

JVC

SCHEMATIC DIAGRAMS

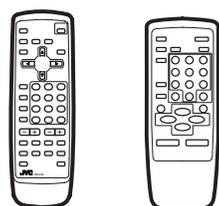
COLOUR TELEVISION

BASIC CHASSIS

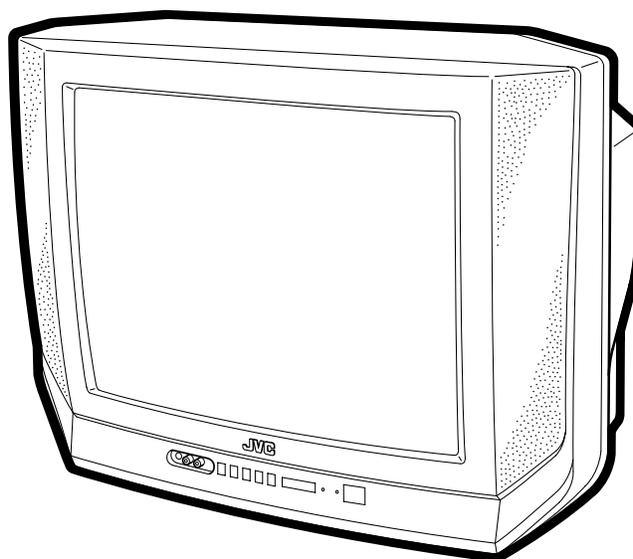
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AV-21F3 AV-21FR3 AV-21FMG3B

CD-ROM No.SML200207



[RM-C90] [RM-C364]



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AV-21F3, AV-21FR3, AV-21FMG3B STANDARD CIRCUIT DIAGRAM

NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the Δ 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 :R1209 \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 :Uninflammable 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



* 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.

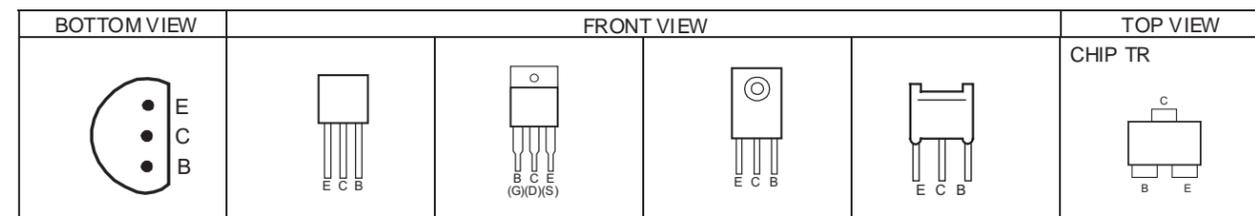
◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

NOTE

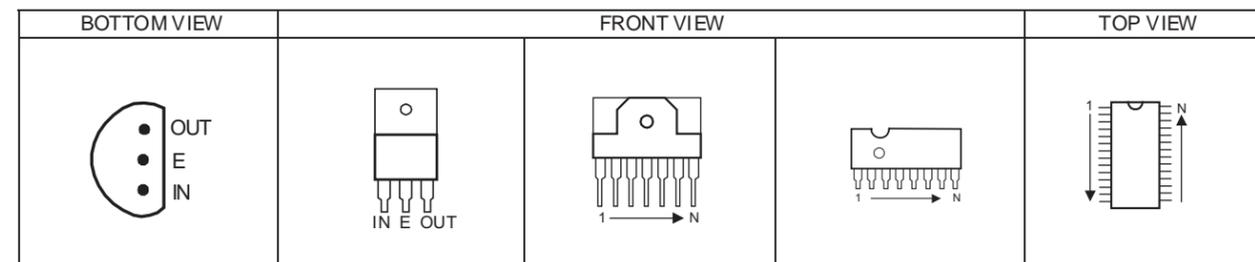
◇ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.
When ordering parts, please use the numbers that appear in the Parts List.

