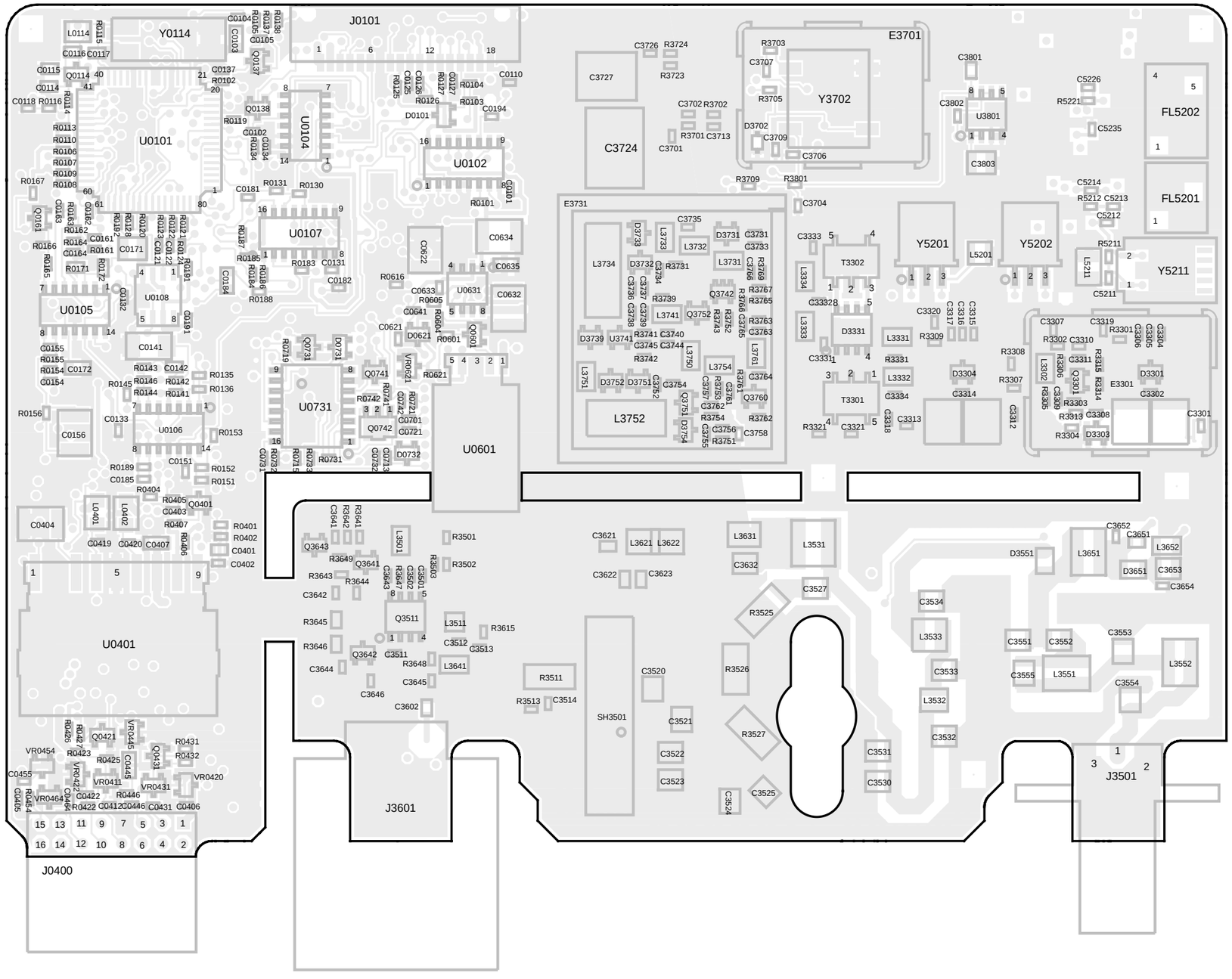
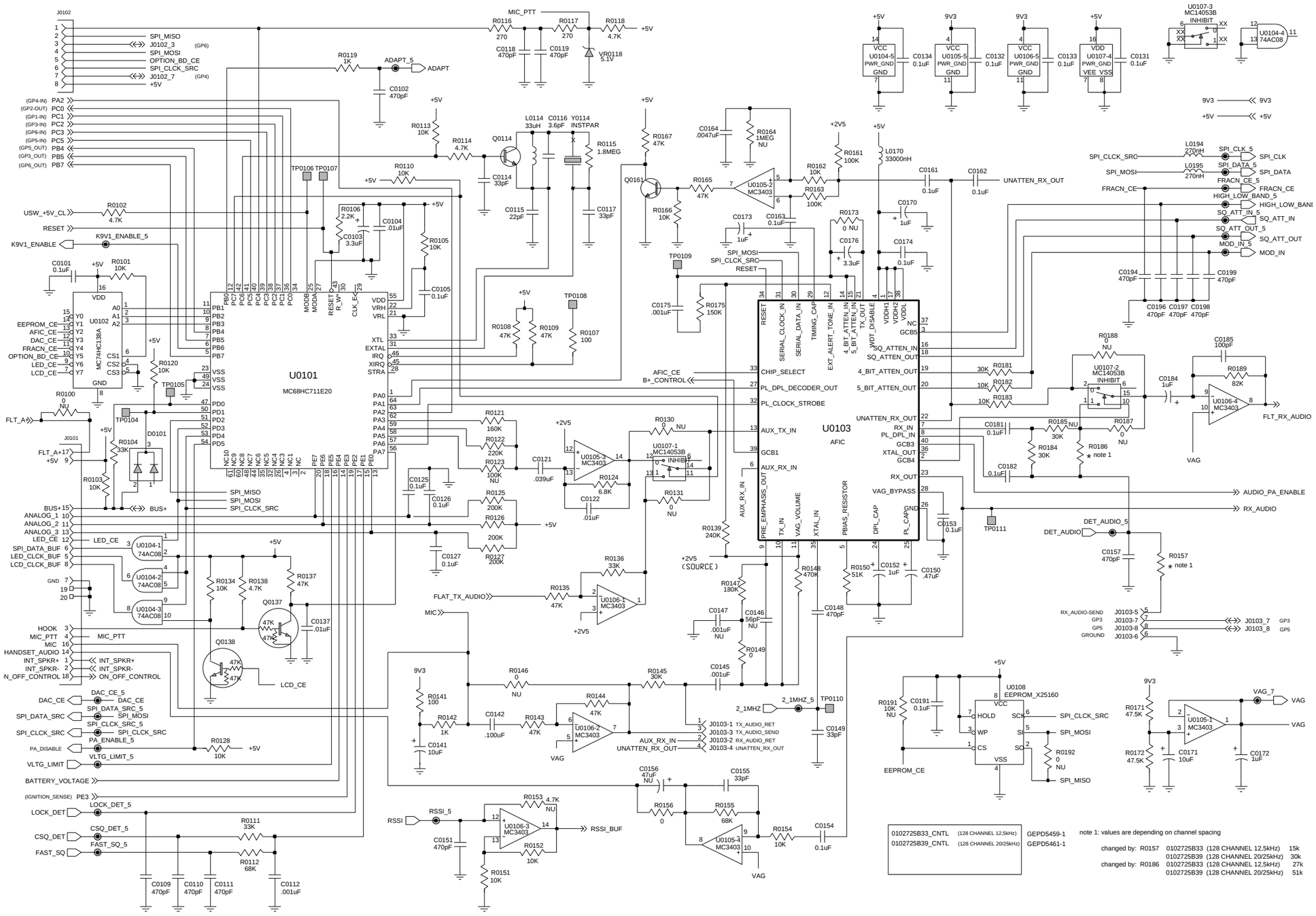
Associated Schematics	
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VHF (136-174MHz) Main Board Top Side PCB No. 8402627Y06_T5



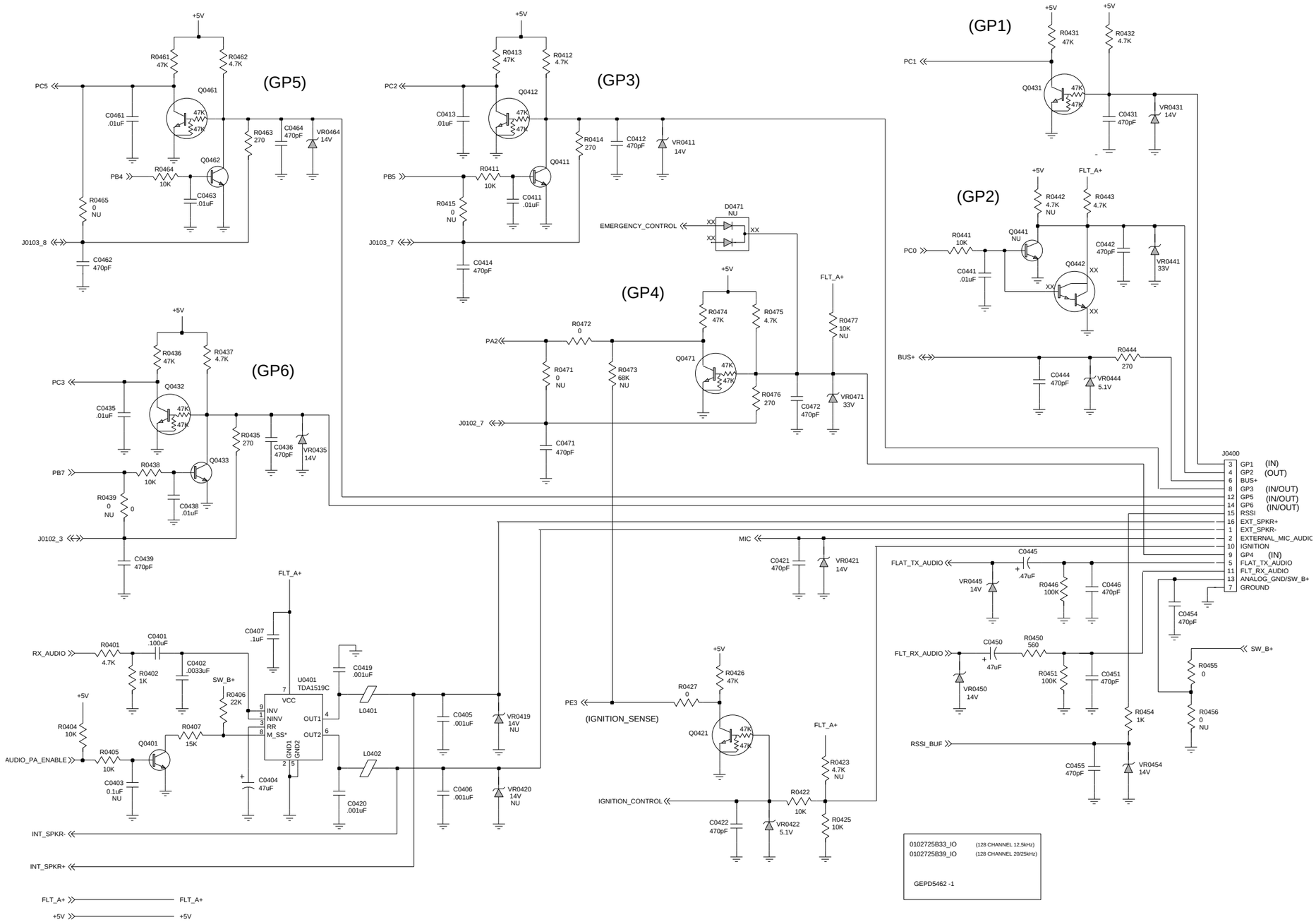
VHF (136-174MHz) Main Board Bottom Side PCB No. 8402627Y06_T5



VHF (136-174MHz) 128 channel Controller Schematic Diagram
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128 channel Controller Parts List

