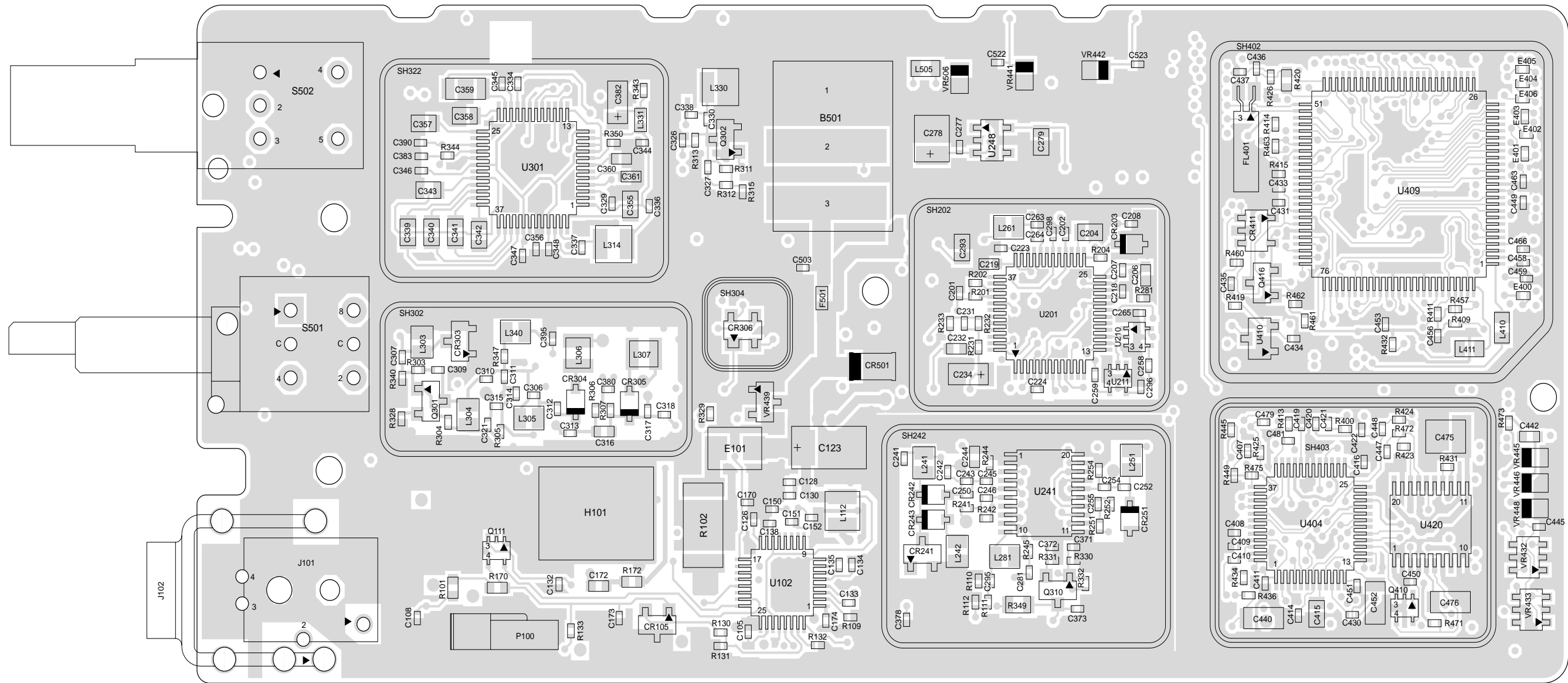
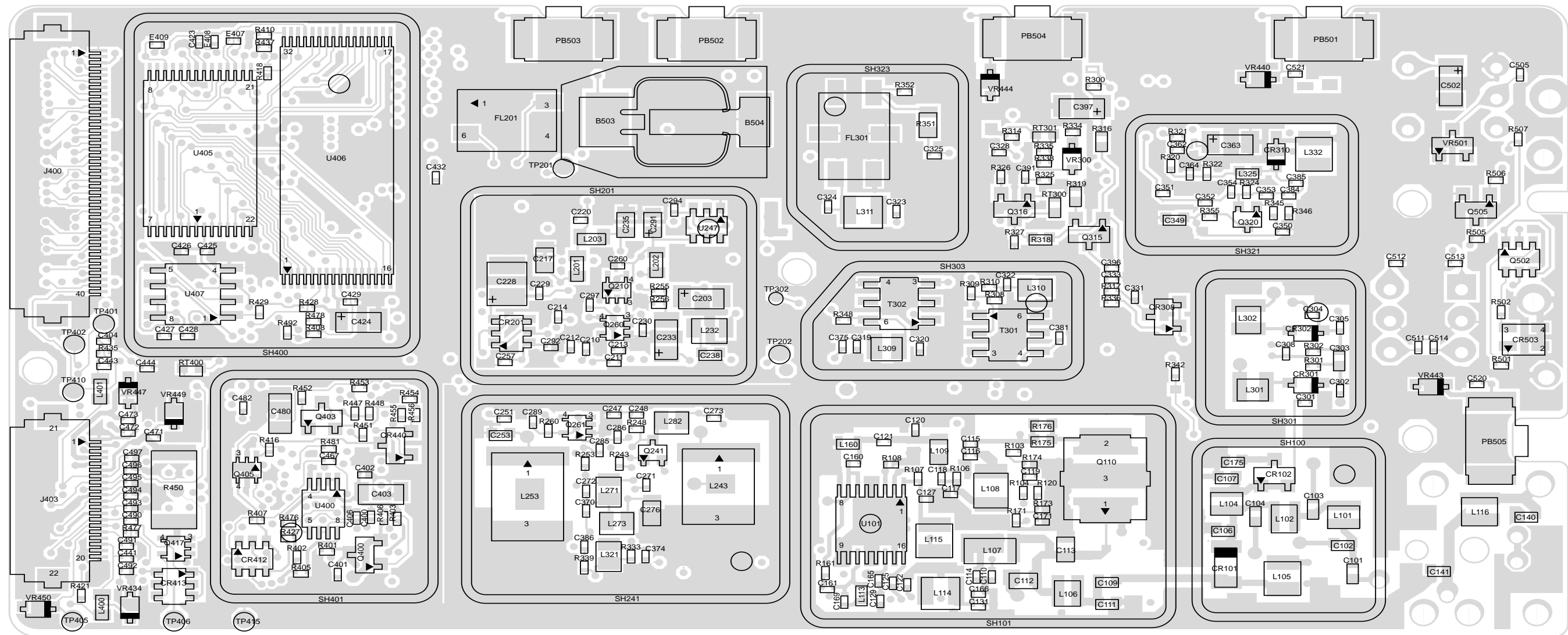


VIEWED FROM SIDE 2



FL08307400

Figure 4-18: UHF (403-470 MHz) 5000/7000 Series Main Board Bottom Side PCB 8480450Z03



ZMY0130183-B

Figure 4-19: UHF (403-470 MHz) 5000/7000 Series Main Board Top Side PCB 8480450Z13

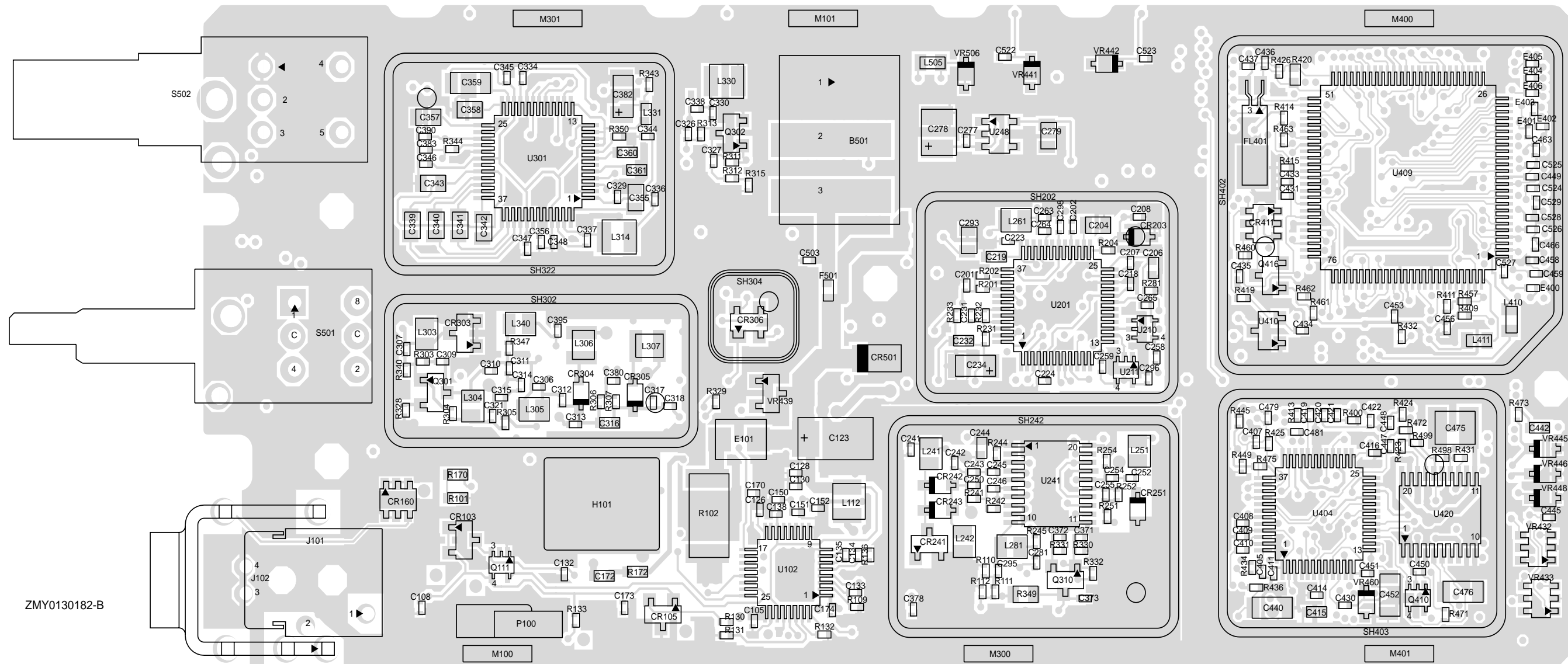


Figure 4-20: UHF (403-470 MHz) 5000/7000 Series Main Board Bottom Side PCB 8480450Z13

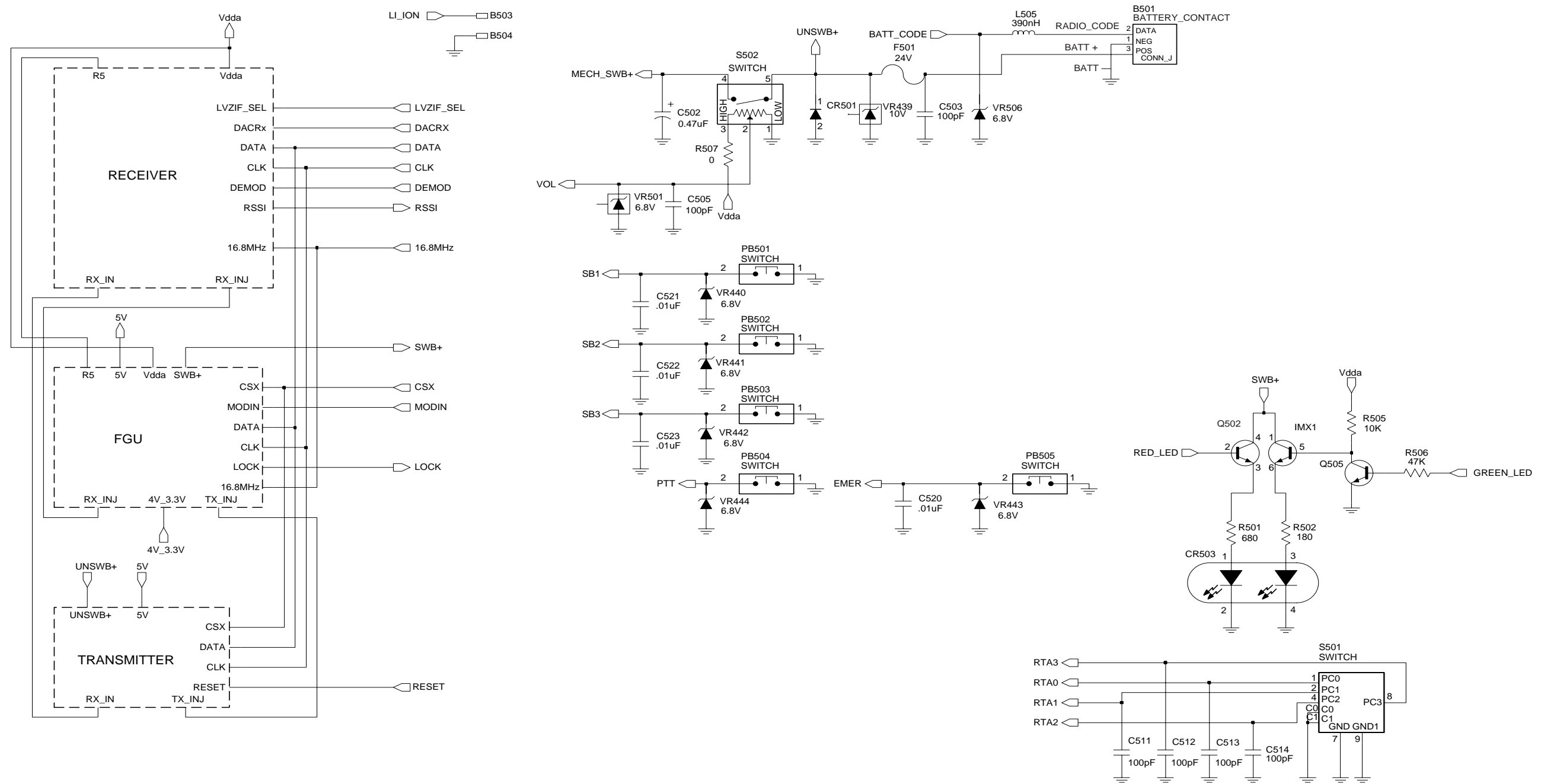
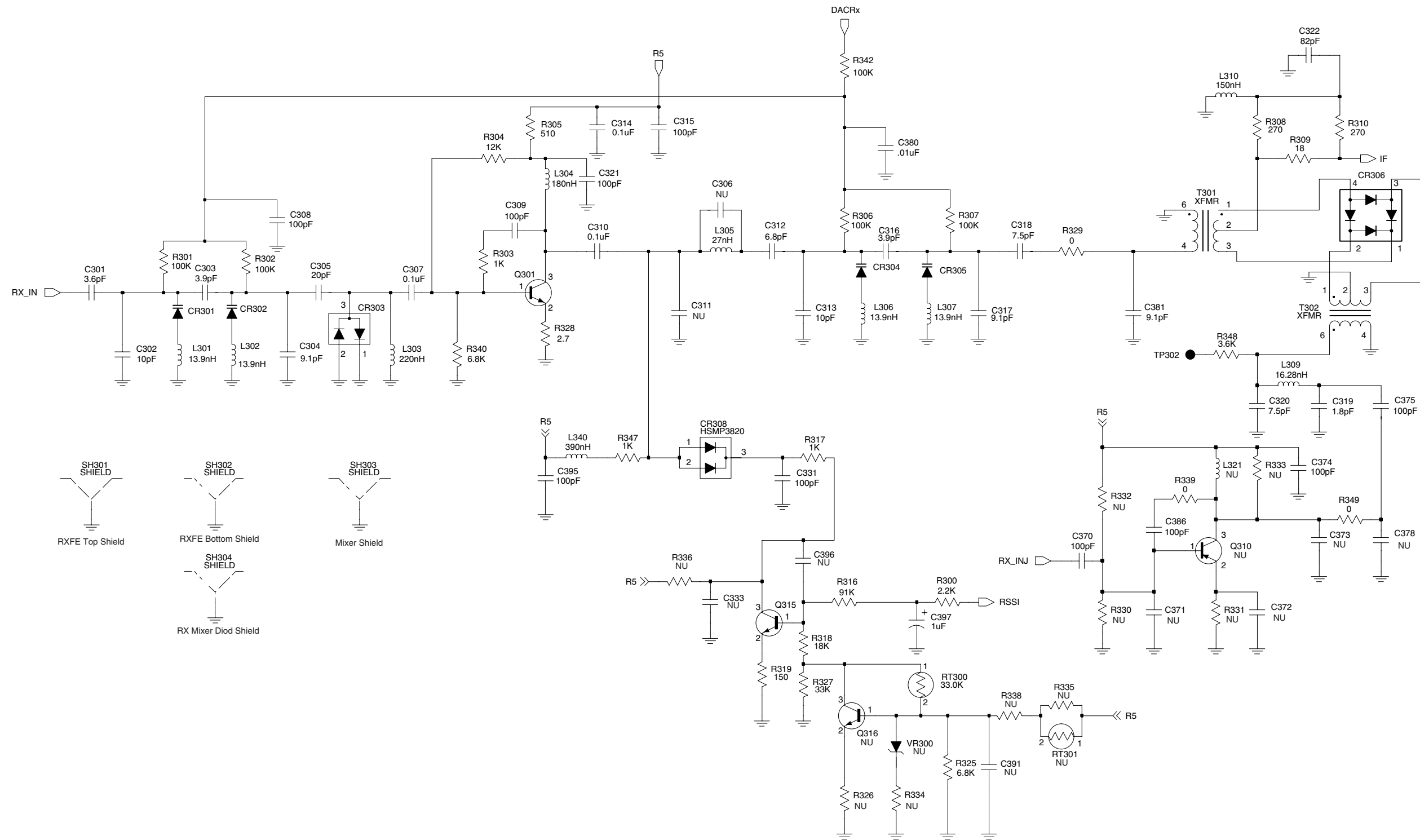
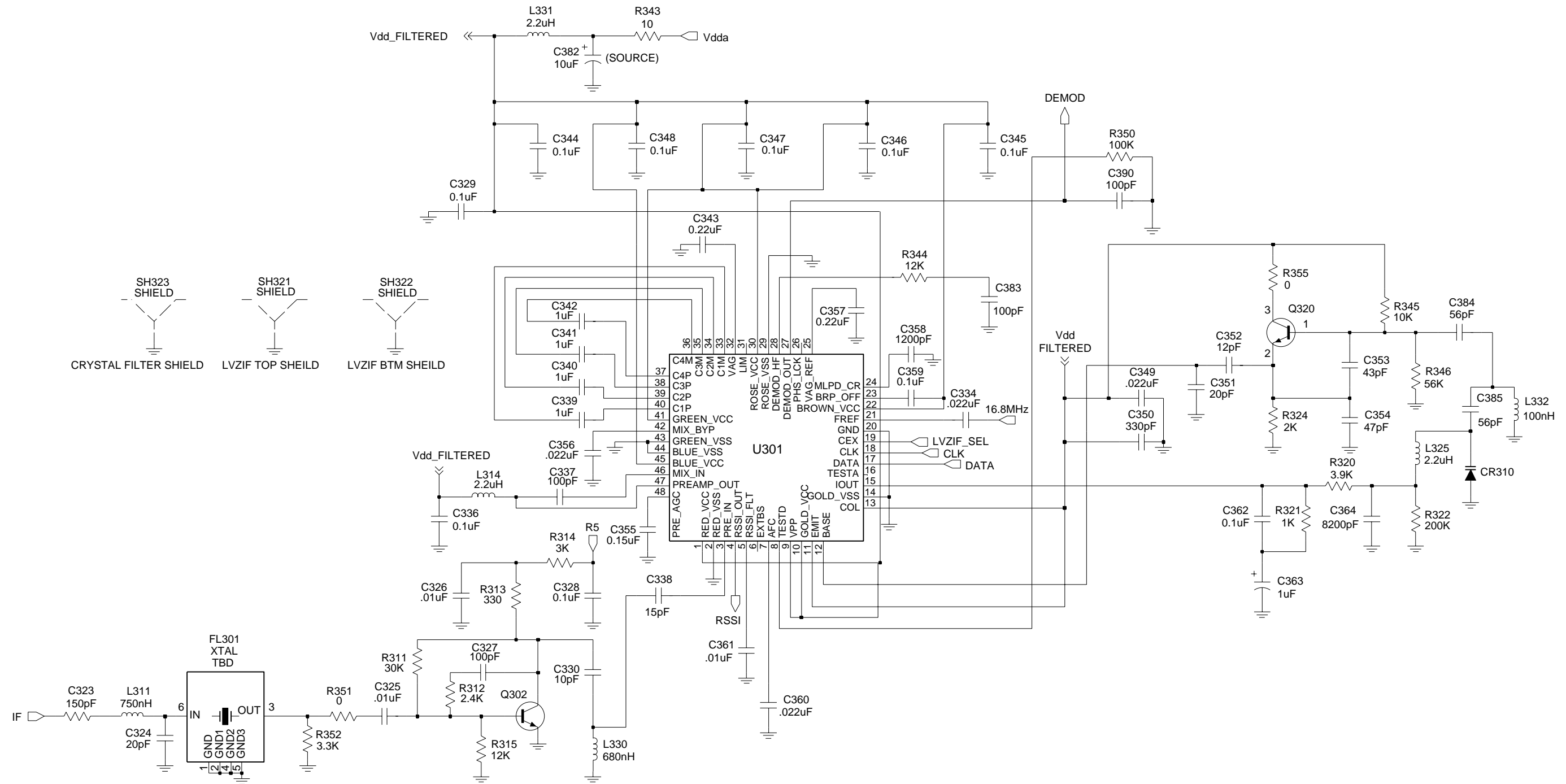


Figure 4-21: UHF (403-470 MHz) Controls and Switches Schematic Diagram



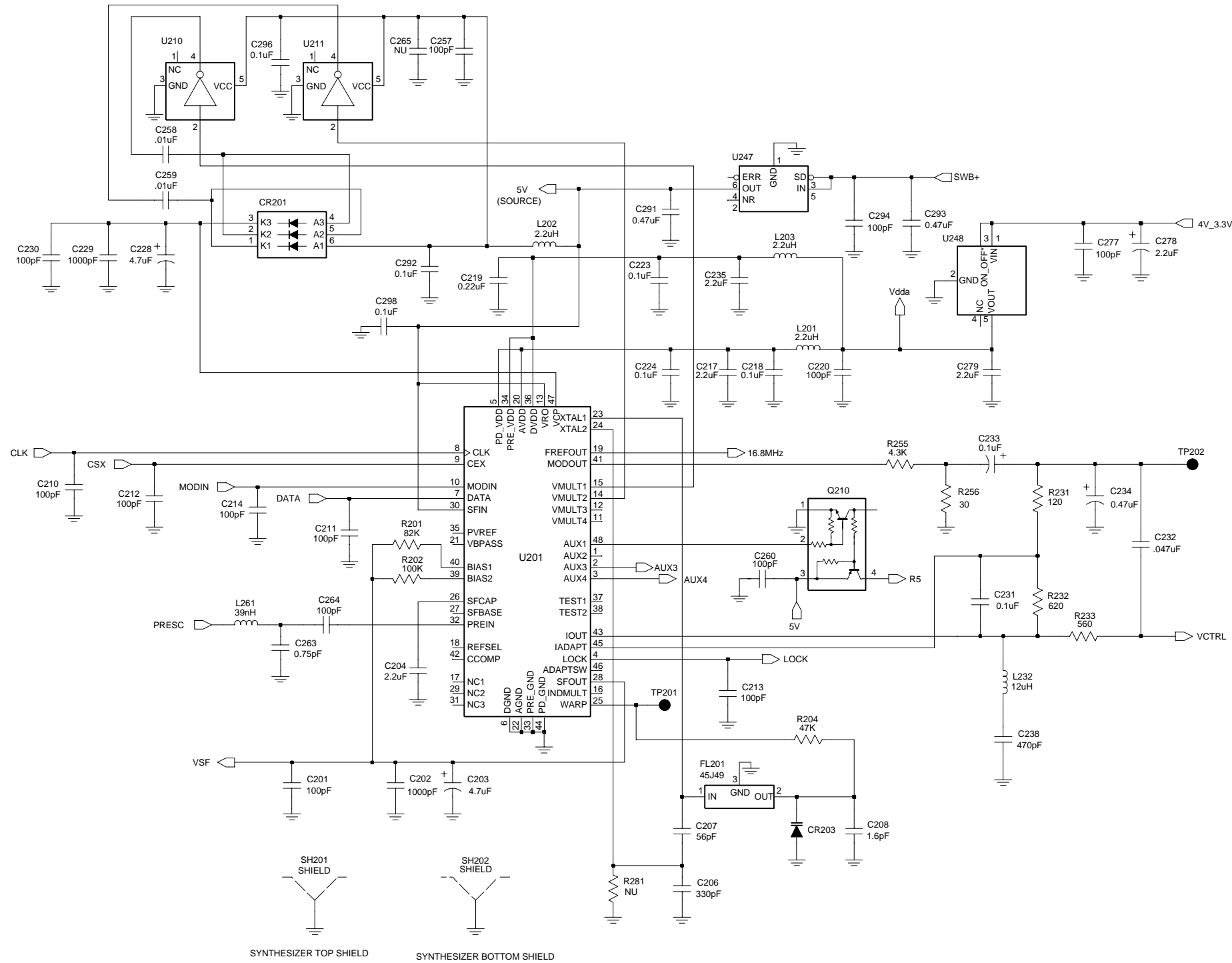
FL08307420

Figure 4-22: UHF (403-470 MHz) Receiver Front End Schematic Diagram



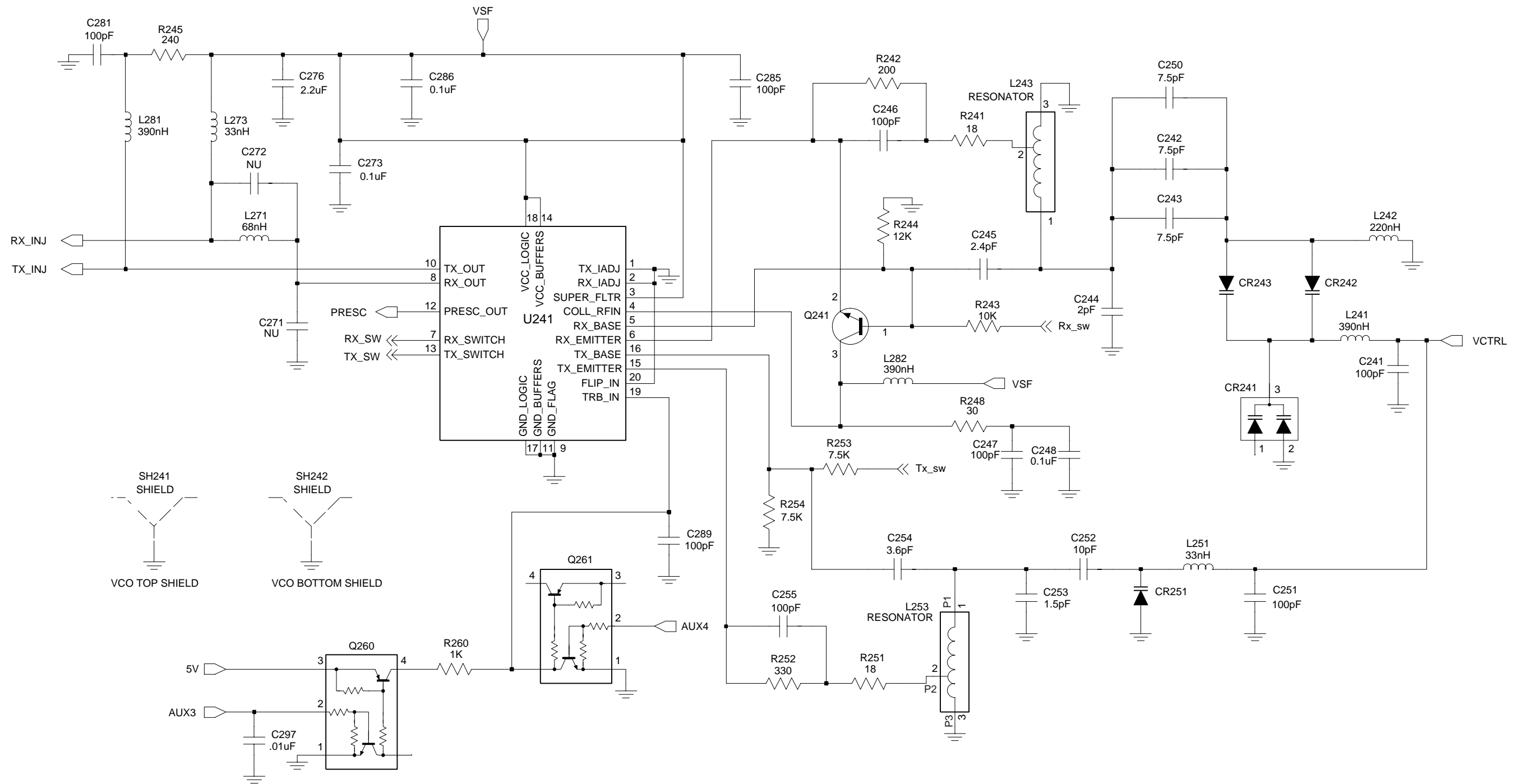
FL08307430

Figure 4-23: UHF (403-470 MHz) Receiver Back End Schematic Diagram



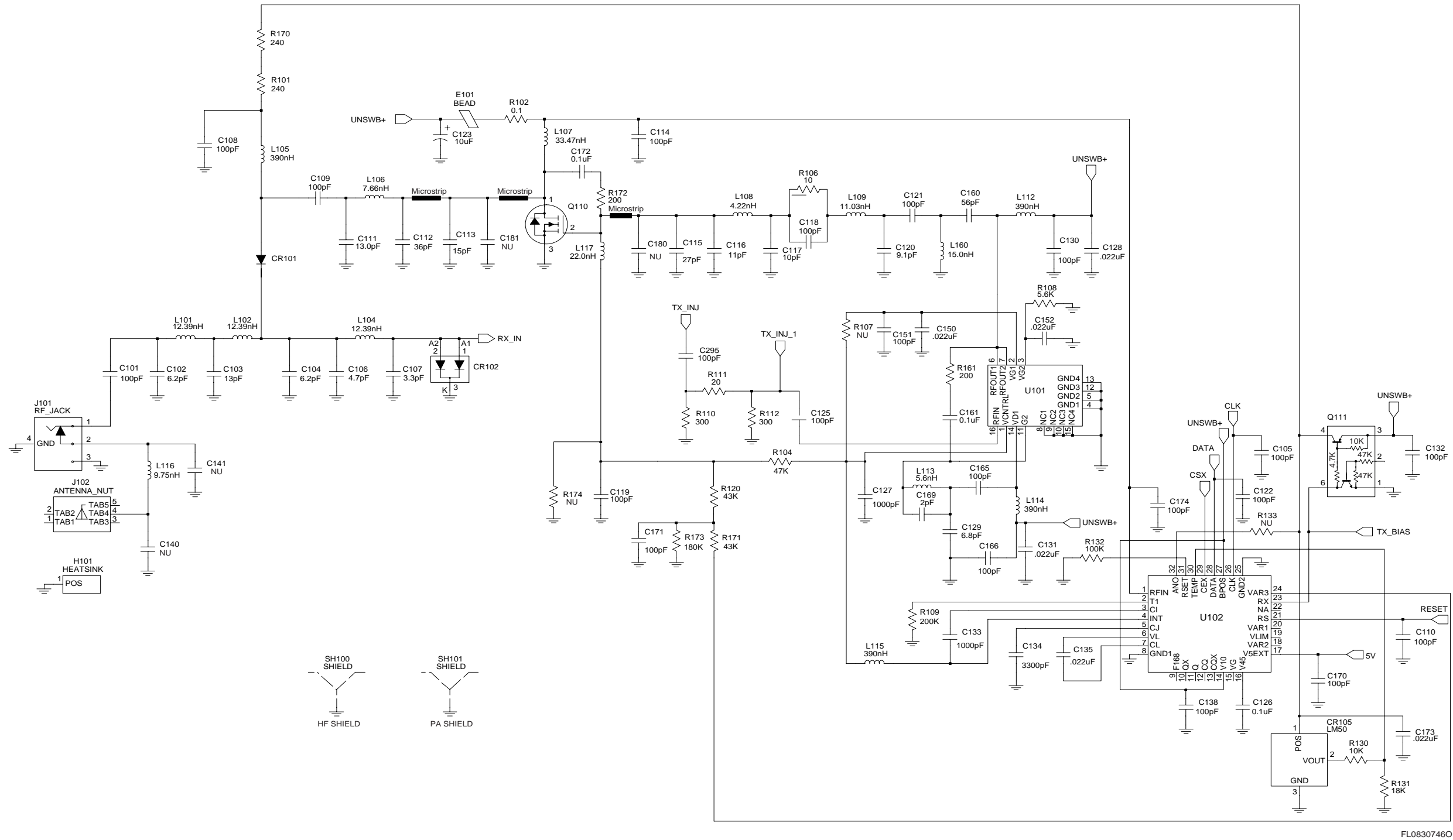
FL08307440

Figure 4-24: UHF (403-470 MHz) Synthesizer Schematic Diagram



FL08307450

Figure 4-25: UHF (403-470 MHz) Voltage Controlled Oscillator Schematic Diagram



FL08307460

Figure 4-26: UHF (403-470 MHz) Transmitter Schematic Diagram

UHF (403-470 MHz) Radio Parts List (PCB 8480450Z03)

