

All resistors are size 0603 (1608 Metric), 1/10 W, 1% or better, unless specifically noted  
 All capacitors are ceramic, size 0603 (1608 Metric), X5R or better, unless specifically noted

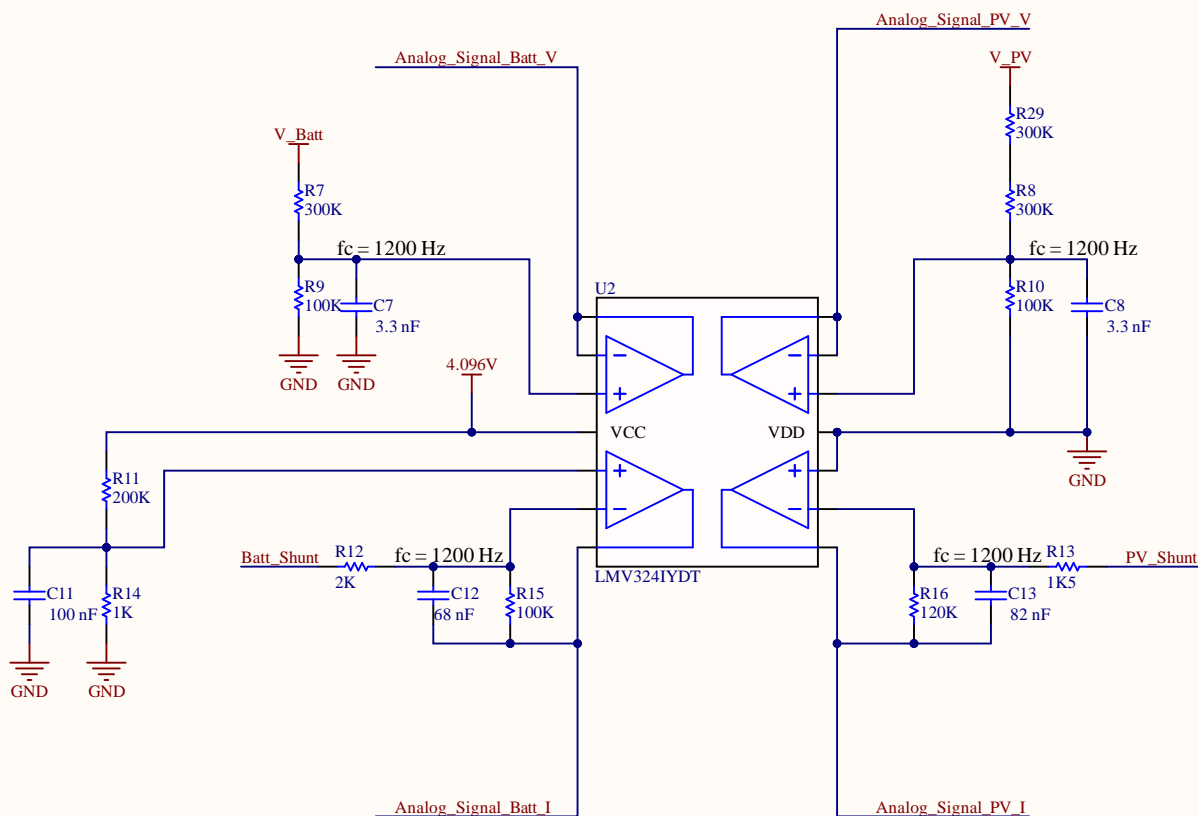
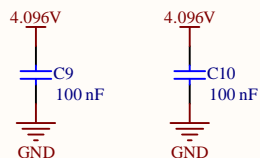
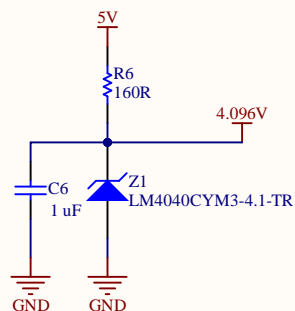
Title: <b>MPPT_V1.0</b>			For educational purposes only!	
Size: <b>A4</b>	Drawn By: <b>Hugo Boyce</b>	Engineer: <b>Hugo Boyce</b>		
Date: <b>2021-09-01</b>	Time: <b>19:21:59</b>	Sheet2 of 5		
File: <b>C:\Users\Hugo Boyce\Documents\Electronics Projects\MPPT\Git\Atmel_MPPT\Hardware\V1.0.1\MPPT_V1.0.1_MCU_and</b>				

