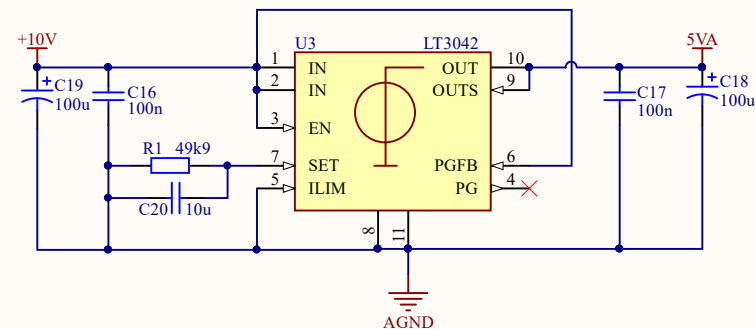
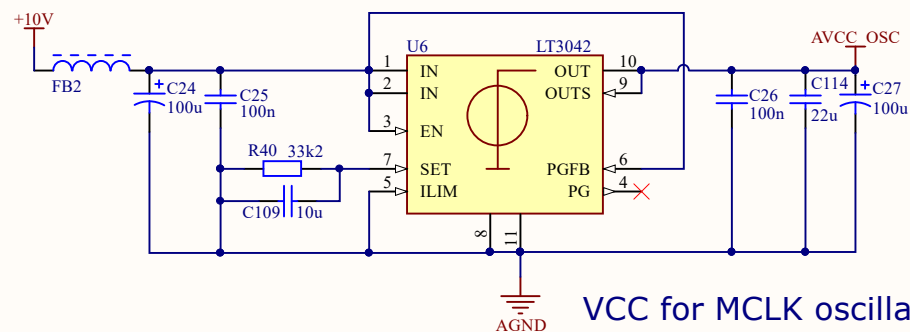


VCC for digital on analog side



CS4398 analog 5V



VCC for MCLK oscillators

Both LT3042 are in QFN, can be changed to MSSOP-
R1 - 49k9 isnt common value, can be changed too.

