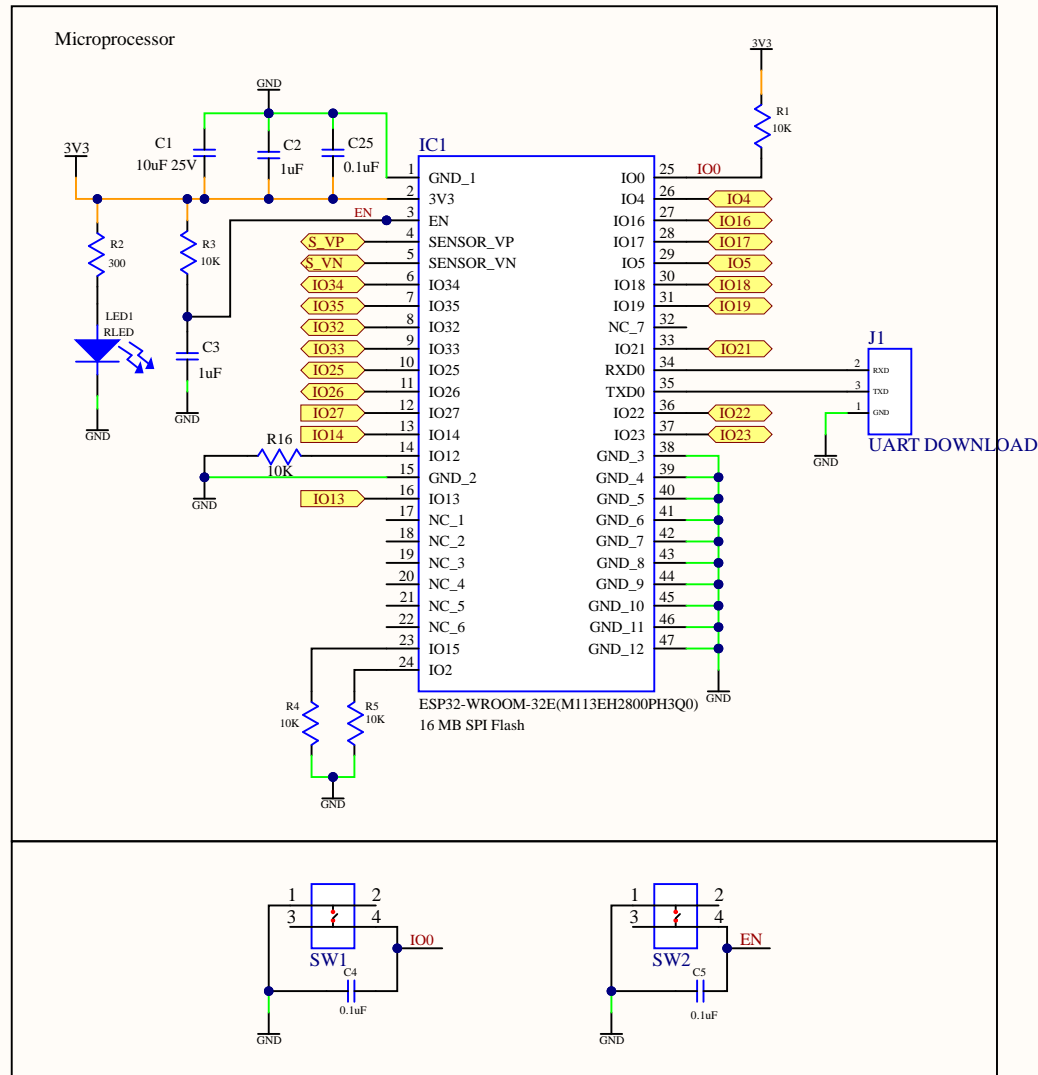
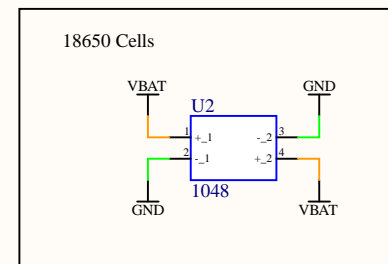
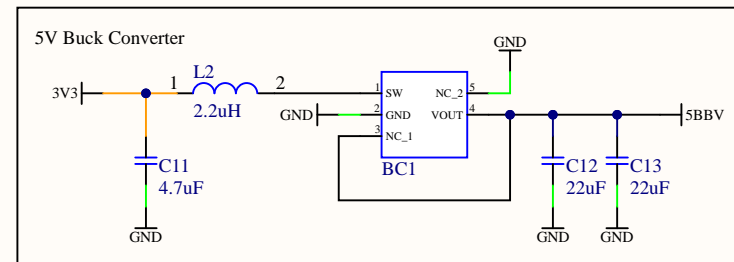
