

Author: PA3AKE Pre-Amplifier

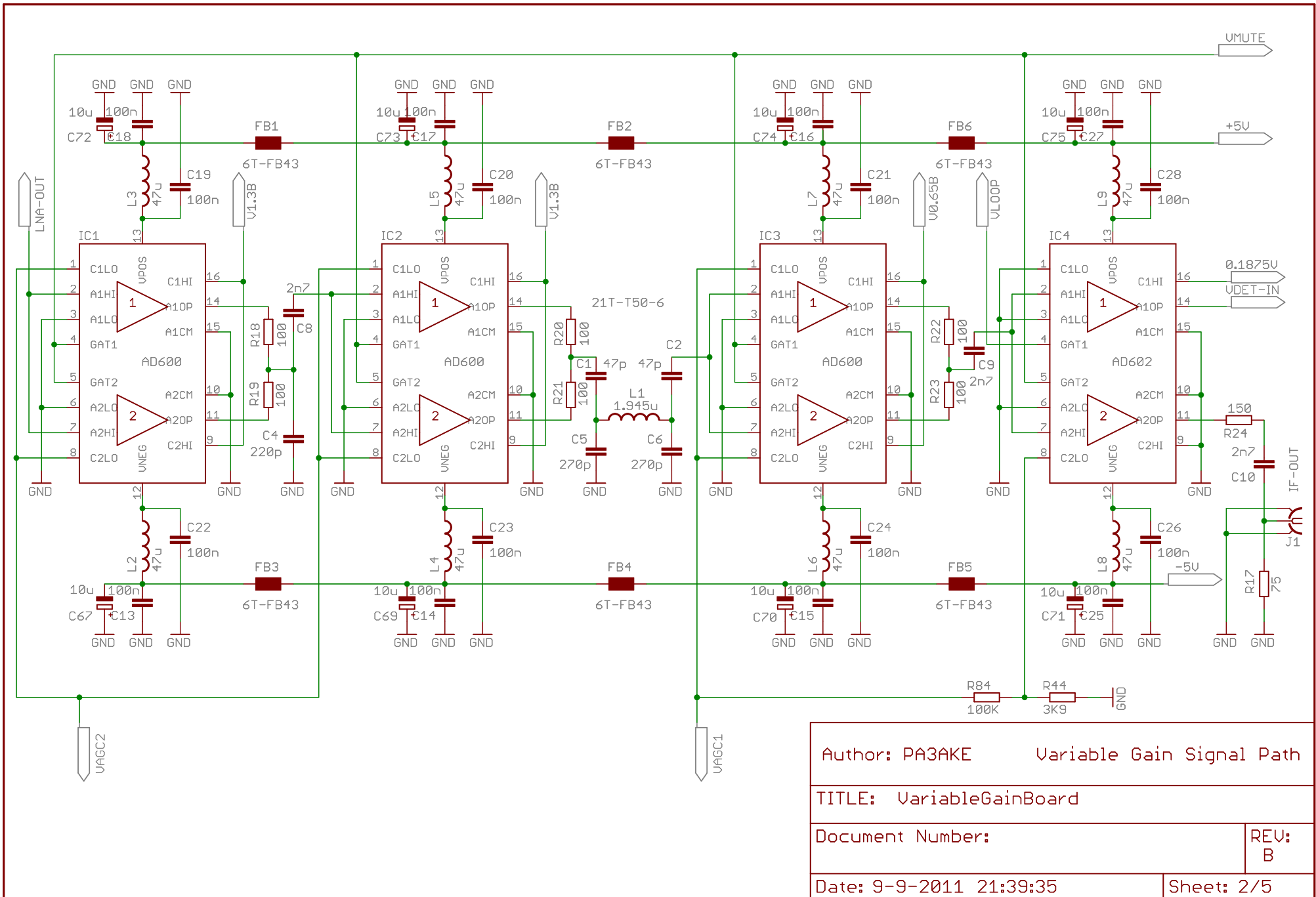
TITLE: VariableGainBoard

