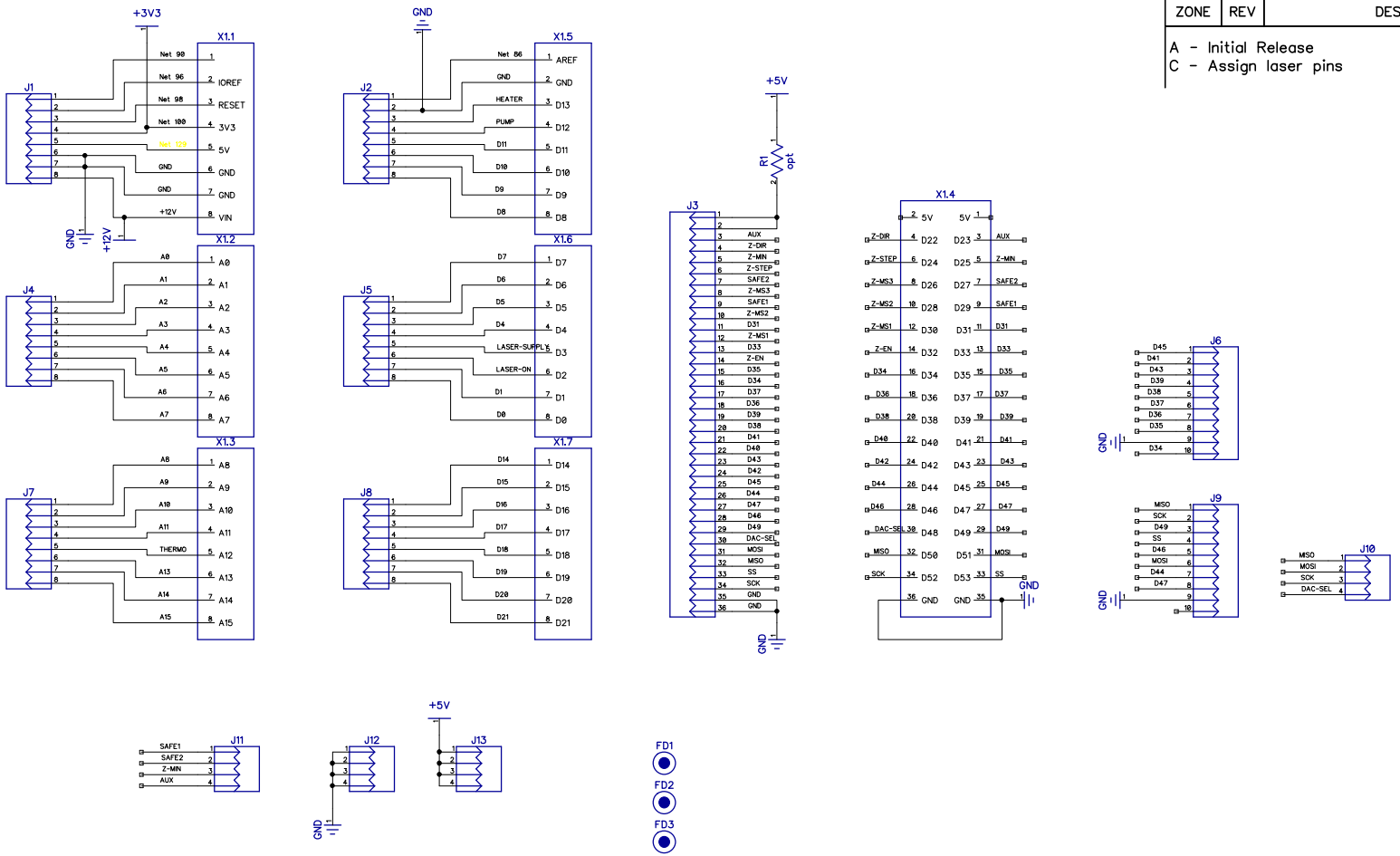


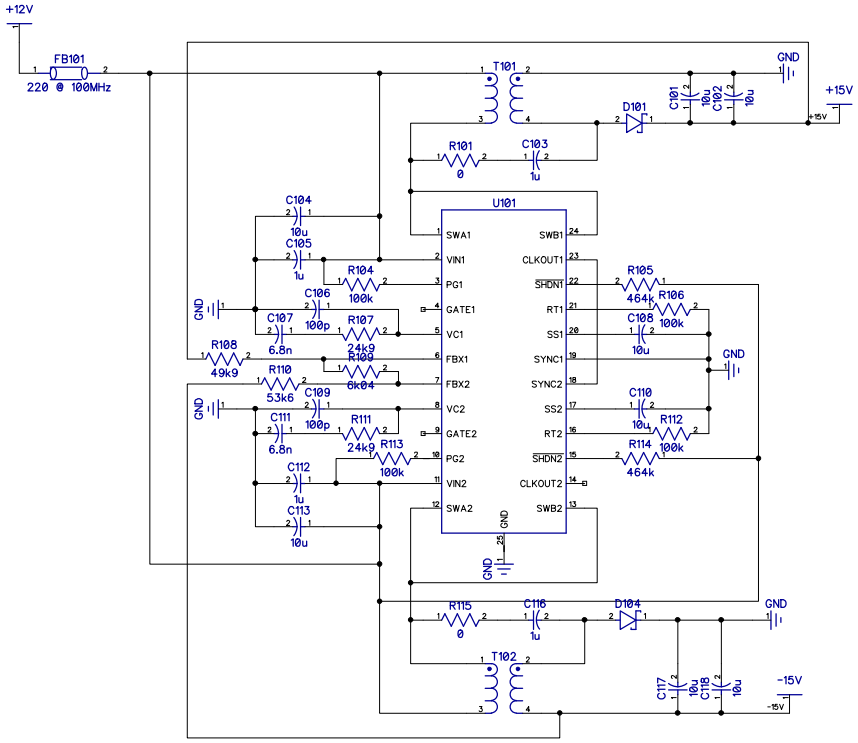
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

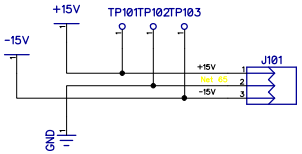
A - Initial Release
C - Assign laser pins

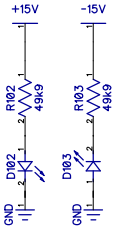
Resin Shield		
Alch3my LLC, CERN OHL v1.2		
Size	PCB 100-0001 PCA 101-0001	Rev G Rev G
9/20/2018	Drawn by JL	
resinshield.dch	Main	

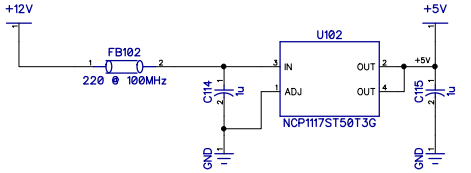
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

A - Initial Release
B - Changed switcher to charge pump type
B.1 - Brigher LEDs
D - 5VLDO, changed switcher to dual regulated type
E - Disconnect SS pins between channels







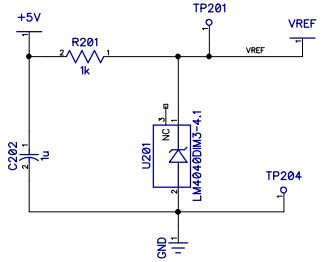


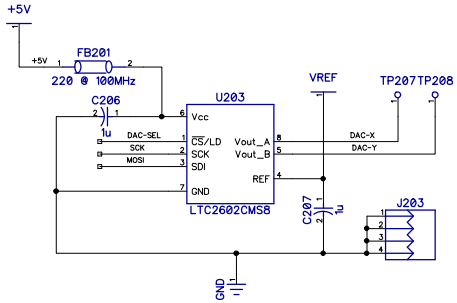
Resin Shield		
Alch3my LLC, CERN OHL v1.2		
Size	Number	Rev
Date		Drawn by JL
resinshield.dch		Power

