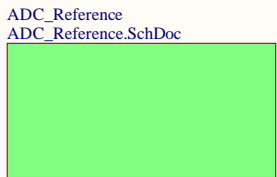
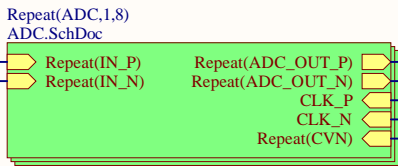
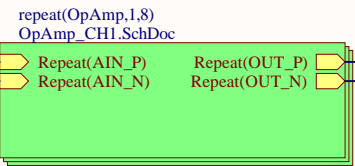
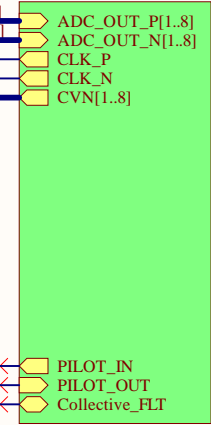


U\_AnalogConnector  
AnalogConnector.SchDoc



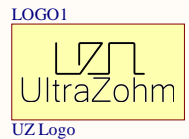
U\_CarrierConnector  
CarrierConnector.SchDoc



Power\_Pos  
Power\_Pos.SchDoc



Power\_Neg  
Power\_Neg.SchDoc



Serial1  
Serial  
Serialnumber 6,3 x 6.3mm  
ProjectName1

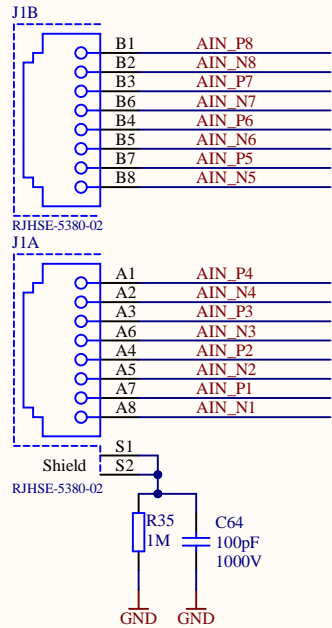


Title TopSheet.SchDoc	
Revision: Rev05	Design Engineer: E. Liegmann
Project: UZ_A_LTC2311.PrjPCB	

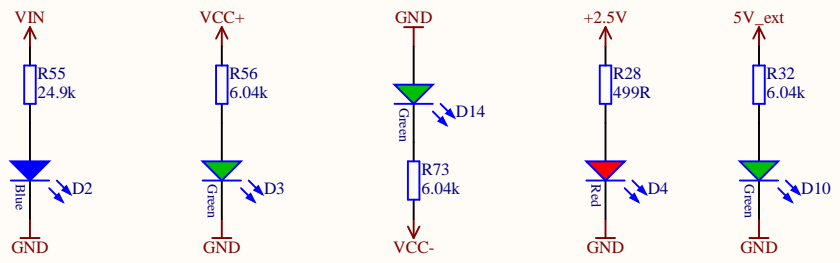
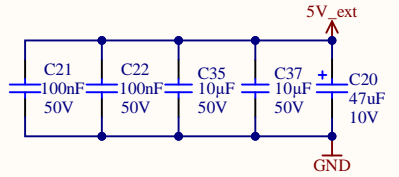
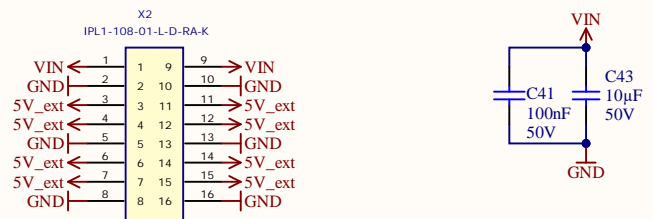
**UltraZohm**  
[www.ultrazohm.com](http://www.ultrazohm.com)  
Date: 17.09.2021  
Sheet 1 of 22



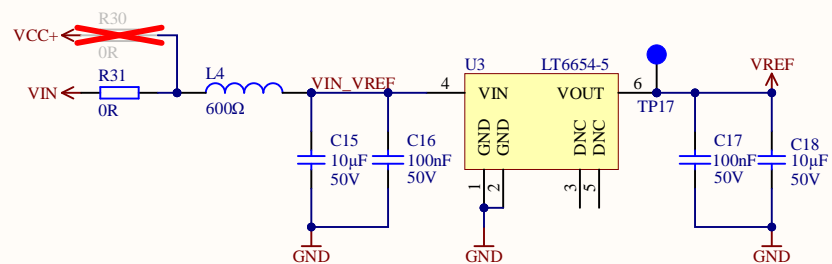




When using the VIN on the power connector X1, use pin 2 and 10 as return ground



Title AnalogConnector.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 3 of 22



1. LT6654 is available in 1.25V/2.048V/2.5V/3V/3.3V/4.096V/5V
2. If the internal reference from LTC2311 (4.096V) is used, U3 is DNP, at LTC2311 REFIN needs to be connected to a cap to GND, and REFOUT disconnected
3. LTC2311 REFOUT max current sink is 700uA.  
 $8\text{ADCs} * 0.7\text{mA} = 5.6\text{mA} < 10\text{mA}$  max output current of LT6654

