

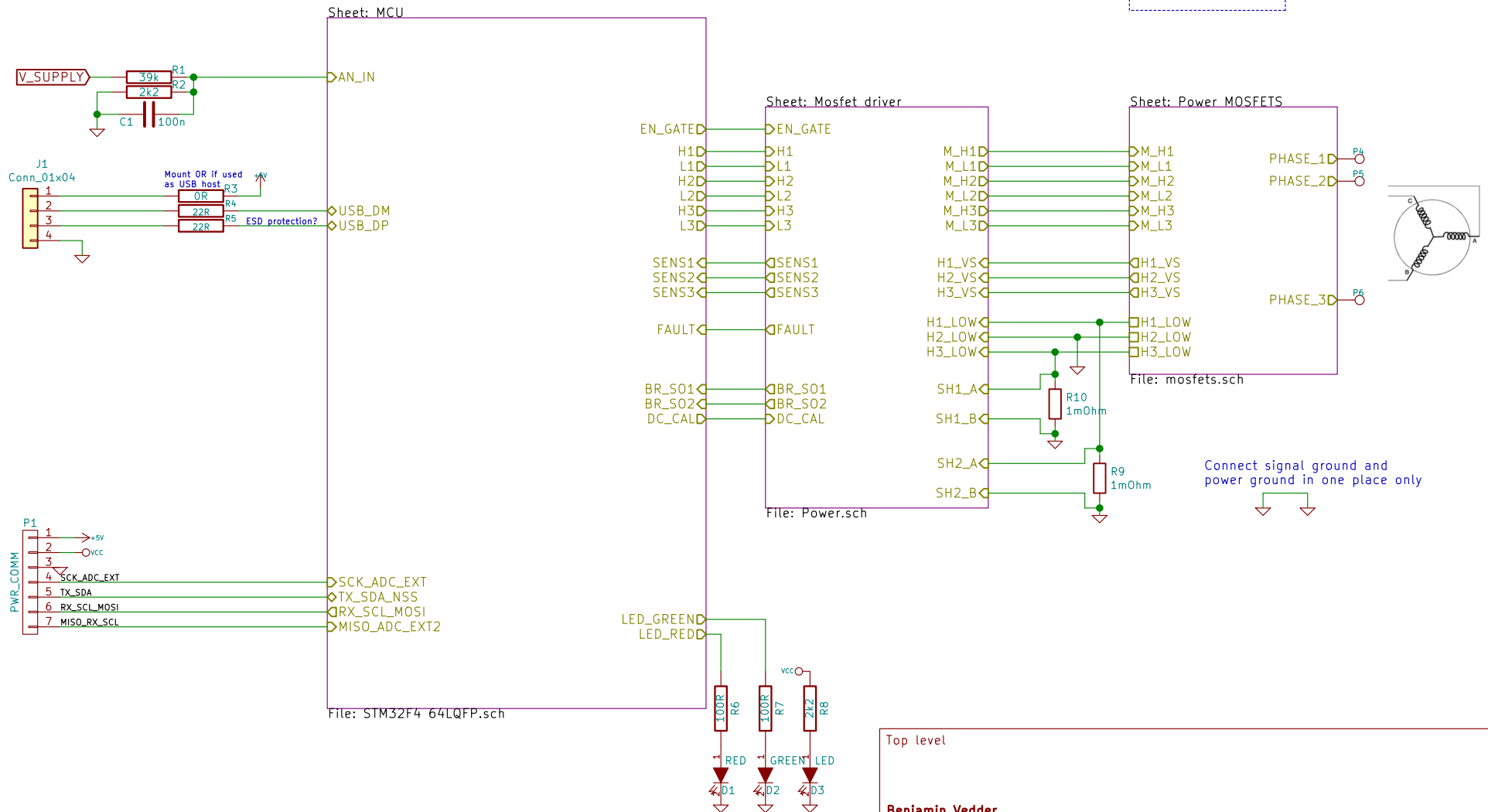


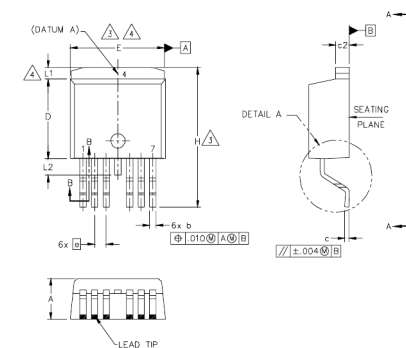
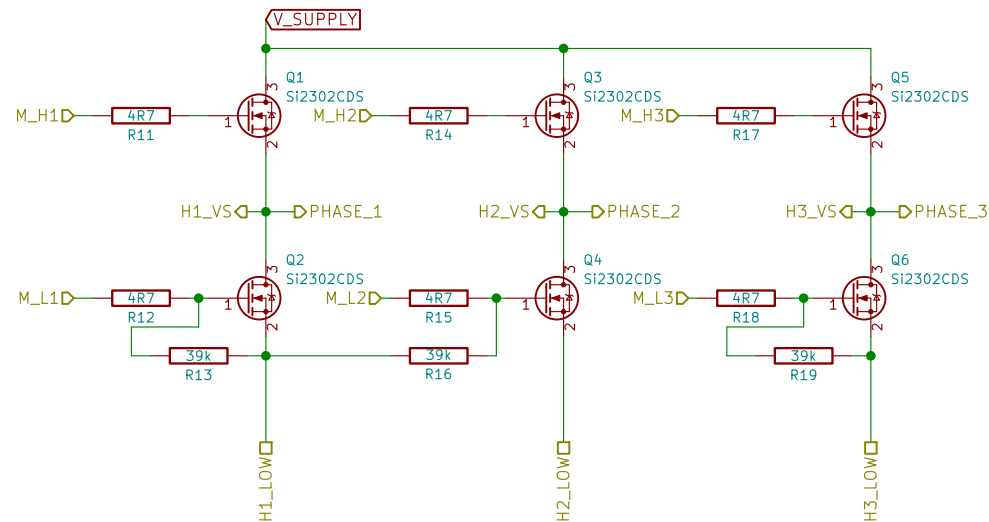
BLDC motor controller

P2  V_SUPPLY
P3 

Voltage supply (0 – 60v)
Needs external decoupling caps to avoid high voltage transients produced by the inductance of the battery wiring while switching the FETs
Also critical for EMI/RF compliance



Top level	
