

Title		
Size	Number	Revision
A4		
Date:	12.14.2022	Sheet of
File:	D:\SDRProject\.\main.SchDoc	Drawn By:

1

2

3

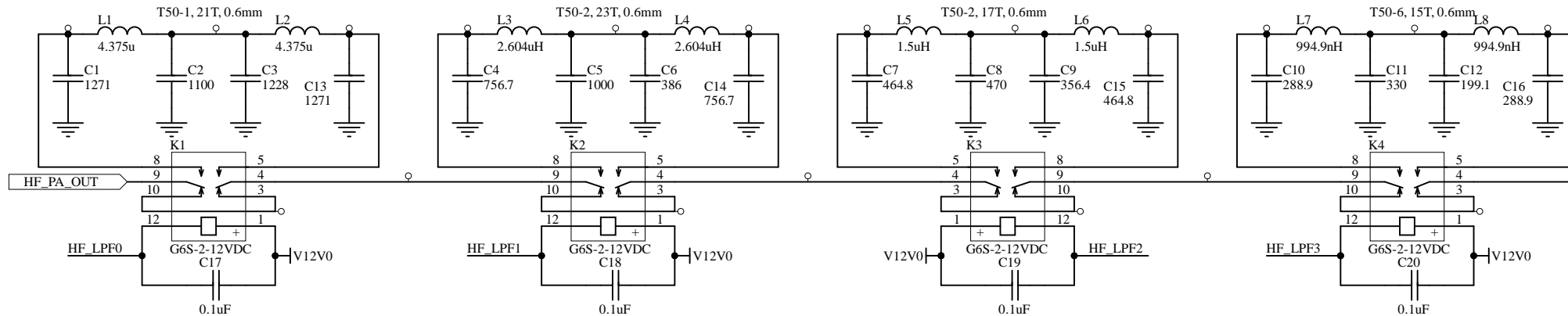
4

2.5 MHz (-3dB 2.9MHz)

4.2 MHz (-3dB 4.9MHz)

7.3 MHz (-3dB 8.4MHz)

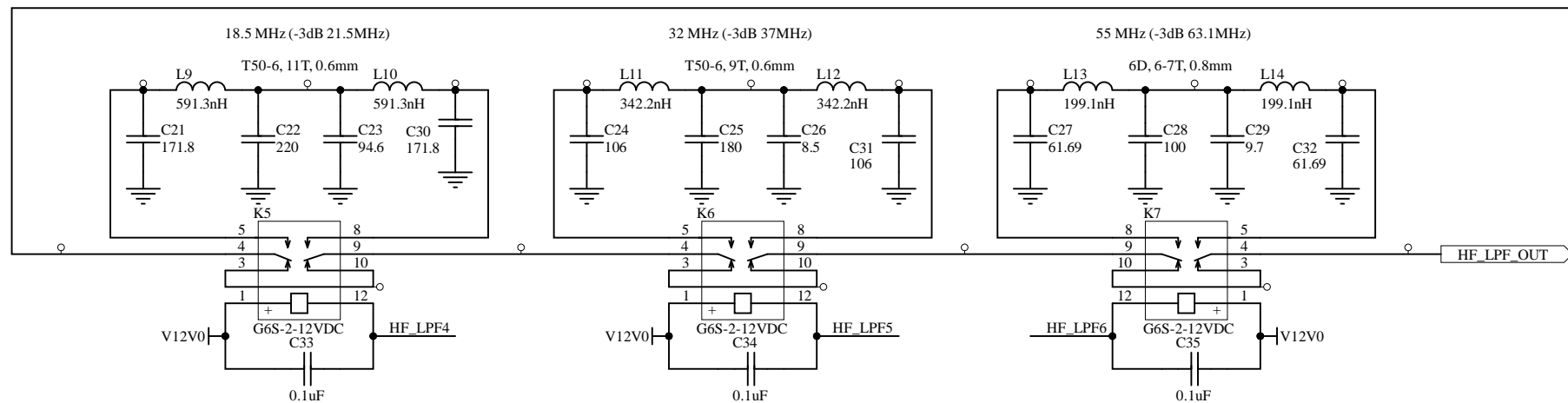
11 MHz (-3dB 13MHz)



