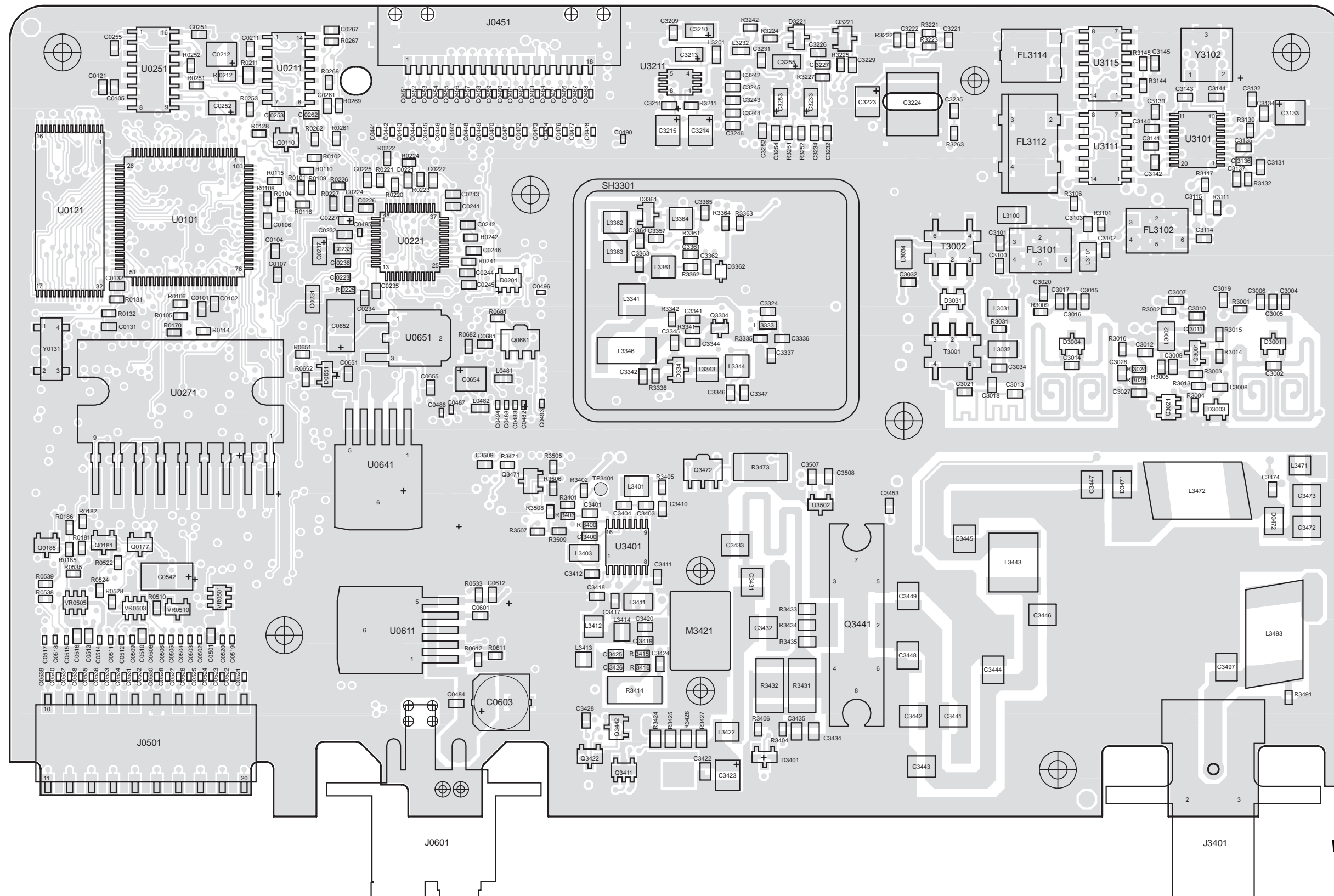
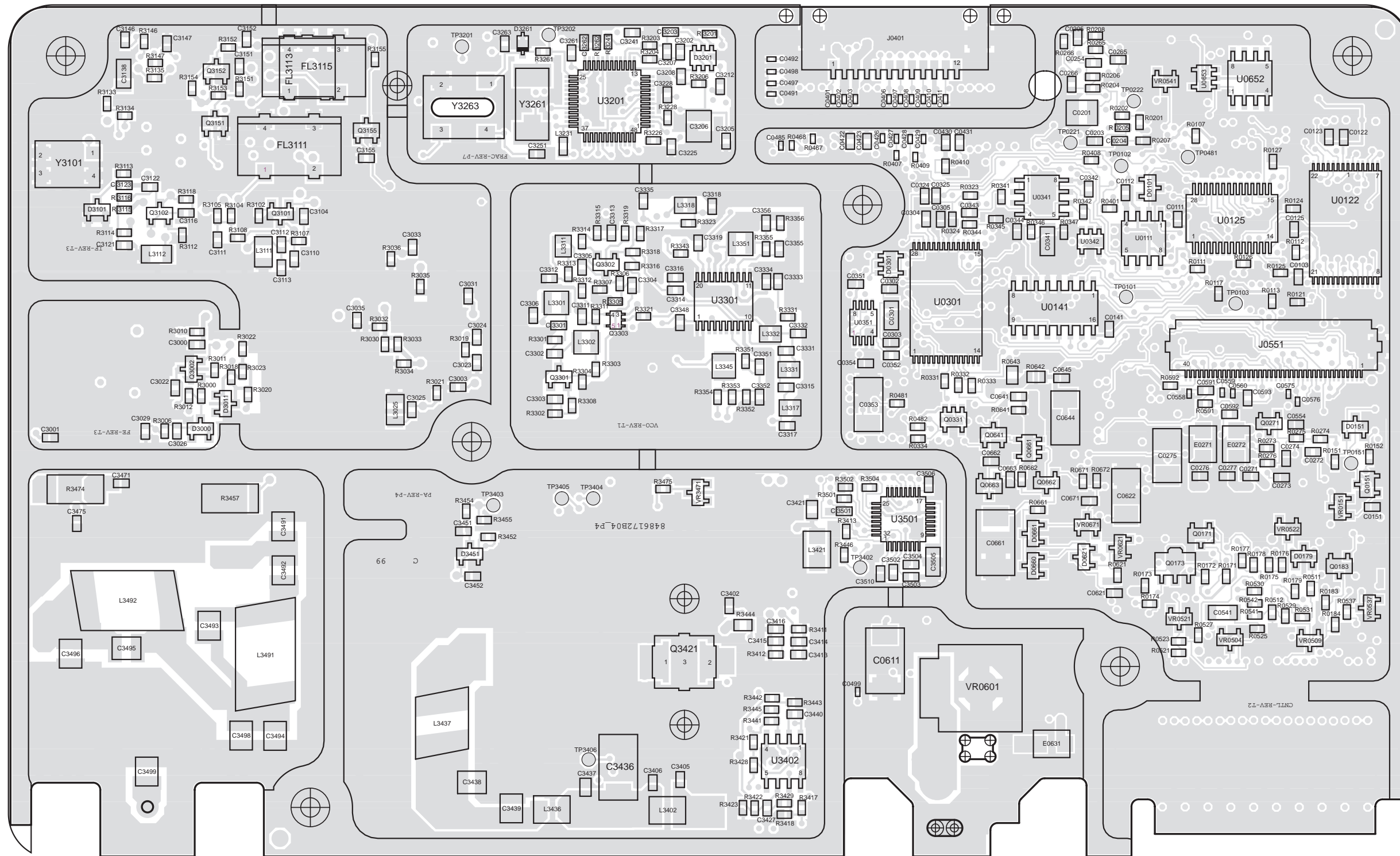


