MOTOROLA P/N 8404787J01 REV O **21 DECEMBER 1995** U501 COMPONENT SIDE (GRAY) SOLDER SIDE (PINK) OVERLAY -----RCB-96115-O RCB-96118-O RCB-96119-O

COMPONENT SIDE VIEW

MOTOROLA P/N 8404787J01 REV O 21 DECEMBER 1995 U501 COMPONENT SIDE INNER LAYER (GRAY)
SOLDER SIDE INNER LAYER (PINK)
OVERLAY -----RCB-96116-O RCB-96117-O

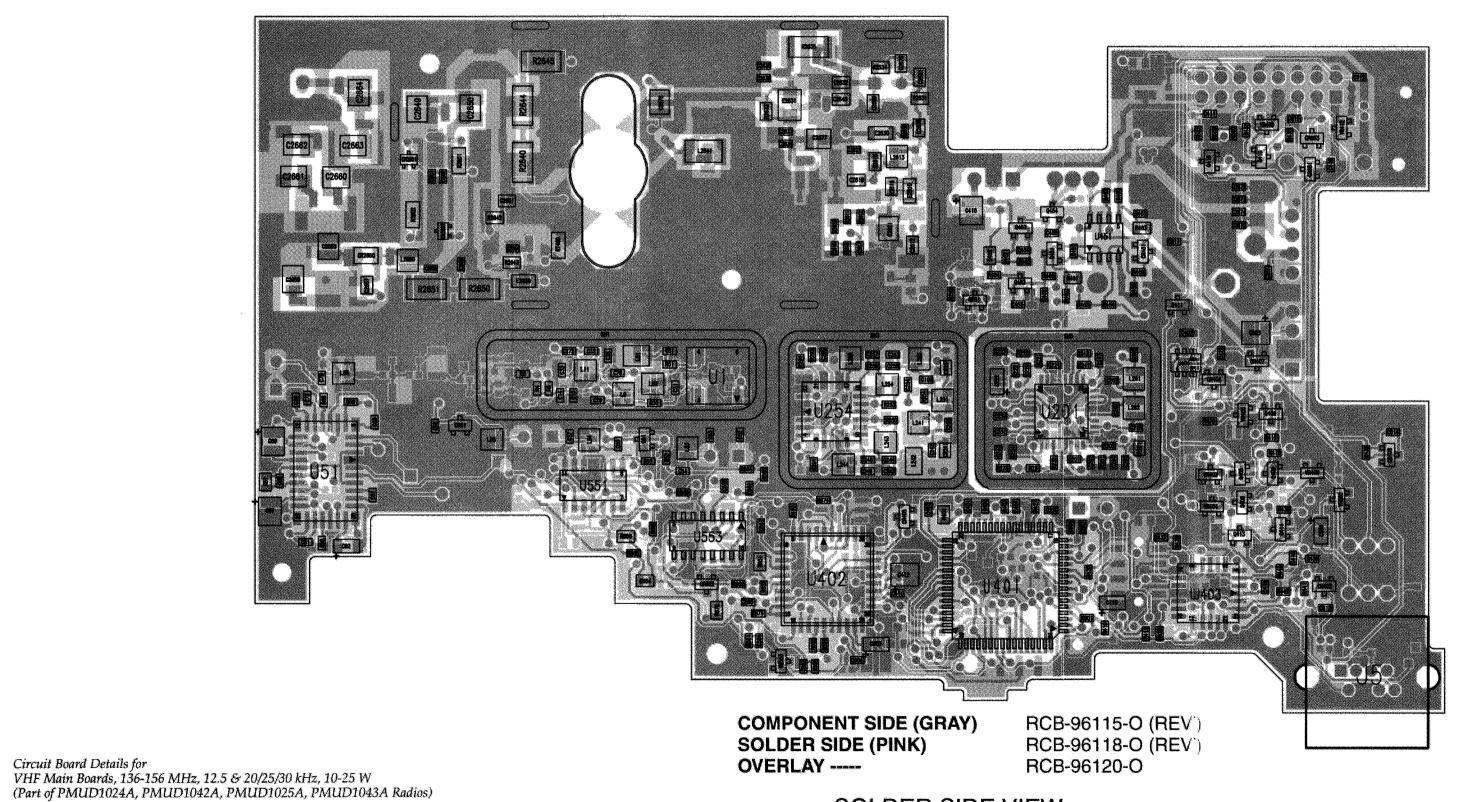
COMPONENT SIDE VIEW

Circuit Board Details for VHF Main Boards, 136-156 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1024A, PMUD1042A, PMUD1025A, PMUD1043A Radios)

RCB-96119-O

MOTOROLA P/N 8404787J01 REV O 21 DECEMBER 1995

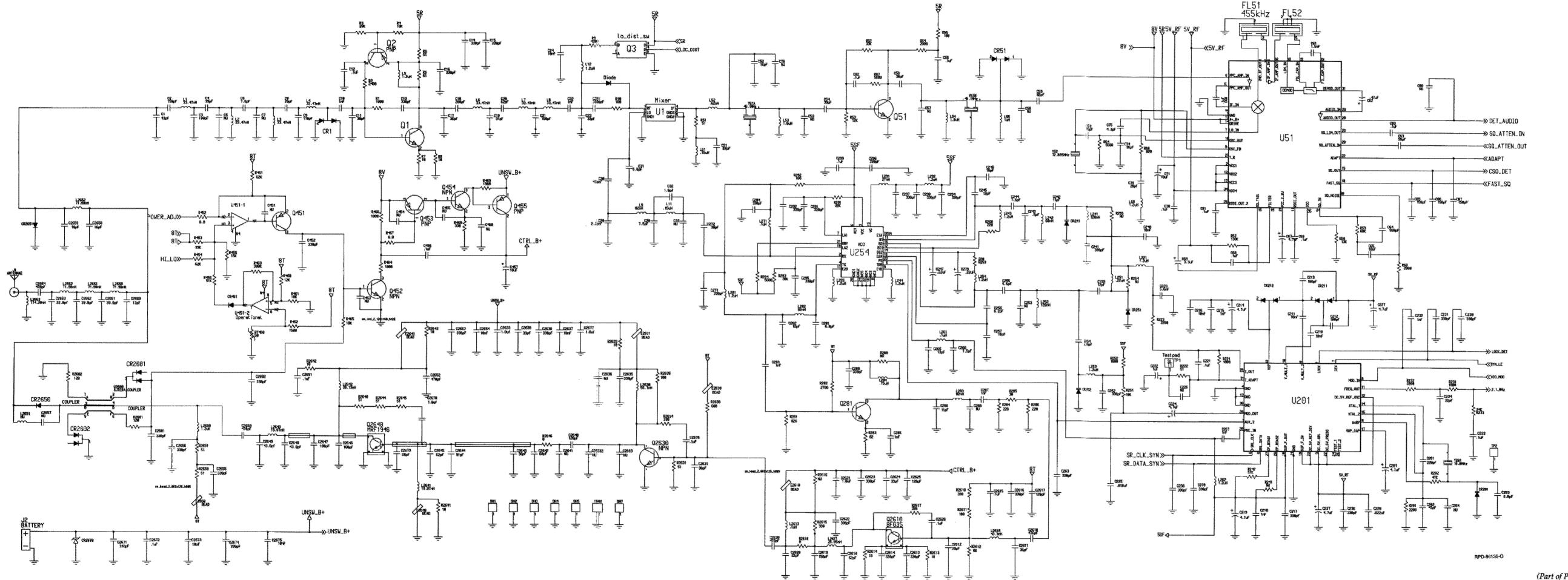
MOTOROLA P/N 8404787J01 REV O 21 DECEMBER 1995



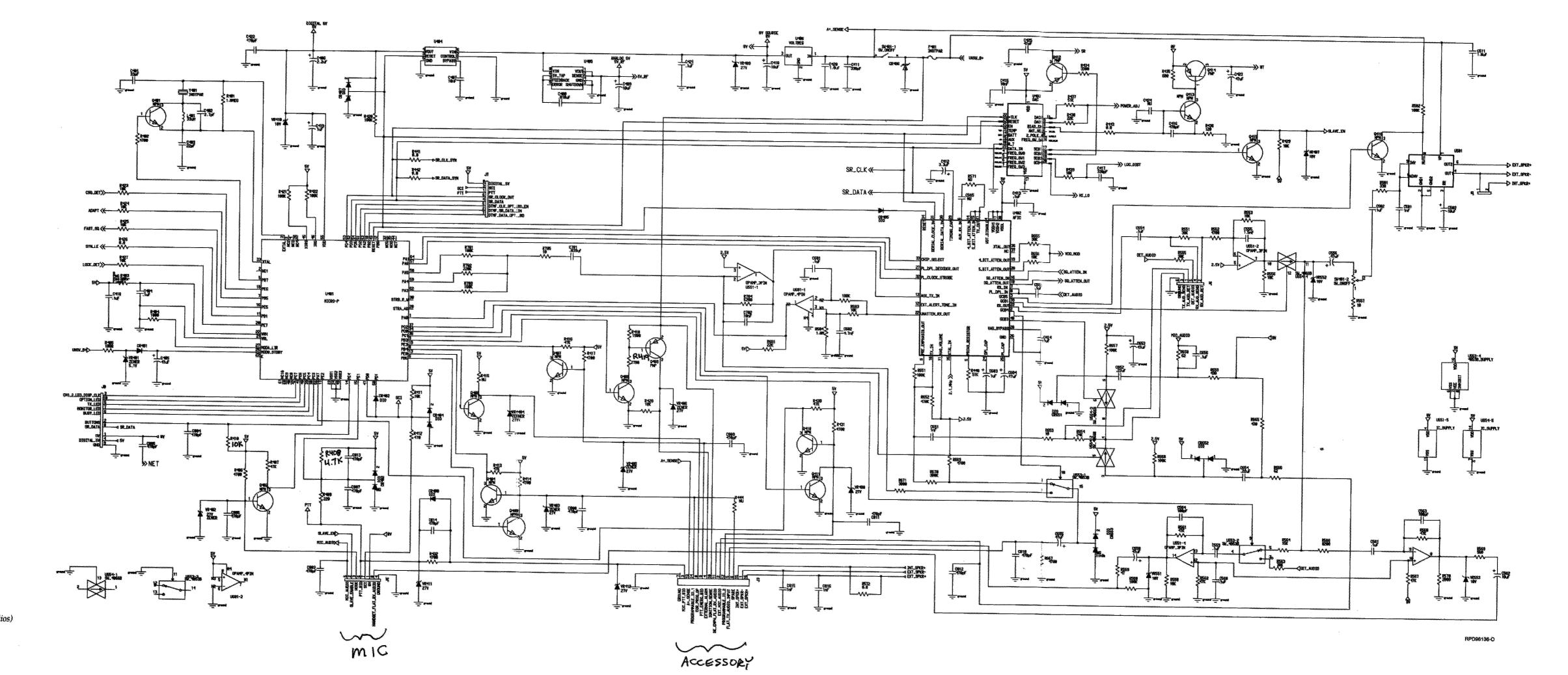
RCB-96116-O (REV) RCB-96117-O (REV) RCB-996120-O COMPONENT SIDE INNER LAYER (GRAY) SOLDER SIDE INNER LAYER (PINK)
OVERLAY ----

SOLDER SIDE VIEW

SOLDER SIDE VIEW



Schematic Diagram for VHF Main Boards, 136-156 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1024A, PMUD1042A, PMUD1025A, PMUD1043A Radios) (Sheet 1 of 2)



Schematic Diagram for VHF Main Boards, 136-156 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1024A, PMUD1042A, PMUD1025A, PMUD1043A Radios) (Sheet 2 of 2)

6880903Z45-A

March, 1998

Parts List

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) (used in PMUD1024 and PMUD1142) SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 20/25/30 kHz (W)

PL-961020-A (used in PMUD1025 and PMUD1143) REFERENCE MOTOROLA DESCRIPTION SYMBOL PART NO. apacitor, fixed: +/-5%; 50 V: unless otherwise stated 21-13740F42 21-13740F55 21-13740F51 21-13740F41 21-13740F24 7.5 uF ±0.25 pF 91-19740F41 21-13740F52 1-19741F25 21-13740F38 0.1 uF ±10%: 16 V 11-13743K15 1-13741F13 C13 thru 16 1-13740F40 21-13750F58 200 n 21-13740F50 21-13740F46 21-13740F51 21-13741F25 21-13740F39 21-13741F29 21-13741F13 7.5 uF ±0.25 pF 21-13740F24 2.2 uF +0.25 pl 21-13740F11 21-13740F42 5.6 uF ±0.25 p 21-13740F21 21-13740F03 1.0 uF ±0.25 p C33 21-13740F49 C52 (N) 21-13740F31 15 pF 21-13740F32 16 pF C52 (W) C54 (N) C54 (W) 21-13740F46 21-13740F41 21-13741K15 0.1 uF ±10%; 16 V 21-13740F52 21-13740F38 21-13740F51 C59 (N) C59 (W) 21-13740F49 0.1 uF ±10%; 16 V 21-13743K15 1500 pF 21-13741F29 tantalum 0.47 uF ±10%; 25 V 23-11049A05 21-13740F40 C63 (N) C63 (W) 21-13740F45 C64 (N 21-13740A79 C64 (W 21-13740A73 21-13741F49 0.1 uF ±10%; 16 V 21-13743K15 tantalum 4.7 uF ±10%; 16 V 23-11049J11 0.1 uF ±10%; 16 V 21-13743K15 tantalum 3.3 uF ±10%; 20 V 23-11049J07 91-13743K15 0.1 uF ±10%: 16 V tantalum 10 uF ±10%; 16 \ 23-11049A57 21-13740F31 21-13740F40 4.3 uF ±0.25 pF 21-13740F18

21-13740F34

21-13743K15

21-13740F55

21-13740F29

21-13740F59

21-13740F43

21-13740L14

23-11049J11

21-13741F49

21-13740F51

23-11049J11

21-13741F25

21-13741F49

21-13741F13

21-13741F25

23-11049J11

21-13743K15

23-11049A07

21-13741F43

23-11049J11

C85 thru 87

C212, 213

C215

C216

C217

C218

C219

C221

C222

C223

C224

20 pF

0.1 uF ±10%: 16 V

6.8 uF ±0.1 pF

100 pF

tantalum 4.7 uF ±10%; 16 V

tantalum 4.7 uF ±10%; 16 V

tantalum 4.7 uF ±10%; 16 V

tantalum 1 uF ±10%; 16 V

tantalum 4.7 uF ±10%; 16 V

0.1 uF ±10%; 16 V

5.6 uF ±0.25 pF

C456 C457 C458 C501 C502 C503 C511

C551 C554

C555

21-13743A19

23-80090M24

21-13741F25

21-13743K15

21-13741W01

21-13743K15

21-13743K15

21-13741F29

23-11049A57

0.1 uF ±10%; 16 V

0.1 uF ±10%; 16 V

1 uF ±10%; 25 V

0.1 uF ±10%; 16 V

0.1 uF ±10%; 16 V

1500 pF

tantalum 10 uF ±10%; 16 V

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) (used in PMUD1024 and PMUD1142) SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 20/25/30 kHz (W) (used in PMUD1025 and PMUD1143)

PI -961020-/ DESCRIPTION SYMBOL PART NO. 21-13741A51 tantalum 4.7 uF ±10%; 16 V 23-11049J11 21-13743E07 .022 uF ±10%; 16 V 21-13741F13 21-13741F25 0.1 uF±10%; 16 V 21-13743K15 21-13740F39 C236 C237 C238, 239 21-13741F13 tantalum 4.7 uF ±10%; 16 V 23-11049J1 21-13741F13 C240 C241 C242 C243 C244 21-13741F49 21-13741F13 21-13740F28 21-13740F01 7.5 uF ±0.25 pF 21-13740F24 C245 C246 C247 C252 C253 C254 21-13740F29 21-13740F33 tantalum 0.22 uF ±10%; 35 V 23-11049A03 330 pF 21-13741F13 21-13740F10 2 uF ±0.25 pl 21-13740F21 6.2 uF ±0.25 pl 21-13740F22 21-13740F33 330 nF 21-13741F13 C264 C265 C266 C267 21-13740F30 7.5 uF ±0.25 pF 21-13740F24 21-13741F25 C271 C272 330 pF 21-13741F13 21-13740F38 tantalum 0.22 uF ±10%; 35 V C279 C281 23-11049A03 6.8 uF ±0.25 pF 21-13740F23 C281 C282 C283 C284 C285 C286 C287 C288 C289 C291, 292 21-13740F29 21-13741F25 330 pF 21-13741F13 21-13741F25 21-13740F28 11 pF 21-13741F25 330 pF 21-13741F13 21-13741F13 330 pF 21-13741F13 C294 thru 2 0.1 uF ±10%; 16 V 21-13743K15 C299 C299 C401 C402 C403 C404 C405 C406 C407 C408 C409, 410 C411 C412 C413, 414 21-13740F39 2.7 uF ±0.25 pF 21-13740F13 21-13740F35 tantalum 1 uF ±10%; 16 V 21-13743K15 tantalum 47 uF ±10%; 10 V 23-11049J43 tantalum 2.2 uF ±10%; 10 V 23-11049A40 21-13741F49 21-13741A51 .018 uF tantalum 10 uF ±10%; 16 V 23-11049A57 21-13741F13 tantalum 3.3 uF ±10%; 20 \ 23-11049J07 21-13743K15 tantalum 1 uF ±10%; 16 V C415 21-13741F49 C416 C417 C418 C419 C420 21-13741F17 330 pf 21-13741F13 .01 uF 21-13743K15 tantalum 1 uF ±10%; 16 V 23-11049A07 21-13741W01 1 uF ±10%; 25 V C421 C422 C423 21-13743K15 21-13741F17 23-11049J43 tantalum 47 uF ±10%; 10 V C424 C425 C451 21-13740F43 47 pF C452 C453 thru 45 21-13741F13 330 pF

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) (used in PMUD1024 and PMUD1142)

C556

C562 C563, 564

C2611

C2612

C2616 C2617

C2618 C2619 C2620 C2621 C2622,

C2624 C2625 C2626 C2630 C2631 C2632 C2633 C2635

C2636 C2637 C2638 C2639 C2640 C2641 C2642 C2643 C2644 C2645 C2646 C2647

C2648, 2

C2651

C2652 C2653 C2654

C2657 C2658 C2659 C2660

C2672

C2674

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 20/25/30 kHz (W) (used in PMUD1025 and PMUD1143) REFERENCE MOTOROLA