18.5 MHz (-3dB 21.5MHz)

32 MHz (-3dB 37MHz)

55 MHz (-3dB 63.1MHz)



HF_LPF_OUT

HF_LPF[0..6]

HF_LPF0
HF_LPF1
HF_LPF2
HF_LPF3
HF_LPF4
HF_LPF5
HF_LPF6

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1

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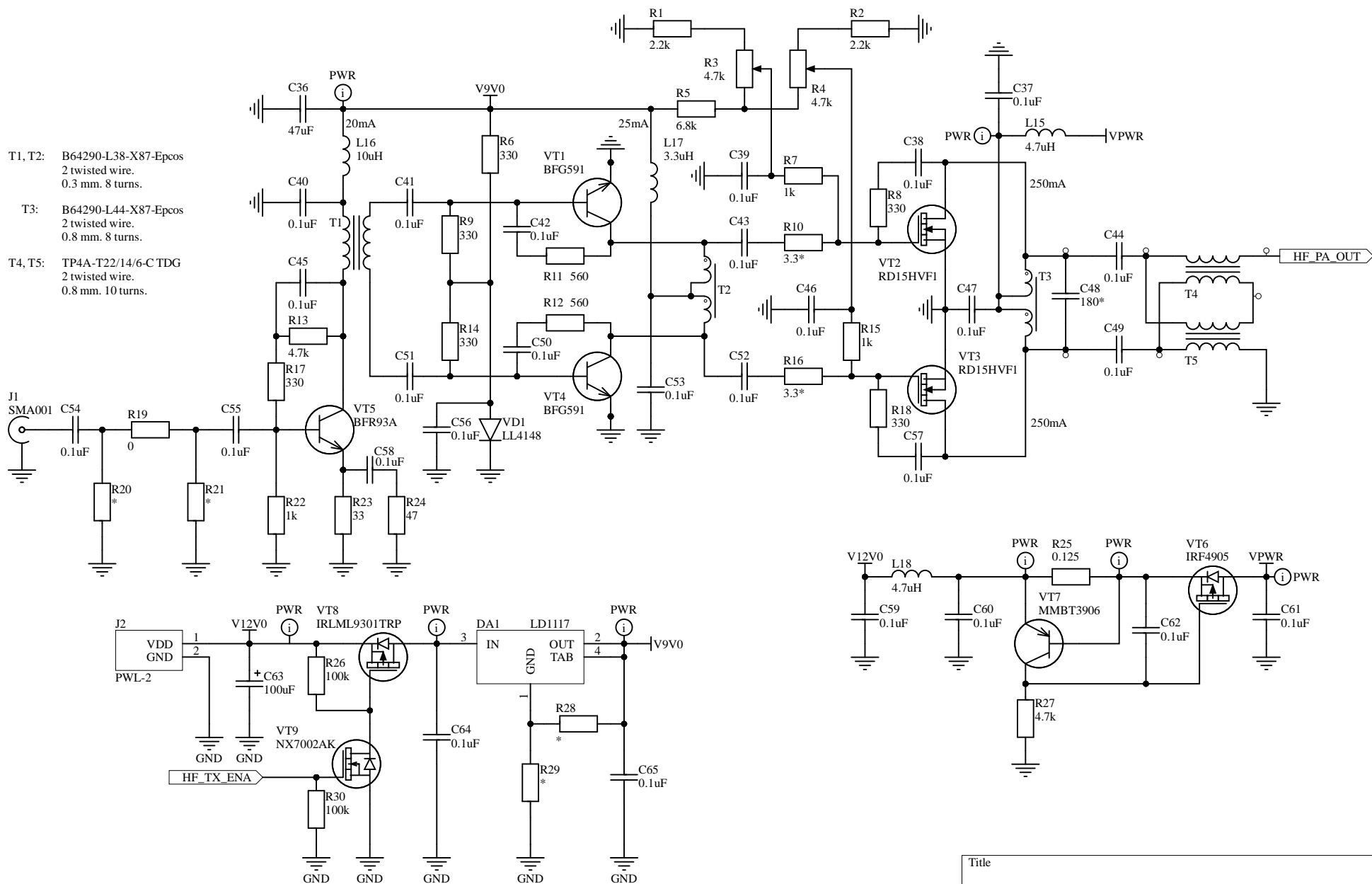
3