Circuit Ref	Motorola Part No.	Description
C0101	2113743K15	100nF 16V
C0102	2113741F17	470pF 50V
C0103	2311049A42	TANT CP 3.3uF 10% 6V
C0104	2113741F49	10nF 50V
C0105	2113743K15	100nF 16V
C0109	2113741F17	470pF 50V
C0110	2113741F17	470pF 50V
C0111	2113741F17	470pF 50V
C0112	2113741F25	1nF 50V
C0114	2113740A41	33pF 5% 50V
C0115	2113740A37	22pF 5% 50V
C0116	2113740G16	CERAMIC CHIP 3.6 P
C0117	2113740A41	33pF 5% 50V
C0118	2113741F17	470pF 50V
C0119	2113741F17	470pF 50V
C0121	2113743K05	39nF 16V
C0122	2113741F49	10nF 50V
C0125	2113743K15	100nF 16V
C0126	2113743K15	100nF 16V
C0127	2113743K15	100nF 16V
C0131	2113743K15	100nF 16V
C0132	2113743K15	100nF 16V
C0133	2113743K15	100nF 16V
C0134	2113743K15	100nF 16V
C0137	2113741F49	10nF 50V
C0141	2311049J26	TANT CP 10uF 20% 16V
C0142	2113743A19	100nF 16V
C0145	2113741F25	1nF 50V
C0148	2113741F17	470pF 50V
C0149	2113740F39	33pF 5% 50V
C0150	2311049A05	TANT CP 470nF 10% 25V
C0151	2113741F17	470pF 50V
C0152	2311049A07	TANT CP 1uF 10% 16V
C0153	2113743K15	100nF 16V
C0154	2113743K15	100nF 16V
C0155	2113740F39	33pF 5% 50V
C0157	2113741F17	470pF 50V
C0161	2113743K15	100nF 16V
C0162	2113743K15	100nF 16V
C0163	2113743K15	100nF 16V
C0164	2113741F41	4.7nF 50V
C0170	2311049A07	TANT CP 1uF 10% 16V
C0171	2311049J23	TANT CP 10uF 10% 6V
C0172	2311049A07	TANT CP 1uF 10% 16V
C0173	2311049A07	TANT CP 1uF 10% 16V
C0174	2113743K15	100nF 16V
C0175	2113741F25	1nF 50V
C0176	2113743A23	220nF 16V
C0181	2113743K15	100nF 16V
C0182	2113743K15	100nF 16V
C0184	2311049A07	TANT CP 1uF 10% 16V
C0185	2113740F51	100pF 5% 50V
C0191	2113743K15	100nF 16V
C0194	2113741F17	470pF 50V
C0196	2113741F17	470pF 50V
C0197	2113741F17	470pF 50V
C0198	2113741F17	470pF 50V
C0199	2113741F17	470pF 50V
C0401	2113743A19	100nF 16V
C0402	2113741F37	3.3nF 50V
C0404	2311049J44	TANT CP 47uF 20% 10V
C0405	2113741F25	1nF 50V
C0406	2113741F25	1nF 50V
C0407	2109720D14	CER LOW DIST 100nF
C0411	2113741F49	10nF 50V
C0412	2113741F17	470pF 50V
C0413	2113741F49	10nF 50V
C0414	2113741F17	470pF 50V
C0419	2113741F25	1nF 50V
C0420	2113741F25	1nF 50V
C0421	2113741F17	470pF 50V
C0422	2113741F17	470pF 50V
C0431	2113741F17	470pF 50V
C0435	2113741F49	10nF 50V
C0436	2113741F17	470pF 50V
C0438	2113741F49	10nF 50V
C0439	2113741F17	470pF 50V
C0441	2113741F49	10nF 50V
C0442	2113741F17	470pF 50V
C0444	2113741F17	470pF 50V
C0445	2311049A05	TANT CP 470nF 10% 25V
C0446	2113741F17	470pF 50V
C0450	2311049J44	TANT CP 47uF 20% 10V
C0451	2113741F17	470pF 50V
C0454	2113741F17	470pF 50V
C0455	2113741F17	470pF 50V
C0461	2113741F49	10nF 50V
C0462	2113741F17	470pF 50V
C0463	2113741F49	10nF 50V
C0464	2113741F17	470pF 50V
C0471	2113741F17	470pF 50V
C0472	2113741F17	470pF 50V
D0101	4813833C02	DIODE DUAL SOT MMBD6100
J0101	0902636Y01	Connector Flex Side Entry
J0102	0904424J03	Accessory Connector
J0103	0904424J03	Accessory Connector
J0400	2804503J01	Connector Accy 16 PIN
L0114	2460578C43	INDUCTOR CHIP 33.0UH
L0170	2462587K26	CHIP IND 33000 NH
L0194	2462587Q40	COIL CHIP 270nH
L0195	2462587Q40	COIL CHIP 270nH
L0401	2484657R01	Ferrite Bead
L0402	2484657R01	Ferrite Bead
Q0114	4813824A10	NPN 40V .2A
Q0137	4880048M01	NPN DIG 47k/47k
Q0138	4880048M01	NPN DIG 47k/47k
Q0161	4813824A10	NPN 40V .2A
Q0401	4813824A10	NPN 40V .2A
Q0411	4813824A10	NPN 40V .2A
Q0412	4880048M01	NPN DIG 47k/47k
Q0421	4880048M01	NPN DIG 47k/47k
Q0431	4880048M01	NPN DIG 47k/47k
Q0432	4880048M01	NPN DIG 47k/47k
Q0433	4813824A10	NPN 40V .2A B=50-150
Q0442	4880052M01	NPN DRLNGTN MXTA
Q0461	4880048M01	NPN DIG 47k/47k
Q0462	4813824A10	NPN 40V .2A B=50-150
Q0471	4880048M01	NPN DIG 47k/47k
R0101	0662057A73	10k 1/16W 5%
R0102	0662057A65	4k7 1/16W 5%
R0103	0662057A73	10k 1/16W 5%
R0104	0662057A85	33k 1/16W 5%
R0105	0662057A73	10k 1/16W 5%
R0106	0662057A57	2k2 1/16W 5%
R0107	0662057A25	100 1/16W 5%
R0108	0662057A89	47k 1/16W 5%
R0109	0662057A89	47k 1/16W 5%
R0110	0662057A73	10k 1/16W 5%
R0111	0662057A85	33k 1/16W 5%



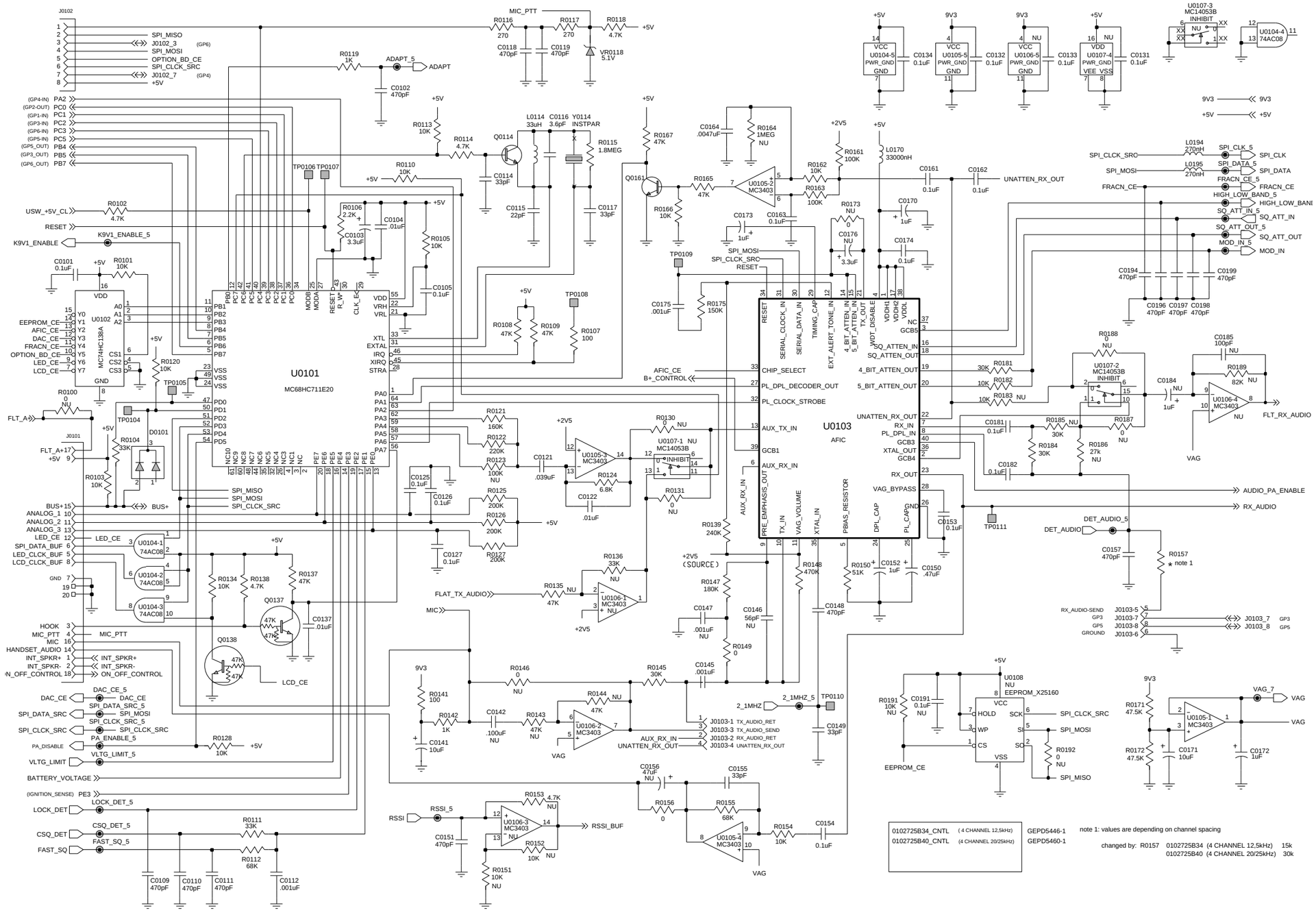
VHF (136-174MHz) 128 channel Controller_IO Schematic Diagram 2 of 2

Circuit Ref	Motorola Part No.	Description
R0112	0662057A93	68k 1/16W 5%
R0113	0662057A73	10k 1/16W 5%
R0114	0662057A65	4k7 1/16W 5%
R0115	0662057B28	1.8M 1/16W 5%
R0116	0662057A35	270 1/16W 5%
R0117	0662057A35	270 1/16W 5%
R0118	0662057A65	4k7 1/16W 5%
R0119	0662057A49	1k 1/16W 5%
R0120	0662057A73	10k 1/16W 5%
R0121	0662057B03	160k 1/16W 5%
R0122	0662057B06	220k 1/16W
R0123	0662057A97	100k 1/16W
R0124	0662057A69	6k8 1/16W 5%
R0125	0662057B05	200k 1/16W
R0126	0662057B05	200k 1/16W
R0127	0662057B05	200k 1/16W
R0128	0662057A73	10k 1/16W 5%
R0134	0662057A73	10k 1/16W 5%
R0135	0662057A89	47k 1/16W 5%
R0136	0662057A85	33k 1/16W 5%
R0137	0662057A89	47k 1/16W 5%
R0138	0662057A65	4k7 1/16W 5%
R0139	0662057B07	240k 1/16W
R0141	0662057A25	100 1/16W 5%
R0142	0662057A49	1k 1/16W 5%
R0143	0662057A89	47k 1/16W 5%
R0144	0662057A89	47k 1/16W 5%
R0145	0662057A84	30k 1/16W 5%
R0147	0662057B04	180k 1/16W 5%
R0148	0662057B14	470k 1/16W 5%
R0149	0662057B47	0 1/16W
R0150	0662057A90	51k 1/16W 5%
R0151	0662057A73	10k 1/16W 5%

