SONY COMPUTER ENTERTAINMENT

SCPH-7500 SERIES

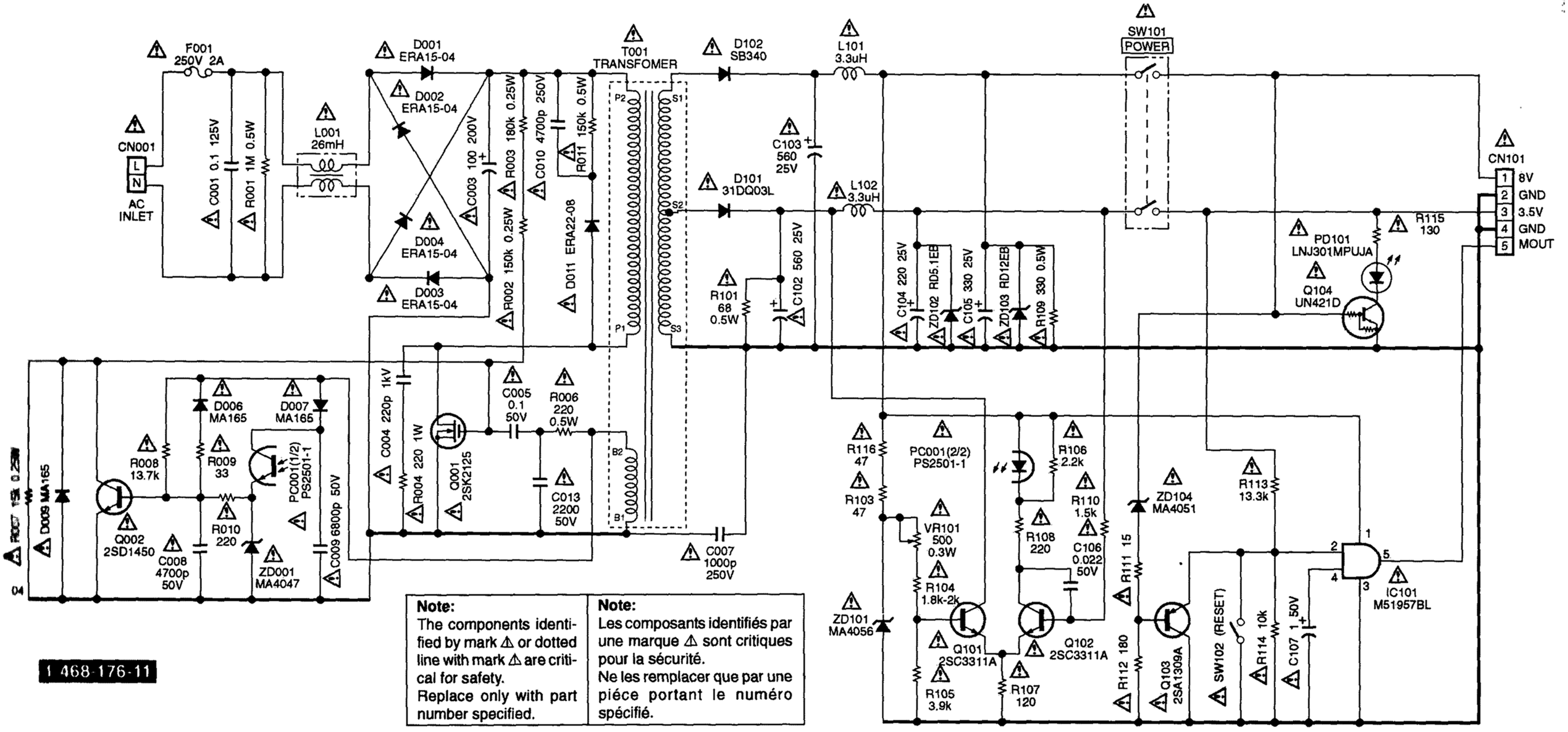
SERVICE MANUAL

Japan Model
SCPH-7500
US/Canada Model
SCPH-7501
Australia Model
SCPH-7502A
UK Model
SCPH-7502B
AEP Model
SCPH-7502C
Asian Model
SCPH-7503

3rd Edition

Registered No.

PlayStation



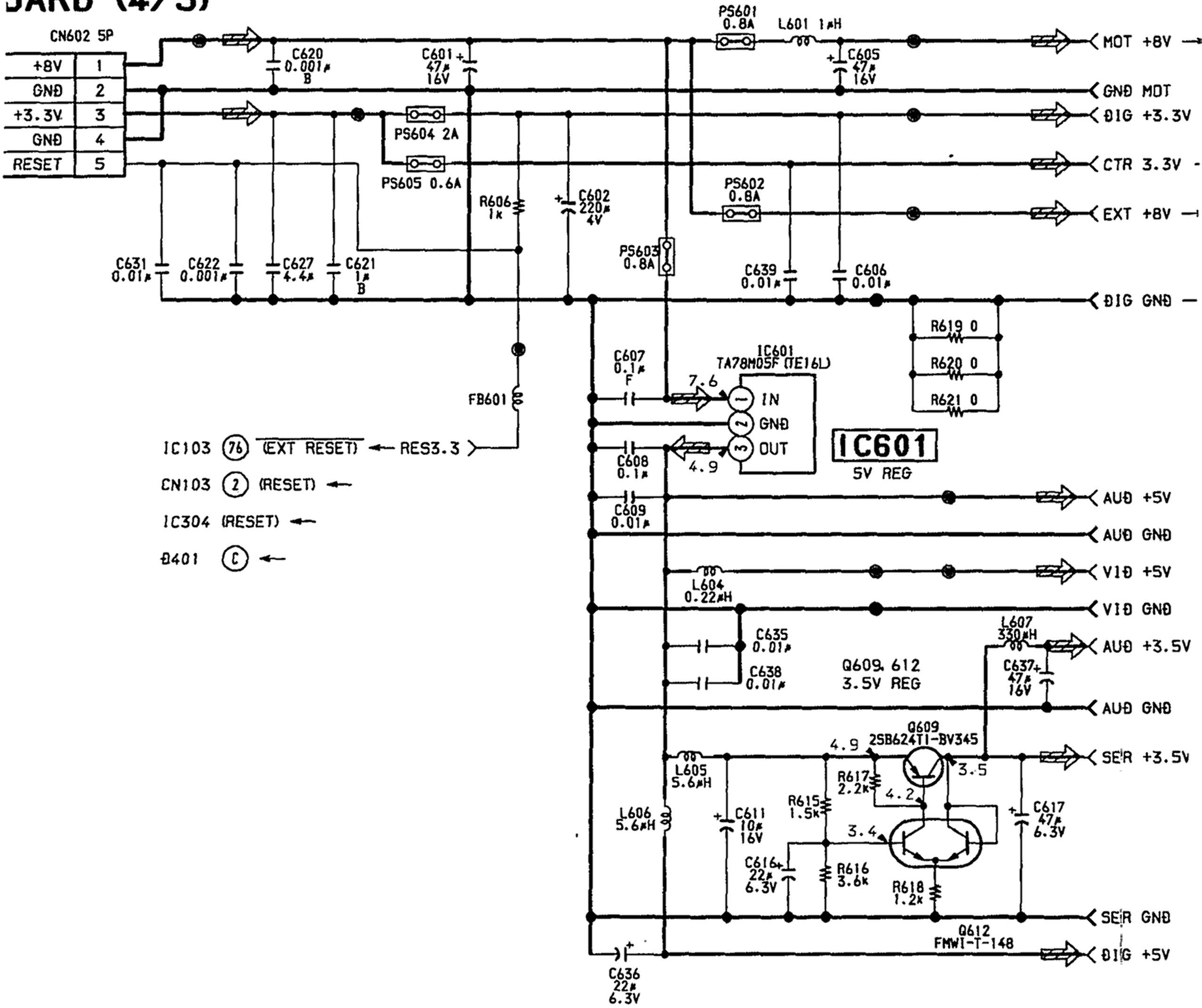
Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

6-9. PRINTED WIRING BOARD (POWER BLOCK (1-468-176-11))

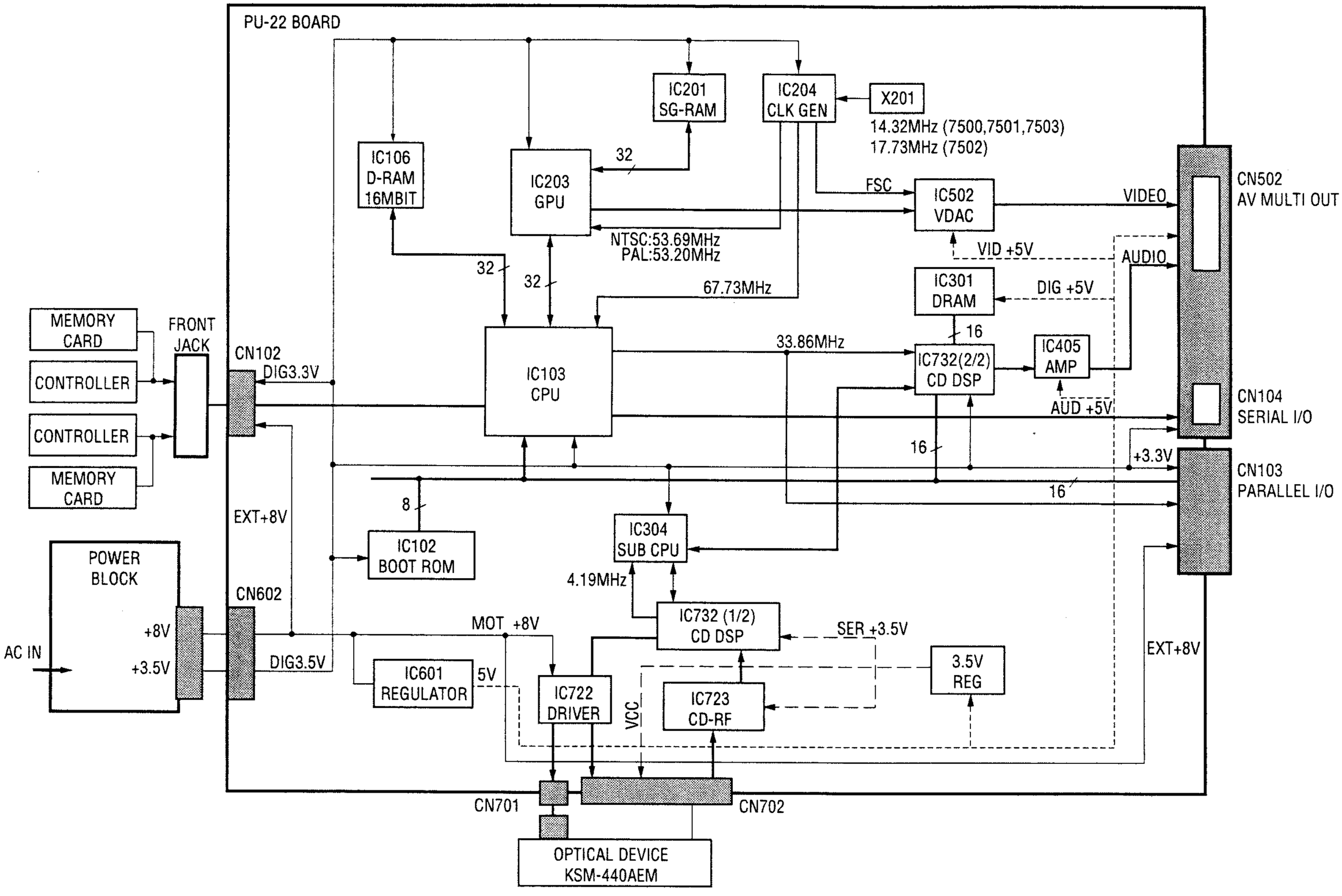
POWER BLOCK (SCPH-7500)

