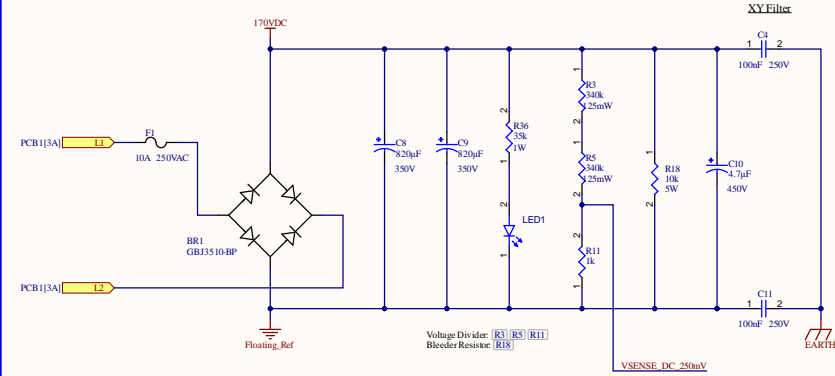
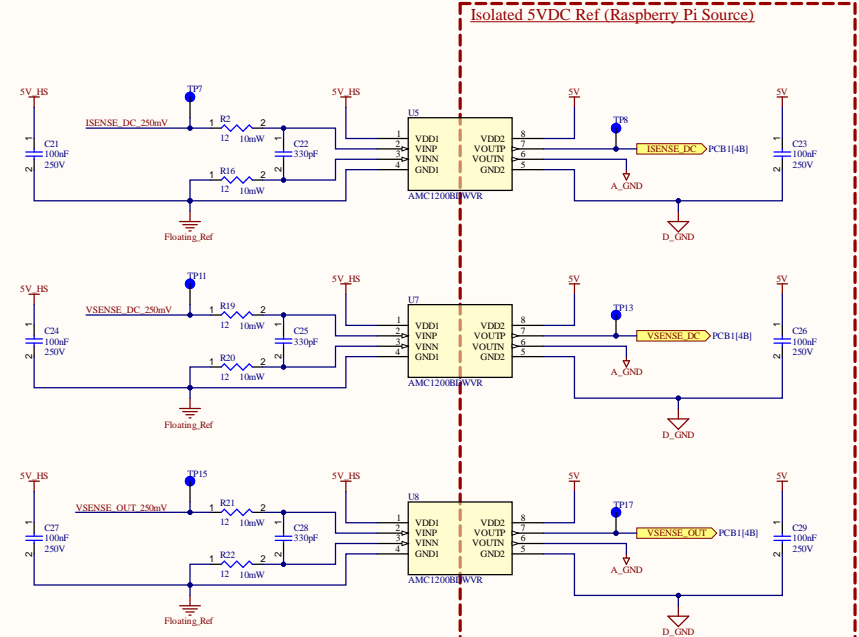
		Title Rectifier & Inverter - Top Sheet	
		Size B	Date 11/15/2025
Drawn By Leon Engle		Revision 1.2	

