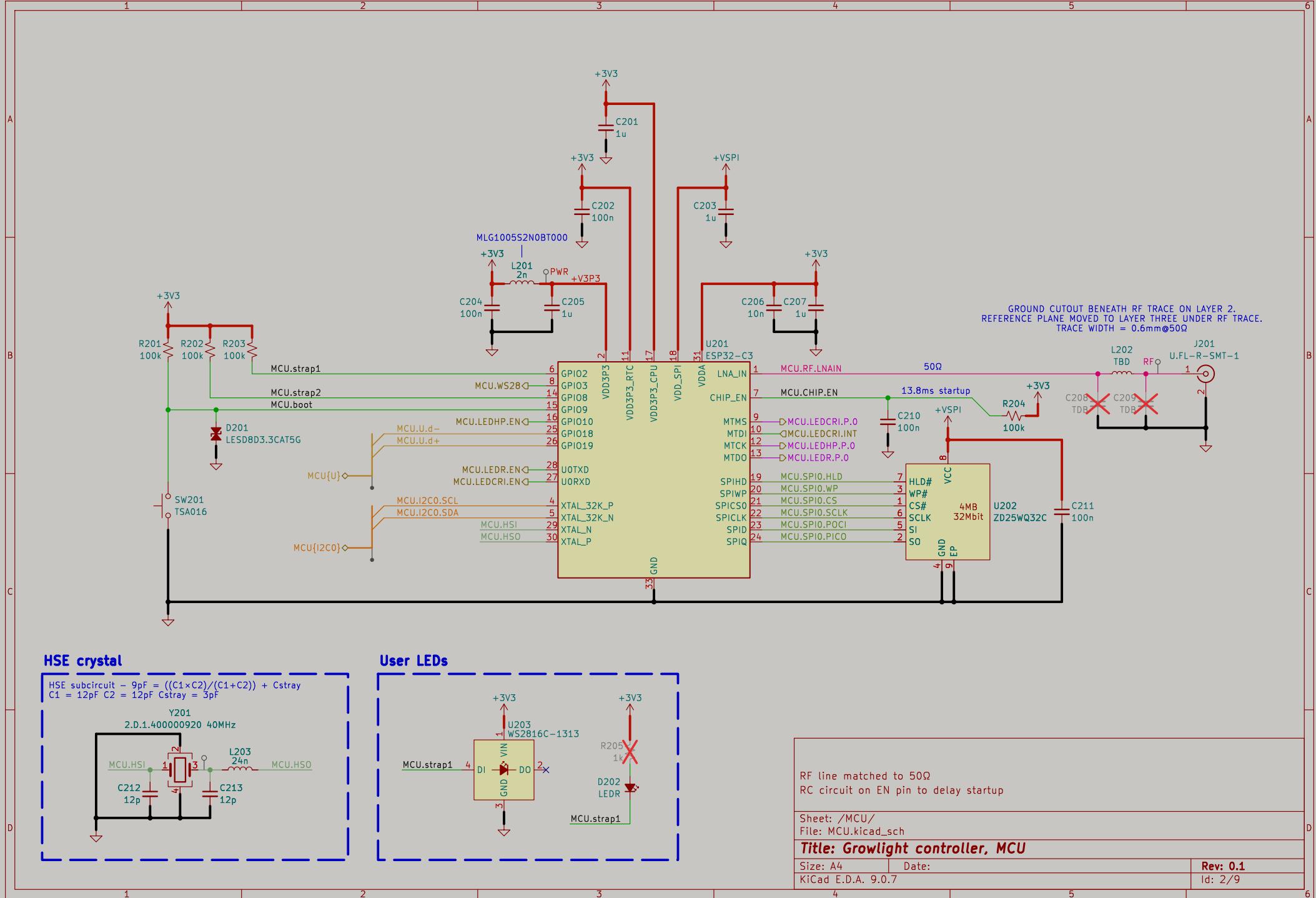
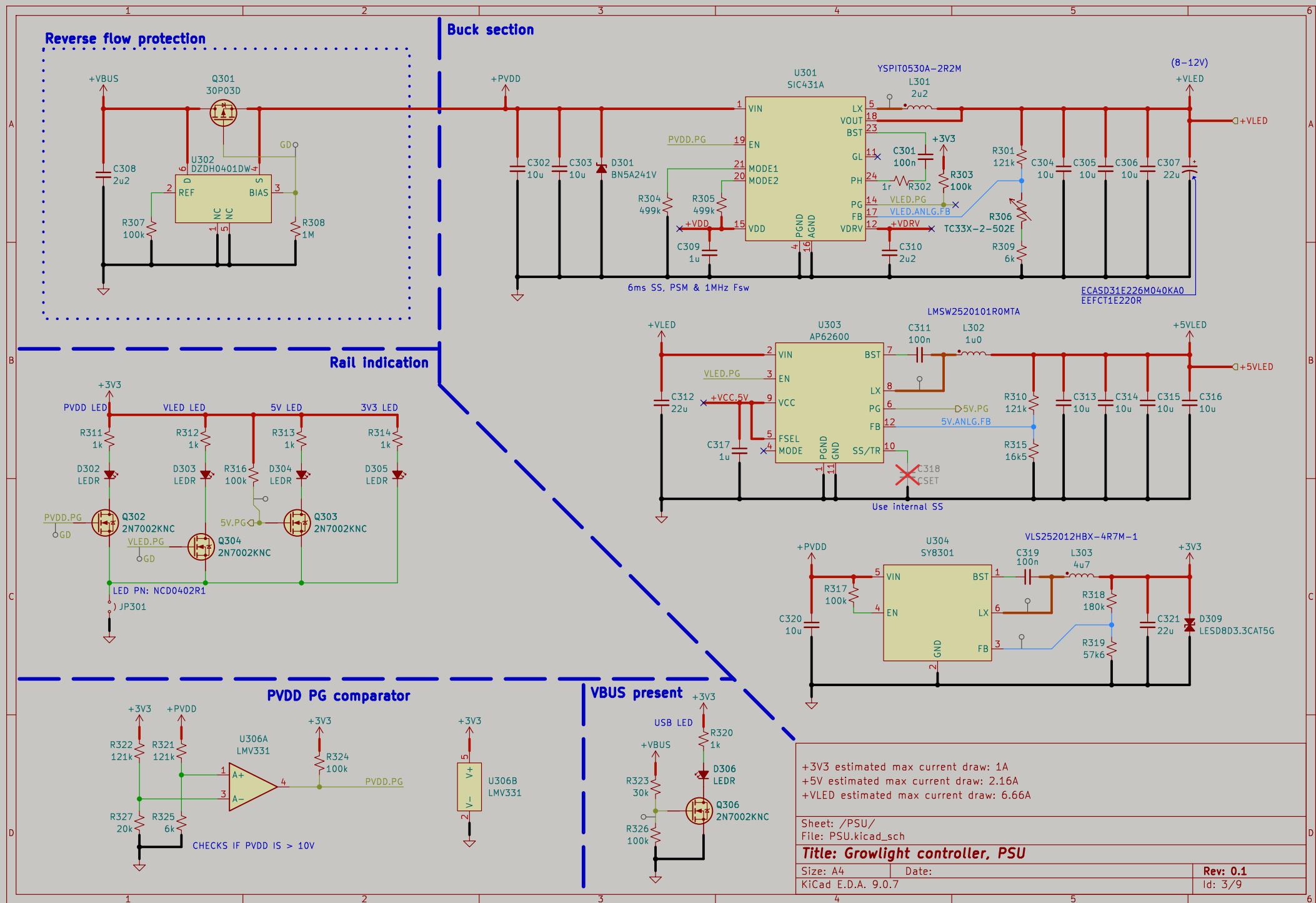