2.0 VHF 1-25W PCB 8486172B04 / Schematics

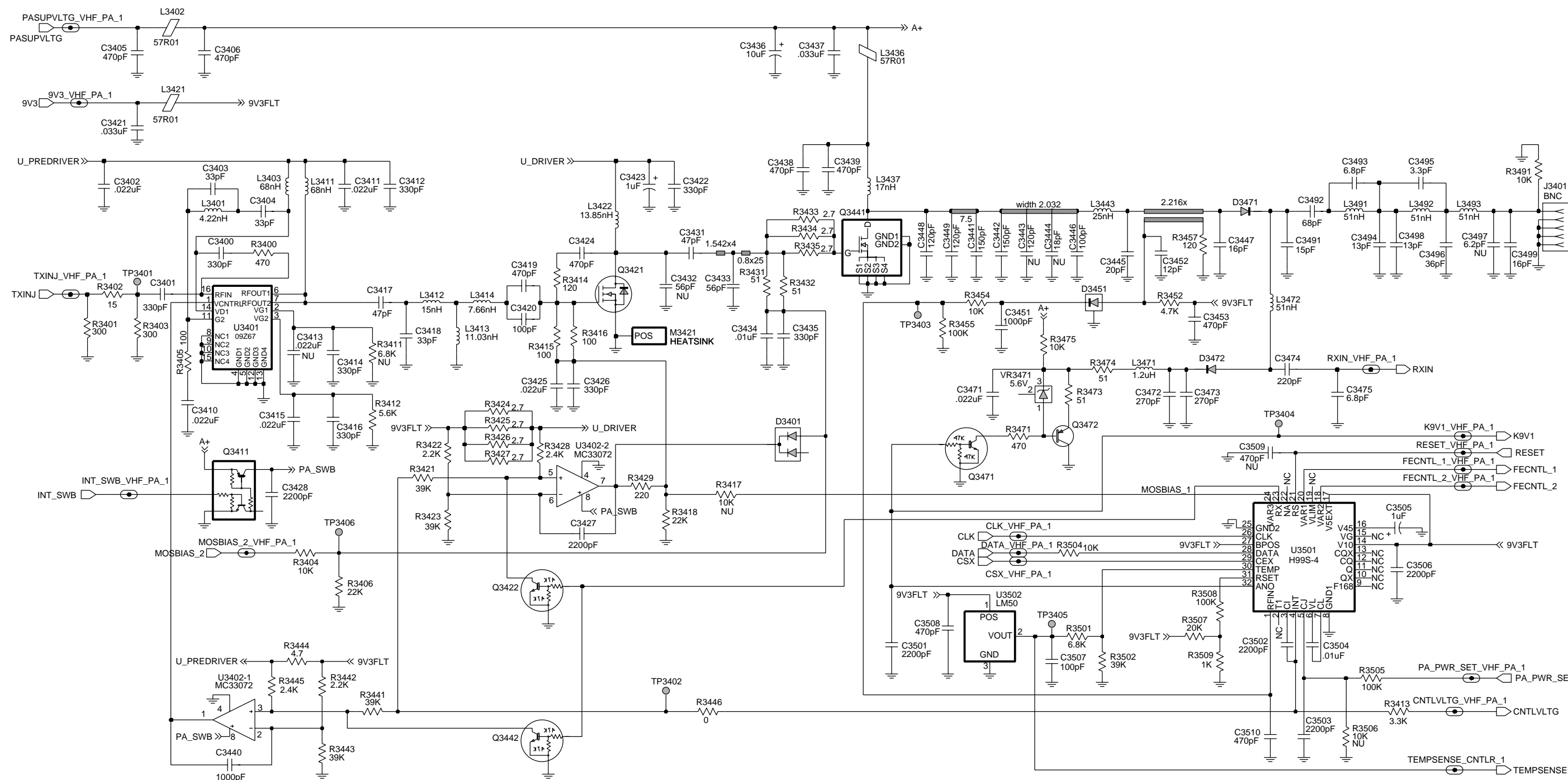


ZWG0130397-P4

**VHF (136-174 MHz) 1-25W
8486172B04 Top Side**



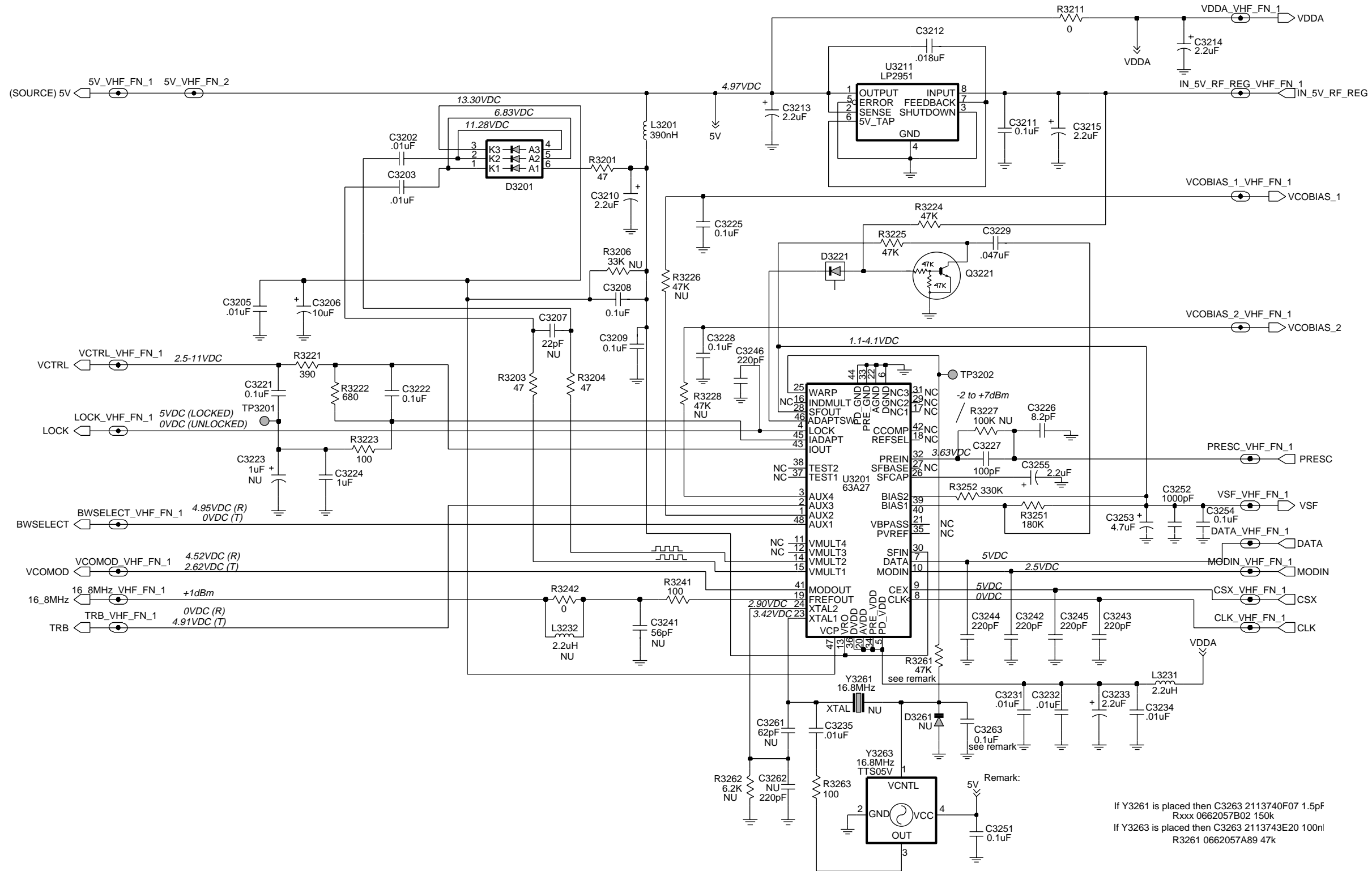
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ZWG0130392-P4

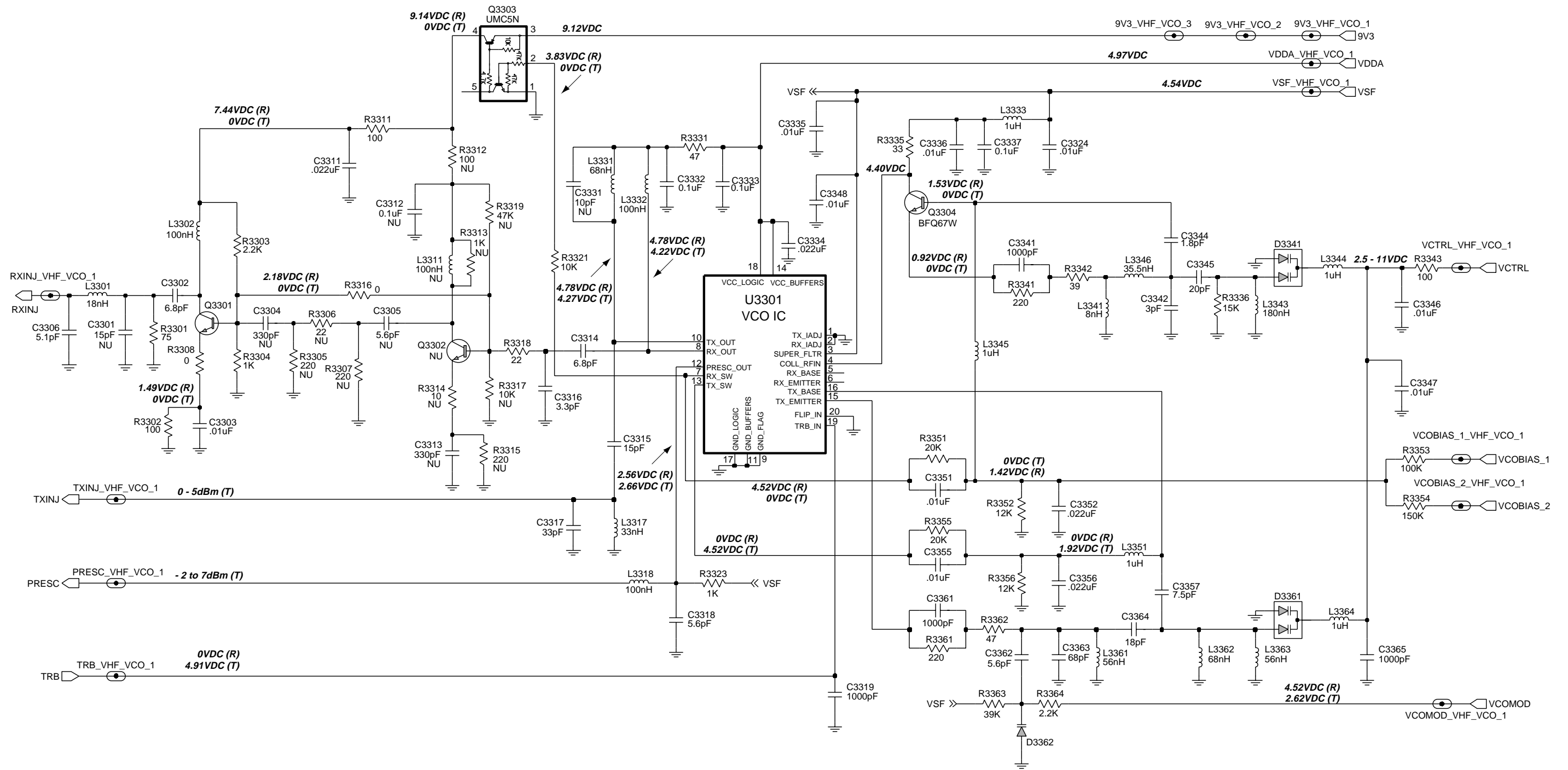
VHF (136-174 MHz) Power Amplifier 1 - 25W