DARD (4/5)

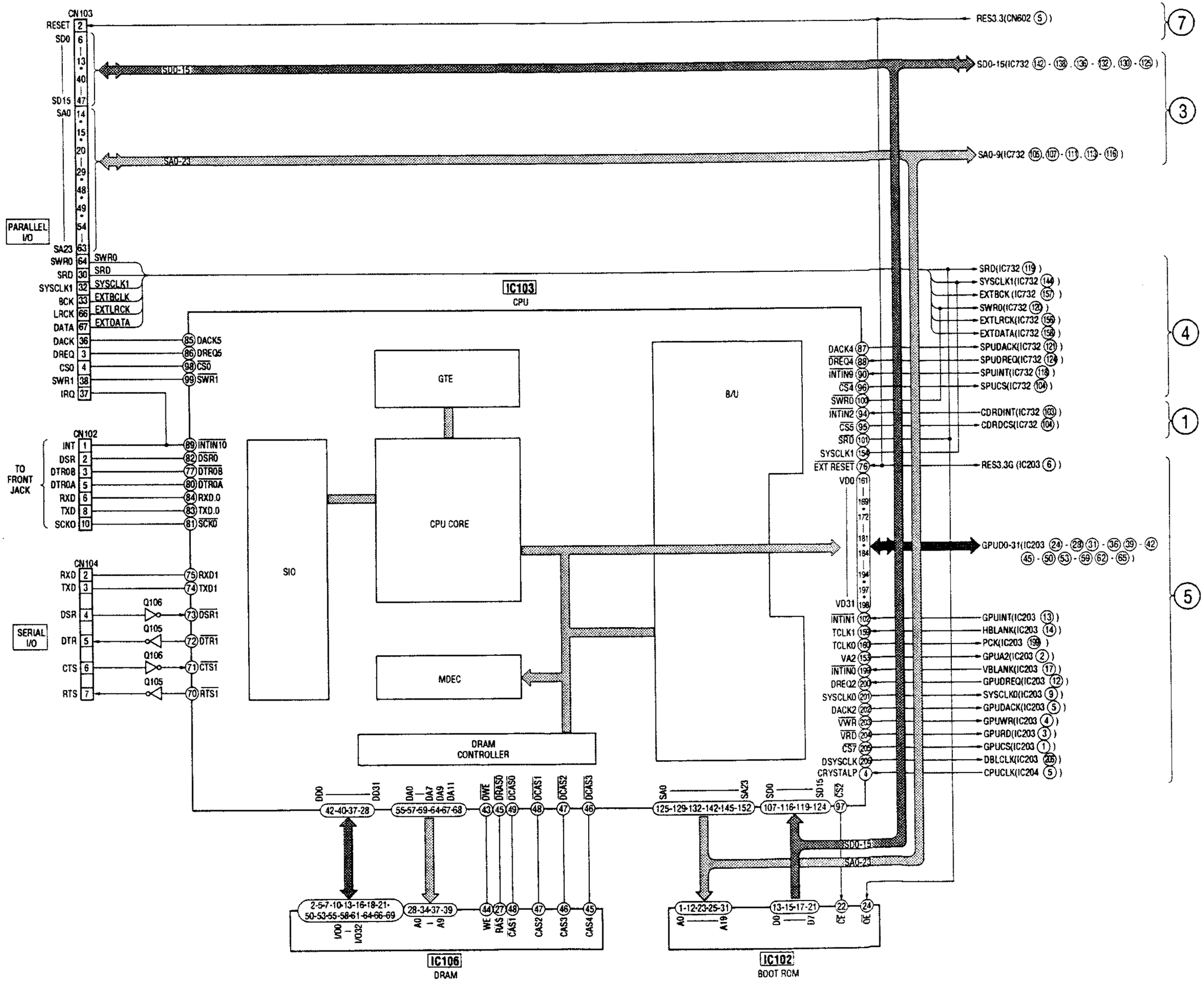

CN602 5P
+8V 1
GND 2
+3.3V 3
GND 4
RESET 5
C620 0.001µ B
C601 47µ 16V
PS601 0.8A
L601 1µH
C605 47µ 16V
MOT +8V
GND MOT
DIG +3.3V
PS604 2A
PS605 0.6A
CTR 3.3V
R606 1k
C602 220µ 4V
PS602 0.8A
EXT +8V
PS603 0.8A
C631 0.01µ
C622 0.001µ
C627 4.4µ
C621 1µ B
C639 0.01µ
C606 0.01µ
DIG GND
R619 0
R620 0
R621 0
FB601
C607 0.1µ F
IC601 TA78M05F (TE16L)
7.6
1 IN
2 GND
3 OUT
4.9
IC601
5V REG
C608 0.1µ
C609 0.01µ
AUD +5V
AUD GND
IC103 (76) (EXT RESET) ← RES3.3
CN103 (2) (RESET) ←
IC304 (RESET) ←
D401 (C) ←
L604 0.22µH
VID +5V
VID GND
C635 0.01µ
C638 0.01µ
Q609, 612 3.5V REG
L607 330µH
C637 47µ 16V
AUD +3.5V
AUD GND
Q609 2SB624T1-BV345
4.9
3.5
4.2
3.4
L605 5.6µH
L606 5.6µH
C611 10µ 16V
R615 1.5k
R617 2.2k
R616 3.6k
R618 1.2k
C616 22µ 6.3V
C617 47µ 6.3V
SER +3.5V
SER GND
Q612 FMW1-T-148
DIG +5V
C636 22µ 6.3V

