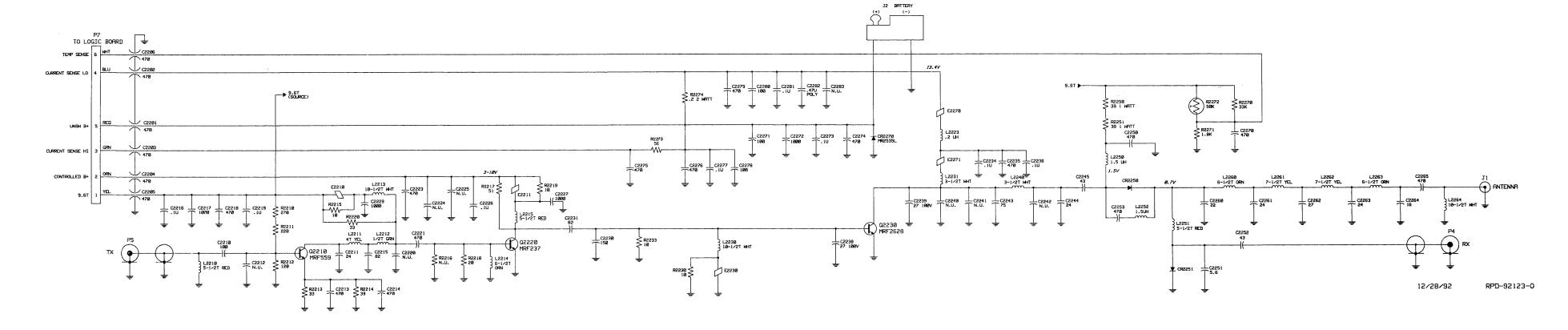
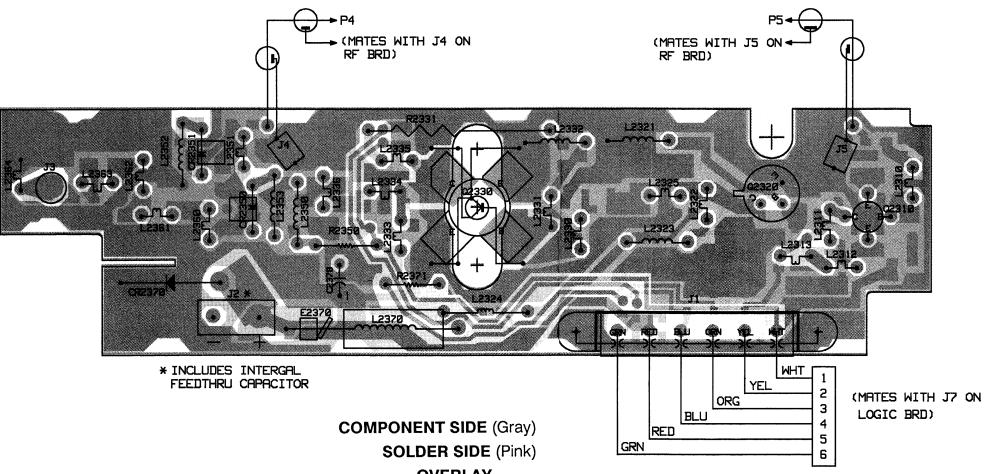


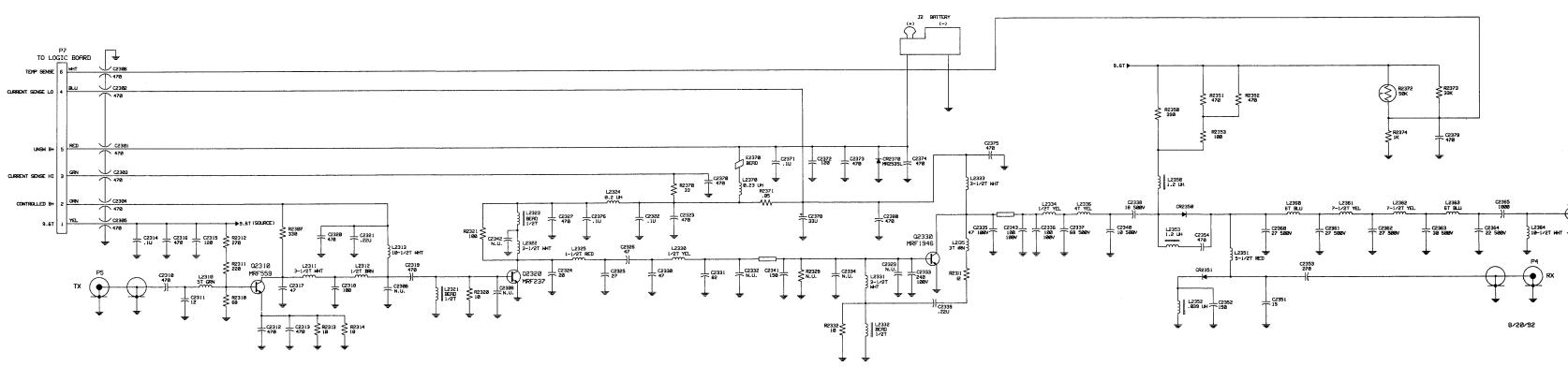
COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------



Circuit Board Details and Schematic for HLD8299A VHF Power Amplifier, 146-174 MHz, 1-10 Watts

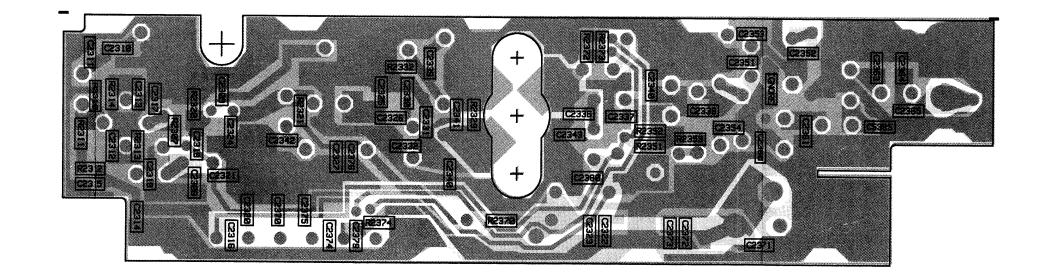


OVERLAY ------



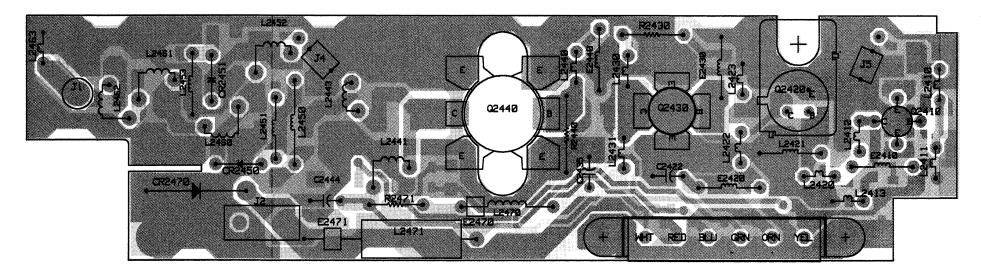
Circuit Board Details and Schematic for HLD8033A VHF Power Amplifier, 146-174 MHz, 10-25 Watts

SOLDER SIDE

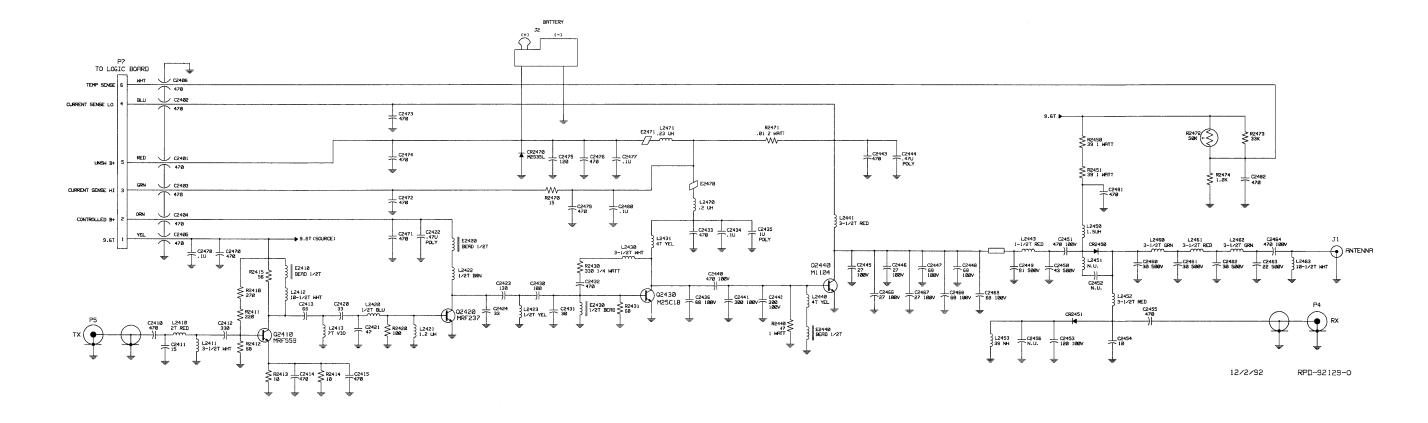


COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY -----

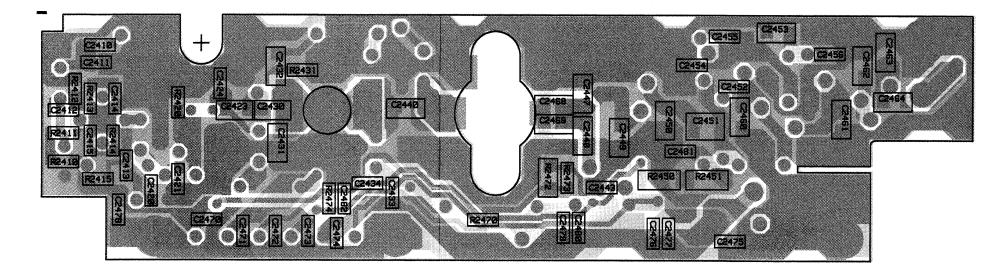
RPD-92114-A



COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------



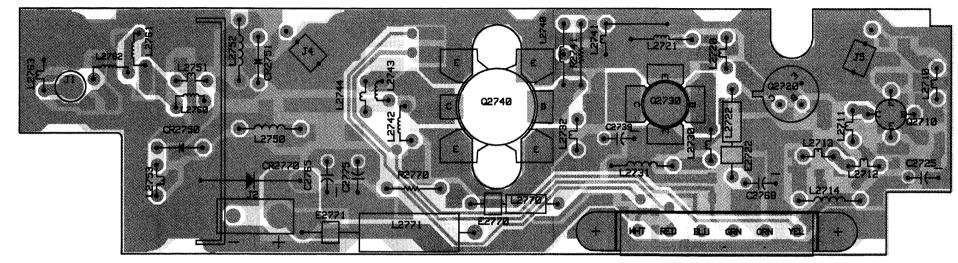
SOLDER SIDE



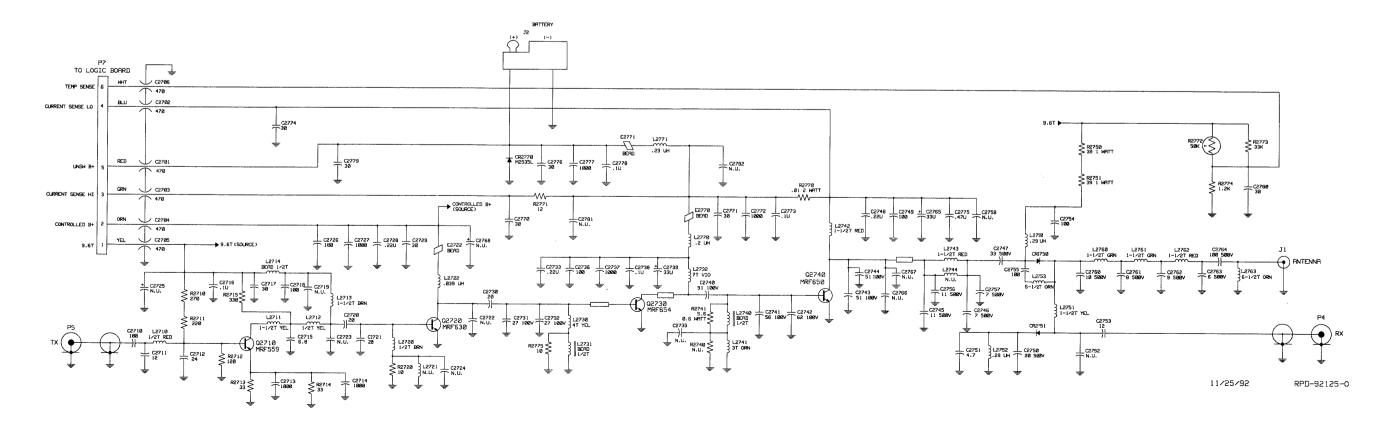
COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

> Circuit Board Details and Schematic for HLD8287A VHF Power Amplifier, 146-174 MHz, 25-45 Watts



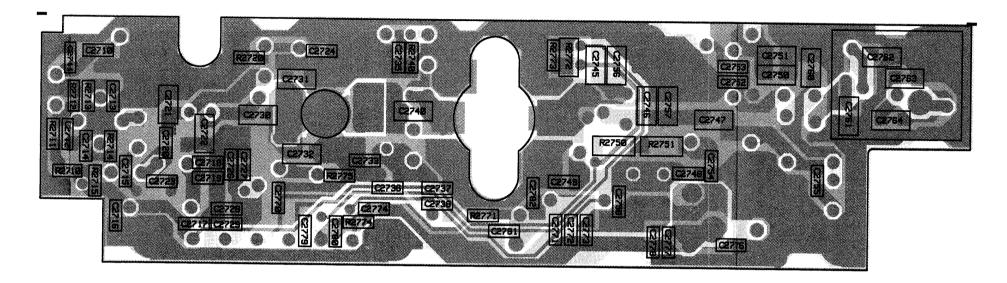


COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

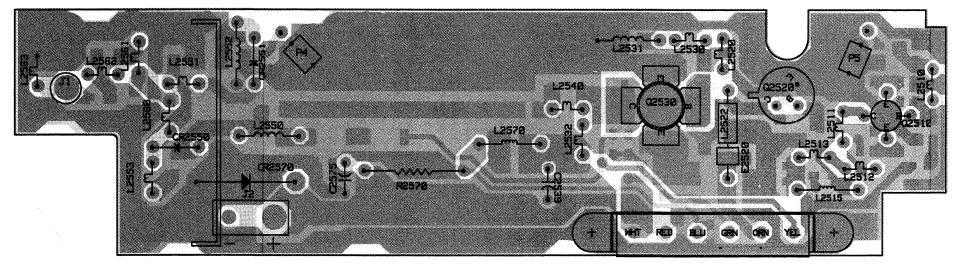


Circuit Board Details and Schematic for HLE8275A UHF Power Amplifier, 403-433 MHz, 25-40 Watts

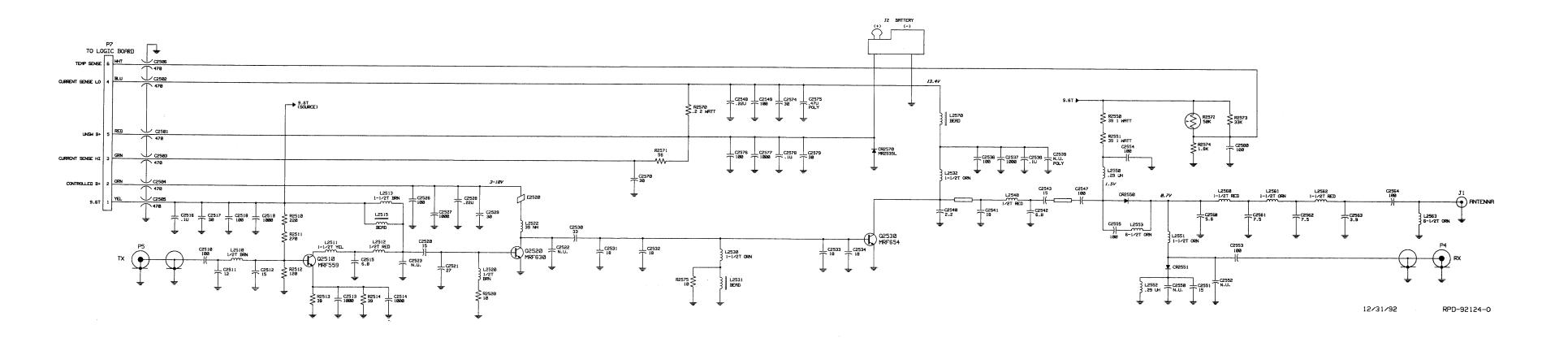
SOLDER SIDE



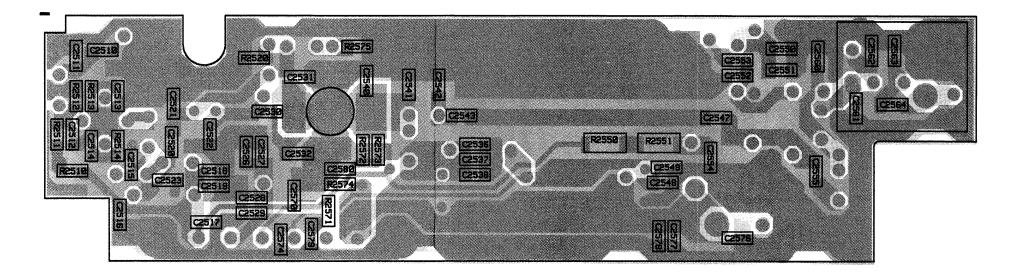
COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------



COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

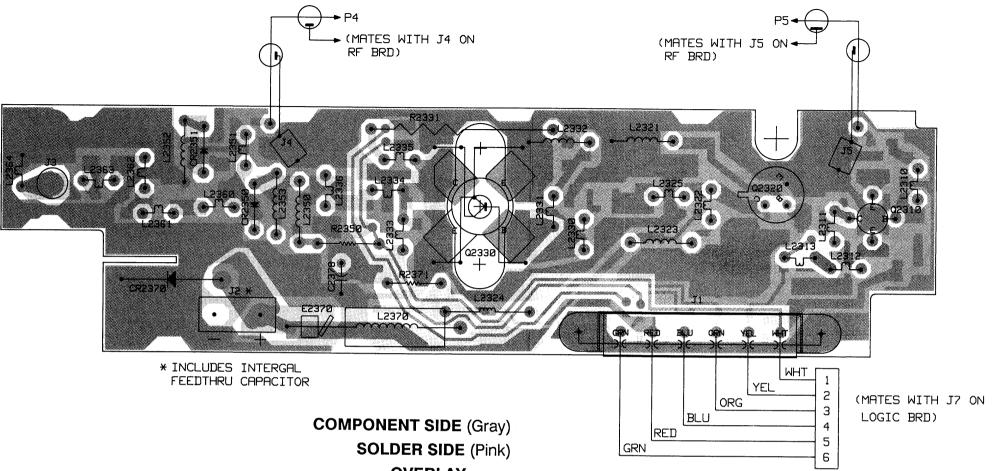


SOLDER SIDE

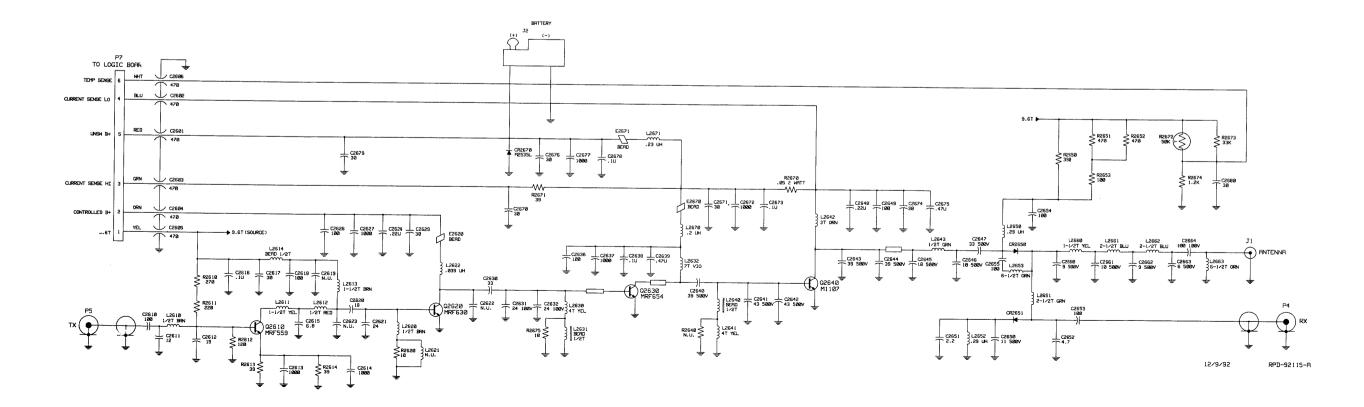


COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

> Circuit Board Details and Schematic for HLE8267A UHF Power Amplifier, 438-470 MHz, 1-10 Watts

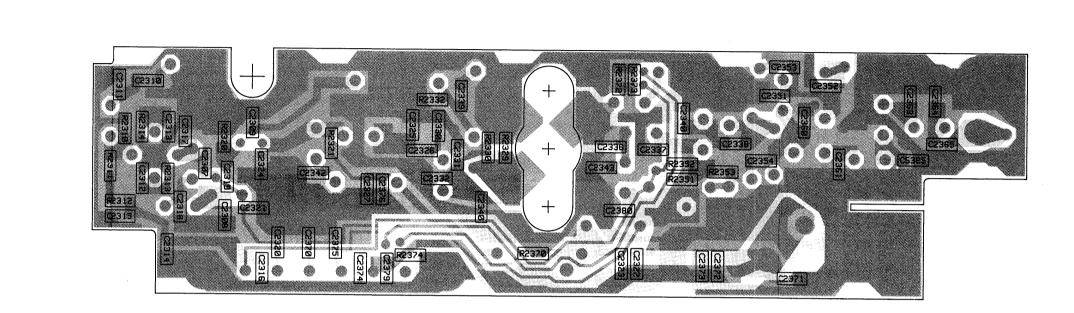


OVERLAY ------

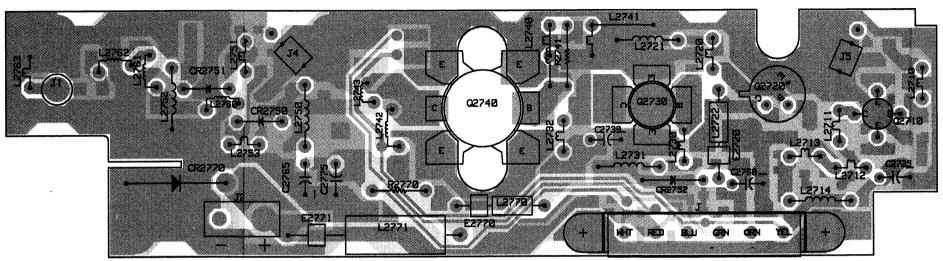


Circuit Board Details and Schematic for HLE8034A UHF Power Amplifier, 438-470 MHz, 10-25 Watts

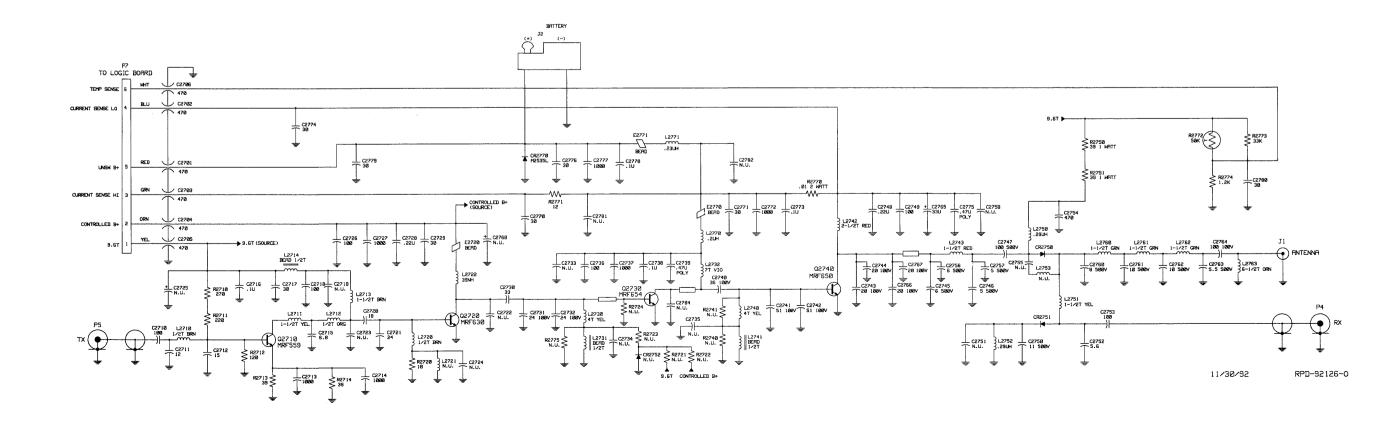
SOLDER SIDE



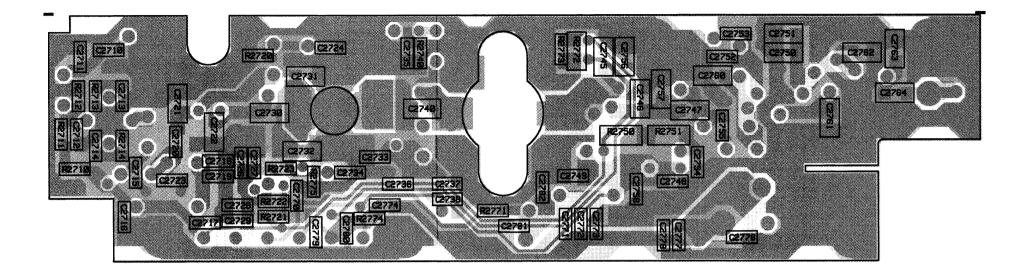
COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------



COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

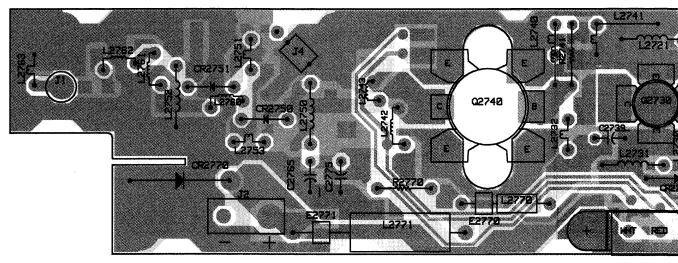


SOLDER SIDE

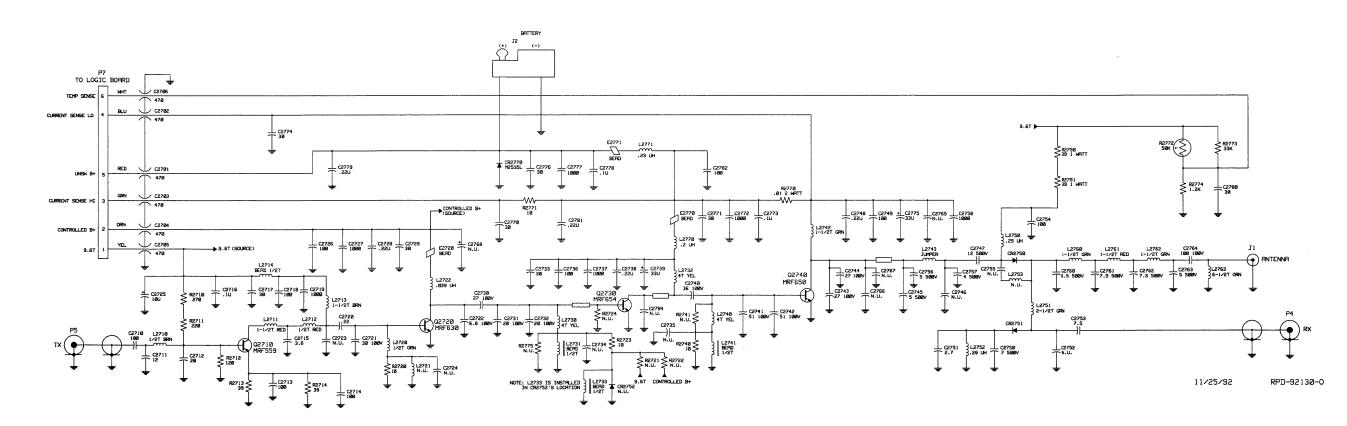


COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

> Circuit Board Details and Schematic for HLE8271A UHF Power Amplifier, 438-470 MHz, 25-40 Watts

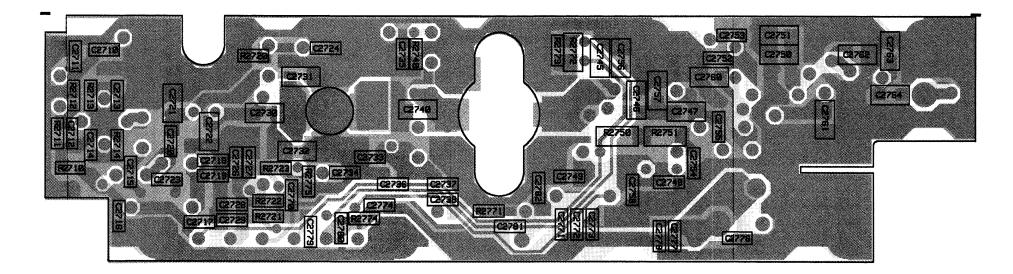


COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

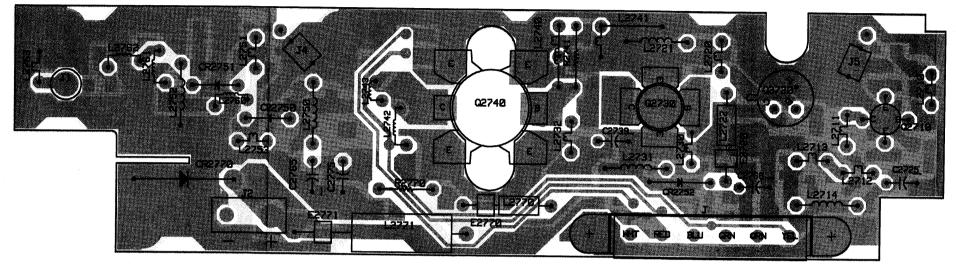


Circuit Board Details and Schematic for HLE8284A UHF Power Amplifier, 465-495 MHz, 25-40 Watts

