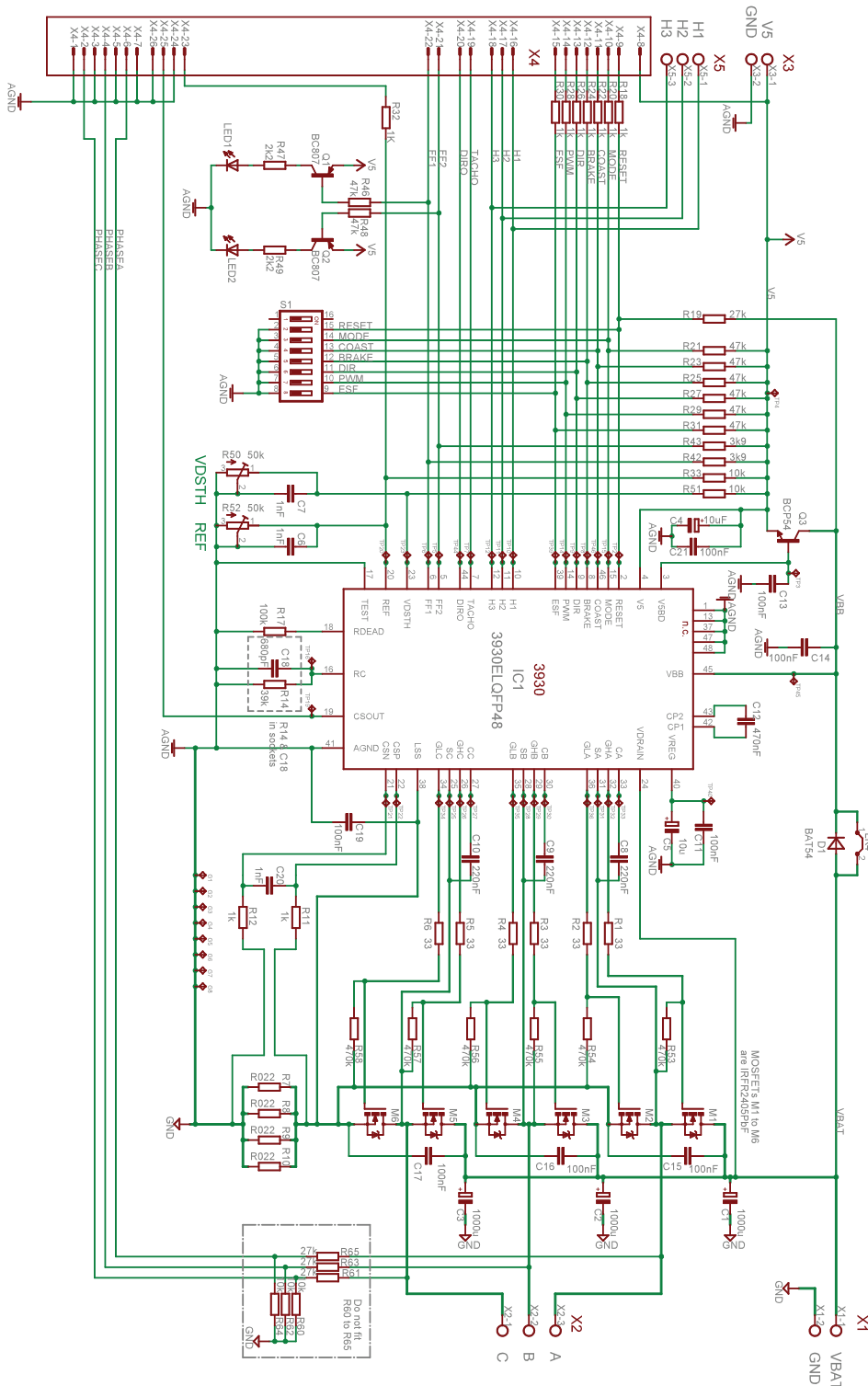
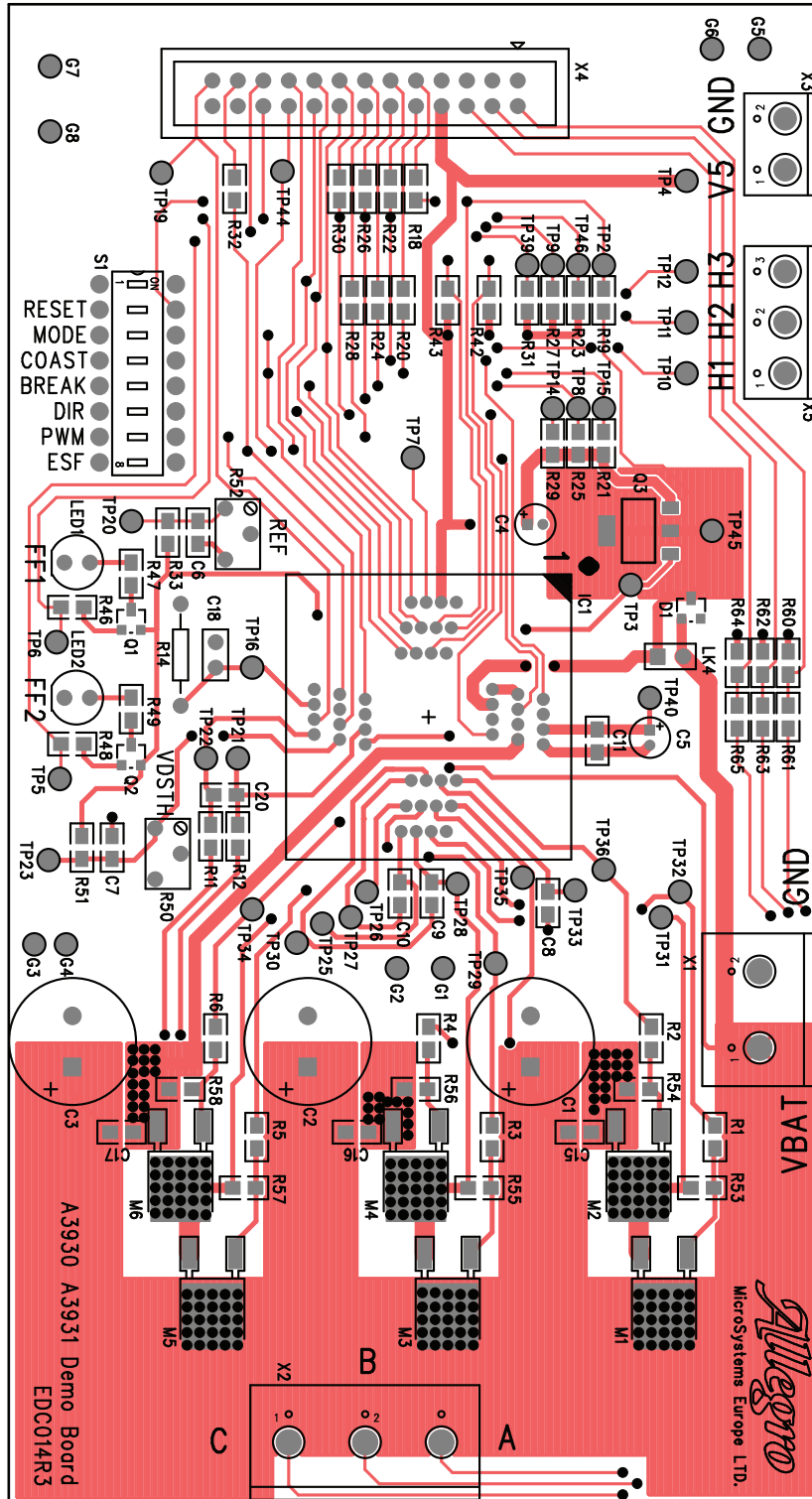


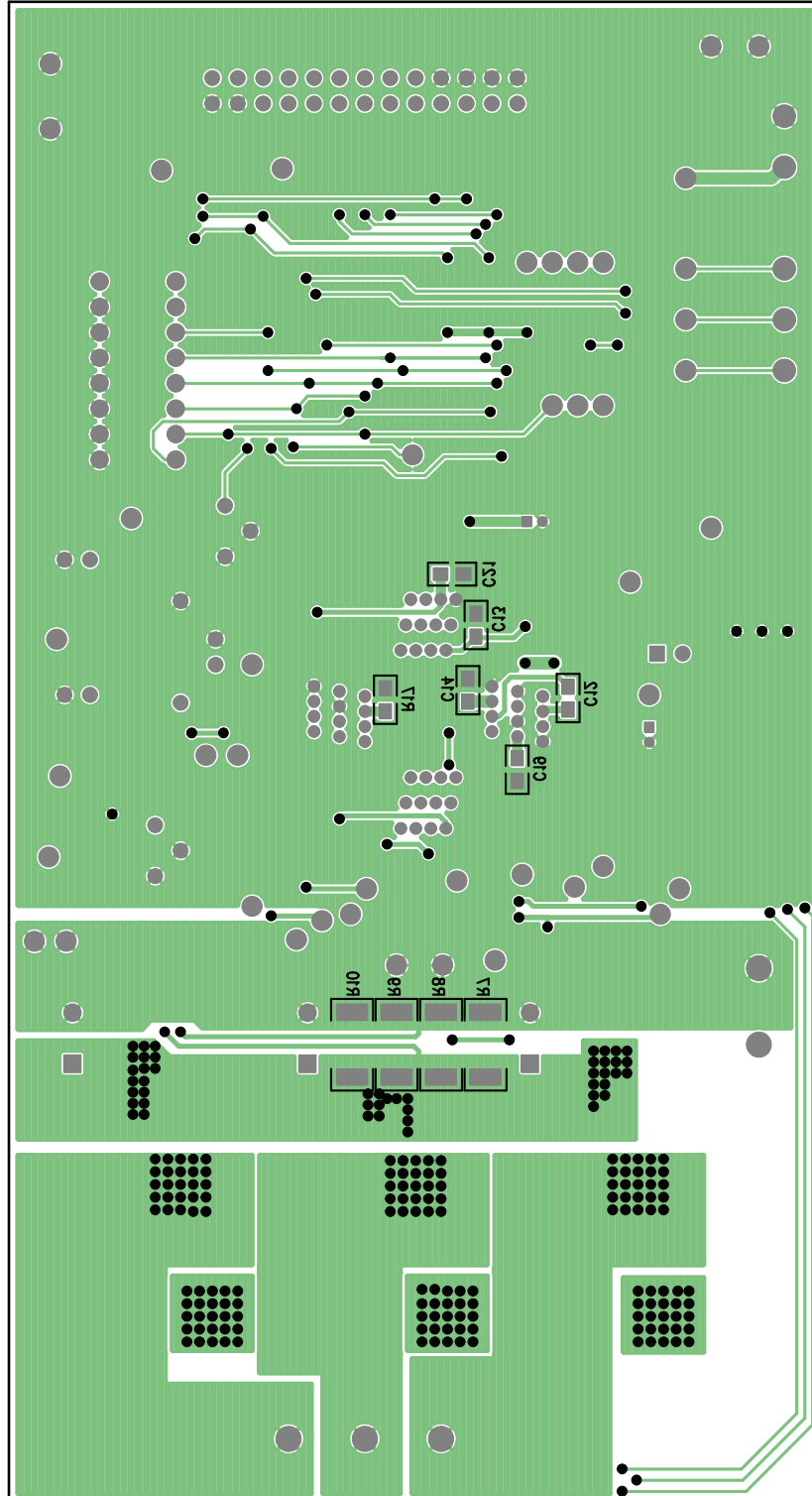
## Demo Board Schematic/Layout

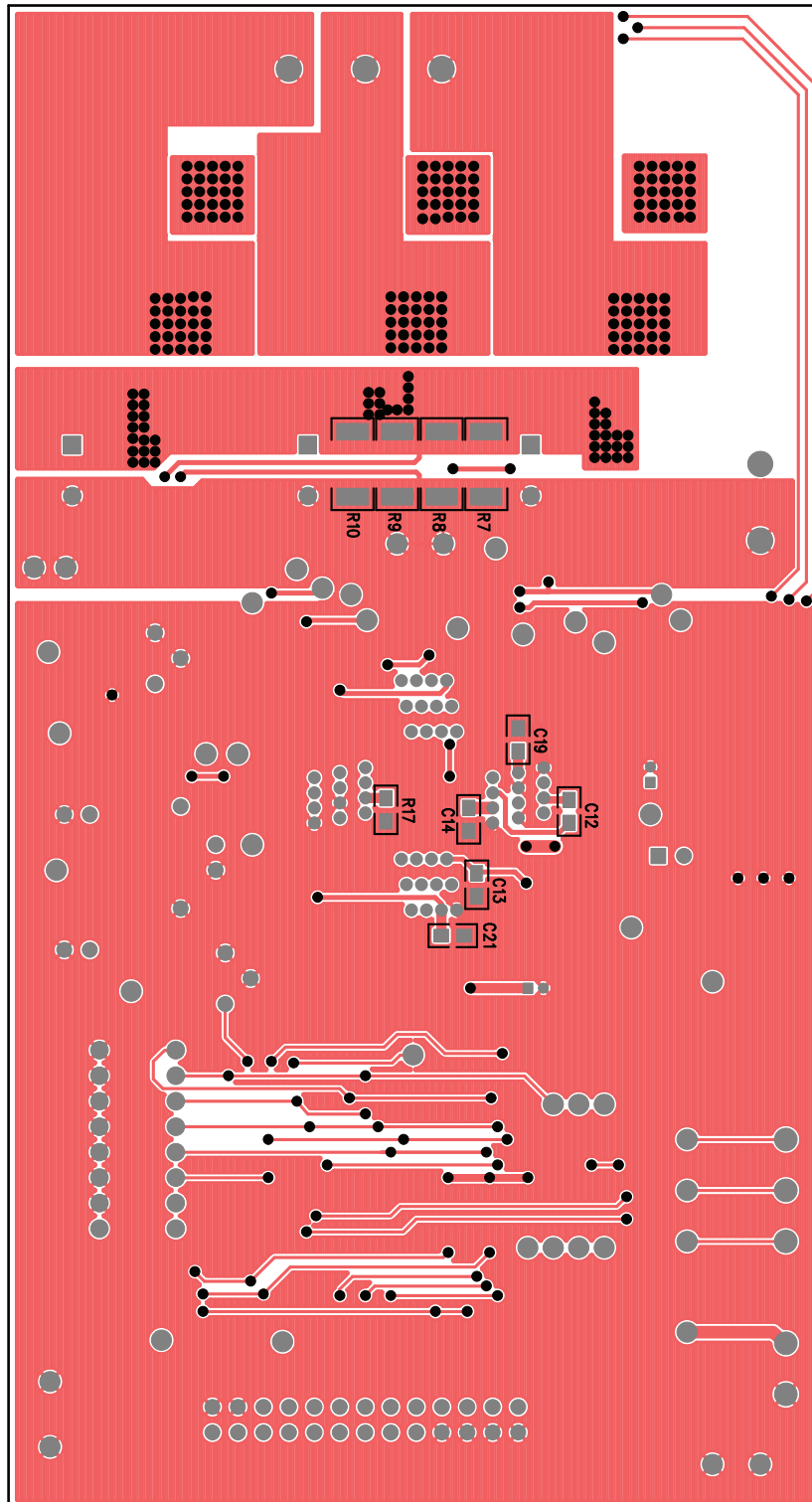
### SCHEMATIC



### LAYOUT







# A3930 and A3931

# Demo Board Schematic/Layout

## BILL OF MATERIALS

A3930/A3931 Demo Board Rev 3 Component List					Last Updated: 15/07/2014				
Part	Value	Package	Description	RS Part	Part	Value	Package	Description	RS Part
C1	1000uF	12.5mm, 5mm pitch	Alu, Elytic, >50V, 105C	365-4329	R10	R022	2512 6.4x3.2mm	1W Chip Resistor	294-5602
C2	1000uF	12.5mm, 5mm pitch	Alu, Elytic, >50V, 105C	365-4329	R11	1k	0805	Chip Resistor	223-0427
C3	1000uF	12.5mm, 5mm pitch	Alu, Elytic, >50V, 105C	365-4329	R12	1k	0805	Chip Resistor	223-0427
C4	10uF	4mm dia, 1.5mm pitch	Alu, Elytic, >16V 105C	414-9008	R14	39k	Axial	Resistor 0.25W	148-871
