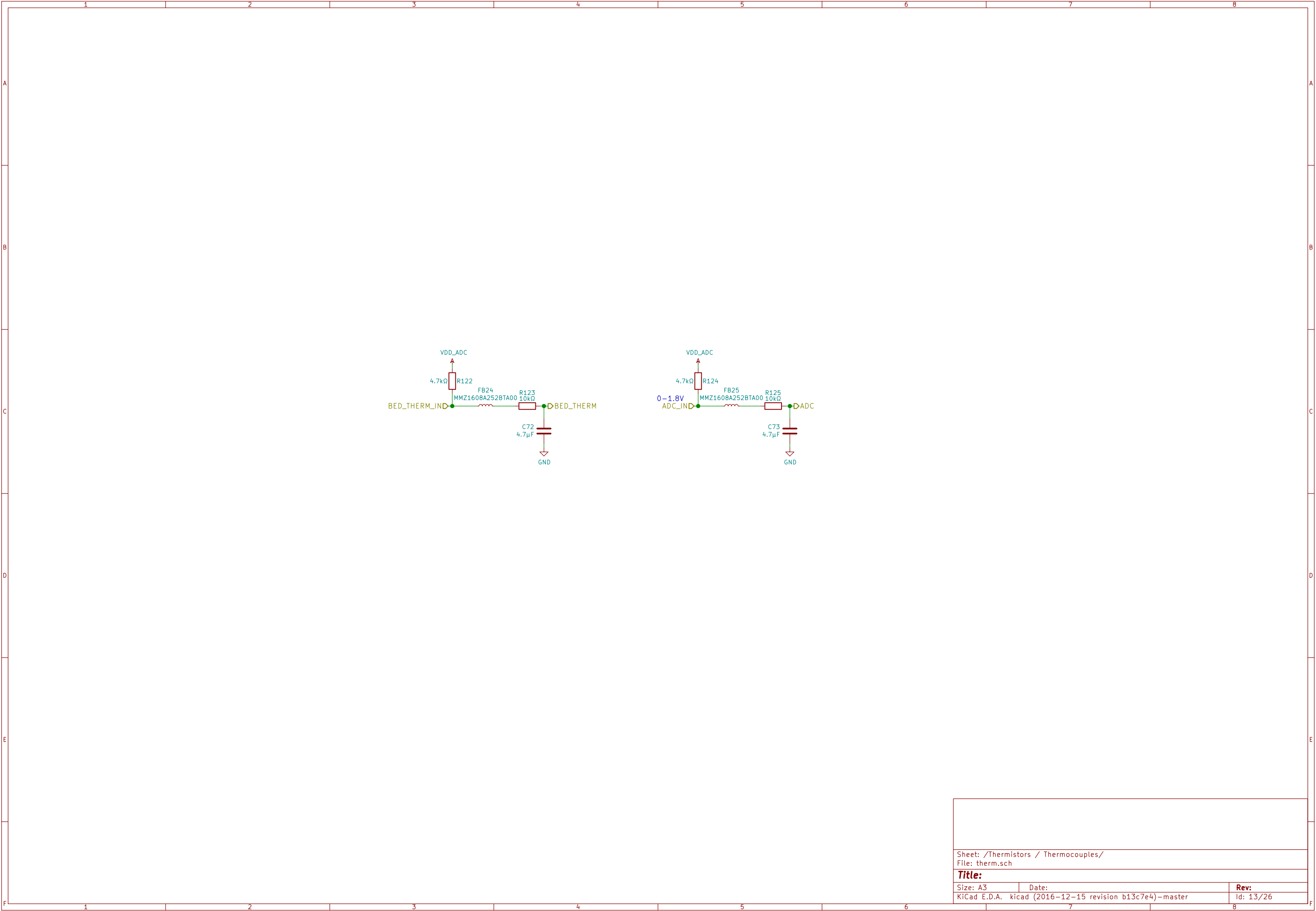
Date:

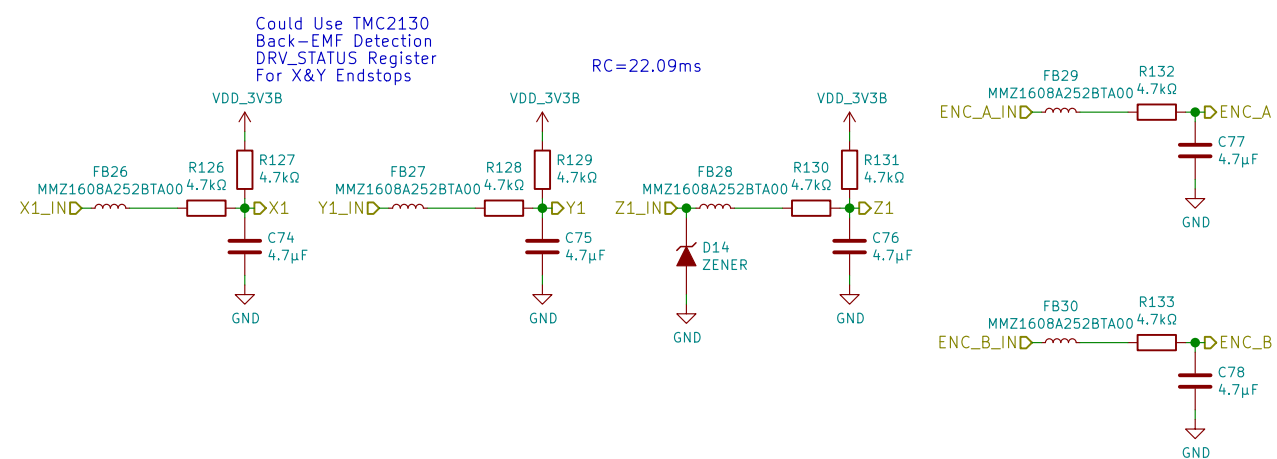
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**Rev:**

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Sheet: /Endstops/  
File: endstop.sch