SEMICONDUCTOR SHAPES

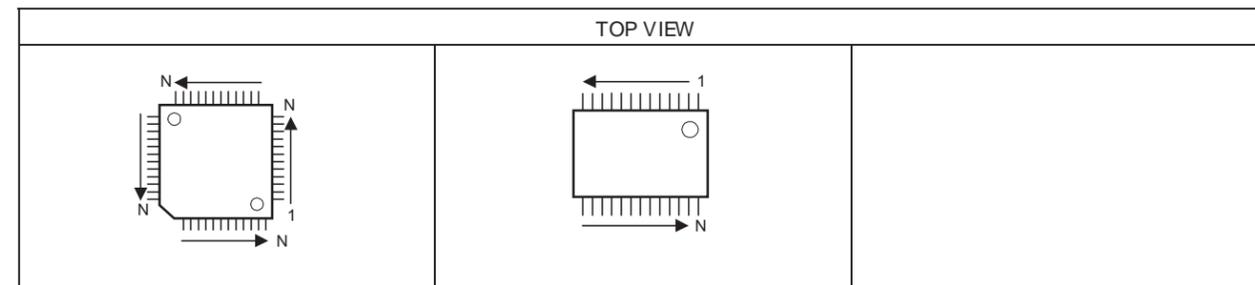
TRANSISTOR



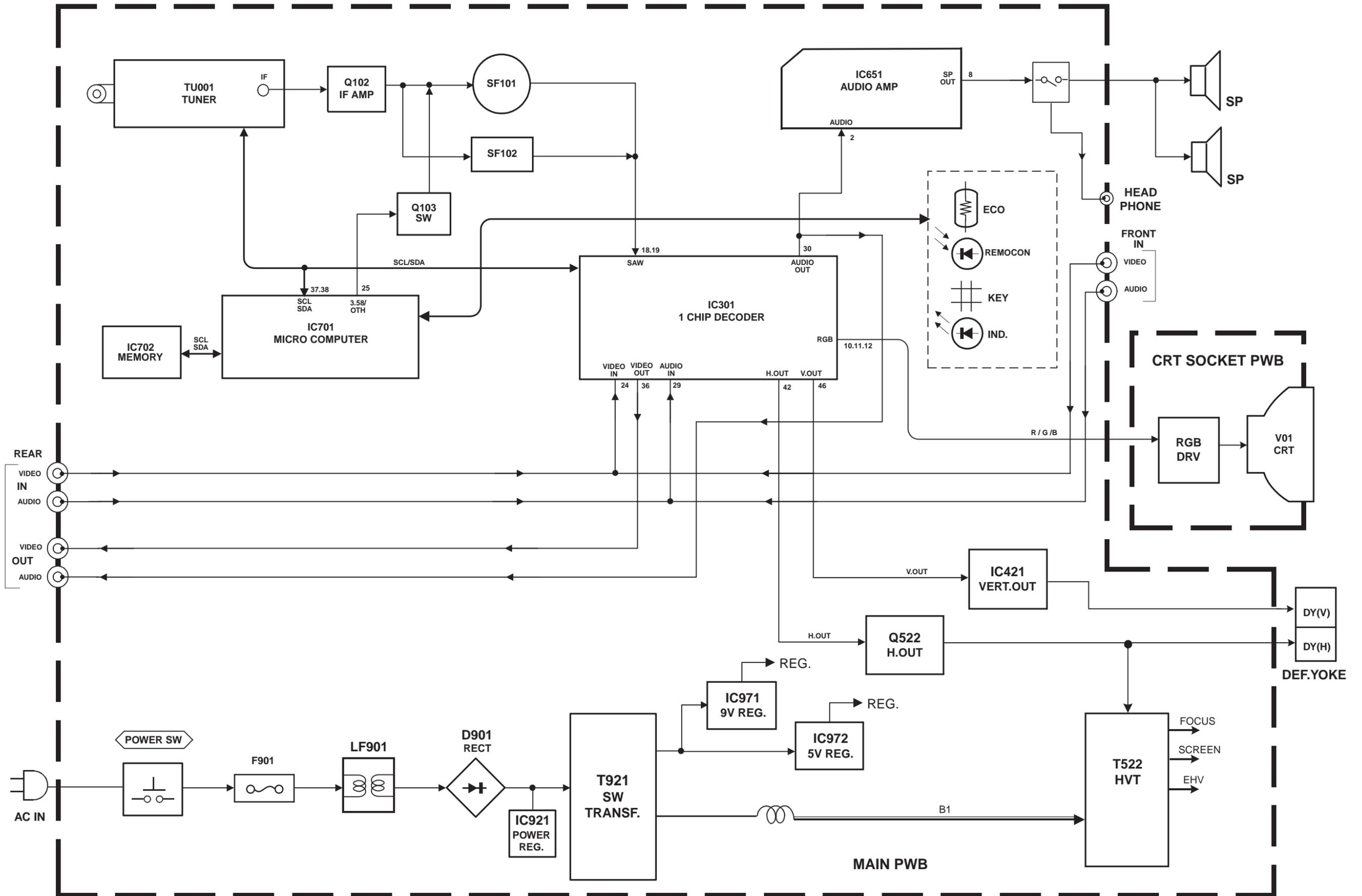
