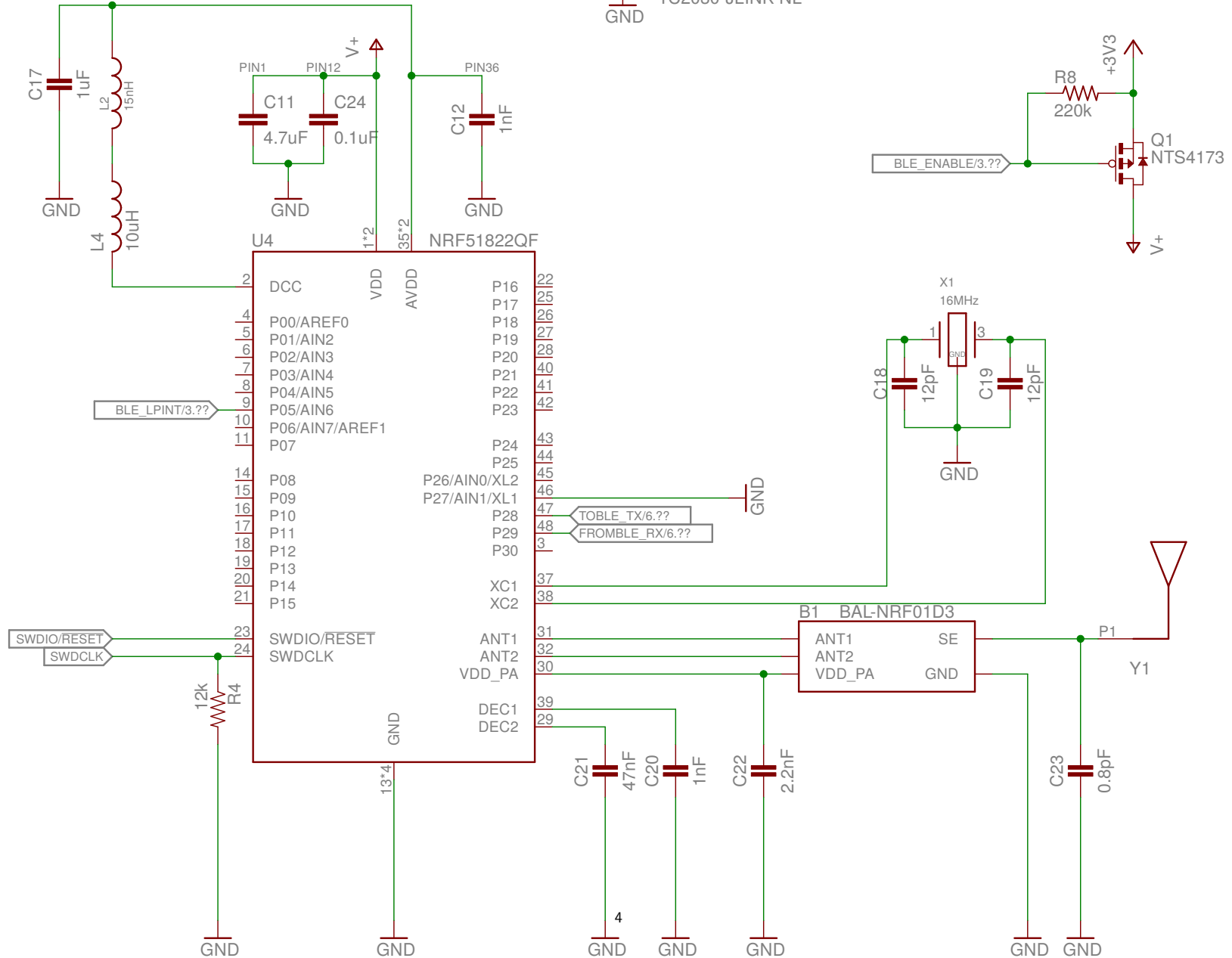
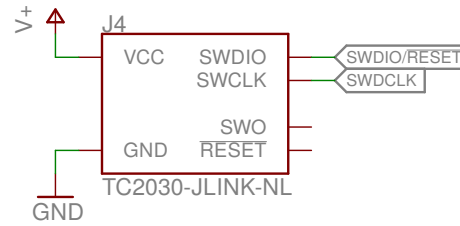
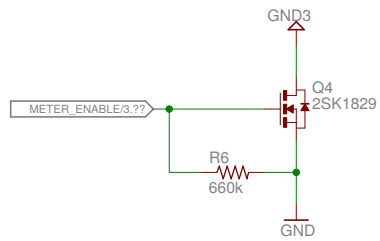
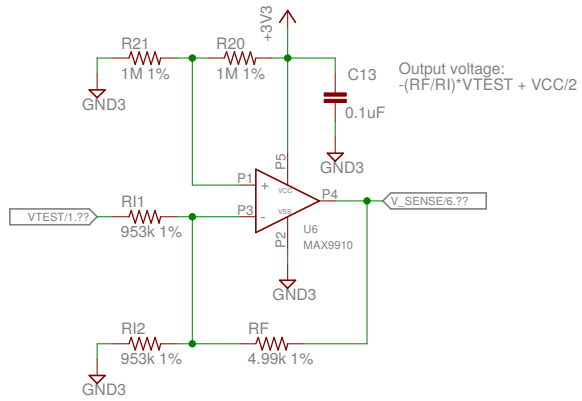


