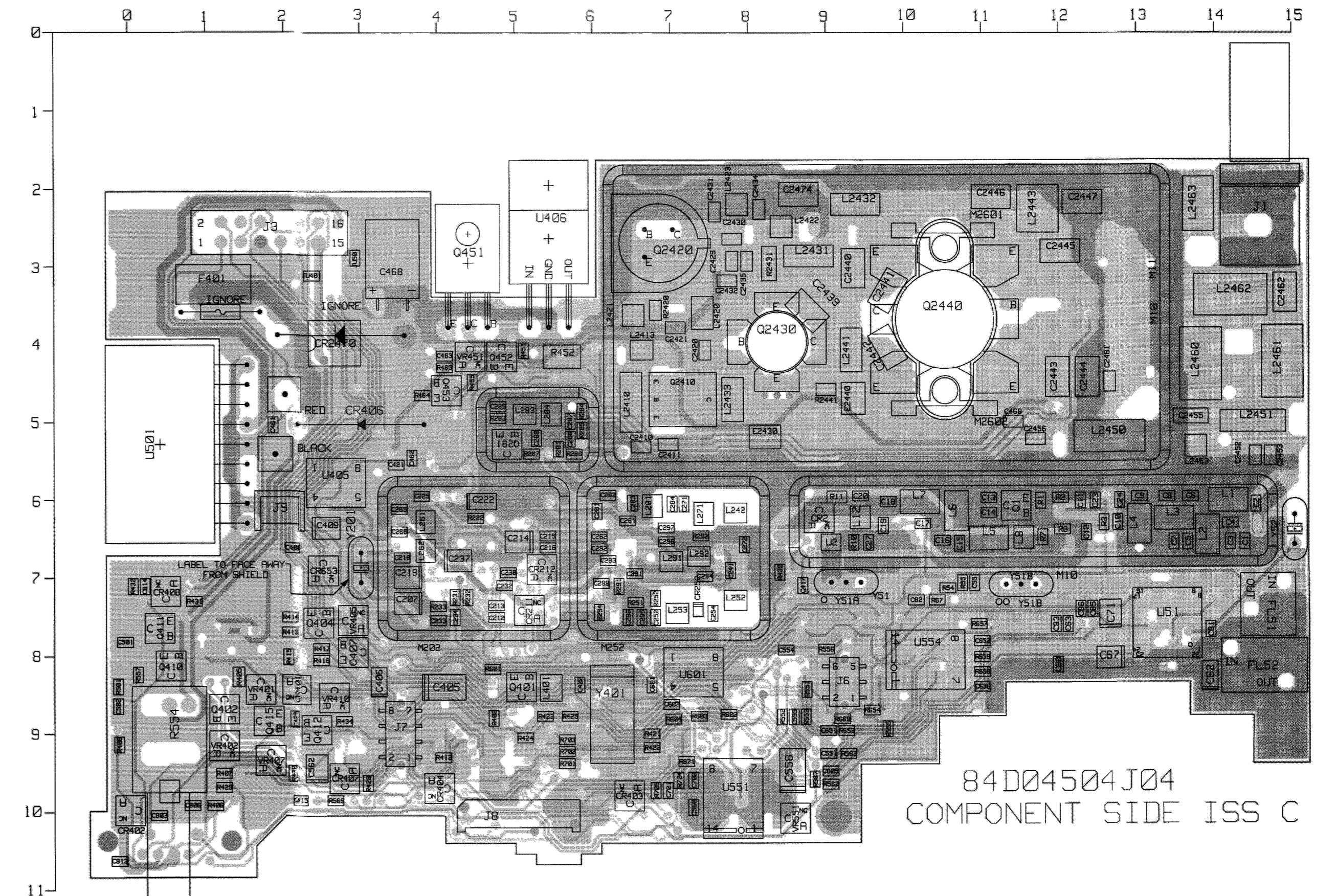


**COMPONENT SIDE (GRAY)** RCB-95114-A  
**SOLDER SIDE (PINK)** RCB-95117-A  
**OVERLAY -----** RCB-95118-A

COMPONENT SIDE VIEW

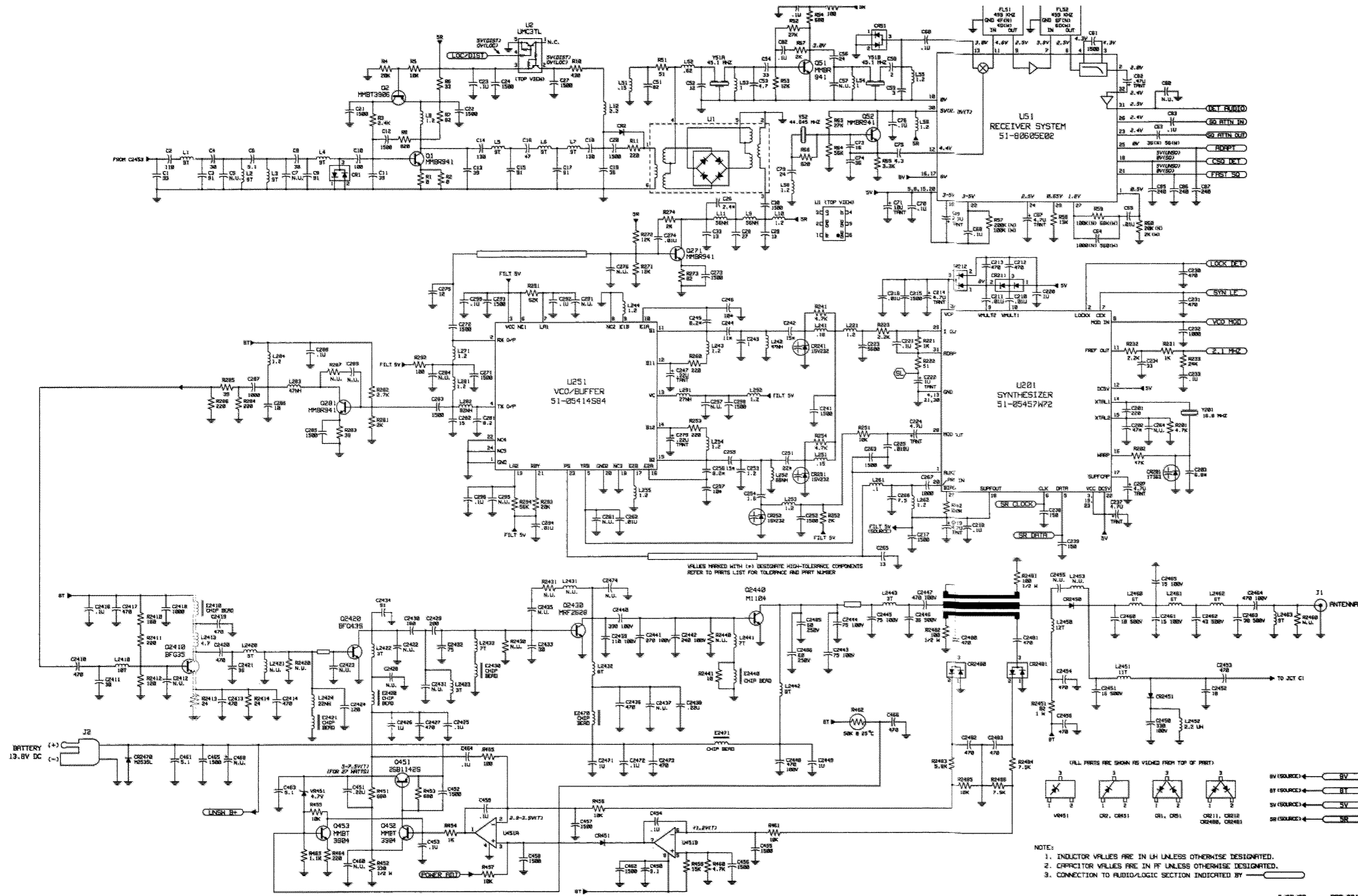


**COMPONENT SIDE INNER LAYER (GRAY)** RCB-95115-A  
**SOLDER SIDE INNER LAYER (PINK)** RCB-95116-A  
**OVERLAY -----** RCB-95118-A

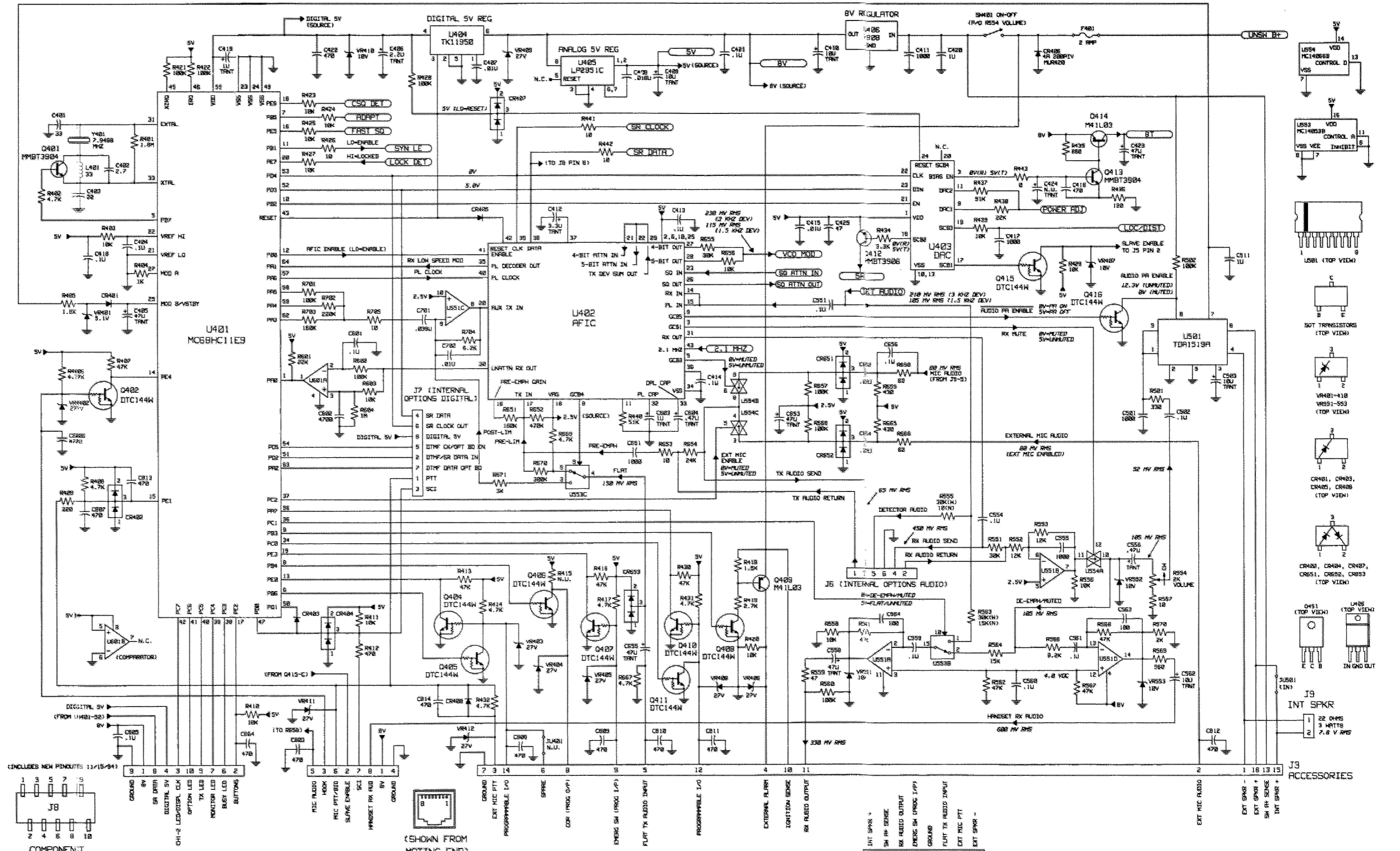
COMPONENT SIDE VIEW

*Circuit Board Details for  
VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W  
(Part of PMUD1067B, PMUD1068B, PMUD1088B, PMUD1089B Radios)*





Schematic Diagrams for  
 VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W  
 (Part of PMUD1067B, PMUD1068B, PMUD1088B, PMUD1089B Radios)  
 (Sheet 1 of 2)



Schematic Diagrams for  
 VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W  
 (Part of PMUD1067B, PMUD1068B, PMUD1088B, PMUD1089B Radios)  
 (Sheet 2 of 2)

- CONNECTION TO RF SECTION INDICATED BY
- AUDIO VOLTAGE LEVELS ARE AT 1 KHZ, 60% DEVIATION UNLESS OTHERWISE SPECIFIED.

