

# JVC

## SCHEMATIC DIAGRAMS

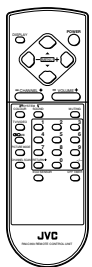
### COLOUR TELEVISION

BASIC CHASSIS

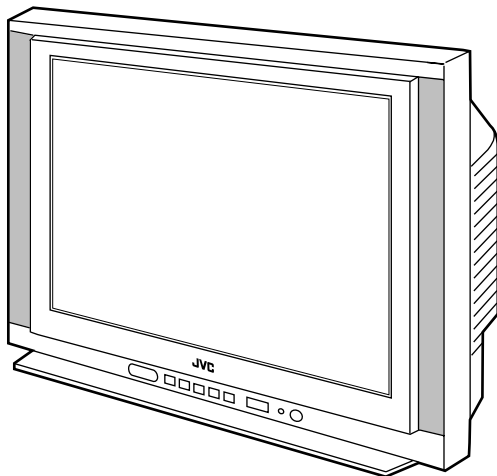
CH

**AV-21L91** (-BK)  
**AV-25L91** (-BK)  
**AV-29L91** (-BK)

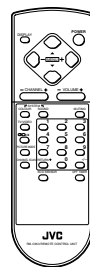
CD-ROM No. SML200112



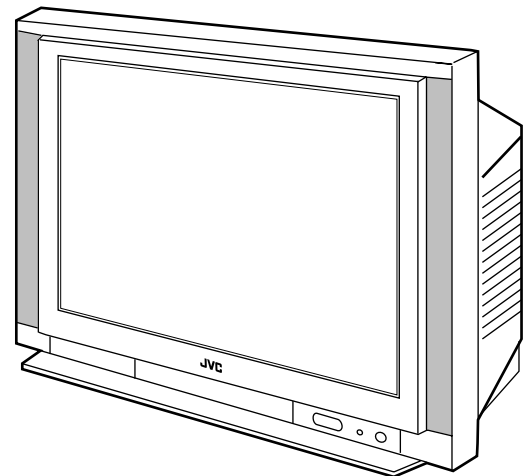
RM-C353-1C



[AV-21L91 (-BK), AV-25L91 (-BK)]



RM-C353-1C



[AV-29L91 (-BK)]

# AV-21L91 (-BK) AV-25L91 (-BK) AV-29L91 (-BK) 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 : Non-Flammable 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]
- AC indicated : AC withstand voltage [V]
- Others : DC withstand voltage [V]

\* Electrolytic Capacitors

47/50[Example] : Capacitance value [ $\mu$ F]/withstand voltage[V]

##### • Type

- No indication : Ceramic capacitor
- MY : Mylar 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



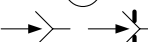
-  : B1
-  : B2(12V)
-  : 9V
-  : 5V

\* 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) : (  $\text{⏏}$  ) 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 ( 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.