VHF (136-174 MHz) Power Amplifier 1 - 25W



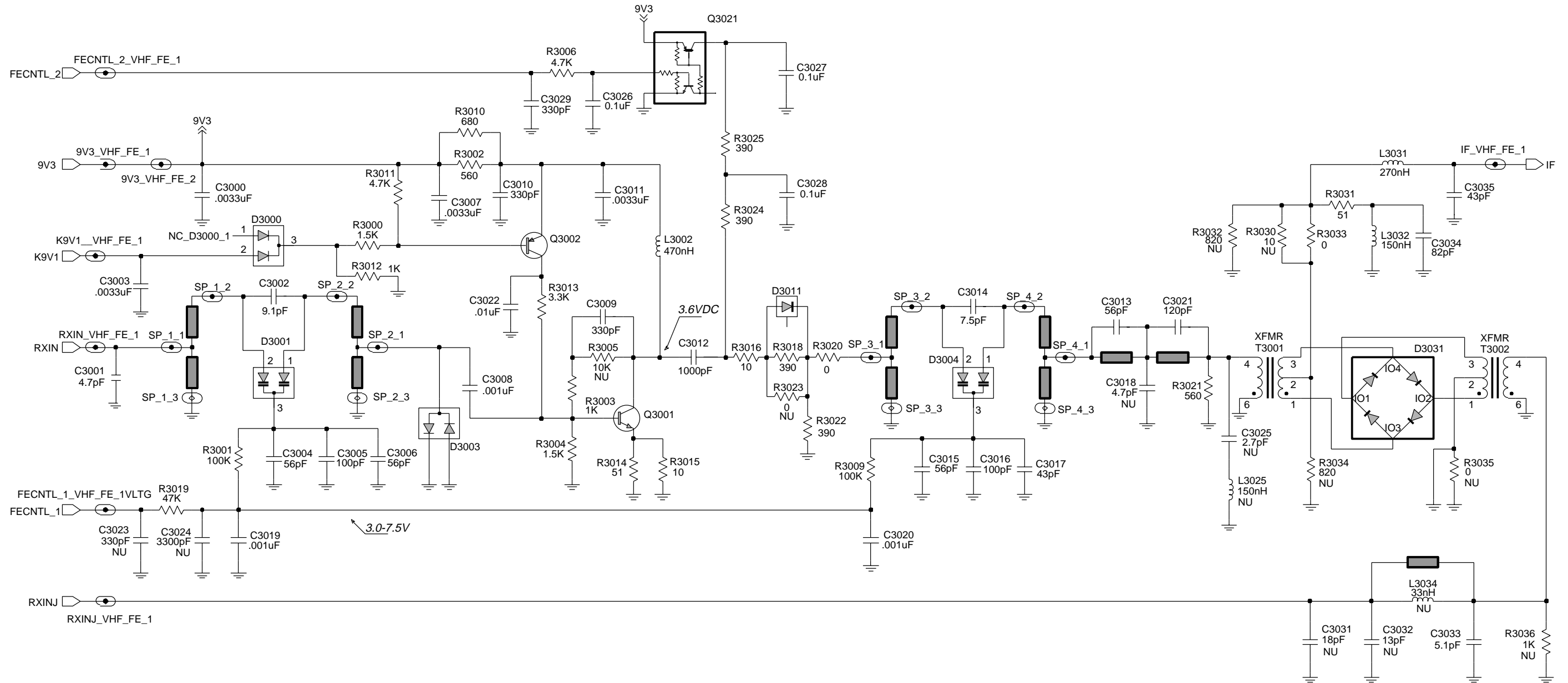
ZWG0130393-P4

VHF (136-174 MHz) FRACN



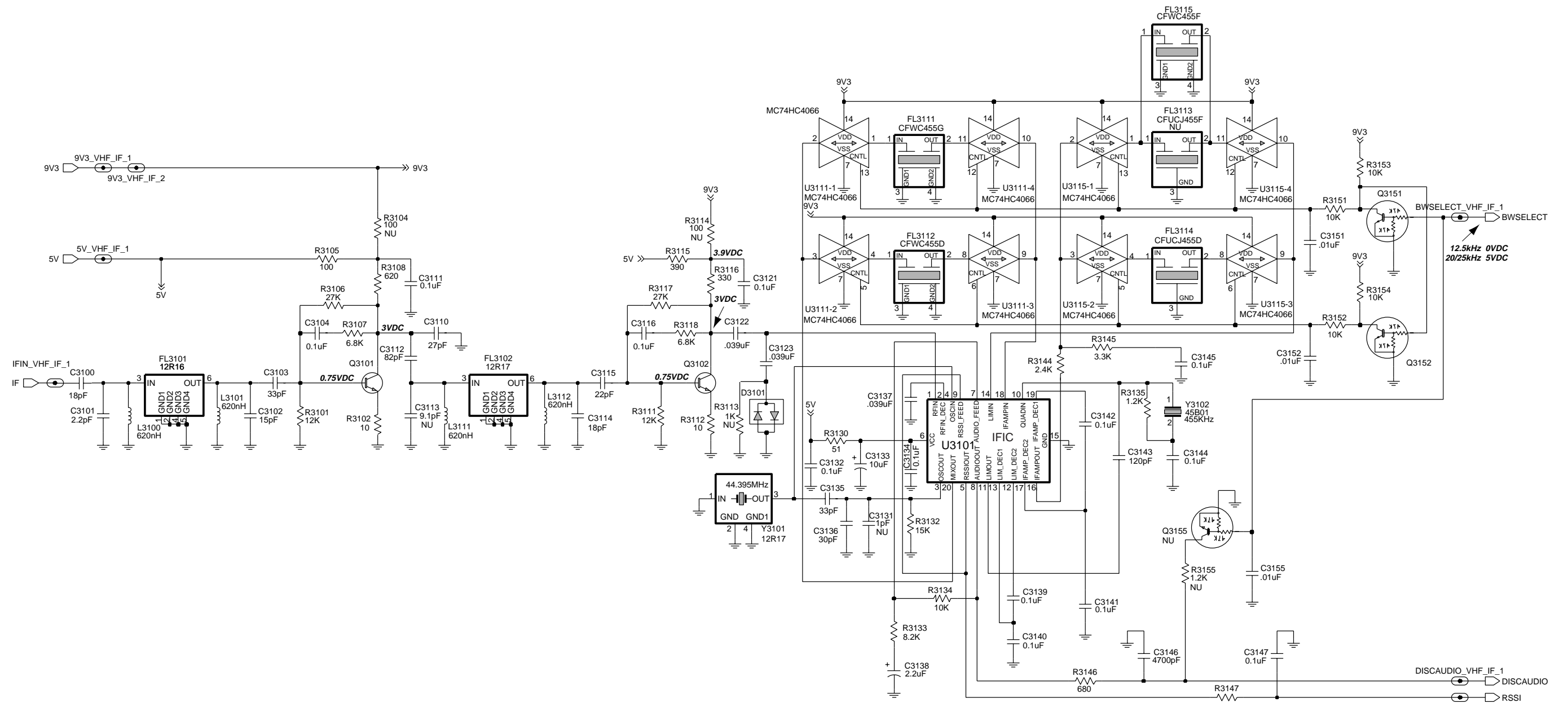
ZWG0130394-P4

VHF (136-174 MHz) Voltage Controlled Oscillator



VHF (136-174 MHz) Receiver Front End

ZWG0130395-P4



ZWG0130396-P4

VHF (136-174 MHz) IF

2.1 VHF PCB 8486172B04 Parts List 1-25W

Circuit Ref	Motorola Part No.	Description
C3000	2113741F37	3.3nF 50V
C3001	2113740F19	4.7pF 5% 50V
C3002	2113740F26	9.1pF 5% 50V
C3003	2113741F37	3.3nF 50V
C3004	2113740F45	56pF 5% 50V
C3005	2113740F51	100pF 5% 50V
C3006	2113740F45	56pF 5% 50V
C3007	2113741F37	3.3nF 50V
C3008	2113741F25	1nF 50V
C3009	2113741F13	330pF 50V
C3010	2113741F13	330pF 50V
C3011	2113741F37	3.3nF 50V
C3012	2113741F25	1nF 50V
C3013	2113740F45	56pF 5% 50V
C3014	2113740F24	7.5pF 5% 50V
C3015	2113740F45	56pF 5% 50V
C3016	2113740F51	100pF 5% 50V
C3017	2113740F42	43pF 5% 50V
C3019	2113741F25	1nF 50V
C3020	2113741F25	1nF 50V
C3021	2113740F53	120pF 5% 50V
C3022	2113741F49	10nF 50V
C3026	2113741F25	1nF 50V
C3027	2113741F25	1nF 50V
C3033	2113740F20	5.1pF 5% 50V
C3034	2113740F49	82pF 5% 50V
C3035	2113740F42	43pF 5% 50V
C3100	2113740F33	18pF 5% 50V
C3101	2113740F11	2.2pF 5% 50V
C3102	2113740F31	15pF 5% 50V
C3103	2113740F39	33pF 5% 50V
C3104	2113743E20	100nF
C3110	2113740F37	27pF 5% 50V
C3111	2113743E20	100nF
C3112	2113740F49	82pF 5% 50V
C3114	2113740F33	18pF 5% 50V
C3115	2113740F35	22pF 5% 50V
C3116	2113743E20	100nF
C3121	2113743E20	100nF
C3122	2113743E11	39nF 10%
C3123	2113743E11	39nF 10%
C3132	2113743E20	100nF
C3133	2311049A57	TANT CP 10uF 10% 16V
C3134	2113743E20	100nF
C3135	2113740L30	33pF 2%
C3136	2113740L29	30pF 2%
C3137	2113743E11	39nF 10%
C3138	2311049A40	TANT CP 2.2uF 10% 10V
C3139	2113743E20	100nF
C3140	2113743E20	100nF

Circuit Ref	Motorola Part No.	Description
C3141	2113743E20	100nF
C3142	2113743E20	100nF
C3143	2113740F53	120pF 5% 50V
C3144	2113743E20	100nF
C3145	2113743E20	100nF
C3146	2113741F41	4.7nF 50V
C3147	2113743E20	100nF
C3151	2113741F49	10nF 50V
C3152	2113741F49	10nF 50V
C3155	2113741F49	10nF 50V
C3202	2113741F49	10nF 50V
C3203	2113741F49	10nF 50V
C3205	2113741F49	10nF 50V
C3206	2311049A57	TANT CP 10uF 10% 16V
C3208	2113743E20	100nF
C3209	2113743E20	100nF
C3210	2311049A40	TANT CP 2.2uF 10% 10V
C3211	2113743E20	100nF
C3212	2113743E05	18nF
C3213	2311049A40	TANT CP 2.2uF 10% 10V
C3214	2311049A09	TANT CP 2.2uF 10% 20V
C3215	2311049A09	TANT CP 2.2uF 10% 20V
C3221	2113743E20	100nF
C3222	2113743E20	100nF
C3224	0882422W23	FILM SM 1.0uF 15V 5%
C3225	2113743E20	100nF
C3226	2113740F25	8.2pF 5% 50V
C3227	2113740F51	100pF 5% 50V
C3228	2113743E20	100nF
C3229	2113743E12	47nF 10%
C3231	2113741F49	10nF 50V
C3232	2113741F49	10nF 50V
C3233	2311049A40	TANT CP 2.2uF 10% 10V
C3234	2113741F49	10nF 50V
C3235	2113741F49	10nF 50V
C3242	2113740F59	220pF 5% 50V
C3243	2113740F59	220pF 5% 50V
C3244	2113740F59	220pF 5% 50V
C3245	2113740F59	220pF 5% 50V
C3246	2113740F59	220pF 5% 50V
C3251	2113743E20	100nF
C3252	2113741F25	1nF 50V
C3253	2311049A56	TANT CP 4.7uF 20% 10V
C3254	2113743E20	100nF
C3255	2311049A40	TANT CP 2.2uF 10% 10V
C3263	2113743E20	100nF
C3302	2113740F23	6.8pF 5% 50V
C3303	2113741F49	10nF 50V
C3306	2113740F20	5.1pF 5% 50V
C3311	2113743E07	22nF
C3314	2113740F23	6.8pF 5% 50V

Circuit Ref	Motorola Part No.	Description
C3315	2113740F31	15pF 5% 50V
C3316	2113740F15	3.3pF 5% 50V
C3317	2113740F39	33pF 5% 50V
C3318	2113740F21	5.6pF 5% 50V
C3319	2113741F25	1nF 50V
C3324	2113741F49	10nF 50V
C3332	2113743E20	100nF
C3333	2113743E20	100nF
C3334	2113743E07	22nF
C3335	2113741F49	10nF 50V
C3336	2113741F49	10nF 50V
C3337	2113743E20	100nF
C3341	2113741F25	1nF 50V
C3342	2113740L05	3.0pF +-0.1pF
C3344	2113740F09	1.8pF 5% 50V
C3345	2113740L25	20pF +-0.25pF
C3346	2113741F49	10nF 50V
C3347	2113741F49	10nF 50V
C3348	2113741F49	10nF 50V
C3351	2113741F49	10nF 50V
C3352	2113743E07	22nF
C3355	2113741F49	10nF 50V
C3356	2113743E07	22nF
C3357	2113740F24	7.5pF 5% 50V
C3361	2113741F25	1nF 50V
C3362	2113740F21	5.6pF 5% 50V
C3363	2113740F47	68pF 5% 50V
C3364	2113740F33	18pF 5% 50V
C3365	2113741F25	1nF 50V
C3400	2113740F63	330pF 5% 50V
C3401	2113740F63	330pF 5% 50V
C3402	2113743E07	22nF
C3403	2113740F39	33pF 5% 50V
C3404	2113740F39	33pF 5% 50V
C3405	2113740F67	470pF 5% 50V
C3406	2113740F67	470pF 5% 50V
C3410	2113743E07	22nF
C3411	2113743E07	22nF
C3412	2113740F63	330pF 5% 50V
C3414	2113740F63	330pF 5% 50V
C3415	2113743E07	22nF
C3416	2113740F63	330pF 5% 50V
C3417	2113740F43	47pF 5% 50V
C3418	2113740F39	33pF 5% 50V
C3419	2113741F17	470pF 50V
C3420	2113740F51	100pF 5% 50V
C3421	2113741A57	33nF 50V
C3422	2113740A67	330pF 5% 50V
C3423	2311049A08	TANT CP 1uF 10% 35V
C3424	2113740F67	470pF 5% 50V
C3425	2113743E07	22nF