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Sheet: /	
File: BLDC_4.sch	
Title: BLDC Driver 4.11	
Size: A4	Date: 21 aug 2015
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Sheet: /Power MOSFETS/

File: mosfets.sch

Title: BLDC Driver 4.11

Size: A4 Date: 21 aug 2015

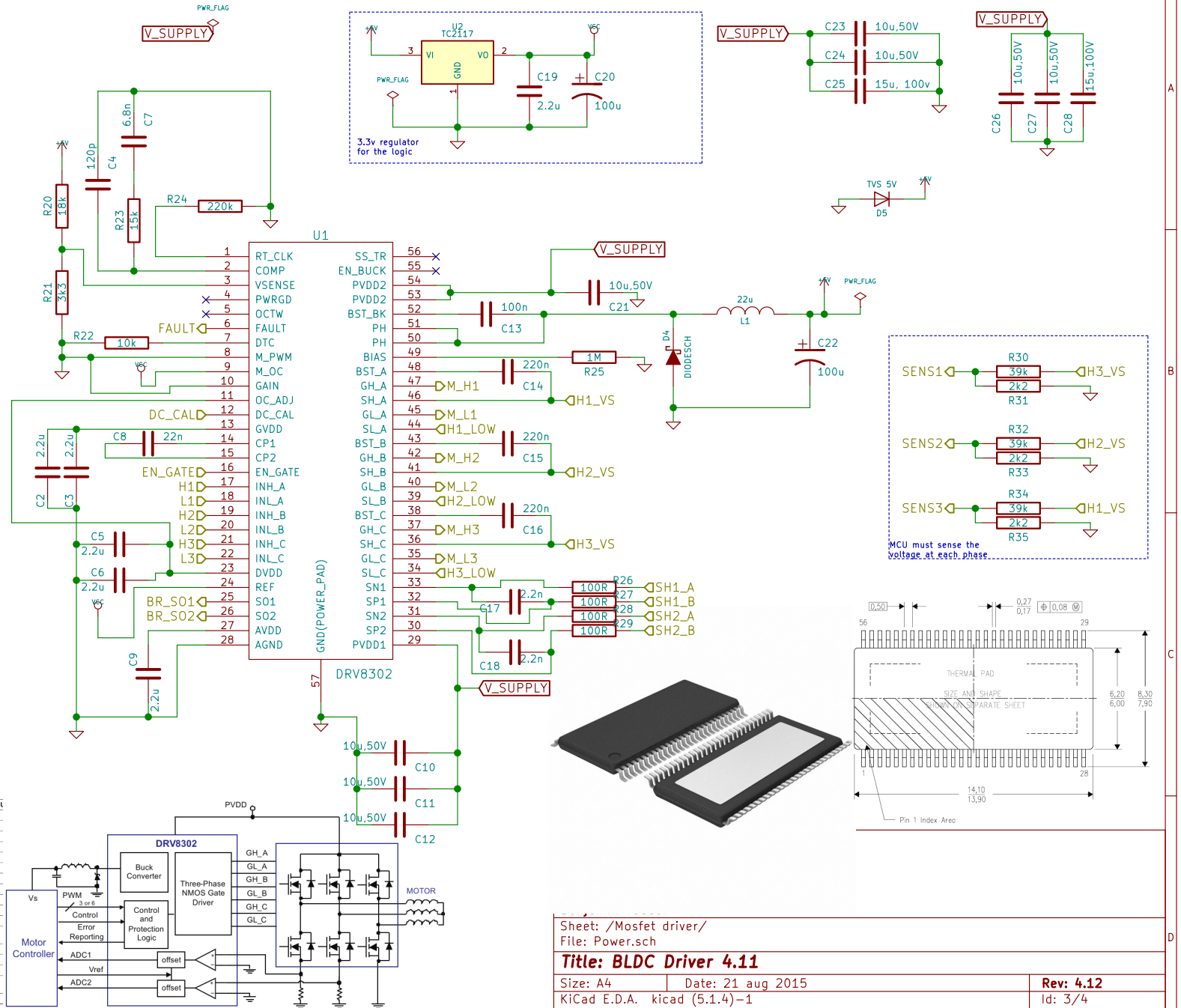
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Rev: 4.12

