

123456

A

Sheet: MCU

File: MCU.sch

Sheet: HV interface

File: HV\_interface.sch

Sheet: peripherals

File: peripherals.sch

Sheet: power

File: power.sch

mechanical / graphical

H1

MountingHole

H2

MountingHole

H3

MountingHole

H4

MountingHole

H5

MountingHole

H6

MountingHole

H7

MountingHole

H8

MountingHole

G1

W logo

G2

MISL logo

G3

PurpleDrop logo

UW MISL

Sheet: /

File: PurpleDrop.sch

Title: PurpleDrop Main Board

Size: A4

Date: 2020-11-03

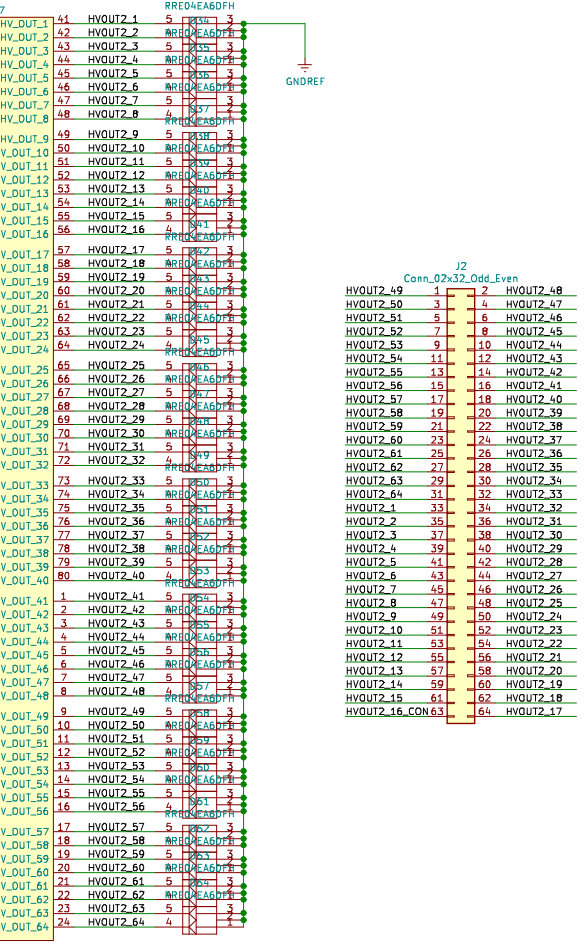
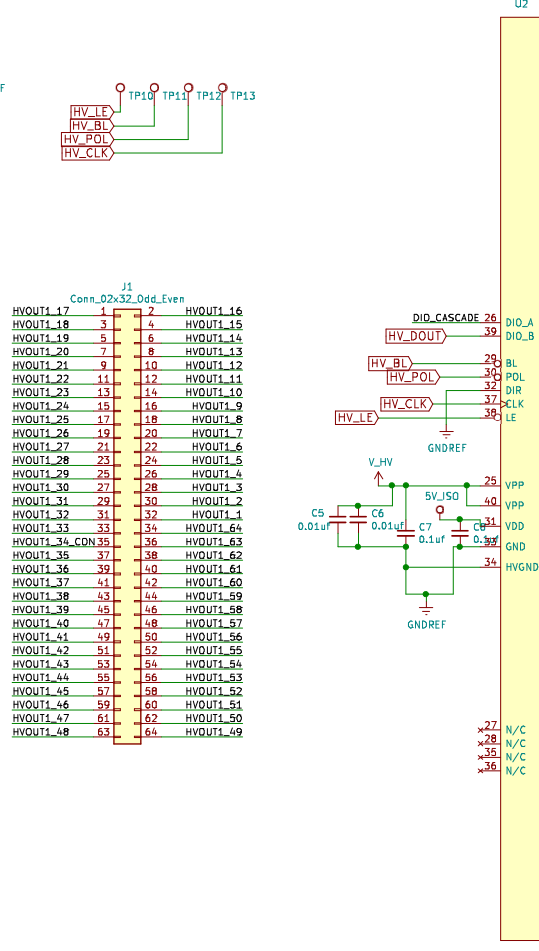
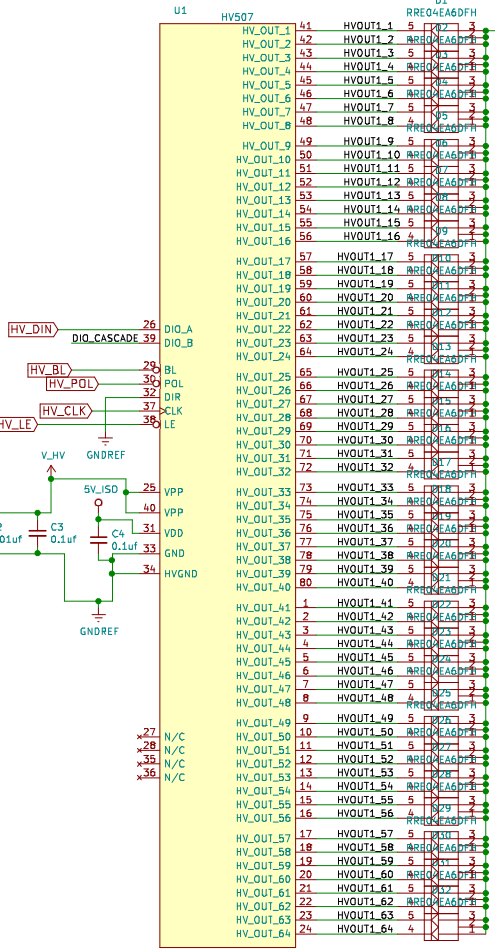
Rev: 6.1

