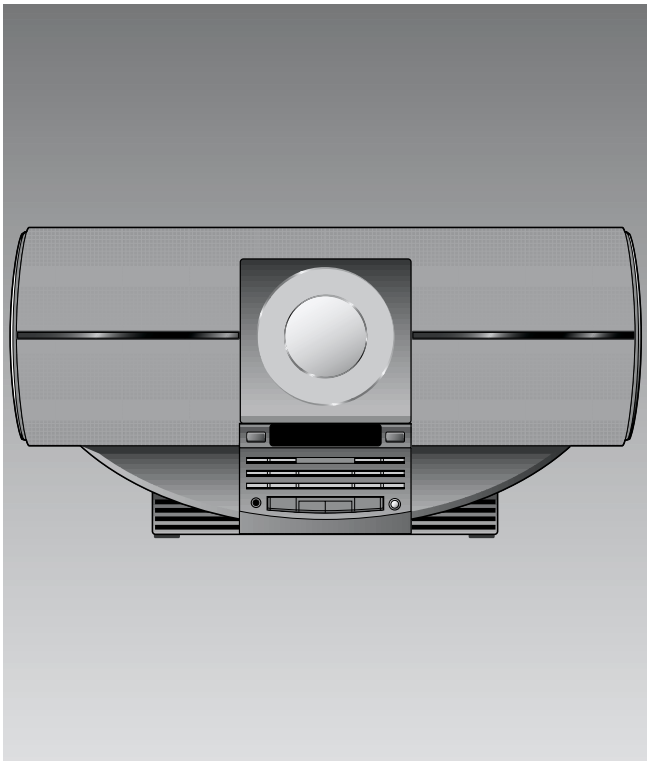
SAMSUNG

INTERIOR COMPONENT SYSTEM

S-2400/2450

SERVICE Manual

INTERIOR COMPONENT SYSTME



CONTENTS

ELECTRONICS

Printed in Korea
Code no. AH68-00036D

2. Disassembly and Reassembly

2-1 Front Cabinet

1. Remove 13 screws of ① of its rear part.(1 screw of Antenna)
2. Remove Front Cabinet to frontward.

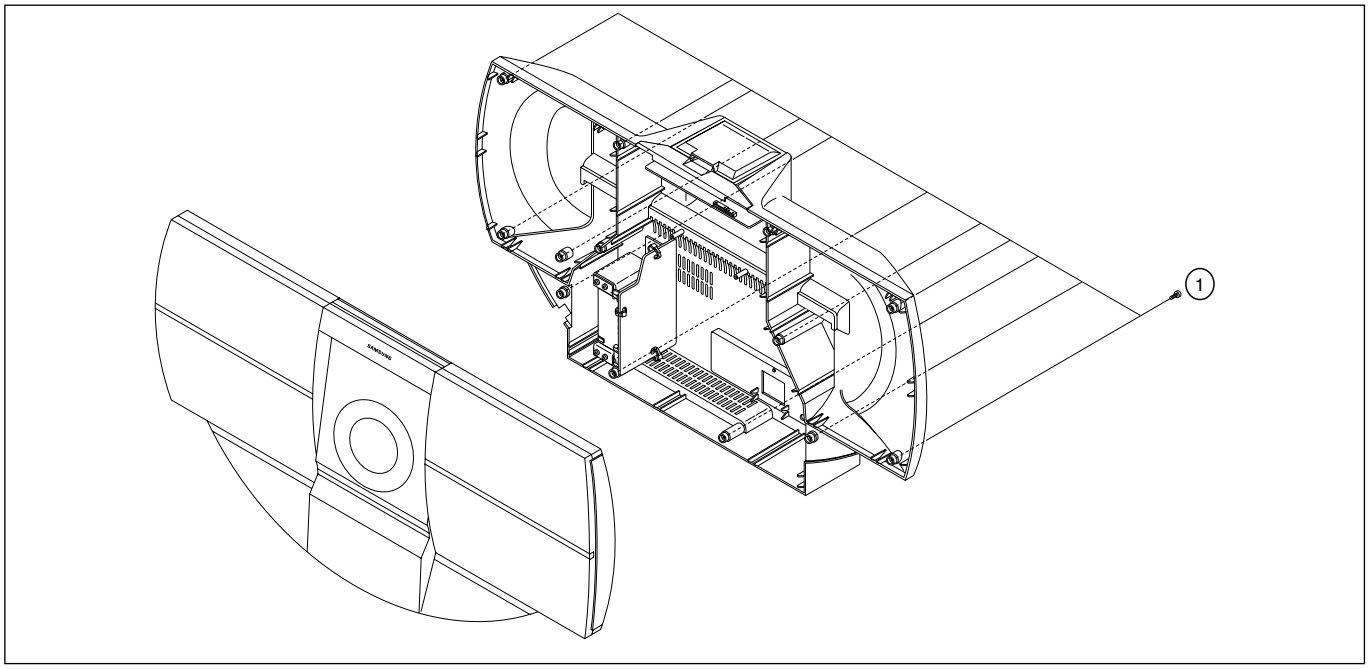


Fig 2-1

2-2 Main-PCB ASS'Y AND CD-MECHA ASS'Y

1. Remove 6 screws of B its rear part
2. Remove the connect wire of C,and remove Main-PCB ASS'Y to backward.
3. Remove 3 screws of A its rear part ,and remove CD-Mecha ASS'Y to backward.

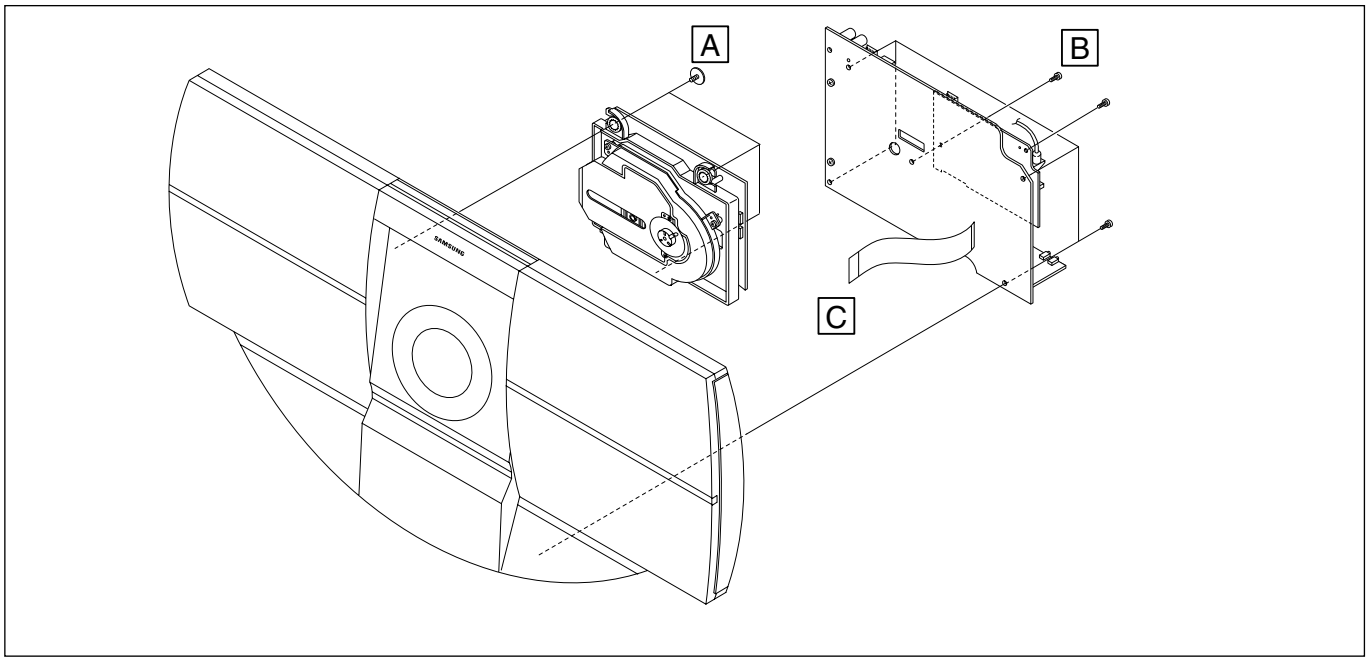


Fig 2-2

2-3 Cabinet-Top ASS'Y

1. Remove 2 screws of ② of its rear part.
2. Pull up Cabinet-Top Ass'y to frontward, and remove it

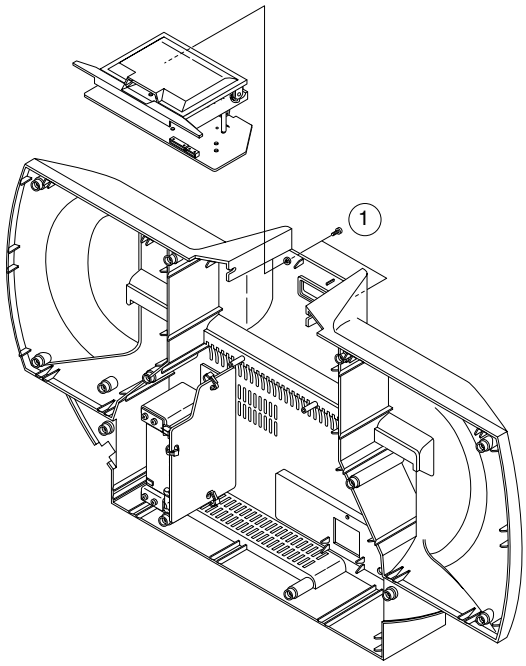


Fig 2-3

2-4 CAP Front ASS'Y

1. Remove Tersey-Frame of C
2. Remove 2 screws of A (Deco-Front).
3. Remove 6 screws of B (Cap-Front).
4. Remove Cap-Front Ass'y to frontward.

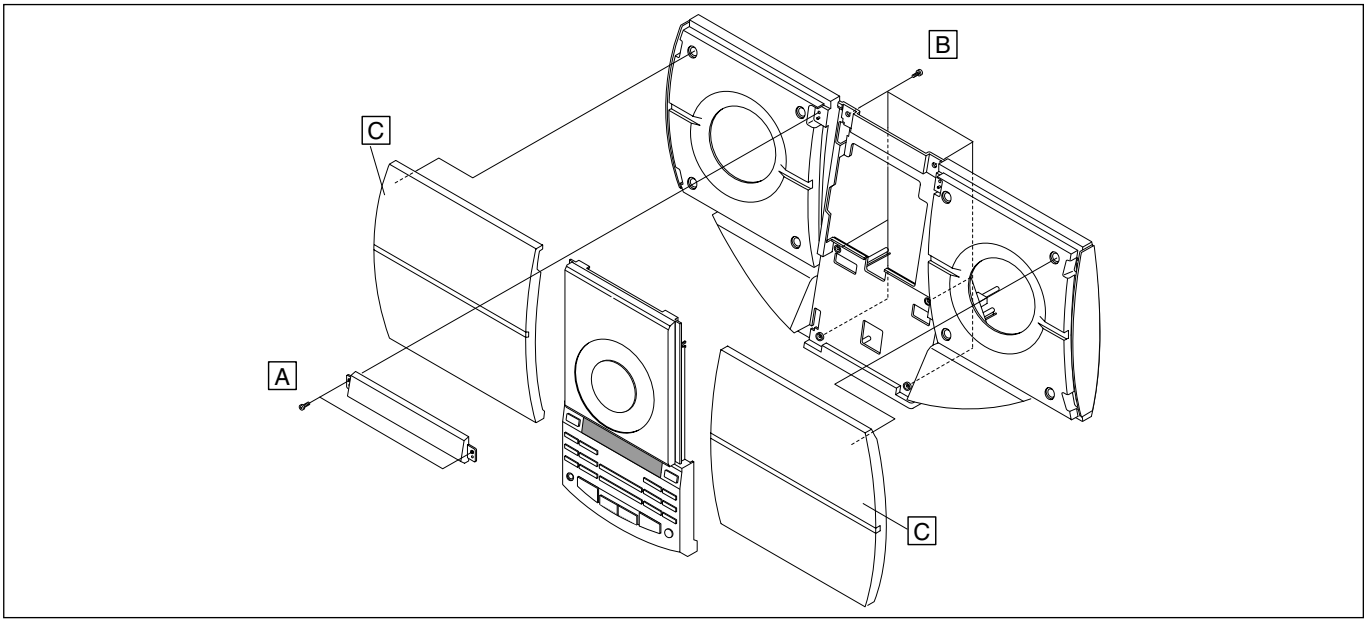
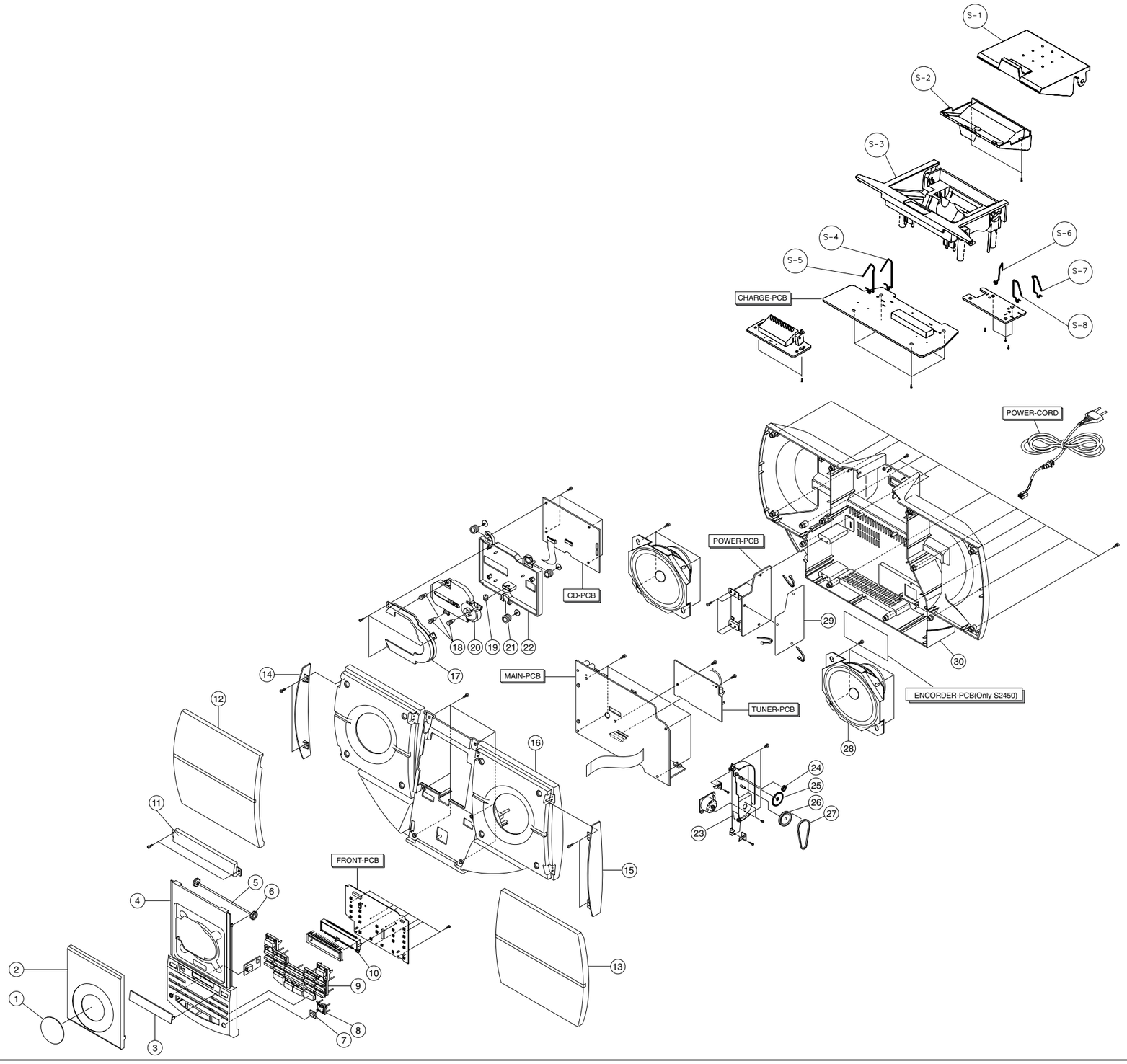


Fig 2-4

3.Exploded Views and Parts List



3-1 Parts list

No.	Code No.	Description	Specification	Remarks
1	AH64-00318A	DECORATION-CD(EXP);-,ABS,-,-,L/GRAY,-,S-2000		
2	AH64-00319A	DOOR—CD;-,PMMA,-,-,-,SMOKE,-,S-2000		
3	AH64-00321A	WINDOW—VFD;-,PMMA,-,-,SMOKE,-,S-2000		
4	AH61-00209H	CAP-FRONT;,MIPS,-,D/GRAY,-,S-2400/EXP		S-2400
4	AH61-00209J	CAP-FRONT;,MIPS,-,D/GRAY,-,S-2450/EXP		S-2450
4	AH61-00209K	CAP-FRONT;,MIPS,-,D/GRAY,-,S-2400/EXP		S-2400(RDS)
4	AH61-00209L	CAP-FRONT;,MIPS,-,D/GRAY,-,S-2450/EXP		S-2450(RDS)
5	AH61-00220A	SHAFT-GEAR;-,MBS PI4.0,-,142,-, ,S-2000		
6	AH66-00062A	GEAR-DOOR;,ABS,-,-,-, ,S-2000		
7	AH67-00026A	LENS—SOUND;-,-,PMMA,-,-,-,S-2000		
8	AH64-00324A	KNOB—SOUND;-,ABS,-,WHT,-,S-2000		
9	AH64-00322A	KNOB—PLAY;-,ABS,-,L/GRAY,-,S-2000		
10	AH61-00214A	HOLDER—VFD;-,ABS,-,BLK,-,S-2000		
11	AH64-00315A	DECORATION-FRONT;-,MIPS,-,-,L/GRAY,,S-2000		
12	AH61-00211A	FRAME-NET,L;-,MIPS,-,-,-,-,-,BLUE,-,S-2000		
13	AH61-00212A	FRAME-NET,R;-,MIPS,-,-,-,-,-,BLUE,-,S-2000		
14	AH64-00313A	DECORATION-SIDE L;-,MIPS,-,-,L/GRAY,-,S-2000		
15	AH64-00314A	DECORATION-SIDE R;-,MIPS,-,-,L/GRAY,-,S-2000		
16	AH64-00307A	CABINET—FRONT;-,MIPS,-,-,-,D/GRAY,-,S-2000		
17	AH61-00210A	CAP-CD;,ABS 94HB,-,BLK,-,S-2000		
18	AH73-00007A	RUBBER—MECHA A;BUTYL,-,S-2000,-		
19	AH73-00008A	RUBBER—MECHA B;SILICONE,-,S-2000,-		
20	AH59-00038A	DECK-CDP;DA23.2.0V,BALL,-,-,-,S-2000,-		
21	AH73-00010A	RUBBER—HOLDER;BUTYLENE,-,S-2000,-		
22	AH61-00213A	HOLDER—CD;-,ABS,-,GRAY,-,S-2000		
23	AH61-00217A	HOLDER—GEAR;-,ABS,-,BLK,-,S-2000		
24	AH66-00061A	GEAR-S;,ABS,-,-,-, ,S-2000		
25	AH66-00060A	GEAR-L;,ABS,-,-,-, ,S-2000		
26	AH66-00059A	GEAR-PULLEY;,ABS,-,-,-, ,S-2000		
27	AH66-00063A	BELT-PULLEY;-,CR,-,-,-,BLK,S-2000		
28	3001-001121	SPEAKER;5W,3.2OHM,82DB,90HZ		
29	AH63-00090A	COVER—PCB;-,PVC 0.5T,-,-,CLR,-,-,S-2000		
30	AH64-00308A	CABINET—BACK;-,MIPS,-,-,-,D/GRAY,-,S-2000		
S-1	AH64-00717A	DOOR—MP3;-,ABS L/GRAY,-,-,-,SILVER,-,S2		
S-2	AH61-00430A	CAP-DOOR-;-,ABS,-,GRAY,MP3,S2450		
S-3	AH64-00716A	CABINET TOP;-,ABS,-,-,-,D/GRY,-,S2400		
S-4	AH61-00432B	SPRING—BATTERY(+);-,SUS 304 WPB,-,-,PI 0.6,-,-,-		
S-5	AH61-00432A	SPRING—BATTERY(-);-,SUS 304 WPB,-,-,PI 0.6,-,-,-		
S-6	AH61-00433A	SPRING—BATTERY(G);-,SUS 304 WPB,-,-,PI 0.6,-,-,-		
S-7	AH61-00431A	SPRING—BATTERY(+);-,SUS 304 WPB,-,-,PI 07,-,-,-,		
S-8	AH61-00431B	SPRING-BATTERYS(+);SUS304,UPB,PI 0.7,NICO		

4. Electrical Parts List

Location no.	Code no.	Description	Specifiation	Remarks
	****** S-2400/2450 Parts List ******			
	AH26-00077A	TRANS-POWER	66*30 115/230V 50/60HZ	ONLY S2450
	AH26-000327A	TRANS-POWER	66*30 115/230V 50/60HZ	ONLY S2400
	AH38-10001A	FM-WIRE	1007#22,1500MM	
	AH39-00178A	ECP CABLE	51002S-18G2+7300P-25G2+1200MM	
	AH39-10002Y	POWER-CORD	CP2,KLCE-2F,2.15M,5239,VDE	
	AH42-20001P	LOOP-ANT	TT,1000MM,18.5UH	
	AH46-20001W	DISC	120MM,-,-,S2400/2450-EXP (ENG)	
	AH59-00042D	REMOCON-ASSY	AR4022,S-2450	
	AH92-00226A ASSY-PCB-TUNER(MW/LW)			**OPTION**
HIC1	AH14-10007G	IC	LC72131D,DIP,STICK PLL	
TIC1	AH14-10008B	IC	LA1837	
TLPF1	AH26-00005A	TRANS-IF	LKS75E00-X000264-2,LOW PASS	
TLPF2	AH26-00005A	TRANS-IF	LKS75E00-X000264-2,LOW PASS	
TL2	AH26-10001E	TRANS-IF	KS940228-09,-,-,7.6X12.0,-,450	
TL3	AH26-10020A	TRANS-DET	-,7KLL,DET,-,7.8 ,91 F,1	
LW ANT	AH27-00007A	COIL-OSC	LKS7FB00-X000002-0,LW,OSC	
MW ANT	AH27-00008A	COIL-OSC	LKS75E00-X000280-0,-,MW,OSC	
LW OSC	AH27-00011A	COIL-OSC	LKS75E00-X0002276-0,LW,ANT	
MW OSC	AH27-00012A	COIL-OSC	LKS75E00-X000279-0,365UH,MWANT	
	AH39-00117A	CABLE-COAXIAL ASSY	-,RCA,170MM,1365#30	
FM PACK	AH40-10025S	TUNER PACK	ST-F404VA-3	
VVC1	0405-000137	DIODE-VARACTOR	KV-1260,20V,100NA,TO-92S	
TFL4	14529-304-6	10CERAMIC-FILTER	AHCM2-450BL	
TX1	2801-000734	CRYSTAL-UNIT	7.2MHz,50ppm,28-AAM,12pF,30ohm	
TFL2	2903-000105	FILTER-CERAMIC	10.7MS3G/BP,10.7MHZ+-25KHZ,180	
TFL1	2903-000119	FILTER-CERAMIC	SFE10.7MJA-10-A	
TFL2	2903-000119	FILTER-CERAMIC	SFE10.7MJA-10-A	
TCON1	3710-000209	CONNECTOR-SOCKET	5P,1R,2mm,STRAIGHT,52084-0510	
TCON2	3710-000248	CONNECTOR-SOCKET	52084-09P	
TCON3	3711-000827	CONNECTOR-HEADER	BOX,2P,1R,2mm,STRAIGHT,SN	
TJ1	3722-000372	JACK-RCA	2P/1C,3.5mm,#16~22,SN	
RX1	2801-003601	CRYSTAL-UNIT	4.332MHZ,30PPM,28-AAM,30PF,150	
RIC1	AH14-10008E	IC	BU1923F,SOP,+5V	
RZD1	0403-000393	DIODE-ZENER	UZP5.1B,5.1V,4.8-5.4V,1W,DO	
RR1	2001-000118	R-CARBON(S)	180ohm,5%,1/2W,AA,TP,2.4x6.4mm	
RR3	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
RR4	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
RR5	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
RR2	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
RC9	2202-000796	C-CERAMIC,MLC-AXIAL	1nF,10%,50V,Y5P,3.5x19mm,-,TP	
RC2	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
RC7	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
RC8	2203-001058	C-CERAMIC,CHIP	560pF,5%,50V,NPO,2012,-,TP	
RC4	2203-001524	C-CERAMIC,CHIP	47pF,5%,50V,NPO,2012,-,TP	
RC5	2203-001524	C-CERAMIC,CHIP	47pF,5%,50V,NPO,2012,-,TP	
RC1	2401-000907	C-AL	22uF,20%,16V,GP,5*11,5MM,TP	
RC6	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
TD5	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
TD6	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
TZD1	0403-000367	DIODE-ZENER	UZ7.5BSC,7.5V,7.33-7.64	
TZD2	0403-000393	DIODE-ZENER	UZP5.1B,5.1V,4.8-5.4V,1W,DO	
TQ4	0501-000294	TR-SMALL SIGNAL	KSA708-YTA,PNP,-80V,-60V,	
TQ2	0501-000392	TR-SMALL SIGNAL	KSC838-OTA,35V,30V,30mA,250	
TQ3	0501-000392	TR-SMALL SIGNAL	KSC838-OTA,35V,30V,30mA,250	
TQ1	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
TQ5	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
TQ6	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
TQ7	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
TR30	2001-000117	R-CARBON(S)	68ohm,5%,1/2W,AA,TP,2.4x6.4mm	
TR44	2001-000118	R-CARBON(S)	180ohm,5%,1/2W,AA,TP,2.4x6.4mm	
TR58	2001-000273	R-CARBON	100Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR5	2001-000281	R-CARBON	100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR39	2001-000290	R-CARBON	10Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR57	2001-000290	R-CARBON	10Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR1	2001-000331	R-CARBON	12Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR55	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR18	2001-000449	R-CARBON	2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR3	2001-000449	R-CARBON	2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR13	2001-000515	R-CARBON	220ohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR40	2001-000522	R-CARBON	22Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR41	2001-000522	R-CARBON	22Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR16	2001-000527	R-CARBON	22ohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR32	2001-000591	R-CARBON	3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR34	2001-000591	R-CARBON	3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR61	2001-000591	R-CARBON	3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR62	2001-000591	R-CARBON	3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR63	2001-000702	R-CARBON	39Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR64	2001-000702	R-CARBON	39Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
TR42	2001-000734	R-CARBON	4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR63	2001-000890	R-CARBON	6.8Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR64	2001-000890	R-CARBON	6.8Kohm,5%,1/8W,AA,TP,1.8x3.2m	
TR1A	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
TR6	2007-000030	R-CHIP	560ohm,5%,1/10W,DA,TP,2012	
TJW41	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
TJW42	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
TR45	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
TR47	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
TR49	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
TR9	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
TR24	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
TR43	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
TR2	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
TR21	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
TR22	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
TR53	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
TR54	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
TR56	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
TR10	2007-000308	R-CHIP	10ohm,5%,1/10W,DA,TP,2012	
TR20	2007-000409	R-CHIP	15Kohm,5%,1/10W,DA,TP,2012	
TR28	2007-000457	R-CHIP	18Kohm,5%,1/10W,DA,TP,2012	
RT48	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
TR46	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
TR50	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
TR52	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
TR9	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
TR35	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
TR36	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
TR40	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
TR7	2007-000518	R-CHIP	2.7Kohm,5%,1/10W,DA,TP,2012	
TR11	2007-000572	R-CHIP	220ohm,5%,1/10W,DA,TP,2012	
TR15	2007-000586	R-CHIP	22Kohm,5%,1/10W,DA,TP,2012	
TR37	2007-000586	R-CHIP	22Kohm,5%,1/10W,DA,TP,2012	
TR12	2007-000686	R-CHIP	3.3Kohm,5%,1/10W,DA,TP,2012	
TR29	2007-000686	R-CHIP	3.3Kohm,5%,1/10W,DA,TP,2012	
TR23	2007-000710	R-CHIP	3.9Kohm,5%,1/10W,DA,TP,2012	
TR8	2007-000822	R-CHIP	390ohm,5%,1/10W,DA,TP,2012	
TR4	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
TR51	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
TR17	2007-000981	R-CHIP	5.6Kohm,5%,1/10W,DA,TP,2012	
TR25	2007-001043	R-CHIP	56ohm,5%,1/10W,DA,TP,2012	
TR27	2007-001071	R-CHIP	6.8Kohm,5%,1/10W,DA,TP,2012	
TR38	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
TR44	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
TSR1	2103-000290	VR-SEMI	20Kohm,30%,1/10W,TOP	
TC39	2201-000565	C-CERAMIC,DISC	47nF,+80% -20% 50V Y5V 12.5*4.	
TC40	2202-000796	C-CERAMIC,MLC-AXIAL	1nF,10%,50V,Y5P,3.5x19mm,-,TP	
TC42	2202-000796	C-CERAMIC,MLC-AXIAL	1nF,10%,50V,Y5P,3.5x19mm,-,TP	
TC41	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
TC20	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
TC28	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
TC29	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
TC3	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
TC44	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
TC7	2203-000429	C-CERAMIC,CHIP	18pF,5%,50V,NPO,2012,-,TP	
TC1	2203-000609	C-CERAMIC,CHIP	22nF,10%,50V,X7R,2012,-,TP	
TC5	2203-000609	C-CERAMIC,CHIP	22nF,10%,50V,X7R,2012,-,TP	
TC65	2203-000609	C-CERAMIC,CHIP	22nF,10%,50V,X7R,2012,-,TP	
TC33	2203-000844	C-CERAMIC,CHIP	39nF,10%,50V,X7R,2012,-,TP	
TC10	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
TC13	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
TC14	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
TC15	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
TC35	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
TC45	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
TC6	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
TC61	2203-001105	C-CERAMIC,CHIP	6.8nF,10%,50V,X7R,2012,-,TP	
TC62	2203-001105	C-CERAMIC,CHIP	6.8nF,10%,50V,X7R,2012,-,TP	
TC32	2203-001132	C-CERAMIC,CHIP	680pF,5%,50V,NPO,2012,-,TP	
TC2	2203-001517	C-CERAMIC,CHIP	15PF,5%,50V,NPO,2012	
TC50	2203-001517	C-CERAMIC,CHIP	15PF,5%,50V,NPO,2012	
TC63	2203-001551	C-CERAMIC,CHIP	1.5nF,10%,50V,X7R,2012,-,TP	
TC64	2203-001551	C-CERAMIC,CHIP	1.5nF,10%,50V,X7R,2012,-,TP	
TC51	2203-001619	C-CERAMIC,CHIP	27pF,5%,50V,NPO,2012,-,TP	
TC21	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
TC46	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
TC12	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
TC26	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
TC27	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
TC30	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
TC34	2401-000907	C-AL	22uF,20%,16V,GP,5*11,5MM,TP	
TC36	2401-001019	C-AL	3.3uF,20%,50V,GP,4*7,5MM,TP	
TC18	2401-001022	C-AL	3.3UF,20%,50V,SME,5*11,5MM,TP	
TC38	2401-001164	C-AL	33uF,20%,16V,GP,5*11,5mm,TP	
TC47	2401-001895	C-AL	100uF,20%,16V,GP,6.3*11,5MM,TP	
TC11	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
TC17	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
TC19	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
TC16	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
TC23	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
TC25	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
TC43	2401-001968	C-AL	470nF,20%,50V,GP,5*11,5mm,TP	
TC4	2401-001975	C-AL	47uF,20%,16V,GP,5*11,5mm,TP	
TC9	2401-001975	C-AL	47uF,20%,16V,GP,5*11,5mm,TP	

