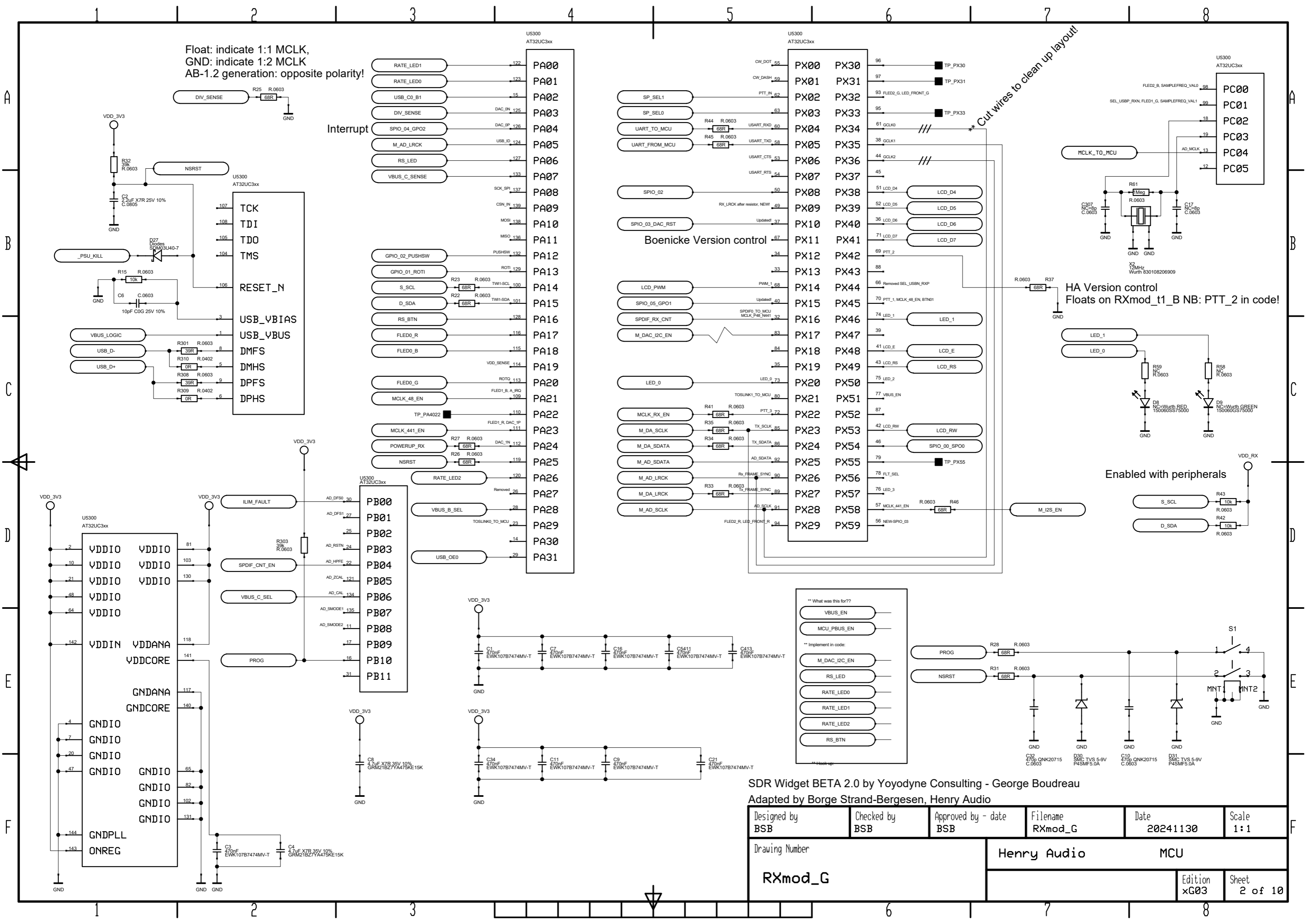


Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number RXmod_G			Henry Audio Top		
				Edition xG03	Sheet 1 of 10

Float: indicate 1:1 MCLK,  
 GND: indicate 1:2 MCLK  
 AB-1.2 generation: opposite polarity!