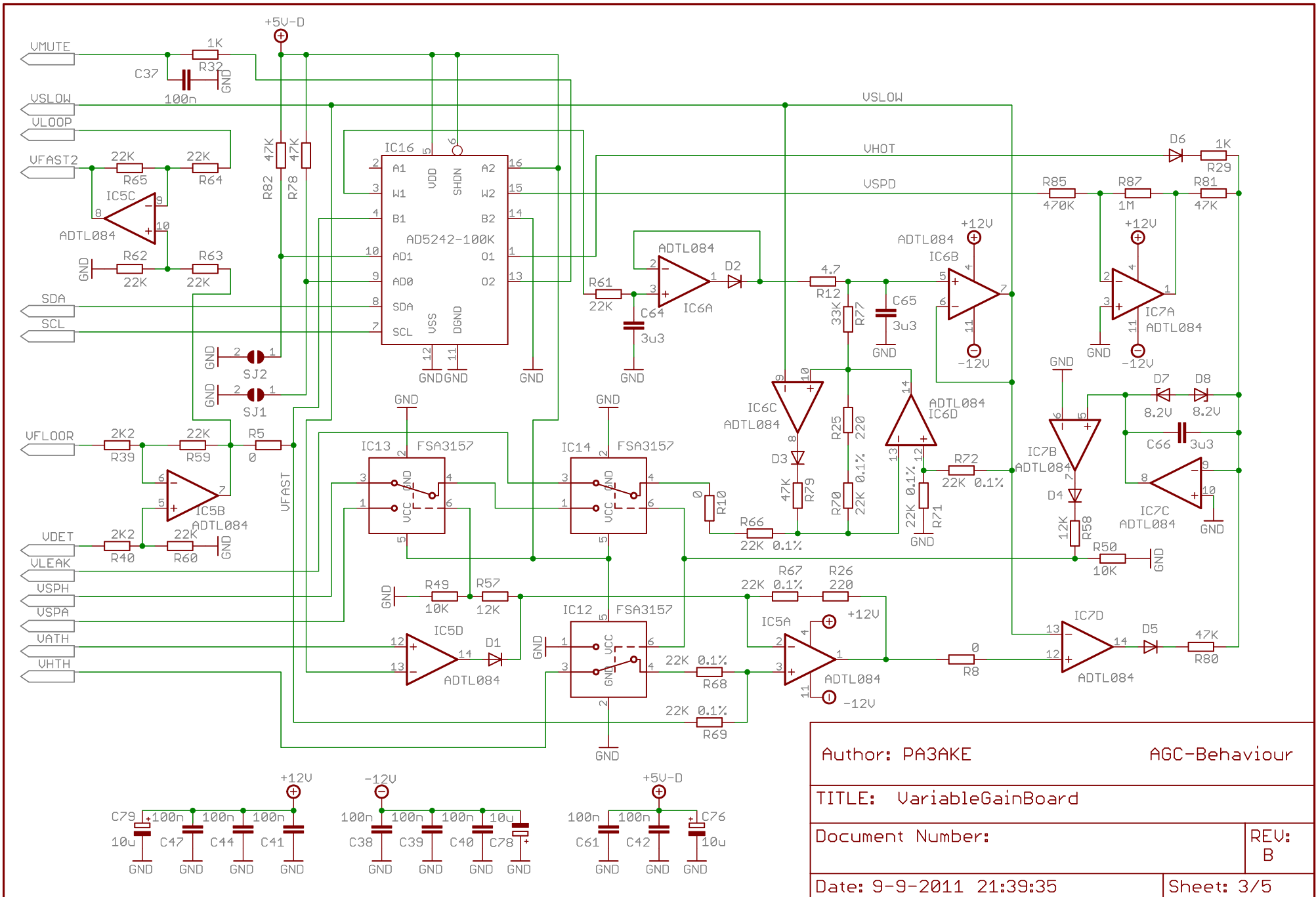
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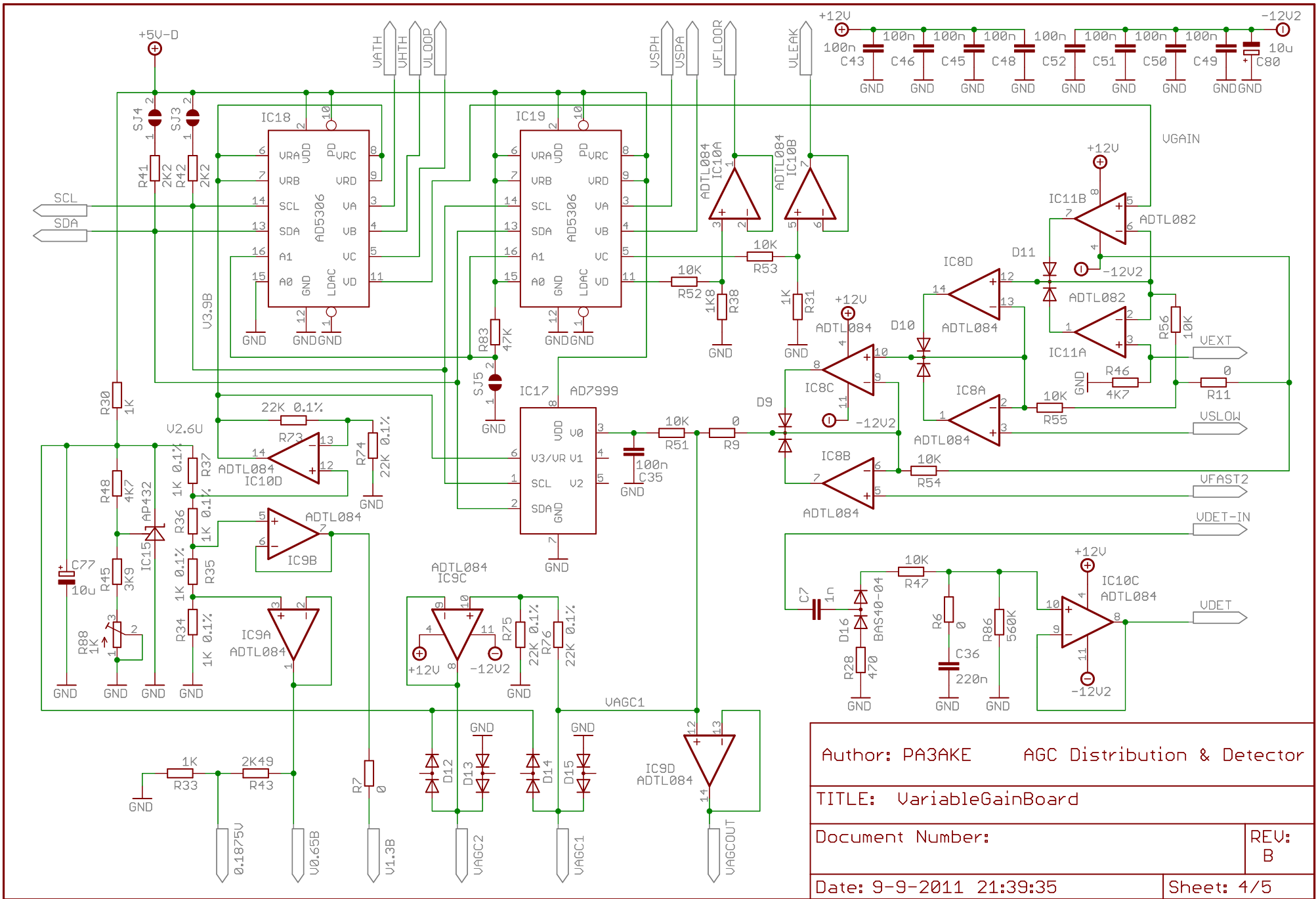
