

Designator	Value	Comment	Description	Footprint	Quantity
		PWM_CONTROL	Header, 6-Pin	B6B-XH-A(LF)(SN)	1
C1, C38, C39, C40, C41	47nF	100V	CL21B104KCFNNNE, MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT 100NF 100V 0805 ROHS	0805 - Capacitor	5
C2, C4, C6	2200pF	10V	TDK C2012X7S2A105K1000 N, 1uF ±10% 100V X7S 0805 MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT ROHS	0805 - Capacitor	3
C3, C5, C21	1uF	100V	TDK C2012X7S2A105K1000 N, 1uF ±10% 100V X7S 0805 MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT ROHS	0805 - Capacitor	3
C7, C13, C19, C22, C23, C24, C25, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C44	0.1uF	100V	CL21B104KCFNNNE, MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT 100NF 100V 0805 ROHS	0805 - Capacitor	18
C8, C9, C26	1000pF	10V	TDK C2012X7S2A105K1000 N, 1uF ±10% 100V X7S 0805 MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT ROHS	0805 - Capacitor	3
C10, C14	100uF	100V	100ZLH100MEFC10X2 0, Aluminum Electrolytic Capacitors Radial, Can - 10000 Hrs @ 105°C, 100uF 20% 100V	Electrolytic Cap	2
C11, C12	2.2uF	10V	Nonpolarized Capacitor	0805 - Capacitor	2
C15, C42, C43	10uF	100V	CL21B104KCFNNNE, MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT 100NF 100V 0805 ROHS	0805 - Capacitor	3
C16	15uF	100V	EEU-E2E/V150, Aluminum Electrolytic Capacitors Radial, Can - 8000 Hrs @ 105°C, CAP ALUM 15uF 20% 350V RADIAL	Electrolytic Cap	1
C17, C18	28pF	100V	CL21B104KCFNNNE, MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT 100NF 100V 0805 ROHS	0805 - Capacitor	2
C20	10nF	10V	C0805C103K8RAC7800 1000pF ±10% 10V Ceramic Capacitor XTR 0805 (2012 Metric)	0805 - Capacitor	1
C27	4.7uF	100V	TDK C2012X7S2A105K1000 N, 1uF ±10% 100V X7S 0805 MULTILAYER CERAMIC CAPACITORS MLCC - SMD/SMT ROHS	0805 - Capacitor	1
D1	RED	Light Emitting Diode	4-PLCC RGB LED	4-PLCC RGB LED	1
P1, P3, P6, P7, P8		M4x3mm	WP-THRBU REDCUBE THR internal through- hole thread, 10x10mm, M4x3mm, 8 pins, 85A	74650094	5
P2	CAN	Header, 4-Pin	b4b-xh	b4b-xh	1
P4	PROGRAMMING	Header, 7-Pin	HDR1X7	HDR1X7	1
P5	DM3D-SF	CONN MICRO SD CARD PUSH-PULL	FP-DM3D-SF-MFG	FP-DM3D-SF-MFG	1
O1, O2, O3, O4, O5, O6	NMOS-2	N-Channel Power MOSFET	T0254P1651X1067X47 0-3	T0254P1651X1067X47 0-3	6
R1, R2, R4, R5, R6, R10, R14, R24, R25, R26, R31, R37	10k	10k	Resistor	0603 - Resistor	12
R3	330	330	Resistor	0603 - Resistor	1
R7, R8, R15, R17, R19	500u	500u	Resistor	RES-C6430X65N	5
R9, R34, R35, R36	2.2k	2.2k	Resistor	0603 - Resistor	4
R11, R12, R23	100	100	Resistor	0603 - Resistor	3
R13, R30, R32, R33	50k	50k	Resistor	0603 - Resistor	4
R16	120	500m	Resistor	0603 - Resistor	1
R18, R27, R28, R29	500m	500m	Resistor	0603 - Resistor	4
R20, R21, R22	56	56	Resistor	0603 - Resistor	3
RT1, RT2, RT3, RT4, RT5, RT6, RT7, RT8		10k	NTC Thermistor for Temperature Sensor, SMD 0603, 10kΩ	ERT-J1VG103JA	8
S1	Switch - Push Button	Push Button Switch	6x6mm Switch	6x6mm Switch	1
U1	LS3DH1TR	Accelerometer	LS3DH1TR	LS3DH1TR	1
U2	TJA1051T_3..118	Integrated Circuit	TJA1051T_3..118	TJA1051T_3..118	1
U3	STM32F405RG16TR		STM32F405RG16TR	STM32F405RG16TR	1
U4	TLV1117-33IDCYR	Linear Voltage Regulator IC3.3V 800mA SOT223-4	TLV1117	TLV1117	1
U5	DRV8323SRTAT	Multiphase Motor Driver Power MOSFET SPI 40- WQFN_6x6	DRV8323SRTAT	DRV8323SRTAT	1
U6, U7	INA180	0V to 26V Current Sense Amplifier	INA180	INA180	2
U8	TMUX1208PWR	Integrated Circuit	SOP65P640X120-16N	SOP65P640X120-16N	1
U9	LM324AMX/NOPB	Gen Purp 4Ch Opamp	LM324AMX/NOPB	LM324AMX/NOPB	1
Y1	ABM3-16.000MHZ-B2- T	16MHz ±20ppm Crystal 18pin 40 Ohms 2-SMD, No Lead	ABM3-16.000MHZ-B2- T	ABM3-16.000MHZ-B2- T	1