Location no.	Code no.	Description	Specifiation	Remarks
	AH92-00228A	**TUNER PCB ASSY(SW1/SW2)**		**OPTION**
VVC1	0405-000137	DIODE-VARACTOR;KV-1260,20V,100NA,T0-92S		
VVC2	0405-000137	DIODE-VARACTOR;KV-1260,20V,100NA,T0-92S		
VVC3	0405-000137	DIODE-VARACTOR;KV-1260,20V,100NA,T0-92S		
TFL4	14529-304-610	FILTER CERAMIC;AHCM2-450BL		
TX1	2801-000734	CRYSTAL-UNIT;7.2MHZ,50PPM,28-AAM,12PF,30OHM		
TFL2	2903-000105	FILTER-CERAMIC;BP,10.7MHZ+-25KHZ,180KHZ+-50KH		
TFL1	2903-000119	FILTER-CERAMIC;SFE10.7MJA-10-A		
TCON1	3710-000209	CONNECTOR-SOCKET;5P,1R,2mm,STRAIGHT,SN		
TCON2	3710-000248	CONNECTOR-SOCKET;9P,1R,2mm,STRAIGHT,SN		
TCON3	3711-000820	CONNECTOR-HEADER;BOX,2P,1R,2.5mm,STRAIGHT,SN		
TJ1	3722-000372	JACK-RCA;2P/1C,3.5MM,SN,BLK,#16~22		
HIC1	AH14-10007G	IC;LC72131,DIP,STICK PLL		
TIC1	AH14-10008B	IC;LA1837,DIP,RF+MPX		
TLPF1	AH26-00005A	TRANS-IF;-,LKS75M00-X000264-0,LOW PASS FILTER,		
TLPF2	AH26-00005A	TRANS-IF;-,LKS75M00-X000264-0,LOW PASS FILTER,		
TL2	AH26-10001E	TRANS-IF;KS940228-09,-,-,7.6X12.0,-,450KHZ,BUL		
TL3	AH26-10020A	TRANS-DET;-,7KLL,DET,-,7.8MM,91PF,11.32M		
SW2 ANT	AH27-00004A	COIL-OSC;LKS75M00-X000271-0,0.58UH,SW2 OSC		
SW1 ANT	AH27-00005A	COIL-OSC;LKS75M00-X000269-0,-,SW OSC		
MW ANT	AH27-00008A	COIL-OSC;LKS75M00-0060LMO-0,-,MW OSC		
SW2 OSC	AH27-00009A	COIL-OSC;LKS75M00-00203SA-0,1.4UH,SW2 ANT		
SW1 OSC	AH27-00010A	COIL-OSC;LKS75M00-X000270-0,10UH,SW1 ANT		
MW OSC	AH27-00013A	COIL-OSC;LKS75M00-0060LMA-0,350UH,MW ANT		
FM-IF	AH39-00117A	CABLE-COAXIAL ASSY;-,RCA,170MM,1365#30		
FM PACK	AH40-10025N	TUNER-FM;KST-401VA,4G,75ohm		
TP3	AH61-40022A	STUD-TAP;SPC1,T0.5,BT2,-,-,		
TL1	AH65-30010A	CLAMP-WIRE;DALB-2,-,-,-,		
TL2	AH65-30010A	CLAMP-WIRE;DALB-2,-,-,-,		
TL3	AH65-30010A	CLAMP-WIRE;DALB-2,-,-,-,		
SD3	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,TP		
SD5	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,TP		
TD5	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,TP		
TD6	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,TP		
TZD1	0403-000367	DIODE-ZENER;UZ7.5BSC,7.5V,7.33-7.64V,500mW		
TZD2	0403-000393	DIODE-ZENER;UZP5.1B,5.1V,4.8-5.4V,1W,DO-41		
SQ3	0501-000010	TR-SMALL SIGNAL;KSC1008,NPN,800mW,TO-92,TP,120		
SQ4	0501-000010	TR-SMALL SIGNAL;KSC1008,NPN,800mW,TO-92,TP,120		
SQ7	0501-000010	TR-SMALL SIGNAL;KSC1008,NPN,800mW,TO-92,TP,120		
TQ4	0501-000294	TR-SMALL SIGNAL;KSA708-Y,PNP,800mW,TO-92,TP,12		
TQ2	0501-000392	TR-SMALL SIGNAL;KSC838-O,NPN,250mW,TO-92,-,70-		
TQ3	0501-000392	TR-SMALL SIGNAL;KSC838-O,NPN,250mW,TO-92,-,70-		
SQ1	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,TP,120-		
SQ2	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,TP,120-		
SQ5	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,TP,120-		
SQ6	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,TP,120-		
TQ1	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,TP,120-		
SQ10	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-92,TP		
SQ11	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-92,TP		
SQ8	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-92,TP		
SQ9	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-92,TP		
TR30	2001-000117	R-CARBON(S);68OHM,5%,1/2W,AA,TP,2.4X6.4MM		
TR44	2001-000118	R-CARBON(S);180ohm,5%,1/2W,AA,TP,2.4x6.4mm		
TR58	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR43	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR5	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		
SR3	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR46	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR48	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR50	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR52	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR55	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR3	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR32	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR34	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR61	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR62	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR16	2001-000527	R-CARBON;22OHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR32	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR34	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR61	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR62	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
SR2	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR4	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR42	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR63	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TR64	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM		
TJW41	2007-000033	R-CHIP;0OHM,5%,1/8W,DA,TP,3216		
TJW42	2007-000033	R-CHIP;0OHM,5%,1/8W,DA,TP,3216		
TJW43	2007-000033	R-CHIP;0OHM,5%,1/8W,DA,TP,3216		
TJW46	2007-000033	R-CHIP;0OHM,5%,1/8W,DA,TP,3216		
TJW47	2007-000033	R-CHIP;0OHM,5%,1/8W,DA,TP,3216		
TJW48	2007-000033	R-CHIP;0OHM,5%,1/8W,DA,TP,3216		
TR24	2007-000033	R-CHIP;0OHM,5%,1/8W,DA,TP,3216		
SR12	2007-000282	R-CHIP;100KOHM,5%,1/10W,DA,TP,2012		
SR6	2007-000282	R-CHIP;100KOHM,5%,1/10W,DA,TP,2012		
SR9	2007-000282	R-CHIP;100KOHM,5%,1/10W,DA,TP,2012		
TR45	2007-000282	R-CHIP;100KOHM,5%,1/10W,DA,TP,2012		
TR47	2007-000282	R-CHIP;100KOHM,5%,1/10W,DA,TP,2012		
TR49	2007-000282	R-CHIP;100KOHM,5%,1/10W,DA,TP,2012		
SR10	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
SR13	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
SR14	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
SR4	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		

Location no.	Code no.	Description	Specifiation	Remarks
SR5	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
SR7	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
SR8	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
TR21	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
TR22	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
TR38	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
TR54	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012		
TR10	2007-000308	R-CHIP;10OHM,5%,1/10W,DA,TP,2012		
TR20	2007-000409	R-CHIP;15KOHM,5%,1/10W,DA,TP,2012		
TR28	2007-000457	R-CHIP;18KOHM,5%,1/10W,DA,TP,2012		
TR9	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012		
TR35	2007-000493	R-CHIP;2.2KOHM,5%,1/10W,DA,TP,2012		
TR36	2007-000493	R-CHIP;2.2KOHM,5%,1/10W,DA,TP,2012		
TR40	2007-000493	R-CHIP;2.2KOHM,5%,1/10W,DA,TP,2012		
TR7	2007-000518	R-CHIP;2.7KOHM,5%,1/10W,DA,TP,2012		
TR11	2007-000572	R-CHIP;220OHM,5%,1/10W,DA,TP,2012		
TR15	2007-000586	R-CHIP;22KOHM,5%,1/10W,DA,TP,2012		
TR37	2007-000586	R-CHIP;22KOHM,5%,1/10W,DA,TP,2012		
TR12	2007-000686	R-CHIP;3.3KOHM,5%,1/10W,DA,TP,2012		
TR29	2007-000686	R-CHIP;3.3KOHM,5%,1/10W,DA,TP,2012		
SR16	2007-000710	R-CHIP;3.9KOHM,5%,1/10W,DA,TP,2012		
SR40	2007-000710	R-CHIP;3.9KOHM,5%,1/10W,DA,TP,2012		
TE23	2007-000710	R-CHIP;3.9KOHM,5%,1/10W,DA,TP,2012		
TR8	2007-000822	R-CHIP;390OHM,5%,1/10W,DA,TP,2012		
SR11	2007-000872	R-CHIP;4.7KOHM,5%,1/10W,DA,TP,2012		
SR15	2007-000872	R-CHIP;4.7KOHM,5%,1/10W,DA,TP,2012		
SR17	2007-000872	R-CHIP;4.7KOHM,5%,1/10W,DA,TP,2012		
SR19	2007-000872	R-CHIP;4.7KOHM,5%,1/10W,DA,TP,2012		
TR51	2007-000872	R-CHIP;4.7KOHM,5%,1/10W,DA,TP,2012		
SR18	2007-000981	R-CHIP;5.6KOHM,5%,1/10W,DA,TP,2012		
TR17	2007-000981	R-CHIP;5.6KOHM,5%,1/10W,DA,TP,2012		
TR6	2007-001033	R-CHIP;560OHM,5%,1/8W,DA,TP,3216		
TR25	2007-001043	R-CHIP;56OHM,5%,1/10W,DA,TP,2012		
TR27	2007-001071	R-CHIP;6.8KOHM,5%,1/10W,DA,TP,2012		
TR41	2007-001177	R-CHIP;8.2KOHM,5%,1/10W,DA,TP,2012		
TSR1	2103-000290	VR-SEMI;20Kohm,30%,1/10W,TOP		
TC39	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0mm,5mm		
TC40	2202-000796	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,3.5x19,		
TC42	2202-000796	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,3.5x19,		
SC8	2202-000806	C-CERAMIC,MLC-AXIAL;220pF,10%,50V,Y5P,TP,3.5x1		
TC41	2203-000239	C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,2012		
TC28	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012		
TC29	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012		
TC3	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012		
TC44	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012		
SC7	2203-000429	C-CERAMIC,CHIP;0.018nF,5%,50V,NP0,TP,2012		
TC1	2203-000609	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,2012		
TC5	2203-000609	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,2012		
TC33	2203-000844	C-CERAMIC,CHIP;39nF,10%,50V,X7R,TP,2012,-		
SC2	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
SC4	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
SC6	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
TC10	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
TC13	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
TC14	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
TC15	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
TC35	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
TC45	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012		
TC61	2203-001105	C-CERAMIC,CHIP;6.8nF,10%,50V,X7R,TP,2012		
TC62	2203-001105	C-CERAMIC,CHIP;6.8nF,10%,50V,X7R,TP,2012		
TC32	2203-001132	C-CERAMIC,CHIP;0.68nF,5%,50V,NP0,TP,2012		
TC2	2203-001517	C-CERAMIC,CHIP;0.015nF,5%,50V,NP0,TP,2012		
TC50	2203-001517	C-CERAMIC,CHIP;0.015nF,5%,50V,NP0,TP,2012		
TC63	2203-001551	C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,2012		
TC64	2203-001551	C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,2012		
TC51	2203-001619	C-CERAMIC,CHIP;0.027nF,5%,50V,NP0,TP,2012		
TC21	2401-000240	C-AL;100uF,20%,10V,GP,TP,5x11,5		
TC46	2401-000240	C-AL;100uF,20%,10V,GP,TP,5x11,5		
TC12	2401-000419	C-AL;10UF,20%,16V,GP,-,4X7,5		
TC26	2401-000419	C-AL;10UF,20%,16V,GP,-,4X7,5		
TC27	2401-000419	C-AL;10UF,20%,16V,GP,-,4X7,5		
TC30	2401-000419	C-AL;10UF,20%,16V,GP,-,4X7,5		
TC34	2401-000907	C-AL;22UF,20%,16V,GP,-,5X11,2MM		
TC36	2401-001019	C-AL;3.3UF,20%,50V,GP,-,5X7,1.5MM		
TC38	2401-001164	C-AL;33UF,20%,16V,GP,-,5X11,2MM		
TC47	2401-001895	C-AL;100uF,20%,16V,GP,6.3x11mm,2.5m		
TC11	2401-001912	C-AL;1uF,20%,50V,GP,5x11mm,2mm,BK		
TC17	2401-001912	C-AL;1uF,20%,50V,GP,5x11mm,2mm,BK		
TC19	2401-001912	C-AL;1uF,20%,50V,GP,5x11mm,2mm,BK		
TC16	2401-001952	C-AL;4.7UF,20%,50V,-,TP,6.3X7,5		
TC23	2401-001952	C-AL;4.7UF,20%,50V,-,TP,6.3X7,5		
TC25	2401-001952	C-AL;4.7UF,20%,50V,-,TP,6.3X7,5		
TC18	2401-001968	C-AL;470NF,20%,50V,GP,TP,5X11MM,5		
TC43	2401-001968	C-AL;470NF,20%,50V,GP,TP,5X11MM,5		
TC4	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5		
TC9	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5		
	AH92-00232A	**ASSY-PCB-JACK(DIGITAL-OUT)**		**OPTION**
OIC1	AH14-10004R	IC	M74HCU04,SOP,TAPE,14P	
	AH39-00023A	LEAD CONNECTOR-ASS	51004-03,51004-03	
OJ1	0603-001051	POTIC TRANSMITTER	TX178A	
OC2	2201-000381	C-CERAMIC,DISC	22nF,+80%,-20% 50V Y5V 8.0*4.0	
OC3	2201-000483	C-CERAMIC,DISC	33pF,5%,50V,NPO,5x3.5mm,5mm,TP	

Location no.	Code no.	Description & Specifiation		Remarks
OC1	2401-001895	C-AL	100uF,20%,16V,GP,6.3*11,5MM,TP	
OF1	2901-001139	FILTER-EMI ON BOARD	50V,.5A,-,390PF,7*2	
	3711-000906	CONNECTOR-HEADER	BOX,3P,1R,2mm,ANGLE,SN	
OCW1	3711-000907	CONNECTOR-HEADER	BOX,3P,1R,2mm,STRAIGHT,SN	
	AH92-00232D	**ASSY-MAIN-PCB-OPTION CE OPTION,S2400/S2450NO A/S**		
FREE	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
HBD1	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	
UR21	3811-000389	WIRE-NO SHEATH CU	SPCW,300V,52.4mm,1/0.5mm,-,-	
	AH92-00573A	**ASSY PCB**	**S2450,ENCODER-PCB**	**ONLY S2450**
PZD1	0403-000746	DIODE-ZENER	RLZ3.9B,3.89-4.16,400MW	
PQ1	0501-000528	TR-SMALL SIGNAL	KSC2982B,NPN,500mW,SOT-89,TP,2	
LIC1	1201-001579	IC-OP AMP	4510,SOP,8P,173MIL,DUAL,90dB,P	
RIC1	1201-001579	IC-OP AMP	4510,SOP,8P,173MIL,DUAL,90dB,P	
ALR0	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ARR0	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ALR6	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
ARR6	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR1	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR2	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR3	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR4	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR5	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR6	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR7	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR8	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
VR9	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
DR29	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
ALR7	2007-000774	R-CHIP	33Kohm,5%,1/10W,DA,TP,2012	
ARR7	2007-000774	R-CHIP	33Kohm,5%,1/10W,DA,TP,2012	
DR14	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR15	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR16	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR17	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR18	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR19	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR20	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR21	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR22	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR23	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR24	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR25	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR26	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR27	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
DR28	2007-000781	R-CHIP	33 OHM 5%,1/10W,DA,TP,2012	
ALR4	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
ALR5	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
ARR4	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
ARR5	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
PR1	2007-001043	R-CHIP	56ohm,5%,1/10W,DA,TP,2012	
ALR1	2007-001056	R-CHIP	6.2KOHM,5%,1/16W,DA,TP,1608	
ALR2	2007-001056	R-CHIP	6.2KOHM,5%,1/16W,DA,TP,1608	
ALR3	2007-001056	R-CHIP	6.2KOHM,5%,1/16W,DA,TP,1608	
ARR1	2007-001056	R-CHIP	6.2KOHM,5%,1/16W,DA,TP,1608	
ARR2	2007-001056	R-CHIP	6.2KOHM,5%,1/16W,DA,TP,1608	
ARR3	2007-001056	R-CHIP	6.2KOHM,5%,1/16W,DA,TP,1608	
ALC3	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
ALC4	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
ARC3	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
ARC4	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
BC21	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
BC22	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
DC1-5	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
PC2	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
PC4	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
PC7	2203-000199	C-CERAMIC,CHIP	100NF,+80-20%,50V,Y5V,2012	
ALC5	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
ARC5	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
ALC1	2203-000595	C-CERAMIC,CHIP	220PF,5%,50V,NPO,TP,2012	
ALC2	2203-000595	C-CERAMIC,CHIP	220PF,5%,50V,NPO,TP,2012	
ARC1	2203-000595	C-CERAMIC,CHIP	220PF,5%,50V,NPO,TP,2012	
ARC2	2203-000595	C-CERAMIC,CHIP	220PF,5%,50V,NPO,TP,2012	
DC6-13	2203-001524	C-CERAMIC,CHIP	47pF,5%,50V,NPO,2012,-,TP	
BCE1	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
BCE2	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
PC1	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
PC3	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
PC5	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
PC6	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
ALC0	2401-001465	C-AL	47uF,20%,10V,GP,5*11,5mm,TP	
ALC7	2401-001465	C-AL	47uF,20%,10V,GP,5*11,5mm,TP	
ARC0	2401-001465	C-AL	47uF,20%,10V,GP,5*11,5mm,TP	
ARC7	2401-001465	C-AL	47uF,20%,10V,GP,5*11,5mm,TP	
PL1	2703-000125	INDUCTIOR-SMD	10UH,10%,1.25*2.0*1.25MM	
VL1	3301-000325	CORE-FERRITE BEAD	AB,3.2x2.5x1.3mm,-,-	
VL2	3301-000325	CORE-FERRITE BEAD	AB,3.2x2.5x1.3mm,-,-	
BL1	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	
BL2	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	
BL3	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	

Location no.	Code no.	Description & Specifiation		Remarks
	AH94-00254A	**ASS'Y-ENCODER**		**ONLY S2450**
	AH92-00572A	ASSY-ENCODE ; PACK	YMP-2001	
CN2	3711-000906	CONNECTOR-HEADER	BOX,3P,1R,2mm,ANGLE,SN	
CN1	3711-003080	CONNECTOR-HEADER	NOWALL,28P,1R,1.25 53434-2811	
	AH92-00223A	**ASSY-PCB-MOTOR ; S-2000,MOTOR BOARDNO A/S**		
MOTOR	AH31-10021A	MOTOR-DC	RF-500TB,9VDC/130mA,	
	AH66-10025A	PULLEY-MOTOR	-,POM,-,CMS-100	
CCON2	3711-000826	CONNECTOR-HEADER	BOX,2P,1R,2MM,ANGLE,SN	
CCON3	3711-000826	CONNECTOR-HEADER	BOX,2P,1R,2MM,ANGLE,SN	
CC0N1	3711-000988	CONNECTOR-HEADER	53015-0510 WHT	
	AH92-00594A	**ASSY-PCB-MAIN ; S2450,W/ENCODER**		
AD13	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
AD10	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD11	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD12	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD18	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD20	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD21	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD22	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD23	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
AD25	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
ED1	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	ONLY S2450
ED2	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	ONLY S2450
ED3	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	ONLY S2450
ED4	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	ONLY S2450
AZD1	0403-000379	DIODE-ZENER	UZP12B,12V,11.4-12.6V,1W,DO	
AZD2	0403-000379	DIODE-ZENER	UZP12B,12V,11.4-12.6V,1W,DO	
AZD6	0403-000379	DIODE-ZENER	UZP12B,12V,11.4-12.6V,1W,DO	
AZD4	0403-000380	DIODE-ZENER	UZP13B,13V,12.4-14.1V,1W,DO	
AZD3	0403-000393	DIODE-ZENER	UZP5.1B,5.1V,4.8-5.4V,1W,DO	
AZD5	0403-001010	DIODE-ZENER	UZP5.6B,5.6V,5.2-6.0V,1W,DO	
EZD1	0403-001010	DIODE-ZENER	UZP5.6B,5.6V,5.2-6.0V,1W,DO	ONLY S2450
JQ1	0501-000303	TR-SMALL SIGNAL	KSA733YTA,PNP,-60V,-50V,-150mA	
JQ2	0501-000303	TR-SMALL SIGNAL	KSA733YTA,PNP,-60V,-50V,-150mA	
JQ3	0501-000303	TR-SMALL SIGNAL	KSA733YTA,PNP,-60V,-50V,-150mA	
AQ12	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
AQ4	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
EQ3	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	ONLY S2450
AQ7	0501-000407	TR-SMALL SIGNAL	KSD471-YTA,40V,30V,1A,800m TP	
AQ8	0501-000407	TR-SMALL SIGNAL	KSD471-YTA,40V,30V,1A,800m TP	
AQ11	0501-000610	TR-SMALL SIGNAL	KSA928A,PNP,-30V,-30V,-2A,1W	
AQ5	0501-000610	TR-SMALL SIGNAL	KSA928A,PNP,-30V,-30V,-2A,1W	
AQ10	0504-000121	TR-DIGITAL	KSR1007TA/108M,300MW,22K-47K	
AQ6	0504-000121	TR-DIGITAL	KSR1007TA/108M,300MW,22K-47K	
JQ14	0504-000122	TR-DIGITAL	KSR1009TA, 300MW,4.7KOHM,TO-9	
JQ4	0504-000122	TR-DIGITAL	KSR1009TA, 300MW,4.7KOHM,TO-9	
AQ3	0504-001003	TR-DIGITAL	KSR2003TA,300mW,22K-22Kohm	
AQ9	0504-001003	TR-DIGITAL	KSR2003TA,300mW,22K-22Kohm	
EQ2	0504-001003	TR-DIGITAL	KSR2003TA,300mW,22K-22Kohm	ONLY S2450
MIC5	1201-000163	IC-OP AMP	4560,SOP,8P,150MIL,DUAL,100V/m	
MIC8	1201-000163	IC-OP AMP	4560,SOP,8P,150MIL,DUAL,100V/m	
JIC1	1204-001465	IC-VOLUME/TONE CONT.	TDA7440D,SOP,28,18.1,PLASTIC,1	
AR2	2001-000028	R-CARBON(S)	100ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AR4	2001-000028	R-CARBON(S)	100ohm,5%,1/2W,AA,TP,2.4x6.4mm	
ER1	2001-000028	R-CARBON(S)	100ohm,5%,1/2W,AA,TP,2.4x6.4mm	ONLY S2450
ER2	2001-000028	R-CARBON(S)	100ohm,5%,1/2W,AA,TP,2.4x6.4mm	ONLY S2450
AR43	2001-000052	R-CARBON(S)	3.3Kohm,5%,1/2W,AA,TP,2.4x6.4m	
AR42	2001-000060	R-CARBON	6.8Kohm,5%,1/4W,AA,TP,2.4x6.4m	
AR51	2001-000109	R-CARBON(S)	470ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AR44	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
AR55	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
JR14	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
JR15	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
AR48	2001-000449	R-CARBON	2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
AR5	2001-000449	R-CARBON	2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
JR16	2001-000515	R-CARBON	220ohm,5%,1/8W,AA,TP,1.8x3.2mm	
JR19	2001-000515	R-CARBON	220ohm,5%,1/8W,AA,TP,1.8x3.2mm	
JR74	2001-000522	R-CARBON	22Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
JR4	2001-000645	R-CARBON	330Kohm,5%,1/8W,AA,TP,1.8x3.2m	
JR73	2001-000645	R-CARBON	330Kohm,5%,1/8W,AA,TP,1.8x3.2m	
JR8	2001-000689	R-CARBON	390Kohm,5%,1/8W,AA,TP,1.8x3.2m	
AR17	2001-000734	R-CARBON	4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
AR54	2001-000793	R-CARBON	47ohm,5%,1/8W,AA,TP,1.8x3.2mm	
AR41	2001-000802	R-CARBON	5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
JR13	2001-000802	R-CARBON	5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
JR9	2001-000802	R-CARBON	5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
AR14	2001-000995	R-CARBON	820ohm,5%,1/8W,AA,TP,1.8x3.2mm	
AR1	2001-001138	R-CARBON(S)	390ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AR30	2001-001138	R-CARBON(S)	390ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AR52	2001-001146	R-CARBON(S)	4.7ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AR53	2001-001146	R-CARBON(S)	4.7ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AR49	2001-001153	R-CARBON(S)	47ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AR50	2001-001153	R-CARBON(S)	47ohm,5%,1/2W,AA,TP,2.4x6.4mm	
JR7	2007-000032	R-CHIP	390Kohm,5%,1/10W,DA,TP,2012	
MJ90	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
MJ91	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
AR18	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
JR17	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
JR20	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	

Location no.	Code no.	Description	Specifiation	Remarks
JR70	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
JR71	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
AR49	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
AR9	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
JR22	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
JR23	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
FR19	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
FR22	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
JR1	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
JR3	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
AR10	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
AR46	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
AR47	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
ER4	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
JR25	2007-000565	R-CHIP	220Kohm,5%,1/10W,DA,TP,2012	
AR3	2007-000586	R-CHIP	22Kohm,5%,1/10W,DA,TP,2012	
JR11	2007-000686	R-CHIP	3.3Kohm,5%,1/10W,DA,TP,2012	
JR12	2007-000686	R-CHIP	3.3Kohm,5%,1/10W,DA,TP,2012	
JR5	2007-000710	R-CHIP	3.9Kohm,5%,1/10W,DA,TP,2012	
JR6	2007-000710	R-CHIP	3.9Kohm,5%,1/10W,DA,TP,2012	
JR2	2007-000778	R-CHIP	33OKohm,5%,1/10W,DA,TP,2012	
JR72	2007-000778	R-CHIP	33OKohm,5%,1/10W,DA,TP,2012	
AR31	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
AR32	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
AR11	2007-001039	R-CHIP	56Kohm,5%,1/10W,DA,TP,2012	
AR29	2007-001039	R-CHIP	56Kohm,5%,1/10W,DA,TP,2012	
FR20	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
FR21	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
AR15	2007-001201	R-CHIP	820ohm,5%,1/10W,DA,TP,2012	
AC21	2201-000161	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,10x4mm,5	
EC2	2201-000161	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,10x4mm,5	ONLY S2450
AC26	2201-000565	C-CERAMIC,DISC	47nF,+80% -20% 50V Y5V 12.5*4.	
AC50	2201-000565	C-CERAMIC,DISC	47nF,+80% -20% 50V Y5V 12.5*4.	
JC12	2202-000820	C-CERAMIC,MLC-AXIAL	5.6nF,20%,16V,Y5R,3.5x19mm,-,T	
JC13	2202-000820	C-CERAMIC,MLC-AXIAL	5.6nF,20%,16V,Y5R,3.5x19mm,-,T	
AC35	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
AC91	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
JC1	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
JC2	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
JC15	2203-000609	C-CERAMIC,CHIP	22nF,10%,50V,X7R,2012,-,TP	
JC17	2203-000609	C-CERAMIC,CHIP	22nF,10%,50V,X7R,2012,-,TP	
JC20	2203-000609	C-CERAMIC,CHIP	22nF,10%,50V,X7R,2012,-,TP	
AC1	2203-000892	C-CERAMIC,CHIP	4.7NF,10%,50V,X7R,TP,2012	
AC2	2203-000892	C-CERAMIC,CHIP	4.7NF,10%,50V,X7R,TP,2012	
FC10	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
AC68	2203-001524	C-CERAMIC,CHIP	47pF,5%,50V,NPO,2012,-,TP	
AC69	2203-001524	C-CERAMIC,CHIP	47pF,5%,50V,NPO,2012,-,TP	
JC50	2203-001524	C-CERAMIC,CHIP	47pF,5%,50V,NPO,2012,-,TP	
JC51	2203-001524	C-CERAMIC,CHIP	47pF,5%,50V,NPO,2012,-,TP	
AC12	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
AC9	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
FC12	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
FC13	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
AC13	2303-000312	C-FILM,PPF	100nF,1%,50V,7.5*12.5*3.5,TP	
AC14	2303-000312	C-FILM,PPF	100nF,1%,50V,7.5*12.5*3.5,TP	
JC14	2303-000312	C-FILM,PPF	100nF,1%,50V,7.5*12.5*3.5,TP	
JC15	2303-000312	C-FILM,PPF	100nF,1%,50V,7.5*12.5*3.5,TP	
JC4	2303-000312	C-FILM,PPF	100nF,1%,50V,7.5*12.5*3.5,TP	
JC5	2303-000312	C-FILM,PPF	100nF,1%,50V,7.5*12.5*3.5,TP	
AC40	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
AC42	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
EC3	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	ONLY S2450
AC44	2401-000303	C-AL	100uF,20%,25V,GP,6.3*11,5MM,TP	
AC60	2401-000303	C-AL	100uF,20%,25V,GP,6.3*11,5MM,TP	
AC70	2401-000303	C-AL	100uF,20%,25V,GP,6.3*11,5MM,TP	
JC53	2401-000303	C-AL	100uF,20%,25V,GP,6.3*11,5MM,TP	
AC47	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
JC11	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
AC39	2401-000438	C-AL	10uF,20%,25V,GP,5*11,5mm,TP	
AC22	2401-000475	C-AL	10uF,20%,50V,GP,5*11,5mm,TP	
EC5	2401-000778	C-AL	220uF,20%,10V,GP,6.3x11,5MM,TP	ONLY S2450
AC8	2401-000795	C-AL	220uF,20%,16V,GP,8*12,5MM,TP	
FC11	2401-000795	C-AL	220uF,20%,16V,GP,8*12,5MM,TP	
AC49	2401-000847	C-AL	220uF,20%,35V,GP,10x12mm,5mm,T	
AC27	2401-000907	C-AL	22uF,20%,16V,GP,5*11,5MM,TP	
AC46	2401-001022	C-AL	3.3UF,20%,50V,SME,5*11,5MM,TP	
AC41	2401-001465	C-AL	47uF,20%,10V,GP,5*11,5mm,TP	
AC43	2401-001465	C-AL	47uF,20%,10V,GP,5*11,5mm,TP	
AC48	2401-001572	C-AL	47uF,20%,50V,GP,6.3*11,5MM,TP	
AC66	2401-001889	C-AL	100nF,20%,50V,GP,5*11,5mm,TP	
JC16	2401-001895	C-AL	100uF,20%,16V,GP,6.3*11,5MM,TP	
AC10	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
AC23	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
AC26	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
AC28	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
AC30	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
AC65	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
JC18	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
JC19	2401-001912	C-AL	1uF,20%,50V,GP,5*11,5mm,TP	
AC29	2401-001969	C-AL	470uF,20%,25V,GP,10x12mm,5mm,T	
AC45	2401-001969	C-AL	470uF,20%,25V,GP,10x12mm,5mm,T	
FC12	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
FC13	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	

Location no.	Code no.	Description	Specifiation	Remarks
JC1	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
JC2	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
JC24	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
JC25	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
JC6	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
JC7	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
JC8	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
JC9	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
AL1	AH27-90001A	COIL-SPRING	,2.2UH,-,-,SPRING	
AL2	AH27-90001A	COIL-SPRING	,2.2UH,-,-,SPRING	
SPKWIRE	AH39-00102A	LEAD CONNECTOR-ASS	-,5264,-,4P,240MM,1007#	
MCW1	AH39-00184A	LEAD CONNECTOR-ASS	,5264,51088,10P	
MCW2	AH39-00185A	LEAD CONNECTOR-ASS	51004,5295,14P	
MAIN	AH62-00015A	HEAT SINK-M	-,AL EXTR,-,-,-,WHT,-,S-2000	
EQ1-H	AH62-30062A	HEAT SINK	AL,MQ6T,-,-,-,H30	ONLY S2450
AD14	0402-000157	DIODE-RECTIFIER	1N5402,200V,3A,DO-2	
AD15	0402-000157	DIODE-RECTIFIER	1N5402,200V,3A,DO-2	
AD16	0402-000157	DIODE-RECTIFIER	1N5402,200V,3A,DO-2	
AD17	0402-000157	DIODE-RECTIFIER	1N5402,200V,3A,DO-2	
AQ1	0502-000303	TR-POWER	KSD882,NPNA,1W	
AQ2	0502-000303	TR-POWER	KSD882,NPNA,1W	
EQ1	0502-000303	TR-POWER	KSD882,NPNA,1W	ONLY S2450
AIC1	1201-000334	IC-POWER AMP	8207,SIP,12P,-,DUAL,-,PLASTIC,	
AC15	2401-000129	C-AL	1000uF,20%,16V,GP,10x16mm,-,	
AC16	2401-000129	C-AL	1000uF,20%,16V,GP,10x16mm,-,	
EC1	2401-000129	C-AL	1000uF,20%,16V,GP,10x16mm,-,	ONLY S2450
AC20	2401-001052	C-AL	3300uF,20%,25V,GP,16*31.5,7.5m	
MCON5	3708-000452	CONNECTOR-FPC/FC/PIC	19P,1.25mm,STRAIGHT,52492-1920	
MCON10	3711-000691	CONNECTOR-HEADER	53014-14P,2MM,STRAIGHT	
MCON3	3711-000963	CONNECTOR-HEADER	BOX,4P,1R,2.5MM,ST	
MCON1	3711-001018	CONNECTOR-HEADER	BOX,5P,1R,2mm,STRAIGHT,SN	
MCON4	3711-001018	CONNECTOR-HEADER	BOX,5P,1R,2mm,STRAIGHT,SN	
MCON9	3711-001557	CONNECTOR-HEADER	NOWALL,5P,1R,2.0MM,53064-0510	
MCON8	3711-001661	CONNECTOR-HEADER	NOWALL,9P,1R,2.0mm,53064-0910	
MCON2	3711-002809	CONNECTOR-HEADER	BOX,8P,1R,2mm,STRAIGHT,SN	
MCON6	3711-004055	CONNECTOR-HEADER	2WALL,5P,1R,2MM,STRAIGH	
MCON7	3711-004055	CONNECTOR-HEADER	2WALL,5P,1R,2MM,STRAIGH	
MCON5	3809-001145	CABLE-FLAT	30V,80C,130MM,19P1.25MM,UL2896	

AH92-00597A ASSY PCB CHARGE/MP3 NO A/S

BIC2	AC14-12001G	IC-POSI.ADJUST REG.	KA78L05Z-TA,TO-92,3P,-,PLASTIC	
BD10	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
BD11	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
BD7	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
BD8	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
BD9	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
BD1	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
BD2	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
BD3	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
BD4	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
BD5	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
BD6	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
BZD1	0403-000352	DIODE-ZENER	UZ4.7BM,4.7V,4.4-5.0V,500mW	
BQ5	0501-000294	TR-SMALL SIGNAL	KSA708-YTA,PNP,-80V,-60V,	
BQ2	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
BQ4	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
BQ6	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
BQ7	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
BQ8	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
BQ10	0504-001003	TR-DIGITAL	KSR2003TA,300mW,22K-22Kohm	
BQ9	0504-001003	TR-DIGITAL	KSR2003TA,300mW,22K-22Kohm	
BR2	2001-000028	R-CARBON(S)	100ohm,5%,1/2W,AA,TP,2.4x6.4mm	
BR7	2001-000028	R-CARBON(S)	100ohm,5%,1/2W,AA,TP,2.4x6.4mm	
BR8	2001-000028	R-CARBON(S)	100ohm,5%,1/2W,AA,TP,2.4x6.4mm	
BR28	2001-000034	R-CARBON	220ohm,5%,1/4W,AA,TP,2.4x6.4mm	
BR4	2001-000062	R-CARBON	470ohm,5%,1/4W,AA,TP,2.4x6.4mm	
BR22	2001-000290	R-CARBON	10Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
BR31	2001-000356	R-CARBON	150Kohm,5%,1/8W,AA,TP,1.8x3.2m	
BR32	2001-000356	R-CARBON	150Kohm,5%,1/8W,AA,TP,1.8x3.2m	
BR33	2001-000356	R-CARBON	150Kohm,5%,1/8W,AA,TP,1.8x3.2m	
BR34	2001-000356	R-CARBON	150Kohm,5%,1/8W,AA,TP,1.8x3.2m	
BR30	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
BR5	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
BR14	2001-000449	R-CARBON	2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
BR35	2001-000666	R-CARBON	33ohm,5%,1/8W,AA,TP,1.8x3.2mm	
BR6	2001-001077	R-CARBON(S)	150ohm,5%,1/2W,AA,TP,2.4x6.4mm	
BR3	2003-000542	R-METAL OXIDE(S)	1ohm,5%,1W,AA,TP,3.3x9mm	
BR1	2003-001021	R-METAL OXIDE(S)	1.3OHM,5%,1W,S-2400	
BJW5	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
BJW6	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
BR10	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR11	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR15	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR16	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR17	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR18	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR20	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR24	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR26	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
BR19	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
BR2	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
BR13	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
BR12	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	