SECTION 5
BLOCK DIAGRAMS

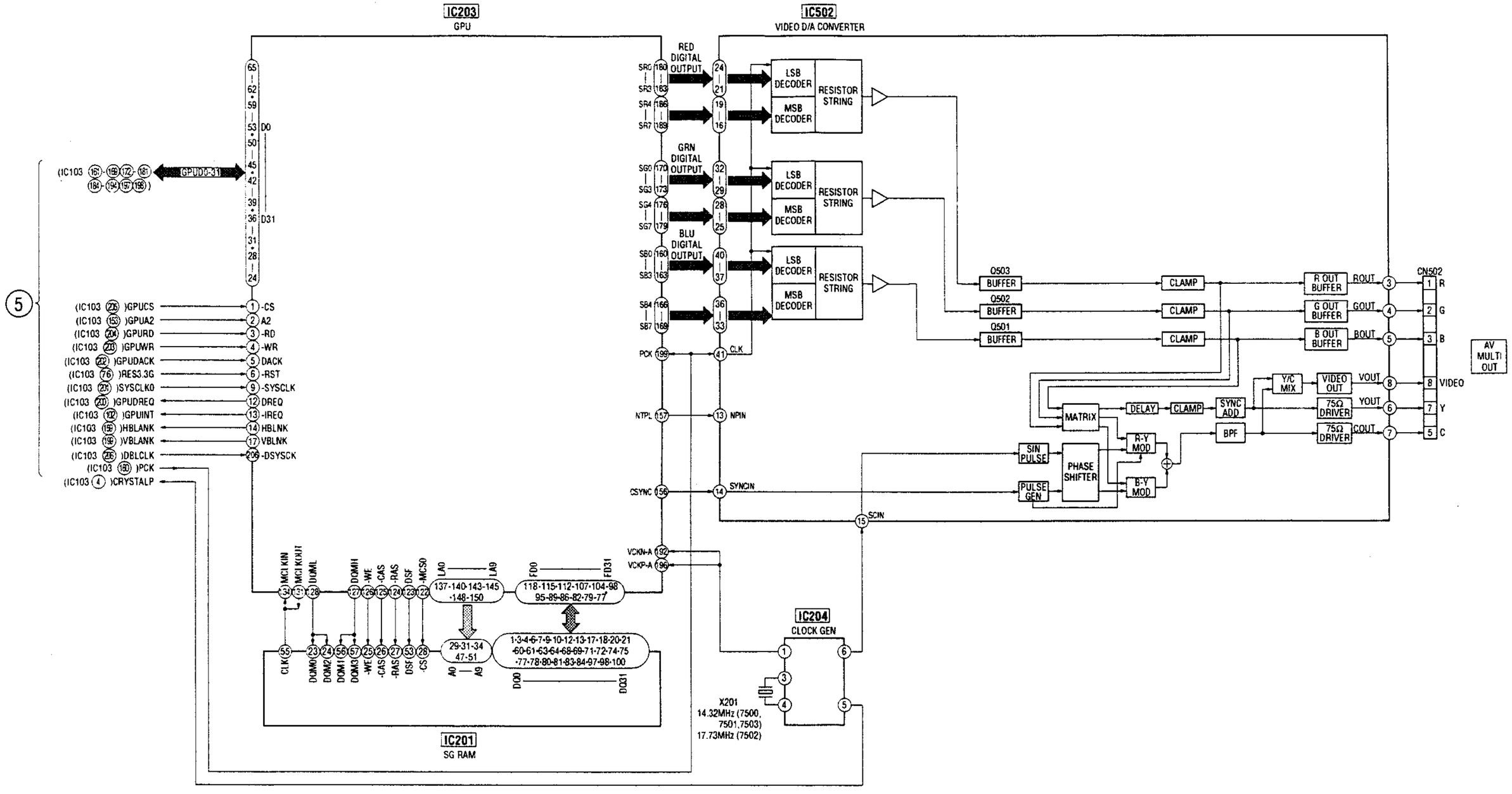
5-1. OVERALL BLOCK DIAGRAM



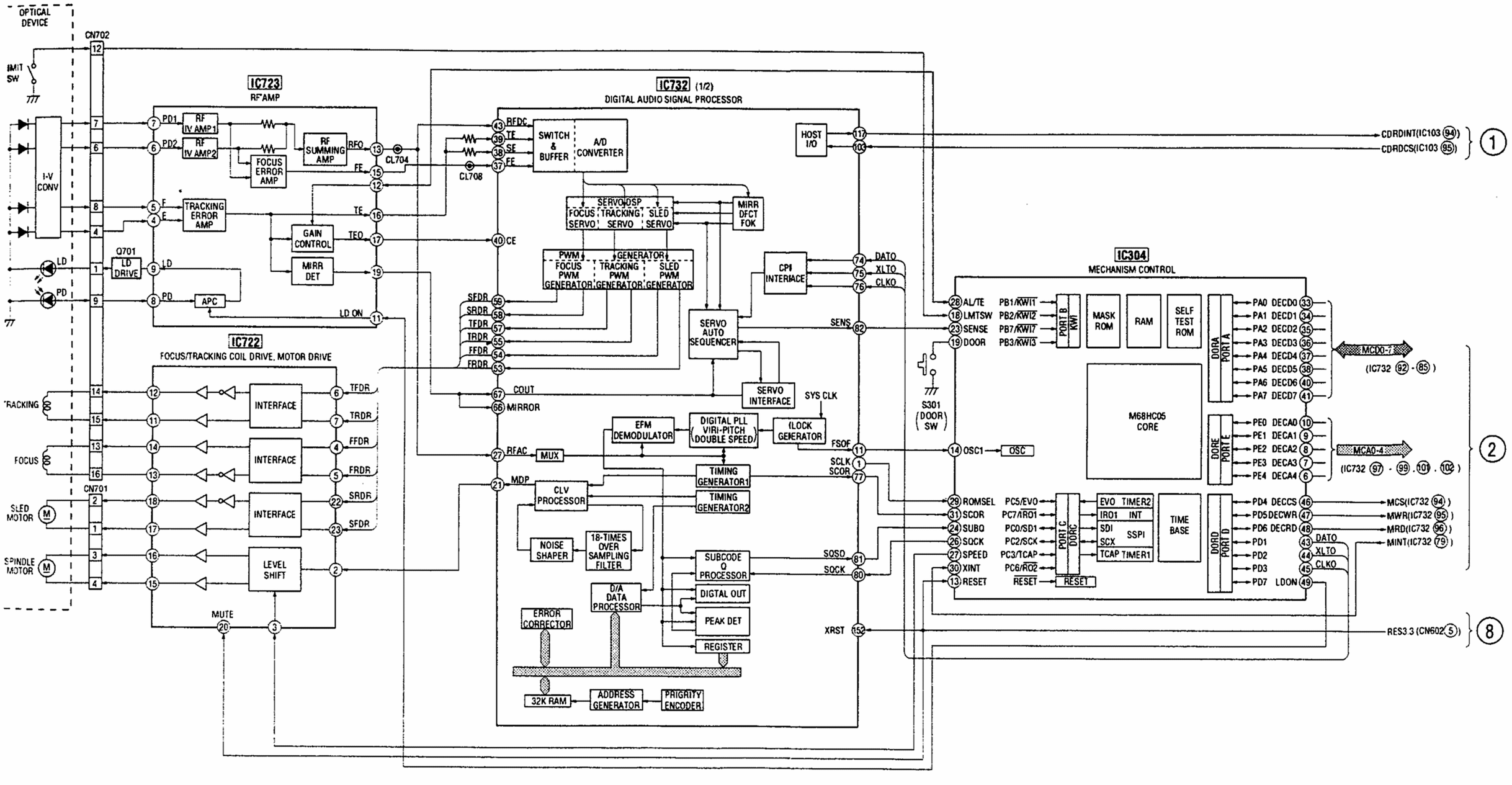
5-2. CPU BLOCK DIAGRAM



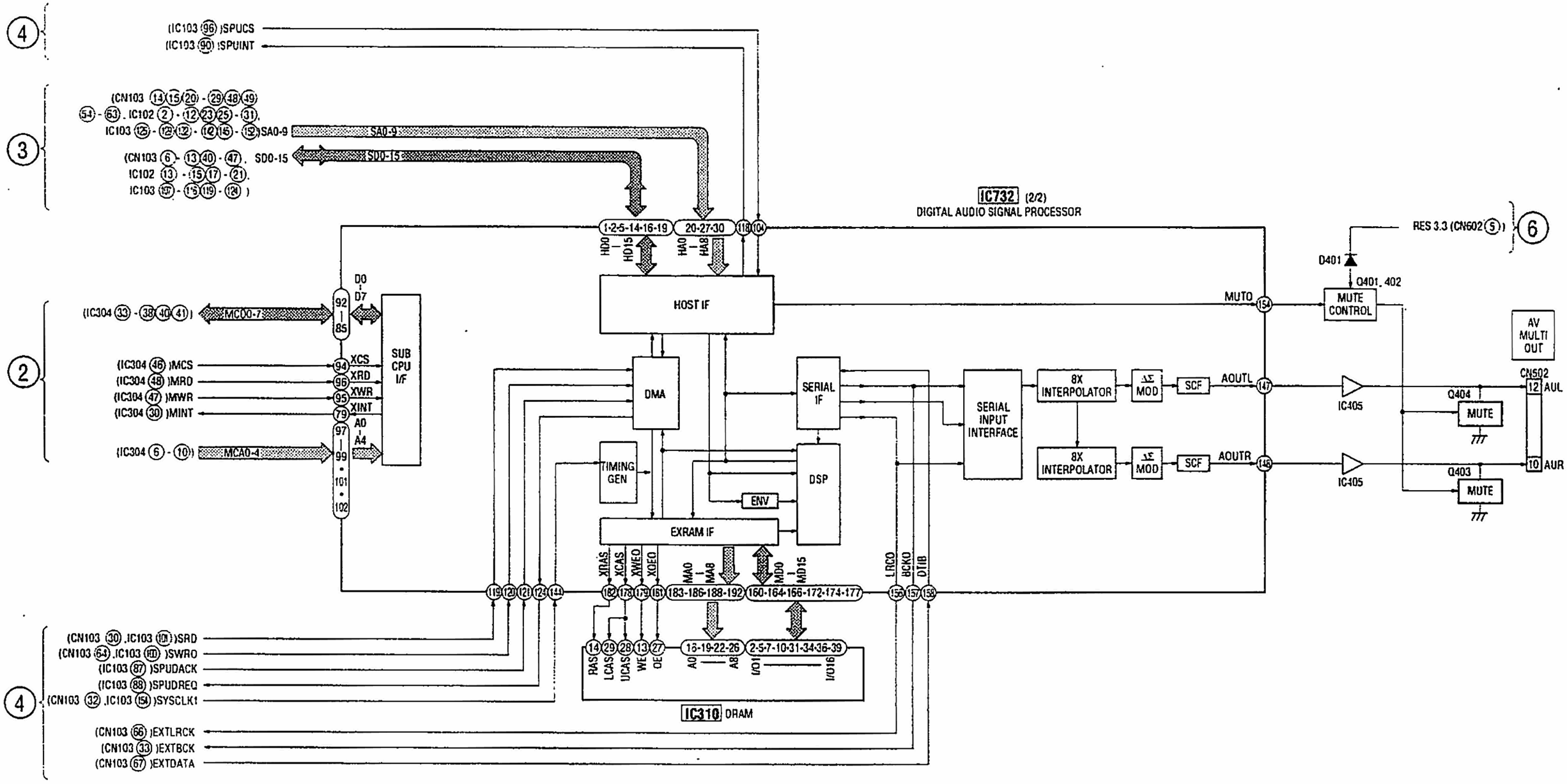
-3. VIDEO BLOCK DIAGRAM



5. SERVO BLOCK DIAGRAM



5-4. AUDIO BLOCK DIAGRAM



IC102

BOOT ROM

IC102
KM23V4000BG-15-KF5314J-1T 7500
KM23V4000BG-15-KF5316J-1T 7501, 7503
MSM534031E-1006-KPR2 7502

IC102

SA19	0	1	A19	VCC	32	3.4	
SA16	0	2	A16	A18	31	0	SA18
SA15	0	3	A15	A17	30	0	SA17
SA12	3.4	4	A12	A14	29	0	SA14
SA7	0	5	A7	A13	28	0	SA13
SA6	0	6	A6	A8	27	0	SA8
SA5	0	7	A5	A9	26	0	SA9
SA4	0	8	A4	A11	25	3.4	SA11
SA3	0	9	A3	OE	24	3.4	
SA2	0	10	A2	A10	23	0	SA10
SA1	0	11	A1	CE	22	3.4	
SA0	0	12	A0	D7	21	3.4	SD7
SD0	3.4	13	D0	D6	20	3.4	SD6
SD1	3.4	14	D1	D5	19	3.4	SD5
SD2	3.4	15	D2	D4	18	3.4	SD4
		16	VSS	D3	17	3.4	SD3

12

13

C150 0.01μ

C102 0.001μ B

C140 0.01μ

C151 0.01μ

RB125
22X4

R115 22

C133
0.001μ
B

C112
0.1μ

C144
0.001μ
B

C145
0.001μ B

C111
0.001μ
B

C110
0.001μ
B

C136
0.001μ
B

C108
0.001μ
B

C124
1μ

C137
0.001μ

C138
0.01μ

C139
0.01μ

C109
0.001
B

R154
330

R107
22

R104 22

RB124
10KX4

RB122
2ZX4

GPUD31 GPUD30 GPUD29 GPUD28 GPUD27 GPUD26 GPUD25 GPUD24 GPUD23 GPUD22 GPUD21 GPUD20 GPUD19 GPUD18 GPUD17 GPUD16 GPUD15 GPUD14 GPUD13 GPUD12 GPUD11 GPUD10 GPUD9 GPUD8 GPUD7 GPUD6 GPUD5 GPUD4 GPUD3 GPUD2 GPUD1 GPUD0

208 VSS 1.6
207 VSS 3.4 (3.2)
206 ΦSYSCLK 3.1
205 CS7 3.4 (3.2)
204 VRD 0
203 VWR 1.6
202 ΦACK2 1.3 (3.1)
201 SYSCLK0 0.3
200 ΦREQ2 3.3
199 INTIN0 3.4 (3.1)
198 VDD 3.4
197 VSS 3.3
196 VD29 3.3
195 VD28 3.3
194 VD27 3.3
193 VD26 3.3
192 VD25 3.3
191 VD24 0 (3.2)
190 VD23 0 (3.2)
189 VD22 3.3 (3.1)
188 VD21 3.3 (3.1)
187 VD20 3.4
186 VD19 3.4
185 VDD 3.4
184 VSS 3.3
183 VD18 3.4 (3.2)
182 VD17 3.4 (3.2)
181 VD16 3.4 (3.2)
180 VD15 3.4 (3.2)
179 VD14 3.4 (3.2)
178 VD13 3.4 (3.2)
177 VD12 3.4 (3.2)
176 VD11 3.4 (3.2)
175 VD10 3.4 (3.2)
174 VD9 3.4 (3.2)
173 VDD 3.4
172 VSS 3.4 (3.2)
171 VD8 3.4 (3.2)
170 VD7 3.4 (3.2)
169 VD6 3.4 (3.2)
168 VD5 3.4 (3.2)
167 VD4 3.4 (3.2)
166 VD3 3.4 (3.2)
165 VD2 3.4 (3.2)
164 VD1 3.4 (3.2)
163 VD0 3.4 (3.2)
162 TCLK0 1.7
161 TCLK1 0.8
160 VDD 3.4
159 VDD 3.4
158 VSS
157 VSS
156 SYSCLK1 1.6
155 VA2 2.1 (1.2)
154 SA23 3.4
153 SA22 0
152 SA21 0
151 SA20 0
150 SA19 0
149 SA18 0
148 SA17 0
147 SA16 0
146 VDD 3.4
145 VSS
144 SA15 0
143 SA14 0
142 SA13 0
141 SA12 3.4
140 SA11 3.4
139 SA10 0
138 SA9 0
137 SA8 0
136 SA7 0
135 SA6 0
134 SA5 0
133 VDD 0
132 VSS
131 SA4 0
130 SA3 0
129 SA2 0
128 SA1 0
127 SA0 0
126 SD15 3.4
125 SD14 3.4
124 SD13 3.4
123 SD12 3.4
122 SD11 3.4
121 SD10 3.4
120 VDD 3.4
119 VSS
118 SD9 3.4
117 SD8 3.4
116 SD7 3.4
115 SD6 3.4
114 SD5 3.4
113 SD4 3.4
112 SD3 3.4
111 SD2 3.4
110 SD1 3.4
109 SD0 3.4
108 VDD 3.4
107 VDD 3.4
106 VDD 3.4
105 VDD 3.4

