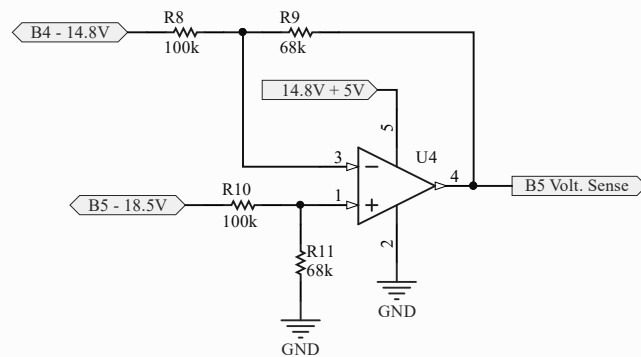
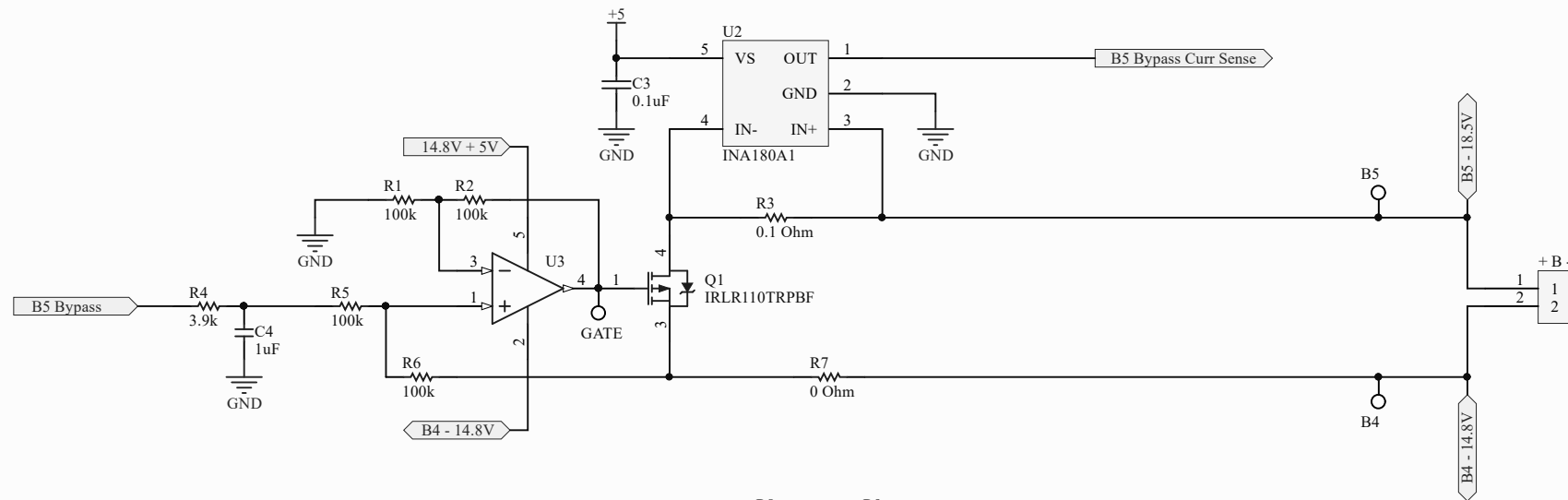
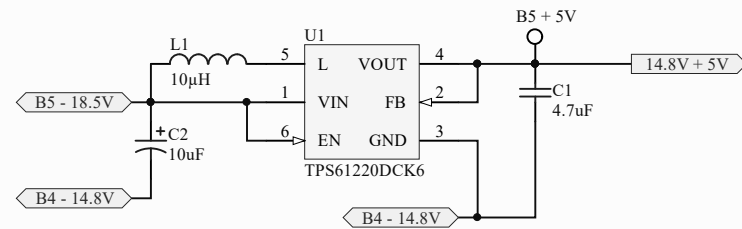
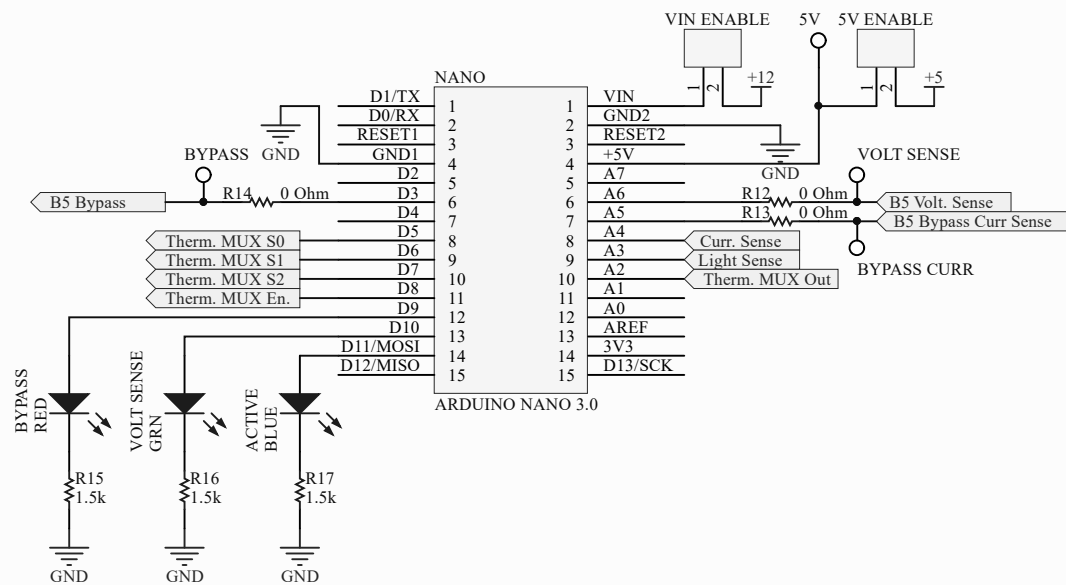
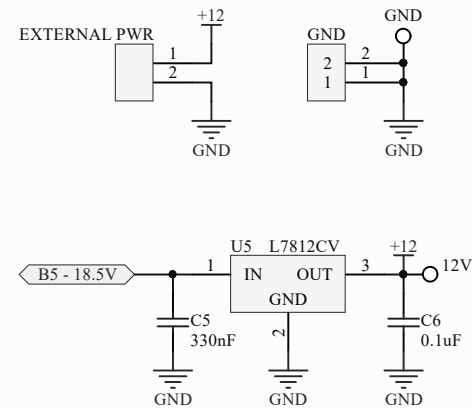
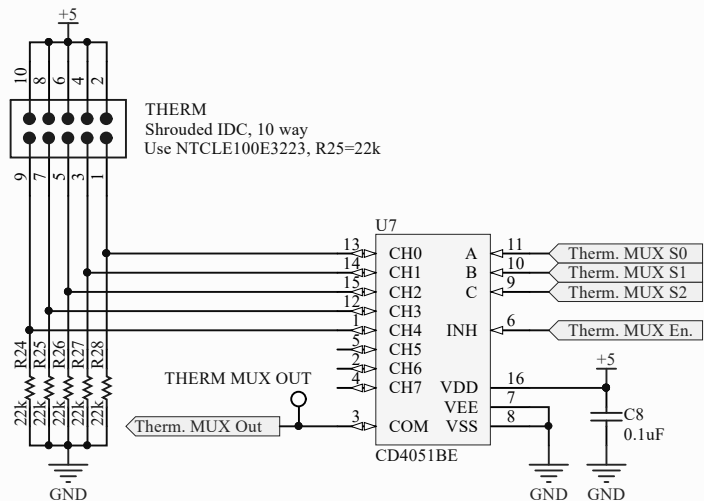
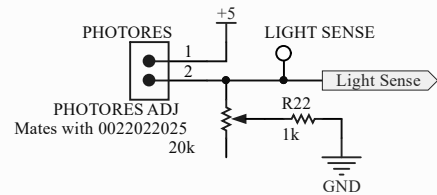
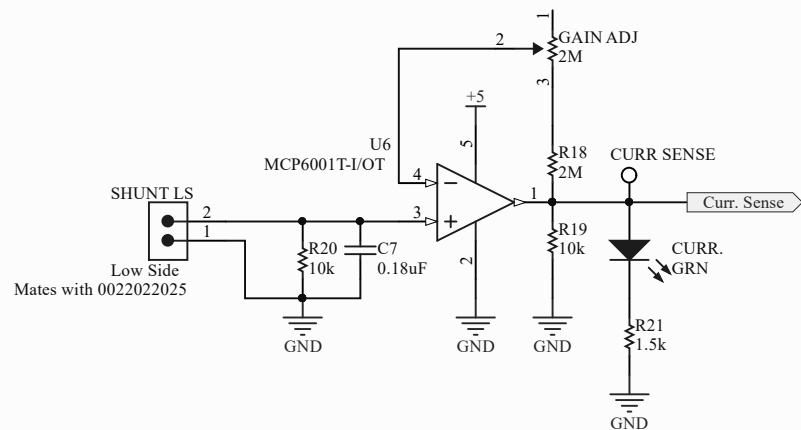


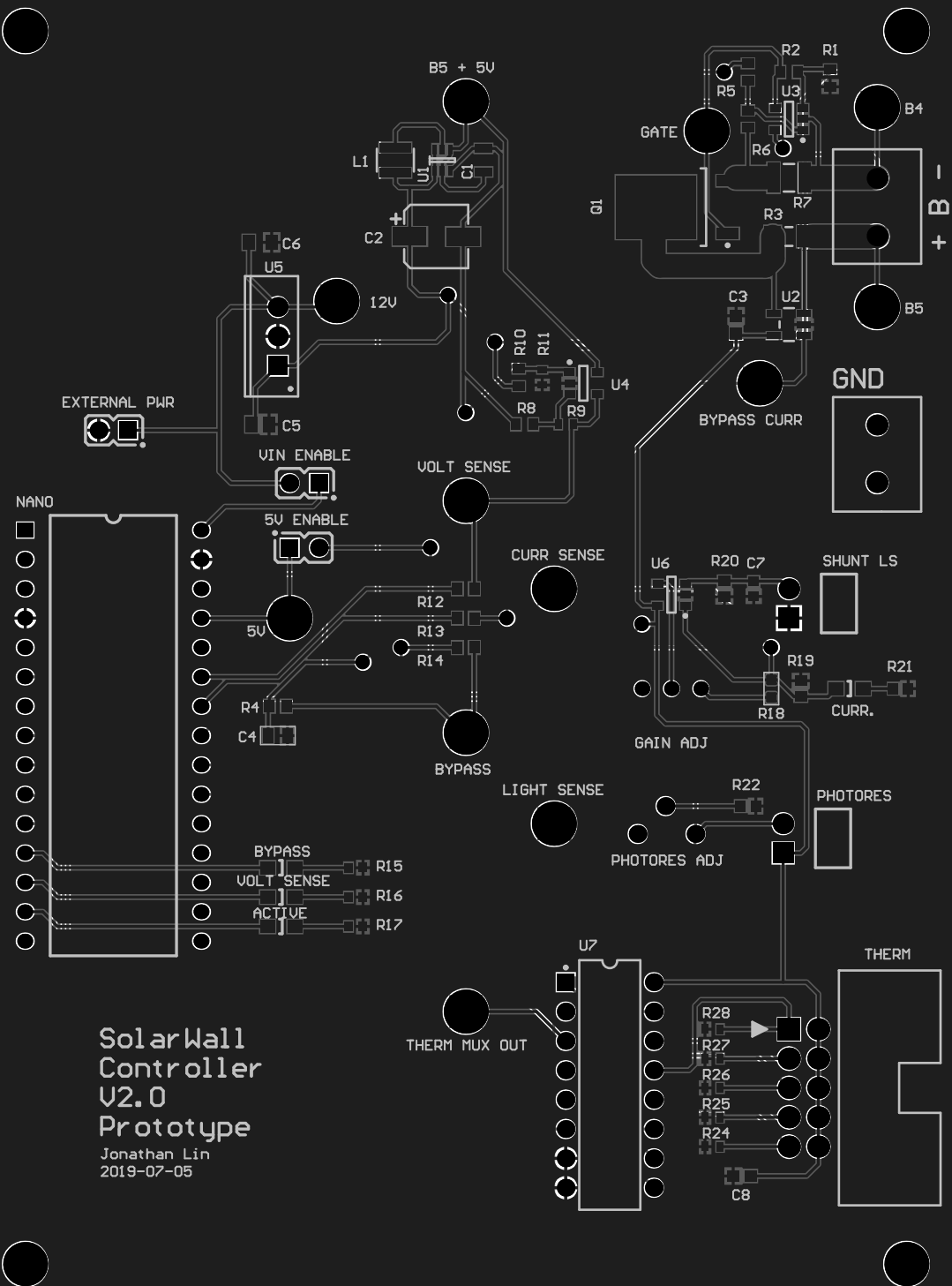
Comment	Description	Designator	Footprint	LibRef	Quantity	
Würth Elektronik 69113710002	Series 1317 - 3.00 mm Horizontal Entry with Pressure Clamp WR- BL, 2 pin	+ B -, GND	PCB- g2bho722hu8Soltew9- 1	691137710002	2	
BYPASS	KEYSTONE 5002 Series- Header: Breakaway: 0.100 in.; PC Board: Single; 2; 0.025 in.; 0.12 in.; 3 A	3V, 12V, BS, BS + 3V, BYPASS, BYPASS CURR, SENSE, GND, LIGHT SENSE, THERM MUX OUT, VOLT SENSE	PCB- gr7485lqbtmavabodp- 1	5002	11	
TE Connectivity 5- 146281-2		5V ENABLE, EXTERNAL PWR, VIN ENABLE	PCB- angly19qucdnc8c7d0- m-1	5-146281-2	3	
BLUE	2.0x1.2mm Low Current Green	ACTIVE	PCB- dnef8g4qbp6b6feh1- 1	APT2012L2GCK	1	
Keystone Electronics 5002	KEYSTONE 5002 Series-	B4, GATE	PCB- gr7485lqbtmavabodp- 1	5002	2	