PL-961020-A DESCRIPTION PART NO. SYMBOL tantalum 0.47 uF ±10%; 25 V 23-11049A05 tantalum 47 uF ±10%; 10 V C559 thru 561 21-13743K15 0.1 uF ±10%; 16 V antalum 10 uF ±10%: 16 V 21-13740F51 100 pF 21-13743K15 0.1 uF ±10%; 16 V 21-13741F41 tantalum 1 uF ±10%; 16 V 23-11049A07 23-11049A05 tantalum 0.47 uF ±10%; 25 V 21-13741F25 21-13743F08 0.22 uF +80/-20%; 16 V tantalum 47 uF ±10%; 10 V 23-11049J43 0.22 uF +80/-20%; 16 V 21-13743F08 23-11049J43 tantalum 47 uF ±10%; 10 V 0.1 uF ±10%; 16 V 21-13743K15 21-13741A59 C702 C803 thru 814 21-13741F49 21-13741F17 470 pF 21-13741F25 C815, 816 21-13741F13 C2601, 2602 21-13740A4 1-13740A36 C2613, 2614 21-13741F13 0.1 uF ±10%; 16 V 1-13743k15 21-13741F13 21-13740F53 21-13740A50 21-13740A59 21-13740A37 1 uF ±10%; 25 V 1-13741W01 1-13741F13 1-13740F39 21-13740F53 21-13743A19 0.1 uF ±10%; 16 V 21-13740A71 21-13740A40 21-13741W01 1 uF ±10%; 25 V 21-13741F13 21-13741F49 21-13741F13 21-13740F39 21-13740A57 21-13740A51 21-13740A42 21-13740A54 21-13740A50 62 pF 21-11078B49 180 pF: 100 V 43 pF: 100 V 21-11078B33 470 pF; 100 V 21-11078859 0.1 uF ±10%; 16 V 21-13743A19 21-13740A71 21-13741F13 21-13741F49 C2655, 2656 21-13741F13 21-11078B19 16 pF: 100 V 21-80060M25 21-80060M22 13 pF 500 V 21-11078B32 1-11078B22 22 pF: 100 V 21-11078B59 470 pF; 100 V 21-13741F13 21-13743K15 21-13741F49 1-13741F13 21-13741F49 1-13743A19 1 uF ±10%; 25 V -13741W01

dual Schottky SOT

dual Schottky SOT

silicon varactor IT363

silicon PIN SOT MMBV3401

48-80142L01

48-80154K03

48-02245J22

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) (jused in PMUD1024 and PMUD1142) (used in PMUD1024 and PMUD1142) SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 20/25/30 kHz (W)

06-62057A47

06-62057A59

06-62057A23

R280 R281 R282 R283

chip 0.1 uH 5%

chip 1.2 uH 5%

NPN, type MMBR941

PNP, type MMBT3906

NPN, type MMBR941

NPN, type MMBR941

PNP; type M41L03

NPN, type MMBT3904

NPN, type MMBT3904

NPN, type MMBT3904

PNP: type 2SB1142S

unless otherwise stated

NPN; type BFG35

NPN: type BFQ43S

NPN: tupe M25C22

PNP type

51 ohms

10 ohms

430 ohms

100 ohms

200k; 1/10 W

130k; 1/10 W

820 ohms

5.6k

2.2k

2 2k

Not Used

2.7k

PNP; type M41L03

NPN, type MMBT3904

digital NPN; type DTC144W

digital NPN; type DTC144W

digital NPN; type DTC144W

digital NPN; type DTC144W

resistor, fixed: +/-5%; 1/16 W:

dual transistor switch UMC3TL

6 turns

4 turns

6 turns

9 turns

9 turns

12 turns

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 20/25/30 kHz (W)

REFERENCE	MOTOROLA		REFERENCE	MOTOROLA
SYMBOL	PART NO.	DESCRIPTION	SYMBOL	PART NO.
CR211	48-13833C07	dual silicon SOT MMBD7000	L2611	24-60591E69
CR212	48-13833C07	dual silicon SOT MMBD7000	L2613	24-62587N53
CR241	48-62824C03	silicon varactor ISV232	L2630	24-60591R29
CR251	48-62824C03	silicon varactor ISV232	L2641	24-60591D69
OR252	48-62824C01	silicon varactor ISV229	L2642	24-60591M77
			L2643	24-60591D69
CR401	48-05129M76	silicon SOT		
CR402	48-13833C07	dual silicon SOT MMBD7000	L2650	24-62587X69
CR403	48-80939T01	Schottky SOT	L2651	***
CR404	48-13833C07	dual silicon SOT MMBD7000	L2652	24-60591S61
CR405	48-05129M76	silicon SOT	L2660, 2661	24-60591S61
CR406	48-83553T02	4A 200 PIV MUR420	L2662	24-60591S61
	48-13833C07	dual silicon SOT MMBD7000	L2663	24-60591V77
CR407		silicon SOT	12000	g. 4402
CR408	48-05129M76			
CR451	48-05129M76	silicon SOT		40 40007307
CR651, 2652	48-13833C07	dual silicon SOT MMBD7000	Q1	48-13827A07
CR653	48-13833C07	dual silicon SOT MMBD7000	Q2	48-05128M6
CR2601, 2602	48-05218N57	dual silicon SOT	Q3	48-09939C04
CR2650, 2651	48-02482J02	silicon PIN MA4P1250	Q51	48-13827A07
CR2670	48-80236E07	transient suppressor	Q281	48-13827A07
CHZO/U	40-00230EU1	transierit suppressor	Q401	48-80214G02
		**-*		
		ferrite bead:	Q402	48-80947V01
E2610	24-80067M01	ferrite bead	Q404 thru 408	48-80947V01
E2630	24-80067M01	ferrite bead	Q409	48-80141L03
E2631	24-80132N01	ferrite bead	Q410, 411	48-80947V01
E2640	24-80067M01	ferrite bead	Q412	48-05128M6
		1961 10 00 0	Q413	48-80214G0
E2641	24-80132N01	ferrite bead		
E2650	24-80067M01	ferrite bead	Q414	48-80141L03
			Q415, 416	48-80947V0
		fuse:	Q451	48-05128M6
F401	65-05214E04	2 amp axial lead	Q452	48-80214G0
1 401			Q453	48-05128M6
		filter:	Q454	48-80214G0
	N4 MAMAMAN 1		Q455	48-02245J25
FL51 (N)	91-80098D04	455 kHz 4F		
FL51 (W)	91-80098D06	455 kHz 4D	Q2610	48-02245J24
FL52 (N)	91-80097D04	455 kHz 6F	Q2630	48-02245J28
FL52 (M)	91-80097D06	455 kHz 6D	Q2640	48-80225C2
		connector, receptacle:		
J1	09-83228R01	mini UHF coax		
J2	30-04510J01	power cable assembly (includes J2)	R1	06-62057A4
J3	28-04503J01	16-pin, accessories	R2	06-62507A5
J5	09-04426J01	telephone type, 8 contact, microphone	R3	06-62057A8
	09-04424J05	6 pin, internal options audio	R4	06-62057A7
J6			R5. 6	06-62057A1
J7	09-04424J06	8-pin, internal options digital		
J8	09-04422J01	10 pin, display board	R7, 8	06-62507A0
J9	28-04423J01	2-pin, internal speaker	R9	06-62057A4
		•	R10	06-62057A2
		resistor, jumper:	R51	06-62057A1
R444	***	Not Used	R52	06-62057A8
		0 ohm	R53	06-62057A7
R572	06-62057B47	V VIIII		06-62057A5
		W 2	R54	
		coll, rf:	R55	06-62057A2
L1 thru 4	24-60591G24	9 turns	R57 (N)	06-62057D3
L5	24-62587N69	chip 1.2 uH 5%	R57 (W)	06-62057D2
L6 thru 8	24-60591G24	9 turns	R58	06-62057A7
	24-62587N52	chip 82 nH 5%	R59 (N)	06-62057A9
L9				06-60257A9
Lii	24-62587N55	chip 0.15 uH 5%	R59 (W)	1 0 0 1 100 4 40
L12	24-62587N69	chip 1.2 uH 5%	R60 (N)	06-62057A8
L51	24-83411T63	chip 0.15 uH 5% shielded	R60 (W)	06-62057A5
L52 (N)	24-62587N65	chip 0.75 uH 5%	R64	06-62057A6
L52 (W)	24-62587N63	chip 0.62 uH 5%	R66	06-62057A4
	24-62587N71	chip 1.8 uH 5%	R67	06-62057A6
L53, 54				06-62057A5
L55	24-62587N68	chip 1.0 uH 5%	R201	
L58	24-62587N69	chip 1.2 uH 5%	R202	06-62057A8
L221	24-62587N69	chip 1.2 uH 5%	R221	06-62057A4
L241	24-62587N54	chip0 .12 uH 5%	R222	06-62057A1
L242	24-62587T13	chip 68 nH 5%	R223	06-62057A5
			R231	06-62057A4
L243, 244	24-62587N69	chip 1.2 uH 5%		M. C
L251	24-62587N57	chip 0.22 uH 5%	R232	06-62057A5
L252	24-62587N54	chip 0.12 uH 5%	R233	06-62057A8
L253 thru 255	24-62587N69	chip 1.2 uH 5%	R241	***
L261	24-62587N53	chip 0.1 uH 5%	R242	06-62057A9
			R251	06-62057A7
L262	24-62587N69	chip 1.2 uH 5%		
L271	24-62587N53	chip 0.1 uH 5%	R252	06-62057A4
L281	24-62587N69	chip 1.2 uH 5%	R253	06-62057A3
L282, 283	24-62587N52	chip 82 nH 5%	R254, 255	
		chip 0.75 uH 5%	R260	06-62057A3
L284	24-62587N65			

24-62587N69

24-60578C43

24-60591G77

chip 27 nH 5%

chip 1.2 µH 5%

chip 33 uH

9 turns

SM50/SM120 YHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) (used in PMUDI024 and PMUDI142)

PL-961020-A

REFERENCE	MOTOROLA	
SYMBOL	PART NO.	DESCRIPTION
R284 R285	06-62057C59 06-62057A12	220 ohms 30 ohms
R286	06-62057A33	220 ohms
R291	06-62057A80	20k
R292	06-62057A25	100 ohms
R293 R294	06-62057A84 06-62057A67	30k 5.6k
R401	06-62057D54	1.8 meg; 1/10 W
R402	06-62057A65	4.7k
R403	06-62057A73	10k
R404	06-62057A49 06-62057A55	1k
R405 R406	06-62057A65	1.8k 4.7k
R407	06-62057A89	47k
R408	06-62057A65	4.7k
R409 R410, 411	06-62057A33	220
R412	06-62057A73 06-62057C67	10k 470 ohms; 1/10 W
R413	06-62057A89	47k
R414	06-62057A65	4.7k
R415	 00 00057480	Not Used
R416 R417	06-62057A89 06-62057A65	47k 4.7k
R418	06-62057A53	1.5k
R419	06-62057A59	2.7k
R420	06-62057A73	10k
R421, 422 R423 thru 425	06-62057A97 06-62057A73	100k 10k
R426	06-62057B47	0 ohms
R427	06-62057A73	10k
R428	06-62057A97	100k
R429	06-62057A73	10k
R430 R431, 432	06-62057A89 06-62057A65	47k 4.7k
R434	06-62057A61	3.3k
R435	06-62057A45	680 ohms
R436	06-62057A27	120 ohms
R437 R438	06-62057A90 06-62057A81	51k 22k
R439	06-62057A51	10k
R440	06-62057A90	51k
R441 thru 443	06-62057B47	0 ohms
R451	06-62057D19	62k; 1/10 W
R452 R453	06-62057B47 06-62057A87	0 ohms 39k
R454	06-62057A92	62k
R455	06-62057A77	15k
R456	06-62057A90	51k
R460	06-62057A75	12k 10k
R461 R462	06-62057A73 06-62057A70	7.5k
R463	06-62057D35	300k; 1/10 W
R464	06-62057A49	1k
R465	06-62057A79	18k
R466 R467	06-62057A49 06-62057B47	1k 0 ohms
R468	06-80195M37	330 ohms; 1/2 W
R469	06-62057A49	1k
R501	06-62057A37	330 ohms
R502	06-62057A97 06-62057A84	100k 30k
R551 R552, 553	06-62057A84 06-62057A75	12k
R555 (N)	06-62057A77	15k
R555 (W)	06-62057A84	30k
R556	06-62057A73	10k
R557 R558	06-62057A01 06-62057A73	10 ohms 10k
R559	06-62057A73	47 ohms
R560	06-62057A97	100k
R561, 562	06-62057A89	47k
R563 (N)	06-62057A77	15k
R563 (W) R564	06-62057A84 06-62057A77	30k 15k
R566	06-62057A77	8.2k
R567, 568	06-62057A89	47k
R569	06-62057A43	560 ohms
R570	06-62057A56	2k
R571 R601	06-62057A81	Not Used 22k
R602	06-62057A97	100k

06-62057A73

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) used in PMUD1024 and PMUD1142)

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 20/25/30 kHz (W)

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
R604	06-62057B22	1.0 meg
R651	06-62057D30	180k; 1/10 W
R652	06-62057B14	470k
R653	06-62057A01	10 ohms
R654	06-62057A82	24k
R655	06-62057A84	30k
R656	06-62057A73	10k
R657	06-62057A97	100k
R658	06-62057C46	62 ohms; 1/10 W
R659	06-62057A40	430 ohms
R665	06-62057A40	430 ohms
R666	06-62057C46	62 ohms
R667	06-62057A65	4.7k
R668	06-62057A97	100k
R669	06-62057A65	4.7k
R670	06-62057D35	300k; 1/10 W
R671	06-62057A60	3k
R701	06-62057A97	100k
R702	06-62057B06	220k
R703	06-62057B03	160k
R704	06-62057A68	6.2k
R705	06-62057A01	10 ohms
R2601, 2602	06-11077A52	120 ohms
R2610	06-62057A37	330 ohms
R2611	06-62057A25	100 ohms
R2612	06-62057A21	68 ohms
R2613, 2614	06-62057A01	10 ohms
R2615	06-62057C63	330 ohms; 1/10 W
R2616	***	Not Used
R2617	06-62057C63	330 ohms; 1/10 W
	06-62057C01	0 ohms; 1/10 W
R2618	4 4 4000 40 4	680
R2630	06-62057A45	
R2631	06-62057C44	51 ohms; 1/10 W
R2633	06-62057C27	10 ohms; 1/10 W
R2634	06-62057C63	330 ohms; 1/10 W
R2635	06-80195M25	100 ohms; 1/2 W
R2640	06-80195M18	51 ohms; 1/2 W
R2641, 2642	06-62057C27	10 ohms; 1/10 W
R2643	06-62057C27	10 ohms; 1/10 W
R2644, 2645	06-80195M18	51 ohms; 1/2 W
R2646	06-62057C01	0 ohms; 1/10 W
R2650, 2651	06-80195M18	51 ohms; 1/2 W
RT460	06-05621T02	thermistor, 50k @ 25C
U1	51-80505D01	integrated circuit: (see note) double balance mixer
U51	51-80207R01	receiver system
U201*	(see note)	synthesizer
U251	51-05414\$84	VCO/buffer
U401*	(see note)	microcomputer MC68HC7711E9
U402	51-02227J35	audio filter
U403	51-05226P38	DAC
	51-80633C01	5 V regulator TK11950
U404	51-80633C01 51-05469E65	5 V regulator LP2951C
U405		8 V regulator MC7808BT
U406	51-13816D03	dual op-amp LM2904 SOIC
U451	51-80932W01	common with annual control of the co
U501	51-80147R01	audio power amp TDA1519AB
U551	51-02198J28	quad op-amp LM2902D SOIC
U553	51-84704M60	tripple 2-channel switch 4053B
U554	51-05663U35	quad bilateral switch
U601	51-02198J23	dual comparator LM2903 SOIC
VIDAN	40.00 40 0č	voltage regulator: (see note)
VR401	48-80140L06	Zener diode 5.1 V SOT
VR402 thru 406		Zener diode 27 V SOT
VR407	48-80140L15	Zener diode 10 V SOT
VR408, 409	48-80948V01	Zener diode 27 V SOT
VR410	48-80140L15	Zener diode 10 V SOT
VR411, 412	48-80948V01	Zener diode 27 V SOT
VR551 thru 553	48-8014UL15	Zener diode 10 V SOT
Y51 (N)	91-80112R06	crystal: (see note) filter 45.1 MHz 12.5 kHz (includes Y51A & Y51B)
Y51 (W)	91-80112R05	filter 45.1 MHz 30.0 kHz (includes Y51A & Y51B)
Y52	48-80606B02	44.645 MHz
Y201*	(see note)	16.8 MHz

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 12.5 kHz (N) (used in PMUD1024 and PMUD1142)

SM50/SM120 VHF Main Board, 136-156 MHz, 10-25 W, 20/25/30 kHz (W) used in PMUD1025 and PMUD1143) PL-961020-4

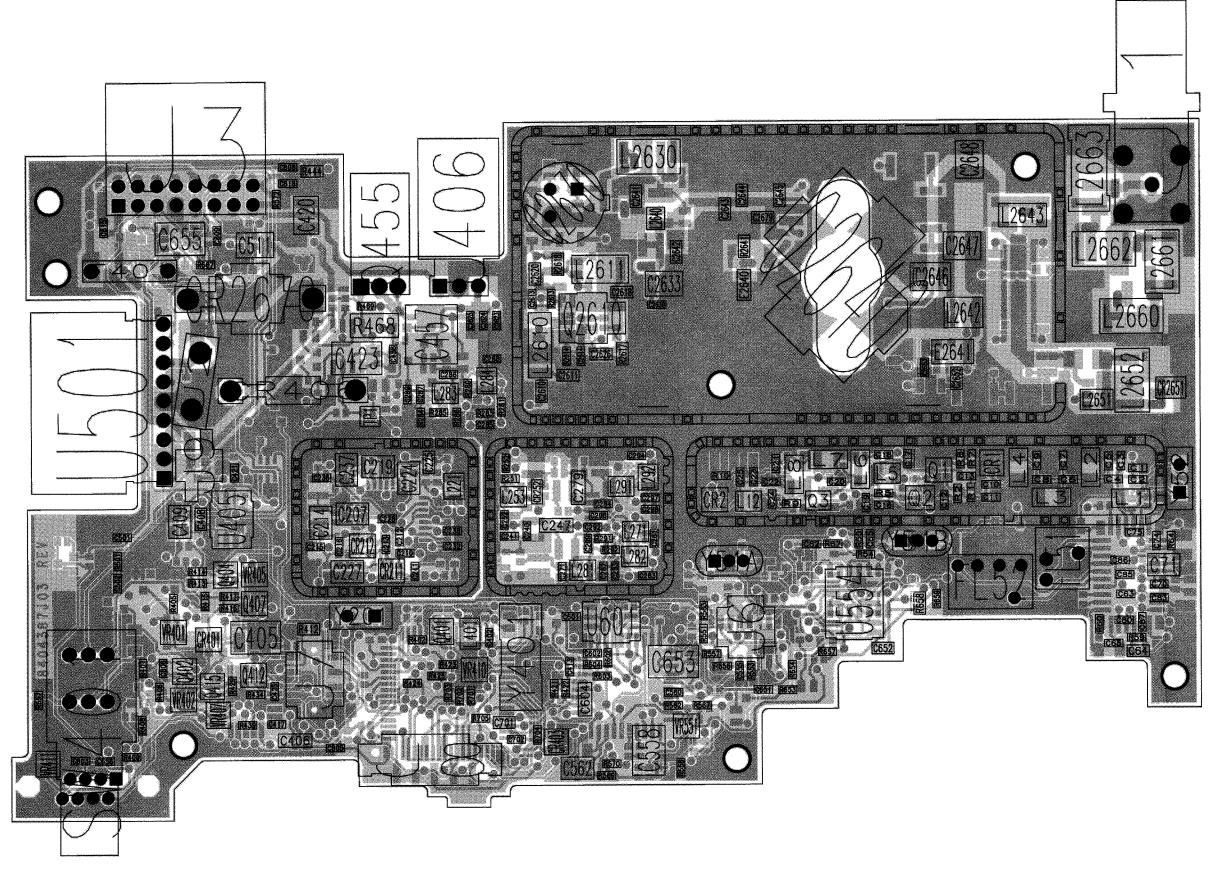
REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
	non-refe	erenced items
	14-05160A02	crystal insulator (used for Y201)
	26-04398J01	VCO/synthesizer shield (4 used)
	26-04399J01	receiver mixer bottom shield
	26-04400J01	receiver front end top shield
	26-04419J01	PA shield frame
	26-04420J01	PA shield cover

note: For optimum performance, diodes, transistors, and integrated circuits must be ordered by Motorola part numbers.