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## SEMICONDUCTOR SHAPES

### TRANSISTOR

BOTTOM VIEW	FRONT VIEW			TOP VIEW
				<b>CHIP TR</b> 

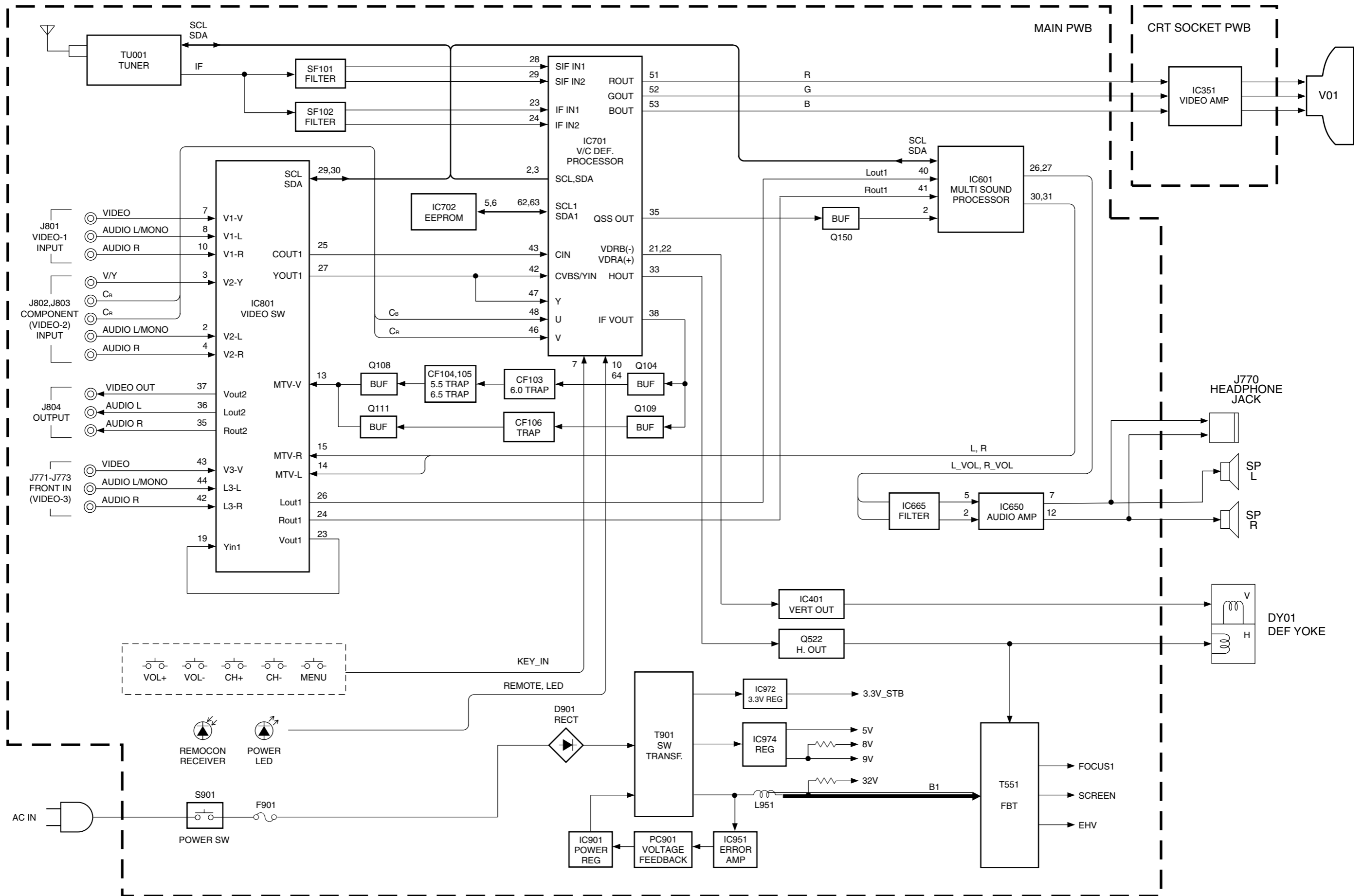
### IC

BOTTOM VIEW	FRONT VIEW		TOP VIEW

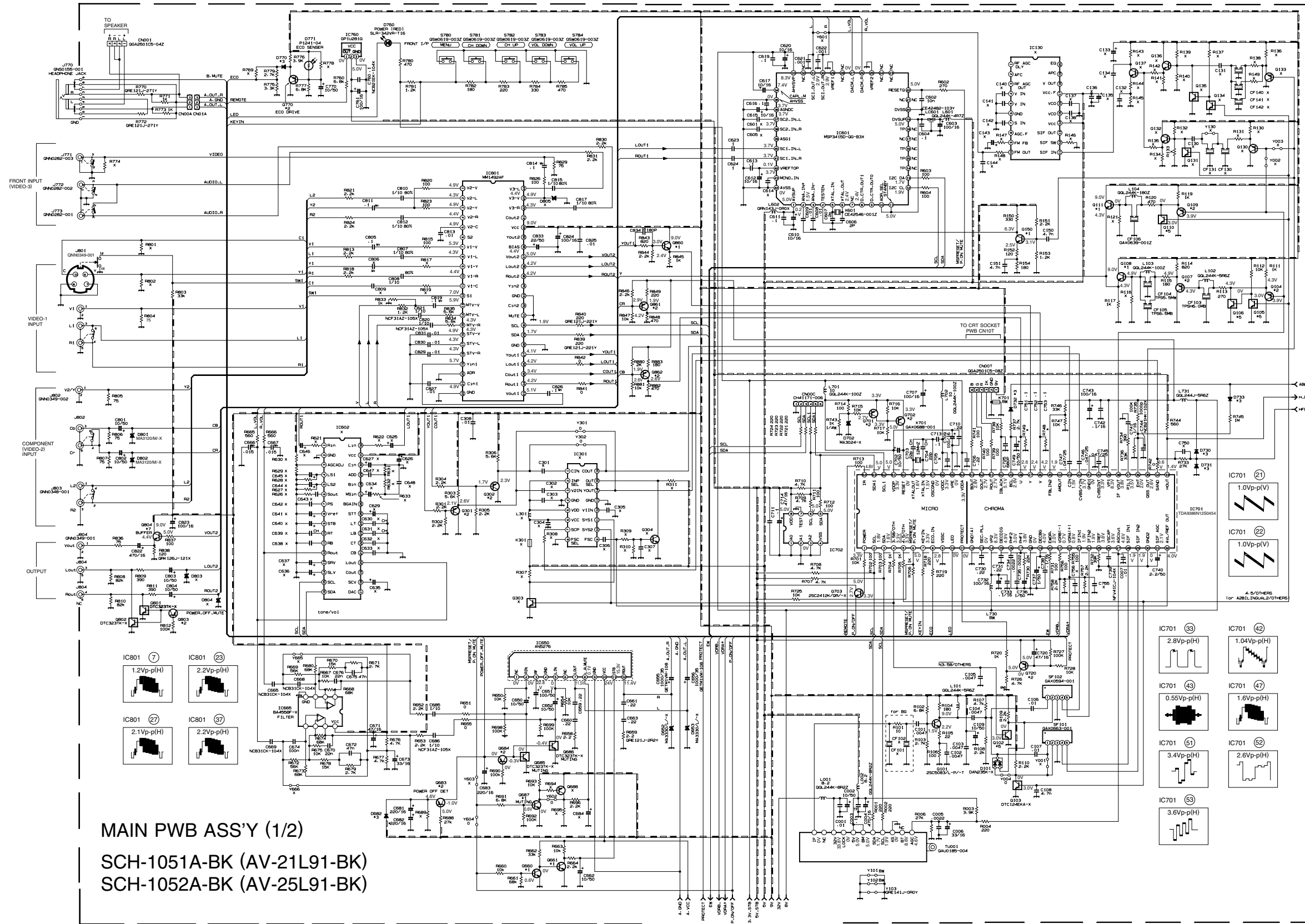
### CHIP IC

TOP VIEW	

# BLOCK DIAGRAM [AV-21L91-BK, AV-25L91-BK]



**CIRCUIT DIAGRAMS [AV-21L91-BK, AV-25L91-BK]**  
**MAIN PWB CIRCUIT DIAGRAM (1/2) [AV-21L91-BK, AV25L91-BK]**



**MAIN PWB