

U_CONN
CONN.SchDoc

SWR_HF
SWR_HF.SchDoc

U_CONTROL
CONTROL.SchDoc

U_LNA
LNA.SchDoc

SWR_VHF
SWR_VHF.SchDoc

HF_AMP
HF_AMP.SchDoc

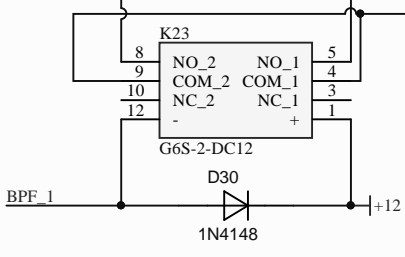
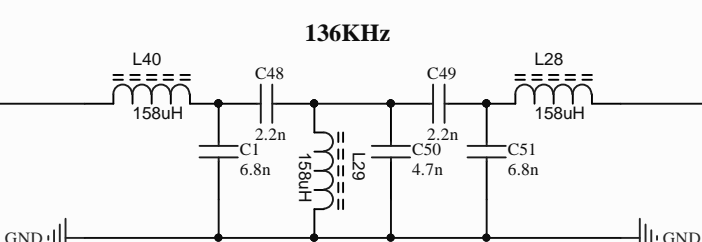
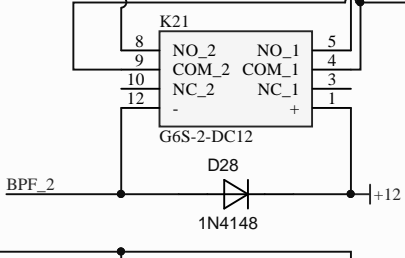
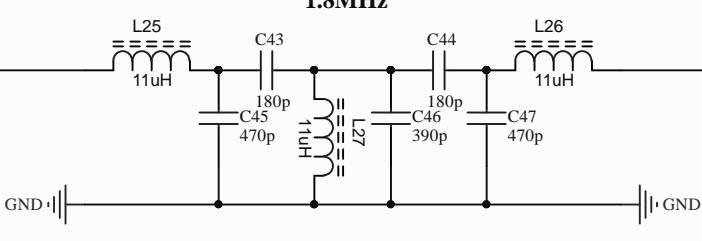
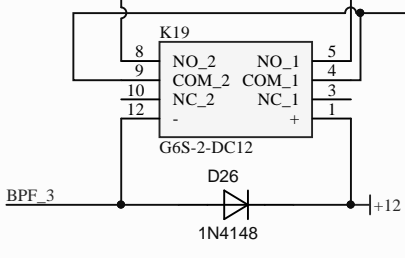
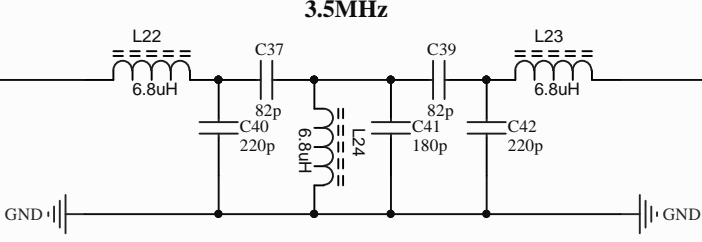
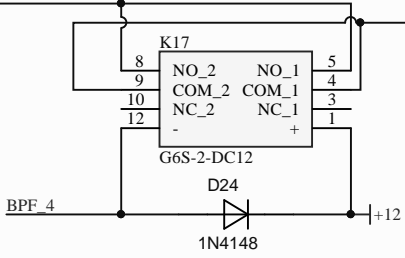
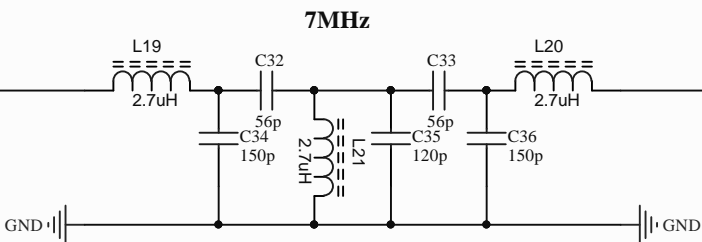
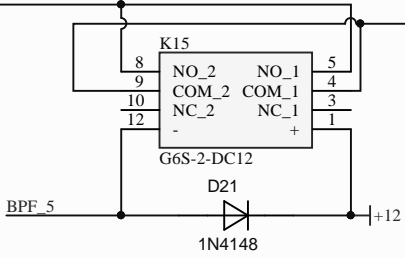
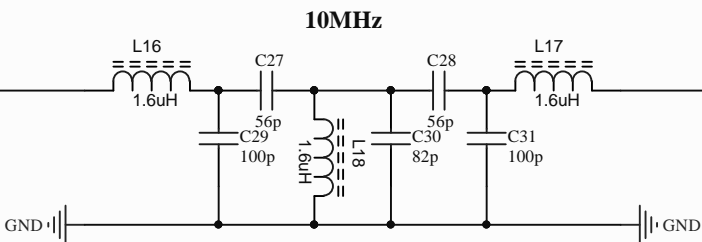
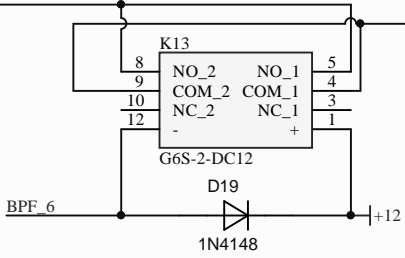
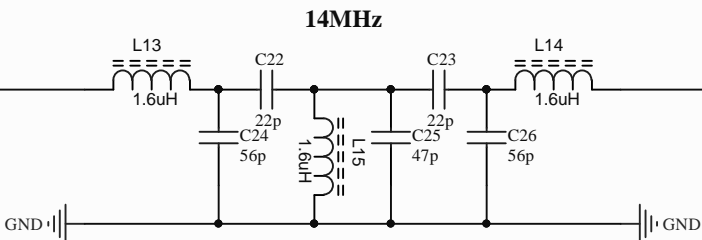
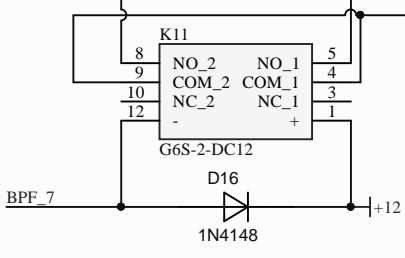
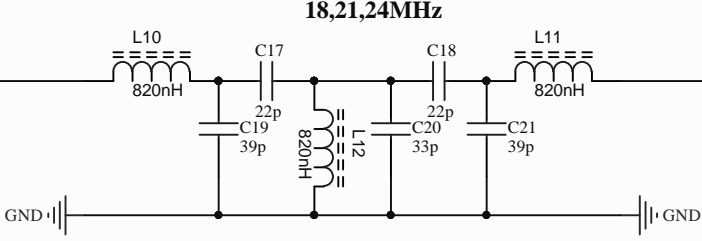
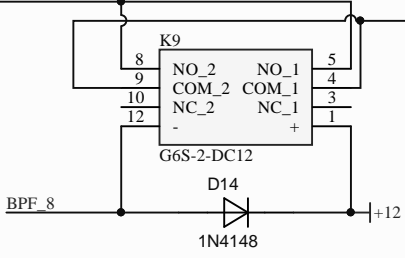
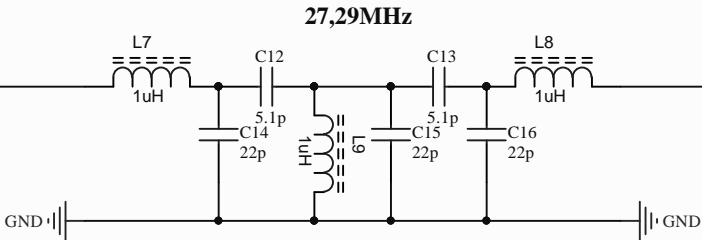
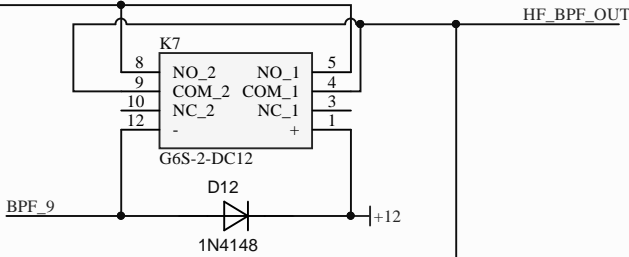
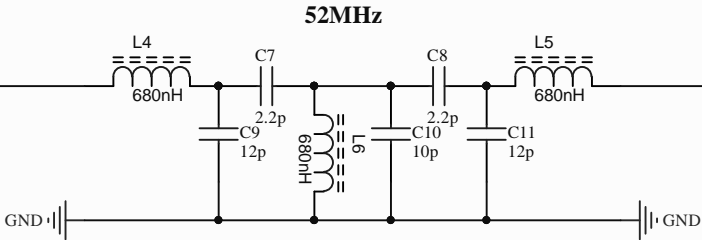
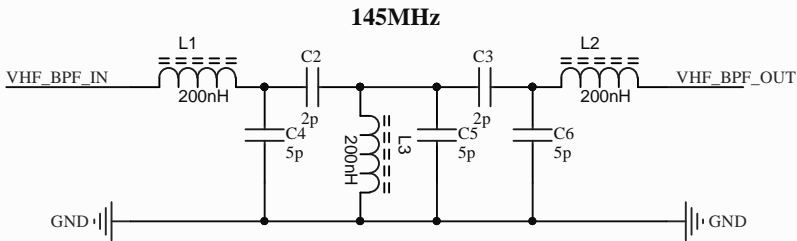
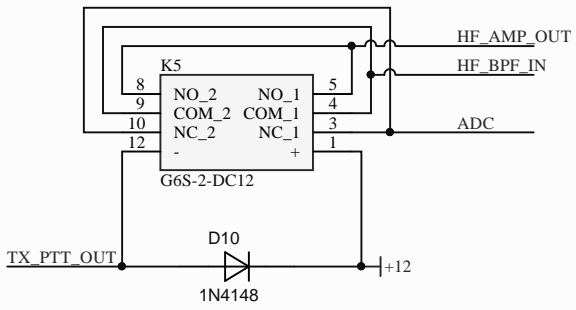
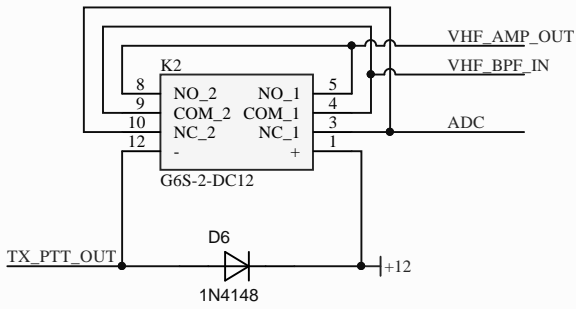
HF_TUNER
HF_TUNER.SchDoc