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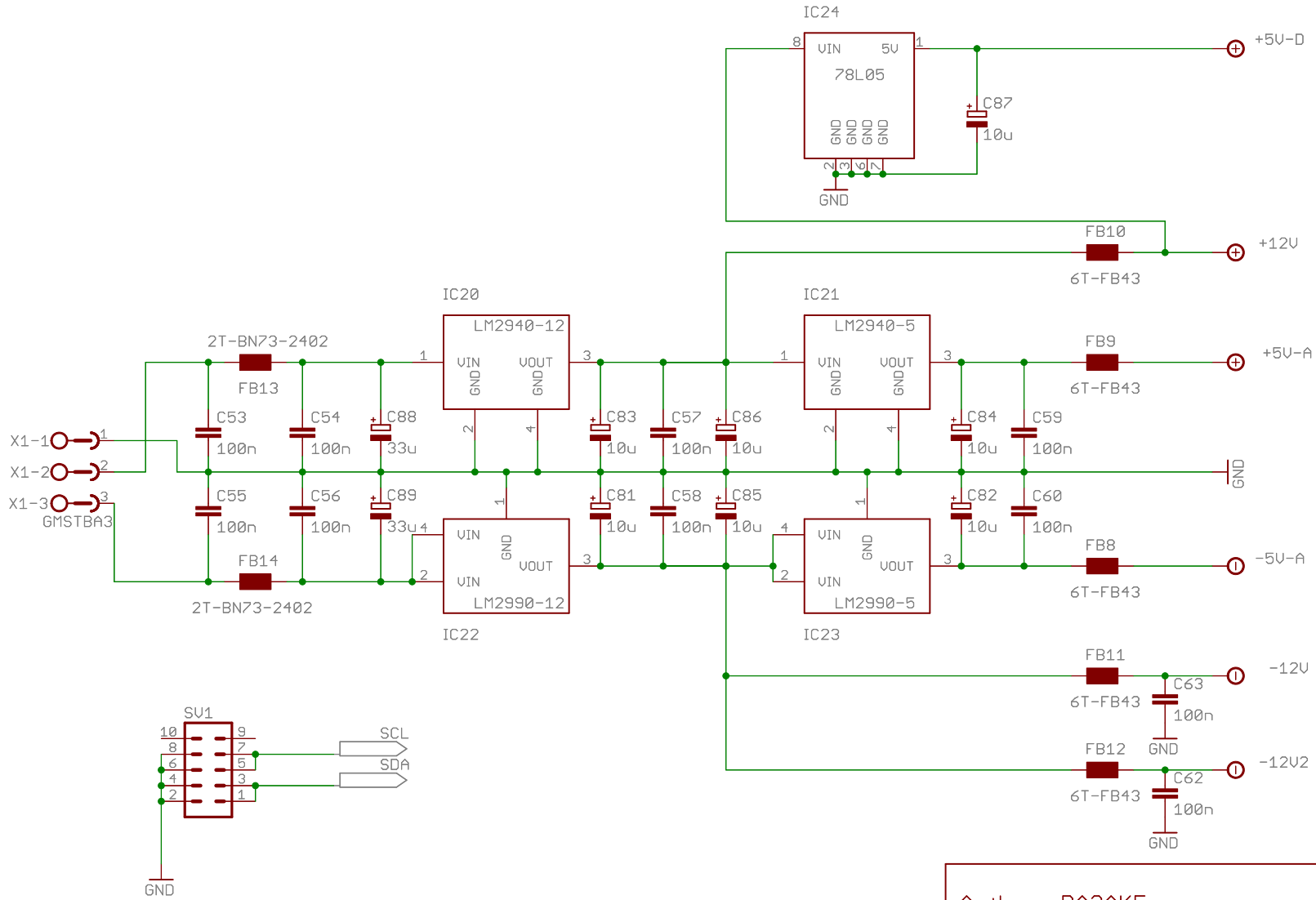
Sheet: 1/5







