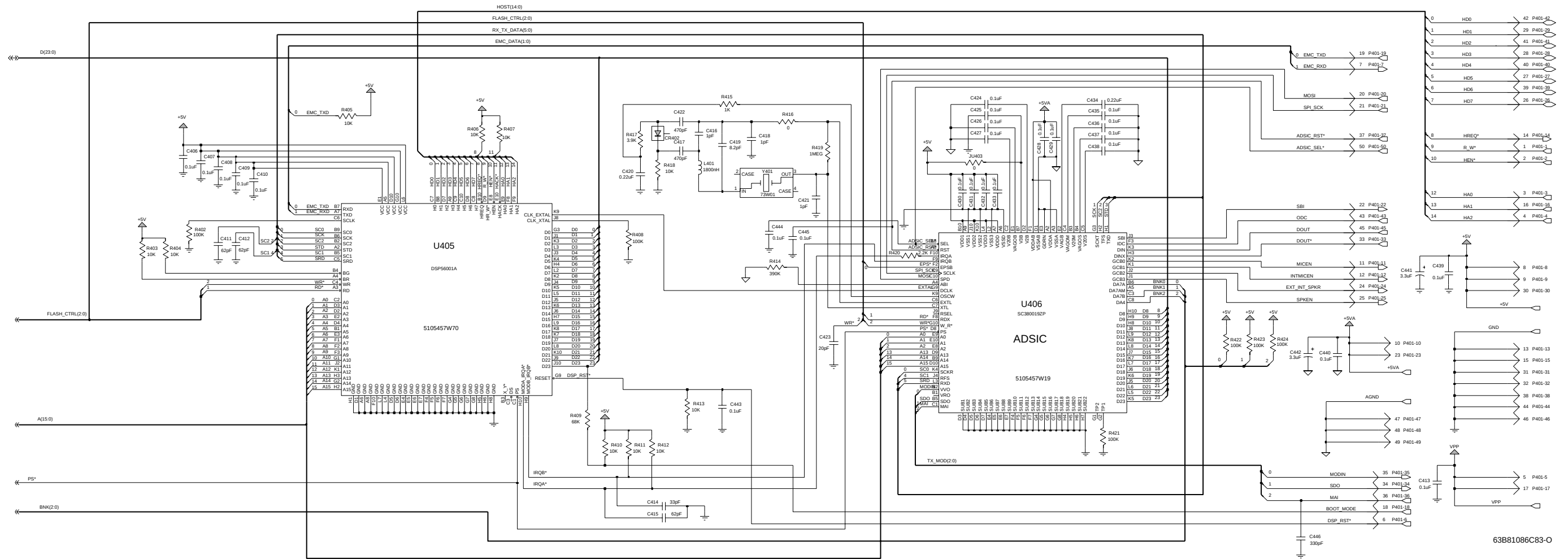
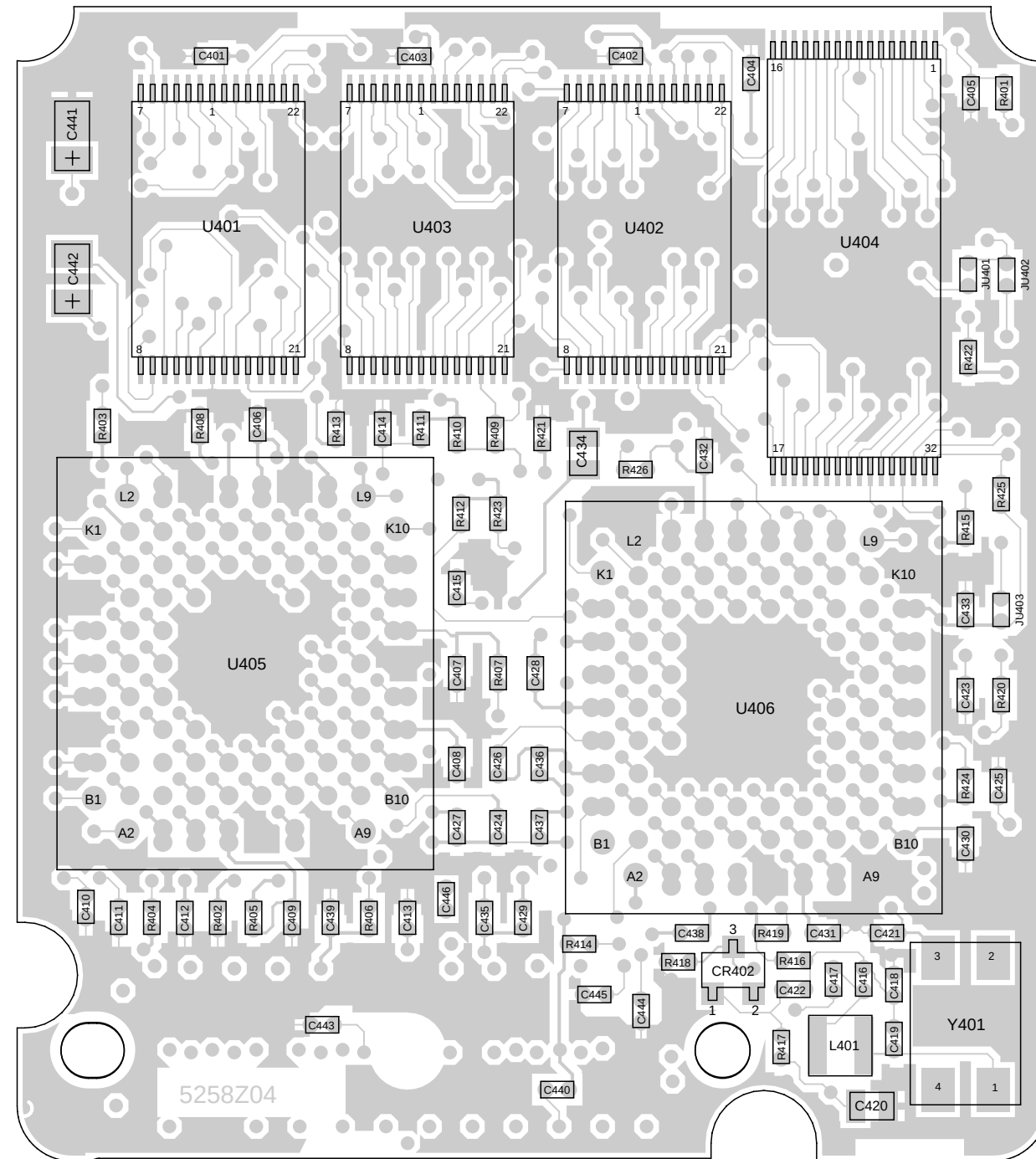




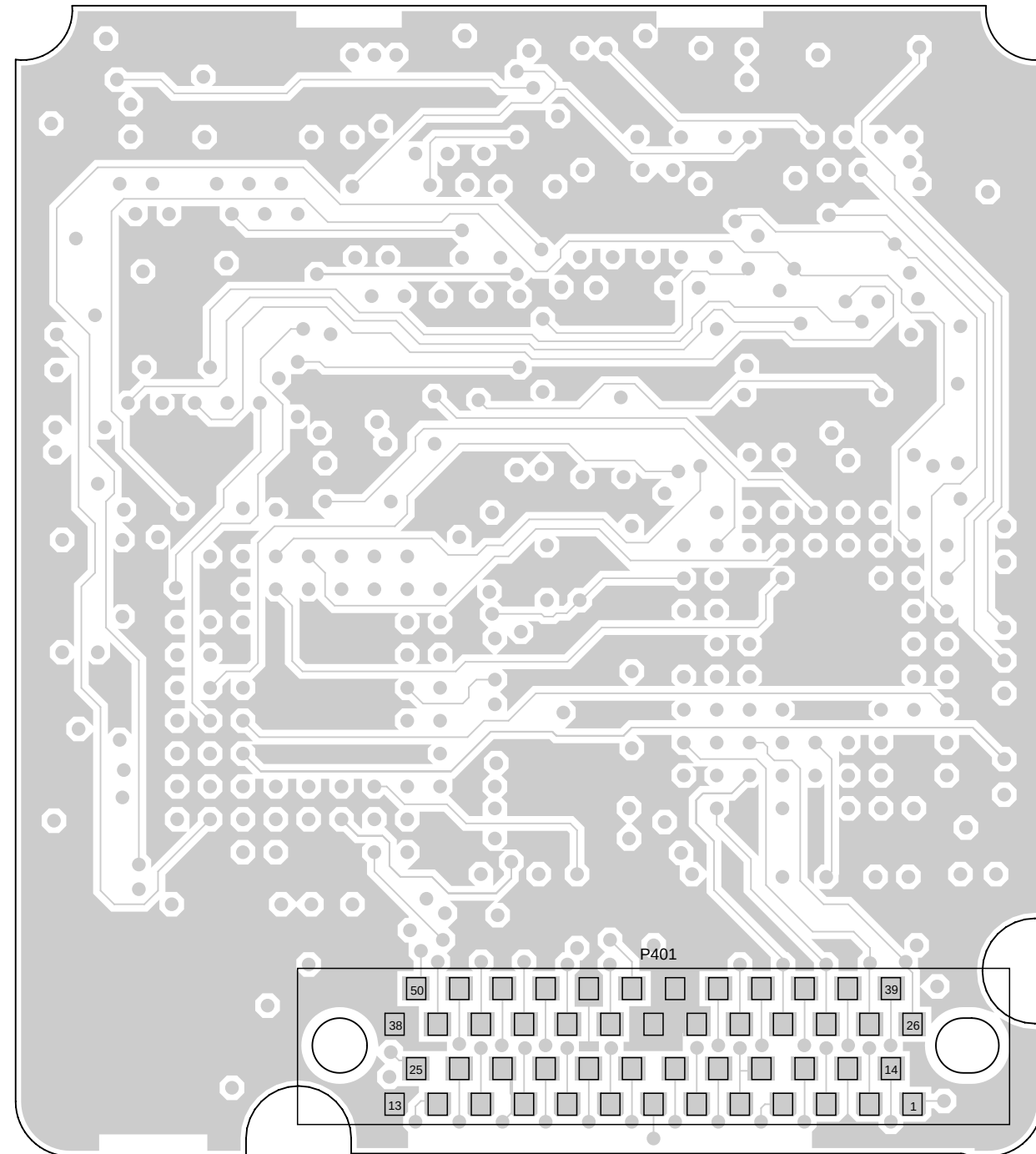
NTN8250C/D Vocoder Board Schematic Diagram, Sheet 2 of 2

