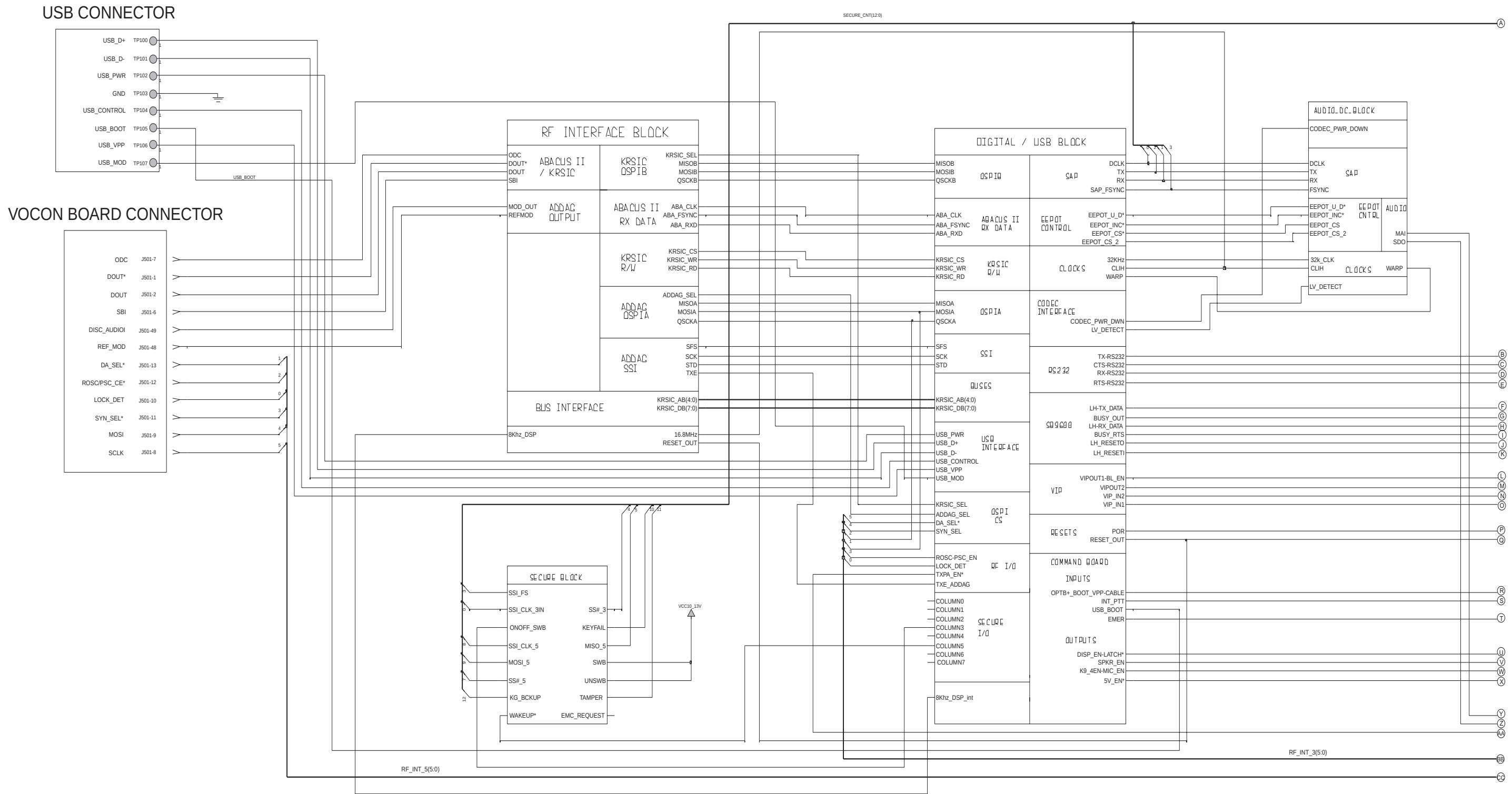
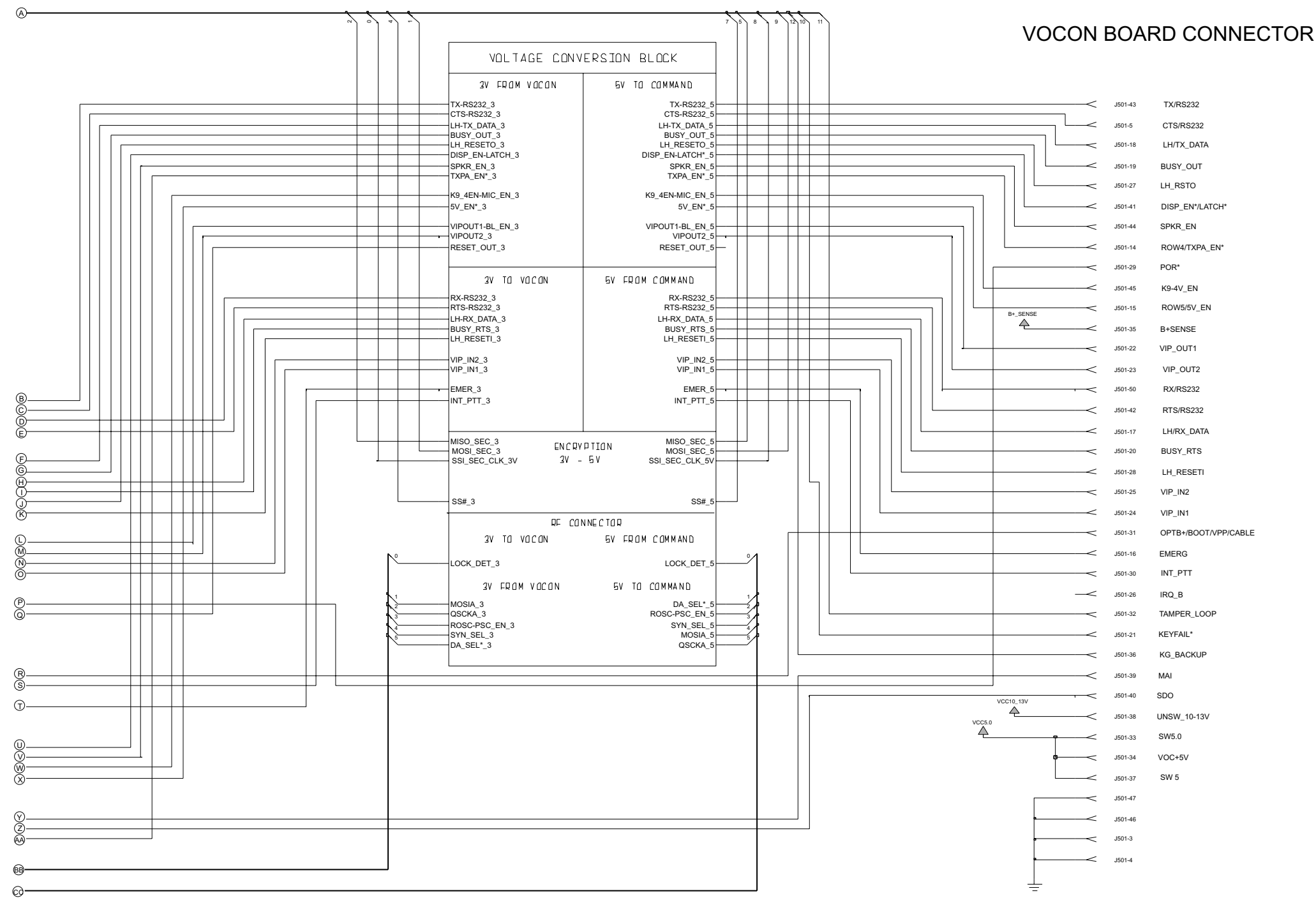


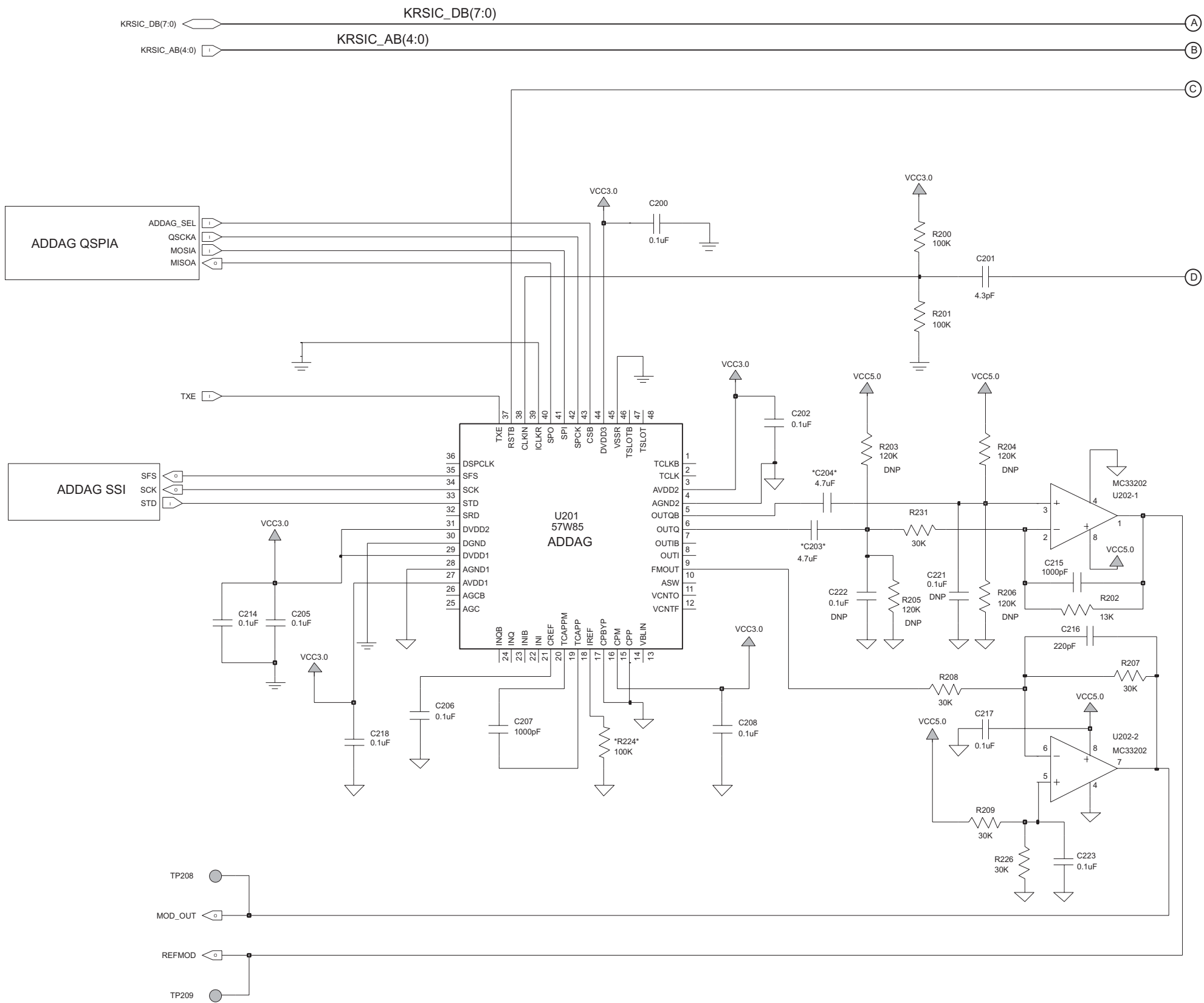
7.4 ASTRO Spectra Plus VOCON Section



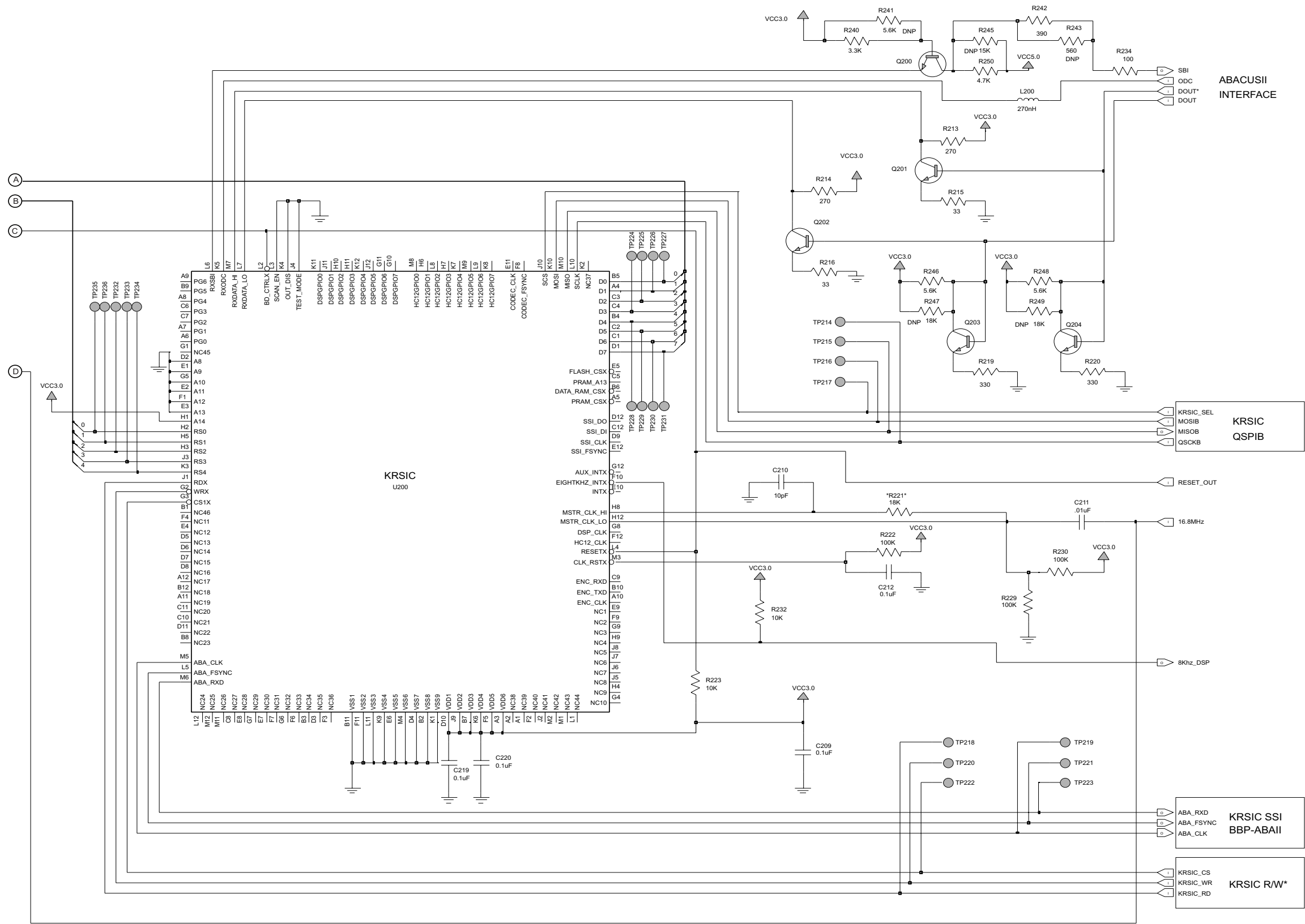
ASTRO Spectra Plus Top Level Schematic (Sheet 1 of 2)



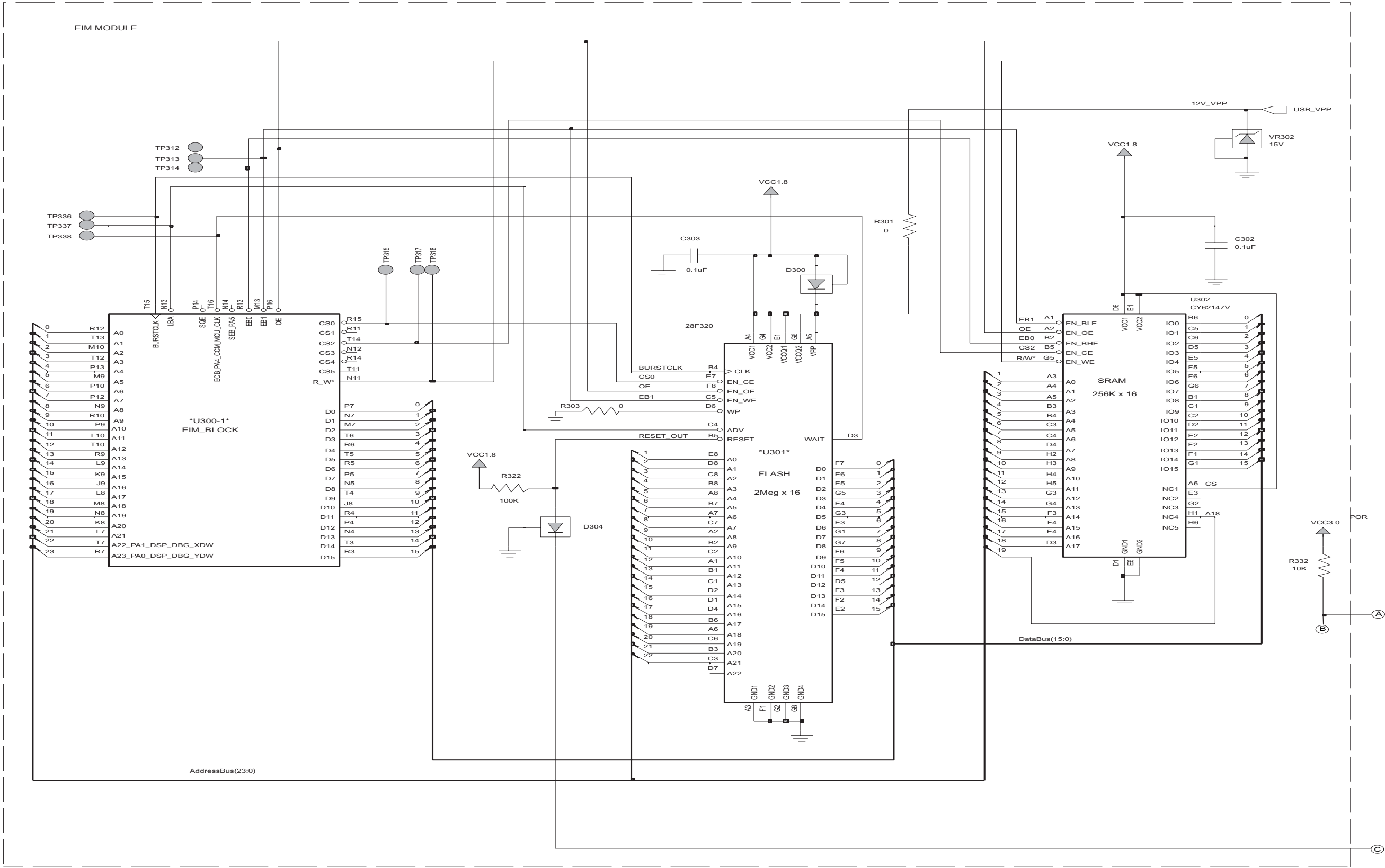
ASTRO Spectra Plus Top Level Schematic (Sheet 2 of 2)



ASTRO Spectra Plus RF Interface Schematic (Sheet 1 of 2)



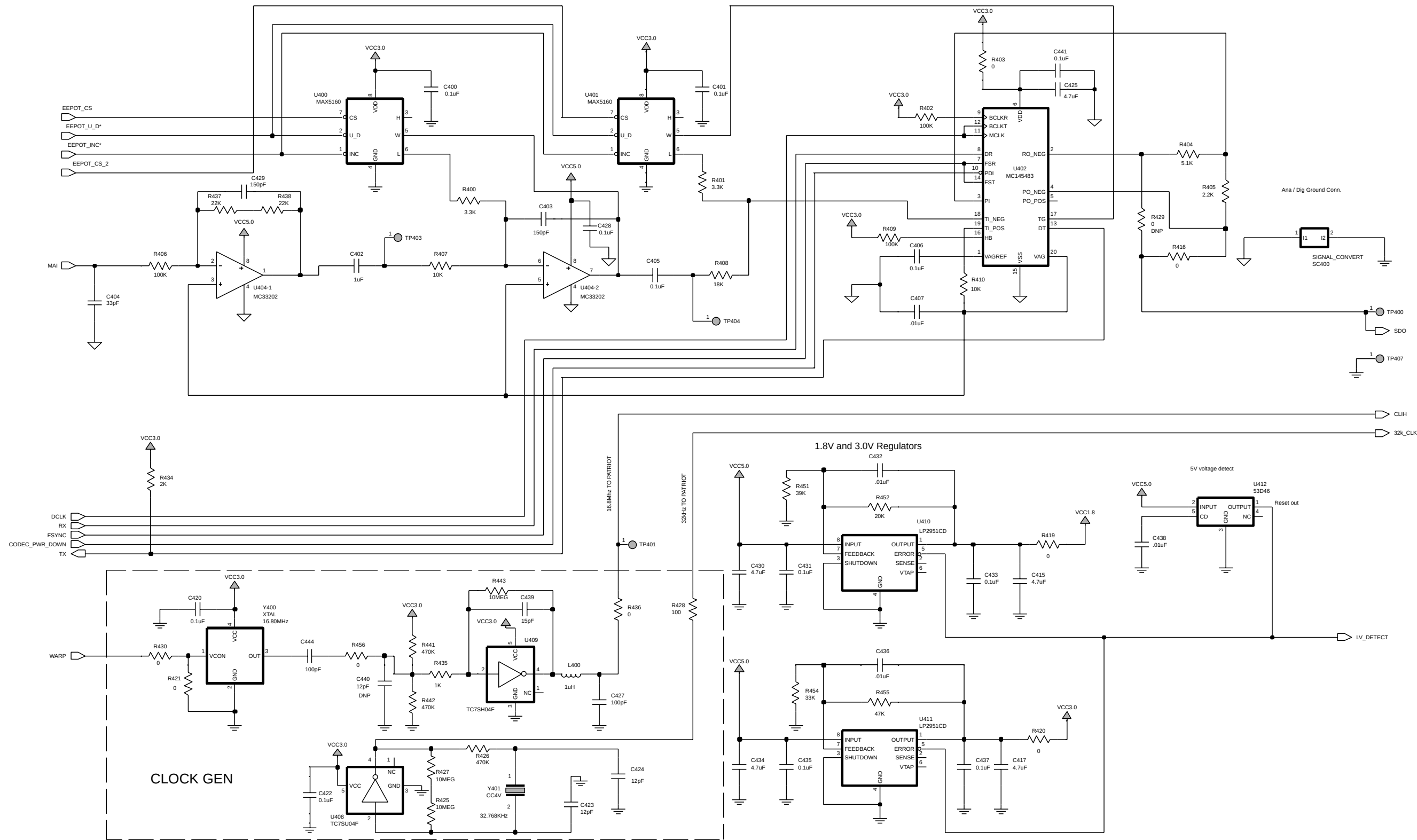
ASTRO Spectra Plus RF Interface Schematic (Sheet 2 of 2)

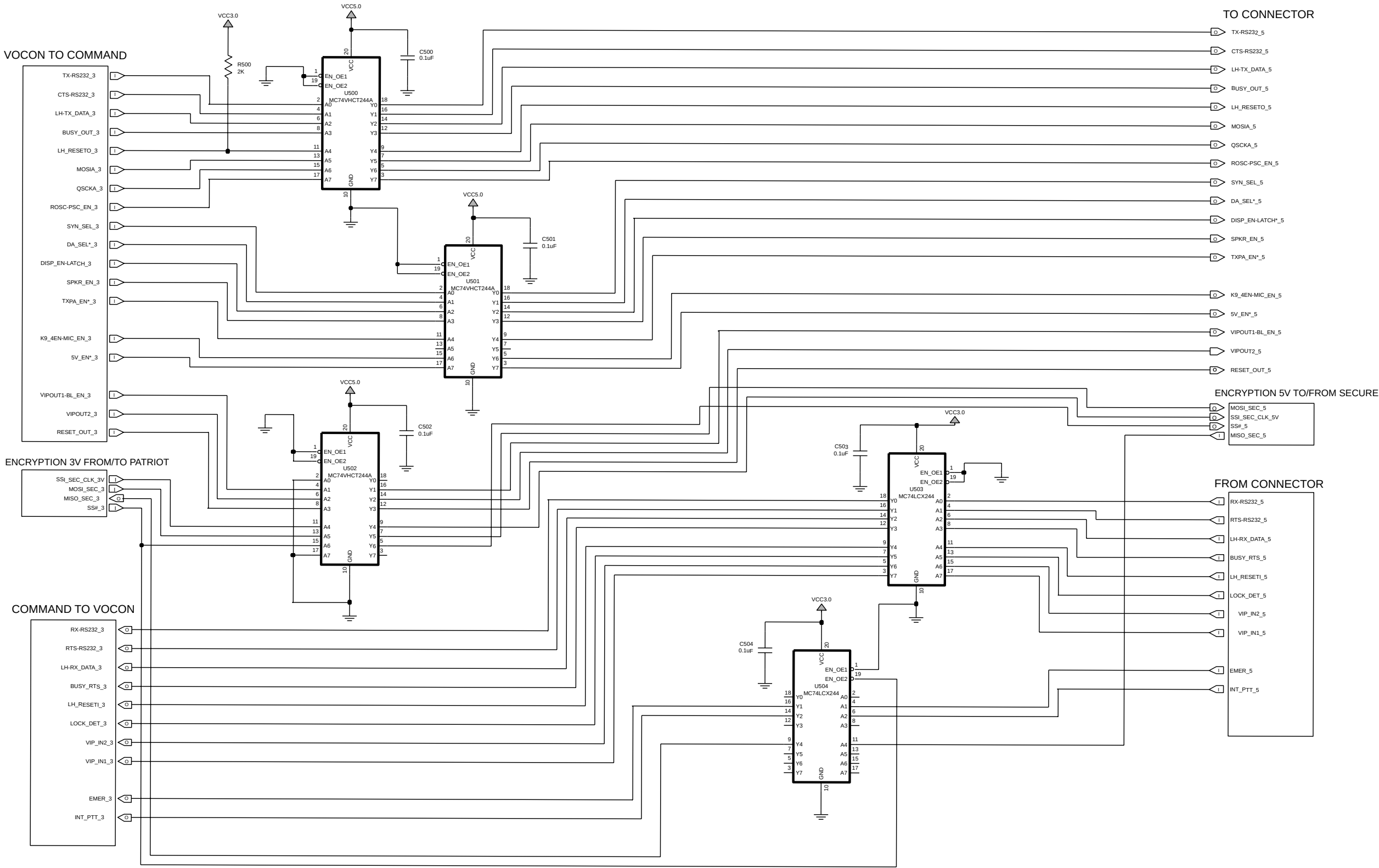


ASTRO Spectra Plus Digital/USB Schematic (Sheet 1 of 2)

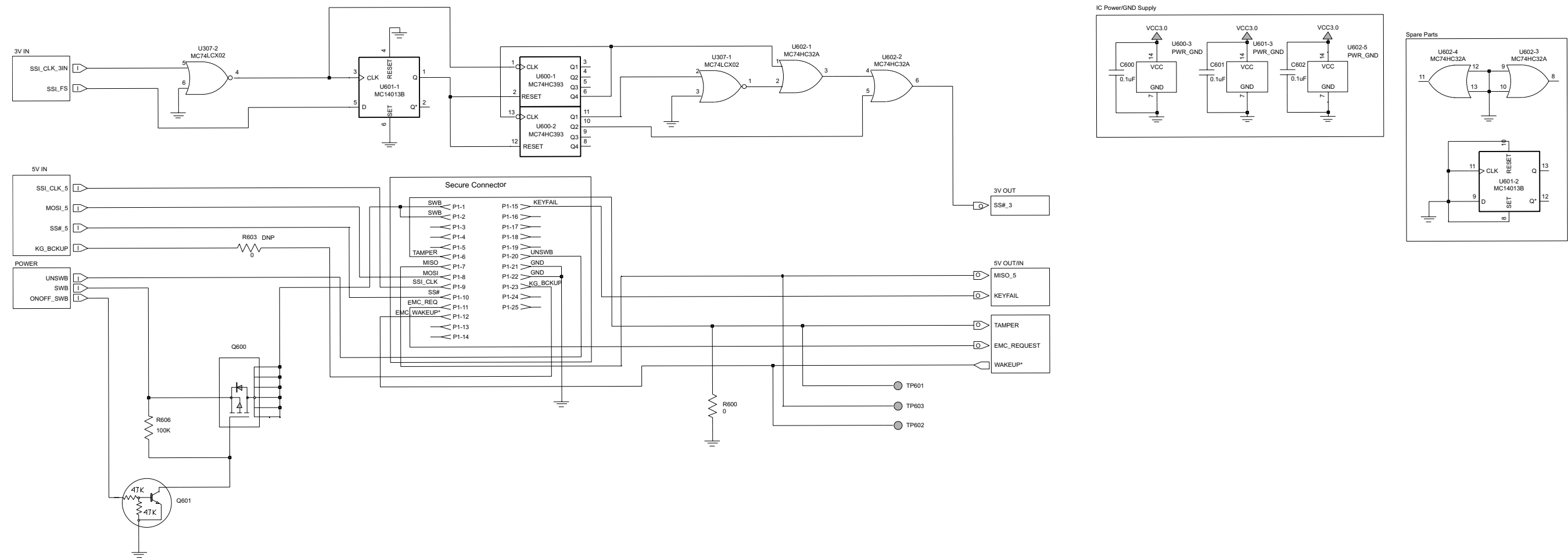


AUDIO DC BLOCK

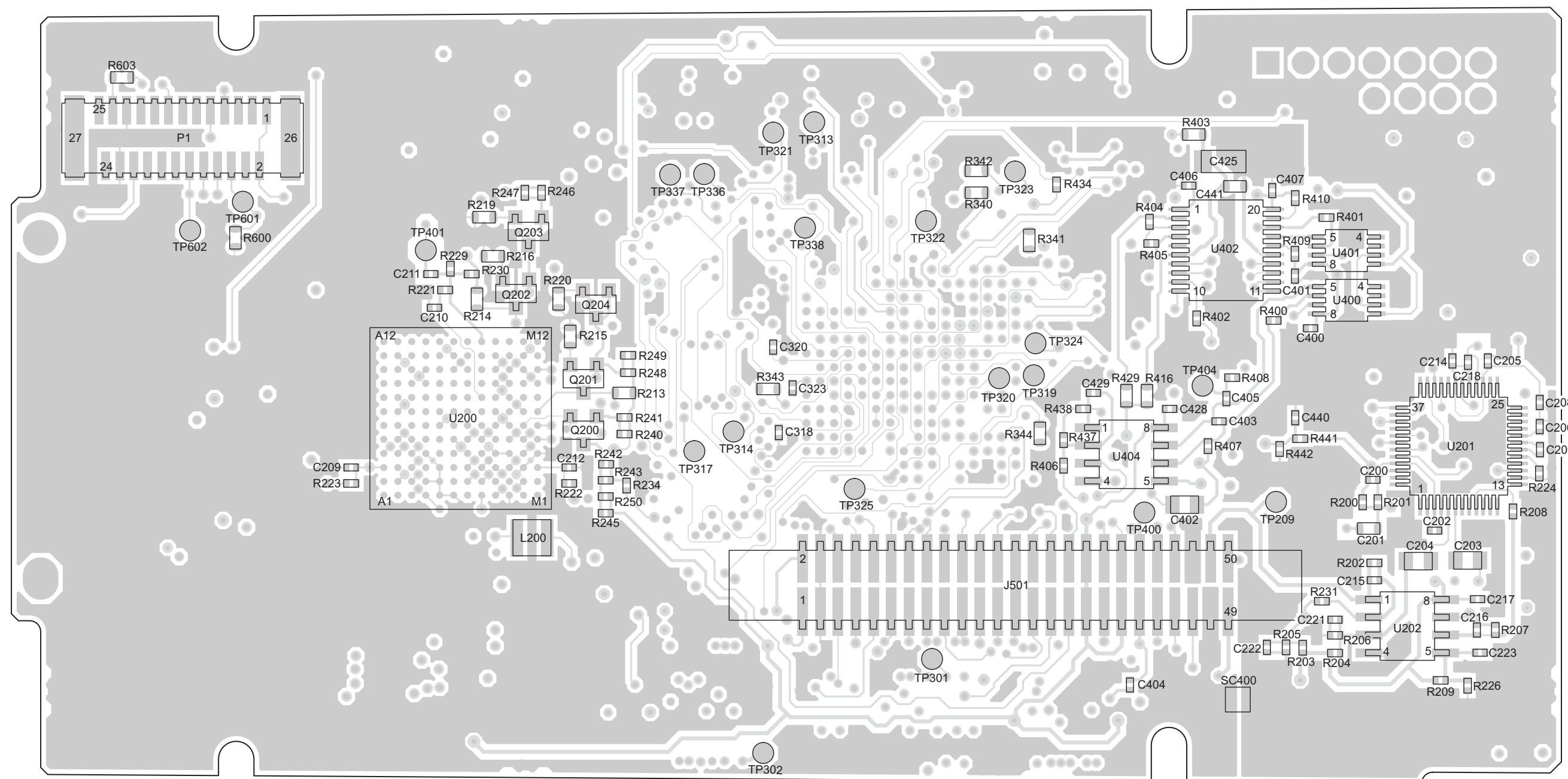




ASTRO Spectra Plus Voltage Conversion Schematic



ASTRO Spectra Plus Secure Interface Schematic



ASTRO Spectra Plus VOCON Component Location Diagram, Bottom View

HLN6837A ASTRO Spectra Plus VOCON Electrical
Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C200	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C201	2113930F18	CAP 4.3 PF 50V +/- .25 PF 50V
C202	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C203	0662057C01	CHIP RES 0 OHMS +.050 OHMS
C204	0662057C01	CHIP RES 0 OHMS +.050 OHMS
C205	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C206	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C207	2113743L17	CAP CHIP 1000 PF 10% X7R
C208	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C209	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C210	2113743N26	CAP CHIP 10.0 PF 5% COG
C211	2113743L41	CAP CHIP 10000 PF 10% X7R
C212	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C214	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C215	2113743L33	CAP CHIP 4700 PF 10% X7R
C216	2113743L09	CAP CHIP 470 PF 10% X7R
C217	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C218	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C219	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C220	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C221 - C222	-----	NOTPLACED
C223	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C300	2113928E01	CAP CER CHIP 1.0 UF 10 % 10V
C301	2113743N38	CAP CHIP 33.0 PF 5% COG
C302	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C303	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C304	2113743M24	CAP CHIP 100000 PF +80-20% Y5V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C305	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C306	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C307	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C308	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C309	2113743L09	CAP CHIP 470 PF 10% X7R
C310	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C311	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C312	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C313	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C314	2113743N38	CAP CHIP 33.0 PF 5% COG
C315	2113928E01	CAP CER CHIP 1.0 UF 10 % 10V
C316	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C317	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C318	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C319	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C320	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C321	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C322	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C323	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C324	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C325	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C326	2113930F59	CAP CER CHP 220 PF 50V 5%
C327	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C328	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C330	2113743L09	CAP CHIP 470 PF 10% X7R
C331	2113743L09	CAP CHIP 470 PF 10% X7R
C400	2113743M24	CAP CHIP 100000 PF +80-20% Y5V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C401	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C402	2113928E01	CAP CER CHIP 1.0 UF 10 % 10V
C403	2113743N54	CAP CHIP 150 PF 5% COG
C404	2113743N38	CAP CHIP 33.0 PF 5% COG
C405	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C406	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C407	2113743L41	CAP CHIP 10000 PF 10% X7R
C415	2185802B01	CAP 10V 4.7UF
C417	2185802B01	CAP 10V 4.7UF
C420	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C422	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C423	2113743N28	CAP CHIP 12.0 PF 5% COG
C424	2113743N28	CAP CHIP 12.0 PF 5% COG
C425	2185802B01	CAP 10V 4.7UF
C427	2113743N50	CAP CHIP 100 PF 5% COG
C428	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C429	2113743N54	CAP CHIP 150 PF 5% COG
C430	2185802B01	CAP 10V 4.7UF
C431	2113932E20	CAP CER CHP .10 UF 10% 16V
C432	2113743L41	CAP CHIP 10000 PF 10% X7R
C433	2113932E20	CAP CER CHP .10 UF 10% 16V
C434	2185802B01	CAP 10V 4.7UF
C435	2113932E20	CAP CER CHP .10 UF 10% 16V
C436	2113743L41	CAP CHIP 10000 PF 10% X7R
C437	2113932E20	CAP CER CHP .10 UF 10% 16V
C438	2113743L41	CAP CHIP 10000 PF 10% X7R
C439	2113743N30	CAP CHIP 15.0 PF 5% COG
C440		NOTPLACED
C441	2113932E20	CAP CER CHP .10 UF 10% 16V
C444	2113743N50	CAP CHIP 100 PF 5% COG
C500	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C501	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C502	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C503	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C504	2113743M24	CAP CHIP 100000 PF +80-20% Y5V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C600	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C601	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
C602	2113743M24	CAP CHIP 100000 PF +80-20% Y5V
D300	4805129M90	DIODE SOT PKGD
D304	4805129M90	DIODE SOT PKGD
J501	0905516W02	CONN RECEPTACLE
L200	2462587N58	CHIP IND 270 NH 5%
L300	2480067M02	CHK RF CHIP BEAD INDUCTOR
L301	2480067M02	CHK RF CHIP BEAD INDUCTOR
L400	2462587N68	CHIP IND 1000 NH 5%
P1	0913915A11	RECP SMT LOPRO 25 POS
P3		NOTPLACED
PCB	8485146D01	PCB, ASTRO/SPECTRA PLUS VOCON
Q200	4813824A10	TSTR NPN 40V .2A GEN PURP
Q201	4805128M12	TSTR SOT BCW 60B (RH)
Q202	4805128M12	TSTR SOT BCW 60B (RH)
Q203	4805128M12	TSTR SOT BCW 60B (RH)
Q204	4805128M12	TSTR SOT BCW 60B (RH)
Q300	4880048M01	TSTR NPN DIG 47K/47K
Q301	4880048M01	TSTR NPN DIG 47K/47K
Q302	4880048M01	TSTR NPN DIG 47K/47K
Q303	4880048M01	TSTR NPN DIG 47K/47K
Q600	4885844C02	XSTR P-CH MOSFET 30V 80MOHM@4.5V
Q601	4880048M01	TSTR NPN DIG 47K/47K
R200	0662057N23	RES. CHIP 100K 5% 20X40
R201	0662057N23	RES. CHIP 100K 5% 20X40
R202	0662057M81	RES. CHIP 2000 5% 20X40
R203 - R206	-----	NOTPLACED
R207	0662057N05	RES. CHIP 18K 5% 20X40
R208	0662057N10	RES. CHIP 30K 5% 20X40
R209	0662057N10	RES. CHIP 30K 5% 20X40
R213	0662057A35	CHIP RES 270 OHMS 5%
R214	0662057A35	CHIP RES 270 OHMS 5%
R215	0662057A13	CHIP RES 33 OHMS 5%
R216	0662057A13	CHIP RES 33 OHMS 5%
R219	0662057A37	CHIP RES 330 OHMS 5%
R220	0662057A37	CHIP RES 330 OHMS 5%
R221	0662057N05	RES. CHIP 18K 5% 20X40
R222	0662057N23	RES. CHIP 100K 5% 20X40

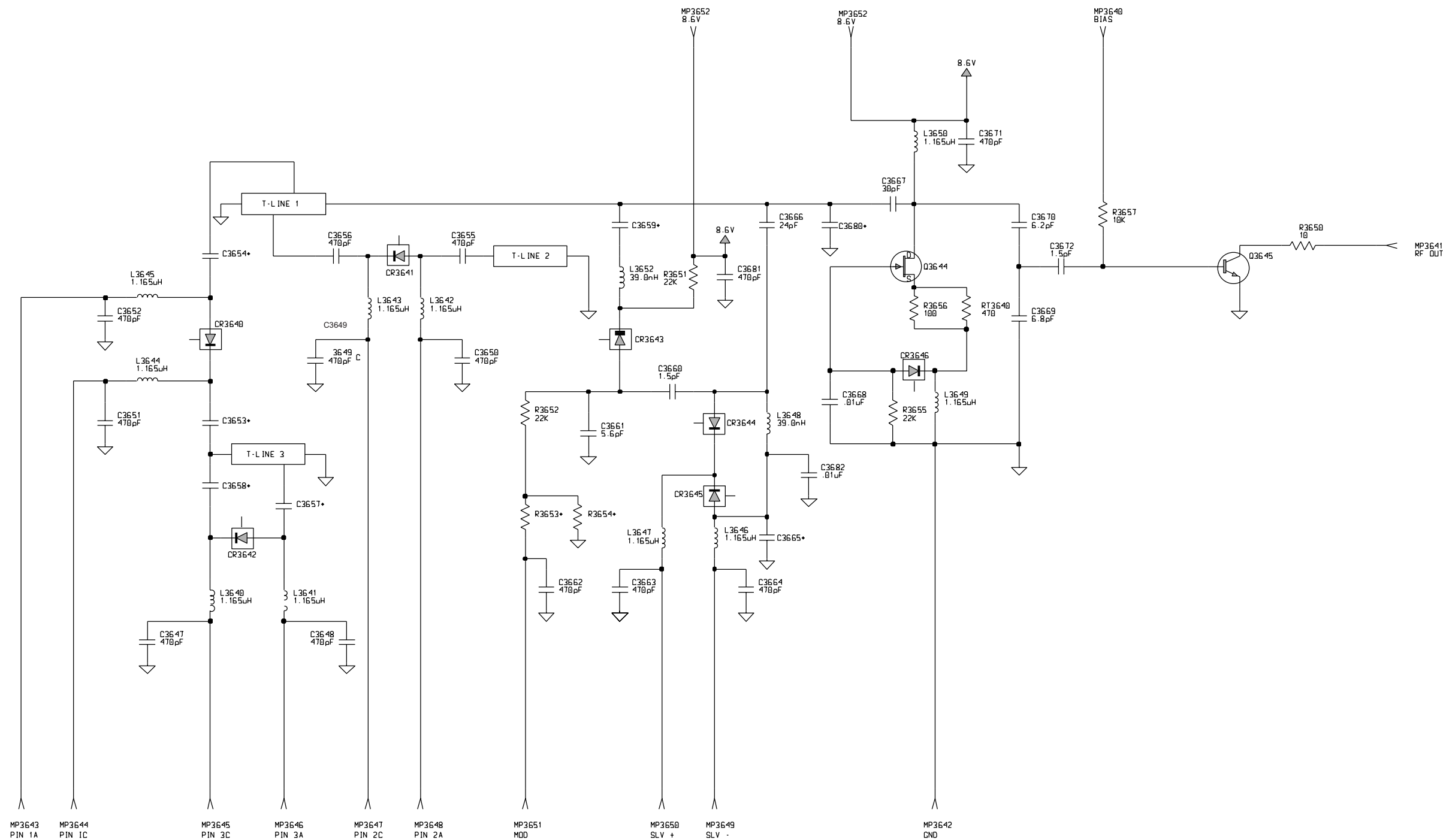
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R223	0662057M98	RES. CHIP 10K 5% 20X40
R224	0662057N23	RES. CHIP 100K 5% 20X40
R226	0662057N10	RES. CHIP 30K 5% 20X40
R229	0662057N23	RES. CHIP 100K 5% 20X40
R230	0662057N23	RES. CHIP 100K 5% 20X40
R231	0662057N10	RES. CHIP 30K 5% 20X40
R232	0662057M98	RES. CHIP 10K 5% 20X40
R234	0662057M50	RES. CHIP 100 5% 20X40
R240	0662057M86	RES. CHIP 3300 5X 20X40
R241	-----	NOTPLACED
R242	0662057M64	RES. CHIP 390 5% 20X40
R243	-----	NOTPLACED
R245 - R249	-----	NOTPLACED
R250	0662057M90	RES. CHIP 4700 5% 20X40
R301	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R303	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R304	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R306	-----	NOTPLACED
R307	0662057N15	RES. CHIP 47K 5% 20X40
R308	0662057N15	RES. CHIP 47K 5% 20X40
R309		NOTPLACED
R310	0662057N15	RES. CHIP 47K 5% 20X40
R311	0662057M98	RES. CHIP 10K 5% 20X40
R313	0662057M78	RES. CHIP 1500 5% 20X40
R314	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R315	0662057N15	RES. CHIP 47K 5% 20X40
R316	0662057M34	RES. CHIP 22 5% 20X40
R317	0662057M34	RES. CHIP 22 5% 20X40
R318	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R320 - R321	-----	NOTPLACED
R322	0662057N23	RES. CHIP 100K 5% 20X40
R323	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R325	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R329	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R331	0662057B47	CHIP RES 0 OHMS +-.050 OHMS

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R332	0662057M98	RES. CHIP 10K 5% 20X40
R333	0662057N15	RES. CHIP 47K 5% 20X40
R340	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R341	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R342	-----	NOTPLACED
R343	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R344	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R345	0662057M74	RES. CHIP 1000 5% 20X40
R346	0662057N15	RES. CHIP 47K 5% 20X40
R347	0662057N15	RES. CHIP 47K 5% 20X40
R348	-----	NOTPLACED
R349	0662057N15	RES. CHIP 47K 5% 20X40
R400	0662057M86	RES. CHIP 3300 5X 20X40
R401	0662057M86	RES. CHIP 3300 5X 20X40
R402	0662057N23	RES. CHIP 100K 5% 20X40
R403	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R404	0662057M91	RES CHIP 5100 5% 20X40
R405	0662057M82	RES. CHIP 2200 5% 20X40
R406	0662057N23	RES. CHIP 100K 5% 20X40
R407	0662057M98	RES. CHIP 10K 5% 20X40
R408	0662057N05	RES. CHIP 18K 5% 20X40
R409	0662057N23	RES. CHIP 100K 5% 20X40
R410	0662057M98	RES. CHIP 10K 5% 20X40
R416	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R419	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R420	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R421	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R425	0662057B46	CHIP RES 10.0 MEG OHMS 5%
R426	0662057N39	RES. CHIP 470K 5% 20X40
R427	0662057B46	CHIP RES 10.0 MEG OHMS 5%
R428	0662057M50	RES. CHIP 100 5% 20X40
R429	-----	NOTPLACED
R430	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R434	0662057M81	RES. CHIP 2000 5% 20X40
R435	0662057M74	RES. CHIP 1000 5% 20X40

