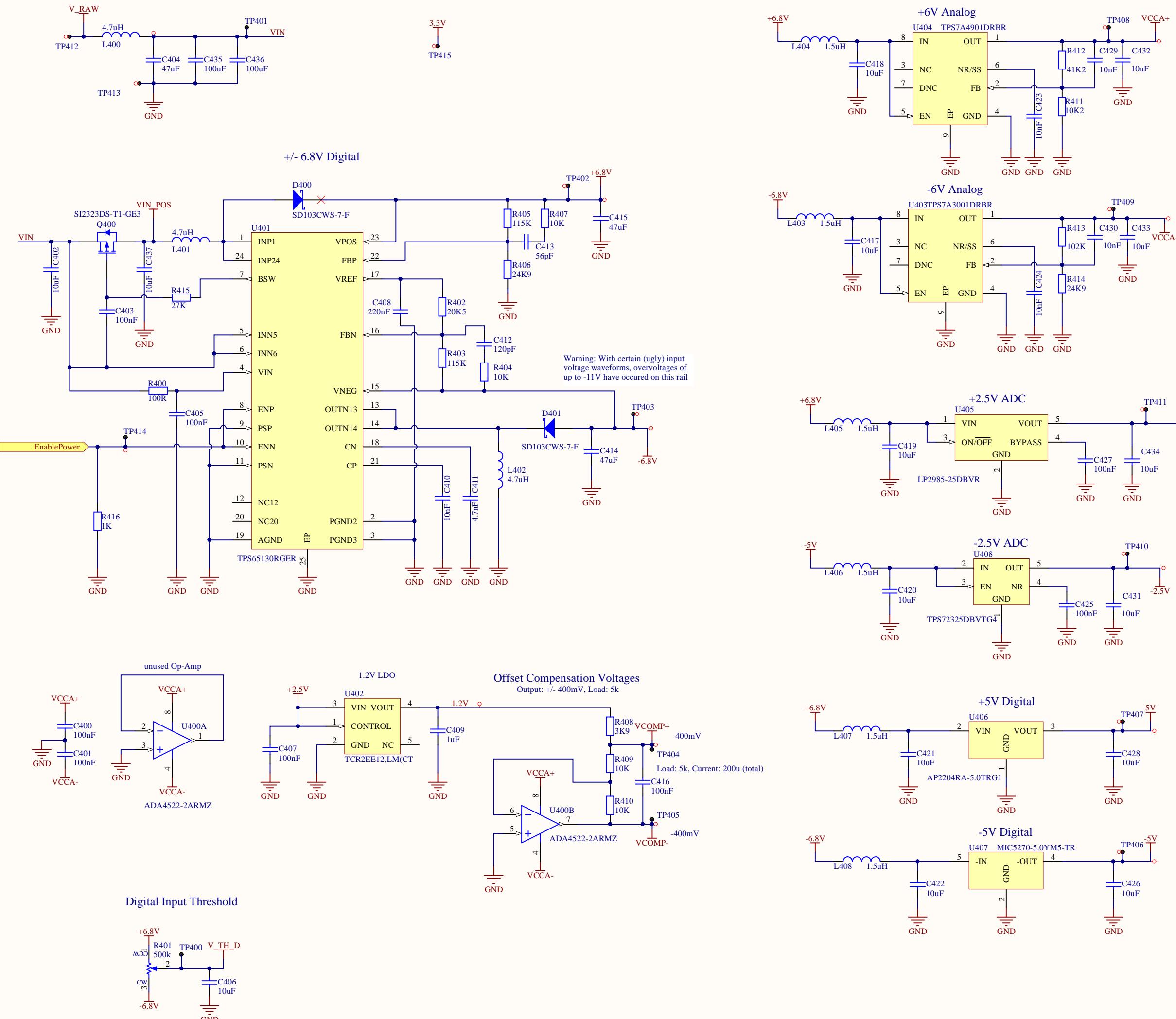


ETH

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Drawing title

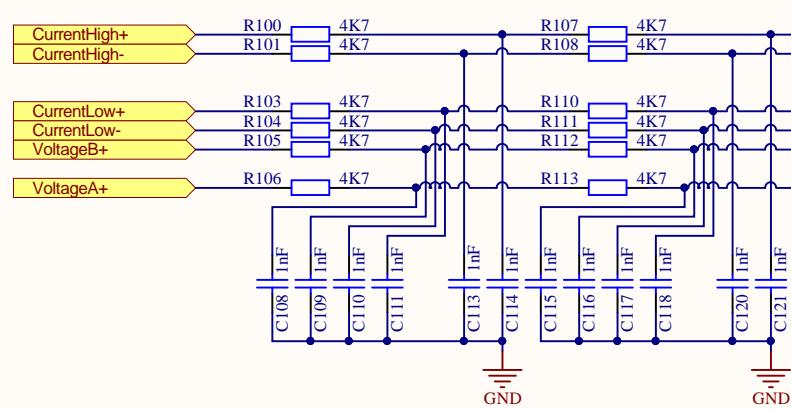
Cape



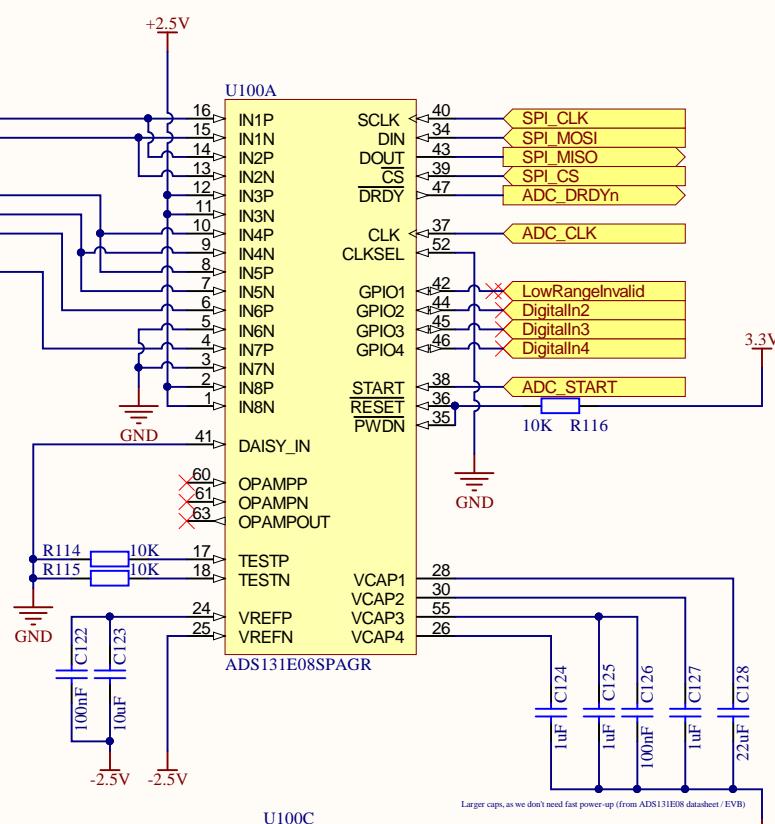
A

Resistors limit input current to 372 μ A

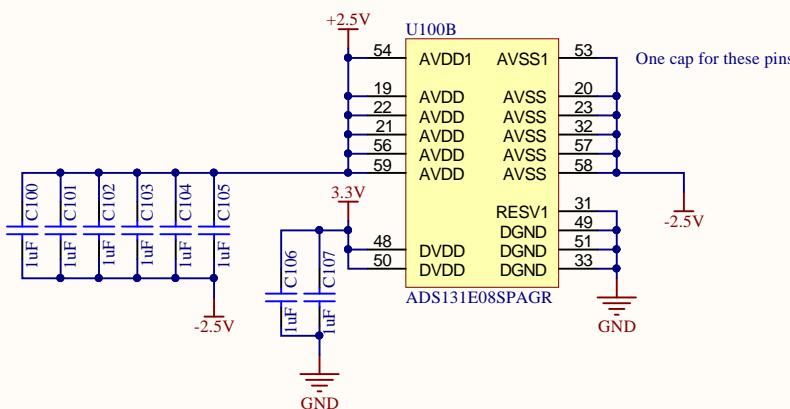
2nd order filter, -3dB @ 21.7kHz



B



C



D

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Drawing title:

