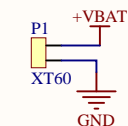


1

Battery Connector

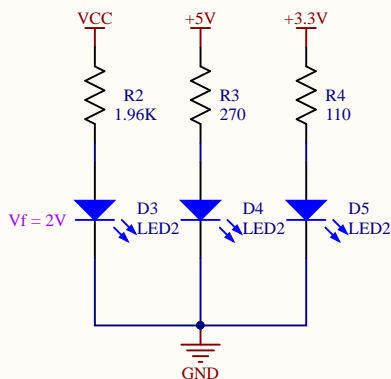


6S LiPo: 22.2V-25.2V

2

LEDs

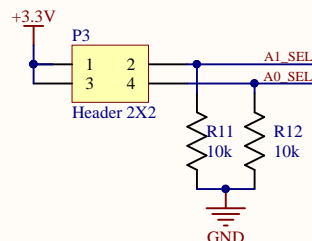
~10mA to 15mA through each



INA226 Slave Address Selector

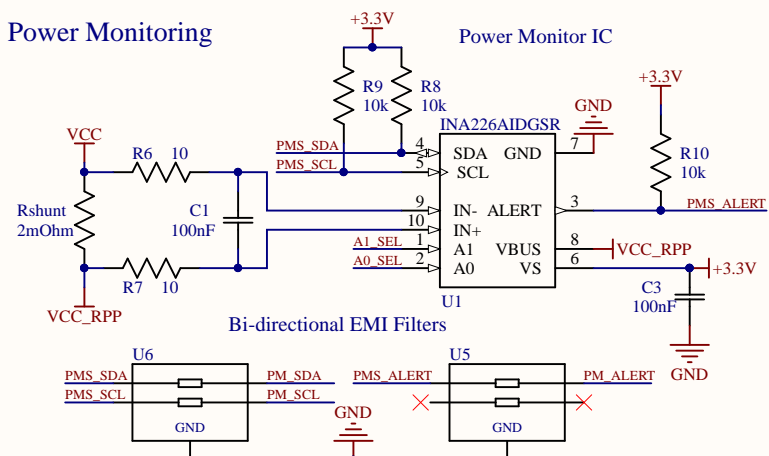
Jumpers used to connect 1->2 and 3->4. Pull-downs to pull to GND if jumpers not connected.

