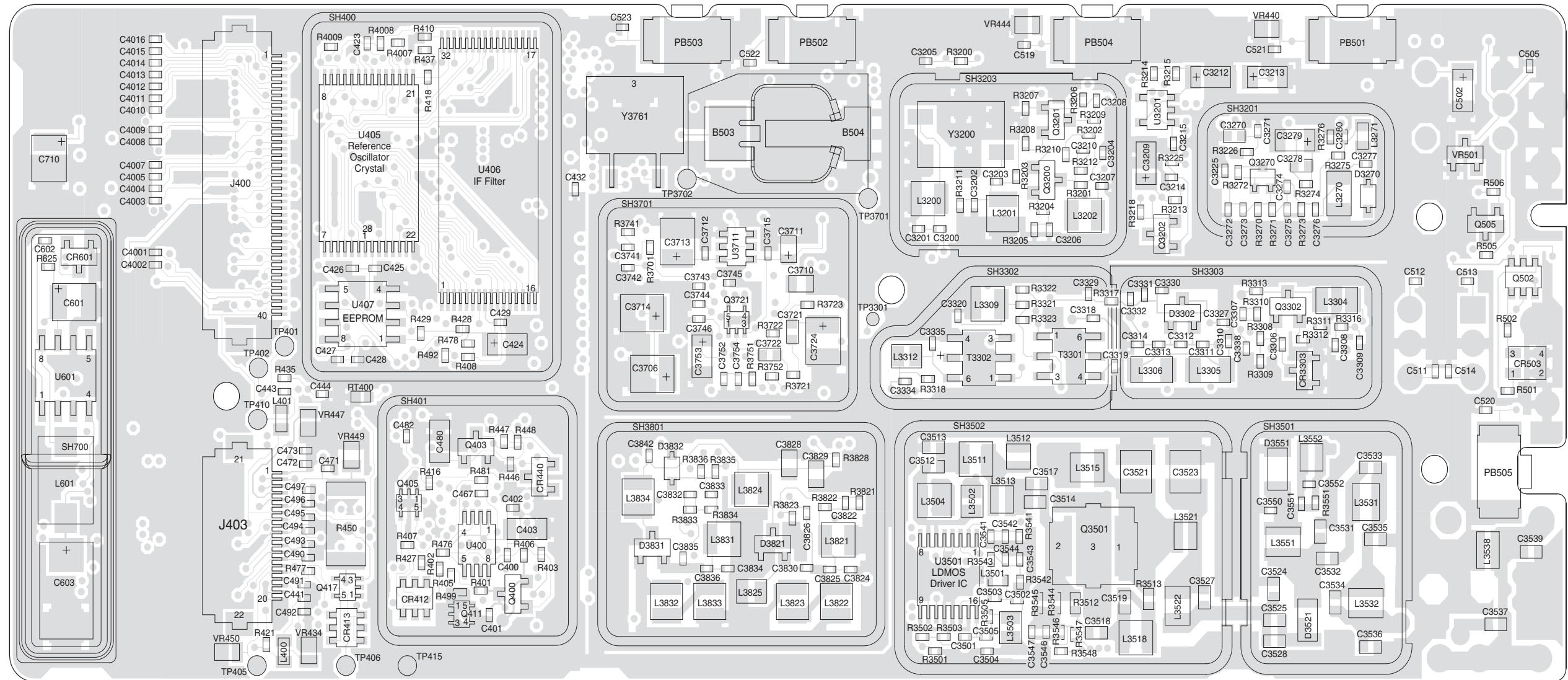


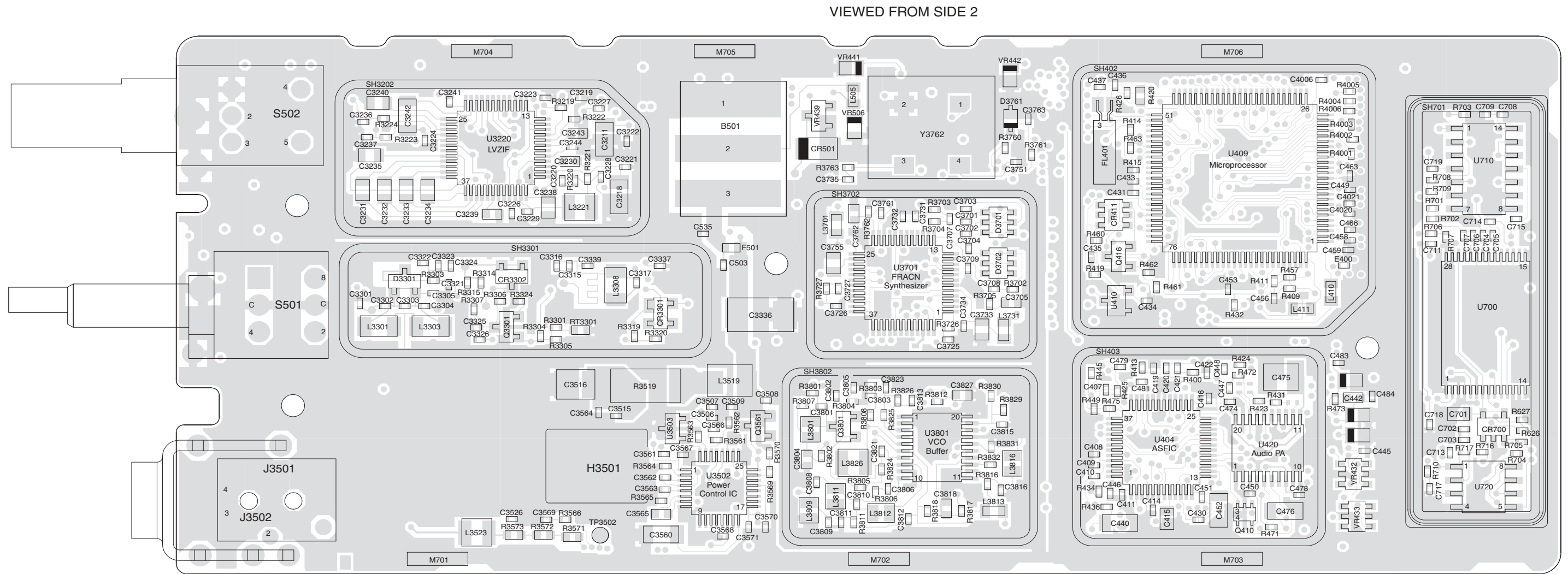
9.25 VHF Circuit Board/Schematic Diagrams and Parts List

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ZWG0130096-B

Figure 9-230. VHF (136-174 MHz) 9000 Series Main Board Top Side PCB



ZWG0130097-B

Figure 9-231. VHF (136-174 MHz) 9000 Series Main Board Bottom Side PCB

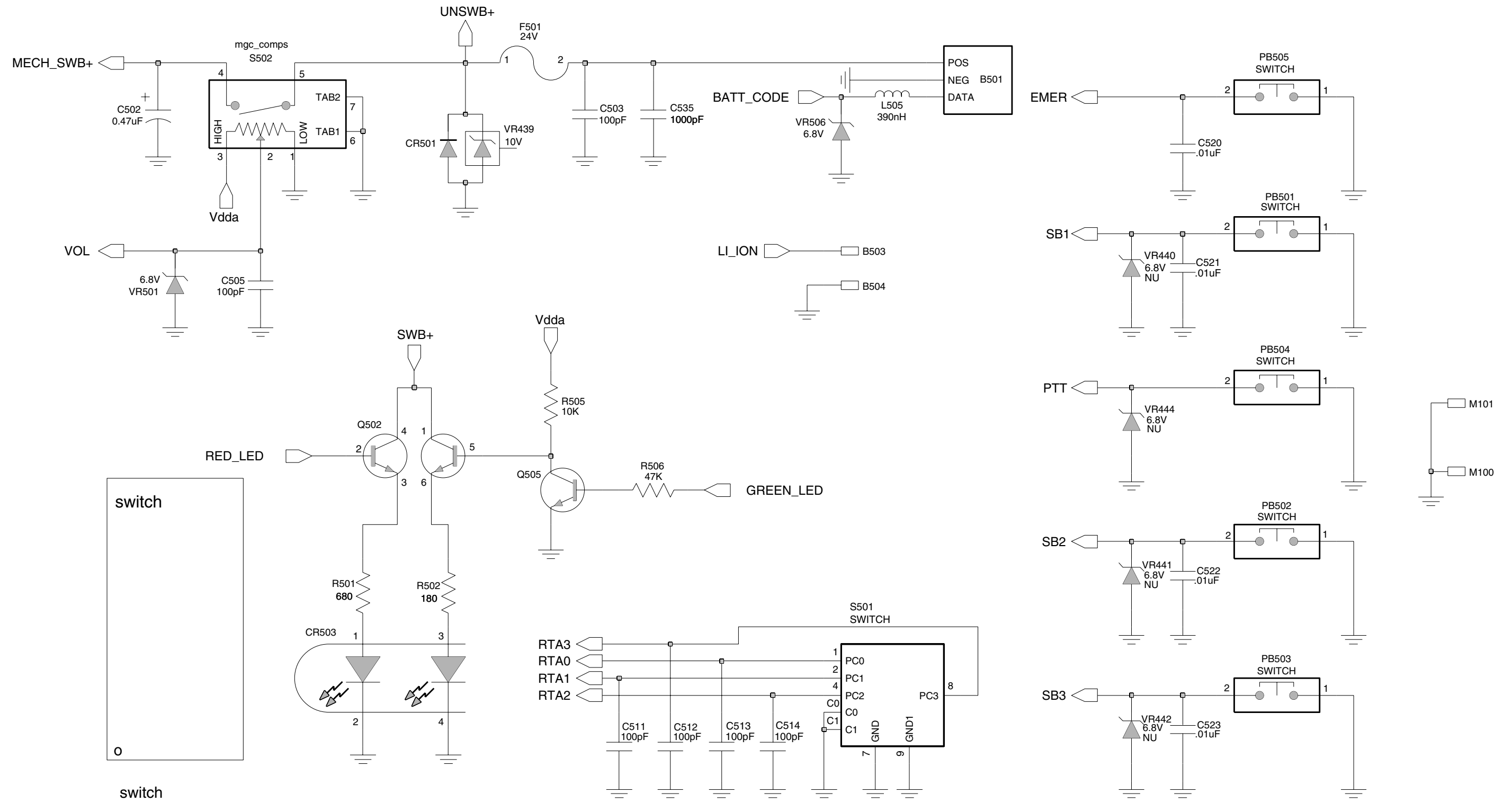
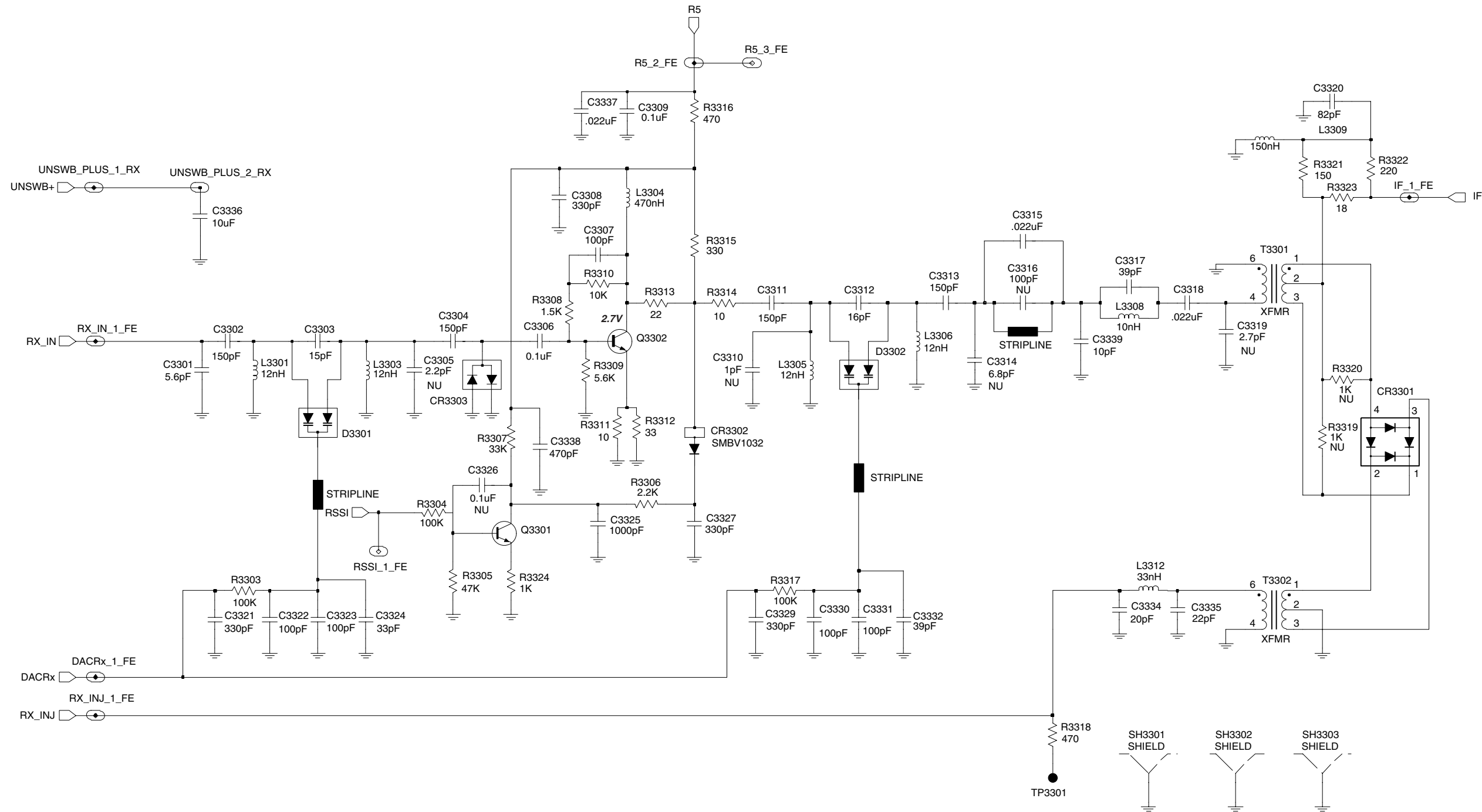
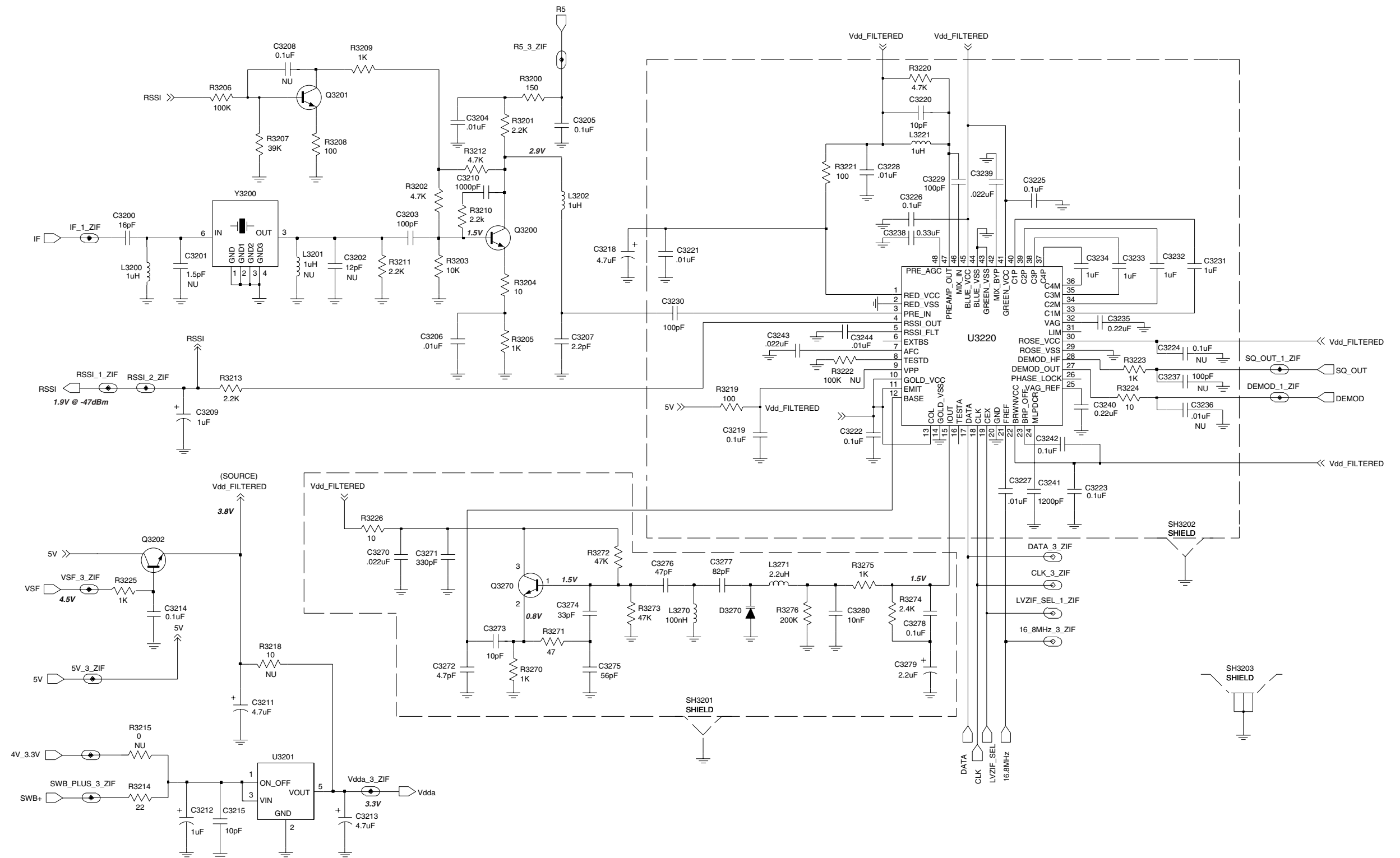


Figure 9-232. VHF (136-174 MHz) Controls and Switches Schematic Diagram



ZWG0130023-A

Figure 9-233. VHF (136-174 MHz) Receiver Front End Schematic Diagram



ZWG0130025-B

Figure 9-234. VHF (136-174 MHz) Receiver Back End Schematic Diagram

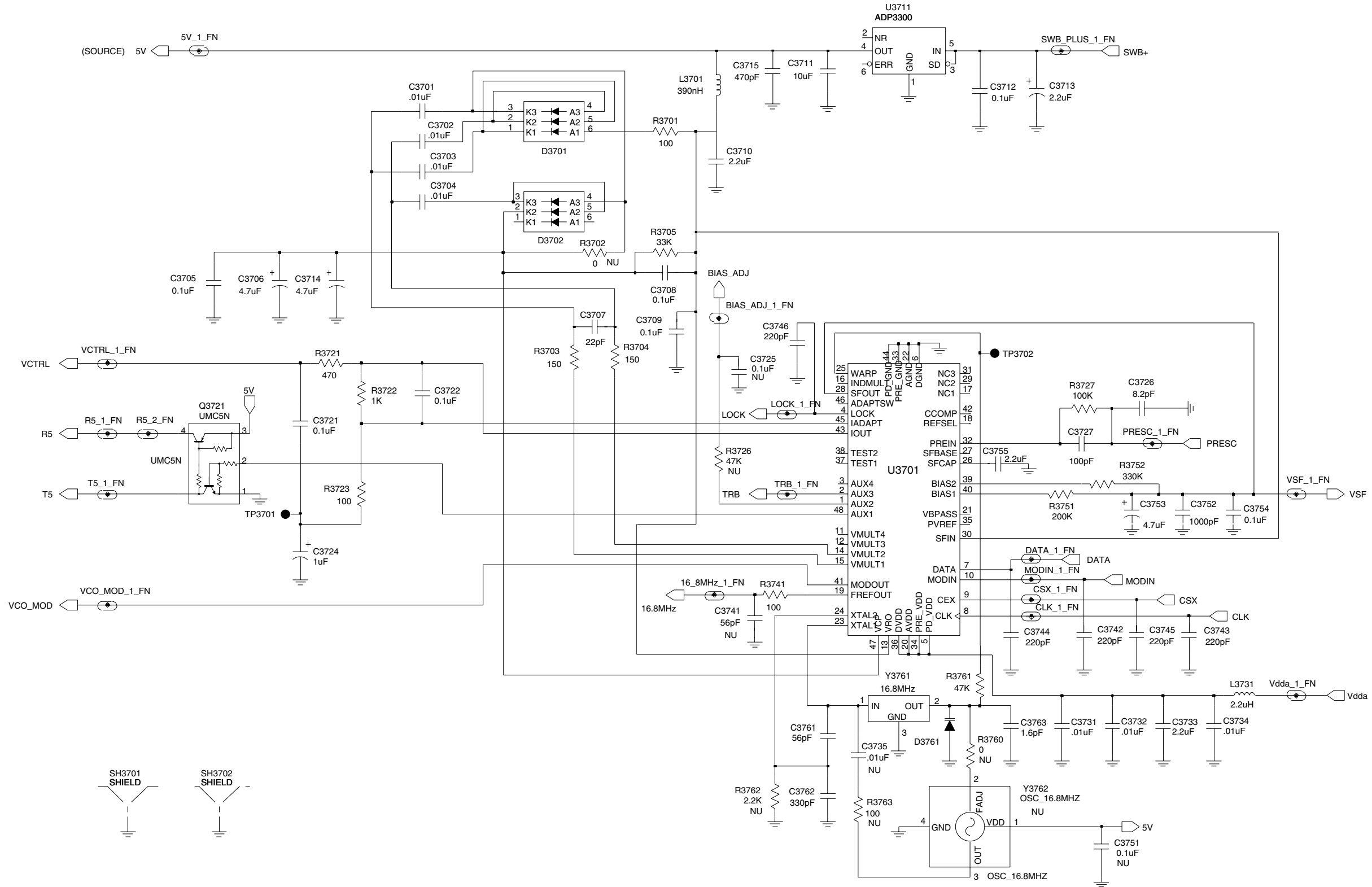
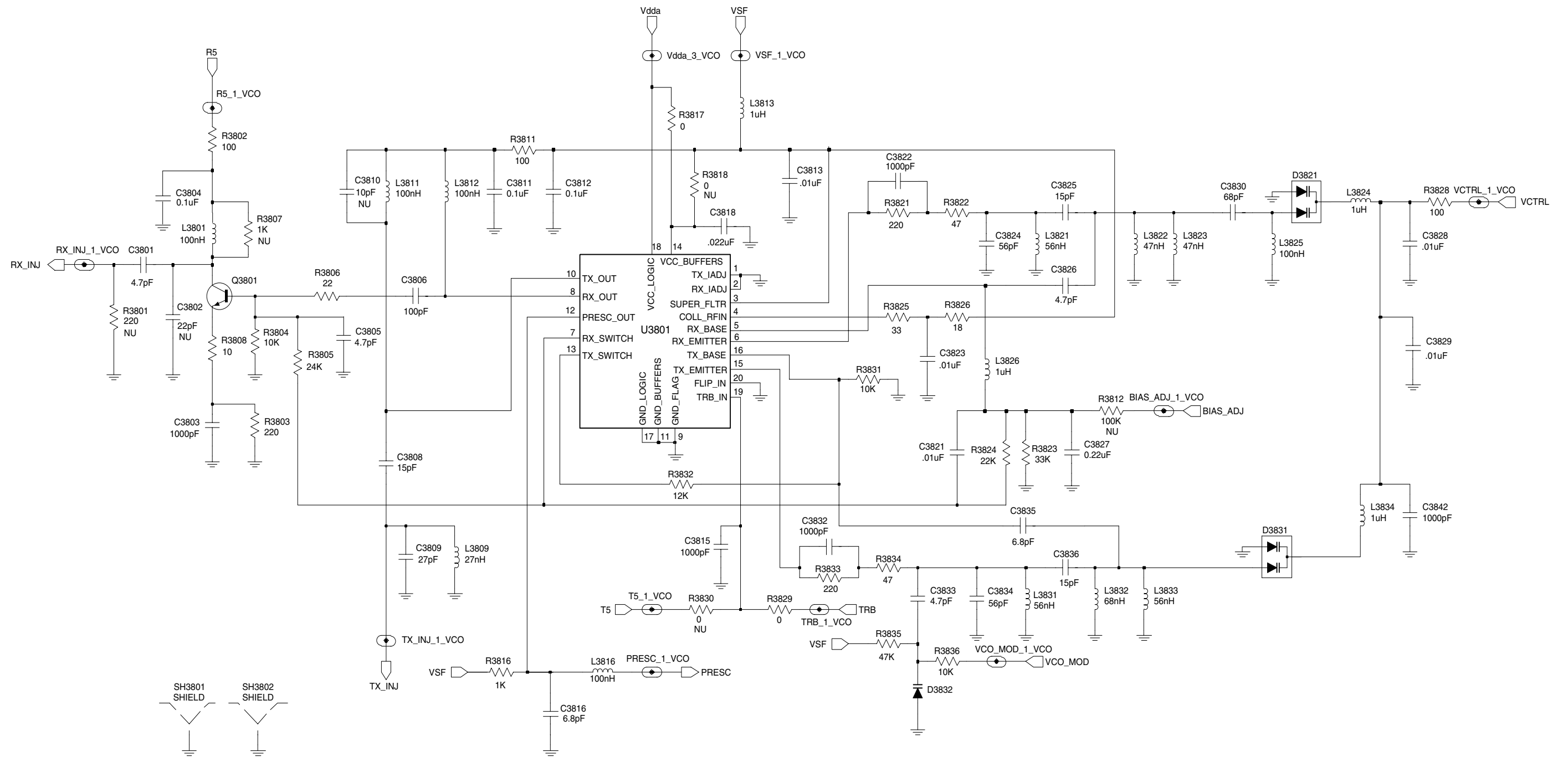
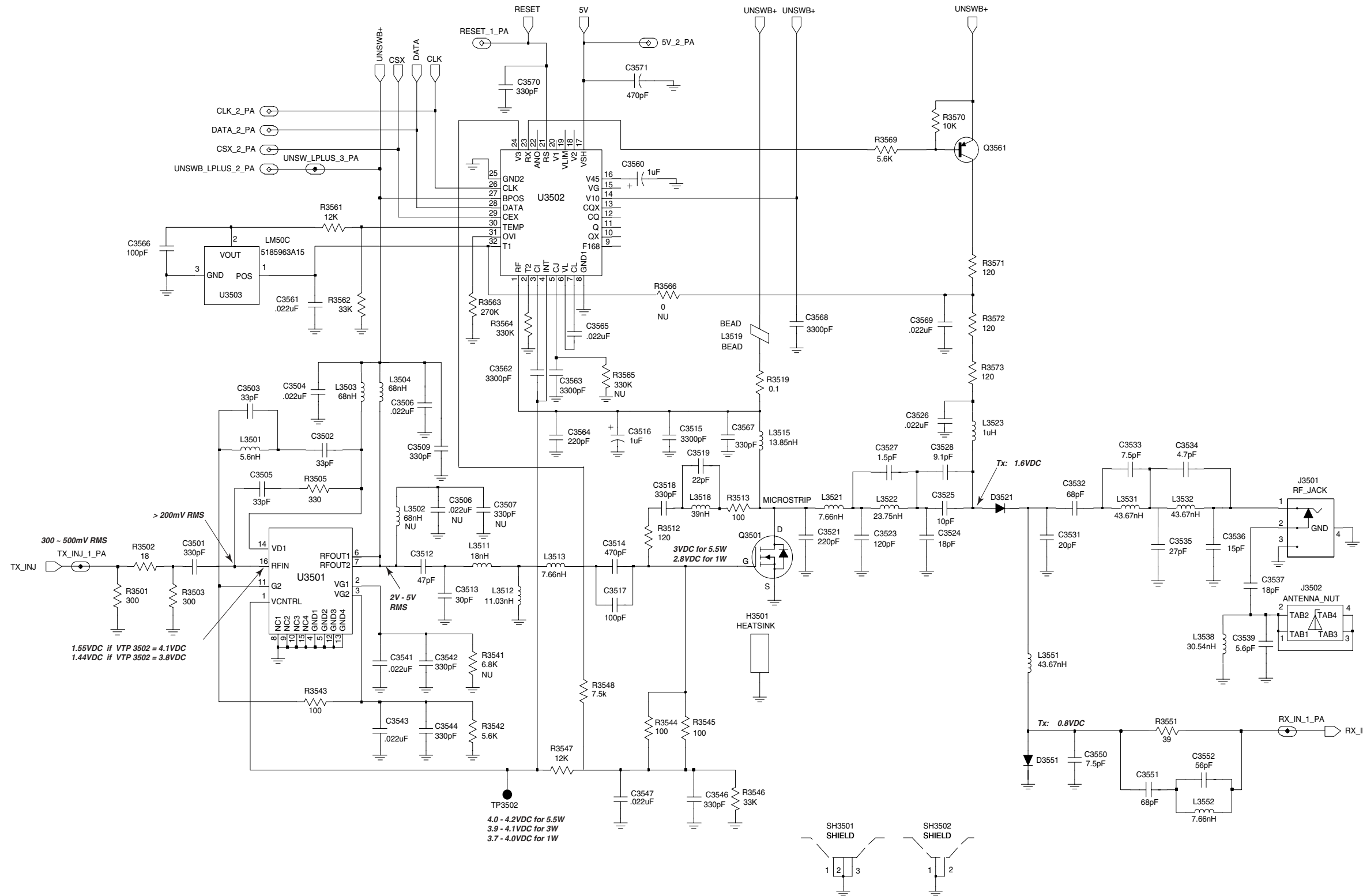


Figure 9-235. VHF (136-174 MHz) Synthesizer Schematic Diagram



ZWG0130020-B

Figure 9-236. VHF (136-174 MHz) Voltage Controlled Oscillator Schematic Diagram



ZWG0130021-D

Figure 9-237. VHF (136-174 MHz) Transmitter Schematic Diagram

VHF (136-174 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-
C3200	2113743N31	16pF
C3203	2113743N50	100pF
C3204	2113743L41	0.01uF
C3205	2113928N01	0.1uF
C3206	2113743L41	0.01uF
C3207	2113743N10	2.2pF
C3209	2311049A07	1uF
C3210	2113743L17	1000pF
C3211	2311049A56	4.7uF
C3212	2311049A07	1uF
C3213	2311049A56	4.7uF
C3214	2113928N01	0.1uF
C3215	2113743N26	10pF
C3218	2311049A56	4.7uF
C3219	2113928N01	0.1uF
C3220	2113743N26	10pF
C3221	2113743L41	0.01uF
C3222	2113928N01	0.1uF
C3223	2113928N01	0.1uF
C3224	2113928N01	0.1uF
C3225	2113928N01	0.1uF
C3226	2113928N01	0.1uF
C3227	2113743L41	0.01uF
C3228	2113743L41	0.01uF
C3229	2113743N50	100pF
C3230	2113740F51	100pF
C3231	2180478Z20	1uF
C3232	2180478Z20	1uF
C3233	2180478Z20	1uF
C3234	2180478Z20	1uF
C3235	2113743A23	0.220uF
C3238	2113743A24	0.330uF
C3239	2113743E07	0.022uF
C3240	2113743A23	0.220uF
C3241	2113743L19	1200pF
C3242	2109720D14	0.1uF
C3243	2113743E07	0.022uF
C3244	2113743L41	0.01uF
C3270	2113743E07	0.022uF
C3271	2113743L05	330pF
C3272	2113743N18	4.7pF
C3273	2113743N26	10.0pF
C3274	2113743N38	33.0pF
C3275	2113743N44	56.0pF
C3276	2113743N42	47.0pF
C3277	2113743N48	82.0pF
C3278	2113743E07	0.022uF
C3279	2311049A40	2.2uF
C3280	2113743L41	0.01uF
C3301	2113743N20	5.6pF
C3302	2113743N54	150pF

Circuit Ref	Motorola Part No.	Description
C3303	2113743N30	15.0pF
C3304	2113743N54	150pF
C3306	2113928N01	0.1uF
C3307	2113743N50	100pF
C3308	2113743L05	330pF
C3309	2113928N01	0.1uF
C3311	2113743N54	150pF
C3312	2113743N31	16.0pF
C3313	2113743N54	150pF
C3315	2113743N26	10.0pF
C3316	2113743N14	3.3pF
C3317	2113743N40	39pF
C3318	2113743M08	0.022uF
C3320	2113743N48	82pF
C3321	2113743L05	330pF
C3322	2113743N50	100pF
C3323	2113743N50	100pF
C3324	2113743N38	33pF
C3325	2113743L17	1000pF
C3327	2113743L05	330pF
C3329	2113743L05	330pF
C3330	2113743N50	100pF
C3331	2113743N50	100pF
C3332	2113743N40	39pF
C3334	2113743N33	20pF
C3335	2113743N34	22pF
C3336	2311049A18	10uF
C3337	2113743M08	0.022pF
C3338	2113743L09	470pF
C3339	2113743N26	10pF
C3501	2113743L05	330pF
C3502	2113743N38	33pF
C3503	2113743N38	33pF
C3504	2113743M08	0.022pF
C3505	2113743N38	33pF
C3508	2113743M08	0.022pF
C3509	2113743L05	330pF
C3512	2113740F43	47pF
C3513	2113740F38	30pF
C3514	2113740F67	470pF
C3515	2113743L29	3300pF
C3516	2311049A08	1uF
C3517	2113740F51	100pF
C3518	2113740F63	330pF
C3519	2113740F35	22pF
C3521	2111078B51	220pF
C3523	2111078B44	120pF
C3524	2113740F33	18pF
C3525	2113740F27	10pF
C3526	2113743M08	0.022pF
C3528	2113740F26	9.1pF
C3531	2113740F34	20pF
C3532	2113740F47	68pF
C3533	2113740F24	7.5pF
C3534	2113740F19	4.7pF
C3535	2113740F37	27

Circuit Ref	Motorola Part No.	Description
C3536	2113740F31	15
C3537	2113740F33	18
C3539	2113740F21	5.6
C3541	2113743M08	0.022pF
C3542	2113743L05	330pF
C3543	2113743M08	0.022pF
C3544	2113743L05	330pF
C3546	2113743L05	330pF
C3547	2113743M08	0.022pF
C3550	2113743N23	7.5pF
C3551	2113743N46	68pF
C3552	2113743N44	56pF
C3560	2311049A07	1.0uF
C3561	2113743M08	0.022pF
C3562	2113743L29	3300pF
C3563	2113743L29	3300pF
C3564	2113743L01	220pF
C3565	2113743E07	0.022uF
C3566	2113743N50	100pF
C3567	2113743L05	330pF
C3568	2113743L29	3300pF
C3569	2113743M08	0.022pF
C3570	2113743L05	330pF
C3571	2113743L09	470pF
C3701	2113743L41	0.01uF
C3702	2113743L41	0.01uF
C3703	2113743L41	0.01uF
C3704	2113743L41	0.01uF
C3705	2113743E20	10 uF
C3706	2311049J11	4.7uF
C3707	2113743N34	22pF
C3708	2113743M24	0.1uF
C3709	2113743M24	0.1uF
C3710	2104993J02	2.2uF
C3711	2311049A69	10uF
C3712	2113743M24	0.1uF
C3713	2311049A09	2.2 uF
C3714	2311049J11	4.7uF
C3715	2113743L09	470pF
C3721	2113743E20	10 uF
C3722	2113743E20	10 uF
C3724	2311049A08	1uF
C3726	2113743N24	8.2pF
C3727	2113743N50	100pF
C3731	2113743L41	0.01uF
C3732	2113743L41	0.01uF
C3733	2104993J02	2.2uF
C3734	2113743L41	0.01uF
C3742	2113743L01	220pF
C3743	2113743L01	220pF
C3744	2113743L01	220pF
C3745	2113743L01	220pF
C3746	2113743L01	220pF
C3752	2113743L17	1000pF
C3753	2311049A56	4.7uF
C3754	2113743M24	0.1uF

Circuit Ref	Motorola Part No.	Description
C3755	2104993J02	2.2uF
*C3761	2113743N44	56.0pF
*C3762	2113740F63	330pF
*C3763	2113743N08	1.6pF
C3801	2113743N18	4.7pF
C3803	2113743L17	1000pF
C3804	2113743E20	10uF
C3805	2113743N18	4.7pF
C3806	2113743N50	100pF
C3808	2113743N30	15pF
C3809	2113743N36	27pF
C3811	2113743M24	0.1uF
C3812	2113743M24	0.1uF
C3813	2113743L41	0.01uF
C3815	2113743L17	1000pF
C3816	2113743N22	6.8pF
C3818	2113743E07	0.022uF
C3821	2113743L41	0.01uF
C3822	2113743L17	1000pF
C3823	2113743L41	0.01uF
C3824	2113743N44	56pF
C3825	2113743N30	15pF
C3826	2113743N18	4.7pF
C3827	2113743E07	0.022uF
C3828	2109720D01	0.01uF
C3829	2109720D01	0.01uF
C3830	2113743N46	68.0pF
C3832	2113743L17	1000pF
C3833	2113743N18	4.7pF
C3834	2113743N44	56pF
C3835	2113743N22	6.8pF
C3836	2113743N30	15.0pF
C3842	2113743L17	1000pF
C400	2113743L41	0.01uF
C401	2113743M24	0.1uF
C402	2113743M24	0.1uF
C403	2113928D08	10uF
C407	2113928N01	0.1uF
C408	2113743N50	100pF
C409	2113743M24	0.01uF
C410	2113928N01	0.1uF
C411	2113743M24	0.01uF
C414	2113743M24	0.01uF
C415	2109720D01	0.01uF
C416	2113928N01	0.1uF
C419	2113743L41	0.01uF
C420	2113743L41	0.01uF
C421	2113928N01	0.1uF
C422	2113743M24	0.01uF
C423	2113743N50	100pF
C424	2311049A59	10uF
C425	2113743M24	0.01uF
C426	2113743N50	100pF
C427	2113743N50	100pF
C428	2113743M24	0.01uF
C429	2113743M24	0.01uF

