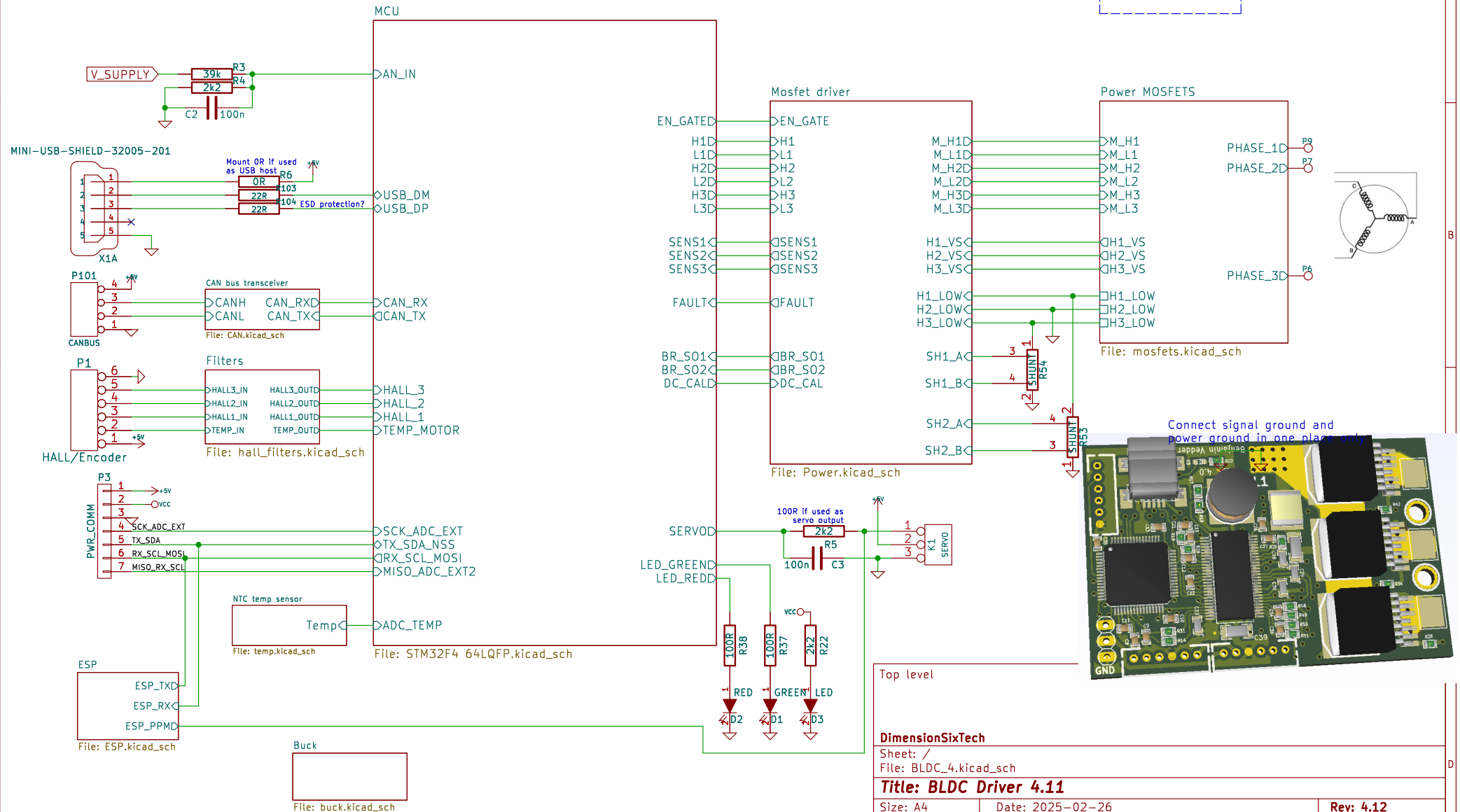
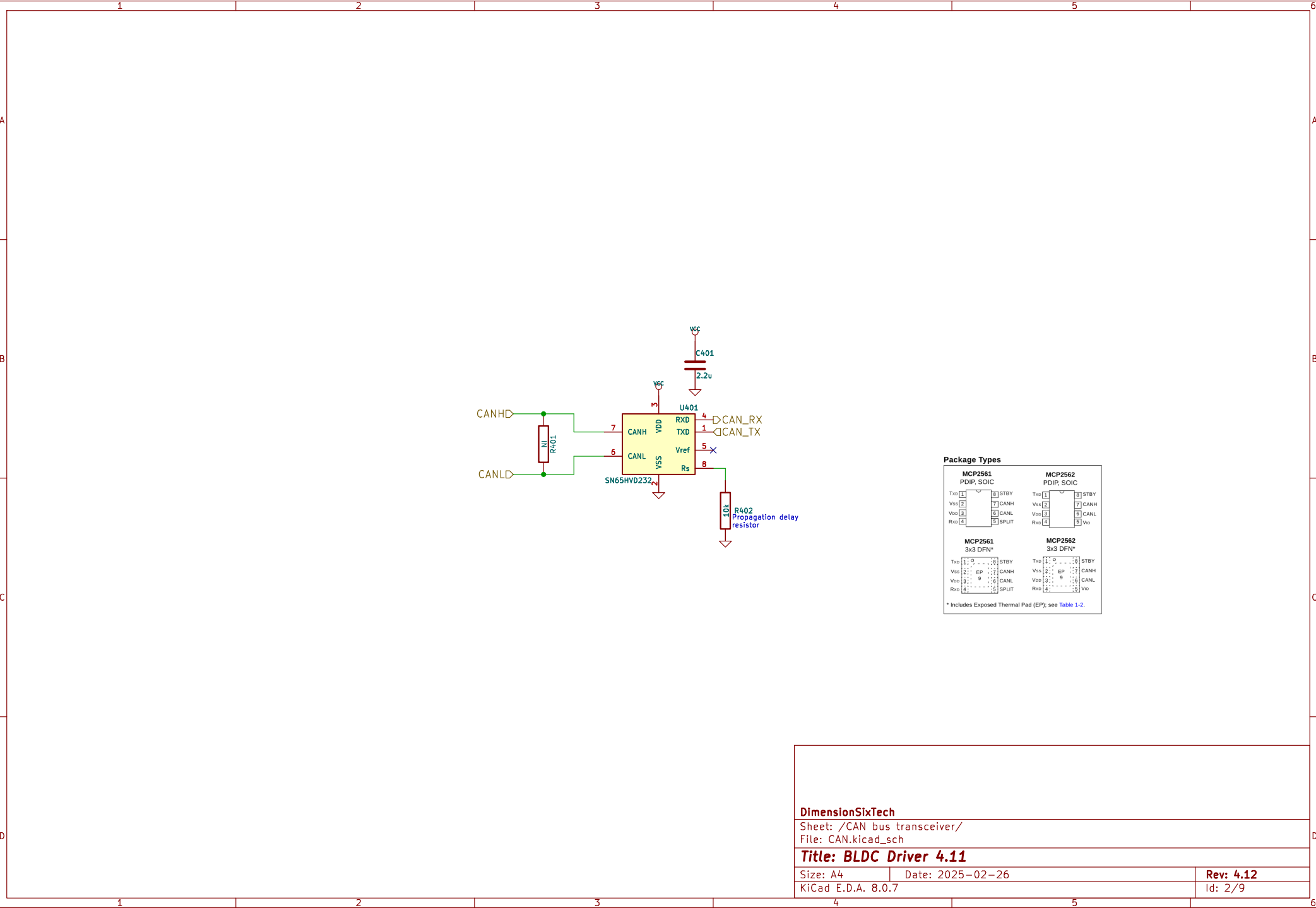
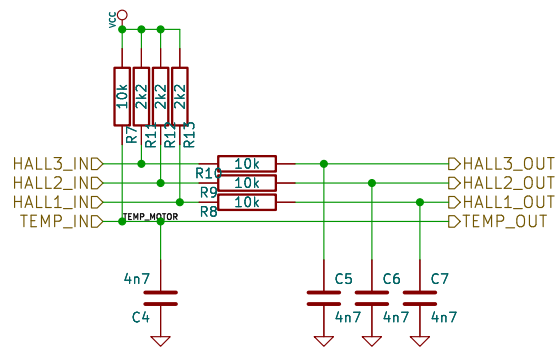