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
C101	2113740F51	100pF
C102	2113740F22	6.2pF, 0.1
C103	2113740F27	10pF
C104	2113740F22	6.2pF, 0.1
C105	2113743N50	100pF
C106	2113740F19	4.7pF, 0.1
C107	2113740F15	3.3pF, 0.1
C108	2113743N50	100pF
C109	2113740F51	100pF
C110	2113743N50	100pF
C111	2113740F30	13pF
C112	2180605Z32	47pF
C113	2180605Z16	10pF
C114	2113743N50	100pF
C115	2113743N30	15pF
C116	2113743N38	33pF
C117	2113743N37	30pF
C118	2113743N50	100pF
C119	2113743N50	100pF
C120	2113743N26	10pF
C121	2113743N50	100pF
C122	2113743N50	100pF
C123	2311049A18	10uF, 10%; 16V
C125	2113743N50	100pF
C126	2113743M24	0.1uF, +80%/-20%
C127	2113743L17	1000pF, 10%
C128	2113743M08	.022uF, +80%/-20%
C129	2113743N23	7.5pF, 0.5
C130	2113743N50	100pF
C131	2113743M08	.022uF, +80%/-20%
C132	2113743N50	100pF
C133	2113743L17	1000pF, 10%
C134	2113743L29	3300pF, 10%
C135	2113743M08	.022uF, +80%/-20%
C138	2113743N50	100pF
C140	Not Placed	
C141	Not Placed	
C150	2113743M08	.022uF, +80%/-20%
C151	2113743N50	100pF
C152	2113743M08	.022uF, +80%/-20%
C160	2113743N50	100pF
C161	2113743M24	0.1uF, +80%/-20%
C165	2113743N50	100pF
C166	2113743N50	100pF
C169	2113743N16	3.9pF, 0.25
C170	2113743N50	100pF
C171	2113743N50	100pF
C172	2113743E20	0.1uF, 10%
C173	2113743M08	.022uF, +80%/-20%
C174	2113743N50	100pF
C201	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C202	2113743L17	1000pF, 10%
C203	2311049A56	4.7uF, 20%; 10V
C204	2104993J02	2.2uF
C206	2113740F63	330pF
C207	2113743N44	56pF
C208	2113743N08	1.6pF
C210	2113743N50	100pF
C211	2113743N50	100pF
C212	2113743N50	100pF
C213	2113743N50	100pF
C214	2113743N50	100pF
C217	2104993J02	2.2uF
C218	2113743M24	0.1uF, +80%/-20%
C219	2113743K16	0.22uF, +80%/-20%
C220	2113743N50	100pF
C223	2113743M24	0.1uF, +80%/-20%
C224	2113743M24	0.1uF, +80%/-20%
C228	2311049J11	4.7uF, 10%; 16V
C229	2113743L17	1000pF, 10%
C230	2113743N50	100pF
C231	2113743M24	0.1uF, +80%/-20%
C232	2113743E12	.047uF, 10%
C233	2311049A01	0.1uF, 10%; 35V
C234	2311049A05	0.47uF, 10%; 25V
C235	2104993J02	2.2uF
C238	2113741F17	470pF
C241	2113743N50	100pF
C242	2113743N23	7.5pF, 0.5
C243	2113743N23	7.5pF, 0.5
C244	2113740F10	2pF, 0.25
C245	2113743N11	2.4pF, 0.25
C246	2113743N50	100pF
C247	2113743N50	100pF
C248	2113743M24	0.1uF, +80%/-20%
C250	2113743N23	7.5pF, 0.5
C251	2113743N50	100pF
C252	2113743N26	10pF
C253	2113740F07	1.5pF, 0.25
C254	2113743N15	3.6pF, 0.25
C255	2113743N50	100pF
C257	2113743N50	100pF
C258	2113743L41	.01uF, 10%
C259	2113743L41	.01uF, 10%
C260	2113743N50	100pF
C263	2113743N02	0.75pF, 0.25
C264	2113743N50	100pF
C265	Not Placed	
C271	Not Placed	
C272	Not Placed	
C273	2113743M24	0.1uF, +80%/-20%
C276	2104993J02	2.2uF
C277	2113743N50	100pF
C278	2311049A09	2.2uF, 10%; 20V
C279	2104993J02	2.2uF
C281	2113743N50	100pF
C285	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C286	2113743M24	0.1uF, +80%/-20%
C289	2113743N50	100pF
C291	2113743A27	0.47uF, 10%
C292	2113743M24	0.1uF, +80%/-20%
C293	2113743A27	0.47uF, 10%
C294	2113743N50	100pF
C295	2113743N50	100pF
C296	2113743M24	0.1uF, +80%/-20%
C297	2113743L41	.01uF, 10%
C298	2113743M24	0.1uF, +80%/-20%
C301	2113743N15	3.6pF, 0.25
C302	2113743N26	10pF
C303	2113740L08	3.9pF, 0.1
C304	2113743N25	9.1pF, 0.5
C305	2113743N33	20pF
C306	Not Placed	
C307	2113743M24	0.1uF, +80%/-20%
C308	2113743N50	100pF
C309	2113743N50	100pF
C310	2113743M24	0.1uF, +80%/-20%
C311	Not Placed	
C312	2113743N22	6.8pF, 0.5
C313	2113743N26	10pF
C314	2113743M24	0.1uF, +80%/-20%
C315	2113743N50	100pF
C316	2113740L08	3.9pF, 0.1
C317	2113743N25	9.1pF, 0.5
C318	2113743N23	7.5pF, 0.5
C319	2113743N69	1.8pF, 0.5
C320	2113743N23	7.5pF, 0.5
C321	2113743N50	100pF
C322	2113743N48	82pF
C323	2113743N54	150pF
C324	2113743N33	20pF
C325	2113743L41	.01uF, 10%
C326	2113743L41	.01uF, 10%
C327	2113743N50	100pF
C328	2113743M24	0.1uF, +80%/-20%
C329	2113743M24	0.1uF, +80%/-20%
C330	2113743N26	10pF
C331	2113743N50	100pF
C333	Not Placed	
C334	2113743M08	.022uF, +80%/-20%
C336	2113743M24	0.1uF, +80%/-20%
C337	2113743N50	100pF
C338	2113743N30	15pF
C339	2180478Z20	1.0uF, 10%
C340	2180478Z20	1.0uF, 10%
C341	2180478Z20	1.0uF, 10%
C342	2180478Z20	1.0uF, 10%
C343	2113743A23	0.22uF, 10%
C344	2113743M24	0.1uF, +80%/-20%
C345	2113743M24	0.1uF, +80%/-20%
C346	2113743M24	0.1uF, +80%/-20%
C347	2113743M24	0.1uF, +80%/-20%
C348	2113743M24	0.1uF, +80%/-20%

Circuit Ref	Motorola Part No.	Description
C349	2113743E07	.022uF, 10%
C350	2113743L05	330pF, 10%
C351	2113743N33	20pF
C352	2113743N28	12pF
C353	2113743N41	43pF
C354	2113743N42	47pF
C355	2113743A21	0.15uF, 10%
C356	2113743M08	.022uF, +80%/-20%
C357	2113743A23	0.22uF, 10%
C358	2113741A23	1200pF
C359	2109720D14	0.1uF
C360	2113743E07	.022uF, 10%
C361	2113741F49	0.1uF, 10%
C362	2113928N01	0.5pF, 0.25
C363	2311049A07	1uF, 10%; 16V
C364	2113743L39	8200 pF
C370	2113743N50	100pF
C371	Not Placed	
C372	Not Placed	
C373	Not Placed	
C374	2113743N50	100pF
C375	2113743N50	100pF
C378	Not Placed	
C380	2113743L41	.01uF, 10%
C381	2113743N25	9.1pF, 0.5
C382	2311049A59	10uF, 10%; 6V
C383	2113743N50	100pF
C384	2113743N44	56pF
C385	2113743N44	56pF
C386	2113743N50	100pF
C390	2113743N50	100pF
C391	Not Placed	
C395	2113743N50	100pF
C396	Not Placed	
C397	2311049A07	1uF, 10%; 16V
C400	2113743L41	.01uF, 10%
C401	2113743M24	0.1uF, +80%/-20%
C402	2113743M24	0.1uF, +80%/-20%
C403	2113928D08	10uF, +80%/-20%
C407	2113928N01	0.1uF, 10%
C408	2113743N50	100pF
C409	2113743M24	0.1uF, +80%/-20%
C410	2113928N01	0.1uF, 10%
C411	2113743M24	0.1uF, +80%/-20%
C414	2113743M24	0.1uF, +80%/-20%
C415	2109720D01	.01uF, 10%
C416	2113928N01	0.1uF, 10%
C419	Not Placed	
C420	2113743L41	.01uF, 10%
C421	2113928N01	0.1uF, 10%
C422	2113743M24	0.1uF, +80%/-20%
C423	2113743N50	100pF
C424	2311049A59	10uF, 10%; 6V
C425	2113743M24	0.1uF, +80%/-20%
C426	2113743N50	100pF
C427	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C428	2113743M24	0.1uF, +80%/-20%
C429	2113743M24	0.1uF, +80%/-20%
C430	2113928N01	0.1uF, 10% (LTR Models Only)
C431	2113743N50	100pF
C432	Not Placed	
C433	2113743L41	.01uF, 10%
C434	2113743M24	0.1uF, +80%/-20%
C435	2113743M24	0.1uF, +80%/-20%
C436	2113743N34	22pF
C437	2113743N34	22pF
C440	2113743G26	4.7uF, +80%/-20%
C441	2113743N50	100pF
C442	2113743E20	0.1uF, 10%
C443	2113928N01	0.1uF, 10%
C444	2113743N50	100pF
C445	2113743N50	100pF
C447	2113928N01	0.1uF, 10%
C448	2113928N01	0.1uF, 10%
C449	2113743N50	100pF
C450	2113743M24	0.1uF, +80%/-20%
C451	2113743M08	.022uF, +80%/-20%
C452	2113743G26	4.7uF, +80%/-20%
C453	2113743N50	100pF
C456	2113743N50	100pF
C458	2113743N50	100pF
C459	2113743N50	100pF
C463	2113743N50	100pF
C466	2113743N50	100pF
C467	2113928N01	0.1uF, 10%
C471	2113743N50	100pF
C472	2113743N50	100pF
C473	2113743N50	100pF
C475	2113743H14	10uF, +80%/-20%
C476	2113928D08	10uF, +80%/-20%
C479	2113928N01	0.1uF, 10%
C480	2113928D08	10uF, +80%/-20%
C481	2113928N01	0.1uF, 10%
C482	2113928N01	0.1uF, 10% (LTR Models Only)
C490	2113743N50	100pF
C491	2113743N50	100pF
C492	2113743N50	100pF
C493	2113743N50	100pF
C494	2113743N50	100pF
C495	2113743N50	100pF
C496	2113743N50	100pF
C497	2113743N50	100pF
C502	2311049A05	0.47uF, 10%; 25V
C503	2113743N50	100pF
C505	2113743N50	100pF
C511	2113743N50	100pF
C512	2113743N50	100pF
C513	2113743N50	100pF
C514	2113743N50	100pF
C520	2113743L41	.01uF, 10%
C521	2113743L41	.01uF, 10%
C522	2113743L41	.01uF, 10%

Circuit Ref	Motorola Part No.	Description
C523	2113743L41	.01uF, 10%
CR101	4880973Z02	Pin Diode
CR102	4802245J41	Pin Diode
CR105	5185963A15	Temperature Sense
CR201	4802233J09	Triple Diode
CR203	4862824C03	Varactor
CR241	4805649Q13	Dual Varactor
CR242	4862824C01	Varactor
CR243	4862824C01	Varactor
CR251	4802245J22	Varactor
CR301	4862824C01	Varactor
CR302	4862824C01	Varactor
CR303	4880154K03	Dual Common Anode-Cathode
CR304	4862824C01	Varactor
CR305	4862824C01	Varactor
CR306	4802245J42	Ring Quad Diode
CR308	4802245J41	Pin Diode
CR310	4862824C01	Varactor
CR411	4802245J47	Schottky Diode
CR412	4802245J47	Schottky Diode
CR413	4802245J47	Schottky Diode
CR440	4813833C02	Dual Diode Common Cathode
CR501	4880107R01	Rectifier
CR503	4805729G49	LED Red/Yellow
E101	2484657R01	Ferrite Bead
E400	2480640Z01	Ferrite Bead
E401	2480640Z01	Ferrite Bead
E402	2480640Z01	Ferrite Bead
E403	2480640Z01	Ferrite Bead
E404	2480640Z01	Ferrite Bead
E405	2480640Z01	Ferrite Bead
E406	2480640Z01	Ferrite Bead
E407	2480640Z01	Ferrite Bead
E408	2480640Z01	Ferrite Bead
E409	2480640Z01	Ferrite Bead
F501	6580542Z01	Fuse 3A
FL201	4802245J49	16.8 MHz Xtal Clip (not field serviceable)
FL301	4802245J43	Xtal Filter 45.1 MHz
FL401	4870368G02	Osc Xtal 38.4 kHz
H101	2680499Z01	Heat Spreader
J101	0180117S05	RF Jack Assembly
J102	0280519Z02	Antenna Nut
J400	0905505Y04	40-pins Connector
J403	0905505Y02	20-pins Connector
L101	2460591B80	19.61nH, 10%
L102	2460591B80	19.61nH, 10%
L104	2460591B80	19.61nH, 10%
L105	2462587N22	390nH, 10%
L106	2460591A11	7.66nH, 10%
L107	2460591G24	33.47nH, 10%
L108	2460591A01	4.22nH, 10%
L109	2460591B04	11.03nH, 10%
L112	2462587N22	390nH, 10%
L113	2413926H09	5.6nH, 5%
L114	2462587N22	390nH, 10%

Circuit Ref	Motorola Part No.	Description
L115	2462587N22	390nH, 10%
L116	2460591A50	9.75nH, 10%
L160	2413926H14	15.0nH, 5%
L201	2462587Q20	2.2uH, 20%
L202	2462587Q20	2.2uH, 20%
L203	2462587Q20	2.2uH, 20%
L232	2462587P25	12uH, 5%
L241	2462587V41	390nH, 10%
L242	2462587V38	220nH, 5%
L243	2460593C01	Teflon Resonator
L251	2462587V28	33nH, 5%
L253	2460593C02	Teflon Resonator
L261	2462587V29	39nH, 5%
L271	2462587V32	68nH, 5%
L273	2462587V28	33nH, 5%
L281	2462587V41	390nH, 10%
L282	2462587V41	390nH, 10%
L301	2460591C04	13.9nH, 10%
L302	2460591C04	13.9nH, 10%
L303	2462587V38	220nH, 5%
L304	2462587V37	180nH, 5%
L305	2462587V27	27nH, 5%
L306	2460591C04	13.9nH, 10%
L307	2460591C04	13.9nH, 10%
L309	2460591C16	16.28nH, 10%
L310	2462587V36	150nH, 5%
L311	2462587N65	750nH, 5%
L314	2462587N72	2.2uH, 5%
L321	Not Placed	
L325	2480646Z20	2.2uH
L330	2462587N64	680nH, 5%
L331	2480646Z20	2.2uH
L332	2462587N53	100nH, 5%
L340	2462587V41	390nH, 10%
L400	2462587Q42	390nH, 10%
L401	2462587Q42	390nH, 10%
L410	2462587Q42	390nH, 10%
L411	2462587Q42	390nH, 10%
L505	2462587Q42	390nH, 10%
P100	3905643V01	Gnd Contact Finger
PB501	4080523Z01	Tactile, Pushbutton
PB502	4080523Z01	Tactile, Pushbutton
PB503	4080523Z01	Tactile, Pushbutton
PB504	4080523Z01	Tactile, Pushbutton
PB505	4080523Z01	Tactile, Pushbutton
Q110	4802245J55	RF Power FET
Q111	4802245J50	Dual NPN/PNP
Q210	4802245J50	Dual NPN/PNP
Q241	4805218N63	NPN
Q260	4802245J50	Dual NPN/PNP
Q261	4802245J50	Dual NPN/PNP
Q301	4802245J44	NPN
Q302	4802245J44	NPN
Q310	Not Placed	
Q315	4880214G02	NPN
Q316	Not Placed	

Circuit Ref	Motorola Part No.	Description
Q320	4805218N63	NPN
Q400	4809579E18	MOSFET P-Chan
Q403	4880214G02	NPN
Q405	4802245J54	Dual NPN
Q410	4802245J54	Dual NPN
Q416	4809579E18	MOSFET P-Chan
Q417	4802245J50	Dual NPN/PNP
Q502	5180159R01	Dual NPN
Q505	4880214G02	NPN
R101	0662057A34	240
R102	0680539Z01	0.1, 1%
R103	0662057M41	43
R104	0662057M81	2K
R106	0662057M26	10
R107	Not Placed	
R108	Not Placed	
R109	0662057N30	200K
R110	0662057M61	300
R111	0662057M33	20
R112	0662057M61	300
R120	0662057M01	0
R130	0662057M98	10K
R131	0662057M98	10K
R132	0662057N39	470K
R133	Not Placed	
R161	0662057M57	200
R170	0662057A34	240
R171	0662057M92	5.6K
R172	0662057A32	200
R173	0662057N47	1MEG
R201	0662057N21	82K
R202	0662057N23	100K
R204	0662057N15	47K
R231	0662057M52	120
R232	0662057M69	620
R233	0662057M68	560
R241	0662057M32	18
R242	0662057M57	200
R243	0662057M98	10K
R244	0662057N01	12K
R245	0662057M59	240
R248	0662057M37	30
R251	0662057M32	18
R252	0662057M62	330
R253	0662057M95	7.5K
R254	0662057M95	7.5K
R255	0662057M89	4.3K
R256	0662057M37	30
R260	0662057M74	1K
R281	0662057M01	0
R300	0662057M82	2.2K
R301	0662057N23	100K
R302	0662057N23	100K
R303	0662057M74	1K
R304	0662057N01	12K
R305	0662057M67	510

Circuit Ref	Motorola Part No.	Description
R306	0662057N23	100K
R307	0662057N23	100K
R308	0662057M60	270
R309	0662057M32	18
R310	0662057M60	270
R311	0662057N10	30K
R312	0662057M83	2.4K
R313	0662057M62	330
R314	0662057M85	3K
R315	0662057N01	12K
R316	0662057A96	36K
R317	0662057M74	1K
R318	0662057A79	18K
R319	0662057A29	150
R320	0662057M88	3.9K
R321	0662057M74	1K
R322	0662057N30	200K
R324	0662057M81	2K
R325	0662057M94	6.8K
R326	Not Placed	
R327	0662057N11	33K
R328	0662057M12	2.7
R329	0662057M01	0
R330	Not Placed	
R331	Not Placed	
R332	Not Placed	
R333	Not Placed	
R334	Not Placed	
R335	Not Placed	
R336	Not Placed	
R338	Not Placed	
R339	0662057M01	0
R340	0662057M94	6.8K
R342	0662057N23	100K
R343	0662057M26	10
R344	0662057N01	12K
R345	0662057M98	10K
R346	0662057N17	56K
R347	0662057M74	1K
R348	0662057M87	3.6K
R349	0662057C01	0
R350	0662057N23	100K
R351	0662057C01	0
R352	0662057M86	3.3K
R355	0662057M01	0
R400	0662057N15	47K
R401	0662057M01	0
R402	Not Placed	
R403	Not Placed	
R405	0662057M01	0
R406	0662057N20	75K
R407	0662057N19	68K
R408	Not Placed	
R409	0662057M98	10K
R410	0662057N23	100K
R411	0662057M98	10K

Circuit Ref	Motorola Part No.	Description
R413	0662057M01	0
R414	0662057V34	180K, 1%
R415	0662057V26	91K, 1%
R416	0662057N13	39K
R418	0662057M01	0
R419	0662057M67	510
R420	0662057B46	10MEG
R421	0662057M81	2K
R423	0662057N15	47K
R424	0662057N12	36K
R425	0662057N10	30K
R426	0662057N35	330K
R427	0662057M84	2.7K
R428	0662057M10	2.2
R429	0662057M98	10K
R431	0662057N39	470K
R432	0662057N16	51K
R434	0662057M62	330 Ohm
R435	0662057M81	2K Ohm
R436	0662057M01	0
R437	Not Placed	
R445	0662057N08	24K
R446	0662057N31	220K
R447	0662057N50	1.3M
R448	0662057N33	270K
R449	0662057N08	24K
R450	0683962T45	68, 1W
R457	0662057M98	10K
R460	0662057M90	4.7K
R461	0662057M56	180
R462	0662057M98	10K
R463	0662057M61	300
R471	0662057M92	5.6K
R472	0662057M87	3.6K
R473	0662057M26	10
R475	0662057M01	0
R476	0662057N08	24K
R477	0662057M74	1K
R478	0662057M98	10K
R481	0662057N08	24K
R492	0662057M01	0
R501	0662057M70	680
R502	0662057M56	180
R505	0662057M98	10K
R506	0662057N15	47K
R507	0662057M01	0
RT300	0680590Z01	Thermistor 33K
RT301	Not Placed	
RT400	0680590Z01	Thermistor 33K
S501	4080502B03	Channel Switch
S502	1880619Z01	Volume Switch
SH100	2680507Z01	Harmonic Filter Shield
SH101	2680510Z01	PA Shield
SH201	2680511Z01	Synthesizer Top Shield
SH202	2680511Z01	Synthesizer Bottom Shield
SH241	2680513Z01	VCO Top Shield

Circuit Ref	Motorola Part No.	Description
SH242	2680514Z01	VCO Bottom Shield
SH301	2680554Z01	Rx Pre-filter shield\
SH302	2680555Z01	Rx Post-filter/RF Amp Shield
SH303	2680509Z01	Mixer Shield
SH304	2680624Z01	Mixer Diode Shield
SH321	2680508Z01	Zif 2nd LO Shield
SH322	2680514Z01	ZIF Shield
SH323	2680553Z01	Xtal Filter Shield
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	Controller On/Off Shield
SH402	2680515Z01	Controller Microprocessor Shield
SH403	2680516Z01	Controller AsficCmp/Audi PA Shield
T301	2580541Z01	Transformer Coil
T302	2580541Z01	Transformer Coil
U101	5105109Z67	LDMOS Driver
U102	5185765B01	Power Control IC
U201	5185963A27	Low Voltage FRACN IC
U210	5102463J61	Inverter
U211	5102463J61	Inverter
U241	5105750U54	VCO Buffer
U247	5105739X05	Regulator Linear
U248	5102463J58	3.3V Regulator
U301	5109632D83	Low Voltage ZIF
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC (LTR Models Only)
U405	Not Placed	
	5102463J36	RAM 32Kx8 (MPT models only)
U406	*5102463J59	ROM 256K
	*5102463J60	ROM 512Kx8 (MPT models only)
U407	*5102463J64	EEPROM 16Kx8
U409	5102226J55	Microcontroller
	5102226J56	(MPT models only)
U410	5102463J57	3.3V Reg
U420	5102463J44	Audio PA
VR300	Not Placed	
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J51	6.8V Zener
VR439	4880140L15	10V Zener
VR440	4802245J51	6.8V Zener
VR441	4802245J51	6.8V Zener
VR442	4802245J51	6.8V Zener
VR443	4802245J51	6.8V Zener
VR444	4802245J51	6.8V Zener
VR445	4802245J53	10V Zener
VR446	4802245J53	10V Zener
VR447	4802245J53	10V Zener
VR448	4802245J53	10V Zener
VR449	4802245J53	10V Zener
VR450	4802245J53	10V Zener
VR501	4813830A18	6.8V Zener
VR506	4802245J51	6.8V Zener

* Motorola Depot Servicing only

UHF (403-470 MHz) Radio Parts List (PCB # 8480450Z13)

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
C101	2113740F51	100pF
C102	2113740F22	6.2pF
C103	2113740F27	10pF
C104	2113740F22	6.2pF
C105	2113743N50	100pF
C106	2113740F19	4.7pF
C107	2113740F15	3.3pF
C108	2113743N50	100pF
C109	2113740F51	100pF
C110	2113743N50	100pF
C111	2113740F30	13pF
C112	2180605Z32	47pF
C113	2180605Z16	10pF
C114	2113743N50	100pF
C115	2113743N30	15pF
C116	2113743N38	33pF
C117	2113743N37	30pF
C118	2113743N50	100pF
C119	2113743N50	100pF
C120	NOT PLACED	GCAM DUMMY PART NUMBER
C121	2113743N50	100pF
C122	2113743N50	100pF
C123	2311049A18	10uF
C125	2113743N50	100pF
C126	2113743M24	100000pF
C127	2113743L17	1000pF
C128	2113743M08	22000pF
C129	2113743N23	7.5pF
C130	2113743N50	100pF
C131	2113743M08	22000pF
C132	2113743N50	100pF
C133	2113743L17	1000pF
C134	2113743L29	3300pF
C135	2113743M08	22000pF
C138	2113743N50	100pF
C140	NOT PLACED	
C141	NOT PLACED	
C150	2113743M08	22000pF
C151	2113743N50	100pF
C152	2113743M08	22000pF
C160	2113743N50	100pF
C161	2113743M24	100000pF
C165	2113743N50	100pF
C166	2113743N50	100pF
C169	2113743N20	5.6 pF
C170	2113743N50	100pF
C171	2113743N50	100pF
C172	2113740F51	100pF
C173	2113743M08	22000pF
C174	2113743N50	100pF
C175	2113740L25	20pF

Circuit Ref	Motorola Part No.	Description
C201	2113743N50	100pF
C202	2113743L17	1000pF
C203	2311049A56	4.7uF
C204	2104993J02	2.2uF
C206	2113740F63	330pF
C207	2113743N40	39pF
C208	NOT PLACED	
C210	2113743N50	100pF
C211	2113743N50	100pF
C212	2113743N50	100pF
C213	2113743N50	100pF
C214	2113743N50	100pF
C217	2104993J02	2.2uF
C218	2113743M24	100000pF
C219	2113743K16	0.220uF
C220	2113743N50	100pF
C223	2113743M24	100000pF
C224	2113743M24	100000pF
C228	2311049J11	4.7uF
C229	2113743L17	1000pF
C230	2113743N50	100pF
C231	2113743M24	100000pF
C232	2113743E12	0.047uF
C233	2311049A01	0.1uF
C234	2311049A05	0.47uF
C235	2104993J02	2.2uF
C238	2113741F17	470pF
C241	2113743N50	100pF
C242	2113743N23	7.5pF
C243	2113743N23	7.5pF
C244	2113740F10	2.0pF
C245	2113743N11	2.4pF
C246	2113743N50	100pF
C247	2113743N50	100pF
C248	2113743M24	100000pF
C250	2113743N23	7.5pF
C251	2113743N50	100pF
C252	2113743N26	10pF
C253	2113740F09	1.8pF
C254	2113743N15	3.6pF
C255	2113743N50	100pF
C257	2113743N50	100pF
C258	2113743L41	10000pF
C259	2113743L41	10000pF
C260	2113743N50	100pF
C263	2113743N02	0.75pF
C264	2113743N50	100pF
C265	NOT PLACED	
C271	NOT PLACED	
C272	NOT PLACED	
C273	2113743M24	100000pF
C276	2104993J02	2.2uF
C277	2113743N50	100pF
C278	2311049A57	10uF
C279	2104993J02	2.2uF
C281	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C285	2113743N50	100pF
C286	2113743M24	100000pF
C289	2113743N50	100pF
C291	2311049A69	10uF
C292	2113743M24	100000pF
C293	2113743A27	0.470uF
C294	2113743N50	100pF
C295	2113743N50	100pF
C296	2113743M24	100000pF
C297	2113743L41	10000pF
C298	2113743M24	100000pF
C301	2113743N15	3.6pF
C302	2113743N26	10pF
C303	2113740L08	3.9pF
C304	2113743N26	10pF
C305	2113743N33	20pF
C306	NOT PLACED	
C307	2113743M24	100000pF
C308	2113743N50	100pF
C309	2113743N50	100pF
C310	2113743M24	100000pF
C311	NOT PLACED	
C312	2113743N25	9.1pF
C313	2113743N26	10pF
C314	2113743M24	100000pF
C315	2113743N50	100pF
C316	2113740L08	3.9pF
C317	2113743N25	9.1pF
C318	2113743N23	7.5pF
C319	2113743N69	1.8pF
C320	2113743N23	7.5pF
C321	2113743N50	100pF
C322	2113743N48	82pF
C323	2113743N54	150pF
C324	2113743N33	20pF
C325	2113743L41	10000pF
C326	2113743L41	10000pF
C327	2113743N50	100pF
C328	2113743M24	100000pF
C329	2113743M24	100000pF
C330	2113743N26	10pF
C331	2113743N50	100pF
C333	NOT PLACED	
C334	2113743M08	22000pF
C336	2113743M24	100000pF
C337	2113743N50	100pF
C338	2113743N30	15pF
C339	2180478Z20	1uF
C340	2180478Z20	1uF
C341	2180478Z20	1uF
C342	2180478Z20	1uF
C343	2113743A23	0.220uF
C344	2113743M24	100000pF
C345	2113743M24	100000pF
C346	2113743M24	100000pF
C347	2113743M24	100000pF