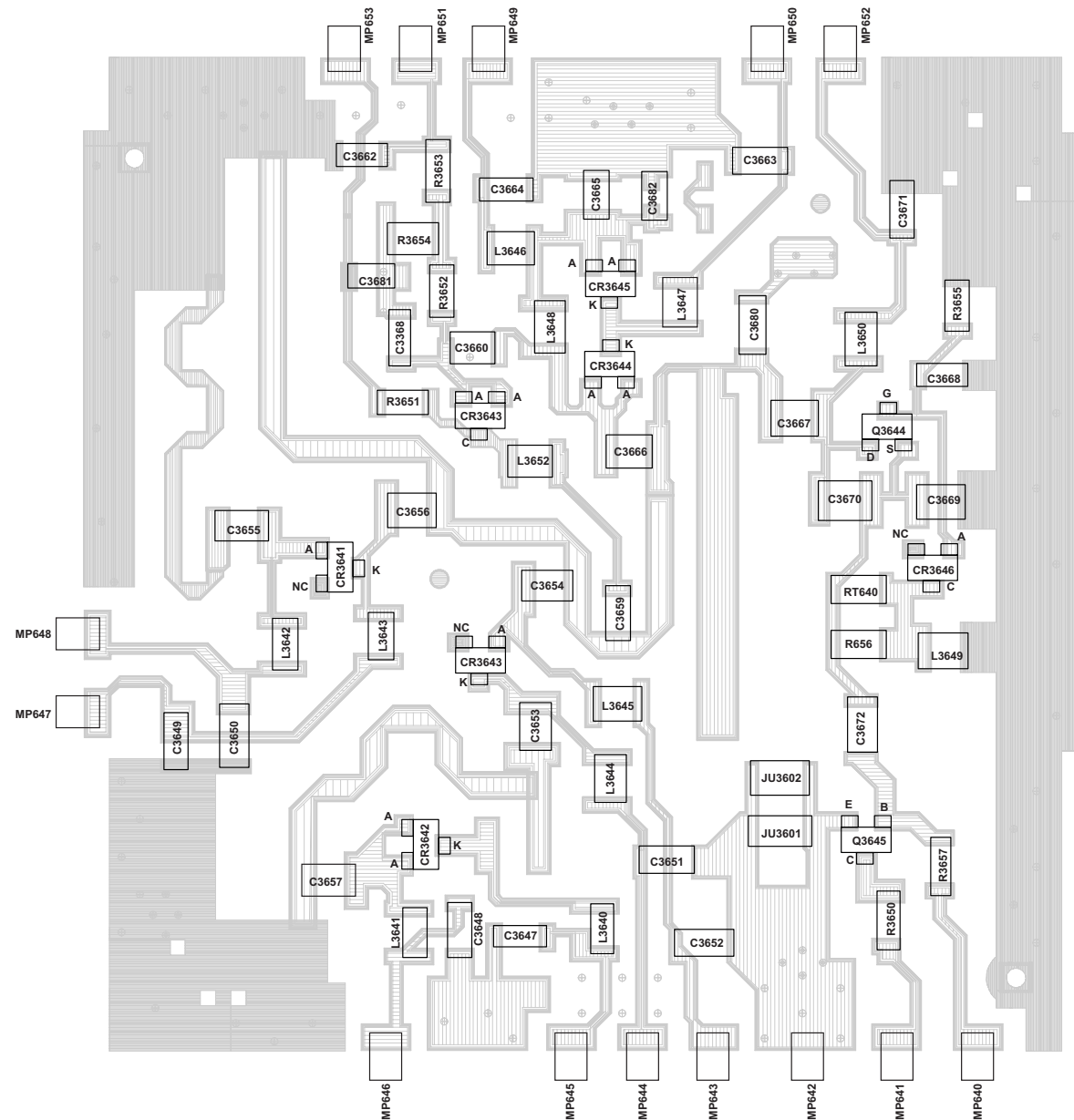
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R436	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R437	0662057N07	RES. CHIP 22K 5% 20X40
R438	0662057N07	RES. CHIP 22K 5% 20X40
R441	0662057N39	RES. CHIP 470K 5% 20X40
R442	0662057N39	RES. CHIP 470K 5% 20X40
R443	0662057B46	CHIP RES 10.0 MEG OHMS 5%
R451	0662057N13	RES. CHIP 39K 5% 20X40
R452	0662057N06	RES. CHIP 20K 5% 20X40
R454	0662057N11	RES. CHIP 33K 5% 20X40
R455	0662057N15	RES. CHIP 47K 5% 20X40
R456	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R500	0662057M81	RES. CHIP 2000 5% 20X40
R600	0662057B47	CHIP RES 0 OHMS +-.050 OHMS
R603	-----	NOTPLACED
R606	0662057N23	RES. CHIP 100K 5% 20X40
SC400	-----	NOTPLACED
U200	5185963A50	IC CMOS KRSIC
U201	5105457W85	CC ADDAG IC
U202	5113818A14	IC DL OP AMP RAIL TO RAIL
U300	5109841C69	IC 256 BGA 17X17 PACKAGE PATRIOT
U301	5185368C95	IC BURST FLASH 32MB
U302	5185130C38	IC SRAM 4MG
U303	5105109Z31	IC QUAD 2:1 MUX/DEMUX
U304	5185368C53	IC USB TRANSCEIVER 14 PIN TSSOP14
U305	5109522E53	IC SNGL BUF NC7S125P5X SC70
U306	5113837A15	IC 3.3V QUAD BUFFER
U307	5113837A02	IC NOR QUAD 2 IN MC 74LCX02DTR
U400	5185368C55	ICDIGITAL EEPOT 8 PIN S08
U401	5185368C55	ICDIGITAL EEPOT 8 PIN S08
U402	5105109Z38	3 VOLT LINEAR PCM CODEC FILTER
U404	5113818A14	IC DL OP AMP RAIL TO RAIL
U408	5185623B01	HIGH SPEED CMOS INVERTER
U409	5185353D93	IC AHCMOS SINGER GATE BUFFERED INVERTER
U410	5185353D55	IC VOLTAGE REGULATOR 100MZ ADJ
U411	5185353D55	IC VOLTAGE REGULATOR 100MZ ADJ

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
U412	5185353D46	IF 4.3V VOLTAGE DETECTOR
U500	5113805C01	IC LN DRVR/RCVR 3V
U501	5113805C01	IC LN DRVR/RCVR 3V
U502	5113805C01	IC LN DRVR/RCVR 3V
U503	5113837A07	IC LINE DRVR OCT3 MC74LCX244DT
U504	5113837A07	IC LINE DRVR OCT3 MC74LCX244DT
U600	5113805B16	IC CNTR DL 4 STAGE BIN HC393D
U601	5113806A05	IC FLIP-FLOP,DUAL D
U602	5113805B44	IC OR QUAD 2-IN
VR301	4813830A11	DIODE 3.9V 5% 225MW MMBZ5228B_
VR302	4813830A28	DIODE 15V 5% 225MW MMBZ5245B_
VR303	4813830A15	DIODE 5.6V 5% 225MW MMBZ5232B_
VR304	4813830A22	DIODE 9.1V 5% 225MW MMBZ5239B_
VR305	4813830A15	DIODE 5.6V 5% 225MW MMBZ5232B_
Y400	4885071E01	MODULE REFERENCE OSCILLATOR 16.8 MHZ 5X3.2 MM
Y401	4809995L05	XTAL QUARTZ 32.768KHZ CC4V-T1

7.5 VCO Section



HLD6061D and HLD6062D VHF VCO Hybrid Schematic



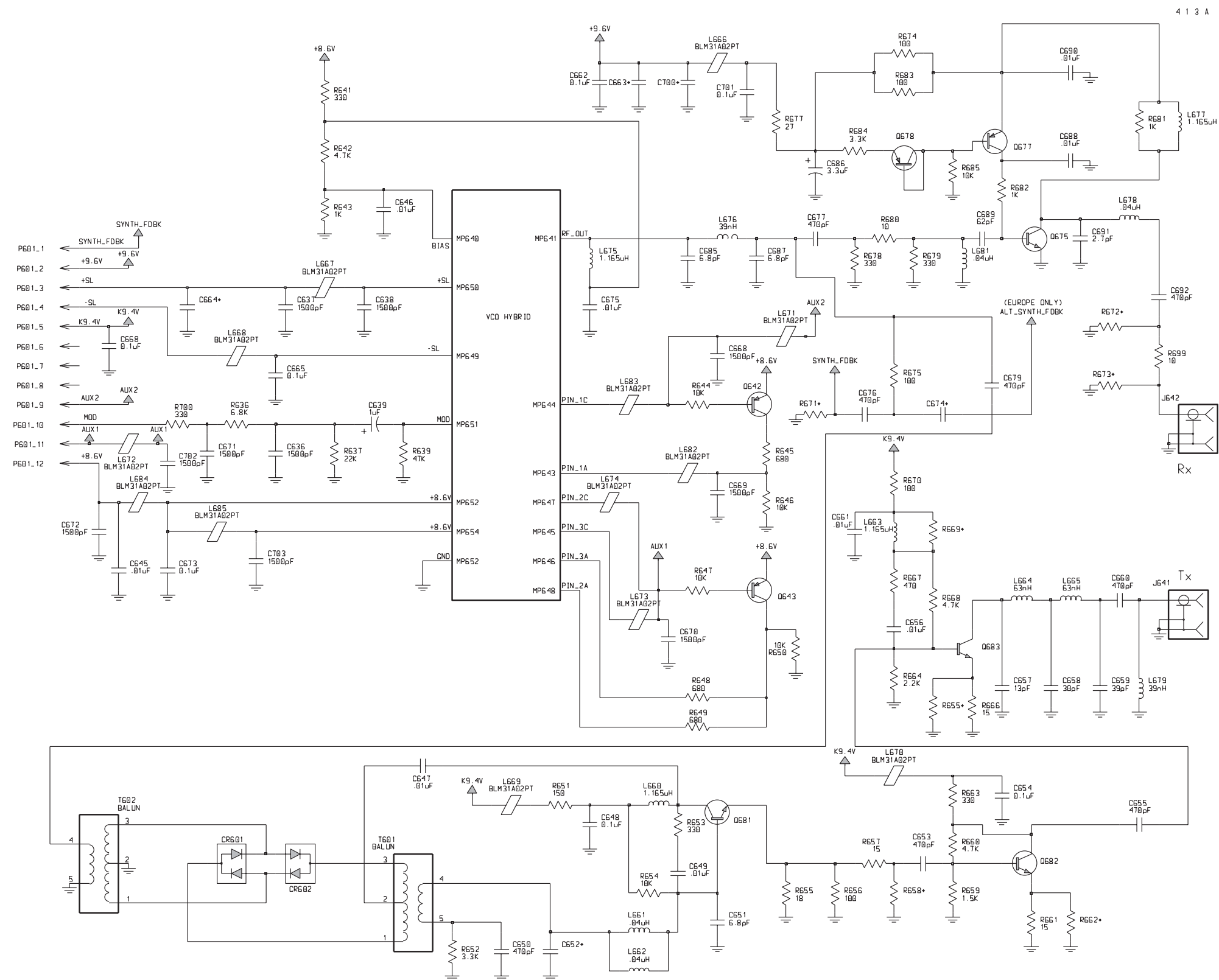
HLD6061D and HLD6062D Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3647 thru C3652	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3653	2113740B73 2113740B65	CAP CHIP REEL CL1 +/-30 1000 ¹ CAP CHIP REEL CL1 +/-30 470 ²
C3654	2113740B69 2111078B59	CAP CHIP REEL CL1 +/-30 680 ¹ CAP CHIP RF 470 5 NPO 100V ²
C3655 & C3656	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3657	2111078B59 2113740B65	CAP CHIP RF 470 5 NPO 100V ¹ CAP CHIP REEL CL1 +/-30 470 ²
C3658	2111078B59 2113740B65	CAP CHIP RF 470 5 NPO 100V ¹ CAP CHIP REEL CL1 +/-30 470 ²
C3659	2113740B11 2113740B09	CAP CHIP REEL CL1 +/-30 2.7 ¹ CAP CHIP REEL CL1 +/-30 2.2 ²
C3660	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3661	2113740B19	CAP CHIP REEL CL1 +/-30 5.6
C3662 & C3663	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3664	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3665	2111078B59 2111078B31	CAP CHIP RF 470 5 NPO 100V ¹ CAP CHIP RF 36 5 NPO 100V ²
C3666	2111078B23	CAP CHIP RF 24 5 NPO 100V
C3667	2111078B31	CAP CHIP RF 36 5 NPO 100V
C3668	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3669	2111078B05	CAP CHIP RF 4.7 .25 NPO 100V
C3670	2111078B11	CAP CHIP RF 8.2 .5 NPO 100V
C3671	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3672	2113740B05	CAP CHIP REEL CL1 +/-30 1.5

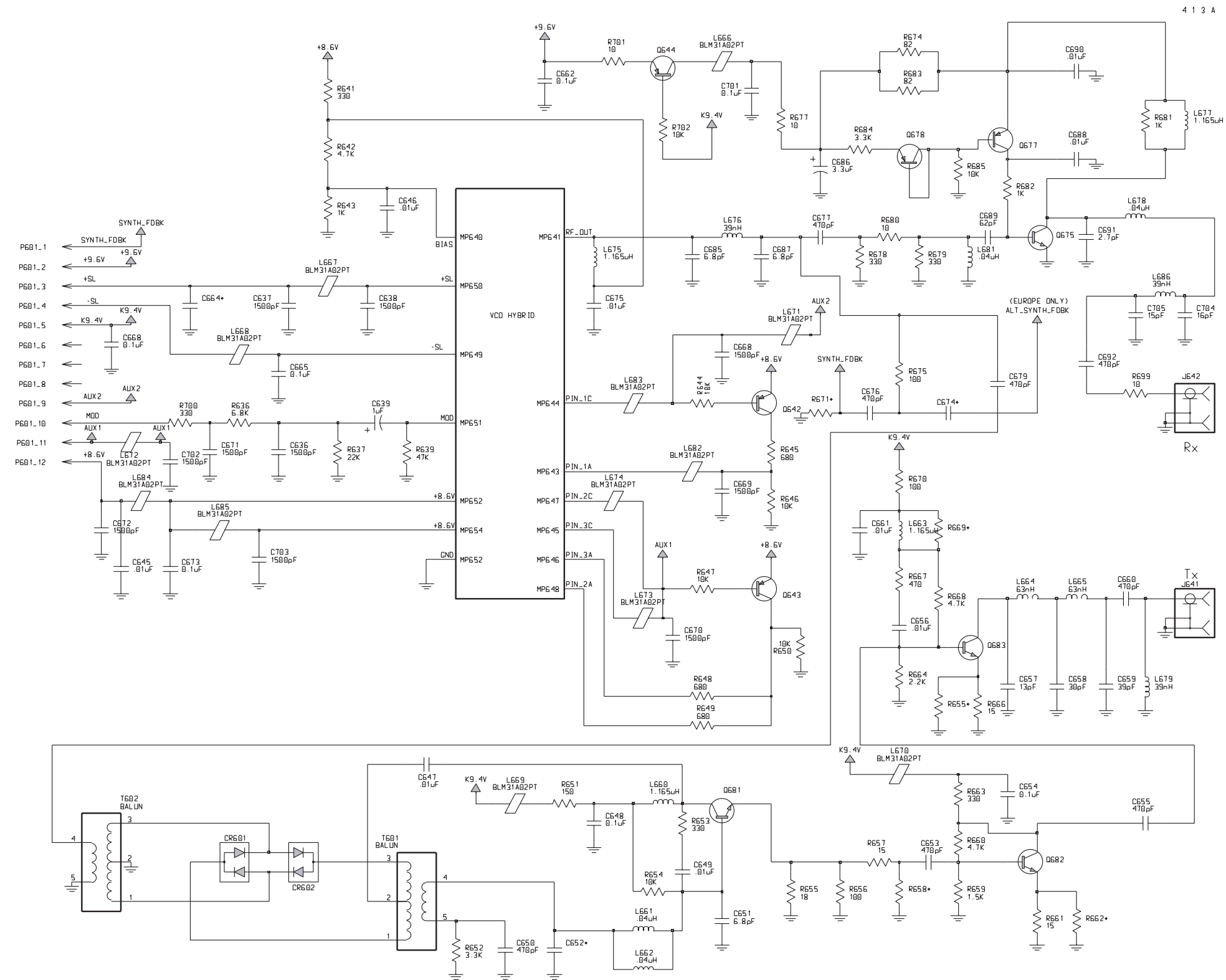
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3680	2113740B01 -----	CAP CHIP REEL CL1 +/-30 1.0 ¹ NOTPLACED ²
C3681	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3682	2113741N45	CAP CHIP CL2 X7R 10% 10000
CR3640	4805656W04	DIODE SOT 23 PIN
CR3641 & CR3642	4880142L01	DIODE PIN SOT 23 MMBV 3401
CR3643	4880006E09	DIODE VARACTOR MMBV109 350MW
CR3644 & CR3645	4880006E13	DIODE VAR SI SMBV1050 350MW
CR3646	4813825A05	DIODE 30V HOT CARRIER MMBD301L
JU3601	----- 0611077A01	NOTPLACED ¹ RES CHIP JUMPER ²
JU3602	0611077A01 -----	RES CHIP JUMPER ¹ NOTPLACED ²
L3640 thru L3647	2480140E01	INDUCTOR CHIP 1.2 UH
L3648	2405452C87	COIL CHIP INDUCTOR 39 5
L3649 & L3650	2480140E01	INDUCTOR CHIP 1.2 UH
L3652	2405452C87	COIL CHIP INDUCTOR 39 5
MP3640 thru MP3653	0780299L01	FRAME LEAD J STRAP
Q3644	4880141L06	TSTR NC MOS FET SOT23 TGR MMBF
Q3645	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
R3650	0611077A26	RES CHIP 10 5 1/8W
R3651 & R3652	0611077B07	RES CHIP 22K 5 1/8W
R3653	0611077B03	RES CHIP 15K 5 1/8W
R3654	0611077B23 -----	RES CHIP 100K 5 1/8W ¹ NOTPLACED ²
R3655	0611077B07	RES CHIP 22K 5 1/8W
R3656	0611077A50	RES CHIP 100 5 1/8W
R3657	0611077A66	RES CHIP 470 5 1/8W
RT3640	0680149M01	THERMISTOR CHIP 470 OHMS
	1280954T43	SPECTRA VHF VCO ASSEMBLY

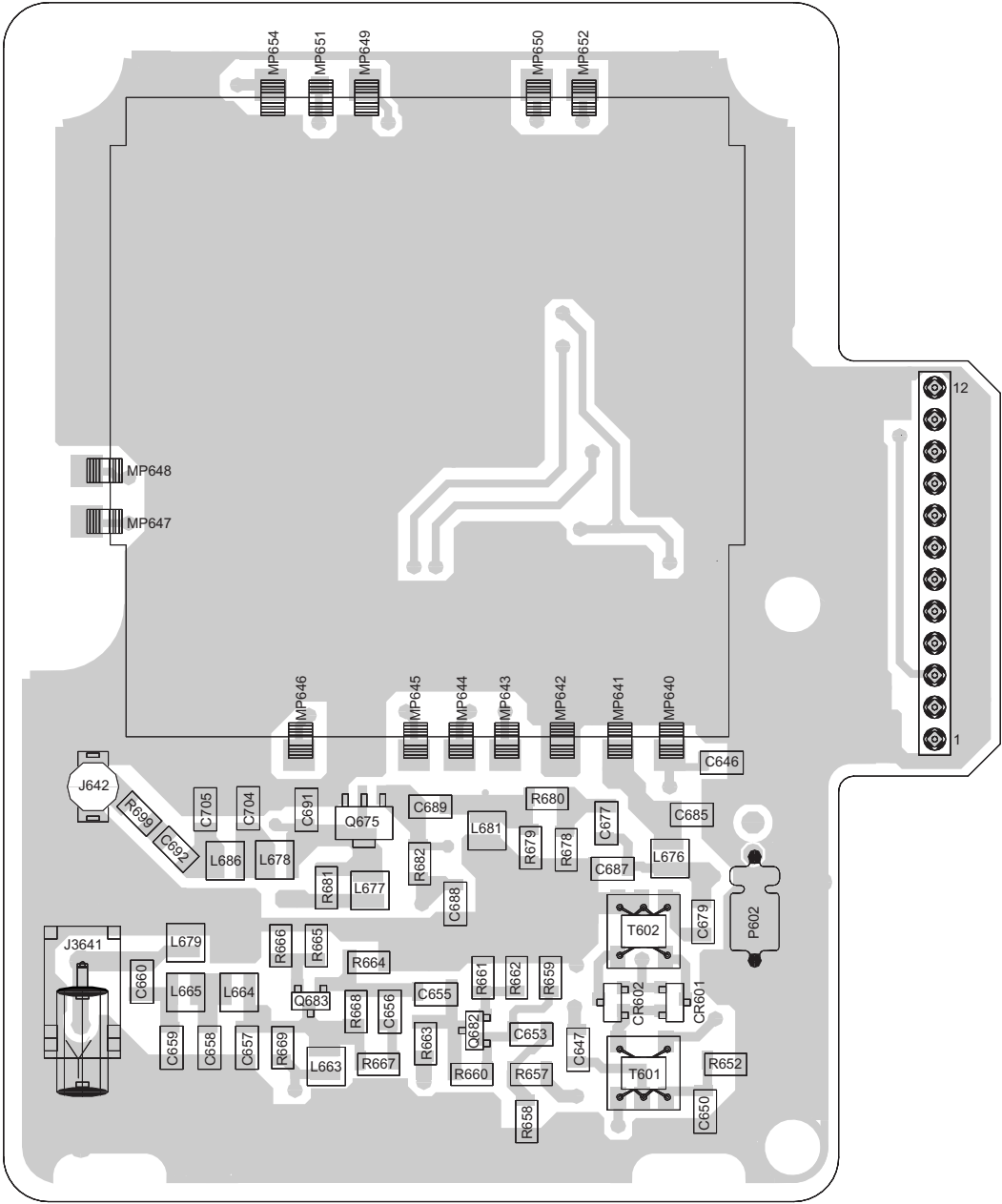
Notes:

1. Valid in HLD6061D only.
2. Valid in HLD6062D only.

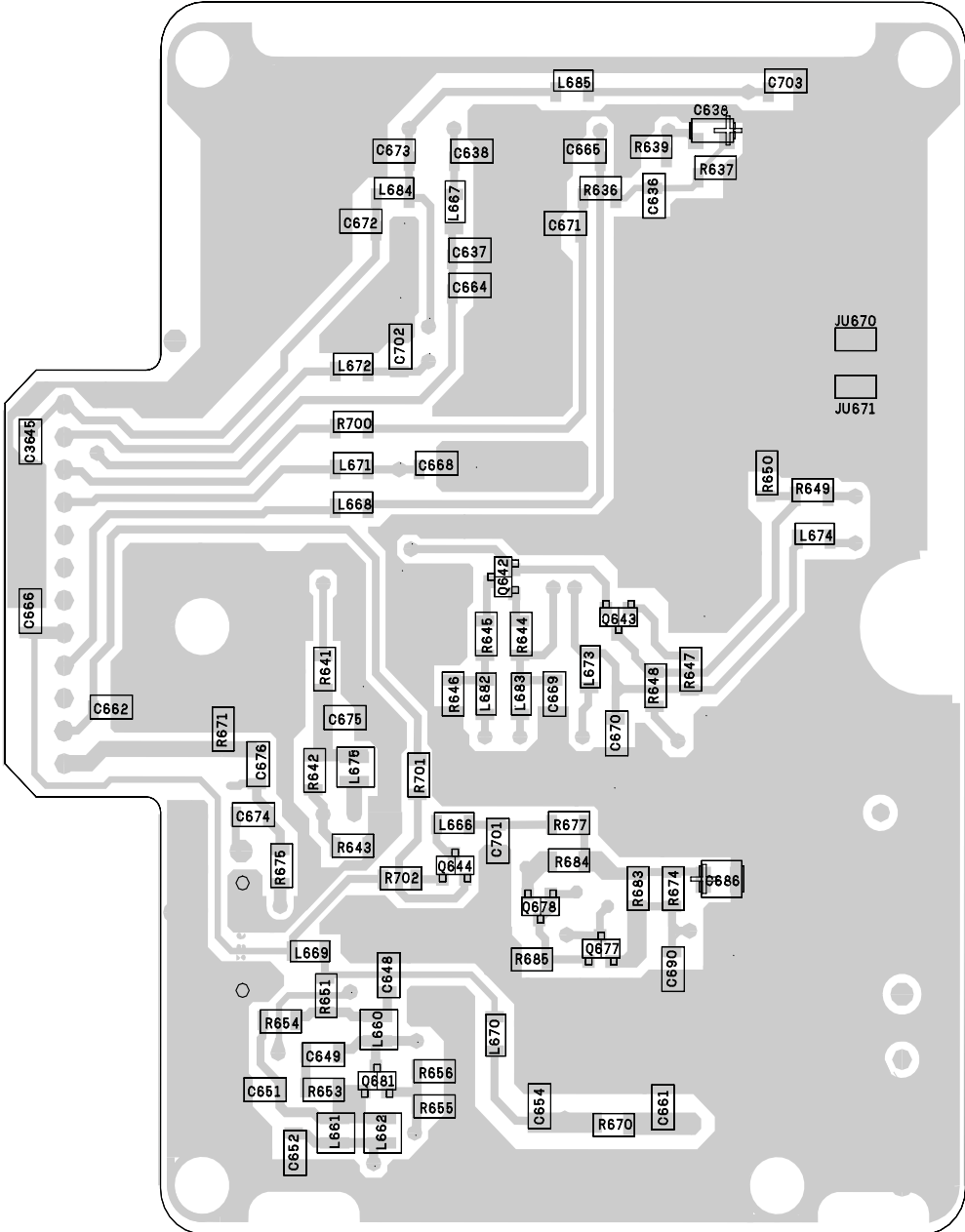


HLD4342B and HLD4343B VHF VCO Carrier Schematic Diagram





Side 1



Side 2

HLD4342D/HLD4343D VHF VCO Carrier Component Location Diagram

HLD4342B and HLD4343B VHF VCO Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3645	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3655	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3656	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3657	2113740B28	CAP CHIP REEL CL1 +/-30 13
C3658	2113740B36	CAP CHIP REEL CL1 +/-30 30
C3659	2113740B39	CAP CHIP REEL CL1 +/-30 39
C3660	2113740B65	CAP CHIP REEL CL1 +/-30 470
C636	2113741N21	CAP CHIP CL2 X7R 10% 1000
C637 & C638	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C639	2311049A37	CAP TANT CHIP 1 20 20
C646 & C647	2113741N45	CAP CHIP CL2 X7R 10% 10000
C648	2113741N69	CAP CHIP CL2 X7R 10% 100000
C649	2113741N45	CAP CHIP CL2 X7R 10% 10000
C650	2113740B65	CAP CHIP REEL CL1 +/-30 470
C651	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C652	-----	NOTPLACED
C653	2113740B65	CAP CHIP REEL CL1 +/-30 470
C654	2160521H41	CAP CHIP 220K 80 20 25V Y5V
C661	2113741N45	CAP CHIP CL2 X7R 10% 10000
C662	2113741N69	CAP CHIP CL2 X7R 10% 100000
C663 & C664	-----	NOTPLACED
C665	2113741N69	CAP CHIP CL2 X7R 10% 100000
C666	2160521H41	CAP CHIP 220K 80 20 25V Y5V
C668 thru C672	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C673	2113741N69	CAP CHIP CL2 X7R 10% 100000
C674	----- 2113740B65	NOTPLACED ¹ CAP CHIP REEL CL1 +/-30 470 ²
C675	2113741N45	CAP CHIP CL2 X7R 10% 10000
C676	2113740B65 -----	CAP CHIP REEL CL1 +/-30 470 ¹ NOTPLACED ²
C677 & C679	2113740B65	CAP CHIP REEL CL1 +/-30 470
C685	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C686	2311049J07	CAP TANT CHIP 3.3 10 20
C687	2113740B21	CAP CHIP REEL CL1 +/-30 6.8

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C688	2113741N45	CAP CHIP CL2 X7R 10% 10000
C689	2113740B44	CAP CHIP REEL CL1 +/-30 62
C690	2113741N45	CAP CHIP CL2 X7R 10% 10000
C691	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C692	2113740B65	CAP CHIP REEL CL1 +/-30 470
C700	-----	NOTPLACED
C701	2113741N69	CAP CHIP CL2 X7R 10% 100000
C702 & C703	2113740B76	CAP CHIP REEL CL1 +/-30 1500
CR601 & CR602	4880154K03	DIODE DUAL SCHOTTKY MIXER
J3641	0980110M01	RECP COAX PCB MOUNT
J642	0980212N03	RECP COAX PCB MOUNT
JU670 & JU671	-----	NOTPLACED
L3663	2480140E01	INDUCTOR CHIP 1.2 UH
L3664 & L3665	2480140E04	INDUCTOR CHIP 65 NH
L660	2480140E01	INDUCTOR CHIP 1.2 UH
L661 & L662	2480140E03	INDUCTOR CHIP 50 NH
L666 thru L674	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L675	2480140E01	INDUCTOR CHIP 1.2 UH
L676	2405452C87	COIL CHIP INDUCTOR 39 5
L677	2480140E01	INDUCTOR CHIP 1.2 UH
L678	2480140E03	INDUCTOR CHIP 50 NH
L679	2405452C87	COIL CHIP INDUCTOR 39 5
L681	2480140E03	INDUCTOR CHIP 50 NH
L682 thru L685	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
P0601	2880099M02	PLUG VERTICAL
P0602	----- 4280088P01	NOTPLACED ¹ CLIP COAX ²
Q3683	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
Q642 & Q643	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q675	4802000P02	NEC SILICON TR 2SC3357 RE
Q677 & Q678	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q681	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
Q682	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
R3663	0611077A62	RES CHIP 330 5 1/8W
R3664	0611077A82	RES CHIP 2200 5 1/8
R3665	-----	NOTPLACED
R3666	0611077A30	RES CHIP 15 5 1/8W
R3667	0611077A66	RES CHIP 470 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R3668	0611077A90	RES CHIP 4700 5 1/8
R3669	-----	NOTPLACED
R636	0611077A94	RES CHIP 6800 5 1/8
R637	0611077B07	RES CHIP 22K 5 1/8W
R639	0611077B15	RES CHIP 47K 5 1/8W
R641	0611077A58	RES CHIP 220 5 1/8W
R642	0611077A90	RES CHIP 4700 5 1/8
R643	0611077A74	RES CHIP 1000 5 1/8
R644	0611077A98	RES CHIP 10K 5 1/8W
R645	0611077A58	RES CHIP 220 5 1/8W
R646 & R647	0611077A98	RES CHIP 10K 5 1/8W
R648 & R649	0611077A70	RES CHIP 680 5 1/8W
R650	0611077A98	RES CHIP 10K 5 1/8W
R651	0611077A54	RES CHIP 150 5 1/8W
R652	0611077A86	RES CHIP 3300 5 1/8
R652	-----	NOTPLACED
R653	0611077A62	RES CHIP 330 5 1/8W
R654	0611077A98	RES CHIP 10K 5 1/8W
R655	0611077A32	RES CHIP 18 5 1/8W
R656	0611077A50	RES CHIP 100 5 1/8W
R657	0611077A30	RES CHIP 15 5 1/8W
R658	-----	NOTPLACED
R659	0611077A78	RES CHIP 1500 5 1/8
R660	0611077A90	RES CHIP 4700 5 1/8
R661	0611077A30	RES CHIP 15 5 1/8W
R662	-----	NOTPLACED
R670	0611077A50	RES CHIP 100 5 1/8W
R671	-----	NOTPLACED
R672	-----	NOTPLACED ¹ RES CHIP 220 5 1/8W ²
R673	----- 0611077A58	NOTPLACED ¹ RES CHIP 220 5 1/8W ²
R674 & R675	0611077A50	RES CHIP 100 5 1/8W
R677	0611077A36	RES CHIP 27 5 1/8W
R678 & R679	0611077A62	RES CHIP 330 5 1/8W
R680	0611077A26	RES CHIP 10 5 1/8W
R681 & R682	0611077A74	RES CHIP 1000 5 1/8
R683	0611077A50	RES CHIP 100 5 1/8W
R684	0611077A86	RES CHIP 3300 5 1/8
R685	0611077A98	RES CHIP 10K 5 1/8W
R699	0611077A38	RES CHIP 33 5 1/8W
R700	0611077A62	RES CHIP 330 5 1/8W
T601 & T602	2405548Q06	TRANSFORMER, RF
	1280954T43	SPECTRA VHF VCO ASSEMBLY

Notes:

- 1. Valid in HLD4342B
- 2. Valid in HLD4343B

HLD4342D and HLD4343D VHF VCO Parts List

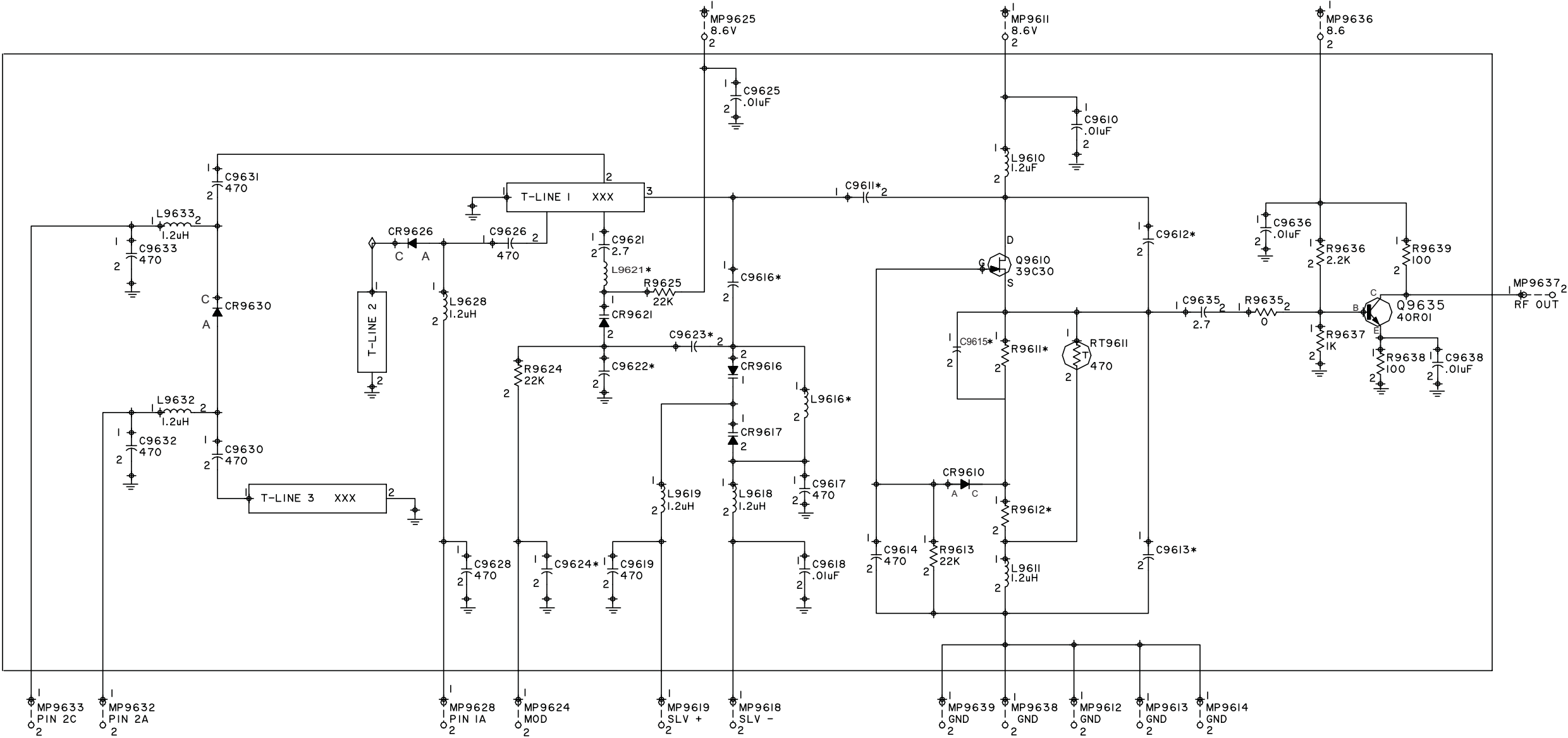
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3645	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3655	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3656	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3657	2113740B28	CAP CHIP REEL CL1 +/-30 13
C3658	2113740B36	CAP CHIP REEL CL1 +/-30 30
C3659	2113740B39	CAP CHIP REEL CL1 +/-30 39
C3660	2113740B65	CAP CHIP REEL CL1 +/-30 470
C636	2113740B76	CAP CHIP REEL CL1 +/-30 1500 ¹
C637 & C638	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C639	2311049A37	CAP TANT CHIP 1 20 20
C646 & C647	2113741N45	CAP CHIP CL2 X7R 10% 10000
C648	2113741N69	CAP CHIP CL2 X7R 10% 100000
C649	2113741N45	CAP CHIP CL2 X7R 10% 10000
C650	2113740B65	CAP CHIP REEL CL1 +/-30 470
C651	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C652	-----	NOTPLACED
C653	2113740B65	CAP CHIP REEL CL1 +/-30 470
C654	2113741N69	CAP CHIP CL2 X7R 10% 100000 ¹
C661	2113741N45	CAP CHIP CL2 X7R 10% 10000
C662	2113741N69	CAP CHIP CL2 X7R 10% 100000
C663	-----	NOTPLACED ²
C664	-----	NOTPLACED
C665 & C666	2113741N69	CAP CHIP CL2 X7R 10% 100000
C668 & C669	2113740B76	000CAP CHIP REEL CL1 +/-30 1500
C670 thru C672	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C673	2113741N69	CAP CHIP CL2 X7R 10% 100000

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C674	----- 2113740B65	NOTPLACED ¹ CAP CHIP REEL CL1 +/-30 470 ²
C675	2113741N45	CAP CHIP CL2 X7R 10% 10000
C676	2113740B65 -----	CAP CHIP REEL CL1 +/-30 470 ¹ NOTPLACED ²
C677 & C679	2113740B65	CAP CHIP REEL CL1 +/-30 470
C685	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C686	2311049J07	CAP TANT CHIP 3.3 10 20
C687	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C688	2113741N45	CAP CHIP CL2 X7R 10% 10000
C689	2113740B44	CAP CHIP REEL CL1 +/-30 62
C690	2113741N45	CAP CHIP CL2 X7R 10% 10000
C691	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C692	2113740B65	CAP CHIP REEL CL1 +/-30 470
C700	-----	NOTPLACED ²
C701	2113741N69	CAP CHIP CL2 X7R 10% 100000
C702 & C703	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C704	2113740B30	CAP CHIP REEL CL1 +/-30 16
C705	2113740B29	CAP CHIP REEL CL1 +/-30 15
CR601 & CR602	4880154K03	DIODE DUAL SCHOTTKY MIXER
J3641	0980110M01	RECP COAX PCB MOUNT
J642	0980212N03	RECP COAX PCB MOUNT
JU670 & JU671	-----	NOTPLACED
L3663	2480140E01	INDUCTOR CHIP 1.2 UH
L3664 & L3665	2480140E04	INDUCTOR CHIP 65 NH
L660	2480140E01	INDUCTOR CHIP 1.2 UH
L661 & L662	2480140E03	INDUCTOR CHIP 50 NH
L666 thru L674	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L675	2480140E01	000INDUCTOR CHIP 1.2 UH
L676	2405452C87	COIL CHIP INDUCTOR 39 5
L677	2480140E01	INDUCTOR CHIP 1.2 UH
L678	2480140E03	INDUCTOR CHIP 50 NH

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L679	2405452C87	COIL CHIP INDUCTOR 39 5
L681	2480140E03	INDUCTOR CHIP 50 NH
L682 thru L685	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L686	2405452C87	COIL CHIP INDUCTOR 39 5 ¹
P0601	2880099M02	PLUG VERTICAL
P0602	----- 4280088P01	NOTPLACED ¹ CLIP COAX ²
Q3683	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
Q642 & Q643	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q644	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE ¹
Q675	4802000P02	NEC SILICON TR 2SC3357 RE
Q677 & Q678	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q681 & Q682	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
R3663	0611077A62	RES CHIP 330 5 1/8W
R3664	0611077A82	RES CHIP 2200 5 1/8
R3665	-----	NOTPLACED
R3666	0611077A30	RES CHIP 15 5 1/8W
R3667	0611077A66	RES CHIP 470 5 1/8W
R3668	0611077A90	RES CHIP 4700 5 1/8
R3669	-----	NOTPLACED
R636	0611077A94	RES CHIP 6800 5 1/8
R637	0611077B07	RES CHIP 22K 5 1/8W
R639	0611077B15	RES CHIP 47K 5 1/8W
R641	0611077A58	RES CHIP 220 5 1/8W
R642	0611077A90	RES CHIP 4700 5 1/8
R643	0611077A74	RES CHIP 1000 5 1/8
R644	0611077A98	RES CHIP 10K 5 1/8W
R645	0611077A58	RES CHIP 220 5 1/8W
R646 & R647	0611077A98	RES CHIP 10K 5 1/8W
R648 & R649	0611077A70	RES CHIP 680 5 1/8W
R650	0611077A98	RES CHIP 10K 5 1/8W
R651	0611077A54	RES CHIP 150 5 1/8W
R652	0611077A86 -----	RES CHIP 3300 5 1/8 ¹ NOTPLACED ²
R653	0611077A62	RES CHIP 330 5 1/8W
R654	0611077A98	RES CHIP 10K 5 1/8W
R655	0611077A32	RES CHIP 18 5 1/8W
R656	0611077A50	RES CHIP 100 5 1/8W
R657	0611077A30	RES CHIP 15 5 1/8W
R658	-----	NOTPLACED
R659	0611077A78	RES CHIP 1500 5 1/8
R660	0611077A90	RES CHIP 4700 5 1/8
R661	0611077A30	RES CHIP 15 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R662	-----	NOTPLACED
R670	0611077A50	RES CHIP 100 5 1/8W
R671	-----	NOTPLACED
R672 & R673	0611077A58	RES CHIP 220 5 1/8W ²
R674	0611077A48	RES CHIP 82 5 1/8W
R675	0611077A50	RES CHIP 100 5 1/8W
R677	0611077A26	RES CHIP 10 5 1/8W
R678 & R679	0611077A62	RES CHIP 330 5 1/8W
R680	0611077A26	RES CHIP 10 5 1/8W
R681	0611077A74	RES CHIP 1000 5 1/8
R682	0611077A74	RES CHIP 1000 5 1/8
R683	0611077A48	RES CHIP 82 5 1/8W
R684	0611077A86	RES CHIP 3300 5 1/8
R685	0611077A98	RES CHIP 10K 5 1/8W
R699	0611077A43	RES CHIP 10 5 1/8W
R700	0611077A62	RES CHIP 330 5 1/8W
R701	0611077A26	RES CHIP 10 5 1/8W
R702	0611077A98	RES CHIP 10K 5 1/8W ¹
T601	2405548Q06	TRANSFORMER, RF
T602	2405548Q06	TRANSFORMER, RF
	1280954T43	SPECTRA VHF VCO ASSEMBLY

Notes:
1. Valid in HLD4342D only.
2. Valid in HLD4343D only.

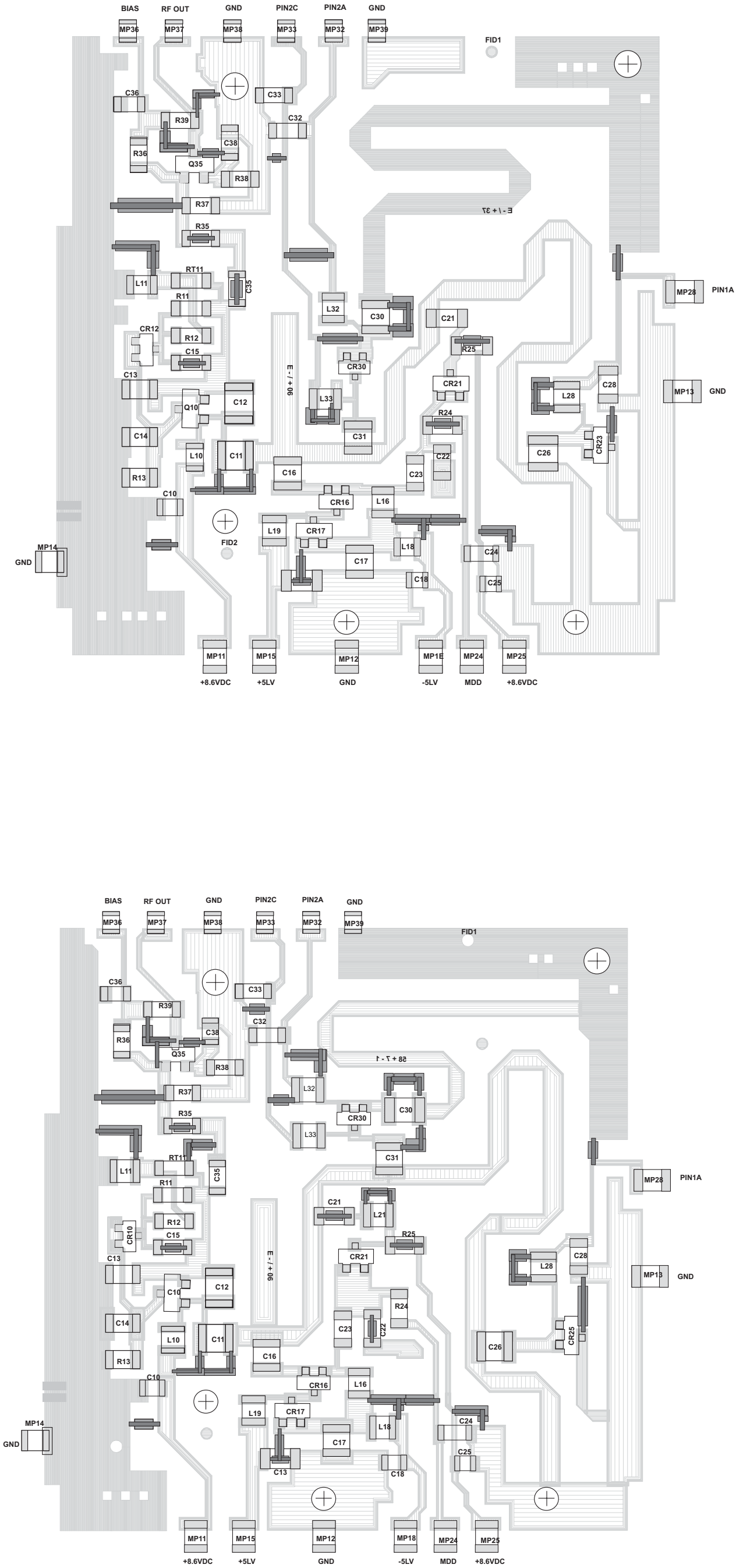


AUX1 =1= LO BS=PIN 1 OFF
 =0= HI BS=PIN 1 ON
AUX2 =1= TX =PIN 2 OFF
 =0= RX =PIN2 ON

* = SEE PARTS LISTS

GXW-5851

UHF VCO Ranges 1, 2, 3, and 4 Hybrid Schematic



Note: These components are shown for reference only. Hybrid assemblies are not considered repairable.