Title **Power Supply**

Size: **A4**

Number: **1**

Revision: **A**

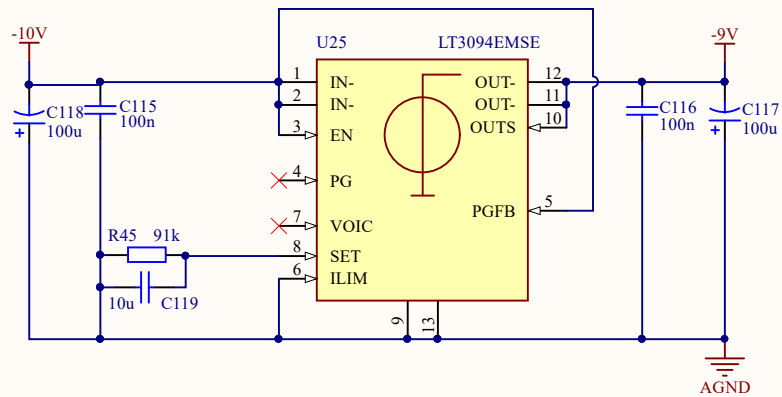
Date: **14/12/2020**

Time: **03:20:39**

Sheet **1** of **8**

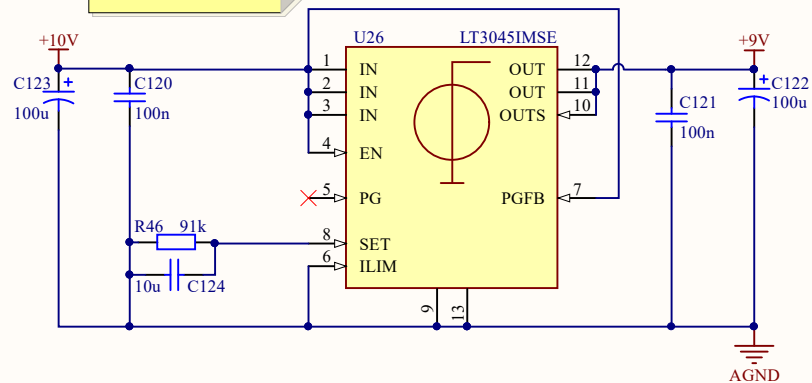
File: **Power Supply.SchDoc**





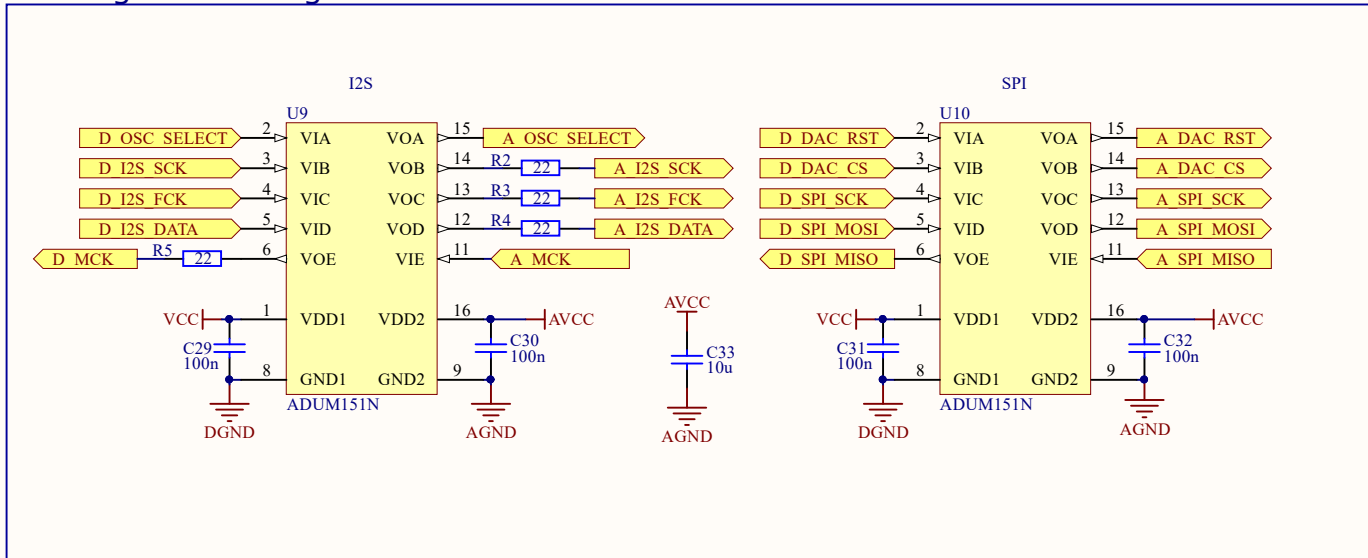
10uF 16V in 0603 are expensive, should be changed.

+/-9V analog rails

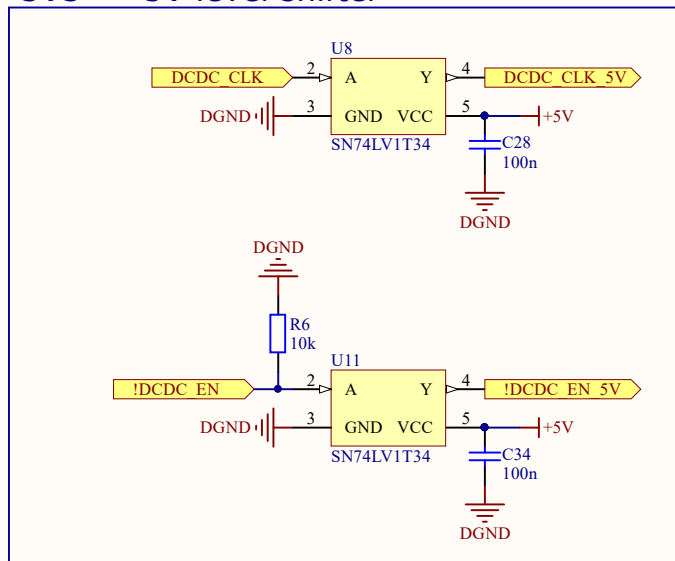



Title +/- 9V LDOs			<div><div></div><div>CIRCUITMAKER</div></div>
Size: A4	Number: 2	Revision: *	
Date: 14/12/2020	Time: 03:20:39	Sheet 2 of 8	
File: Power Supply 9V.SchDoc			

