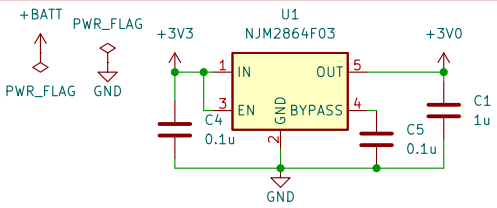

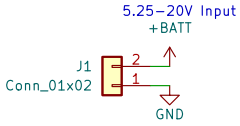

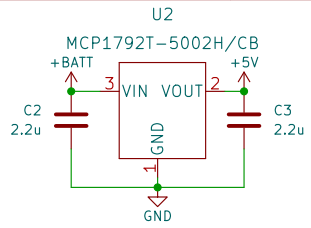

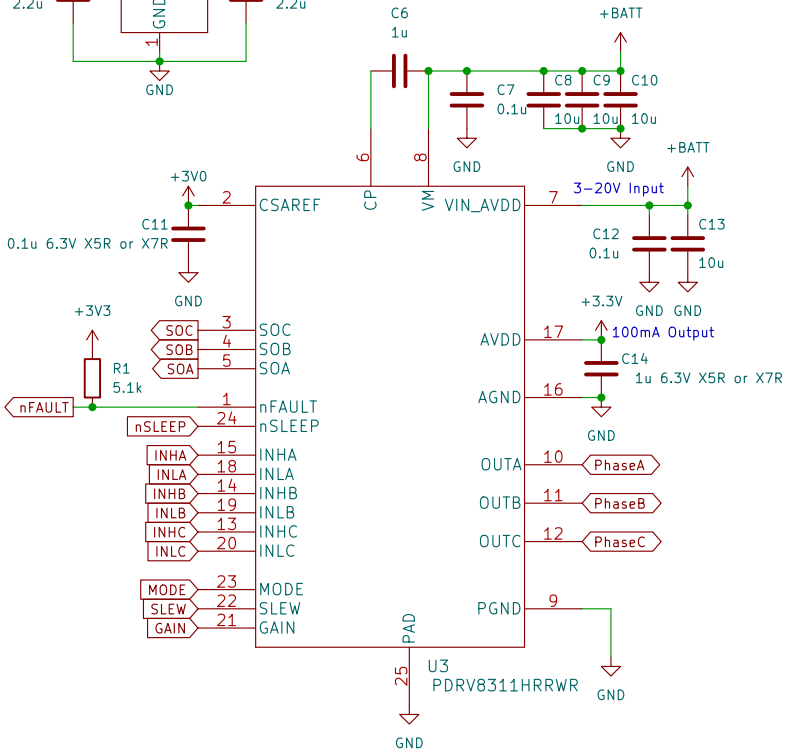

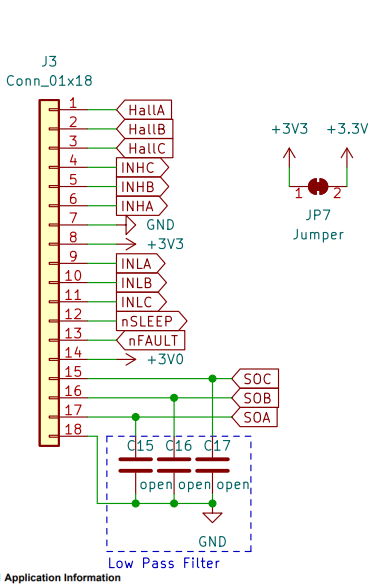

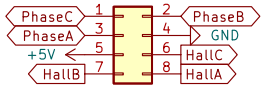

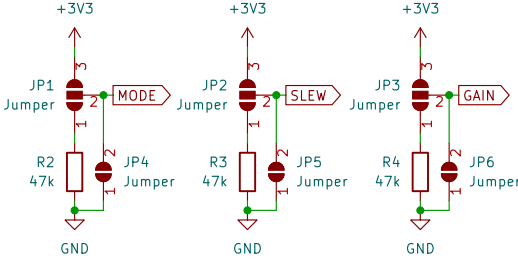

Option, cable and connection information

Example product designation: **2214S012BXTR-3830**

Option	Type	Description
3830	Connector	Standard cable with connector MOLEX Microfit 3.0, 43025-0800, recommended mating connector 43020-0800
4337	Gearhead combination	For combination with gearhead 20/1R

