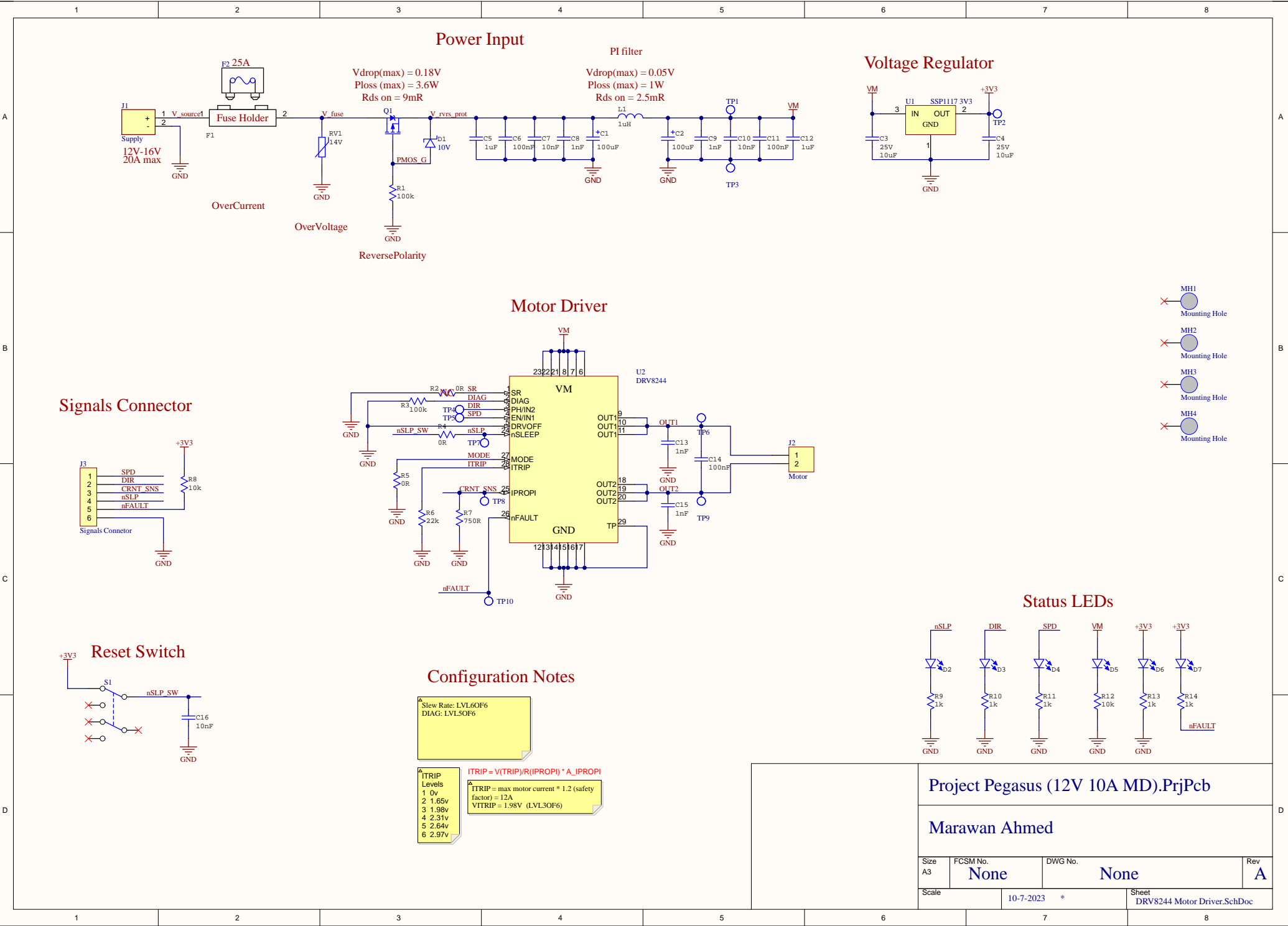
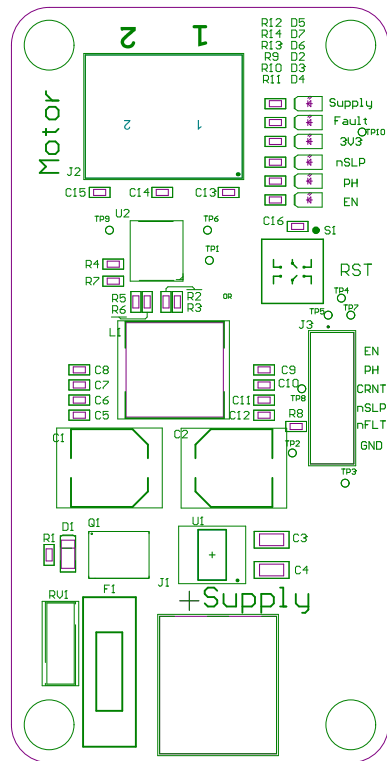
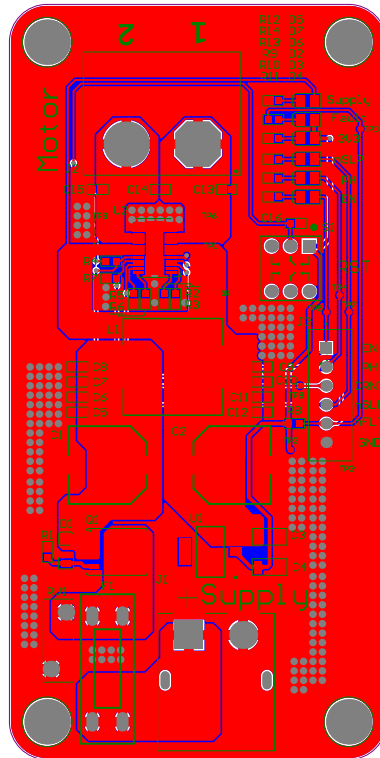