Title ADC\_Reference.SchDoc

Revision: Rev05

Design Engineer: E. Liegmann

Project: UZ\_A\_LTC2311.PrjPCB

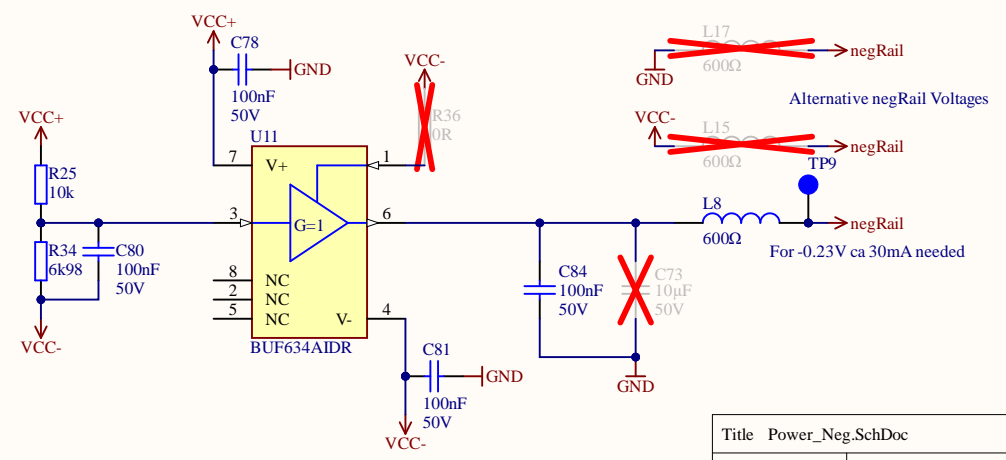
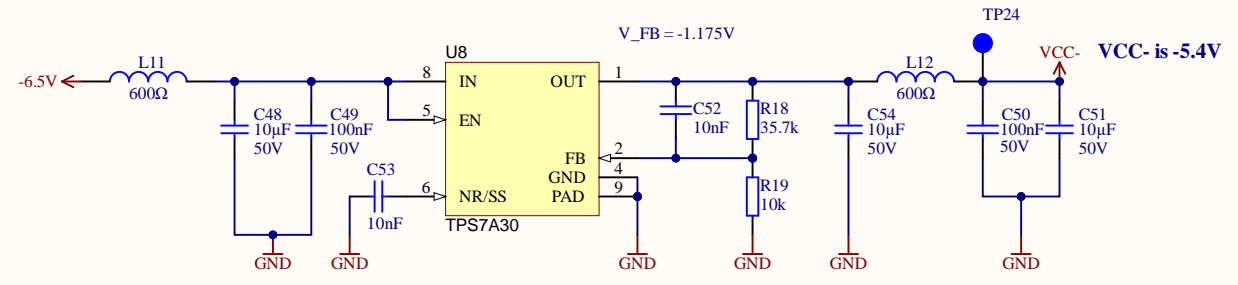
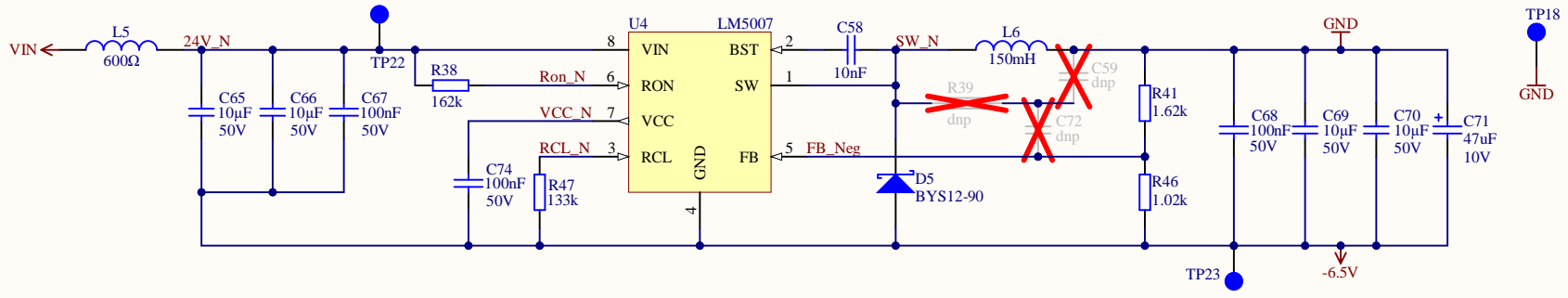
**UltraZohm**


[www.ultrazohm.com](http://www.ultrazohm.com)

Date: 17.09.2021

Sheet 4 of 22

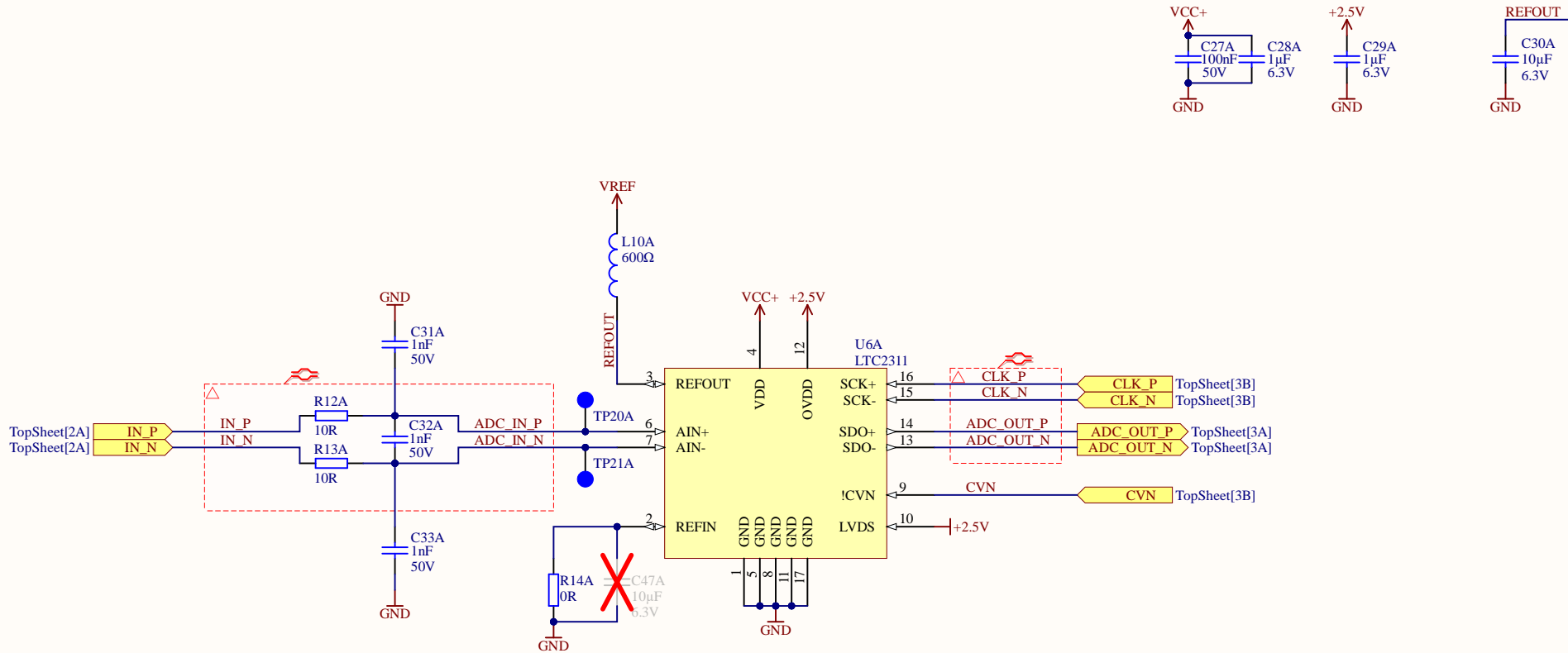





Title Power_Neg.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 5 of 22



ADC can provide internal 4.096V reference. For that purpose R14 has to be replaced by 10u capacitor