BLDC motor controller





Package Types	
MCP2561 PDIP, SOIC	MCP2562 PDIP, SOIC
MCP2561 3x3 DFN*	MCP2562 3x3 DFN*
* Includes Exposed Thermal Pad (EP); see Table 1-2.	



DimensionSixTech

Sheet: /Filters/

File: hall_filters.kicad_sch

Title: BLDC Driver 4.11

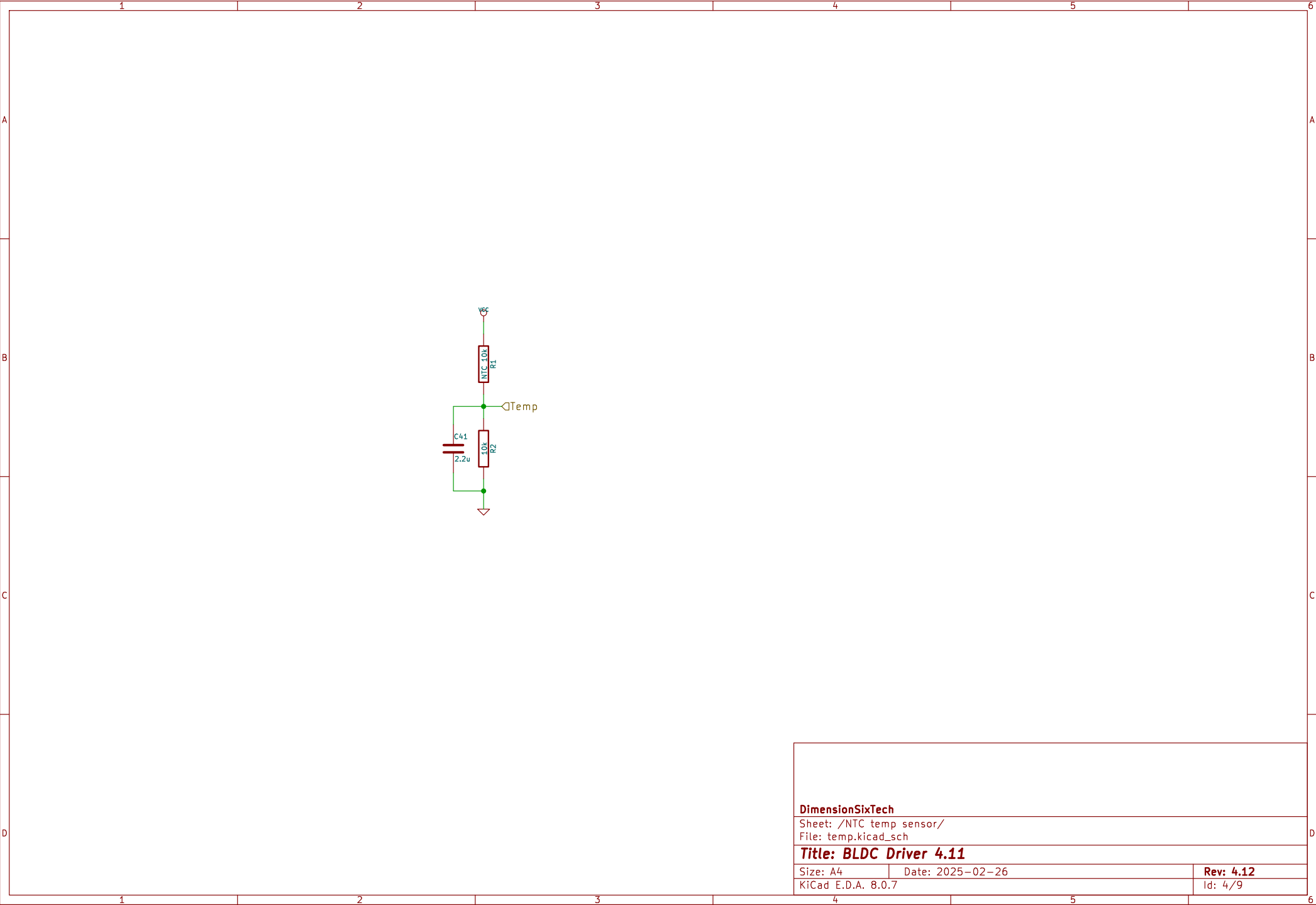
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Date: 2025-02-26

