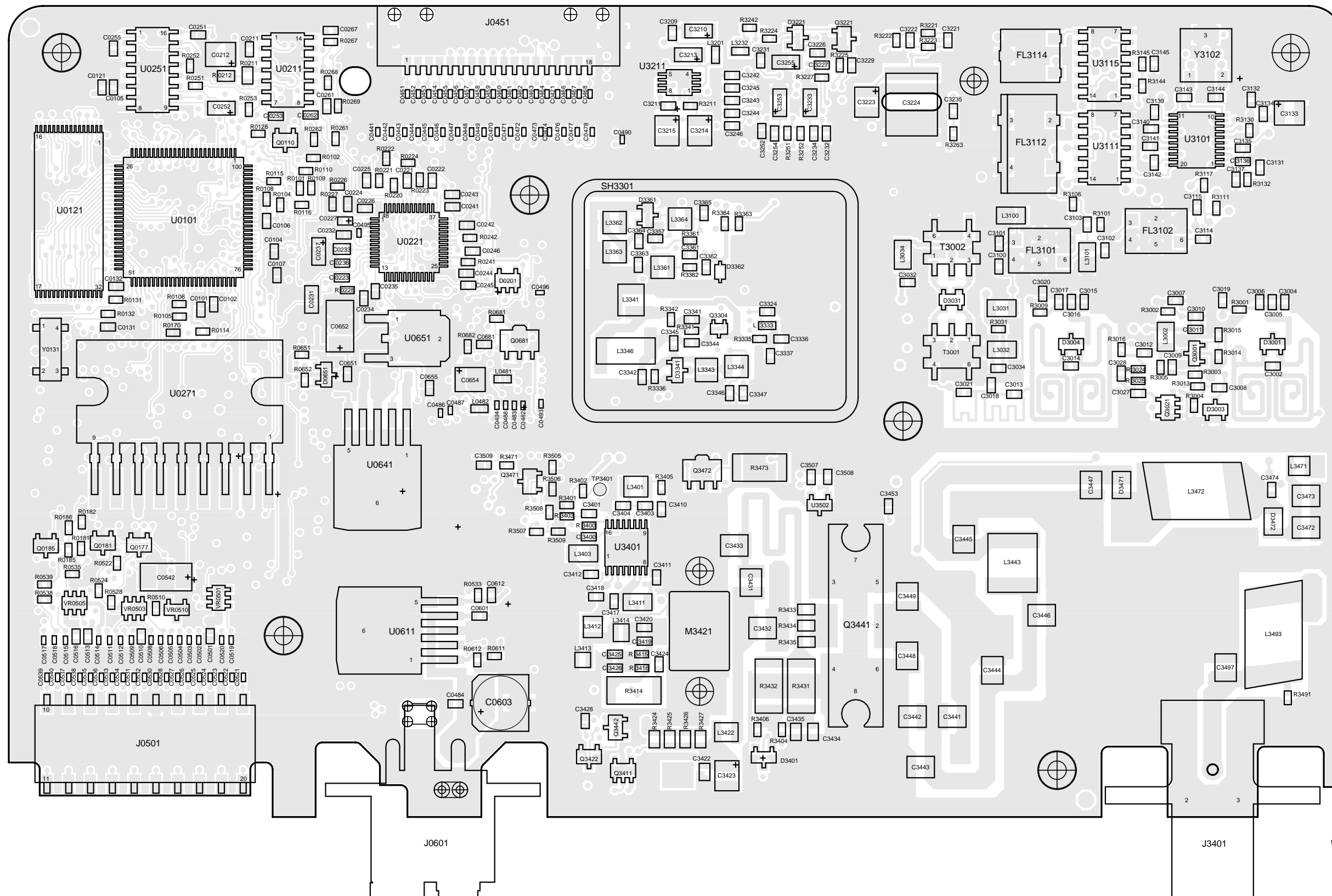
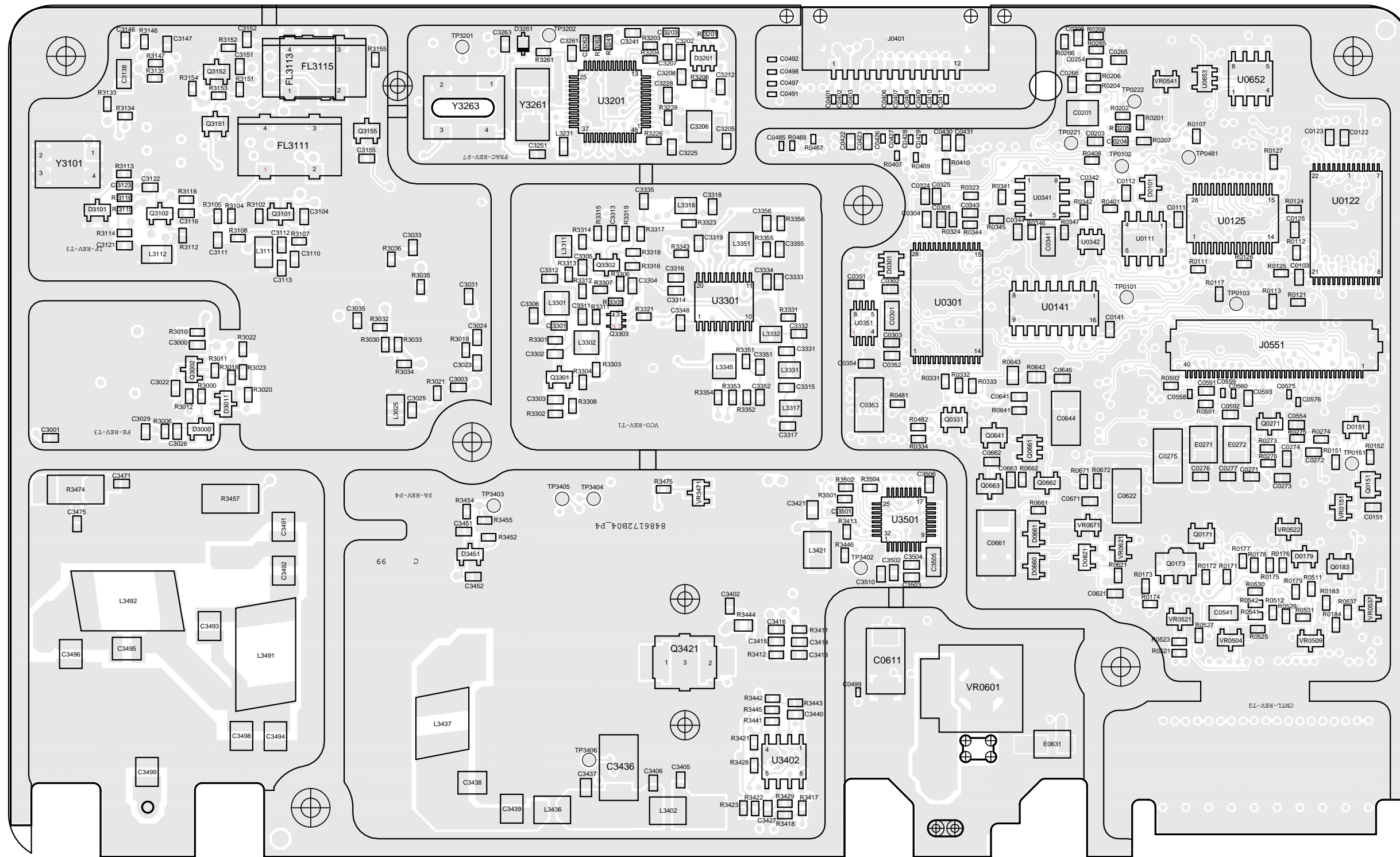


2.0 VHF 1-25W PCB 8486172B04 / Schematics



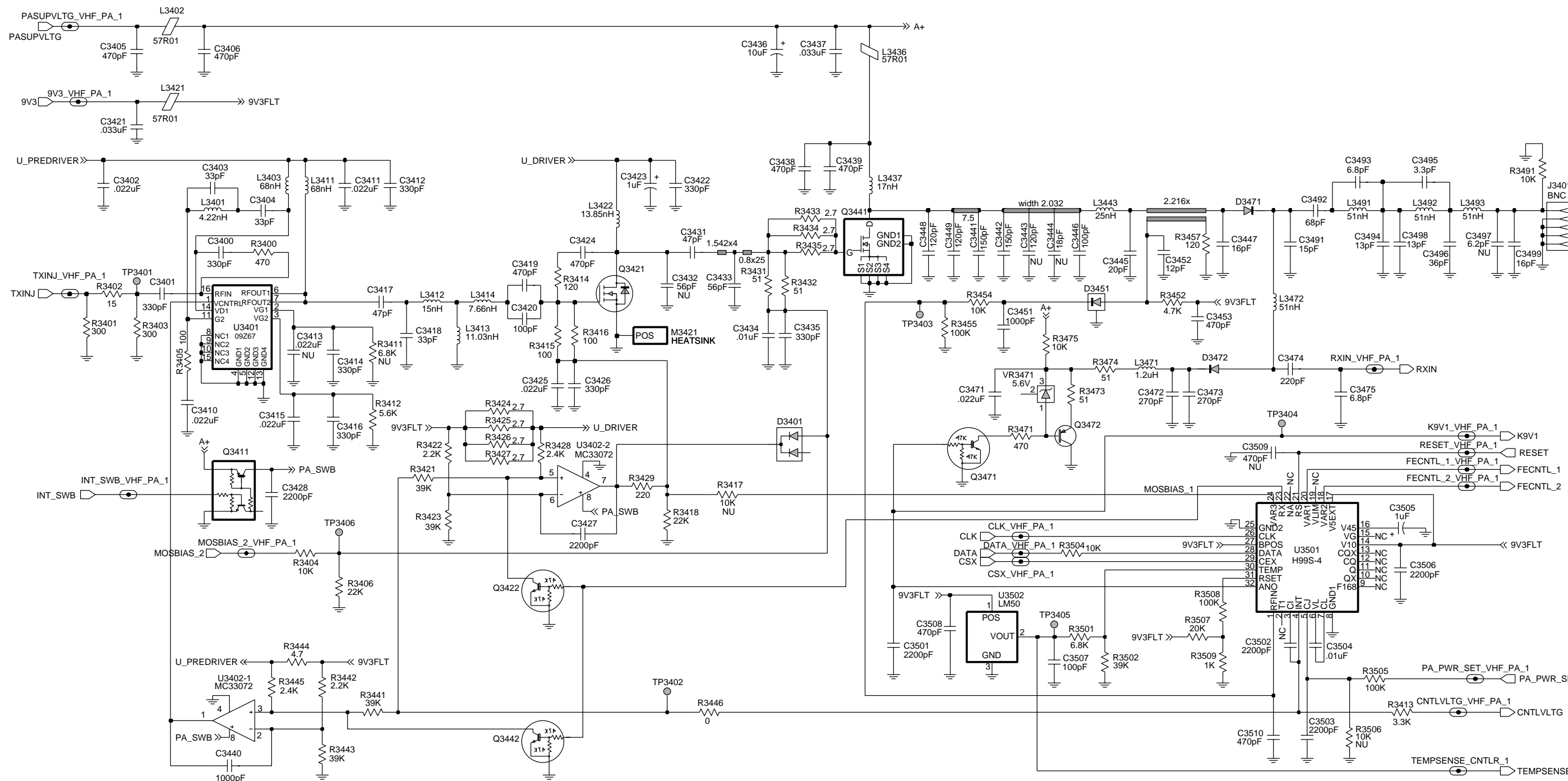
ZWG0130397-P4

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



ZWG01300398-P4

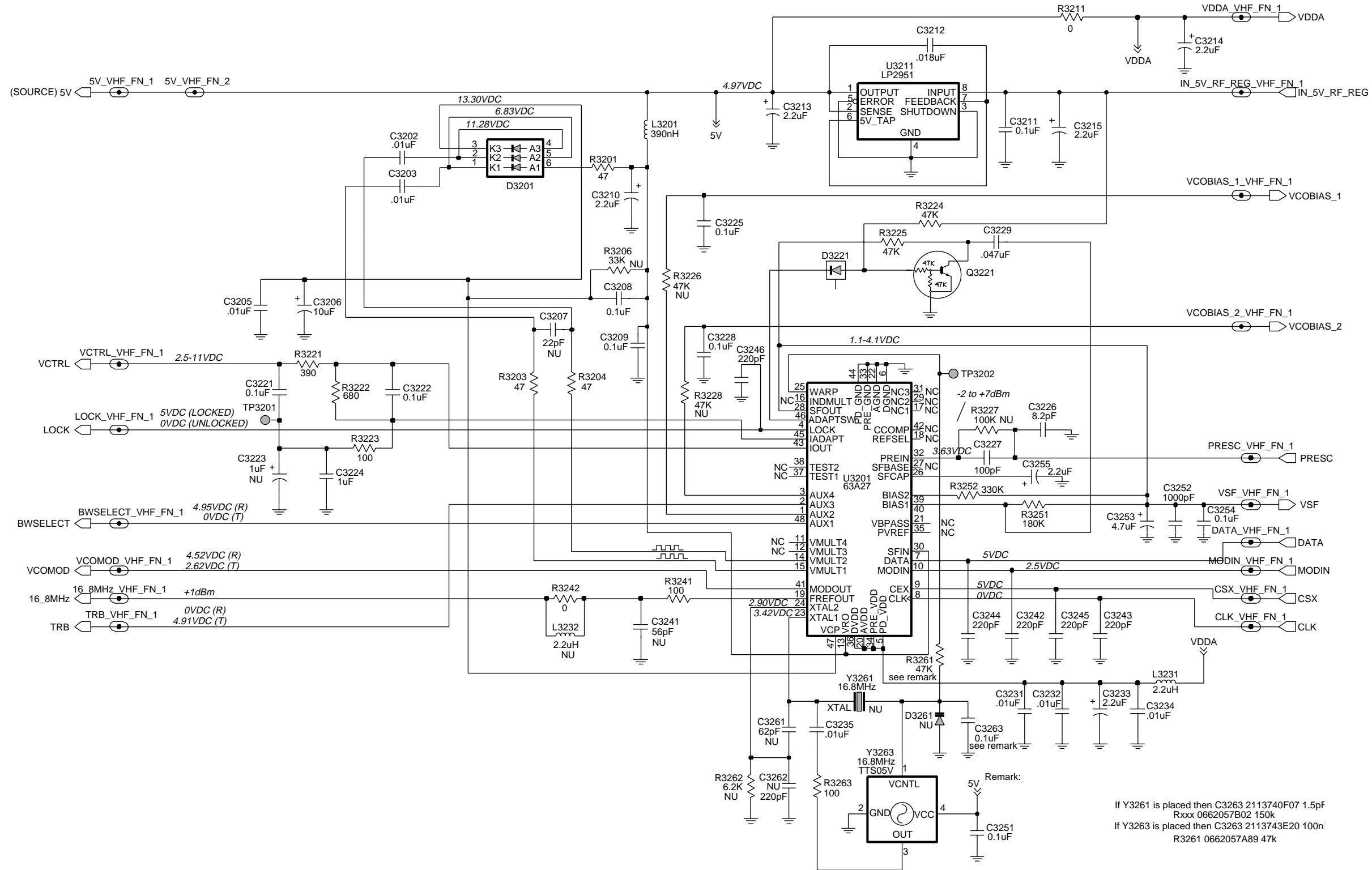
VHF (136-174 MHz) 1-25W 8486172B04 Bottom Side



ZWG0130392-P4

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

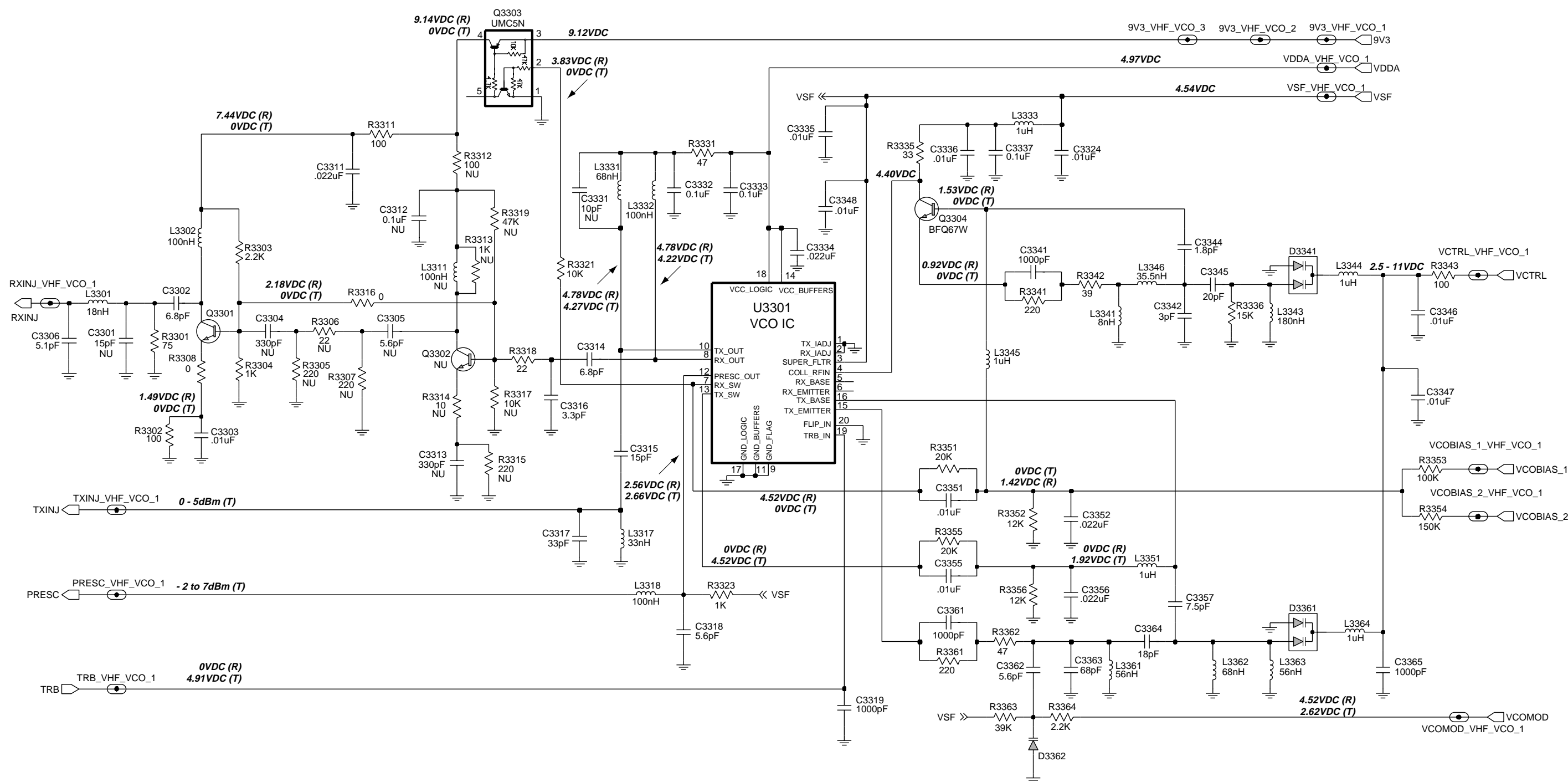
VHF (136-174 MHz) Power Amplifier 1 - 25W