digital - analog isolation

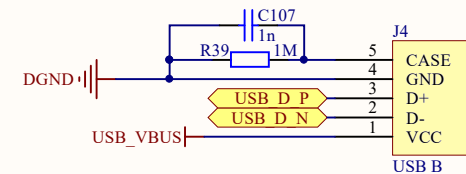
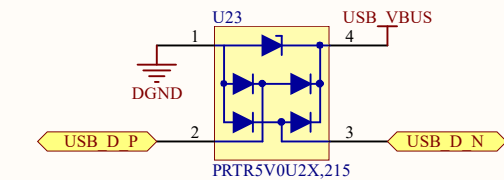
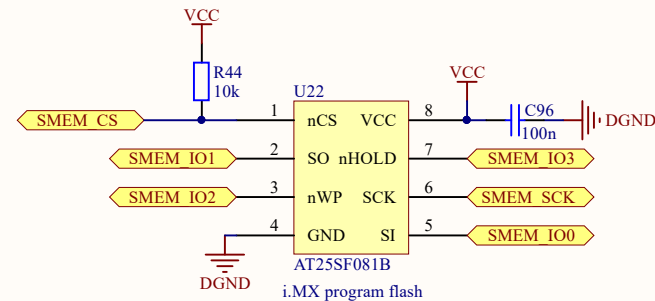
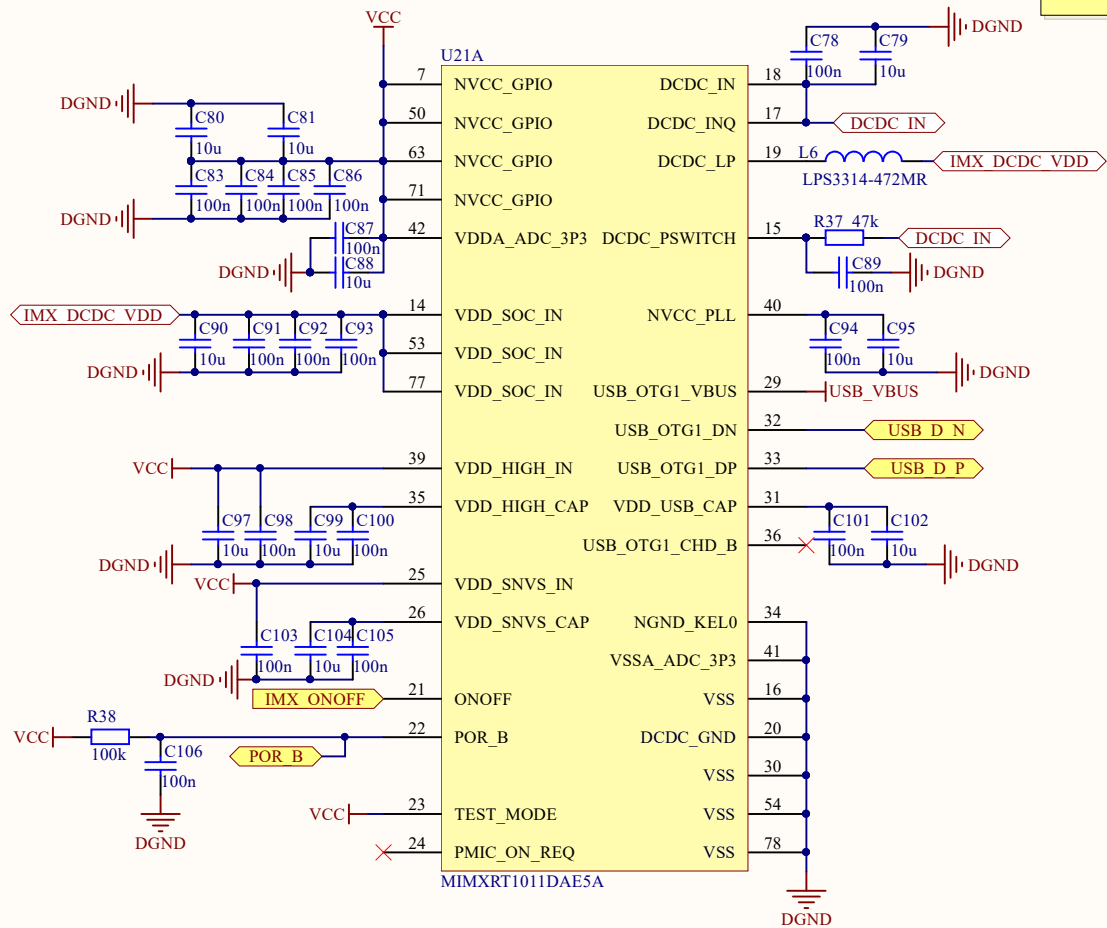