Circuit Ref	Motorola Part No.	Description
R3502	0662057M32	18
R3503	0662057M61	300
R3505	0662057M62	330
R3512	0662057A27	120
R3513	0662057A25	100
R3519	0680539Z01	0.1
R3542	0662057M92	5.6K
R3543	0662057M50	100
R3544	0662057A25	100
R3545	0662057A25	100
R3546	0662057N11	33K
R3547	0662057N01	12K
R3548	0662057M95	7.5K
R3551	0662057M40	39
R3561	0662057N01	12K
R3562	0662057N11	33K
R3563	0662057N33	270K
R3564	0662057N35	330K
R3569	0662057M92	5600
R3570	0662057M98	10K
R3571	0662057A27	5.6K
R3572	0662057A27	120
R3573	0662057A27	120
R3701	0662057M50	100
R3703	0662057M54	150
R3704	0662057M54	150
R3705	0662057N11	33K
R3721	0662057M66	470
R3722	0662057M74	1000
R3723	0662057M50	100
R3727	0662057N23	100K
R3741	0662057M50	100
R3751	0662057N30	200K
R3752	0662057N35	330K
R3761	0662057N15	47K
R3802	0662057M50	100
R3803	0662057M58	220
R3804	0662057M98	10K
R3805	0662057N08	24K
R3806	0662057M34	22
R3808	0662057M26	10
R3811	0662057M50	100
R3816	0662057M74	1K
R3817	0662057M01	0
R3821	0662057M58	220
R3822	0662057M42	47
R3823	0662057N11	33K
R3824	0662057N07	22K
R3825	0662057M38	33
R3826	0662057M32	18
R3828	0662057M50	100
R3829	0662057M01	0
R3831	0662057M98	10K
R3832	0662057N01	12K
R3833	0662057M58	220
R3834	0662057M42	47

Circuit Ref	Motorola Part No.	Description
R3835	0662057N15	47K
R3836	0662057M98	10K
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
R420	0662057B46	10M
R421	0662057M81	2K
R423	0662057N21	82K
R424	0662057N12	36K
R425	0662057N10	30K
R426	0662057N35	330K
R427	0662057M84	2700
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	1.5M
R448	0662057N33	270K
R449	0662057N08	24K
R450	0683962T45	68
R457	0662057M98	10K
R460	0662057M90	4.7K
R461	0662057M56	180
R462	0662057M98	10K
R463	0662057M61	300
R471	0662057M92	5.6K
R472	0662057M93	6.2K
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
RT400	0680590Z01	33K
S501	4080710Z02	Frequency Switch

Circuit Ref	Motorola Part No.	Description
S502	1880619Z01	Volume Potentiometer
SH3201	2602023X08	Shield
SH3202	2686081B02	Shield
SH3203	2686081B03	Shield
SH3301	2686081B01	Shield
SH3302	2686081B05	Shield
SH3303	2686081B06	Shield
SH3501	2686081B03	Shield
SH3502	2686081B04	Shield
SH3701	2680511Z01	Shield, Synthesizer
SH3702	2680511Z01	Shield
SH3801	2680513Z01	Shield, VCO Top
SH3802	2680514Z01	Shield, VCO Bottom/LVZIF
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	Controller On/Off Shield
SH402	2680515Z01	Controller Microprocessor Shield
SH403	2680516Z01	Controller ASFIC Compander/ Audio PA Shield
T3301	2580541Z01	Transformer Coil
T3302	2580541Z01	Transformer Coil
U3201	5102463J58	3.3V Regulator
U3220	5109632D83	Low Voltage ZIF
U3501	5105109Z67	LDMOS Driver
U3502	5185765B01	Power Control IC
U3503	5185963A15	Temperature Sense
U3701	5185963A27	Low Voltage FracN
U3711	5105739X05	Regulator, Linear
U3801	5105750U54	VCO Buffer
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC
U405	5102463J36	Static RAM
U406	5102463J60	512KX8 Flash ROM
U407	5102463J64	16KX8 EEPROM
U409	5102226J56	Microcontroller
U410	5102463J57	3.3V Regulator
U420	5102463J44	Audio PA
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J51	6.8V Zener
VR439	4880140L15	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
Y3200	9186153B01	Crystal Filter
Y3761	4802245J49	Crystal 16.8 MHz

* Motorola Depot Servicing only

Notes

9.26 Low Band Circuit Board/Schematic Diagrams and Parts List

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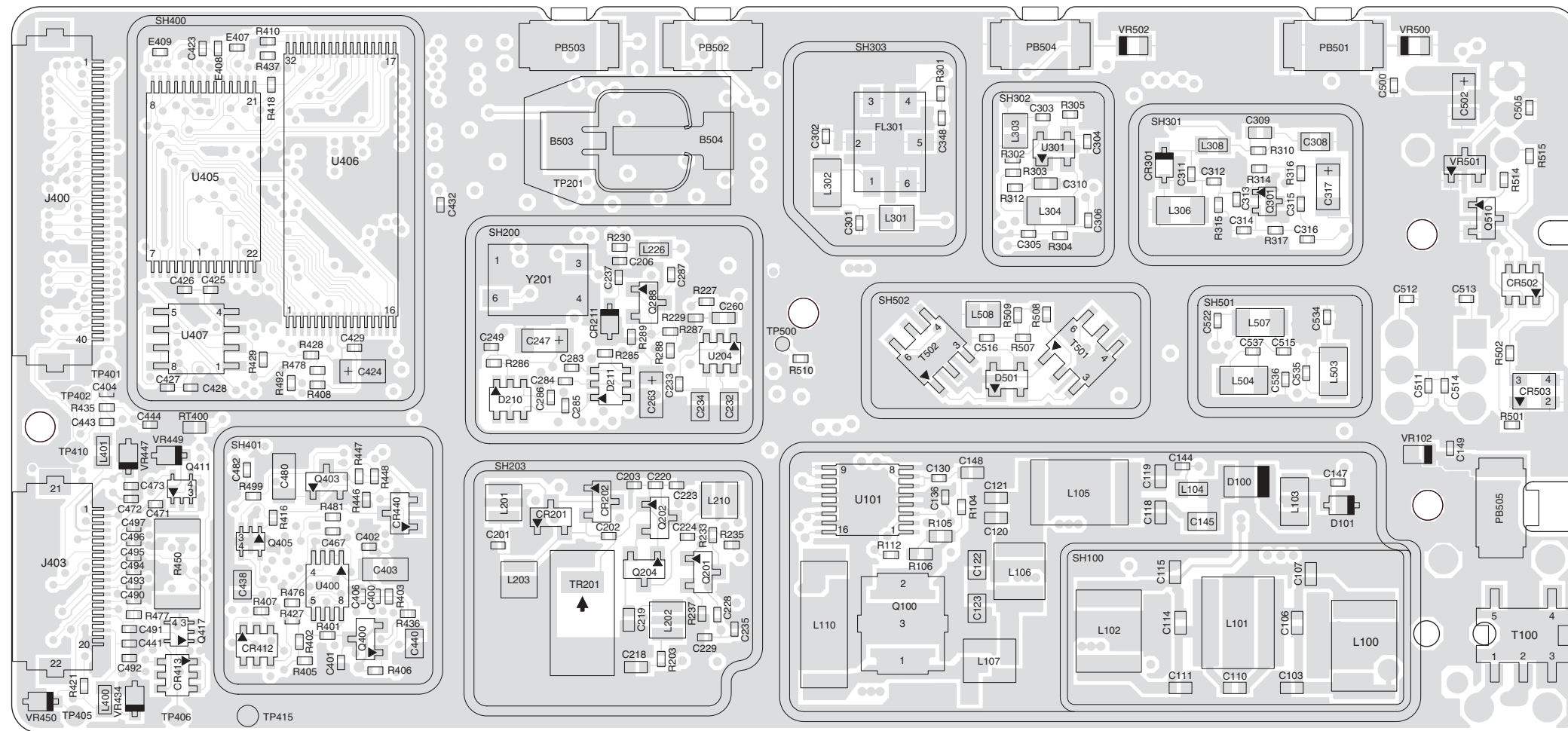


Figure 9-238. Low Band (29.7-42/35-50 MHz) Main Board Top Side PCB

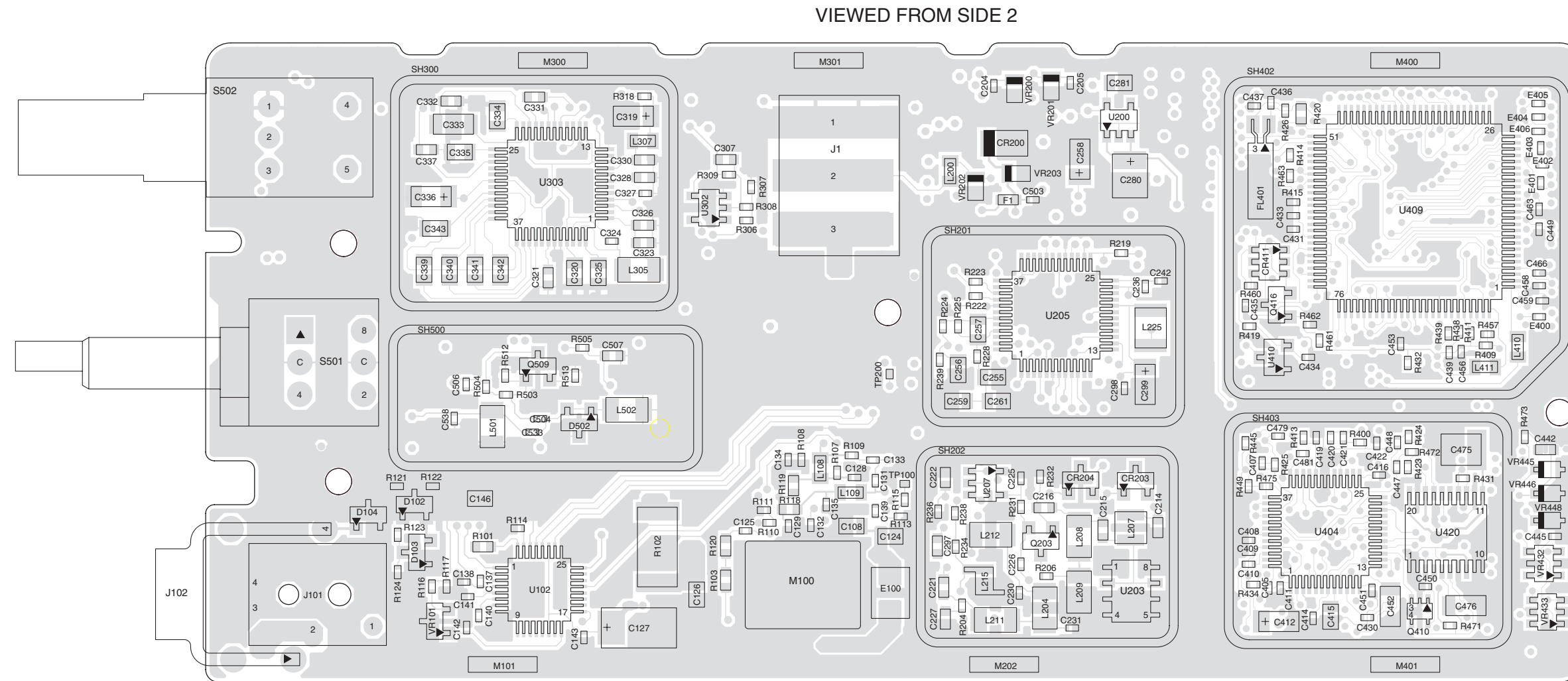
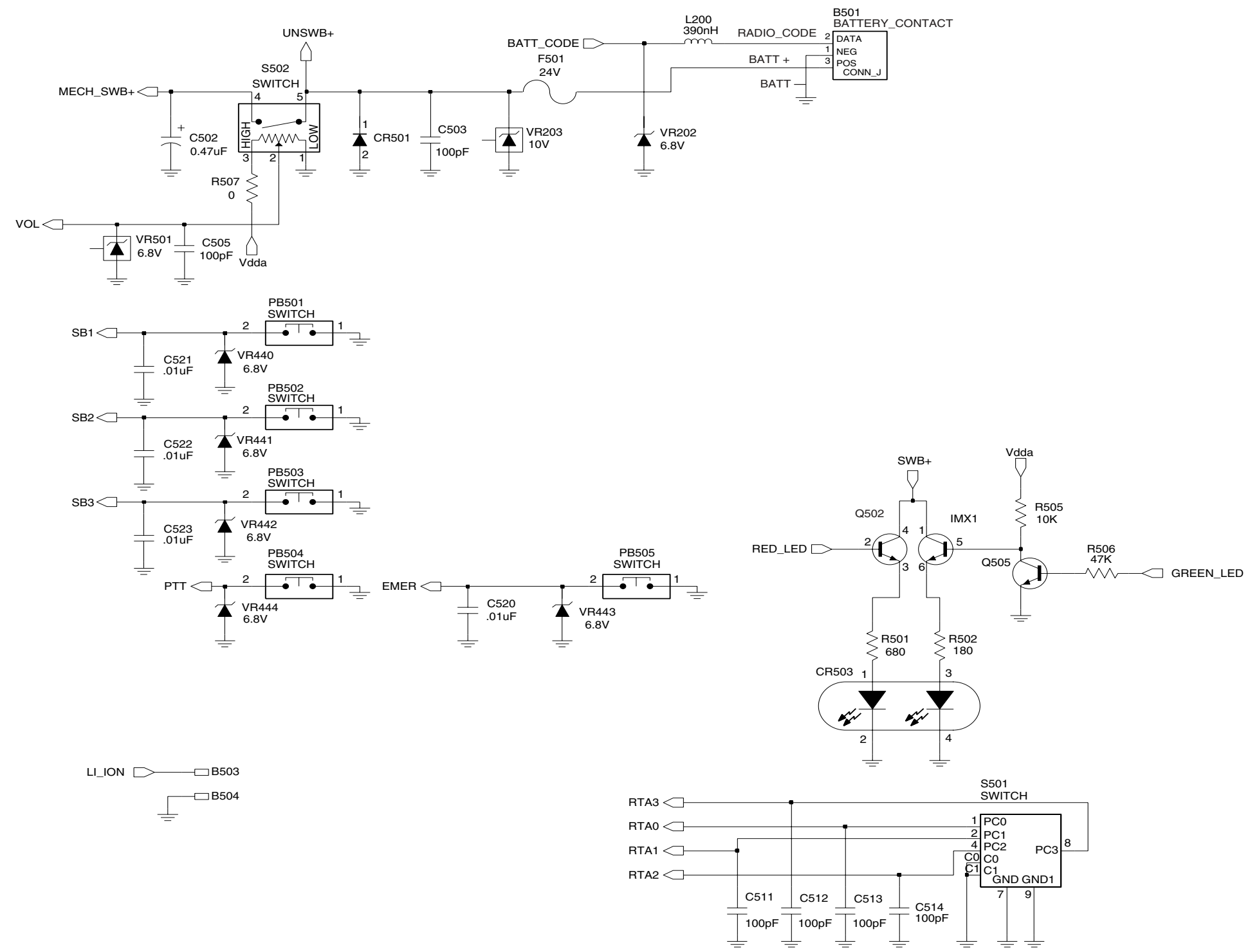
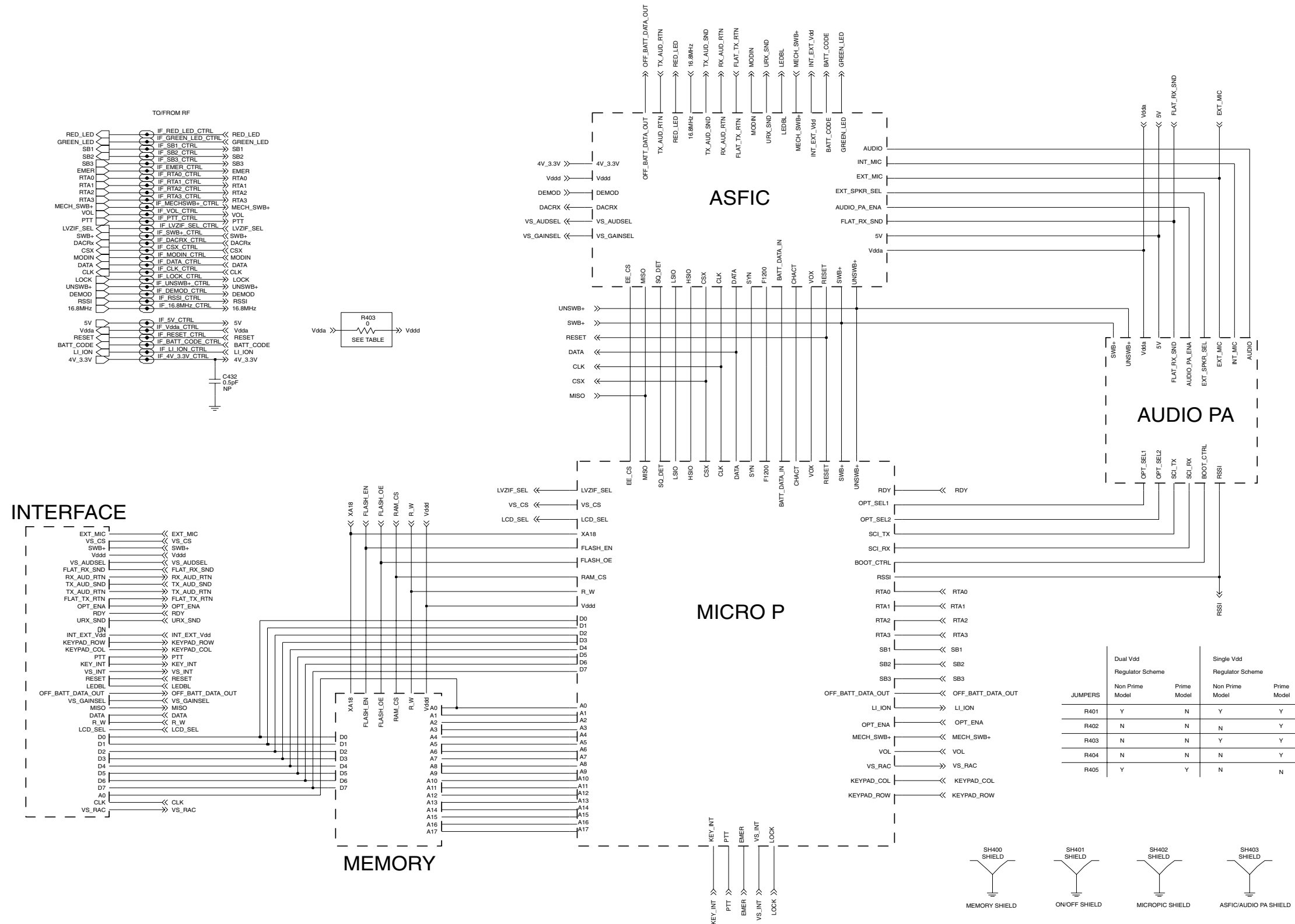


Figure 9-239. Low Band (29.7-42/35-50 MHz) Main Board Bottom Side PCB



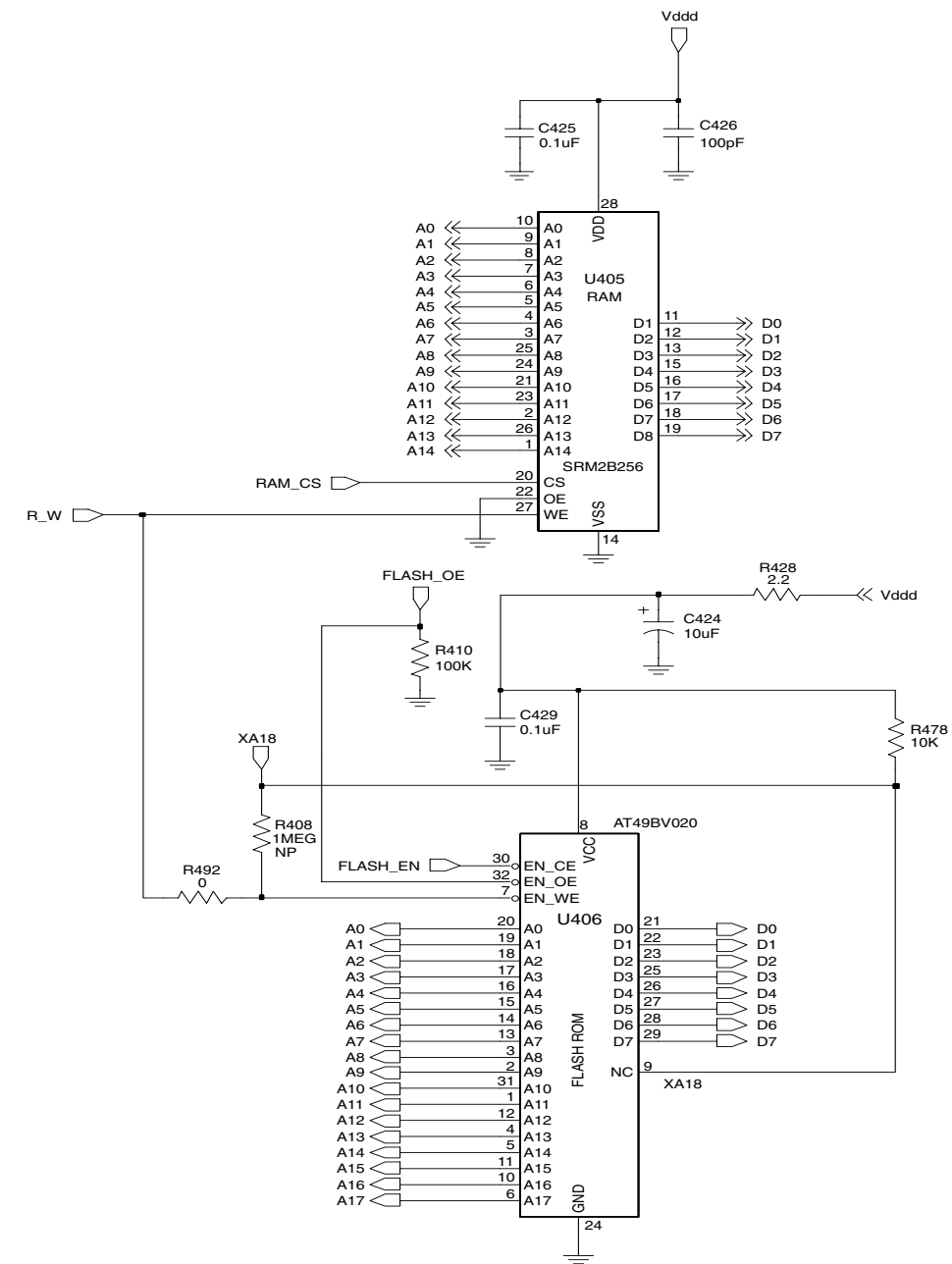
FL0830467O

Figure 9-240. Low Band (30-50 MHz) Controls and Switches Diagram



FL08304600

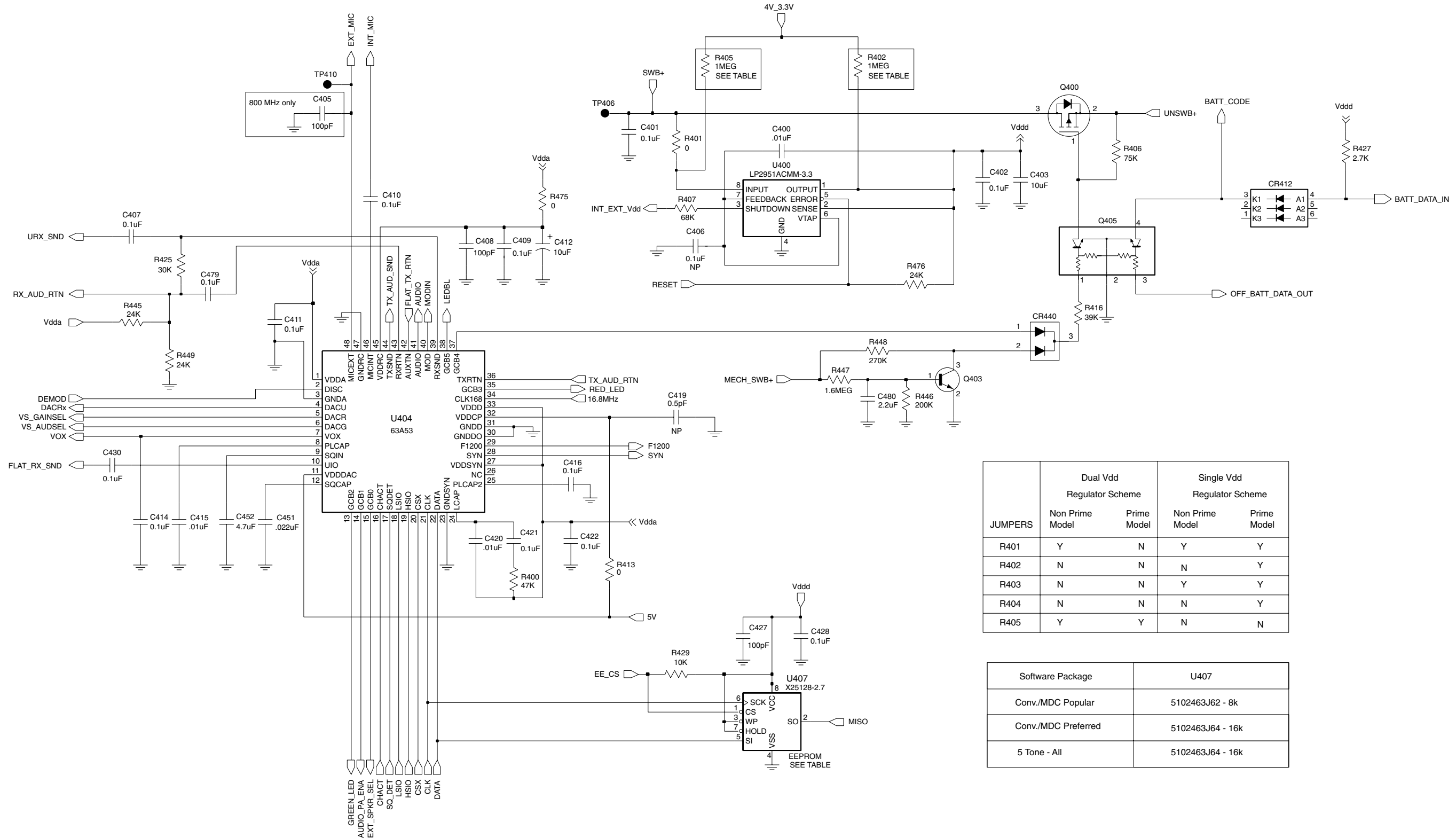
Figure 9-241. Low Band (29.7-42/35-50 MHz) Controller Overall Schematic Diagram



Software Package	U406	U405
Conventional/MDC	5102463J59 - 128k	Not used
5 Tone	5102463J60 - 512k	5102463J36 - 32k

FL0830464O

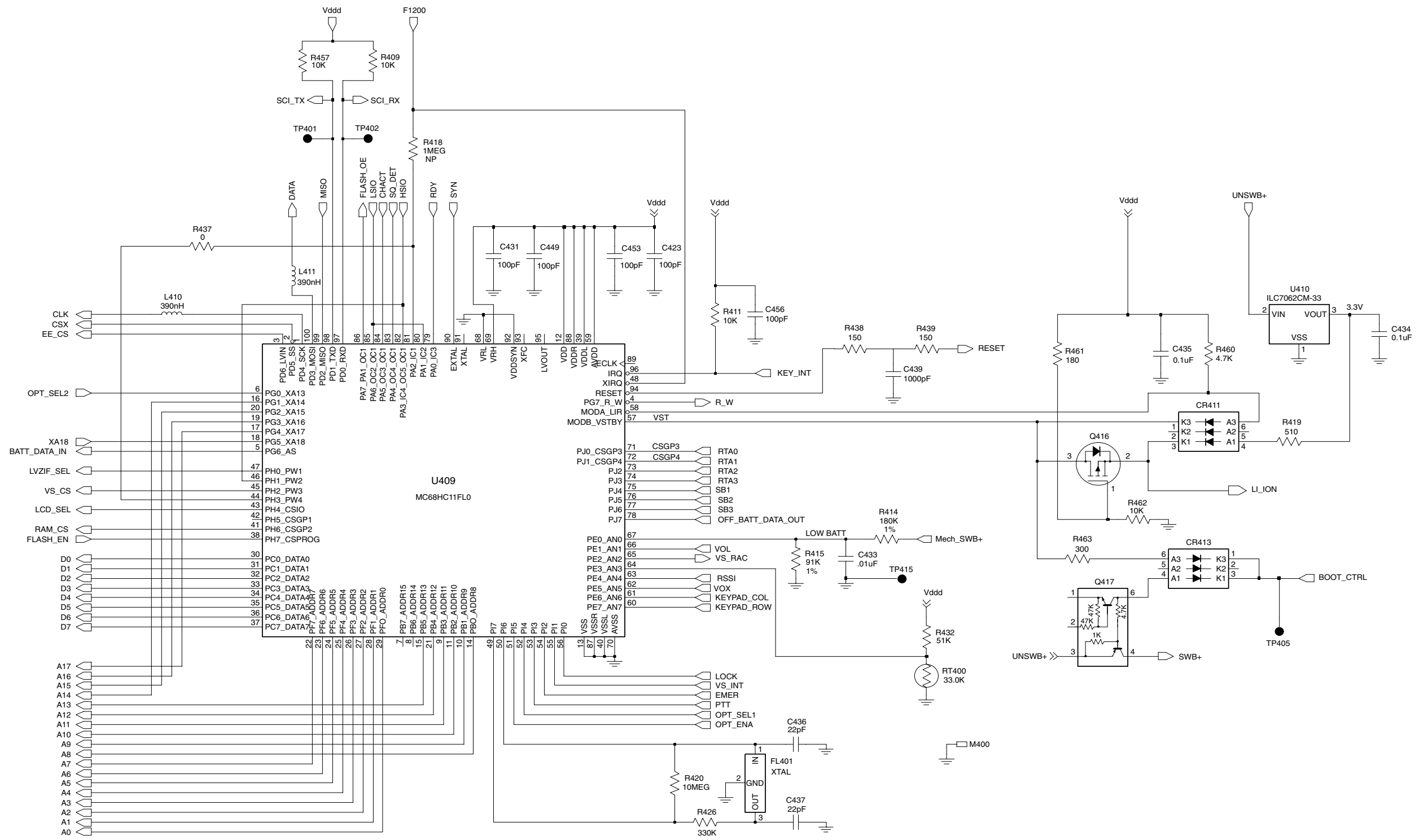
Figure 9-242. Low Band (29.7-42/35-50 MHz) Controller Memory Schematic Diagram



JUMPERS	Dual Vdd Regulator Scheme		Single Vdd Regulator Scheme	
	Non Prime Model	Prime Model	Non Prime Model	Prime Model
R401	Y	N	Y	Y
R402	N	N	N	Y
R403	N	N	Y	Y
R404	N	N	N	Y
R405	Y	Y	N	N

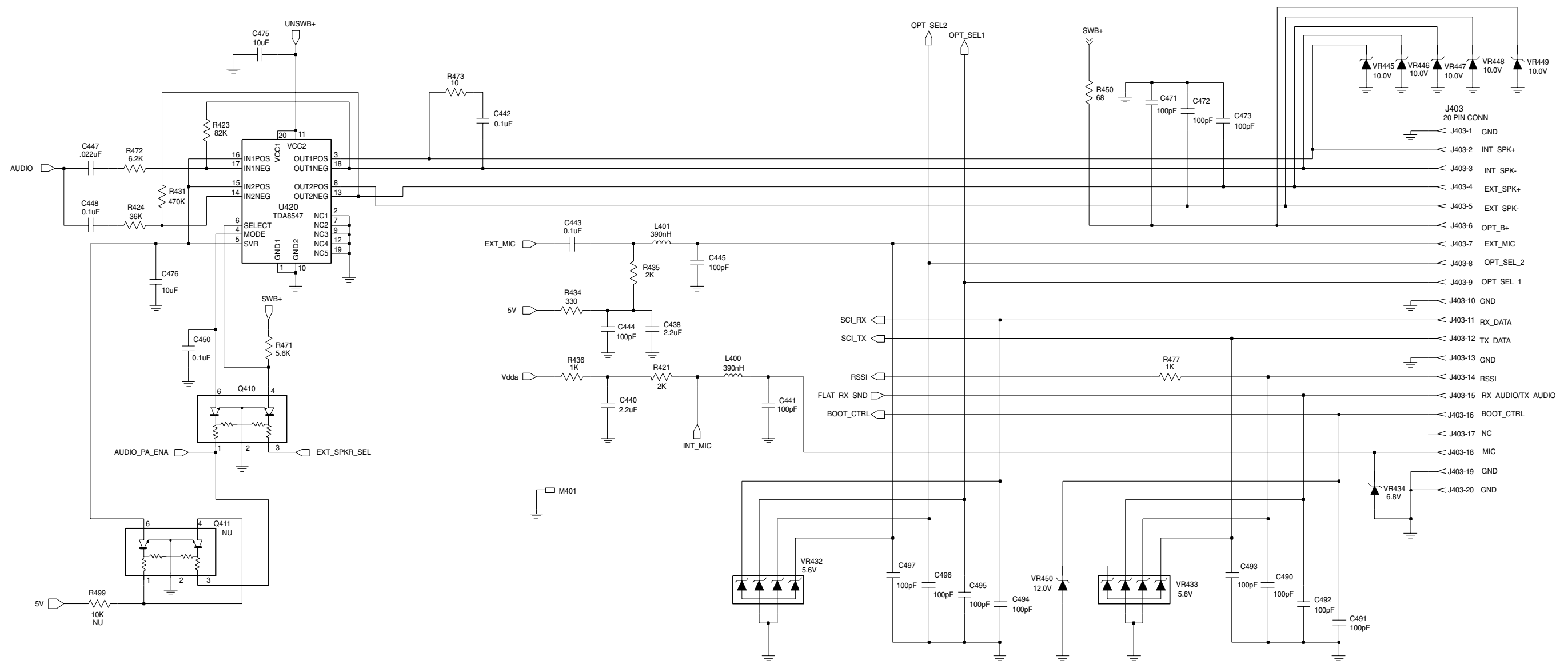
Software Package	U407
Conv./MDC Popular	5102463J62 - 8k
Conv./MDC Preferred	5102463J64 - 16k
5 Tone - All	5102463J64 - 16k

Figure 9-243. Low Band (29.7-42/35-50 MHz) Controller AFSIC Schematic Diagram



FL0830465O

Figure 9-244. Low Band (29.7-42/35-50 MHz) Controller Microprocessor Schematic Diagram