Location no.	Code no.	Description & Specifiation		Remarks
BR25	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
BC1	2201-000163	C-CERAMIC,DISC	10nF,+80-20%,50V,Y5V,6.5*5,5MM	
BC3	2201-000565	C-CERAMIC,DISC	47nF,+80% -20% 50V Y5V 12.5*4.	
BC5	2201-000783	C-CERAMIC,DISC	100nF,+80%,-20%,50V,Y5V,-,5mm,	
BC6	2201-000783	C-CERAMIC,DISC	100nF,+80%,-20%,50V,Y5V,-,5mm,	
BC7	2201-000783	C-CERAMIC,DISC	100nF,+80%,-20%,50V,Y5V,-,5mm,	
BC9	2201-000783	C-CERAMIC,DISC	100nF,+80%,-20%,50V,Y5V,-,5mm,	
BC10	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
BC2	2401-000686	C-AL	2200uF,20%,16V,GP,13*25mm,5mm,	
BC6	2401-000795	C-AL	220uF,20%,16V,GP,8*12,5MM,TP	
BC4	2401-001092	C-AL	330uF,20%,10V,GP,8*11.5,5MM,TP	
BC8	2401-001355	C-AL	470uF,20%,10V,GP,8x11.5,5MM,TP	
BF1*2	3602-000147	FUSE-CLIP	250V,7.5A,30mohm	
BCW3	AH39-00186A	LEAD CONNECTOR-ASSY	-,-,-,-,-,-,-,51004,5295,14P	
BQ1-H	AH62-30062A	HEAT SINK	AL,MQ6T,-,-,-,H30	
BQ1	0502-000241	TR-POWER	KSA614-O,PNP,-80V,-55V,-3A,25	
BQ3	0502-000303	TR-POWER	KSD882,NPNA,1W	
BIC1	1203-001605	IC-BATTERY	2002,DIP,8P,300MIL,PLASTIC,-,-	
BQ1-S	6003-000283	SCREW-TAPTITE	BH,+,B,M3,L8,ZPC(YEL),SWCH16A	

AH92-00599B ASSY-JACK-PCB

AUD3	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
AUD4	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
AUD5	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
TD11	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
TD12	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
TD2	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
TD3	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
AUR7L	2007-000267	R-CHIP	1.8Kohm,5%,1/10W,DA,TP,2012	
AUR7R	2007-000267	R-CHIP	1.8Kohm,5%,1/10W,DA,TP,2012	
AUR8L	2007-001071	R-CHIP	6.8Kohm,5%,1/10W,DA,TP,2012	
AUR8R	2007-001071	R-CHIP	6.8Kohm,5%,1/10W,DA,TP,2012	
AUR9L	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
AUR9R	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
AUC7L	2203-001058	C-CERAMIC,CHIP	560pF,5%,50V,NPO,2012,-,TP	
AUC7R	2203-001058	C-CERAMIC,CHIP	560pF,5%,50V,NPO,2012,-,TP	
AUC8	2401-000303	C-AL	100uF,20%,25V,GP,6.3*11,5MM,TP	
AUC6L	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
AUC6R	2401-000419	C-AL	10UF,20%,16V,GP,5*11,5MM,TP	
AUC5	2401-001164	C-AL	33uF,20%,16V,GP,5*11,5mm,TP	
AUC7	2401-001164	C-AL	33uF,20%,16V,GP,5*11,5mm,TP	
AUC4L	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
AUC4R	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
FJ1	AH37-20001S	JACK-ANT TERMINAL	SP-031S,BLK	
TCON3	AH39-00106A	LEAD CONNECTOR-ASS	,5295,51004,2P,150MM,#2533	
AW1	AH39-00170A	LEAD-CONNECTOR,ASS'	,51004-03,5295-	
AUIC2	1201-001410	IC-ISOLATION AMP	30TO+85C,57DB,2.0V/US,-,-,-	
TCON1	3710-001405	CONNECTOR-SOCKET	5P,1R,2MM,ANGLE,SN	
TCON2	3710-001405	CONNECTOR-SOCKET	5P,1R,2MM,ANGLE,SN	

AH92-00628A ASSY PCB-LEAF SW

LCN1	AH37-00012A	JACK	-,-,9P,BULK,PTB053	
CLOSE	AH39-00108A	LEAD CONNECTOR-ASSY	-,5295,51004,2P,80MM,1007#	
OPEN	AH39-00109A	LEAD CONNECTOR-ASSY	-,5295,51004,2P,160MM,1007#	
LCW2	AH39-00110A	LEAD CONNECTOR-ASSY	-,5295,51004,2P,100MM,1007#	
LCW1	AH39-00194A	LEAD CONNECTOR-ASSY	9P,1061#26/2547#28,130MM	
CLOSE	3405-000101	SWITCH-MICRO	MLS-24	
MYMY	3405-000101	SWITCH-MICRO	MLS-24	
OPEN	3405-000101	SWITCH-MICRO	MLS-24	

AH92-00629A ASSY PCB-BATT SENS

LCN3	AH39-00110A	LEAD CONNECTOR-ASSY	-,5295,51004,2P,100MM,1007#	

AH92-00596A ASSY-PCB-ADAPTER

AUIC5	AC14-12001G	IC-POSI.ADJUST REG.	KA78L05Z-TA,TO-92,3P,-,PLASTIC	
AUIC3	AH09-00006E	IC-MCU-MASK	MSM66573-048TB,	
AUQ2	0504-000117	TR-DIGITAL	KSR1002TA/KRC102M,300MW,10K	
AUQ1	0504-000144	TR-DIGITAL	KSR2002,PNP,300MW,10K-10K0HM,T	
AUIC4	0801-000928	IC-CMOS LOGIC	74HCT245,TRANSCEIVER,SOP,20P	
AUR36	2001-000020	R-CARBON(S)	22ohm,5%,1/2W,AA,TP,2.4x6.4mm	
AUR11	2001-000290	R-CARBON	10Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
AUR34	2001-000449	R-CARBON	2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
AUR35	2001-000449	R-CARBON	2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
AUR10	2001-000515	R-CARBON	220ohm,5%,1/8W,AA,TP,1.8x3.2mm	
EJW20	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
AUR29	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
AUR30	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
AUR31	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
AUR32	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
AUR33	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
EBB9	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
EBD7	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
EBD8	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
AUR12	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
AUR50-57	2007-000766	R-CHIP	330ohm,5%,1/10W,DA,TP,2012	
AUC16	2201-000247	C-CERAMIC,DISC	15pF,5%,50V,NPO,4x3.5mm,5mm,TP	
AUC17	2201-000751	C-CERAMIC,DISC	39pF,5%,50V,NPO,5x3.5mm,5mm,TP	
BC15	2201-000783	C-CERAMIC,DISC	100nF,+80%,-20%,50V,Y5V,-,5mm,	
EC100	2201-000783	C-CERAMIC,DISC	100nF,+80%,-20%,50V,Y5V,-,5mm,	
EC101	2201-000783	C-CERAMIC,DISC	100nF,+80%,-20%,50V,Y5V,-,5mm,	
AUC25	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
AUC12	2202-000797	C-CERAMIC,MLC-AXIAL	10nF,30%,16V,Y5R,3.5x19mm,-,TP	
AUC20	2202-000854	C-CERAMIC,MLC-AXIAL	47nF,+80-20%,50V,Y5V,3.5x19mm,	
AUC26	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
AUC22	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
AUC19	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
BC12	2401-000778	C-AL	220uF,20%,10V,GP,6.3x11,5MM,TP	
AUC15	2401-001893	C-AL	100uF,20%,16V,GP,6*7,5MM,TP	
AUC11	2401-002180	C-AL	2.2uF,20%,50V,GP,5*11,5mm,TP	
EBD1	3301-000297	CORE-FERRITE BEAD	AA,3.6x1.2x5.7mm,1400,2900G	
EBD3	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	
EBD4	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	
EBD5	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	
AFL1	AH29-00004A	FILTER-LINE NOISE	-,0.05UH,500MA,50V,TU08MT	
AFL2	AH29-00004A	FILTER-LINE NOISE	-,0.05UH,500MA,50V,TU08MT	
AFL3	AH29-00004A	FILTER-LINE NOISE	-,0.05UH,500MA,50V,TU08MT	
AUX1	2801-003413	CRYSTAL-UNIT	24MHZ,50PPM,28-AAM,20P	
BCN3	3711-000702	CONNECTOR-HEADER	53015-14P,BOX,1R,2mm,ANGLE,	
BCN4	3711-000826	CONNECTOR-HEADER	BOX,2P,1R,2MM,ANGLE,SN	
BCN6	3711-000826	CONNECTOR-HEADER	BOX,2P,1R,2MM,ANGLE,SN	
BCN1	3711-000906	CONNECTOR-HEADER	BOX,3P,1R,2mm,ANGLE,SN	
BCN2	3711-001171	CONNECTOR-HEADER	BOX,9P,1R,2mm,STRAIGHT,SN	
	3710-001036	CONNECTOR-SOCKET	28P,IR, 1.25MM,52690-2811	

AH92-00600A ASSY-PCB-JACK — ONLY S2450

EW1	AH39-00195A	LEAD-CONNECTOR	2547#38,200MM,S-2400	
EIC1	1201-000163	IC-OP AMP	4560,SOP,8P,150MIL,DUAL,100V/m	
ER4R	2001-000008	R-CARBON	15Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
ER2L	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ER2R	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ER5L	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ER5R	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ER6L	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ER6R	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
ER1L	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
ER1R	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
ER4L	2007-000409	R-CHIP	15Kohm,5%,1/10W,DA,TP,2012	
ER3L	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
ER3R	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
EC1L	2401-001954	C-AL	4.7UF,20%,50V,GP,5*11,5MM,TP	
EC1R	2401-001954	C-AL	4.7UF,20%,50V,GP,5*11,5MM,TP	
EC3L	2401-001954	C-AL	4.7UF,20%,50V,GP,5*11,5MM,TP	
EC3R	2401-001954	C-AL	4.7UF,20%,50V,GP,5*11,5MM,TP	
EC2L	2401-001975	C-AL	47uF,20%,16V,GP,5*11,5mm,TP	
EC2R	2401-001975	C-AL	47uF,20%,16V,GP,5*11,5mm,TP	

AH92-00601A ASSY PCB-FRONT SUM

AH92-00236A ASSY-PCB-H/PHONE

ACON1	AH39-00104A	LEAD CONNECTOR-ASSY	-,35023,51004,5P,200MM,1007#	
HR1	2001-000036	R-CARBON	330ohm,5%,1/4W,AA,TP,2.4x6.4mm	
HR2	2001-000036	R-CARBON	330ohm,5%,1/4W,AA,TP,2.4x6.4mm	
HC3	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
HC4	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
HL1	2701-000111	INDUCTOR-AXIAL	100uH,10%,2.5x3.4,LAL02TB101K	
HL2	2701-000111	INDUCTOR-AXIAL	100uH,10%,2.5x3.4,LAL02TB101K	
HBD1	3301-000353	CORE FERRITE BEAD	BLM21A121SP,AB 2.0*1.25*0.9MM	
AJ2	3722-000495	JACK-PHONE	11P,3.5mm,-,AG	

AH94-00359A ASSY-TAPG-FRONT PCB — S.N.A.

UIC2	AC14-12001G	IC-POSI.ADJUST REG.	KA78L05Z-TA,TO-92,3P,-,PLASTIC	
UIC1	AH09-00025B	IC-MICOM	LC866548V-5S95,S2400-2450,100P	
UD1	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
UD13	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
UD14	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
UD2	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
UD15	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
UD16	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
UD3	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
UD4	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
UD6	0402-000127	DIODE-RECTIFIER	1N4002,100V,1A,DO-41	
UQ1	0501-000398	TR-SMALL SIGNAL	KSC945-YTA,NPN,60V,50V,150MA,	
UQ2	0504-000122	TR-DIGITAL	KSR1009TA, 300MW,4.7KOHM,TO-9	
UQ3	0504-000122	TR-DIGITAL	KSR1009TA, 300MW,4.7KOHM,TO-9	
UQ4	0504-000122	TR-DIGITAL	KSR1009TA, 300MW,4.7KOHM,TO-9	
ULED1	0601-001232	LED	LTL-1CHKES-UA,GRN,555NM,2.5MM	
ULED2	0601-001232	LED	LTL-1CHKES-UA,GRN,555NM,2.5MM	
ULED3	0601-001232	LED	LTL-1CHKES-UA,GRN,555NM,2.5MM	
UR64	2001-000005	R-CARBON	390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR65	2001-000005	R-CARBON	390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR66	2001-000005	R-CARBON	390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR39	2001-000241	R-CARBON	1.5Kohm,5%,1/8W,AA,TP,1.8x3.2m	
UR40	2001-000258	R-CARBON	1.8Kohm,5%,1/8W,AA,TP,1.8x3.2m	
UR13	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR14	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR16	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR18	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR23	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR32	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR5	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR6	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
UR41	2001-000472	R-CARBON	2.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
UR36	2001-000613	R-CARBON	3.9Kohm,5%,1/8W,AA,TP,1.8x3.2m	
UR48	2001-000613	R-CARBON	3.9Kohm,5%,1/8W,AA,TP,1.8x3.2m	

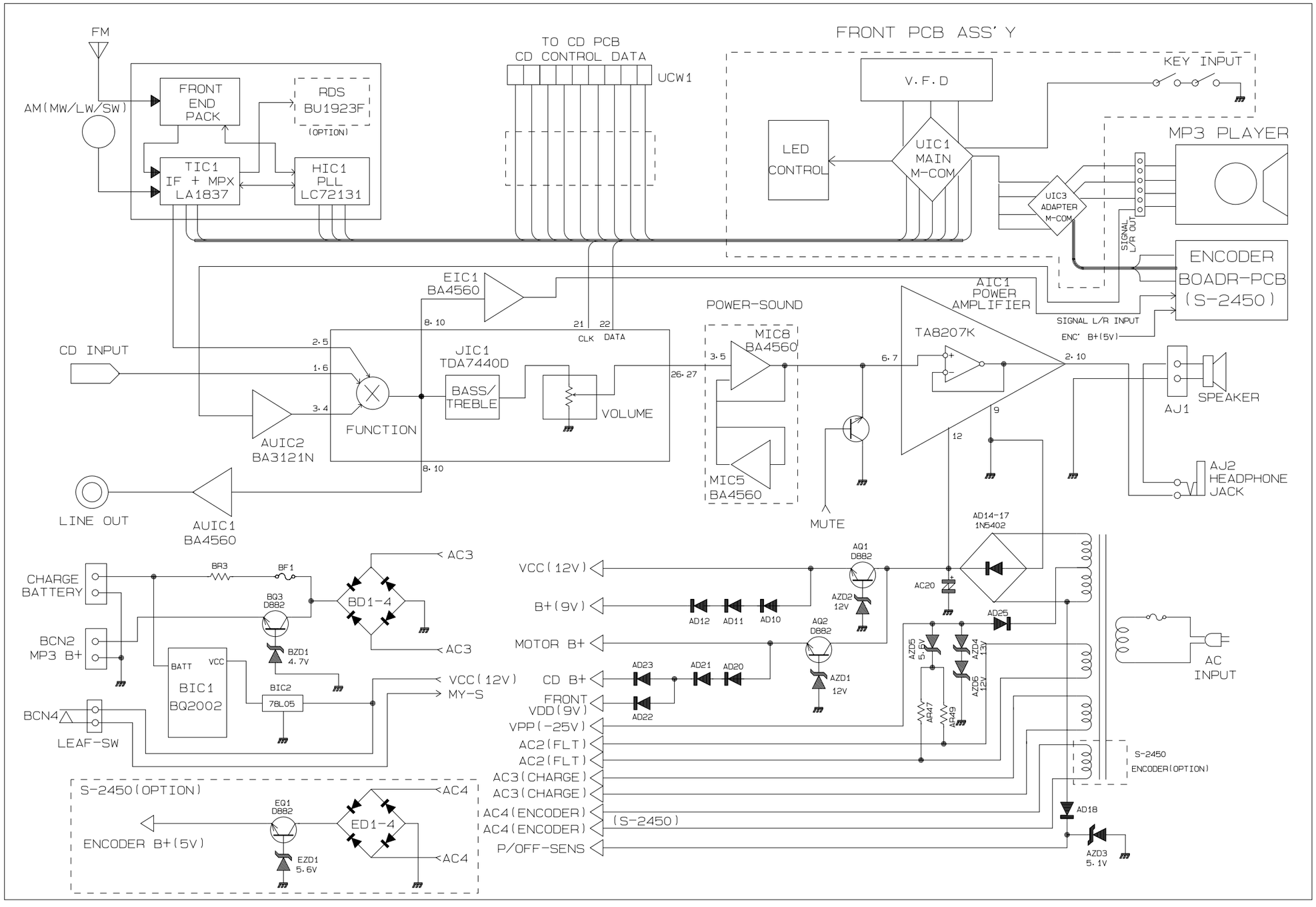
Location no.	Code no.	Description	Specifiation	Remarks
UR42	2001-000890	R-CARBON	6.8Kohm,5%,1/8W,AA,TP,1.8x3.2m	
UR43	2001-000890	R-CARBON	6.8Kohm,5%,1/8W,AA,TP,1.8x3.2m	
FJW50-64	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
UR2	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
UR33	2007-000241	R-CHIP	1.5Kohm,5%,1/10W,DA,TP,2012	
UR45	2007-000241	R-CHIP	1.5Kohm,5%,1/10W,DA,TP,2012	
UR34	2007-000267	R-CHIP	1.8Kohm,5%,1/10W,DA,TP,2012	
UR40	2007-000267	R-CHIP	1.8Kohm,5%,1/10W,DA,TP,2012	
UR46	2007-000267	R-CHIP	1.8Kohm,5%,1/10W,DA,TP,2012	
UR73	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
UR74	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
UR75	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
UR38	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
UR44	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
UR50	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
UR1	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR12	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR13	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR14	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR15	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR17	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR19	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR20	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR22	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR24	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR28	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR29	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR3	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR30	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR31	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR32	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR4	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR59	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR60	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR72	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR9	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
UR62	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
UR63	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
UR69	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
UR70	2007-000493	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	
UR35	2007-000518	R-CHIP	2.7Kohm,5%,1/10W,DA,TP,2012	
UR47	2007-000518	R-CHIP	2.7Kohm,5%,1/10W,DA,TP,2012	
UR26	2007-000565	R-CHIP	220Kohm,5%,1/10W,DA,TP,2012	
UR42	2007-000710	R-CHIP	3.9Kohm,5%,1/10W,DA,TP,2012	
UR25	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR51	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR52	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR53	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR54	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR55	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR56	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR57	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR58	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR76	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR77	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
UR61	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
UR27	2007-000947	R-CHIP	47ohm,5%,1/10W,DA,TP,2012	
UR37	2007-001071	R-CHIP	6.8Kohm,5%,1/10W,DA,TP,2012	
UR49	2007-001071	R-CHIP	6.8Kohm,5%,1/10W,DA,TP,2012	
UR71	2007-001654	R-CHIP	10MOHM,1%,1/10W,DA,TP,201	
UR71A	2007-001654	R-CHIP	10MOHM,1%,1/10W,DA,TP,201	
UC1	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC10	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC22	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC24	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC9	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC90	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC91	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC92	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC93	2202-000781	C-CERAMIC,MLC-AXIAL	100pF,10%,50V,Y5P,3.5x19mm,-,T	
UC38	2202-000854	C-CERAMIC,MLC-AXIAL	47nF,+80-20%,50V,Y5V,3.5x19mm,	
UC39	2202-000854	C-CERAMIC,MLC-AXIAL	47nF,+80-20%,50V,Y5V,3.5x19mm,	
EC2	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
UC11	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
UC12	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
UC13	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
UC2	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
UC21	2203-000239	C-CERAMIC,CHIP	100pF,5%,50V,NPO,2012,-,TP	
FC14	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
FC15	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
EC1	2203-000595	C-CERAMIC,CHIP	220PF,5%,50V,NPO,TP,2012	
UC16	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
UC31	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
UC36	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
UC41	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
UC45	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
UC32	2203-001517	C-CERAMIC,CHIP	15PF,5%,50V,NPO,2012	
UC33	2203-001517	C-CERAMIC,CHIP	15PF,5%,50V,NPO,2012	
CU35	2203-001619	C-CERAMIC,CHIP	27pF,5%,50V,NPO,2012,-,TP	
UC34	2203-001619	C-CERAMIC,CHIP	27pF,5%,50V,NPO,2012,-,TP	
UC30	2401-000243	C-AL	100uF,20%,10V,GP,6*5.2.5MM,TP	
UC42	2401-000243	C-AL	100uF,20%,10V,GP,6*5.2.5MM,TP	
CU40	2401-000475	C-AL	10uF,20%,50V,GP,5*11,5mm,TP	
UC37	2401-000475	C-AL	10uF,20%,50V,GP,5*11,5mm,TP	
UC28	2401-000752	C-AL	220nF,20%,50V,GP,3*5,2.5MM,TP	
UC27	2401-001238	C-AL	4.7uF,20%,25V,GP,3*5,2.5MM,TP	
UC14	2401-001895	C-AL	100uF,20%,16V,GP,6.3*11,5MM,TP	
INTRO	3404-000165	SWITCH-TACT	12V,50mA,160gf,SKHV10910A	
US1-7	3404-000165	SWITCH-TACT	12V,50mA,160gf,SKHV10910A	
US9-21	3404-000165	SWITCH-TACT	12V,50mA,160gf,SKHV10910A	
VFD	AH07-00012A	V.F.DISPLAY	-,HNA-08SS23,S2000,-	
FWC2	AH39-00101A	LEAD CONNECTOR-ASSY	-,5295,51004,5P,150MM,1007#	
	AH61-00214A	HOLDER—VFD	-,ABS,-,BLK,-,S-2000	
UC29	2409-000123	C-EDL	47000uF,4uA,5.5V,-,-,5mm,BK	
UX1	2801-001394	CRYSTAL-UNIT	32.768KHz,20ppm,28-AAY,12.5pF,	
UX2	2802-000181	RESONATOR-CERAMIC	6MHZ,0.3%,BK,9.0X4.0X7.5M	
UCW1	3708-000451	CONNECTOR-FPC/FC/PIC	16P,1.25mm,STRAIGHT,52492-1620	
FCW1	3708-000452	CONNECTOR-FPC/FC/PIC	19P,1.25mm,STRAIGHT,52492-1920	
	AH92-00602A	**ASSY-PCB-POWER**		
PF2*2	3602-000147	FUSE-CLIP	250V,7.5A,30mohm	
PF3*2	3602-000147	FUSE-CLIP	250V,7.5A,30mohm	
PF4*2	3602-000147	FUSE-CLIP	250V,7.5A,30mohm	
PL1	AH27-10001F	COIL-CHOKE	27uH,K,Q30,-,-,DR(6.5*7.5),-,-	
PL2	AH27-10001F	COIL-CHOKE	27uH,K,Q30,-,-,DR(6.5*7.5),-,-	
PC1	2201-000546	C-CERAMIC,DISC	4.7nF,20%,400V,Y5U,16.0*7.0,10	
PC2	2201-000546	C-CERAMIC,DISC	4.7nF,20%,400V,Y5U,16.0*7.0,10	
PF3	3601-000220	FUSE-CARTRIDGE	250V,200MA,TIME-LAG,GLASS,5*20	
PF4	3601-000282	FUSE-CARTRIDGE	250V,4A,TIME-LAG,GLASS,5.2*20M	
PF2	3601-000304	FUSE-CARTRIDGE	250V,630mA,TIME-LAG,GLASS,5x20	
PWF2	3711-000190	CONNECTOR-HEADER	1WALL,2P,1R,7.92mm,STRAIGHT,SN	
	3711-000588	CONNECTOR-HEADER	BOX,10P,1R,2.5mm,STRAIGHT,SN	
	AH97-00228A	**ASSY-CD PACK**	**G3SLIM,-,S2400,NEW**	
	AH59-00038A	CD-DECK	DA23 S2000	
	AH92-00249A	**ASSY-PCB-CD**	**G3SLIM,S-2400**	
NZD1	0403-000358	DIODE-ZENER	UZ5.6BSB,5.6V,5.46-5.7V,500	
NQ100	0501-000314	TR-SMALL SIGNAL	KSA812,PNP,-60V,-50V,-100mA	
IC9286	0904-001442	IC-DSP	S5L9286F01-Q0R0,80QFP	
IC9258	1003-000179	IC-MOTOR DRIVER	KA9258D,SOP,28P,-,SINGLE,-,ST,	
IC9223	1204-001286	IC-ASP	S1L9223A-1-Q0R0,80QFP	
NR143	2007-000001	R-CHIP	68Kohm,5%,1/10W,DA,TP,2012	
NJ100	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ104	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ106	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ107	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ112	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ115	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ116	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ120	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ121	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ123	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ124	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NR200	2007-000029	R-CHIP	0ohm,5%,1/10W,DA,TP,2012	
NJ101	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ102	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ103	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ105	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ108	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ109	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ111	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ113	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ114	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ117	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ118	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ119	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NJ122	2007-000033	R-CHIP	0ohm,5%,1/8W,DA,TP,3216	
NR102	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
NR105	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
NR122	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
NR123	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
NR146	2007-000282	R-CHIP	100Kohm,5%,1/10W,DA,TP,2012	
NR124	2007-000290	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	
NR133	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
NR135	2007-000300	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	
NR127	2007-000338	R-CHIP	120Kohm,5%,1/10W,DA,TP,2012	
NR128	2007-000338	R-CHIP	120Kohm,5%,1/10W,DA,TP,2012	
NR134	2007-000338	R-CHIP	120Kohm,5%,1/10W,DA,TP,2012	
NR104	2007-000355	R-CHIP	12Kohm,5%,1/10W,DA,TP,2012	
NR106	2007-000395	R-CHIP	150Kohm,5%,1/10W,DA,TP,2012	
NR136	2007-000395	R-CHIP	150Kohm,5%,1/10W,DA,TP,2012	
NR108	2007-000444	R-CHIP	180Kohm,5%,1/10W,DA,TP,2012	
NR126	2007-000457	R-CHIP	18Kohm,5%,1/10W,DA,TP,2012	
NR110	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
NR116	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
NR147	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
NR148	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
NR149	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
NR150	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
NR151	2007-000468	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	
NR107	2007-000477	R-CHIP	1Mohm,5%,1/10W,DA,TP,2012	
NR112	2007-000586	R-CHIP	22Kohm,5%,1/10W,DA,TP,2012	
NR118	2007-000586	R-CHIP	22Kohm,5%,1/10W,DA,TP,2012	
NR145	2007-000586	R-CHIP	22Kohm,5%,1/10W,DA,TP,2012	
NR139	2007-000635	R-CHIP	270Kohm,5%,1/10W,DA,TP,2012	

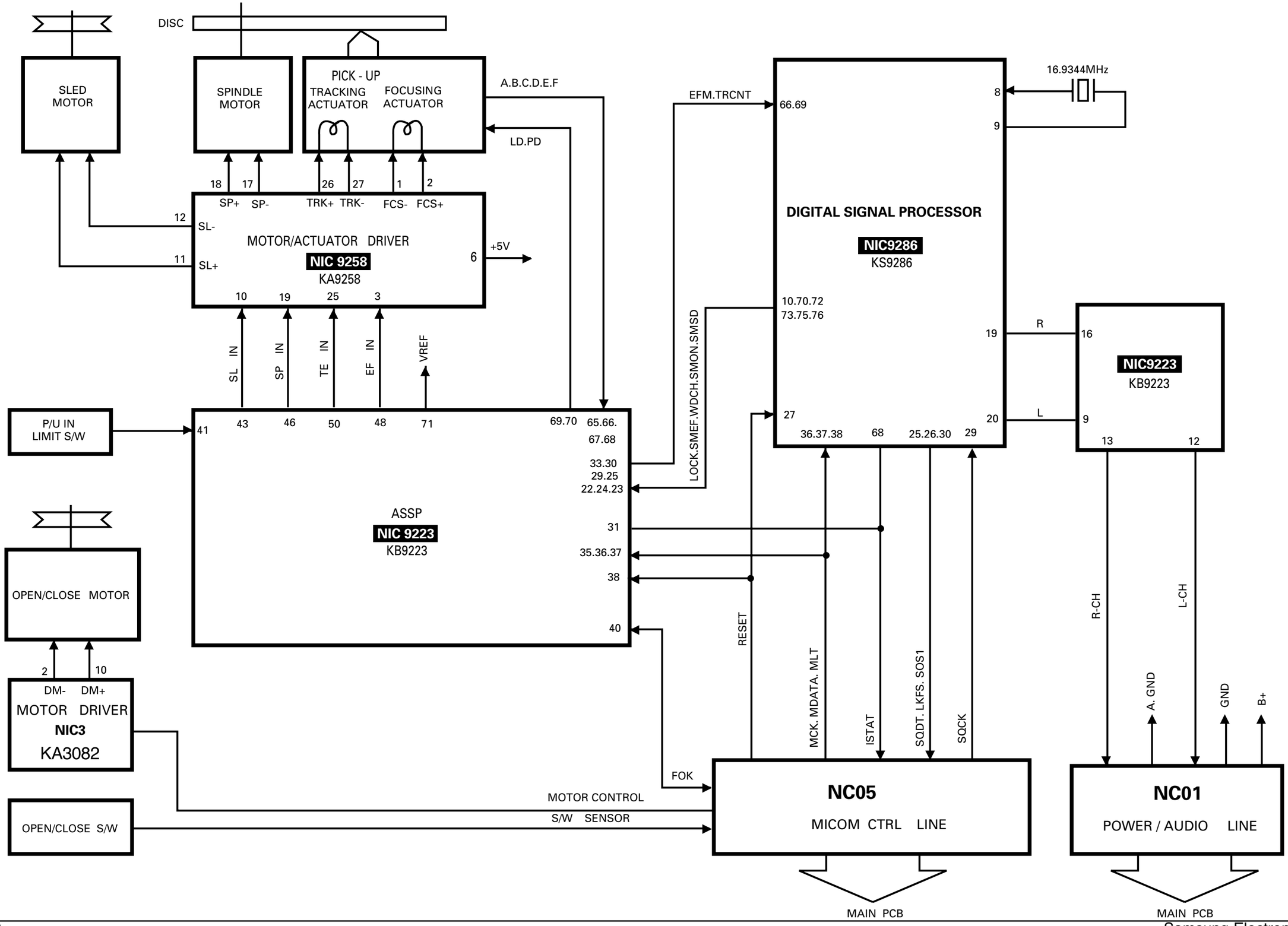
Location no.	Code no.	Description & Specifiation		Remarks
NR100	2007-000653	R-CHIP	27Kohm,5%,1/10W,DA,TP,2012	
NR113	2007-000653	R-CHIP	27Kohm,5%,1/10W,DA,TP,2012	
NR119	2007-000653	R-CHIP	27Kohm,5%,1/10W,DA,TP,2012	
NR101	2007-000686	R-CHIP	3.3Kohm,5%,1/10W,DA,TP,2012	
NR103	2007-000686	R-CHIP	3.3Kohm,5%,1/10W,DA,TP,2012	
NR140	2007-000774	R-CHIP	33Kohm,5%,1/10W,DA,TP,2012	
NR138	2007-000778	R-CHIP	33OKohm,5%,1/10W,DA,TP,2012	
NR109	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
NR111	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
NR115	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
NR117	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
NR125	2007-000872	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	
NR114	2007-000898	R-CHIP	430Kohm,5%,1/10W,DA,TP,2012	
NR137	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
NR141	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
NR142	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
NR144	2007-000941	R-CHIP	47Kohm,5%,1/10W,DA,TP,2012	
NR129	2007-001039	R-CHIP	56Kohm,5%,1/10W,DA,TP,2012	
NR130	2007-001039	R-CHIP	56Kohm,5%,1/10W,DA,TP,2012	
NR131	2007-001039	R-CHIP	56Kohm,5%,1/10W,DA,TP,2012	
NR132	2007-001039	R-CHIP	56Kohm,5%,1/10W,DA,TP,2012	
NR149	2007-001177	R-CHIP	8.2Kohm,5%,1/10W,DA,TP,2012	
NR120	2007-001216	R-CHIP	82ohm,5%,1/10W,DA,TP,2012	
NC100	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC106	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC108	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC109	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC117	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC122	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC127	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC129	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC131	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC133	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC134	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC135	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC147	2203-000206	C-CERAMIC,CHIP	100nF,10%,50V,X7R,2012,-,TP	
NC111	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC114	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC115	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC116	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC119	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC132	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC141	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC144	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC146	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC147	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC148	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC149	2203-000260	C-CERAMIC,CHIP	10nF,10%,50V,X7R,2012,-,TP	
NC123	2203-000477	C-CERAMIC,CHIP	1uF,+80-20%,16V,Y5V,2012,-,TP	
NC138	2203-000495	C-CERAMIC,CHIP	2.2nF,10%,50V,X7R,2012,-,TP	
NC120	2203-000648	C-CERAMIC,CHIP	24pF,5%,50V,NPO,2012,-,TP	
NC140	2203-000787	C-CERAMIC,CHIP	330PF,0.1,50V,Y5P,2012,-,	
NC110	2203-000802	C-CERAMIC,CHIP	33NF,10%,50V,X7R,2012,TP	
NC118	2203-000802	C-CERAMIC,CHIP	33NF,10%,50V,X7R,2012,TP	
NC121	2203-000892	C-CERAMIC,CHIP	4.7NF,10%,50V,X7R,TP,2012	
NC124	2203-000892	C-CERAMIC,CHIP	4.7NF,10%,50V,X7R,TP,2012	
NC125	2203-000892	C-CERAMIC,CHIP	4.7NF,10%,50V,X7R,TP,2012	
NC139	2203-000953	C-CERAMIC,CHIP	470pF,5%,50V,NPO,2012,-,TP	
NC102	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
NC143	2203-000979	C-CERAMIC,CHIP	47nF,10%,50V,X7R,2012,-,TP	
NC142	2203-001137	C-CERAMIC,CHIP	68nF,+80-20%,50V,Y5V,2012,-,TP	
NC112	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
NC113	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
NC128	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
NC136	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
NC137	2203-001537	C-CERAMIC,CHIP	1NF,10%,50V,X7R,2012	
NC103	2203-001551	C-CERAMIC,CHIP	1.5nF,10%,50V,X7R,2012,-,TP	
NC122	2203-001551	C-CERAMIC,CHIP	1.5nF,10%,50V,X7R,2012,-,TP	
NC101	2203-001619	C-CERAMIC,CHIP	27pF,5%,50V,NPO,2012,-,TP	
NC104	2203-001619	C-CERAMIC,CHIP	27pF,5%,50V,NPO,2012,-,TP	
NC105	2203-001619	C-CERAMIC,CHIP	27pF,5%,50V,NPO,2012,-,TP	
NC88	2401-000795	C-AL	220uF,20%,16V,GP,8*12,5MM,TP	
NC89	2401-001965	C-AL	470nF,20%,50V,BK,4*7,5MM,TP	
NC90	2401-001965	C-AL	470nF,20%,50V,BK,4*7,5MM,TP	
NC01	AH39-00103A	LEAD CONNECTOR-ASS	-,5295,51004,8P,210MM,1007#	
NC02	AH39-00111A	LEAD CONNECTOR-ASSY	-,5295,51004,5P,70MM,1007#	
NIC3	1003-001162	IC-MOTOR DRIVER	KA3082,SIP,10PIN,25MIL,D	
NXF1	2802-000211	RESONATOR-CERAMIC	16.93MHz,0.5%,TP,10.0x5.0x10.0	
NC05	3708-000413	CONNECTOR-FPC/FC/PIC	16P,1.25mm,ANGLE,	
NCW100	3708-001388	CONNECTOR-FPC/FC/PIC	16P,1MM,ANGLE,SN	
NC03	3711-004381	CONNECTOR-HEADER	BOX,6P,1R,1.5MM,STRAIGHT,SN	
NIC1	AC14-12001G	IC-POSI.ADJUST REG.	KA78L05Z-TA,TO-92,3P,-,PLASTIC	
NIC2	AC14-12001G	IC-POSI.ADJUST REG.	KA78L05Z-TA,TO-92,3P,-,PLASTIC	
ND1-4	0401-000101	DIODE-SWITCHING	1N4148,100V,200mA,500mW,4nS	
NZD1	0403-000361	DIODE-ZENER	UZ6.2BSB,6.2V,5.99-6.24V,50	
NTR1	0501-000610	TR-SMALL SIGNAL	KSA928A,PNP,-30V,-30V,-2A,1W	
NR12	2001-000319	R-CARBON	120Kohm,5%,1/8W,AA,TP,1.8x3.2m	
NJ9	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
NR13	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
NR9-10	2001-000429	R-CARBON	1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
NR14	2001-000527	R-CARBON	22ohm,5%,1/8W,AA,TP,1.8x3.2mm	
NFR1	2008-000140	R-FUSIBLE	2.2ohm,5%,1/2W,AA,TP,3.5x9.4mm	
NC1	2202-000797	C-CERAMIC,MLC-AXIAL	10nF,30%,16V,Y5R,3.5x19mm,-,TP	