1 VDD 3.4
2 VDD 3.4
3 CRYSTALN 1.7
4 CRYSTALP 1.9 (1.4)
5 DD31 0.2 (1.1)
6 DD30 2 (1.3)
7 DD29 0.2 (1.3)
8 DD28 0.3 (1)
9 DD27 0.3 (1.4)
10 DD26 0.3 (1.5)
11 DD25 0.2 (1.5)
12 DD24 0.2 (1.2)
13 DD23 3.4
14 VDD
15 VSS 0.2 (1.2)
16 DD22 0.3 (1.2)
17 DD21 0.2 (1.2)
18 DD20 0.3 (1.2)
19 DD19 0.3 (1.4)
20 DD18 0.3 (1.3)
21 DD17 0 (1.5)
22 DD16 0.6 (0.8)
23 DD15 0.8 (1.4)
24 DD14 0.6 (1)
25 DD13 3.4
26 VDD
27 VSS 1
28 DD12 0.8 (1.1)
29 DD11 0.9 (1.2)
30 DD10 0.8 (1.1)
31 DD9 1 (1.6)
32 DD8 0.8 (1.1)
33 DD7 0.8 (1.3)
34 DD6 0.9 (1.2)
35 DD5 0.9 (1.4)
36 DD4 0.8 (1.3)
37 DD3 3.4
38 VDD
39 VSS 0.8 (1.4)
40 DD2 2.7 (1.3)
41 DD1 0.6 (1.4)
42 DD0 3.4 (2.6)
43 DWE
44 DRAS1 2.6 (1.9)
45 DRAS0 3.4
46 DCAS3 3.2 (3)
47 DCAS2 3.2 (3)
48 DCAS1 3.2 (3)
49 DCAS0 3.4
50 VDD
51 VSS
52 VSS

53 VDD 3.4
54 VDD 3.4
55 DA11 1.8
56 DA10 0 (0.8)
57 DA9 0.3 (1.9)
58 DA8 3.1 (1)
59 DA7 2.5 (1)
60 DA6 2.4 (1)
61 DA5 2.7 (1.9)
62 DA4 0.7 (2)
63 DA3
64 DA2
65 VSS 3.4
66 VDD (1) 2.7
67 DA1 (1) 3.1
68 DA0 3.4
69 RC NET 3.4
70 RTS1 0
71 CTS1 3.4
72 DTR1 0
73 DSR1 3.4
74 TXD1 3.4
75 RXD1 3.4
76 EXT RESET 3.4
77 DTROB 3.4
78 VSS 3.4
79 VDD 3.4
80 DTROA 3.4
81 SCKO 3.4
82 DSRO 3.4
83 TXD.0 3.4
84 RXD.0 0
85 DACK5 0
86 DREQ5 0
87 DACK4 0
88 DREQ4 2.6
89 INTIN10 3.4
90 INTIN9 3.4
91 VSS 3.4
92 VDD 3.4
93 CSHTST 3.4
94 INTIN2 (3.2) 3.4
95 CS5 3.4
96 CS4 3.4
97 CS2 3.4
98 CS0 3.4
99 SWR1 3.4
100 SWR0 3.4
101 SRD 3.4
102 INTIN1 3.4
103 VSS
104 VSS

CPMA8 CPMA9 CPMA7 CPMA6 CPMA5 CPMA4 CPMA3 CPMA2 CPMA1 CPMA0

① 67.73MHz 0.4Vp-p 1.6V 0V
IC103 ④

② 10μs/div 3.6Vp-p 0V
IC103 ⑤ MENU

③ NTSC:66.67MHz/PAL:64.5MHz 0.4Vp-p 1.4V 0V
IC103 ㉖

④ 0.1μs/div 3.5Vp-p 0V
IC103 ㉔

⑤ 0.8μs 3.5Vp-p 0V
IC103 ㉘

⑥ 1μs/div 3.5Vp-p 0V
IC103 ㉒

⑦ 33.3MHz 3.3Vp-p 0V
IC103 ㉑

⑧ 5ms/div 3.7Vp-p 0V
IC103 ⑯ MENU

⑨ 5ms/div 4.0Vp-p 0V
IC103 ⑯ PLAY

⑩ 33.3MHz 3.2Vp-p 0V
IC103 ⑮

⑪ 50ns/div 3.5Vp-p 0V
IC103 ⑮

⑫ 1ms/div 4.0Vp-p 0V
IC102 ㉔ PLAY

⑬ 155ms 3.6Vp-p 0V
IC102 ㉒ PLAY

IC103
IC103
CX88606Q
CPU

IC203 (206) (-ØSYSCK) ← ØBLCLK

IC204 (5) → CPUCLK

IC203 (65) (Ø0) ↔ GPUØ0 — GPUØ0
IC203 (64) (Ø1) ↔ GPUØ1 — GPUØ1
IC203 (63) (Ø2) ↔ GPUØ2 — GPUØ2
IC203 (62) (Ø3) ↔ GPUØ3 — GPUØ3
IC203 (59) (Ø4) ↔ GPUØ4 — GPUØ4
IC203 (58) (Ø5) ↔ GPUØ5 — GPUØ5
IC203 (57) (Ø6) ↔ GPUØ6 — GPUØ6
IC203 (56) (Ø7) ↔ GPUØ7 — GPUØ7
IC203 (55) (Ø8) ↔ GPUØ8 — GPUØ8
IC203 (54) (Ø9) ↔ GPUØ9 — GPUØ9
IC203 (53) (Ø10) ↔ GPUØ10 — GPUØ10
IC203 (50) (Ø11) ↔ GPUØ11 — GPUØ11
IC203 (49) (Ø12) ↔ GPUØ12 — GPUØ12
IC203 (48) (Ø13) ↔ GPUØ13 — GPUØ13
IC203 (47) (Ø14) ↔ GPUØ14 — GPUØ14
IC203 (46) (Ø15) ↔ GPUØ15 — GPUØ15
IC203 (45) (Ø16) ↔ GPUØ16 — GPUØ16
IC203 (42) (Ø17) ↔ GPUØ17 — GPUØ17
IC203 (41) (Ø18) ↔ GPUØ18 — GPUØ18
IC203 (40) (Ø19) ↔ GPUØ19 — GPUØ19
IC203 (39) (Ø20) ↔ GPUØ20 — GPUØ20
IC203 (36) (Ø21) ↔ GPUØ21 — GPUØ21
IC203 (35) (Ø22) ↔ GPUØ22 — GPUØ22
IC203 (34) (Ø23) ↔ GPUØ23 — GPUØ23
IC203 (33) (Ø24) ↔ GPUØ24 — GPUØ24
IC203 (32) (Ø25) ↔ GPUØ25 — GPUØ25
IC203 (31) (Ø26) ↔ GPUØ26 — GPUØ26
IC203 (28) (Ø27) ↔ GPUØ27 — GPUØ27
IC203 (27) (Ø28) ↔ GPUØ28 — GPUØ28
IC203 (26) (Ø29) ↔ GPUØ29 — GPUØ29
IC203 (25) (Ø30) ↔ GPUØ30 — GPUØ30
IC203 (24) (Ø31) ↔ GPUØ31 — GPUØ31

IC203 (6) (-RST) ← RES3.3G

C115 0.01μ B
C116 100p
C113 0.1μ F

IC106 T7X16 (YEL)

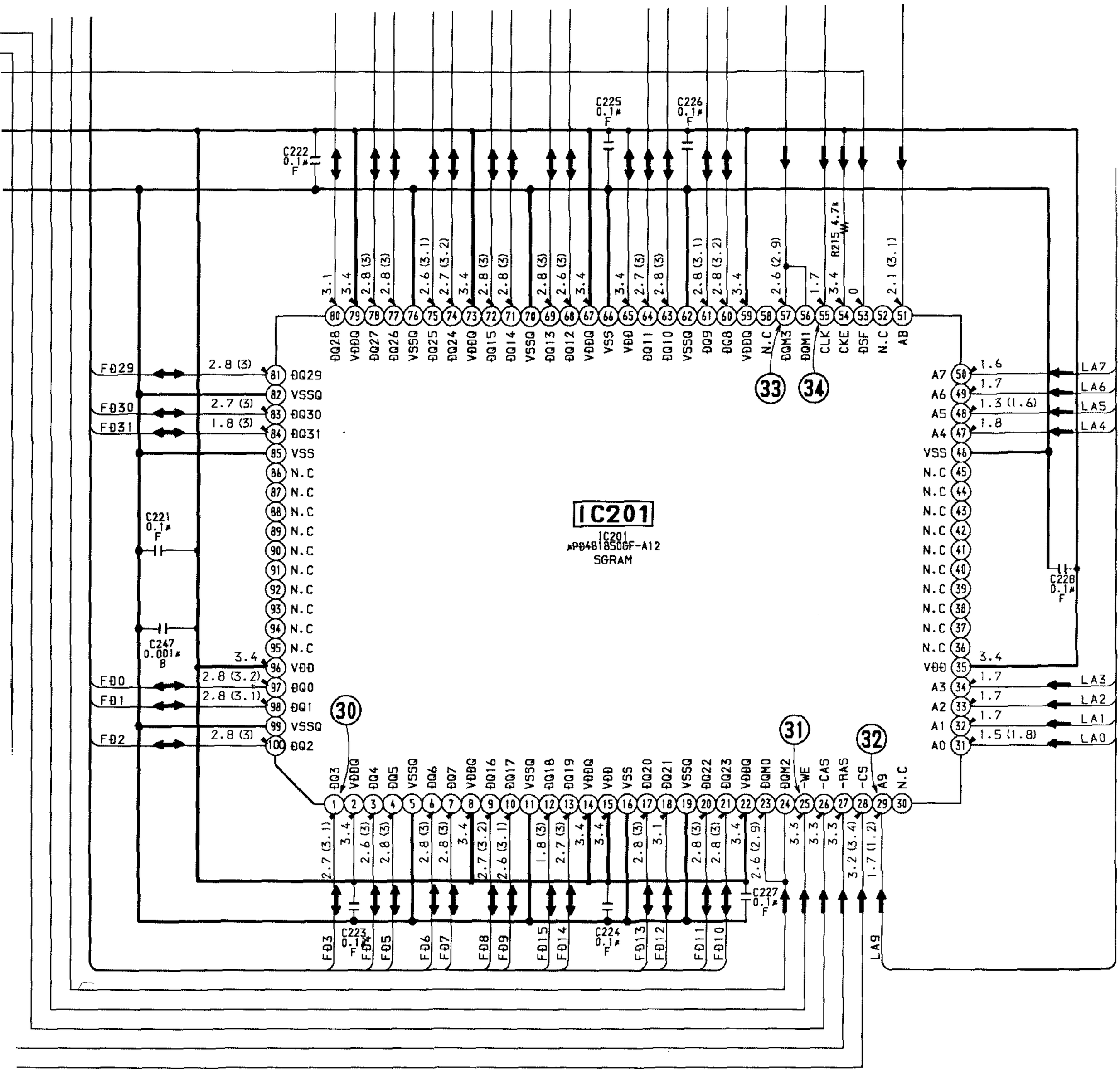
	3.4	1	VCC	VSS 70	
CPMØ0	0.6 (1.4)	2	I/O1	I/O32 69 1.9 (1.4)	CPMØ31
CPMØ1	0.6 (1.4)	3	I/O2	I/O31 68 9.2 (1.1)	CPMØ30
CPMØ2	0.8 (1.4)	4	I/O3	I/O30 67 2 (1.1)	CPMØ29
CPMØ3	0.8 (1.3)	5	I/O4	I/O29 66 0.2 (1.3)	CPMØ28
	3.4	6	VCC	VSS 65	
CPMØ4	0.9 (1.2)	7	I/O5	I/O28 64 0.3 (1)	CPMØ27
CPMØ5	0.9 (1.2)	8	I/O6	I/O27 63 0.3 (1.4)	CPMØ26
CPMØ6	0.8 (1.3)	9	I/O7	I/O26 62 0.3 (1.5)	CPMØ25
CPMØ7	0.8 (1.1)	10	I/O8	I/O25 61 0.2 (1.5)	CPMØ24
		11	N.C.	N.C. 60	
	3.4	12	VCC	VSS 59	
CPMØ8	1 (1.6)	13	I/O9	I/O24 58 0.2 (1.2)	CPMØ23
CPMØ9	0.8 (1.1)	14	I/O10	I/O23 57 0.2 (1.2)	CPMØ22
CPMØ10	0.9 (1.2)	15	I/O11	I/O22 56 0.3 (1.2)	CPMØ21
CPMØ11	0.8 (1.1)	16	I/O12	I/O21 55 0.2 (1.2)	CPMØ20
	3.4	17	VCC	VSS 54	
CPMØ12	1	18	I/O13	I/O20 53 0.3 (1.2)	CPMØ19
CPMØ13	0.6 (1)	19	I/O14	I/O19 52 0.3 (1.4)	CPMØ18
CPMØ14	0.8 (1.4)	20	I/O15	I/O18 51 0.3 (1.3)	CPMØ17
CPMØ15	0.6 (0.8)	21	I/O16	I/O17 50 0 (1.5)	CPMØ16
		22	N.C.	N.C. 49	
		23	N.C.	CAS1 48 3.2 (3)	
		24	N.C.	CAS2 47 3.2 (3)	
		25	N.C.	CAS3 46 3.2 (3)	
		26	N.C.	CAS4 45 3.2 (3)	
	2.6 (1.9)	27	RAS	WE 44 3	
CPMA0	3.1 (1)	28	A0	OE 43	
CPMA1	2.7 (1)	29	A1	N.C. 42	
CPMA2	0.7 (2)	30	A2	N.C. 41	
CPMA3	2.7 (1.9)	31	A3	N.C. 40	
CPMA4	2.4 (1)	32	A4	A9R 39 0 (0.8)	CPMA9
CPMA5	2.5 (1)	33	A5	A8 38 1.8	CPMA8
CPMA6	3.1 (1)	34	A6	A7 37 0.3 (1.9)	CPMA7
	3.4	35	VCC	VSS 36	