VIEWED FROM SIDE 1



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VIEWED FROM SIDE 2



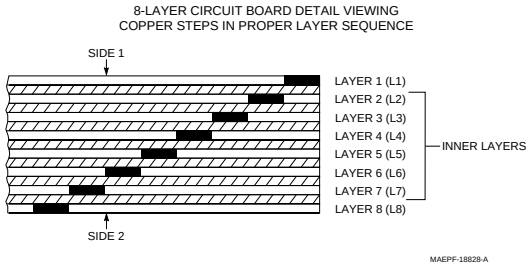
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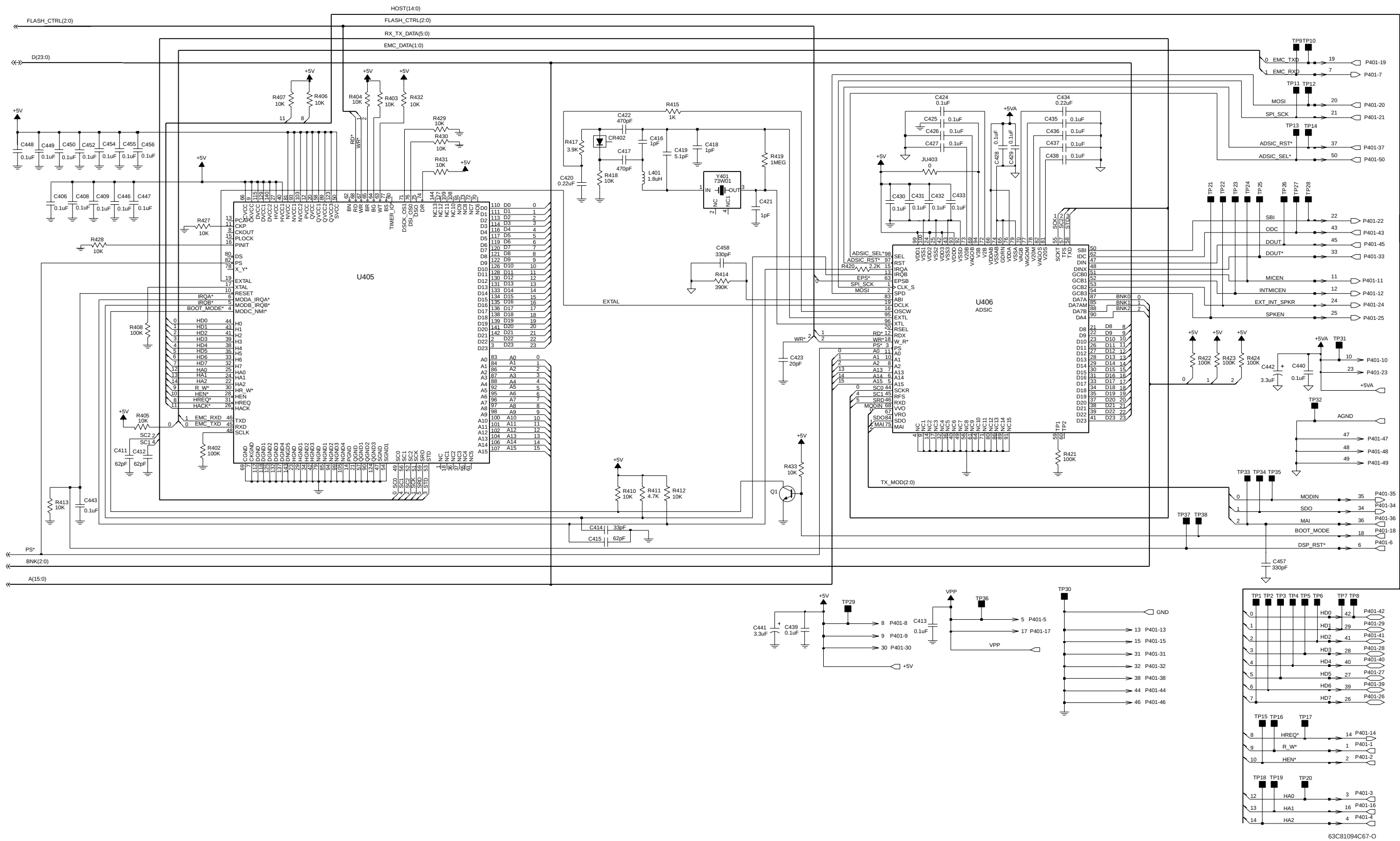
NTN8250C/D Vocoder Board
Electrical Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
		CAPACITOR, Fixed: unless otherwise stated
C401 thru 410	2113932K15	0.1μF
C411, 412	2113930F46	62pF
C413	2113932K15	0.1μF
C414	2113930F39	33pF
C415	2113930F46	62pF
C416	2113930F03	1pF
C417	2113931F17	470pF
C418	2113930F03	1pF
C419	2113930F25	8.2 pF
C420	2113743A23	.22μF
C421	2113930F03	1pF
C422	2113931F17	470pF
C423	2113930F34	20pF
C424 thru 433	2113932K15	0.1μF
C434	2113743A23	.22μF
C435 thru 440	2113932K15	0.1μF
C441, 442	2311049A42	3.3 μF
C443	2113932K15	0.1μF
C444, 445	2113932K15	Not Placed
C446	2113931F13	330pF (NTN8250D only)
CR402	4813825A06	DIODE: See Note 1. PIN Diode, 35V
		JUMPER:
JU401	0662057B47	Not Placed
JU402	0662057B47	0
JU403	0662057B47	0
		COIL, RF: unless otherwise stated
L401	2462587E71	1800nH Chip Inductor
		RESISTOR; Ω:
R401	0662057A73	10K
R402	0662057A97	100K
R403 thru 407	0662057A73	10K
R408	0662057A97	100K
R409	0662057A93	68K
R410 thru 413	0662057A73	10K
R414	0662057B12	390K
R415	0662057A49	1K
R416	0662057B47	0
R417	0662057A63	3.9K
R418	0662057A73	10K
R419	0662057B22	1M
R420	0662057A57	2.2K
R421 thru 424	0662057A97	100K
R425, 426	0662057A73	10K
		INTEGRATED CIRCUIT MOD- ULE: See Note 1.
U401 thru 403	5105462G87	32K X 8 DSP-SRAM
U404	5105625U73	256K X 8 FLASH ROM
U405	5105457W70	DSP (Digital Signal Processor)
U406	5105457W19	ADSIC (ABACUS/DSP Sup- port IC)
		CRYSTAL: See Note 2
Y401	4805573W01	33 MHz Crystal

		MISCELLANEOUS:
	8405258Z04	PC Board (NTN8250C)
	or 8405258Z05	PC Board (NTN8250D)