**\* Cut wires to clean up layout.**

**HA Version control**  
 Floats on RXmod\_t1\_B NB: PTT\_2 in code!

Enabled with peripherals

**\*\* What was this for??**

- VBUS\_EN
- MCU\_PBUS\_EN

**\*\* Implement in code:**

- M\_DAC\_I2C\_EN
- RS\_LED
- RATE\_LED0
- RATE\_LED1
- RATE\_LED2
- RS\_BTN

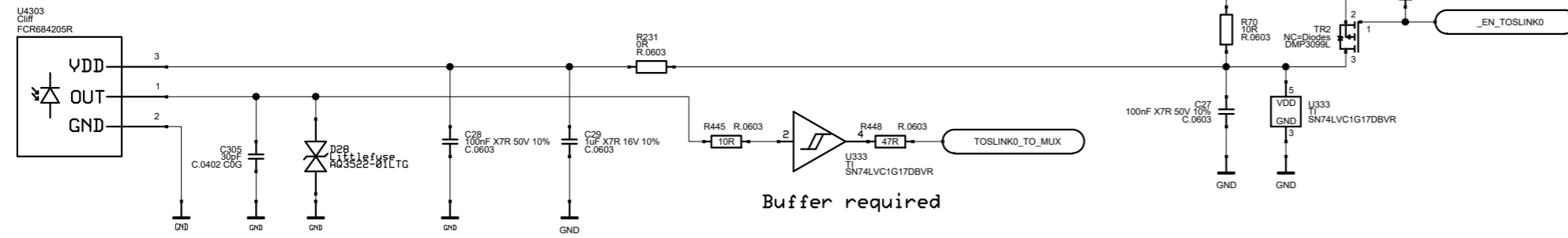
**\*\* Hookup:**

SDR Widget BETA 2.0 by Yoyodyne Consulting - George Boudreau  
 Adapted by Borge Strand-Bergesen, Henry Audio

Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number <b>RXmod_G</b>			Henry Audio MCU		
				Edition xG03	Sheet 2 of 10



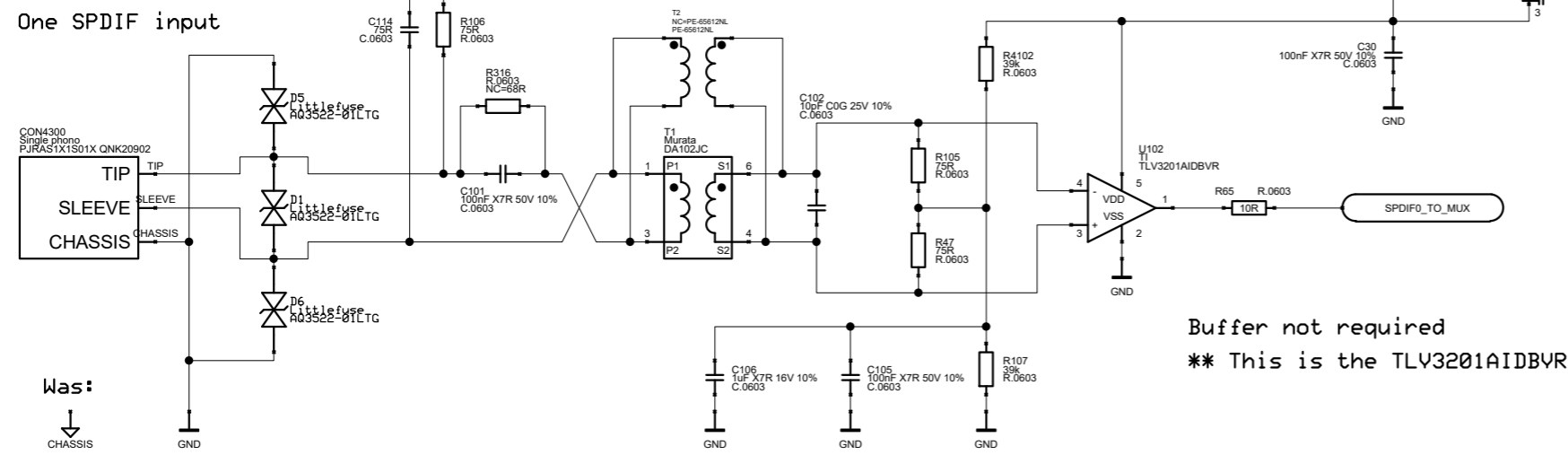
Two TOSLINK inputs



Buffer required

Buffer required

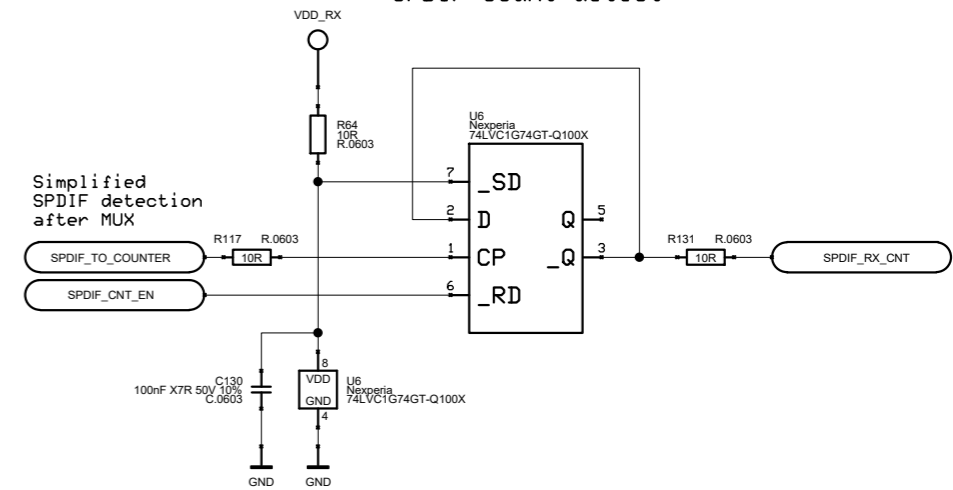
One SPDIF input



C114 is a resistor!