3V3 -> 5V level shifter

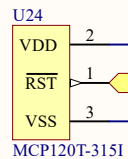


Title <i>Control Interface</i>			* * * * *	
Size: A4	Number:3	Revision:*		
Date: 14/12/2020	Time: 03:20:40	Sheet3 of 8		
File: Comm Interface.SchDoc				


▲ DCDC_IN isn't connected to VCC!!!!



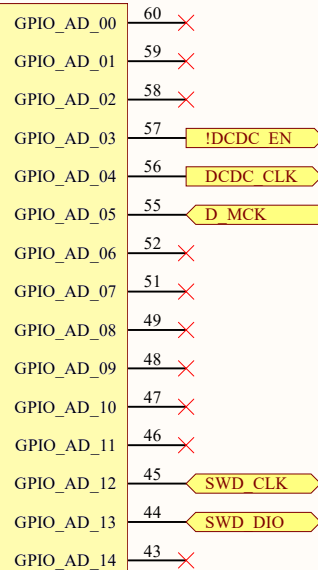
▲ open-drain output with NO internal pull-up!



▲ R38, C106, U24 and C108 can be removed to use internal POR.

Title <i>MCU Power & Clocks</i>			* * * *	
Size: A4	Number:4	Revision:*		
Date: 14/12/2020	Time: 03:20:40	Sheet4 of 8		
File: MCU System.SchDoc				

U21B

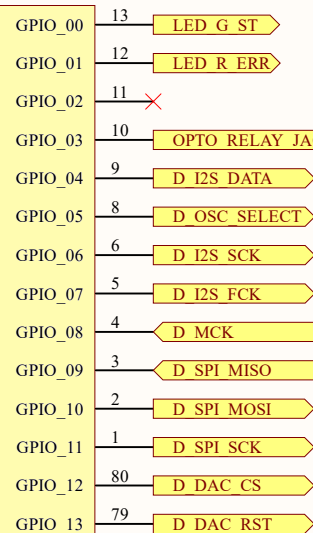


MIMXRT1011DAE5A

▲ GPIO_AD_05 isnt
 GPT_CLK_IN.. D_MCK
 needs to be changed to
 GPIO_AD_03.

▲ We cant use internal timer to
 drive transformer, external
 divider should be added.
 D_MCK / 32 ->
 DCDC_CLK

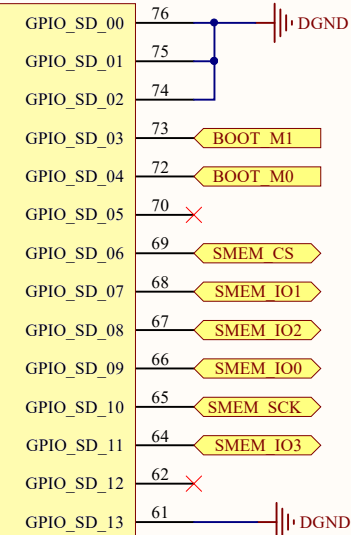
U21C



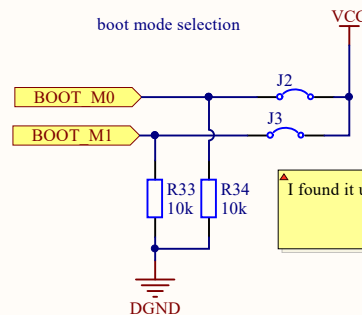
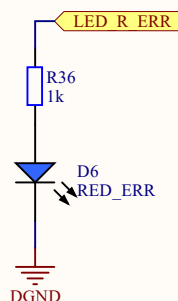
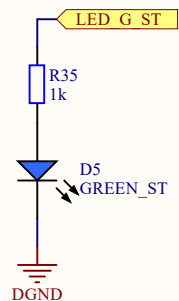
MIMXRT1011DAE5A

▲ D_SPI_MISO will be driven by
 isolator to LOW and cause
 bootloader to detect activity on
 UART -> wont bootup to USB
 downloader. This is just a FlexIO,
 swap MISO and MOSI.