FL08304620

Figure 9-245. Low Band (29.7-42/35-50 MHz) Controller Audio PA Schematic Diagram

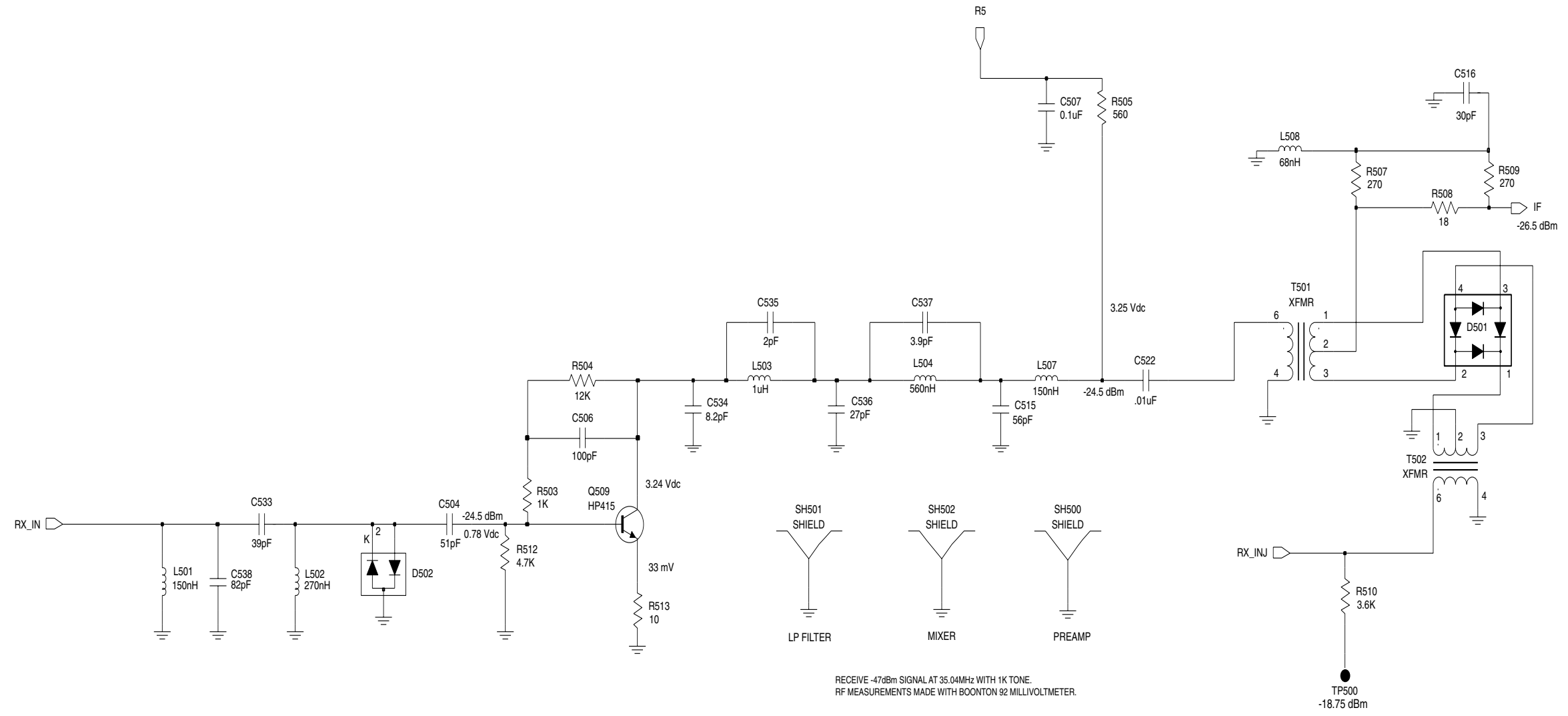
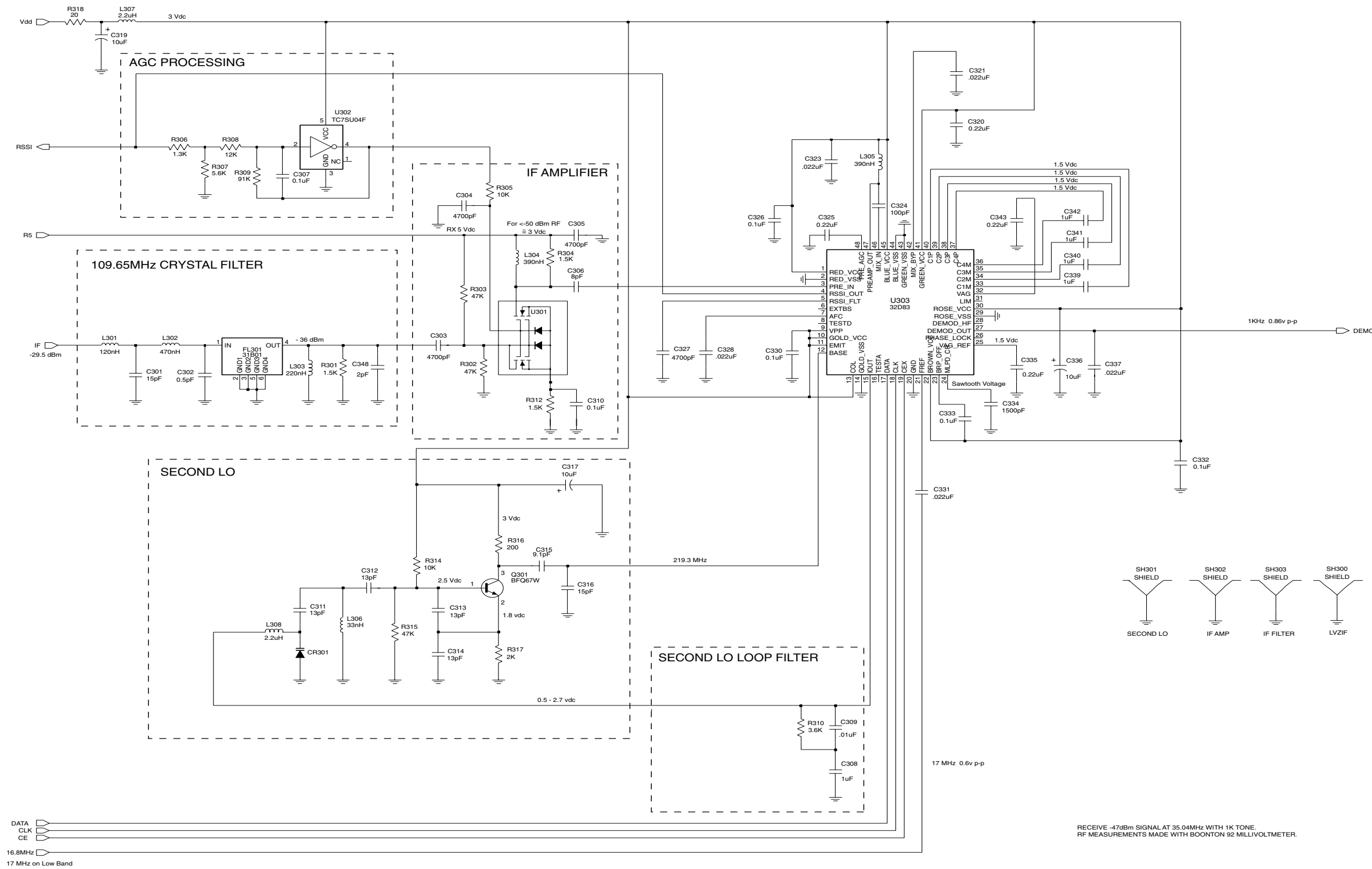


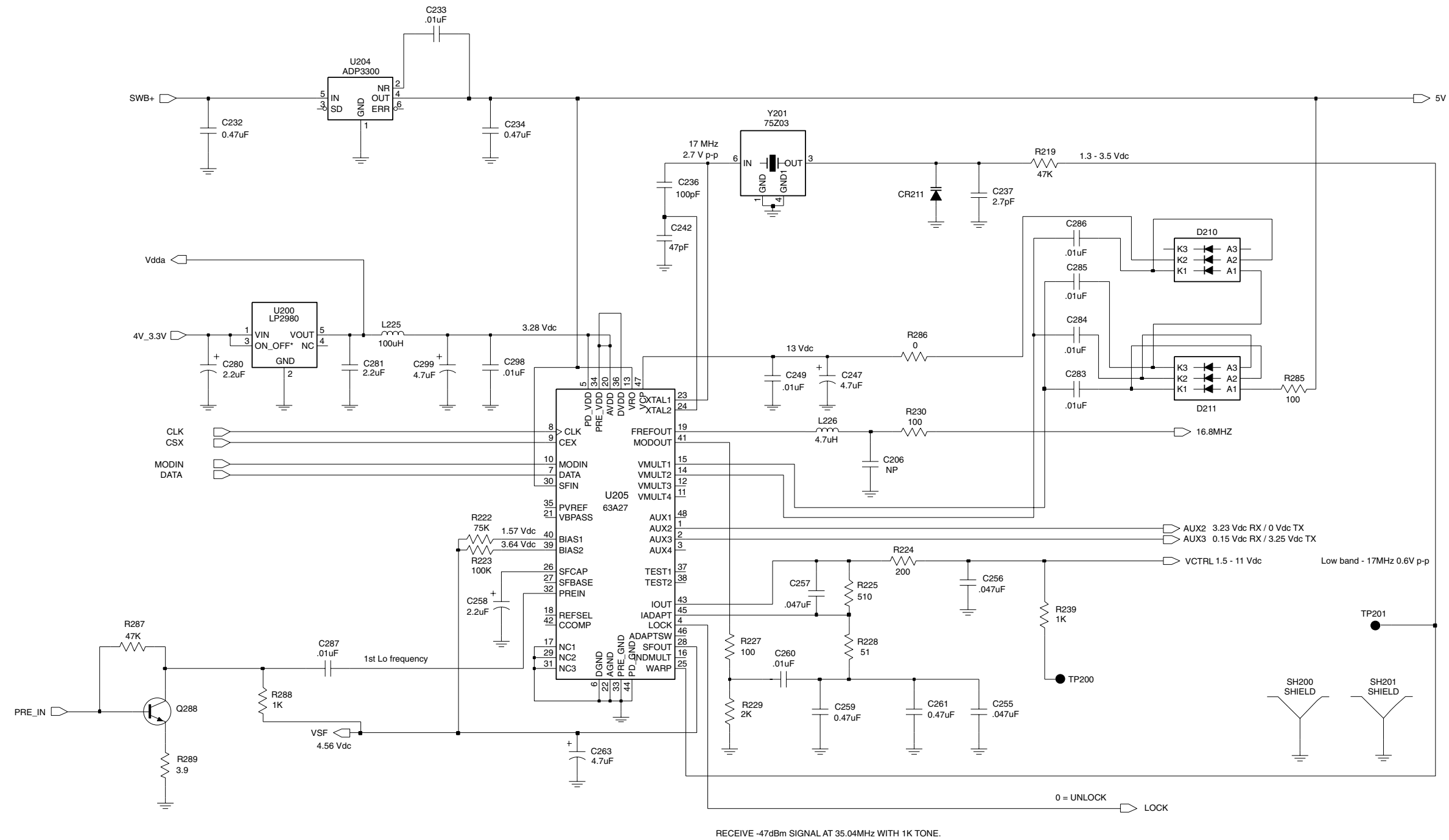
Figure 9-246. Low Band (29.7-42/35-50 MHz) Receiver Front End Schematic Diagram



RECEIVE -47dBm SIGNAL AT 35.04MHz WITH 1K TONE.
RF MEASUREMENTS MADE WITH BOONTON 92 MILLIVOLTMETER.

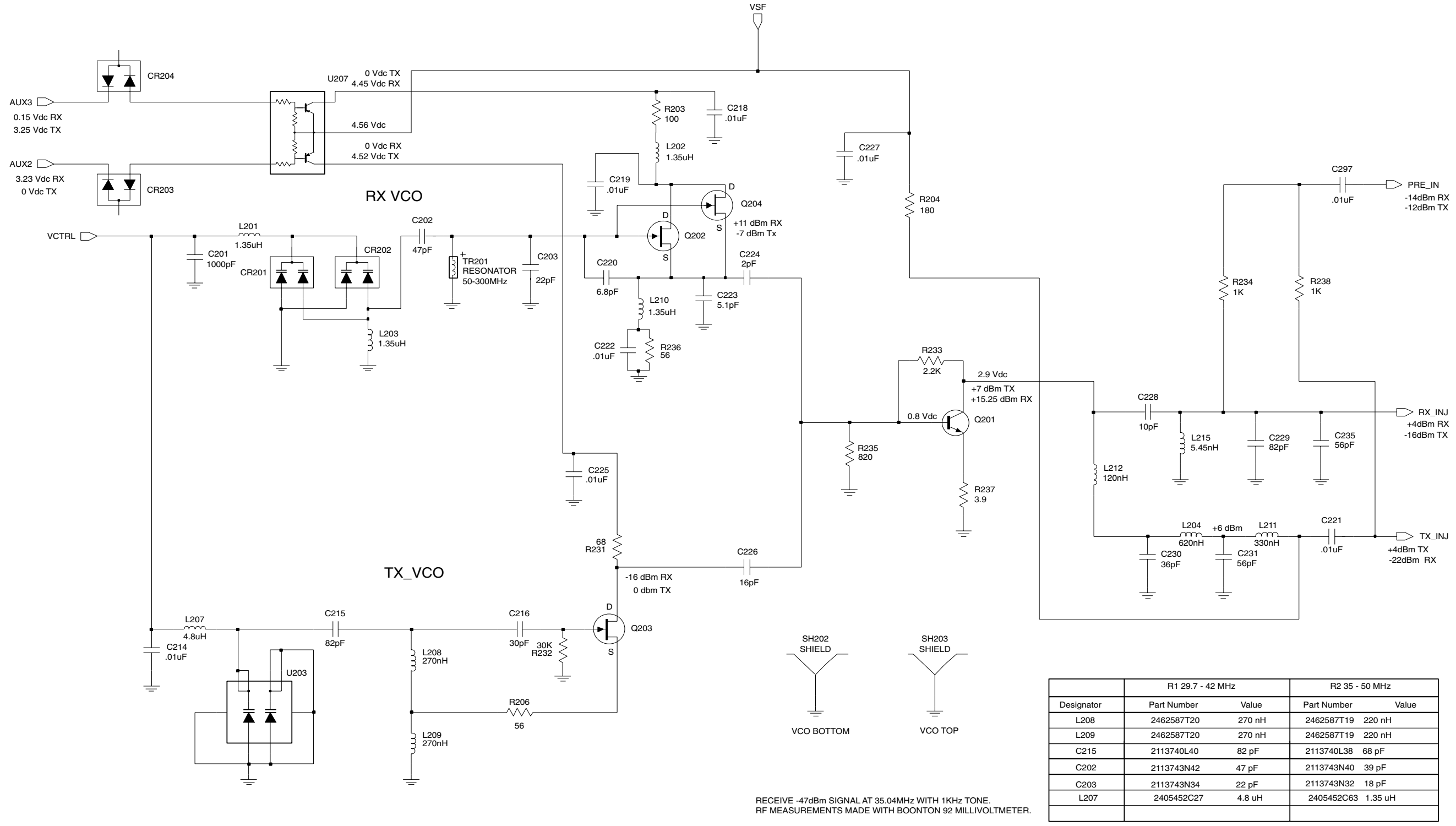
FL08304720

Figure 9-247. Low Band (29.7-42/35-50 MHz) Receiver Back End Schematic Diagram



FL08304680

Figure 9-248. Low Band (29.7-42/35-50 MHz) Frequency Generation Unit Synthesizer



FL08304690

Figure 9-249. Low Band (29.7-42/35-50 MHz) Frequency Generation Unit VCO Diagram

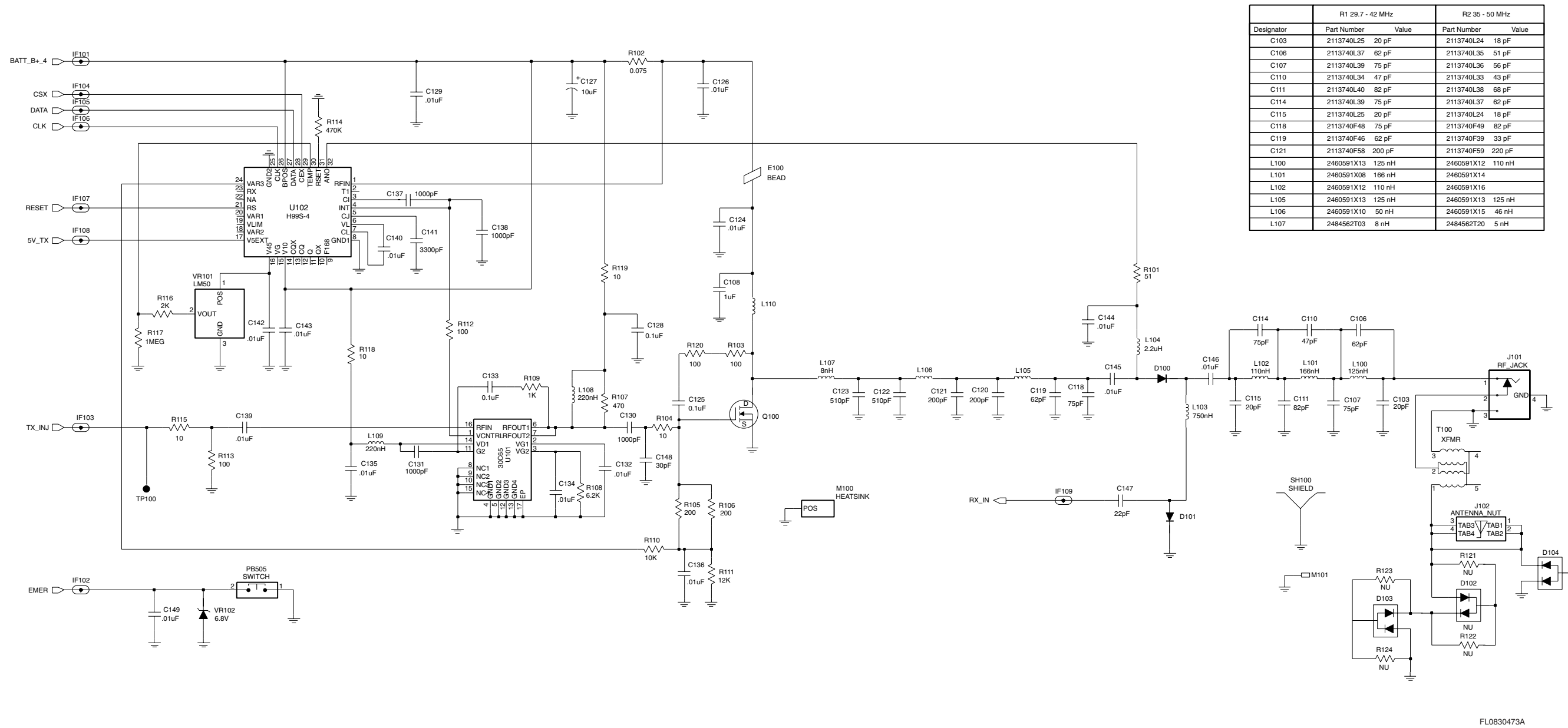


Figure 9-250. Low Band (29.7-42/35-50 MHz) Transmitter Schematic Diagram

Circuit Ref	Motorola Part No.	Description
C507	2113743K15	0.1uF
C511	2113743N50	100pF
C512	2113743N50	100pF
C513	2113743N50	100pF
C514	2113743N50	100pF
C515	2113743N44	56pF
C516	211374N37	30pF
C522	2113743L41	0.01uF
C533	2113743N40	100pF
C534	2113743N24	8.2pF
C535	2113743N09	2pF
C536	2113743N36	27pF
C537	2113743N16	3.9pF
C538	2113743N48	82pF
CR200	4880107R01	Varactor
CR201	4805649Q13	Dual Varactor
CR202	4805649Q13	Dual Varactor
CR203	4813833C07	Varactor
CR204	4813833C07	Varactor
CR211	4813833C03	Varactor
CR301	4813833C01	Varactor
CR411	4802245J62	Schottky Diode
CR412	4802245J62	Schottky Diode
CR413	4802245J62	Schottky Diode
CR440	4813833C02	Dual Diode Common Cathode
CR502	4880107R01	Rectifier
CR503	4805729G49	LED Red/Yellow
D100	4802482J02	Pin Diode
D101	4809948D23	Pin Diode
D102	NOT PLACED	
D103	NOT PLACED	
D104	4813833C06	Dual Schottky Diode
D210	4802233J09	Triple Diode
D211	4802233J09	Triple Diode
D501	4802245J42	Ring Quad Diode
D502	4805129M06	Dual Diode
E100	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
F1	6580542Z01	Fuse 3A
FL301	4885631B01	109.65 MHz Crystal Filter
FL401	4870368G02	38.4 kHz Crystal Oscillator
J1	0986237A02	Connector
J101	0985613Z01	RF Jack
J102	0280519Z01	Antenna Nut
J400	0905505Y04	40-pins Connector
J403	0905505Y02	20-pins Connector
L100	2460591X13	125nH

Circuit Ref	Motorola Part No.	Description
L100*	2460591X12	110nH
L101	2460591X08	166nH
L101*	2460591X14	
L102	2460591X12	110nH
L102*	2460591X16	
L103	2462587T27	750nH
L104	2462587Q20	2.2uH
L105	2460591X13	125nH
L106	2460591X10	50nH
L106*	2460591X15	46nH
L107	2484562T03	8nH
L107*	2484562T20	5nH
L108	2462587Q08	220nH
L109	2462587Q08	220nH
L110	2460591X11	100nH
L200	2462587Q42	390nH
L201	2405452C63	1.35uH
L202	2405452C63	1.35uH
L203	2405452C63	1.35uH
L204	2462587T25	620nH
L207	2405452C27	4.7uH
L207*	2405452C63	1.35uH
L208	2462587T20	270nH
L208*	2462587T19	220nH
L209	2462587T20	270nH
L209*	2462587T19	220nH
L210	2405452C63	1.35uH
L211	2462587T21	330nH
L212	2462587T16	5.45nH
L215	2409348J04	13.85nH
L225	2462587L50	100uH
L226	2462587Q20	2.2uH
L301	2462587V35	120nH
L302	2462587T23	470nH
L303	2462587V38	220nH
L304	2462587T22	390nH
L305	2462587T22	390nH
L306	2462587T44	33nH 2%
L307	2462587Q20	2.2uH
L308	2462587Q20	2.2uH
L400	2462587Q42	390nH
L401	2462587Q42	390nH
L410	2462587Q42	390nH
L411	2462587Q42	390nH
L501	2462587T17	150nH
L502	2462587T20	270nH
L503	2462587T30	1nH
L504	2462587T24	560nH
L507	2462587T17	150nH
L508	2462587V32	68nH
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
Q100	4813828A08	FET

Circuit Ref	Motorola Part No.	Description
Q201	4802245J44	NPN
Q202	4805218N82	FET
Q203	4805218N82	FET
Q204	4805218N82	FET
Q288	4802245J44	NPN
Q301	4805218N63	NPN
Q400	4809579E18	MOSFET P-Channel
Q403	4880214G02	NPN
Q405	4802245J54	Dual NPN
Q410	4802245J54	Dual NPN
Q411	Not Placed	
Q416	4809579E18	MOSFET P-Chan
Q417	4802245J50	Dual NPN/PNP
Q509	4802245J44	NPN
Q510	4880214G02	NPN
R101	0662057A18	51
R102	0680735Z01	0.075
R103	0662057A25	100
R104	0662057M26	10
R105	0662057A32	200
R106	0662057A32	200
R107	0662057M66	470
R108	0662057M93	6.2K
R109	0662057M74	1K
R110	0662057M98	10K
R111	0662057N01	12K
R112	0662057M50	100
R113	0662057M50	100
R114	0662057N39	470K
R115	0662057M26	10
R116	0662057M81	2K
R117	0662057N47	1M
R118	0662057A01	10
R119	0662057A01	10
R120	0662057A25	100
R121	NOT PLACED	
R122	NOT PLACED	
R123	NOT PLACED	
R124	NOT PLACED	
R203	0662057M50	100
R204	0662057M56	180
R206	0662057U45	56
R219	0662057N15	47K
R222	0662057N20	75K
R223	0662057N23	100K
R224	0662057M57	200
R225	0662057M67	510
R227	0662057M50	100
R228	0662057M43	51
R229	0662057M81	2K
R230	0662057M50	100
R231	0662057M46	68
R232	0662057N10	30K
R233	0662057M82	2.2K
R234	0662057M74	1000
R235	0662057M72	820

Circuit Ref	Motorola Part No.	Description
R236	0662057M44	56
R237	0662057M16	3.9
R238	0662057M74	1K
R239	0662057M74	1K
R285	0662057M50	100
R286	0662057M01	0
R287	0662057N15	47K
R288	0662057M74	1K
R289	0662057M16	3.9
R301	0662057M78	1.5K
R302	0662057N15	47K
R303	0662057N15	47K
R304	0662057M78	1.5K
R305	0662057M98	10K
R306	0662057M77	1.3K
R307	0662057M92	5.6K
R308	0662057N01	12K
R309	0662057N22	91K
R310	0662057M87	3.6K
R312	0662057M78	1.5K
R314	0662057M98	10K
R315	0662057N15	47K
R316	0662057M57	200
R317	0662057M81	2K
R318	0662057M33	20
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	0662057N13	39K
R418	Not Placed	
R419	0662057M67	510
R420	0662057B46	10M
R421	0662057M81	2K
R423	0662057N21	82K
R424	0662057N12	36K
R425	0662057N10	30K
R426	0662057M35	330
R427	0662057M84	2.7K
R428	0662057M10	2.2
R429	0662057M98	10K
R431	0662057N39	470K
R432	0662057N16	51K
R434	0662057M62	330
R435	0662057M81	2K
R436	0662057M74	1K

Circuit Ref	Motorola Part No.	Description
R437	0662057M01	0
R438	0662057M54	150
R439	0662057M54	150
R445	0662057N08	24K
R446	0662057N30	220K
R447	0662057N52	1.6M
R448	0662057N33	270K
R449	0662057N08	24K
R450	0662057T45	68
R457	0662057M98	10K
R460	0662057M90	4.7K
R461	0662057M56	180
R462	0662057M98	10K
R463	0662057M61	300
R471	0662057N06	20K
R472	0662057M93	6.2K
R473	0662057M26	10
R475	0662057M01	0
R476	0662057N08	24K
R477	0662057M74	1K
R478	0662057M98	10K
R481	0662057N08	24K
R492	0662057M01	0
R499	Not Placed	
R501	0662057M70	680
R502	0662057M56	180
R503	0662057M74	1K
R504	0662057N01	12K
R505	0662057M68	10K
R507	0662057M60	270
R508	0662057M32	18
R509	0662057M60	270
R510	0662057M87	3.6K
R512	0662057M90	4.7K
R513	0662057M26	10
R514	0662057N15	47K
R515	0662057M98	10K
RT400	0680590Z01	Thermistor 33K
S501	4080710Z01	Channel Switch
S502	1880619Z02	Volume Switch
SH100	2686076A01	Shield
SH200	2685709B02	Shield
SH201	2680511Z01	Shield
SH202	2680511Z01	Shield
SH203	2686079A01	Shield
SH300	2680516Z01	Shield
SH301	2680508Z01	Shield
SH302	2680697Z01	Shield
SH303	2680553Z01	Shield
SH400	2680505Z01	Controller Memory Shield
SH401	2680506Z01	Controller On/Off Shield
SH402	2680515Z01	Controller Microprocessor Shield
SH403	2680516Z01	Controller ASFIC Cmp/Audi PA Shield
SH500	2680555Z01	Shield
SH501	2680697Z01	Shield

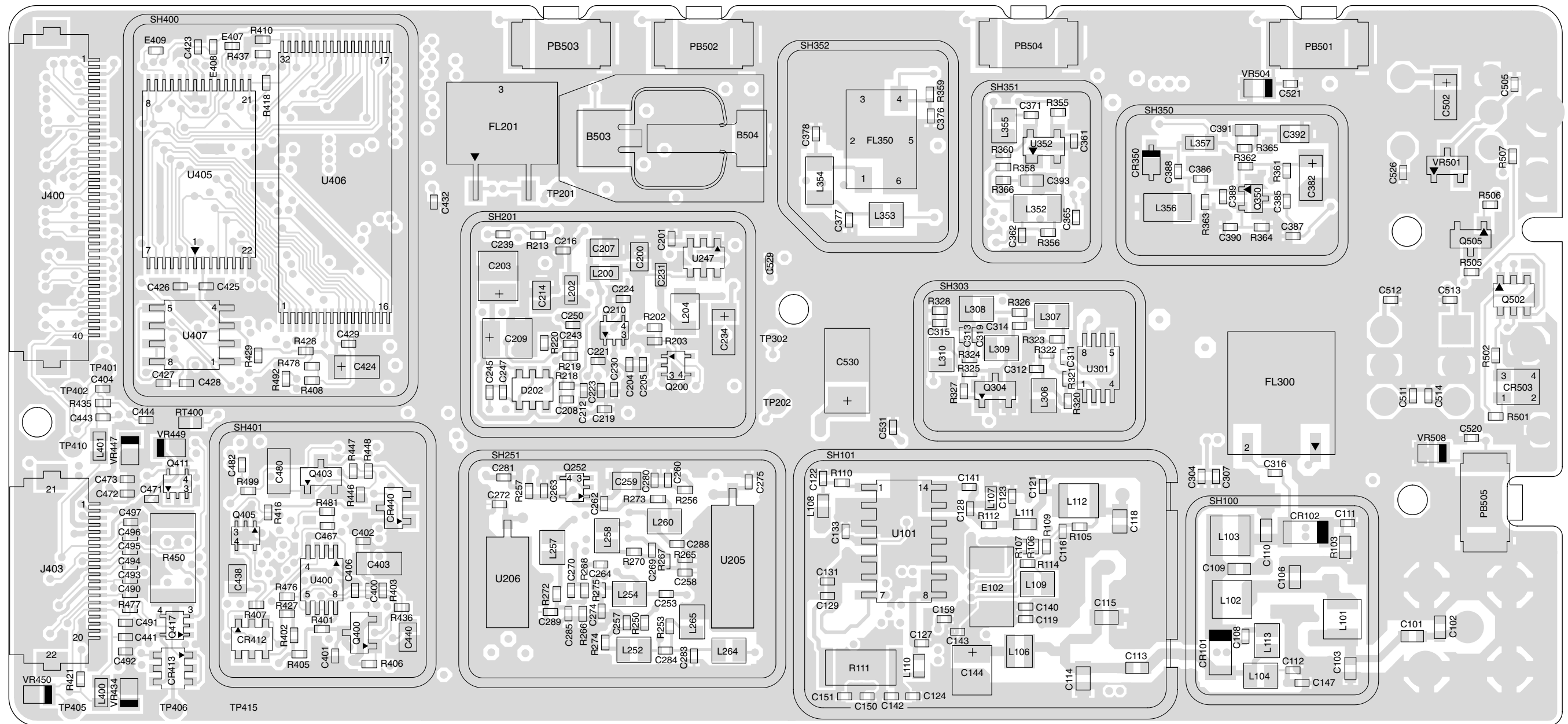
Circuit Ref	Motorola Part No.	Description
SH502	2680696Z01	Shield
T100	2505515V03	Transformer Coil
T501	2580541Z01	Transformer Coil
T502	2580541Z01	Transformer Coil
TR201	2460593D01	Resonator, 50-300MHz
U101	5185130C65	LDMOS Driver
U102	5185765B26	Power Control
U200	5102463J58	3.3V Regulator
U203	4805649Q14	Varactor Diode
U204	5105739X05	Linear Regulator
U205	5185963A27	LV Fractional N Synthesizer
U207	4805921T06	Dual PNP
U301	4885622B01	Dual Gate MOSFET
U302	5185623B01	3.3V Regulator
U303	5109632D83	Low Voltage ZIF
U400	5102463J40	3.3V Regulator
U404	5185963A53	ASFIC
U405	Not Placed	
U406**	5102463J59	ROM 128K
U407**	5102463J62	EEPROM 8Kx8
U409	5102226J56	Microcontroller
U410	5102463J57	3.3V Regulator
U420	5102463J44	Audio PA
VR101	5185963A15	Temperature Sense
VR102	4802245J73	6.8V Zener
VR200	4802245J73	6.8V Zener
VR201	4802245J73	6.8V Zener
VR202	4802245J73	6.8V Zener
VR203	4802245J74	6.8V Zener
VR432	4805656W08	5.6V Zener
VR433	4805656W08	5.6V Zener
VR434	4802245J73	6.8V Zener
VR445	4802245J53	10V Zener
VR446	4802245J74	10V Zener
VR447	4802245J74	10V Zener
VR448	4802245J74	10V Zener
VR449	4802245J74	10V Zener
VR450	4802245J75	12V Zener
VR500	4802245J73	6.8V Zener
VR501	4802245J73	6.8V Zener
VR502	4802245J51	6.8V Zener
Y201	4805875Z03	Crystal Oscillator

** Motorola depot servicing only

* Range 2 only

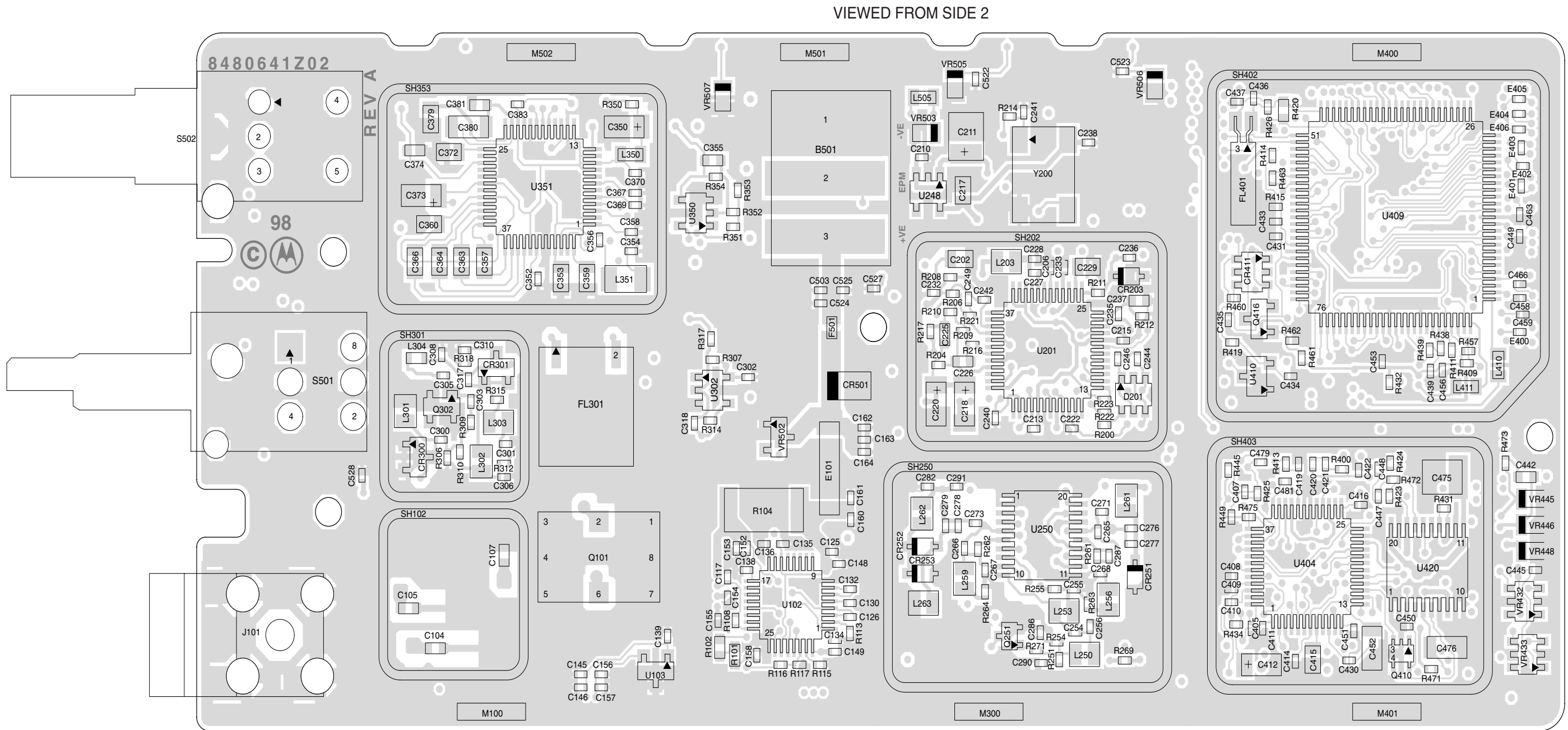
9.27 800 MHz Circuit Board/Schematic Diagrams and Parts List (PCB 84860641Z02 / 8480641Z03 (Rev B)

VIEWED FROM SIDE 1



FL08307260

Figure 9-251. 800 MHz (806-870 MHz) Main Board Top Side PCB 84860641Z02



FL08307270

Figure 9-252. 800 MHz (806-870 MHz) Main Board Bottom Side PCB 84860641Z02

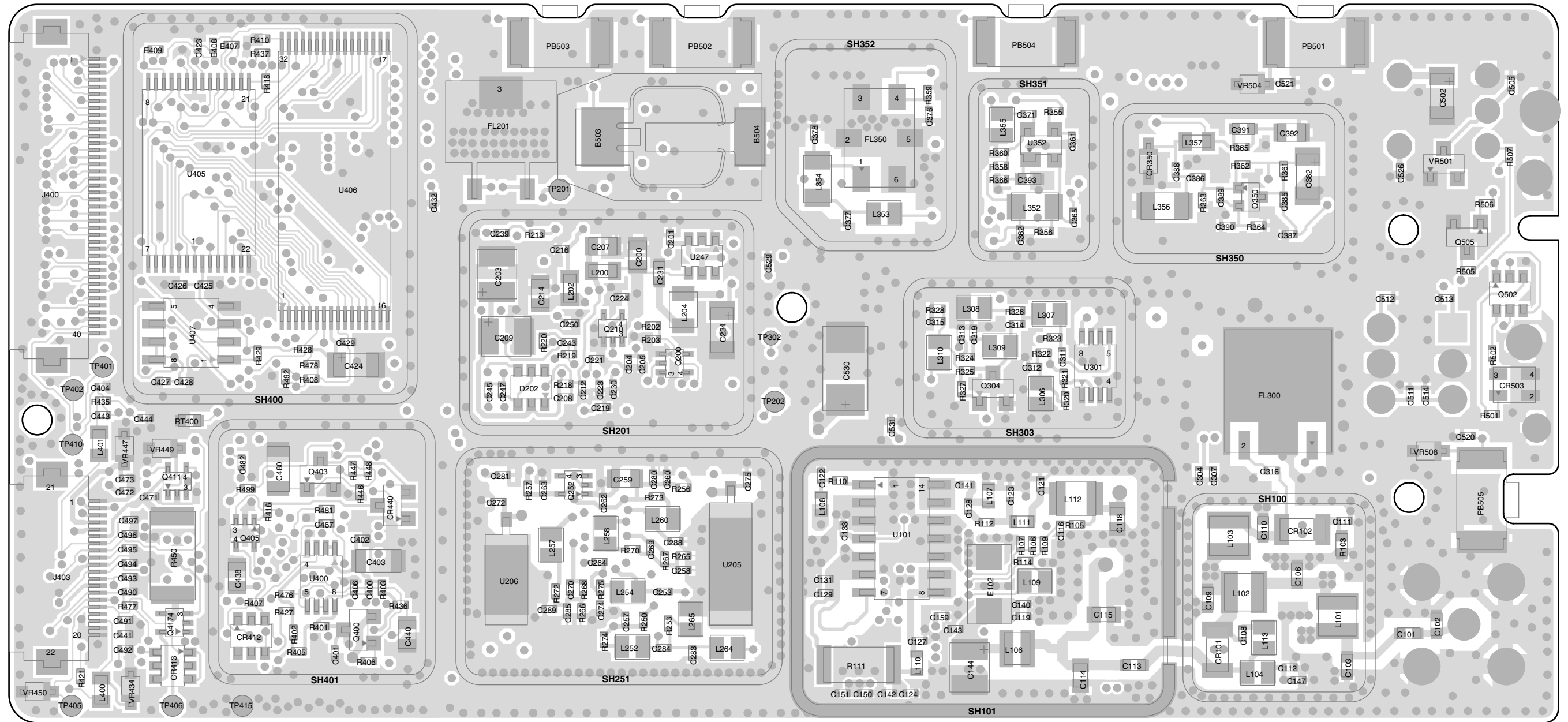


Figure 9-253. 800 MHz Popular/Preferred (806-870 MHz) Main Board Top Side PCB 8480641Z03 (Rev B)