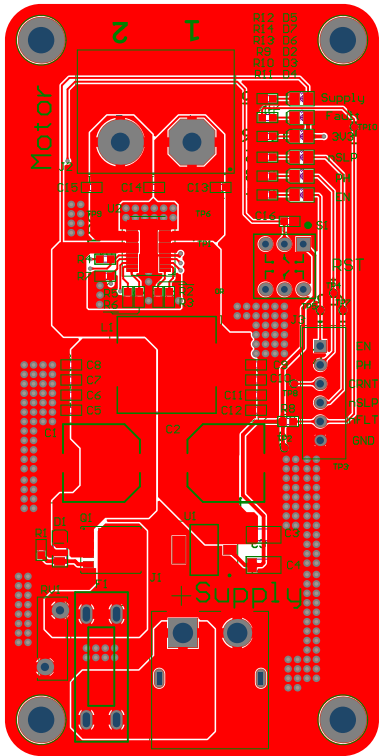
Schematic

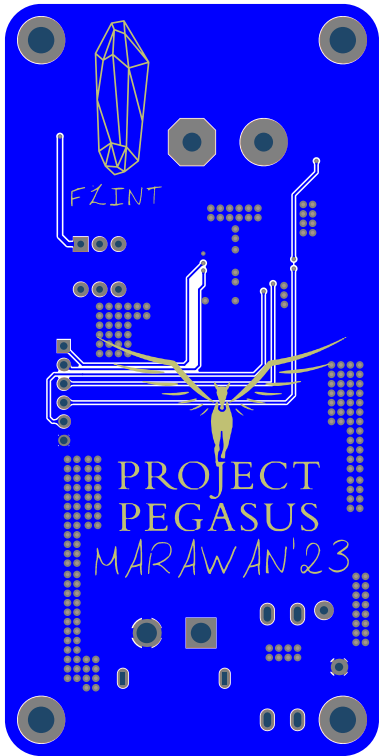


Component Layout

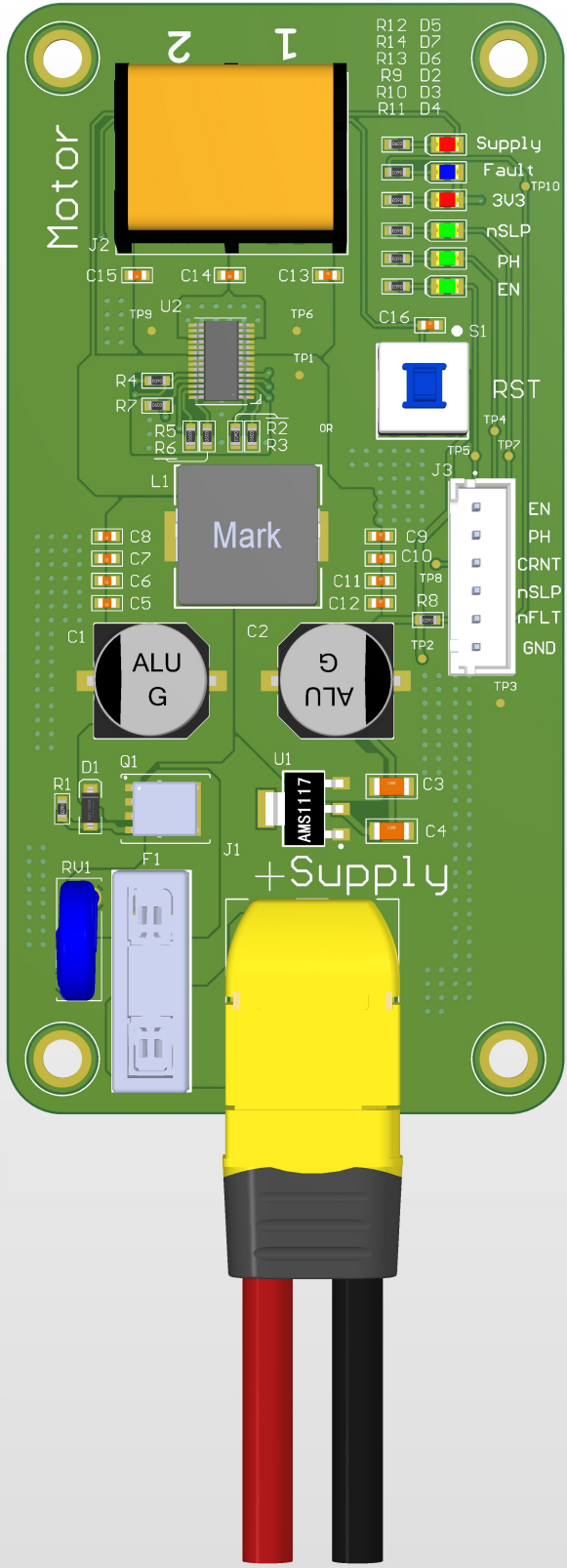




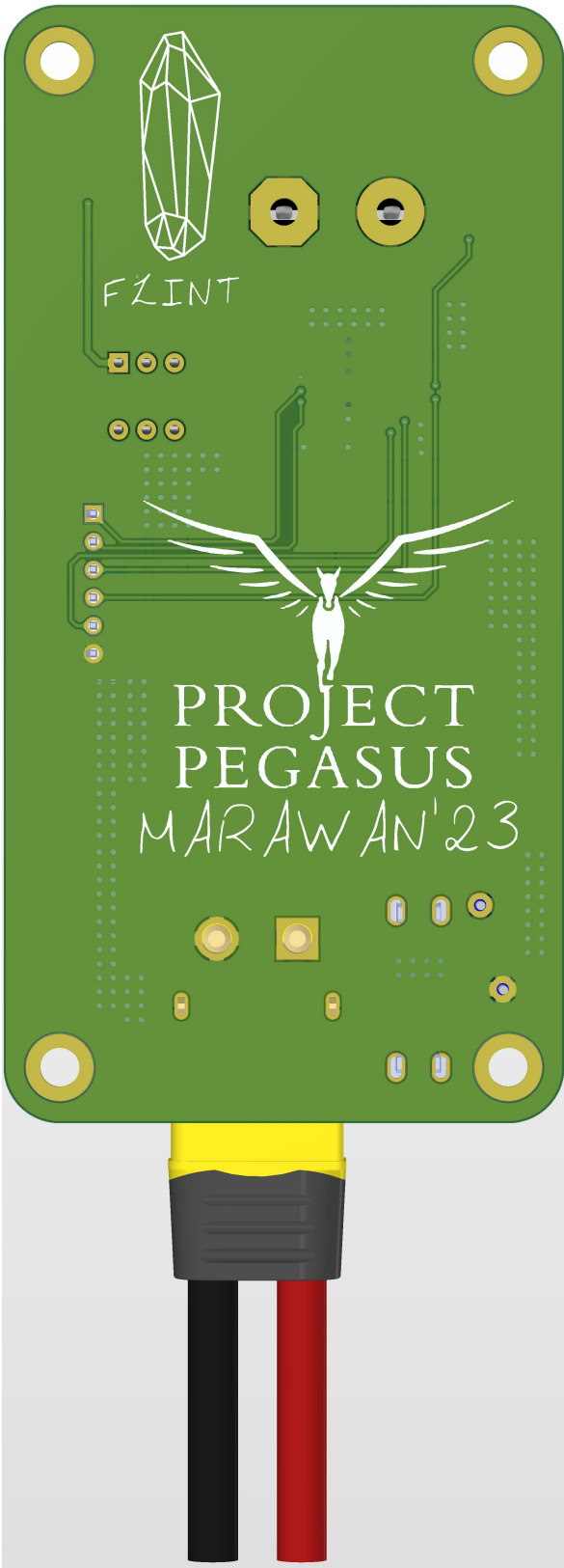




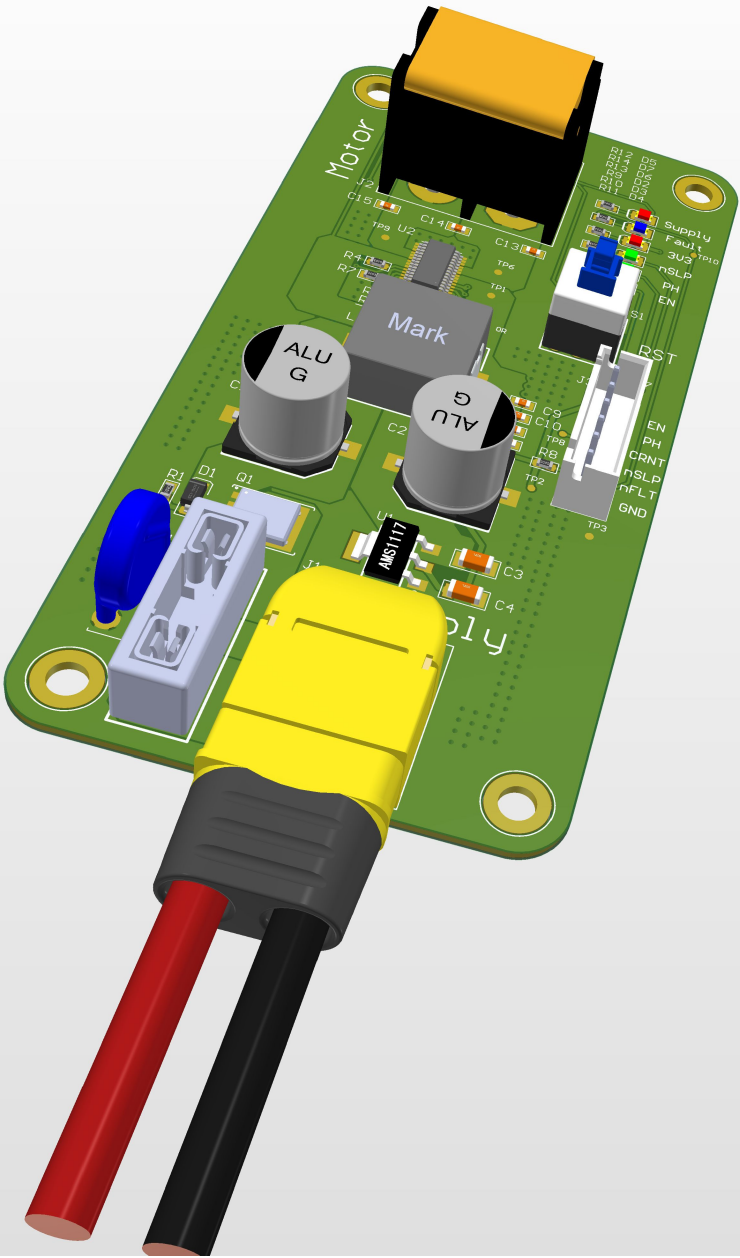
3D Top View



3D Bottom View



3D Isometric View



BOM

Line #	Manufacturer Part Number	Description	Designator	Quantity	Supplier Part Number	Supplier	Manufacturer
	RT1J101M1010	-40°C~+105°C 2000hrs@105°C 100uF 10.2mm 63V 10mm ±20% SMD,D10xL10.2mm Aluminum Electrolytic Capacitors - SMD ROHS	C1, C2	2	C280414	LCSC	ROQANG