ASS'Y (1/2)**  
**SCH-1051A-BK (AV-21L91-BK)**  
**SCH-1052A-BK (AV-25L91-BK)**

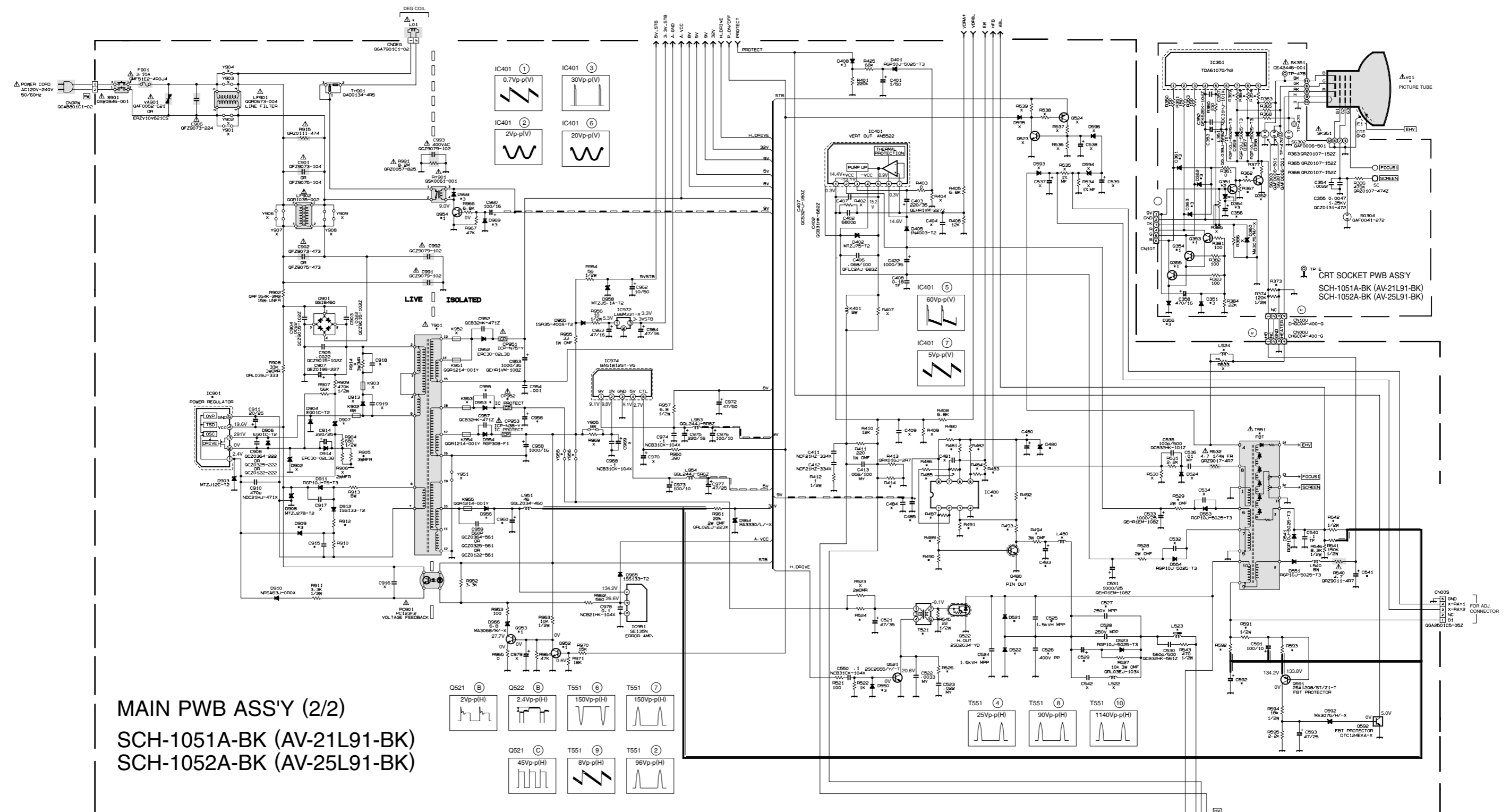
**\* DIFFERENCE LIST (\*PARTS)**

	R748	R749
SCH-1051A-BK	4.7M Ω	4.7M Ω
SCH-1052A-BK	2.2M Ω	2.2M Ω

**NOTE**

- X : OPTION (NON MOUNT)
- BW : BUS WIRE
- 0 : NRS563J-0R0X
- \*1 : 2SC2412K/QR-X
- \*2 : 2SA1037AK/QR-X
- \*3 : MA111-X
- \*5 : DTC124EKA-X
- \*7 : 2SC1740S/QR-T

MAIN (2/2) AND CRT SOCKET PWB CIRCUIT DIAGRAMS [AV-21L91-BK, AV-25L91-BK]



