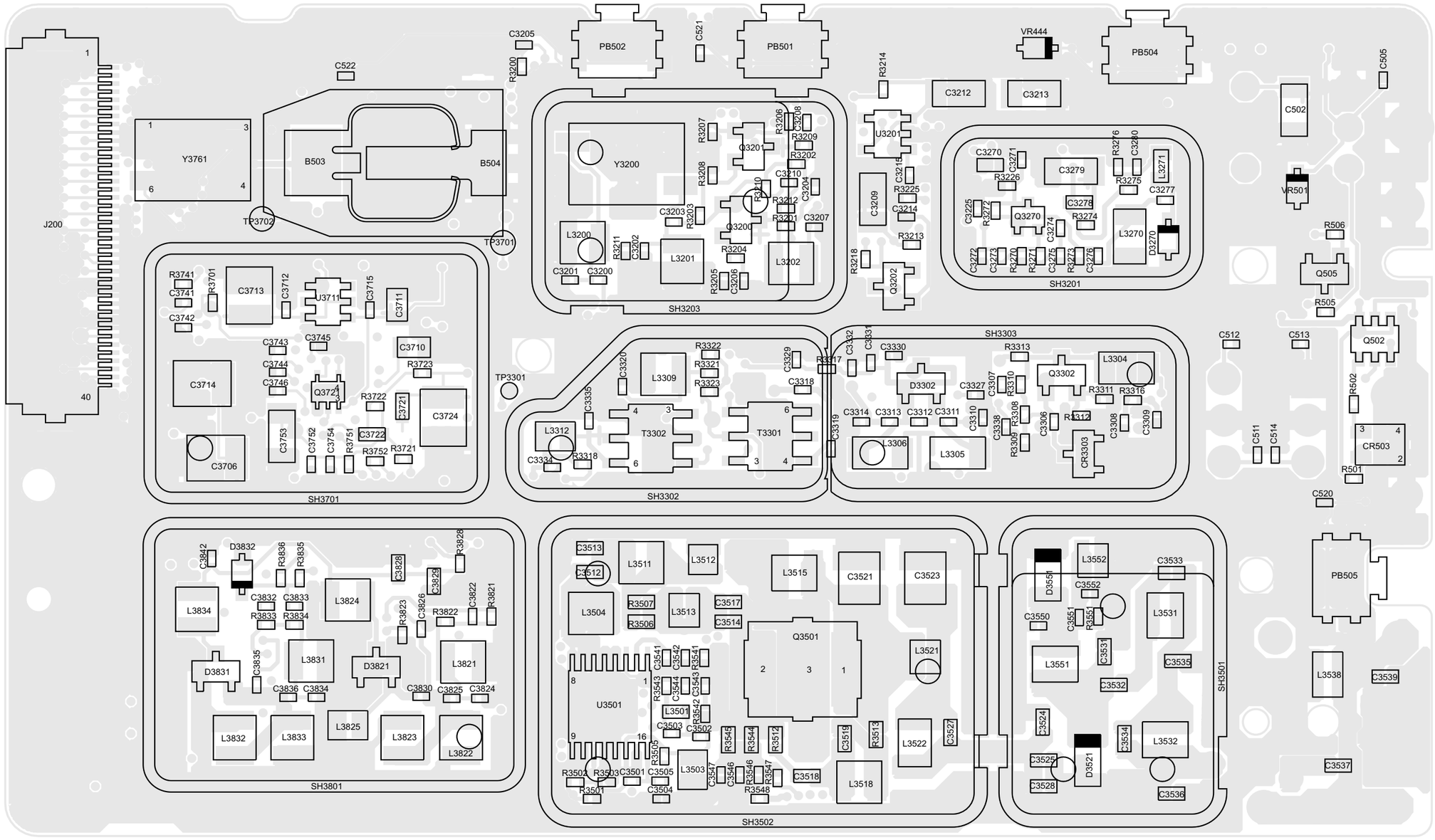
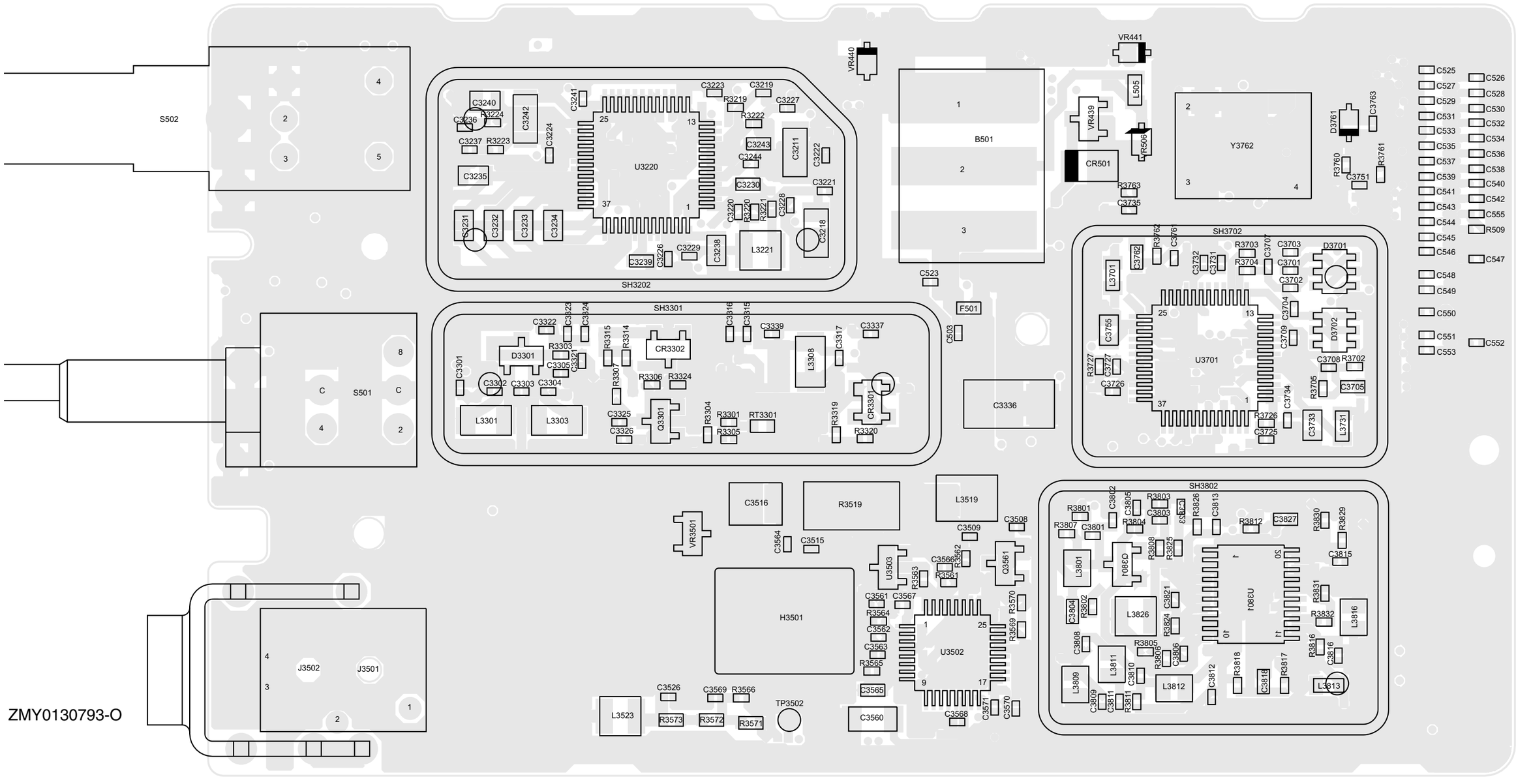
4.6 VHF Circuit Board/Schematic Diagrams and Parts List