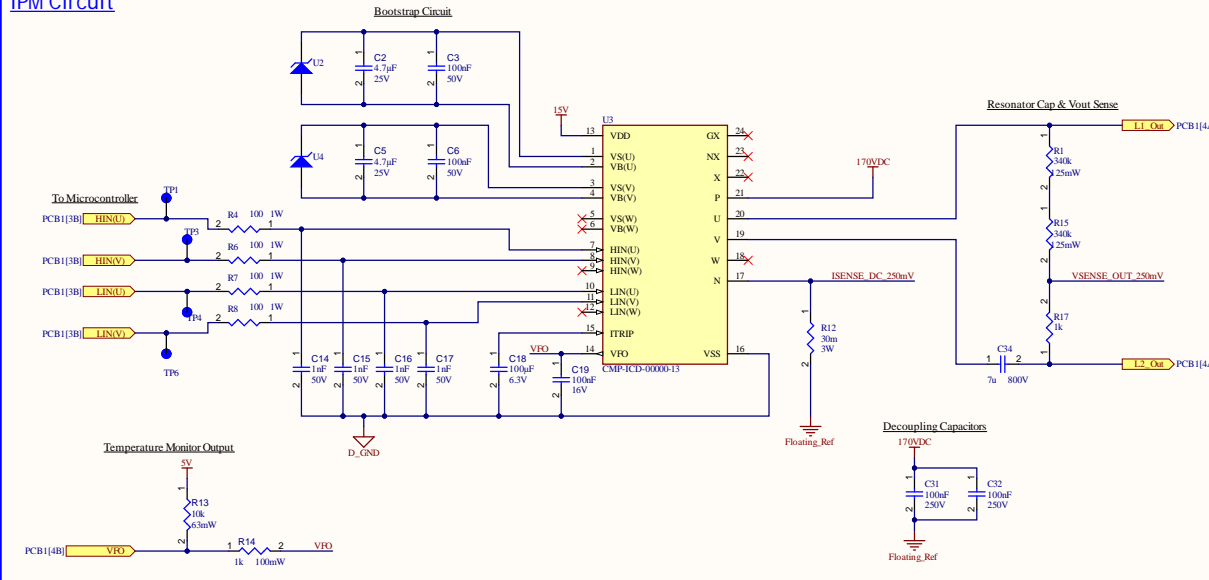
## Rectifier & XY Filter

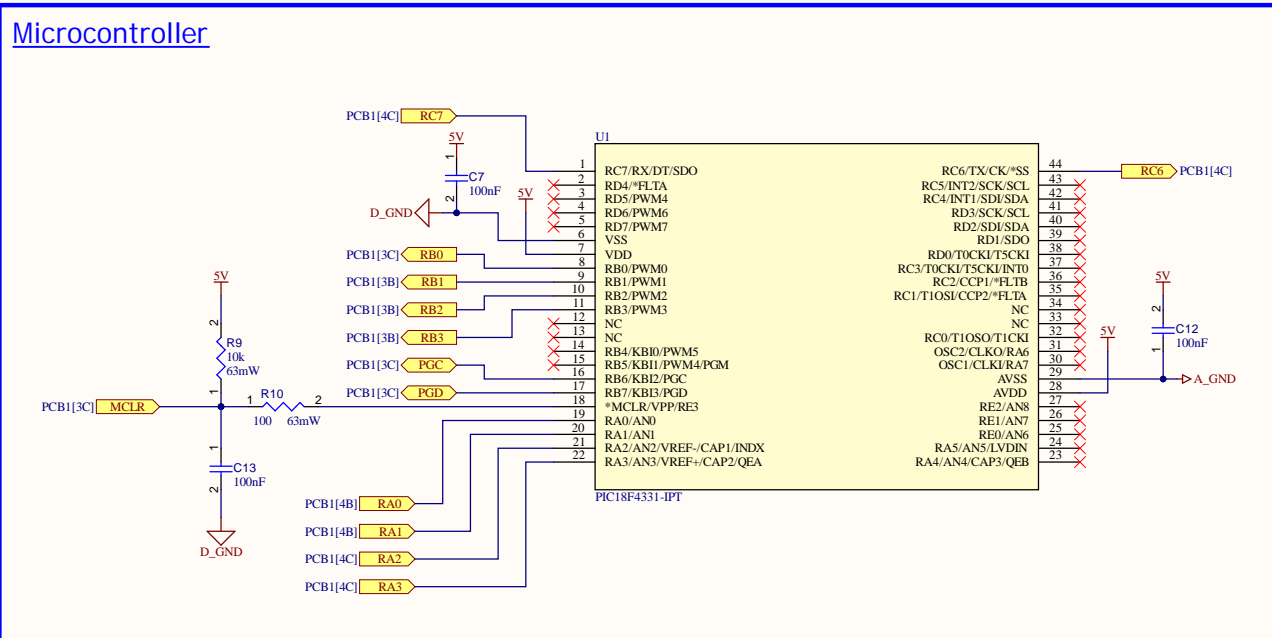



## V & I Sense Linear Isolators



## IPM Circuit







Title

PCB1 - Microcontroller

Size

A

Date

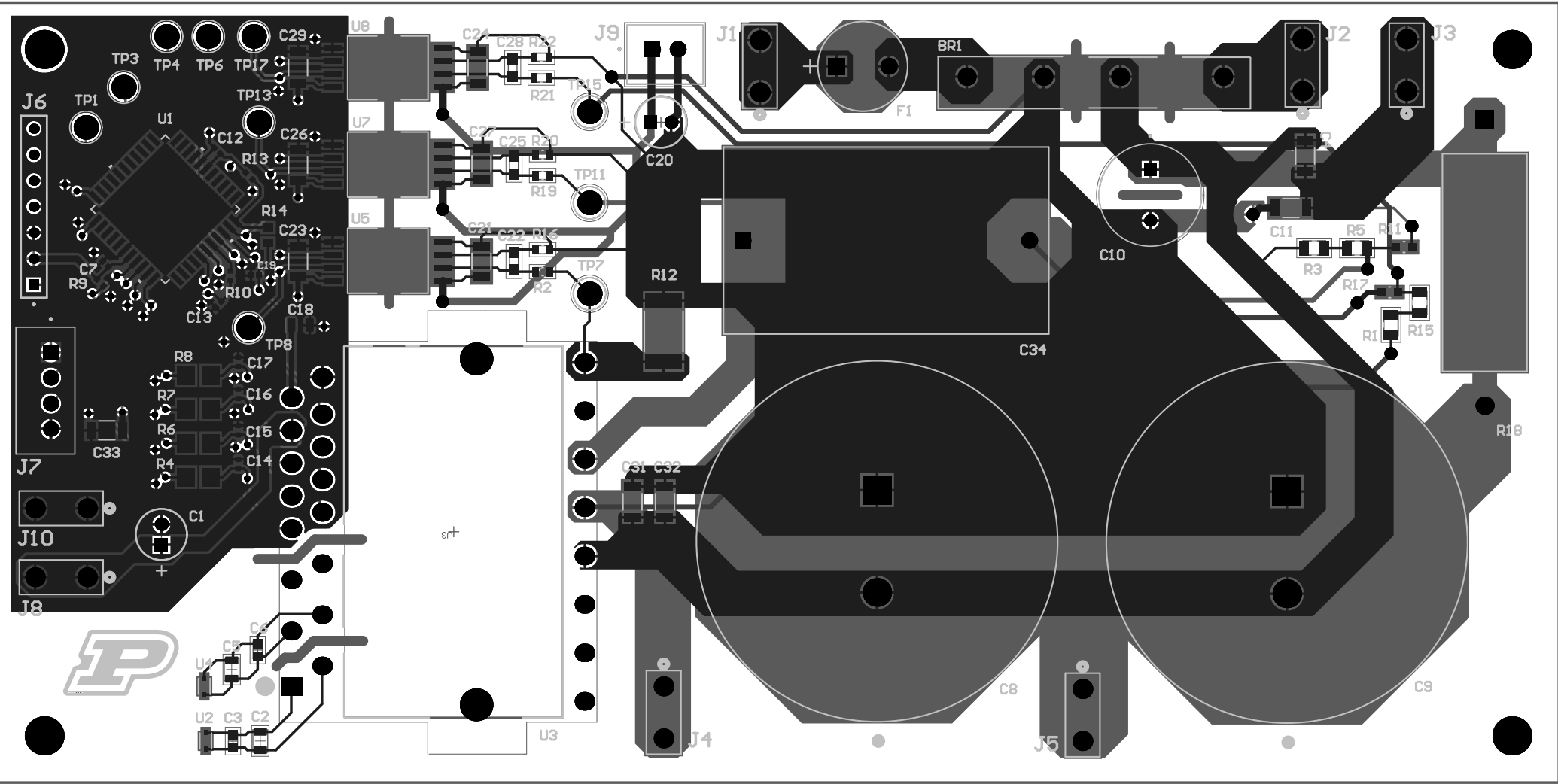
11/21/2025

Revision

1.2

Drawn By

Leon Engle



Comment	Description	Designator	Footprint	UsRef	Quantity
GBL610-BP	Description	BR1	GBL_MOC	OMP-072-00000-2	1
EOA1H-M100	Aluminum Electrolytic Capacitor, 10 uF, +/-20%, 50V, -40 to 85 degC, 2-Pin THD, RoHS, Bulk	C1, C20	CAPR65-200-1100S00X1200	OMP-001-00025-7	2
Capacitor 4.7uF +/-40% 25V 0805	Chip Capacitor, 4.7uF +/-40%, 25V, 0805, Thickness 1.45mm	C2, C5	CAPC0805(2012)145,L	OMP-001-00080-5	2
Capacitor 100 nF +/-10% 50V 0603	Chip Capacitor, 100 nF, +/-10%, 50V, 0603 (1608 Metric)	C3, C6	CPFC1608X50V00NLT020	OMP-001-00017-6	2
CAPCER0.1uF 250V X7R 1206	0.1 uF +/-10% 250V Ceramic Capacitor X7R 1206 (3216 Metric), C31B104KB-6SNE	Q4, C11, C21, C23, C24, C26, C27, C29, C31, C32	CAP_C31_5MM	OMP-001-00087-4	10
Capacitor 0.1 uF +/-5% 16V 0402	Chip Capacitor, 0.1 uF, +/-5%, 16V, 0402 (1005 Metric)	C7, C12, C13, C19	CAPC1005X56V025LL10T15	OMP-001-00001-6	4
CPALUM 620uF 20% 350V SNAP TH	ESM6251VSNR21M46S	C8, C9	CHBM-VSN_A45	OMP-001-00089-3	2
CPALUM 4.7uF 20% 450V RADIAL	ECA-2WHG4R7	C10	CAPPR6500V60D1000H000	OMP-001-00088-2	1
Capacitor 1nF +/-20% 50V 0402	Chip Capacitor, 1nF +/-20%, 50V, 0402, Thickness 0.33mm	C14, C15, C16, C17	CAPC0402(1005)33,L	OMP-001-00086-4	4