Buffer not required  
\*\* This is the TLV3201AIDBVR

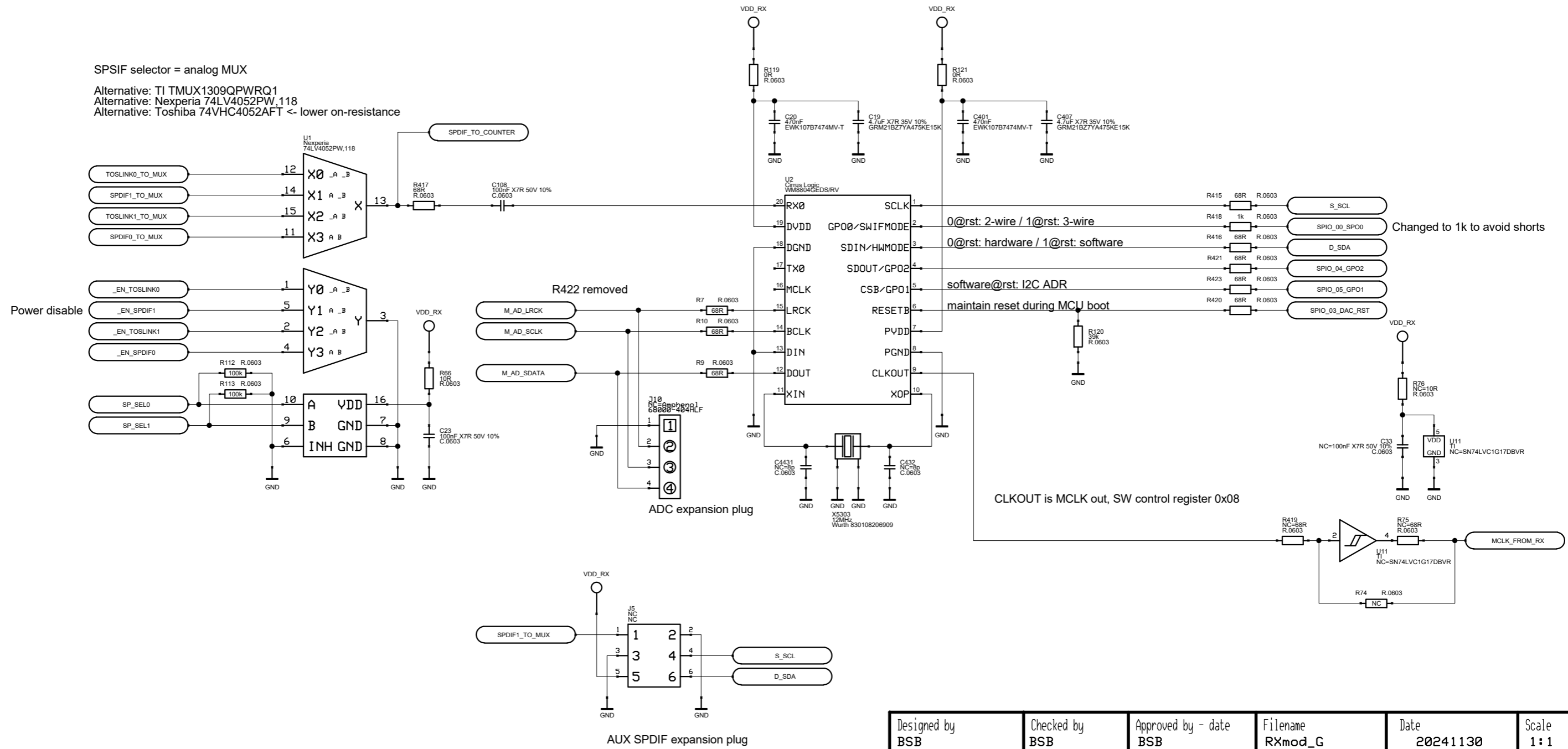
SPDIF count/detect



Simplified SPDIF detection after MUX

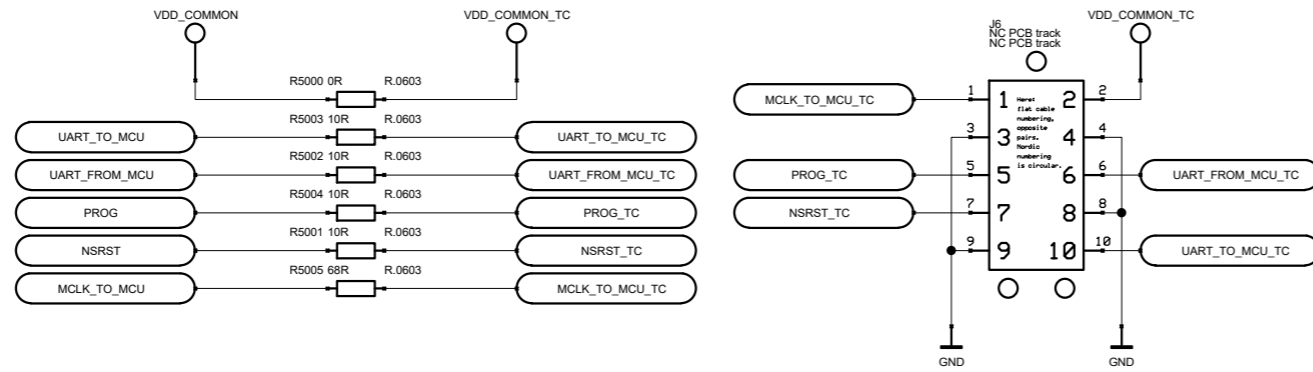
Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number RXmod_G			Henry Audio Audio RX 1		
			Edition xG03	Sheet 4 of 10	