Connection

No.	Function	Colour
1	Phase C	yellow
2	Phase B	orange
3	Phase A	brown
4	GND	black
5	U_{DD} (+5V)	red
6	Hall sensor C	grey
7	Hall sensor B	blue
8	Hall sensor A	green

Standard cable

Single wires, material PVC, AWG 26, Phase A/B/C AWG 26, Hall A/B/C, U_{DD}, GND

11.2 Layout Example

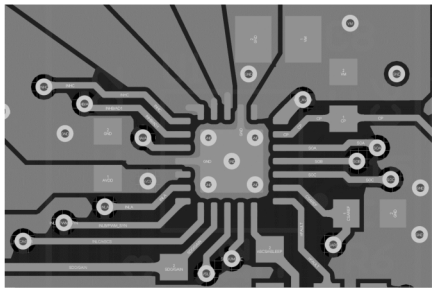

Figure 11-1. Recommended Layout Example for DRV8311

9.1 Application Information

The DRV8311 can be used to drive Brushless-DC motors. The following design procedure can be used to configure the DRV8311.

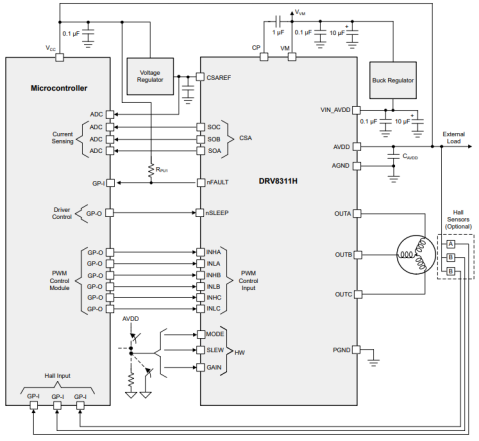

Figure 9-1. Application Schematics (DRV8311H)

FOUR-LEVEL INPUTS (GAIN, MODE, SLEW)

V_{L1}	Input mode 1 voltage	Tied to AGND	0		0.21*AVDD	V
V_{L2}	Input mode 2 voltage	47 kΩ +/- 5% tied to GND	0.25*AVDD	0.5*AVDD	0.55*AVDD	V
V_{L3}	Input mode 3 voltage	Hi-Z	0.606*AVDD	0.757*AVDD	0.909*AVDD	V
V_{L4}	Input mode 4 voltage	Tied to AVDD	0.94*AVDD		AVDD	V
R_{PU}	Input pullup resistance	To AVDD		48	70	kΩ
R_{PD}	Input pulldown resistance	To AGND		160	200	kΩ

7.3 Feature Description

Table 7-1 lists the recommended values of the external components for the driver.

Table 7-1. DRV8311 External Components

COMPONENTS	PIN 1	PIN 2	RECOMMENDED
C_{VM1}	VM	PGND	X5R or X7R, 0.1-µF, VM-rated capacitor
C_{VM2}	VM	PGND	≥ 10-µF, VM-rated electrolytic capacitor
C_{VIN_AVDD1}	VIN_AVDD	AGND	X5R or X7R, 0.1-µF, VIN_AVDD-rated capacitor
C_{VIN_AVDD2}	VIN_AVDD	AGND	≥ 10-µF, VIN_AVDD-rated capacitor
C_{CP}	CP	VM	X5R or X7R, 16-V, 0.1-µF capacitor
C_{AVDD}	AVDD	AGND	X5R or X7R, 0.7 to 7-µF, 6.3-V capacitor
R_{nFAULT}	AVDD	nFAULT	5.1-kΩ, Pullup resistor
R_{SDO}	AVDD	SDO	5.1-kΩ, Pullup resistor (Optional)
R_{MODE}	MODE	AGND or AVDD	Section 7.3.3.2
R_{SLEW}	SLEW	AGND or AVDD	Section 7.3.3.2
R_{GAIN}	GAIN	AGND or AVDD	Section 7.3.3.2
C_{CSAREF}	CSAREF	AGND	X5R or X7R, 0.1-µF, CSAREF-rated capacitor

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