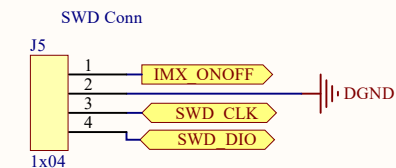
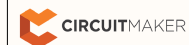
U21D

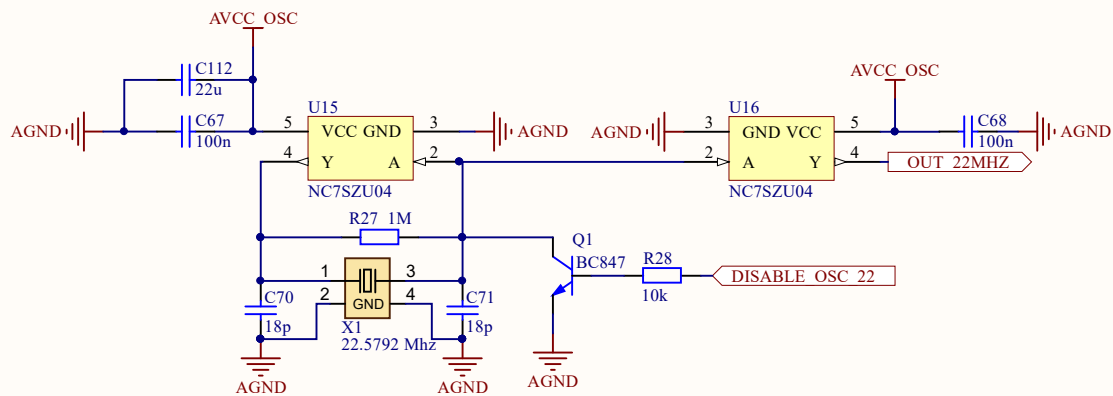


MIMXRT1011DAE5A

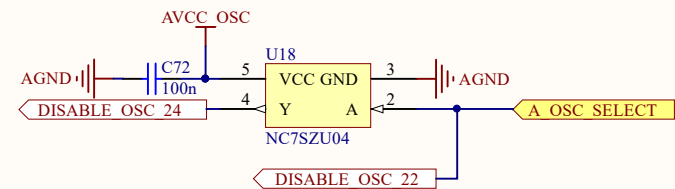
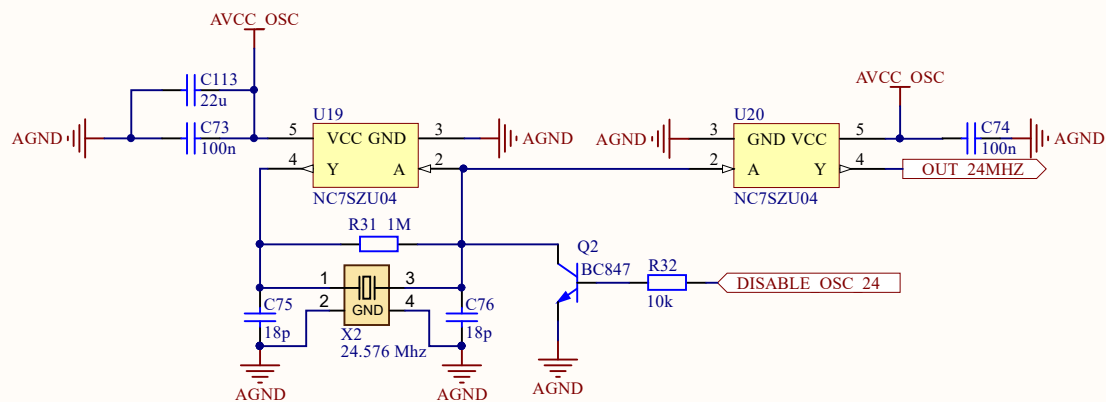
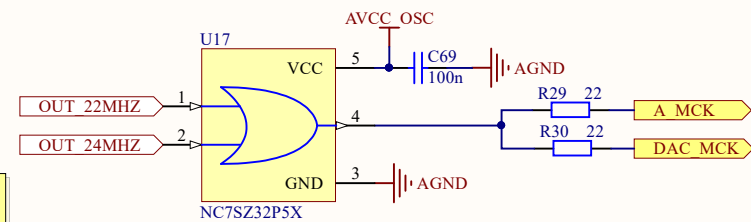