Circuit Ref	Motorola Part No.	Description
C348	2113743M24	100000pF
C349	2113743E07	0.022uF
C350	2113743L05	330pF
C351	2113743N33	20pF
C352	2113743N28	12pF
C353	2113743N41	43pF
C354	2113743N42	47pF
C355	2113743A24	0.330uF
C356	2113743M08	22000pF
C357	2113743A23	0.220uF
C358	2113741A23	1200pF
C359	2109720D14	0.1uF
C360	2113743E07	0.022uF
C361	2113741F49	10nF
C362	2113743M08	22000pF
C363	2311049A40	2.2uF
C364	2113743L41	10000pF
C370	2113743N50	100pF
C371	NOT PLACED	
C372	NOT PLACED	
C373	NOT PLACED	
C374	2113743N50	100pF
C375	2113743N50	100pF
C378	NOT PLACED	
C380	2113743L41	10000pF
C381	2113743N21	6.2pF
C382	2311049A59	10uF
C383	2113743N50	100pF
C384	2113743N44	56pF
C385	2113743N44	56pF
C386	2113743N50	100pF
C390	2113743N50	100pF
C391	NOT PLACED	
C395	2113743N50	100pF
C396	NOT PLACED	
C397	2311049A05	0.47uF
C400	2113743L41	10000pF
C401	2113743M24	100000pF
C402	2113743M24	100000pF
C403	2113743G24	2.2uF
C404	NOT PLACED	
C405	NOT PLACED	
C406	NOT PLACED	
C407	2113928N01	0.1uF
C408	2113743N50	100pF
C409	2113743M24	100000pF
C410	2113928N01	0.1uF
C411	2113743M24	100000pF
C414	2113743M24	100000pF
C415	2185895Z01	0.01uF
C416	2113928N01	0.1uF
C419	NOT PLACED	
C420	2113743L41	10000pF
C421	2113928N01	0.1uF
C422	2113743M24	100000pF
C423	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C424	2311049A59	10uF
C425	2113743M24	100000pF
C426	2113743N50	100pF
C427	2113743N50	100pF
C428	2113743M24	100000pF
C429	2113743M24	100000pF
C430	2113928N01	0.1uF
C431	2113743N50	100pF
C432	NOT PLACED	
C433	2113743L41	10000pF
C434	2113928N01	0.1uF (not placed in GP328)
C435	2113743M24	100000pF
C436	2113743N34	22pF (not placed in GP328)
C437	2113743N34	22pF (not placed in GP328)
C440	2113743G26	4.7F
C441	2113743N50	100pF
C442	2113743E20	0.10uF
C443	2113928N01	0.1uF
C444	2113743N50	100pF
C445	2113743N50	100pF
C447	2113743M08	22000pF
C448	2113928N01	0.1uF
C449	2113743N50	100pF
C450	NOT PLACED	
C451	2113743M08	22000pF
C452	2113743B29	1uF
C453	2113743N50	100pF
C456	2113743N50	100pF
C458	2113743N50	100pF
C459	2113743N50	100pF
C463	2113743N50	100pF
C466	2113743N50	100pF
C467	2113928N01	0.1uF
C471	2113743N50	100pF
C472	2113743L09	470pF
C473	2113743L09	470pF
C475	2113743H14	10uF
C476	2113928D08	10uF
C479	2113928N01	0.1uF
C480	2113928D08	10uF
C481	2113928N01	0.1uF
C482	2113928N01	0.1uF
C490	2113743N50	100pF
C491	2113743N50	100pF
C492	2113743N50	100pF
C493	2113743N50	100pF
C494	2113743N50	100pF
C495	2113743N50	100pF
C496	2113743N50	100pF
C497	2113743N50	100pF
C502	2311049A05	0.47uF
C503	2113743N50	100pF
C505	2113743N50	100pF
C511	2113743N50	100pF
C512	2113743N50	100pF
C513	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C514	2113743N50	100pF
C520	2113743L41	10000pF
C521	2113743L41	10000pF
C522	2113743L41	10000pF
C523	2113743L41	10000pF
C524	2113743N50	100pF
C525	2113743N50	100pF
C526	2113743N50	100pF
C527	2113743N50	100pF
C528	2113743N50	100pF
C529	2113743N50	100pF
CR101	4880973Z02	Pin diode
CR102	4802245J41	Pin diode
CR103	4802245J41	Pin diode
CR105	5185963A15	Temperature sensor
CR160	NOT PLACED	
CR201	4802233J09	Triple diode (SOT 25)
CR203	4862824C03	Varactor
CR241	4805649Q13	Varactor
CR242	4862824C08	Varactor
CR243	4862824C08	Varactor
CR251	4802245J22	Varactor
CR301	4862824C08	Varactor
CR302	4862824C08	Varactor
CR303	4880154K03	Dual common anode-cathode diode
CR304	4862824C08	Varactor
CR305	4862824C08	Varactor
CR306	4802245J42	Ring Quad diode (SOT-143)
CR308	4802245J41	Pin diode
CR310	4862824C08	Varactor
CR411	4802245J62	Diode Schottky
CR412	4802245J62	Diode Schottky
CR413	4802245J62	Diode Schottky
CR440	4813833C02	Dual common cathode diode
CR501	4880107R01	Rectifier
CR503	4805729G49	LED Red/Yellow
E101	2484657R01	Ferrite bead
E400	2480640Z01	Ferrite bead
E401	2480640Z01	Ferrite bead
E402	2480640Z01	Ferrite bead
E403	2480640Z01	Ferrite bead
E404	2480640Z01	Ferrite bead
E405	2480640Z01	Ferrite bead
E406	2480640Z01	Ferrite bead
E407	2480640Z01	Ferrite bead
E408	2480640Z01	Ferrite bead
E409	2480640Z01	Ferrite bead
F501	6580542Z01	3A fuse
FL201	4805875Z04	16.8 MHz Xtal oscillator (not field serviceable)
FL301	4802245J43	Xtal Filter 45.1 MHz
FL401	4870368G02	Xtal Oscillator 38.4 kHz (not placed in GP328)
H101	2680499Z01	Heat spreader
J101	0985613Z01	RF Jack

Circuit Ref	Motorola Part No.	Description
J102	0280519Z02	Antenna nut
J400	0905505Y04	40-pin connector
J403	0905505Y02	20-pin connector
L101	2479990B02	19.61nH
L102	2479990B02	19.61nH
L104	2479990B02	19.61nH
L105	2462587N22	390nH
L106	2479990A02	7.66nH
L107	2479990G01	33.47nH
L108	2479990A01	4.22nH
L109	0662057C01	0
L112	2462587N45	22nH
L113	2413926H09	5.6nH
L114	2462587N45	22nH
L115	2462587N22	390nH
L116	2479990A03	9.75nH
L160	2413926H14	15nH
L201	2462587Q20	2200nH
L202	2462587Q20	2200nH
L203	2462587Q20	2200nH
L232	2462587P25	12000nH
L241	2462587V41	390nH
L242	2462587V38	220nH
L243	2460593C01	Multi-layered Teflon resonator, Rx
L251	2462587V28	33nH
L253	2460593C02	Multi-layered Teflon resonator, Tx
L261	2462587V29	39nH
L271	2462587V32	68nH
L273	2462587V28	33nH
L281	2462587V41	390nH
L282	2462587V41	390nH
L301	2479990C01	13.9nH
L302	2479990C01	13.9nH
L303	2462587V26	22nH
L304	2462587V37	180nH
L305	2462587V26	22nH
L306	2479990C01	13.9nH
L307	2479990C01	13.9nH
L309	2479990C02	16.28nH
L310	2462587V36	150nH
L311	2462587N65	750nH
L314	2462587N72	2200nH
L321	NOT PLACED	
L325	2480646Z20	2.2uH
L330	2462587N64	680nH
L331	2480646Z20	2.2uH
L332	2462587N53	100nH
L340	2462587V41	390nH
L400	2462587Q42	390nH
L401	2462587Q42	390nH
L410	2462587Q42	390nH
L411	2462587Q42	390nH
L505	2462587Q42	390nH
P100	3905643V01	Ground contact finger
PB501	4080523Z01	Tactile switch, pushbutton
PB502	4080523Z01	Tactile switch, pushbutton

Circuit Ref	Motorola Part No.	Description
PB503	4080523Z01	Tactile switch, pushbutton
PB504	4080523Z01	Tactile switch, pushbutton
PB505	4080523Z01	Tactile switch, pushbutton
Q110	4813828A09	RF PA
Q111	4802245J50	Dual NPN/PNP transistor
Q210	4802245J50	Dual NPN/PNP transistor
Q241	4805218N63	RF NPN transistor
Q260	4802245J50	Dual NPN/PNP transistor
Q261	4802245J50	Dual NPN/PNP transistor
Q301	4802245J44	NPN Transistor
Q302	4802245J44	NPN Transistor
Q310	NOT PLACED	
Q315	4880214G02	NPN
Q316	NOT PLACED	
Q320	4805218N63	RF NPN transistor
Q400	4809579E18	Mosfet P - channel
Q403	4813824A17	Bipolar Transistor, PNP
Q405	4802245J54	Dual NPN Transistor
Q410	4802245J54	Dual NPN Transistor
Q416	4809579E18	Mosfet P - channel (not placed in GP328)
Q417	4802245J50	Dual NPN/PNP transistor
Q502	5180159R01	DUAL TRANS NPNS
Q505	4880214G02	NPN
R101	0662057A34	240
R102	0680539Z01	0.1
R103	0662057M41	43
R104	0662057N15	47k
R106	0662057M26	10
R107	NOT PLACED	
R108	0662057M92	5600
R109	0662057N30	200k
R110	0662057M61	300
R111	0662057M33	20
R112	0662057M61	300
R120	0662057N14	43k
R130	0662057M98	10k
R131	0662057N05	18k
R132	0662057N33	270k
R133	NOT PLACED	
R136	0662057N47	1M
R161	0662057M57	200
R170	0662057A34	240
R171	0662057N14	43k
R172	0662057A32	200
R173	0662057N29	180k
R174	0662057N15	47k
R175	0662057B67	6.2
R176	0662057B67	6.2
R201	0662057N21	82k
R202	0662057N23	100k
R204	0662057N15	47k
R231	0662057M52	120
R232	0662057M69	620
R233	0662057M68	560
R241	0662057M32	18

Circuit Ref	Motorola Part No.	Description
R242	0662057M57	200
R243	0662057M98	10k
R244	0662057N01	12k
R245	0662057M59	240
R248	0662057M37	30
R251	0662057M32	18
R252	0662057M62	330
R253	0662057M95	7500
R254	0662057M95	7500
R255	0662057M89	4300
R256	0662057M37	30
R260	0662057M74	1000
R281	NOT PLACED	
R300	0662057M82	2200
R301	0662057N23	100k
R302	0662057N23	100k
R303	0662057M74	1000
R304	0662057N01	12k
R305	0662057M67	510
R306	0662057N23	100k
R307	0662057N23	100k
R308	0662057M60	270
R309	0662057M32	18
R310	0662057M60	270
R311	0662057N10	30k
R312	0662057M83	2400
R313	0662057M62	330
R314	0662057M85	3000
R315	0662057N01	12k
R316	0662057A96	91K
R317	0662057M74	1000
R318	0662057A79	18
R319	0662057A29	150
R320	0662057M74	1000
R321	0662057M83	2400
R322	0662057N30	200k
R324	0662057M81	2000
R325	0662057M94	6800
R326	NOT PLACED	
R327	0662057N11	33k
R328	0662057M12	2.7
R329	0662057M01	0
R330	NOT PLACED	
R331	NOT PLACED	
R332	NOT PLACED	
R333	NOT PLACED	
R334	NOT PLACED	
R335	NOT PLACED	
R336	NOT PLACED	
R338	NOT PLACED	
R339	0662057M01	0
R340	0662057M94	6800
R342	0662057N23	100k
R343	0662057M26	10
R344	0662057N01	12k
R345	0662057M98	10k

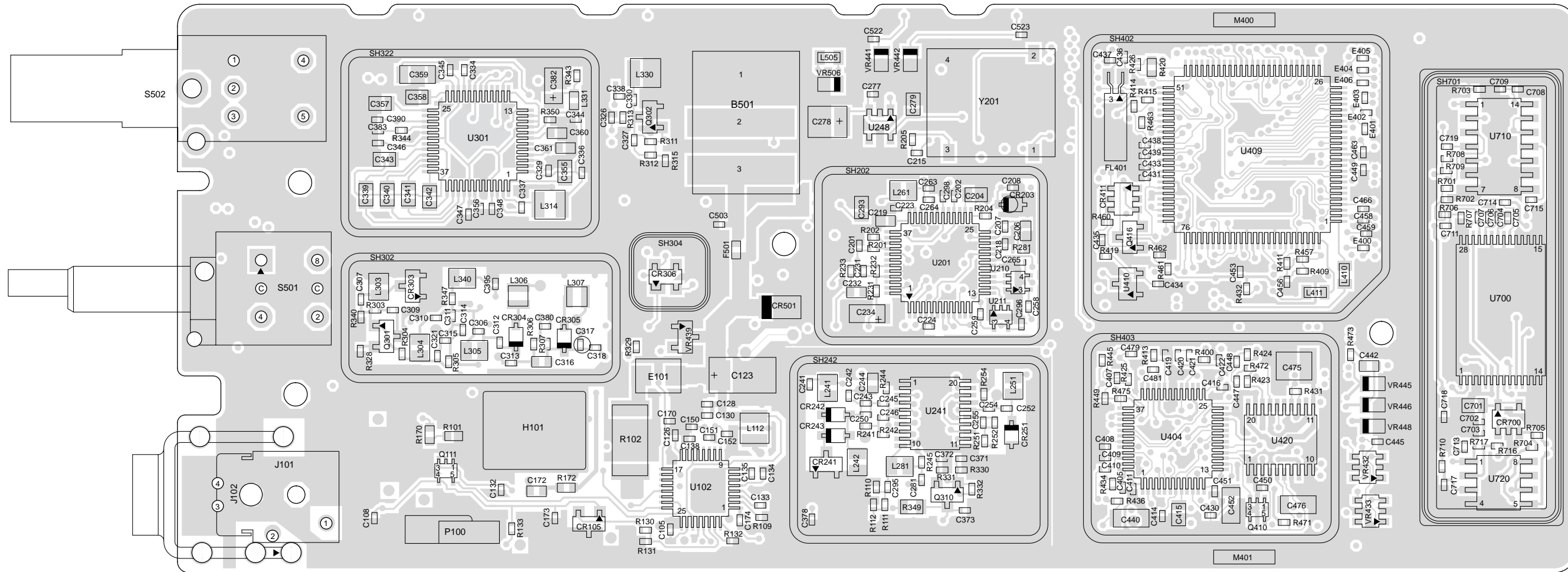
Circuit Ref	Motorola Part No.	Description
R346	0662057N17	56k
R347	0662057M74	1000
R348	0662057M87	3600
R349	0662057C01	0
R350	0662057N23	100k
R351	0662057C01	0
R352	0662057M86	3300
R355	0662057M01	0
R400	0662057N15	47k
R401	0662057M01	0
R402	NOT PLACED	
R403	NOT PLACED	
R405	0662057M01	0
R406	0662057N20	75k
R407	0662057N19	68k
R408	NOT PLACED	
R409	0662057M98	10k
R410	0662057N23	100k
R411	0662057M98	10k
R413	0662057M01	0
R414	0662057V34	180k
R415	0662057V26	91k
R416	0662057M98	10k
R418	0662057M01	0
R419	0662057M67	510
R420	0662057B46	10M (not placed in GP328)
R421	0662057M81	2000
R423	0662057N39	470k
R424	0662057N12	36k
R425	0662057N10	30k
R426	0662057N35	330k (not placed in GP328)
R427	0662057M84	2700
R428	0662057M10	2.2
R429	0662057M98	10k
R431	0662057N39	470k
R432	0662057N16	51k
R434	0662057M62	330 Ohm
R435	0662057M81	2k Ohm
R436	0662057M01	0
R445	0662057N08	24k
R447	0662057N23	100k
R448	0662057M98	10k
R449	0662057N08	24k
R450	0683962T45	68 ohms, 1W
R451	0662057N03	15k
R452	0662057N23	100k
R453	NOT PLACED	
R454	NOT PLACED	
R455	NOT PLACED	
R456	0662057M01	0
R457	0662057M98	10k
R460	0662057M90	4700
R461	0662057M56	180 (not placed in GP328)
R462	0662057M98	10k (not placed in GP328)
R463	0662057M61	300
R471	0662057N06	20k

Circuit Ref	Motorola Part No.	Description
R472	0662057N12	36k
R473	0662057M26	10
R475	0662057M01	0
R476	0662057N35	330k
R477	0662057M74	1000
R478	0662057M98	10k
R481	0662057N08	24k
R492	0662057M01	0
R498	0662057M98	10k
R499	0662057M98	10k (not placed in GP328)
R501	0662057M70	680
R502	0662057M56	180
R505	0662057M98	10k
R506	0662057N15	47k
R507	0662057M01	0
RT300	0680590Z01	THERMISTOR_33K
RT301	NOT PLACED	
RT400	0680590Z01	THERMISTOR_33K
S501	4080710Z01	Frequency switch
S502	1880619Z02	Volume/on-off switch
SH100	2680507Z01	Harmonic Filter shield
SH101	2680510Z01	RF PA shield
SH201	2680511Z01	Synthesizer top shield
SH202	2680511Z01	Synthesizer bottom shield
SH241	2680513Z01	Resonators shield
SH242	2680514Z01	VCO Buffer IC shield
SH301	2680554Z01	Receiver front end shield
SH302	2680555Z01	Receiver front end bottom shield
SH303	2680509Z01	Mixer shield
SH304	2680624Z01	Mixer diode shield
SH321	2680508Z01	LVZIF 2nd LO shield
SH322	2680514Z01	LVZIF shield
SH323	2680553Z01	Crystal Filter shield
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	Controller on-off shield
SH402	2680515Z01	Microprocessor shield
SH403	2680516Z01	Asfic_Cmp/Audio PA shield
T301	2580541Z01	Balun transformer
T302	2580541Z01	Balun transformer
U101	5185130C65	VHF/UHF/800 MHZ LDMOS DRIVER
U102	5185765B28	PCIC
U201	5185963A27	LVFRACN Synthesizer IC
U210	5102463J61	Inverter
U211	5102463J61	Inverter
U241	5105750U54	VCO BUFFER IC
U247	5105739X05	SOT 5V Regulator
U248	5102463J58	3.3V Regulator
U301	5109632D83	LVZIF IC
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC_CMP IC
U405	NOT PLACED	
U406	*5102463J59	Flash ROM 128K x 8
U407	*5102463J64	16K x 8 EEPROM
U409	5102226J56	Microprocessor

Circuit Ref	Motorola Part No.	Description
U410	5102463J57	3.3V Regulator (not placed in GP328)
U420	5102463J44	Audio PA
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J73	ZENER DIODE-6.8V
VR439	4880140L17	Zener diode-12V
VR440	4802245J73	ZENER DIODE-6.8V
VR441	4802245J73	ZENER DIODE-6.8V
VR442	4802245J73	ZENER DIODE-6.8V
VR443	4802245J73	ZENER DIODE-6.8V
VR444	4802245J73	ZENER DIODE-6.8V
VR445	4802245J53	ZENER DIODE-10V
VR446	4802245J74	ZENER DIODE-10V
VR447	4802245J74	ZENER DIODE-10V
VR448	4802245J74	ZENER DIODE-10V
VR449	4802245J74	ZENER DIODE-10V
VR450	4802245J75	ZENER DIODE-12V
VR460	4802245J73	ZENER DIODE-6.8V
VR501	4813830A18	6.8V Zener
VR506	4802245J73	ZENER DIODE-6.8V
	1485777Z01	INSULATOR (KAPTON)
	8480450Z13	UHF B1 main PC board

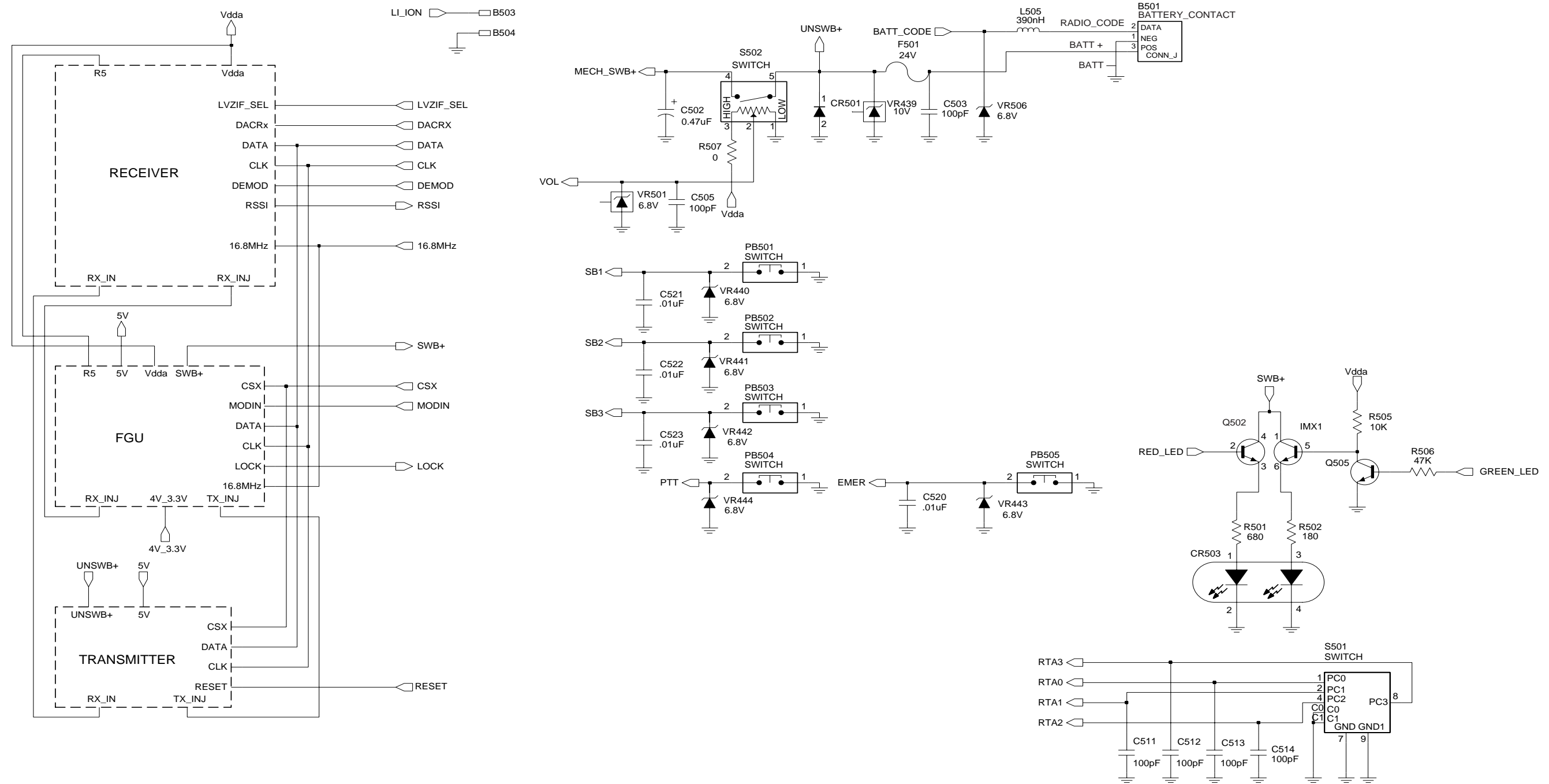
* Motorola Depot Servicing only

VIEWED FROM SIDE 2



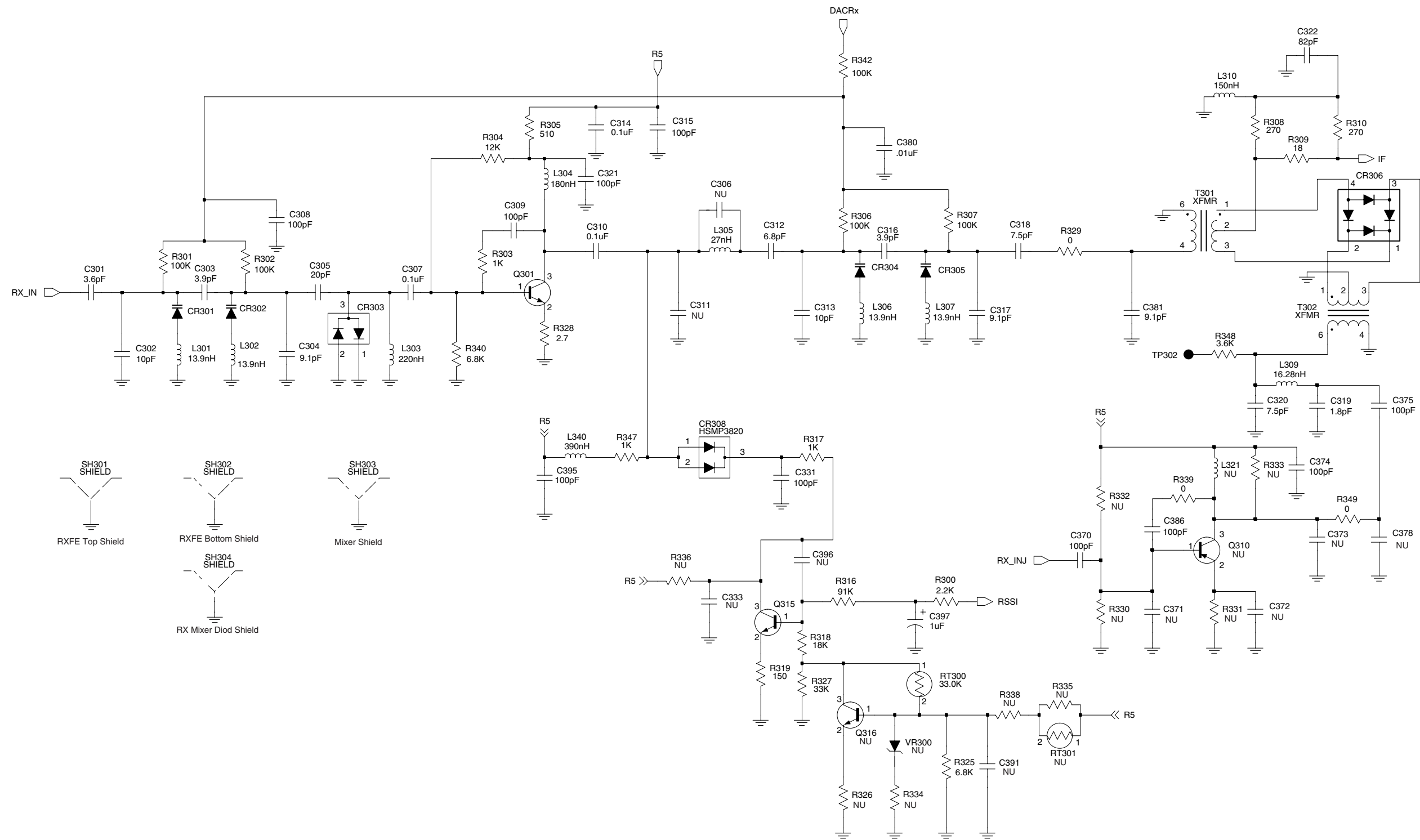
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Figure 4-28: UHF (403-470 MHz) 9000 Series Main Board Bottom Side PCB



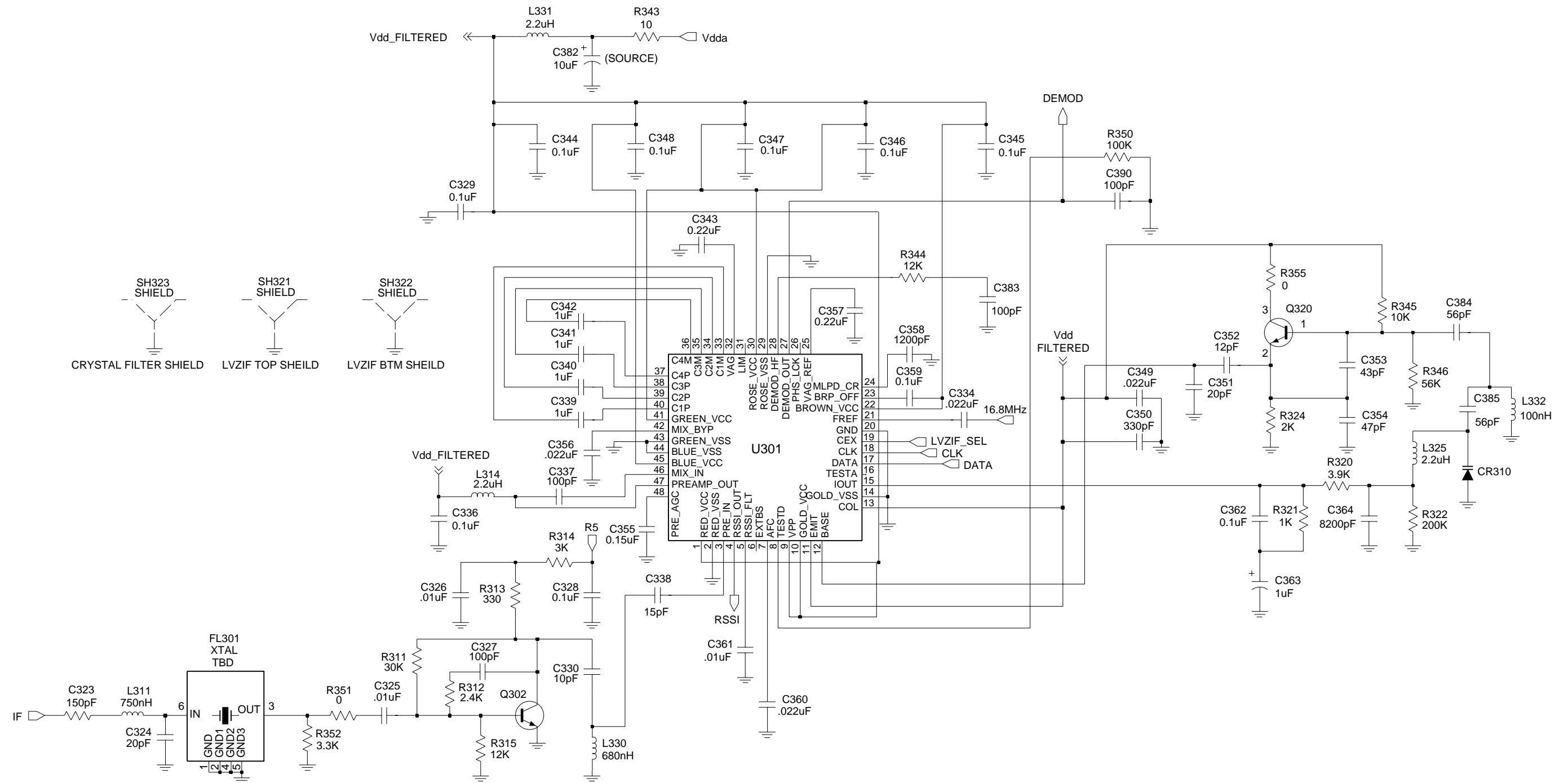
FL08307410

Figure 4-29: UHF (403-470 MHz) Controls and Switches Schematic Diagram



FL08307420

Figure 4-30: UHF (403-470 MHz) Receiver Front End Schematic Diagram



FL08307430

Figure 4-31: UHF (403-470 MHz) Receiver Back End Schematic Diagram

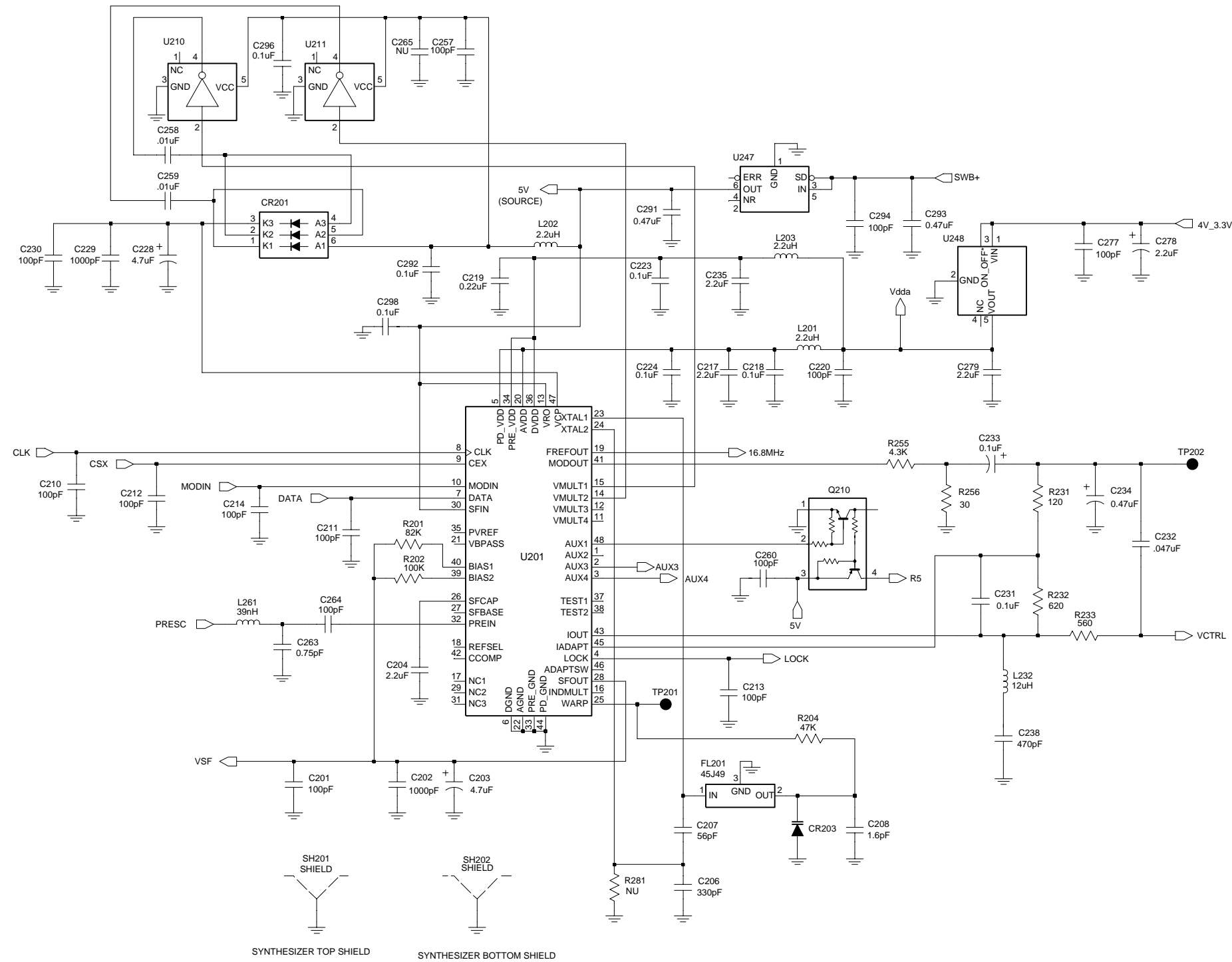
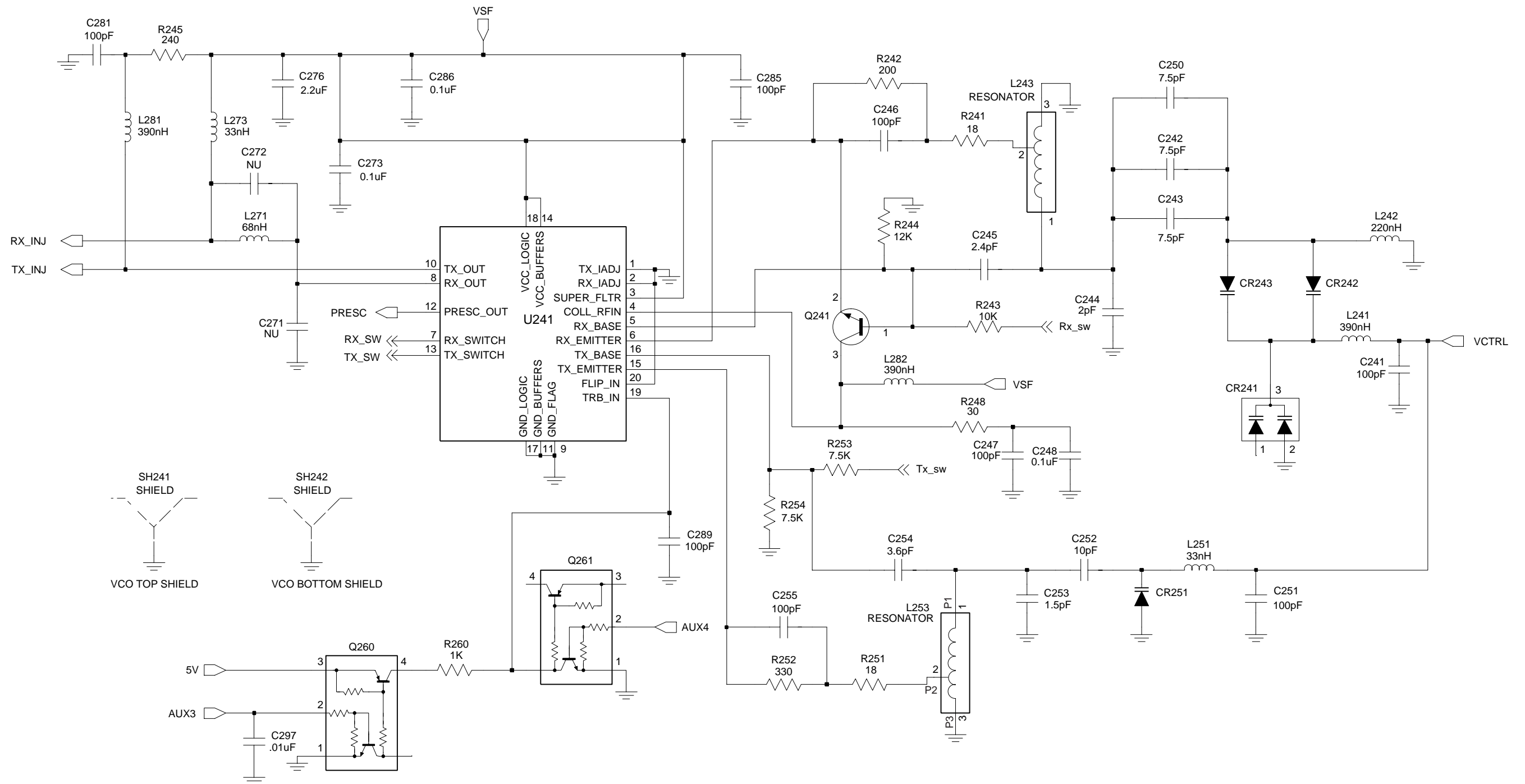