Designators marked with an (*) denote parts which are not field serviceable Recalibration of the radio using specialized factory equipment is mandatory when these components are replaced in order to guarantee the specified frequency stability of the radio at temperature extremes

> VHF Main Boards, 136-156 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1024A, PMUD1042A, PMUD1025A, PMUD1043A Radios)

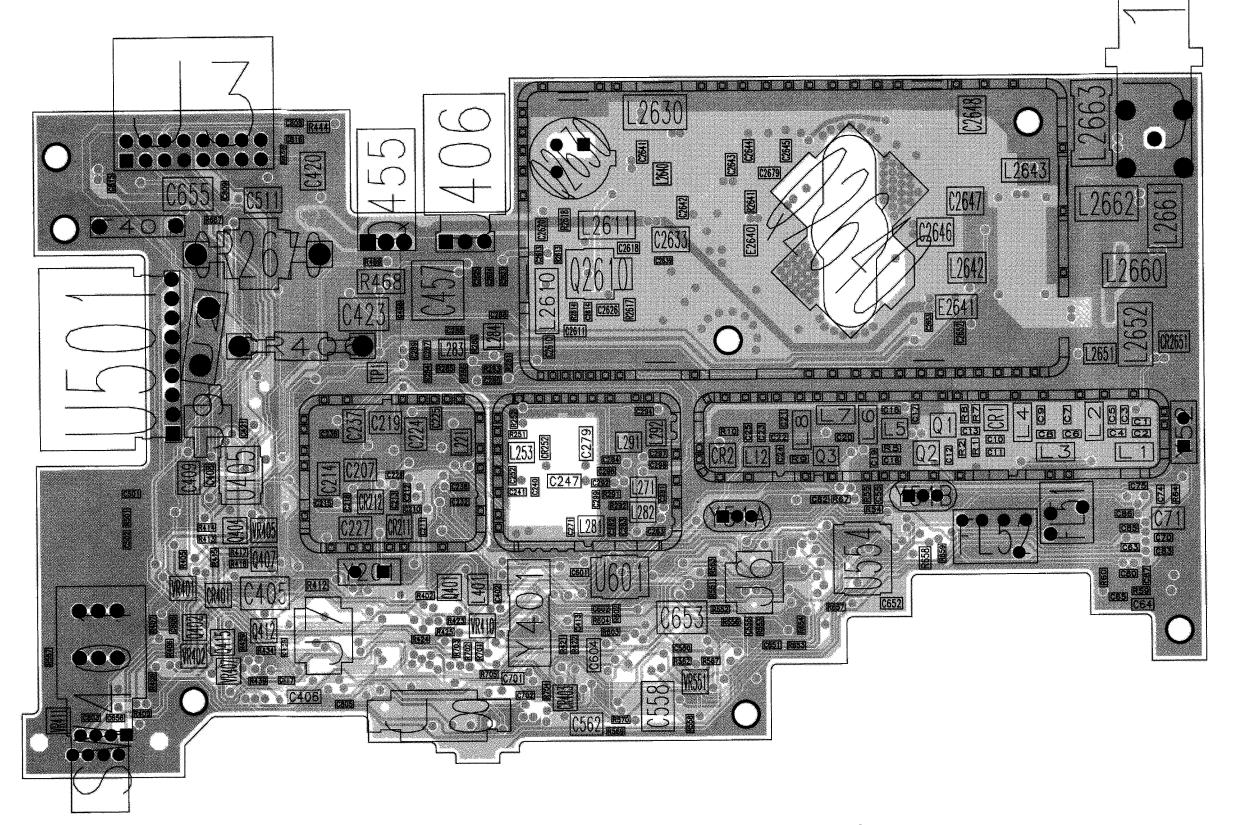
March, 1998



COMPONENT SIDE (GRAY) SOLDER SIDE (PINK) OVERLAY -----

RCB-95108-O RCB-95111-O RCB-95112-O

COMPONENT SIDE VIEW

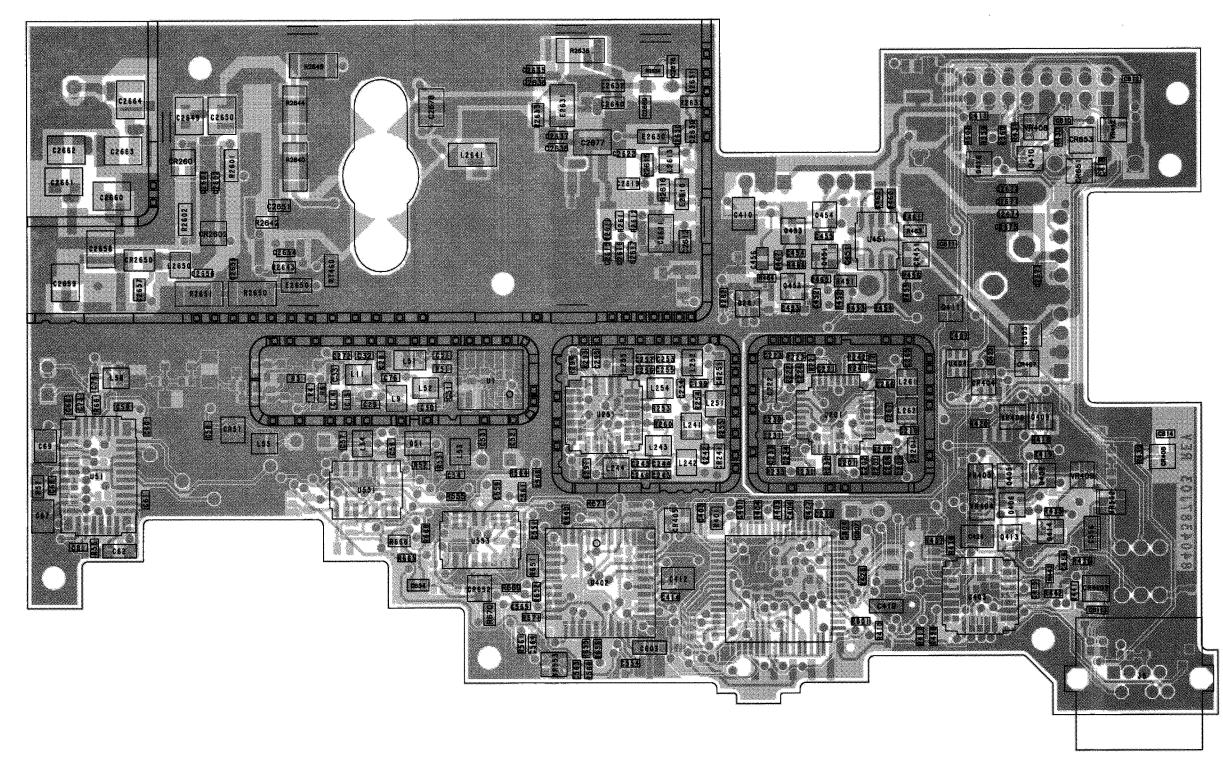


COMPONENT SIDE INNER LAYER (GRAY)
SOLDER SIDE INNER LAYER (PINK)
OVERLAY ----

RCB-95109-O RCB-95110-O RCB-95112-O

Circuit Board Details for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1030A, PMUD1031A, PMUD1086A, and PMUD1087A Radios)

COMPONENT SIDE VIEW

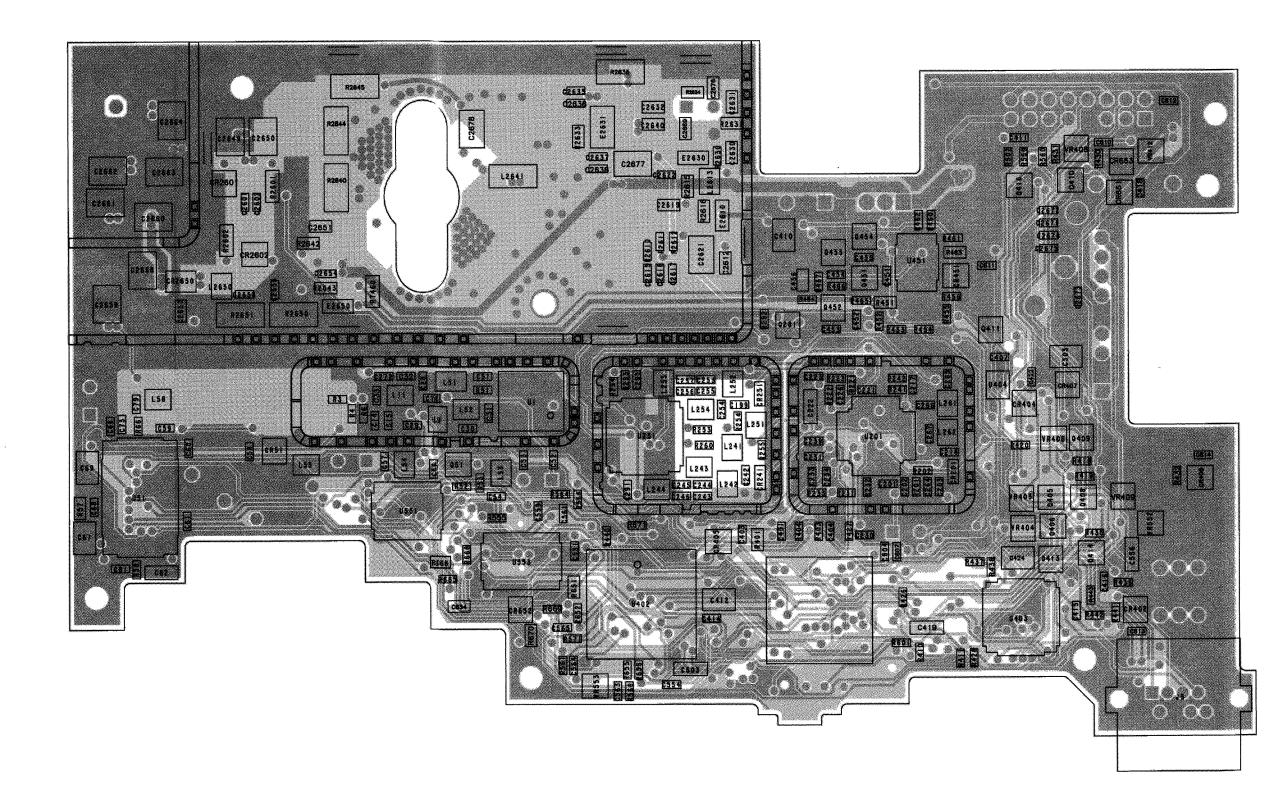


COMPONENT SIDE (GRAY)
SOLDER SIDE (PINK)
OVERLAY ----

RCB-95108-O (REV) RCB-95111-O (REV) RCB-95113-O

SOLDER SIDE VIEW

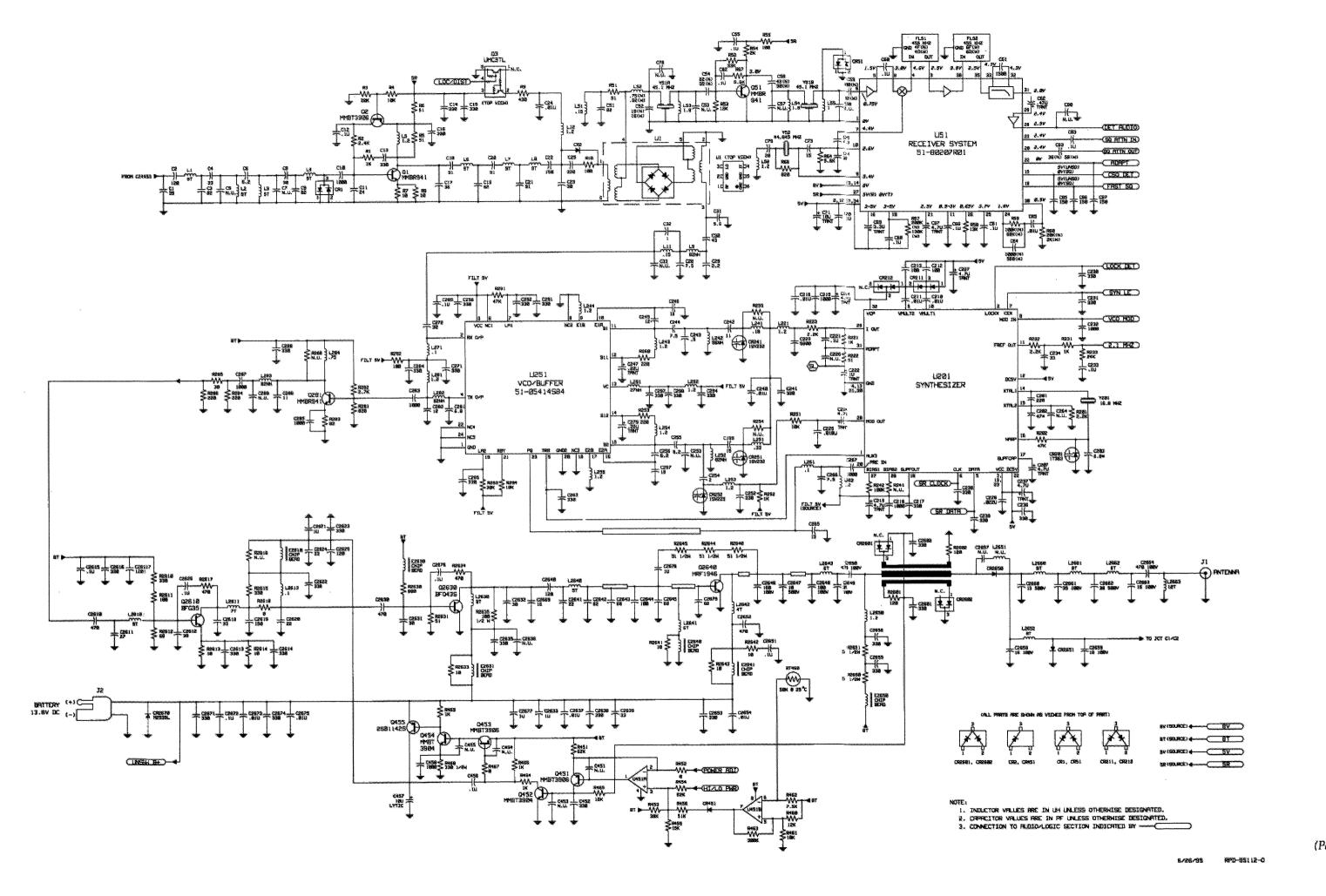
Circuit Board Details for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1030A, PMUD1031A, PMUD1086A, and PMUD1087A Radios)



