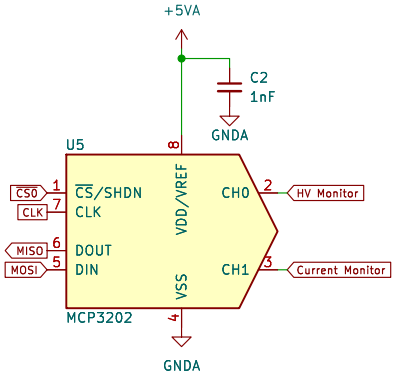
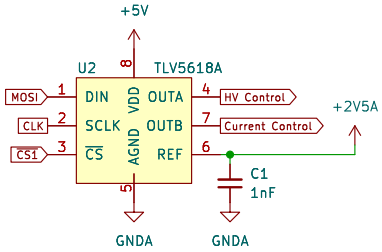
X-MAGIX Peripheral Circuitry

ADC

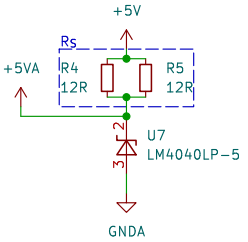


DAC

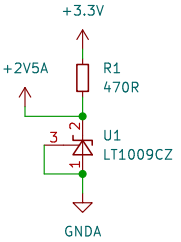


ADC 5V Ref

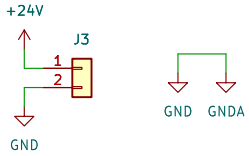
$R_S = (V_S - V_R)/(I_L + I_Q) \approx 6R$



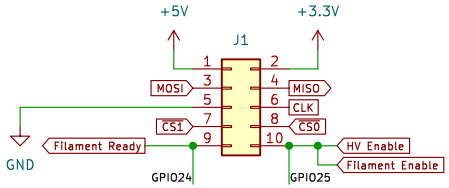
DAC 2.5V Ref



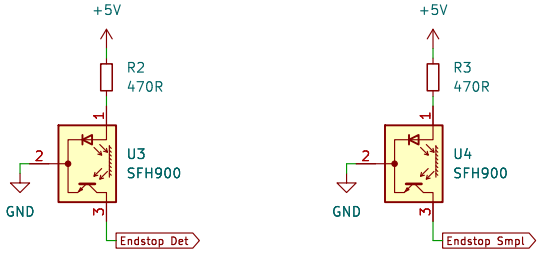
+24V and GNDing



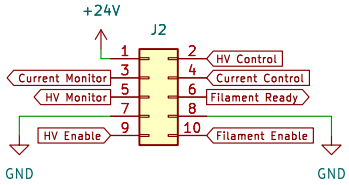
SPI



Endstops



X-Ray Source I/O



Pin	Function	I/O Value
1	HV Enable	0.0 or +5.0 Volts (Input Z = 10k)
2	Filament Ready	0.0 or +5.0 Volts (Output Z =1k)
3	HV Control	2.667 to +4.667 Volts (Input Z = 100k)
4	HV Monitor	2.667 to +4.667 Volts (Output Z = 100Ω)
5	Current Control	0.04 to +1.2 Volts (Input Z = 100k)
6	Current Monitor	0.0 to +1.2 Volts (Output Z = 100Ω)
7	Ground	GND
8	Ground	GND
9	Filament Enable	0.0 or +5.0 Volts (Input Z = 10k)
10	Input Power	+24 Volts DC ± 5%

!!WIP!!

by Dennis Hunter
Hochschule RheinMain

Sheet: /
File: raspberry.kicad_sch

Title: X-MAGIX Peripheral Circuitry

Size: A4	Date: 2023-09-13	**Rev: 0**
KiCad E.D.A. kicad 7.0.6		Id: 1/1