RED	2.0x1.2mm Low Current Red	BYPASS	PCB- dnef8g4qbp6b6feh1- 1	APT2012L5ECKJ3-PRV	1	
4.7uF	Cap Ceramic 4.7uF 6.3V X5R 10% SMD 0603 85°C Paper T/R	C1	PCB- aplqutvmeggu276tpoc- 1	BMK107B1475KA-T	1	
10uF	WX Series 10 uF 16 V 85°C Ø3 x 5.4 mm SMT Chip Aluminum Electrolytic Cap	C2		3mm Dia SMD Cap	UWK1C100MCL2GB	1
0.1uF	0603 0.1 uF 25 V ± 10 % Tolerance X7R SMT Multilayer Ceramic Capacitor	C3, C8	PCB- fyggghlyh4an5ux2gphu- 1	CC0603RX07R8BB104	2	
1uF	Cap Ceramic 1uF 50V X5R 10% SMD 0805 85°C Embossed T/R	C4	PCB- byo5i178wp7b73c12v- 25	UMK212B1105KG-T	1	
330nF	CAP CER 0.33uF 50V 10% X8L 0805	C5	CAPC-2013X140K45LL15T	GCCH21BL11H34KA56L	1	
0.1uF	CAP CER 0.1uF 50V 10% X7R 0805	C6	CAPC-2013X94X50LL20T25	W005SC104KA22A	1	
0.18uF	CAP CER 0.18uF 10V 10% X7R 0603	C7	CAPC-1608X90X35LL15T5	0603ZC184KAT2A	1	
GRN	2.0x1.2mm Low Current Green	CURR-, VOLT SENSE	PCB- dnef8g4qbp6b6feh1- 1	APT2012L2GCK	2	
2M	Res Cermet Trimmer 2M Ohm 10% 1/2W 25(Elec)Turn 2.19mm Ø9.53 X 4.43 X 11.55mm Pin Thru-Hole Tube	GAIN ADJ	PCB- hse4uuaT5cnkhyg9c- 1	3296W-1-205LF	1	