Remark:
 If Y3261 is placed then C3263 2113740F07 1.5pF
 Rxxx 0662057B02 150k
 If Y3263 is placed then C3263 2113743E20 100n
 R3261 0662057A89 47k

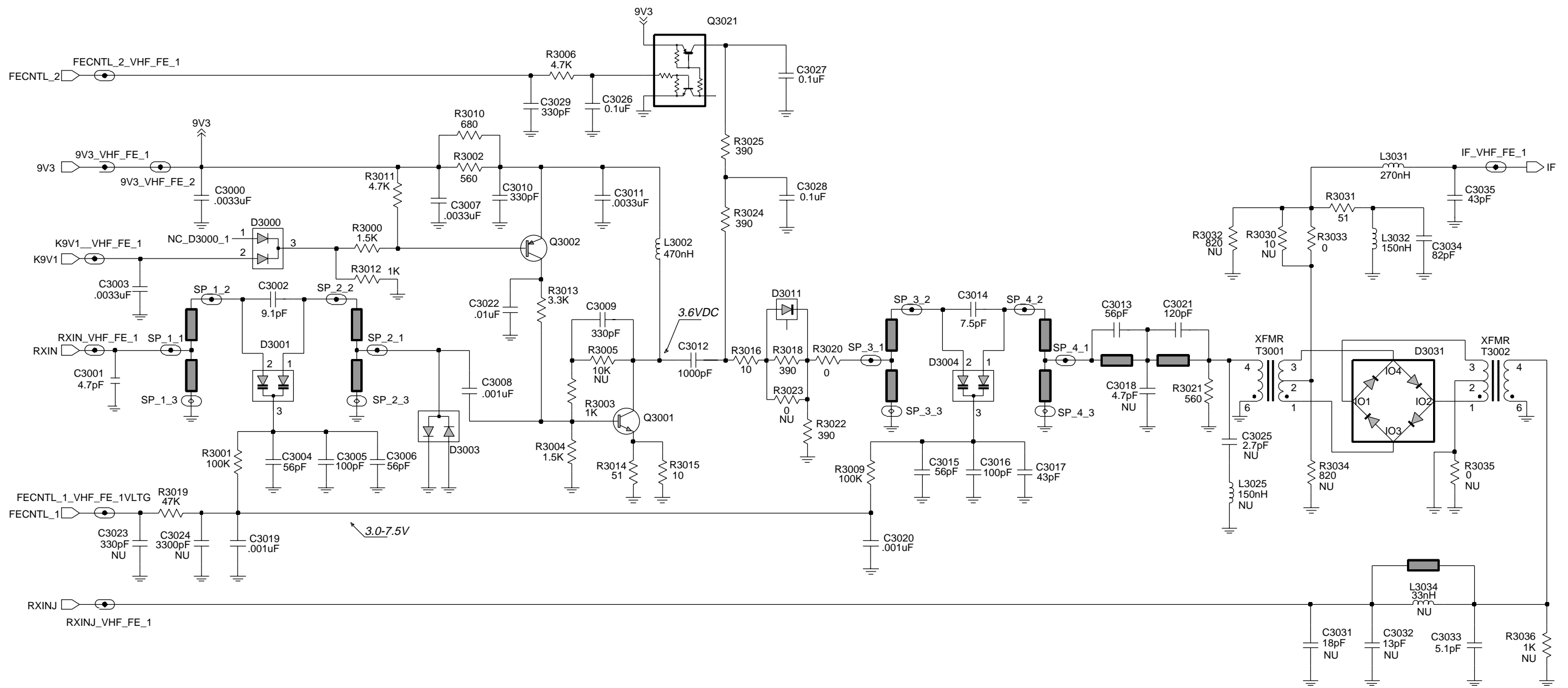
ZWG0130393-P4

VHF (136-174 MHz) FRACN



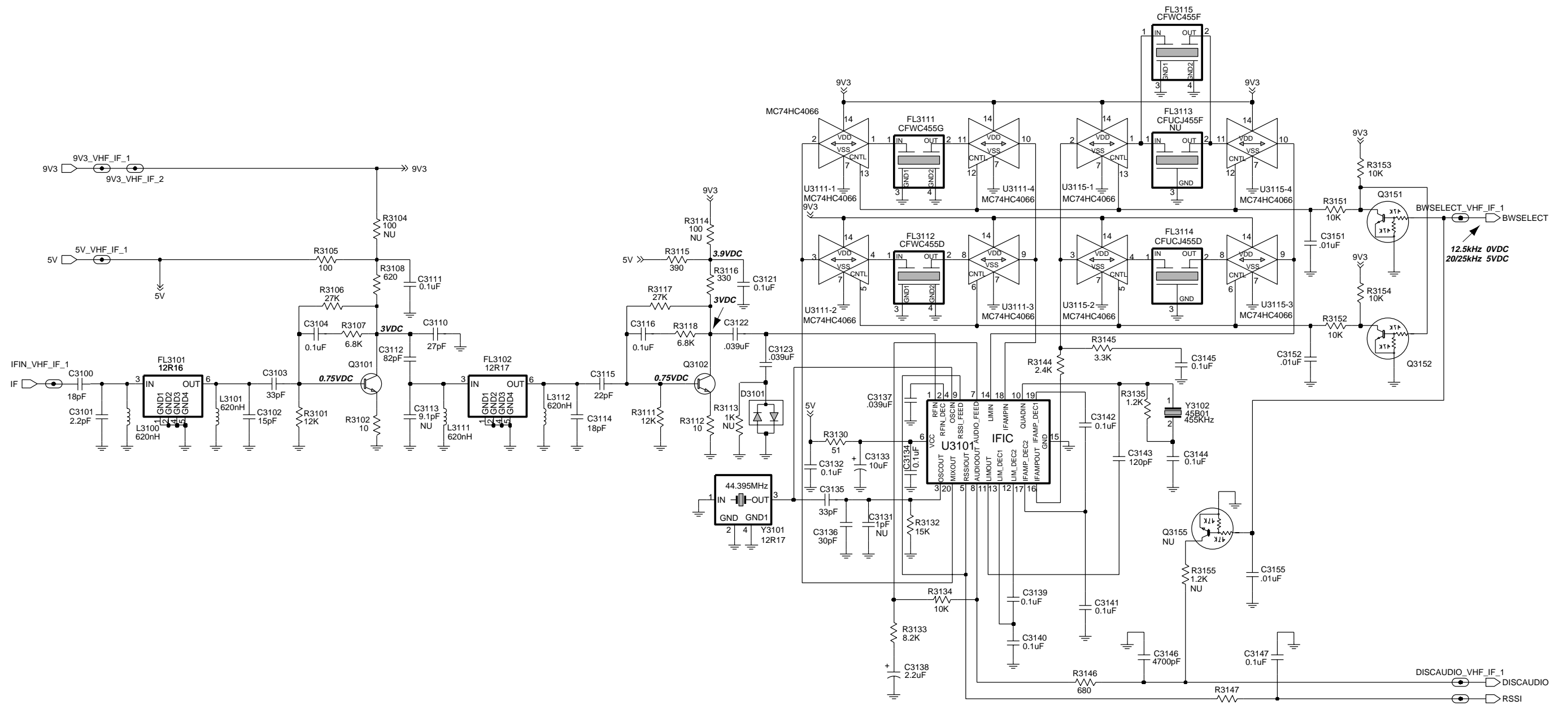
ZWG0130394-P4

VHF (136-174 MHz) Voltage Controlled Oscillator



VHF (136-174 MHz) Receiver Front End

ZWG0130395-P4



ZWG0130396-P4

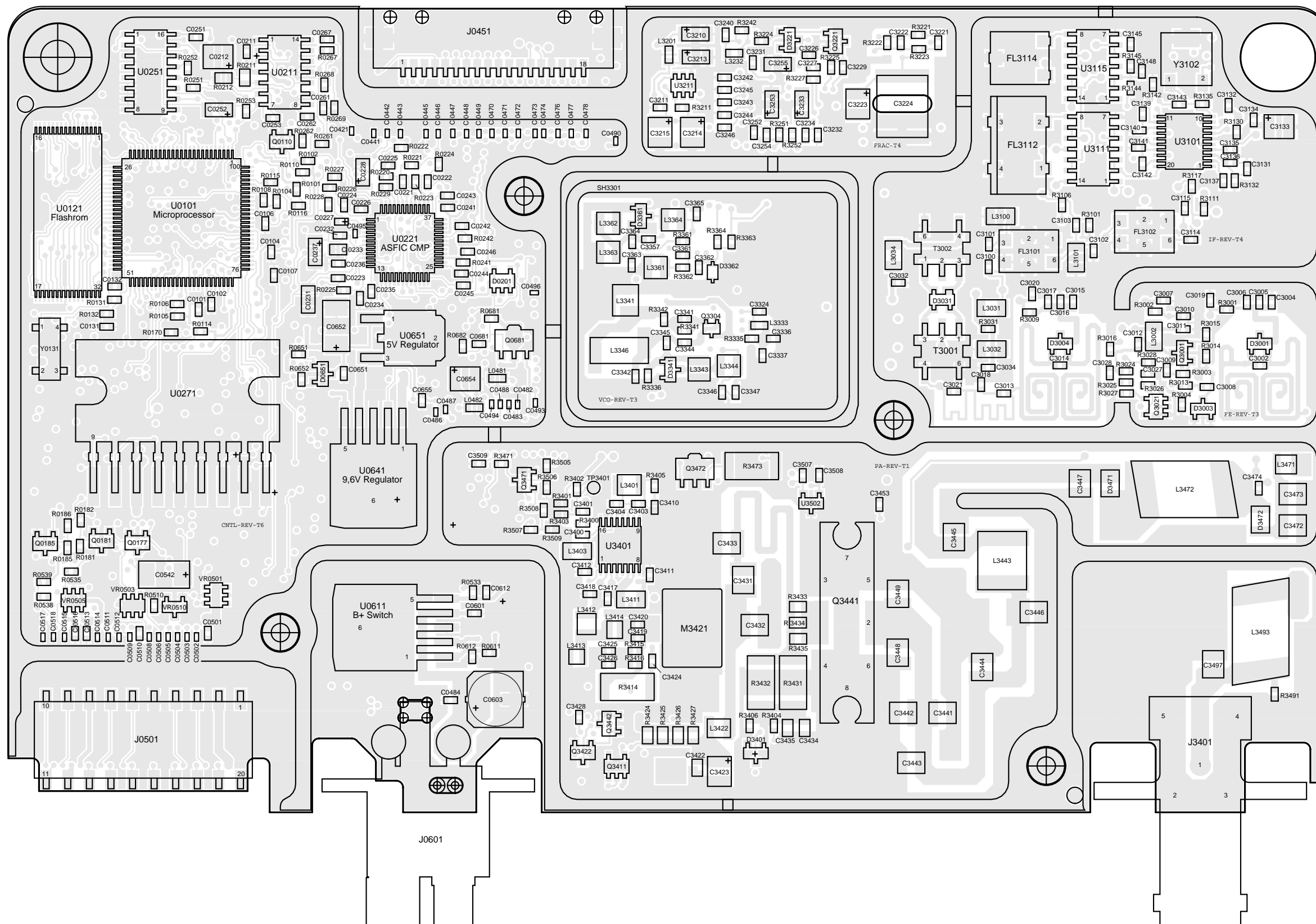
VHF (136-174 MHz) IF

Circuit Ref	Motorola Part No.	Description
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	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

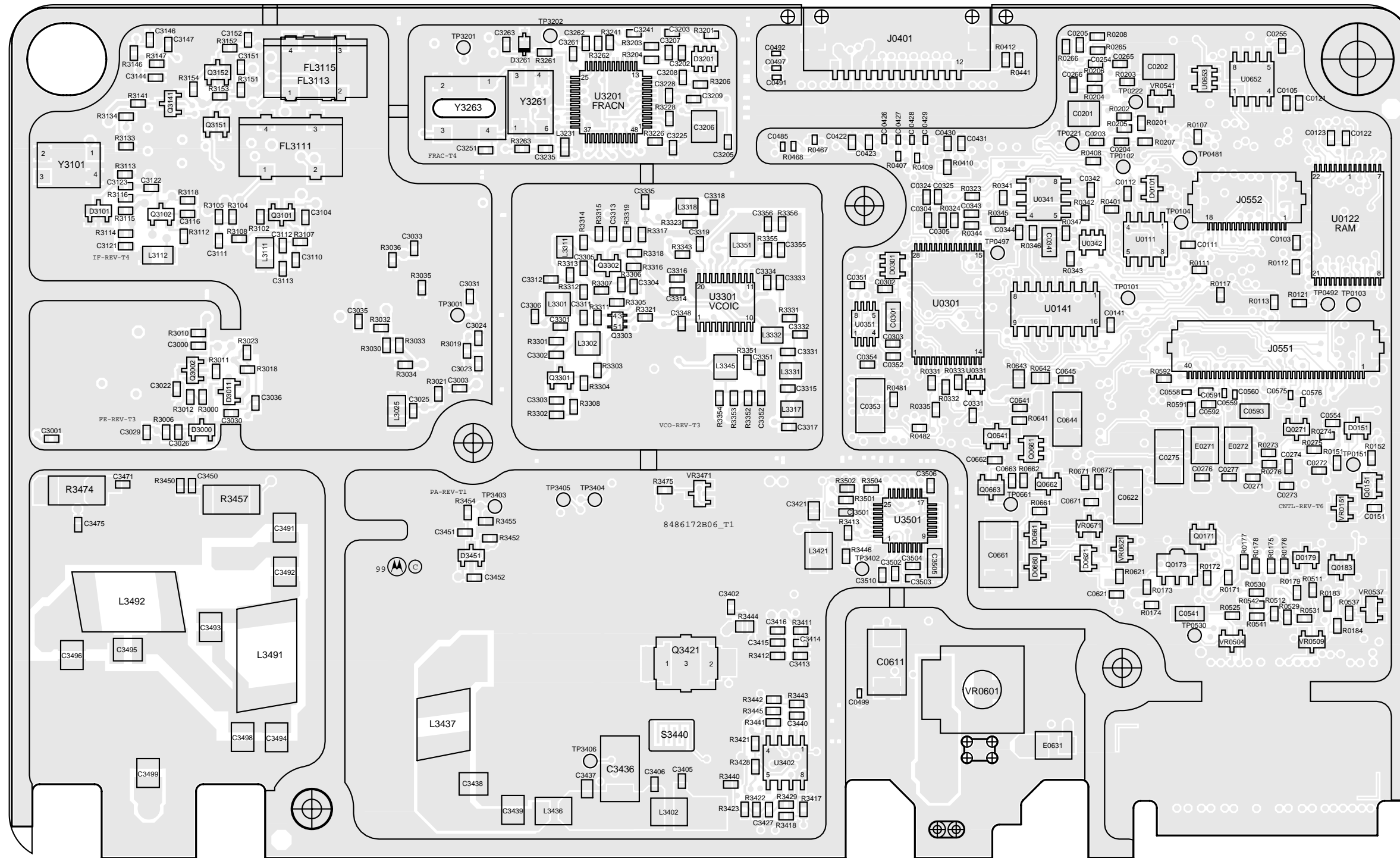
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

