

# JVC

# SCHEMATIC DIAGRAMS

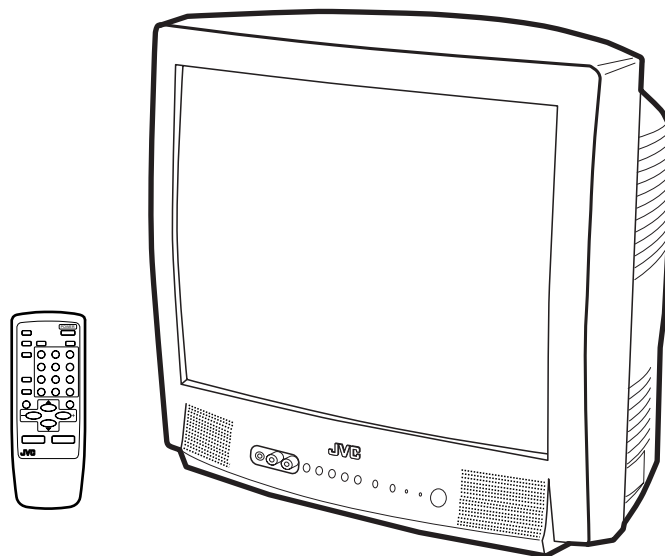
## COLOUR TELEVISION

BASIC CHASSIS

CG

**AV-21Q3/D / AV-21Q3/AU**  
**AV-21Q3/HK / AV-21QMG3**  
**AV-21QMG3/-A / AV-21QMG3/U**  
**AV-2115EE**

CD-ROM No.SML200209



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# AV-21Q3/D, AV-21Q3/AU, AV-21Q3/HK, AV-21QMG3, AV-21QMG3/-A, AV-21QMG3/U AV-2115EE

## 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 $\Omega$  /V
- (4)Oscilloscope sweeping time :H  $\Rightarrow$  20 $\mu$ 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 :[  $\Omega$  ]
- K :[K  $\Omega$  ]
- M :[M  $\Omega$  ]

- 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 :[ $\mu$ 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 [ $\mu$ 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 :[ $\mu$ 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.

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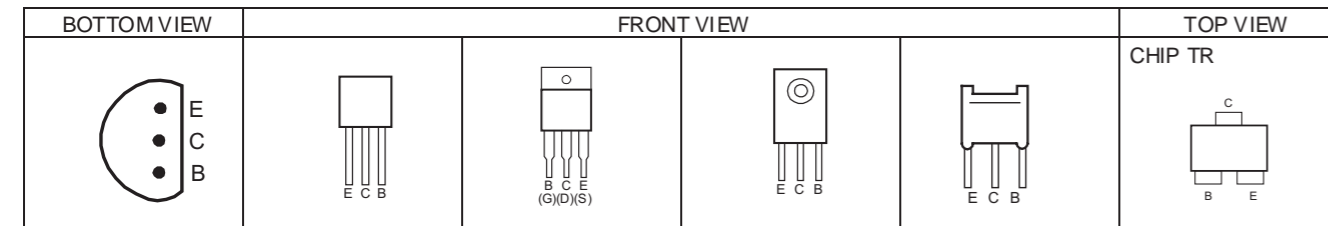
**PATTERN DIAGRAMS**

**MAIN PWB PATTERN** ----- 2-13

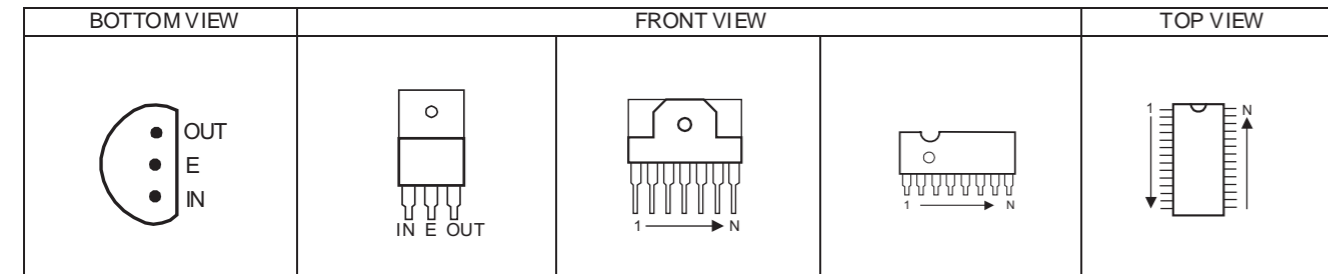
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## SEMICONDUCTOR SHAPES