	CL31B106KAHNNNE	Ceramic capacitor SMD-1206 10000nF (10uF) /25V X7R# K 10%, Samsung, RoHS/4k/	C3, C4	2	C14860	LCSC	Samsung
	GRM188R61H105KAALD	0603 1 uF 50 V ±10% Tolerance X5R SMT Multilayer Ceramic Capacitor	C5, C12	2	C77386	LCSC	Murata
	CC0603KRX7R0BB104	0603 0.1 uF 100 V ±10% Tolerance X7R Multilayer Ceramic Capacitor	C6, C11, C14	3	C113803	LCSC	Yageo
	06035C103K4T2A	0603 10nF 50V ±10% Tolerance X7R Surface Mount Multilayer Ceramic Capacitor	C7, C10, C16	3	C513325	LCSC	Kyocera AVX
	CC0603KRX7R9BB102	CAP CER 1100PF 50V COG/NP0 0603	C8, C9, C13, C15	4	C100040	LCSC	YAGEO
	DDZ10C-7	±2.5% Single 470mW 10V SOD-123 Zener Diodes ROHS	D1	1	C3025207	LCSC	Diodes Incorporated
	NCD0805G1	emerald 0805 Light Emitting Diodes (LED) ROHS	D2, D3, D4	3	C84260	LCSC	FOSHAN Nationstar Optoelectronics
	NCD0805R1	red 0805 Light Emitting Diodes (LED) ROHS	D5, D6	2	C84256	LCSC	FOSHAN Nationstar Optoelectronics
	NCD0805B2	blue 0805 Light Emitting Diodes (LED) ROHS	D7	1	C84259	LCSC	FOSHAN Nationstar Optoelectronics
	XF-508P-A	Plugin Fuse Holders ROHS	F1	1	C2935469	LCSC	XFCN