Circuit Ref	Motorola Part No.	Description
R0152	0662057A73	10k 1/16W 5%
R0154	0662057A73	10k 1/16W 5%
R0155	0662057A93	68k 1/16W 5%
R0156	0662057B47	0 1/16W
R0157	0662057A77	15k 1/16W 5% (12.5kHz)
R0157	0662057A84	30k 1/16W 5% (20/25kHz)
R0161	0662057A97	100k 1/16W
R0162	0662057A73	10k 1/16W 5%
R0163	0662057A97	100k 1/16W
R0165	0662057A89	47k 1/16W 5%
R0166	0662057A73	10k 1/16W 5%
R0167	0662057A89	47k 1/16W 5%
R0171	0662057R92	47.5k .1W 1%
R0172	0662057R92	47.5k .1W 1%
R0175	0662057B02	150k 1/16W
R0181	0662057A84	30k 1/16W 5%
R0182	0662057A73	10k 1/16W 5%
R0183	0662057A73	10k 1/16W 5%
R0184	0662057A84	30k 1/16W 5%
R0186	0662057A83	27k 1/16W 5% (12.5kHz)
R0186	0662057A90	51k 1/16W 5% (20/25kHz)
R0189	0662057A95	82k 1/16W 5%
R0401	0662057A65	4k7 1/16W 5%
R0402	0662057A49	1k 1/16W 5%
R0404	0662057A73	10k 1/16W 5%
R0405	0662057A73	10k 1/16W 5%
R0406	0662057A81	22k 1/16W 5%
R0407	0662057A77	15k 1/16W 5%
R0411	0662057A73	10k 1/16W 5%
R0412	0662057A65	4k7 1/16W 5%
R0413	0662057A89	47k 1/16W 5%
R0414	0662057A35	270 1/16W 5%
R0422	0662057A73	10k 1/16W 5%

Circuit Ref	Motorola Part No.	Description
R0425	0662057A73	10k 1/16W 5%
R0426	0662057A89	47k 1/16W 5%
R0427	0662057B47	0 1/16W
R0431	0662057A89	47k 1/16W 5%
R0432	0662057A65	4k7 1/16W 5%
R0435	0662057A35	270 1/16W 5%
R0436	0662057A89	47k 1/16W 5%
R0437	0662057A65	4k7 1/16W 5%
R0438	0662057A73	10k 1/16W 5%
R0441	0662057A73	10k 1/16W 5%
R0443	0662057A65	4k7 1/16W 5%
R0444	0662057A35	270 1/16W 5%
R0446	0662057A97	100k 1/16W
R0450	0662057A43	560 1/16W 5%
R0451	0662057A97	100k 1/16W
R0454	0662057A49	1k 1/16W 5%
R0455	0662057A09	22 1/16W 5%
R0461	0662057A89	47k 1/16W 5%
R0462	0662057A65	4k7 1/16W 5%
R0463	0662057A35	270 1/16W 5%
R0464	0662057A73	10k 1/16W 5%
R0472	0662057B47	0 1/16W
R0474	0662057A89	47k 1/16W 5%
R0475	0662057A65	4k7 1/16W 5%
R0476	0662057A35	270 1/16W 5%
U0101	5102226J16	68HC711E20 64PQFP OTP
U0102	5113805A30	10F8 DCDR/REMUX 74HC138
U0103	5105165R77	CHIP CAR 40 PIN W/63G7
U0104	5105492X36	74AC08 4 AND GATES
U0105	5183222M49	QUAD OPAMP __3403_
U0106	5183222M49	QUAD OPAMP __3403_
U0107	5113806A20	MUX/DEMUX,TRIPLE 2-

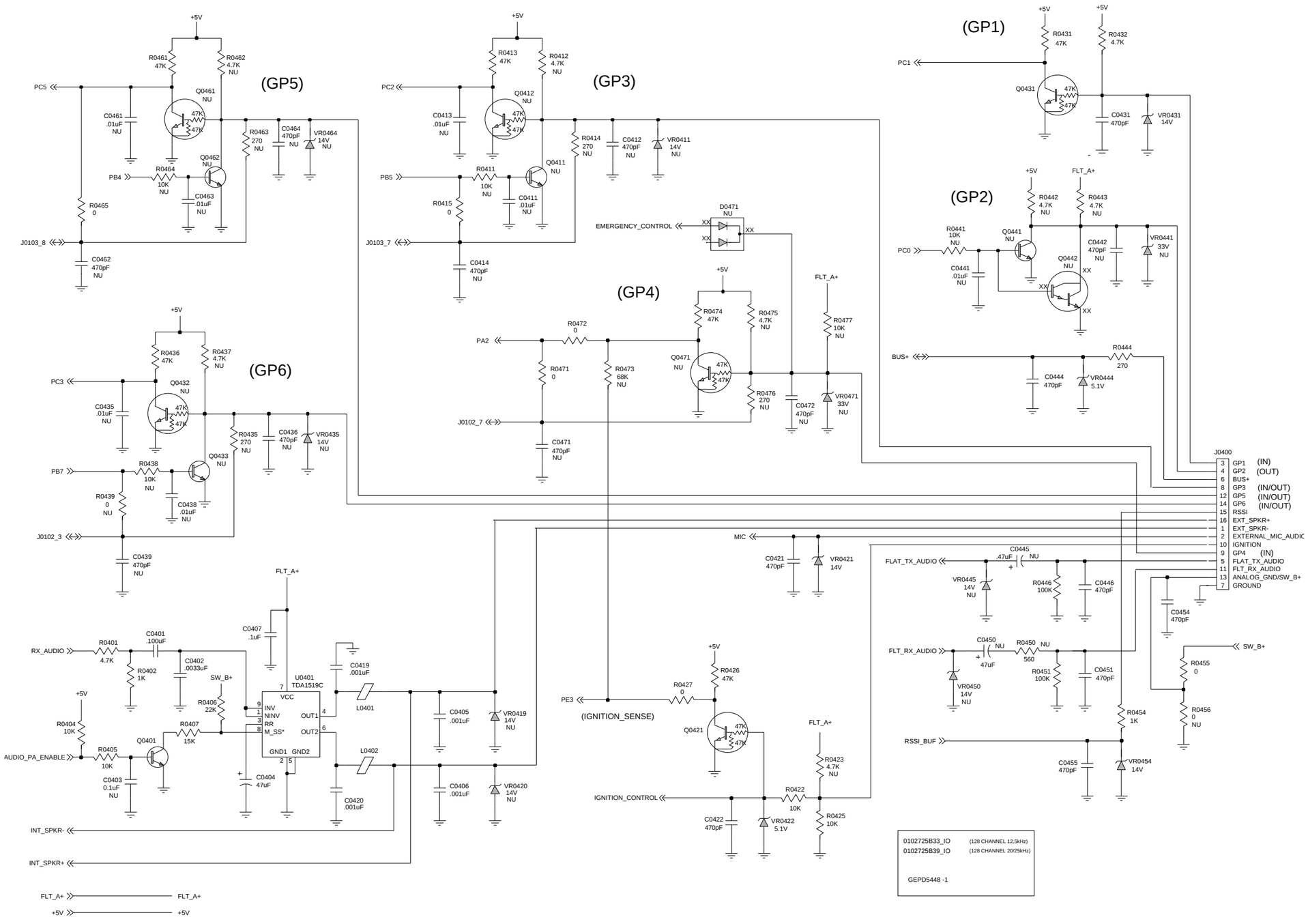
Circuit Ref	Motorola Part No.	Description
U0108	5105462G78	EEPROM !&K SPEI CMOS
U0401	5109699X01	AUDIO PA TDA1915C
VR0118	4813830A14	5.1V 5% 225mW
VR0411	4813830A27	14V 5% 225mW
VR0421	4813830A27	14V 5% 225mW
VR0422	4813830A14	5.1V 5% 225mW
VR0431	4813830A27	14V 5% 225mW
VR0435	4813830A27	14V 5% 225mW
VR0441	4813830A40	SOC23 AUTO SDN
VR0444	4813830A14	5.1V 5% 225mW
VR0445	4813830A27	14V 5% 225mW
VR0450	4813830A27	14V 5% 225mW
VR0454	4813830A27	14V 5% 225mW
VR0464	4813830A27	14V 5% 225mW
VR0471	4813830A40	SOC23 AUTO SDN
Y0114	4880113R01	CRYSTAL 7.9488