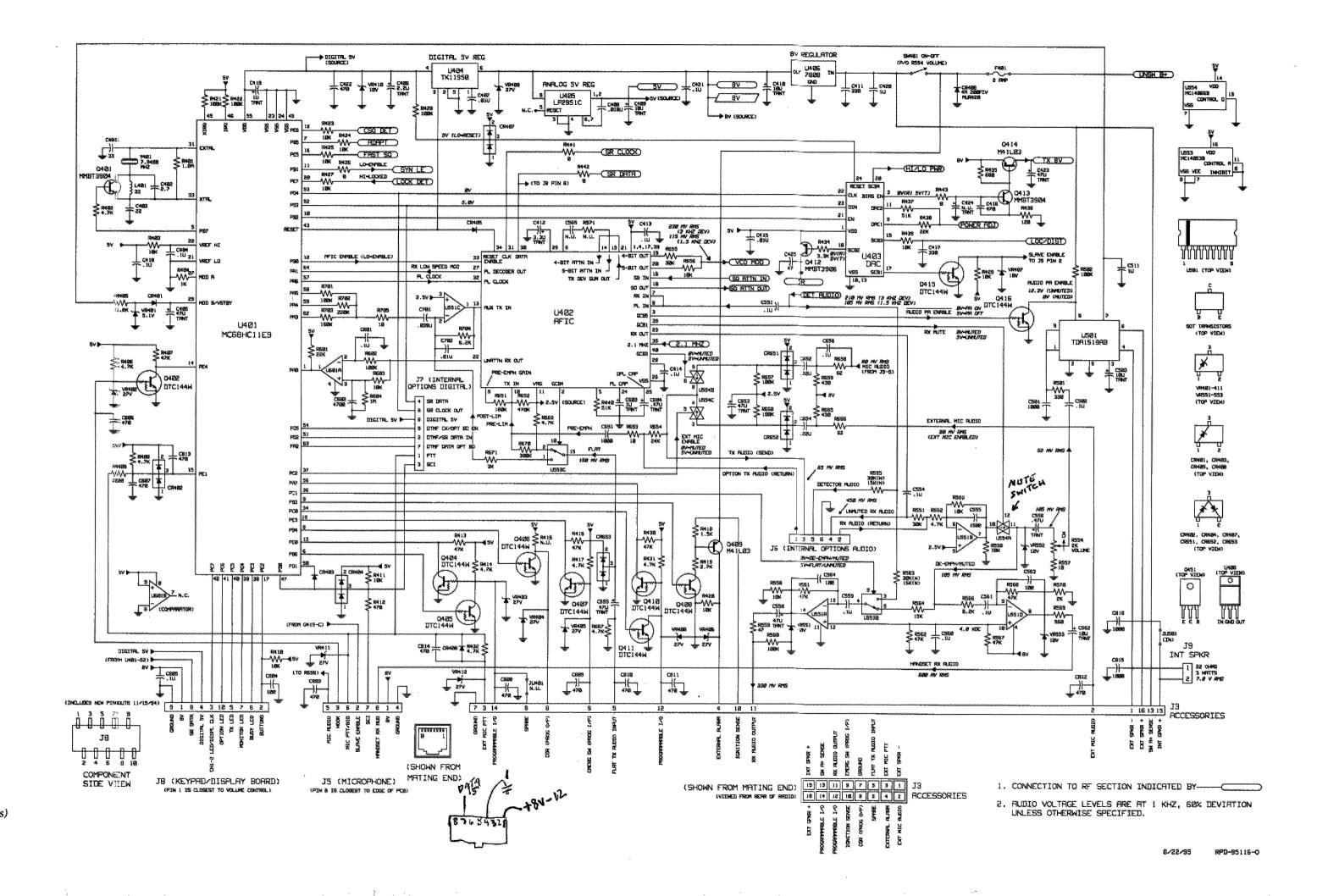
COMPONENT SIDE INNER LAYER (GRAY)
SOLDER SIDE INNER LAYER (PINK)
OVERLAY -----

RCB-95109-O (REV) RCB-95110-O (REV) RCB-95113-O

SOLDER SIDE VIEW



Schematic Diagram for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1030A, PMUD1031A, PMUD1086A, and PMUD1087A Radios) (Sheet 1 of 2)



Schematic Diagram for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1030A, PMUD1031A, PMUD1086A, and PMUD1087A Radios) (Sheet 2 of 2)

Parts List

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W 12.5 kHz (N) (used in PMUD1030 & PMUD1086) SM50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W

21-19740F41

21-13740F53

20/25/30 kHz (W) (used in PMUD1031 & PMUD1087)

SYMBOL PART NO.

capacitor, fixed; uF +/-5%; 50 V;

unless otherwise stated

12.5 kHz (N) (used in PMUD1030 & PMUD1086) SM50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W 20/25/30 kHz (W) (used in PMUD1031 & PMUD1087) REFERENCE MOTOROLA

SYMBOL

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W

PART NO.

23-11049J11

21-13743E07

21-13741A51 .018 uF

PL-951009-A

DESCRIPTION

tantalum 4.7 uF 10%; 16 V

.022 uF 10%; 16 V

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W 12.5 kHz (N) (used in PMUD1030 & PMUD1086) SM50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W IUD1087)

PL-951009-A

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W 12.5 kHz (N) (used in PMUD1030 & PMUD1086) SM50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W

12.5 kHz (N) (used in PMUD1030 & PMUD1086) SM50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W 20/25/30 kHz (W) (used in PMUD1031 & PMUD1087)

L282, 283

SYMBOL PART NO.

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W

24-62587X65

24-62587X46

24-62587X69

24-60578C43

24-60591G77

24-60591E69

24-62587X53

24-60591R29

24-60591C40

24-60591D69

24-60591M77

24-60591D69

24-62587X69

24-60591R29

24-60591V77

48-13827A07

48-13824A17

48-09939C04

48-13827A07

48-13827A07 48-80214G02

48-80947V01

48-80947V01

48-80141L03

48-80947V01

48-13824A17

48-80214G02

48-801411.03

48-80947V01

48-13824A17

48-13824A17

48-80214G02

48-02245J25

48-02245J24

48-02245J28

48-80225C22

06-62057A49

06-62057A58

06-62057A80

06-62057A73

06-62057A18

06-62057A18

06-62057A01

06-62057A40

06-62057A25

06-62057A18

06-62057485

06-62057A75

06-62057A56

06-62057A25

06-62057D31 06-62057D27

06-62057A76

06-62057A97

06-62057A93

06-62057A80

06-62057A56

06-62057A67

06-62057A47

06-62057A67

06-62057A57

06-62057A89

06-62057A49 06-62057A18

06-62057A57

06-62057A49

06-62057A57

06-62057A82

06-62057A97

06-62057A73

06-62057A49 1k

L2660 thru 2662 24-60591R29

Q404 thru 408

0410.411

Q415, 416

Q412

Q413 Q414

Q452 Q453 Q454

Q455 Q2610

R7.8

R55

R57(N) R57(W)

R59(N) R59(W)

R60(N)

R202

R221 R222 R223

R231

R232 R233

R241

R242

R251

R252

24-62587X52 chip 82 nH 5%

48-80214G02 NPN; type MMBT3904

PL-951009-A

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W REFERENCE MOTOROLA

12.5 kHz (N) (used in PMUD1030 & PMUD1086) M50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W 20/25/30 kHz (W) (used in PMUD1031 & PMUD1087)

variable 2k with switch

REFERENCE MOTOROLA DESCRIPTION SYMBOL PART NO. R567, 568 R569 R570 R571 R601 R602 R603 R651

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W 12.5 kHz (N) (used in PMUD1030 & PMUD1086) SM50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W 20/25/30 kHz (W) (used in PMUD1031 & PMUD1087)

06-62057489

06-62057A43

06-62057A56

06-62057A81

06-62057A97

06-62057A73

06-62057B22

47k

06-62057D30 180k 1/10 watt

Not Used

DESCRIPTION

PL-951009-A

SM50/SM120 VHF Main Board, 150-170 Mhz, 10-25 W 20/25/30 kHz (W) (used in PMUD1031 & PMUD1087) PL-951009-A REFERENCE MOTOROLA SYMBOL PART NO. DESCRIPTION crystal: (see note) filter 45.1 MHz 12.5 kHz Y51(N) 91-80112R06 (includes Y51A and Y51B Y51(W) 91-80112R05 filter 45.1 MHz 25 kHz (includes Y51A and Y51B) 48-80008K02 44.645 MHz Y201* Y401 (see note) 16.8 MHz 48-80113R01 7.9488 MHz non-referenced items 26-04398J01 VCO/synthesizer shield (4 used) 26-04399J01 receiver mixer bottom shield 26-04400J01 receiver front end top shield 26-04419J01 PA shield frame 26-04420J01 PA shield cover note: For optimum performance, diodes, transistors, and integrated circuits

SM50/SM120 VHF Main Board, 150-170 MHz, 10-25 W

12.5 kHz (N) (used in PMUD1030 & PMUD1086)

Designators marked with an (*) denote parts which are not field serviceable. Recalibration of the radio using specialized factory equipment is mandatory when these components are replaced in order to guarantee the specified frequency stability of the radio at temperature extremes.

C3	C2	21-13/40/03	120 pr	C230, 231	21-13741F13	330 pF
Not Used C233						
Case						
Total						
Case		Z1-10/40/ZZ				
Color		21.127/0520				
C11						
C119						
C13 thru 15 2 -1-374/R15						
C19						
21-1374/P60						
C18						
C26						
C21						
C21 21-13740F80 91 pF C247 23-11049A03 antalaum 22 uF 10%; 35 V C262 21-13740F81 S0 pF C262 21-13740F81 S0 pF C263 21-13740F81 S0 pF C263 C263						
222						
C25						
C25					21-10/41/10	
C25					91-197/0510	
C29			and the state of t			
C29						
C30						
C32						
C32						
C35						
CS2(N)					2 1 MM2 NO. A	
CS2(N) 21-13740F31 15 pF C271 21-13741F13 330 pF C32(N) 21-13740F38 15 pF C272 21-13740F38 330 pF C34(N) 21-13740F34 21-13740F			177			
CS2 21-13740F38						
CS34 N					1000 1 0	
CS4(N) 21-13740F46 82 pF C288 21-13740F28 21 pF						
CSA(W)					to the second of the second of the	
CSS						
CSB(N)						
CSR(W)		1/40				
CS9 CS9						
CS9(N)						
C89 W 21-13749F49 82 pF		100				
CSC						
C61						
C82					21-13741F13	
C83(N) 21-13740F40 36 pF C294 thru 298 21-1374F13 330 pF						
CS3(W) 21-3740F45 56 pF C299 21-13743F15 0.1 uF 10%; 16 V						
C64(N) 21-13740A73 1000 pF				C299	21-13743K15	0.1 uF 10%; 16 V
C64(W) 21-13740F33 560 pF				C401	21-13740F39	33 pF
C65				C402	21-13740F13	2.7 ±0.25 pF
C67 23-11049J11 tantalum 4.7 uF 10%; 16 V C405 23-11049J43 tantalum 4.7 uF 10%; 10 V C68 21-13743K15 0.1 uF 10%; 16 V C406 23-11049J40 tantalum 3.0 uF 10%; 20 V C407 21-13741F49 .01 uF 10%; 10 V C408 21-13741F49 .01 uF 10%; 10 V C408 21-13741F49 .01 uF 10%; 16 V C409, 410 23-11049A57 tantalum 10 uF 10%; 16 V C411 21-13741F13 330 pF C412 23-11049J07 tantalum 3.3 uF 10%; 20 V C75 21-13740F13 4.3 ±0.25 pF C412 23-11049J07 tantalum 3.3 uF 10%; 20 V C75 21-13740F13 4.3 ±0.25 pF C413, 414 21-13743K15 1.1 uF 10%; 16 V C76 Not Used C415 21-13741F49 .01 uF C77 21-13740F3 20 pF C416 21-13741F19 30 pF C416 21-13741F19 30 pF C418 21-13749F3 20 pF C418 21-13749F3 20 pF C418 21-13749F3 20 pF C419 23-11049J07 tantalum 1 uF 10%; 16 V C418 21-13749F3 20 pF C419 23-11049J07 tantalum 1 uF 10%; 16 V C419 23-11049J07 tantalum 1 uF 10%; 16 V C419 23-11049J07 tantalum 1 uF 10%; 16 V C420 21-13740F3 47 pF C422 21-13741F17 470 pF C420 21-13740F43 47 pF C422 21-13741F17 470 pF C420 21-13740F43 47 pF C422 21-13741F17 470 pF C421 21-13741F19 20 pF C422 21-13741F17 470 pF C422 21-13741F19 20 pF C424 21-13741F19 20 pF C424 21-13741F19 20 pF C424 21-13741F19 20 pF C425 21-13741F19 20 pF C426 21-13740F43 47 pF C426 21-13741F13 30 pF C426 21-13741F13 30 pF C456 21-13741F25 1000 pF C456 21-13741		21-13741F49	.01 úF	C403	21-13740F35	22 pF
C67 23-11049J11 tantalum 4.7 uF 10%; 16 V C405 23-11049J43 tantalum 4.7 uF 10%; 10 V C68 21-13743K15 0.1 uF 10%; 16 V C406 23-11049J40 tantalum 3.0 uF 10%; 20 V C407 21-13741F49 .01 uF 10%; 10 V C408 21-13741F49 .01 uF 10%; 10 V C408 21-13741F49 .01 uF 10%; 16 V C409, 410 23-11049A57 tantalum 10 uF 10%; 16 V C411 21-13741F13 330 pF C412 23-11049J07 tantalum 3.3 uF 10%; 20 V C75 21-13740F13 4.3 ±0.25 pF C412 23-11049J07 tantalum 3.3 uF 10%; 20 V C75 21-13740F13 4.3 ±0.25 pF C413, 414 21-13743K15 1.1 uF 10%; 16 V C76 Not Used C415 21-13741F49 .01 uF C77 21-13740F3 20 pF C416 21-13741F19 30 pF C416 21-13741F19 30 pF C418 21-13749F3 20 pF C418 21-13749F3 20 pF C418 21-13749F3 20 pF C419 23-11049J07 tantalum 1 uF 10%; 16 V C418 21-13749F3 20 pF C419 23-11049J07 tantalum 1 uF 10%; 16 V C419 23-11049J07 tantalum 1 uF 10%; 16 V C419 23-11049J07 tantalum 1 uF 10%; 16 V C420 21-13740F3 47 pF C422 21-13741F17 470 pF C420 21-13740F43 47 pF C422 21-13741F17 470 pF C420 21-13740F43 47 pF C422 21-13741F17 470 pF C421 21-13741F19 20 pF C422 21-13741F17 470 pF C422 21-13741F19 20 pF C424 21-13741F19 20 pF C424 21-13741F19 20 pF C424 21-13741F19 20 pF C425 21-13741F19 20 pF C426 21-13740F43 47 pF C426 21-13741F13 30 pF C426 21-13741F13 30 pF C456 21-13741F25 1000 pF C456 21-13741	C66	21-13743K15	0.1 uF 10%; 16 V	C404	21-13743K15	0.1 uF 10%; 16 V
C89	C67	23-11049J11	tantalum 4.7 uF 10%; 16 V		23-11049J43	
C70 21-13743K15 0.1 uF 10%; 16 V C408 21-13741A51 .018 uF C71 23-11049A57 tantalum 10 uF 10%; 16 V C409, 410 23-11049A57 tantalum 10 uF 10%; 16 V C411 21-13741F13 330 pF C411 21-13741F13 330 pF C412 23-11049A07 tantalum 3.3 uF 10%; 20 V .1 uF 10%; 16 V C502 21-13740F40 36 pF C412 23-11049A07 tantalum 3.3 uF 10%; 20 V .1 uF 10%; 16 V C75 21-13740F40 4.3 ±0.25 pF C413, 414 21-13743K15 .1 uF 10%; 16 V C415 21-13741F49 .01 uF C79 21-13740F34 20 pF C416 21-13741F17 470 pF C80 Not Used C417 21-13741F17 470 pF C81 thru 83 21-13740F35 0.1 uF 10%; 16 V C418 21-13743K15 0.1 uF 10%; 16 V C418 21-13743K15 0.1 uF 10%; 16 V C419 23-11049A07 tantalum 1 uF 10%; 16 V C419 23-11049A07 tantalum 1 uF 10%; 16 V C420 21-13740F43 47 pF C422 21-13741F17 470 pF C422 21-13740F43 47 pF C422 21-13740F43 47 pF C422 21-13740F43 C11 uF 10%; 16 V C424 VNot Used C210, 211 21-13741F49 .01 uF C456 21-13740F43 VNot Used C214 23-11049J11 tantalum 4.7 uF 10%; 16 V C452 21-13740F43 VNot Used C214 23-11049J11 tantalum 4.7 uF 10%; 16 V C452 21-13741F13 VNot Used C216 21-13741F3 30 pF C457 23-80090M24 VNot Used C216 21-13741F3 30 pF C457 23-80090M24 VNot Used C216 21-13741F3 30 pF C458 21-13741F25 1000 pF C459 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C458 21-13741F25 1000 pF C459 23-11049A07 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C459 23-11049A07 tantalum 4.7 uF 10%; 16 V C502 21-13741F25 1000 pF C459 23-11049A07 tantalum 4.7 uF 10%; 16 V C503 23-11049A67 tantalum 1 uF 1	C68	21-13743K15	0.1 uF 10%; 16 V		23-11049A40	
C71 23-11049A57 tantalum 10 uF 10%; 16 V C73 21-13740F31 15 pF C74 21-13740F31 15 pF C75 21-13740F31 36 pF C76	C69	23-11049J07	tantalum 3.3 uF 10%; 20 V	C407	21-13741F49	
C73	C70	21-13743K15		C408	21-13741A51	.018 uF
C74	C71	23-11049A57	tantalum 10 uF 10%; 16 V		23-11049A57	tantalum 10 uF 10%; 16 V
C75	C73	21-13740F31	15 pF	C411	21-13741F13	330 pF
C75	C74					
C79		21-13740F18				
C80 Not Used C417 21-13741F13 330 pF C81 thru 83 21-13743K15 0.1 uF 10%; 16 V C418 21-13743K15 0.1 uF 10%; 16 V C85 thru 87 21-13740F55 150 pF C419 23-11049A07 tantalum 1 uF 10%; 16 V C199 21-13740F31 15 pF C420 21-13741W01 1 uF 10%; 25 V C201 21-13740F59 220 pF C421 21-13743K15 0.1 uF 10%; 16 V C202 21-13740F43 47 pF C422 21-13741F17 470 pF C203 21-13740F43 47 pF C422 21-13741F17 470 pF C204 21-13740F44 6.8 ± 0.1 pF C423 23-11049J43 tantalum 47 uF 10%; 10 V C207 23-11049J11 tantalum 4.7 uF 10%; 16 V C424 Not Used C210, 211 21-13741F49 .01 uF C425 21-13740F43 47 pF C212, 213 21-13740F51 100 pF C451 Not Used C214 23-11049J11 tantalum 4.7 uF 10%; 16 V C452 21-13741F13 330 pF C216 21-13741F25 1000 pF C453 thru 455 Not Used C216 21-13741F49 .01 uF C456 21-13743A19 0.1 uF 10%; 16 V C217 21-13741F49 .01 uF C456 21-13741F25 1000 pF C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C221 21-13743K15 0.1 uF 10%; 16 V C502 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A57 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
C81 thru 83		21-13740F34				
C85 thru 87						
C199 21-13740F31 15 pF						
C201 21-13740F59 220 pF C421 21-13743K15 0.1 uF 10%; 16 V C202 21-13740F43 47 pF C422 21-13741F17 470 pF C423 23-11049J43 tantalum 47 uF 10%; 10 V C424		977				
C202 21-13740F43 47 pF						
C203 21-13740L14 6.8 ± 0.1 pF C423 23-11049J43 tantalum 47 uF 10%; 10 V C207 23-11049J11 tantalum 4.7 uF 10%; 16 V C424 Not Used C210, 211 21-13741F49 .01 uF C425 21-13740F43 47 pF C451 Not Used C212, 213 21-13740F51 100 pF C451 Not Used C214 23-11049J11 tantalum 4.7 uF 10%; 16 V C452 21-13741F13 330 pF C453 thru 455 Not Used C216 21-13741F49 .01 uF C456 21-13743A19 0.1 uF 10%; 16 V C217 21-13741F13 330 pF C457 23-80090M24 lytic 10 uF 20%; 25 V C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C21 21-13743K15 0.1 uF 10%; 16 V C502 21-13743K15 0.1 uF 10%; 16 V C22 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A57 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
C207 23-11049J11 tantalum 4.7 uF 10%; 16 V C424 Not Used C210, 211 21-13741F49 .01 uF C425 21-13740F43 47 pF C212, 213 21-13740F51 100 pF C451 Not Used C214 23-11049J11 tantalum 4.7 uF 10%; 16 V C452 21-13741F13 330 pF C215 21-13741F25 1000 pF C458 21-13743A19 0.1 uF 10%; 16 V C217 21-13741F13 330 pF C456 21-13743A19 0.1 uF 10%; 16 V C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C221 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C223 21-13741F43 5600 pF C501 21-13741W01 1 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V		A CONTRACTOR OF THE PARTY OF TH				
C210, 211 21-13741F49 .01 uF						
C212, 213 21-13740F51 100 pF C451 Not Used C214 23-11049J11 tantalum 4.7 uF 10%; 16 V C452 21-13741F13 330 pF C215 21-13741F25 1000 pF C456 21-13743A19 0.1 uF 10%; 16 V C216 21-13741F49 .01 uF C456 21-13743A19 0.1 uF 10%; 16 V C217 21-13741F13 330 pF C457 23-80090M24 lytic 10 uF 20%; 25 V C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C221 21-13743K15 0.1 uF 10%; 16 V C502 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A67 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
C214 23-11049J11 tantalum 4.7 uF 10%; 16 V C452 21-13741F13 330 pF C215 21-13741F25 1000 pF C453 thru 455 Not Used C216 21-13741F49 .0.1 uF C456 21-13743A19 0.1 uF 10%; 16 V C217 21-13741F13 330 pF C457 23-80090M24 lytic 10 uF 20%; 25 V C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C221 21-13743K15 0.1 uF 10%; 16 V C502 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A57 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V					21-13/40F43	
C215 21-13741F25 1000 pF C453 thru 455 Not Used C216 21-13741F49 .01 uF C456 21-13743A19 0.1 uF 10%; 16 V C217 21-13741F13 330 pF C457 23-80090M24 lytic 10 uF 20%; 25 V C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C221 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
C216 21-13741F49 .01 uF C456 21-13743A19 0.1 uF 10%; 16 V C217 21-13741F13 330 pF C457 23-80090M24 lytic 10 uF 20%; 25 V C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantatum 4.7 uF 10%; 16 V C221 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V		W. 1 MAN 1			21-13/41F13	
C217 21-13741F13 330 pF C457 23-80090M24 lytic 10 uF 20%; 25 V C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C221 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V					A. 4044A44A	
C218 21-13741F25 1000 pF C458 21-13741F25 1000 pF C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C221 21-13743K15 0.1 uF 10%; 16 V C502 21-13743K15 0.1 uF 10%; 16 V C502 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A57 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
C219 23-11049J11 tantalum 4.7 uF 10%; 16 V C501 21-13741F25 1000 pF C221 21-13743K15 0.1 uF 10%; 16 V C502 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A57 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V		5.16	*			
C221 21-13743K15 0.1 uF 10%; 16 V C502 21-13743K15 0.1 uF 10%; 16 V C222 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A57 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
C222 23-11049A07 tantalum 1 uF 10%; 16 V C503 23-11049A57 tantalum 10 uF 10%; 16 V C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
C223 21-13741F43 5600 pF C511 21-13741W01 1 uF 10%; 25 V						
0224 23*11049011 (attaign14.7 ur 10%, 10 V 0301 21*13/43N13 U.1 ur 10%, 10 V						
	UZZ4	23-11049311	Idilianum 4.7 UF 1076; 10 V	U001	Z1-13/43N13	U. F.U.F. 1U.70, 152 V