ADC

Drawing number: 4

Rev. 2

Date: 08.05.2017 16:58:49

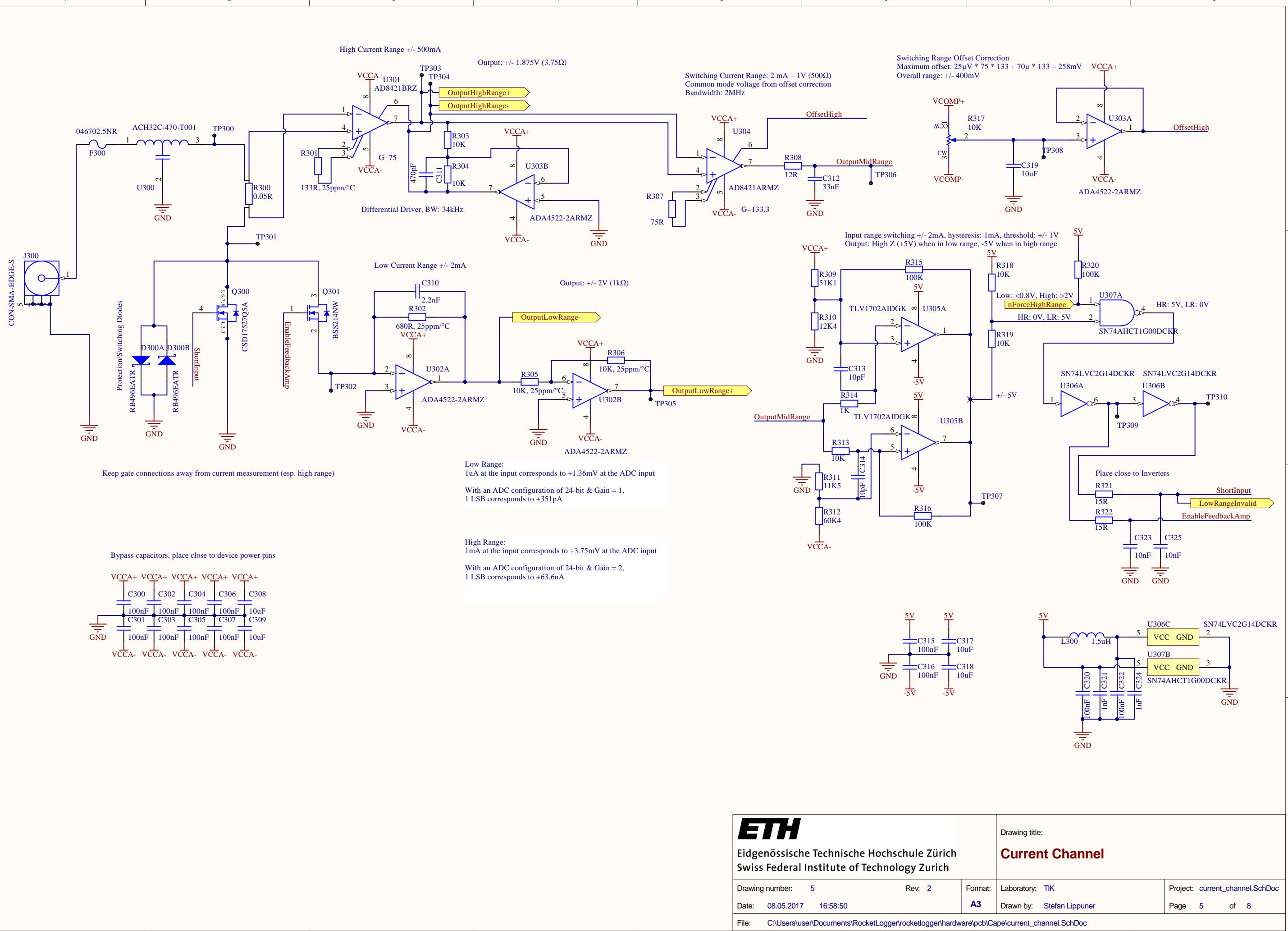
Format: A4 Q

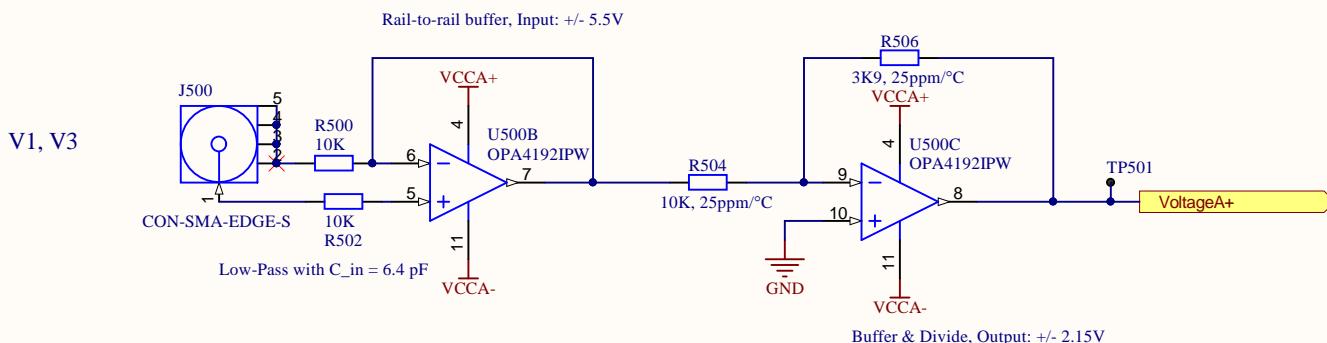
Laboratory: TIK
Drawn by: Stefan Lippuner