3.0 VHF 1-25W PCB 8486172B06 / Schematics



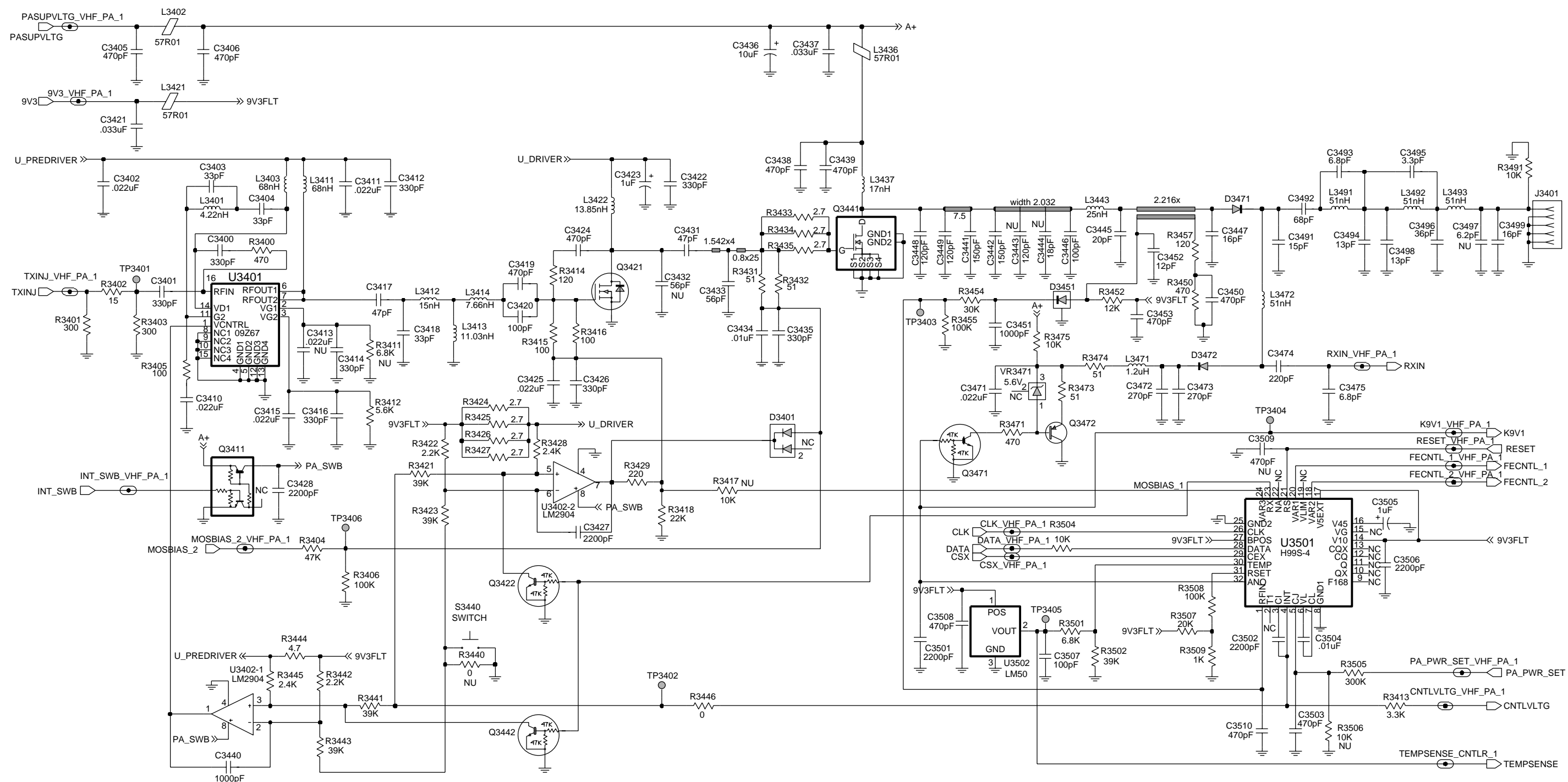
ZWG0130397-O

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



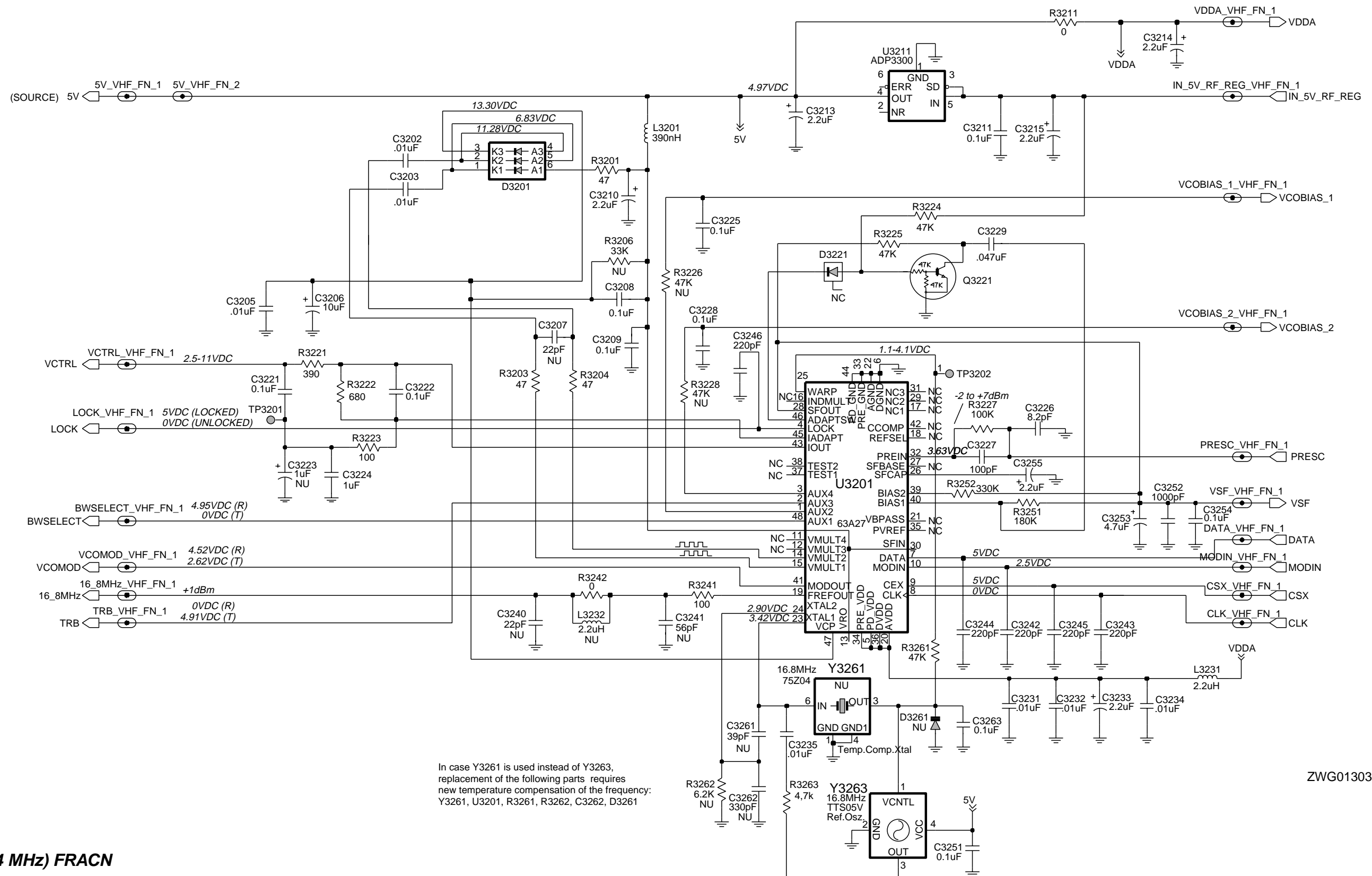
ZWG01300398-O

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



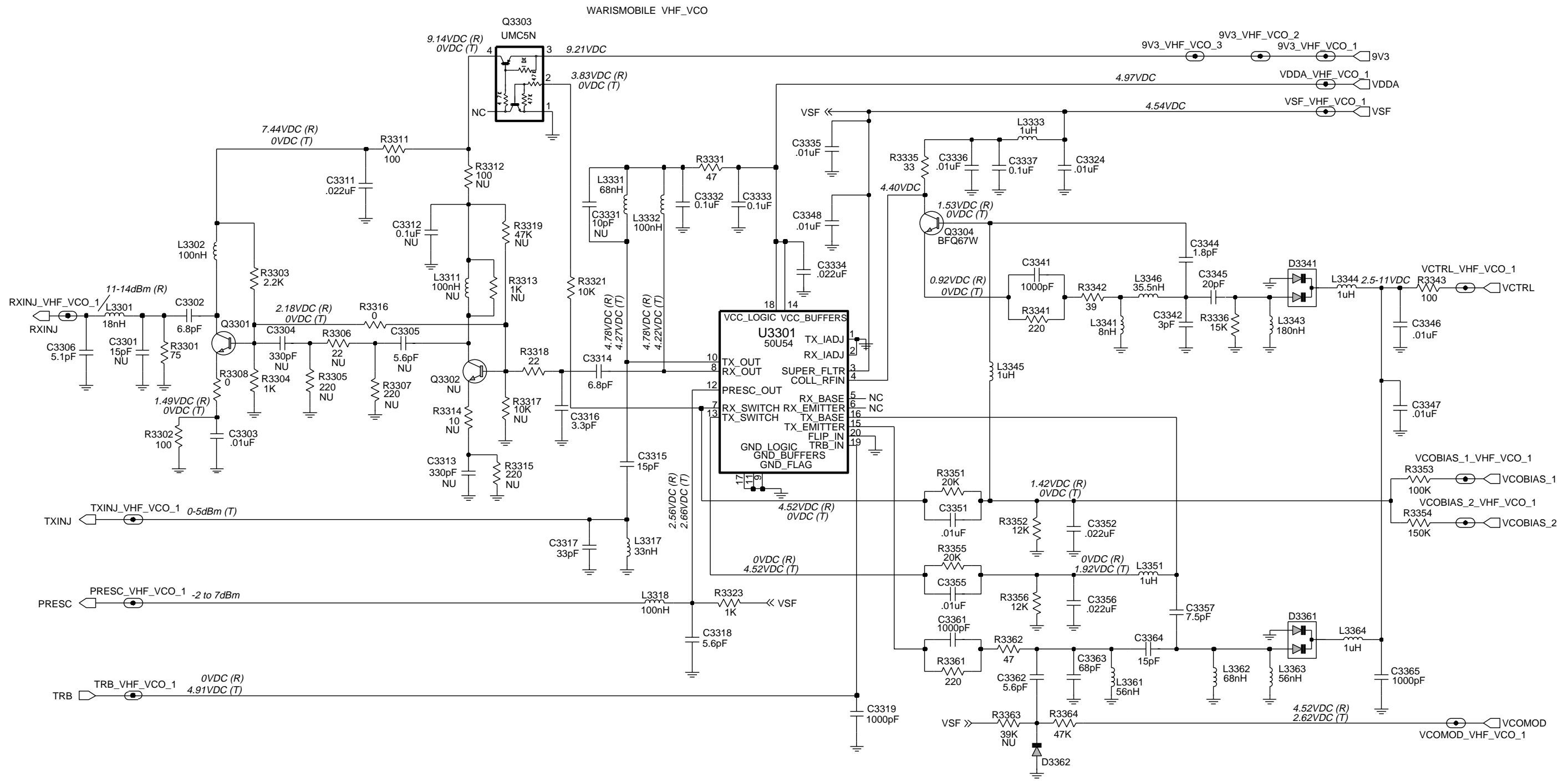
ZWG0130392-A

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



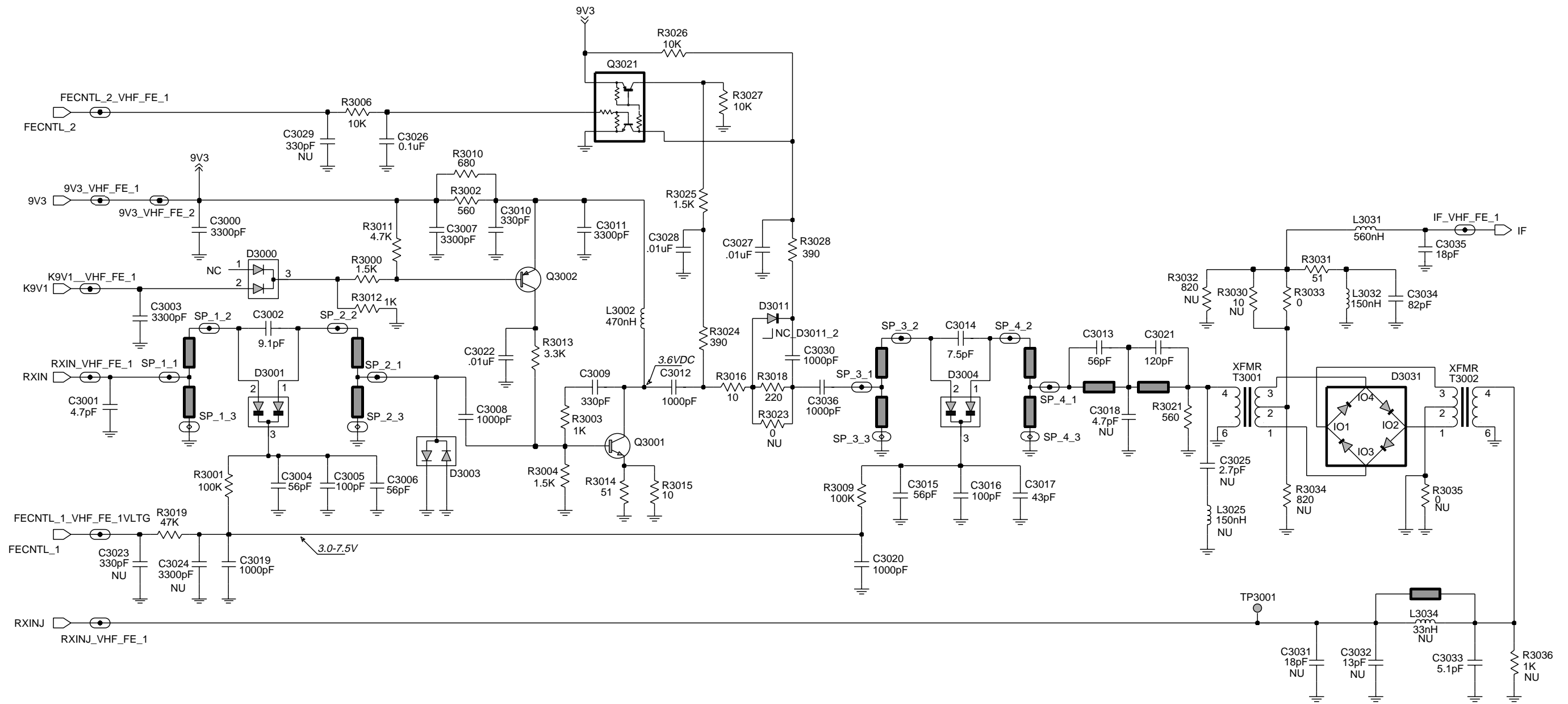
ZWG0130393-A

VHF (136-174 MHz) FRACN



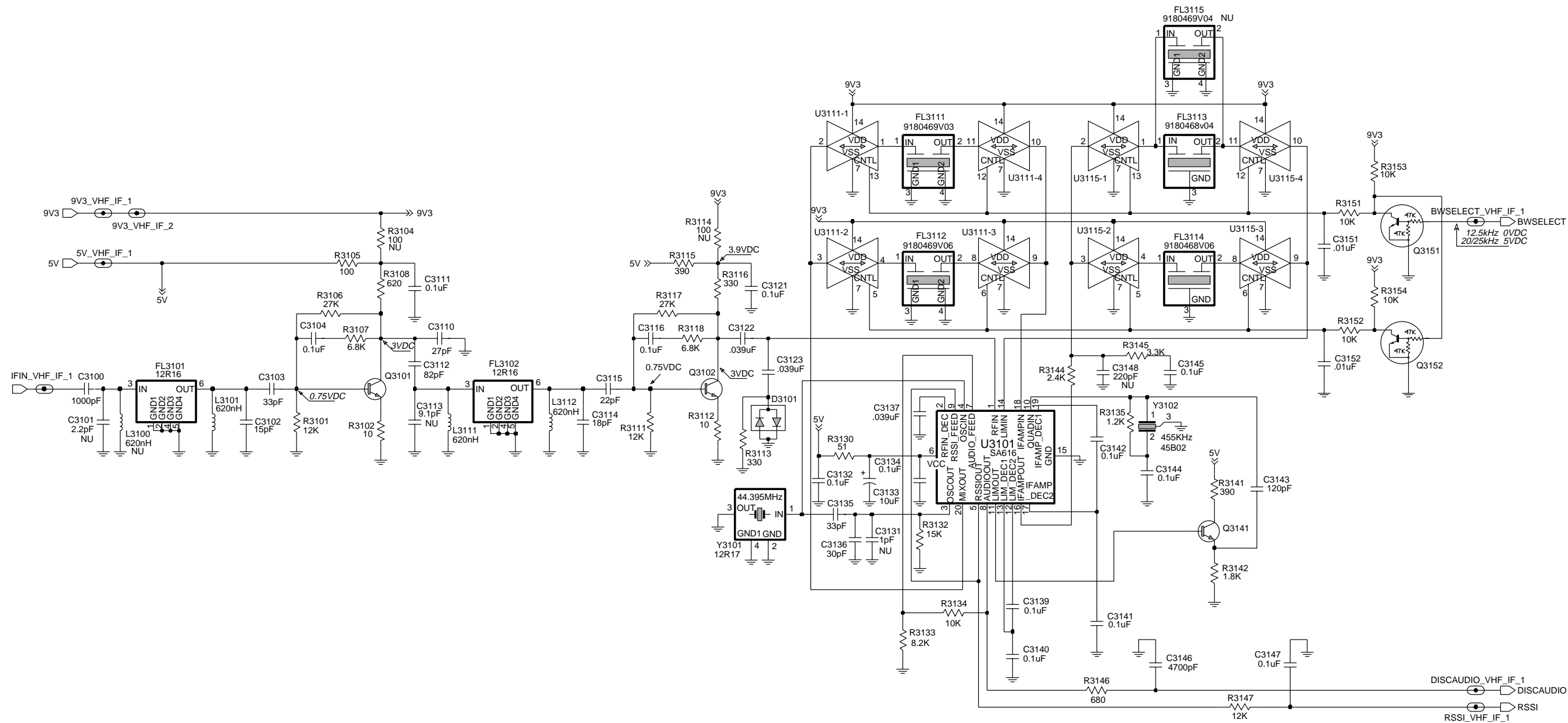
ZWG0130394-O

VHF (136-174 MHz) Voltage Controlled Oscillator



VHF (136-174 MHz) Receiver Front End

ZWG0130395-A



ZWG0130396-O

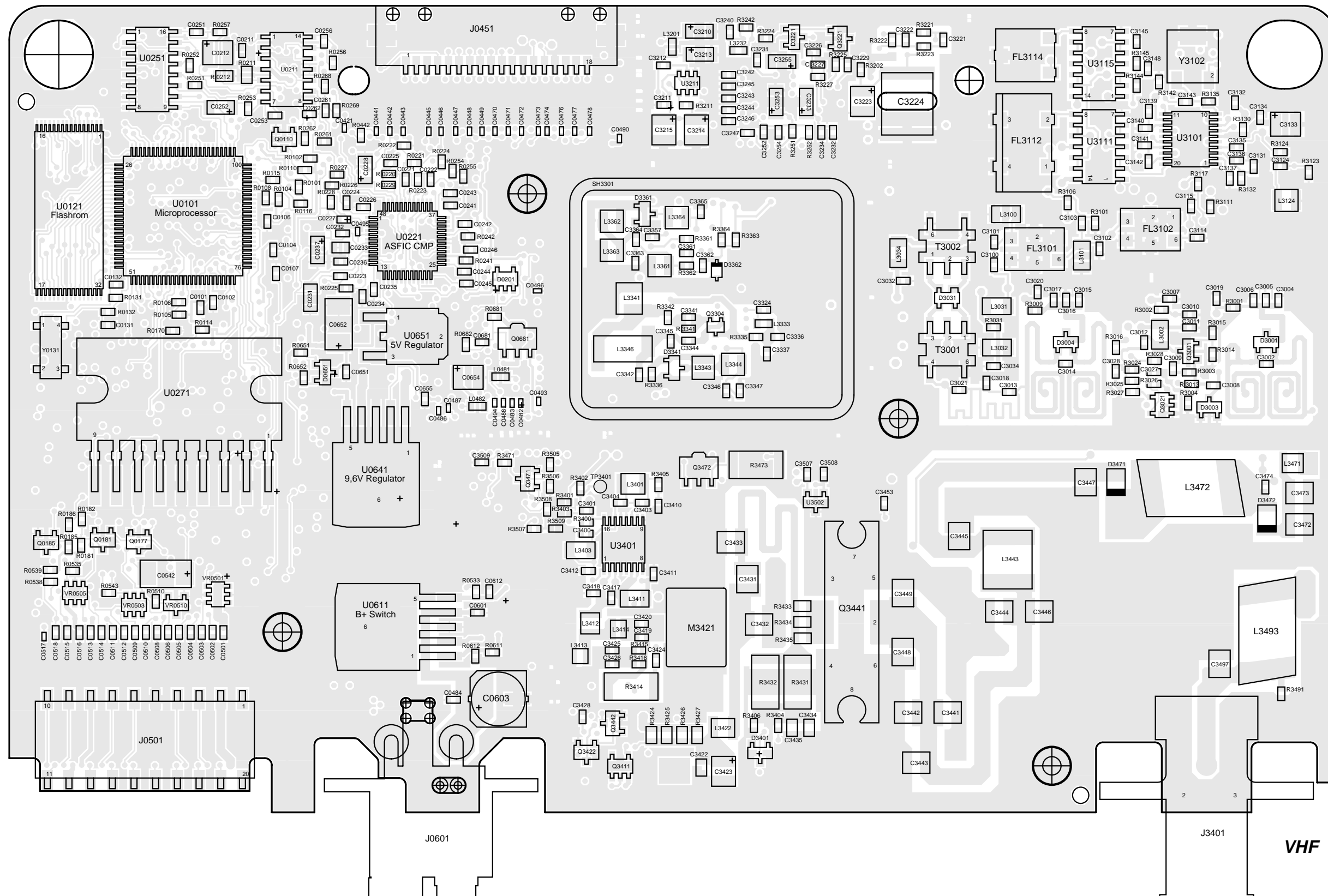
VHF (136-174 MHz) IF

Circuit Ref	Motorola Part No.	Description
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 48PIN GFP
U3211	5105739X05	IC SOT 5V HI-PRECISION REGULAT
U3301	5105750U54	VCO BUFFER PKG DIE