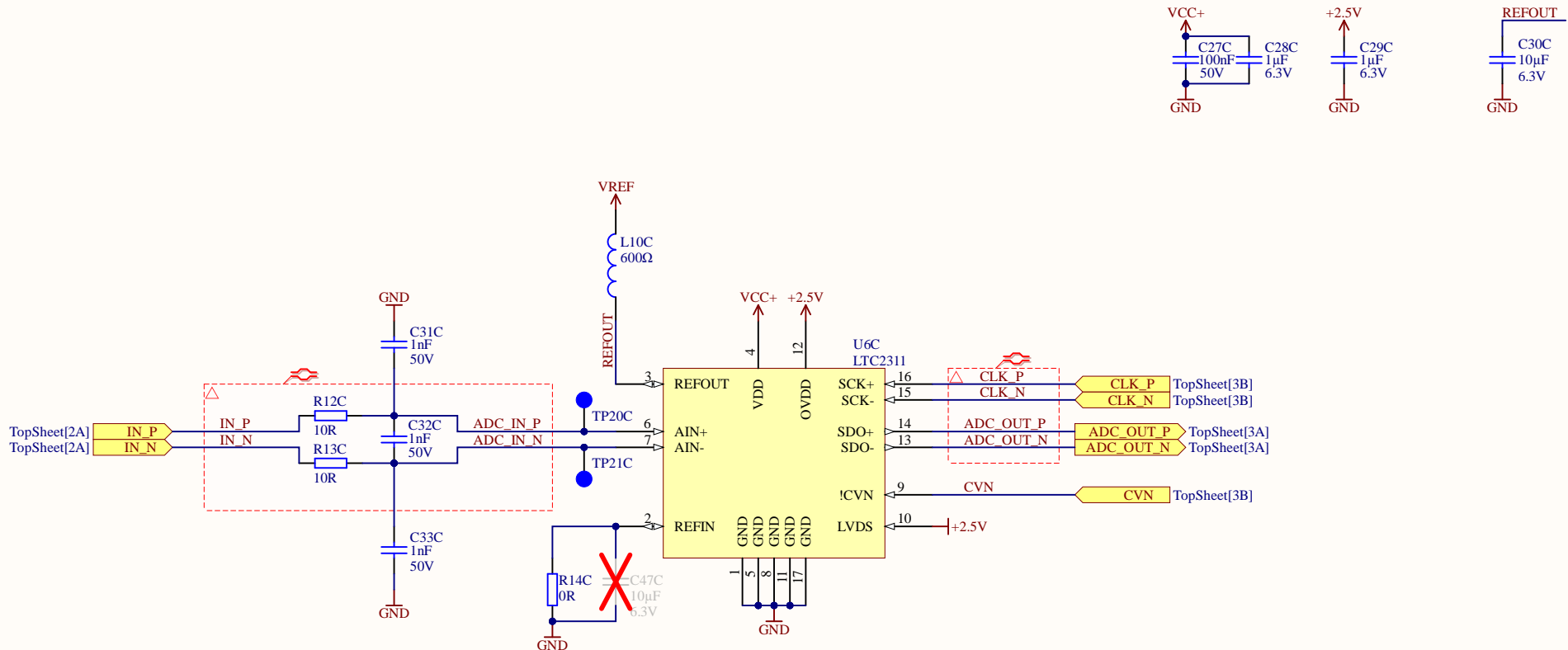


Title ADC.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 7.1 of 22

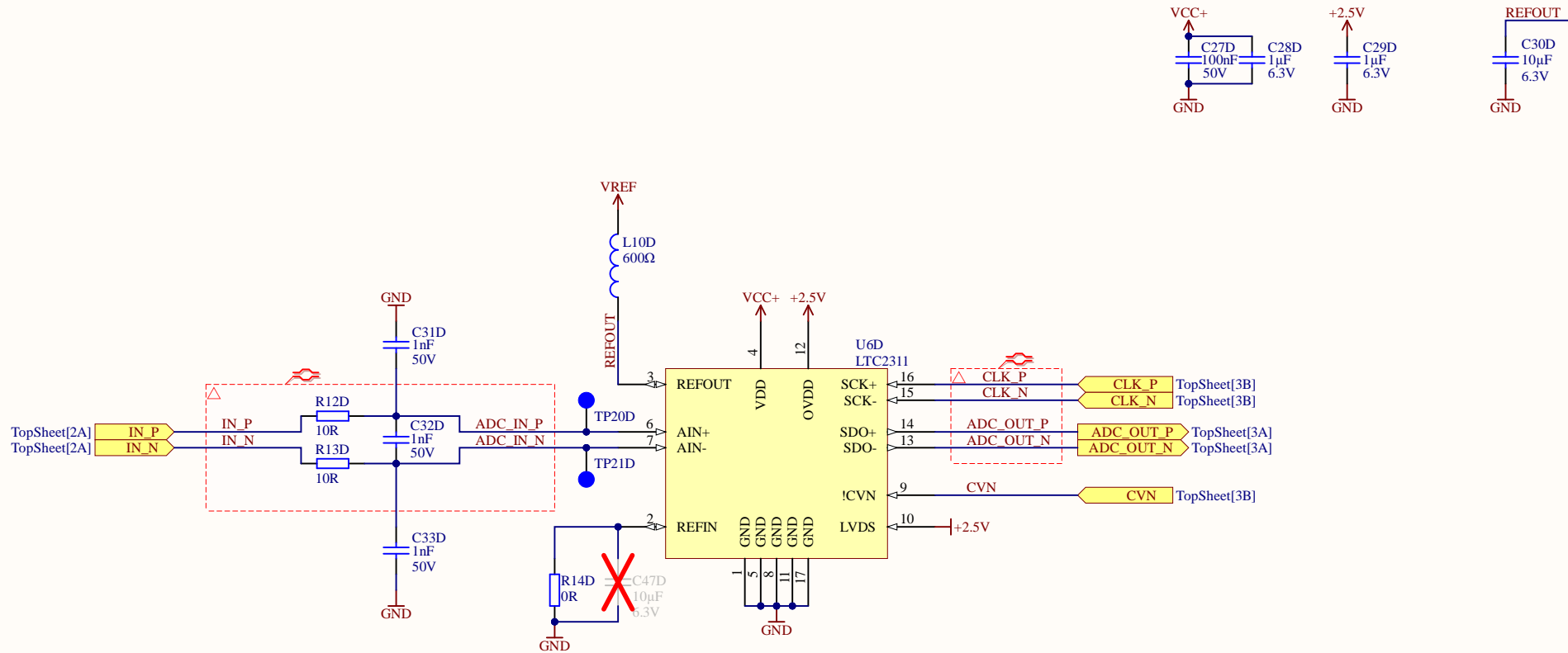





ADC can provide internal 4.096V reference. For that purpose R14 has to be replaced by 10u capacitor