C5	10uF	4mm dia, 1.5mm pitch	Alu, Elytic, >16V 105C	414-9008	R17	100k	0805	Chip Resistor	223-0691
C6	1nF	0805	Ceramic Chip Cap >16V X7R	211-3552	R18	1k	0805	Chip Resistor	223-0427
C7	1nF	0805	Ceramic Chip Cap >16V X7R	211-3552	R19	27k	0805	Chip Resistor	223-0613
C8	220nF	0805	Ceramic Chip Cap >25V X5R	648-0884	R20	1k	0805	Chip Resistor	223-0427
C9	220nF	0805	Ceramic Chip Cap >25V X5R	648-0884	R21	47k	0805	Chip Resistor	223-0641
C10	220nF	0805	Ceramic Chip Cap >25V X5R	648-0884	R22	1k	0805	Chip Resistor	223-0427
C11	100nF	0805	Ceramic Chip Cap >35V X5R/X7R	237-7100	R23	47k	0805	Chip Resistor	223-0641
C12	470nF	0805	Ceramic Chip Cap >16V X5R/X7R	496-2845	R24	1k	0805	Chip Resistor	223-0427
C13	100nF	0805	Ceramic Chip Cap >16V X5R/X7R	237-7100	R25	47k	0805	Chip Resistor	223-0641
C14	100nF	0805	Ceramic Chip Cap >50V X5R	237-7100	R26	1k	0805	Chip Resistor	223-0427
