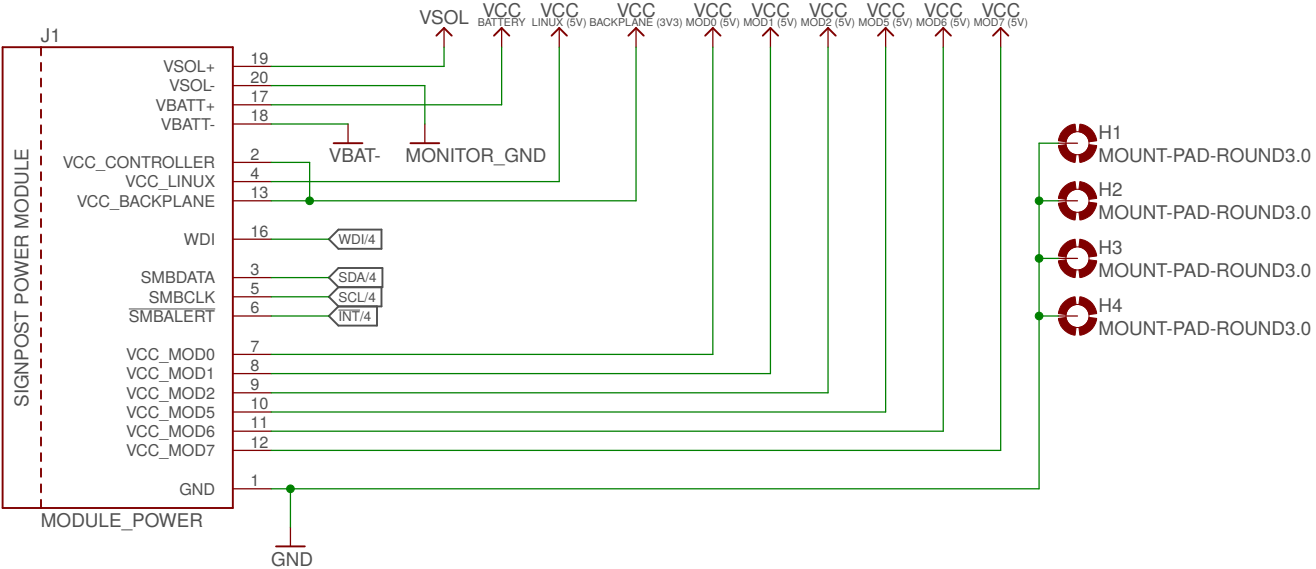


Power Module Header



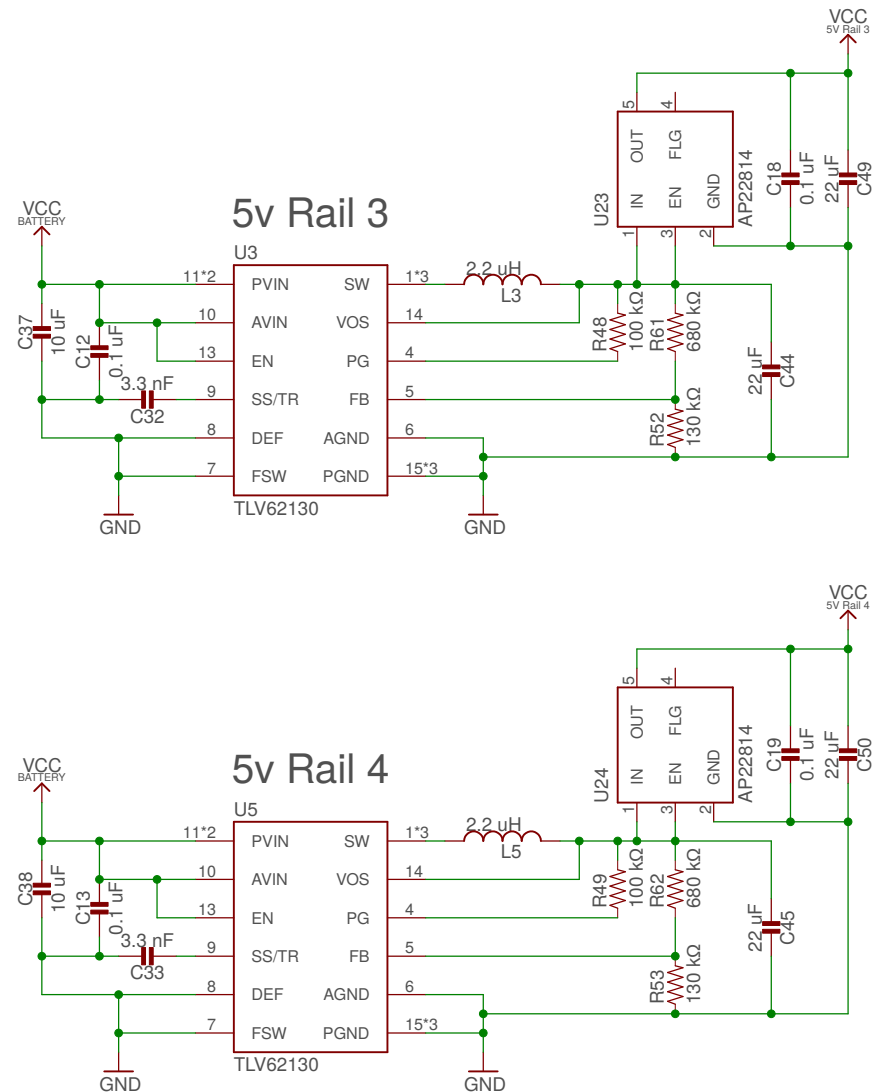
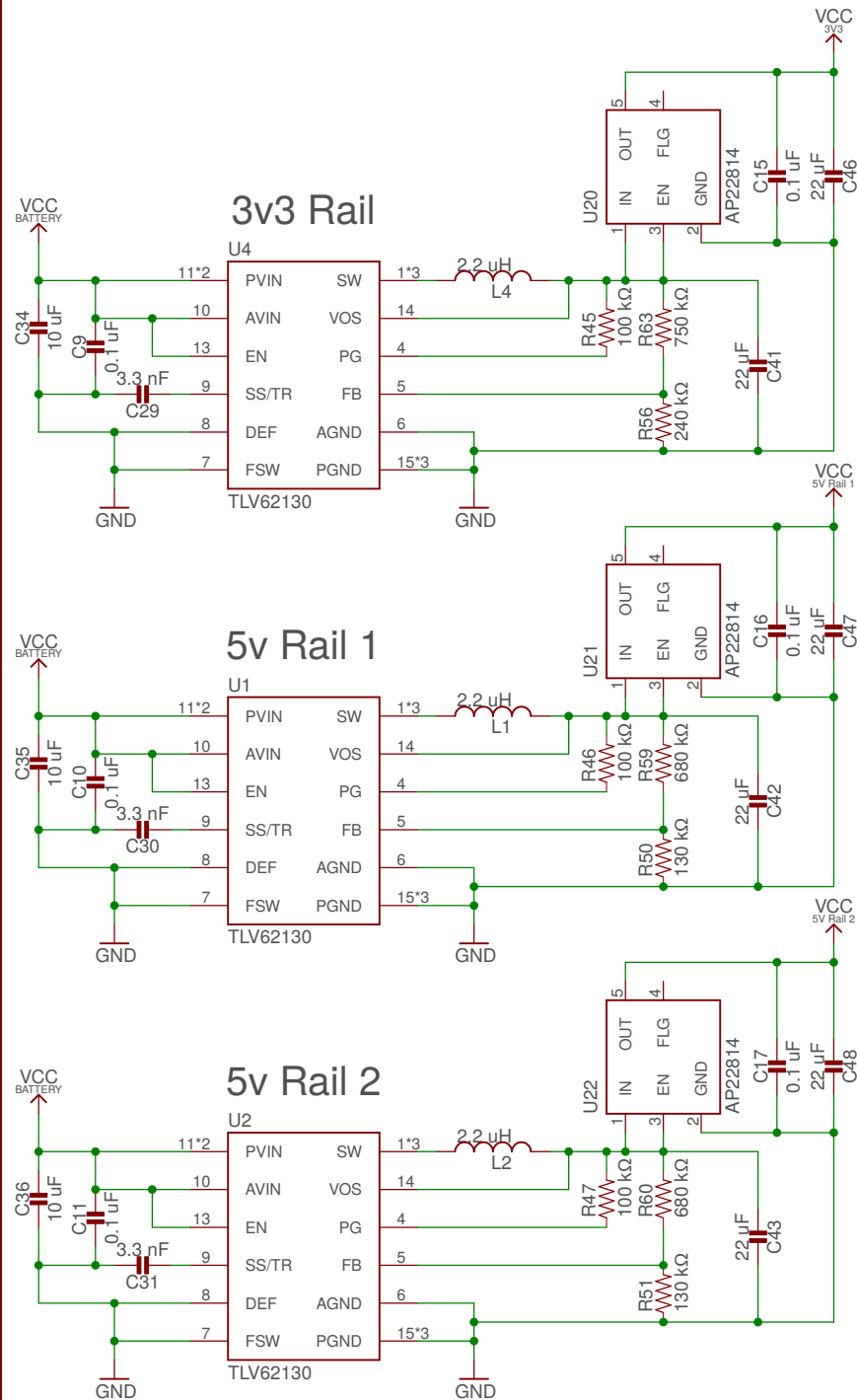
Power Supply Module