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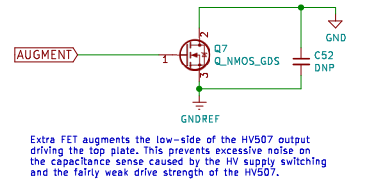
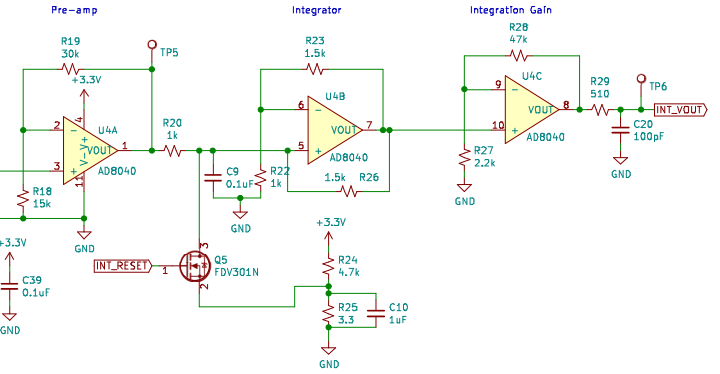
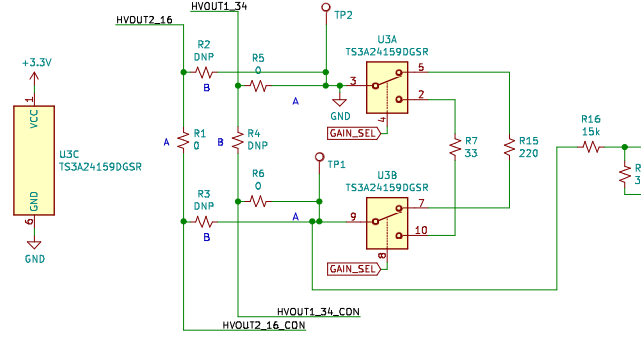
D