REFERENCE	MOTOROLA	31 & PMUD1087) PL-
SYMBOL	PART NO.	DESCRIPTION
C554	21-13743K15	0.1 uF 10% 16 V
C555	21-13741F25	1000 pF
C556 C558	23-11049A05 23-11049J43	tantalum 0.47 uF 10%; 25 V tantalum 47 uF 10%; 10 V
C559 thru 561	21-13743K15	0.1 uF 10%; 16V
C562	23-11049A57	tantalum 10 uF 10%; 16 V
C563, 564	21-13740F51	100 pF Not Used
C565 C601	21-13743K15	0.1 uF 10%; 16 V
C602	21-13741F41	4700 pF
C603	23-11049A07	tantalum 1 uF 10%; 16 V
C604 C651	23-11049A05 21-13741F25	tantalum 0.47 uF 10%; 25 V 1000 pF
C652	21-13743F08	0.22 uF +80/-20%; 16 V
C653	23-11049J43	tantalum 47 uF 10%; 10 V
C654 C655	21-13743F08 23-11049J43	0.22 uF +80/-20%; 16 V tantalum 47 uF 10%; 10 V
C656	21-13743K15	0.1 uF 10%; 16 V
C701	21-13741A59	.039 uF
C702 C803	21-13741F49 21-13741F17	.01 uF 470 pF
C804	21-13740F51	100 pF
C805	21-13743K15	0.1 uF 10%; 16 V
C806 thru 814 C815, 816	21-13741F17 21-13741F25	470 pF 1000 pF
C2601, 2602	21-13741F13	330 pF
C2610	21-13740A71	470 pF
C2611	21-13740A39	27 pF
C2612 C2613, 2614	21-13740A43 21-13741F13	39 pF 330 pF
C2615	21-13743K15	0.1 uF 10%; 16 V
C2616	21-13741F13	330 pF
C2617 C2618	21-13740F53 21-13740A41	120 pF 33 pF
C2619	21-13740A59	150 pF
C2620	21-13740A37	22 pF
C2621 C2622, 2623	21-13741W01 21-13741F13	1 uF 10%; 25 V 330 pF
C2624	21-13740F39	33 pF
C2625	21-13740F53	120 pF
C2626 C2630	21-13743A19 21-13740A71	0.1 uF 10%; 16 V 470 pF
C2631	21-13740A40	30 pF
C2632	21-13740A40	30 pF
C2633 C2635	21-13741W01 21-13741F13	1 uF 10%; 25 V 330 pF
C2636		Not Used
C2637	21-13741F49	.01 uF
C2638 C2639	21-13741F13 21-13740F39	330 pF 33 pF
C2640	21-13740A57	12Ó pF
C2641	21-13740A37	22 pF
C2642 C2643	21-13740A48 21-13740A51	51 pF 68 pF
C2644	21-13740A55	100 pF
C2645	21-13740A51	68 pF
C2646 C2647	21-11078B48 21-80060M19	160 pF 100 V 10 pF 500 V
C2648	21-11078B42	100 pF 100 V
C2649	21-11078B32	39 pF 100 V
C2650 C2651	21-11078B59 21-13743A19	470 pF 100 V 0.1 uF 10%: 16 V
C2652	21-13740A71	470 pF
C2653	21-13741F13	330 pF
C2654 C2655	21-13741F49 21-13741F13	.01 uF 330 pF
C2656	21-13741F13	330 pF
C2657		Not Used
C2658, 2659	21-11078B19 21-80060M22	16 pF 100 V 13 pF 500 V
C2660 C2661	21-11078B32	39 pF 100 V
C2662	21-80060M32	36 pF 500 V
C2663	21-11078B19	16 pF 100 V
C2664 C2669	21-11078B59 21-13740A34	470 pF 100 V 16 pF
C2671	21-13741F13	330 pF
C2672	21-13743K15	0.1 uF 10%; 16 V
C2673 C2674	21-13741F49 21-13741F13	.01 uF 330 pF
C2675	21-13741F49	.01 uF
C2676	21-13743A19	0.1 uF 10%; 16 V

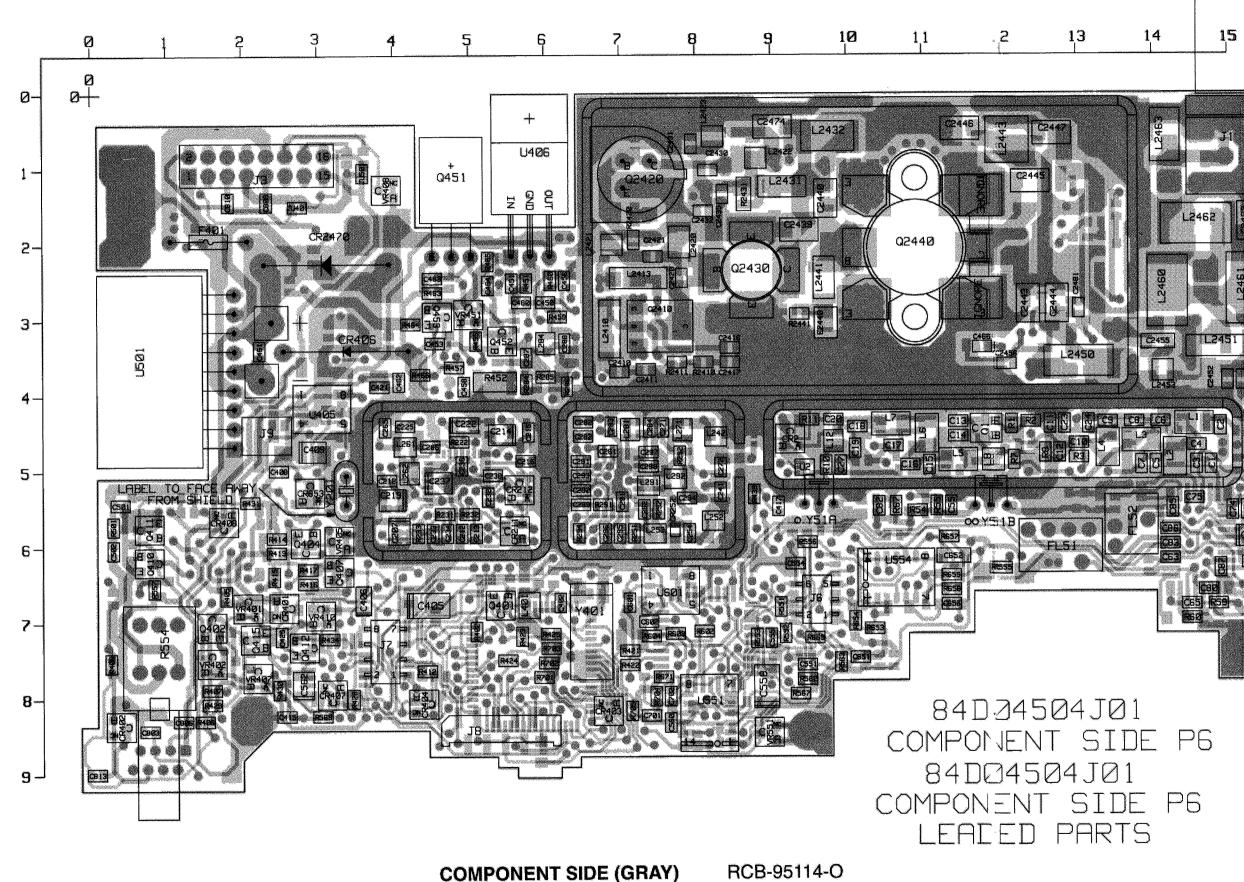
REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C2677, 2678	21-13741W01	1 uF 10%; 25 V
C2679	21-13740A51	68 pF
		diode: (see note)
CR1	48-80154K03	dual Schottky SOT
CR2	48-80142L01	silicon PIN SOT MMBV3401
CR51	48-80154K03	dual Schottky SOT
CR201	48-02245J22	silicon varactor SOT 1T363
CR211, 212	48-13833C07	dual silicon SOT MMBD7000
CR241	48-62824C03	silicon varactor SOT 1SV232
CR251	48-62824C03	silicon varactor SOT 1SV232
CR252	48-62824C01	silicon varactor SOT 1SV229
CR401 CR402	48-05129M76 48-13833C07	silicon SOT dual silicon SOT MMBD7000
CR402 CR403	48-80939T01	Schottky SOT
CR404	48-13833C07	dual silicon SOT MMBD7000
CR405	48-05129M76	silicon SOT
CR406	48-83553T02	4A 200 PIV MUR420
CR407	48-13833C07	dual silicon SOT MMBD7000
CR408	48-05129M76	silicon SOT
CR451	48-05129M76	silicon SOT
CR651 thru 653	48-13833C07	dual silicon SOT MMBD7000
CR2601, 2602	48-05218N57	dual silicon SOT
CR2650, 2651	48-02482J02	silicon PIN MA4P1250
CR2670	48-80236E07	transient suppressor
		ferrite beads:
E2610	24-80067M01	ferrite bead
E2630	24-80067M01	ferrite bead
E2631	24-80132N01	ferrite bead
E2640	24-80067M01	ferrite bead
E2641	24-80132N01	ferrite bead
E2650	24-80067M01	ferrite bead

Fana	AE AEA44EA4	fuse:
F401	65-05214E04	2 amp axial lead
		filter:
FL51(N)	91-80098D04	455 kHz 4F
FL51(W)	91-80098D06	455 kHz 4D
FL52(N)	91-80097D04	455 kHz 6F
FL52(W)	91-80097D06	455 kHz 6D
• •		
		connector, receptacle:
J1	09-09006C01	mini UHF coax
J2 ·	30-04510J01	power cable assembly (includes J2)
J3	28-04503J01	16-pin, accessories
J5 J6	09-04426J01 09-04424J05	telephone type, 8 contact, microphone 6-pin, internal options audio
J7	09-04424306	8-pin, internal options digital
J8	09-04422J02	10-pin, display board
J9	28-04423J01	2-pin, internal speaker
		m lead account affections
		jumper:
JU401		Not Used
JU501	06-62057B47	jumper
		and of
I i Hone I	SA BOSONO	coil, rf:
L1 thru 4	24-60591G24	9 turns chin 1.2 nH 5%
L5 L6 thru 8	24-62587X69 24-60591G24	chip 1.2 uH 5% 9 turns
LO unu o	24-62587X52	chip 82 nH 5%
L11	24-62587X55	chip 0.15 uH 5%
L12	24-62587X69	chip 1.2 uH 5%
L51	24-83411T63	0.15 uH 5% shielded
L52(N)	24-62587X65	chip 0.75 uH 5%
L52(W)	24-62587X63	chip 0.62 uH 5%
L53, 54	24-62587N71	chip 1.8 uH 5%
L55	24-62587X68	chip 1 uH 5%
L58	24-62587X69	chip 1.2 uH 5%
L221	24-62587XN69	
L241	24-62587X56	chip 0.18 uH 5%
L242	24-62587X50	chip 56 nH 5%
L243, 244	24-62587X69	chip 1.2 uH 5%
L251	24-62587X63	chip 0.33 uH 5%
L252	24-62587X52 24-62587X69	chip 82 nH 5% chip 1.2 uH 5%
L253 thru 255 L261	24-62587X53	chip 0.1 uH 5%
	ET UEUU! AUU	uniquitation (a)
		chin 1.2 nH 5%
L262 L271	24-62587X69 24-62587X53	chip 1.2 uH 5% chip 0.1 uH 5%

DESCRIPTION	SYMBOL	MOTOHOLA	neéco
DESCRIPTION		PART NO.	DESCR
chip 82 nH 5%	R253	06-62057A33	220
chip 0.75 uH 5%	R254, 255	00 00057400	Not Used
chip 27 nH 5%	R260 R280	06-62057A33	220
chip 1.2 uH 5%			Not Used
chip 33 uH	R281 R282	06-62057A47	820 2.7k
9 turns	R283	06-62057A59	2.7k 82
7 turns chip 0.1 uH 5%	R284	06-62057A23 06-62057A33	220
	R285	06-62057A12	30
8 turns 5 turns	R286	06-62057A33	220
6 turns	R291	06-62057A89	47k
4 turns	R292	06-62057A25	100
6 turns	R293	06-62057A84	30k
chip 1.2 uH 5%	R294	06-62057A73	10k
Not Used	R401	06-62057D54	1.8 meg 1/10 watt
8 turns	R402	06-62057A65	4.7k
8 turns	R403	06-62057A73	10k
12 turns	R404	06-62057A49	1k
(m. 34-178	R405	06-62057A55	1.8k
transistor: (see note)	R406	06-62057A65	4.7k
NPN; type MMBR941	R407	06-62057A89	47k
PNP: type MMBT3906	R408	06-62057A65	4.7k
dual transistor switch UMC3TL	R409	06-62057A33	220
NPN; type MMBR941	R410, 411	06-62057A73	10k
NPN; type MMBR941	R412	06-62057C67	470 1/10 watt
NPN; type MMBT3904	R413	06-62057A89	47k
digital NPN; type DTC144W	R414	06-62057A65	4.7k
digital NPN; type DTC144W	R415	***	Not Used
PNP, type M41L03	R416	06-62057A89	47k
digital NPN; type DTC144W	R417	06-62057A65	4.7k
PNP; type MMBT3906	R418	06-62057A53	1.5k
NPN; type MMBT3904	R419	06-62057A59	2.7k
PNP, type M41L03	R420	06-62057A73	10k
digital NPN; type DTC144W	R421, 422	06-62057A97	100k
PNP; type MMBT3906	R423 thru 425	06-62057A73	10k
NPN; type MMBT3904	R426	06-62057B47	O
PNP; type MMBT3906	R427	06-62057A73	10k
NPN; type MMBT3904	R428	06-62057A97	100k
PNP; type 2SB1142S	R429	06-62057A73	10k
NPN; type BFG35	R430	06-62057A89	47k
NPN; type BFQ43S	R431, 432	06-62057A65	4.7k
NPN; type M25C22	R434	06-62057A61	3.3k
The state of the s	R435	06-62057A45	680
resistor, fixed: +/-5%; 1/16 W:	R436	06-62057A27	120
unless otherwise stated	R437	06-62057A90	51k
1k	R438	06-62057A81	22k
2.4k	R439	06-62057A73	10k
20k	R440	06-62057A90	51k
10k	R441 thru 443	06-62057B47	0
51	R451	06-62057D19	62k 1/10 watt
51	R452	06-62057B47	0
10	R453	06-62057A87	39k
430	R454	06-62057A92	62k
100	R455	06-62057A77	15k
51	R456	06-62057A90	51k
33k	R460	06-62057A75	12k
12k	R461	06-62057A73	10k
2k	R462	06-62057A70	7.5k
100	R463	06-62057D35	300k 1/10 watt
200k 1/10 watt	R464	06-62057A49	1k
130k 1/10 watt	R465	06-62057A79	18k
13k	R466	06-62057A49	1k
100K	R467	06-62057B47	Ö
68k	R468	06-80195M37	330 1/2 watt
20k	R469	06-62057A49	1k
2k	R501	06-62057A37	330
5.6k	R502	06-62057A97	100k
820	R551	06-62057A84	30k
5.6k	R552, 553	06-62057A75	12k
2.2k	R554	18-04405J02	variable 2k with sw
47k	R555(N)	06-62057A01	10
1k	R555(W)	06-62057A84	30k
51	R556	06-62057A73	10k
2.2k	R557	06-62057A01	10
1k	R558	06-62057A73	10k
2.2k	R559	06-62057A17	47
24k	R560	06-62057A97	100k
Not Used	R561, 562	06-62057A89	47k
100k	R563(N)	06-62057A77	15k
10k	R563(W)	06-62057A84	30k
1k	R564	06-62057A77	15k