IC106
ØRAM

C118 0.001μ B
C122 0.001μ B

RB121 22X4
RB120 22X4

→ DIG +3.3V


C222 0.1μF
C225 0.1μF
C226 0.1μF
R215 4.7k
IC201
IC201
μPD4818500GF-A12
SGRAM
C221 0.1μF
C247 0.001μ B
C223 0.1μF
C224 0.1μF
C227 0.1μF
C228 0.1μF
FD29
FD30
FD31
FD0
FD1
FD2
FD3
FD4
FD5
FD6
FD7
FD8
FD9
FD15
FD14
FD13
FD12
FD11
FD10
LA7
LA6
LA5
LA4
LA3
LA2
LA1
LA0
LA9
30
31
32
33
34
DQ28 DQ29 VSSQ DQ30 DQ31 VSS N.C N.C N.C N.C N.C N.C VDD DQ0 DQ1 VSSQ DQ2
DQ3 VDDQ DQ4 DQ5 VSSQ DQ6 DQ7 VDDQ DQ16 DQ17 VSSQ DQ18 DQ19 VDDQ VDD VSS DQ20 DQ21 VSSQ DQ22 DQ23 VDDQ DQM0 DQM2 -WE -CAS -RAS -CS A9 N.C
DQ28 VDDQ DQ27 DQ26 VSSQ DQ25 DQ24 VDDQ DQ15 DQ14 VSSQ DQ13 DQ12 VDDQ VSS VDD DQ11 DQ10 VSSQ DQ9 DQ8 VDDQ N.C DQM3 DQM1 CLK CKE DSF N.C AB
A7 A6 A5 A4 VSS N.C N.C N.C N.C N.C N.C VDD A3 A2 A1 A0

IC203

IC203
CX08561BQ
GPU

C214 0.1μ
C212 0.1μ
C216 0.1μ
C219 0.1μ
RB202 22×4

15 CSYNC
NTPL
-VSYNC
-HSYNC
SB0
SB1
SB2
SB3
VSS
VDD
SB4
SB5
SB6
SB7
SG0
SG1
SG2
SG3
VSS
VDD
SG4
SG5
SG6
SG7
SR0
SR1
SR2
SR3
VSS
VDD
SR4
SR5
SR6
SR7
VSS
VDD
17 VCKN-A
VDD
VSS
VDD
17 VCKP-A
VDD
VSS
18 PCK
VSS
VDD
DMASK
ODE2
VSS
VDD
-DSYSCK
VSS
VDD

20 -CS
21 A2
22 -RD
23 -WR
24 DACK
-RST
25 SYSCLK
27 DREQ
26 -IREQ
28 HBLNK
29 VBLNK
HVHLD
N.C

32 MCLKIN
16 MCLKOUT
16

57

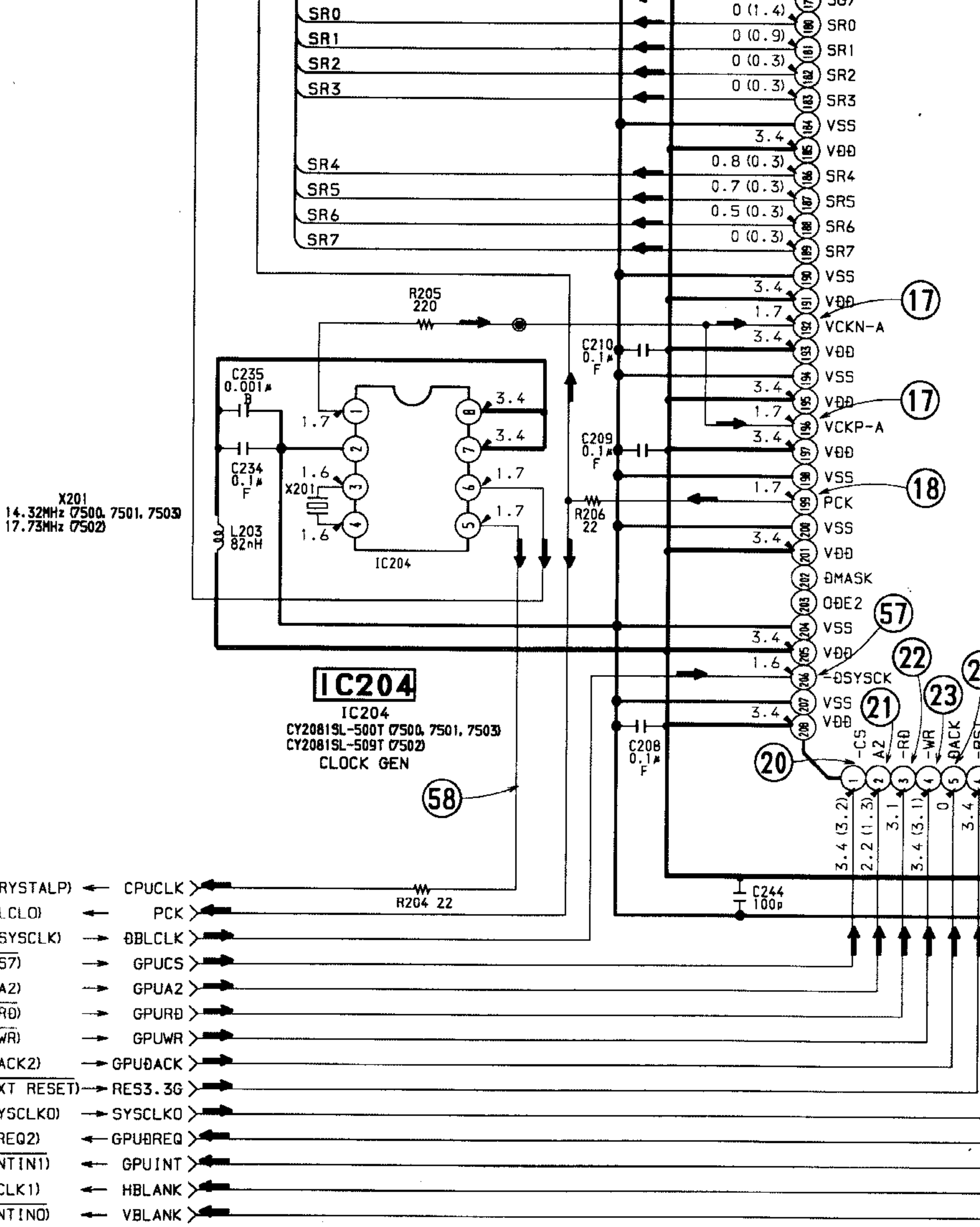
VSS VDD FSC VSS VDD LA0 LA1 LA2 VDD VSS LA3 LA4 LA5 VSS VDD LA6 LA7 LA8 LA9 VDD VSS MCLKIN VDD VSS MCLKOUT VDD VSS DQML DQMH -WE -CAS -RAS DSF -MCS0 -MCS1 VDD VSS FD0 FD1 FD2 FD3 VDD VSS FD4 FD5 FD6 FD7 FD8 FD9 VDD VSS

FD10 FD11 FD12 FD13 FD14 FD15 FD16 VDD VSS FD17 FD18 FD19 FD20 FD21 FD22 FD23 VSS VDD FD24 FD25 FD26 FD27 FD28 VSS VDD FD29 FD30 FD31 VSS VDD TEST0 TEST1 TEST2 TEST3 PCKSL0 PCKSL1 PCKSL2 VDD VSS D0 D1 D2 D3 VDD VSS D4 D5 D6 D7 D8 D9 D10

-CS A2 -RD -WR DACK -RST VDD VSS SYSCLK VDD VSS DREQ -IREQ HBLNK VSS VDD VBLNK HVHLD VSS VSS N.C VDD VDD D31 D30 D29 D28 D27 VDD VSS D26 D25 D24 D23 D22 D21 VDD VSS D20 D19 D18 D17 VDD VSS D16 D15 D14 D13 D12 D11 VDD VSS