Location no.	Code no.	Description & Specifiation		Remarks
NC2	2202-000797	C-CERAMIC,MLC-AXIAL	10nF,30%,16V,Y5R,3.5x19mm,-,TP	
NC3	2202-000797	C-CERAMIC,MLC-AXIAL	10nF,30%,16V,Y5R,3.5x19mm,-,TP	
NC4	2301-000476	C-FILM,PEF	82nF,10%,50V,10.5x12.5x6,TP	
NC21	2401-000240	C-AL	100uF,20%,10V,GP,5*11mm,5mm,TP	
NC10	2401-000244	C-AL	100uF,20%,10V,GP,6.3*7,5MM,TP	
NC12	2401-000244	C-AL	100uF,20%,10V,GP,6.3*7,5MM,TP	
NC15	2401-000244	C-AL	100uF,20%,10V,GP,6.3*7,5MM,TP	
NC22	2401-000244	C-AL	100uF,20%,10V,GP,6.3*7,5MM,TP	
NC11	2401-000407	C-AL	10uF,20%,16V,GP,3.5*5,2.5MM,TP	
NC13	2401-000778	C-AL	220uF,20%,10V,GP,6.3x11,5MM,TP	
NC14	2401-000778	C-AL	220uF,20%,10V,GP,6.3x11,5MM,TP	
NC16	2401-001102	C-AL	330uF,20%,16V,GP,8*11.5,5MM,TP	
NC17	2401-001893	C-AL	100uF,20%,16V,GP,6*7,5MM,TP	
NC18	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
NC19	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
NC20	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
NC23	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
NC24	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
NC25	2401-001952	C-AL	4.7uF,20%,50V,GP,5*7,5mm,TP	
NL2	2701-000114	INDUCTOR-AXIAL	10uH,10%,2.5x3.4mm,LA02TB100K	
NL3	2701-000114	INDUCTOR-AXIAL	10uH,10%,2.5x3.4mm,LA02TB100K	
NL4	2701-000114	INDUCTOR-AXIAL	10uH,10%,2.5x3.4mm,LA02TB100K	
NL1	2701-000178	INDUCTOR-AXIAL	33uH,10%,2.8x7mm,BAL03ST330K	
NJ11	3301-000297	CORE-FERRITE BEAD	AA,3.6x1.2x5.7mm,1400,2900G	
NJ20	3301-000297	CORE-FERRITE BEAD	AA,3.6x1.2x5.7mm,1400,2900G	
NJ1-8	3811-000389	WIRE-NO SHEATH CU	SPCW,300V,52.4mm,1/0.5mm,-,-	
NJ21-39	3811-000389	WIRE-NO SHEATH CU	SPCW,300V,52.4mm,1/0.5mm,-,-	
	3809-001146	CABLE-FLAT	30V,80C,60MM,16P,1.25MM,UL2896	
	3001-001121	SPEAKER	5W,3.2OHM,82DB,90HZ	

5. Block Diagram

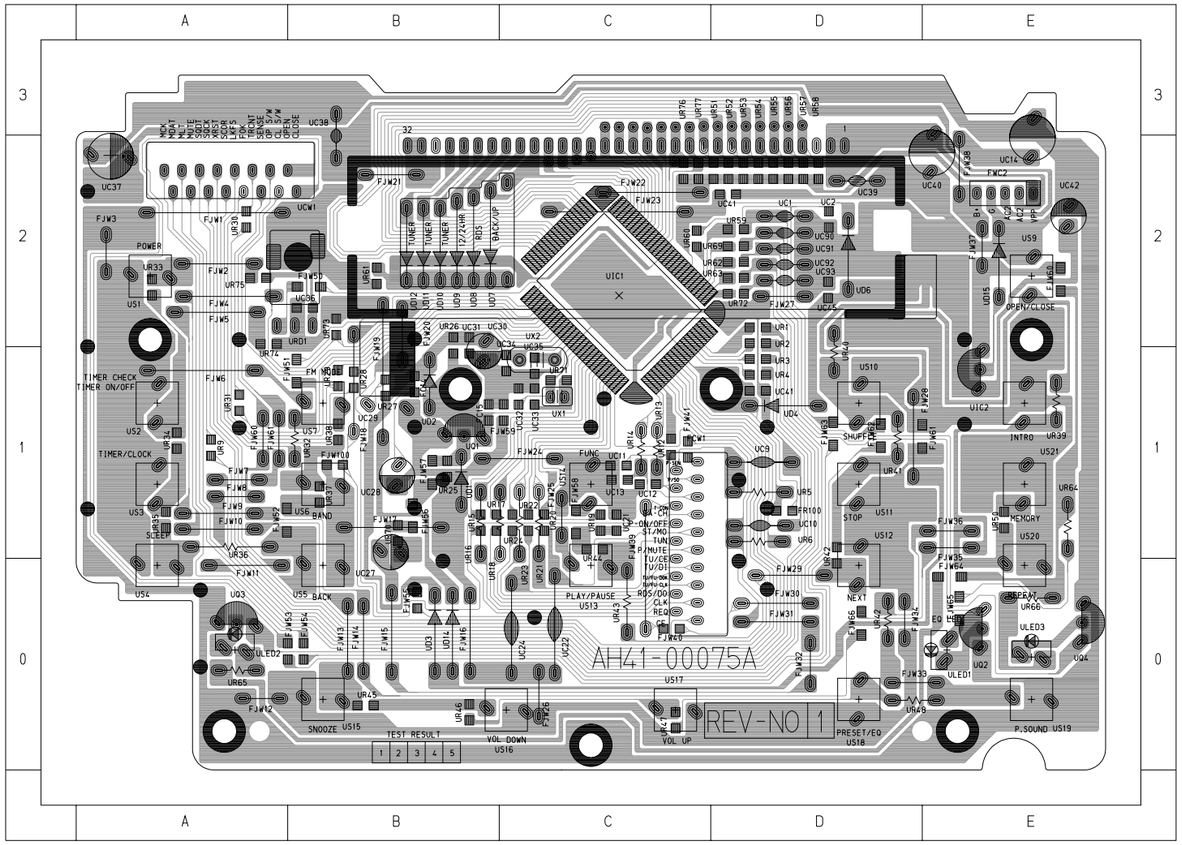
5-1 Main



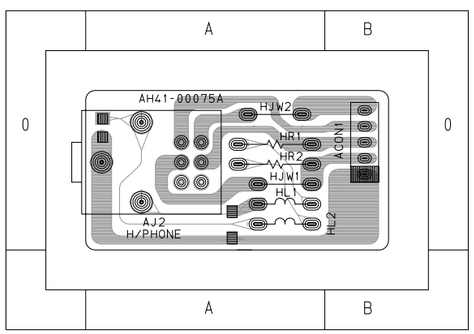

DISC
SLED MOTOR
SPINDLE MOTOR
PICK - UP
TRACKING ACTUATOR
FOCUSING ACTUATOR
A.B.C.D.E.F
LD.PD
18 17 26 27 1 2
SP+ SP- TRK+ TRK- FCS- FCS+
12
SL-
11
SL+
MOTOR/ACTUATOR DRIVER
NIC 9258
KA9258
6
+5V
10 19 25 3
SL IN
SP IN
TE IN
EF IN
VREF
P/U IN LIMIT S/W
41
43 46 50 48 71
69.70 65.66. 67.68
33.30 29.25 22.24.23
ASSP
NIC 9223
KB9223
31
35.36.37
38
40
EFM.TRCNT
66.69
LOCK.SMEF.WDCH.SMON.SMSD
16.9344MHz
8
9
DIGITAL SIGNAL PROCESSOR
NIC9286
KS9286
10.70.72
73.75.76
27
36.37.38 68 25.26.30 29
19
20
R
L
NIC9223
KB9223
16
9
13
12
OPEN/CLOSE MOTOR
2 10
DM- DM+
MOTOR DRIVER
NIC3
KA3082
OPEN/CLOSE S/W
MOTOR CONTROL
S/W SENSOR
FOK
RESET
MCK. MDATA. MLT
ISTAT
SQDT. LKFS. SOS1
SQCK
R-CH
L-CH
A. GND
GND
B+
NC05
MICOM CTRL LINE
NC01
POWER / AUDIO LINE
MAIN PCB
MAIN PCB

6. Printed Circuit Board Diagram

6-1 FRONT



6-2 Headphone PCB



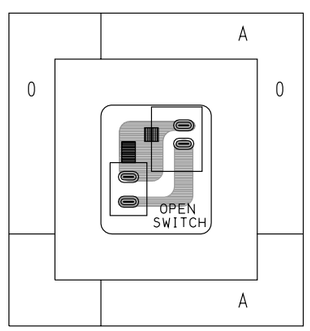
*** RESISTOR ***

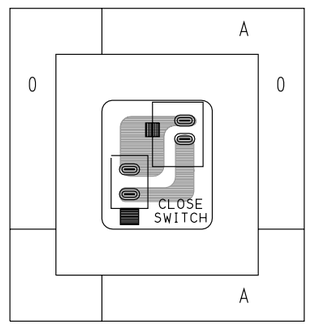
HR1 (A0)
HR2 (A0)

*** IC&WAFER ***

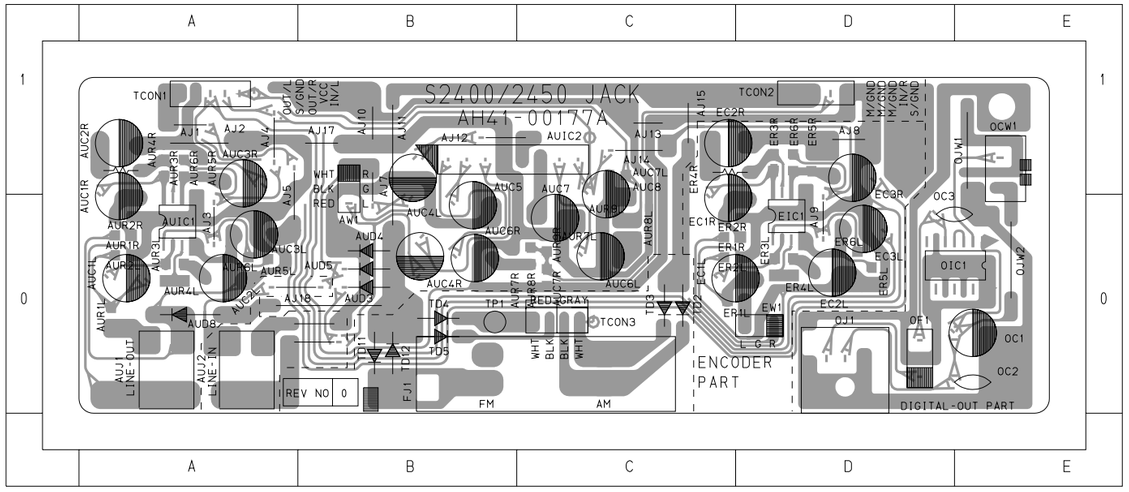
ACON1 (B0)

6-3 Open/Close PCB





6-4 Jack PCB



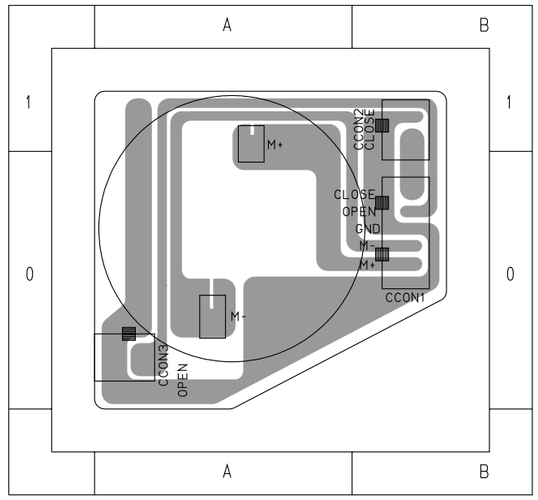
*** DIODE ***

AUD3 (B0)
AUD4 (B0)
AUD5 (B0)
AUD8 (A0)
TD11 (B0)
TD12 (B0)
TD2 (C0)
TD3 (C0)
TD4 (B0)
TD5 (B0)

*** IC&WAFER ***

AUIC2 (B1)
AW1 (B1)
EW1 (D0)
OCW1 (E1)
OF1 (D0)
TCON3 (C0)

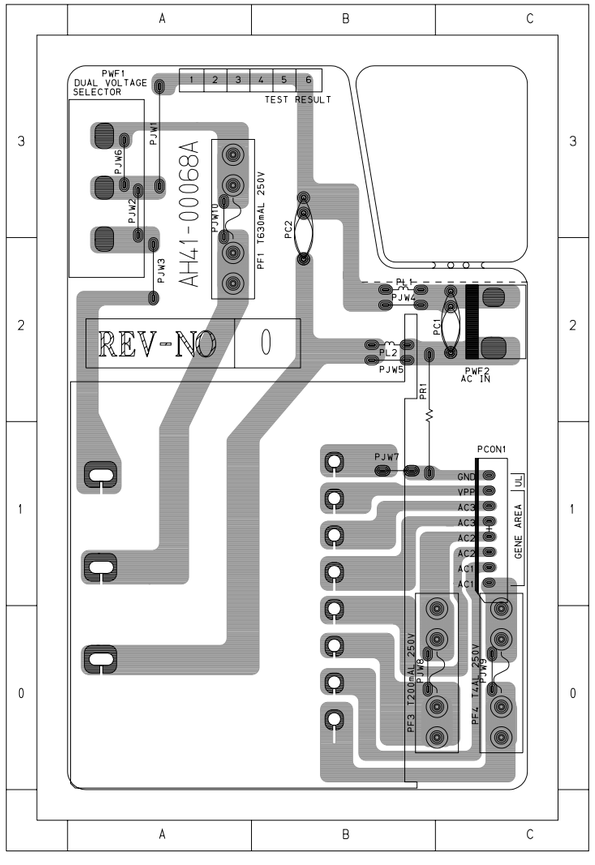
6-5 Motor PCB



*** IC&WAFER ***

CCON1 (B0)
CCON2 (B1)
CCON3 (A0)

6-6 POWER(S-2400/2450)



*** RESISTOR ***

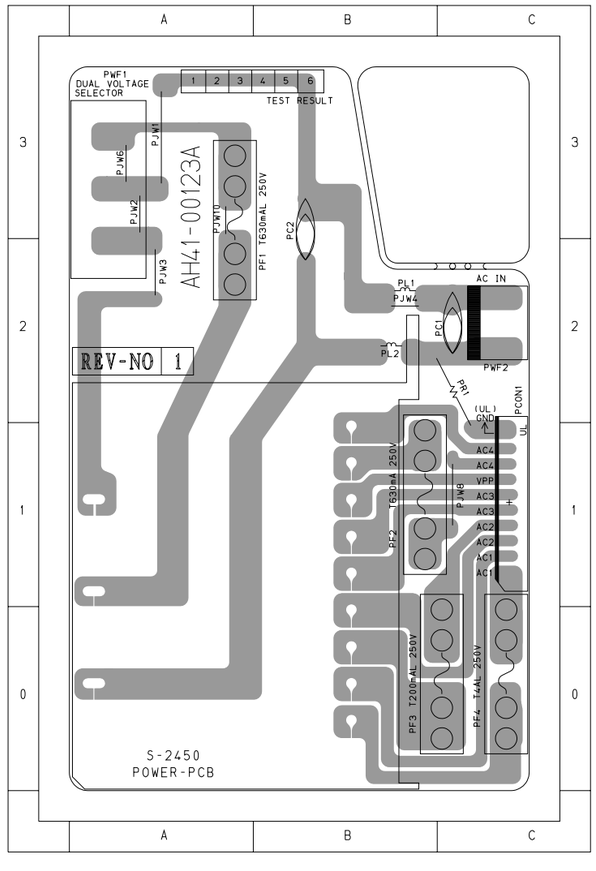
PR1 (B1)

*** CONDENSER ***

PL1 (B2)
PL2 (B2)

*** IC&WAFER ***

PCON1 (C1)



*** RESISTOR ***

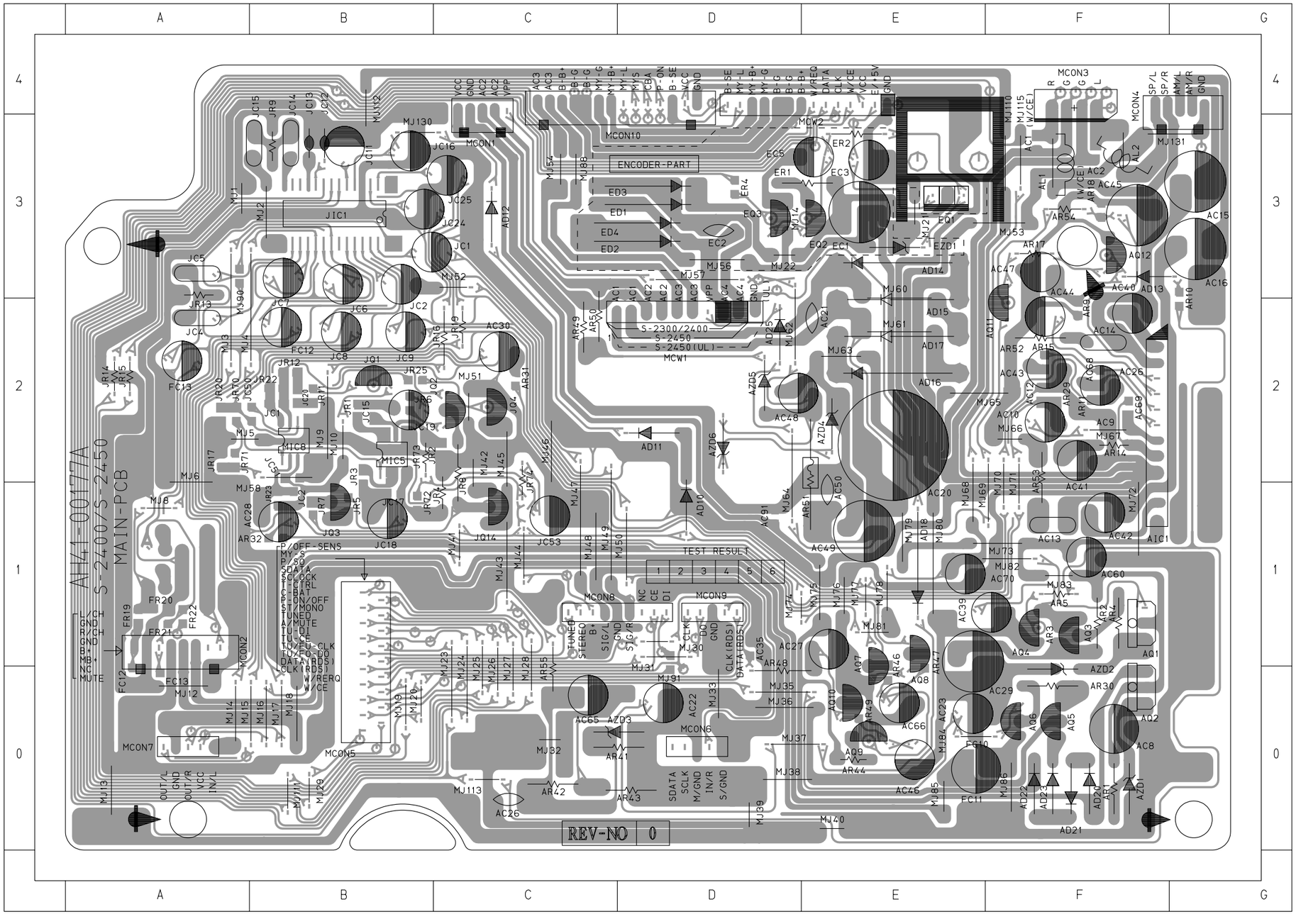
PR1 (B2)

*** CONDENSER ***

PL1 (B2)
PL2 (B2)

*** IC&WAFER ***

PCON1 (C1)



*** DIODE ***

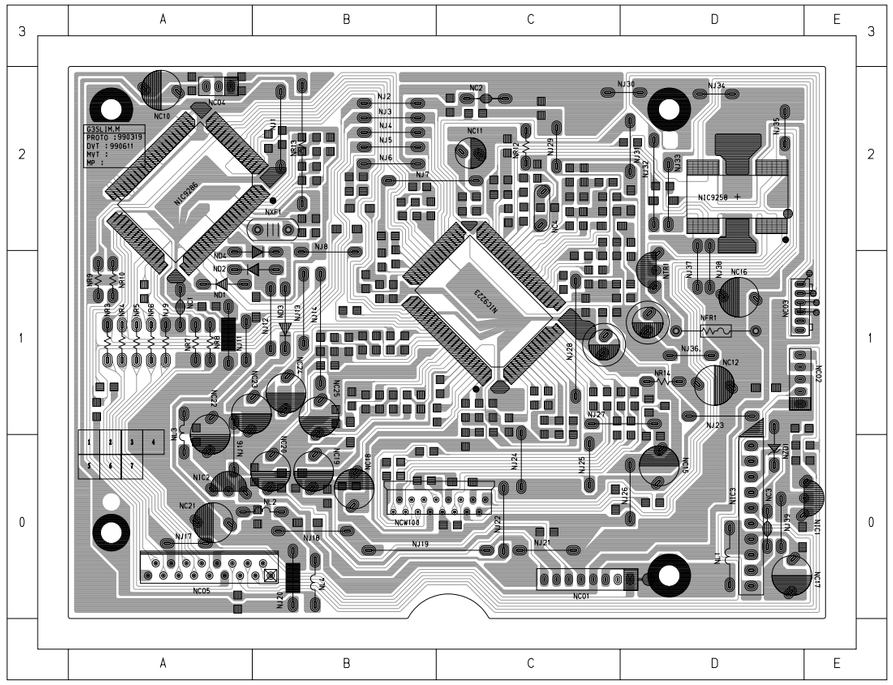
AD10 (D2)
AD11 (D2)
AD12 (C3)
AD13 (F3)
AD18 (E1)
AD20 (F0)
AD21 (F0)
AD22 (F0)
AD23 (F0)
AD25 (D2)
AZD1 (F0)
AZD2 (F0)
AZD3 (C0)
AZD4 (E2)
AZD5 (D2)
AZD6 (D2)
ED1 (D3)
ED2 (D3)
ED3 (D3)
ED4 (D3)
EZD1 (E3)

*** IC&WAFER ***

* (B2)
* (B2)
MCON1 (C4)
MCON10 (D4)
MCON2 (A1)
MCON3 (F4)
MCON4 (G4)
MCW1 (D2)
MCW2 (E4)

*** TR ***

AQ10 (E0)
AQ11 (F2)
AQ12 (F3)
AQ3 (F1)
AQ4 (F1)
AQ5 (F0)
AQ6 (F0)
AQ7 (E1)
AQ8 (E1)
AQ9 (E0)
EQ2 (E3)
EQ3 (D3)
JQ1 (B2)
JQ14 (C1)
JQ2 (C2)
JQ3 (B1)
JQ4 (C2)



*** CONDENSER *** *** DIODE ***

NC1 (A1)
NC10 (A2)
NC11 (C2)
NC12 (D1)
NC15 (D0)
NC16 (D1)
NC17 (D0)
NC18 (B0)
NC19 (B0)
NC2 (C2)
NC20 (B0)
NC21 (A0)
NC22 (A1)
NC23 (A1)
NC24 (B1)
NC25 (B1)
NC3 (D0)
NC4 (C2)

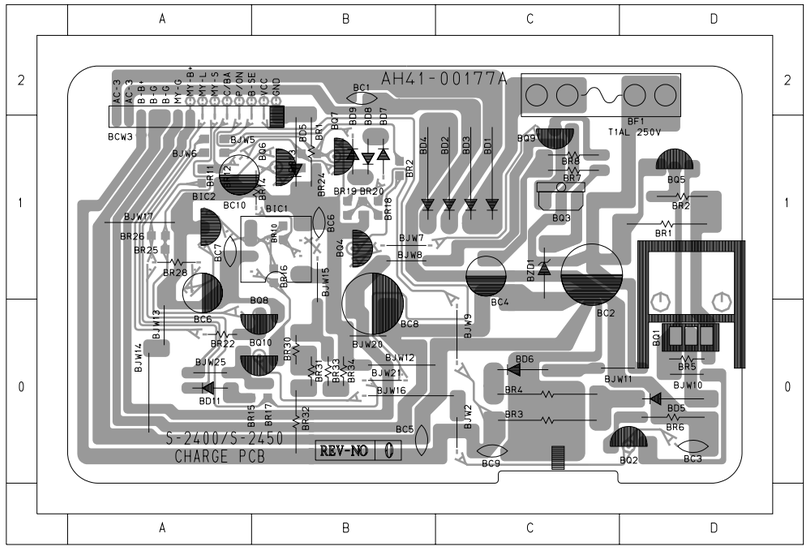
ND1 (A1)
ND2 (A1)
ND3 (B1)
ND4 (B1)
NZD1 (D0)

*** IC&WAFER ***

NC01 (C0)
NC02 (D1)
NC04 (A2)
NC05 (A0)
NIC3 (D0)

*** TR ***

NIC1 (E0)
NIC2 (A0)
NTR1 (D1)



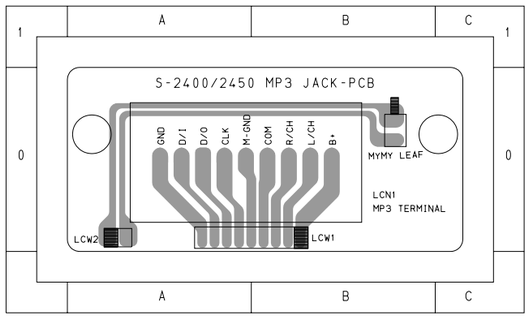
*** DIODE *** *** IC&WAFER ***

BD1 (C1)
BD11 (A0)
BD2 (C1)
BD3 (C1)
BD4 (B1)
BD5 (D0)
BD5 (B1)
BD6 (C0)
BD7 (B1)
BD8 (B1)
BD9 (B1)
BZD1 (C1)

BCW3 (A1)
BIC1 (B1)

*** TR ***

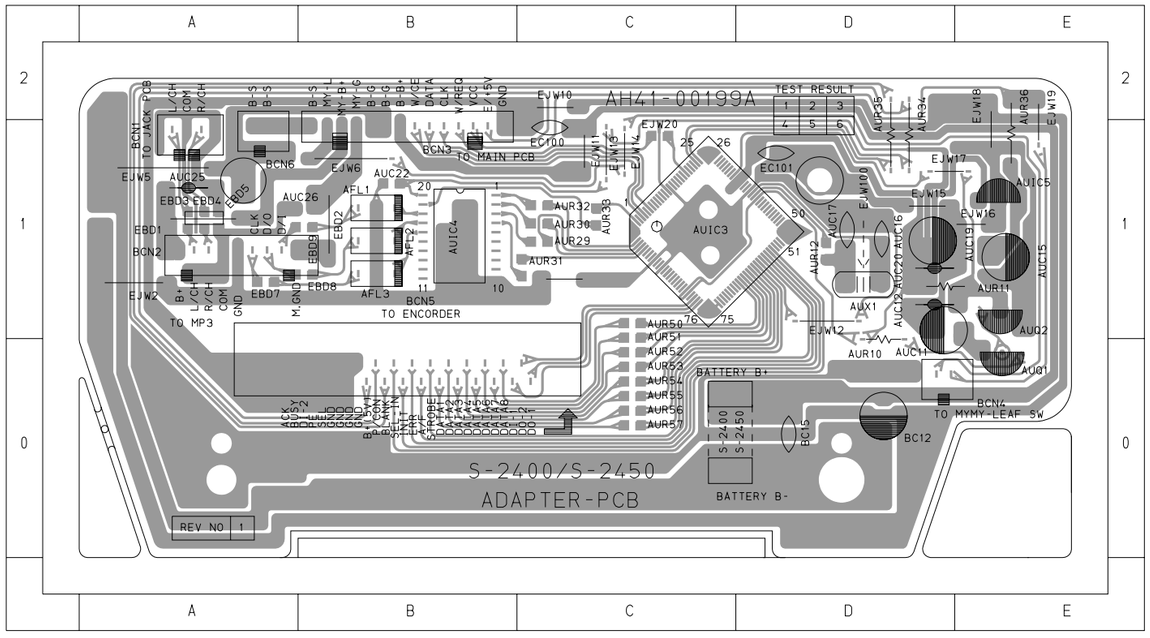
BIC2 (A1)
BQ10 (B0)
BQ2 (C0)
BQ4 (B1)
BQ5 (D1)
BQ6 (B1)
BQ7 (B1)
BQ8 (B0)
BQ9 (C1)



*** IC&WAFER ***

LCW1 (B0)
LCW2 (A0)

6-10 Adapter/Batt-Sense

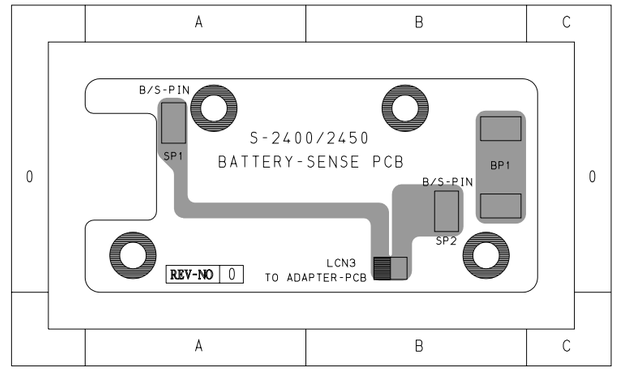


*** TR ***

AUIC5 (E1)
AUQ1 (E0)
AUQ2 (E1)