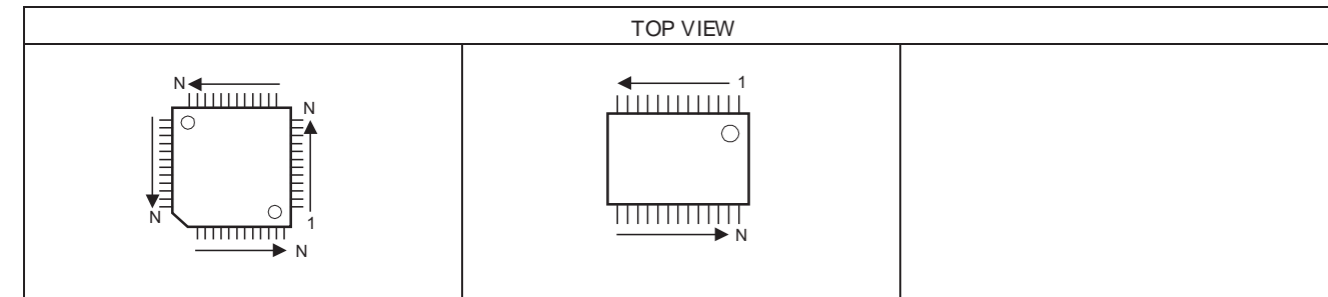
### TRANSISTOR



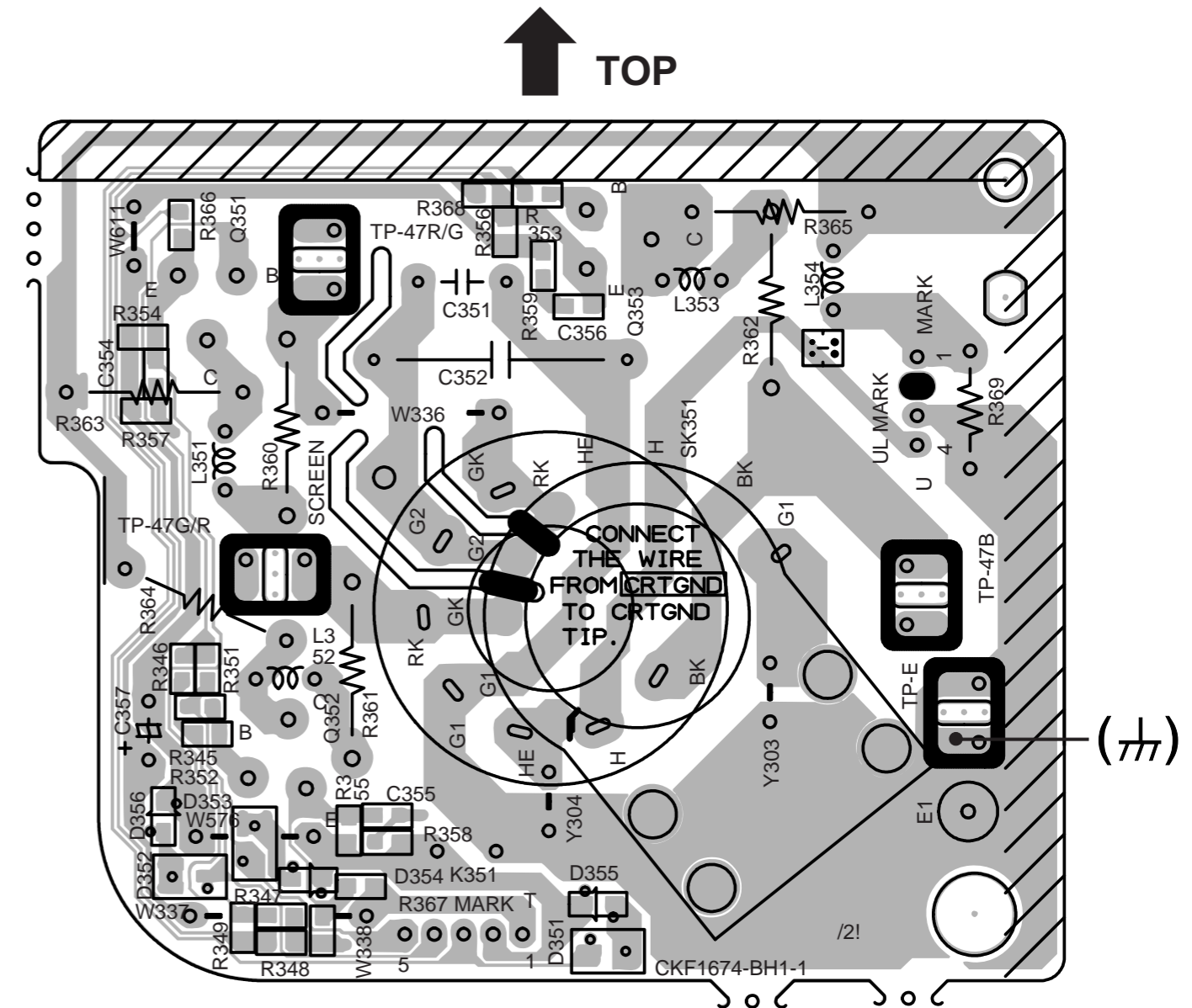
### IC



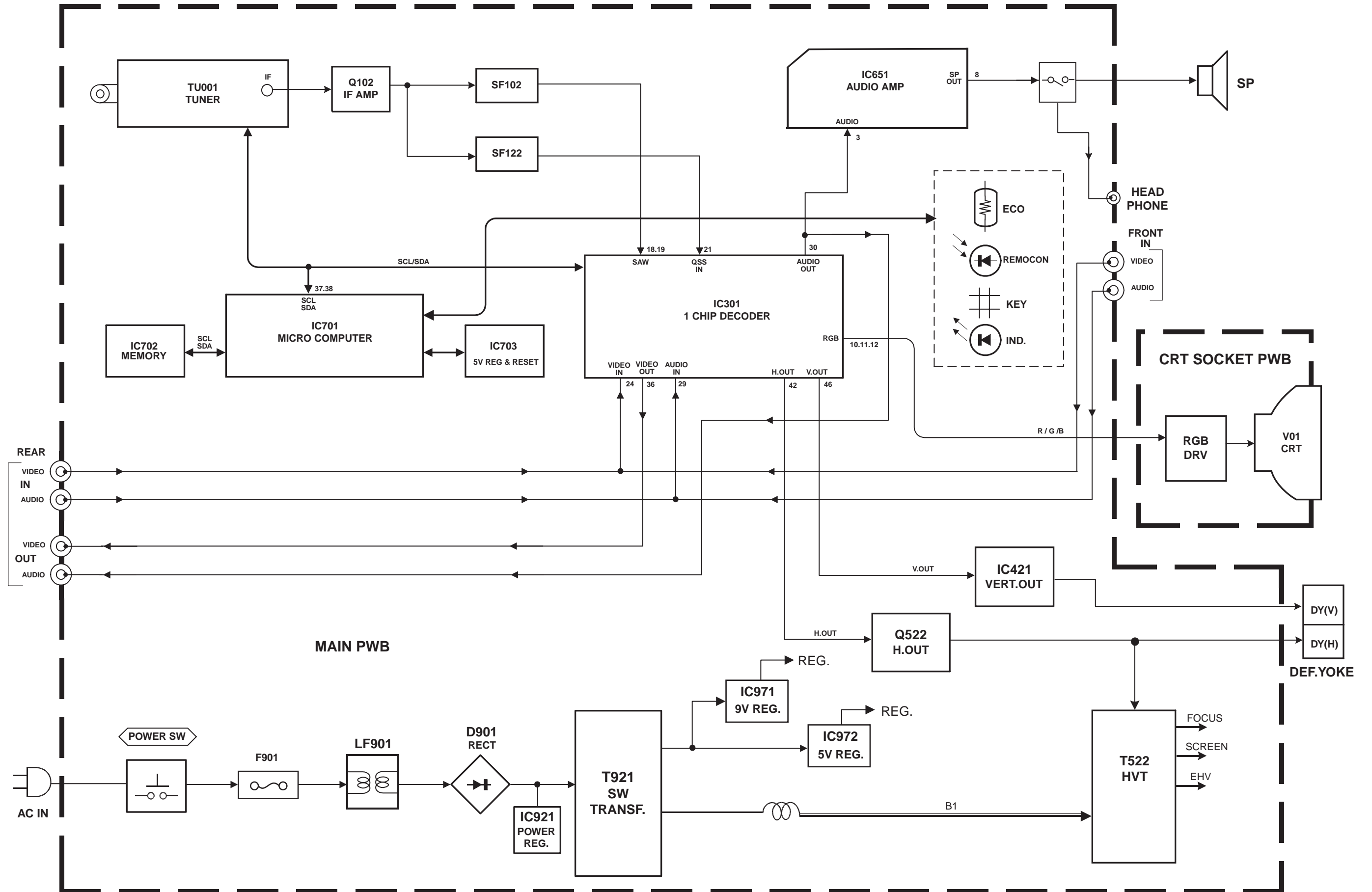
### CHIP IC



## CRT SOCKET PWB PATTERN



# BLOCK