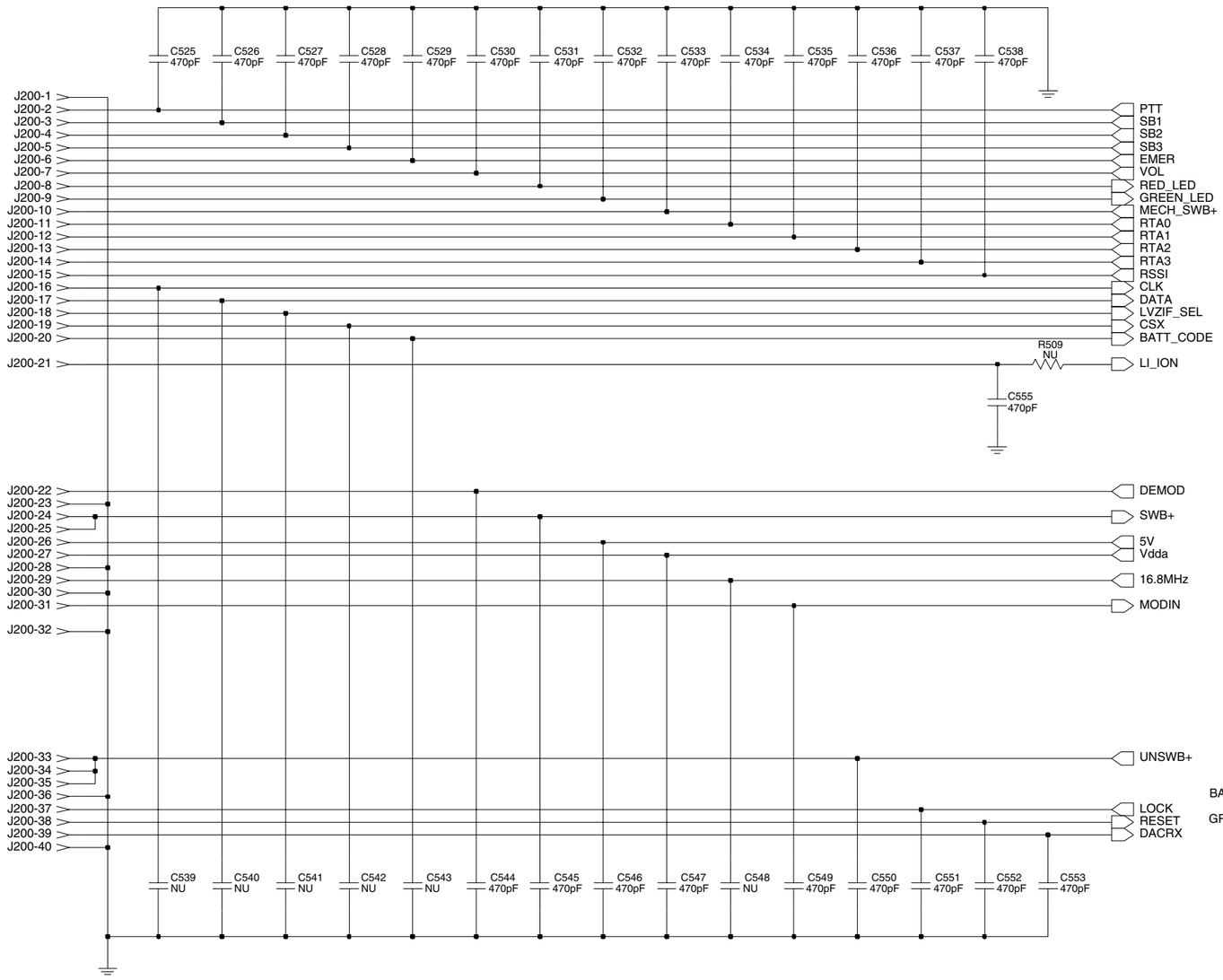
ZMY0130792-O

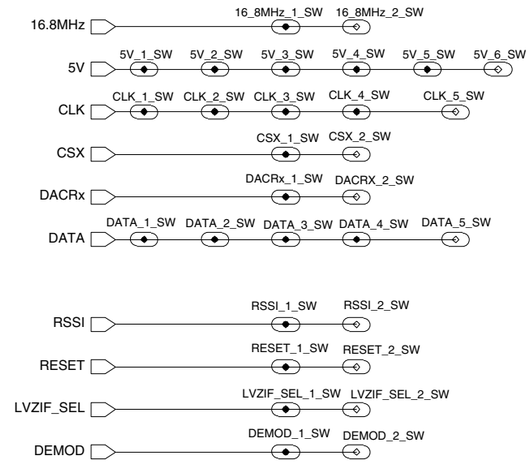
VHF (136-174MHz) Main Board Top Side PCB No. 8404055G05/G06/G07