C15	100nF	0805	Ceramic Chip Cap >50V X5R	237-7100	R27	47k	0805	Chip Resistor	223-0641
C16	100nF	0805	Ceramic Chip Cap >50V X5R	237-7100	R28	1k	0805	Chip Resistor	223-0427
C17	100nF	0805	Ceramic Chip Cap >50V X5R	237-7100	R29	47k	0805	Chip Resistor	223-0641
C18	680pF	Radial 5mm	Ceramic Cap >16V COG (Farnell)	1100511	R30	1k	0805	Chip Resistor	223-0427
C19	100nF	0805	Ceramic Chip Cap >50V X5R	237-7100	R31	47k	0805	Chip Resistor	223-0641
C20	1nF	0805	Ceramic Chip Cap >16V X7R	211-3552	R32	1k	0805	Chip Resistor	223-0427
C21	100nF	0805	Ceramic Chip Cap >16V X5R/X7R	237-7100	R33	10k	0805	Chip Resistor	223-0562
D1	BAT54	SOT23	Schottky Diode 0.2A 30V	436-7818	R42	3k9	0805	Chip Resistor	223-0506
*Gx	\	1mm PCB Hole	x4 Ground bars, copper wire, 20swg	355-063	R43	3k9	0805	Chip Resistor	223-0506