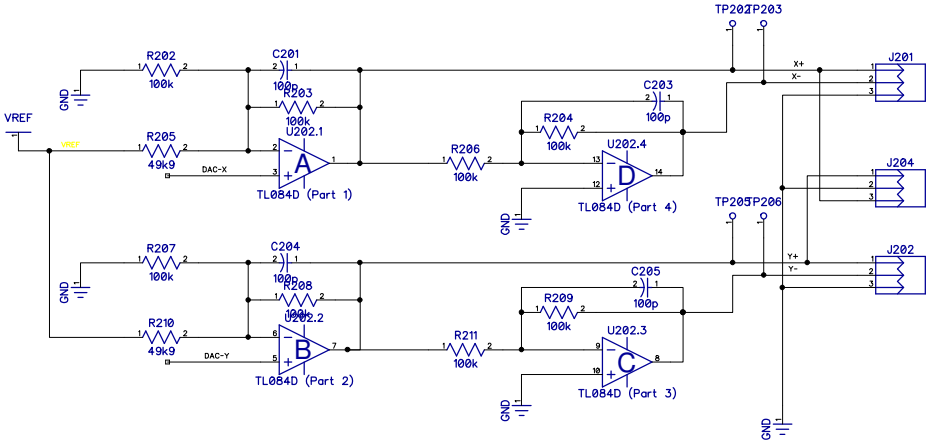
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

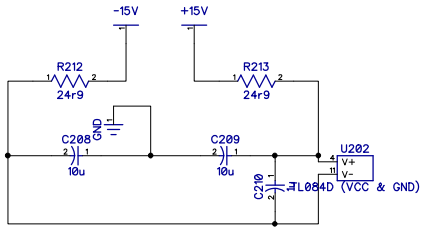
A - Initial Release
C - Improve decoupling
C.1 - Change C207 from 0.1u to 1u