U_BPF
BPF.SchDoc

HF_AMP_DRIVER
HF_AMP_DRIVER.SchDoc

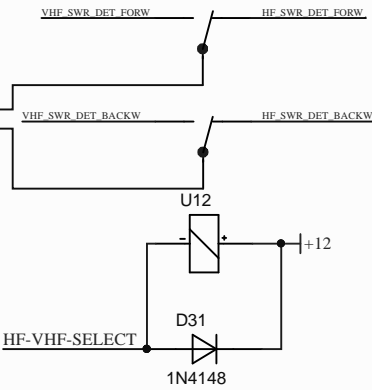
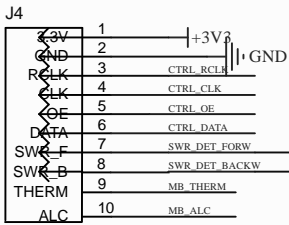
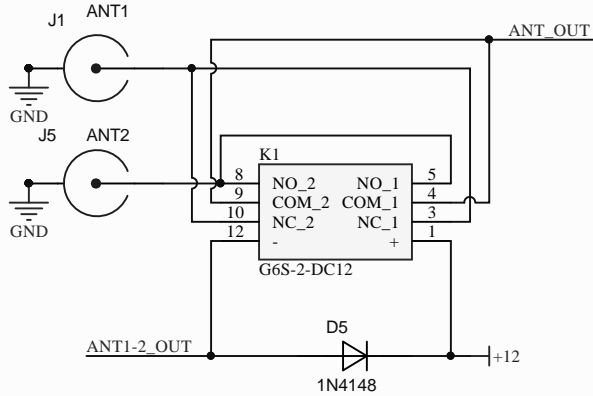
VHF_AMP
VHF_AMP.SchDoc

BPF

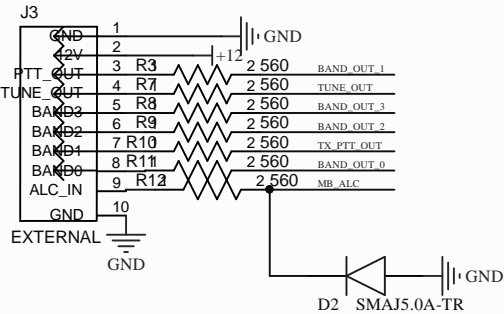
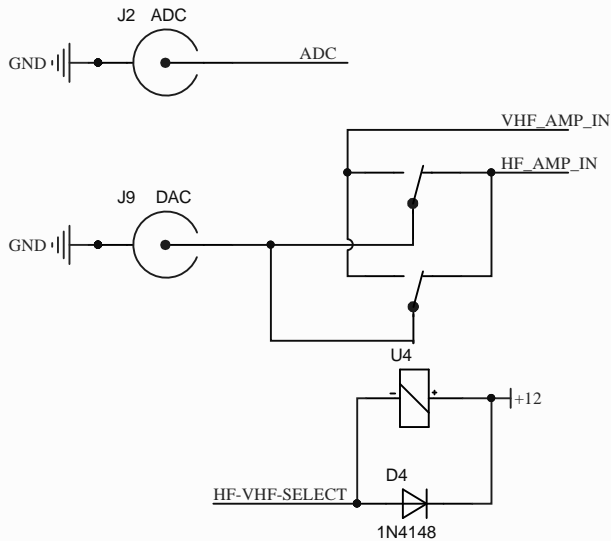