Rev: 4.12

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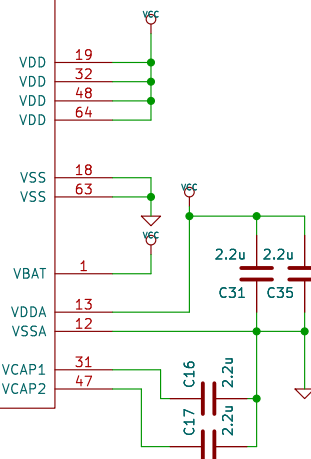
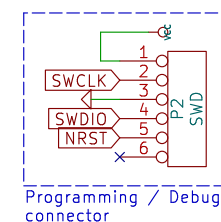
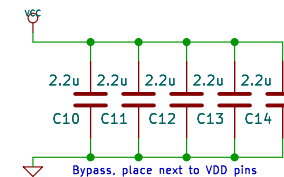
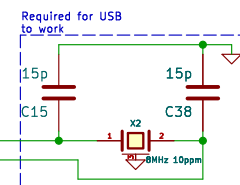
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DimensionSixTech		
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Title: BLDC Driver 4.11		
Size: A4	Date: 2025-02-26	Rev: 4.12
KiCad E.D.A. 8.0.7		Id: 4/9



		U1	
SENS3D	14	PA0(ADC123_IN0/WKUP)	PC14-OSC32_IN
SENS2D	15	PA1(ADC123_IN1)	PC15-OSC32_OUT
SENS1D	16	PA2(ADC123_IN2)	
ADC_TEMP	17	PA3(ADC123_IN3)	PH0-OSC_IN
TX_SDA_NSS	20	PA4(ADC12_IN4/DAC1_OUT)	PH1-OSC_OUT
SCK_ADC_EXTD	21	PA5(ADC12_IN5/DAC2_OUT)	
MISO_ADC_EXTD	22	PA6(ADC12_IN6)	BOOT0(VPP)
RX_SCL_MOSI	23	PA7(ADC12_IN7)	PB2-BOOT1
	41	PA8	
	42	PA9(OTG_FS_VBUS)	
	43	PA10	NRST
USB_DM	44	PA11	
USB_DP	45	PA12	
			PA13(JTMS-SWDIO)
BR_SO2D	26	PB0(ADC12_IN8)	PA14(JTCK-SWCLK)
BR_SO1D	27	PB1(ADC12_IN9)	PA15(JTDI)
SERVO	57	PB5	PB3(JTDO/TRACESWO)
HALL_1D	58	PB6	PB4(NJTRST)
HALL_2D	59	PB7	
CAN_RXD	61	PB8	
CAN_TXD	62	PB9	
RX_SCL_MOSI	29	PB10	
TX_SDA_NSS	30	PB11	
DC_CALD	33	PB12	
L3	34	PB13(OTG_HS_VBUS)	
L2	35	PB14	
L1	36	PB15	VDD
			VDD
TEMP_MOTORD	8	PC0(ADC123_IN10)	VDD
	9	PC1(ADC123_IN11)	VDD
AN_IND	10	PC2(ADC123_IN12)	
	11	PC3(ADC123_IN13)	
LED_GREEN	24	PC4(ADC12_IN14)	VSS
LED_RED	25	PC5(ADC12_IN15)	VSS
TX_SDA_NSS	37	PC6	
RX_SCL_MOSI	38	PC7	
	39	PC8	
	40	PC9	VBAT
EN_GATE	51	PC10	
HALL_3D	52	PC11	VDDA
FAULTD	53	PC12	VSSA
	2	PC13_(RTC_AF1)	
			VCAP1
	54	PD2	VCAP2