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Sheet 3 of 5

File: C:\Users\Hugo Boyce\Documents\Electronics Projects\MPPT\Git\Atmel\_MPPT\Hardware\V1.0.1\MPPT\_V1.0.1\_Analog.Sch

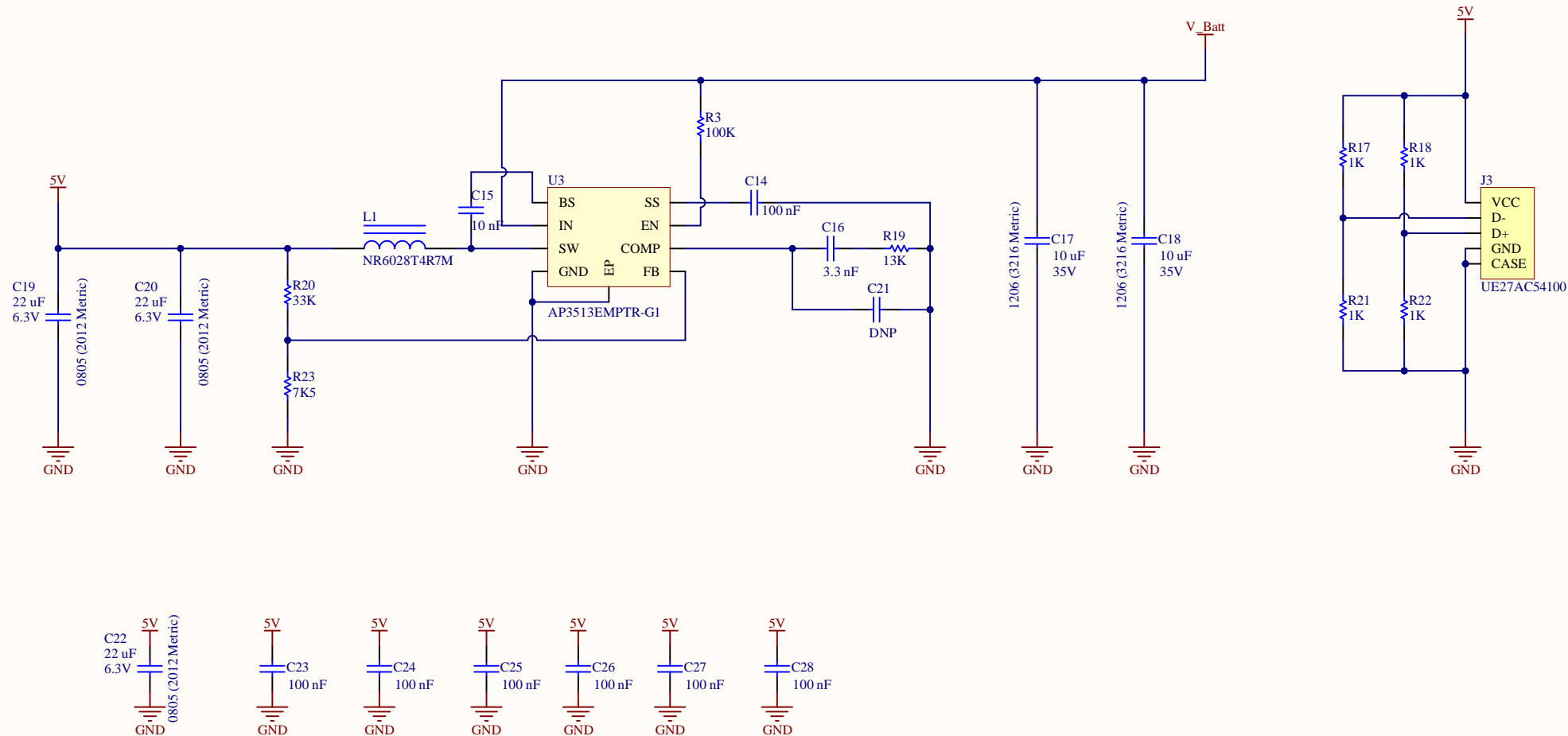
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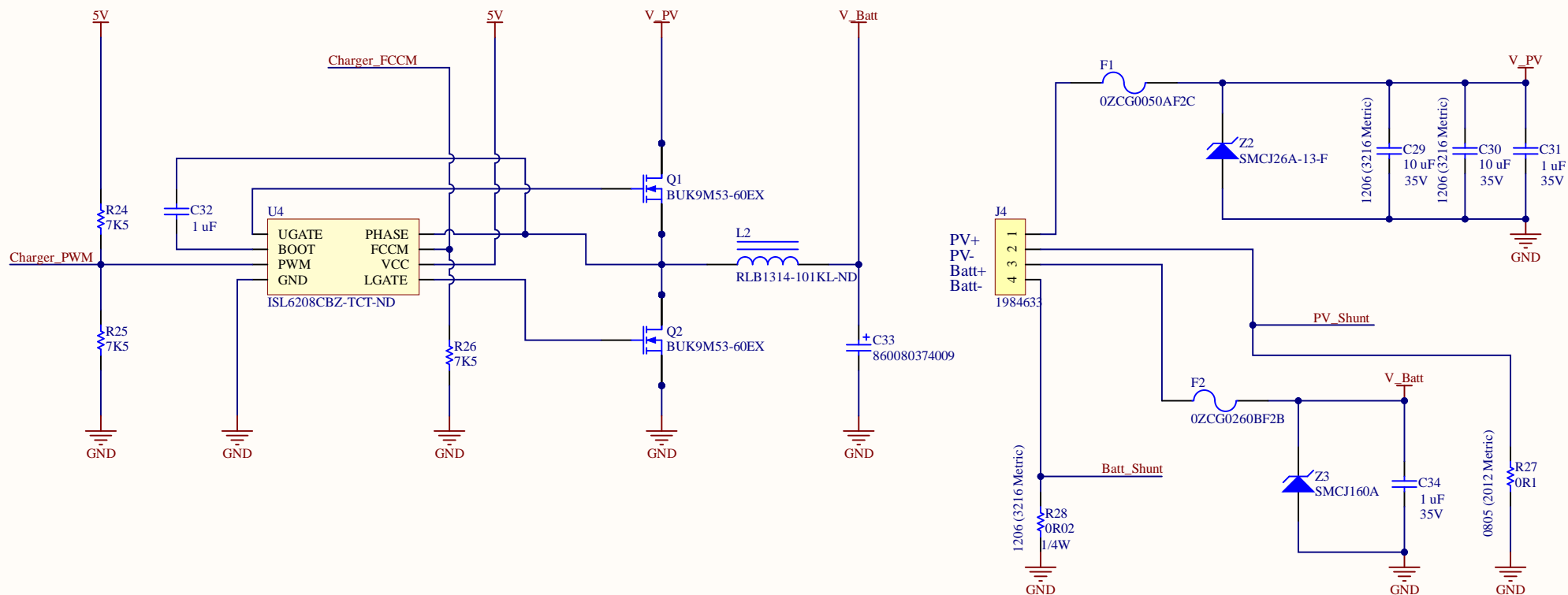
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4