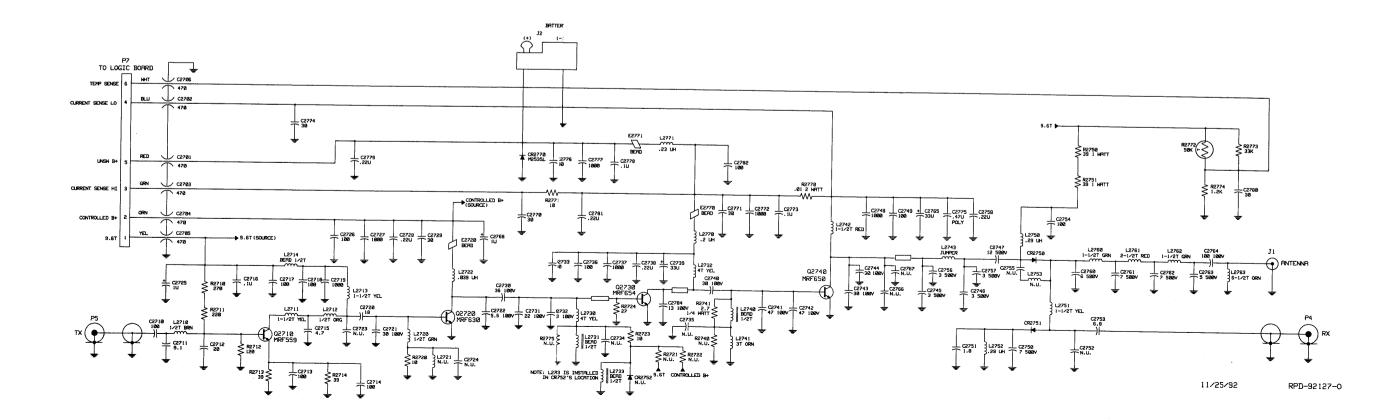




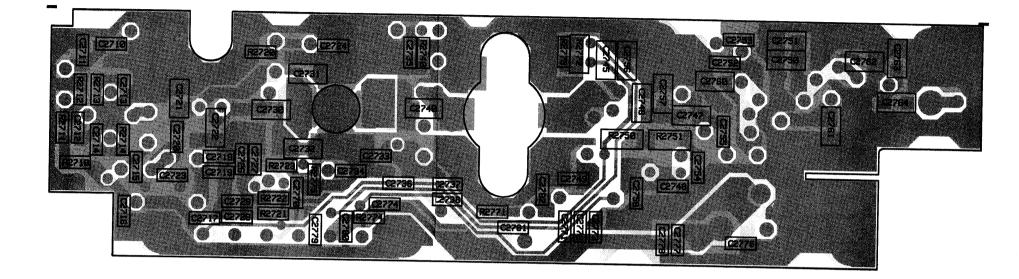




COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------



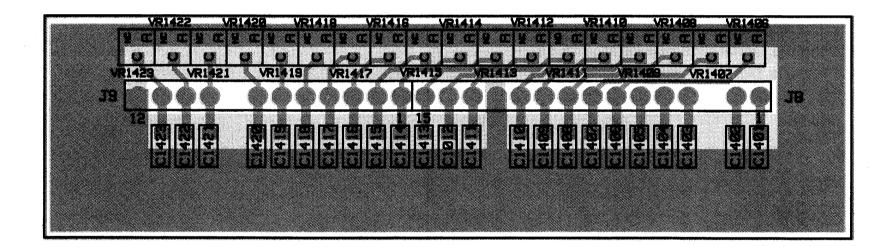
SOLDER SIDE



COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

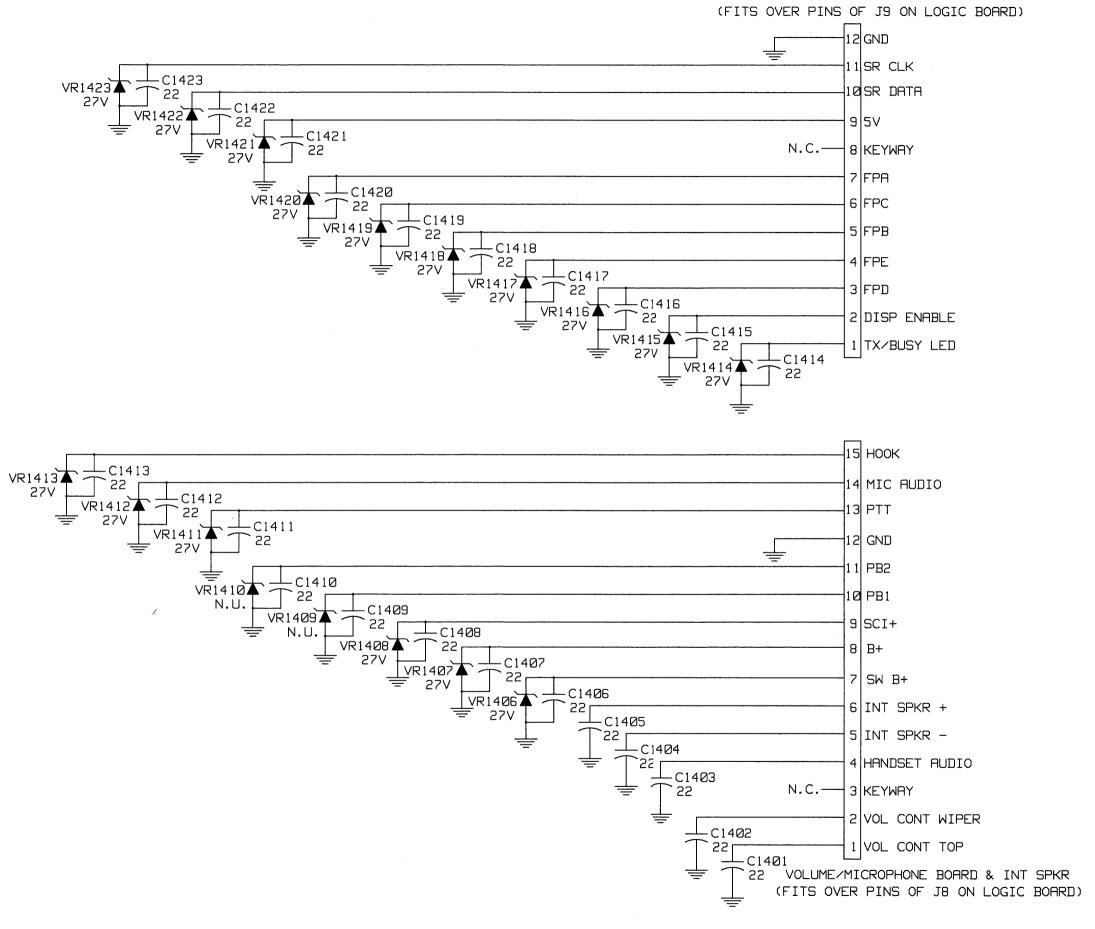
> Circuit Board Details and Schematic for HLE8269A UHF Power Amplifier, 490-520 MHz, 25-35 Watts

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COMPONENT SIDE (Gray) **SOLDER SIDE** (Pink) OVERLAY ------

Circuit Board Detail, Schematic and Parts List for Front Panel Filter Board (01-80704Y83)



RPD-92113-0

DISPLAY PCB

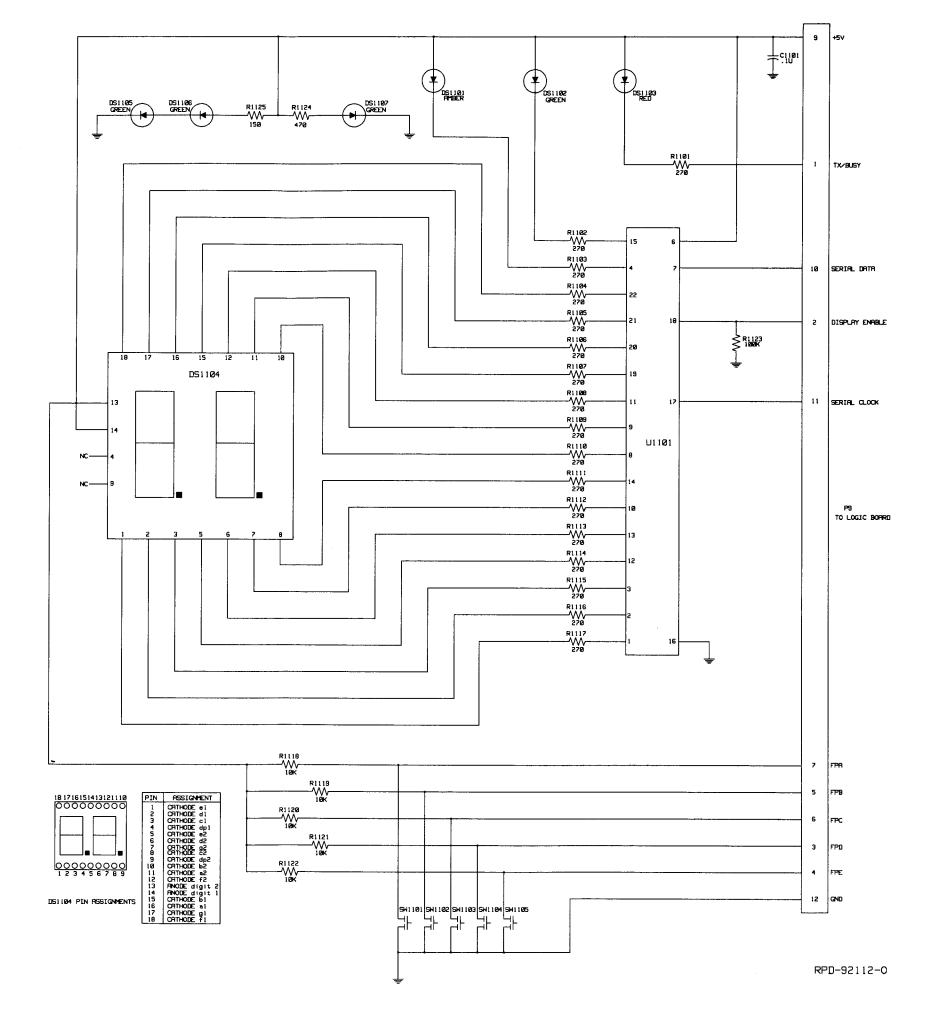
01-80704Y83 Front Panel Filter Board

REFERENCE	MOTOROLA	DESCRIPTION
NUMBER	PART NO.	
Capacitor, chip,	5%, 50V unless	otherwise indicated.
• • • •		
C1401	21-13740B33	22 pF
C1402	21-13740B33	22 pF
C1403	21-13740B33	22 pF
C1404	21-13740B33	22 pF
C1405	21-13740B33	22 pF
C1406	21-13740B33	22 pF
C1407	21-13740B33	22 pF
C1408	21-13740B33	22 pF
C1409	21-13740B33	22 pF
C1410	21-13740B33	22 pF
C1411	21-13740B33	22 pF
C1412	21-13740B33	22 pF
C1413	21-13740B33	22 pF
C1414	21-13740B33	22 pF
C1415	21-13740B33	22 pF
C1416	21-13740B33	22 pF
C1417	21-13740B33	22 pF
C1418	21-13740B33	22 pF
C1419	21-13740B33	22 pF
C1420	21-13740B33	22 pF
C1421	21-13740B33	22 pF
C1422	21-13740B33	22 pF
C1423	21-13740B33	22 pF
0	21 10/ 10000	LE Pi
Voltage regulato	ors (see note)	
VR1406	48-80948V01	zener diode 27V SOT
VR1407	48-80948V01	zener diode 27V SOT
VR1408	48-80948V01	zener diode 27V SOT
VR1409		not used
VR1410		not used
VR1411	48-80948V01	zener diode 27V SOT
VR1412	48-80948V01	zener diode 27V SOT
VR1413	48-80948V01	zener diode 27V SOT
VR1414	48-80948V01	zener diode 27V SOT
VR1415	48-80948V01	zener diode 27V SOT
VR1416	48-80948V01	zener diode 27V SOT
VR1417	48-80948V01	zener diode 27V SOT
VR1418	48-80948V01	zener diode 27V SOT
VR1419	48-80948V01	zener diode 27V SOT
VR1420	48-80948V01	zener diode 27V SOT
VR1420	48-80948V01	zener diode 27V SOT
VR1422	48-80948V01	zener diode 27V SOT
VR1423	48-80948V01	zener diode 27V SOT
	-0-003-0001	

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

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PL-921014-O



HLN8075A Display Board

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION		
Capacitor, chip, 5%, 50V unless otherwise indicated.				

C1101 21-13741B69 .1 uF

Displays and Indicators

DS1101	48-80051M03	diode LED amber
DS1102	48-80051M02	diode LED green
DS1103	48-80051M01	diode LED red
DS1104	48-80055M01	dual 7 segment LED
DS1105	48-83636N04	diode LED green
DS1106	48-83636N04	diode LED green
DS1107	48-83636N04	diode LED green

Resistors, chip, 5%, 1/10 watt, unless otherwise indicated.

R1101	06-11077A60	270
R1102	06-11077A60	270
R1 103	06-11077A60	270
R1104	06-11077A60	270
R1105	06-11077A60	270
R1106	06-11077A60	270
R1107	06-11077A60	270
R1108	06-11077A60	270
R1109	06-11077A60	270
R1110	06-11077A60	270
R1111	06-11077A60	270
R1112	06-11077A60	270
R1113	06-11077A60	270
R1114	06-11077A60	270
R1115	06-11077A60	270
R1116	06-11077A60	270
R1117	06-11077A60	270
R1118	06-11077A98	10k
R1119	06-11077A98	10k
R1120	06-11077A98	10k
R1121	06-11077A98	10k
R1122	06-11077A98	10k
R1123	06-11077B23	100k
R1124	06-11077A66	470
R1125	06-11077A54	150

Integrated circuits and modules (see note)

U1101

51-84437N25 driver, serial to parallel

Non-referenced items

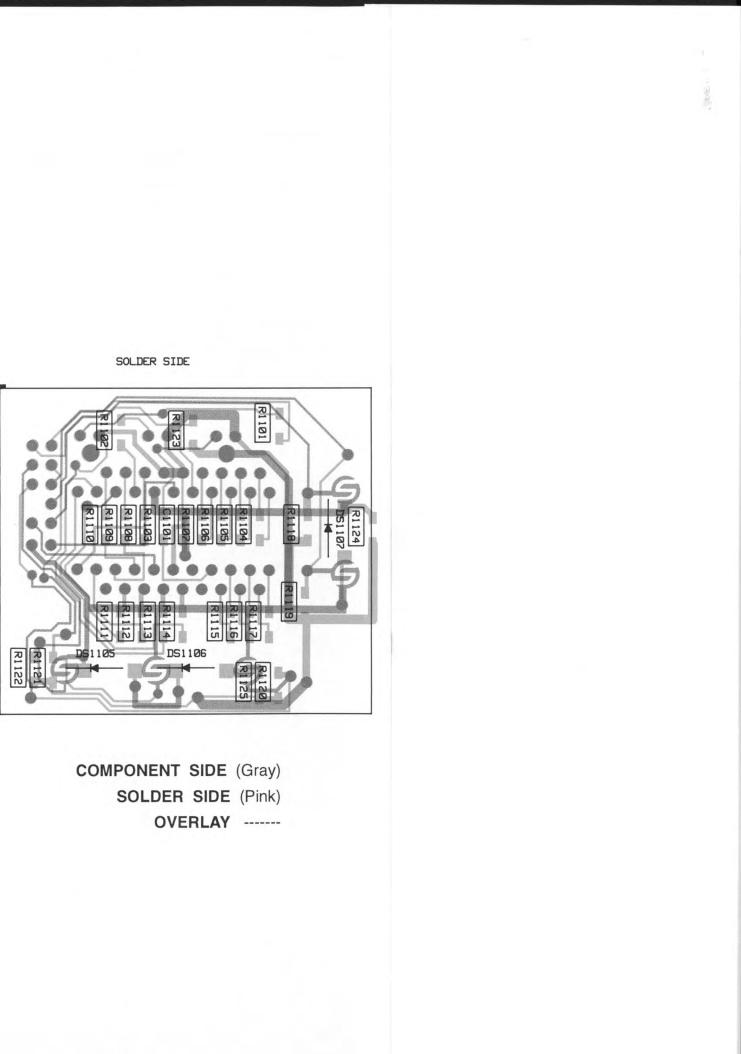
01-80747T11	cable assembly (includes P9)
42-80053N01	ground strap
43-80278L01	spacer, LED display
43-80280L01	spac ər, LED

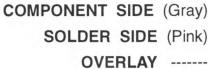
Note: For optimum performance, diodes, transistors, and integrated circuits must be ordered by Motorola part numbers.

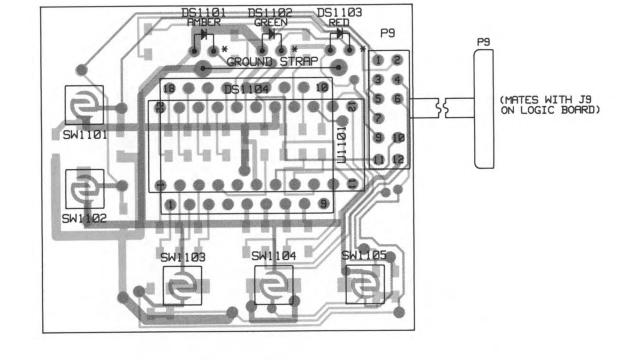
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PL-921013-0

Schematic Diagram and Parts List for HLN8075A Display Board







COMPONENT SIDE (Gray) SOLDER SIDE (Pink) OVERLAY ------

COMPONENT SIDE

Circuit Board Details for HLN8075A Display Board

HLN8071A Volume/Microphone Board

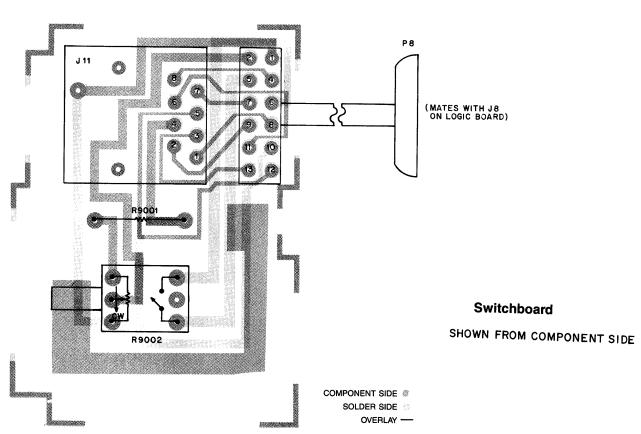
REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Receptacle, jac	k	
J11	09-80132M01	telephone type, 8 contact
Resistors		
R9001 R9002	06-11009A01 18-80140M01	10 5% 1/4 watt 2k VOLUME with switch
Non-referenced	items	

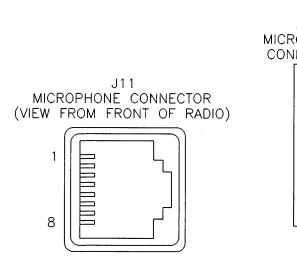
01-80614B01	cable assembly (includes P8)
	P8)

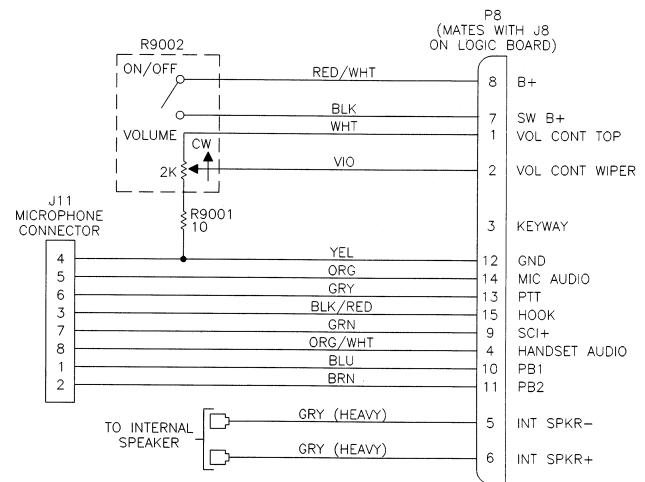
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PL-921019-O

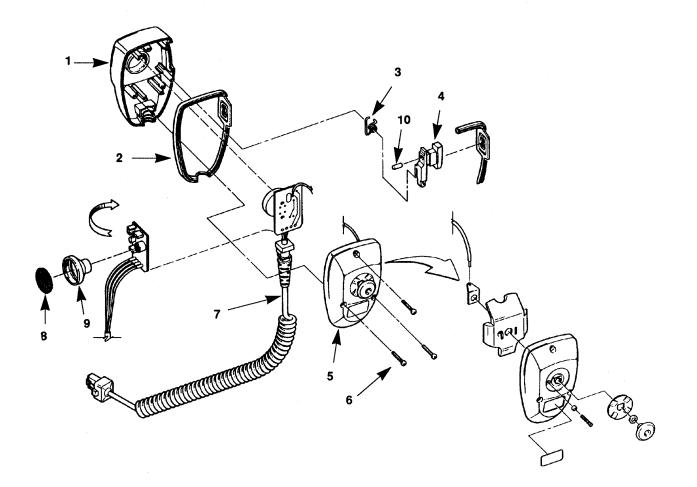


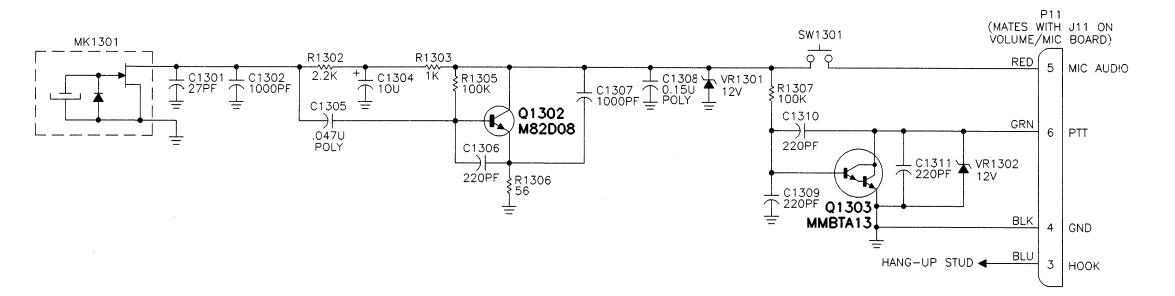




RPD-92116-0

Circuit Board Detail, Schematic and Parts List for HLN8071A Volume/Microphone Board





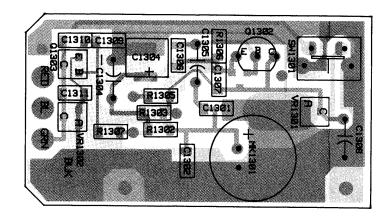
parts list

HMN3596A: MICROPHONE EXPLODED VIEW PARTS LIST (part of HMN3413A)

REF SYMBOL	MOTOROLA PART NUMBER	DESCRIPTION	QTY. USED
1 2 3 4 5 6 7 8 9 10	15-80566B02 32-80565B01 41-80150R01 38-80568B01 01-80704Y99 03-11994A23 30-80978Z03 35-80132R01 05-80149R01 75-80983Z02	FRONT HOUSING GASKET, MICROPHONE SPRING PTT BUTTON REAR HOUSING RIVETED SCREWS 5-20 x 7/8 COIL CORD, MICROPHONE FELT, BAFFLE, MICROPHONE GROMMET, MIC. RUBBER SPACER, SWITCH	1 1 1 3 1 1 1 1

Exploded View, Schematic, Circuit Board Detail and Parts List for Microphone

RPD-92117-0



COMPONENT SIDE

SHOWN FROM COMPONENT SIDE

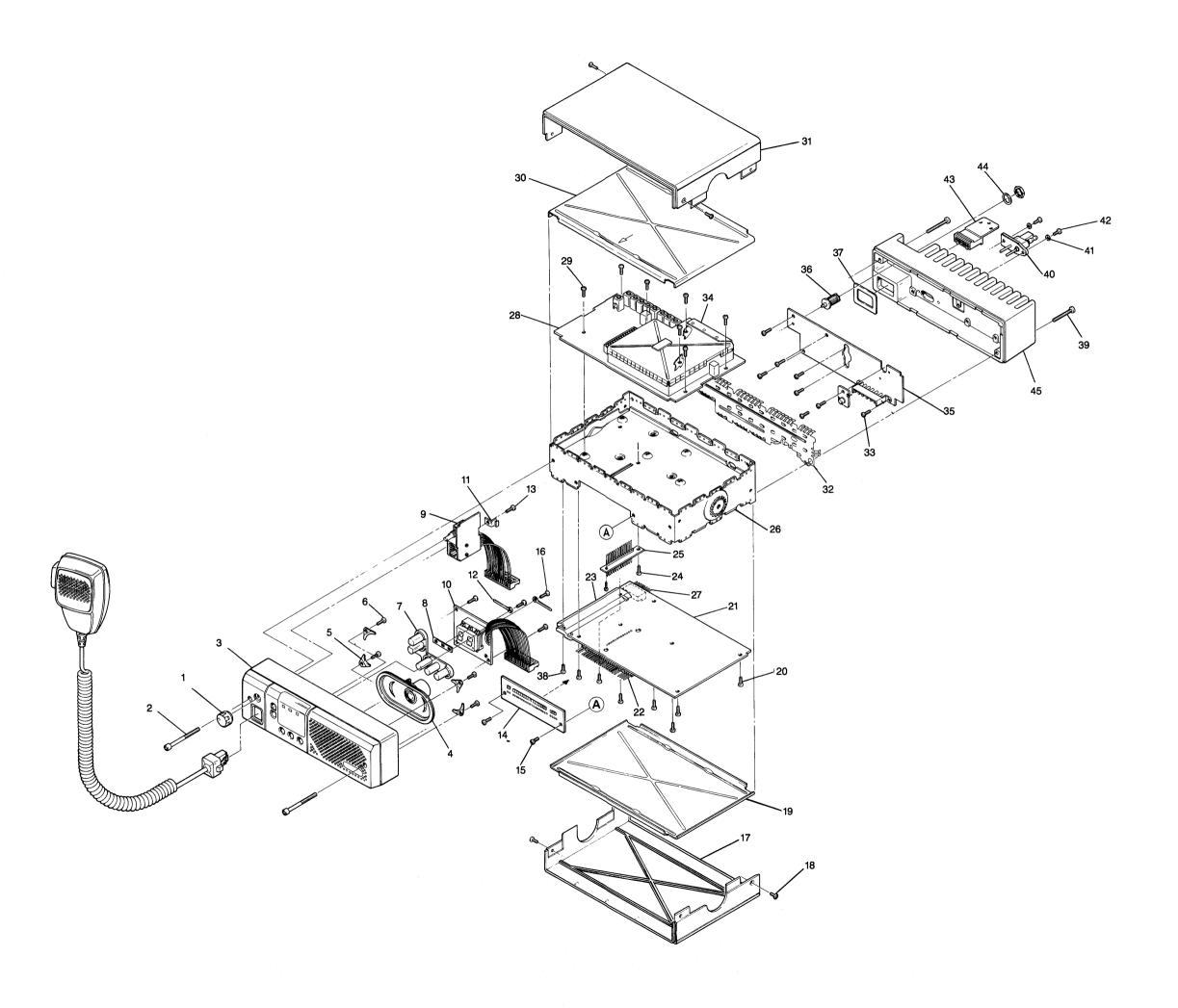
01-80704Y98 Microphone Board (Used in HMN3596A Microphone)

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Capacitors, chip	o, 5%, 50V unles:	s otherwise indicated
C1301	21-13740B35	27 pF
C1302	21-13740B73	1000 pF
C1304	23-11049J27	
C1305	08-11051A11	poly .047 uF 63V
C1306	21-13740B57	220 pF
C1307	21-13740B73	1000 pF
C1308	08-11051A14	poly .15 uF 63V
C1309	21-13740B57	
C1310	21-13740B57	220 pF
C1311	21-13740B57	220 pF
Microphone		
MK1301	50-80258E04	cartridge electret
Transistors (see	note)	
Q1302	48-80182D08	NPN; type M8208
Q1303	48-05128M19	NPN; type MMBTA13
Resistors, chip,	5%, 1/8 watt	
R1302	06-11077A82	2.2k
R1303	06-11077A74	1k
R1305	06-11077B23	100k
R1306	06-11077A44	56
R1307	06-11077B23	100k
Switch		
SW1301	40-80164S01	momentary pushbutton
Voltage regulate	ors (see note)	
VR1301	48-80140L17	zener diode 12V 5% SOT
VR1302	48-80140L17	zener diode 12V 5% SOT

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PL-921020-O

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parts list

(GM300 Mobile Radio exploded view)

REF SYMBOL	MOTOROLA PART NUMBER	DESCRIPTION	USED OD FA
1	36-80106M03	Knob, Control	
2	03-80270L01	Screw, M4 x .7 x 38 cap blk	
3	15-80516B01	Housing, Front-Panel, 8/16 freq.	1 5.90 EA
4	50-80085D03	Speaker	1
5	42-80253L01	Bracket, speaker	4
6	03-10945 A 11	Screw, M3 x 8 plastite	4
7	75-80517B01	Keypad, elastomeric, 8/16 freq.	1
8	32-80039M01	Gasket, LED	1
9	HLN8071A	Vol/Mic. cable assembly	1
10	HLN8075A	Display PCB assembly, 8/16 freq.	1 1
11	07-80037M01	Bracket, PCB retainer	1
12	29-00129883	Lug	1 1
13	03-10945A11	Screw, M3 x 8 plastite	1 1
14	01-80704Y83	Front Panel Filter PCB	
15	03-10943M09	Screw, M3 x 6	209 EA
16	03-10945A11	Screw, M3 x 8 plastite	
r 17	15-80127L01	Cover, housing	1 9.46 EA E
18	03-10943R55	Screw, M3 x 8	4
19	26-80498B01	Shield, chassis	
20	03-10943M09	Screw, M3 x 6	6 SAM
21	****	Logic Bd. (See model chart)	
22	28-80600B01	Connector, 27 pin, J8 & J9	1
23	26-80497B01	Heatsink, logic bd	1
24	03-10943M09	Screw, M3 x 6	2
25	01-80605B01	Feed-thru assembly, RF/Logic	1 1
26	27-80496B01	Chassis	1 1
27	28-80923V01	Connector, 16 pin	1
28	به در چید بر سن ها دان ۵ قات تا ۵ قات	RF Bd. (See model chart)	1
29	03-10943M09	Screw, M3 x 6	7
30	26-80498B01	Shield, chassis	
5 31	15-80127L01	Cover, housing	1 9.46EA <
32	26-80223M07	Shield, PA	
33	03-10943M10	Screw, M3 x 8	8
34	26-80229L03	Shield, VCO	1 1
35		(Part of P.A. assembly)	
36	09-80131M01	Antenna connector, mini UHF	1
37	32-80014N03	Gasket, accessory conn.	
38	03-10943M10	Screw, M3 x 8	2
39	03-80271L01	Screw, M4 x 27	2
40	09-80255E01	Power connector	
41	04-05587G01	Washer, power conn.	
42	03-10943M11	Screw, M3 x 10	2
43	01-80701Y58	Connector assembly	
44	04-80943V01	Lock-washer, ant.conn.	
45	26-80124L01	Heatsink, P.A.	