**Parts List**

SM50/SM120 VHF Main Board, 150-170 MHz, 40 W, 12.5 kHz (N)  
 (later version) (used in PMUD1067 & PMUD1088)  
 SM50/SM120 VHF Main Board, 150-170 MHz 40 W, 20/25/30 kHz (W)  
 (later version) (used in PMUD1068 & PMUD1089) PL-981003-0

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C1	21-13740L15	capacitor, fixed: uF +/-5%; 80 V; unless otherwise stated
C2	21-13740L14	7.5 +/-0.1 pF
C3	21-13740L16	6.8 +/-0.1 pF
C4	21-13740L19	3.3 +/-0.1 pF
C5	21-13740L07	11 pF 2%
C6	21-13740L13	3.6 +/-0.1 pF
C7	21-13740L19	6.2 +/-0.1 pF
C8	21-13740L03	2.4 +/-0.1 pF
C9	21-13740L07	3.6 +/-0.1 pF
C10	21-13740L15	7.5 +/-0.1 pF
C11, 12	21-13740F60	240 pF
C14	21-13740L05	3.0 +/-0.1 pF
C15	21-13740L18	7.5 +/-0.1 pF
C16	21-13740L10	4.7 +/-0.1 pF
C17	21-13740L21	13 pF 2%
C18	21-13740L09	4.3 +/-0.1 pF
C19	21-13740L10	4.7 +/-0.1 pF
C20	21-13740L23	16 pF 2%
C21	21-13740L09	4.3 +/-0.1 pF
C22	21-13740L08	3.9 +/-0.1 pF
C23	21-13740L21	13 pF 2%
C24	21-13740L10	4.7 +/-0.1 pF
C25	21-13740L08	3.9 +/-0.1 pF
C26	21-13740L01	2.0 +/-0.1 pF
C27	21-13740F60	240 pF
C28	21-13740F29	12 pF
C29	21-13740F31	15 pF
C30	21-13740F60	240 pF
C33	21-13740F05	1.2 +/-0.25 pF
C51	21-13740F49	82 pF
C52	21-13740F29	12 pF
C53	21-13740F19	4.7 +/-0.25 pF
C54	21-13740F39	33 pF
C55	21-13743E20	0.1 uF 10%; 16 V
C56	21-13740F36	24 pF
C57	---	Not Used
C58	21-13740F10	2 +/-0.25 pF
C59	21-13740F14	3 +/-0.25 pF
C60	21-13743E20	0.1 uF 10%; 16 V
C61	21-13741F29	1500 pF
C62	23-11049A05	tantalum 0.47 uF 10%; 25 V
C63(N)	21-13740F40	36 pF
C63(W)	21-13740F45	56 pF
C64(N)	21-13740F69	560 pF
C64(W)	21-13741F25	1000 pF
C65	21-13741F49	.01 uF
C67	23-11049J11	tantalum 4.7 uF 10%; 16 V
C68	21-13743E20	0.1 uF 10%; 16 V
C69	23-11049J07	tantalum 3.3 uF 10%; 20 V
C70	21-13743E20	0.1 uF 10%; 16 V
C71	23-11049A57	tantalum 10 uF 10%; 16 V
C73	21-13740F32	16 pF
C74	21-13740F40	36 pF
C75	21-13740F18	4.3 +/-0.25 pF
C76	21-13743E20	0.1 uF 10%; 16 V
C79	21-13740F36	24 pF
C80	---	Not Used
C82, 83	21-13743E20	0.1 uF 10%; 16 V
C85 thru 87	21-13740F60	240 pF
C201	21-13740F59	220 pF
C202	21-13740L34	47 pF 2%
C203	21-13740L14	6.8 +/-0.1 pF
C207	23-11049J11	tantalum 4.7 uF 10%; 16 V
C210, 211	21-13741F49	.01 uF
C212, 213	21-13741F17	470 pF
C214	23-11049J11	tantalum 4.7 uF 10%; 16 V
C215	21-13741F25	1000 pF
C216	21-13741F49	.01 uF
C217	21-13740F60	240 pF
C218	21-13741F25	1000 pF
C219	23-11049J11	tantalum 4.7 uF 10%; 16 V
C220	21-13928E01	1 uF 10%; 10 V
C221	21-13743E20	0.1 uF 10%; 16 V
C222	23-11049A07	tantalum 1 uF 10%; 16 V
C223	21-13741F43	5600 pF
C224	23-11049J11	tantalum 4.7 uF 10%; 16 V
C225	21-13743E05	.018 uF 10%; 16 V
C230, 231	21-13740F60	240 pF
C232	21-13741F25	1000 pF

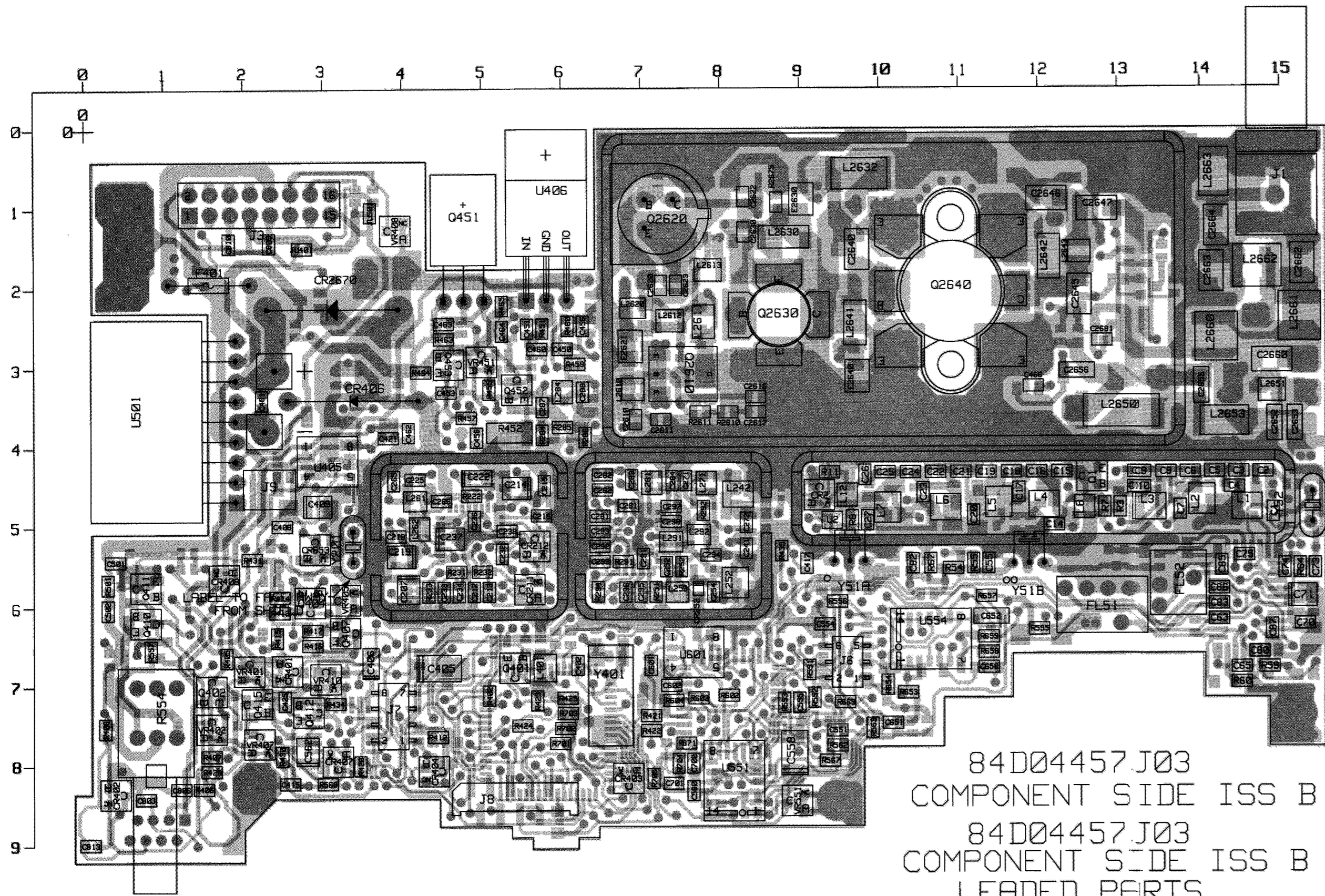
SM50/SM120 VHF Main Board, 150-170 MHz, 40 W, 12.5 kHz (N)  
 (later version) (used in PMUD1067 & PMUD1088)  
 SM50/SM120 VHF Main Board, 150-170 MHz 40 W, 20/25/30 kHz (W)  
 (later version) (used in PMUD1068 & PMUD1089) PL-981003-0

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C233	21-13743E20	0.1 uF 10%; 16 V
C234	21-13740F39	33 pF
C237	23-11049J11	tantalum 4.7 uF 10%; 16 V
C238, 239	21-13740F60	240 pF
C241	21-13740F60	240 pF
C242	21-13740L15	7.5 +/-0.1 pF
C243	21-13740L03	2.4 +/-0.1 pF
C244	21-13740L16	8.2 +/-0.1 pF
C245	21-13740L12	5.6 +/-0.1 pF
C246	21-13740L13	6.2 +/-0.1 pF
C247	23-11049A03	tantalum .22 uF 10%; 35 V
C251	21-13740L16	8.2 +/-0.1 pF
R406	21-13740F60	240 pF
C252	21-13740F07	1.5 +/-0.25 pF
C253	21-13740F03	1 +/-0.25 pF
C255	21-13740L24	18 pF 2%
C256, 257	21-13740L13	6.2 +/-0.1 pF
C258	21-13740L14	18 pF 2%
C261	21-13740F60	240 pF
C262	21-13741F49	.01 uF
C263	21-13740F60	240 pF
C264 thru 266	---	Not Used
C267	21-13740F60	240 pF
C271, 272	21-13740F60	240 pF
C273	21-13740F41	39 pF
C274	21-13741F49	.01 uF
C275	21-13740F18	4.3 +/-0.25 pF
C276	21-13740F25	8.2 +/-0.25 pF
C279	23-11049A03	tantalum 0.22 uF 10%; 35 V
C281	21-13740F22	6.2 +/-0.25 pF
C282	21-13740F34	20 pF
C283	21-13740F60	240 pF
C284	21-13741F49	.01 uF
C285	21-13740F47	68 pF
C286	---	Not Used
C287	21-13740F47	68 pF
C288	21-13743E20	0.1 uF 10%; 16 V
C289	---	Not Used
C291	---	Not Used
C292, 293	21-13740F60	240 pF
C294	21-13741F49	.01 uF
C295	21-13740F60	240 pF
C296	---	Not Used
C297	21-13740F60	240 pF
C298, 299	21-13743E20	0.1 uF 10%; 16 V
C401	21-13740F39	33 pF
C402	21-13740F13	2.7 +/-0.25 pF
C403	21-13740F35	22 pF
C404	21-13743E20	0.1 uF 10%; 16 V
C405	23-11049J43	tantalum 47 uF 10%; 10 V
C406	23-11049A40	tantalum 2.2 uF 10%; 10 V
C407	21-13741F49	.01 uF
C408	21-13743E05	.018 uF 10%; 16 V
C409	23-11049A57	tantalum 10 uF 10%; 16 V
C410	23-11049A57	tantalum 10 uF 10%; 16 V
C411	21-13741F25	1000 pF
C412	23-11049J07	tantalum 3.3 uF 10%; 20 V
C413, 414	21-13743E20	0.1 uF 10%; 16 V
C415	21-13741F49	.01 uF
C416	21-13741F17	470 pF
C417	21-13741F25	1000 pF
C418	21-13740L15	0.1 uF 10%; 16 V
C419	23-11049A07	tantalum 1 uF 10%; 16 V
C420	21-13740L34	47 pF 2%
C421	21-13743E20	0.1 uF 10%; 16 V
C422	21-13741F17	470 pF
C423	23-11049J43	tantalum 47 uF 10%; 10 V
C424	---	Not Used
C425	21-13740F43	47 pF
C430	21-13740F26	8.1 +/-0.25 pF
C431	---	Not Used
C432	21-13740F60	240 pF
C433, 454	21-13743E20	0.1 uF 10%; 16 V
C435 thru 457	21-13740F60	240 pF
C458	21-13741F25	1000 pF
C459	21-13743E20	0.1 uF 10%; 16 V
C460	---	Not Used
C461	21-13740F20	5.1 +/-0.25 pF
C462	21-13740F60	240 pF
C463	21-13740F20	5.1 +/-0.25 pF
C464	21-13743E20	0.1 uF 10%; 16 V
C465	21-13741F17	470 pF

SM50/SM120 VHF Main Board, 150-170 MHz, 40 W, 12.5 kHz (N)  
 (later version) (used in PMUD1067 & PMUD1088)  
 SM50/SM120 VHF Main Board, 150-170 MHz 40 W, 20/25/30 kHz (W)  
 (later version) (used in PMUD1068 & PMUD1089) PL-981003-0

