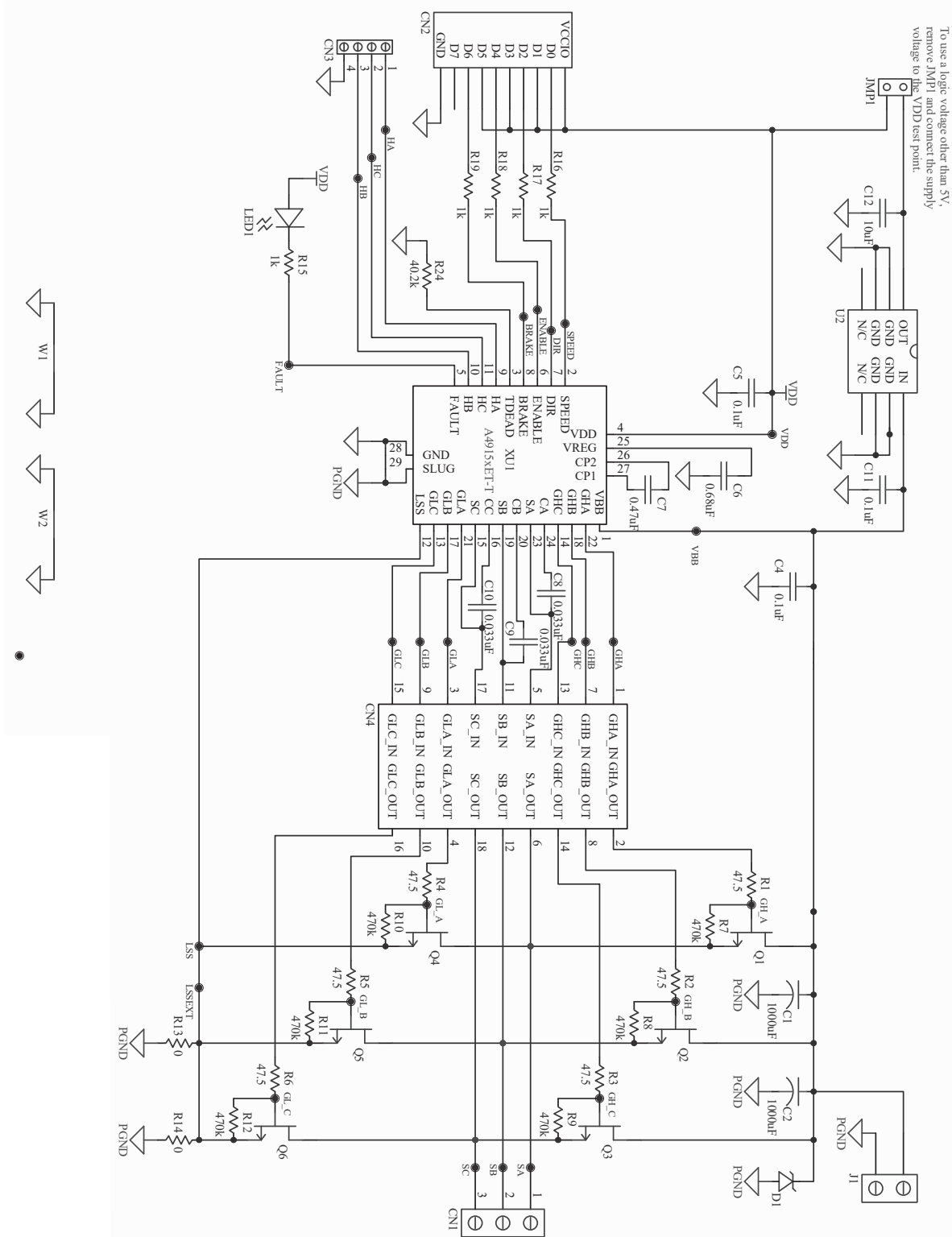
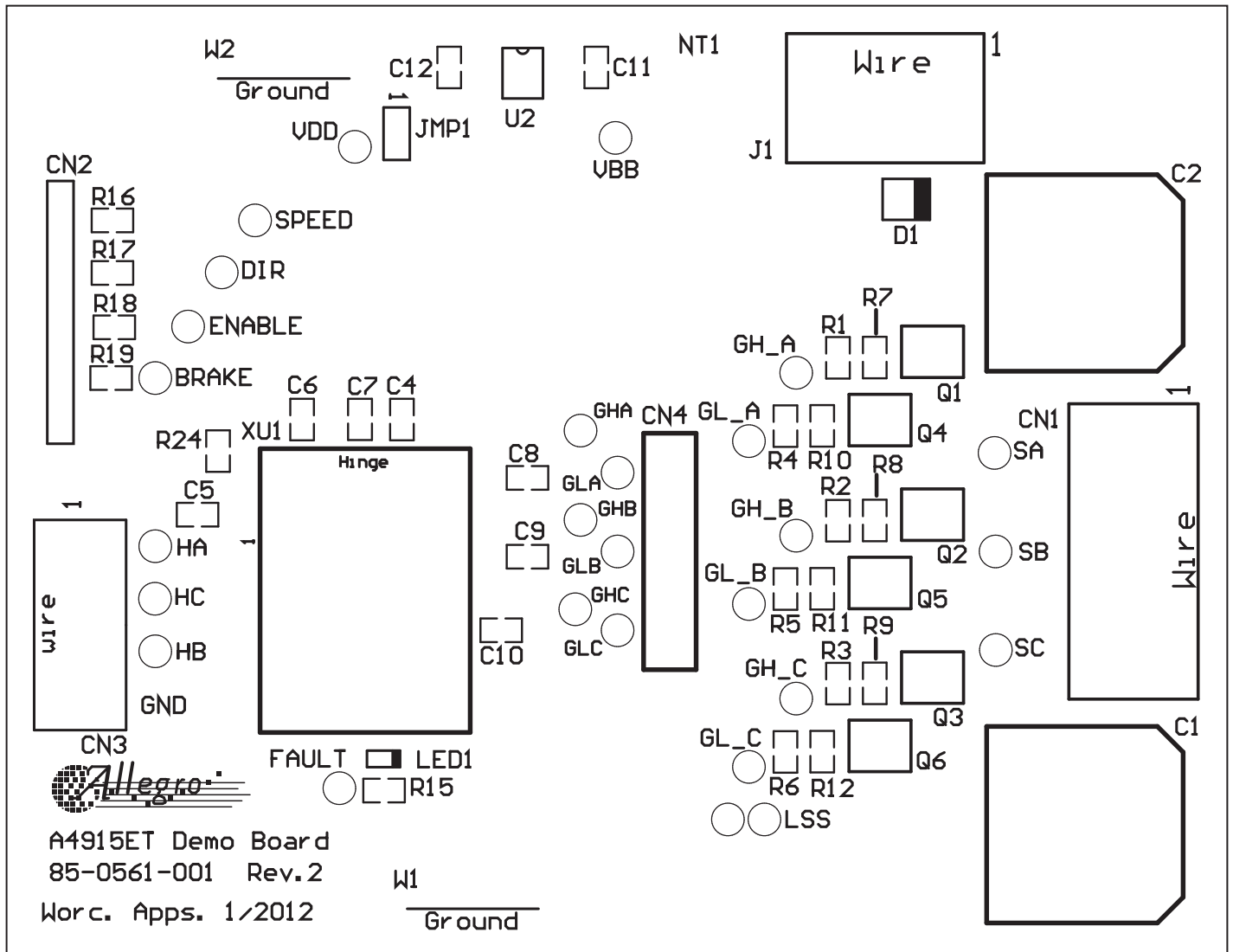


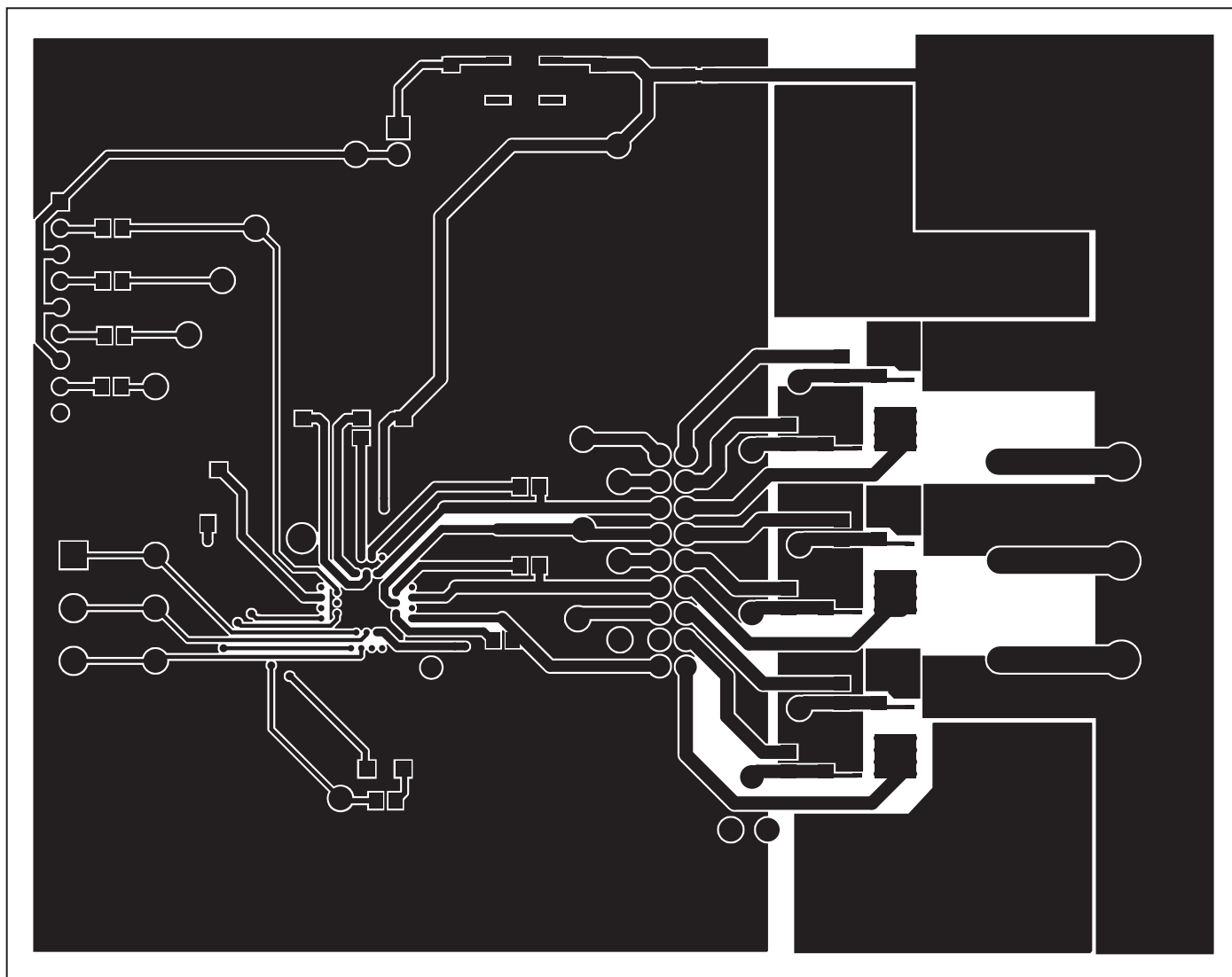
## Demo Board Schematic/Layout

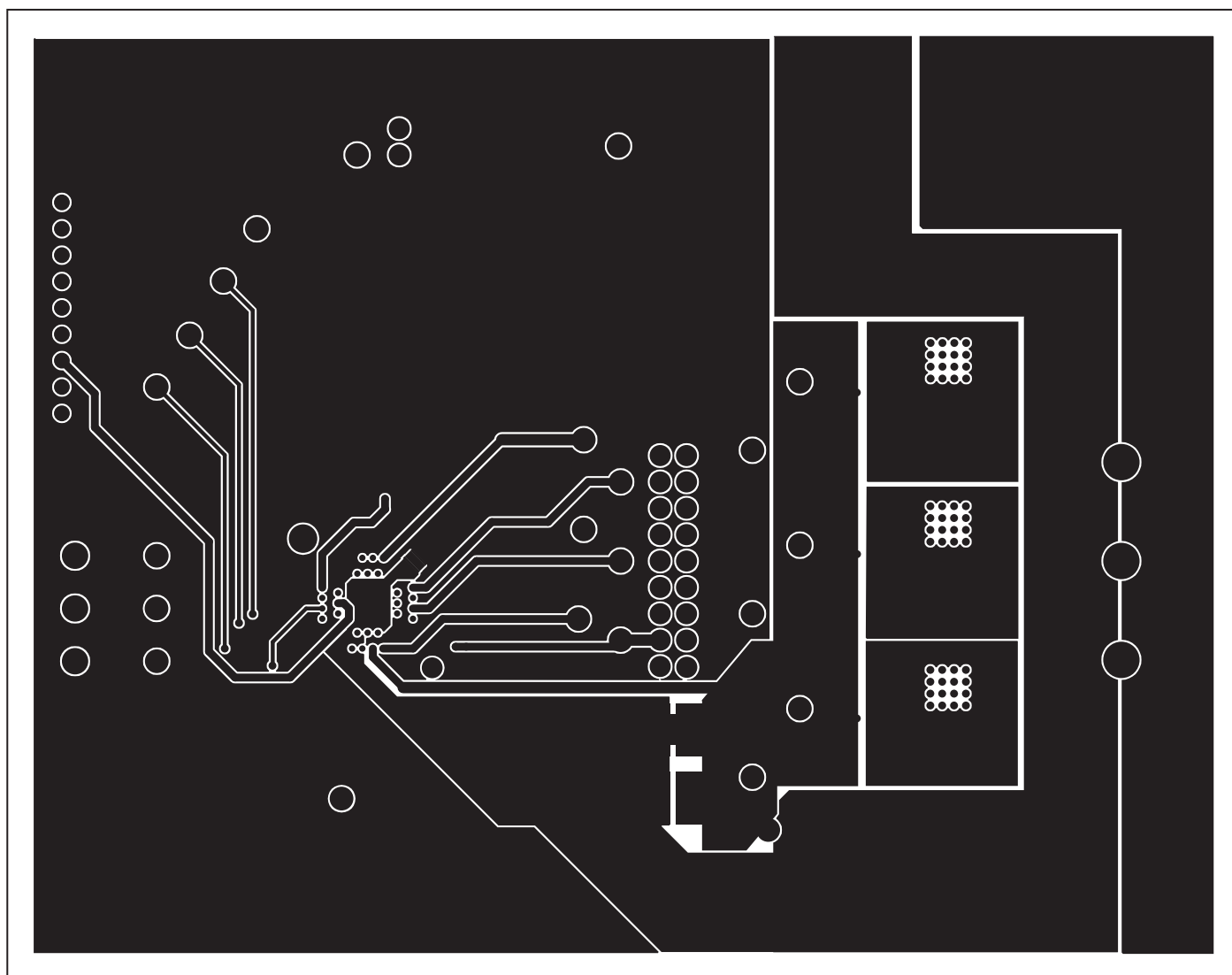
### SCHEMATIC

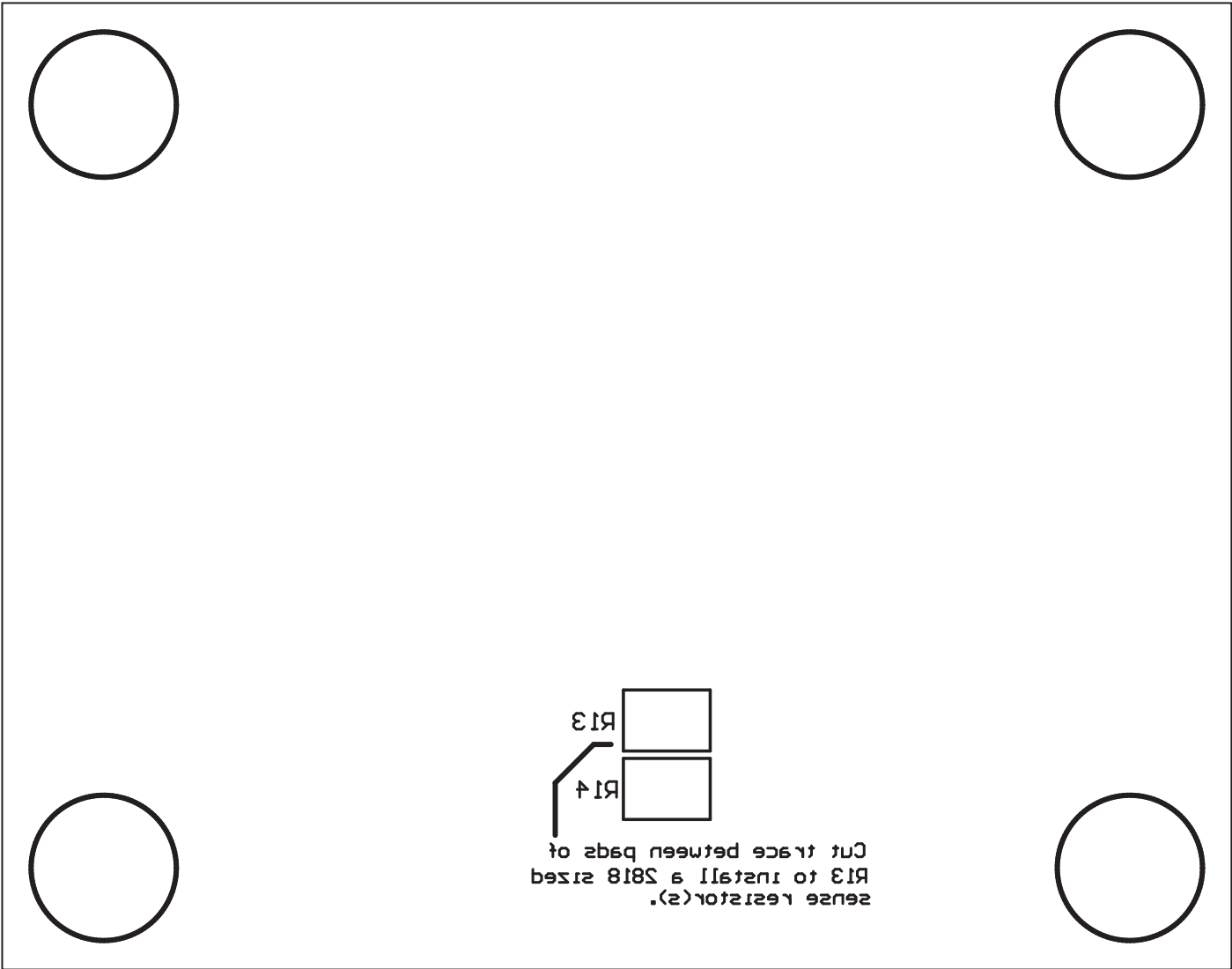


## LAYOUT









## BILL OF MATERIALS

All Devices MUST be ROHS Compliant

Item	Quantity	Designator	value	Description	PartType	Footprint
1	26	BRAKE, DIR, ENABLE, FAULT, GH_A, GH_B, GH_C, GHA, GHB, GHC, GL_A, GL_B, GL_C, GLA, GLB, GLC, HA, HB, HC, LSS, SA, SB, SC, SPEED, VBB, VDD		