IC



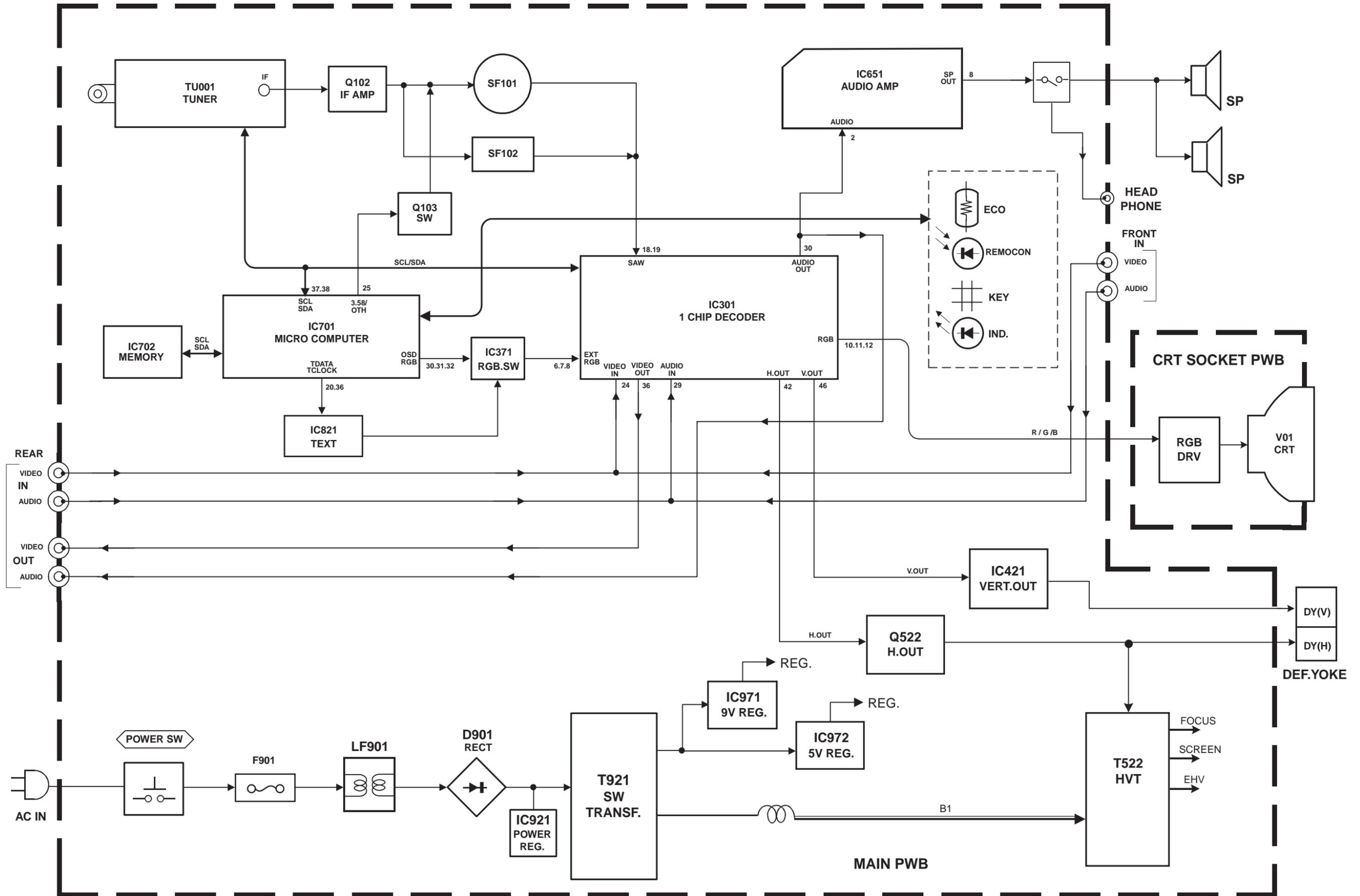
CHIP IC



BLOCK DIAGRAM [AV-21F3, AV-21FMG3B]