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C466	21-13740A59	150 pF
C468	---	Not Used
C501	21-13741F25	1000 pF
C502	21-13743E20	0.1 uF 10%; 16 V
C503	23-11049A57	tantalum 10 uF 10%; 16 V
C511	21-13741W01	1 uF 10%; 25 V
C551	21-13743E20	0.1 uF 10%; 16 V
C554	21-13743E20	0.1 uF 10%; 16 V
C555	21-13741F25	1000 pF
C556	23-11049A03	tantalum 0.47 uF 10%; 25 V
C558	23-11049J43	tantalum 47 uF 10%; 10 V
C559 thru 561	21-13743E20	0.1 uF 10%; 16 V
C560	21-13740L16	8.2 +/-0.1 pF
C562	21-13740F60	240 pF
C563, 564	21-13740F51	100 pF
C601	21-13743E20	0.1 uF 10%; 16 V
C602	21-13741F41	4700 pF
C603	23-11049A07	tantalum 1 uF 10%; 16 V
C604	23-11049A05	tantalum .47 uF 10%; 25 V
C651	21-13741F25	1000 pF
C652	21-13743E20	0.22 uF +/-80/-20%; 16 V
C653	23-11049J43	tantalum 47 uF 10%; 10 V
C654	21-13743E16	0.22 uF +/-80/-20%; 16 V
C655	23-11049J43	tantalum 47 uF 10%; 10 V
C656	21-13743E20	0.1 uF 10%; 16 V
C701	21-13743E11	.039 uF 10%; 16 V
C702	21-13741F49	.01 uF
C803, 804	21-13741F17	470 pF
C805	21-13743E20	0.1 uF 10%; 16 V
C806 thru 814	21-13741F17	470 pF
C2610	21-13740A30	11 pF
C2611	21-13740A29	10 pF
C2612	21-13740A33	15 pF
C2615, 2614	21-13740A79	1000 pF
C2616	21-13740A24	6.8 +/-0.25 pF
C2618	21-13740A59	150 pF
C2619, 2618	21-13743A19	0.1 uF 10%; 16 V
C2620	21-13740A59	150 pF
C2621	21-13740A33	27 pF
C2622, 2623	---	Not Used
C2626	21-13741W01	1 uF 10%; 25 V
C2627	21-13740A79	1000 pF
C2628	21-13740A59	150 pF
C2629	---	Not Used
C2630	21-13740A39	27 pF
C2631, 2632	21-13740B32	20 pF
C2636	21-13740A59	150 pF
C2637	21-13741W01	1 uF 10%; 25 V
C2639	---	Not Used
C2643, 2644	21-11078B32	39 pF 100V
C2645	21-80964X35	51 pF 100 V
C2646	21-11078B32	clamped mica 39 pF 250 V
C2647	21-11078B16	13 pF 100 V
C2648	21-80060M15	8 +/-0.5pF 500 V
C2649	21-80060M34	43 pF 500 V
C2648	21-13740B49	100 pF
C2649	21-13741W01	1 uF 10%; 25 V
C2650	21-80060M33	39 pF 500 V
L241	21-13740A10	2 +/-0.25 pF
L242	21-13740A36	20 pF
L243, 244	24-84562T11	4 turns airwound 2%
L251	24-82587X49	chip 0.47 uH 5%
L252	24-84562T13	3 turns airwound 2%
L253 thru 255	24-82587X60	chip 0.39 uH 5%
L261	24-82587X45	chip 22 nH 5%
L262	24-82587X60	chip 0.39 uH 5%
L263	21-80060M11	6 +/-0.5 pF 500 V
L264	21-80060M49	100 pF 100 V
L271	24-82587X61	chip 0.47 uH 5%
L272	24-82587X60	chip 0.39 uH 5%
L282	24-82587X43	chip 15 nH 5%
L283	24-82587X47	chip 33 nH 5%
L284	24-82587X60	chip 0.39 uH 5%
L291	24-82587X43	chip 15 nH 5%
L292	24-82587X60	chip 0.39 uH 5%
L401	24-80579C43	chip 33 uH
L2610	24-80591A01	24 turns
L2611	24-80591C73	5 turns
L2612	24-80591B17	4 turns
L2613	24-80591B73	4 turns
L2620	24-82587T40	chip 33 nH 5%
L2622	24-82587T40	chip 33 nH 5%
L2630	24-80591E73	7 turns

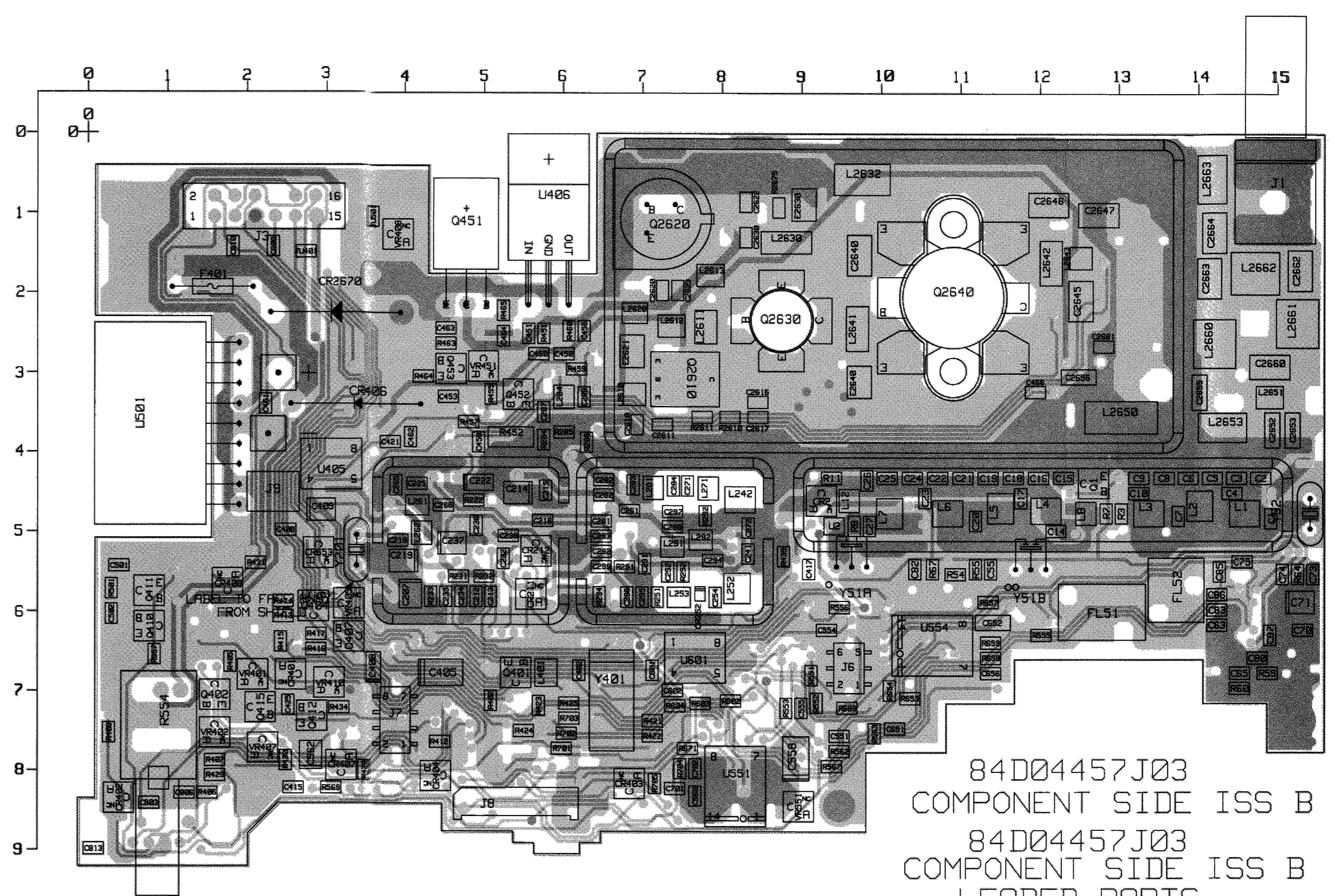
SM50/SM120 VHF Main Board, 150-170 MHz, 40 W, 12.5 kHz (N)  
 (later version) (used in PMUD1