R652	06-62057B14	470k
R653	06-62057A01	10
R654	06-62057A82	24k
R655	06-62057A84	30k
R656	06-62057A73	10k
R657	06-62057A97	100k
R658	06-62057C46	62 1/10 watt
R659	06-62057A40	430
R665	06-62057A40	430
R666	06-62057C46	62 1/10 watt
R667	06-62057A65	4.7k
R668	06-62057A97	100k
R669	06-62057A65	4.7k
R670	06-62057D35	300k 1/10 watt
R671	06-62057A60	3k
R701	06-62057A97	100k
R702	06-62057B06	220k
R703	06-62057B03	160k
R704	06-62057A68	6.2k
R705	06-62057A01	10
R2601, 2602	06-11077A52	120
•		330
R2610	06-62057A37	46. 46.
R2611	06-62057A25	100
R2612	06-62057A21	68 10
R2613, 2614	06-62057A01	
R2615	06-62057C63	330 1/10 walt
R2616	***	Not Used
R2617	06-62057C67	470 1/10 watt
R2618	06-62057C01	0 1/10 watt
R2630	06-62057A45	680
R2631	06-62057C44	51 1/10 watt
R2633	06-62057C27	10 1/10 watt
R2634	06-62057C67	470 1/10 walt
R2635	06-80195M25	100 1/2 watt
R2640	06-80195M18	51 1/2 watt
R2641, 2642	06-62057C27	10 1/10 watt
R2642, 2643	06-62057C27	10 1/10 watt
R2644, 2645	06-80195M18	51 1/2 watt
R2650, 2651	06-80195M18	51 1/2 watt
RT460	06-05621T02	thermistor 50k @ 25°C
		integrated circuit: (see note)
U1	51-80505D01	double-balanced mixer
U51	51-80207R01	receiver system
U201*	(see note)	synthesizer
U251	51-02227566	VCO/buffer
U401	51-99010D01	microcomputer MC68HC711E9
U402	51-02227J35	audio filter
U403	51-05226P38	DAC
U404	51-80633C01	5 V regulator TK11950
U405	51-05469E65	5 V regulator LP2951C
U406	51-13816D03	8 V regulator MC7808BT
U451	51-80932W01	dual op-amp LM2904 SOIC
U501	51-80147R01	audio power amp TDA1519AB
U551	51-02198J28	quad op-amp LM2902D SOIC
U553	51-84704M60	triple 2-channel switch 4053B
U554	51-84704M50 51-84704M52	guad bilateral switch 4066B
U601	51-02198J23	dual comparator LM2903 SOIC
0001	31-02190020	
1777 - 64	** ***	voltage regulator: (see note)
VR401	48-80140L06	zener diode 5.1 V SOT
VR402 thru 406	48-80948V01	zener diode 27 V SOT
VR407	48-80140L15	zener diode 10 V SOT
VR408, 409	48-80948V01	zener diode 27 V SOT
VR410	48-80140L15	zener diode 10 V SOT
	48-80948V01	zener diode 27 V SOT
VR411, 412 VR551 thru 553	48-80140L15	zener diode 10 V SOT

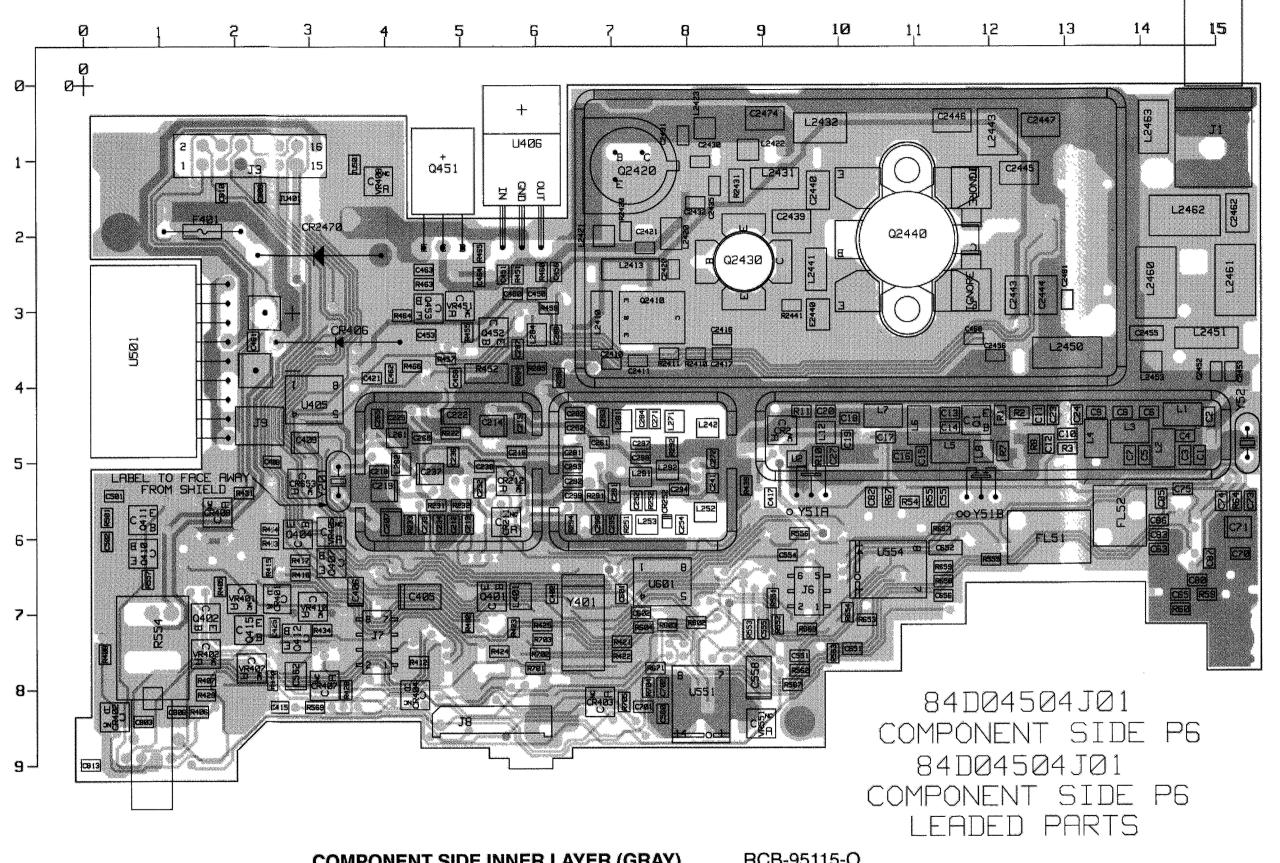
Parts List for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 10-25 W (Part of PMUD1030A, PMUD1031A, PMUD1086A, and PMUD1087A Radios)



COMPONENT SIDE (GRAY) SOLDER SIDE (PINK) OVERLAY ----

RCB-95117-O RCB-95118-O

COMPONENT SIDE VIEW

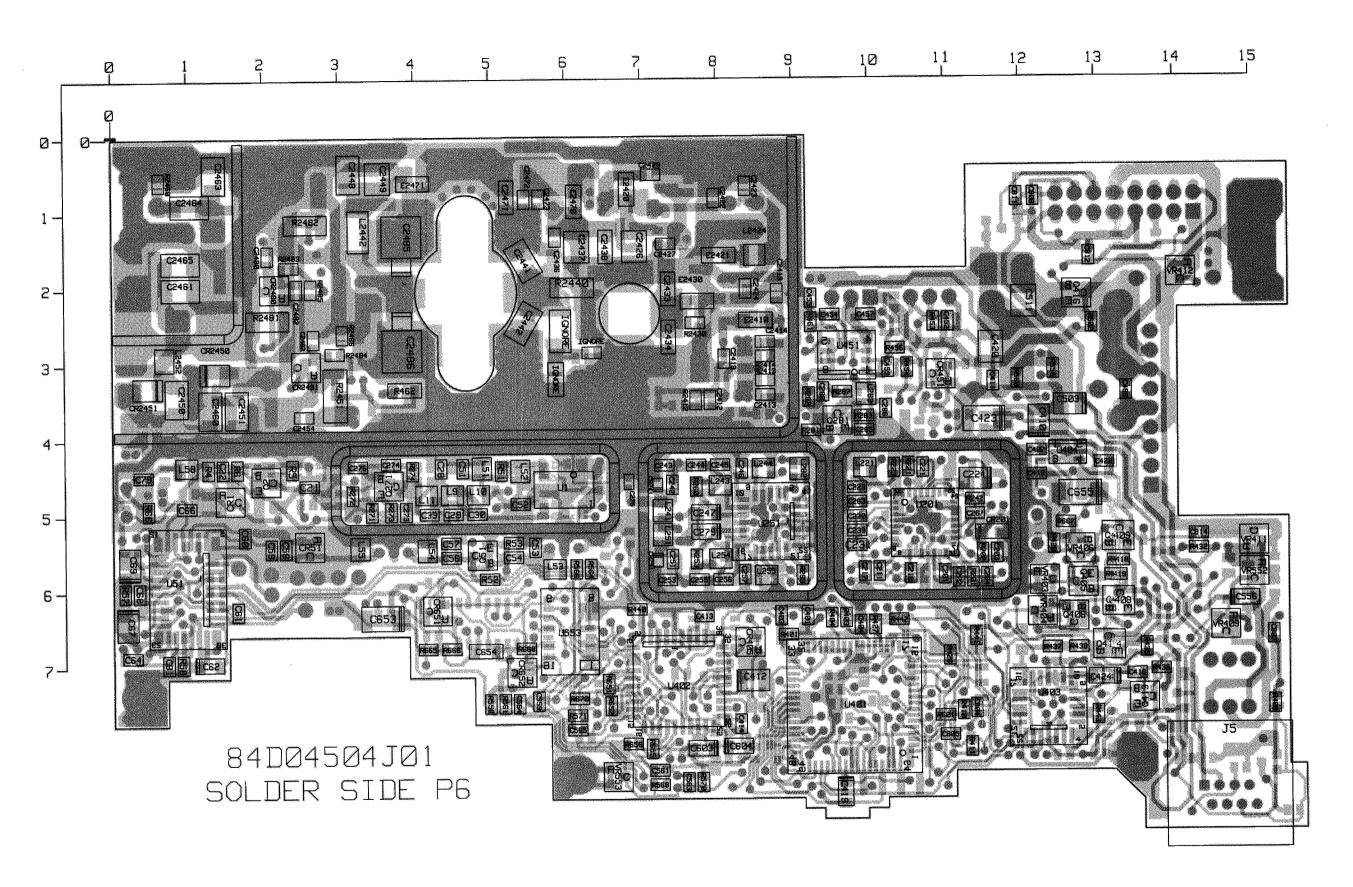


COMPONENT SIDE INNER LAYER (GRAY) SOLDER SIDE INNER LAYER (PINK) OVERLAY ----

RCB-95115-O RCB-95116-O RCB-95118-O

Circuit Board Details for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W (Part of PMUD1067A, PMUD1068A, PMUD1088A, PMUD1089A Radios)

COMPONENT SIDE VIEW



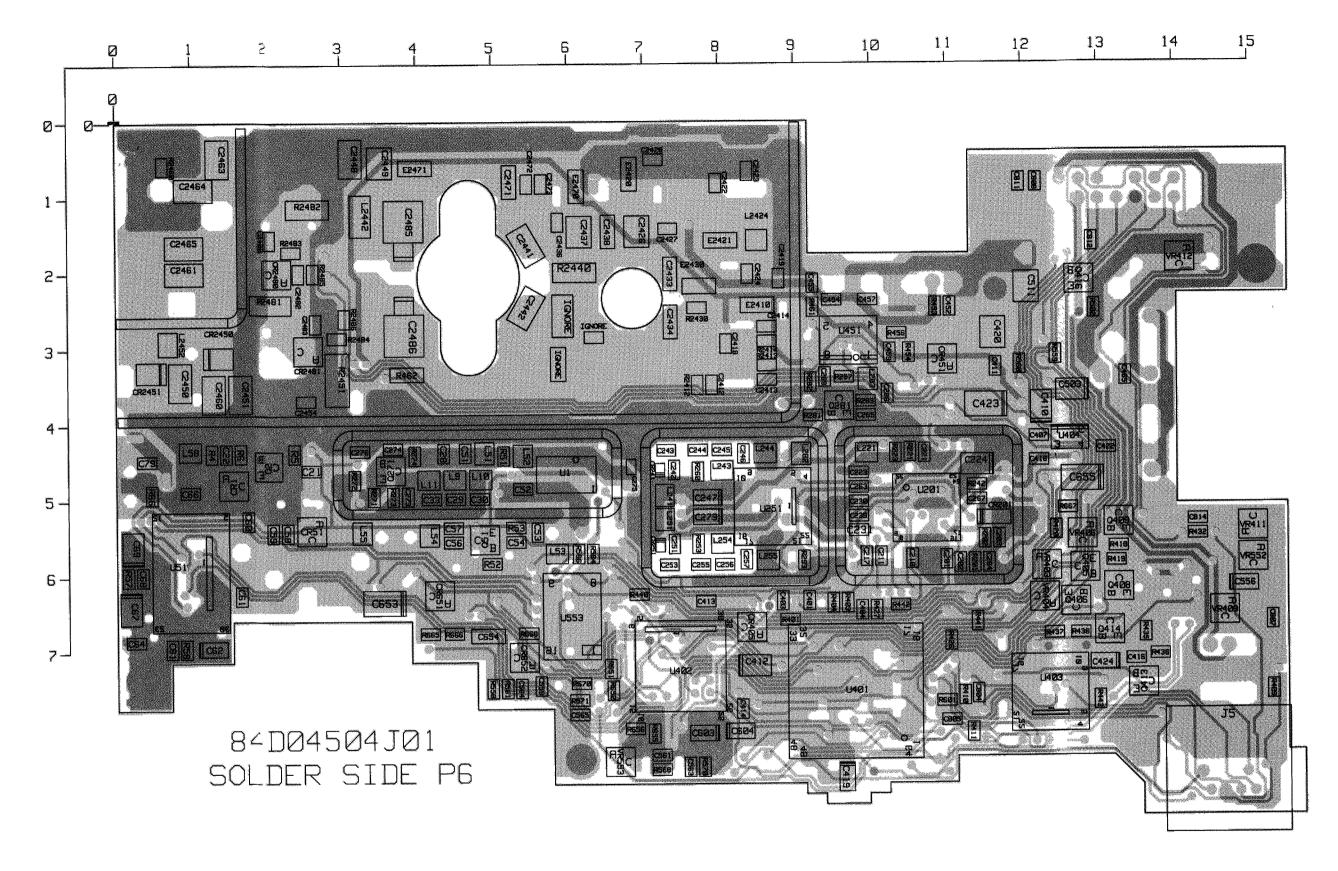
COMPONENT SIDE (GRAY)
SOLDER SIDE (PINK)
OVERLAY -----

RCB-95114-O (REV) RCB-95117-O (REV) RCB-95119-O (REV)

SOLDER SIDE VIEW

Circuit Board Details for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W (Part of PMUD1067A, PMUD1068A, PMUD1088A, PMUD1089A Radios)

