

JVC

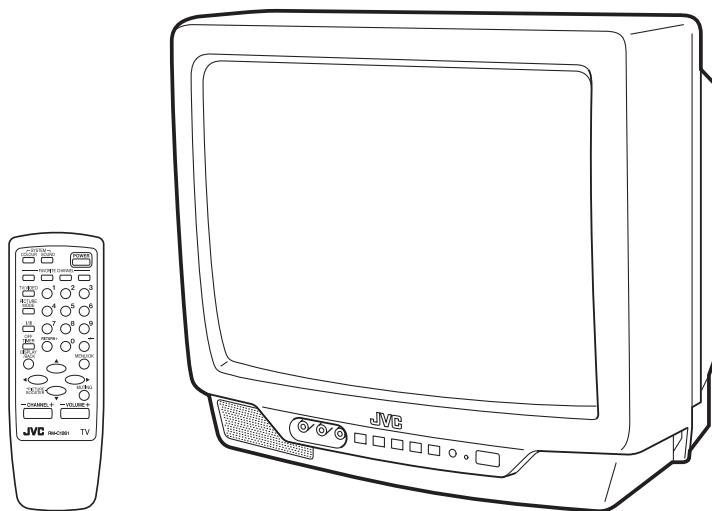
SCHEMATIC DIAGRAMS

COLOUR TELEVISION

**AV-14A14/A, AV-14A14/H,
AV-14AG14/U, AV-14AMG4/G,
AV-14AMG4/s**

CD-ROM No.SML200412

BASIC CHASSIS
CW



AV-14A14/A,AV-14A14/H,AV-14AG14/U, AV-14AMG4/G,AV-14AMG4/s

STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the $\triangle$ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- (1)Input signal : Colour bar signal
- (2)Setting positions of each knob/button and variable resistor : Original setting position when shipped
- (3)Internal resistance of tester : DC 20k Ω /V
- (4)Oscilloscope sweeping time : H $\Rightarrow$ 20 μ s / div
: V $\Rightarrow$ 5ms / div
: Others $\Rightarrow$ Sweeping time is specified
- (5)Voltage values : All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R209 $\rightarrow$ R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

- No unit : [Ω]
- K : [k Ω]
- M : [M Ω]

● Rated allowable power

- No indication : 1/16 [W]
- Others : As specified

● Type

- No indication : Carbon resistor
- OMR : Oxide metal film resistor
- MFR : Metal film resistor
- MPR : Metal plate resistor
- UNFR : Uninflamable resistor
- FR : Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

- 1 or higher : [pF]
- less than 1 : [μ F]

● Withstand voltage

- No indication : DC50[V]
- Others : DC withstand voltage [V]
- AC indicated : AC withstand voltage [V]

* Electrolytic Capacitors

47/50[Example]: Capacitance value [μ F]/withstand voltage[V]

●Type

- No indication : Ceramic capacitor
- MM : Metalized mylar capacitor
- PP : Polypropylene capacitor
- MPP : Metalized polypropylene capacitor
- MF : Metalized film capacitor
- TF : Thin film capacitor
- BP : Bipolar electrolytic capacitor
- TAN : Tantalum capacitor

(3)Coils

- No unit : [μ H]
- Others : As specified

(4)Power Supply

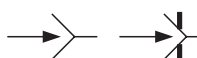
-  : B1
-  : B2 (12V)
-  : 9V
-  : 5V

* Respective voltage values are indicated

(5)Test point

-  : Test point
-  : Only test point display

(6)Connecting method

-  : Connector
-  : Wrapping or soldering
-  : Receptacle

(7)Ground symbol

-  : LIVE side ground
-  : ISOLATED(NEUTRAL) side ground
-  : EARTH ground
-  : DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ($\perp$) side GND and the ISOLATED(NEUTRAL) : ($\perp$) side GND. Therefore, care must be taken for the following points.

- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. if the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

NOTE

◆ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.

When ordering parts, please use the numbers that appear in the Parts List.