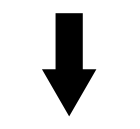
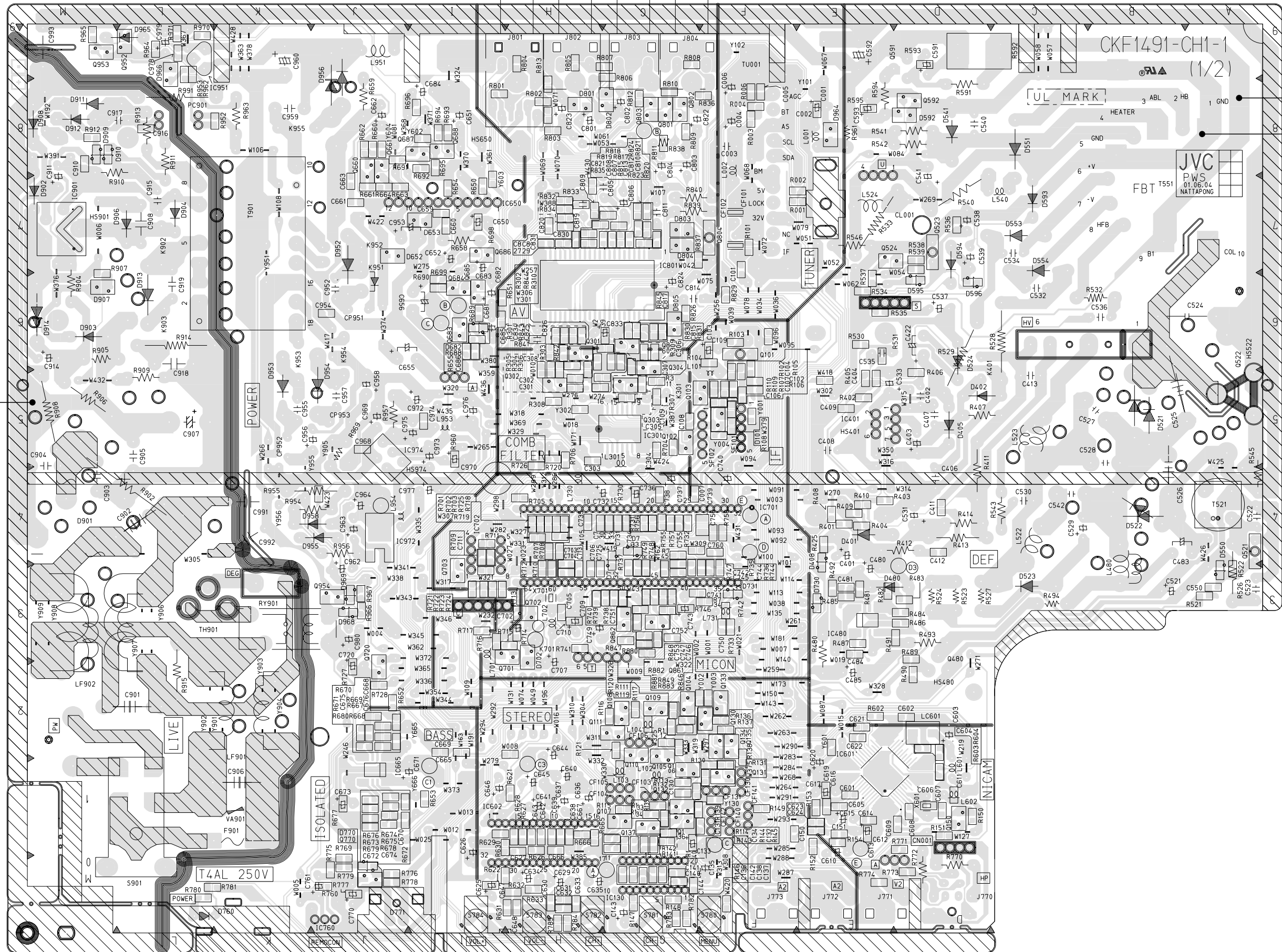
MAIN PWB ASS'Y (2/2)  
SCH-1051A-BK (AV-21L91-BK)  
SCH-1052A-BK (AV-25L91-BK)

\*DIFFERENCE LIST (\*PARTS)

	IC480	IC901	Q352	Q480	D480	D521	D522	D907	D953	D956	T521	ΔT551	ΔT901	ΔL01	L480	L523	L524	ΔV01	R354
SCH-1051A-BK	NOT USED	STR-F6707A/F7	2SC4722/NP/	NOT USED	NOT USED	ERB06-15-F1	RU3AM-LFC4	MA3300/M-X	NOT USED	RU3AM-LFC4	CE40203-00CJ1	QQH0104-001	QQS0117-001	QQW0118-001	NOT USED	QQR1005-004	QQLZ034-360	A51QDX992X	2.2kΩ
SCH-1052A-BK	UPC358G2-XE	STR-F6709A/F7	NOT USED	2SD1408/0V-LB	MTZJ4.3A-T2	RH3G-F1	31DF6N-FC5	MA3150/M-X	RGP10J-5025-T3	31DF6N-FC5	QQR1229-001	QQH0097-001	QQS0116-001	QQW0119-001	QQR1138-001	QQR1137-005	QQLZ026-140	A59QDF891X	1.8kΩ
	R362	R364	R367	R369	R373	R377	R414	R480	R481	R482	R483	R484	R485	R486	R487	R489	R490	R491	R492
SCH-1051A-BK	4.7kΩ	2.2kΩ	820Ω	2.2kΩ	390kΩ	47kΩ	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
SCH-1052A-BK	NOT USED	1.8kΩ	NOT USED	1.8kΩ	120kΩ	NOT USED	8.2Ω	680Ω	22 kΩ	5.6 kΩ	82 kΩ	5.6 kΩ	5.6 kΩ	2.7 kΩ	33 kΩ	1.2 kΩ	1kΩ	5.6 kΩ	8.2 kΩ
	R493	R494	R524	R526	R528	R529	R541	R542	R591	R592	R593	R905	R910	R912	C353	C356	C480	C483	C485
SCH-1051A-BK	NOT USED	NOT USED	27Ω	270Ω/1W	1.2Ω	1.2Ω	150kΩ	150kΩ	2.2kΩ	2.2Ω	1kΩ	0.22Ω	3.9kΩ	1.8kΩ	1μF	100μF	NOT USED	NOT USED	NOT USED
SCH-1052A-BK	33kΩ	47Ω	82Ω	270Ω/2W	0.47Ω	0.47Ω	120kΩ	120kΩ	4.7kΩ	3.9Ω	820Ω	0.15Ω	4.7kΩ	1μF	1000μF	10μF	NOT USED	NOT USED	22μF
	C524	C525	C526	C527	C528	C529	C541	C592	C915	C955	C956	C960	ΔCP952	DY01	K953	Y955	Y956		
SCH-1051A-BK	6100pF	3400pF	0.039μF	0.15μF	0.12μF	4.7μF	4.7μF	100μF	2200pF	NOT USED	NOT USED	100μF	NOT USED	QQD0060-002	NOT USED	NOT USED	BW		
SCH-1052A-BK	4700pF	0.011μF	0.022μF	0.18μF	0.18μF	2.2μF	10μF	220μF	1500pF	470pF	220μF	220μF	220μF	ICP-N50-Y	QQD0062-001	QQR1214-001Y	BW	NOT USED	