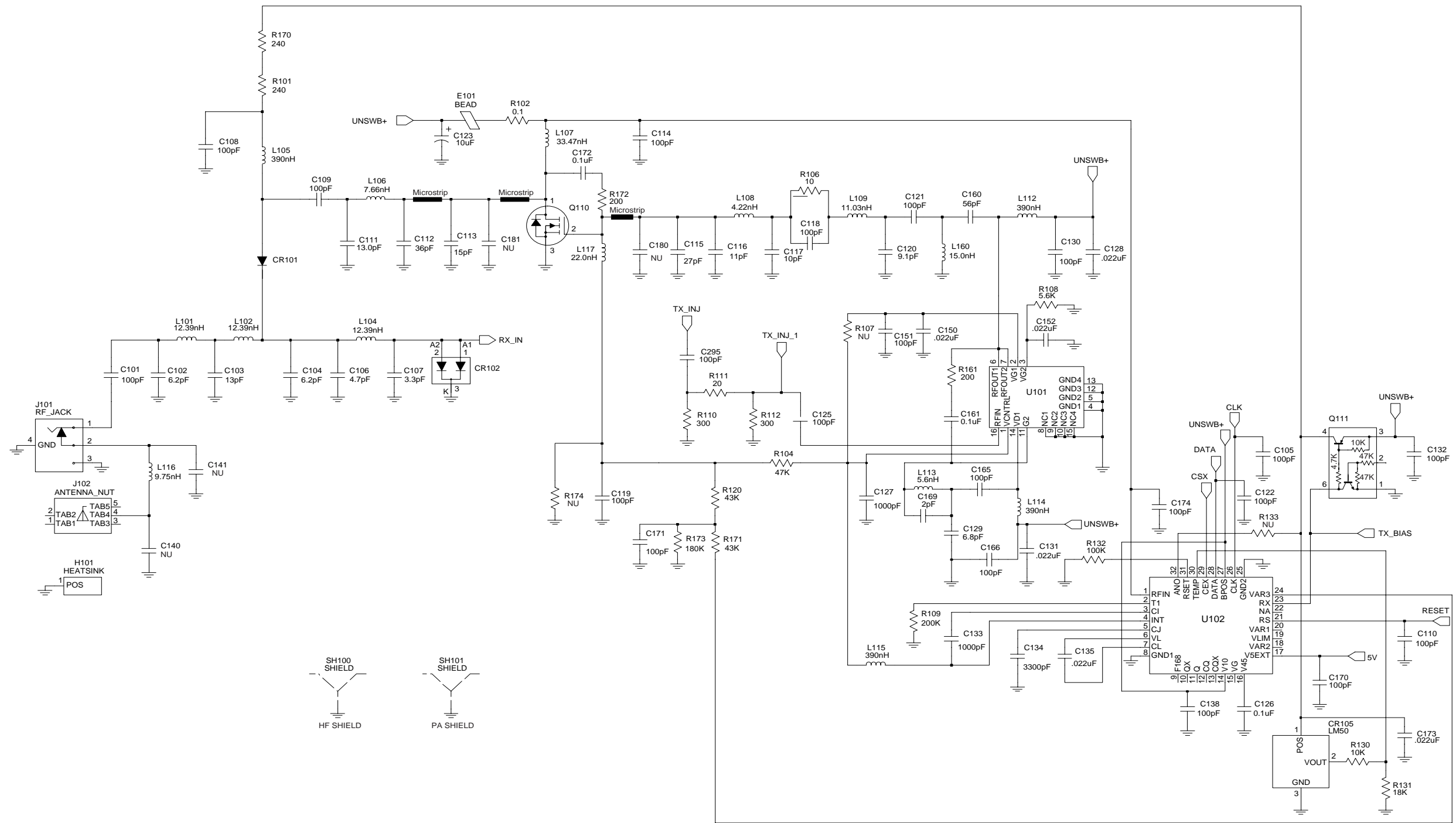
Figure 4-32: UHF (403-470 MHz) Synthesizer Schematic Diagram

FL08307440



FL08307450

Figure 4-33: UHF (403-470 MHz) Voltage Controlled Oscillator Schematic Diagram



FL08307460

Figure 4-34: UHF (403-470 MHz) Transmitter Schematic Diagram

UHF (403-470 MHz) 9000 Series Radio Parts List

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
C101	2113740F51	100pF
C102	2113740F22	6.2pF, 0.1
C103	2113740F27	10pF
C104	2113740F22	6.2pF, 0.1
C105	2113743N50	100pF
C106	2113740F19	4.7pF, 0.1
C107	2113740F15	3.3pF, 0.1
C108	2113743N50	100pF
C109	2113740F51	100pF
C110	2113743N50	100pF
C111	2113740F30	13pF
C112	2180605Z32	47pF
C113	2180605Z16	10pF
C114	2113743N50	100pF
C115	2113743N30	15pF
C116	2113743N38	33pF
C117	2113743N37	30pF
C118	2113743N50	100pF
C119	2113743N50	100pF
C120	2113743N26	10pF
C121	2113743N50	100pF
C122	2113743N50	100pF
C123	2311049A18	10uF, 10%; 16V
C125	2113743N50	100pF
C126	2113743M24	0.1uF, +80%/-20%
C127	2113743L17	1000pF, 10%
C128	2113743M08	.022uF, +80%/-20%
C129	2113743N23	7.5pF, 0.5
C130	2113743N50	100pF
C131	2113743M08	.022uF, +80%/-20%
C132	2113743N50	100pF
C133	2113743L17	1000pF, 10%
C134	2113743L29	3300pF, 10%
C135	2113743M08	.022uF, +80%/-20%
C138	2113743N50	100pF
C140	Not Placed	
C141	Not Placed	
C150	2113743M08	.022uF, +80%/-20%
C151	2113743N50	100pF
C152	2113743M08	.022uF, +80%/-20%
C160	2113743N50	100pF
C161	2113743M24	0.1uF, +80%/-20%
C165	2113743N50	100pF
C166	2113743N50	100pF
C169	2113743N16	3.9pF, 0.25
C170	2113743N50	100pF
C171	2113743N50	100pF
C172	2113743E20	0.1uF, 10%
C173	2113743M08	.022uF, +80%/-20%

Circuit Ref	Motorola Part No.	Description
C174	2113743N50	100pF
C201	2113743N50	100pF
C202	2113743L17	1000pF, 10%
C203	2311049A56	4.7uF, 20%; 10V
C204	2104993J02	2.2uF
C206	2113740F63	330pF
C207	2113743N44	56pF
C208	2113743N08	1.6pF
C210	2113743N50	100pF
C211	2113743N50	100pF
C212	2113743N50	100pF
C213	2113743N50	100pF
C214	2113743N50	100pF
C217	2104993J02	2.2uF
C218	2113743M24	0.1uF, +80%/-20%
C219	2113743K16	0.22uF, +80%/-20%
C220	2113743N50	100pF
C223	2113743M24	0.1uF, +80%/-20%
C224	2113743M24	0.1uF, +80%/-20%
C228	2311049J11	4.7uF, 10%; 16V
C229	2113743L17	1000pF, 10%
C230	2113743N50	100pF
C231	2113743M24	0.1uF, +80%/-20%
C232	2113743E12	.047uF, 10%
C233	2311049A01	0.1uF, 10%; 35V
C234	2311049A05	0.47uF, 10%; 25V
C235	2104993J02	2.2uF
C238	2113741F17	470pF
C241	2113743N50	100pF
C242	2113743N23	7.5pF, 0.5
C243	2113743N23	7.5pF, 0.5
C244	2113740F10	2pF, 0.25
C245	2113743N11	2.4pF, 0.25
C246	2113743N50	100pF
C247	2113743N50	100pF
C248	2113743M24	0.1uF, +80%/-20%
C250	2113743N23	7.5pF, 0.5
C251	2113743N50	100pF
C252	2113743N26	10pF
C253	2113740F07	1.5pF, 0.25
C254	2113743N15	3.6pF, 0.25
C255	2113743N50	100pF
C257	2113743N50	100pF
C258	2113743L41	.01uF, 10%
C259	2113743L41	.01uF, 10%
C260	2113743N50	100pF
C263	2113743N02	0.75pF, 0.25
C264	2113743N50	100pF
C265	Not Placed	
C271	Not Placed	
C272	Not Placed	
C273	2113743M24	0.1uF, +80%/-20%
C276	2104993J02	2.2uF
C277	2113743N50	100pF
C278	2311049A09	2.2uF, 10%; 20V

Circuit Ref	Motorola Part No.	Description
C279	2104993J02	2.2uF
C281	2113743N50	100pF
C285	2113743N50	100pF
C286	2113743M24	0.1uF, +80%/-20%
C289	2113743N50	100pF
C291	2113743A27	0.47uF, 10%
C292	2113743M24	0.1uF, +80%/-20%
C293	2113743A27	0.47uF, 10%
C294	2113743N50	100pF
C295	2113743N50	100pF
C296	2113743M24	0.1uF, +80%/-20%
C297	2113743L41	.01uF, 10%
C298	2113743M24	0.1uF, +80%/-20%
C301	2113743N15	3.6pF, 0.25
C302	2113743N26	10pF
C303	2113740L08	3.9pF, 0.1
C304	2113743N25	9.1pF, 0.5
C305	2113743N33	20pF
C306	Not Placed	
C307	2113743M24	0.1uF, +80%/-20%
C308	2113743N50	100pF
C309	2113743N50	100pF
C310	2113743M24	0.1uF, +80%/-20%
C311	Not Placed	
C312	2113743N22	6.8pF, 0.5
C313	2113743N26	10pF
C314	2113743M24	0.1uF, +80%/-20%
C315	2113743N50	100pF
C316	2113740L08	3.9pF, 0.1
C317	2113743N25	9.1pF, 0.5
C318	2113743N23	7.5pF, 0.5
C319	2113743N69	1.8pF, 0.5
C320	2113743N23	7.5pF, 0.5
C321	2113743N50	100pF
C322	2113743N48	82pF
C323	2113743N54	150pF
C324	2113743N33	20pF
C325	2113743L41	.01uF, 10%
C326	2113743L41	.01uF, 10%
C327	2113743N50	100pF
C328	2113743M24	0.1uF, +80%/-20%
C329	2113743M24	0.1uF, +80%/-20%
C330	2113743N26	10pF
C331	2113743N50	100pF
C333	Not Placed	
C334	2113743M08	.022uF, +80%/-20%
C336	2113743M24	0.1uF, +80%/-20%
C337	2113743N50	100pF
C338	2113743N30	15pF
C339	2180478Z20	1.0uF, 10%
C340	2180478Z20	1.0uF, 10%
C341	2180478Z20	1.0uF, 10%
C342	2180478Z20	1.0uF, 10%
C343	2113743A23	0.22uF, 10%
C344	2113743M24	0.1uF, +80%/-20%

Circuit Ref	Motorola Part No.	Description
C345	2113743M24	0.1uF, +80%/-20%
C346	2113743M24	0.1uF, +80%/-20%
C347	2113743M24	0.1uF, +80%/-20%
C348	2113743M24	0.1uF, +80%/-20%
C349	2113743E07	.022uF, 10%
C350	2113743L05	330pF, 10%
C351	2113743N33	20pF
C352	2113743N28	12pF
C353	2113743N41	43pF
C354	2113743N42	47pF
C355	2113743A21	0.15uF, 10%
C356	2113743M08	.022uF, +80%/-20%
C357	2113743A23	0.22uF, 10%
C358	2113741A23	1200pF
C359	2109720D14	0.1uF
C360	2113743E07	.022uF, 10%
C361	2113741F49	0.1uF, 10%
C362	2113928N01	0.5pF, 0.25
C363	2311049A07	1uF, 10%; 16V
C364	2113743L39	8200 pF
C370	2113743N50	100pF
C371	Not Placed	
C372	Not Placed	
C373	Not Placed	
C374	2113743N50	100pF
C375	2113743N50	100pF
C378	Not Placed	
C380	2113743L41	.01uF, 10%
C381	2113743N25	9.1pF, 0.5
C382	2311049A59	10uF, 10%; 6V
C383	2113743N50	100pF
C384	2113743N44	56pF
C385	2113743N44	56pF
C386	2113743N50	100pF
C390	2113743N50	100pF
C391	Not Placed	
C395	2113743N50	100pF
C396	Not Placed	
C397	2311049A07	1uF, 10%; 16V
C400	2113743L41	.01uF, 10%
C401	2113743M24	0.1uF, +80%/-20%
C402	2113743M24	0.1uF, +80%/-20%
C403	2113928D08	10uF, +80%/-20%
C407	2113928N01	0.1uF, 10%
C408	2113743N50	100pF
C409	2113743M24	0.1uF, +80%/-20%
C410	2113928N01	0.1uF, 10%
C411	2113743M24	0.1uF, +80%/-20%
C414	2113743M24	0.1uF, +80%/-20%
C415	2109720D01	.01uF, 10%
C416	2113928N01	0.1uF, 10%
C419	Not Placed	
C420	2113743L41	.01uF, 10%
C421	2113928N01	0.1uF, 10%
C422	2113743M24	0.1uF, +80%/-20%

Circuit Ref	Motorola Part No.	Description
C423	2113743N50	100pF
C424	2311049A59	10uF, 10%; 6V
C425	2113743M24	0.1uF, +80%/-20%
C426	2113743N50	100pF
C427	2113743N50	100pF
C428	2113743M24	0.1uF, +80%/-20%
C429	2113743M24	0.1uF, +80%/-20%
C430	2113928N01	0.1uF, 10%
C431	2113743N50	100pF
C432	Not Placed	
C433	2113743L41	.01uF, 10%
C434	2113743M24	0.1uF, +80%/-20%
C435	2113743M24	0.1uF, +80%/-20%
C436	2113743N34	22pF
C437	2113743N34	22pF
C440	2113743G26	4.7uF, +80%/-20%
C441	2113743N50	100pF
C442	2113743E20	0.1uF, 10%
C443	2113928N01	0.1uF, 10%
C444	2113743N50	100pF
C445	2113743N50	100pF
C447	2113928N01	0.1uF, 10%
C448	2113928N01	0.1uF, 10%
C449	2113743N50	100pF
C450	2113743M24	0.1uF, +80%/-20%
C451	2113743M08	.022uF, +80%/-20%
C452	2113743G26	4.7uF, +80%/-20%
C453	2113743N50	100pF
C456	2113743N50	100pF
C458	2113743N50	100pF
C459	2113743N50	100pF
C463	2113743N50	100pF
C466	2113743N50	100pF
C467	2113928N01	0.1uF, 10%
C471	2113743N50	100pF
C472	2113743N50	100pF
C473	2113743N50	100pF
C475	2113743H14	10uF, +80%/-20%
C476	2113928D08	10uF, +80%/-20%
C479	2113928N01	0.1uF, 10%
C480	2113928D08	10uF, +80%/-20%
C481	2113928N01	0.1uF, 10%
C482	2113928N01	0.1uF, 10%
C490	2113743N50	100pF
C491	2113743N50	100pF
C492	2113743N50	100pF
C493	2113743N50	100pF
C494	2113743N50	100pF
C495	2113743N50	100pF
C496	2113743N50	100pF
C497	2113743N50	100pF
C502	2311049A05	0.47uF, 10%; 25V
C503	2113743N50	100pF
C505	2113743N50	100pF
C511	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C512	2113743N50	100pF
C513	2113743N50	100pF
C514	2113743N50	100pF
C520	2113743L41	.01uF, 10%
C521	2113743L41	.01uF, 10%
C522	2113743L41	.01uF, 10%
C523	2113743L41	.01uF, 10%
CR101	4880973Z02	Pin Diode
CR102	4802245J41	Pin Diode
CR105	5185963A15	Temperature Sense
CR201	4802233J09	Triple Diode
CR203	4862824C03	Varactor
CR241	4805649Q13	Dual Varactor
CR242	4862824C01	Varactor
CR243	4862824C01	Varactor
CR251	4802245J22	Varactor
CR301	4862824C01	Varactor
CR302	4862824C01	Varactor
CR303	4880154K03	Dual Common Anode-Cathode
CR304	4862824C01	Varactor
CR305	4862824C01	Varactor
CR306	4802245J42	Ring Quad Diode
CR308	4802245J41	Pin Diode
CR310	4862824C01	Varactor
CR411	4802245J47	Schottky Diode
CR412	4802245J47	Schottky Diode
CR413	4802245J47	Schottky Diode
CR440	4813833C02	Dual Diode Common Cathode
CR501	4880107R01	Rectifier
CR503	4805729G49	LED Red/Yellow
E101	2484657R01	Ferrite Bead
E400	2480640Z01	Ferrite Bead
E401	2480640Z01	Ferrite Bead
E402	2480640Z01	Ferrite Bead
E403	2480640Z01	Ferrite Bead
E404	2480640Z01	Ferrite Bead
E405	2480640Z01	Ferrite Bead
E406	2480640Z01	Ferrite Bead
E407	2480640Z01	Ferrite Bead
E408	2480640Z01	Ferrite Bead
E409	2480640Z01	Ferrite Bead
F501	6580542Z01	Fuse 3A
FL201	4802245J49	16.8 MHz Xtal Clip (not field serviceable)
FL301	4802245J43	Xtal Filter 45.1 MHz
FL401	4870368G02	Osc Xtal 38.4 kHz
H101	2680499Z01	Heat Spreader
J101	0180117S05	RF Jack Assembly
J102	0280519Z02	Antenna Nut
J400	0905505Y04	40-pins Connector
J403	0905505Y02	20-pins Connector
L101	2460591B80	19.61nH, 10%
L102	2460591B80	19.61nH, 10%
L104	2460591B80	19.61nH, 10%
L105	2462587N22	390nH, 10%

Circuit Ref	Motorola Part No.	Description
L106	2460591A11	7.66nH, 10%
L107	2460591G24	33.47nH, 10%
L108	2460591A01	4.22nH, 10%
L109	2460591B04	11.03nH, 10%
L112	2462587N22	390nH, 10%
L113	2413926H09	5.6nH, 5%
L114	2462587N22	390nH, 10%
L115	2462587N22	390nH, 10%
L116	2460591A50	9.75nH, 10%
L160	2413926H14	15.0nH, 5%
L201	2462587Q20	2.2uH, 20%
L202	2462587Q20	2.2uH, 20%
L203	2462587Q20	2.2uH, 20%
L232	2462587P25	12uH, 5%
L241	2462587V41	390nH, 10%
L242	2462587V38	220nH, 5%
L243	2460593C01	Teflon Resonator
L251	2462587V28	33nH, 5%
L253	2460593C02	Teflon Resonator
L261	2462587V29	39nH, 5%
L271	2462587V32	68nH, 5%
L273	2462587V28	33nH, 5%
L281	2462587V41	390nH, 10%
L282	2462587V41	390nH, 10%
L301	2460591C04	13.9nH, 10%
L302	2460591C04	13.9nH, 10%
L303	2462587V38	220nH, 5%
L304	2462587V37	180nH, 5%
L305	2462587V27	27nH, 5%
L306	2460591C04	13.9nH, 10%
L307	2460591C04	13.9nH, 10%
L309	2460591C16	16.28nH, 10%
L310	2462587V36	150nH, 5%
L311	2462587N65	750nH, 5%
L314	2462587N72	2.2uH, 5%
L321	Not Placed	
L325	2480646Z20	2.2uH
L330	2462587N64	680nH, 5%
L331	2480646Z20	2.2uH
L332	2462587N53	100nH, 5%
L340	2462587V41	390nH, 10%
L400	2462587Q42	390nH, 10%
L401	2462587Q42	390nH, 10%
L410	2462587Q42	390nH, 10%
L411	2462587Q42	390nH, 10%
L505	2462587Q42	390nH, 10%
P100	3905643V01	Gnd Contact Finger
PB501	4080523Z01	Tactile, Pushbutton
PB502	4080523Z01	Tactile, Pushbutton
PB503	4080523Z01	Tactile, Pushbutton
PB504	4080523Z01	Tactile, Pushbutton
PB505	4080523Z01	Tactile, Pushbutton
Q110	4802245J55	RF Power FET
Q111	4802245J50	Dual NPN/PNP
Q210	4802245J50	Dual NPN/PNP

Circuit Ref	Motorola Part No.	Description
Q241	4805218N63	NPN
Q260	4802245J50	Dual NPN/PNP
Q261	4802245J50	Dual NPN/PNP
Q301	4802245J44	NPN
Q302	4802245J44	NPN
Q310	Not Placed	
Q315	4880214G02	NPN
Q316	Not Placed	
Q320	4805218N63	NPN
Q400	4809579E18	MOSFET P-Chan
Q403	4880214G02	NPN
Q405	4802245J54	Dual NPN
Q410	4802245J54	Dual NPN
Q416	4809579E18	MOSFET P-Chan
Q417	4802245J50	Dual NPN/PNP
Q502	5180159R01	Dual NPN
Q505	4880214G02	NPN
R101	0662057A34	240
R102	0680539Z01	0.1, 1%
R103	0662057M41	43
R104	0662057M81	2K
R106	0662057M26	10
R107	Not Placed	
R108	Not Placed	
R109	0662057N30	200K
R110	0662057M61	300
R111	0662057M33	20
R112	0662057M61	300
R120	0662057M01	0
R130	0662057M98	10K
R131	0662057M98	10K
R132	0662057N39	470K
R133	Not Placed	
R161	0662057M57	200
R170	0662057A34	240
R171	0662057M92	5.6K
R172	0662057A32	200
R173	0662057N47	1MEG
R201	0662057N21	82K
R202	0662057N23	100K
R204	0662057N15	47K
R231	0662057M52	120
R232	0662057M69	620
R233	0662057M68	560
R241	0662057M32	18
R242	0662057M57	200
R243	0662057M98	10K
R244	0662057N01	12K
R245	0662057M59	240
R248	0662057M37	30
R251	0662057M32	18
R252	0662057M62	330
R253	0662057M95	7.5K
R254	0662057M95	7.5K
R255	0662057M89	4.3K

Circuit Ref	Motorola Part No.	Description
R256	0662057M37	30
R260	0662057M74	1K
R281	0662057M01	0
R300	0662057M82	2.2K
R301	0662057N23	100K
R302	0662057N23	100K
R303	0662057M74	1K
R304	0662057N01	12K
R305	0662057M67	510
R306	0662057N23	100K
R307	0662057N23	100K
R308	0662057M60	270
R309	0662057M32	18
R310	0662057M60	270
R311	0662057N10	30K
R312	0662057M83	2.4K
R313	0662057M62	330
R314	0662057M85	3K
R315	0662057N01	12K
R316	0662057A96	36K
R317	0662057M74	1K
R318	0662057A79	18K
R319	0662057A29	150
R320	0662057M88	3.9K
R321	0662057M74	1K
R322	0662057N30	200K
R324	0662057M81	2K
R325	0662057M94	6.8K
R326	Not Placed	
R327	0662057N11	33K
R328	0662057M12	2.7
R329	0662057M01	0
R330	Not Placed	
R331	Not Placed	
R332	Not Placed	
R333	Not Placed	
R334	Not Placed	
R335	Not Placed	
R336	Not Placed	
R338	Not Placed	
R339	0662057M01	0
R340	0662057M94	6.8K
R342	0662057N23	100K
R343	0662057M26	10
R344	0662057N01	12K
R345	0662057M98	10K
R346	0662057N17	56K
R347	0662057M74	1K
R348	0662057M87	3.6K
R349	0662057C01	0
R350	0662057N23	100K
R351	0662057C01	0
R352	0662057M86	3.3K
R355	0662057M01	0
R400	0662057N15	47K

Circuit Ref	Motorola Part No.	Description
R401	0662057M01	0
R402	Not Placed	
R403	Not Placed	
R405	0662057M01	0
R406	0662057N20	75K
R407	0662057N19	68K
R408	Not Placed	
R409	0662057M98	10K
R410	0662057N23	100K
R411	0662057M98	10K
R413	0662057M01	0
R414	0662057V34	180K, 1%
R415	0662057V26	91K, 1%
R416	0662057N13	39K
R418	0662057M01	0
R419	0662057M67	510
R420	0662057B46	10MEG
R421	0662057M81	2K
R423	0662057N15	47K
R424	0662057N12	36K
R425	0662057N10	30K
R426	0662057N35	330K
R427	0662057M84	2.7K
R428	0662057M10	2.2
R429	0662057M98	10K
R431	0662057N39	470K
R432	0662057N16	51K
R434	0662057M93	6.2K
R435	0662057M81	2K
R436	0662057M01	0
R437	Not Placed	
R445	0662057N08	24K
R446	0662057N31	220K
R447	0662057N50	1.3M
R448	0662057N33	270K
R449	0662057N08	24K
R450	0683962T45	68, 1W
R457	0662057M98	10K
R460	0662057M90	4.7K
R461	0662057M56	180
R462	0662057M98	10K
R463	0662057M61	300
R471	0662057M92	5.6K
R472	0662057M87	3.6K
R473	0662057M26	10
R475	0662057M01	0
R476	0662057N08	24K
R477	0662057M74	1K
R478	0662057M98	10K
R481	0662057N08	24K
R492	0662057M01	0
R501	0662057M70	680
R502	0662057M56	180
R505	0662057M98	10K
R506	0662057N15	47K

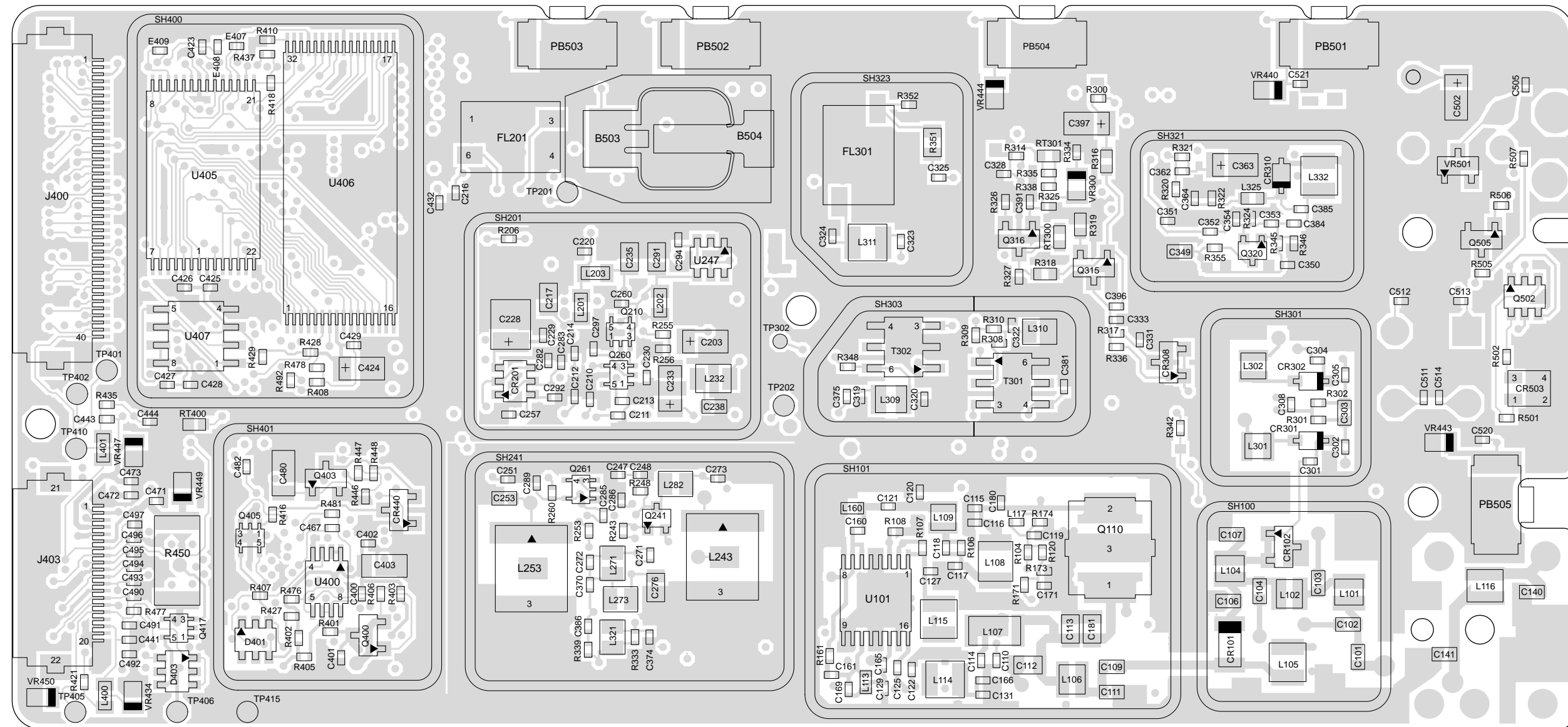
Circuit Ref	Motorola Part No.	Description
R507	0662057M01	0
RT300	0680590Z01	Thermistor 33K
RT301	Not Placed	
RT400	0680590Z01	Thermistor 33K
S501	4080502B03	Channel Switch
S502	1880619Z01	Volume Switch
SH100	2680507Z01	Harmonic Filter Shield
SH101	2680510Z01	PA Shield
SH201	2680511Z01	Synthesizer Top Shield
SH202	2680511Z01	Synthesizer Bottom Shield
SH241	2680513Z01	VCO Top Shield
SH242	2680514Z01	VCO Bottom Shield
SH301	2680554Z01	Rx Pre-filter shield\
SH302	2680555Z01	Rx Post-filter/RF Amp Shield
SH303	2680509Z01	Mixer Shield
SH304	2680624Z01	Mixer Diode Shield
SH321	2680508Z01	Zif 2nd LO Shield
SH322	2680514Z01	ZIF Shield
SH323	2680553Z01	Xtal Filter Shield
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	Controller On/Off Shield
SH402	2680515Z01	Controller Microprocessor Shield
SH403	2680516Z01	Controller AsficCmp/Audi PA Shield
T301	2580541Z01	Transformer Coil
T302	2580541Z01	Transformer Coil
U101	5105109Z67	LDMOS Driver
U102	5185765B01	Power Control IC
U201	5185963A27	Low Voltage FRACN IC
U210	5102463J61	Inverter
U211	5102463J61	Inverter
U241	5105750U54	VCO Buffer
U247	5105739X05	Regulator Linear
U248	5102463J58	3.3V Regulator
U301	5109632D83	Low Voltage ZIF
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC
U405	Not Placed	
U406	*5102463J59	ROM 256K
U407	*5102463J64	EEPROM 16Kx8
U409	5102226J55	Microcontroller
U410	5102463J57	3.3V Reg
U420	5102463J44	Audio PA
VR300	Not Placed	
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J51	6.8V Zener
VR439	4880140L15	10V Zener
VR440	4802245J51	6.8V Zener
VR441	4802245J51	6.8V Zener
VR442	4802245J51	6.8V Zener
VR443	4802245J51	6.8V Zener
VR444	4802245J51	6.8V Zener
VR445	4802245J53	10V Zener
VR446	4802245J53	10V Zener
VR447	4802245J53	10V Zener