DIAGRAM

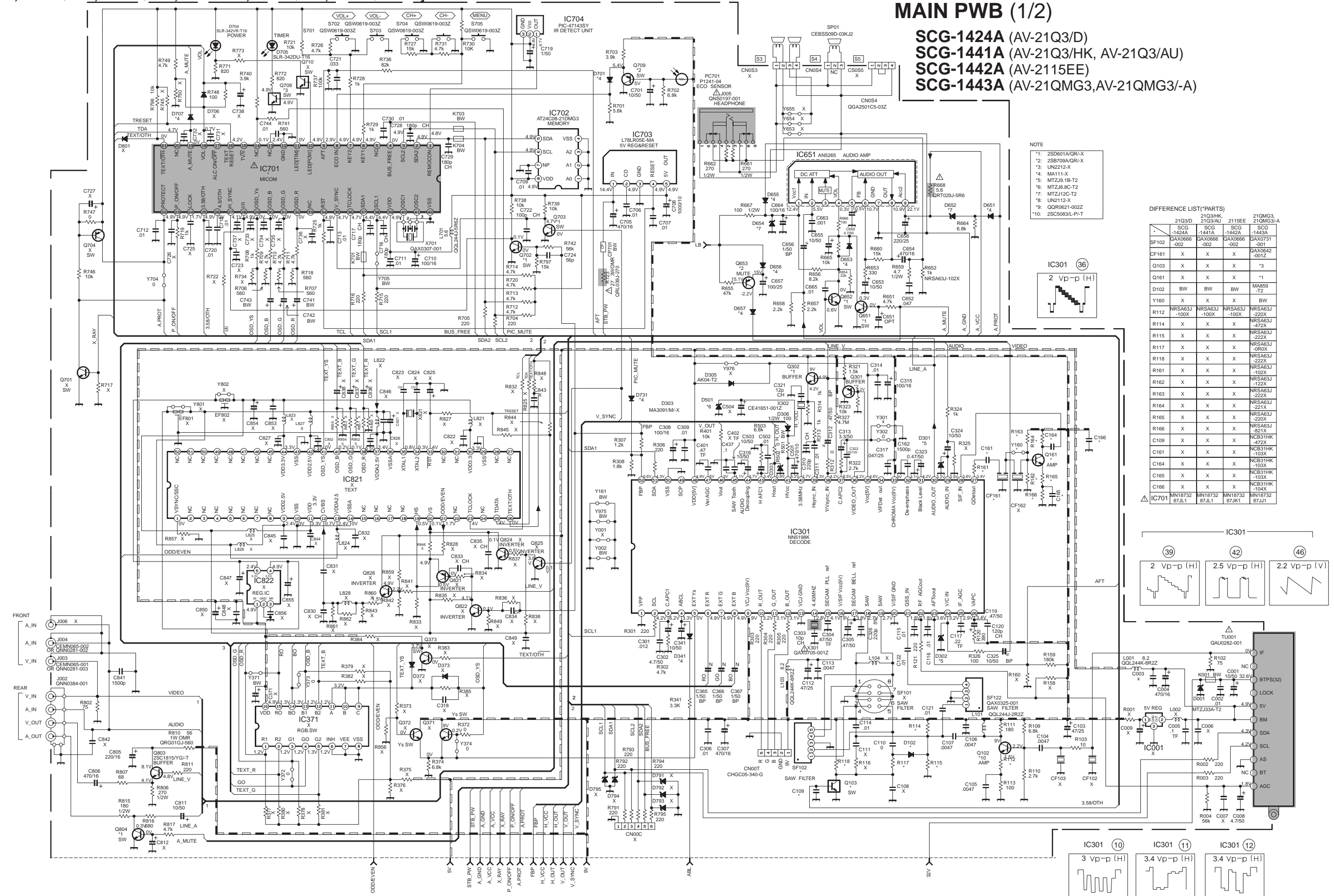


# CIRCUIT DIAGRAMS

MAIN PWB CIRCUIT DIAGRAMS (1/2)  
[AV-21Q3/D, AV-21Q3/HK, AV-21Q3/AU, AV-2115EE, AV-21QMG3, AV-21QMG3-A]

## MAIN PWB (1/2)

SCG-1424A (AV-21Q3/D)  
SCG-1441A (AV-21Q3/HK, AV-21Q3/AU)  
SCG-1442A (AV-2115EE)  
SCG-1443A (AV-21QMG3, AV-21QMG3-A)

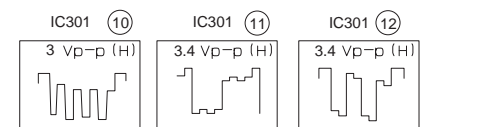
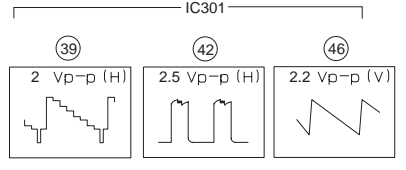
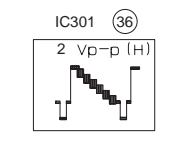


NOTE

- 1: 2SD601A/QR-X
- 2: 2SB709A/QR-X
- 3: UN212-X
- 4: MA111-X
- 5: MTZJ6.1B-T2
- 6: MTZJ6.9C-T2
- 7: MTZJ20-T2
- 8: UN212-X
- 9: QOR0621-002Z
- 10: 2SC5083L-P-T