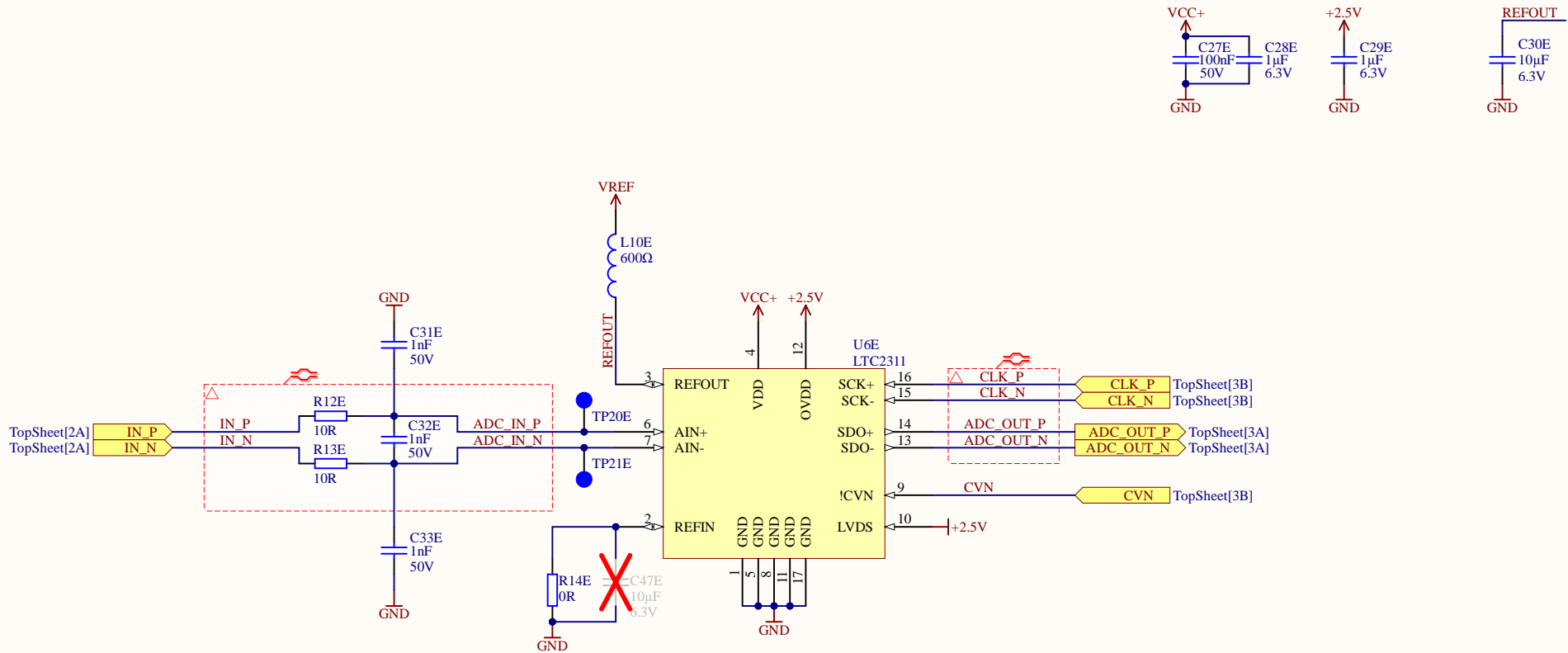


ADC can provide internal 4.096V reference. For that purpose R14 has to be replaced by 10u capacitor

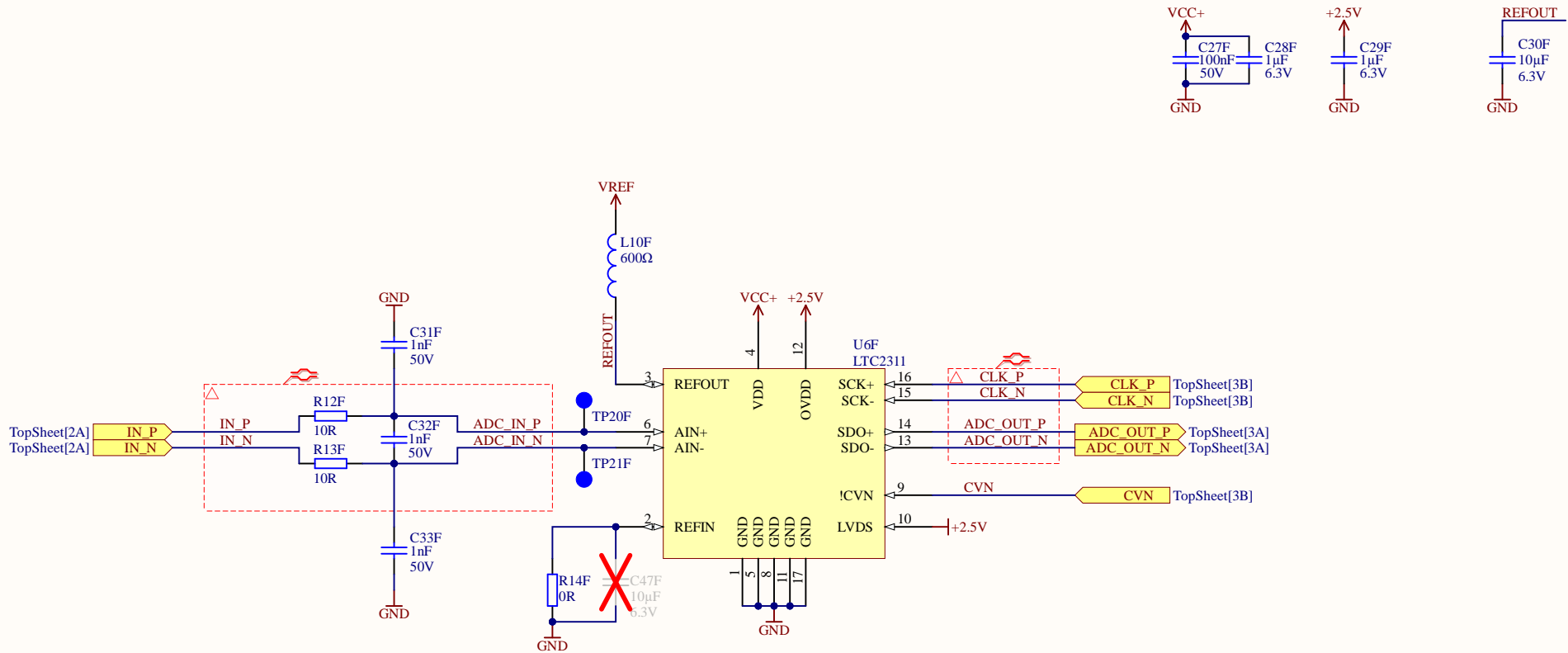


Title ADC.SchDoc		
Revision: Rev05	Design Engineer: E. Liegmann	
Project: UZ_A_LTC2311.PrjPCB		
		<a href="http://www.ultrazohm.com">www.ultrazohm.com</a> Date: 17.09.2021 Sheet 7.4 of 22