(No.YA150)2-1

CONTENTS

SEMICONDUCTOR SHAPES2-2

USING P.W. BOARD2-2

BLOCK DIAGRAM2-3

CIRCUIT DIAGRAMS

 MAIN PWB CIRCUIT DIAGRAM(1/3) [AV-14A14/A,AV14A14/H] 2-5

 MAIN PWB CIRCUIT DIAGRAM(2/3),(3/3) [AV-14A14/A,AV14A14/H] 2-7

 MAIN PWB CIRCUIT DIAGRAM(1/3) [AV14AG14/U] 2-9

 MAIN PWB CIRCUIT DIAGRAM(2/3),(3/3) [AV14AG14/U]2-11

 MAIN PWB CIRCUIT DIAGRAM(1/3) [AV-14AMG4/G] 2-13

 MAIN PWB CIRCUIT DIAGRAM(2/3),(3/3) [AV-14AMG4/G] 2-15

 MAIN PWB CIRCUIT DIAGRAM(1/3) [AV-14AMG4/S] 2-17

 MAIN PWB CIRCUIT DIAGRAM(2/3),(3/3) [AV-14AMG4/S] 2-19

PATTERN DIAGRAMS

 MAIN PWB PATTERN [AV-14A14/A,AV14A14/H,AV-14AMG4/G,AV14AMG4/U] 2-21

 MAIN PWB PATTERN [AV-14AG14/S] 2-23

VOLTAGE CHARTS 2-25

WAVEFORMS 2-26

SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR

IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW

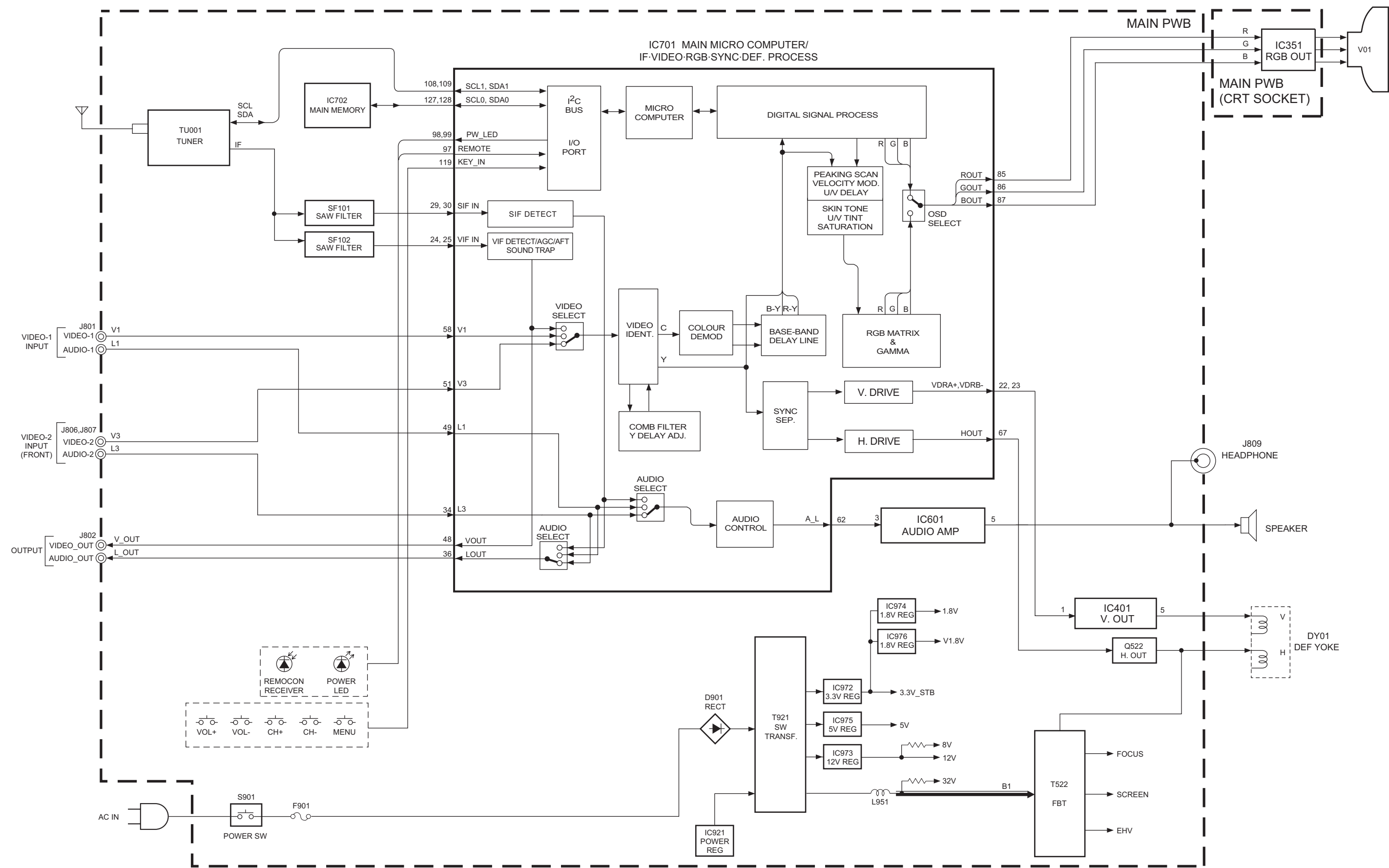
CHIP IC

TOP VIEW		

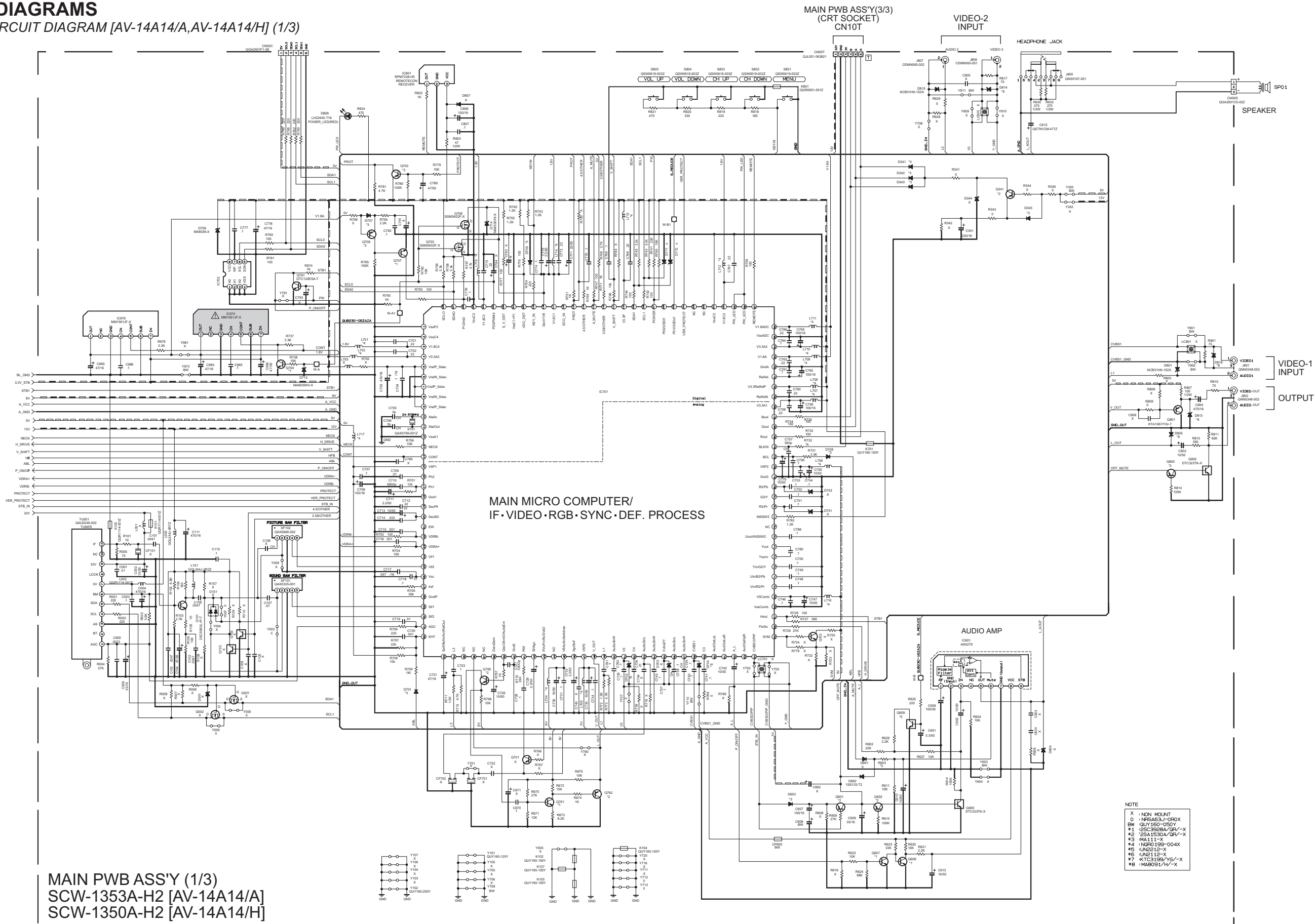
USING P.W. BOARD

P.W. BOARD ASS'Y NAME	AV-14A14/A	AV-14A14/H	AV-14AG14/U	AV-14AMG4/G	AV-14AMG4/S
MAIN P.W. BOARD	SCW-1353-H2	SCW-1350-H2	SCW-1354-H2	SCW-1349-H2	SCW-1351-H2