*** IC&WAFER ***

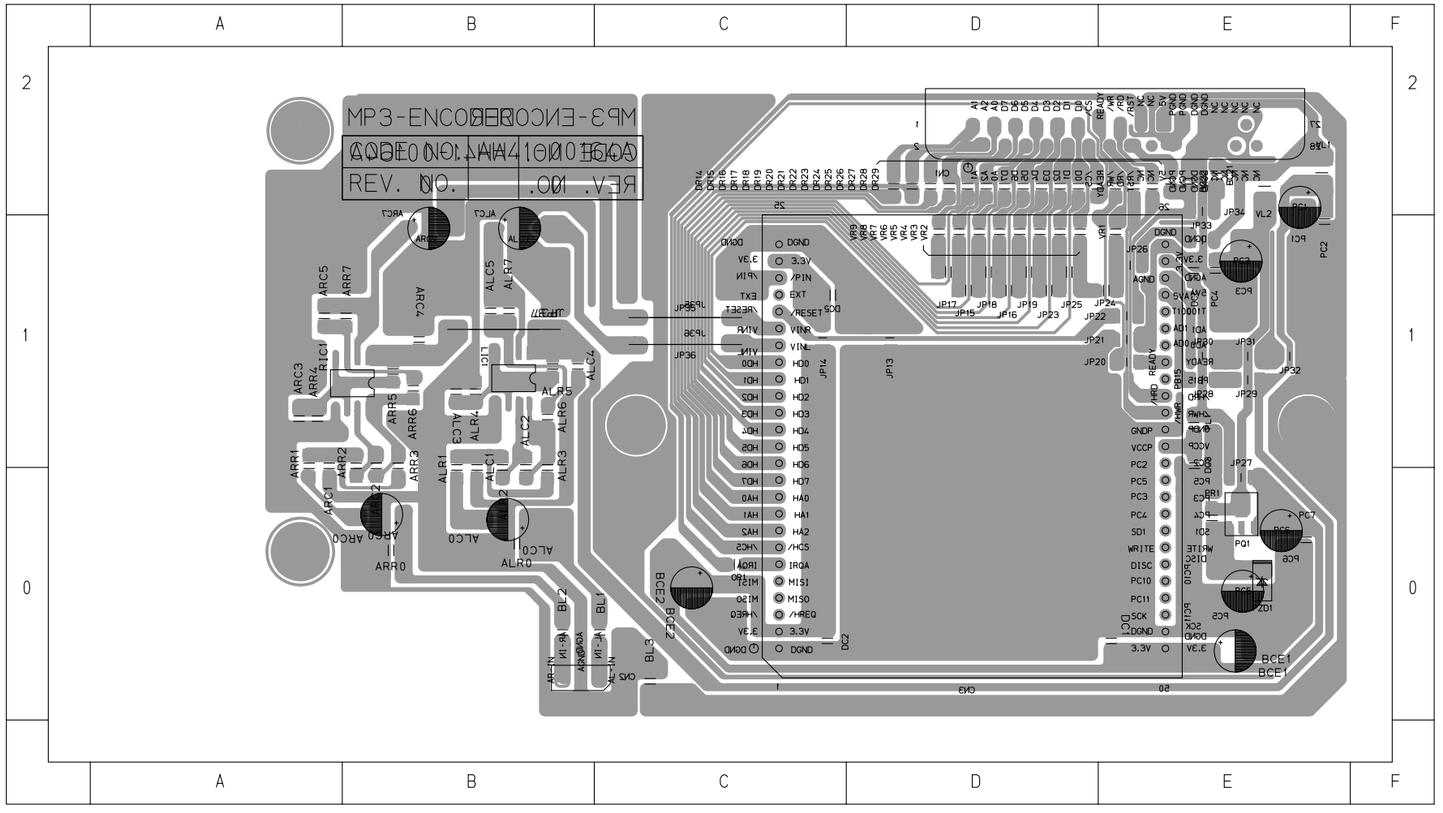
BCN1 (A1)
BCN2 (A1)
BCN3 (B1)
BCN4 (D0)
BCN6 (A1)



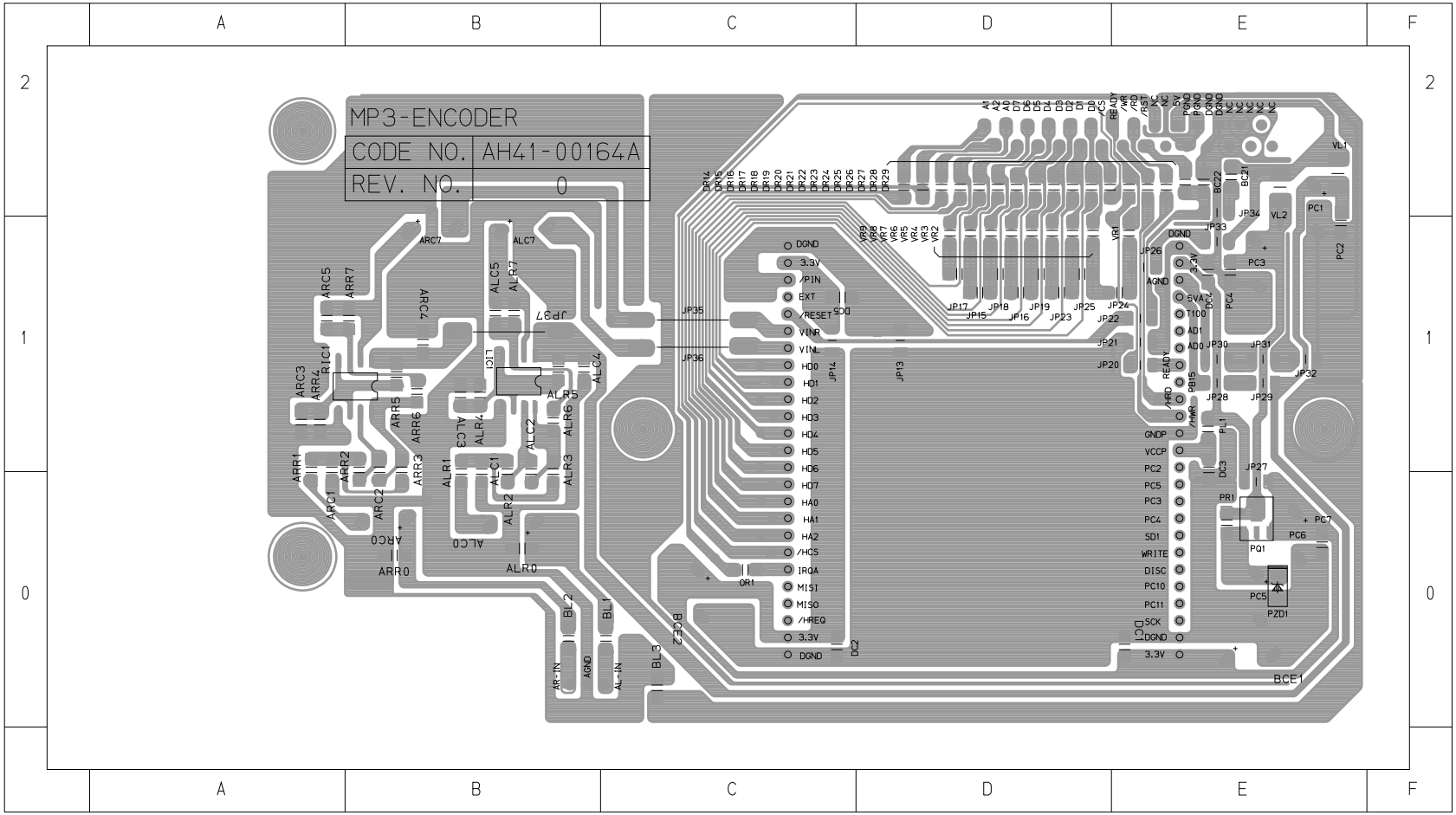
*** IC&WAFER ***

LCN3 (B0)

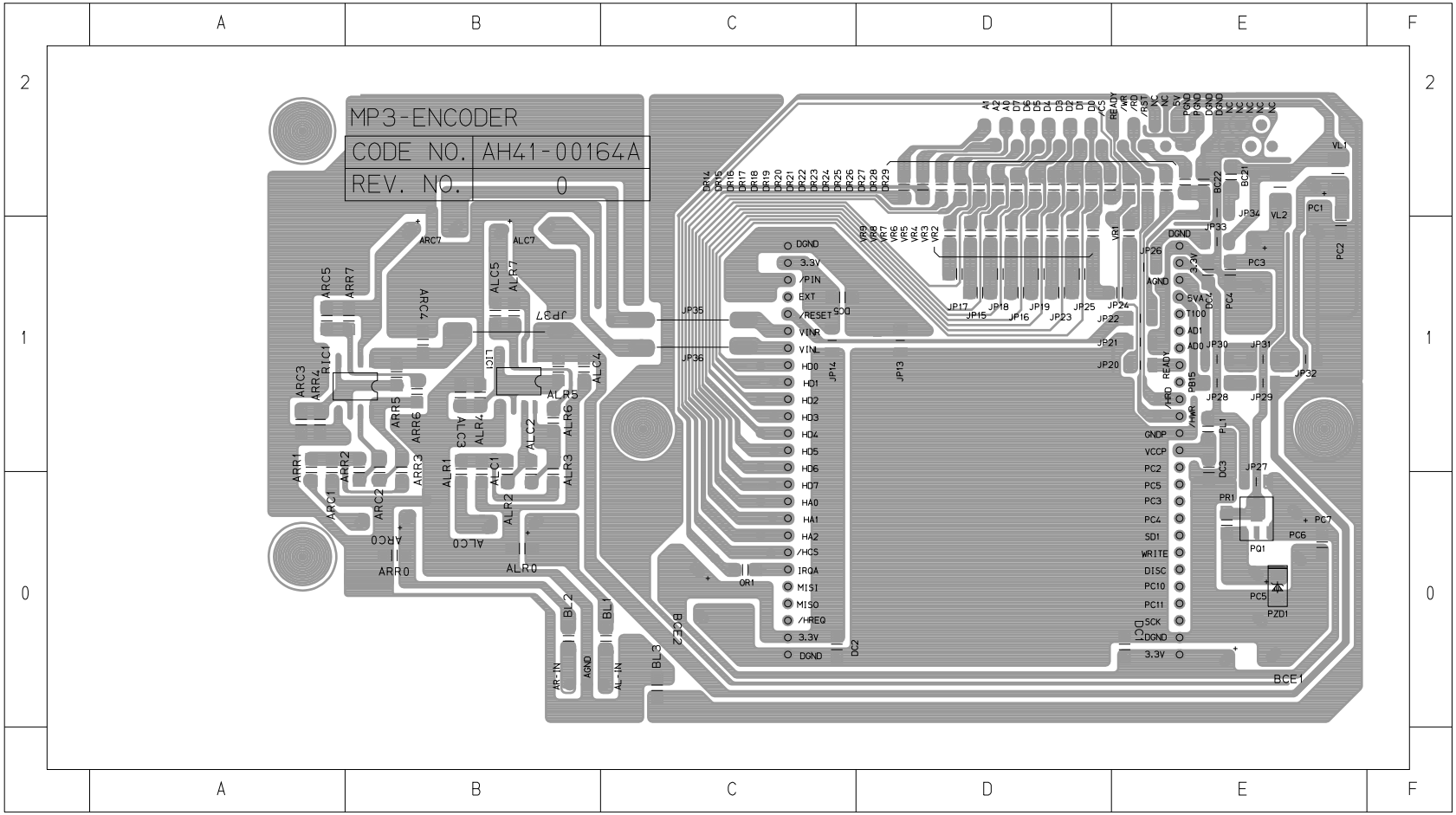
6-11 ENCODER



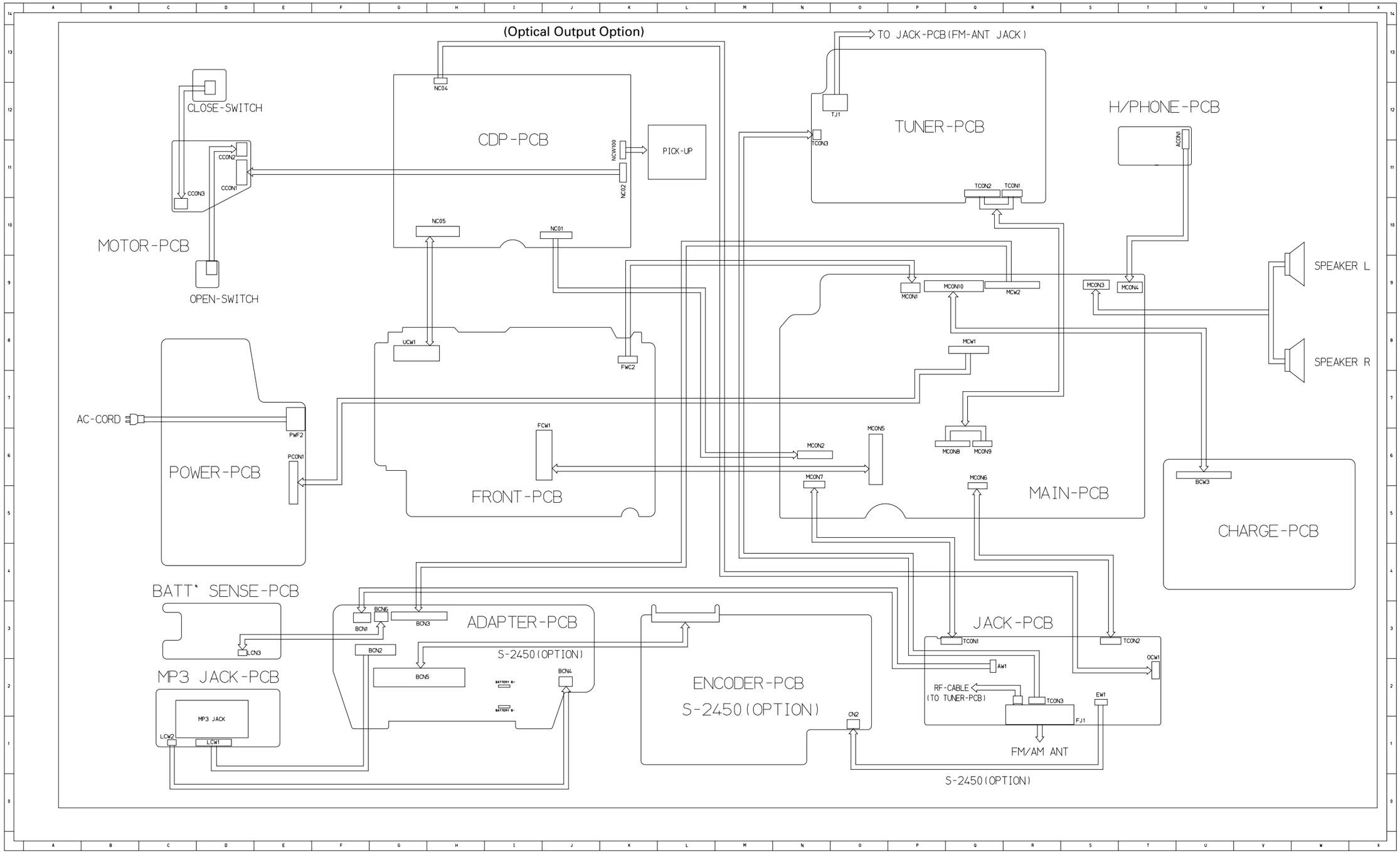
ENCODER PCB DIAGRAM (only S2450 Model)



ENCODER PCB DIAGRAM (only S2450 Model)

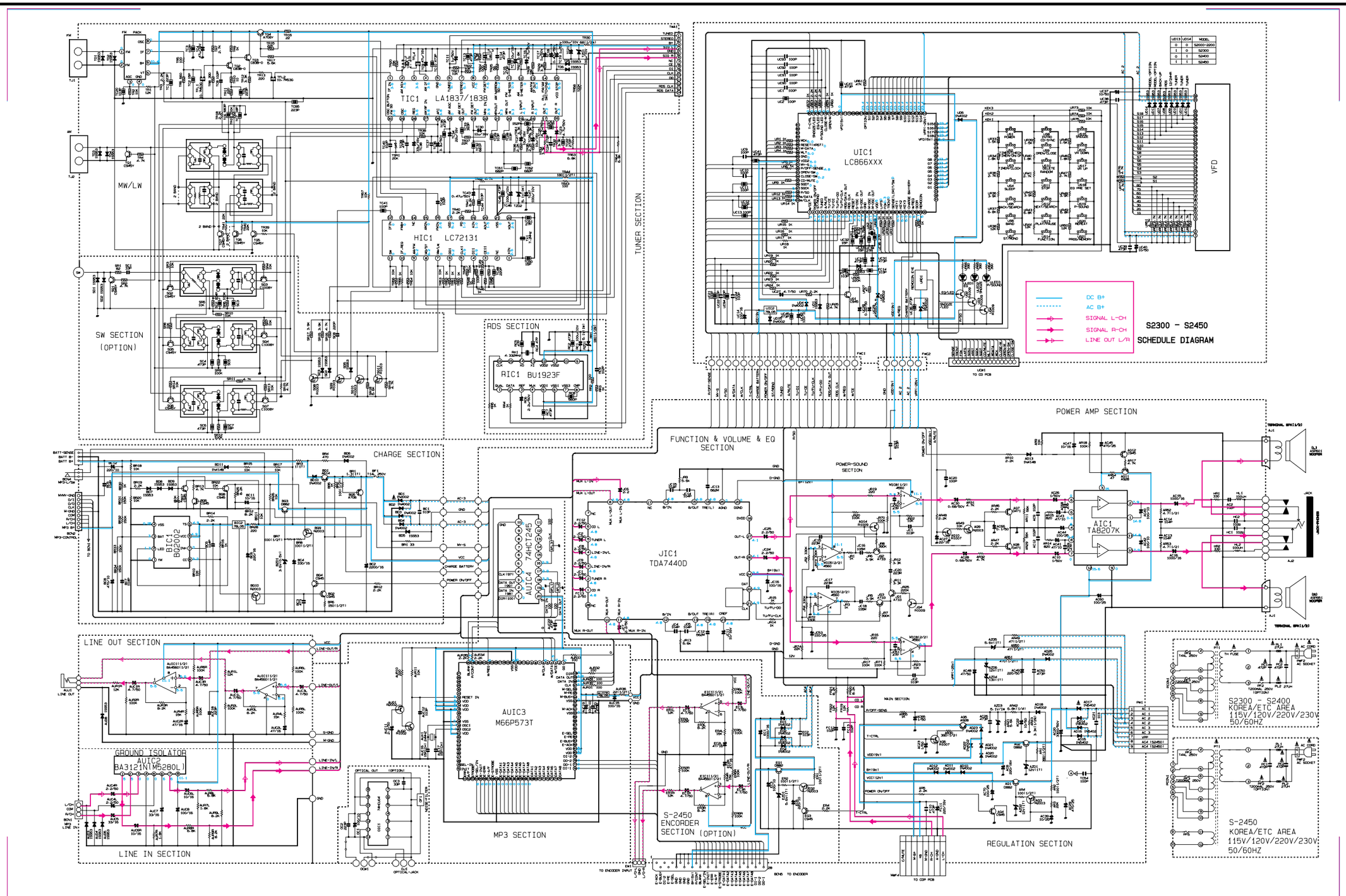


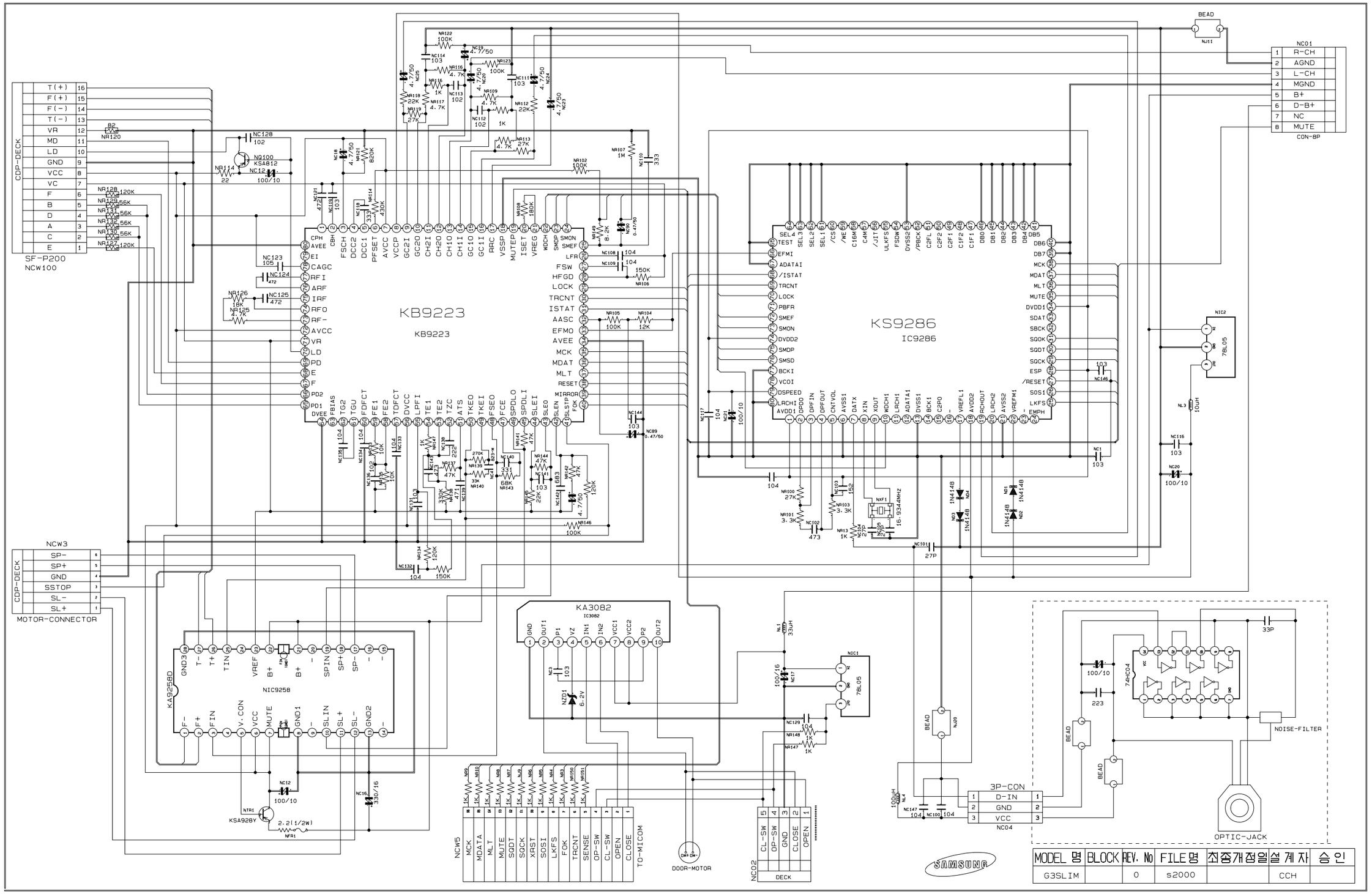
7. Wiring Diagram

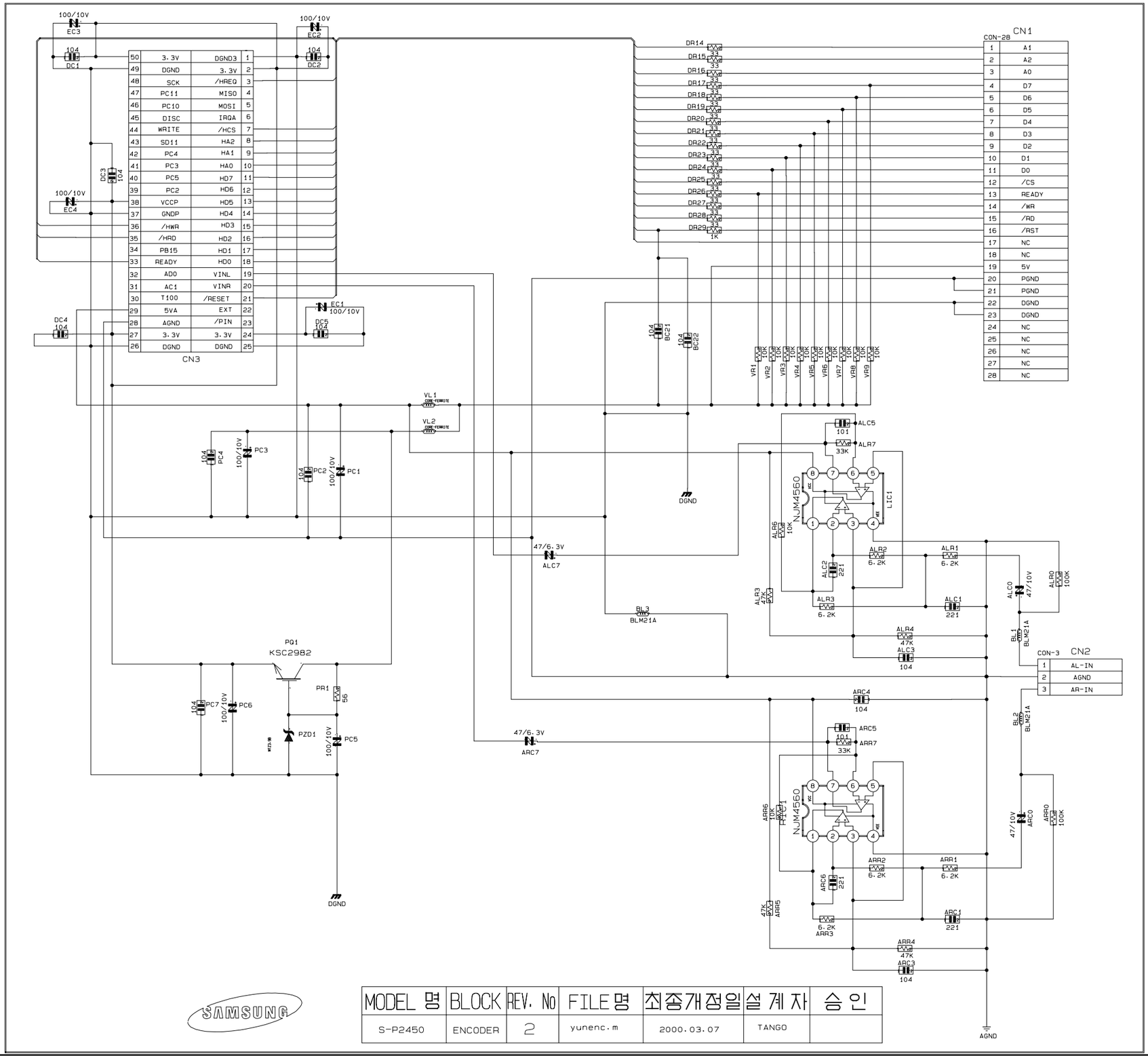


8. Schematic Diagram

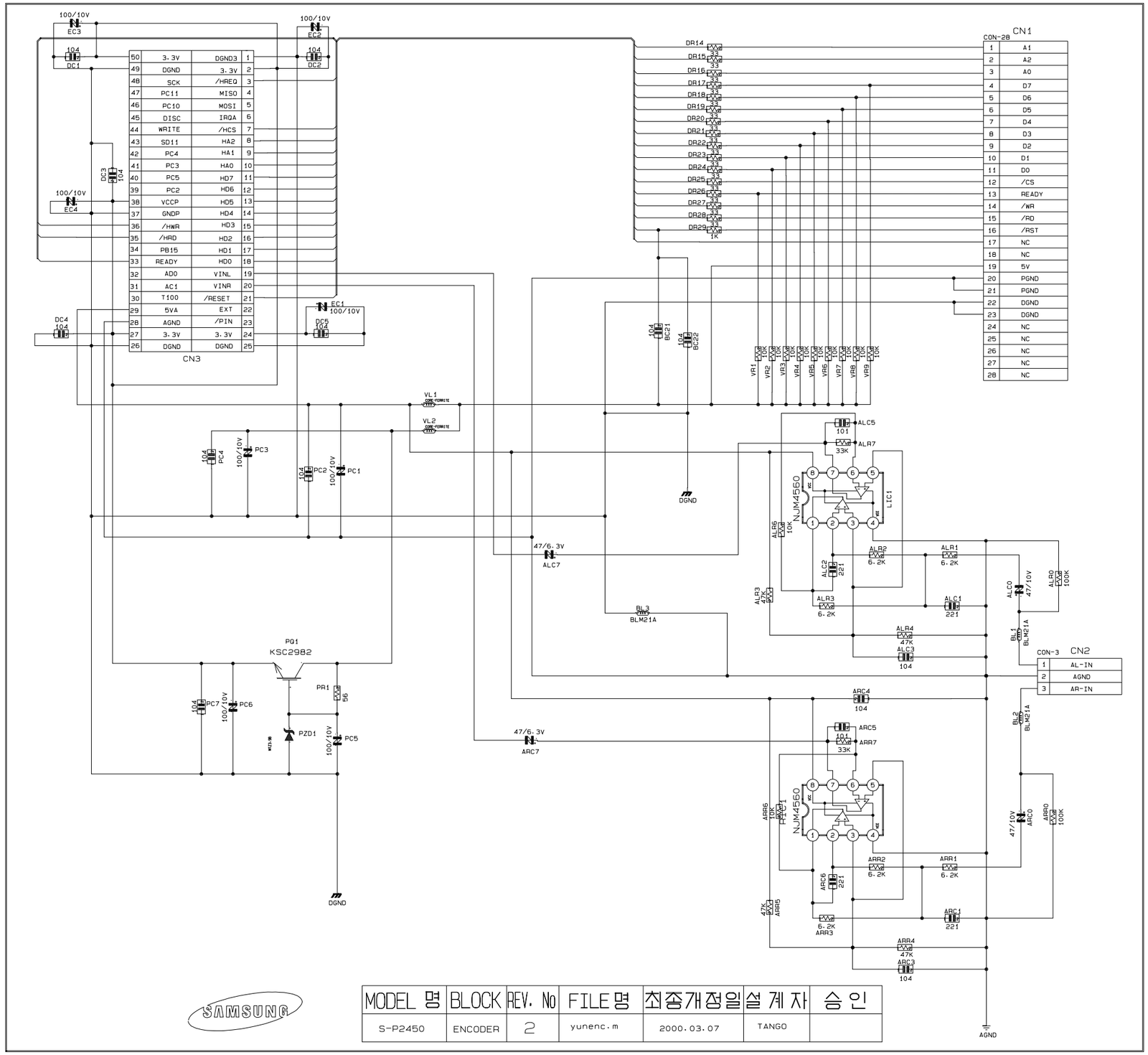
8-1 Main Part



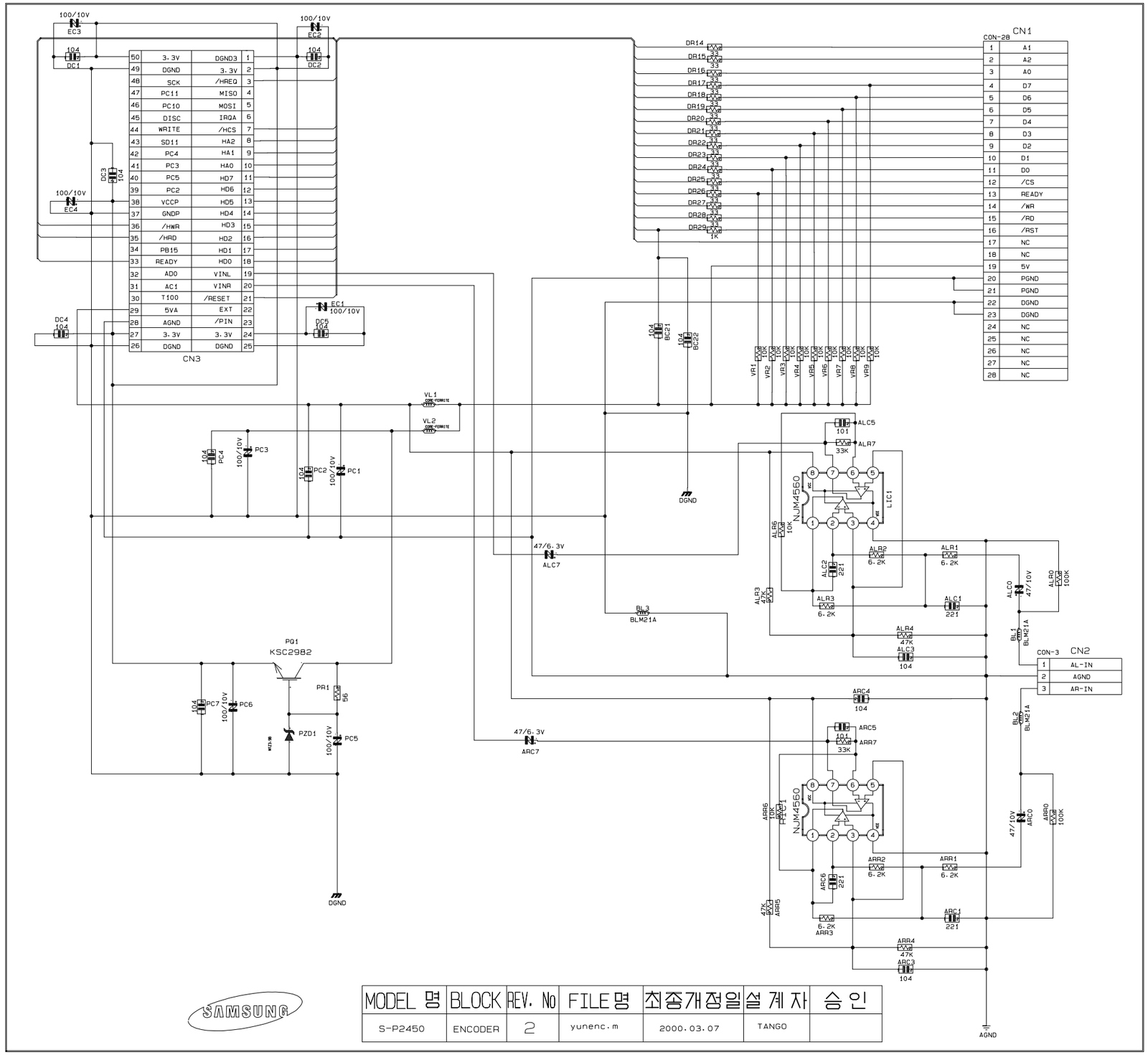

CDP-DECK
SF-P200
NCW100
KB9223
KB9223
KS9286
IC9286
KA3082
IC3082
KA9258D
NIC9258
NCW3
MOTOR-CONNECTOR
NCW5
TO-MICOM
DOOR-MOTOR
NCO2
DECK
CON-BP
3P-CON
NOISE-FILTER
OPTIC-JACK
BEAD
7BL05
74HC04
KSA928BY
NZD1 6.2V
NXF1 16.9344MHz
1N4148
MODEL 명 | BLOCK | REV. NO | FILE명 | 최종개정일 | 설 계 자 | 승 인
G3SLIM | | 0 | s2000 | | CCH |
SAMSUNG


