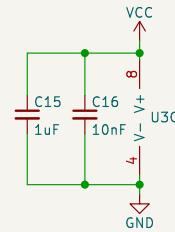
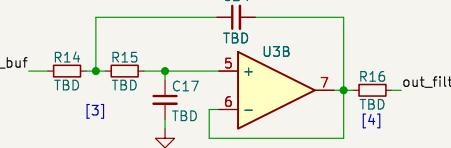
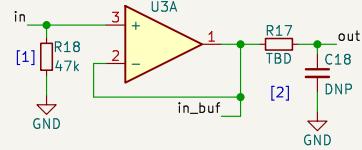


Sheet: /Voltage measurements/
File: volt_meas.kicad_sch

Title:

Size: A4 | Date:
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Inputs
in → in

Outputs
out → out
out_filt → out_filt

Sheet: /Current measurements/lia current sensor conditioning/
File: curr_sens_cond.kicad_sch

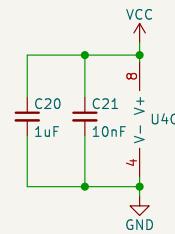
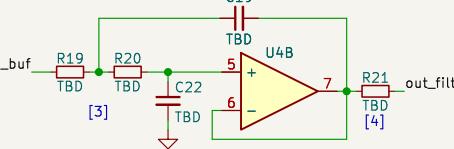
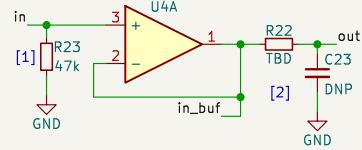
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[1] This pull-down resistor was placed here just to present some kind of small load to the sensor's output. Also, this prevents the amplifier's input to ever float. I'm not really sure whether this makes a difference or not. [Future notes: maybe it is better to move this resistor to the output of the sensor?]

[2] This RC network can be used to give some kind of low pass filter at the amplifier's output. Just remember that if you use this, the output is not buffered anymore. If the RC network is used, just R might be used to help damping oscillations at the amplifiers output, in case whatever is connected to the output is far away.

[3] 2nd order low-pass filter (Sallen-Key topology). Note that you can easily turn this in a simple first-order low-pass as well.

[4] Same purpose as [2]

Inputs
in → in_buf

Outputs
out → out_filt

Sheet: /Current measurements/IL current sensor conditioning/
File: curr_sens_cond.kicad_sch

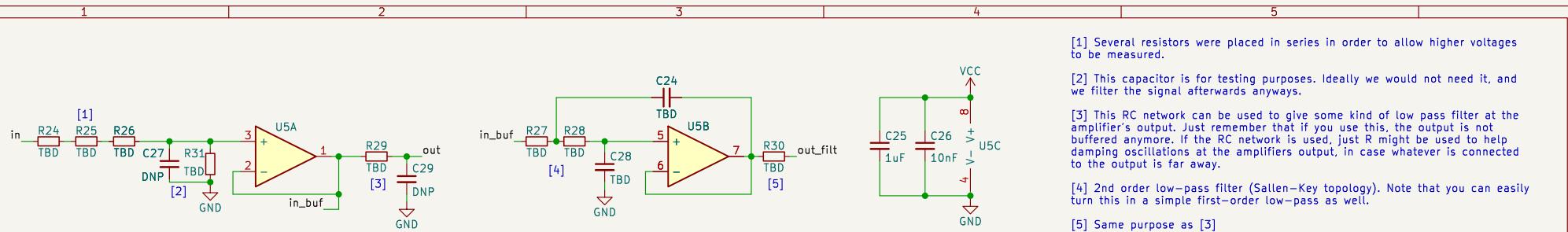
Title:

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Rev:

Id: 6/11



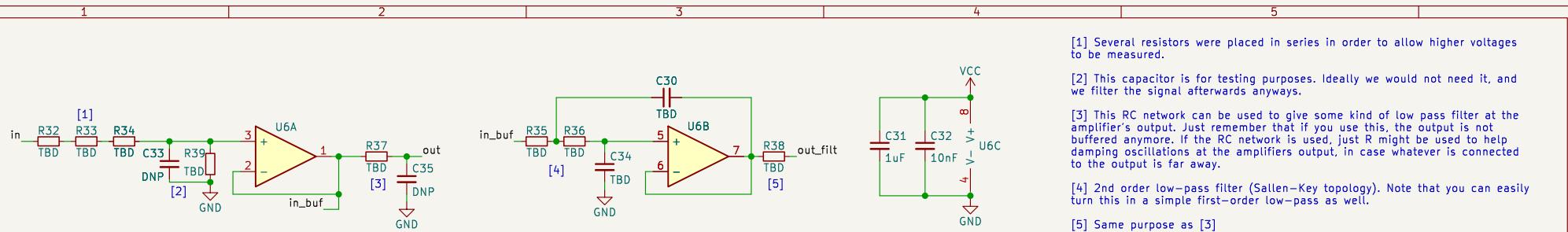
Inputs
in → \triangle in
Outputs
out → \triangle out
out_filt → \triangle out_filt

Sheet: /Voltage measurements/Vio voltage conditioning/
File: volt_cond.kicad_sch

Title:

Size: A4 | Date:
KiCad E.D.A. 9.0.0

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Id: 7/11



Inputs
in → in_buf

Outputs
out → out_buf
out_filt → out_filt

Sheet: /Voltage measurements/Vdc voltage conditioning/
File: volt_cond.kicad_sch

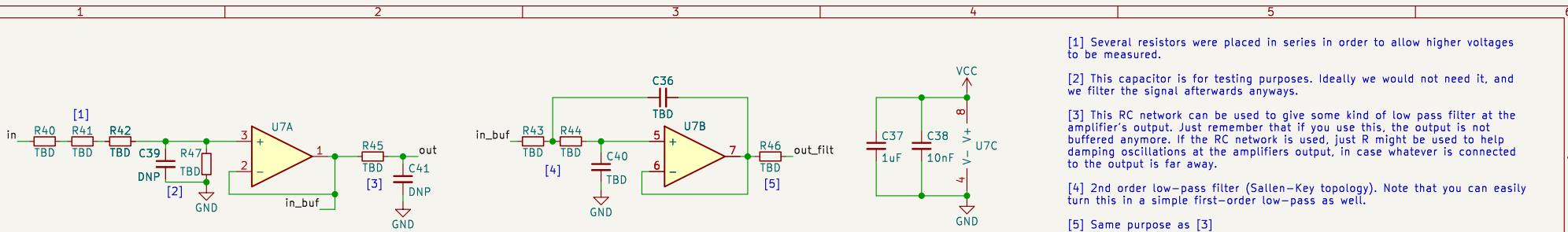
Title:

Size: A4 | Date:

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Rev:

Id: 8/11



Inputs
in → in

Outputs
out → out
out_filt → out_filt

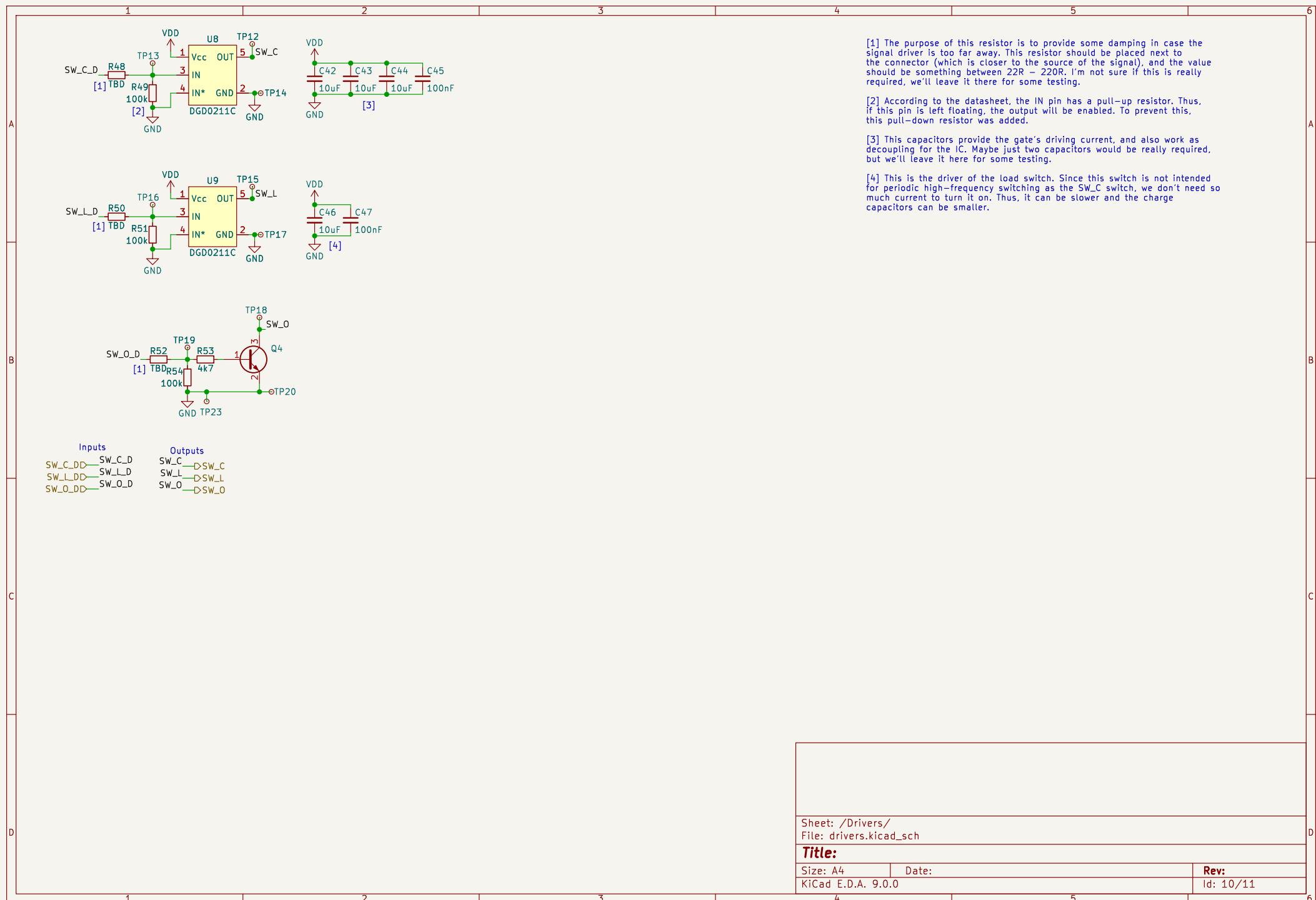
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File: volt_cond.kicad_sch

Title:

Size: A4 | Date:

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[1] We're placing these resistors because of bad past experience with linear regulators, when using ceramic capacitors at the output. Turns out that, if the ESR of the output capacitor is too low, the output might oscillate around the regulated value. This is not a big problem when using electrolytic capacitors, because of their comparatively higher ESR. Anyways, these resistors should be small, something like 1R or even smaller. However, they might make difference.

A

A

B

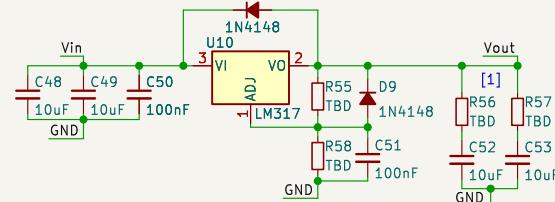
B

C

C

D

D



Inputs
Vin
GND

Outputs
Vout
GND

Sheet: /LM317/
File: lm317_fixed.kicad_sch

Title:

Size: A4 | Date:
KiCad E.D.A. 9.0.0

Rev:
Id: 11/11