10uH	Inductor Power Chip Shielded Wirewound 10uH 20% 1MHz Ferrite 1.2A 0.288Ohm DCR 1212 T/R	L1	PCB- vewda3j484q4d4f994d- 1	LQH3MPN100MRL	1	
ARDUINO NANO 3.0	Arduino Nano 3.0	NANO	PCBComponent_1	ARDUINO NANO 3.0	1	
Pin 1 to GND	KK® 254 Solid Header, Right Angle, with Friction Lock, 2 Circuits, Tin (Sn) Plating	PHOTORES	PCB- fbv082lavltmssgdmv- 1	22-05-3021	1	
20k	Pot	PHOTORES ADJ	PCB- 9csh4knhicbyvjgu-1	3296Y-1-203LF	1	
5W-837447-1	MOSFET P-CH 55V 31A DPAK	Q1	PCB- Sorkzbz4xcofe4cn7g14- 1	IRFR5205TRPBF	1	
100k	Res Thin Film 0603 100K Ohm 0.1% 1/10W 25ppm/C Molded SMD SMD Paper T/R	R1, R2, R5, R6, R8, R10	RESC160BX5X25SML10T15	RT0603BRD07100KL	6	
0.1 Ohm	100 mOhms ± 1% 0.25W, 1/4W Chip Resistor 1206 (3216 Metric) Automotive AEC Q200, Current Sense, Moisture Resistant, Pulse Withstanding Metal Element	R3	RESC3216XB9X51N4L25T25	WSL1206R1000FEA	1	
3.9k	Thick Film Resistors - SMD 0603 3.9kOhms 5% Tol	R4	RESC160BX5X30ML15T15	ERJ-3GEY392V	1	
0 Ohm	Thick Film Resistors - SMD 3/4-watt ZERO ohm Jumper	R7	RESC3225X60X45LL20T20	CRCW1210000020EAHP	1	