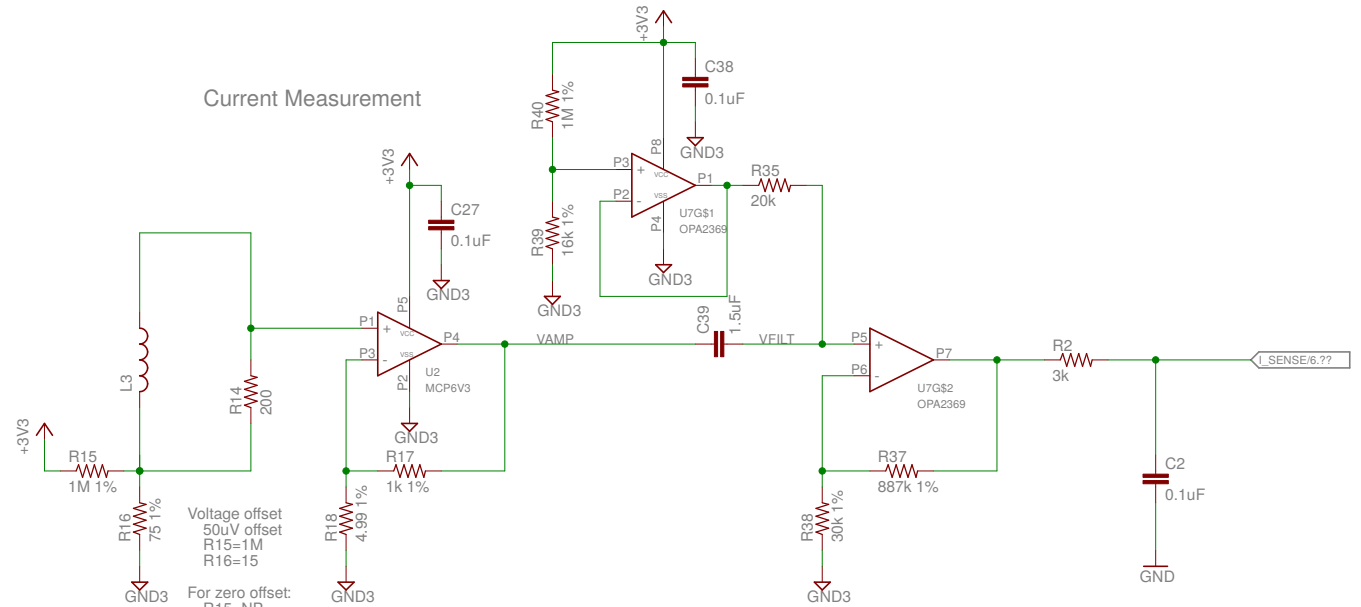
## JTAG Connection

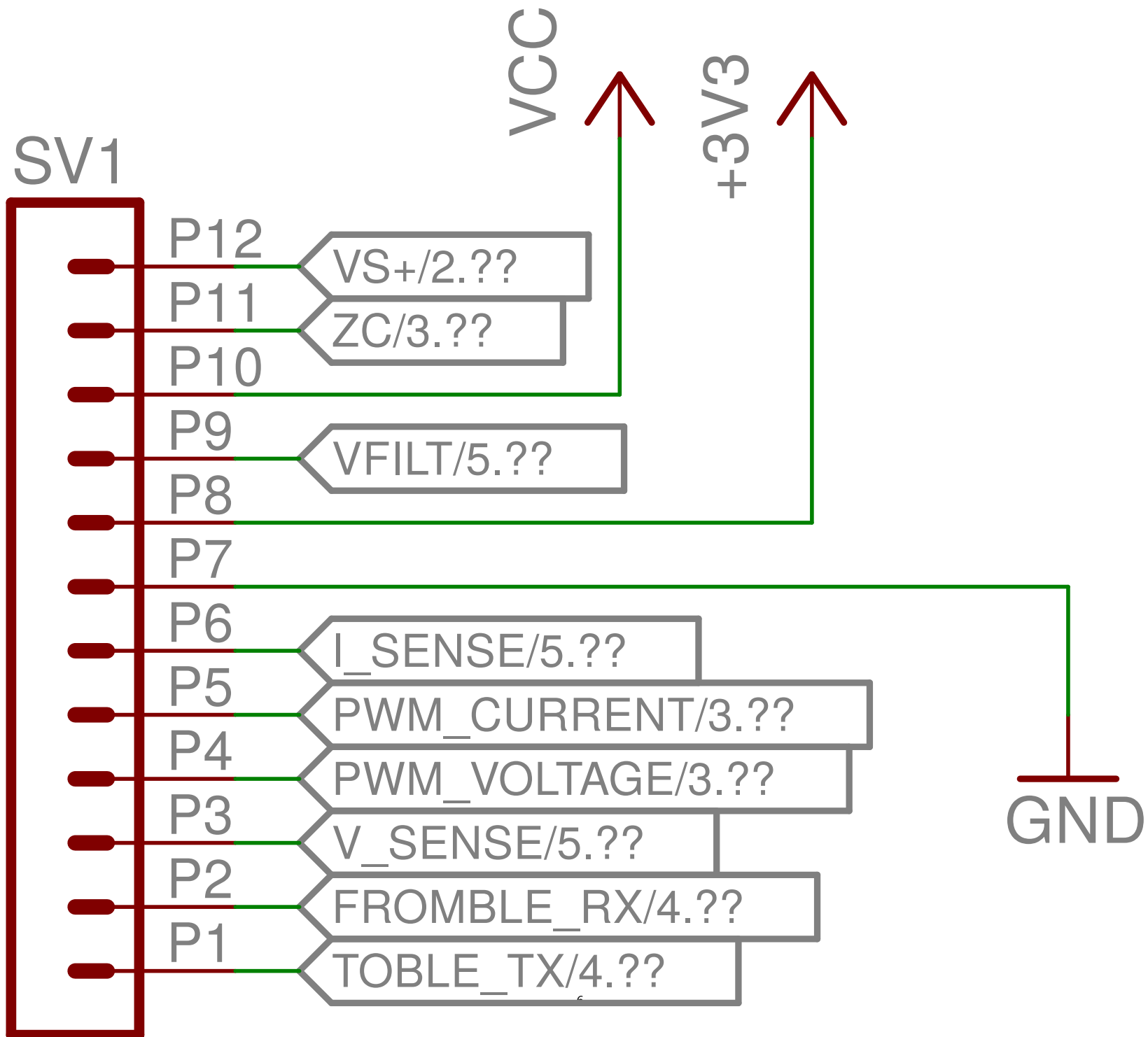


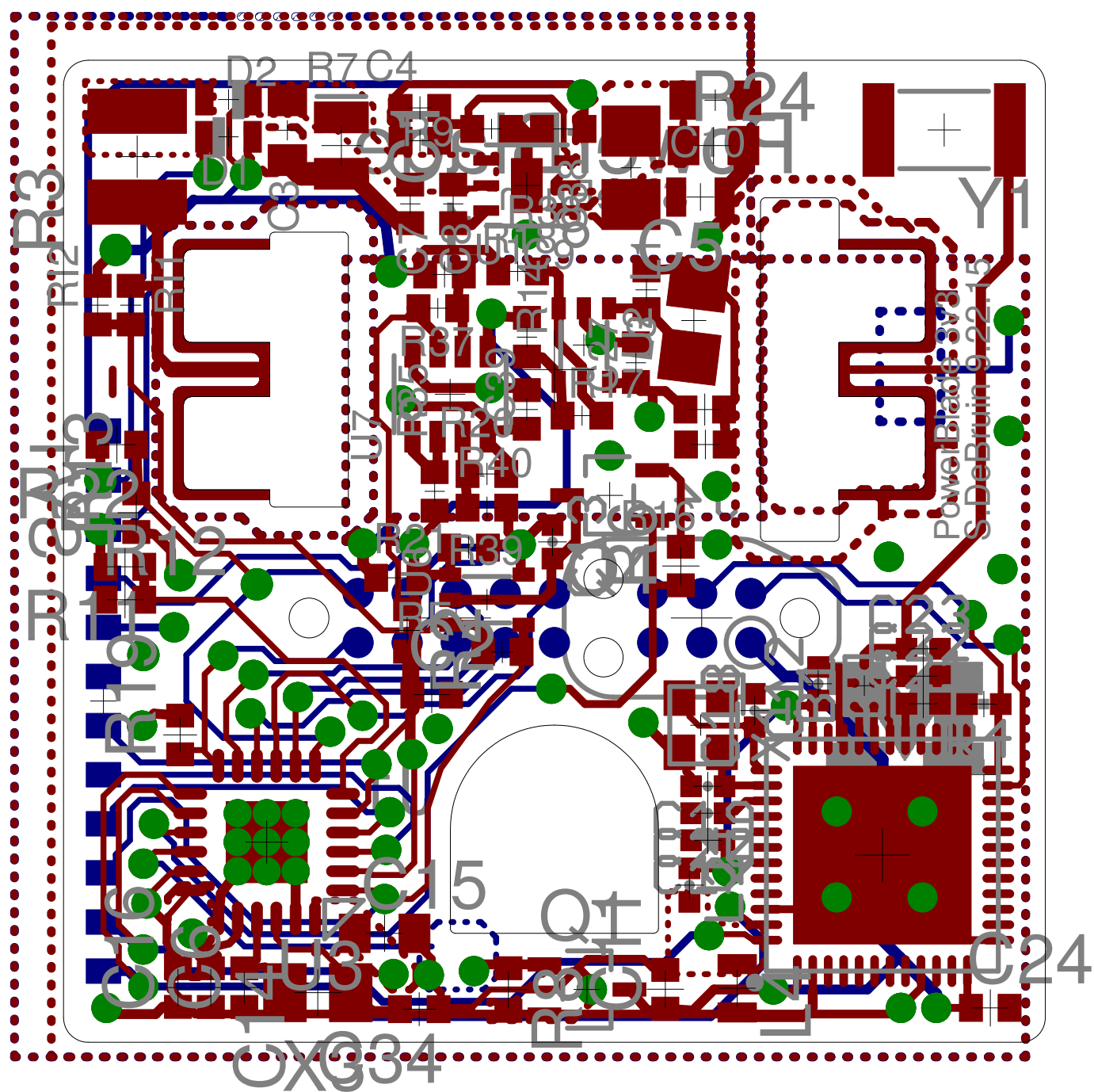
## Voltage Measurement

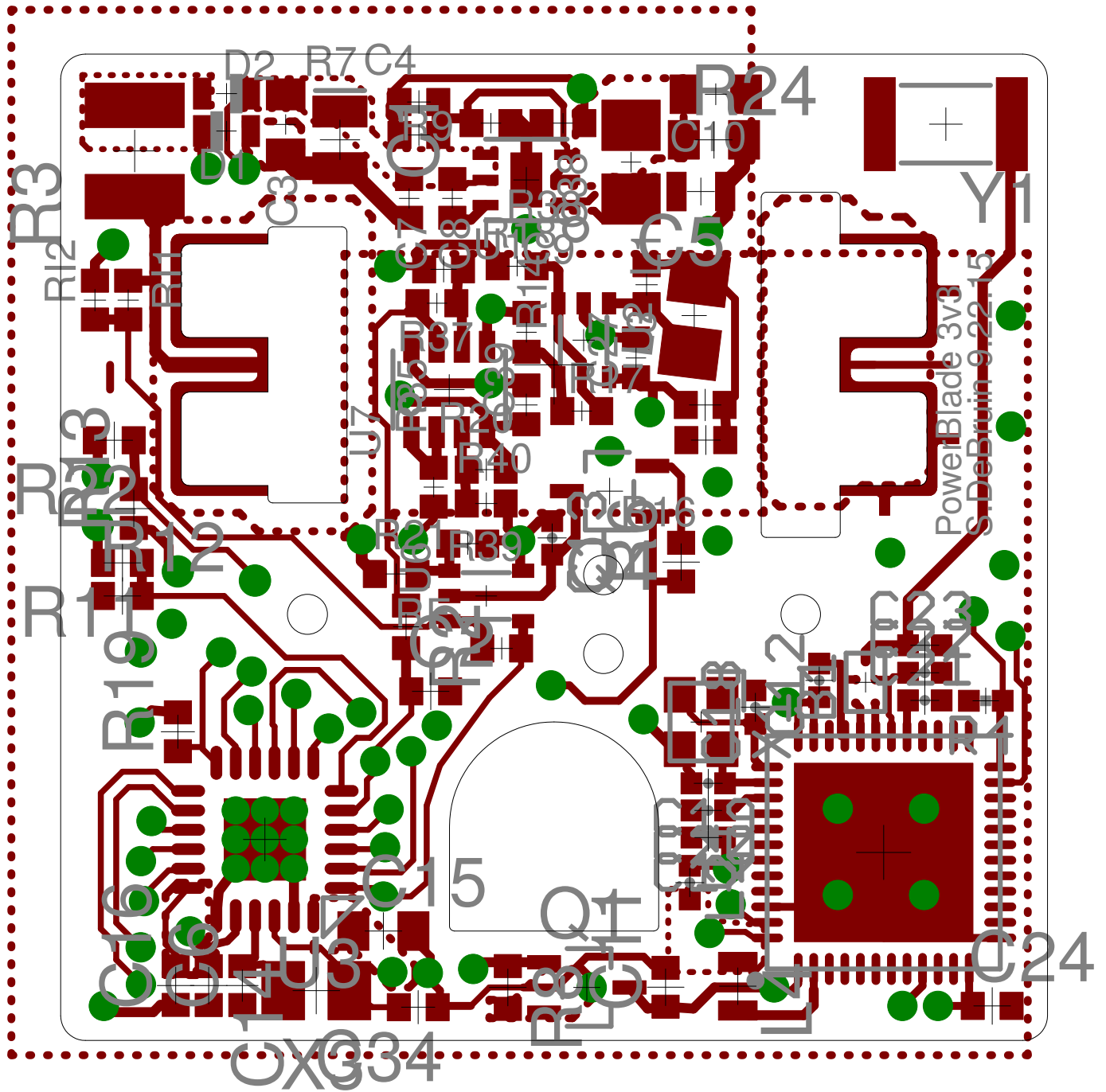


## Current Measurement

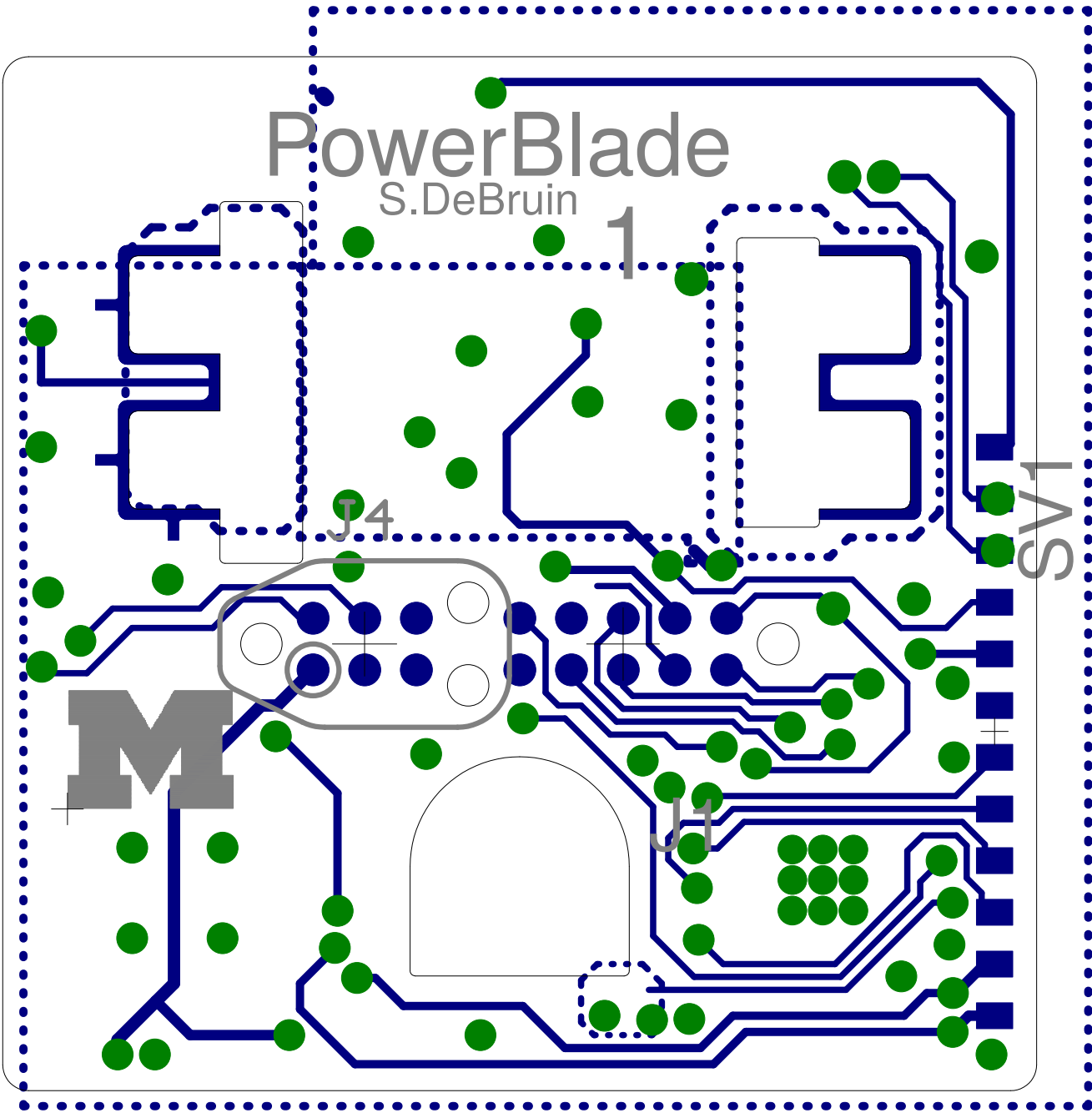


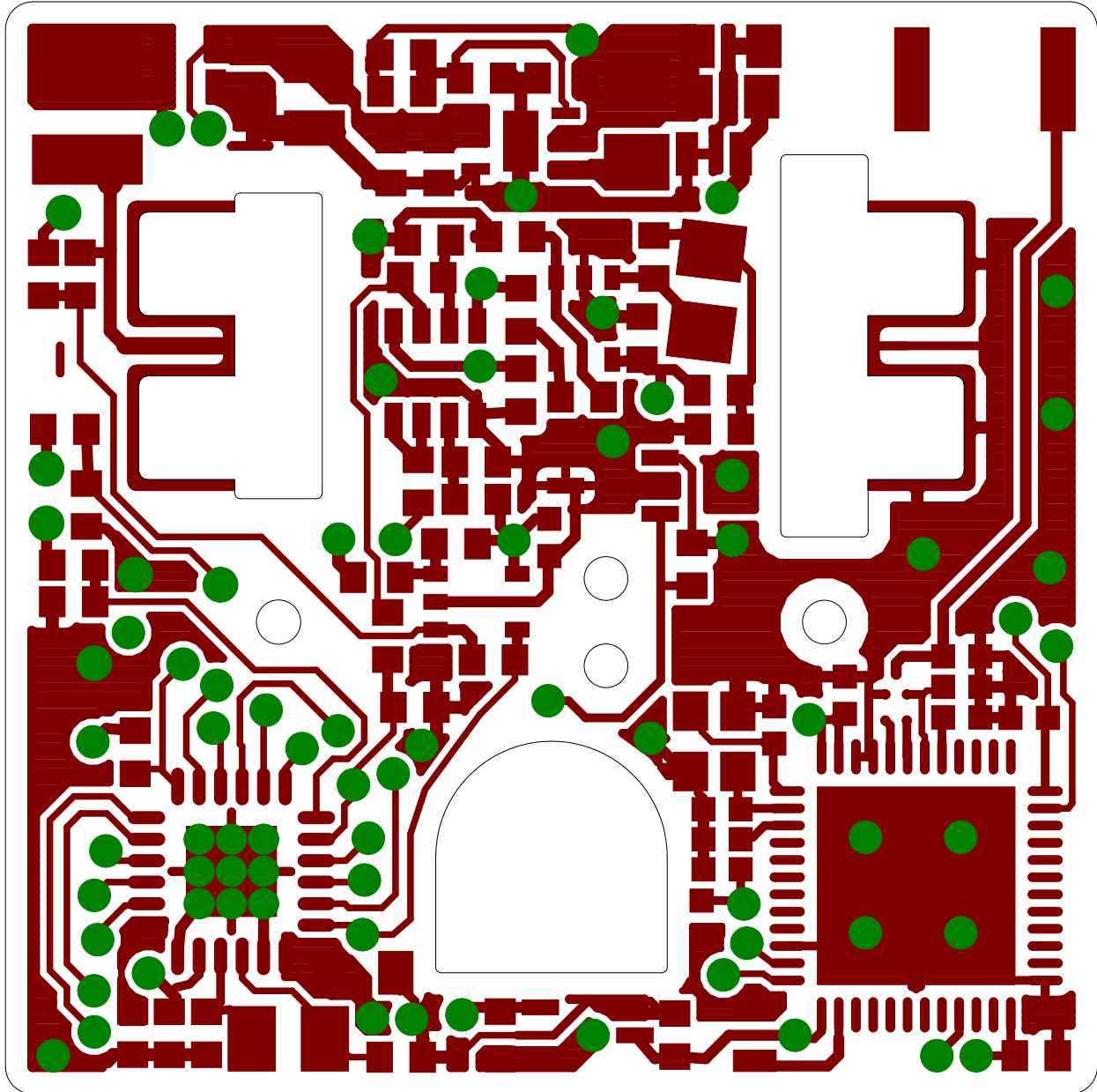


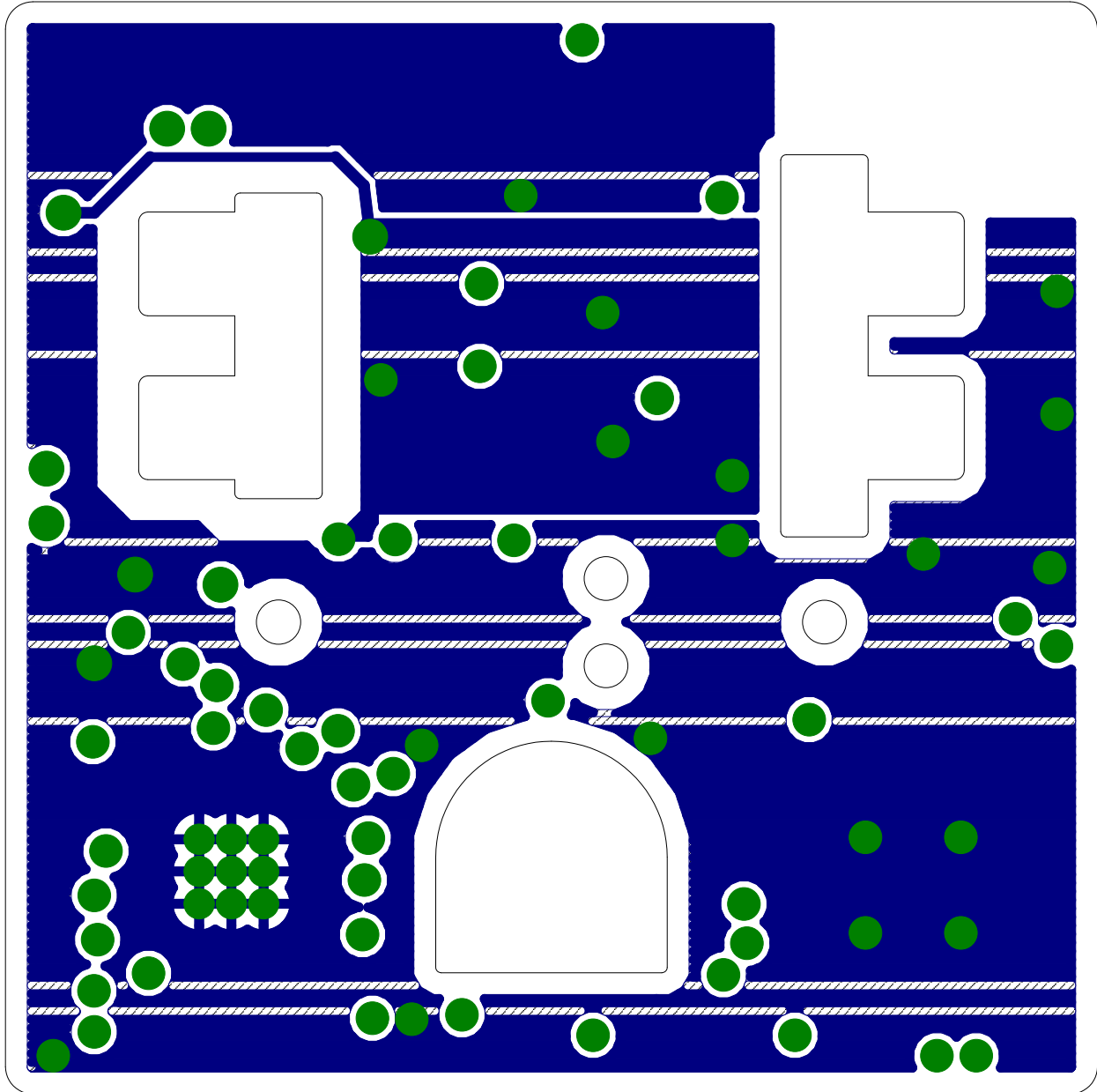