SPSIF selector = analog MUX  
 Alternative: TI TMUX1309QPWRQ1  
 Alternative: Nexperia 74LV4052PW\_118  
 Alternative: Toshiba 74VHC4052AFT <- lower on-resistance

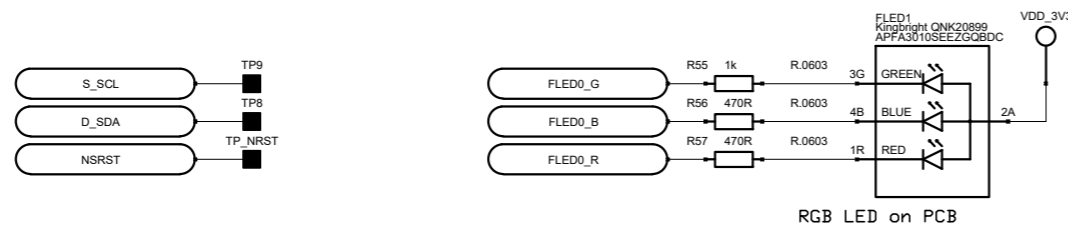
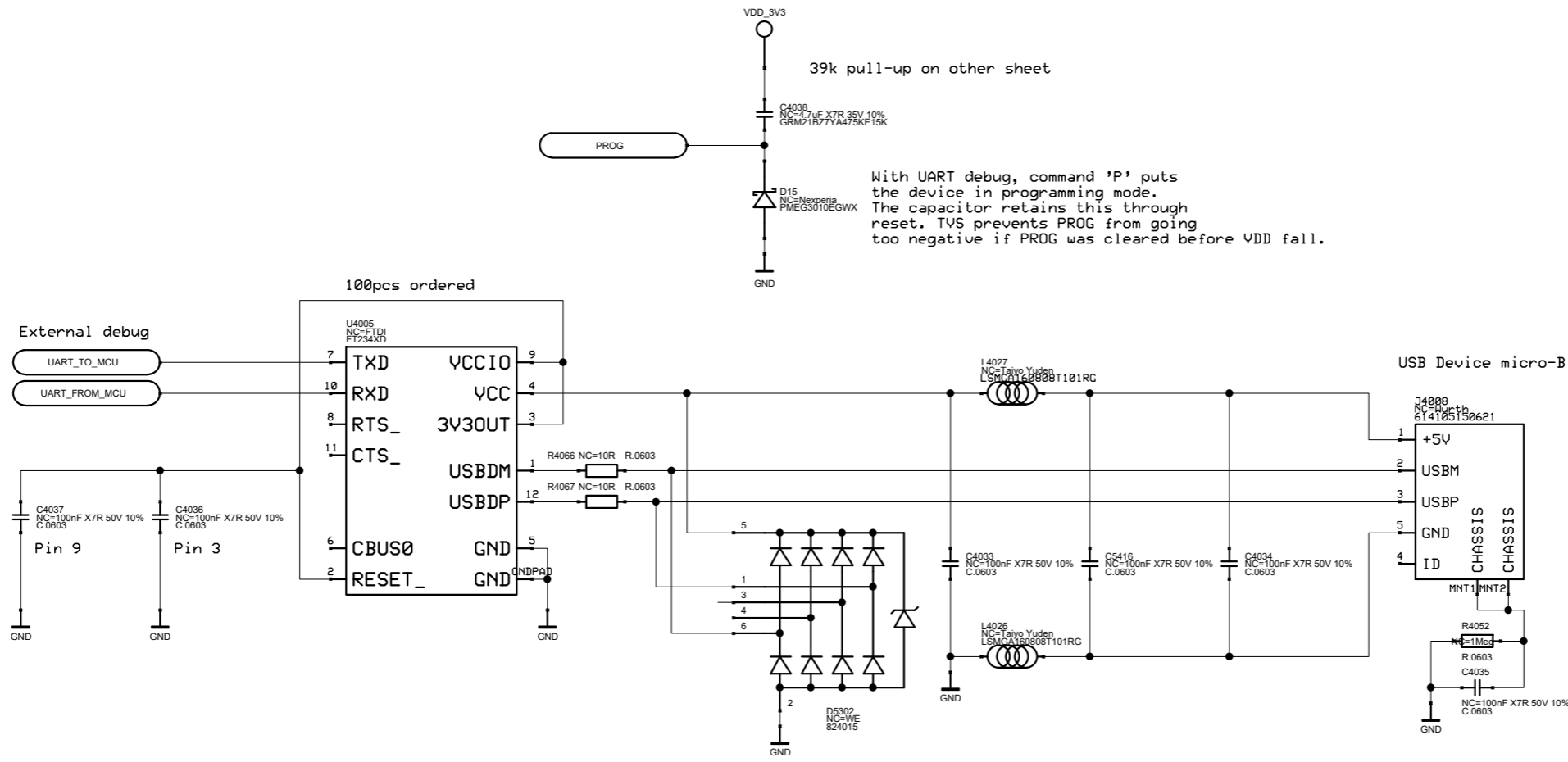


Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number <b>RXmod_G</b>			Henry Audio		Audio RX 2
				Edition xG03	Sheet 5 of 10

Production test with Tag Connect on top: <https://www.digikey.no/en/products/detail/tag-connect-llc/TC2050-IDC/2605366>  
 Consider using it with a patch board for <https://www.kjell.com/no/produkter/elektro-og-verktoy/elektronikk/utviklerkit/arduino/moduler/luxorparts-usb-til-serie11-adapter-for-arduino-p88064>

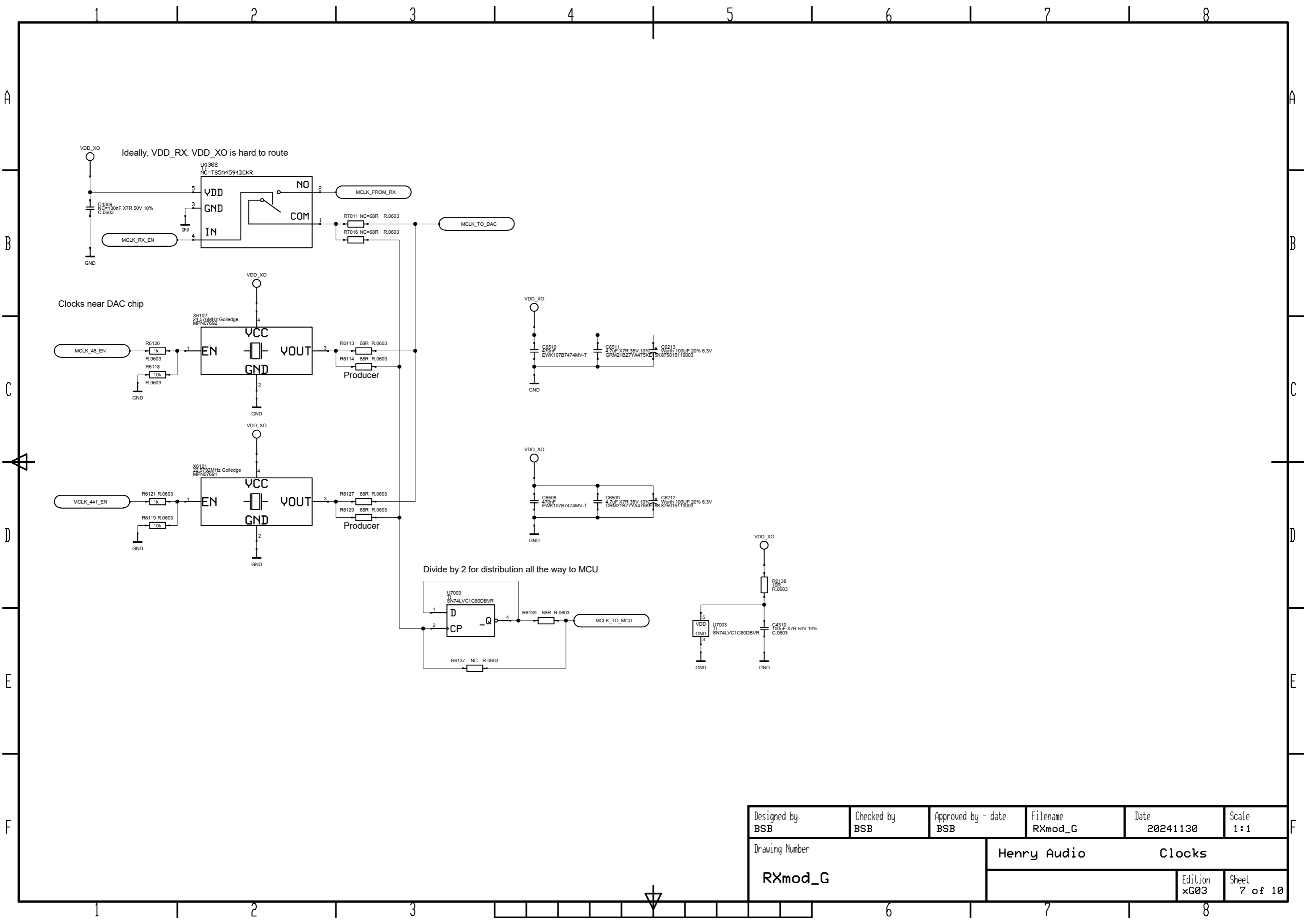


USB UART debug system and SW Prog button activation. Present in prototypes, removed in costed BOM