Exploded Mechanical View and Parts List for GM300 Mobile Radios

(PAGE 66 IS BLANK)

HLD8029A RF Board, 146-174 MHz, 12.5 kHz (N) HLD8031A RF Board, 146-174 MHz, 25 kHz (W)

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poly .022 uF 63V

HLD8029A RF Board, 146-174 MHz, 12.5 kHz (N) HLD8031A RF Board, 146-174 MHz, 25 kHz (W)			
REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	
Capacitor, chip	o, 5%, 50V unless	otherwise indicated.	
C1 C2	21-13740B30	16 pF	
C2 C3	21-13740B38 21-13740B36	36 pF 30 pF	
C4	21-13740B30	16 pF	
C5	04 40740040	not used	
C6 C7	21-13740B13 21-13740B13	3.3 +/25 pF 3.3 +/25 pF	
C8	21-13740B25	10 pF	
C9	21-13740B37	33 pF	
C10 C11	21-13740B38 21-13740B33	36 pF 22 pF	
C12	21-13740B65	470 pF	
C13	21-13740B32	20 pF	
C14 C15	21-13740B45 21-13740B43	68 pF 56 pF	
C16	21-13740B34	24 pF	
C17	21-13740B42	51 pF	
C18 C19	21-13740B27 21-13740B65	12 pF	
C20	21-13740B05 21-11032B15	470 pF .22 uF +80/-20%	
C21	21-11032B15		
C22 C23	21-13741B45	.01 uF	
C51	21-13741B45 21-13740B35	.01 uF 27 pF	
C52	21-13740B35	27 pF	
C53	21-13740B18	5.1 +/25 pF	
C54 C55	21-13740B47 21-13741B45	82 pF .01 uF	
Č56	21-13741B45	.01 uF	
C57	21-13740B29	15 pF	
C58 C59	21-13740B25	10 pF	
C60	21-13740B29 21-13741B45	15 pF .01 uF	
C61	21-13741B45	.01 uF	
C65	21-11032B15	.22 uF +80/-20%	
C66 C67	21-13741B45 23-13749C39	.01 uF tantalum 10 uF 10% 20V	
C68	21-13740B29	15 pF	
C69	21-13740B39	39 pF	
C70 C71	21-13740B29 21-11032B15	15 pF .22 uF +80/-20%	
C72	21-11032B15	.22 uF +80/-20%	
C73	23-13749C39	tantalum 10 uF 10% 20V	
C74 C75	23-11048B13		
C76	21-13741B69 23-11048B05	.1 uF lytic 1 uF 20% 50V	
C77	21-11032B15	.22 uF +80/-20%	
C78	21-11032B15	.22 uF +80/-20%	
C79 C80	21-13741B29 21-11032B15	.0022 uF .22 uF + 80/-20%	
C81	21-13740B55	180 pF	
C82	21-11032B15	.22 uF +80/-20%	
C83 C84	21-11032B15	.22 uF +80/-20%	
C85	21-13740B09 21-13740B25	2.2 +/25 pF 10 pF	
C86		not used	
C87	21-13741B45	.01 uF	
C88 C89	21-11032B15	.22 uF +80/-20% not used	
C101	23-11048B13	lytic 10 uF 20% 16V	
C102	08-11051A13	poly .1 uF 63V	
C103 C104	21-13741B45	.01 uF	
C104	21-13741B45 23-11048B13	.01 uF lytic 10 uF 20% 16V	
C106	21-13740B29	15 pF	
C107	21-13741B69	.1 uF	
C108 C109	21-13741B69 08-11051A13	.1 uF poly .1 uF 63V	
C110	08-11051A19	poly 1 uF 63V	
C111	08-11051A09	poly .022 uF 63V	

01 10741 B60	not used
21-13741B69 21-13740B73	.1 uF 1000 pF
21-13741B45	.01 uF
21-13740B73	1000 pF
21-13740B73	1000 pF
21-13740B31	18 pF
21-13740B73 21-13740B73	1000 pF 1000 pF
21-13740B29	15 pF
21-13740B49	100 pF
	not used
21-13740B73	1000 pF
21-13740B47 21-13740B25	82 pF
21-13741B45	10 pF .01 uF
21-13740B55	180 pF
21-13740B55	180 pF
21-13741B45	.01 uF
08-11051A15 21-13740B35	poly .22 uF 63V 27 pF
21-13740B29	15 pF
21-13740B73	1000 pF
23-11048B13	lytic 10 uF 20% 16V
08-11051A17	poly .47 uF 63V
21-13741B69	,1 uF 1000 ∞F
21-13740B73 21-13740B49	1000 pF 100 pF
21-13740B49	100 pF
21-13740B49	100 pF
	not used
21-13740B73	1000 pF
21-13741B69 23-11048B13	.1 uF lytic 10 uF 20% 16V
21-13740B73	1000 pF
21-13740B27	12 pF
21-13740B29	15 pF
21-13740B27	12 pF
21-13740B23 21-13740B73	8.2 +/25 pF
21-13740B73	1000 pF 1000 pF
21-13740B73	1000 pF
21-13740B19	5.6 +/25 pF
21-13740B13	3.3 +/25 pF
21-13740B73	1000 pF
21-13740B47	82 pF not used
21-13741B45	.01 uF
21-13740B13	3.3 +/25 pF
21-13740B73	1000 pF
21-13740B05	1.5 +/25 pF
21-13741B45 21-13740B13	.01 uF 3.3 +/25 pF
21-13740B73	1000 pF
21-13740B73	1000 pF
21-13740B80	2200 pF
21-13740B05	1.5 +/25 pF
21-13740B05 21-13740B38	1.5 +/25 pF
21-13/40000	36 pF not used
21-13740B40	43 pF
21-13740B29	15 pF
21-13740B23	8.2 +/25 pF
21-13740B23	8.2 +/25 pF
21-13740B73 21-13740B73	1000 pF 1000 pF
21-13740B73	1000 pF
21-13740B13	3.3 +/25 pF
21-13740B19	5.6 +/25 pF
21-13740B73	1000 pF
21-13740B47	82 pF
21-13740B73	not used 1000 pF
21-13740B73 21-13740B25	10 pF
21-13740B73	1000 pF
21-13740B01	1 +/25 pF
21-13741B45	.01 uF
21-13740B17	4.7 +/25 pF

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C112 C113 C114

C115 C116

C117 C118

C118 C119 C120 C121 C122 C127 C151 C152 C152

C153 C154 C155 C156

C157 C158 C159 C160 C161

C162

C163 C164 C165 C166 C167 C168 C169 C169 C176

C177 C201 C205 C206 C207

C208 C209 C210 C211 C212 C213 C214 C215 C216 C217 C218 C219 C220 C221

C222

C222 C223 C224 C225 C228 C229

C230

C231 C232 C233 C234 C235

C236 C237 C238 C239 C240 C241 C242 C243 C244 C245 C246 C247 C248 C249

C250

RF 146-174 MHz

C251	21-13740B73	1000 pF	L59	24-80164M03	tunable .7 uH E716
C252	21-13740B73				
	21-13/400/3	1000 pF	L60	24-62587E69	chip 1.2 uH 5%
C253	_	not used	L61	25-80000E01	tunable 455 kHz with cap
C256	21-13741B45	.01 uF	L101	24-62587E69	chip 1.2 uH 5%
C258	08-11051A08	poly .015 uF 63V	L102	24-62587E47	chip 33 nH 5%
C276	21-13741B45	.01 uF	L103		· · · ·
C277	23-11048B19			24-62587E76	chip 4.7 uH 5%
		lytic 47 uF 20% 16V	L151	24-80299D01	tunable 17-3/4 turns
C278	23-11048B19	lytic 47 uF 20% 16V	L152	24-11087A35	chip 5.6 uH 10%
C301	21-13741B45	.01 uF	L202	24-80148M05	tunable 3-1/2 turns
C302		not used	L203	24-62587E69	chip 1.2 uH 5%
C303	21-13740B65	470 pF	L204	24-62587E47	chip 33 nH 5%
C304		not used	L205		
C305		not used		24-62587E69	chip 1.2 uH 5%
			L206	24-62587E69	chip 1.2 uH 5%
C306		notused	L207	24-62587E69	chip 1.2 uH 5%
C307		not used	L208	24-62587E47	chip 33 nH 5%
C308		not used	L209	24-62587E56	chip .18 uH 5%
C309		not used	L210	24-62587E52	chip 82 nH 5%
C310		not used	L211		
C311				24-62587E69	chip 1.2 uH 5%
		not used	L213	24-80148M08	tunable 4-1/2 turns
C312		not used	L214	24-62587E69	chip 1.2 uH 5%
C313		not used	L215	24-62587E52	chip 82 nH 5%
			L216	24-62587E69	chip 1.2 uH 5%
Diodes (see not	ie)		L217		
	-,			24-62587E69	chip 1.2 uH 5%
CR2	10 00104000	dual Sahatting COT	L218	24-62587E69	chip 1.2 uH 5%
	48-80154K03	dual Schottky SOT	L219	24-62587E47	chip 33 nH 5%
CR5	48-80142L01	silicon PIN SOT MMBV3401	L220	24-62587E56	chip .18 uH 5%
CR51	48-05129M76	silicon SOT	L221	24-62587E54	chip .12 uH 5%
CR52	48-05129M76	silicon SOT	L222	24-62587E69	chip 1.2 uH 5%
CR101	48-05129M76	silicon SOT	L301		
CR102	48-05129M76	silicon SOT	1301	24-84657R01	ferrite bead
CR151	48-80006E10	silicon varactor SOT	Transistors (see	note)	
CR152	48-80006E10	silicon varactor SOT			
CR153	48-84336R03	dual silicon SOT MMBD7000	Q1	48-80950X01	NPN; type M50X01
CR202	48-80006E11	silicon varactor SOT	Q2	48-05128M67	PNP; type MMBT3906
CR203	48-80006E11	silicon varactor SOT			
			Q5	48-05128M67	PNP; type MMBT3906
CR204	48-80006E11	silicon varactor SOT	Q6	48-80214G02	NPN; type MMBT3904
CR205	48-80006E11	silicon varactor SOT	Q51	48-05128M66	field effect; type MMBFU310
CR206	48-80154K03	dual Schottky SOT	Q52	48-05128M66	field effect; type MMBFU310
CR209	48-80006E10	silicon varactor SOT	Q53	48-80214G02	NPN; type MMBT3904
CR210	48-80006E11	silicon varactor SOT			
CR211			Q101	48-05128M67	PNP; type MMBT3906
	48-80006E11	silicon varactor SOT	Q102	48-80182D20	NPN; type M82D20/M9987
CR212	48-80006E11	silicon varactor SOT	Q103	48-80182D20	NPN; type M82D20/M9987
CR213	48-80006E11	silicon varactor SOT	Q104	48-05128M67	PNP; type MMBT3906
CR214	48-80154K03	dual Schottky SOT	Q105	48-80214G02	NPN; type MMBT3904
			Q106	48-80214G02	
Filters			-		NPN; type MMBT3904
1 11015			Q107	48-11043C19	NPN; type M43C19/M9658
	A4 AAAA77774		Q151	48-11043C19	NPN; type M43C19/M9658
FL51(N)	91-80097D04	455 kHz 6F	Q152	48-11043C06	PNP; type M43C06/M9643
FL51(W)	91-80097D06	455 kHz 6D	Q203	48-05128M66	field effect; type MMBFU310
FL52(N)	91-80098D04	455 kHz 4F	Q204	48-11043C19	NPN; type M43C19/M9658
FL52(Ŵ)	91-80098D06	455 kHz 4D	Q205	48-11043C19	NPN; type M43C19/M9658
(-)					
Connector room	ntoolo		Q206	48-05128M66	field effect; type MMBFU310
Connector, rece	spracie		Q207	48-11043C19	NPN; type M43C19/M9658
			Q208	48-11043C19	NPN; type M43C19/M9658
J4	09-80135M01	coaxial (RX)	Q276	48-80214G02	NPN; type MMBT3904
J5	09-80135M01	coaxial (TX)	Q277	48-05128M67	PNP; type MMBT3906
J6	09-80130M03	14-pin, RF board	Q278	48-05128M67	PNP; type MMBT3906
		· · Fuller seens			
Coils			Q279	48-05128M67	PNP; type MMBT3906
00113					
14	04 00507554		Resistors, chip,	5%, 1/10 watt, u	nless otherwise indicated.
L1	24-62587E51	chip 68 nH 5%			
12	24-62587E51	chip 68 nH 5%	R1	06-11077A30	15
L3	24-62587E51	chip 68 nH 5%	R2		not used
L4	24-62587E51	chip 68 nH 5%	R3	06 11077866	
L5	24-62587E51	chip 68 nH 5%		06-11077A66	470
L6			R4	06-11077A84	2.7k
	24-62587E51	chip 68 nH 5%	R5	06-11077A56	180
L7	24-62587E51	chip 68 nH 5%	R6	06-11077A98	10k
L8	24-62587E69	chip 1.2 uH 5%	R7	06-11077A96	8.2k
L10	24-62587E69	chip 1.2 uH 5%	R8	06-11077A98	10k
L11	24-62587E51	chip 68 nH 5%			
L51			R9	06-11077A90	4.7k
	24-62587E61	chip .47 uH 5%	R10	06-11077B07	22k
L52	24-62587E61	chip .47 uH 5%	R11	06-11077B15	47k
L53	24-62587E61	chip .47 uH 5%	R12	06-11077A50	100
L54	24-62587E76	chip 4.7 uH 5%	R13	06-11077A68	560
L55	24-80164M02	tunable .7 uH E715			
			R51	06-11077A43	51
L56	24-80164M01	tunahle 7 µH F712	DEA		150
L56 157	24-80164M01	tunable .7 uH E713	R52	06-11077A54	150
L57	24-80164M04	tunable .7 uH E714	R53	06-11077A88	3.9k

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R56	06-11077B45	820k
R57	06-11077A72	820
R58	06-11077B23	100k
R59	06-11077B27	150k
R60	18-05500L08	variable 22k
R61(N) R61(W)	06-11077B07	22k
R62(N)	06-11077B19 06-11077A26	68k 10
R62(W)	06-11077B09	27k
R63`	06-11077B21	82k
R102	06-11077A62	330
R103 R104	06-11077A98	10k
R104	06-11077A98 06-11077B11	10k 33k
R106	06-11077A74	1k
R107	06-11077A78	1.5k
R108	06-11077A26	10
R109 R110	06-11077A26	10 15k
R110	06-11077B03 06-11077A72	15k 820
R112	06-11077A86	3.3k
R113	06-11077A74	1k
R114	06-11077A72	820
R115	06-11077A70	680
R116 R118	06-11077A92 06-11077A70	5.6k 680
R119	06-11077A90	4.7k
R120	06-11077A88	3.9k
R121	06-11077A88	3.9k
R122	06-11077A43	51
R123 R124	06-11077A50	100 2 7k
R124	06-11077A84 06-11077A72	2.7k 820
R151	06-11077B15	47k
R152	06-11077B11	33k
R153	06-11077B15	47k
R154 R155	06-11077A34	22
R155	06-11077A98 06-11077B03	10k 15k
R157	06-11077A78	1.5k
R158	06-11077A74	1k
R159	06-11077A74	1k
R160 R161	06 11077400	not used
R162	06-11077A98	10k not used
R163(N)	06-11077B11	33k
R163(Ŵ)	06-11077A50	100
R164	18-05500L08	variable 22k
R165(N)	06-11077A98	10k
R165(W) R176	06-11077B03 06-11077G26	15k 22.6k 1%
R177	06-11077G18	18.7k 1%
R178	06-11077F91	10.0k 1%
R179	06-11077F91	10.0k 1%
R180 R181	06-11077G52 06-11077F91	42.2k 1%
R182	06-11077G28	10.0k 1% 23.7k 1%
R207	06-11077A44	56
R208	06-11077A44	56
R209	06-11077A50	100
R210 R211	06-11077A84	2.7k
R212	06-11077A98 06-11077A84	10k 2.7k
R213	06-11077A72	820
R214	06-11077A50	100
R215	06-11077A84	2.7k
R216	06-11077A72	820
R217 R218	06-11077A42 06-11077A54	47 150
R219	06-11077A34	39
R220	06-11077A54	150
R222	06-11077A88	3.9k
R223(N)	06-11077A92	5.6k
R223(W) R224	06-11077A66 06-11077B23	470 100k
R225(N)	06-11077A92	5.6k
R225(W)	06-11077B01	12k
R226	06-11077A44	56

R227	06-11077A44	56
R228	06-11077A50	100
R229	06-11077A84	2.7k
R230	06-11077A98	10k
R231	06-11077A84	2.7k
R232	06-11077A72	820
R233	06-11077A50	100
R234	06-11077A84	2.7k
R235		
	06-11077A72	820
R236	06-11077A42	47
R237	06-11077A62	330
R238	06-11077A32	18
R239	06-11077A62	330
R241	06-11077B23	100k
R276	06-11077A98	10k
R277	06-11077A60	270
R278	06-11077A26	-
		10
R279	06-11077A90	4.7k
R280	06-11077A98	10k
R281	06-11077A90	4.7k
R301	06-11077A74	1k
R302	18-05500L08	variable 22k
R303	06-11077B01	12k
Transformers		
T1	25-80163M02	balun
T2	25-80163M02	
12	20-001001002	Daidh
Integrated circu	its and modules	(see note)
U1	48-80174R01	quad Schottky ring SOIC
U1 U51	48-80174R01 51-05479G05	quad Schottky ring SOIC receiver system
•••		receiver system 14, 97
U51 U101	51-05479G05 51-84704M75	receiver system 14.97 synthesizer
U51 U101 U102	51-05479G05 51-84704M75 51-84810F66	receiver system /4.87 synthesizer prescaler
U51 U101	51-05479G05 51-84704M75	receiver system 14.87 synthesizer
U51 U101 U102 U176	51-05479G05 51-84704M75 51-84810F66 51-80932W01	receiver system 14.87 synthesizer prescaler
U51 U101 U102 U176 Voltage regulate	51-05479G05 51-84704M75 51-84810F66 51-80932W01	receiver system 14.87 synthesizer prescaler
U51 U101 U102 U176	51-05479G05 51-84704M75 51-84810F66 51-80932W01	receiver system 74.87 synthesizer prescaler dual op-amp
U51 U101 U102 U176 Voltage regulato	51-05479G05 51-84704M75 51-84810F66 51-80932W01 prs (see note)	receiver system 74.87 synthesizer prescaler dual op-amp
U51 U101 U102 U176 Voltage regulate	51-05479G05 51-84704M75 51-84810F66 51-80932W01 prs (see note)	receiver system 74.87 synthesizer prescaler dual op-amp
U51 U101 U102 U176 Voltage regulato VR176 Crystals	51-05479G05 51-84704M75 51-84810F66 51-80932W01 prs (see note) 48-82256C11	receiver system 74. 27 synthesizer prescaler dual op-amp zener diode 10V 5%
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51 (N)	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03	receiver system 74. 27 synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(W)	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M03	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(W) Y52	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-80008K02	receiver system / 4. 87 synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51 (N) Y51 (W)	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M03	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M03 91-80022M02 48-80008K02 48-80174D05	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(W) Y52	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M03 91-80022M02 48-80008K02 48-80174D05	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-8008K02 48-80174D05 items	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-8008K02 48-80174D05 items 26-80097M01	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151)
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M02 48-80022M02 48-8008K02 48-8008K02 48-80174D05 items 26-80097M01 26-80098M01	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used)
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-8008K02 48-80174D05 items 26-80097M01	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-8008K02 48-80174D05 items 26-80097M01 26-80228L01	receiver system / 4. ? synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5)
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-8008K02 48-80174D05 items 26-80097M01 26-80228L01 26-80229L03	receiver system / 4. ? synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5) shield VCO frame
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-80174D05 items 26-80097M01 26-80098M01 26-80228L01 26-80229L03 75-05295B02	receiver system / 4. ?? synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5) shield VCO frame insulator (for Y151)
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-8008K02 48-80174D05 items 26-80097M01 26-80228L01 26-80229L03	receiver system 14. ? synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5) shield VCO frame insulator (for Y151) insulator (3 used, for
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-80174D05 items 26-80097M01 26-80098M01 26-80228L01 26-80229L03 75-05295B02	receiver system / 4. ?? synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5) shield VCO frame insulator (for Y151)
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(N) Y52 Y151	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-80174D05 items 26-80097M01 26-80098M01 26-80228L01 26-80229L03 75-05295B02	receiver system / 4. ?? synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5) shield VCO frame insulator (for Y151) insulator (3 used, for
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y51(W) Y52 Y151 Non-referenced	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M02 48-80022M02 48-80022M02 48-80022M02 48-8008K02 48-80174D05 items 26-80097M01 26-80097M01 26-80228L01 26-80229L03 75-05295B02 75-05295B05	receiver system synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5) shield VCO frame insulator (for Y151) insulator (3 used, for Y51A/B, Y52)
U51 U101 U102 U176 Voltage regulato VR176 Crystals Y51(N) Y52 Y151 Non-referenced	51-05479G05 51-84704M75 51-84810F66 51-80932W01 ors (see note) 48-82256C11 91-80022M03 91-80022M02 48-8008K02 48-8008K02 48-80174D05 items 26-80097M01 26-80228L01 26-80228L01 26-80229L03 75-05295B02 75-05295B05	receiver system / 4. ?? synthesizer prescaler dual op-amp zener diode 10V 5% filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz 44.645 MHz 14.4 MHz shield coil can (for L151) shield coil can (10 used) shield can (2 used, for J4 and J5) shield VCO frame insulator (for Y151) insulator (3 used, for

12/14/92

PL-921009-A

HLE8230A RF Board, 403-433 MHz, 12.5 kHz (N) C101 HLE8229A RF Board, 403-433 MHz, 25 kHz (W) C102 C102 C102				
REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	C103 C104 C105	
Capacitor, chip,	5%, 50V unless	otherwise indicated.	C106 C107 C108	
C1	21-13740G27	8.2 +/1 pF	C109	
C2	21-13740G27	8.2 +/1 pF	C110	
C3 C4	21-13740G17	3.9 +/1 pF	C111	
C5	21-13740G30 21-13740G21	11 pF 2% 5.6 +/1 pF	C112 C113	
Č6	21-13740G19	4.7 +/1 pF	C114	
C7	21-13740G27	8.2 +/1 pF	C115	
C8	21-13740G17	3.9 +/1 pF	C116	
C9 C10	21-13740G21	5.6 +/1 pF	C117	
C10	21-13740G27 21-13740G32	8.2 +/1 pF 13 pF 2%	C118 C119	
C12	21-13740B45	68 pF	C120	
C13	21-13740G27	8.2 +/1 pF	C121	
C14		not used	C122	
C15 C16	21-13740G13	2.7 +/1 pF	C123	
C16 C17	21-13740G20 21-13740G37	5.1 +/1 pF 22 pF 2%	C124 C125	
C18	21-13740G19	4.7 +/1 pF	C125	
C19	21-13740G16	3.6 +/1 pF	C127	
C20	21-13740G36	20 pF 2%	C128	
C21 C22	21-13740G18	4.3 +/1 pF	C129	
C23	21-13740G17 21-13740G35	3.9 +/1 pF 18 pF 2%	C130 C131	
C24	21-13740G20	5.1 +/1 pF	C132	
C25	21-13740G29	10 pF 2%	C133	
C26	21-13740G31	12 pF 2%	C151	
C27 C28	21-11032B15	.22 uF +80/-20%	C152	
C29	21-13740B45	68 pF not used	C153 C154	
C30	21-13740B35	27 pF	C155	
C33	21-13741B45	.01 uF	C156	
C51	21-13740B55	180 pF	C157	
C52 C53	21-13740B27 21-13740B47	12 pF 82 pF	C158	
C54	21-13740B61	330 pF	C159 C160	
C55	21-13741B45	.01 uF	C161	
C56	21-13741B45	.01 uF	C162	
C57(N)	21-13740B29	15 pF	C163	
C57(W) C58(N)	21-13740B31 21-13740B25	18 pF 10 pF	C164 C165	
C58(W)	21-13740B27	12 pF	C105	
C59(N)	21-13740B29	15 pF	C201	
C59(W)	21-13740B31	18 pF	C205	
C60	21-13741B45	.01 uF	C206	
C61 C65	21-13741B45 21-11032B15	.01 uF .22 uF +80/-20%	C207 C208	
C66	21-13741B45	.01 uF	C208	
C67	23-13749C39	tantalum 10 uF 10% 20V	C210	
C68	21-13740B29	15 pF	C212	
C69 C70	21-13740B39 21-13740B29	39 pF 15 pF	C213	
C71	21-13740B29 21-11032B15	.22 uF +80/-20%	C214 C215	
C72	21-11032B15	.22 uF +80/-20%	C216	
C73	23-13749C39	tantalum 10 uF 10% 20V	C218	
C74 C75	23-11048B13	lytic 10 uF 20% 16V	C220	
C76	21-13741B69 23-11048B05	.1 uF lytic 1 uF 20% 50V	C221 C222	
C77	21-11032B15	.22 uF +80/-20%	C224	
C78	21-11032B15	.22 uF +80/-20%	C225	
C79	21-13741B29	.0022 uF	C228	
C80 C81	21-11032B15	.22 uF +80/-20%	C230	
C82	21-13740B55 21-11032B15	180 pF .22 uF +80/-20%	C231 C233	
C83	21-11032B15	.22 uF +80/-20%	C234	
C84	21-13740B09	2.2 +/25 pF	C235	
C85 C86	21-13740B25	10 pF	C236	
C86 C87	21-11032B15 21-11032B15	.22 uF +80/-20% .22 uF +80/-20%	C237 C239	
C90	21-13741B45	.01 uF	C239	
C91	21-13740B49	100 pF	C242	

23-11048B13 08-11051A13 21-11032B15 21-13741B45 23-11048B13 21-13740B29 21-13741B69 21-13741B69 08-11051A13 08-11051A19 08-11051A09 08-11051A09 08-11051A01 21-13741B45 21-13740B49	lytic 10 uF 20% 16V poly .1 uF 63V .22 uF + 80/-20% .01 uF lytic 10 uF 20% 16V 15 pF .1 uF .1 uF .1 uF poly .1 uF 63V poly .022 uF 63V poly .001 uF 63V .01 uF 68 pF .01 uF 100 pF not used
21-13740B45 21-13740B45 21-13740B19 21-13740B49 21-13740B45 21-13740B25 21-13740B73	not used 68 pF 68 pF 5.6 +/25 pF 100 pF 68 pF 10 pF 1000 pF
21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-13740B49 21-13740B47 21-13740B47 21-13740B25 21-13740B55 21-13740B55 21-13740B55	not used .22 uF + 80/-20% .22 uF + 80/-20% 100 pF 1000 pF 1000 pF 10 pF .01 uF 180 pF 180 pF
08-11051A15 21-13740B35 21-13740B73 23-11048B13 08-11051A17 21-11032B15 21-13740B73 23-11048B13 21-13740B73 23-11048B13 21-13740B49 21-13740B16 21-13740B16 21-13740B19 21-13740B19 21-13740B19 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B18 21-13740B18 21-13740B18 21-13740B18 21-13740B18 21-13740B22 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49	poly .22 uF 63V 27 pF 15 pF 1000 pF lytic 10 uF 20% 16V poly .47 uF 63V .22 uF +80/-20% .0033 uF 1000 pF lytic 10 uF 20% 16V 100 pF 4.3 +/.25 pF 3.6 +/.25 pF 3.6 +/.25 pF 3.6 +/.25 pF 100 pF 1 +/.25 pF 100 pF 1 +/.25 pF 100 pF 15 +/.25 pF 1.5 +/.25 pF 1.5 +/.25 pF 5.1 +/.25 pF 5.1 +/.25 pF 7.5 +/.25 pF 7.5 +/.25 pF 100 pF 100 pF 100 pF 1.5 +/.25 pF $1.5 +/.25$ pF 1.5 +/.25 pF $1.5 +/.25$ pF $1.5 +/.25 +/.25$ pF $1.5 +/.25 +/$

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C243 C244	21-13740B13 21-11032B15	3.3 +/25 pF .22 uF +80/-20%
C245	21-13740B45	68 pF
C247	21-13740B23	8.2 +/25 pF
C248	21-13740B01	1 +/25 pF
C249	21-13740B49	100 pF
C251	21-13740B45	68 pF
C252 C253	21-13740B49 21-13740B45	100 pF
C255	21-13/40043	68 pF not used
-C256	21-13741B45	.01 uF
C257		not used
C258	08-11051A07	poly .01 uF 63V
C259	21-13740B23	8.2 +/25 pF
C260		not used
C261	21-13741B45	.01 uF
C262	_	not used
C263	21-13740B19	5.6 +/25 pF
C264		not used
C265		not used
C266	21-13740B03	1.2 +/25 pF
C267	21-13740B01	1 +/25 pF
C268 C269	21-13740B13 21-13740B09	3.3 +/25 pF
C209 C270	21-13/40009	2.2 +/25 pF not used
C271		not used
C272	21-13740B45	68 pF
C273		not used
C274	21-13740B49	100 pF
C275	21-13741B45	.01 uF
C276	21-13741B45	.01 uF
C277	23-11048B19	lytic 47 uF 20% 16V
C278	23-11048B19	lytic 47 uF 20% 16V
C279	21-13740B45	68 pF
C280	21-11032B15	.22 uF +80/-20%
C301	21-13741B45	.01 uF
C302	21-13740B45	68 pF
C303 C304	21-13740B45 21-13740B45	68 pF
C305	21-13740B45	68 pF 68 pF
C306	21-13740B45	68 pF
C307	21-13740B45	68 pF
C308	21-13740B45	68 pF
C309	21-13740B45	68 pF
C310	21-13740B45	68 pF
C311	21-13740B45	68 pF
C312	21-13740B45	68 pF
C313	21-13740B45	68 pF
C314	21-13740B49	100 pF
Diodes (see no	te)	
CR2	48-80154K03	dual Schottky SOT
CR3	48-80939T01	Schottky SOT
CR5	48-80142L01	silicon PIN SOT MM
CR51	48-05129M76	silicon SOT
CR52	48-05129M76	silicon SOT
CR101	48-05129M76	silicon SOT

48-80154K03 48-80939T01 48-80142L01 48-05129M76 48-05129M76 48-05129M76 48-05129M76 48-80006E10 48-80006E10 48-84006E10 48-84336R03 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-80939T01	dual Schottky SOT Schottky SOT silicon PIN SOT MMBV3401 silicon SOT silicon SOT silicon SOT silicon varactor SOT silicon varactor SOT dual silicon SOT MMBD7000 silicon varactor SOT dual Schottky SOT silicon varactor SOT
91-80097D04 91-80097D06 91-80098D04 91-80098D06	455 kHz 6F 455 kHz 6D 455 kHz 4F 455 kHz 4D
	48-80939T01 48-80142L01 48-05129M76 48-05129M76 48-05129M76 48-05129M76 48-80006E10 48-80006E10 48-84336R03 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-84534N02 48-80939T01 91-80097D04 91-80097D06 91-80097D06

Connector, receptacle			
J4 J5 J6	09-80135M01 09-80135M01 09-80130M03	coaxial (RX) coaxial (TX) 14-pin, RF board	
Jumpers			
JU1 JU2 JU3 JU51 JU52 JU201 JU201	06-11077A01 06-11077A01 06-11077A01 06-11077A01 06-11077A01 06-11077A01	jumper jumper jumper jumper not used not used	
Coils			
$ \begin{array}{c} L1 \\ L2 \\ L3 \\ L4 \\ L5 \\ L6 \\ L7 \\ L8 \\ L9 \\ L10 \\ L51 \\ L52 \\ L53 \\ L54 \\ L55 \\ L56 \\ L57 \\ L58 \\ L59 \\ L60 \\ L61 \\ L101 \\ L102 \\ L151 \\ L152 \\ L203 \\ L204 \\ L205 \\ L206 \\ L207 \\ L209 \\ L210 \\ L211 \\ L213 \\ L214 \\ L215 \\ L216 \\ L217 \\ L218 \\ L220 \\ L221 \\ \end{array} $	24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-82587N42 24-62587N42 24-62587N44 24-62587N56 24-62587N56 24-62587N56 24-80164M03 24-80164M03 24-80164M04 24-80164M03 24-80164M03 24-80287N56 24-80287N56 24-62587N57 24-1030A04 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-1030B08 24-62587N55 24-62587	4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound chip 12 nH 5% chip 18 nH 5% chip 12 nH 5% chip 12 uH 5% chip 12 uH 5% chip 1 uH 5% chip 14.7 uH 5% tunable .7 uH E713 tunable .7 uH E713 tunable .7 uH E714 chip 4.7 uH 5% tunable .7 uH E716 chip 1.2 uH 5% tunable 455 kHz with cap chip 5.6 uH 10% tunable 2-1/2 turns RED chip .15 uH 5% chip .15 uH 5% chip .22 uH 5% 2-1/2 turns GRN chip .15 uH 5% chip .21 uH 5% chip .21 uH 5% chip .22 uH 5% tunable 1-1/2 turns BRN chip .15 uH 5% chip .21/2 turns BRN chip .15 uH 5% chip .15 uH 5% chip .15 uH 5% chip .21 urns BRN chip .21 urns BRN	
L222 L223	24-62587N56	chip .18 uH 5% not used	
Transistors (see note)			
Q1 Q2 Q3 Q4 Q5 Q6 Q51 Q52 Q53 Q101 Q102 Q103 Q104	48-80950X01 48-05128M67 48-05128M67 48-05128M67 48-05128M67 48-80214G02 48-05128M66 48-80214G02 48-05128M67 48-80182D20 48-80182D20 48-05128M67	NPN; type M50X01 PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 NPN; type MMBT3904 field effect; type MMBFU310 field effect; type MMBFU310 NPN; type MMBT3904 PNP; type MMBT3906 NPN; type M82D20/M9987 NPN; type M82D20/M9987 PNP; type MMBT3906	