CN3
CN1
CON-28
CN2
CON-3
NJM4560
KSC2982
PZD1
DGND
AGND
MODEL 명 | BLOCK | REV. No | FILE명 | 최종개정일 | 설 계 자 | 승 인
S-P2450 | ENCODER | 2 | yunenc.m | 2000.03.07 | TANGO

ENCODER SCHEMATIC DIAGRAM (only S2450 Model)



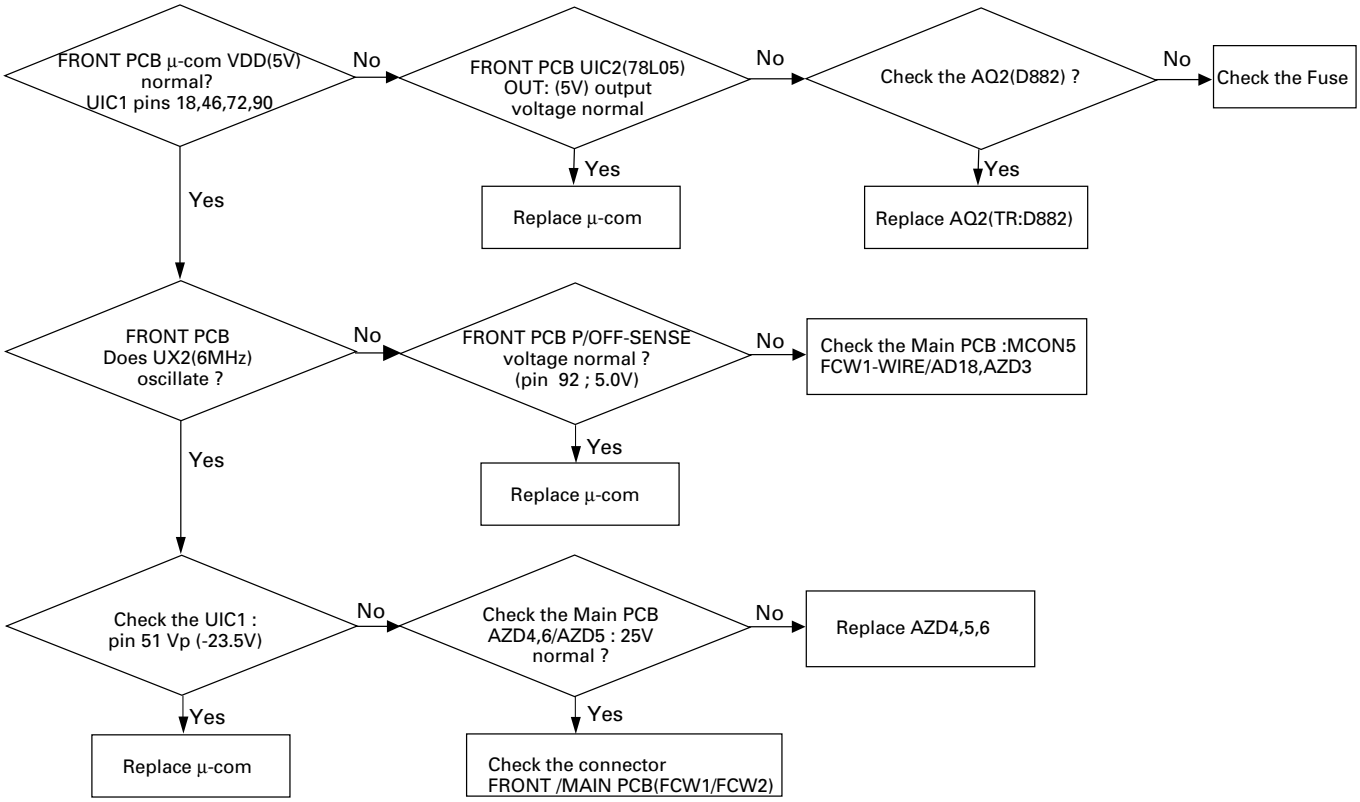
ENCODER SCHEMATIC DIAGRAM (only S2450 Model)



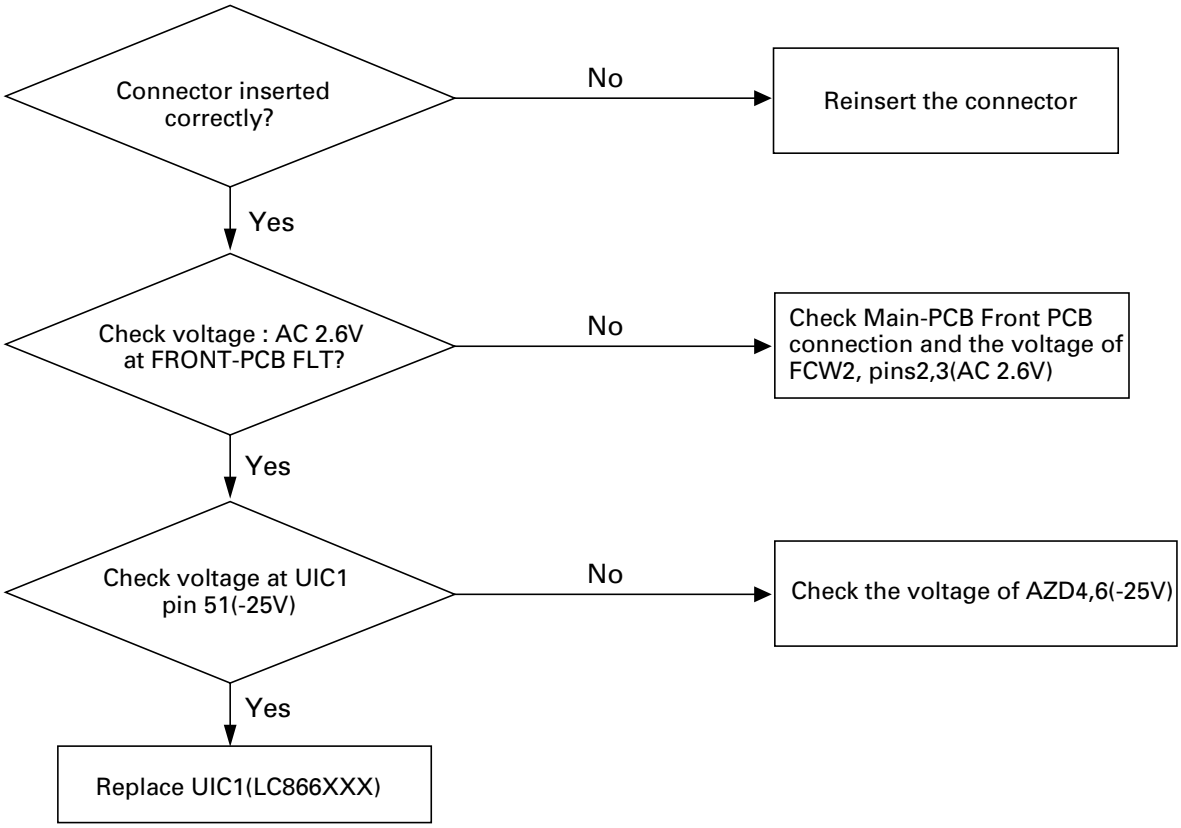
9. Troubleshooting

9-1 Amplifier

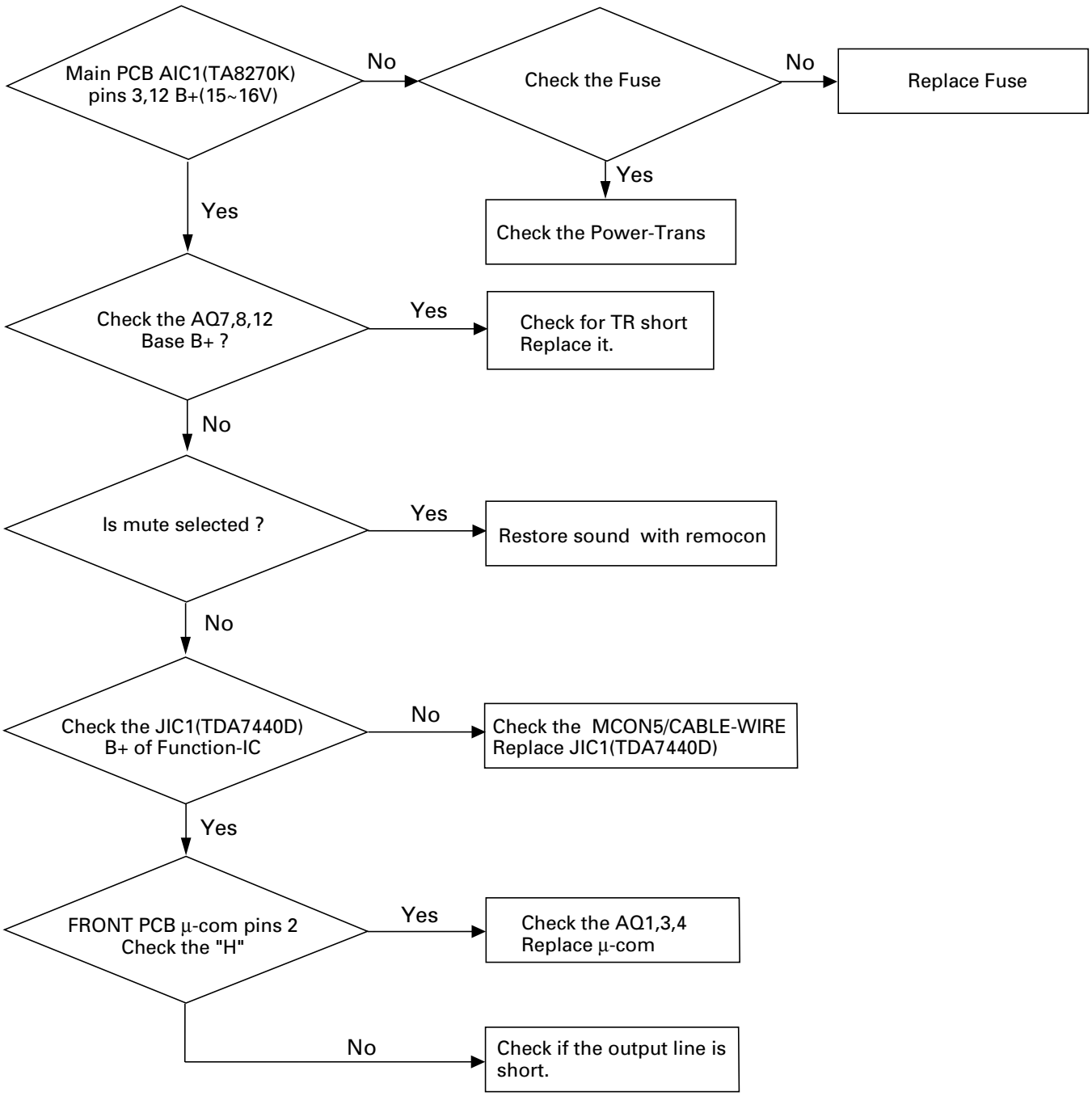
9-1-1 Power Malfunction



9-1-2 FLT Malfunction

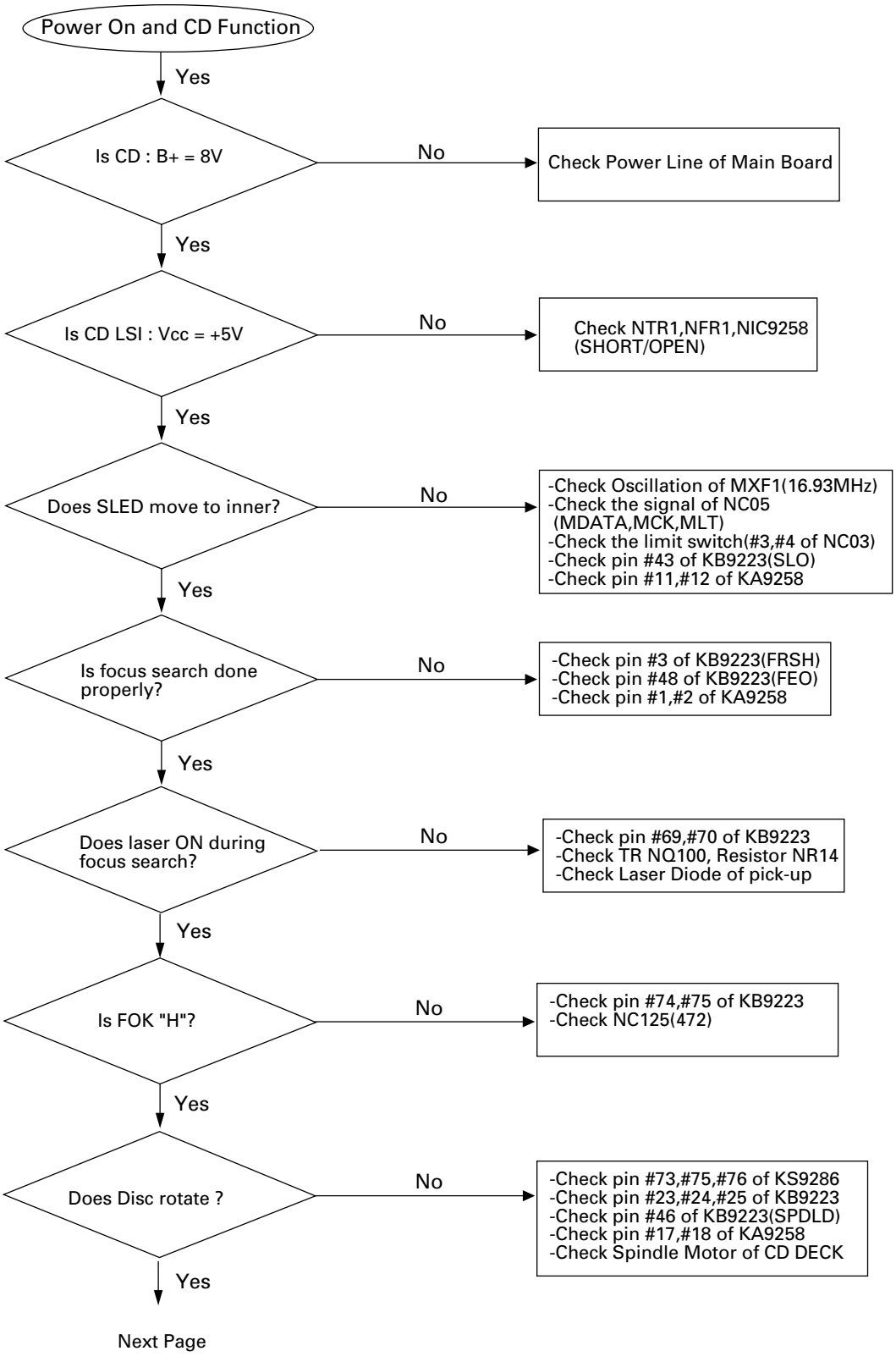


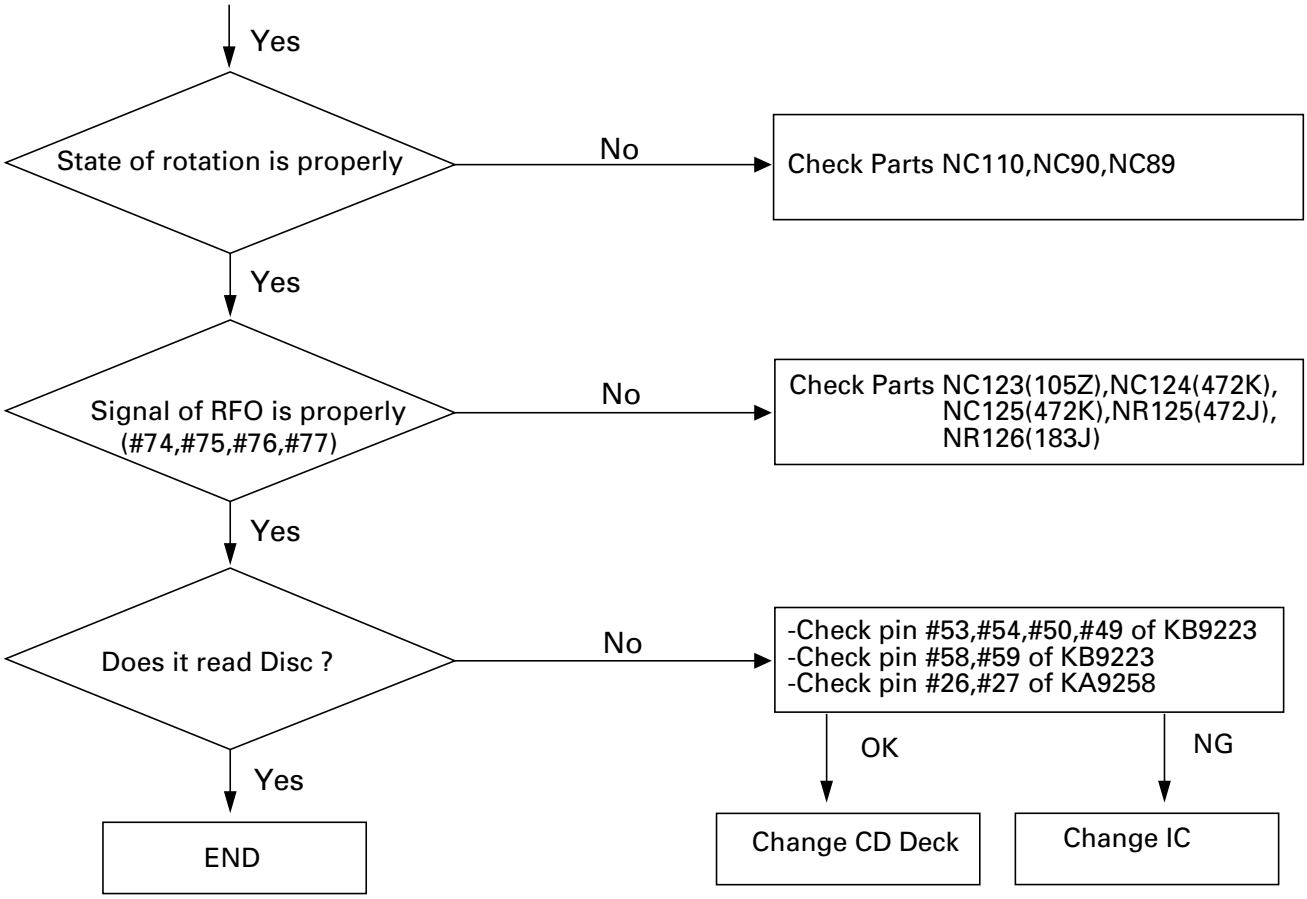
9-1-3 No Output



9-2 CD

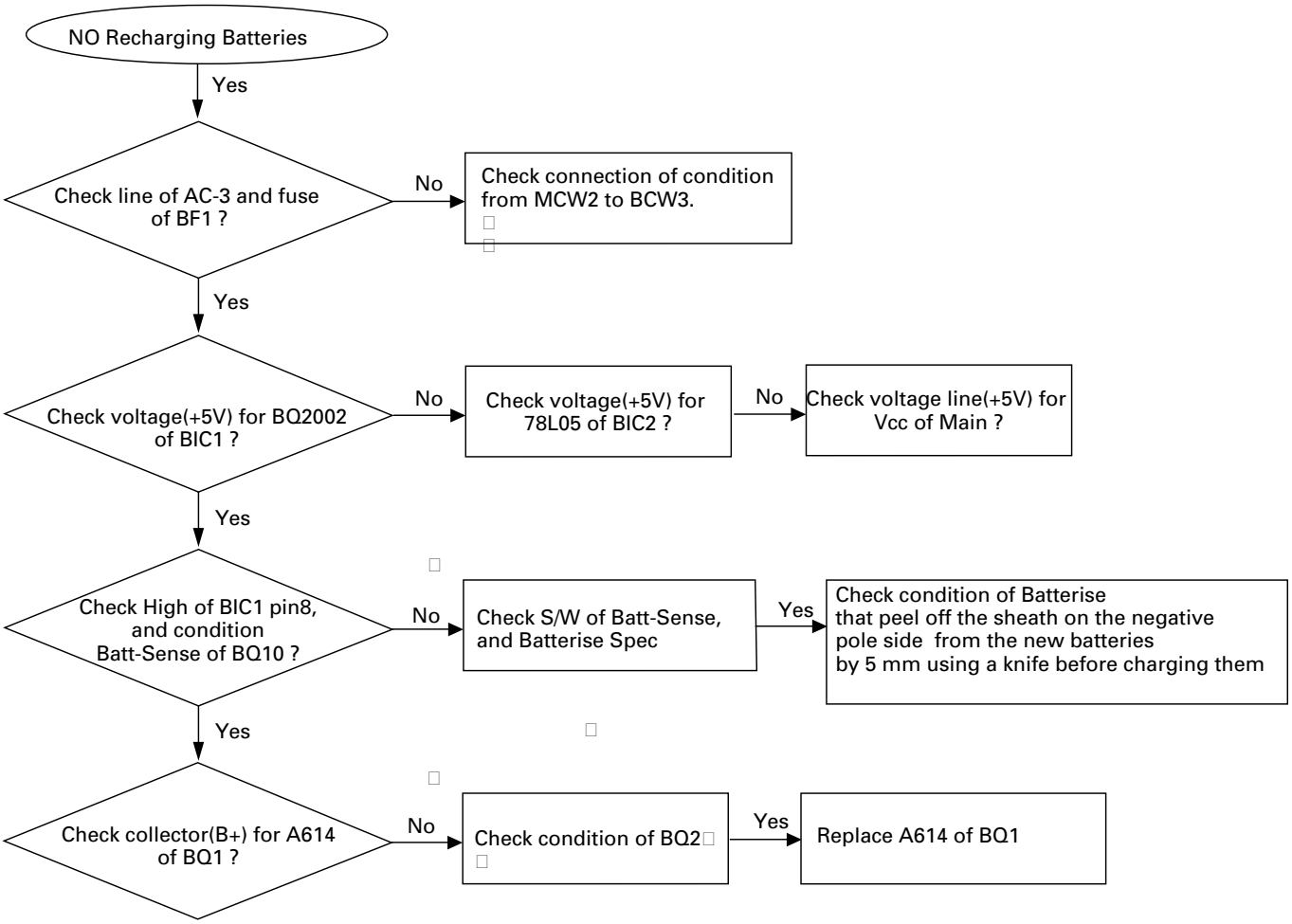
9-2-1 Disc Revolution Malfunction




Yes
State of rotation is properly
No
Check Parts NC110,NC90,NC89
Yes
Signal of RFO is properly
(#74,#75,#76,#77)
No
Check Parts NC123(105Z),NC124(472K),
NC125(472K),NR125(472J),
NR126(183J)
Yes
Does it read Disc ?
No
-Check pin #53,#54,#50,#49 of KB9223
-Check pin #58,#59 of KB9223
-Check pin #26,#27 of KA9258
OK
NG
Yes
END
Change CD Deck
Change IC

9-3 MP3

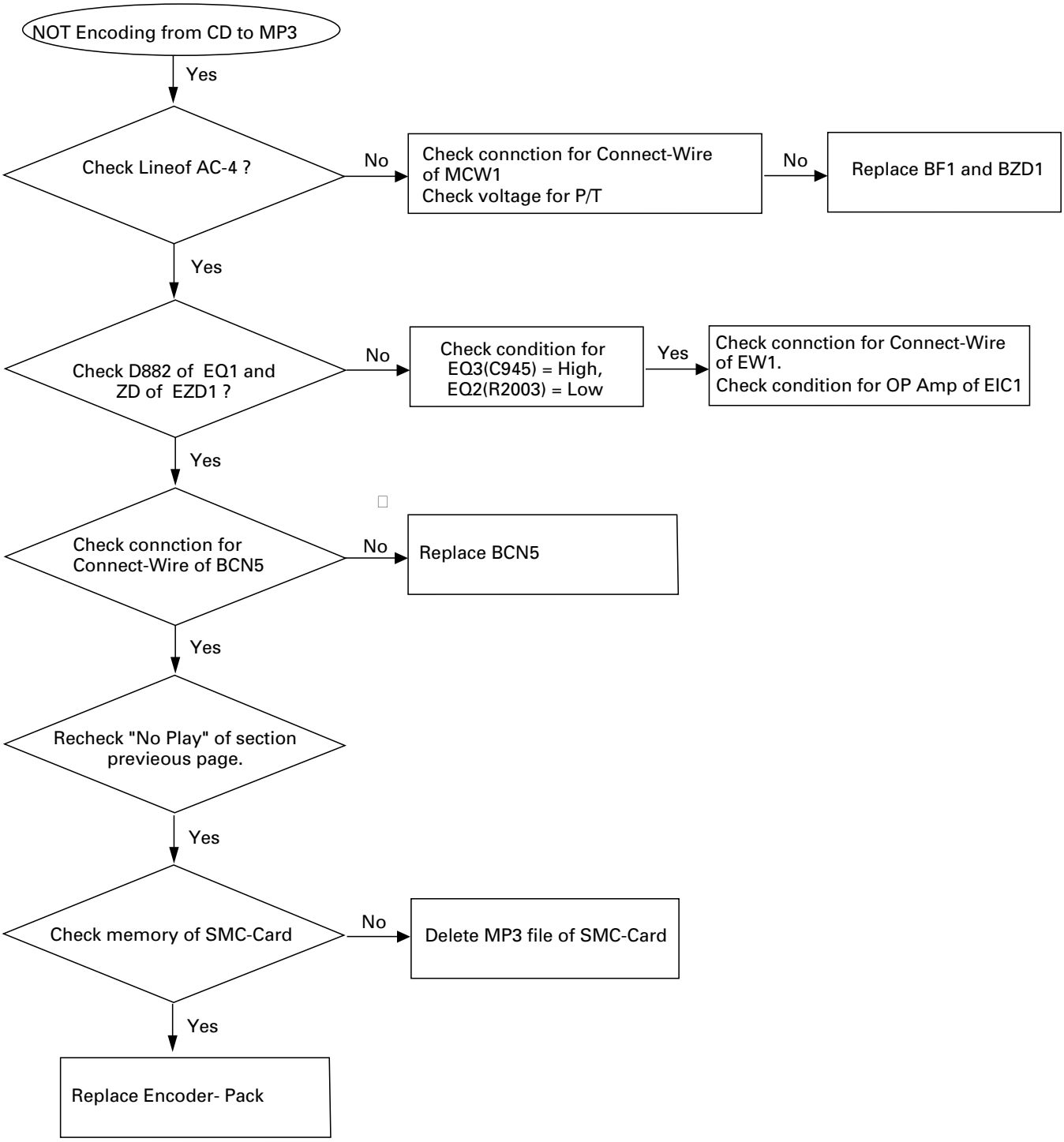
9-3-1 Recharge



9-3-2 No play


NO PLAY
Yes
Check connection of Con-wire for LCW1,MCW2,BCW3.
No
Check FUSE of BF1 and voltage(+4.7V) for Z-Diode of BZD1 ?
No
Replace BF1 and BZD1
Yes
Check Lineof AC-3 ?
Yes
Check voltage(+5V) for B+ of AUIC3,AUIC4 ?
No
Check voltage(+5V) for B+ of AUIC5 ?
No
Check voltage line(+5V) for Vcc of AQ1 ?
Yes
Check High for pin3,6,20 of AUIC3 ?
No
Check connction for Flat-Cable from FCW1 to MCON5.
Yes
Check oscillation(24MHz) of AUX1 ?
No
Replace AUX1
Yes
Check circuit of AUIC3,AUIC4 and short
No
Replace AUIC3,AUIC4

9-3-3 Encoding ;Only S-2450



10. IC Internal Diagram

10-1 74HCT245 ; AUIC4

National Semiconductor

August 1996

MM74HCT245
Octal TRI-STATE® Transceiver

General Description

This TRI-STATE bi-directional buffer utilizes advanced silicon-gate CMOS technology and is intended for two-way asynchronous communication between data buses. It has high drive current outputs which enable high speed operation even when driving large bus capacitances. This circuit possesses the low power consumption of CMOS circuitry, yet has speeds comparable to low power Schottky TTL circuits.

This device is TTL input compatible and can drive up to 15 LS-TTL loads, and all inputs are protected from damage due to static discharge by diodes to V_{CC} and ground.

The MM74HCT245 has one active low enable input ($\overline{G}$), and a direction control (DIR). When the DIR input is high, data flows from the A inputs to the B outputs. When DIR is low, data flows from B to A.

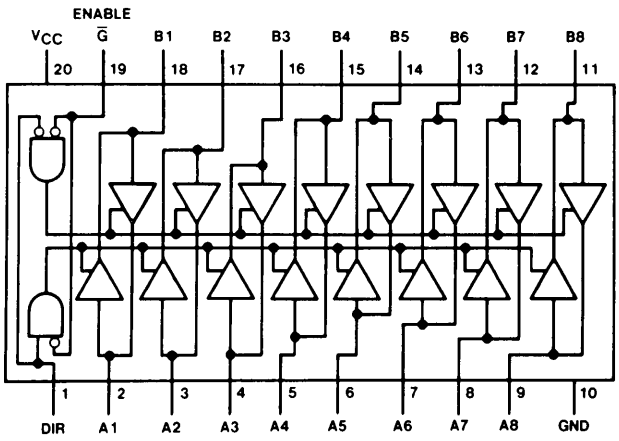
MM74HCT devices are intended to interface between TTL and NMOS components and standard CMOS devices. These parts are also plug-in replacements for LS-TTL devices and can be used to reduce power consumption in existing designs.

Features

- TTL input compatible
- TRI-STATE outputs for connection to system busses
- High output drive current: 6 mA (min)
- High speed: 16 ns typical propagation delay
- Low power: 80 μA (74HCT Series)

Connection Diagram

Dual-In-Line Package



TL/F/5366–1

Top View

Order Number MM74HCT245

Truth Table

Control Inputs		Operation
$\overline{G}$	DIR	245
L	L	B data to A bus
L	H	A data to B bus
H	X	isolation

H = high level L = low level, X = irrelevant

TRI-STATE® is a registered trademark of National Semiconductor Corp.

Absolute Maximum Ratings (Notes 1 & 2)

If Military/Aerospace specified devices are required, please contact the National Semiconductor Sales Office/Distributors for availability and specifications.

Supply Voltage (V_{CC})	−0.5 to +7.0V
DC Input Voltage (V_{IN})	−1.5 to V_{CC} +1.5V
DC Output Voltage (V_{OUT})	−0.5 to V_{CC} +0.5V
Clamp Diode Current (I_{IK}, I_{OK})	±20 mA
DC Output Current, per pin (I_{OUT})	±35 mA
DC V_{CC} or GND Current, per pin (I_{CC})	±70 mA
Storage Temperature Range (T_{STG})	−65°C to +150°C
Power Dissipation (P_D)	
(Note 3)	600 mW
S.O. Package only	500 mW
Lead Temperature (T_L)	
(Soldering 10 seconds)	260°C

Operating Conditions

	Min	Max	Units
Supply Voltage (V_{CC})	4.5	5.5	V
DC Input or Output Voltage (V_{IN}, V_{OUT})	0	V_{CC}	V
Operating Temp. Range (T_A)			
MM74HCT	−40	+85	°C
Input Rise or Fall Times (t_r, t_f)		500	ns

DC Electrical Characteristics (V_{CC} = 5V ± 10%, unless otherwise specified.)

Symbol	Parameter	Conditions	T_A = 25°C	74HCT T_A = −40 to 85°C	T_A = 125°C	Units
			Typ	Guaranteed Limits		
V_{IH}	Minimum High Level Input Voltage			2.0	2.0	2.0	V
V_{IL}	Maximum Low Level Input Voltage			0.8	0.8	0.8	V
V_{OH}	Minimum High Level Output Voltage	V_{IN} = V_{IH} or V_{IL}					
		$\|I_{OUT}\|$ = 20 μA	V_{CC}	V_{CC} −0.1	V_{CC} −0.1	V_{CC} −0.1	V
		$\|I_{OUT}\|$ = 6.0 mA, V_{CC} = 4.5V	4.2	3.98	3.84	3.7	V
		$\|I_{OUT}\|$ = 7.2 mA, V_{CC} = 5.5V	5.2	4.98	4.84	4.7	V
V_{OL}	Maximum Low Level Voltage	V_{IN} = V_{IH} or V_{IL}					
		$\|I_{OUT}\|$ = 20 μA	0	0.1	0.1	0.1	V
		$\|I_{OUT}\|$ = 6.0 mA, V_{CC} = 4.5V	0.2	0.26	0.33	0.4	V
		$\|I_{OUT}\|$ = 7.2 mA, V_{CC} = 5.5V	0.2	0.26	0.33	0.4	V
I_{IN}	Maximum Input Current	V_{IN} = V_{CC} or GND, V_{IH} or V_{IL}, Pin 1 or 19		±0.1	±1.0	±1.0	μA
I_{OZ}	Maximum TRI-STATE Output Leakage Current	V_{OUT} = V_{CC} or GND $\overline{G}$ = V_{IH}		±0.5	±5.0	±10	μA
I_{CC}	Maximum Quiescent Supply Current	V_{IN} = V_{CC} or GND I_{OUT} = 0 μA		8	80	160	μA
		V_{IN} = 2.4V or 0.5V (Note 4)	0.6	1.0	1.3	1.5	mA

Note 1: Absolute Maximum Ratings are those values beyond which damage to the device may occur.

Note 2: Unless otherwise specified all voltages are referenced to ground.

Note 3: Power Dissipation temperature derating — plastic "N" package: −12 mW/°C from 65°C to 85°C.

Note 4: Measured per input. All other inputs at V_{CC} or ground.