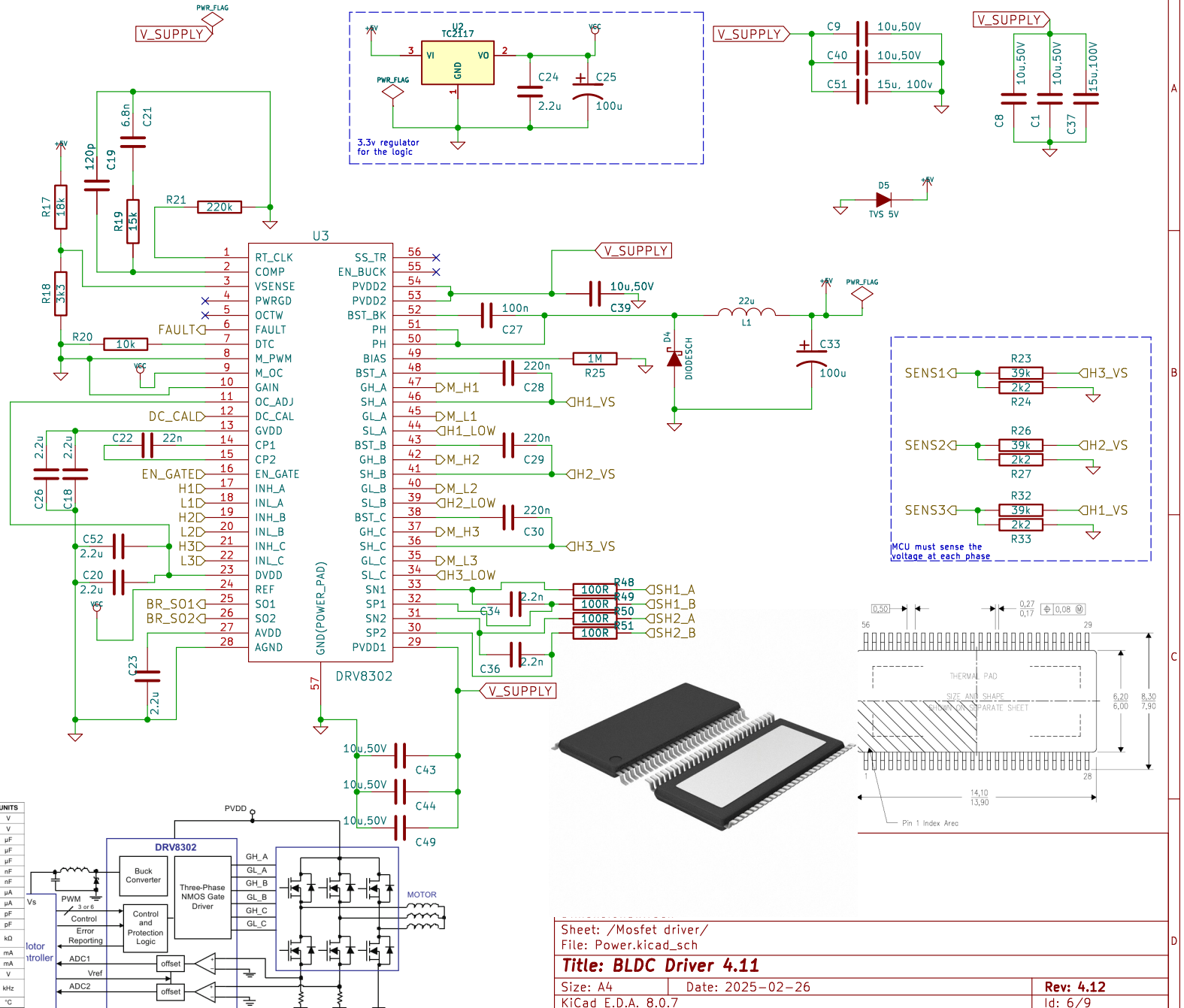


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File: STM32F4_64LQFP.kicad_sch

Id: 5/9

FEATURES

- Operating Supply Voltage 8V–60V
- 2.3A Sink and 1.7A Source Gate Drive Current Capability
- Integrated Dual Shunt Current Amplifiers With Adjustable Gain and Offset
- Integrated Buck Converter to Support up to 1.5A External Load