84D04457J03  
 COMPONENT SIDE ISS B  
 84D04457J03  
 COMPONENT SIDE ISS B  
 LEADED PARTS

COMPONENT SIDE (GRAY) RCB-95120-O  
 SOLDER SIDE (PINK) RCB-95123-O  
 OVERLAY ----- RCB-95124-O

COMPONENT SIDE VIEW

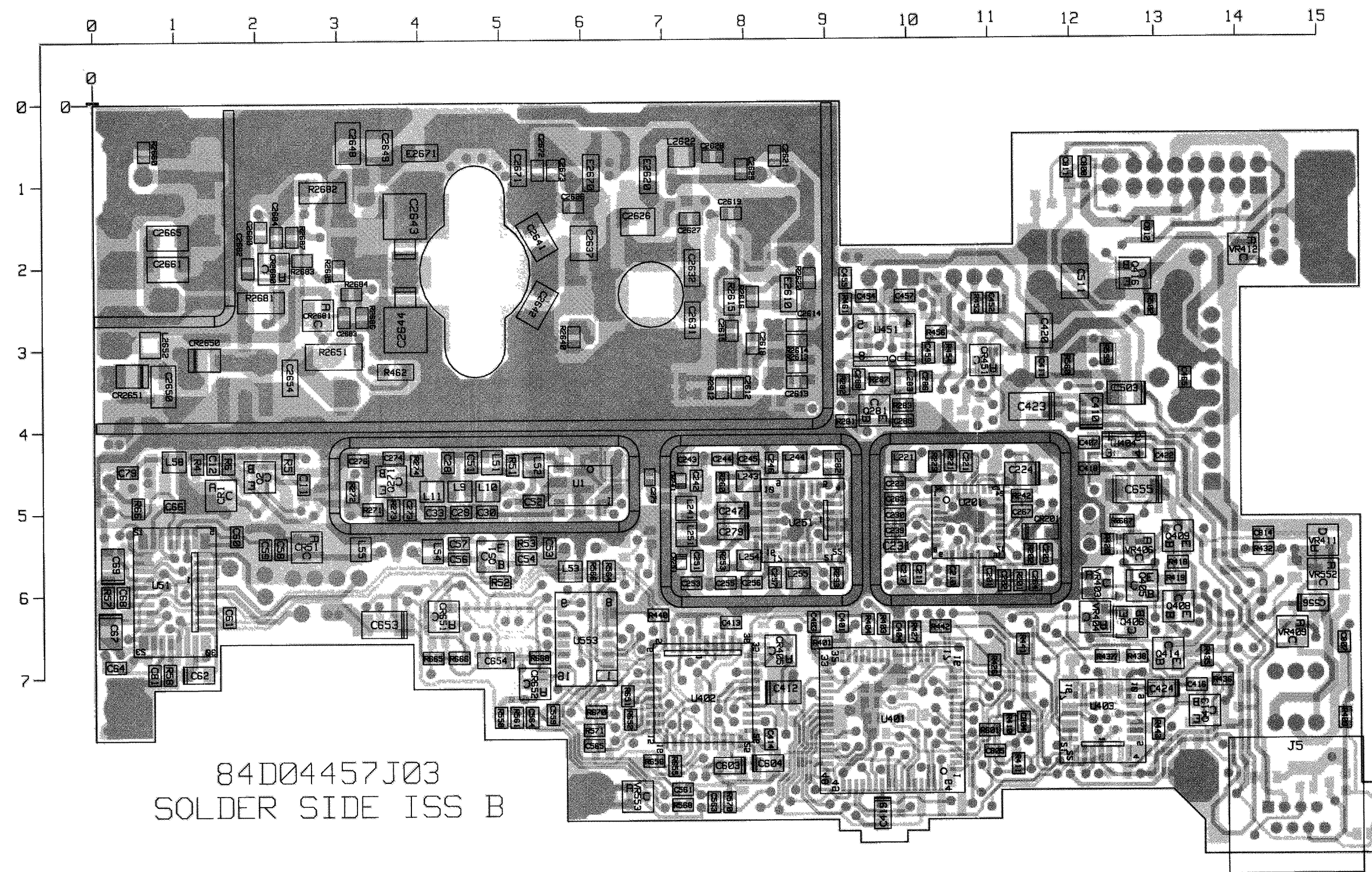


84D04457J03  
 COMPONENT SIDE ISS B  
 84D04457J03  
 COMPONENT SIDE ISS B  
 LEADED PARTS

COMPONENT SIDE INNER LAYER (GRAY) RCB-95121-O  
 SOLDER SIDE INNER LAYER (PINK) RCB-95122-O  
 OVERLAY ----- RCB-95124-O

COMPONENT SIDE VIEW

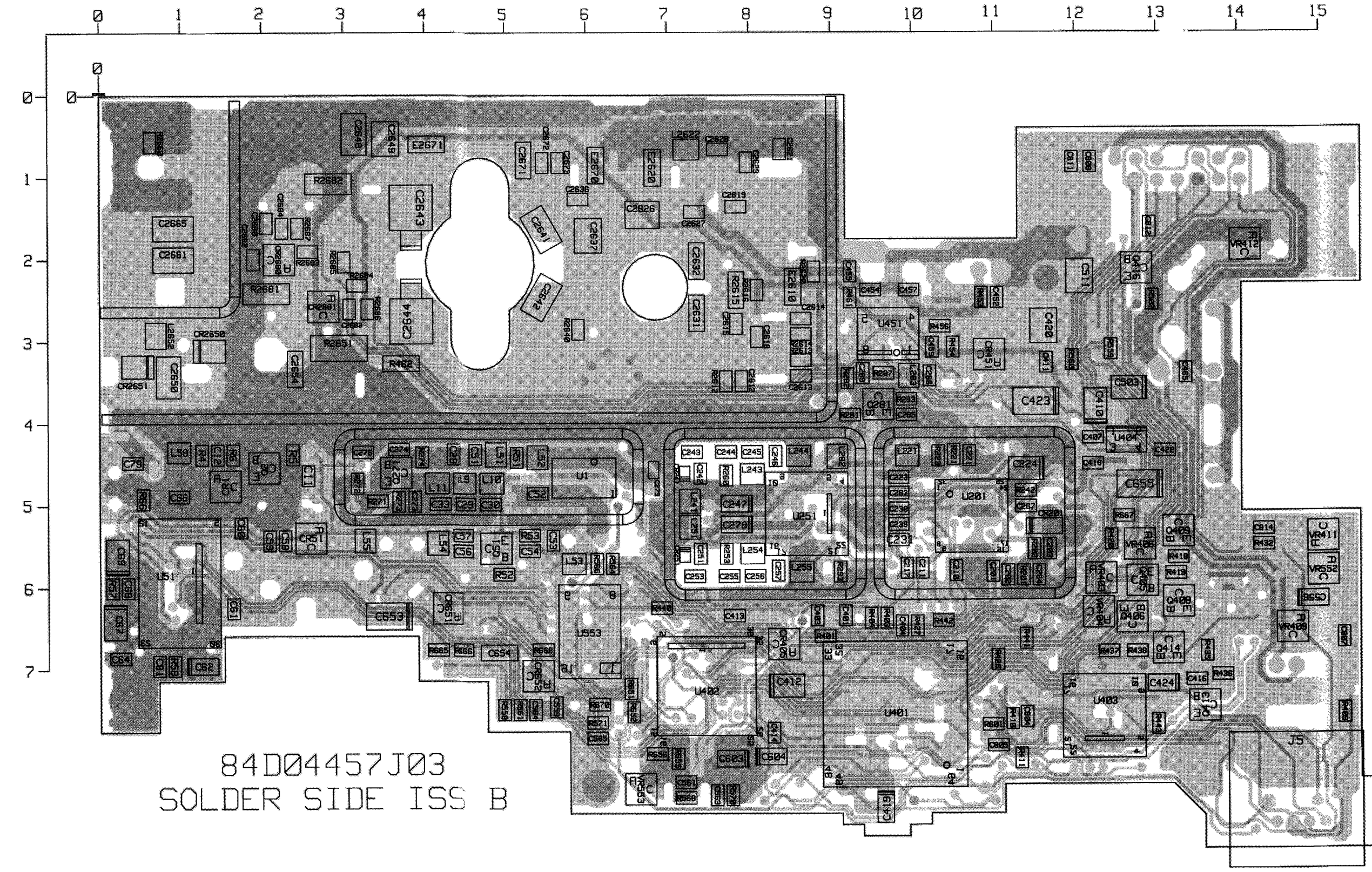
Circuit Board Details for  
 UHF Main Boards, 450-470 MHz, 12.5 & 20-25 kHz, 10-25 W  
 (Part of PMUE1006A, PMUE1007A, PMUE1054A, and PMUE1055A Radios)



84D04457J03  
SOLDER SIDE ISS B

COMPONENT SIDE (GRAY) RCB-95120-O (REV)  
 SOLDER SIDE (PINK) RCB-95123-O (REV)  
 OVERLAY ---- RCB-95125-O (REV)

SOLDER SIDE VIEW

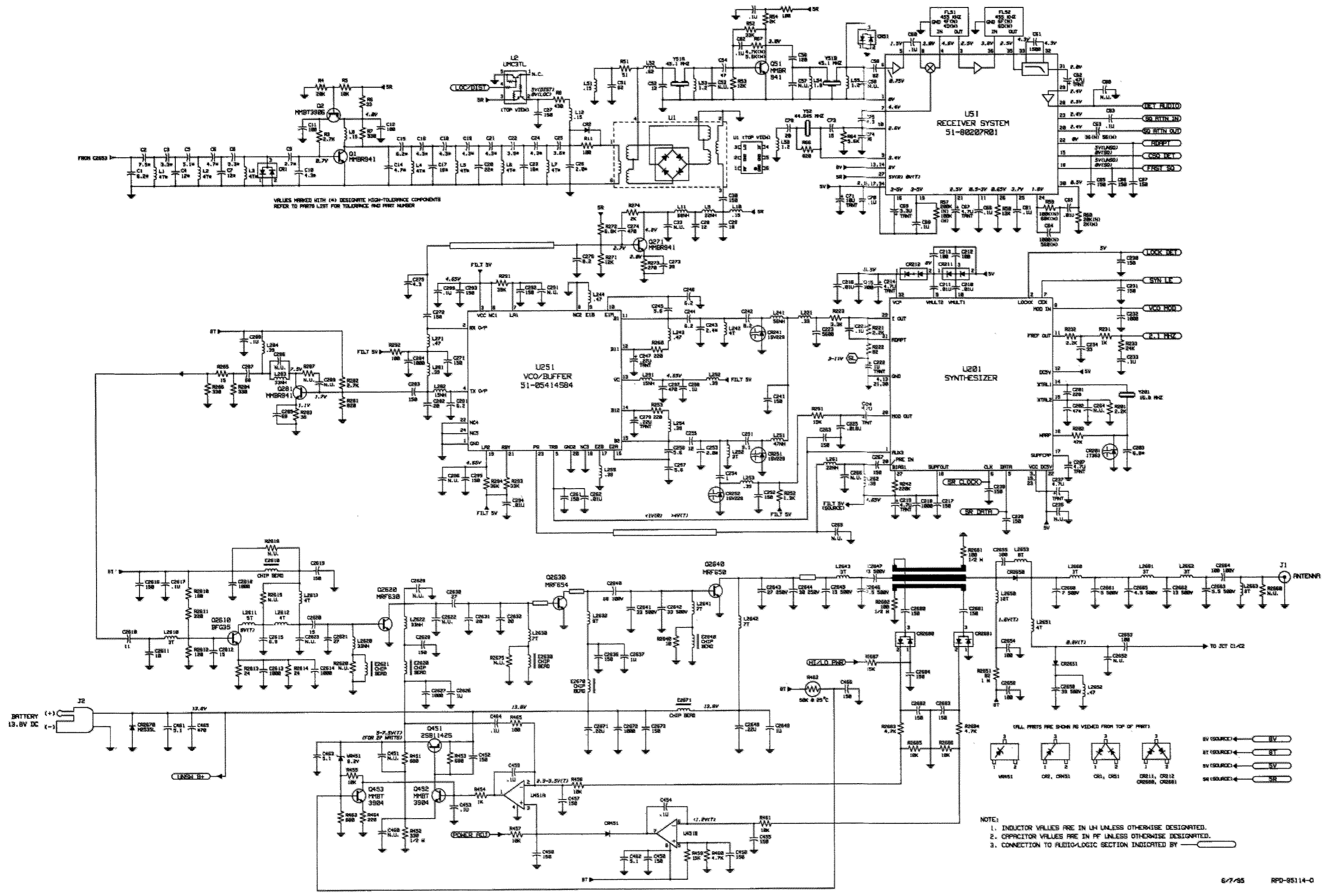


84D04457J03  
SOLDER SIDE ISS B

COMPONENT SIDE INNER LAYER (GRAY) RCB-95121-O (REV)  
 SOLDER SIDE INNER LAYER (PINK) RCB-95122-O (REV)  
 OVERLAY ----- RCB-95125-O (REV)

SOLDER SIDE VIEW

Circuit Board Details for  
 UHF Main Boards, 450-470 MHz, 12.5 & 20-25 kHz, 10-25 W  
 (Part of PMUE1006A, PMUE1007A, PMUE1054A, and PMUE1055A Radios)



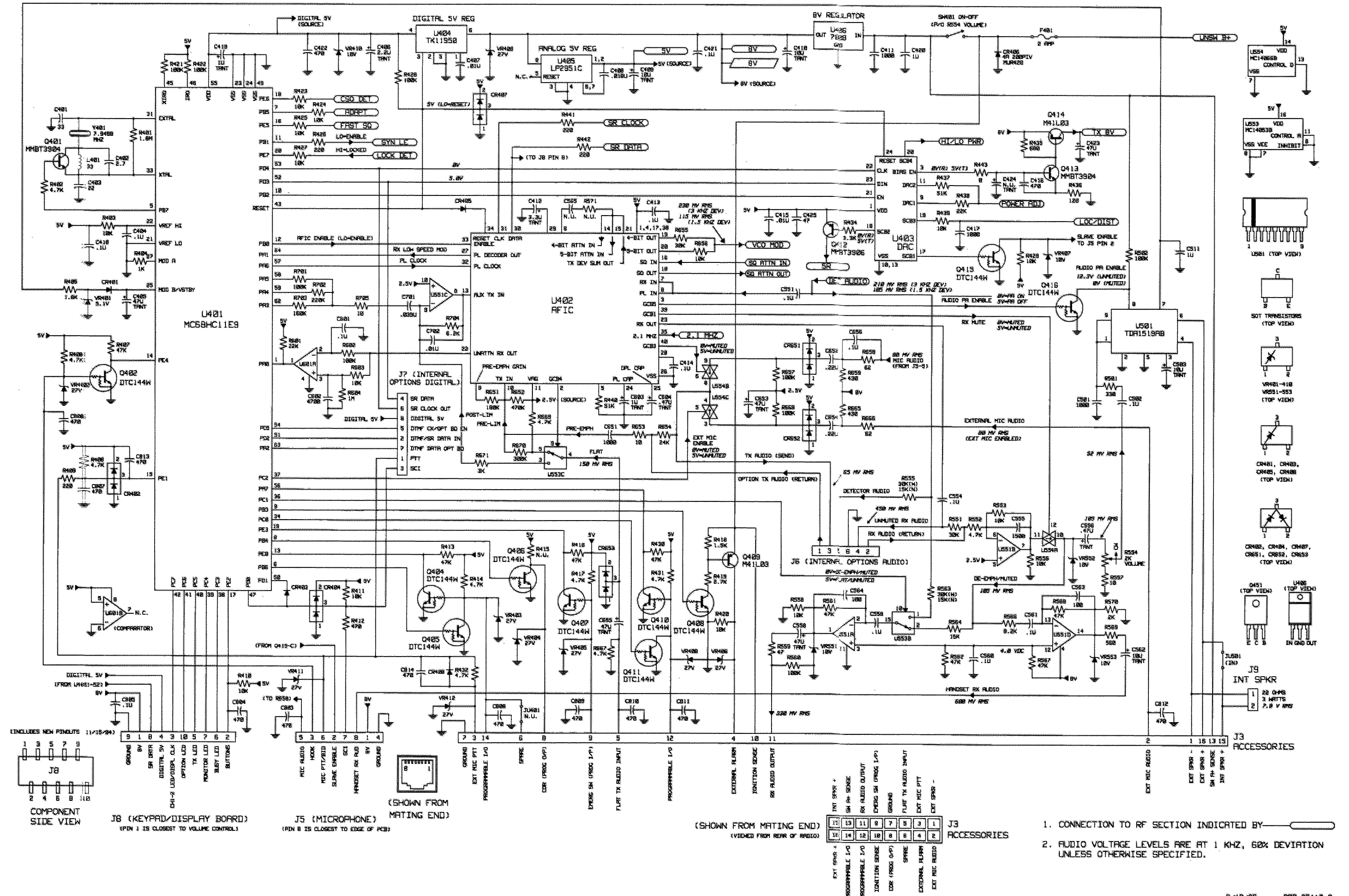
VALUES MARKED WITH (\*) DESIGNATE HIGH-TOLERANCE COMPONENTS REFER TO PARTS LIST FOR TOLERANCE AND PART NUMBER

NOTE:  
 1. INDUCTOR VALUES ARE IN UH UNLESS OTHERWISE DESIGNATED.  
 2. CAPACITOR VALUES ARE IN PF UNLESS OTHERWISE DESIGNATED.  
 3. CONNECTION TO FLUORO-LOGIC SECTION INDICATED BY

Schematic Diagram for  
 UHF Main Boards, 450-470 MHz, 12.5 & 20-25 kHz, 10-25 W  
 (Part of PMUE1006A, PMUE1007A, PMUE1054A, and PMUE1055A Radios)  
 (Sheet 1 of 2)

6/7-85 RFD-95114-0





Schematic Diagram for UHF Main Boards, 450-470 MHz, 12.5 & 20-25 kHz, 10-25 W (Part of PMUE1006A, PMUE1007A, PMUE1054A, and PMUE1055A Radios) (Sheet 2 of 2)

1. CONNECTION TO RF SECTION INDICATED BY
2. AUDIO VOLTAGE LEVELS ARE AT 1 KHZ, 60% DEVIATION UNLESS OTHERWISE SPECIFIED.

**Parts List**

SM50/SM120 UHF Main Board, 450-470 MHz, 10-25 Watts  
 12.5 kHz (N) (used in PMUE1006 & PMUE1054)  
 SM50/SM120 UHF Main Board, 450-470 MHz, 10-25 Watts  
 20/25 kHz (W) (used in PMUE1007 & PMUE1055) PL-951011-A