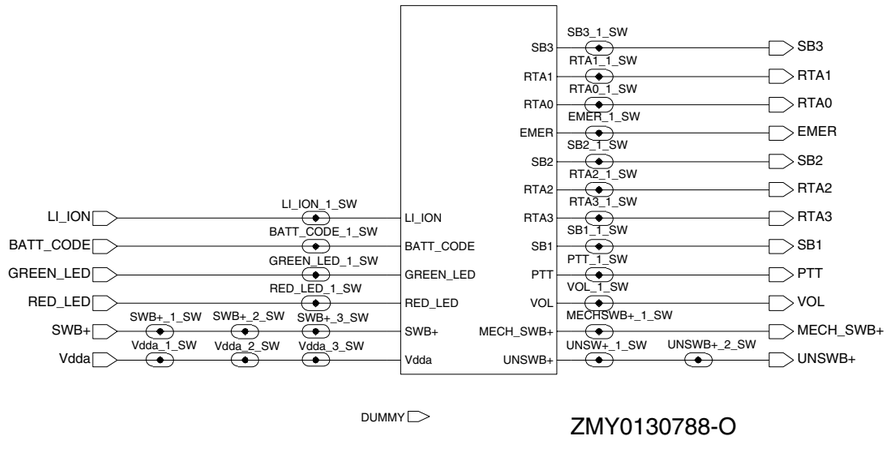


ZMY0130793-O

VHF (136-174MHz) Main Board Bot Side PCB No. 8404055G05/G06/G07

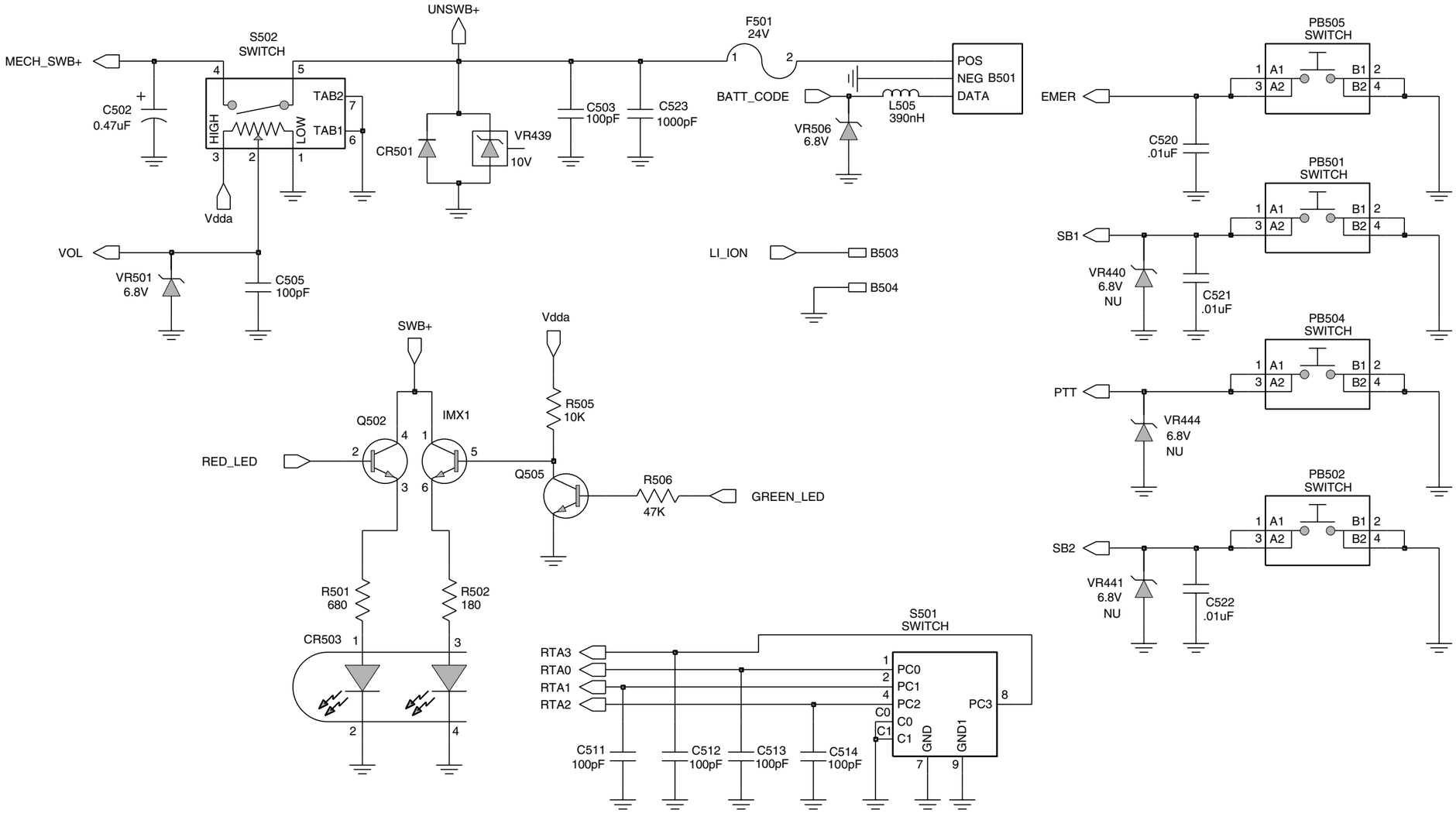






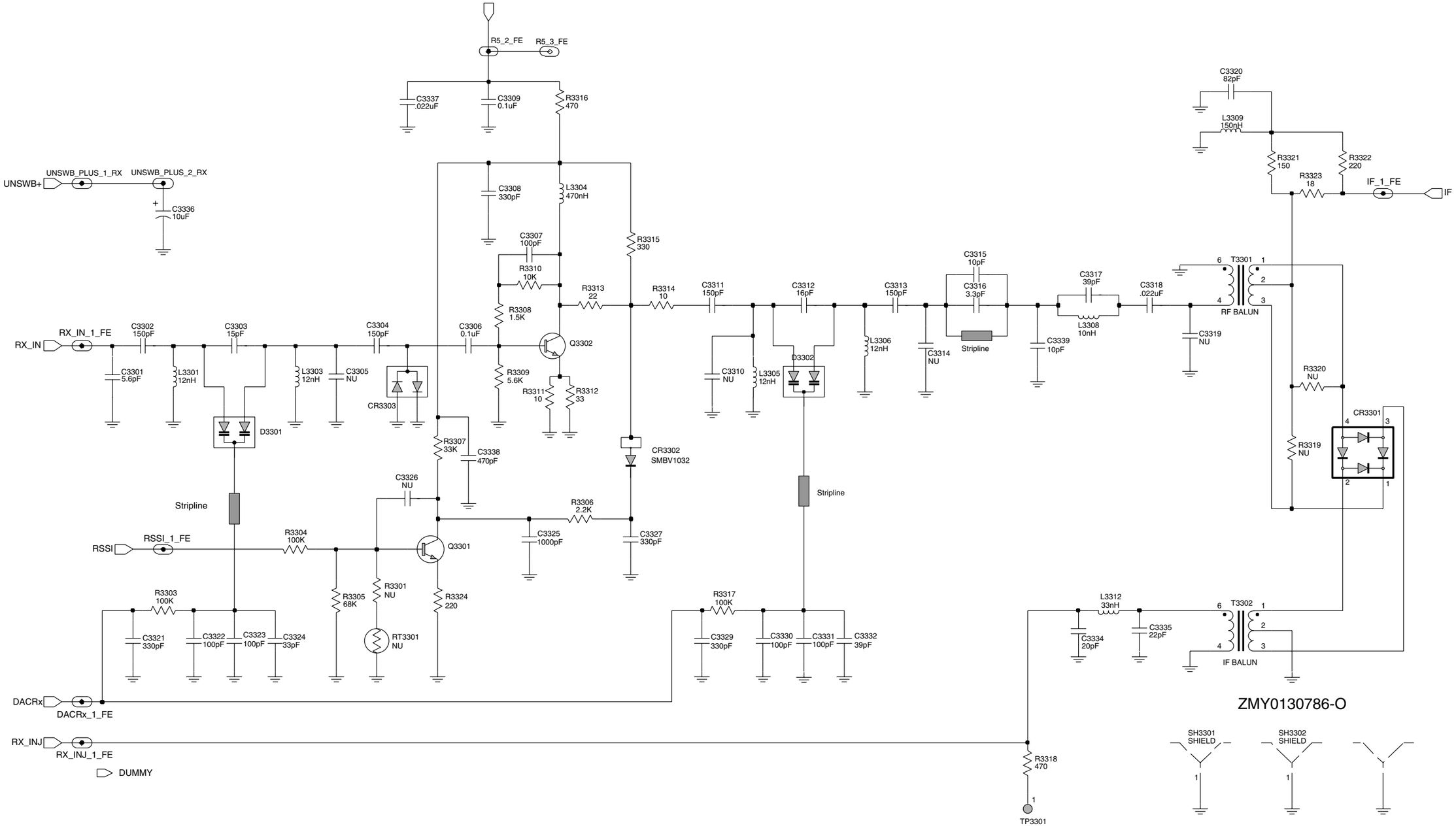