Line #	Manufacturer Part Number	Description	Designator	Quantity	Supplier Part Number	Supplier	Manufacturer
	0287025.PXCN	32V Fuse Automotive Holder Blade 25A - Automotive Fuses ROHS	F2	1	C116701	LCSC	Littelfuse
	XT60PW-M	Power Connectors ROHS	J1	1	C98732	LCSC	Changzhou Amass Elec
	DBT50G-9.5-2P	-40°C~+105°C 32A 750V Black 1x2P Corner pin Barrier Block 12-22 Straight pin 2 1 9.5mm 4 Straight,P=9.5 mm Barrier Terminal Blocks ROHS	J2	1	C395958	LCSC	DIBO
	B6B-XH-A(LF)(SN)	1x6P XH 1 2.5mm 6 Brass Plugin,P=2.5m m Wire To Board / Wire To Wire Connector ROHS	J3	1	C144397	LCSC	JST Sales America
	MHCC12050-1R0M-R7	29A 1uH ±20% 37A SMD Power Inductors ROHS	L1	1	C329553	LCSC	Chilisin Elec
	HYG110P04LQ2C2	40V 55A 62.5W 9mΩ@10V,20 A P Channel PDFN- 8(5.9x5.2) MOSFETs ROHS	Q1	1	C2891580	LCSC	HUAYI
	ERJ3EKF1003V	RES SMD 100K OHM 1% 1/10W 0603	R1, R3	2	C189597	LCSC	Panasonic
	ERJ-3GEY0R00V	ERJ Series 0603 0 Ohm 0.05 W Jumper Surface Mount Thick Film Chip Resistor	R2, R4, R5	3	C716999	LCSC	Panasonic
	ERJ3GEYJ223V	100mW Thick Film Resistors ±5% ±200ppm/°C 22kΩ 0603 Chip Resistor - Surface Mount ROHS	R6	1	C403455	LCSC	PANASONIC

Line #	Manufacturer Part Number	Description	Designator	Quantity	Supplier Part Number	Supplier	Manufacturer
	ERJ-3EKF7500V	Res Thick Film 0603 750 Ohm 1% 1/10W ±100ppm/°C Molded SMD Punched Carrier T/R	R7	1	C403346	LCSC	Panasonic
	ERJ-3EKF1002V	Res Thick Film 0603 10K Ohm 1% 1/10W ±100ppm/°C Molded SMD Punched Carrier T/R	R8, R12	2	C191124	LCSC	Panasonic
	ERJ3EKF1001V	Res Thick Film 0603 1K Ohm 1% 1/10W ±100ppm/°C Molded SMD Punched Carrier T/R	R9, R10, R11, R13, R14	5	C118155	LCSC	Panasonic
	VDR-10D180L	Allowable voltage is 14VDC 11VAC Varistor Voltage 18V (15V~21.6V) Plugin Varistors ROHS	RV1	1	C283931	LCSC	VDR Varistor
	G-Switch	No lock Straight DPDT 30V 100000 Times 500mA Plugin Push Switches ROHS	S1	1	C2848957	LCSC	PB-22E86C
	SSP1117-3.3V	Fixed Positive LDO Regulator, 3.3V, 1.3V Dropout, Load current 1A, Vin max = 20V	U1	1	C277892	LCSC	Shanghai Siproin Microelectronics
	DRV8244SQDGQRQ1	Automotive 40V, 21-A H-Bridge driver with integrated current sensing and feedback 28-HVSSOP -40 to 125	U2	1	296- DRV8244SQDGQRQ1CT-ND	Digi-Key	Texas Instruments