1 2 3 4 5 6





A

A

B

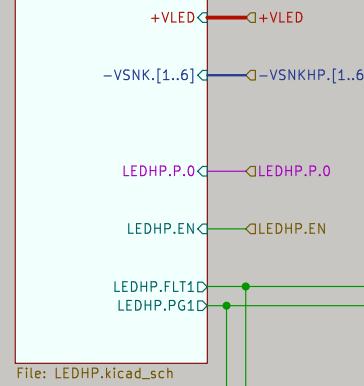
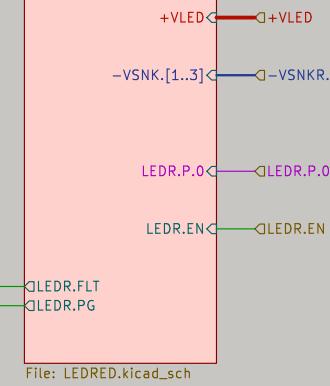
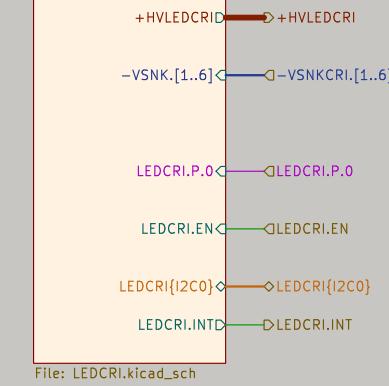
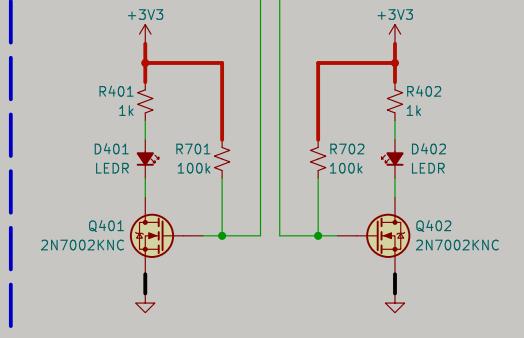
B