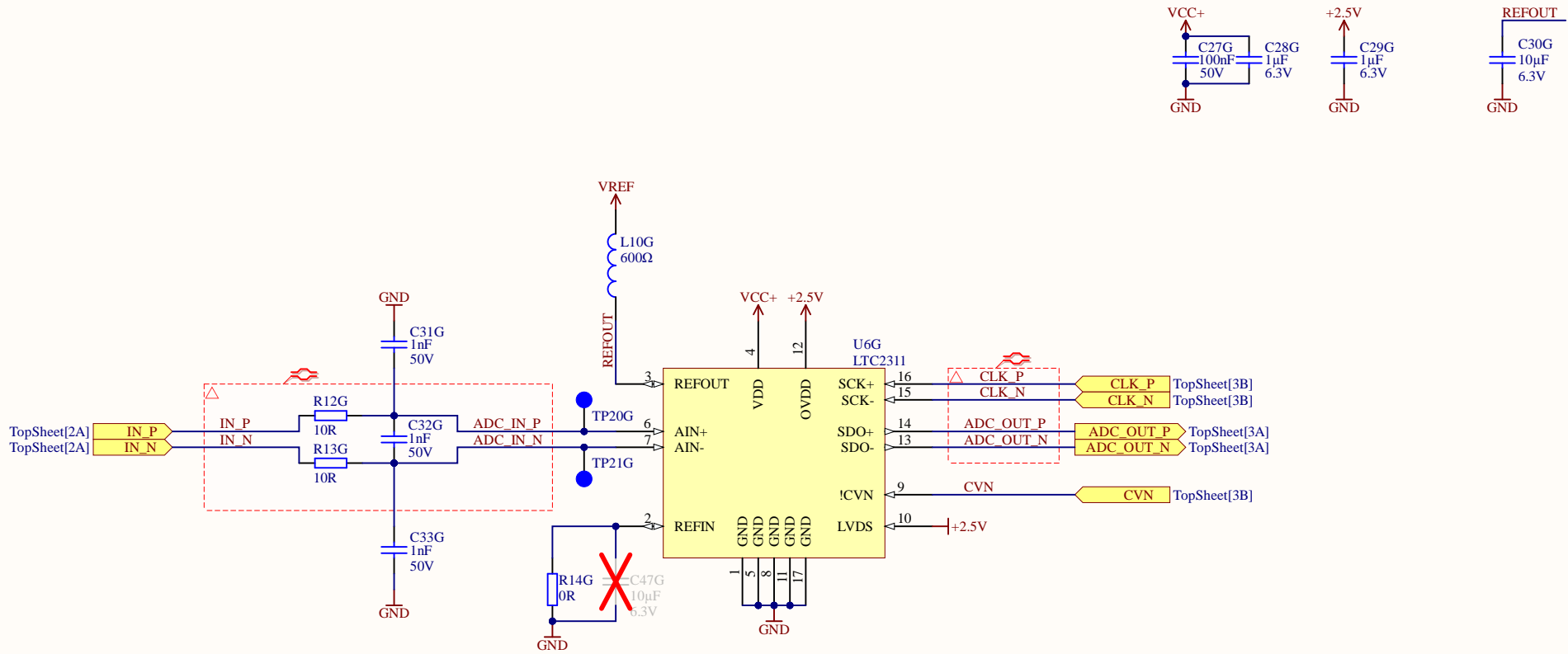
ADC can provide internal 4.096V reference. For that purpose R14 has to be replaced by 10u capacitor



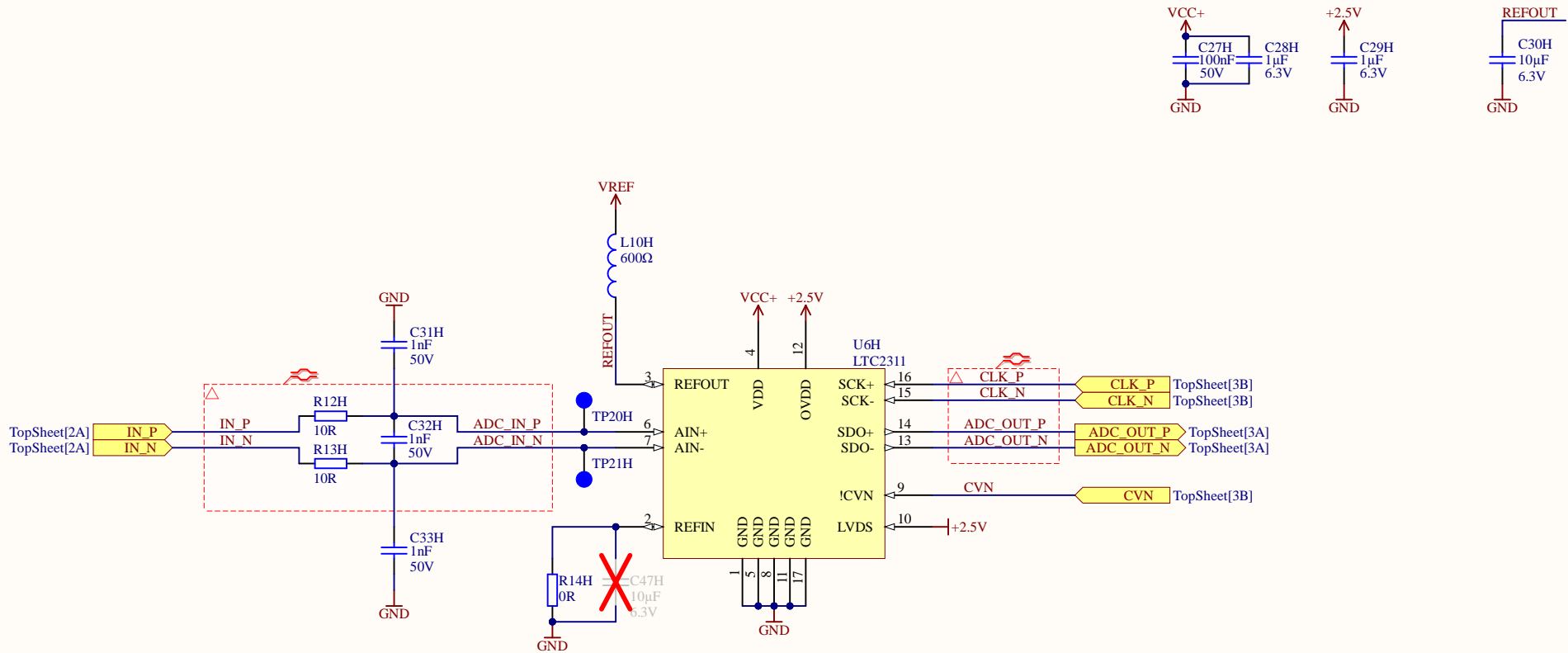
ADC can provide internal 4.096V reference. For that purpose R14 has to be replaced by 10u capacitor



ADC can provide internal 4.096V reference. For that purpose R14 has to be replaced by 10u capacitor