0.5mm cord
2200m - 158uH - M1000HM3-5 K16*10*4,5 - 19.5 turns
160m - 11uH - T68-2 - 44 turns
80m - 6.8uH - T68-2 - 35 turns
40m - 2.7uH - T68-2 - 22 turns
30m - 1.6uH - T68-2 - 17 turns
20m - 1.6uH - T68-2 - 17 turns
17,15,12m - 820nH - T68-2 - 12 turns
CB,10m - 1uH - T68-2 - 13 turns
6m - 680nH - T50-6 - 12 turns
2m - 200nH - air - 6 turns, 7mm diam

TXRX_COMUTATOR



CONN



A

B

C

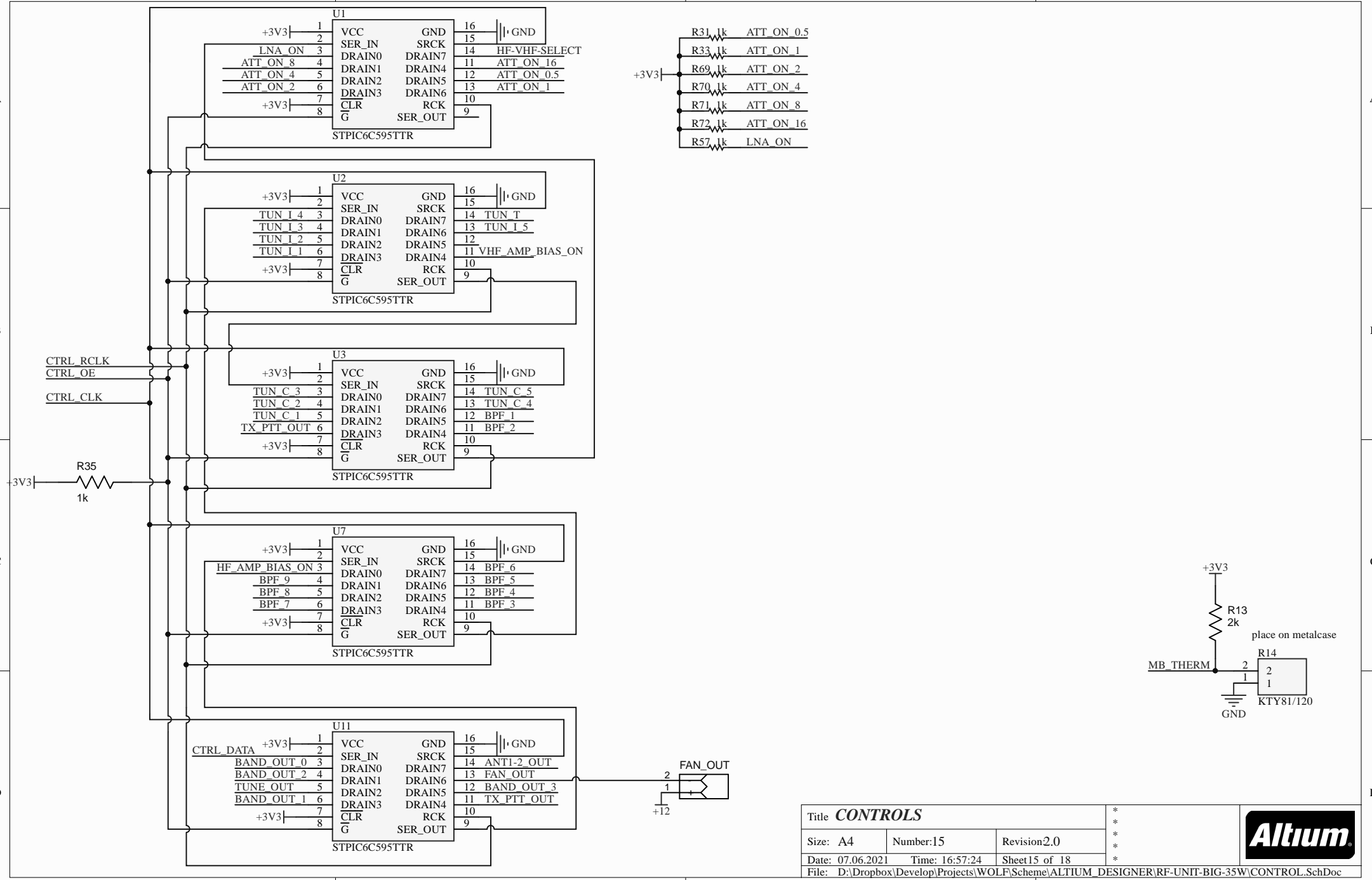
D


A

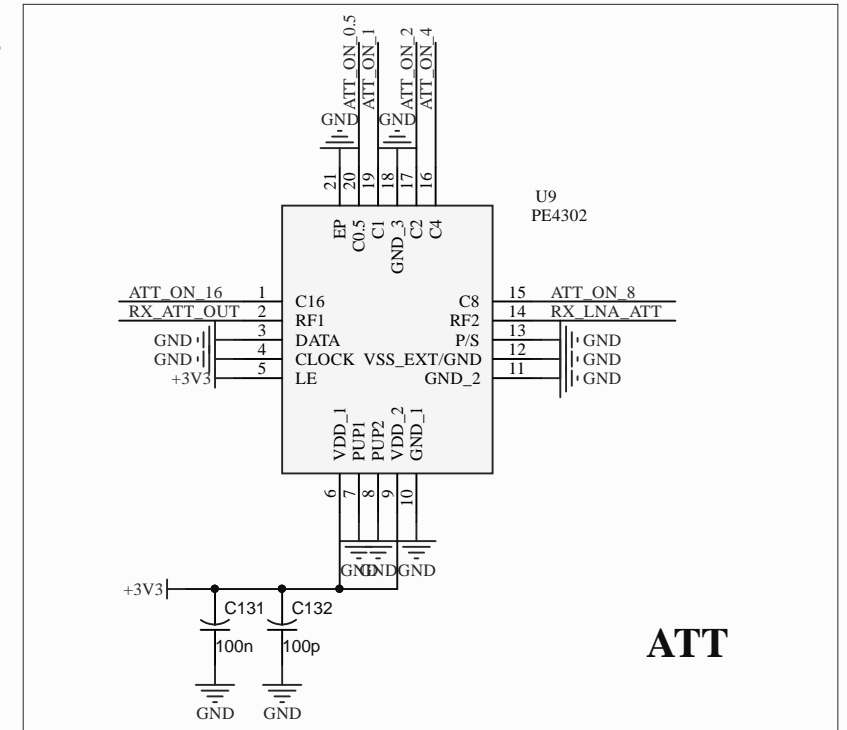
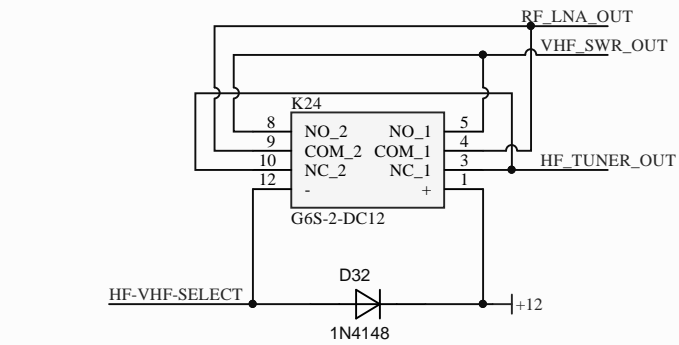
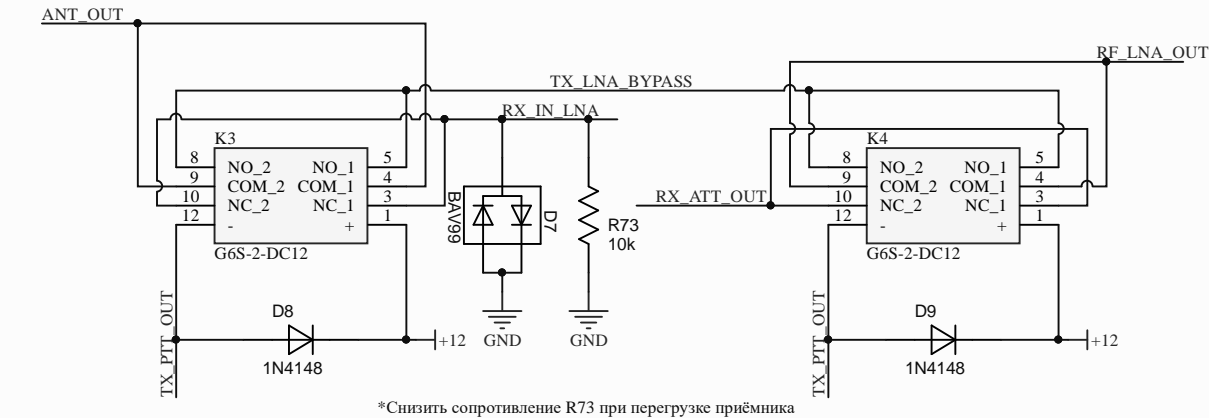
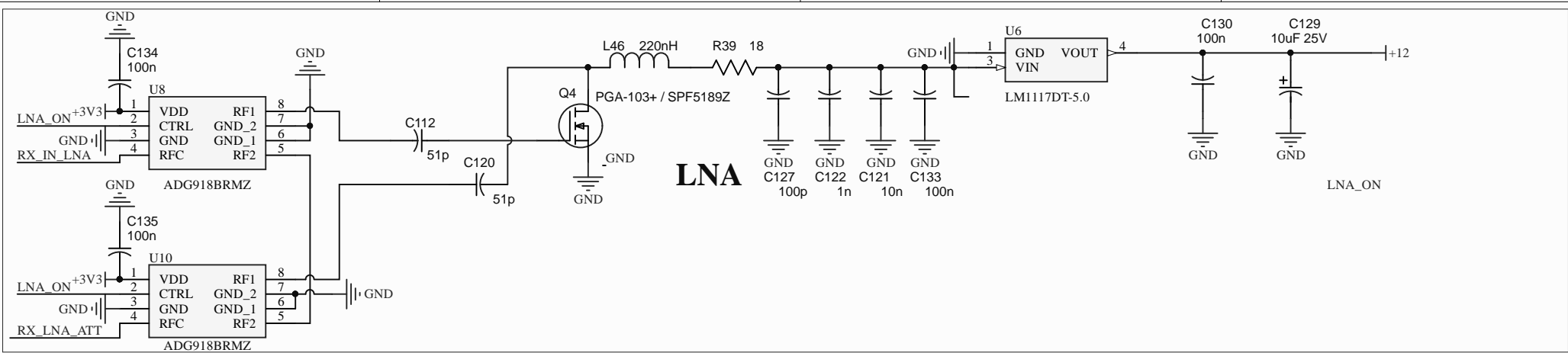
B