C

C

D

D

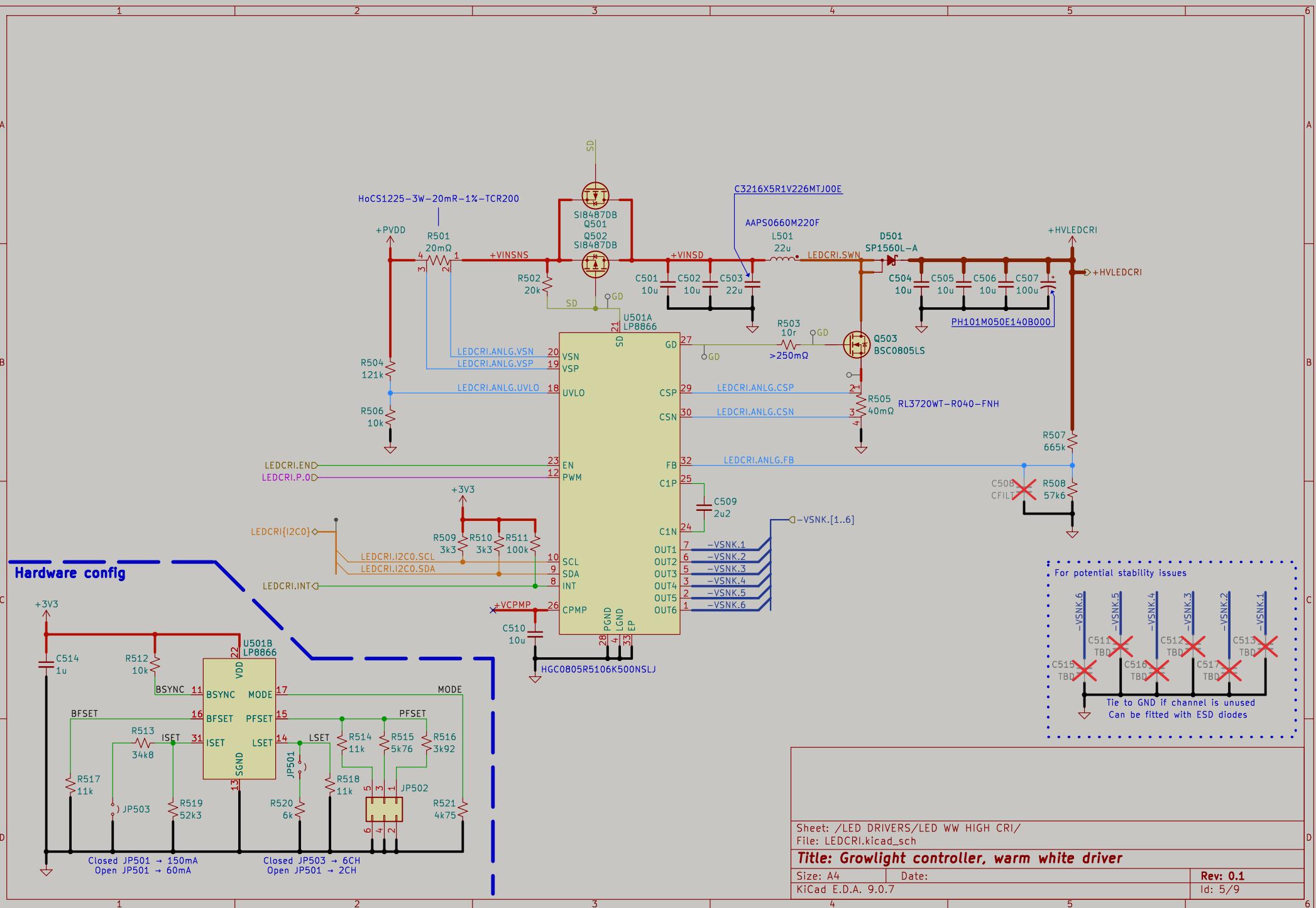
LED CW HIGH POWER**LED RED****LED WW HIGH CRI****FLT & PG LEDs**

Sheet: /LED DRIVERS/
File: LEADDIVERS.kicad_sch

Title: Growlight controller, overview page

Size: A4 Date:
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Rev: 0.1
Id: 4/9



A

A

B

B

C

C

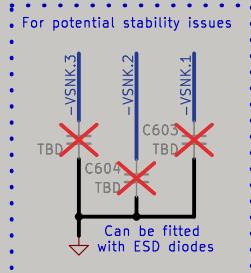
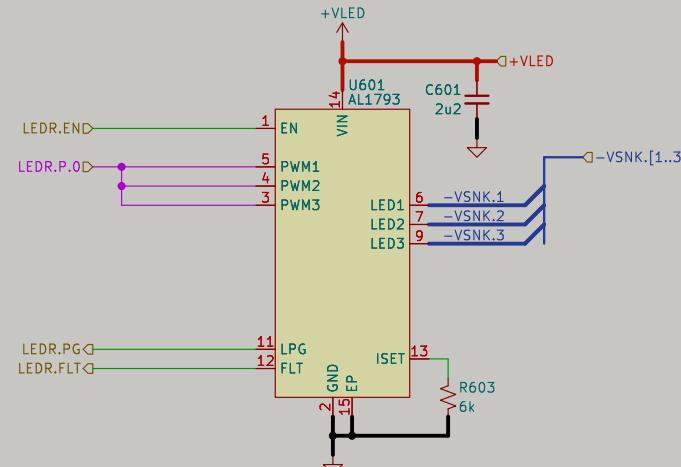
D

D

For 500mA LED current, RSET should be 6K