BLOCK DIAGRAM

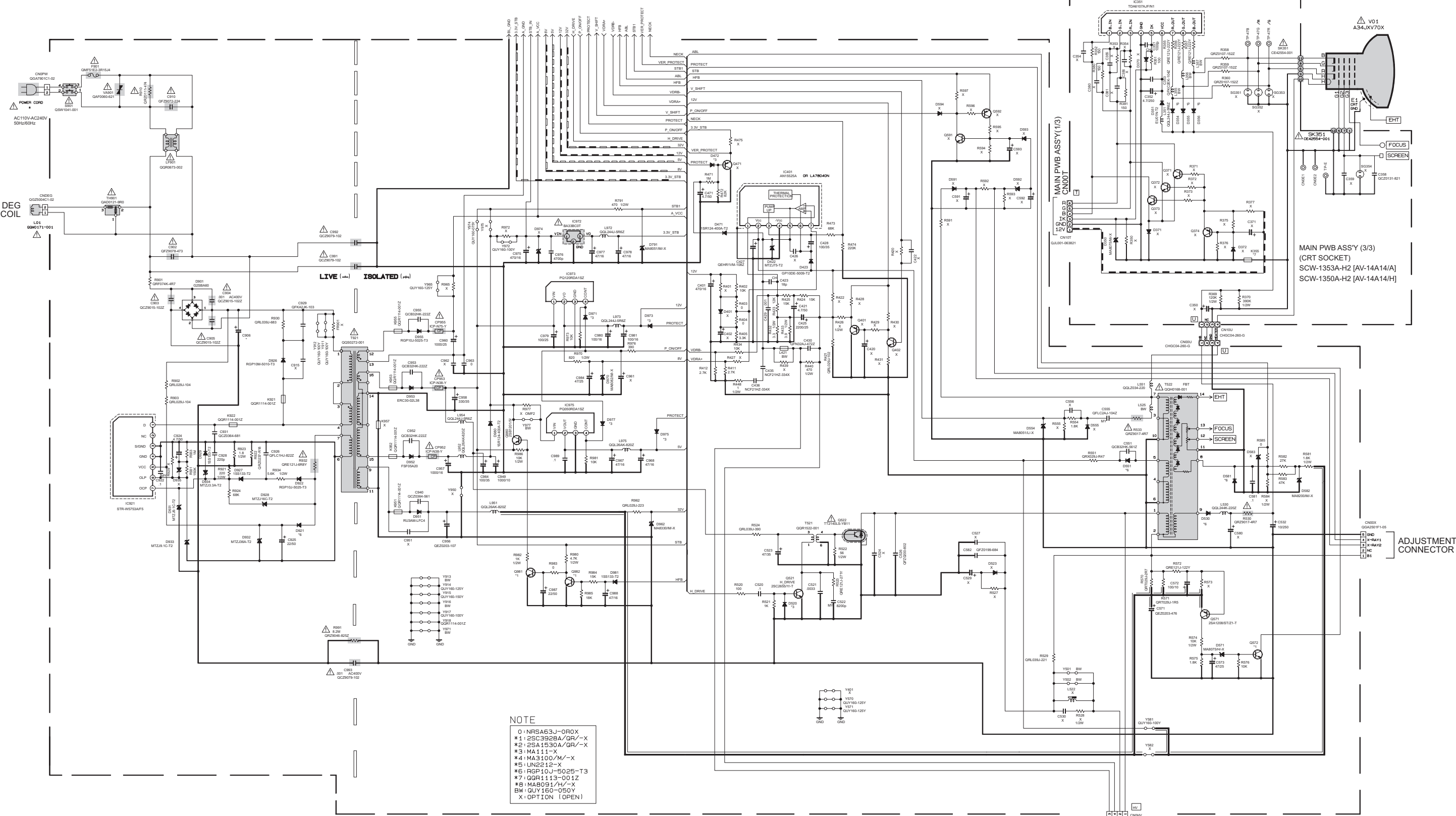


CIRCUIT DIAGRAMS
MAIN PWB CIRCUIT DIAGRAM [AV-14A14/A,AV-14A14/H] (1/3)



NOTE) 1.Refer to the part list for the part number of IC701 and IC702.
2.Refer to page 2-19 for voltages of this circuit diagram.
3.Refer to page 2-20 for waveforms of this circuit diagram.

MAIN PWB CIRCUIT DIAGRAM [AV-14A14/A,AV-14A14/H] (2/3),(3/3)



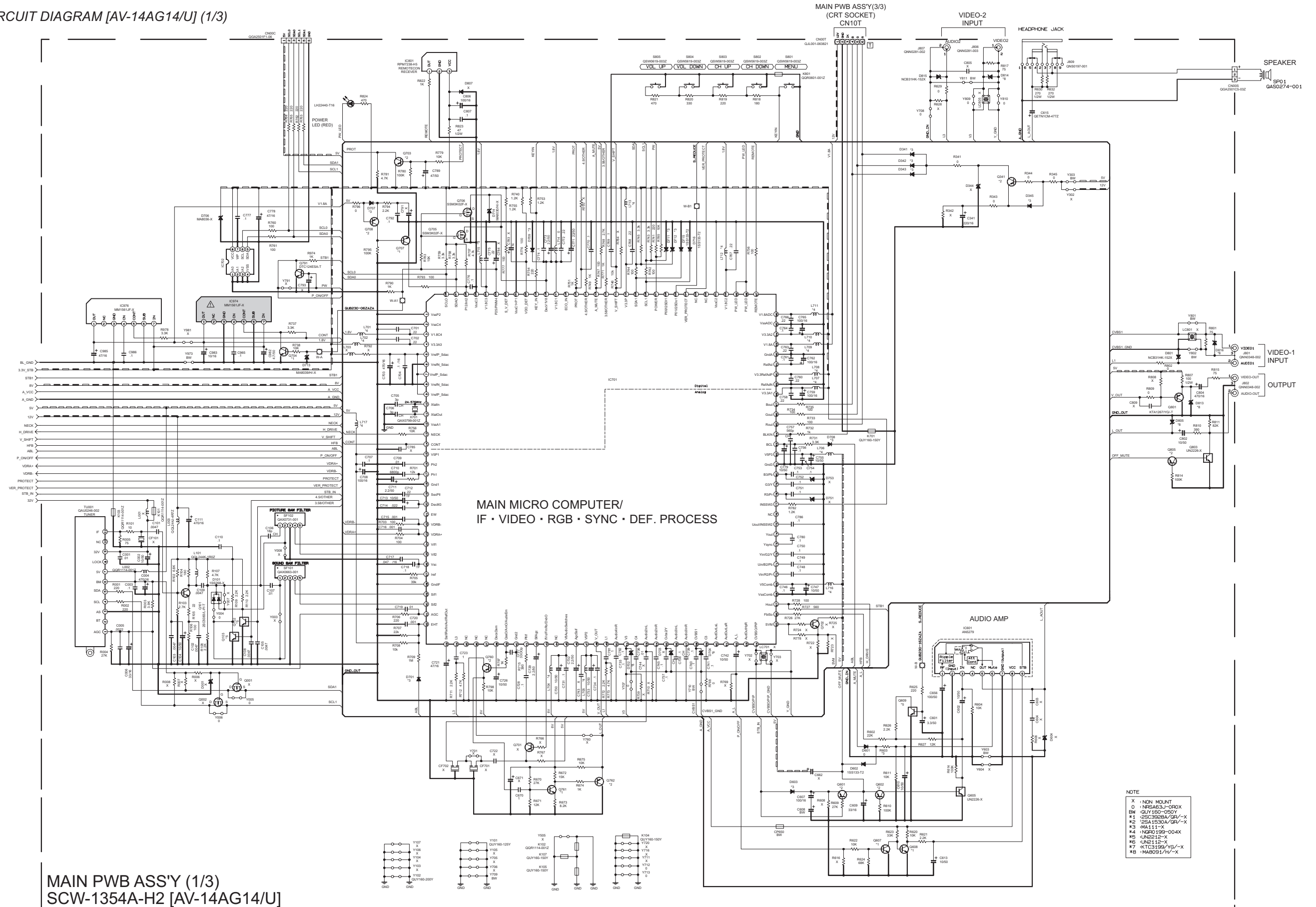
MAIN PWB ASS'Y (2/3)
SCW-1353A-H2 [AV-14A14/A]
SCW-1350A-H2 [AV-14A14/H]