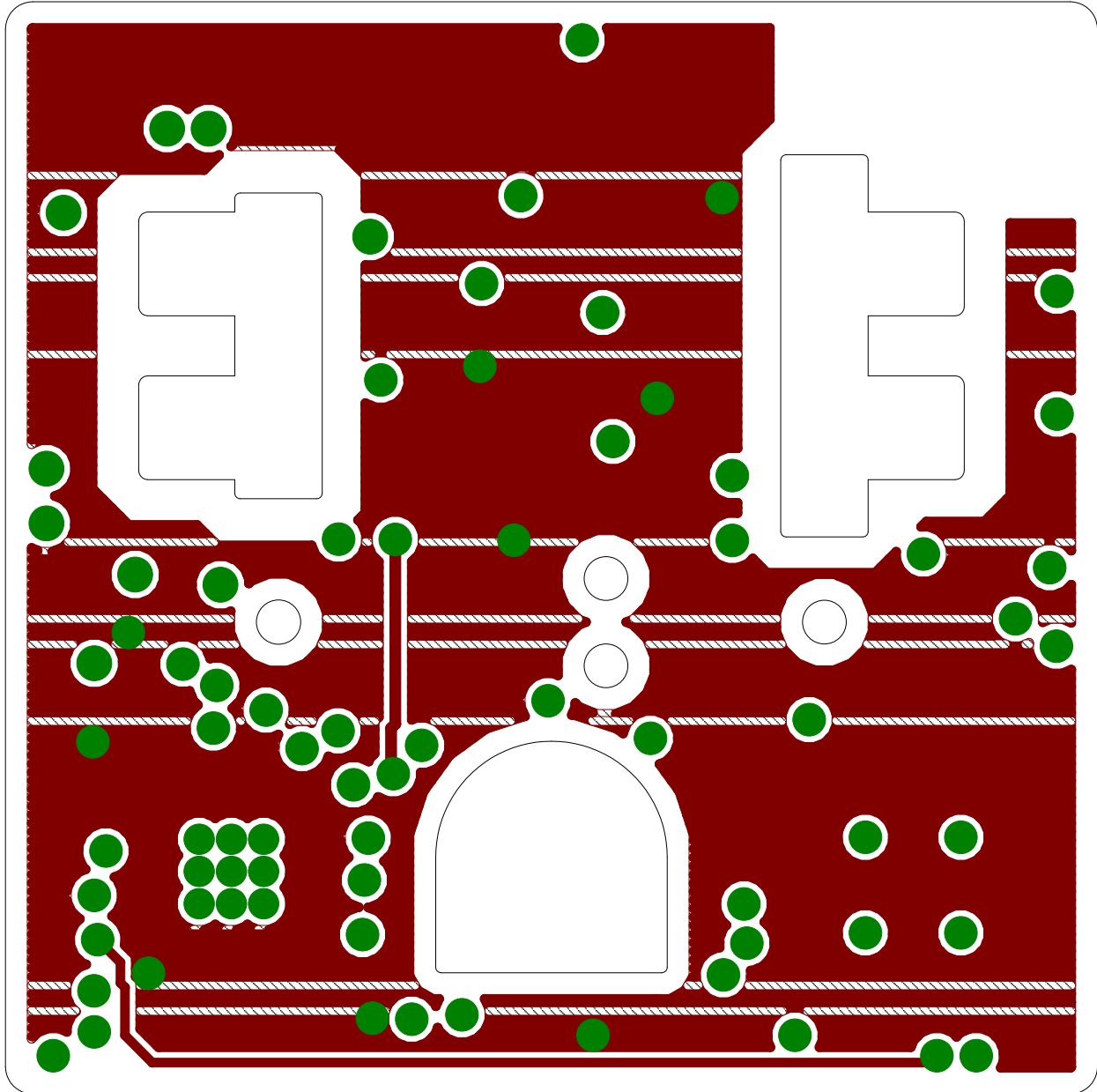




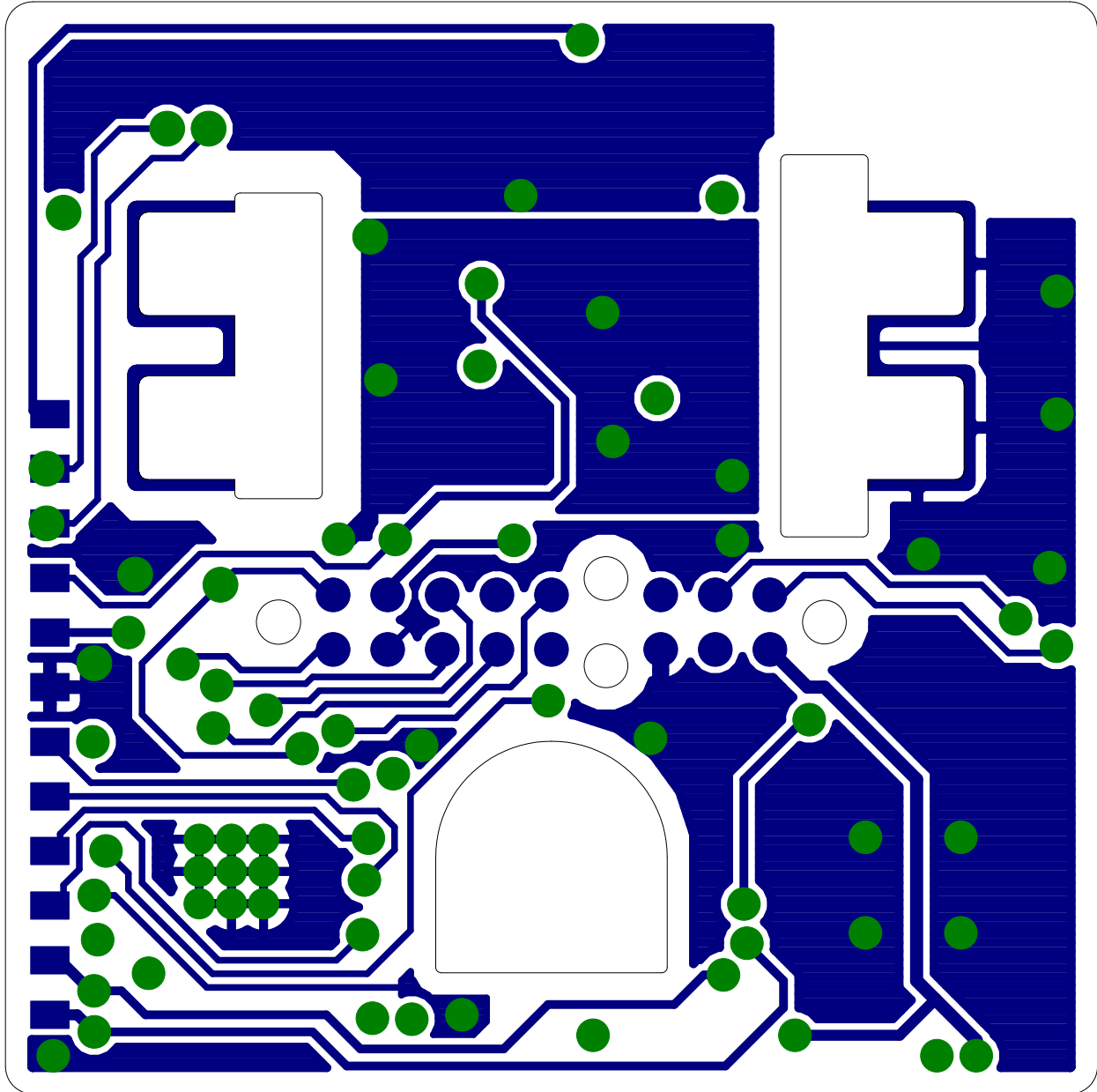


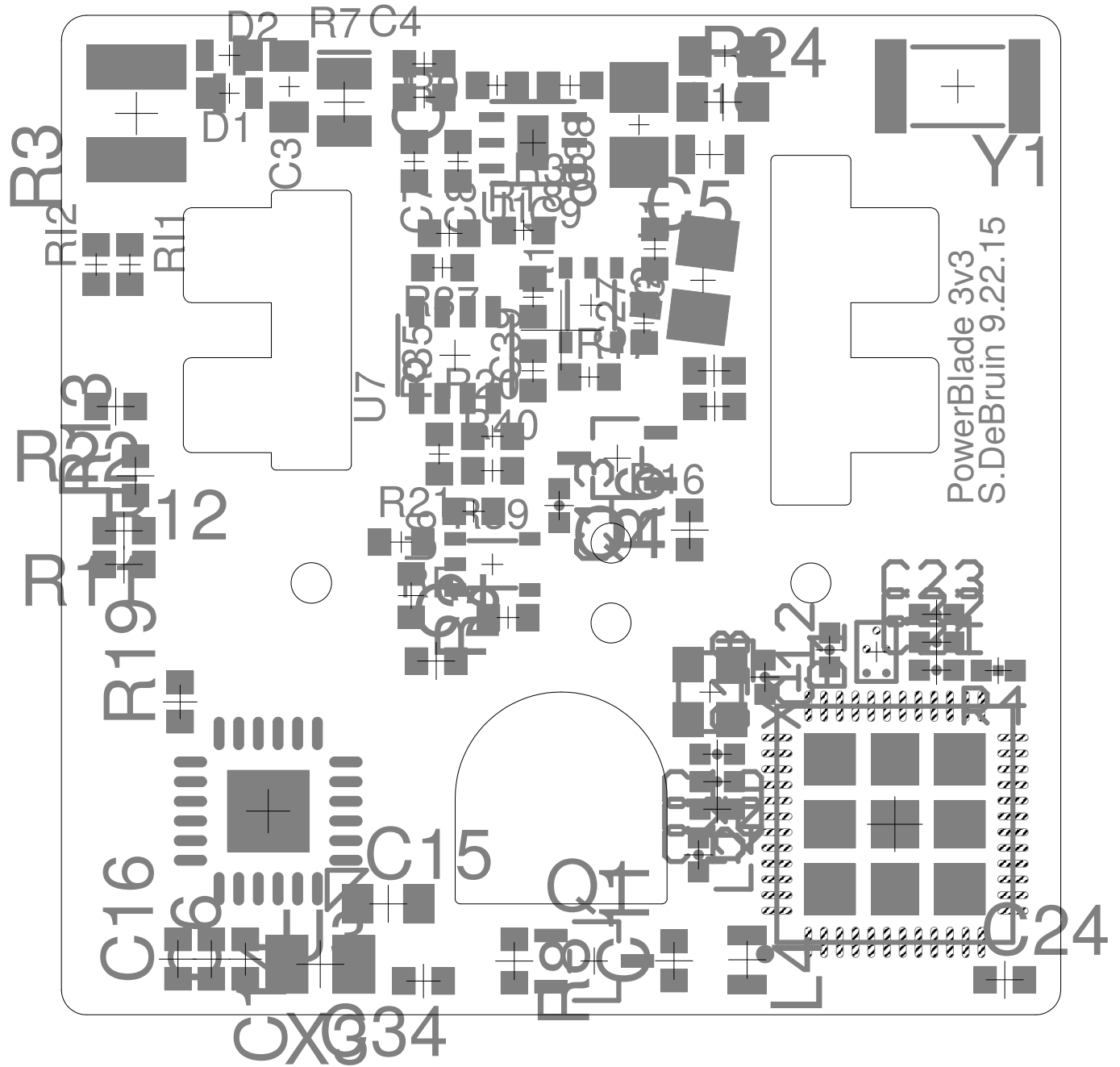


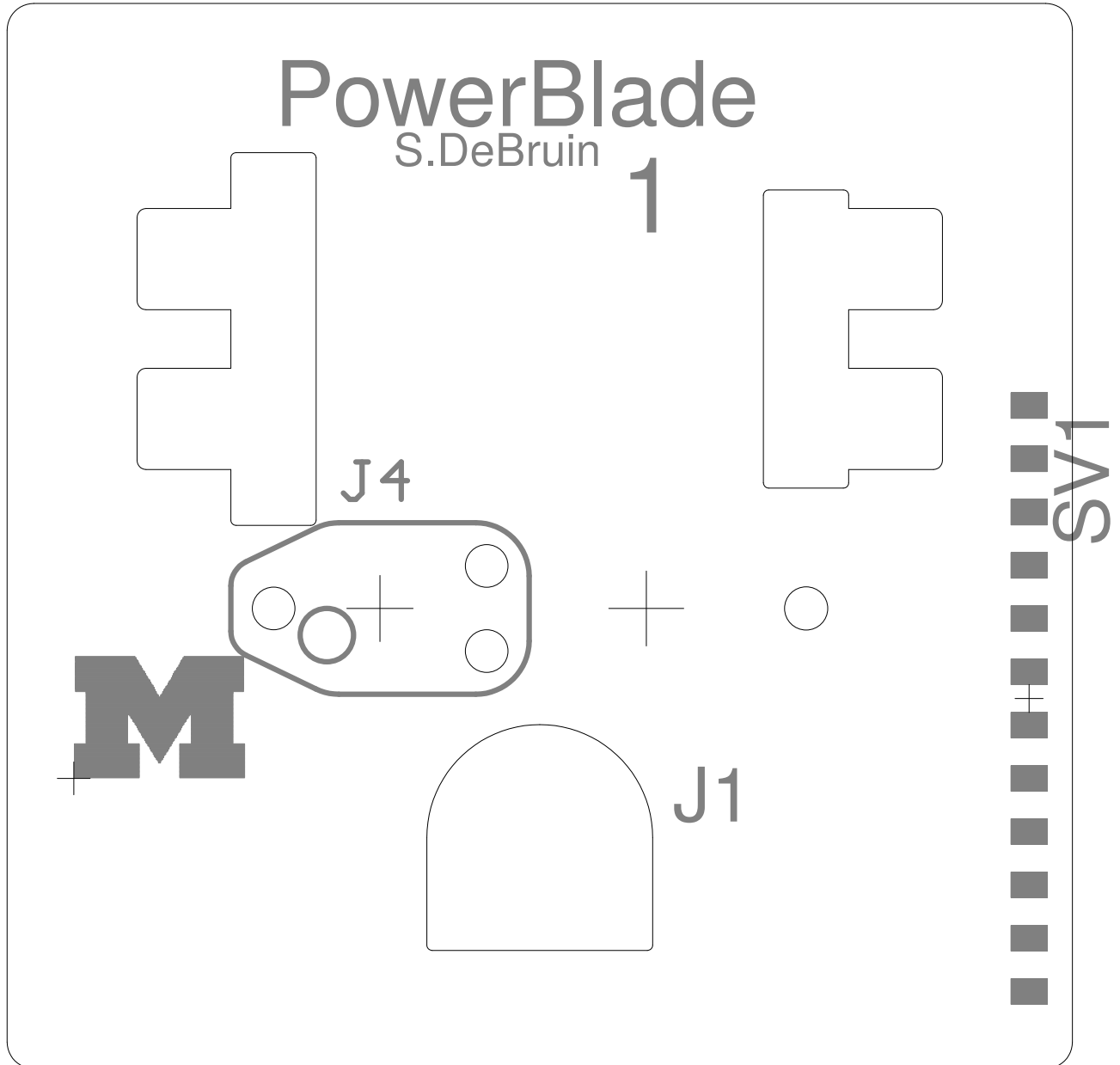




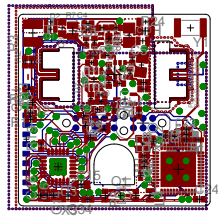
Bottom Copper Layer





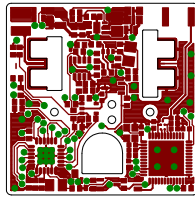


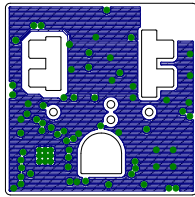