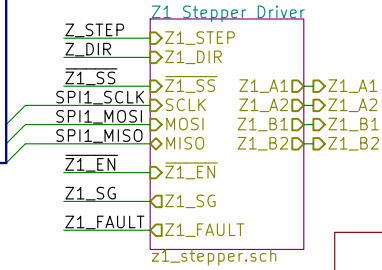
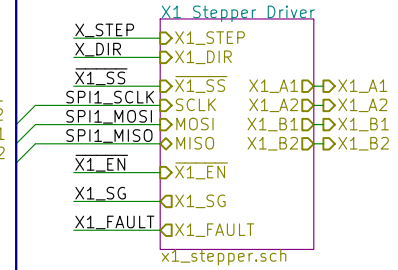
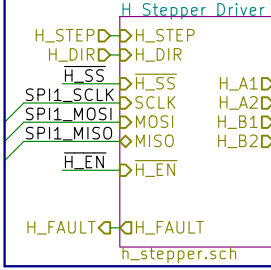
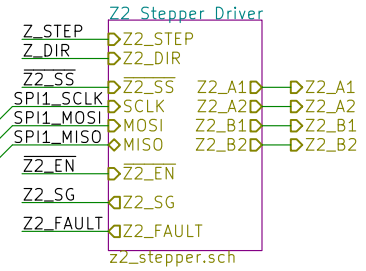
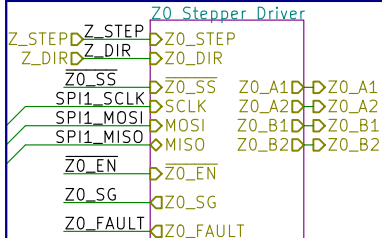
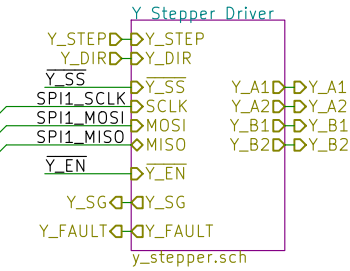
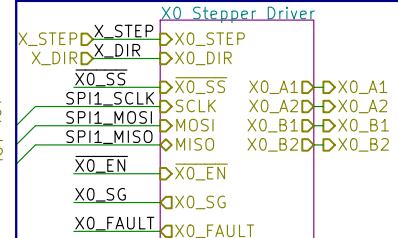
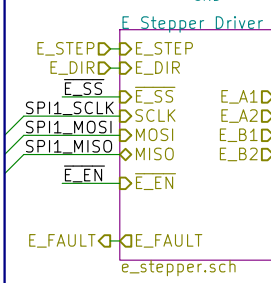
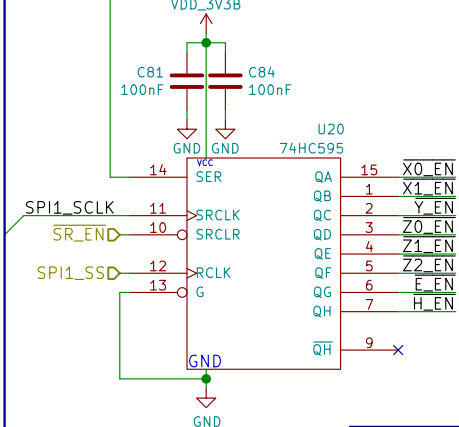
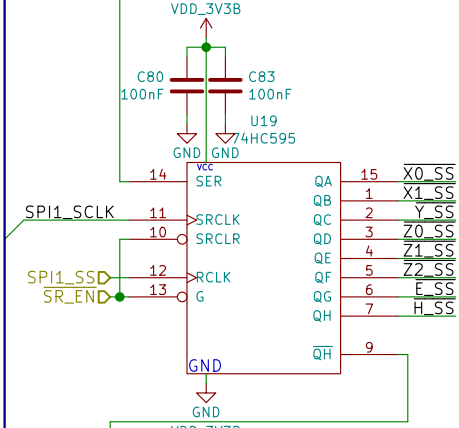
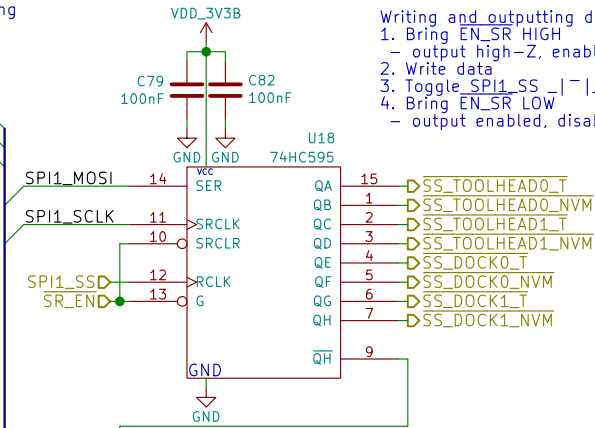
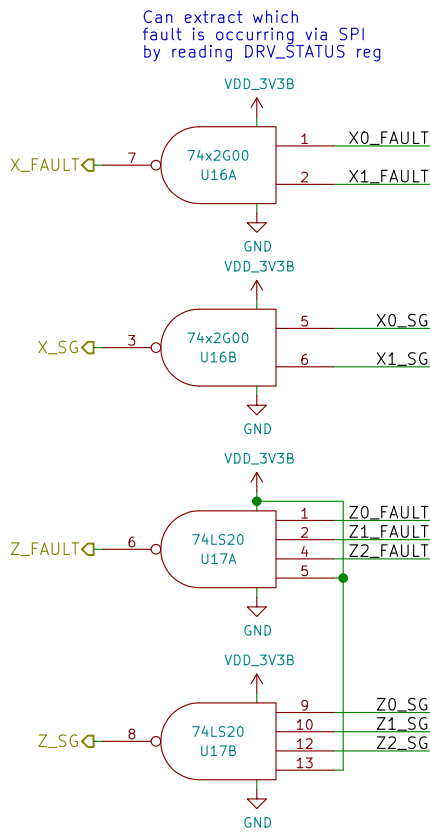
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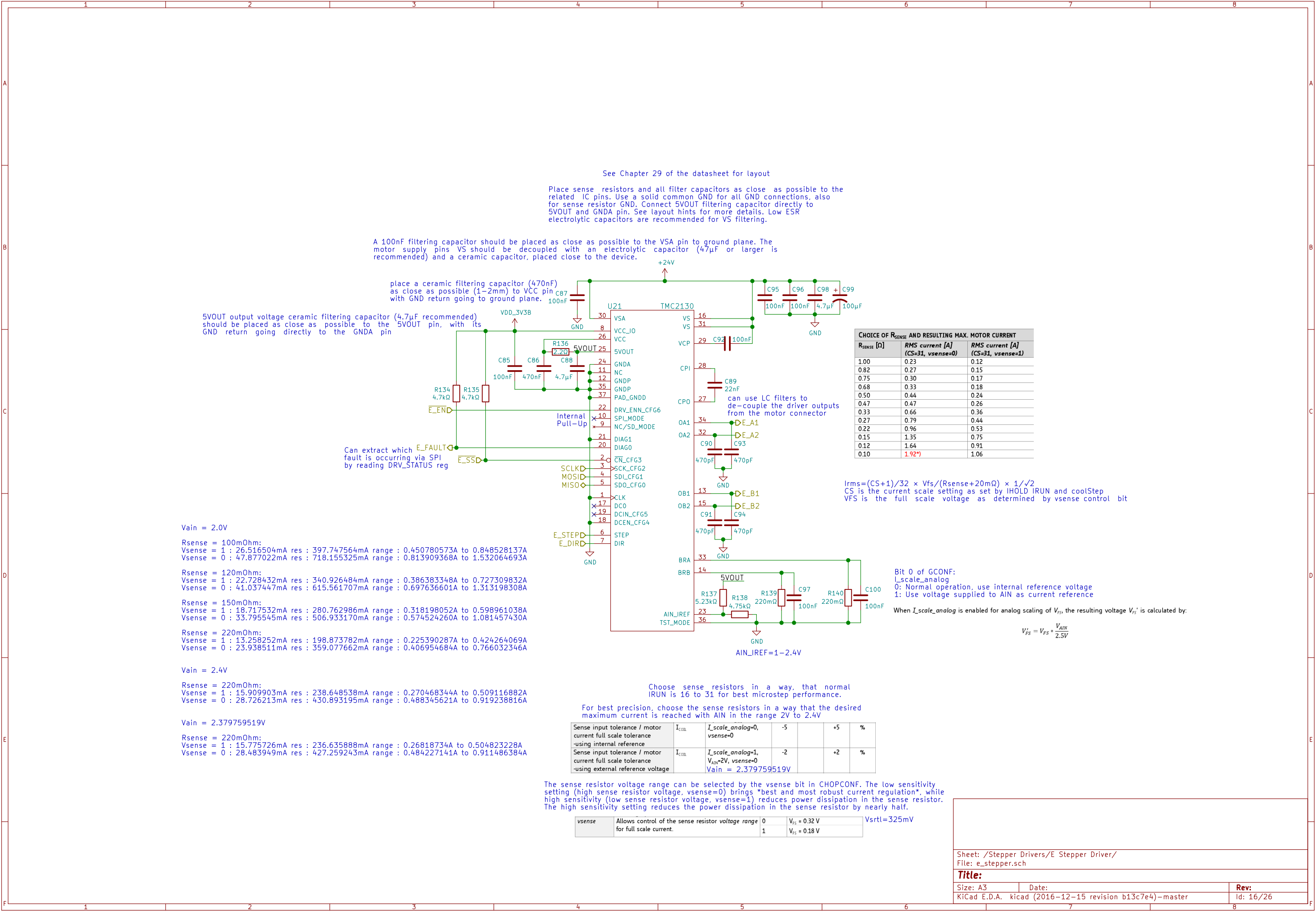
Size: A3