$$2000 \times (1.5/6) = 500\text{mA} \quad (2000 \times (V_{ref}/RSET) = I_{LED})$$

Minimum VREG headroom of 0.47V



$V_{DROPPtyp} @ 500\text{mA} = 470\text{mV}$
 $RSET = 6\text{K} \rightarrow 500\text{mA IREG}$

Sheet: /LED DRIVERS/LED RED/
File: LEDRED.kicad_sch

Title: Growlight controller, red driver

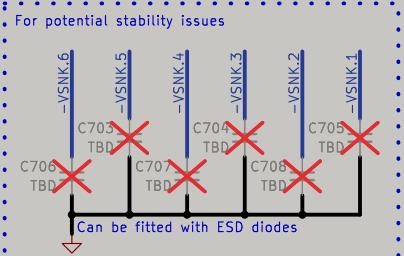
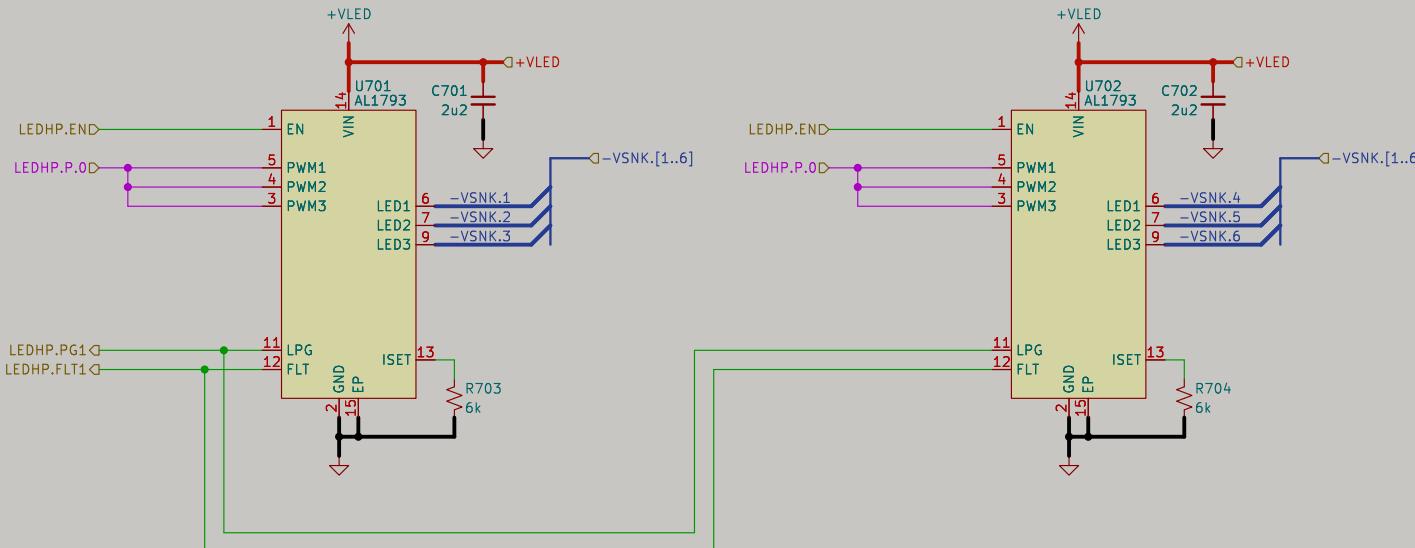
Size: A4 Date:

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Rev: 0.1

Id: 6/9

For 500mA LED current, RSET should be 6K
 $2000 \times (1.5/6) = 500\text{mA}$ ($2000 \times (\text{Vref}/\text{RSET}) = \text{ILED}$)
 Minimum VREG headroom of 0.47V



$\text{VDROPP}_{\text{typ}}@500\text{mA} = 470\text{mV}$
 $\text{RSET} = 6\text{K} \rightarrow 500\text{mA IREG}$

Sheet: /LED DRIVERS/LED CW HIGH POWER/
 File: LEDHP.kicad_sch

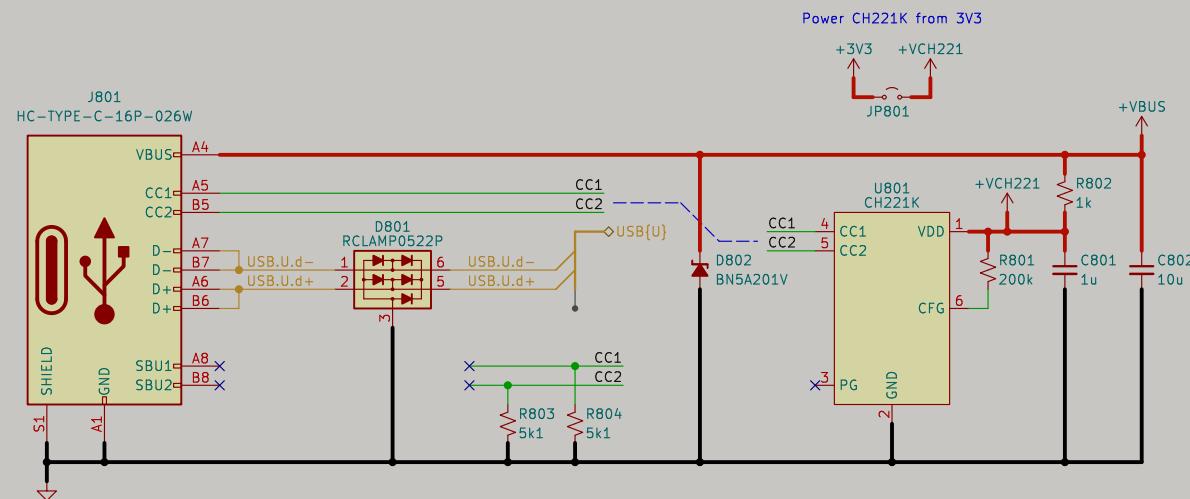
Title: Growlight controller, cold white driver

Size: A4 Date:

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Rev: 0.1

Id: 7/9



Resistance on CFG to VDD	Request-voltage
10kΩ	5V
20kΩ	9V
47kΩ	12V
100kΩ	15V
200kΩ	20V