IC1	A3930/A3931 skt	eLQFP48 in socket	Sensata Technologies 3007-048-6-07 \ (previously Welis-Cit 7007-048-X-07)	\	R46	47k	0805	Chip Resistor	223-0641
**LED1	\	3mm	LED Red 20mA	228-4979	R47	2k2	0805	Chip Resistor	223-0477
**LED2	\	3mm	LED Red 20mA	228-4979	R48	47k	0805	Chip Resistor	223-0641
LK4 (@ LK4)	2-way \	SIL 2.54mm pitch \	Single row jumper header \ Jumper shorting link (Red)	251-8086 \ 251-8531	R49	2k2	0805	Chip Resistor	223-0477
M1	IRFR2405PbF	DPAK (TO252AA)	MOSFET	543-2222	R50	50k	6mm	Multiturn Cermet Trim Resistor	521-9293
M2	IRFR2405PbF	DPAK (TO252AA)	MOSFET	543-2222	R51	10k	0805	Chip Resistor	223-0562
M3	IRFR2405PbF	DPAK (TO252AA)	MOSFET	543-2222	R52	50k	6mm	Multiturn Cermet Trim Resistor	521-9293
M4	IRFR2405PbF	DPAK (TO252AA)	MOSFET	543-2222	R53	470k	0805	Chip Resistor	223-0786
M5	IRFR2405PbF	DPAK (TO252AA)	MOSFET	543-2222	R54	470k	0805	Chip Resistor	223-0786
M6	IRFR2405PbF	DPAK (TO252AA)	MOSFET	543-2222	R55	470k	0805	Chip Resistor	223-0786