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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



Sheet: /Mosfet driver/
File: Power.sch

Title: BLDC Driver 4.11

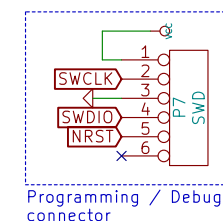
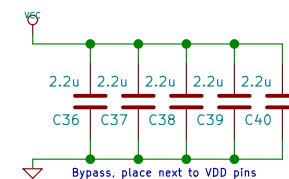
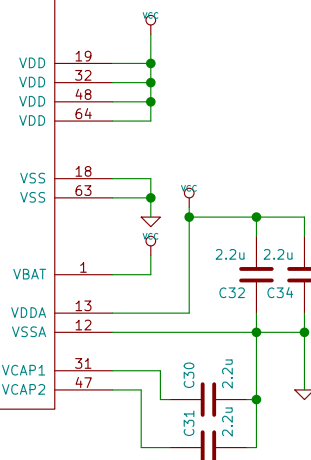
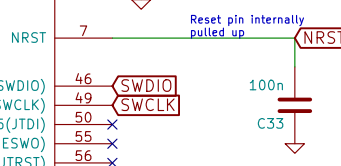
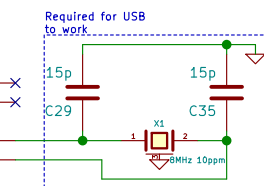
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SENS3▷	14	PA0(ADC123_IN0/WKUP)
SENS2▷	15	PA1(ADC123_IN1)
SENS1▷	16	PA2(ADC123_IN2)
ADC_TEMP▷	17	PA3(ADC123_IN3)
TX_SDA_NSS◇	20	PA4(ADC12_IN4/DAC1_OUT)
SCK_ADC_EXT▷	21	PA5(ADC12_IN5/DAC2_OUT)
MISO_ADC_EXT▷	22	PA6(ADC12_IN6)
RX_SCL_MOSI◇	23	PA7(ADC12_IN7)
H3◇	41	PA8
H2◇	42	PA9(OTG_FS_VBUS)
H1◇	43	PA10
USB_DM◇	44	PA11
USB_DP◇	45	PA12
BR_S02▷	26	PB0(ADC12_IN8)
BR_S01▷	27	PB1(ADC12_IN9)
	57	PB5
	58	PB6
	59	PB7
	61	PB8
	62	PB9
RX_SCL_MOSI◇	29	PB10
TX_SDA_NSS◇	30	PB11
DC_CAL▷	33	PB12
L3◇	34	PB13(OTG_HS_VBUS)
L2◇	35	PB14
L1◇	36	PB15
	8	PC0(ADC123_IN10)
	9	PC1(ADC123_IN11)
AN_IN▷	10	PC2(ADC123_IN12)
	11	PC3(ADC123_IN13)
LED_GREEN◇	24	PC4(ADC12_IN14)
LED_RED◇	25	PC5(ADC12_IN15)
TX_SDA_NSS◇	37	PC6
RX_SCL_MOSI◇	38	PC7
	39	PC8
	40	PC9
EN_GATE▷	51	PC10
	52	PC11
FAULT▷	53	PC12
	2	PC13_(RTC_AF1)
	54	PD2

STM32F40X_LQFP64



Sheet: /MCU/
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