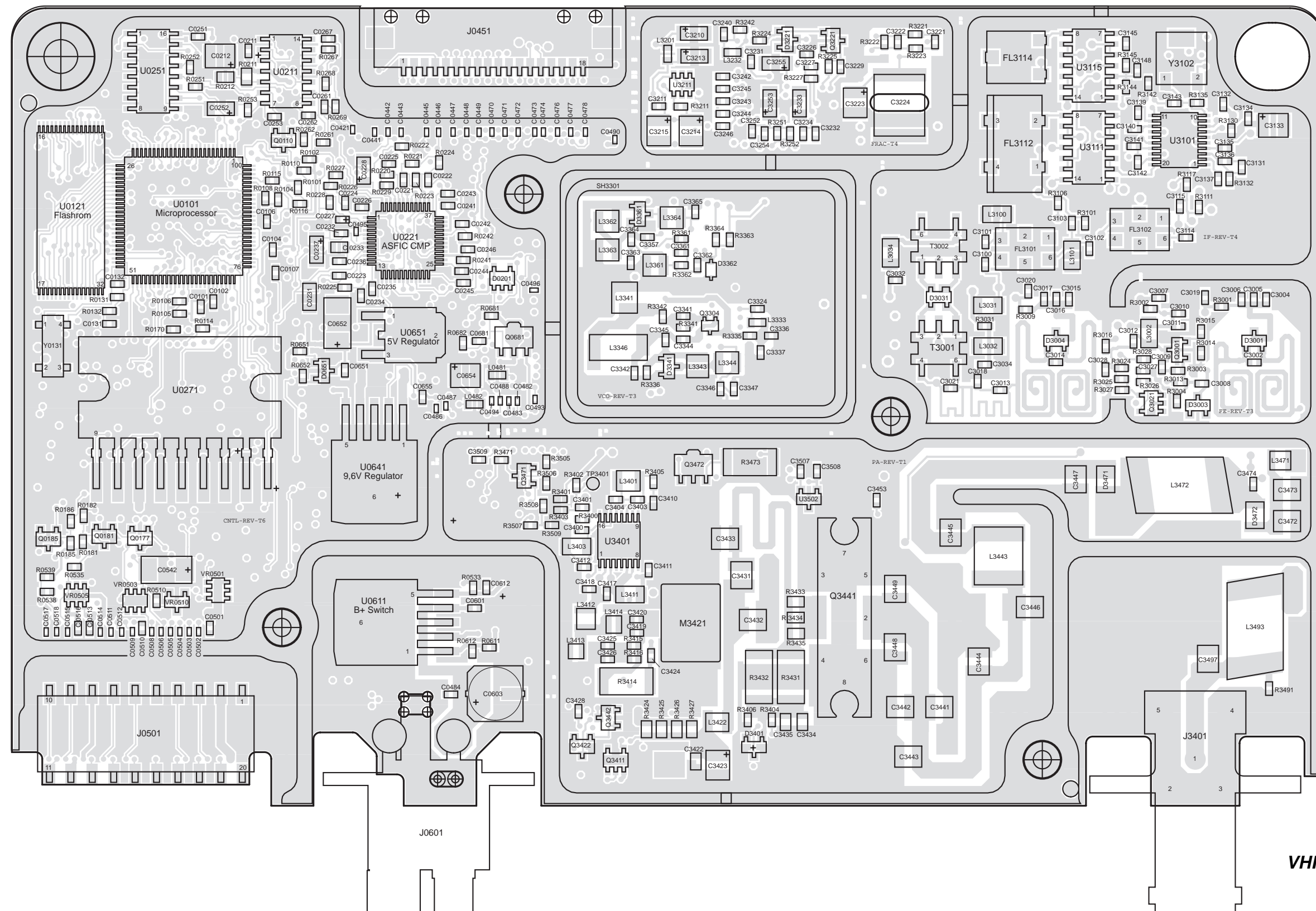
Circuit Ref	Motorola Part No.	Description
C3426	2113740F63	330pF 5% 50V
C3427	2113741F33	2.2nF 50V
C3428	2113741F33	2.2nF 50V
C3431	2111078B34	HQ 47pF 5%
C3433	2111078B36	HQ 56pF 5%
C3434	2113741A45	10nF 50V
C3435	2113740A67	330pF 5% 50V
C3436	2311049A45	TANT CP 10uF 10% 35V
C3437	2113741A57	33nF 50V
C3438	2111078B59	HQ 470pF 5%
C3439	2111078B59	HQ 470pF 5%
C3440	2113741F25	1nF 50V
C3441	2111078B47	HQ 150pF 5%
C3442	2111078B47	HQ 150pF 5%
C3445	2111078B21	HQ 20pF 5%
C3446	2111078B42	HQ 100pF 5%
C3447	2111078B19	HQ 16pF 5%
C3448	2111078B44	HQ 120pF 5%
C3449	2111078B44	HQ 120pF 5%
C3451	2113741F25	1nF 50V
C3452	2113740F29	12pF 5% 50V
C3453	2113740F67	470pF 5% 50V
C3471	2113743E07	22nF
C3472	2111078B53	HQ 270pF 5%
C3473	2111078B53	HQ 270pF 5%
C3474	2113740F59	220pF 5% 50V
C3475	2113740F23	6.8pF 5% 50V
C3491	2111078B18	HQ 15pF 5%
C3492	2111078B38	HQ 68pF 5%
C3493	2111078B09	HQ 6.8pF 5%
C3494	2111078B16	HQ 13pF 5%
C3495	2111078B01	HQ 3.3pF 5%
C3496	2111078B31	HQ 36pF 5%
C3498	2111078B16	HQ 13pF 5%
C3499	2111078B19	HQ 16pF 5%
C3501	2113741F33	2.2nF 50V
C3502	2113741F33	2.2nF 50V
C3503	2113741F33	2.2nF 50V
C3504	2113741F49	10nF 50V
C3505	2311049A07	TANT CP 1uF 10% 16V
C3506	2113741F33	2.2nF 50V
C3507	2113740F51	100pF 5% 50V
C3508	2113740F67	470pF 5% 50V
C3510	2113740F67	470pF 5% 50V
D3000	4813833C02	DUAL SOT MMBD6100
D3001	4805649Q13	VCTR 1SV228 SOT23
D3003	4880154K03	DUAL SCHOTTKY SOT23
D3004	4805649Q13	VCTR 1SV228 SOT23
D3011	4880142L01	PIN
D3031	4886143B01	MIXER DIODE CROSSOVER
D3101	4880154K03	DUAL SCHOTTKY SOT23

Circuit Ref	Motorola Part No.	Description
R3471	0662057A41	470 1/16W 5%
R3473	0680194M18	51 1W 5%
R3474	0680194M18	51 1W 5%
R3475	0662057A73	10k 1/16W 5%
R3491	0662057A73	10k 1/16W 5%
R3501	0662057A69	6k8 1/16W 5%
R3502	0662057A87	39k 1/16W 5%
R3504	0662057A73	10k 1/16W 5%
R3505	0662057A97	100k 1/16W
R3507	0662057A80	20k 1/16W 5%
R3508	0662057A97	100k 1/16W
R3509	0662057A49	1k 1/16W 5%
T3001	2508396X02	TRANSFORMER
T3002	2508397X02	TRANSFORMER
U3101	5186144B01	FM IF IC SA616
U3111	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3115	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3201	5185963A27	IC TESTED AT25016 48 PIN GFP
U3211	5185963A33	VLTG REG LP2951 SO8
U3301	5105750U54	VCO BUFFER PKG DIE
U3401	5105109Z67	LDMOS DRIVER VHF/UHF
U3402	5113818A03	IC HIGH PERFORMANCE SI
U3501	5185765B01	IC POWER CONTROL
U3502	5185963A15	TEMP SENSOR 1M5
Y3101	4880606B09	CRYSTAL 44.395 MHZ
Y3102	9186145B02	44.85 MHZ XSTAL FLTR 60dB
Y3263	4886182B01	VCTCXO 16.8MHz 2ppm TTSO5V
* Y3261	Not Used	16.8MHz 75Z04

* Motorola Depot Servicing only

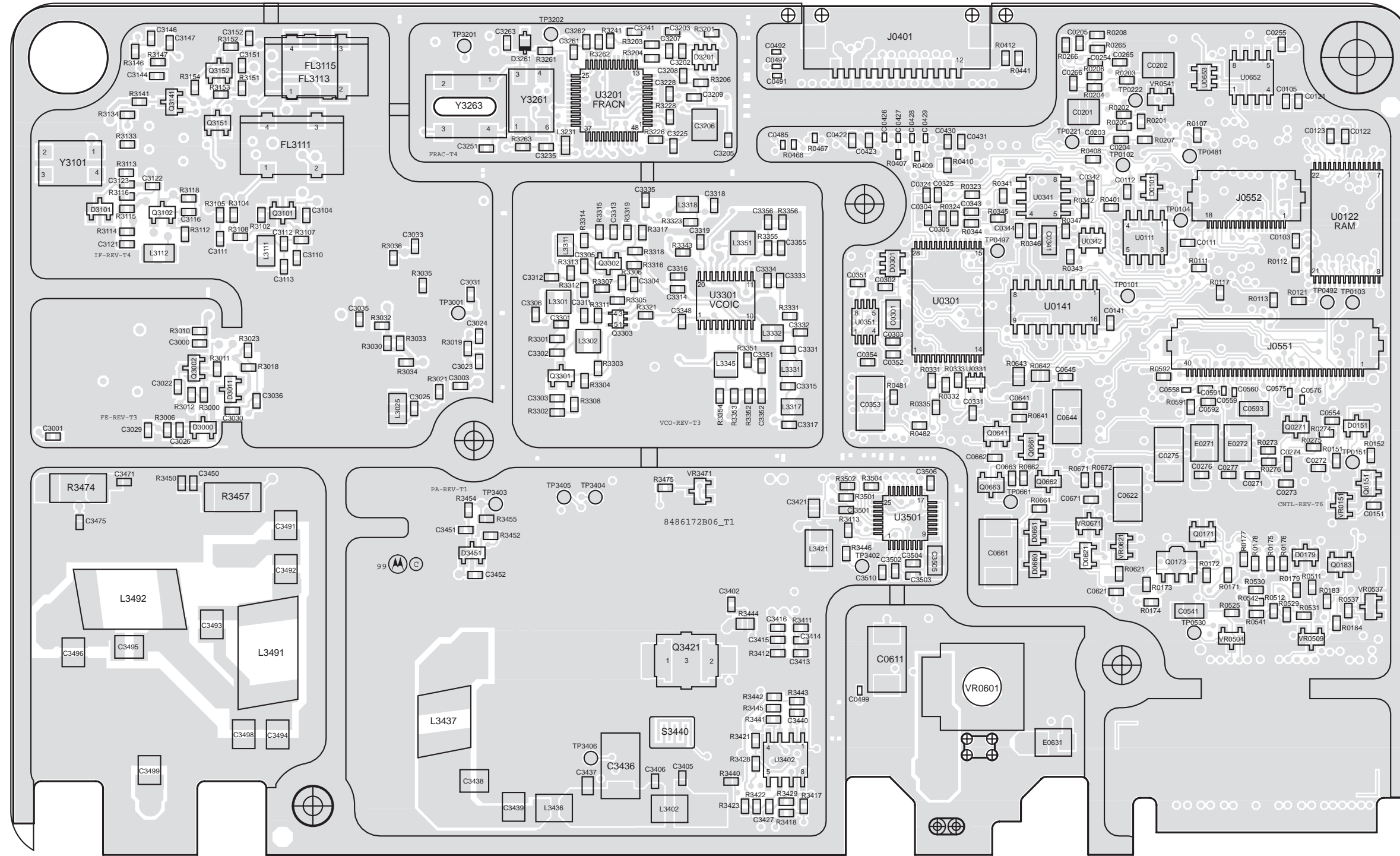
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