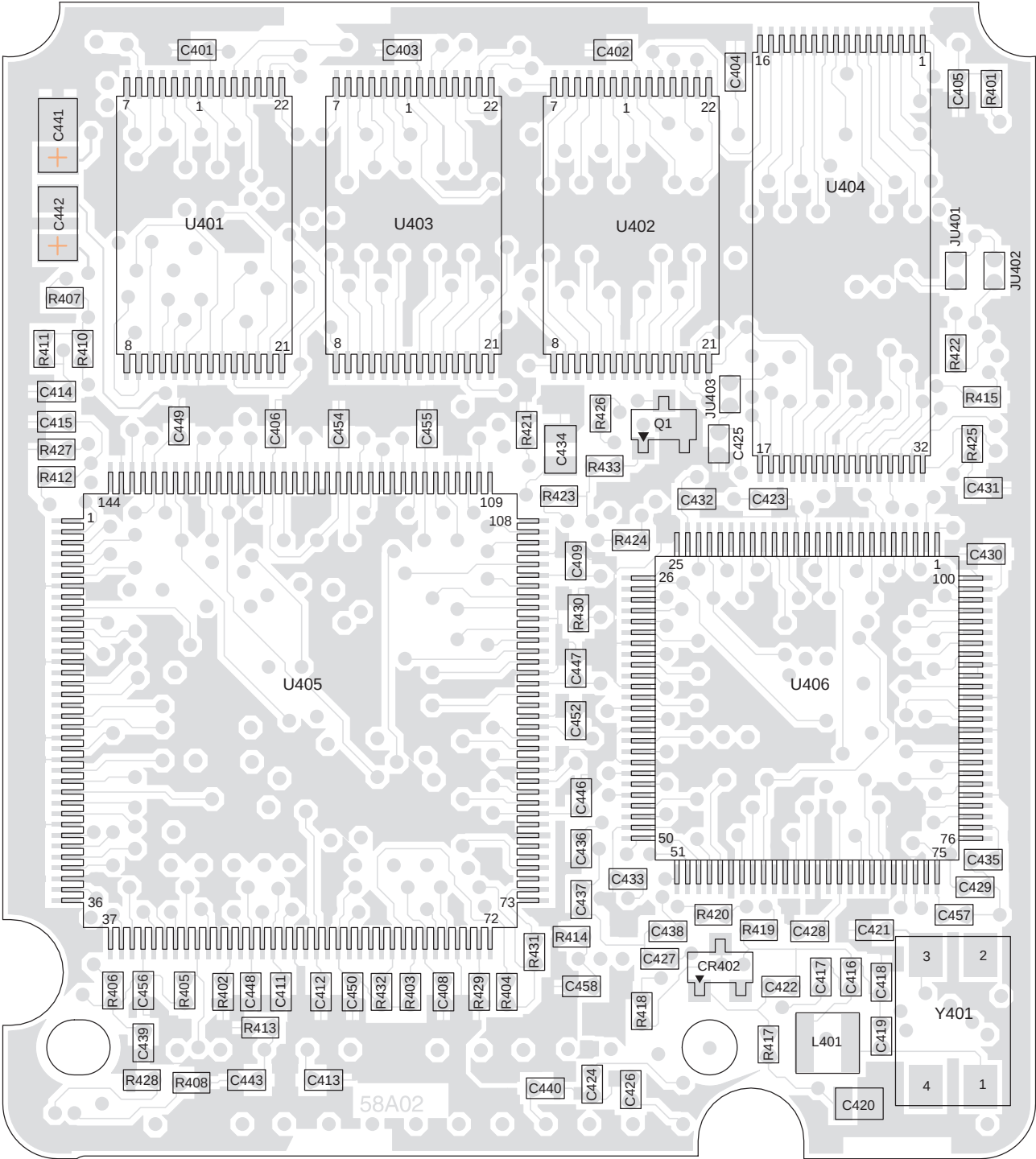
- Notes:
- For optimum performance, order replacement diodes, transistors, and circuit modules by Motorola part number only.
 - When ordering crystals, specify carrier frequency, crystal frequency, crystal type number, and Motorola part number.
 - Part value notations:
 $p=10^{-12}$
 $n=10^{-9}$
 $\mu=10^{-6}$
 $m=10^{-3}$
 $k=10^3$
 $M=10^6$
 - ITEM refers to the component reference designator. SIDE refers to the location of the component on the board; S1=Side 1, S2=Side 2.
 - THE NTN8250 Vocoder kits use an 8-layer printed circuit board.





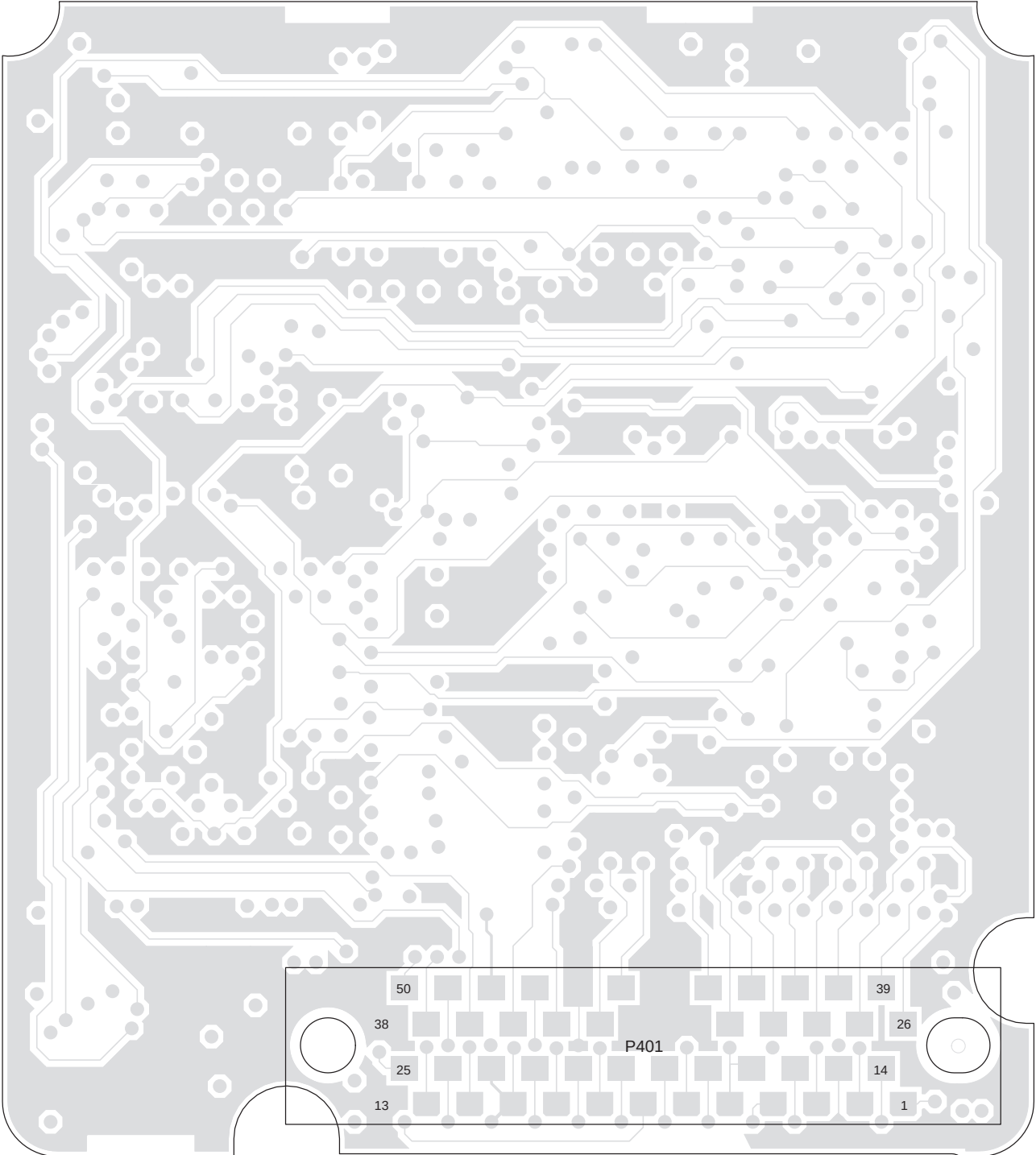
NTN8250F Vocoder Board Schematic Diagram, Sheet 2 of 2

VIEWED FROM SIDE 1



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VIEWED FROM SIDE 2



MAEPF-27136-O

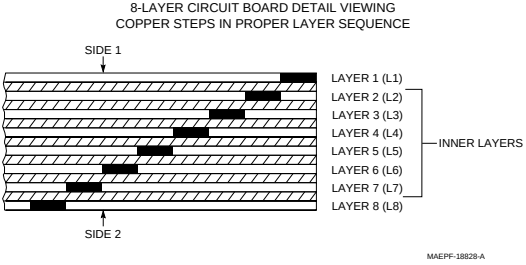
NTN8250F Vocoder Board Component Location Detail

NTN8250F Vocoder Board
Electrical Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
		CAPACITOR, Fixed: pF ±5%; 50V Unless otherwise stated
C401 thru C406	2113932K15	0.1 uF +80/-20% 16V
C406	2113932K15	0.1 uF +80/-20% 16V
C408, C409	2113932K15	0.1 uF +80/-20% 16V
C411, C412	-----	Not Placed
C413	2113932K15	0.1 uF +80/-20% 16V
C414	2113930F39	33
C415	2113930F46	62
C416	2113930F03	1 pF 50V ±0.1 pF 50V
C417	2113931F17	470
C418	2113930F03	1 pF 50V ±0.1 pF 50V
C419	2113930F20	5.1 pF 50V ±0.25 pF 50V
C420	2113743A23	0.22 uF 10%
C421	2113930F03	1 pF 50V ±0.1 pF 50V
C422	2113931F17	470
C423	2113930F34	20
C424 thru C433	2113932K15	0.1 uF +80/-20% 16V
C434	2113743A23	0.22 uF 10%
C435 thru C440	2113932K15	CAP CER .100 UF +80/-20% 16V
C441, C442	2311049A42	3.3 uF
C443	2113932K15	0.1 uF +80/-20% 16V
C446 thru C450	2113932K15	0.1 uF +80/-20% 16V
C452	2113932K15	0.1 uF +80/-20% 16V
C454 thru C456	2113932K15	0.1 uF +80/-20% 16V
C457, C458	2113931F13	330
		DIODE: See Note 1.
CR402	4813825A06	PIN DIODE, 35V
		JUMPER:
JU401	-----	Not Placed
JU402, JU403	0662057B47	0
		COIL, RF:
L401	2462587E71	1800 nH
		PLUG:
P401	-----	Not Placed
		TRANSISTOR: See Note 1.
Q1	4805128M12	NPN
		RESISTOR, Fixed: Ω ±5%; 1/8W Unless otherwise stated
R401	0662057A73	10k
R402	0662057A97	100k
R403 thru R407	0662057A73	10k
R408	0662057A97	100k
R410	0662057A73	10k
R411	0662057A65	4.7k
R412, R413	0662057A73	10k
R414	0662057B12	390k
R415	0662057A49	1k
R417	0662057A63	3.9k
R418	0662057A73	10k
R419	0662057B22	1 M
R420	0662057A57	2.2k
R421 thru R424	0662057A97	100k
R425 thru R433	0662057A73	10k
		INTEGRATED CIRCUIT MODULE: See Note 1.
U401 thru U403	5185963A18	32k x 8 DSP-SRAM
U404	5185130C54	256k x 8 FLASH ROM
U405	5105457W66	DSP (Digital Signal Processor)
U406	5185963A10	ADSIC (ABACUS/DSP Support IC)
		CRYSTAL: See Note 2.
Y401	4805573W01	33 MHz

Notes:

- For optimum performance, order replacement diodes, transistors, and circuit modules by Motorola part number only.
- When ordering crystals, specify carrier frequency, crystal frequency, crystal type number, and Motorola part number.
- Part value notations:
p=10⁻¹²
n=10⁻⁹
μ=10⁻⁶
m=10⁻³
k=10³
M=10⁶
- ITEM refers to the component reference designator. SIDE refers to the location of the component on the board; S1=Side 1, S2=Side 2.
- THE NTN8250 Vocoder kits use an 8-layer printed circuit board.