Author: PA3AKE		AGC Distribution & Detector	
TITLE: VariableGainBoard			
Document Number:			REV: B
Date: 9-9-2011 21:39:35			Sheet: 4/5



Author: PA3AKE

Power Supplies

TITLE: VariableGainBoard

Document Number:

REV:
B

Date: 9-9-2011 21:39:35

Sheet: 5/5

Variable Gain Board Rev-B Partlist

Part	Value	Package	Description
-Resistors-----			
Note: All resistors should have 1% precision unless 0.1% is specified.			
R1	0	1206	(Generic Thick Film resistor)
R2	0	1206	(Generic Thick Film resistor)
R3	0	1206	(Generic Thick Film resistor)
R4	0	1206	(Generic Thick Film resistor)
R5	0	1206	(Generic Thick Film resistor)
R6	0	1206	(Generic Thick Film resistor)
R7	0	1206	(Generic Thick Film resistor)
R8	0	1206	(Generic Thick Film resistor)
R9	0	1206	(Generic Thick Film resistor)
R10	0	1206	(Generic Thick Film resistor)
R11	0	1206	(Generic Thick Film resistor)
R12	4.7	1206	(Generic Thick Film resistor)
R13	33	1206	(Generic Thick Film resistor)
R14	33	1206	(Generic Thick Film resistor)
R15	33	1206	(Generic Thick Film resistor)
R16	33	1206	(Generic Thick Film resistor)
R17	75	1206	(Generic Thick Film resistor)
R18	100	1206	(Generic Thick Film resistor)
R19	100	1206	(Generic Thick Film resistor)
R20	100	1206	(Generic Thick Film resistor)
R21	100	1206	(Generic Thick Film resistor)
R22	100	1206	(Generic Thick Film resistor)
R23	100	1206	(Generic Thick Film resistor)
R24	150	1206	(Generic Thick Film resistor)
R25	220	1206	(Generic Thick Film resistor)
R26	220	1206	(Generic Thick Film resistor)
R27	240	1206	(Generic Thick Film resistor)
R28	470	1206	(Generic Thick Film resistor)
R29	1K	1206	(Generic Thick Film resistor)
R30	1K	1206	(Generic Thick Film resistor)
R31	1K	1206	(Generic Thick Film resistor)
R32	1K	1206	(Generic Thick Film resistor)
R33	1K	1206	(Generic Thick Film resistor)
R34	1K 0.1%	1206	(Generic Thick Film resistor)
R35	1K 0.1%	1206	(Generic Thick Film resistor)
R36	1K 0.1%	1206	(Generic Thick Film resistor)
R37	1K 0.1%	1206	(Generic Thick Film resistor)
R38	1K8	1206	(Generic Thick Film resistor)
R39	2K2	1206	(Generic Thick Film resistor)
R40	2K2	1206	(Generic Thick Film resistor)

R41	2K2	1206	(Generic Thick Film resistor)
R42	2K2	1206	(Generic Thick Film resistor)
R43	2K49	1206	(Generic Thick Film resistor)
R44	3K9	1206	(Generic Thick Film resistor)
R45	3K9	1206	(Generic Thick Film resistor)
R46	4K7	1206	(Generic Thick Film resistor)
R47	10K	1206	(Generic Thick Film resistor)
R48	4K7	1206	(Generic Thick Film resistor)
R49	10K	1206	(Generic Thick Film resistor)
R50	10K	1206	(Generic Thick Film resistor)
R51	10K	1206	(Generic Thick Film resistor)
R52	10K	1206	(Generic Thick Film resistor)
R53	10K	1206	(Generic Thick Film resistor)
R54	10K	1206	(Generic Thick Film resistor)
R55	10K	1206	(Generic Thick Film resistor)
R56	10K	1206	(Generic Thick Film resistor)
R57	12K	1206	(Generic Thick Film resistor)
R58	12K	1206	(Generic Thick Film resistor)
R59	22K	1206	(Generic Thick Film resistor)
R60	22K	1206	(Generic Thick Film resistor)
R61	22K	1206	(Generic Thick Film resistor)
R62	22K	1206	(Generic Thick Film resistor)
R63	22K	1206	(Generic Thick Film resistor)
R64	22K	1206	(Generic Thick Film resistor)
R65	22K	1206	(Generic Thick Film resistor)
R66	22K 0.1%	1206	(Generic Thick Film resistor)
R67	22K 0.1%	1206	(Generic Thick Film resistor)
R68	22K 0.1%	1206	(Generic Thick Film resistor)
R69	22K 0.1%	1206	(Generic Thick Film resistor)
R70	22K 0.1%	1206	(Generic Thick Film resistor)
R71	22K 0.1%	1206	(Generic Thick Film resistor)
R72	22K 0.1%	1206	(Generic Thick Film resistor)
R73	22K 0.1%	1206	(Generic Thick Film resistor)
R74	22K 0.1%	1206	(Generic Thick Film resistor)
R75	22K 0.1%	1206	(Generic Thick Film resistor)
R76	22K 0.1%	1206	(Generic Thick Film resistor)
R77	33K	1206	(Generic Thick Film resistor)
R78	47K	1206	(Generic Thick Film resistor)
R79	47K	1206	(Generic Thick Film resistor)
R80	47K	1206	(Generic Thick Film resistor)
R81	47K	1206	(Generic Thick Film resistor)
R82	47K	1206	(Generic Thick Film resistor)
R83	47K	1206	(Generic Thick Film resistor)
R84	100K	1206	(Generic Thick Film resistor)
R85	470K	1206	(Generic Thick Film resistor)
R86	560K	1206	(Generic Thick Film resistor)
R87	1M	1206	(Generic Thick Film resistor)
R88	1K	4.80 x 3.50 x 5.10mm	(Cemet 10 turn trim pot, Murata:PVG5A102C03R00)

-Inductors-----

L1	1.945u	T50-6	(Micrometals T50-6, 21 turns 0.8mm enameled copper)
L2	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)
L3	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)
L4	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)
L5	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)
L6	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)
L7	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)
L8	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)
L9	47u	1210	(Panasonic-ECG: ELJ-PA470KF, self resonance 9.5MHz)