NOTE) 1.Refer to page 2-19 for voltages of this circuit diagram.
2.Refer to page 2-20 for waveforms of this circuit diagram.

DIFFERENCE PART LIST

	14A14A	14A14H	14A14H	14A14H	14A14H
POWER	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012
VIDEO	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012
VIDEO	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012
VIDEO	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012	QQR1113-0012

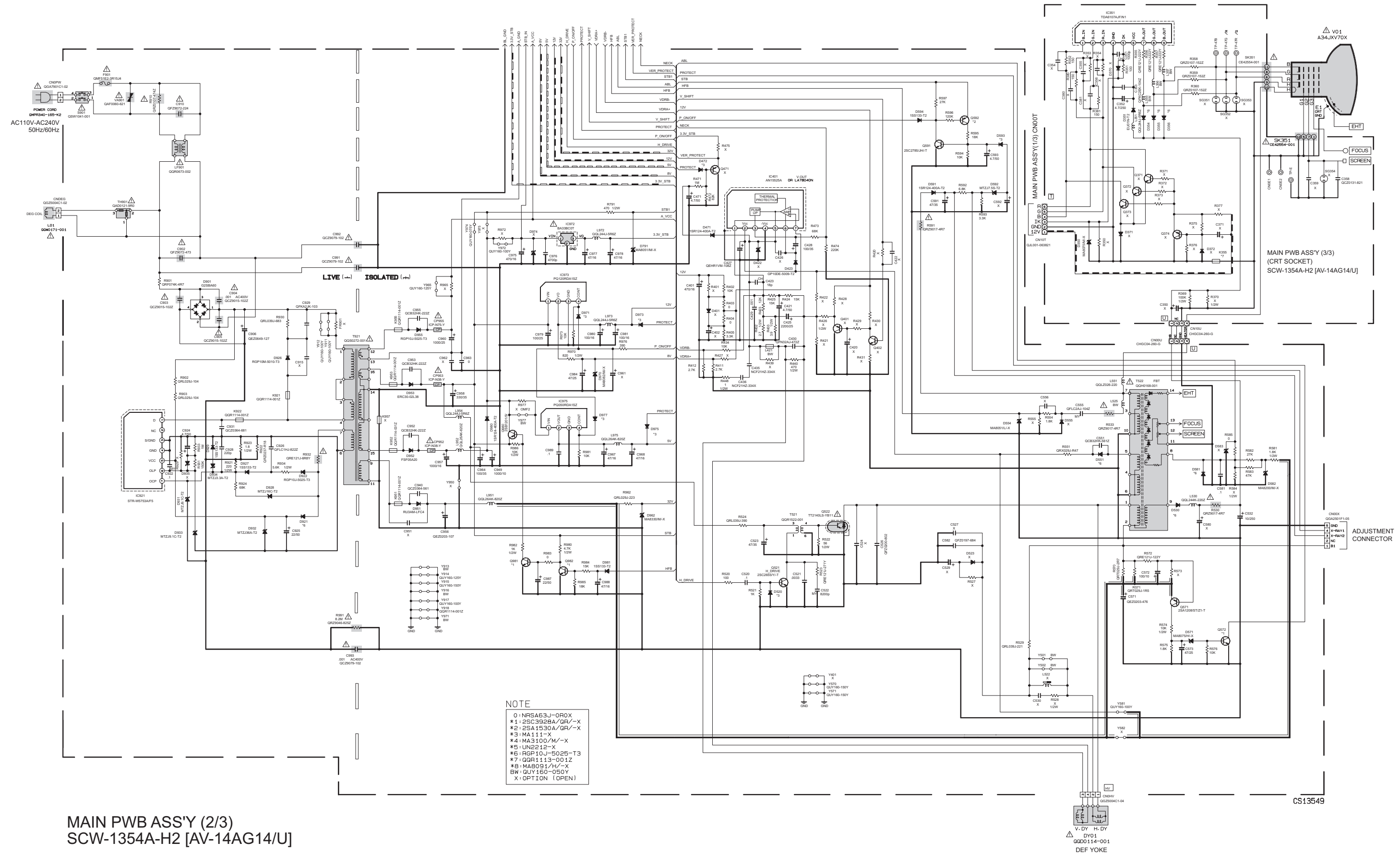
MAIN PWB CIRCUIT DIAGRAM [AV-14AG14/U] (1/3)



NOTE) 1.Refer to the part list for the part number of IC701 and IC702.
2.Refer to page 2-19 for voltages of this circuit diagram.
3.Refer to page 2-20 for waveforms of this circuit diagram.

