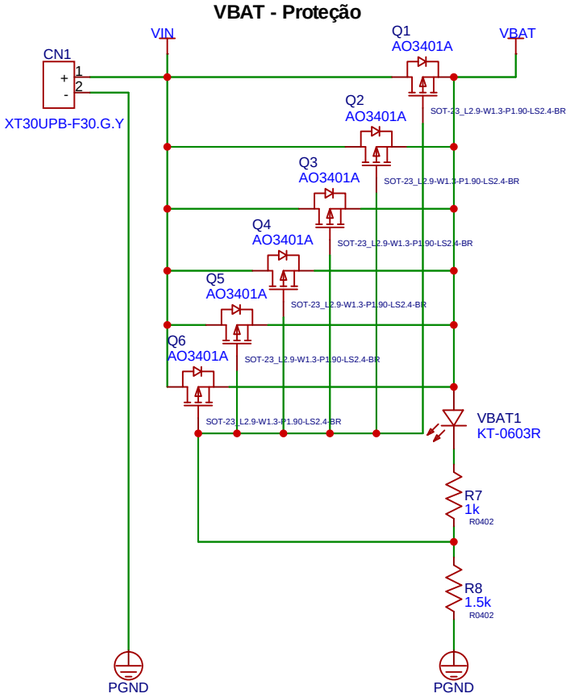
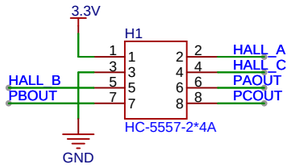
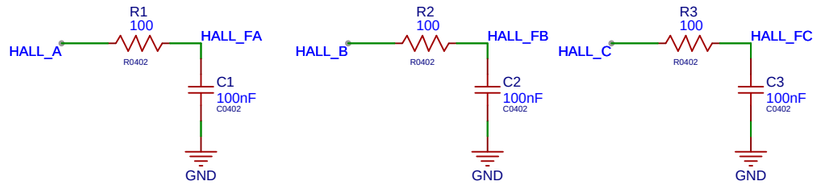
VBAT - Proteção