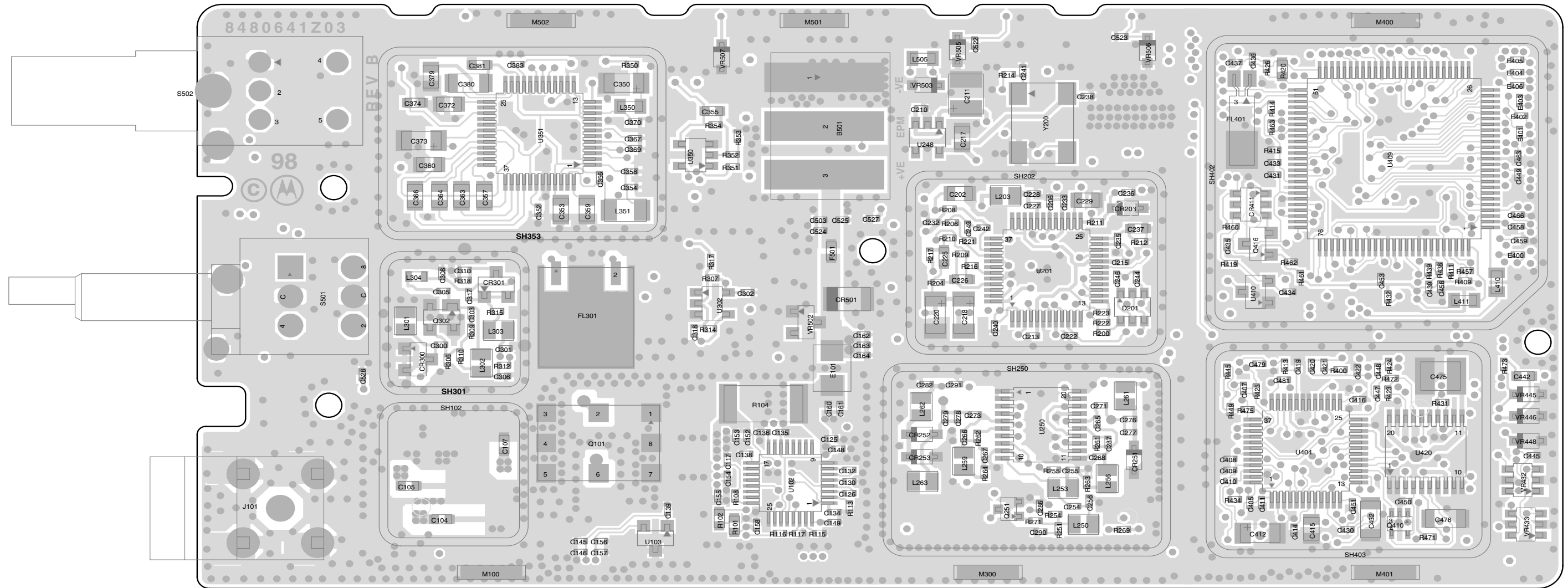
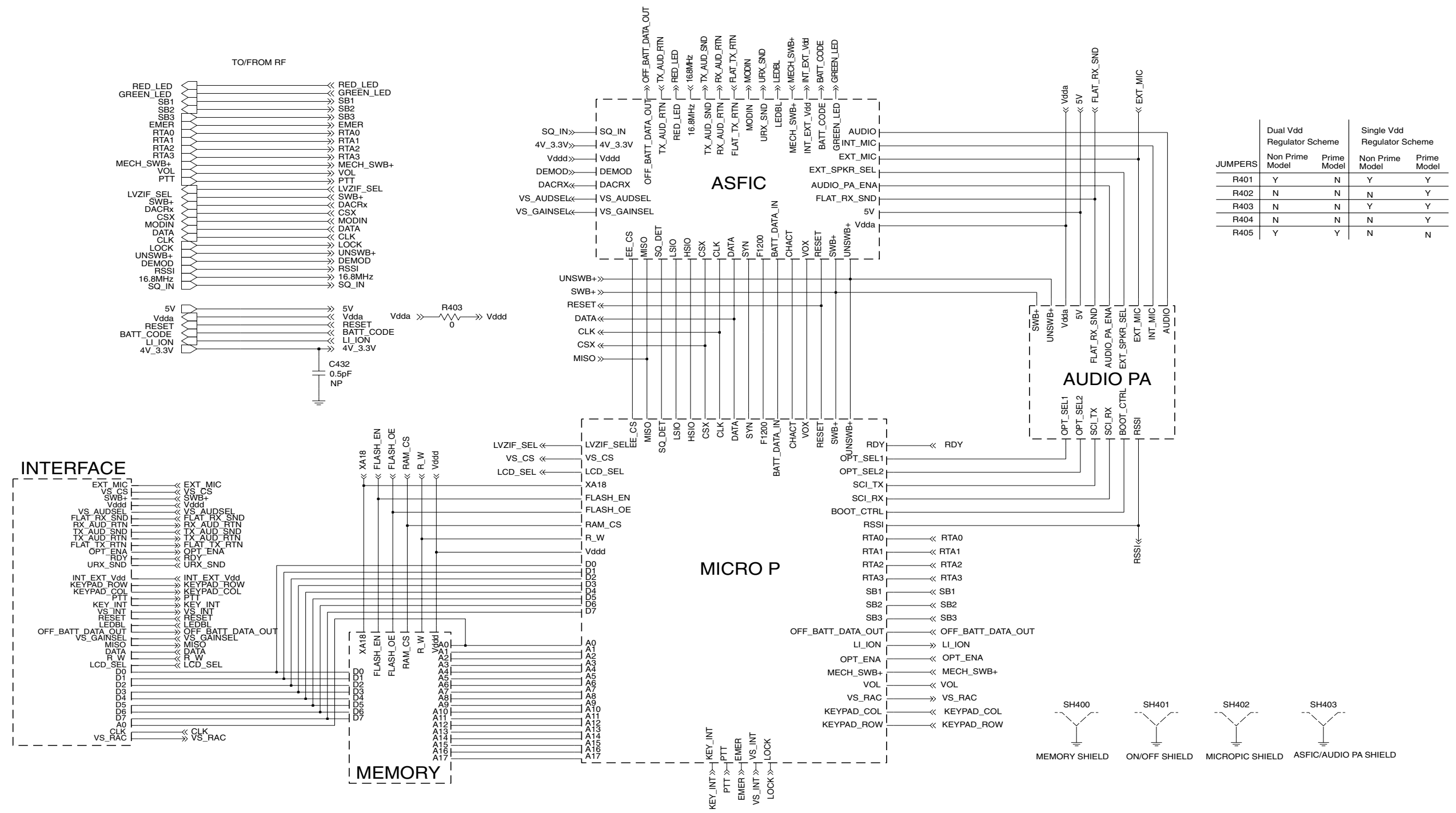


Figure 9-254. 800 MHz Popular/Preferred (806-870 MHz) Main Board Bottom Side PCB 8480641Z03 (Rev B)



FL08307130

Figure 9-255. 800 MHz Complete Controller

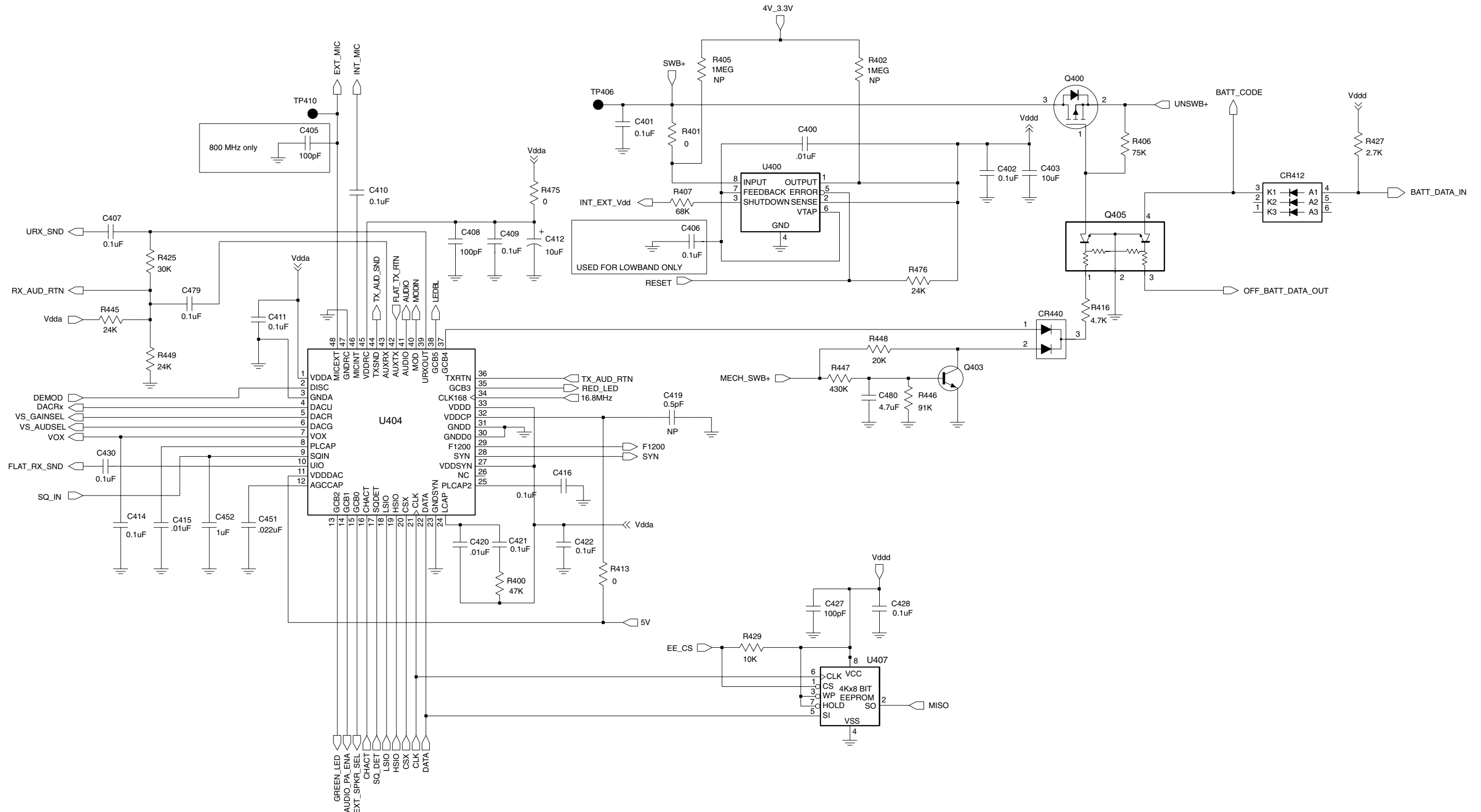
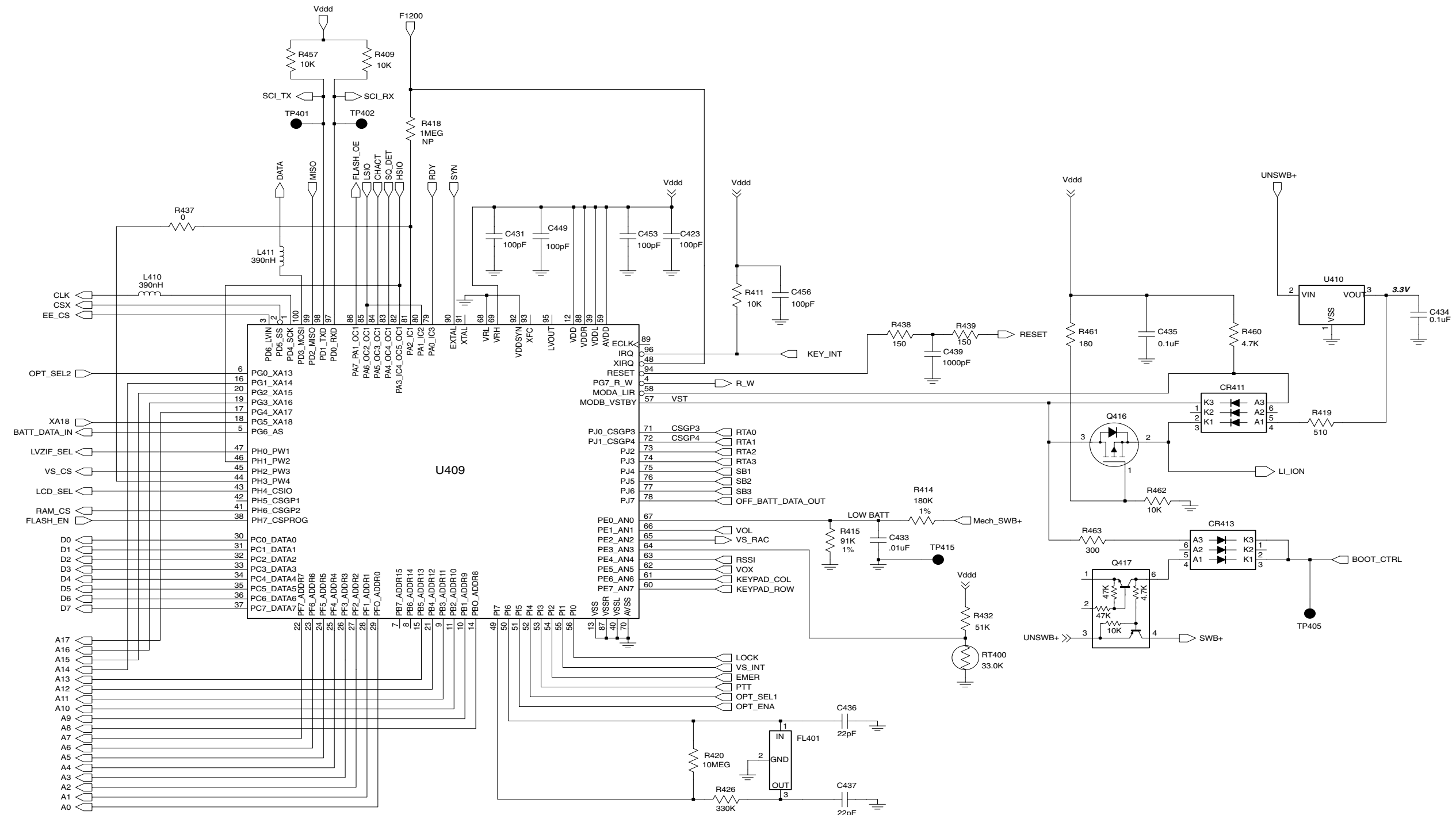
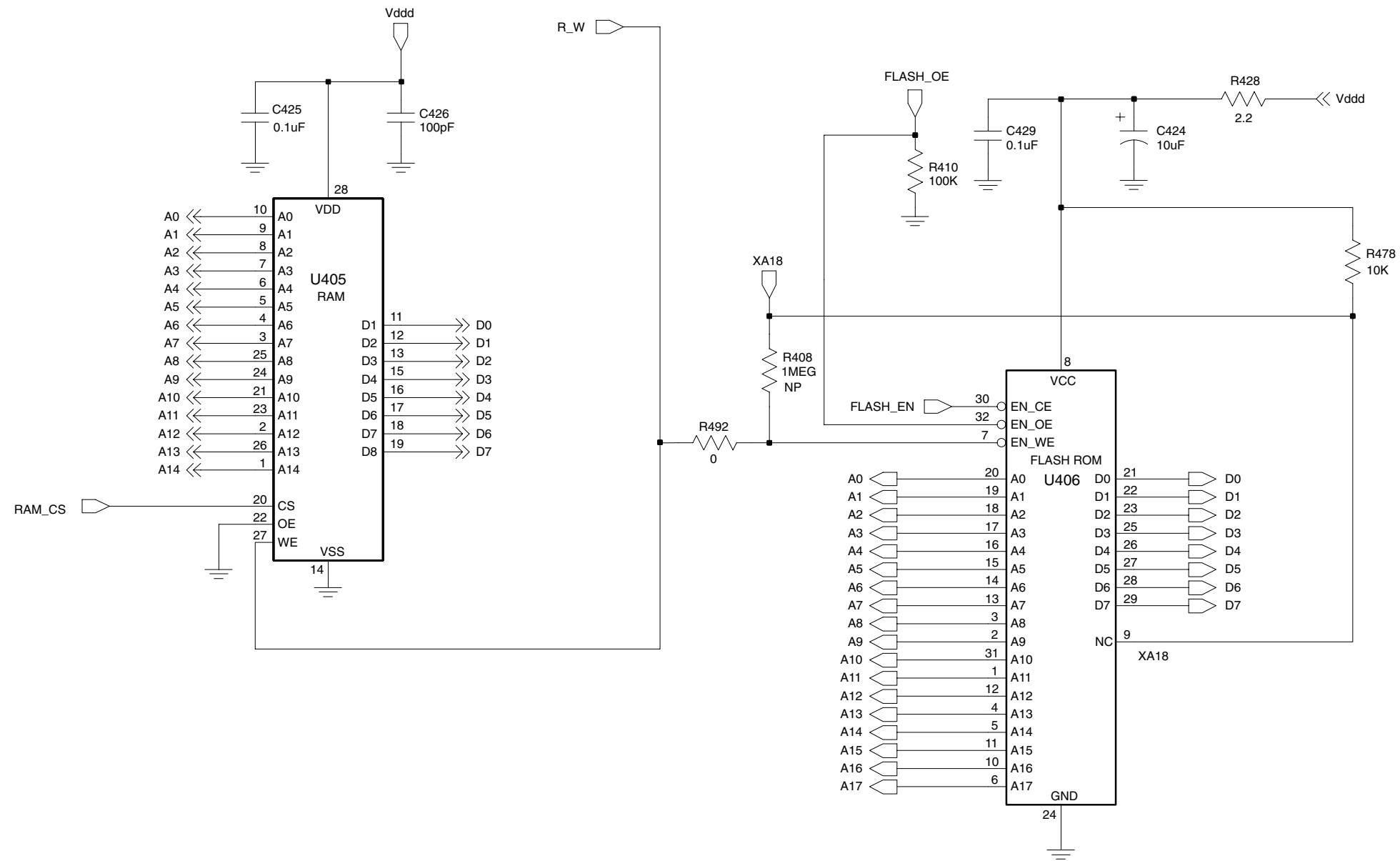