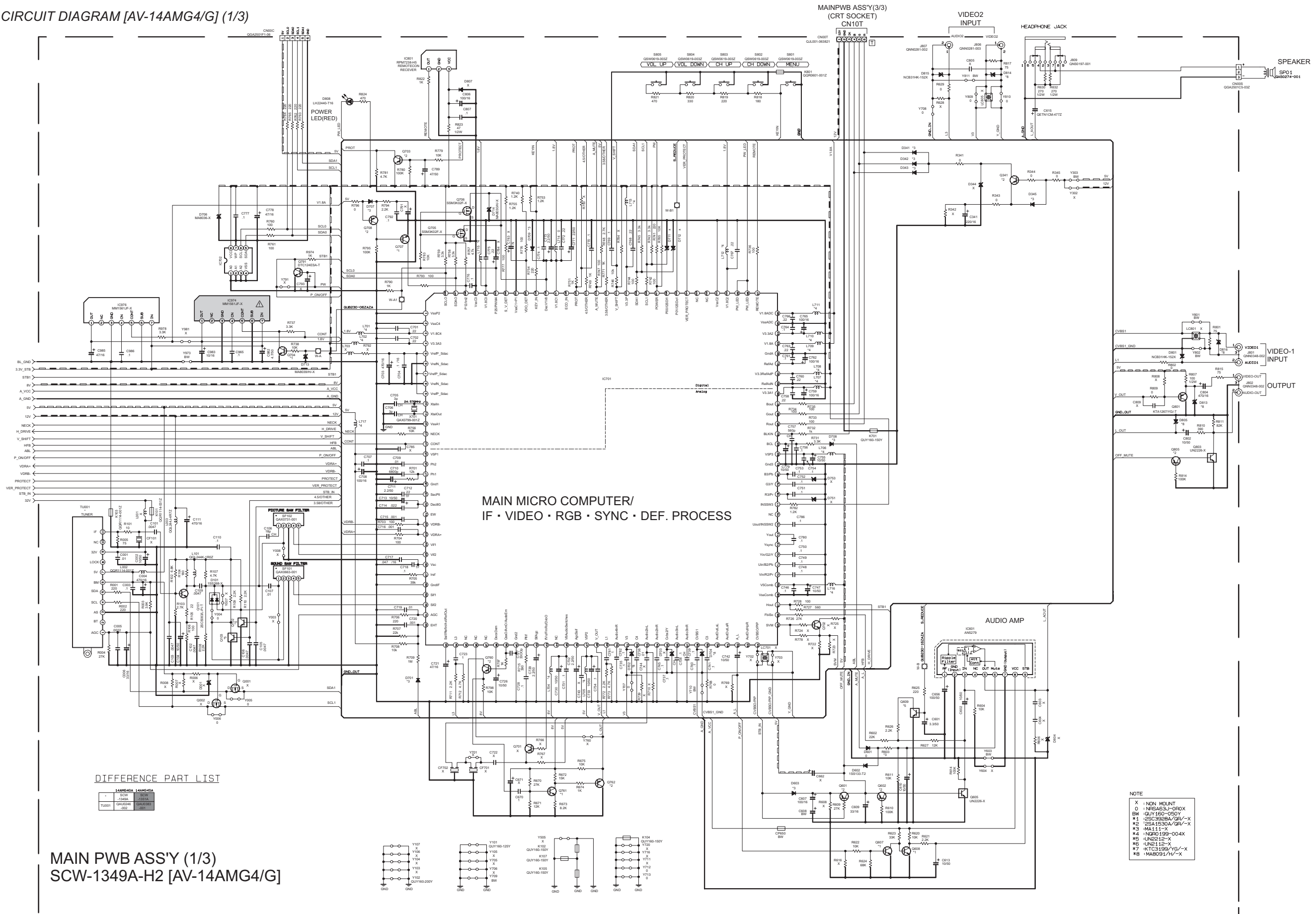
CS13549

MAIN PWB CIRCUIT DIAGRAM [AV-14AG14/U] (2/3),(3/3)



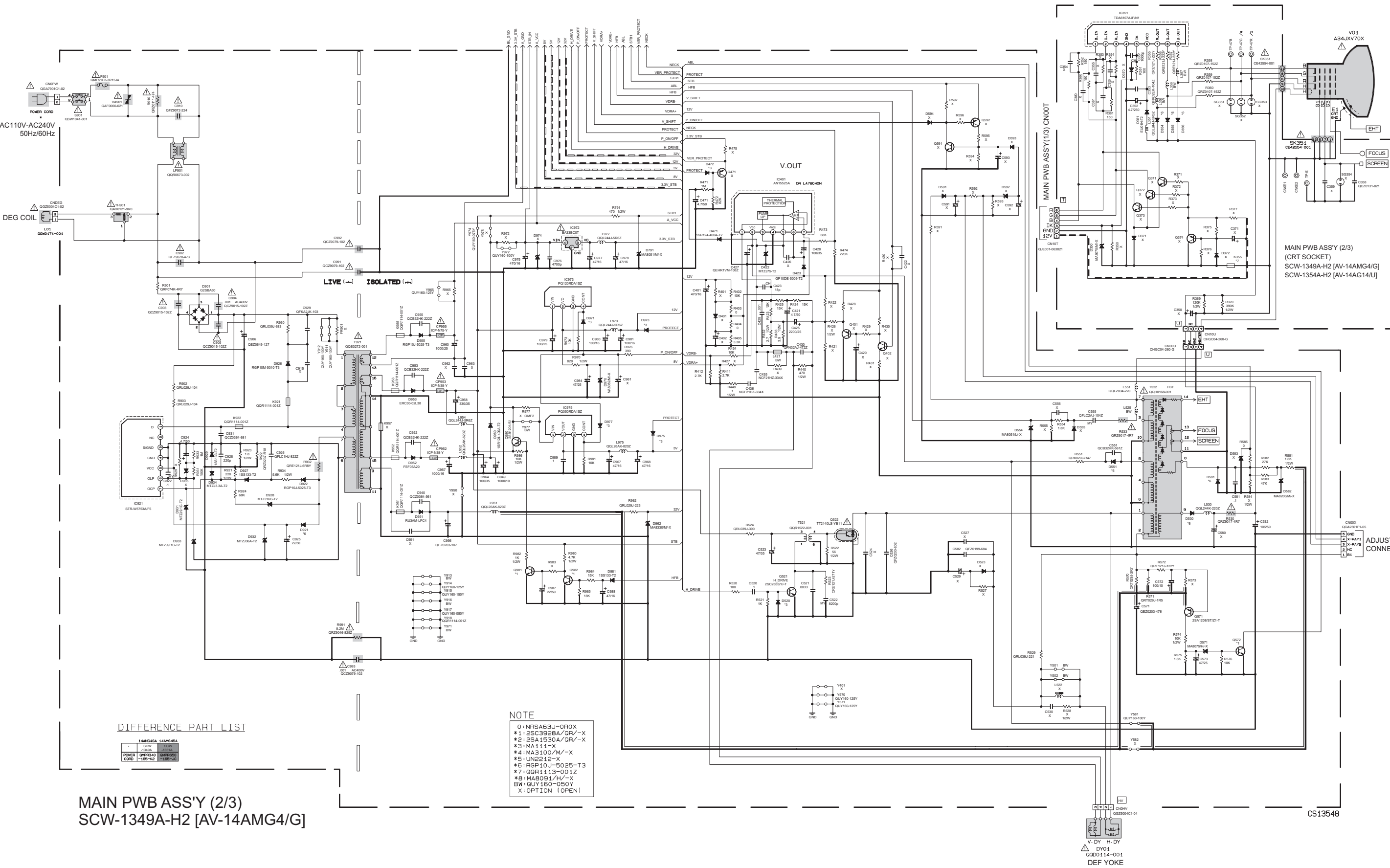
NOTE) 1.Refer to page 2-19 for voltages of this circuit diagram.
2.Refer to page 2-20 for waveforms of this circuit diagram.