68k	Thin Film Resistors - SMD 1/10W 68k ohm 1% 25ppm	R9, R11	RESC160BX5X25LL10T15	RT0603BRD0768KL	2	
0 Ohm	KL Series 0603 0.1 W 0 Ohm Jumper Surface Mount Thick Film Chip Resistor	R12, R13, R14	PCB- z4mf4nrbhvo2vusio9- 1	AC0603JR-070RL	3	
1.5k	Thick Film Resistors - SMD 0603 1.5kOhms 5% Tol	R15, R16, R17	RESC160BX5X30LL15T15	ERJ-3GEY152V	3	
2M	KL Series 0603 0.1 W 2 MOhms 1% ± 100 ppm/C SMT Thick Film Chip Resistor	R18	R0603_A	RC0603FR-072ML	1	
10k	RES SMD 10K OHM 1% 1/4W 0603	R19, R20	PCB- 4asppfb21vtafBz3o3v8- 1	CRCW060310K0FKEAHP	2	
1.5k	Res Thick Film 0603 1.5k Ohm 1% 0.25W(1/4W) 100ppm/C Molded SMD Automotive Punched T/R	R21	PCB- 9cf7z3zco0dkpf6fkxy- 1	ERJ-PA3F1501V	1	
1k	Res Thick Film 0603 1k Ohm 1% 1/10W ±100ppm/C Molded SMD SMD Paper Tape on Plastic Reel	R22	CAPC160BX60X35NL10T15	CR0603-FX-1001ELF	1	
22k	Thin Film Resistors 1/10W 22k ohm -1% 25ppm	R24, R25, R26, R27, R28	RESC160BX5X25LL10T15	RT0603BRD0722KL	5	
Low Side	KK® 254 Solid Header, Right Angle, with Friction Lock, 2 Circuits, Tin (Sn) Plating	SHUNT LS	PCB- fbv082lavltmssgdmv- 1	22-05-3021	1	