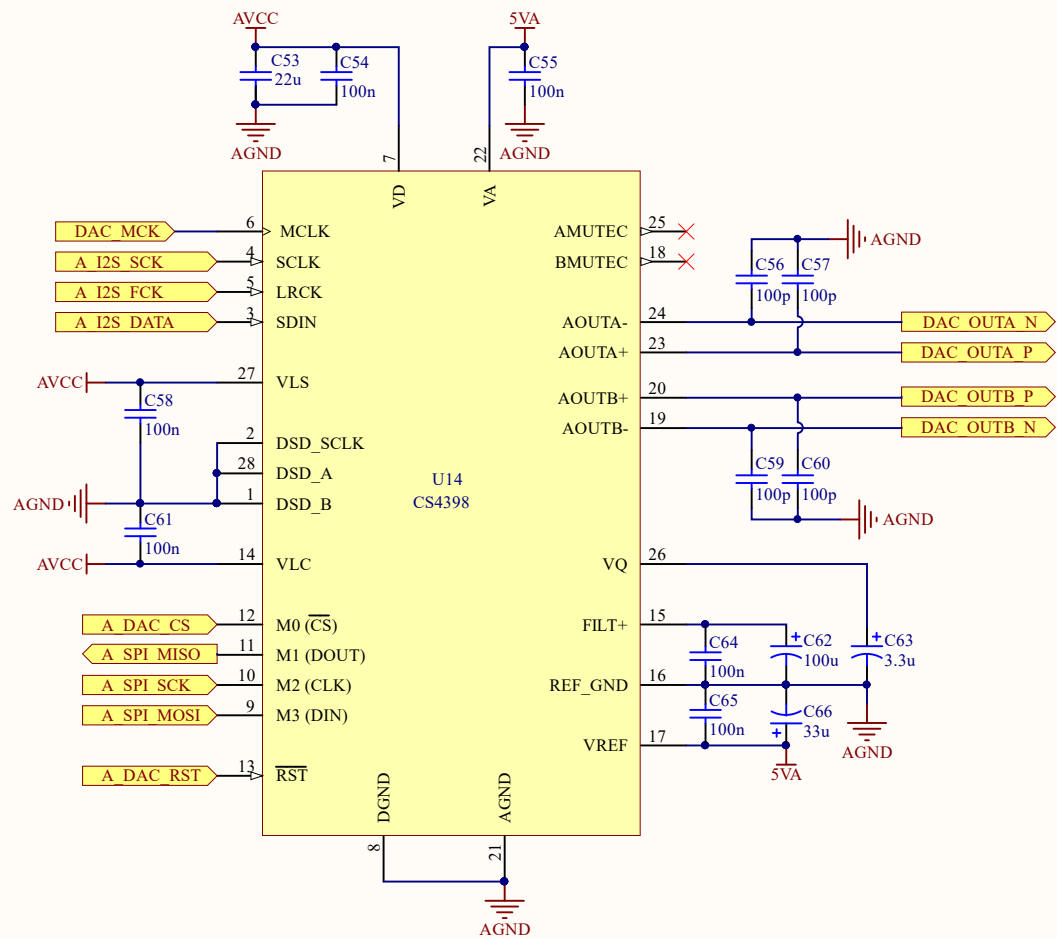
▲ I found it useless. Can be removed.