C

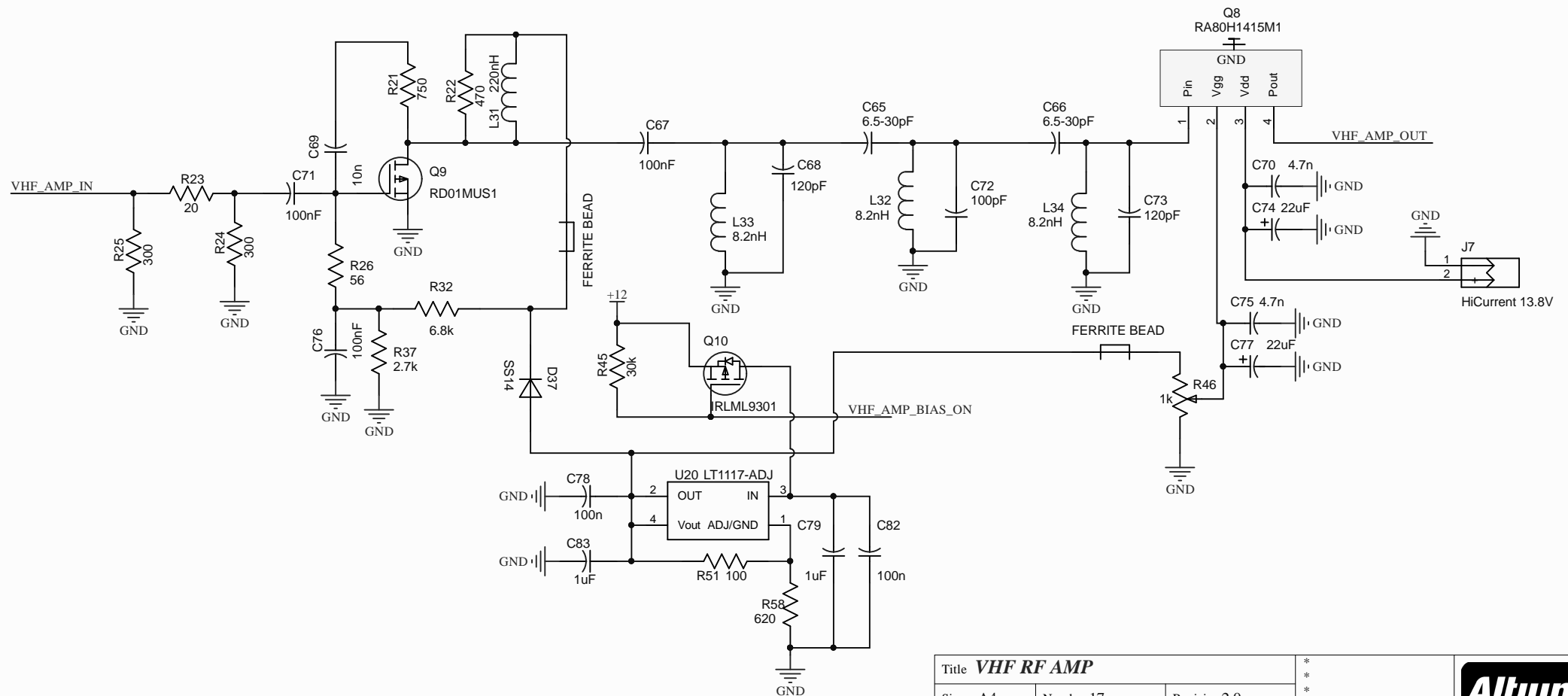
D




Title CONTROLS			
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Date: 07.06.2021	Time: 16:57:24	Sheet15 of 18	
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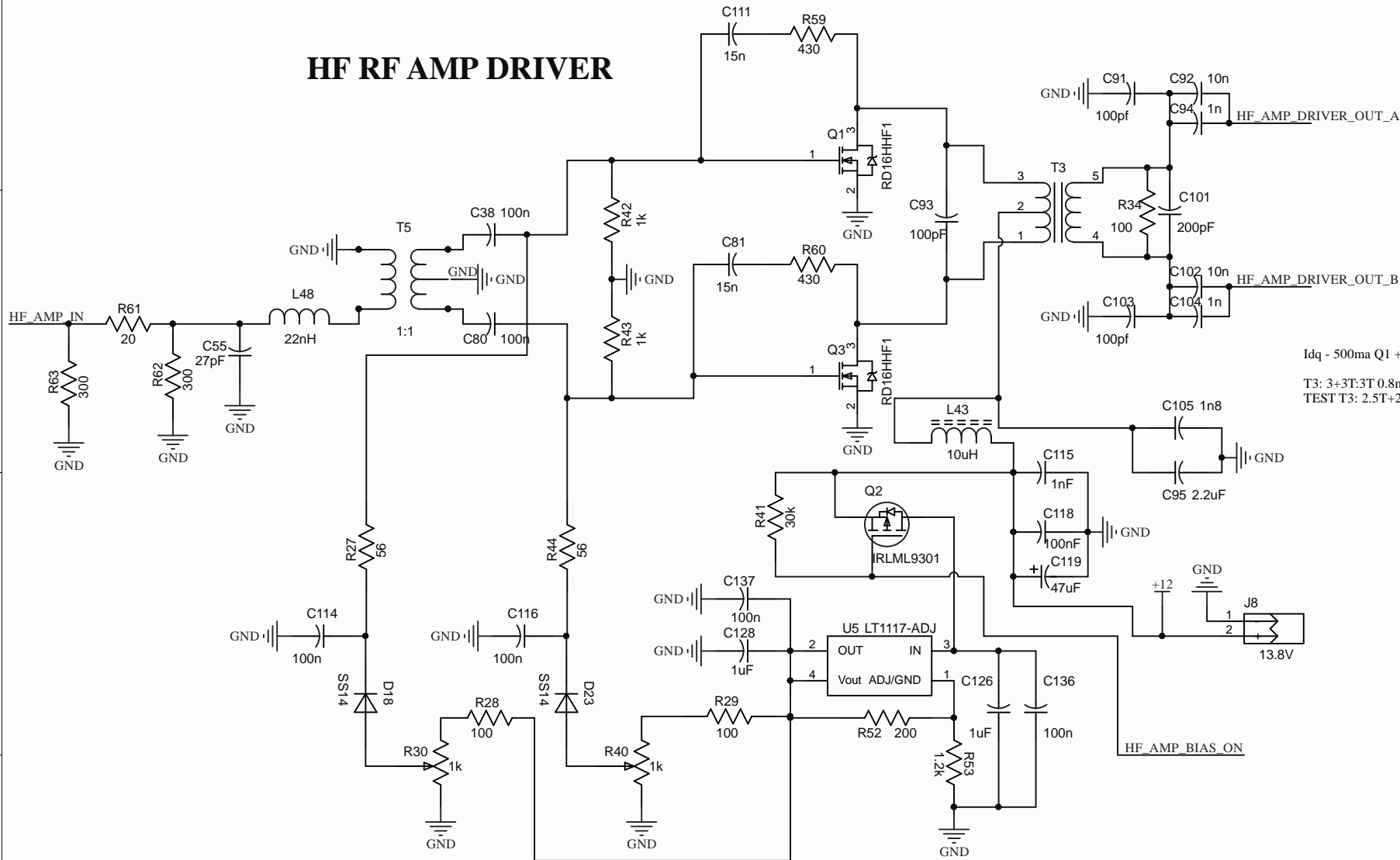


VHF RF AMP



Title VHF RF AMP			<div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;"> ** ** ** ** </div>  </div>
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Date: 07.06.2021	Time: 16:57:25	Sheet 17 of 18	
File: D:\Dropbox\Develop\Projects\WOLF\Scheme\ALTUM DESIGNER\RF-UNIT-BIG-35W\VHF_AMP.SchDoc			

HF RF AMP DRIVER



Idq - 500ma Q1 + 500ma Q3
T3: 3+3T:3T 0.8mm BN-43-202
TEST T3: 2.5T+2.5T:3T 0.9mm binocle 14x18.5x10

Title **HF RF AMP DRIVER**

Size: A4 Number:17 Revision:2.0

Date: 07.06.2021 Time: 16:57:25 Sheet 17 of 18

File: D:\Dropbox\Develop\Projects\WOLF\Scheme\ALTUM DESIGNER\RF-UNIT-BIG-35W\HF AMP DRIVER.SchDoc