VHF (136-174MHz) 4 channel Controller Schematic Diagram
1 of 2

128 channel Controller Parts List

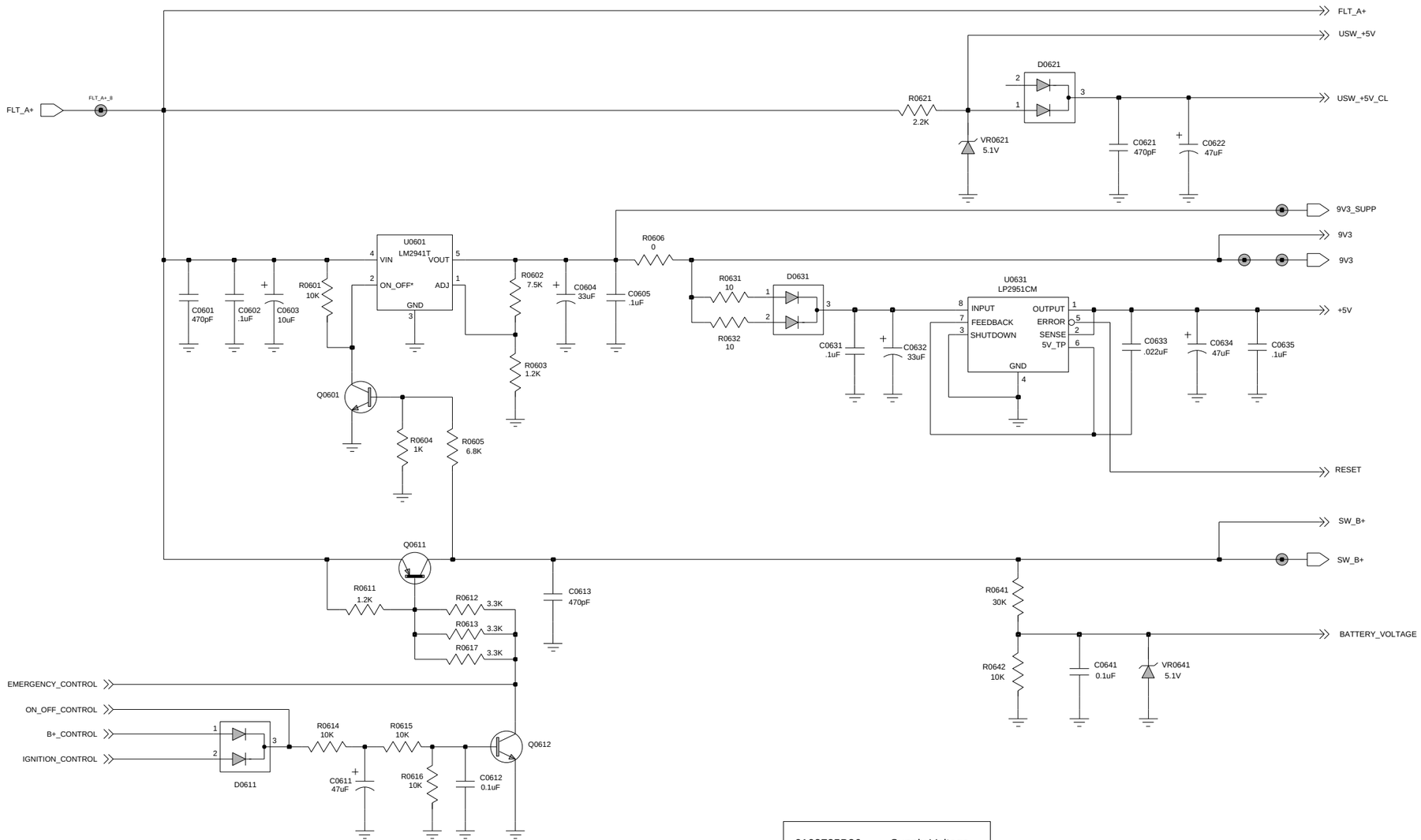
Circuit Ref	Motorola Part No.	Description
C0101	2113743K15	100nF 16V
C0102	2113741F17	470pF 50V
C0103	2311049A42	TANT CP 3.3uF 10% 6V
C0104	2113741F49	10nF 50V
C0105	2113743K15	100nF 16V
C0109	2113741F17	470pF 50V
C0110	2113741F17	470pF 50V
C0111	2113741F17	470pF 50V
C0112	2113741F25	1nF 50V
C0114	2113740A41	33pF 5% 50V
C0115	2113740A37	22pF 5% 50V
C0116	2113740G16	CERAMIC CHIP 3.6 P
C0117	2113740A41	33pF 5% 50V
C0118	2113741F17	470pF 50V
C0119	2113741F17	470pF 50V
C0121	2113743K05	39nF 16V
C0122	2113741F49	10nF 50V
C0125	2113743K15	100nF 16V
C0126	2113743K15	100nF 16V
C0127	2113743K15	100nF 16V
C0131	2113743K15	100nF 16V
C0132	2113743K15	100nF 16V
C0133	2113743K15	100nF 16V
C0134	2113743K15	100nF 16V
C0137	2113741F49	10nF 50V
C0141	2311049J26	TANT CP 10uF 20% 16V
C0145	2113741F25	1nF 50V
C0148	2113741F17	470pF 50V
C0149	2113740F39	33pF 5% 50V
C0150	2311049A05	TANT CP 470nF 10% 25V
C0151	2113741F17	470pF 50V
C0152	2311049A07	TANT CP 1uF 10% 16V
C0153	2113743K15	100nF 16V
C0154	2113743K15	100nF 16V
C0155	2113740F39	33pF 5% 50V
C0157	2113741F17	470pF 50V
C0161	2113743K15	100nF 16V
C0162	2113743K15	100nF 16V
C0163	2113743K15	100nF 16V
C0164	2113741F41	4.7nF 50V
C0170	2311049A07	TANT CP 1uF 10% 16V
C0171	2311049J23	TANT CP 10uF 10% 6V
C0172	2311049A07	TANT CP 1uF 10% 16V
C0173	2311049A07	TANT CP 1uF 10% 16V
C0174	2113743K15	100nF 16V
C0175	2113741F25	1nF 50V
C0181	2113743K15	100nF 16V
C0182	2113743K15	100nF 16V
C0194	2113741F17	470pF 50V
C0196	2113741F17	470pF 50V
C0197	2113741F17	470pF 50V
C0198	2113741F17	470pF 50V
C0199	2113741F17	470pF 50V
C0401	2113743A19	100nF 16V
C0402	2113741F37	3.3nF 50V
C0404	2311049J44	TANT CP 47uF 20% 10V
C0405	2113741F25	1nF 50V
C0406	2113741F25	1nF 50V
C0407	2109720D14	CER LOW DIST 100nF
C0419	2113741F25	1nF 50V
C0420	2113741F25	1nF 50V
C0421	2113741F17	470pF 50V
C0422	2113741F17	470pF 50V
C0431	2113741F17	470pF 50V
C0444	2113741F17	470pF 50V
D0101	4813833C02	DUAL SOT MMBD6100
J0101	0902636Y01	Connector Flex Side Entry
J0102	0904424J03	Accessory Connector
J0103	0904424J03	Accessory Connector
J0400	2804503J01	Connector Accy 16 PIN
L0114	2460578C43	INDUCTOR CHIP 33.0UH 1
L0170	2462587K26	CHIP IND 33000 NH
L0194	2462587Q40	COIL CHIP 270nH
L0195	2462587Q40	COIL CHIP 270nH
L0401	2484657R01	Ferrite Bead
L0402	2484657R01	Ferrite Bead
Q0114	4813824A10	NPN 40V
Q0137	4880048M01	NPN DIG 47k/47k
Q0138	4880048M01	NPN DIG 47k/47k
Q0161	4813824A10	NPN 40V
Q0401	4813824A10	NPN 40V
Q0421	4880048M01	NPN DIG 47k/47k
Q0431	4880048M01	NPN DIG 47k/47k
R0101	0662057A73	10k 1/16W 5%
R0102	0662057A65	4k7 1/16W 5%
R0103	0662057A73	10k 1/16W 5%
R0104	0662057A85	33k 1/16W 5%
R0105	0662057A73	10k 1/16W 5%
R0106	0662057A57	2k2 1/16W 5%
R0107	0662057A25	100 1/16W 5%
R0108	0662057A89	47k 1/16W 5%
R0109	0662057A89	47k 1/16W 5%
R0110	0662057A73	10k 1/16W 5%
R0111	0662057A85	33k 1/16W 5%
R0112	0662057A93	68k 1/16W 5%
R0113	0662057A73	10k 1/16W 5%
R0114	0662057A65	4k7 1/16W 5%
R0115	0662057B28	1.8M 1/16W 5%
R0116	0662057A35	270 1/16W 5%
R0117	0662057A35	270 1/16W 5%
R0118	0662057A65	4k7 1/16W 5%
R0119	0662057A49	1k 1/16W 5%
R0120	0662057A73	10k 1/16W 5%
R0121	0662057B03	160k 1/16W 5%
R0122	0662057B06	220k 1/16W
R0123	0662057A97	100k 1/16W
R0124	0662057A69	6k8 1/16W 5%
R0125	0662057B05	200k 1/16W
R0126	0662057B05	200k 1/16W
R0127	0662057B05	200k 1/16W
R0128	0662057A73	10k 1/16W 5%
R0130	0662057B47	0 1/16W
R0134	0662057A73	10k 1/16W 5%
R0137	0662057A89	47k 1/16W 5%
R0138	0662057A65	4k7 1/16W 5%
R0139	0662057B07	240k 1/16W
R0141	0662057A25	100 1/16W 5%
R0142	0662057A49	1k 1/16W 5%
R0145	0662057A84	30k 1/16W 5%
R0146	0662057B47	0 1/16W
R0147	0662057B04	180k 1/16W 5%
R0148	0662057B14	470k 1/16W 5%
R0150	0662057A90	51k 1/16W 5%
R0153	0662057A65	4k7 1/16W 5%
R0154	0662057A73	10k 1/16W 5%
R0155	0662057A93	68k 1/16W 5%
R0156	0662057B47	0 1/16W
R0157	0662057A77	15k 1/16W 5% (12.5kHz)
R0157	0662057A84	30k 1/16W 5% (20/25kHz)
R0161	0662057A97	100k 1/16W



VHF (136-174MHz) 4 channel Controller_IO Schematic Diagram 2 of 2

Circuit Ref	Motorola Part No.	Description
R0162	0662057A73	10k 1/16W 5%
R0163	0662057A97	100k 1/16W
R0165	0662057A89	47k 1/16W 5%
R0166	0662057A73	10k 1/16W 5%
R0167	0662057A89	47k 1/16W 5%
R0171	0662057R92	47.5k .1W 1%
R0172	0662057R92	47.5k .1W 1%
R0175	0662057B02	150k 1/16W
R0181	0662057A84	30k 1/16W 5%
R0182	0662057A73	10k 1/16W 5%
R0183	0662057A73	10k 1/16W 5%
R0184	0662057A84	30k 1/16W 5%
R0186		Not used
R0401	0662057A65	4k7 1/16W 5%
R0402	0662057A49	1k 1/16W 5%
R0404	0662057A73	10k 1/16W 5%
R0405	0662057A73	10k 1/16W 5%
R0406	0662057A81	22k 1/16W 5%
R0407	0662057A77	15k 1/16W 5%
R0413	0662057A89	47k 1/16W 5%
R0421	0662057B47	0 1/16W
R0422	0662057A73	10k 1/16W 5%
R0425	0662057A73	10k 1/16W 5%
R0426	0662057A89	47k 1/16W 5%
R0427	0662057B47	0 1/16W
R0431	0662057A89	47k 1/16W 5%
R0432	0662057A65	4k7 1/16W 5%
R0436	0662057A89	47k 1/16W 5%
R0444	0662057A35	270 1/16W 5%
R0454	0662057A49	1k 1/16W 5%
R0461	0662057A89	47k 1/16W 5%
R0471	0662057B47	0 1/16W
R0472	0662057B47	0 1/16W

Circuit Ref	Motorola Part No.	Description
R0474	0662057A89	47k 1/16W 5%
U0101	5102226J16	68HC711E20 64PQFP OTP
U0102	5113805A30	IC 10F8 DCDR/REMUX 74HC138
U0103	5105165R77	CHIP CAR 40 PIN W/63G7
U0104	5105492X36	74AC08 4 AND GATES
U0105	5183222M49	IC QUAD OPAMP __3403_
U0401	5109699X01	AUDIO PA TDA1915C
VR0118	4813830A14	DIODE 5.1V 5% 225mW
VR0421	4813830A27	DIODE 14V 5% 225mW
VR0422	4813830A14	DIODE 5.1V 5% 225mW
VR0431	4813830A27	DIODE 14V 5% 225mW
VR0444	4813830A14	DIODE 5.1V 5% 225mW
VR0454	4813830A27	DIODE 14V 5% 225mW
Y0114	4880113R01	CRYSTAL 7.9488