- Independent Control of 3 or 6 PWM Inputs
- Bootstrap Gate Driver With 100% Duty Cycle Support
- Programmable Dead Time to Protect External FETs from Shoot Through
- Programmable Overcurrent Protection of External MOSFETs
- Thermally Enhanced 56-Pin TSSOP Pad Down DCA Package

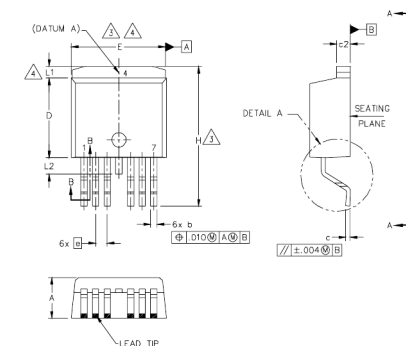
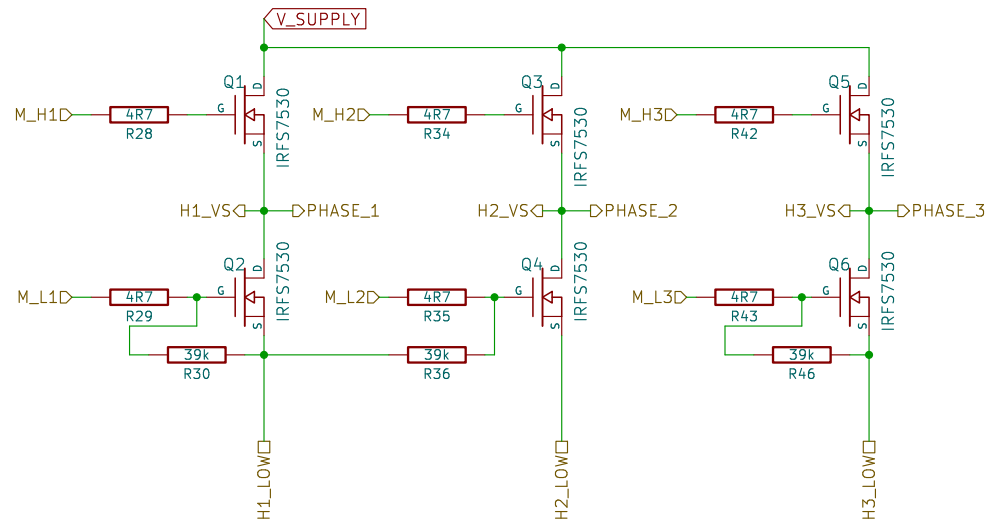