Size: A3	Date:	Rev:
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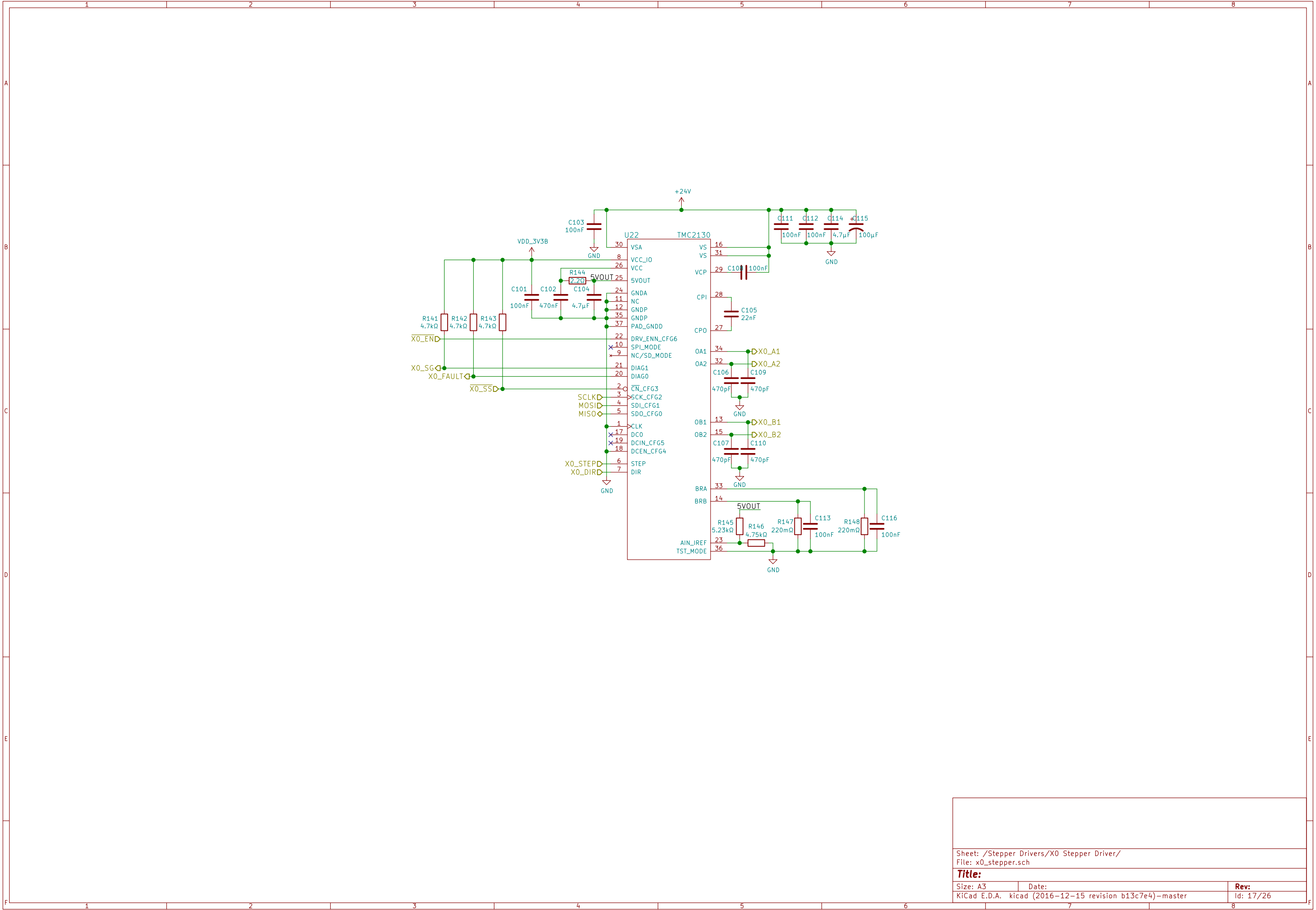
When EN\_SR transitions from LOW to HIGH each D-FF of the shift-register come out of their reset states and the output is set to high-Z, ready for writing  
When EN\_SR transitions from HIGH to LOW each D-FF of the shift-register goes into their reset states and the output is enabled, SS/EN selected  
SPI1\_SS captures the data in the shift register and is ready to be driven by the second stage of D-FFs