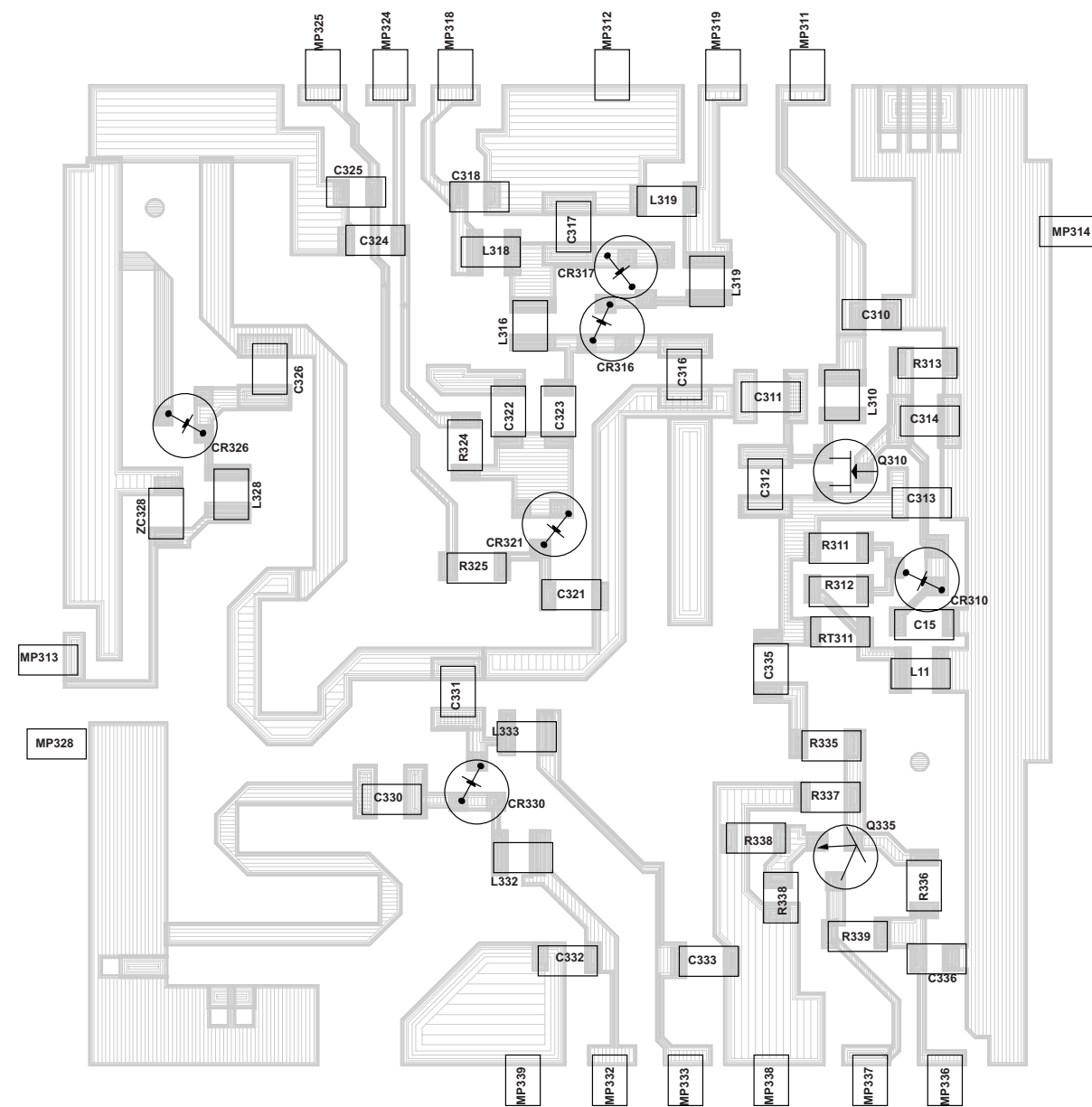
HLE6101A UHF VCO Range 1 Hybrid and HLE6102A Range 2 Hybrid Component Location Diagram

HLE6101A UHF VCO Range 1 Hybrid and HLE6102A
UHF VCO Range 2 Hybrid Parts List

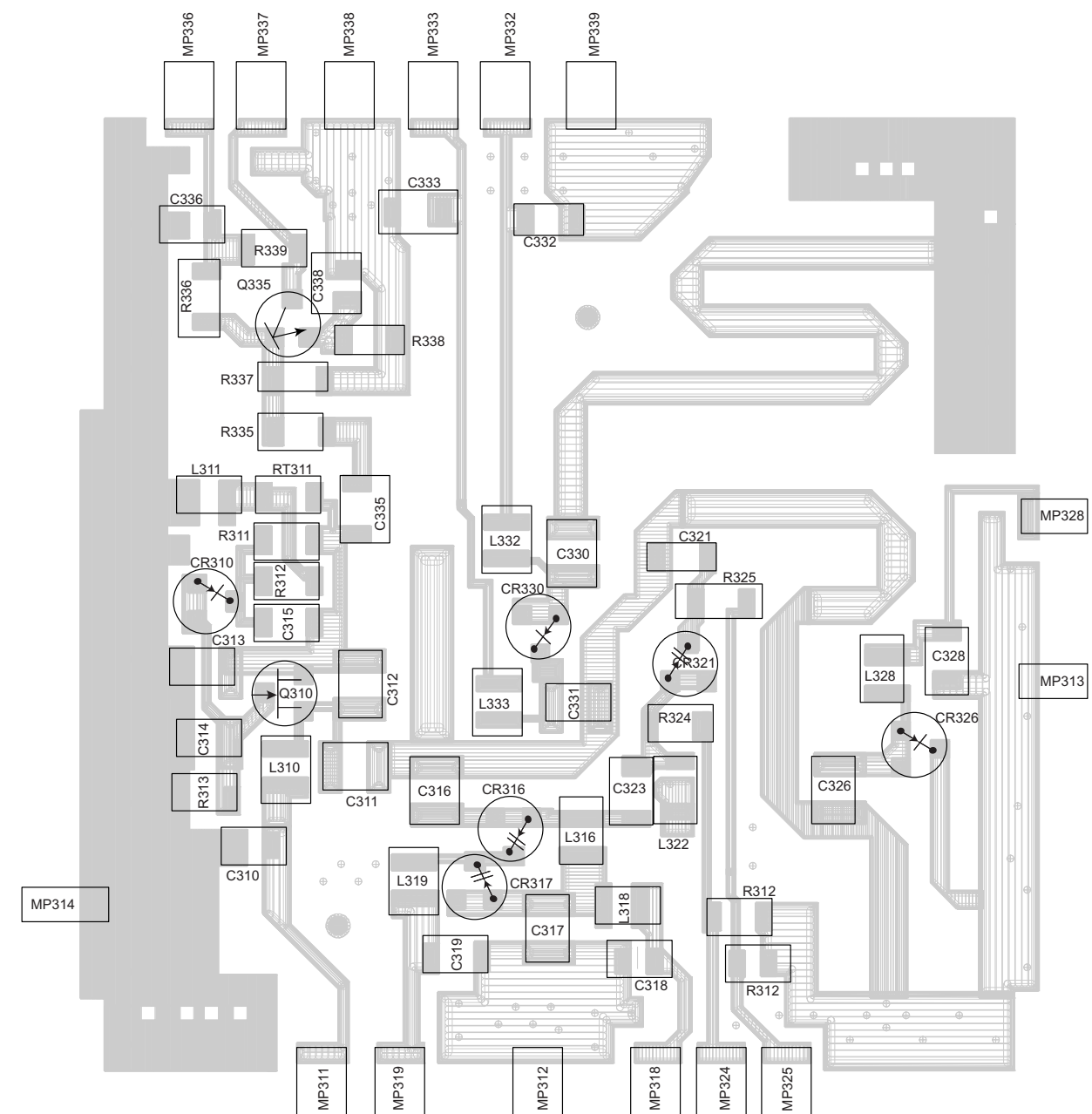
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C9610	2111059B11	CAP CHIP 21D84547A11 A/I
C9611	2111078B29	CAP CHIP RF 33 5 NPO 100V ¹
	2111078B27	CAP CHIP RF 30 5 NPO 100V ²
C9612	2111078B14	CAP CHIP RF 11 5 NPO 100V
C9613	2111078B20	CAP CHIP RF 18 5 NPO 100V
C9614	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9615	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9616	2111078B14	CAP CHIP RF 11 5 NPO 100V ¹
	2111078B15	CAP CHIP RF 12 5 NPO 100V ²
C9617	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9618	2111059B11	CAP CHIP 21D84547A11 A/I
C9619	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9621	2113740B07	CAP CHIP REEL CL1 +/-30 1.8 ¹
	2113740B11	CAP CHIP REEL CL1 +/-30 2.7 ²
C9622	2113740B29	CAP CHIP REEL CL1 +/-30 15 ¹
	2113740B27	CAP CHIP REEL CL1 +/-30 12 ²
C9623	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C9624	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C9625	2111059B11	CAP CHIP 21D84547A11 A/I
C9626	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9628	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9630 & C9631	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9632 & C9633	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9635	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C9636 & C9638	2111059B11	CAP CHIP 21D84547A11 A/I
CR9610	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR9616 & CR9617	4880006E13	DIODE VAR SI SMBV1050 350MW

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
CR9621	4880006E13	DIODE VAR SI SMBV1050 350MW
CR9626 & CR9630	4880142L01	DIODE PIN SOT 23 MMBV 3401
L9610 & L9611	2480140E01	INDUCTOR CHIP 1.2 UH
L9616	2480140E04	INDUCTOR CHIP 65 NH
L9618 & L9619	2480140E01	INDUCTOR CHIP 1.2 UH
L9621	2480140E03	INDUCTOR CHIP 50 NH ¹
L9628, L9632, & L9633	2480140E01	INDUCTOR CHIP 1.2 UH
MP9611 thru MP9614,	0780299L01	FRAME LEAD J STRAP
MP9618 & M9619	0780299L01	FRAME LEAD J STRAP
MP9624 & M9625	0780299L01	FRAME LEAD J STRAP
MP9628	0780299L01	FRAME LEAD J STRAP
MP9632 & M9633	0780299L01	FRAME LEAD J STRAP
MP9636 thru M9639	0780299L01	FRAME LEAD J STRAP
Q9610	4880141L06	TSTR NC MOS FET SOT23 TGR MMBF
Q9635	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
R9611	0611077A46	RES CHIP 68 5 1/8W
R9612	0611077A32	RES CHIP 18 5 1/8W
R9613	0611077B07	RES CHIP 22K 5 1/8W
R9624 & R9625	0611077B07	RES CHIP 22K 5 1/8W
R9635	0611077A01	RES CHIP JUMPER
R9636	0611077A82	RES CHIP 2200 5 1/8
R9637	0611077A74	RES CHIP 1000 5 1/8
R9638 & R9639	0611077A50	RES CHIP 100 5 1/8W
RT9611	0680149M01	THERMISTOR CHIP 470 OHMS
	8480034P02	HYBRID CKT BD UHF VCO R1

Notes:
1. Valid in HLE6101A only.
2. Valid in HLE6102A only.



Range 3



Range 4

HLE6103B UHF VCO Range 3 Hybrid and HLE6104B Range 4 Hybrid Component Location Diagram

HLE6103B UHF VCO Range 3 Hybrid and HLE6104B
UHF VCO Range 4 Hybrid Parts List

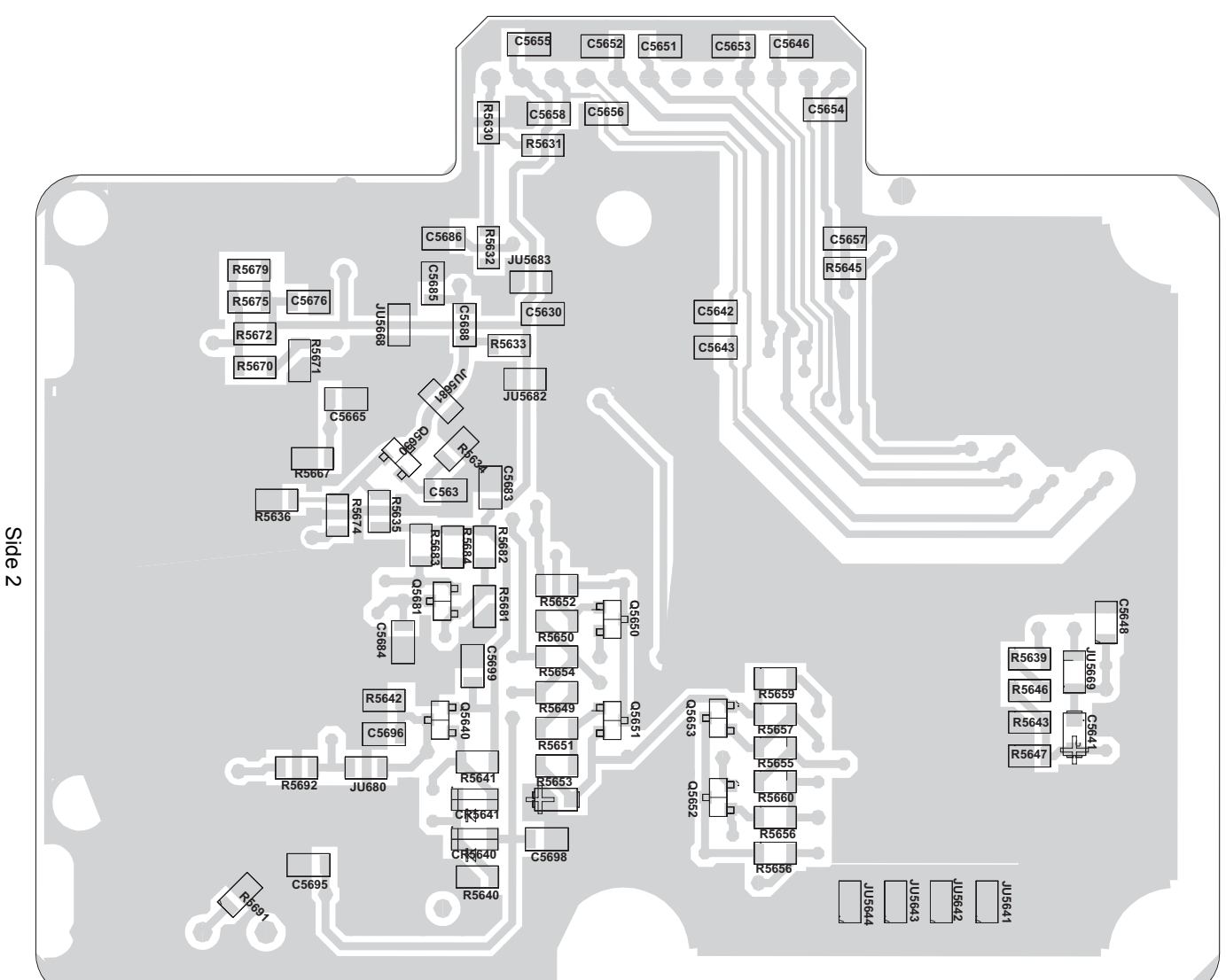
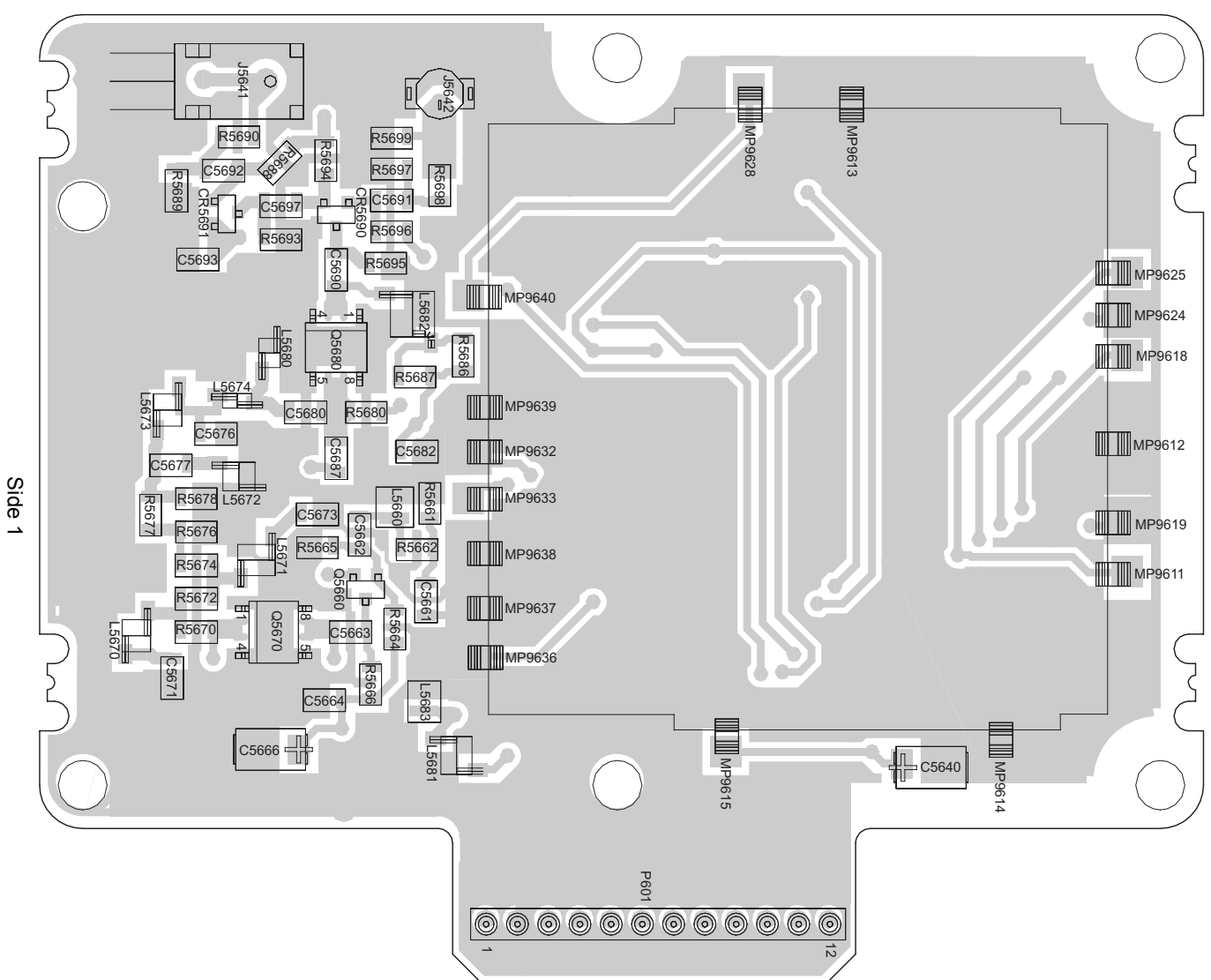
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C9610	2111059B11	CAP CHIP 21D84547A11 A/I
C9611	2111078B22	CAP CHIP RF 22 5 NPO 100V
C9612 & C9613	2111078B15	CAP CHIP RF 12 5 NPO 100V
C9614	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9615	2113740B65	CAP CHIP REEL CL1 +/-30 470 ²
C9616	2111078B18 2111078B14	CAP CHIP RF 15 5 NPO 100V ¹ CAP CHIP RF 11 5 NPO 100V ²
C9617	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9618	2111059B11	CAP CHIP 21D84547A11 A/I
C9619	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9621	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C9622	2113740B15 2113740B31	CAP CHIP REEL CL1 +/-30 3.9 ¹ CAP CHIP REEL CL1 +/-30 18 ²
C9623	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C9624	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C9625	2111059B11	CAP CHIP 21D84547A11 A/I
C9626	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9628	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9630 & C9631	2111078B59	CAP CHIP RF 470 5 NPO 100V
C9632	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9633	2113740B65	CAP CHIP REEL CL1 +/-30 470
C9635	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C9636 & C9638	2111059B11	CAP CHIP 21D84547A11 A/I
CR9610	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR9616	4880006E13	DIODE VAR SI SMBV1050 350MW
CR9617 & CR9621	4880006E13	DIODE VAR SI SMBV1050 350MW
CR9626 & CR9630	4880154K05	DIODE CMN CATH DUAL PIN SOT23
L9610 & L9611	2480140E01	INDUCTOR CHIP 1.2 UH
L9616	2480140E06 2480140E04	INDUCTOR CHIP 130 NH ¹ INDUCTOR CHIP 65 NH ²
L9618 & L8619	2480140E01	INDUCTOR CHIP 1.2 UH
L9628	2480140E01	INDUCTOR CHIP 1.2 UH
L9632 & L9633	2480140E01	INDUCTOR CHIP 1.2 UH
MP9611 thru MP9614	0780299L01	FRAME LEAD J STRAP
MP9618 & MP9619	0780299L01	FRAME LEAD J STRAP

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
MP9624 & MP9625	0780299L01	FRAME LEAD J STRAP
MP9628	0780299L01	FRAME LEAD J STRAP
MP9632 & MP9633	0780299L01	FRAME LEAD J STRAP
MP9636 thru MP9639	0780299L01	FRAME LEAD J STRAP
Q9610	4880141L06	TSTR NC MOS FET SOT23 TGR MMBF
Q9635	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
R9611	0611077A32 0611077A43	RES CHIP 18 5 1/8W ¹ RES CHIP 51 5 1/8W ²
R9612	0611077A46 0611077A43	RES CHIP 68 5 1/8W ¹ RES CHIP 51 5 1/8W ²
R9613	0611077B07	RES CHIP 22K 5 1/8W
R9624 & R9625	0611077B07	RES CHIP 22K 5 1/8W
R9635	0611077A01	RES CHIP JUMPER
R9636	0611077A82	RES CHIP 2200 5 1/8
R9637	0611077A74	RES CHIP 1000 5 1/8
R9638	0611077A50	RES CHIP 100 5 1/8W
R9639	0611077A50	RES CHIP 100 5 1/8W
RT9611	0680149M01	THERMISTOR CHIP 470 OHMS
	8480036P02	BD CKT HYBRID

Notes:
1. Valid in HLE6103B only.
2. Valid in HLE6104B only.



68P81076C25-C



HLE6000D Range 3 and HLE6041D Range 4 UHF VCO Component Location Diagrams

HLE6000D and HLE6041D UHF VCO Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5630 & C5631	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5640	2311049J26	CAP TANT CHIP 10 20 16
C5641	2311049A35	CAP TANT CHIP 0.47 20 25
C5642 & C5643	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C5646	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5650	2311049A37	CAP TANT CHIP 1 20 20
C5651 thru C5658	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5661	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5662	2113740B28	CAP CHIP REEL CL1 +/-30 13
C5663 thru C5665	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5666	2311049J26	CAP TANT CHIP 10 20 16
C5670	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5671	2113740B39	CAP CHIP REEL CL1 +/-30 39
C5672	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5673	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5674	2113740B29	CAP CHIP REEL CL1 +/-30 15
C5675	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5676	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5677	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
C5680	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5682 thru C5684	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5685 & C5686	2113740B19	CAP CHIP REEL CL1 +/-30 5.6
C5687 & C5688	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5690 thru C5693	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5695 thru C5699	2113741N45	CAP CHIP CL2 X7R 10% 10000
CR5640 & CR5641	4880066M01	DIODE SIGNAL RLS4148
CR5690 & CR5691	4880154K05	DIODE CMN CATH DUAL PIN SOT23
J5641	0980110M01	RECP COAX PCB MOUNT

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
J5642	0980212N03	RECP COAX PCB MOUNT
JU5641 & JU5642	-----	NOTPLACED
JU5643	0611077A01	RES CHIP JUMPER ¹ NOTPLACED ²
JU5644	----- 0611077A01	NOTPLACED ¹ RES CHIP JUMPER ²
JU5668	0611077A01	RES CHIP JUMPER
JU5669	-----	NOTPLACED
JU5680 thru Ju5683	0611077A01	RES CHIP JUMPER
L5660	2480140E04	INDUCTOR CHIP 65 NH
L5670	2480091G21	COIL AIRWOUND
L5671	2480091G24	COIL AIRWOUND
L5672 & L5673	2480091G21	COIL AIRWOUND
L5674	2480091G06	COIL AIRWOUND
L5680	2480091G20	COIL AIRWOUND
L5681	2480091G24	COIL AIRWOUND
L5682	2480091G32	COIL AIRWOUND
L5683	-----	NOTPLACED
MP5655	1180117M01	ADHESIVE PREFORM VCO
MP5676	1580223N02	COVER SHIELD
P0601	2880099M02	PLUG VERTICAL
Q5630	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
Q5640 & Q5650	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5651	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5652	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5653	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5660	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
Q5670 & Q5680	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5681	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
R5630	0611077A32	RES CHIP 18 5 1/8W
R5631	0611077A46	RES CHIP 68 5 1/8W
R5632	0611077A32	RES CHIP 18 5 1/8W
R5633	0611077A50	RES CHIP 100 5 1/8W
R5634	0611077A50	RES CHIP 100 5 1/8W
R5635	0611077A82	RES CHIP 2200 5 1/8
R5636	0611077A74	RES CHIP 1000 5 1/8
R5639	0611077A01 0611077A94	RES CHIP JUMPER ¹ RES CHIP 6800 5 1/8 ²
R5640	0611077A98	RES CHIP 10K 5 1/8W
R5641	0611077A90	RES CHIP 4700 5 1/8

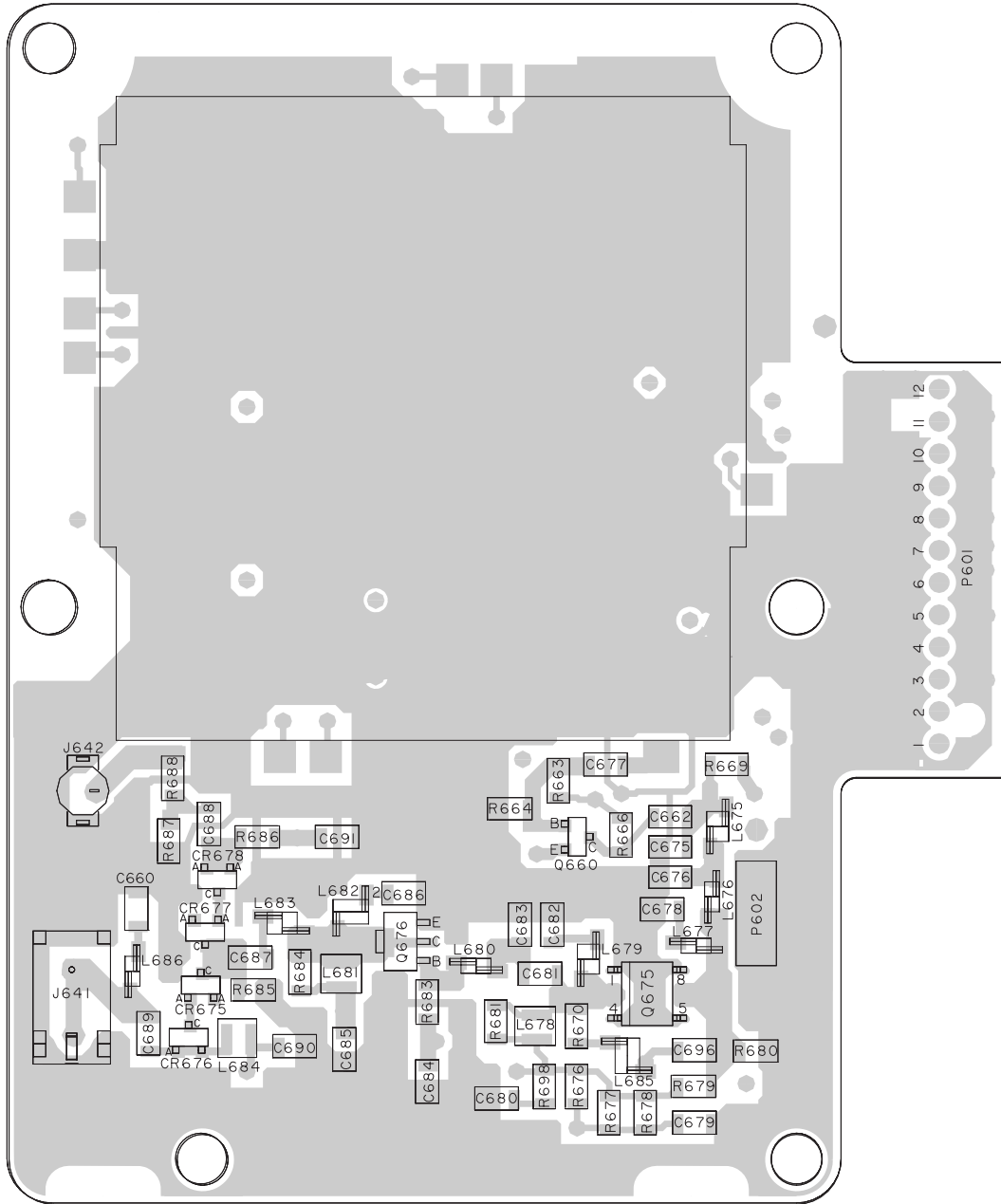
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R5642	0611077A98	RES CHIP 10K 5 1/8W
R5643	0611077B07 0611077A90	RES CHIP 22K 5 1/8W ¹ RES CHIP 4700 5 1/8 ²
R5645	0611077A32	RES CHIP 18 5 1/8W
R5646	0611077B19	RES CHIP 68K 5 1/8W
R5647	0611077A90	RES CHIP 4700 5 1/8
R5648	0611077B31	RES CHIP 220K 5 1/8W
R5649	0611077B47	RES CHIP 1 MEG 5 1/8W
R5650	0611077A98	RES CHIP 10K 5 1/8W
R5651	0611077B47	RES CHIP 1 MEG 5 1/8W
R5652	0611077A60	RES CHIP 270 5 1/8W
R5653	0611077B23	RES CHIP 100K 5 1/8W
R5654	0611077A60	RES CHIP 270 5 1/8W
R5655	0611077B47	RES CHIP 1 MEG 5 1/8W
R5656	0611077A68	RES CHIP 560 5 1/8W
R5657	0611077B23	RES CHIP 100K 5 1/8W
R5658	0611077A98	RES CHIP 10K 5 1/8W
R5659	0611077B23	RES CHIP 100K 5 1/8W
R5660	0611077B47	RES CHIP 1 MEG 5 1/8W
R5661 & R5662	0611077A46	RES CHIP 68 5 1/8W
R5664	0611077A82	RES CHIP 2200 5 1/8
R5665	0611077A74	RES CHIP 1000 5 1/8
R5666 & R5667	0611077A50	RES CHIP 100 5 1/8W
R5670	0611077A90	RES CHIP 4700 5 1/8
R5671 & R5672	0611077A74	RES CHIP 1000 5 1/8
R5674	0611077A36	RES CHIP 27 5 1/8W
R5675	0611077A74	RES CHIP 1000 5 1/8
R5676	0611077A68	RES CHIP 560 5 1/8W
R5677	0611077A30	RES CHIP 15 5 1/8W
R5678	0611077A68	RES CHIP 560 5 1/8W
R5679 & R5680	0611077A74	RES CHIP 1000 5 1/8
R5681	0611077A82	RES CHIP 2200 5 1/8
R5682	0611077A74	RES CHIP 1000 5 1/8
R5683	0611077A46	RES CHIP 68 5 1/8W
R5684	0611077A50	RES CHIP 100 5 1/8W
R5686	0611077A46	RES CHIP 68 5 1/8W
R5687	0611077A50	RES CHIP 100 5 1/8W
R5688	0611077A74	RES CHIP 1000 5 1/8
R5689	0611077A68	RES CHIP 560 5 1/8W
R5690	0611077A26	RES CHIP 10 5 1/8W
R5691	0611077A68	RES CHIP 560 5 1/8W
R5692 thru R5696	0611077A74	RES CHIP 1000 5 1/8
R5697	0611077A58	RES CHIP 220 5 1/8W
R5698	0611077A40	RES CHIP 39 5 1/8W
R5699	0611077A58	RES CHIP 220 5 1/8W
	3280247N01	GASKET VCO

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
	8480208N37	BD CKT UHF VCO CAR BFRPNL
	8480208N07	BD CKT UHF VCO CAR BFR

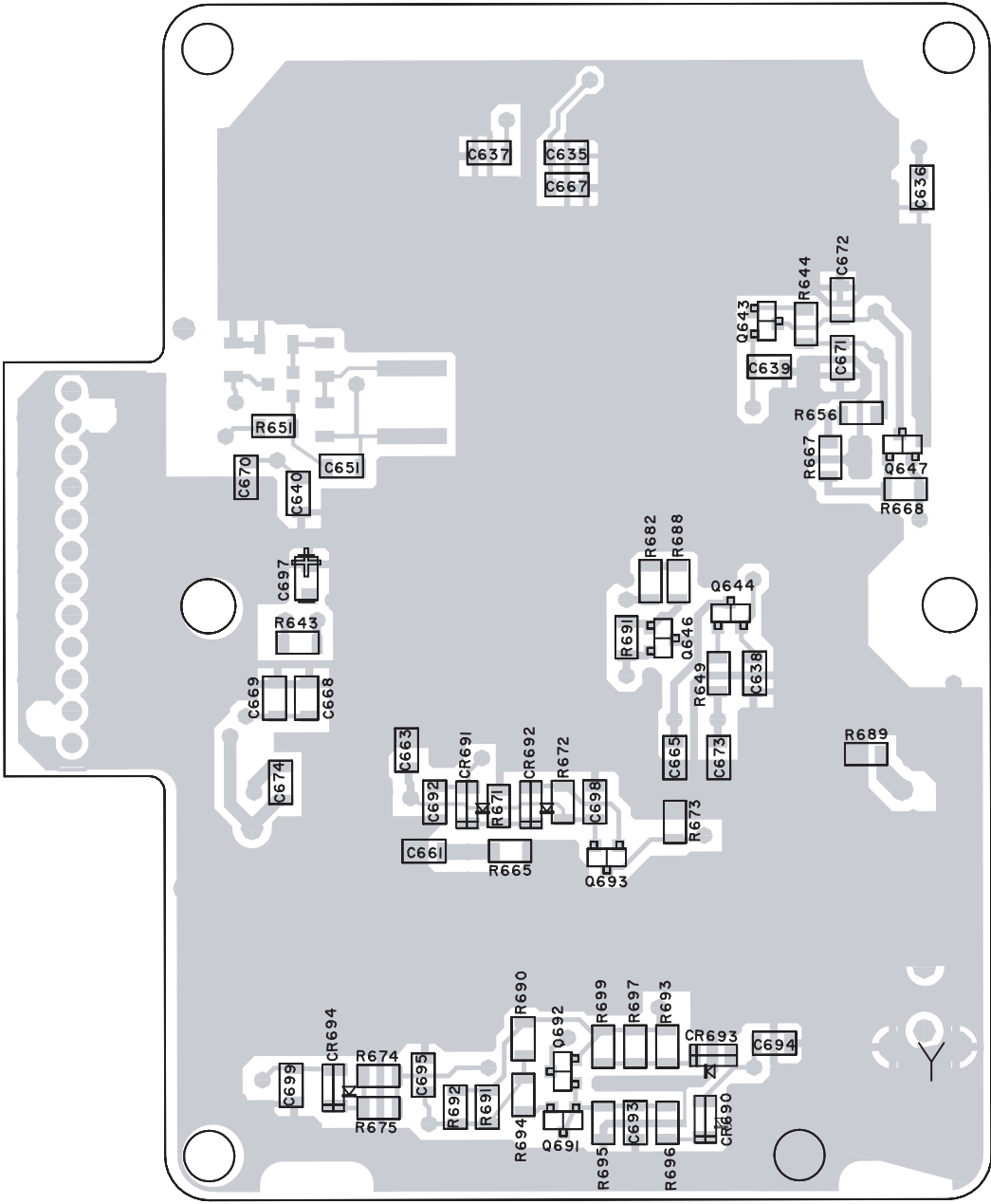
Notes:
1. Valid in HLE6000D only.
2. Valid in HLE6041D only.



68P81076C25-C



Side 1



Side 2

HLF6080B 800 MHz VCO Component Location Diagram

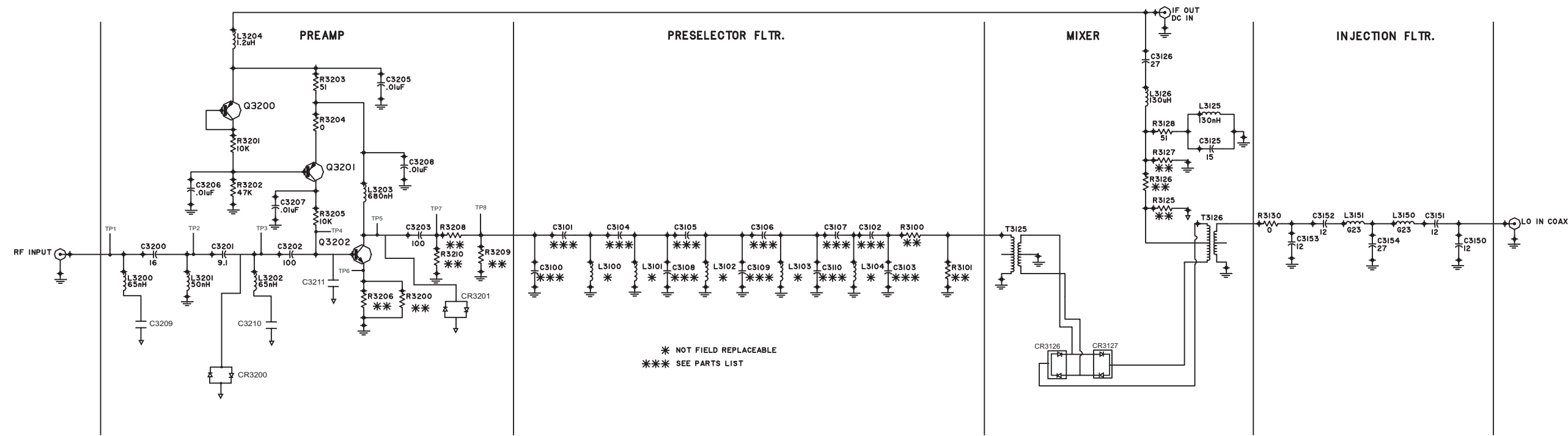
HLF6080B 800 MHz VCO Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C635 thru C637	2113740B49	CAP CHIP REEL CL1 +/-30 100
C638 & C639	2113741N45	CAP CHIP CL2 X7R 10% 10000
C640	2113740B49	CAP CHIP REEL CL1 +/-30 100
C649	2113741N69	CAP CHIP CL2 X7R 10% 100000
C650	-----	NOTPLACED
C651	2113740B69	CAP CHIP REEL CL1 +/-30 680
C660	-----	NOTPLACED
C661 thru C663	2113741N69	CAP CHIP CL2 X7R 10% 100000
C665	2113740B49	CAP CHIP REEL CL1 +/-30 100
C666	-----	NOTPLACED
C667 & C668	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C669	2113740B49	CAP CHIP REEL CL1 +/-30 100
C670	2113741N69	CAP CHIP CL2 X7R 10% 100000
C671 thru C674	2113740B49	CAP CHIP REEL CL1 +/-30 100
C675	2113740B30	CAP CHIP REEL CL1 +/-30 16
C676	2113740B36	CAP CHIP REEL CL1 +/-30 30
C677	2113741N69	CAP CHIP CL2 X7R 10% 100000
C678	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C679	2113741N45	CAP CHIP CL2 X7R 10% 10000
C680	2113740B49	CAP CHIP REEL CL1 +/-30 100
C681	2113740B15	CAP CHIP REEL CL1 +/-30 3.9
C682	2113740B28	CAP CHIP REEL CL1 +/-30 13
C683	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C684	2113741N45	CAP CHIP CL2 X7R 10% 10000
C685	2111078B27	CAP CHIP RF 30 5 NPO 100V
C686	2113740B15	CAP CHIP REEL CL1 +/-30 3.9
C687 & C688	2113740B36	CAP CHIP REEL CL1 +/-30 30
C689	2113740B25	CAP CHIP REEL CL1 +/-30 10
C690 & C691	2111078B27	CAP CHIP RF 30 5 NPO 100V
C692 thru C695	2113741N45	CAP CHIP CL2 X7R 10% 10000
C696	2113741N69	CAP CHIP CL2 X7R 10% 100000
C697	2311049A37	CAP TANT CHIP 1 20 20
C698 & C699	2113741N45	CAP CHIP CL2 X7R 10% 10000
CR675 thru CR678	4880142L01	DIODE PIN SOT 23 MMBV 3401

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
CR690 thru CR694	4880066M01	DIODE SIGNAL RLS4148
E9677	8480154P01	BD CKT 800 VCO CARRIER
E9677	8480154P31	BD CKT 800 VCO CARRIER PNL
J641	0980110M01	RECP COAX PCB MOUNT
J642	0980212N03	RECP COAX PCB MOUNT
JU645	0611077A01	RES CHIP JUMPER
JU646	-----	NOTPLACED
JU647	0611077A01	RES CHIP JUMPER
JU648	-----	NOTPLACED
L675	2480091G20	COIL AIRWOUND
L676	2480091G06	COIL AIRWOUND
L677	2480091G06	COIL AIRWOUND
L678	2480140E04	INDUCTOR CHIP 65 NH
L679	2480091G20	COIL AIRWOUND
L680	2480091G06	COIL AIRWOUND
L681	2480140E06	INDUCTOR CHIP 130 NH
L682	2480091G01	COIL AIRWOUND
L683	2480091G20	COIL AIRWOUND
L684	2480140E06	INDUCTOR CHIP 130 NH
L685	2480091G01	COIL AIRWOUND
L686	-----	NOTPLACED
MP9655	1180117M01	ADHESIVE PREFORM VCO
MP9676	1580223N02	COVER SHIELD
P601	2880099M02	PLUG VERTICAL
Q643	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q644	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q645	-----	NOTPLACED
Q646	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q647	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q660	4813827A03	TSTR NPN SML SIG MMBR901LT1 7X
Q675	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q676	4802000P02	NEC SILICON TR 2SC3357 RE
Q691 thru Q693	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
R621	0611077B47	RES CHIP 1 MEG 5 1/8W
R622	0611077B23	RES CHIP 100K 5 1/8W
R643	0611077B23	RES CHIP 100K 5 1/8W
R644 & R649	0611077A90	RES CHIP 4700 5 1/8
R650	NOTPLACED	64AM DUMMY PART NUMBER
R651	0611077A94	RES CHIP 6800 5 1/8
R656 & R657	0611077B47	RES CHIP 1 MEG 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R662	-----	NOTPLACED
R663	0611077A82	RES CHIP 2200 5 1/8
R664	0611077A74	RES CHIP 1000 5 1/8
R665 & R666	0611077A50	RES CHIP 100 5 1/8W
R668	0611077B23	RES CHIP 100K 5 1/8W
R669	0611077A54	RES CHIP 150 5 1/8W
R670	0611077A50	RES CHIP 100 5 1/8W
R671	0611077A98	RES CHIP 10K 5 1/8W
R672	0611077A90	RES CHIP 4700 5 1/8
R673	0611077A98	RES CHIP 10K 5 1/8W
R674	0611077A70	RES CHIP 680 5 1/8W
R675	0611077A78	RES CHIP 1500 5 1/8
R676	0611077A74	RES CHIP 1000 5 1/8
R677	0611077A70	RES CHIP 680 5 1/8W
R678	0611077A74	RES CHIP 1000 5 1/8
R679	0611077A94	RES CHIP 6800 5 1/8
R680	0611077A74	RES CHIP 1000 5 1/8
R681	0611077A82	RES CHIP 2200 5 1/8
R682	0611077B47	RES CHIP 1 MEG 5 1/8W
R683	0611077A74	RES CHIP 1000 5 1/8
R684	0611077A82	RES CHIP 2200 5 1/8
R685	0611077A74	RES CHIP 1000 5 1/8
R686	0611077A82	RES CHIP 2200 5 1/8
R687	0611077A50	RES CHIP 100 5 1/8W
R688	0611077A46	RES CHIP 68 5 1/8W
R689	0611077A50	RES CHIP 100 5 1/8W
R690	0611077A70	RES CHIP 680 5 1/8W
R691 & R692	0611077A70	RES CHIP 680 5 1/8W
R693	0611077A58	RES CHIP 220 5 1/8W
R694	0611077A90	RES CHIP 4700 5 1/8
R695	0611077A74	RES CHIP 1000 5 1/8
R696 & R697	0611077A70	RES CHIP 680 5 1/8W
R698	0611077A36	RES CHIP 27 5 1/8W
R699	0611077A50	RES CHIP 100 5 1/8W
	3280247N01	GASKET VCO

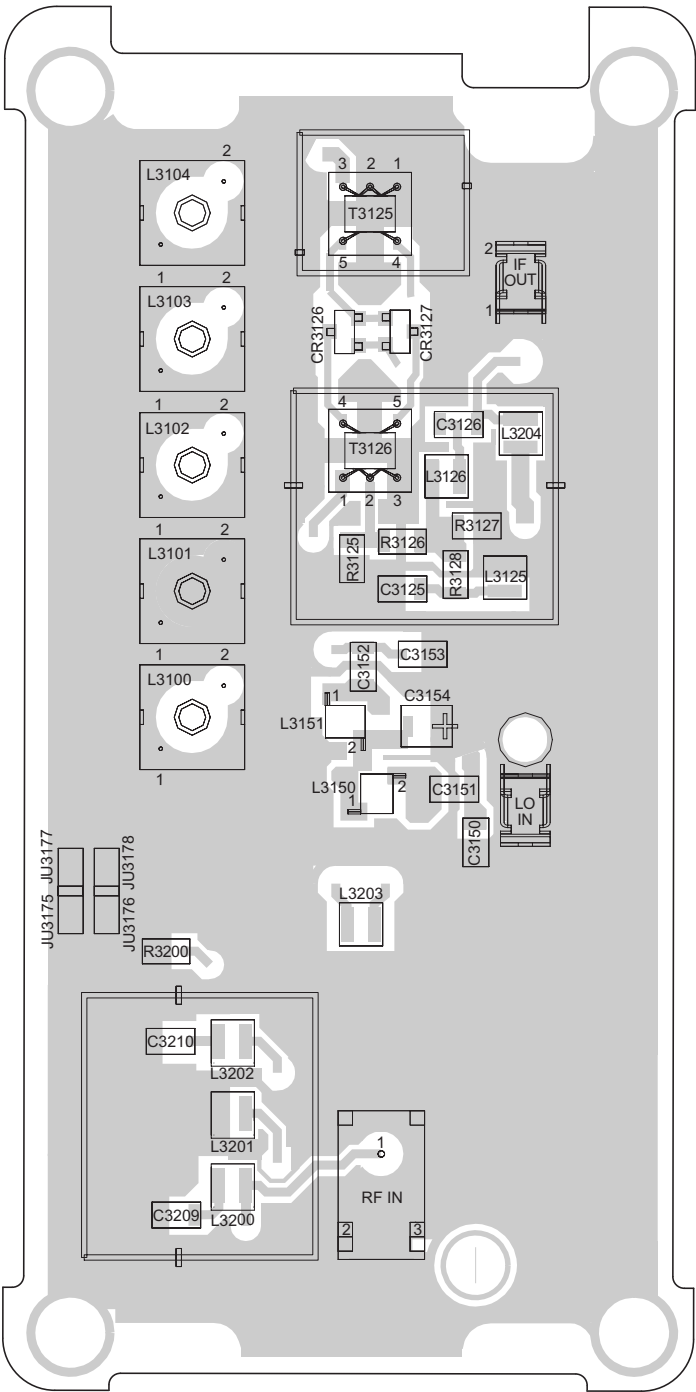
7.6 RX Front-End Section



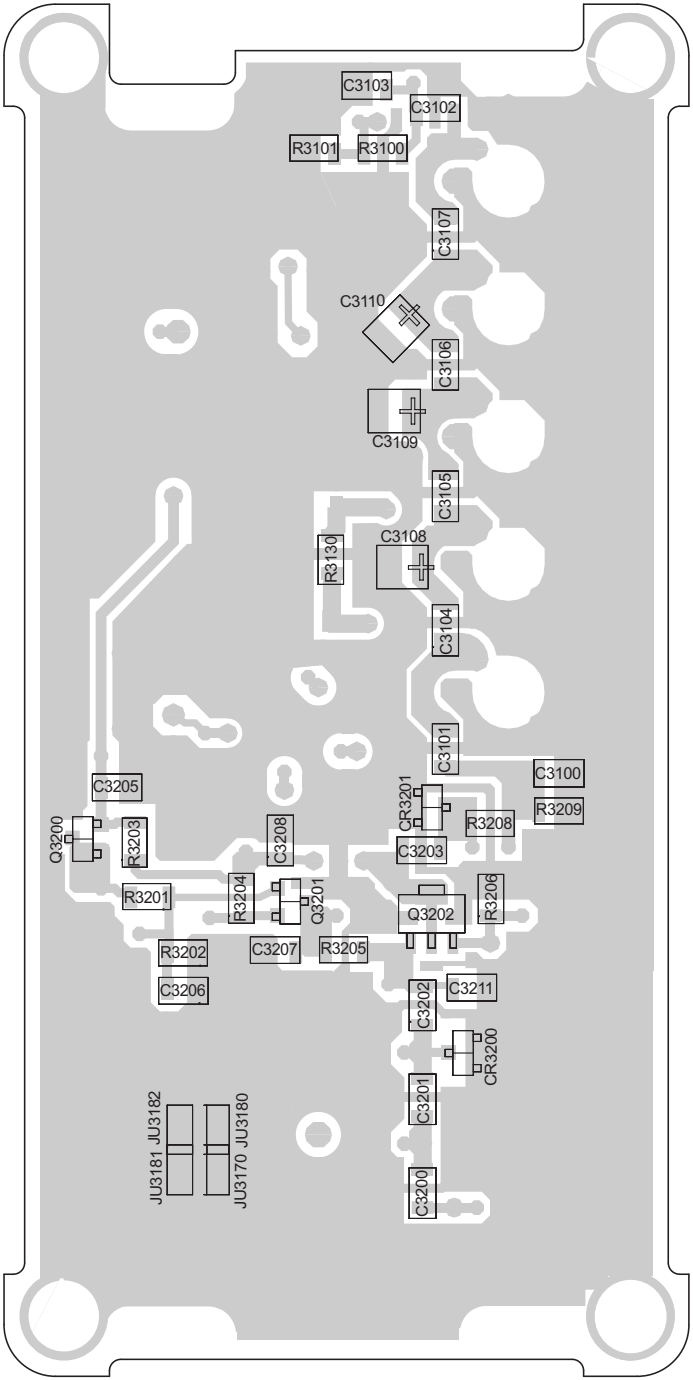
NOTE:
ALL RESISTANCE IN OHMS, ALL CAPACITANCE
IN PICO FARADS UNLESS OTHERWISE NOTED.