NOTE  
 X : OPTION (NON MOUNT)  
 BW : BUS WIRE  
 0 : NRS6A63J-OR0X  
 \*1 : 2SC2412K/QR/-X  
 \*2 : 2SA1037AK/QR/-X  
 \*3 : MA111-X

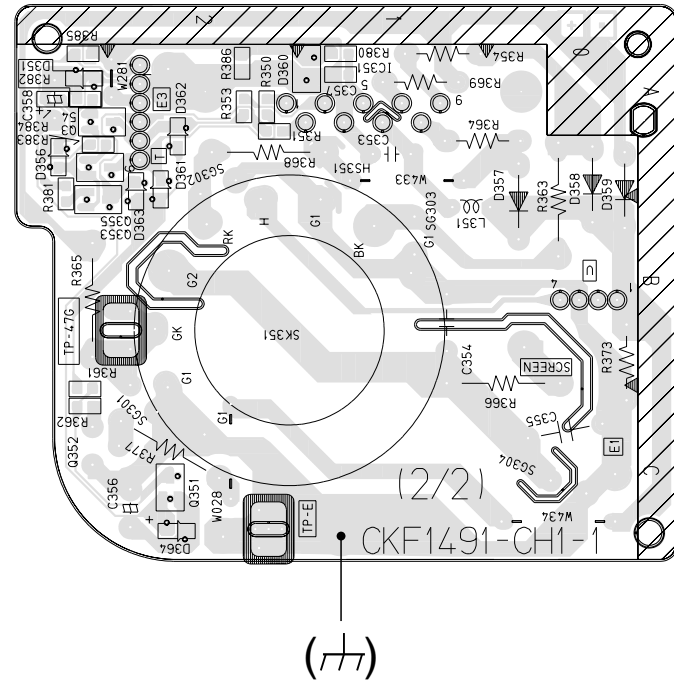
**PATTERN DIAGRAMS [AV-21L91-BK, AV-25L91-BK]**  
**MAIN PWB PATTERN [AV-21L91-BK, AV-25L91-BK]**



FRONT

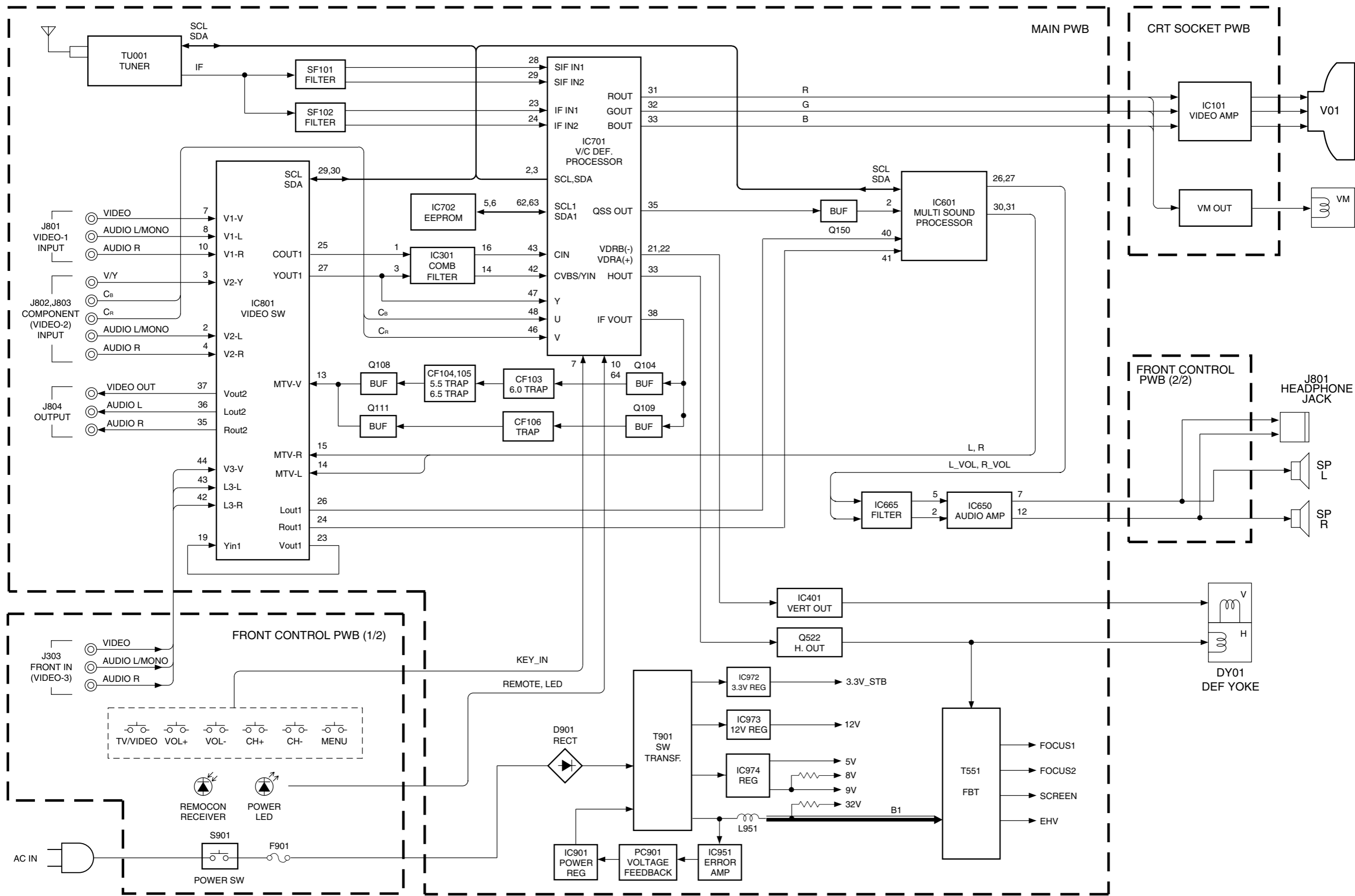
B1  
(H)