AC Electrical Characteristics MM74HCT245

V_{CC} = 5.0V, $t_r = t_f$ = 6 ns, T_A = 25°C (unless otherwise specified)

Symbol	Parameter	Conditions	Typ	Guaranteed Limit	Units
t_{PHL}, t_{PLH}	Maximum Output Propagation Delay	C_L = 45 pF	16	20	ns
t_{PZL}, t_{PZH}	Maximum Output Enable Time	C_L = 45 pF R_L = 1 kΩ	29	40	ns
t_{PLZ}, t_{PHZ}	Maximum Output Disable Time	C_L = 5 pF R_L = 1 kΩ	20	25	ns

AC Electrical Characteristics MM74HCT245

V_{CC} = 5.0V ±10%, $t_r = t_f$ = 6 ns (unless otherwise specified)

Symbol	Parameter	Conditions	T_A = 25°C	74HCT T_A = −40 to 85°C		T_A = 125°C	Units
			Typ	Guaranteed Limits			
t_{PHL}, t_{PLH}	Maximum Output Propagation Delay	C_L = 50 pF	17	23	29	34	ns
		C_L = 150 pF	24	30	38	45	ns
t_{PZL}	Maximum Output Enable Time	R_L = 1 kΩ C_L = 50 pF	31	42	53	63	ns
t_{PZH}	Maximum Output Enable Time	R_L = 1 kΩ C_L = 50 pF	23	33	41	49	ns
t_{PHZ}, t_{PLZ}	Maximum Output Disable Time	R_L = 1 kΩ C_L = 50 pF	21	30	38	45	ns
t_{THL}, t_{TLH}	Maximum Output Rise and Fall Time	C_L = 50 pF	8	12	15	18	ns
C_{IN}	Maximum Input Capacitance		10	15	15	15	pF
C_{OUT}	Maximum Output/Input Capacitance		20	25	25	25	pF
C_{PD}	Power Dissipation Capacitance	(Note 5) $\overline{G}$ = V_{CC} GND $\overline{G}$ =	7 100				pF pF

Note 5: C_{PD} determines the no load power consumption, $P_D = C_{PD} V_{CC}^2 f + I_{CC} V_{CC}$, and the no load dynamic current consumption, $I_S = C_{PD} V_{CC} f + I_{CC}$.

10-2 BA3121N ; AUIC2

Audio ICs

Ground isolation amplifier

BA3121 / BA3121F / BA3121N

The BA3121,BA3121F and BA3121N are ground isolation amplifiers developed for use in car audio applications. These ICs efficiently eliminate problems caused by wiring resistance, and remove noise generated by the electrical devices used in automobiles. The capacitance values of the external capacitors required for the ICs are small to allow compact and reliable set design.

●Applications
Car audio systems

●Features
1) Large capacitors not required
2) High common-mode rejection ratio (57dB typ. at f = 1kHz).
3) Low noise (V_{NO} = 3.5μVrms Typ.).
4) Low distortion (THD = 0.002% Typ.).
5) Two channels.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V_{CC}	18	V
Power dissipation	Pd	800 (BA3121)*	mW
		450 (BA3121F)*	
		900 (BA3121N)*	
Operating temperature	Topr	−30～+85	℃
Storage temperature	Tstg	−55～+125	℃

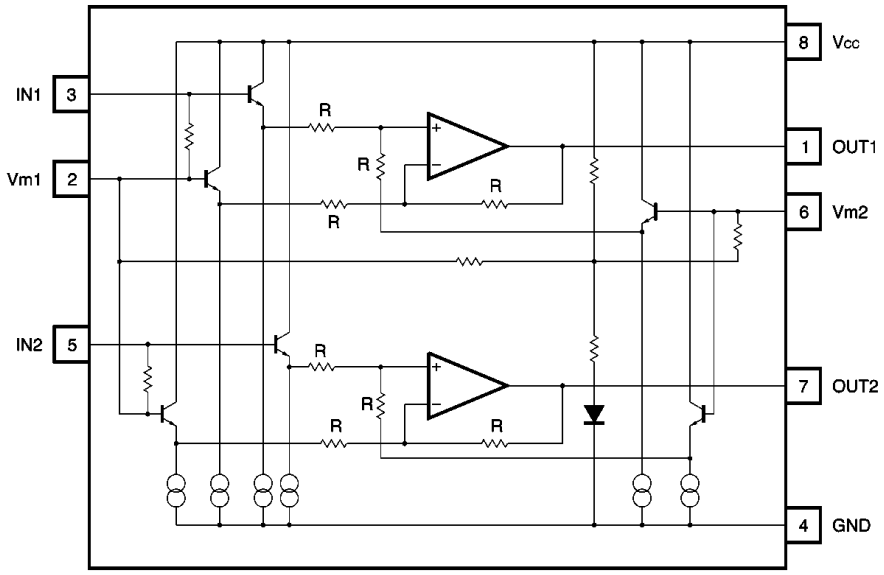
* Reduced by 8.0mW (BA3121), 4.5mW (BA3121F), and 9.0mW (BA3121N) for each increase in Ta of 1°C over 25°C.

●Recommended operating conditions (Ta = 25°C)

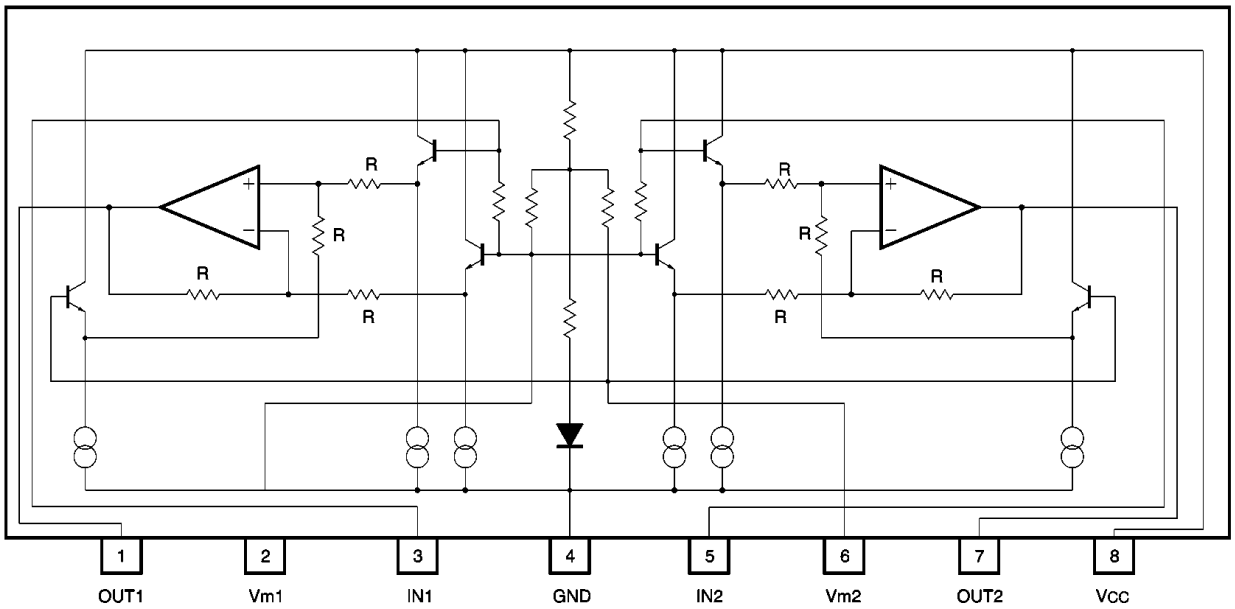
Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	V_{CC}	4	12	18	V

●Block diagrams

BA3121 / BA3121F



BA3121N



●Electrical characteristics (unless otherwise noted, Ta = 25°C, V_{CC} = 12V, f = 1kHz, R_g = 1.8kΩ)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Quiescent current	I_Q	5.6	9.0	14.0	mA	V_{IN}=0V_{rms}
Output noise voltage	V_{NO}	—	3.5	8.0	μV_{rms}	BPF=20Hz~20kHz
Voltage gain	G_V	−1.5	−0.04	1.5	dB	V_O=−10dBm, R_g=0Ω
Maximum output voltage	V_{OM}	1.8	2.0	—	V_{rms}	THD=0.1%, V_{CC}=8V
Total harmonic distortion	THD	—	0.002	0.02	%	V_O=0.7V_{rms}
Common-mode rejection ratio	CMRR	41	57	—	dB	
Common-mode voltage	V_{CM}	2.5	3.75	—	V_{rms}	V_{CC}=8V, CMRR=40dB
Ripple rejection ratio	RR	72	80	—	dB	f_{RR}=100Hz, V_{RR}=−10dBm, R_g=0Ω
Channel separation	CS	—	82	—	dB	V_{IN}=−10dBm, R_g=1.8kΩ/OPEN
Slew rate	SR	—	2.0	—	V/μs	
Input resistance	R_{IN}	44	55	66	kΩ	

◎Not designed for radiation resistance.

Benchmarq Products from Texas Instruments

bq2002/F

NiCd/NiMH Fast-Charge Management ICs

Features

- Fast charge of nickel cadmium or nickel-metal hydride batteries
- Direct LED output displays charge status
- Fast-charge termination by -ΔV, maximum voltage, maximum temperature, and maximum time
- Internal band-gap voltage reference
- Optional top-off charge
- Selectable pulse trickle charge rates
- Low-power mode
- 8-pin 300-mil DIP or 150-mil SOIC

General Description

The bq2002 and bq2002/F Fast-Charge ICs are low-cost CMOS battery-charge controllers providing reliable charge termination for both NiCd and NiMH battery applications. Controlling a current-limited or constant-current supply allows the bq2002/F to be the basis for a cost-effective stand-alone or system-integrated charger. The bq2002/F integrates fast charge with optional top-off and pulsed-trickle control in a single IC for charging one or more NiCd or NiMH battery cells.

Fast charge is initiated on application of the charging supply or battery replacement. For safety, fast charge is inhibited if the battery temperature and voltage are outside configured limits.

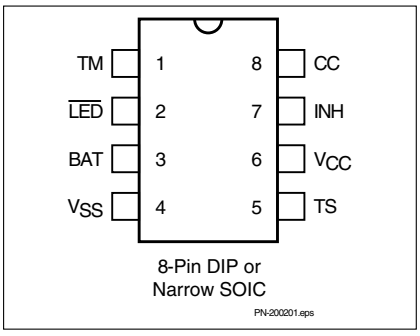
Fast charge is terminated by any of the following:

- Peak voltage detection (PVD)
- Negative delta voltage (-ΔV)
- Maximum voltage
- Maximum temperature
- Maximum time

After fast charge, the bq2002/F optionally tops-off and pulse-trickles the battery per the pre-configured limits. Fast charge may be inhibited using the INH pin. The bq2002/F may also be placed in low-standby-power mode to reduce system power consumption.

The bq2002F differs from the bq2002 only in that a slightly different set of fast-charge and top-off time limits is available. All differences between the two ICs are illustrated in Table 1.

Pin Connections



Pin Names

TM	Timer mode select input	TS	Temperature sense input
$\overline{LED}$	Charging status output	V_{CC}	Supply voltage input
BAT	Battery voltage input	INH	Charge inhibit input
V_{SS}	System ground	CC	Charge control output

bq2002/F Selection Guide

Part No.	TCO	HTF	LTF	-ΔV	PVD	Fast Charge	t_{MTO}	Top-Off	Maintenance
bq2002	0.5 * V_{CC}	None	None		✔	C/2	160	C/32	C/64
					✔	1C	80	C/16	C/64
				✔		2C	40	None	C/32
bq2002F	0.5 * V_{CC}	None	None		✔	C/2	160	C/32	C/64
					✔	1C	100	C/16	C/64
				✔		2C	55	None	C/32

SLUS131–JANUARY 1999 D

Pin Descriptions

TM **Timer mode input**

A three-level input that controls the settings for the fast charge safety timer, voltage termination mode, top-off, pulse-trickle, and voltage hold-off time.

$\overline{\text{LED}}$ **Charging output status**

Open-drain output that indicates the charging status.

BAT **Battery input voltage**

The battery voltage sense input. The input to this pin is created by a high-impedance resistor divider network connected between the positive and negative terminals of the battery.

V_{SS} **System ground**

TS **Temperature sense input**

Input for an external battery temperature monitoring thermistor.

V_{CC} **Supply voltage input**

5.0V ±20% power input.

INH **Charge inhibit input**

When high, INH suspends the fast charge in progress. When returned low, the IC resumes operation at the point where initially suspended.

CC **Charge control output**

An open-drain output used to control the charging current to the battery. CC switching to high impedance (Z) enables charging current to flow, and low to inhibit charging current. CC is modulated to provide top-off, if enabled, and pulse trickle.

Functional Description

Figure 2 shows a state diagram and Figure 3 shows a block diagram of the bq2002/F.

Battery Voltage and Temperature Measurements

Battery voltage and temperature are monitored for maximum allowable values. The voltage presented on the battery sense input, BAT, should represent a single-cell potential for the battery under charge. A resistor-divider ratio of

$$\frac{RB1}{RB2} = N - 1$$

is recommended to maintain the battery voltage within the valid range, where N is the number of cells, RB1 is the resistor connected to the positive battery terminal, and RB2 is the resistor connected to the negative battery terminal. See Figure 1.

Note: This resistor-divider network input impedance to end-to-end should be at least 200kΩ and less than 1 MΩ.

A ground-referenced negative temperature coefficient thermistor placed near the battery may be used as a low-cost temperature-to-voltage transducer. The temperature sense voltage input at TS is developed using a resistor-thermistor network between V_{CC} and V_{SS}. See Figure 1.

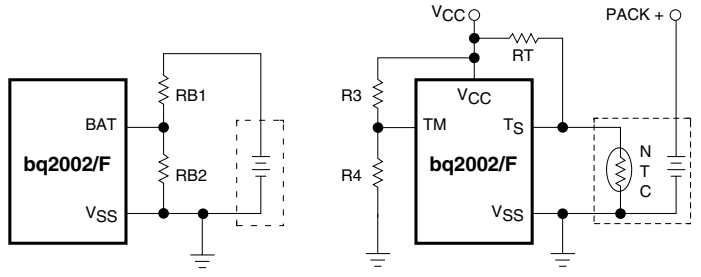


Figure 1. Voltage and Temperature Monitoring and TM Pin Configuration

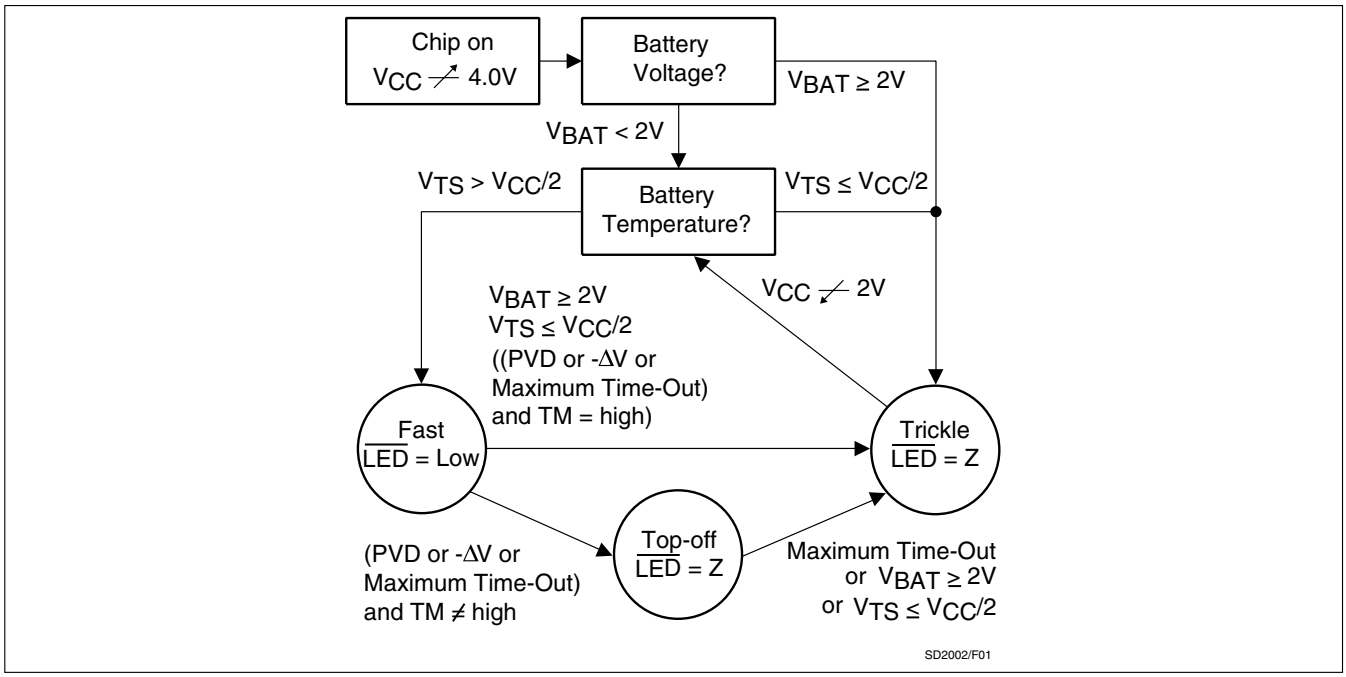


Figure 2. State Diagram

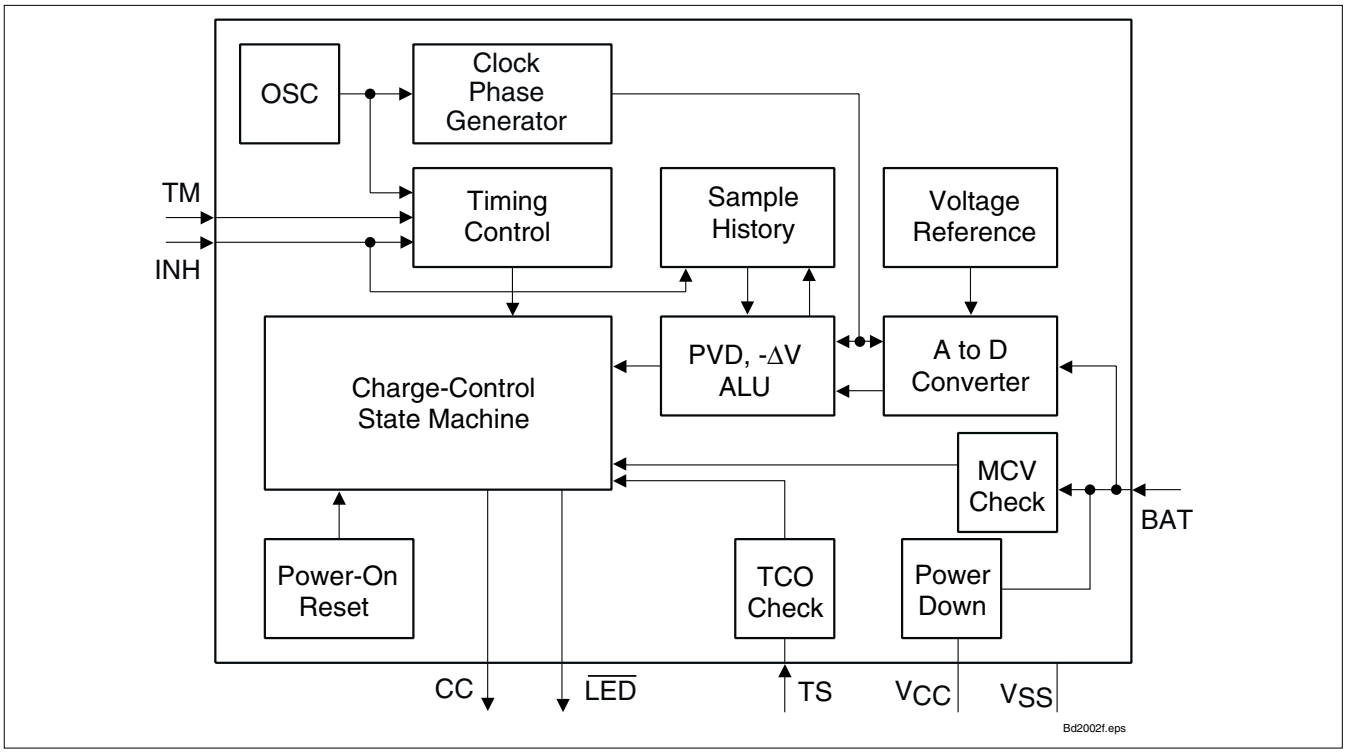


Figure 3. Block Diagram

10-4 BU1923F ; RIC1

Audio ICs

RDS / RBDS decoder

BU1923 / BU1923F

The BU1923 and BU1923F are RDS / RBDS decoders that employ a digital PLL and have a built-in anti-aliasing filter and an eight-stage BPF (switched-capacitor filter). Linear CMOS circuitry is used for low power consumption.

●Applications

RDS / RBDS compatible FM receivers for American and European markets, car stereos, high-fidelity stereo systems and components, and FM pagers.

●Features

1) Low current.
2) Two-stage anti-aliasing filter (LPF).
3) 57kHz band-pass filter.
4) DSB demodulation (digital PLL).
5) Quality indication output for demodulated data.

●Absolute maximum ratings (Ta = 25°C)

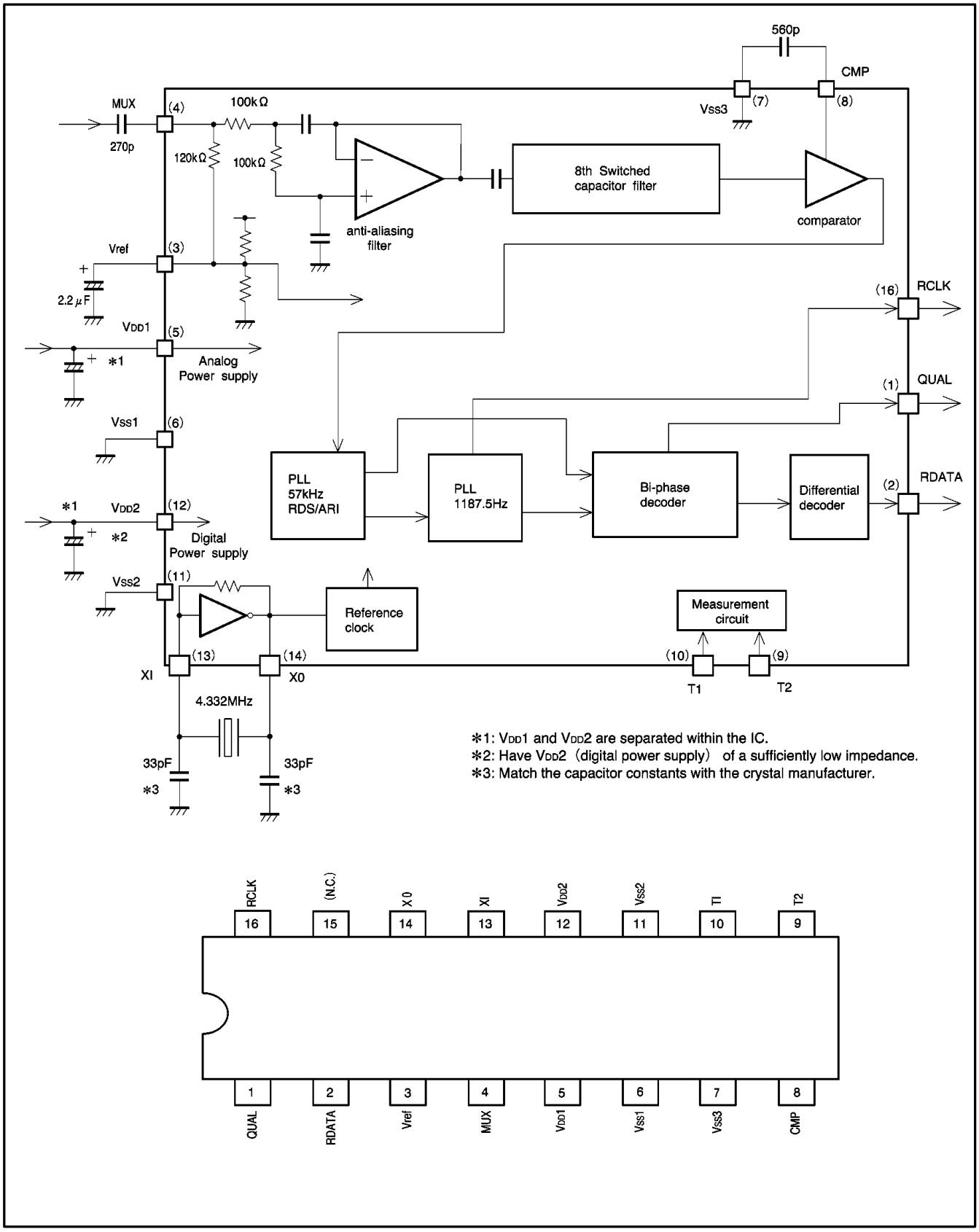
Parameter	Symbol	Limits	Unit	Conditions
Power supply voltage	V_{DD}	−0.3～+7.0	V	V_{DD1} V_{DD2}
Maximum input voltage	V_{MAX}	−0.3～V_{DD}+0.3	V	All input pins
Maximum output voltage	I_{MAX}	±4.0	mA	All output pins
Power dissipation	P_d	350*	mW	−
Operating temperature	T_{opr}	−40～+85	℃	−
Storage temperature	T_{stg}	−55～+125	℃	−

*Reduced by 3.5mW for each increase in Ta of 1℃ over 25℃.

●Recommended operating conditions (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	V_{DD1}	4.5	−	5.5	V
	V_{DD2}	4.5	−	5.5	V

●Block diagram

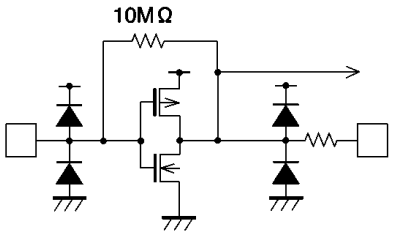


●Pin descriptions

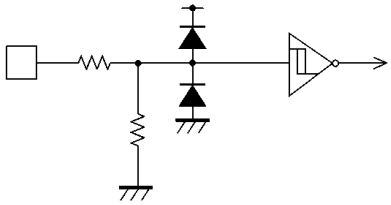
Pin No.	Symbol	Pin name	Function	Input/output type
1	QUAL	Demodulator quality	Good data: High, bad data: Low	Type C
2	RDATA	Demodulator data	Refer to output data timing	—
3	Vref	Reference voltage	1/2 $V_{DD}1$ (refer to input/output circuits)	Type E
4	MUX	Input	Composite signal input (refer to input/output circuits)	Type D
5	$V_{DD}1$	Analog power supply	4.5V to 5.5V	—
6	$V_{SS}1$			
7	CMP	Comparator input	C-junction (refer to input/output circuits)	Type D
8	$V_{SS}3$	GND	—	—
9	T2	Test input	Open or connected to ground	Type B
10	T1			
11	$V_{DD}2$	Digital power supply	4.5V to 5.5V	—
12	$V_{SS}2$			
13	XI	Crystal oscillator	Connects to 4.332MHz oscillator (refer to input/output circuits)	Type A
14	XO			
15	(N.C.)	—	—	—
16	RCLK	Demodulator clock	1187.5Hz clock (refer to the timing diagram)	Type C

●Input / output circuits

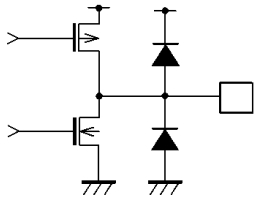
Type A



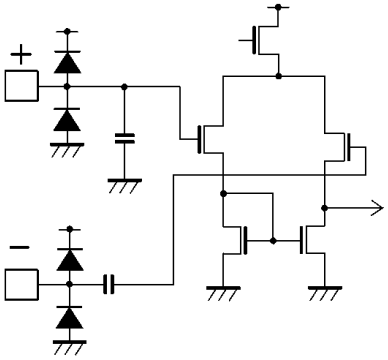
Type B



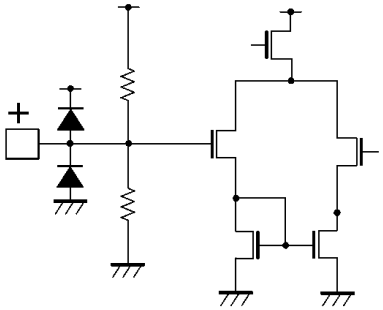
Type C



Type D



Type E



Monolithic Linear IC

LA1837

Single-Chip Home Stereo IC with Electronic Tuning Support

Overview

The LA1837 is a single-chip AM/FM IF and MPX IC that supports electronic tuning and was developed for use in home stereo systems. It is optimal for use in automatic station selection systems that use the SD and IF counting techniques.

Functions

AM: RF amplifier, mixer, oscillator, IF amplifier, detector AGC, oscillator buffer, S-meter, narrow-band SD, IF buffer

FM IF: IF amplifier, quadrature detector, S-meter, S-curve detector, IF buffer output

MPX: PLL stereo decoder, stereo display, forced mono, VCO stop, post amplifier, audio muting, adjacent channel interference rejection function

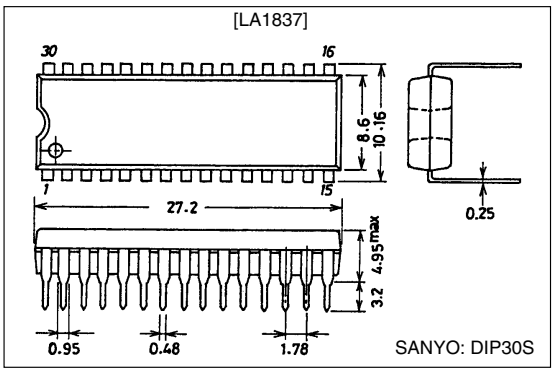
Features

- On-chip MPX VCO (no external components required)
- Adjacent channel interference rejection function (third and fifth order)
- Supports both the SD and the IF counting techniques.
- The AM and FM SD sensitivities can be set independently.
- The AM and FM output levels can be set independently.
- Improved AM practical sensitivity and high-input distortion characteristics

Package Dimensions

unit: mm

3061-DIP30S



Specifications

Maximum Ratings at Ta = 25°C

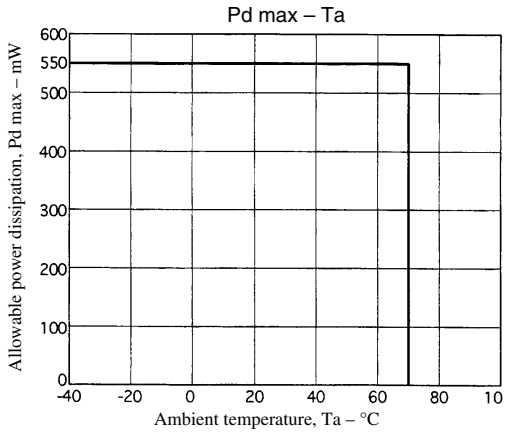
Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		12	V
Allowable power dissipation	Pd max	Ta ≤ 70°C	550	mW
Operating temperature	Topr		–20 to + 70	°C
Storage temperature	Tstg		–40 to +125	°C

Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		9	V
Operating voltage range	V_{CC} op		7 to 11	V

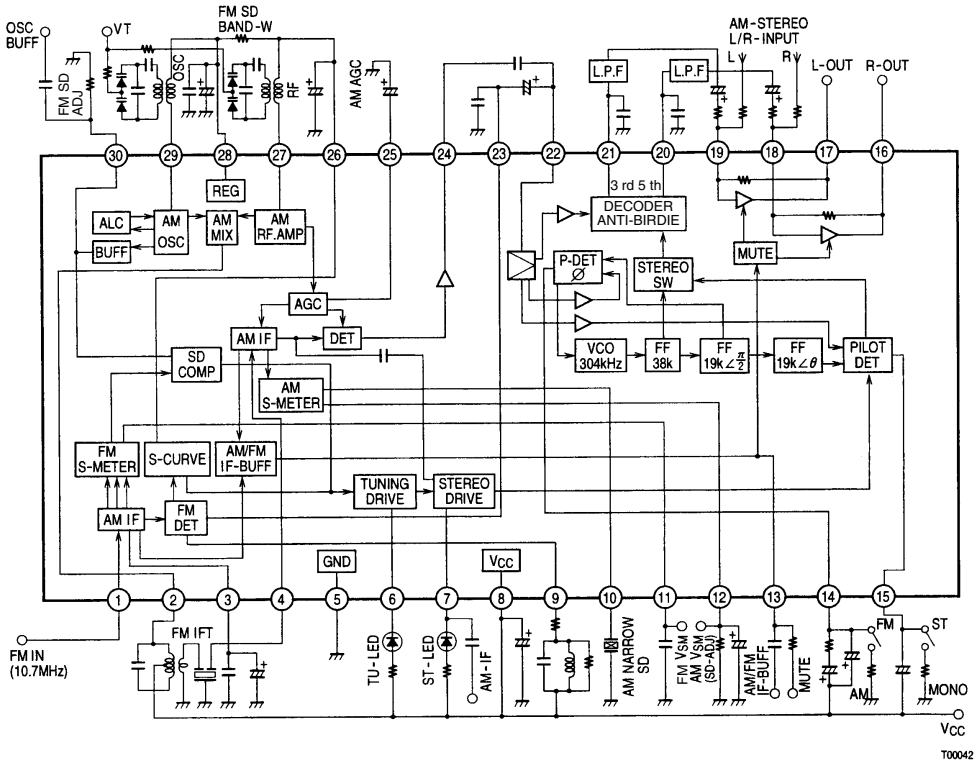
Electrical Characteristics at Ta = 25°C, V_{CC} = 9 V, in the specified Test Circuit

