

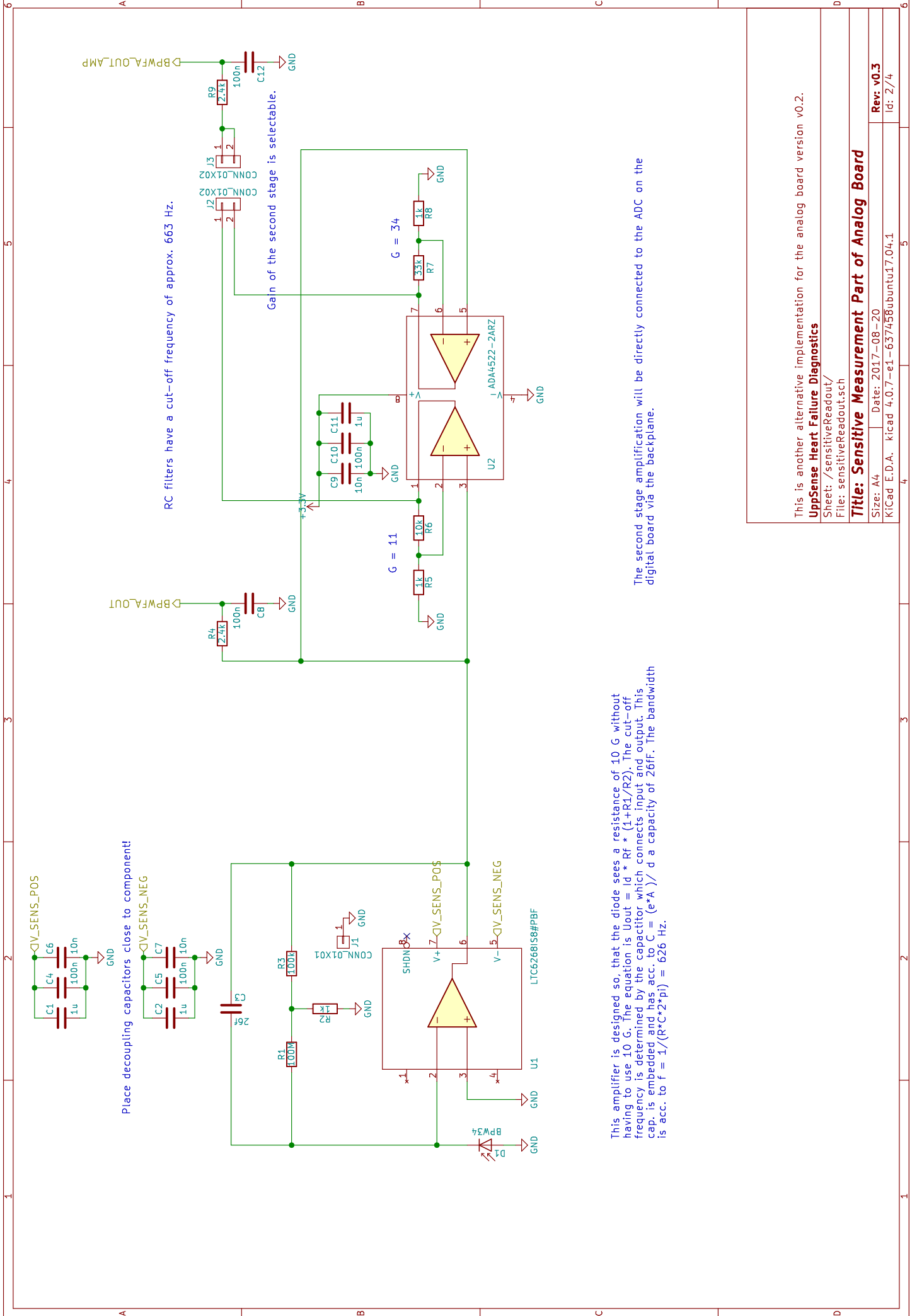
UppSense Heart Failure Diagnostics

Sheet: /
File: analog_board_v0.33.sch

Title: SensUs Sensor Board

Size: A4 | Date: 2017-08-20
KICad E.D.A. kicad 4.0.7-e1-637458ubuntu17.04.1

Rev: v.0.3
Id: 1/4



This amplifier is designed so, that the diode sees a resistance of 10 G without having to use 10 G. The equation is $I_{out} = I_d * R_f * (1 + R1/R2)$. The cut-off frequency is determined by the capacitor which connects input and output. This cap. is embedded and has acc. to $C = (e * A) / d$ a capacity of 26fF. The bandwidth is acc. to $f = 1 / (R * C * 2 * \pi) = 626$ Hz.

The second stage amplification will be directly connected to the ADC on the digital board via the backplane.

This is another alternative implementation for the analog board version v0.2.