RF 403-433 MHz

Q105	48-80214G02	NPN; type MMBT3904	R158	06-11077A74	1k
Q106	48-80214G02	NPN; type MMBT3904	R159	06-11077A74	1k
Q107	48-11043C19	NPN; type M43C19/M9658	R161	06-11077A98	10k
Q151	48-11043C19	NPN; type M43C19/M9658	R162		not used
Q152	48-11043C06	PNP; type M43C06/M9643	R163(N)	06-11077B23	100k
Q203	48-05128M66	field effect; type MMBFU310	R163(W)	06-11077B17	56k
Q204	48-80950X01	NPN; type M50X01	R164	18-05500L08	variable 22k
Q205	48-80950X01	NPN; type M50X01	R165(N)	06-11077A98	10k
Q206	48-05128M66	field effect; type MMBFU310	R165(Ŵ)	06-11077B03	15k
Q207	48-80950X01	NPN; type M50X01	R176	06-11077G26	22.6k 1%
Q208	48-80950X01	NPN; type M50X01	R177	06-11077G18	18.7k 1%
Q276	48-80214G02	NPN; type MMBT3904	R178	06-11077F91	10.0k 1%
Q277	48-05128M67	PNP; type MMBT3906	R179	06-11077F91	10.0k 1%
Q278	48-05128M67	PNP; type MMBT3906	R180	06-11077G52	42.2k 1%
Q279	48-05128M67	PNP; type MMBT3906	R181	06-11077F91	10.0k 1%
B			R182	06-11077G28	23.7k 1%
Hesistors, chi	p, 5%, 1/10 watt, ui	nless otherwise indicated.	R207	06-11077A44	56
D4	00 44077404		R208	06-11077A38	33
R1	06-11077A84	2.7k	R209	06-11077A38	33
R2	06-11077A54	150	R210	06-11077A98	10k
R3	06-11077A60	270	R212	06-11077A84	2.7k
R4	06-11077B07	22k	R213	06-11077A72	820
R5	06-11077A95	7.5k	R214	06-11077A50	100
R6	06-11077A90	4.7k	R215	06-11077A84	2.7k
R7 R8	06-11077A98	10k	R216	06-11077A72	820
	06-11077A98	10k	R217	06-11077A50	100
R9 R10	06-11077A90	4.7k	R218	06-11077A53	130
R10	06-11077B07	22k 47k	R219	06-11077A41	43
R12	06-11077B15 06-11077A45	47k	R220	06-11077A53	130
R12	06-11077A65	62	R222	06-11077A88	3.9k
R51		430	R223	06-11077A94	6.8k
R52	06-11077A44	56 150	R224	06-11077B23	100k
R53	06-11077A54 06-11077A88	150 3.9k	R225	06-11077A88	3.9k
R54	06-11077A54		R226	06-11077A44	56
R56	06-11077B45	150 820k	R227	06-11077A38	33
R57	06-11077A72	820	R228	06-11077A38	33
R58	06-11077B23	100k	R229	06-11077A98	10k
R59	06-11077B27	150k	R231	06-11077A84	2.7k
R60	18-05500L08	variable 22k	R232 R233	06-11077A72	820
R61(N)	06-11077B07	22k		06-11077A50	100 2 7k
R61(W)	06-11077B19	68k	R234 R235	06-11077A84	2.7k
R62(N)	06-11077A26	10	R235	06-11077A72 06-11077A50	820 100
R62(W)	06-11077B09	27k	R237	06-11077A61	300
R63	06-11077B21	82k	R238	06-11077A32	18
R102	06-11077A62	330	R239	06-11077A61	300
R103	06-11077A98	10k	R240	00-110/7/101	not used
R104	06-11077A98	10k	R243	06-11077B23	100k
R105	06-11077B11	33k	R244	06-11077A74	1k
R106	06-11077A73	910	B245	06-11077A74	1k
R107	06-11077A78	1.5k	R246	06-11077B09	27k
R108	06-11077A26	10	R276	06-11077A98	10k
R109	06-11077A26	10	R277	06-11077A60	270
R110	06-11077B03	15k	R278	06-11077A26	10
R111	06-11077A54	150	R279	06-11077A90	4.7k
R112	06-11077A72	820	R280	06-11077A98	10k
R113	06-11077A58	220	R281	06-11077A90	4.7k
R114	06-11077A54	150			15k
R115			R301(N)	06-11077B03	
	06-11077A70	680	R301(W)	06-11077803 06-11077882	2.2k
R116		680 5.6k			2.2k variable 22k
R116 R118	06-11077A70 06-11077A92 06-11077A70	680 5.6k 680	R301(W)	06-11077A82	
R116 R118 R119	06-11077A70 06-11077A92 06-11077A70 06-11077A88	680 5.6k 680 3.9k	R301 (W) R302	06-11077A82 18-05500L08	variable 22k
R116 R118 R119 R120	06-11077A70 06-11077A92 06-11077A70 06-11077A88 06-11077A88	680 5.6k 680 3.9k 3.9k	R301 (W) R302	06-11077A82 18-05500L08	variable 22k
R116 R118 R119 R120 R121	06-11077A70 06-11077A92 06-11077A70 06-11077A88 06-11077A88 06-11077A84	680 5.6k 680 3.9k 3.9k 2.7k	R301 (W) R302 R303 Transformers	06-11077A82 18-05500L08 06-11077A94	variable 22k 6.8k
R116 R118 R119 R120 R121 R122	06-11077A70 06-11077A92 06-11077A70 06-11077A88 06-11077A88 06-11077A84 06-11077A88	680 5.6k 680 3.9k 3.9k 2.7k 3.9k	R301 (W) R302 R303 Transformers T1	06-11077A82 18-05500L08 06-11077A94 25-80163M02	variable 22k 6.8k balun
R116 R118 R119 R120 R121 R122 R123	06-11077A70 06-11077A92 06-11077A70 06-11077A88 06-11077A88 06-11077A84 06-11077A84 06-11077A84	680 5.6k 680 3.9k 3.9k 2.7k 3.9k 1k	R301 (W) R302 R303 Transformers	06-11077A82 18-05500L08 06-11077A94	variable 22k 6.8k
R116 R118 R119 R120 R121 R122 R123 R123 R124	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A88 06-11077A74 06-11077A78	680 5.6k 680 3.9k 2.7k 3.9k 1.5k	R301 (W) R302 R303 Transformers T1 T2	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02	variable 22k 6.8k balun balun
R116 R118 R119 R120 R121 R122 R123 R123 R124 R125	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A74 06-11077A74 06-11077A78 06-11077A78	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56	R301 (W) R302 R303 Transformers T1 T2	06-11077A82 18-05500L08 06-11077A94 25-80163M02	variable 22k 6.8k balun balun
R116 R118 R119 R120 R121 R122 R123 R123 R124 R125 R126	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A78	680 5.6k 680 3.9k 3.9k 2.7k 3.9k 1k 1.5k 56 100	R301 (W) R302 R303 Transformers T1 T2 Integrated circu	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules	variable 22k 6.8k balun balun (see note)
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A50 06-11077A84	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k	R301 (W) R302 R303 Transformers T1 T2 Integrated circa U1	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01	variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC
R116 R118 R119 R120 R121 R122 R123 R123 R124 R125 R126 R126 R127 R128	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A74 06-11077A74 06-11077A78 06-11077A78 06-11077A78 06-11077A84 06-11077A72	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820	R301 (W) R302 R303 Transformers T1 T2 Integrated circ U1 U1 U51	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05	variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R126 R127 R128 R151	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A84 06-11077A84 06-11077A84 06-11077A74 06-11077A74 06-11077A44 06-11077A40 06-11077A84 06-11077A72 06-11077A75	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k	R301 (W) R302 R303 Transformers T1 T2 Integrated circe U1 U1 U51 U101	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05 51-84704M75	variable 22k 6.8k balun (see note) quad Schottky ring SOIC receiver system synthesizer
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R151 R152	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A84 06-11077A74 06-11077A74 06-11077A74 06-11077A84 06-11077A84 06-11077B15 06-11077B11	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k	R301 (W) R302 R303 Transformers T1 T2 Integrated circa U1 U51 U101 U101 U102	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05 51-84704M75 51-83977M45	variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R125 R126 R127 R128 R151 R152 R153	06-11077A70 06-11077A92 06-11077A92 06-11077A88 06-11077A88 06-11077A84 06-11077A84 06-11077A74 06-11077A74 06-11077A74 06-11077A84 06-11077A84 06-11077A81 06-11077B15 06-11077B15	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k 47k	R301 (W) R302 R303 Transformers T1 T2 Integrated circe U1 U1 U51 U101	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05 51-84704M75	variable 22k 6.8k balun (see note) quad Schottky ring SOIC receiver system synthesizer
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R152 R153 R154	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A84 06-11077A74 06-11077A74 06-11077A74 06-11077A84 06-11077A84 06-11077A81 06-11077B15 06-11077B15 06-11077A34	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k 47k 22	R301 (W) R302 R303 Transformers T1 T2 Integrated circs U1 U51 U101 U102 U176	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05 51-84704M75 51-83977M45 51-80932W01	variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R127 R128 R151 R152 R151 R152 R153 R154 R155	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A74 06-11077A74 06-11077A74 06-11077A84 06-11077A72 06-11077A15 06-11077B15 06-11077A34 06-11077A34	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k 47k 22	R301 (W) R302 R303 Transformers T1 T2 Integrated circa U1 U51 U101 U101 U102	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05 51-84704M75 51-83977M45 51-80932W01	variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R152 R151 R152 R153 R154 R155 R156	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A84 06-11077A74 06-11077A74 06-11077A74 06-11077A84 06-11077A72 06-11077B15 06-11077B15 06-11077A98 06-11077A98 06-11077A98	680 5.6k 680 3.9k 2.7k 3.9k 1.5k 56 100 2.7k 820 47k 33k 47k 22 10k	R301 (W) R302 R303 Transformers T1 T2 Integrated circe U1 U51 U101 U102 U176 Voltage regula	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05 51-84704M75 51-83977M45 51-80932W01 tors (see note)	variable 22k 6.8k balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler dual op-amp
R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R127 R128 R151 R152 R151 R152 R153 R154 R155	06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A84 06-11077A74 06-11077A74 06-11077A74 06-11077A84 06-11077A72 06-11077A15 06-11077B15 06-11077A34 06-11077A34	680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k 47k 22	R301 (W) R302 R303 Transformers T1 T2 Integrated circs U1 U51 U101 U102 U176	06-11077A82 18-05500L08 06-11077A94 25-80163M02 25-80163M02 uits and modules 48-80174R01 51-05479G05 51-84704M75 51-83977M45 51-80932W01	variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler

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Crystals

Y51(N)	91-80022M03	filter 45.1 MHz 12.5 kHz
Y51(Ŵ)	91-80022M02	filter 45.1 MHz 25 kHz
Y52	48-80008K02	44.645 MHz
Y151	48-80174D05	14.4 MHz

Non-referenced items

26-80097M01 26-80098M01	shield coil can (for L151) shield coil can (17 used)
26-80228L01	shield can (for J4)
26-80229L03	shield VCO frame
26-80256L02	shield image
42-80957X01	ground clip
75-05295B02	insulator (for Y151)
75-05295B07	insulator (3 used, for Y51A/B, Y52)

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

12/14/92

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PL-921021-O

HLE8301A RF Board, 438-470 MHz, 12.5 kHz (N) C101 HLE8300A RF Board, 438-470 MHz, 25 kHz (W) C102			
REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	C103 C104 C105
Capacitor, chip,	5%, 50V unless	otherwise indicated.	C106 C107 C108
C1 C2	21-13740G21	5.6 +/1 pF	C109
C3	21-13740G18 21-13740G18	4.3 +/1 pF 4.3 +/1 pF	C110 C111
C4	21-13740G33	15 pF 2%	C112
C5 C6	21-13740G18 21-13740G15	4.3 +/1 pF 3.3 +/1 pF	C113 C114
Ċ7	21-13740G28	9.1 +/1 pF	C115
C8 C9	21-13740G17 21-13740G17	3.9 +/1 pF 3.9 +/1 pF	C116 C117
C10	21-13740G24	6.8 +/1 pF	C118
C11	21-13740G29	10 pF 2%	C119
C12 C13	21-13740B45 21-13740G31	68 pF 12 pF 2%	C120 C121
C14	21-13740G29	10 pF 2%	C122
C15 C16	21-13740G18 21-13740G15	4.3 +/1 pF 3.3 +/1 pF	C123 C124
C17	21-13740G31	12 pF 2%	C125
C18	21-13740G16	3.6 +/1 pF	C126
C19 C20	21-13740G16 21-13740G35	3.6 +/1 pF 18 pF 2%	C127 C128
C21	21-13740G16	3.6 +/1 pF	C129
C22 C23	21-13740G16 21-13740G33	3.6 +/1 pF 15 pF 2%	C130 C131
C24	21-13740G15	3.3 +/1 pF	C132
C25 C26	21-13740G19 21-13740G31	4.7 +/1 pF 12 pF 2%	C133 C151
C27	21-11032B15	.22 uF +80/-20%	C152
C28	21-13740B45	68 pF	C153
C29 C30	21-13740B34	not used 24 pF	C154 C155
C33		not used	C156
C51 C52	21-13740B55 21-13740B27	180 pF 12 pF	C157 C158
C53	21-13740B47	82 pF	C158
C54	21-13740B61	330 pF	C160
C55 C56	21-13741B45 21-13741B45	.01 uF .01 uF	C161 C162
C57(N)	21-13740B29	15 pF	C163
C57 (Ŵ) C58 (N)	21-13740B31 21-13740B25	18 pF 10 pF	C164 C165
C58(Ŵ)	21-13740B27	12 pF	C176
C59(N)	21-13740B29	15 pF	C201
C59(W) C60	21-13740B31 21-13741B45	18 pF .01 uF	C205 C206
C61	21-13741B45	.01 uF	C207
C65 C66	21-11032B15 21-13741B45	.22 uF +80/-20% .01 uF	C208 C209
C67	23-13749C39	tantalum 10 uF 10% 20V	C210
C68	21-13740B29	15 pF	C212
C69 C70	21-13740B39 21-13740B29	39 pF 15 pF	C213 C214
C71	21-11032B15	.22 uF + 80/-20%	C215
C72 C73	21-11032B15 23-13749C39	.22 uF +80/-20% tantalum 10 uF 10% 20V	C216 C218
C74	23-11048B13	lytic 10 uF 20% 16V	C220
C75 C76	21-13741B69 23-11048B05	.1 uF lytic 1 uF 20% 50V	C221 C222
C77	23-11048805 21-11032B15	.22 uF + 80/-20%	C222
C78	21-11032B15	.22 uF + 80/-20%	C225
C79 C80	21-13741B29 21-11032B15	.0022 uF .22 uF +80/-20%	C228 C230
C81	21-13740B55	180 pF	C231
C82 C83	21-11032B15 21-11032B15	.22 uF +80/-20% .22 uF +80/-20%	C233 C234
C84	21-11032B15 21-13740B09	2.2 +/25 pF	C234 C235
C85	21-13740B25	10 pF	C236
C86 C87	21-11032B15	not used .22 uF +80/-20%	C237 C239
C90	21-11032B15	.22 uF +80/-20%	C240
C91	21-13740B49	100 pF	C242

23-11048B13 08-11051A13 21-11032B15 21-13741B45 23-11048B13 21-13740B29 21-13741B69 21-13741B69 08-11051A13 08-11051A19 08-11051A09 08-11051A09 08-11051A09 21-13741B45 21-13740B45 21-13741B45	lytic 10 uF 20% 16V poly .1 uF 63V .22 uF + 80/-20% .01 uF lytic 10 uF 20% 16V 15 pF .1 uF .1 uF poly .1 uF 63V poly 1 uF 63V poly .022 uF 63V poly .001 uF 63V .01 uF
21-13740B49 21-13741B69 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B49 21-13740B45 21-13740B25 21-13740B73	100 pF .1 uF 68 pF 68 pF 5.6 +/25 pF 100 pF 68 pF 10 pF 1000 pF not used
21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-13740B45 21-13740B47 21-13740B47 21-13740B25 21-13740B55 21-13740B55 21-13740B55	.22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% 68 pF 1000 pF 82 pF 10 pF .01 uF 180 pF 180 pF
08-11051A15 21-13740B35 21-13740B29 21-13740B73 23-11048B13 08-11051A17 21-13741B33 21-13740B73 23-11048B13 21-13740B45	not used poly .22 uF 63V 27 pF 15 pF 1000 pF lytic 10 uF 20% 16V poly .47 uF 63V not used .0033 uF 1000 pF lytic 10 uF 20% 16V 68 pF
21-13740B11 21-13740B21 21-13740B14 21-13740B09 21-13740B49 21-13740B49 21-13740B13 21-13740B13 21-13740B49 21-13740B09 21-13740B49 21-13740B49 21-13740B23	2.7 +/25 pF 6.8 +/25 pF 3.6 +/25 pF 2.2 +/25 pF 100 pF 1 +/25 pF 3.3 +/25 pF 100 pF 2.2 +/25 pF 100 pF 8.2 +/25 pF
21-13740B13 21-13740B49 21-13740B49 21-13740B49 21-13740B01 21-13740B01 21-13740B17 21-13740B17 21-13740B17 21-13740B15 21-13740B45 21-13740B45 21-13740B45	3.3 +/25 pF 100 pF 100 pF 100 pF 100 22 uF 1 +/25 pF 4.7 +/25 pF 4.7 +/25 pF 6.8 +/25 pF 3.9 +/25 pF 68 pF 68 pF 1 +/25 pF 68 pF 1 +/25 pF 68 pF



C243 C244 C245 C247 C248 C249 C251 C252 C253 C255 C256	21-13740B09 21-11032B15 21-13740B45 21-13740B32 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13741B45	2.2 +/25 pF .22 uF + 80/-20% 68 pF 20 pF 5.6 +/25 pF 68 pF 68 pF 68 pF 68 pF not used .01 uF
C257	21-13741B45	.01 uF
C258 C259	08-11051A07 21-13740B22	poly .01 uF 63V 7.5 +/25 pF
C260 C261	21-13741B45	not used .01 uF
C262 C263 C264	21-13740B19	not used 5.6 +/25 pF not used
C265 C266	21-13740B03	not used 1.2 +/25 pF
C267 C268	21-13740B01 21-13740B09	1 +/25 pF
C269	21-13740B09 21-13740B09	2.2 +/25 pF 2.2 +/25 pF
C270 C271		not used not used
C272 C273	21-13740B45 21-13740B49	68 pF 100 pF
C274	21-13740B49	100 pF
C275 C276	21-13741B45	not used .01 uF
C277 C278	23-11048B19 23-11048B19	lytic 47 uF 20% 16V lytic 47 uF 20% 16V
C279	21-13740B45	68 pF
C280 C301	21-11032B15 21-13741B45	.22 uF +80/-20% .01 uF
C302 C303	21-13740B45 21-13740B45	68 pF 68 pF
C304	21-13740B45	68 pF
C305 C306	21-13740B45 21-13740B45	68 pF 68 pF
C307 C308	21-13740B45 21-13740B45	68 pF 68 pF
C309	21-13740B45	68 pF
C310 C311	21-13740B45 21-13740B45	68 pF 68 pF
C312 C313	21-13740B45 21-13740B45	68 pF
C314	21-13740B45 21-13740B49	68 pF 100 pF
Diodes (see	note)	
CR2 CR3	48-80154K03 48-80939T01	dual Schottky SOT Schottky SOT
CR5 CR51	48-80142L01	silicon PIN SOT MMBV3401
CR52	48-05129M76 48-05129M76	silicon SOT silicon SOT
CR101 CR102	48-05129M76 48-05129M76	silicon SOT silicon SOT
CR151	48-80006E10	silicon varactor SOT
CR152 CR153	48-80006E10 48-84336R03	silicon varactor SOT dual silicon SOT MMBD7000
CR203 CR205	48-84534N02 48-84534N02	silicon varactor SOT silicon varactor SOT
CR206	48-80154K02	dual Schottky SOT
CR209 CR211	48-84534N02 48-84534N02	silicon varactor SOT silicon varactor SOT
CR213 CR214	48-84534N02 48-80939T01	silicon varactor SOT Schottky SOT

silicon varactor SOT silicon varactor SOT Schottky SOT

455 kHz 6F 455 kHz 6D

455 kHz 4F

455 kHz 4D

91-80097D04 91-80097D06

91-80098D04

91-80098D06

Filters

FL51(N) FL51(W) FL52(N) FL52(W)

Connector, receptacie			
J4 J5 J6	09-80135M01 09-80135M01 09-80130M03	coaxial (RX) coaxial (TX) 14-pin, RF board	
Jumpers			
JU1 JU2 JU3 JU51 JU52 JU201 JU202	06-11077A01	jumper not used not used not used not used not used not used	
Coils			
$ \begin{array}{c} L1 \\ L2 \\ L3 \\ L4 \\ L5 \\ L6 \\ L7 \\ L8 \\ L9 \\ L9 \\ L10 \\ L51 \\ L52 \\ L53 \\ L54 \\ L55 \\ L56 \\ L57 \\ L58 \\ L59 \\ L60 \\ L61 \\ L101 \\ L102 \\ L151 \\ L152 \\ L202 \\ L203 \\ L205 \\ L206 \\ L207 \\ L209 \\ L205 \\ L206 \\ L207 \\ L209 \\ L211 \\ L213 \\ L214 \\ L215 \\ L216 \\ L217 \\ L218 \\ L220 \\ L221 \\ \end{array} $	24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-1030B04 24-11030B04 24-11030B04 24-62587N56 24-62587N56 24-62587N56 24-80164M02 24-80164M02 24-80164M03 24-62587N76 24-80164M03 24-62587N56 24-62587N55 24-62587N54 24-62587N54 24-62587N54 24-62587N54 24-62587N54 24-62587N54 24-62587N55 24-62587N54 24-62587N54 24-62587N54 24-62587N54 24-62587N54 24-62587N54 24-1030B08	4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 1-1/2 turns YEL 1-1/2 turns YEL chip .12 uH 5% 7-1/2 turns YEL chip .12 uH 5% 7-1/2 turns YEL chip .13 uH 5% chip 4.7 uH 5% tunable .7 uH E713 tunable .7 uH E713 tunable .7 uH E714 chip 4.7 uH 5% tunable .7 uH E716 chip 1.2 uH 5% tunable 455 kHz with cap chip .18 uH 5% chip 33 nH 5% tunable 17-3/4 turns chip 5.6 uH 10% tunable 2-1/2 turns RED chip .15 uH 5% chip .15 uH 5% chip .22 uH 5% 2-1/2 turns GRN 4-1/2 turns BRN chip .12 uH 5% chip .13 uH 5% 2-1/2 turns BRN chip .12 uH 5% chip .12 uH 5% chip .13 uH 5% 2-1/2 turns BRN chip .12 uH 5% chip .13 uH 5% 2-1/2 turns BRN	
L222 L223	24-62587N56	chip .18 uH 5% not used	
Transistors (see note)			
Q1 Q2 Q3 Q4 Q5 Q6 Q51 Q52 Q53 Q101 Q102 Q103 Q104	48-80950X01 48-05128M67 48-05128M67 48-05128M67 48-05128M67 48-05128M66 48-05128M66 48-05128M66 48-05128M67 48-00182D20 48-05128M67	NPN; type M50X01 PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 NPN; type MMBT3904 field effect; type MMBFU310 field effect; type MMBFU310 NPN; type MMBT3906 NPN; type MMBT3906 NPN; type M82D20/M9987 NPN; type M82D20/M9987 PNP; type MMBT3906	

Connector, receptacle

RF 438-470 MHz

Q105					
	48-80214G02	NPN; type MMBT3904	R158	06-11077A74	1k
Q106	48-80214G02	NPN; type MMBT3904	R159	06-11077A74	1k
Q107	48-11043C19	NPN; type M43C19/M9658			
Q151	48-11043C19		R161	06-11077A98	10k
Q152		NPN; type M43C19/M9658	R162		not used
	48-11043C06	PNP; type M43C06/M9643	R163(N)	06-11077B23	100k
Q203	48-05128M66	field effect; type MMBFU310	R163(W)	06-11077B17	56k
Q204	48-80950X01	NPN; type M50X01	R164	18-05500L08	variable 22k
Q205	48-80950X01	NPN; type M50X01	R165(N)	06-11077A98	10k
Q206	48-05128M66	field effect; type MMBFU310	R165(Ŵ)	06-11077B03	15k
Q207	48-80950X01	NPN; type M50X01	R176	06-11077G26	22.6k 1%
Q208	48-80950X01	NPN; type M50X01	R177	06-11077G18	18.7k 1%
Q276	48-80214G02	NPN; type MMBT3904	R178	06-11077F91	10.0k 1%
Q277	48-05128M67	PNP; type MMBT3906	R179		
Q278	48-05128M67	PNP; type MMBT3906		06-11077F91	10.0k 1%
Q279	48-05128M67		R180	06-11077G52	42.2k 1%
QLIS	40-0012010107	PNP; type MMBT3906	R181	06-11077F91	10.0k 1%
Desisters ship	EQ. 1/10		R182	06-11077G28	23.7k 1%
nesisions, chip	, 576, 1/10 watt, u	nless otherwise indicated.	R207	06-11077A44	56
D1			R208	06-11077A44	56
R1	06-11077A84	2.7k	R209	06-11077A34	22
R2	06-11077A54	150	R210	06-11077A98	10k
R3	06-11077A60	270	R212	06-11077A84	2.7k
R4	06-11077B01	12k	R213	06-11077A72	820
R5	06-11077B03	15k	R214	06-11077A50	100
R6	06-11077A90	4.7k			
R7	06-11077A98	10k	R215 R216	06-11077A84	2.7k
R8	06-11077A98	10k	R216	06-11077A72	820
R9			R217	06-11077A66	470
	06-11077A90	4.7k	R218	06-11077A66	470
R10	06-11077B07	22k	R219	06-11077A28	12
R11	06-11077B15	47k	R220	06-11077A66	470
R12	06-11077A45	62	R222	06-11077A88	3.9k
R13	06-11077A65	430	R223	06-11077A94	6.8k
R51	06-11077A44	56	R224	06-11077B23	100k
R52	06-11077A54	150	R225	06-11077A90	4.7k
R53	06-11077A88	3.9k	R226		
R54	06-11077A54	150		06-11077A44	56
R56	06-11077B45	820k	R227	06-11077A34	22
R57	06-11077A72	820	R228	06-11077A38	33
R58			R229	06-11077A98	10k
	06-11077B23	100k	R231	06-11077A84	2.7k
R59	06-11077B27	150k	R232	06-11077A72	820
R60	18-05500L08	variable 22k	R233	06-11077A46	68
R61(N)	06-11077B07	22k	R234	06-11077A84	2.7k
R61(W)	06-11077B19	68k	R235	06-11077A72	820
R62(N)	06-11077A26	10	R236	06-11077A46	68
R62(W)	06-11077B09	27k	R237	06-11077A58	220
R63	06-11077B21	82k	R238	06-11077A34	22
R102	06-11077A62	330	R239		
R103	06-11077A98	10k		06-11077A58	220
R104	06-11077A98	10k	R240		notused
R105	06-11077B11		R243	06-11077B23	100k
		33k		06-11077A74	1k
			R244	00-110/7/4/4	
R106	06-11077A73	910	R245	06-11077A74	1k
R107	06-11077A73 06-11077A78	1.5k			
R107 R108	06-11077A73 06-11077A78 06-11077A26	1.5k 10	R245	06-11077A74	1k
R107 R108 R109	06-11077A73 06-11077A78	1.5k	R245 R246	06-11077A74 06-11077B09	1k 27k 10k
R107 R108 R109 R110	06-11077A73 06-11077A78 06-11077A26	1.5k 10	R245 R246 R276 R277	06-11077A74 06-11077B09 06-11077A98 06-11077A60	1k 27k 10k 270
R107 R108 R109	06-11077A73 06-11077A78 06-11077A26 06-11077A26	1.5k 10 10	R245 R246 R276 R277 R278	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A26	1k 27k 10k 270 10
R107 R108 R109 R110	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077B03	1.5k 10 10 15k	R245 R246 R276 R277 R278 R279	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A26 06-11077A90	1k 27k 10k 270 10 4.7k
R107 R108 R109 R110 R111	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A72	1.5k 10 10 15k 150 820	R245 R246 R276 R277 R278 R279 R280	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A26 06-11077A90 06-11077A98	1k 27k 10k 270 10 4.7k 10k
R107 R108 R109 R110 R111 R112 R113	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A52 06-11077A58	1.5k 10 10 15k 150 820 220	R245 R246 R276 R277 R278 R279 R280 R281	06-11077A74 06-11077A98 06-11077A98 06-11077A96 06-11077A26 06-11077A90 06-11077A98 06-11077A90	1k 27k 10k 270 10 4.7k 10k 4.7k
R107 R108 R109 R110 R111 R112 R113 R113 R114	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A50 06-11077A54 06-11077A54 06-11077A58 06-11077A54	1.5k 10 10 15k 150 820 220 150	R245 R246 R276 R277 R278 R279 R280 R281 R301(N)	06-11077A74 06-11077A98 06-11077A98 06-11077A96 06-11077A90 06-11077A90 06-11077A90 06-11077A90	1k 27k 10k 270 10 4.7k 10k 4.7k 15k
R107 R108 R109 R110 R111 R112 R113 R114 R115	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A58 06-11077A58 06-11077A54 06-11077A54	1.5k 10 10 15k 150 820 220 150 680	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W)	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077B03 06-11077A82	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A52 06-11077A54 06-11077A54 06-11077A54 06-11077A70	1.5k 10 10 15k 150 820 220 150 680 5.6k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A90 06-11077A90 06-11077A98 06-11077A93 06-11077A92 18-05500L08	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k
R107 R108 R109 R110 R111 R112 R112 R113 R114 R115 R116 R118	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A58 06-11077A58 06-11077A54 06-11077A70 06-11077A70	1.5k 10 10 15k 150 820 220 150 680 5.6k 680	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W)	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077B03 06-11077A82	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A58 06-11077A58 06-11077A50 06-11077A70 06-11077A70 06-11077A70	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A90 06-11077A90 06-11077A98 06-11077A93 06-11077A92 18-05500L08	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A788 06-11077A88	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A90 06-11077A90 06-11077A98 06-11077A93 06-11077A92 18-05500L08	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k
R107 R108 R109 R1110 R111 R112 R113 R114 R115 R116 R116 R118 R119 R120 R121	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A58 06-11077A58 06-11077A50 06-11077A70 06-11077A70 06-11077A70	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k 2.7k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A90 06-11077A90 06-11077A98 06-11077A93 06-11077A92 18-05500L08	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A788 06-11077A88	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303	06-11077A74 06-11077B09 06-11077A98 06-11077A60 06-11077A90 06-11077A90 06-11077A98 06-11077A93 06-11077A92 18-05500L08	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k
R107 R108 R109 R1110 R111 R112 R113 R114 R115 R116 R116 R118 R119 R120 R121	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A72 06-11077A54 06-11077A54 06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k 2.7k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A92 18-05500L08 06-11077A94	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A50 06-11077A54 06-11077A52 06-11077A54 06-11077A54 06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k 2.7k 3.9k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(N) R301(W) R302 R303 Transformers	06-11077A74 06-11077A98 06-11077A98 06-11077A96 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A82 18-05500L08 06-11077A94	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A58 06-11077A54 06-11077A70 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A78	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 2.7k 3.9k 1k 1.5k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A93 06-11077A94 25-80163M02 25-80163M02	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A58 06-11077A58 06-11077A54 06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A78	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k 2.7k 3.9k 2.7k 3.9k 1k 1.5k 56	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A92 18-05500L08 06-11077A94	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R122 R122 R123 R124 R125 R126	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A750	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k 3.9k 2.7k 3.9k 1.5k 56 100	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A93 06-11077A94 25-80163M02 25-80163M02 25-80163M02	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note)
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R126 R127	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A72 06-11077A72 06-11077A54 06-11077A54 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A74 06-11077A74 06-11077A74	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 5.6k 680 3.9k 3.9k 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1	06-11077A74 06-11077A98 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A93 06-11077A93 06-11077A94 25-80163M02 25-80163M02 25-80163M02 att and modules 48-80174P01	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A72 06-11077A72 06-11077A54 06-11077A70 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A78 06-11077A78 06-11077A78 06-11077A78 06-11077A78	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A92 18-05500L08 06-11077A92 18-05500L08 06-11077A94 25-80163M02 25-80163M02 25-80163M02 sits and modules 48-80174F01 51-05479G05	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A50 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A78 06-11077A78 06-11077A78 06-11077A72 06-11077A72 06-11077A72	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A92 18-05500L08 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 sits and modules 48-80174R01 51-05479G05 51-84704M75	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun balun (see note) quad Schottky ring SOIC receiver system synthesizer
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R151 R152	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A78 06-11077A74 06-11077A72 06-11077A72 06-11077A71 06-11077A72 06-11077A71 06-11077A72	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 3.9k 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 820	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101 U102	06-11077A74 06-11077A98 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A92 18-05500L08 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 51-84704M75 51-83977M45	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R152 R153	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077B03 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A750 06-11077A51 06-11077A51 06-11077A51 06-11077B15	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A92 18-05500L08 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 sits and modules 48-80174R01 51-05479G05 51-84704M75	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun balun (see note) quad Schottky ring SOIC receiver system synthesizer
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R127 R128 R151 R152 R153 R154	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A75 06-11077A84 06-11077A75 06-11077A15 06-11077B15 06-11077B15 06-11077B15	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k 47k 22	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101 U102	06-11077A74 06-11077A98 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A92 18-05500L08 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 51-84704M75 51-83977M45	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R152 R151 R152 R154 R155	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077B03 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A750 06-11077A51 06-11077A51 06-11077A51 06-11077B15	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101 U102	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A93 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 51-83977M45 51-83977M45 51-83977M45	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R152 R153 R155 R155 R155	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A92 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A75 06-11077A84 06-11077A75 06-11077A15 06-11077B15 06-11077B15 06-11077B15	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k 47k 22	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101 U102 U176	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A93 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 51-83977M45 51-83977M45 51-83977M45	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R152 R151 R152 R154 R155	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A72 06-11077A72 06-11077A15 06-11077B15 06-11077B15 06-11077A34 06-11077A34 06-11077A34	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 5.6k 680 3.9k 3.9k 3.9k 2.7k 3.9k 1.5k 56 100 2.7k 820 47k 33k 47k 22 10k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101 U102 U176	06-11077A74 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A93 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 51-83977M45 51-83977M45 51-83977M45	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler
R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R118 R119 R120 R121 R122 R123 R124 R125 R126 R127 R128 R151 R152 R153 R155 R155 R155 R156	06-11077A73 06-11077A78 06-11077A26 06-11077A26 06-11077A26 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A54 06-11077A70 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A88 06-11077A74 06-11077A74 06-11077A74 06-11077A750 06-11077A751 06-11077B15 06-11077B15 06-11077A98 06-11077A98 06-11077A98	1.5k 10 10 15k 150 820 220 150 680 5.6k 680 3.9k 2.7k 3.9k 2.7k 3.9k 1k 1.5k 56 100 2.7k 820 47k 33k 47k 22 10k 15k	R245 R246 R276 R277 R278 R279 R280 R281 R301(N) R301(W) R302 R303 Transformers T1 T2 Integrated circu U1 U51 U101 U102 U176 Voltage regulat	06-11077A74 06-11077A98 06-11077A98 06-11077A98 06-11077A90 06-11077A90 06-11077A90 06-11077A90 06-11077A93 06-11077A93 06-11077A93 06-11077A93 06-11077A93 06-11077A94 25-80163M02 25-80163M02 25-80163M02 25-80163M02 25-80163M02 35-80163M02 25-80163M02 51-84704M75 51-83977M45 51-8032W01	1k 27k 10k 270 10 4.7k 10k 4.7k 15k 2.2k variable 22k 6.8k balun balun (see note) quad Schottky ring SOIC receiver system synthesizer prescaler dual op-amp

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Crystals

Y51(N)	91-80022M03	filter 45.1 MHz 12.5 kHz
Y51(Ŵ)	91-80022M02	filter 45.1 MHz 25 kHz
Y52	48-80008K02	44.645 MHz
Y151	48-80174D05	14.4 MHz

Non-referenced items

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

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PL-921025-O

HLE8264A RF Board,	465-495 MHz,	12.5 kHz (N)
HLE8263A RF Board,		

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Capacitor, chip,	5%, 50V unless	otherwise indicated.
C1	21-13740G15	3.3 +/1 pF
C2	21-13740G17	3.9 +/1 pF
C3	21-13740G19	4.7 +/1 pF
C4 C5	21-13740G29	10 pF 2%
C5 C6	21-13740G14 21-13740G18	3.0 +/1 pF 4.3 +/1 pF
C7	21-13740G29	10 pF 2%
C8	21-13740G13	2.7 +/1 pF
C9	21-13740G16	3.6 +/1 pF
C10	21-13740G29	10 pF 2%
C11	21-13740G31	12 pF 2%
C12	21-13740B45	68 pF
C13 C14	21-13740G20	5.1 +/1 pF
C15	21-13740G19 21-13740G14	4.7 +/1 pF 3.0 +/1 pF
C16	21-13740G15	3.3 +/1 pF
C17	21-13740G31	12 pF 2%
C18	21-13740G14	3.0 +/1 pF
C19	21-13740G15	3.3 +/1 pF
C20	21-13740G33	15 pF 2%
C21	21-13740G15	3.3 +/1 pF
C22 C23	21-13740G15 21-13740G31	3.3 +/1 pF 12 pF 2%
C24	21-13740G17	3.9 +/1 pF
C25	21-13740G15	3.3 +/1 pF
C26	21-13740G28	9.1 +/1 pF
C27	21-11032B15	.22 uF +80/-20%
C28	21-13740B45	68 pF
C29	21-13740B45	68 pF
C30 C33	21-11032B15	.22 uF + 80/-20%
C51	21-13740B55	not used 180 pF
C52	21-13740B27	12 pF
C53	21-13740B47	82 pF
C54	21-13740B61	330 pF
C55	21-13741B45	.01 uF
C56	21-13741B45	.01 uF
C57(N)	21-13740B29	15 pF
C57(W) C58(N)	21-13740B31 21-13740B25	18 pF 10 pF
C58(W)	21-13740B27	12 pF
C59(N)	21-13740B29	15 pF
C59(W)	21-13740B31	18 pF
C60	21-13741B45	.01 uF
C61	21-13741B45	.01 uF
C65	21-11032B15	.22 uF +80/-20%
C66	21-13741B45	.01 uF
C67 C68	23-13749C39 21-13740B33	tantalum_10 uF 10% 20V 22 pF
C69	21-13740B39	39 pF
C70	21-13740B29	15 pF
C71	21-11032B15	.22 uF +80/-20%
C72	21-11032B15	.22 uF +80/-20%
C73	23-13749C39	tantalum 10 uF 10% 20V
C74	23-11048B13	lytic_10 uF 20% 16V
C75	21-13741B69	
C76 C77	23-11048B05 21-11032B15	lytic 1 uF 20% 50V .22 uF +80/-20%
C78	21-11032B15	.22 uF +80/-20%
C79	21-13741B29	.0022 uF
C80	21-11032B15	.22 uF +80/-20%
C81	21-13740B55	180 pF
C82	21-11032B15	.22 uF +80/-20%
C83	21-11032B15	.22 uF +80/-20%
C84	21-13740B09	2.2 +/25 pF
C85	21-13740B27	12 pF
C86 C87	21-11032B15	not used .22 uF +80/-20%
C90	21-11032B15	.22 uF +80/-20%
C91	21-13740B49	
		F