A1=A0=GND, Slave address is 1000000



3

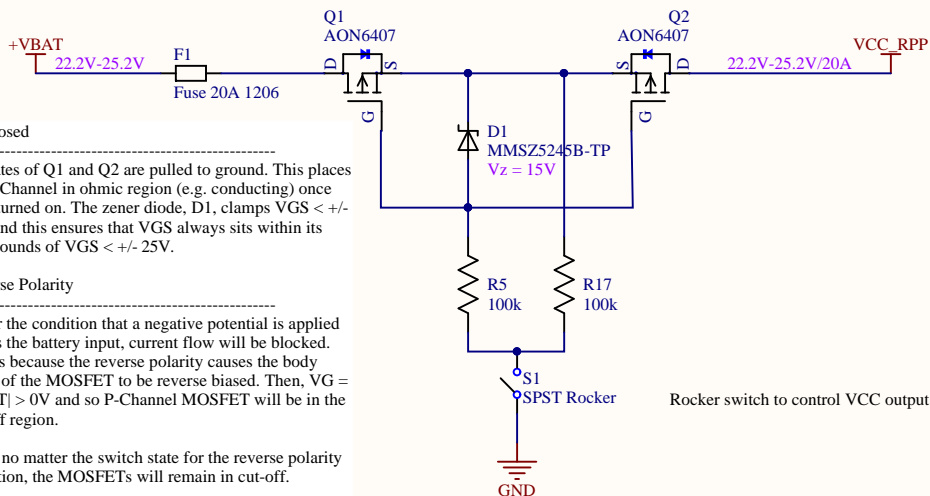
Power Monitoring



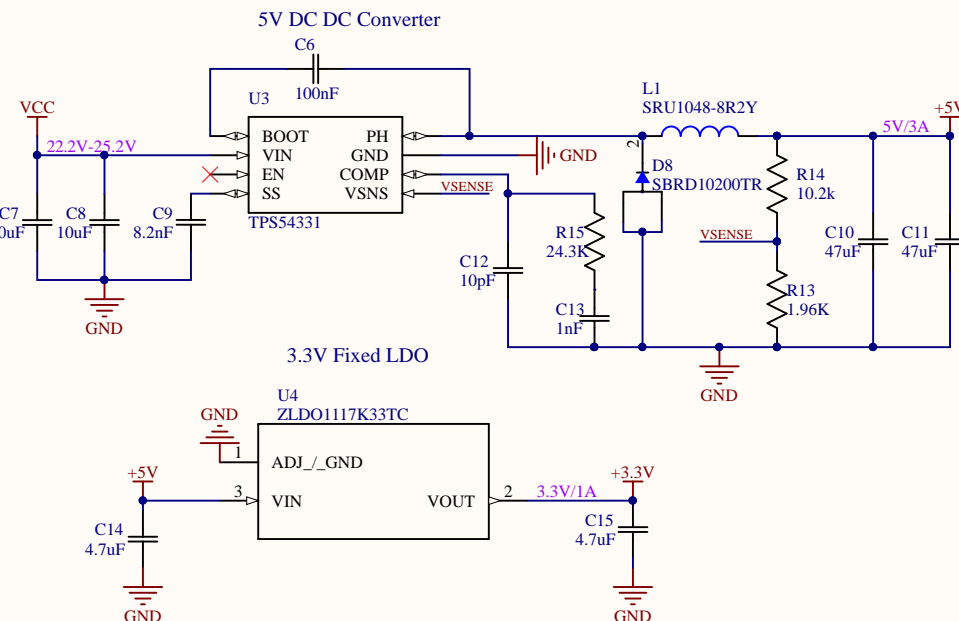
4

Power Monitor IC

Reverse Polarity Protection

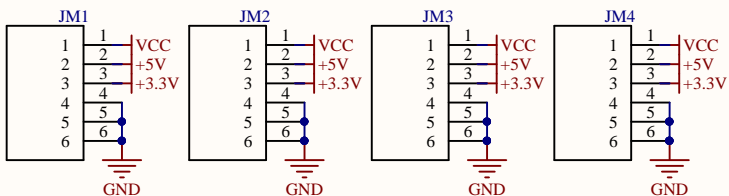


Voltage Regulation



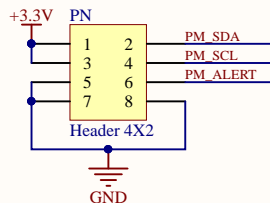
Motor Connectors

VCC for motor windings, +5V for Hall sensors



Nucleo Connector

Power monitor lines and +3.3V for Nucleo



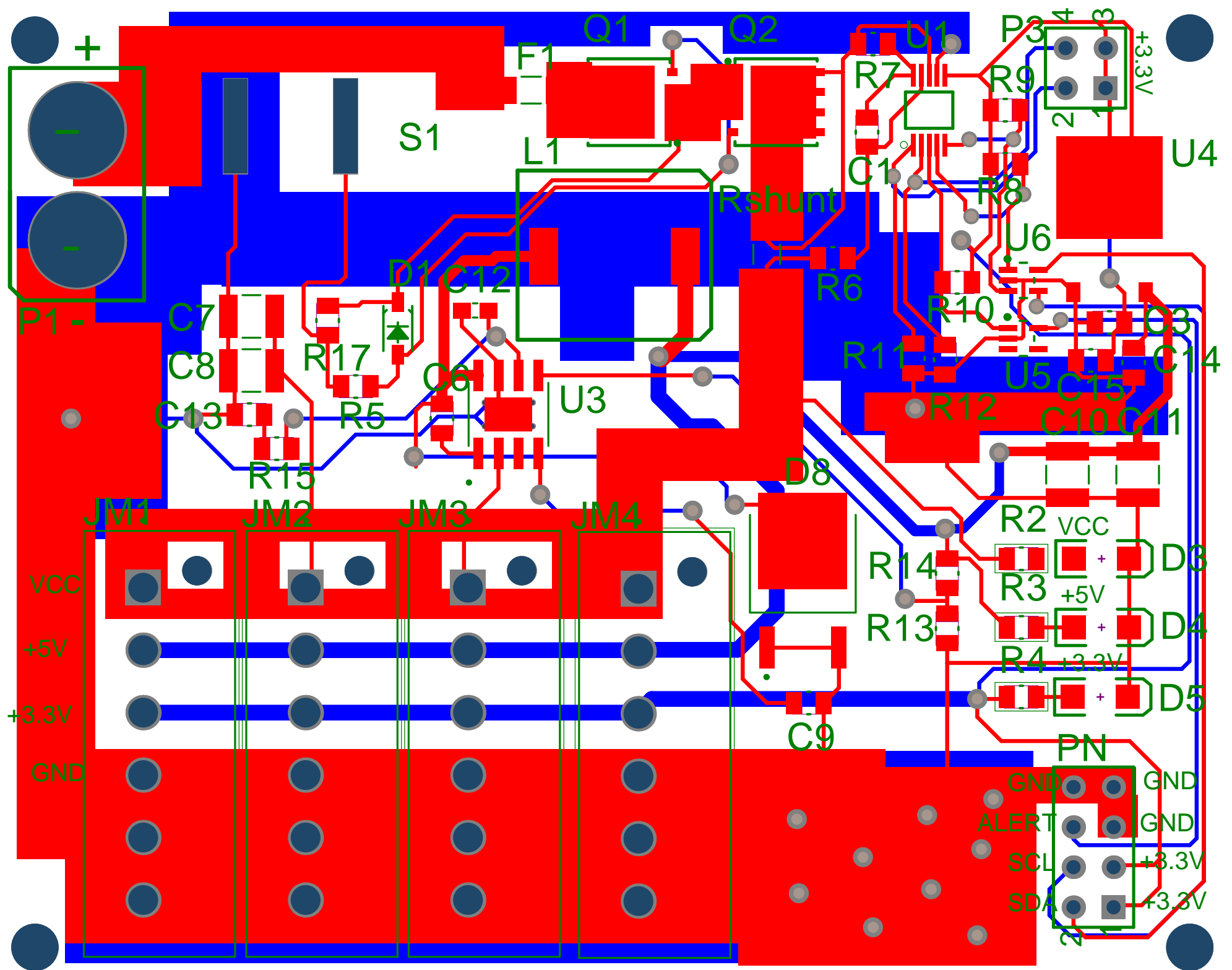
Title		
Power Distribution - 2nd Revision		
Size	Number	Revision
A4		2
Date:	2020-03-08	Sheet of
File:	C:\Users\...\power-v2.0.SchDoc	Drawn By: Hannah Sawiuk