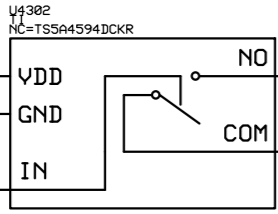


Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number RXmod_G			Henry Audio Debug and LED		
				Edition xG03	Sheet 10 of 10

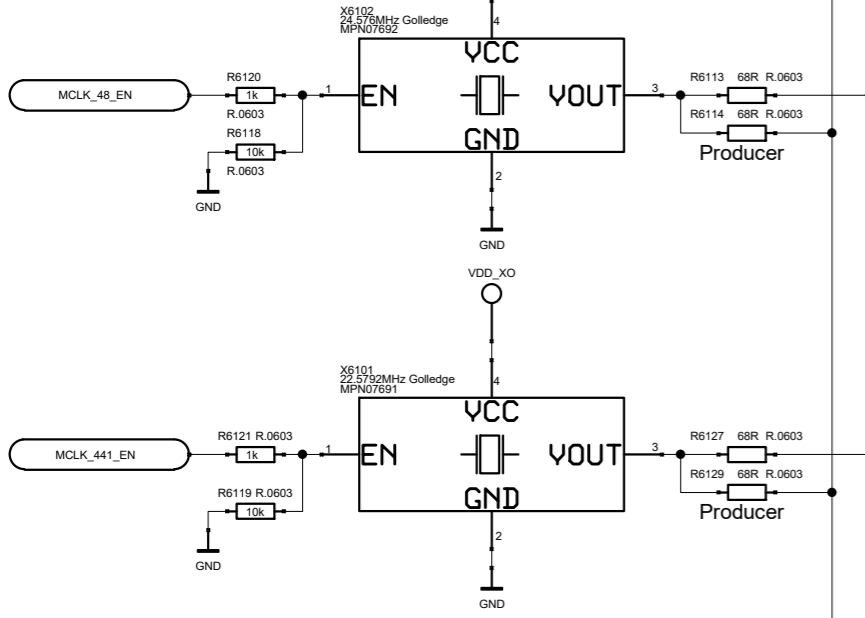




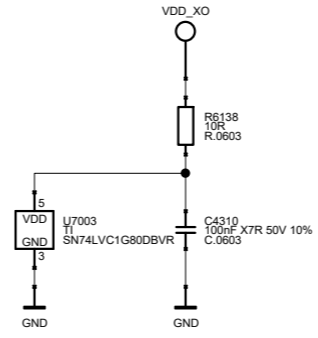
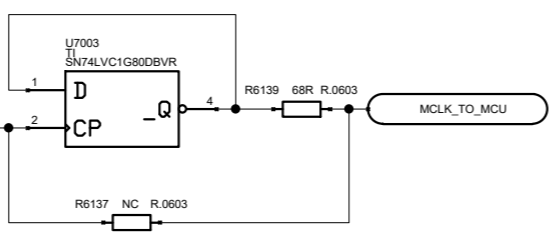
Ideally, VDD\_RX. VDD\_XO is hard to route



Clocks near DAC chip



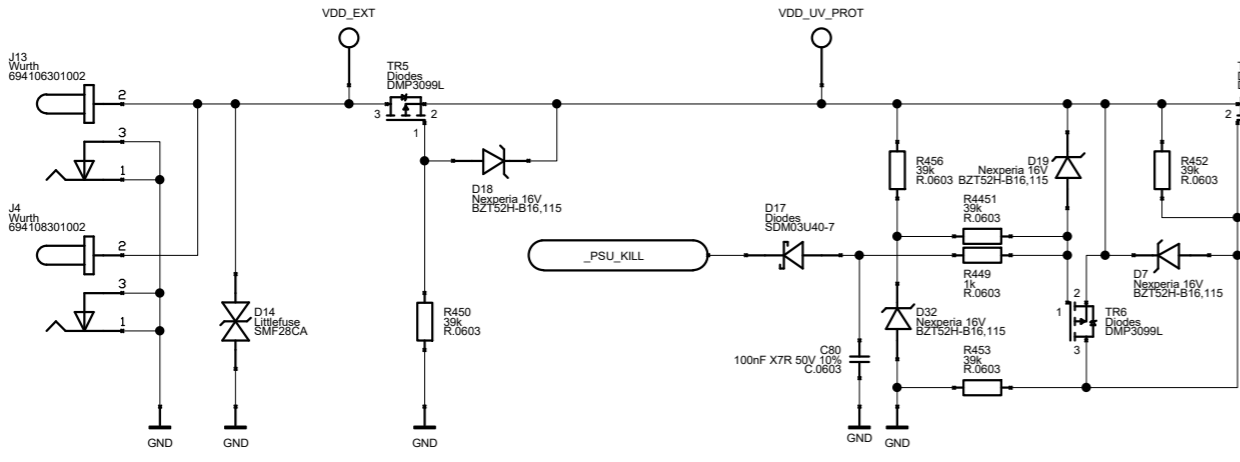
Divide by 2 for distribution all the way to MCU



Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number RXmod_G			Henry Audio Clocks		
				Edition xG03	Sheet 7 of 10