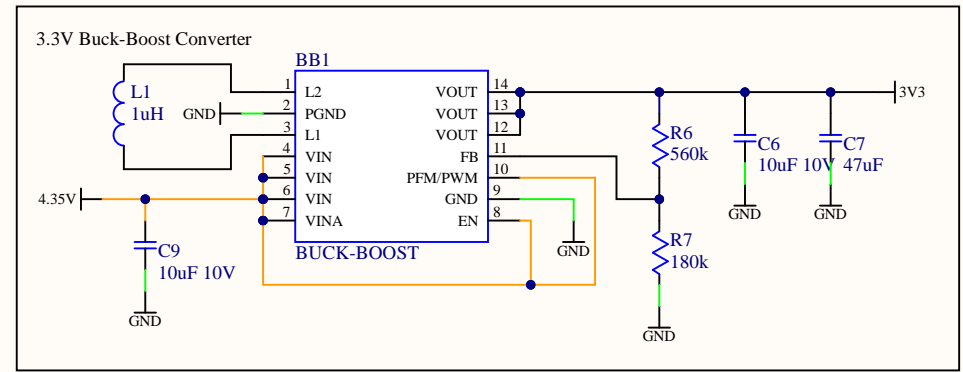
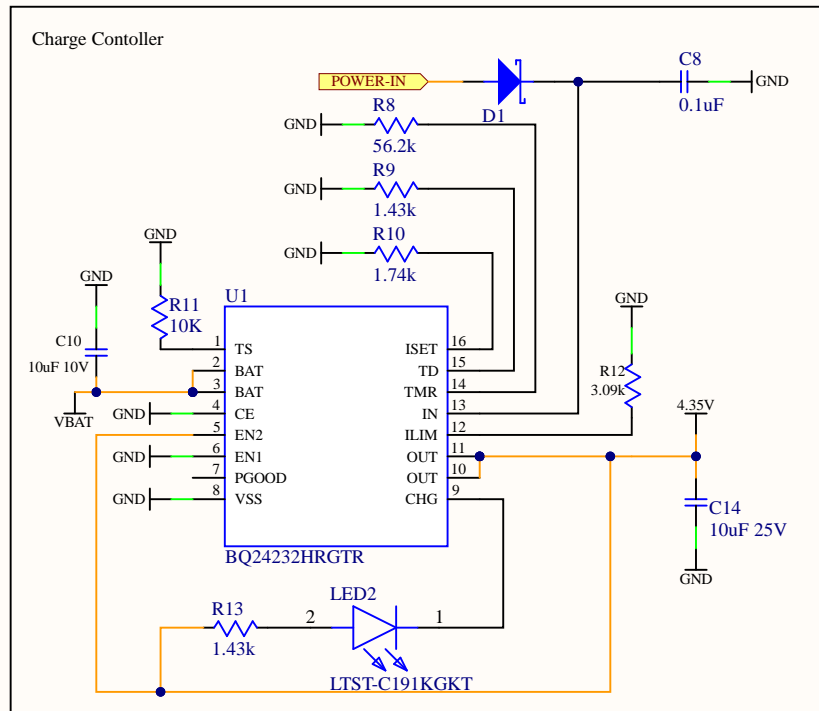