Circuit Ref	Motorola Part No.	Description
VR448	4802245J53	10V Zener
VR449	4802245J53	10V Zener
VR450	4802245J53	10V Zener
VR501	4813830A18	6.8V Zener
VR506	4802245J51	6.8V Zener

* Motorola Depot Servicing only

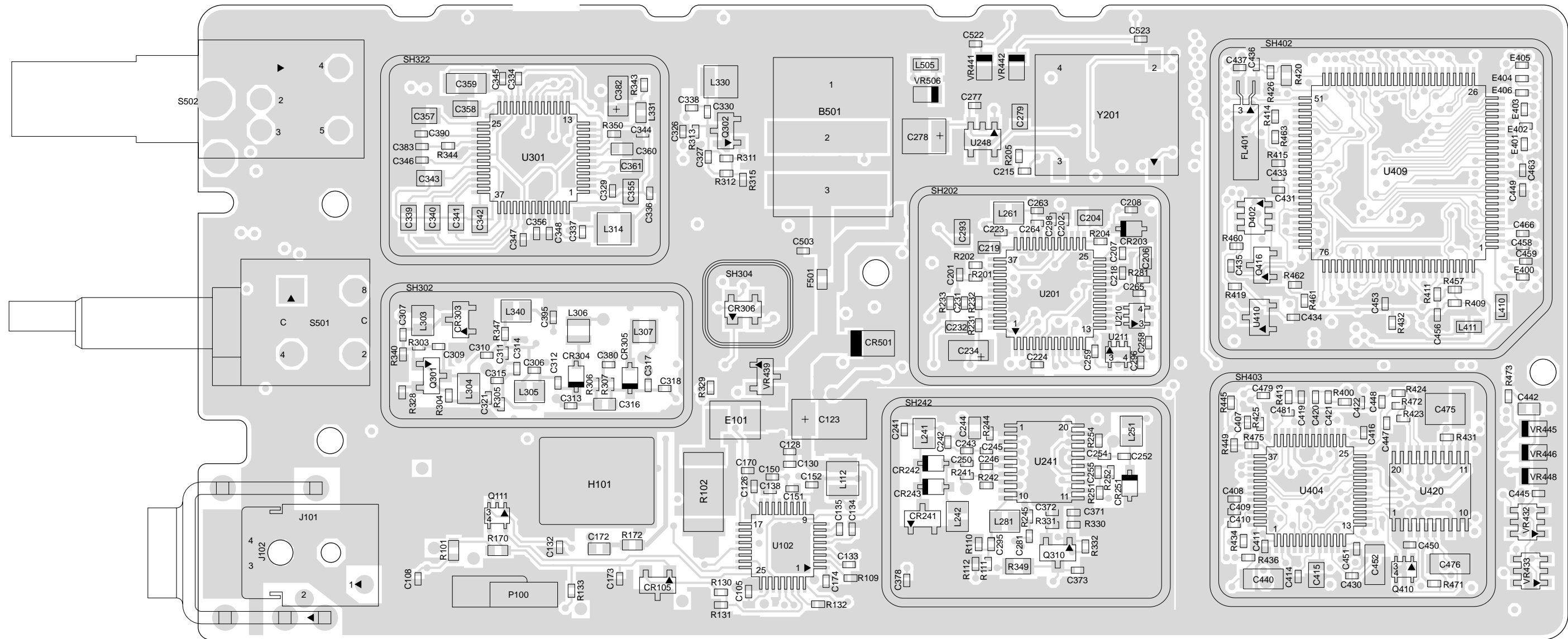
Notes

VIEWED FROM SIDE 1



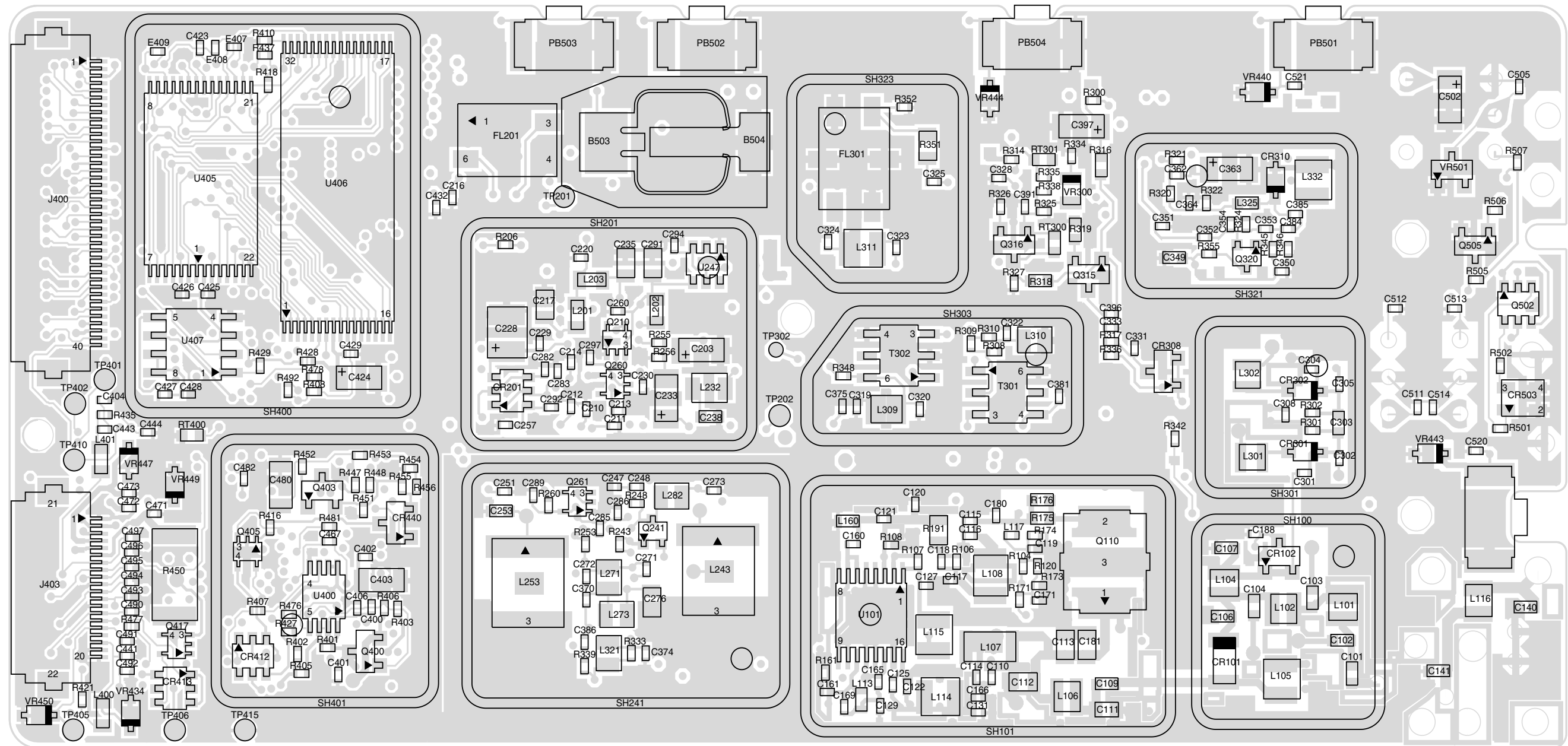
FL08307490

Figure 4-35: UHF (450-527 MHz) 5000/7000 Series Main Board Top Side PCB 8485641Z02



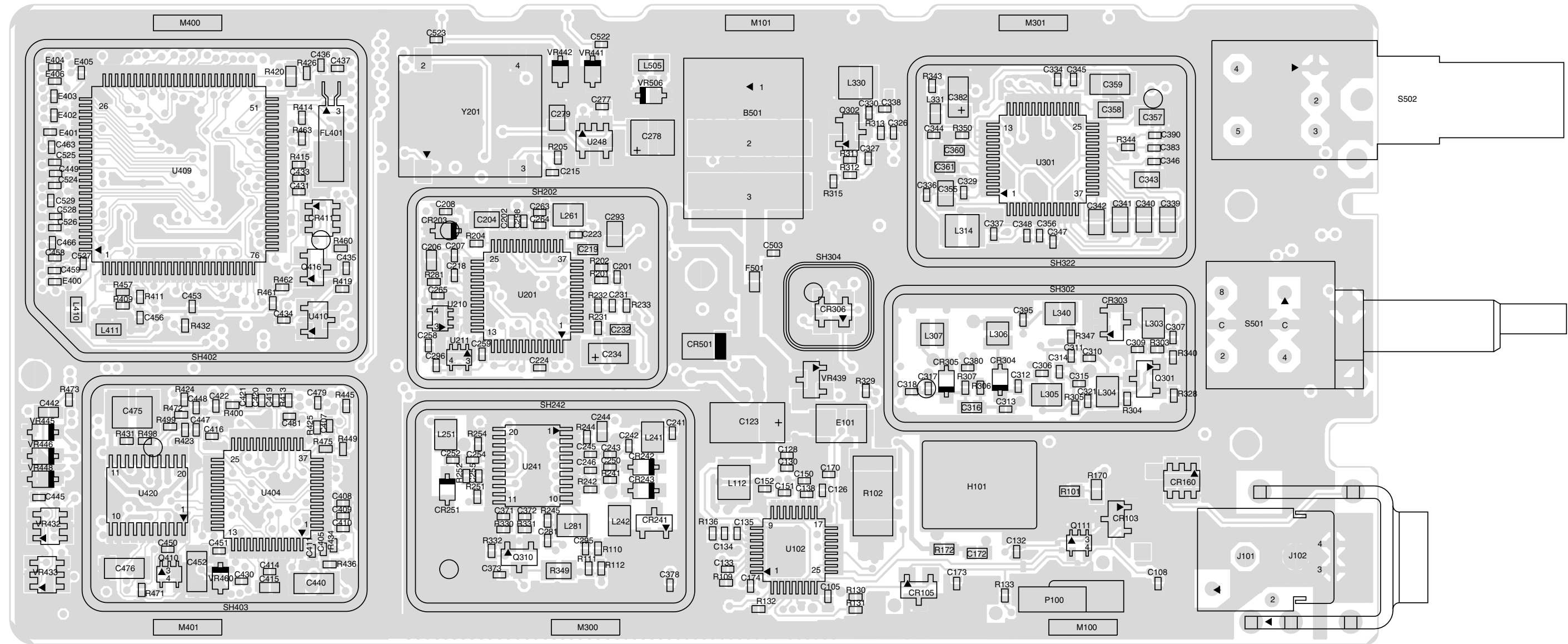
FL08307500

Figure 4-36: UHF (450-527 MHz) 5000/7000 Series Main Board Bottom Side PCB 8485641Z02



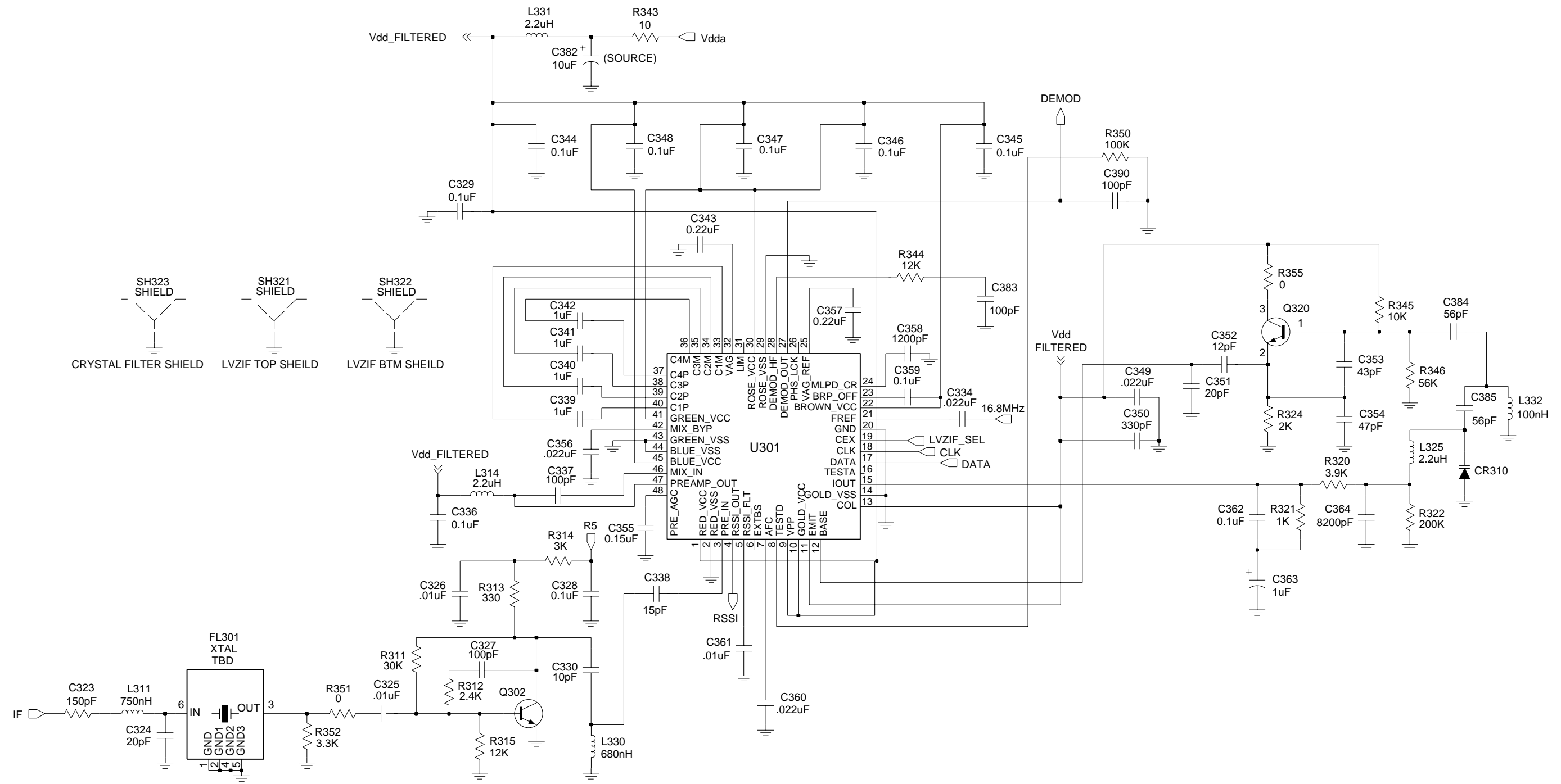
ZMY0130258-A

Figure 4-37: UHF (450-527 MHz) 5000/7000 Series Main Board Top Side PCB 8485641Z06



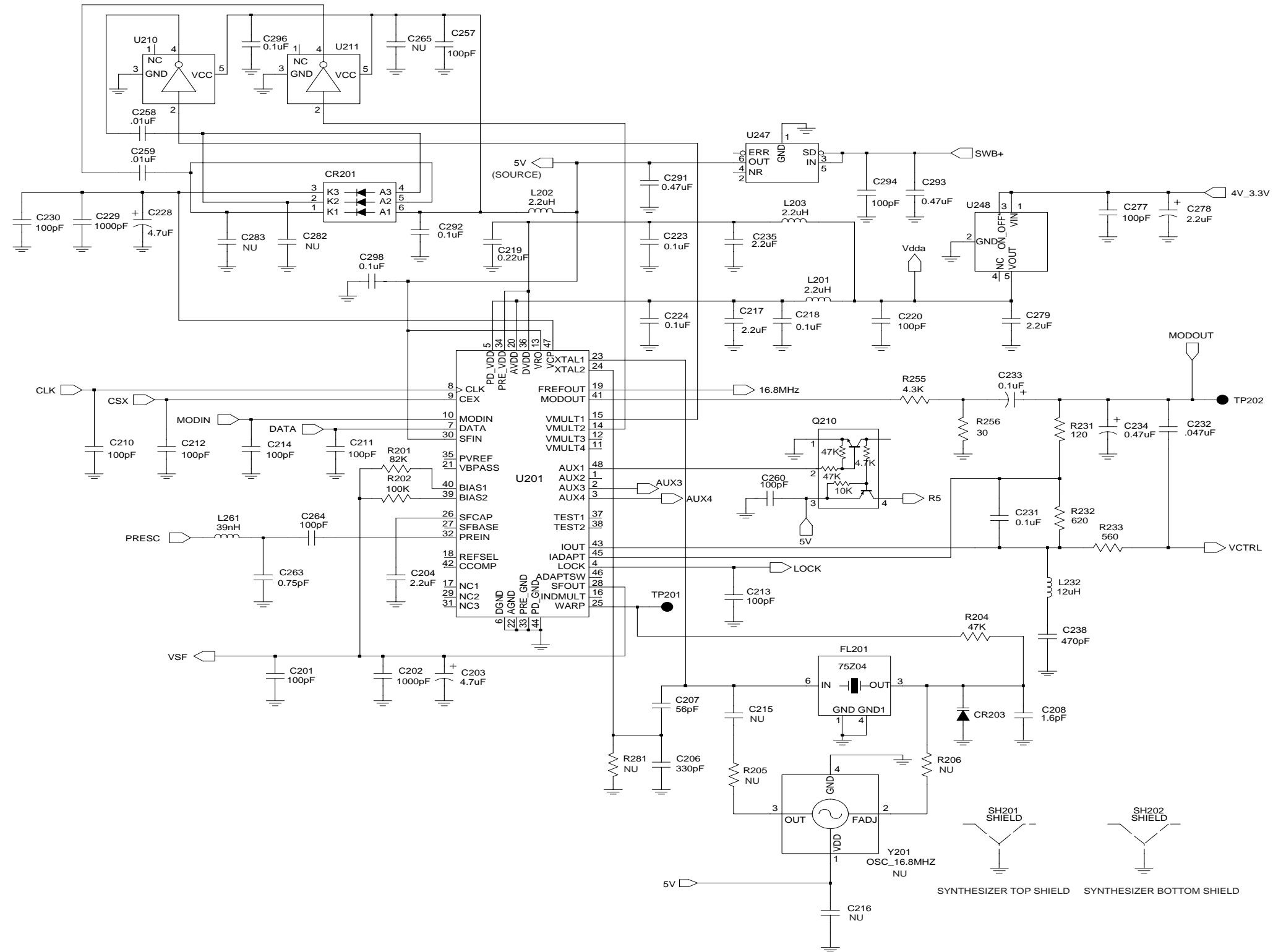
ZMY0130259 -A

Figure 4-38: UHF (450-527 MHz) 5000/7000 Series Main Board Bottom Side PCB 8485641Z06



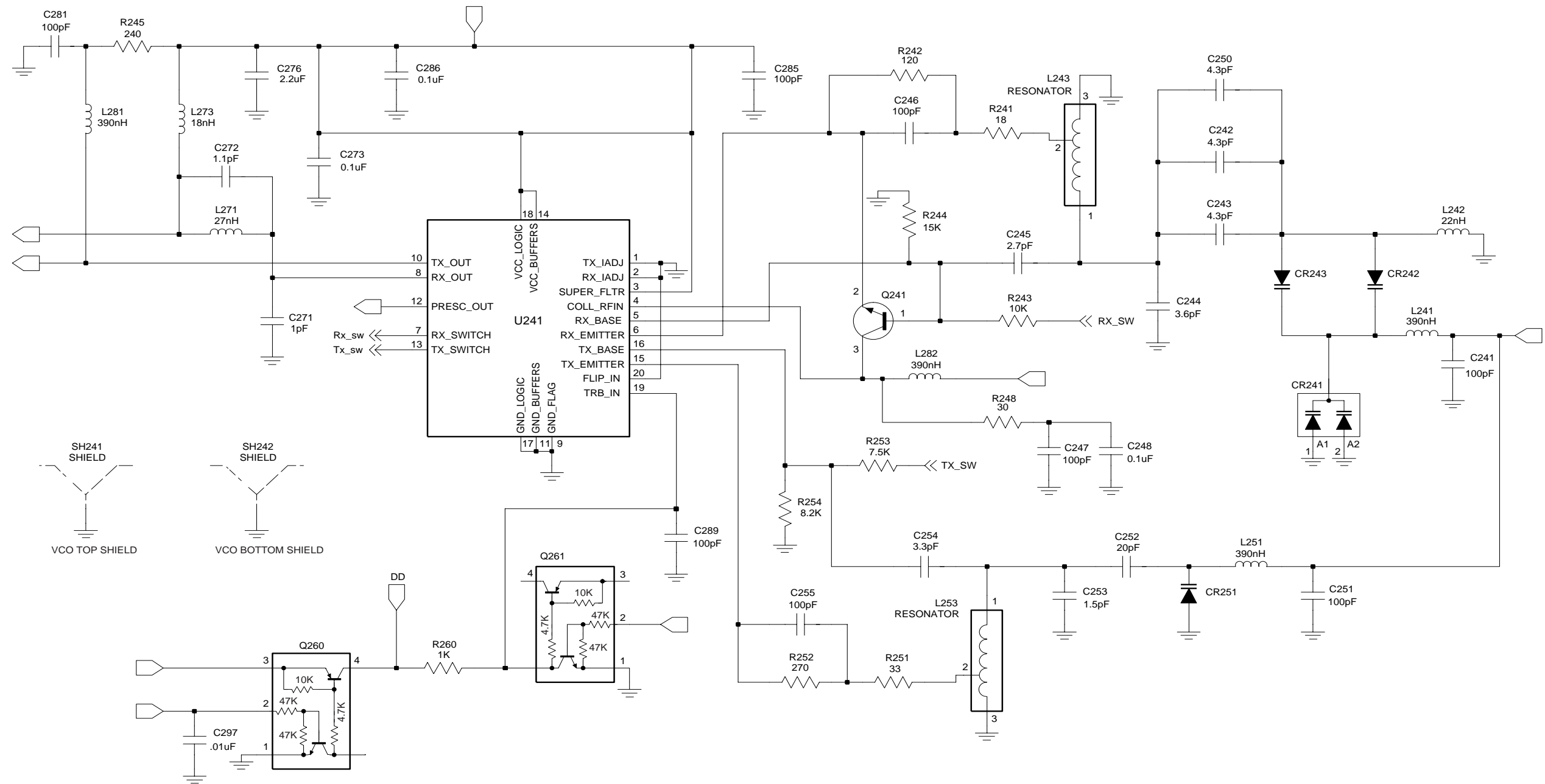
FL08307430

Figure 4-41: UHF (450-527 MHz) Receiver Back End Schematic Diagram



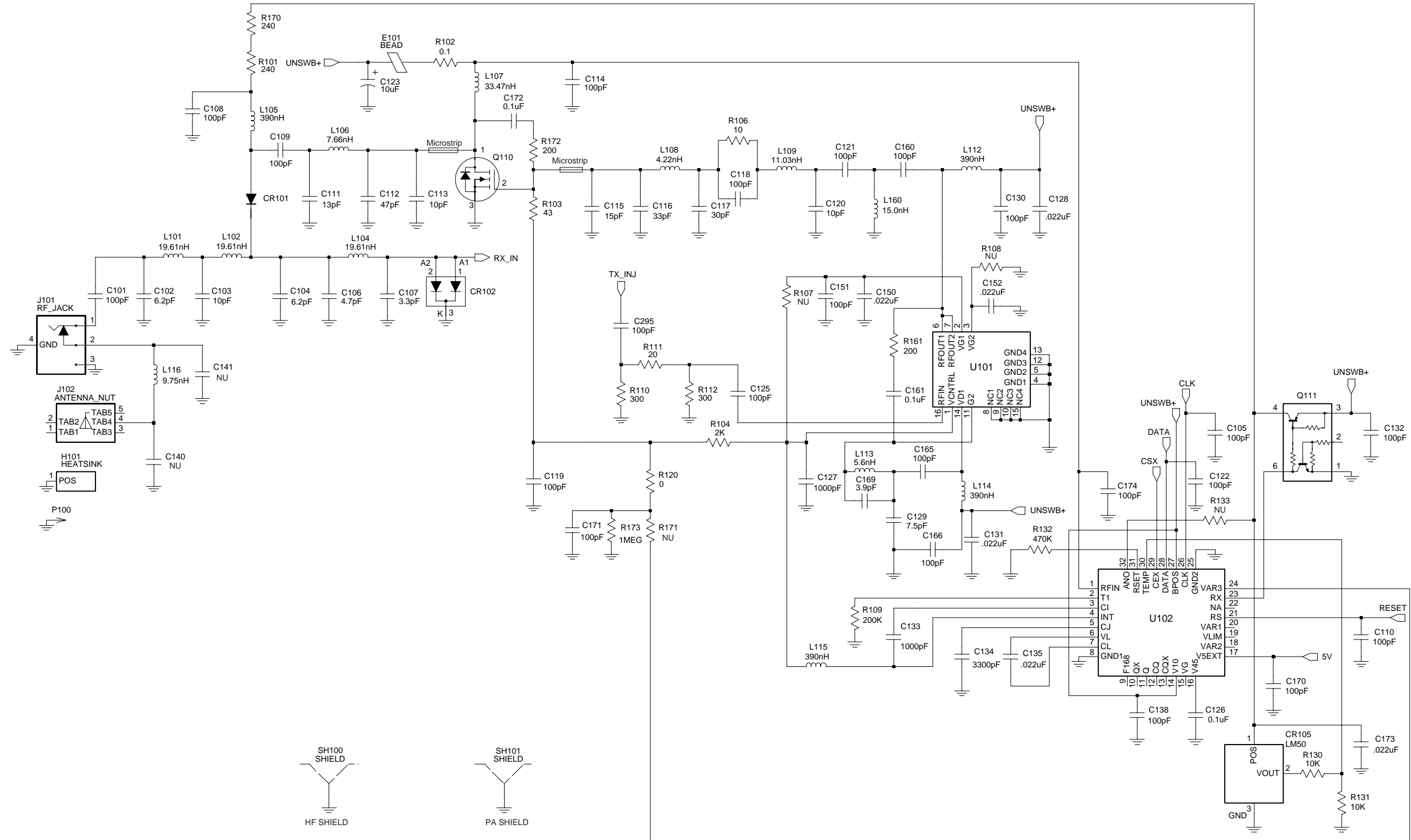
FL0830751O

Figure 4-42: UHF (450-527 MHz) Synthesizer Schematic Diagram



FL08307520

Figure 4-43: UHF (450-527 MHz) Voltage Controlled Oscillator Schematic Diagram



FL08307530

Figure 4-44: UHF (450-527 MHz) Transmitter Schematic Diagram

UHF (450-527 MHz) Radio Parts List (PCB 8485641Z02)

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
C101	2113740F51	100pF
C102	2113740F22	6.2pF
C103	2113740F27	10pF
C104	2113740F22	6.2pF
C105	2113743N50	100pF
C106	2113740F19	4.7pF
C107	2113740F15	3.3pF
C108	2113743N50	100pF
C109	2113740F51	100pF
C110	2113743N50	100pF
C111	2113740F30	13pF
C112	2180605Z32	47pF
C113	2180605Z16	10pF
C114	2113743N50	100pF
C115	2113743N30	15.0pF
C116	2113743N38	33.0pF
C117	2113743N37	30.0pF
C118	2113743N50	100pF
C119	2113743N50	100pF
C120	2113743N26	10pF
C121	2113743N50	100pF
C122	2113743N50	100pF
C123	2311049A18	10uF
C125	2113743N50	100pF
C126	2113743M24	0.1uF
C127	2113743L17	1000pF
C128	2113743M08	0.022uF
C129	2113743N23	7.5pF
C130	2113743N50	100pF
C131	2113743M08	0.022uF
C132	2113743N50	100pF
C133	2113743L17	1000pF
C134	2113743L29	3300pF
C135	2113743M08	0.022uF
C138	2113743N50	100pF
C150	2113743M08	0.022uF
C151	2113743N50	100pF
C152	2113743M08	0.022uF
C160	2113743N50	100pF
C161	2113743M24	0.1uF
C165	2113743N50	100pF
C166	2113743N50	100pF
C169	2113743N20	5.6pF
C170	2113743N50	100pF
C171	2113743N50	100pF
C172	2113740F51	100pF
C173	2113743M08	0.022uF
C174	2113743N50	100pF
C201	2113743N50	100pF
C202	2113743L17	1000pF
C203	2311049A56	4.7pF

Circuit Ref	Motorola Part No.	Description
C204	2104993J02	2.2uF
C206	2113740F63	330pF
C207	2113743N44	56.0pF
C208	2113743N08	1.6pF
C210	2113743N50	100pF
C211	2113743N50	100pF
C212	2113743N50	100pF
C213	2113743N50	100pF
C214	2113743N50	100pF
C217	2104993J02	2.2uF
C218	2113743M24	0.1uF
C219	2113743K16	0.220uF
C220	2113743N50	100pF
C223	2113743M24	0.1uF
C224	2113743M24	0.1uF
C228	2311049J11	4.7uF
C229	2113743L17	1000pF
C230	2113743N50	100pF
C231	2113743M24	0.1uF
C232	2113743E12	0.047uF
C233	2311049A01	0.1pF
C234	2311049A05	0.47pF
C235	2104993J02	2.2uF
C238	2113741F17	470pF
C241	2113743N50	100pF
C242	2113743N23	7.5pF
C243	2113743N23	7.5pF
C244	2113740F10	2.0pF
C245	2113743N11	2.4pF
C246	2113743N50	100pF
C247	2113743N50	100pF
C248	2113743M24	0.1uF
C250	2113743N23	7.5pF
C251	2113743N50	100pF
C252	2113743N26	10pF
C253	2113740F09	1.8pF
C254	2113743N15	3.6pF
C255	2113743N50	100pF
C257	2113743N50	100pF
C258	2113743L41	0.01uF
C259	2113743L41	0.01uF
C260	2113743N50	100pF
C263	2113743N02	0.75pF
C264	2113743N50	100pF
C273	2113743M24	0.1uF
C276	2104993J02	2.2uF
C277	2113743N50	100pF
C278	2311049A09	2.2uF
C279	2104993J02	2.2uF
C281	2113743N50	100pF
C285	2113743N50	100pF
C286	2113743M24	0.1uF
C289	2113743N50	100pF
C291	2311049A69	10.0uF
C292	2113743M24	0.1uF
C293	2113743A27	0.470uF