Figure 9-256. 800 MHz Controller ASFIC/ON_OFF



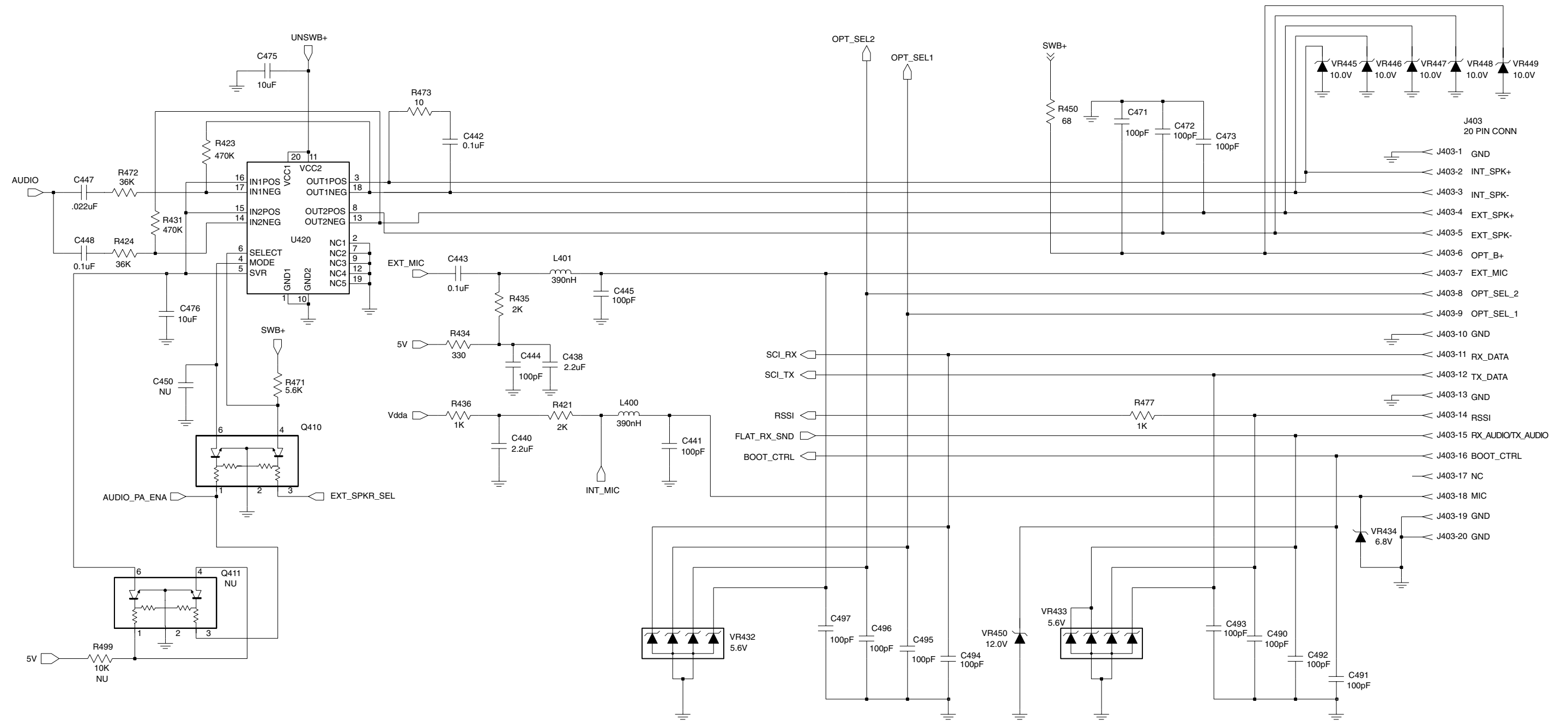
FL08307160

Figure 9-257. 800 MHz Controller Microprocessor



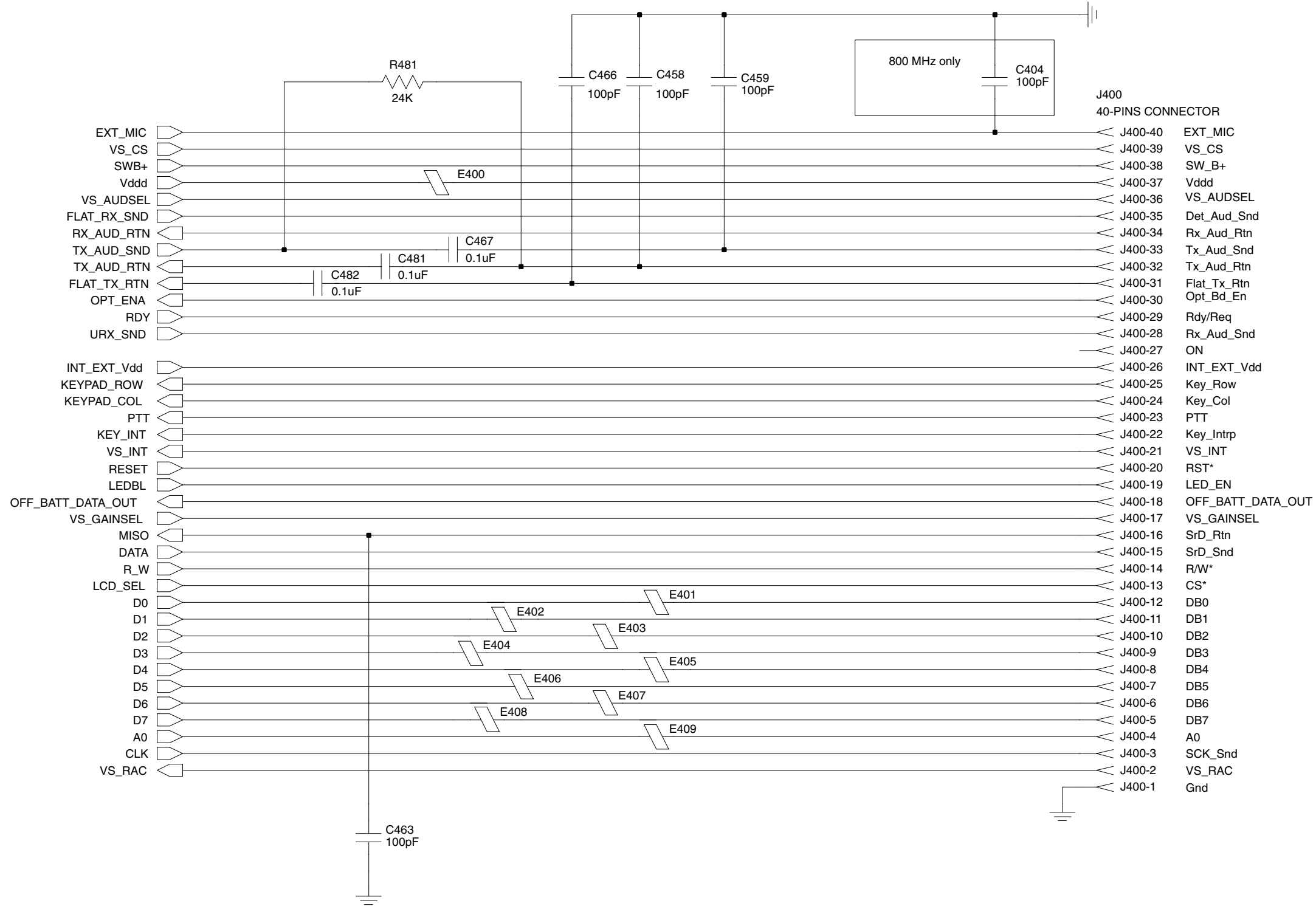
FL08307150

Figure 9-258. 800 MHz Controller Memory



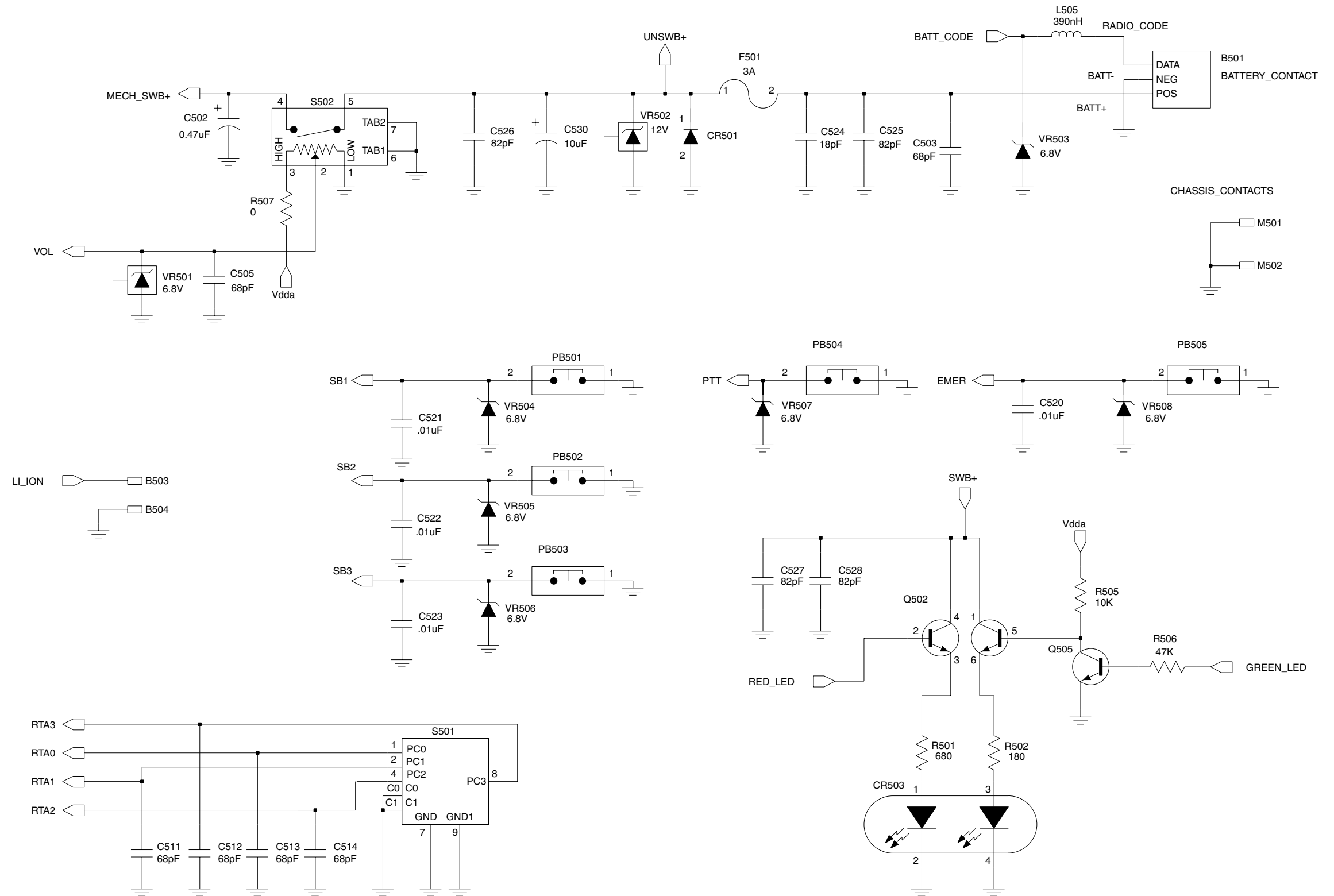
FL08307120

Figure 9-259. 800 MHz Controller Audio Power Amplifier



FL08307140

Figure 9-260. 800 MHz Controller Interface



FL08307280

Figure 9-261. 800 MHz Controls and Switches Schematic Diagram

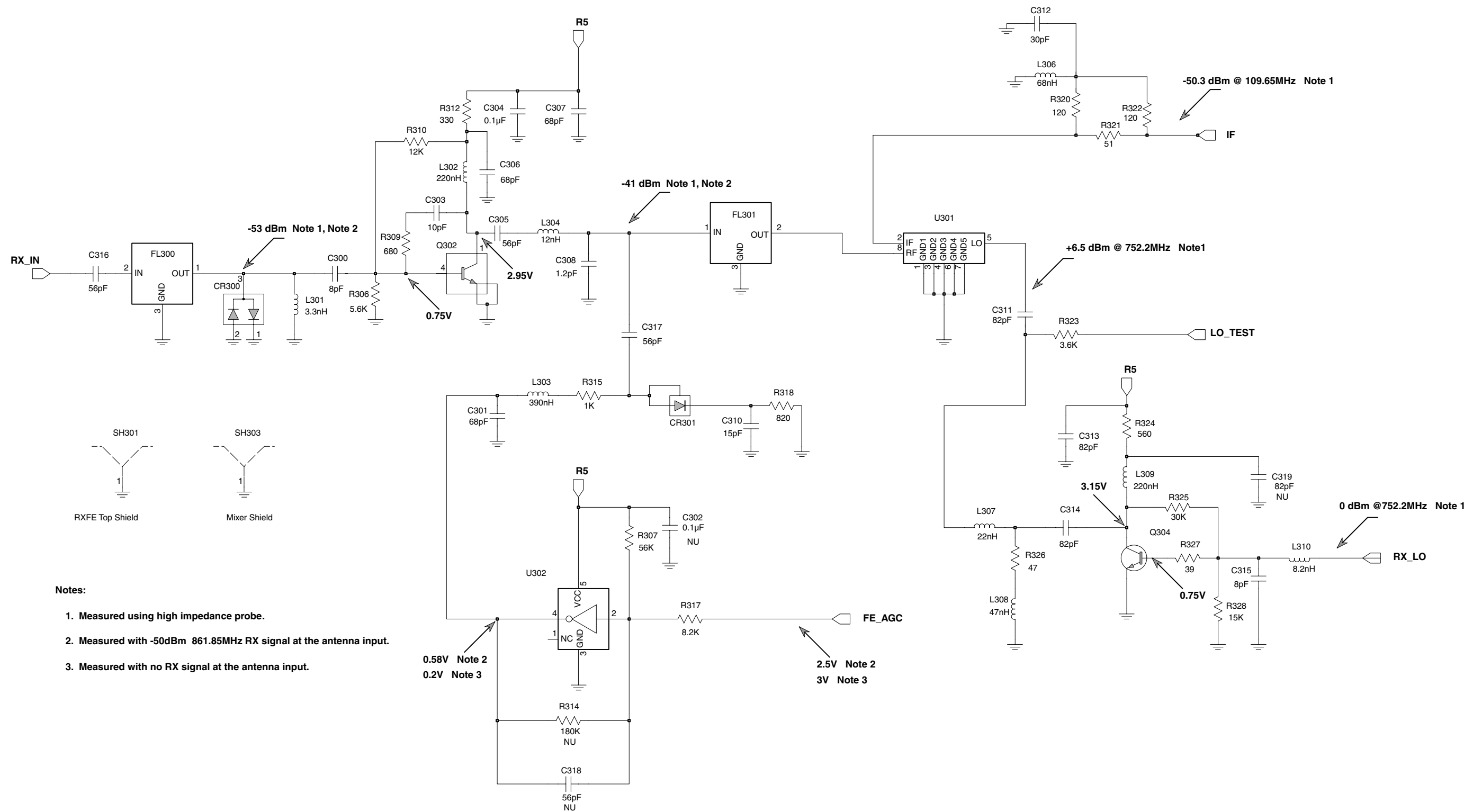


Figure 9-262. 800 MHz Receiver Front End Schematic Diagram

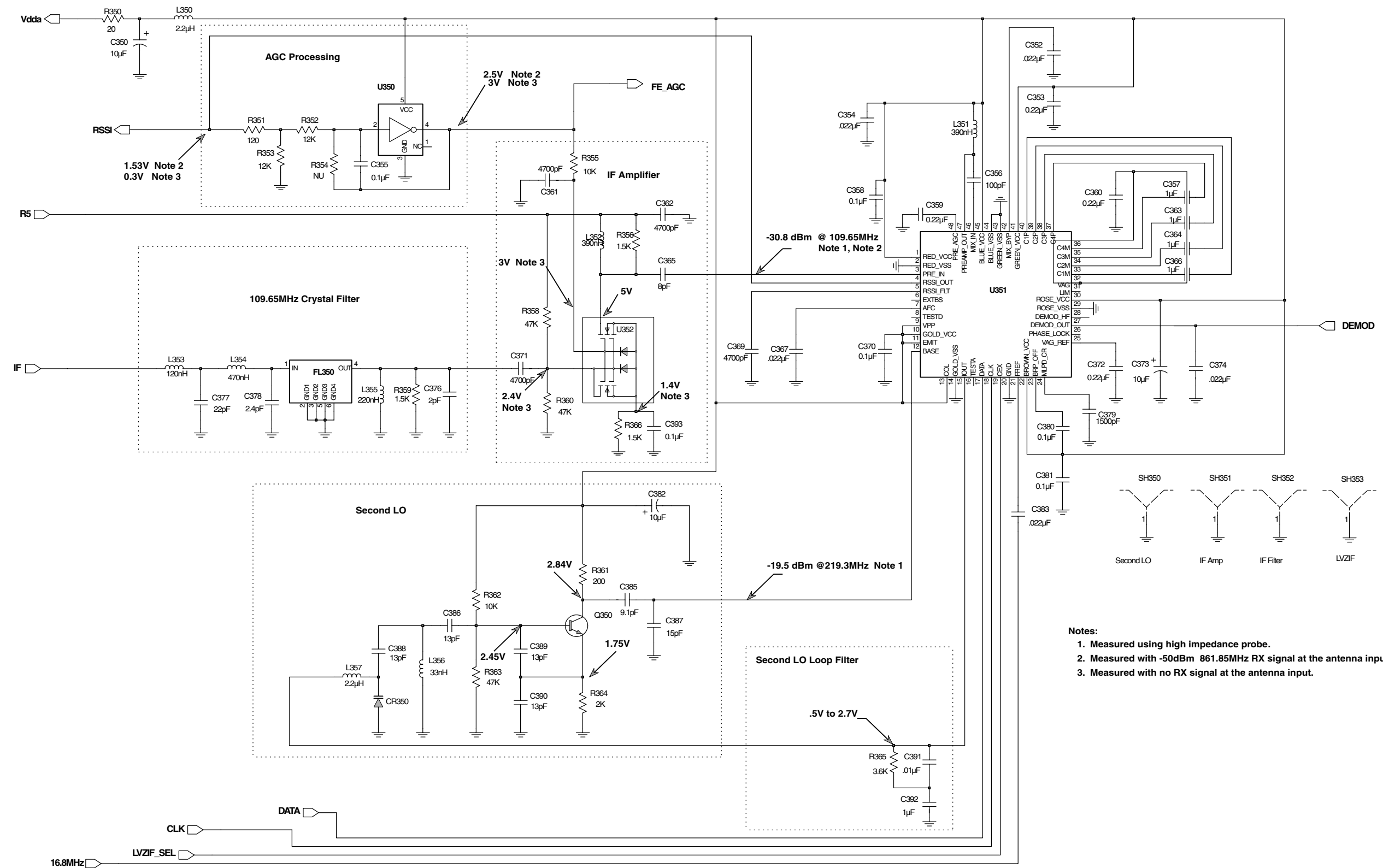


Figure 9-263. 800 MHz Receiver Back End Schematic Diagram

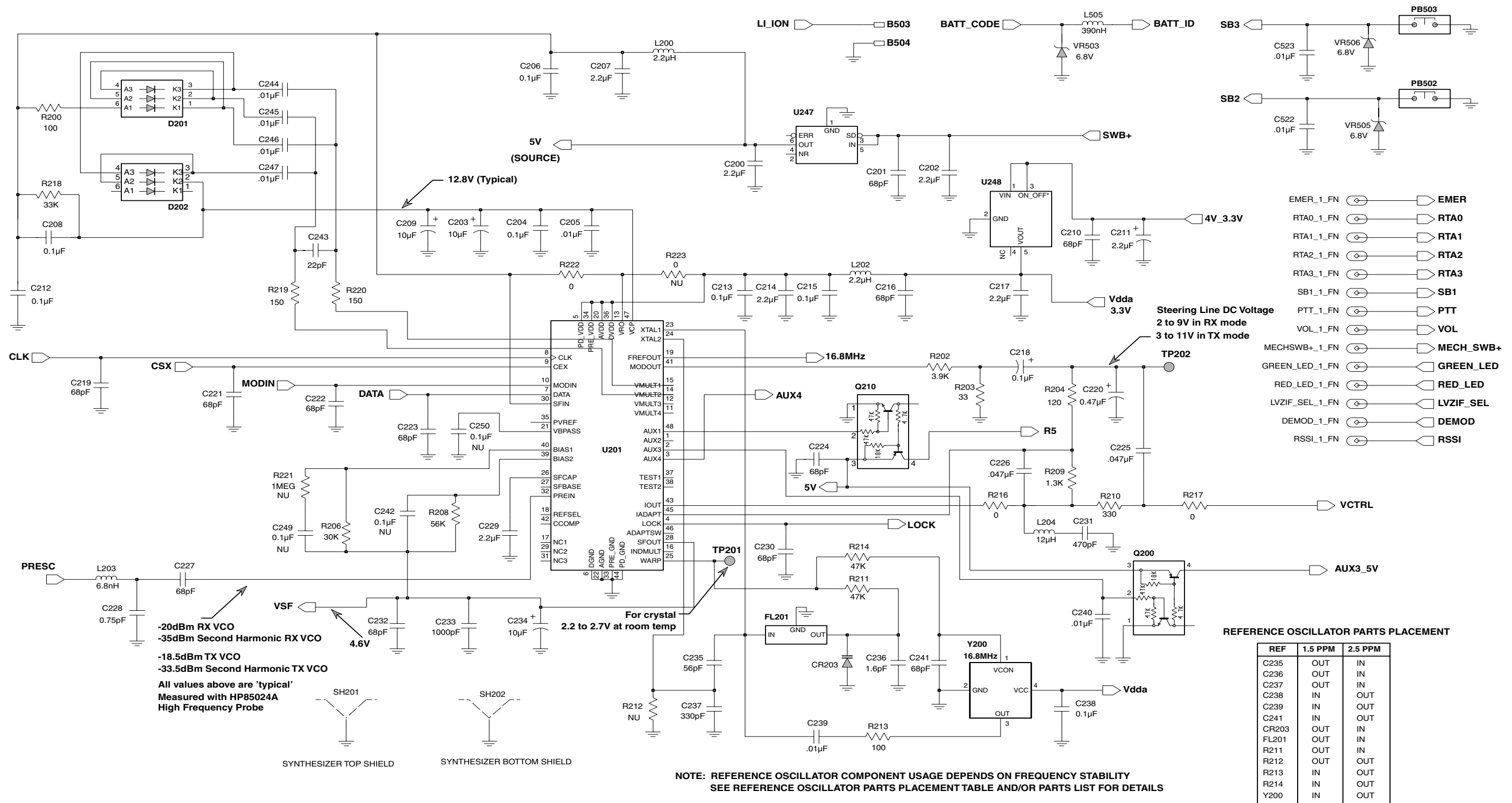
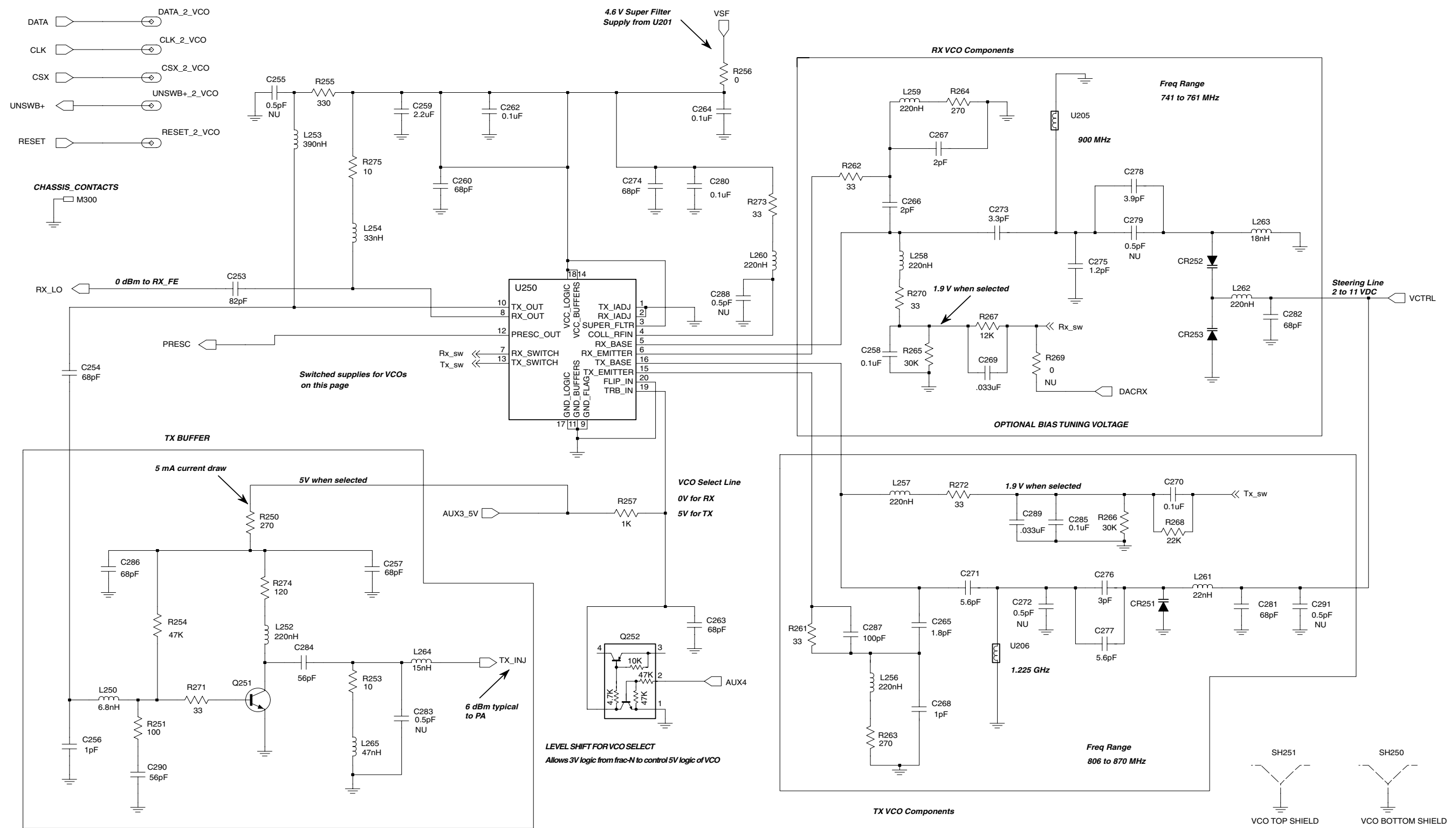


Figure 9-264. 800 MHz Synthesizer Schematic Diagram



FL08307320

Figure 9-265. 800 MHz Voltage Controlled Oscillator Schematic Diagram

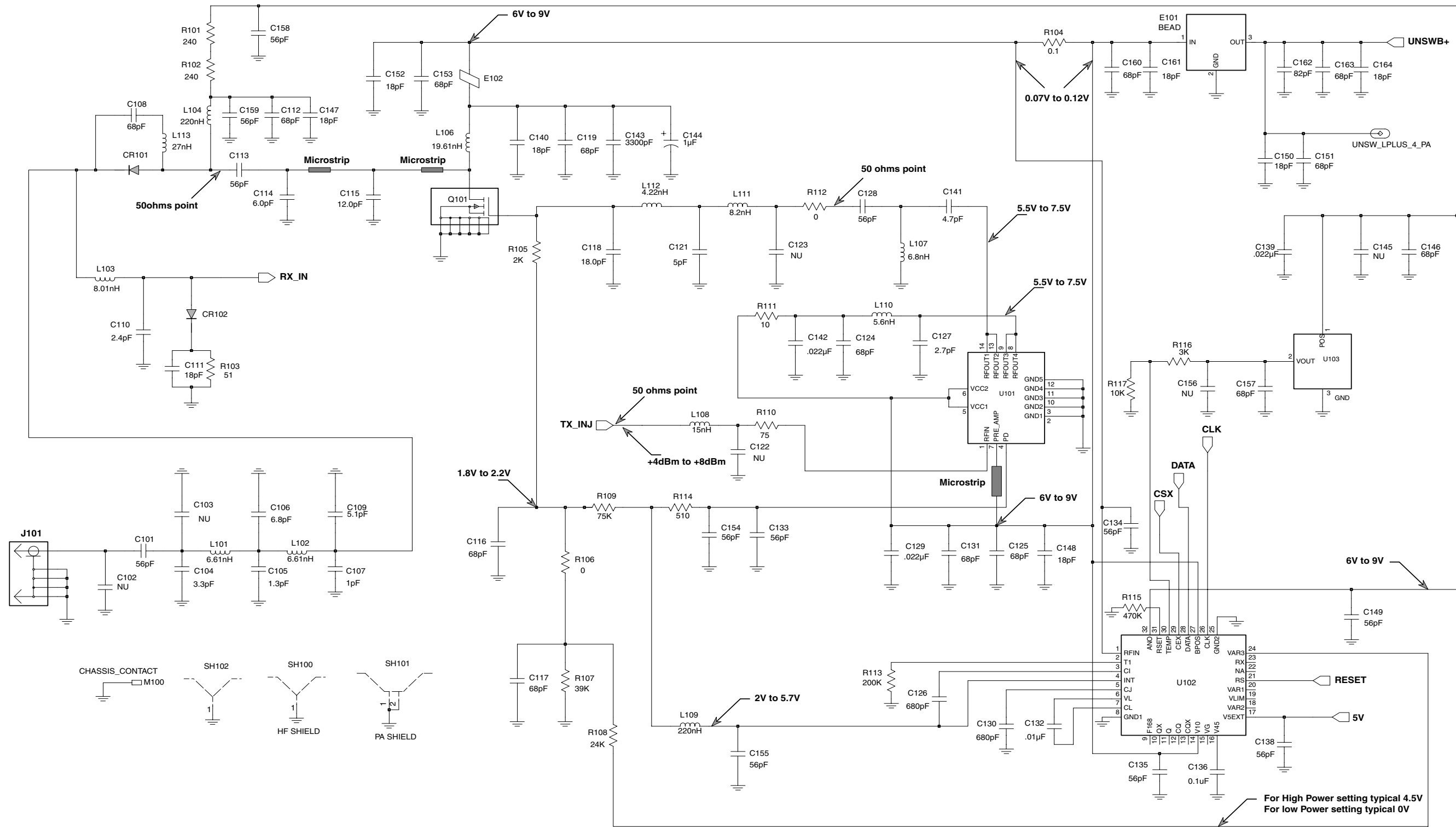


Figure 9-266. 800 MHz Transmitter Schematic Diagram (Rev A)

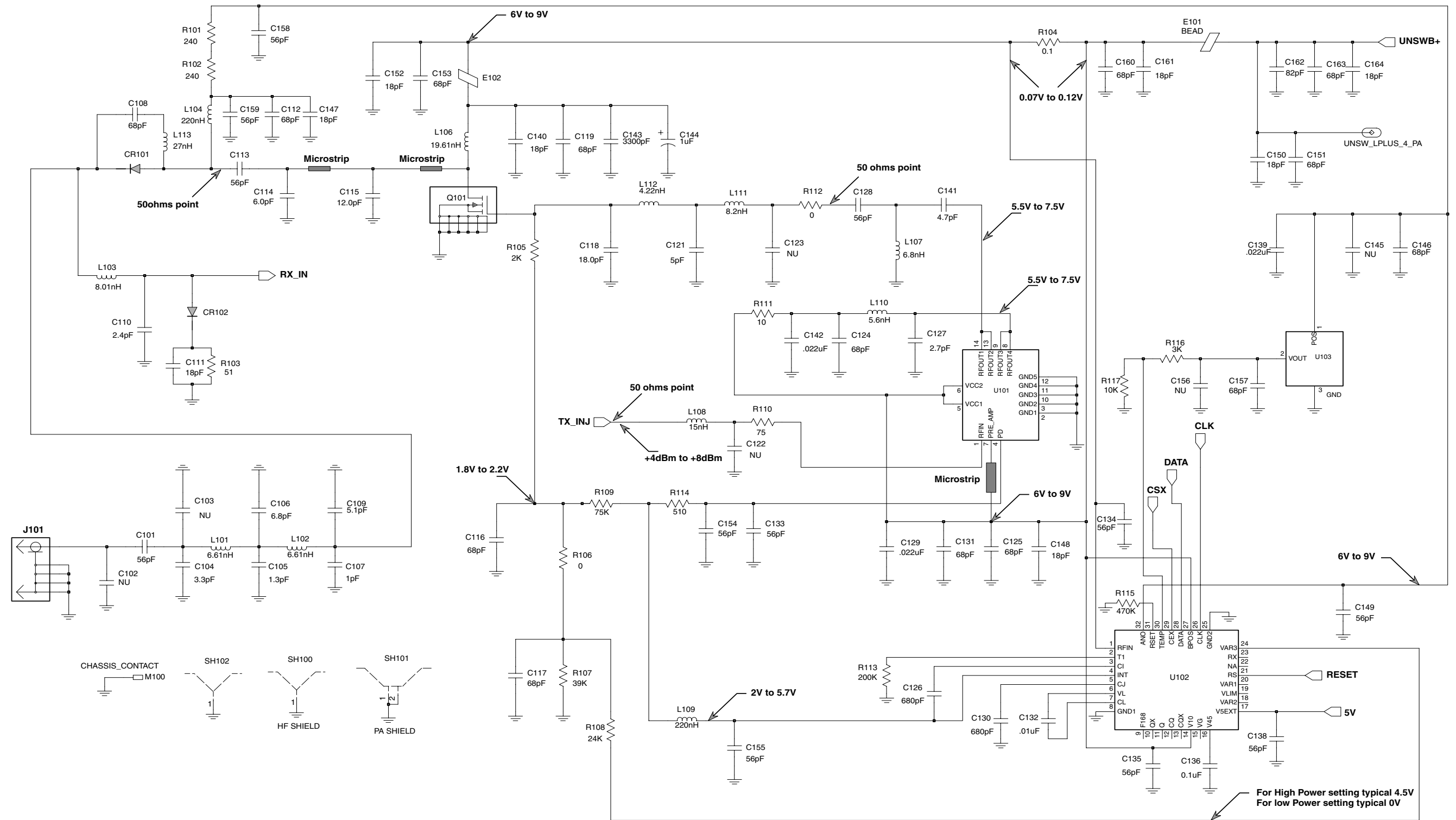


Figure 9-267. 800MHz Transmitter Schematic Diagram (Rev B)

800 MHz Parts List

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
C101	2113740F45	Capacitor Chip 56pF
C104	2113740F15	Capacitor Chip 3.3pF
C105	2113740F06	Capacitor Chip 1.3pF
C106	2113740F23	Capacitor Chip 6.8pF
C107	2113740F03	Capacitor Chip 1pF
C108	2113743N46	Capacitor Chip 68pF
C109	2113740F20	Capacitor Chip 5.1pF
C110	2113740F12	Capacitor Chip 2.4pF
C111	2113743N32	Capacitor Chip 18pF
C112	2113743N46	Capacitor Chip 68pF
C113	2113740F45	Capacitor Chip 56pF
C114	2103689A19	Capacitor Chip 6.0pF
C115	2103689A05	Capacitor Chip 12.0pF
C116 to C117	2113743N46	Capacitor Chip 68pF
C118	2103689A08	Capacitor Chip 18.0pF
C119	2113743N46	Capacitor Chip 68pF
C121	2113743N60	Capacitor Chip 5pF
C124 to C125	2113743N46	Capacitor Chip 68pF
C126	2113743L13	Capacitor Chip 680pF
C127	2113743N12	Capacitor Chip 2.7pF
C128	2113743N44	Capacitor Chip 56pF
C129	2113743M08	Capacitor Chip 0.022µF
C130	2113743L13	Capacitor Chip 680pF
C131	2113743N46	Capacitor Chip 68pF
C132	2113743L41	Capacitor Chip 0.01µF
C133 to C135	2113743N44	Capacitor Chip 56pF
C136	2113743M24	Capacitor Chip 0.1µF
C138	2113743N44	Capacitor Chip 56pF
C139	2113743M08	Capacitor Chip 0.022µF
C140	2113743N32	Capacitor Chip 18pF
C141	2113743N18	Capacitor Chip 4.7pF
C142	2113743M08	Capacitor Chip 0.022µF
C143	2113743L29	Capacitor Chip 3300pF
C144	2311049A08	Capacitor Tantalum 1µF
C146	2113743N46	Capacitor Chip 68pF
C147 to C148	2113743N32	Capacitor Chip 18pF
C149	2113743N44	Capacitor Chip 56pF
C150	2113743N32	Capacitor Chip 18pF
C151	2113743N46	Capacitor Chip 68pF
C152	2113743N32	Capacitor Chip 18pF
C153	2113743N46	Capacitor Chip 68pF
C154 to C155	2113743N44	Capacitor Chip 56pF
C157	2113743N46	Capacitor Chip 68pF
C158 to C159	2113743N44	Capacitor Chip 56pF
C160	2113743N46	Capacitor Chip 68pF
C161	2113743N32	Capacitor Chip 18pF
C162	2113743N48	Capacitor Chip 82pF
C163	2113743N46	Capacitor Chip 68pF
C164	2113743N32	Capacitor Chip 18pF
C200	2113743F18	Capacitor Chip 2.2µF
C201	2113743N46	Capacitor Chip 68pF
C202	2113743F18	Capacitor Chip 2.2µF

Circuit Ref	Motorola Part No.	Description
C203	2311049A57	Capacitor Tantalum 10µF
C204	2113743M24	Capacitor Chip 0.1µF
C205	2113743L41	Capacitor Chip 0.01µF
C206	2113743M24	Capacitor Chip 0.1µF
C207	2113743F18	Capacitor Chip 2.2µF
C208	2113743M24	Capacitor Chip 0.1µF
C209	2311049A57	Capacitor Tantalum 10µF
C210	2113743N46	Capacitor Chip 68pF
C211	2311049A09	Capacitor Tantalum 2.2µF
C212 to C213	2113743M24	Capacitor Chip 0.1µF
C214	2113743F18	Capacitor Chip 2.2µF
C215	2113743M24	Capacitor Chip 0.1µF
C216	2113743N46	Capacitor Chip 68pF
C217	2113743F18	Capacitor Chip 2.2µF
C218	2311049A01	Capacitor Tantalum 0.1µF
C219	2113743N46	Capacitor Chip 68pF
C220	2311049A05	Capacitor Tantalum 0.47µF
C221 to C224	2113743N46	Capacitor Chip 68pF
C225 to C226	2113743E12	Capacitor Chip 0.047µF
C227	2113743N46	Capacitor Chip 68pF
C228	2113743N02	Capacitor Chip 0.75pF
C229	2113743F18	Capacitor Chip 2.2µF
C230	2113743N46	Capacitor Chip 68pF
C231	2113741F17	Capacitor Chip 470pF
C232	2113743N46	Capacitor Chip 68pF
C233	2113743L17	Capacitor Chip 1000pF
C234	2311049A59	Capacitor Tantalum 10µF
C235	2113743N44	Capacitor Chip 56pF
C236	2113743N08	Capacitor Chip 1.6pF
C237	2113740F63	Capacitor Chip 330pF
C238	2113743M24	Capacitor Chip 0.1µF
C239	2113743L41	Capacitor Chip 0.01µF
C240	2113743L41	Capacitor Chip 0.01µF
C241	2113743N46	Capacitor Chip 68pF
C243	2113743N34	Capacitor Chip 22pF
C244 to C247	2113743L41	Capacitor Chip 0.01µF
C253	2113743N48	Capacitor Chip 82pF
C254	2113743N46	Capacitor Chip 68pF
C256	2113743N03	Capacitor Chip 1pF
C257	2113743N46	Capacitor Chip 68pF
C258	2113743M24	Capacitor Chip 0.1µF
C259	2113743F18	Capacitor Chip 2.2µF
C260	2113743N46	Capacitor Chip 68pF
C262	2113743M24	Capacitor Chip 0.1µF
C263	2113743N46	Capacitor Chip 68pF
C264	2113743M24	Capacitor Chip 0.1µF
C265	2113743N69	Capacitor Chip 1.8pF
C266 to C267	2113743N09	Capacitor Chip 2pF
C268	2113743N03	Capacitor Chip 1pF
C269	2113743M12	Capacitor Chip 0.033µF
C270	2113743M24	Capacitor Chip 0.1µF
C271	2113743N20	Capacitor Chip 5.6pF
C273	2113743N14	Capacitor Chip 3.3pF
C274	2113743N46	Capacitor Chip 68pF
C275	2113743N05	Capacitor Chip 1.2pF
C276	2113743N13	Capacitor Chip 3pF

Circuit Ref	Motorola Part No.	Description
C277	2113743N20	Capacitor Chip 5.6pF
C278	2113743N16	Capacitor Chip 3.9pF
C280	2113743M24	Capacitor Chip 0.1µF
C281 to C282	2113743N46	Capacitor Chip 68pF
C284	2113743N44	Capacitor Chip 56pF
C285	2113743M24	Capacitor Chip 0.1µF
C286	2113743N46	Capacitor Chip 68pF
C287	2113743N50	Capacitor Chip 100pF
C289	2113743M12	Capacitor Chip 0.033µF
C290	2113743N44	Capacitor Chip 56pF
C300	2113743N65	Capacitor Chip 8pF
C301	2113743N46	Capacitor Chip 68pF
C303	2113743N26	Capacitor Chip 10pF
C304	2113743M24	Capacitor Chip 0.1µF
C305	2113743N44	Capacitor Chip 56pF
C306 to C307	2113743N46	Capacitor Chip 68pF
C308	2113743N05	Capacitor Chip 1.2pF
C310	2113743N30	Capacitor Chip 15pF
C311	2113743N48	Capacitor Chip 82pF
C312	2113743N37	Capacitor Chip 30pF
C313 C314	2113743N48	Capacitor Chip 82pF
C315	2113743N65	Capacitor Chip 8pF
C316 to C317	2113743N44	Capacitor Chip 56pF
C350	2311049A59	Capacitor Tantalum 10µF
C352	2113743M08	Capacitor Chip 0.022µF
C353	2113743A23	Capacitor Chip 0.22µF
C354	2113743M08	Capacitor Chip 0.022µF
C355	2113743E20	Capacitor Chip 0.1µF
C356	2113743N50	Capacitor Chip 100pF
C357	2113743F16	Capacitor Chip 1µF
C358	2113743M24	Capacitor Chip 0.1µF
C359 to C360	2113743A23	Capacitor Chip 0.22µF
C361 to C362	2113743R33	Capacitor Chip 4700pF
C363 to C364	2113743F16	Capacitor Chip 1µF
C365	2113743N65	Capacitor Chip 8pF
C366	2113743F16	Capacitor Chip 1µF
C367	2113743M08	Capacitor Chip 0.022µF
C369	2113743R33	Capacitor Chip 4700pF
C370	2113743M24	Capacitor Chip 0.1µF
C371	2113743R33	Capacitor Chip 4700pF
C372	2113743A23	Capacitor Chip 0.22µF
C373	2311049A59	Capacitor Tantalum 10µF
C374	2113743E07	Capacitor Chip 0.022µF
C376	2113743N09	Capacitor Chip 2pF
C377	2113743N34	Capacitor Chip 22pF
C378	2113743N11	Capacitor Chip 2.4pF
C379	2113740A82	Capacitor Chip 1500pF
C380	2109720D14	Capacitor Chip 0.1µF
C381	2113743E20	Capacitor Chip 0.1µF
C382	2311049A59	Capacitor Tantalum 10µF
C383	2113743M08	Capacitor Chip 0.022µF
C385	2113743N25	Capacitor Chip 9.1pF
C386	2113743N29	Capacitor Chip 13pF
C387	2113743N30	Capacitor Chip 15pF
C388 to C390	2113743N29	Capacitor Chip 13pF
C391	2113741F49	Capacitor Chip 0.01µF

Circuit Ref	Motorola Part No.	Description
C392	2113743F16	Capacitor Chip 1µF
C393	2113743E20	Capacitor Chip 0.1µF
C400	2113743L41	Capacitor Chip 0.01µF
C401 to C402	2113743M24	Capacitor Chip 0.1µF
C403	2113928D08	Capacitor Chip 10µF
C404	2113743N46	Capacitor Chip 68pF
C405	2113743N46	Capacitor Chip 68pF
C407	2113928N01	Capacitor Chip 0.1µF
C408	2113743N46	Capacitor Chip 68pF
C409	2113743M24	Capacitor Chip 0.1µF
C410	2113928N01	Capacitor Chip 0.1µF
C411	2113743M24	Capacitor Chip 0.1µF
C412	2311049A59	Capacitor Tantalum 10µF
C414	2113743M24	Capacitor Chip 0.1µF
C415	2109720D01	Capacitor Chip 0.01µF
C416	2113928N01	Capacitor Chip 0.1µF
C420	2113743L41	Capacitor Chip 0.01µF
C421	2113928N01	Capacitor Chip 0.1µF
C422	2113743M24	Capacitor Chip 0.1µF
C423	2113743N46	Capacitor Chip 68pF
C424	2311049A59	Capacitor Tantalum 10µF
C425	2113743M24	Capacitor Chip 0.1µF
C426 to C427	2113743N46	Capacitor Chip 68pF
C428 to C429	2113743M24	Capacitor Chip 0.1µF
C430	2113928N01	Capacitor Chip 0.1µF
C431	2113743N46	Capacitor Chip 68pF
C433	2113743L41	Capacitor Chip 0.01µF
C434 to C435	2113743M24	Capacitor Chip 0.1µF
C436 to C437	2113743N34	Capacitor Chip 22pF
C438	2113743F18	Capacitor Chip 2.2µF
C439	2113743L17	Capacitor Chip 1000pF
C440	2113743F18	Capacitor Chip 2.2µF
C441	2113743N46	Capacitor Chip 68pF
C442	2113743E20	Capacitor Chip 0.1µF
C443	2113928N01	Capacitor Chip 0.1µF
C444 to C445	2113743N46	Capacitor Chip 68pF
C447	2113743M08	Capacitor Chip 0.022µF
C448	2113928N01	Capacitor Chip 0.1µF
C449	2113743N46	Capacitor Chip 68pF
C451	2113743M08	Capacitor Chip 0.022µF
C452	2113743B29	Capacitor Chip 1µF
C453	2113743N46	Capacitor Chip 68pF
C456	2113743N46	Capacitor Chip 68pF
C458 to C459	2113743N46	Capacitor Chip 68pF
C463	2113743N46	Capacitor Chip 68pF
C466	2113743N46	Capacitor Chip 68pF
C467	2113928N01	Capacitor Chip 0.1µF
C471 to C473	2113743N46	Capacitor Chip 68pF
C475	2113743H14	Capacitor Chip 10µF
C476	2113928D08	Capacitor Chip 10µF
C479	2113928N01	Capacitor Chip 0.1µF
C480	2113743G26	Capacitor Chip 4.7µF
C481 to C482	2113928N01	Capacitor Chip 0.1µF
C490 to C497	2113743N46	Capacitor Chip 68pF
C502	2311049A05	Capacitor Tantalum 0.47µF
C503	2113743N46	Capacitor Chip 68pF

Circuit Ref	Motorola Part No.	Description	Circuit Ref	Motorola Part No.	Description	Circuit Ref	Motorola Part No.	Description	Circuit Ref	Motorola Part No.	Description
C505	2113743N46	Capacitor Chip 68pF	L204	2462587P25	Inductor 12µH	Q400	4809579E18	Transistor FET TP0101T	R306	0662057M92	Resistor Chip 5.6K
C511 to C514	2113743N46	Capacitor Chip 68pF	L250	2462587V21	Inductor 6.8nH	Q403	4880214G02	Transistor Bipolar MMBT3904L	R307	0662057N17	Resistor Chip 56K
C520 to C523	2113743L41	Capacitor Chip 0.01µF	L252	2462587V38	Inductor 220nH	Q405	4802245J54	Transistor Bipolar UMG5N	R309	0662057M70	Resistor Chip 680
C524	2113743N32	Capacitor Chip 18pF	L253	2462587V41	Inductor 390nH	Q410	4802245J54	Transistor Bipolar UMG5N	R310	0662057N01	Resistor Chip 12K
C525 to C529	2113743N48	Capacitor Chip 82pF	L254	2462587V28	Inductor 33nH	Q416	4809579E18	Transistor FET TP0101T	R312	0662057M62	Resistor Chip 330
C530	2311049A18	Capacitor Tantalum 10µF	L256 to L260	2462587V38	Inductor 220nH	Q417	4802245J50	Transistor Bipolar	R315	0662057M74	Resistor Chip 1K
C531	2113743N48	Capacitor Chip 82pF	L261	2462587V26	Inductor 22nH	Q502	5180159R01	Transistor Bipolar IMX1	R317	0662057M96	Resistor Chip 8.2K
CR101 to CR102	4880973Z02	Diode PIN MA4PH261	L262	2462587V38	Inductor 220nH	Q505	4880214G02	Transistor Bipolar MMBT3904L	R318	0662057M72	Resistor Chip 820
CR203	4862824C03	Diode Varactor 1SV232	L263	2462587V25	Inductor 18nH	R101 to R102	0662057A34	Resistor Chip 240	R320	0662057M52	Resistor Chip 120
CR251 to CR253	4862824C01	Diode Varactor 1SV229	L264	2462587V24	Inductor 15nH	R103	0662057A18	Resistor Chip 51	R321	0662057M43	Resistor Chip 51
CR300	4880154K03	Diode Schottky MMBD353LT1	L265	2462587V30	Inductor 47nH	R104	0680539Z01	Resistor Chip 0.1	R322	0662057M52	Resistor Chip 120
CR301	4802245J41	Diode Switching HSMP3820	L301	2462587V20	Inductor 3.3nH	R105	0662057M81	Resistor Chip 2K	R323	0662057M87	Resistor Chip 3.6K
CR350	4862824C01	Diode Varactor 1SV229	L302	2462587V38	Inductor 220nH	R106	0662057M01	Resistor Chip 0	R324	0662057M68	Resistor Chip 560
CR411 to CR413	4802245J62	Diode Array RB731U	L303	2462587V41	Inductor 390nH	R107	0662057N13	Resistor Chip 39K	R325	0662057N10	Resistor Chip 30K
CR440	4813833C02	Diode Dual Common Cathode MMBD6100LT1	L304	2413926G08	Inductor 12nH	R108	0662057N08	Resistor Chip 24K	R326	0662057M42	Resistor Chip 47
CR501	4880107R01	Diode Rectifier BYD17D	L306	2462587V32	Inductor 68nH	R109	0662057N20	Resistor Chip 75K	R327	0662057M40	Resistor Chip 39
CR503	4805729G49	Opto-Device LED BRPY1204W	L307	2462587V26	Inductor 22nH	R110	0662057M47	Resistor Chip 75	R328	0662057N03	Resistor Chip 15K
D201 to D202	4802233J09	Diode Array IMN10	L308	2462587V30	Inductor 47nH	R111	0680195M01	Resistor Chip 10	R350	0662057M33	Resistor Chip 20
E101 (for PCB No. 8480641Z02 Rev A only)	9162002U03	Filter, EMI	L309	2462587V38	Inductor 220nH	R112	0662057M01	Resistor Chip 0	R351	0662057M52	Resistor Chip 120
E101 (for PCB No. 8480641Z03 Rev B only)	2484657R01	2743019447	L310	2462587V22	Inductor 8.2nH	R113	0662057M01	Resistor Chip 0	R352 to R353	0662057N01	Resistor Chip 12K
E102	2405688Z01	2744044446	L350	2462587Q20	Inductor 2.2µH	R114	0662057N30	Resistor Chip 200K	R355	0662057M98	Resistor Chip 10K
E400 to E409	2480640Z01	BK1005HM471	L351 to L352	2462587T22	Inductor 390nH	R115	0662057M67	Resistor Chip 510	R356	0662057M78	Resistor Chip 1.5K
F501	6580542Z01	Protector 1608FF	L353	2462587V35	Inductor 120nH	R116	0662057N39	Resistor Chip 470K	R358	0662057N15	Resistor Chip 47K
FL201	4802245J49	16.8 MHz Xtal Clip (not field serviceable)	L354	2462587T23	Inductor 470nH	R117	0662057M85	Resistor Chip 3K	R359	0662057M78	Resistor Chip 1.5K
FL300 to FL301	9180657Z01	Filter	L355	2462587V38	Inductor 220nH	R200	0662057M98	Resistor Chip 10K	R360	0662057N15	Resistor Chip 47K
FL350	4885631B01	Filter 31B01	L356	2462587T40	Inductor 33nH	R202	0662057M50	Resistor Chip 100	R361	0662057M57	Resistor Chip 200
FL401	4870368G02	Oscillator Crystal 68G02	L400 to L401	2462587Q42	Inductor 390nH	R203	0662057M88	Resistor Chip 3.9K	R362	0662057M98	Resistor Chip 10K
J101	2880658Z02	Connector	L410 to L411	2462587Q42	Inductor 390nH	R204	0662057M38	Resistor Chip 33	R363	0662057N15	Resistor Chip 47K
J400	0905505Y04	Connector Multi_pin FH12-40S-0.5SH	L505	2462587Q42	Inductor 390nH	R206	0662057M52	Resistor Chip 120	R364	0662057M81	Resistor Chip 2K
J403	0905505Y02	Connector Multi_pin CL586-0524-9	M100	7585651Z01	Mechanical	R208	0662057M98	Resistor Chip 100	R365	0662057M87	Resistor Chip 3.6K
L101 to L102	2460591A29	Inductor Airwound 6.61nH	(for PCB No. 8480641Z02 Rev A only)	7585651Z01	Mechanical	R209	0662057N10	Resistor Chip 30K	R366	0662057M78	Resistor Chip 1.5K
L103	2460591A49	Inductor Airwound 8.01nH	M300	7585651Z01	Mechanical	R210	0662057N17	Resistor Chip 56K	R400	0662057N15	Resistor Chip 47K
L104	2462587V38	Inductor 220nH	(for PCB No. 8480641Z02 Rev A only)	7585651Z01	Mechanical	R211	0662057M77	Resistor Chip 1.3K	R401	0662057M01	Resistor Chip 0
L106	2479990B02	Inductor Airwound 19.61nH	M400 to M401	7585651Z01	Mechanical	R213	0662057M62	Resistor Chip 330	R405	0662057M01	Resistor Chip 0
L107	2413926G05	Inductor 6.8nH	(for PCB No. 8480641Z02 Rev A only)	7585651Z01	Mechanical	R214	0662057N15	Resistor Chip 47K	R406	0662057N20	Resistor Chip 75K
L108	2413926G09	Inductor 15nH	M501 to M502	7585651Z01	Mechanical	R216 to R217	0662057M01	Resistor Chip 0	R407	0662057N19	Resistor Chip 68K
L109	2462587V38	Inductor 220nH	(for PCB No. 8480641Z02 Rev A only)	7585651Z01	Mechanical	R218	0662057M50	Resistor Chip 100	R409	0662057M98	Resistor Chip 10K
L110	2413926G04	Inductor 5.6nH	PB501 to PB505	4080523Z01	Mechanical KSS223G	R219 to R220	0662057N15	Resistor Chip 47K	R410	0662057N23	Resistor Chip 100K
L111	2413926G06	Inductor 8.2nH	Q101	5105385Y73	Transistor 85Y73	R222	0662057M01	Resistor Chip 0	R411	0662057M98	Resistor Chip 10K
L112	2479990A01	Inductor Airwound 4.22nH	Q200	4802245J50	Transistor Bipolar	R250	0662057M54	Resistor Chip 150	R413	0662057M01	Resistor Chip 0
L113	2462587V27	Inductor 27nH	Q210	4802245J50	Transistor Bipolar	R251	0662057M01	Resistor Chip 0	R414	0662057V34	Resistor Chip 180K
L200	2462587Q20	Inductor 2.2µH	Q251	4805218N63	Transistor Bipolar BFQ67W	R253	0662057M60	Resistor Chip 270	R415	0662057V26	Resistor Chip 91K
L202	2462587Q20	Inductor 2.2µH	Q252	4802245J50	Transistor Bipolar	R254	0662057M50	Resistor Chip 100	R416	0662057M90	Resistor Chip 4.7K
L203	2462587V21	Inductor 6.8nH	Q302	4802245J56	Transistor Bipolar QSBT0048	R255	0662057M26	Resistor Chip 10	R419	0662057M67	Resistor Chip 510
			Q304	4802245J44	Transistor Bipolar HP415	R256	0662057N15	Resistor Chip 47K	R420	0662057B46	Resistor Chip 10MEG
			Q350	4805218N63	Transistor Bipolar BFQ67W	R257	0662057M62	Resistor Chip 330	R421	0662057M81	Resistor Chip 2K
						R261 to R262	0662057M01	Resistor Chip 0	R423	0662057M81	Resistor Chip 2K
						R263 to R264	0662057M74	Resistor Chip 1K	R424	0662057N39	Resistor Chip 470K
						R265 to R266	0662057M38	Resistor Chip 33	R425	0662057N12	Resistor Chip 36K
						R267	0662057M60	Resistor Chip 270	R426	0662057N10	Resistor Chip 30K
						R268	0662057N10	Resistor Chip 30K	R427	0662057N35	Resistor Chip 30K
						R270 to R273	0662057N01	Resistor Chip 12K	R428	0662057N35	Resistor Chip 30K
						R274	0662057N07	Resistor Chip 22K	R429	0662057M84	Resistor Chip 2.7K
						R275	0662057N01	Resistor Chip 12K	R431	0662057M10	Resistor Chip 2.2
							0662057M07	Resistor Chip 22K	R432	0662057M98	Resistor Chip 10K
							0662057M38	Resistor Chip 33	R433	0662057N39	Resistor Chip 470K
							0662057M52	Resistor Chip 120	R434	0662057N16	Resistor Chip 51K
							0662057M26	Resistor Chip 10			