MAIN PWB CIRCUIT DIAGRAM [AV-14AMG4/G] (1/3)



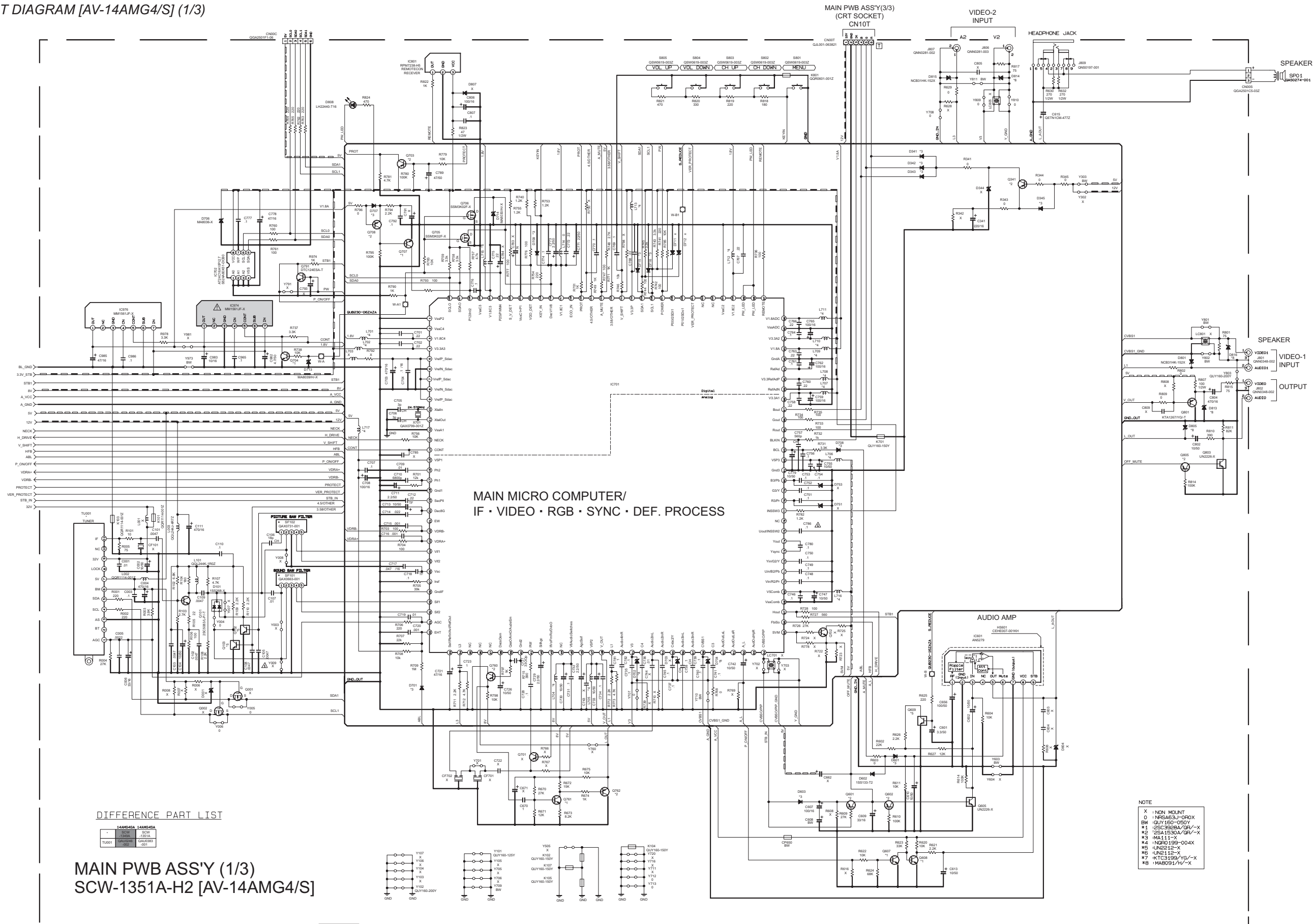
NOTE) 1.Refer to the part list for the part number of IC701 and IC702.
2.Refer to page 2-19 for voltages of this circuit diagram.
3.Refer to page 2-20 for waveforms of this circuit diagram.

MAIN PWB CIRCUIT DIAGRAM [AV-14AMG4/G] (2/3),(3/3)



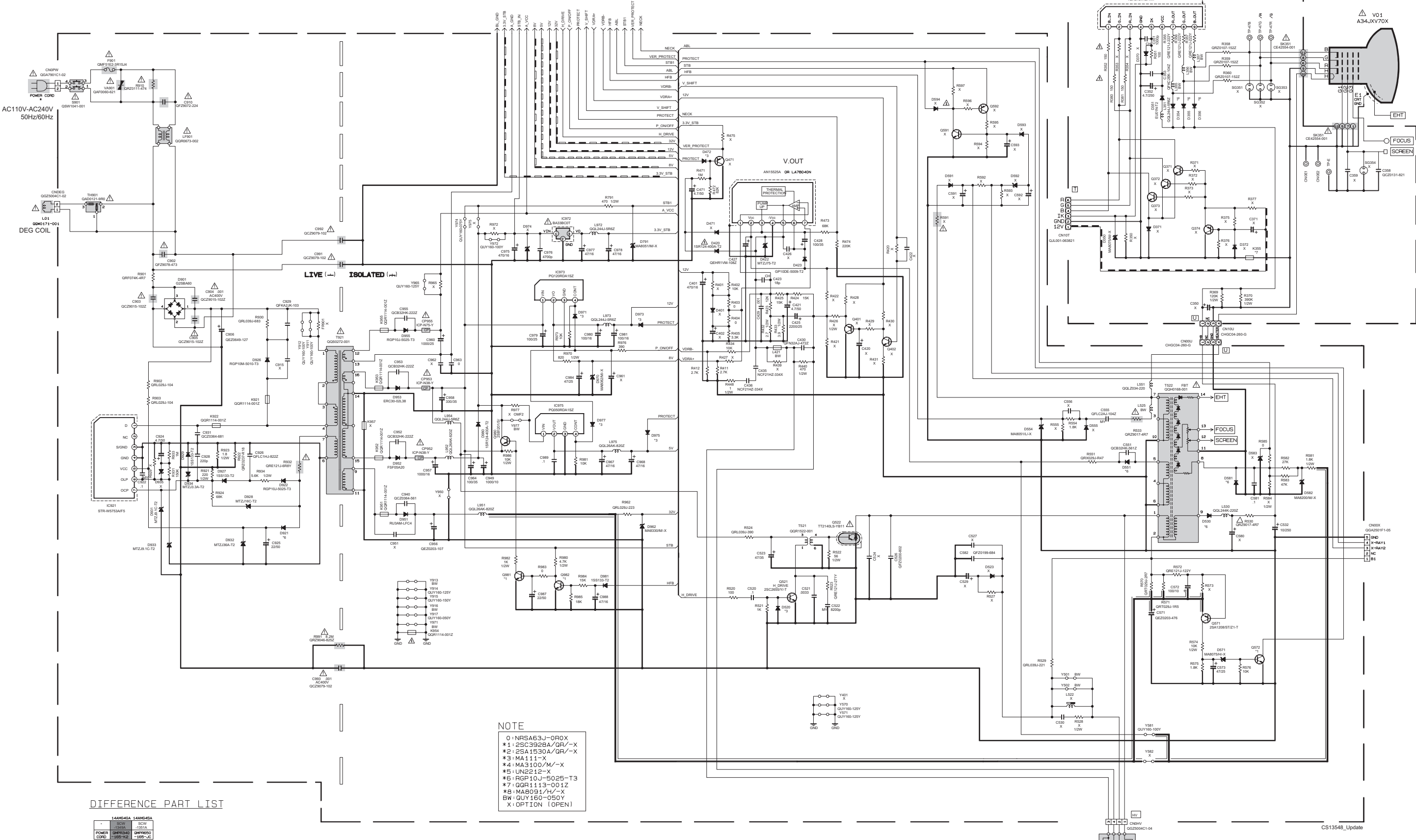
NOTE) 1.Refer to page 2-19 for voltages of this circuit diagram.
2.Refer to page 2-20 for waveforms of this circuit diagram.