3.0 VHF 1-25W PCB 8486172B06 / Schematics



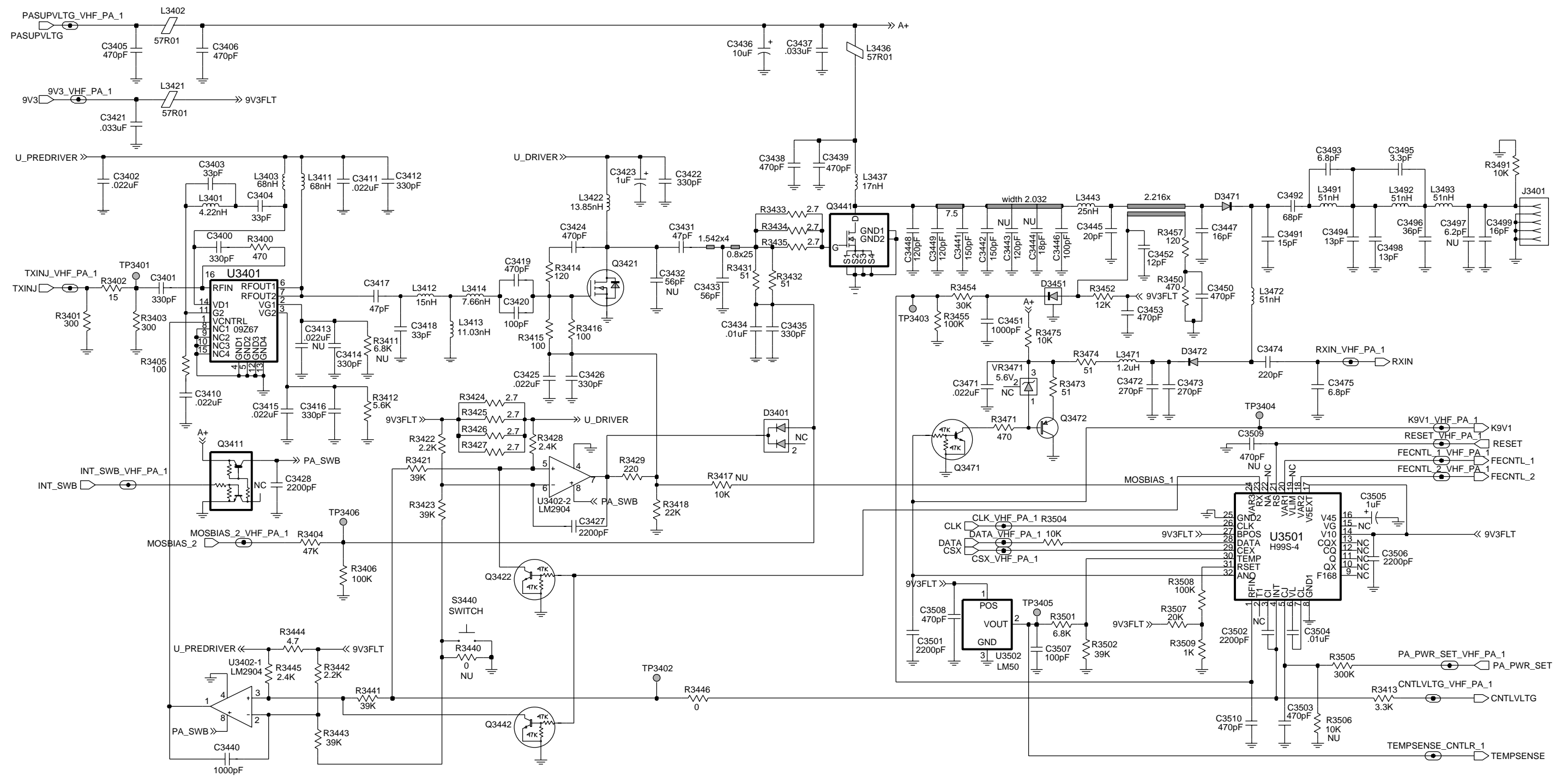
ZWG0130397-O

**VHF (136-174 MHz) 1-25W
8486172B06 Top Side**



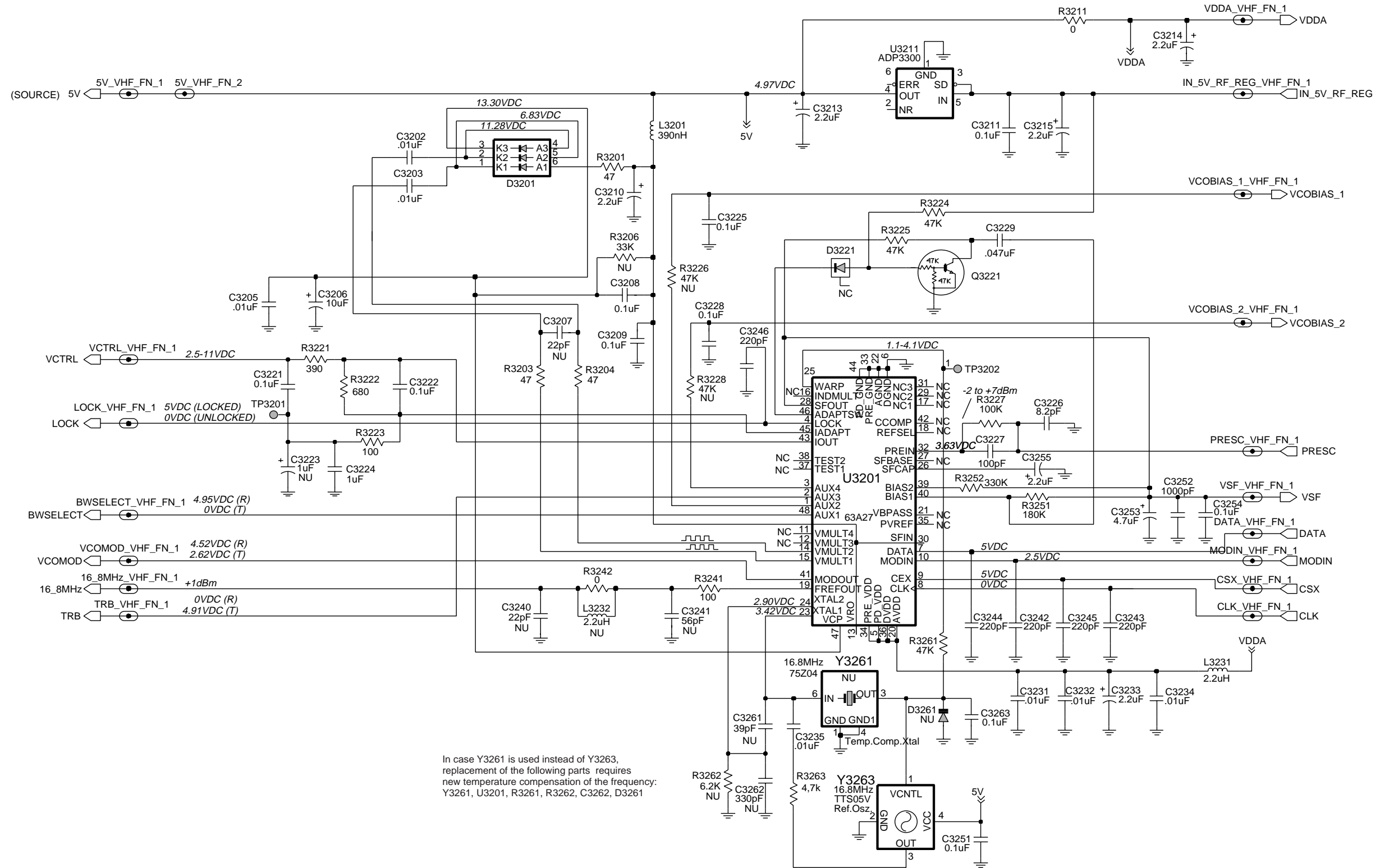
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VHF (136-174 MHz) 1-25W 8486172B06 Bottom Side



