

June 22, 2018

1 DSPIRA 2018 LNA Assembly

We shall assemble our LNAs referring to the schematic and layout in Figures 1 and 2 respectively. An assembly guide is given in §1.1

1.1 Assembly

Assemble all the surface mount passives first (Resistors, Capacitors and Inductors). Try to work from Left to right on the board, but also put on all components with the same value at once.

Component Label	Value
L2	10 nH
L1, L3, L4, L5, L6	100 nH
C6	9.1 pF
C1, C5	27 pF
C15	6.8 pF
C4	4700 pF
C2, C3, C7, C8, C9, C10, C11, C12, C13, C14	330 pF
R5	4.7k Ω
R2	27k Ω
R1	33k Ω
R3	50 Ω
R8	150 Ω
R4, R13	43 Ω
R6	17.4 Ω
R7, R14	5.8 Ω
R9, R10	287 Ω
R11, R12, R15, R16	870 Ω

Now place the actives:

Component Label	Value	Notes
U2	SAV-541	Make sure the large pad lines up with the big foot
U1, U3	GALI-39+	
U4, U5	BFCN-1445	Align dot to point towards input
IC1	LM2940	

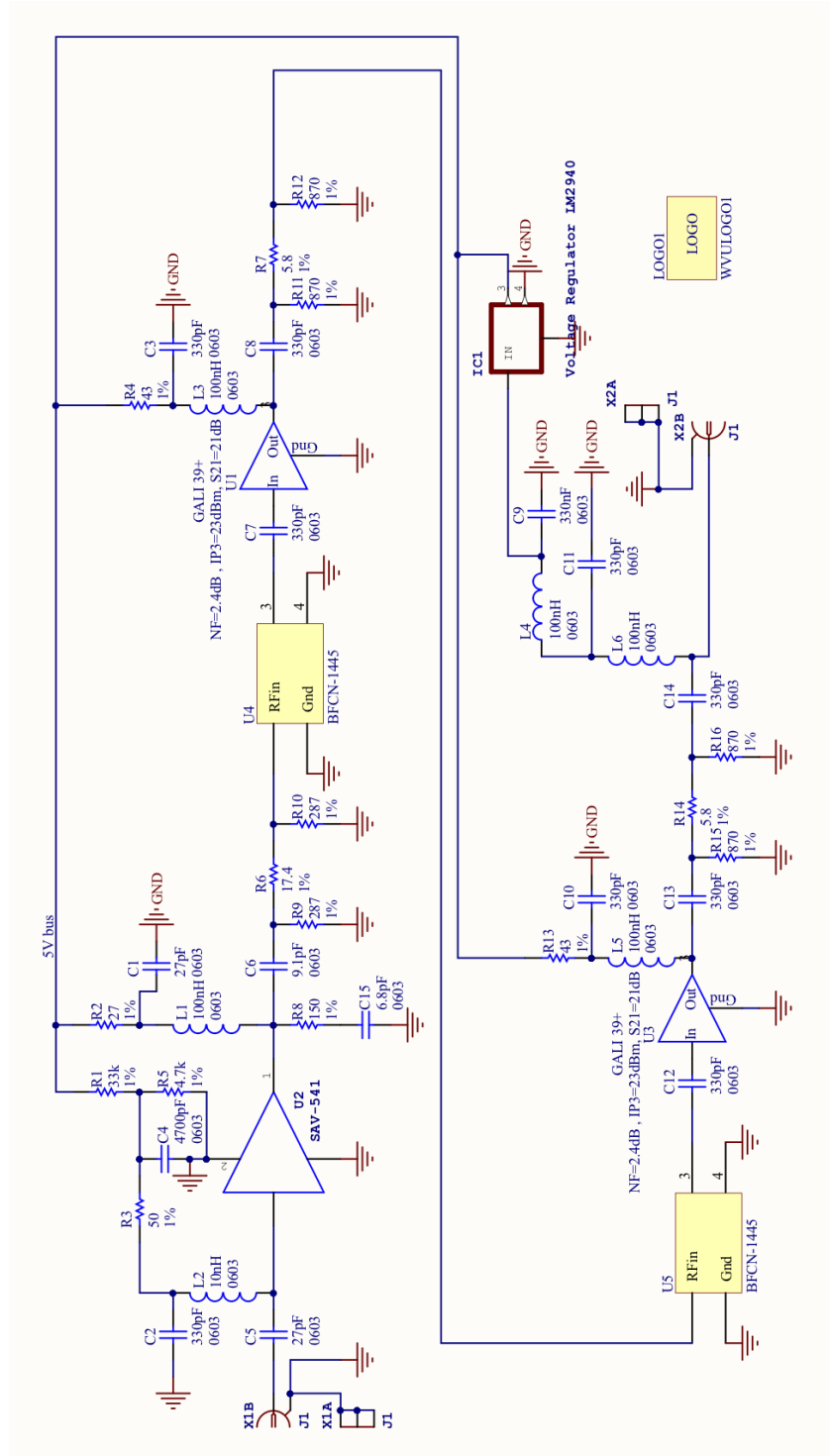


Figure 1: Schematic of the LNA circuit

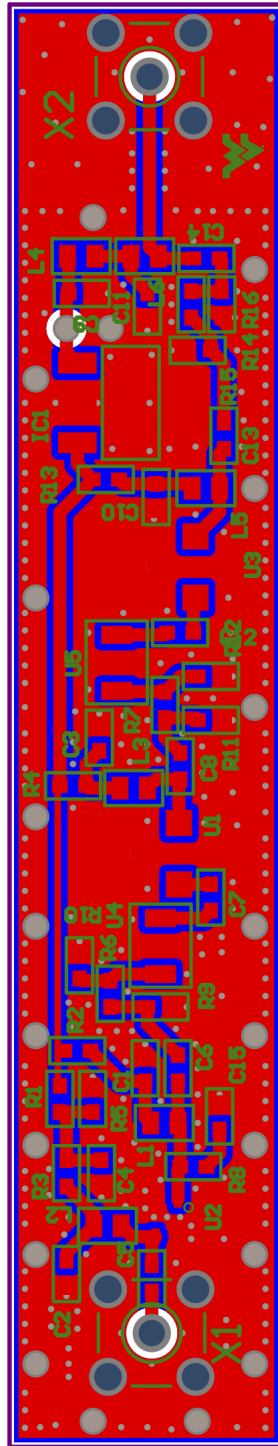


Figure 2: Schematic of the LNA circuit