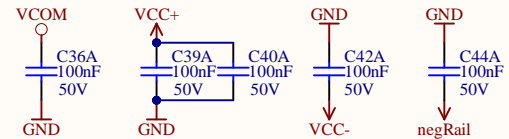
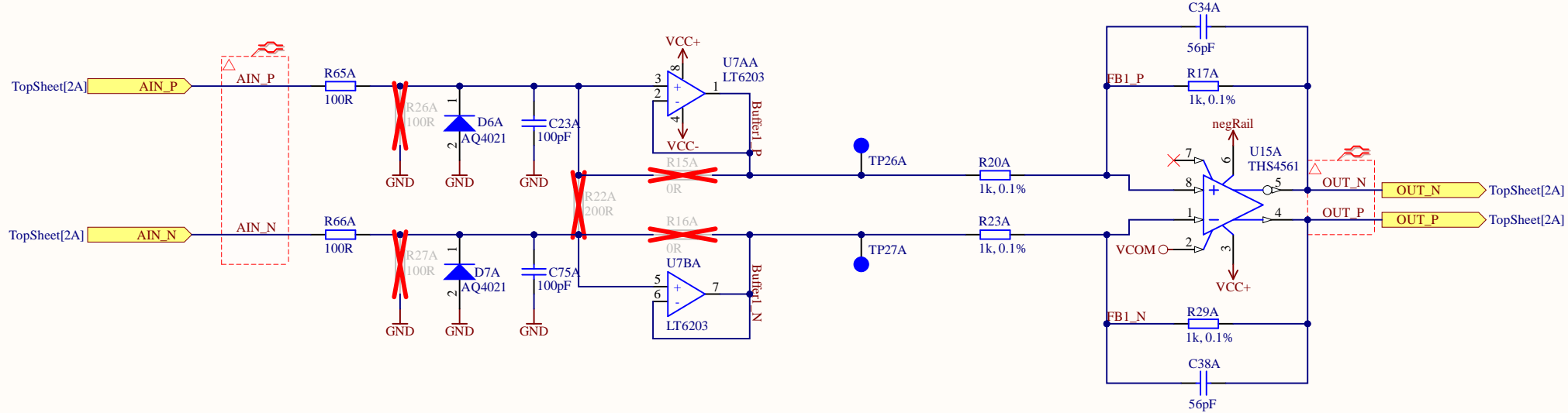


ADC can provide internal 4.096V reference. For that purpose R14 has to be replaced by 10u capacitor



to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a gain of  $g=0.82$   
 we get a gain accuracy of 0.1%  
 this would allow to use 0V and 5V as rails  
 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>

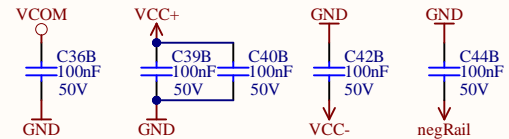
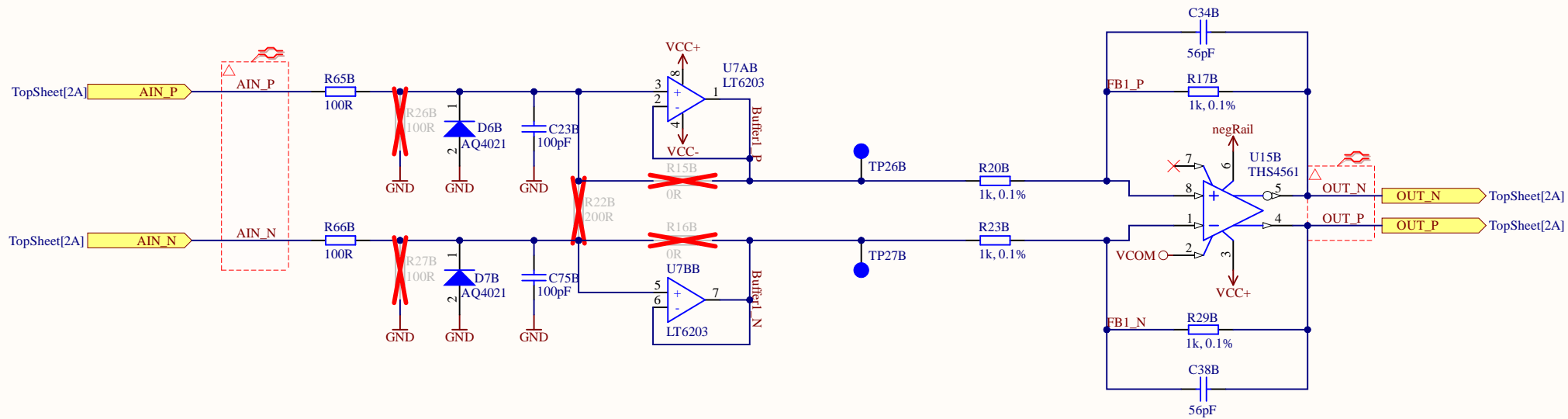


Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561



Title OpAmp_CH1.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.1 of 22

to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a  
 gain of  $g=0.82$   
 we get a gain accuracy of 0.1%  
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 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>



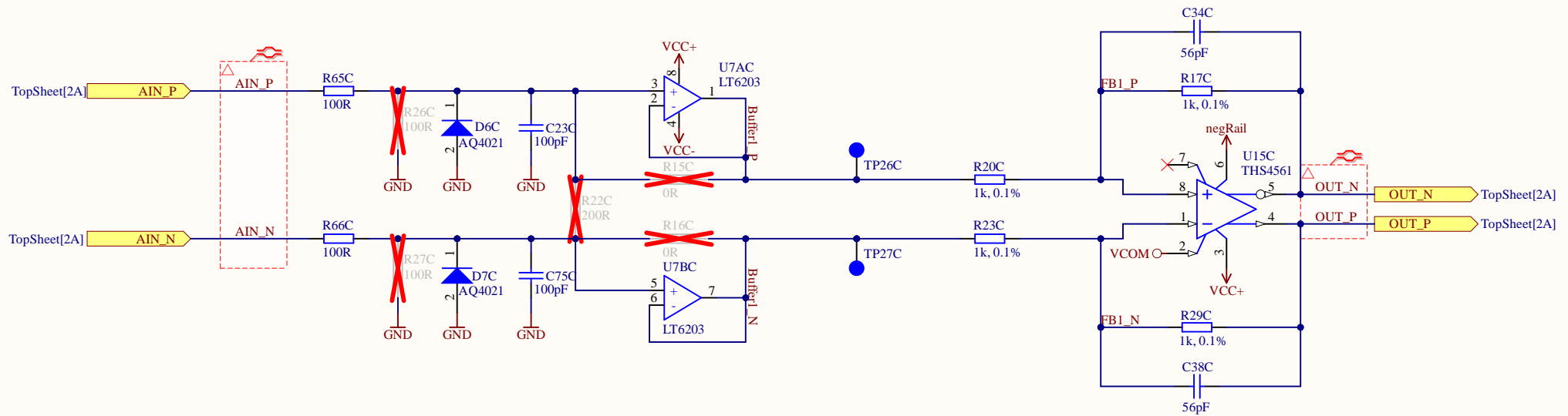
Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561

Title OpAmp_CH1.SchDoc		 <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.2 of 22

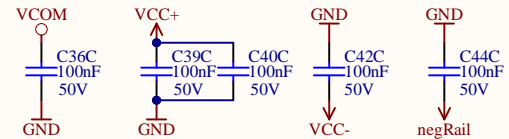


to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a gain of  $g=0.82$   
 we get a gain accuracy of 0.1%  
 this would allow to use 0V and 5V as rails  
 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>