ZMY0130788-O

VHF Controls And Switches Schematic Diagram



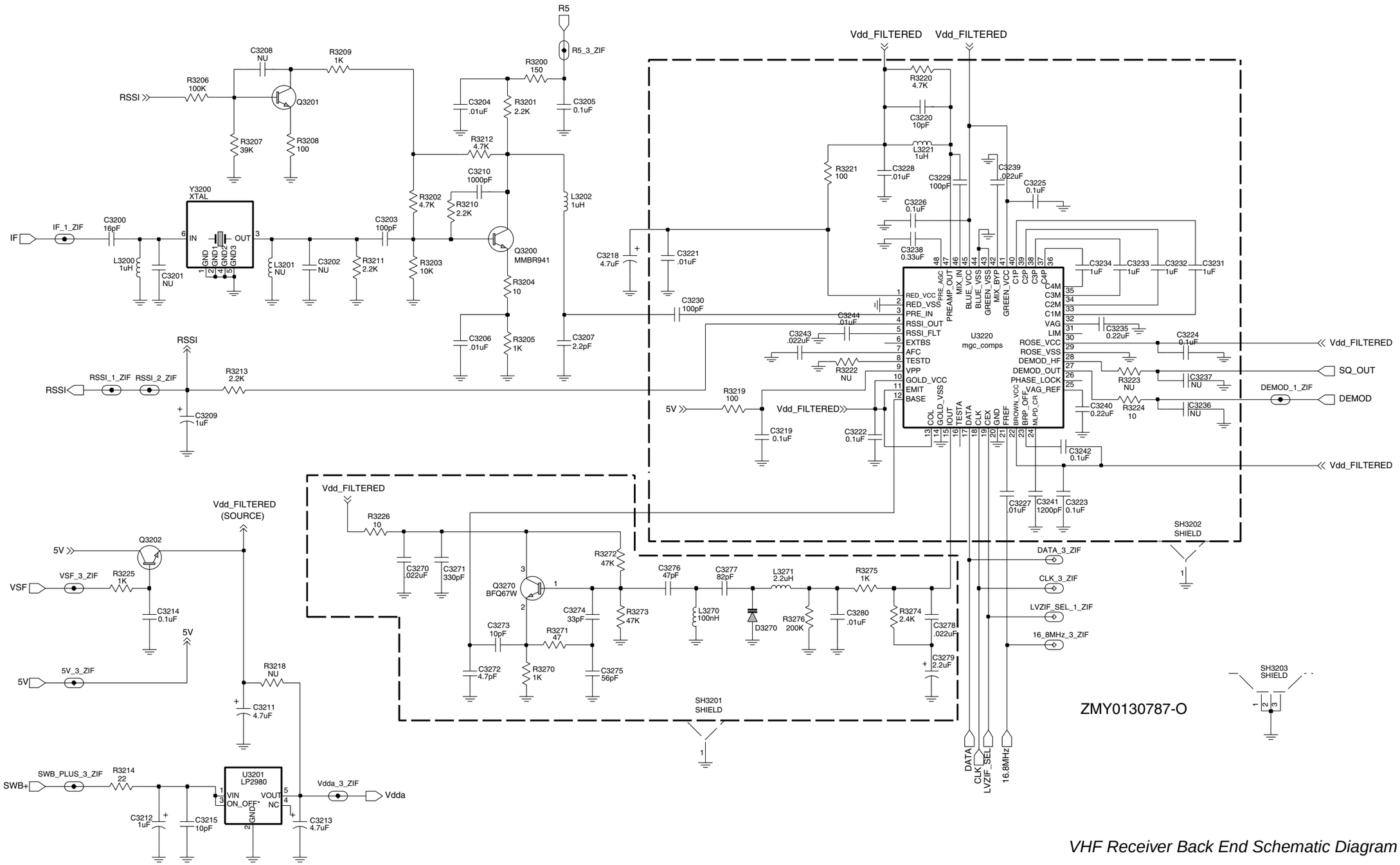
ZWG0130945-O

VHF Battery Contacts (Controls and Switches) Schematic Diagram