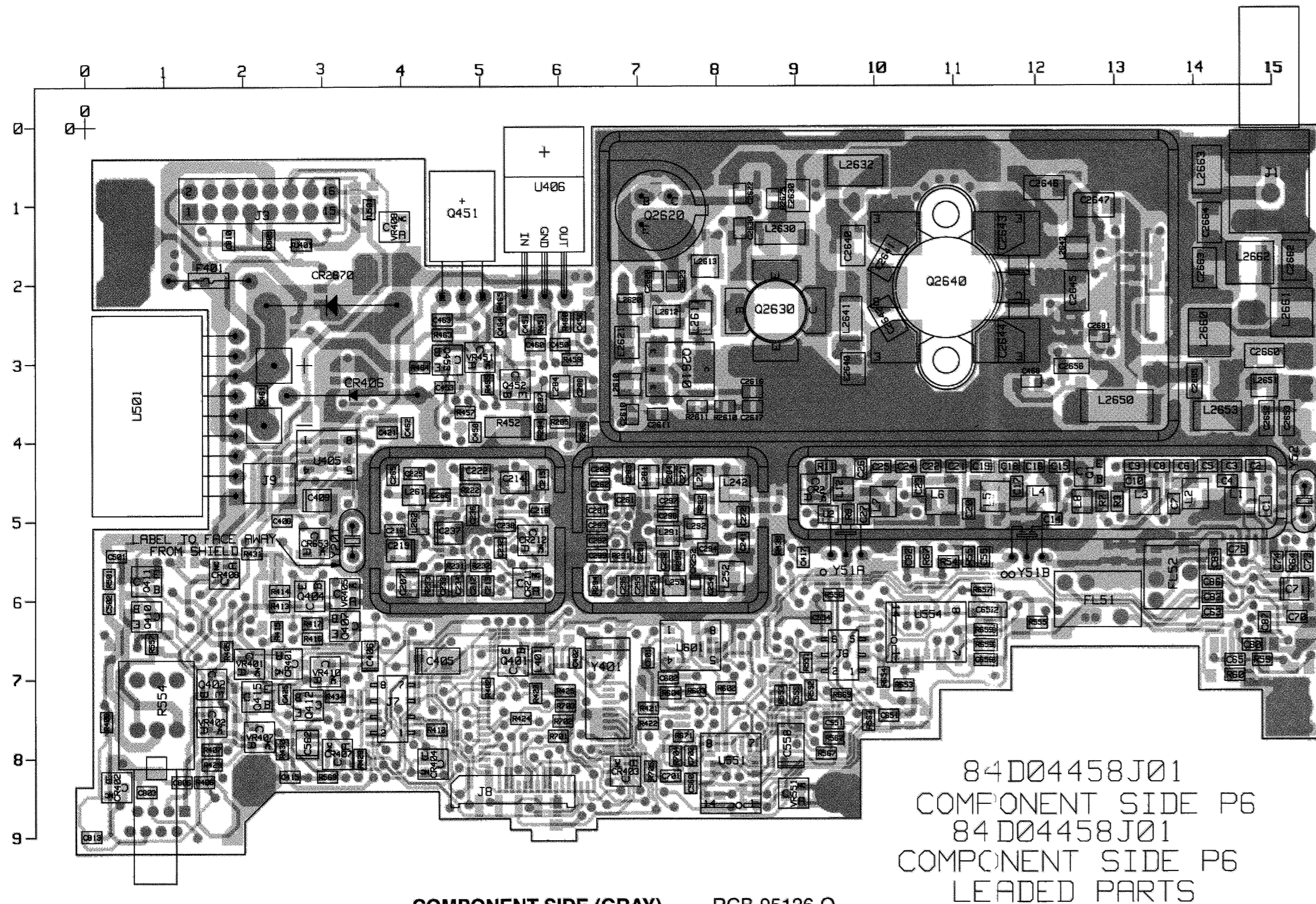
REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C1	21-13740G21	capacitor, fixed: uF +/-5%; 50 V; unless otherwise stated
C2	21-13740G24	5.6 +/-0.1 pF
C3	21-13740G16	3.6 +/-0.1 pF
C4	21-13740G30	11 pF 2%
C5	21-13740G17	3.9 +/-0.1 pF
C6	21-13740G23	6.2 +/-0.1 pF
C7	21-13740G28	9.1 pF 2%
C8	21-13740G12	2.4 +/-0.1 pF
C9	21-13740G13	2.7 +/-0.1 pF
C10	21-13740G12	2.4 +/-0.1 pF
C11, 12	21-13740A55	100 pF
C14	21-13740L05	3.0 +/-0.1 pF
C15	21-13740G25	7.5 +/-0.1 pF
C16	21-13740G18	4.3 +/-0.1 pF
C17	21-13740G32	13 pF 2%
C18, 19	21-13740G18	4.3 +/-0.1 pF
C20	21-13740G34	16 pF 2%
C21	21-13740G18	4.3 +/-0.1 pF
C22	21-13740G17	3.9 +/-0.1 pF
C23	21-13740G32	13 pF 2%
C24, 25	21-13740G18	4.3 +/-0.1 pF
C26	21-13740G10	2.0 +/-0.1 pF
C27	21-13740A59	150 pF
C28	21-13740A31	12 pF
C29	21-13740A35	18 pF
C30	21-13740A59	150 pF
C33	---	Not Used
C51	21-13740A53	82 pF
C52	21-13740A31	12 pF
C53	---	Not Used
C54	21-13740A46	47 pF
C55	21-13743A19	0.1 uF 10%; 16 V
C56	21-13740A57	120 pF
C57, 58	---	Not Used
C59	21-13740A53	82 pF
C60	21-13743A19	0.1 uF 10%; 16 V
C61	21-13741A25	1500 pF
C62	23-11049A05	tantalum 0.47 uF 10%; 25 V
C63(N)	21-13740A42	36 pF
C63(W)	21-13740A49	56 pF
C64(N)	21-13740A79	1000 pF
C64(W)	21-13740A73	560 pF
C65	21-13741A45	.01 uF
C66	21-13743A19	0.1 uF 10%; 16 V
C67	23-11049J11	tantalum 4.7 uF 10%; 16 V
C68	21-13743A19	0.1 uF 10%; 16 V
C69	23-11049J07	tantalum 3.3 uF 10%; 20 V
C70	21-13743A19	0.1 uF 10%; 16 V
C71	23-11049A57	tantalum 10 uF 10%; 16 V
C73	21-13740A33	15 pF
C74	21-13740A42	36 pF
C75	21-13740A18	4.3 +/-0.25 pF
C79	21-13740A36	20 pF
C80	---	Not Used
C81 thru 83	21-13743A19	0.1 uF 10%; 16 V
C85 thru 87	21-13740A59	150 pF
C201	21-13740A63	220 pF
C202	21-13740G46	47 pF 2%
C203	21-13740G24	6.8 +/-0.1 pF
C207	23-11049J11	tantalum 4.7 uF 10%; 16 V
C210, 211	21-13741A45	.01 uF
C212, 213	21-13740A55	100 pF
C21	23-11049J11	tantalum 4.7 uF 10%; 16 V
C215	21-13740A79	1000 pF
C216	21-13741A45	.01 uF
C217	21-13740A59	150 pF
C218	21-13740A79	1000 pF
C219	23-11049J11	tantalum 4.7 uF 10%; 16 V
C221	21-13743A19	0.1 uF 10%; 16 V
C222	23-11049A07	tantalum 1 uF 10%; 16 V
C223	21-13741A39	5600 pF
C224	23-11049J11	tantalum 4.7 uF 10%; 16 V
C225	21-13741A51	.018 uF
C230, 231	21-13740A59	150 pF
C232	21-13740A79	1000 pF
C233	21-13743A19	0.1 uF 10%; 16 V
C234	21-13740A41	33 pF
C236	---	Not Used

SM50/SM120 UHF Main Board, 450-470 MHz, 10-25 Watts  
 12.5 kHz (N) (used in PMUE1006 & PMUE1054)  
 SM50/SM120 UHF Main Board, 450-470 MHz, 10-25 Watts  
 20/25 kHz (W) (used in PMUE1007 & PMUE1055) PL-951011-A

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C237	23-11049J11	tantalum 4.7 uF 10%; 16 V
C238, 239	21-13740A59	150 pF
C241	21-13740A59	150 pF
C242	21-13740A27	8.2 +/-0.25 pF
C243	21-13740G12	2.4 +/-0.1 pF
C244	21-13740A23	6.2 +/-0.25 pF
C245	21-13740A23	6.2 +/-0.25 pF
C246	21-13740A23	6.2 +/-0.25 pF
C247	23-11049A03	tantalum 0.22 uF 10%; 35 V
C251	21-13740A27	8.2 +/-0.25 pF
C252	21-13740G09	1.8 +/-0.1 pF
C253	21-13740G10	2.0 +/-0.1 pF
C254	21-13740A03	1 +/-0.25 pF
C255	21-13741A79	1000 pF
C256, 257	21-13740A21	5.6 +/-0.25 pF
C261	21-13740A59	150 pF
C262	21-13741A45	.01 uF
C263	21-13740A59	150 pF
C264 thru 266	---	Not Used
C267	21-13740A59	150 pF
C271, 272	21-13740A43	39 pF
C273	21-13740A71	470 pF
C274	21-13740A71	470 pF
C275	21-13740F18	4.3 +/-0.25 pF
C276	21-13740A27	8.2 +/-0.25 pF
C279	23-11049A03	tantalum 0.22 uF 10%; 35 V
C281	21-13740A23	6.2 +/-0.25 pF
C282	21-13740A36	20 pF
C283	21-13740A59	150 pF
C284	21-13740A79	1000 pF
C285	21-13740A51	68 pF
C286	---	Not Used
C287	21-13740A51	68 pF
C288	21-13743A19	0.1 uF 10%; 16 V
C289	---	Not Used
C291	---	Not Used
C292, 293	21-13740A59	150 pF
C294	21-13741A45	.01 uF
C295	21-13740A59	150 pF
C296	---	Not Used
C297	21-13740A71	470 pF
C298, 299	21-13743A19	0.1 uF 10%; 16 V
C401	21-13740A41	33 pF
C402	21-13740A13	2.7 +/-0.25 pF
C403	21-13740A37	22 pF
C404	21-13740A19	0.1 uF 10%; 16 V
C405	23-11049J43	tantalum 47 uF 10%; 10 V
C406	23-11049A40	tantalum 2.2 uF 10%; 10 V
C407	21-13741A45	.01 uF
C408	21-13741A51	.018 uF
C409, 410	23-11049A57	tantalum 10 uF 10%; 16 V
C411	21-13740A79	1000 pF
C412	23-11049J07	tantalum 3.3 uF 10%; 20 V
C413, 414	21-13743A19	0.1 uF 10%; 16 V
C415	21-13741A45	.01 uF
C416	21-13740A71	470 pF
C417	21-13740A79	1000 pF
C418	21-13743A19	0.1 uF 10%; 16 V
C419	23-11049A07	tantalum 1 uF 10%; 16 V
C420	21-13741W01	1 uF 10%; 25 V
C421	21-13743A19	0.1 uF 10%; 16 V
C422	21-13740A71	470 pF
C423	23-11049J43	tantalum 47 uF 10%; 10 V
C424	---	Not Used
C425	21-13740A46	47 pF
C450	21-13740A59	150 pF
C451	---	Not Used
C452	21-13740A59	150 pF
C453, 454	21-13743A19	0.1 uF 10%; 16 V
C455 thru 458	21-13740A59	150 pF
C459	21-13743A19	0.1 uF 10%; 16 V
C460	---	Not Used
C461 thru 463	21-13740A20	5.1 +/-0.25 pF
C464	21-13743A19	0.1 uF 10%; 16 V
C465	21-13740A71	470 pF
C466	21-13740A59	150 pF
C501	21-13740A79	1000 pF
C502	21-13743A19	0.1 uF 10%; 16 V
C503	23-11049A57	tantalum 10 uF 10%; 16 V
C511	21-13741W01	1 uF 10%; 25 V