Vocoder/Controller Board Signals

Due to the nature of the schematic-generating program, signal names must be different when they are not directly connected to the same point. The following tables provide a cross-reference to the various pinouts for the same functional signal.

Vocoder Board Address Bus (A) Pinouts

Bus	U401, U402, U403	U404	U405	U406
A0	21	20	C2/83	E9/11
A1	23	19	D3/84	E10/10
A2	24	18	D2/86	E8/8
A3	25	17	E2/87	—
A4	26	16	D4/88	—
A5	1	15	B1/92	—
A6	2	14	E3/95	—
A7	3	13	F1/96	—
A8	4	3	F2/97	—
A9	5	2	F3/98	—
A10	6	31	G1/100	—
A11	7	1	J2/101	—
A12	8	12	K1/102	—
A13	9	4	H3/104	D9/7
A14	10	5	G2/106	B9/6
A15	20	11	H2/107	D10/5

Controller Board Address Bus (HA) Pinouts

Bus	U405	U701	U702	U705	U706	U727
HA0	E9/25	17	D7	10	13	21
HA1	F8/24	16	C7	9	11	20
HA2	F9/22	15	C8	8	10	19
HA3	—	14	D8	7	8	18
HA4	—	13	E6	6	2	17
HA5	—	12	—	5	7	16
HA6	—	11	—	4	6	15
HA7	—	10	—	3	5	14
HA8	—	9	F6	25	27	8
HA9	—	8	F7	24	12	7
HA10	—	7	—	21	24	36
HA11	—	6	—	23	26	6
HA12	—	5	—	2	4	5
HA13	—	4	—	26	28	4
HA14	—	3-In	H8-In H4-Out	1	3	3
HA15	—	78-In	H7-In K3-Out	—	—	2
HA16	—	—	K6	—	—	1
HA17	—	—	G5	—	—	40
HA18	—	—	J6	—	—	13
HA19	—	—	H6	—	—	37

Vocoder Board Data Bus (D) Pinouts

Bus	U401	U402	U403	U404	U405	U406
D0	11	—	—	21	G3/110	—
D1	12	—	—	22	J1/111	—
D2	13	—	—	23	K3/113	—
D3	15	—	—	25	L3/114	—
D4	16	—	—	26	J3/116	—
D5	17	—	—	27	K4/117	—
D6	18	—	—	28	H4/119	—
D7	19	—	—	29	L2/120	—
D8	—	11	—	—	K2/121	H10/21
D9	—	12	—	—	J4/122	H9/22
D10	—	13	—	—	K5/126	H8/23
D11	—	15	—	—	L5/128	J8/26
D12	—	16	—	—	J5/130	L9/27
D13	—	17	—	—	K6/131	K8/28
D14	—	18	—	—	J6/133	L8/29
D15	—	19	—	—	H7/134	J7/30
D16	—	—	11	—	L9/135	K7/31
D17	—	—	12	—	K8/136	L7/33
D18	—	—	13	—	K7/138	J6/34
D19	—	—	15	—	J7/139	K6/35
D20	—	—	16	—	L8/141	J5/37
D21	—	—	17	—	K10/142	L6/38
D22	—	—	18	—	J9/2	L5/39
D23	—	—	19	—	J10/3	K5/41

Controller Board Data Bus (HD) Pinouts

Bus	U405	U701	U702	U705	U706	U727
HD0	C7/44	40	C3	1	14	25
HD1	B8/43	43	B1	12	15	26
HD2	D7/41	44	C2	13	16	27
HD3	A9/39	45	D4	15	18	28
HD4	C9/38	46	C1	16	19	32
HD5	C10/35	47	D2	17	20	33
HD6	D8/33	48	D3	18	21	34
HD7	C8/32	49	D1	19	23	35

U701 (MCU)

U701 Pin Number	Description	To/From
18	PE0	R171
19	PE4 TG1 TOGGLE SWITCH	J101-34
23	PE1 B SENSE/LBAT/PWR DWN	VR122
24	PE5 TG2 CONCENTRIC SWITCH	J101-23
25	PE2 VOL	J101-31
26	PE6	R177
27	PE3 EMERG	J101-41
28	PE7 BAT_STATUS	R176
		P201-5
32	MOD B	Q104C
33	MOD A	Q104C
34	ECLK (1.8432MHz)	U206-A4
35	R/W*	U405-D9/30
		U206-B3
36	EXTAL 7.3728MHz	Y100-2
37	XTAL	R158
39	4XECLK (7.3726MHz)	U206-A3
50	RESET/RESET*	U727-10
		U206-E4
51	XIRQ*	R160
52	IRQ*	U206-E2
53	PG7 CSPROG*	U206-E3
54	PG6 CSGEN*	U708-1
55	PG5 CS101*	U206-G1
56	PG4 ADSIC RST*	U406-A8/97
57	PG3 ADSIC SEL*	U406-B8/98
58	PG2 DSP RST*	U405-G9/10
59	PG1 ROSC/PSC CE*	P201-8
62	PG0 SYN SEL*	P201-9
63	PD0 BOOT DATA IN (RXD)	U704-2
		U206-J2
64	PD1 BOOT DATA OUT (TXD)/KEYFAIL	J704-1
		J101-2 U717-1
65	PD2 MISO	J601-7
66	PD3 MOSI	J601-17 P201-17
		P301-2
		U406-C10/2
67	PD4 SPI SCK	J601-9
		P201-10
		P301-1
		U406-C9/1
68	PD5 DA SEL*	P201-7
70	PA7 BL_HOME*	J101-19
71	PA6 ECLK SHIFT	Q102B
72	PA5 BOOTSTRAP*	U206-E5
73	PA4 BL_FREQ	J101-20
74	PA3 SB9600 BUSY	J101-8
75	PA2 HREQ*	U405-B10/31
76	PA1 BOOT MODE	R409
77	PA0 MUX_CNTL	U717-4

U702 (SLIC)