Capacitor 100uF +/-20% 6.3V 0805	Chip Capacitor, 100uF +/-20%, 6.3V, 0805, Thickness 1.45mm	C18	CAPC0805(2012)145,L	OMP-001-00054-5	1
0603C331KAT2A	0603 330 pF 25 V A +/-10 % Tolerance X7R SMT Multilayer Ceramic Capacitor, KCM15AR71E31KT	C22, C25, C28	CAPC1608X90	OMP-001-00086-3	3
B32774X8709K000	7 uF Film Capacitor 800V Polypropylene (PP), Metallized Radial, B32774X8709K000	C34	CAP_B32774X_31p5X18X27p5-27p5_TDK	OMP-001-00090-2	1
3742100410	No Description Available	F1	FUS_LITTLEFUSE_374_LTF	OMP-005-00013-3	1
1217861-1	250 PASICN PCB 145 TCR	J1, J2, J3, J4, J5, J6, J10	CONN_1217861-1_TEC	OMP-027-00000-5	7
TS-107-G-AA	Conn Unshrouded Header HDR7 POS 2.54mm Solder ST Top Entry Thru-Hole Tube	J8	SWITEC_TS-107-G-AA	OMP-002-00074-2	1
B4B-X4-A	Connector Header Through Hole 4 position 0.098 (2.50mm)	J7	JST_B4B-X4-A	OMP-002-00073-2	1
B2B-X4-A		J9	JST_B2B-X4-A	OMP-119-00000-1	0
QBLP595-IG	Chip LED 0402, Green, 0.02 A, 3.1 to 3.7 V, -40 to 80 degC, 2-Pin SMD, RoHS, Tape and Reel	LED1	QTB-QBLP595_V	OMP-007-00041-3	1
CRCM0605340KFGA	RES SMD 340K CHM 1% 1/8W 0805	R1, R3, R5, R15	RESC2012X50N	OMP-009-00187-2	4
RES SMD 12 CHM 1% 1/10W 0603	Res Thick Film 0603 12 Ohm 1% 0.1W (1/10W) 100ppm CMolded SMD Automotive Punched T/R ERLBKF12R0V	R2, R16, R19, R20, R21, R22	RES_ERLBKF12R0V	OMP-009-00192-2	6
-HKG3216F-1000-B-T1	100 Ohms +/-1% 1W Chip Resistor 1206 (3216 Metric) Anti-Sulfur, Automotive AEC-Q200, Moisture Resistant Thin Film	R4, R6, R7, R8, R35	RESC3216X55N	OMP-009-00184-5	5
