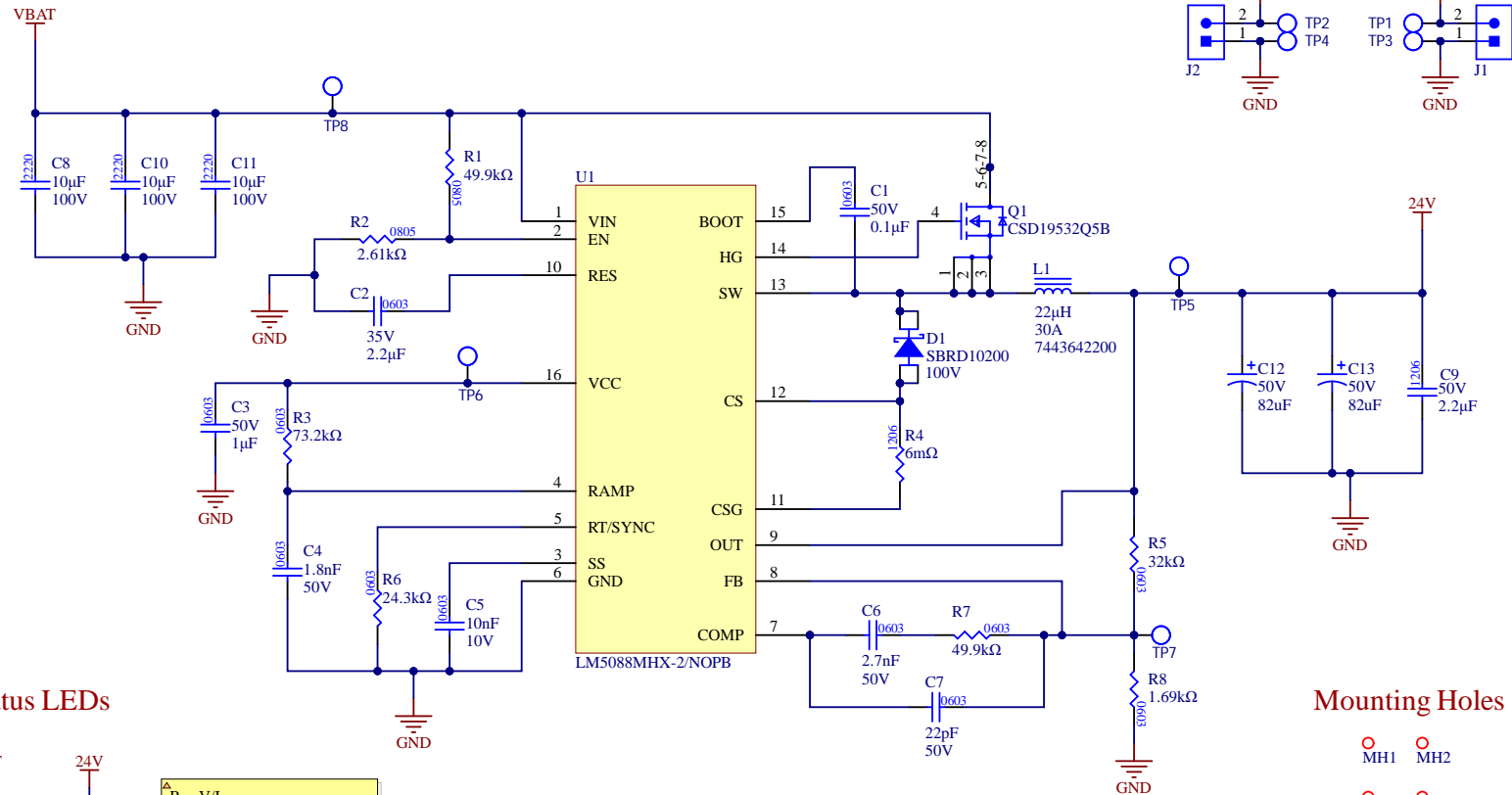
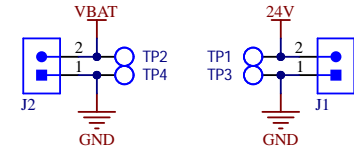


50V-24V Buck Converter @ 10A

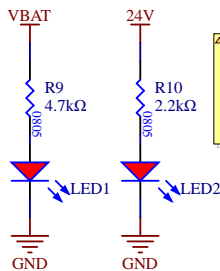


Connectors



Status LEDs

$R = V/I$
 $R = (50V)/(10mA)$
 $R = 5k\Omega$
 Closest standard value: 4.7kΩ



$R = V/I$
 $R = (24V)/(10mA)$
 $R = 2.4k\Omega$
 Closest standard value: 2.2kΩ

Mounting Holes



UW ROBOTICS TEAM University of Waterloo Robotics Team 200 University Ave W Waterloo, Ontario, Canada N2L 3G1		REV 1
PROJECT 30to50V-24V PDB.PrjPcb, [No Variations]		
DOCUMENT 30to50V-24V_10A.SchDoc		MODIFIED 2023-07-17
ENGINEER Muhammad T, Shab G	REVIEWER *	SHEET 1 OF 1