Circuit Ref	Motorola Part No.	Description
C294	2113743N50	100pF
C295	2113743N50	100pF
C296	2113743M24	0.1uF
C297	2113743L41	0.01uF
C298	2113743M24	0.1uF
C301	2113743N15	3.6pF
C302	2113743N26	10pF
C303	2113740L08	3.9pF
C304	2113743N26	10pF
C305	2113743N33	20.0pF
C307	2113743M24	0.1uF
C308	2113743N50	100pF
C309	2113743N50	100pF
C310	2113743M24	0.1uF
C312	2113743N25	9.1pF
C313	2113743N26	10pF
C314	2113743M24	0.1uF
C315	2113743N50	100pF
C316	2113740L08	3.9pF
C317	2113743N25	9.1pF
C318	2113743N23	7.5pF
C319	2113743N69	1.8pF
C320	2113743N23	7.5pF
C321	2113743N50	100pF
C322	2113743N48	82.0pF
C323	2113743N54	150pF
C324	2113743N33	20.0pF
C325	2113743L41	0.01uF
C326	2113743L41	0.01uF
C327	2113743N50	100pF
C328	2113743M24	0.1uF
C329	2113743M24	0.1uF
C330	2113743N26	10pF
C331	2113743N50	100pF
C334	2113743M08	0.022uF
C336	2113743M24	0.1uF
C337	2113743N50	100pF
C338	2113743N30	15.0pF
C339	2180478Z20	1.0uF
C340	2180478Z20	1.0uF
C341	2180478Z20	1.0uF
C342	2180478Z20	1.0uF
C343	2113743A23	0.220uF
C344	2113743M24	0.1uF
C345	2113743M24	0.1uF
C346	2113743M24	0.1uF
C347	2113743M24	0.1uF
C348	2113743M24	0.1uF
C349	2113743E07	0.022uF
C350	2113743L05	330pF
C351	2113743N33	20.0pF
C352	2113743N28	12.0pF
C353	2113743N41	43.0pF
C354	2113743N42	47.0pF
C355	2113743A24	0.330uF
C356	2113743M08	0.022uF

Circuit Ref	Motorola Part No.	Description
C357	2113743A23	0.220uF
C358	2113741A23	1200pF
C359	2109720D14	0.1uF
C360	2113743E07	0.022uF
C361	2113741F49	10NF
C362	2113743M08	0.022uF
C363	2311049A40	2.2uF
C364	2113743L41	0.01uF
C370	2113743N50	100pF
C374	2113743N50	100pF
C375	2113743N50	100pF
C380	2113743L41	0.01uF
C381	2113743N21	6.2pF
C382	2311049A59	10uF
C383	2113743N50	100pF
C384	2113743N44	56.0pF
C385	2113743N44	56.0pF
C386	2113743N50	100pF
C390	2113743N50	100pF
C395	2113743N50	100pF
C397	2311049A05	0.47pF
C400	2113743L41	0.01uF
C401	2113743M24	0.1uF
C402	2113743M24	0.1uF
C403	2113928D08	10.0uF
C407	2113928N01	0.1uF
C408	2113743N50	100pF
C409	2113743M24	0.1uF
C410	2113928N01	0.1uF
C411	2113743M24	0.1uF
C414	2113743M24	0.1uF
C415	2109720D01	0.01uF
C416	2113928N01	0.1uF
C420	2113743L41	0.01uF
C421	2113928N01	0.1uF
C422	2113743M24	0.1uF
C423	2113743N50	100pF
C424	2311049A59	10uF
C425	2113743M24	0.1uF
C426	2113743N50	100pF
C427	2113743N50	100pF
C428	2113743M24	0.1uF
C429	2113743M24	0.1uF
C430	2113928N01	0.1uF
C431	2113743N50	100pF
C433	2113743L41	0.01uF
C434	2113743M24	0.1uF (not used in PRO5150 and HT750)
C435	2113743M24	0.1uF
C436	2113743N34	22.0pF (not used in PRO5150 and HT750)
C437	2113743N34	22.0pF (not used in PRO5150 and HT750)
C440	2113743G26	4.7uF
C441	2113743N50	100pF
C442	2113743E20	10uF

Circuit Ref	Motorola Part No.	Description
C443	2113928N01	0.1uF
C444	2113743N50	100pF
C445	2113743N50	100pF
C447	2113743M08	0.022uF
C448	2113928N01	0.1uF
C449	2113743N50	100pF
C451	2113743M08	0.022uF
C452	2113743G26	4.7uF
C453	2113743N50	100pF
C456	2113743N50	100pF
C458	2113743N50	100pF
C459	2113743N50	100pF
C463	2113743N50	100pF
C466	2113743N50	100pF
C467	2113928N01	0.1uF
C471	2113743N50	100pF
C472	2113743L09	470pF
C473	2113743L09	470pF
C475	2113743H14	10.0uF
C476	2113928D08	10.0uF
C479	2113928N01	0.1uF
C480	2113928D08	10.0uF
C481	2113928N01	0.1uF
C482	2113928N01	0.1uF
C490	2113743N50	100pF
C491	2113743N50	100pF
C492	2113743N50	100pF
C493	2113743N50	100pF
C494	2113743N50	100pF
C495	2113743N50	100pF
C496	2113743N50	100pF
C497	2113743N50	100pF
C502	2311049A05	0.47pF
C503	2113743N50	100pF
C505	2113743N50	100pF
C511	2113743N50	100pF
C512	2113743N50	100pF
C513	2113743N50	100pF
C514	2113743N50	100pF
C520	2113743L41	0.01uF
C521	2113743L41	0.01uF
C522	2113743L41	0.01uF
C523	2113743L41	0.01uF
CR101	4880973Z02	Pin Diode
CR102	4802245J41	Pin Diodes
CR105	5185963A15	Temperature Sense
CR201	4802233J09	Diode Triple
CR203	4862824C03	Varactor
CR241	4805649Q13	Dual Varactor
CR242	4862824C01	Varactor
CR243	4862824C01	Varactor
CR251	4802245J22	Varactor
CR301	4862824C01	Varactor
CR302	4862824C01	Varactor
CR303	4880154K03	Dual Common Anode-cathode
CR304	4862824C01	Varactor

Circuit Ref	Motorola Part No.	Description
CR305	4862824C01	Varactor
CR306	4802245J42	Ring Quad Diode
CR308	4802245J41	Pin Diodes
CR310	4862824C01	Varactor
CR411	4802245J47	Diode Schottky
CR412	4802245J47	Diode Schottky
CR413	4802245J47	Diode Schottky
CR440	4813833C02	Dual Diode Common Cathode
CR501	4880107R01	Rectifier
CR503	4805729G49	Led Red/yellow
E101	2484657R01	Ferrite Bead
E400	2480640Z01	Ferrite Bead
E401	2480640Z01	Ferrite Bead
E402	2480640Z01	Ferrite Bead
E403	2480640Z01	Ferrite Bead
E404	2480640Z01	Ferrite Bead
E405	2480640Z01	Ferrite Bead
E406	2480640Z01	Ferrite Bead
E407	2480640Z01	Ferrite Bead
E408	2480640Z01	Ferrite Bead
E409	2480640Z01	Ferrite Bead
F501	6580542Z01	Fuse 3A
FL201	4802245J49	16.8 MHz Xtal Clip (not field serviceable)
FL301	4802245J43	Crystal Filter 45.1 MHz
FL401	4870368G02	Clock Oscillator Crystal (not used in PRO5150 and HT750)
H101	2680499Z01	Heat Spreader
J101	0180117S05	RF Jack Assembly
J102	0280519Z02	Nut, Antenna
J400	0905505Y04	40 Pin Connector
J403	0905505Y02	20 Pin Connector
L101	2479990B02	19.61nH
L102	2479990B02	19.61nH
L104	2479990B02	19.61nH
L105	2462587N22	390nH
L106	2479990A02	7.66nH
L107	2479990G01	33.47nH
L108	2479990A01	4.22nH
L109	2479990B01	11.03nH
L112	2462587N45	22nH
L113	2413926H09	5.6nH
L114	2462587N22	390nH
L115	2462587N22	390nH
L116	2479990A03	9.75nH
L160	2413926H14	15.0nH
L201	2462587Q20	2.2uH
L202	2462587Q20	2.2uH
L203	2462587Q20	2.2uH
L232	2462587P25	12uH
L241	2462587V41	390nH
L242	2462587V38	220nH
L243	2460593C01	Teflon Resonator
L251	2462587V28	33nH
L253	2460593C02	Teflon Resonator
L261	2462587V29	39nH

Circuit Ref	Motorola Part No.	Description
L271	2462587V32	68nH
L273	2462587V28	33nH
L281	2462587V41	390nH
L282	2462587V41	390nH
L301	2479990C01	13.9nH
L302	2479990C01	13.9nH
L303	2462587V26	22nH
L304	2462587V37	180nH
L305	2462587V26	22nH
L306	2479990C01	13.9nH
L307	2479990C01	13.9nH
L309	2479990C02	16.28nH
L310	2462587V36	150nH
L311	2462587N65	750nH
L314	2462587N72	2.2uH
L325	2480646Z20	2.20uH
L330	2462587N64	680nH
L331	2480646Z20	2.20uH
L332	2462587N53	100nH
L340	2462587V41	390nH
L400	2462587Q42	390nH
L401	2462587Q42	390nH
L410	2462587Q42	390nH
L411	2462587Q42	390nH
L505	2462587Q42	390nH
P100	3905643V01	Ground Contact Finger
PB501	4080523Z01	Tactile Push Button
PB502	4080523Z01	Tactile Push Button
PB503	4080523Z01	Tactile Push Button
PB504	4080523Z01	Tactile Push Button
PB505	4080523Z01	Tactile Push Button
Q110	4802245J55	RF Power Fet
Q111	4802245J50	Dual NPN/PNP
Q210	4802245J50	Dual NPN/PNP
Q241	4805218N63	NPN
Q260	4802245J50	Dual NPN/PNP
Q261	4802245J50	Dual NPN/PNP
Q301	4802245J44	NPN
Q302	4802245J44	NPN
Q315	4880214G02	NPN
Q320	4805218N63	NPN
Q400	4809579E18	MOSFET P-Chan
Q403	4880214G02	NPN
Q405	4802245J54	Dual NPN
Q410	4802245J54	dual NPN
Q416	4809579E18	MOSFET P-Chan
Q417	4802245J50	Dual NPN/PNP
Q502	5180159R01	Dual NPN
Q505	4880214G02	NPN
R101	0662057A34	240
R102	0680735Z01	0.075
R103	0662057M41	43
R104	0662057N15	47K
R106	0662057M26	10
R108	0662057M92	5.6K
R109	0662057N30	200K

Circuit Ref	Motorola Part No.	Description
R110	0662057M61	300
R111	0662057M33	20
R112	0662057M61	300
R120	0662057N14	43K
R130	0662057M98	10K
R131	0662057N05	18K
R132	0662057N33	270K
R161	0662057M57	200
R170	0662057A34	240
R171	0662057N14	43K
R172	0662057A32	200
R173	0662057N29	180K
R201	0662057N21	82K
R202	0662057N23	100K
R204	0662057N15	47K
R231	0662057M52	120
R232	0662057M69	620
R233	0662057M68	560
R241	0662057M32	18
R242	0662057M57	200
R243	0662057M98	10K
R244	0662057N01	12K
R245	0662057M59	240
R248	0662057M37	30
R251	0662057M32	18
R252	0662057M62	330
R253	0662057M95	7.5K
R254	0662057M95	6.8K
R255	0662057M89	4.3K
R256	0662057M37	30
R260	0662057M74	1K
R300	0662057M82	2.2K
R301	0662057N23	100K
R302	0662057N23	100K
R303	0662057M74	1K
R304	0662057N01	12K
R305	0662057M67	0
R306	0662057N23	100K
R307	0662057N23	100K
R308	0662057M60	270
R309	0662057M32	18
R310	0662057M60	270
R311	0662057N10	30K
R312	0662057M83	2.4K
R313	0662057M62	330
R314	0662057M85	3K
R315	0662057N01	12K
R316	0662057A96	91K
R317	0662057M74	1K
R318	0662057A79	18K
R319	0662057A29	150
R320	0662057M74	1K
R321	0662057M83	2.4K
R322	0662057N30	200K
R324	0662057M81	2K
R325	0662057M94	6.8K

Circuit Ref	Motorola Part No.	Description
R327	0662057N11	33K
R328	0662057M12	2.7
R329	0662057M01	0
R339	0662057M01	0
R340	0662057M94	6.8K
R342	0662057N23	100K
R343	0662057M26	10
R344	0662057N01	12K
R345	0662057M98	10K
R346	0662057N17	56K
R347	0662057M74	1K
R348	0662057M87	3.6K
R349	0662057C01	0
R350	0662057N23	100K
R351	0662057C01	0
R352	0662057M86	3.3K
R355	0662057M01	0
R400	0662057N15	47K
R401	0662057M01	0
R405	0662057M01	0
R406	0662057N20	75K
R407	0662057N19	68K
R409	0662057M98	10K
R410	0662057N23	100K
R411	0662057M98	10K
R413	0662057M01	0
R414	0662057V34	180K
R415	0662057V26	91K
R416	0662057N13	39K
R418	0662057M01	0
R419	0662057M67	0 (not used in PRO5150 and HT750)
R420	0662057B46	10.0 MEG (not used in PRO5150 and HT750)
R421	0662057M81	2K
R423	0662057N39	470K
R424	0662057N12	36K
R425	0662057N10	30K
R426	0662057N35	330K (not used in PRO5150 and HT750)
R427	0662057M84	2.7K
R428	0662057M10	2.2
R429	0662057M98	10K
R431	0662057N39	470K
R432	0662057N16	51K
R434	0662057M62	330
R435	0662057M81	2K
R436	0662057M01	0
R445	0662057N08	24K
R446	0662057N31	220K
R447	0662057N51	1.5MEG
R448	0662057N33	270K
R449	0662057N08	24K
R450	0683962T45	68
R457	0662057M98	10K
R460	0662057M90	4.7K

Circuit Ref	Motorola Part No.	Description
R461	0662057M56	180 (not used in PRO5150 and HT750)
R462	0662057M98	10K (not used in PRO5150 and HT750)
R463	0662057M61	300
R471	0662057M92	5.6K
R472	0662057N12	36K
R473	0662057M26	10
R475	0662057M01	0
R476	0662057N08	24K
R477	0662057M74	1K
R478	0662057M98	10K
R481	0662057N08	24K
R492	0662057M01	0
R501	0662057M70	680
R502	0662057M56	180
R505	0662057M98	10K
R506	0662057N15	47K
R507	0662057M01	0
RT300	0680590Z01	Thermistor 33K
RT400	0680590Z01	Thermistor 33K
S501	4080710Z01	Channel Switch
S502	1880619Z01	Volume Switch
SH100	2680507Z01	Shield, Harmonic Filter
SH101	2680510Z01	Shield, Pa
SH201	2680511Z01	Synthesizer Top Shield
SH202	2680511Z01	Synthesizer Bottom Shield
SH241	2680513Z01	Shield, VCO Top
SH242	2680514Z01	Shield, VCO Bottom/LVZIF
SH301	2680554Z01	RX Pre Filter Shield
SH302	2680555Z01	RX Post Filter/RX Amp
SH303	2680509Z01	Shield, Mixer
SH304	2680624Z01	Shield, Mixer Diode
SH321	2680508Z01	Shield, LVZIF 2nd LO
SH322	2680514Z01	ZIF Shield
SH323	2680553Z01	Shield, Crystal Filter
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	On/off Controller Shield
SH402	2680515Z01	Microprocessor Controlled Shield
SH403	2680516Z01	ASFIC CMP/Audio PA Controller Shield
T301	2580541Z01	Transformer Coil
T302	2580541Z01	Transformer Coil
U101	5105109Z67	LDMOS Driver UHF IC
U102	5185765B01	Power Control IC
U201	5185963A27	LVFRACN
U210	5102463J61	Inverter
U211	5102463J61	Inverter
U241	5105750U54	VCO Buffer
U247	5105739X05	Regulator Linear
U248	5102463J58	3.3v Regulator
U301	5109632D83	LVZIF 2.2
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC CMP
U405	5102463J36	Static RAM 32Kx8
U406	*5102463J59	Flash ROM 128Kx8

Circuit Ref	Motorola Part No.	Description
U407	*5102463J60	ROM 512Kx8 (MPT models only)
U407	*5102463J64	16K X 8 EEPROM (not used in PRO5150 and HT750)
U409	5102226J56	Microprocessor HC11FLO
U410	5102463J57	Regulator 3.3V (not used in PRO5150 and HT750)
U420	5102463J44	Audio PA
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J51	Zener 6.8V
VR439	4880140L15	10V Zener
VR440	4802245J51	Zener 6.8V
VR441	4802245J51	Zener 6.8V
VR442	4802245J51	Zener 6.8V
VR443	4802245J51	Zener 6.8V
VR444	4802245J51	Zener 6.8V
VR445	4802245J53	Zener 10V
VR446	4802245J53	Zener 10V
VR447	4802245J53	Zener 10V
VR448	4802245J53	Zener 10V
VR449	4802245J53	Zener 10V
VR450	4802245J53	Zener 10V
VR501	4813830A18	6.8V Zener
VR506	4802245J51	Zener 6.8V
	7580671Z01	Pad (Flexible Circuit)
	7580671Z01	Pad (Flexible Circuit)

* Motorola Depot Servicing only

UHF (450-527 MHz) Radio Parts List (PCB 8485641Z06)

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
C101	2113740F51	100pF
C102	2113740F22	6.2pF
C103	2113740F28	11pF
C104	2113740F22	6.2pF
C105	2113743N50	100pF
C106	2113740F19	4.7pF
C107	2113740F15	3.3pF
C108	2113743N50	100pF
C109	2113740F51	100pF
C110	2113743N50	100pF
C111	2103689A22	11pF
C112	2180605Z28	33pF
C113	2180605Z22	18pF
C114	2113743N50	100pF
C115	2113743N36	27pF
C116	2113743N27	11pF
C117	NOT PLACED	
C118	2113743N50	100pF
C119	2113743N50	100pF
C120	2113743N23	7.5pF, 0.5
C121	2113743N50	100pF
C122	2113743N50	100pF
C123	2311049A18	10uF, 10%, 16V
C125	2113743N50	100pF
C126	2113743M24	100000pF, +80%/-20%
C127	2113743L17	1000pF, 10%
C128	2113743M08	22000pF, +80%/-20%
C129	2113743N22	6.8pF, 0.5
C130	2113743N50	100pF
C131	2113743M08	22000pF, +80%/-20%
C132	2113743N50	100pF
C133	2113743L17	1000pF, 10%
C134	2113743L29	3300pF, 10%
C135	2113743M08	22000pF, +80%/-20%
C138	2113743N50	100pF
C140	NOT PLACED	
C141	2113740F25	8.2pF
C150	2113743M08	22000pF, +80%/-20%
C151	2113743N50	100pF
C152	2113743M08	22000pF, +80%/-20%
C160	2113743N44	56pF
C161	2113743M24	100000pF, +80%/-20%
C165	2113743N50	100pF
C166	2113743N50	100pF
C169	2113743N09	2.0pF, 0.25
C170	2113743N50	100pF
C171	2113743N50	100pF
C172	2113743E20	0.10uF, 10%
C173	2113743M08	22000pF, +80%/-20%
C174	2113743N50	100pF
C180	NOT PLACED	

Circuit Ref	Motorola Part No.	Description
C181	NOT PLACED	
C188	2113743N39	36pF
C201	2113743N50	100pF
C202	2113743L17	1000pF, 10%
C203	2311049A56	4.7uF, 20%, 10V
C204	2104993J02	2.2uF
C206	2113740F63	330pF
C207	2113743N40	39pF
C208	NOT PLACED	
C210	2113743N50	100pF
C211	2113743N50	100pF
C212	2113743N50	100pF
C213	2113743N50	100pF
C214	2113743N50	100pF
C215	NOT PLACED	
C216	NOT PLACED	
C217	2104993J02	2.2uF
C218	2113743M24	100000pF, +80%/-20%
C219	2113743K16	0.220uF, +80%/-20%
C220	2113743N50	100pF
C223	2113743M24	100000pF, +80%/-20%
C224	2113743M24	100000pF, +80%/-20%
C228	2311049J11	4.7uF, 10%, 16V
C229	2113743L17	1000pF, 10%
C230	2113743N50	100pF
C231	2113743M24	100000pF, +80%/-20%
C232	2113743E12	0.047uF, 10%
C233	2311049A01	0.1uF, 10%, 35V
C234	2311049A05	0.47uF, 10%, 25V
C235	2104993J02	2.2uF
C238	2113741F17	470pF
C241	2113743N50	100pF
C242	2113743N17	4.3pF, 0.25
C243	2113743N17	4.3pF, 0.25
C244	2113740F14	3.0pF
C245	2113743N12	2.7pF, 0.25
C246	2113743N50	100pF
C247	2113743N50	100pF
C248	2113743M24	100000pF, +80%/-20%
C250	2113743N17	4.3pF, 0.25
C251	2113743N50	100pF
C252	2113743N33	20pF
C253	2113740F07	1.5pF
C254	2113743N14	3.3pF, 0.25
C255	2113743N50	100pF
C257	2113743N50	100pF
C258	2113743L41	10000pF, 10%
C259	2113743L41	10000pF, 10%
C260	2113743N50	100pF
C263	2113743N02	0.75pF, 0.25
C264	2113743N50	100pF
C265	NOT PLACED	
C271	2113743N03	1.0pF, 0.25
C272	2113743N04	1.1pF, 0.25
C273	2113743M24	100000pF, +80%/-20%
C276	2104993J02	2.2uF

Circuit Ref	Motorola Part No.	Description
C277	2113743N50	100pF
C278	2311049A57	10uF, 10%, 20V
C279	2104993J02	2.2uF
C281	2113743N50	100pF
C282	NOT PLACED	
C283	NOT PLACED	
C285	2113743N50	100pF
C286	2113743M24	100000pF, +80%/-20%
C289	2113743N50	100pF
C291	2311049A69	10uF, 20%, 6.3V
C292	2113743M24	100000pF, +80%/-20%
C293	2113743A27	0.470uF, 10%
C294	2113743N50	100pF
C295	2113743N50	100pF
C296	2113743M24	100000pF, +80%/-20%
C297	2113743L41	10000pF, 10%
C298	2113743M24	100000pF, +80%/-20%
C301	2113743N24	8.2pF, 0.5
C302	2113743N28	12pF
C303	2113740L09	4.3pF, 0.1
C304	2113743N27	11pF
C305	2113743N24	8.2pF, 0.5
C306	NOT PLACED	
C307	2113743M24	100000pF, +80%/-20%
C308	2113743N50	100pF
C309	2113743N50	100pF
C310	2113743M24	100000pF, +80%/-20%
C311	NOT PLACED	
C312	2113743N23	7.5pF, 0.5
C313	2113743N27	11pF
C314	2113743M24	100000pF, +80%/-20%
C315	2113743N50	100pF
C316	2113740L09	4.3pF, 0.1
C317	2113743N27	11pF
C318	2113743N23	7.5pF, 0.5
C319	2113743N15	3.6pF, 0.25
C320	2113743N23	7.5pF, 0.5
C321	2113743N50	100pF
C322	2113743N48	82pF
C323	2113743N54	150pF
C324	2113743N33	20pF
C325	2113743L41	10000pF, 10%
C326	2113743L41	10000pF, 10%
C327	2113743N50	100pF
C328	2113743M24	100000pF, +80%/-20%
C329	2113743M24	100000pF, +80%/-20%
C330	2113743N26	10pF
C331	2113743N50	100pF
C333	NOT PLACED	
C334	2113743M08	22000pF, +80%/-20%
C336	2113743M24	100000pF, +80%/-20%
C337	2113743N50	100pF
C338	2113743N30	15pF
C339	2180478Z20	1uF
C340	2180478Z20	1uF
C341	2180478Z20	1uF

Circuit Ref	Motorola Part No.	Description
C342	2180478Z20	1uF
C343	2113743A23	0.220uF, 10%
C344	2113743M24	100000pF, +80%/-20%
C345	2113743M24	100000pF, +80%/-20%
C346	2113743M24	100000pF, +80%/-20%
C347	2113743M24	100000pF, +80%/-20%
C348	2113743M24	100000pF, +80%/-20%
C349	2113743E07	0.022uF
C350	2113743L05	330pF, 10%
C351	2113743N33	20pF
C352	2113743N28	12pF
C353	2113743N41	43pF
C354	2113743N42	47pF
C355	2113743A24	0.330uF, 10%
C356	2113743M08	22000pF, +80%/-20%
C357	2113743A23	0.220uF, 10%
C358	2113741A23	1200pF
C359	2109720D14	0.1uF, low distortion
C360	2113743E07	0.022uF
C361	2113741F49	10nF
C362	2113743M08	22000pF, +80%/-20%
C363	2311049A40	2.2uF, 10%, 10V
C364	2113743L41	10000pF, 10%
C370	2113743N50	100pF
C371	NOT PLACED	
C372	NOT PLACED	
C373	NOT PLACED	
C374	2113743N50	100pF
C375	2113743N50	100pF
C378	NOT PLACED	
C380	2113743L41	10000pF, 10%
C381	2113743N18	4.7pF, 0.25
C382	2311049A59	10uF, 10%, 6V
C383	2113743N50	100pF
C384	2113743N44	56pF
C385	2113743N44	56pF
C386	2113743N50	100pF
C390	2113743N50	100pF
C391	NOT PLACED	
C395	2113743N50	100pF
C396	NOT PLACED	
C397	2311049A07	1uF, 10%, 16V
C400	2113743L41	10000pF, 10%
C401	2113743M24	100000pF, +80%/-20%
C402	2113743M24	100000pF, +80%/-20%
C403	2113743G24	2.2uF, +/-80%/-20%
C404	NOT PLACED	GCAM DUMMY PART NUMBER
C405	NOT PLACED	
C406	NOT PLACED	
C407	2113928N01	0.1uF, 10%
C408	2113743N50	100pF
C409	2113743M24	100000pF, +80%/-20%
C410	2113928N01	0.1uF, 10%
C411	2113743M24	100000pF, +80%/-20%
C414	2113743M24	100000pF, +80%/-20%
C415	2185895Z01	0.01uF, low distortion

Circuit Ref	Motorola Part No.	Description
C416	2113928N01	0.1uF, 10%
C419	NOT PLACED	
C420	2113743L41	10000pF, 10%
C421	2113928N01	0.1uF, 10%
C422	2113743M24	100000pF, +80%/-20%
C423	2113743N50	100pF
C424	2311049A59	10uF, 10%, 6V
C425	2113743M24	100000pF, +80%/-20%
C426	2113743N50	100pF
C427	2113743N50	100pF
C428	2113743M24	100000pF, +80%/-20%
C429	2113743M24	100000pF, +80%/-20%
C430	2113928N01	0.1uF, 10%
C431	2113743N50	100pF
C432	NOT PLACED	
C433	2113743L41	10000pF, 10%
C434	2113928N01	0.1uF, 10%(not used in GP328)
C435	2113743M24	100000pF, +80%/-20%
C436	2113743N34	22pF (not used in GP328)
C437	2113743N34	22pF (not used in GP328)
C440	2113743G26	4.7uF, +80%/-20%
C441	2113743N50	100pF
C442	2113743E20	0.10uF, 10%
C443	2113928N01	0.1uF, 10%
C444	2113743N50	100pF
C445	2113743N50	100pF
C447	2113743M08	22000pF, +80%/-20%
C448	2113928N01	0.1uF, 10%
C449	2113743N50	100pF
C450	NOT PLACED	
C451	2113743M08	22000pF, +80%/-20%
C452	2113743B29	1uF, 10%
C453	2113743N50	100pF
C456	2113743N50	100pF
C458	2113743N50	100pF
C459	2113743N50	100pF
C463	2113743N50	100pF
C466	2113743N50	100pF
C467	2113928N01	0.1uF, 10%
C471	2113743N50	100pF
C472	2113743L09	470pF, 10%
C473	2113743L09	470pF, 10%
C475	2113743H14	10uF, +80%/-20%
C476	2113928D08	10uF, +/-80%/-20%
C479	2113928N01	0.1uF, 10%
C480	2113928D08	10uF, +/-80%/-20%
C481	2113928N01	0.1uF, 10%
C482	2113928N01	0.1uF, 10%
C490	2113743N50	100pF
C491	2113743N50	100pF
C492	2113743N50	100pF
C493	2113743N50	100pF
C494	2113743N50	100pF
C495	2113743N50	100pF
C496	2113743N50	100pF
C497	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C502	2311049A05	0.47uF, 10%, 25V
C503	2113743N50	100pF
C505	2113743N50	100pF
C511	2113743N50	100pF
C512	2113743N50	100pF
C513	2113743N50	100pF
C514	2113743N50	100pF
C520	2113743L41	10000pF, 10%
C521	2113743L41	10000pF, 10%
C522	2113743L41	10000pF, 10%
C523	2113743L41	10000pF, 10%
C524	2113743N50	100pF
C525	2113743N50	100pF
C526	2113743N50	100pF
C527	2113743N50	100pF
C528	2113743N50	100pF
C529	NOT PLACED	
CR101	4880973Z02	Pin diode
CR102	4802245J41	Pin diode
CR103	4802245J41	Pin diode
CR105	5185963A15	Temperature sensor
CR160	NOT PLACED	
CR201	4802233J09	Triple diode (SOT 25)
CR203	4862824C03	Varactor
CR241	4805649Q13	Varactor
CR242	4862824C01	Varactor
CR243	4862824C01	Varactor
CR251	4862824C01	Varactor
CR301	4862824C01	Varactor
CR302	4862824C01	Varactor
CR303	4880154K03	Dual common anode-cathode diode
CR304	4862824C01	Varactor
CR305	4862824C01	Varactor
CR306	4802245J42	Ring Quad diode (SOT-143)
CR308	4802245J41	Pin diode
CR310	4862824C01	Varactor
CR411	4802245J62	Diode Schottky
CR412	4802245J62	Diode Schottky
CR413	4802245J62	Diode Schottky
CR440	4813833C02	Dual common cathode diode
CR501	4880107R01	Rectifier
CR503	4805729G49	LED Red/Yellow
E101	2484657R01	Ferrite bead
E400	2480640Z01	Ferrite bead
E401	2480640Z01	Ferrite bead
E402	2480640Z01	Ferrite bead
E403	2480640Z01	Ferrite bead
E404	2480640Z01	Ferrite bead
E405	2480640Z01	Ferrite bead
E406	2480640Z01	Ferrite bead
E407	2480640Z01	Ferrite bead
E408	2480640Z01	Ferrite bead
E409	2480640Z01	Ferrite bead
F501	6580542Z01	3A fuse

Circuit Ref	Motorola Part No.	Description
FL201	4805875Z04	16.8 MHz Xtal oscillator (not field serviceable)
FL301	4802245J43	Xtal Filter 45.1 MHz
FL401	4870368G02	Xtal Oscillator 38.4 kHz (not used in GP328)
H101	2680499Z01	Heat spreader
J101	0985613Z01	RF Jack
J102	0280519Z02	Antenna nut
J403	0905505Y02	20-pin connector
L101	2460591B28	13.37nH
L102	2460591B28	13.37nH
L104	2460591B48	15.22nH
L105	2462587N22	390nH
L106	2460591A19	8.71nH
L107	2479990G01	33.47nH
L108	2479990A01	4.22nH
L112	2462587N42	12nH, 5%
L113	2413926H09	5.6nH, 0.3
L114	2462587N42	12nH, 5%
L115	2462587N22	390nH
L116	2479990C02	16.28nH
L117	2409154M17	22nH
L160	2413926H14	15nH, 5%
L201	2462587Q20	2200nH, 20%
L202	2462587Q20	2200nH, 20%
L203	2462587Q20	2200nH, 20%
L232	2462587P25	12000nH, 5%
L241	2462587V41	390nH
L242	2462587V26	22nH, 5%
L243	2460593C03	Multi-layered Teflon resonator, Rx
L251	2462587V41	390nH
L253	2460593C03	Multi-layered Teflon resonator, Tx
L261	2462587V29	39nH, 5%
L271	2462587V27	27nH, 5%
L273	2462587V25	18nH, 5%
L281	2462587V41	390nH
L282	2462587V41	390nH
L301	2479990B01	11.03nH
L302	2479990B01	11.03nH
L303	2462587V26	22nH, 5%
L304	2462587V37	180nH, 5%
L305	2462587V23	12nH, 5%
L306	2479990B01	11.03nH
L307	2479990B01	11.03nH
L309	2479990C02	16.28nH
L310	2462587V36	150nH, 5%
L311	2462587N65	750nH, 5%
L314	2462587N72	2200nH, 5%
L321	NOT PLACED	
L325	2480646Z20	2.2uH
L330	2462587N64	680nH, 5%
L331	2480646Z20	2.2uH
L332	2462587N53	100nH, 5%
L340	2462587V41	390nH
L400	2462587Q42	390nH
L401	2462587Q42	390nH