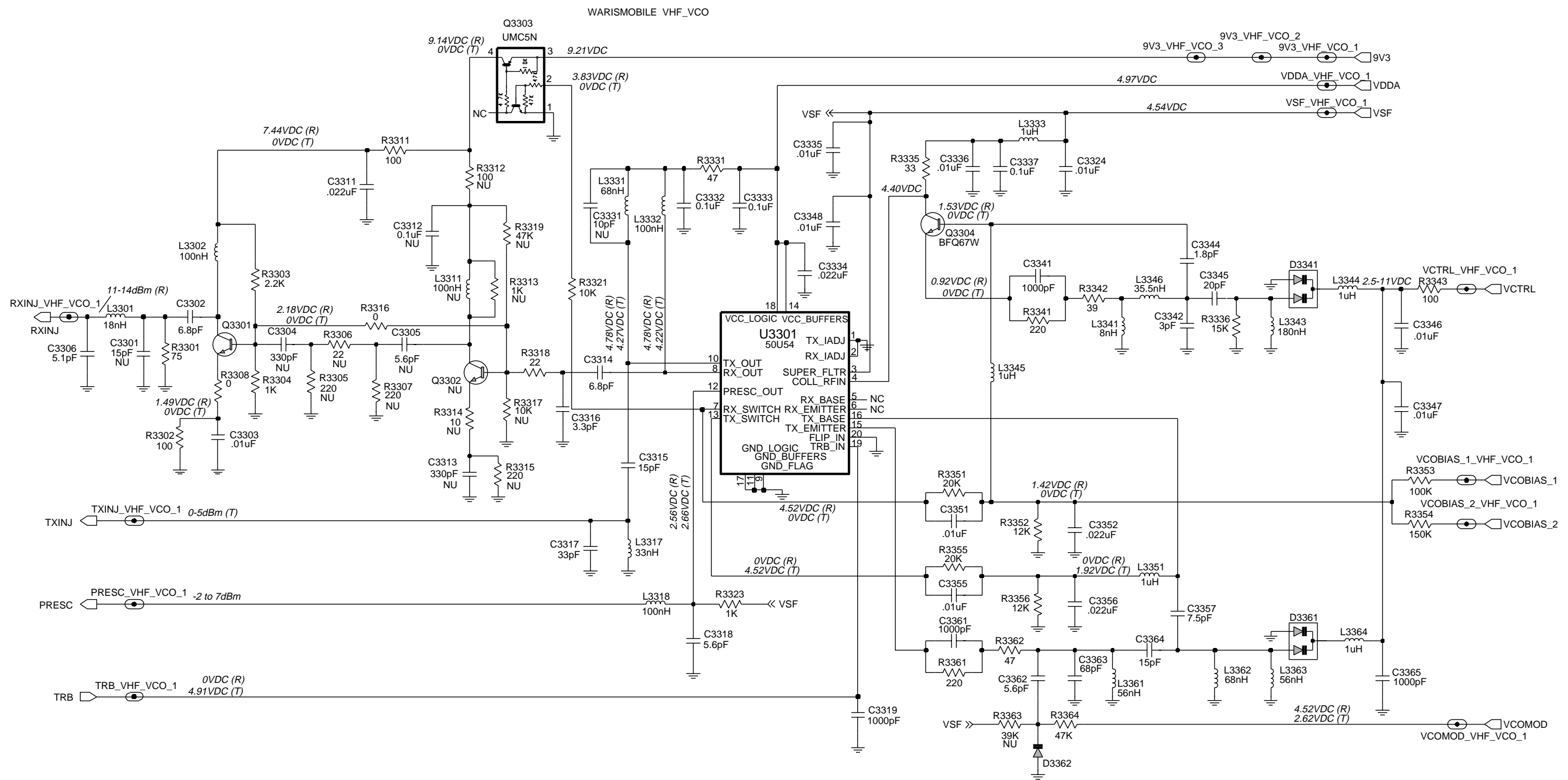
ZWG0130392-A

VHF (136-174 MHz) Power Amplifier 1-25W



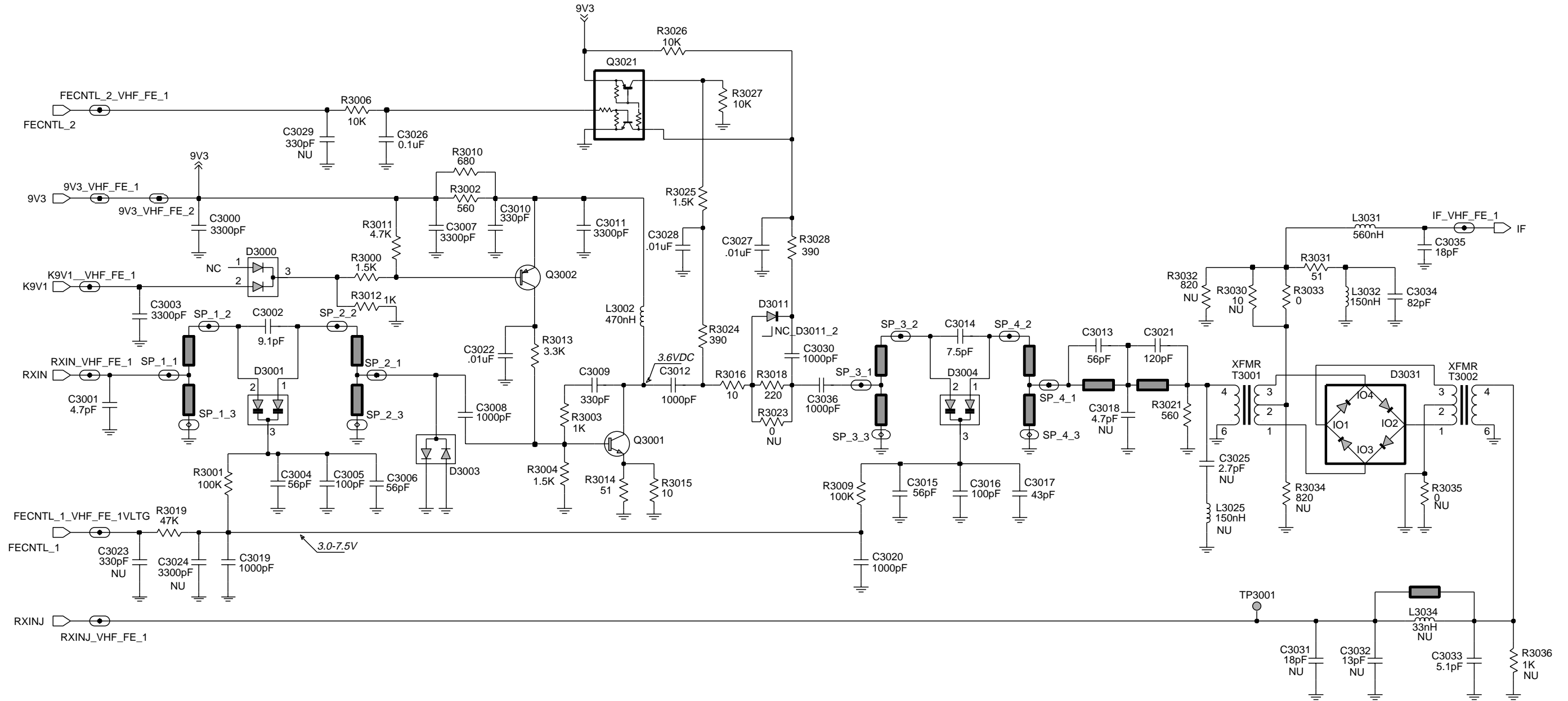
ZWG0130393-A

VHF (136-174 MHz) FRACN



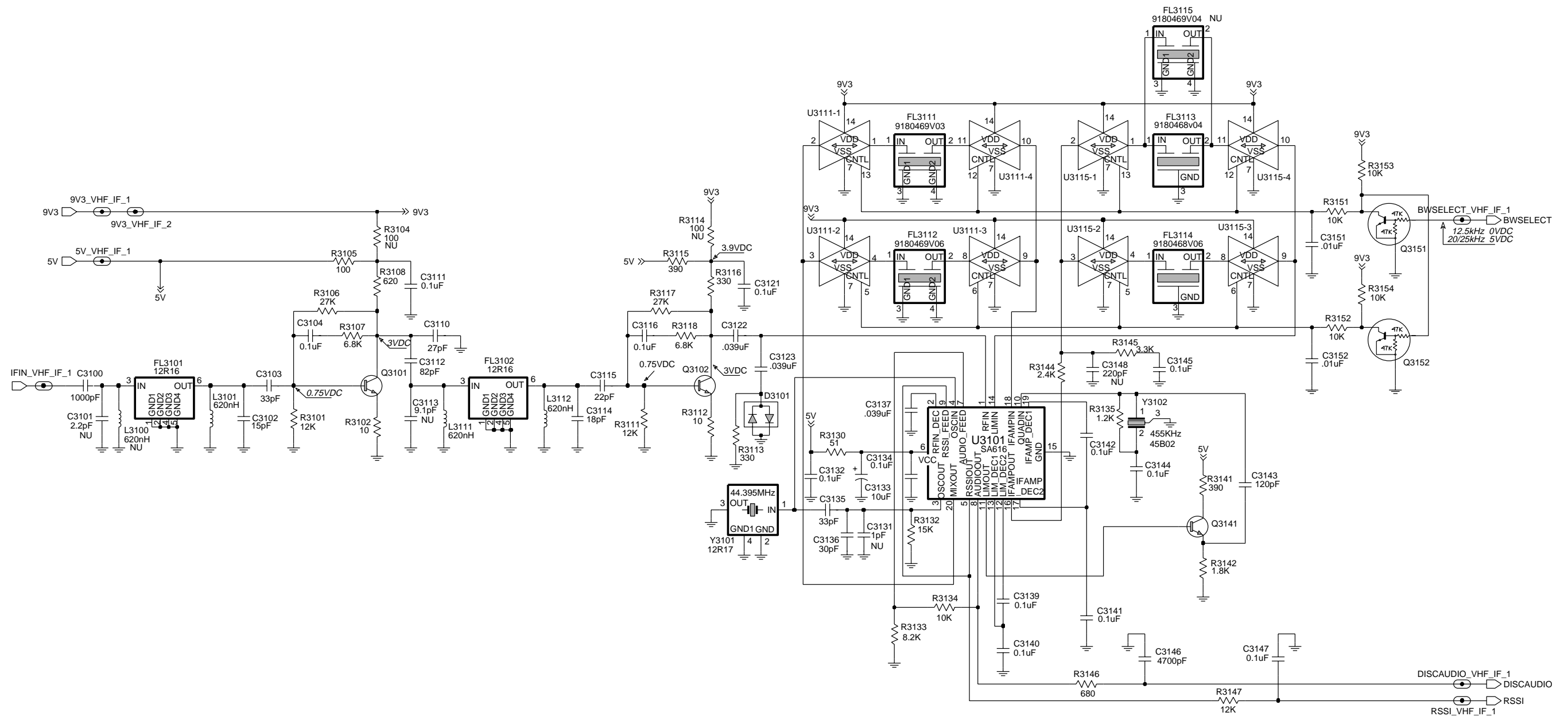
ZWG0130394-O

VHF (136-174 MHz) Voltage Controlled Oscillator



VHF (136-174 MHz) Receiver Front End

ZWG0130395-A



ZWG0130396-O

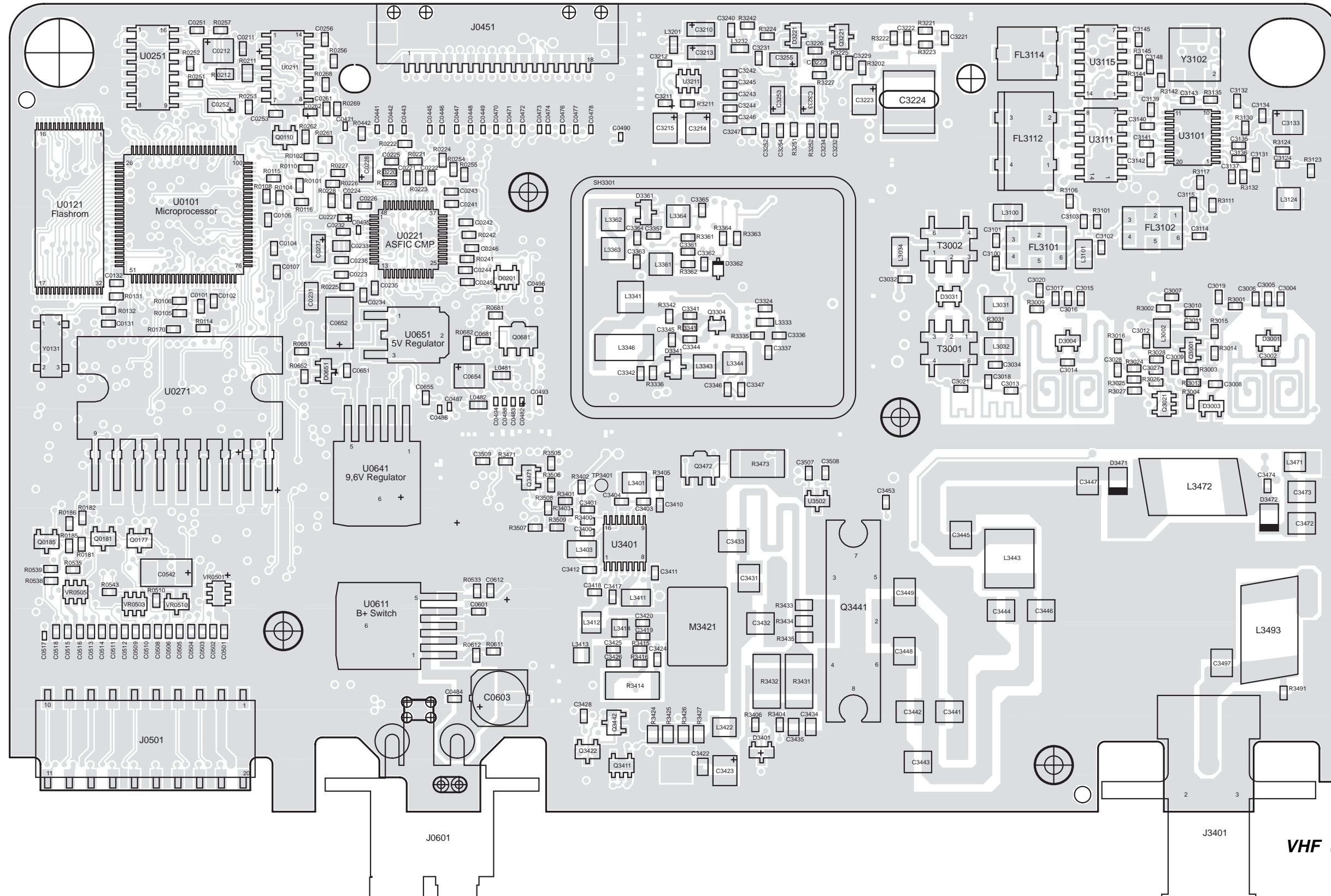
VHF (136-174 MHz) IF

Circuit Ref	Motorola Part No.	Description
R3443	0662057A87	39k 1/16W 5%
R3444	0662057C19	4R7 1/10W 5%
R3445	0662057A58	2k4 1/16W 5%
R3446	0662057B47	0 1/16W
R3450	0662057A41	470 1/16W 5%
R3452	0662057A75	12k 1/16W 5%
R3454	0662057A84	30k 1/16W 5%
R3455	0662057A97	100k 1/16W
R3457	0683962T51	120 1W 5%
R3471	0662057A41	470 1/16W 5%
R3473	0680194M18	51 1W 5%
R3474	0680194M18	51 1W 5%
R3475	0662057A73	10k 1/16W 5%
R3491	0662057A73	10k 1/16W 5%
R3501	0662057A69	6k8 1/16W 5%
R3502	0662057A87	39k 1/16W 5%
R3504	0662057A73	10k 1/16W 5%
R3505	0662057B09	300k 1/16W 5%
R3507	0662057A80	20k 1/16W 5%
R3508	0662057A97	100k 1/16W
R3509	0662057A49	1k 1/16W 5%
T3001	2508396X02	TRANSFORMER
T3002	2508397X02	TRANSFORMER
U3101	5186144B01	FM IF IC SA616
U3111	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3115	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3201	5185963A27	IC TESTED AT25016 48 PIN GFP
U3211	5105739X05	IC SOT 5V HI-PRECISION REGULAT
U3301	5105750U54	VCO BUFFER PKG DIE
U3401	5105109Z67	LD MOS DRIVER VHF/UHF
U3402	5180932W01	LINEAR IC OP AMP
U3501	5185765B01	IC POWER CONTROL
U3502	5185963A15	TEMP SENSOR 1M5
VR3471	4813830A15	5.6V 5% 225mW
Y3101	4880606B09	CRYSTAL 44.395 MHZ
Y3102	9186145B02	CERAMIC DISCRIMINATOR 455kHz
Y3263	4886182B01	VCTCXO 16.8MHz 2ppm TTSO5V
* Y3261	Not Used	16.8MHz 75Z04

* Motorola Depot Servicing only

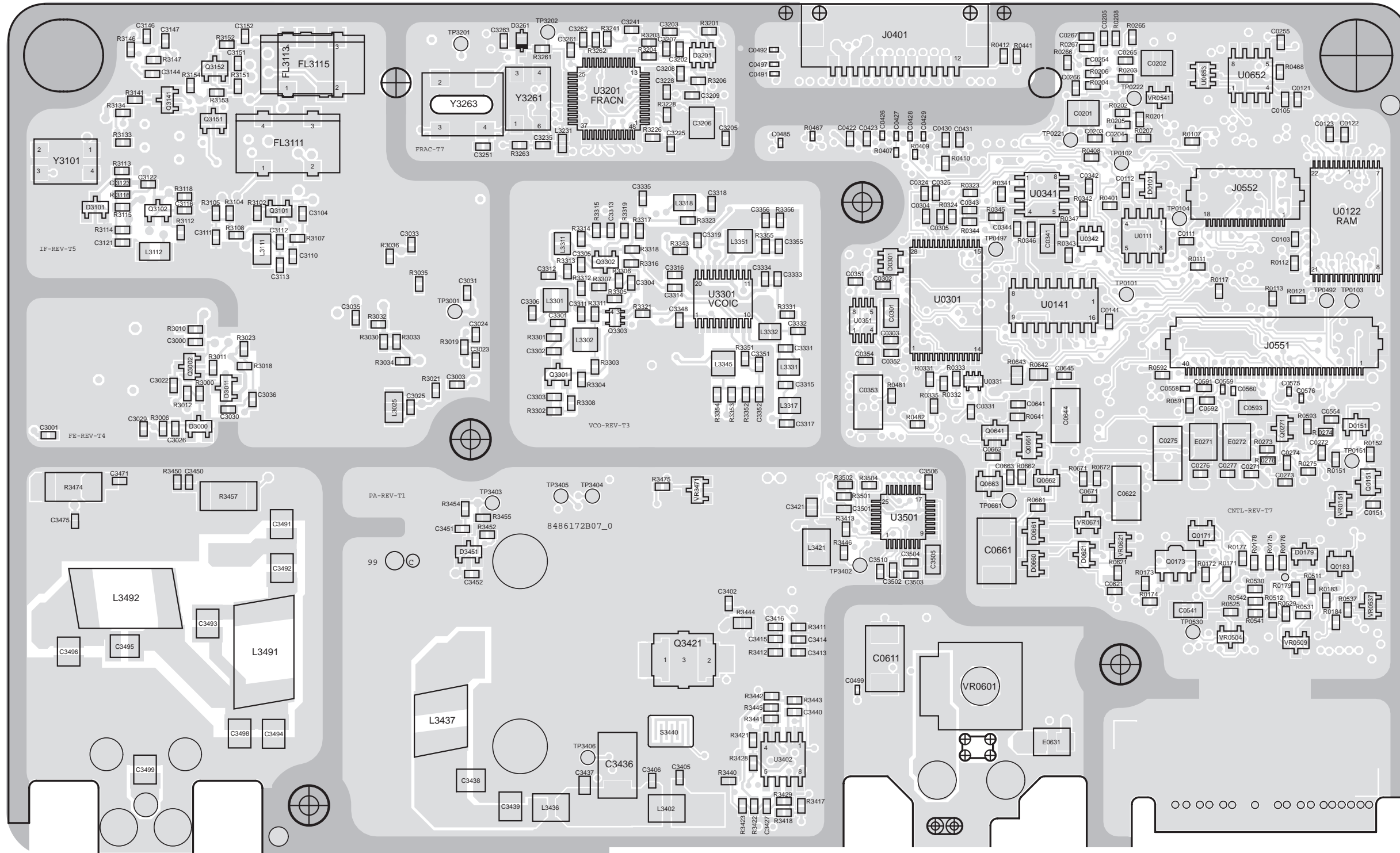
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