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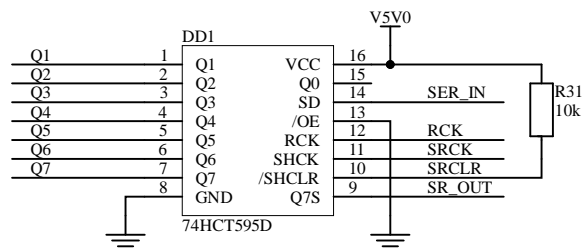
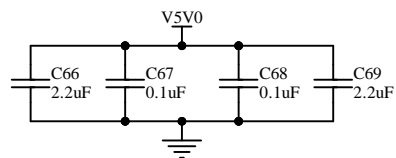
T1, T2: B64290-L38-X87-Epcos
2 twisted wire.
0.3 mm. 8 turns.

T3: B64290-L44-X87-Epcos
2 twisted wire.
0.8 mm. 8 turns.

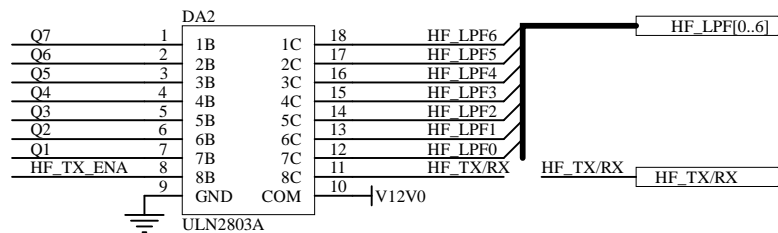
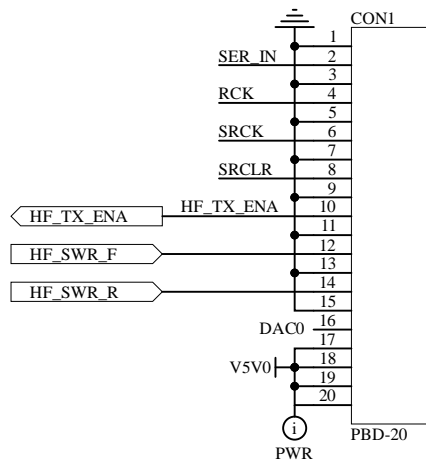
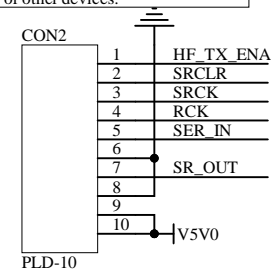
T4, T5: TP4A-T22/14/6-C TDG
2 twisted wire.
0.8 mm. 10 turns.