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File: <b>C:\Users\Hugo Boyce\Documents\Electronics Projects\MPPT\Git\Atmel_MPPT\Hardware\V1.0.1\MPPT_V1.0.1_5V_Supply</b>			

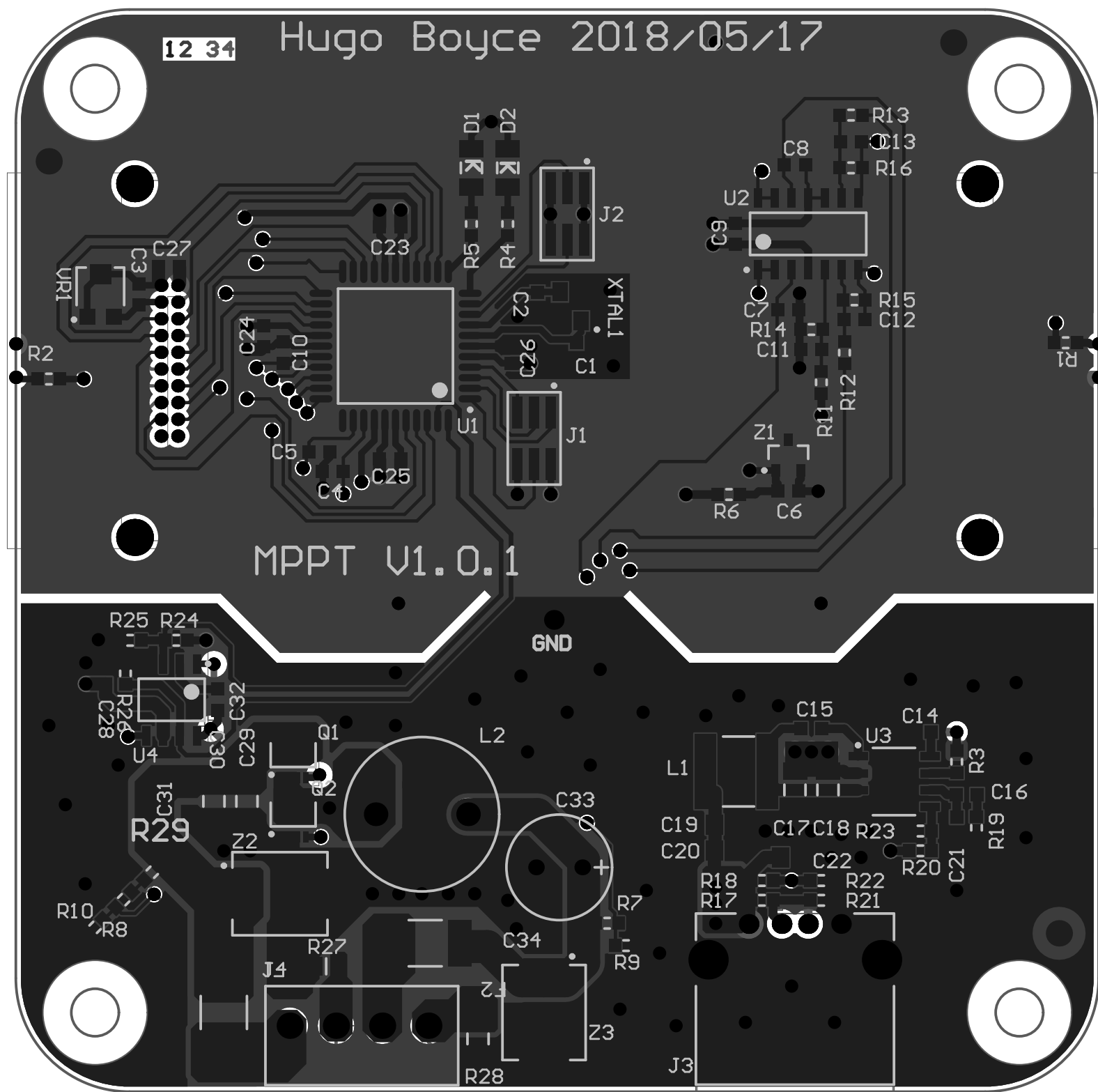


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File: <b>C:\Users\Hugo Boyce\Documents\Electronics Projects\MPPT\Git\Atmel_MPPT\Hardware\V1.0.1\MPPT_V1.0.1_Charger.C</b>			