1

2

3

4

A

B

C

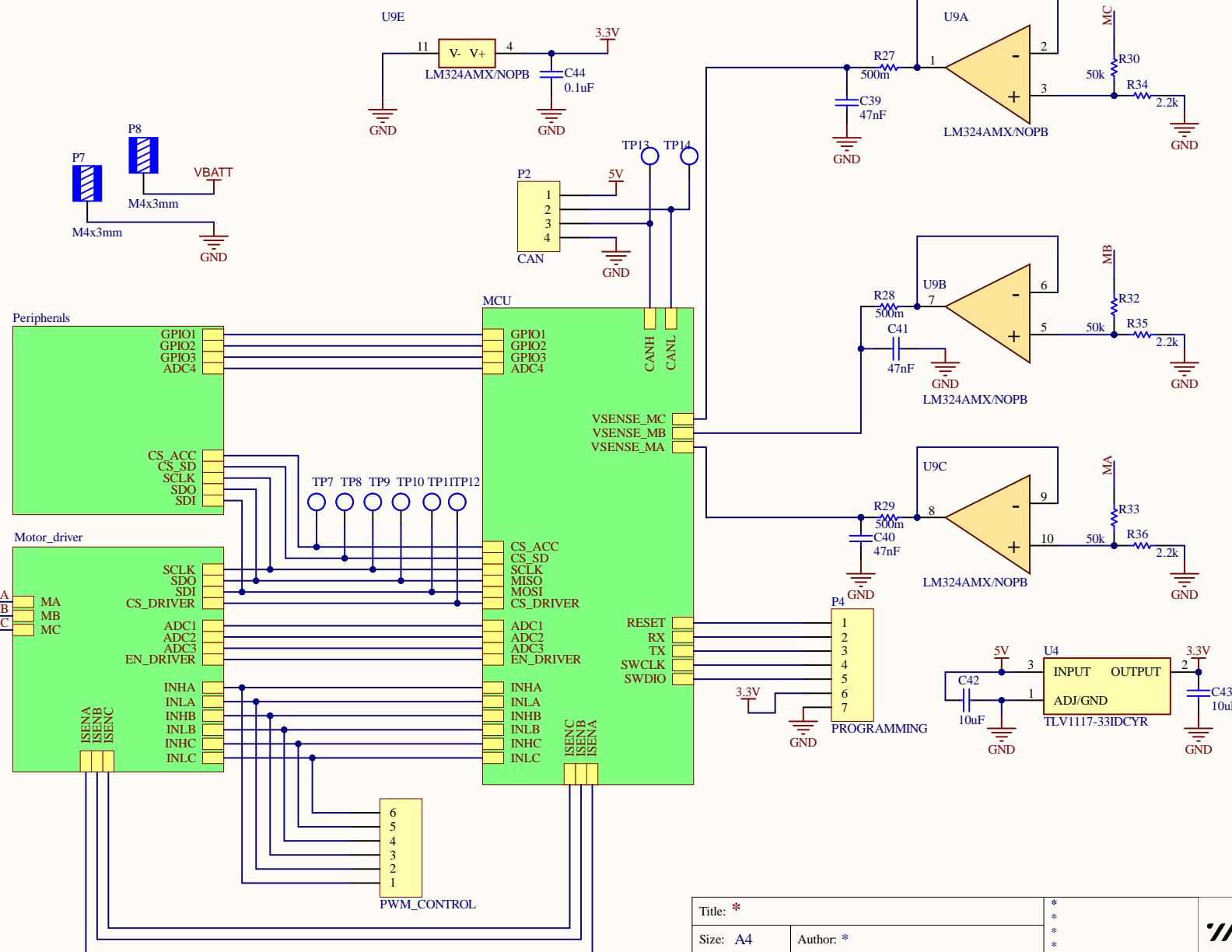
D

A

B

C

D



Pulse Width Modulation Control