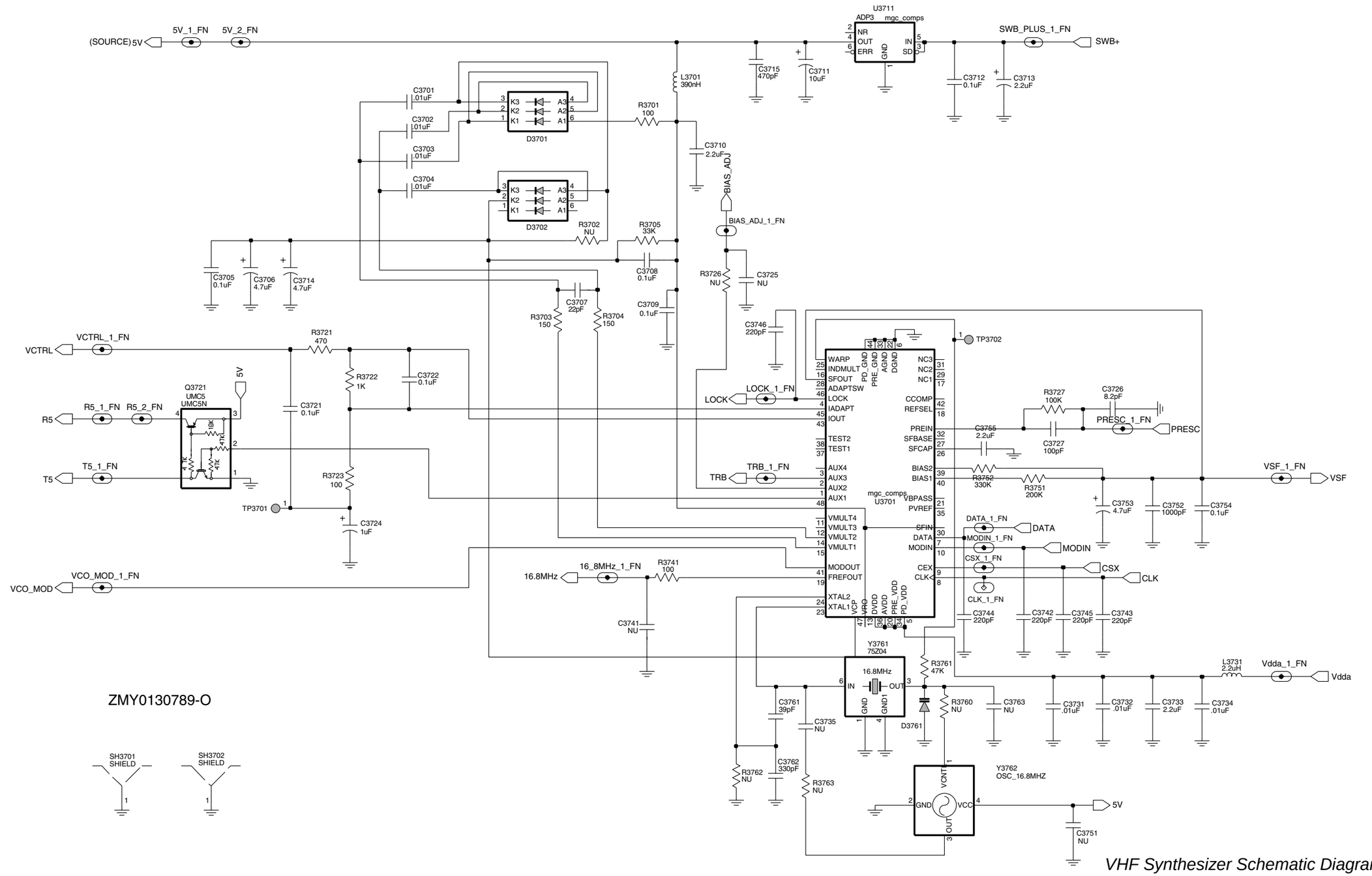


ZMY0130786-O

VHF Receiver Front End Schematic Diagram

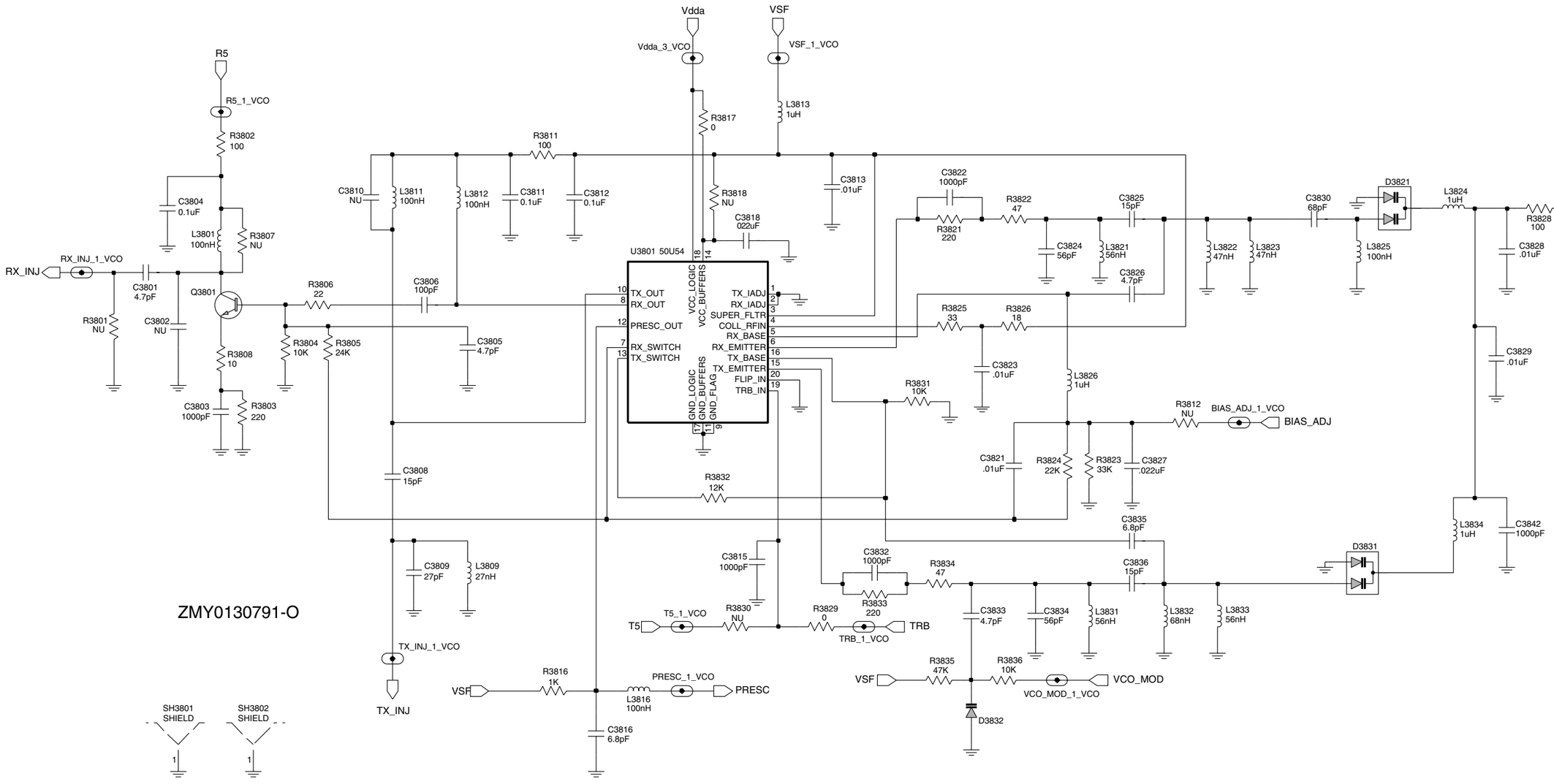


VHF Receiver Back End Schematic Diagram

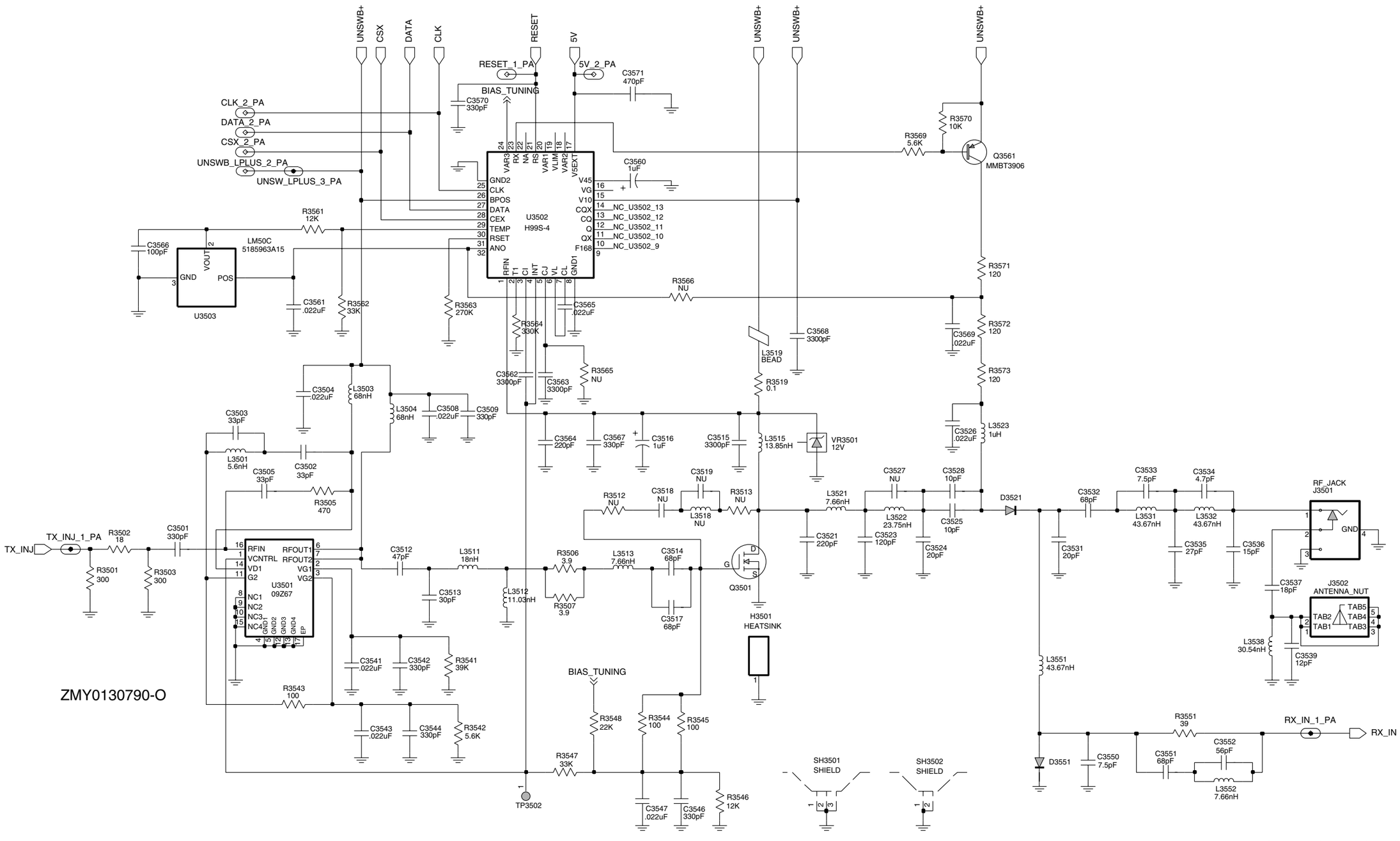


ZMY0130789-O

VHF Synthesizer Schematic Diagram



VHF Voltage Controlled Oscillator Schematic Diagram



ZMY0130790-O

VHF Transmitter Schematic Diagram

VHF Radio Parts List)