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
[FM Mono Characteristics] fc = 10.7 MHz, fm = 1 kHz, with the coil adjusted so that $V_{AFC} - V_{REG}$ = 0 V						
Current drain	I_{CCO-FM}	With no input	18	31	44	mA
Demodulation output	V_{OFM}	100 dBμ, 100% mod. The pin 16 output	730	1100	1460	mVrms
Channel balance	C.B-mono	100 dBμ, 100% mod. The pin 16 output/pin 17 output	–1.5	0	+1.5	dB
Total harmonic distortion (mono)	$THD_{FM(1)}$	100 dBμ, 100% mod. The pin 16 output		0.3	1.3	%
Total harmonic distortion (mono)	$THD_{FM(2)}$	100 dBμ, 200% mod. The pin 16 output		1.0	5	%
Signal-to-noise ratio	S/N_{FM}	100 dBμ, 100% mod. The pin 16 output	72	80		dB
AM rejection ratio	AMR	100 dBμ, AM 30 % mod. The pin 16 output	45	65		dB
Limiting input voltage	–3 dBL.S.	100 dBμ, 100% mod. Referenced to the output. The input such that the output is down –3 dB.	26	32	38	dBμ
LED sensitivity	SD_{On-FM}		51	60	69	dBμ
LED bandwidth	SD_{BW}	100 dBμ	85	120	170	kHz
IF count buffer output	$V_{IFBuff-FM}$	100 dBμ. The pin 13 output	80	120	160	mVrms
S-meter output	$V_{SM-FM(1)}$	0 dBμ. The pin 11 output	0	0.1	0.5	V
	$V_{SM-FM(2)}$	100 dBμ. The pin 11 output	3.6	4.3	5.0	V
Muting attenuation	Mute-Att	100 dBμ, 100% mod. The pin 16 output	75	85		dB
[FM Stereo Characteristics] fc = 10.7 MHz, 100 dBμ, fm = 1 kHz, L + R = 90%, Pilot = 10%						
Separation (left)	Sep_L	L mod. The pin 16 output/pin 17 output	30	45		dB
Separation (right)	Sep_R	R mod. The pin 17 output/pin 16 output	30	45		dB
Stereo on level	ST_{ON}	The pilot modulation such that V7 is under 0.7 V.	1.3	2.7	5	%
Stereo off level	ST_{OFF}	The pilot modulation such that V7 is over 4.5 V.		1.5		%
Total harmonic distortion (main)	THD-main	L+R mod. The pin 16 output		0.3	1.3	%
Adjacent channel interference rejection ratio	Brej-3rd	fs = 113 kHz, Vs = 90 %, Pilot = 10 %, The pin 16 output vs. the L-R mod. 1 kHz demodulated output		40		dB
	Brej-5th	fs = 189 kHz, Vs = 90 %, Pilot = 10 %, The pin 16 output vs. the L-R mod. 1 kHz demodulated output		40		dB
[AM Characteristics] fc = 1000 kHz, fm = 1 kHz						
Current drain	I_{CCO-AM}	With no input	15	25	35	mA
Detector output	$V_{OAM(1)}$	23 dBμ, 30% mod. The pin 16 output	100	180	360	mVrms
	$V_{OAM(2)}$	80 dBμ, 30% mod. The pin 16 output	200	320	500	mVrms
Signal-to-noise ratio	$S/N_{AM(1)}$	23 dBμ, 30% mod. The pin 16 output	18	22		dB
	$S/N_{AM(2)}$	80 dBμ, 30% mod. The pin 16 output	49	55		dB
Total harmonic distortion (mono)	$THD_{AM(1)}$	80 dBμ, 30% mod. The pin 16 output		0.4	1.2	%
	$THD_{AM(2)}$	80 dBμ, 80% mod. The pin 16 output		1.0	4.0	%
LED sensitivity	SD_{On-AM}		17	27	37	dBμ
Local oscillator buffer output	V_{OSC-AM}	With no input. The pin 30 output	110	160	220	mVrms
IF counter buffer output	$V_{IFBuff-AM}$	80 dBμ, no modulation. The pin 13 output	160	220	300	mVrms
ST-IF output	$V_{STIF-AM}$	80 dBμ, no modulation. The pin 7 output	16	34	48	mVrms
S-meter output	V_{SM-AM}	0 dBμ, no modulation.	0	0	0.2	V

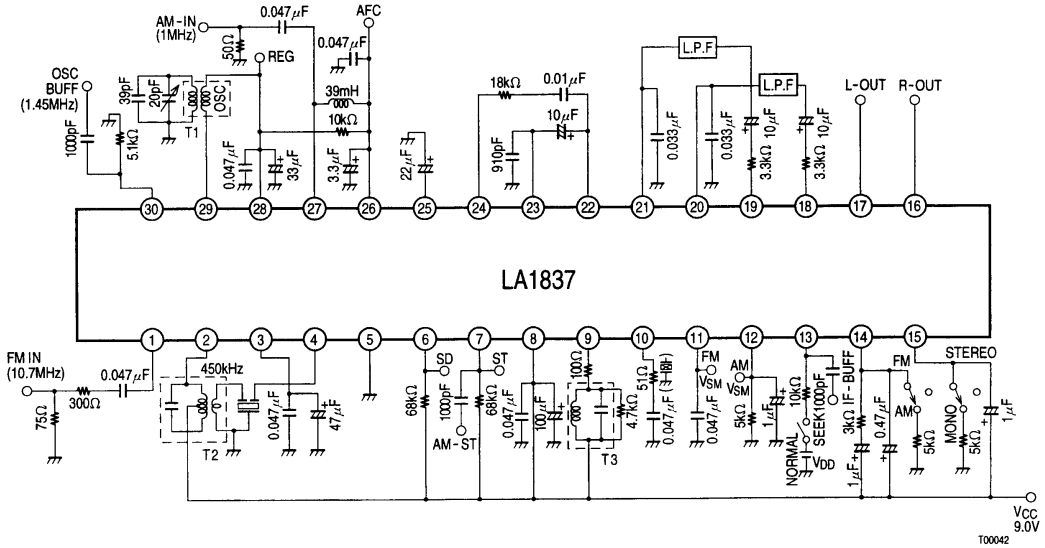


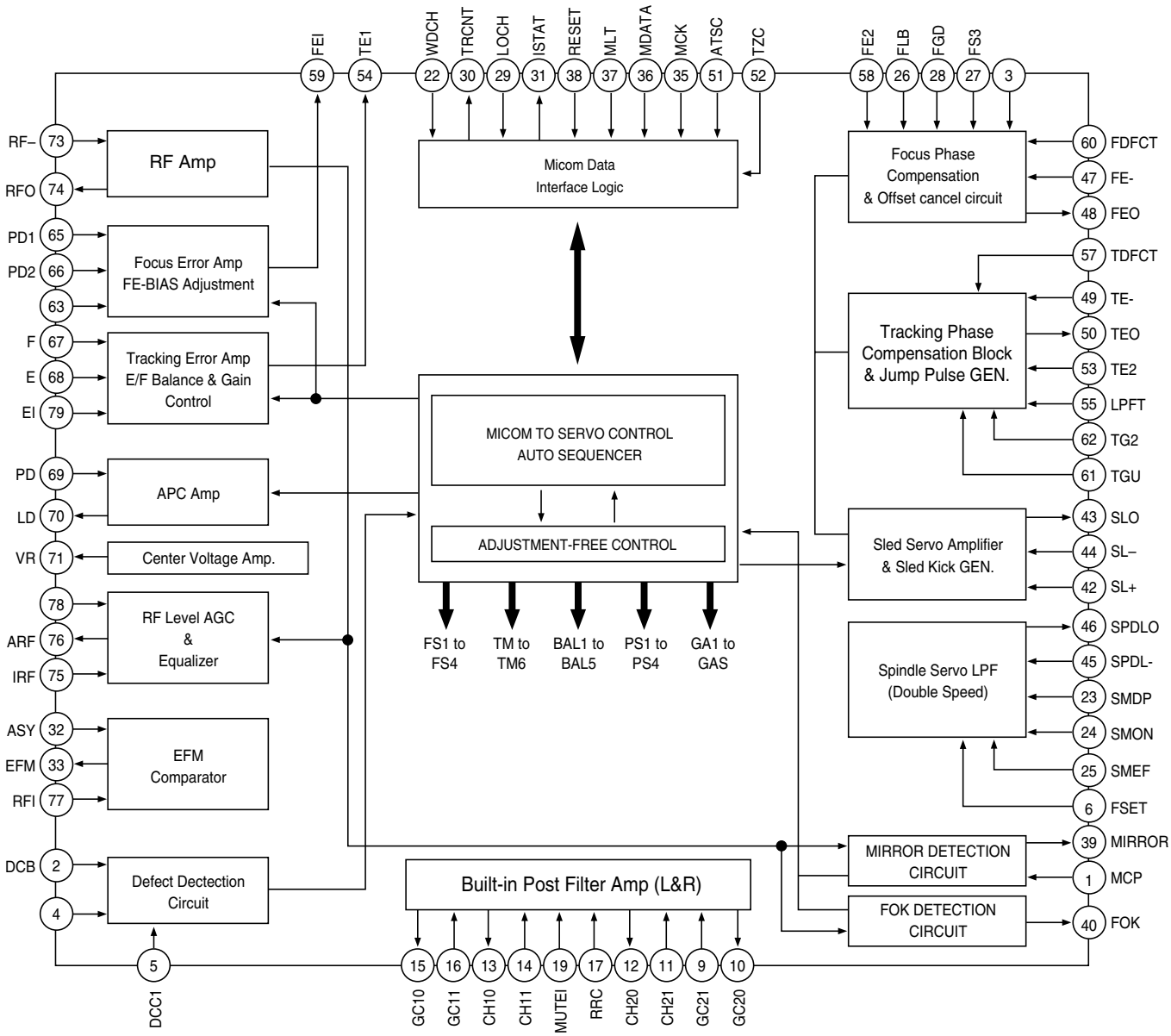
LA1837

Block Diagram

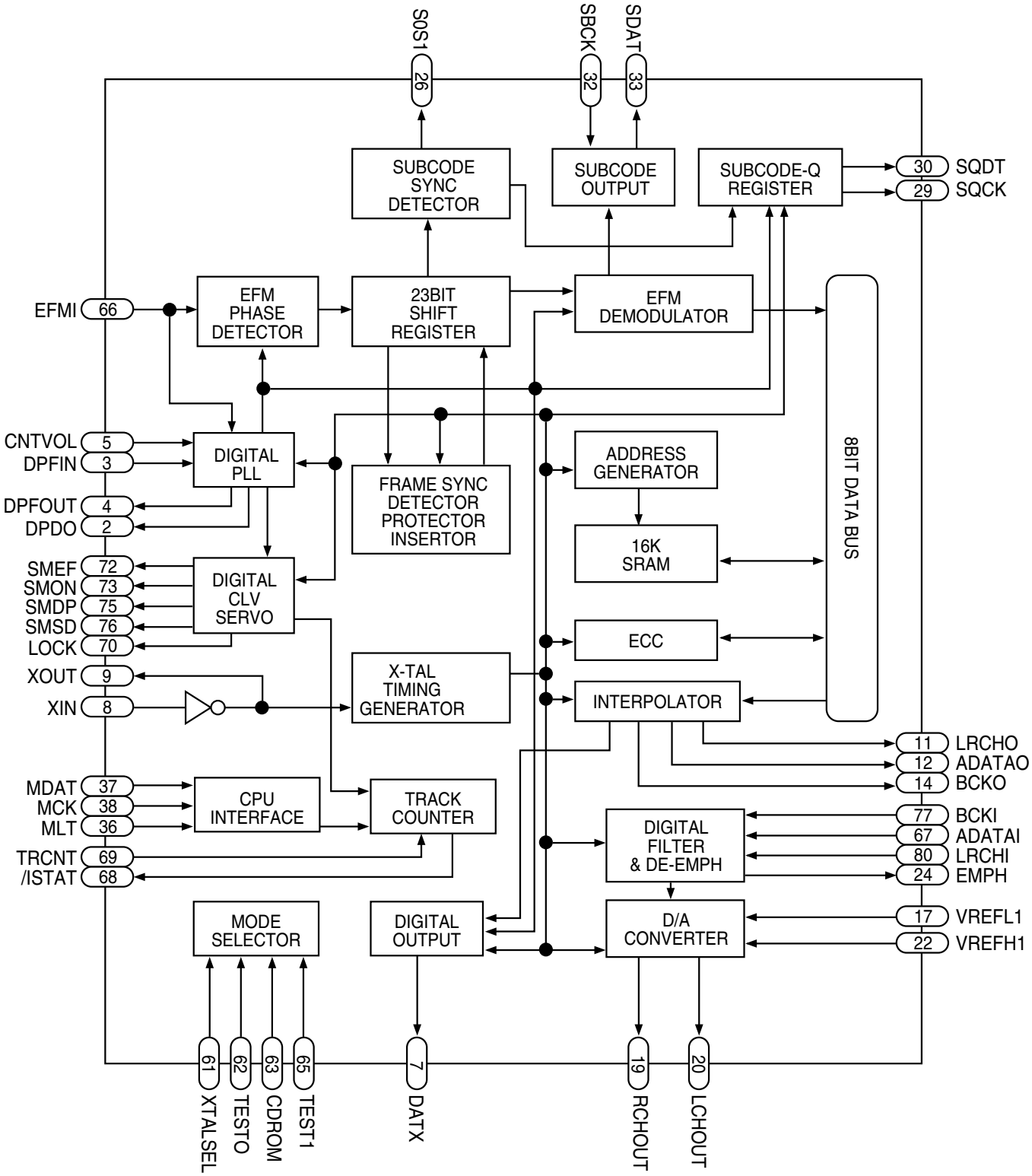


Test Circuit Diagram

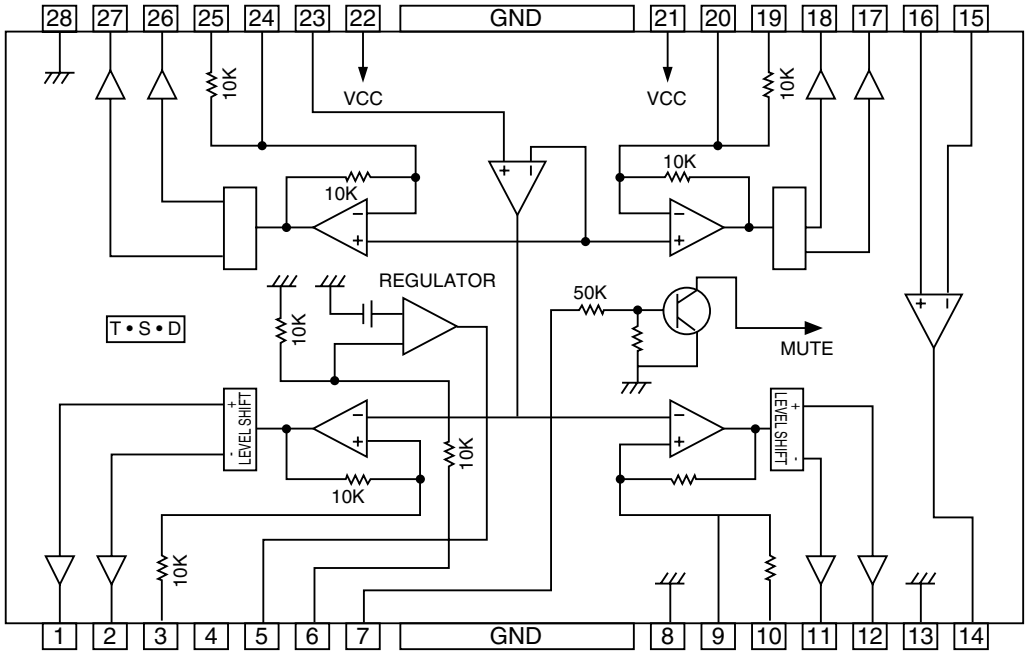



FEI
TE1
WDCH
TRCNT
LOCH
ISTAT
RESET
MLT
MDATA
MCK
ATSC
TZC
FE2
FLB
FGD
FS3
59
54
22
30
29
31
38
37
36
35
51
52
58
26
28
27
3
RF–
RFO
PD1
PD2
F
E
EI
PD
LD
VR
ARF
IRF
ASY
EFM
RFI
DCB
73
74
65
66
63
67
68
79
69
70
71
78
76
75
32
33
77
2
4
5
RF Amp
Focus Error Amp
FE-BIAS Adjustment
Tracking Error Amp
E/F Balance & Gain
Control
APC Amp
Center Voltage Amp.
RF Level AGC
&
Equalizer
EFM
Comparator
Defect Dectection
Circuit
DCC1
Micom Data
Interface Logic
MICOM TO SERVO CONTROL
AUTO SEQUENCER
ADJUSTMENT-FREE CONTROL
FS1 to
FS4
TM to
TM6
BAL1 to
BAL5
PS1 to
PS4
GA1 to
GAS
Built-in Post Filter Amp (L&R)
15
16
13
14
19
17
12
11
9
10
GC10
GC11
CH10
CH11
MUTEI
RRC
CH20
CH21
GC21
GC20
Focus Phase
Compensation
& Offset cancel circuit
Tracking Phase
Compensation Block
& Jump Pulse GEN.
Sled Servo Amplifier
& Sled Kick GEN.
Spindle Servo LPF
(Double Speed)
MIRROR DETECTION
CIRCUIT
FOK DETECTION
CIRCUIT
60
47
48
57
49
50
53
55
62
61
43
44
42
46
45
23
24
25
6
39
1
40
FDFCT
FE-
FEO
TDFCT
TE-
TEO
TE2
LPFT
TG2
TGU
SLO
SL–
SL+
SPDLO
SPDL-
SMDP
SMON
SMEF
FSET
MIRROR
MCP
FOK

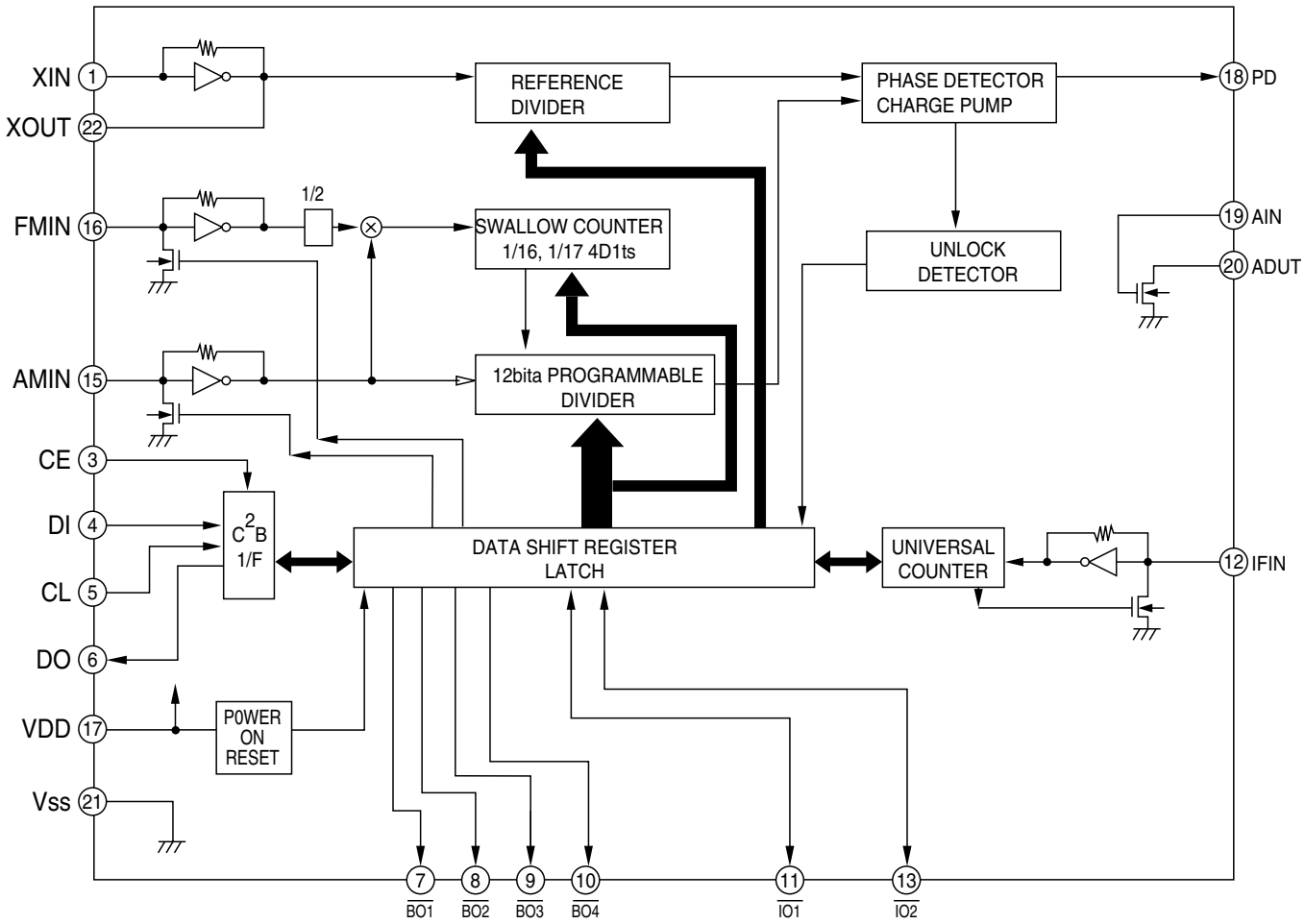
10-7 KS9286


S0S1
26
SBCK
32
SDAT
33
SUBCODE SYNC DETECTOR
SUBCODE OUTPUT
SUBCODE-Q REGISTER
30
SQDT
29
SQCK
EFMI
66
EFM PHASE DETECTOR
23BIT SHIFT REGISTER
EFM DEMODULATOR
8BIT DATA BUS
CNTVOL
5
DPFIN
3
DIGITAL PLL
FRAME SYNC DETECTOR PROTECTOR INSERTOR
ADDRESS GENERATOR
DPFOUT
4
DPDO
2
16K SRAM
SMEF
72
SMON
73
SMDP
75
SMSD
76
LOCK
70
DIGITAL CLV SERVO
ECC
XOUT
9
XIN
8
X-TAL TIMING GENERATOR
INTERPOLATOR
11
LRCHO
12
ADATAO
14
BCKO
MDAT
37
MCK
38
MLT
36
CPU INTERFACE
TRACK COUNTER
77
BCKI
67
ADATAI
80
LRCHI
24
EMPH
DIGITAL FILTER & DE-EMPH
TRCNT
69
/ISTAT
68
MODE SELECTOR
DIGITAL OUTPUT
D/A CONVERTER
17
VREFL1
22
VREFH1
61
XTALSEL
62
TESTO
63
CDROM
65
TEST1
7
DATX
19
RCHOUT
20
LCHOUT

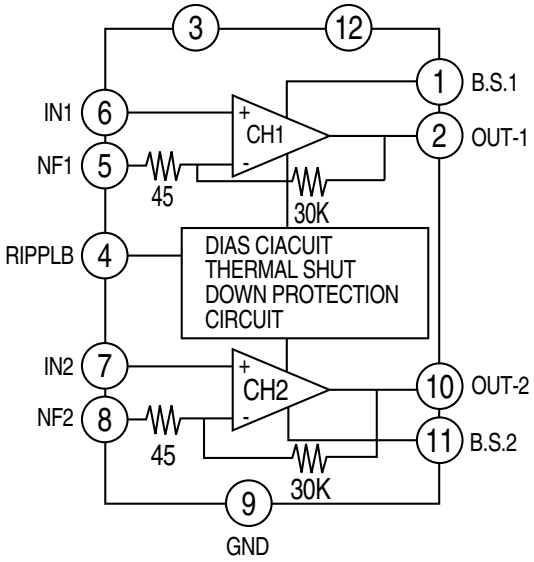
10-8 KA9258



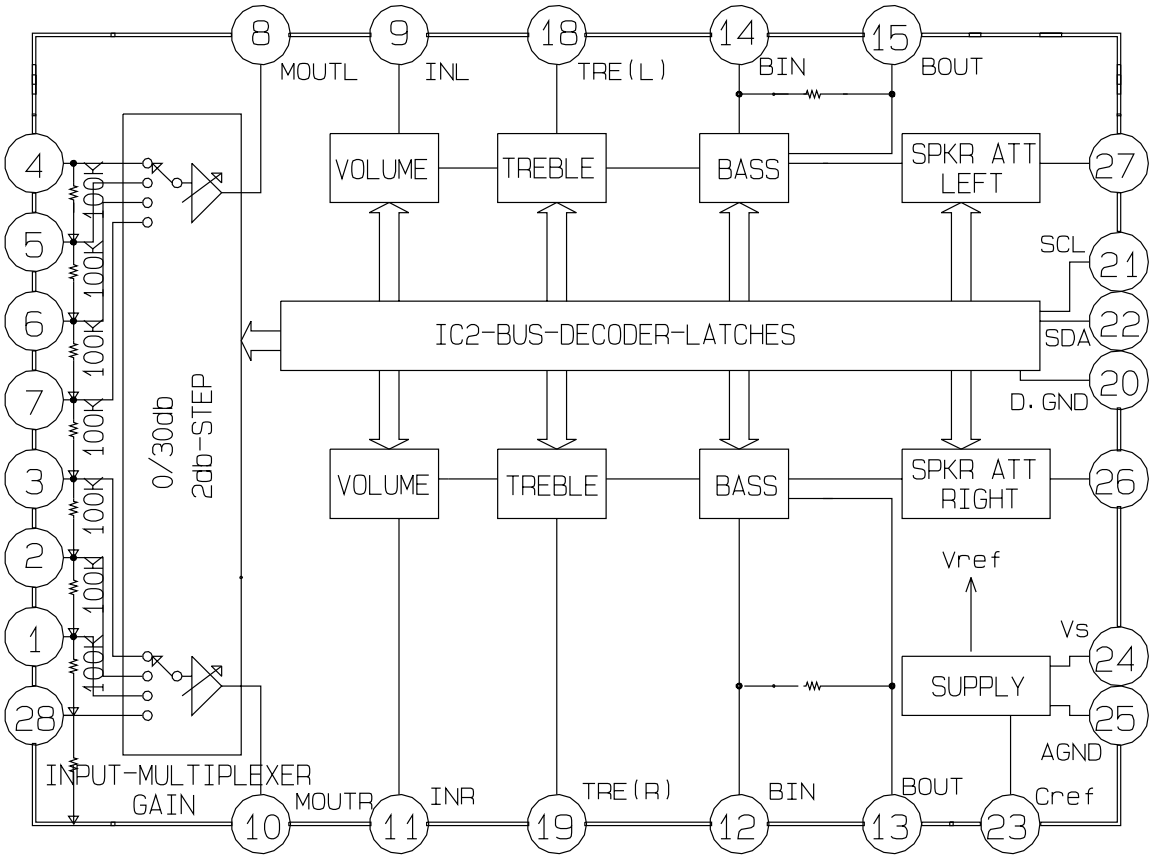
10-9 LC72131 ; HIC1



10-10 TA8207K ; AIC1



10-11 TDA7440D ; JIC1



10-12 MP3 MICOM ; AUIC3,OKI ,MSM66573 (TQFP100)

No	PORT	I/O	PIN ASSIGN	No	PORT	I/O	PIN ASSIGN
1	P10-4	O	GO	51	P0-0	I/O	M-ERR
2	P10-5	O		52	P0-1	I/O	M-A/F
3	P10-7	O	wingo ce	53	P0-2	I/O	M-STROBE
4	P8-0	I/O	data I/o	54	P0-3	I/O	E-SEL/IN
5	P8-1	O		55	P0-4	I/O	E-INIT
6	P8-2	I/O	clock	56	P0-5	I/O	E-ERR
7	P8-3	O		57	P0-6	I/O	E-A/F
8	P8-4	I		58	P0-7	I/O	E-STROBE
9	P8-6	O		59		$	Vss
10	P8-7	O		60	P4-0	I/O	E-DATA 1
11	P7-6	O		61	P4-1	I/O	E-DATA 2
12	P7-7	O		62	P4-2	I/O	E-DATA 3
13			VDD	63	P4-3	I/O	E-DATA 4
14			Vss	64	P4-4	I/O	E-DATA 5
15	P9-7	O		65	P4-5	I/O	E-DATA 6
16	P9-0	INT		66	P4-6	I/O	E-DATA 7
17	P9-1	INT		67	P4-7	I/O	E-DATA 8
18	P9-2	O		68	P1-0	0	M-DATA 1
19	P9-3	O		69	P1-1	0	M-DATA 2
20	P6-0	INT	wingo request	70	P1-2	0	M-DATA 3
21	P6-1	INT		71	P1-3	O	M-DATA 4
22	P6-2	INT		72	P1-4	O	M-DATA 5
23	P6-3	INT		73	P1-5	O	M-DATA 6
24	P6-4	I/O	E-P/CONTROL	74	P1-6	O	M-DATA 7
25	P6-5	I/O	E-BLANK	75	P1-7	O	M-DATA 8
26	P6-6	I/O		76	P2-O	O	e-data/IN1
27	P6-7	I/O		77	P2-1	O	e-data/out1
28	P5-4	I/O		78	P2-2	O	e-data/OUT2
29	P5-5	I/O		79	P2-3	O	e-data/in2
30	P5-6	I/O		80		$	Vdd
31	P5-7	I/O		81		$	Vref(VDD)
32	/RESET IN	I	RST_ IN	82	A/D P12-0	I	
33	NM1		NMI(VCC)	83	A/D P12-1	I	
34	/EA		/EA(VDD)	84	A/D P12-2	I	
35			VDD	85	A/D P12-3	I	
36			XT0(GND)	86	A/D P12-4	I	
37			XTI	87	A/D P12-5	I	
38			GND	88	A/D P12-6	I	
39			OSC0	89	A/D P12-7	I	
40			OSCI	90		$	Vss
41			VDD	91	P7-0	O	
42	P11-0	O		92	P7-1	O	
43	P11-1	O		93		$	Vss
44	P11-2	O		94	P7-2	O	
45	P11-3	O		95	P7-4	O	
46	P11-6	O		96	P7-5	O	
47	P11-7	O		97	P10-0	I/O	CLK
48	P3-1	I		98	P10-1	O	DATA OUT
49	P3-2	I		99	P10-2	I	DATA IN
50	P3-3	O		100	P10-3	O	DIR

10-13 SLIM MICOM ; UIC3

PORT	NO	NAME	IO	FUNCTION
P 16	1	MCE		MYMP3 CE
P 17	2	POWER	O	POWER ON/OFF
P3 0	3	MO/ST	I	FM MONO/STEREO
1	4	TUNED	I	TUNED
2	5	A/MU	O	AUDIO MUTE
3	6	DI	I	LC72131 DI(PCB->DO)
4	7	CE	O	LC72131 CHIP ENABLE
5	8	CLK	O	LC72131/TDA7440 CLOCK
6	9	DO	O	LC72-/TDA- DO (PCB->DI)
7	10	RDS	I	RDS DATA OUT
P70	11	RDS	I	RDS CLK
RES	12	RESET		MICOM RESET
P74	13	CF1	I	32.768 KHz IN
P75	14	CF2	O	32.768KHz OUT
VSS	15	GND		GND
CF 1	16	XT1	I	6MHZ OSC IN
CF 2	17	XT2	O	6MHZ OSC OUT
VDD1	18	VDD		VDD
P8 0	19	LKFS	I	LKFS
1	20	FOK	I	FOK
2	21	TRCNT	I	TRCNT
3	22	SENSE	I	SENSE & LIMIT SW
4	23	AD1	I	KEY A/D 1
5	24	AD2	I	KEY A/D 2
6	25	AD3	I	KEY A/D 3
7	26	CHARG	I	CHARGBE BATTERY
P7 1	27	SCE	I	MYMP3 REQUEST
2	28	SCOR	I	SCOR IN
3	29	REMO	I	REMOCON IN
S 0	30	S0	O	
1	31	S1	O	
2	32	S2	O	
3	33	S3	O	
4	34	S4	O	VFD GRID 1
5	35	S5	O	VFD GRID 2
6	36	S6	O	VFD GRID 3
7	37	S7	O	VFD GRID 4
8	38	S8	O	VFD GRID 5
9	39	S9	O	VFD GRID 6
10	40	S10	O	VFD GRID 7
11	41	S11	O	VFD GRID 8
12	42	S12	O	
13	43	S13	O	
14	44	S14	O	
15	45	S15	O	
VDD3	46	VDD3		VFD 5V
S 16	47	S16	O	VFD SEG18 TUNER
17	48	S17	O	VFD SEG17 TUNER
18	49	S18	O	VFD SEG16 TUNER
19	50	S19	O	VFD SEG15 12/24 HR

PORT	NO	NAME	IO	FUNCTION
VP	51	VPP	O	-32V
S20	52		O	VFD SEG 14 RDS
S21	53		O	VFD SEG 13 BACKUP
S22	54		O	VFD SEG 12
S23	55		O	VFD SEG 11
S24	56	UD8	O	VFD SEG 10
S25	57	UD7	O	VFD SEG 9
S26	58	UD6	O	VFD SEG 8
S27	59	UD5	O	VFD SEG 7
S28	60	UD4	O	VFD SEG 6
S29	61	UD3	O	VFD SEG 5
S30	62	UD2	O	VFD SEG 4
S31	63	UD1	O	VFD SEG 3
S32	64		O	VFD SEG 2
S33	65	S18	O	VFD SEG 1
2	66	OPT	I	OPTION INPUT
3	67		I	
4	68		I	
5	69		I	
6	70		I	
7	71		I	
VDD4	72	VDD4		VFD 5V
PF 0	73			
1	74			
2	75	CLOSM	O	CLOSE MOTOR
3	76	OPENM	O	OPEN MOTOR
4	77	PLED	O	P SOUND LED
5	78	EQLED	O	EQ LED
6	79	SNLED	O	SNOOE LED
7	80	T_CNT		TUNER/CD CONTROL
PG 0	81		O	
1	82		O	
2	83		O	
3	84		O	
PO 0	85	MCK	0	MCK
1	86	XRST	O	RESET
2	87	MDATA	O	DATA
3	88	MLT	O	MLT
VSS2	89			GND
VDD2	90			VDD2
P0 4	91	MY-S	I	“MY-MY,MP3 SENSE”
5	92	P_SEN	I	POWER SENSE
6	93	SW2	I	CLOSE SW
7	94	SW1	I	OPEN SW
P1 0	95	CMUTE	O	CD MUTE
1	96	SQDT	I	SUBQ DATA IN
2	97	SQCK	O	SUBQ DATA IN CLK
3	98	PCTL	O	P-SOUND ON/OFF
4	99	SDADA	I/O	SYTEM DATA I/O
5	100	SCLOCK	O	SYSTEM CLOCK