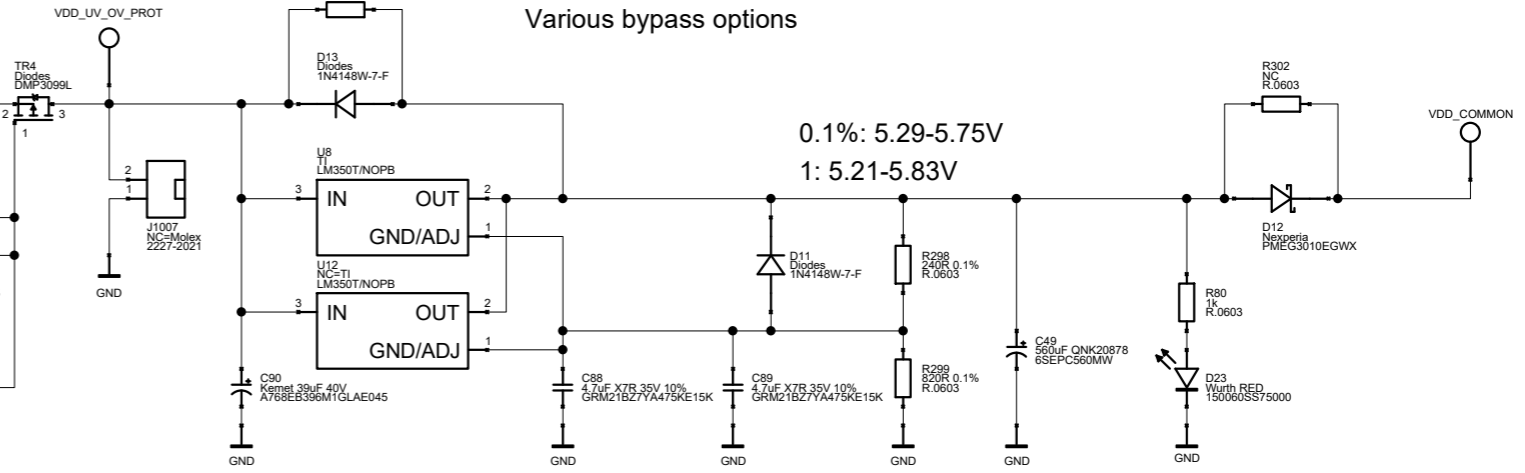


External power plugs  
7.5 - 15VDC



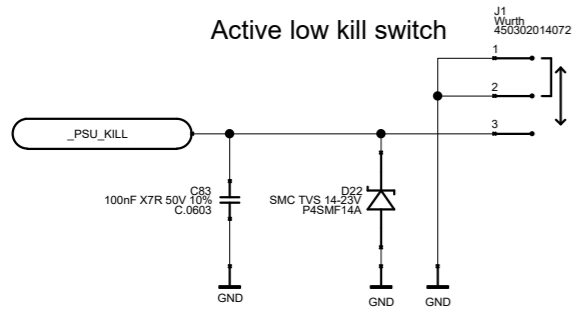
Power protection circuit:  
<https://kaktuscircuits.blogspot.com/2014/07/reverse-polarity-and-overvoltage.html>