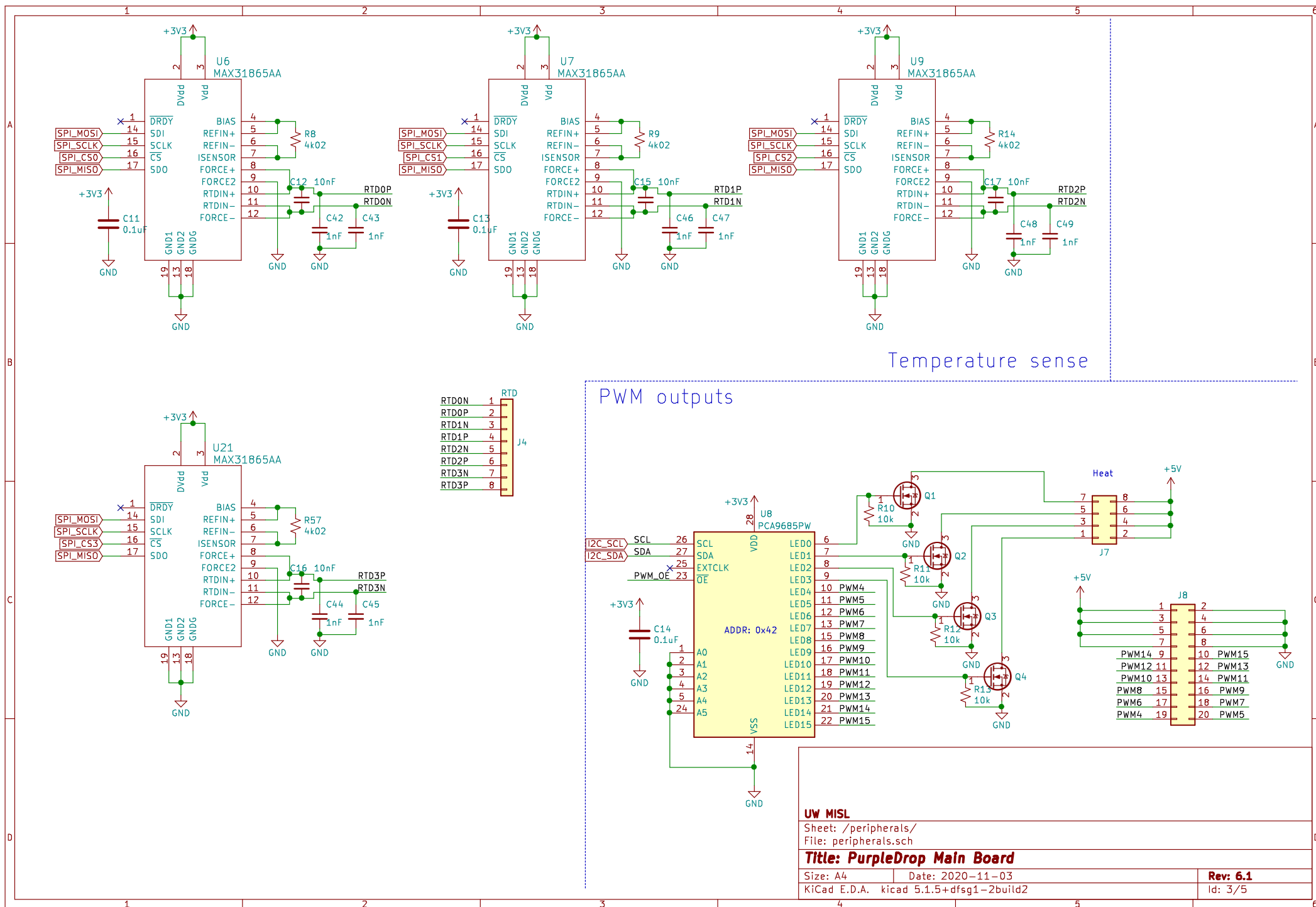
J2 Conn\_02x32\_Odd\_Even

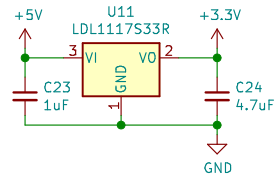
Pin	Signal	Pin	Signal
1	HVOUT2_49	2	HVOUT2_48
3	HVOUT2_50	4	HVOUT2_47
5	HVOUT2_51	6	HVOUT2_46
7	HVOUT2_52	8	HVOUT2_45
9	HVOUT2_53	10	HVOUT2_44
11	HVOUT2_54	12	HVOUT2_43
13	HVOUT2_55	14	HVOUT2_42
15	HVOUT2_56	16	HVOUT2_41
17	HVOUT2_57	18	HVOUT2_40
19	HVOUT2_58	20	HVOUT2_39
21	HVOUT2_59	22	HVOUT2_38
23	HVOUT2_60	24	HVOUT2_37
25	HVOUT2_61	26	HVOUT2_36
27	HVOUT2_62	28	HVOUT2_35
29	HVOUT2_63	30	HVOUT2_34
31	HVOUT2_64	32	HVOUT2_33
33	HVOUT2_65	34	HVOUT2_32
35	HVOUT2_66	36	HVOUT2_31
37	HVOUT2_67	38	HVOUT2_30
39	HVOUT2_68	40	HVOUT2_29
41	HVOUT2_69	42	HVOUT2_28
43	HVOUT2_70	44	HVOUT2_27
45	HVOUT2_71	46	HVOUT2_26
47	HVOUT2_72	48	HVOUT2_25
49	HVOUT2_73	50	HVOUT2_24
51	HVOUT2_74	52	HVOUT2_23
53	HVOUT2_75	54	HVOUT2_22
55	HVOUT2_76	56	HVOUT2_21
57	HVOUT2_77	58	HVOUT2_20
59	HVOUT2_78	60	HVOUT2_19
61	HVOUT2_79	62	HVOUT2_18
63	HVOUT2_80	64	HVOUT2_17

Current Sensing Resistor Routing  
Config "A" selects HVOUT1\_34  
Config "B" selects HVOUT2\_16  
Or, wire externally using test points



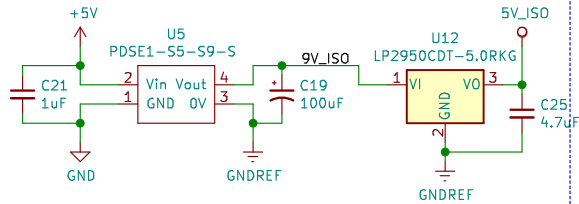
Extra FET augments the low-side of the HV507 output driving the top plate. This prevents excessive noise on the capacitance sense caused by the HV supply switching and the fairly weak drive strength of the HV507.