-Capacitors-----

C1	47p	1206	(Generic C0G,NP0 MLCC)
C2	47p	1206	(Generic C0G,NP0 MLCC)
C3	47p	1206	(Generic C0G,NP0 MLCC)
C4	220p	1206	(Generic C0G,NP0 MLCC)
C5	270p	1206	(Generic C0G,NP0 MLCC)
C6	270p	1206	(Generic C0G,NP0 MLCC)
C7	1n	1206	(Generic C0G,NP0 MLCC)
C8	2n7	1206	(Generic X7R MLCC)
C9	2n7	1206	(Generic X7R MLCC)
C10	2n7	1206	(Generic X7R MLCC)
C11	2n7	1206	(Generic X7R MLCC)
C12	2n7	1206	(Generic X7R MLCC)
C13	100n	1206	(Generic X7R MLCC)
C14	100n	1206	(Generic X7R MLCC)
C15	100n	1206	(Generic X7R MLCC)
C16	100n	1206	(Generic X7R MLCC)
C17	100n	1206	(Generic X7R MLCC)
C18	100n	1206	(Generic X7R MLCC)
C19	100n	1206	(Generic X7R MLCC)
C20	100n	1206	(Generic X7R MLCC)
C21	100n	1206	(Generic X7R MLCC)
C22	100n	1206	(Generic X7R MLCC)
C23	100n	1206	(Generic X7R MLCC)
C24	100n	1206	(Generic X7R MLCC)
C25	100n	1206	(Generic X7R MLCC)
C26	100n	1206	(Generic X7R MLCC)
C27	100n	1206	(Generic X7R MLCC)
C28	100n	1206	(Generic X7R MLCC)
C29	100n	1206	(Generic X7R MLCC)
C30	100n	1206	(Generic X7R MLCC)
C31	100n	1206	(Generic X7R MLCC)
C32	100n	1206	(Generic X7R MLCC)
C33	100n	1206	(Generic X7R MLCC)

C34	100n	1206	(Generic X7R MLCC)
C35	100n	1206	(Generic X7R MLCC)
C36	220n	2.5x7.5, 5mm	(Generic Polyester film, MKT)
C37	100n	1206	(Generic X7R MLCC)
C38	100n	1206	(Generic X7R MLCC)
C39	100n	1206	(Generic X7R MLCC)
C40	100n	1206	(Generic X7R MLCC)
C41	100n	1206	(Generic X7R MLCC)
C42	100n	1206	(Generic X7R MLCC)
C43	100n	1206	(Generic X7R MLCC)
C44	100n	1206	(Generic X7R MLCC)
C45	100n	1206	(Generic X7R MLCC)
C46	100n	1206	(Generic X7R MLCC)
C47	100n	1206	(Generic X7R MLCC)
C48	100n	1206	(Generic X7R MLCC)
C49	100n	1206	(Generic X7R MLCC)
C50	100n	1206	(Generic X7R MLCC)
C51	100n	1206	(Generic X7R MLCC)
C52	100n	1206	(Generic X7R MLCC)
C53	100n	1206	(Generic X7R MLCC)
C54	100n	1206	(Generic X7R MLCC)
C55	100n	1206	(Generic X7R MLCC)
C56	100n	1206	(Generic X7R MLCC)
C57	100n	1206	(Generic X7R MLCC)
C58	100n	1206	(Generic X7R MLCC)
C59	100n	1206	(Generic X7R MLCC)
C60	100n	1206	(Generic X7R MLCC)
C61	100n	1206	(Generic X7R MLCC)
C62	100n	1206	(Generic X7R MLCC)
C63	100n	1206	(Generic X7R MLCC)
C64	3u3	13mm x 6mm,	(Epcos Inc: B32521C335J, MKT Polyester Metallized)
C65	3u3	13mm x 6mm,	(Epcos Inc: B32521C335J, MKT Polyester Metallized)
C66	3u3	13mm x 6mm,	(Epcos Inc: B32521C335J, MKT Polyester Metallized)
C67	10u	SMCB	(Generic Tantalium)
C68	10u	SMCB	(Generic Tantalium)
C69	10u	SMCB	(Generic Tantalium)
C70	10u	SMCB	(Generic Tantalium)
C71	10u	SMCB	(Generic Tantalium)
C72	10u	SMCB	(Generic Tantalium)
C73	10u	SMCB	(Generic Tantalium)
C74	10u	SMCB	(Generic Tantalium)
C75	10u	SMCB	(Generic Tantalium)
C76	10u	SMCB	(Generic Tantalium)
C77	10u	SMCB	(Generic Tantalium)
C78	10u	SMCB	(Generic Tantalium)
C79	10u	SMCB	(Generic Tantalium)
C80	10u	SMCB	(Generic Tantalium)
C81	10u	SMCB	(Generic Tantalium)

C82	10u	SMCB	(Generic Tantalium)
C83	10u	SMCB	(Generic Tantalium)
C84	10u	SMCB	(Generic Tantalium)
C85	10u	SMCB	(Generic Tantalium)
C86	10u	SMCB	(Generic Tantalium)
C87	10u	SMCB	(Generic Tantalium)
C88	33u	SMCD	(Generic Tantalium)
C89	33u	SMCD	(Generic Tantalium)

-Ferrite Beads-----

FB1	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB2	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB3	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB4	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB5	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB6	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB7	BN43	6 turns	(6 turns 0.3mm enameled copper)
FB8	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB9	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB10	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB11	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB12	FB43	6 turns	(6 turns 0.3mm enameled copper)
FB13	BN73-2402	2 turns	(2 turns 0.8mm enameled copper)
FB14	BN73-2402	2 turns	(2 turns 0.8mm enameled copper)