R207 4.7k

C244 100p
C213 0.1μF
C215 0.1μF
C217 0.1μF
C218 0.1μF
C245 100p
C239 0.001μF

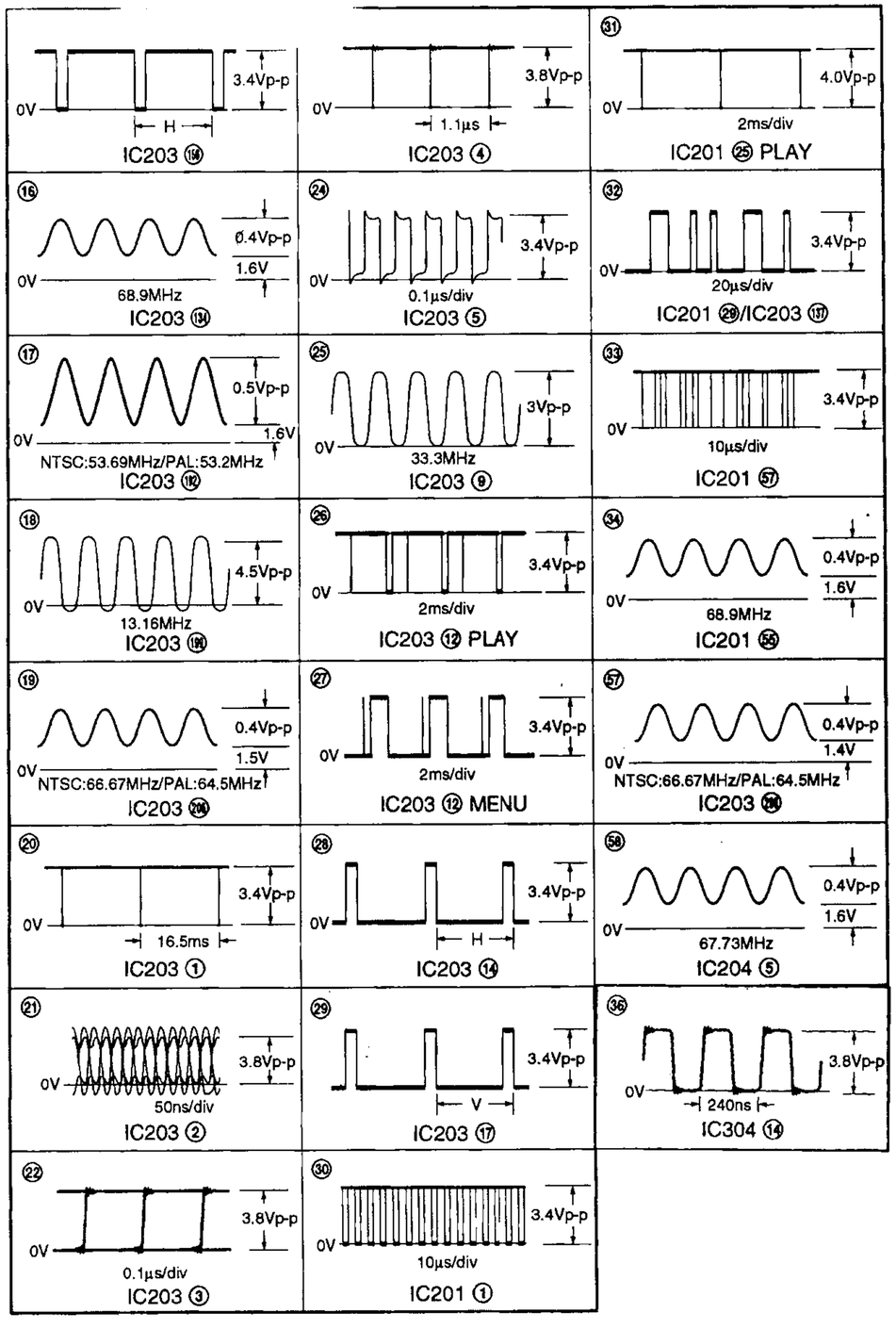

SR0
SR1
SR2
SR3
SR4
SR5
SR6
SR7
0 (1.4)
0 (0.9)
0 (0.3)
0 (0.3)
3.4
0.8 (0.3)
0.7 (0.3)
0.5 (0.3)
0 (0.3)
VSS
VDD
SR0
SR1
SR2
SR3
SR4
SR5
SR6
SR7
R205
220
C235
0.001μ
B
C234
0.1μ
F
L203
82nH
X201
14.32MHz (7500, 7501, 7503)
17.73MHz (7502)
1.7
1.6
3.4
IC204
C210
0.1μ
F
C209
0.1μ
F
C208
0.1μ
F
R206
22
R204 22
C244
100p
VCKN-A
VCKP-A
PCK
DMASK
DDE2
-DSYSCK
-CS
A2
-RD
-WR
-DACK
17
18
57
22
23
21
20
58
IC204
CY2081SL-500T (7500, 7501, 7503)
CY2081SL-509T (7502)
CLOCK GEN
(CRYSTALP) CPUCLK
(TLCLO) PCK
(DSYSCLK) DBLCLK
(CS7) GPUCS
(VA2) GPUA2
(VRD) GPURD
(VWR) GPUWR
(DACK2) GPUDACK
(EXT RESET) RES3.3G
(SYSCLKO) SYSCLKO
(DREQ2) GPUDREQ
(INTIN1) GPUINT
(TCLK1) HBLANK
(INTINO) VBLANK

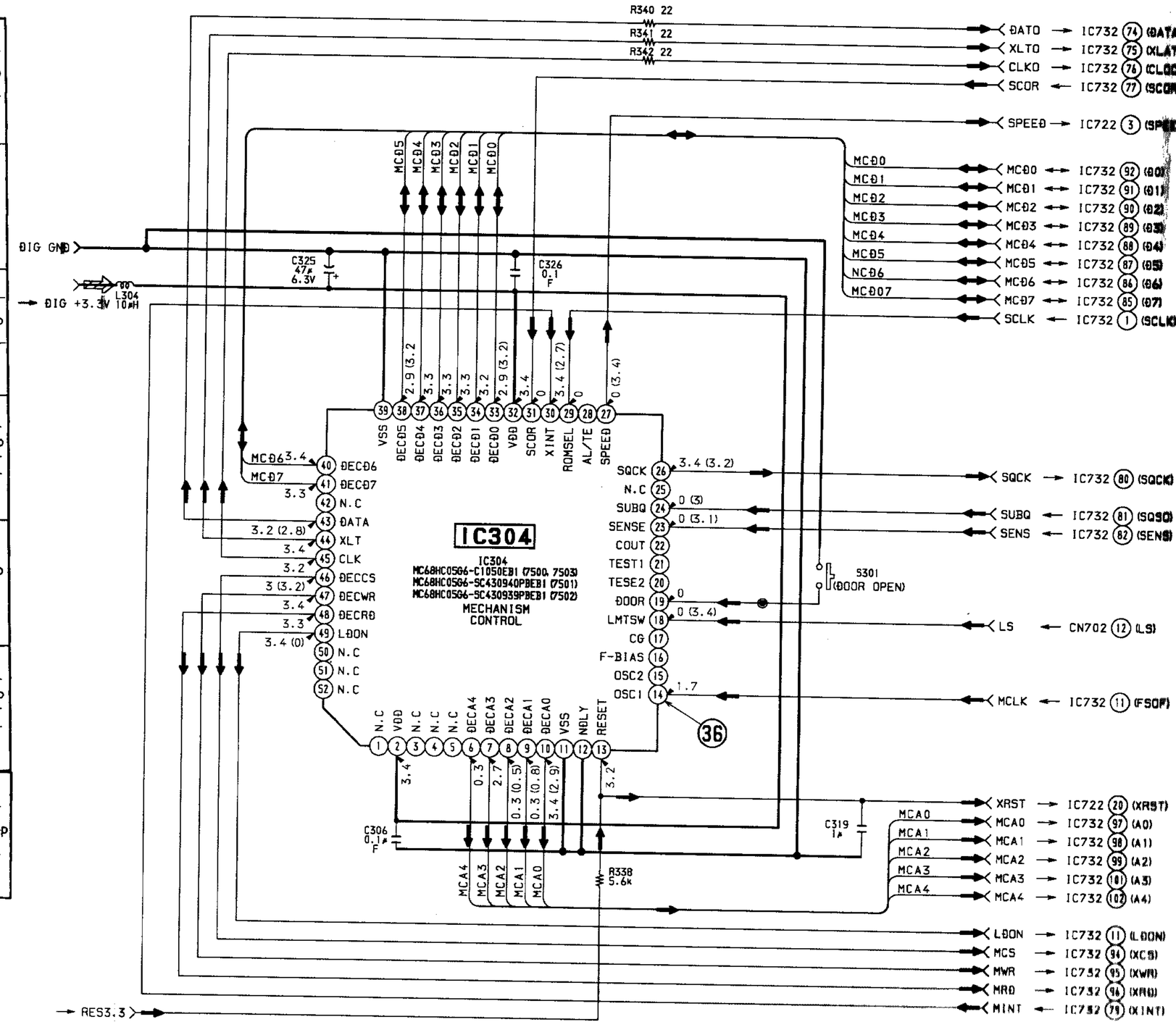
6-5. SCHEMATIC DIAGRAM (PU-22 (-11/-12/-21/-22/-32) BOARD (3/5))