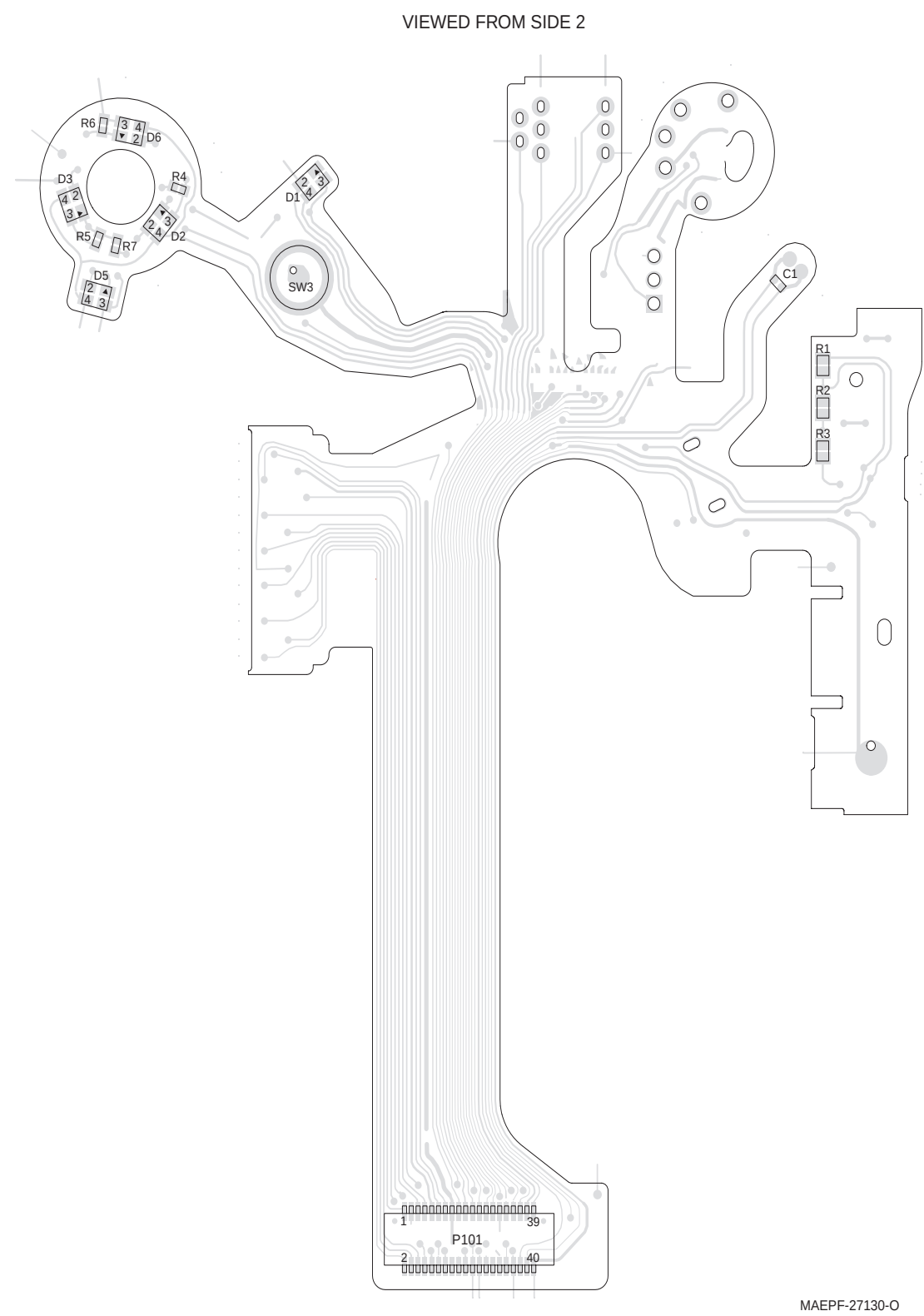
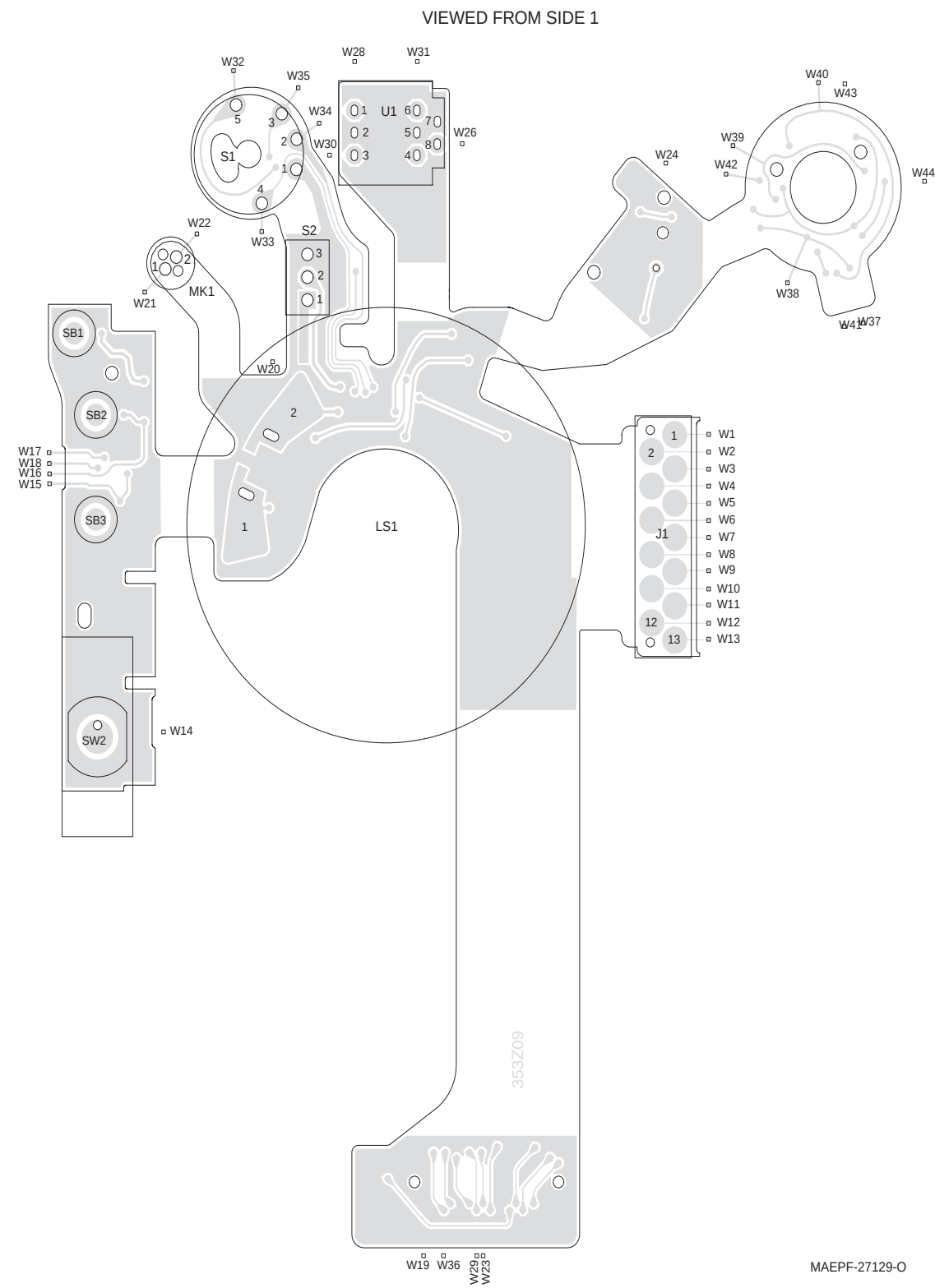
U702 Pin Number	Description	To/From
A2	MEM R/W*	U705-27
		U706-6
		U727-9
A3	4XECLK	U701-39
A4	ECLK	U701-34
A5	RS232 DATA OUT/BOOT DATA IN	J101-6
A7	PJ6 COL1*	P107-1
B2,G3	RXDIN/RS232 DATA IN	J101-4
B3	R/W*	U405-D9/30
		U701-35
B4	PJ0 COL3 MOB IRQ*	P107-3
B6	PJ3 CTSOUT*	J101-1
C4	OE*	U706-1
		U705-22
		U727-24
C6	PJ5 OPT SEL2	J101-7
C9	POR*	U726-1
D5	PJ1 COL2	P107-2
D6	PJ7 EMC EN*	J601-19
E2	IRQ*	J701-52
E3	AV*/CSPROG*	U701-53
E4	HC11RST*/RESET*	U701-50
		U727-10
E5	BOOTSTRAP*	U701-72
E7	BL EN	P107-4
		P301-4
E8	GRN LED	J101-22
F2	PH2 RTA2	J101-26
F3	PH0 RTA0	J101-27
F4	PH1 RTA1	J101-24
F5	ROM2CS*	U725-2
F8	ROW5 5V EN*	P107-9
G1	CE*/CS101*	U701-55
G2	SCNSLB	R180
G4	ROW2 SPKREN*	P107-6
G6	CS2B RAM SEL*	U708-2
G7	ROW6 MICEN	P107-10
G8	DISP EN*	P301-3
G9	ROW4 TXPA EN*	P107-8
H1	PH3 RTA3	J101-25
H2	PH5 INT PTT*	J101-19
		U206-H2
H3	PH6 EMC REQ	J601-11
H9	RED LED	J101-21
J2	BOOTRX/BOOT DATA IN	U701-63
		U704-2
J3	ROW1	P107-5
J4	EE1CS*	U706-27
J7	CS1B HEN*	U405-E8/28
J8	RTSIN*	J101-10
J9	B+ CNTL	U709-2
		Q105
K2	PH7 LOCK DET*	P201-3
		U302-41
		CR502
K5	ROM1CS*	U725-1
K7	CS3B EMC WAKEUP*	J601-25
K8	ROW3 BUSY OUT*	P107-7

Vocoder U405 (DSP)