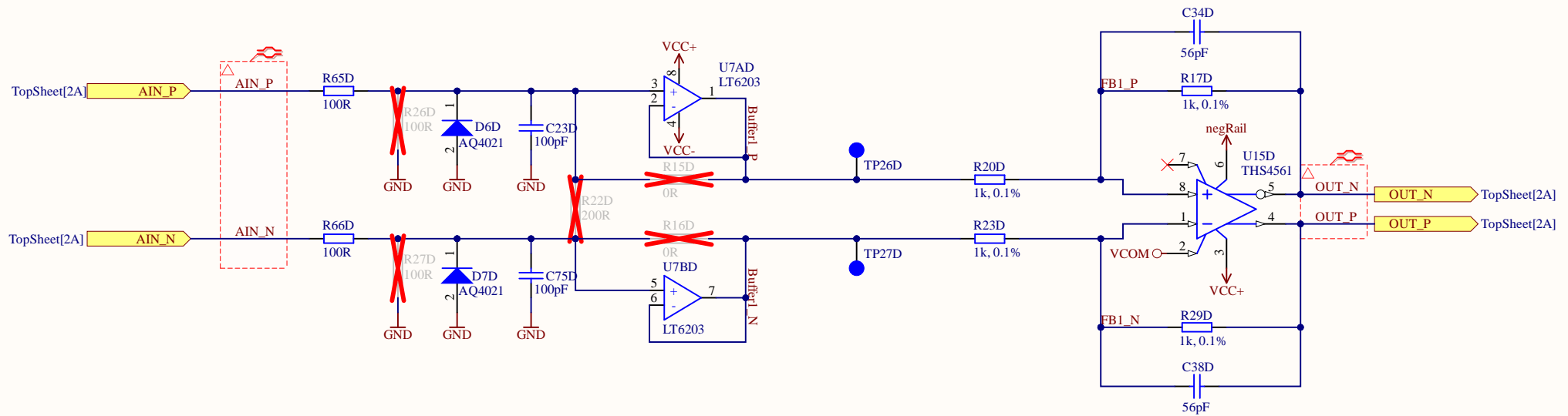
Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561



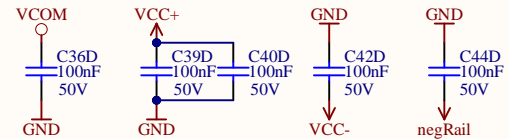
Title OpAmp_CH1.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.3 of 22

to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a  
 gain of  $g=0.82$   
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 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>



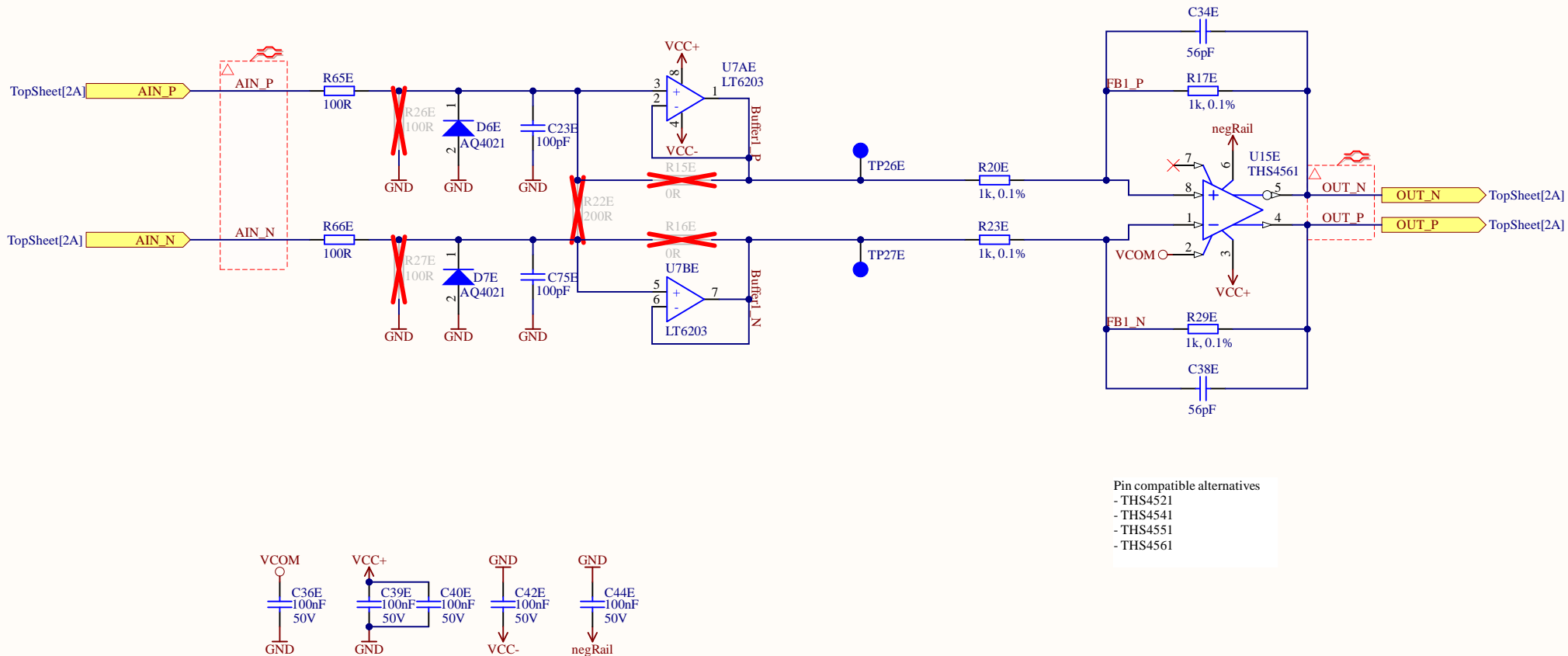
Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561



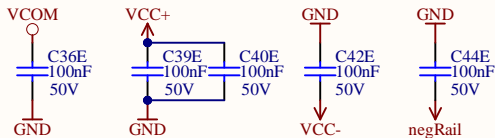
Title OpAmp_CH1.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.4 of 22

to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a  
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 we get a gain accuracy of 0.1%  
 this would allow to use 0V and 5V as rails  
 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>



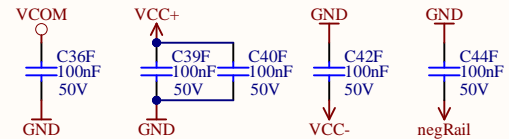
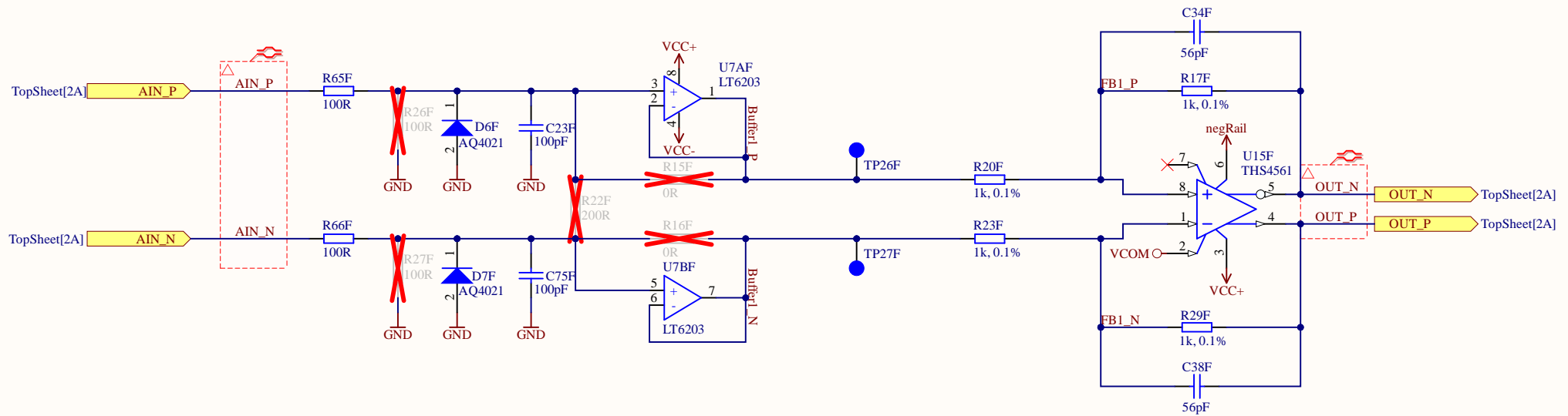
Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561