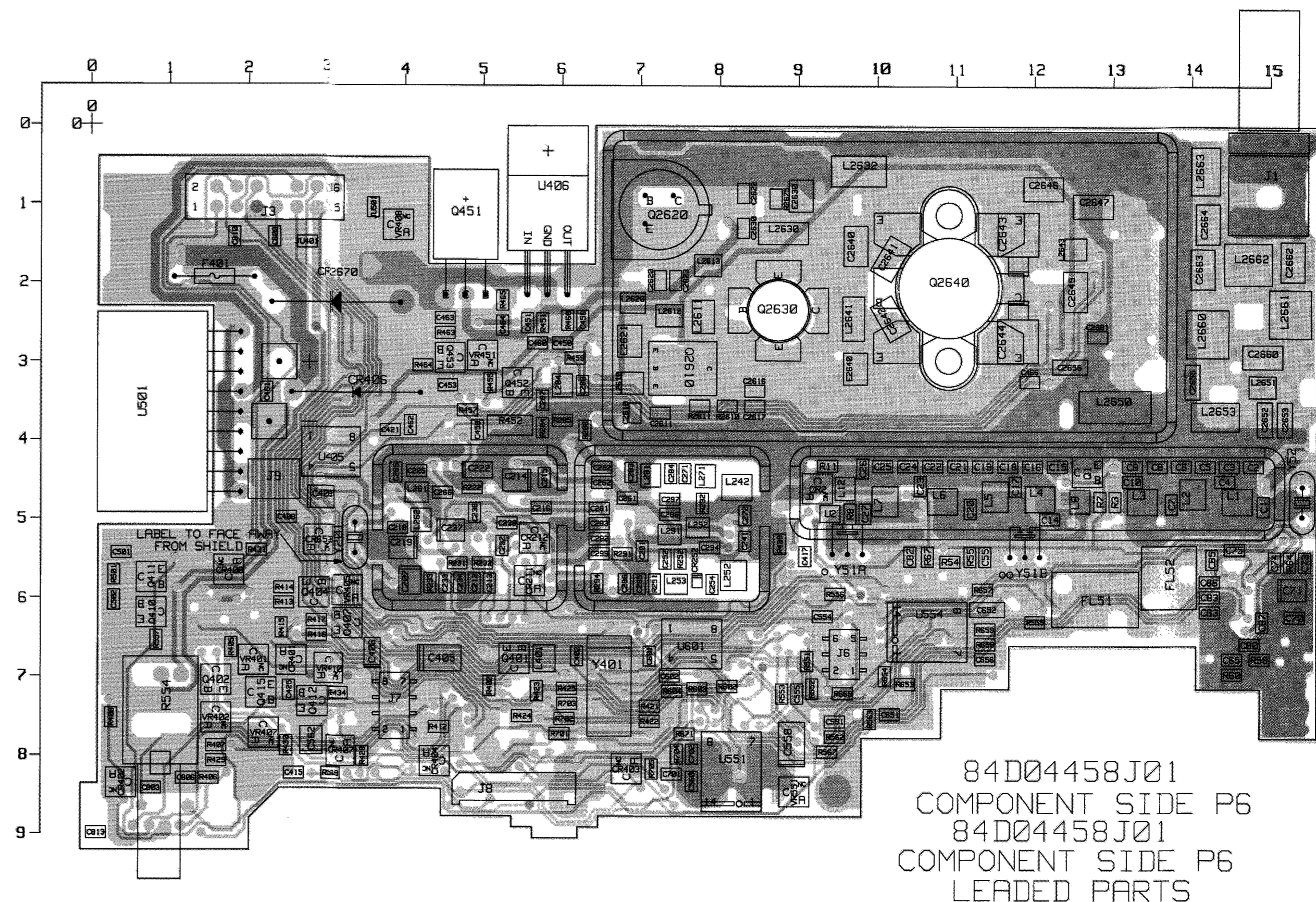
SM50/SM120 UHF Main Board, 450-470 MHz, 10-25 Watts  
 12.5 kHz (N) (used in PMUE1006 & PMUE1054)  
 SM50/SM120 UHF Main Board, 450-470 MHz, 10-25 Watts  
 20/25 kHz (W) (used in PMUE1007 & PMUE1055) PL-951011-A

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C551	21-13743A19	0.1 uF 10% 16V
C554	48-05129M76	0.1 uF 10% 16 V
C555	21-13741A25	1500 pF
C556	23-11049A05	tantalum 0.47 uF 10%; 25 V
C558	23-11049J43	tantalum 47 uF 10%; 10 V
C559 thru 561	21-13743A19	0.1 uF 10% 16 V
C562	23-11049A57	tantalum 10 uF 10%; 16 V
C563, 564	21-13740A55	100 pF
C565	---	Not Used
C566	21-13743A19	0.1 uF 10%; 16 V
C602	21-13741A37	4700 pF
C603	23-11049A07	tantalum 1 uF 10%; 16 V
C604	23-11049A05	tantalum 0.47 uF 10%; 25 V
C651	21-13740A79	1000 pF
C652	21-11032B15	0.22 uF +/-80/-20%
C653	23-11049J43	tantalum 47 uF 10%; 10 V
C654	21-11032B15	0.22 uF +/-80/-20%
C655	23-11049J43	tantalum 47 uF 10%; 10 V
C656	21-13743A19	0.1 uF 10%; 16 V
C701	21-13741A59	309 pF
C702	21-13741A45	0.1 pF
C803, 804	21-13740A71	470 pF
C805	21-13743A19	0.1 uF 10%; 16 V
C806 thru 814	21-13740A71	470 pF
C810	21-13740A30	11 pF
C811	21-13740A20	10 pF
C812	21-13740A33	15 pF
C813, 2614	21-13740A79	1000 pF
C815	21-13740A24	6.8 +/-0.25 pF
C816	21-13740A59	150 pF
C817	21-13740A59	150 pF
C818	21-13743A19	0.1 uF 10%; 16 V
C819	21-13740A79	1000 pF
C820	21-13740A59	150 pF
C821	21-13740A33	15 pF
C822	21-13740A39	27 pF
C823	---	Not Used
C824, 2623	---	Not Used
C825	21-13741W01	1 uF 10%; 25 V
C826	21-13740A79	1000 pF
C827	21-13740A59	150 pF
C828	21-13740A59	150 pF
C829	---	Not Used
C830	21-13740A39	27 pF
C831	---	Not Used
C832	21-13741W01	1 uF 10%; 25 V
C833	21-13740A79	1000 pF
C834	21-13740A59	150 pF
C835	---	Not Used
C836	21-13740A39	27 pF
C837	21-13740B32	20 pF
C838	21-80658X31	33 pF 500 V
C839	21-80658X35	chip 0.15 uH 5%
C840	21-80658X55	chip 0.15 uH 5%
C841	21-80658X69	chip 0.82 uH 5%
C842	21-80658X69	chip 1.2 uH 5%
C843	21-80658X69	chip 1.8 uH 5%
C844	21-80658X69	chip 1.2 uH 5%
C845	21-80658X69	chip 1.2 uH 5%
C846	21-80658X69	chip 1.2 uH 5%
C847	21-80658X69	chip 1.2 uH 5%
C848	21-80658X69	chip 1.2 uH 5%
C849	21-80658X69	chip 1.2 uH 5%
C850	21-80658X69	chip 1.2 uH 5%
C851	21-80658X69	chip 1.2 uH 5%
C852	21-80658X69	chip 1.2 uH 5%
C853	21-80658X69	chip 1.2 uH 5%
C854	21-80658X69	chip 1.2 uH 5%
C855	21-80658X69	chip 1.2 uH 5%
C856	21-80658X69	chip 1.2 uH 5%
C857	21-80658X69	chip 1.2 uH 5%
C858	21-80658X69	chip 1.2 uH 5%
C859	21-80658X69	chip 1.2 uH 5%
C860	21-80658X69	chip 1.2 uH 5%
C861	21-80658X69	chip 1.2 uH 5%
C862	21-80658X69	chip 1.2 uH 5%
C863	21-80658X69	chip 1.2 uH 5%
C864	21-80658X69	chip 1.2 uH 5%
C865	21-80658X69	chip 1.2 uH 5%
C866	21-80658X69	chip 1.2 uH 5%
C867	21-80658X69	chip 1.2 uH 5%
C868	21-80658X69	chip 1.2 uH 5%
C869	21-80658X69	chip 1.2 uH 5%
C870	21-80658X69	chip 1.2 uH 5%
C871	21-80658X69	chip 1.2 uH 5%
C872	21-80658X69	chip 1.2 uH 5%
C873	21-80658X69	chip 1.2 uH 5%
C874	21-80658X69	chip 1.2 uH 5%
C875	21-80658X69	chip 1.2 uH 5%
C876	21-80658X69	chip 1.2 uH 5%
C877	21-80658X69	chip 1.2 uH