Circuit Ref	Motorola Part No.	Description
L410	2462587Q42	390nH
L411	2462587Q42	390nH
L505	2462587Q42	390nH
P100	3905643V01	Ground contact finger
PB501	4080523Z01	Tactile switch, pushbutton
PB502	4080523Z01	Tactile switch, pushbutton
PB503	4080523Z01	Tactile switch, pushbutton
PB504	4080523Z01	Tactile switch, pushbutton
PB505	4080523Z01	Tactile switch, pushbutton
Q110	4813828A09	RF Power Amplifier
Q111	4802245J50	Dual NPN/PNP transistor
Q210	4802245J50	Dual NPN/PNP transistor
Q241	4805218N63	RF NPN transistor
Q260	4802245J50	Dual NPN/PNP transistor
Q261	4802245J50	Dual NPN/PNP transistor
Q301	4802245J44	NPN Transistor
Q302	4802245J44	NPN Transistor
Q310	NOT PLACED	
Q315	4880214G02	NPN Transistor
Q316	NOT PLACED	
Q320	4805218N63	RF NPN transistor
Q400	4809579E18	Mosfet P - channel
Q403	4813824A17	Bipolar Transistor, PNP
Q405	4802245J54	Dual NPN Transistor
Q410	4802245J54	Dual NPN Transistor
Q416	4809579E18	Mosfet P - channel (not used in GP328)
Q417	4802245J50	Dual NPN/PNP transistor
Q502	5180159R01	Dual NPN Transistor
Q505	4880214G02	NPN Transistor
R101	0662057A34	240
R102	0680539Z01	0.1
R104	0662057N15	47K
R106	0662057M26	10
R107	NOT PLACED	
R108	0662057M92	5600
R109	0662057N30	200K
R110	0662057M61	300
R111	0662057M33	20
R112	0662057M61	300
R120	0662057N14	43K
R130	0662057M98	10K
R131	0662057N05	18K
R132	0662057N33	270K
R133	NOT PLACED	
R136	0662057N47	1M
R161	0662057M57	200
R170	0662057A34	240
R171	0662057N14	43K
R172	0662057A32	200
R173	0662057N29	180K
R174	0662057N15	47K
R175	0662057B59	3
R176	0662057B59	3
R191	0662057C01	0
R201	0662057N21	82K

Circuit Ref	Motorola Part No.	Description
R202	0662057N23	100K
R204	0662057N15	47K
R205	NOT PLACED	
R206	NOT PLACED	
R231	0662057M52	120
R232	0662057M69	620
R233	0662057M68	560
R241	0662057M32	18
R242	0662057M52	120
R243	0662057M98	10K
R244	0662057N03	15K
R245	0662057M59	240
R248	0662057M37	30
R251	0662057M38	33
R252	0662057M60	270
R253	0662057M95	7500
R254	0662057M96	8200
R255	0662057M89	4300
R256	0662057M37	30
R260	0662057M74	1000
R281	NOT PLACED	
R300	0662057M82	2200
R301	0662057N23	100K
R302	0662057N23	100K
R303	0662057M78	1500
R304	0662057N01	12K
R305	0662057M66	470
R306	0662057N23	100K
R307	0662057N23	100K
R308	0662057M60	270
R309	0662057M32	18
R310	0662057M60	270
R311	0662057N10	30K
R312	0662057M83	2400
R313	0662057M62	330
R314	0662057M85	3000
R315	0662057N01	12K
R316	0662057A96	91K
R317	0662057M74	1000
R318	0662057A79	18K
R319	0662057A29	150
R320	0662057M74	1000
R321	0662057M83	2400
R322	0662057N30	200K
R324	0662057M81	2000
R325	0662057M94	6800
R326	NOT PLACED	
R327	0662057N11	33K
R328	0662057M12	2.7
R329	0662057M01	0
R330	NOT PLACED	
R331	NOT PLACED	
R332	NOT PLACED	
R333	NOT PLACED	
R334	NOT PLACED	
R335	NOT PLACED	

Circuit Ref	Motorola Part No.	Description
R336	NOT PLACED	
R338	NOT PLACED	
R339	0662057M01	0
R340	0662057M96	8200
R342	0662057N23	100K
R343	0662057M26	10
R344	0662057N01	12K
R345	0662057M98	10K
R346	0662057N17	56K
R347	0662057M74	1000
R348	0662057M87	3600
R349	0662057C01	0
R350	0662057N23	100K
R351	0662057C01	0
R352	0662057M86	3300
R355	0662057M01	0
R400	0662057N15	47K
R401	0662057M01	0
R402	NOT PLACED	
R403	NOT PLACED	
R405	0662057M01	0
R406	0662057N20	75K
R407	0662057N19	68K
R408	NOT PLACED	
R409	0662057M98	10K
R410	0662057N23	100K
R411	0662057M98	10K
R413	0662057M01	0
R414	0662057V34	180K, 1%
R415	0662057V26	91K, 1%
R416	0662057M98	10K
R418	0662057M01	0
R419	0662057M67	510
R420	0662057B46	10M (not used in GP328)
R421	0662057M81	2000
R423	0662057N39	470K
R424	0662057N12	36K
R425	0662057N10	30K
R426	0662057N35	330K (not used in GP328)
R427	0662057M84	2700
R428	0662057M10	2.2
R429	0662057M98	10K
R431	0662057N39	470K
R432	0662057N16	51K
R434	0662057M62	330
R435	0662057M81	2000
R436	0662057M01	0
R437	NOT PLACED	
R445	0662057N08	24K
R447	0662057N23	100K
R448	0662057M98	10K
R449	0662057N08	24K
R450	0683962T45	68 ohms, 1W
R451	0662057N03	15K
R452	0662057N23	100K
R453	NOT PLACED	

Circuit Ref	Motorola Part No.	Description
R454	NOT PLACED	
R455	NOT PLACED	
R456	0662057M01	0
R457	0662057M98	10K
R460	0662057M90	4700
R461	0662057M56	180 (not used in GP328)
R462	0662057M98	10K (not used in GP328)
R463	0662057M61	300
R471	0662057N06	20K
R472	0662057N12	36K
R473	0662057M26	10
R475	0662057M01	0
R476	0662057N35	330K
R477	0662057M74	1000
R478	0662057M98	10K
R481	0662057N08	24K
R492	0662057M01	0
R501	0662057M70	680
R502	0662057M56	180
R505	0662057M98	10K
R506	0662057N15	47K
R507	0662057M01	0
RT300	0680590Z01	THERMISTOR_33K
RT301	NOT PLACED	
RT400	0680590Z01	THERMISTOR_33K
S501	4080710Z01	Frequency switch
S502	1880619Z02	Volume/on-off switch
SH100	2680507Z01	Harmonic Filter shield
SH101	2680510Z01	RF PA shield
SH201	2680511Z01	Synthesizer top shield
SH202	2680511Z01	Synthesizer bottom shield
SH241	2680513Z01	Resonators shield
SH242	2680514Z01	VCO Buffer IC shield
SH301	2680554Z01	Receiver front end shield
SH302	2680555Z01	Receiver front end bottom shield
SH303	2680509Z01	Mixer shield
SH304	2680624Z01	Mixer diode shield
SH321	2680508Z01	LVZIF 2nd LO shield
SH322	2680514Z01	LVZIF shield
SH323	2680553Z01	Crystal Filter shield
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	Controller on-off shield
SH402	2680515Z01	Microprocessor shield
SH403	2680516Z01	Asfic_Cmp/Audio PA shield
T301	2580541Z02	Balun transformer
T302	2580541Z02	Balun transformer
U101	5185130C65	IC VHF/UHF/800 MHZ LDMOS DRIVER
U102	5185765B28	PCIC
U201	5185963A27	LVFRACN Synthesizer IC
U210	5102463J61	Inverter
U211	5102463J61	Inverter
U241	5105750U54	VCO BUFFER IC
U247	5105739X05	SOT 5V Regulator
U248	5102463J58	3.3V Regulator
U301	5109632D83	LVZIF IC

Circuit Ref	Motorola Part No.	Description
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC_CMP IC
U405	NOT PLACED	
U406	*5102463J59	128K x 8 Flash Memory
U407	*5102463J64	16K x 8 EEPROM
U409	5102226J56	Microprocessor
U410	5102463J57	3.3V Regulator (not used in GP328)
U420	5102463J44	Audio PA
VR300	NOT PLACED	
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J73	ZENER DIODE-6.8V
VR439	4880140L17	Zener diode-12V
VR440	4802245J73	ZENER DIODE-6.8V
VR441	4802245J73	ZENER DIODE-6.8V
VR442	4802245J73	ZENER DIODE-6.8V
VR443	4802245J73	ZENER DIODE-6.8V
VR444	4802245J73	ZENER DIODE-6.8V
VR445	4802245J53	ZENER DIODE-10V
VR446	4802245J74	ZENER DIODE-10V
VR447	4802245J74	ZENER DIODE-10V
VR448	4802245J74	ZENER DIODE-10V
VR449	4802245J74	ZENER DIODE-10V
VR450	4802245J75	ZENER DIODE-12V
VR460	4802245J73	ZENER DIODE-6.8V
VR501	4813830A18	6.8V Zener
VR506	4802245J73	ZENER DIODE-6.8V
Y201	NOT PLACED	
	8485641Z06	UHF B2 main PC board

* Motorola Depot Servicing only

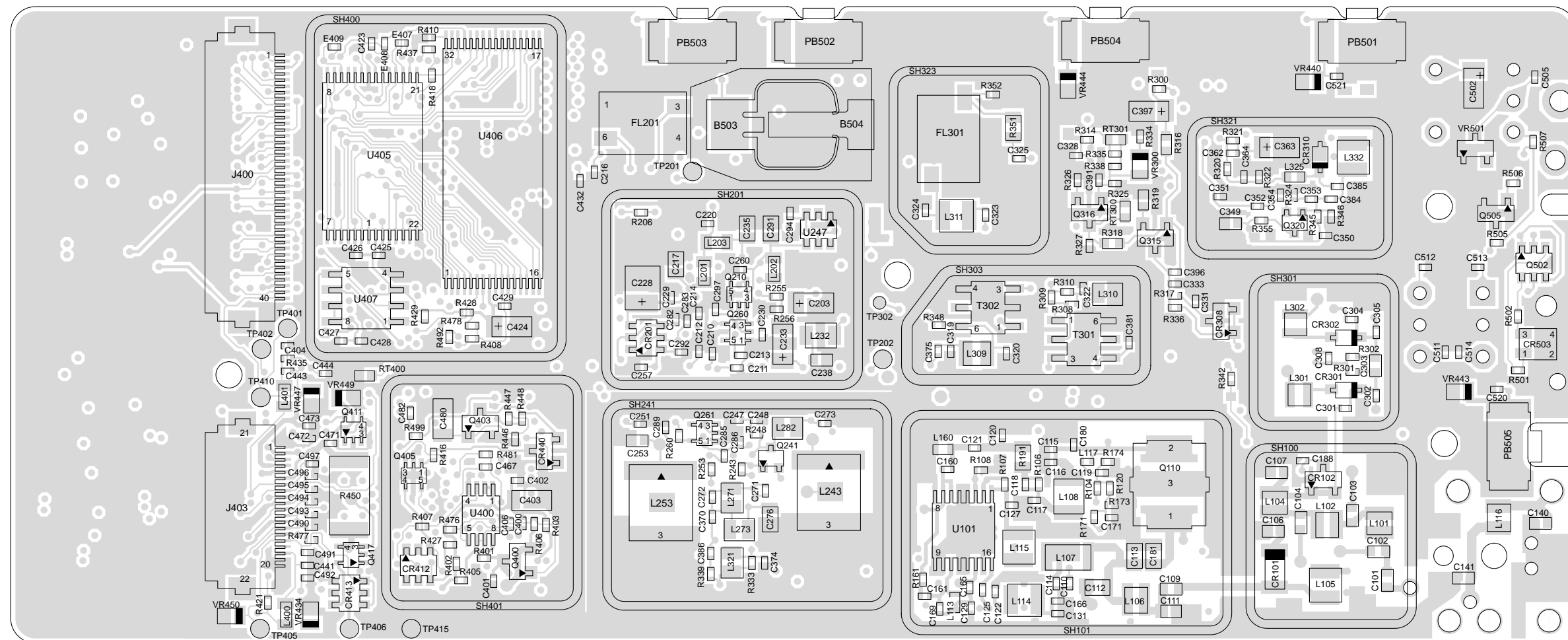
Note: Tolerance

Capacitor - 5% unless specified otherwise

Inductor - 10% unless specified otherwise

Resistor - 5% unless specified otherwise

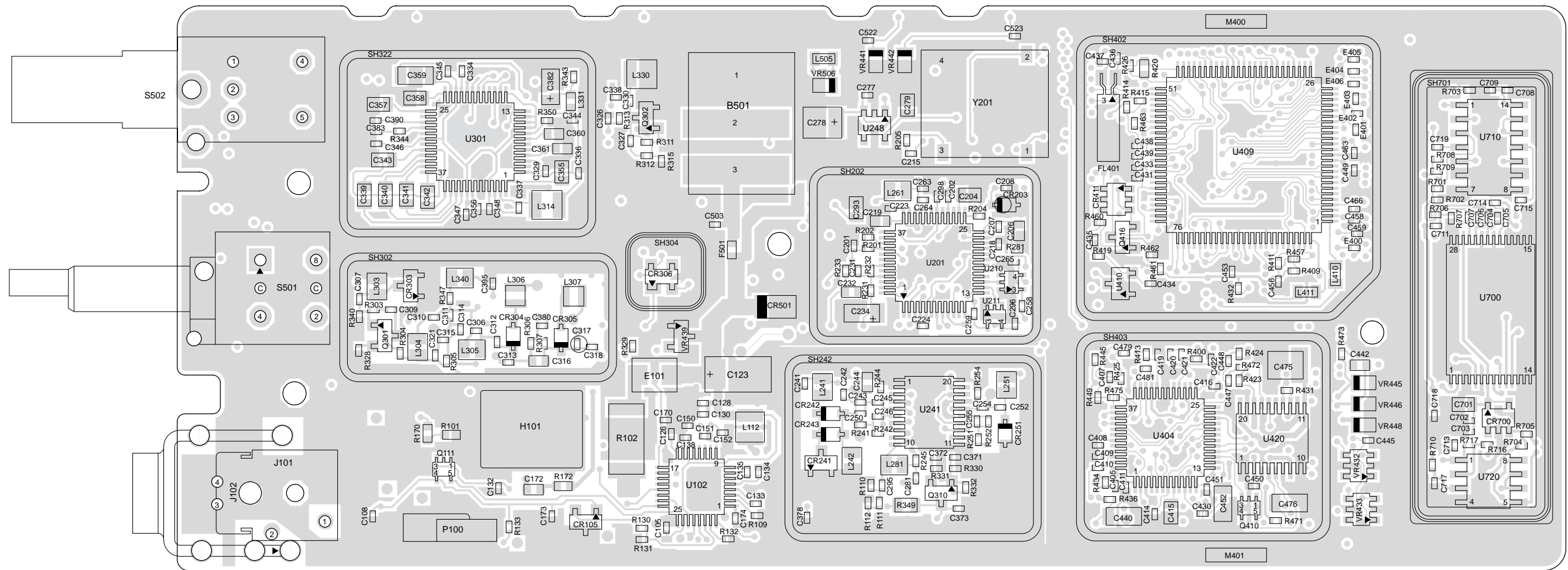
VIEWED FROM SIDE 1



ZMY0130258-O

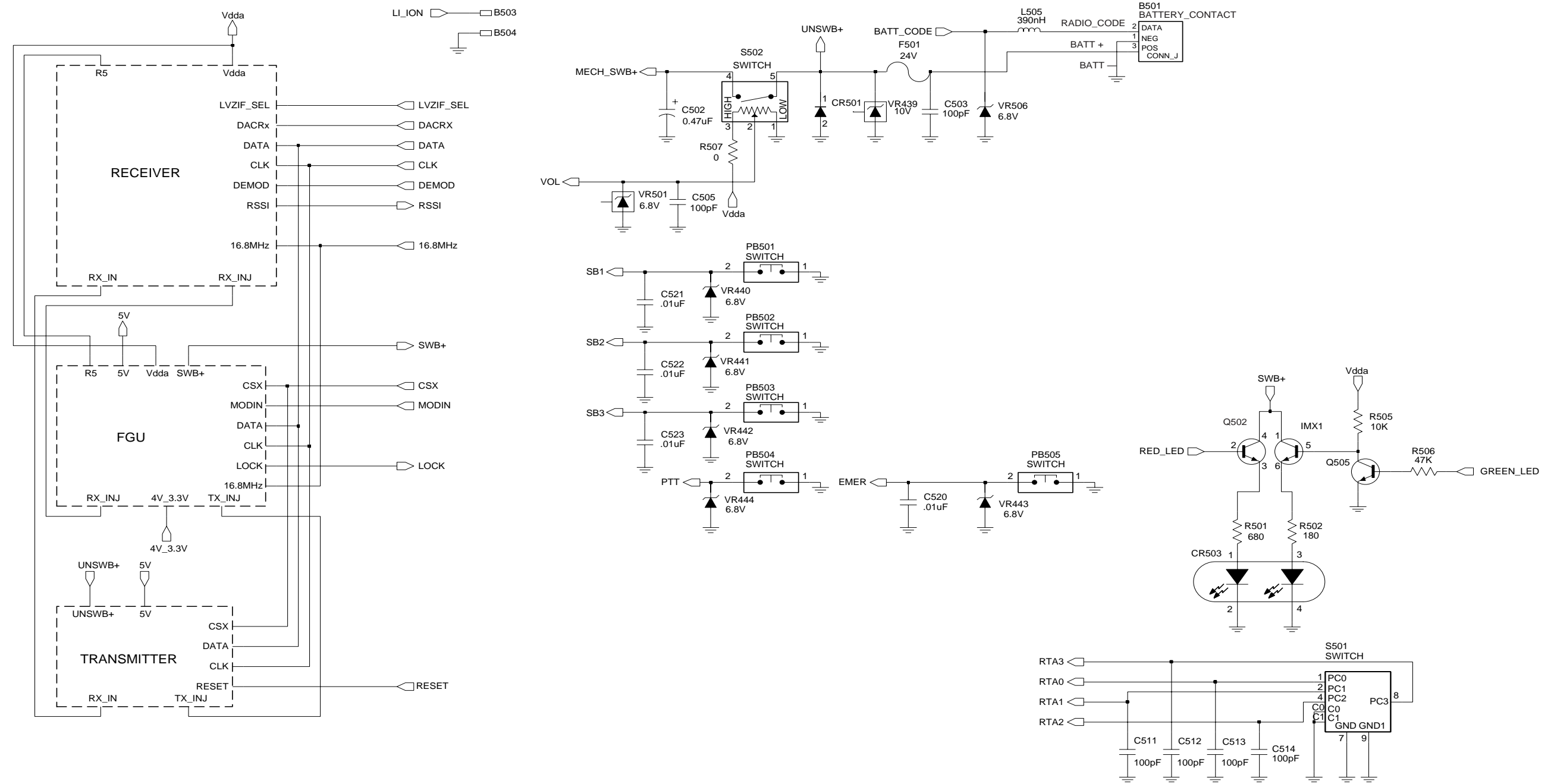
Figure 4-45: UHF (450-527 MHz) 9000 Series Main Board Top Side PCB