-Transformers-----

T1	BN61-2402	1:4:1 turns	(1 turns 0.8mm, 5 turns 0.3mm on BN61-2402)
T2	BN43-2402	4 turns	(4 bifilar turns on BN43-2402)

-Integrated Circuits-----

IC1	AD600JRZ	SOIC-16	(Analog Devices Inc, VGA)
IC2	AD600JRZ	SOIC-16	(Analog Devices Inc, VGA)
IC3	AD600JRZ	SOIC-16	(Analog Devices Inc, VGA)
IC4	AD602JRZ	SOIC-16	(Analog Devices Inc, VGA)
IC5	ADTL084ARZ	SOIC-14	(Analog Devices Inc, Quad JFET OPAMP)
IC6	ADTL084ARZ	SOIC-14	(Analog Devices Inc, Quad JFET OPAMP)
IC7	ADTL084ARZ	SOIC-14	(Analog Devices Inc, Quad JFET OPAMP)
IC8	ADTL084ARZ	SOIC-14	(Analog Devices Inc, Quad JFET OPAMP)
IC9	ADTL084ARZ	SOIC-14	(Analog Devices Inc, Quad JFET OPAMP)
IC10	ADTL084ARZ	SOIC-14	(Analog Devices Inc, Quad JFET OPAMP)
IC11	ADTL082ARZ	SOIC-08	(Analog Devices Inc, Dual JFET OPAMP)
IC12	FSA3157P6X	SC70-6	(Fairchild Semiconductor, SPDT bus-switch)
IC13	FSA3157P6X	SC70-6	(Fairchild Semiconductor, SPDT bus-switch)
IC14	FSA3157P6X	SC70-6	(Fairchild Semiconductor, SPDT bus-switch)
IC15	AP432ASAG-7	SOT23-3	(Diodes Inc, Adjustable Shunt Regulator)

IC16	AD5242BRUZ100	TSSOP-16	(Analog Devices Inc, 100K 8bit pos digital potmeter)
IC17	AD7999YRJZ	SOT23-8	(Analog Devices Inc, 4-channel 8bit ADC)
IC18	AD5306ARUZ	TSSOP-16	(Analog Devices Inc, 4-channel 8bit DAC)
IC19	AD5306ARUZ	TSSOP-16	(Analog Devices Inc, 4-channel 8bit DAC)
IC20	LM2940IMP-12	SOT223-4	(National Semiconductor, 12V LDO regulator)
IC21	LM2940IMP-5.0	SOT223-4	(National Semiconductor, 5V LDO regulator)
IC22	LM2990S-12	TO263	(National Semiconductor, -12V LDO regulator)
IC23	LM2990S-5.0	TO263	(National Semiconductor, -5V LDO regulator)
IC24	UA78L05CD	SOIC-08	(Texas Instruments, 5V regulator)

-Diodes-----

D1	MMBD4148-TP	SOT23-3	(Micro Commercial Co, Si diode)
D2	MMBD4148-TP	SOT23-3	(Micro Commercial Co, Si diode)
D3	MMBD4148-TP	SOT23-3	(Micro Commercial Co, Si diode)
D4	MMBD4148-TP	SOT23-3	(Micro Commercial Co, Si diode)
D5	MMBD4148-TP	SOT23-3	(Micro Commercial Co, Si diode)
D6	MMBD4148-TP	SOT23-3	(Micro Commercial Co, Si diode)
D7	BZX84C8V2-7-F	SOT23-3	(Diodes Inc, 350mW 8.2V Zener)
D8	BZX84C8V2-7-F	SOT23-3	(Diodes Inc, 350mW 8.2V Zener)
D9	MMBD4148CC	SOT23-3	(Fairchild Semiconductor, common cathode pair Si diode)
D10	MMBD4148CC	SOT23-3	(Fairchild Semiconductor, common cathode pair Si diode)
D11	MMBD4148CC	SOT23-3	(Fairchild Semiconductor, common cathode pair Si diode)
D12	MMBD4148SE-TP	SOT23-3	(Micro Commercial Co, series connection pair Si diode)
D13	MMBD4148SE-TP	SOT23-3	(Micro Commercial Co, series connection pair Si diode)
D14	MMBD4148SE-TP	SOT23-3	(Micro Commercial Co, series connection pair Si diode)
D15	MMBD4148SE-TP	SOT23-3	(Micro Commercial Co, series connection pair Si diode)
D16	BAS40-04-TP	SOT23-3	(Micro Commercial Co, common cathode pair Schottky diode)