U3401	5105109Z67	LDMOS 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

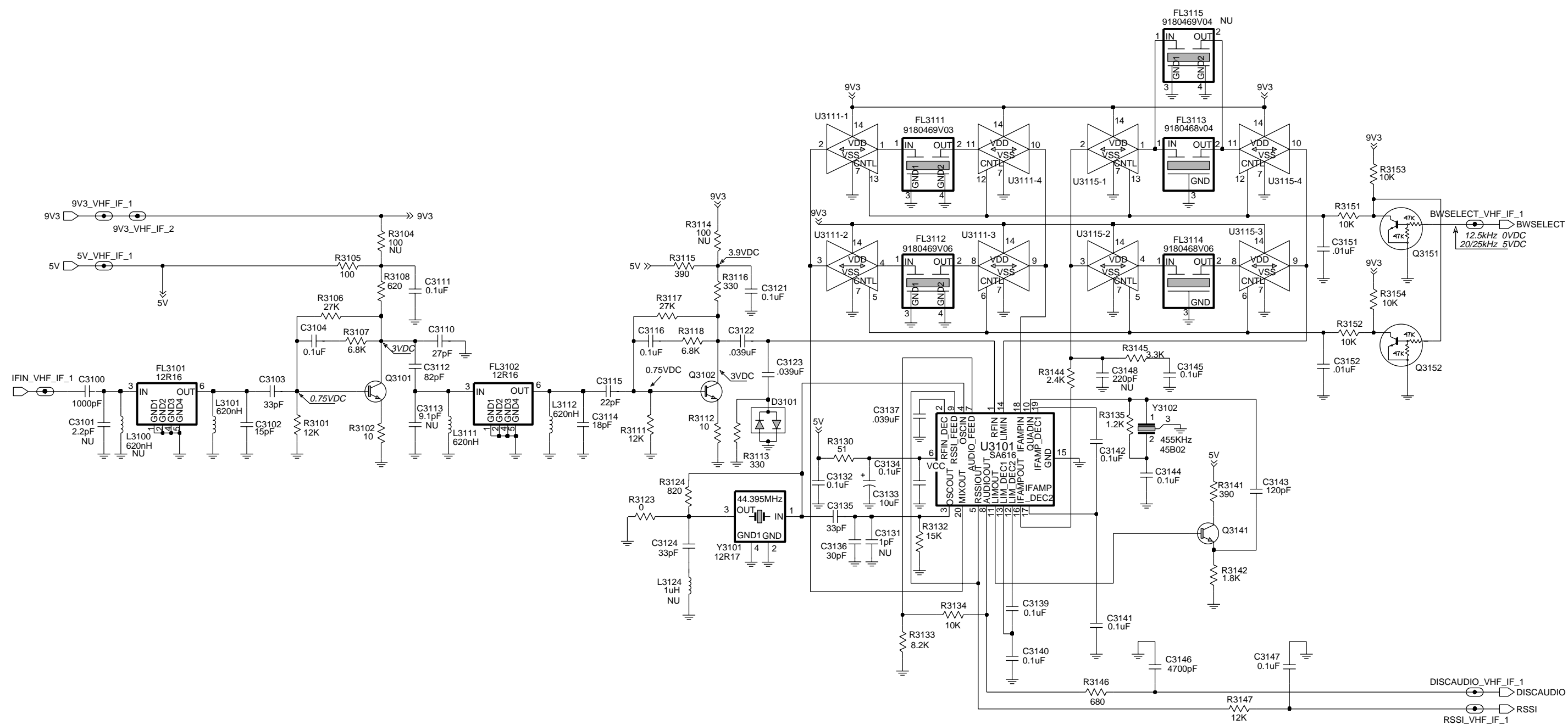
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

4.0 VHF 1-25W PCB 8486172B07 / Schematics



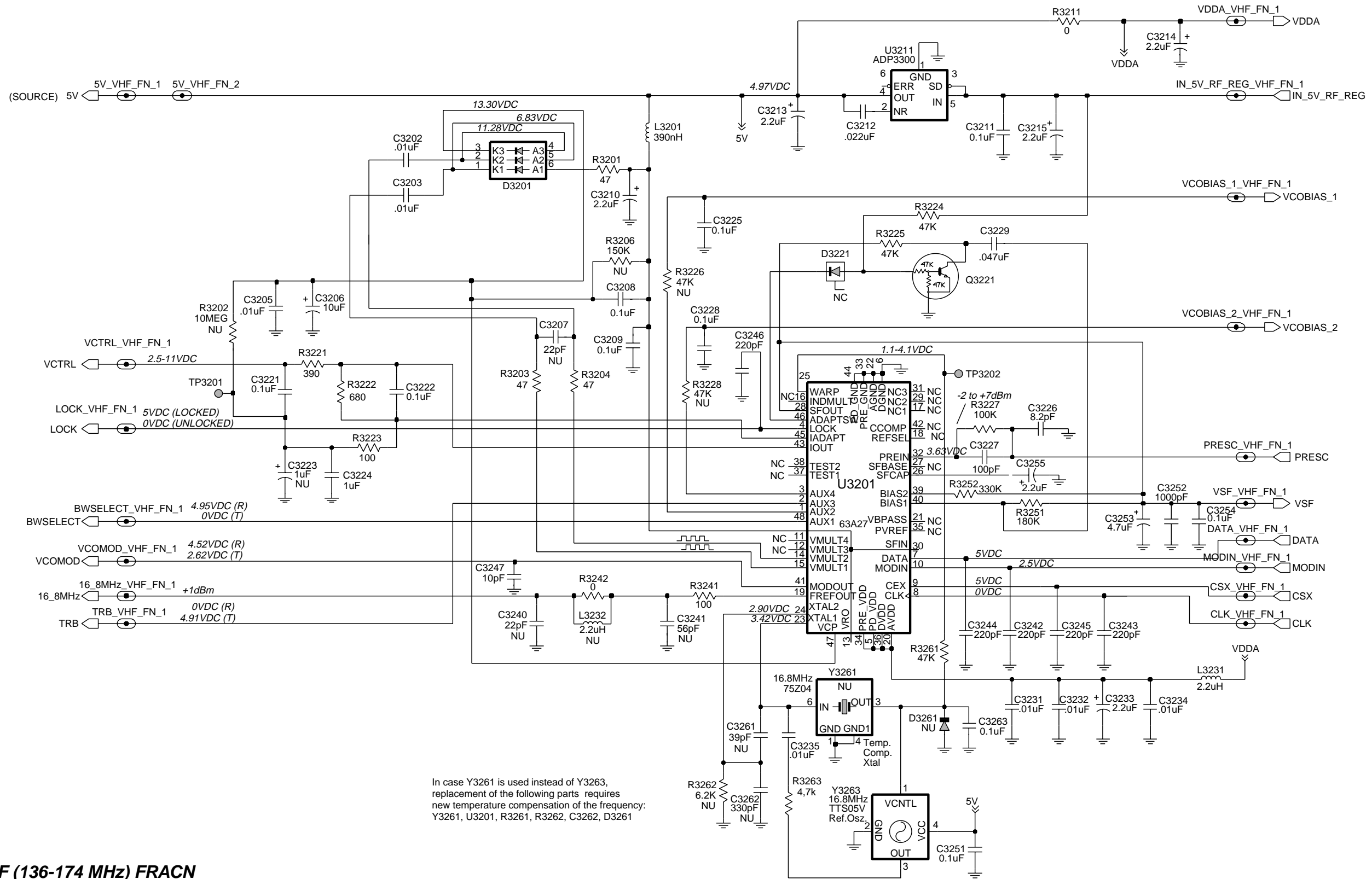
ZWG0130397-A

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



ZWG0130565-O

VHF (136-174 MHz) IF



VHF (136-174 MHz) FRACN

ZWG0130564-O

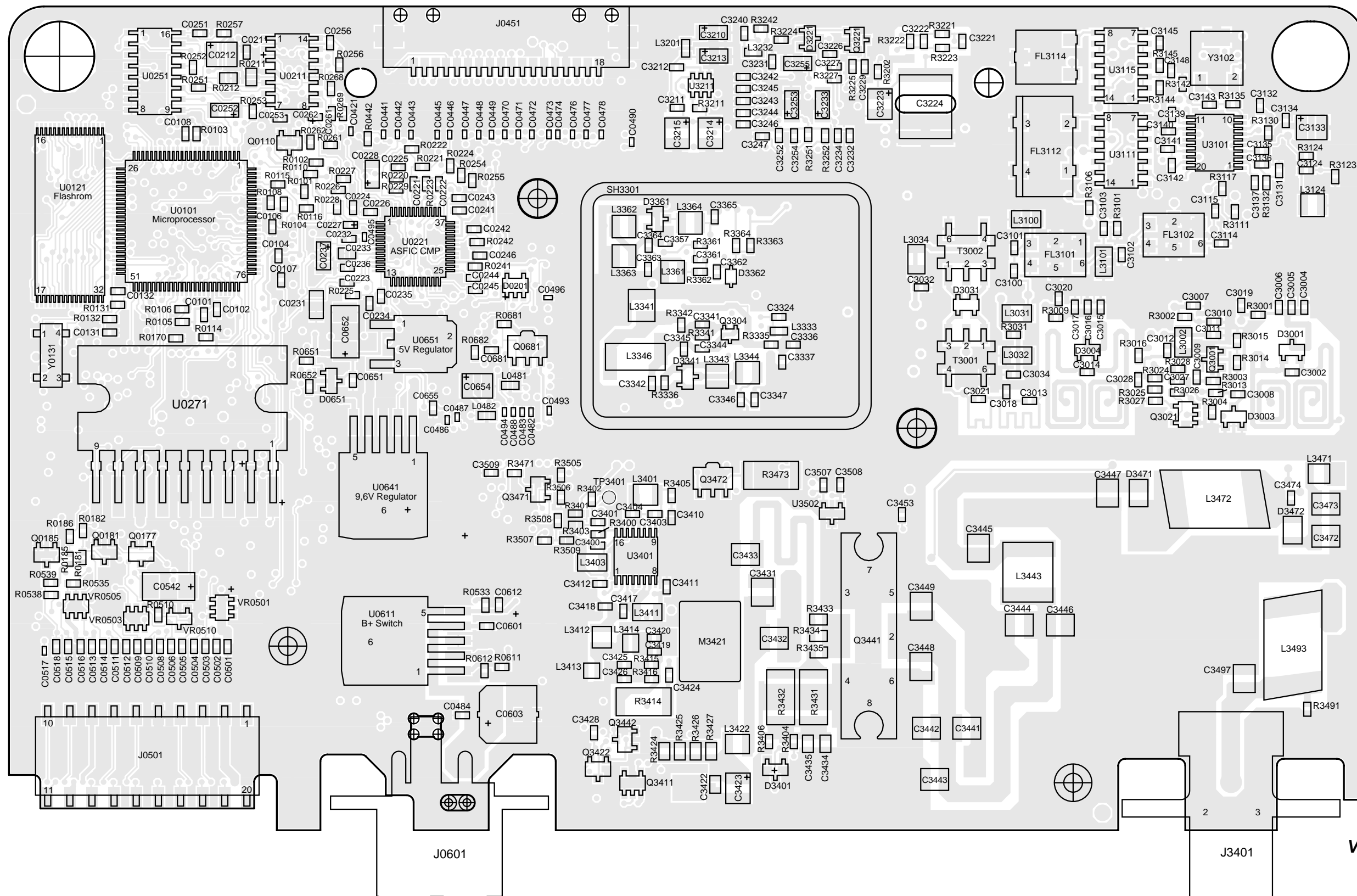
Circuit Ref	Motorola Part No.	Description
R3425	0662057C13	2R7 1/10W 5%
R3426	0662057C13	2R7 1/10W 5%
R3427	0662057C13	2R7 1/10W 5%
R3428	0662057A58	2k4 1/16W 5%
R3429	0662057A33	220 1/16W 5%
R3431	0680194M18	51 1W 5%
R3432	0680194M18	51 1W 5%
R3433	0662057C13	2R7 1/10W 5%
R3434	0662057C13	2R7 1/10W 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

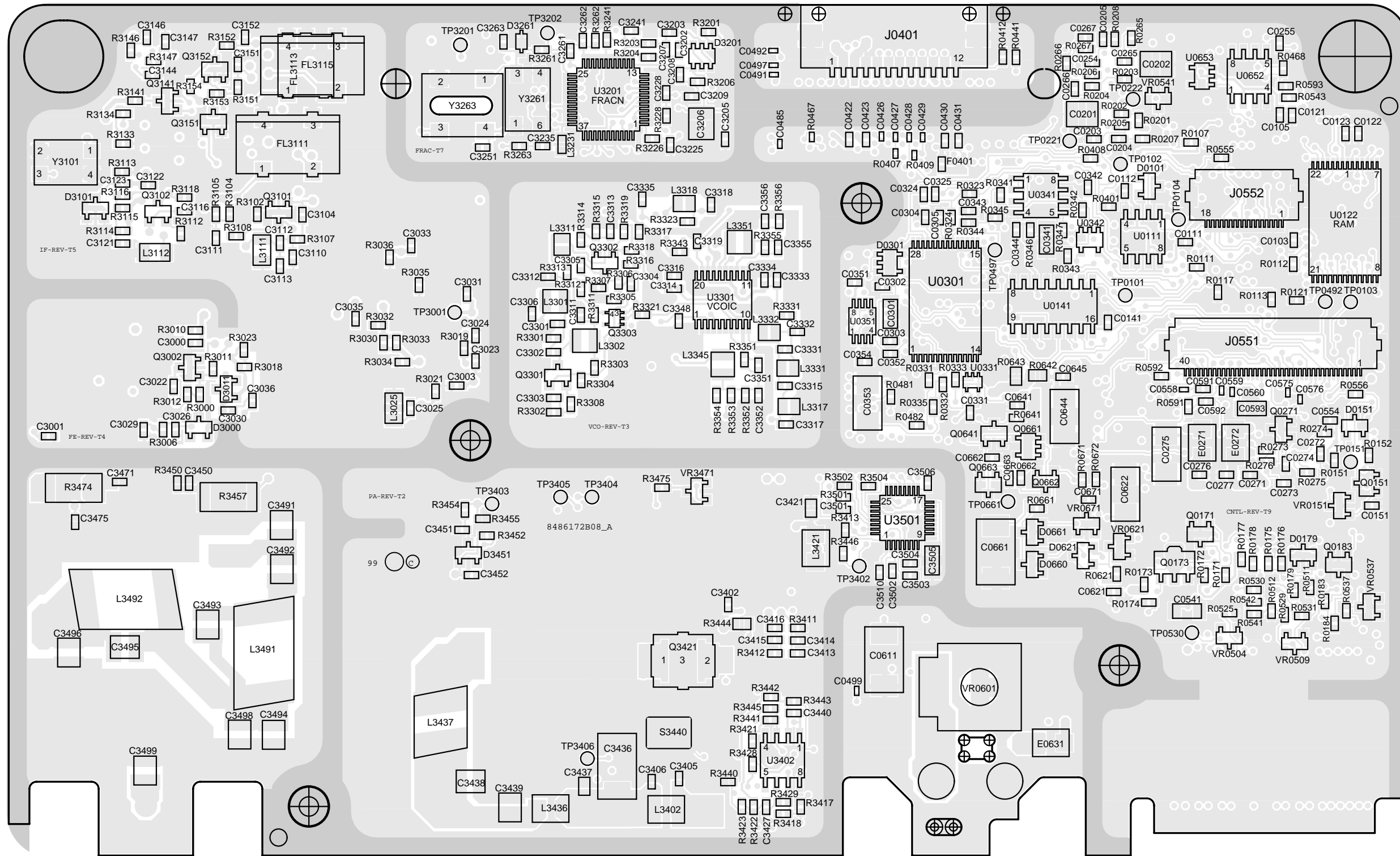
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