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Hugo Boyce 2018/05/17



Comment	Description	Designator	Footprint	Quantity	Value
UE27AC54100	CONN RCPT USB TYPE A R/A GOLD	J3	UE27AC5410	1	
TSX-3225 20.0000MF20G-AC3	CRYSTAL 20.0000MHZ 9PF SMD	XTAL1	EPSON_TSX-3225	1	
TC33X-2-103E	TRIMMER 10K OHM 0.1W SMD	VR1	TC33_BOURNS	1	
SMCJ160A	TVS DIODE 160VWM 259VC SMC	Z3	SMCJxxx	1	
SMCJ26A-13-F	TVS DIODE 26VWM 42.1VC SMC	Z2	SMCJxxx	1	
RLB1314-101KL	FIXED IND 100UH 1A 120 MOHM TH	L2	BOURNS_RLB1314	1	
Res SMD	Resistor	R1, R2	RESC1608N	2	330R
Res SMD	Resistor	R3, R9, R10, R15	RESC1608N	4	100K
Res SMD	Resistor	R4, R5, R14, R17, R18, R21, R22	RESC1608N	7	1K
Res SMD	Resistor	R6	RESC1608N	1	160R
Res SMD	Resistor	R7, R8, R29	RESC1608N	3	300K
Res SMD	Resistor	R11	RESC1608N	1	200K
Res SMD	Resistor	R12	RESC1608N	1	2K
Res SMD	Resistor	R13	RESC1608N	1	1K5
Res SMD	Resistor	R16	RESC1608N	1	120K
Res SMD	Resistor	R19	RESC1608N	1	13K
Res SMD	Resistor	R20	RESC1608N	1	33K
Res SMD	Resistor	R23, R24, R25, R26	RESC1608N	4	7K5
Res SMD	Resistor	R27	RESC2012N	1	0R1
Res SMD	Resistor	R28	RESC3216N	1	0R02
PTS645SM95SMTR92LFS	SWITCH TACTILE SPST-NO 0.05A 12V	S1, S2	PTS645SM95SMTR92LFS	2	
PCB	Printed Circuit Board	PCB		1	
NR6028T4R7M	FIXED IND 4.7UH 3A 40.3 MOHM SMD	L1	NR6028	1	
LMV324IYDT	IC OPAMP GP 1.3MHZ RRO 14SO	U2	LMV324IYDT	1	
LM4040CYM3-4.1-TR	IC VREF SHUNT 4.096V SOT23	Z1	LM4040C	1	
LCD_ERM12232-1_128X32_MATRIX	128x64 Graphic LCD Module, EastRising	DS1	LCD_ERM12232	1	
ISL6208CBZ-T	IC MOSFET DRVR SYNC BUCK 8-SOIC	U4	ISL6208CBZ-T	1	
1608	Capacitor	C15	CAPC1608N	1	10 nF
Cap SMD	Capacitor	C1, C2	CAPC1608N	2	9 pF
Cap SMD	Capacitor	C3, C4, C5, C9, C10, C11, C14, C23, C24, C25, C26, C27, C28	CAPC1608N	13	100 nF
Cap SMD	Capacitor	C6, C31, C32, C34	CAPC1608N	4	1 uF
Cap SMD	Capacitor	C7, C8, C16	CAPC1608N	3	3.3 nF
Cap SMD	Capacitor	C12	CAPC1608N	1	68 nF
Cap SMD	Capacitor	C13	CAPC1608N	1	82 nF
Cap SMD	Capacitor	C17, C18, C29, C30	CAPC3216N	4	10 uF
Cap SMD	Capacitor	C21	CAPC1608N	1	DNP
JMK212BBJ226MGHT	Capacitor	C19, C20, C22	CAPC2012N	3	22 uF
BUK9M53-60EX	MOSFET N-CH 60V 17A LFPK	Q1, Q2	BUK9M53-60E	2	
ATmega164A-AU	8-bit AVR Microcontroller, 16KB Flash, 512 Bytes EEPROM, 1KB SRAM, 44-pin TQFP, Industrial Grade (-40°C to 85°C)	U1	44A_N	1	
AP3513EMPTR-G1	IC REG BUCK ADJ 3A SYNC 8SOIC	U3	AP3513E	1	
860080374009	CAP ALUM 220UF 20% 16V THRU HOLE	C33	860080374009	1	
20021121-00006C4LF	CONN HEADER 6POS DL UNSHRD SMD	J1, J2	20021121-00006	2	
1984633	CONN TERM BLOCK T/H 4POS 3.5MM	J4	1984633	1	
150120RS75000	LED RED CLEAR 1206 SMD	D1, D2	150120RS75000	2	
OZCG0260BF2B	PTC RESET FUSE 16V 2.6A 1812	F2	OZCG0_BEL_FUSE	1	
OZCG0050AF2C	PTC RESET FUSE 30V 500MA 1812	F1	OZCG0_BEL_FUSE	1	