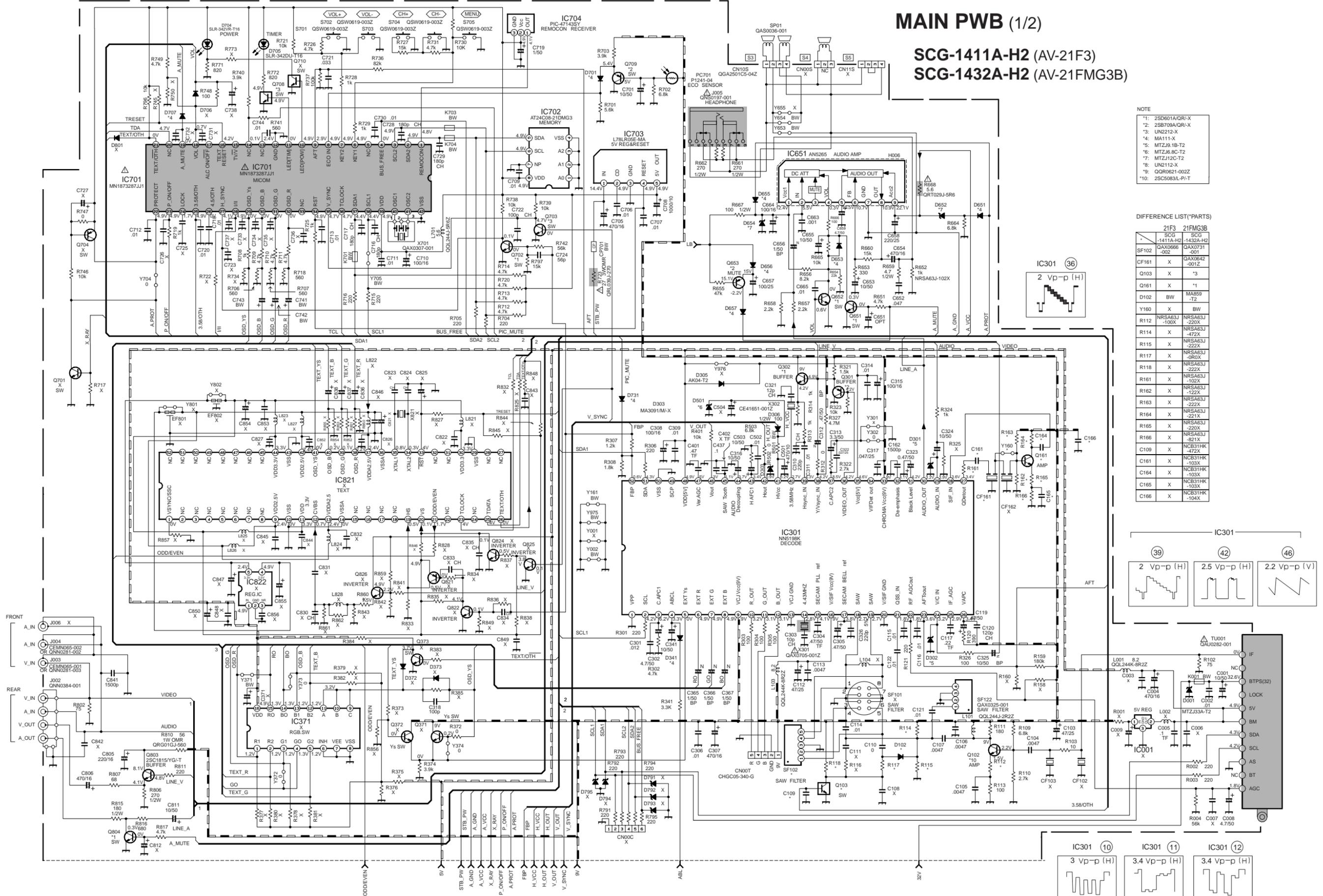


BLOCK DIAGRAM [AV-21FR3]



CIRCUIT DIAGRAMS MAIN PWB CIRCUIT DIAGRAMS (1/2) [AV-21F3, AV-21FMG3B]

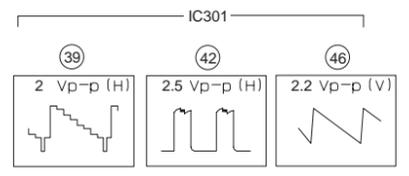
MAIN PWB (1/2)
SCG-1411A-H2 (AV-21F3)
SCG-1432A-H2 (AV-21FMG3B)



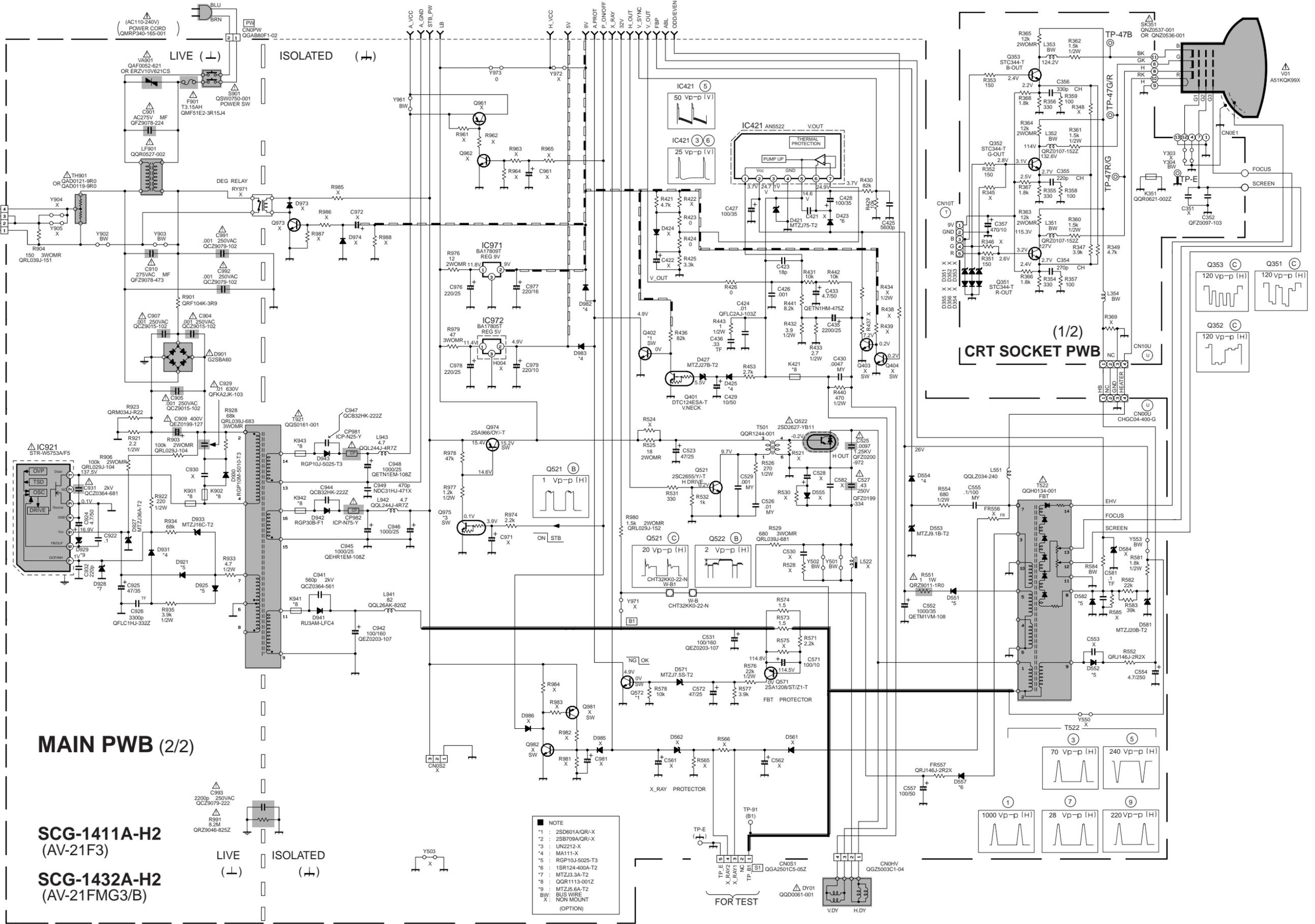
NOTE
*1: 2SD601AQR-X
*2: 2SB708AQR-X
*3: UN212-X
*4: MA111-X
*5: MTZJ9-1B-T2
*6: MTZJ9-8C-T2
*7: MTZJ20-T2
*8: UN121-X
*9: QOR0621-002Z
*10: 2SC5083L-P1-T