5.0 VHF 1-25W PCB 8486172B08 / Schematics



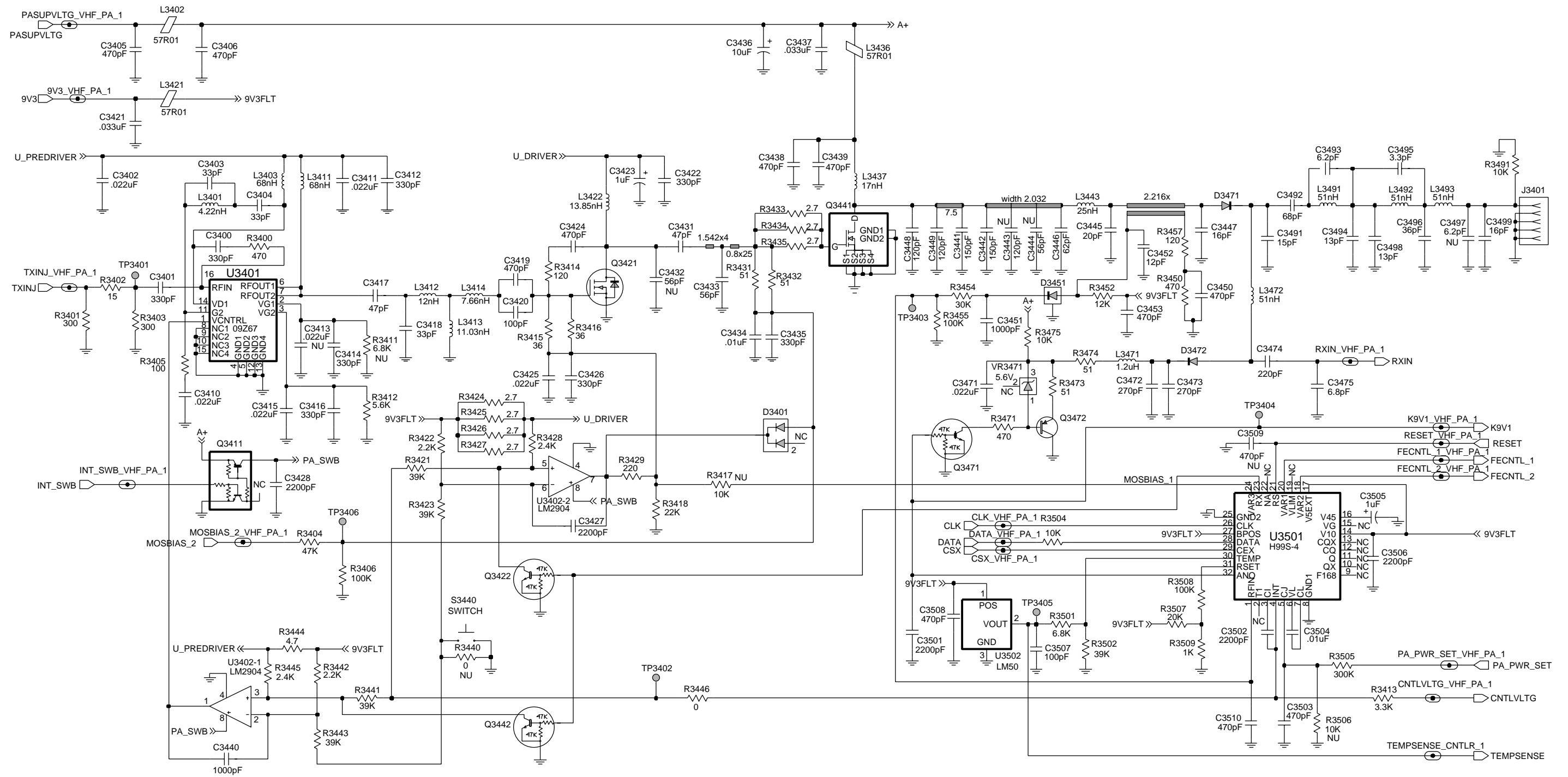
ZWG0130591-O

VHF (136-174 MHz) 1-25W
8486172B08 Top Side

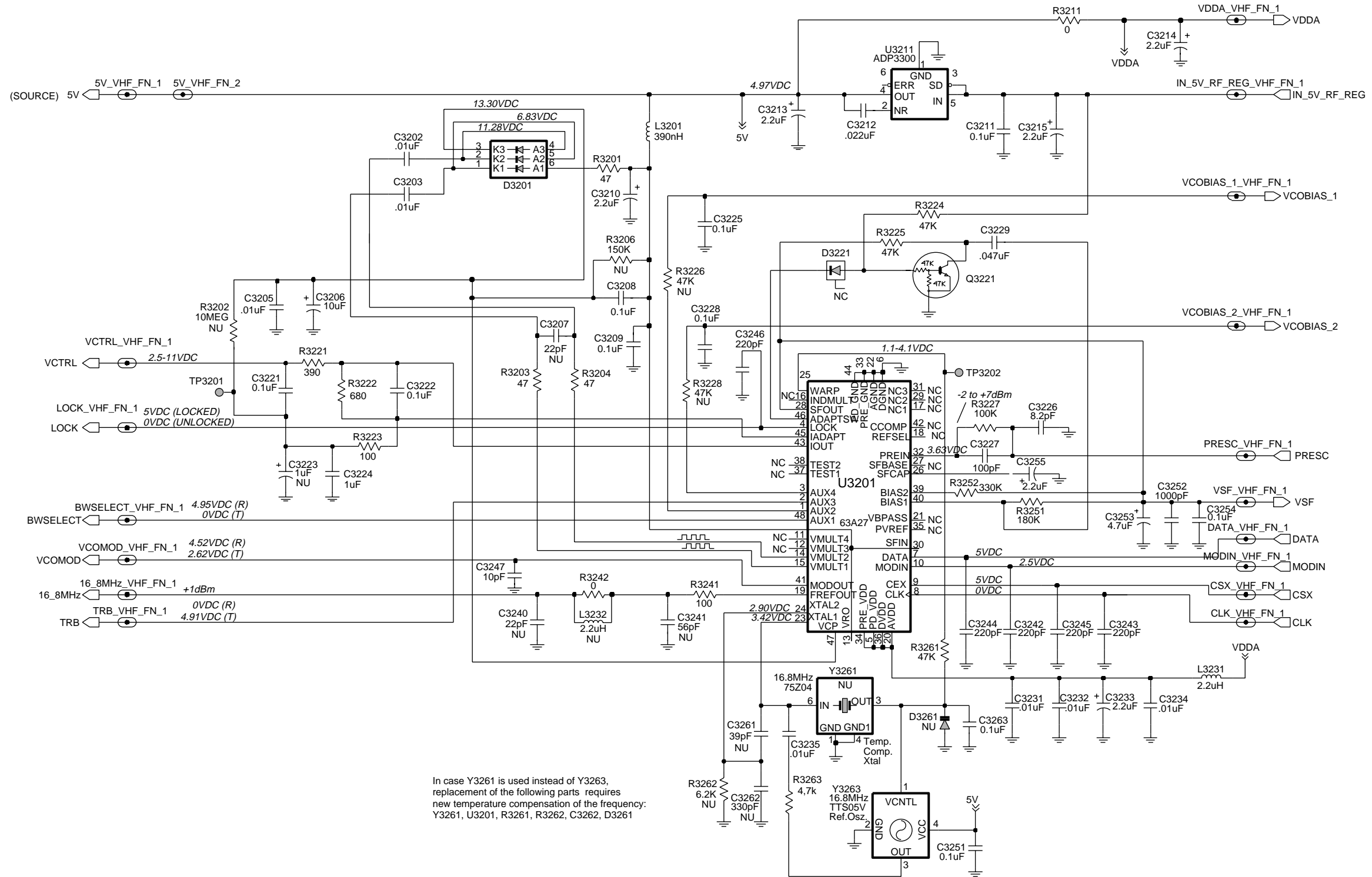


ZWG01300592-O

VHF (136-174 MHz) 1-25W 8486172B08 Bottom Side

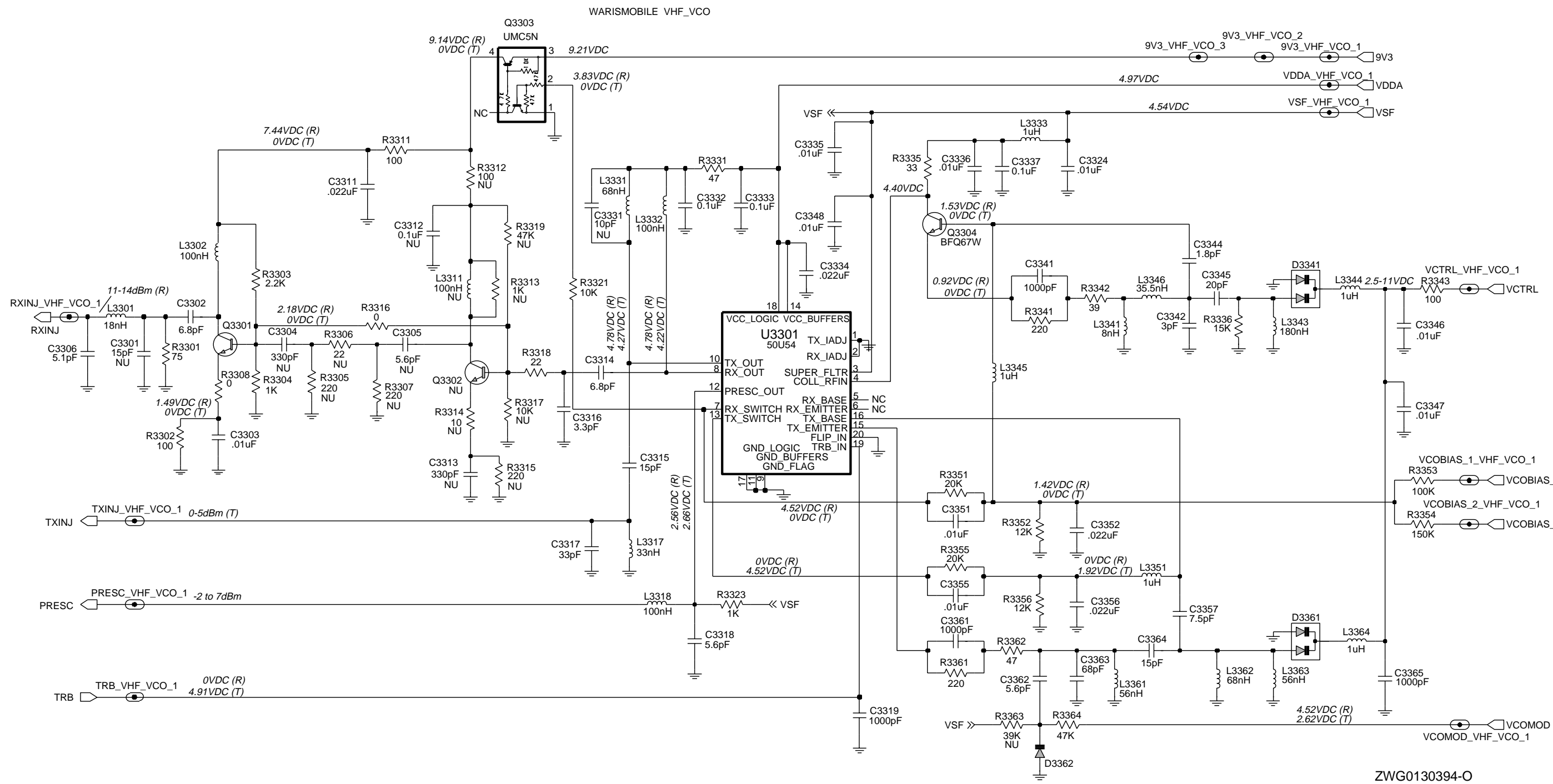


VHF (136-174 MHz) Power Amplifier 1 - 25W

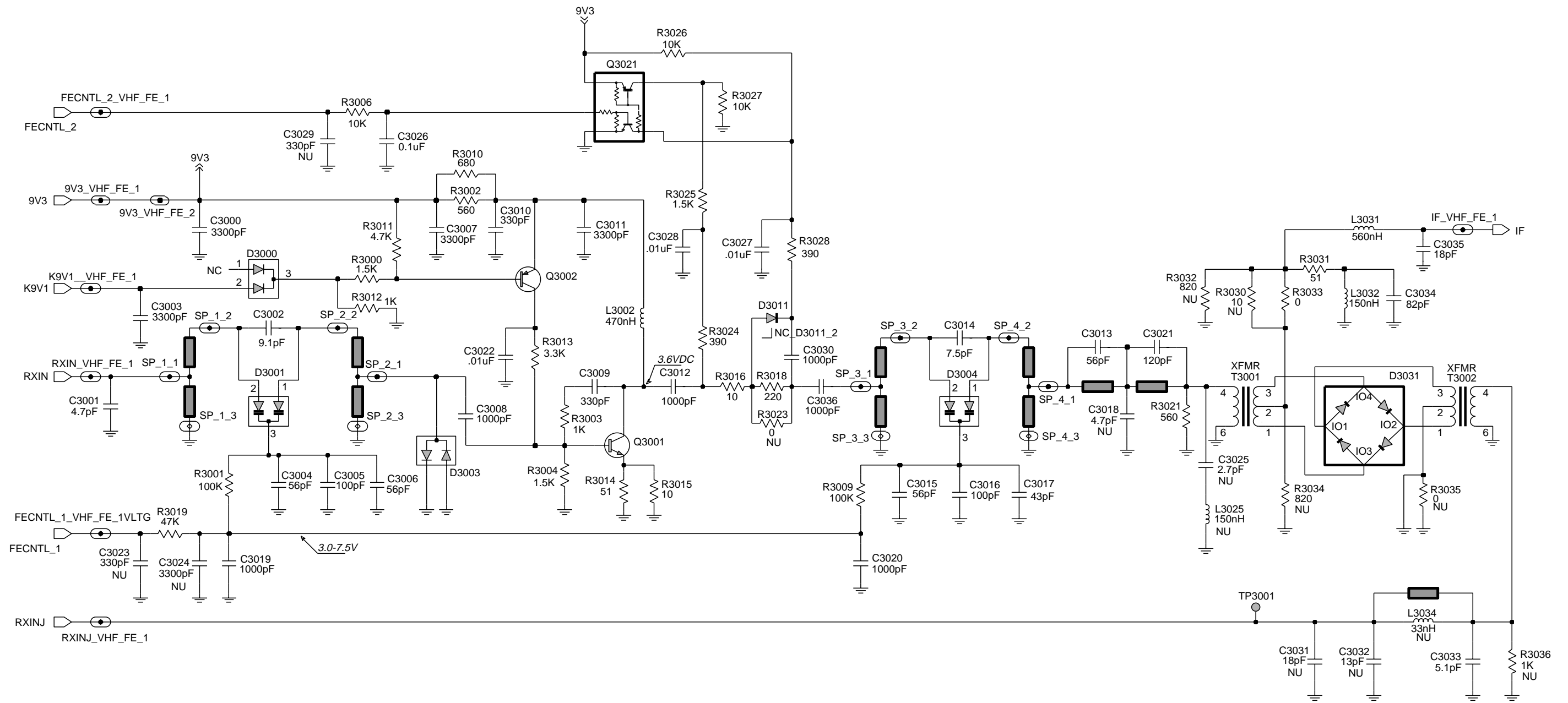


ZWG0130564-O

VHF (136-174 MHz) FRACN

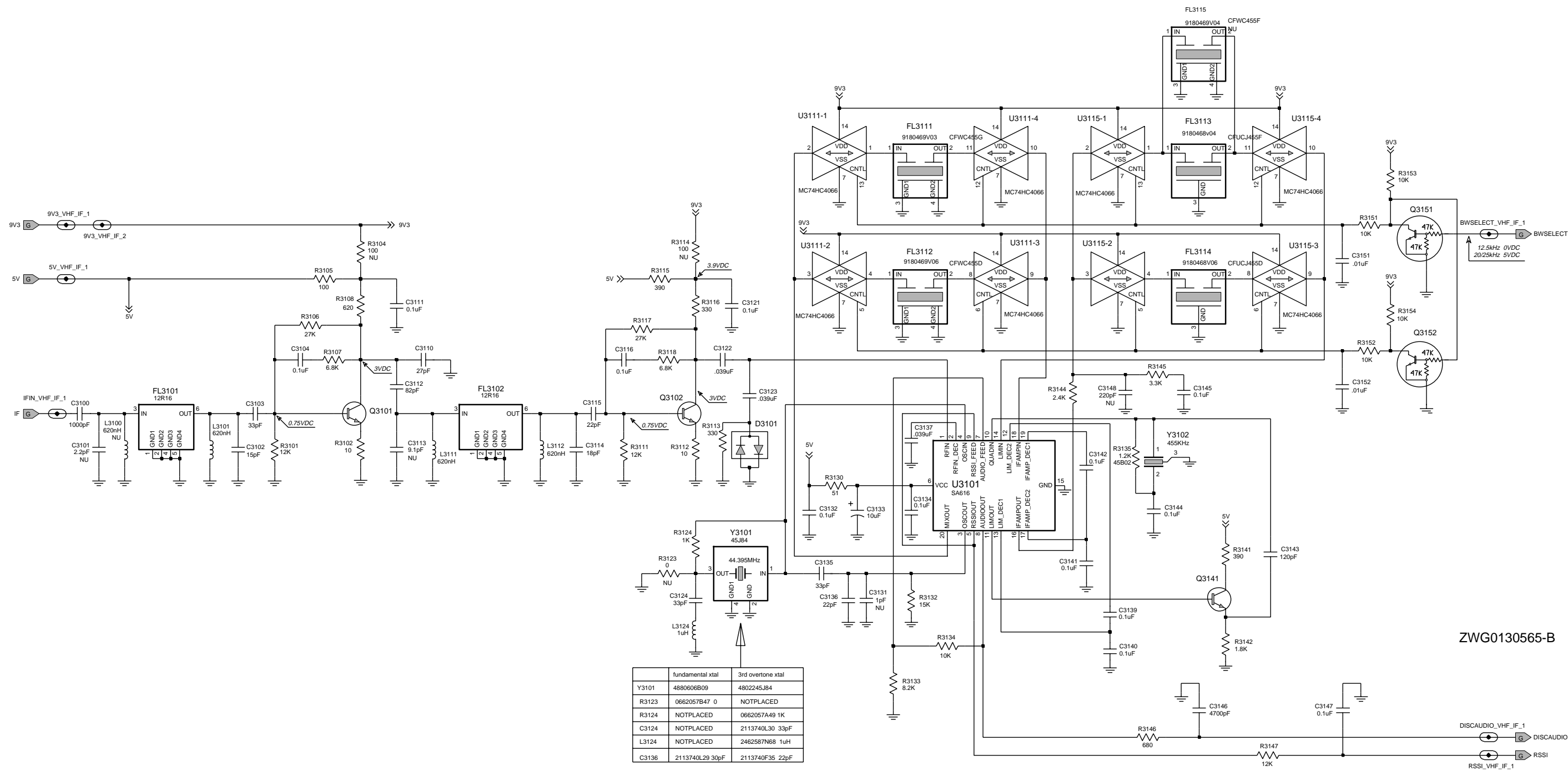


VHF (136-174 MHz) Voltage Controlled Oscillator



VHF (136-174 MHz) Receiver Front End

ZWG0130395-A



ZWG0130565-B

VHF (136-174 MHz) IF

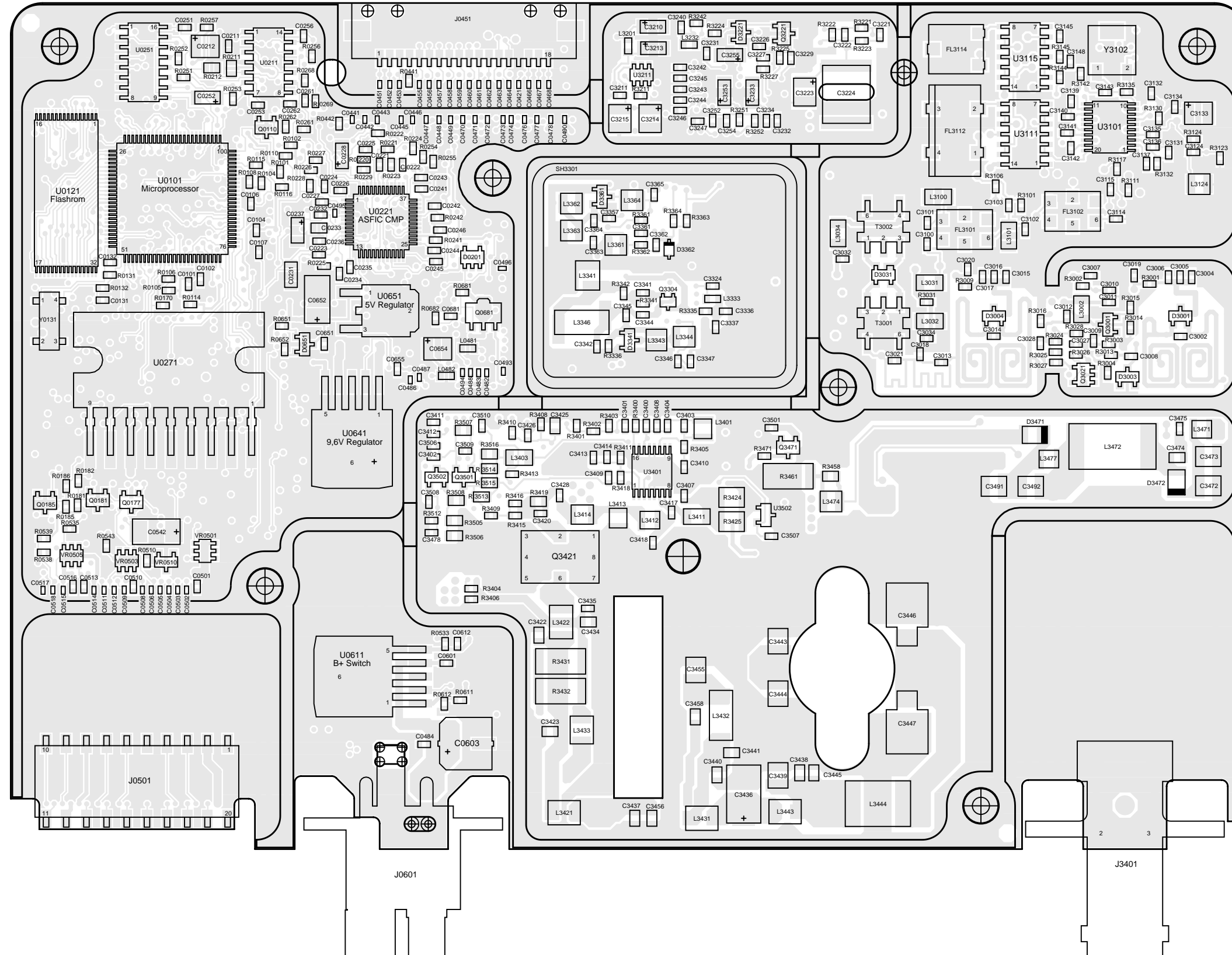
Circuit Ref	Motorola Part No.	Description
R3427	0662057C13	2R7 1/10W 5%
R3428	0662057A58	2k4 1/16W 5%