REV:
D

Author: Neal Jackson

Date: 5/17/17 9:57 PM

Sheet: 1/8



Power Supply Module

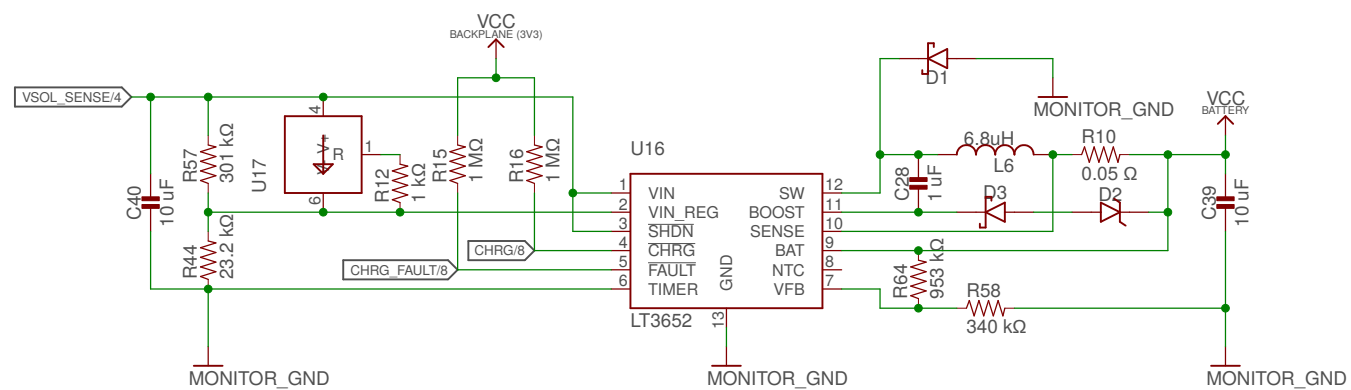
Author: Neal Jackson

Date: 5/17/17 9:57 PM

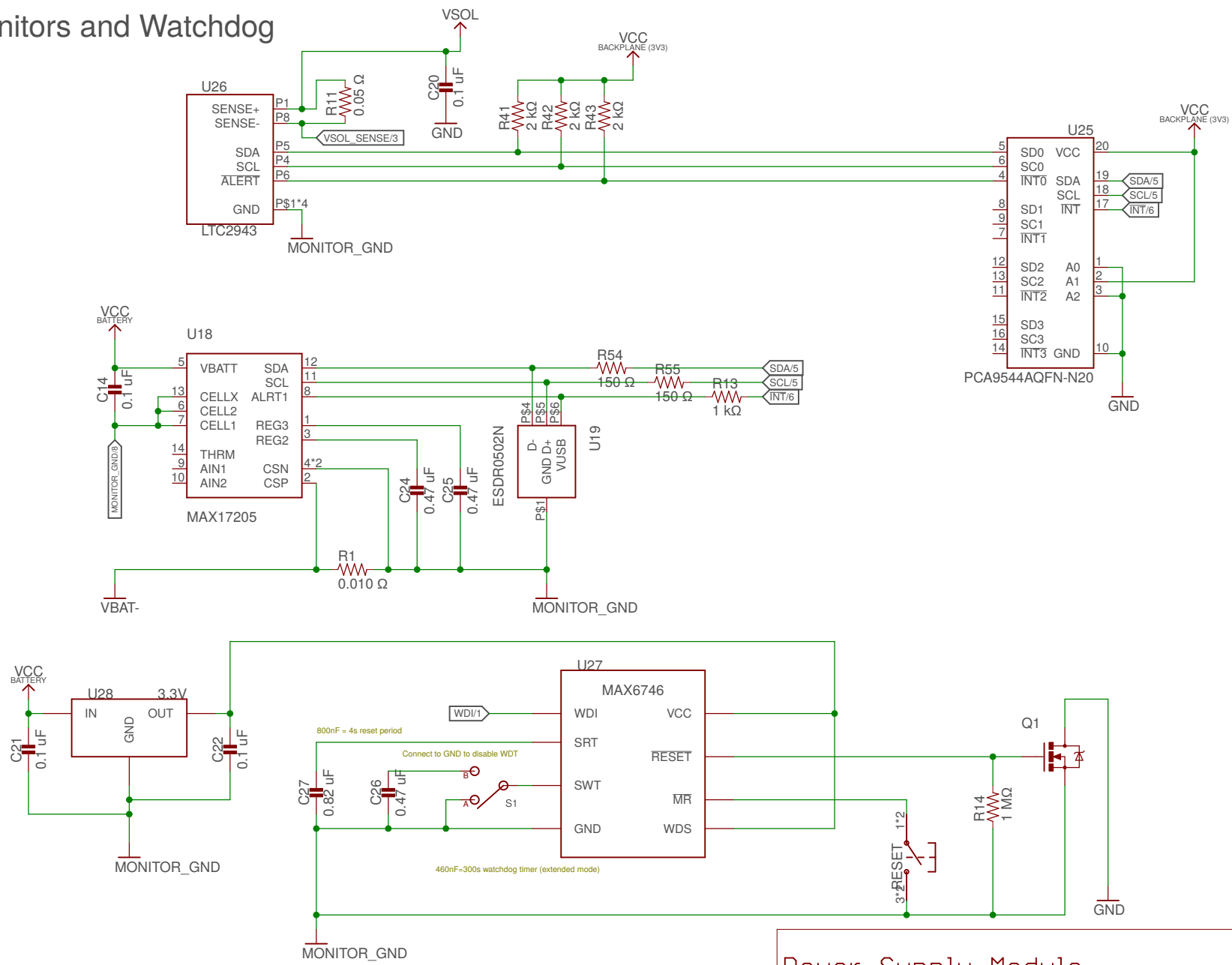
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Sheet: 2/8

Solar Charger



Monitors and Watchdog



Power Supply Module

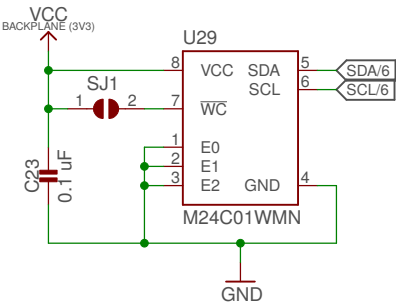
REV:
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Author: Neal Jackson