DIFFERENCE LIST(*PARTS)

	21F3	21FMG3B
SF102	QAX0666-002	QAX0731-001
CF161	X	QAX0642-001Z
Q103	X	*3
Q161	X	*1
D102	BW	MA859-T2
Y160	X	BW
R112	NRS463J-100X	NRS463J-222X
R114	X	-472X
R115	X	NRS463J-222X
R117	X	NRS463J-OROX
R118	X	NRS463J-222X
R161	X	NRS463J-102X
R162	X	NRS463J-122X
R163	X	NRS463J-222X
R164	X	NRS463J-221X
R165	X	NRS463J-220X
R166	X	NRS463J-821X
C109	X	NCB31HK-472X
C161	X	NCB31HK-103X
C164	X	NCB31HK-103X
C165	X	NCB31HK-103X
C166	X	NCB31HK-104X



MAIN PWB CIRCUIT DIAGRAM (2/2) [AV-21F3, AV-21FMG3B]



MAIN PWB (2/2)

SCG-1411A-H2 (AV-21F3)

SCG-1432A-H2 (AV-21FMG3/B)

- NOTE
- *1 : 2SD601A/QR/-X
 - *2 : 2SB709A/QR/-X
 - *3 : UN2212-X
 - *4 : MA111-X
 - *5 : RGP10J-5025-T3
 - *6 : 1SR124-400A-T2
 - *7 : MTZJ3.3A-T2
 - *8 : QQR1113-001Z
 - *9 : MTZJ5.6A-T2
- BW: BUS WIRE
X: NON MOUNT (OPTION)

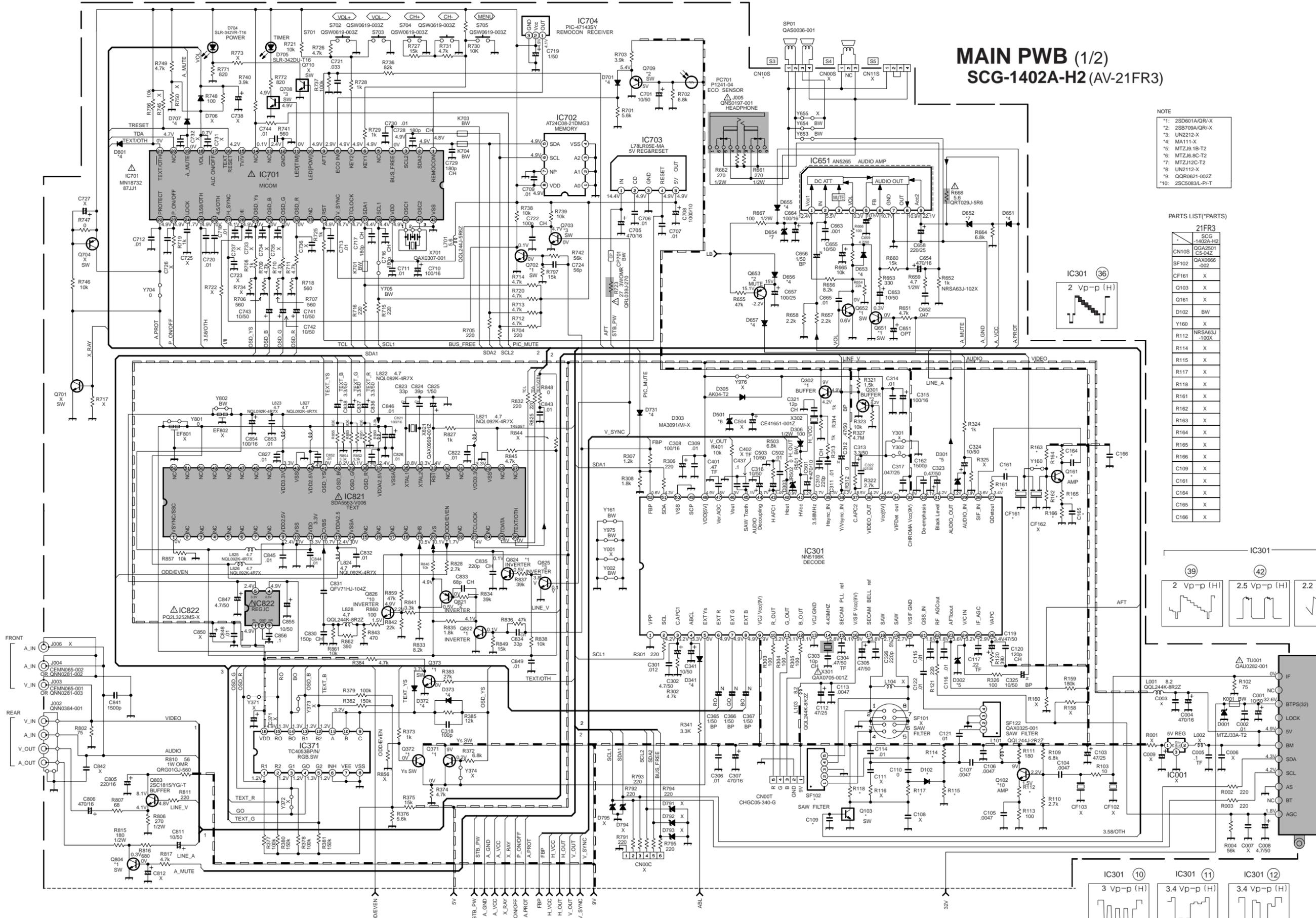
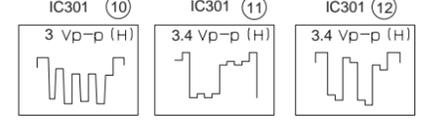
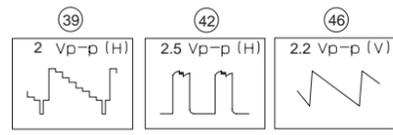
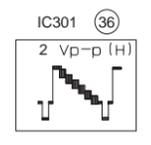
MAIN PWB CIRCUIT DIAGRAMS (1/2) [AV-21FR3]