Resistor 10K +/-1% 0402 63 mW	Chip Resistor, 10 KOhms, +/-1%, 63 mW, -55 to 125 degC, 0402	R8, R13	RESC0402(1005)_L	OMP-009-00149-6	2
Resistor 100R +/-1% 0402 63 mW	Chip Resistor, 100 Ohms, +/-1%, 63 mW, -55 to 125 degC, 0402	R10	RESC0402(1005)_L	OMP-009-00167-4	1
Res 1k +/-0.1% 0.2W 0603	CPA-34EB102V	R11, R17	RC0603N_PAW	OMP-009-00188-4	2
CRA2512FZ-R033ELF	CRA2512FZ-R033ELF	R12	BO_CRA2512	OMP-009-00150-4	1
Resistor 1k +/-1% 0603 100 mW	Chip Resistor, 1 KOhm, +/-1%, 0.1 W, -55 to 155 degC, 0603 (1608 Metric)	R64	RESC1608X55V025ML10T15	OMP-009-00014-5	1
RES10KCHM 5% 5W AXIAL	55J10KE	R18	55J_CHM	OMP-129-00000-3	1
100R2F	100R0.063W 1% 0402 (1005 Metric) SMD	R37	RESC0402(1005)_L	OMP-009-00085-2	1
1.25in Ceramic Standoff		ST1, ST2, ST3, ST4	New footprint 1	OMP-00030-00004-3	4
5011	Test Point Multi-Purpose TH-M.H. 445 Nylon 46 Insulated Blk. PhosBronze/Silver	TP1, TP3, TP4, TP6, TP7, TP8, TP11, TP13, TP15, TP17	TP_5011	OMP-117-00000-1	10
PC18F431-IPT	No Description Available	U1	TQFF44_MC_MCH	OMP-112-00000-3	1
S2MM5218V7TG	DIODE ZENER 18V 500MW SOD623	U2, U4	SOD-623_0P9X1P3_QNS	OMP-075-00000-3	2
OMP-ICD-00000-13	Ipm Module, Igate/Mosfet, 600V, 20A, RoHS Compliant: Yes	U5	DIP_36x21D-24	OMP-024-00000-1	1
AMC1200EDWR	8uA max, 250 mV input, precision current sensing basic isolated amplifier 8-SOIC-40 to 105	U6, U7, U8	DWA8_TEX	OMP-014-00003-2	3