Comment	Description	Designator	Footprint	LibRef	Quantity
CAP_0.1uF_50V_0603	CAP CER 0.1UF 50V X7R 0603	C1	CAP0603	CAP_0.1uF_50V_0603	1
CAP_2.2uF_35V_0603	CAP CER 2.2UF 35V X5R 0603	C2	CAP0603	CAP_2.2uF_35V_0603	1
CAP_1uF_50V_0603	CAP CER 1UF 50V X6S 0603	C3	CAP0603	CAP_1uF_50V_0603	1
CAP_1.8nF_50V_0603	CAP CER 1800PF 50V COG/NPO 0603	C4	CAP0603	CAP_1.8nF_50V_0603	1
CAP_10nF_25V_0603	CAP CER 10000PF 25V COG 0603	C5	CAP0603	CAP_10nF_25V_0603	1
CAP_2.7nF_50V_0603	CAP CER 2700PF 50V X7R 0603	C6	CAP0603	CAP_2.7nF_50V_0603	1
CAP_22pF_50V_0603	CAP CER 22PF 50V COG/NPO 0603	C7	CAP0603	CAP_22pF_50V_0603	1
CAP_10uF_50V_2220	CAP CER 10UF 100V X7S 2220	C8, C10, C11	C5750X7S2A106M230 KB	CAP_10uF_50V_2220	3
CAP_2.2uF_50V_1206	CAP CER 2.2UF 50V X7R 1206	C9	CAP1206	CAP_2.2uF_50V_1206	1
CAP_47uF_100V_ALUM	Aluminum Electrolytic Capacitor, Polarized, Aluminum (wet), 100V, 20% +Tol, 20% - Tol, 47uF, Surface Mount, 5454	C12, C13	RADIAL_CORNELL_D	CAP_47uF_100V_ALUM	2
DIO_SCHOTTKY_100V_5.5A	DIODE SCHOTTKY 200V 10A DPAK	D1	D-PAK	DIO_SCHOTTKY_200V_10A	1
CON_2POS_SCREW_TERM	TERM BLK 2POS SIDE ENTRY 5MM	J1, J2	1935161	CON_2POS_SCREW_TERM	2
IND_22uH_30A	FIXED IND 22UH 30A 2.4 MOHM SMD	L1	IND_VISHAY_IHLP6767GZ51	IND_22uH_30A	1
LED_RED	LED RED DIFFUSED 0805 SMD	LED1, LED2	LED_0805_RED	LED_RED	2
CSD19532Q5B	MOSFET N-CH 100V 100A 8SON	Q1	FP-DNK0008A-MFG	CMP-04962-000007-1	1
RES_49.9kΩ_0805_1%	RES 49.9K OHM 1% 1/8W 0805	R1	RES0805	RES_49.9kΩ_0805_1%	1
RES_2.61kΩ_0805_1%	RES 2.61K OHM 1% 1/8W 0805	R2	RES0805	RES_2.61kΩ_0805_1%	1
RES_73.2kΩ_0603_1%	RES 73.2K OHM 1% 1/10W 0603	R3	RES0603	RES_73.2kΩ_0603_1%	1
RES_0.006Ω_1206_1%	RES 0.006 OHM 1% 1W 1206	R4	RES1206	RES_0.006Ω_1206_1%	1
RES_32KΩ_0603_0.1%	RES SMD 32K OHM 0.1% 1/10W 0603	R5	RES0603	RES_32KΩ_0603_0.1%	1
RES_24.3kΩ_0603_1%	RES 24.3K OHM 1% 1/10W 0603	R6	RES0603	RES_24.3kΩ_0603_1%	1
RES_49.9kΩ_0603_1%	RES 49.9K OHM 1% 1/10W 0603	R7	RES0603	RES_49.9kΩ_0603_1%	1
RES_1.69kΩ_0603_1%	RES 1.69K OHM 1% 1/10W 0603	R8	RES0603	RES_1.69kΩ_0603_1%	1
RES_4.7kΩ_0805_5%	RES 4.7K OHM 5% 1/8W 0805	R9	RES0805	RES_4.7kΩ_0805_5%	1
RES_2.2kΩ_0805_5%	RES 2.2K OHM 5% 1/8W 0805	R10	RES0805	RES_2.2kΩ_0805_5%	1
TESTPOINT_LOOP	TESTPOINT THRUHOLE	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8	TESTPOINT_LOOP	TESTPOINT_LOOP	8
LM5088	IC REG CTRLR BUCK 16HTSSOP	U1		LM5088MHX-2/NOPB	1