1

2

3

4



Bill of Materials

Bill of Materials For Project [power-v2.0.PrjPCB] (No PCB Document Selected)

Source Data From: power-v2.0.PrjPCB
Project: power-v2.0.PrjPCB
Variant: None

Creation Date: 2020-03-08 2:51:18 PM
Print Date: 08-Mar-20 2:51:35 PM

#Column Name	Comment	#Column Name	Designator	Description	Quantity
	100nF		C1, C3, C6	CAP CER 0.1UF 50V X7R 0805	3
	10uF		C7, C8	CAP CER 10UF 50V X7R 1210	2
	8.2nF		C9	CAP CER 8200PF 50V X7R 0805	1
	47uF		C10, C11	CAP CER 47UF 6.3V X7R 1210	2
	10pF		C12	CAP CER SMD 0603 10PF 10% X7R 50	1
	1nF		C13	CAP CER 1000PF 50V X7R 0805	1
	4.7uF		C14, C15	CAP CER 4.7UF 25V X5R 0805	2
	MMSZ5245B-TP		D1	Zener Diode 15V 500mW ±5% Surface Mount SOD-123	1
	LED2		D3, D4, D5	Typical RED, GREEN, YELLOW, AMBER GaAs LED	3
	SBRD10200TR		D8	Diode Schottky 200V 10A Surface Mount DPAK	1
	Fuse 20A 1206		F1	FUSE BOARD MOUNT 20A 32VAC 63VDC	1
	CONN HEADER VERT 6POS 3.96MM		JM1, JM2, JM3, JM4	Connector Header Through Hole 6 position 0.156" (3.96mm)	4
	SRU1048-8R2Y		L1	FIXED IND 8.2UH 4.6A 15 MOHM SMD	1
	XT60		P1	XT60 CONNECTORS FEMALE PAIR	1
	Header 2X2		P3	Header, 2-Pin, Dual row	1
	Header 4X2		PN	Header, 4-Pin, Dual row	1
	AON6407		Q1, Q2	P-Channel 30V 32A (Ta), 85A (Tc) 7.3W (Ta), 83W (Tc) Surface Mount 8-DFN (5x6)	2
	1.96K		R2, R13	RES SMD 1.96K OHM 1% 1/8W 0805	2
	270		R3	RES SMD 270 OHM 5% 1/8W 0805	1
	110		R4	RES SMD 110 OHM 1% 1/8W 0805	1
	100k		R5, R17	RES SMD 100K OHM 1% 1/8W 0805	2
	10		R6, R7	RES SMD 10 OHM 1% 1/8W 0805	2
	10k		R8, R9, R10, R11, R12	RES SMD 10K OHM 1% 1/8W 0805	5
	10.2k		R14	RES SMD 10.2K OHM 1% 1/8W 0805	1
	24.3K		R15	RES SMD 24.3K OHM 1% 1/8W 0805	1
	2mOhm		Rshunt	RES 0.002 OHM 1% 1W 1206	1
	SPST Rocker		S1	Rocker Switch SPST 10A (AC) 125V Panel Mount, Snap-In	1
	INA226AIDGSR		U1	36-V, Bi-Directional, Ultra-High Accuracy, Low-/High-Side, I2C Out Current/Power Monitor w/ Alert 10-VSSOP -40 to 125	1
	TPS54331		U3	Buck Switching Regulator IC Positive Adjustable 0.8V 1 Output 3A 8-SOIC .0154, 3.90mm Width_	1
	ZLDO1117K33T C		U4	Linear Voltage Regulator IC Positive Fixed 1 Output 1A TO-252-3	1
	EMI		U5, U6	RC (Pi) EMI Filter 2nd Order Low Pass 2 Channel R = 100Ohms, C = 19pF (Total) SOT-665	2
					50

Approved	Notes