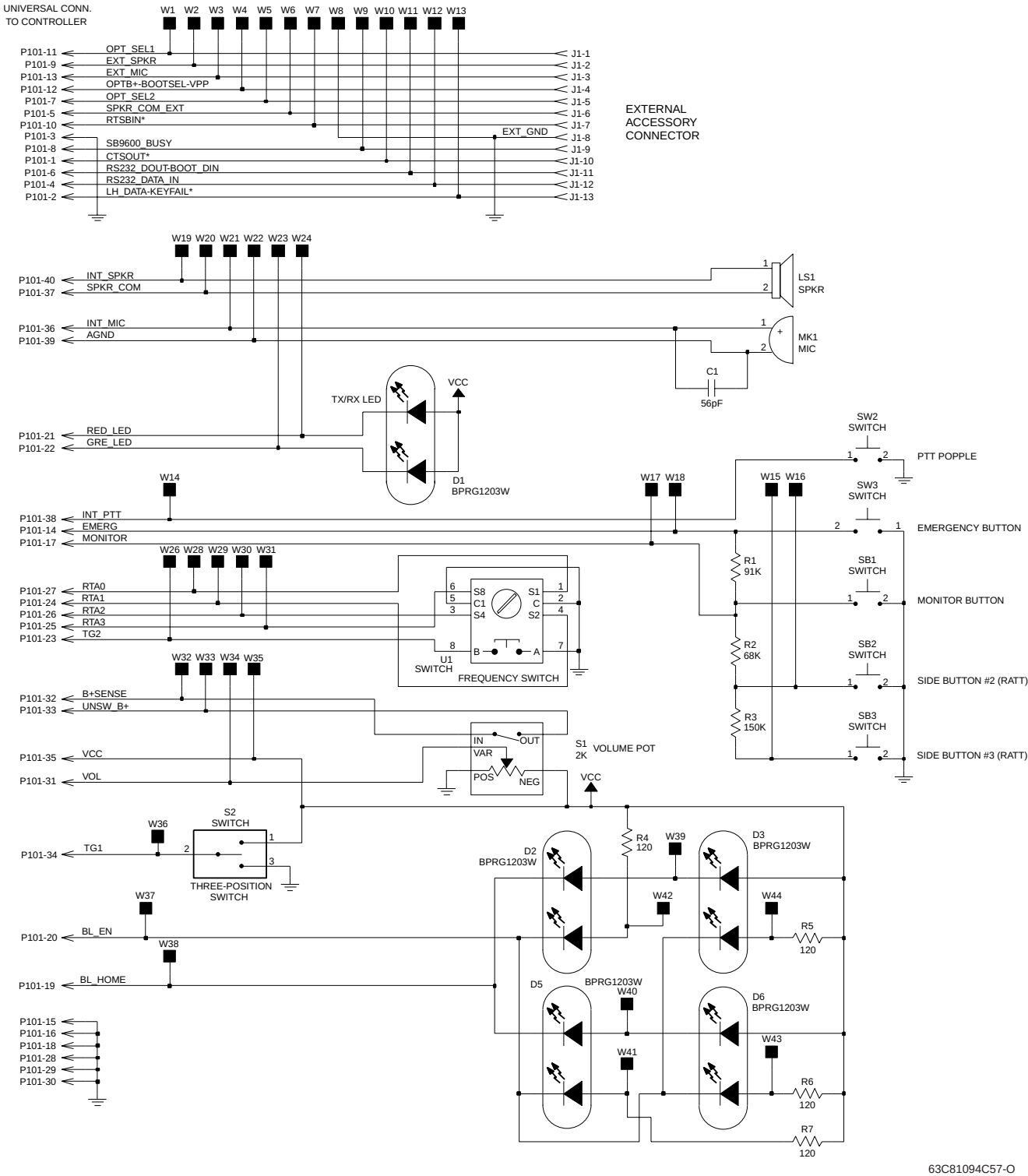
U405 Pin Number	Description	To/From
A2/53	TXD/STD	U406-H1/58
A3/68	RD*	U401-22 U402-22 U403-22
A7/46	TXD/EMC RXD	J601-5
B2/52	SC2 TFS 48kHz	U406-H2/57
B5/56	SC1 RFS 20kHz	U406-J4/45
B6/51	SCK SCKT 1.2MHz	U406-G3/55
B7/45	RXD/EMC TXD	J601-3
B9/49	SCO SCKR 2.4MHz	U406-K4/44
B10/31	HREQ*	U701-75
C1/82	PS*	U404-6 U406-D8/3
C4/67	WR*	U401-27 U402-27 U403-27
C5/59	SRD RXO	U406-L3/46
C6/48	SCLK	R402
D9/30	HR/W*	U701-35 U702-B3
E8/28	HEN*	U702-J7
E10/26	HACK*	R407
G9/10	RESET/DSP RST*	U701-58
H9/5	MODB/IRQB*	U406-F9/13
H10/6	MODA/IRQA*	U406-F10/15
J8/17	XTAL	R408
K9/19	EXTAL (DCLK)	U406-G9/19
4	MODC/NMI*	Q1

Vocoder U406 (ADSIC)

U406 Pin Number	Description	To/From
A4/83	AB1	R414
A8/97	RST*/ADSIC RST*	U701-56
B2/68	MODIN	P201-14
B5/84	SDO	U401-C6
B6/87	DA7A BNK0	U404-5
B8/98	SEL*/ADSIC SEL*	U701-57
C1/75	MAI	U401-F2
C3/88	DA7B BNK1	U404-11
C6/95	EXTL	Y401
C7//96	XTL 33MHz	Y401
C8/90	DA4 BNK2	U404-10
C9/1	SCLK/SPI SCK	U701-67 J601-9 P201-10 P301-1
C10/2	SPD/MOSI	U701-66 J601-17 P201-17 P301-2
D8/3	PS*	U404-6 U405-C1/82
F2/63	SSW/EPS*	U404-30
F3/62	IDC ODC 2.4MHz	P201-11
F8/12	RD*	U405-A3/68 U404-32 U402/3/1-22
F9/13	IRQB/IRQB* 8kHz	U405-H9/5
F10/15	IRQA/IRQA*	U405-H10/6
G2/59	TP1	R421
G3/55	SCKT SCK 1.2MHz	U405-B6/51
G9/19	DCLK	U405-K9/19
G10/18	WR*	U405-C4/67 U404-7 U402/3/1-27
H1/58	TXD STD	U405-A2/53
H2/57	TFS SC2 48kHz	U405-B2/52
H3/48	DIN*/DOUT*	P201-1
J1/54	GCB3 SPKEN	U718-19
J2/53	GCB2 (EXT/INT SPKR)	U718-20
J3/50	SBI	P201-4
J4/45	RFS SC1 20kHz	U405-B5/56
K1/52	GCB1	U712-4 U718-16 Q107 (INT MICEN)
K2/51	GCB0 MICEN	U718-4, Q108
K3/47	DIN/DOUT	P201-2
K4/44	SCKR SCO 2.4MHz	U405-B9/49
K9/16	OSCW	CR402
L3/46	RXD SRD	U405-C5/59



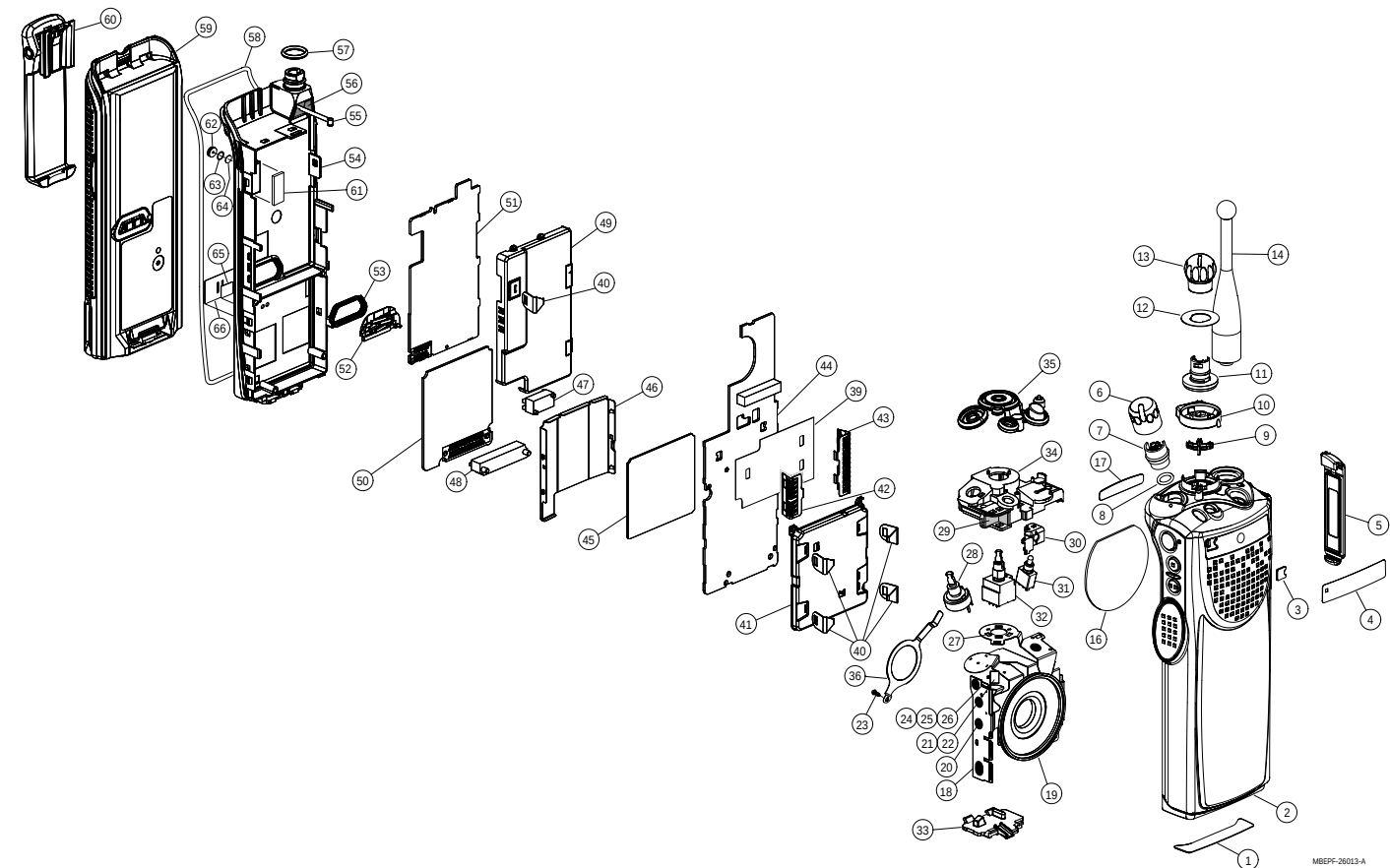
0105956V33 Controller Flex Circuit Detail



0105956V33 Controller Flex
Electrical Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
CAPACITOR:		
C1	2113740F45	56 pF
DIODE:		
D1,D2,D3,D5, D6	4805729G63	LED, Dual
CONNECTOR:		
J1	0905313Z01	
SPEAKER:		
LS1	5005213W02	
MICROPHONE:		
MK1	5005227J07	
CONNECTOR		
P101	2880422L02	
RESISTOR:		
R1	0660076A96	91k
R2	0660076A93	68k
R3	0660076B05	150k
R4, R5, R6, R7	0662057A27	120
SWITCH:		
S1	1805629V01	Potentiometer
S2	4005572W01	3-Pole; 3 Position
SWITCH:		
SB1, SB2, SB3	0905310Z01	Pushbutton
SW2	3905517V01	Pushbutton
SW3	3905329W01	Pushbutton
MODULE:		
U1	4002622J03	