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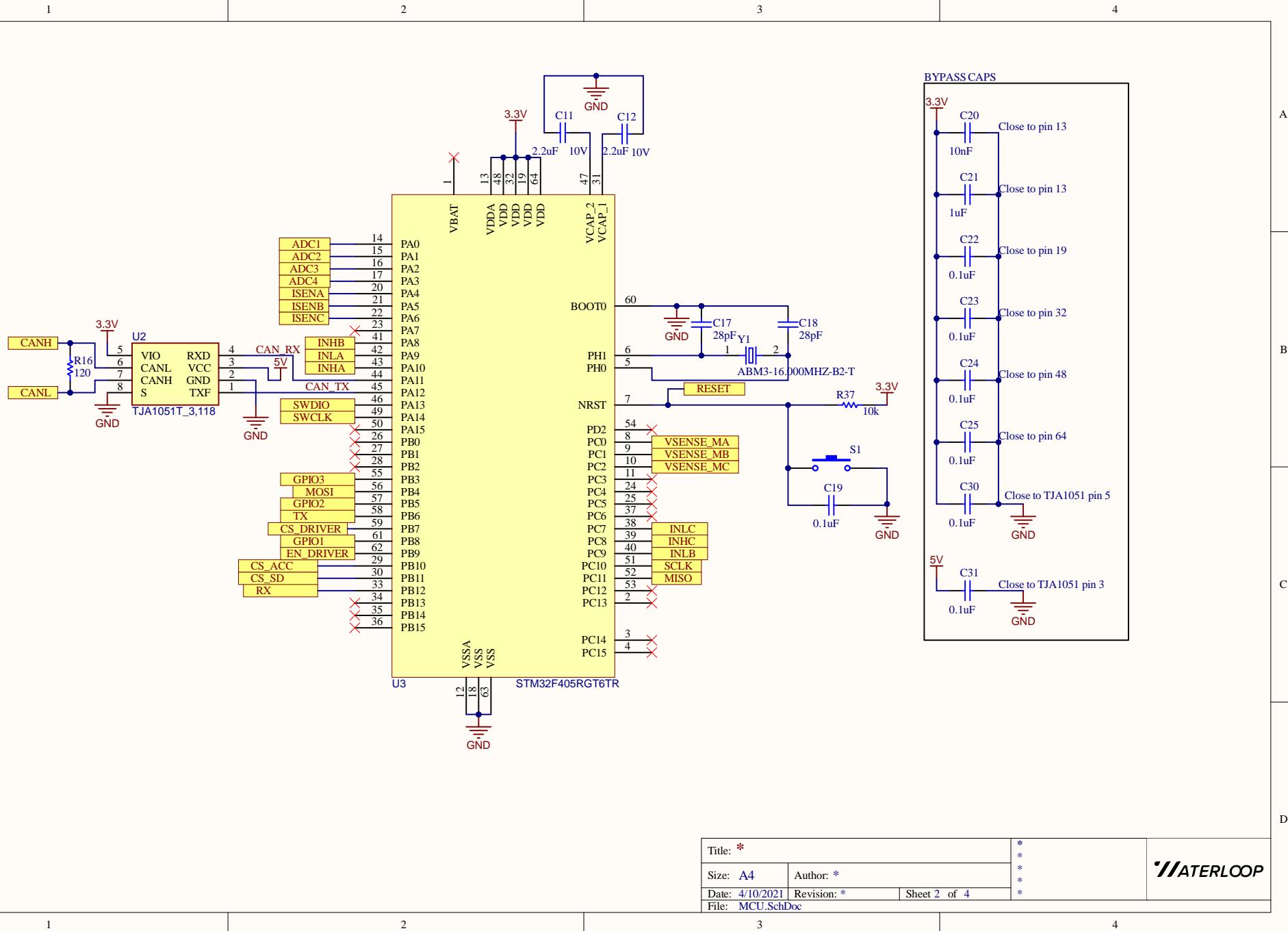
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