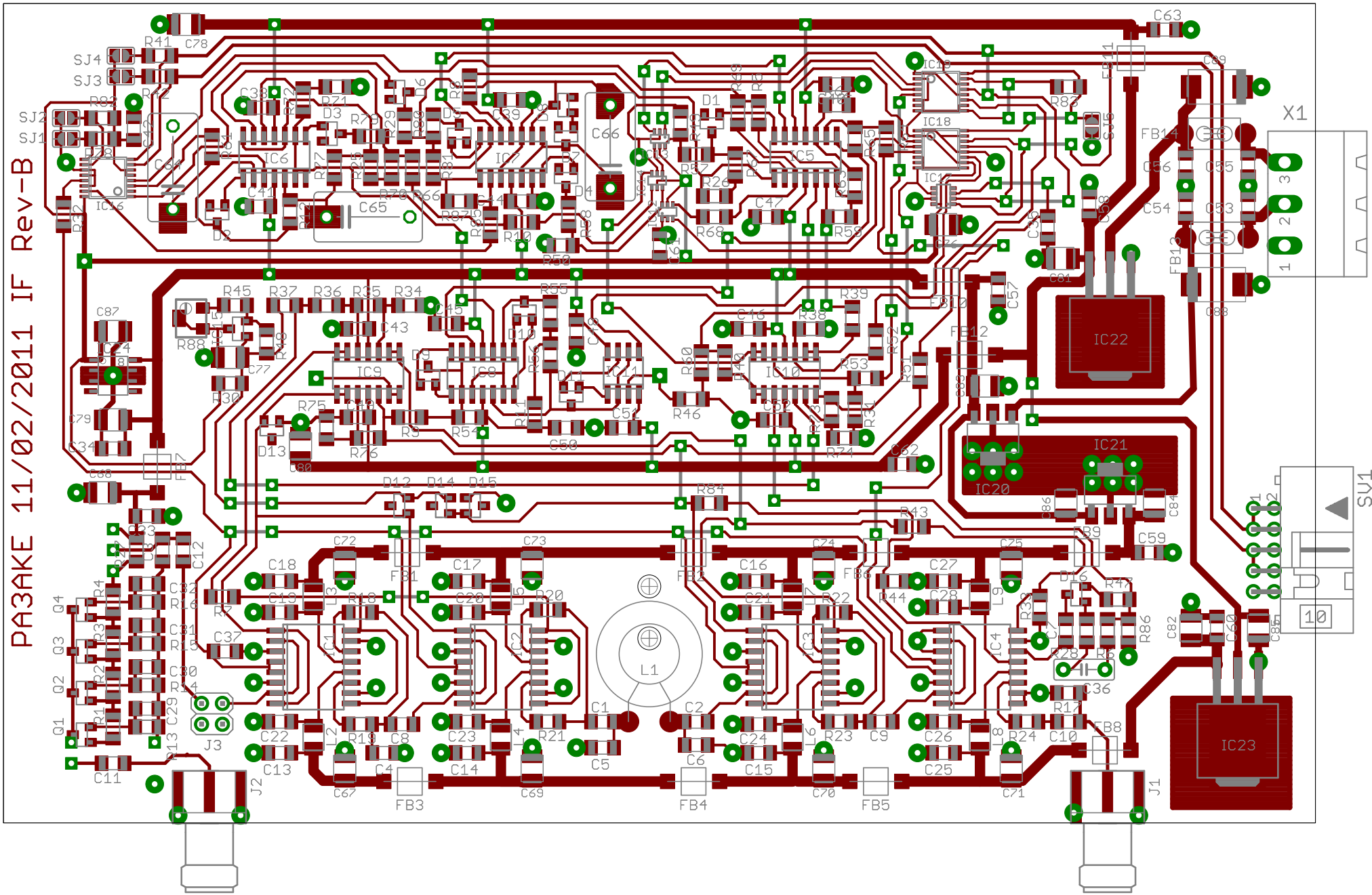
-Transistors-----

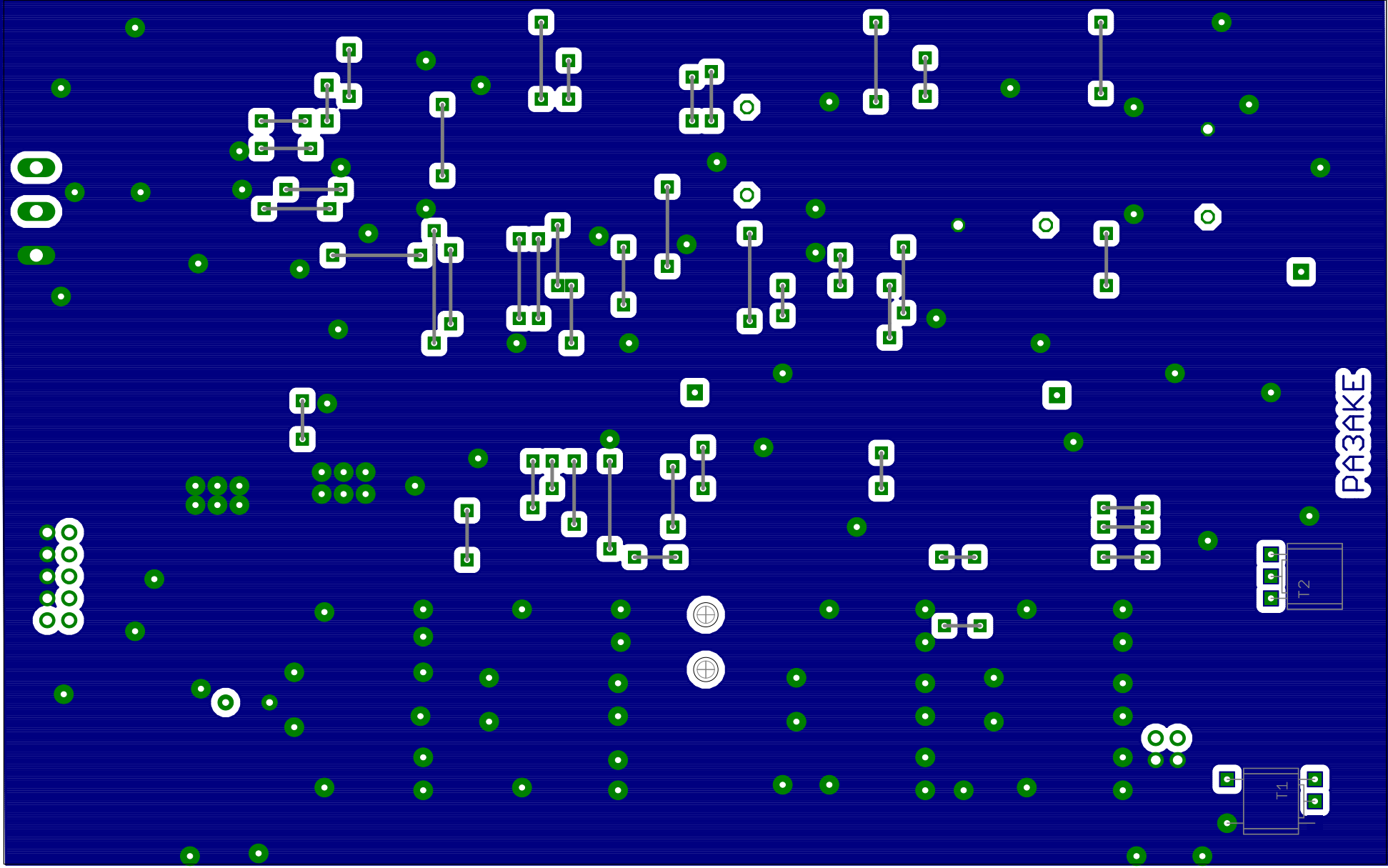
Q1	MMBFJ310LT1G	SOT23-3	(ON-Semiconductor N-JFET)
Q2	MMBFJ310LT1G	SOT23-3	(ON-Semiconductor N-JFET)
Q3	MMBFJ310LT1G	SOT23-3	(ON-Semiconductor N-JFET)
Q4	MMBFJ310LT1G	SOT23-3	(ON-Semiconductor N-JFET)