# Top and Bottom Layers 1:1 Scale

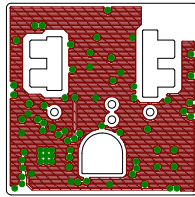




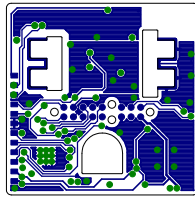
Top Layer 1:1 Scale







## Bottom Copper Layer 1:1 Scale



Item	Quantity	Part	Value	Device
1	1	B1	BAL-NRF01D3	BAL-NRF01D3
2	1	C1	33uF	CPOL-US0805_SM
3	1	C11	4.7uF	C-EUC0402
4	2	C12, C20	1nF	CAPACITOR
5	1	C15	10uF	C-EUC0603_SM
6	1	C16	470nF	C-EUC0402
7	1	C17	1uF	CAPACITOR
8	2	C18, C19	12pF	CAPACITOR
9	1	C2	0.1uF	C-EUC0402
10	1	C21	47nF	CAPACITOR
11	1	C22	2.2nF	CAPACITOR
12	1	C23	0.8pF	CAPACITOR
13	2	C3, C10	22uF	C-EUC0603_SM
14	1	C39	1.5uF	C-EUC0402
15	1	C4	22pF	C-EUC0402
16	1	C5	NP	C-EUC0603_TN
17	2	C6, C34	8pF	C-EUC0402
18	1	C7	4.7uF	C-EUC0402
19	7	C8, C9, C13, C14,	0.1uF	C-EUC0402
20	1	D1	ZENERBZT52	ZENERBZT52
21	1	D2	DIODE	DIODE