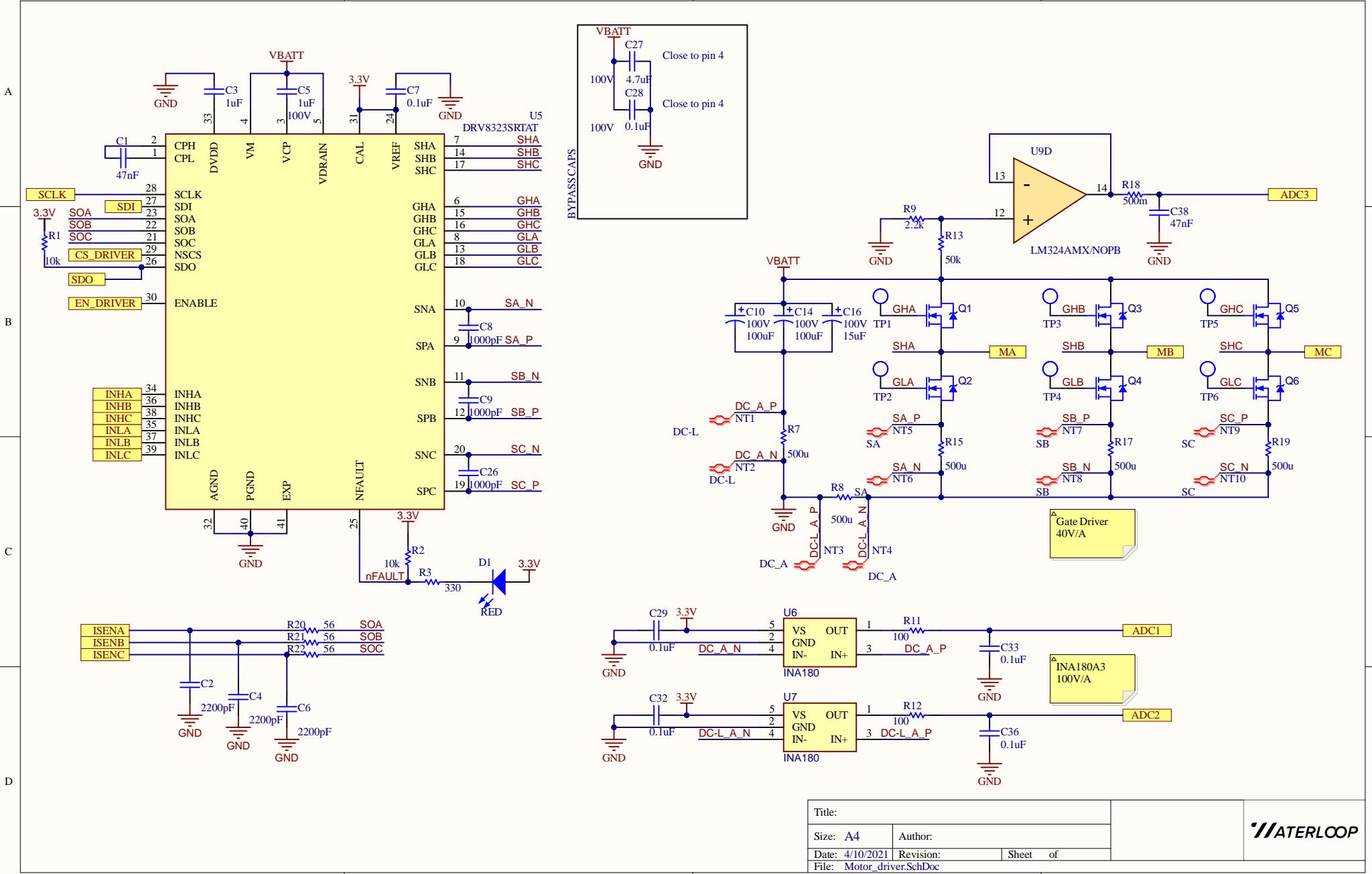
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