Title OpAmp_CH1.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.5 of 22

to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a gain of  $g=0.82$   
 we get a gain accuracy of 0.1%  
 this would allow to use 0V and 5V as rails  
 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>

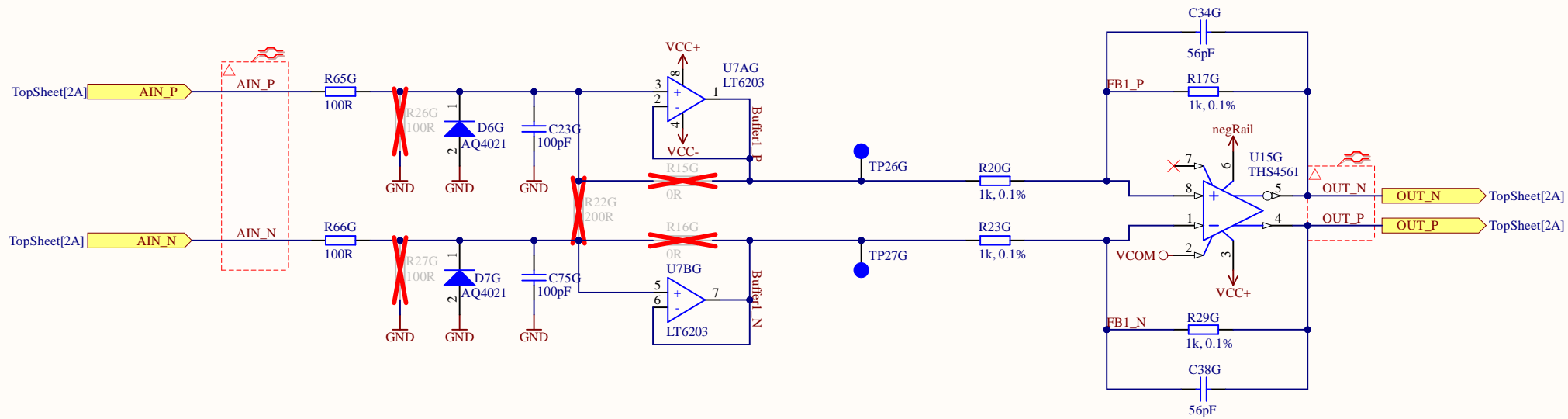


Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561

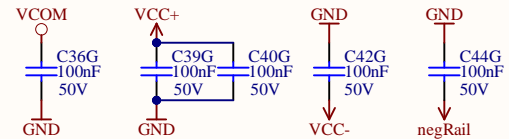
Title OpAmp_CH1.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.6 of 22

to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a  
 gain of  $g=0.82$   
 we get a gain accuracy of 0.1%  
 this would allow to use 0V and 5V as rails  
 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>



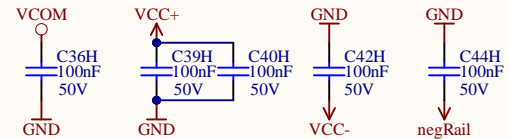
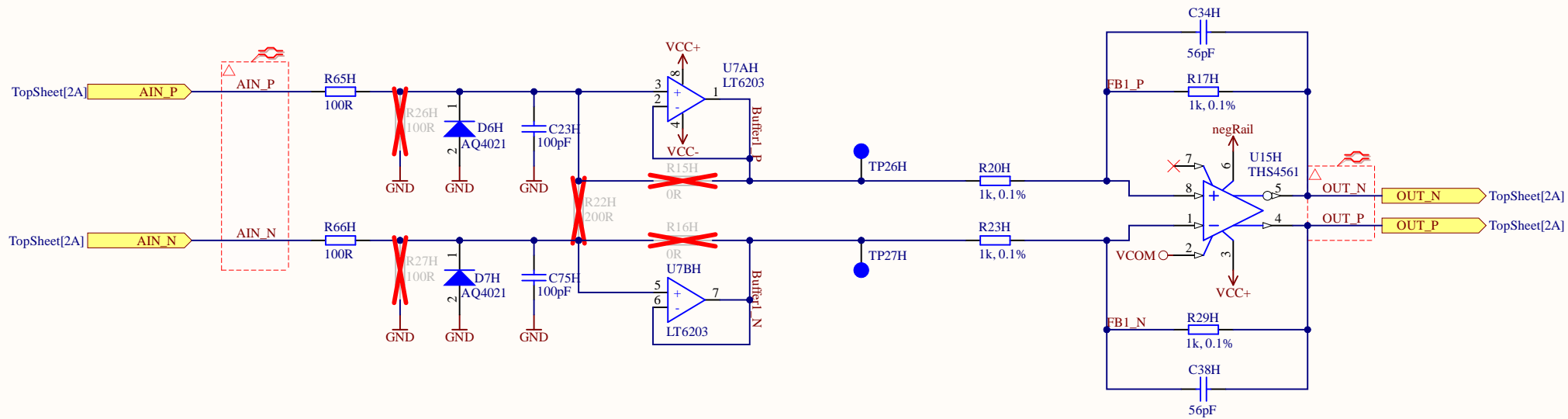
Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561



Title OpAmp_CH1.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.7 of 22

to map 5V -> 4.096V  
 gains needs to be  $4.096V/5 = 0.8192$   
 with  $R20 = 1k$  and  $R17 = 820R$ , resulting in a  
 gain of  $g=0.82$   
 we get a gain accuracy of 0.1%  
 this would allow to use 0V and 5V as rails  
 with  $V_{com} = 2.5V$

<https://jansson.us/resistors.html>



Pin compatible alternatives  
 - THS4521  
 - THS4541  
 - THS4551  
 - THS4561

Title OpAmp_CH1.SchDoc		<b>UltraZohm</b> <a href="http://www.ultrazohm.com">www.ultrazohm.com</a>	
Revision: Rev05	Design Engineer: E. Liegmann		
Project: UZ_A_LTC2311.PrjPCB		Date: 17.09.2021	Sheet 8.8 of 22