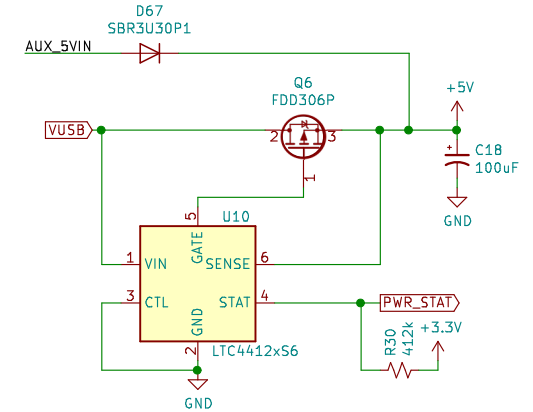
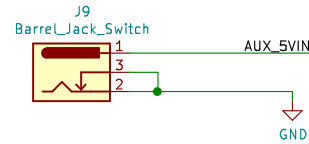


3.3V regulator

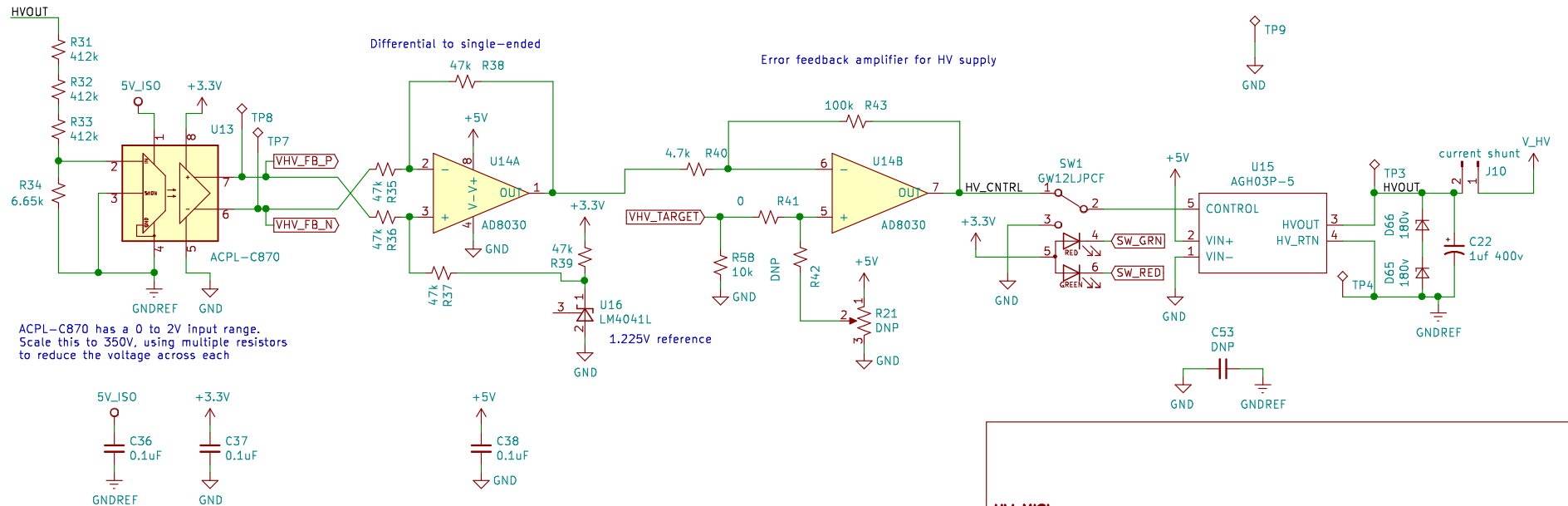
5V->9V\_ISO DC-DC convert stepped back down to 5V\_ISO, in order to allow a wider range of input voltage while keeping the 5V supply for HV507 tightly regulated.



Isolated 5V supply



Power Input Selection



UW MISL

Sheet: /power/  
File: power.sch

Title: PurpleDrop Main Board

Size: A4 Date: 2020-11-03

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