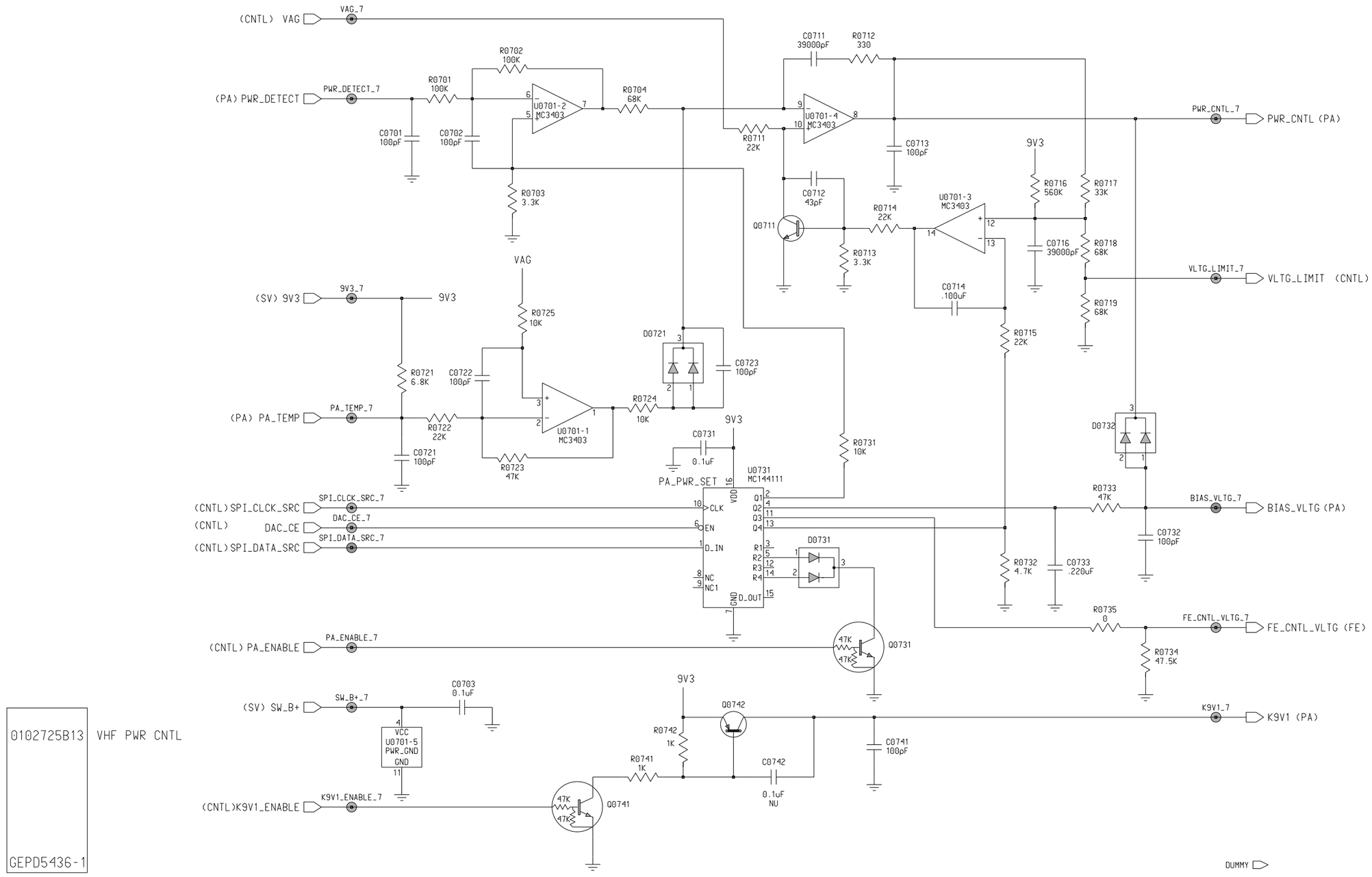
0102725B36 Supply Voltage

GEPD5449-1

VHF (136-174MHz) Supply Voltage Schematic Diagram

Supply Voltage Parts List

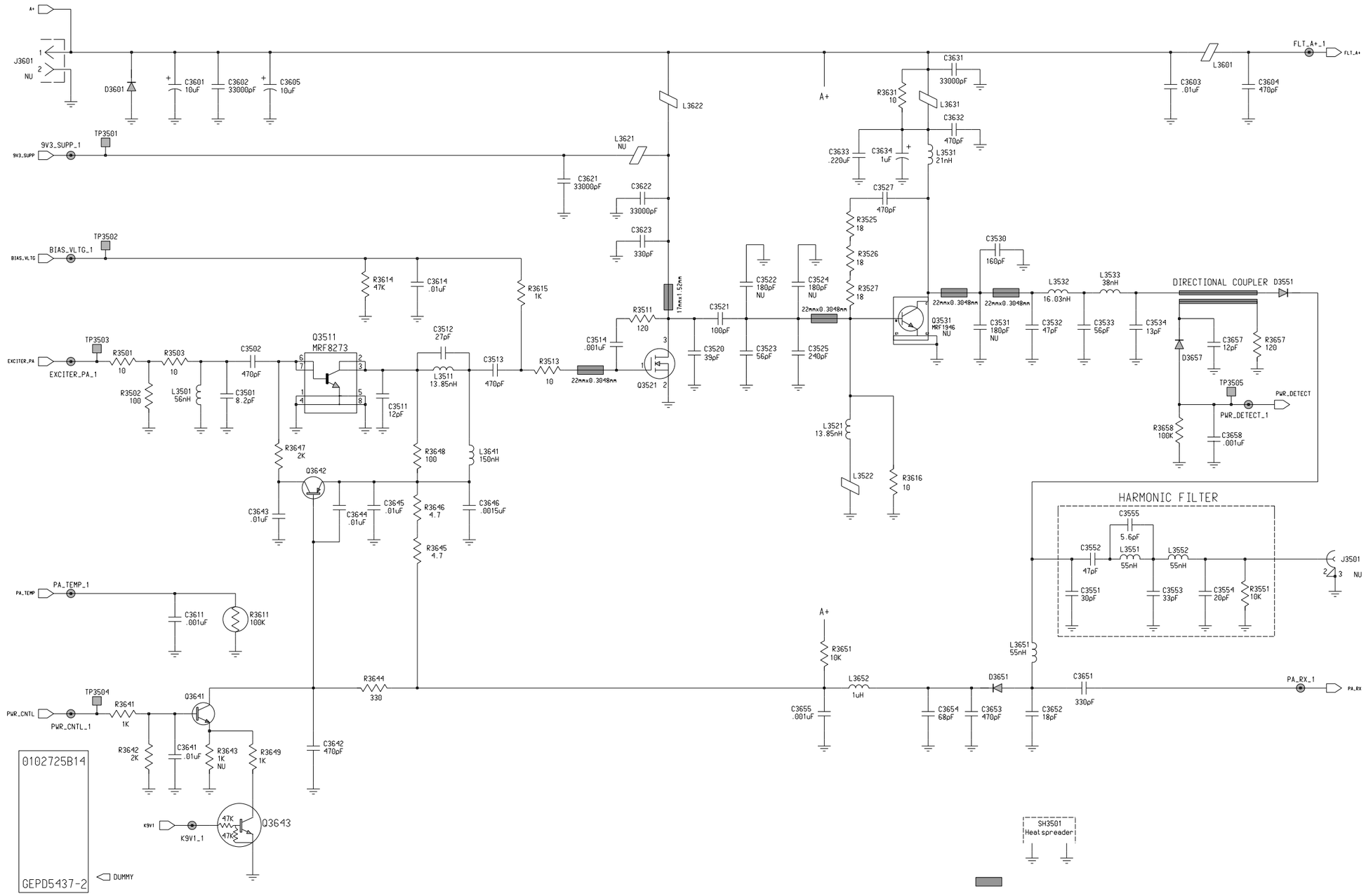
Circuit Ref	Motorola Part No.	Description
C0601	2113741F17	470pF 50V
C0602	2109720D14	100nF LOW DIST
C0603	2380090M24	LYT 10uF 50V 20%
C0604	2311049J40	33uF 20% 16V
C0605	2109720D14	100nF LOW DIST
C0611	2311049J44	TANT CP 47uF 20% 10V
C0612	2113743K15	100nF 16V
C0613	2113741F17	470pF 50V
C0621	2113741F17	470pF 50V
C0622	2311049J44	TANT CP 47uF 20% 10V
C0631	2109720D14	100nF LOW DIST
C0632	2311049J40	33uF 20% 16V
C0633	2113743E07	22nF 16V
C0634	2311049J44	47uF 20% 10V
C0635	2109720D14	100nF LOW DIST
C0641	2113743K15	100nF 16V
D0611	4813833C02	DUAL SOT MMBD6100
D0621	4813833C02	DUAL SOT MMBD6100
D0631	4813833C02	DUAL SOT MMBD6100
Q0601	4813824A10	NPN 40V
Q0611	4805128M27	PNP SOT89
Q0612	4813824A10	NPN 40V
R0601	0662057A73	10k 1/16W 5%
R0602	0660076E70	FILM 7500
R0603	0660076E51	FILM 1200
R0604	0662057A49	1k 1/16W 5%
R0605	0662057A69	6k8 1/16W 5%
R0606	0662057B47	0 1/16W
R0611	0662057A51	1k2 1/16W 5%
R0612	0660076A61	3300 5 1/8
R0613	0660076A61	3300 5 1/8
R0614	0662057A73	10k 1/16W 5%
R0615	0662057A73	10k 1/16W 5%
R0616	0662057A73	10k 1/16W 5%
R0617	0660076A61	3300 5 1/8
R0621	0662057A57	2k2 1/16W 5%
R0631	0662057A01	10 1/16W 5%
R0632	0662057A01	10 1/16W 5%
R0641	0662057A84	30k 1/16W 5%
R0642	0662057A73	10k 1/16W 5%
U0601	5105625U25	9.3V REG 2941
U0631	5105469E65	VLTG REGLTR LP2951C
VR0621	4813830A14	5.1V 5% 225mW
VR0641	4813830A14	5.1V 5% 225mW



VHF (136-174MHz) Power Control Schematic Diagram

Power Control Parts List

Circuit Ref	Motorola Part No.	Description
C0701	2113740F51	100pF 5% 50V
C0702	2113740F51	100pF 5% 50V
C0703	2113743K15	100nF 16V Y5V
C0711	2113741A59	CL2 X7R REEL
C0712	2113740F42	43pF 5% 50V
C0713	2113740F51	100pF 5% 50V
C0714	2113743A19	100nF 10%
C0716	2113741A59	CL2 X7R REEL
C0721	2113740F51	100pF 5% 50V
C0722	2113740F51	100pF 5% 50V
C0723	2113740F51	100pF 5% 50V
C0731	2113743K15	100nF 16V Y5V
C0732	2113740F51	100pF 5% 50V
C0733	2113743A23	220nF 16V
C0741	2113740F51	100pF 5% 50V
D0721	4813833C02	DIODE DUAL
D0731	4813833C02	DIODE DUAL
D0732	4813833C02	DIODE DUAL
Q0711	4813824A10	NPN 40V .2A
Q0731	4880048M01	NPN DIG 47k/47k
Q0741	4880048M01	NPN DIG 47k/47k
Q0742	4805128M27	PNP SOT89
R0701	0662057A97	100k 1/16W
R0702	0662057A97	100k 1/16W
R0703	0662057A61	3k3 1/16W 5%
R0704	0662057A93	68k 1/16W 5%
R0711	0662057A81	22k 1/16W 5%
R0712	0662057A37	330 1/16W 5%
R0713	0662057A61	3k3 1/16W 5%
R0714	0662057A81	22k 1/16W 5%
R0715	0662057A81	22k 1/16W 5%
R0716	0662057B16	560k 1/16W 5%
R0717	0662057A85	33k 1/16W 5%
R0718	0662057A93	68k 1/16W 5%
R0719	0662057A93	68k 1/16W 5%
R0721	0662057A69	6k8 1/16W 5%
R0722	0662057A81	22k 1/16W 5%
R0723	0662057A89	47k 1/16W 5%
R0724	0662057A73	10k 1/16W 5%
R0725	0662057A73	10k 1/16W 5%
R0731	0662057A73	10k 1/16W 5%
R0732	0662057A65	4k7 1/16W 5%
R0733	0662057A89	47k 1/16W 5%
R0734	0662057R92	47.5k .1W 1%
R0735	0662057C01	0 1/10W 5%
R0741	0662057A49	1k 1/16W 5%
R0742	0662057A49	1k 1/16W 5%
U0701	5183222M49	IC QUAD OPAMP __3403_
U0731	5113811G02	IC D/A CONV & BIT 4 CHAN