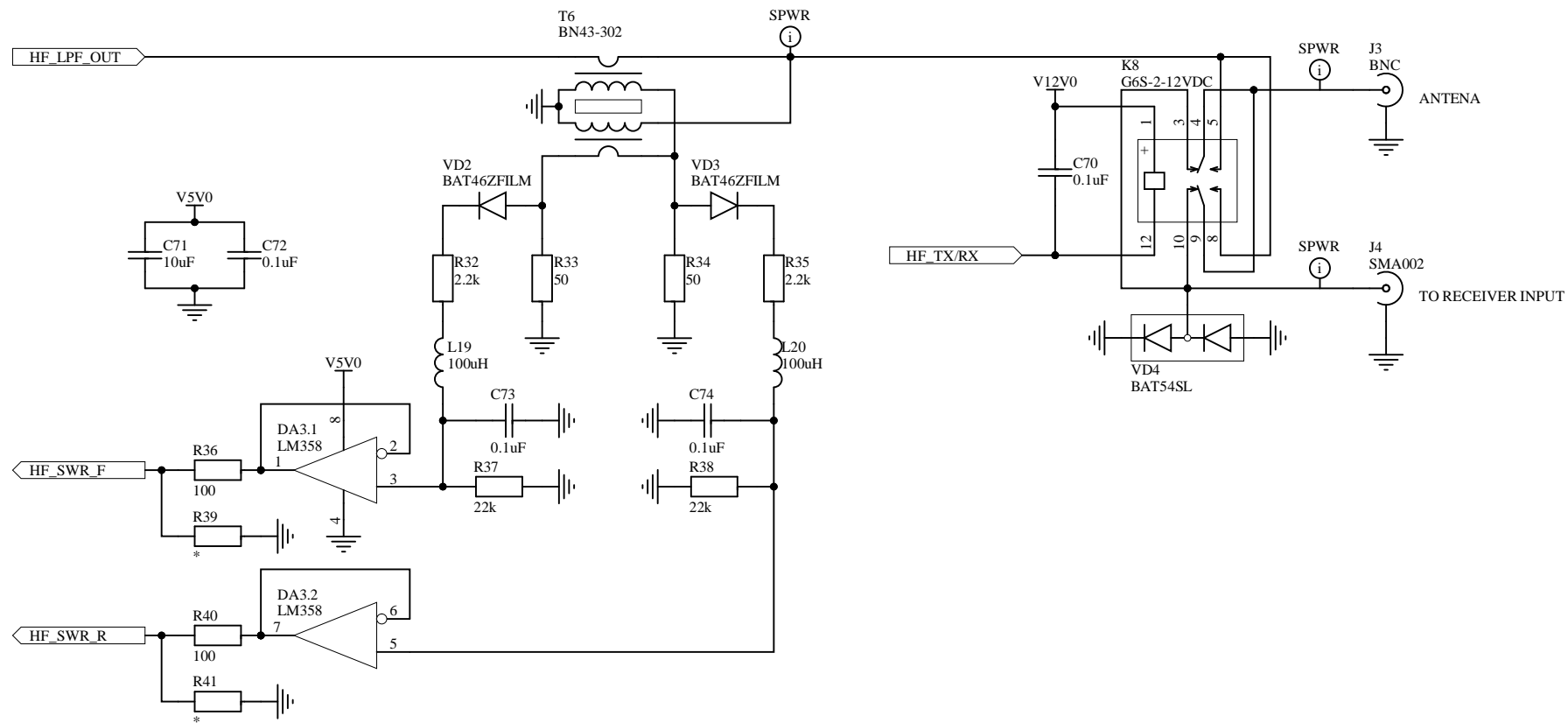
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The shift register (74HCT595) output that can be used to control an antenna tuner or other devices.



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File:	D:\SDRProject\..swr-antenna.SchDoc	Drawn By:

Comment	Description	Designator	Footprint	Refuf	Quantity
1271	1206, NPO, 1kV	C1, C13	CAPC3216X125N	Cap1206	2
1100	1206, NPO, 1kV	C2	CAPC3216X125N	Cap1206	1
1228	1206, NPO, 1kV	C3	CAPC3216X125N	Cap1206	1
756.7	1206, NPO, 1kV	C4, C14	CAPC3216X125N	Cap1206	2
1000	1206, NPO, 1kV	C5	CAPC3216X125N	Cap1206	1
1001	1206, NPO, 1kV	C6	CAPC3216X125N	Cap1206	1
464.8	1206, NPO, 1kV	C7, C15	CAPC3216X125N	Cap1206	2
470	1206, NPO, 1kV	C8	CAPC3216X125N	Cap1206	1
266.4	1206, NPO, 1kV	C9	CAPC3216X125N	Cap1206	1
288.9	1206, NPO, 1kV	C10, C16	CAPC3216X125N	Cap1206	2
330	1206, NPO, 1kV	C11	CAPC3216X125N	Cap1206	1
199.1	1206, NPO, 1kV	C12	CAPC3216X125N	Cap1206	1
0.1uF	Capacitor 2x1.25 mm	C17, C18, C19, C20, C33, C34, C35, C38, C39, C40, C41, C42, C43, C45, C46, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C64, C65, C67, C68, C70, C72, C73, C74	CAPC2013X100N	Cap0805	34
171.8	1206, NPO, 1kV	C21, C30	CAPC3216X125N	Cap1206	2
220	1206, NPO, 1kV	C22	CAPC3216X125N	Cap1206	1
94.6	1206, NPO, 1kV	C23	CAPC3216X125N	Cap1206	1
106	1206, NPO, 1kV	C24, C31	CAPC3216X125N	Cap1206	2
180	1206, NPO, 1kV	C25	CAPC3216X125N	Cap1206	1
8.5	1206, NPO, 1kV	C26	CAPC3216X125N	Cap1206	1
61.49	1206, NPO, 1kV	C27, C32	CAPC3216X125N	Cap1206	2
100	1206, NPO, 1kV	C28	CAPC3216X125N	Cap1206	1
9.7	1206, NPO, 1kV	C29	CAPC3216X125N	Cap1206	1
47uF	GRM32ER70A470K105L	C36	CAPC3225X270N	Cap1210	1
0.1uF	FM31X104K251EEG, FM31X104K251EEG, rcs	C37, C47	CAPC3216X125N	Cap1206	2
0.1uF	GRM43DR72J040K0W01 (0102, X7R, EIA, 0.1uF, DC630V), rcs	C44, C49	CAPC4532X218N	Cap1812	2
180*	1206, NPO, 1kV	C48	CAPC3216X125N	Cap1206	1
100uF	EEUR1E1471, mrad	C63	CAPPR500-1050K1300	CapPolarized	1
2.2uF	Capacitor 2x1.25 mm	C66, C69	CAPC2013X100N	Cap0805	2
10uF	Capacitor 2x1.25 mm	C71	CAPC2013X100N	Cap0805	1
PBD-20		CON1	PBD-20	CONNECTOR-20	1
PLD-10		CON2	PLD-10	CONNECTOR-10	1
LD1117	Adjustable and fixed low drop positive voltage regulator	DA1	SOT23OP700X180-4N	LD1117	1
ULN2803A	Darlington Transistor Array	DA2	SOIC127P1030Q265-18N	ULN2803A	1
LM358	Single Supply Dual Operational Amplifiers	DA3	SOIC127P600X175-8N	LM358	1
74HCT9550	8-bit serial-in, serial or parallel-out shift register with output latches, 3-state, mrad	DD1	SOIC127P600X175-16N	74HCT9550	1
SMAD01		J1	SMAD02	RF Connector	1
PWL-2		J2	PWL-2	PWR_CONNECTOR	1
BNC	EM-BC028M NGP-50	J3	BNC-TYCO_1, 1337542-0	RF Connector	1
SMAD02		J4	SMAD02	RF Connector	1