MAIN PWB (1/2)
SCG-1402A-H2 (AV-21FR3)

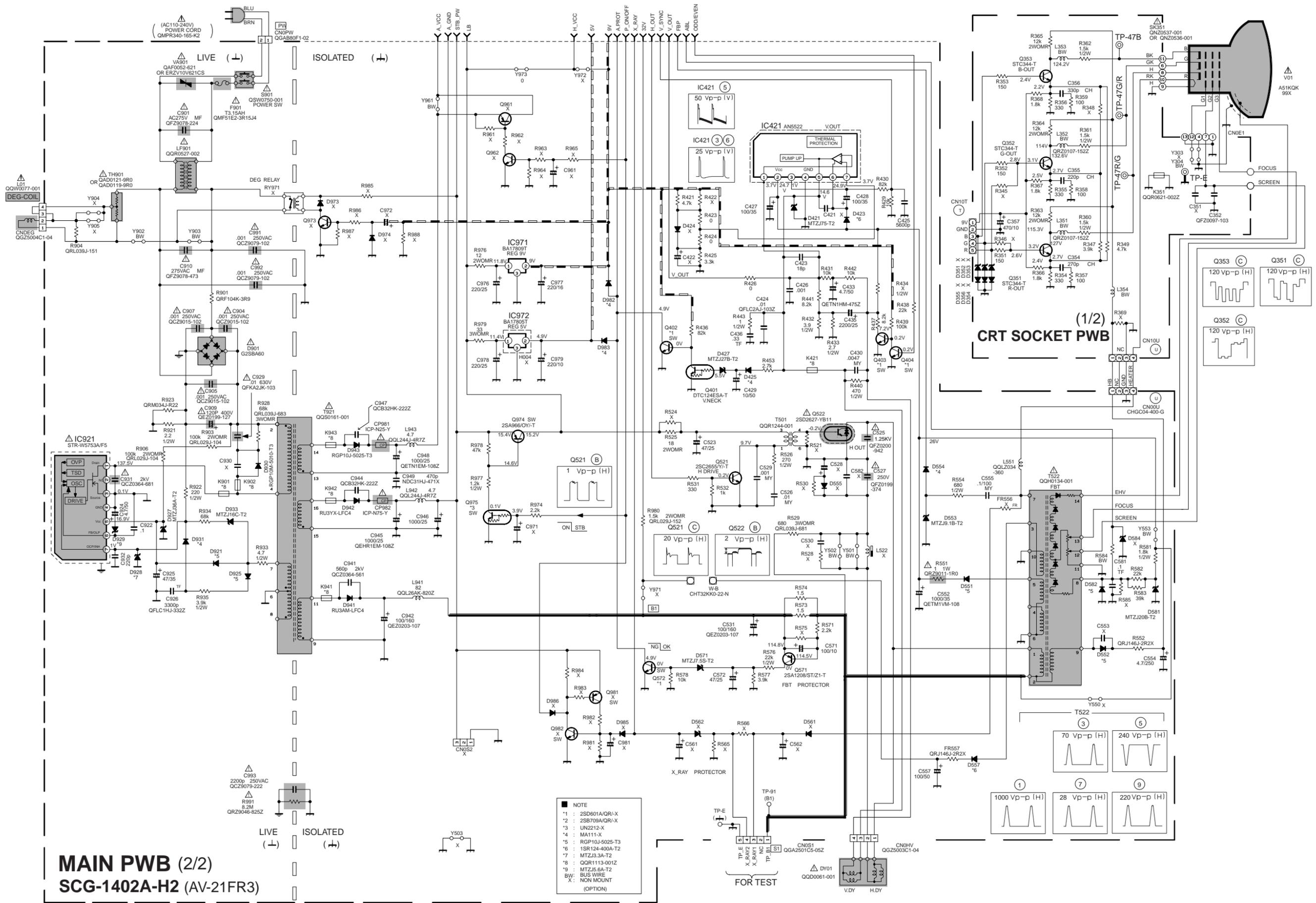
- NOTE
- *1: 2SD601A(QR)-X
 - *2: 2SB709A(QR)-X
 - *3: UN212-X
 - *4: MA111-X
 - *5: MTZJ8-1B-T2
 - *6: MTZJ8-8C-T2
 - *7: MTZJ12C-T2
 - *8: UN212-X
 - *9: QOR0621-002Z
 - *10: 2SC5083L-P/T