Circuit Ref	Motorola Part No.	Description
R435	0662057M81	Resistor Chip 2K
R436	0662057M74	Resistor Chip 1K
R437	0662057M01	Resistor Chip 0
R438 to R439	0662057M54	Resistor Chip 150
R445	0662057N08	Resistor Chip 24K
R446	0662057N22	Resistor Chip 91K
R447	0662057N38	Resistor Chip 430K
R448	0662057N06	Resistor Chip 20K
R449	0662057N08	Resistor Chip 24K
R450	0683962T45	Resistor Chip 68
R457	0662057M98	Resistor Chip 10K
R460	0662057M90	Resistor Chip 4.7K
R461	0662057M56	Resistor Chip 180
R462	0662057M98	Resistor Chip 10K
R463	0662057M61	Resistor Chip 300
R471	0662057M92	Resistor Chip 5.6K
R472	0662057N12	Resistor Chip 36K
R473	0662057M26	Resistor Chip 10
R475	0662057M01	Resistor Chip 0
R476	0662057N08	Resistor Chip 24K
R477	0662057M74	Resistor Chip 1K
R478	0662057M98	Resistor Chip 10K
R481	0662057N08	Resistor Chip 24K
R492	0662057M01	Resistor Chip 0
R501	0662057M70	Resistor Chip 680
R502	0662057M56	Resistor Chip 180
R505	0662057M98	Resistor Chip 10K
R506	0662057N15	Resistor Chip 47K
R507	0662057M01	Resistor Chip 0
RT400	0680590Z01	Resistor Thermal 33.0K
S501	4080710Z01	Mechanical Rotary Switch
S501	4080710Z02	Mechanical Rotary Switch
S502	1880619Z01	Mechanical
SH100	2680507Z01	Mechanical Shield 07Z01
SH101	2686081B04	Mechanical Shield 81B04
SH102	2680554Z01	Mechanical Shield 54Z01
SH201	2680511Z01	Mechanical Shield 11Z01
SH202	2680511Z01	Mechanical Shield 11Z01
SH250	2680514Z01	Mechanical Shield 14Z01
SH251	2680513Z01	Mechanical Shield 13Z01
SH301	2680554Z01	Mechanical Shield 54Z01
SH303	2680508Z01	Mechanical Shield 08Z01
SH350	2680508Z01	Mechanical Shield 08Z01
SH351	2680697Z01	Mechanical Shield 97Z01
SH352	2680553Z01	Mechanical Shield 53Z01
SH353	2680514Z01	Mechanical Shield 14Z01
SH400	2680505Z01	Mechanical Shield 05Z01
SH401	2680506Z01	Mechanical Shield 06Z01
SH402	2680515Z01	Mechanical Shield 15Z01
SH403	2680516Z01	Mechanical Shield 16Z01
U101	5102463J66	Analog IC Amp RF2103P
U102	5185765B28	Custom IC H9S-4
U103	5185963A15	Analog IC LM50CIM3X
U201	5185963A27	Custom IC ASIC 63A27
U205	4802245J58	Oscillator DRR030KER900TCT

Circuit Ref	Motorola Part No.	Description
U206	4802245J57	Oscillator DRR030KE1R225TC
U247	5105739X05	Analog IC ADP3300
U248	5102463J58	Analog IC Voltage Regulator LP2980AIM5
U250	5105750U54	Custom IC Buffer/Driver 50U54
U301	5185963A43	Analog IC MA4EX900L-1226
U302	5185623B01	Digital IC Gate TC7SU04FTE85L
U350	5185623B01	Digital IC Gate TC7SU04FTE85L
U351	5109632D83	Custom IC 32D83
U352	4885622B01	Transistor BF904
U400	5102463J40	Analog IC Voltage Regulator LP2951ACMM-3.3
U404	5185963A53	Custom IC 63A53
U405	5102463J36	Digital IC Memory
U406	5102463J60	Digital IC Memory AT49LV040-90T1
U407	5102463J64	Digital IC Memory X25128-2.7
U409	5102226J56	Digital IC Microprocessor MC68HC11FL0PU1
U410	5102463J57	Analog IC Voltage Regulator ILC7062
U420	5102463J44	Analog IC Amp TDA8547TS
VR432 to VR433	4805656W08	Diode MMQA5V6T1
VR434	4802245J73	Diode Zener UDZSTE17
VR445 to VR449	4802245J74	Diode Zener UDZSTE17
VR450	4802245J75	Diode Zener UDZSTE17
VR501	4813830A18	Diode Zener MMBZ5235BLT1
VR502	4880140L17	Diode Zener MMBZ5242B
VR503 to VR508	4802245J73	Diode Zener UDZSTE17
Y200	4802245J68	Oscillator Crystal TTS12V
B501	0986237A01	Connector Multi_Pin 37A01
B503	3980502Z01	Mechanical
B504	3980501Z01	Mechanical
C101	2113740F45	Capacitor Chip 56pF
C104	2113740F15	Capacitor Chip 3.3pF
C105	2113740F06	Capacitor Chip 1.3pF
C106	2113740F23	Capacitor Chip 6.8pF
C107	2113740F03	Capacitor Chip 1pF
C108	2113743N46	Capacitor Chip 68pF
C109	2113740F20	Capacitor Chip 5.1pF
C110	2113740F12	Capacitor Chip 2.4pF

Note:For optimum performance, diodes, transistors, integrated circuits, and crystals must be ordered by Motorola part number

* Motorola Depot Servicing only

9.28 PassPort Circuit Board/Schematic Diagram

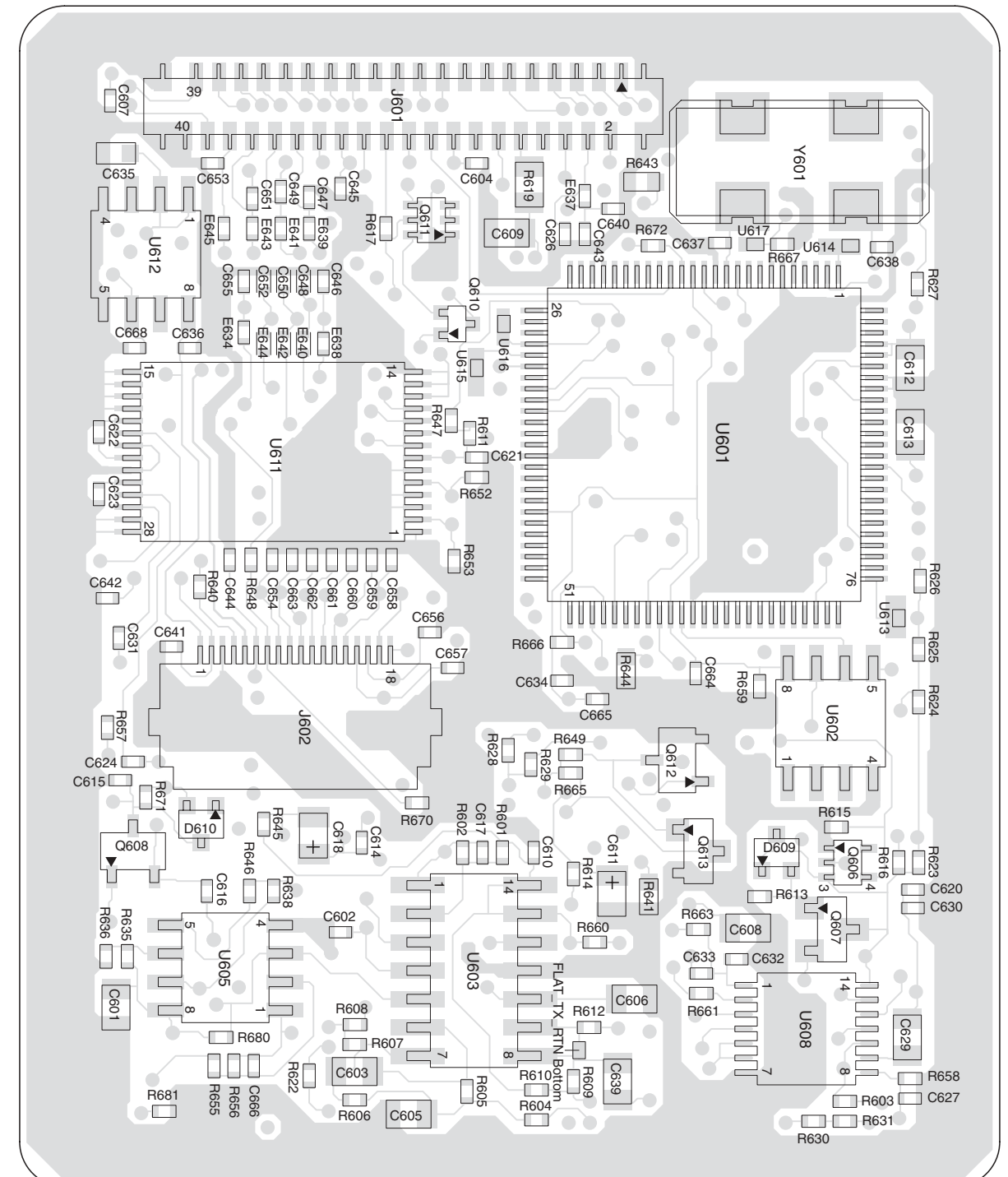
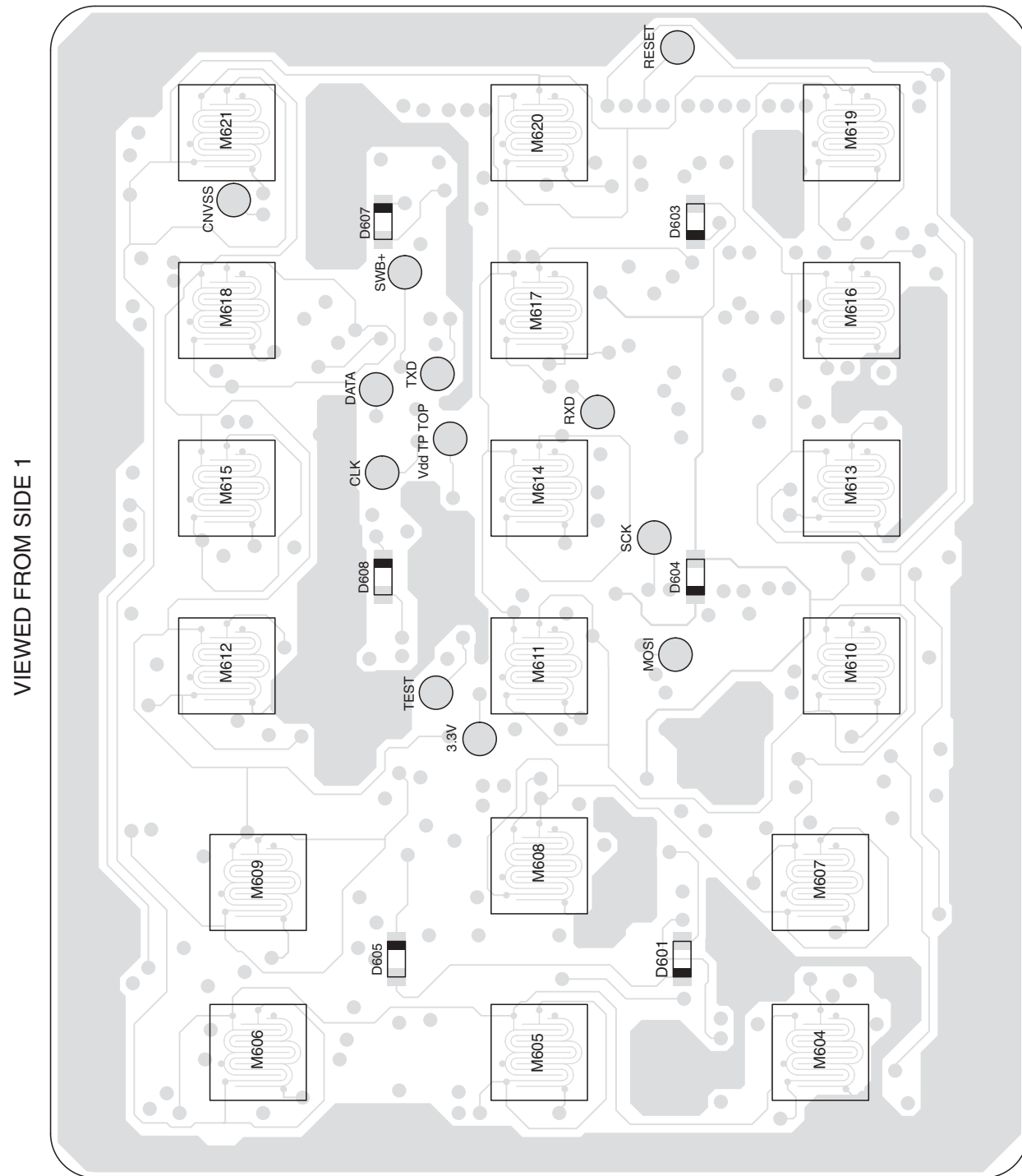
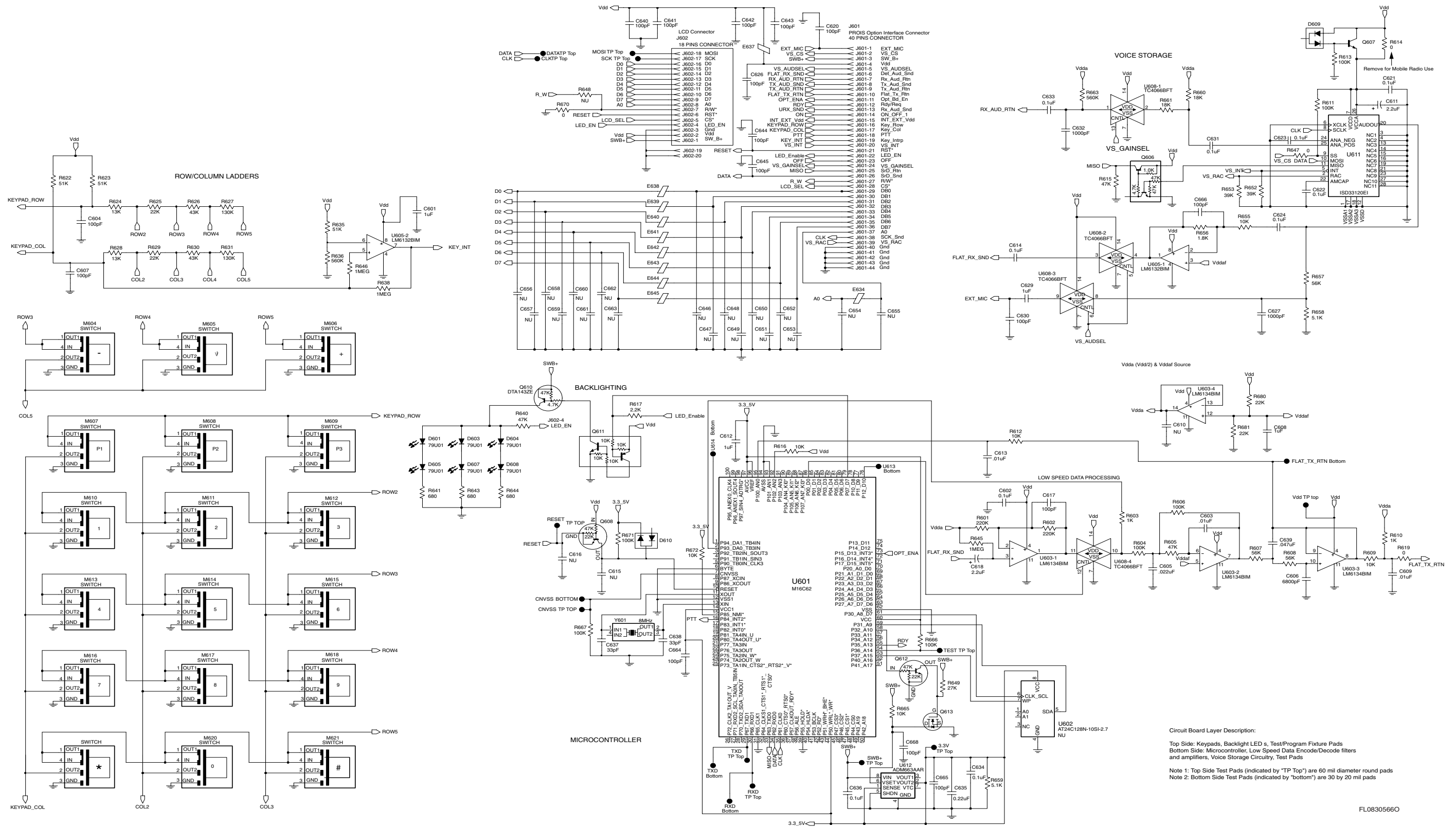


Figure 9-268. PassPort Trunking Controller PCB Board Side 1 & 2



Circuit Board Layer Description:
 Top Side: Keypads, Backlight LED's, Test/Program Fixture Pads
 Bottom Side: Microcontroller, Low Speed Data Encode/Decode filters and amplifiers, Voice Storage Circuitry, Test Pads

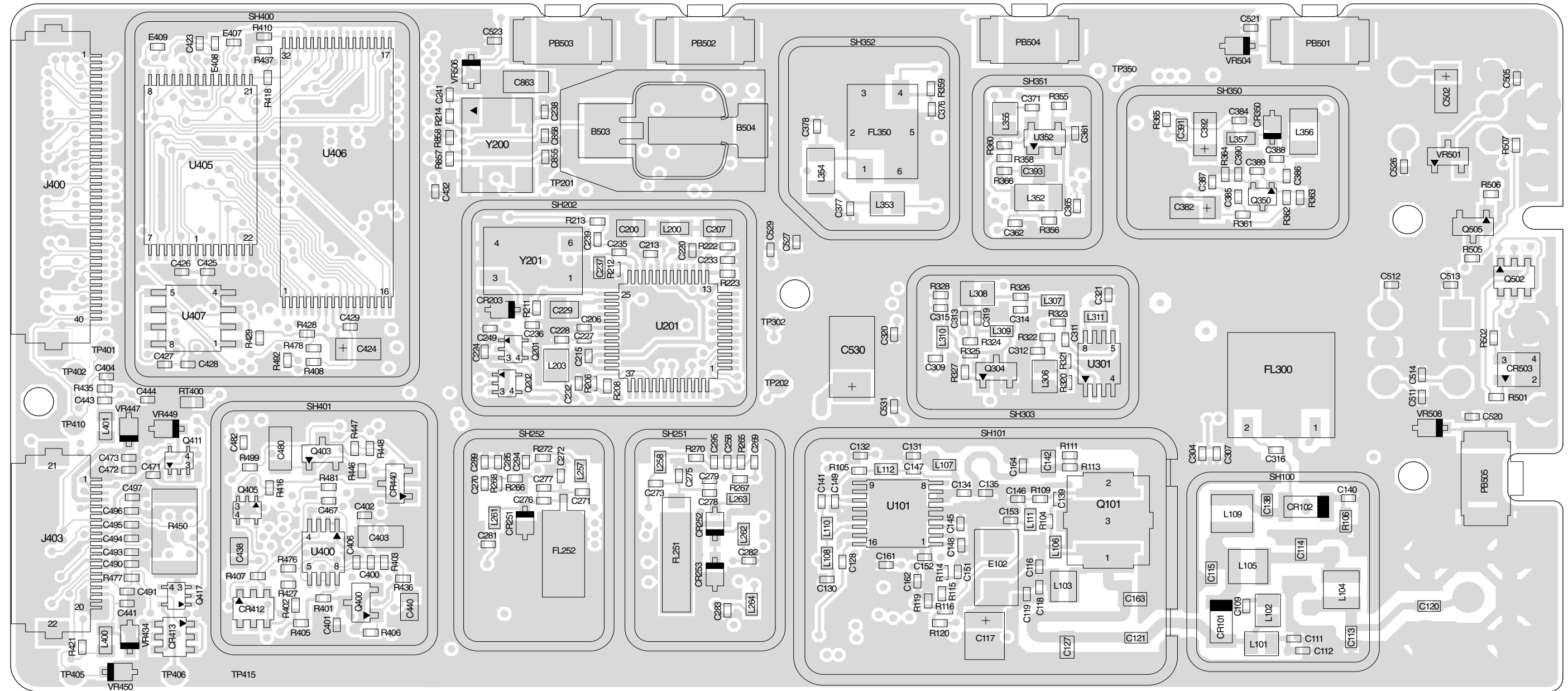
Note 1: Top Side Test Pads (indicated by "TP Top") are 60 mil diameter round pads
 Note 2: Bottom Side Test Pads (indicated by "bottom") are 30 by 20 mil pads

FL08305660

Figure 9-269. PassPort Controller Schematic Diagram

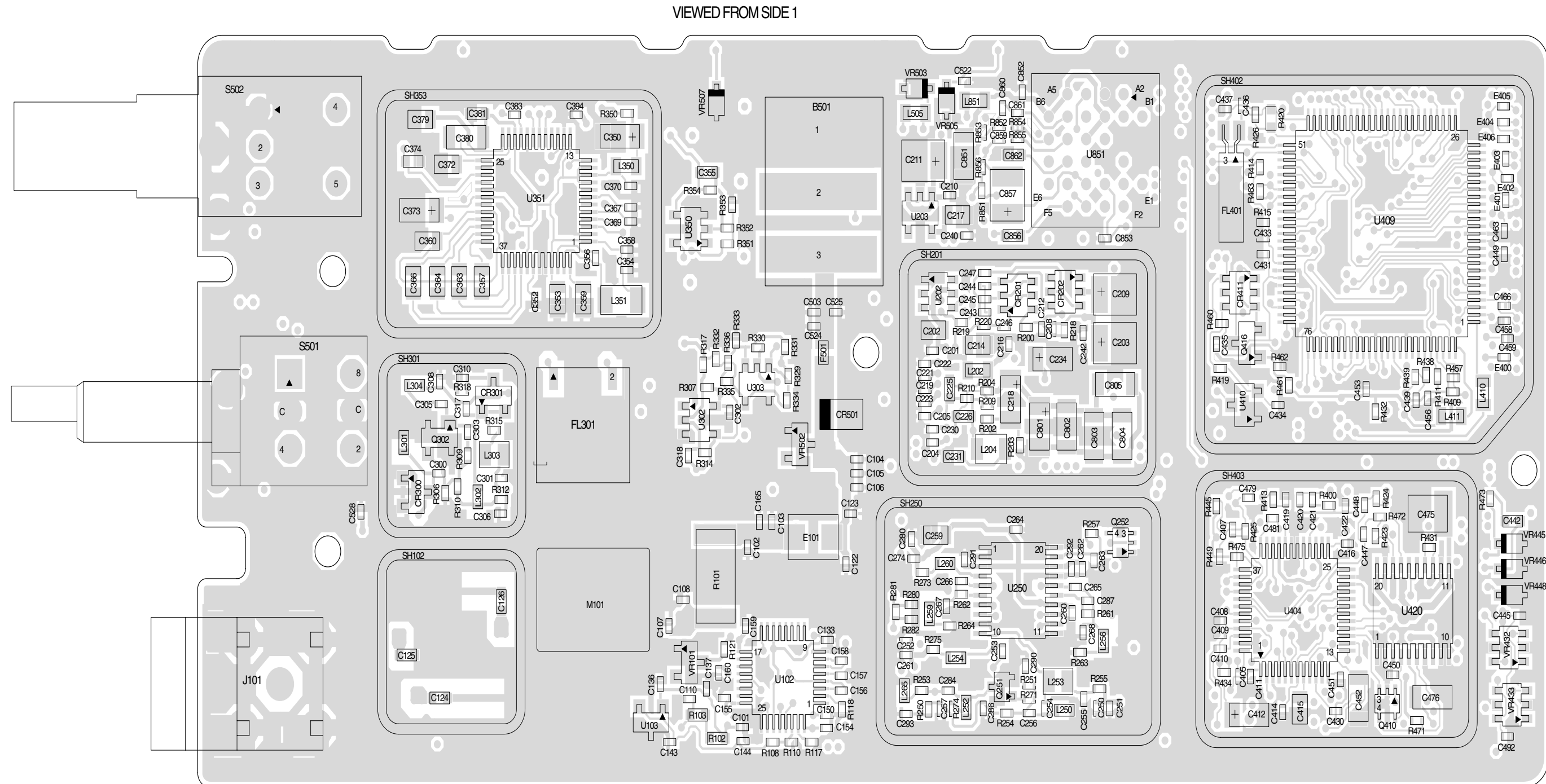
9.29 900 MHz Circuit Board/Schematic Diagrams and Parts List (PCB 8485910Z01)