HF RF AMP

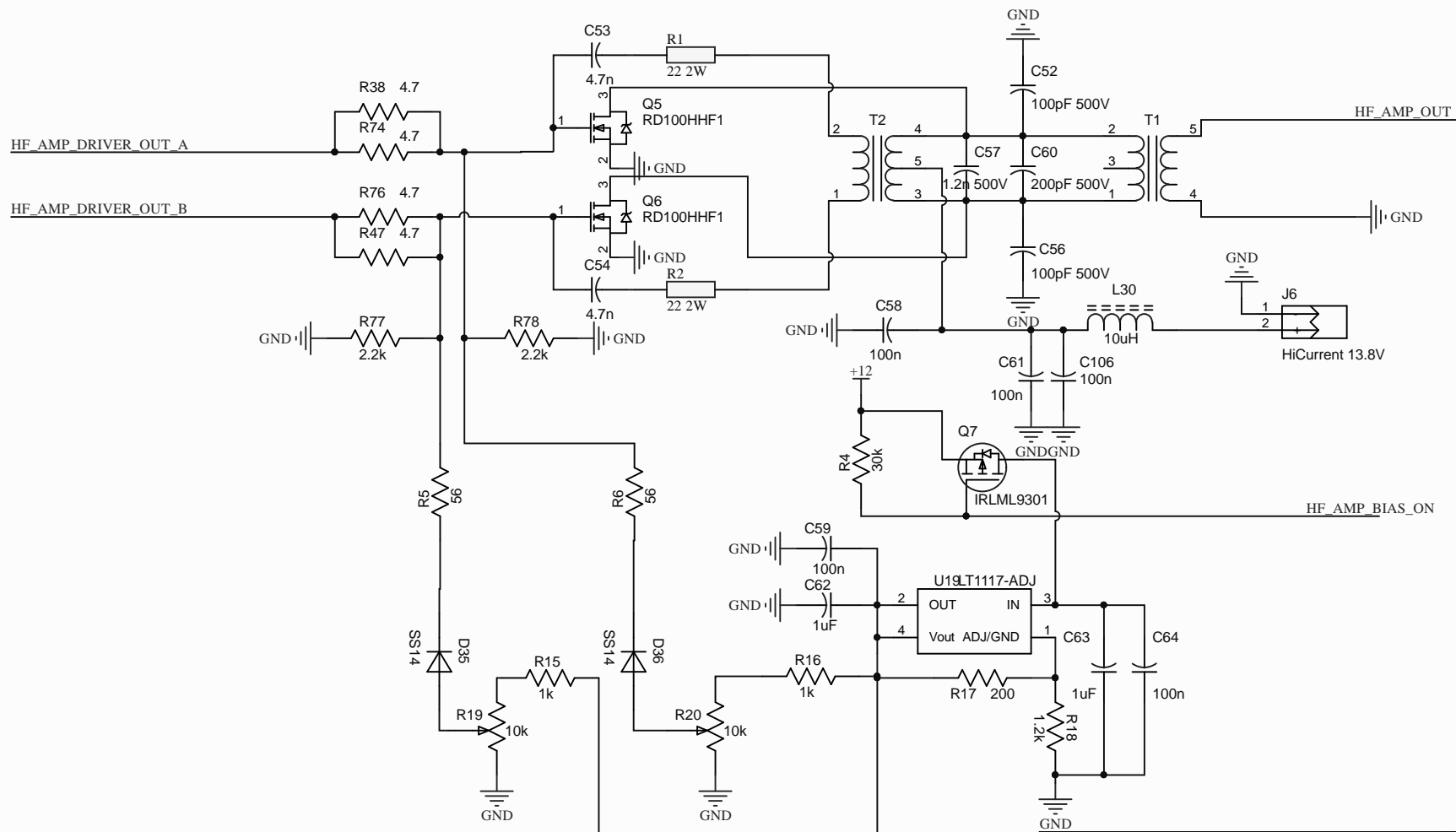
Idq - 500ma Q5 + 500ma Q6

T1: 1T:4T 25ohms coaxial BN-61-002

T2: 13+13T:1T 0.8mm FT-82-43-TR

TEST T2: M2000HM 20x12x6 13+13T:1T MГTФ 0.5mm^2

TEST T1: 2 tube 28x10x6 1T:4T copper tube+MГTФ 0.5mm^2



Title **HF RF AMP**

Size: A4

Number:17

Revision:2.0

Date: 07.06.2021

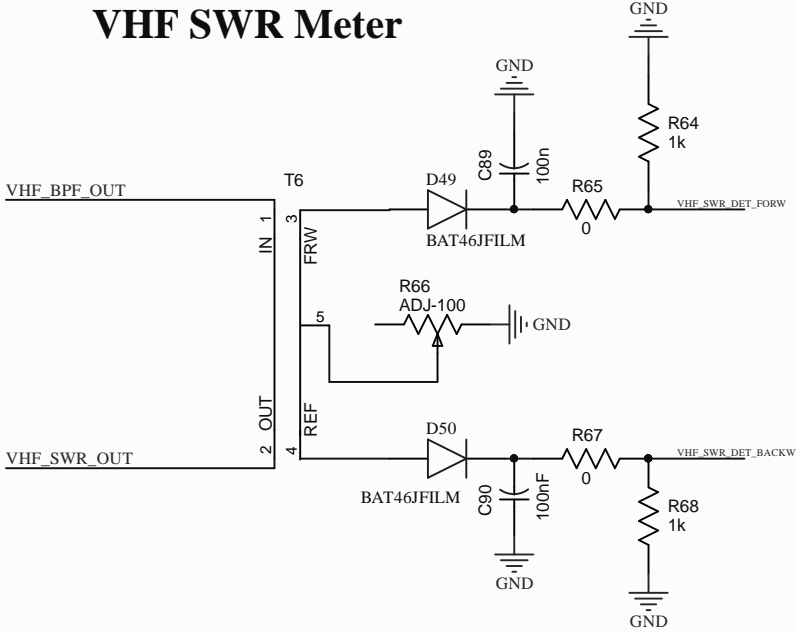
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Sheet 17 of 18

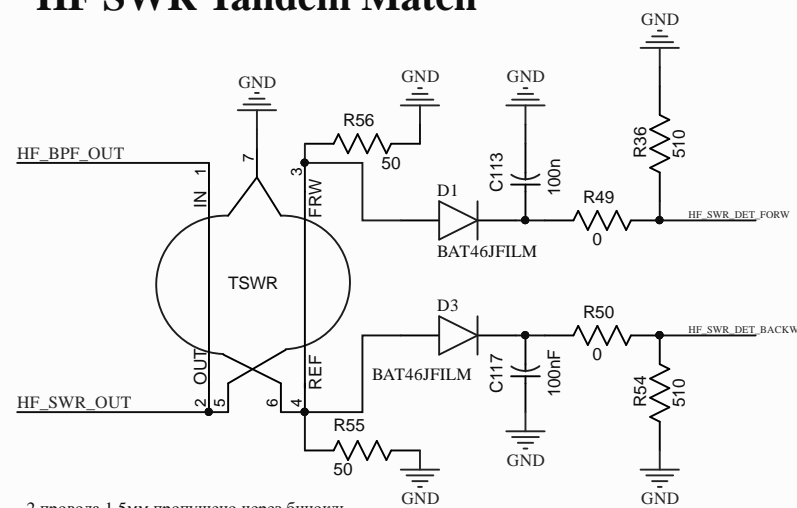
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VHF SWR Meter