4.0 VHF 1-25W PCB 8486172B07 / Schematics

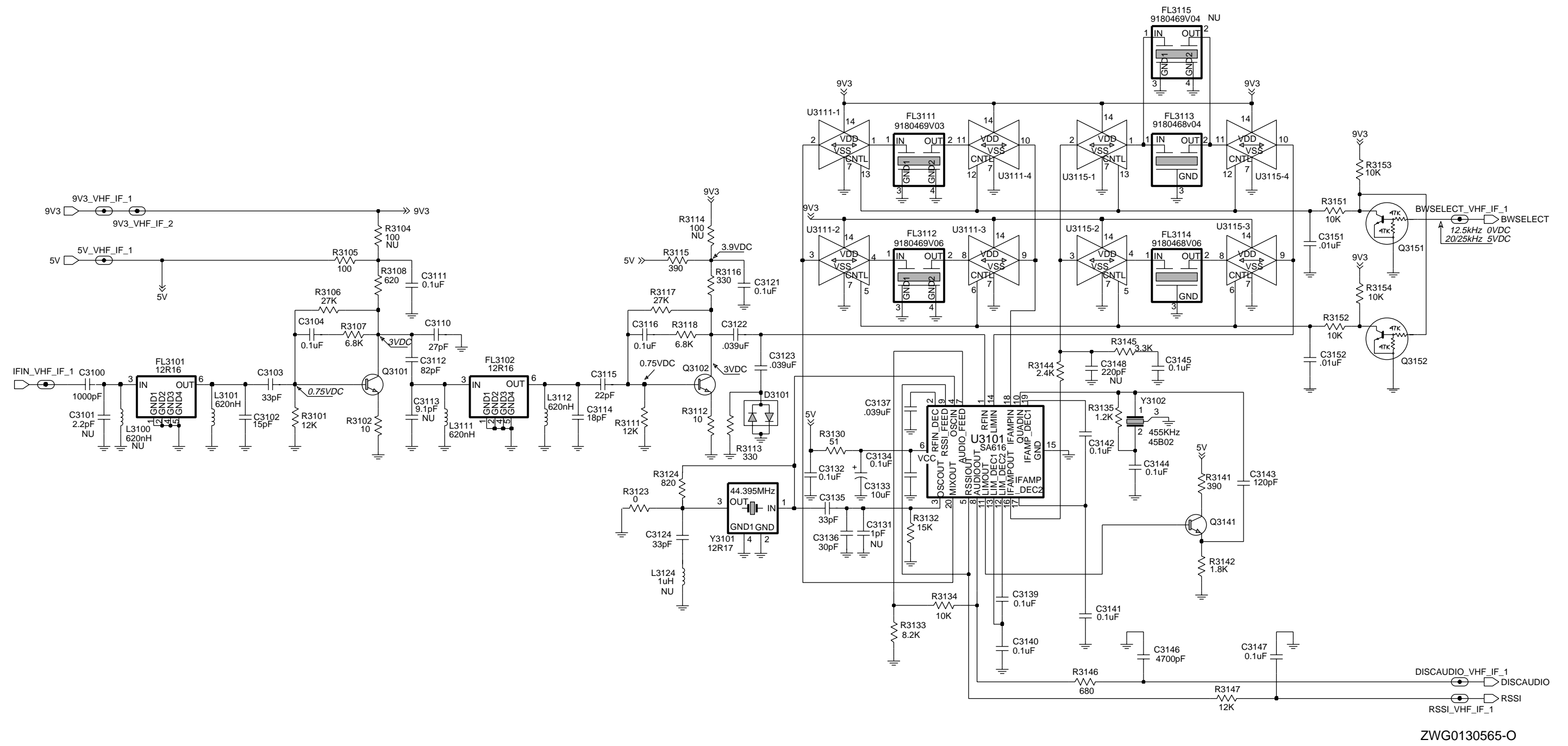


ZWG0130397-A

**VHF (136-174 MHz) 1-25W
846172B07 Top Side**

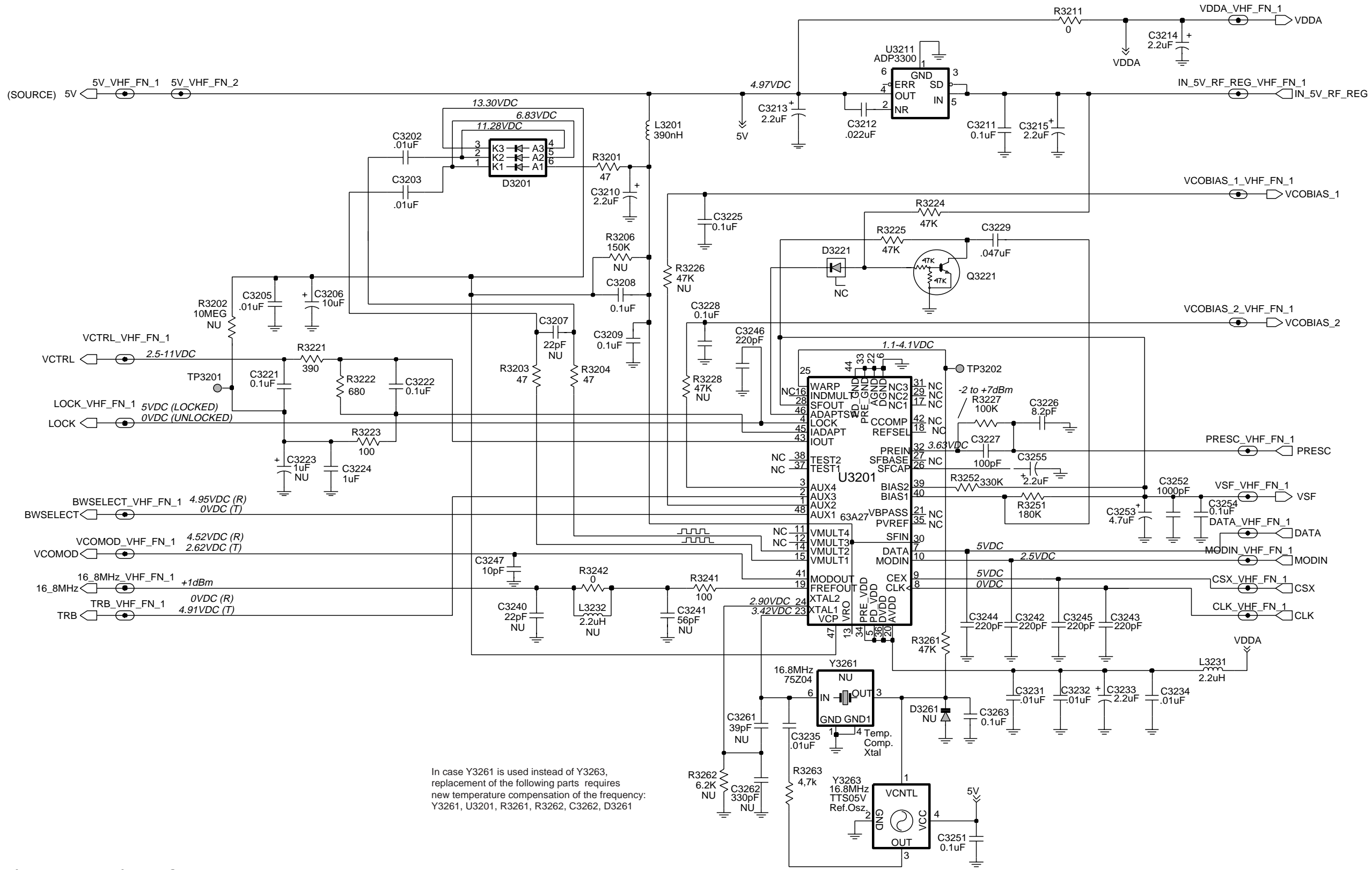


ZWG01300398-A



ZWG0130565-O

VHF (136-174 MHz) IF



ZWG0130564-O

VHF (136-174 MHz) FRACN

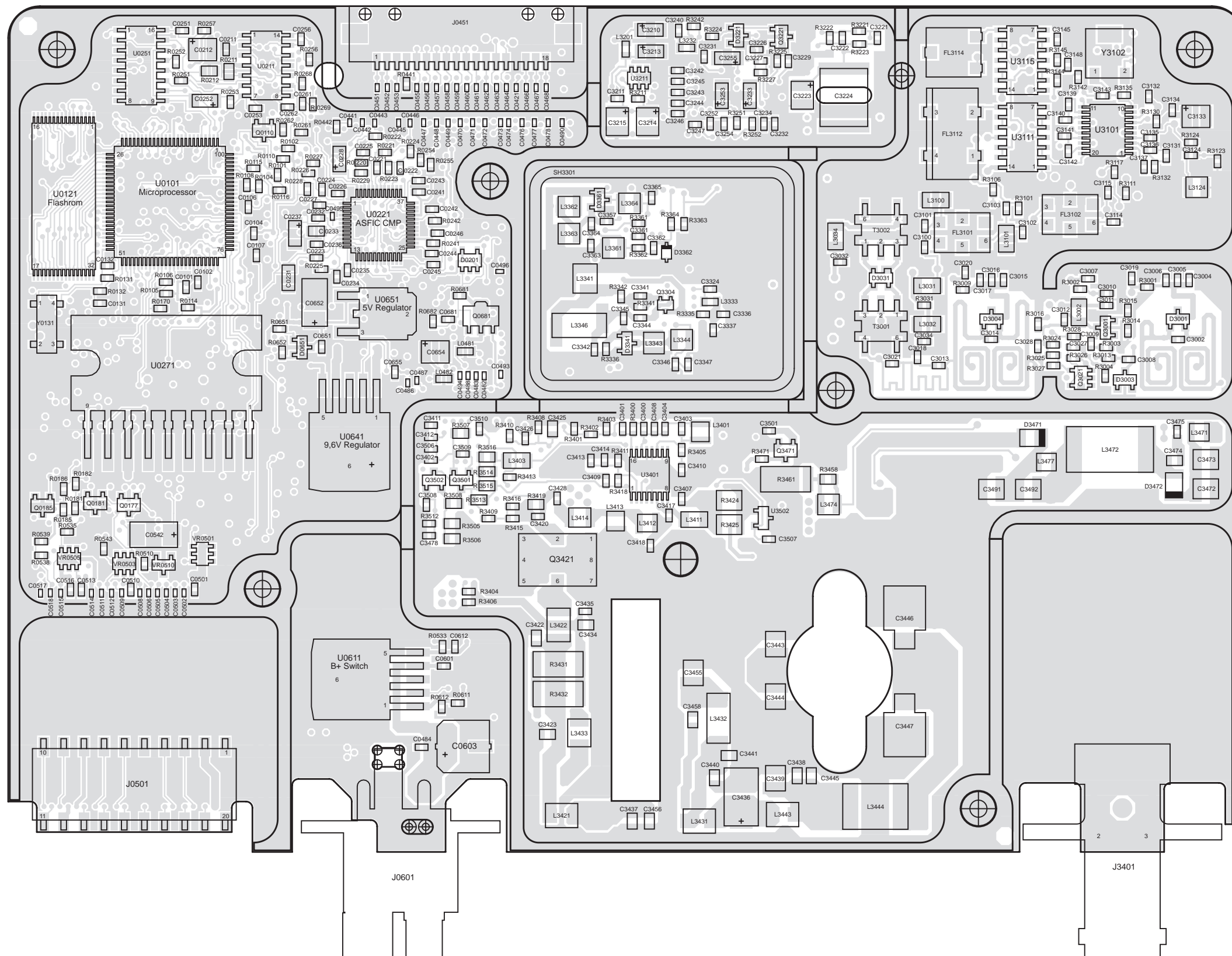
Circuit Ref	Motorola Part No.	Description
R3426	0662057C13	2R7 1/10W 5%
R3427	0662057C13	2R7 1/10W 5%
R3428	0662057A58	2k4 1/16W 5%
R3429	0662057A33	220 1/16W 5%
R3431	0680194M18	51 1W 5%
R3432	0680194M18	51 1W 5%
R3433	0662057C13	2R7 1/10W 5%
R3434	0662057C13	2R7 1/10W 5%
R3435	0662057C13	2R7 1/10W 5%
R3441	0662057A87	39k 1/16W 5%
R3442	0662057A57	2k2 1/16W 5%
R3443	0662057A87	39k 1/16W 5%
R3444	0662057C19	4R7 1/10W 5%
R3445	0662057A58	2k4 1/16W 5%
R3446	0662057B47	0 1/16W
R3450	0662057A41	470 1/16W 5%
R3452	0662057A75	12k 1/16W 5%
R3454	0662057A84	30k 1/16W 5%
R3455	0662057A97	100k 1/16W
R3457	0683962T51	120 1W 5%
R3471	0662057A41	470 1/16W 5%
R3473	0680194M18	51 1W 5%
R3474	0680194M18	51 1W 5%
R3475	0662057A73	10k 1/16W 5%
R3491	0662057A73	10k 1/16W 5%
R3501	0662057A69	6k8 1/16W 5%
R3502	0662057A87	39k 1/16W 5%
R3504	0662057A73	10k 1/16W 5%
R3505	0662057B09	300k 1/16W 5%
R3507	0662057A80	20k 1/16W 5%
R3508	0662057A97	100k 1/16W
R3509	0662057A49	1k 1/16W 5%
T3001	2508396X02	TRANSFORMER
T3002	2508397X02	TRANSFORMER
U3101	5186144B01	FM IF IC SA616
U3111	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3115	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3201	5185963A27	IC TESTED AT25016 48 PIN GFP
U3211	5105739X05	IC SOT 5V HI-PRECISION REGULAT
U3301	5105750U54	VCO BUFFER PKG DIE
U3401	5105109Z67	LD MOS DRIVER VHF/UHF
U3402	5180932W01	LINEAR IC OP AMP
U3501	5185765B01	IC POWER CONTROL
U3502	5185963A15	TEMP SENSOR 1M5
VR3471	4813830A15	5.6V 5% 225mW
Y3101	4880606B09	CRYSTAL 44.395 MHZ