VIEWED FROM SIDE 1



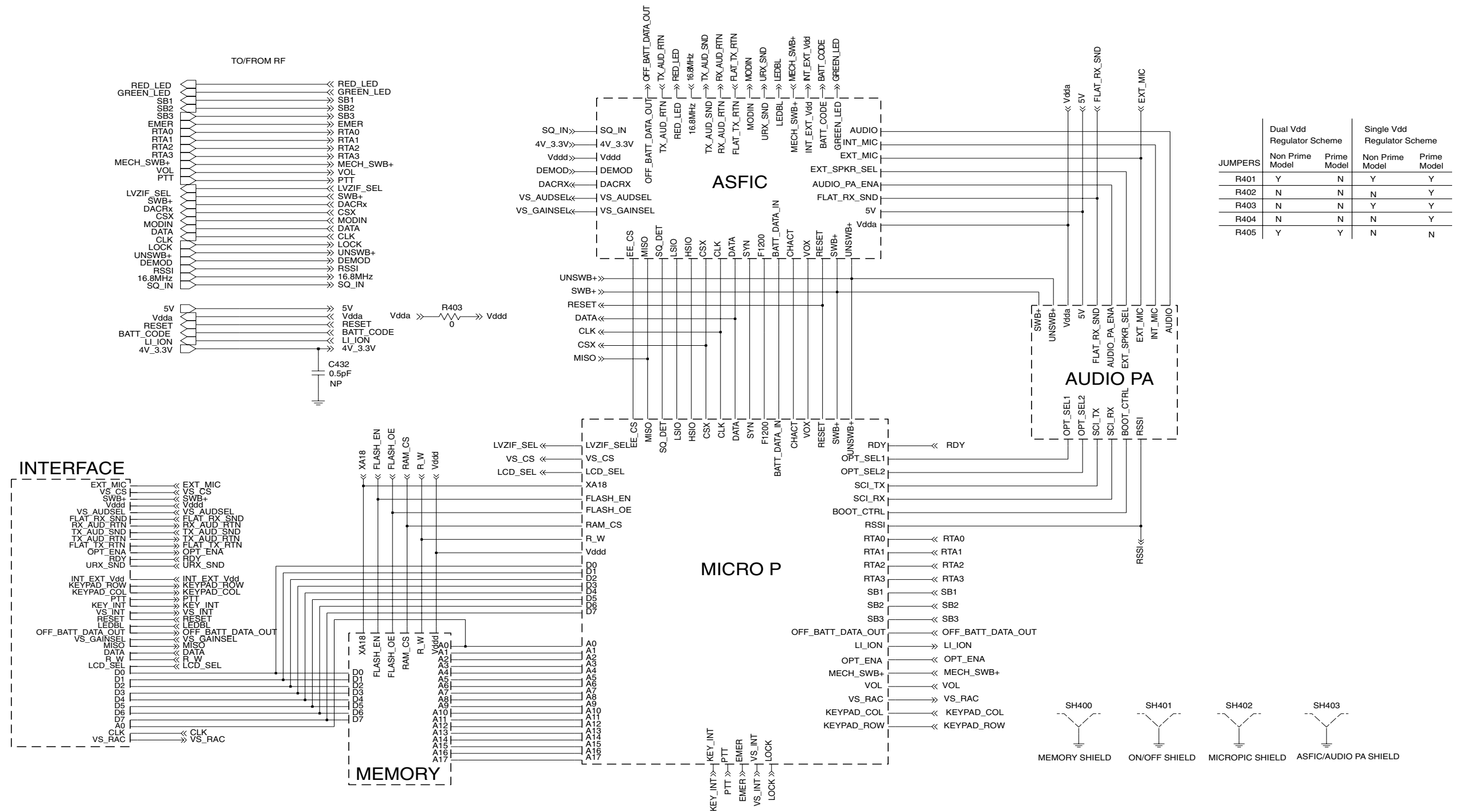
FL08307020

Figure 9-270. 900 MHz (896-941 MHz) Main Board Top Side PCB 8485910Z01



FL08307030

Figure 9-271. 900 MHz (896-941 MHz) Main Board Bottom Side PCB 8485910Z01



FL08307130

Figure 9-272. 900 MHz Complete Controller

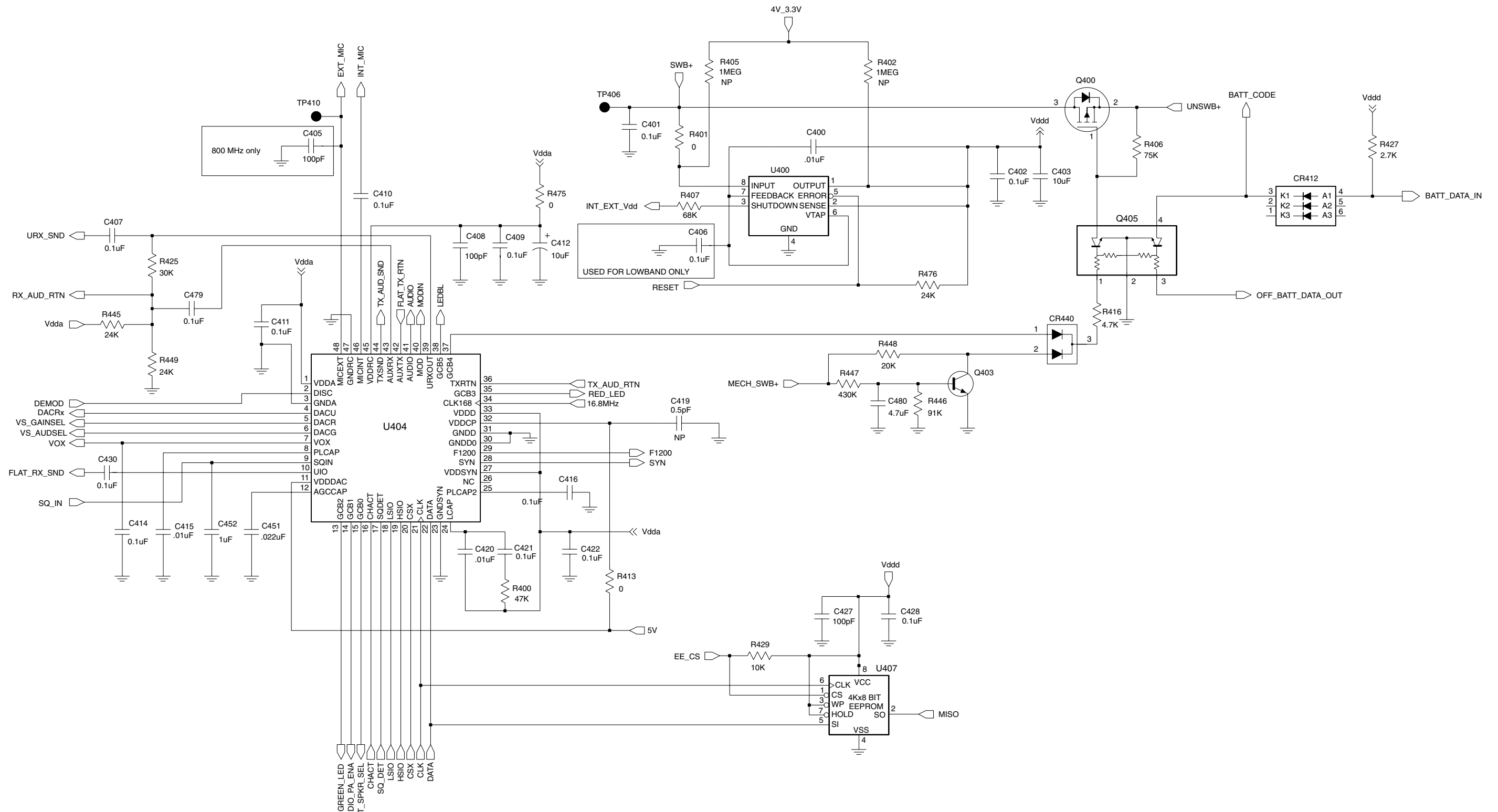
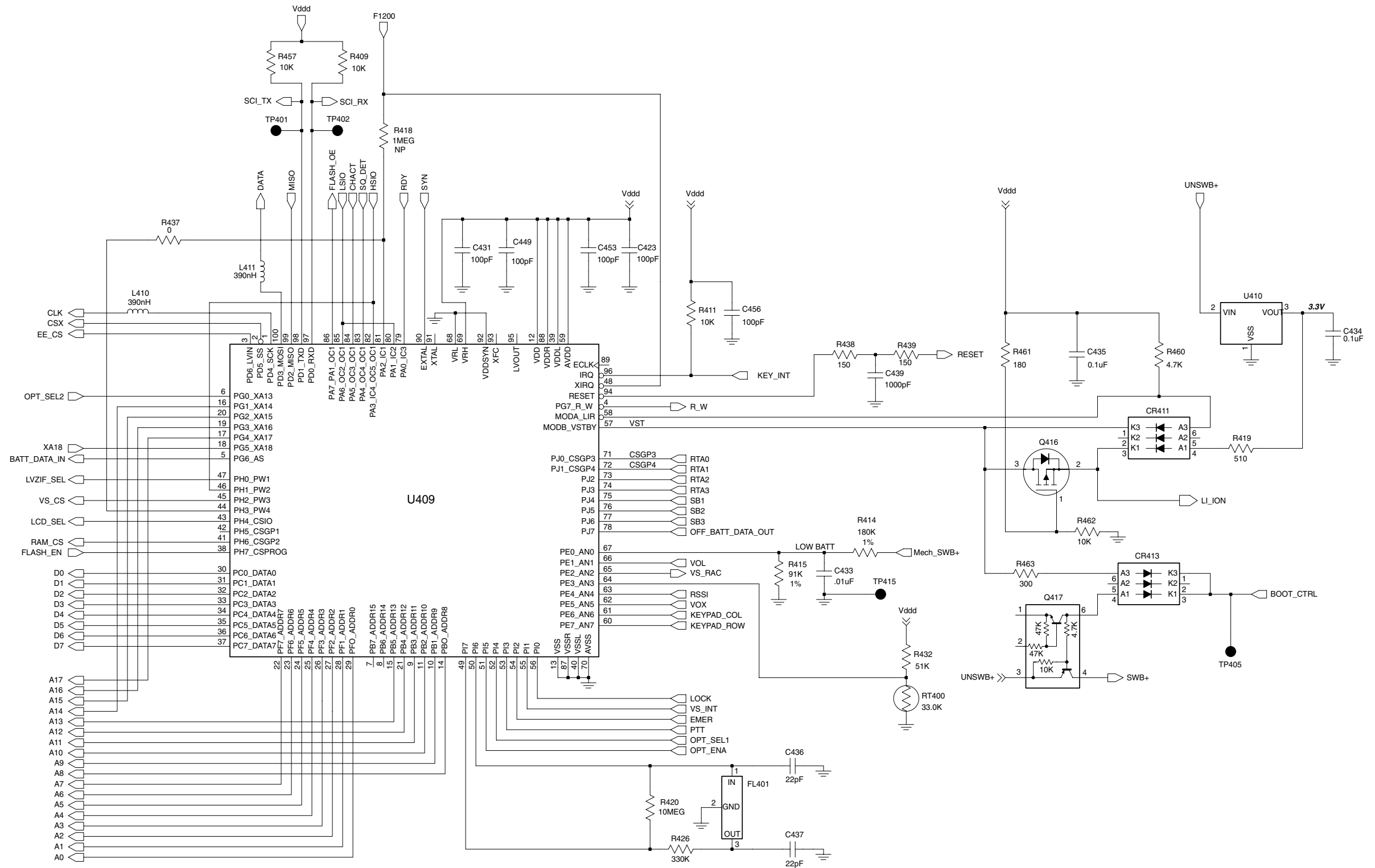
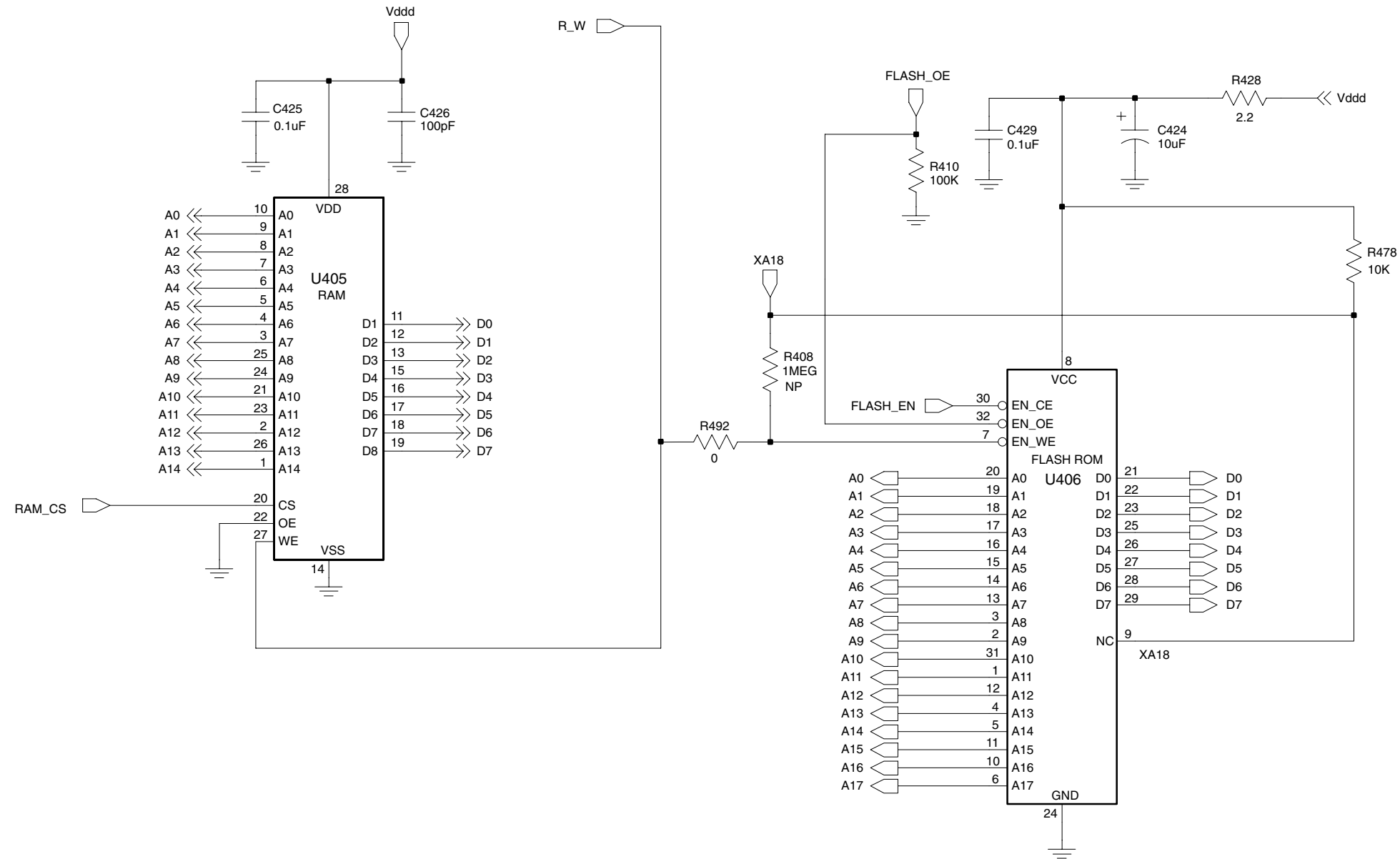


Figure 9-273. 900 MHz Controller ASFIC/ON_OFF



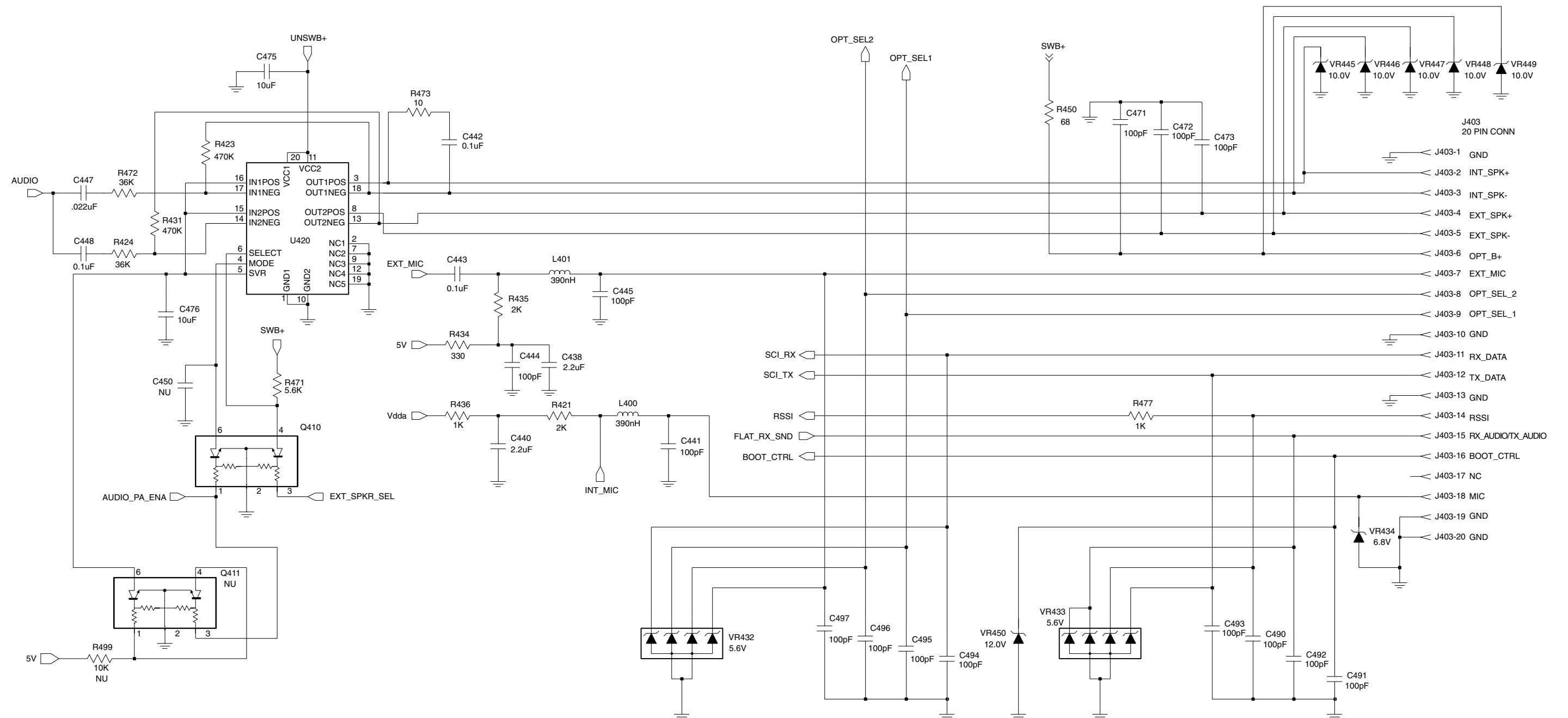
FL08307160

Figure 9-274. 900 MHz Controller Microprocessor



FL08307150

Figure 9-275. 900 MHz Controller Memory



FL08307120

Figure 9-276. 900 MHz Controller Audio Power Amplifier

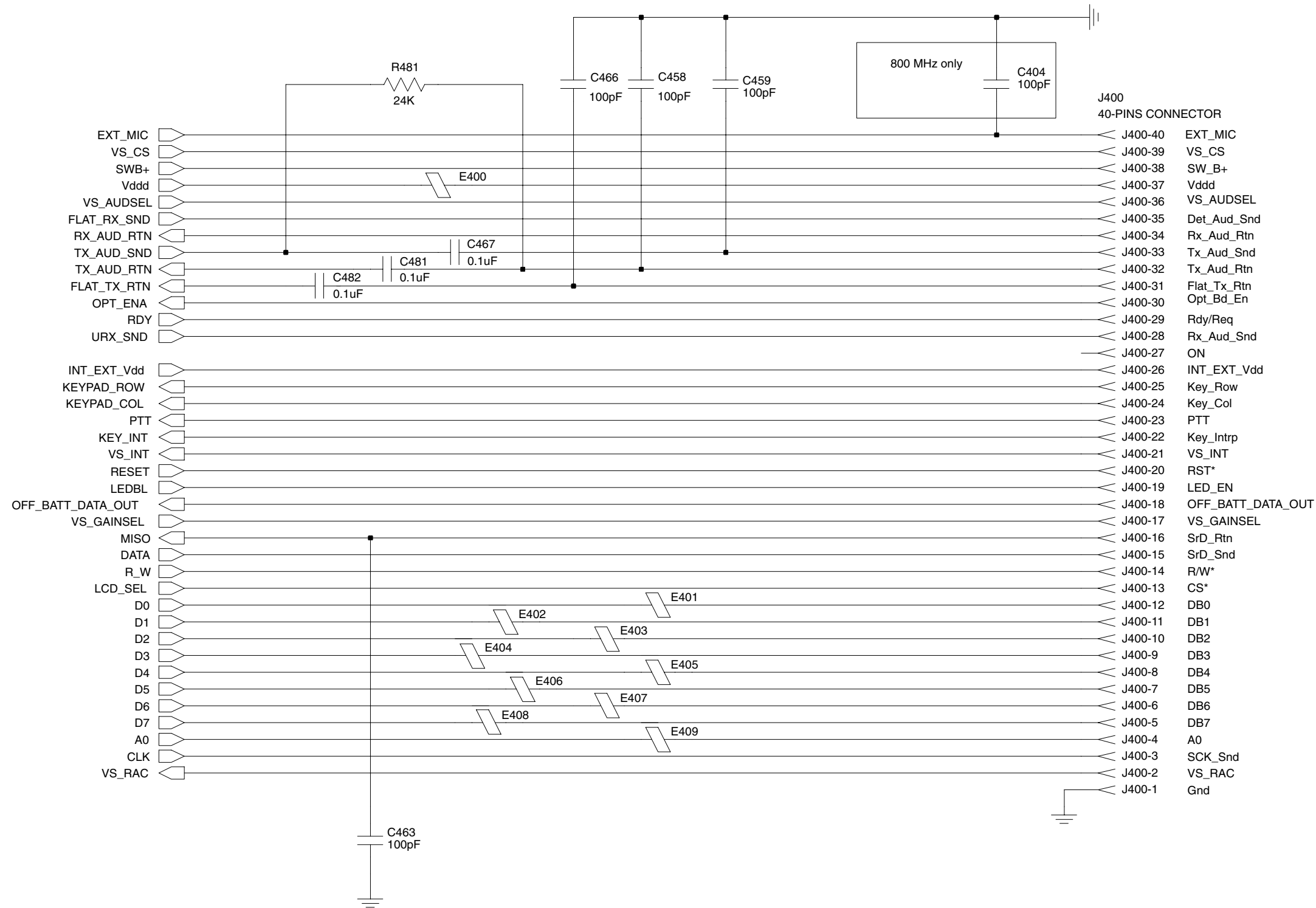
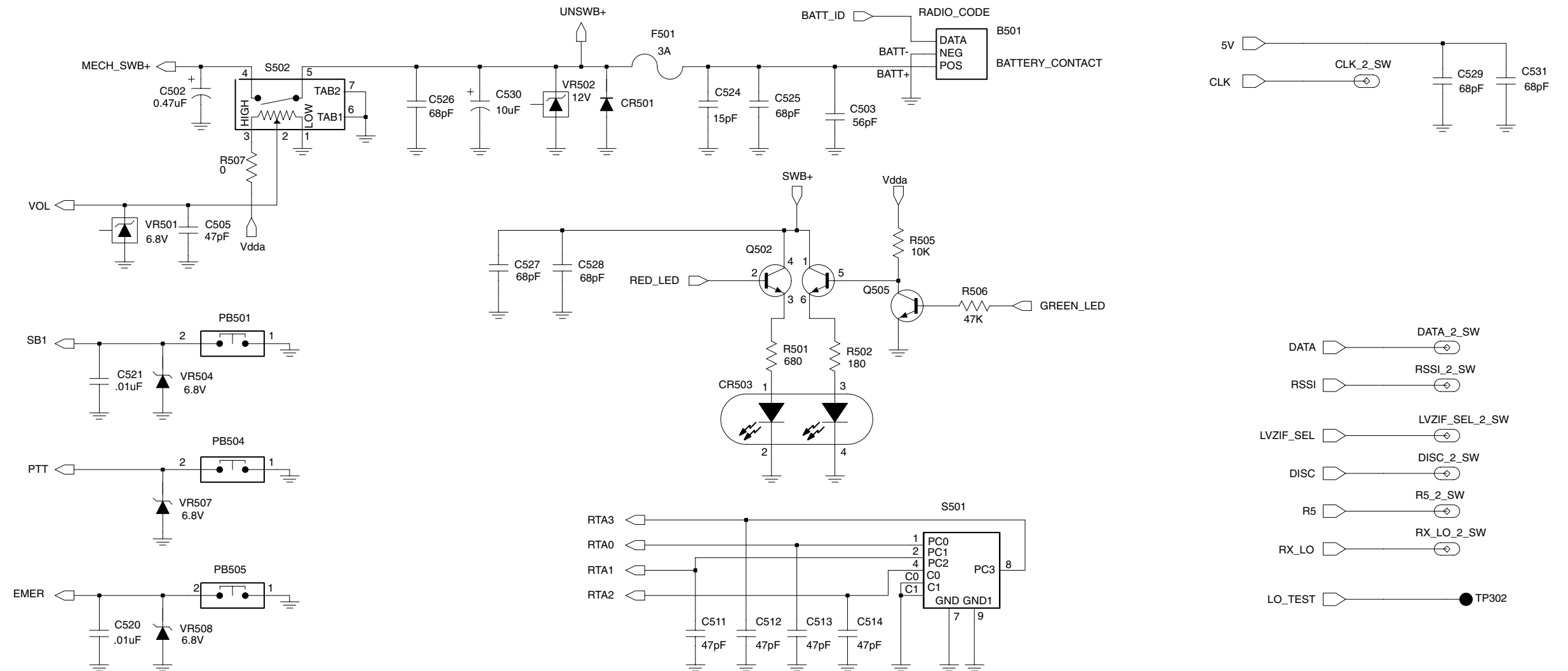


Figure 9-277. 900 MHz Controller Interface



FL0830708O

Figure 9-278. 900 MHz Controls and Switches Schematic Diagram

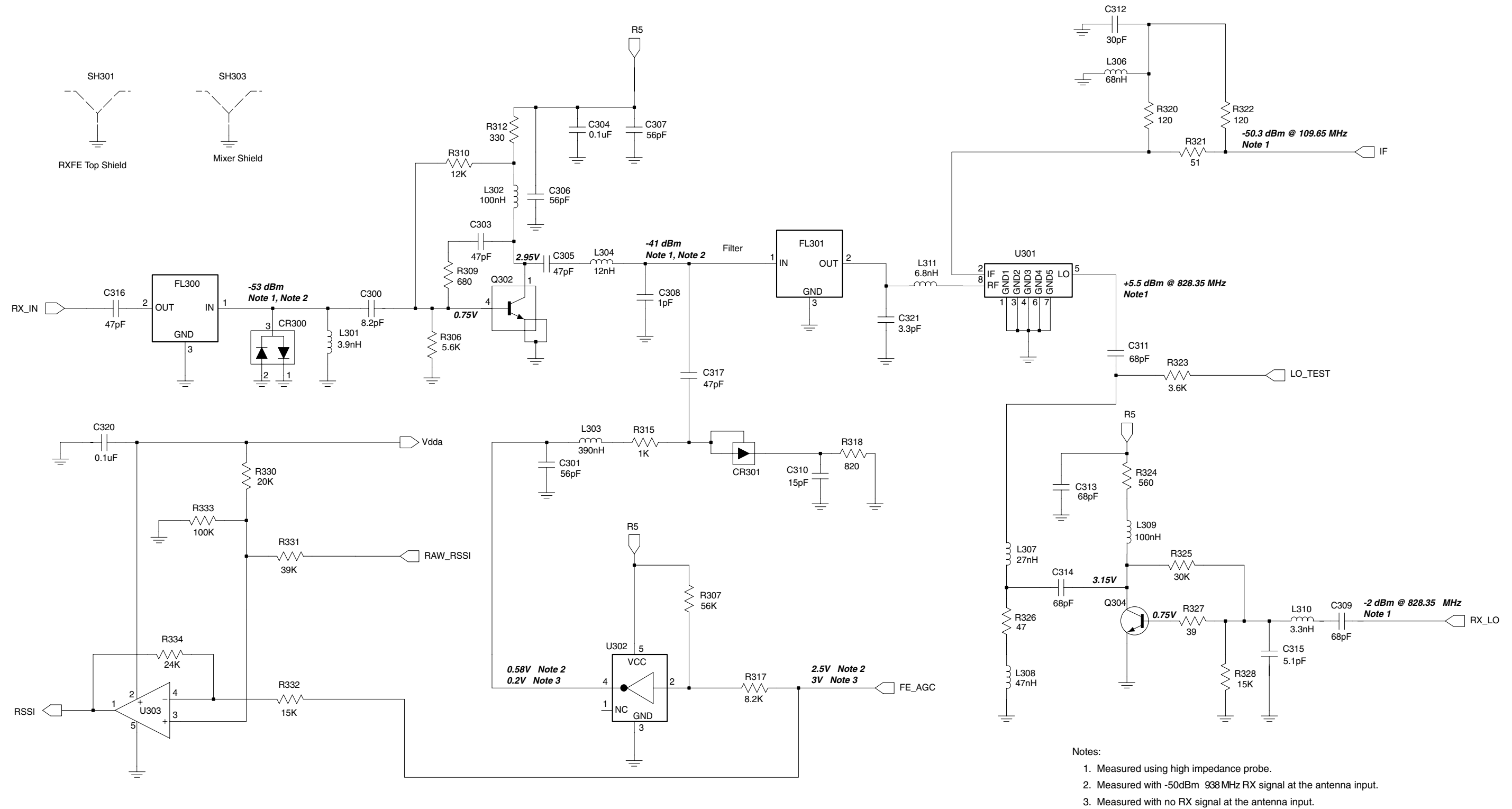
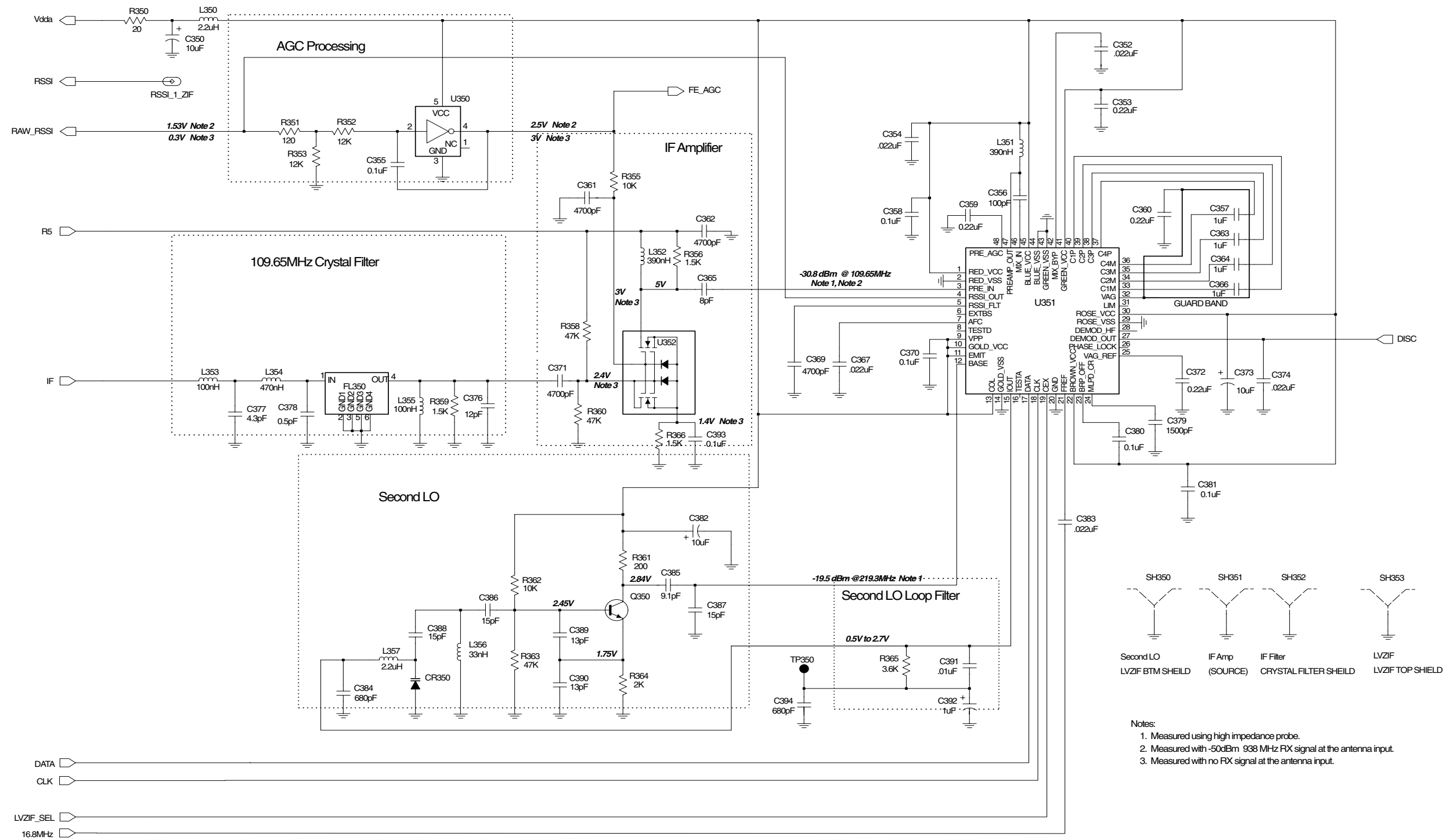
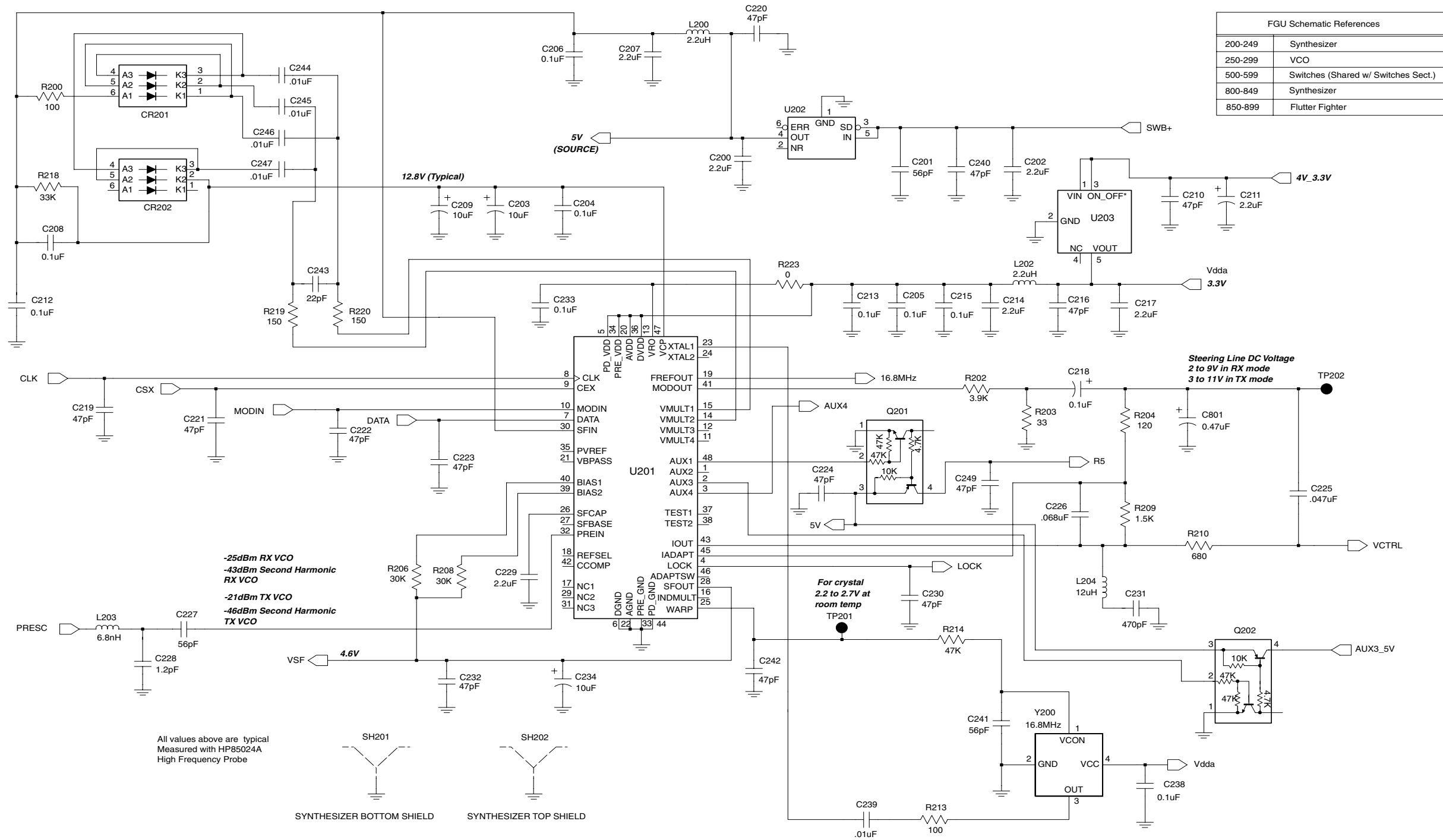


Figure 9-279. 900 MHz Receiver Front End Schematic Diagram



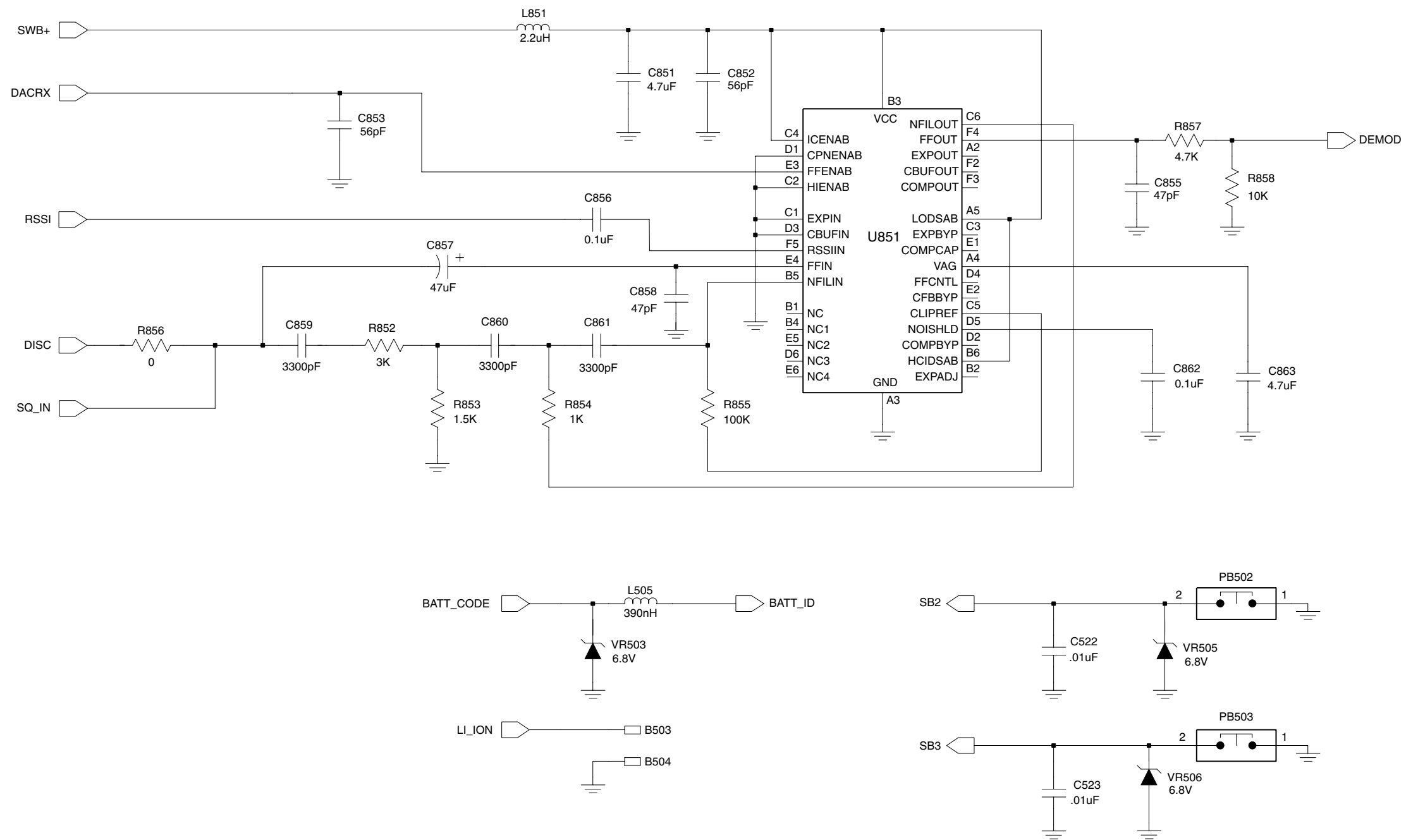
FL08307100

Figure 9-280. 900 MHz Receiver Back End Schematic Diagram



FL08307040

Figure 9-281. 900 MHz Synthesizer Schematic Diagram



FL0830705O

Figure 9-282. 900 MHz Hear/Clear Schematic Diagram

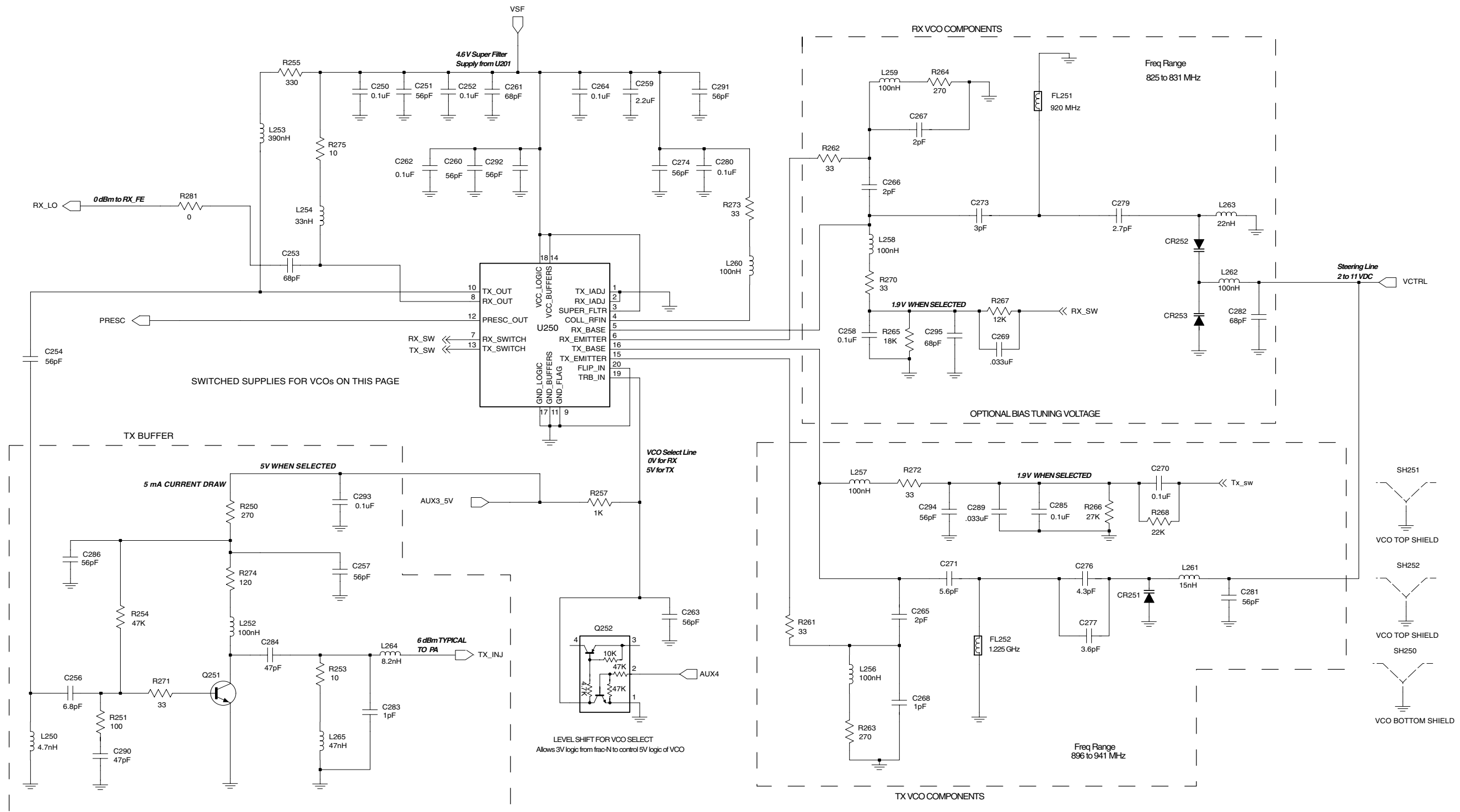
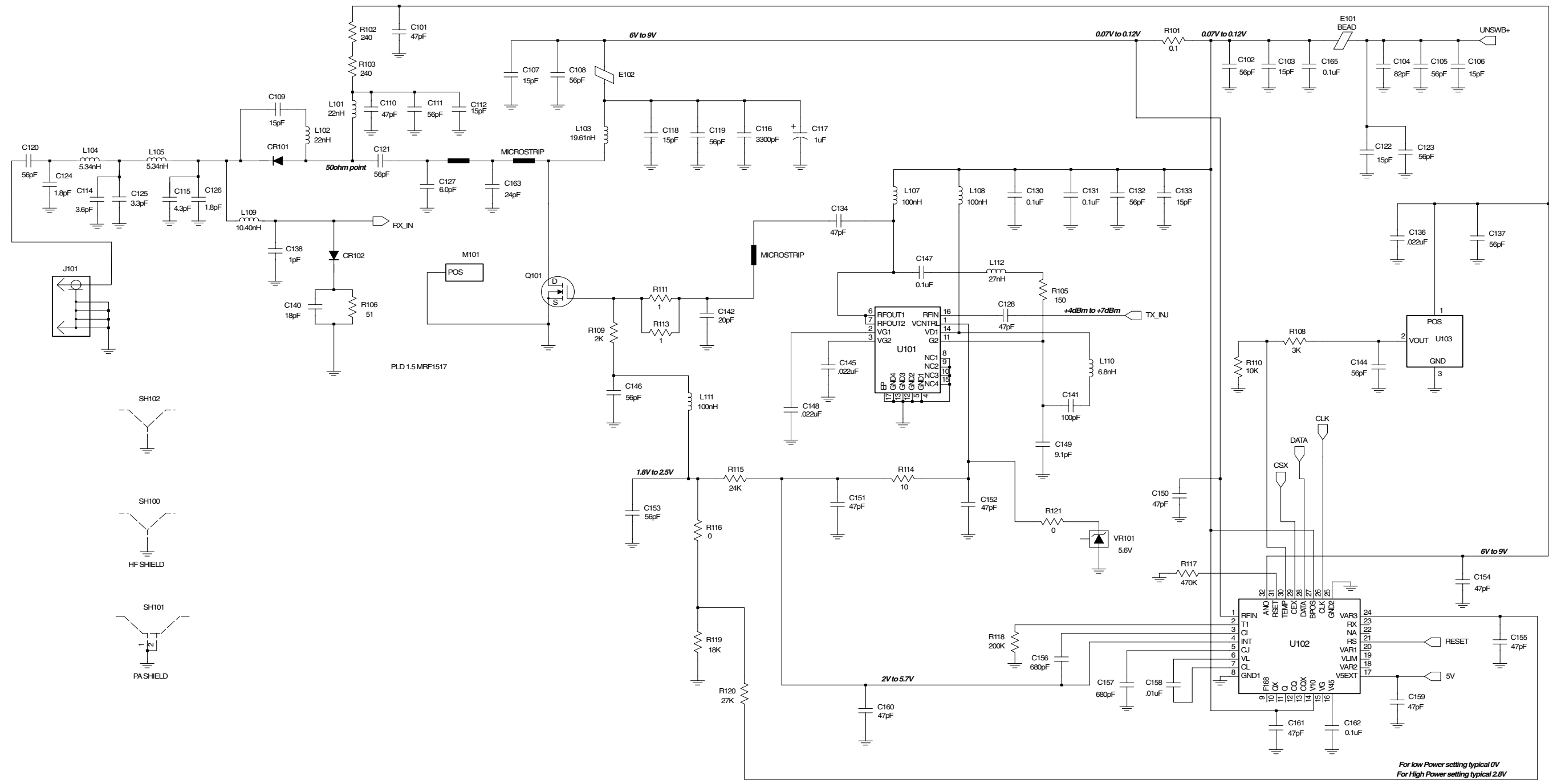