Title			Sensor System	
Size	Number		Revision	
A				
Date:	4/21/2022		Sheet 1 of 5	
File:	C:\Users\...\MainSensorBoard.SchDoc		Drawn By: Charles Ernest Olsen Jr.	



Title		
Sensor System		
Size	Number	Revision
A		
Date:	4/21/2022	Sheet 2 of 5
File:	C:\Users\...\MainSensorBoard2.SchDoc	Drawn By: Charles Ernest Olsen Jr.



Title Sensor System		
Size A	Number	Revision
Date:	4/21/2022	Sheet 3 of
File:	C:\Users\...\MainSensorBoard3.SchDoc	Drawn By: Charles Ernest Olsen Jr.

A

A

B

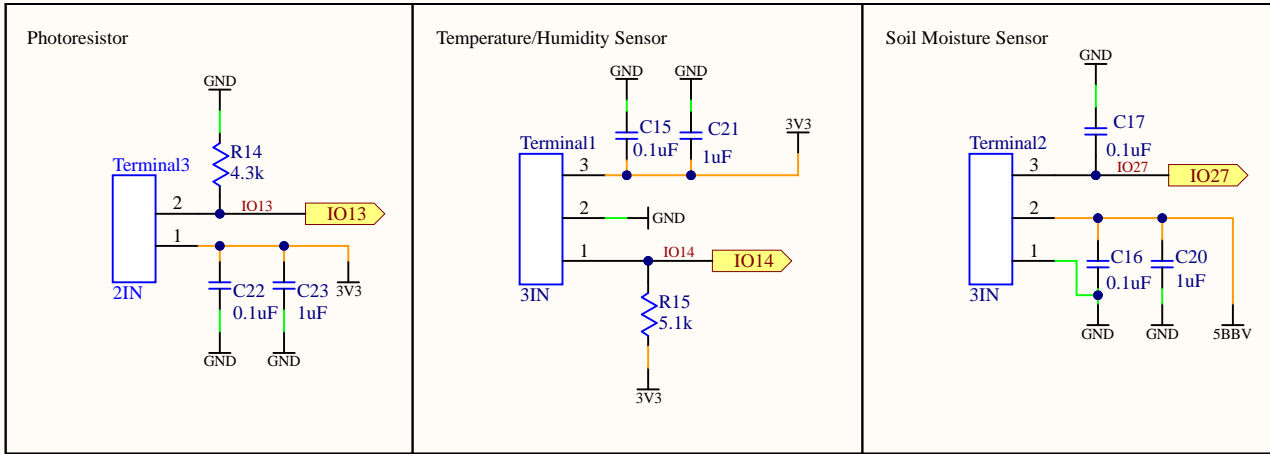
B

C

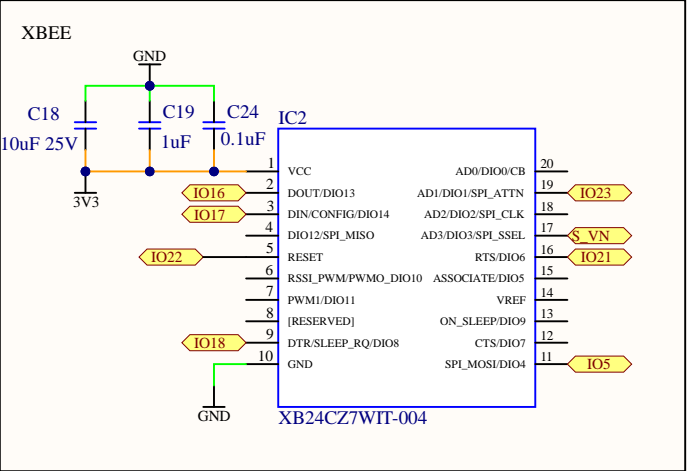
C

D

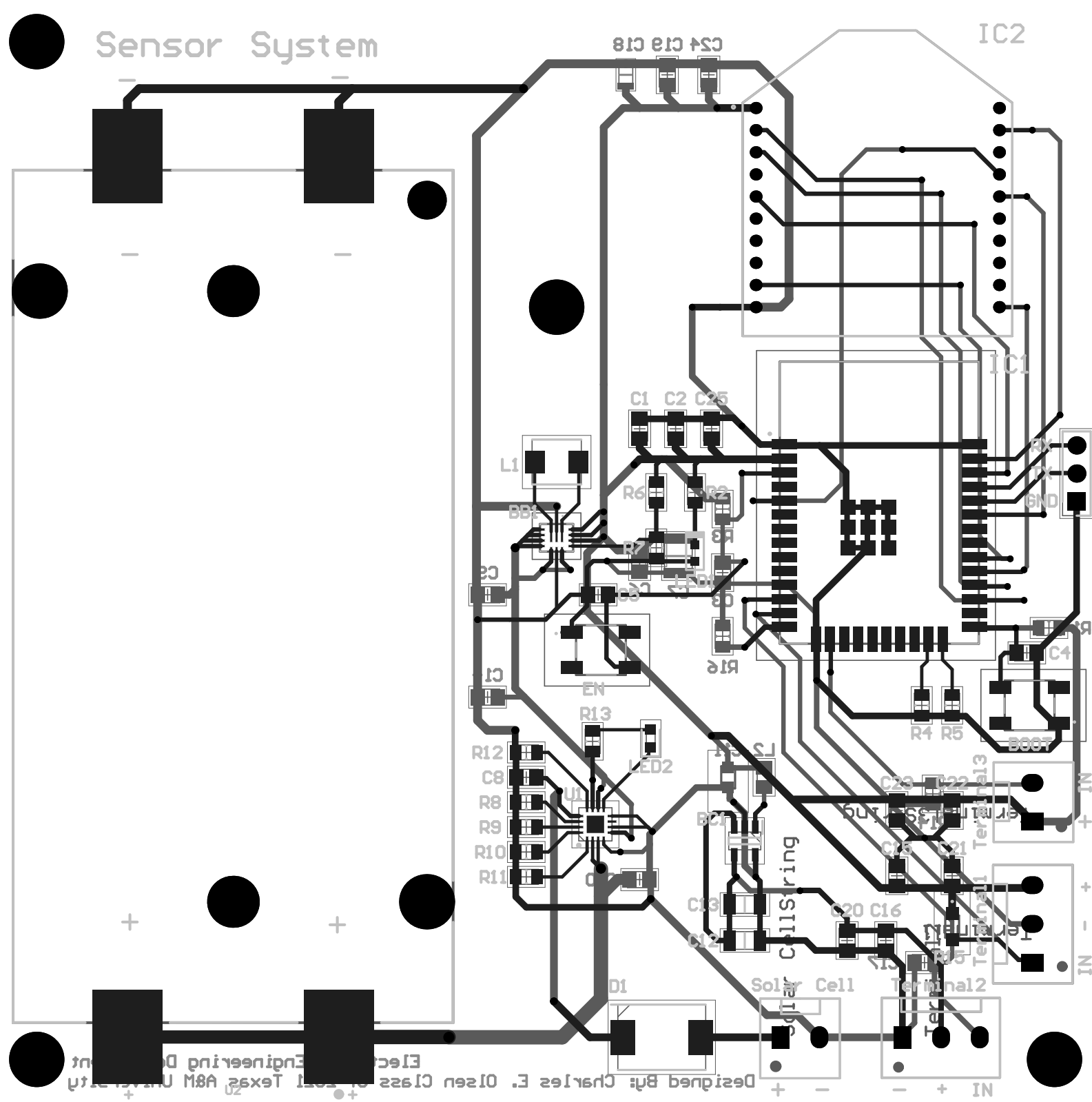
D



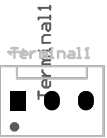
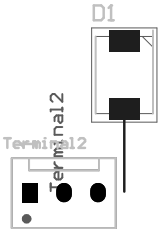
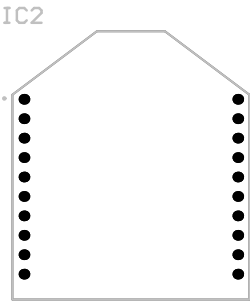
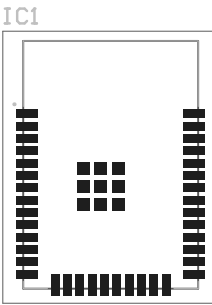
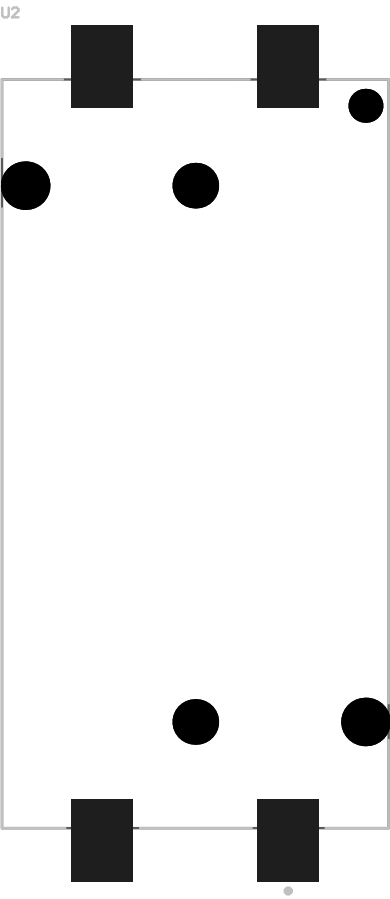
Title			Sensor System	
Size	Number		Revision	
A				
Date:	4/21/2022		Sheet 4 of 5	
File:	C:\Users\...\MainSensorBoard4.SchDoc		Drawn By: Charles Ernest Olsen Jr.	



Title			Sensor System	
Size	Number		Revision	
A				
Date:	4/21/2022		Sheet 5 of 5	
File:	C:\Users\...\MainSensorBoard5.SchDoc		Drawn By: Charles Ernest Olsen Jr.	



Designed By: Charles E. Olsen Class of 2011 Texas A&M University
Electrical Engineering Department