Shrouded IDC, 10 way	Conn Socket Strip SKT 10 POS 2.54mm Solder 1A Thru-Hole	THERM	PCB- 6gy99jg7hir1kur10t9e- 1	302-R101	1	
TP561220DCK6	Boost Voltage Converter with 0.7 to 5.5 V Input and 1.8 to 5.5 V Output, -40 to 85 degC, 6-Pin SC70 (DCK), Green (RoHS & no Sb/Rf)	U1	PCB- cf8mw4cw6ftg2gaqfcsu- 1	TP561220DCKR	1	
INA180A1	26V, Low- or High-Side Voltage Output Current Sense Amplifier 5-SOT-23 -40 to 125	U2	SOT23-5_D	INA180A1IDBVR	1	
CMP-0055-01337-3	Low Power Single Op Amp, 5-pin SOT-23	U3, U4	MF05A_L	CMP-0055-01337-3	2	
U7B12CV	Positive Voltage Regulator, 12V, 3-Pin TO-220	U5	PCB- lye1sd8ny0gaceleune- 1	U7B12CV	1	
MC92001T-4VOT	1 MHz, Low-Power Operational Amplifier, 5-Pin SOT-23, Industrial Temperature, Tape and Reel	U6	SOT-23-OTS_L	MC92001T-4VOT	1	
CD4051BE	CD4051BE MULTIPLEXER	U7	PCB-wkxmky2o49R0p7	CD4051BE	1	



Title		
Size	Number	Revision
A4		
Date:	2019-07-05	Sheet of
File:	Cell Group Test.SchDoc	Drawn By:



Title		
Size A4	Number	Revision
Date: 2019-07-05	Sheet of	
File: Nano Shunt Thermistor Photodiode.Sch	Down By:	



SolarWall  
Controller  
V2.0  
Prototype  
Jonathan Lin  
2019-07-05