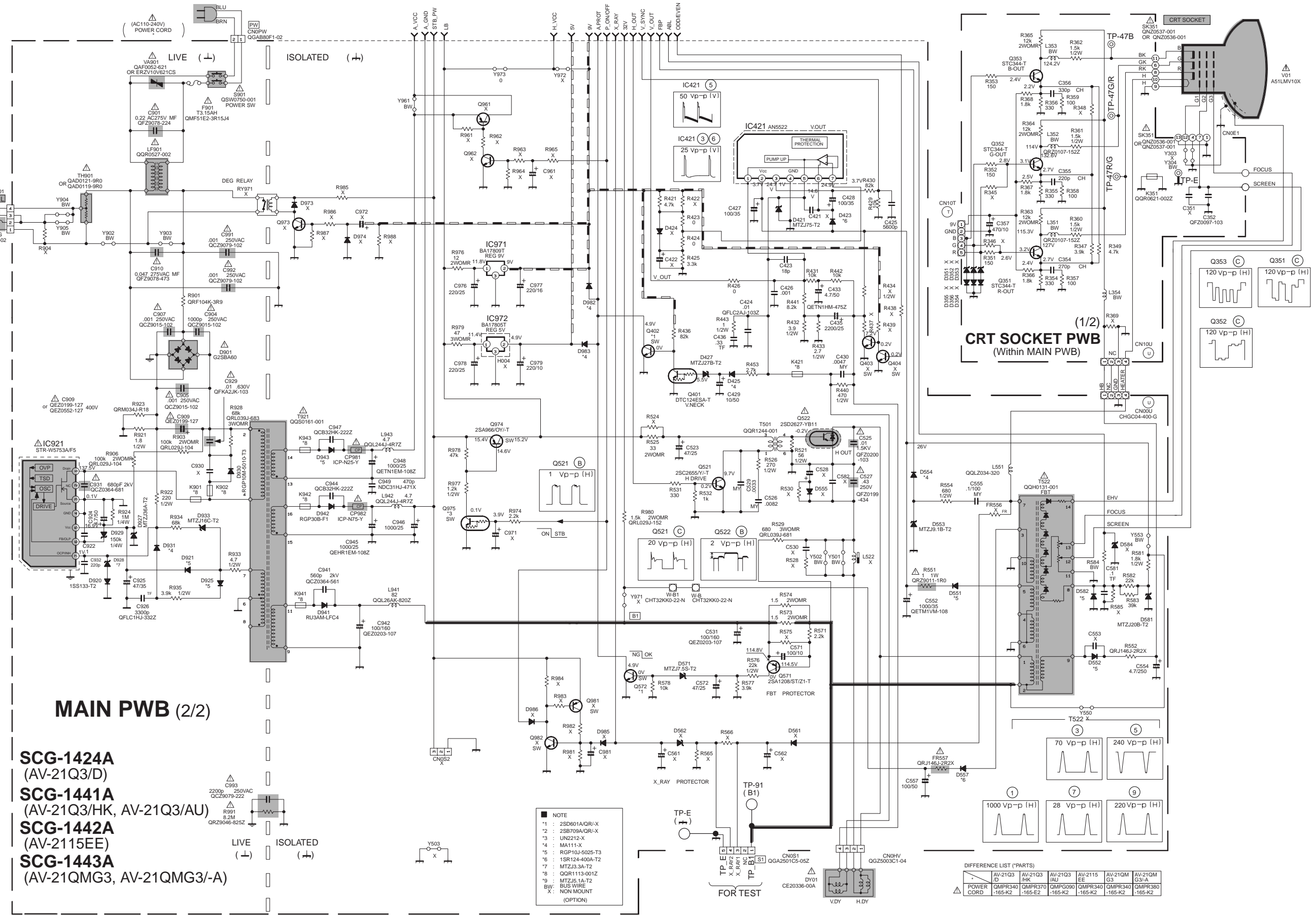
DIFFERENCE LIST(\*PARTS)

	21Q3/D	21Q3/HK	2115EE	21QMG3
SF102	SCG-1424A DAX0666-002	SCG-1441A DAX0666-002	SCG-1442A DAX0666-002	SCG-1443A DAX0731-001
CF161	X	X	X	DAX0542-001Z
Q103	X	X	X	*3
Q161	X	X	X	*1
D102	BW	BW	BW	MA859 -12
Y160	X	X	X	BW
R112	NRSA63J -100X	NRSA63J -100X	NRSA63J -100X	NRSA63J -220X
R114	X	X	X	NRSA63J -472X
R115	X	X	X	NRSA63J -222X
R117	X	X	X	NRSA63J -OR0X
R118	X	X	X	NRSA63J -222X
R161	X	X	X	NRSA63J -102X
R162	X	X	X	NRSA63J -122X
R163	X	X	X	NRSA63J -222X
R164	X	X	X	NRSA63J -220X
R165	X	X	X	NRSA63J -821X
R166	X	X	X	NRSA63J -821X
C109	X	X	X	NCB31HK -472X
C161	X	X	X	NCB31HK -103X
C164	X	X	X	NCB31HK -103X
C165	X	X	X	NCB31HK -104X
C166	X	X	X	NCB31HK -104X
IC701	MN18732 87JL1	MN18732 87JL1	MN18732 87JK1	MN18732 87JJ1