PCB	EDC014R3	\	A3930/A3931 Demo Board Rev3	\	R56	470k	0805	Chip Resistor	223-0786
Q1	BC807	SOT23	NPN Bipolar Transistor	113-0219	R57	470k	0805	Chip Resistor	223-0786
Q2	BC807	SOT23	NPN Bipolar Transistor	113-0219	R58	470k	0805	Chip Resistor	223-0786
Q3	BCP54	SOT223	NPN Bipolar Transistor	112-5447	S1	8-Way	DIL-16	8-pole DIP Switch	342-118
R1	33R	0805	Chip Resistor	223-0225	TPx	\	1mm PCB Hole	x36 Test Terminals	262-2185
R2	33R	0805	Chip Resistor	223-0225	X1	2-way	7.62mm	Pheonix 2-way Screw terminal	189-5966
R3	33R	0805	Chip Resistor	223-0225	X2	3-way	7.62mm	Pheonix 3-way Screw terminal	189-5972
R4	33R	0805	Chip Resistor	223-0225	X3	2-way	5.08mm	Pheonix 2-way Screw terminal	425-8720
R5	33R	0805	Chip Resistor	223-0225	X4	26-way	26-pin	3M 26-way connector	542-9030
R6	33R	0805	Chip Resistor	223-0225	X5	3-way	5.08mm	Pheonix 3-way Screw terminal	425-8736
R7	R022	2512 6.4x3.2mm	1W Chip Resistor	294-5602	(@ R14/C18)	1-way	SIL 2.54mm pitch	x4 SIL sockets for R14/C18 parts	267-7416
Customer Option - Add Additional Sense Resistors if required for Higher Currents					(@ Board)	\	\	Rubber feet (x5 per board)	248-451
Customer Option - Add Phase Voltage Potential Divider if required for bemf sensing					NoFit				
R8	R022	2512 6.4x3.2mm	1W Chip Resistor	294-5602	R60	10k	0805	Chip Resistor	223-0562
R9	R022	2512 6.4x3.2mm	1W Chip Resistor	294-5602	R61	27k	0805	Chip Resistor	223-0613
					R62	10k	0805	Chip Resistor	223-0562
					R63	27k	0805	Chip Resistor	223-0613
					R64	10k	0805	Chip Resistor	223-0562
					R65	27k	0805	Chip Resistor	223-0613

### Revision History

Number	Date	Description
-	September 13, 2016	Initial release

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