Date: 5/17/17 9:57 PM

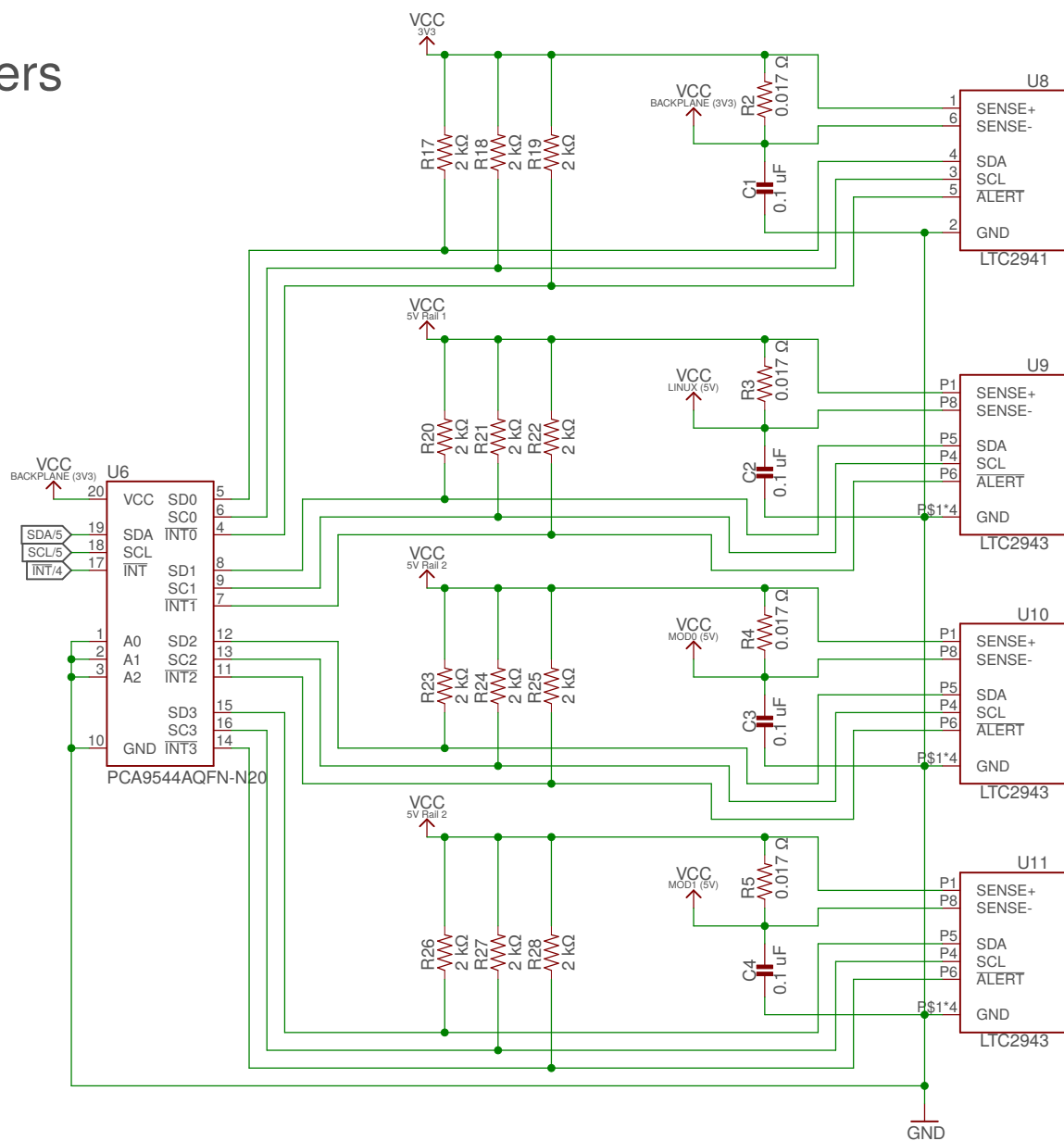
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EEPROM ID