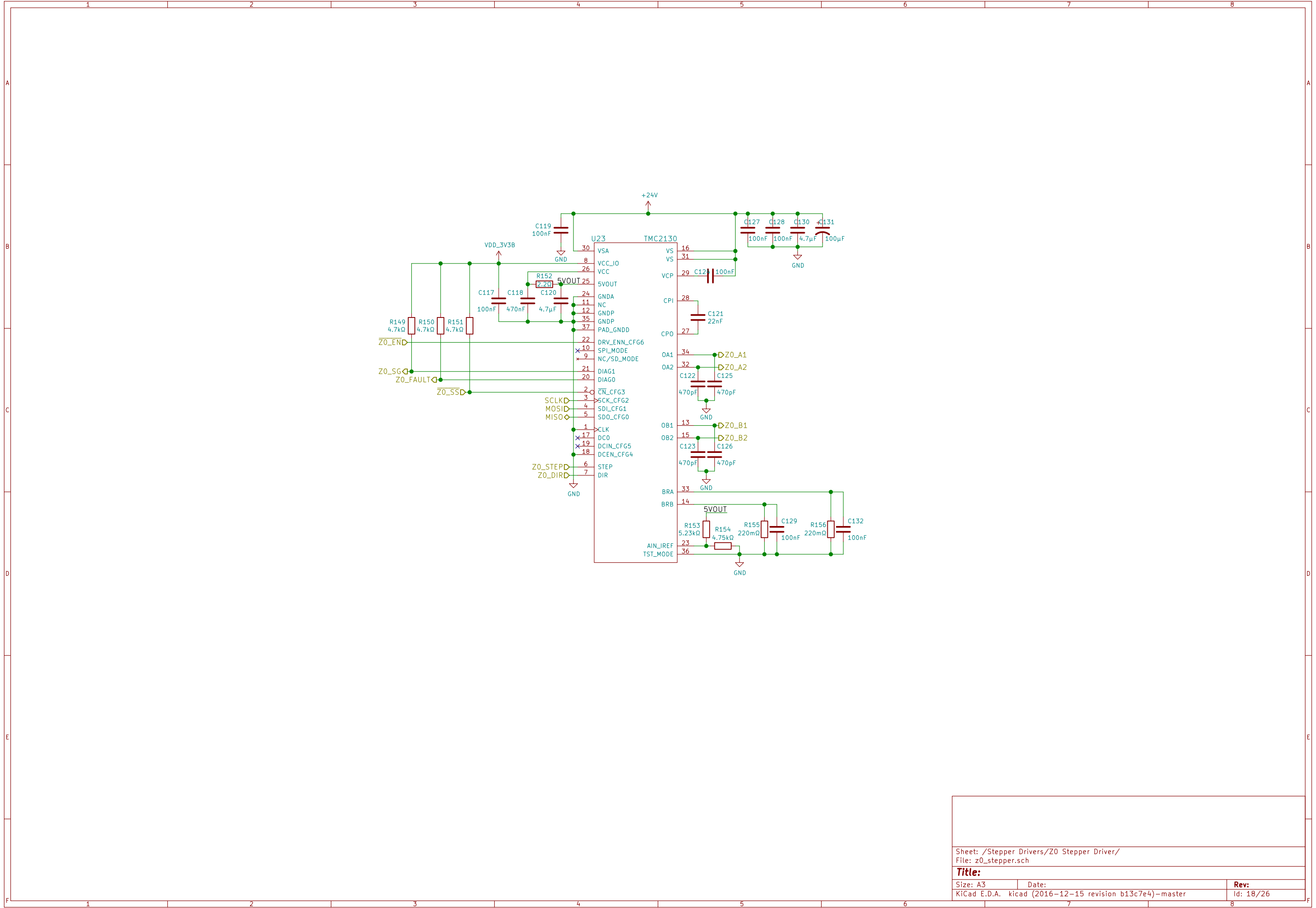
Writing and outputting data:  
1. Bring EN\_SR HIGH  
- output high-Z, enables all motors  
2. Write data  
3. Toggle SPI1\_SS -|\_|-  
4. Bring EN\_SR LOW  
- output enabled, disable specific motors/ready to configure