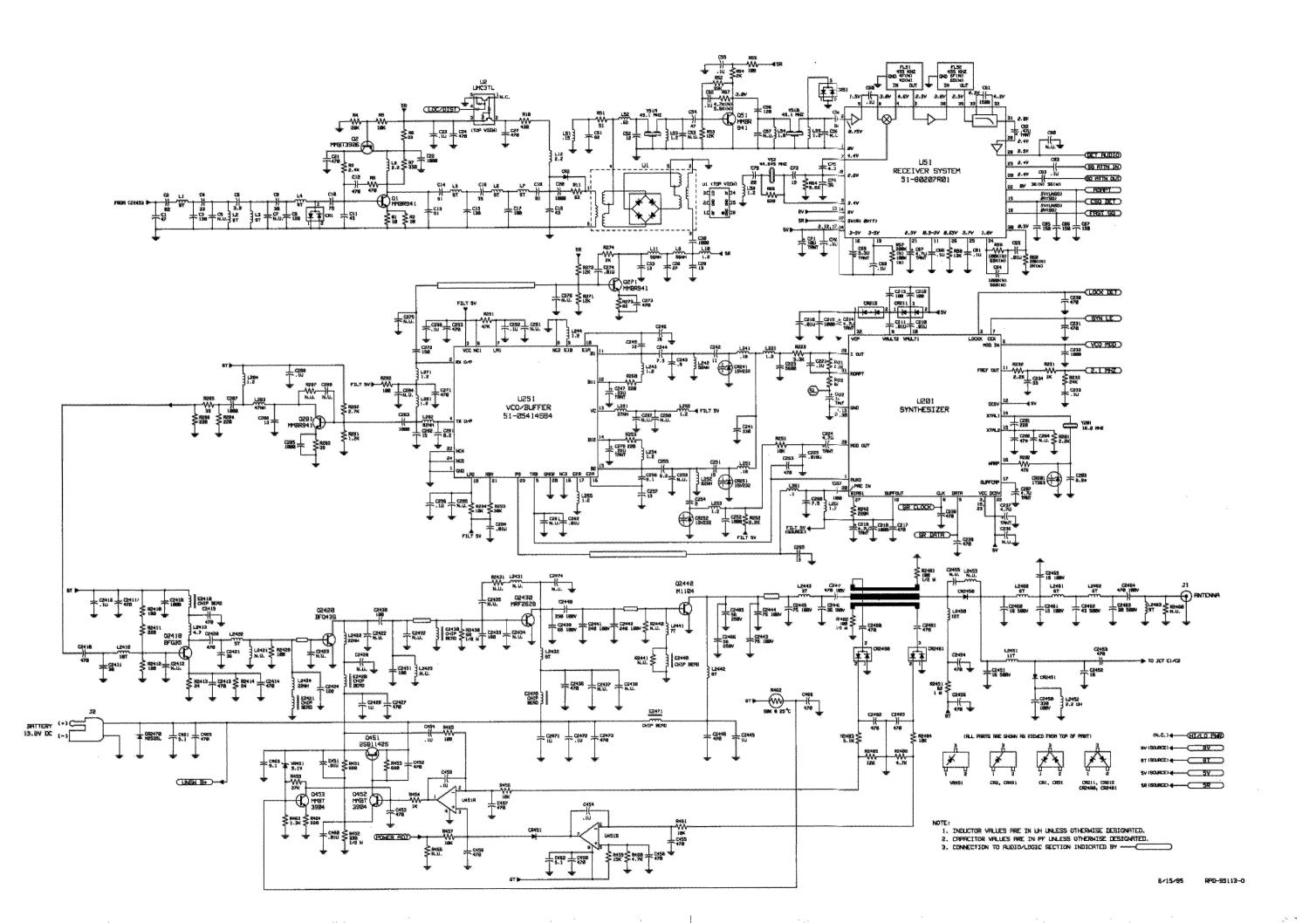
0903Z45-A Mar



COMPONENT SIDE INNER LAYER (GRAY) SOLDER SIDE INNER LAYER (PINK) OVERLAY -----

RCB-95115-O (REV) RCB-95116-O (REV) RCB-95119-O (REV)

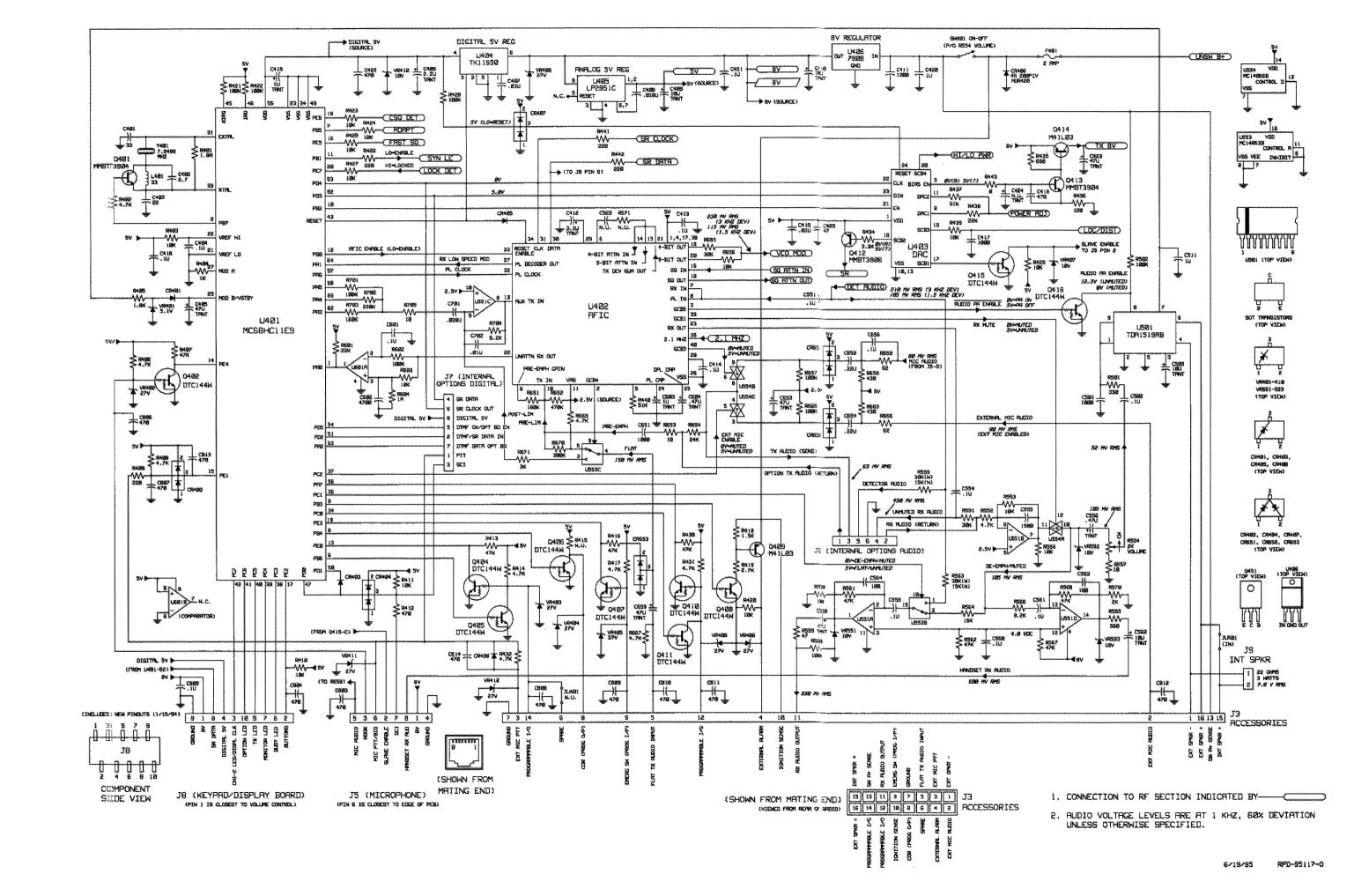
SOLDER SIDE VIEW



Schematic Diagrams for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W (Part of PMUD1067A, PMUD1068A, PMUD1088A, PMUD1089A Radios) (Sheet 1 of 2)

March, 1998

6880903Z45-A



Schematic Diagrams for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W (Part of PMUD1067A, PMUD1068A, PMUD1088A, PMUD1089A Radios) (Sheet 2 of 2)

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6880903Z45-A

March, 1998

Parts List

SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts 12.5 kHz (N) (used in PMUD1067 & PMUD1088) SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts

SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts 12.5 kHz (N) (used in PMUD1067 & PMUD1088) SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts 20/25/30 kHz, 40// (used in PMI) 1068 & PMUD1089)

SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts 12.5 kHz (N) (used in PMUD1067 & PMUD1088) SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts

SM:50/SM120 VHF Main Board, 150-170 MHz, 40 Watts 12..5 kHz (N) (used in PMUD1067 & PMUD1088) SM:50/SM120 VHF Main Board, 150-170 MHz, 40 Watts

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

PL-951010-A

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

PL-951010-A REFERENCE MOTOROLA SYMBOL PART NO.

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

DESCRIPTION

PL-951010-A

SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts 20/25/30 kHz (W) (used in PMUD1068 & PMUD1089) PL-951010-A REFERENCE MOTOROLA SYMBOL PART NO. 48-80113R01 7.9488 MHz non-referenced items

SM50/SM120 VHF Main Board, 150-170 MHz, 40 Watts 12.5 kHz (N) (used in PMUD1067 & PMUD1088)

14-80168S01 crystal insulator (2 used for Y52, Y201)
26-04398J01 VCO/synthesizer shield (4 used)
26-04399J01 receiver mixer bottom shield 26-04400J01 receiver front end top shield 26-04419J01 PA shield frame 26-04420J01 PA shield cover 42-80281L01 ground clip (2 used for Q2440)

note: For optimum performance, diodes, transistors, and integrated circuits must be ordered by Motorola part numbers.

Designators marked with an (*) denote parts which are not field serviceable. Recalibration of the radio using specialized factory equipment is mandatory when these components are replaced in order to guarantee the specified frequency stability of the radio at temperature extremes.

REFERENCE	MOTOROLA		REFERENCE	MOTOROLA	DESCRIPTION
SYMBOL	PART NO.	DESCRIPTION	SYMBOL	PART NO.	
w.:		capacitor, fixed: uF +/-5%; 50 V:	C236		Not Used
		unless otherwise stated	C237	23-11049J11	tantalum 4.7 uF 10%; 16 V
i a	21-13740A41	33 pF	C238, 239	21-13740A71	470 pF
51		150 pF	C241	21-13740A67	330 pF
2	21-13740A59		C242	21-13740A30	11 pF
23	21-13740A54	91 pF	C243	21-13740A01	0.5 ±0.1 pF
24	21-13740A41	39 pF	C244, 245	21-13740A27	8.2 ±0.25 pF
55		Not Used		21-13740A29	10 pF
26	21-13740A23	6.2 ±0.25 pF	C246		tantalum 0.22 uF 10%; 35 V
7	****	Not Used	C247	23-11049A03	
28	21-13740A40	30 pF	C251	21-13740A33	15 pF
39	21-13740A54	91 pF	C252	21-13740A79	1000 pF
210	21-13740A79	100 pF	C253		Not Used_
Ž11	21-13740A38	24 pF	C254	21-13740A10	2 ±0.25 pF
512	21-13740A71	470 pF	C255	21-13740A27	8.2 ±0.25 pF
213	21-13740A41	33 pF	C256	21-13740A28	9.1 ±0.25 pF
214	21-13740A58	130 pF	C257	21-13740A32	13 pF
	21-13740A54	91 pF	C261		Not Used
215			C262	21-13741A45	.01 uF
216	21-13740A48	51 pF	C263	21-13740A71	470 pF
C17	21-13740A53	82 pF		#1161.461.41	Not Used
218	21-13740A58	130 pF	C264		13 pF
C19	21-13740A42	36 pF	C265	21-13740A32	7.5±0.25 pF
C20	21-13740A79	1000 pF	C266	21-13740A25	
221	21-13740A71	470 pF	C267	21-13740A79	1000 pF
222	21-13740A79	1000 pF	C271	21-13740A71	470 pF
	21-13743A19	0.1 uF 10%; 16 V	C272	21-13740A59	150 pF
C24	21-13740A71	470 pF	C273	21-13740A71	470 pF
C27	21-13740A71	470 pF	C274	21-13741A45	.01 uF
C28	21-13740A39	27 pF	C275	2113740F29	12 pF
	21-13740A32	13 pF	C276		Not Used
C29	21-13740A79	1000 pF	C279	23-11049A03	tantalum 0.22 uF 10%; 35 V
C30		and the second s	C275	21-13740A27	8.2 ±0.25 pF
C33	21-13740A32	13 pF		A CONTRACTOR OF THE PARTY OF TH	15 pF
C51	21-13740A53	82 pF	C282	21-13740A33	
C52	21-13740A31	12 pF	C283	21-13740A79	1000 pF
C53	***	Not Used	C284	Name	Not Used
C54	21-13740A46	47 pF	C285	21-13740A79	1000 pF
C55	21-13743A19	0.1 uF 10%; 16 V	C286	21-13740A32	13 pF _
C56	21-13740A57	120 pF	C287	21-13740A79	1000 pF
C57, 58	THE	Not Used	C288	21-13743A19	0.1 uF 10%; 16 V
C59	21-13740A53	82 pF	C289	***	Not Used
C60	21-13743A19	0.1 uF 10%; 16 V	C291	***	Not Used
C61	21-13741A25	1500 pF	C292	21-13743A19	0.1 uF 10%; 16 V
	23-11049A05	tantalum 0.47 uF 10%; 25 V	C293	21-13740A71	470 pF
C62		36 pF		21-13741A45	.01 uF
C63(N)	21-13740A42		C294		Not Used
C63(W)	21-13740A49	56 pF	C295	ma ma ammandanh	0.1 uF 10%; 16 V
C64(N)	21-13740A79	1000 pF	C296	21-13743A19	
C64(W)	21-13740A73	560 pF	C297, 298	www.	Not Used
C65	21-13741A45	.01 uF	C299	21-13743A19	0.1 uF 10%; 16 V
C66	21-13743A19	0.1 uF 10%; 16 V	C401	21-13740A41	33 pF
C67	23-11049J11	tantalum 4.7 uF 10%; 16 V	C402	21-13740A13	2.7 ±0.25 pF
C68	21-13743A19	0.1 uF 10%; 16 V	C403	21-13740A37	22 pF
C69	23-11049J07	tantalum 3.3 uF 10%; 20 V	C404	21-13743A19	0.1 uF 10%; 16 V
C70	21-13743A19	0.1 uF 10%; 16 V	C405	23-11049J43	tantalum 47 uF 10%; 10 V
C71	23-11049A57	tantalum 10 uF 10%; 16 V	C405 C406	23-11049A40	tantalum 2.2 uF 10%; 10 V
C73	21-13740A33	15 pF			.01 uF
	21-13740A33	36 pF	C407	21-13741A45	
C74	21-13740A42 21-13740A18	4.3 ±0.25 pF	C408	21-13741A51	.018 uF
C75			C409, 410	23-11049A57	tantalum 10 uF 10%; 16 V
C79	21-13740A36	20 pF	C411	21-13740A79	1000 pF
C80	سمد معدد مسموری میش	Not Used	C412	23-11049J07	tantalum 3.3 uF 10%; 20 V
C81 thru 83	21-13743A19	0.1 uF 10%; 16 V	C413, 414	21-13743A19	0.1 uF 10%; 16 V
C85 thru 87	21-13740A59	150 pF	C415	21-13741A45	.01 uF
C201	21-13740A63	220 pF	C416	21-13740A71	470 pF
C202	21-13740G46	47 pF 2%	C417	21-13740A79	1000 pF
C203	21-13740G24	6.8 ±0.1 pF	C418	21-13743A19	0.1 uF 10%; 16 V
C207	23-11049J11	tantalum 4.7 uF 10%; 16 V		23-11049A07	tantalum 1 uF 10%; 16 V
C210, 211	21-13741A45	.01 uF	C419	21-13741W01	1 uF 10%; 25 V
C212, 213	21-13740A55	100 pF	C420		
C214	23-11049J11	tantalum 4.7 uF 10%; 16 V	C421	21-13743A19	0.1 uF 10%; 16 V
	21-13740A79	1000 pF	C422	21-13740A71	470 pF
C215			C423	23-11049J43	tantalum 47 uF 10%; 10 V
C216	21-13741A45	.01 uF	C424	www	Not Used
C217	21-13740A71	470 pF	C425	21-13740A46	47 pF
C218	21-13740A79	1000 pF	C450	21-13740A71	470 pF
C219	23-11049J11	tantalum 4.7 uF 10%; 16 V	C451	21-13743A21	0,22 uF, 10%; 16 V
C221	21-13743A19	0.1 uF 10%; 16 V	C452	21-13740A71	470 pF
C222	23-11049A07	tantalum 1 uF 10%; 16 V			0.1 uF, 10%; 16 V
C223	21-13741A39	5600 pF	C453	21-13743A19	
		tantalum 4.7 uF 10%; 16 V	C454	21-13743A19	0.1 uF 10%; 16 V
C224	23-11049J11		C455 thru 458	21-13740A71	470 pF
C225	21-13741A51	.018 uF	C459	21-13743A19	0.1 uF 10%; 16 V
C230, 231	21-13740A71	470 pF_	C460		Not Used
C232	21-13740A79	1000 pF	C461 thru 463	21-13740A20	5.1 ±0.25 pF
C233	21-13743A19	0.1 uF 10%; 16 V	and the second s	21-13743A19	0.1 uF 10%; 16 V
C234	21-13740A41	33 pF	C464	E 1 194 496115	*** *** ***** ** **