Circuit Ref	Motorola Part No.	Description
Y3102	9186145B02	CERAMIC DISCRIMINATOR 455kHz
Y3263	4886182B01	VCTCXO 16.8MHz 2ppm TTSO5V
* Y3261	Not Used	16.8MHz 75Z04

* Motorola Depot Servicing only

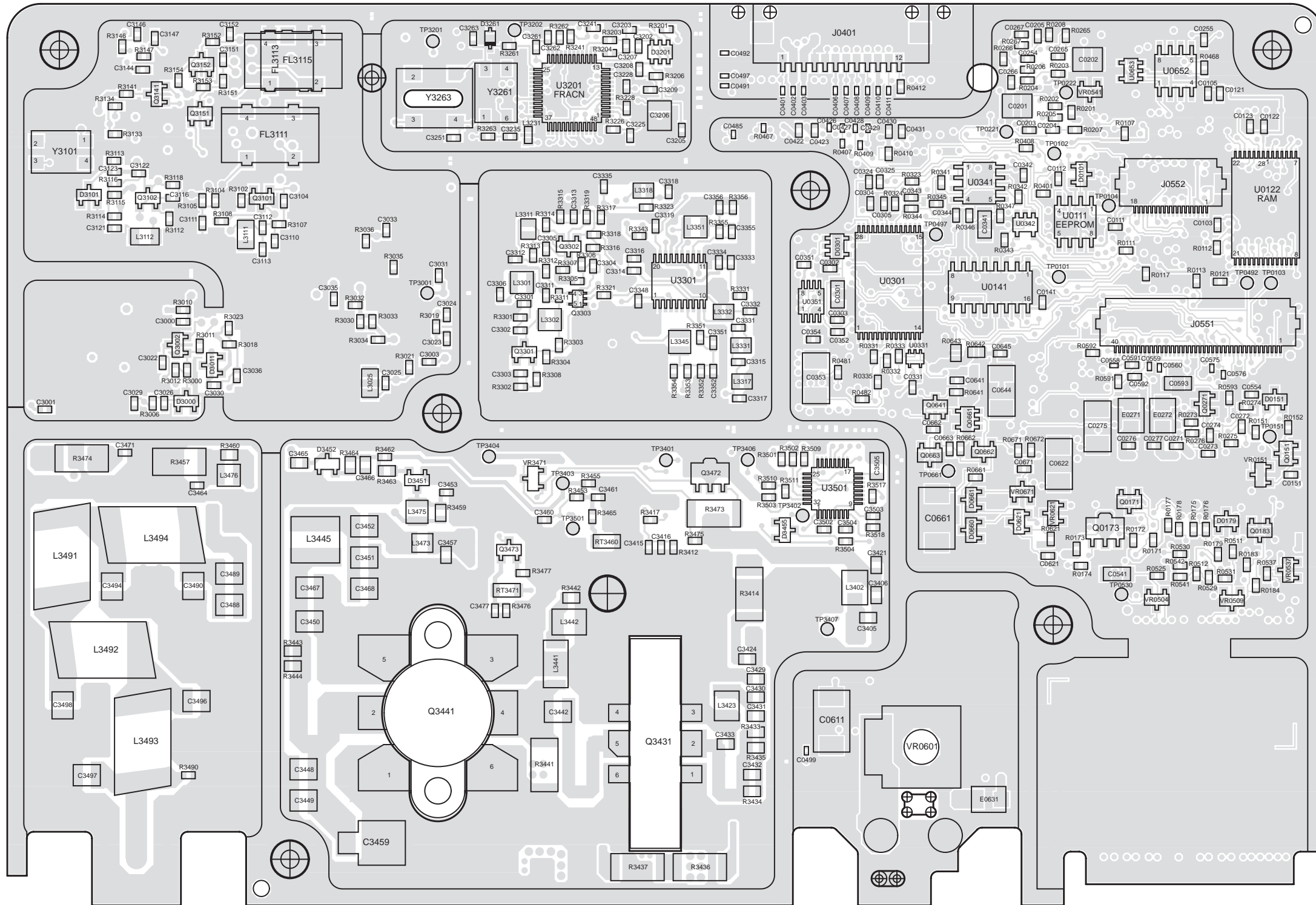
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

5.0 VHF 25-45W PCB 8486140B12 / Schematic



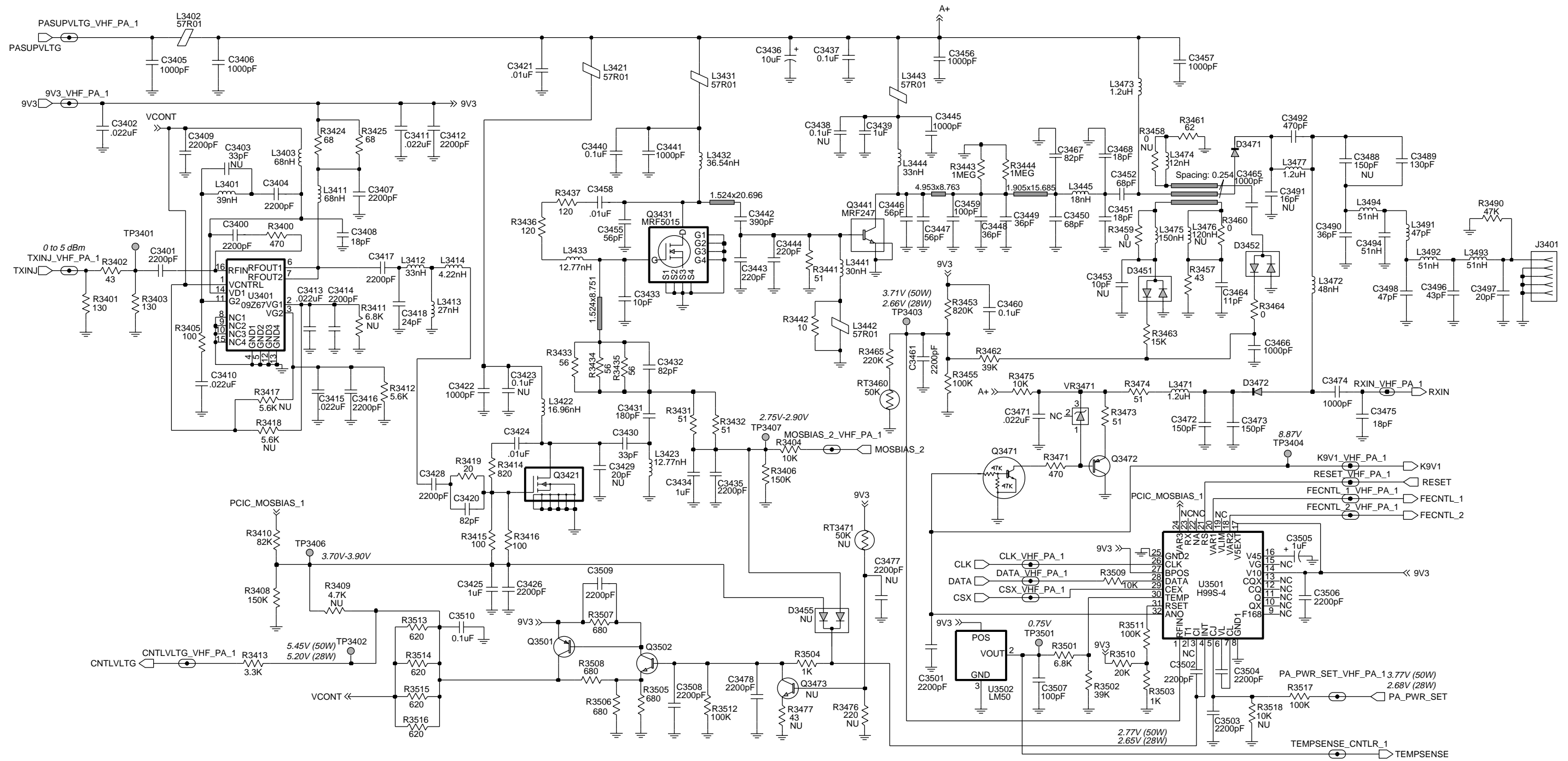
ZWG01303227-B

**VHF (136-174 MHz) 25-45W
8486140B12 Top Side**



VHF (136-174 MHz) 25-45W 846140B12 Bottom Side

ZWG01303226-B



ZWG0130512-O

VHF (136-174 MHz) Power Amplifier 25-45W

Circuit Ref	Motorola Part No	Description
R3501	0662057A69	6k8 1/16W 5%
R3502	0662057A87	39k 1/16W 5%
R3503	0662057A49	1k 1/16W 5%
R3504	0662057A49	1k 1/16W 5%
R3505	0662057C71	680 1/10W 5%
R3506	0662057C71	680 1/10W 5%
R3507	0662057C71	680 1/10W 5%
R3508	0662057C71	680 1/10W 5%
R3509	0662057A73	10k 1/16W 5%
R3510	0662057A80	20k 1/16W 5%
R3511	0662057A97	100k 1/16W
R3512	0662057A97	100k 1/16W
R3513	0611079A69	6k8 1/16W 5%
R3514	0611079A69	6k8 1/16W 5%
R3515	0611079A69	6k8 1/16W 5%
R3516	0611079A69	6k8 1/16W 5%
R3517	0662057A97	100k 1/16W
RT3460	0605621T02	THERMISTOR CHIP
T3001	2508396X02	TRANSFORMER
T3002	2508397X02	TRANSFORMER
U3101	5186144B01	FM IF IC SA616
U3111	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3115	5113805A86	IC QUAD ANALOG MUX/ DEMUX
U3201	5185963A27	IC TESTED AT25016 48 PIN GFP
U3211	5105739X05	IC SOT 5V HI-PRECISION REGULAT
U3301	5105750U54	VCO BUFFER PKG DIE
U3401	5105109Z67	LDMOS DRIVER VHF/UHF
U3501	5185765B01	IC POWER CONTROL
U3502	5185963A15	TEMP SENSOR 1M5
VR3471	4813830A15	5.6V 5% 225mW
Y3101	4880606B09	CRYSTAL 44.395 MHZ
Y3102	9186145B02	CERAMIC DISCRIMINATOR 455kHz
Y3263	4886182B01	VCTCXO 16.8MHz 2ppm TTSO5V
* Y3261	Not Used	16.8MHz 75Z04

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