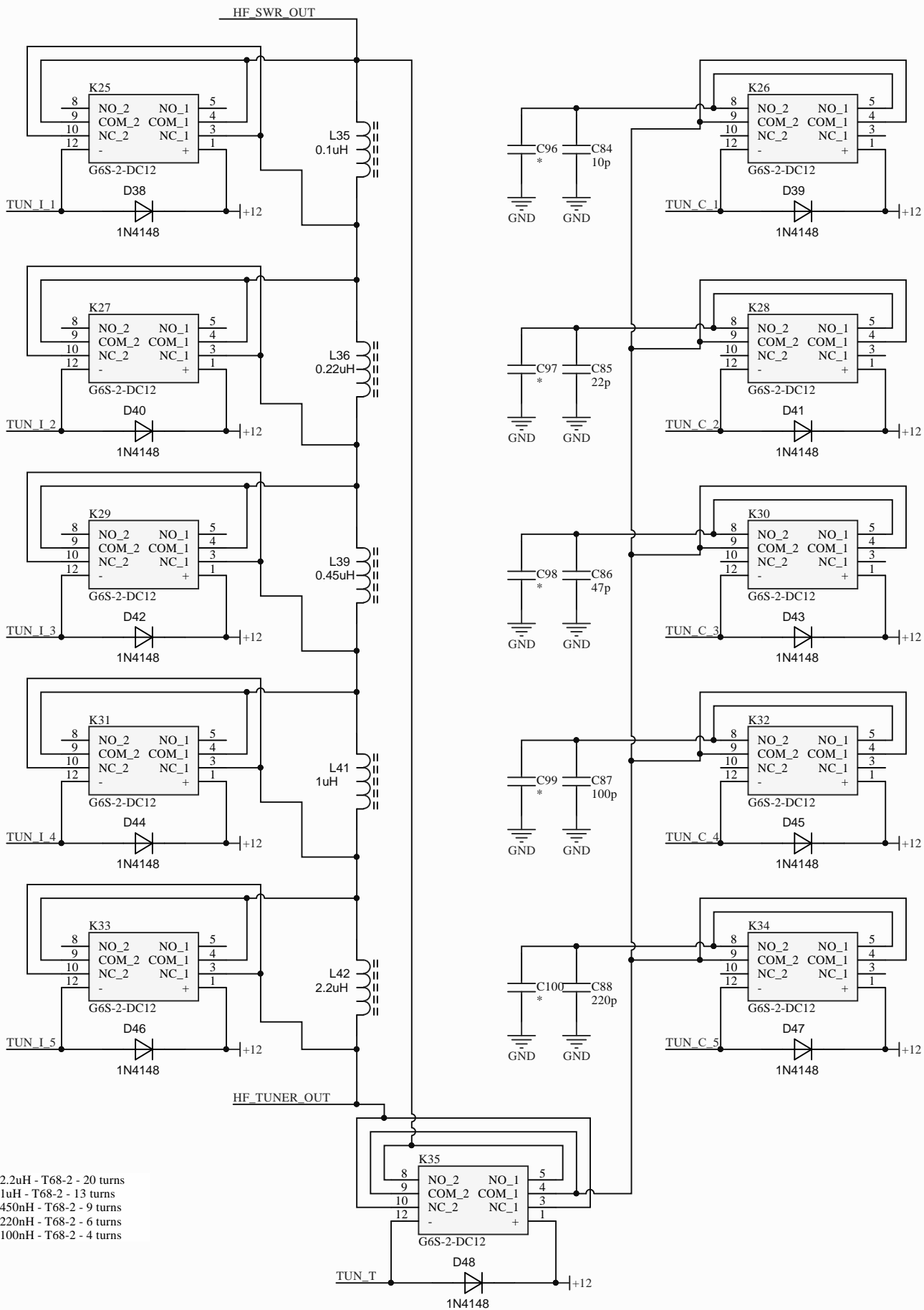


HF SWR Tandem Match



2 провода 1.5мм пропущено через бинокль
по диагонали пропущено и намотано по 20 витков 0.5мм

HF Antenna Tuner



Title **HF Tuner**

Size: A4

Number:18

Revision:2.0

Date: 07.06.2021

Time: 16:57:25

Sheet 18 of 18

File: D:\Dropbox\Develop\Projects\WOLF\Scheme\ALTUM_DESIGNER\RF-UNIT-BIG-35W\HF_TUNER.SchDoc