GXW-5910-B

HRD6001E/6002E/6011E/6012E VHF Receiver Front-End Schematic



Side 1



Side 2

HRD6001E/6002E/6011E/6012E VHF Component Location Diagram

HRD6001E VHF RXFE Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3100 & C3101	2113740B34	CAP CHIP REEL CL1 +/-30 24
C3102	2113740B30	CAP CHIP REEL CL1 +/-30 16
C3103	2113740B34	CAP CHIP REEL CL1 +/-30 24
C3104	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3105 & C3106	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
C3107	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3108 thru C3110	2111078B15	CAP CHIP RF 12 5 NPO 100V
C3125	2113740B29	CAP CHIP REEL CL1 +/-30 15
C3126	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3150 thru C3153	2113740B27	CAP CHIP REEL CL1 +/-30 12
C3154	2111078B25	CAP CHIP RF 27 5 NPO 100V
C3200	2113740B30	CAP CHIP REEL CL1 +/-30 16
C3201	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C3202 & C3203	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3205 thru C3208	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3209 & C3210	0611077A01	RES CHIP JUMPER
CR3125	4880236E17	DIODE QUAD RING
CR3200 & CR3201	4880154K03	DIODE DUAL SCHOTTKY MIXER
E3103 & E3104	2980014A03	CLIP COAX TERMINAL
E3105 & E3106	2680003M03	SHLD HI IF TIN PLATED
E3107	2680004M03	SHLD OUTPUT MATCH TIN PLATED
J3102	0980110M01	RECP COAX PCB MOUNT
JU3175 & JU3178	0611077A01	RES CHIP JUMPER
JU3180 & JU3181	0611077A01	RES CHIP JUMPER
L3100 thru L3104	2480148M07	IND 4 1/2 TURNS FER CORE 82NH
L3125 & L3126	2480140E06	INDUCTOR CHIP 130 NH
L3150 & L3151	2480091G23	COIL AIRWOUND
L3200	2480140E04	INDUCTOR CHIP 65 NH
L3201	2480140E03	INDUCTOR CHIP 50 NH
L3202	2480140E04	INDUCTOR CHIP 65 NH
L3203	2480140E07	INDUCTOR CHIP 680 NH
L3204	2480140E01	INDUCTOR CHIP 1.2 UH

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
Q3200 & Q3201	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3202	4802000P02	NEC SILICON TR 2SC3357 RE
R3100	0611077A26	RES CHIP 10 5 1/8W
R3101 & R3125	0611077A70	RES CHIP 680 5 1/8W
R3126	0611077A26	RES CHIP 10 5 1/8W
R3127	0611077A70	RES CHIP 680 5 1/8W
R3128	0611077A43	RES CHIP 51 5 1/8W
R3130	0611077A01	RES CHIP JUMPER
R3200	0611077A43	RES CHIP 51 5 1/8W
R3201	0611077A98	RES CHIP 10K 5 1/8W
R3202	0611077B15	RES CHIP 47K 5 1/8W
R3203	0611077A43	RES CHIP 51 5 1/8W
R3204	0611077A01	RES CHIP JUMPER
R3205	0611077A98	RES CHIP 10K 5 1/8W
R3206	0611077A46	RES CHIP 68 5 1/8W
R3208	0611077A26	RES CHIP 10 5 1/8W
R3209	0611077A72	RES CHIP 820 5 1/8W
T3125	2405548Q06	TRANSFORMER, RF
T3126	2405548Q06	TRANSFORMER, RF
W3101	3080037R05	CABLE ASSEMBLY
W3103	3080152M07	CBL COAX ASSEMBLY
	1280954T42	SPECTRA VHF FRONT END ASSEM
	MXW7635	HRD6001B/6011B PL
	8480067S32	PCB VHF RX PNL
	5480072G01	LABEL BD CKT PRTD

HRD6002E Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3100	2113740B31	CAP CHIP REEL CL1 +/-30 18
C3101	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3102	2113740B31	CAP CHIP REEL CL1 +/-30 18
C3103	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3104	211374B009	CAP CHIP REEL CL1 +/-30 2.2 ³
	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3105 thru C3106	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3107	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C3108	2111078B16	CAP CHIP RF 13 5 NPO 100V ³
	2111078B19	CAP CHIP RF 16 5 NPO 100V
C3109 & C3110	2111078B16	CAP CHIP RF 13 5 NPO 100V
C3125	2113740B29	CAP CHIP REEL CL1 +/-30 15
C3126	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3150 thru C3153	2113740B27	CAP CHIP REEL CL1 +/-30 12
C3154	2111078B25	CAP CHIP RF 27 5 NPO 100V
C3200	2113740B25	CAP CHIP REEL CL1 +/-30 10 ³
	2113740B30	CAP CHIP REEL CL1 +/-30 16
C3201	2113740B23	CAP CHIP REEL CL1 +/-30 8.2 ³
	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C3202	2113740B49	CAP CHIP REEL CL1 +/-30 100
	2113740B65	CAP CHIP REEL CL1 +/-30 470 ³
C3203	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3205 thru C3208	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3209	2113740B31	CAP CHIP REEL CL1 +/-30 18 ³
C3210	2113740B32	CAP CHIP REEL CL1 +/-30 20 ³
CR3125	4880236E17	DIODE QUAD RING ¹
CR3126 & C3127	4880154K03	DIODE DUAL SCHOTTKY MIXER ⁴
CR3200 & CR3201	4880154K03	DIODE DUAL SCHOTTKY MIXER ⁴
E3103 & E3104	2980014A03	CLIP COAX TERMINAL ⁶
E3105 & E3106	2680003M03	SHLD HI IF TIN PLATED ⁶
E3107	2680004M03	SHLD OUTPUT MATCH TIN PLATED ⁶

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
J3102	0980110M01	RECP COAX PCB MOUNT
JU3175	0611077A01	RES CHIP JUMPER ³
JU3177 & JU3178	-----	NOT PLACED
JU3176, JU3179, & JU3181 ³	0611077A01	RES CHIP JUMPER
JU3180 & JU3181	-----	NOT PLACED ³
JU3182	0611077A01	RES CHIP JUMPER ³
JU3209 & JU3210	0611077A01	RES CHIP JUMPER ²
L3100 thru L3104	2480148M04	IND 3 1/2 TURNS FER CORE 62NH
L3125 & L3126	2480140E06	INDUCTOR CHIP 130 NH
L3150 & L3151	2480091G23	COIL AIRWOUND
L3200	2480140E04	INDUCTOR CHIP 65 NH
	2480140E06	INDUCTOR CHIP 130 NH ³
L3201	2480140E03	INDUCTOR CHIP 50 NH
L3202	2480140E04	INDUCTOR CHIP 65 NH
	2480140E06	INDUCTOR CHIP 130 NH ³
L3203	2480140E07	INDUCTOR CHIP 680 NH
	2480140E06	INDUCTOR CHIP 130 NH ³
L3204	2480140E01	INDUCTOR CHIP 1.2 UH
M3000 & M3001	2980014A03	CLIP COAX TERMINAL ³
Q3200	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3201	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3202	4882971R01	TSTR NPN 71R01 RF
	4802000P02	NEC SILICON TR 2SC3357 RE ⁷
R3100	0611077A26	RES CHIP 10 5 1/8W
R3101	0611077A70	RES CHIP 680 5 1/8W
R3125	0611077A70	RES CHIP 680 5 1/8W
	0611077A68	RES CHIP 560 5 1/8W ³
R3126	0611077A26	RES CHIP 10 5 1/8W
R3127	0611077A70	RES CHIP 680 5 1/8W
	0611077A68	RES CHIP 560 5 1/8W ³
R3128	0611077A43	RES CHIP 51 5 1/8W
R3130	0611077A01	RES CHIP JUMPER
R3131 & R3132	-----	NOT PLACED ³
R3200	0611077A43	RES CHIP 51 5 1/8W
R3201	0611077A98	RES CHIP 10K 5 1/8W
R3202	0611077B15	RES CHIP 47K 5 1/8W
R3203	0611077A43	RES CHIP 51 5 1/8W
R3204	0611077A01	RES CHIP JUMPER
R3205	0611077A98	RES CHIP 10K 5 1/8W
R3206	0611077A36	RES CHIP 27 5 1/8W ⁵

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R3208	0611077A26 0611077A32	RES CHIP 10 5 1/8W RES CHIP 18 5 1/8W ¹
R3209	0611077A68 0611077A72	RES CHIP 560 5 1/8W RES CHIP 820 5 1/8W ⁴
R3210	0611077A68 0611077A72	RES CHIP 560 5 1/8W ⁴ RES CHIP 820 5 1/8W ³
SH1	2680003M03	SHLD HI IF TIN PLATED ³
SH2	2680004M03	SHLD OUTPUT MATCH TIN PLATED ³
SH3	2680003M03	SHLD HI IF TIN PLATED ³
T3125	2405548Q06	TRANSFORMER, RF ⁶
T3126	2405548Q06	TRANSFORMER, RF
T3127	2405548Q06	TRANSFORMER, RF ³
W3101	3080037R05	CABLE ASSEMBLY ⁶
W3103	3080152M07	CBL COAX ASSEMBLY ⁶
	1280954T42	SPECTRA VHF FRONT END ASSEM

Notes:
1. Valid in HRD6002C only.
2. Valid in HRD6002E only.
3. Valid in HRD6002G only.
4. Not valid in HRD6002C.
5. Not valid in HRD6002E
6. Not valid in HRD6002G
7. Valid in HRD6002E and HRD6002G only.

HRD6011E Parts List

ITEM	MOTOROLA PART NUBER	DESCRIPTION
C3100 & C3101	2113740B34	CAP CHIP REEL CL1 +/-30 24
C3102	2113740B30	CAP CHIP REEL CL1 +/-30 16
C3103	2113740B34	CAP CHIP REEL CL1 +/-30 24
C3104	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3105 & C3106	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
C3107	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3108	2111078B16	CAP CHIP RF 13 5 NPO 100V
C3109	2111078B15	CAP CHIP RF 12 5 NPO 100V
C3110	2111078B16	CAP CHIP RF 13 5 NPO 100V
C3125	2113740B29	CAP CHIP REEL CL1 +/-30 15
C3126	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3150 thru C3153	2113740B27	CAP CHIP REEL CL1 +/-30 12
C3154	2111078B25	CAP CHIP RF 27 5 NPO 100V
C3200	2113740B30	CAP CHIP REEL CL1 +/-30 16
C3201	2113740B24	CAP CHIP REEL CL1 +/-30 9.1

ITEM	MOTOROLA PART NUBER	DESCRIPTION
C3202 & C3203	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3205 thru C3208	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3209 & C3210	0611077A01	RES CHIP JUMPER ¹
CR3125	4880236E17	DIODE QUAD RING
CR3200	4880154K03	DIODE DUAL SCHOTTKY MIXER ¹
CR3201	4880154K03	DIODE DUAL SCHOTTKY MIXER ¹
E3103 & E3104	2980014A03	CLIP COAX TERMINAL
E3105 & E3106	2680003M03	SHLD HI IF TIN PLATED
E3107	2680004M03	SHLD OUTPUT MATCH TIN PLATED
J3102	0980110M01	RECP COAX PCB MOUNT
JU3177 & JU3178	0611077A01	RES CHIP JUMPER
JU3180 & JU3182	0611077A01	RES CHIP JUMPER
L3100 thru L3104	2480148M07	IND 4 1/2 TURNS FER CORE 82NH
L3125 & L3126	2480140E06	INDUCTOR CHIP 130 NH
L3150 & L3151	2480091G23	COIL AIRWOUND
L3200	2480140E04	INDUCTOR CHIP 65 NH
L3201	2480140E03	INDUCTOR CHIP 50 NH
L3202	2480140E04	INDUCTOR CHIP 65 NH
L3203	2480140E07	INDUCTOR CHIP 680 NH
L3204	2480140E01	INDUCTOR CHIP 1.2 UH
Q3200 & Q3201	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3202	4882971R01	TSTR NPN 71R01 RF
R3100 & R3126	0611077A01	RES CHIP JUMPER
R3128	0611077A43	RES CHIP 51 5 1/8W
R3130	0611077A01	RES CHIP JUMPER
R3201	0611077A98	RES CHIP 10K 5 1/8W
R3202	0611077B15	RES CHIP 47K 5 1/8W
R3203	0611077A43	RES CHIP 51 5 1/8W
R3204	0611077A01	RES CHIP JUMPER
R3205	0611077A98	RES CHIP 10K 5 1/8W
R3206 & R3208	0611077A26	RES CHIP 10 5 1/8W
R3209	0611077A72	RES CHIP 820 5 1/8W
R3210	0611077A72	RES CHIP 820 5 1/8W ²
T3125	2405548Q06	TRANSFORMER, RF
T3126	2405548Q06	TRANSFORMER, RF
W3101	3080037R05	CABLE ASSEMBLY

ITEM	MOTOROLA PART NUBER	DESCRIPTION
W3103	3080152M07	CBL COAX ASSEMBLY
	1280954T42	SPECTRA VHF FRONT END ASSEM

Notes:
1. Valid in HRD6011D only.
2. Valid in HRD6011C only.

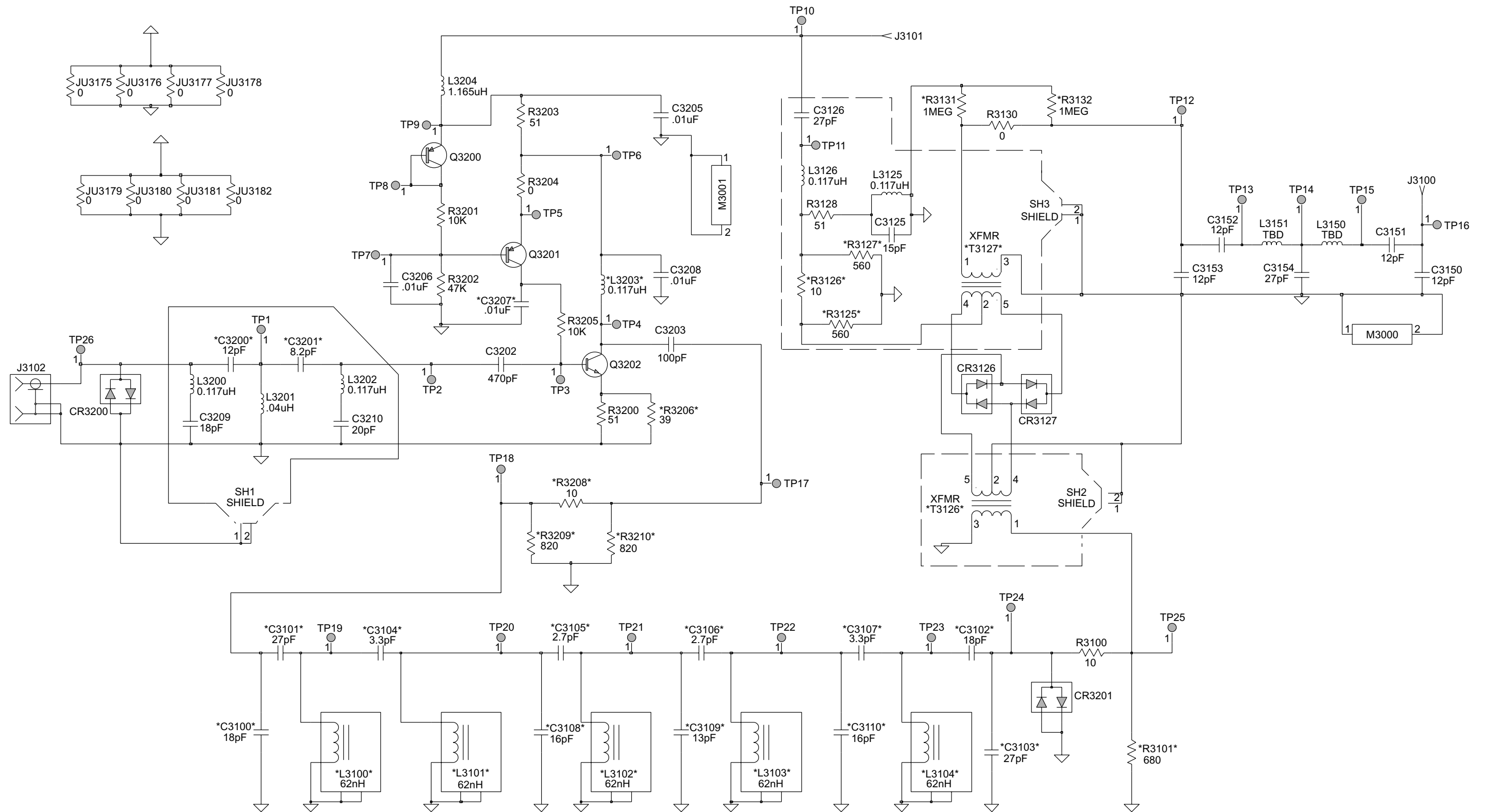
HRD6012E Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3100	2113740B31	CAP CHIP REEL CL1 +/-30 18
C3101	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3102	2113740B31	CAP CHIP REEL CL1 +/-30 18
C3103	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3104	2113740B09	CAP CHIP REEL CL1 +/-30 2.2 ³
	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3105 thru C3106	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3107	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C3108	2111078B16	CAP CHIP RF 13 5 NPO 100V ³
	2111078B19	CAP CHIP RF 16 5 NPO 100V
C3109 & C3110	2111078B16	CAP CHIP RF 13 5 NPO 100V
C3125	2113740B29	CAP CHIP REEL CL1 +/-30 15
C3126	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3150 thru C3153	2113740B27	CAP CHIP REEL CL1 +/-30 12
C3154	2111078B25	CAP CHIP RF 27 5 NPO 100V
C3200	2113740B25	CAP CHIP REEL CL1 +/-30 10 ³
	2113740B30	CAP CHIP REEL CL1 +/-30 16
C3201	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
	2113740B25	CAP CHIP REEL CL1 +/-30 10 ³
C3202	2113740B49	CAP CHIP REEL CL1 +/-30 100
	2113740B65	CAP CHIP REEL CL1 +/-30 470 ³
C3203	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3205 thru C3208	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3209	0611077A01 2113740B31	RES CHIP JUMPER CAP CHIP REEL CL1 +/-30 18 ³

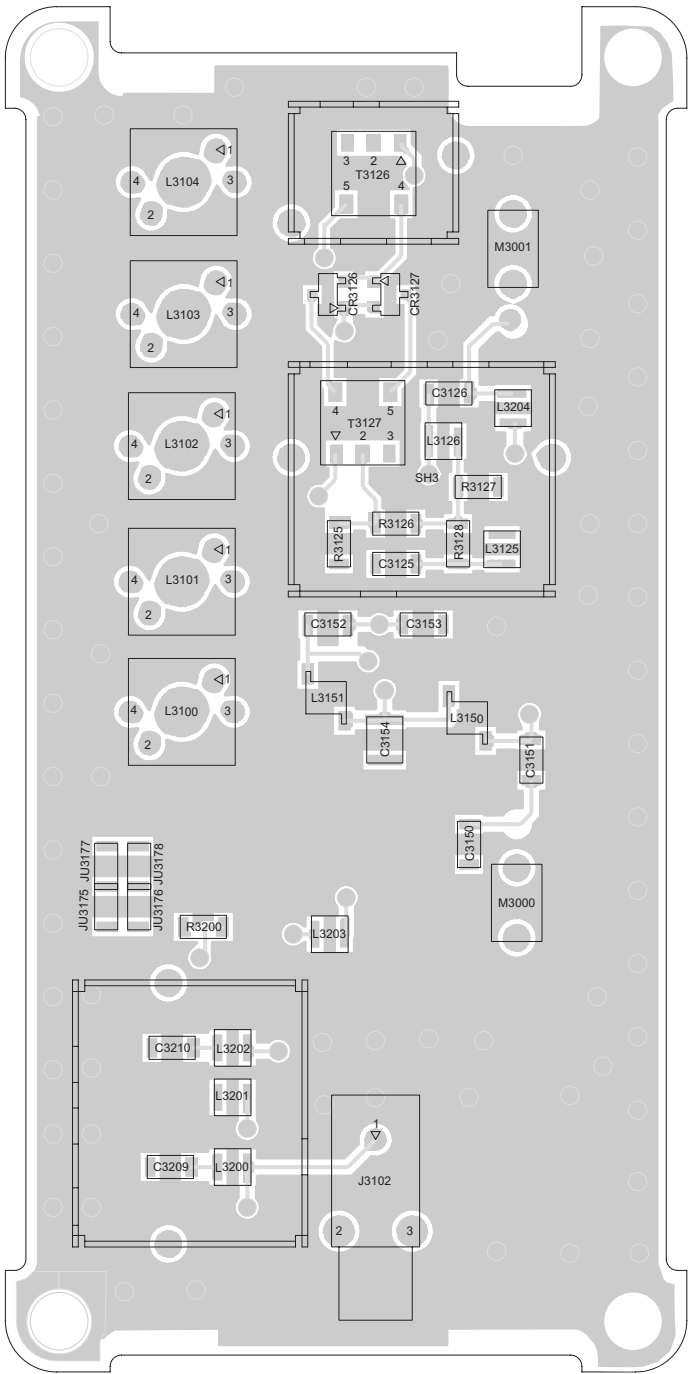
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3210	0611077A01 2113740B32	RES CHIP JUMPER CAP CHIP REEL CL1 +/-30 20 ³
CR3125	4880236E17	DIODE QUAD RING ¹
CR3126 & CR3127	4880154K03	DIODE DUAL SCHOTTKY MIXER ⁴
CR3200 & CR3201	4880154K03	DIODE DUAL SCHOTTKY MIXER
E3103 & E3104	2980014A03	CLIP COAX TERMINAL ⁵
E3105 & E3106	2680003M03	SHLD HI IF TIN PLATED ⁵
E3107	2680004M03	SHLD OUTPUT MATCH TIN PLATED ⁵
J3102	0980110M01	RECP COAX PCB MOUNT
JU3175	-----	NOTPLACED ³
JU3176 & JU3177	0611077A01	RES CHIP JUMPER
JU3178	-----	NOTPLACED ³
JU3179	0611077A01	RES CHIP JUMPER
JU3180	-----	NOTPLACED ³
JU3181	0611077A01	RES CHIP JUMPER ³
JU3182	0611077A01 -----	RES CHIP JUMPER NOTPLACED ³
L3100 thru L3104	2480148M04	IND 3 1/2 TURNS FER CORE 62NH
L3125 & L3126	2480140E06	INDUCTOR CHIP 130 NH
L3150 & L3151	2480091G23	COIL AIRWOUND
L3200	2480140E04 2480140E06	INDUCTOR CHIP 65 NH INDUCTOR CHIP 130 NH ³
L3201	2480140E03	INDUCTOR CHIP 50 NH
L3202	2480140E04 2480140E06	INDUCTOR CHIP 65 NH INDUCTOR CHIP 130 NH ³
L3203	2480140E06 2480140E07	INDUCTOR CHIP 130 NH ³ INDUCTOR CHIP 680 NH
L3204	2480140E01	INDUCTOR CHIP 1.2 UH
M3000 & M3001	2980014A03	CLIP COAX TERMINAL ³
Q3200 & Q3201	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3202	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE ²
	4802000P02	NEC SILICON TR 2SC3357 RE ³
	4882971R01	TSTR NPN 71R01 RF ¹
R3101, R31127 & R3125	-----	NOTPLACED ³
R3100 & R3126	0611077A01	RES CHIP JUMPER
R3128	0611077A43	RES CHIP 51 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R3130	0611077A01	RES CHIP JUMPER
R3131 & R3132	-----	NOTPLACED ³
R3200	-----	NOTPLACED ³
R3201	0611077A98	RES CHIP 10K 5 1/8W
R3202	0611077B15	RES CHIP 47K 5 1/8W
R3203	0611077A43	RES CHIP 51 5 1/8W
R3204	0611077A01	RES CHIP JUMPER
R3205	0611077A98	RES CHIP 10K 5 1/8W
R3206	0611077A10 0611077A26	RES CHIP 2.2 5 1/8W ³ RES CHIP 10 5 1/8W
R3208	0611077A26	RES CHIP 10 5 1/8W
R3209	0611077A72	RES CHIP 820 5 1/8W
R3210	-----	NOTPLACED ³
SH1	2680003M03	SHLD HI IF TIN PLATED ³
SH2	2680004M03	SHLD OUTPUT MATCH TIN PLATED ³
SH3	2680003M03	SHLD HI IF TIN PLATED ³
T3125	2405548Q06	TRANSFORMER, RF ⁵
T3126	2405548Q06	TRANSFORMER, RF
T3127	2405548Q06	TRANSFORMER, RF ³
W3101	3080037R05	CABLE ASSEMBLY ⁵
W3103	3080152M07	CBL COAX ASSEMBLY ⁵
	8480067S02	PCB VHF RX ¹
	8480067S32	PCB VHF RX PNL ²
	1280954T42	SPECTRA VHF FRONT END ASSEM

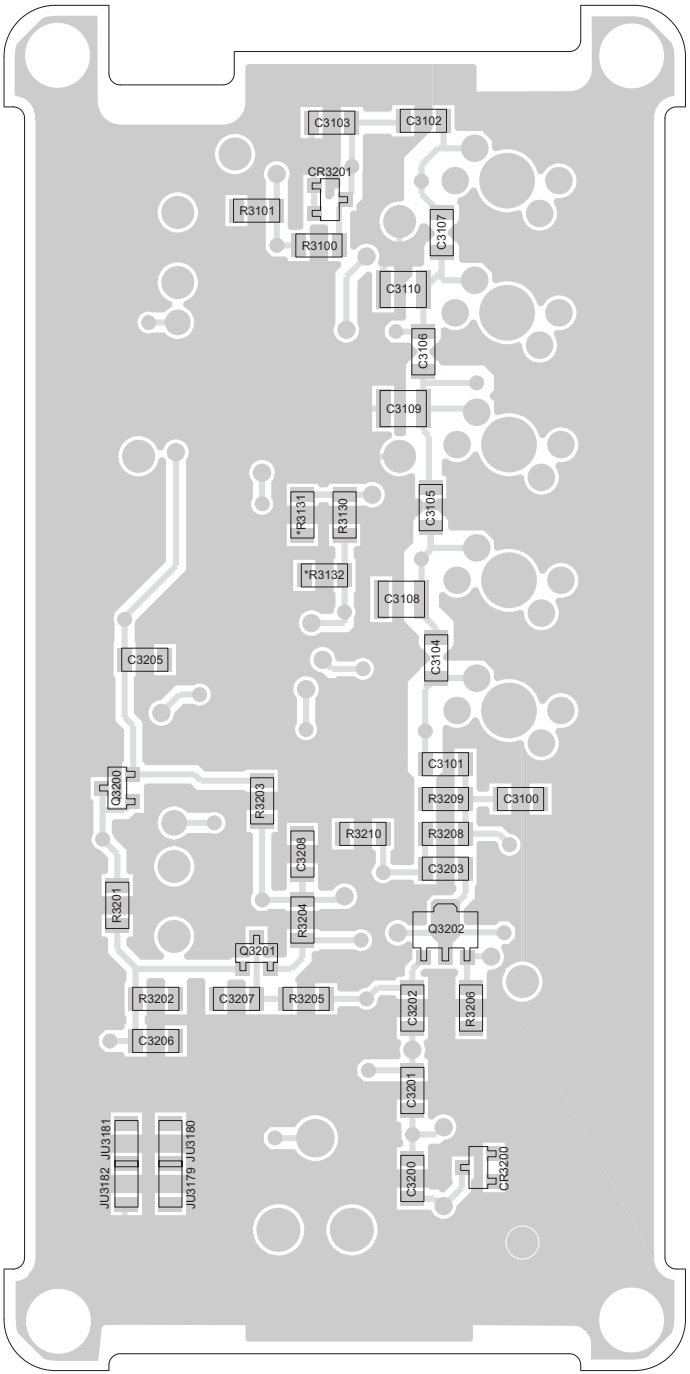
Notes:
1. Valid in HRD6012D only.
2. Valid in HRD6012E only.
3. Valid in HRD6012G only.
4. Not valid in HRD6012D.
5. Noy valid in HRD6012G.



HRD6001G/6002G/6011G/6012G VHF Receiver Front-End Schematic



Side 1



Side 2

HRD6001G/6002G/6011G/6012G VHF Receiver Front-End Component Location Diagram

HRD6001G/HRD6002G/HRD6011G/HRD6012G VHF RXFE
Parts List

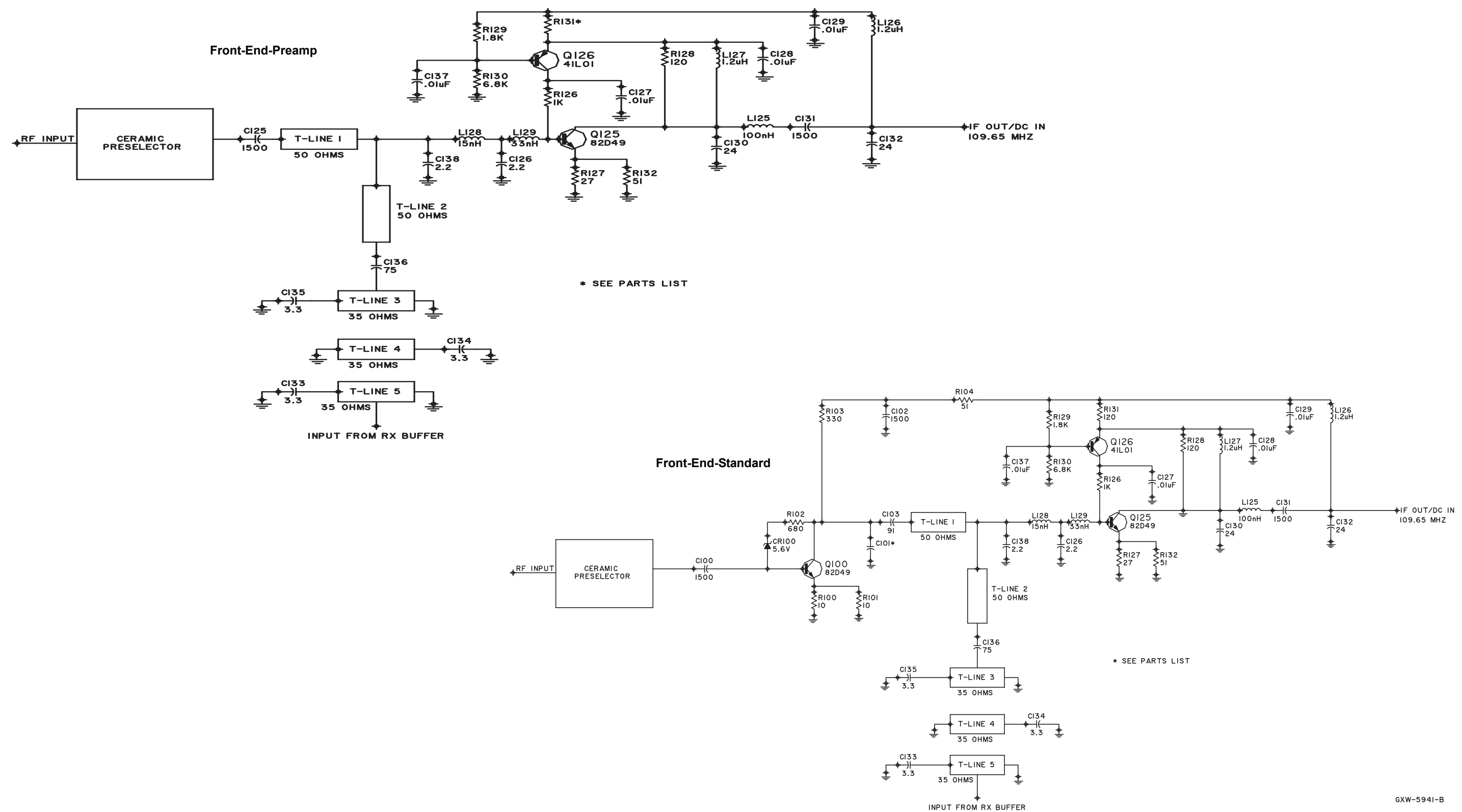
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3100	2113740B35 ¹ 2113740B31 ² 2113740B35 ³ 2113740B31 ⁴	CAP CHIP REEL CL1 +/-30 27
C3101	2113740B32 ¹ 2113740B35 ² 2113740B32 ³ 2113740B35 ⁴	CAP CHIP REEL CL1 +/-30 20
C3102	2113740B32 ¹ 2113740B31 ² 2113740B34 ³ 2113740B31 ⁴	CAP CHIP REEL CL1 +/-30 20
C3103	2113740B31 ¹ 2113740B35 ² 2113740B31 ³ 2113740B35 ⁴	CAP CHIP REEL CL1 +/-30 18
C3104	2113740B13 ¹ 2113740B09 ² 2113740B13 ³ 2113740B09 ⁴	CAP CHIP REEL CL1 +/-30 3.3
C3105 & C3106	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C3107	2113740B11 ¹ 2113740B13 ² 2113740B11 ³ 2113740B13 ⁴	CAP CHIP REEL CL1 +/-30 2.7
C3108 & C3109	2111078B15 ¹ 2111078B16 ² 2111078B15 ³ 2111078B16 ⁴	CAP CHIP RF 12 5 NPO 100V
C3110	2111078B15 ¹ 2111078B16 ² 2111078B15 ³ 2111078B16 ⁴	CAP CHIP RF 12 5 NPO 100V
C3125	2113740B29	CAP CHIP REEL CL1 +/-30 15
C3126	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3150 thru C3153	2113740B27	CAP CHIP REEL CL1 +/-30 12
C3154	2111078B25	CAP CHIP RF 27 5 NPO 100V
C3200	2113740B27 ¹ 2113740B25 ² 2113740B27 ³ 2113740B25 ⁴	CAP CHIP REEL CL1 +/-30 12
C3201	2113740B23 ¹ 2113740B23 ² 2113740B23 ³ 2113740B25 ⁴	CAP CHIP REEL CL1 +/-30 8.2
C3202	2113740B65	CAP CHIP REEL CL1 +/-30 470

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3203	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3205	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3206	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3207	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3208	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3209	2113740B31	CAP CHIP REEL CL1 +/-30 18
C3210	2113740B32	CAP CHIP REEL CL1 +/-30 20
CR3126 & CR3127	4880154K03	DIODE DUAL SCHOTTKY MIXER
CR3200 & CR3201	4880154K03	DIODE DUAL SCHOTTKY MIXER
J3102	0980110M01	RECP COAX PCB MOUNT
JU3175	0611077A01 ¹ 0611077A01 ² NOTPLACED ³ NOTPLACED ⁴	RES CHIP JUMPER
JU3176	NOTPLACED ¹ 0611077A01 ² NOTPLACED ³ 0611077A01 ⁴	RES CHIP JUMPER
JU3177	NOTPLACED ¹ NOTPLACED ² 0611077A01 ³ 0611077A01 ⁴	RES CHIP JUMPER
JU3178	0611077A01 ¹ NOTPLACED ² 0611077A01 ³ NOTPLACED ⁴	RES CHIP JUMPER
JU3179	NOTPLACED ¹ 0611077A01 ² NOTPLACED ³ 0611077A01 ⁴	RES CHIP JUMPER
JU3180	0611077A01 ¹ NOTPLACED ² 0611077A01 ³ NOTPLACED ⁴	RES CHIP JUMPER
JU3181	NOTPLACED ¹ NOTPLACED ² 0611077A01 ³ 0611077A01 ⁴	RES CHIP JUMPER
JU3182	0611077A01 ¹ 0611077A01 ² NOTPLACED ³ NOTPLACED ⁴	RES CHIP JUMPER
L3100 thru L3104	2480148M04	IND 3 1/2 TURNS FER CORE 62NH

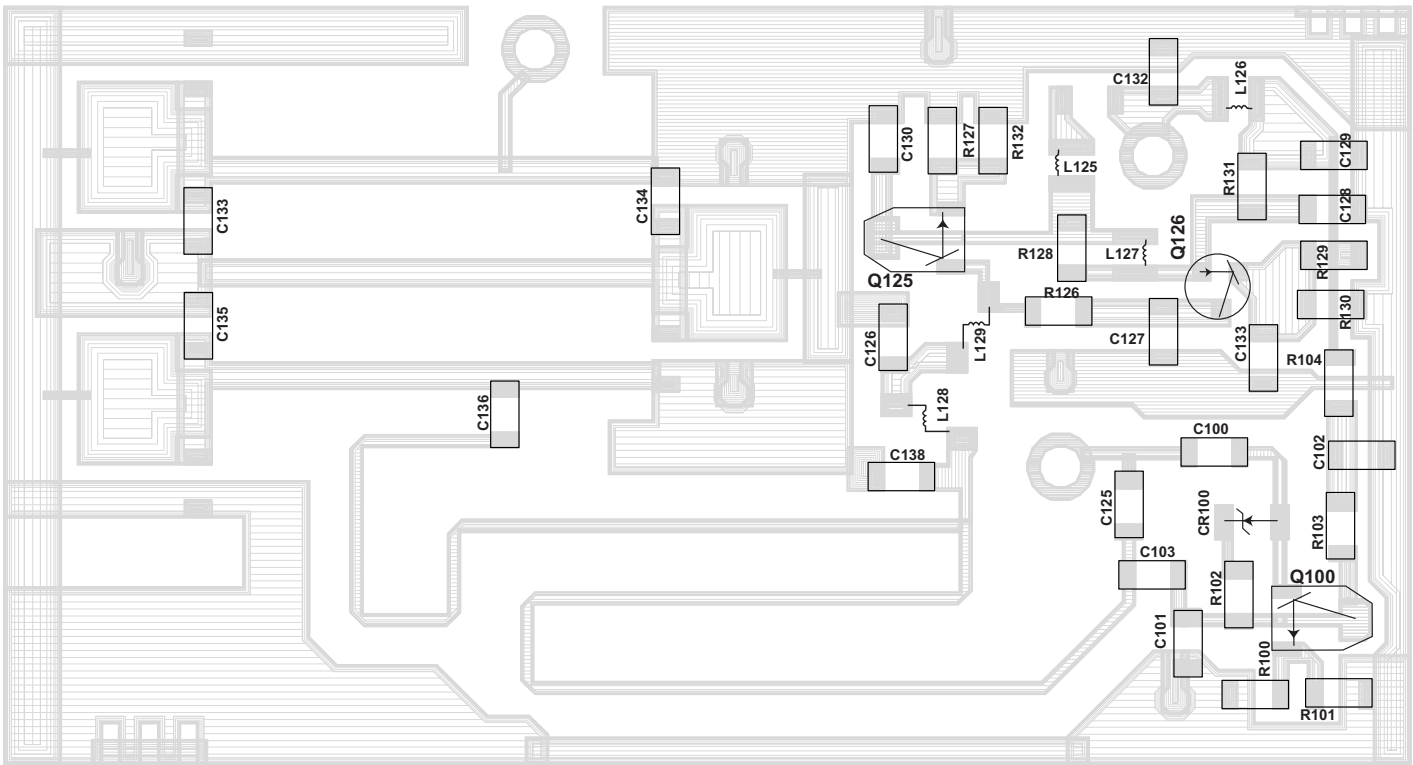
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L3125 & L3126	2480140E06	INDUCTOR CHIP 130 NH
L3150 & L3151	2480091G23	COIL AIRWOUND
L3200	2480140E06	INDUCTOR CHIP 130 NH
L3201	2480140E03	INDUCTOR CHIP 50 NH
L3202 & L3203	2480140E06	INDUCTOR CHIP 130 NH
L3204	2480140E01	INDUCTOR CHIP 1.2 UH
M3000	2980014A03	CLIP COAX TERMINAL
M3001	2980014A03	CLIP COAX TERMINAL
Q3200	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3201	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3202	4802000P02	NEC SILICON TR 2SC3357 RE
R3100	0611077A26 ¹ 0611077A26 ² 0611077A01 ³ 0611077A01 ⁴	RES CHIP 10 5 1/8W
R3101	0611077A70 ¹ 0611077A70 ² NOTPLACED ³ NOTPLACED ⁴	RES CHIP 680 5 1/8W
R3125	0611077A68 ¹ 0611077A68 ² NOTPLACED ³ NOTPLACED ⁴	RES CHIP 560 5 1/8W
R3126	0611077A26 ¹ 0611077A26 ² 0611077A01 ³ 0611077A01 ⁴	RES CHIP 10 5 1/8W
R3127	0611077A68 ¹ 0611077A68 ² NOTPLACED ³ NOTPLACED ⁴	RES CHIP 560 5 1/8W
R3128	0611077A43	RES CHIP 51 5 1/8W
R3130	0611077A01	RES CHIP JUMPER
R3131 & R3132	NOTPLACED	-----
R3200	0611077A43 ¹ 0611077A43 ² NOTPLACED ³ NOTPLACED ⁴	RES CHIP 51 5 1/8W
R3201	0611077A98	RES CHIP 10K 5 1/8W
R3202	0611077B15	RES CHIP 47K 5 1/8W
R3203	0611077A43	RES CHIP 51 5 1/8W
R3204	0611077A01	RES CHIP JUMPER
R3205	0611077A98	RES CHIP 10K 5 1/8W
R3206	0611077A36 ¹ 0611077A36 ² 0611077A10 ³ 0611077A10 ⁴	RES CHIP 27 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R3208	0611077A26	RES CHIP 10 5 1/8W
R3209	0611077A72	RES CHIP 820 5 1/8W
R3210	0611077A72 ¹ 0611077A72 ² NOTPLACED ³ NOTPLACED ⁴	RES CHIP 820 5 1/8W
SH1	2680003M03	SHLD HI IF TIN PLATED
SH2	2680004M03	SHLD OUTPUT MATCH TIN PLATED
SH3	2680003M03	SHLD HI IF TIN PLATED
T3126 & T3127	2405548Q06	TRANSFORMER, RF

Notes:
1. Valid in HRD6001G.
2. Valid in HRD6002G.
3. Valid in HRD6011G.
4. Valid in HRD6012G.