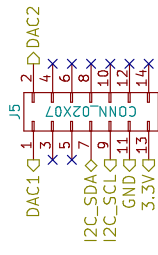
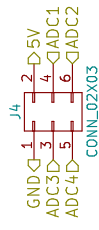
UppSense Heart Failure Diagnostics

Sheet: /sensitiveReadout/
File: sensitiveReadout.sch

Title: Sensitive Measurement Part of Analog Board

Size: A4 | Date: 2017-08-20
KiCad E.D.A. kicad 4.0.7-e1-637458ubuntu17.04.1

Rev. v0.3
Id: 2/4

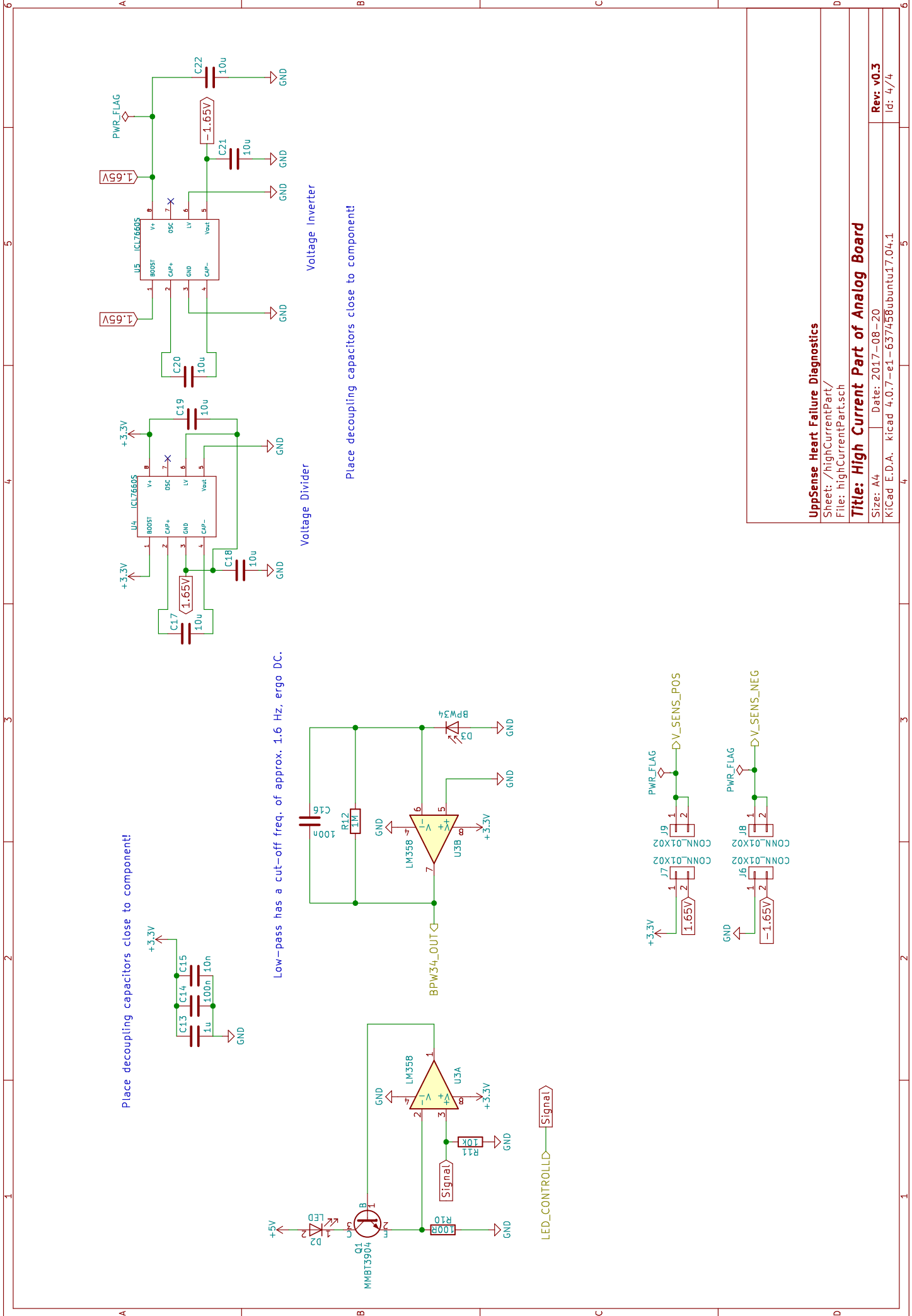


UppSense Heart Failure Diagnostics

Sheet: /interface/
File: interface.sch

Title: Interface to Backplane

Size: A4 Date: 2017-07-05 Rev: v0.2
 KiCad E.D.A. kicad 4.0.7-e1-637458ubuntu17.04.1 Id: 3/4



Place decoupling capacitors close to component!

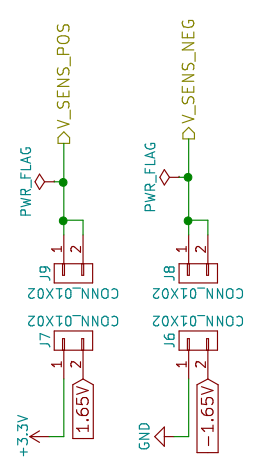
Low-pass has a cut-off freq. of approx. 1.6 Hz, ergo DC.

Voltage Divider

Voltage Inverter

Place decoupling capacitors close to component!

LED_CONTROLLED



UppSense Heart Failure Diagnostics

Sheet: /highCurrentPart/
File: highCurrentPart.sch

Title: High Current Part of Analog Board

Size: A4 | Date: 2017-08-20 | Rev: v0.3
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