23-11048B13	lytic 10 uF 20% 16V
08-11051A13 21-11032B15	poly .1 uF 63V .22 uF +80/-20%
21-13741B45	.01 uF
23-11048B13	lytic 10 uF 20% 16V
21-13740B29	15 pF
21-13741B69	.1 uF
21-13741B69	.1 uF
08-11051A13 08-11051A19	poly .1 uF 63V poly 1 uF 63V
08-11051A09	poly .022 uF 63V
08-11051A01	poly .001 uF 63V
21-13741B45	.01 uF
21-13740B45	68 pF
21-13741B45	.01 uF
21-13740B49	100 pF
21-13741B69 21-13740B45	.1 uF 68 pF
21-13740B45	68 pF
21-13740B45	68 pF
21-13740B19	5.6 +/25 pF
21-13740B49	100 pF
21-13740B45	68 pF
21-13740B25 21-13740B73	10 pF 1000 pF
21-13/400/3	not used
21-11032B15	.22 uF +80/-20%
21-11032B15	.22 uF +80/-20% .22 uF +80/-20%
21-11032B15 21-13740B49	.22 ur +80/-20% 100 pF
21-13740B73	1000 pF
21-13740B47	82 pF
21-13740B25	10 pF
21-13741B45	.01 uF
21-13740B55 21-13740B55	180 pF 180 pF
21-13/40000	not used
08-11051A15	poly .22 uF 63V
21-13740B35	27 pF
21-13740B29	15 pF
21-13740B73	1000 pF
23-11048B13 08-11051A17	lytic 10 uF 20% 16V poly .47 uF 63V
	not used
21-13741B33	.0033 uF
21-13740B73	1000 pF
23-11048B13	lytic 10 uF 20% 16V
21-13740B45 21-13740B19	68 pF 5.6 +/25 pF
21-13740B23	8.2 +/25 pF
21-13740B19	5.6 +/25 pF
21-13740B19	5.6 +/25 pF
21-13740B49	100 pF
21-13740B49 21-13740B01	100 pF 1 +/25 pF
21-13/ 40001	not used
21-13740B49	100 pF
21-13740B13	3.3 +/25 pF
21-13740B49	100 pF
21-13740B17 21-13740B05	4.7 +/25 pF
21-13740B49	1.5 +/25 pF 100 pF
21-13740B49	100 pF
21-13740B49	100 pF
21-13741B29	.0022 uF
21-13740B01 21-13740B01	1 +/25 pF
	1 +/25 pF 2.7 +/25 pF
21-13740B11 21-13740B21	2.7 +/25 pF 6.8 +/25 pF
21-13740B11	2.7 +/25 pF
21-13740B11 21-13740B21 21-13740B13 21-13740B18	2.7 +/25 pF 6.8 +/25 pF 3.3 +/25 pF 5.1 +/25 pF
21-13740B11 21-13740B21 21-13740B13 21-13740B18 21-13740B18 21-13740B45	2.7 +/25 pF 6.8 +/25 pF 3.3 +/25 pF 5.1 +/25 pF 68 pF
21-13740B11 21-13740B21 21-13740B13 21-13740B18 21-13740B45 21-13740B45 21-13740B45	2.7 +/25 pF 6.8 +/25 pF 3.3 +/25 pF 5.1 +/25 pF 68 pF 68 pF
21-13740B11 21-13740B21 21-13740B13 21-13740B18 21-13740B18 21-13740B45	2.7 +/25 pF 6.8 +/25 pF 3.3 +/25 pF 5.1 +/25 pF 68 pF

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 $\begin{array}{c} C101\\ C102\\ C103\\ C104\\ C105\\ C106\\ C107\\ C108\\ C109\\ C110\\ C111\\ C112\\ C113\\ C114\\ C115\\ C116\\ C122\\ C122\\ C122\\ C122\\ C124\\ C125\\ C126\\ C127\\ C128\\ C129\\ C123\\ C124\\ C125\\ C126\\ C127\\ C128\\ C129\\ C133\\ C133\\$

C132 C133 C151 C152 C153 C154 C155 C156 C157 C158 C159 C160

C161 C162 C163 C164 C165 C176 C201 C205 C206 C207 C208 C209

C210 C212 C213 C214 C215 C216 C218 C220 C221 C222

C224 C225 C228 C230 C231 C233 C234 C235

C236 C237 C239 C240

C242

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C243	21-13740B09	2.2 +/25 pF
C244	21-11032B15	.22 uF +80/-20%
C245	21-13740B45	68 pF
C247	21-13740B27	12 pF
C248	21-13740B17	4.7 +/25 pF
C249 C251	21-13740B45 21-13740B45	68 pF
C252	21-13740B45	68 pF 68 pF
C253	21-13740B45	68 pF
C255	2110/10010	not used
C256	21-13741B45	.01 uF
C257	21-13741B45	.01 uF
C258	08-11051A07	poly .01 uF 63V
C259	21-13740B22	7.5 +/25 pF
C260	. .	not used
C261	21-13741B45	.01 uF
C262		not used
C263 C264		not used not used
C265		not used
C266	21-13740B03	1.2 +/25 pF
C267	21-13740B01	1 +/25 pF
C268	21-13740B13	3.3 +/25 pF
C269	21-13740B09	2.2 +/25 pF
C270		not used
C271	21-13740B45	68 pF
C272	21-13740B45	68 pF
C273	21-13740B49	100 pF
C274	21-13740B49	100 pF
C275 C276	21-13741B45	not used .01 uF
C277	23-11048B19	lvtic 47 uF 20% 16V
C278	23-11048B19	lytic 47 uF 20% 16V
C279	21-13740B45	68 pF
C280	21-11032B15	.22 uF +80/-20%
C301	21-13741B45	.01 uF
C302	21-13740B45	68 pF
C303	21-13740B45	68 pF
C304	21-13740B45	68 pF
C305	21-13740B45	68 pF
C306 C307	21-13740B45 21-13740B45	68 pF 68 pF
C308	21-13740B45	68 pF
C309	21-13740B45	68 pF
C310	21-13740B45	68 pF
C311	21-13740B45	68 pF
C312	21-13740B45	68 pF
C313	21-13740B45	68 pF
C314		not used
Diodes (see not	e)	
000	40.004541/00	dual Cabattley COT
CR2 CR3	48-80154K03 48-80939T01	dual Schottky SOT Schottky SOT
CR5	48-80142L01	silicon PIN SOT MMBV3401
CR51	48-05129M76	silicon SOT
CR52	48-05129M76	silicon SOT
CR101	48-05129M76	silicon SOT
CR102	48-05129M76	silicon SOT
CR151	48-80006E10	silicon varactor SOT
CR152	48-80006E10	silicon varactor SOT
CR153	48-84336R03	dual silicon SOT MMBD7000
CR203	48-84534N02	silicon varactor SOT
CR205	48-84534N02	silicon varactor SOT
CR206 CR209	48-80154K02	dual Schottky SOT silicon varactor SOT
CR211	48-84534N02 48-84534N02	silicon varactor SOT
CR213	48-84534N02	silicon varactor SOT
CR214	48-80939T01	Schottky SOT
0.2	10 00000101	contrainy con
Filters		
FL51(N)	91-80097D04	455 kHz 6F
FL51(W)	91-80097D06	455 kHz 6D
FL52(N)	91-80098D04	
FL52(W)	91-80098D06	455 kHz 4D

Connector, receptacle			
J4 J5 J6	09-80135M01 09-80135M01 09-80130M03	coaxial (RX) coaxial (TX) 14-pin, RF board	
Jumpers			
JU1 JU2 JU3 JU51 JU52 JU201 JU202	06-11077A01 06-11077A01	not used not used not used not used jumper jumper	
Coils			
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L51 L52 L53 L54 L55 L56 L57 L58 L59 L60 L61 L101 L102 L151 L152 L202 L203 L204 L205 L206 L207 L209 L210 L211 L213 L214 L215 L216 L217 L218 L220 L211 L212 L214 L215 L216 L217 L218 L220 L211 L212 L214 L215 L216 L217 L218 L220 L211 L212 L212 L221 L222 L223	24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-80164T03 24-62587N56 24-62587N56 24-62587N56 24-80164M03 24-62587N56 24-80164M03 24-62587N56 24-62587N56 24-62587N56 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N57 24-80148M01 24-62587N55 24-62587N57 24-80148M01 24-62587N57 24-80148M01 24-62587N54 24-625	4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 1-1/2 turns YEL 1-1/2 turns YEL 1-1/2 turns YEL chip .1 uH 5% 7-1/2 turns YEL chip 1 uH 5% chip 4.7 uH 5% tunable .7 uH E715 tunable .7 uH E713 tunable .7 uH E716 chip 1.2 uH 5% tunable 455 kHz with cap chip .18 uH 5% chip 33 nH 5% tunable 17-3/4 turns chip 5.6 uH 10% tunable 1-1/2 turns BRN chip .15 uH 5% chip .15 uH 5% chip .15 uH 5% chip .12 uH 5% chip .13 uH 5% chip .13 uH 5% chip .14 uH 5% chip .12 uH 5% chip .13 uH 5% chip .13 uH 5% chip .14 uH 5% chip .13 uH 5% chip .14 uH 5% chip .18 u	
Transistors (see	e note)		
Q1 Q2 Q3 Q4 Q5 Q5 Q5 Q5 Q53 Q101 Q102 Q103 Q104	48-80950X01 48-05128M67 48-05128M67 48-05128M67 48-80214G02 48-05128M66 48-05128M66 48-80214G02 48-05128M67 48-80182D20 48-80182D20 48-80182D20	NPN; type M50X01 PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 NPN; type MMBT3904 field effect; type MMBFU310 field effect; type MMBFU310 NPN; type MMBT3904 PNP; type MMBT3906 NPN; type M82D20/M9987 NPN; type M82D20/M9987 PNP; type MMBT3906	

RF 465-495 MHz

Q105	48-80214G02	NPN; type MMBT3904	D150	06 11077474	16
Q106	48-80214G02		R158	06-11077A74	1k
		NPN; type MMBT3904	R159	06-11077A74	1k
Q107	48-11043C19	NPN; type M43C19/M9658	R161	06-11077A98	10k
Q151	48-11043C19	NPN; type M43C19/M9658	R162		not used
Q152	48-11043C06	PNP; type M43C06/M9643	R163(N)	06-11077B23	100k
Q203	48-05128M66	field effect; type MMBFU310	R163(W)	06-11077B17	56k
Q204	48-80950X01	NPN; type M50X01	R164	18-05500L08	variable 22k
Q205	48-80950X01	NPN; type M50X01			
Q206			R165(N)	06-11077A98	10k
-	48-05128M66	field effect; type MMBFU310	R165(W)	06-11077B03	15k
Q207	48-80950X01	NPN; type M50X01	R176	06-11077G26	22.6k 1%
Q208	48-80950X01	NPN; type M50X01	R177	06-11077G18	18.7k 1%
Q276	48-80214G02	NPN; type MMBT3904	R178	06-11077F91	10.0k 1%
Q277	48-05128M67	PNP; type MMBT3906	R179	06-11077F91	10.0k 1%
Q278	48-05128M67	PNP; type MMBT3906	_		
Q279	48-05128M67		R180	06-11077G52	42.2k 1%
Q2/9	40-0012010/	PNP; type MMBT3906	R181	06-11077F91	10.0k 1%
- • • • • •			R182	06-11077G28	23.7k 1%
Hesistors, chip,	5%, 1/10 watt, u	nless otherwise indicated.	R207	06-11077A44	56
			R208	06-11077A44	56
R1	06-11077A84	2.7k	R209	06-11077A34	22
R2	06-11077A54	150	R210		
R3	06-11077A60	270		06-11077A98	10k
			R212	06-11077A84	2.7k
R4	06-11077B01	12k	R213	06-11077A72	820
R5	06-11077B03	15k	R214	06-11077A54	150
R6	06-11077A90	4.7k	R215	06-11077A84	2.7k
R7	06-11077A98	10k	R216	06-11077A72	820
R8	06-11077A98	10k	R217	06-11077A64	390
R9	06-11077A90	4.7k			
			R218	06-11077A65	430
R10	06-11077B07	22k	R219	06-11077A34	22
R11	06-11077B15	47k	R220	06-11077A65	430
R12	06-11077A45	62	R222	06-11077A88	3.9k
R13	06-11077A65	430	R223	06-11077A94	6.8k
R51	06-11077A44	56	R224	06-11077B23	100k
R52	06-11077A54	150			
R53			R225	06-11077A90	4.7k
	06-11077A88	3.9k	R226	06-11077A44	56
R54	06-11077A54	150	R227	06-11077A34	22
R56	06-11077B45	820k	R228	06-11077A38	33
R57	06-11077A72	820	R229	06-11077A98	10k
R58	06-11077B23	100k	R231	06-11077A84	2.7k
R59	06-11077B27	150k	R232		
				06-11077A72	820
R60	18-05500L08	variable 22k	R233	06-11077A44	56
R61(N)	06-11077B07	22k	R234	06-11077A84	2.7k
R61(W)	06-11077B19	68k	R235	06-11077A72	820
R62(N)	06-11077A26	10	R236	06-11077A44	56
R62(W)	06-11077B09	27k	R237	06-11077A66	470
R63	06-11077B21	82k	R238		
R102		330		06-11077A28	12
	06-11077A62		R239	06-11077A66	470
R103	06-11077A98	10k	R240		not used
R104	06-11077A98	10k	R243	06-11077B23	100k
R105	06-11077B11	33k	R244	06-11077A74	1k
R106	06-11077A73	910	R245	06-11077A74	1k
R107	06-11077A78	1.5k	R246		
R108	06-11077A26	10		06-11077B09	27k
			R276	06-11077A98	10k
R109	06-11077A26	10	R277	06-11077A60	270
R110	06-11077B03	15k	R278	06-11077A26	10
R111	06-11077A54	150	R279	06-11077A90	4.7k
R112	06-11077A72	820	R280	06-11077A98	10k
R113	06-11077A58	220	R281	06-11077A90	4.7k
R114	06-11077A54	150	R301(N)		
R115	06-11077A70	680		06-11077B03	15k
			R301(W)	06-11077A82	2.2k
R116	06-11077A92	5.6k	R302	18-05500L08	variable 22k
R118	06-11077A70	680	R303	06-11077A94	6.8k
R119	06-11077A88	3.9k			
R120	06-11077A88	3.9k	Transformers		
R121	06-11077A84	2.7k			
R122	06-11077A88	3.9k	T1	25-80163M02	balun
R123	06-11077A74	1k	T2	25-80163M02	balun
R124	06-11077A78	1.5k			
R125	06-11077A44	56	Integrated circu	its and modules	(see note)
R126	06-11077A50	100	-		-
R127	06-11077A84	2.7k	U1	48-80174R01	quad Schottky ring SOIC
R128	06-11077A72	820	U51	51-05479G05	receiver system
R151					
	06-11077B15	47k	U101	51-84704M75	synthesizer
R152	06-11077B11	33k	U102	51-83977M45	prescaler
R153	06-11077B15	47k	U176	51-80932W01	dual op-amp
R154	06-11077A34	22			• •
R155	06-11077A98	10k	Voltage regulat	ors (see note)	
R156	06-11077B03	15k		,	
R157	06-11077A78	1.5k	VR176	48-82256C11	zener diode 10V 5%
1110/	00-110//A/8		VN1/0	-0-02200011	29101 0000 104 370

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Crystals

Y51(N) Y51(W)	91-80022M03 91-80022M02	filter 45.1 MHz 12.5 kHz filter 45.1 MHz 25 kHz
Y52	48-80008K02	44.645 MHz
Y151	48-80174D05	14.4 MHz

Non-referenced items

26-80097M01 26-80098M01 26-80228L01 26-80229L03 26-80256L02 42-80915V01	shield coil can (for L151) shield coil can (17 used) shield can (for J4) shield VCO frame shield image ground clip ground clip
42-80957X01 75-05295B02 75-05295B07	ground clip insulator (for Y151) insulator (3 used, for Y51A/B, Y52)

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

11/30/92

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PL-921034-O

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	C103 C104 C105	21 21 23
		otherwise indicated.	C106 C107	21 21
C1	_		C108	21
C2	21-13740G21 21-13740G17	5.6 +/1 pF 3.9 +/1 pF	C109 C110	08 08
Č3	21-13740G15	3.3 +/1 pF	Č111	08
C4	21-13740G28	9.1 +/1 pF	C112	08
C5 C6	21-13740G14	3.0 +/1 pF	C113	21
C7	21-13740G14 21-13740G28	3.0 +/1 pF 9.1 +/1 pF	C114 C115	21 21
C8	21-13740G13	2.7 +/1 pF	C116	21
C9	21-13740G13	2.7 +/1 pF	C117	21
C10 C11	21-13740G24	6.8 +/1 pF	C118	21
C12	21-13740G36 21-13740B45	20 pF 2% 68 pF	C119 C120	21 21
Č13	21-13740G17	3.9 +/1 pF	C121	21
C14	21-13740G12	2.4 +/1 pF	C122	21
C15	21-13740G13	2.7 +/1 pF	C123	21
C16 C17	21-13740G14 21-13740G31	3.0 +/1 pF 12 pF 2%	C124 C125	21 21
C18	21-13740G14	3.0 +/1 pF	C126	21
C19	21-13740G13	2.7 +/1 pF	C127	21
C20	21-13740G31	12 pF 2%	C128	21
C21 C22	21-13740G11 21-13740G14	2.2 +/1 pF 3.0 +/1 pF	C129 C130	21 21
Č23	21-13740G33	15 pF 2%	C131	21
C24	21-13740G13	2.7 +/1 pF	C132	21
C25	21-13740G16	3.6 +/1 pF	C133	21
C26 C27	21-13740G30 21-11032B15	11 pF 2% .22 uF +80/-20%	C151 C152	2 ⁻ 2 ⁻
C28	21-13740B45	68 pF	C152	2
C29	21-13740B45	68 pF	C154	2
C30	21-11032B15	.22 uF +80/-20%	C155	21
C33 C51	21-13740B55	not used 180 pF	C156 C157	21
C52	21-13740B27	12 pF	C158	08
C53	21-13740B47	82 pF	C159	2
C54 C55	21-13740B61 21-13741B45	330 pF	C160	2
C55	21-13741B45 21-13741B45	.01 uF .01 uF	C161 C162	2* 23
C57(N)	21-13740B29	15 pF	C163	Ō
C57 (W)	21-13740B31	18 pF	C164	
C58(N)	21-13740B25	10 pF	C165	2
C58(Ŵ) C59(N)	21-13740B27 21-13740B29	12 pF 15 pF	C176 C201	2 ⁻ 23
C59(W)	21-13740B31	18 pF	C205	2
C60	21-13741B45	.01 uF	C206	2
C61	21-13741B45	.01 uF	C207	2
C65 C66	21-11032B15 21-13741B45	.22 uF +80/-20% .01 uF	C208 C209	2 ⁻ 2 ⁻
C67	23-13749C39	tantalum 10 uF 10% 20V	C210	2
C68	21-13740B33	22 pF	C212	2
C69	21-13740B39	39 pF	C213	2
C70 C71	21-13740B29 21-11032B15	15 pF .22 uF +80/-20%	C214 C215	2
C72	21-11032B15	.22 uF +80/-20%	C216	2
C73	23-13749C39	tantalum 10 uF 10% 20V	C218	2
C74	23-11048B13	lytic_10 uF 20% 16V	C220	2
C75 C76	21-13741B69 23-11048B05	.1 uF lytic 1 uF 20% 50V	C221 C222	2
C77	21-11032B15	.22 uF + 80/-20%	C224	2
C78	21-11032B15	.22 uF +80/-20%	C225	2
C79	21-13741B29	.0022 uF	C228	2
C80 C81	21-11032B15 21-13740B55	.22 uF +80/-20% 180 pF	C230 C231	2
C82	21-13/40855 21-11032B15	.22 uF +80/-20%	C231 C233	2
C83	21-11032B15	.22 uF +80/-20%	C234	2
C84	21-13740B09	2.2 +/25 pF	C235	2
C85	21-13740B27	12 pF	C236	2
C86 C87	21-11032B15	not used .22 uF +80/-20%	C237 C239	2
				2
C90 C91	21-11032B15	.22 uF +80/-20% 100 pF	C240	2

23-11048B13 08-11051A13 21-11032B15 21-13741B45 23-11048B13 21-13740B29 21-13741B69 08-11051A13 08-11051A19 08-11051A09 08-11051A09 08-11051A09 08-11051A09 08-11051A09 08-11051A09 08-11051A09 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45	lytic 10 uF 20% 16V poly .1 uF 63V .22 uF + 80/-20% .01 uF lytic 10 uF 20% 16V 15 pF .1 uF .1 uF .1 uF poly .1 uF 63V poly 1 uF 63V poly .022 uF 63V poly .022 uF 63V poly .001 uF 63V .01 uF 68 pF .01 uF 68 pF 68 pF 68 pF 68 pF 3.9 +/25 pF 100 pF 100 pF 100 pF
21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-11032B15 21-13740B49 21-13740B49 21-13740B47 21-13740B25 21-13741B45 21-13740B55 21-13740B55	not used .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% .22 uF +80/-20% 100 pF 1000 pF 82 pF 10 pF .01 uF 180 pF 180 pF
08-11051A15 21-13740B35 21-13740B29 21-13740B73 23-11048B13 08-11051A17	not used poly .22 uF 63V 27 pF 15 pF 1000 pF lytic 10 uF 20% 16V poly .47 uF 63V not used
21-13741B33 21-13740B73 23-11048B13 21-13740B45 21-13740B45 21-13740B19 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B49 21-13740B01 21-13740B11 21-13740B11 21-13740B18 21-13740B45 21-13740B45 21-13740B45 21-13740B45 21-13740B45	.0033 uF 1000 pF lytic 10 uF 20% 16V 68 pF 3.9 +/.25 pF 5.6 +/.25 pF 5.6 +/.25 pF 100 pF 100 pF 1 +/.25 pF 3.3 +/.25 pF 100 pF 8.2 +/.25 pF 100 pF 8.2 +/.25 pF 1.5 +/.25 pF 100 pF 100 pF 100 pF 2.2 +/.25 pF 2.7 +/.25 pF 2.2 +/.25 pF 2.2 +/.25 pF 2.2 +/.25 pF 2.2 +/.25 pF 68 pF 1 +/.25 pF 68 pF 68 pF 68 pF

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C243	21-13740B09	2.2 +/25 pF
C244	21-11032B15	.22 uF +80/-20%
C245	21-13740B45	68 pF
C247 C248	21-13740B16 21-13740B09	4.3 +/25 pF 2.2 +/25 pF
C249	21-13740B45	68 pF
C251	21-13740B45	68 pF
C252	21-13740B45	68 pF
C253	21-13740B45	68 pF
C255	01 10741D45	not used
C256 C257	21-13741B45 21-13741B45	.01 uF .01 uF
C258	08-11051A07	poly .01 uF 63V
C259	21-13740B22	7.5 +/25 pF
C260		not used
C261	21-13741B45	.01 uF
C262		not used
C263 C264		not used not used
C265		not used
C266	21-13740B03	1.2 +/25 pF
C267	21-13740B01	1 +/25 pF
C268	21-13740B13	3.3 +/25 pF
C269	21-13740B09	2.2 +/25 pF
C270		not used
C271 C272	21-13740B45	not used 68 pF
C273	21-13740B49	100 pF
C274	21-13740B49	100 pF
C275		not used
C276	21-13741B45	.01 uF
C277	23-11048B19	lytic 47 uF 20% 16V
C278 C279	23-11048B19 21-13740B45	lytic 47 uF 20% 16V
C280	21-11032B15	68 pF .22 uF +80/-20%
C301	21-13741B45	.01 uF
C302	21-13740B45	68 pF
C303	21-13740B45	68 pF
C304	21-13740B45	68 pF
C305	21-13740B45	68 pF
C306 C307	21-13740B45 21-13740B45	68 pF
C308	21-13740B45	68 pF 68 pF
C309	21-13740B45	68 pF
C310	21-13740B45	68 pF
C311	21-13740B45	68 pF
C312	21-13740B45	68 pF
C313 C314	21-13740B45	68 pF
0314		not used
Diodes (see not	e)	
CR2	48-80154K03	dual Schottky SOT
CR3	48-80939T01	Schottky SOT
CR5	48-80142L01	silicon PIN SOT MMBV3401
CR51	48-05129M76	silicon SOT
CR52	48-05129M76	silicon SOT
CR101 CR102	48-05129M76	silicon SOT
CR151	48-05129M76 48-80006E10	silicon SOT silicon varactor SOT
CR152	48-80006E10	silicon varactor SOT
CR153	48-84336R03	dual silicon SOT MMBD7000
CR203	48-84534N02	silicon varactor SOT
CR205	48-84534N02	silicon varactor SOT
CR206	48-80154K02	dual Schottky SOT
CR209 CR211	48-84534N02 48-84534N02	silicon varactor SOT silicon varactor SOT
CR213	48-84534N02	silicon varactor SOT silicon varactor SOT
CR214	48-80939T01	Schottky SOT
Filters		-
	04 0000-T	
FL51(N)	91-80097D04	455 kHz 6F
FL51(W) FL52(N)	91-80097D06 91-80098D04	455 kHz 6D 455 kHz 4F
FL52(W)	91-80098D06	

Connector, receptacie			
J4 J5 J6	09-80135M01 09-80135M01 09-80130M03	coaxial (RX) coaxial (TX) 14-pin, RF board	
Jumpers			
JU1 JU2 JU3 JU51 JU52 JU201 JU202	06-11077A01 06-11077A01 06-11077A01	not used not used jumper not used not used jumper jumper	
Coils			
$ \begin{array}{c} L1 \\ L2 \\ L3 \\ L4 \\ L5 \\ L6 \\ L7 \\ L8 \\ L9 \\ L10 \\ L51 \\ L52 \\ L53 \\ L54 \\ L55 \\ L56 \\ L57 \\ L58 \\ L59 \\ L60 \\ L61 \\ L101 \\ L102 \\ L151 \\ L152 \\ L203 \\ L204 \\ L205 \\ L206 \\ L207 \\ L209 \\ L211 \\ L215 \\ L216 \\ L217 \\ L218 \\ L216 \\ L217 \\ L218 \\ L220 \\ L221 \\ L222 \\ L22$	24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-84562T04 24-80587N53 24-11030B07 24-62587N56 24-62587N56 24-62587N76 24-80164M01 24-80164M03 24-80164M03 24-80164M03 24-80164M03 24-80164M03 24-80164M03 24-80164M03 24-80287N56 24-80287N56 24-62587N55 24-11030B07 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N55 24-62587N57 24-80148M01 24-62587N55 24-62587N57 24-80148M01 24-62587N56 24-11030B06 24-1030B06 24-62587N54 24-62587N56 24-11030B06 24-11030B06 24-62587N56 24-11030B05 24-11030B05 24-11030B05 24-11030B05 24-11030B05 24-11030B05	4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 4 turns airwound 3-1/2 turns WHT 3-1/2 turns WHT 3-1/2 turns WHT 3-1/2 turns YEL chip 1 uH 5% 7-1/2 turns YEL chip 1 uH 5% chip 3.8 uH 5% tunable .7 uH E713 tunable .7 uH E713 tunable .7 uH E713 tunable .7 uH E716 chip 1.2 uH 5% tunable .7 uH E716 chip 1.2 uH 5% tunable 1-7 uH E716 chip 1.8 uH 5% tunable 1-7/2 turns BRN chip 33 nH 5% tunable 1-1/2 turns BRN chip .15 uH 5% 2-1/2 turns WHT chip .15 uH 5% chip .22 uH 5% 2-1/2 turns BRN chip .39 uH 5% tunable 1-1/2 turns BRN chip .21 uH 5% chip .12 uH 5% chip .13 uH 5%	
L223 Transistors (see	note)	not used	
Q1	48-80950X01	NPN; type M50X01	
Q2 Q3 Q4 Q5 Q6 Q51 Q52 Q53 Q101 Q102 Q103 Q104	48-05128M67 48-05128M67 48-05128M67 48-05128M67 48-05128M66 48-05128M66 48-05128M66 48-05128M67 48-80182D20 48-05128M67	PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 PNP; type MMBT3906 NPN; type MMBT3906 NPN; type MMBT3904 field effect; type MMBFU310 field effect; type MMBFU310 NPN; type MMBT3904 PNP; type MMBT3906 NPN; type M82D20/M9987 PNP; type MMBT3906	

Connector, receptacle

RF 490-520 MHz

Q105	48-80214G02	NPN; type MMBT3904	R158	06-11077A74	1k
Q106	48-80214G02	NPN; type MMBT3904	R159	06-11077A74	1k
Q107	48-11043C19	NPN; type M43C19/M9658	R161	06-11077A98	10k
Q151	48-11043C19	NPN; type M43C19/M9658	R162	00-110/7/30	not used
Q152	48-11043C06	PNP; type M43C06/M9643	R163(N)	06-11077B23	100k
Q203	48-05128M66	field effect; type MMBFU310			
Q204	48-80950X01	NPN; type M50X01	R163(W)	06-11077B17	56k
Q205			R164	18-05500L08	variable 22k
Q206	48-80950X01	NPN; type M50X01	R165(N)	06-11077A98	10k
	48-05128M66	field effect; type MMBFU310	R165(W)	06-11077B03	15k
Q207	48-80950X01	NPN; type M50X01	R176	06-11077G26	22.6k 1%
Q208	48-80950X01	NPN; type M50X01	R177	06-11077G18	18.7k 1%
Q276	48-80214G02	NPN; type MMBT3904	R178	06-11077F91	10.0k 1%
Q277	48-05128M67	PNP; type MMBT3906	R179	06-11077F91	10.0k 1%
Q278	48-05128M67	PNP; type MMBT3906	R180	06-11077G52	42.2k 1%
Q279	48-05128M67	PNP; type MMBT3906	R181	06-11077F91	10.0k 1%
			R182	06-11077G28	23.7k 1%
Resistors, chip,	5%, 1/10 watt, ui	nless otherwise indicated.	R207	06-11077A44	56
			R208	06-11077A44	56
R1	06-11077A84	2.7k	R209	06-11077A34	22
R2	06-11077A54	150	R210	06-11077A98	10k
R3	06-11077A60	270	R212	06-11077A84	2.7k
R4	06-11077B01	12k			
R5	06-11077B03	15k	R213	06-11077A72	820
Rő	06-11077A90	4.7k	R214	06-11077A50	100
R7	06-11077A98		R215	06-11077A84	2.7k
R8		10k	R216	06-11077A72	820
	06-11077A98	10k	R217	06-11077A66	470
R9	06-11077A90	4.7k	R218	06-11077A56	180
R10	06-11077B07	22k	R219	06-11077A38	33
R11	06-11077B15	47k	R220	06-11077A56	180
R12	06-11077A45	62	R222	06-11077A88	3.9k
R13	06-11077A65	430	R223	06-11077A94	6.8k
R51	06-11077A44	56	R224	06-11077B23	100k
R52	06-11077A54	150	R225	06-11077A90	4.7k
R53	06-11077A88	3.9k	R226	06-11077A44	56
R54	06-11077A54	150	R227	06-11077A34	22
R56	06-11077B45	820k	R228	06-11077A38	33
R57	06-11077A72	820	R229	06-11077A98	10k
R58	06-11077B23	100k	R231		
R59	06-11077B27	150k	R232	06-11077A84	2.7k
R60	18-05500L08	variable 22k		06-11077A72	820
R61(N)	06-11077807	22k	R233	06-11077A46	68
			R234	06-11077A84	2.7k
R61(W)	06-11077B19	68k	R235	06-11077A72	820
R62(N)	06-11077A26	10	R236	06-11077A46	68
R62(W)	06-11077B09	27k	R237	06-11077A66	470
R63	06-11077B21	82k	R238	06-11077A28	12
R102	06-11077A62	330	R239	06-11077A66	470
R103	06-11077A98	10k	R240		not used
R104	06-11077A98	10k	R243	06-11077B23	100k
R105	06-11077B11	33k	R244	06-11077A74	1k
R106	06-11077A73	910	R245	06-11077A74	1k
R107	06-11077A78	1.5k	R246	06-11077B09	27k
R108	06-11077A26	10	R276	06-11077A98	10k
R109	06-11077A26	10	R277	06-11077A60	270
R110	06-11077B03	15k	R278	06-11077A26	10
R111	06-11077A54	150	R279	06-11077A90	4.7k
R112	06-11077A72	820	R280	06-11077A98	10k
R113	06-11077A58	220	R281	06-11077A98	
R114	06-11077A54	150			4.7k
R115	06-11077A70	680	R301(N)	06-11077B03	15k
R115 R116	06-11077A92	5.6k	R301(W)	06-11077A82	2.2k
R118			R302	18-05500L08	variable 22k
R118	06-11077A70 06-11077A88	680 2 OF	R303	06-11077A94	6.8k
		3.9k			
R120	06-11077A88	3.9k	Transformers		
R121	06-11077A84	2.7k	_		
R122	06-11077A88	3.9k	T1	25-80163M02	balun
R123	06-11077A74	1k	T2	25-80163M02	balun
R124	06-11077A78	1.5k			
R125	06-11077A44	56	Integrated circu	its and modules	(see note)
R126	06-11077A50	100	-		
R127	06-11077A84	2.7k	U1	48-80174R01	quad Schottky ring SOIC
R128	06-11077A72	820	U51	51-05479G05	receiver system
R151	06-11077B15	47k	U101	51-84704M75	synthesizer
R152	06-11077B11	33k	U102	51-83977M45	prescaler
R153	06-11077B15	47k	U176	51-80932W01	dual op-amp
R154	06-11077A34	22	0.1.0	5. 5050£1101	-adi op dinp
R155	06-11077A98	10k	Voltage regulate	ors (see note)	
R156	06-11077B03	15k	tonage regulati		
R157	06-11077A78	1.5k	VR176	48-82256C11	zener diode 10V 5%
			******	-0-02200011	