HRE6001B/6002C/6003B/6004B/6011B/6012B/6014B UHF Receiver Front-End Preamp and Standard Schematics



HRE6001B/6002C/6003B/6004B/6011B/6012B/6014B UHF Receiver Front-End Hybrid Component Location Diagram

HRE6011B UHF RXFE Pre-Amp Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C100	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C101	2113740B19	CAP CHIP REEL CL1 +/-30 5.6
C102	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C103	2113740B48	CAP CHIP REEL CL1 +/-30 91
C126	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C127 thru C129	2113741N45	CAP CHIP CL2 X7R 10% 10000
C130	2113740B34	CAP CHIP REEL CL1 +/-30 24
C131	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C132	2113740B34	CAP CHIP REEL CL1 +/-30 24
C133 thru C135	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C136	2113740B46	CAP CHIP REEL CL1 +/-30 75
C137	2113741N45	CAP CHIP CL2 X7R 10% 10000
C138	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
CR100	4882958R78	DIODE 48R82958R01 A/P 5.6V
E125	2680015P02	SHLD RXFE UHF TIN PLATED
E126	2680002M02	SHLD INJ FLTR TIN PLATED
HY126	9180209N01	FLTR BANDPASS CERAMIC 417 MHZ
JU5125	-----	PART NOT USED
L125	2480140E10	INDUCTOR CHIP 100NH
L126 & L127	2480140E01	INDUCTOR CHIP 1.2 UH
L128	2480091G21	COIL AIRWOUND
L129	2480091G33	COIL AIRWOUND
MP126	0780091P01	BRACKET RX FE UHF
MP127	0780214N01	FRAME PRESELECTOR LEAD
MP128	4280191N01	CLIP RECEIVER GROUNDING
MP129	4280013P01	RETAINER WIRE
MP130	4380025P01	SPACER WIRE
Q100 & Q125	4802000P02	NEC SILICON TR 2SC3357 RE
Q126	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
R100 & R101	0611077A26	RES CHIP 10 5 1/8W
R102	0611077A70	RES CHIP 680 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R103	0611077A62	RES CHIP 330 5 1/8W
R104	0611077A43	RES CHIP 51 5 1/8W
R126	0611077A74	RES CHIP 1000 5 1/8
R127	0611077A36	RES CHIP 27 5 1/8W
R128	0611077A52	RES CHIP 120 5 1/8W
R129	0611077A80	RES CHIP 1800 5 1/8
R130	0611077A94	RES CHIP 6800 5 1/8
R131	0611077A50	RES CHIP 100 5 1/8W
R132	0611077A43	RES CHIP 51 5 1/8W
W128	3080152M07	CBL COAX ASSEMBLY
W642	3080037R05	CABLE ASSEMBLY
	8480241N02	HYBRID CKT BD UHF F/E
	0980212N02	RECP COAX PCB MOUNT

HRE6012B UHF RXFE Pre-Amp Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C100	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C101	2113740B19	CAP CHIP REEL CL1 +/-30 5.6
C102	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C103	2113740B48	CAP CHIP REEL CL1 +/-30 91
C126	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
C127 thru C129	2113741N45	CAP CHIP CL2 X7R 10% 10000
C130	2113740B34	CAP CHIP REEL CL1 +/-30 24
C131	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C132	2113740B34	CAP CHIP REEL CL1 +/-30 24
C132	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C133 & C134	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C135	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C136	2113740B46	CAP CHIP REEL CL1 +/-30 75
C137	2113741N45	CAP CHIP CL2 X7R 10% 10000
C138	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
CR100	4882958R78	DIODE 48R82958R01 A/P 5.6V
E125	2680015P02	SHLD RXFE UHF TIN PLATED
E126	2680002M02	SHLD INJ FLTR TIN PLATED
HY126	9180209N02	FLTR BANDPASS CERAMIC 455 MHZ
L125	2480140E10	INDUCTOR CHIP 100NH

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L126 & L127	2480140E01	INDUCTOR CHIP 1.2 UH
L128	2480091G21	COIL AIRWOUND
L129	2480091G33	COIL AIRWOUND
MP126	0780091P01	BRACKET RX FE UHF
MP127	0780214N01	FRAME PRESELECTOR LEAD
MP128	4280191N01	CLIP RECEIVER GROUNDING
MP129	4280013P01	RETAINER WIRE
MP130	4380025P01	SPACER WIRE
Q100 & Q125	4802000P02	NEC SILICON TR 2SC3357 RE
Q126	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
R100 & R101	0611077A26	RES CHIP 10 5 1/8W
R102	0611077A70	RES CHIP 680 5 1/8W
R103	0611077A62	RES CHIP 330 5 1/8W
R104	0611077A43	RES CHIP 51 5 1/8W
R126	0611077A74	RES CHIP 1000 5 1/8
R127	0611077A36	RES CHIP 27 5 1/8W
R128	0611077A52	RES CHIP 120 5 1/8W
R129	0611077A80	RES CHIP 1800 5 1/8
R130	0611077A94	RES CHIP 6800 5 1/8
R131	0611077A50	RES CHIP 100 5 1/8W
R132	0611077A43	RES CHIP 51 5 1/8W
W128	3080152M07	CBL COAX ASSEMBLY
	0980212N02	RECP COAX PCB MOUNT
	3080037R05	CABLE ASSEMBLY
	0180757T43	SHLD W/CONTACT
	8480241N02	HYBRID CKT BD UHF F/E

HRE6014B UHF RXFE Pre-Amp Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C100	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C101	2113740B19	CAP CHIP REEL CL1 +/-30 5.6
C102	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C103	2113740B48	CAP CHIP REEL CL1 +/-30 91
C126	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
C127 thru C129	2113741N45	CAP CHIP CL2 X7R 10% 10000
C130	2113740B34	CAP CHIP REEL CL1 +/-30 24
C131	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C132	2113740B34	CAP CHIP REEL CL1 +/-30 24

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C133 thru C135	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C136	2113740B46	CAP CHIP REEL CL1 +/-30 75
C137	2113741N45	CAP CHIP CL2 X7R 10% 10000
C138	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
CR100	4882958R78	DIODE 48R82958R01 A/P 5.6V
E125	2680015P02	SHLD RXFE UHF TIN PLATED
E126	2680002M02	SHLD INJ FLTR TIN PLATED
HY126	9180209N04	FLTR BANDPASS CERAMIC 497 MHZ
L125	2480140E10	INDUCTOR CHIP 100NH
L126 & L127	2480140E01	INDUCTOR CHIP 1.2 UH
L128	2480091G21	COIL AIRWOUND
L129	2480091G33	COIL AIRWOUND
MP126	0780091P01	BRACKET RX FE UHF
MP127	0780214N01	FRAME PRESELECTOR LEAD
MP128	4280191N01	CLIP RECEIVER GROUNDING
MP129	4280013P01	RETAINER WIRE
MP130	4380025P01	SPACER WIRE
Q100 & Q125	4802000P02	NEC SILICON TR 2SC3357 RE
Q126	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
R100	0611077A26	RES CHIP 10 5 1/8W
R101	0611077A26	RES CHIP 10 5 1/8W
R102	0611077A70	RES CHIP 680 5 1/8W
R103	0611077A62	RES CHIP 330 5 1/8W
R104	0611077A43	RES CHIP 51 5 1/8W
R126	0611077A74	RES CHIP 1000 5 1/8
R127	0611077A36	RES CHIP 27 5 1/8W
R128	0611077A52	RES CHIP 120 5 1/8W
R129	0611077A80	RES CHIP 1800 5 1/8
R130	0611077A94	RES CHIP 6800 5 1/8
R131	0611077A50	RES CHIP 100 5 1/8W
R132	0611077A43	RES CHIP 51 5 1/8W
W128	3080152M07	CBL COAX ASSEMBLY
W642	3080037R05	CABLE ASSEMBLY
	0980212N02	RECP COAX PCB MOUNT
	8480241N02	HYBRID CKT BD UHF F/E

HRE6001B and HRE6002C UHF RXFE Standard Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C125	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C126	2113740B09 2113740B11	CAP CHIP REEL CL1 +/-30 2.7 ² CAP CHIP REEL CL1 +/-30 2.7 ¹
C127	2113741N45	CAP CHIP CL2 X7R 10% 10000 ¹
C128 & C129	2113741N45	CAP CHIP CL2 X7R 10% 10000
C130	2113740B34	CAP CHIP REEL CL1 +/-30 24
C131	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C132	2113740B34	CAP CHIP REEL CL1 +/-30 24
C133 thru C135	2113740B13 2113740B17	CAP CHIP REEL CL1 +/-30 3.3 ² CAP CHIP REEL CL1 +/-30 4.7 ¹
C136	2113740B46	CAP CHIP REEL CL1 +/-30 75
C137	2113741N45	CAP CHIP CL2 X7R 10% 10000
C138	2113740B09 2113740B17	CAP CHIP REEL CL1 +/-30 2.2 ² CAP CHIP REEL CL1 +/-30 4.7 ¹
E125	2680015P02	SHLD RXFE UHF TIN PLATED
E126	2680002M02	SHLD INJ FLTR TIN PLATED
HY126	9180209N02	FLTR BANDPASS CERAMIC 455 MHZ ²
HY5126	9180209N01	FLTR BANDPASS CERAMIC 417 MHZ ¹
JU125	0611077A01	RES CHIP JUMPER ¹
JU5125	-----	PART NOT USED ¹
L125	2480140E10	INDUCTOR CHIP 100NH
L126 & L127	2480140E01	INDUCTOR CHIP 1.2 UH
L128	2480091G21	COIL AIRWOUND
L129	2480091G33	COIL AIRWOUND
MP127	0780214N01	FRAME PRESELECTOR LEAD
MP128	4280191N01	CLIP RECEIVER GROUNDING
MP129	4280013P01	RETAINER WIRE
MP130	4380025P01	SPACER WIRE
MP156	0780091P01	BRACKET RX FE UHF
Q125	4802000P02	NEC SILICON TR 2SC3357 RE
Q126	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R126	0611077A74	RES CHIP 1000 5 1/8
R127	0611077A36	RES CHIP 27 5 1/8W ¹
R128	0611077A52	RES CHIP 120 5 1/8W
R129	0611077A80	RES CHIP 1800 5 1/8
R130	0611077A90 0611077A94	RES CHIP 4700 5 1/8 ¹ RES CHIP 6800 5 1/8 ²
R131	0611077A46 0611077A50	RES CHIP 68 5 1/8W ¹ RES CHIP 100 5 1/8W ²
R132	0611077A43	RES CHIP 51 5 1/8W
W128	3080152M07	CBL COAX ASSEMBLY
W642	3080037R05	CABLE ASSEMBLY
	8480241N02	HYBRID CKT BD UHF F/E

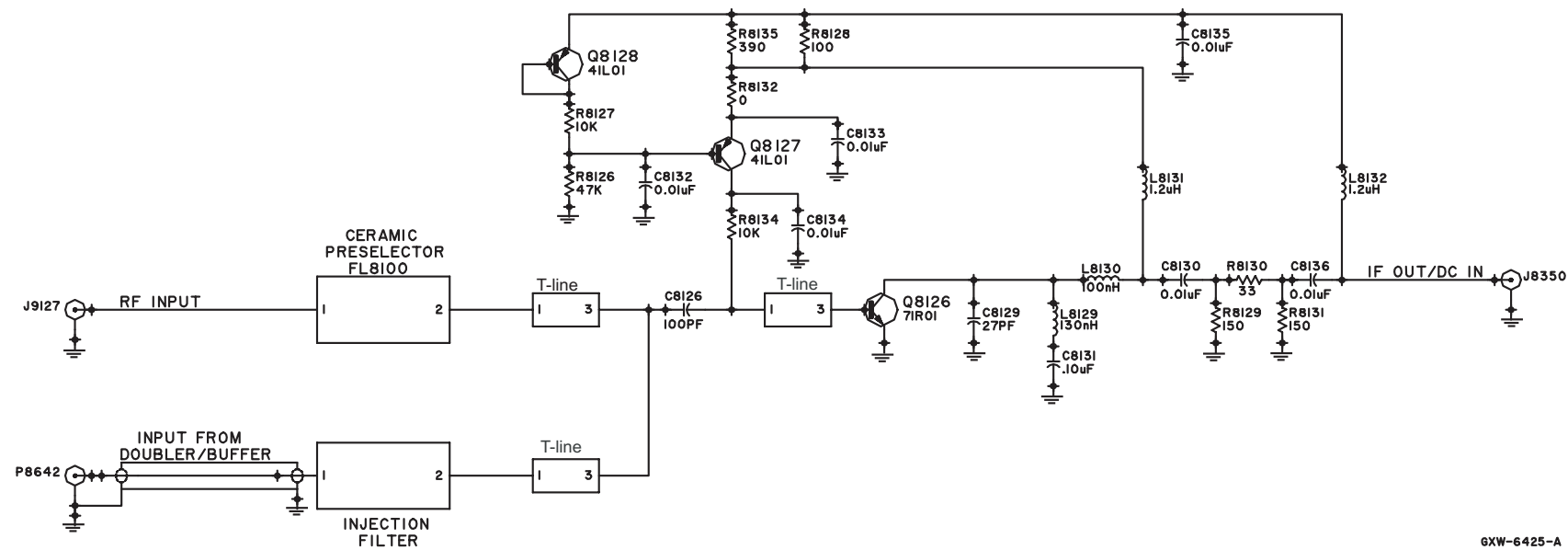
Notes:
1. Valid in HRE6001B only.
2. Valid in HRE6002C only.

HRE6003B and HRE6004B UHF RXFE Standard Parts List

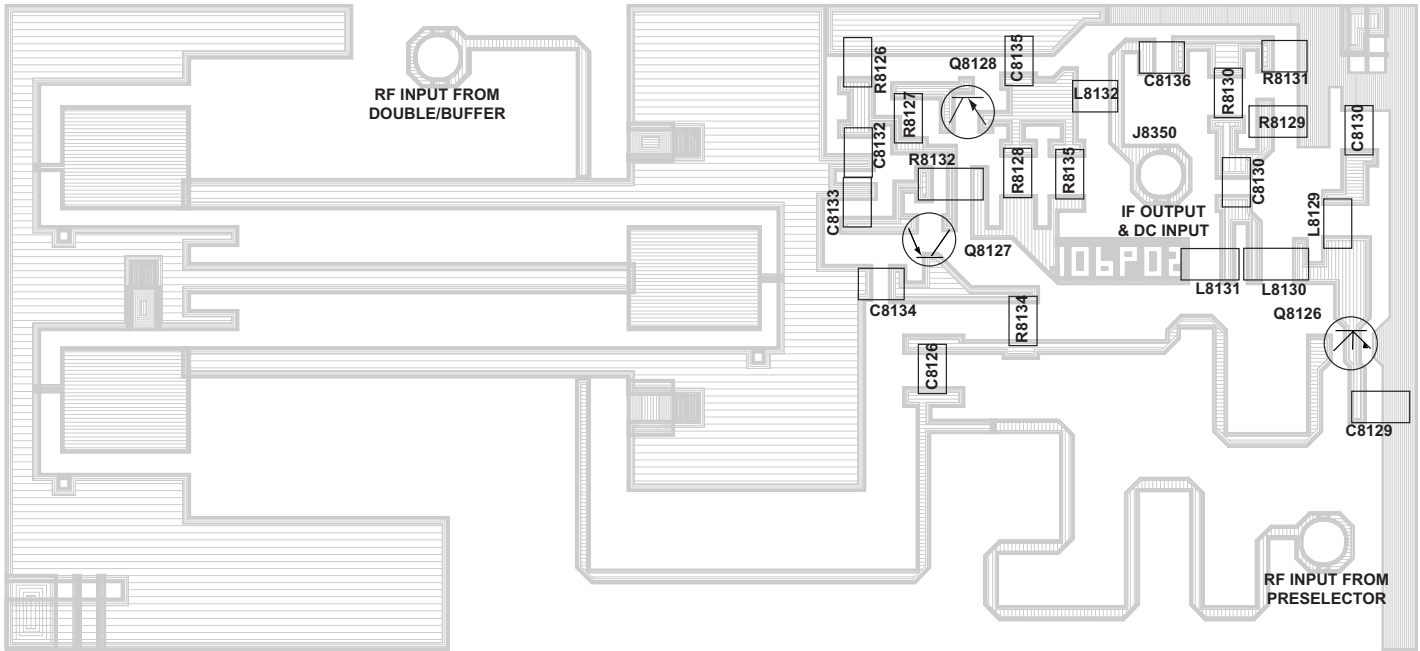
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C100, C101 & C103	-----	NOTPLACED
C125	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C126	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
C127 thru C129	2113741N45	CAP CHIP CL2 X7R 10% 10000
C130	2113740B34	CAP CHIP REEL CL1 +/-30 24
C131	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C132	2113740B34	CAP CHIP REEL CL1 +/-30 24
C133 thru C135	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C136	2113740B46	CAP CHIP REEL CL1 +/-30 75
C137	2113741N45	CAP CHIP CL2 X7R 10% 10000
C138	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
CR100	-----	NOTPLACED
E125	2680015P02	SHLD RXFE UHF TIN PLATED
E126	2680002M02	SHLD INJ FLTR TIN PLATED
HY126	9180209N03 9180209N04	FLTR BANDPASS CERAMIC 465 MHZ ¹ FLTR BANDPASS CERAMIC 497 MHZ ²
L125	2480140E10	INDUCTOR CHIP 100NH
L126	2480140E01	INDUCTOR CHIP 1.2 UH
L127	2480140E01	INDUCTOR CHIP 1.2 UH

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L128	2480091G21	COIL AIRWOUND
L129	2480091G33	COIL AIRWOUND
MP126	0780091P01	BRACKET RX FE UHF
MP127	0780214N01	FRAME PRESELECTOR LEAD
MP128	4280191N01	CLIP RECEIVER GROUNDING
MP129	4280013P01	RETAINER WIRE
MP130	4380025P01	SPACER WIRE
Q100	-----	NOTPLACED
Q125	4802000P02	NEC SILICON TR 2SC3357 RE
Q126	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
R100 thru R104	-----	NOTPLACED
R126	0611077A74	RES CHIP 1000 5 1/8
R127	0611077A36	RES CHIP 27 5 1/8W
R128	0611077A52	RES CHIP 120 5 1/8W
R129	0611077A80	RES CHIP 1800 5 1/8
R130	0611077A94	RES CHIP 6800 5 1/8
R131	0611077A50	RES CHIP 100 5 1/8W
R132	0611077A26 0611077A43	RES CHIP 10 5 1/8W ² RES CHIP 51 5 1/8W ¹
W128	3080152M07	CBL COAX ASSEMBLY
W642	3080037R05	CABLE ASSEMBLY
	0980212N02	RECP COAX PCB MOUNT
	0980110M01	RECP COAX PCB MOUNT
	8480241N02	HYBRID CKT BD UHF F/E

Notes:
1. Valid in HRE6003B only.
2. Valid in HRE6004B only.



HRF6004B/C 800 MHz Receiver Front-End Schematic Diagram

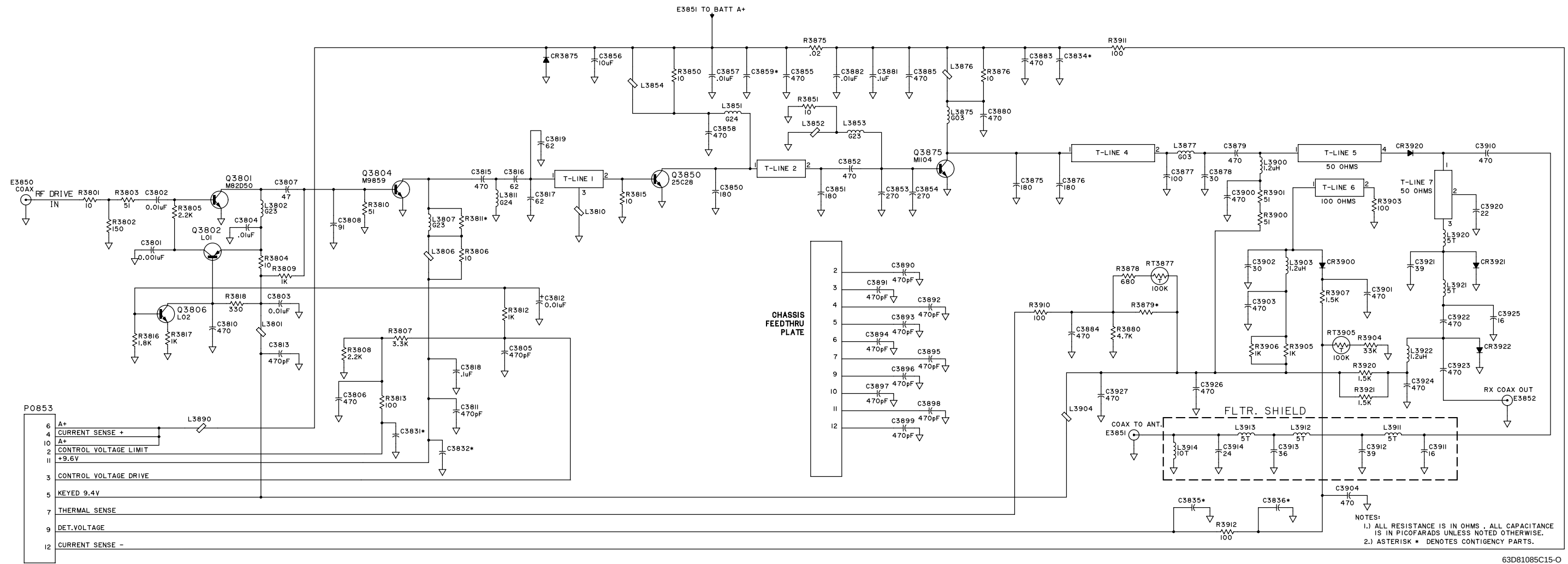


HRF6004B/C 800 MHz Receiver Front-End Component Location Diagram

HRF6004B/C 800 MHz RXFE Parts List

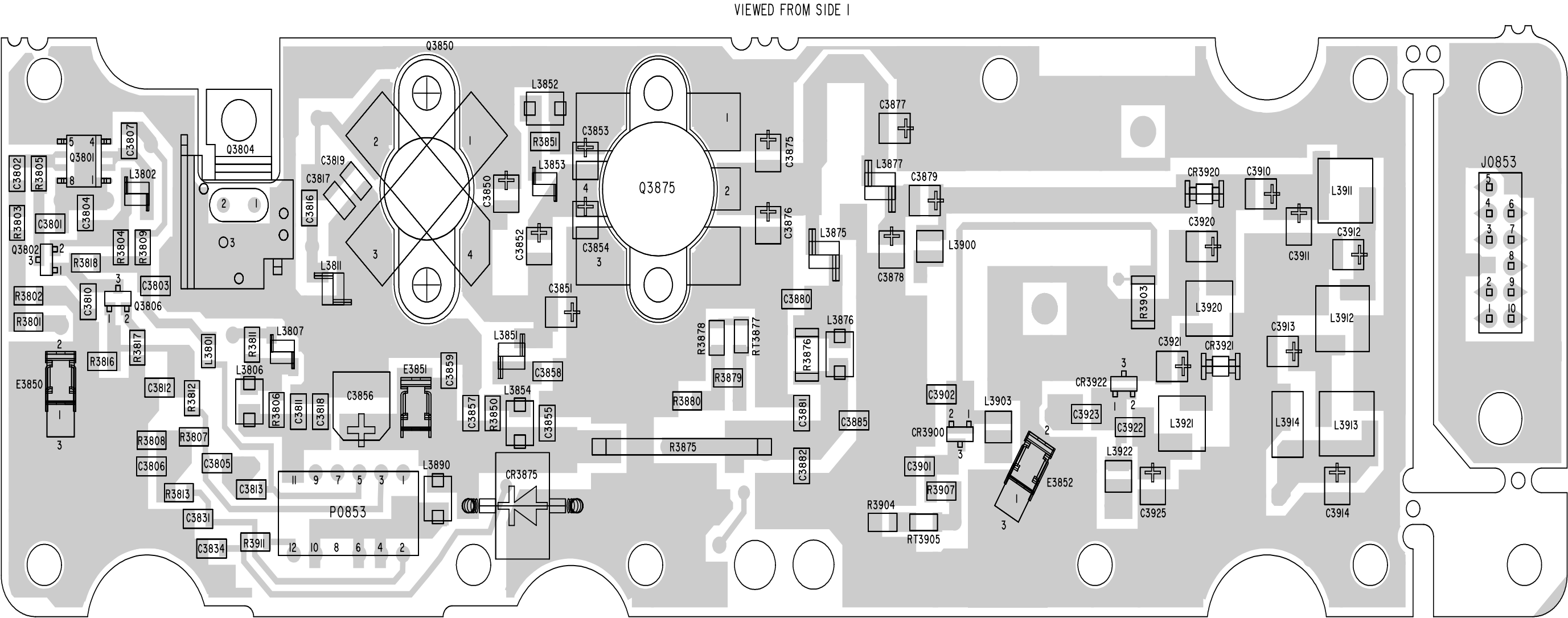
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C8126	2111078B42	CAP CHIP RF 100 5 NPO 100V
C8129	2111059D57	CAP CHIP 21D84873H57 A/I
C8130	2111059B11	CAP CHIP 21D84547A11 A/I
C8131	2113741N69	CAP CHIP CL2 X7R 10% 100000
C8132 thru C8136	2111059B11	CAP CHIP 21D84547A11 A/I
E8126	9180087M02	FILTER CER 6 P 938MHZ
E8127	2680002M02	SHLD INJ FLTR TIN PLATED
E8130	2680010N02	SHLD RCVR FNT END TIN PLATED
J9127	0980110M01	RECP COAX PCB MOUNT
L8129	2480140E06	INDUCTOR CHIP 130 NH
L8130	2480140E10	INDUCTOR CHIP 100NH
L8131	2480140E01	INDUCTOR CHIP 1.2 UH
L8132	2480140E01	INDUCTOR CHIP 1.2 UH
MP8126	0780259M02	FRAME TIN PLATED
MP8127	6480100P01	SBSTR RECEIVER FRONT END
MP8128	0780031P01	BRKT RCVR FRONT END
Q8126	4802000P02	NEC SILICON TR 2SC3357 RE
Q8127	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q8128	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
R8126	0611077B15	RES CHIP 47K 5 1/8W
R8127	0611077A98	RES CHIP 10K 5 1/8W
R8128	0611077A50	RES CHIP 100 5 1/8W
R8129	0611077A54	RES CHIP 150 5 1/8W
R8130	0611077A38	RES CHIP 33 5 1/8W
R8131	0611077A54	RES CHIP 150 5 1/8W
R8132	0611077A01	RES CHIP JUMPER
R8134	0611077A98	RES CHIP 10K 5 1/8W
R8135	0611077A64	RES CHIP 390 5 1/8W
W8127	3080037R05	CABLE ASSEMBLY
W8128	3080152M07	CBL COAX ASSEMBLY
	4285615C01	CLIP, GROUND
	8480106P02	BD THK FLM MIXER

7.7 Power Amplifier Section

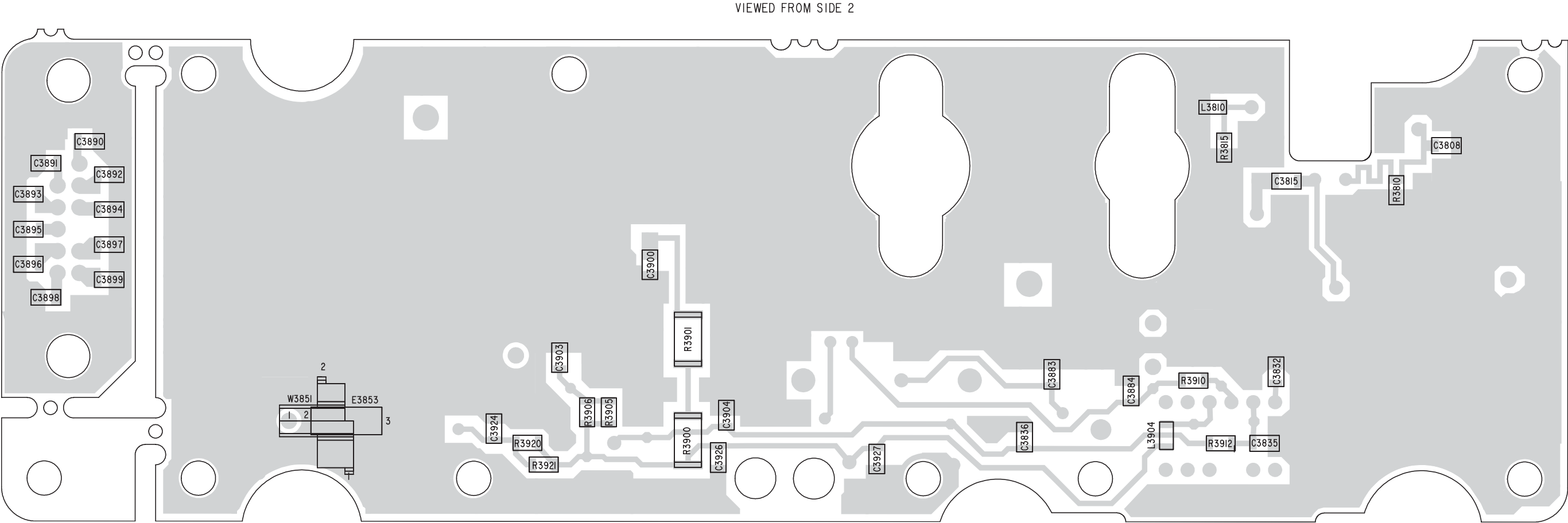


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HLD6022C VHF 50 Watt PA Schematic



HLD6022C VHF 50-Watt PA Component Location Diagram, Side 1



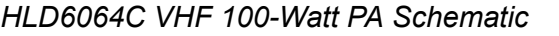
HLD6022C VHF 50-Watt PA Component Location Diagram, Side 2

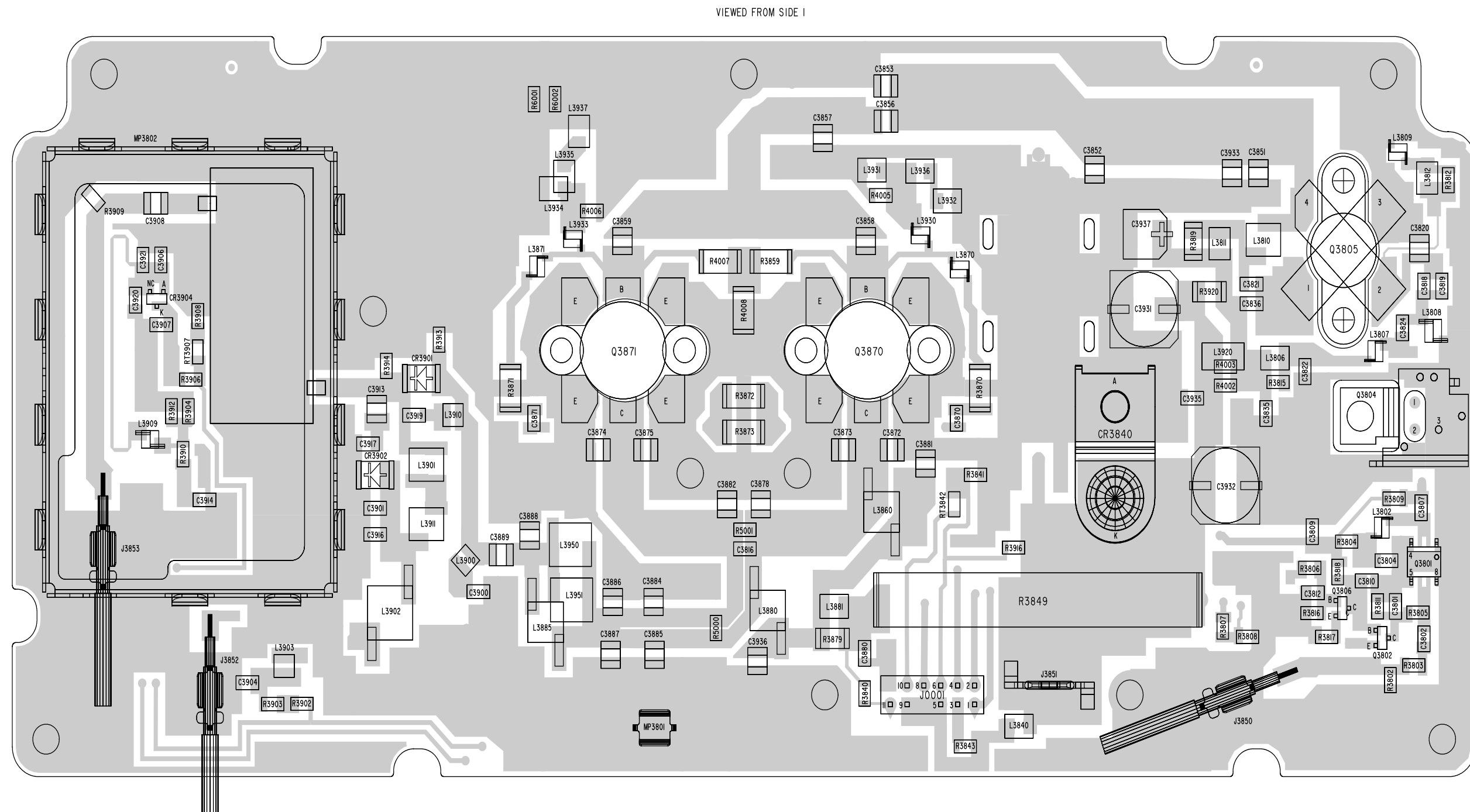
HLD6022C VHF 50-Watt PA Parts List

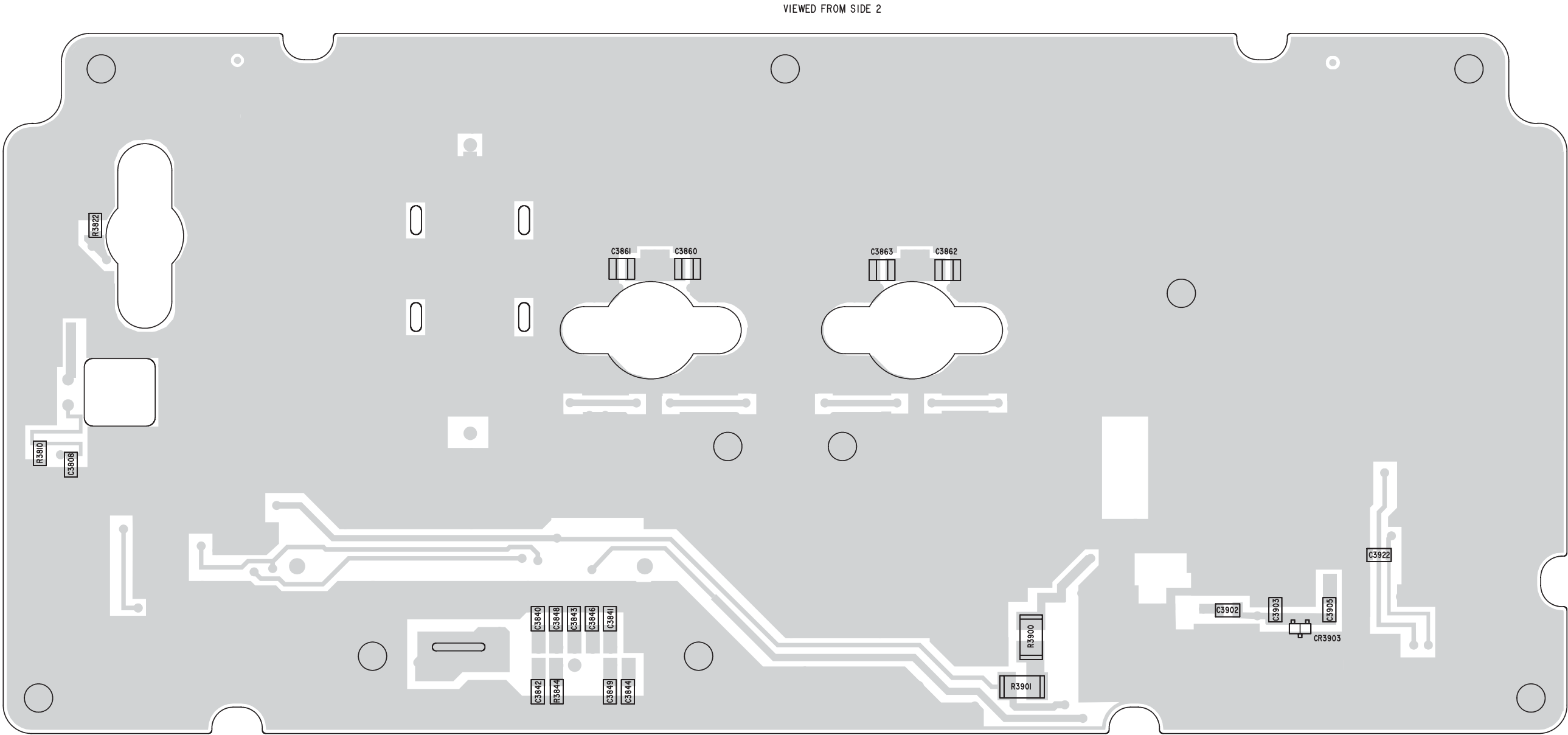
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3801	2113741N21	CAP CHIP CL2 X7R 10% 1000
C3802 thru C3805	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3806	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3807	2113740B41	CAP CHIP REEL CL1 +/-30 47
C3808	2113740B48	CAP CHIP REEL CL1 +/-30 91
C3810 & C3811	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3812	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3813 & C3815	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3816 & C3817	2113740B44	CAP CHIP REEL CL1 +/-30 62
C3818	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3819	2113740B44	CAP CHIP REEL CL1 +/-30 62
C3831 & C3832	-----	NOTPLACED
C3834	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C3835 & C3836	-----	NOTPLACED
C3850 thru C3852	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3855	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3856	2380090M24	CAP ALU 10 20 50V SURF MT
C3857	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3858	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3859	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3875 & C3876	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3877	2111078B42	CAP CHIP RF 100 5 NPO 100V
C3878	2111078B27	CAP CHIP RF 30 5 NPO 100V
C3879	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3880	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3881	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3882	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3883 thru C3885	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3890 thru C3901	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3902	2113740B36	CAP CHIP REEL CL1 +/-30 30
C3903 & C3904	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3910	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3911	2111078B19	CAP CHIP RF 16 5 NPO 100V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3912	2111078B19	CAP CHIP RF 16 5 NPO 100V
C3913	2111078B31	CAP CHIP RF 36 5 NPO 100V
C3914	2111078B23	CAP CHIP RF 24 5 NPO 100V
C3920 & C3921	2111078B22	CAP CHIP RF 22 5 NPO 100V
C3922 thru C3924	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3925	2111078B19	CAP CHIP RF 16 5 NPO 100V
C3926 & C3927	2113740B65	CAP CHIP REEL CL1 +/-30 470
CR3875	4880236E07	DIODE TRANSIENT SUP
CR3900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR3920 & CR3921	4880236E24	DIODE PIN
CR3922	4805119G18	DIODE SMBD1023 STEP RECOVERY
E3800	2680187N02	HEATSINK, TO39
E3801	2680188N02	SHLD HAR FILTER FENCE TIN PLAT
E3803	8480176N34	BD CK 50W PA PNL
E3850 thru E3852	2980014A03	CLIP COAX TERMINAL
L3801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3802	2480091G23	COIL AIRWOUND
L3806	2484657R01	INDUCTOR BEAD CHIP
L3807	2480091G23	COIL AIRWOUND
L3810	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3811 & L3851	2480091G24	COIL AIRWOUND
L3852	2484657R01	INDUCTOR BEAD CHIP
L3853	2480091G23	COIL AIRWOUND
L3854	2484657R01	INDUCTOR BEAD CHIP
L3875	2480090G03	COIL AIRWOUND
L3876	2484657R01	INDUCTOR BEAD CHIP
L3877	2480090G03	COIL AIRWOUND
L3890	2484657R01	INDUCTOR BEAD CHIP
L3900 & L3903	2480140E01	INDUCTOR CHIP 1.2 UH
L3904	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3911	2480090G15	COIL AIRWOUND
L3912	2480090G10	COIL AIRWOUND
L3913	2480090G15	COIL AIRWOUND
L3914	2480090G13	COIL AIRWOUND
L3920 & L3921	2480090G14	COIL AIRWOUND
L3922	2480140E01	INDUCTOR CHIP 1.2 UH
P0850	2880102M06	PLUG VERTICAL 12 POSITION

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
P0853	0980103M04	RECEPTICAL RIGHT ANGLE 12 POS
Q3801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q3802	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3804	4800869859	TSTR NPN 69859
Q3806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q3850	4880225C28	TSTR RF MRF2628 IN FLANGE PKG
Q3875	4884411L04	TSTR M1104
R3801	0611077A26	RES CHIP 10 5 1/8W
R3802	0611077A54	RES CHIP 150 5 1/8W
R3803	0611077A43	RES CHIP 51 5 1/8W
R3804	0611077A26	RES CHIP 10 5 1/8W
R3805	0611077A82	RES CHIP 2200 5 1/8
R3806	0611077A26	RES CHIP 10 5 1/8W
R3807	0611077A86	RES CHIP 3300 5 1/8
R3808	0611077A82	RES CHIP 2200 5 1/8
R3809	0611077A74	RES CHIP 1000 5 1/8
R3810	0611077A43	RES CHIP 51 5 1/8W
R3811	-----	NOTPLACED
R3812	0611077A74	RES CHIP 1000 5 1/8
R3813	0611077A50	RES CHIP 100 5 1/8W
R3815	0611077A26	RES CHIP 10 5 1/8W
R3816	0611077A80	RES CHIP 1800 5 1/8
R3817	0611077A74	RES CHIP 1000 5 1/8
R3818	0611077A62	RES CHIP 330 5 1/8W
R3850	0611077A26	RES CHIP 10 5 1/8W
R3851	0611077A26	RES CHIP 10 5 1/8W
R3875	1780228N02	RESISTOR SHUNT
R3876	0680195M01	RES CHIP 10 OHMS 5% .5W
R3878	0611077A70	RES CHIP 680 5 1/8W
R3879	-----	NOTPLACED
R3880	0611077A90	RES CHIP 4700 5 1/8
R3900 & R3901	0680194M18	RES 51 OHMS 5% 1W
R3903	0680195M25	RES CHIP 100 OHMS 5% .5W
R3904	0611077B11	RES CHIP 33K 5 1/8W
R3905 & R3906	0611077A74	RES CHIP 1000 5 1/8
R3907	0611077A78	RES CHIP 1500 5 1/8
R3910 thru R3912	0611077A50	RES CHIP 100 5 1/8W
R3920 & R3921	0611077A72	RES CHIP 820 5 1/8W
RT3877 & RT3905	0680149M02	THERMISTOR CHIP 100K OHM