PARTS LIST(*PARTS)

21FR3	
REF	DESCRIPTION
IC701	MIN18732 87J1
IC702	AT24C02-128G3 MEMORY
IC703	L78L05E-ANA 5V REG&RESET
IC704	PIC4743S3 REMOCON RECEIVER
IC651	AN5265 AUDIO AMP
IC821	SDA5553-V006 TEXT
IC822	PO2L3252MS-X
IC301	NS189K DECODE
IC001	5V REG
IC002	SAW FILTER
IC003	SAW FILTER
IC004	SAW FILTER
IC005	SAW FILTER
IC006	SAW FILTER
IC007	SAW FILTER
IC008	SAW FILTER
IC009	SAW FILTER
IC010	SAW FILTER
IC011	SAW FILTER
IC012	SAW FILTER
IC013	SAW FILTER
IC014	SAW FILTER
IC015	SAW FILTER
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IC199	SAW FILTER
IC200	SAW FILTER



MAIN PWB CIRCUIT DIAGRAM (2/2) [AV-21FR3]



MAIN PWB (2/2)
SCG-1402A-H2 (AV-21FR3)

NOTE

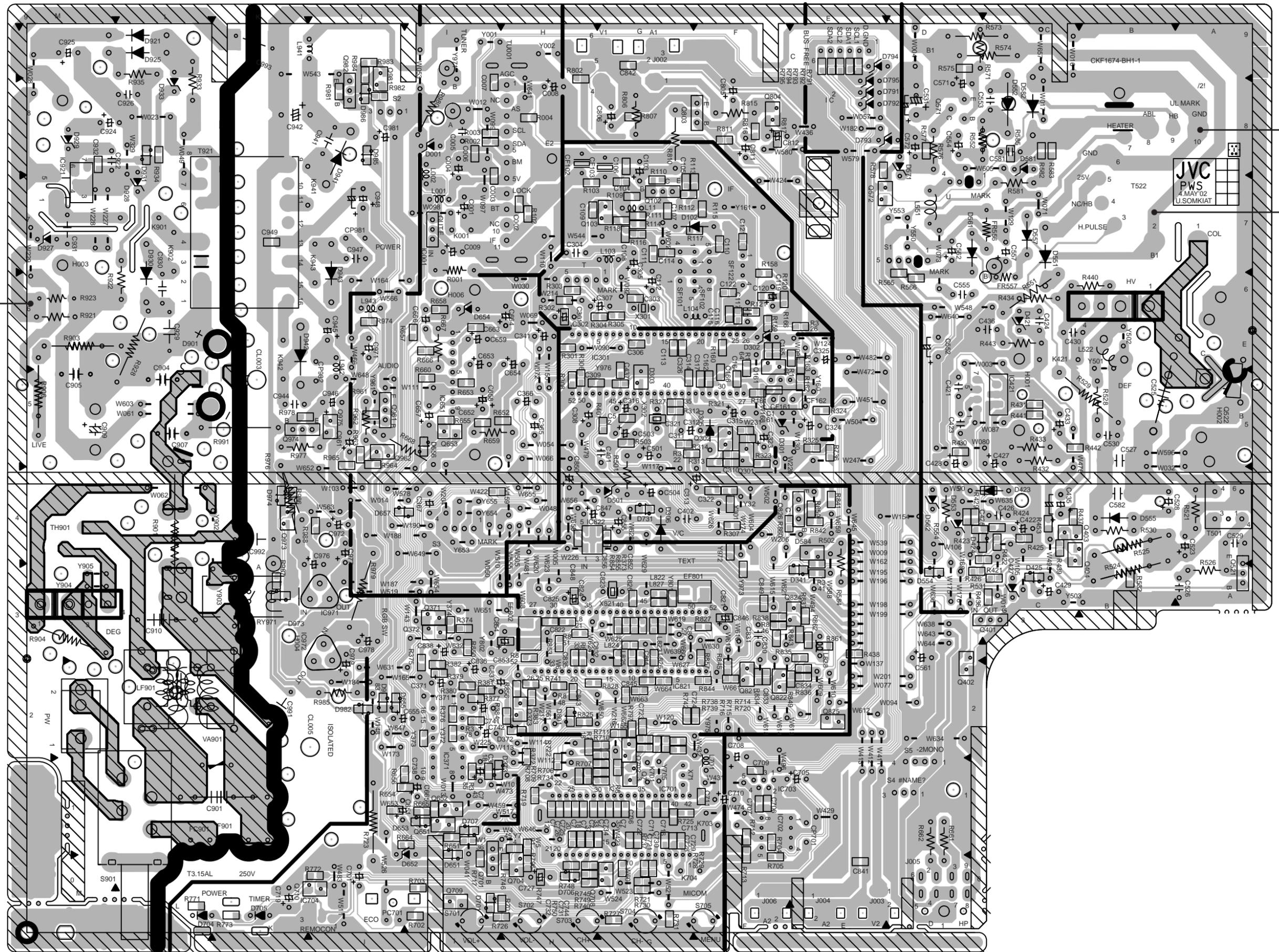
- *1 : 2SD601A/QR/-X
- *2 : 2SB709A/QR/-X
- *3 : UN2212-X
- *4 : MA111-X
- *5 : RGP10J-6025-T3
- *6 : 1SR124-400A-T2
- *7 : MTZJ3.3A-T2
- *8 : QQR1113-001Z
- *9 : MTZJ5.6A-T2