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Crystals

Y51(N)	91-80022M03	filter 45.1 MHz 12.5 kHz
Y51(Ŵ)	91-80022M02	filter 45.1 MHz 25 kHz
Y52	48-80008K02	44.645 MHz
Y151	48-80174D05	14.4 MHz

Non-referenced items

26-80097M01	shield coil can (for L151)
26-80098M01	shield coil can (17 used)
26-80228L01	shield can (for J4)
26-80229L03	shield VCO frame
26-80256L02	shield image
42-80915V01	ground clip (2 used)
42-80957X01	ground clip
75-05295B02	insulator (for Y151)
75-05295B07	insulator (3 used, for
	Y51A/B, Y52)

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

11/25/92

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PL-921022-O

2-LAYER LOGIC

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
apacitor, chip	9, 5%, 50V unless	otherwise indicated.
401	21-13741B45	.01 uF
402	08-11051A09	poly .022 uF 63V
403 404	21-13741B45	.01 uF
405	23-11048B19 23-11048B13	lytic 47 uF 20% 16V lytic 10 uF 20% 16V
105	08-11051A15	poly .22 uF 63V
107	23-11013A56	tantalum 47 uF 20% 6V
408	23-11048B19	
409	08-11051A17	
451	23-11048B19	lytic 47 uF 20% 16V
452	21-13741B45	.01 uF
453	21-11032B14	.15 uF +80/-20%
454	21-13741B45	.01 uF
455 458	08-11051A15	poly .22 uF 63V
+50 159	21-13740B36 21-13740B36	30 pF
460	21-13740B30	30 pF .01 uF
61	21-13741B45	.01 uF
63	21-13740B36	30 pF
464	21-13740B36	30 pF
465	21-13740B36	30 pF
466		not used
501	08-11051A22	poly .039 uF 63V
502	21-13740B76	1500 pF
503	21-13741B69	.1 uF
504	23-11048B13	lytic 10 uF 20% 16V
505 506	08-11051A17	poly .47 uF 63V
507	08-11051A17	poly .47 uF 63V
551	23-11048B13	not used lytic 10 uF 20% 16V
552	21-13740B36	30 pF
553	21-13740B71	820 pF
554	08-11051A03	poly .0022 uF 63V
555	21-13740B51	120 pF
556	08-11051A12	poly .068 uF 63V
557	08-11051A12	poly .068 uF 63V
558	08-11051A12	poly .068 uF 63V
559	08-11051A13	poly .1 uF 63V
560	08-11051A13	poly .1 uF 63V
561	08-11051A15	poly .22 uF 63V
562	08-11051A09	poly_022 uF 63V
563	21-13741B69	.1 uF
564 565	21-13740B49	100 pF
565 566	23-11048B13	lytic 10 uF 20% 16V
567	21-13741B45 21-13741B45	.01 uF
568	23-11048B19	.01 uF lytic 47 uF 20% 16V
500 501	23-11048B05	lytic 1 uF 20% 50V
504		not used
605		not used
606	08-11051A22	poly .039 uF 63V
607	08-11051A13	poly .1 uF 63V
608	08-11051A05	poly .0047 uF 63V
609	21-13740B60	300 pF
510	08-11051A16	poly .33 uF 63V
511	21-13740B49	100 pF
612	23-11048B19	lytic 47 uF 20% 16V
551	23-11048B19	lytic 47 uF 20% 16V
52	08-11051A06	poly .0068 uF 63V
53	08-11051A15	poly .22 uF 63V
56 57	23-11048B13	lytic 10 uF 20% 16V
658	21-13741B69	.1 uF
659	21-13741B45 23-11013A56	.01 uF
660	23-11013A56 23-11048B13	tantalum 47 uF 20% 6V
561	21-13740B74	lytic 10 uF 20% 16V
562	21-13/40B/4 08-11051A07	1200 pF
563	21-13740B50	poly .01 uF 63V 110 pF
565 564	23-11048B09	lytic 4.7 uF 20% 35V
65	21-13740B36	30 pF

66	21-13740B74	1200 pF
67	08-11051A08	poly .015 uF 63V
i68 '01	08-11051A13 21-13740B78	poly .1 uF 63V 1800 pF
03	23-11048B05	lytic 1 uF 20% 50V
'04 '05	08-11051A12	poly .068 uF 63V
'05 '06	08-11051A16 08-11051A03	poly .33 uF 63V poly .0022 uF 63V
07	21-13740B69	680 pF
01	21-13740B49	100 pF
02	21-13740B49	100 pF
03 04		not used not used
05	21-13740B73	1000 pF
08	21-13740B49	100 pF
09 19	21-13740B49 21-13740B73	100 pF
24	21-13740B49	1000 pF 100 pF
27	23-11048B05	lytic 1 uF 20% 50V
28	21-13741B69	.1 uF
29 30	21-13741B45 21-13740B31	.01 uF 18pF
31	21-13740B21	6.8 +/25 pF
32	21-13740B30	16 pF
34 35	21-13741B69	.1 uF
36	21-13741B69 21-13740B73	.1 uF 1000 pF
41	21-13740B73	1000 pF
43	21-13740B73	1000 pF
44 45	21-13740B73 21-13740B73	1000 pF 1000 pF
46	21-13740B73	1000 pF
47	21-13740B73	1000 pF
51	21-13740B73	1000 pF
54 55	21-13740B73 23-11013A56	1000 pF tantalum 47 uF 20% 6V
56	21-13740B49	100 pF
57	21-13740B73	1000 pF
58 69	21-13740B73	1000 pF
70	21-13740B73 21-13740B49	1000 pF 100 pF
14		not used
15		not used
16 17		not used not used
18		not used
19		not used
20		not used
22		not used
odes (see note)	
401	48-05129M76	silicon SOT
402	48-83654H02	silicon
403	48-05129M76	silicon SOT
1451 1551	48-05129M76 48-05129M76	silicon SOT silicon SOT
603	48-84336R03	dual silicon SOT MMBD7000
651	48-05129M76	silicon SOT
801	48-05129M76	silicon SOT
Se		
01	65-05214E04	2 amp axial lead
nnector, recer	otacie	
	28-80923V01 09-80130M03	16-pin, accessories 14-pin, RF board
	28-80128M03	6 pin, RF power amplifier
	28-80600B01	27-pin, includes J8 and J9
npers		
551	09-80601B01	push-on jumper, 2-pin
601 651	09-80601B01 09-80601B01	push-on jumper, 2-pin push-on jumper, 2-pin
809	09-80601B01	push-on jumper, 2-pin

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2-LAYER LOGIC

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R473

06-11077B09

27k

Coils		
L801	24-11087A42	chip 22 uH ferrite
L802	24-11087A42	chip 22 uH ferrite
L803	24-11087A42	chip 22 uH ferrite
Connector Plug		
Connector, Plug		
P551	28-80002R03	3-pin header
P601	28-80002R03	3-pin header
P651	28-80002R03	3-pin header
P809	28-80002R03	3-pin header
Transistors (see	note)	
Q401	48-00869619	PNP, type M9619
Q402	48-80214G02	NPN; type MMBT3904
Q403	48-05128M67	PNP; type MMBT3906
Q404	48-80214G02	NPN; type MMBT3904
Q452	48-00869619	PNP, type M9619
Q453	48-80214G02	NPN; type MMBT3904
Q454	48-80214G02	NPN; type MMBT3904
Q455	48-80141L03	PNP, type M41L03
Q501	48-80214G02	NPN; type MMBT3904
Q551	48-80949V01	field effect; type MMBF5484
Q651	48-05128M67	PNP; type MMBT3906
Q652	48-80214G02	NPN; type MMBT3904
Q801	48-80214G02	NPN; type MMBT3904
Q802 Q803	48-80141L03 48-80947V01	PNP, type M41L03 digital NPN; type DTC144W
Q804	48-80214G02	NPN; type MMBT3904
Q805	48-80947V01	digital NPN; type DTC144W
Q806	48-80947V01	digital NPN; type DTC144W
Q807	48-80214G02	NPN; type MMBT3904
Q808	48-80214G02	NPN; type MMBT3904
Q809	48-80214G02	NPN; type MMBT3904
Q810	48-80214G02	NPN; type MMBT3904
Q811	48-80947V01	digital NPN; type DTC144W
Q812	48-80947V01	digital NPN; type DTC144W
Q821	48-80214G02	NPN; type MMBT3904
Besistors, chio.	5%, 1/10 watt, u	nless otherwise indicated.
noolototo, omp,	0 /0, 1, 10 mail, a	
R401	06-11077A70	680
R402	06-80195M37	330 1/2 watt
R403	06-11077A70	680
R404	06-11077F18	1.74k 1% 2.21k 1%
R405 R406	06-11077F28 06-11077A98	10k
R407	06-11077A76	1.2k
R408	06-11077F91	10.0k 1%
R409	06-11077F91	10.0k 1%
R410	06-11077A80	1.8k
R411	06-11077A78	1.5k
R412	06-11077A84	2.7k
R413	06-11077A98	10k
R414	06-11077A98	10k
R453	06-11077A70	680
R454	06-80195M37	330 1/2 watt
R455	06-11077A70	680
R456	06-11077A82	2.2k
R457	06-11077A76	1.2k
R458	06-11077A90 06-11077A90	4.7k 4.7k
R459 R460	06-11077B01	12k
R461	06-11077A70	680
R462	06-11077B29	180k
R463	06-11077B25	120k
R464	06-11077G88	100k 1%
R465	06-11077G88	100k 1%
R466	06-11077F91	10.0k 1%
R467	06-11077F91	10.0k 1%
R468	06-11077A60	270
R469	06-11077A74	1k
R470	06-11077A98	10k
R471	06-11077B07	22k
R472 R473	06-11077A92 06-11077B09	5.6k 27k
1177/02		67 N

R474 R501 R502 R551 R551 R552 R553 R554 R555 R556 R556 R557 R558	06-11077A98 06-11077A90 06-11077A90 06-11077A94 06-11077A94 06-11077B18 06-11077B18 06-11077B18 06-11077F18 06-11077F20 06-11077F20	10k 100k 4.7k 1.5k 6.8k 390k 62k 62k 62k 62k 4.02k 1% 1.82k 1% 33.2k 1%
R559 R560 R561 R562 R563 R567 R568 R569 R570 R573 R574 R575 R576	06-11077G88 06-11077E77 06-11077G88 06-11077B16 06-11077B15 06-11077A86 06-11077A80 06-11077A42 06-11077B07 06-11077B09 06-11077A98 06-11077B10	100k 1% 665 1% 100k 1% 51k 47k 3.3k 22k 47 100k 27k 100k 27k 10k 30k
R577 R578 R581 R601 R602 R603 R607 R608 R609 R610	06-11077B23 06-11077A42 06-11077A68 06-11077A98 06-11077B47 06-11077B74 06-11077B11 06-11077B15	100k 47 560 10k 1 meg 1k not used not used 33k 47k
R611 R612 R613 R615 R616 R617 R620 R622 R651 R652	06-11077G42 06-11077G42 06-11077G42 06-11077G95 06-11077G31 06-11077A82 06-11077A98 06-11077A98 06-11077A68 06-11077A50	33.2k 1% 33.2k 1% 33.2k 1% 118k 1% 25.5k 1% 2.2k 10k 220k 560 100
R653 R654 R655 R656 R657 R658 R659 R659 R660 R661 R662	06-11077A98 06-11077A98 06-11077A90 06-11077B39 06-11077B42 06-11077A82 06-11077A82 06-11077B19 06-11077B03 06-11077B17	10k 10k 4.7k 470k 620k 619k 1% 2.2k 68k 15k 56k
R663 R664 R665 R666 R667 R668 R669 R669 R670 R671 R671	06-11077B18 06-11077B07 06-11077B23 06-11077B23 06-11077G56 06-11077G42 06-11077G42 06-11077G41 06-11077A61 06-11077B17	62k 22k 2.7k 100k 100k 46.4k 1% 33.2k 1% 33.2k 1% 300 56k
R673 R674 R701 R702 R703 R705 R706 R707 R708 R709	06-11077B23 06-11077A82 06-11077G88 06-11077G31 06-11077G31 06-11077G56 06-11077G95 06-11077B15 06-11077B19	100k 2.2k 100k 1% 178k 1% 25.5k 1% 178k 1% 46.4k 1% 118k 1% 47k 68k
R710 R711 R714	06-11077G13 06-11077G13 06-11077B10	16.5k 1% 16.5k 1% 30k

R715	06-11077B05	18k	U652	51-02198J22	duai op-amp 4558 SOIC
R716	06-11077A86	3.3k	U653	51-80059M01	voltage-controlled attenuator
R801	06-11077A78	1.5k	U801	51-80135C10	D/A converter MC144110
R802	06-11077A84	2.7k	U802	51-80649B01	microcomputer
R803	06-11077A98	10k	COOL	51-00043001	MC68HC11E9
R804	06-11077A90	4.7k			
R807	06-11077B15	47k	Voltage reg	ulators (see note)	
R808	06-11077A90	4.7k	voltage leg	diators (366 11016)	
R809	06-11077A90	4.7k	VR401	48-83461E40	zener diode 5.1V 1%
R810	06-11077B17	56k	VR402	48-80140L06	zener diode 5.1V 1%
R811	06-11077B17	56k	VR551	48-80140L15	zener diode 10V SOT
R812	06-11077A90	4.7k	VR551 VR552		
R813	06-11077A90	4.7k		48-80140L15	zener diode 10V SOT
B814	06-11077A90	4.7k	VR801	48-80948V01	zener diode 27V SOT
R815	06-11077A90	4.7k	VR802	48-80948V01	zener diode 27V SOT
R816			VR803		not used
R817	06-11077B23	100k	VR804		not used
	06-11077B23	100k	VR805		not used
R818	06-11077B23	100k	VR807		not used
R822	06-11077B15	47k	VR811	48-80948V01	zener diode 27V SOT
R825	06-11077B15	47k	VR812	48-82256C20	zener diode 27V
R826	06-11077A90	4.7k	VR813	48-80948V01	zener diode 27V SOT
R827	06-11077A98	10k	VR814	48-80948V01	zener diode 27V SOT
R828	06-11077A98	10k			
R831	06-11077A74	1k	Crystals		
R832	06-11077A74	1k			
R833	06-11077A98	10k	Y801	48-80173D09	7.776 MHz
R836	06-11077A98	10k			
R842	06-11077A74	1k	Non-referer	nced items	
R845	06-11077A74	1k			
R846	06-11077A98	10k		03-10943M04	screw M2.5 X 8 (2 used, for
R847	06-11077A74	1k			Q401 and Q452)
R849	06-11077A98	10k		03-80271L01	screw (2 used for U501)
R850	06-11077A74	1k		04-00136334	washer flat (2 used for U501)
R851	06-11077B15	47k		14-83820M05	insulator (2 used, for Q401
R852	06-11077B15	47k			and Q452)
R853	06-11077B45	820k		26-80497B01	heatsink
R854	06-11077A90	4.7k		01-80701Y58	connector assembly (mates
R857	06-11077A98	10k		•••••••	with J3)
R858	06-11077A98	10k		09-82071K09	14 pin socket (2 used for
R859	06-11077A98	10k			U804)
R860	06-11077A98	10k		26-80123M02	logic shield frame
R862	06-11077F95	11.0k 1%			logio chiera namo
R863	06-11077F91	10.0k 1%	Note: For o	ntimum performance	, diodes, transistors, and in-
R864	06-11077F20	1.82k 1%			d by Motorola part numbers.
R865	06-11077A98	10k	tegrated Cir	Cars must be bluele	a by Motorola part numbers.
R866	06-11077A98	10k	3/13/92		PL-92011-O
R867	06-11077A98	10k	0/10/32		
R868	06-11077A98	10k			
R869	06-11077A98	10k			
R870		10k			
Ben i	06-11077A98				
R871	06-11077A98	10k			
R872	06-11077A98	10k			
R876	06-11077A98	10k			
R877	06-11077B23	100k			
R878	06-11077B23	100k			
R879	06-11077B23	100k			
R880	06-11077B15	47k			
R883	06-11077A90	4.7k			
R884	06-11077B15	47k			
R887	06-11077A90	4.7k			
R889	06-11077A68	560			
R890	06-11077A98	10k			
R918	06-11077A98	10k			
R919	06-11077A98	10k			
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Integrated circuits and modules (see note)

U401	51-02198J22	dual op-amp 4558 SOIC
U402	51-80942T01	regulator, 5V with reset
U451	51-02198J22	dual op-amp 4558 SOIC
U501	51-80147R01	audio power amp TDA1519A
U551	51-02198J22	dual op-amp 4558 SOIC
U552	51-02198J22	dual op-amp 4558 SOIC
U553	51-02198J22	dual op-amp 4558 SOIC
U601	51-02198J23	dual comparator 2903 SOIC
U602	51-02198J22	dual op-amp 4558 SOIC
U603	51-02198J22	dual op-amp 4558 SOIC
U651	51-02198J22	dual op-amp 4558 SOIC

HLN8070A Logic Board 4-Layer Expanded

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REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	C667 C668	0
Capacitor, chip	. 5%. 50V unless	otherwise indicated.	C701 C703	2 2
			C704	0
C401 C402	21-13741B45 08-11051A09	.01 uF poly .022 uF 63V	C705 C706	0
C403	21-13741B45	.01 uF	C707	2
2404	23-11048B19	lytic 47 uF 20% 16V	C801	2
C405	23-11048B13	lytic 10 uF 20% 16V	C802	2
C406 C407	08-11051A15 23-11013A56	poly .22 uF 63V tantalum 47 uF 20% 6V	C803 C804	2
2408	23-11048B19	lytic 47 uF 20% 16V	C805	2
2409	08-11051A17		C806	2
C451	23-11048B19	lytic 47 uF 20% 16V	C807	2
C452 C453	21-13741B45 21-11032B14	.01 uF .15 uF +80/-20%	C808 C809	2
C454	21-13741B45	.01 uF	C810	2
C455	08-11051A15		C811	2
2458	21-13740B36	30 pF	C812	2
C459 C460	21-13740B36	30 pF	C813 C814	2
C461	21-13741B45 21-13741B45	.01 uF .01 uF	C815	2
C462	21-11032B15		C816	2
2463	21-13740B36	30 pF	C817	2
2464	21-13740B36	30 pF	C818	2
C465 C466	21-13740B36	30 pF not used	C819 C820	2
C501	08-11051A22	poly .039 uF 63V	C821	2
C502	21-13740B76	1500 pF	C822	2
C503	21-13741B69	.1 uF	C823	2
C504 C505	23-11048B13 08-11051A17	lytic 10 uF 20% 16V poly .47 uF 63V	C824 C825	2
C507	06-11051A17	not used	C826	2
C551	23-11048B13	lytic 10 uF 20% 16V	C827	2
0552	21-13740B36	30 pF	C828	2
C553 C554	21-13740B71	820 pF	C829 C830	2
C555	08-11051A03 21-13740B51	poly .0022 uF 63V 120 pF	C830 C831	2
0556	08-11051A12	poly .068 uF 63V	C832	2
C557	08-11051A12	poly .068 uF 63V	C833	2
C558 C559	08-11051A12	poly .068 uF 63V	C834	2
C560	08-11051A13 08-11051A13	poly .1 uF 63V poly .1 uF 63V	C835 C836	2
C561	08-11051A15	poly .22 uF 63V	C837	2
0562	08-11051A09	poly022 uF 63V	C838	2
C563 C564	21-13741B69	.1 uF	C839	2
C565	21-13740B49 23-11048B13	100 pF lytic 10 uF 20% 16V	C840 C841	2
C566	21-13741B45		C842	2
2567	21-13741B45	.01 uF	C843	2
2568	23-11048B19	lytic 47 uF 20% 16V	C844	2
C569 C601	21-13740B33 23-11048B05	22 pF lytic 1 uF 20% 50V	C845 C846	2
C604	20-110-10200	not used	C847	2
C605		not used	C848	2
C606	08-11051A22	poly .039 uF 63V	C849	2
C607 C608	08-11051A13 08-11051A05	poly .1 uF 63V	C850	2
C609	21-13740B60	poly .0047 uF 63V 300 pF	C851 C852	2
C610	08-11051A16	poly .33 uF 63V	C853	2
C611	21-13740B49	100 pF	C854	2
C612 C651	23-11048B19	lytic 47 uF 20% 16V	C855	2
C652	23-11048B19 08-11051A06	lytic 47 uF 20% 16V poly .0068 uF 63V	C856 C857	2
C653	08-11051A15	poly .22 uF 63V	C858	2
C656	23-11048B13	lytic_10 uF 20% 16V	C860	2
C657	21-13741B69	.1 uF	C861	2
C658 C659	21-13741B45 23-11013A56	.01 uF tantalum 47 uF 20% 6V	C862 C863	2
C660	23-11048B13	lytic 10 uF 20% 16V	C864	2
C661	21-13740B74	1200 pF	C865	2
C662	08-11051A07	poly .01 uF 63V	C866	2
C663	21-13740B50	110 pF	C867	2
C664	23-11048B09	lytic 4.7 uF 20% 35V	C868	2

21-13740B36 21-13740B74 08-11051A08 08-11051A03 21-13740B78 23-11048B05 08-11051A12 08-11051A12 08-11051A12 08-11051A12 08-11051A03 21-13740B49 21-13740B49 21-13740B73 21-137	30 pF 1200 pF poly .015 uF 63V poly .015 uF 63V 1800 pF lytic 1 uF 20% 50V poly .068 uF 63V poly .033 uF 63V poly .0022 uF 63V 680 pF 100 pF 1000
21-13740B73 21-13740B73	1000 pF 1000 pF
21-13740B73 21-13741B45 21-13741B45 21-13740B73 23-11013A56 21-13740B73 21-13740B73 21-13740B73 21-13741B53 21-13740B73 21-13740B73 21-13740B73 21-13740B73 21-13740B73 21-13740B73 21-13740B73 21-13740B73 21-13740B73	

D : 1 (
Diodes (see not	te)		Q810	48-80214G02	NPN; type MMBT3904
00404	40.054001470		Q811	48-80947V01	digital NPN; type DTC144W
CR401	48-05129M76	silicon SOT	Q812	48-80947V01	digital NPN; type DTC144W
CR402	48-83654H02	silicon	Q813	48-80947V0 1	digital NPN; type DTC144W
CR403	48-05129M76	silicon SOT	Q814	48-80214G02	NPN; type MMBT3904
CR451	48-05129M76	silicon SOT	Q815	48-80947V01	digital NPN; type DTC144W
CR551	48-05129M76	silicon SOT	Q816	48-80214G02	NPN; type MMBT3904
CR603	48-84336R03	dual silicon SOT MMBD7000	Q817	48-80947V01	digital NPN; type DTC144W
CR651	48-05129M76	silicon SOT	Q818	48-80214G02	NPN; type MMBT3904
			Q819	48-80214G02	NPN; type MMBT3904
Fuse			Q820	48-80947V01	digital NPN; type DTC144W
500/					• • •
F801	65-05214E04	2 amp axial lead	Resistors, c	hip, 5%, 1/10 watt, ui	nless otherwise indicated.
Connector rec	notacle		D / A /		
Connector, rece	eptacie		R401	06-11077A70	680
J3	28-80923V01	16-pin, accessories	R402	06-80195M37	330 1/2 watt
J6	09-80130M03	14-pin, RF board	R403	06-11077A70	680
J7	28-80128M03	6 pin, RF power amplifier	R404	06-11077F18	1.74k 1%
J8/J9	28-80600B01	27-pin, includes J8 and J9	R405	06-11077F28	2.21k 1%
00/03	20-00000001	27-pm, includes 36 and 39	R406	06-11077A98	10k
Jumpers			R407	06-11077A76	1.2k
oumpers			R408	06-11077F91	10.0k 1%
JU551	09-80601B01	ouch on iumnor 0 ain	R409	06-11077F91	10.0k 1%
JU601		push-on jumper, 2-pin	R410	06-11077A80	1.8k
	09-80601B01	push-on jumper, 2-pin	R411	06-11077A98	10k
JU651	09-80601B01	push-on jumper, 2-pin	R412	06-11077A74	1k
JU701	09-80601B01	push-on jumper, 2-pin	R413	06-11077A98	10 k
JU802	06-11077A01	jumper	R414	06-11077A98	10k
JU803	00 110-10	not used	R453	06-11077A70	680
JU804	06-11077A01	jumper	R454	06-80195M37	330 1/2 watt
JU805		not used	R455	06-11077A70	680
JU806	06-11077A01	jumper	R456	06-11077A82	2.2k
JU807	06-11009B23	jumper	R457	06-11077A76	1.2k
JU808	09-80601B01	push-on jumper, 2-pin	R458	06-11077A90	4.7k
JU810		not used	R459	06-11077A90	4.7k
JU811	06-11077A01	jumper	R460	06-11077B01	12k
			R461	06-11077A70	680
Coils			R462	06-11077B29	180k
			R463	06-11077B25	120k
L801	24-11087A42	chip 22 uH ferrite	R464	06-11077G88	100k 1%
L802	24-83961B02	5 turns GRN	R465	06-11077G88	100k 1%
L803	24-83961B02	5 turns GRN	R466	06-11077F91	10.0k 1%
-			R467	06-11077F91	10.0k 1%
Connector, Plug	9		R468	06-11077A60	270
			R469	06-11077A74	1k
P551	28-80002R03	3-pin header	R470	06-11077A98	10k
P601	28-80002R03	3-pin header	R471	06-11077B07	22k
P651	28-80002R03	3-pin header	R472	06-11077A92	5.6k
P701	28-80002R03	3-pin header	R473	06-11077B09	27k
P808	28-80002R03	3-pin header	R474	06-11077A98	10k
P810	28-80002R03	3-pin header			
P811	28-80002R03	3-pin header	R475	06-11077G88	100k 1%
-			R476	06-11077G57	47.5k 1%
Transistors (see	e note)		R477	06-11077A90	4.7k
	···· ·		R501	06-11077B23	100k
Q401	48-00869619	PNP, type M9619	R502	06-11077A90	4.7k
Q402	48-80214G02	NPN; type MMBT3904	R503	06-11077A78	1.5k
Q403	48-80516C01	TMOS; type MTD4P06	R551	06-11077A94	6.8k
Q404	48-80214G02	NPN; type MMBT3904	R552	06-11077B37	390k
Q452	48-00869619	PNP, type M9619	R553	06-11077B18	62k
Q453	48-80214G02	NPN; type MMBT3904	R554	06-11077B18	62k
Q454	48-80214G02	NPN; type MMBT3904	R555	06-11077B18	62k
Q455	48-80141L03	PNP, type M41L03	R556	06-11077F53	4.02k 1%
Q456	48-80214G02	NPN; type MMBT3904	R557	06-11077F20	1.82k 1%
Q501	48-80214G02	NPN; type MMBT3904	R558	06-11077G42	33.2k 1%
Q551	48-80949V01	field effect; type MMBF5484	R559	06-11077G88	100k 1%
Q601	48-80214G02	NPN; type MMBT3904	R560	06-11077E77	665 1%
Q651	48-05128M67	PNP; type MMBT3906	R561	06-11077G88	100k 1%
Q652	48-80214G02	NPN; type MMBT3904	R562	06-11077B16	51k
Q801	48-80214G02		R563	06-11077B15	47k
Q802	48-80214002 48-80141L03	NPN; type MMBT3904 PNP, type M41L03	R567	06-11077A86	3.3k
Q803	48-80947V01	PNP, type M41L03 digital NPN: type DTC144W	R568	06-11077B07	22k
Q804	48-80214G02	digital NPN; type DTC144W	R569	06-11077A42	47
Q805		NPN; type MMBT3904	R570	06-11077B23	100k
Q806	48-80947V01	digital NPN; type DTC144W	R573	06-11077B09	27k
Q807	48-80947V01	digital NPN; type DTC144W	R574	06-11077A98	10k
Q808	48-80214G02 48-05128M67	NPN; type MMBT3904 PNP: type MMBT3906	R575	06-11077B10	30k
Q809	48-05128M67	PNP; type MMBT3906	R576	06-11077B10	30k
		PNP; type MMBT3906	R577	06-11077B23	100k

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R578	06-1
R579 R580	06-1 06-1
R581 R601	06-1
R602	06-1 06-1
R603 R607	06-1
R608 R609	06-1
R610 R611	06-1
R612	06-1 06-1
R613 R615	06-1 06-1
R616	06-1
R617 R618	06-1 06-1
R619 R620	06-1 06-1
R622	06-1
R651 R652	06-1 06-1
R653	06-1
R654 R655	06-1 06-1
R656 R657	06-1 06-1
R658	06-1
R659 R660	06-1 06-1
R661 R662	06-1
R663	06-1 06-1
R664 R665	06-1 06-1
R666	06-1
R667 R668	06-1 06-1
R669 R670	06-1 06-1
R671	06-1
R672 R673	06-1 06-1
R674 R701	06-1
R702	06-1 06-1
R703 R705	06-1 06-1
R706	06-1
R707 R708	06-1 06-1
R709 R710	06-1 06-1
R711	06-1
R714 R715	06-1 06-1
R716	06-1
R801 R802	06-1 06-1
R803 R804	06-1 06-1
R807	06-1
R808 R809	06-1 06-1
R810 R811	06-1 06-1
R812	06-1
R813 R814	06-1 06-1
R815 R816	06-1
R817	06-1 06-1
R818 R822	06-1 06-1
R825	06-1
R826 R827	06-1 06-1

06-11077A42 06-11077B37 06-11077B09 06-11077A68 06-11077A98 06-11077A74 06-11077A74	47 390k 27k 560 10k 1 meg 1k not used
06-11077A74 06-11077B11 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G31 06-11077A82 06-11077A98 06-11077A98 06-11077A98 06-11077A98 06-11077A98 06-11077A98 06-11077A99 06-11077A99 06-11077B19 06-11077B17 06-11077B17 06-11077B18 06-11077G42 06-11077G42 06-11077G42 06-11077G56 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G56 06-11077G42 06-11077G42 06-11077G42 06-11077G56 06-11077G42 06-11077G56 06-11077G42 06-11077G56 06-11077G42 06-11077G42 06-11077G56 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G42 06-11077G43 06-11077G43 06-11077G43 06-11077G43 06-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11077A90 07-11	1k -
06-11077B23 06-11077B23 06-11077B15 06-11077B15 06-11077A90 06-11077A98	100k 100k 47k 47k 4.7k 4.7k 10k