Coulomb Counters

For MOD0-2,5



Power Supply Module

REV:
D

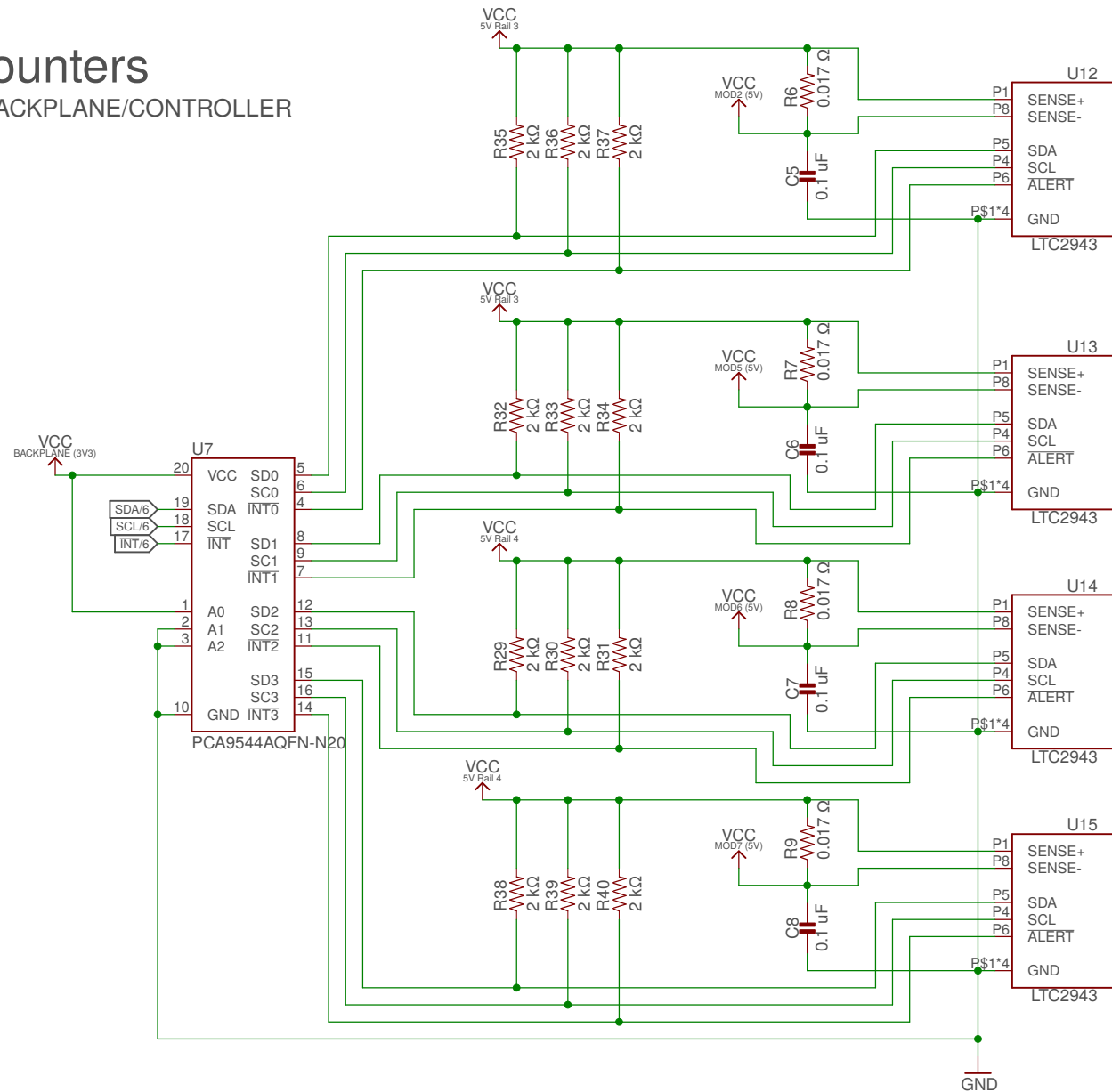
Author: Neal Jackson

Date: 5/17/17 9:57 PM

Sheet: 6/8

Coulomb Counters

For MOD6-7, LINUX, BACKPLANE/CONTROLLER



Power Supply Module

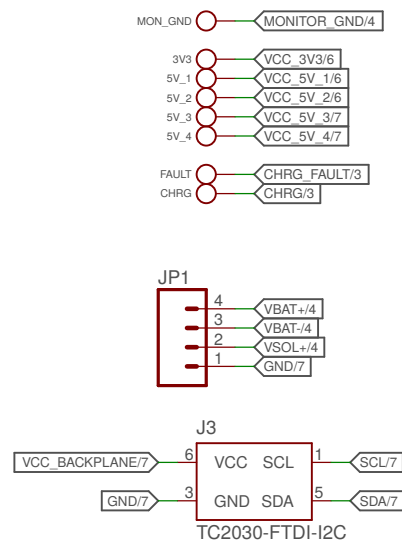
Author: Neal Jackson

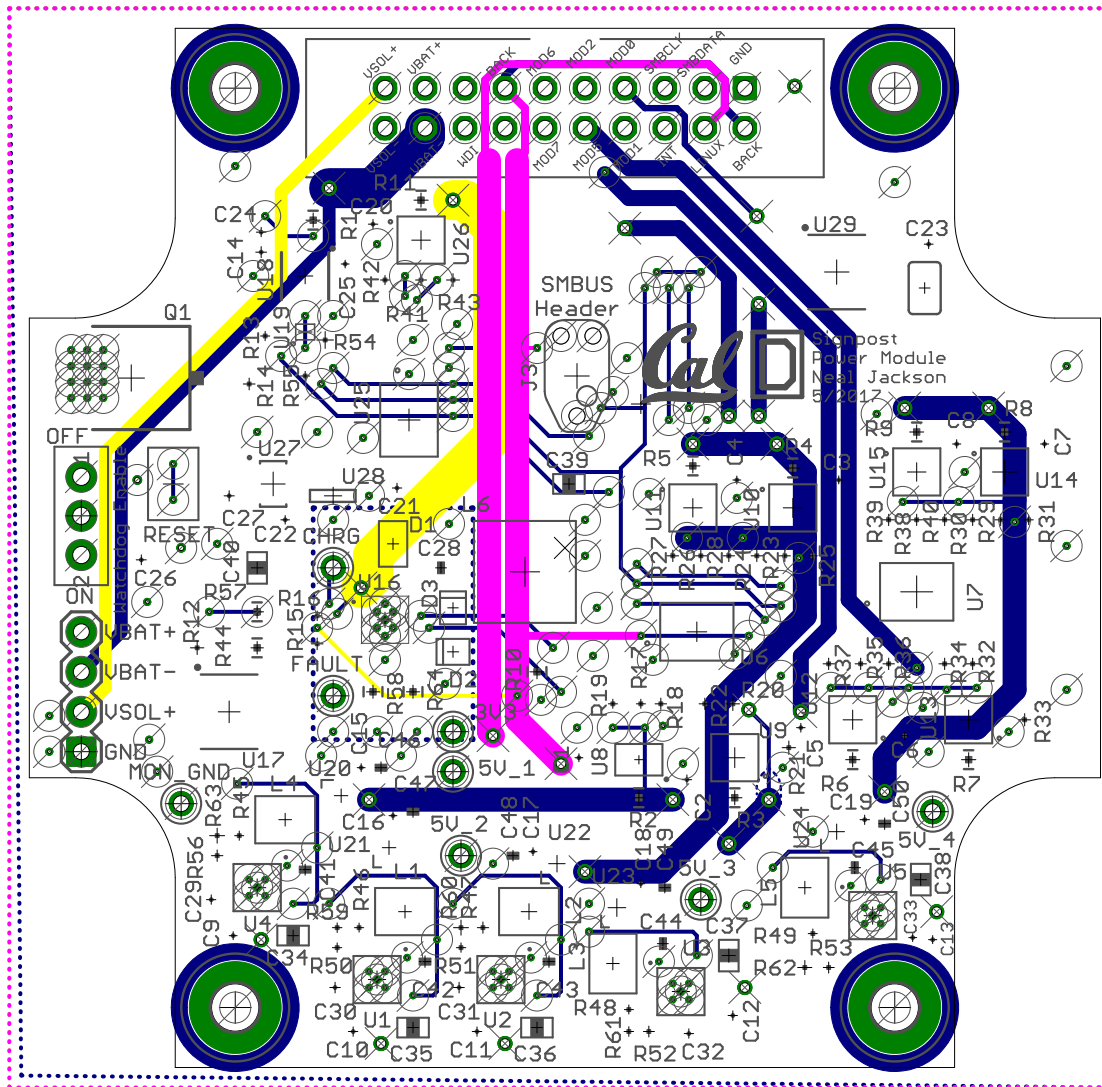
Date: 5/17/17 9:57 PM

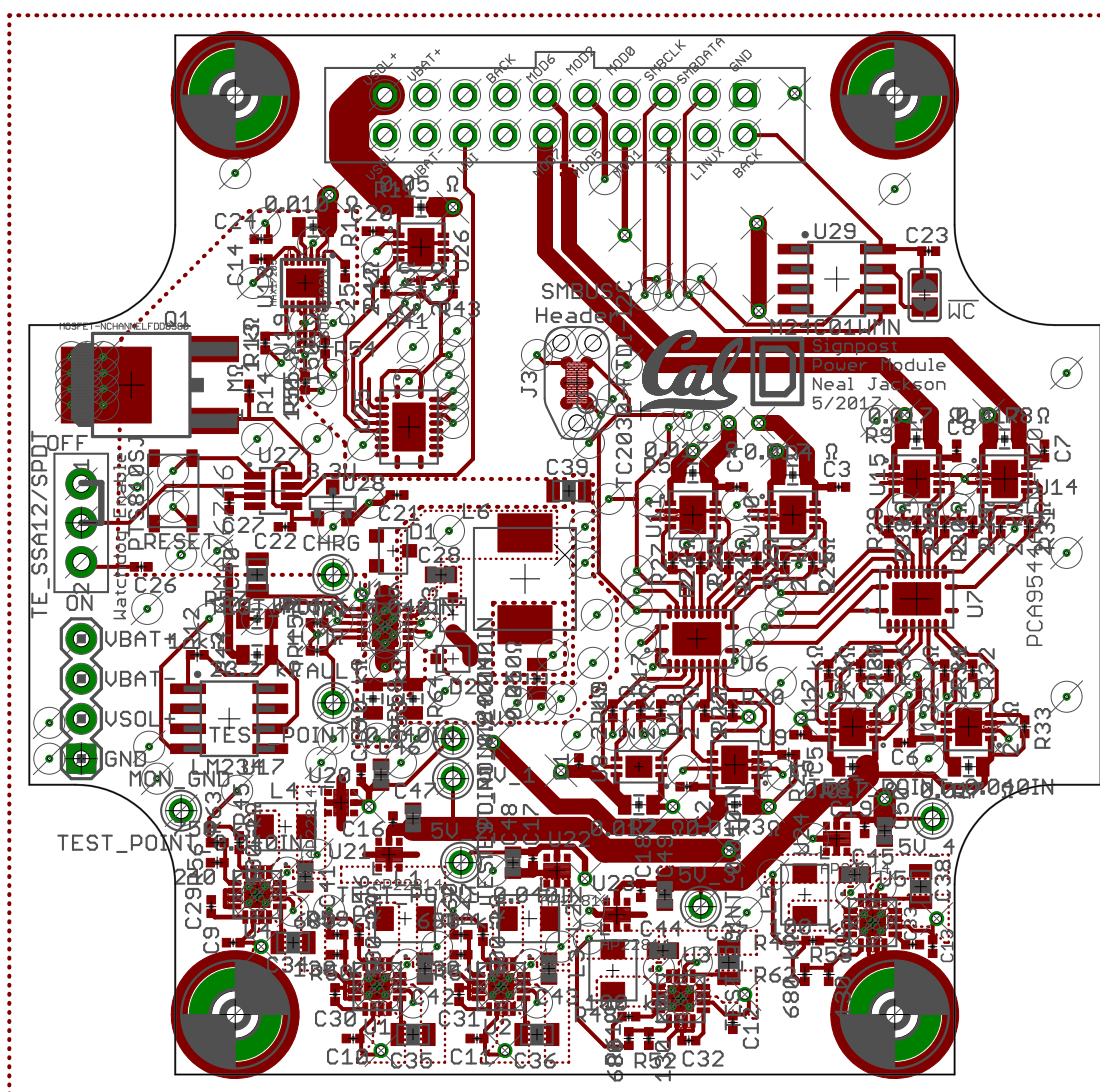
REV:
D

Sheet: 7/8

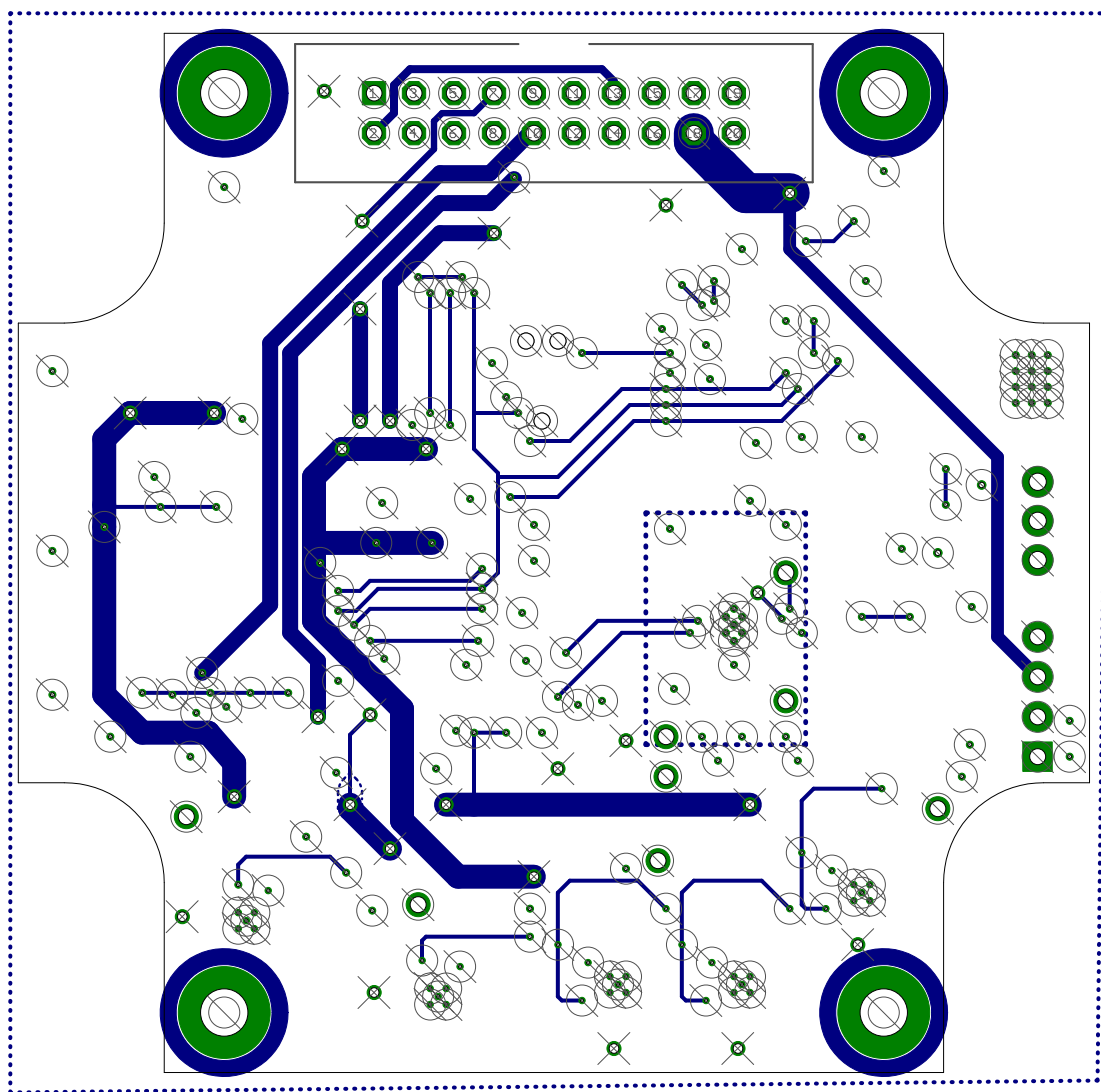
Debugging

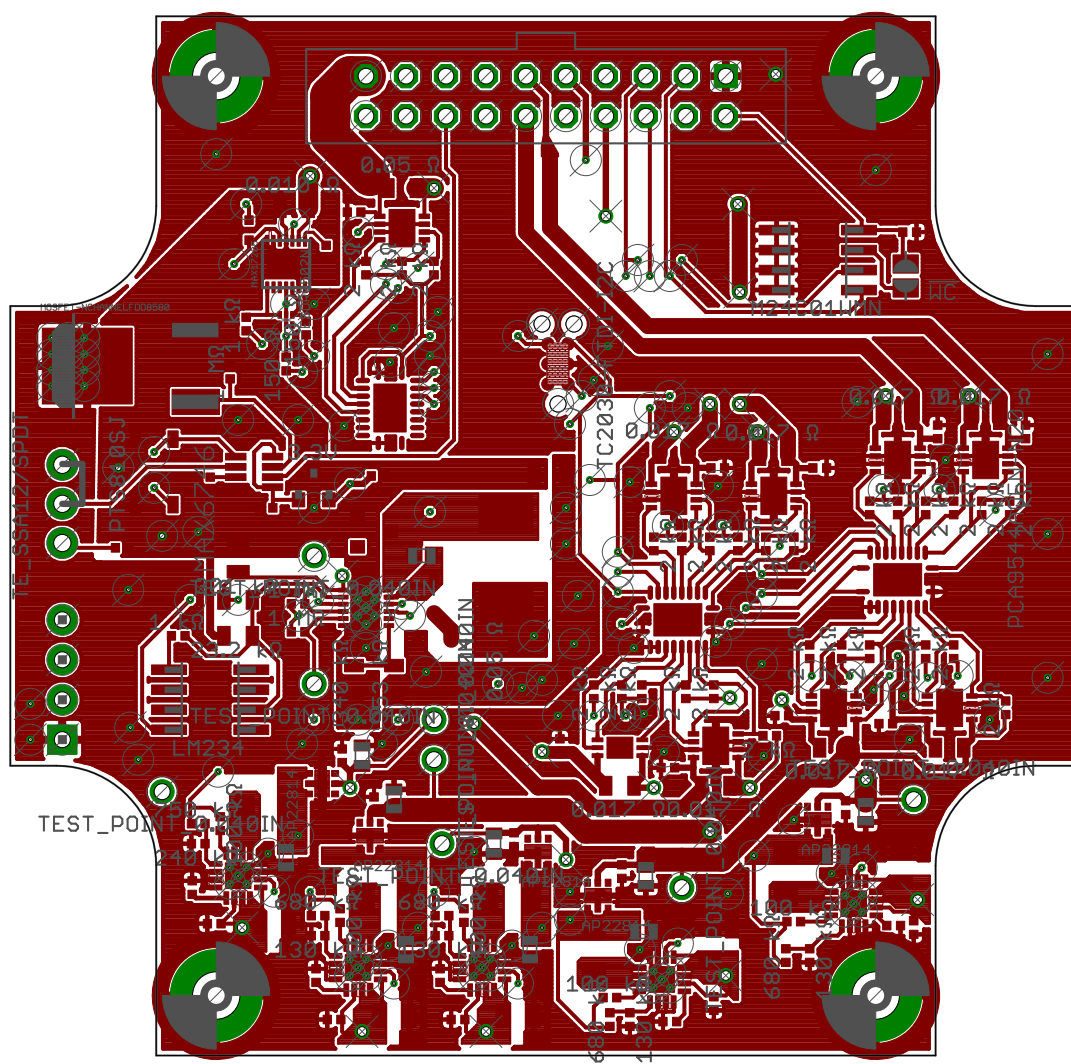


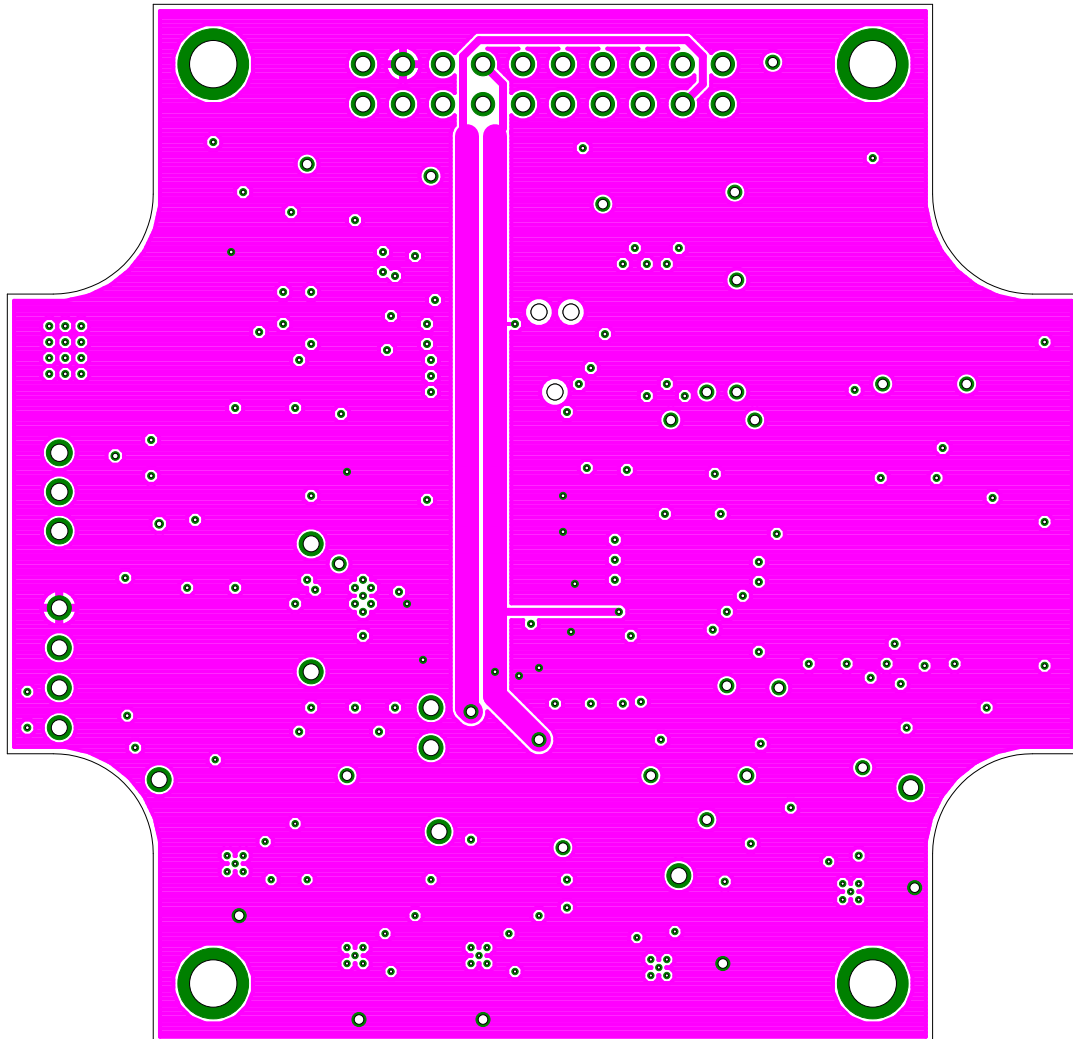


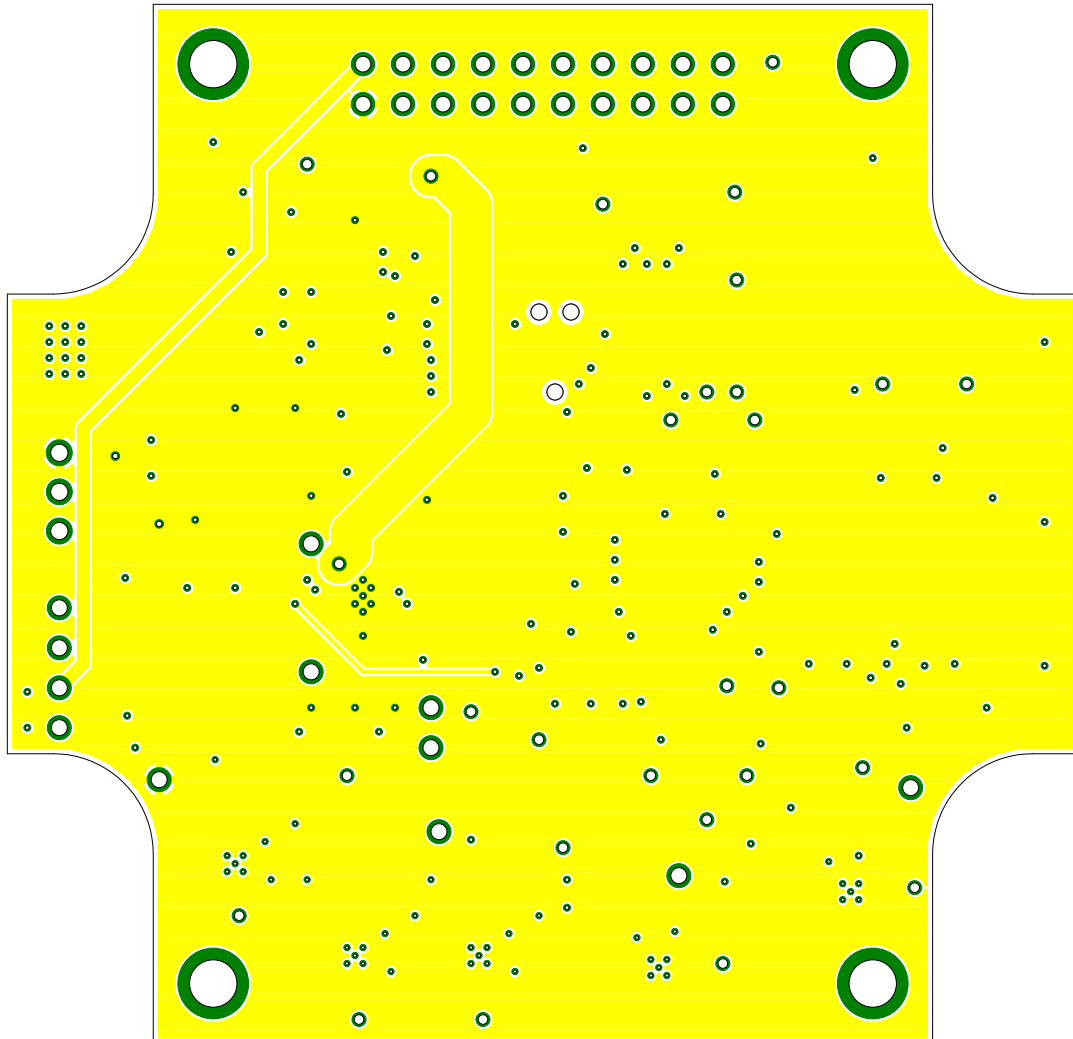


Bottom Layer

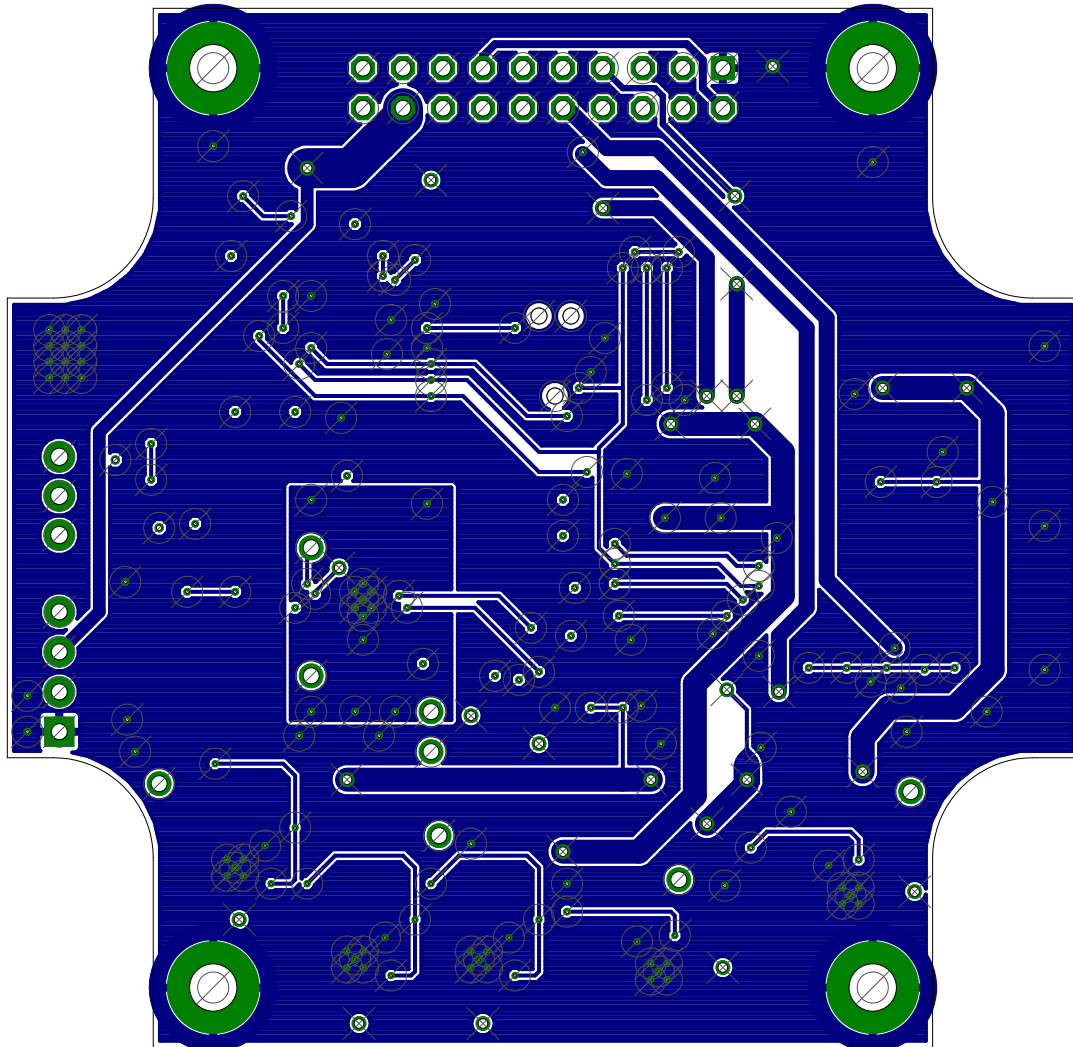


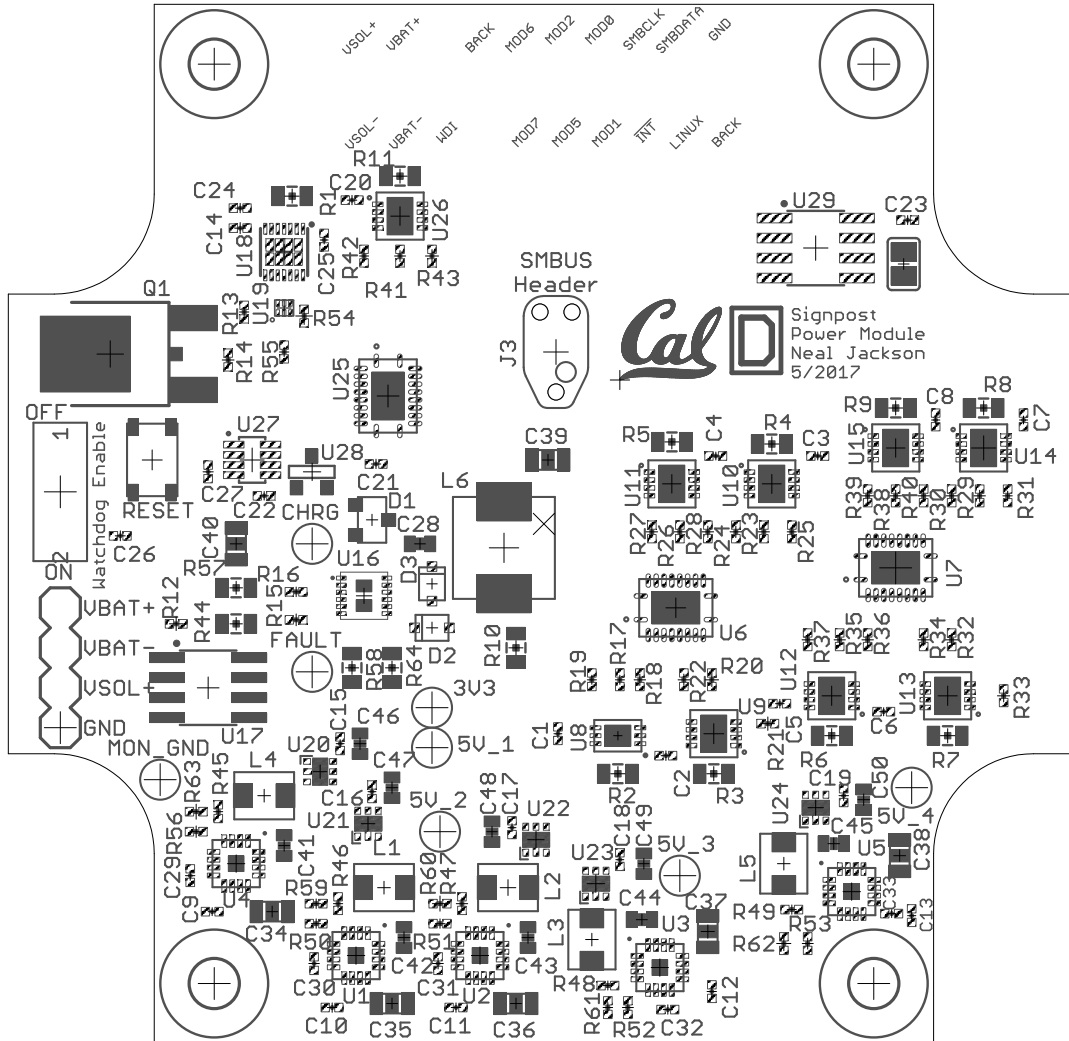




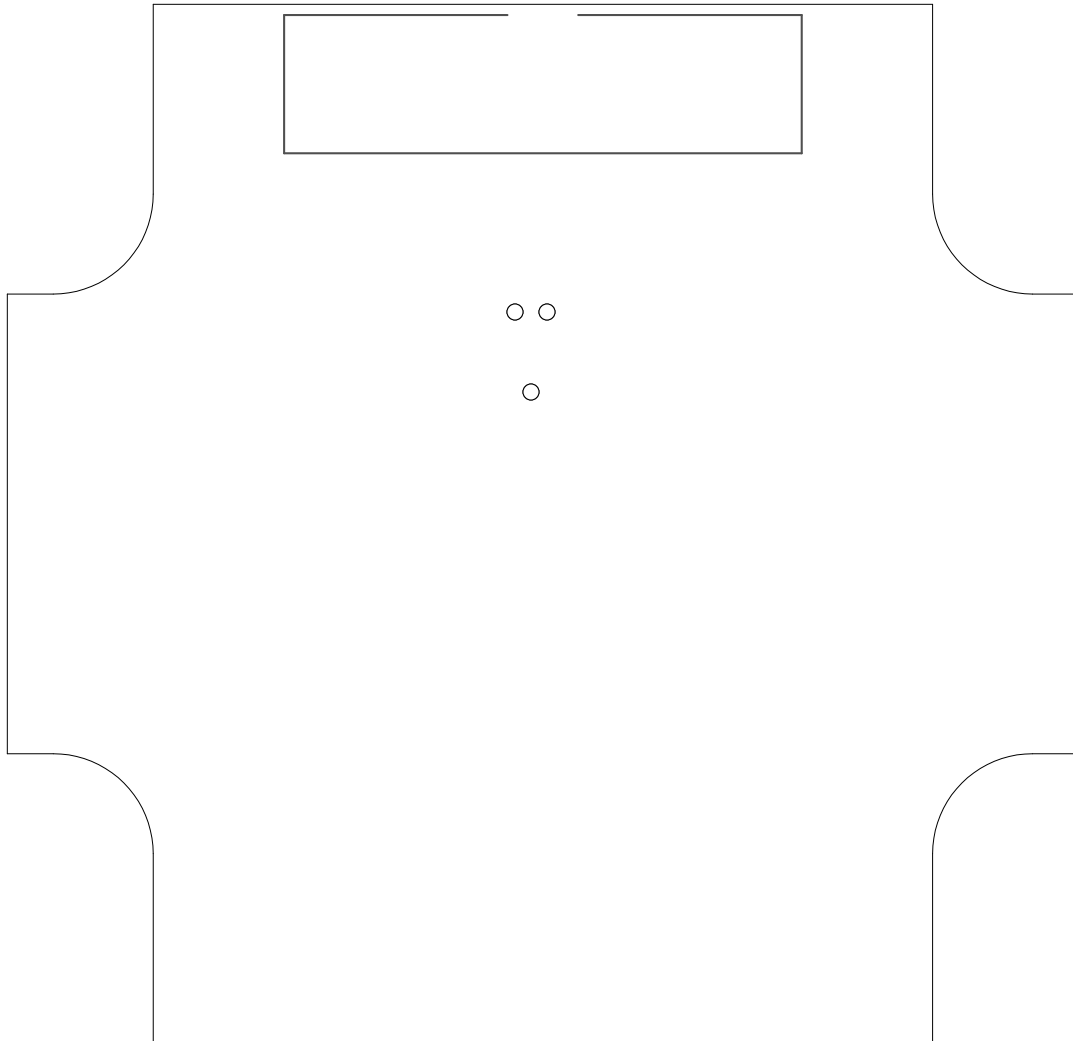


Bottom Copper Layer