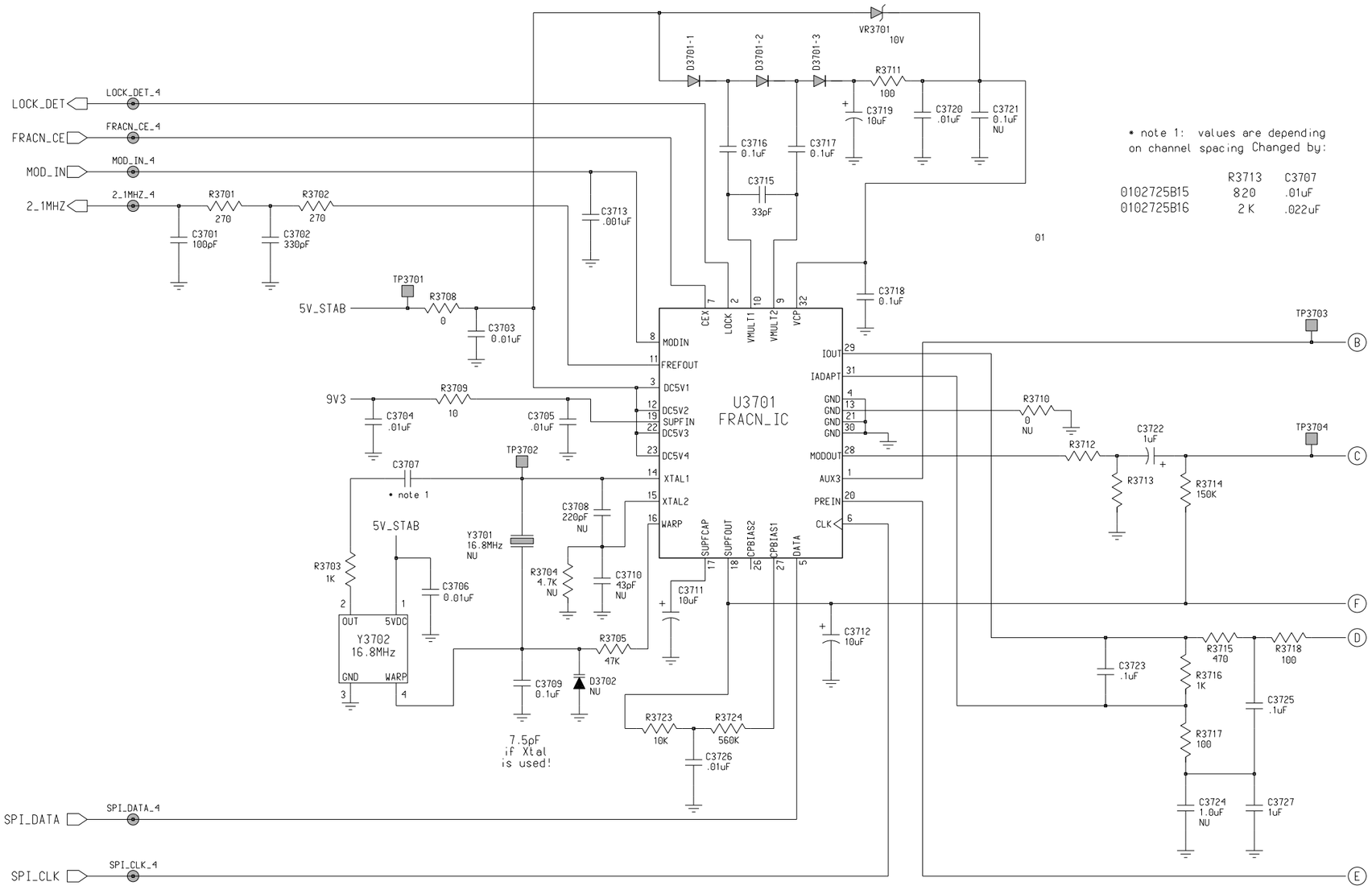


0102725B14

VHF (136-174MHz) Power Amplifier 5-25W Schematic Diagram

Power Amplifier 5-25W Parts List

Circuit Ref	Motorola Part No.	Description
C3501	2113740F25	8.2pF 5% 50V
C3502	2113741F17	470pF 50V
C3511	2113740F29	12pF 5% 50V
C3512	2113740F37	27pF 5% 50V
C3513	2113741F17	470pF 50V
C3514	2113741F25	1nF 50V
C3520	2111078B32	39pF 5% 100V
C3521	2111078B42	100pF 5% 100V
C3523	2111078B36	56pF 5% 100V
C3525	2111078B52	240pF 5% 100V
C3527	2111078B59	470pF 5% 100V
C3530	2111078B48	160pF 5% 100V
C3532	2111078B34	47pF 5% 100V
C3533	2111078B36	56pF 5% 100V
C3534	2111078B16	13pF 5% 100V
C3551	2111078B27	30pF 5% 100V
C3552	2111078B34	47pF 5% 100V
C3553	2111078B29	33pF 5% 100V
C3554	2111078B21	20pF 5% 100V
C3555	2111078B07	5.6pF .25% 100V
C3601	2380090M24	10uF 50V 20%
C3602	2113741A57	33nF 50V
C3603	2113741F49	10nF 50V
C3604	2113741F17	470pF 50V
C3605	2311049A45	TANTCHIP 10 10 35
C3611	2113741F25	1nF 50V
C3614	2113741F49	10nF 50V
C3621	2113741A57	33nF 50V
C3622	2113741A57	33nF 50V
C3623	2113740A67	330nF 50V
C3631	2113741A57	33nF 50V
C3632	2111078B59	470pF 5% 100V
C3633	2113743A23	220nF 10% 16V
C3634	2311049A08	TANTCHIP 1 10 35 A/P
C3641	2113741F49	10nF 50V
C3642	2113741F17	470pF 5% 50V
C3643	2113741F49	10nF 50V
C3644	2113741F49	10nF 50V
C3645	2113741F49	10nF 50V
C3646	2113741F29	1.5nF 50V
C3651	2113740A67	330pF 5% 50V
C3652	2113740F33	18pF 5% 50V
C3653	2111078B59	470pF 5%100V
C3654	2113740F47	68pF 5% 50V
C3655	2113741F25	1nF 50V
C3657	2113740F29	12pF 5% 50V
C3658	2113741F25	1nF 50V
D3551	4802482J02	PIN DIODE SMD
D3601	4813832B35	24V TRANS SUP 1.5
D3651	4802482J02	PIN DIODE SMD
D3657	4880236E05	DIODE HOTCAR SOT 23
J3501	0905902V01	PWR CONNECTOR 2 PIN
J3601	0905901V02	BNC CONNECTOR
L3501	2462587T12	INDCHIP 56NH 5% LOW
L3511	2460591C23	Coil Air Wound Induc 13.85
L3521	2460591C23	Coil Air Wound Induc 13.85
L3522	2484657R01	INDUCTOR BEADCHIP
L3531	2460591X01	Coil Air Wound Sq. 21NH
L3532	2460591L29	Coil Air Wound Induc 16.03
L3533	2460591M77	Coil Air Wound Induc 38.13
L3551	2460591W04	COIL SQUARE RFD-022-16
L3552	2460591W04	COIL SQUARE RFD-022-16
L3601	2484657R01	INDUCTOR BEADCHIP
L3622	2484657R01	INDUCTOR BEADCHIP
L3631	2484657R01	INDUCTOR BEADCHIP
L3641	2462587T17	INDCHIP 150NH 5% LOW
L3651	2460591W04	COIL SQUARE RFD-022-16
L3652	2462587T30	INDCHIP 1000NH 5% LOW
Q3511	4813827A26	TSTR NPN SML SIG MRF8372 8372
Q3521	4805847W01	TSTR
Q3531	4880225C22	TSTR RF PWR
Q3641	4813824A10	XSTR NPN 40V .2A GENP B=50-150
Q3642	4813824A17	XSTR PNP40V .2A GENP B=100-300
Q3643	4880048M01	TSTR NPN DIG 47K/47K
R3501	0662057A01	10 1/16W 5%
R3502	0662057A25	100 1/16W 5%
R3503	0662057A01	10 1/16W 5%
R3511	0683962T51	120 5%
R3513	0662057A01	10 1/16W 5%
R3525	0680194M07	18 5% 1W
R3526	0680194M07	18 5% 1W
R3527	0680194M07	18 5% 1W
R3551	0662057A73	10K 1/16W 5%
R3611	0680149M02	THERM 100K @25C
R3614	0662057A89	47K 5%
R3615	0662057A49	1K 5%
R3616	0680194M01	10 5% 1W
R3631	0680194M01	10 5% 1W
R3641	0662057A49	1K 5%
R3642	0662057A56	2K 5%
R3644	0662057A37	330 5%
R3645	0662057C19	4.7 5%
R3646	0662057C19	4.7 5%
R3647	0662057A56	2K 5%
R3648	0662057A25	100 5%
R3649	0662057A49	1000 OHMS 5%
R3651	0662057A73	10K OHMS 5%
R3657	0683962T51	120 5-1
R3658	0662057A97	100K 5%
SH3501	2602642Y01	HEATSPREADER



• note 1: values are depending on channel spacing Changed by:

	R3713	C3707
0102725B15	820	.01uF
0102725B16	2 K	.022uF

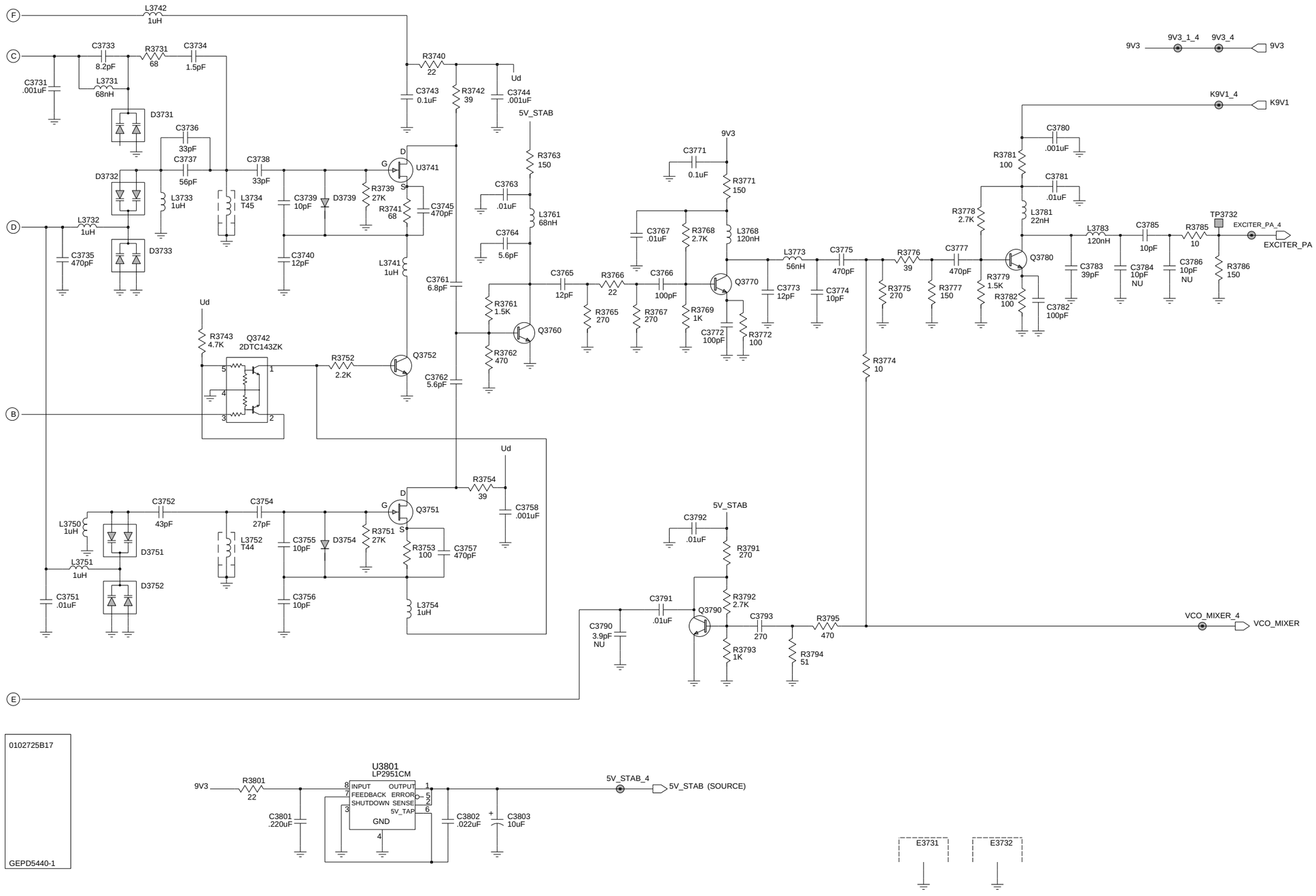
0102725B15	GEPD5438-3	12.5 kHz channel spacing
0102725B16	GEPD5439-3	20/25 kHz channel spacing