Project: adc.SchDoc

Page 4 of 8

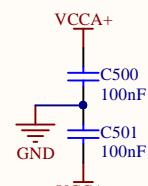
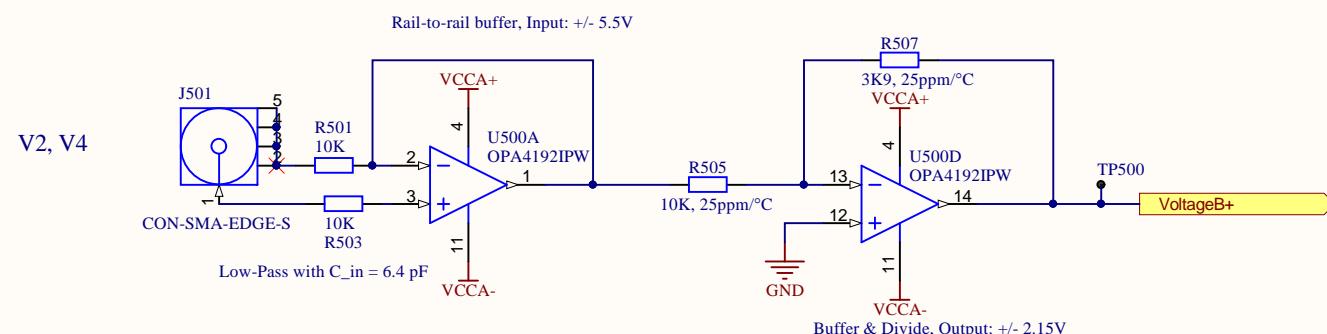
File: C:\Users\user\Documents\RocketLogger\rocketlogger\hardware\pcb\Cape\adc.SchDoc