HLD6064C VHF 100-Watt PA Component Location Diagram, Side 2

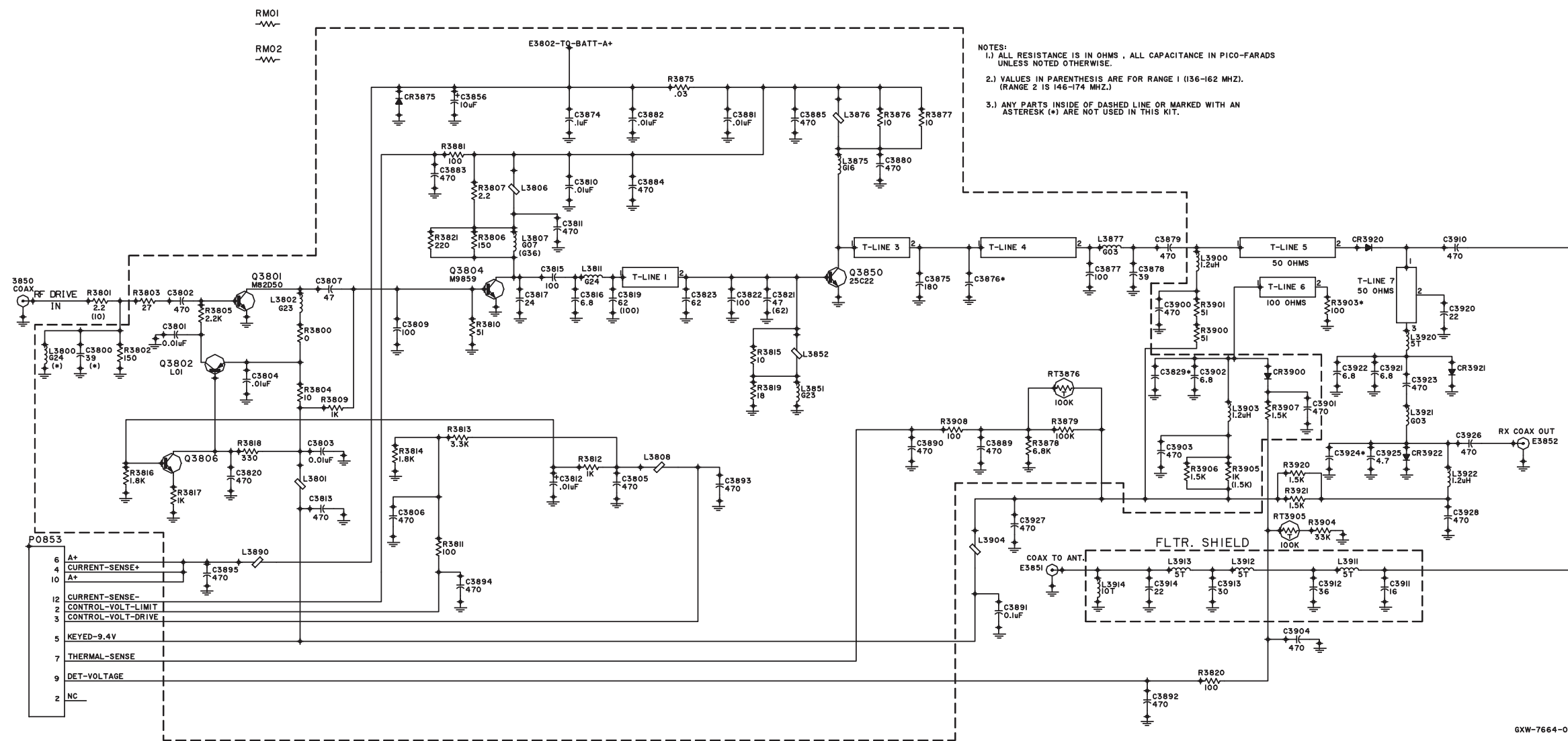
HLD6064C VHF R1 100-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3801 & C3802	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3807	2113740B36	CAP CHIP REEL CL1 +/-30 30
C3808	2113740B48	CAP CHIP REEL CL1 +/-30 91
C3809	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3810	2113740B76	CAP CHIP REEL CL1 +/-30 1500
C3812	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3816	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3818	2113740B39	CAP CHIP REEL CL1 +/-30 39
C3819	2113740B35	CAP CHIP REEL CL1 +/-30 27
C3820	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3821 & C3824	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3835	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3836	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3840 thru C3844	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3846 thru C3849	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3851	2111078B44	CAP CHIP RF 120 5 NPO 100V
C3852	2111078B40	CAP CHIP RF 82 5 NPO 100V
C3853	2111078B44	CAP CHIP RF 120 5 NPO 100V
C3856	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3857	2111078B47	CAP CHIP RF 150 5 NPO 100V
C3858 thru C3860	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3861 & C3862	2111078B51	CAP CHIP RF 220 5 NPO 100V
C3863	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3870 & C3871	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3872 thru C3875	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3878	2111078B40	CAP CHIP RF 82 5 NPO 100V
C3880	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3881	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3882	2111078B40	CAP CHIP RF 82 5 NPO 100V
C3886 & C3887	2111078B40	CAP CHIP RF 82 5 NPO 100V
C3888	2111078B27	CAP CHIP RF 30 5 NPO 100V
C3889	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3900	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3901	2113740B30	CAP CHIP REEL CL1 +/-30 16
C3902	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3903	2113740B09	CAP CHIP REEL CL1 +/-30 2.2

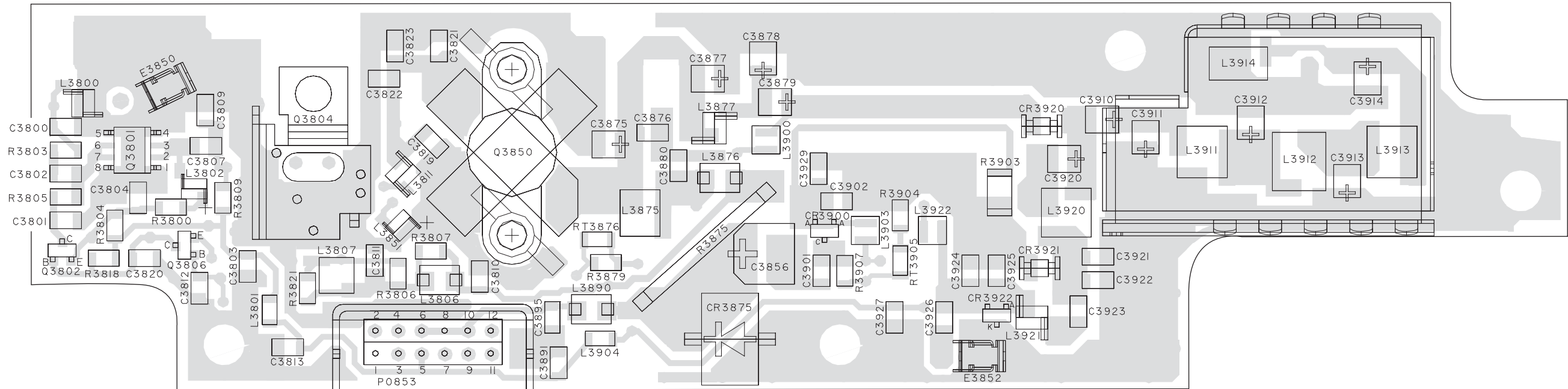
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3904 & C3905	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3907	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3908	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3913	2111078B19	CAP CHIP RF 16 5 NPO 100V
C3914	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3917	2113740B36	CAP CHIP REEL CL1 +/-30 30
C3919	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3920	2113740B36	CAP CHIP REEL CL1 +/-30 30
C3931 & C3932	2380090M32	CAP ALU 220 20 35V
C3933	2111078B44	CAP CHIP RF 120 5 NPO 100V
C3935	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3936	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3937	2380090M24	CAP ALU 10 20 50V SURF MT
CR3840	4880222R01	DIODE REVERSE POLARITY SPECTRA
CR3901 & CR3902	4880121R01	PWR PIN DIODE SMD TAPE & REEL
CR3903	4880142L01	DIODE PIN SOT 23 MMBV 3401
CR3904	4813825A05	DIODE 30V HOT CARRIER MMBD301L
J0001	2880102M11	PLUG VERTICAL 12 POS
J3850	4280088P01	CLIP COAX
J3851	2980119R01	TERMINAL POWER
J3852 & J3853	4280088P01	CLIP COAX
L3802	2480091G23	COIL AIRWOUND
L3806	2484657R01	INDUCTOR BEAD CHIP
L3807	2480091G23	COIL AIRWOUND
L3808	2480091G24	COIL AIRWOUND
L3809	2480091G23	COIL AIRWOUND
L3810	2480090G16	COIL AIRWOUND RF 000.000
L3811 & L3812	2484657R01	INDUCTOR BEAD CHIP
L3840	2484657R01	INDUCTOR BEAD CHIP
L3860	2480090G19	COIL AIRWOUND
L3870 & L3871	2480091G23	COIL AIRWOUND
L3881	2484657R01	INDUCTOR BEAD CHIP
L3900	2480140E01	INDUCTOR CHIP 1.2 UH
L3901	2480090G16	COIL AIRWOUND RF 000.000
L3902	2480090G20	COIL AIRWOUND
L3903	2480140E01	INDUCTOR CHIP 1.2 UH
L3909	2480091G21	COIL AIRWOUND
L3910	2480140E11	INDUCTOR CHIP 360 NH
L3911	2480090G16	COIL AIRWOUND RF 000.000
L3920	2480090G13	COIL AIRWOUND
L3930	2480091G23	COIL AIRWOUND
L3931	2484657R01	INDUCTOR BEAD CHIP
L3933	2480091G23	COIL AIRWOUND

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L3934	2484657R01	INDUCTOR BEAD CHIP
L3950 & L3951	2480090G10	COIL AIRWOUND
MP3801	4280202R02	CLIP COAX TIN PLATED
MP3802	2680139P02	SHLD HAR FLTR TIN PLATED
MP3803	2680201R02	HEATSINK DIODE TIN PLATED
MP3804	2680187N02	HEATSINK, TO39
Q3801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q3802	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3804	4800869859	TSTR NPN 69859
Q3805	4880225C22	TSTR NPN 174MHZ 3/30W MRF1946
Q3806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q3870 & Q3871	4884411L04	TSTR M1104
R3802 & R3803	0611077A46	RES CHIP 68 5 1/8W
R3804	0611077A26	RES CHIP 10 5 1/8W
R3805	0611077A82	RES CHIP 2200 5 1/8
R3806	0611077A74	RES CHIP 1000 5 1/8
R3807	0611077A86	RES CHIP 3300 5 1/8
R3808	0611077A80	RES CHIP 1800 5 1/8
R3809	0611077A74	RES CHIP 1000 5 1/8
R3810	0611077A43	RES CHIP 51 5 1/8W
R3811	0611077A74	RES CHIP 1000 5 1/8
R3816	0611077A80	RES CHIP 1800 5 1/8
R3817	0611077A74	RES CHIP 1000 5 1/8
R3818	0611077A62	RES CHIP 330 5 1/8W
R3819	0680195M01	RES CHIP 10 OHMS 5% .5W
R3822	0611077A26	RES CHIP 10 5 1/8W
R3840	0611077A50	RES CHIP 100 5 1/8W
R3841	0611077A80	RES CHIP 1800 5 1/8
R3843	0611077A50	RES CHIP 100 5 1/8W
R3849	1780165C02	RES SHUNT
R3859	0680194M01	RES 10 OHMS 5% 1W
R3870 & R3871	0680194M18	RES 51 OHMS 5% 1W
R3872 & R3873	0680194M13	RES 33 OHMS 5% 1W
R3879	0680195M01	RES CHIP 10 OHMS 5% .5W
R3900 & R3901	0680194M18	RES 51 OHMS 5% 1W
R3902 & R3903	0611077A54	RES CHIP 150 5 1/8W
R3904	0611077A52	RES CHIP 120 5 1/8W
R3906	0611077A78	RES CHIP 1500 5 1/8
R3908	0611077B11	RES CHIP 33K 5 1/8W
R3909	0611077B15	RES CHIP 47K 5 1/8W
R3910	0611077A66	RES CHIP 470 5 1/8W

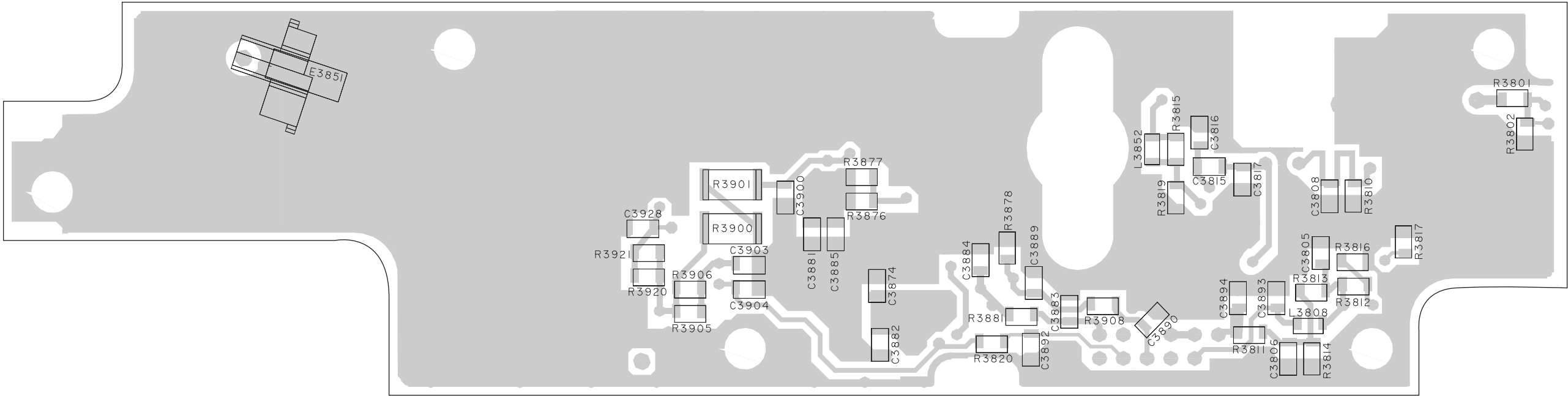
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R3913 & R3914	0611077B47	RES CHIP 1 MEG 5 1/8W
R3916	0611077B07	RES CHIP 22K 5 1/8W
R3920	0680195M01	RES CHIP 10 OHMS 5% .5W
R4005 & R4006	0611077A32	RES CHIP 18 5 1/8W
R4007	0680194M01	RES 10 OHMS 5% 1W
R4008	0680194M18	RES 51 OHMS 5% 1W
R5001	0611077A26	RES CHIP 10 5 1/8W
R6001	0611077A01	RES CHIP JUMPER
RT3842 & RT3907	0680149M02	THERMISTOR CHIP 100K OHM
	8480112P05	BD CKT VHF
	0180756T06	HYBRID BD HAR FLTR VHF SPECTRA



HLD6032B/HLD6066B VHF 25-Watt PA Schematic



HLD6032B/HLD6066B VHF 25-Watt PA Component Location Diagram, Side 1



HLD6032B/HLD6066B VHF 25-Watt PA Component Location Diagram, Side 2

HLD6032B VHF R2 25-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3800	2113740B39	CAP CHIP REEL CL1 +/-30 39
C3801	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3802	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3803	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3805 & C3806	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3807	2113740B39	CAP CHIP REEL CL1 +/-30 39
C3809	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3810	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3811	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3812	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3813	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3815	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3816	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C3817	2113740B34	CAP CHIP REEL CL1 +/-30 24
C3819	2113740B44	CAP CHIP REEL CL1 +/-30 62
C3820	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3821	2113740B41	CAP CHIP REEL CL1 +/-30 47
C3822	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3823	2113740B44	CAP CHIP REEL CL1 +/-30 62
C3856	2380090M24	CAP ALU 10 20 50V SURF MT
C3874	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3875	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3877	2111078B42	CAP CHIP RF 100 5 NPO 100V
C3879	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3880	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3881	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3882	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3883 thru C3885	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3889 & C3890	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3891	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3892 thru C3895	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3900 & C3901	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3902	2113740B23	CAP CHIP REEL CL1 +/-30 8.2
C3903	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3904	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3910	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3911	2111078B19	CAP CHIP RF 16 5 NPO 100V
C3912	2111078B31	CAP CHIP RF 36 5 NPO 100V
C3913	2111078B27	CAP CHIP RF 30 5 NPO 100V
C3914 & C3920	2111078B22	CAP CHIP RF 22 5 NPO 100V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3921 & C3922	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C3923	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3925	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C3926 thru C3928	2113740B65	CAP CHIP REEL CL1 +/-30 470
CR3875	4880236E07	DIODE TRANSIENT SUP
CR3900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR3922	4805119G18	DIODE SMBD1023 STEP RECOVERY
E3800	2680187N02	HEATSINK, TO39
E3803	8480259N33	CKT BD VHF 25W PANEL
E3804	8480259N03	CKT BD VHF 25W PA
E3850	2980014A03	CLIP COAX TERMINAL
E3851	3080152M10	CBL COAX ASSEMBLY
E3852	2980014A03	CLIP COAX TERMINAL
E3854	3080152M02	CABLE COAX ASSEMBLY
L3800	2480091G24	COIL AIRWOUND
L3801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3802	2480091G23	COIL AIRWOUND
L3807	2480091G07	COIL AIRWOUND
L3808	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3811	2480091G24	COIL AIRWOUND
L3851	2480091G23	COIL AIRWOUND
L3852	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3875	2480090G16	COIL AIRWOUND RF 000.000
L3877	2480090G03	COIL AIRWOUND
L3900 & L3903	2480140E01	INDUCTOR CHIP 1.2 UH
L3904	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3911	2480090G15	COIL AIRWOUND
L3912	2480090G10	COIL AIRWOUND
L3913	2480090G15	COIL AIRWOUND
L3914	2480090G13	COIL AIRWOUND
L3920	2480090G14	COIL AIRWOUND
L3921	2480090G03	COIL AIRWOUND
L3922	2480140E01	INDUCTOR CHIP 1.2 UH
P0853	6480262N01	PLATE LP FEEDTHRU ASSEMBLY
Q3801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q3802	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3804	4800869859	TSTR NPN 69859
Q3806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE

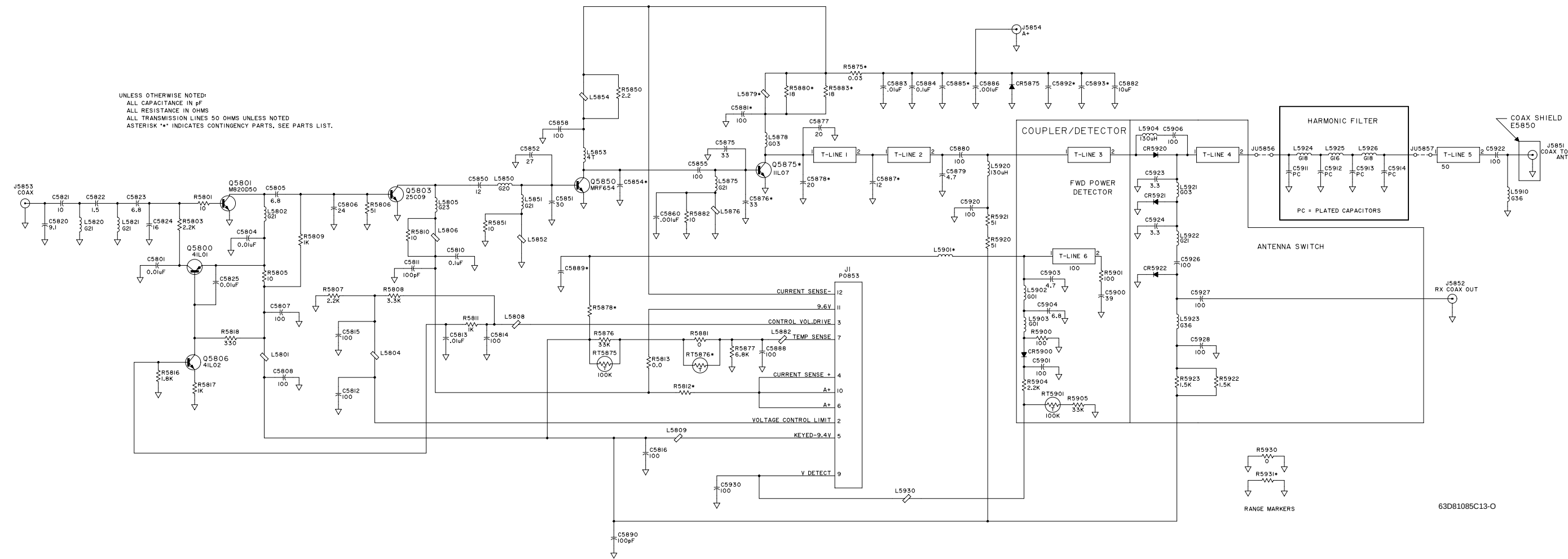
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
Q3850	4880225C22	TSTR NPN 174MHZ 3/30W MRF1946
R3800	0611077A01	RES CHIP JUMPER
R3801	0611077A26	RES CHIP 10 5 1/8W
R3802	0611077A54	RES CHIP 150 5 1/8W
R3803	0611077A36	RES CHIP 27 5 1/8W
R3804	0611077A26	RES CHIP 10 5 1/8W
R3805	0611077A82	RES CHIP 2200 5 1/8
R3806	0611077A54	RES CHIP 150 5 1/8W
R3807	0611077A10	RES CHIP 2.2 5 1/8W
R3809	0611077A74	RES CHIP 1000 5 1/8
R3810	0611077A43	RES CHIP 51 5 1/8W
R3811	0611077A50	RES CHIP 100 5 1/8W
R3812	0611077A74	RES CHIP 1000 5 1/8
R3813	0611077A86	RES CHIP 3300 5 1/8
R3814	0611077A82	RES CHIP 2200 5 1/8
R3815	0611077A26	RES CHIP 10 5 1/8W
R3816	0611077A80	RES CHIP 1800 5 1/8
R3817	0611077A74	RES CHIP 1000 5 1/8
R3818	0611077A62	RES CHIP 330 5 1/8W
R3819	0611077A32	RES CHIP 18 5 1/8W
R3820	0611077A50	RES CHIP 100 5 1/8W
R3821	0611077A58	RES CHIP 220 5 1/8W
R3875	1780228N01	RESISTOR SHUNT
R3876 & R3877	0611077A26	RES CHIP 10 5 1/8W
R3878	0611077A94	RES CHIP 6800 5 1/8
R3879	0611077B23	RES CHIP 100K 5 1/8W
R3881	0611077A50	RES CHIP 100 5 1/8W
R3900 & R3901	0680194M18	RES 51 OHMS 5% 1W
R3903	0680195M25	RES CHIP 100 OHMS 5% .5W
R3904	0611077B11	RES CHIP 33K 5 1/8W
R3905	0611077A74	RES CHIP 1000 5 1/8
R3906 & R3907	0611077A78	RES CHIP 1500 5 1/8
R3908	0611077A50	RES CHIP 100 5 1/8W
R3920 & R3921	0611077A72	RES CHIP 820 5 1/8W
RM0002	0611077A01	RES CHIP JUMPER
RT3876 & RT3905	0680149M02	THERMISTOR CHIP 100K OHM
	2484657R01	INDUCTOR BEAD CHIP
	4880236E24	DIODE PIN
	2111078B32	CAP CHIP RF 39 5 NPO 100V

HLD6066B VHF R1 25-Watt PA Parts List

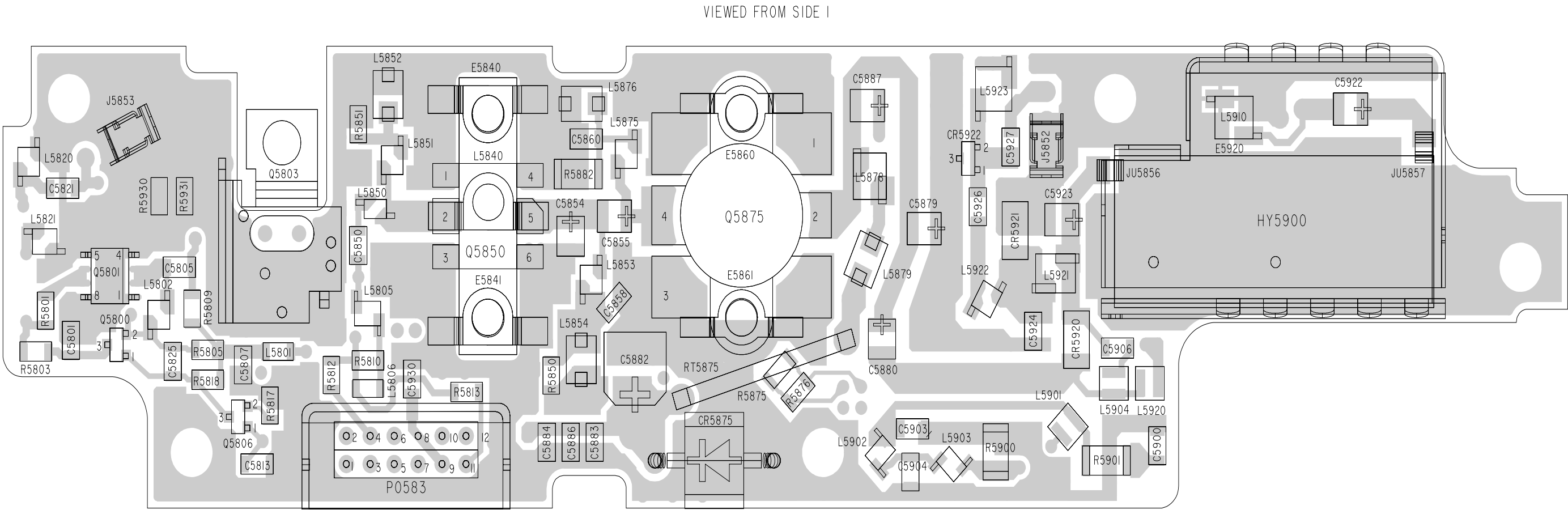
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3801	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3802	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3803	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3805 & C3806	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3807	2113740B39	CAP CHIP REEL CL1 +/-30 39
C3809	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3810	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3811	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3812	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3813	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3815	2113740B49	CAP CHIP REEL CL1 +/-30 100
C3816	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C3817	2113740B34	CAP CHIP REEL CL1 +/-30 24
C3819	2113740B47	CAP CHIP REEL CL1 +/-30 82
C3820	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3821 & C3822	2113740B44	CAP CHIP REEL CL1 +/-30 62
C3823	2113740B47	CAP CHIP REEL CL1 +/-30 82
C3856	2380090M24	CAP ALU 10 20 50V SURF MT
C3874	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3875	2111078B49	CAP CHIP RF 180 5 NPO 100V
C3877	2111078B42	CAP CHIP RF 100 5 NPO 100V
C3878	2111078B32	CAP CHIP RF 39 5 NPO 100V
C3879	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3880	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3881 & C3882	2113741N45	CAP CHIP CL2 X7R 10% 10000
C3883 thru C3885 & C3889, C3890	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3891	2113741N69	CAP CHIP CL2 X7R 10% 100000
C3892 thru C3895	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3900 & C3901	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3902	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C3903 & C3904	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3910	2111078B59	CAP CHIP RF 470 5 NPO 100V
C3911	2111078B19	CAP CHIP RF 16 5 NPO 100V
C3912	2111078B31	CAP CHIP RF 36 5 NPO 100V
C3913	2111078B27	CAP CHIP RF 30 5 NPO 100V
C3914 & C3920	2111078B22	CAP CHIP RF 22 5 NPO 100V
C3921 & C3922	2113740B21	CAP CHIP REEL CL1 +/-30 6.8

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C3923	2113740B65	CAP CHIP REEL CL1 +/-30 470
C3925	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C3926 thru C3928	2113740B65	CAP CHIP REEL CL1 +/-30 470
CR3875	4880236E07	DIODE TRANSIENT SUP
CR3900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR3920 & CR3921	4880236E24	DIODE PIN
CR3922	4805119G18	DIODE SMBD1023 STEP RECOVERY
E3800	2680187N02	HEATSINK, TO39
E3803	8480259N33	CKT BD VHF 25W PANEL
E3804	8480259N03	CKT BD VHF 25W PA
E3850 & E3852	2980014A03	CLIP COAX TERMINAL
L3801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3802	2480091G23	COIL AIRWOUND
L3806	2484657R01	INDUCTOR BEAD CHIP
L3807	2480091G36	COIL AIRWOUND
L3808	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3811	2480091G24	COIL AIRWOUND
L3851	2480091G23	COIL AIRWOUND
L3852	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3875	2480090G16	COIL AIRWOUND RF 000.000
L3876	2484657R01	INDUCTOR BEAD CHIP
L3877	2480090G03	COIL AIRWOUND
L3890	2484657R01	INDUCTOR BEAD CHIP
L3900 & L3903	2480140E01	INDUCTOR CHIP 1.2 UH
L3904	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L3911	2480090G15	COIL AIRWOUND
L3912	2480090G10	COIL AIRWOUND
L3913	2480090G15	COIL AIRWOUND
L3914	2480090G13	COIL AIRWOUND
L3920	2480090G14	COIL AIRWOUND
L3921	2480090G04	COIL AIRWOUND
L3922	2480140E01	INDUCTOR CHIP 1.2 UH
P0853	6480262N01	PLATE LP FEEDTHRU ASSEMBLY
Q3801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q3802	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q3804	4800869859	TSTR NPN 69859
Q3806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
Q3850	4880225C22	TSTR NPN 174MHZ3/30W MRF1946
R3800	0611077A01	RES CHIP JUMPER
R3801	0611077A26	RES CHIP 10 5 1/8W
R3802	0611077A54	RES CHIP 150 5 1/8W
R3803	0611077A40	RES CHIP 39 5 1/8W
R3804	0611077A26	RES CHIP 10 5 1/8W
R3805	0611077A82	RES CHIP 2200 5 1/8
R3806	0611077A54	RES CHIP 150 5 1/8W
R3807	0611077A10	RES CHIP 2.2 5 1/8W
R3809	0611077A74	RES CHIP 1000 5 1/8
R3810	0611077A43	RES CHIP 51 5 1/8W
R3811	0611077A50	RES CHIP 100 5 1/8W
R3812	0611077A74	RES CHIP 1000 5 1/8
R3813	0611077A86	RES CHIP 3300 5 1/8
R3814	0611077A80	RES CHIP 1800 5 1/8
R3815	0611077A26	RES CHIP 10 5 1/8W
R3816	0611077A80	RES CHIP 1800 5 1/8
R3817	0611077A74	RES CHIP 1000 5 1/8
R3818	0611077A62	RES CHIP 330 5 1/8W
R3819	0611077A32	RES CHIP 18 5 1/8W
R3820	0611077A50	RES CHIP 100 5 1/8W
R3821	0611077A58	RES CHIP 220 5 1/8W
R3875	1780228N01	RESISTOR SHUNT
R3876 & R3877	0611077A26	RES CHIP 10 5 1/8W
R3878	0611077A94	RES CHIP 6800 5 1/8
R3879	0611077B23	RES CHIP 100K 5 1/8W
R3881	0611077A50	RES CHIP 100 5 1/8W
R3900 & R3901	0680194M18	RES 51 OHMS 5% 1W
R3903	0680195M25	RES CHIP 100 OHMS 5% .5W
R3904	0611077B11	RES CHIP 33K 5 1/8W
R3905 thru R3907	0611077A78	RES CHIP 1500 5 1/8
R3908	0611077A50	RES CHIP 100 5 1/8W
R3920 & R3921	0611077A66	RES CHIP 470 5 1/8W
RM01	0611077A01	RES CHIP JUMPER
RT3876 & RT3905	0680149M02	THERMISTOR CHIP 100K OHM

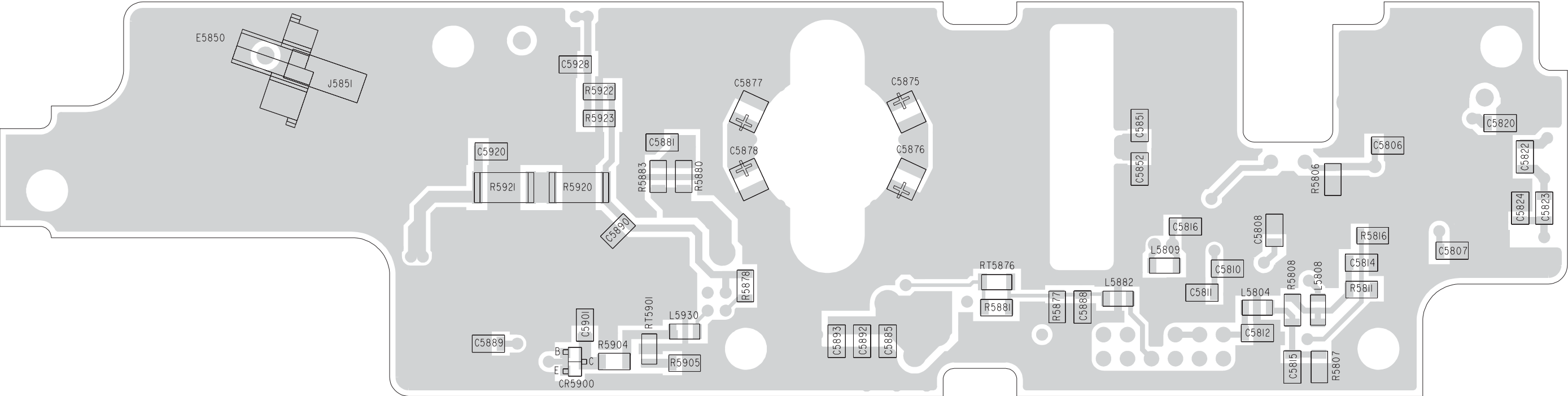


HLE6062B and HLE6071B UHF 25-Watt PA Schematic



HLE6062B UHF 25-Watt PA Component Location Diagram, Side 1

VIED FROM SIDE 2



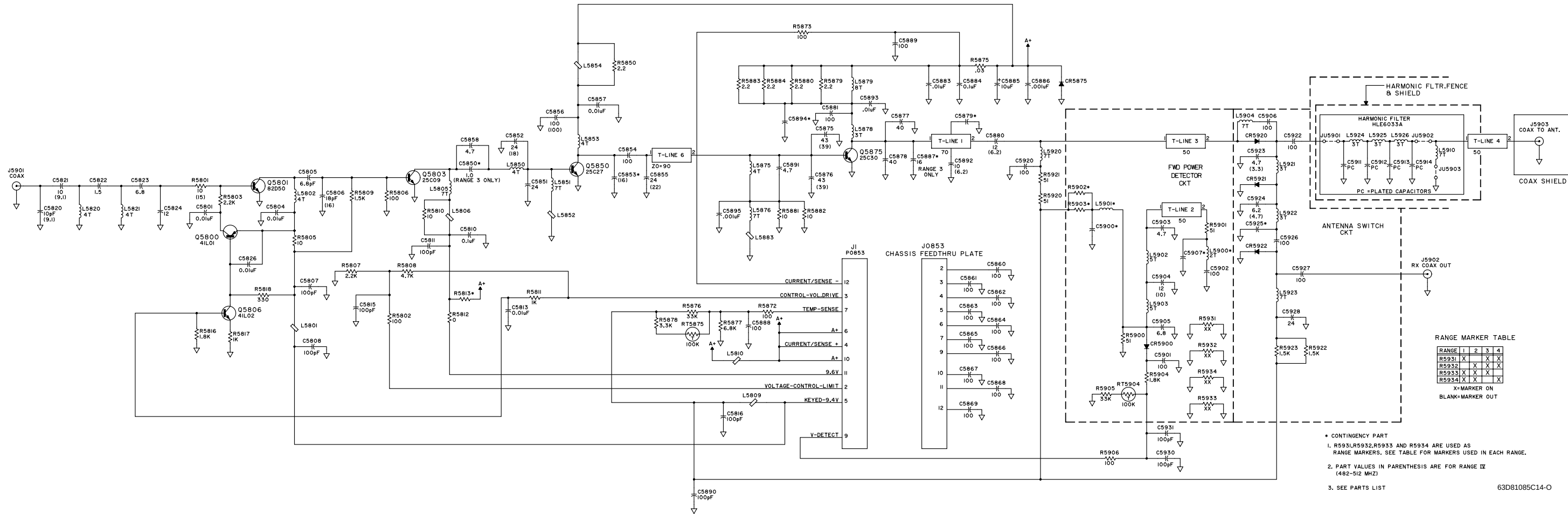
HLE6062B UHF 25-Watt PA Component Location Diagram, Side 2

HLE6062B VHF R2 25-Watt PA Parts List

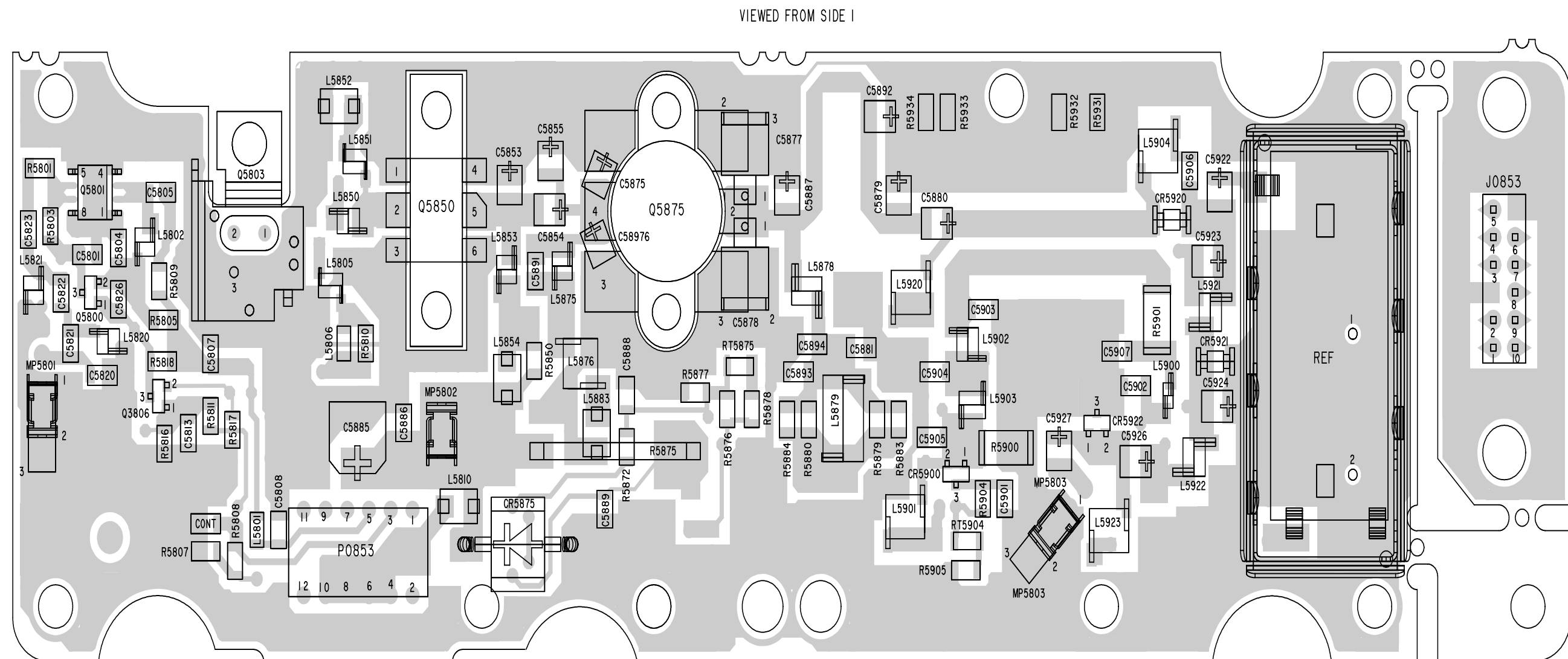
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5801 & C5804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5805	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5806	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5807 & C5808	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5810	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5811 & C5812	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5813	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5814 thru C5816	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5820	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5821	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5822	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C5823	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5824	2113740B30	CAP CHIP REEL CL1 +/-30 16
C5825	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5850	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5851	2113740B36	CAP CHIP REEL CL1 +/-30 30
C5852	2113740B35	CAP CHIP REEL CL1 +/-30 27
C5854	2111078B05	CAP CHIP RF 4.7 .25 NPO 100V
C5855	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5858	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5860	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5875 & C5876	2111078B29	CAP CHIP RF 33 5 NPO 100V
C5877 & C5878	2111078B21	CAP CHIP RF 20 5 NPO 100V
C5879	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V
C5880	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5881	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5882	2380090M24	CAP ALU 10 20 50V SURF MT
C5883	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5884	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5885	-----	NOTPLACED
C5886	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5887	2111078B15	CAP CHIP RF 12 5 NPO 100V
C5888	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5889	-----	NOTPLACED
C5890	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5892 & C5893	-----	NOTPLACED
C5900	2113740B39	CAP CHIP REEL CL1 +/-30 39
C5901	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5903 & C5904	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5906 & C5920	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5922	2111078B42	CAP CHIP RF 100 5 NPO 100V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5923	2111078B01	CAP CHIP RF 3.3 .25 NPO 100V
C5924	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C5926 thru C5928 & C5930	2113740B49	CAP CHIP REEL CL1 +/-30 100
CR5875	4880236E07	DIODE TRANSIENT SUP
CR5900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR5920 & CR5921	4880236E24	DIODE PIN
CR5922	4805119G18	DIODE SMBD1023 STEP RECOVERY
E5803	2680187N02	HEATSINK, TO39
E5920	2680084N02	SHLD HAR FLTR TIN PLATED
J5852 & J5853	2980014A03	CLIP COAX TERMINAL
L5801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5802	2480091G21	COIL AIRWOUND
L5804	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5805	2480091G23	COIL AIRWOUND
L5806	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5808 & L5809	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5820 & L5821	2480091G21	COIL AIRWOUND
L5850	2480091G20	COIL AIRWOUND
L5851	2480091G21	COIL AIRWOUND
L5852	2484657R01	INDUCTOR BEAD CHIP
L5853	2480091G21	COIL AIRWOUND
L5854	2484657R01	INDUCTOR BEAD CHIP
L5875	2480091G21	COIL AIRWOUND
L5876	2484657R01	INDUCTOR BEAD CHIP
L5878	2480090G03	COIL AIRWOUND
L5879	2484657R01	INDUCTOR BEAD CHIP
L5882	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5901	-----	NOTPLACED
L5902 & L5903	2480091G01	COIL AIRWOUND
L5904	2480140E06	INDUCTOR CHIP 130 NH
L5910	2480091G36	COIL AIRWOUND
L5920	2480140E06	INDUCTOR CHIP 130 NH
L5921	2480090G03	COIL AIRWOUND
L5922	2480091G21	COIL AIRWOUND
L5923	2480091G36	COIL AIRWOUND
L5930	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
P0853	6480262N01	PLATE LP FEEDTHRU ASSEMBLY

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
Q5800	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5803	4880225C09	TSTR M25C09
Q5806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5850	4880225C27	TSTR RF MRF654F IN CS12 PKG
R5801	0611077A26	RES CHIP 10 5 1/8W
R5803	0611077A82	RES CHIP 2200 5 1/8
R5805	0611077A26	RES CHIP 10 5 1/8W
R5806	0611077A43	RES CHIP 51 5 1/8W
R5807	0611077A82	RES CHIP 2200 5 1/8
R5808	0611077A86	RES CHIP 3300 5 1/8
R5809	0611077A74	RES CHIP 1000 5 1/8
R5810	0611077A26	RES CHIP 10 5 1/8W
R5811	0611077A74	RES CHIP 1000 5 1/8
R5812	-----	NOTPLACED
R5813	0611077A01	RES CHIP JUMPER
R5816	0611077A80	RES CHIP 1800 5 1/8
R5817	0611077A74	RES CHIP 1000 5 1/8
R5818	0611077A62	RES CHIP 330 5 1/8W
R5850	0611077A10	RES CHIP 2.2 5 1/8W
R5851	0611077A26	RES CHIP 10 5 1/8W
R5875	1780228N01	RESISTOR SHUNT
R5876	0611077B11	RES CHIP 33K 5 1/8W
R5877	0611077A94	RES CHIP 6800 5 1/8
R5880	0611077A32	RES CHIP 18 5 1/8W
R5881	0611077A01	RES CHIP JUMPER
R5882	0680195M01	RES CHIP 10 OHMS 5% .5W
R5883	0611077A32	RES CHIP 18 5 1/8W
R5900 & R5901	0680195M25	RES CHIP 100 OHMS 5% .5W
R5904	0611077A82	RES CHIP 2200 5 1/8
R5905	0611077B11	RES CHIP 33K 5 1/8W
R5920 & R5921	0680194M18	RES 51 OHMS 5% 1W
R5922 & R5923	0611077A72	RES CHIP 820 5 1/8W
R5930	0611077A01	RES CHIP JUMPER
R5931	-----	NOTPLACED
RT5875	0680149M02	THERMISTOR CHIP 100K OHM
RT5876	-----	NOTPLACED
RT5901	0680149M02	THERMISTOR CHIP 100K OHM
	8480233N32	BD CKT 25W PA UHF PNL
	2280128P01	PIN POLARIZING
	8480233N02	BD CKT 25W PA UHF



HLE6043C, HLE6044C, and HLE6049B UHF 40-Watt PA Schematic



HLE6043C, HLE6044C, and HLE6049B UHF 40-Watt PA Component Location Diagram, Side 1

HLE6043C UHF R3 40-Watt Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5801 & C5804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5805	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5806	2113740B31	CAP CHIP REEL CL1 +/-30 18
C5807 & C5808	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5810	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5811	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5813	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5815	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5816	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C5820 & C5821	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5822	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C5823	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5824	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5826	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5850	2113740B01	CAP CHIP REEL CL1 +/-30 1.0
C5851 & C5852	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5853	-----	NOTPLACED
C5854	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5855	2111078B23	CAP CHIP RF 24 5 NPO 100V
C5856	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5857	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5858	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5860 thru C5862	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5863	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C5864 thru C5869	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5875 & C5876	2111078B32	CAP CHIP RF 39 5 NPO 100V
C5877 & C5878	2184366F08	CAP MICA 40 5 250V
C5879	-----	NOTPLACED
C5880	2111078B15	CAP CHIP RF 12 5 NPO 100V
C5881	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5883	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5884	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5885	2380090M24	CAP ALU 10 20 50V SURF MT
C5886	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5887	2111078B19	CAP CHIP RF 16 5 NPO 100V
C5888 thru C5890	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5891	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5892	2111078B13	CAP CHIP RF 10 .5 NPO 100V
C5893	2113741N45	CAP CHIP CL2 X7R 10% 10000

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5894	-----	NOTPLACED
C5895	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5900	-----	NOTPLACED
C5901 & C5902	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5903	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5904	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5905	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5906	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5907	-----	NOTPLACED
C5920	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C5922	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5923	2111078B05	CAP CHIP RF 4.7 .25 NPO 100V
C5924	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V
C5926 & C5927	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5928	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5930 & C5931	2113740B49	CAP CHIP REEL CL1 +/-30 100
CR5875	4880236E07	DIODE TRANSIENT SUP
CR5900	4880236E05	DIODE HOT CAR SOT 23
CR5920 & CR5921	4880236E24	DIODE PIN
CR5922	4805119G18	DIODE SMBD1023 STEP RECOVERY
J0853	2880102M06	PLUG VERTICAL 12 POSITION
L5801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5802	2480091G21	COIL AIRWOUND
L5805	2480091G23	COIL AIRWOUND
L5806	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5809	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5810	2484657R01	INDUCTOR BEAD CHIP
L5820 & L5821	2480091G21	COIL AIRWOUND
L5850	2480091G21	COIL AIRWOUND
L5851	2480091G23	COIL AIRWOUND
L5852	2484657R01	INDUCTOR BEAD CHIP
L5853	2480091G21	COIL AIRWOUND
L5854	2484657R01	INDUCTOR BEAD CHIP
L5875	2480091G21	COIL AIRWOUND
L5876	2480091G36	COIL AIRWOUND
L5878	2480090G03	COIL AIRWOUND
L5879	2480090G05	COIL AIRWOUND
L5883	2484657R01	INDUCTOR BEAD CHIP
L5900	2480091G06	COIL AIRWOUND
L5901	-----	NOTPLACED
L5902 & L5903	2480091G24	COIL AIRWOUND