E3701 NU E3702 E3703 NU

VHF (136-174MHz) Synthesizer Schematic Diagram

Synthesizer Parts List

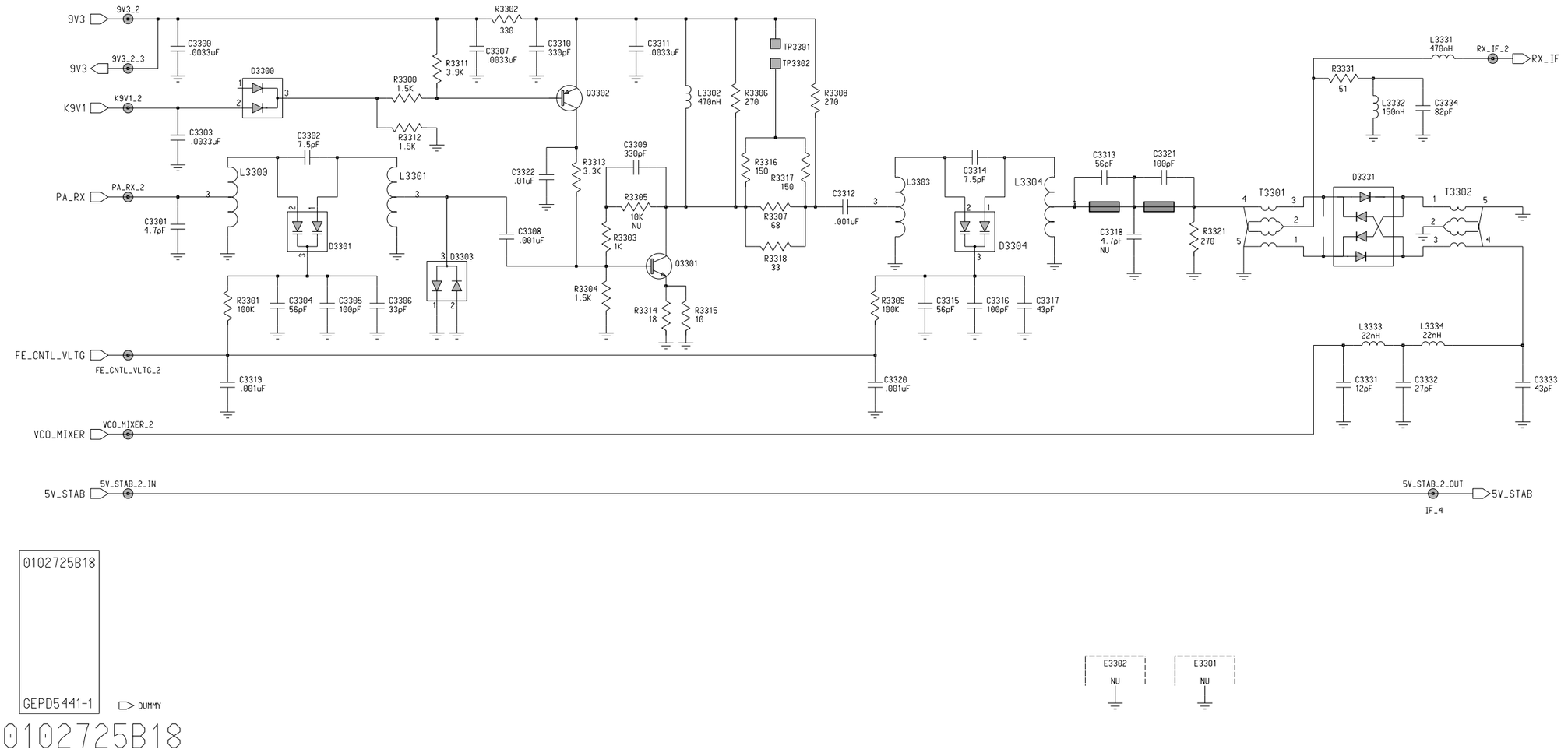
Circuit Ref	Motorola Part No.	Description
C3701	2113740F51	100pF 5% 50V
C3702	2113741F13	330pF 50V
C3703	2113743F49	10nF 50V
C3704	2113741F49	10nF 50V
C3705	2113741F49	10nF 50V
C3706	2113743F49	10nF 50V
C3707	2113741F49 2113743E07	10nF 50V (12.5kHz) 22nF 50V (20/25kHz)
C3709	2113743K15	100nF
C3711	2311049A63	TANT CP 10uF
C3712	2311049J26	TANT CP 10uF
C3713	2113741F25	1nF 50V
C3715	2113740F39	33pF 5% 50V
C3716	2113743K15	100nF
C3717	2113743K15	100nF
C3718	2113743K15	100nF
C3719	2311049A19	TANT CP 10uF 10% 25V
C3720	2113741F49	10nF 50V
C3722	2311049A07	1uF 10% 16V
C3723	2109720D14	100nF
C3725	2109720D14	100nF
C3726	2113741F49	10nF 50V
C3727	0811051A19	1uF 5%
D3701	4802233J09	TRIPLE SOT143-RH
E3702	2605915V01	SHLD PCB MOUNT 1
R3701	0662057A35	270 1/16W 5%
R3702	0662057A35	270 1/16W 5%
R3703	0662057A49	1k 1/16W 5%
R3705	0662057A89	47k 1/16W 5% (12.5kHz)
R3708	0662057B47	0 Ohm
R3709	0662057A01	10 1/16W 5%
R3711	0662057A25	100 1/16W 5%
R3712	0662057A59	2k7 1/16W 5%
R3713	0662057A47 0662057A56	820 1/16W 5% (12.5kHz) 2k 1/16W 5% (20/25kHz)
R3714	0662057B02	150k 1/16W
R3715	0662057A41	470 1/16W
R3716	0662057A49	1k 1/16W
R3717	0662057A25	100 1/16W 5%
R3718	0662057A25	100 1/16W 5%
R3723	0662057A73	10k 1/16W 5%
R3724	0662057B16	560k 1/16W 5%
U3701	5105457W72	CC CONT 5105191W59
VR3701	4813830A23	DIODE 10V 5% 20mA 350mW
Y3702	4809863M01	Crystal Quartz Ref Osc 16.8 MHz TEMPUS



VHF (136-174MHz) Voltage Controlled Oscillator Schematic Diagram

Voltage Controlled Oscillator Parts List

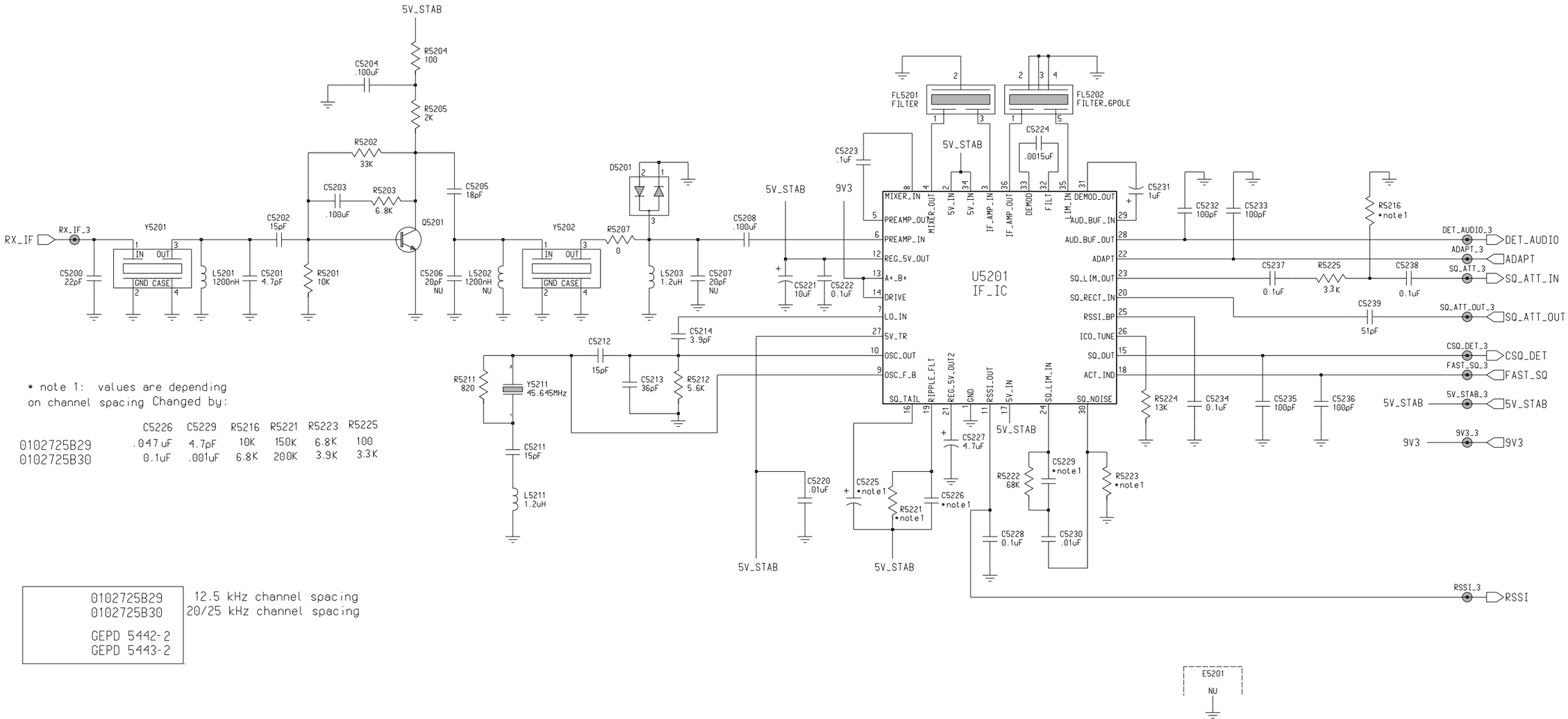
Circuit Ref	Motorola Part No.	Description
C3731	2113741F25	1nF 50V
C3733	2113740F25	8.2pF 5% 50V
C3734	2113740F07	1.5pF 5% 50V
C3735	2113741F17	470pF 50V
C3736	2113740F39	33pF 5% 50V
C3737	2113740F45	56pF 5% 50V
C3738	2113740F39	33pF 5% 50V
C3739	2113740F27	10pF 5% 50V
C3740	2113740F29	12pF 5% 50V
C3743	2113743K15	100nF 16V
C3744	2113741F25	1nF 50V
C3745	2113741F17	470pF 50V
C3751	2109720D01	LOW DIST 10nF
C3752	2113740F42	43pF 5% 50V
C3754	2113740F37	27pF 5% 50V
C3755	2113740F27	10pF 5% 50V
C3756	2113740F27	10pF 5% 50V
C3757	2113741F17	470pF 50V
C3758	2113741F25	1nF 50V
C3761	2113740F23	6.8pF 5% 50V
C3762	2113740F21	5.6pF 5% 50V
C3763	2113741F49	10nF 50V
C3764	2113740F21	5.6pF 5% 50V
C3765	2113740F29	12pF 5% 50V
C3766	2113740F51	100pF 5% 50V
C3767	2113741F49	10nF 50V X7R
C3771	2113743K15	100nF 16V
C3772	2113740F51	100pF 5% 50V
C3773	2113740F29	12pF 5% 50V
C3774	2113740F27	10pF 5% 50V
C3775	2113741F17	470pF 50V
C3777	2113741F17	470pF 50V
C3780	2113741F25	1nF 50V
C3781	2113741F49	10nF 50V
C3782	2113740F51	100pF 5% 50V
C3783	2113740F41	39pF 5%
C3785	2113740F27	10pF 5%
C3791	2113741F49	10nF 50V
C3792	2113741F49	10nF 50V
C3793	2113741F49	10nF 50V
C3801	2113743A23	220nF 16V
C3802	2113743E07	22nF 16V
C3803	2311049A63	TANT CP 10uF 10% 10V
D3731	4805649Q13	VCTR 1SV228 SOT23
D3732	4805649Q13	VCTR 1SV228 SOT23
D3733	4805649Q13	VCTR 1SV228 SOT23
D3739	4880236E05	SCHOTTKY
D3751	4805649Q13	VCTR 1SV228 SOT23
D3752	4805649Q13	VCTR 1SV228 SOT23
D3754	4880236E05	SCHOTTKY
E3732	2605915V01	SHLD PCB MOUNT
L3731	2462587T13	COIL CHIP 68nH
L3732	2462587T30	COIL CHIP 1uH
L3733	2462587T30	COIL CHIP 1uH
L3734	0105950T45	HELICAL MOLDED FIN .175
L3741	2462587T30	COIL CHIP 1uH
L3742	2462587T30	COIL CHIP 1uH
L3750	2462587T30	COIL CHIP 1uH
L3751	2462587T30	COIL CHIP 1uH
L3752	0105950T44	HELICAL MOLDED FIN .175
L3754	2462587T30	COIL CHIP 1uH
L3761	2462587T13	COIL CHIP 68nH
L3768	2462587T16	COIL CHIP 120nH
L3773	2462587T12	COIL CHIP 56nH
L3781	2462587T38	COIL CHIP 22nH
L3783	2462587T16	COIL CHIP 120nH
Q3742	4805921T09	XSTR DUAL ROHM FMG8
Q3751	4813823A05	N-CH RF JFET MMBU310LT1
Q3752	4813824A10	NPN 40V .2A
Q3760	4813827A07	NPN SML SIG MMBR9
Q3770	4813827A07	NPN SML SIG MMBR9
Q3780	4813827A07	NPN SML SIG MMBR9
Q3790	4813827A07	NPN SML SIG MMBR9
R3731	0662057A21	68 1/16W 5%
R3739	0662057A83	27k 1/16W 5%
R3740	0662057A09	22 1/16W 5%
R3741	0662057A21	68.5 1/16W 5%
R3742	0662057A15	39 1/16W 5%
R3743	0662057A65	4k7 1/16W 5%
R3751	0662057A83	27k 1/16W 5%
R3752	0662057A57	2k2 1/16W 5%
R3753	0662057A25	100 1/16W 5%
R3754	0662057A15	39 1/16W 5%
R3761	0662057A53	1k5 1/16W 5%
R3762	0662057A41	470 1/16W 5%
R3763	0662057A29	150 1/16W 5%
R3765	0662057A35	270 1/16W 5%
R3766	0662057A09	22 1/16W 5%
R3767	0662057A35	270 1/16W 5%
R3768	0662057A59	2k7 1/16W 5%
R3769	0662057A49	1k 1/16W 5%
R3771	0662057A29	150 1/16W 5%
R3772	0662057A25	100 1/16W 5%
R3774	0662057A01	10 1/16W 5%
R3775	0662057A35	270 1/16W 5%
R3776	0662057A15	39 1/16W 5%
R3777	0662057A29	150 1/16W 5%
R3778	0662057A59	2k7 1/16W 5%
R3779	0662057A53	1.5k 1/16W 5%
R3781	0662057A25	100 1/16W 5%
R3782	0662057A25	100 1/16W 5%
R3785	0662057A01	10 1/16W 5%
R3786	0662057A29	150 1/16W 5%
R3791	0662057A35	270 1/16W 5%
R3792	0662057A59	2k7 1/16W 5%
R3793	0662057A49	1k 1/16W 5%
R3794	0662057A18	51 1/16W 5%
R3795	0662057A41	470 1/16W 5%
R3801	0662057A09	22 1/16W 5%
U3741	4813823A05	N-CH RF JFET MMBU310LT1
U3801	5105469E65	VLTG REGLTR LP2951C