22	1	J1	JTAG_14PIN_IDC-ND	JTAG_14PIN_IDC-ND
23	1	J4	TC2030-JLINK-NL	TC2030-JLINK-NL
24	1	L1	10uH	L-USL0805
25	1	L2	15nH	INDUCTOR0402
26	1	L3		L-USL0805
27	1	L4	10uH	L-USL0603_TN
28	1	Q1	NTS4173	NTS4173
29	1	Q4	2SK1829	2SK1829
30	2	R12, R13	330k	R-US_R0402
31	1	R14		200 R-US_R0402
32	4	R15, R20, R21, R4	1M 1%	R-US_R0402
33	1	R16	75 1%	R-US_R0402
34	1	R17	1k 1%	R-US_R0402
35	1	R18	4.99 1%	R-US_R0402
36	1	R19	47k	R-US_R0402
37	1	R2	3k	R-US_R0402_SM
38	1	R24	1 1%	R-US_R0603_SM
39	1	R3	69.8k	R-US_R1210
40	1	R35	20k	R-US_R0402
41	1	R37	887k 1%	R-US_R0402
42	1	R38	30k 1%	R-US_R0402
43	1	R39	16k 1%	R-US_R0402
44	1	R4	12k	RESISTOR
45	3	R6, R11, R22	665k	R-US_R0402
46	1	R7	560k	R-US_R0402
47	1	R8	220k	R-US_R0402_SM