COMPONENT SIDE (GRAY) RCB-95126-O  
 SOLDER SIDE (PINK) RCB-95129-O  
 OVERLAY ----- RCB-95130-O

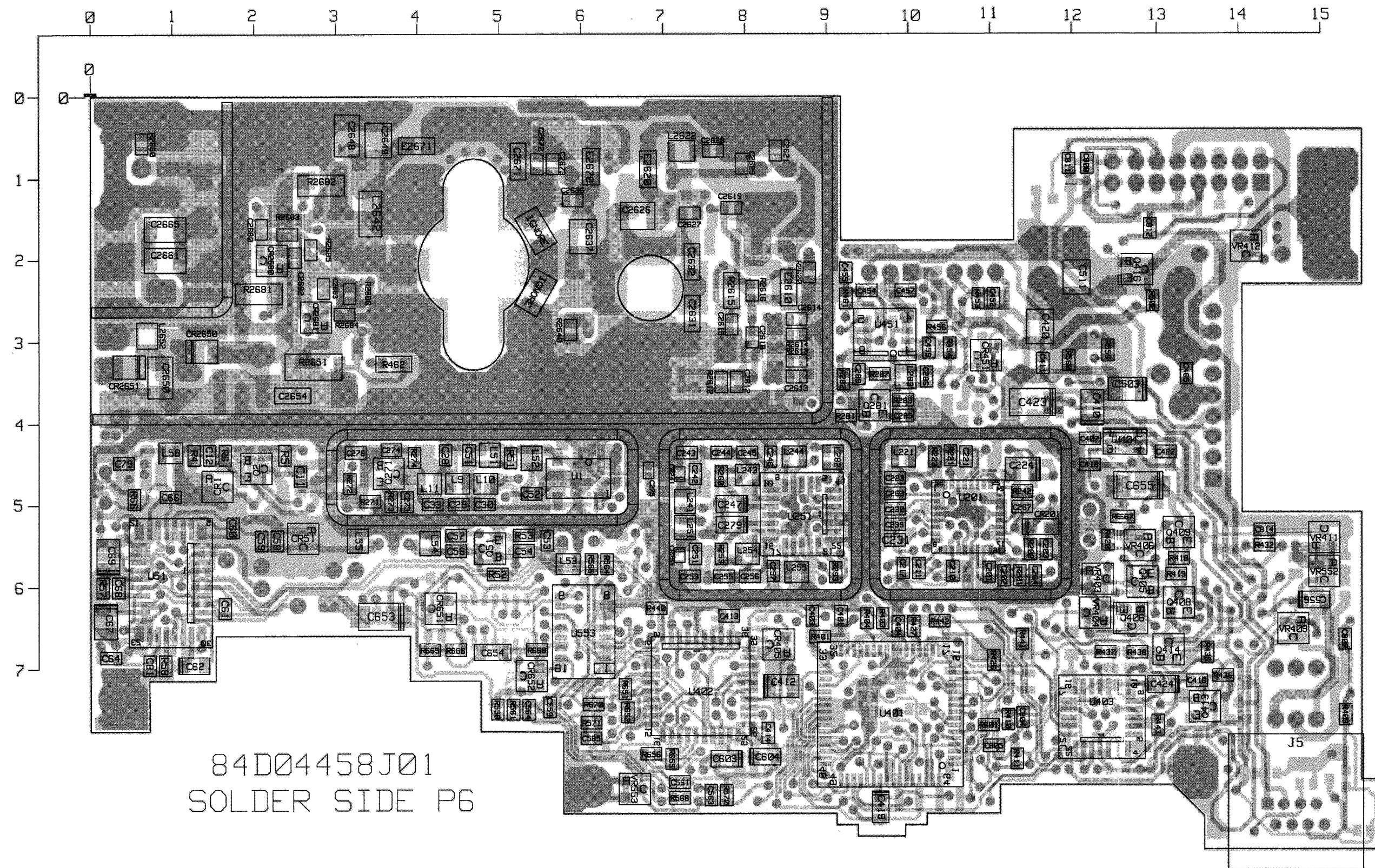
COMPONENT SIDE VIEW



COMPONENT SIDE INNER LAYER (GRAY) RCB-95127-O  
 SOLDER SIDE INNER LAYER (PINK) RCB-95128-O  
 OVERLAY ----- RCB-95130-O

COMPONENT SIDE VIEW

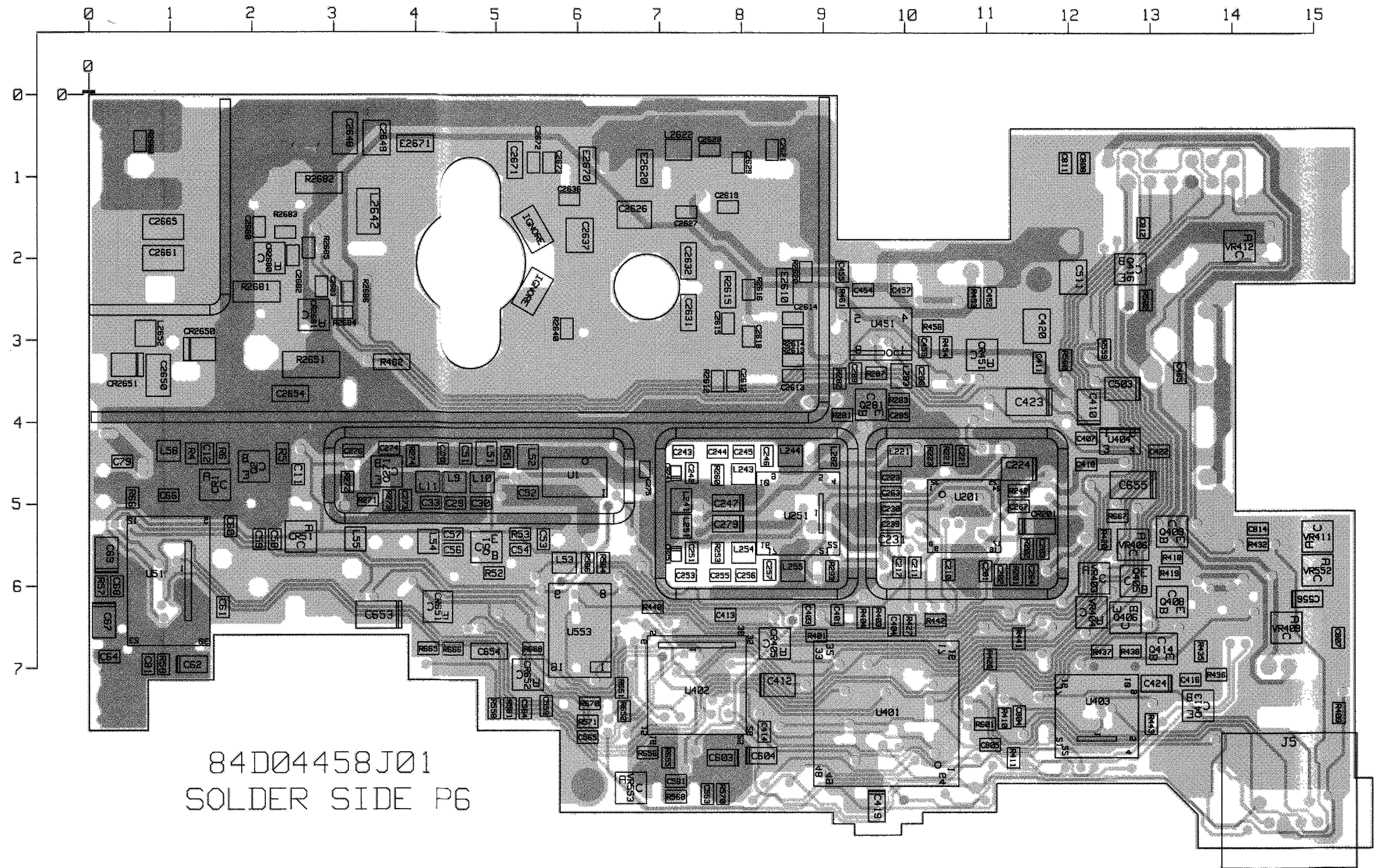
Circuit Board Details for  
 UHF Main Boards, 450-470 MHz, 12.5 & 20-25 kHz, 40 W  
 (Part of PMUE1039A, PMUE1040A, PMUE1056A, and PMUE1057A Radios)



84D04458J01  
SOLDER SIDE P6

COMPONENT SIDE (GRAY) RCB-95126-O (REV)  
SOLDER SIDE (PINK) RCB-95129-O (REV)  
OVERLAY ---- RCB-95131-O (REV)

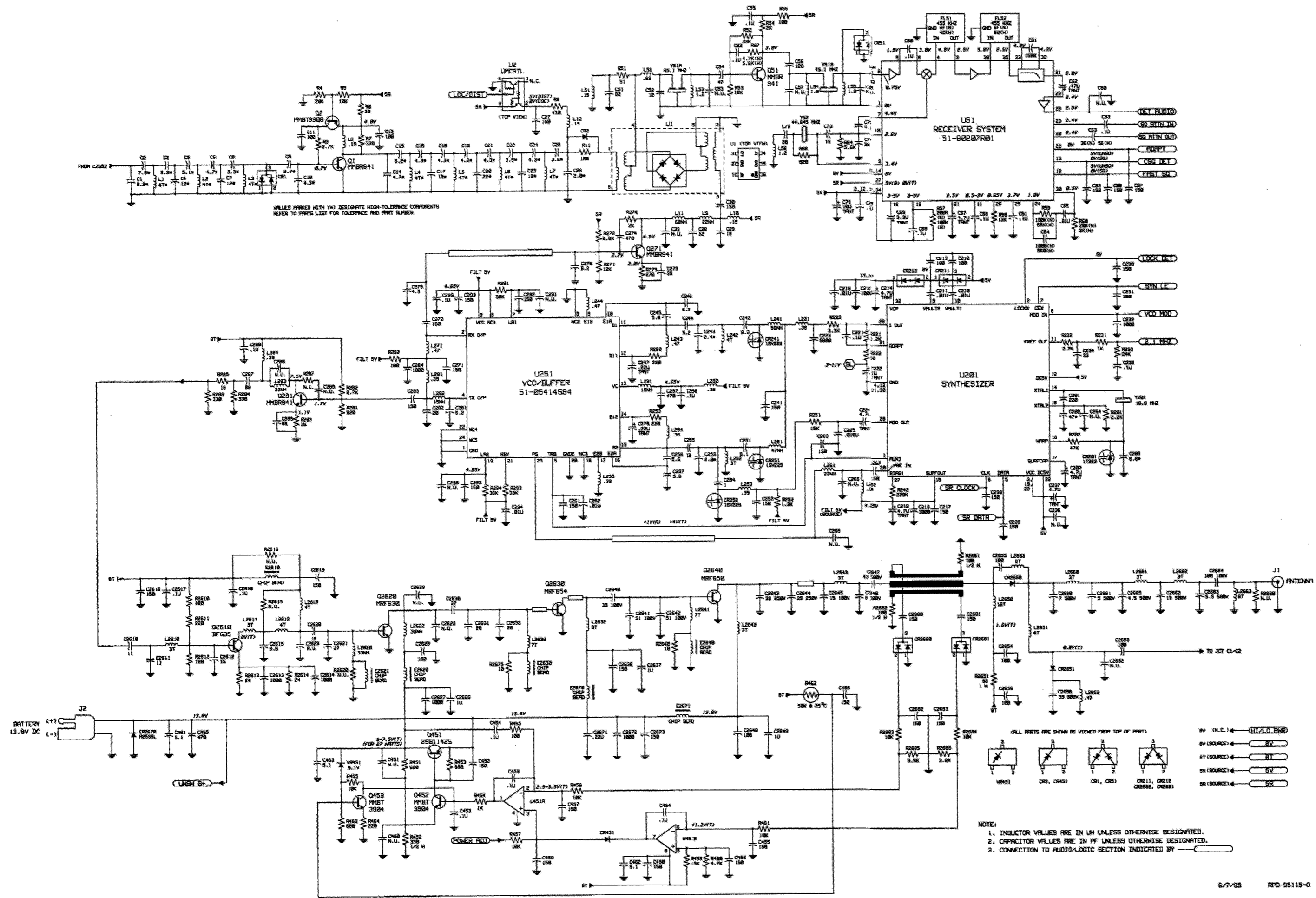
SOLDER SIDE VIEW



84D04458J01  
SOLDER SIDE P6

COMPONENT SIDE INNER LAYER (GRAY) RCB-95127-O (REV)  
SOLDER SIDE INNER LAYER (PINK) RCB-95128-O (REV)  
OVERLAY ---- RCB-95131-O (REV)

SOLDER SIDE VIEW

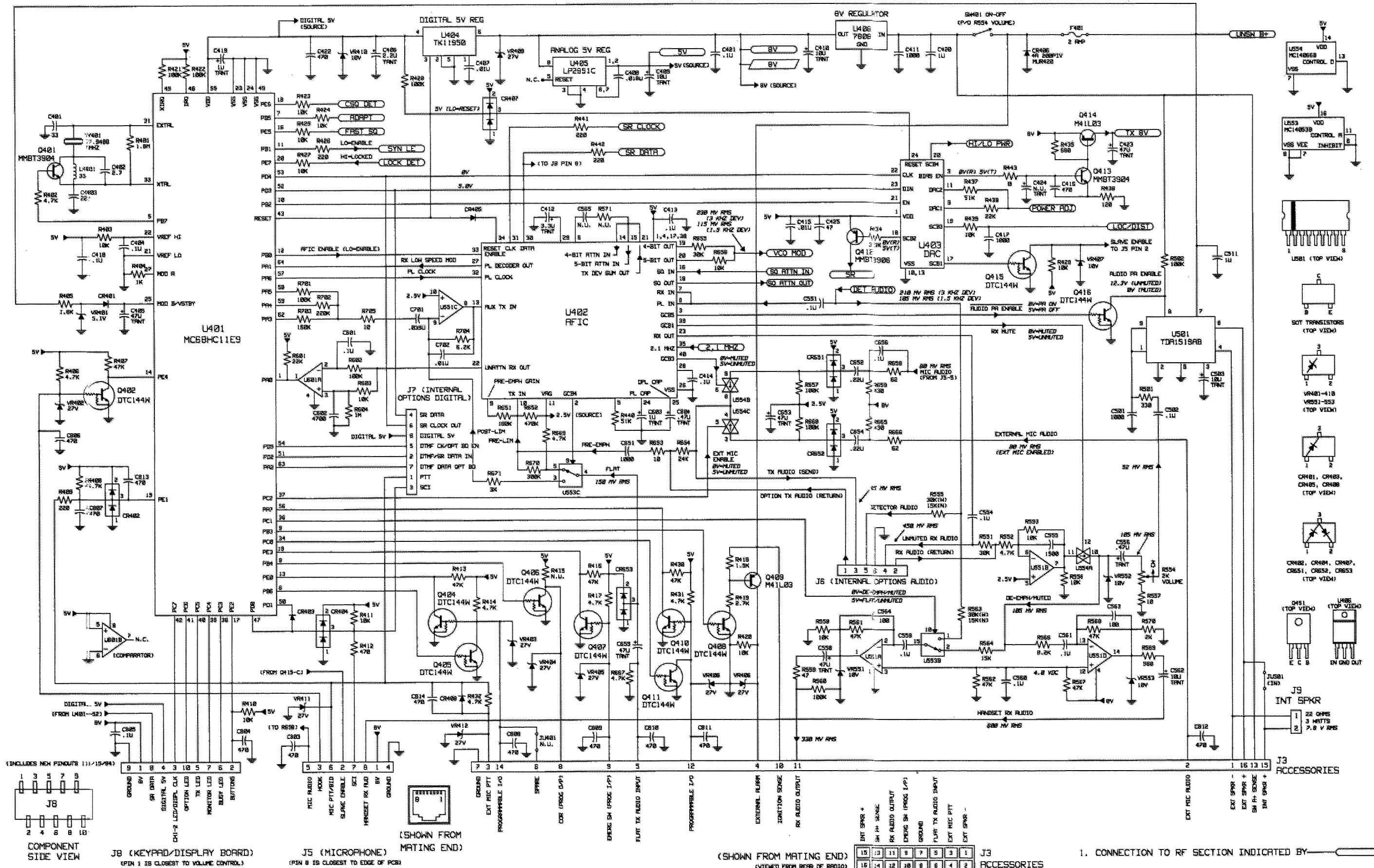


VALUES MARKED WITH (\*) DESIGNATE HIGH-TOLERANCE COMPONENTS REFER TO PARTS LIST FOR TOLERANCE AND PART NUMBER

- NOTE:
1. INDUCTOR VALUES ARE IN UH UNLESS OTHERWISE DESIGNATED.
  2. CAPACITOR VALUES ARE IN PF UNLESS OTHERWISE DESIGNATED.
  3. CONNECTION TO FLUID/LOGIC SECTION INDICATED BY

Schematic Diagram for  
 UHF Main Boards, 450-470 MHz, 12.5 & 20-25 kHz, 40 W  
 (Part of PMUE1039A, PMUE1040A, PMUE1056A, and PMUE1057A Radios)  
 (Sheet 1 of 2)

6/7/95 RFD-95115-0



Schematic Diagram for  
 UHF Main Boards, 450-470 MHz, 12.5 & 20-25 kHz, 40 W  
 (Part of PMUE1039A, PMUE1040A, PMUE1056A, and PMUE1057A Radios)  
 (Sheet 2 of 2)

1. CONNECTION TO RF SECTION INDICATED BY \_\_\_\_\_
2. AUDIO VOLTAGE LEVELS ARE AT 1 KHZ, 60% DEVIATION UNLESS OTHERWISE SPECIFIED.