**CRT SOCKET PWB PATTERN [AV-21L91-BK, AV-25L91-BK]**

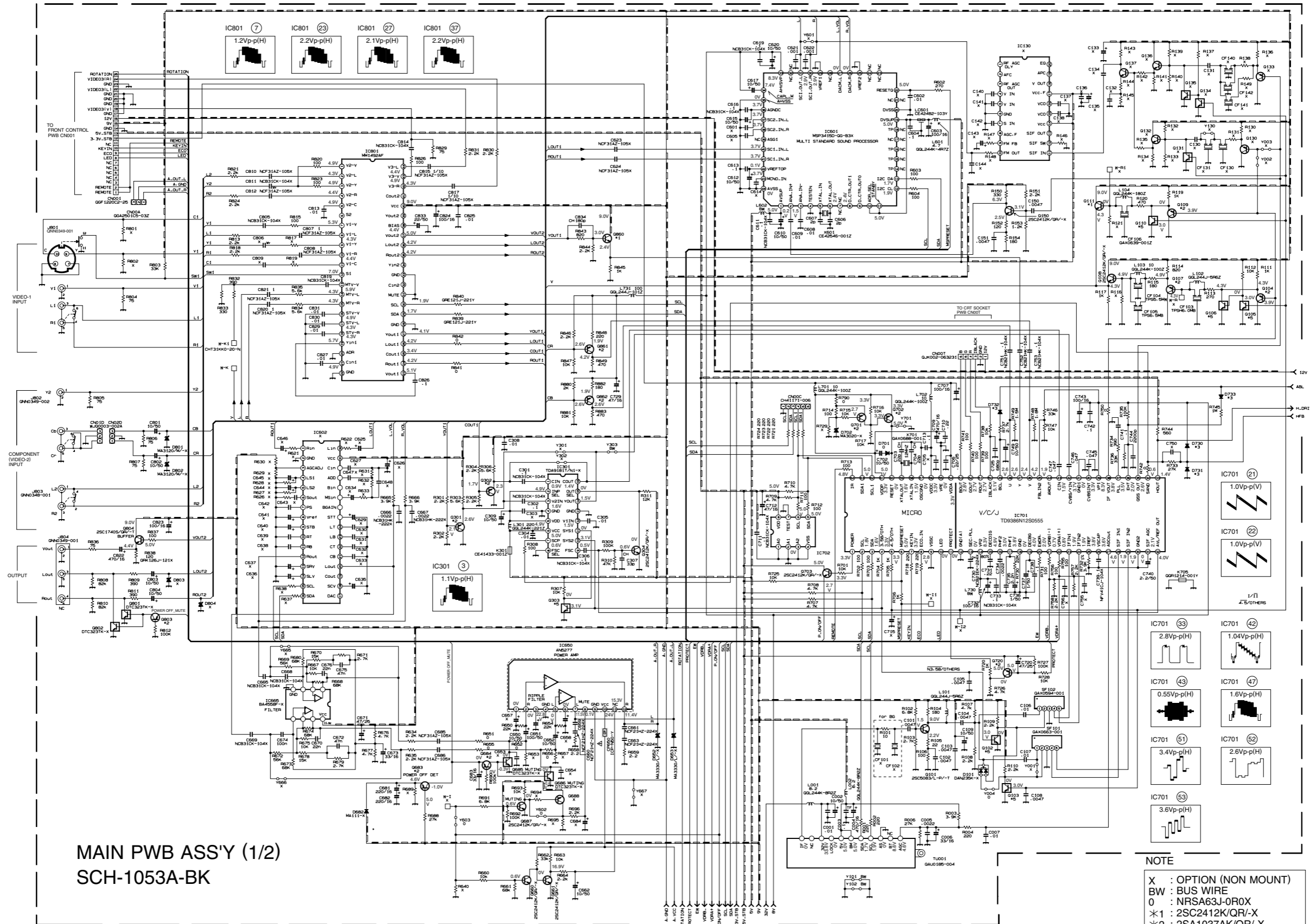




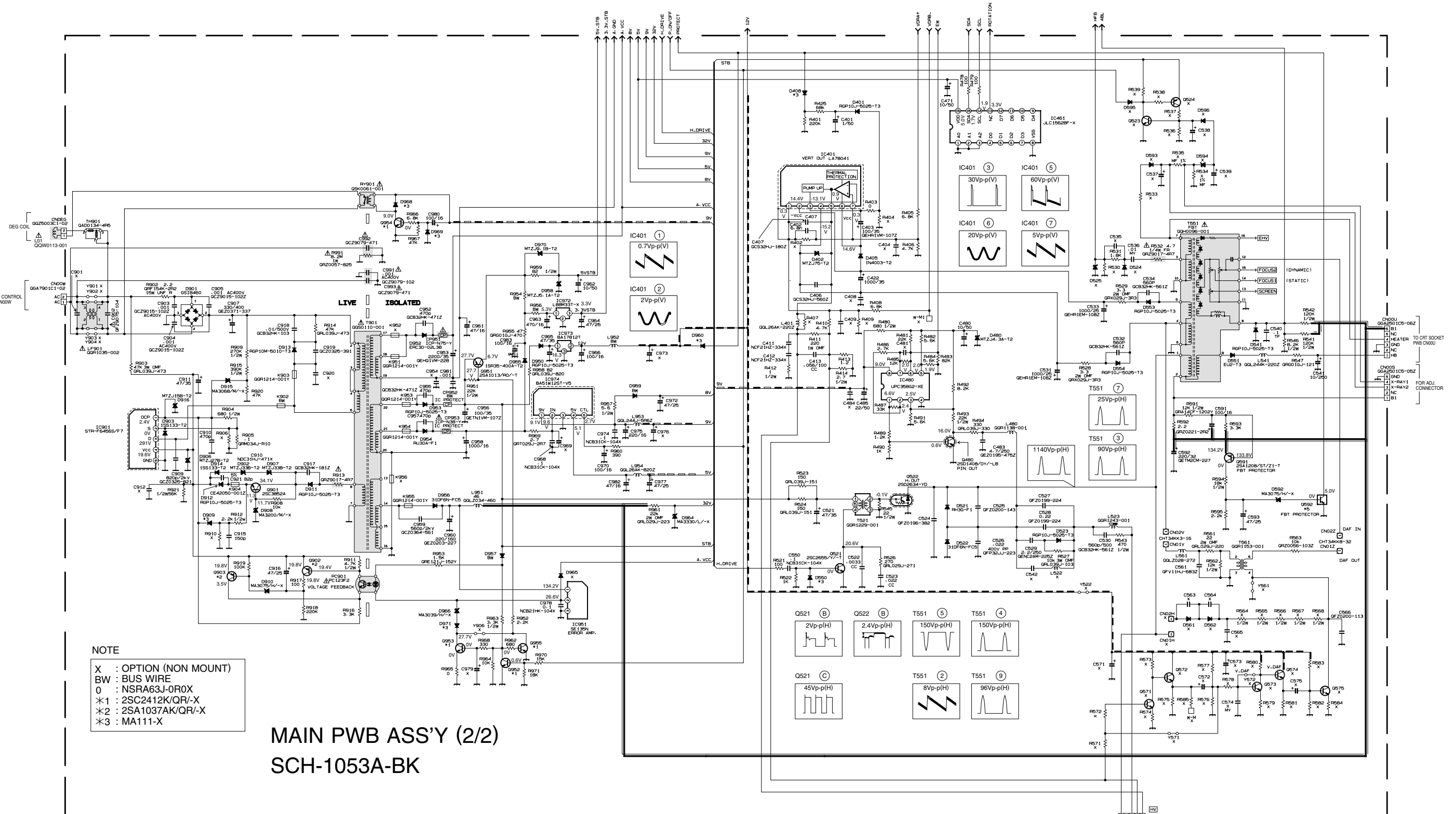
# BLOCK DIAGRAM [AV-29L91-BK]



# CIRCUIT DIAGRAMS [AV-29L91-BK] MAIN PWB CIRCUIT DIAGRAM (1/2) [AV29L91-BK]



MAIN PWB CIRCUIT DIAGRAM (2/2) [AV-29L91-BK]