Altium

Component	Description	Designator	Footprint	LibRef	Quantity
6.8n	Capacitor NPO HiVol	C2, C3	CAP_1206	B3262.0A0682.X0B	2
2p	Capacitor NPO HiVol	C4, C5, C6	CAP_1206	B3262.0A0682.X0B	2
5p	Capacitor NPO HiVol	C7, C8	CAP_1206	B3262.0A0682.X0B	3
2.2p	Capacitor NPO HiVol	C9, C11	CAP_1206	B3262.0A0682.X0B	2
150p	Capacitor NPO HiVol	C10	CAP_1206	B3262.0A0682.X0B	1
5.1p	Capacitor NPO HiVol	C12, C13	CAP_1206	B3262.0A0682.X0B	2
22p	Capacitor NPO HiVol	C14, C15, C16, C17	CAP_1206	B3262.0A0682.X0B	7
39p	Capacitor NPO HiVol	C19, C21	CAP_1206	B3262.0A0682.X0B	2
13p	Capacitor NPO HiVol	C20	CAP_1206	B3262.0A0682.X0B	1
56p	Capacitor NPO HiVol	C24, C26, C27, C28	CAP_1206	B3262.0A0682.X0B	6
47p	Capacitor NPO HiVol	C25	CAP_1206	B3262.0A0682.X0B	1
100p	Capacitor NPO HiVol	C29, C31	CAP_1206	B3262.0A0682.X0B	2
82p	Capacitor NPO HiVol	C30, C37, C39	CAP_1206	B3262.0A0682.X0B	3
150p	Capacitor NPO HiVol	C34, C36	CAP_1206	B3262.0A0682.X0B	2
120p	Capacitor NPO HiVol	C35	CAP_1206	B3262.0A0682.X0B	1
100n	CAP_0805	C38, C50, C64, C78	CAP_0805	CAP_0805	16
220p	Capacitor NPO HiVol	C40, C42	CAP_1206	B3262.0A0682.X0B	2
180p	Capacitor NPO HiVol	C41, C43, C44	CAP_1206	B3262.0A0682.X0B	3
470p	Capacitor NPO HiVol	C45, C47	CAP_1206	B3262.0A0682.X0B	2
200p	Capacitor NPO HiVol	C46	CAP_1206	B3262.0A0682.X0B	1
2.2n	Capacitor NPO HiVol	C48, C49	CAP_1206	B3262.0A0682.X0B	2
4.7n	Capacitor NPO HiVol	C50, C53, C54	CAP_1206	B3262.0A0682.X0B	3
100pF 50V	CAP_1206	C52, C56	CAP_1206	CAP_1206	2
27p	CAP_0805	C55	CAP_0805	CAP_0805	1
1.2n 500V	CAP_1206	C57	CAP_1206	CAP_1206	1
100n	CAP_1206	C58, C61, C106	CAP_1206	CAP_1206	3
200pF 50V	CAP_1206	C60	CAP_1206	CAP_1206	1
1uF	CAP_0805	C62, C63, C79, C85	CAP_0805	CAP_0805	6
6.5-30pF	12Z63P100A10	C65, C66	S0252010E	CAP_0805	2
100pF	CAP_0805	C67, C71, C76, C96	CAP_0805	CAP_0805	6
120pF	CAP_0805	C68, C73	CAP_0805	CAP_0805	2
10n	CAP_1206	C69, C92, C102	CAP_1206	CAP_1206	3
4.7n	CAP_0805	C70, C75	CAP_0805	CAP_0805	2
100pF	CAP_0805	C72	CAP_0805	CAP_0805	1
222	CAPAE_6.5nV.dh5.4	C74, C77	CAPAE_6.5nV.dh5.4	CAPAE_6.5nV.dh5.4	2
15n	CAP_1206	C81, C111	CAP_1206	CAP_1206	2
10p	Capacitor	C84	B3262.0A0682.X0B	B3262.0A0682.X0B	1
22p	Capacitor	C85	B3262.0A0682.X0B	B3262.0A0682.X0B	1
47p	Capacitor	C86	B3262.0A0682.X0B	B3262.0A0682.X0B	1
100p	Capacitor	C87	B3262.0A0682.X0B	B3262.0A0682.X0B	1
220p	Capacitor	C88	B3262.0A0682.X0B	B3262.0A0682.X0B	1
100pF	CAP_1206	C91, C93, C103	CAP_1206	CAP_1206	3
1n	CAP_1206	C94, C104	CAP_1206	CAP_1206	2
2.2pF	CAP_1206	C95	CAP_1206	CAP_1206	1
200pF	Capacitor NPO HiVol	C96, C97, C98, C99	CAP_1206	B3262.0A0682.X0B	5
200pF	CAP_1206	C101	CAP_1206	CAP_1206	1
100p	CAP_1206	C105	CAP_1206	CAP_1206	1
51p	CAP_0805	C112, C120	CAP_0805	CAP_0805	2
100p	CAP_0805	C115	CAP_0805	CAP_0805	1
47pF	CAPAE_6.5nV.dh5.4	C119	CAPAE_6.5nV.dh5.4	CAPAE_6.5nV.dh5.4	1
10n	CAP_0805	C121	6-0805_M	CAP_0805	1
1n	CAP_0805	C122	6-0805_M	CAP_0805	1
100p	CAP_0805	C123, C132	6-0805_M	CAP_0805	2
10uF 25V	CAPAE_5.3uV.3h6.1	C129	CAPAE_5.3uV.3h6.1	CAPAE_5.3uV.3h6.1	1
100n	CAP_0805	C131	6-0805_M	CAP_0805	1
BA146 F&M	Diode	D1, D3, D49, D50	S0D92S1X117N	BA146 F&M	4
5MB.5A-TR	Diode	D2	SMBJ56CATR	SMBJ73V3	1
1N4148	1N4148	D5, D6, D8, D9	SSM	1N4148	3
BAV99	BAV99	D7	SOT23	BAV99	1
SSW	SSW	D18, D23, D35, D36	SSW	SSW	5
FERRITE BEAD	IND. FERRITE BEAD	F1, F2	RES	IND. FERRITE BEAD	2
51022-0200	51022-0200	FAN_OUT	51022-0200	51022-0200	1
ANT1	SMA	J	31-543	31-543	1
ADC	SMA	J	31-543	31-543	1
EXTERNAL	2*5 PIN	J	90131-0126	90131-0126	1
MOTHERBOARD	2*5 PIN	J	90131-0126	90131-0126	1
ANT2	SMA	J	31-543	31-543	1