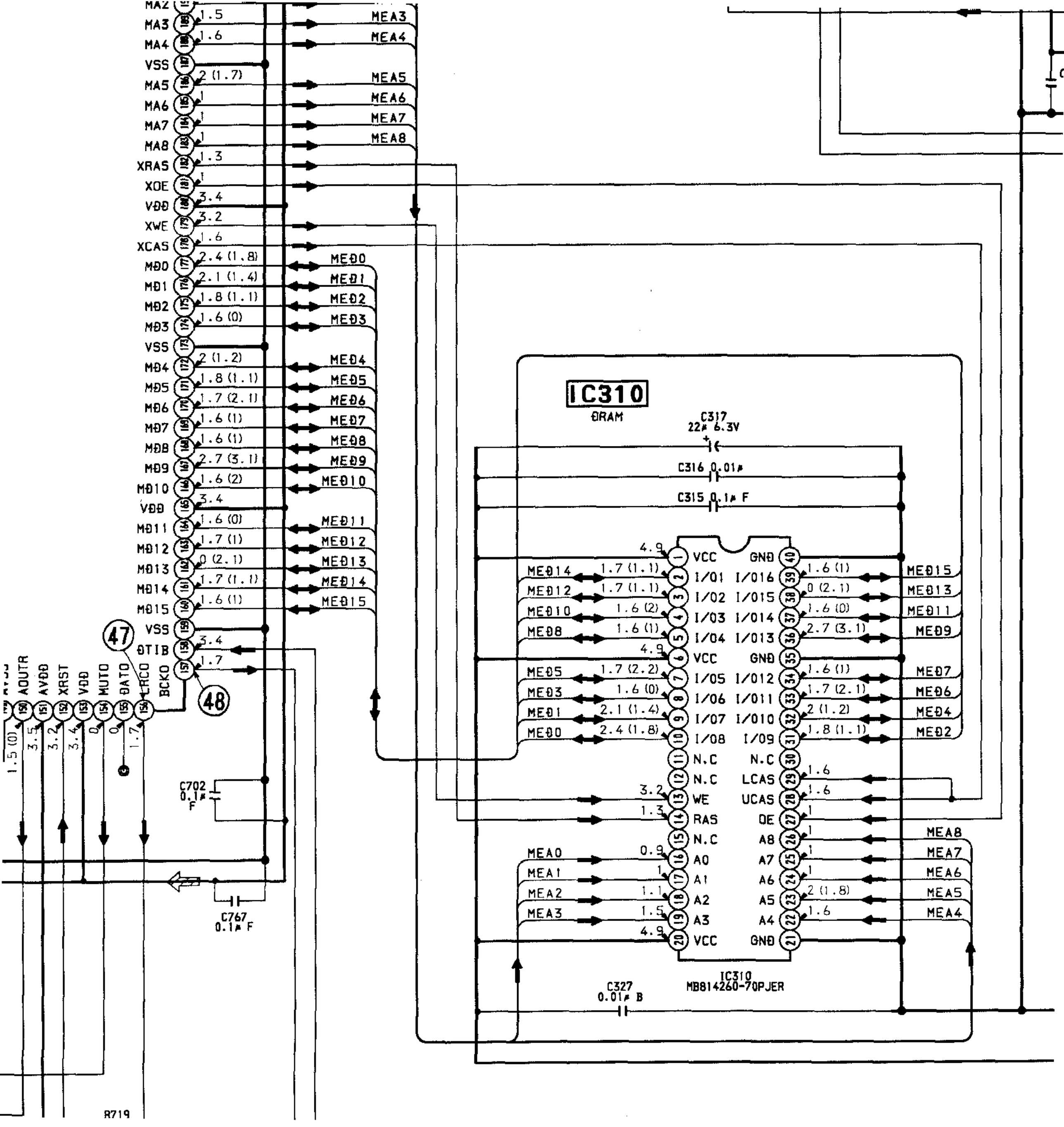
1 2 3 4 5 6 7 8 9

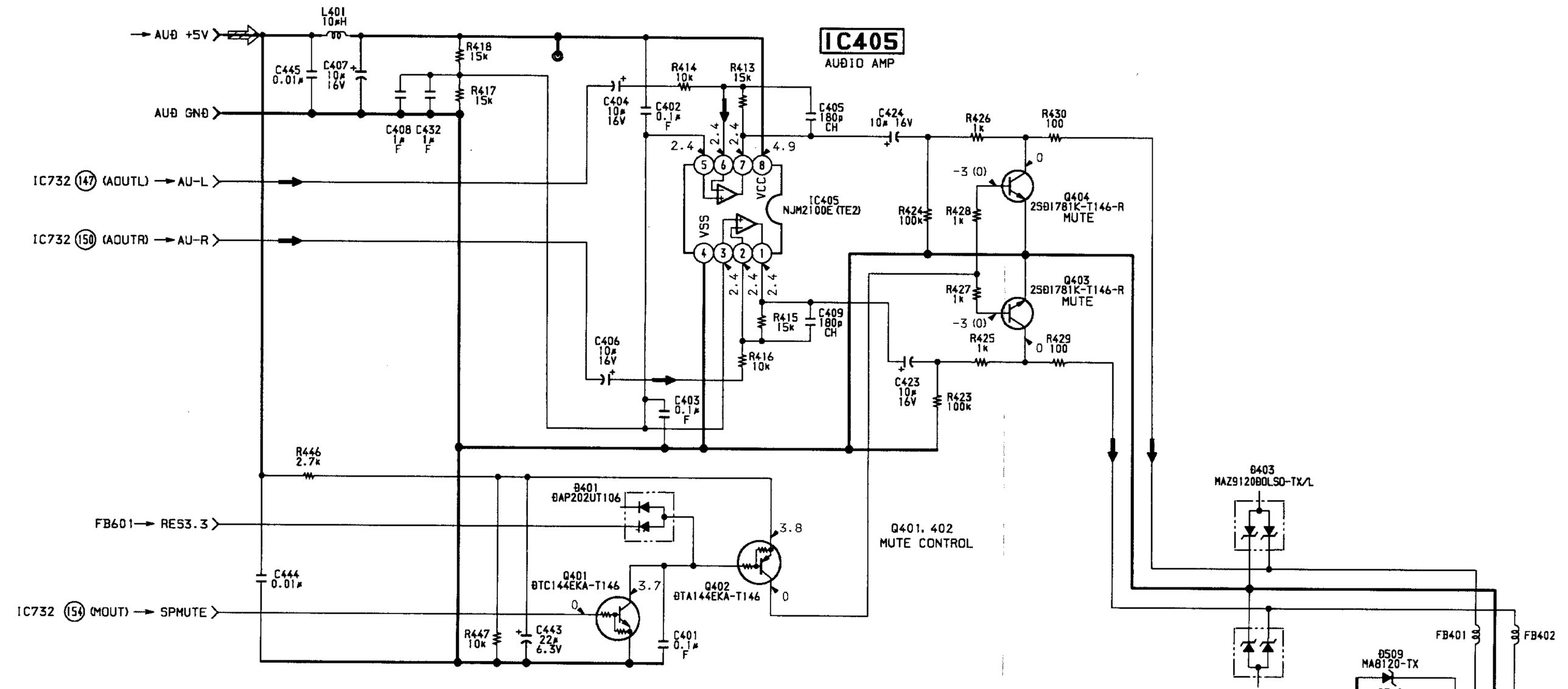
PU-22 BOARD (3/5)