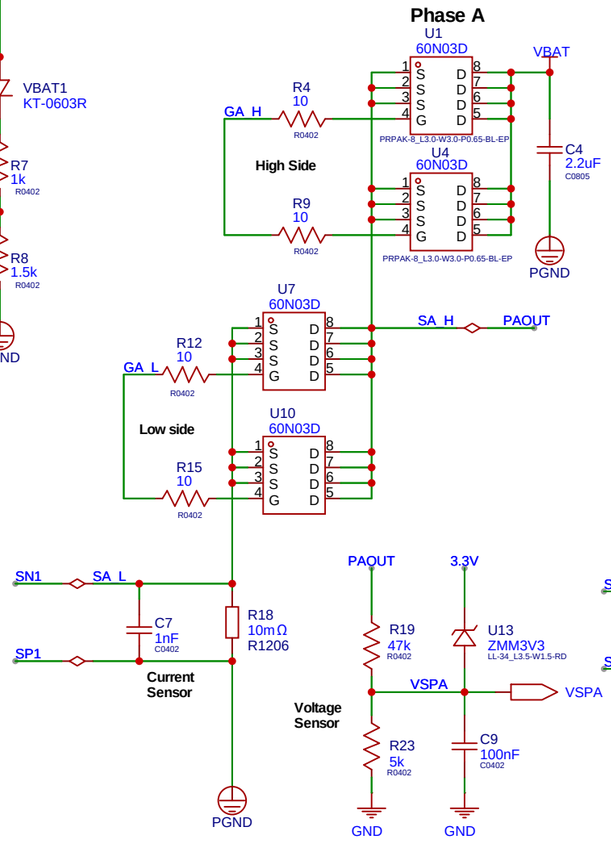
Conn. Motor



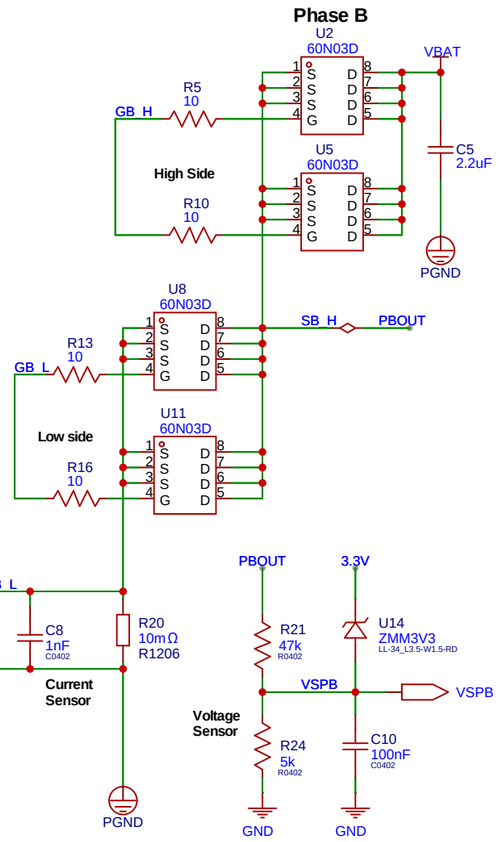
Filtra em 15kHz



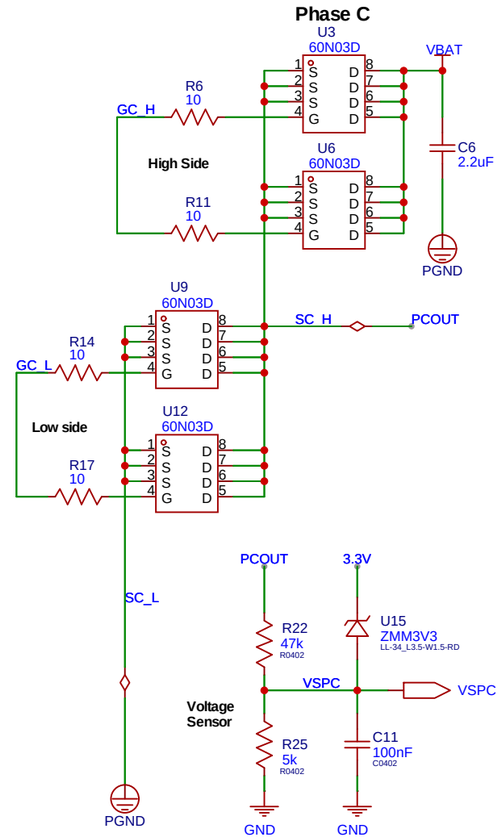
Phase A



Phase B



Phase C

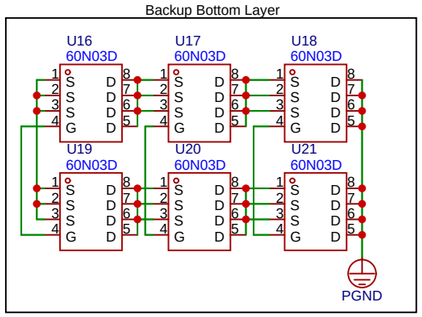


Analog
AGND

General
GND

Power
PGND

Backup Bottom Layer



Schematic	Schematic1	Update Date	2025-01-27
Page	Power	Create Date	2024-12-20
Drawn	EasyEDA	Part Number	JLCPCB-002
Reviewed	EasyEDA	BLDC Driver_2025	
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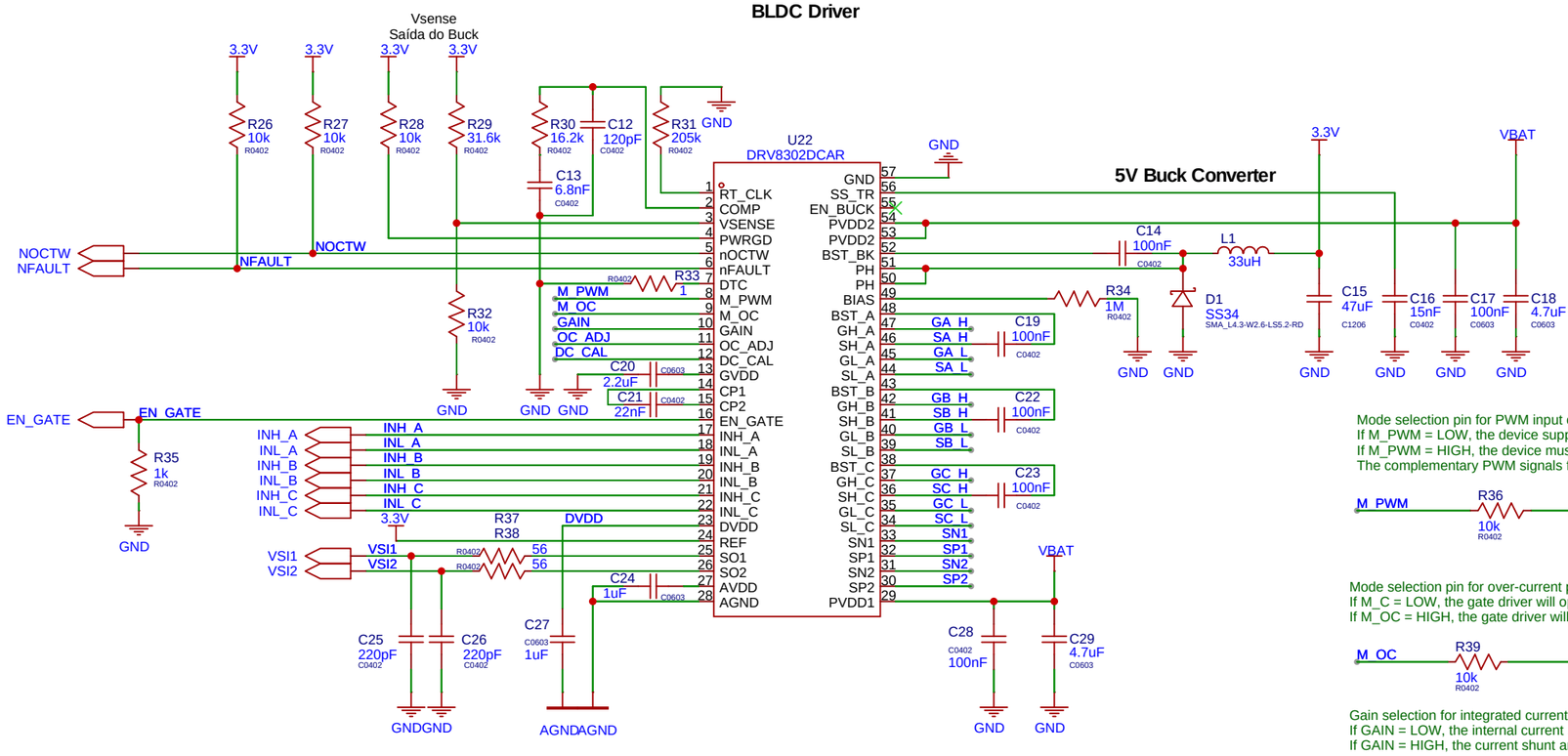
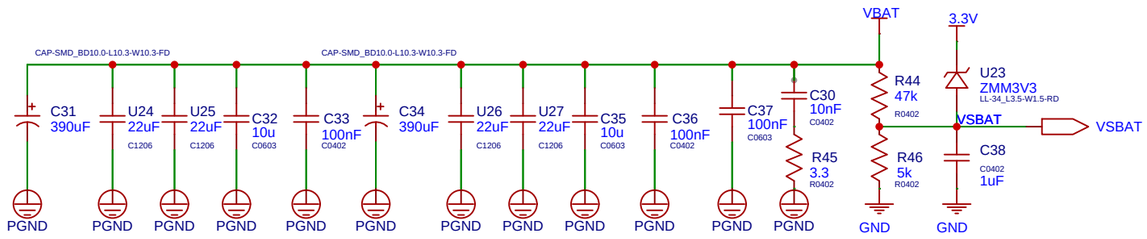
EasyEDA		V0.1 / A3	iOsnaaente

BLDC Driver

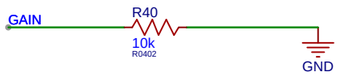




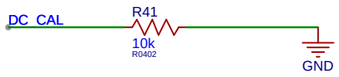
Mode selection pin for PWM input configuration.
If M_PWM = LOW, the device supports 6 independent PWM inputs.
If M_PWM = HIGH, the device must be connected to ONY 3 PWM input signals on INH_x.
The complementary PWM signals for low side signaling will be internally generated from the high side inputs

Mode selection pin for over-current protection options.
If M_C = LOW, the gate driver will operate in a cycle-by-cycle current limiting mode.
If M_OC = HIGH, the gate driver will shutdown the channel wich detected an over-current event.

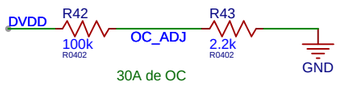
Gain selection for integrated current shunt amplifiers.
If GAIN = LOW, the internal current shunt amplifiers have a gain of 10 V/V.
If GAIN = HIGH, the current shunt amplifiers have a gain of 40 V/V



When DC_CAL is high, device shorts inputs of shunt amplifiers and disconnects loads.
DC offset calibration can be done through external microcontroller.



Overcurrent trip set pin.
Apply a voltage on this pin to set the trip point for the internal overcurrent protection circuitry.
A voltage divider from DVDD is recommended.