0105956V33 Controller Flex Schematic and Parts List



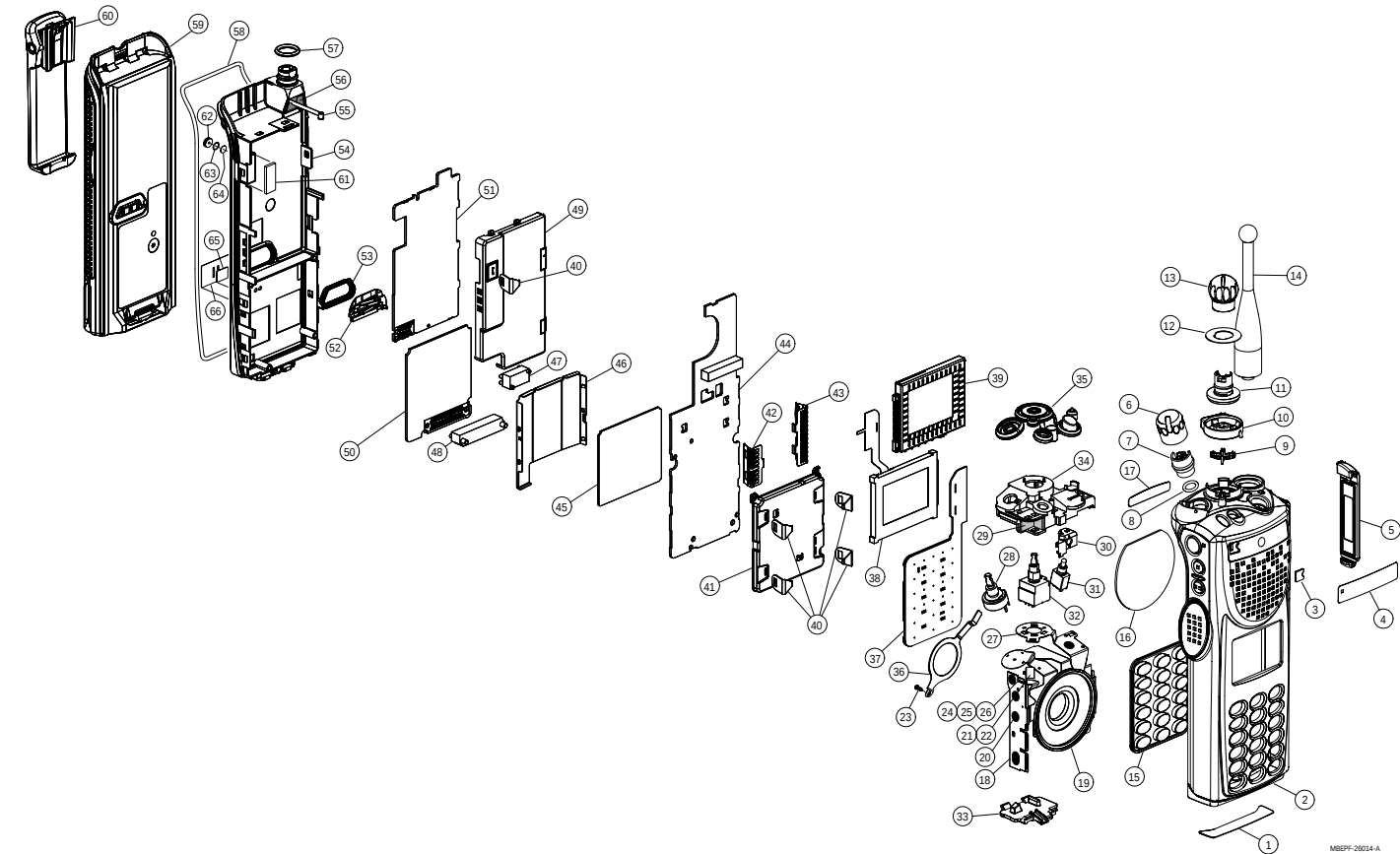
Model I Exploded View and Parts List

Model I
Exploded View Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
1	3305630Z01	LABEL, Motorola Bottom
2	1505661Z04 or 1586329A01 or 1586329A02	ASSEMBLY, Model I Housing (See Note 1) ASSEMBLY, Model I Housing (R Model)(See Note 1) ASSEMBLY, Model I Housing (Yellow R Model)(See Note 1)
3	3505586Z02 or 3585626B01	GRILLCLOTH, Microphone Front MESH, Microphone Front (R Models)
4	3305573Z01 or 3305573Z02 or 3305573Z03	LABEL, Motorola Front LABEL, Motorola Front (R Model) LABEL, Motorola Front (Yellow R Model)
5	1505579Z01	COVER, Accessory Connector
6	3605371Z01	KNOB, Volume
7	4305372Z01	INSERT, Volume Knob Retainer
8	3205379W01	O-RING, Volume Torque
9	6105376Z01	LIGHTPIPE, Indicator
10	4505375Z01	LEVER, Secure
11	4305373Z01	INSERT, Frequency Knob Retainer
12	1305374Z01	ESCUTCHEON, Frequency Dial
13	3605370Z01	KNOB, Frequency
14	NAD6563 or NAD6566_ or NAD6567_ or NAD6568_ or NAE6546_ or NAE6547_ or NAE6548_ or NAE6549_ or NAF5037_ or NAF5039_ or NAF5042_	ANTENNA, VHF Wideband Helical (136-174MHz) ANTENNA, VHF Helical (136-151MHz) ANTENNA, VHF Helical (151-162MHz) ANTENNA, VHF Helical (162-174MHz) ANTENNA, UHF Helical (403-435MHz) ANTENNA, UHF Helical (435-470MHz) ANTENNA, UHF Helical (470-512MHz) ANTENNA, UHF Wideband Whip (403-520MHz) ANTENNA, 800MHz Whip (806-870MHz) ANTENNA, 800MHz Dipole (806-870MHz) ANTENNA, 800MHz Stubby Quarterwave (806-870MHz)
16	3505340Z02	MESH, Speaker
17	3305574Z01 or 3305574Z02	LABEL, Motorola Back LABEL, Motorola Back (Yellow R Model)
18	0105956V33	ASSEMBLY, Controls Universal Flex (includes items 19 thru 22, 24 thru 28, and 30 thru 32)
19	5085962A03 or 5085962A05	SPEAKER (part of item 18) SPEAKER (part of item 18) (R Models)
20	3905667Z02	POPPLES, PTT and Side Button (part of item 18)
21	-----	MICROPHONE, Electret (part of item 18) (Not Field Replaceable)
22	-----	CAPACITOR, 56pF (part of item 18) (Not Field Replaceable)
23	0300140332	SCREW, Tapping - 28 x 3/16
24	0660076A93	RESISTOR, 68kΩ (part of item 18)
25	0660076A96	RESISTOR, 91kΩ (part of item 18)
26	0660076B05	RESISTOR, 150kΩ (part of item 18)
27	4805729G63	LED, Green/Red (5 req'd) (part of item 18)
28	1805629V04	POTENTIOMETER, Volume (part of item 18)
29	7505748Z01	PAD, Microphone Boot (non-R models only)
30	1405332Z01 or 1486164A01	BOOT, Microphone Boot (part of item 18) BOOT, Microphone Boot (part of item 18)(R Models)
31	4005572W04	SWITCH, Toggle, 3 Pos. A/B/C (part of item 18)
32	4002622J04	SWITCH, Frequency (part of item 18)
33	0705357Z01	BRACKET, Controls Bottom
34	0705352Z02	BRACKET, Controls
35	3205354Z02	SEAL, Controls
36	4205338Z02	RETAINER, Speaker
39	1405874Z01	INSULATOR, Control Front
40	4205631Z01	CLIP, Control Locking
41	2605342Z02	SHIELD, Controller Front
42	0705330Z01	BRACKET, Flex Attach Display
43	0705368Z01	BRACKET, Flex Attach Keypad

44	NCN6128_ or NCN6167_	KIT, Controller Board (See Note 2) KIT, Controller Board (See Note 2)
45	NTN8253B or NTN8254B or NTN8255A or NTN8256B or NTN8257B or NTN8258A or NTN8259A or NTN8260B or NTN8261B or NTN8326A or NTN8328A or NTN8329A or NTN8330A or NTN8331A or NTN8418A or PLN7748A or PLN7750A	KIT, DES Encryption Board KIT, DES-XL Encryption Board KIT, DES-OFB Encryption Board KIT, DVI-XL Encryption Board KIT, DVP-XL Encryption Board KIT, DES-OFB and DES-XL Encryption Board KIT, DES-OFB and DVP-XL Encryption Board KIT, DES-XL and DVP-XL Encryption Board KIT, DVP-XL and DVI-XL Encryption Board KIT, DES-OFB and DVI-XL Encryption Board KIT, DVP Encryption Board KIT, DVI-XL and DVP Encryption Board KIT, DVP and DES-XL Encryption Board KIT, DVP and DVP-XL Encryption Board KIT, DES-OFB and DES Encryption Board DVI-XL Variant Tag8 Variant Tag6
46	2605344Z01	SHIELD, Vocoder with Insulators
47	2805216Z03	CONNECTOR, Compression, 20-Pin
48	2805214Z03	CONNECTOR, Compression, 50-Pin
49	2605343Z07	SHIELD, RF with Insulator
50	NTN8250_	KIT, Vocoder Board
51	NUF6472_ or NLE4249_ or NLE4250_ or NLD8898_	KIT, 800MHz RF Board KIT, UHF Range 1 RF Board KIT, UHF Range 2 RF Board KIT, VHF RF Board
52	0905585Z02 or 0905585Z03	ASSEMBLY, B+ ASSEMBLY, B+ (R Models)
53	3205351Z02	SEAL, B+
54	1505348Z01 or 1505348Z04	ASSEMBLY, Casting ASSEMBLY, Casting (R Models)
55	3005664Z01	ASSEMBLY, Coaxial Cable
56	7505487Z01	PAD, Coaxial
57	3205082E96	GASKET, O-Ring Bushing
58	3205349Z03	SEAL, Main
59	NTN8294_ or NTN8298_ or NTN8297_	BATTERY, NiCd BATTERY, NiMH BATTERY, NiCd (Ruggedized)
60	NTN8266_	KIT, Belt Clip
61	7505922Z01	PAD, Thermal
62	0286165A03	NUT, Spanner
63	3205300V01	SEAL, O-Ring
64	3205472M03	SEAL, Port (No longer used.)
65	3285877B01	SEAL, Port
66	3385873B01	LABEL, Seal