R3429	0662057A33	220 1/16W 5%
R3431	0680194M18	51 1W 5%
R3432	0680194M18	51 1W 5%
R3433	0662057C13	2R7 1/10W 5%
R3434	0662057C13	2R7 1/10W 5%
R3435	0662057C13	2R7 1/10W 5%
R3441	0662057A87	39k 1/16W 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	5185130C65	LDMOS DRIVER VHF/UHF/ 800MHz
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

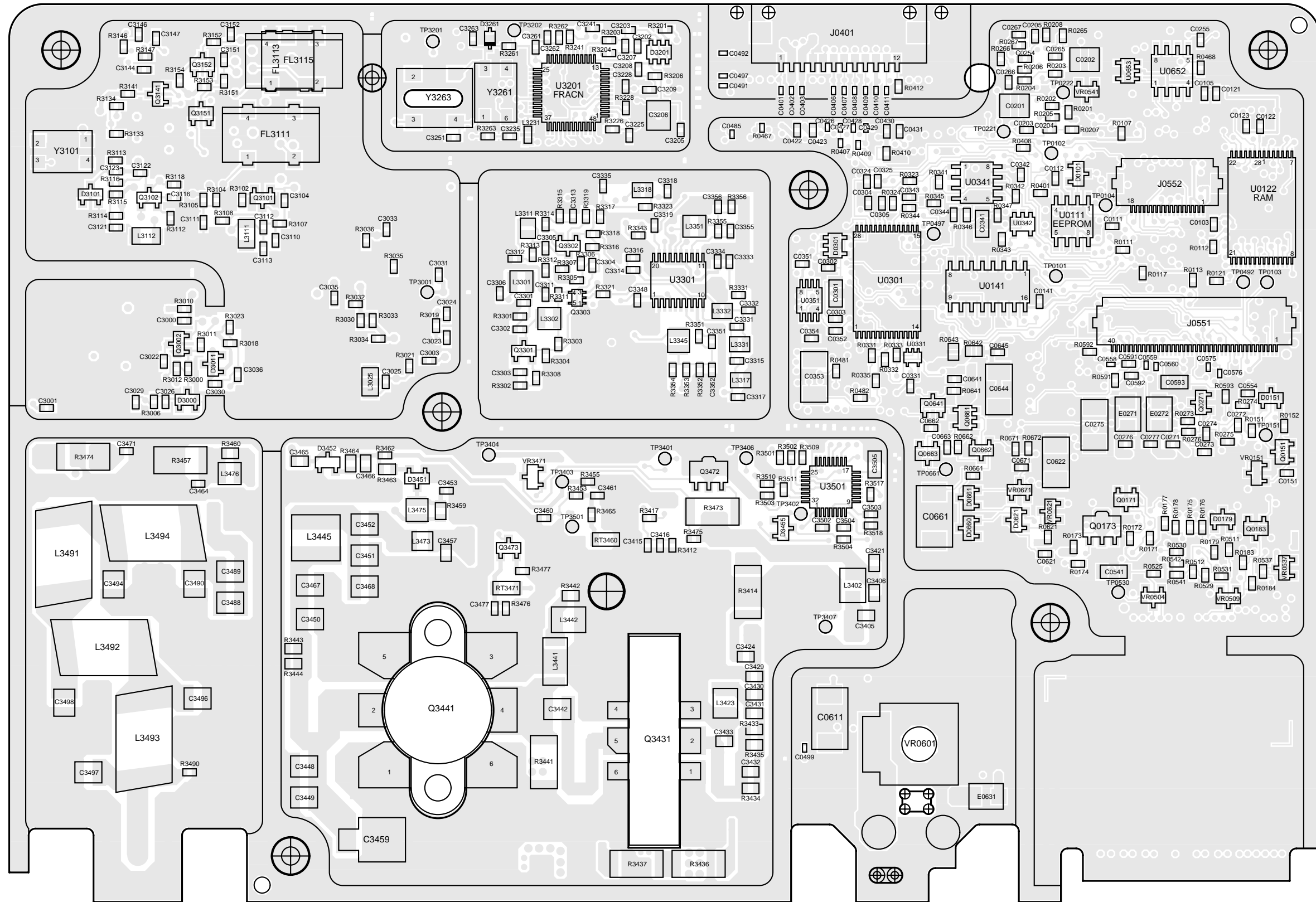
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

6.0 VHF 25-45W PCB 8486140B12 / Schematic



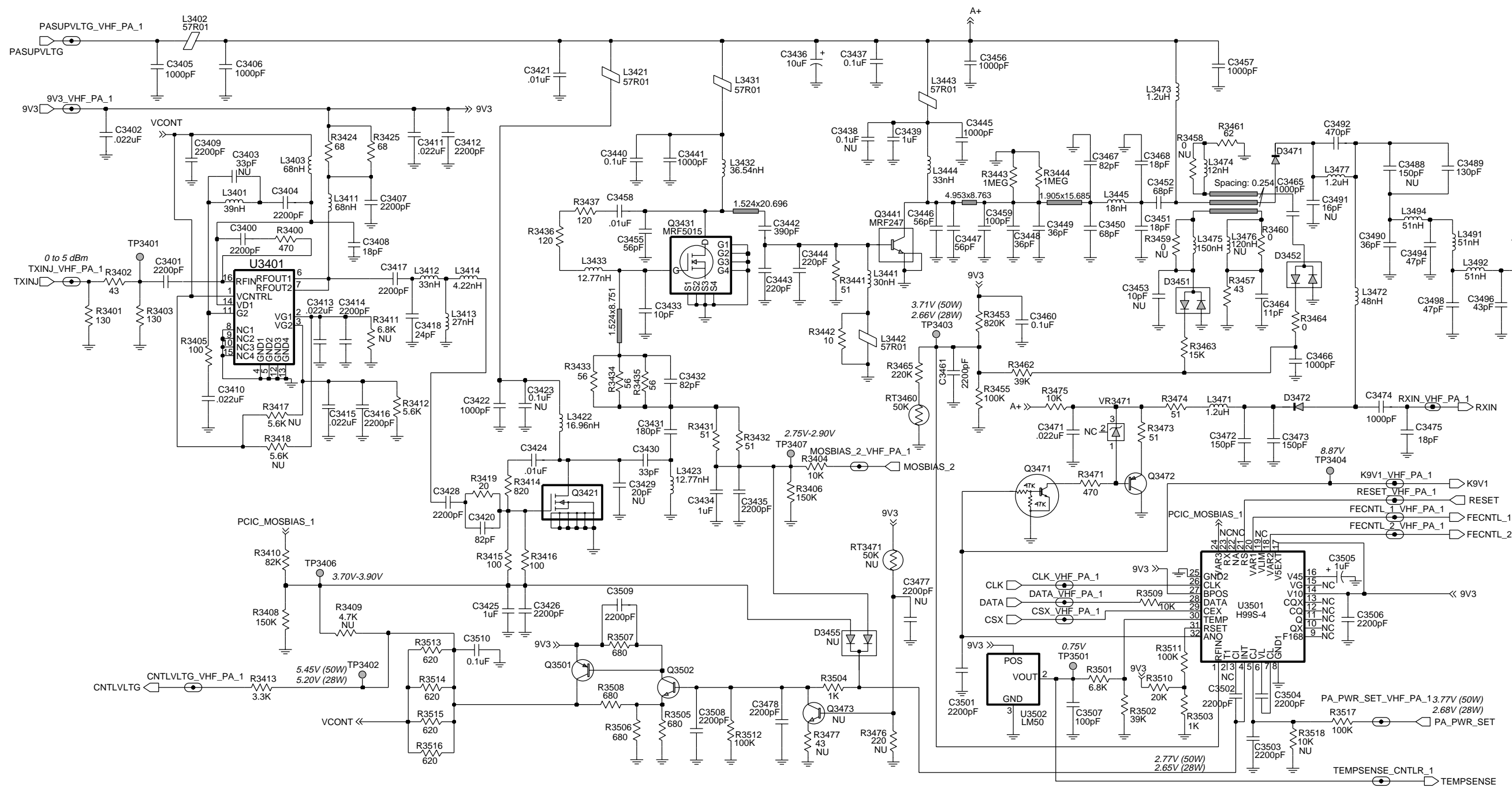
ZWG0130227-B

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



ZWG0130226-B

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



ZWG0130512-O

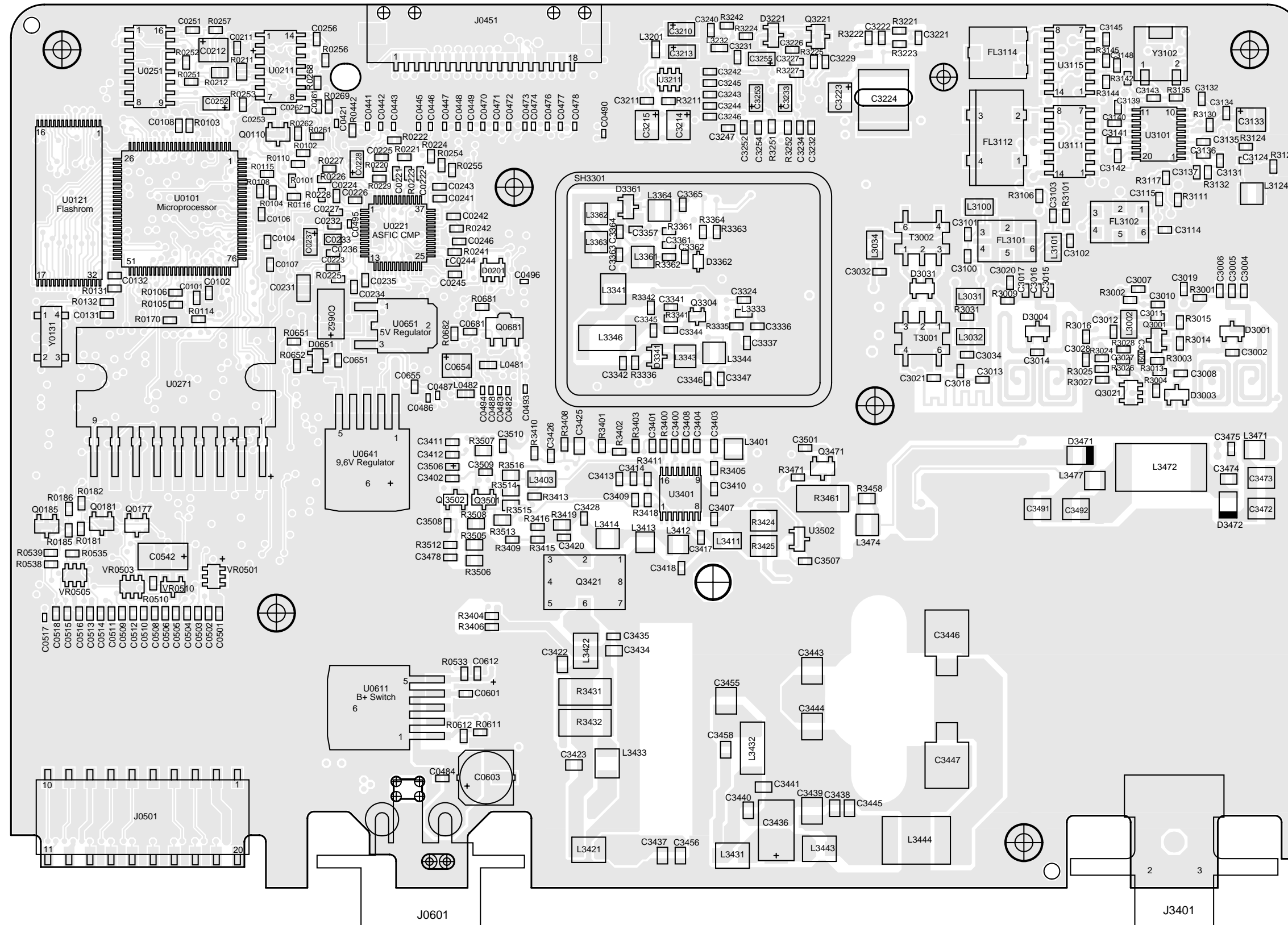
VHF (136-174 MHz) Power Amplifier 25-45W