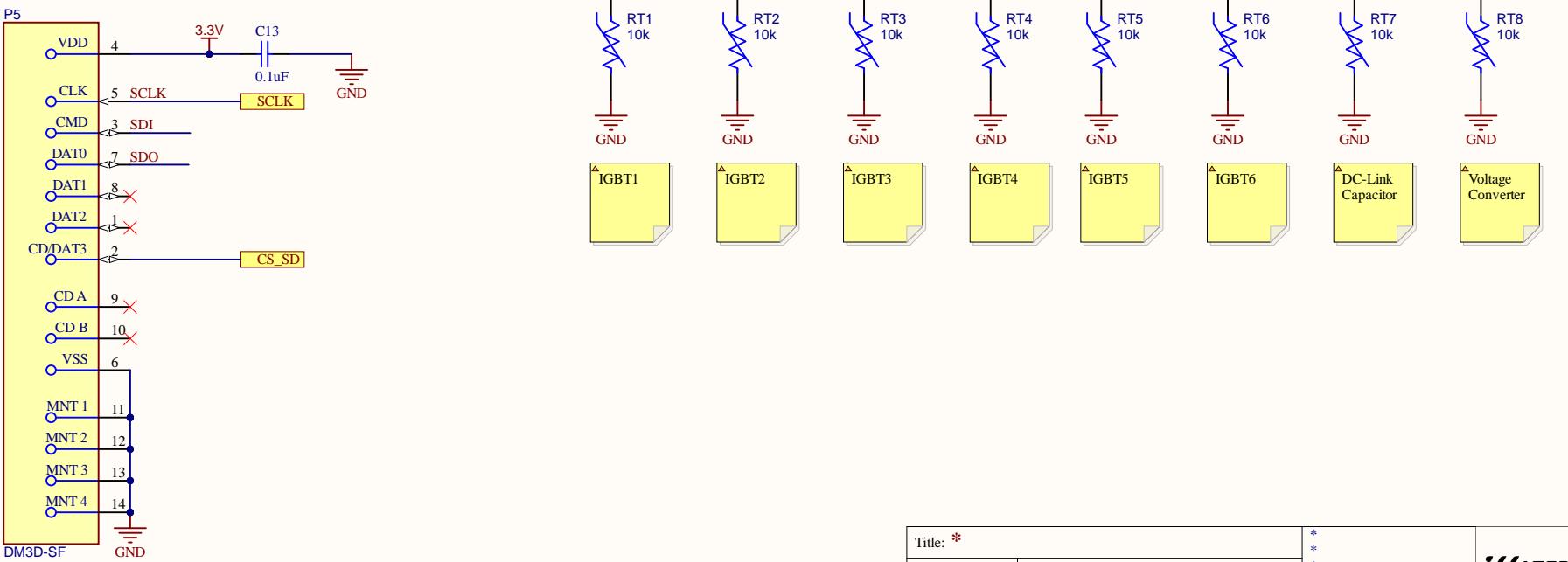
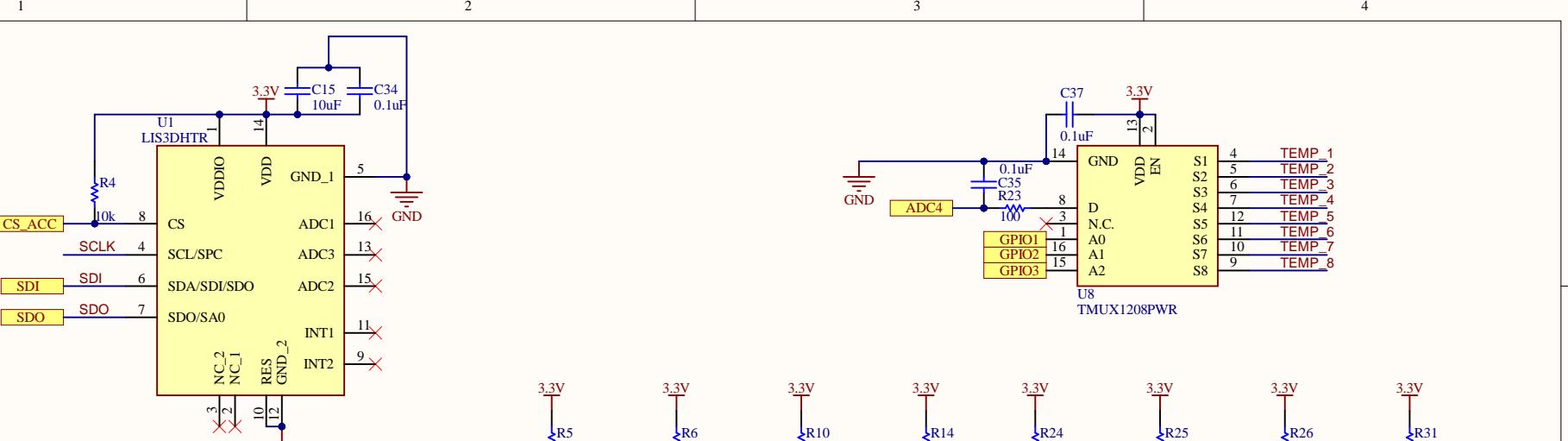
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