Circuit Ref	Motorola Part No.	Description
B501	0986237A02	Battery Contact Module
B503	3980502Z01	Backup Battery Contact, B+ (not used in GP344)
B504	3980501Z01	Backup Battery Contact, B- (not used in GP344)
C3200	2113743N31	16.0pF
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	10pF
C3274	2113743N38	33pF
C3275	2113743N44	56pF
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
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	10pF
C3316	2113743N14	3.3pF
C3317	2113743N40	39.0pF
C3318	2113743M08	0.022uF
C3320	2113743N48	82.0pF
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	39.0pF
C3334	2113743N33	20pF
C3335	2113743N34	22pF
C3336	2311049A18	10uF
C3337	2113743M08	0.022uF
C3338	2113743L09	470pF
C3339	2113743N26	10pF
C3501	2113743L05	330pF
C3502	2113743N38	33pF
C3503	2113743N38	33pF
C3504	2113743M08	0.022uF
C3505	2113743N38	33pF
C3508	2113743M08	0.022uF
C3509	2113743L05	330pF
C3512	2113740F43	47pF
C3513	2113740F38	30pF
C3514	2113740F47	68pF
C3515	2113743L29	3300pF
C3516	2311049A08	1uF
C3517	2113740F47	68pF
C3521	2111078B51	220pF
C3523	2111078B44	120pF
C3524	2113740F34	20pF
C3525	2113740F27	10pF
C3526	2113743M08	0.022uF
C3528	2113740F27	10pF
C3531	2113740F34	20pF
C3532	2113740F47	68pF
C3533	2113740F24	7.5pF
C3534	2113740F19	4.7pF
C3535	2113740F37	27pF
C3536	2113740F31	15pf
C3537	2113740F33	18pF
C3539	2113740F29	12pF
C3541	2113743M08	0.022uF
C3542	2113743L05	330pF
C3543	2113743M08	0.022uF
C3544	2113743L05	330pF
C3546	2113743L05	330pF
C3547	2113743M08	0.022uF
C3550	2113743N23	7.5pF
C3551	2113743N46	68.0pF
C3552	2113743N44	56pF
C3560	2311049A07	1uF
C3561	2113743M08	0.022uF
C3562	2113743L29	3300pF
C3563	2113743L29	3300pF
C3564	2113743L01	220pF
C3565	2113743E07	0.022uF
C3566	2113743N50	100pF
C3567	2113743L05	330pF
C3568	2113743L29	3300pF
C3569	2113743M08	0.022uF
C3570	2113743L05	330pF
C3571	2113743L09	470pF
C3701	2113743L41	0.01uF
C3702	2113743L41	0.01uF
C3703	2113743L41	0.01uF
C3704	2113743L41	0.01uF
C3705	2113743E20	10uF
C3706	2311049J11	4.7uF
C3707	2113743N34	22pF
C3708	2113928N01	0.1uF
C3709	2113928N01	0.1uF
C3710	2104993J02	2.2uF
C3711	2311049A69	10uF
C3712	2113928N01	0.1uF
C3713	2311049A09	2.2uF
C3714	2311049J11	4.7uF
C3715	2113743L09	470pF
C3721	2113743E20	10uF
C3722	2113743E20	10uF
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	2113928N01	0.1uF
C3755	2104993J02	2.2uF
C3761	2113743N40	39pF
C3762	2113740F63	330pF
C3801	2113743N18	4.7pF
C3803	2113743L17	1000pF
C3804	2113743E20	10uF
C3805	2113743N18	4.7pF
C3806	2113743N50	100pF
C3808	2113743N30	15.0pF
C3809	2113743N36	27pF
C3811	2113928N01	0.1uF
C3812	2113928N01	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	15.0pF
C3826	2113743N18	4.7pF
C3827	2113743E07	0.022uF
C3828	2185895Z01	0.01uF
C3829	2185895Z01	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
C502	2311049A05	0.47uF
C503	2113743N50	100pF
C511	2113743N50	100pF
C512	2113743N50	100pF

Circuit Ref	Motorola Part No.	Description
C513	2113743N50	100pF
C514	2113743N50	100pF
C520	2113743L41	0.01uF
C521	2113743L41	0.01uF
C522	2113743L41	0.01uF
C523	2113743L41	0.01uF
C525	2113743L09	470pF
C526	2113743L09	470pF
C527	2113743L09	470pF
C528	2113743L09	470pF
C529	2113743L09	470pF
C530	2113743L09	470pF
C531	2113743L09	470pF
C532	2113743L09	470pF
C533	2113743L09	470pF
C534	2113743L09	470pF
C535	2113743L09	470pF
C536	2113743L09	470pF
C537	2113743L09	470pF
C538	2113743L09	470pF
C544	2113743L09	470pF
C545	2113743L09	470pF
C546	2113743L09	470pF
C547	2113743L09	470pF
C549	2113743L09	470pF
C550	2113743L09	470pF
C551	2113743L09	470pF
C552	2113743L09	470pF
C553	2113743L09	470pF
C555	2113743L09	470pF
CR3301	4802245J42	Ring Quad Diode
CR3302	4805129M96	SMBV1032
CR3303	4880154K03	Dual Comm Anode-Cathode
CR501	4880107R01	Rectifier
CR503	4805729G49	LED Red/Yel
D3270	4862824C01	Varactor
D3301	4802081B58	Diode Dual
D3302	4802081B58	Diode Dual
D3521	4880973Z02	Pin Diode
D3551	4880973Z02	Pin Diode
D3701	4802233J09	Triple Diode
D3702	4802233J09	Triple Diode
D3761	4862824C03	Varactor
D3821	4805649Q13	Dual Varactor
D3831	4805649Q13	Dual Varactor
D3832	4862824C01	Varactor
F501	6580542Z01	Fuse 3A
H3501	2680499Z01	HEATSINK
J200	0905505Y04	40 Pins Connector
J3501	0985613Z01	RF JACK
J3502	0280519Z02	Antenna Nut