30A de OC

Schematic	Schematic1	Update Date	2025-01-27
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Page	Driver	Part Number	JLCPCB-002
Drawn	EasyEDA	BLDC Driver_2025	
Reviewed	EasyEDA		
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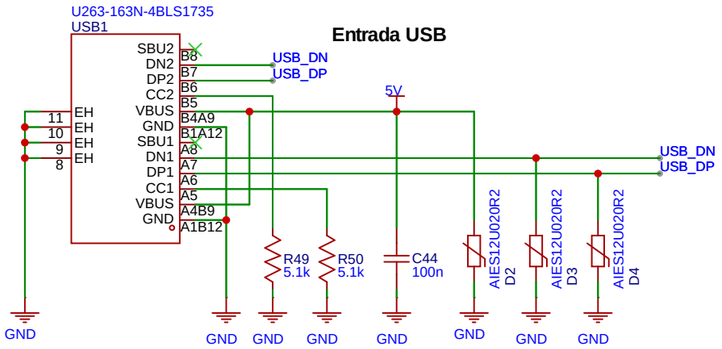
Entrada USB



ESP32

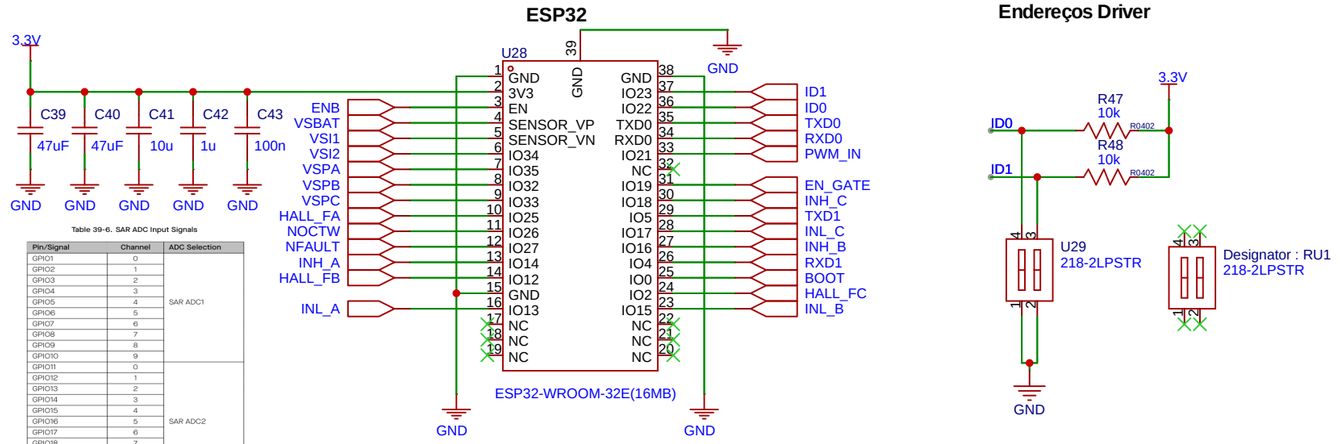
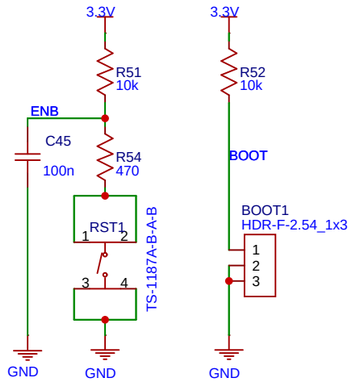


Table 39-6. SAR ADC Input Signals

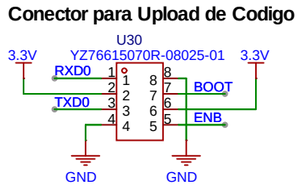
Pin/Signal	Channel	ADC Selection
GPIO1	0	SAR ADC1
GPIO2	1	
GPIO3	2	
GPIO4	3	
GPIO5	4	
GPIO6	5	
GPIO7	6	
GPIO8	7	
GPIO9	8	
GPIO10	9	
GPIO11	0	SAR ADC2
GPIO12	1	
GPIO13	2	
GPIO14	3	
GPIO15	4	
GPIO16	5	
GPIO17	6	
GPIO18	7	
GPIO19	8	
GPIO20	9	
Internal voltage	n/a	