VIEWED FROM SIDE 2



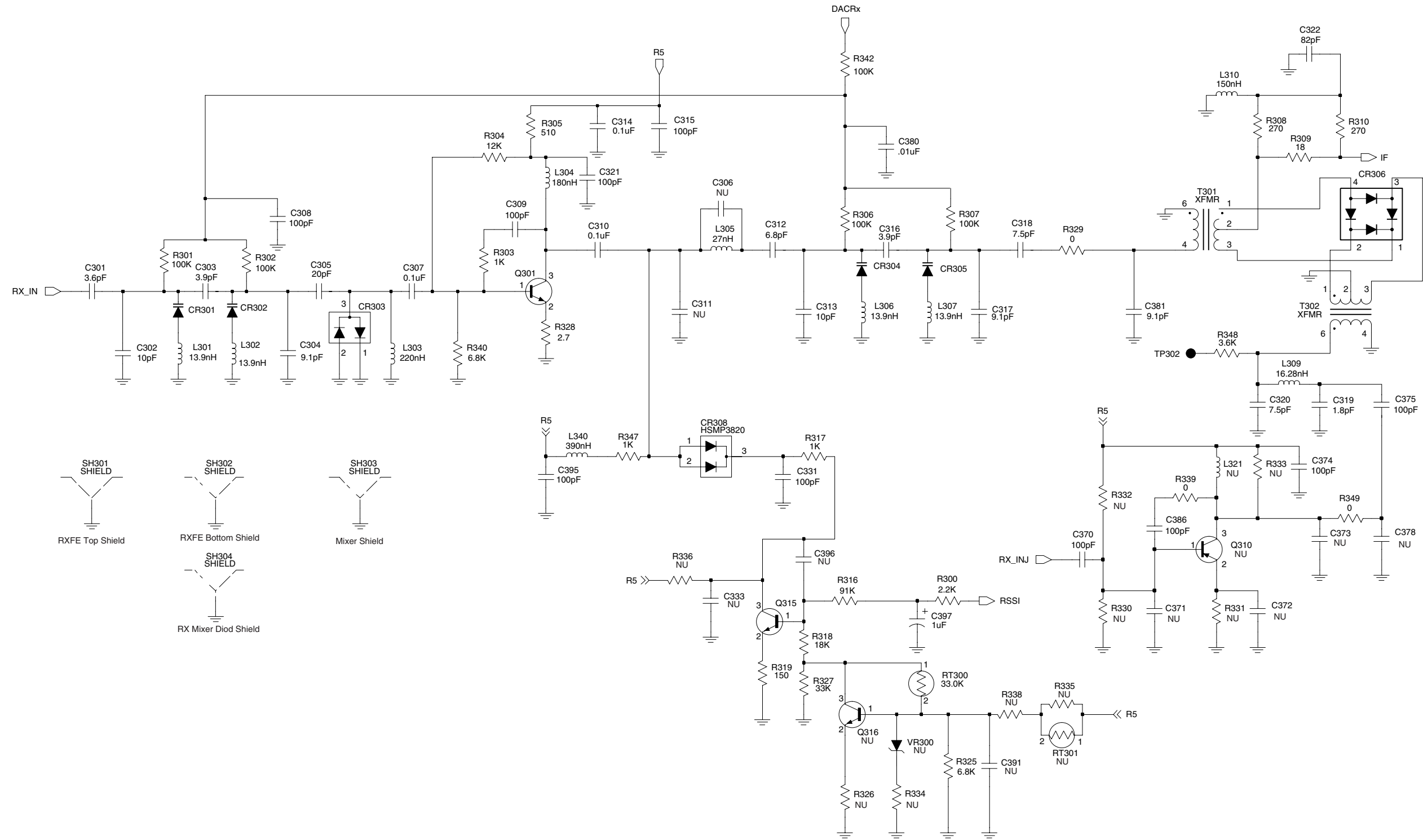
ZMY0130259-O

Figure 4-46: UHF (450-527 MHz) 9000 Series Main Board Bottom Side PCB



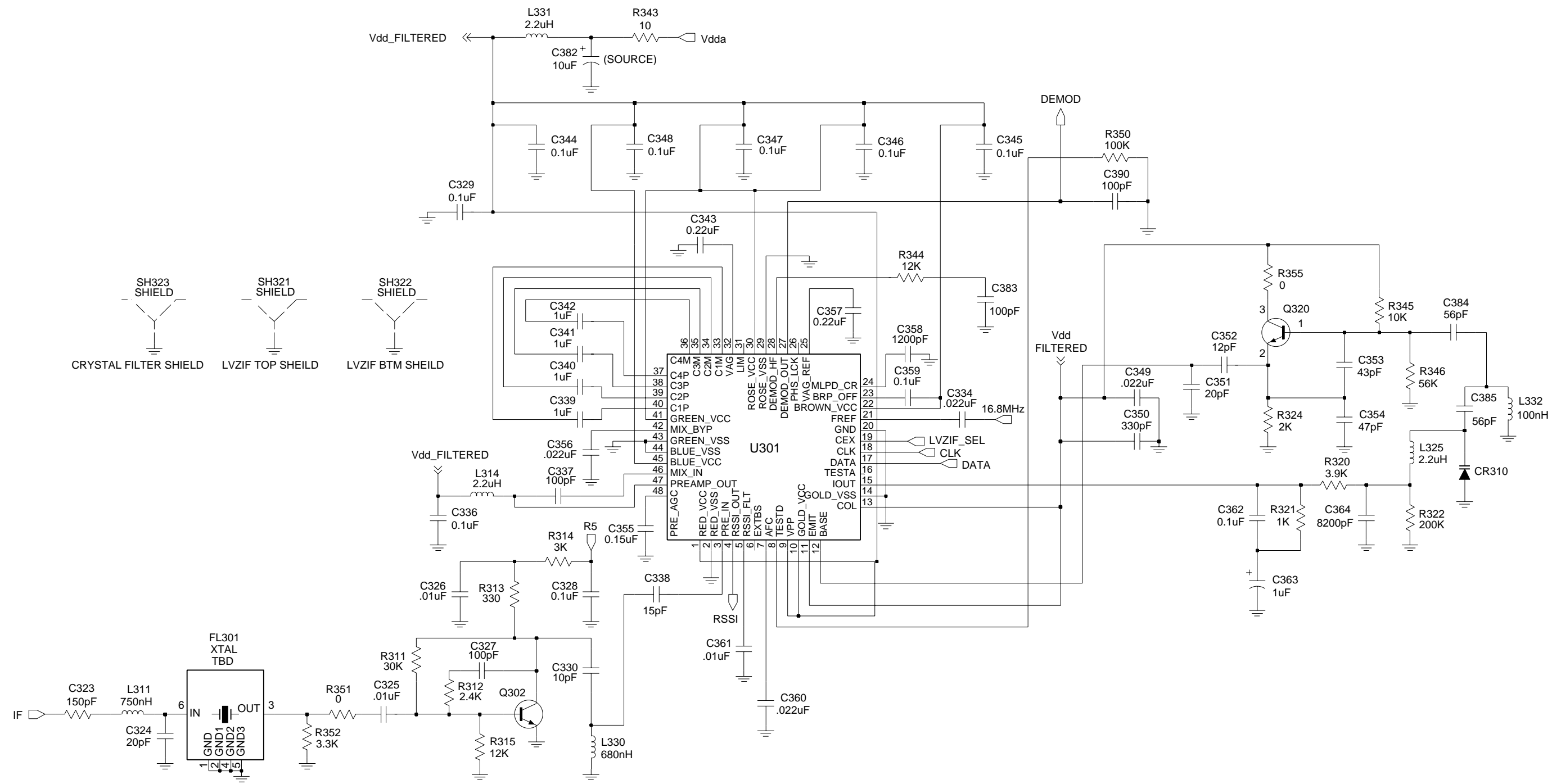
FL08307410

Figure 4-47: UHF (450-527 MHz) Controls and Switches Schematic Diagram



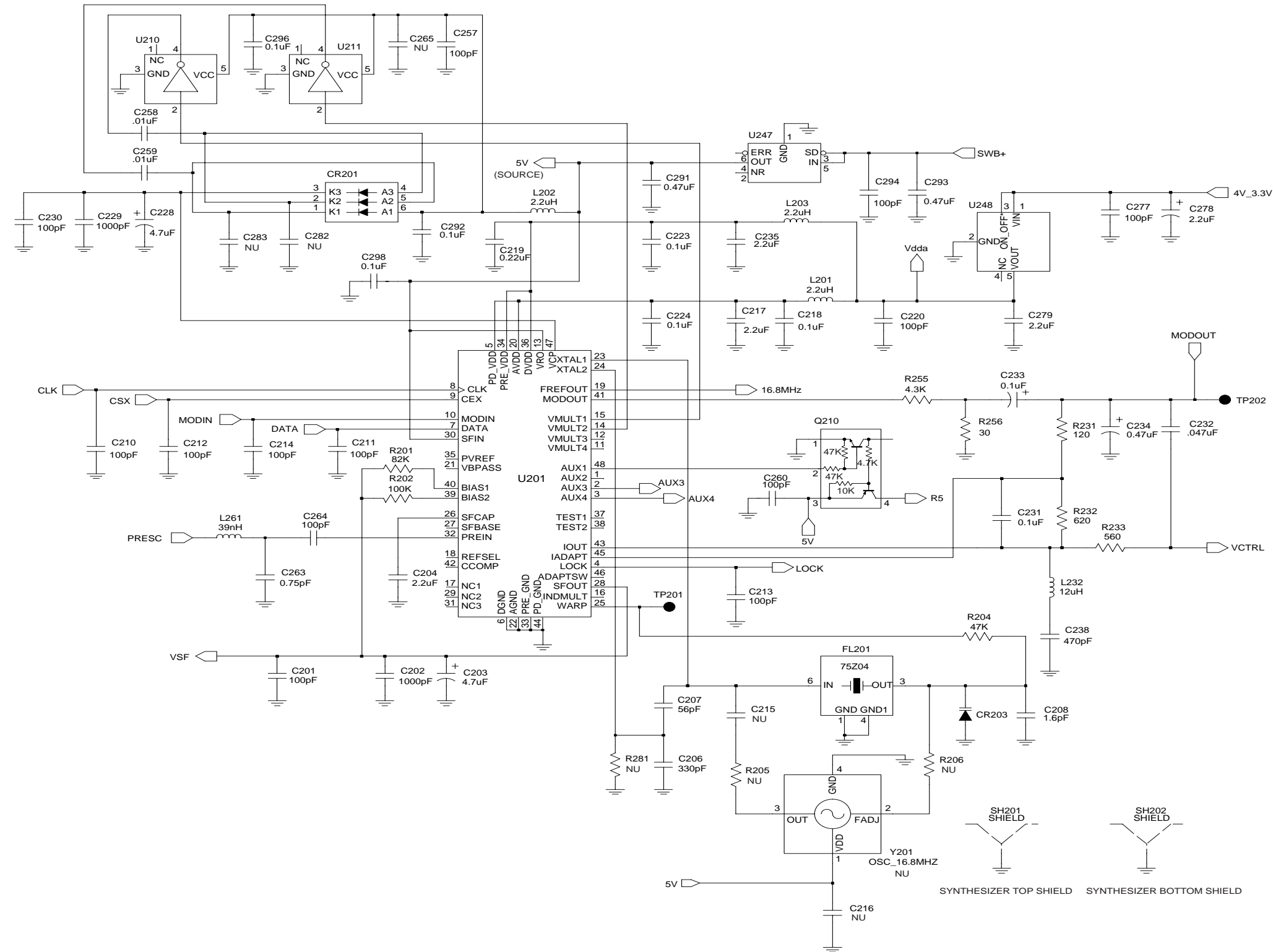
FL08307420

Figure 4-48: UHF (450-527 MHz) Receiver Front End Schematic Diagram



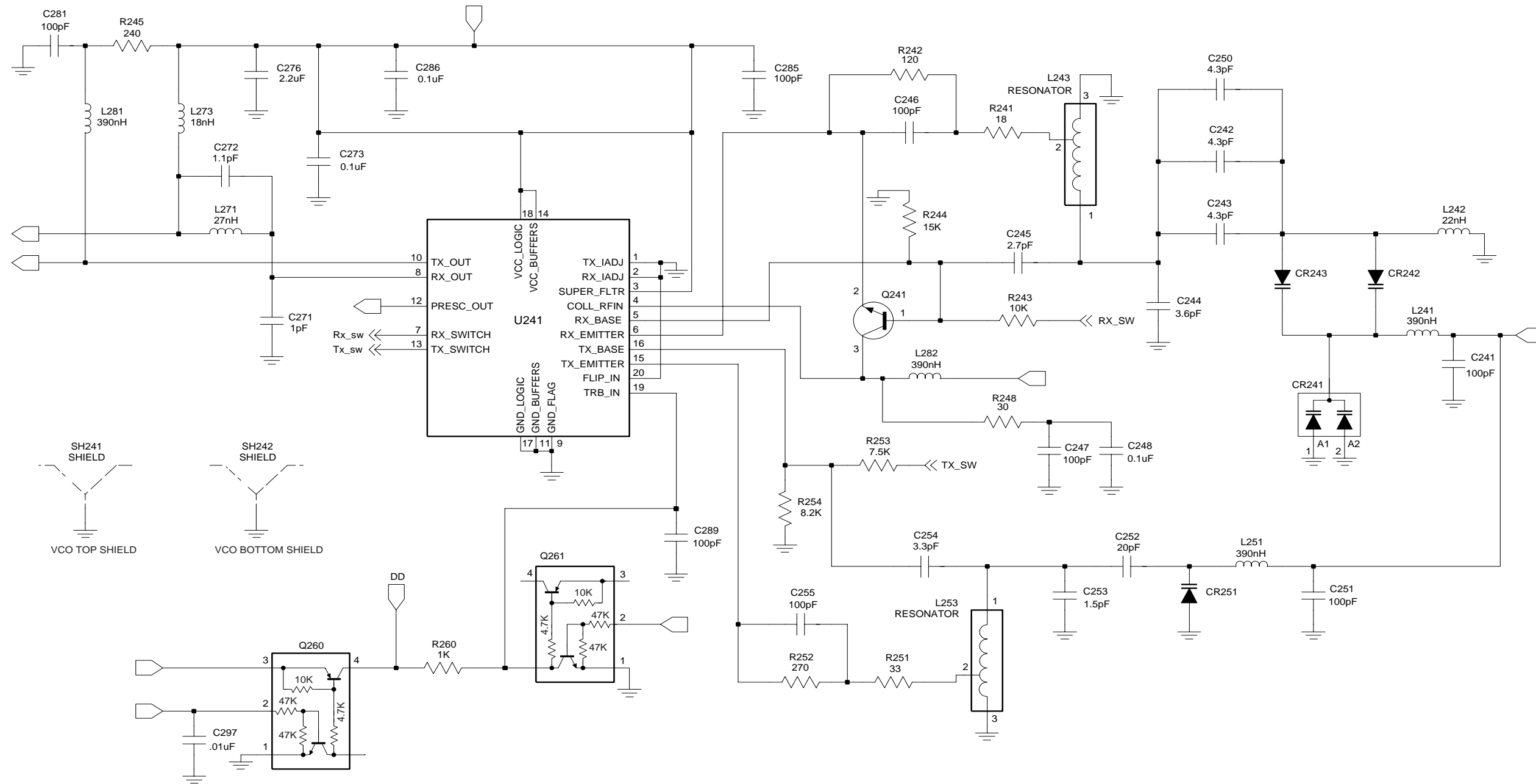
FL08307430

Figure 4-49: UHF (450-527 MHz) Receiver Back End Schematic Diagram



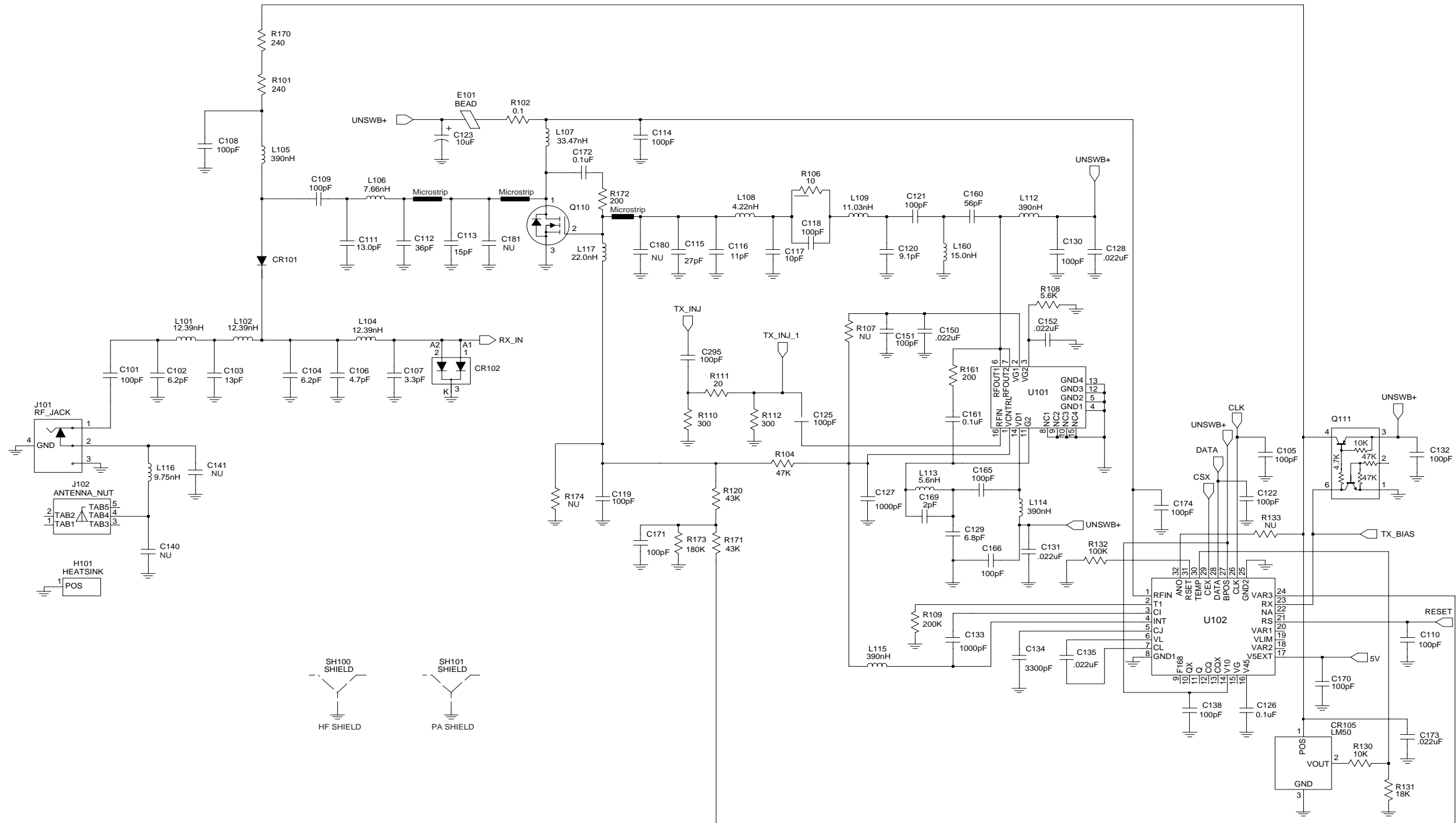
FL08307510

Figure 4-50: UHF (450-527 MHz) Synthesizer Schematic Diagram



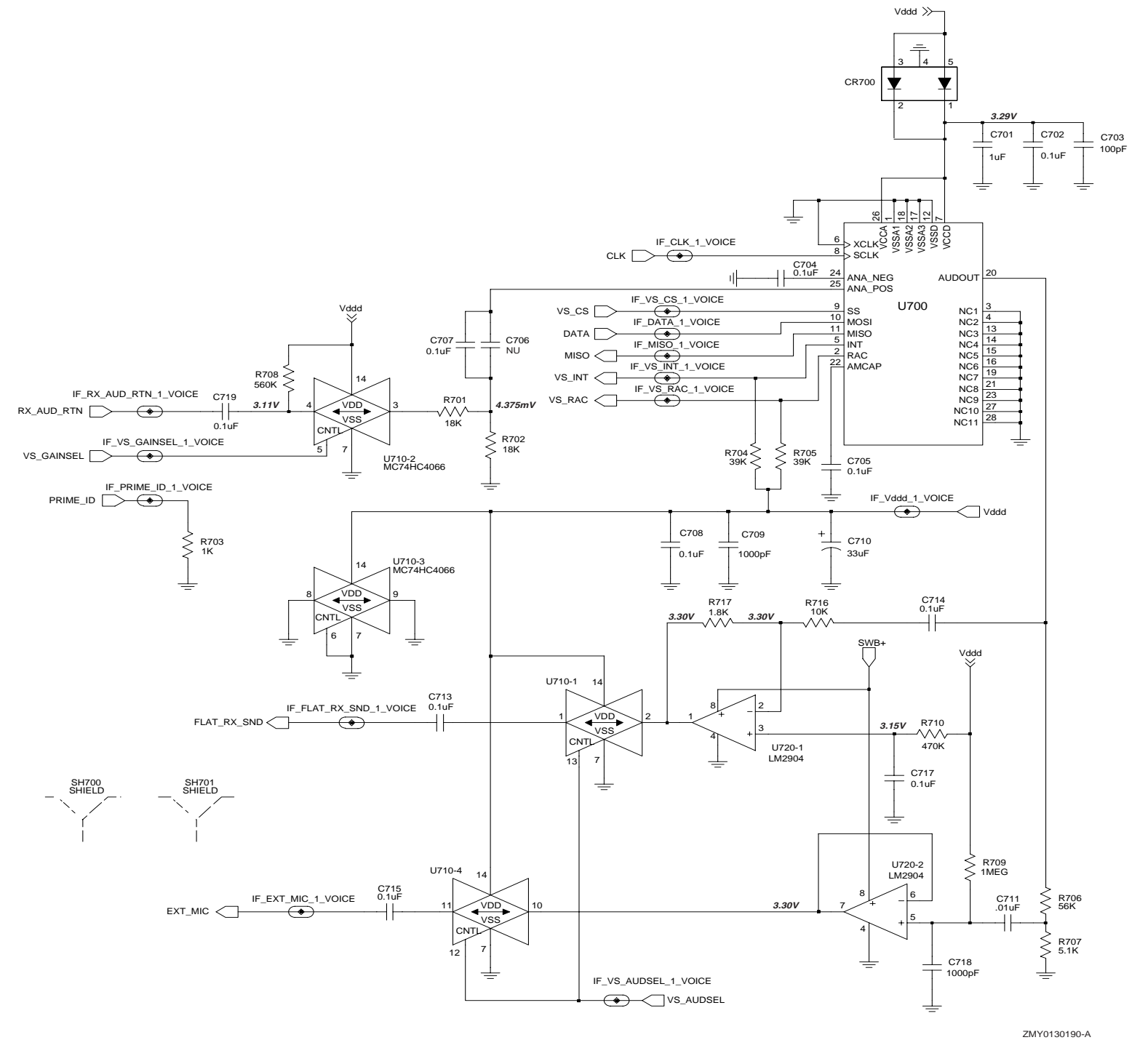
FL08307520

Figure 4-51: UHF (450-527 MHz) Voltage Controlled Oscillator Schematic Diagram



FL08307460

Figure 4-52: UHF (450-527 MHz) Transmitter Schematic Diagram



ZMY0130190-A

Figure 4-53: UHF (450-527 MHz) Voice Storage Schematic Diagram

UHF (450-527 MHz) 9000 Series Radio Parts List

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
C101	2113740F51	100pF
C102	2113740F22	6.2pF
C103	2113740F27	10pF
C104	2113740F22	6.2pF
C105	2113743N50	100pF
C106	2113740F19	4.7pF
C107	2113740F15	3.3pF
C108	2113743N50	100pF
C109	2113740F51	100pF
C110	2113743N50	100pF
C111	2113740F30	13pF
C112	2180605Z32	47pF
C113	2180605Z16	10pF
C114	2113743N50	100pF
C115	2113743N30	15.0pF
C116	2113743N38	33.0pF
C117	2113743N37	30.0pF
C118	2113743N50	100pF
C119	2113743N50	100pF
C120	2113743N26	10pF
C121	2113743N50	100pF
C122	2113743N50	100pF
C123	2311049A18	10uF
C125	2113743N50	100pF
C126	2113743M24	0.1uF
C127	2113743L17	1000pF
C128	2113743M08	0.022uF
C129	2113743N23	7.5pF
C130	2113743N50	100pF
C131	2113743M08	0.022uF
C132	2113743N50	100pF
C133	2113743L17	1000pF
C134	2113743L29	3300pF
C135	2113743M08	0.022uF
C138	2113743N50	100pF
C150	2113743M08	0.022uF
C151	2113743N50	100pF
C152	2113743M08	0.022uF
C160	2113743N50	100pF
C161	2113743M24	0.1uF
C165	2113743N50	100pF
C166	2113743N50	100pF
C169	2113743N20	5.6pF
C170	2113743N50	100pF
C171	2113743N50	100pF
C172	2113740F51	100pF
C173	2113743M08	0.022uF
C174	2113743N50	100pF
C201	2113743N50	100pF
C202	2113743L17	1000pF
C203	2311049A56	4.7pF

Circuit Ref	Motorola Part No.	Description
C204	2104993J02	2.2uF
C206	2113740F63	330pF
C207	2113743N44	56.0pF
C208	2113743N08	1.6pF
C210	2113743N50	100pF
C211	2113743N50	100pF
C212	2113743N50	100pF
C213	2113743N50	100pF
C214	2113743N50	100pF
C217	2104993J02	2.2uF
C218	2113743M24	0.1uF
C219	2113743K16	0.220uF
C220	2113743N50	100pF
C223	2113743M24	0.1uF
C224	2113743M24	0.1uF
C228	2311049J11	4.7uF
C229	2113743L17	1000pF
C230	2113743N50	100pF
C231	2113743M24	0.1uF
C232	2113743E12	0.047uF
C233	2311049A01	0.1pF
C234	2311049A05	0.47pF
C235	2104993J02	2.2uF
C238	2113741F17	470pF
C241	2113743N50	100pF
C242	2113743N23	7.5pF
C243	2113743N23	7.5pF
C244	2113740F10	2.0pF
C245	2113743N11	2.4pF
C246	2113743N50	100pF
C247	2113743N50	100pF
C248	2113743M24	0.1uF
C250	2113743N23	7.5pF
C251	2113743N50	100pF
C252	2113743N26	10pF
C253	2113740F09	1.8pF
C254	2113743N15	3.6pF
C255	2113743N50	100pF
C257	2113743N50	100pF
C258	2113743L41	0.01uF
C259	2113743L41	0.01uF
C260	2113743N50	100pF
C263	2113743N02	0.75pF
C264	2113743N50	100pF
C273	2113743M24	0.1uF
C276	2104993J02	2.2uF
C277	2113743N50	100pF
C278	2311049A09	2.2uF
C279	2104993J02	2.2uF
C281	2113743N50	100pF
C285	2113743N50	100pF
C286	2113743M24	0.1uF
C289	2113743N50	100pF
C291	2311049A69	10.0uF
C292	2113743M24	0.1uF
C293	2113743A27	0.470uF

Circuit Ref	Motorola Part No.	Description
C294	2113743N50	100pF
C295	2113743N50	100pF
C296	2113743M24	0.1uF
C297	2113743L41	0.01uF
C298	2113743M24	0.1uF
C301	2113743N15	3.6pF
C302	2113743N26	10pF
C303	2113740L08	3.9pF
C304	2113743N26	10pF
C305	2113743N33	20.0pF
C307	2113743M24	0.1uF
C308	2113743N50	100pF
C309	2113743N50	100pF
C310	2113743M24	0.1uF
C312	2113743N25	9.1pF
C313	2113743N26	10pF
C314	2113743M24	0.1uF
C315	2113743N50	100pF
C316	2113740L08	3.9pF
C317	2113743N25	9.1pF
C318	2113743N23	7.5pF
C319	2113743N69	1.8pF
C320	2113743N23	7.5pF
C321	2113743N50	100pF
C322	2113743N48	82.0pF
C323	2113743N54	150pF
C324	2113743N33	20.0pF
C325	2113743L41	0.01uF
C326	2113743L41	0.01uF
C327	2113743N50	100pF
C328	2113743M24	0.1uF
C329	2113743M24	0.1uF
C330	2113743N26	10pF
C331	2113743N50	100pF
C334	2113743M08	0.022uF
C336	2113743M24	0.1uF
C337	2113743N50	100pF
C338	2113743N30	15.0pF
C339	2180478Z20	1.0uF
C340	2180478Z20	1.0uF
C341	2180478Z20	1.0uF
C342	2180478Z20	1.0uF
C343	2113743A23	0.220uF
C344	2113743M24	0.1uF
C345	2113743M24	0.1uF
C346	2113743M24	0.1uF
C347	2113743M24	0.1uF
C348	2113743M24	0.1uF
C349	2113743E07	0.022uF
C350	2113743L05	330pF
C351	2113743N33	20.0pF
C352	2113743N28	12.0pF
C353	2113743N41	43.0pF
C354	2113743N42	47.0pF
C355	2113743A24	0.330uF
C356	2113743M08	0.022uF

Circuit Ref	Motorola Part No.	Description
C357	2113743A23	0.220uF
C358	2113741A23	1200pF
C359	2109720D14	0.1uF
C360	2113743E07	0.022uF
C361	2113741F49	10NF
C362	2113743M08	0.022uF
C363	2311049A40	2.2uF
C364	2113743L41	0.01uF
C370	2113743N50	100pF
C374	2113743N50	100pF
C375	2113743N50	100pF
C380	2113743L41	0.01uF
C381	2113743N21	6.2pF
C382	2311049A59	10uF
C383	2113743N50	100pF
C384	2113743N44	56.0pF
C385	2113743N44	56.0pF
C386	2113743N50	100pF
C390	2113743N50	100pF
C395	2113743N50	100pF
C397	2311049A05	0.47pF
C400	2113743L41	0.01uF
C401	2113743M24	0.1uF
C402	2113743M24	0.1uF
C403	2113928D08	10.0uF
C407	2113928N01	0.1uF
C408	2113743N50	100pF
C409	2113743M24	0.1uF
C410	2113928N01	0.1uF
C411	2113743M24	0.1uF
C414	2113743M24	0.1uF
C415	2109720D01	0.01uF
C416	2113928N01	0.1uF
C420	2113743L41	0.01uF
C421	2113928N01	0.1uF
C422	2113743M24	0.1uF
C423	2113743N50	100pF
C424	2311049A59	10uF
C425	2113743M24	0.1uF
C426	2113743N50	100pF
C427	2113743N50	100pF
C428	2113743M24	0.1uF
C429	2113743M24	0.1uF
C430	2113928N01	0.1uF
C431	2113743N50	100pF
C433	2113743L41	0.01uF
C434	2113743M24	0.1uF (not used in PRO5150 and HT750)
C435	2113743M24	0.1uF
C436	2113743N34	22.0pF (not used in PRO5150 and HT750)
C437	2113743N34	22.0pF (not used in PRO5150 and HT750)
C440	2113743G26	4.7uF
C441	2113743N50	100pF
C442	2113743E20	10uF

Circuit Ref	Motorola Part No.	Description
C443	2113928N01	0.1uF
C444	2113743N50	100pF
C445	2113743N50	100pF
C447	2113743M08	0.022uF
C448	2113928N01	0.1uF
C449	2113743N50	100pF
C451	2113743M08	0.022uF
C452	2113743G26	4.7uF
C453	2113743N50	100pF
C456	2113743N50	100pF
C458	2113743N50	100pF
C459	2113743N50	100pF
C463	2113743N50	100pF
C466	2113743N50	100pF
C467	2113928N01	0.1uF
C471	2113743N50	100pF
C472	2113743L09	470pF
C473	2113743L09	470pF
C475	2113743H14	10.0uF
C476	2113928D08	10.0uF
C479	2113928N01	0.1uF
C480	2113928D08	10.0uF
C481	2113928N01	0.1uF
C482	2113928N01	0.1uF
C490	2113743N50	100pF
C491	2113743N50	100pF
C492	2113743N50	100pF
C493	2113743N50	100pF
C494	2113743N50	100pF
C495	2113743N50	100pF
C496	2113743N50	100pF
C497	2113743N50	100pF
C502	2311049A05	0.47pF
C503	2113743N50	100pF
C505	2113743N50	100pF
C511	2113743N50	100pF
C512	2113743N50	100pF
C513	2113743N50	100pF
C514	2113743N50	100pF
C520	2113743L41	0.01uF
C521	2113743L41	0.01uF
C522	2113743L41	0.01uF
C523	2113743L41	0.01uF
CR101	4880973Z02	Pin Diode
CR102	4802245J41	Pin Diodes
CR105	5185963A15	Temperature Sense
CR201	4802233J09	Diode Triple
CR203	4862824C03	Varactor
CR241	4805649Q13	Dual Varactor
CR242	4862824C01	Varactor
CR243	4862824C01	Varactor
CR251	4802245J22	Varactor
CR301	4862824C01	Varactor
CR302	4862824C01	Varactor
CR303	4880154K03	Dual Common Anode-cathode
CR304	4862824C01	Varactor

Circuit Ref	Motorola Part No.	Description
CR305	4862824C01	Varactor
CR306	4802245J42	Ring Quad Diode
CR308	4802245J41	Pin Diodes
CR310	4862824C01	Varactor
CR411	4802245J47	Diode Schottky
CR412	4802245J47	Diode Schottky
CR413	4802245J47	Diode Schottky
CR440	4813833C02	Dual Diode Common Cathode
CR501	4880107R01	Rectifier
CR503	4805729G49	Led Red/yellow
E101	2484657R01	Ferrite Bead
E400	2480640Z01	Ferrite Bead
E401	2480640Z01	Ferrite Bead
E402	2480640Z01	Ferrite Bead
E403	2480640Z01	Ferrite Bead
E404	2480640Z01	Ferrite Bead
E405	2480640Z01	Ferrite Bead
E406	2480640Z01	Ferrite Bead
E407	2480640Z01	Ferrite Bead
E408	2480640Z01	Ferrite Bead
E409	2480640Z01	Ferrite Bead
F501	6580542Z01	Fuse 3A
FL201	4802245J49	16.8 MHz Xtal Clip (not field serviceable)
FL301	4802245J43	Crystal Filter 45.1 MHz
FL401	4870368G02	Clock Oscillator Crystal (not used in PRO5150 and HT750)
H101	2680499Z01	Heat Spreader
J101	0180117S05	RF Jack Assembly
J102	0280519Z02	Nut, Antenna
J400	0905505Y04	40 Pin Connector
J403	0905505Y02	20 Pin Connector
L101	2479990B02	19.61nH
L102	2479990B02	19.61nH
L104	2479990B02	19.61nH
L105	2462587N22	390nH
L106	2479990A02	7.66nH
L107	2479990G01	33.47nH
L108	2479990A01	4.22nH
L109	2479990B01	11.03nH
L112	2462587N45	22nH
L113	2413926H09	5.6nH
L114	2462587N22	390nH
L115	2462587N22	390nH
L116	2479990A03	9.75nH
L160	2413926H14	15.0nH
L201	2462587Q20	2.2uH
L202	2462587Q20	2.2uH
L203	2462587Q20	2.2uH
L232	2462587P25	12uH
L241	2462587V41	390nH
L242	2462587V38	220nH
L243	2460593C01	Teflon Resonator
L251	2462587V28	33nH
L253	2460593C02	Teflon Resonator
L261	2462587V29	39nH

Circuit Ref	Motorola Part No.	Description
L271	2462587V32	68nH
L273	2462587V28	33nH
L281	2462587V41	390nH
L282	2462587V41	390nH
L301	2479990C01	13.9nH
L302	2479990C01	13.9nH
L303	2462587V26	22nH
L304	2462587V37	180nH
L305	2462587V26	22nH
L306	2479990C01	13.9nH
L307	2479990C01	13.9nH
L309	2479990C02	16.2nH
L310	2462587V36	150nH
L311	2462587N65	750nH
L314	2462587N72	2.2uH
L325	2480646Z20	2.20uH
L330	2462587N64	680nH
L331	2480646Z20	2.20uH
L332	2462587N53	100nH
L340	2462587V41	390nH
L400	2462587Q42	390nH
L401	2462587Q42	390nH
L410	2462587Q42	390nH
L411	2462587Q42	390nH
L505	2462587Q42	390nH
P100	3905643V01	Ground Contact Finger
PB501	4080523Z01	Tactile Push Button
PB502	4080523Z01	Tactile Push Button
PB503	4080523Z01	Tactile Push Button
PB504	4080523Z01	Tactile Push Button
PB505	4080523Z01	Tactile Push Button
Q110	4802245J55	RF Power Fet
Q111	4802245J50	Dual NPN/PNP
Q210	4802245J50	Dual NPN/PNP
Q241	4805218N63	NPN
Q260	4802245J50	Dual NPN/PNP
Q261	4802245J50	Dual NPN/PNP
Q301	4802245J44	NPN
Q302	4802245J44	NPN
Q315	4880214G02	NPN
Q320	4805218N63	NPN
Q400	4809579E18	MOSFET P-Chan
Q403	4880214G02	NPN
Q405	4802245J54	Dual NPN
Q410	4802245J54	dual NPN
Q416	4809579E18	MOSFET P-Chan
Q417	4802245J50	Dual NPN/PNP
Q502	5180159R01	Dual NPN
Q505	4880214G02	NPN
R101	0662057A34	240
R102	0680735Z01	0.075
R103	0662057M41	43
R104	0662057N15	47K
R106	0662057M26	10
R108	0662057M92	5.6K
R109	0662057N30	200K

Circuit Ref	Motorola Part No.	Description
R110	0662057M61	300
R111	0662057M33	20
R112	0662057M61	300
R120	0662057N14	43K
R130	0662057M98	10K
R131	0662057N05	18K
R132	0662057N33	270K
R161	0662057M57	200
R170	0662057A34	240
R171	0662057N14	43K
R172	0662057A32	200
R173	0662057N29	180K
R201	0662057N21	82K
R202	0662057N23	100K
R204	0662057N15	47K
R231	0662057M52	120
R232	0662057M69	620
R233	0662057M68	560
R241	0662057M32	18
R242	0662057M57	200
R243	0662057M98	10K
R244	0662057N01	12K
R245	0662057M59	240
R248	0662057M37	30
R251	0662057M32	18
R252	0662057M62	330
R253	0662057M95	7.5K
R254	0662057M95	6.8K
R255	0662057M89	4.3K
R256	0662057M37	30
R260	0662057M74	1K
R300	0662057M82	2.2K
R301	0662057N23	100K
R302	0662057N23	100K
R303	0662057M74	1K
R304	0662057N01	12K
R305	0662057M67	0
R306	0662057N23	100K
R307	0662057N23	100K
R308	0662057M60	270
R309	0662057M32	18
R310	0662057M60	270
R311	0662057N10	30K
R312	0662057M83	2.4K
R313	0662057M62	330
R314	0662057M85	3K
R315	0662057N01	12K
R316	0662057A96	91K
R317	0662057M74	1K
R318	0662057A79	18K
R319	0662057A29	150
R320	0662057M74	1K
R321	0662057M83	2.4K
R322	0662057N30	200K
R324	0662057M81	2K
R325	0662057M94	6.8K

Circuit Ref	Motorola Part No.	Description
R327	0662057N11	33K
R328	0662057M12	2.7
R329	0662057M01	0
R339	0662057M01	0
R340	0662057M94	6.8K
R342	0662057N23	100K
R343	0662057M26	10
R344	0662057N01	12K
R345	0662057M98	10K
R346	0662057N17	56K
R347	0662057M74	1K
R348	0662057M87	3.6K
R349	0662057C01	0
R350	0662057N23	100K
R351	0662057C01	0
R352	0662057M86	3.3K
R355	0662057M01	0
R400	0662057N15	47K
R401	0662057M01	0
R405	0662057M01	0
R406	0662057N20	75K
R407	0662057N19	68K
R409	0662057M98	10K
R410	0662057N23	100K
R411	0662057M98	10K
R413	0662057M01	0
R414	0662057V34	180K
R415	0662057V26	91K
R416	0662057N13	39K
R418	0662057M01	0
R419	0662057M67	0 (not used in PRO5150 and HT750)
R420	0662057B46	10.0 MEG (not used in PRO5150 and HT750)
R421	0662057M81	2K
R423	0662057N39	470K
R424	0662057N12	36K
R425	0662057N10	30K
R426	0662057N35	330K (not used in PRO5150 and HT750)
R427	0662057M84	2.7K
R428	0662057M10	2.2
R429	0662057M98	10K
R431	0662057N39	470K
R432	0662057N16	51K
R434	0662057M62	330
R435	0662057M81	2K
R436	0662057M01	0
R445	0662057N08	24K
R446	0662057N31	220K
R447	0662057N51	1.5MEG
R448	0662057N33	270K
R449	0662057N08	24K
R450	0683962T45	68
R457	0662057M98	10K
R460	0662057M90	4.7K

Circuit Ref	Motorola Part No.	Description
R461	0662057M56	180 (not used in PRO5150 and HT750)
R462	0662057M98	10K (not used in PRO5150 and HT750)
R463	0662057M61	300
R471	0662057M92	5.6K
R472	0662057N12	36K
R473	0662057M26	10
R475	0662057M01	0
R476	0662057N08	24K
R477	0662057M74	1K
R478	0662057M98	10K
R481	0662057N08	24K
R492	0662057M01	0
R501	0662057M70	680
R502	0662057M56	180
R505	0662057M98	10K
R506	0662057N15	47K
R507	0662057M01	0
RT300	0680590Z01	Thermistor 33K
RT400	0680590Z01	Thermistor 33K
S501	4080710Z01	Channel Switch
S502	1880619Z01	Volume Switch
SH100	2680507Z01	Shield, Harmonic Filter
SH101	2680510Z01	Shield, Pa
SH201	2680511Z01	Synthesizer Top Shield
SH202	2680511Z01	Synthesizer Bottom Shield
SH241	2680513Z01	Shield, VCO Top
SH242	2680514Z01	Shield, VCO Bottom/LVZIF
SH301	2680554Z01	RX Pre Filter Shield
SH302	2680555Z01	RX Post Filter/RX Amp
SH303	2680509Z01	Shield, Mixer
SH304	2680624Z01	Shield, Mixer Diode
SH321	2680508Z01	Shield, LVZIF 2nd LO
SH322	2680514Z01	ZIF Shield
SH323	2680553Z01	Shield, Crystal Filter
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	On/off Controller Shield
SH402	2680515Z01	Microprocessor Controlled Shield
SH403	2680516Z01	Audio PA Controller Shield
T301	2580541Z01	Transformer Coil
T302	2580541Z01	Transformer Coil
U101	5105109Z67	LDMOS Driver UHF IC
U102	5185765B01	Power Control IC
U201	5185963A27	LVFRACN
U210	5102463J61	Inverter
U211	5102463J61	Inverter
U241	5105750U54	VCO Buffer
U247	5105739X05	Regulator Linear
U248	5102463J58	3.3v Regulator
U301	5109632D83	LVZIF 2.2
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC CMP
U405	5102463J36	Static RAM 32KX8 I
U406	*5102463J59	Flash ROM 128KX8

Circuit Ref	Motorola Part No.	Description
U407	*5102463J64	16K X 8 EEPROM (not used in PRO5150 and HT750)
	*5102463J62	8KX 8 EEPROM not used in GP338
U409	5102226J56	Microprocessor HC11FLO
U410	5102463J57	Regulator 3.3V (not used in PRO5150 and HT750)
U420	5102463J44	Audio PA
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J51	Zener 6.8V
VR439	4880140L15	10V Zener
VR440	4802245J51	Zener 6.8V
VR441	4802245J51	Zener 6.8V
VR442	4802245J51	Zener 6.8V
VR443	4802245J51	Zener 6.8V
VR444	4802245J51	Zener 6.8V
VR445	4802245J53	Zener 10V
VR446	4802245J53	Zener 10V
VR447	4802245J53	Zener 10V
VR448	4802245J53	Zener 10V
VR449	4802245J53	Zener 10V
VR450	4802245J53	Zener 10V
VR501	4813830A18	6.8V Zener
VR506	4802245J51	Zener 6.8V
	7580671Z01	Pad (Flexible Circuit)
	7580671Z01	Pad (Flexible Circuit)
Voice Storage Parts List		
C601	2311049A57	10uF
C602	2113743L41	0.01uF
C603	2311049C07	100uF
C701	2180478Z20	1uF
C702	2311049N01	0.1uF
C703	2311049A57	10uF
C704	2311049N01	0.1uF
C705	2311049N01	0.1uF
C706	2311049N01	0.1uF
C707	2311049N01	0.1uF
C708	2311049N01	0.1uF
C709	2311049A57	10uF
C710	2311049A30	33uF
C711	2311049N01	0.1uF
C712	2311049N01	0.1uF
C713	2311049N01	0.1uF
C714	2311049N01	0.1uF
C715	2311049N01	0.1uF
C716	2311049N01	0.1uF
C717	2180478Z20	1uF
C718	2180478Z20	1uF
CR601	4805129M76	
CR700	4802245J47	
L601	2480570Z01	68uH
R625	0662057M01	
R626	0662057M83	
R627	0662057M74	
R701	0662057N10	

Circuit Ref	Motorola Part No.	Description
R702	0662057M91	
R703	0662057N15	
R704	0662057N23	
R705	0662057N23	
R706	0662057N17	
R707	0662057M91	
R716	0662057N15	
R717	0662057N15	
U601	5105109Z74	
U700	5102463J53	
U710	5102463J52	
U720	5180932W01	

* Motorola Depot Servicing only