GAS-2-12VDC	Compact, Industry-Standard 2-pole relay	K1, K2, K3, K4, K5, K6, K7, K8	GAS-2	GAS-2-12VDC	8
4.375u	T50-1	L1, L2	T50-2	Inductor	2
2.694uH	T50-2	L3, L4	T50-2	Inductor	2
1.5uH	T50-2	L5, L6	T50-6	Inductor	2
9H4.9uH	T50-6	L7, L8	T50-6	Inductor	2
591.3uH	T50-6	L9, L10	T50-6	Inductor	2
142.2uH	T50-6	L11, L12	T50-6	Inductor	2
199.1uH	T50-6	L13, L14	T50-6	Inductor	2
4.7uH	Bechen, 4.7uH±10%, 16V-5.0A, RdC, wds=0.05	L15, L18	Inductor radial	Inductor	2
10uH	SMD 0805 50 100mA L-04021N100M70L, mrad	L16	RESC2013X64N	Inductor	1
3.3uH	3.3uH ±10%, inductance, approx=670nA 0.340Ohm (RL51B EC36 2018-A -K13)	L17	RES1270-650X250	Inductor	1
100uH	SWR100BH7 101K Helico	L19, L20	INDUCTOR-100H	Inductor	2
2.2k		R1, R2, R32, R35	RESC2013X64N	Res0805	4
4.7k	4.7 kOhm 3296W (RL54-3296W-47Z), rcs, (N9V9kue)	R3, R4	3296W	potentiometer	2
6.8k		R5	RESC2013X64N	Res0805	1
330		R6, R8, R9, R14, R17, R18	RESC2013X64N	Res0805	4
1k		R7, R15, R22	RESC2013X64N	Res0805	3
0.3"		R10, R16	RESC2013X64N	Res0805	2
280		R11, R12	RESC2013X64N	Res0805	2
4.7k		R13, R27	RESC2013X64N	Res0805	2
0		R19	RESC2013X64N	Res0805	1
		R20, R21, R28, R29, R30, R41	RESC2013X64N	Res0805	6
33		R23	RESC2013X64N	Res0805	1
47		R24	RESC2013X64N	Res0805	1
0.125	8 items, 1 Ohm in parallel, 1206	R25	RESC3216X080N	Res0805	1
100k		R26, R30	RESC2013X64N	Res0805	2
10k		R31	RESC2013X64N	Res0805	1
50		R33, R34	RESC2013X64N	Res0805	2
100		R36, R40	RESC2013X64N	Res0805	2
20k		R37, R38	RESC2013X64N	Res0805	2
R10"x4"x4 N87	R10"x4"x4 N87 (B4C290 L38-X87-Epcos)	T1, T2	R10uax4	transformer type 2, transformer type 1	2
R12.5"x7.5"x5 N87	R12.5"x7.5"x5 N87 (B4C290 L44-X87-Epcos)	T3	R12.5x7.5x5	transformer type 1	1
TP4A-722/14/6-C TDC	TP4A-722/14/6-C TDC	T4, T5	R22x14x6	transformer type 2	2
BN43-302	BN43-302	V6	LANDEM	varimm-match	1
LL4148		VD1	DIODEMLT1515N	DIODE	1
BAT447FLM	Small signal Schottky diodes, mrad	VD2, VD3	SOD3816X118N	DIODE	2
BAT54SL	BAT54SL	VD4	SOT199P229X119-3N	DIODE-2-1A-3C-3A-2C	1
BRG591	NPN 7 GHz wideband transistor	V11, V14	SOT23OP700X180-4N	BRG591	2
BD1996F1		V12, V13	TO-220-48LP	BD1996F1	2
BRV93A	NPN 6 GHz wideband transistor	V15	SOT199P229X119-3N	BRV93A	1
RF4905	HEMTT Power MOSFET	V16	TO-220-v	RF4905	1
MMBT3906	MMBT3906LITG, PNP General Purpose Amplifier, mrad	V17	SOT199P229X119-3N	MMBT3906	1
BLMA5901TRP	BLMA5901TRP	V18	SOT199P229X119-3N	BLMA5901TRP	1
MC1002AM		V19	SOT199P229X119-3N	MC1002AM	1