Circuit Ref	Motorola Part No	Description
R3490	0662057A89	47k 1/16W 5%
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

* Motorola Depot Servicing only

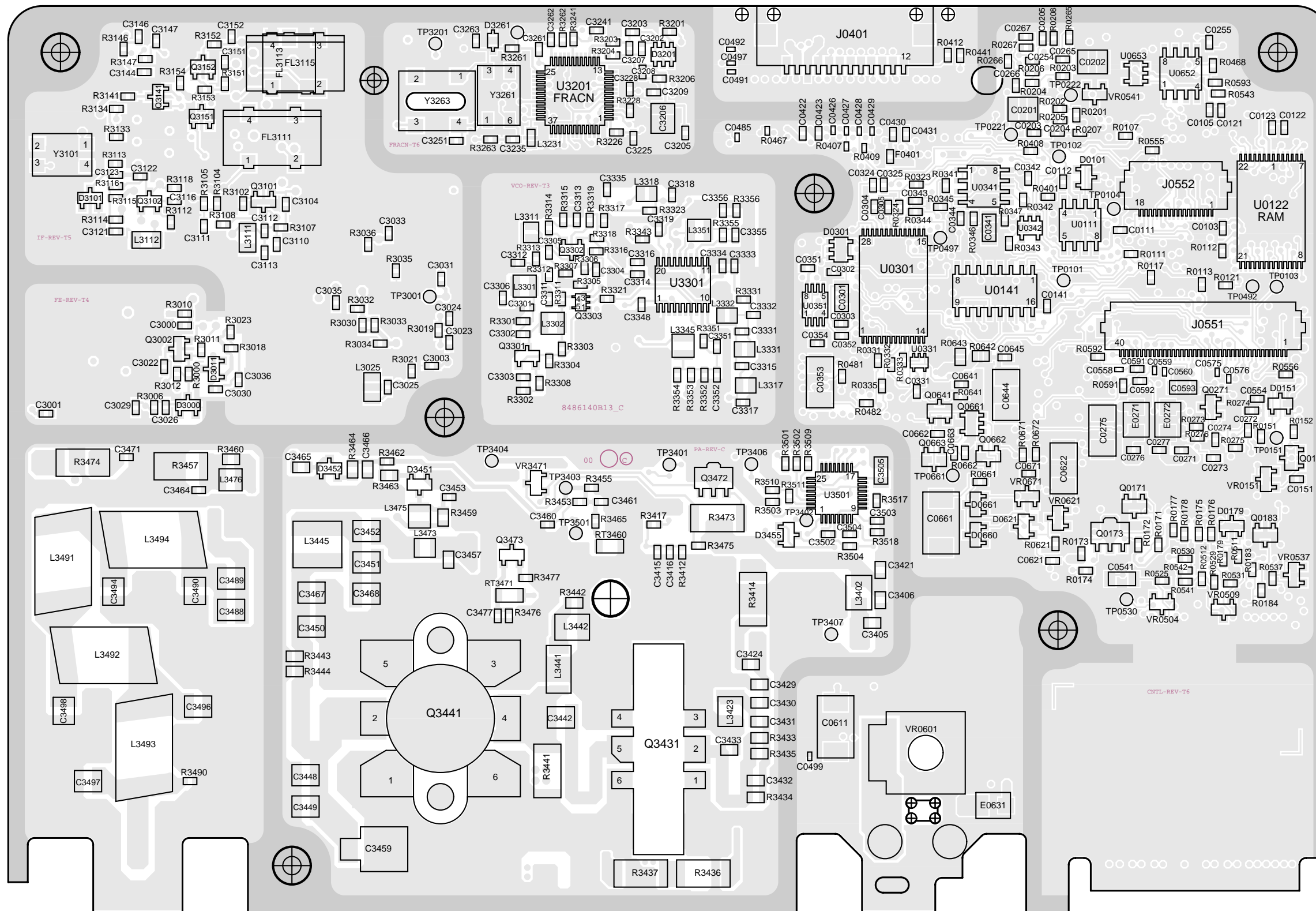
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

7.0 VHF 25-45W PCB 8486140B13



ZWG0130589-O

**VHF (136-174 MHz) 25-45W
8486140B13 Top Side**



ZWG0130590-O

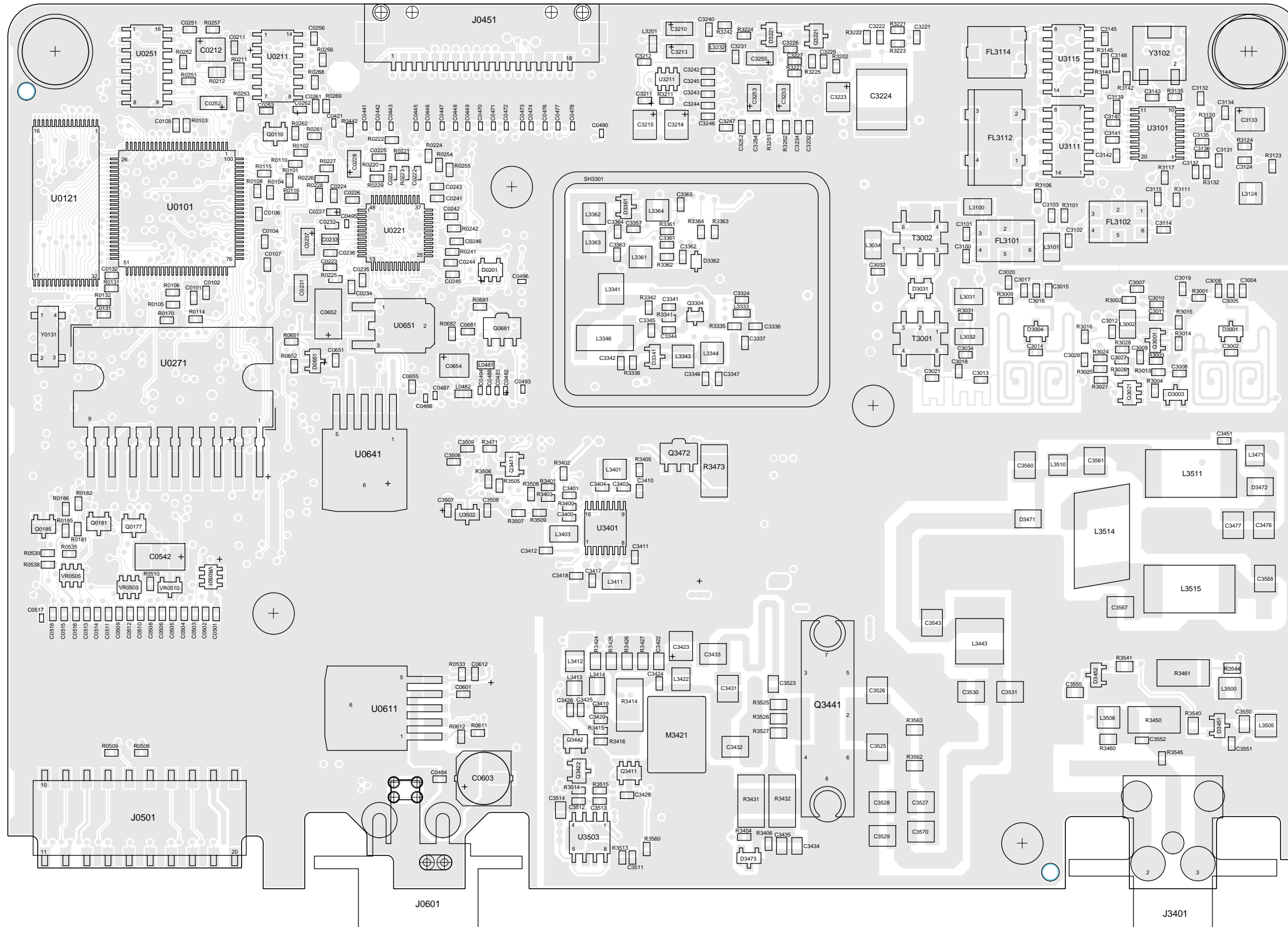
VHF (136-174 MHz) 25-45W 846140B13 Bottom Side

Circuit Ref	Motorola Part No	Description
R3490	0662057A89	47k 1/16W 5%
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	5185130C65	IC VHF/UHF/800MHz LDMOS DRIVER
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

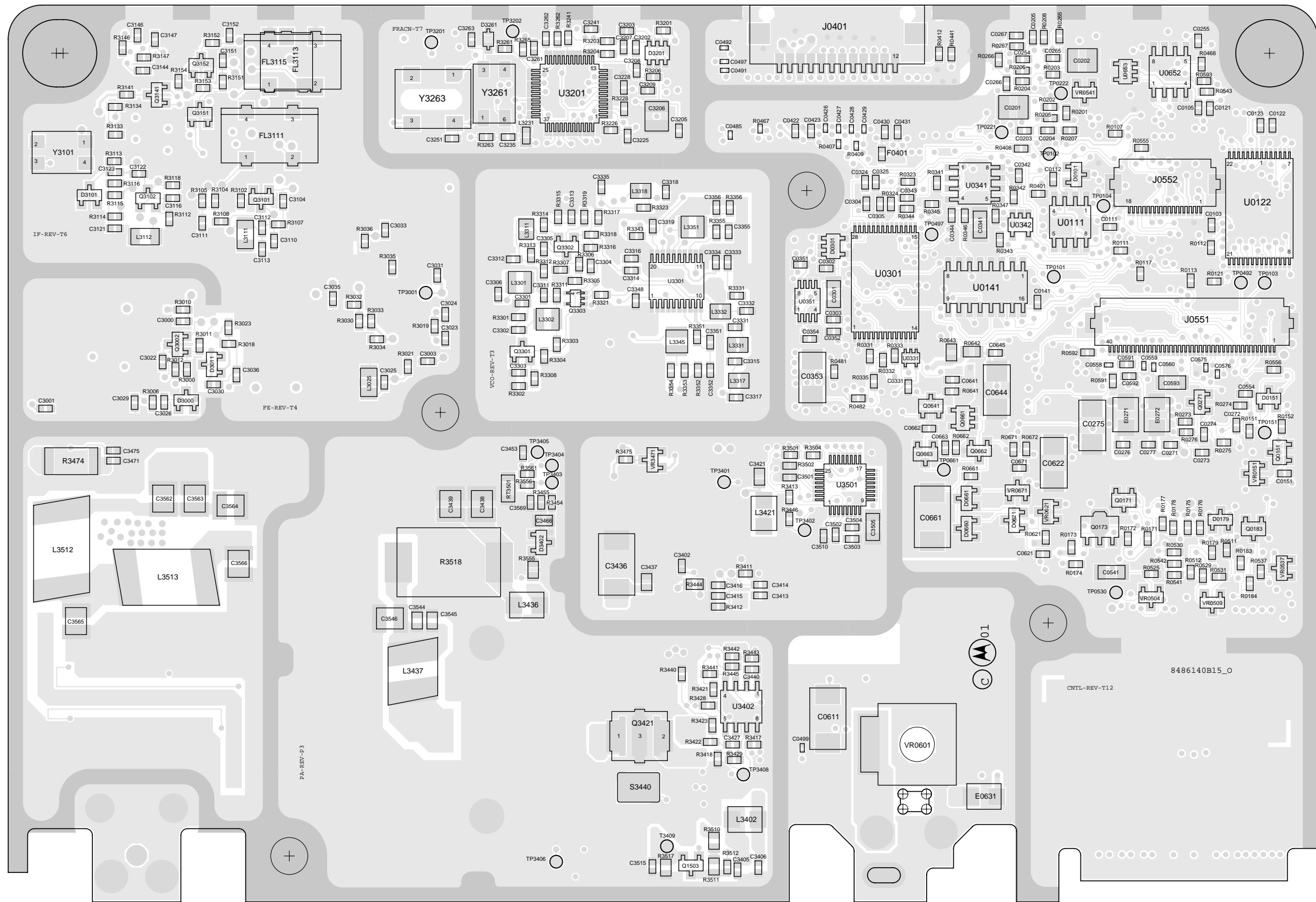
Reference designators with an asterisk indicate components which are not fieldreplaceable because they need to be calibrated with specialized factory equipment after installation. Radios in which these parts have been replaced in the field will be off frequency at temperature extremes.