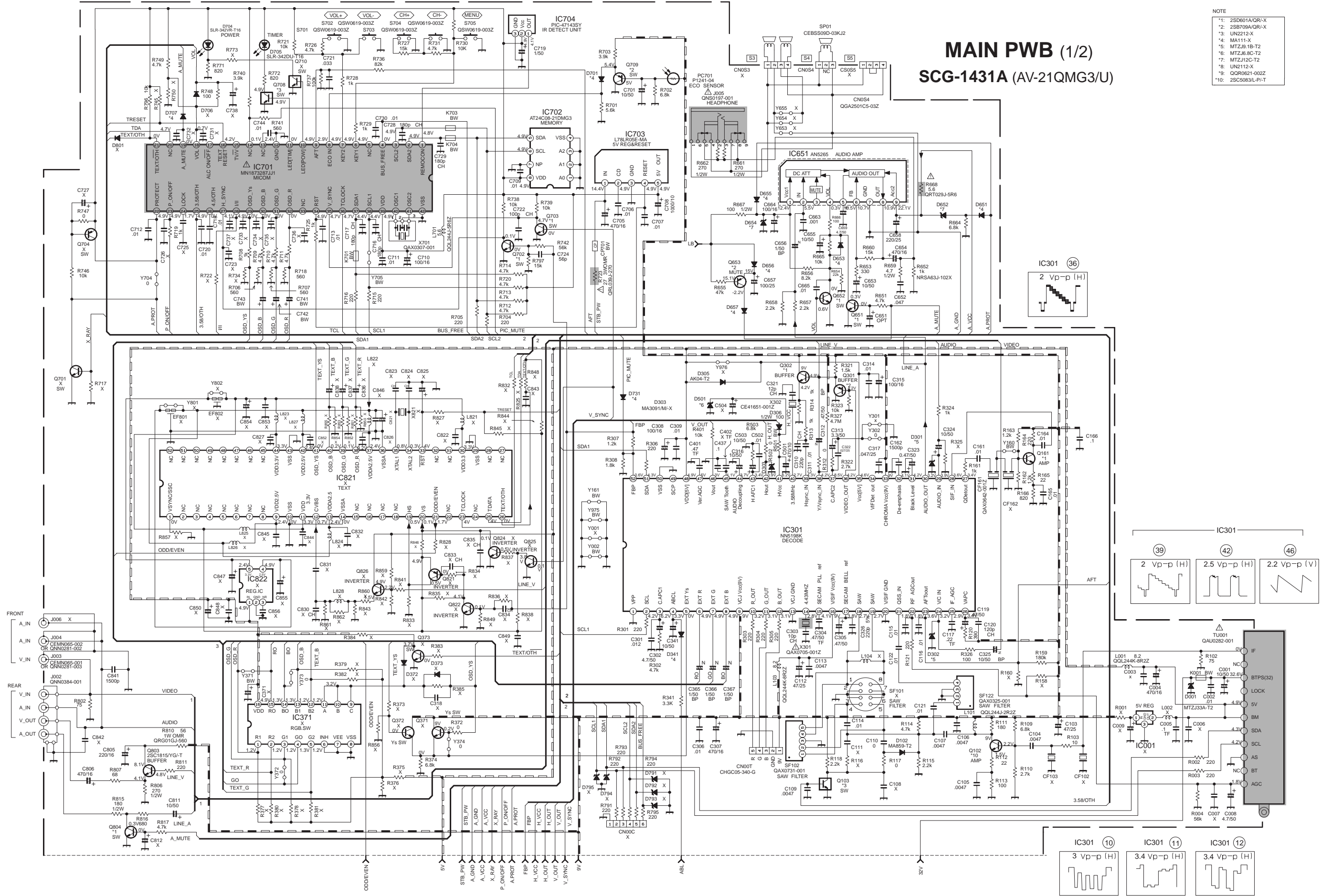
**MAIN PWB CIRCUIT DIAGRAMS (2/2)**  
[AV-21Q3/D, AV-21Q3/HK, AV-21Q3/AU, AV-2115EE, AV-21QMG3, AV-21QMG3/-A]



MAIN PWB CIRCUIT DIAGRAMS (1/2) [AV-21QMG3/U]

MAIN PWB (1/2)  
SCG-1431A (AV-21QMG3/U)

- NOTE
- \*1: 2SD601A/QR-X
  - \*2: 2SB709A/QR-X
  - \*3: UN212-X
  - \*4: MA111-X
  - \*5: MTZJ9-1B-T2
  - \*6: MTZJ6-3C-T2
  - \*7: MTZJ12C-T2
  - \*8: UN212-X
  - \*9: QOR0621-002Z
  - \*10: 2SC5083L-PL-T