R828	06 11077400	104
	06-11077A98	10k
R829	06-11077A74	1k
R830	06-11077A74	1k
R831	06-11077A50	100
B832	06-11077A50	
		100
R833	06-11077A98	10k
R834	06-11077F91	10.0k 1%
R835	06-11077B05	18k
R836	06-11077A98	10k
R837	06-11077B05	18k
R838	06-11077F91	10.0k 1%
R839	06-11077A98	10k
R840	06-11077A98	1 0k
R841	06-11077A98	10k
R842	06-11077A74	1k
R843	06-11077A98	10k
R844	06-11077A98	10k
R845	06-11077A74	1k
R846	06-11077A98	10k
R847	06-11077A50	100
R848	06-11077A74	1k
R849	06-11077A98	10k
R850	06-11077A74	1k
R851	06-11077B15	47k
R852	06-11077B15	47k
R853	06-11077B45	820k
R854	06-11077A90	4.7k
R855	06-11077B15	47k
R856	06-11077A74	1k
R857	06-11077A98	10k
R858	06-11077A98	
		10k
R859	06-11077A98	10k
R860	06-11077A98	10k
R861	06-11077B23	100k
R862	06-11077F95	11.0k 1%
R863	06-11077F91	10.0k 1%
R864	06-11077F20	1.82k 1%
R865	06-11077A98	10k
R866	06-11077A98	10k
R867	06-11077A98	10k
R868	06-11077A98	10k
R869	06-11077A98	10k
R870	06-11077A98	10k
R871	06-11077A98	10k
R872	06-11077A98	10k
R873	06-11077A98	10k
R874	06-11077A74	1k
R875	06-11077A98	10k
R876	06-11077A98	10k
R877	06-11077B23	100k
R878	06-11077B23	100k
R879	06-11077B23	100k
R880	06-11077B15	47k
R883	06-11077A90	4.7k
R884	06-11077B15	47k
R887	06-11077A90	4.7k
R888		not used
R889	06-11077A68	560
R890	06-11077A98	10k
R899	06-11077A98	10k
R901	06-11077A90	4.7k
R902	06-11077B15	47k
R903	06-11077A98	10k
R904	06-11077A98	10k
R905	06-11077A90	4.7k
R906	06-11077B15	47k
R907	06-11077A98	10k
R908	06-11077A98	10k
R909	06-11077A90	4.7k
R910	06-11077B15	47k
R911	06-11077A98	10k
R912	06-11077A98	10k
R913	06-11077A98	10k
		-
R914	06-11077A90	4.7k
R915	06-11077B15	47k
R916	06-11077A98	10k
R917	06-11077A74	1k
R918	06-11077A98	10k

Integrated circuits and modules (see note)

11100		
U401	51-02198J22	dual op-amp 4558 SOIC
U402	51-80942T01	regulator, 5V with reset
U451	51-02198J22	dual op-amp 4558 SOIC
U501	51-80147R01	audio power amp TDA1519A
U551	51-02198J22	dual op-amp 4558 SOIC
U552	51-02198J22	dual op-amp 4558 SOIC
U553	51-02198J22	dual op-amp 4558 SOIC
U601	51-02198J23	dual comparator 2903 SOIC
U602	51-02198J22	dual op-amp 4558 SOIC
U603	51-02198J22	dual op-amp 4558 SOIC
U651	51-02198J22	dual op-amp 4558 SOIC
U652	51-02198J22	dual op-amp 4558 SOIC
U653	51-80059M01	voltage-controlled attenuator
U701	51-02198J22	dual op-amp 4558 SOIC
U801	51-80135C10	D/A converter MC144110
U802	51-80960T01	microcomputer
U803	51-82862N09	gate array
U804	HLN8121A	ROM kit
U805	51-80901W01	EEPROM
U806	51-80914V01	static RAM

Voltage regulators (see note)

VR401	48-83461E40	zener diode 5.1V 1%
VB402	48-80140L06	zener diode 5.1V
VR403	48-80948V01	zener diode 3.1V
VR551	48-80140L15	zener diode 10V SOT
VR552	48-80140L15	zener diode 10V SOT
VR801	48-80948V01	zener diode 27V SOT
VR802	48-80948V01	zener diode 27V SOT
VR803		not used
VR804	48-80948V01	zener diode 27V SOT
VR805		not used
VR806		not used
VR807		not used
VR808	48-80948V01	zener diode 27V SOT
VR809	48-80948V01	zener diode 27V SOT
VR810	48-80948V01	zener diode 27V SOT
VR811	48-80948V01	zener diode 27V SOT
VR812	48-82256C20	zener diode 27V

Crystals

Y801 48-80173D09 7.77	76 MHz
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Non-referenced items

03-10943M04	screw M2.5 X 8 (2 used, for
03-80271L01	Q401 and Q452) screw (2 used for U501)
04-00136334	washer flat (2 used for U501)
14-83820M05	insulator (2 used, for Q401
	and Q452)
26-80497B01	heatsink
01-80701Y58	connector assembly (mates with J3)
09-82071K09	14 pin socket (2 used for U804)
26-80123M02	logic shield frame

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

11/24/92

PL-921012-A

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PA 146-174 MHz (1-10W)

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	REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
	Capacitor, chip,	5%, 50V unless (otherwise indicated.
	C2210	21-13740B49	100 pF
	C2211	21-13740B34	24 pF
	C2212		notused
	C2213	21-13740B65	470 pF
	C2214	21-13740B65	470 pF
	C2215	21-13740B47	82 pF
	C2216	21-13741B69	.1 uF
	C2217	21-13740B73	1000 pF
	C2218	21-13740B65	470 pF
	C2219	21-13741B69	.1 uF
*	C2220		not used
	C2221	21-13740B65	470 pF
	C2223	21-13740B65	470 pF
	C2224		not used
•	C2225		not used
	C2226	21-13741869	.1 uF
	C2227	21-13740B65	470 pF
	C2229	21-13740B73	1000 pF
	C2230	21-13740853	150 pF
	C2231	21-13740B47	82 pF
	C2234	21-13741B69	.1 uF
	C2235	21-13740B65	470 pF
	C2236	21-13741869	.1 uF
	C2240	21 10/ 11000	not used
	C2241		not used
	C2242		not used
	C2243	21-13740B46	75 pF
	C2244	21-13740B34	24 pF
	C2245	21-13740B40	43 pF
	C2250	21-13740B65	
	C2251	21-13740B19	470 pF 5.6 +/25 pF
	C2252	21-13740B40	43 pF
	C2253	21-13740B40	470 pF
	C2260	21-13740B33	
	C2261	21-13740833	22 pF
	C2262	21-13740B34 21-13740B35	24 pF
	C2263	21-13740835	27 pF 24 pF
	C2264	21-13740B30	
	C2265		16 pF
	C2270	21-13740B65	470 pF
	C2270	21-13740B65	470 pF
		21-13740B49	100 pF
	C2272 C2273	21-13740B73	1000 pF
		21-13741B69	.1 uF
	C2274	21-13740B65	470 pF
	C2275	21-13740B65	470 pF
	C2276	21-13740B65	470 pF
	C2277	21-13741B69	.1 uF
	C2278	21-13740B49	100 pF
	C2279	21-13740B65	470 pF
	C2280	21-13740B49	100 pF
•	C2281	21-13741B69	.1 uF
	כעככי ז	00 11051817	0014 17 UE 6911

HLD8299A PA Board, 146-174 MHz, 1-10 Watt

not used

poly .47 uF 63V

Diodes (see note)

C2282

C2283

CR2250	48-80010E01	PIN UM9401
CR2251	48-80010E01	PIN UM9401
CR2270	48-80236E07	transient suppressor diode

Ferrite Beads

E2210 E2211 E2230 E2270 E2271	24-84657R01 24-84657R01 24-84657R01 24-84657R01 24-84657R01	ferrite bead ferrite bead ferrite bead ferrite bead ferrite bead
Coils		
L2210	24-11030B10	5-1/2 turn RED

08-11051A17

L2211 L2212 L2213 L2214 L2215 L2223 L2230 L2231 L2240 L2250 L2251 L2252 L2260 L2261 L2262 L2263 L2263 L2264		.2 uH 10-1/2 turns WHT 3-1/2 turns WHT 3-1/2 turns WHT chip 1.5 uH 5-1/2 turns RED chip 1.5 uH 6-1/2 turns ORN
Transistors (see	note)	
Q2210 Q2220	48-82233P39 48-80225C23	
Resistors, chip,	5%, 1/10 watt, ui	nless otherwise indicated.
R2210 R2211 R2212 R2213 R2214 R2215 R2216 R2217 R2218 R2219 R2220 R2230 R2230 R2230 R2230 R2230 R2251 R2270 R2271 R2271 R2272 R2273 R2274 Non-referenced	06-11077A60 06-11077A58 06-11077A52 06-11077A33 06-11077A40 06-11077A43 06-11077A26 06-11077A26 06-11077A26 06-11077A26 06-11077A26 06-11077A26 06-80194M15 06-80194M15 06-80194M15 06-11077B11 06-11077A11 06-11077A40 06-05621T02 06-11077A44 06-11086D01 items 26-80158L01 29-80014A03	56
Note: For optim tegrated circuits	um performance s must be ordere	e, diodes, transistors, and in- d by Motorola part numbers.
1/7/93	• · · · · · · · · · · · · · · · · · · ·	PL-921028-O

PA 146-174 MHz (1-10W)

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Non-referenced	items	
	01-80556B01	6-wire cable assembly (in- cludes P7)
	01-80634B01	feedthru bracket assembly (includes C2201 through C2206, 470 pF feedthru capacitors, 6 used)

HLN8274A PA Hardware Kit, 146-174 MHz, 1-10 Watt

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	
Capacitor, chip			
C2238 C2239	21-11078B25 21-11078B25	27 pF 100V 27 pF 100V	
Connector, rece	ptacle		
J1 J2	09-80131M01 09-80255E01	mini UHF coax power (includes feedthru)	
Connector, plug	3		
P4	30-80138M08	coaxial cable 200 mm with	
P5	30-80138M07	plug coaxial cable 150 mm with plug	
Transistors			
Q2230	48-80225C18	NPN; type MRF2628	
Non-referenced items			
	02-00007003 03-10943M10 03-10943M11 04-00131974 04-05587G01 04-80943V01 26-80124L01 26-80124L01 26-80223M07 32-80014N03 42-80520B01	nut 8-32x5/16x1/8 (for J1) screw M3x.5x8 (6 used) screw M3x.5x10 (2 used for J2) washer (2 used for J2) washer nylon (for J2) lockwasher (for J1) heat sink PA shield gasket, accessory connector ground clip, pc board (2 used)	

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

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PL-921029-O

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PA 146-174 MHz (10-25W)

HLD8033A PA E	Board, 146-174 N	1Hz, 10-25 Watt	L2323	24-80036A01	ferrite bead 1/2 turn
DECEDENCE		DEGODIETION	L2324	24-82723H46	.2 uH
REFERENCE	MOTOROLA	DESCRIPTION	L2325	24-11030B02	1-1/2 turns RED
NUMBER	PART NO.		L2330	24-11030E04	1/2 turn YEL
~			L2331	24-11030B07	3-1/2 turn WHT
Capacitor, chip	, 5%, 50V unless	otherwise indicated.	L2332	24-80036A01	ferrite bead 1/2 turn
0			L2333	24-11030B07	3-1/2 turns WHT
C2308		not used	L2334	24-11030E04	1/2 turn YEL
C2309	_	not used	L2335	24-11030A02	3 turns ORG
C2310	21-13740B65	470 pF	L2336	24-11030A03	4 turns YEL
C2311	21-13740B27	12 pF	L2350	24-82723H49	1.2 uH
C2312	21-13740B65	470 pF	L2351	24-11030B10	5-1/2 turns RED
C2313	21-13740B65	470 pF	L2352	24-82723H44	.039 uH
C2314	21-13741B69	.1 uF	L2353	24-82723H49	1.2 uH
C2315	21-13740B51	120 pF	L2360	24-11030A05	6 turns BLU
C2316	21-13740B65	470 pF	L2361	24-11030B12	7-1/2 turns YEL
C2317	21-13740B41	47 pF	L2362	24-11030B12	7-1/2 turns YEL
C2318	21-13740B49	100 pF	L2363	24-11030A05	6 turns BLU
C2319	21-13740B65	470 pF	L2364	24-11030B15	10-1/2 turns WHT
C2320	21-13740B65	470 pF	L2370	24-84346A02	.23 uH
C2321	21-11032B15	.22 uF +80/-20%			
C2322	21-13741B69	.1 uF	Transistors (see note)	
C2323	21-13740B65	470 pF	`		
C2324	21-13740B32	20 pF	Q2310	48-82233P39	NPN; type 33P39
C2325	21-13740B35	27 pF	Q2320	48-80225C23	NPN; type MRF237
C2326	21-13740B41	47 pF			
C2327	21-13740B65	470 pF	Resistors, ch	nip. 5%. 1/10 watt. u	nless otherwise indicated.
C2330	21-13740B41	47 pF			
C2331	21-13740B47	82 pF	R2307	06-11077A62	330
C2332		not used	R2310	06-11077A46	68
C2334		not used	R2311	06-11077A58	220
C2336	21-80060M43	100 pF 100V	R2312	06-11077A60	270
C2337	21-80060M39	68 pF 500V	R2313	06-11077A26	10
C2338	21-80060M25	18 pF 500V	R2314	06-11077A26	10
C2339	21-11032B15	.22 uF + 80/-20%	R2320	06-11077A26	10
C2340	21-80060M19	10 pF 500V	R2321	06-11077A50	100
C2341	21-13740B53	150 pF	R2329		not used
C2342		not used	R2331	06-80279M01	metal film 82 3 watt
C2343	21-80060M43	100 pF 100V	R2332	06-11077A26	10
C2351	21-13740B29	15 pF	R2350	06-11009A39	390 1/4 watt
C2352	21-13740B53	150 pF	R2351	06-11077A66	470
C2353	21-13740B59	270 pF	R2352	06-11077A66	470
C2354	21-13740B65	470 pF	R2353	06-11077A50	100
C2360	21-80060M29	27 pF 500V	R2370	06-11077A38	33
C2361	21-80060M29	27 pF 500V	R2371	06-80147M01	metal plate .05 2 watt
C2362	21-80060M29	27 pF 500V	R2372	06-05621T02	thermistor 50k
C2363	21-80060M30	30 pF 500V	R2373	06-11077B11	33k
C2364	21-80060M27	22 pF 500V	R2374	06-11077A74	1k
C2365	21-13740B73	1000 pF			
C2370	21-13740B65	470 pF	Non-reference	ced items	
C2371	21-13741B69	.1 uF			
C2372	21-13740B51	120 pF		26-80158L01	heat sink (for Q2320)
C2373	21-13740B65	470 pF		26-80275M01	heat sink, diode (2 used for
C2374	21-13740B65	470 pF		20-002/01101	CR2350 and CR2351)
C2375	21-13740B65	470 pF		29-80014A03	clip coax terminal (2 used)
C2376	21-13741B69	.1 uF		20 000 14/ 00	chp coax terminal (2 used)
C2378	23-11048A17	lytic 33 uF 20% 25V	Note: For on	timum performano	e, diodes, transistors, and in-
C2379	21-13740B65	470 pF			d by Motorola part numbers.
C2380	21-13740865	470 pF 470 pF	legialeu circ	ans must be ordere	u by motorola part numbers.
02000	21-13/40003	470 pr	8/20/92		PL-921015-A
Diodes (see not	te)		0,20,32		F 2-921013-A
CR2350	48-80010E01	silicon PIN UM9401			
CR2351	48-80010E01	silicon PIN UM9401			
CR2370	48-80236E07	transient suppressor diode			
J	10 00200201				
Ferrite Beads					

E2370	76-83960B01	ferrite bead 1/2 turn
Coils		

1 WHT
N
WHT 1/2 turn
WHT

PA 146-174 MHz (10-25W)

01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Non-referenced	items	
	01-80556B01	6-wire cable assembly (in- cludes P7)
	01-80634B01	feedthru bracket assembly (includes C2301 through C2306, 470 pF feedthru capacitors, 6 used)

HLN8069A PA Hardware Kit, VHF 25 Watt

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	
Capacitors, chi	р		
C2329		not used	
C2333	21-11078B52	240 pF 100V	
C2335	21-11078B34	47 pF 100V	
Connector, rece	eptacle		
J1	09-80131M01	mini UHF coax	
J2	09-80255E01	power (includes feedthru)	
Connector, plug	9		
P4	30-80138M08	coaxial cable 200 mm with	
P5	30-80138M07	plug coaxial cable 150 mm with	
FJ	30-001301407	plug	
Transistors			
Q2330	48-80225C22	NPN; type MRF1946	
Non-referenced items			
	02-00007003	nut 8-32x5/16x1/8 (for J1)	
	03-10943M10	screw M3x.5x8 (8 used)	
	03-10943M11	screw M3x.5x10 (2 used for J2)	
	04-00131974	washer (2 used for J2)	
	04-05587G01	washer nylon (for J2)	
	04-80943V01	lockwasher (for J1)	
	26-80124L01	heat sink	
	26-80223M07	PA shield	
	32-80014N03	gasket, accessory connector	
	38-80014N01	plug button	
	42-80281L01	ground clip (2 used for Q2330)	
	42-80520B01	ground clip, pc board (2 used)	

N tegrated circuits must be ordered by Motorola part numbers.

8/20/92

PL-921016-A

PA 146-174 MHz (25-45W)

HLD8287A PA Board, 146-174 MHz, 25-45 Watt

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REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	
Capacitor, chip	o, 5%, 50V unless	otherwise indicated.	
C2410	21-13740B65	470 pF	
C2411 C2412	21-13740B29	15 pF	
C2412 C2413	21-13740B61 21-13740B45	330 pF 68 pF	
C2414	21-13740B65	470 pF	ĺ
C2415	21-13740B65	470 pF	i
C2420	21-13740B37	33 pF	1
C2421 C2422	21-13740B41	47 pF	ļ
C2423	08-11051A17 21-13740B52	poly .47 uF 63V 130 pF	
C2424	21-13740B37	33 pF	i
C2430	21-13740B49	100 pF	i
C2431	21-13740B36	30 pF	L
C2432 C2433	21-13740B65 21-13740B65	470 pF	-
C2434	21-13740B65	470 pF .1 uF	٦
C2435	08-11051A19	poly 1 uF 63V	(
C2440	21-11078B59	470 pF 100V	Ċ
C2443	21-13740B65	470 pF	_
C2444 C2447	08-11051A17	poly .47 uF 63V	F
C2448	21-11078B38 21-11078B38	68 pF 100V 68 pF 100V	F
C2449	21-80060M42	91 pF 500V	Ē
C2450	21-80060M34	43 pF 500V	F
C2451	21-11078B59	470 pF 100V	F
C2452 C2453	01 11070D44	not used	F
C2455	21-11078B44 21-13740B25	120 pF 100V 10 pF	F
C2455	21-13740B65	470 pF	Ē
C2456		not used	F
C2460	21-80060M30	30 pF 500V	F
C2461 C2462	21-80060M30 21-80060M30	30 pF 500V 30 pF 500V	F
C2463	21-80060M27	22 pF 500V	Ŕ
C2464	21-11078B59	470 pF 100V	F
C2468	21-11078B38	68 pF 100V	F
C2469 C2470	21-11078B38 21-13740B65	68 pF 100V	F
C2471	21-13740B65	470 pF 470 pF	F
C2472	21-13740B65	470 pF	N
C2473	21-13740B65	470 pF	
C2474	21-13740B65	470 pF	
C2475 C2476	21-13740B51 21-13740B65	120 pF 470 pF	
C2477	21-13740B69	-1 uF	
C2478	21-13741B69	.1 uF	
C2479	21-13740B65	470 pF	4
C2480 C2481	21-13741B69	.1 uF	te
C2482	21-13740B65 21-13740B65	470 pF 470 pF	1
Diodes (see not		4/0 pr	•
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CR2450 CR2451	48-80010E01 48-80010E01	silicon PIN silicon PIN	
CR2470	48-80236E07	transient suppressor diode	
Ferrite Beads			
E2410	24-80036A01	ferrite bead 1/2 turn	
E2420	24-80036A01	ferrite bead 1/2 turn	
E2430	24-80036A01	ferrite bead 1/2 turn	
E2440 E2470	24-80036A01	ferrite bead 1/2 turn	
E2470 E2471	76-83960B01 76-83960B01	ferrite bead 1/2 turn ferrite bead 1/2 turn	
Coils			
L2410	24-11030A01	2 turns RED	
2411	24-11030B07	3-1/2 turns WHT	
L2412	24-11030B15	10-1/2 turns WHT	

L2413	24-11030A06	7 turns VIO
L2420	24-11030A06 24-11030E06	1/2 turn BLU
L2421	24-82723H4Q	12uH
L2422	24-11030E01	1/2 turn BRN
L2423	24-11030E04 24-11030B07	1/2 turn YEL
L2430	24-11030B07	3-1/2 turns WHT
L2431	24-11030D03	4 turns YEI
L2440	24-11030D03	4 turns YEL
L2441	24-80908T25	3-1/2 turns RED
L2443	24-80908T09	1-1/2 turns RED
L2450	24-82835G25	1.5 uH 5%
L2451		not used
	24-80908T23	3-1/2 turns RED
L2453	24-82723H44	
L2460	24-80908T22	3-1/2 turns GRN
L2461	24-80908T23 24-80908T22	3-1/2 turns RED
L2462 L2463		
L2470	24-11030B15 24-82723H46	10-1/2 turns WHT
L2471		
L24/ I	24-84346A02	.23 uH
Transistors (see	note)	
Q2410	40.000000000	
Q2410 Q2420	48-82233P39 48-80225C23	
42420	40-00220023	NPN; type MRF237
Resistors, chip, t	5%, 1/10 watt, ur	nless otherwise indicated.
R2410	06-11077A60	270
R2411	06-11077A58	220
R2412	06-11077A46	68
R2413	06-11077A26	10
R2414	06-11077A26	10
R2415		
R2420	06-11077A44 06-11077A50	100
R2430	06-11077A50 06-11009C37	330 1/4 watt FCF
R2431	06-11077A46	68
R2440	06-11086A27	47 1 watt FMO
R2450	06-80194M15	39 1 watt
R2451	06-80194M15	39 1 watt
R2470	06-11077A30	15
R2471	06-80147M02	
R2472	06-05621T02	thermistor 50k
R2473	06-11077B11	33k
R2474	06-11077A76	1.2k
Non-referenced i	items	
	26-80158L01	heat sink (for Q2420)
		heat sink (2 used for
		CR2450 and CR2451)
	29-80014A03	clip coax terminal (2 used)
Note: For optimu	m performance	, diodes, transistors, and in- d by Motorola part numbers.
legialed circuits	must be ordered	d by Motorola part numbers.
12/2/92		PL-921035-O

PA 146-174 MHz (25-45W)

01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Non-referenced	d items	
	01-80556B01	6-wire cable assembly (in- cludes P7)
	01-80634B01	feedthru bracket assembly (includes C2401 through C2406, 470 pF feedthru capacitors, 6 used)

HLN8289A PA Hardware Kit, 146-174 MHz, 25-45 Watt

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	
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Capacitors, chip

C2436	21-11078B38	68 pF 100V
C2441	21-11078B54	300 pF 100V
C2442	21-11078B54	300 pF 100V
C2445	21-11078B25	27 pF 100V
C2446	21-11078B25	27 pF 100V
C2466	21-11078B25	27 pF 100V
C2467	21-11078B25	27 pF 100V

Connector, receptacle

J1 J2	mini UHF coax power (includes feedthru)
	• • • •

Connector, plug

P4	30-80138M08	coaxial cable 200 mm with
P5	30-80138M07	plug coaxial cable 150 mm with plug

Transistors

Non-referenced items

02-00007003	nut 8-32x5/16x1/8 (for J1)
03-10943M10	screw M3x.5x8 (8 used)
03-10943M11	screw M3x.5x10 (2 used for J2)
04-00131974	washer (2 used for J2)
04-05587G01	washer nylon (for J2)
04-80943V01	lockwasher (for J1)
26-80124L01	heat sink
26-80223M07	PA shield
32-80014N03	gasket, accessory connector
42-80281L01	ground clip (2 used for
	Q2440)
42-80520B01	ground clip, pc board (2 used)

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

12/2/92

PL-921036-O

HLE8275A PA Board, 403-433 MHz, 25/40 Watt



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REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Capacitor, chip	, 5%, 50V unless	otherwise indicated.
C2710	21-13740B49	100 pF
C2711	21-13740B27	12 pF
C2712	21-13740B34	24 pF
C2713	21-13740B73	1000 pF
C2714	21-13740B73	1000 pF
C2715	21-13740B21	6.8 +/25 pF
C2716	21-13741B69	.1 uF
C2717	21-13740B36	30 pF
C2718	21-13740B49	100 pF
C2719		not used
C2720	21-13740B32	20 pF
C2721	21-13740B32	20 pF
C2722		not used
C2723		not used
C2724		not used
C2725		not used
C2726	21-13740B49	100 pF
C2727	21-13740B73	1000 pF
C2728	21-11032B15	.22 uF +80/-20%
C2729	21-13740B36	30 pF
C2730	21-13740B32	20 pF
C2731	21-11078B25	27 pF 100V
C2732	21-11078B25	27 pF 100V
C2733	21-11032B15	.22 uF +80/-20%
C2735		not used
C2736	21-13740B49	100 pF
C2737	21-13740B73	1000 pF
C2738 C2739	21-13741B69	.1 uF
C2739 C2740	23-11048A17	lytic 33 uF 20% 25V
C2740 C2745	21-11078B35 21-80060M20	51 pF 100V 11 pF 500V
C2746	21-80060M120	7 +/25 pF 500V
C2747	21-80060M31	33 pF 500V
C2748	21-11032B15	.22 uF + 80/-20%
C2749	21-13740B49	100 pF
C2750	21-80060M26	20 pF 500V
C2751	21-13740B17	4.7 +/25 pF
C2752		not used
C2753	21-13740B27	12 pF
C2754	21-13740B49	100 pF
C2755	21-13740B49	100 pF
C2756	21-80060M20	11 pF 500V
C2757	21-80060M13	7 +/25 pF 500V
C2758		not used
C2760	21-80060M19	10 pF 500V
C2761	21-80060M15	8 +/25 pF 500V
C2762	21-80060M17	9 +/25 pF 500V
C2763	21-80060M11	6 +/25 pF 500V
C2764	21-80060M43	100 pF 100V
C2765	23-11048A17	lytic 33 uF 20% 25V
C2768	- · · · · - - - · ·	not used
C2770	21-13740B36	30 pF
C2771	21-13740B36	30 pF
C2772	21-13740B73	1000 pF
C2773	21-13741B69	.1 uF
C2774	21-13740B36	30 pF
C2775	08-11051A17	poly .47 uF 63V
C2776	21-13740B36	30 pF
C2777 C2778	21-13740B73	1000 pF
C2778 C2779	21-13741B69 21-13740B36	.1 uF
C2779 C2780	21-13740B36	30 pF 30 pF
C2780 C2781	21-13/40030	30 pF not used
C2782		not used
JE1 02		

i enne Deads		
E2722	76-83960B01	ferrite bead 1/2 turn
E2770	76-83960B01	ferrite bead 1/2 turn ferrite bead 1/2 turn
E2771	76-83960B01	ferrite bead 1/2 turn
0-11-		
Coils		
L2710	24-11030E02	1/2 turn RED
L2711	24-11030B04	1-1/2 turns YEL
L2712	24-11030E04	1/2 turn YEL
L2713	24-11030B01	1-1/2 turns BRN
L2714	24-80036A01	ferrite bead 1/2 turn
L2720	24-11030E01	1/2 turn BRN
L2721		not used
L2722	24-82723H44	.039 uH
L2730	24-11030A03	4 turns YEL
L2731	24-80036A01	ferrite bead 1/2 turn
L2732	24-11030A06	7 turns VIO
L2740	24-80036A01	ferrite bead 1/2 turn
L2741	24-11030A02	3 turns ORN
L2742	24-80908T11	1-1/2 turns RED
L2743	24-80908T01	1-1/2 turns RED
L2744		not used
L2750	24-82723H40	.29 uH
L2751	24-11030B04	1-1/2 turns YEL
L2752 L2753	24-82723H40 24-11030B11	.29 uH 6-1/2 turns ORN
L2755	24-80908T08	1-1/2 turns GRN
L2761	24-80908T08	1-1/2 turns GRN
L2762	24-80908T11	1-1/2 turns RED
L2763	24-11030B11	6-1/2 turns ORN
L2770	24-82723H46	
L2771	24-84346A02	.23 uH
Transistors (see	note)	
Q2710	48-82233P39	NPN; type MRF559
Q2720	48-80225C09	
Resistors, chip, s	5%, 1/10 watt, ur	nless otherwise indicated.
R2710	06-11077A60	270
R2711	06-11077A58	220
R2712	06-11077A52	120
R2713	06-11077A38	33
R2714	06-11077A38	33
R2715 R2720	06-11077A62 06-11077A26	330
R2740	00-110/7/420	10 not used
R2741	06-02369M10	
R2750	06-80194M15	39 1 watt
R2751	06-80194M15	39 1 watt
R2770	06-80147M02	metal plate .01 10% 2 watt
R2771	06-11077A28	12
R2772	06-05621T02	thermistor 50k
R2773	06-11077B11	33k
R2774	06-11077A76	1.2k
R2775	06-11077A26	10
Non-referenced	items	
	26.001501.01	heat sink for 00700)
	26-80158L01 26-80275M01	heat sink (for Q2720) heat sink (2 used for
	LO-OUL/ DIVIU I	CR2750 and CR2751)
	29-80014A03	clip coax terminal (2 used)

Ferrite Beads

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

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Diodes (see note)

CR2750	48-80010E01	silicon PIN UM9401
CR2751	48-80010E01	silicon PIN UM9401
CR2770	48-80236E07	transient suppressor diode

PL-921030-O

PA 403-433 MHz (25/40W)

01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Non-referenced	litems	
	01-80556B01	6-wire cable assembly (in-

01-00000001	o-wire cable assertibly (in-
	cludes P7)
01-80634B01	feedthru bracket assembly
	(includes C2701 through
	C2706, 470 pF feedthru
	capacitors, 6 used)

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HLN8277A PA Hardware Kit, 403-433 MHz, 25/40 Watt

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Capacitors, chip)	
C2741 C2742 C2743 C2744 C2766 C2767	21-11078B36 21-11078B37 21-11078B35 21-11078B35 21-11078B35	56 pF 100V 62 pF 100V 51 pF 100V 51 pF 100V not used not used
Connector, rece	ptacle	
J1 J2	09-80131M01 09-80255E01	mini UHF coax power (includes feedthru)
Connector, plug	l	
P4	30-80138M08	coaxial cable 200 mm with
P5	30-80138M07	plug coaxial cable 150 mm with plug
Transistors		
Q2730 Q2740	48-80225C19 48-80225C24	NPN; type MRF654 NPN; type MRF650
Non-referenced	items	
	02-0007003 03-10943M10 03-10943M11 04-00131974 04-05587G01 04-80943V01 26-80124L03 26-80223M07 26-80514C01 26-80551C01 32-80014N03 42-80281L01	nut 8-32x5/16x1/8 (for J1) screw M3x.5x8 (8 used) screw M3x.5x10 (2 used for J2) washer (2 used for J2) washer nylon (for J2) lockwasher (for J1) heat sink PA shield filter shield antenna connector shield gasket, accessory connector ground clip (2 used for Q2740)

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PL-921031-O

PA 438-470 MHz (1-10W)

	Capacitor, chip,	5%, 50V unless
	C2510 C2511 C2512	21-13740B49 21-13740B27 21-13740B29
	C2513 C2514	21-13740B73 21-13740B73
	C2515 C2516	21-13740B21 21-13741B69
	C2517 C2518	21-13740B36 21-13740B49
	C2519	21-13740B73
•	C2520 C2521	21-13740B29 21-13740B35
	C2522 C2523	
2	C2526 C2527	21-13740B49
	C2527 C2528	21-13/40B/3 21-11032B15
	C2529 C2530	21-13740B36 21-13740B37
	C2531 C2532	21-13740B31 21-13740B31
	C2536	21-13740B49
	C2537 C2538	21-13740B49 21-13740B73 21-11032B15 21-13740B36 21-13740B37 21-13740B31 21-13740B49 21-13740B73 21-13741B69
	C2539 C2540	21-13740B09
	C2541 C2542	21-13740B31 21-13740B21
	C2543	21-13740B29
_	C2547 C2548	21-13740B49 21-11032B15
	C2549 C2550	21-13740B49
	C2551 C2552	21-13740B29
	C2553	21-13740B49
	C2554 C2555	21-13740B49 21-13740B49 21-13740B49 21-13740B19
	C2560 C2561	21-13740B19 21-13740B22
	C2562 C2563	21-13740B22
	C2564	21-13740B15 21-13740B49
	C2570 C2574	21-13740B36 21-13740B36
	C2575 C2576	08-11051A17 21-13740849
	C2577 C2578	21-13740B73
	02578	21-13741B69

NUMBER

HLE8267A PA B	oard, 438-470 M	Hz, 1-10 Watt
REFERENCE	MOTOROLA	DESCRIPTIC

PART NO.

unless otherwise indicated.