VHF (136-174MHz) RX-FE Schematic Diagram

RX-FE
Parts List

Circuit Ref	Motorola Part No.	Description
C3300	2113741F37	3.3nF 50V
C3301	2113740F19	4.7pF 5% 50V
C3302	2113740F24	7.5pF 5% 50V
C3303	2113741F37	3.3nF 50V
C3304	2113740F45	56pF 5% 50V
C3305	2113740F51	100pF 5% 50V
C3306	2113740F39	33pF 5% 50V
C3307	2113741F37	3.3nF 50V
C3308	2113741F25	1nF 50V
C3309	2113741F13	330pF 50V
C3310	2113741F13	330pF 50V
C3311	2113741F37	3.3nF 50V
C3312	2113741F25	1nF 50V
C3313	2113740F45	56pF 5% 50V
C3314	2113740F24	7.5pF 5% 50V
C3315	2113740F45	56pF 5% 50V
C3316	2113740F51	100pF 5% 50V
C3317	2113740F42	43pF 5% 50V
C3319	2113741F25	1nF 50V
C3320	2113741F25	1nF 50V
C3321	2113741F51	100pF 5% 50V
C3322	2113741F49	10nF 50V
C3331	2113740F29	12pF 5% 50V
C3332	2113740F37	27pF 5% 50V
C3333	2113740F42	43pF 5% 50V
C3334	2113740F49	82pF 5% 50V
D3300	4813833C02	DUAL SOT MMBD6100
D3301	4805649Q13	VCTR 1SV228 SOT23
D3303	4880154K03	DUAL SCHOTTKY SOT23
D3304	4805649Q13	VCTR 1SV228 SOT23
D3331	4880174R01	QUAD SOIC 8 PIN
L3302	2462587T23	COIL CHIP 470nH
L3331	2462587T23	COIL CHIP 470nH
L3332	2462587T17	COIL CHIP 150nH
L3333	2462587T38	COIL CHIP 22nH 5%
L3334	2462587T38	COIL CHIP 22nH 5%
Q3301	4813827A07	NPN SML SIG MMBR9
Q3302	4813824A17	XSTR PNP40V .2A
R3300	0662057A53	1k5 1/16W 5%
R3301	0662057A97	100k 1/16W
R3302	0662057A37	330 1/16W 5%
R3303	0662057A49	1k 1/16W 5%
R3304	0662057A53	1k5 1/16W 5%
R3306	0662057A35	270 1/16W 5%
R3307	0662057A21	68 1/16W 5%
R3308	0662057A35	270 1/16W 5%
R3309	0662057A97	100k 1/16W
R3311	0662057A63	3k9 31/16W 5%
R3312	0662057A53	1k5 1/16W 5%
R3313	0662057A61	3k3 1/16W 5%
R3314	0662057A07	18 1/16W 5%
R3315	0662057A01	10 1/16W 5%
R3316	0662057A29	150 1/16W 5%
R3317	0662057A29	150 1/16W 5%
R3318	0662057A13	33 1/16W 5%
R3321	0662057A35	270 1/16W 5%
R3331	0662057A18	51 1/16W 5%
T3301	2505515V03	XFMR JEDI MIXER SMD 4:1
T3302	2505515V03	XFMR JEDI MIXER SMD 4:1



* note 1: values are depending on channel spacing Changed by:

	C5226	C5229	R5216	R5221	R5223	R5225
0102725B29	.047uF	4.7pF	10K	150K	6.8K	100
0102725B30	0.1uF	.001uF	6.8K	200K	3.9K	3.3K

0102725B29	12.5 kHz channel spacing
0102725B30	20/25 kHz channel spacing
GEPD 5442-2	
GEPD 5443-2	

VHF (136-174MHz) RX-IF Schematic Diagram

RX-IF
Parts List

Circuit Ref	Motorola Part No.	Description
C5200	2113740F35	22pF 5% 50V
C5201	2113740F19	4.7pF 5% 50V
C5202	2113740F31	15pF 5% 50V
C5203	2113743A19	100nF 16V
C5204	2113743A19	100nF 16V
C5205	2113740F33	18pF 5% 50V
C5208	2113743A19	100nF 16V
C5211	2113740F31	15pF 5% 50V
C5212	2113740F31	15pF 5% 50V
C5213	2113740F40	36pF 5% 50V
C5214	2113740F17	3.9pF 5% 50V
C5220	2113741F49	10nF 50V
C5221	2311049J25	TANT CP 10uF 10% 16V
C5222	2113743K15	100nF 16V
C5223	2113743E20	100nF 16V
C5224	2113741F29	1.5nF 50V
C5225	2311049J11	TANT CP 4.7uF 10% 16V
C5226	2113743K07 2113743K15	47nF 16V (12.5kHz) 100nF 16V (20/25kHz)
C5227	2311049J11	TANT CP 4.7uF 10% 16V
C5228	2113743K15	100nF 16V
C5229	2113741F41 2113741F25	4.7nF 50V (12.5kHz) 1nF (20/25kHz)
C5230	2113741F49	10nF 50V
C5231	2311049A07	TANT CP 1uF 10% 16V
C5232	2113740F51	100pF 5% 50V
C5233	2113740F51	100pF 5% 50V
C5234	2113743K15	100nF 16V
C5235	2113740F51	100pF 5% 50V
C5236	2113740F51	100pF 5% 50V
C5237	2113743K15	100nF 16V
C5238	2113743K15	100nF 16V Y5V
C5239	2113740F44	51pF 5% 50V
D5201	4880154K03	DUAL SCHOTTKY SOT23
FL5201	9180098D04 9180098D06	FILTER CER 4-EL 455kHz (12.5kHz) FILTER CER 4-EL 455kHz (20/25kHz)
FL5202	9180097D04 9180097D06	FILTER CER 6-EL 455kHz (12.5kHz) FILTER CER 6-EL 455kHz (20/25kHz)
L5201	2462587N69	CHIP IND 1200 NH
L5203	2483411T74	Inductor Chip Shielded
L5211	2483411T74	Inductor Chip Shielded
Q5201	4882022N70	Transistor NPN
R5201	0662057A73	10k 1/16W 5%
R5202	0662057A85	33k 1/16W 5%
R5203	0662057A69	6k8 1/16W 5%
R5204	0662057A25	100 1/16W 5%
R5205	0662057A56	2k 1/16W 5%
R5207	0662057B47	0 1/16W
R5211	0662057A47	820 1/16W 5%
R5212	0662057A67	5k6 1/16W 5%
R5216	0662057A73 0662057A69	10k 1/16W 5% (12.5kHz) 4k7 1/16W 5% (20/25kHz)
R5221	0662057B02 0662057B05	150k 1/16W (12.5kHz) 200k 1/16W (20/25kHz)
R5222	0662057A93	68k 1/16W 5%
R5223	0662057A69 0662057A63	6k8 1/16W 5% (12.5kHz) 3k9 1/16W 5% (20/25kHz)
R5224	0662057A76	13k 1/16W 5%
R5225	0662057A25 0662057A61	100 1/16W 5% (12.5kHz) 3k3 1/16W 5% (20/25kHz)
U5201	5180207R01	IF IC
Y5201	9102651Y01 9102652Y01	XTAL FLTR 45.1MHz 12.5KHz 80dB XTAL FLTR 45.1MHz 20/25KHz 80dB
Y5202	9102651Y02 9102652Y02	XTAL FLTR 45.1MHz 12.5KHz 60dB XTAL FLTR 45.1MHz 20/25KHz 60dB
Y5211	4802653Y01	XTAL OSC 44.645MHz