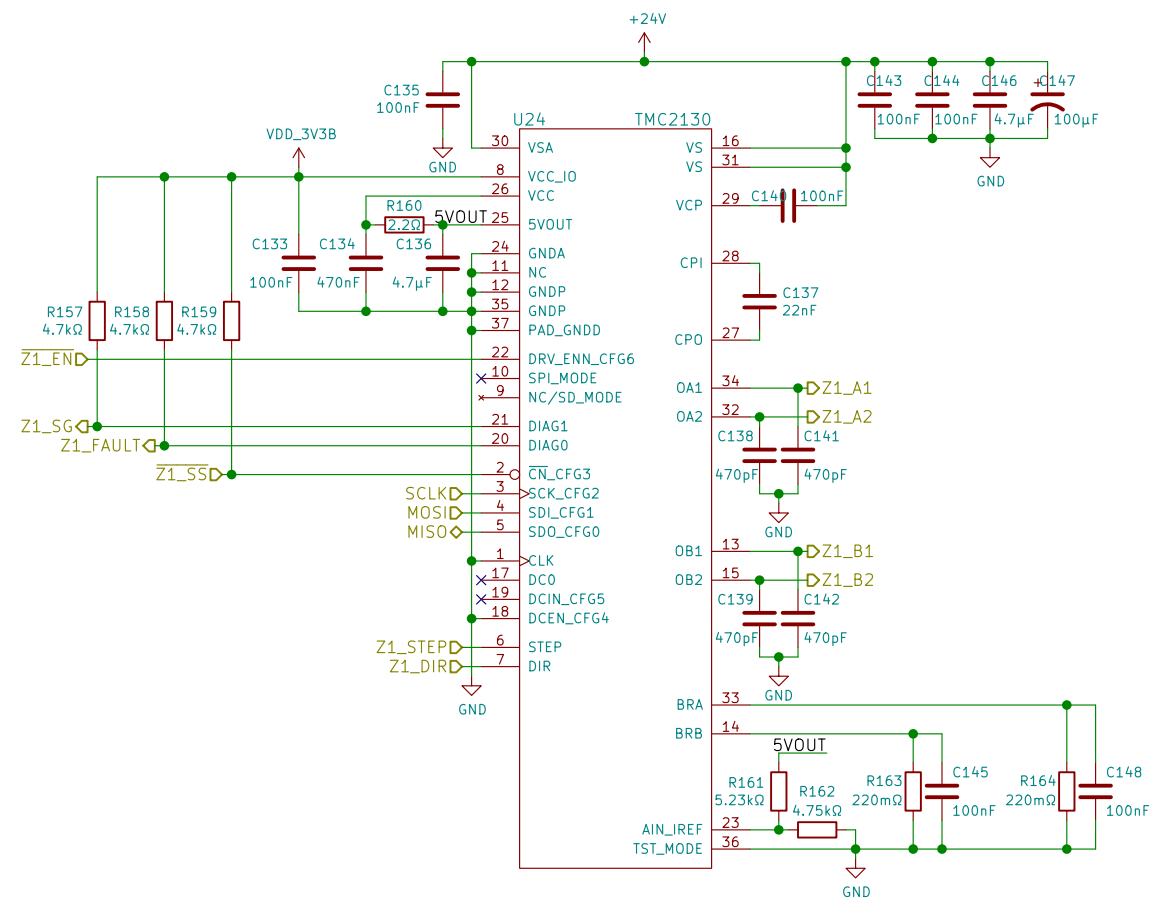




Sheet: /Stepper Drivers/Z0 Stepper Driver/  
File: z0\_stepper.sch

**Title:**

Size: A3	Date:	Rev:
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Sheet: /Stepper Drivers/Z1 Stepper Driver/  
File: z1\_stepper.sch

**Title:**

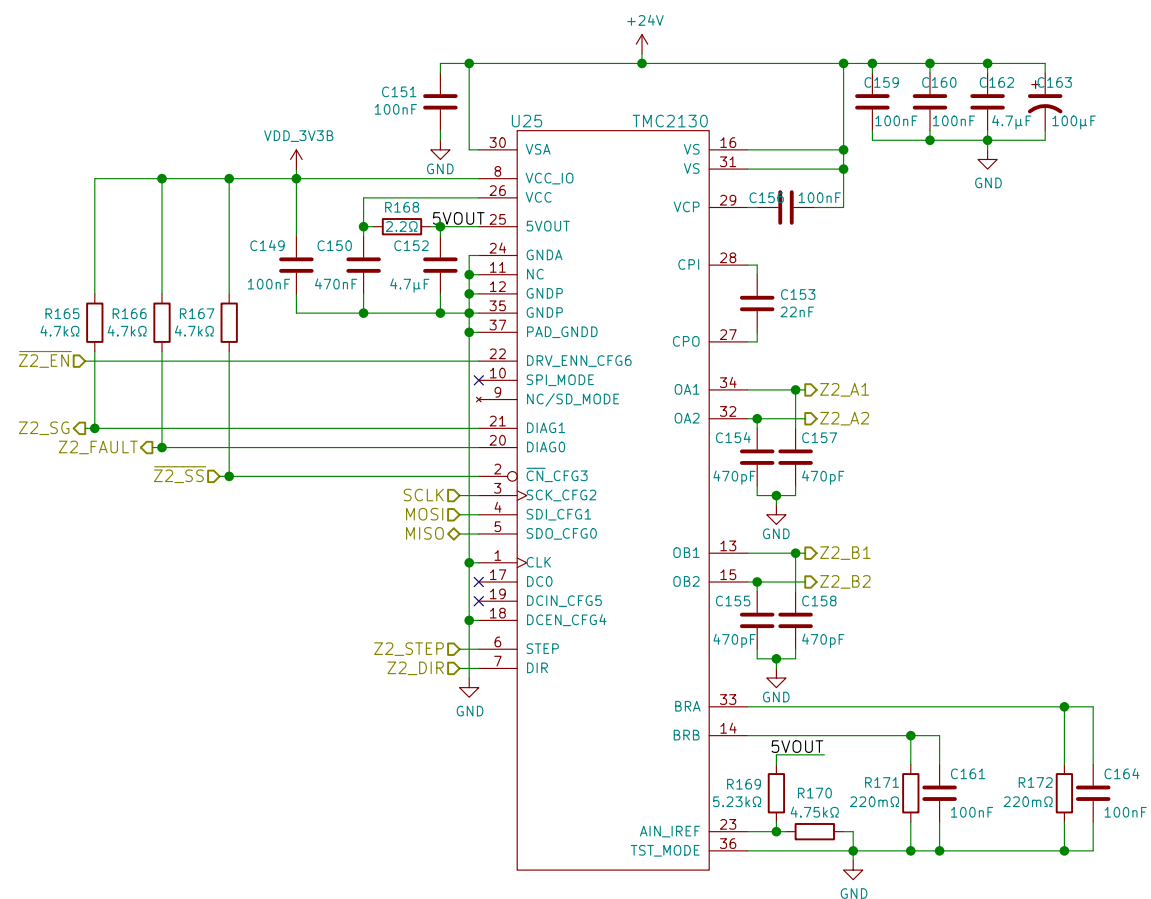
Size: A3

Date:

Size: AS	Date:
KiCad E.D.A. kicad (2016-12-15 revision b13c7e4)-master	

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Id: 19/26



Sheet: /Stepper Drivers/Z2 Stepper Driver/  
File: z2\_stepper.sch

**Title:**

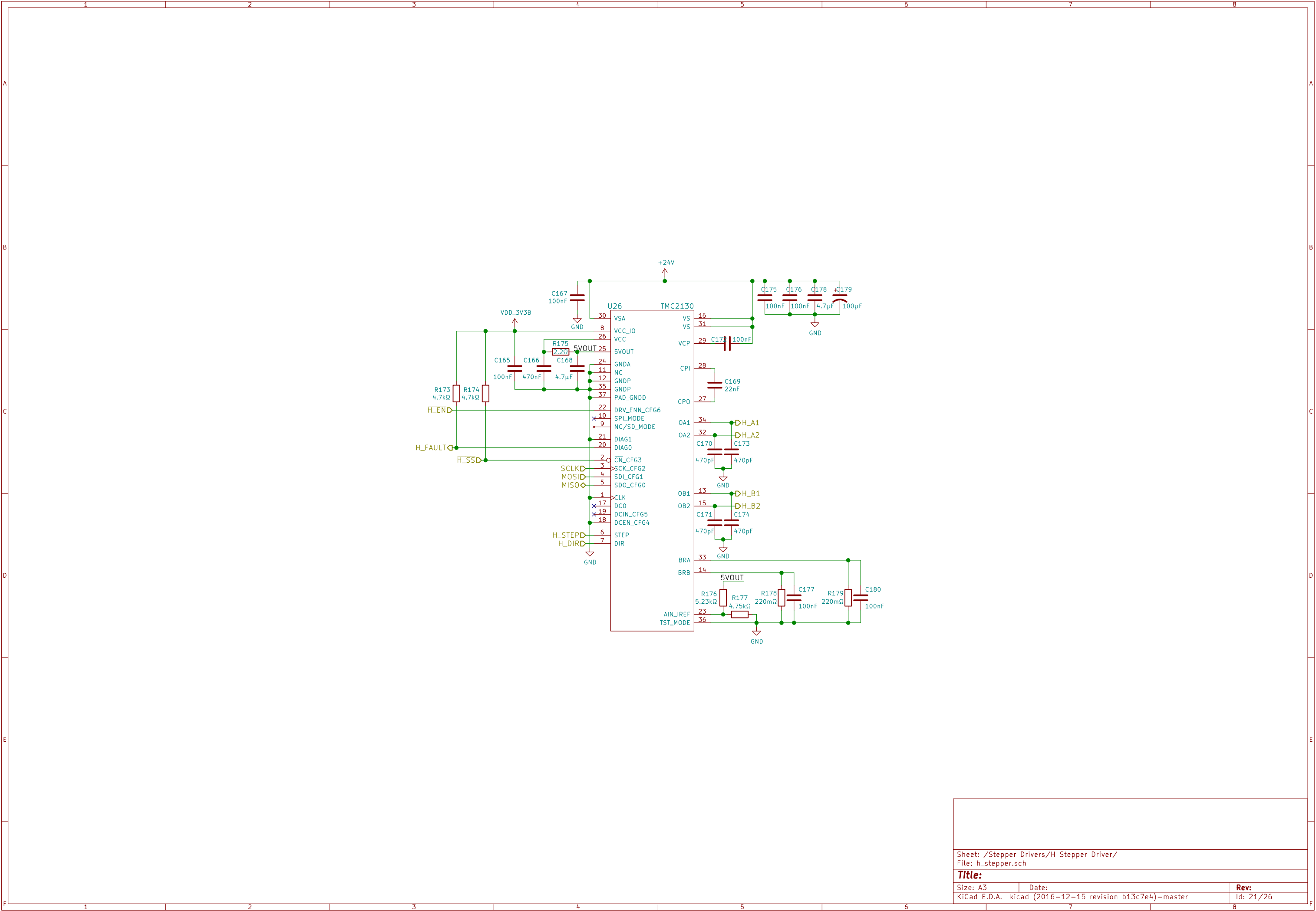
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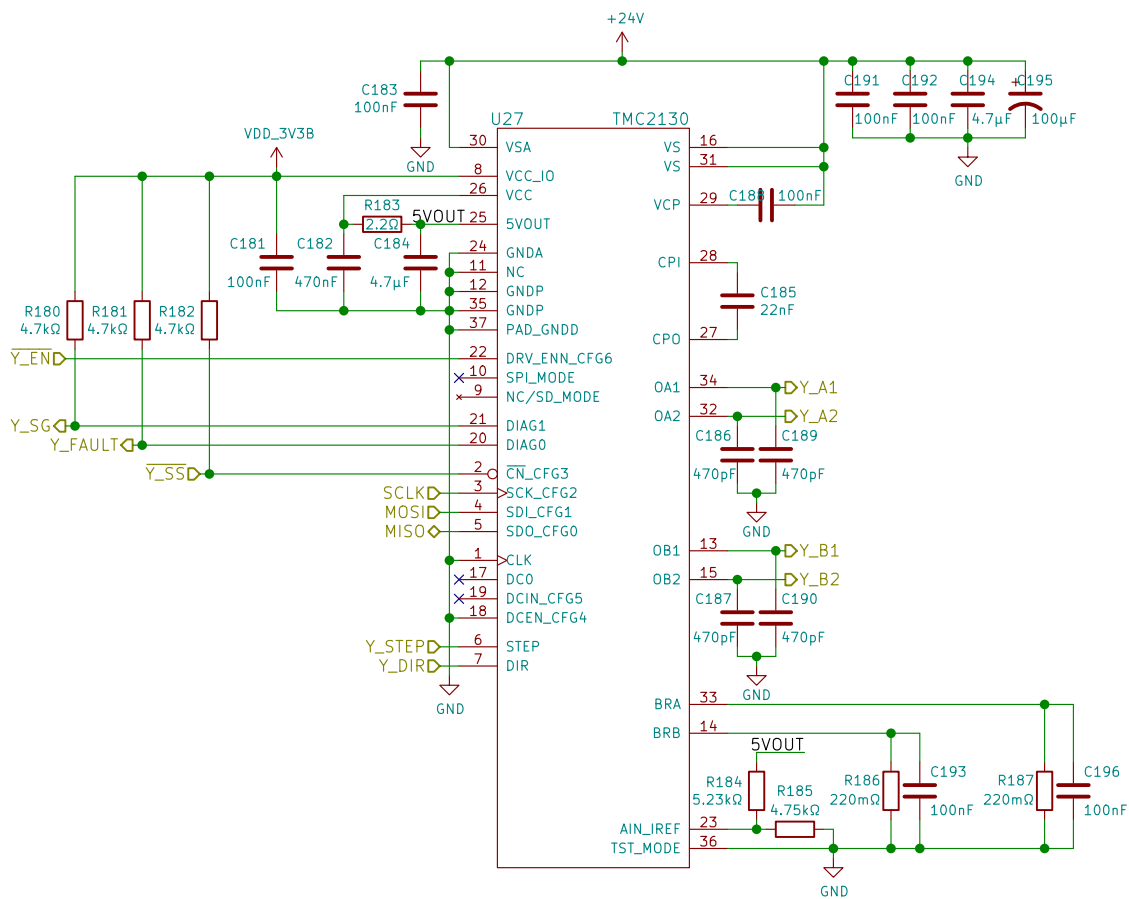
Date:

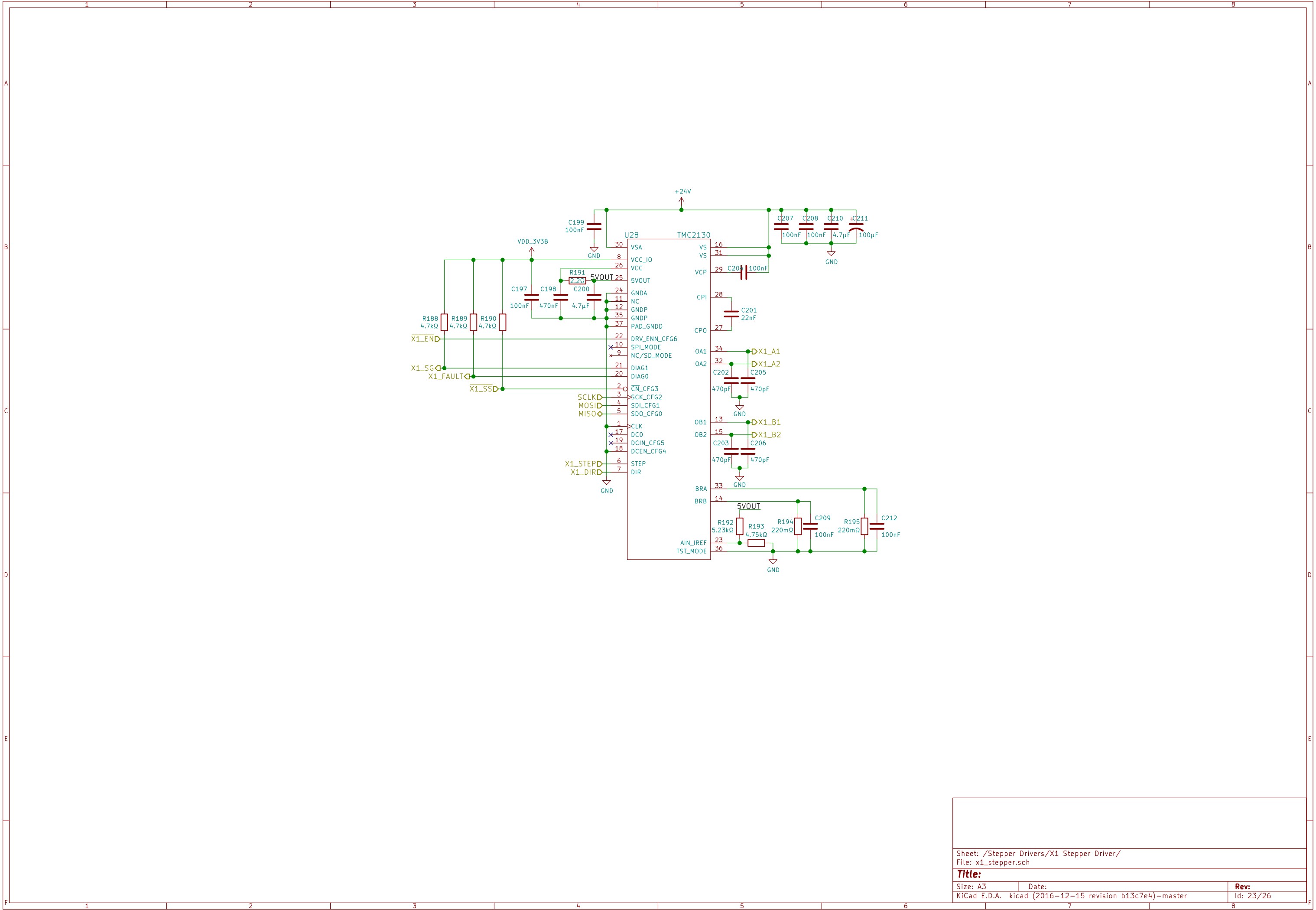
Size: A5	Date:
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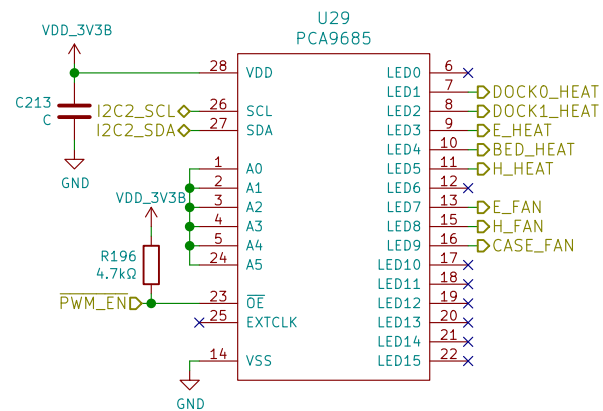
Rev:

Id: 20/26









Sheet: /PWM/  
File: pwm.sch

**Title:**

Size: A4

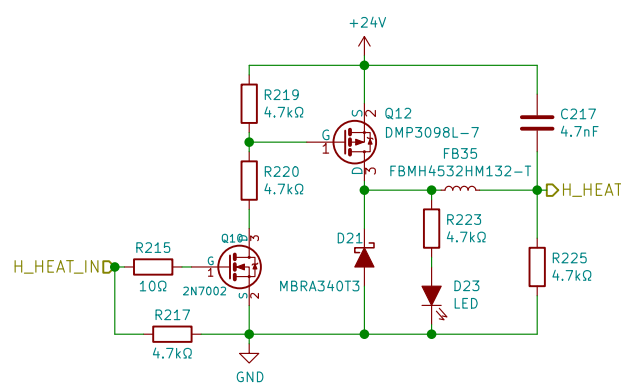
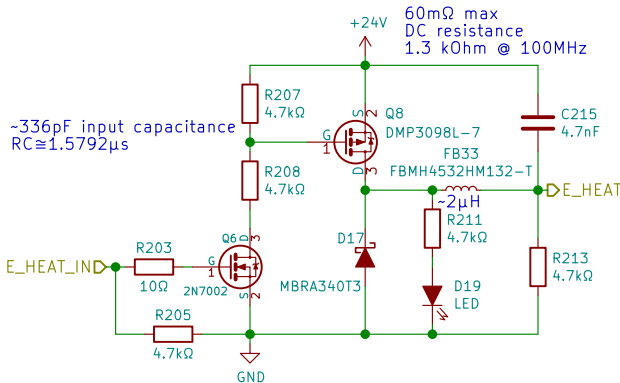
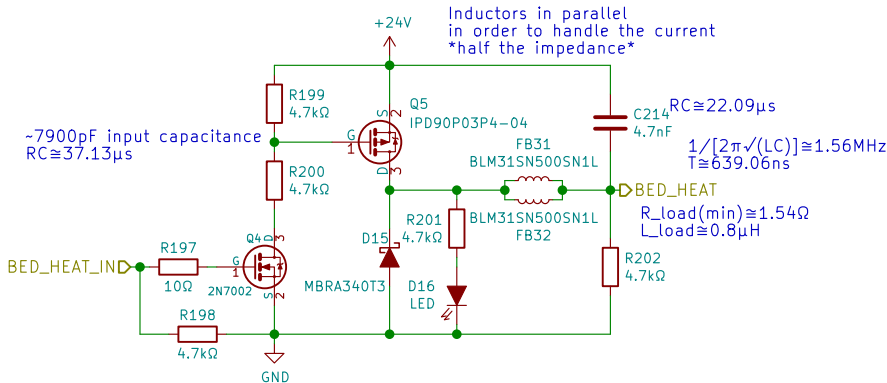
Date:

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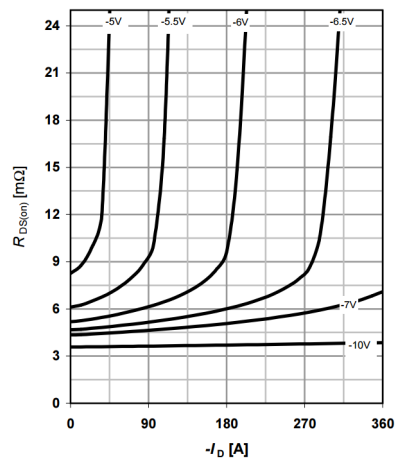




#### 6 Typ. drain-source on-state resistance

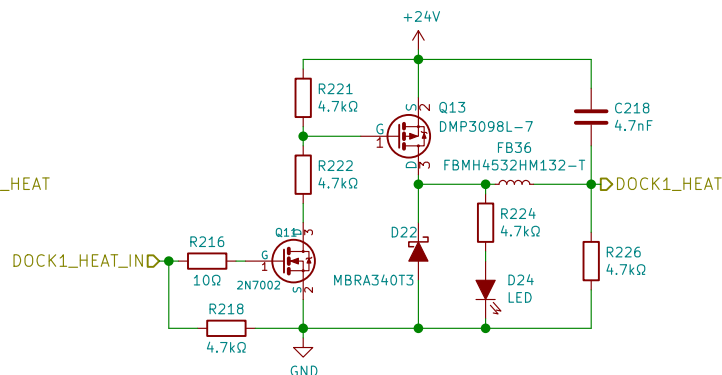
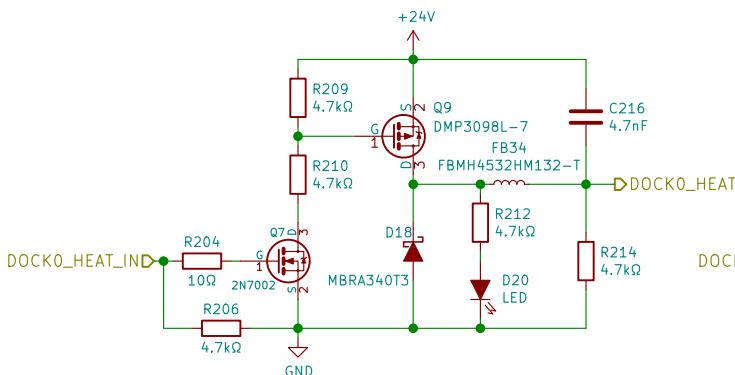
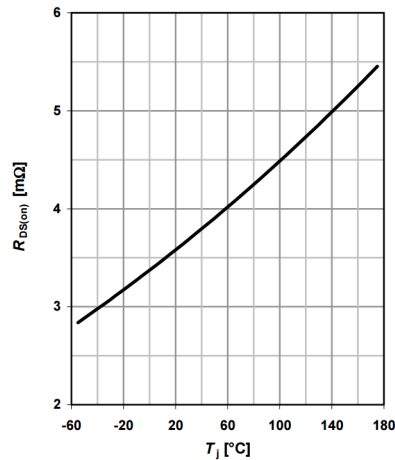
$$R_{\text{DS(on)}} = (I_D); T_J = 25^\circ\text{C}$$

parameter:  $V_{\text{GS}}$



#### 8 Typ. drain-source on-state resistance

$$R_{\text{DS(on)}} = f(T_J); I_D = -90\text{ A}; V_{\text{GS}} = -10\text{ V}$$



Sheet: /Heaters/  
File: heater.sch

**Title:**

Size: A3

Date:

**Rev:**

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