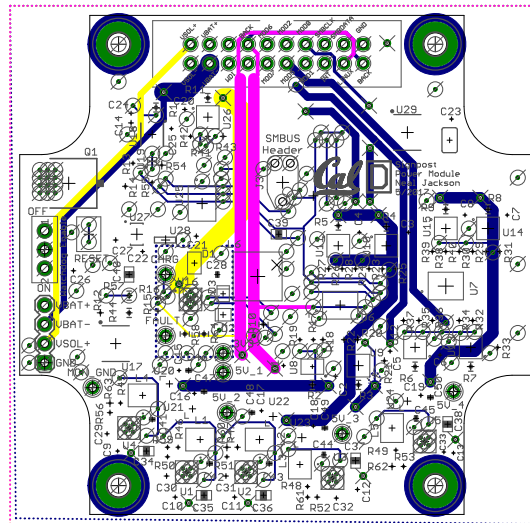




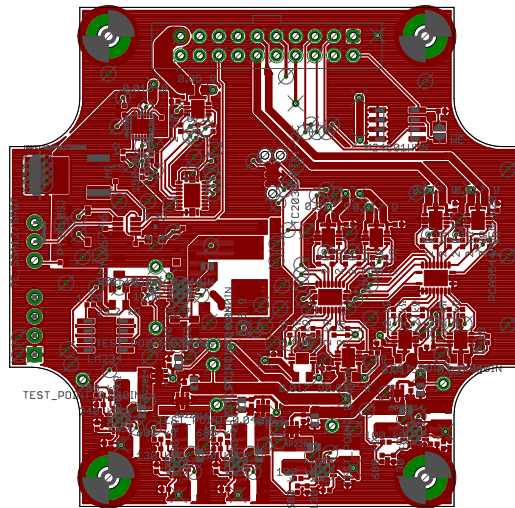
Bottom Paste Layer with Silkscreen

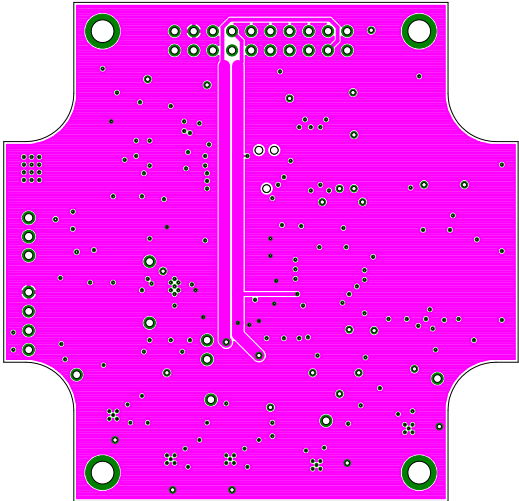


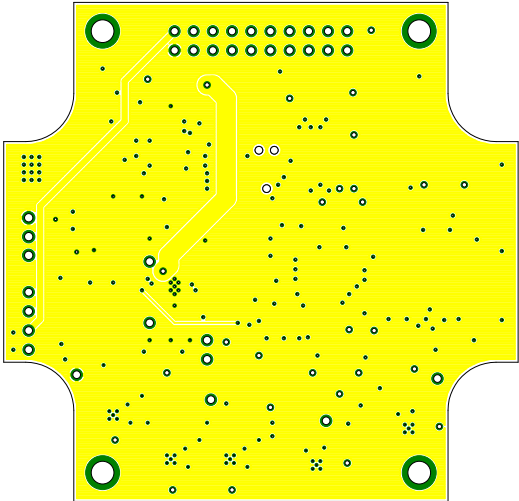
Top and Bottom Layers 1:1 Scale



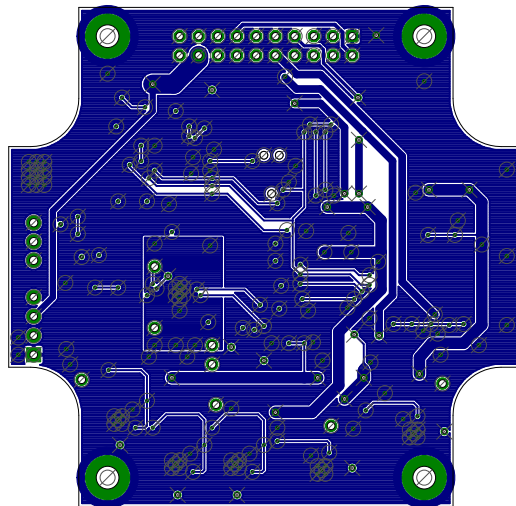
Top Layer 1:1 Scale







Bottom Copper Layer 1:1 Scale



power_supply_module_bom

Qty	Value	Device	Package	Parts
1		DIODE_ZENERSOT323	SOD323	D2
1	0.010 Ω	RESISTOR0805_RES	0805_RES	R1
8	0.017 Ω	RESISTOR0805_RES	0805_RES	R2, R3, R4, R
2	0.05 Ω	RESISTOR0805_RES	0805_RES	R10, R11
23	0.1 uF	CAPACITOR0402_CAP	0402_CAP	C1, C2, C3, C
3	0.47 uF	CAPACITOR0402_CAP	0402_CAP	C24, C25, C2
1	0.82 uF	CAPACITOR0402_CAP	0402_CAP	C27
2	1 MΩ	RESISTOR0402_RES	0402_RES	R15, R16
1	1 MΩ	RESISTOR0402_RES	0402_RES	R14