Circuit Ref	Motorola Part No.	Description
L3200	2462587N68	1000nH
L3202	2462587N68	1000nH
L3221	2462587N68	1000nH
L3270	2462587T15	100nH
L3271	2462587Q20	2.2uH
L3301	2462587T35	2nH
L3303	2462587T35	2nH
L3304	2462587T23	470nH
L3305	2462587T35	2nH
L3306	2462587T35	2nH
L3308	2462587T34	10nH
L3309	2462587N55	150nH
L3312	2462587V28	33nH
L3501	2413926H09	5.6nH
L3503	2462587V32	68nH
L3504	2462587N51	68nH
L3511	2462587N44	18nH
L3512	2479990B01	11.03nH
L3513	2479990A02	7.66nH
L3515	2479990C03	13.85nH
L3519	2484657R01	BEAD
L3521	2479990A02	7.66nH
L3522	2479990E01	23.75nH
L3523	2462587N68	1000nH
L3531	2479990N01	43.67nH
L3532	2479990N01	43.67nH
L3538	2479990M01	30.54nH
L3551	2479990N01	43.67nH
L3552	2479990A02	7.66nH
L3701	2462587Q42	390nH
L3731	2462587Q20	2.2uH
L3801	2462587V34	100nH
L3809	2462587V27	27nH
L3811	2462587V34	100nH
L3812	2462587V34	100nH
L3813	2462587Q47	1uH
L3816	2462587V34	100nH
L3821	2462587N50	56nH
L3822	2462587N49	47nH
L3823	2462587N49	47nH
L3824	2462587N68	1000nH
L3825	2462587V34	100nH
L3826	2462587N68	1000nH
L3831	2462587N50	56nH
L3832	2462587N51	68nH
L3833	2462587N50	56nH
L3834	2462587N68	1000nH
L400	2462587Q42	390NH 10%
L401	2462587Q42	390NH 10%
L410	2462587Q42	390NH 10%
L411	2462587Q42	390NH 10%

Circuit Ref	Motorola Part No.	Description
L505	2462587Q42	390nH
PB501	4070354A01	Tact Switch
PB502	4070354A01	Tact Switch
PB504	4070354A01	Tact Switch
PB505	4070354A01	Tact Switch
Q3200	4813827A07	MMBR941
Q3201	4880214G02	NPN
Q3202	4880214G02	NPN
Q3270	4805218N63	BFQ67W
Q3301	4880214G02	NPN
Q3302	4813827A07	MMBR942
Q3501	4813828A08	RF Power FET
Q3561	4813824A17	PNP
Q3721	4809939C05	DUAL NPN/PNP
Q3801	4813827A07	MMBR943
Q502	5180159R01	Dual NPN
Q505	4880214G02	NPN
R3200	0662057M54	150
R3201	0662057M82	2.2K
R3202	0662057M90	4.7K
R3203	0662057M98	10K
R3204	0662057M26	10
R3205	0662057M74	1K
R3206	0662057N23	100K
R3207	0662057N13	39K
R3208	0662057M50	100
R3209	0662057M74	1K
R3210	0662057M82	2.2K
R3211	0662057M82	2.2K
R3212	0662057M90	4.7K
R3213	0662057M82	2.2K
R3214	0662057M34	22
R3219	0662057M50	100
R3220	0662057M90	4.7K
R3221	0662057M50	100
R3224	0662057M26	10
R3225	0662057M74	1K
R3226	0662057M26	10
R3270	0662057M74	1K
R3271	0662057M42	47
R3272	0662057N15	47K
R3273	0662057N15	47K
R3274	0662057M83	2.4K
R3275	0662057M74	1K
R3276	0662057N30	200K
R3303	0662057N23	100K
R3304	0662057N23	100K
R3305	0662057N19	68K
R3306	0662057M82	2.2K
R3307	0662057N11	33K
R3308	0662057M78	1.5K

Circuit Ref	Motorola Part No.	Description
R3309	0662057M92	5.6K
R3310	0662057M98	10K
R3311	0662057M26	10
R3312	0662057M38	33
R3313	0662057M34	22
R3314	0662057M26	10
R3315	0662057M62	330
R3316	0662057M66	470
R3317	0662057N23	100K
R3318	0662057M66	470
R3321	0662057M54	150
R3322	0662057M58	220
R3323	0662057M32	18
R3324	0662057M58	220
R3501	0662057M61	300
R3502	0662057M32	18
R3503	0662057M61	300
R3505	0662057M62	330
R3506	0662057B62	3.9
R3507	0662057B62	3.9
R3519	0680539Z01	0.1
R3542	0662057M92	5.6K
R3543	0662057M50	100
R3544	0662057A25	100
R3545	0662057A25	100
R3546	0662057N01	12K
R3547	0662057N11	33K
R3548	0662057N07	22K
R3551	0662057M40	39
R3561	0662057N01	12K
R3562	0662057N11	33K
R3563	0662057N33	270K
R3564	0662057N35	330K
R3569	0662057M92	5.6K
R3570	0662057M98	10K
R3571	0662057A27	120
R3572	0662057A27	120
R3573	0662057A27	120
R3701	0662057M50	100
R3703	0662057M54	150
R3704	0662057M54	150
R3705	0662057N11	33K
R3721	0662057M66	470
R3722	0662057M74	1K
R3723	0662057M50	100
R3727	0662057N23	100K
R3741	0662057M50	100
R3751	0662057N30	200K
R3752	0662057N35	330K
R3761	0662057N15	47K
R3802	0662057M50	100

Circuit Ref	Motorola Part No.	Description
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
R3835	0662057N15	47K
R3836	0662057M98	10K
R501	0662057M70	680
R502	0662057M56	180
R505	0662057M98	10K
R506	0662057N15	47K
R509	0662057M01	0 (not used in GP344)
RT400	0680590Z01	Thermistor 33K
S501	4080710Z01	Freq Switch (used in GP344)
S501	4080710Z02	Freq Switch (used in GP388)
S502	1880619Z02	Volume Switch
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
SH3702	2680511Z01	SHIELD
SH3801	2680513Z01	SHIELD
SH3802	2680514Z01	SHIELD
T3301	2580541Z02	XFMR Coil
T3302	2580541Z02	XFMR Coil
U3201	5102463J58	LP2980
U3220	5109632D83	LVZIF
U3501	5185130C65	LDMOS Driver
U3502	5185765B26	PWR CTRL IN MOS20
U3503	5185963A15	Temperature Sense
U3701	5185963A27	LVFRACN
U3711	5105739X05	Regulator Linear
U3801	5105750U54	VCO IC
VR3501	4880140L17	DIODE ZENER 12V
VR439	4880140L17	DIODE ZENER 12V
VR501	4802245J73	DIODE ZENER 6.8V
VR506	4802245J73	DIODE ZENER 6.8V
Y3200	9186153B01	XTAL
Y3761	4805875Z04	XTAL 16.8MHz
PCB RF	8404055G05/ G06/G07	VHF RF PCB
PCB Ctrl	8404051G07	VHF Controller PCB without Keypad and Display
PCB Ctrl	8404056G01/ G02	VHF Controller PCB with Keypad and Display

* Motorola Depot Servicing only