MAIN PWB CIRCUIT DIAGRAM [AV-14AMG4/S] (1/3)



NOTE) 1.Refer to the part list for the part number of IC701 and IC702.
2.Refer to page 2-19 for voltages of this circuit diagram.
3.Refer to page 2-20 for waveforms of this circuit diagram.

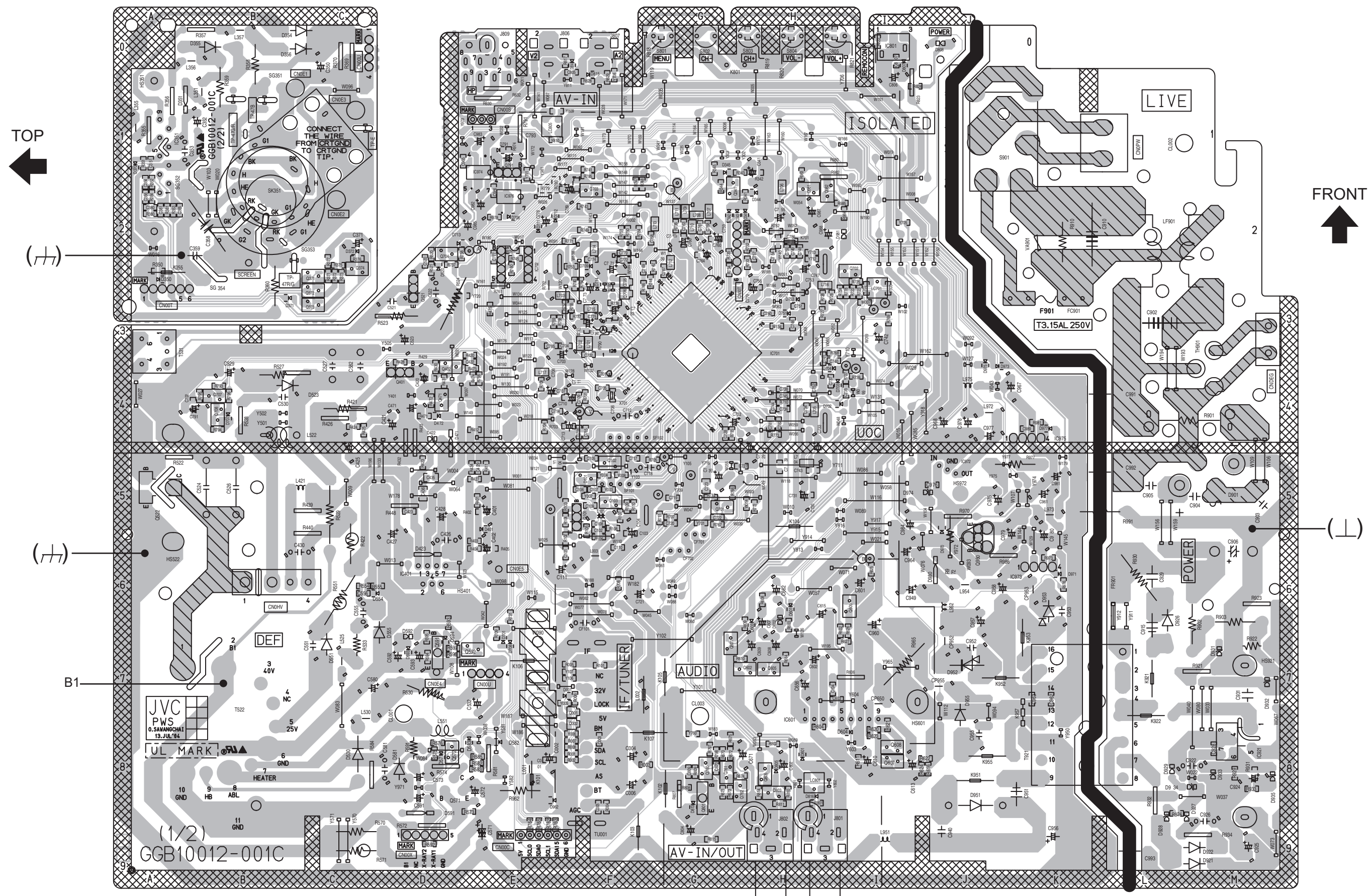
MAIN PWB CIRCUIT DIAGRAM [AV-14AMG4/S] (2/3),(3/3)



MAIN PWB ASS'Y (1/3)
SCW-1351A-H2 [AV-14AMG4/S]

NOTE) 1.Refer to page 2-19 for voltages of this circuit diagram.
2.Refer to page 2-20 for waveforms of this circuit diagram.