1	1 kΩ	RESISTOR0402_RES	0402_RES	R12, R13
1	1 uF	CAPACITOR0603_CAP	0603_CAP	C28
7	10 uF	CAPACITOR0805_CAP	0805_CAP	C34, C35, C3
5	100 kΩ	RESISTOR0402_RES	0402_RES	R45, R46, R4
4	130 kΩ	RESISTOR0402_RES	0402_RES	R50, R51, R5
1	150 Ω	RESISTOR0402_RES	0402_RES	R54, R55
27	2 kΩ	RESISTOR0402_RES	0402_RES	R17, R18, R1
5	2.2 uH	INDUCTOR1HL	1HL-1212BZ-11	L1, L2, L3, L4
10	22 uF	CAPACITOR0603_CAP	0603_CAP	C41, C42, C4
1	23.2 kΩ	RESISTOR0805_RES	0805_RES	R44
1	240 kΩ	RESISTOR0402_RES	0402_RES	R56
5	3.3 nF	CAPACITOR0402_CAP	0402_CAP	C29, C30, C3
1	3.3V	T1LM34803.3V	SOT-23	U28
1	301 kΩ	RESISTOR0805_RES	0805_RES	R57
1	340 kΩ	RESISTOR0805_RES	0805_RES	R58
1	6.8uH	INDUCTOR1HL2525CZ	1HL-2525CZ	L6
4	680 kΩ	RESISTOR0402_RES	0402_RES	R59, R60, R6