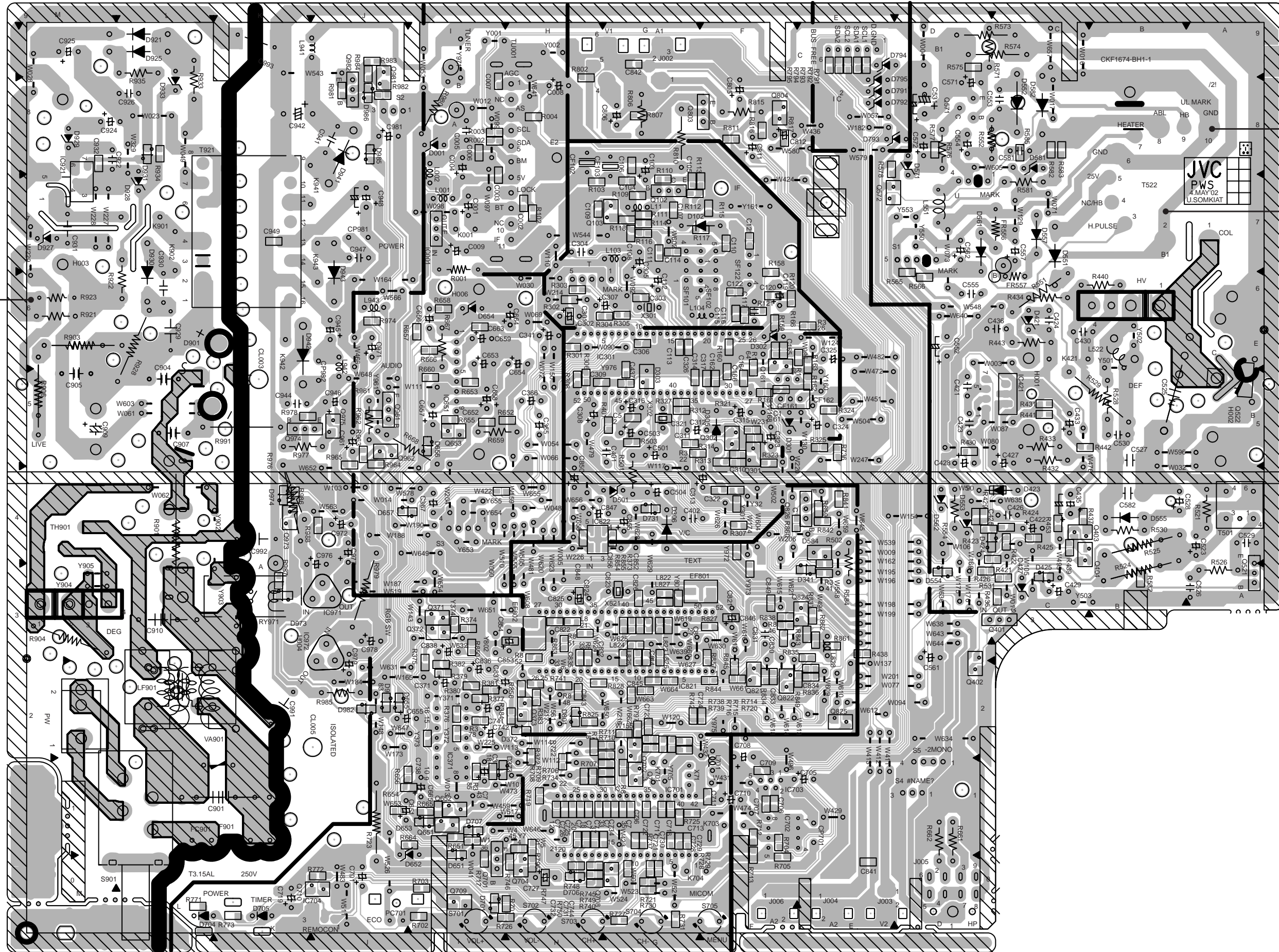
PATTERN DIAGRAMS MAIN PWB PATTERN

FRONT

(T)

TP-E  
(T)

TP-91  
(B1)



**JVC**

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