1V at the input corresponds to -390mV at the ADC input
With an ADC configuration of 24-bit & Gain = 1,
1 LSB corresponds to -1.22uV

Note: For pseudo-differential inputs, the maximum amplitude is +/- 2.2V



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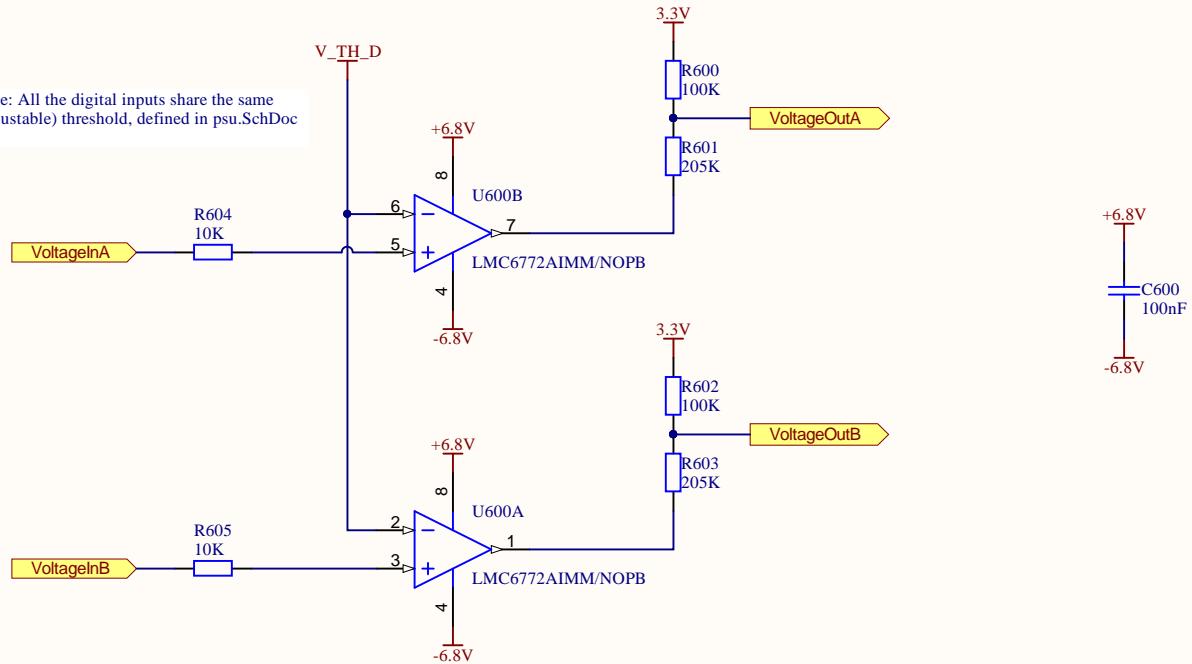
Drawing title:

Voltage Channel

Drawing number:	6	Rev.	2	Format:	Laboratory:	TIK	Project:	voltage_channel.SchDoc
Date:	08.05.2017	16:58:50		A4 Q	Drawn by:	Stefan Lippuner		
File:	C:\Users\user\Documents\RocketLogger\rocketlogger\hardware\pcb\Cape\voltage_channel.SchDoc							

A

Note: All the digital inputs share the same (adjustable) threshold, defined in psu.SchDoc



B

C

D

A

B

C

D



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Drawing title:

Digital Voltage Channel

Drawing number: 7 Rev. 2

Date: 08.05.2017 16:58:50

File: C:\Users\user\Documents\RocketLogger\rocketlogger\hardware\pcb\Cape\digital_voltage_channel.SchDoc