48	1 R9	180k	R-US_R0402
49	1 RF	4.99k 1%	R-US_R0402
50	2 RI1, RI2	953k 1%	R-US_R0402
51	1 SV1		MA12-11M27
52	1 U1	TPS62122	TPS62122
53	1 U2	OPA333	OPA333
54	1 U3	MSP430FR5738	MSP430FR5738
55	1 U4	NRF51822QF	NRF51822QF
56	1 U6	MAX9910	MAX9910
57	1 U7	OPA2369	OPA2369
58	1 X1	16MHz	TXC-8Y
59	1 X3	32.768kHz	CRYSTAL_0805
60	1 Y1	UREACH_XTEND	UREACH_XTEND

Package  
BAL-NRF01D3  
CPOL0805\_SM  
C0402  
0402\_CAP  
C0603\_SM  
C0402  
0402\_CAP  
0402\_CAP  
C0402  
0402\_CAP  
0402\_CAP  
0402\_CAP  
C0603\_SM  
C0402  
C0402  
C0603\_TN  
C0402  
C0402  
C0402  
BZT52  
BAS521  
TC2050-IDC-NL-430-ND  
TC2030-IDC-NL  
L0805  
0402\_CAP  
L0805  
C0603\_TN  
SC-70-3  
SC-70-3  
R0402  
R0402  
R0402  
R0402  
R0402  
R0402  
R0402  
R0402\_SM  
R0603\_SM  
R1210  
R0402  
R0402  
R0402  
R0402  
0402\_RES  
R0402  
R0402  
R0402\_SM

R0402

R0402

R0402

MA12-1\_1MM27

WDFN-6

SC70-5

VQFN-24

QFN-48-6MM

SC70-5

SOT-23-8

TXC-8Y

805

UREACH\_XTEND



Description

50 ohm nominal input / conjugate match balun to nRF51422-QFAA,

POLARIZED CAPACITOR, American symbol

CAPACITOR, European symbol

0402 Capacitor

CAPACITOR, European symbol

CAPACITOR, European symbol

0402 Capacitor

0402 Capacitor

CAPACITOR, European symbol

0402 Capacitor

0402 Capacitor

0402 Capacitor

CAPACITOR, European symbol

CAPACITOR, European symbol

CAPACITOR, European symbol

CAPACITOR, European symbol

CAPACITOR, European symbol

CAPACITOR, European symbol

CAPACITOR, European symbol

INDUCTOR, American symbol

INDUCTOR, American symbol

INDUCTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

Resistor

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol

RESISTOR, American symbol  
RESISTOR, American symbol  
RESISTOR, American symbol  
PIN HEADER

Multiprotocol Bluetooth® 4.0 low energy/2.4 GHz RF SoC

2mmx1.6mm SMD Crystal

Distributor	Dist Part #	Type
DigiKey	497-13637-1-ND	BGA
DigiKey	478-8650-1-ND	smt
DigiKey	445-5947-1-ND	smt
DigiKey	490-1303-1-ND	smt
DigiKey	445-6853-1-ND	smt
DigiKey	445-4989-1-ND	smt
DigiKey	1276-1513-1-ND	smt
DigiKey	490-6197-1-ND	smt
DigiKey	490-10777-1-ND	smt
DigiKey	445-1264-1-ND	smt
DigiKey	490-5419-1-ND	smt
DigiKey	490-6269-1-ND	smt
DigiKey	445-9077-1-ND	smt
DigiKey	445-13815-1-ND	smt
DigiKey	445-1239-1-ND	smt
DigiKey	NP	DNS
DigiKey	445-4890-1-ND	smt
DigiKey	445-8023-1-ND	smt
DigiKey	445-4952-1-ND	smt
DigiKey	BZT52C10T-7DICT-ND	smt
DigiKey	BAS521-7DICT-ND	smt
DigiKey	NP	DNS
DigiKey	NP	DNS
DigiKey	490-4990-1-ND	smt
DigiKey	587-1521-1-ND	smt
DigiKey	732-3452-1-ND	smt
DigiKey	490-4025-1-ND	smt
DigiKey	NTS4173PT1GOSCT-ND	smt
DigiKey	2SK1829TE85LFCT-ND	smt
DigiKey	P330KLCT-ND	smt
DigiKey	P200LCT-ND	smt
DigiKey	P1.00MLCT-ND	smt
DigiKey	P75.0LCT-ND	smt
DigiKey	P1.00KLCT-ND	smt
DigiKey	RMCF0402FT4R99CT-ND	smt
DigiKey	P47KJCT-ND	smt
DigiKey	P3.00KLCT-ND	smt
DigiKey	P1.0AJCT-ND	smt
DigiKey	P69.8KAACT-ND	smt
DigiKey	P20.0KLCT-ND	smt
DigiKey	P887KLCT-ND	smt
DigiKey	P30.0KLCT-ND	smt
DigiKey	P16.0KLCT-ND	smt
DigiKey	RHM12.0KCDCT-ND	smt
DigiKey	P665KLCT-ND	smt
DigiKey	P560KLCT-ND	smt
DigiKey	P220KJCT-ND	smt

DigiKey	P180KLCT-ND	smt
DigiKey	P4.99KLCT-ND	smt
DigiKey	P953KLCT-ND	smt
DigiKey	S9014E-12-ND	DNS
DigiKey	296-27695-1-ND	fine pitch
DigiKey	296-19547-1-ND	smt
DigiKey	296-29232-1-ND	fine pitch
DigiKey	1490-1032-1-ND	fine pitch
DigiKey	296-25252-1-ND	smt
DigiKey	296-22671-1-ND	smt
DigiKey	887-2003-1-ND	smt
DigiKey	535-12373-1-ND	smt
RichardsonRFPD	FR05-S1-N-0-110B	smt

Board Summary for Quote	
Total Unique Parts	56
SMT placements per board	69
Thru-hole per board	0
Fine pitch per board	3
BGA per board	1