C501	PART NO.	DESCRIPTION			
C501		470 ×C	CR51	48-80154K03	dual Schottky SOT
	21-13740A71	470 pF	©R201	48-02245J22	silicon varactor SOT 1T363
	21-13740A79	1000 pF	©R211, 212	48-13833C07	dual silicon SOT MMBD7000
	21-13743A19	0.1 uF 10%; 16 V	CR241	48-62824C03	silicon varactor SOT 1SV232
	23-11049A57	tantalum 10 uF 10%; 16 V	(CR251, 252	48-62824C03	silicon varactor SOT 1SV232
	21-13741W01	1 uF 10%; 25 V	(3R401	48-05129M76	silicon SOT
C551	21-13743A19	0.1 uF 10%; 16 V	(CR402	48-13833C07	dual silicon SOT MMBD7000
C554	21-13743A19	0.1 uF 10%; 16 V	€CR403	48-80939T01	Schottky SOT
	21-13741A79	1000 pF	(CR404	48-13833C07	dual silicon SOT MMBD7000
C556	23-11049A05	tantalum .47 uF 10%; 25 V		48-05129M76	silicon SOT
C558	23-11049J43	tantalum 47 uF 10%; 10 V	CR405	48-83553T02	4A 200 PIV MUR420
C559 thru 561	21-13743A19	0.1 uF 10% 16V	(CR406	48-13833C07	dual silicon SOT MMBD7000
C562	23-11049A57	tantalum 10 uF 10%; 16 V	(CR407		silicon SOT
C563, 564	21-13740A55	100 pF	CR408	48-05129M76	silicon SOT
C565		Not Used	CR451	48-05129M76	dual silicon SOT MMBD7000
C601	21-13743A19	0.1 uF 10%; 16 V	CR651 thru 653	48-13833C07	silicon PIN MA4P1250
C602	21-13741A37	4700 pF	CR2450, 2451	48-02482J02	
C603	23-11049A07	tantalum 1 uF 10%; 16 V	CR2470	48-80236E07	transient suppressor
	23-11049A05	tantalum 0.47 uF 10%; 25 V	CR2480, 2481	48-82290T02	dual Schottky SOT HSMS-280
C604		1000 pF			
C651	21-13740A79	0.22 uF +80/-20%			ferrite beads:
C652	21-11032B15		E2410	24-84657R01	ferrite bead
C653	23-11049J43	tantalum 47 uF 10%; 10 V	E2420, 2421	24-84657R01	ferrite bead
C654	21-11032B15	0.22 uF +80/-20%	E2430	24-84657R01	ferrite bead
C655	23-11049J43	tantalum 47 uF 10%; 10 V	E2440	24-84657R01	ferrite bead
C656	21-13743A19	0.1 uF 10%; 16 V	E2470, 2471	24-84657R01	ferrite bead
C701	21-13741A59	.039 uF	E210, 2411	war warmed kittle i	· · · · · · · · · · · · · · · · · · ·
C702	21-13741A45	.01 uF			fuse:
C803, 804	21-13740A71	470 pF	F-286.2	SE DESTACOA	
C805	21-13743A19	0.1 uF 10%; 16 V	F401	65-05214E04	2 amp axial lead
C806 thru 814	21-13740A71	470 pF			4114 www.
C2410	21-13740A71	470 pF	<u></u>	د ساسد در مومومومومو	filter:
C2410	21-13740A40	30 pF	FL51(N)	91-80098D04	455 kHz 4F
	21-101-404-40	Not Used	FL51(W)	91-80098D06	455 kHz 4D
C2412		470 pF	FL52(N)	91-80097D04	455 kHz 6F
C2413, 2414	21-13740A71	0.1 uF 10%; 16 V	FL52(W)	91-80097D06	455 kHz 6D
C2416	21-13743A19				
C2417	21-13740A71	470 pF			connector, receptacle:
C2418	21-13740A79	1000 pF	J1	09-09006C01	mini UHF coax
C2419, 2420	21-13740A71	470 pF	J2	30-04510J01	power cable assembly (includ-
C2421	21-13740A42	36 pF	J2 J3	28-04503J01	16-pin, accessories
C2422, 2423	16,600	Not Used		09-04426J01	telephone type, 8 contact, mic
C2424	21-13740A57	120 pF	J <u>5</u>		6-pin, internal options audio
C2426	21-13741W01	1 uF 10%; 25 V	J6	09-04424J05	8-pin, internal options digital
C2427	21-13740A71	470 pF	J7	09-04424J06	10-pin, display board
C2428	***	Not Used	J8	09-04422J02	
C2429	21-13740A79	1000 pF	J9	28-04423J01	2-pin, internal speaker
C2430, 2431	21-13740A55	100 pF			*
C2430, 2401	***	Not Used			jumper:
C2433	21-13740B55	180 pF	JU401	***	Not Used
	21-101-10000	Not Used	JU501	06-62057C01	jumper
C2434, 2435	21-13740A71	470 pF			
C2436	21-13/4UM/1	Not Used			coil, rf:
C2437		0,22 uF +80/-20%	L1 thru 7	24-60591G24	9 turns
C2438	21-11032B15		Ľ8	24-62587X69	chip 1.2 uH 5%
C2439	21-11078B42	100 pF 100 V	Ĺ9	24-62587X50	chip 56 nH 5%
C2440	21-11078B55	330 pF 100 V	L10	24-62587X69	chip 1.2 uH 5%
C2441, 2442	21-11078B52	240 pF 100 V	L11	24-62587X50	chip 56 nH 5%
C2443 thru 2445		75 pF 100 V	L12	24-62587N72	chip 2.2 uH 5%
C2446	21-80060M32	36 pF 500 V		24-62587X55	chip 0.15 uH 5%
C2447	21-11078B59	470 pF 100 V	L51		
C2448	21-13740B65	470 pF	L52	24-62587X63	chip 0.62 uH 5%
C2449	21-13741W01	1 uF 10%; 25 V	L53	24-62587X69	chip 1.2 uH 5%
C2450	21-11078B55	330 pF 100 V	L54	24-62587N71	ohip 1.8 uH 5%
C2450 C2451	21-80060M24	16 pF 500 V	L55	24-62587X69	chip 1.2 uH 5%
	21-13740A38	24 pF	L58	24-62587X69	chip 1.2 uH 5%
C2452		470 pF	L221	24-62587X69	chip 1.2 uH 5%
C2453, 2454	21-13740A71		L241	24-62587V37	chip 0.18 uH 5%
C2455	**** *********************************	Not Used	L242	24-62587V36	chip 0.15 nH 5%
C2456	21-13740A71	470 pF	L243, 244	24-62587X69	chip 1.2 uH 5%
C2460	21-80060M25	18 pF 500 V		24-62587X56	chip 0.18 uH 5%
C2461	21-11078B18	15 pF 100 V	L251		chip 82 nH 5%
C2462	21-80060M34		L252	24-62587X52	
C2463	21-80060M30	30 pF 500 V	L253 thru 255	24-62587X69	chip 1.2 uH 5%
C2464	21-11078B59	470 pF 100 V	L261	24-62587X53	chip 0.1 uH 5%
C2465	21-11078B18	15 pF 100 V	L262	24-62587X69	chip 1.2 uH 5%
C2471	21-13741W01	. Šas valsa sasa va	L271	24-62587X69	chip 1.2 uH 5%
	21-13743A19	0.1 uF 10%; 16 V	L281	24-62587X69	chip 1.2 uH 5%
C2472		470 pF	L282	24-62587X52	chip 82 nH 5%
C2473	21-13740A71	Not Used	L283	24-62587X49	
C2474	*** * *** 40740Å74		L284	24-62587X69	
C2480 thru 248:		470 pF	L291	24-62587X46	
C2485, 2486	21-80964X35	clamped mica 39 pF 250 V			chip 1.2 uH 5%
-			L292	24-62587X69	
		diode: (see note)	L401	24-60578C43 24-60591H77	
			L2410		

	SECTOROL A		REFERENCE	MOTOROLA	
REFERENCE	MOTOROLA	DESCRIPTION	SYMBOL.	PART NO.	DESCRIPTION
SYMBOL	PART NO.	V-2000000000000000000000000000000000000			
L2420	24-60591C73	5 turns	R273	06-62057C49	82
L2421	***	Not Used	R274	06-62057C82	2k
L2422	24-62587X45	chip 22 nH 5%	R281	06-62057C77	1.2k
L2423		Not Used	R282	06-62057C85	2.7k
L2424	24-62587X45	chip 22 nH 5%	R283	06-62057C41	39
L2431		Not Used	R284	06-62057C59	220
L2432	24-60591F77	8 turns	R285	06-62057C41	39
	24-60591E77	7 turns	R286	06-62057C59	220
L2441	144	**	R287	***	Not Used
L2442	24-60591F77	8 turns	R291	06-62057D16	47k
L2443	24-60591X01	3 turns			
L2450	24-60591V77	12 turns	R292	06-62057C51	100
L2451	24-60591J77	11 turns	R293	06-62057D11	30k
L2452	24-11087B30	chip 2.2 uH	R294	06-62057D11	30k
L2453	www.	Not Used	R401	06-62057D54	1,8 meg
L2460 thru 2462	24-60591X04	6 turns	R402	06-62057C91	4.7k
L2463	24-60591577	9 turns	R403	06-62057C99	10k
			R404	06-62057C75	1k
		transistor: (see note)	R405	06-62057C81	1.8k
en a	48-13827A07	NPN; type MMBR941	R406	06-62057C91	4.7k
Q1			R407	06-62057D16	47k
Q2	48-13824A17	PNP; type MMBT3906	R408	06-62057C91	4.7k
Q51	48-13827A07	NPN; type MMBR941	R409		220
Q271	48-13827A07	NPN; type MMBR941		06-62057C59	
Q281	48-13827A07	NPN; type MMBR941	R410, 411	06-62057C99	10k
Q401	48-80214G02	NPN; type MMBT3904	R412	06-62057C67	470
Q402	48-80947V01	digital NPN; type DTC144W	R413	06-62057D16	47k
Q404 thru 408	48-80947V01	digital NPN; type DTC144W	R414	06-62057C91	4.7k
Q409	48-80141L03	PNP, type M41L03	R415		Not Used
Q410, 411	48-80947V01	digital NPN; type DTC144W	R416	06-62057D16	47k
Q412	48-13824A17	PNP; type MMBT3906	R417	06-62057C91	4.7k
	48-80214G02	NPN; type MMBT3904	R418	06-62057C79	1.5k
Q413	48-80141L03	PNP, type M41L03	R419	06-62057C85	2.7k
Q414			R420	06-62057C99	10k
Q415, 416	48-80947V01	digital NPN; type DTC144W	R421, 422	06-62057D24	100k
Q451	48-02245J25	PNP; type 2SB1142S	R423 thru 425	06-62057C99	10k
Q452, 453	48-80214G02	NPN; type MMBT3904			10
Q2410	48-02245J24	NPN, type BFG35	R426	06-62057C27	
Q2420	48-02245J28	NPN; type BFQ43S	R427	06-62057C99	10k
Q2430	48-80225C18	NPN; type MRF2628	R428	06-62057D24	100k
Q2440	48-84411L04	NPN; type M1104	R429	06-62057C99	10k
		, 1	R430	06-62057D16	47k
		resistor, fixed: +/-5%; 1/10 W:	R431, 432	06-62057C91	4.7k
		unless otherwise stated	R434	06-62057C87	3.3k
ma n	06-62057C01	0	R435	06-62057C71	680
R1, 2			R436	06-62057C53	120
R3	06-62057C84	2.4k	R437	06-62057D17	51k
R4	06-62057D07	20k			
R5	06-62057C99	10k	R438	06-62057D08	22k
R6	06-62057C39	33	R439	06-62057C99	10k
R7	06-62057C49	82	R440	06-62057D17	51k
R8	06-62057C73	820	R441, 442	06-62057C27	220
R10	06-62057C66	430	R443	06-62057C01	0
R11	06-62057C46	62	R451	06-62057C71	10
R51	06-62057C44	51	R452	06-80195M37	330 1/2 watt
	06-62057D12	33k	R453	06-62057C71	680
R52		12k	R454	06-62057C75	1k
R53	06-62057D02		R455	06-62057D10	27k
R54	06-62057C82	2k	R456, 457	06-62057C99	10k
R55	06-62057C51	100	R459	06-62057D04	15k
R57(N)	06-62057D31	200k			
R57(W)	06-62057D24	100k	R460	06-62057C91	4,7k
R58	06-62057D03	13k	R461	06-62057C99	10k
R59(N)	06-62057D24	100k	R462	06-05621T02	thermistor 50k @ 25oC
R59(W)	06-62057D20	68k	R463	06-62057C78	1.3k
R60(N)	06-62057D07	20k	R464	06-62057C59	220
R60(W)	06-62057C82	2k	R465	06-62057C51	100
	06-62057C93	5.6k	R466		Not Used
R64		820	R501	06-62057C63	330
R66	06-62057C73		R502	06-62057D24	100k
R67(N)	06-62057C91	4.7k	R551	06-62057D11	30k
R67(W)	06-62057C93	5.6k			
R201	06-62057C83	2.2k	R552, 553	06-62057D02	12k
R202	06-62057D16	47k	R554	18-04405J02	variable 2k with switch
R221	06-62057C83	2.2k	R555(N)	06-62057C27	10.
R222	06-62057C49	82	R555(W)	06-62057D11	30k
R223	06-62057C87	3.3k	R556	06-62057C99	10k
R231	06-62057C75	1k	R557	06-62057C27	10
		na saran	R558	06-62057C99	10k
R232	06-62057C83		R559	06-62057C43	47
R233	06-62057D09		R560	06-62057D24	100k
R241	06-62057A65	4.7k, 1/16 W			
DOVO	06-62057D32		R561, 562	06-62057D16	47k
R242	06-62057C99	10k	R563(N)	06-62057D04	15k
R251	OU OHOU! WYY		R563(W)	06-62057D11	30k
R251		2.2k			
R251 R252	06-62057C83		R564	06-62057D04	15k
R251		220		06-62057D04 06-62057C97	15k 8.2k

R569 R570		
R570	06-62057C69	560
	06-62057C82	2k
R571	***	Not Used
R601	06-62057D08	22k
R602	06-62057D24	100k
13		
R603	06-62057C99	10k
R604	06-62057D48	1 meg
R651	06-62057D30	180k
R652	06-62057D40	470k
R653	06-62057C27	10
R654	06-62057D09	24k
R655	06-62057D11	30k
R656	06-62057C99	10k
R657	06-62057D24	100k
R658	06-62057C46	62
R659	06-62057C66	430
R665	06-62057C66	430
R666	06-62057C46	62
R667	06-62057C91	4.7k
R668	06-62057D24	100k
R669	06-62057C91	4.7k
R670	06-62057D35	300k
R671	06-62057C86	3k
R701	06-62057D24	100k
R702	06-62057D32	220k
R703	06-62057D29	160k
MV.		
R704	06-62057C94	6.2k
R705	06-62057C27	10
	06-62057C57	180
R2410	44 4	
R2411	06-62057C59	220
R2412	06-62057C53	120
R2413, 2414	06-62057C36	24
R2420	06-62057C51	100
R2430	06-11077A46	68
40		
R2431	***	Not Used
R2440	***	Not Used
**** ** * * * *	06-62057C27	10
R2441		
R2451	06-80194M23	82 1 watt
R2460	***	Not Used
R2481, 2482	06-80195M25	100 1/2 watt
R2483	06-62057C92	5.1k
		7.5k
R2484	06-62057C96	
R2485	06-62057D02	12k
R2486	06-62057C96	7.5k
		intermedial planets from animal
		integrated circuit: (see note)
U1	51-80505D01	double-balanced mixer
**		dual transistor switch UMC3TL
U2	48-09939C04	
U51	51-80207R01	receiver system
U201*	(see note)	synthesizer
1.4		
U251	51-02227\$66	VCO/buffer
LIANA	51-99010D01	microcomputer MC68HC711E9
U401	51-02227J35	audio filter
U402		
U402 U403	51-05226P38	DAC
U402		
U402 U403 U404	51-05226P38 51-80633C01	DAC 5 V regulator TK11950
U402 U403 U404 U405	51-05226P38 51-80633C01 51-05469E65	DAC 5 V regulator TK11950 5 V regulator LP2951C
U402 U403 U404	51-05226P38 51-80633C01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT
U402 U403 U404 U405 U406	51-05226P38 51-80633C01 51-05469E65 51-13816D03	DAC 5 V regulator TK11950 5 V regulator LP2951C
U402 U403 U404 U405 U406 U451	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC
U402 U403 U404 U405 U406 U451 U501	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB
U402 U403 U404 U405 U406 U451	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC
U402 U403 U404 U405 U406 U451 U501 U551	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC
U402 U403 U404 U405 U406 U451 U501 U551 U553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B
U402 U403 U404 U405 U406 U451 U501 U551 U553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note)
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601 VR401 VR402 thru 406	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601 VR401 VR401 VR402 thru 406 VR407	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M50 51-02198J23 48-80140L06 48-80948V01 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601 VR401 VR401 VR402 thru 406 VR407 VR408, 409	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 27 V SOT zener diode 27 V SOT
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601 VR401 VR401 VR402 thru 406 VR407	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M50 51-02198J23 48-80140L06 48-80948V01 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 27 V SOT zener diode 10 V SOT zener diode 10 V SOT zener diode 27 V SOT zener diode 27 V SOT
U402 U403 U404 U405 U406 U451 U501 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4056B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT zener diode 10 V SOT zener diode 10 V SOT zener diode 27 V SOT zener diode 27 V SOT
U402 U403 U404 U405 U406 U451 U501 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4056B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U501 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451 VR551 thru 553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80140L15 48-80948V01 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80948V01 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT zener diode 27 V SOT zener diode 27 V SOT zener diode 5.1 V SOT zener diode 10 V SOT
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451 VR551 thru 553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01 48-80948V01	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U501 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80140L15 48-80948V01 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80948V01 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT zener diode 27 V SOT zener diode 27 V SOT zener diode 5.1 V SOT zener diode 10 V SOT
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451 VR551 thru 553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M60 51-92198J23 48-80140L06 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451 VR551 thru 553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80140L15 48-80948V01 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80948V01 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4053B quad bilateral switch 4056B dual comparator LM2903 SOIC voltage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 10 V SOT zener diode 27 V SOT zener diode 27 V SOT zener diode 5.1 V SOT
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451 VR551 thru 553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M60 51-92198J23 48-80140L06 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 5.1 V SOT zener SO
U402 U403 U404 U405 U406 U451 U551 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451 VR551 thru 553 V51(N)	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M52 51-02198J23 48-80140L06 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80140L15 91-80112R06 91-80112R06	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 5.1 V SOT zener diode 10 V SOT zener diode 10 V SOT zener diode 5.1 MHz 12.5 kHz (includes Y51A and Y51B) filter 45.1 MHz 25 kHz (includes Y51A and Y51B)
U402 U403 U404 U405 U406 U451 U501 U551 U553 U554 U601 VR401 VR402 thru 406 VR407 VR408, 409 VR410 VR411, 412 VR451 VR551 thru 553	51-05226P38 51-80633C01 51-05469E65 51-13816D03 51-80932W01 51-80147R01 51-02198J28 51-84704M60 51-84704M60 51-92198J23 48-80140L06 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80948V01 48-80140L15 48-80140L15	DAC 5 V regulator TK11950 5 V regulator LP2951C 8 V regulator LP2951C 8 V regulator MC7808BT dual op-amp LM2904 SOIC audio power amp TDA1519AB quad op-amp LM2902D SOIC triple 2-channel switch 4053B quad bilateral switch 4066B dual comparator LM2903 SOIC voitage regulator: (see note) zener diode 5.1 V SOT zener diode 27 V SOT zener diode 5.1 V SOT zener SO

Parts List for VHF Main Boards, 150-170 MHz, 12.5 & 20/25/30 kHz, 40 W (Part of PMUD1067A, PMUD1068A, PMUD1088A, PMUD1089A Radios)