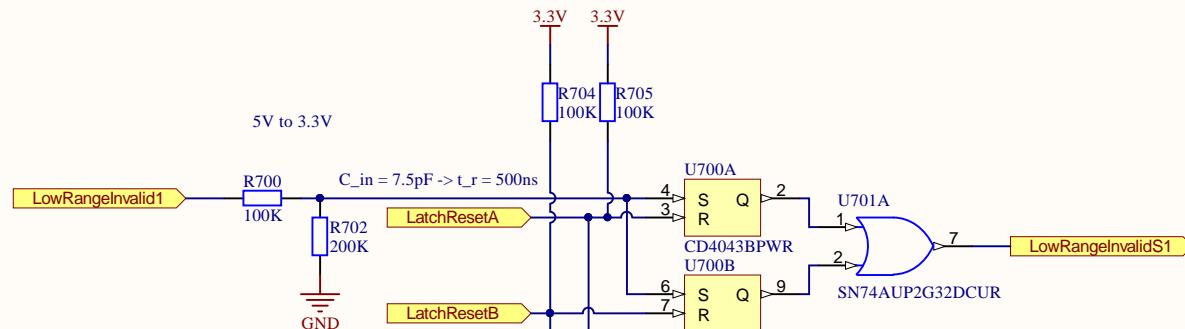
Format: A4 Q Laboratory: TIK

Drawn by: Stefan Lippuner

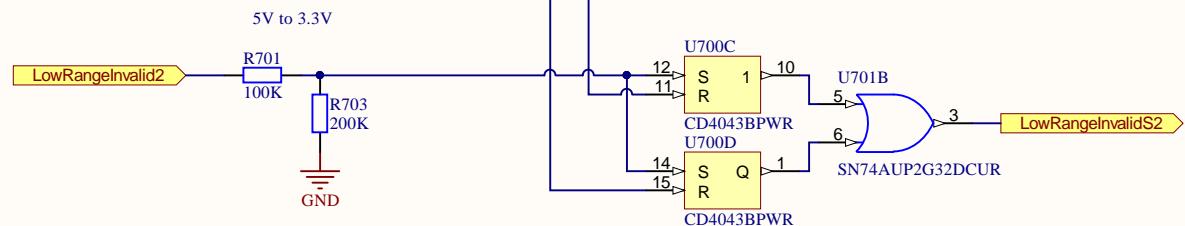
Project: digital_voltage_channel.SchDoc

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A

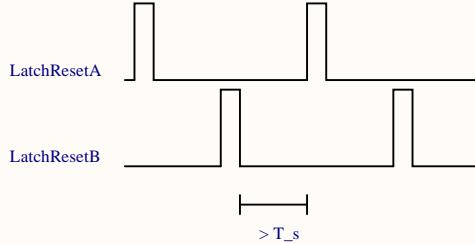
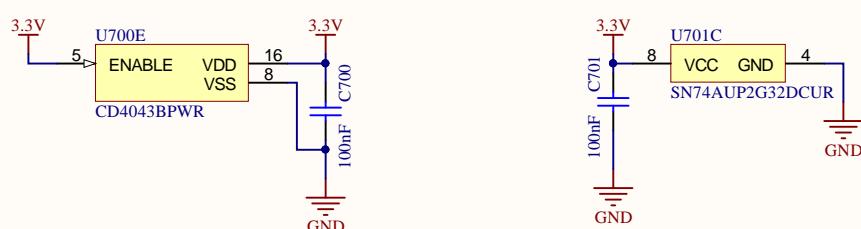


B



C

This circuit stretches the (potentially) short pulses on the LowRangelinvalid signals, such that the ADC can actually detect them. In order to guarantee that, the periods between the non-overlapping reset periods for the two latches must be longer than the sampling period.



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Drawing title:

Range Valid Signal Stretching

Drawing number: 8	Rev. 2	Format: A4 Q	Laboratory: TIK	Project: range_valid_stretching.SchDoc
Date: 08.05.2017 16:58:50		Drawn by: Stefan Lippuner		
File: C:\Users\user\Documents\RocketLogger\rocketlogger\hardware\pcb\Cape\range_valid_stretching.SchDoc				Page 8 of 8