HiCurrent 13.8V	XZ	M, B	198A7172	198A7172	2
13.8V	XZ	M	198A7172	198A7172	1
D06	SMA	M	31-543	31-543	1
G65-3-DC12	Relay or Contactor	K1, K2, K3, K4, K5	G652DC12	G65-3-DC12	35
200nH	Inductor	L1, L2, L3	IND. FERRITE_CORE	IND. FERRITE_CORE	3
680nH	Inductor	L4, L5, L6	IND. FERRITE_CORE	IND. FERRITE_CORE	3
1uH	Inductor	L7, L8, L9, L41	IND. FERRITE_CORE	IND. FERRITE_CORE	4
820nH	Inductor	L10, L11, L9	IND. FERRITE_CORE	IND. FERRITE_CORE	3
1.6uH	Inductor	L13, L14, L15, L16	IND. FERRITE_CORE	IND. FERRITE_CORE	6
2.7uH	Inductor	L19, L20, L2	IND. FERRITE_CORE	IND. FERRITE_CORE	3
6.8uH	Inductor	L22, L23, L8	IND. FERRITE_CORE	IND. FERRITE_CORE	3
11uH	Inductor	L25, L26, L27	IND. FERRITE_CORE	IND. FERRITE_CORE	3
150uH	Inductor	L28, L29, L40	IND. FERRITE_CORE	IND. FERRITE_CORE	3
10uH	Inductor	L30, L6	IND. FERRITE_CORE	IND. FERRITE_CORE	2
15uH	IND. 1206	L31	IND. 1206	IND. 1206	1
8.20H	IND. 0805	L32, L33, L3	IND. 0805	IND. 0805	3
0.1uH	Inductor	L6	IND. FERRITE_CORE	IND. FERRITE_CORE	1
0.22uH	Inductor	L6	IND. FERRITE_CORE	IND. FERRITE_CORE	1
0.45uH	Inductor	L8	IND. FERRITE_CORE	IND. FERRITE_CORE	1
2.2uH	Inductor	L40	IND. FERRITE_CORE	IND. FERRITE_CORE	1
220nH	IND. 1206	L46	IND. 1206	IND. 1206	1
22nH	IND. 0805	L48	IND. 0805	IND. 0805	1
RD10HHF1	RD10HHF1	Q1, Q2	RD16_V2	RD10HHF1	2
RL44J101	MS0171	Q2, Q7, Q10	S0273	MS0171_LNH_PD	3
PGA-103+/5PFF510	PGA-103+/5PFF510	Q4	S0189	PGA-103+	1
RD10HHF1	RD10HHF1	Q5, Q6	RD100_V2	RD10HHF1	2
BA80H1415M	BA80H1415M	Q8	BA80H1415M	BA80H1415M	1
RD01M51	RD01M51	Q9	S0189	RD01M51	1
2.2 2W	CF6200-0100R	R1, R2	RES-2W	CF6200-0100R	2
540	RES_0805	R3, R7, R8, R9, R10	RES_0805	RES_0805	7
30k	RES_0805	R4, R41, R45	RES_0805	RES_0805	3
56	RES_0805	R5, R6, R26, R27, R4	RES_0805	RES_0805	5
2k	RES_0805	R13	RES_0805	RES_0805	1
KTY81/120	Integrated Circuit	R14	T0254P420X460X	KTY81_120	1
1k	RES_0805	R15, R16, R35, R42	RES_0805	RES_0805	7
200	RES_0805	R17, R52	RES_0805	RES_0805	2
1k	RES_0805	R18, R53	RES_0805	RES_0805	2
ADJ10k	306J	R19, R20	306J	306J	2
750	RES_1206	R21	RES_1206	RES_1206	1
470	RES_1206	R22	RES_1206	RES_1206	1
20	RES_1206	R23, R61	RES_1206	RES_1206	2
300	RES_1206	R24, R25, R62, R63	RES_1206	RES_1206	4
100	RES_0805	R28, R29, R51	RES_0805	RES_0805	3
ADJ1k	306J	R30, R40, R46	306J	306J	3
1k	RES_0805	R31, R33, R57, R60	RES-2013X60X40M	CMP-2001-00626-1	7
6.8k	RES_0805	R32	RES_0805	RES_0805	1
100	RES_1206	R34	RES_1206	RES_1206	1
510	RES_0805	R36, R54	RES_0805	RES_0805	2
2.2k	RES_0805	R37	RES_0805	RES_0805	1
4.7	RES_1206	R38, R47, R74, R76	RES_1206	RES_1206	4
18	RES_1206	R39	RES_1206	RES_1206	1
50	RES_1206	R49, R50, R65, R65	RES_0805	RES_0805	4
50	RES_1206	R55, R56	RES_1206	RES_1206	2
420	RES_0805	R58	RES_0805	RES_0805	1
430	RES_1206	R59, R60	RES_1206	RES_1206	2
ADJ100	306J	R66	306J	306J	1
1k	RES_1206	R73	RES_1206	RES_1206	1
2.2k	RES_0805	R77, R78	RES_0805	RES_0805	2
TRANSF_HF2	TRANSF_HF2	T1	TRANSF_HF2-3	TRANSF_HF2	1
TRANSF_HF1	TRANSF_HF1	T2	TRANSF_HF1	TRANSF_HF1	1
TRANSF_HF3	TRANSF_HF3	T5	TRANSF_HF3	TRANSF_HF3	1
1:1	TRANSF_ACORE2	T6	TRANSF_ACORE2	TRANSF_ACORE2	1
SWR_VHF	SWR_VHF	T6	SWR_VHF	SWR_VHF	1
SWR_TANDEM_MAT0	SWR_TANDEM_MAT0	TSWR	SWR_TANDEM_MAT0	SWR_TANDEM_MAT0	1
STP1K6C595TTR	Integrated Circuit	U1, U2, U3, U7, U11	S0P65P440X120-1	STP1K6C595TTR	5
4A04m R80	4A04m R80	U4, U12	4A04m R80	4A04m R80	2
L11T1175T-ADJ	L11T1175T-ADJ	U5, U19, U20	L11T1175T-ADJ	L11T1175T-ADJ	3
LHM1170T-5.0	Integrated Circuit	U6	T0228P991X238-3	LHM1170T-ADJ	1
ADG9188RMZ	Integrated Circuit	U9, U10	S0P65P490X110-0	ADG9188RMZ	2
PE4130Q	Integrated Circuit	U9	QF N50P400X400X	PE41312C2	1