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Title: BLDC Driver 4.11

Size: A4 Date: 2025-02-26
KiCad E.D.A. 8.0.7

Rev: 4.12
Id: 6/9



DimensionSixTech

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File: mosfets.kicad_sch

Title: BLDC Driver 4.11

Size: A4

Date: 2025-02-26

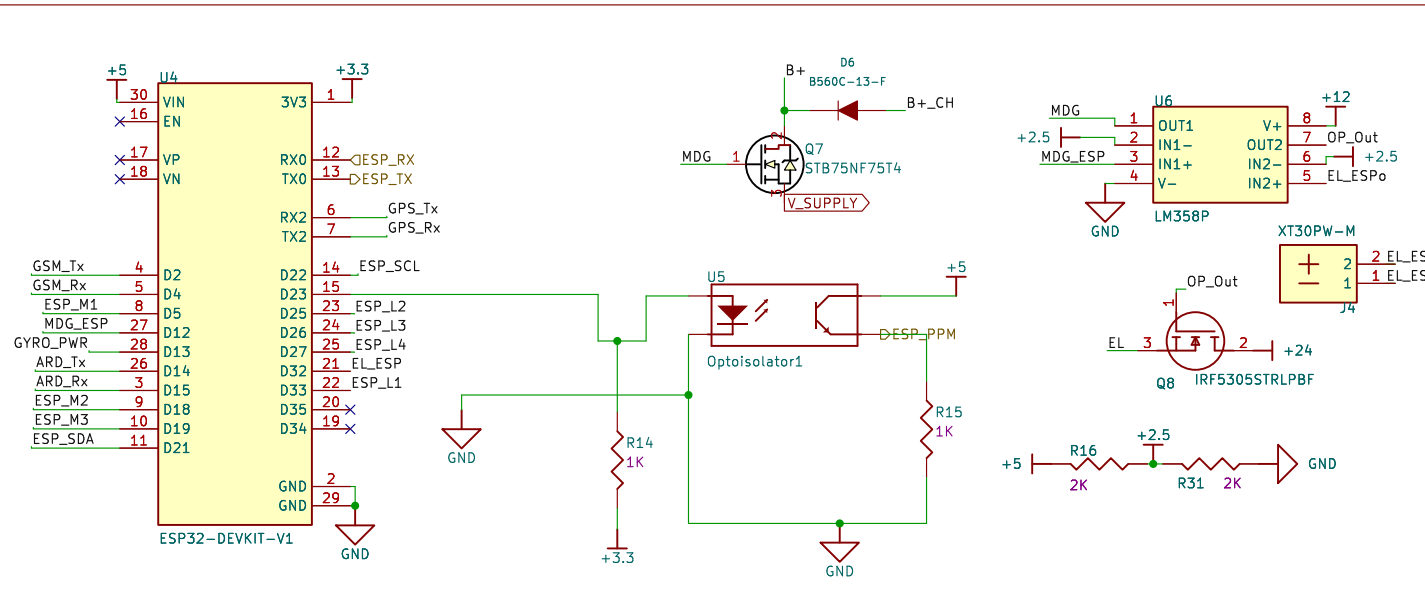
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Rev: 4.12

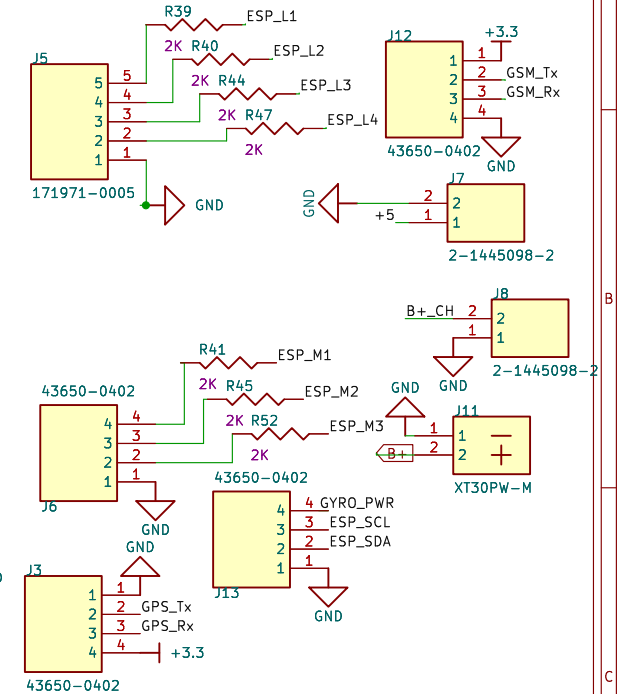
Id: 7/9

Current Design

BD139 IRFZ44 BD140(PNP)