**Parts List**

SM50/SM120 UHF Main Board, 450-470 MHz, 40 Watts, 12.5 kHz (N) (Used in PMUE1039 & PMUE1056)  
 SM50/SM120 UHF Main Board, 450-470 MHz, 40 Watts, 20/25 kHz (W) (used in PMUE1040 & PMUE1057)

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C1	21-13740G21	capacitor, fixed: uF +/-5%; 50 V; unless otherwise stated
C2	21-13740G24	5.6 ±0.1 pF
C3	21-13740G16	6.8 ±0.1 pF
C4	21-13740G30	3.6 ±0.1 pF
C5	21-13740G27	11 pF 2%
C6	21-13740G23	6.2 ±0.1 pF
C7	21-13740G28	6.2 ±0.1 pF
C8	21-13740G12	9.1 pF 2%
C9	21-13740G13	2.4 ±0.1 pF
C10	21-13740G12	2.7 ±0.1 pF
C11	21-13740A55	2.4 ±0.1 pF
C12	21-13740A55	100 pF
C14	21-13740L05	3.0 ±0.1 pF
C15	21-13740G25	7.5 ±0.1 pF
C16	21-13740G18	4.3 ±0.1 pF
C17	21-13740G32	13 pF 2%
C18	21-13740G18	4.3 ±0.1 pF
C19	21-13740G18	4.3 ±0.1 pF
C20	21-13740G34	16 pF 2%
C21	21-13740G18	4.3 ±0.1 pF
C22	21-13740G17	3.9 ±0.1 pF
C23	21-13740G32	13 pF 2%
C24, 25	21-13740G18	4.3 ±0.1 pF
C26	21-13740G10	2.0 ±0.1 pF
C27	21-13740A59	150 pF
C28	21-13740A31	12 pF
C29	21-13740A35	18 pF
C30	21-13740A59	150 pF
C33	---	Not Used
C51	21-13740A53	82 pF
C52	21-13740A31	12 pF
C53	---	Not Used
C54	21-13740A46	47 pF
C55	21-13743A19	0.1 uF 10%; 16 V
C56	21-13740A57	120 pF
C57, 58	---	Not Used
C59	21-13740A53	82 pF
C60	21-13740A59	150 pF
C61	21-13741A25	1500 pF
C62	23-11049A05	tantalum 0.47 uF 10%; 25 V
C63(N)	21-13740A42	96 pF
C64(W)	21-13740A49	56 pF
C65(N)	21-13740A79	1000 pF
C65(W)	21-13740A73	560 pF
C66	21-13741A45	0.1 uF
C67	21-13743A19	0.1 uF 10%; 16 V
C68	23-11049J11	tantalum 4.7 uF 10%; 16 V
C69	21-13743A19	0.1 uF 10%; 16 V
C70	21-13743A19	0.1 uF 10%; 16 V
C71	23-11049A57	tantalum 10 uF 10%; 16 V
C73	21-13740A33	15 pF
C74	21-13740A42	36 pF
C75	21-13740A18	4.3 ±0.25 pF
C79	21-13740A36	20 pF
C80	---	Not Used
C81 thru 83	21-13743A19	0.1 uF 10%; 16 V
C85 thru 87	21-13740A59	150 pF
C89	21-13740A63	220 pF
C90	21-13740G46	47 pF 2%
C92	21-13740G24	6.8 ±0.1 pF
C93	23-11049J11	tantalum 4.7 uF 10%; 16 V
C207	21-13741A45	0.1 uF
C210, 211	21-13740A55	100 pF
C212, 213	23-11049J11	tantalum 4.7 uF 10%; 16 V
C214	21-13740A79	1000 pF
C215	21-13741A45	0.1 uF
C216	21-13741A45	150 pF
C217	21-13740A59	150 pF
C218	21-13740A79	1000 pF
C219	23-11049J11	tantalum 4.7 uF 10%; 16 V
C221	21-13743A19	0.1 uF 10%; 16 V
C222	23-11049A07	tantalum 1 uF 10%; 16 V
C223	21-13741A39	5600 pF
C224	23-11049J11	tantalum 4.7 uF 10%; 16 V
C225	21-13741A51	0.18 uF
C230, 231	21-13740A59	150 pF
C232	21-13740A79	1000 pF
C233	21-13743A19	0.1 uF 10%; 16 V
C234	21-13740A41	33 pF

SM50/SM120 UHF Main Board, 450-470 MHz, 40 Watts, 12.5 kHz (N) (Used in PMUE1039 & PMUE1056)  
 SM50/SM120 UHF Main Board, 450-470 MHz, 40 Watts, 20/25 kHz (W) (used in PMUE1040 & PMUE1057)

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C236	---	Not Used
C237	23-11049J11	tantalum 4.7 uF 10%; 16 V
C238, 239	21-13740A59	150 pF
C241	21-13740A59	150 pF
C242	21-13740A27	8.2 ±0.25 pF
C243	21-13740G12	2.4 ±0.1 pF
C244	21-13740A23	6.2 ±0.25 pF
C245	21-13740A21	5.6 ±0.25 pF
C246	21-13740A23	6.2 ±0.25 pF
C247	23-11049A03	tantalum 0.22 uF 10%; 35 V
C251	21-13740A27	8.2 ±0.25 pF
C252	21-13740A59	150 pF
C253	21-13740G09	1.8 ±0.1 pF
C254	21-13740A03	1 ±0.25 pF
C255	21-13740A31	12 pF
C256, 257	21-13740A21	5.6 ±0.25 pF
C261	21-13740A59	150 pF
C262	21-13741A45	0.1 uF
C263	21-13740A59	150 pF
C264 thru 266	---	Not Used
C267	21-13740A59	150 pF
C271, 272	21-13740A59	150 pF
C273	21-13740A43	39 pF
C274	21-13740A71	470 pF
C275	21-13740F18	4.3 ±0.25 pF
C276	21-13740A27	8.2 ±0.25 pF
C279	23-11049A03	tantalum 0.22 uF 10%; 35 V
C281	21-13740A23	6.2 ±0.25 pF
C282	21-13740A36	20 pF
C283	21-13740A59	150 pF
C284	21-13740A79	1000 pF
C285	21-13740A51	68 pF
C286	---	Not Used
C287	21-13740A51	68 pF
C288	21-13743A19	0.1 uF 10%; 16 V
C289	---	Not Used
C291	---	Not Used
C292, 293	21-13740A59	150 pF
C294	21-13741A45	0.1 uF
C295	21-13740A59	150 pF
C296	---	Not Used
C297	21-13740A71	470 pF
C298, 299	21-13743A19	0.1 uF 10%; 16 V
C401	21-13740A41	33 pF
C402	21-13741W01	2.7 ±0.25 pF
C403	21-13740A37	22 pF
C404	21-13743A19	0.1 uF 10%; 16 V
C405	23-11049J43	tantalum 4.7 uF 10%; 10 V
C406	23-11049A04	tantalum 2.2 uF 10%; 10 V
C407	21-13741A45	0.1 uF
C408	21-13741A51	0.18 uF
C409, 410	23-11049A57	tantalum 10 uF 10%; 16 V
C411	21-13740A79	1000 pF
C412	23-11049J07	tantalum 3.3 uF 10%; 20 V
C413, 414	21-13743A19	0.1 uF 10%; 16 V
C415	21-13741A45	0.1 uF
C416	21-13740A71	470 pF
C417	21-13740A79	1000 pF
C418	21-13743A19	0.1 uF 10%; 16 V
C419	23-11049A07	tantalum 1 uF 10%; 16 V
C420	21-13741W01	1 uF 10%; 25 V
C421	21-13743A19	0.1 uF 10%; 16 V
C422	21-13740A71	470 pF
C423	23-11049J43	tantalum 4.7 uF 10%; 10 V
C424	---	Not Used
C425	21-13740A46	47 pF
C450	21-13740A28	9.1 ±0.25 pF
C451	---	Not Used
C452	21-13740A59	150 pF
C453, 454	21-13743A19	0.1 uF 10%; 16 V
C455 thru 458	21-13740A59	150 pF
C459	21-13743A19	0.1 uF 10%; 16 V
C460	---	Not Used
C461	21-13740A20	5.1 ±0.25 pF
C462	21-13740A59	150 pF
C463	21-13740A20	5.1 ±0.25 pF
C464	21-13743A19	0.1 uF 10%; 16 V
C465	21-13740A71	470 pF
C466	21-13740A59	150 pF
C501	21-13740A79	1000 pF
C502	21-13743A19	0.1 uF 10%; 16 V

SM50/SM120 UHF Main Board, 450-470 MHz, 40 Watts, 12.5 kHz (N) (Used in PMUE1039 & PMUE1056)  
 SM50/SM120 UHF Main Board, 450-470 MHz, 40 Watts, 20/25 kHz (W) (used in PMUE1040 & PMUE1057)

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C503	23-11049A57	tantalum 10 uF 10%; 16 V
C511	21-13741W01	1 uF 10%; 25 V
C551	21-13743A19	0.1 uF 10%; 16 V
C554	21-13743A19	0.1 uF 10%; 16 V
C555	21-13741A79	1000 pF
C556	23-11049A05	tantalum .47 uF 10%; 25 V
C558	23-11049J43	tantalum 4.7 uF 10%; 10 V
C559 thru 561	21-13743A19	0.1 uF 10%; 16 V
C562	23-11049A57	tantalum 10 uF 10%; 16 V
C563, 564	21-13740A55	0.0 pF
C565	---	Not Used
C601	21-13743A19	0.1 uF 10%; 16 V
C602	21-13741A57	4700 pF
C603	23-11049A07	tantalum 1 uF 10%; 16 V
C604	23-11049A05	tantalum 0.47 uF 10%; 25 V
C651	21-13740A79	1000 pF
C652	21-11032B15	0.22 uF +80/-20%
C653	23-11049J43	tantalum 4.7 uF 10%; 10 V
C654	21-11032B15	0.22 uF +80/-20%
C655	23-11049J43	tantalum 4.7 uF 10%; 10 V
C656	21-13743A19	0.1 uF 10%; 16 V
C701	21-13741A59	.039 uF
C702	21-13741A45	.01 uF
C803, 804	21-13740A71	470 pF
C805	21-13743A19	0.1 uF 10%; 16 V
C806 thru 814	21-13740A71	470 pF
C810	21-13740A30	11 pF
C811	21-13740A29	10 pF
C812	21-13740A33	15 pF
C813, 2614	21-13740A79	1000 pF
C815	21-13740A24	6.8 ±0.25 pF
C816	21-13740A59	150 pF
C817, 2618	21-13743A19	0.1 uF 10%; 16 V
C818	21-13740A59	150 pF
C819	21-13740A33	15 pF
C821	21-13740A39	27 pF
C822, 2623	---	Not Used
C826	21-13741W01	1 uF 10%; 25 V
C827	21-13740A79	1000 pF
C828	21-13740A59	150 pF
C829	---	Not Used
C830	21-13740A39	27 pF
C831, 2632	21-13740B32	20 pF
C836	21-13740A59	150 pF
C837	21-13741W01	1 uF 10%; 25 V
C838	21-11078B18	16 pF; 100 V
C839	21-11078B34	47 pF; 100 V
C840	21-11078B35	51 pF; 100 V
C841	21-11078B36	56 pF; 100 V
C842	21-11078B36	56 pF; 100 V
C843, 2644	21-80964X35	clamped mica 39 pF 250 V
C845	21-11078B18	16 pF; 100 V
C846	21-80060M15	8 ±0.5 pF 500 V
C847	21-80060M34	43 pF 500 V
C848	21-13740B49	100 pF
C849	21-82587X69	chip 1.2 uH 5%
C850	21-13741W01	1 uF 10%; 25 V
C851	21-82587X63	39 pF 500 V
C852	21-13740A10	2.0 pF
C853	21-13740A36	20 pF
C854 thru 2656	21-13740B49	100 pF
C2660	21-80060M13	7 ±0.5 pF 500 V
C2661	21-11078B05	4.7 ±0.2 pF; 100 V
C2662	21-80060M22	13 pF 500 V
C2663	21-80060M11	6 ±0.5 pF 500 V
L261	24-82587X60	chip 0.39 uH 5%
L262	24-82587X60	chip 0.39 uH 5%
L263	24-82587X61	chip 0.39 uH 5%
L264	24-82587X60	chip 0.39 uH 5%
L265	21-11032B15	0.22 uF +80/-20%
L266	21-13740A79	1000 pF
L267	21-13740A59	150 pF
L268	24-82587X47	chip 33 nH 5%
L284	24-82587X60	chip 0.39 uH 5%
L291	24-82587X43	chip 15 nH 5%
L292	24-82587X60	chip 0.39 uH 5%
L401	24-80579C43	3 turns uH
CR2	48-80142L01	silicon Schottky SOT
CR51	24-80591C73	5 turns
CR201	48-02245J22	silicon varactor SOT 1T363
CR211, 212	48-13839C07	dual silicon SOT MMBD7000
CR241	48-82824C01	silicon varactor SOT 1SV229
CR251, 252	48-82824C01	silicon varactor SOT 1SV229
CR401	48-05129M76	silicon SOT
CR402	48-13839C07	dual silicon SOT MMBD7000
CR403	48-80939T01	Schottky SOT

SM50/SM120 UHF Main Board, 450-470 MHz, 40 Watts, 12.5 kHz (N) (Used in PMUE1039 & PMUE1056)  
 SM50/SM120 UHF Main Board, 450-470 MHz