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L5904 & L5920	2480091G36	COIL AIRWOUND
L5921 & L5922	2480090G03	COIL AIRWOUND
L5923	2480091G36	COIL AIRWOUND
P0853	0980103M04	RECEPTICAL RIGHT ANGLE 12 POS
Q5800	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5803	4880225C09	TSTR M25C09
Q5803	2680187N02	HEATSINK, TO39
Q5806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5850	4880225C27	TSTR RF MRF654F IN CS12 PKG
Q5875	4880225C30	TSTR RF 14W/50W UHF .5 CQ
R5801	0611077A26	RES CHIP 10 5 1/8W
R5802	0611077A50	RES CHIP 100 5 1/8W
R5803	0611077A82	RES CHIP 2200 5 1/8
R5805	0611077A26	RES CHIP 10 5 1/8W
R5806	0611077A50	RES CHIP 100 5 1/8W
R5807	0611077A82	RES CHIP 2200 5 1/8
R5808	0611077A90	RES CHIP 4700 5 1/8
R5809	0611077A78	RES CHIP 1500 5 1/8
R5810	0611077A26	RES CHIP 10 5 1/8W
R5811	0611077A74	RES CHIP 1000 5 1/8
R5812	0611077A01	RES CHIP JUMPER
R5813	-----	NOTPLACED
R5816	0611077A80	RES CHIP 1800 5 1/8
R5817	0611077A74	RES CHIP 1000 5 1/8
R5818	0611077A62	RES CHIP 330 5 1/8W
R5850	0611077A10	RES CHIP 2.2 5 1/8W
R5872	0611077A50	RES CHIP 100 5 1/8W
R5873	0611077A50	RES CHIP 100 5 1/8W
R5875	1780228N01	RESISTOR SHUNT
R5876	0611077B11	RES CHIP 33K 5 1/8W
R5877	0611077A94	RES CHIP 6800 5 1/8
R5878	0611077A86	RES CHIP 3300 5 1/8
R5879 & R5880	0611077A10	RES CHIP 2.2 5 1/8W
R5881 & R5882	0611077A19	RES CHIP 5.1 5 1/8W
R5883 & R5884	0611077A10	RES CHIP 2.2 5 1/8W
R5900 & R5901	0680194M18	RES 51 OHMS 5% 1W
R5902 & R5903	-----	NOTPLACED
R5904	0611077A80	RES CHIP 1800 5 1/8
R5905	0611077B11	RES CHIP 33K 5 1/8W
R5906	0611077A50	RES CHIP 100 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R5920 & R5921	0680194M18	RES 51 OHMS 5% 1W
R5922 & R5923	0611077A78	RES CHIP 1500 5 1/8
R5931 thru R5933	0611077A01	RES CHIP JUMPER
R5934	-----	NOTPLACED
RT5875 & RT5904	0680149M02	THERMISTOR CHIP 100K OHM
	8480198N34	BD CKT 40W UHF PA PNL

HLE6044C UHF R4 40-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5801 & C5804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5805	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5806	2113740B31	CAP CHIP REEL CL1 +/-30 18
C5807 & C5808	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5810	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5811	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5813	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5815 & C5816	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5820 & C5821	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5822	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C5823	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5824	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5826	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5850	-----	NOTPLACED
C5851 & C5852	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5853	2111078B19	CAP CHIP RF 16 5 NPO 100V
C5854	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5855	2111078B22	CAP CHIP RF 22 5 NPO 100V
C5856	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5857	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5858	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5860 thru C5869	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5875 & C5876	2111078B32	CAP CHIP RF 39 5 NPO 100V
C5877 & C5878	2184366F08	CAP MICA 40 5 250V
C5879	-----	NOTPLACED
C5880	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5881	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5883	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5884	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5885	2380090M24	CAP ALU 10 20 50V SURF MT
C5886	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5887	-----	NOTPLACED
C5888 & C5889	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5890	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5891	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5892	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V
C5893	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5894	-----	NOTPLACED
C5895	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5900	-----	NOTPLACED
C5901 & C5902	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5903	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5904	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5905	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5906	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5907	-----	NOTPLACED
C5920	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C5922	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5923	2111078B01	CAP CHIP RF 3.3 .25 NPO 100V
C5924	2111078B05	CAP CHIP RF 4.7 .25 NPO 100V
C5926 & C5927	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5928	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5930 & C5931	2113740B49	CAP CHIP REEL CL1 +/-30 100
CR5875	4880236E07	DIODE TRANSIENT SUP
CR5900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR5920 & CR5921	4880236E24	DIODE PIN
CR5922	4805119G18	DIODE SMBD1023 STEP RECOVERY
J0853	2880102M06	PLUG VERTICAL 12 POSITION
L5801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5802	2480091G21	COIL AIRWOUND
L5805	2480091G23	COIL AIRWOUND
L5806 & L5809	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5810	2484657R01	INDUCTOR BEAD CHIP
L5820, L5821 & L5850	2480091G21	COIL AIRWOUND
L5851	2480091G23	COIL AIRWOUND
L5852	2484657R01	INDUCTOR BEAD CHIP

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L5853	2480091G21	COIL AIRWOUND
L5854	2484657R01	INDUCTOR BEAD CHIP
L5875	2480091G21	COIL AIRWOUND
L5876	2480091G36	COIL AIRWOUND
L5878	2480090G03	COIL AIRWOUND
L5879	2480090G05	COIL AIRWOUND
L5883	2484657R01	INDUCTOR BEAD CHIP
L5900	2480091G06	COIL AIRWOUND
L5901	-----	NOTPLACED
L5902 & L5903	2480091G24	COIL AIRWOUND
L5904 & L5920	2480091G36	COIL AIRWOUND
L5921 & L5922	2480090G03	COIL AIRWOUND
L5923	2480091G36	COIL AIRWOUND
MP5801 thru MP5803	2980014A03	CLIP COAX TERMINAL
P0853	0980103M04	RECEPTICAL RIGHT ANGLE 12 POS
Q5800	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5803	4880225C09	TSTR M25C09
Q5806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5850	4880225C27	TSTR RF MRF654F IN CS12 PKG
Q5875	4880225C30	TSTR RF 14W/50W UHF .5 CQ
R5801	0611077A30	RES CHIP 15 5 1/8W
R5802	0611077A50	RES CHIP 100 5 1/8W
R5803	0611077A82	RES CHIP 2200 5 1/8
R5805	0611077A26	RES CHIP 10 5 1/8W
R5806	0611077A50	RES CHIP 100 5 1/8W
R5807	0611077A82	RES CHIP 2200 5 1/8
R5808	0611077A90	RES CHIP 4700 5 1/8
R5809	0611077A78	RES CHIP 1500 5 1/8
R5810	0611077A26	RES CHIP 10 5 1/8W
R5811	0611077A74	RES CHIP 1000 5 1/8
R5812	0611077A01	RES CHIP JUMPER
R5813	-----	NOTPLACED
R5816	0611077A80	RES CHIP 1800 5 1/8
R5817	0611077A74	RES CHIP 1000 5 1/8
R5818	0611077A62	RES CHIP 330 5 1/8W
R5850	0611077A10	RES CHIP 2.2 5 1/8W
R5872 & R5873	0611077A50	RES CHIP 100 5 1/8W
R5875	1780228N01	RESISTOR SHUNT
R5876	0611077B11	RES CHIP 33K 5 1/8W
R5877	0611077A94	RES CHIP 6800 5 1/8
R5878	0611077A86	RES CHIP 3300 5 1/8

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R5879	0611077A10	RES CHIP 2.2 5 1/8W
R5880	0611077A10	RES CHIP 2.2 5 1/8W
R5881	0611077A19	RES CHIP 5.1 5 1/8W
R5882	0611077A19	RES CHIP 5.1 5 1/8W
R5883 & R5884	0611077A10	RES CHIP 2.2 5 1/8W
R5900 & R5901	0680194M18	RES 51 OHMS 5% 1W
R5902 & R5903	-----	NOTPLACED
R5904	0611077A80	RES CHIP 1800 5 1/8
R5905	0611077B11	RES CHIP 33K 5 1/8W
R5906	0611077A50	RES CHIP 100 5 1/8W
R5920 & R5921	0680194M18	RES 51 OHMS 5% 1W
R5922 & R5923	0611077A78	RES CHIP 1500 5 1/8
R5931 & R5932	0611077A01	RES CHIP JUMPER
R5933	-----	NOTPLACED
R5934	0611077A01	RES CHIP JUMPER
RT5875 & RT5904	0680149M02	THERMISTOR CHIP 100K OHM
	8480198N34	BD CKT 40W UHF PA PNL

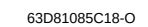
HLE6049B UHF R1 40-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5801 & C5804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5805	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5806	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5807 & C5808	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5810	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5811	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5813	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5815	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5816	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C5820	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5821	2113740B28	CAP CHIP REEL CL1 +/-30 13
C5822	2113740B07	CAP CHIP REEL CL1 +/-30 1.8
C5823	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5824	2113740B28	CAP CHIP REEL CL1 +/-30 13
C5826	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5850	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C5851	2113740B39	CAP CHIP REEL CL1 +/-30 39
C5852	2113740B35	CAP CHIP REEL CL1 +/-30 27
C5853	-----	NOTPLACED
C5854	2111078B42	CAP CHIP RF 100 5 NPO 100V

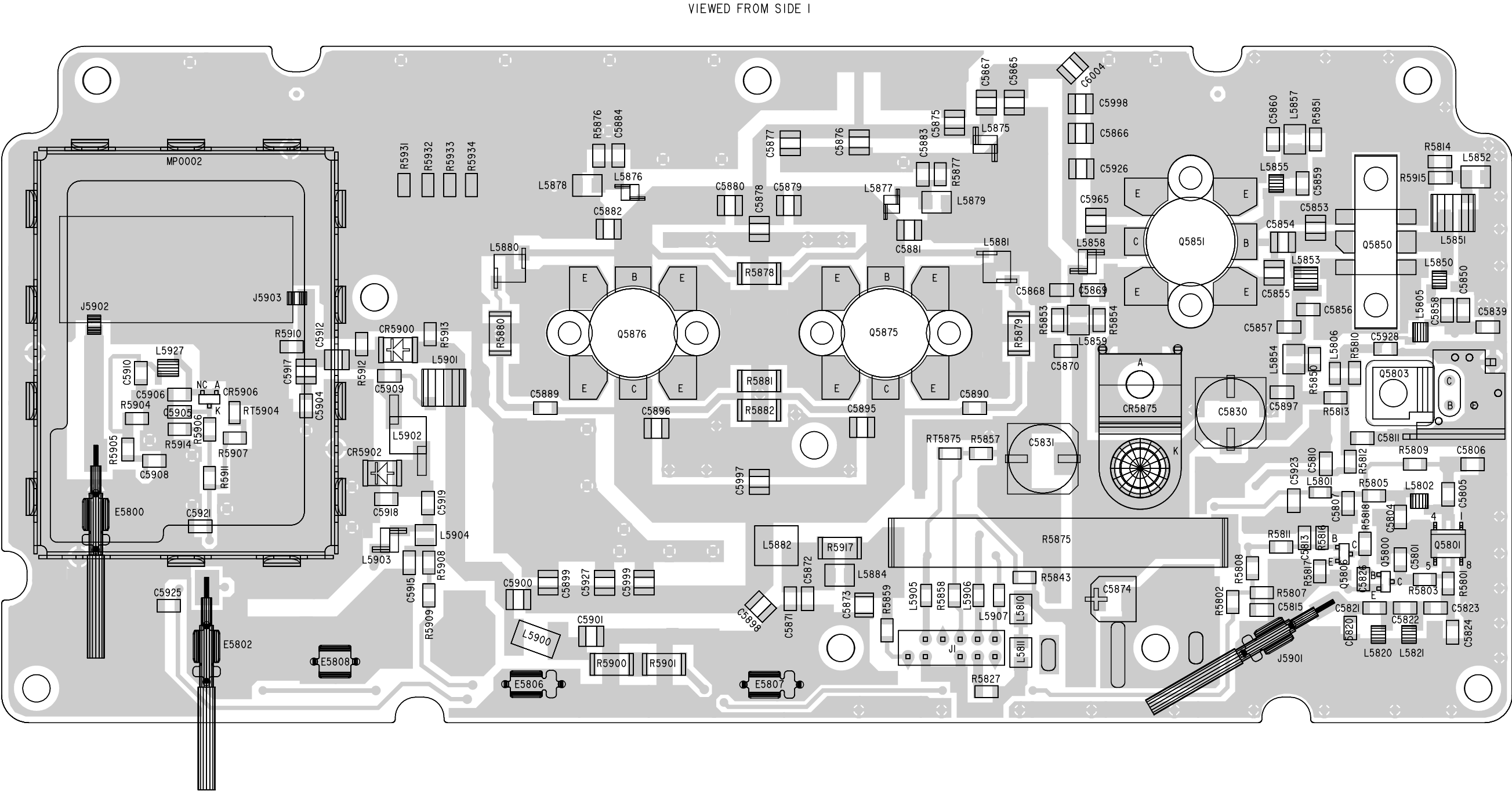
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5855	2111078B27	CAP CHIP RF 30 5 NPO 100V
C5856	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5857	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5858	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5860 & C5861	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5862	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5863	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C5864 thru C5869	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5875 & C5876	2111078B32	CAP CHIP RF 39 5 NPO 100V
C5877 & C5878	2184366F08	CAP MICA 40 5 250V
C5879	-----	NOTPLACED
C5880	2111078B22	CAP CHIP RF 22 5 NPO 100V
C5881	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5883	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5884	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5885	2380090M24	CAP ALU 10 20 50V SURF MT
C5886	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5887	2111078B22	CAP CHIP RF 22 5 NPO 100V
C5888 & C5889	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5890	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5891	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5892	2111078B15	CAP CHIP RF 12 5 NPO 100V
C5893	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5894	-----	NOTPLACED
C5895	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5900	-----	NOTPLACED
C5901	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5902	-----	NOTPLACED
C5903	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5904	2113740B28	CAP CHIP REEL CL1 +/-30 13
C5905	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5906	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5920	2113743G24	CAP CHIP 2.2 UF 16V +80-20%
C5922	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5923	2111078B01	CAP CHIP RF 3.3 .25 NPO 100V
C5924	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V
C5926 & C5927	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5928	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5930 & C5931	2113740B49	CAP CHIP REEL CL1 +/-30 100
CR5875	4880236E07	DIODE TRANSIENT SUP
CR5900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR5920 & CR5921	4880236E24	DIODE PIN

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
CR5922	4805119G18	DIODE SMBD1023 STEP RECOVERY
E5803	2680187N02	HEATSINK, TO39
E5920	2680188N02	SHLD HAR FILTER FENCE TIN PLAT
E5922	2880102M06	PLUG VERTICAL 12 POSITION
L5801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5802	2480091G21	COIL AIRWOUND
L5805	2480091G23	COIL AIRWOUND
L5806 & L5809	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5810	2484657R01	INDUCTOR BEAD CHIP
L5820, L5821 & L5850	2480091G21	COIL AIRWOUND
L5851	2480091G23	COIL AIRWOUND
L5852	2484657R01	INDUCTOR BEAD CHIP
L5853	2480091G21	COIL AIRWOUND
L5854	2484657R01	INDUCTOR BEAD CHIP
L5875	2480091G21	COIL AIRWOUND
L5876	2480091G36	COIL AIRWOUND
L5878	2480090G03	COIL AIRWOUND
L5879	2480090G05	COIL AIRWOUND
L5883	2484657R01	INDUCTOR BEAD CHIP
L5900 & L5901	-----	NOTPLACED
L5902 & L5903	2480091G24	COIL AIRWOUND
L5904 & L5920	2480091G36	COIL AIRWOUND
L5921	2480090G04	COIL AIRWOUND
L5922	2480090G18	COIL AIRWOUND
L5923	2480091G36	COIL AIRWOUND
MP5801 thru MP5803	2980014A03	CLIP COAX TERMINAL
P0853	0980103M04	RECEPTICAL RIGHT ANGLE 12 POS
Q5800	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5803	4880225C09	TSTR M25C09
Q5806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5850	4880225C27	TSTR RF MRF654F IN CS12 PKG
Q5875	4880225C30	TSTR RF 14W/50W UHF .5 CQ
R5801	0611077A30	RES CHIP 15 5 1/8W
R5802	0611077A50	RES CHIP 100 5 1/8W
R5803	0611077A82	RES CHIP 2200 5 1/8
R5805	0611077A26	RES CHIP 10 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R5806	0611077A50	RES CHIP 100 5 1/8W
R5807	0611077A82	RES CHIP 2200 5 1/8
R5808	0611077A90	RES CHIP 4700 5 1/8
R5809	0611077A78	RES CHIP 1500 5 1/8
R5810	0611077A26	RES CHIP 10 5 1/8W
R5811	0611077A74	RES CHIP 1000 5 1/8
R5812	0611077A01	RES CHIP JUMPER
R5813	-----	NOTPLACED
R5816	0611077A80	RES CHIP 1800 5 1/8
R5817	0611077A74	RES CHIP 1000 5 1/8
R5818	0611077A62	RES CHIP 330 5 1/8W
R5850	0611077A10	RES CHIP 2.2 5 1/8W
R5872 & R5873	0611077A50	RES CHIP 100 5 1/8W
R5875	1780228N01	RESISTOR SHUNT
R5876	0611077B11	RES CHIP 33K 5 1/8W
R5877	0611077A94	RES CHIP 6800 5 1/8
R5878	0611077A86	RES CHIP 3300 5 1/8
R5879 & R5880	0611077A10	RES CHIP 2.2 5 1/8W
R5881 & R5882	0611077A19	RES CHIP 5.1 5 1/8W
R5883 & R5884	0611077A10	RES CHIP 2.2 5 1/8W
R5900 & R5901	0680194M18	RES 51 OHMS 5% 1W
R5902 & R5903	-----	NOTPLACED
R5904	0611077A80	RES CHIP 1800 5 1/8
R5905	0611077B11	RES CHIP 33K 5 1/8W
R5906	0611077A50	RES CHIP 100 5 1/8W
R5907	0611077A36	RES CHIP 27 5 1/8W
R5920 & R5921	0680194M18	RES 51 OHMS 5% 1W
R5922 & R5923	0611077A78	RES CHIP 1500 5 1/8
R5931	0611077A01	RES CHIP JUMPER
R5932	-----	NOTPLACED
R5933 & R5934	0611077A01	RES CHIP JUMPER
RT5875	0680149M02	THERMISTOR CHIP 100K OHM
RT5904	0680149M02	THERMISTOR CHIP 100K OHM
	4280120P01	CLIP RECEIVE GROUND
	8480198N34	BD CKT 40W UHF PA PNL



July 1, 2002



HLE6039C, HLE6040C, and HLE6051C UHF 100-Watt PA Component Location Diagram, Side 1

July 1, 2002

HLE6039C UHF R3 100-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5801	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5805	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5806	2113740B30	CAP CHIP REEL CL1 +/-30 16
C5807	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5808	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5810	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5811	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5813	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5815 thru C5818	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5820	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5821	2113740B23	CAP CHIP REEL CL1 +/-30 8.2
C5822	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C5823	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5824	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5826	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5830 & C5831	2380090M32	CAP ALU 220 20 35V
C5838	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5839	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5840 thru C5844	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5846	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5848 & C5849	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5851 & C5852	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5853	2111078B19	CAP CHIP RF 16 5 NPO 100V
C5854	2111078B40	CAP CHIP RF 82 5 NPO 100V
C5855	2111078B19	CAP CHIP RF 16 5 NPO 100V
C5856	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5858	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5859	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5860	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5861 & C5862	2111078B29	CAP CHIP RF 33 5 NPO 100V
C5863 & C5864	2184366F43	CAP MICA 30 5 250V
C5865	2111078B07	CAP CHIP RF 5.6 .25 NPO 100V
C5867	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5868	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5870	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5872	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5873	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5874	2380090M24	CAP ALU 10 20 50V SURF MT
C5875	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V
C5876	2111078B22	CAP CHIP RF 22 5 NPO 100V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5877 & C5878	2111078B13	CAP CHIP RF 10 .5 NPO 100V
C5879 & C5880	2111078B27	CAP CHIP RF 30 5 NPO 100V
C5883 & C5884	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5885 thru C5888	2184366F43	CAP MICA 30 5 250V
C5889 & C5890	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5891 thru C5894	2184366F43	CAP MICA 30 5 250V
C5897	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5898	-----	NOTPLACED
C5899	2113742B18	CAP CER 4.7 PF +- .25PF
C5900	2111078B27	CAP CHIP RF 30 5 NPO 100V
C5901	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5904	2113740B01	CAP CHIP REEL CL1 +/-30 1.0
C5905	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5906	2113740B29	CAP CHIP REEL CL1 +/-30 15
C5908	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5909	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5910	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C5912	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5915	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5917	2111078B01	CAP CHIP RF 3.3 .25 NPO 100V
C5918	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C5919 & C5921	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5923	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5924	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5926	2111078B09	CAP CHIP RF 6.8 .25 NPO 100V
C5928	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5965	2111078B09	CAP CHIP RF 6.8 .25 NPO 100V
C5997	2113742B22	CAP CER 10.0 PF .50 PF
CR5875	4880222R01	DIODE REVERSE POLARITY SPECTRA
CR5900 & CR5902	4880121R01	PWR PIN DIODE SMD TAPE & REEL
CR5904 & CR5905	4805656W04	DIODE SOT 23 PIN
CR5906	4813825A05	DIODE 30V HOT CARRIER MMBD301L
E5800 & E5802	4280088P01	CLIP COAX
E5803	2680187N02	HEATSINK, TO39
E5804	2680201R02	HEATSINK DIODE TIN PLATED
E5806	4280088P01	CLIP COAX
E5807	4280088P01	CLIP COAX

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
E5808	4280202R02	CLIP COAX TIN PLATED
J0001	2880102M11	PLUG VERTICAL 12 POS
J5901	4280088P01	CLIP COAX
L5801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5802	2480091G21	COIL AIRWOUND
L5805	2480091G23	COIL AIRWOUND
L5806	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5810 & L5811	2484657R01	INDUCTOR BEAD CHIP
L5820, L5821 & L5850	2480091G21	COIL AIRWOUND
L5851	2480091G23	COIL AIRWOUND
L5852	2484657R01	INDUCTOR BEAD CHIP
L5853	2480090G03	COIL AIRWOUND
L5854	2484657R01	INDUCTOR BEAD CHIP
L5855	2480091G21	COIL AIRWOUND
L5857	2484657R01	INDUCTOR BEAD CHIP
L5858	2480090G03	COIL AIRWOUND
L5859	2484657R01	INDUCTOR BEAD CHIP
L5875	2480090G03	COIL AIRWOUND
L5876 & L5877	2480091G21	COIL AIRWOUND
L5878 & L5879	2484657R01	INDUCTOR BEAD CHIP
L5880 & L5881	2480091G36	COIL AIRWOUND
L5882	2480090G10	COIL AIRWOUND
L5884	2484657R01	INDUCTOR BEAD CHIP
L5900	2480090G13	COIL AIRWOUND
L5901	2480090G16	COIL AIRWOUND RF 000.000
L5902	2480090G19	COIL AIRWOUND
L5903	2480090G03	COIL AIRWOUND
L5904	2480140E11	INDUCTOR CHIP 360 NH
L5905	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5906 thru L5910	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5927	2480091G24	COIL AIRWOUND
MP0002	2680139P02	SHLD HAR FLTR TIN PLATED
Q5800	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5802	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5803	4880225C09	TSTR M25C09
Q5804	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
Q5805 & Q5806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5850	4880225C27	TSTR RF MRF654F IN CS12 PKG
Q5851	4880225C30	TSTR RF 14W/50W UHF .5 CQ
Q5875 & Q5876	4880225C29	TSTR RF MRF658 IN FLANGE PKG
R5801	0611077A30	RES CHIP 15 5 1/8W
R5802	0611077A74	RES CHIP 1000 5 1/8
R5803	0611077A82	RES CHIP 2200 5 1/8
R5805	0611077A26	RES CHIP 10 5 1/8W
R5806	0611077A50	RES CHIP 100 5 1/8W
R5807	0611077A82	RES CHIP 2200 5 1/8
R5808	0611077A90	RES CHIP 4700 5 1/8
R5809	0611077A78	RES CHIP 1500 5 1/8
R5810	0611077A26	RES CHIP 10 5 1/8W
R5811	0611077A74	RES CHIP 1000 5 1/8
R5812	0611077A01	RES CHIP JUMPER
R5816	0611077A80	RES CHIP 1800 5 1/8
R5817	0611077A74	RES CHIP 1000 5 1/8
R5818	0611077A62	RES CHIP 330 5 1/8W
R5819	0611077A86	RES CHIP 3300 5 1/8
R5820	0611077B01	RES CHIP 12K 5 1/8W
R5821	0611077A90	RES CHIP 4700 5 1/8
R5822	0611077A74	RES CHIP 1000 5 1/8
R5823	0611077A98	RES CHIP 10K 5 1/8W
R5824	0611077A90	RES CHIP 4700 5 1/8
R5825	0611077B05	RES CHIP 18K 5 1/8W
R5826	0611077A68	RES CHIP 560 5 1/8W
R5827	0611077A50	RES CHIP 100 5 1/8W
R5828	0611077B15	RES CHIP 47K 5 1/8W
R5843	0611077B07	RES CHIP 22K 5 1/8W
R5850 & R5851	0611077A10	RES CHIP 2.2 5 1/8W
R5853 & R5854	0611077A10	RES CHIP 2.2 5 1/8W
R5855	0611077A74	RES CHIP 1000 5 1/8
R5857	0611077A82	RES CHIP 2200 5 1/8
R5858	0611077A74	RES CHIP 1000 5 1/8
R5859	0611077A50	RES CHIP 100 5 1/8W
R5875	1780165C02	RES SHUNT
R5876 & R5877	0611077A10	RES CHIP 2.2 5 1/8W
R5878	0680194M01	RES 10 OHMS 5% 1W
R5879 & R5880	0680194M13	RES 33 OHMS 5% 1W
R5881 & R5882	0680194M01	RES 10 OHMS 5% 1W
R5900	0680194M18	RES 51 OHMS 5% 1W
R5901	0680194M01	RES 10 OHMS 5% 1W
R5904	0611077A50	RES CHIP 100 5 1/8W
R5905	0611077A60	RES CHIP 270 5 1/8W
R5906	0611077A01	RES CHIP JUMPER

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R5907	0611077B11	RES CHIP 33K 5 1/8W
R5908 & R5909	0611077A54	RES CHIP 150 5 1/8W
R5910	0611077B23	RES CHIP 100K 5 1/8W
R5911	0611077A74	RES CHIP 1000 5 1/8
R5912 & R5913	0611077B47	RES CHIP 1 MEG 5 1/8W
R5914	0611077A90	RES CHIP 4700 5 1/8
R5915	0611077A26	RES CHIP 10 5 1/8W
R5916	0611077A66	RES CHIP 470 5 1/8W
RT5875 & RT5904	0680149M02	THERMISTOR CHIP 100K OHM
Z1	4813830A14	DIODE 5.1V 5% 225MW MMBZ5231B_

HLE6040C UHF R4 100-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5801	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5805	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5806	2113740B27	CAP CHIP REEL CL1 +/-30 12
C5807	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5808	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5810	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5811	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5813	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5815 thru C5818	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5820	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5820	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5821	2113740B23	CAP CHIP REEL CL1 +/-30 8.2
C5822	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5823	2113740B23	CAP CHIP REEL CL1 +/-30 8.2
C5824	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5826	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5830 & C5831	2380090M32	CAP ALU 220 20 35V
C5838	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5839	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5840 thru C5844	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5846	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5848 & C5849	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5851	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5852	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5853	2111078B21	CAP CHIP RF 20 5 NPO 100V
C5854	2111078B42	CAP CHIP RF 100 5 NPO 100V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5855	2111078B22	CAP CHIP RF 22 5 NPO 100V
C5856	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5858	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5859	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5860	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5861 & C5862	2111078B23	CAP CHIP RF 24 5 NPO 100V
C5863 & C5864	2113742B27	CAP CER 27.0 PF 5% PF
C5865	2111078B05	CAP CHIP RF 4.7 .25 NPO 100V
C5866	2111078B15	CAP CHIP RF 12 5 NPO 100V
C5867	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5868	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5870	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5872	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5873	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5874	2380090M24	CAP ALU 10 20 50V SURF MT
C5875	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V
C5876	2111078B22	CAP CHIP RF 22 5 NPO 100V
C5877	2111078B13	CAP CHIP RF 10 .5 NPO 100V
C5878	2111078B15	CAP CHIP RF 12 5 NPO 100V
C5879 & C5880	2111078B27	CAP CHIP RF 30 5 NPO 100V
C5883 & C5884	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5885 thru C5888	2113742B27	CAP CER 27.0 PF 5% PF
C5889	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5890	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5891 thru C5894	2113742B27	CAP CER 27.0 PF 5% PF
C5897	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5898	2113742B17	CAP CER 3.9 PF +/- .25PF
C5898	2113742B18	CAP CER 4.7 PF +/- .25PF
C5900	2111078B27	CAP CHIP RF 30 5 NPO 100V
C5901	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5904	2113740B01	CAP CHIP REEL CL1 +/-30 1.0
C5905	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5906	2113740B29	CAP CHIP REEL CL1 +/-30 15
C5908 & C5909	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5910	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C5912	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5915	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5917	2111078B01	CAP CHIP RF 3.3 .25 NPO 100V
C5918	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C5919 & C5921	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5923	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5924	2113740B49	CAP CHIP REEL CL1 +/-30 100

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5925	2113740B73	CAP CHIP REEL CL1 +/-30 1000
C5926	2111078B08	CAP CHIP RF 6.2 .25 NPO 100V
C5928	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5965	2111078B19	CAP CHIP RF 16 5 NPO 100V
C5997	2113742B17	CAP CER 3.9 PF +/- .25PF
C5998	2113740B47	CAP CHIP REEL CL1 +/-30 82
C5999	2113742B20	CAP CER 6.8 PF .25 PF
CR5875	4880222R01	DIODE REVERSE POLARITY SPECTRA
CR5900 & CR5902	4880121R01	PWR PIN DIODE SMD TAPE & REEL
CR5904 & CR5905	4880142L01	DIODE PIN SOT 23 MMBV 3401
CR5906	4813825A05	DIODE 30V HOT CARRIER MMBD301L
E5800 & E5802	4280088P01	CLIP COAX
E5803	2680187N02	HEATSINK, TO39
E5804	8480110P05	BD CKT PA UHF
E5804	2680201R02	HEATSINK DIODE TIN PLATED
E5806 thru E5808	4280088P01	CLIP COAX
E5808	4280202R02	CLIP COAX TIN PLATED
J0001	2880102M11	PLUG VERTICAL 12 POS
L5801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5802	2480091G21	COIL AIRWOUND
L5805	2480091G23	COIL AIRWOUND
L5806	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5820 & L5821	2480091G21	COIL AIRWOUND
L5850	2480091G21	COIL AIRWOUND
L5851	2480090G16	COIL AIRWOUND RF 000.000
L5853	2480090G03	COIL AIRWOUND
L5855	2480091G21	COIL AIRWOUND
L5858 & L5875	2480090G03	COIL AIRWOUND
L5876 & L5877	2480091G20	COIL AIRWOUND
L5880 & L5881	2480091G36	COIL AIRWOUND
L5882	2480090G19	COIL AIRWOUND
L5882	2480090G10	COIL AIRWOUND
L5900	2480090G13	COIL AIRWOUND
L5901	2480090G16	COIL AIRWOUND RF 000.000
L5902	2480090G19	COIL AIRWOUND
L5903	2480090G03	COIL AIRWOUND
L5904	2480140E11	INDUCTOR CHIP 360 NH

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
L5905 thru L5910	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5927	2480091G24	COIL AIRWOUND
MP0002	2680139P02	SHLD HAR FLTR TIN PLATED
Q5800	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5802	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5803	4880225C09	TSTR M25C09
Q5804	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5805 & Q5806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5850	4880225C27	TSTR RF MRF654F IN CS12 PKG
Q5851	4880225C30	TSTR RF 14W/50W UHF .5 CQ
Q5875	4880225C29	TSTR RF MRF658 IN FLANGE PKG
Q5876	4880225C29	TSTR RF MRF658 IN FLANGE PKG
R5801	0611077A30	RES CHIP 15 5 1/8W
R5802	0611077A74	RES CHIP 1000 5 1/8
R5803	0611077A82	RES CHIP 2200 5 1/8
R5805	0611077A26	RES CHIP 10 5 1/8W
R5806	0611077A50	RES CHIP 100 5 1/8W
R5807	0611077A82	RES CHIP 2200 5 1/8
R5808	0611077A90	RES CHIP 4700 5 1/8
R5809	0611077A78	RES CHIP 1500 5 1/8
R5810	0611077A26	RES CHIP 10 5 1/8W
R5811	0611077A74	RES CHIP 1000 5 1/8
R5812	0611077A01	RES CHIP JUMPER
R5816	0611077A80	RES CHIP 1800 5 1/8
R5817	0611077A74	RES CHIP 1000 5 1/8
R5818	0611077A62	RES CHIP 330 5 1/8W
R5819	0611077A86	RES CHIP 3300 5 1/8
R5820	0611077B01	RES CHIP 12K 5 1/8W
R5821	0611077A90	RES CHIP 4700 5 1/8
R5822	0611077A74	RES CHIP 1000 5 1/8
R5823	0611077A98	RES CHIP 10K 5 1/8W
R5824	0611077A90	RES CHIP 4700 5 1/8
R5825	0611077B05	RES CHIP 18K 5 1/8W
R5826	0611077A68	RES CHIP 560 5 1/8W
R5827	0611077A50	RES CHIP 100 5 1/8W
R5828	0611077B15	RES CHIP 47K 5 1/8W
R5843	0611077B07	RES CHIP 22K 5 1/8W
R5850 & R5851	0611077A10	RES CHIP 2.2 5 1/8W
R5853 & R5854	0611077A10	RES CHIP 2.2 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R5855	0611077A50	RES CHIP 100 5 1/8W
R5857	0611077A82	RES CHIP 2200 5 1/8
R5858	0611077A74	RES CHIP 1000 5 1/8
R5859	0611077A50	RES CHIP 100 5 1/8W
R5875	1780165C02	RES SHUNT
R5876 & R5877	0611077A10	RES CHIP 2.2 5 1/8W
R5878	0680194M01	RES 10 OHMS 5% 1W
R5879 & R5880	0680194M13	RES 33 OHMS 5% 1W
R5881	0680194M01	RES 10 OHMS 5% 1W
R5882	0680194M01	RES 10 OHMS 5% 1W
R5900	0680194M18	RES 51 OHMS 5% 1W
R5901	0680194M01	RES 10 OHMS 5% 1W
R5904	0611077A52	RES CHIP 120 5 1/8W
R5905	0611077A60	RES CHIP 270 5 1/8W
R5906	0611077A74	RES CHIP 1000 5 1/8
R5907	0611077B11	RES CHIP 33K 5 1/8W
R5908 & R5909	0611077A54	RES CHIP 150 5 1/8W
R5910	0611077B23	RES CHIP 100K 5 1/8W
R5911	0611077A01	RES CHIP JUMPER
R5912 & R5913	0611077B47	RES CHIP 1 MEG 5 1/8W
R5915	0611077A26	RES CHIP 10 5 1/8W
R5916	0611077A74	RES CHIP 1000 5 1/8
R5917	0680194M01	RES 10 OHMS 5% 1W
RT5875 & RT5904	0680149M02	THERMISTOR CHIP 100K OHM

HLE6051 UHF R1 100-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5801	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5802 & C5803	-----	NOTPLACED
C5804	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5805	2113740B30	CAP CHIP REEL CL1 +/-30 16
C5806	2113740B34	CAP CHIP REEL CL1 +/-30 24
C5807	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5808	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5810	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5811	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5813	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5815 thru C5818	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5820	2113740B25	CAP CHIP REEL CL1 +/-30 10
C5821	2113740B29	CAP CHIP REEL CL1 +/-30 15
C5822	2113740B09	CAP CHIP REEL CL1 +/-30 2.2

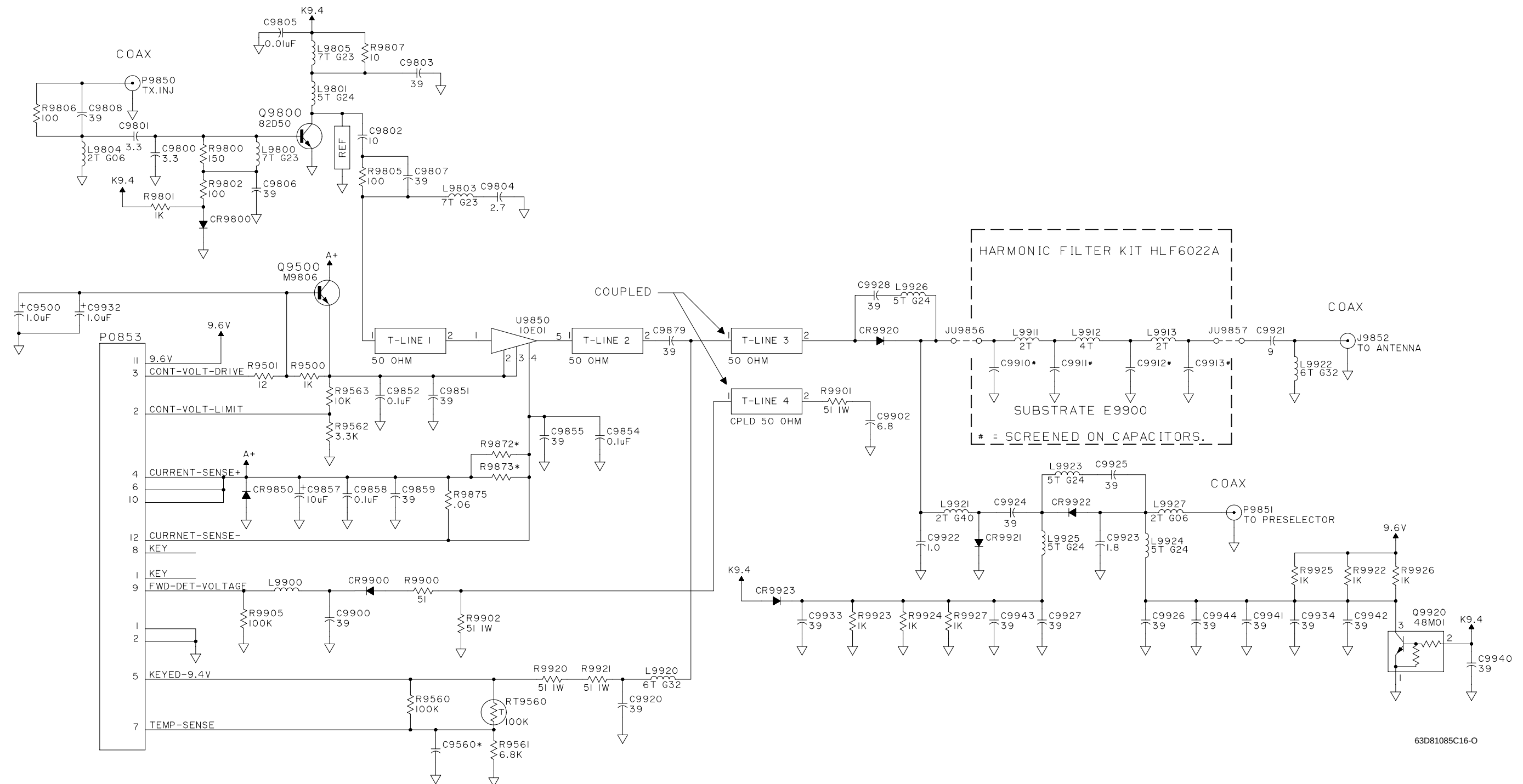
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5823	2113740B24	CAP CHIP REEL CL1 +/-30 9.1
C5824	2113740B28	CAP CHIP REEL CL1 +/-30 13
C5826	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5830 & C5831	2380090M32	CAP ALU 220 20 35V
C5838	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5839	-----	NOTPLACED
C5840 thru C5844	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5846, C5848 & C5849	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5851	2113740B36	CAP CHIP REEL CL1 +/-30 30
C5852	2113740B36	CAP CHIP REEL CL1 +/-30 30
C5853	-----	NOTPLACED
C5854	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5855	2111078B29	CAP CHIP RF 33 5 NPO 100V
C5856	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5856 & C5857	-----	NOTPLACED
C5858	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5859	2113740B17	CAP CHIP REEL CL1 +/-30 4.7
C5860	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5861 & C5862	2111078B31	CAP CHIP RF 36 5 NPO 100V
C5863 & C5864	2113742B28	CAP CER 33.0 PF 5% PF
C5865	2111078B07	CAP CHIP RF 5.6 .25 NPO 100V
C5866	-----	NOTPLACED
C5867	2111078B25	CAP CHIP RF 27 5 NPO 100V
C5868	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5869	-----	NOTPLACED
C5870	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5871	-----	NOTPLACED
C5872	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5873	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5874	2380090M24	CAP ALU 10 20 50V SURF MT
C5875	2111078B15	CAP CHIP RF 12 5 NPO 100V
C5876	2111078B27	CAP CHIP RF 30 5 NPO 100V
C5877	2111078B15	CAP CHIP RF 12 5 NPO 100V
C5878	2111078B19	CAP CHIP RF 16 5 NPO 100V
C5879 & C5880	2111078B27	CAP CHIP RF 30 5 NPO 100V
C5881 & C5882	2111078B07	CAP CHIP RF 5.6 .25 NPO 100V
C5883 & C5884	2113741N21	CAP CHIP CL2 X7R 10% 1000
C5885 thru C5888	2184366F44	CAP MICA 40 5 250V

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C5889 & C5890	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5891 thru C5894	2184366F44	CAP MICA 40 5 250V
C5895 & C5896	-----	NOTPLACED
C5897	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5898	2113742B21	CAP CER 8.2 PF .50 PF
C5899	-----	NOTPLACED
C5900	2111078B19	CAP CHIP RF 16 5 NPO 100V
C5901	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5904	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C5905	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5906	2113740B23	CAP CHIP REEL CL1 +/-30 8.2
C5908 & C5909	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5910	2113740B01	CAP CHIP REEL CL1 +/-30 1.0
C5912	2111078B42	CAP CHIP RF 100 5 NPO 100V
C5915	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5917	2111078B01	CAP CHIP RF 3.3 .25 NPO 100V
C5918	2113740B09	CAP CHIP REEL CL1 +/-30 2.2
C5919	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5920	-----	NOTPLACED
C5921	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5922	-----	NOTPLACED
C5923	2113741N45	CAP CHIP CL2 X7R 10% 10000
C5924	2113740B49	CAP CHIP REEL CL1 +/-30 100
C5925	-----	NOTPLACED
C5926	2111078B13	CAP CHIP RF 10 .5 NPO 100V
C5927	2113742B31	CAP CER 6.2PF +/- .25PF
C5928	2113741N69	CAP CHIP CL2 X7R 10% 100000
C5965	2111078B22	CAP CHIP RF 22 5 NPO 100V
C5997	2113742B23	CAP CHIP 12PF
C5998 thru C6003	-----	NOTPLACED
C6004	2111078B03	CAP CHIP RF 3.9 .25 NPO 100V
C6005	0780255R01	BRKT FLTR
CR5875	4880222R01	DIODE REVERSE POLARITY SPECTRA
CR5900 & CR5902	4880121R01	PWR PIN DIODE SMD TAPE & REEL
CR5904 & CR5905	4880142L01	DIODE PIN SOT 23 MMBV 3401
CR5906	4813825A05	DIODE 30V HOT CARRIER MMBD301L
E5800	4280088P01	CLIP COAX
E5801	2680201R02	HEATSINK DIODE TIN PLATED
E5802	4280088P01	CLIP COAX