1	750 kΩ	RESISTOR0402_RES	0402_RES	R63
1	953 kΩ	RESISTOR0805_RES	0805_RES	R64
5	AP22814	AP22814	U-DFN2020-6	U20, U21, U2
1	DIODE_SCHOTTKYSOD323	DIODE_SCHOTTKYSOD323	SOD323	D3
1	DIODE_SCHOTTKYSOT-23F	DIODE_SCHOTTKYSOT-23F	SOT-23F	D1
1	ESDR0502N	ESDR0502N	UDFN-6	U19
1	LM234	LM234	SOIC-8	U17
1	LT3652	LT3652	DFN-12/3MM	U16
1	LTC2941	LTC2941	DFN-6-2MMX3MM	U8
8	LTC2943	LTC2943	DFN-8	U9, U10, U11
1	M24C01WMN	M24C01WMN	SOIC-8	U29
1	MAX17205	MAX17205	14-TDFN	U18
1	MAX6746	MAX6746	SOT-23-8	U27
1	MODULE_POWER	MODULE_POWER	MODULE_POWER	J1
1	MOSFET-NCHANNELFDD8580	MOSFET-NCHANNELFDD8580	DPAK	Q1
3	PCA9544AQFN-N20	PCA9544AQFN-N20	QFN-N20	U6, U7, U25
1	PTS810SJ	PTS810SJ	PTS810SJ	RESET
1	TC2030-FTDI-I2C	TC2030-FTDI-I2C	TC2030-IDC-NL	J3
1	TE_SSA12/SPDT	TE_SSA12/SPDT	TE_SSA12/SPDT	S1