Title **MCU Gpio**Size: **A4**Number: **5**Revision: *****Date: **14/12/2020** Time: **03:20:40**Sheet **5** of **8**File: **MCU GPIO.SchDoc**

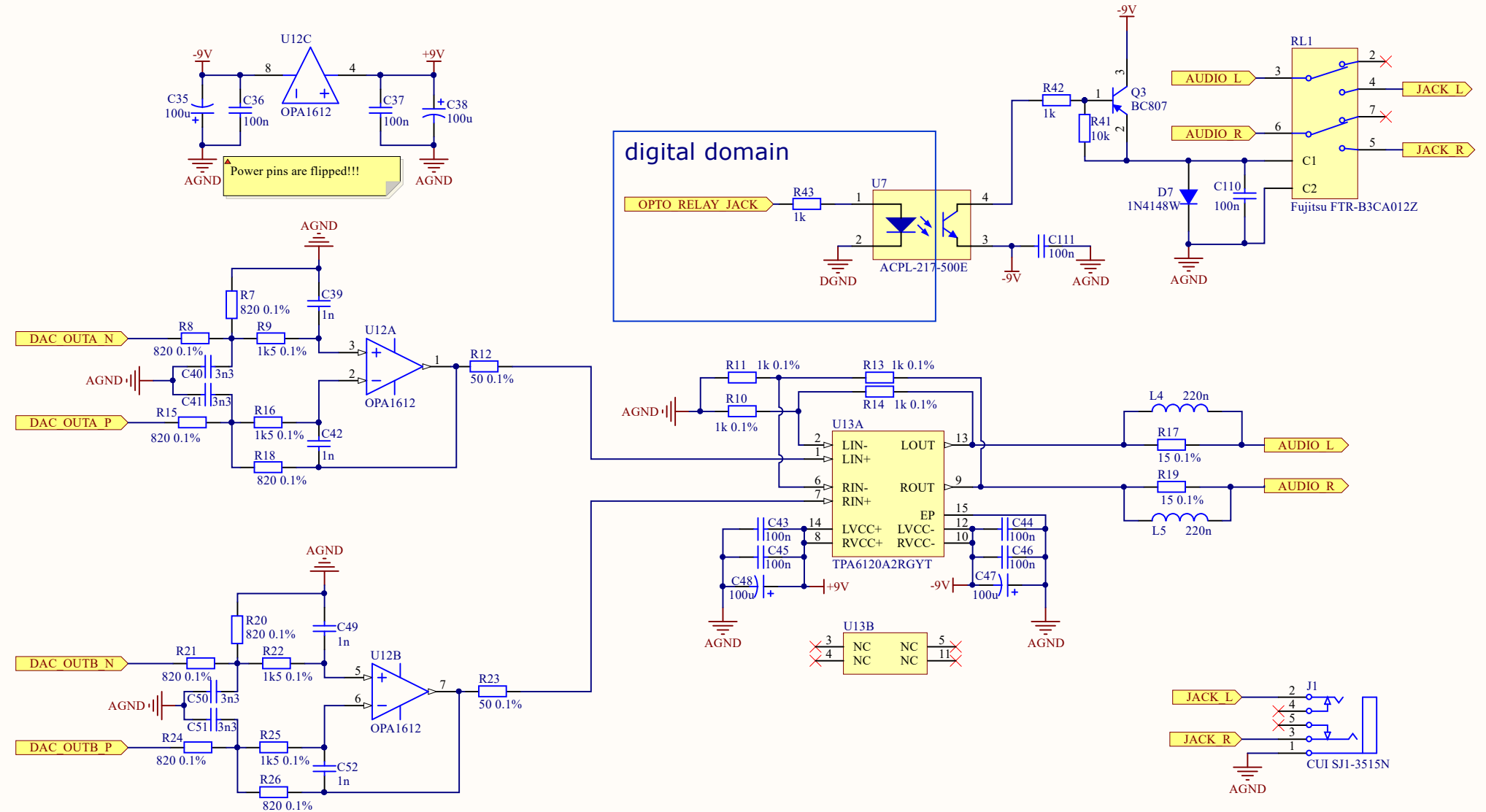



Disabling any oscillator will block OR gate...
change U16 and U20 for buffers
NC7SZ125M5X.





Title CS4398 DAC			<div>CIRCUITMAKER</div>
Size: A4	Number: 7	Revision: *	
Date: 14/12/2020	Time: 03:20:40	Sheet 7 of 8	
File: CS4398 DAC.SchDoc			



Title <i>Audio Output</i>			* * * *	
Size: A4	Number:8	Revision:*		
Date: 14/12/2020	Time: 03:20:40	Sheet8 of 8		
File: Audio Output.SchDoc				