Connectors



DimensionSixTech

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File: ESP.kicad_sch

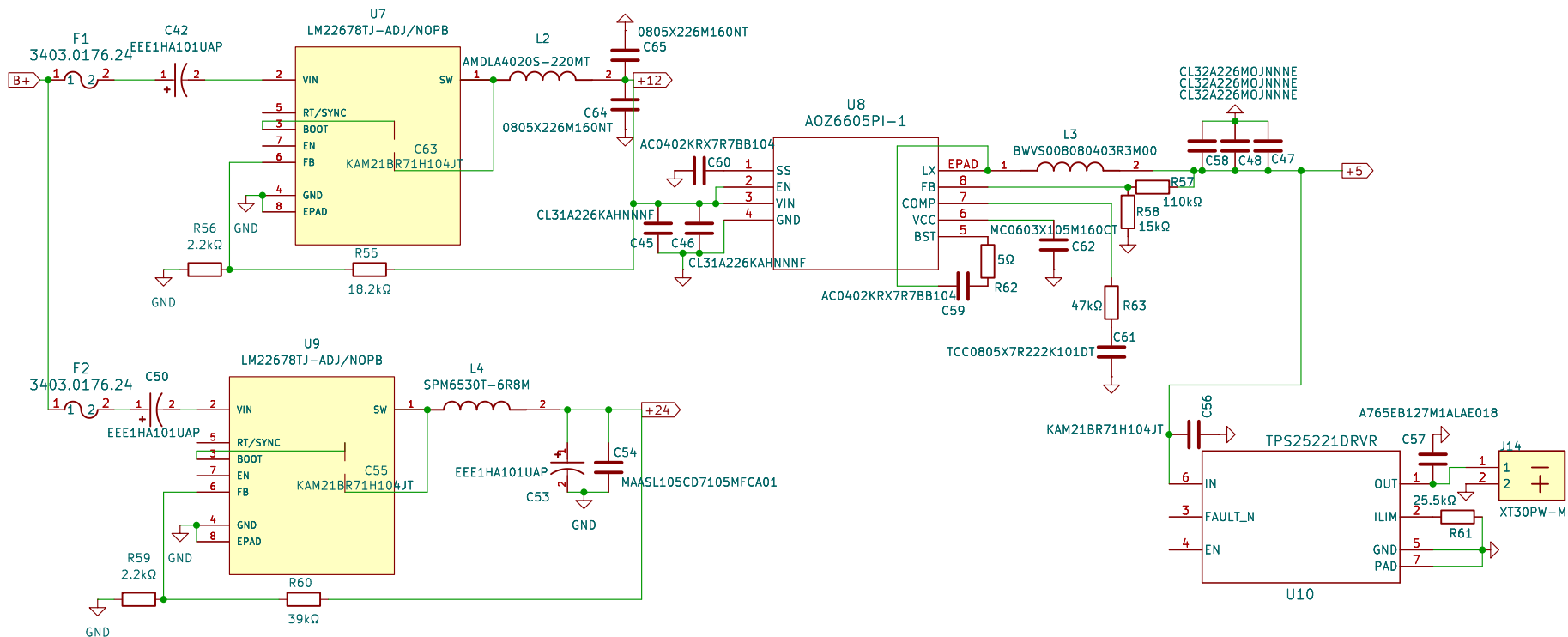
Title: BLDC Driver 4.11

Size: A4 Date: 2025-02-26

KiCad E.D.A. 8.0.7

Rev: 4.12

Id: 8/9



DimensionSixTech

Sheet: /Buck/
File: buck.kicad_sch

Title: BLDC Driver 4.11

Size: A4
KiCad E.D.A. 8.0.7

Date: 2025-02-26

Rev: 4.12

Id: 9/9