5	TLV62130	TLV62130	TQFN-16/3MM	U1, U2, U3, U

power_supply_module_bom

DIGIKEY

MOUSER

1727-5151-1-ND

WSLPB-.01CT-ND

WSLPB-.017CT-ND

WSLPB-.05CT-ND

490-5920-1-ND

490-3266-1-ND

490-10440-1-ND

P1.0KJCT-ND

P1.00MLCT-ND

P1.0KJCT-ND

490-3890-1-ND

490-5523-1-ND

P100KJCT-ND

P130KLCT-ND

P150LCT-ND

P2.00KLCT-ND

541-1322-1-ND

1276-1193-1-ND

P23.2KDATR-ND

P240KLCT-ND

490-3248-1-ND

ZMR330FCT-ND

P301KDATR-ND

P340KDACT-ND

541-2582-1-ND

P680KLCT-ND

P750KJCT-ND

P953KDACT-ND

AP22814ASN-7DICT-ND

CMDSH2-4L CT-ND

CMPSH1-4 CT-ND

ESDR0502NMUTBGOSCT-ND

497-1549-1-ND

LT3652EDD#PBF-ND

LTC2941IDCB#TRMPBFCT-ND

LTC2943IDD#PBF-ND

497-8631-1-ND

700-MAX17205G+00E

MAX6746KA46+TCT-ND

S9172-ND

NTD4965NT4GOSCT-ND

296-20960-1-ND

CKN10504CT-ND

450-1602-ND

296-35978-1-ND