Internal power plug  
not protected

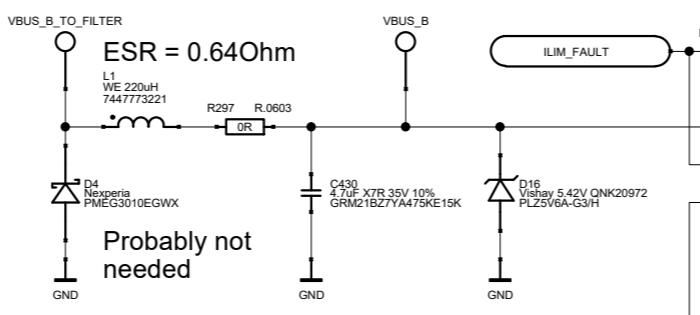


U8: rear cooling  
U12: bottom cooling

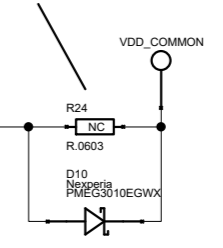
Active low kill switch



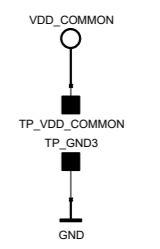
USB-B power



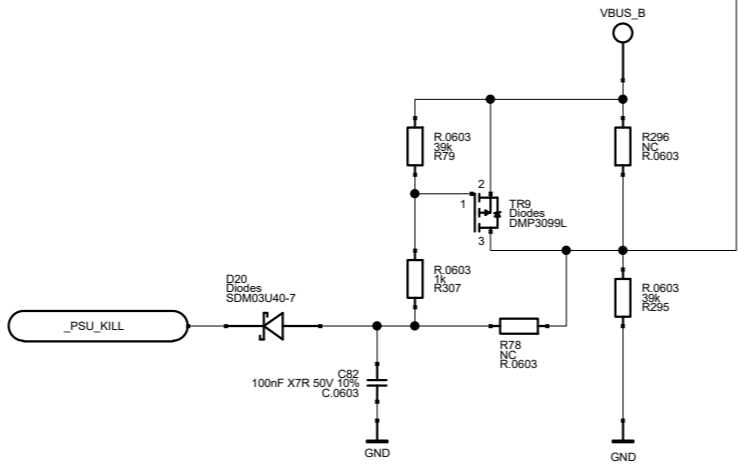
Ext: diode. USB only: 0R



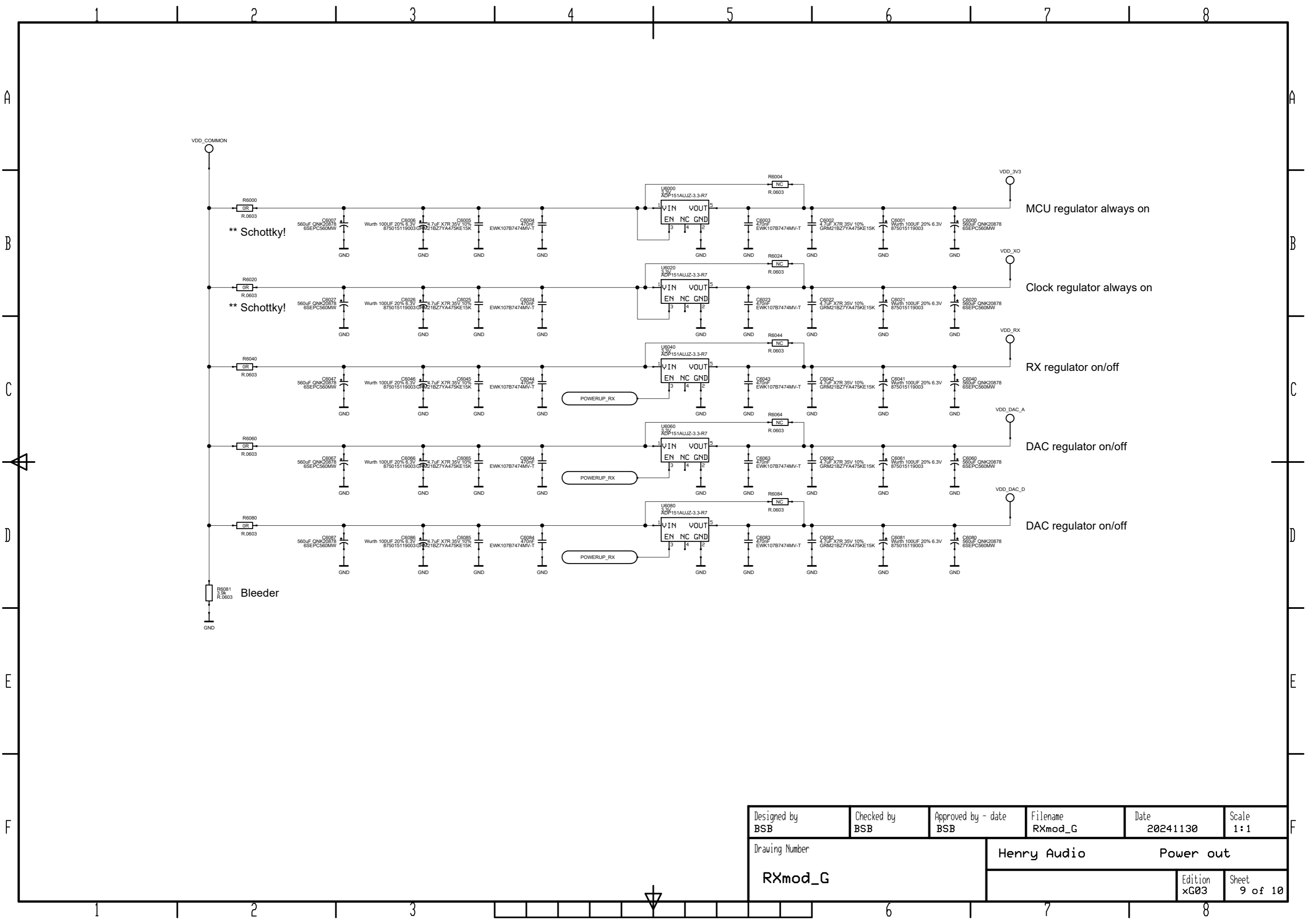
External large decoupling



Alt. 1: '41, \_EN, R295, TR9, R303, R307, R311  
Alt. 2: '51, \_EN, R296, R78



Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number RXmod_G			Henry Audio		Power in
			Edition xG03		Sheet 8 of 10



\*\* Schottky!

\*\* Schottky!

Bleeder

MCU regulator always on

Clock regulator always on

RX regulator on/off

DAC regulator on/off

DAC regulator on/off

Designed by BSB	Checked by BSB	Approved by - date BSB	Filename RXmod_G	Date 20241130	Scale 1:1
Drawing Number RXmod_G			Henry Audio		Power out
				Edition xG03	Sheet 9 of 10