PATTERN DIAGRAMS
MAIN PWB PATTERN [AV-14A14/A,AV-14A14/H,AV-14AMG4/G, AV-14AG14/U]



VOLTAGE CHARTS

<MAIN>

MODE PIN NO.	DC (V)
IC401	
1	2.9
2	25.3
3	1.7
4	0
5	12.8
6	25.7
7	2.9
IC601	
1	18.1
2	0
3	0
4	0
5	9.1
6	0.6
7	0
8	19.3
9	13.2
IC701	
1	0
2	0
3	1.8
4	3.2
5	3.2
6	0
7	3.2
8	0
9	0.5
10	1.6
11	1.5
12	0
13	0.2
14	3.0
15	4.9
16	2.0
17	2.3
18	0
19	2.3
20	2.3
21	0
22	2.4
23	2.0
24	1.9
25	2.0
26	2.3
27	1.9
28	0
29	1.9
30	1.9
31	0
32	3.3
33	0
34	2.2
35	2.2
36	3.5
37	3.5
38	2.3
39	2.58
40	0
41	2.0
42	1.8
43	2.2
44	0.5
45	8.2
46	1.4
47	4.8
48	1.3
49	2.2
50	2.2
51	1.4
52	1.5
53	2.2
54	2.2
55	1.4
56	2.2
57	2.2
58	1.4
59	1.5
60	7.4
61	7.4
62	3.6
63	3.6
64	0.1
65	0
66	0.5
67	1.6
68	0
69	4.8
70	1.3
71	1.3
72	1.3
73	1.9
74	1.7
75	0.2
76	0
77	3.2
78	1.2

MODE PIN NO.	DC (V)
79	1.2
80	0
81	0
82	4.8
83	3.6
84	3.7
85	2.2
86	2.2
87	2.3
88	3.2
89	0
90	3.2
91	1.6
92	0
93	1.7
94	3.2
95	0
96	1.7
97	3.2
98	0
99	0
100	1.8
101	0.3
102	3.3
103	3.2
104	0
105	0.2
106	0.2
107	0
108	1.7
109	1.5
110	3.2
111	2.3
112	0.4
113	0.3
114	3.2
115	0
116	0.7
117	1.9
118	1.7
119	3.2
120	0.4
121	0
122	0.4
123	0
124	1.8
125	0
126	3.2
127	3.1
128	3.2
IC702	
1	0
2	0
3	0
4	0
5	3.2
6	3.1
7	0
8	3.2
IC801	
1	3.2
2	3.2
3	0
IC921	
1	302.7
3	0
4	0
5	31.5
6	3.5
7	0.9
IC972	
1	6.3
2	0
3	3.3
IC973	
1	14.1
2	11.9
3	0
4	3.2
IC974	
1	1.8
2	0.2
3	0
4	0.5
5	2.9
6	0
7	3.2
IC975	
1	6.3
2	4.9
3	0
4	3.3
IC976	
1	1.8
2	0.5
3	0
4	0.5

MODE PIN NO.	DC (V)
5	2.9
6	0
7	3.2
Q101	
E	2.1
C	11.8
B	2.9
Q521	
E	0
C	9.9
B	0
Q522	
E	0
C	110.0
B	0
Q571	
E	114.5
C	0
B	114.1
Q572	
E	0
C	3.2
B	0
Q601	
E	8.1
C	0.2
B	8.2
Q602	
E	0.2
C	-0.1
B	0
Q605	
E	0
C	2.7
B	-0.1
Q607	
E	0
C	0
B	0.6
Q608	
E	0
C	14.4
B	0
Q703	
E	3.2
C	0
B	3.2
Q791	
E	0
C	4.1
B	0
Q801	
E	2.1
C	0
B	1.3
Q803	
E	0
C	0
B	-1.2
Q805	
E	0.2
C	-1.1
B	0
Q980	
E	14.1
C	6.2
B	14.1
Q981	
E	0
C	14.1
B	0
Q982	
E	0
C	0
B	0.7
TU001	
1	2.0
2	0
3	0
4	1.8
5	1.7
6	4.9
7	4.9
8	0
9	34.1
11	0

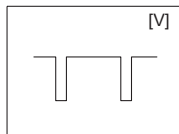
<MAIN (CRT SOCKET)>

MODE PIN NO.	DC (V)
IC351	
1	2.2
2	2.1
3	2.1
4	0
5	4.1
6	184.2
7	117.2
8	121.9
9	111.9

WAVEFORMS

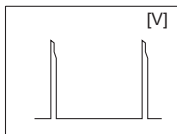
-MAIN PWB-

IC401-1



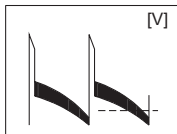
0.8Vp-p

IC401-3



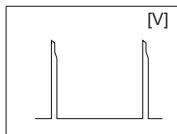
27Vp-p

IC401-5



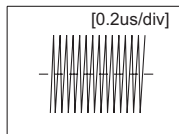
52Vp-p

IC401-6



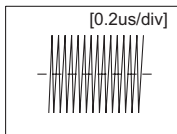
28Vp-p

IC701-10



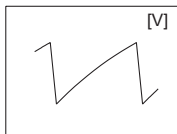
2.6Vp-p

IC701-11



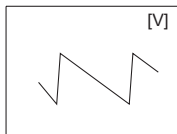
3.4Vp-p

IC701-22



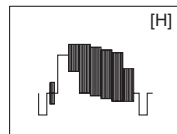
2.0Vp-p

IC701-23



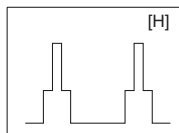
2.8Vp-p

IC701-48



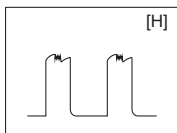
2.2Vp-p

IC701-66



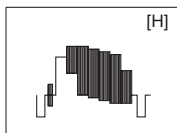
5.4Vp-p

IC701-67



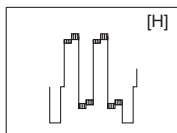
3.5Vp-p

IC701-74



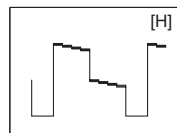
1.0Vp-p

IC701-85



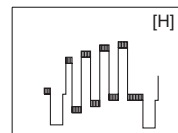
1.5Vp-p

IC701-86



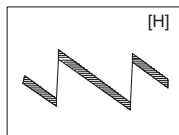
1.4Vp-p

IC701-87



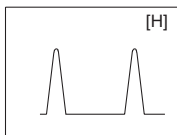
2.0Vp-p

T522-2



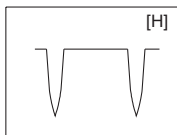
0.4Vp-p

T522-3



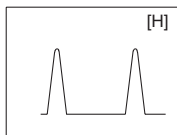
60Vp-p

T522-5



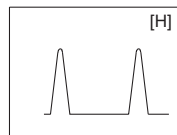
240Vp-p

T522-7



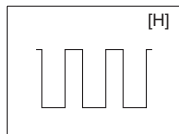
26Vp-p

T522-9



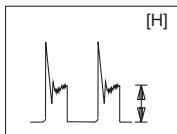
210Vp-p

Q521-B



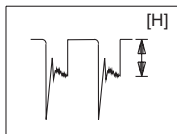
1.5Vp-p

Q521-C



42Vp-p

Q522-B



10Vp-p

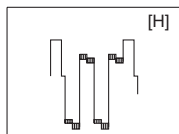
Q522-C



930Vp-p

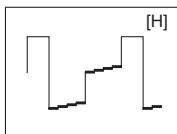
-CRT SOCKET PWB-

IC351-7



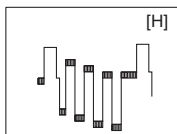
120Vp-p

IC351-8



100Vp-p

IC351-9



140Vp-p



Victor Company of Japan, Limited
AV & MULTIMEDIA COMPANY VIDEO DISPLAY CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