Notes: 1. The 1586329A01 and 1586329A02 housing assemblies are **not** backward compatible with the 1505661Z03 housing assembly..
2. The NCN6167_ Controller Board is **not** backward compatible with the NCN6128_ Controller Board.



Models II and III Exploded View and Parts List

Models II and III
Exploded View Parts List

ITEM	MOTOROLA PART NUMBER	DESCRIPTION
1	3305630Z01	LABEL, Motorola Bottom
2	1505660Z05	ASSEMBLY, Model III Housing (See Note 1)
	or 1586328A01	ASSEMBLY, Model III Housing (R Model) (See Note 1)
	or 1586328A03	ASSEMBLY, Model III Housing (Yellow R Model) (See Note 1)
	or 1505660Z06	ASSEMBLY, Model II Housing (See Note 1)
	or 1586328A02	ASSEMBLY, Model II Housing (R Model) (See Note 1)
	or 1586328A04	ASSEMBLY, Model II Housing (Yellow R Model) (See Note 1)
3	3505586Z02	GRILLCLOTH, Microphone Front
	or 3585626B01	MESH, Microphone Front (R Models)
4	3305573Z01	LABEL, Motorola Front
	or 3305573Z02	LABEL, Motorola Front (R Models)
	or 3305573Z03	LABEL, Motorola Front (Yellow R Models)
5	1505579Z01	COVER, Accessory Connector
6	3605371Z01	KNOB, Volume
7	4305372Z01	INSERT, Volume Knob Retainer
8	3205379W01	O-RING, Volume Torque
9	6105376Z01	LIGHTPIPE, Indicator
10	4505375Z01	LEVER, Secure
11	4305373Z01	INSERT, Frequency Knob Retainer
12	1305374Z01	ESCUTCHEON, Frequency Dial
13	3605370Z01	KNOB, Frequency
14	NAD6563_	ANTENNA, VHF Wideband Helical (136-174MHz)
	or NAD6566_	ANTENNA, VHF Helical (136-151MHz)
	or NAD6567_	ANTENNA, VHF Helical (151-162MHz)
	or NAD6568_	ANTENNA, VHF Helical (162-174MHz)
	or NAE6546_	ANTENNA, UHF Helical (403-435MHz)
	or NAE6547_	ANTENNA, UHF Helical (435-470MHz)
	or NAE6548_	ANTENNA, UHF Helical (470-512MHz)
	or NAE6549_	ANTENNA, UHF Wideband Whip (403-520MHz)
	or NAF5037_	ANTENNA, 800MHz Whip (806-870MHz)
	or NAF5039_	ANTENNA, 800MHz Dipole (806-870MHz)
	or NAF5042_	ANTENNA, 800MHz Stubby Quarterwave (806-870MHz)
15	7505293Z01	KEYPAD, Model III
	or 7505293Z02	KEYPAD, Model III (R Models)
	or 7585696A01	KEYPAD, Model II
	or 7585696A02	KEYPAD, Model II (R Models)
16	3505340Z02	MESH, Speaker
17	3305574Z01	LABEL, Motorola Back
	or 3305574Z02	LABEL, Motorola Back (Yellow R Models)
18	0105956V33	ASSEMBLY, Controls Universal Flex (includes items 19 thru 22, 24 thru 28, and 30 thru 32)
19	5085962A03	SPEAKER (part of item 18)
	or 5085962A05	SPEAKER (part of item 18) (R Models)
20	3905667Z02	POPPLS, PTT and Side Button (part of item 18)
21	-----	MICROPHONE, Electret (part of item 18) (Not Field Replaceable)
22	-----	CAPACITOR, 56pF (part of item 18) (Not Field Replaceable)
23	0300140332	SCREW, Tapping - 28 x 3/16
24	0660076A93	RESISTOR, 68kΩ (part of item 18)
25	0660076A96	RESISTOR, 91kΩ (part of item 18)
26	0660076B05	RESISTOR, 150kΩ (part of item 18)
27	4805729G63	LED, Green/Red (5 req'd) (part of item 18)
28	1805629V04	POTENTIOMETER, Volume (part of item 18)
29	7505748Z01	PAD, Microphone Boot (non-R models)
30	1405332Z01	BOOT, Microphone Boot (part of item 18)
	or 1486164A01	BOOT, Microphone Boot (part of item 18)(R Models)
31	4005572W04	SWITCH, Toggle, 3 Pos. A/B/C (part of item 18)
32	4002622J04	SWITCH, Frequency (part of item 18)

33	0705357Z01	BRACKET, Controls Bottom
34	0705352Z02	BRACKET, Controls
35	3205354Z02	SEAL, Controls
36	4205338Z02	RETAINER, Speaker
37	NTN8311_	KIT, Keypad Flex Assembly, Model III
	or NTN8493_	KIT, Keypad Flex Assembly, Model II
38	5105385Y19	MODULE, LCD
39	7505336Z01	PAD, Display Locator
40	4205631Z01	CLIP, Control Locking
41	2605342Z01	SHIELD, Controller Front
42	0705330Z01	BRACKET, Flex Attach Display
43	0705368Z01	BRACKET, Flex Attach Keypad
44	NCN6128_	KIT, Controller Board (See Note 2)
	or NCN6167_	KIT, Controller Board (See Note 2)
45	NTN8253B	KIT, DES Encryption Board
	or NTN8254B	KIT, DES-XL Encryption Board
	or NTN8255A	KIT, DES-OFB Encryption Board
	or NTN8256B	KIT, DVI-XL Encryption Board
	or NTN8257B	KIT, DVP-XL Encryption Board
	or NTN8258A	KIT, DES-OFB and DES-XL Encryption Board
	or NTN8259A	KIT, DES-OFB and DVP-XL Encryption Board
	or NTN8260B	KIT, DES-XL and DVP-XL Encryption Board
	or NTN8261B	KIT, DVP-XL and DVI-XL Encryption Board
	or NTN8326A	KIT, DES-OFB and DVI-XL Encryption Board
	or NTN8328A	KIT, DVP Encryption Board
	or NTN8329A	KIT, DVI-XL and DVP Encryption Board
	or NTN8330A	KIT, DVP and DES-XL Encryption Board
	or NTN8331A	KIT, DVP and DVP-XL Encryption Board
	or NTN8418A	KIT, DES-OFB and DES Encryption Board
	or PLN7748A	DVI-XL Variant Tag8
	or PLN7750A	Variant Tag6
46	2605344Z01	SHIELD, Vocoder with Insulators
47	2805216Z03	CONNECTOR, Compression, 20-Pin
48	2805214Z03	CONNECTOR, Compression, 50-Pin
49	2605343Z07	SHIELD, 800MHz with Insulator
50	NTN8250_	KIT, Vocoder Board
51	NUF6472_	KIT, 800MHz RF Board
	or NLE4249_	KIT, UHF Range 1 RF Board
	or NLE4250_	KIT, UHF Range 2 RF Board
	or NLD8898_	KIT, VHF RF Board
52	0905585Z02	ASSEMBLY, B+
	or 0905585Z03	ASSEMBLY, B+ (R Models)
53	3205351Z02	SEAL, B+
54	1505348Z01	ASSEMBLY, Casting
	or 1505348Z04	ASSEMBLY, Casting (R Models)
55	3005664Z01	ASSEMBLY, Coaxial Cable
56	7505487Z01	PAD, Coax
57	3205082E96	GASKET, O-Ring Bushing
58	3205349Z03	SEAL, Main
59	NTN8294_	BATTERY, NiCd
	or NTN8298_	BATTERY, NiMH
	or NTN8297_	BATTERY, NiCd (Ruggedized)
60	NTN8266_	KIT, Belt Clip
61	7505922Z01	PAD, Thermal
62	0286165A03	NUT, Spanner
63	3205300V01	SEAL, O-Ring
64	3205472M03	SEAL, Port (No longer used.)
65	3285877B01	SEAL, Port
66	3385873B01	LABEL, Seal

Notes:

- The 1586328A02 and 1586328A04 housing assemblies are **not** backward compatible with the 1505660Z04 housing assembly. The 1586328A01 and 1586328A03 housing assemblies are **not** backward compatible with the 1505660Z03 housing assembly.
- The NCN6167_ Controller Board is **not** backward compatible with the NCN6128_ Controller Board.

Replacement Parts Ordering

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

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

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