Endereços Driver

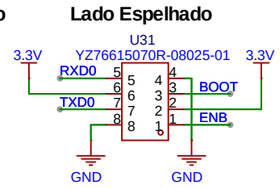
Push buttons



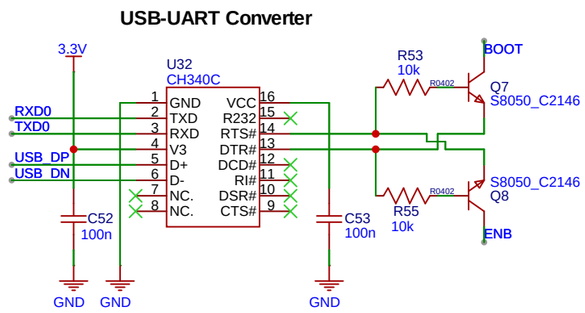
Conector para Upload de Codigo



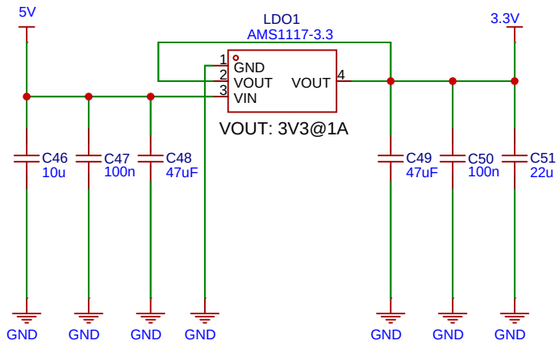
Lado Espelhado



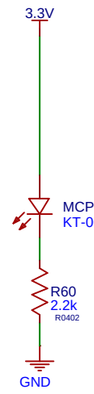
USB-UART Converter



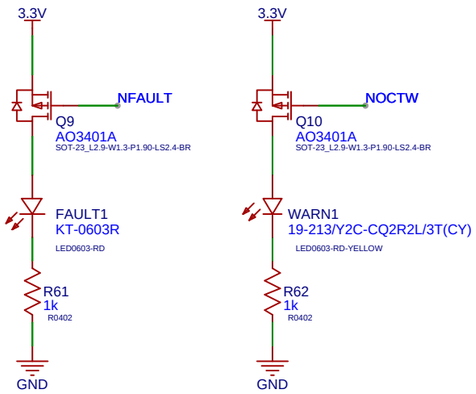
Regulador LDO 3V3



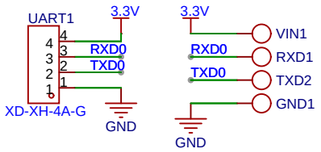
Energia



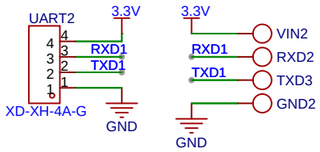
Leds WARNING e FAULT



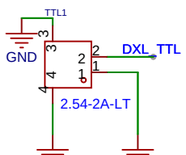
DEBUG UART0



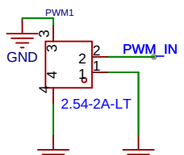
COMM. UART1



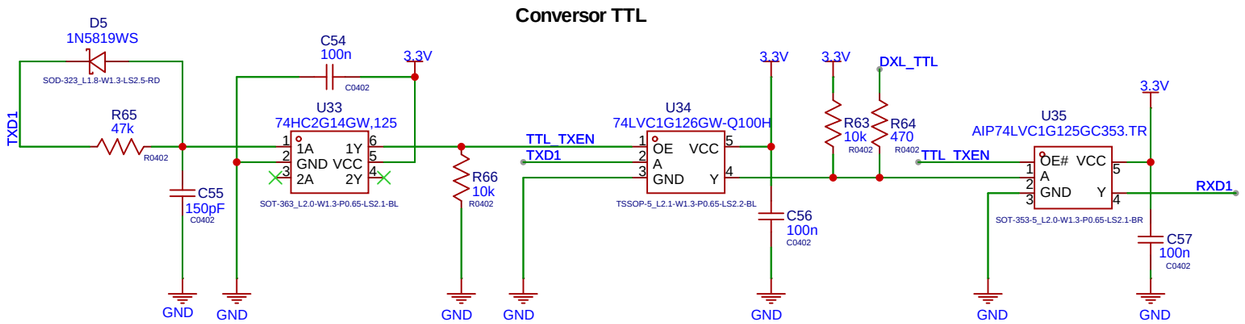
COMM. DXL



COMM. PWM



Conversor TTL



Schematic	Schematic1	Update Date	2025-01-27
		Create Date	2024-12-20
Page	Microcontrolador	Part Number	JLCPCB-002
Drawn	EasyEDA	BLDC Driver_2025	
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EasyEDA		V0.1 / A3	iOsnaaente