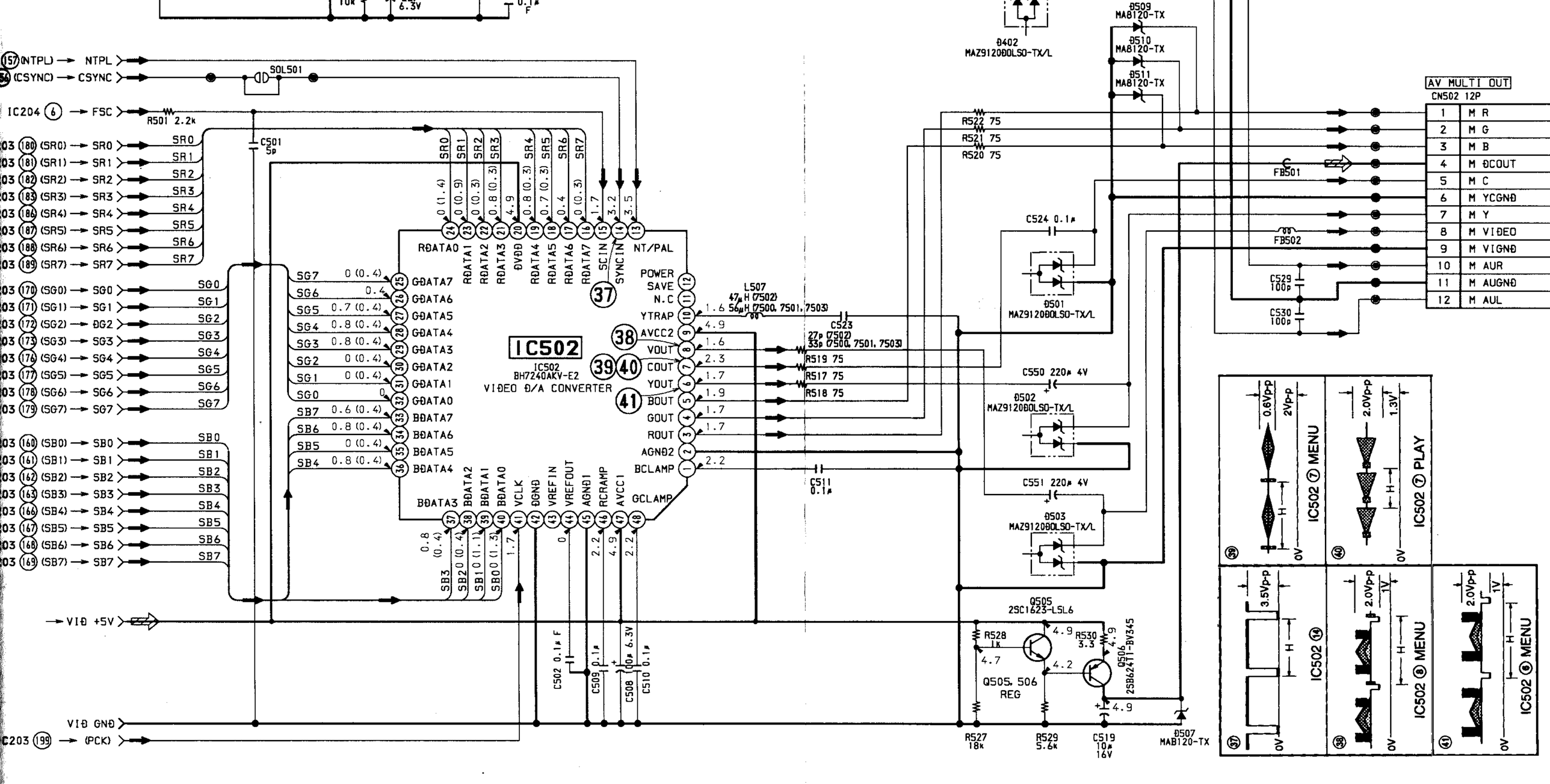
PU-22 B(

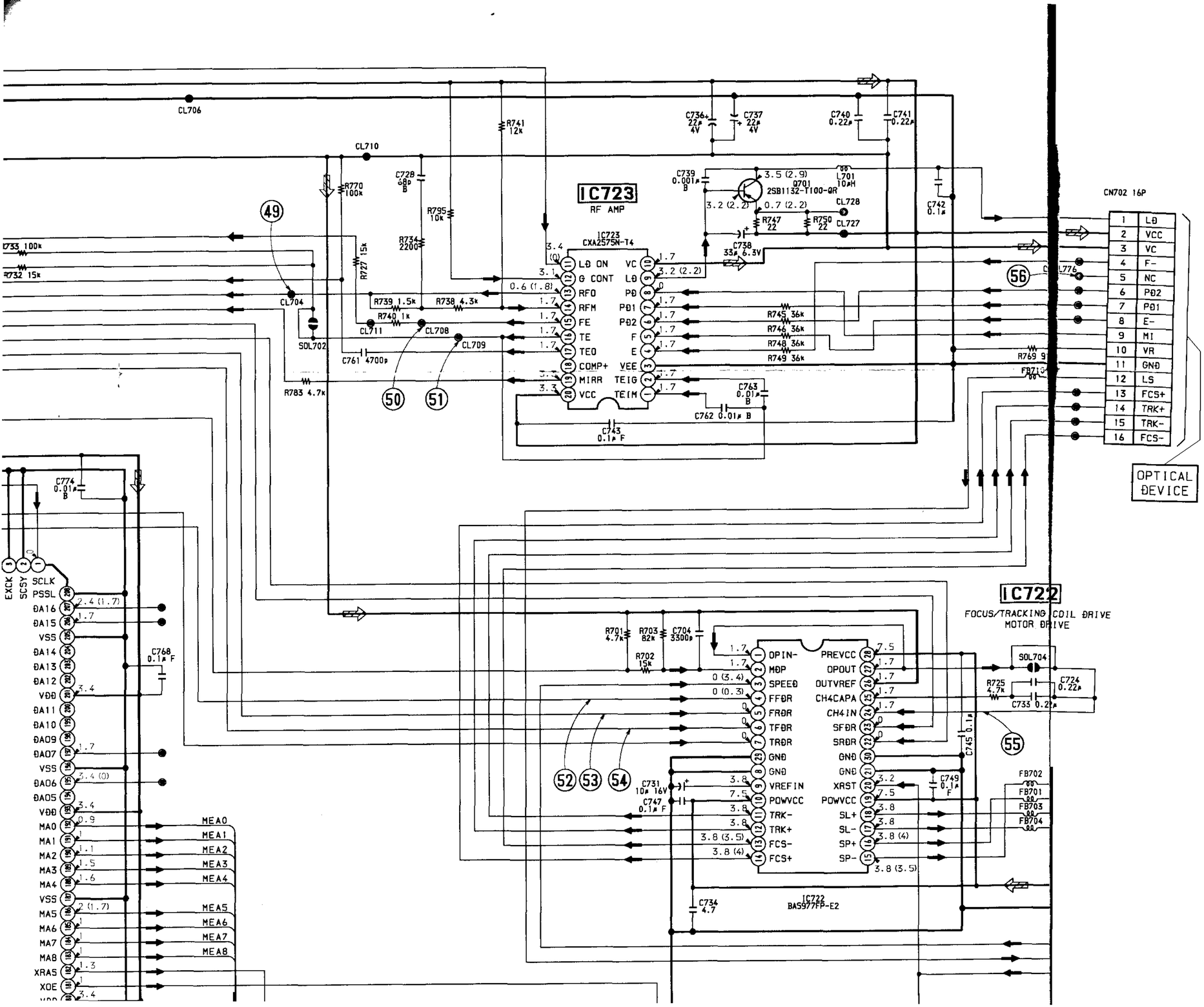





MA2
MA3
MA4
VSS
MA5
MA6
MA7
MA8
XRAS
XOE
VDD
XWE
XCAS
MD0
MD1
MD2
MD3
VSS
MD4
MD5
MD6
MD7
MD8
MD9
MD10
VDD
MD11
MD12
MD13
MD14
MD15
VSS
DTIB
BCKO
LRCO
DATO
MUTO
VDD
XRST
AVDD
AOUTR
MEA3
MEA4
MEA5
MEA6
MEA7
MEA8
MED0
MED1
MED2
MED3
MED4
MED5
MED6
MED7
MED8
MED9
MED10
MED11
MED12
MED13
MED14
MED15
47
48
C702
0.1μF
C767
0.1μF
R719
IC310
DRAM
C317
22μ 6.3V
C316 0.01μ
C315 0.1μ F
VCC
I/01
I/02
I/03
I/04
I/05
I/06
I/07
I/08
N.C
WE
RAS
A0
A1
A2
A3
GND
I/016
I/015
I/014
I/013
I/012
I/011
I/010
I/09
LCAS
UCAS
OE
A8
A7
A6
A5
A4
C327
0.01μ B
IC310
MB814260-70PJER


IC405
AUDIO AMP
AUD +5V
AUD GND
IC732 (147) (AOUTL) → AU-L
IC732 (150) (AOUTR) → AU-R
FB601 → RES3.3
IC732 (154) (MOUT) → SPMUTE
L401 10μH
C445 0.01μ
C407 10μ 16V
C408 1μF
C432 1μF
R418 15k
R417 15k
C404 10μ 16V
C402 0.1μF
R414 10k
R413 15k
C405 180p CH
C424 10μ 16V
R426 1k
R430 100
IC405 NJM2100E (TE2)
VCC
VSS
R424 100k
R428 1k
Q404 2SD1781K-T146-R MUTE
R427 1k
Q403 2SD1781K-T146-R MUTE
R425 1k
R429 100
C409 180p CH
R415 15k
C406 10μ 16V
R416 10k
C403 0.1μF
C423 10μ 16V
R423 100k
R446 2.7k
D401 DAP202UT106
Q401 DTC144EKA-T146
Q402 DTA144EKA-T146
Q401, 402 MUTE CONTROL
C444 0.01μ
R447 10k
C443 22μ 6.3V
C401 0.1μF
D403 MAZ9120D0LS0-TX/L
D509 MA8120-TX
FB401
FB402


IC502
IC502
BH7240AKV-E2
VIDEO D/A CONVERTER
AV MULTI OUT
CN502 12P
1 M R
2 M G
3 M B
4 M DCOUT
5 M C
6 M YCGND
7 M Y
8 M VIDEO
9 M VIGND
10 M AUR
11 M AUGND
12 M AUL
(157) (NTPL) → NTPL
(156) (CSYNC) → CSYNC
SOL501
IC204 (6) → FSC
R501 2.2k
C501 5p
(180) (SR0) → SR0
(181) (SR1) → SR1
(182) (SR2) → SR2
(183) (SR3) → SR3
(186) (SR4) → SR4
(187) (SR5) → SR5
(188) (SR6) → SR6
(189) (SR7) → SR7
(170) (SG0) → SG0
(171) (SG1) → SG1
(172) (SG2) → SG2
(173) (SG3) → SG3
(176) (SG4) → SG4
(177) (SG5) → SG5
(178) (SG6) → SG6
(179) (SG7) → SG7
(160) (SB0) → SB0
(161) (SB1) → SB1
(162) (SB2) → SB2
(163) (SB3) → SB3
(166) (SB4) → SB4
(167) (SB5) → SB5
(168) (SB6) → SB6
(169) (SB7) → SB7
→ VID +5V
VID GND
C203 (199) → (PCK)
RDATA0
RDATA1
RDATA2
RDATA3
DVDD
RDATA4
RDATA5
RDATA6
RDATA7
SCIN
SYNCIN
NT/PAL
POWER SAVE
N.C
YTRAP
AVCC2
VOUT
COUT
YOUT
BOUT
GOUT
ROUT
AGND2
BCLAMP
GCLAMP
GDATA7
GDATA6
GDATA5
GDATA4
GDATA3
GDATA2
GDATA1
GDATA0
BDATA7
BDATA6
BDATA5
BDATA4
BDATA3
BDATA2
BDATA1
BDATA0
VCLK
DGND
VREFIN
VREFOUT
AGND1
RCRAMP
AVCC1
L507
47µH (7502)
56µH (7500, 7501, 7503)
C523
27p (7502)
33p (7500, 7501, 7503)
C511 0.1µ
R519 75
R517 75
R518 75
R522 75
R521 75
R520 75
FB501
FB502
C529 100p
C530 100p
C524 0.1µ
C550 220µ 4V
C551 220µ 4V
D501 MAZ9120D0LS0-TX/L
D502 MAZ9120D0LS0-TX/L
D503 MAZ9120D0LS0-TX/L
D402 MAZ9120D0LS0-TX/L
D509 MA8120-TX
D510 MA8120-TX
D511 MA8120-TX
D507 MA8120-TX
Q505 2SC1623-L5L6
Q506 2SB62411-BV345
Q505, 506 REG
R528 1k
R530 3.3
R527 18k
R529 5.6k
C519 10µ 16V
C502 0.1µ F
C509 0.1µ
C508 10µ 6.3V
C510 0.1µ
IC502 ⑦ MENU
IC502 ⑦ PLAY
IC502 ⑭
IC502 ⑧ MENU
IC502 ⑥ MENU
0.6Vp-p
2Vp-p
2.0Vp-p
3.5Vp-p
1V
1.3V
H
0V



42 — 1Vp-p, 0.8V, 0V, 0.72µs
IC732 (44) MENU

43 — 1.9µs, 2.8Vp-p, 0.4V, 0V
IC732 (32)

44 — 3.8Vp-p, 0V, 0.2µs/div
IC732 (24) PLAY

45 — 3.5Vp-p, 0V, 240ns
IC732 (11)

46 — 3.4Vp-p, 0V, 34MHz
IC732 (144)

47 — 3.8Vp-p, 0V
IC732 (157)

48 — 3.8Vp-p, 0V, 240ns
IC732 (157)

49 — 1.0Vp-p, 1.3V, 0.1µs/div
IC723 (13)/CL704 PLAY

50 — 0V
IC723 (15) PLAY

51 — 0V
IC723 (16) PLAY

52 — 0V, 5.6µs
IC722 (4) PLA

53 — 0V, 5.6µs
IC722 (7) PLAY

54 — 0V, 5.6µs
IC722 (6) PLA

55 — 0V
IC722 (9) PLA

56 — 0.1µs/div
CN702 (5)/CL776

IC732

IC732
CXØ2938Q
ØIGITAL AUØIO SIGNAL PROCESSOR

→ DIG +3.3V

→ DIG GND

→ EXT +8V

→ CTR 3.3V

SERIAL I/O

CN104 8P

SIO +3.3V	1
RXD	2
TXD	3
DSR	4
DTR	5
CTS	6
RTS	7
SIO GND	8

L102 1uH

D105 MAZ9120D0L5D-TX/L

D104 HZM6.8ZFA-TR

R146 1k
R148 1k
R134 1k

Q105, 106 INVERTER

R135 470
R136 470

C132 0.001u B

RB119 22X4

FB115
FB116
FB114
FB111
FB112
FB113

Q106 FMG9A-T148

Q105 FMG9A-T148

(FROM JACK)

CN102 10P

SCKO	10
+3.3V	9
TXD	8
GND	7
RXD	6
DTRDA	5
+8V	4
DTRDB	3
DSR	2
INT	1

FB122
CL199
FB121
FB120
FB119
FB118
FB117
FB123

L106 1uH

L104 1uH

D103 MAZ9120D0LSD-TX/L

D111 RD3.9SB-T1

D101 HZM6.8FA-TR

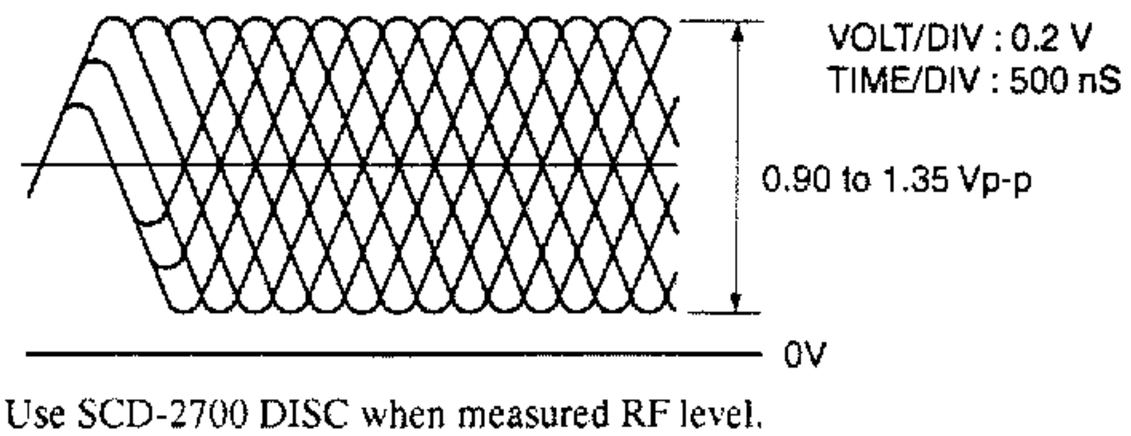
C135 0.01u B

SECTION 3
ADJUSTMENTS

3-1. CHECK SPECIFICATION

RF level 0.90 to 1.35 Vp-p (Check point : Between CL704 (HOT) and CL710 (VC).)

• RF signal waveform (eye pattern)



Use SCD-2700 DISC when measured RF level.

Use the oscilloscope with input impedance more than 10 MΩ.

RF Jitter Below 9.0 nS (Measuring by KJM-6135S JITTER METER.)

Below 27.0 nS (Measuring by KJM-6235S JITTER METER.)

PP level 1.1 ± 0.6 Vp-p (Check point : Between CL776 (HOT) and CL710 (VC).)

Use LPF (fc = 10 kHz)

Tracking level 1.25 ± 0.65 Vp-p (Check point : Between CL709 (HOT) and CL710 (VC).)

Caution.	Vc Line (CL710) do not make common use with GND line.

Check Point for PU-22 Board.