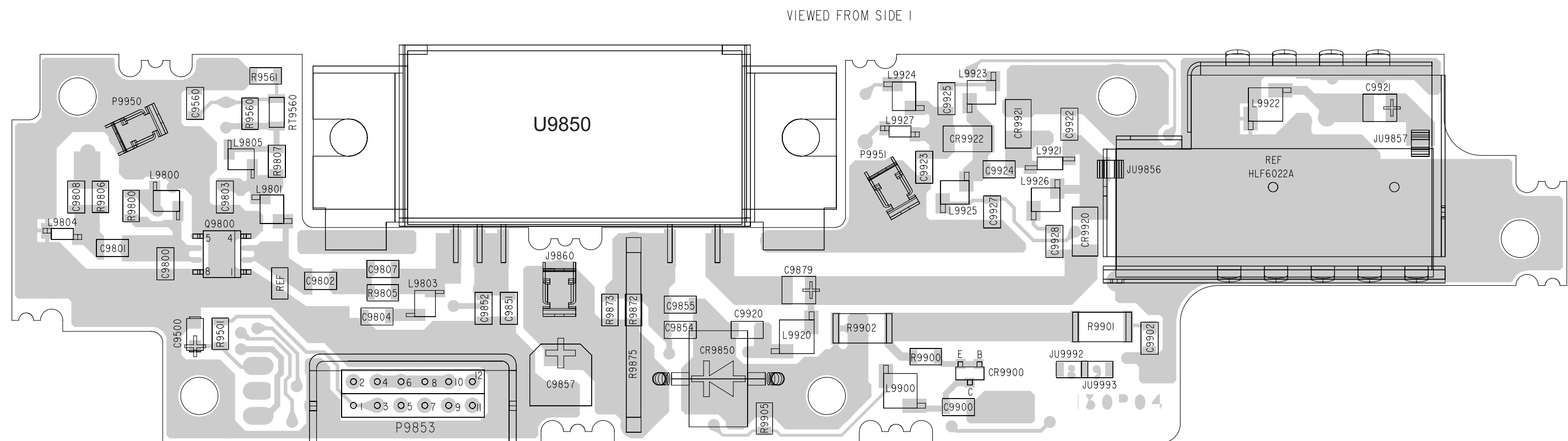
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
E5803	2680187N02	HEATSINK, TO39
E5806 & E5807	4280088P01	CLIP COAX
E5808	4280202R02	CLIP COAX TIN PLATED
J1103	2880102M11	PLUG VERTICAL 12 POS
J5901	4280088P01	CLIP COAX
L5801	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5802	2480091G21	COIL AIRWOUND
L5805	2480091G23	COIL AIRWOUND
L5806	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5810 & L5811	2484657R01	INDUCTOR BEAD CHIP
L5820 & L5821	2480091G21	COIL AIRWOUND
L5850	2480091G21	COIL AIRWOUND
L5851	2480091G23	COIL AIRWOUND
L5852	2484657R01	INDUCTOR BEAD CHIP
L5853	2480090G03	COIL AIRWOUND
L5854	2484657R01	INDUCTOR BEAD CHIP
L5855	2480091G21	COIL AIRWOUND
L5857	2484657R01	INDUCTOR BEAD CHIP
L5858	2480090G03	COIL AIRWOUND
L5859	2484657R01	INDUCTOR BEAD CHIP
L5875	2480090G03	COIL AIRWOUND
L5876 & L5877	2480091G21	COIL AIRWOUND
L5878 & L5879	2484657R01	INDUCTOR BEAD CHIP
L5880 & L5881	2480091G36	COIL AIRWOUND
L5882	2480090G16	COIL AIRWOUND RF 000.000
L5884	2484657R01	INDUCTOR BEAD CHIP
L5900	2480090G13	COIL AIRWOUND
L5901	2480090G16	COIL AIRWOUND RF 000.000
L5902	2480090G19	COIL AIRWOUND
L5903	2480090G03	COIL AIRWOUND
L5904	2480140E11	INDUCTOR CHIP 360 NH
L5905 thru L5910	2480067M01	CHK RF CHIP BEAD INDUCTOR 28MZ
L5927	2480091G24	COIL AIRWOUND
MP0002	2680139P02	SHLD HAR FLTR TIN PLATED
Q5800	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5801	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q5802	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5803	4880225C09	TSTR M25C09

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
Q5804	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q5805 & Q5806	4880141L02	TSTR NPN SOT23 LO PROFILE TAPE
Q5850	4880225C27	TSTR RF MRF654F IN CS12 PKG
Q5851	4880225C30	TSTR RF 14W/50W UHF .5 CQ
Q5875	4880225C29	TSTR RF MRF658 IN FLANGE PKG
Q5876	4880225C29	TSTR RF MRF658 IN FLANGE PKG
R5801	0611077A30	RES CHIP 15 5 1/8W
R5802	0611077A74	RES CHIP 1000 5 1/8
R5803	0611077A82	RES CHIP 2200 5 1/8
R5805	0611077A26	RES CHIP 10 5 1/8W
R5806	0611077A50	RES CHIP 100 5 1/8W
R5807	0611077A82	RES CHIP 2200 5 1/8
R5808	0611077A90	RES CHIP 4700 5 1/8
R5809	0611077A78	RES CHIP 1500 5 1/8
R5810	0611077A26	RES CHIP 10 5 1/8W
R5811	0611077A74	RES CHIP 1000 5 1/8
R5812	0611077A01	RES CHIP JUMPER
R5813 & R5814	-----	NOTPLACED
R5816	0611077A80	RES CHIP 1800 5 1/8
R5817	0611077A74	RES CHIP 1000 5 1/8
R5818	0611077A62	RES CHIP 330 5 1/8W
R5819	0611077A86	RES CHIP 3300 5 1/8
R5820	0611077B01	RES CHIP 12K 5 1/8W
R5821	0611077A90	RES CHIP 4700 5 1/8
R5822	0611077A74	RES CHIP 1000 5 1/8
R5823	0611077A98	RES CHIP 10K 5 1/8W
R5824	0611077A90	RES CHIP 4700 5 1/8
R5825	0611077B05	RES CHIP 18K 5 1/8W
R5826	0611077A68	RES CHIP 560 5 1/8W
R5827	0611077A50	RES CHIP 100 5 1/8W
R5828	0611077B15	RES CHIP 47K 5 1/8W
R5843	0611077B07	RES CHIP 22K 5 1/8W
R5850 & R5851	0611077A10	RES CHIP 2.2 5 1/8W
R5853 & R5854	0611077A10	RES CHIP 2.2 5 1/8W
R5855	0611077A74	RES CHIP 1000 5 1/8
R5857	0611077A82	RES CHIP 2200 5 1/8
R5858	0611077A74	RES CHIP 1000 5 1/8
R5859	0611077A50	RES CHIP 100 5 1/8W
R5875	1780165C02	RES SHUNT
R5876 & R5877	0611077A10	RES CHIP 2.2 5 1/8W
R5878	0680194M01	RES 10 OHMS 5% 1W
R5879 & R5880	0680194M13	RES 33 OHMS 5% 1W

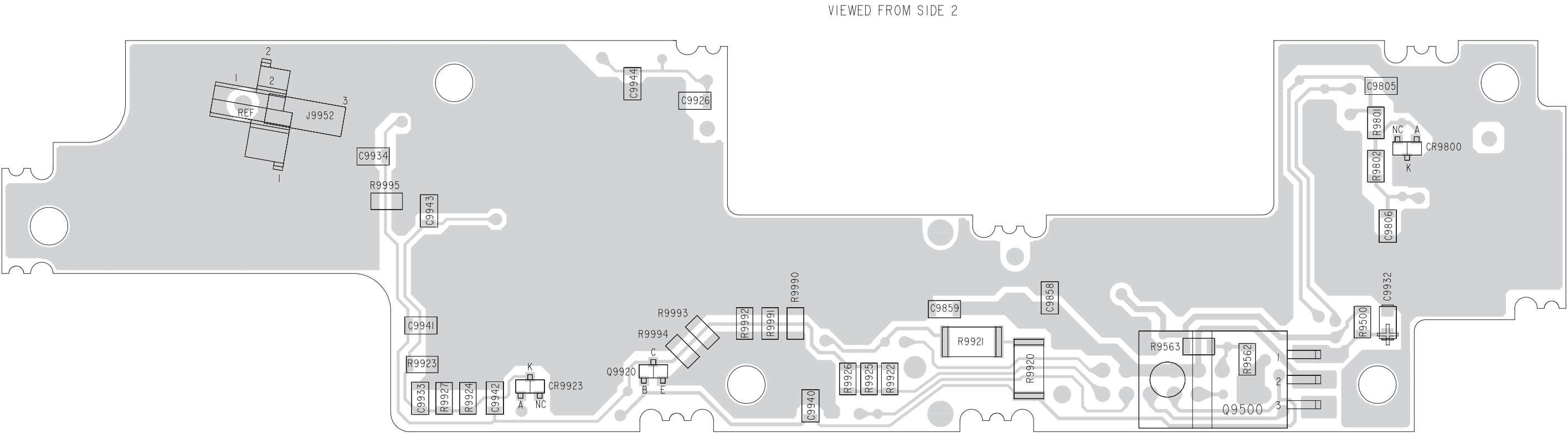
ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R5881 & R5882	0680194M01	RES 10 OHMS 5% 1W
R5900	0680194M18	RES 51 OHMS 5% 1W
R5901	0680194M01	RES 10 OHMS 5% 1W
R5904	0611077A50	RES CHIP 100 5 1/8W
R5905	0611077A60	RES CHIP 270 5 1/8W
R5906	0611077A74	RES CHIP 1000 5 1/8
R5907	0611077B11	RES CHIP 33K 5 1/8W
R5908 & R5909	0611077A54	RES CHIP 150 5 1/8W
R5910	0611077B23	RES CHIP 100K 5 1/8W
R5911	0611077A74	RES CHIP 1000 5 1/8
R5912 & R5913	0611077B47	RES CHIP 1 MEG 5 1/8W
R5914	0611077A90	RES CHIP 4700 5 1/8
R5915	0611077A26	RES CHIP 10 5 1/8W
R5916	0611077A66	RES CHIP 470 5 1/8W
R5917	0680194M01	RES 10 OHMS 5% 1W
RT5875 & RT5904	0680149M02	THERMISTOR CHIP 100K OHM
Z1	4813830A14	DIODE 5.1V 5% 225MW MMBZ5231B_
Z2	-----	NOTPLACED
	2280128P01	PIN POLARIZING
	8480110P05	BD CKT PA UHF



HLF6078B 800 MHz 15-Watt PA Schematic



HLF6078B 800 MHz 15-Watt PA Component Location Diagram, Side 1

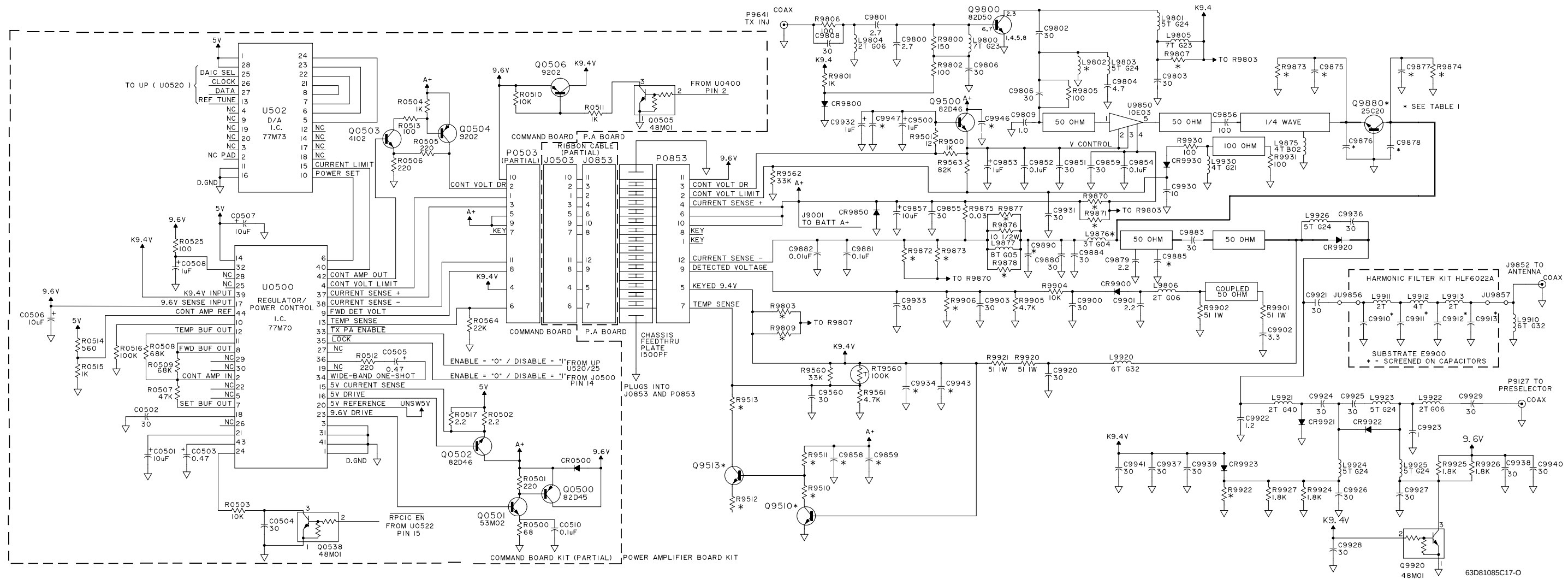


HLF6078B 800 MHz 15-Watt PA Component Location Diagram, Side 2

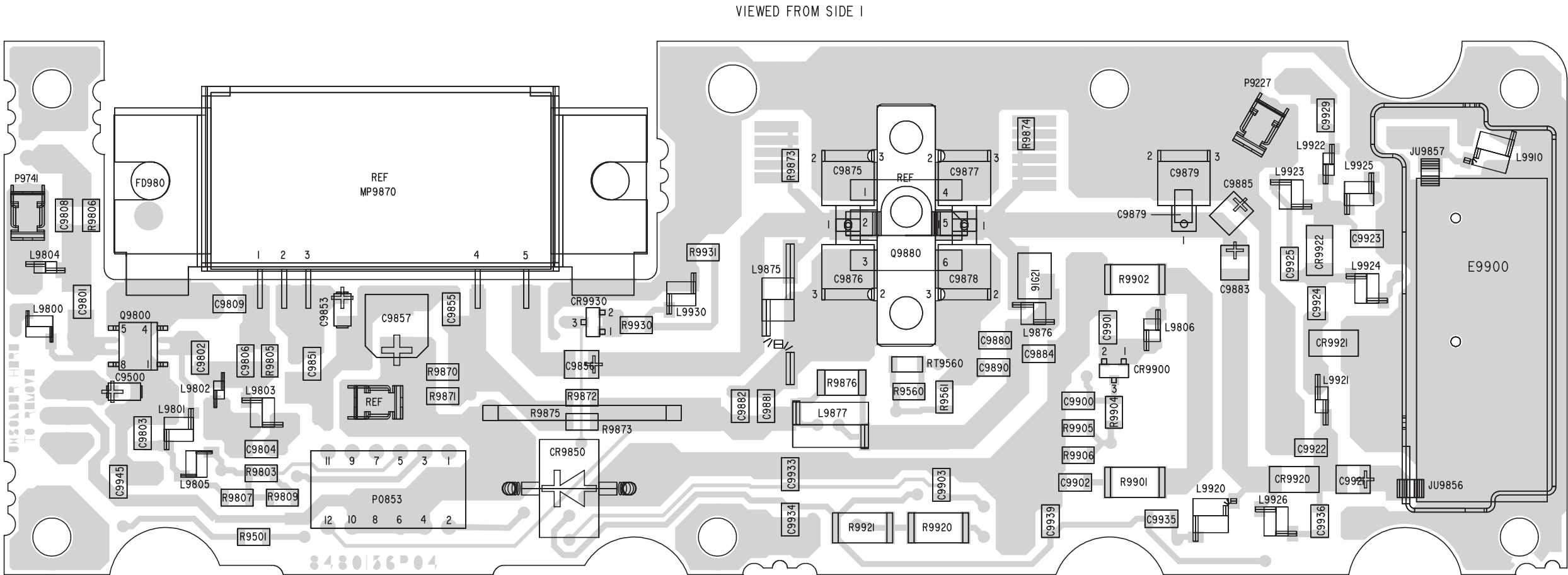
HLF6078C 800MHz 15-Watt PA Parts List

ITEM	MOTOROLA PARTS NUMBER	DESCRIPTION
C9500	2311049A37	CAP TANT CHIP 1 20 20
C9800 & C9801	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C9802	2113740B25	CAP CHIP REEL CL1 +/-30 10
C9803	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9804	2113740B11	CAP CHIP REEL CL1 +/-30 2.7
C9805	2113741N45	CAP CHIP CL2 X7R 10% 10000
C9806 thru C9808	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9851	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9852	2113741N69	CAP CHIP CL2 X7R 10% 100000
C9854	2113741N69	CAP CHIP CL2 X7R 10% 100000
C9855	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9857	2380090M24	CAP ALU 10 20 50V SURF MT
C9858	2111078B29	CAP CHIP RF 33 5 NPO 100V
C9859	2113741N69	CAP CHIP CL2 X7R 10% 100000
C9879	2111078B32	CAP CHIP RF 39 5 NPO 100V
C9900	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9902	2113740B25	CAP CHIP REEL CL1 +/-30 10
C9920	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9921	2111078B32	CAP CHIP RF 39 5 NPO 100V
C9922	2113740B01	CAP CHIP REEL CL1 +/-30 1.0
C9923	2113740B07	CAP CHIP REEL CL1 +/-30 1.8
C9924 thru C9928	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9932	2311049A37	CAP TANT CHIP 1 20 20
C9933 & C9934	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9940 thru C9944	2113740B39	CAP CHIP REEL CL1 +/-30 39
CR9800	4811058B11	DIODE 48S11058A11 A/P
CR9850	4880236E07	DIODE TRANSIENT SUP
CR9900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR9920 thru CR9922	4880236E24	DIODE PIN
CR9923	4811058B11	DIODE 48S11058A11 A/P
J9860	2980014A03	CLIP COAX TERMINAL
L9800	2480091G23	COIL AIRWOUND
L9801	2480091G24	COIL AIRWOUND
L9803	2480091G23	COIL AIRWOUND
L9804	2480091G06	COIL AIRWOUND
L9805	2480091G23	COIL AIRWOUND

ITEM	MOTOROLA PARTS NUMBER	DESCRIPTION
L9900 & L9920	2480091G32	COIL AIRWOUND
L9921	2480091G40	COIL AIRWOUND
L9922	2480091G32	COIL AIRWOUND
L9923	2480091G23	COIL AIRWOUND
L9924	2480091G01	COIL AIRWOUND
L9925 & L9926	2480091G24	COIL AIRWOUND
L9927	2480091G06	COIL AIRWOUND
P9853	6480262N01	PLATE LP FEEDTHRU ASSEMBLY
P9950 & P9951	2980014A03	CLIP COAX TERMINAL
Q9800	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q9500	4813822D56	TSTR NPN 100V 6A
Q9920	4880048M01	TSTR NPN DIG 47K/47K
R9500	0611077A74	RES CHIP 1000 5 1/8
R9501	0611077A28	RES CHIP 12 5 1/8W
R9560	0611077B23	RES CHIP 100K 5 1/8W
R9561	0611077A94	RES CHIP 6800 5 1/8
R9562	0611077A86	RES CHIP 3300 5 1/8
R9563	0611077A98	RES CHIP 10K 5 1/8W
R9800	0611077A54	RES CHIP 150 5 1/8W
R9801	0611077A74	RES CHIP 1000 5 1/8
R9802 & R9805	0611077A50	RES CHIP 100 5 1/8W
R9806	0611077A50	RES CHIP 100 5 1/8W
R9807	0611077A26	RES CHIP 10 5 1/8W
R9875	1780228N03	RESISTOR SHUNT
R9900	0611077A43	RES CHIP 51 5 1/8W
R9901 & R9902	0680194M18	RES 51 OHMS 5% 1W
R9905	0611077B23	RES CHIP 100K 5 1/8W
R9920 & R9921	0680194M18	RES 51 OHMS 5% 1W
R9922 thru R9927	0611077A74	RES CHIP 1000 5 1/8
R9990 thru R9995	0611077A01	RES CHIP JUMPER
RT9560	0680149M02	THERMISTOR CHIP 100K OHM
U9850	5180110E01	MODE RF PWR 800MH 20W
	2280128P01	PIN POLARIZING
	8480130P05	BD CKT 1.5/15W PA

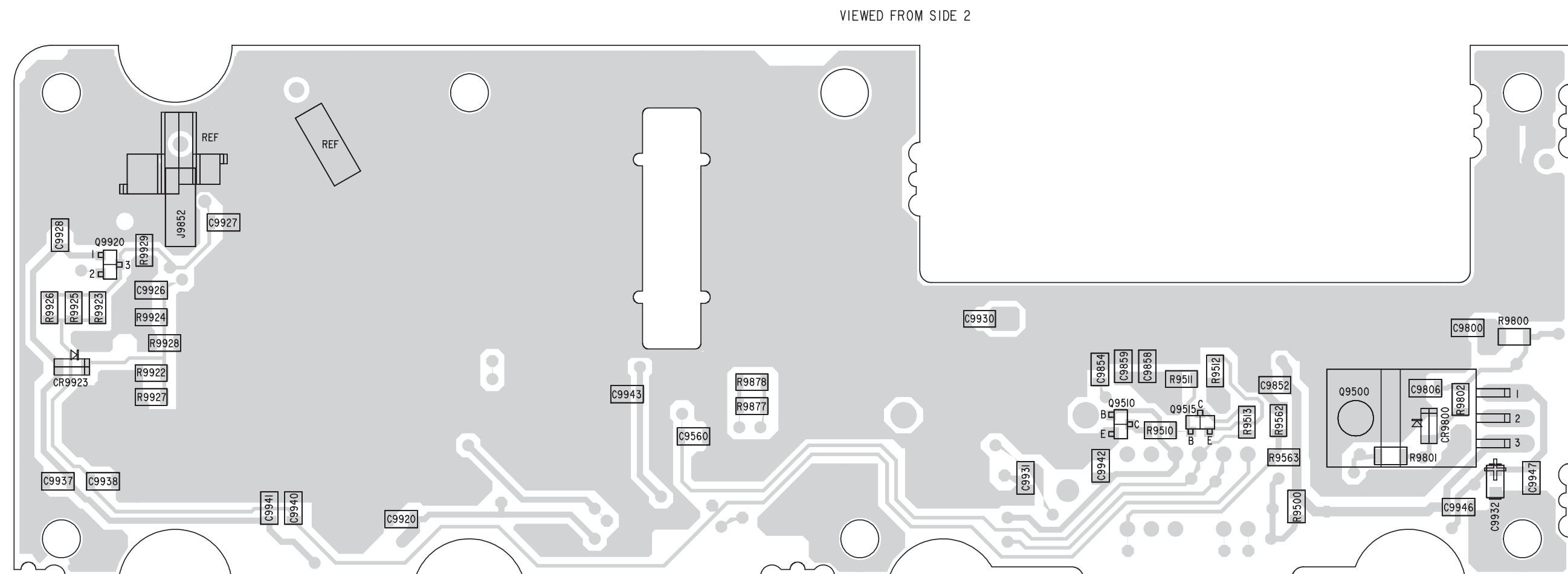


HLF6077D 800 MHz 35-Watt PA Schematic



Spectra
8480156p04.A

HLF6077D 800 MHz 35-Watt PA Component Location Diagram, Side 1



HLF6077D 800 MHz 35-Watt PA Component Location Diagram, Side 2

HLF6077D 800MHz 35-Watt PA Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
C9500	2311049A37	CAP TANT CHIP 1 20 20
C9560	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9800 & C9801	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C9802	2113740B15	CAP CHIP REEL CL1 +/-30 3.9
C9803	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9804	2113740B21	CAP CHIP REEL CL1 +/-30 6.8
C9806 thru C9808	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9809	-----	NOTPLACED
C9851	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9852	2113741N69	CAP CHIP CL2 X7R 10% 100000
C9853	2311049A37	CAP TANT CHIP 1 20 20
C9854	2113741N69	CAP CHIP CL2 X7R 10% 100000
C9855	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9856	2111078B42	CAP CHIP RF 100 5 NPO 100V
C9857	2380090M24	CAP ALU 10 20 50V SURF MT
C9858	2111078B29	CAP CHIP RF 33 5 NPO 100V
C9859	-----	NOTPLACED
C9879	2180240G69	CAP MTL CLAD MICA PF
C9880	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9881	2113741N69	CAP CHIP CL2 X7R 10% 100000
C9882	2113741N45	CAP CHIP CL2 X7R 10% 10000
C9883	2111078B32	CAP CHIP RF 39 5 NPO 100V
C9884	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9885 & C9890	-----	NOTPLACED
C9900	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9901	2113740B13	CAP CHIP REEL CL1 +/-30 3.3
C9902	2113740B25	CAP CHIP REEL CL1 +/-30 10
C9903 & C9920	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9921	2111078B32	CAP CHIP RF 39 5 NPO 100V
C9922	2113740B01	CAP CHIP REEL CL1 +/-30 1.0
C9923	2113740B05	CAP CHIP REEL CL1 +/-30 1.5
C9924 thru C9929	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9930	2113740B25	CAP CHIP REEL CL1 +/-30 10
C9931	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9932	2311049A37	CAP TANT CHIP 1 20 20
C9933 thru C9941	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9942 & C9943	-----	NOTPLACED
C9945	2113740B39	CAP CHIP REEL CL1 +/-30 39
C9946	-----	NOTPLACED
C9947	2113740B39	CAP CHIP REEL CL1 +/-30 39

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
CR9800	4880066M01	DIODE SIGNAL RLS4148
CR9850	4880236E07	DIODE TRANSIENT SUP
CR9900	4813825A05	DIODE 30V HOT CARRIER MMBD301L
CR9920 thru CR9922	4880236E24	DIODE PIN
CR9923	4880066M01	DIODE SIGNAL RLS4148
CR9930	4813825A05	DIODE 30V HOT CARRIER MMBD301L
J9001	2980014A03	CLIP COAX TERMINAL
L9800	2480091G23	COIL AIRWOUND
L9801	2480091G24	COIL AIRWOUND
L9802	2480091G13	COIL AIRWOUND
L9803	2480091G24	COIL AIRWOUND
L9804	2480091G06	COIL AIRWOUND
L9805	2480091G23	COIL AIRWOUND
L9806	2480091G06	COIL AIRWOUND
L9876	2480091G21	COIL AIRWOUND
L9877	2480090G05	COIL AIRWOUND
L9910 & L9920	2480091G32	COIL AIRWOUND
L9921	2480091G40	COIL AIRWOUND
L9922	2480091G06	COIL AIRWOUND
L9923 thru L9926	2480091G24	COIL AIRWOUND
L9930	2480091G21	COIL AIRWOUND
MP0001	2680090N02	SHLD MID PWR FENCE TIN PLATED
P0853	0980103M04	RECEPTICAL RIGHT ANGLE 12 POS
P9227 & P9741	2980014A03	CLIP COAX TERMINAL
Q9500	4813822D56	TSTR NPN 100V 6A
Q9510	4880048M01	TSTR NPN DIG 47K/47K
Q9515	4880141L01	TSTR PNP SOT23 LO PROFILE TAPE
Q9800	4880182D50	TSTR SI SORF 4V 750MW 960MHZ
Q9920	4880048M01	TSTR NPN DIG 47K/47K
R9500	0611077A74	RES CHIP 1000 5 1/8
R9501	0611077A28	RES CHIP 12 5 1/8W
R9510	0611077B11	RES CHIP 33K 5 1/8W
R9511	0611077A98	RES CHIP 10K 5 1/8W
R9512	0611077A01	RES CHIP JUMPER
R9513	0611077B07	RES CHIP 22K 5 1/8W
R9560	-----	NOTPLACED
R9561	0611077A90	RES CHIP 4700 5 1/8
R9562	0611077B11	RES CHIP 33K 5 1/8W
R9563	0611077B21	RES CHIP 82K 5 1/8W
R9800	0611077A54	RES CHIP 150 5 1/8W

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
R9801	0611077A74	RES CHIP 1000 5 1/8
R9802	0611077A50	RES CHIP 100 5 1/8W
R9803	-----	NOTPLACED
R9805 & R9806	0611077A50	RES CHIP 100 5 1/8W
R9807 & R9809	-----	NOTPLACED
R9870 & R9871	0611077A01	RES CHIP JUMPER
R9872 & R9873	-----	NOTPLACED
R9874	0611077A01	RES CHIP JUMPER
R9875	1780228N01	RESISTOR SHUNT
R9876	-----	NOTPLACED
R9877 & R9878	0611077A26	RES CHIP 10 5 1/8W
R9901 & R9902	0680194M18	RES 51 OHMS 5% 1W
R9904	0611077B07	RES CHIP 22K 5 1/8W
R9905	0611077B11	RES CHIP 33K 5 1/8W
R9906	-----	NOTPLACED
R9920 & R9921	0680194M18	RES 51 OHMS 5% 1W
R9922 thru R9927	0611077A74	RES CHIP 1000 5 1/8
R9928 & R9929	0611077A01	RES CHIP JUMPER
R9930	0611077A52	RES CHIP 120 5 1/8W
R9931	0611077A50	RES CHIP 100 5 1/8W
RT9560	0680149M02	THERMISTOR CHIP 100K OHM
U9850	5180110E01	MODE RF PWR 800MH 20W
	2280128P01	PIN POLARIZING
	8480156P04	BD CKT PA

Appendix A Secure Modules

A.1 Introduction

The secure modules are designed to digitally encrypt and decrypt voice and ASTRO data in ASTRO Digital Spectra and Digital Spectra Plus mobile radios. This section covers the following secure modules:

Table A-1. ASTRO Digital Spectra Secure Modules

KIT NO.	ENCRYPTION TYPE
HLN1441	DES, DES-XL, DES-OFB
NTN1158	DVI-XL
NTN1147	DVP-XL
NTN1369	DES-XL , DVP-XL
NTN1565	DES-OFB, DVP-XL

Table A-2. ASTRO Digital Spectra Plus Secure Modules

KIT NO.	ENCRYPTION TYPE
NNTN4024A	DES, DES-XL, DES-OFB
NNTN4025A	DVI-XL
NNTN4026A	DVP-XL
NNTN4027A	DES, DES-XL , DES-OFB with DVP-XL Encryption Kit

NOTE: The secure module is NOT serviceable. The information contained in this section is only meant to help determine whether a problem is due to the secure module or the radio itself.

The secure module uses a custom encryption integrated circuit (IC) and an encryption key variable to perform its encode/decode function. The encryption key variable is loaded into the secure module, via the radio's microphone connector, from a hand-held key-variable loader (KVL). The encryption IC corresponds to the particular encryption algorithm purchased. The encryption algorithms and their corresponding kit numbers are listed in the above table.

NOTE: When ordering replacement modules, make sure that the kit and board numbers of the module that is ordered are the same as those of the module that is being replaced.

A.2 Circuit Description

The secure module operates from three power supplies (UNSW_B+, SW_B+, and KG_BACKUP). The SW_B+ is turned on and off by the radio's on/off switch. The UNSW_B+ provides power to the secure module as long as the radio battery is in place.

Key variables are loaded into the secure module through connector P1, pin 15. Up to 16 keys (depending on the type of encryption module) can be stored in the module at a time. The key can be infinite key retention or 3 day key retention, depending on how the code plug is setup.

The radio's host processor communicates with the secure module on the Serial Peripheral Interface (SPI) bus. The host processor is the master on this bus, while the secure module is a slave on the bus. The SPI bus consists of five signal lines. Refer to [Table A-1](#) for signal information. A communications failure between the host processor and the secure module will be indicated as an "ERROR 09/10" message on the radio display.

A.3 Troubleshooting Secure Operations

Refer to the *ASTRO Digital Spectra and Digital Spectra Plus Mobile Radios Basic Service Manual* (68P81076C20) for disassembly and reassembly information. A key-variable loader (KVL) and oscilloscope are needed to troubleshoot the secure module.

NOTE: The secure module itself is not serviceable. If the secure module is found to be defective, it must be replaced.

A.3.1 Error 09/10, Error 09/90

The ASTRO Digital Spectra Mobile Radio automatically performs a self test on every power-up. Should the radio fail the self tests, the display will show "ERROR 09/10" or "ERROR 09/90" accompanied by a short beep. If the display shows "ERROR 09/10" or "ERROR 09/90," the radio failed the secure power-up tests and the host microcontroller was unable to communicate with the secure module via the SPI bus. Turn the radio off and back on. If the radio still does not pass the self tests, then a problem exists with the secure operations of the radio.

Troubleshooting information for "ERROR 09/10" is found in Troubleshooting [Chart C.17, "09/10, Secure Hardware Failure," on page 5-13](#). For "ERROR 09/90," see Troubleshooting [Chart C.18, "09/90, Secure Hardware Failure," on page 5-13](#).

A.3.2 Keyload

When the keyloading cable is attached to the ASTRO Digital Spectra Mobile Radio and "KEYLOADING" is not displayed on the ASTRO Digital Spectra Mobile Radio display, then the radio has not gone into KEYLOAD mode. For troubleshooting a "KEYLOAD" failure, refer to Troubleshooting [Chart C.21, "Key Load Fail," on page 5-16](#).

NOTE: ASTRO Digital Spectra Mobile Radios need a keyloader that has the ability to keyload a ASTRO Digital Spectra Mobile Radio. The keyloader must be either a KVL-3000 or later model key-variable loader.

Appendix B Replacement Parts Ordering

B.1 Basic Ordering Information

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

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

B.2 Transceiver Board and VOCON Board Ordering Information

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

B.3 Motorola Online

Motorola Online users can access our online catalog at

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

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

B.4 Mail Orders

Send written orders to the following addresses:

**Replacement Parts/
Test Equipment/Manuals/
Crystal Service Items:**

Motorola Inc.
Customer Care and Services
Division
(United States and Canada)
Attention: Order Processing
1307 E. Algonquin Road
Schaumburg, IL 60196

Federal Government Orders:

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

International Orders:

Motorola Inc.
Customer Care and Services
Division
(United States and Canada)
Attention: Order Processing
1307 E. Algonquin Road
Schaumburg, IL 60196

B.5 Telephone Orders

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

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

B.6 Fax Orders

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

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

B.7 Parts Identification

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

B.8 Product Customer Service

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

Glossary

This glossary contains an alphabetical listing of terms and their definitions that are applicable to ASTRO portable and mobile subscriber radio products.

Term	Definition
A/D	<i>See analog-to-digital conversion.</i>
Abacus IC	A custom integrated circuit providing a digital receiver intermediate frequency (IF) backend.
ADC	<i>See analog-to-digital converter.</i>
ADDAG	<i>See Analog-to-Digital, Digital-to-Analog and Glue.</i>
ALC	<i>See automatic level control.</i>
analog	Refers to a continuously variable signal or a circuit or device designed to handle such signals. <i>See also digital.</i>
Analog-to-Digital, Digital-to-Analog and Glue	An integrated circuit designed to be an interface between the radio's DSP, which is digital, and the analog transmitter and receiver ICs.
analog-to-digital conversion	Conversion of an instantaneous dc voltage level to a corresponding digital value. <i>See also D/A.</i>
analog-to-digital converter	A device that converts analog signals into digital data. <i>See also DAC.</i>
automatic level control	A circuit in the transmit RF path that controls RF power amplifier output, provides leveling over frequency and voltage, and protects against high VSWR.
band	Frequencies allowed for a specific purpose.
BBP	<i>See baseband interface port.</i>
baseband interface port	Synchronous serial interface to the transceiver board used to transfer transmit and receive audio data.
BGA	<i>See ball grid array.</i>
ball grid array	A type of IC package characterized by solder balls arranged in a grid that are located on the underside of the package.
CODEC	<i>See coder/decoder.</i>
coder/decoder	A device that encodes or decodes a signal.

Term	Definition
CPS	<i>See Customer Programming Software.</i>
Customer Programming Software	Software with a graphical user interface containing the feature set of an ASTRO radio. <i>See also RSS.</i>
D/A	<i>See digital-to-analog conversion.</i>
DAC	<i>See digital-to-analog converter.</i>
default	A pre-defined set of parameters.
digital	Refers to data that is stored or transmitted as a sequence of discrete symbols from a finite set; most commonly this means binary data represented using electronic or electromagnetic signals. <i>See also analog.</i>
digital-to-analog conversion	Conversion of a digital signal to a voltage that is proportional to the input value. <i>See also A/D.</i>
digital-to-analog converter	A device that converts digital data into analog signals. <i>See also ADC.</i>
Digital Private Line	A type of digital communications that utilizes privacy call, as well as memory channel and busy channel lock out to enhance communication efficiency.
digital signal processor	A microcontroller specifically designed for performing the mathematics involved in manipulating analog information, such as sound, that has been converted into a digital form. DSP also implies the use of a data compression technique.
digital signal processor code	Object code executed by the Digital Signal Processor in an ASTRO subscriber radio. The DSP is responsible for computation-intensive tasks, such as decoding ASTRO signaling.
DPL	<i>See Digital Private Line. See also PL.</i>
DSP	<i>See digital signal processor.</i>
DSP code	<i>See digital signal processor code.</i>
DTMF	<i>See dual tone multi-frequency.</i>
dual tone multi-frequency	The system used by touch-tone telephones. DTMF assigns a specific frequency, or tone, to each key so that it can easily be identified by a microprocessor.
EEPOT	Electrically Programmable Digital Potentiometer.
EEPROM	<i>See Electrically Erasable Programmable Read-Only Memory.</i>

Term	Definition
Electrically Erasable Programmable Read-Only Memory	A special type of PROM that can be erased by exposing it to an electrical charge. An EEPROM retains its contents even when the power is turned off.
FCC	Federal Communications Commission.
firmware	Code executed by an embedded processor such as the Host or DSP in a subscriber radio. This type of code is typically resident in non-volatile memory and as such is more difficult to change than code executed from RAM.
FGU	<i>See frequency generation unit.</i>
flash	A non-volatile memory device similar to an EEPROM. Flash memory can be erased and reprogrammed in blocks instead of one byte at a time.
FLASHcode	A 13-digit code which uniquely identifies the System Software Package and Software Revenue Options that are enabled in a particular subscriber radio. FLASHcodes are only applicable for radios which are upgradeable through the FLASHport process.
FLASHport	A Motorola term that describes the ability of a radio to change memory. Every FLASHport radio contains a FLASHport EEPROM memory chip that can be software written and rewritten to, again and again.
FMR	<i>See Florida Manual Revision.</i>
Florida Manual Revision	A publication that provides supplemental information for its parent publication before it is revised and reissued.
frequency	Number of times a complete electromagnetic-wave cycle occurs in a fixed unit of time (usually one second).
frequency generation unit	This unit generates ultra-stable, low-phase noise master clock and other derived synchronization clocks that are distributed throughout the communication network.
General-Purpose Input/Output	Pins whose function is programmable.
GPIO	<i>See General-Purpose Input/Output.</i>
host code	Object code executed by the host processor in an ASTRO subscriber radio. The host is responsible for control-oriented tasks such as decoding and responding to user inputs.
IC	<i>See integrated circuit.</i>
IF	Intermediate Frequency.
IMBE	A sub-band, voice-encoding algorithm used in ASTRO digital voice.

Term	Definition
inbound signaling word	Data transmitted on the control channel from a subscriber unit to the central control unit.
integrated circuit	An assembly of interconnected components on a small semiconductor chip, usually made of silicon. One chip can contain millions of microscopic components and perform many functions.
ISW	<i>See inbound signaling word.</i>
key-variable loader	A device used to load encryption keys into a radio.
kHz	<i>See kilohertz.</i>
kilohertz	One thousand cycles per second. Used especially as a radio-frequency unit.
KVL	<i>See key-variable loader.</i>
LCD	<i>See liquid-crystal display.</i>
LED	<i>See LED.</i>
light emitting diode	An electronic device that lights up when electricity is passed through it.
liquid-crystal display	An LCD uses two sheets of polarizing material with a liquid-crystal solution between them. An electric current passed through the liquid causes the crystals to align so that light cannot pass through them.
LO	Local oscillator.
low-speed handshake	150-baud digital data sent to the radio during trunked operation while receiving audio.
LSH	<i>See low-speed handshake.</i>
Master In Slave Out	SPI data line from a peripheral to the MCU.
Master Out Slave In	SPI data line from the MCU to a peripheral.
MCU	<i>See microcontroller unit.</i>
MDC	Motorola Digital Communications.
MDI	MCU/DSP Interface internal to the Patriot IC.
MHz	<i>See Megahertz.</i>
Megahertz	One million cycles per second. Used especially as a radio-frequency unit.
microcontroller unit	Also written as μC . A microprocessor that contains RAM and ROM components, as well as communications and programming components and peripherals.
MISO	<i>See Master In Slave Out.</i>

Term	Definition
MOSI	<i>See Master Out Slave In.</i>
multiplexer	An electronic device that combines several signals for transmission on some shared medium (e.g., a telephone wire).
MUX	<i>See multiplexer.</i>
NiCd	Nickel-cadmium.
NiMH	Nickel-metal-hydride.
OMPAC	<i>See over-molded pad-array carrier.</i>
open architecture	A controller configuration that utilizes a microprocessor with extended ROM, RAM, and EEPROM.
oscillator	An electronic device that produces alternating electric current and commonly employs tuned circuits and amplifying components.
OSW	<i>See outbound signaling word.</i>
OTAR	<i>See over-the-air rekeying.</i>
outbound signaling word	Data transmitted on the control channel from the central controller to the subscriber unit.
over-molded pad-array carrier	A Motorola custom IC package, distinguished by the presence of solder balls on the bottom pads.
over-the-air rekeying	Allows the dispatcher to remotely reprogram the encryption keys in the radio.
PA	Power amplifier.
paging	One-way communication that alerts the receiver to retrieve a message.
Patriot IC	A dual-core processor that contains an MCU and a DSP in one IC package.
PC Board	Printed Circuit Board. Also referred to as a PCB.
phase-locked loop	A circuit in which an oscillator is kept in phase with a reference, usually after passing through a frequency divider.
PL	<i>See private-line tone squelch.</i>
PLL	<i>See phase-locked loop.</i>
private-line tone squelch	A continuous sub-audible tone that is transmitted along with the carrier. <i>See also DPL.</i>
Programmable Read-Only Memory	A memory chip on which data can be written only once. Once data has been written onto a PROM, it remains there forever.
PROM	<i>See Programmable Read-Only Memory.</i>

Term	Definition
PTT	<i>See Push-to-Talk.</i>
Push-to-Talk	The switch or button usually located on the left side of the radio which, when pressed, causes the radio to transmit. When the PTT is released, the unit returns to receive operation.
radio frequency	The portion of the electromagnetic spectrum between audio sound and infrared light (approximately 10 kHz to 10 GHz).
radio frequency power amplifier	Amplifier having one or more active devices to amplify radio signals.
Radio Interface Box	A service aid used to enable communications between a radio and the programming software.
Radio Service Software	DOS-based software containing the feature set of an ASTRO radio. <i>See also CPS.</i>
random access memory	A type of computer memory that can be accessed randomly; that is, any byte of memory can be accessed without touching the preceding bytes.
RAM	<i>See random access memory.</i>
read-only memory	A type of computer memory on which data has been prerecorded. Once data has been written onto a ROM chip, it cannot be removed and can only be read.
real-time clock	A module that keeps track of elapsed time even when a computer is turned off.
receiver	Electronic device that amplifies RF signals. A receiver separates the audio signal from the RF carrier, amplifies it, and converts it back to the original sound waves.
registers	Short-term data-storage circuits within the microcontroller unit or programmable logic IC.
repeater	Remote transmit/receive facility that re-transmits received signals in order to improve communications range and coverage (conventional operation).
repeater/talkaround	A conventional radio feature that permits communication through a receive/transmit facility, which re-transmits received signals in order to improve communication range and coverage.
RESET	Reset line: an input to the microcontroller that restarts execution.
RF	<i>See radio frequency.</i>
RF PA	<i>See radio frequency power amplifier.</i>
RIB	<i>See Radio Interface Box.</i>
ROM	<i>See read-only memory.</i>

Term	Definition
RPCIC	Regulator/power control IC.
RPT/TA	<i>See repeater/talkaround.</i>
RSS	<i>See Radio Service Software.</i>
RTC	<i>See real-time clock.</i>
RX	Receive.
RX DATA	Recovered digital data line.
SAP	<i>See Serial Audio CODEC Port.</i>
SCI IN	Serial Communications Interface Input line.
Serial Audio CODEC Port	SSI to and from the GCAP II IC CODEC used to transfer transmit and receive audio data.
Serial Communication Interface Input Line	A full-duplex (receiver/transmitter) asynchronous serial interface.
SCI IN	<i>See Serial Communication Interface Input Line.</i>
Serial Peripheral Interface	How the microcontroller communicates to modules and ICs through the CLOCK and DATA lines.
signal	An electrically transmitted electromagnetic wave.
Signal Qualifier mode	An operating mode in which the radio is muted, but still continues to analyze receive data to determine RX signal type.
softpot	<i>See software potentiometer.</i>
software	Computer programs, procedures, rules, documentation, and data pertaining to the operation of a system.
software potentiometer	A computer-adjustable electronic attenuator.
spectrum	Frequency range within which radiation has specific characteristics.
SPI	<i>See Serial Peripheral Interface.</i>
squelch	Muting of audio circuits when received signal levels fall below a pre-determined value. With carrier squelch, all channel activity that exceeds the radio's preset squelch level can be heard.
SRAM	<i>See static RAM.</i>
SRIB	Smart Radio Interface Box. <i>See RIB.</i>
SSI	<i>See Synchronous Serial Interface.</i>

Term	Definition
Standby mode	An operating mode in which the radio is muted but still continues to monitor data.
static RAM	A type of memory used for volatile, program/data memory that does not need to be refreshed.
Synchronous Serial Interface	DSP interface to peripherals that consists of a clock signal line, a frame synchronization signal line, and a data line.
system central controllers	Main control unit of the trunked dispatch system; handles ISW and OSW messages to and from subscriber units (<i>See ISW and OSW</i>).
system select	The act of selecting the desired operating system with the system-select switch (also, the name given to this switch).
thin small-outline package	A type of dynamic random-access memory (DRAM) package that is commonly used in memory applications.
time-out timer	A timer that limits the length of a transmission.
TOT	<i>See time-out timer.</i>
transceiver	Transmitter-receiver. A device that both transmits and receives analog or digital signals. Also abbreviated as XCVR.
transmitter	Electronic equipment that generates and amplifies an RF carrier signal, modulates the signal, and then radiates it into space.
TSOP	<i>See thin small-outline package.</i>
TX	Transmit.
UART	<i>See also Universal Asynchronous Receiver Transmitter.</i>
UHF	Ultra-High Frequency.
Universal Asynchronous Receiver Transmitter	A microchip with programming that controls a computer's interface to its attached serial devices.
Universal Serial Bus	An external bus standard that supports data transfer rates of 12 Mbps.
USB	<i>See Universal Serial Bus.</i>
VCO	<i>See voltage-controlled oscillator.</i>
vector sum excited linear predictive coding	A voice-encoding technique used in ASTRO digital voice.
VHF	Very-High Frequency.
VIP	Vehicle Interface Port.
VOCON	<i>See vocoder/controller.</i>

Term	Definition
vocoder	An electronic device for synthesizing speech by implementing a compression algorithm particular to voice. <i>See also voice encoder.</i>
vocoder/controller	A PC board that contains an ASTRO radio's microcontroller, DSP, memory, audio and power functions, and interface support circuitry.
voice encoder	The DSP-based system for digitally processing analog signals, and includes the capabilities of performing voice compression algorithms or voice encoding. <i>See also vocoder.</i>
voltage-controlled oscillator	An oscillator in which the frequency of oscillation can be varied by changing a control voltage.

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