Comment	Description	Designator	Footprint	LibRef	Quantity
BUCK-BOOST	Industry's Smallest 4A Switch Single-Inductor Buck-Boost Converter 14-VQFN-HR -40 to 125	B81	TP5630250RNC1	TP5630250RNC1	1
TP561322ZADBVT	Power Supply	BC1	SOT99P280X145-SN	TP561322ZADBVT	1
10uF 25V	Cap Ceramic 10uF 25V X7S 10% Pad SMD 0805 125°C Low ESR Automotive T/R	C1, C14	Cap08051uF	CGA4J1X7S1E106K125AC	2
1uF	CAP CER 1UF 16V X7R 0805	C2, C3, C19, C20, C21, C23	Cap08051uF	C0805C10514RAC7025	6
0.1uF	Cap Cer 0805 0.1UF 16V X7R 5%	C4, C5, C8, C15, C16, C17, C22, C24, C25	Cap08051uF	C0805C1044RECAUT0	9
10uF 10V	Cap Ceramic 10uF 10V X5R 10% SMD 0805 85°C Embossed Plastic T/R	C6, C9, C10	Cap08051uF	CL21A106KPFNNNG	3
47uF	Cap Ceramic 47uF 16V X5R 10% SMD 1210 85°C Embossed Plastic T/R	C7	CAPC3225X270N	GRM32ER61C476ME1SL	1
4.7uF	Capacitor	C11	C2012_Commercial	C2012XR1A475M125AC	1
22uF	Capacitor	C12, C13	CAPC3216X180N	GRM31CR71A226KE15	2
10uF 25V	Capacitor	C18	CAPC2012X145N	CGA4J1X7S1E106K125AC	1
V5-30BQ040HM3/9AT	Diode Schottky Rectifier 40V 4A 2-Pin DO-214AB Plastic T/R	D1	DIOM7959X262N	V5-30BQ040HM3/9AT	1
ESP32-WROOM-32E(M113EH2800PH3 Q0)	Integrated Circuit	IC1	ESP32WROOM32EM113EH2800PH3Q0	ESP32-WROOM-32E(M113EH2800PH3 Q0)	1
XB24CZ7WIT-004	RF Transceiver Module, 2.4GHz, -102DBM	IC2	XB24CAPIT-001	XB24CZ7WIT-004	1
UART DOWNLOAD	Conn Unshrouded Header HDR 3 POS 2.54mm Solder ST Thru-Hole C-Grid III™ Frame	J1	HDRV3W90P0XZ54_1X3_740X249X560P	R0120-0763	1
1uH	Inductor	L1	INDPM4441X120N	IHLP1616ABER1R0M11	1
2.2uH	Inductor	L2	INDC2012X105N	MLP2012H2R2MT051	1
RLED	LED Uni-Color Red 609nm 2-Pin Chip LED T/R / LED RED CLEAR 0603 SMD	LED1	LED0603	LTST-C191KRKT	1
LTST-C191KGKT	LED	LED2	LEDC1608X55N	LTST-C191KGKT	1
10K	Res Thick Film 0805 10K Ohm 1% 0.25W ±100ppm/°C Molded SMD Punched Carrier T/R	R1, R3, R4, R5, R11, R16	R080510K1/2W	ERJ-P06F1002V	6
300	Resistor	R2	R080510K1/2W	ERJ-P06J301V	1
560k	Res Thick Film 0805 560K Ohm 0.5% 0.25W(1/4W) ±50ppm/°C Pad SMD Automotive T/R	R6	R080510K1/2W	ERJ-PB6D5603V	1
180k	Res Thick Film 0805 180K Ohm 0.5% 0.25W(1/4W) ±50ppm/°C Pad SMD Automotive T/R	R7	R080510K1/2W	ERJ-PB6D1803V	1
56.2k	Res Thick Film 0805 56.2K Ohm 0.5% 0.25W(1/4W) ±50ppm/°C Pad SMD Automotive T/R	R8	R080510K1/2W	ERJ-PB6D5622V	1
1.43k	Res Thick Film 0805 1.43K Ohm 0.5% 0.25W(1/4W) ±50ppm/°C Pad SMD Automotive T/R	R9, R13	R080510K1/2W	ERJ-PB6D1431V	2
1.74k	RES SMD 1.74K OHM 0.1% 1/4W 0805	R10	R080510K1/2W	ERJ-PB6B1741V	1
3.09k	Res Thick Film 0805 3.09K Ohm 0.5% 0.25W(1/4W) ±50ppm/°C Pad SMD Automotive T/R	R12	R080510K1/2W	ERJ-PB6D3091V	1
4.3k	Res Thick Film 0805 4.32K Ohm 0.5% 0.25W(1/4W) ±50ppm/°C Pad SMD Automotive T/R	R14	R080510K1/2W	ERJ-PB6D4321V	1
5.1k	Res Thick Film 0805 5.1K Ohm 0.5% 0.25W(1/4W) ±50ppm/°C Pad SMD Automotive T/R	R15	ERJP06_ (0805)	ERJ-PB6D5101V	1
2IN	Two-Wire-Terminal Switch Tactile N.O. SPST Round Button Gull Wing 0.05A 12VDC 100000Cycles 2.45N SMD T/R	Solar Cell, Terminal3	HDR1X2	PRT-08084	2
Switch		SW1, SW2	PTS6475K38SMTRLFS	PTS6475K38SMTRLFS	2
3IN	3-Wire-Terminal	Terminal1, Terminal2	HDR1X3	PRT-08235	2
BQ24232HRGTR	USB-Friendly Lithium Based battery charger With power-Path For 4.35V Batteries 16-VQFN -40 to 85	U1	QFN50P300X300X100-17N-D	BQ24232HRGTR	1
1048	Undefined or Miscellaneous	U2	1048	1048	1