Large Test Point	Keystone Electronics 5010; Digikey 5010K-ND	PAD 57 125 TP HB
2	2	C1, C2	1000uF	50V Capacitor	United Chemi-Con EMVY500GDA102MMN0S; Digikey 565-2501-2-ND	UCC MN0 Cap
3	3	C4, C5, C11	0.1uF	50V Capacitor	TDK C2012X7R1H104K; Digikey 445-1349-1-ND	0805
4	1	C6	0.68uF	25V Capacitor	TDK CGA4J3X7R1E684K; Digikey 445-5686-1-ND	0805
5	1	C7	0.47uF	25V Capacitor	AVX 08053D474KAT2A; Digikey 478-1407-1-ND	0805
6	3	C8, C9, C10	0.033uF	50V Capacitor	Yageo CC0805KRX7R9BB333; Digikey 311-1374-1-ND	0805
7	1	C12	10uF	25V Capacitor	Murata GRM21BR61E106KA73L; Digikey 490-5523-1-ND	0805
8	1	CN1		3-Pin Screw Down Connector	Phoenix Contact 1714984; Digikey 277-1272-ND	MKDS 5/ 3-9,2 2
9	1	CN2, JMP1		10-Pin Male Header (Cut from 50-Pin Strip), Cut pins from 50-pin strip	Samtec TSW-150-07-T-S; Digikey SAM1035-50-ND	2-pos. shunt, 10pinUSBConn
10	1	CN3		4-Pin Screw Down connector	On Shore ED120/4DS; Digikey ED2227-ND	4-pin screw down connector2