BW: BUS WIRE
X: NON MOUNT
X: (OPTION)

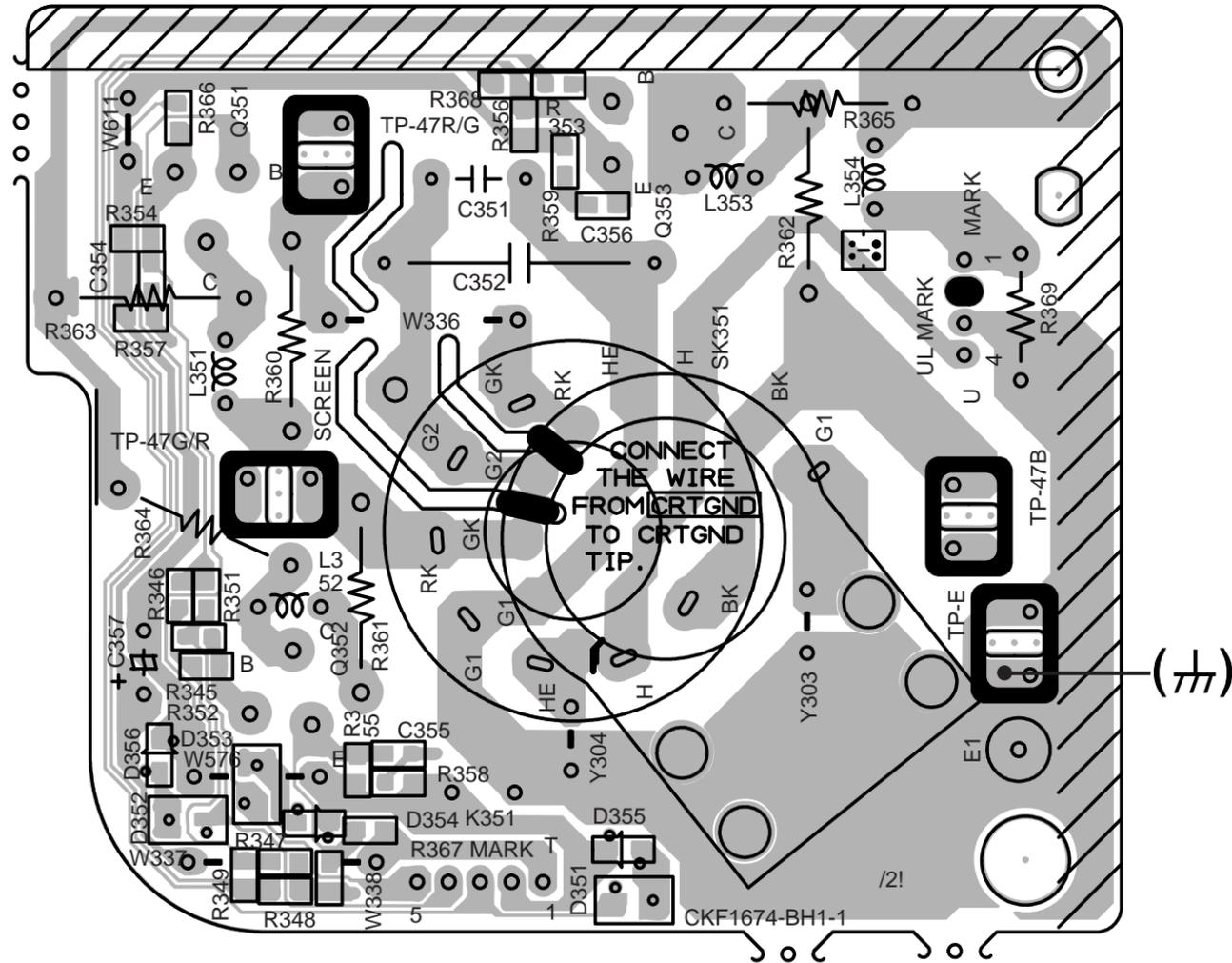
PATTERN DIAGRAMS MAIN PWB PATTERN

FRONT

(T)



CRT SOCKET PWB PATTERN



JVC

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