VPDrequest = 20V

Sheet: /USB + PD/
File: USB+PD.kicad_sch

Title: Growlight controller, USB + PD page

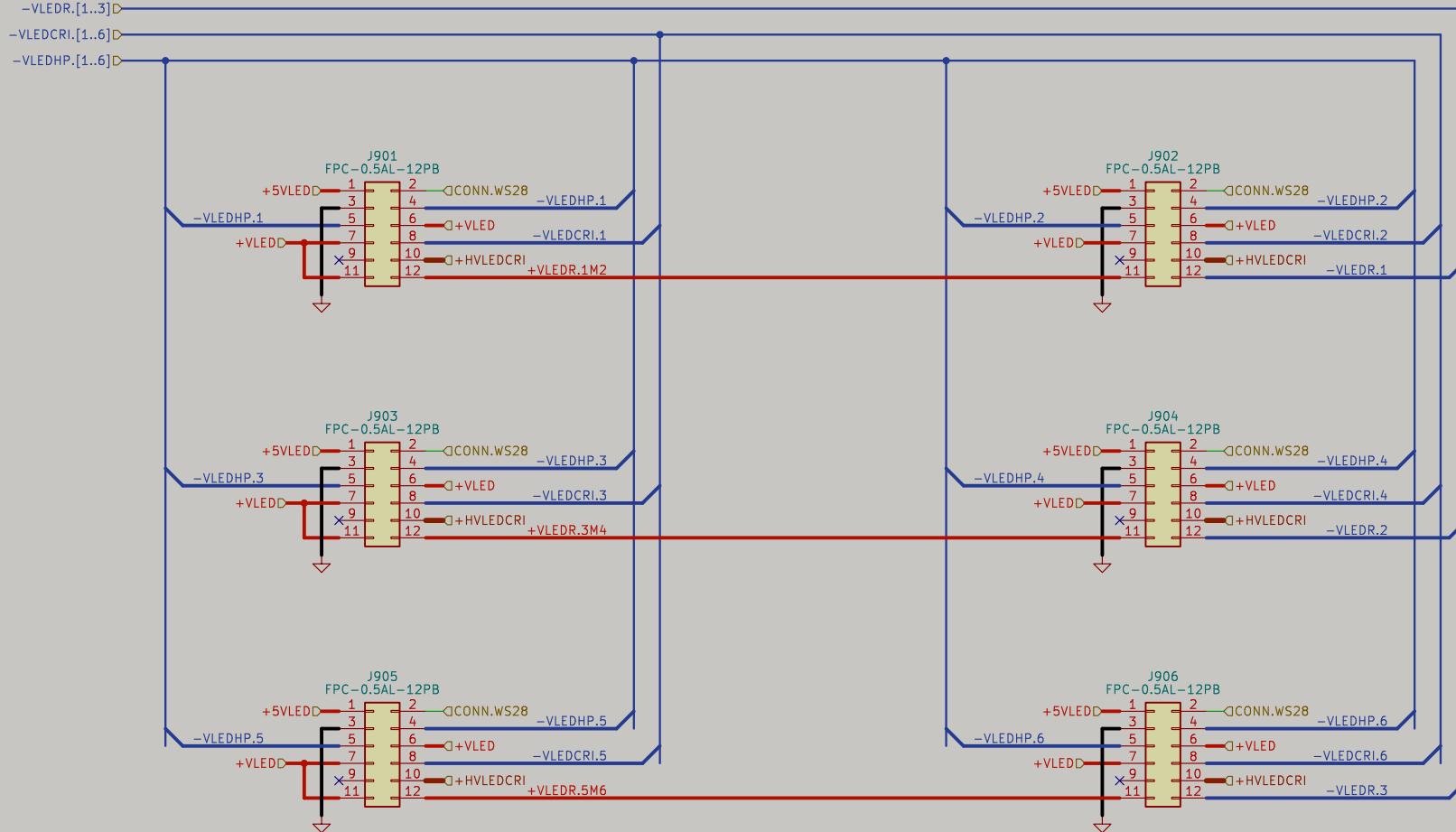
Size: A4 Date:
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Rev: 0.1
Id: 8/9

1 2 3 4 5 6

A

A



Sheet: /LED CONNECTORS/
File: LEDCONNECTORS.kicad_sch

Title: Growlight controller, connector page

Size: A4 Date:
KiCad E.D.A. 9.0.7

Rev: 0.1
Id: 9/9

1 2 3 4 5 6