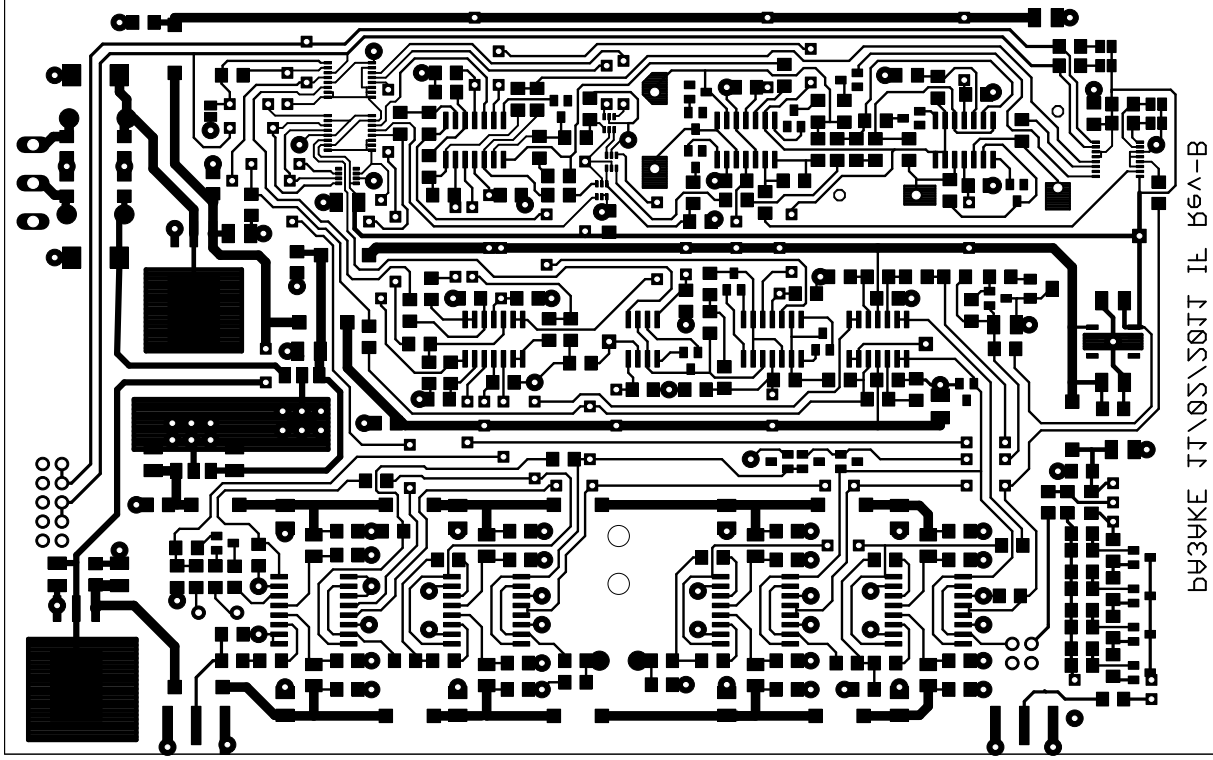
-Connectors-----

J1	IF-OUT	SMA	(Card edge SMA female connector)
J2	IF-IN	SMA	(Card edge SMA female connector)
J3	pin-header	2X02	(2x2 pin header)
SV1	I2C-bus	ML10L	(10 pin male flatcable connector)
X1	MSTBA	MSTBA 2.5/3-G-5.08	(conn header rt ang 3pos 5.08mm, PhoenixContact 1757255)
X1	MSTBA	MSTB 2.5/3-ST-5.08	(conn term block plug 3pos 5.08mm, PhoenixContact 1757022)

PA3AKE 11/02/2011 IF Rev-B







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