4V reference



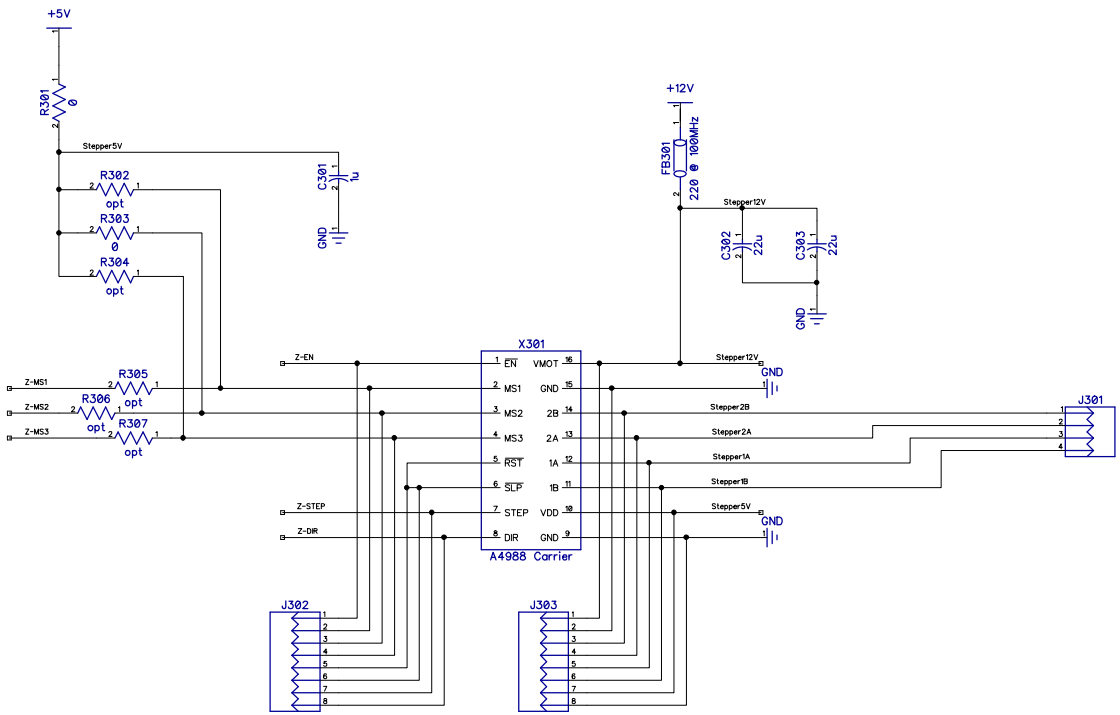






Resin Shield		
Alch3my LLC, CERN OHL v1.2		
Size		Rev
Date		Drawn by JL
resinshield.dch		Analog

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
		A - Initial Release		

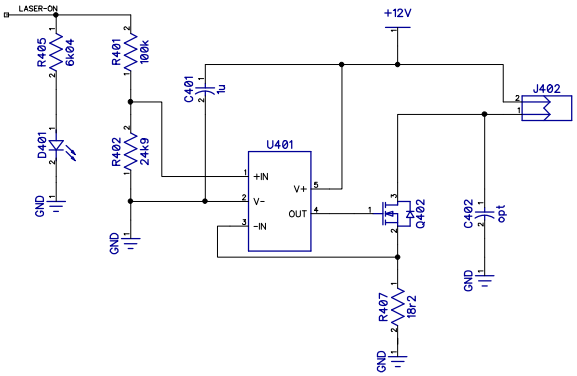


Resin Shield		
Alch3my LLC, CERN OHL v1.2		
Size	Number	Rev
Date		Drawn by JL
resinshield.dch		Stepper

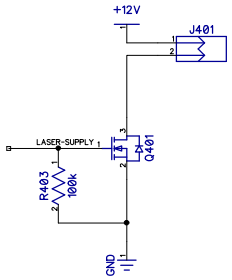
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

C - Laser-ON was not assigned to a pin. TTL drive requires back to back FETs
E - Integrated laser driver
F - J402 flipped
G - Simplified laser driver

Laser Control

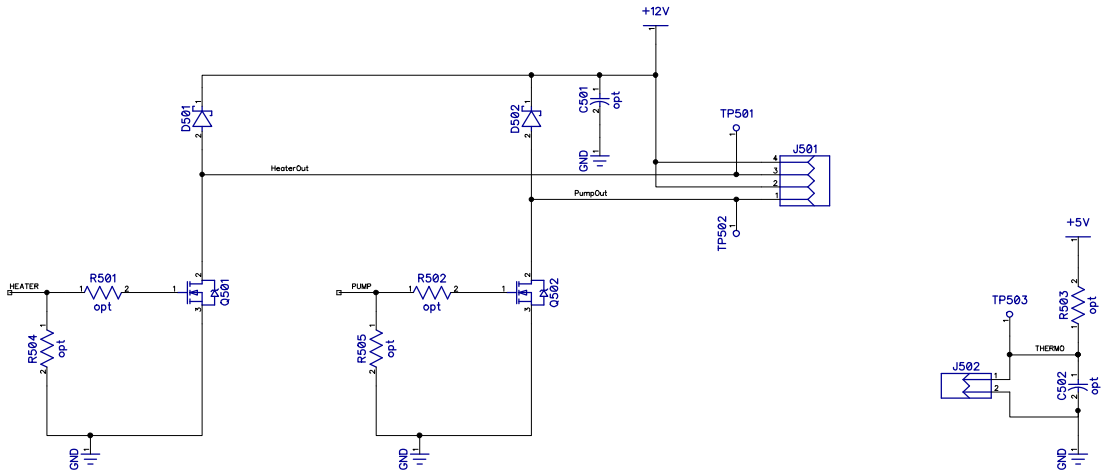


12V Supply



Resin Shield		
Alch3my LLC, CERN OHL v1.2		
Size	Number	Rev
Date		Drawn by JL
resinshield.dch		Laser