11	1	CN4		Cut from 80-Pin Strip	Tyco 9-146257-0; Digikey A34977-40-ND	18-Pin Dual Row 0.1" Connector
12	1	D1		TVS Zener	Bourns SMBJ45A; Digikey SMBJ45ABCT-ND	DO-214AA
13	4			Bumpon Foot	3M SJ-5303 (CLEAR); Digikey SJ5303-7-ND	Bumpon Foot
14	1	J1		2-Pin Screw Down Connector	Phoenix Contact 1714971; Digikey 277-1271-ND	MKDS 5/ 2-9,5
15	1	LED1		Green LED	Lite-On LTST-C150GKT; Digikey 160-1169-1-ND	1206 LED
16	6	Q1, Q2, Q3, Q4, Q5, Q6		60V 40A 14.4mohm N-CH Mosfet	IR IRFH5406TR2PBF; Digikey IRFH5406TR2PBFCT-ND	PQFN 5x6 B
17	6	R1, R2, R3, R4, R5, R6	47.5	1/8W Resistor	Panasonic ERJ-6ENF47R5V; Digikey P47.5CCT-ND	0805
18	6	R7, R8, R9, R10, R11, R12	470k	1/8W Resistor	Panasonic ERJ-6ENF4703V; Digikey P470KCCT-ND	0805
19	5	R15, R16, R17, R18, R19	1k	1/8W Resistor	Panasonic ERJ-6GEYJ102V; Digikey P1.0KACT-ND	0805
20	1	R24	40.2k	1/8W Resistor	Vishay/Dale CRCW080540K2FKEA; Digikey 541-40.2KCCT-ND	0805
21	10			Shunts for JMP1 and CN4	3M 969102-0000-DA; Digikey 3M9580-ND	
22	1			pcb	85-0561-001 Rev. 2	
23	1	U2	5V	Linear Voltage Regulator	National LM2936HVMA-5.0/NOPB; Digikey LM2936HVMA-5.0/NOPB-ND	LM2936HVMA
24	2	W1, W2		22 Gauge Buss Wire (300mils above pcb)		Scope Ground
25	1	XU1		Socket for 3-Phase Motor Controller	28QN50K15050-B	28QN50K15050-B

## Revision History

Number	Date	Description
–	September 6, 2016	Initial release

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