DESCRIPTION

100 pF 12 pF 15 pF

1000 pF

1000 pF

.1 uF

30 pF

15 pF 27 pF

not used not used

100 pF

30 pF

33 pF

18 pF

18 pF

100 pF 1000 pF .1 uF

not used

18 pF

15 pF

not used

15 pF not used

100 pF

100 pF

100 pF

30 pF

30 pF

1000 pF

.1 uF

30 pF

39 nH

100 pF

5.6 +/-.25 pF

7.5 +/-.25 pF

7.5 +/-.25 pF 3.9 +/-.25 pF 100 pF

poly .47 uF 63V 100 pF

2.2 +/-.25 pF

6.8 +/-.25 pF

100 pF .22 uF +80/-20% 100 pF

1000 pF .22 uF +80/-20%

100 pF 1000 pF

6.8 +/-.25 pF

		· ·
L2530 L2531 L2532 L2540 L2550 L2551 L2552 L2553 L2560 L2561 L2561 L2562 L2563 L2563 L2563 L2570	24-11030B03 24-80036A01 24-11030B03 24-11030E02 24-82723H40 24-11030B03 24-82723H40 24-11030B11 24-11030B02 24-11030B03 24-11030B02 24-11030B11 24-80036A01	1-1/2 turns ORN ferrite bead 1/2 turn 1-1/2 turns ORN 1/2 turn RED .29 uH 1-1/2 turns ORN .29 uH 6-1/2 turns ORN 1-1/2 turns RED 1-1/2 turns RED 6-1/2 turns RED 6-1/2 turns ORN ferrite bead 1/2 turn
Transistors (see	note)	
Q2510 Q2520 Q2530	48-82233P39 48-80225C09 48-80225C19	NPN; type MRF559 NPN; type MRF630 NPN; type MRF654
Resistors, chip, 5	5%, 1/10 watt, ur	less otherwise indicated.
R2510 R2511 R2512 R2513 R2514 R2520 R2550 R2551 R2570 R2571 R2572 R2573 R2574 R2575 Non-referenced i	06-11077A58 06-11077A50 06-11077A52 06-11077A52 06-11077A40 06-11077A40 06-11077A40 06-80194M15 06-80194M15 06-80194M15 06-11086D01 06-11077A44 06-05621T02 06-11077A44 06-05621T02 06-11077A80 06-11077A80 06-11077A80 06-11077A80 06-11077A80 06-11077A80 06-11077A80 06-11077A80	220 270 120 39 39 10 39 1 watt 39 1 watt 39 1 watt 0.2 2 watt FMO 56 thermistor 50k 33k 1.8k 10 heat sink (for Q2520) clip coax terminal (2 used)
Note: For optimu	Im performance	, diodes, transistors, and in-
tegrated circuits	must be ordered	by Motorola part numbers.
12/31/92		PL-921026-O

Diodes (see note)

C2579

C2580

CR2550	48-80010E01	silicon PIN UM9401
CR2551	48-80010E01	silicon PIN UM9401
CR2570	48-80236E07	transient suppressor diode

Ferrite Beads

L2522

E2520	24-84657R01	ferrite bead
Coils		
L2510 L2511 L2512	24-11030E01 24-11030B04 24-11030E02	1/2 turn BRN 1-1/2 turns YEL 1/2 turn RED
L2513 L2515 L2520	24-11030B01 24-80036A01 24-11030E01	1-1/2 turns BRN ferrite bead 1/2 turn 1/2 turn BRN

24-82723H44

21-13740B36

21-13740B49

PA 438-470 MHz (1-10W)

01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Non-referenced	l items	
	01-80556B01	6-wire cable assembly (in- cludes P7)
	01-80634B01	feedthru bracket assembly (includes C2501 through C2506, 470 pF feedthru capacitors, 6 used)

HLN8268A PA Hardware Kit, 438-470 MHz, 1-10 Watt

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Capacitors, ch	ip, 5%, 50V	
C2533	21-13740B31	18 pF
C2534	21-13740B31	18 pF
Connector, rec	ceptacle	
J1	09-80131M01	mini UHF coax
J2	09-80255E01	power (includes feedthru)
Connector, plu	ıg	
P4	30-80138M08	coaxial cable 200 mm with
P5	30-80138M07	plug coaxial cable 150 mm with plug
Non-reference	d items	
	02-00007003	nut 8-32x5/16x1/8 (for J1)
	03-10943M10	screw M3x.5x8 (6 used)
	03-10943M11	screw M3x.5x10 (2 used for J2)
	04-00131974	washer (2 used for J2)
	04-05587G01	washer nylon (for J2)
	04-80943V01	lockwasher (for J1)
	26-80124L01	heat sink
	26-80223M07	PA shield
	26-80514C01	filter shield
	26-80551C01	antenna connector shield
	32-80014N03	gasket, accessory connector

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

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PL-921027-O

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PA 438-470 MHz (10-25W)

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HLE8034A PA B	oard, 438-470 M	IHz, 10-25 Watt
REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Capacitor, chip,	5%, 50V unless	otherwise indicated.
C2610	21-13740B49	100 pF
C2611	21-13740B27	12 pF
C2612	21-13740B29	15 pF
C2613	21-13740B73	1000 pF
C2614	21-13740B73	1000 pF
C2615	21-13740B21	6.8 +/25 pF
C2616	21-13741B69	.1 uF
C2617 C2618	21-13740B36 21-13740B49	30 pF
C2619	21-13/40049	100 pF not used
C2620	21-13740B31	18 pF
C2621	21-13740B34	24 pF
C2622		not used
C2623		not used
C2626	21-13740B49	100 pF
C2627	21-13740B73	1000 pF
C2628	21-11032B15	.22 uF +80/-20%
C2629 C2630	21-13740B36	30 pF
C2631	21-13740B37 21-11078B23	33 pF
C2632	21-11078B23	24 pF 100V 24 pF 100V
C2636	21-13740B49	100 pF
C2637	21-13740B73	1000 pF
C2638	21-13741B69	.1 uF
C2639	08-11051A17	poly .47 uF 63V
C2640	21-80060M33	39 pF 500V
C2645	21-80060M25	18 pF 500V
C2646	21-80060M19	10 pF 500V
C2647 C2648	21-80060M31 21-11032B15	33 pF 500V
C2649	21-13740B49	.22 uF +80/-20% 100 pF
C2650	21-80060M20	11 pF 500V
C2651	21-13740B09	2.2 +/25 pF
C2652	21-13740B17	4.7 +/25 pF
C2653	21-13740B49	100 pF
C2654	21-13740B49	100 pF
C2655	21-13740B49	100 pF
C2660 C2661	21-80060M17	9 +/5 pF 500V
C2662	21-80060M19 21-80060M17	10 pF 500V 9 +/5 pF 500V
C2663	21-80060M11	6 +/5 pF 500V
C2664	21-80060M43	100 pF 500V
C2670	21-13740B36	30 pF
C2671	21-13740B36	30 pF
C2672	21-13740B73	1000 pF
C2673	21-13741B69	.1 uF
C2674	21-13740B36	30 pF
C2675	08-11051A17	.47 uF 63V
C2676 C2677	21-13740B36 21-13740B73	30 pF
C2678	21-13740B/3 21-13741B69	1000 pF .1 uF
C2679	21-13740B36	30 pF
C2680	21-13740B36	30 pF
Diodes (see note)	
CR2650	48-80010E01	silicon PIN
CR2651	48-80010E01	silicon PIN
CR2670	48-80236E07	transient suppressor diode
Ferrite Beads		

L2613	24-11030B01	1-1/2 turns BRN
L2614		
	24-80036A01	ferrite bead 1/2 turn
L2620	24-11030E01	1/2 turn BRN
L2621		not used
L2622	24-82723H44	.039 uH
L2630	24-11030A03	4 turns YEL
L2631	24-80036A01	ferrite bead 1/2 turn
L2632	24-80030A06	7 turns VIO
L2640	24-80036A01	-
L2641	24-11030A03	
L2642	24-11030A02	3 turns ORG
L2643	24-11030E05	1/2 turn GRN
L2650	24-82723H40	.29 uH
L2651	24-11030B05	2 1/2 turns GRN
L2652	24-82723H40	.29 uH
L2653	24-11030B11	6-1/2 turns ORN
L2660	24-11030B04	
L2661	24-11030B06	
L2662	24-11030B06	
L2663	24-11030B11	• • • • • • • • • • • • • • • • • • • •
L2670	24-82723H46	
L2671	24-84346A02	.23 uH
Transistors (see note)	
,		
Q2610	48-82233P39	NPN; type MRF559
Q2620	48-80225C09	
GLULU	+0 00LL0003	
Resistors of	in 5% 1/10 woth w	nless otherwise indicated.
nesistors, cri	ip, 5 %, 1/10 wall, u	mess otherwise indicated.
Docto	00 44077400	
R2610	06-11077A60	270
R2611	06-11077A58	220
R2612	06-11077A52	120
R2613	06-11077A40	39
R2614	06-11077A40	39
R2620	06-11077A26	10
R2640	00-110// 20	· •
	00 44000400	not used
R2650	06-11009A39	390 1/4 watt
R2651	06-11077A66	470
R2652	06-11077A66	470
R2653	06-11077A50	100
R2670	06-80147M01	metal plate .05 10% 2 watt
R2671	06-11077A40	39
R2672	06-05621T02	thermistor 50k
R2673	06-11077B11	33k
R2674		
	06-11077A76	1.2k
R2675	06-11077A26	10
Non-reference	ed items	
	26-80158L01	heat sink (for Q2620)
	29-80014A03	clip coax terminal (2 used)
		,
Note: For opt	timum performance	, diodes, transistors, and in-
tegrated circl	uits must be ordere	d by Motorola part numbers.
		a by meterola part hambord.
8/20/92		PL-921017-A
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 Coils
 24-11030E01
 1/2 turn BRN

 L2610
 24-11030B04
 1-1/2 turns YEL

 L2612
 24-11030E03
 1/2 turn ORN

76-83960B01 76-83960B01

76-83960B01

ferrite bead 1/2 turn ferrite bead 1/2 turn

ferrite bead 1/2 turn

E2620 E2670 E2671

PA 438-470 MHz (10-25W)

01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Non-referenced	litems	
	01-80556B01	6-wire cable assembly (in- cludes P7)
	01-80634B01	feedthru bracket assembly (includes C2601 through C2606, 470 pF feedthru capacitors, 6 used)

HLN8068A PA Hardware Kit, 438-470 MHz, 10-25 Watt

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	

Capacitors, chip

C2641	21-80060M34	43 pF 500V
C2642	21-80060M34	43 pF 500V
C2643	21-80060M33	39 pF 500V
C2644	21-80060M33	39 pF 500V
02044	21-80000M33	39 pr 500V

Connector, receptacle

J1	09-80131M01	mini UHF coax
J2	09-80255E01	power (includes feedthru)

Connector, plug

P4	30-80138M08	coaxial cable 200 mm with
P5	30-80138M07	plug coaxial cable 150 mm with plug

Transistors

Q2630 48-80225C19 NPN; type MR Q2640 48-84411L07 NPN; type M1

Non-referenced items

02-00007003	nut 8-32x5/16x1/8 (for J1)
03-10943M10	screw M3x.5x8 (8 used)
03-10943M11	screw M3x.5x10 (2 used for J2)
04-00131974	washer (2 used for J2)
04-05587G01	washer nylon (for J2)
04-80943V01	lockwasher (for J1)
26-80124L01	heat sink
26-80223M07	PA shield
32-80014N03	gasket, accessory connector
42-80281L01	ground clip (2 used for Q2640)
42-80520B01	ground clip, pc board (2 used)

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

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PL-921018-A

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PA 438-470 MHz (25/40W)

CEEDEN OF	MOTODOLA	DECODIDITION			
REFERENCE	MOTOROLA PART NO.	DESCRIPTION	Ferrite Beads	70 00000 001	family hand 1/0 hum
Capacitor, chip	, 5%, 50V unless (otherwise indicated.	E2720 E2770 E2771	76-83960B01 76-83960B01 76-83960B01	ferrite bead 1/2 turn ferrite bead 1/2 turn ferrite bead 1/2 turn
2710	21-13740B49	100 pF	_		
2711	21-13740B27	12 pF	Coils		
2712	21-13740B29	15 pF			
2713	21-13740B73	1000 pF	L2710	24-11030E01	1/2 turn BRN
2714	21-13740B73	1000 pF	L2711	24-11030B04	1-1/2 turns YEL
2715	21-13740B21	6.8 +/25 pF	L2712	24-11030E03	1/2 turn ORN 1-1/2 turns BRN
2716	21-13741B69	.1 uF	L2713	24-11030B01 24-80036A01	ferrite bead 1/2 turn
2717	21-13740B36	30 pF	L2714 L2720	24-11030E01	1/2 turn BRN
2718	21-13740B49	100 pF	L2720	24-11030L01	not used
22719	01 10740B01	not used	L2722	24-82723H44	39 nH
C2720 C2721	21-13740B31	18 pF	L2730	24-11030D03	4 turns YEL
2722	21-13740B34	24 pF not used	L2731	24-80036A01	ferrite bead 1/2 turn
2723		not used	L2732	24-11030A06	7 turns VIO
2724		not used	L2740	24-11030D03	4 turns YEL
2725		not used	L2741	24-80036A01	ferrite bead 1/2 turn
2725 22726	21-13740B49	100 pF	L2742	24-80908T17	2-1/2 turns RED
52727 52727	21-13740B49 21-13740B73	100 pF	L2743	24-80908T01	1-1/2 turns RED
2728	21-13/40B/3 21-11032B15	.22 uF +80/-20%	L2750	24-82723H40	.29 uH
2729 22729	21-13740B36	30 pF	L2751	24-11030B04	1-1/2 turns YEL
2729 22730	21-13740B37	33 pF	L2752	24-82723H40	.29 uH
C2731	21-13/40B3/ 21-11078B23	24 pF 100V	L2753		not used
C2732	21-11078B23	24 pF 100V 24 pF 100V	L2760	24-80908T06	1-1/2 turns GRN
C2733	21-110/0023	not used	L2761	24-80908T10	1-1/2 turns GRN
C2734		not used	L2762	24-80908T10	1-1/2 turns GRN
C2735		not used	L2763	24-11030B11	6-1/2 turns ORN
C2736	21-13740B49	100 pF	L2770	24-82723H46	.2 uH
C2737	21-13740B49 21-13740B73	1000 pF	L2771	24-84346A02	.23 uH
C2738	_	.1 uF		24.04040702	.20 011
	21-13741B69		Transistors (se	e note)	
C2739	08-11051A17	poly .47 uF 63V	118113131013 (36		
22740	21-11078B31	36 pF 100V	Q2710	48-82233P39	NPN; type MRF559
22745	21-80060M11	6 +/25 pF 500V	Q2720	48-80225C09	NPN; type MRF630
C2746	21-80060M09	5 +/25 pF 500V	92720	40-00223003	
C2747	21-80060M43	100 pF 500V	Pesistore chin	5% 1/10 watt u	nless otherwise indicated.
C2748	21-11032B15	.22 uF +80/-20%	nesisions, chip	, 5%, 1/10 wall, u	mess otherwise maicated.
C2749	21-13740B49	100 pF	R2710	06-11077A60	270
C2750	21-80060M20	11 pF 500V	R2711	06-11077A58	220
C2751 C2752	21-13740B19	not used	R2712	06-11077A52	120
		5.6 +/25 pF	R2713	06-11077A40	39
C2753 C2754	21-13740B49	100 pF	R2714	06-11077A40	39
	21-13740 B65	470 pF	R2720	06-11077A26	10
C2755	01.000001411	not used	R2721	00 110/1/20	not used
C2756	21-80060M11 21-80060M09	6 +/25 pF 500V	R2722		not used
C2757	21-80000M09	5 +/25 pF 500V	R2723		not used
C2758		not used	R2740		not used
C2760	21-80060M15	8 +/25 pF 500V	R2741		not used
C2761	21-80060M19	10 pF 500V	R2750	06-80194M15	39 1 watt
C2762	21-80060M19	10 pF 500V	R2751	06-80194M15	39 1 watt
C2763	21-80060M10	5.5 +/25 pF 500V	R2770	06-80194M15	
C2764	21-80060M43	100 pF 100V	R2771	06-11077A28	12
C2765	23-11048A17	lytic 35 uF 20% 25V	R2772	06-05621T02	thermistor 50k
C2768	04 407 4000-	not used	R2773	06-11077B11	33k
C2770	21-13740B36	30 pF	R2774	06-11077A76	1.2k
C2771	21-13740B36	30 pF	R2775	00-110/7/4/0	not used
C2772	21-13740B73	1000 pF	nzi i j		
C2773	21-13741B69	.1 uF	Non-reference	d items	
C2774	21-13740B36	30 pF	NON-IGIEICE		
C2775	08-11051A17	poly .47 uF 63V		26-80158L01	heat sink (for Q2720)
C2776	21-13740B36	30 pF		26-80158L01	heat sink (2 used for
C2777	21-13740B73	1000 pF		EU-OUE/ SIVIU I	CR2750 and CR2751)
C2778	21-13741B69	.1 uF		29-80014A03	clip coax terminal (2 used
C2779	21-13740B36	30 pF		23-00014403	onp coax terriniai (2 used
C2780	21-13740B36	30 pF	Makes For and	num cadares-	a diadaa transistara aarti-
C2781		not used			e, diodes, transistors, and in
C2782		not used		its must be ordere	ed by Motorola part numbers
Diodes (see no	ote)		9/14/92		PL-921032
CR2750	48-80010E01	silicon PIN UM9401			
CR2751	48-80010E01	silicon PIN UM9401			
CR2752		not used			



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PA 438-470 MHz (25/40W)

01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	
Non-referenced	items		

01-80556B01	6-wire cable assembly (in- cludes P7)
01-80634B01	feedthru bracket assembly (includes C2701 through C2706, 470 pF feedthru capacitors, 6 used)

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HLN8272A PA Hardware Kit,	438-470 MHz, 25-40 Watt
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REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION

Capacitors, chip

C2741	21-11078B35	51 pF 100V
C2742	21-11078B35	51 pF 100V
C2743 C2744	21-11078B21 21-11078B21	20 pF 100V
C2766	21-11078B21	20 pF 100V
C2767	21-11078B21	20 pF 100V 20 pF 100V
02/0/	21-110/0021	20 01 100 0

Connector, receptacle

J1	09-80131M01	mini UHF coax
J2	09-80255E01	power (includes feedthru)

Connector, plug

P4	30-80138M08	coaxial cable 200 mm with
P5	30-80138M07	plug coaxial cable 150 mm with plug

Transistors

Q2730 48-80225C19	NPN; type MRF654
Q2740 48-80225C24	NPN; type MRF650

Non-referenced items

00 00007000	aut 0.000E/100/10 (fee 14)
02-00007003	nut 8-32x5/16x1/8 (for J1)
03-10943M10	screw M3x.5x8 (8 used)
03-10943M11	screw M3x.5x10 (2 used for J2)
04-00131974	washer (2 used for J2)
04-05587G01	washer nylon (for J2)
04-80943V01	lockwasher (for J1)
26-80124L01	heat sink
26-80223M07	PA shield
32-80014N03	gasket, accessory connector
42-80281L01	ground clip (2 used for Q2740)
42-80520B01	ground clip, pc board (2 used)

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

9/14/92

PL-921033-O

PA 465-495 MHz (25/40W)

REFERENCE	MOTOROLA	DESCRIPTION	Ferrite Beads		
NUMBER	PART NO.		E2720	76-83960B01	ferrite bead 1/2 turn
Capacitor, chip	, 5%, 50V unless (otherwise indicated.	E2770 E2771	76-83960B01 76-83960B01	ferrite bead 1/2 turn ferrite bead 1/2 turn
2710	21-13740B49	100 pF			
2711	21-13740B27	12 pF	Coils		
2712	21-13740B32	20 pF			
2713	21-13740B49	100 pF	L2710	24-11030E01	1/2 turn BRN
2714	21-13740B49	100 pF	L2711	24-11030B02	1-1/2 turns RED
2715	21-13740B14	3.6 +/25 pF	L2712	24-11030E02	1/2 turn RED
2716	21-13741B69	.1 uF	L2713	24-11030B01	1-1/2 turns BRN
22717	21-13740B36	30 pF	L2714	24-80036A01	ferrite bead 1/2 turn
22718	21-13740B49	100 pF	L2720	24-11030E03	1/2 turn ORN
C2719	21-13740B73	1000 pF	L2721		not used
2720	21-13740B33	22 pF	L2722	24-82723H44	39 nH
02721	21-11078B27	30 pF 100V	L2730	24-11030A03	4 turns YEL
2722	21-11078B09	6.8 +/25 pF 100V	L2731	24-80036A01	ferrite bead 1/2 turn
02723	21-110/0003	not used	L2732	24-11030A03	4 turns YEL
C2724		not used	L2733	24-80036A01	ferrite bead 1/2 turn
C2725	23-11048B13	lytic 10 uF 20% 16V	L2740	24-11030A03	4 turns YEL
C2726	21-13740B49	100 pF	L2741	24-80036A01	ferrite bead 1/2 turn
C2727	21-13740B49 21-13740B73	100 pF	L2742	24-80908T12	1-1/2 turns GRN
52728		.22 uF +80/-20%	L2743	67 0000011E	jumper
52729	21-11032B15		L2743	24-82723H40	.29 uH
	21-13740B36	30 pF	L2751	24-11030B05	2-1/2 turns GRN
C2730	21-11078B25	27 pF 100V			•
C2731	21-11078B21	20 pF 100V	L2752	24-82723H40	.29 uH
C2732	21-11078B21	20 pF 100V	L2753	04 00000700	not used
C2733	21-13740B36	30 pF	L2760	24-80908T08	1-1/2 turns GRN
C2734		not used	L2761	24-80908T09	1-1/2 turns RED
C2735		not used	L2762	24-80908T08	1-1/2 turns GRN
C2736	21-13740B49	100 pF	L2763	24-11030B11	6-1/2 turns ORN
C2737	21-13740B73	1000 pF	L2770	24-82723H46	.2 uH
C2738	21-11032B15	.22 uF +80/-20%	L2771	24-84346A02	.23 uH
C2739	23-11048A17	lytic 33 uF 20% 25V			
C2740	21-11078B31	36 pF 100V	Transistors (s	ee note)	
C2745	21-80060M09	5 +/25 pF 500V			
C2746		not used	Q2710	48-82233P39	NPN; type MRF559
C2747	21-80060M21	12 pF 500V	Q2720	48-80225C09	NPN; type MRF630
C2748	21-11032B15	.22 uF + 80/-20%			
C2749	21-13740B49	100 pF	Resistors, chi	p, 5%, 1/10 watt, ur	nless otherwise indicated.
C2750	21-80060M13	7 +/25 pF 500V		• • • • •	
C2751	21-13740B11	2.7 +/25 pF	R2710	06-11077A60	270
C2752	21 10/40011	not used	R2711	06-11077A58	220
C2753	21-13740B22	7.5 +/25 pF	R2712	06-11077A52	120
C2754	21-13740B49	· · · · · · ·	R2713	06-11077A40	39
	21-13/40049	100 pF	R2714	06-11077A40	39
C2755	04.000001400		R2720	06-11077A26	10
C2756	21-80060M09	5 +/25 pF 500V	R2721	00-110///20	not used
C2757	21-80060M07	4 +/25 pF 500V			
C2758	21-13740B73	1000 pF	R2722	00 11077 100	not used
C2760	21-80060M12	6.5 +/25 pF 500V	R2723	06-11077A26	10
C2761	21-80060M14	7.5 +/25 pF 500V	R2740	06-11077A26	10
C2762	21-80060M14	7.5 +/25 pF 500V	R2741		notused
C2763	21-80060M09	5 +/25 pF 500V	R2750	06-80194M15	39 1 watt
C2764	21-80060M43	100 pF 100V	R2751	06-80194M15	39 1 watt
C2765		not used	R2770	06-80147M02	metal plate .01 10% 2 wat
C2768		not used	R2771	06-11077A26	10
C2770	21-13740B36	30 pF	R2772	06-05621T02	thermistor 50k
C2771	21-13740B36	30 pF	R2773	06-11077B11	33k
C2772	21-13740B73	1000 pF	R2774	06-11077A76	1.2k
C2773	21-13741B69	.1 uF	R2775		not used
C2774	21-13740B36	30 pF			
C2775	23-11048A17	lytic 33 uF 20% 25V	Non-referenc	ed items	
C2776	21-13740B36	30 pF			
C2777	21-13740B38	1000 pF		26-80158L01	heat sink (for Q2720)
				26-80275M01	heat sink (2 used for
C2778	21-13741B69	.1 uF			CR2750 and CR2751)
C2779	21-11032B15	.22 uF +80/-20%		29-80014A03	clip coax terminal (2 used
C2780	21-13740B36	30 pF		20-000 17/00	the star lourning (2 0360
C2781	21-11032B15	.22 uF +80/-20%	Alata Par	inum nadarmar	diadaa translatara aadir
C2782	21-13740B49	100 pF	tegrated circ	uits must be ordere	e, diodes, transistors, and in d by Motorola part numbers
Diodes (see no	ote)		11/25/92		PL-92103
CR2750	48-80010504	silicon DIM LIMO404	11/20/32		1 2-52 105
 ADV / DU1 	48-80010E01	silicon PIN UM9401			
CR2751	48-80010E01	silicon PIN UM9401			

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PA 465-495 MHz (25/40W)

01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION
Non-referenced	l items	
	01-80556B01	6-wire cable assembly (in- cludes P7)
	01-80634801	feedthru bracket assembly (includes C2701 through C2706, 470 pF feedthru capacitors, 6 used)

HLN8286A PA Hardware Kit, 465-495 MHz, 25/40 Watt

REFERENCE NUMBER	MOTOROLA PART NO.	DESCRIPTION	

Capacitors, chip

Connector, receptacle

J1	09-80131M01	mini UHF coax
J2	09-80255E01	power (includes feedthru)

Connector, plug

P4	30-80138M08	coaxial cable 200 mm with
P5	30-80138M07	plug coaxial cable 150 mm with plug

Transistors

Q2730	48-80225C19	NPN; type MRF654
Q2740	48-80225C24	NPN; type MRF650

Resistor, chip, 5%, 1/10 watt

R2724

not used

Non-referenced items

02-00007003	nut 8-32x5/16x1/8 (for J1)
03-10943M10	screw M3x.5x8 (8 used)
03-10943M11	screw M3x.5x10 (2 used for J2)
04-00131974	washer (2 used for J2)
04-05587G01	washer nylon (for J2)
04-80943V01	lockwasher (for J1)
26-80124L01	heat sink
26-80223M07	PA shield
32-80014N03	gasket, accessory connector
42-80281L01	ground clip (2 used for Q2740)
42-80520B01	ground clip, pc board (2 used)
42-80915V01	ground clip, pc board

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

11/25/92

PL-921038-O

PA 490-520 MHz (25/35W)

REFERENCE	MOTOROLA	DESCRIPTION	- Ferrite Beads		
NUMBER	PART NO.		- E2720	76-83960B01	ferrite bead 1/2 turn
Capacitor, chip	, 5%, 50V unless (otherwise indicated.	E2770 E2771	76-83960B01 76-83960B01	ferrite bead 1/2 turn ferrite bead 1/2 turn
C2710	21-13740B49	100 pF			
C2711	21-13740B24	9.1 +/25 pF	Coils		
C2712	21-13740B32	20 pF			
C2713	21-13740B49	100 pF	L2710	24-11030E01	1/2 turn BRN
C2714	21-13740B49	100 pF	L2711	24-11030B04	1-1/2 turns YEL
C2715	21-13740B17	4.7 +/25 pF	L2712	24-11030E03	1/2 turn ORN
C2716	21-13741B69	.1 uF	L2713	24-11030B04	1-1/2 turns YEL
C2717	21-13740B49	100 pF	L2714	24-80036A01	ferrite bead 1/2 turn
C2718	21-13740B49	100 pF	L2720	24-11030E05	1/2 turn GRN
C2719	21-13740B73	1000 pF	L2721		not used
C2720	21-13740B31	18 pF	L2722	24-82723H44	.039 uH
C2721	21-11078B27	30 pF 100V	L2730	24-11030A03	4 turns YEL
2722	21-11078B07	5.6 +/25 pF 100V	L2731	24-80036A01	ferrite bead 1/2 turn
C2723		not used	L2732	24-11030A03	4 turns YEL
C2724		not used	L2733	24-80036A01	ferrite bead 1/2 turn
C2725	23-11048B05	lytic 1 uF 20% 50V	L2740	24-80036A01	ferrite bead 1/2 turn
C2726	21-13740B49	100 pF	L2741	24-11030A02	3 turns ORN
C2727	21-13740B73	1000 pF	L2742	24-80908T11	1-1/2 turns RED
C2728	21-11032B15	.22 uF +80/-20%	L2743		jumper wire
C2729	21-13740B36	30 pF	L2750	24-82723H40	.29 uH
C2730	21-11078B31	36 pF 100V	L2751	24-11030B04	1-1/2 turns YEL
C2731	21-11078B22	22 pF 100V	L2752	24-82723H40	.29 uH
C2732	21-11078B16	13 pF 100V	L2753	04 0000T00	not used
C2733	21-13740B36	30 pF	L2760	24-80908T08	1-1/2 turns GRN
C2734		not used	L2761	24-80908T09	1-1/2 turns RED
C2735		not used	L2762	24-80908T08	1-1/2 turns GRN
C2736	21-13740B49	100 pF	L2763	24-11030B11	6-1/2 turns ORN
C2737	21-13740B73	1000 pF	L2770	24-82723H46	.2 uH
C2738	21-11032B15	.22 uF + 80/-20%	L2771	24-84346A02	.23 uH
C2739	23-11048A17	lytic 33 uF 20% 25V	Transistary (a)		
C2740	21-11078B27	30 pF 100V	Transistors (se	ee note)	
C2745	21-80060M05	3 +/25 pF 500V	00740	40.000000000	
C2746	21-80060M05	3 +/25 pF 500V	Q2710	48-82233P39	NPN; type MRF559
C2747	21-80060M21	12 pF 500V	Q2720	48-80225C09	NPN; type MRF630
C2748	21-13740B73	1000 pF	Decistore chi	- EQ 1/10 woth w	nless otherwise indicated.
C2749	21-13740B49	100 pF	mesistors, crig	9, 5%, 1/10 wait, ui	liess otherwise indicated.
C2750	21-80060M13	7 +/25 pF 500V	R2710	06-11077A60	270
C2751	21-13740B07	1.8 +/25 pF	R2711	06-11077A58	220
C2752	01 10740001		R2712	06-11077A52	120
C2753	21-13740B21	6.8 +/25 pF	R2713	06-11077A40	39
C2754	21-13740B49	100 pF	R2714	06-11077A40	39
C2755	01.000001405	not used	R2720	06-11077A26	10
C2756	21-80060M05	3 +/25 pF 500V	R2721	00-110///20	not used
C2757	21-80060M05	3 +/25 pF 500V	R2722		not used
C2758	21-11032B15	.22 uF +80/-20%	R2723	06-11077A26	10
C2760	21-80060M11	6 +/25 pF 500V	R2740	00-110// 20	not used
C2761	21-80060M13	7 +/25 pF 500V	R2740	06-11009B26	2.7 1/4 watt FCF
C2762	21-80060M13	7 +/25 pF 500V	R2750	06-80194M15	39 1 watt
C2763	21-80060M09	5 +/25 pF 500V	R2751	06-80194M15	39 1 watt
C2764	21-80060M43	100 pF 100V	R2770	06-80194M15	metal plate .01 10% 2 wat
C2765	23-11048A17	lytic 33 uF 20% 25V	R2771	06-11077A26	10
C2768	23-11048B05	lytic 1 uF 20% 50V	R2772	06-05621T02	thermistor 50k
C2770	21-13740B36	30 pF	R2773	06-11077B11	33k
C2771	21-13740B36	30 pF 1000 pF	R2774	06-11077A76	1.2k
C2772	21-13740B73	1000 pF	R2775	vv normu	not used
C2773 C2774	21-13741B69	.1 uF			
	21-13740B36	30 pF	Non-reference	ed items	
C2775 C2776	08-11051A17	poly .47 uF 63V 30 pE			
C2776 C2777	21-13740B36 21-13740B73	30 pF 1000 pF		26-80158L01	heat sink (for Q2720)
C2778	21-13740B73	1000 pF .1 uF		26-80275M01	heat sink (2 used for
	21-13741B69	_			CR2750 and CR2751)
C2779	21-11032B15	.22 uF +80/-20% 30 pF		29-80014A03	clip coax terminal (2 used
C2780	21-13740B36	30 pF			
C2781	21-11032B15	.22 uF +80/-20%	Note: For ont	imum nerformanor	e, diodes, transistors, and in
C2782	21-13740B49	100 pF	tegrated circu	its must be ordere	d by Motorola part numbers
Diodes (see no			11/25/92		PL-921023
CR2750	48-80010E01	silicon PIN UM9401			
CR2751	48-80010E01	silicon PIN UM9401			
CR2752		not used			

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01-80704Y64 Feedthru Bracket and Cable Assembly

REFERENCE MOTOROLA NUMBER PART NO.		DESCRIPTION	
Non-referenced items			
	01 00550D01	Cuuire cable cocombly (in	

01-80556801	6-wire cable assembly (in- cludes P7)
01-80634B01	feedthru bracket assembly (includes C2701 through C2706, 470 pF feedthru capacitors, 6 used)

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HLN8270A PA Hardware Kit, 490-520 MHz, 25/35 Watt

REFERENCE MOTOROLA DESCRIPTION NUMBER PART NO. Capacitors, chip 47 pF 100V 47 pF 100V 30 pF 100V 30 pF 100V C2741 21-11078B34 C2742 C2743 C2744 21-11078B34 21-11078B27 21-11078B27 C2766 not used C2767 not used C2784 21-11078B16 13 pF 100V

Connector, receptacle

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J1	09-80131M01	mini UHF coax
J2	09-80255E01	power (includes feedthru)

Connector, plug

P4	30-80138M08	coaxial cable 200 mm with
P5	30-80138M07	plug coaxial cable 150 mm with plug

Transistors

Q2730	48-80225C19	NPN; type MRF654
Q2740	48-80225C24	NPN; type MRF650

Resistor, chip, 5%, 1/10 watt

R2724 06-11077A36 27

Non-referenced items

02-00007003	nut 8-32x5/16x1/8 (for J1)
03-10943M10	screw M3x.5x8 (8 used)
03-10943M11	screw M3x.5x10 (2 used for J2)
04-00131974	washer (2 used for J2)
04-05587G01	washer nylon (for J2)
04-80943V01	lockwasher (for J1)
26-80124L01	heat sink
26-80223M07	PA shield
32-80014N03	gasket, accessory connector
42-80281L01	ground clip (2 used for Q2740)
42-80520801	ground clip, pc board (2 used)
42-80915V01	ground clip, pc board

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

PL-921024-O