Figure 9-283. 900 MHz Voltage Controlled Oscillator Schematic Diagram



FL08307060

Figure 9-284. 900 MHz Transmitter Schematic Diagram

900 MHz Radio Parts List for PMUF1059A, and PMUF1060A

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup battery B+
B504	3980501Z01	Backup battery B-
CAPACITOR, FIXED		
C101	2113743N42	Capacitor Chip 47pF
C102	2113743N44	Capacitor Chip 56pF
C103	2113743N30	Capacitor Chip 15pF
C104	2113743N48	Capacitor Chip 82pF
C105	2113743N44	Capacitor Chip 56pF
C106 to C107	2113743N30	Capacitor Chip 15pF
C108	2113743N44	Capacitor Chip 56pF
C109	2113743N30	Capacitor Chip 15pF
C110	2113743N42	Capacitor Chip 47pF
C111	2113743N44	Capacitor Chip 56pF
C112	2113743N30	Capacitor Chip 15pF
C113	2113740F01	Capacitor Chip 0.5pF
C114	2113740F16	Capacitor Chip 3.6pF
C115	2113740F18	Capacitor Chip 4.3pF
C116	2113743L29	Capacitor Chip 3300pF
C117	2311049A08	Capacitor Tantalum 1µF
C118	2113743N30	Capacitor Chip 15pF
C119	2113743N44	Capacitor Chip 56pF
C120 to C121	2113740F45	Capacitor Chip 56pF
C122	2113743N30	Capacitor Chip 15pF
C123	2113743N44	Capacitor Chip 56pF
C124	2113740F09	Capacitor Chip 1.8pF
C125	2113740F15	Capacitor Chip 3.3pF
C126	2113740F09	Capacitor Chip 1.8pF
C127	2103689A19	Capacitor Chip 6.0pF
C128	2113743N42	Capacitor Chip 47pF
C130 to C131	2113743M24	Capacitor Chip 0.1µF
C132	2113743N44	Capacitor Chip 56pF
C133	2113743N30	Capacitor Chip 15pF
C134	2113743N42	Capacitor Chip 47pF
C135	2113743N10	Capacitor Chip 2.2µF
C136	2113743M08	Capacitor Chip 0.022µF
C137	2113743N44	Capacitor Chip 56pF
C138	2113740F03	Capacitor Chip 1pF
C139	2113743M24	Capacitor Chip 0.1µF
C140	2113743N32	Capacitor Chip 18pF
C141	2113743N50	Capacitor Chip 100pF
C142	2103689A45	Capacitor Chip 20pF
C144	2113743N44	Capacitor Chip 56pF
C145	2113743M08	Capacitor Chip 0.022µF
C146	2113743N44	Capacitor Chip 56pF
C147	2113743M24	Capacitor Chip 0.1µF
C148	2113743M08	Capacitor Chip 0.022µF
C149	2113743N25	Capacitor Chip 9.1pF
C150 to C152	2113743N42	Capacitor Chip 47pF
C153	2113743N44	Capacitor Chip 56pF

Circuit Ref	Motorola Part No.	Description
C154 to C155	2113743N42	Capacitor Chip 47pF
C156	2113743L13	Capacitor Chip 680pF
C157	2113743L13	Capacitor Chip 680pF
C158	2113743L41	Capacitor Chip 0.01µF
C159 to C161	2113743N42	Capacitor Chip 47pF
C162	2113743M24	Capacitor Chip 0.1µF
C163	2103689A47	Capacitor Chip 24pF
C164	2113743N26	Capacitor Chip 10pF
C165	2113743M24	Capacitor Chip 0.1µF
C200	2113743F18	Capacitor Chip 2.2µF
C201	2113743N44	Capacitor Chip 56pF
C202	2113743F18	Capacitor Chip 2.2µF
C203	2311049A57	Capacitor Tantalum 10µF
C204 to C206	2113743M24	Capacitor Chip 0.1µF
C207	2113743F18	Capacitor Chip 2.2µF
C208	2113743M24	Capacitor Chip 0.1µF
C209	2311049A57	Capacitor Tantalum 10µF
C210	2113743N42	Capacitor Chip 47pF
C211	2311049A09	Capacitor Tantalum 2.2µF
C212 to C213	2113743M24	Capacitor Chip 0.1µF
C214	2113743F18	Capacitor Chip 2.2µF
C215	2113743M24	Capacitor Chip 0.1µF
C216	2113743N42	Capacitor Chip 47pF
C217	2113743F18	Capacitor Chip 2.2µF
C218	2109720D14	Capacitor Chip 0.1µF
C219 to C224	2113743N42	Capacitor Chip 47pF
C225	2113743E12	Capacitor Chip 0.047µF
C226	2113743E13	Capacitor Chip 0.068µF
C227	2113743N44	Capacitor Chip 56pF
C228	2113743N05	Capacitor Chip 1.2pF
C229	2113743F18	Capacitor Chip 2.2µF
C230	2113743N42	Capacitor Chip 47pF
C231	2113741F17	Capacitor Chip 470pF
C232	2113743N42	Capacitor Chip 47pF
C233	2113743M24	Capacitor Chip 0.1µF
C234	2311049A59	Capacitor Tantalum 10µF
C235	2113743N44	Capacitor Chip 56pF
C236	2113743N08	Capacitor Chip 1.6pF
C237	2113740F63	Capacitor Chip 330pF
C238	2113743M24	Capacitor Chip 0.1µF
C239	2113743L41	Capacitor Chip 0.01µF
C240	2113743N42	Capacitor Chip 47pF
C241	2113743N44	Capacitor Chip 56pF
C242	2113743N42	Capacitor Chip 47pF
C243	2113743N34	Capacitor Chip 22pF
C244 to C247	2113743L41	Capacitor Chip 0.01µF
C249	2113743N42	Capacitor Chip 47pF
C250	2113743M24	Capacitor Chip 0.1µF
C251	2113743N44	Capacitor Chip 56pF
C252	2113743M24	Capacitor Chip 0.1µF

Circuit Ref	Motorola Part No.	Description
C253	2113743N46	Capacitor Chip 68pF
C254	2113743N44	Capacitor Chip 56pF
C255	2113743N01	Capacitor Chip 0.5pF
C256	2113743N22	Capacitor Chip 6.8pF
C257	2113743N44	Capacitor Chip 56pF
C258	2113743M24	Capacitor Chip 0.1µF
C259	2113743F18	Capacitor Chip 2.2µF
C260	2113743N44	Capacitor Chip 56pF
C261	2113743N46	Capacitor Chip 68pF
C262	2113743M24	Capacitor Chip 0.1µF
C263	2113743N44	Capacitor Chip 56pF
C264	2113743M24	Capacitor Chip 0.1µF
C265 to C267	2113743N09	Capacitor Chip 2pF
C268	2113743N03	Capacitor Chip 1pF
C269	2113743M12	Capacitor Chip 0.033µF
C270	2113743M24	Capacitor Chip 0.1µF
C271	2113743N20	Capacitor Chip 5.6pF
C272	2113743N01	Capacitor Chip 0.5pF
C273	2113743N13	Capacitor Chip 3pF
C274	2113743N44	Capacitor Chip 56pF
C275	2113743N02	Capacitor Chip 0.75pF
C276	2113743N17	Capacitor Chip 4.3pF
C277	2113743N15	Capacitor Chip 3.6pF
C278	2113743N13	Capacitor Chip 3pF
C279	2113743N12	Capacitor Chip 2.7pF
C280	2113743M24	Capacitor Chip 0.1µF
C281	2113743N44	Capacitor Chip 56pF
C282	2113743N46	Capacitor Chip 68pF
C283	2113743N03	Capacitor Chip 1pF
C284	2113743N42	Capacitor Chip 47pF
C285	2113743M24	Capacitor Chip 0.1µF
C286	2113743N44	Capacitor Chip 56pF
C287	2113743N50	Capacitor Chip 100pF
C289	2113743M12	Capacitor Chip 0.033µF
C290	2113743N42	Capacitor Chip 47pF
C291 to C292	2113743N44	Capacitor Chip 56pF
C293	2113743M24	Capacitor Chip 0.1µF
C294	2113743N44	Capacitor Chip 56pF
C295	2113743N46	Capacitor Chip 68pF
C300	2113743N24	Capacitor Chip 8.2pF
C301	2113743N44	Capacitor Chip 56pF
C302	2113743M24	Capacitor Chip 0.1µF
C303	2113743N42	Capacitor Chip 47pF
C304	2113743M24	Capacitor Chip 0.1µF
C305	2113743N42	Capacitor Chip 47pF
C306 to C307	2113743N44	Capacitor Chip 56pF
C308	2113743N03	Capacitor Chip 1pF
C309	2113743N46	Capacitor Chip 68pF
C310	2113743N30	Capacitor Chip 15pF
C311	2113743N46	Capacitor Chip 68pF
C312	2113743N37	Capacitor Chip 30pF
C313 to C314	2113743N46	Capacitor Chip 68pF

Circuit Ref	Motorola Part No.	Description
C315	2113743N19	Capacitor Chip 5.1pF
C316 to C317	2113743N42	Capacitor Chip 47pF
C318	2113743N44	Capacitor Chip 56pF
C319	2113743N46	Capacitor Chip 68pF
C320	2113743M24	Capacitor Chip 0.1µF
C321	2113743N14	Capacitor Chip 3.3pF
C350	2311049A59	Capacitor Tantalum 10µF
C352	2113743M08	Capacitor Chip 0.022µF
C353	2113743A23	Capacitor Chip 0.22µF
C354	2113743M08	Capacitor Chip 0.022µF
C355	2113743E20	Capacitor Chip 0.1µF
C356	2113743N50	Capacitor Chip 100pF
C357	2113743F16	Capacitor Chip 1µF
C358	2113743M24	Capacitor Chip 0.1µF
C359 to C360	2113743A23	Capacitor Chip 0.22µF
C361 to C362	2113743R33	Capacitor Chip 4700pF
C363 to C364	2113743F16	Capacitor Chip 1µF
C365	2113743N65	Capacitor Chip 8pF
C366	2113743F16	Capacitor Chip 1µF
C367	2113743M08	Capacitor Chip 0.022µF
C369	2113743R33	Capacitor Chip 4700pF
C370	2113743M24	Capacitor Chip 0.1µF
C371	2113743R33	Capacitor Chip 4700pF
C372	2113743A23	Capacitor Chip 0.22µF
C373	2311049A59	Capacitor Tantalum 10µF
C374	2113743E07	Capacitor Chip 0.022µF
C376	2113743N28	Capacitor Chip 12pF
C377	2113743N17	Capacitor Chip 4.3pF
C378	2113743N01	Capacitor Chip 0.5pF
C379	2113740A82	Capacitor Chip 1500pF
C380	2109720D14	Capacitor Chip 0.1µF
C381	2113743E20	Capacitor Chip 0.1µF
C382	2311049A59	Capacitor Tantalum 10µF
C383	2113743M08	Capacitor Chip 0.022µF
C384	2113743L13	Capacitor Chip 680pF
C385	2113743N25	Capacitor Chip 9.1pF
C386 to C388	2113743N30	Capacitor Chip 15pF
C389 to C390	2113743N29	Capacitor Chip 13pF
C391	2113741F49	Capacitor Chip 0.01µF
C392	2311049A07	Capacitor Tantalum 1µF
C393	2113743E20	Capacitor Chip 0.1µF
C394	2113743L13	Capacitor Chip 680pF
C400	2113743L41	Capacitor Chip 0.01µF
C401 to C402	2113743M24	Capacitor Chip 0.1µF
C403	2113928D08	Capacitor Chip 10µF
C404 to C405	2113743N50	Capacitor Chip 100pF
C406 to C407	2113928N01	Capacitor Chip 0.1µF

Circuit Ref	Motorola Part No.	Description
C408	2113743N50	Capacitor Chip 100pF
C409	2113743M24	Capacitor Chip 0.1µF
C410	2113928N01	Capacitor Chip 0.1µF
C411	2113743M24	Capacitor Chip 0.1µF
C412	2311049A59	Capacitor Tantalum 10µF
C414	2113743M24	Capacitor Chip 0.1µF
C415	2109720D01	Capacitor Chip 0.01µF
C416	2113928N01	Capacitor Chip 0.1µF
C419	2113928N01	Capacitor Chip 0.1µF
C420	2113743L41	Capacitor Chip 0.01µF
C421	2113928N01	Capacitor Chip 0.1µF
C422	2113743M24	Capacitor Chip 0.1µF
C423	2113743N50	Capacitor Chip 100pF
C424	2311049A59	Capacitor Tantalum 10µF
C425	2113743M24	Capacitor Chip 0.1µF
C426 to C427	2113743N50	Capacitor Chip 100pF
C428	2113743M24	Capacitor Chip 0.1µF
C429	2113743M24	Capacitor Chip 0.1µF
C430	2113928N01	Capacitor Chip 0.1µF
C431	2113743N50	Capacitor Chip 100pF
C432	2113743N01	Capacitor Chip 0.5pF
C433	2113743L41	Capacitor Chip 0.01µF
C434 to C435	2113743M24	Capacitor Chip 0.1µF
C436 to C437	2113743N34	Capacitor Chip 22pF
C438	2113743F18	Capacitor Chip 2.2µF
C439	2113743L17	Capacitor Chip 1000pF
C440	2113743F18	Capacitor Chip 2.2µF
C441	2113743N50	Capacitor Chip 100pF
C442	2113743E20	Capacitor Chip 0.1µF
C443	2113928N01	Capacitor Chip 0.1µF
C444 to C445	2113743N50	Capacitor Chip 100pF
C447	2113743M08	Capacitor Chip 0.022µF
C448	2113928N01	Capacitor Chip 0.1µF
C449	2113743N50	Capacitor Chip 100pF
C450	2113743M24	Capacitor Chip 0.1µF
C451	2113743M08	Capacitor Chip 0.022µF
C452	2113743B29	Capacitor Chip 1µF
C453	2113743N50	Capacitor Chip 100pF
C456	2113743N50	Capacitor Chip 100pF
C458 to C459	2113743N50	Capacitor Chip 100pF
C463	2113743N50	Capacitor Chip 100pF
C466	2113743N50	Capacitor Chip 100pF
C467	2113928N01	Capacitor Chip 0.1µF
C471 to C473	2113743N50	Capacitor Chip 100pF
C475	2113743H14	Capacitor Chip 10µF
C476	2113928D08	Capacitor Chip 10µF
C479	2113928N01	Capacitor Chip 0.1µF
C480	2113743G26	Capacitor Chip 4.7µF
C481 to C482	2113928N01	Capacitor Chip 0.1µF

Circuit Ref	Motorola Part No.	Description
C490 to C497	2113743N50	Capacitor Chip 100pF
C502	2311049A05	Capacitor Tantalum 0.47µF
C503	2113743N44	Capacitor Chip 56pF
C505	2113743N42	Capacitor Chip 47pF
C511 to C514	2113743N42	Capacitor Chip 47pF
C520	2113743L41	Capacitor Chip 0.01µF
C521 to C523	2113743L41	Capacitor Chip 0.01µF
C524	2113743N30	Capacitor Chip 15pF
C525 to C529	2113743N46	Capacitor Chip 68pF
C530	2311049A18	Capacitor Tantalum 10µF
C531	2113743N46	Capacitor Chip 68pF
C801	2111049A05	Capacitor Tantalum 0.47µF
C802 to C805	2109720D14	Capacitor Chip 0.1µF
C851	2113743G26	Capacitor Chip 4.7µF
C852 to C853	2113743N44	Capacitor Chip 56pF
C854	2113743F16	Capacitor Chip 1µF
C855	2113743N42	Capacitor Chip 47pF
C856	2113743E20	Capacitor Chip 0.1µF
C857	2113743F16	Capacitor Chip 1µF
C858	2113743N42	Capacitor Chip 47pF
C859 to C861	2113743L29	Capacitor Chip 3300pF
C862	2113743E20	Capacitor Chip 0.1µF
C863	2113743G26	Capacitor Chip 4.7µF
DIODE (SEE NOTE)		
CR101 to CR102	4880973Z02	Diode Pin MA4PH261
CR201 to CR202	4802233J09	Diode Array IMN10
CR203	4802233J22	Diode Array 1T363
CR251 to CR253	4862824C01	Diode Varactor 1SV229
CR300	4880154K03	Diode Schottky MMBD353LT1
CR301	4802245J41	Diode Switching HSMP3820
CR350	4862824C01	Diode VARACTOR 1SV229
CR411 to CR413	4802245J62	Diode Array RB731U
CR412 to CR413	4802245J62	Diode Array RB731U
CR440	4813833C02	Diode Dual Common Cathode MMBD6100LT1
CR501	4880107R01	Diode Rectifier BYD17D
CR503	4805729G49	Opto-Device LED BRPY1204W
FERRITE BEADS		
E101	2484657R01	2743019447
E102	2405688Z01	2744044446
E400 to E409	2480640Z01	BK1005HM471
FUSE		
F501	6580542Z01	Protector 1608FF

Circuit Ref	Motorola Part No.	Description
OSCILLATOR		
FL251	PT48PNGA33	Resonator
FL252	4802245J57	Resonator DRR030KE1R225TC
FILTER		
FL300 to FL301	4802245J78	FILTER A0-L177-01
FL350	4885631B01	FILTER 31B01
FL401	4870368G02	Crystal
CONNECTOR		
J101	2880658Z02	CONNECTOR
J400	0905505Y04	Connector Multi_pin FH12-40S-0.5SH
J403	0905505Y02	CONNECTOR MULTI_PIN CL586-0524-9
COIL, INDUCTOR		
L101	2462587V26	Inductor 22nH
L102	2462587V26	Inductor 22nH
L103	2460591B80	Inductor Airwound 19.61nH
L104	2460591A13	Inductor Airwound 5.34nH
L105	2460591A13	Inductor Airwound 5.34nH
L106	2413926G12	Inductor 27nH
L107 to L108	2413926G19	Inductor 100nH
L109	2460591A77	Inductor Airwound 10.40nH
L110	2413926G05	Inductor 6.8nH
L111	2413926G19	Inductor 100nH
L112	2413926G12	Inductor 27nH
L200	2462587Q20	Inductor 2.2µH
L202	2462587Q20	Inductor 2.2µH
L203	2462587V21	Inductor 6.8nH
L204	2462587P25	Inductor 12µH
L250	2413926G03	Inductor 4.7nH
L252	2413926G19	Inductor 100nH
L253	2462587V41	Inductor 390nH
L254	2413926G13	Inductor 33nH
L256 to L260	2413926G19	Inductor 100nH
L261	2413926G09	Inductor 15nH
L262	2413926G19	Inductor 100nH
L263	2413926G11	Inductor 22nH
L264	2413926G06	Inductor 8.2nH
L265	2413926G15	Inductor 47nH
L301	2413926G02	Inductor 3.9nH
L302	2413926G19	Inductor 100nH
L303	2462587V41	Inductor 390nH
L304	2413926G08	Inductor 12nH
L306	2462587V32	Inductor 68nH
L307	2413926G12	Inductor 27nH
L308	2462587V30	Inductor 47nH
L309	2413926G19	Inductor 100nH
L310	2413926G01	Inductor 3.3nH
L311	2413926G05	Inductor 6.8nH
L350	2462587Q20	Inductor 2.2µH
L351 to L352	2462587T22	Inductor 390nH
L353	2462587V34	Inductor 100nH

Circuit Ref	Motorola Part No.	Description
L354	2462587T23	Inductor 470nH
L355	2413923B04	Inductor 100nH
L356	2462587T44	Inductor 33nH
L357	2462587Q20	Inductor 2.2µH
L400 to L401	2462587Q42	Inductor 390nH
L410 to L411	2462587Q42	Inductor 390nH
L505	2462587Q42	Inductor 390nH
L851	2462587Q20	Inductor 2.2µH
M101	2680499Z01	Mechanical
PUSH BUTTON SWITCH		
PB501 to PB505	4080523Z01	Mechanical Switch KSS223G
TRANSISTOR (SEE NOTE)		
Q101	4813828A09	Transistor FET MRF1517T1
Q201 to Q202	4802245J50	Transistor Bipolar UMC5N
Q251	4805218N63	Transistor Bipolar BFQ67W
Q252	4802245J50	Transistor Bipolar UMC5N
Q302	4802245J56	Transistor Bipolar QSBT0048
Q304	4802245J44	Transistor Bipolar HP415
Q350	4805218N63	Transistor Bipolar BFQ67W
Q400	4809579E18	Transistor FET TP0101T
Q403	4880214G02	Transistor Bipolar MMBT3904L
Q405	4802245J54	Transistor Bipolar UMG5N
Q410 to Q411	4802245J54	Transistor Bipolar UMG5N
Q416	4809579E18	Transistor FET TP0101T
Q417	4802245J50	Transistor Bipolar UMC5N
Q502	5180159R01	Transistor Bipolar IMX1
Q505	4880214G02	Transistor Bipolar MMBT3904L
RESISTOR, FIXED		
R101	0680539Z01	Resistor Chip 0.1
R102 to R103	0662057A34	Resistor Chip 240
R104	0662057M50	Resistor Chip 100
R105	0662057M54	Resistor Chip 150
R106	0662057A18	Resistor Chip 51
R108	0662057M85	Resistor Chip 3K
R109	0662057M81	Resistor Chip 2K
R110	0662057M98	Resistor Chip 10K
R111	0662057M02	Resistor Chip 1
R113	0662057M02	Resistor Chip 1
R114	0662057M26	Resistor Chip 10
R115	0662057N08	Resistor Chip 24K
R116	0662057M01	Resistor Chip 0
R117	0662057N39	Resistor Chip 470K
R118	0662057N30	Resistor Chip 200K
R119	0662057N05	Resistor Chip 18K
R120	0662057N09	Resistor Chip 27K
R121	0662057M01	Resistor Chip 0
R200	0662057M50	Resistor Chip 100
R202	0662057M88	Resistor Chip 3.9K
R203	0662057M38	Resistor Chip 33
R204	0662057M52	Resistor Chip 120

Circuit Ref	Motorola Part No.	Description
R206	0662057N10	Resistor Chip 30K
R208	0662057N10	Resistor Chip 30K
R209	0662057M78	Resistor Chip 1.5K
R210	0662057M70	Resistor Chip 680
R211	0662057N15	Resistor Chip 47K
R212	0662057N47	Resistor Chip 1MEG
R213	0662057M50	Resistor Chip 100
R214	0662057N15	Resistor Chip 47K
R218	0662057N11	Resistor Chip 33K
R219 to	0662057M54	Resistor Chip 150
R220		
R222	0662057M01	Resistor Chip 0
R223	0662057M01	Resistor Chip 0
R250	0662057M60	Resistor Chip 270
R251	0662057M50	Resistor Chip 100
R253	0662057M26	Resistor Chip 10
R254	0662057N15	Resistor Chip 47K
R255	0662057M62	Resistor Chip 330
R257	0662057M74	Resistor Chip 1K
R261 to	0662057M38	Resistor Chip 33
R262		
R263 to	0662057M60	Resistor Chip 270
R264		
R265	0662057N05	Resistor Chip 18K
R266	0662057N09	Resistor Chip 27K
R267	0662057N01	Resistor Chip 12K
R268	0662057N07	Resistor Chip 22K
R270 to	0662057M38	Resistor Chip 33
R273		
R274	0662057M52	Resistor Chip 120
R275	0662057M26	Resistor Chip 10
R280	0662057M41	Resistor Chip 43
R281	0662057M01	Resistor Chip 0
R282	0662057M41	Resistor Chip 43
R306	0662057M92	Resistor Chip 5.6K
R307	0662057N17	Resistor Chip 56K
R309	0662057M70	Resistor Chip 680
R310	0662057N01	Resistor Chip 12K
R312	0662057M62	Resistor Chip 330
R314	0662057N29	Resistor Chip 180K
R315	0662057M74	Resistor Chip 1K
R317	0662057M96	Resistor Chip 8.2K
R318	0662057M72	Resistor Chip 820
R320	0662057M52	Resistor Chip 120
R321	0662057M43	Resistor Chip 51
R322	0662057M52	Resistor Chip 120
R323	0662057M87	Resistor Chip 3.6K
R324	0662057M68	Resistor Chip 560
R325	0662057N10	Resistor Chip 30K
R326	0662057M42	Resistor Chip 47
R327	0662057M40	Resistor Chip 39
R328	0662057N03	Resistor Chip 15K
R329	0662057N47	Resistor Chip 1MEG
R330	0662057N06	Resistor Chip 20K
R331	0662057N13	Resistor Chip 39K
R332	0662057N03	Resistor Chip 15K

Circuit Ref	Motorola Part No.	Description
R333	0662057N23	Resistor Chip 100K
R334	0662057N08	Resistor Chip 24K
R335 to	0662057N47	Resistor Chip 1MEG
R336		
R350	0662057M33	Resistor Chip 20
R351	0662057M52	Resistor Chip 120
R352 to	0662057N01	Resistor Chip 12K
R353		
R354	0662057N22	Resistor Chip 91K
R355	0662057M98	Resistor Chip 10K
R356	0662057M78	Resistor Chip 1.5K
R358	0662057N15	Resistor Chip 47K
R359	0662057M78	Resistor Chip 1.5K
R360	0662057N15	Resistor Chip 47K
R361	0662057M57	Resistor Chip 200
R362	0662057M98	Resistor Chip 10K
R363	0662057N15	Resistor Chip 47K
R364	0662057M81	Resistor Chip 2K
R365	0662057M87	Resistor Chip 3.6K
R366	0662057M78	Resistor Chip 1.5K
R400	0662057N15	Resistor Chip 47K
R401	0662057M01	Resistor Chip 0
R402	0662057N47	Resistor Chip 1MEG
R403	0662057M01	Resistor Chip 0
R405	0662057N47	Resistor Chip 1MEG
R406	0662057N20	Resistor Chip 75K
R407	0662057N19	Resistor Chip 68K
R408	0662057N47	Resistor Chip 1MEG
R409	0662057M98	Resistor Chip 10K
R410	0662057N23	Resistor Chip 100K
R411	0662057M98	Resistor Chip 10K
R413	0662057M01	Resistor Chip 0
R414	0662057V34	Resistor Chip 180K
R415	0662057V26	Resistor Chip 91K
R416	0662057M90	Resistor Chip 4.7K
R418	0662057N47	Resistor Chip 1MEG
R419	0662057M67	Resistor Chip 510
R420	0662057B46	Resistor Chip 10MEG
R421	0662057M81	Resistor Chip 2K
R423	0662057N39	Resistor Chip 470K
R424	0662057N12	Resistor Chip 36K
R425	0662057N10	Resistor Chip 30K
R426	0662057N35	Resistor Chip 330K
R427	0662057M84	Resistor Chip 2.7K
R428	0662057M10	Resistor Chip 2.2
R429	0662057M98	Resistor Chip 10K
R431	0662057N39	Resistor Chip 470K
R432	0662057N16	Resistor Chip 51K
R434	0662057M62	Resistor Chip 330
R435	0662057M81	Resistor Chip 2K
R436	0662057M74	Resistor Chip 1K
R437	0662057M01	Resistor Chip 0
R438 to	0662057M54	Resistor Chip 150
R439		
R445	0662057N08	Resistor Chip 24K
R446	0662057N22	Resistor Chip 91K

Circuit Ref	Motorola Part No.	Description
R447	0662057N38	Resistor Chip 430K
R448	0662057N06	Resistor Chip 20K
R449	0662057N08	Resistor Chip 24K
R450	0683962T45	Resistor Chip 68
R457	0662057M98	Resistor Chip 10K
R460	0662057M90	Resistor Chip 4.7K
R461	0662057M56	Resistor Chip 180
R462	0662057M98	Resistor Chip 10K
R463	0662057M61	Resistor Chip 300
R471	0662057M92	Resistor Chip 5.6K
R472	0662057N12	Resistor Chip 36K
R473	0662057M26	Resistor Chip 10
R475	0662057M01	Resistor Chip 0
R476	0662057N08	Resistor Chip 24K
R477	0662057M74	Resistor Chip 1K
R478	0662057M98	Resistor Chip 10K
R481	0662057N08	Resistor Chip 24K
R492	0662057M01	Resistor Chip 0
R499	0662057M98	Resistor Chip 10K
R501	0662057M70	Resistor Chip 680
R502	0662057M56	Resistor Chip 180
R505	0662057M98	Resistor Chip 10K
R506	0662057N15	Resistor Chip 47K
R507	0662057M01	Resistor Chip 0
R851	0662057M01	Resistor Chip 0
R852	0662057M85	Resistor Chip 3K
R853	0662057M78	Resistor Chip 1.5K
R854	0662057M74	Resistor Chip 1K
R855	0662057N23	Resistor Chip 100K
R856	0662057M01	Resistor Chip 0
R857	0662057M90	Resistor Chip 4.7K
R858	0662057M98	Resistor Chip 10K
THERMISTOR		
RT400	0680590Z01	Resistor Thermal 33.0K
SWITCH		
S501	4080710Z01	Mechanical Rotary Switch
S502	1880619Z01	Switch
SHIELD:		
SH100	2680507Z01	Mechanical Shield 07Z01
SH101	2686081B04	Mechanical Shield 81B04
SH102	2680554Z01	Mechanical Shield 54Z01
SH201 to	2680511Z01	Mechanical Shield 11Z01
SH202		
SH250	2680514Z01	Mechanical Shield 14Z01
SH251 to	2680508Z01	Mechanical Shield 08Z01
SH252		
SH301	2680554Z01	Mechanical Shield 54Z01
SH303	2680508Z01	Mechanical Shield 08Z01
SH350	2680508Z01	Mechanical Shield 08Z01
SH351	2605547X01	Mechanical Shield 47X01
SH352	2680553Z01	Mechanical Shield 53Z01
SH353	2680514Z01	Mechanical Shield 14Z01
SH400	2680505Z01	Mechanical Shield 05Z01
SH401	2680506Z01	Mechanical Shield 06Z01
SH402	2680515Z01	Mechanical Shield 15Z01
SH403	2680516Z01	Mechanical Shield 16Z01

Circuit Ref	Motorola Part No.	Description
INTEGRATED CIRCUIT (SEE NOTE)		
U101	5185130C65	Analog IC
U102	5185765B01	Custom IC H99S-4
U103	5185963A15	Analog IC LM50CIM3X
U201	5185963A27	Custom IC ASIC 63A27
U202	5105739X05	Analog IC ADP3300
U203	5102463J58	Analog IC Voltage RegulatorLP2980AIM5
U250	5105750U54	Custom IC Buffer/Driver 50U54
U301	5185963A43	Analog IC MA4EX900L-1226
U302	5185623B01	Digital IC Gate TC7SU04FTE85L
U303	5185963A60	Analog IC OP Amp LMC7101BIM5X
U350	5185623B01	Digital IC Gate TC7SU04FTE85L
U351	5109632D83	Custom IC 32D83
U352	4885622B01	Transistor BF904
U400	5102463J40	Analog IC Voltage Regulator LP2951ACMM-3.3
U404	5105109Z41	Custom IC 09Z41
U405	5102463J36	Digital IC Memory
U406	5102463J42	Digital IC Memory AT49BV020
U407	5102463J47	Digital IC Memory X25320_2.7V
U409	5102226J56	Digital IC MICROPROCESSOR MC68HC11FLOPU1
U410	5102463J57	ILC7062CM-33
U420	5102463J44	Analog IC AMP TDA8547TS
U851	5105835U50	Custom IC 35U50
ZENER DIODE (SEE NOTE)		
VR101	4813830A15	Diode Zener MMBZ5232B
VR432 to	4805656W08	Diode MMQA5V6T1
VR433		
VR434	4802245J73	Diode Zener UDZSTE17
VR445 to	4802245J74	Diode Zener UDZSTE17
VR449		
VR450	4802245J75	Diode Zener UDZSTE17
VR501	4813830A18	Diode Zener MMBZ5235BLT1
VR502	4880140L17	Diode Zener MMBZ5242B
VR503 to	4802245J73	Diode Zener UDZSTE17
VR508		
CRYSTAL (SEE NOTE)		
Y200	4802245J68	Oscillator Crystal TTS12V
Y201	4805875Z04	Oscillator Crystal 75Z04

Note: For optimum performance, diodes, transistors, integrated circuits, and crystals must be ordered by Motorola part number.

** Motorola Depot Servicing only*

Appendix A Replacement Parts Ordering

A.1 Basic Ordering Information

When ordering replacement parts or equipment information, the complete identification number should be included. This applies to all components, kits, and chassis. If the component part number is not known, the order should include the number of the chassis or kit of which it is a part, and sufficient description of the desired component to identify it.

Crystal orders should specify the crystal type number, crystal and carrier frequency, and the model number in which the part is used.

A.2 Transceiver Board and VOCON Board Ordering Information

When ordering a replacement Transceiver Board or VOCON Board, refer to the applicable Model Chart in the front of this manual, read the Transceiver Board or VOCON Board note, and include the proper information with your order.

A.3 Motorola Online

Motorola Online users can access our online catalog at

<https://www.motorola.com/businessonline>

To register for online access, please call 1-800-814-0601.

A.4 Mail Orders

Send written orders to the following addresses:

**Replacement Parts/
Test Equipment/Manuals/
Crystal Service Items**
(United States and Canada):

Motorola Inc.
Customer Care and Services
Division*
Attention: Order Processing
1307 E. Algonquin Road
Schaumburg, IL 60196
U.S.A.

Federal Government Orders:

Motorola Inc.
U.S. Federal Government
Markets Division
Attention: Order Processing
7230 Parkway Drive
Landover, MD 21076

International Orders:

Motorola Inc.
Customer Care and Services
Division*
Attention: Order Processing
1307 E. Algonquin Road
Schaumburg, IL 60196
U.S.A.

A.5 Telephone Orders

Customer Care and Services Division*
(United States and Canada)
7:00 AM to 7:00 PM (Central Standard Time)
Monday through Friday (Chicago, U.S.A.)
1-800-422-4210
(International Orders)
1-847-538-8023

U.S. Federal Government Markets Division (USFGMD)
1-800-826-1913 Federal Government Parts - Credit Cards Only
8:30 AM to 5:00 PM (Eastern Standard Time)

A.6 Fax Orders

Customer Care and Services Division*
(United States and Canada)
1-800-622-6210
(International)
847-576-3023

USFGMD
(Federal Government Orders)
1-800-526-8641 (For Parts and Equipment Purchase Orders)

A.7 Parts Identification

Customer Care and Services Division*
(United States and Canada)
1-800-422-4210, menu 3

A.8 Product Customer Service

Customer Response Center
(Non-technical Issues)
1-800-247-2346
FAX:1-800-247-2347

* Customer Care and Services Division (CCSD) was formerly known as Accessories and Aftermarket Division (AAD).



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