8.0 VHF 25-45W PCB 8486140B15 / Schematics

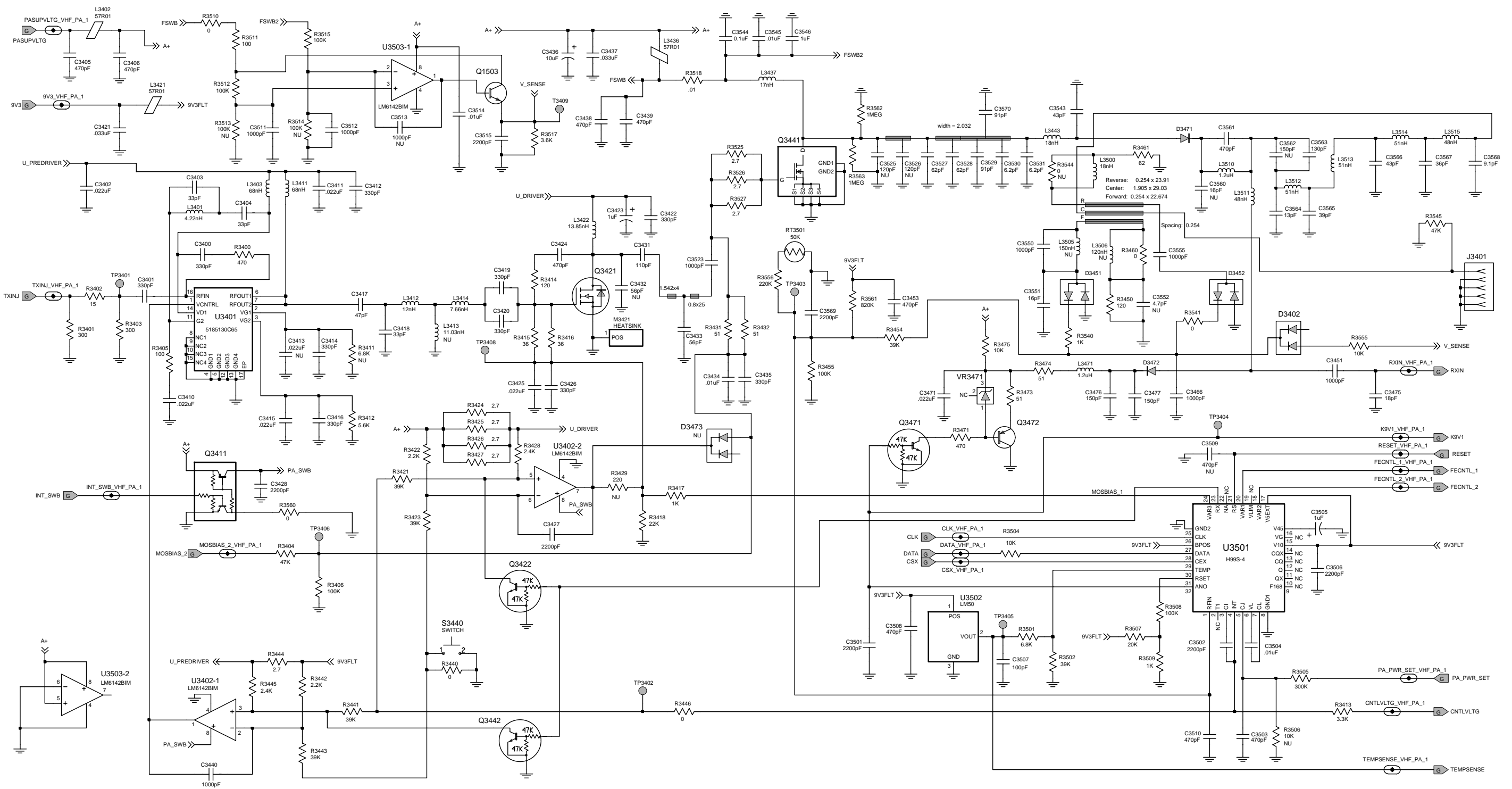


ZWG0131057-O

**VHF (136-174 MHz) 25-45W
8486140B15 Top Side**

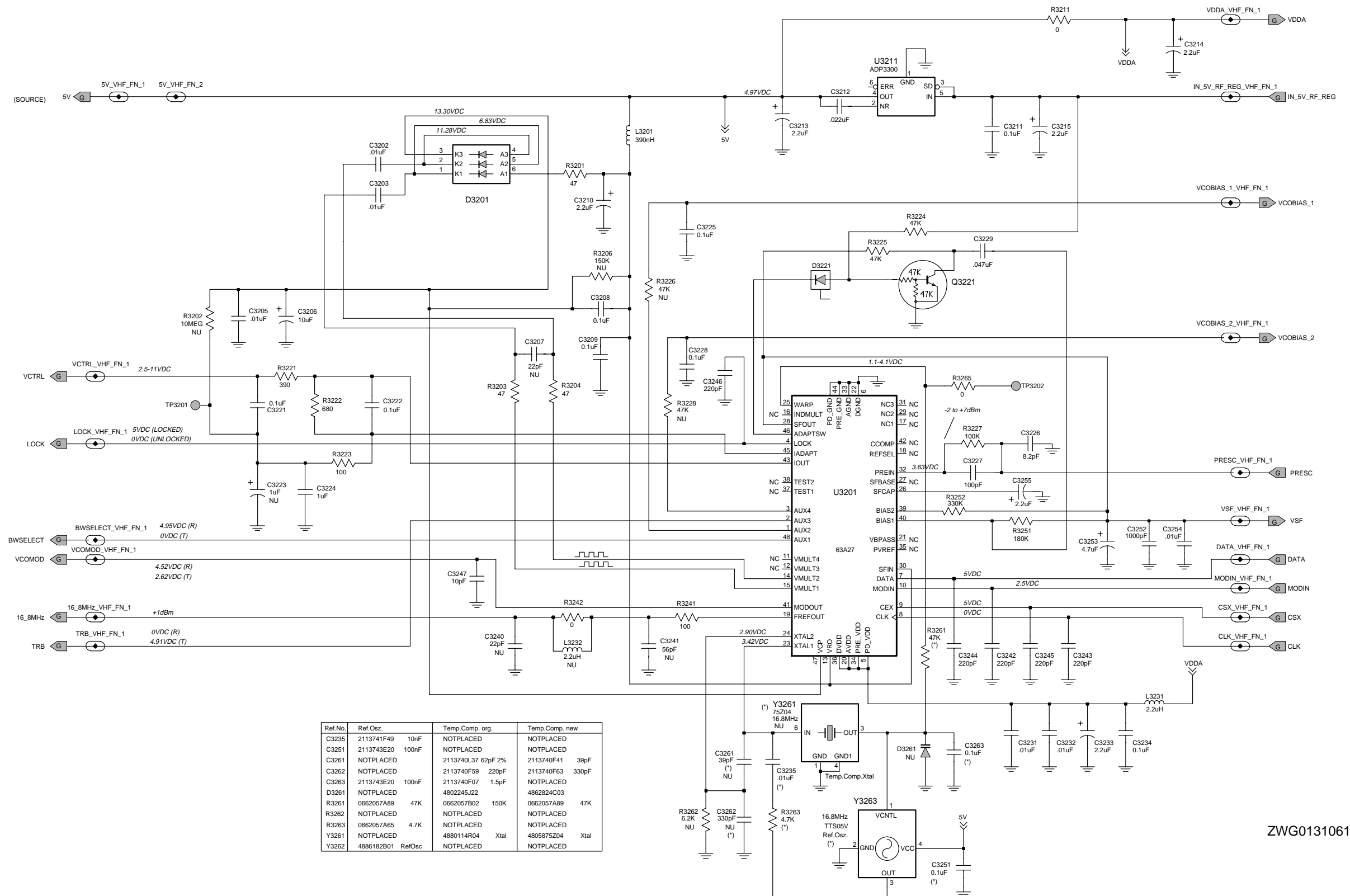


VHF (136-174 MHz) 25-45W 8486140B15 Bottom Side

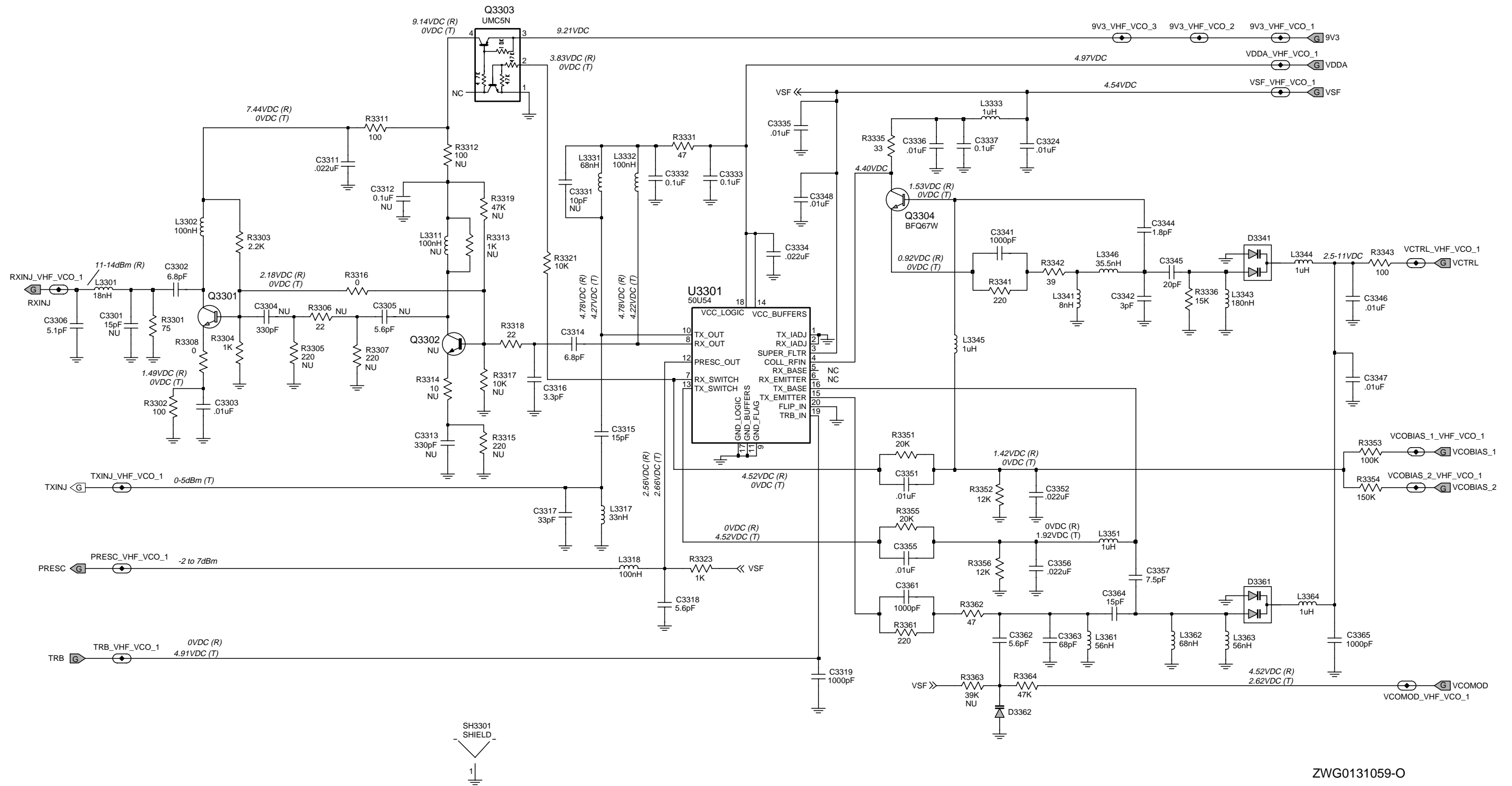


VHF (136-174 MHz) Power Amplifier 25 - 45W

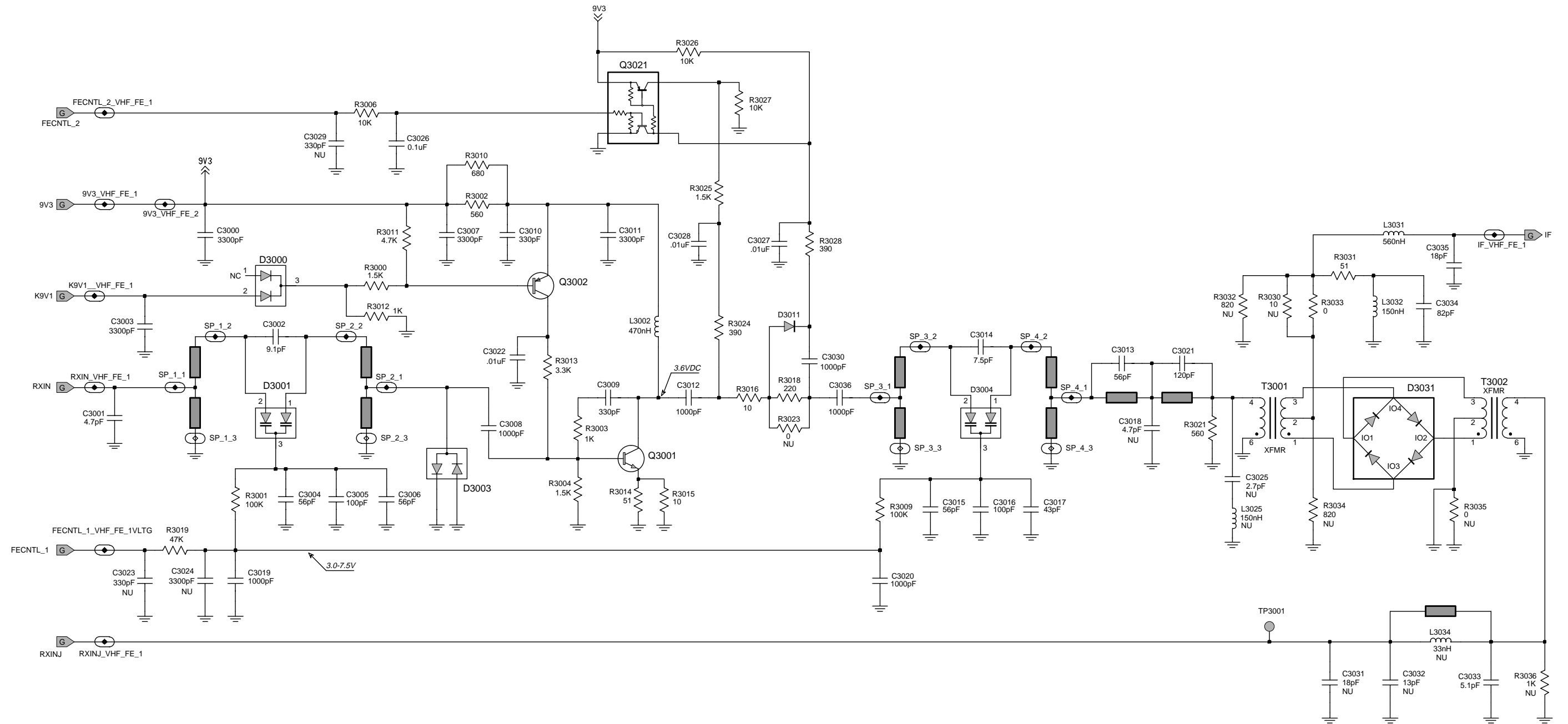
ZWG0131063-0



ZWG0131061-O

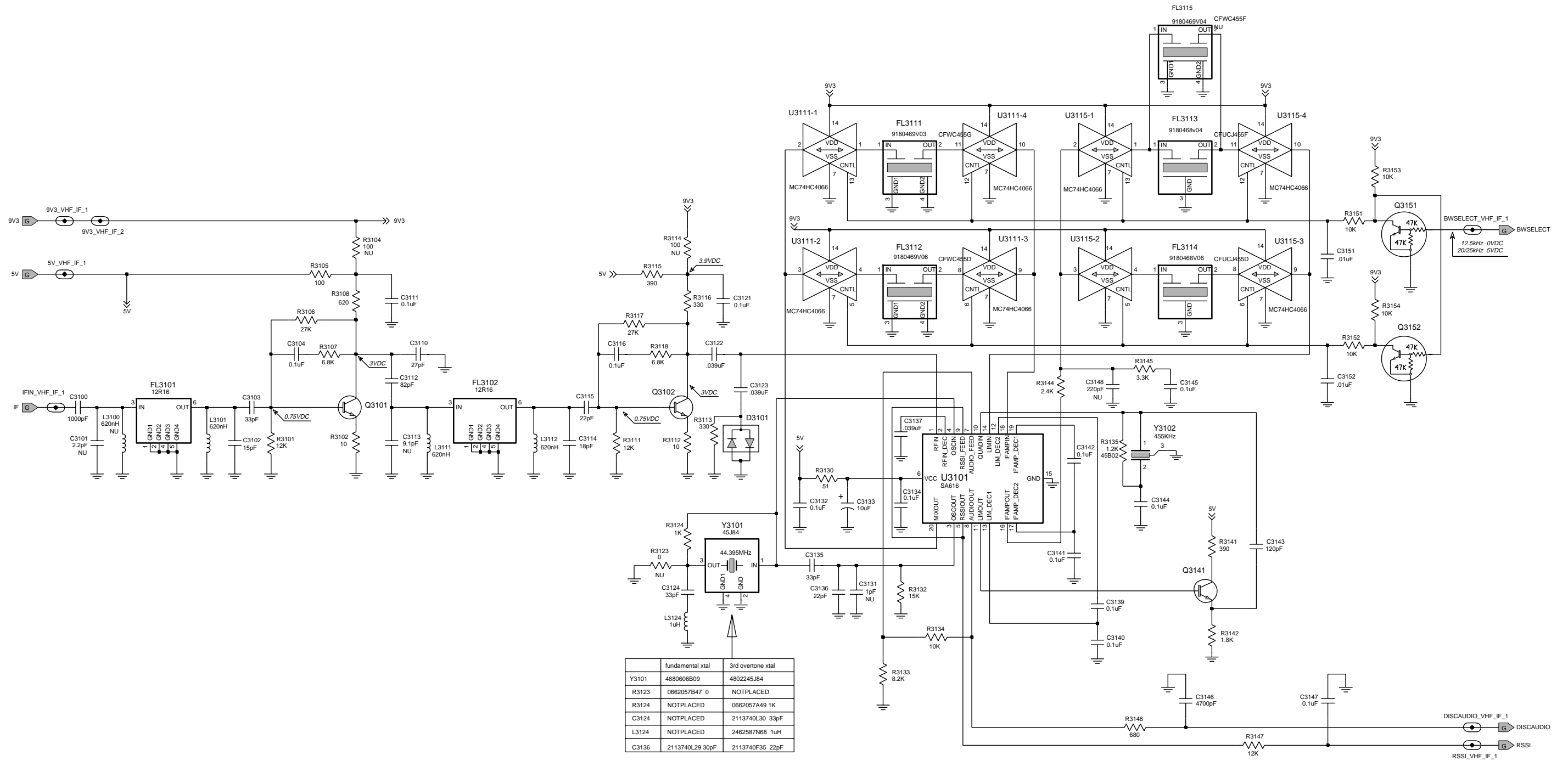


VHF (136-174 MHz) Voltage Controlled Oscillator



VHF (136-174 MHz) Receiver Front End

ZWG0131062-O



ZWG0131060-O

VHF (136-174 MHz) IF

Circuit Ref	Motorola Part No.	Description
R3502	0662057A87	39K OHMS 5%
R3504	0662057A73	10K OHMS 5%
R3505	0662057B09	300K OHMS
R3507	0662057A80	20K OHMS 5%
R3508	0662057A97	100K OHM 5%
R3509	0662057A49	1000 OHMS 5%
R3510	0662057C01	0 OHMS .050 OHMS
R3511	0662057R19	100 OHMS 1%
R3512	0662057P95	100.0K 1%
R3515	0662057P95	100.0K 1%
R3517	0662057C88	3600 OHMS 5%
R3518	0682089V01	SMT .01 2W
R3525	0662057C13	2.7 OHMS 5%
R3526	0662057C13	2.7 OHMS 5%
R3527	0662057C13	2.7 OHMS 5%
R3540	0662057C75	1000 OHMS 5%
R3541	0662057C01	0 OHMS .050 OHMS
R3545	0662057A89	47K OHMS 5%
R3555	0662057C99	10K OHMS 5%
R3556	0662057B06	220K OHMS 5%
R3560	0662057B47	0 OHMS +.050 OHMS
R3561	0662057B20	820K OHMS 5%
R3562	0662057D48	1.0 MEG OHMS 5%
R3563	0662057D48	1.0 MEG OHMS 5%
RT3501	0605621T02	TMTR CHIP SURFACE MT
SH3301	2602641Y02	SHIELD, ARIANE VCO
T3001	2508396X02	TRANSFORMER
T3002	2508397X02	TRANSFORMER
U3101	5186144B01	FM IF IC SA616
U3111	5102463J52	MC74HC4066D QUAD ANA- LOG SWITCH
U3115	5102463J52	MC74HC4066D QUAD ANA- LOG SWITCH
U3201	5185963A27	IC TESTED AT25016 48 PIN GFP
U3211	5105739X05	IC SOT 5V HI-PRECISION REG- ULAT
U3301	5105750U54	IC PKG DIE VCO BUFFER
U3401	5185130C65	IC VHF/UHF/800 MHZ LDMOS DRIVER
U3402	5109731C21	C OP AMP LM6142BIM 8SO
U3501	5185765B26	IC PWR CTRL IN MOS20
U3502	5185963A15	IC TEMP SENSOR 1M50C
U3503	5109731C21	C OP AMP LM6142BIM 8SO
Y3101	4802245J84	XTAL 44.395MHZ, 3RD OT, SMD
Y3102	9186145B02	CER.DISCR. CDBCA455CX36- TC
Y3263	4886182B01	VCTCXO 16.8MHZ 2PPM TTS05V
	8486140B15	PCB WM VHF 45W

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* Motorola Depot Servicing only