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
		A - Initial Release		



Resin Shield		
Alch3my LLC, CERN OHL v1.2		
Size	Number	Rev
Date		Drawn by JL
resinshield.dch		Resin

RefDes	Name	Value	Quantity	Pattern
C101, C102, C104, C108, C110, C113, C117, C118, C208, C209	CAP_0805	10u	10	CAP_0805
C103, C105, C112, C114, C115, C116, C202, C206, C207, C210, C301, C401	CAP_0805	1u	12	CAP_0805
C106, C109, C201, C203, C204, C205	CAP_0603	100p	6	CAP_0603
C107, C111	CAP_0603	6.8n	2	CAP_0603
C302, C303	CAP_1210	22u	2	CAP_1210
C402, C502	CAP_0805	opt	2	CAP_0805
C501	CAP_1210	opt	1	CAP_1210
D101, D104	PMEG4020ETP		2	SOD-128
D102, D103, D401	APL3015SRCPRV-F01		3	APL3015
D501, D502	PMEG4020ETP	opt	2	SOD-128
FB101, FB102, FB201, FB301	BLM18KG221SN1D	220 @ 100MHz	4	RES_0603
FD1, FD2, FD3	Fiducial		3	Fiducial
J1, J2, J4, J5, J7, J8	644456-8		6	HDR-1x8T/2.54/20x2
J3	90131-0138		1	HDR-2x18T/2.54x2.54/46x5
J6, J9	90131-0125	opt	2	HDR-2x5T/2.54x2.54/13x5
J10, J203	644456-4	opt	2	HDR-1x4T/2.54/10x2
J11, J12, J13, J301	644456-4		4	HDR-1x4T/2.54/10x2
J101	0022272031		1	Molex 3pin
J201, J202, J204	B3B-XH-A		3	JST B3B-XH-A
J302, J303	PPTC081LFBN-RC		2	HDR-1x8T/2.54/20x2
J401, J402	B2B-XH-A		2	JST B2B-XH-A
J501	OSTVN04A150	opt	1	TB-1x4/2.54/11x7/Sc_H
J502	644456-2	opt	1	HDR-1x2T/2.54/5x2
Q401, Q402	2N7002		2	SOT23
Q501, Q502	IRLZ44N	opt	2	TO-220
R1, R302, R304, R305, R306, R307, R501, R502, R503, R504, R505	RES_0603	opt	11	RES_0603
R101, R115	RES_1210	0	2	RES_1210
R102, R103, R108, R205, R210	RES_0603	49k9	5	RES_0603
R104, R106, R112, R113, R202, R203, R204, R206, R207, R208, R209, R211, R401, R403	RES_0603	100k	14	RES_0603
R105, R114	RES_0603	464k	2	RES_0603
R107, R111, R402	RES_0603	24k9	3	RES_0603
R109, R405	RES_0603	6k04	2	RES_0603
R110	RES_0603	53k6	1	RES_0603
R201	RES_0603	1k	1	RES_0603
R212, R213	RES_0603	24r9	2	RES_0603
R301, R303	RES_0603	0	2	RES_0603
R407	RES_0603	18r2	1	RES_0603
T101, T102	SRF1260-150M	15uH	2	SRF1260
TP101, TP102, TP103, TP201, TP202, TP203, TP204, TP205, TP206, TP207, TP208, TP501, TP502, TP503	TESTPOINT		14	Round
U101	LT8582		1	4x7DFN
U102	NCP1117ST50T3G		1	SOT223-4
U201	LM4040DIM3-4.1		1	SOT23
U202	TL084D		1	SOIC-14/150mil
U203	LTC2602CMS8		1	MSOP-8
U401	LM321MF		1	SOT23-5
X1	Arduino Mega		1	
X301	A4988 Carrier		1	

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

Resin Shield

Alch3my LLC, CERN OHL v1.2

Size	Number	Rev

Date	Drawn by JL
resinshield.dch	Document