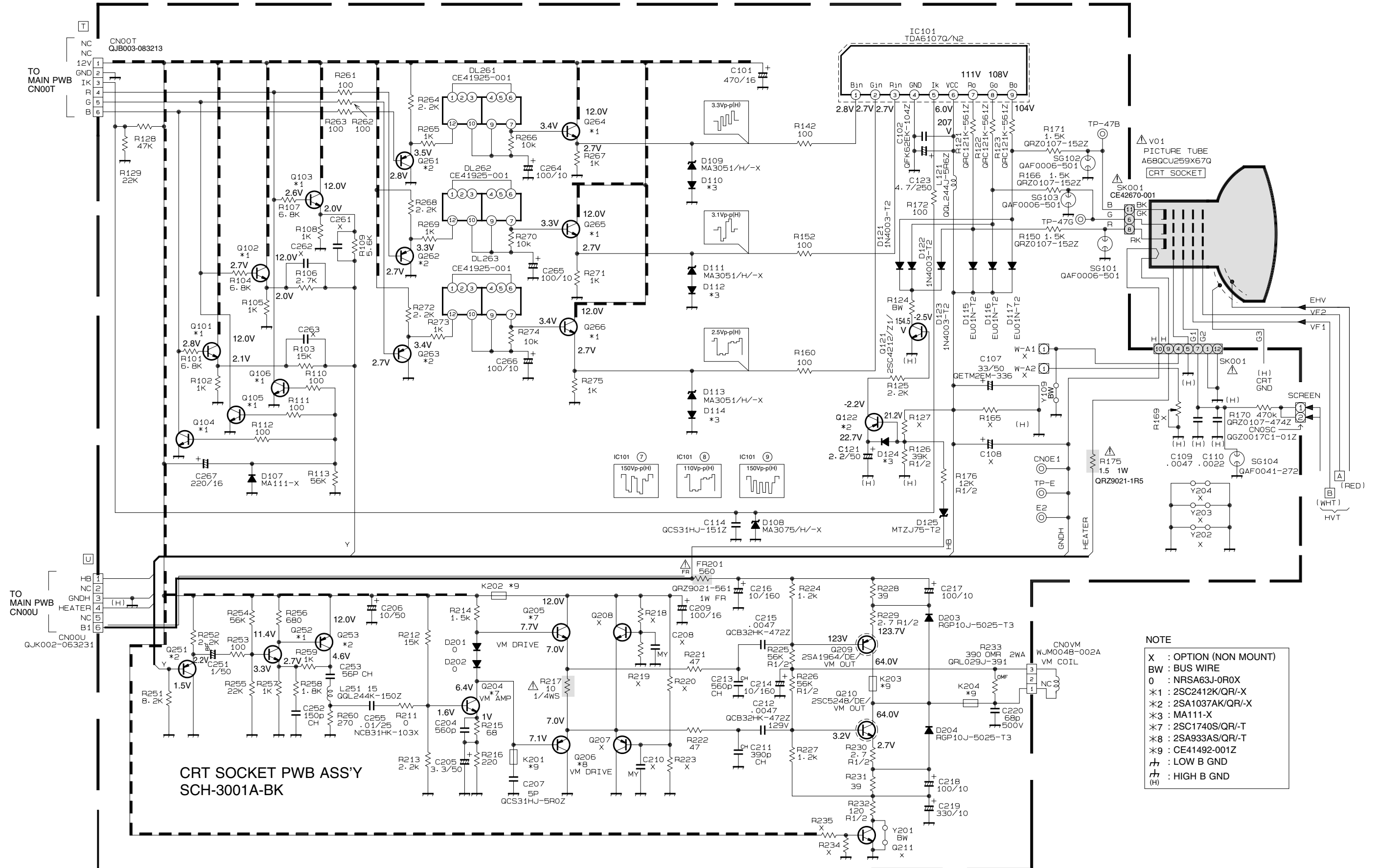


NOTE

- X : OPTION (NON MOUNT)
- BW : BUS WIRE
- 0 : NSRA63J-0R0X
- \*1 : 2SC2412K/QR/X
- \*2 : 2SA1037AK/QR/X
- \*3 : MA111-X

MAIN PWB ASS'Y (2/2)  
SCH-1053A-BK

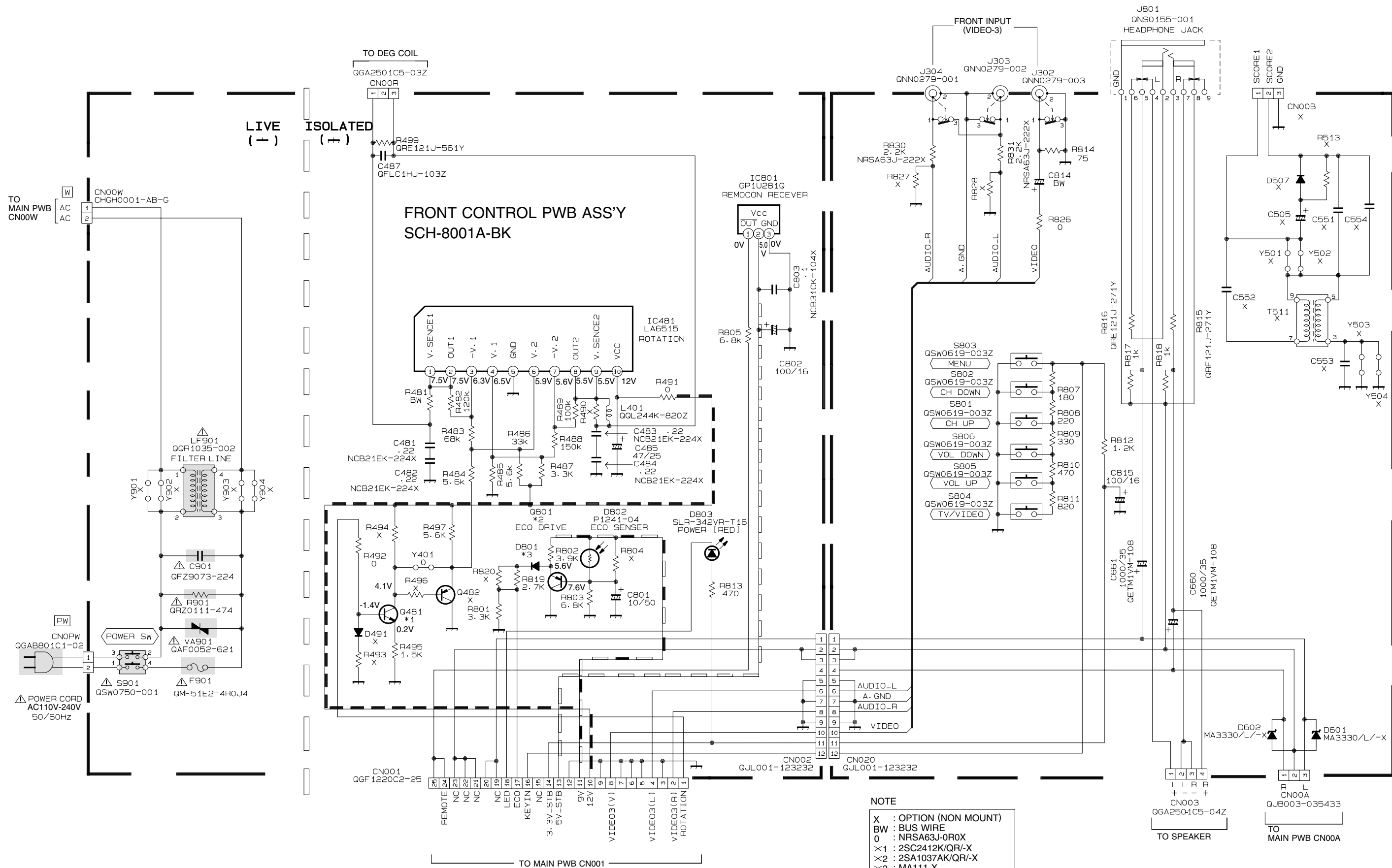
CRT SOCKET PWB CIRCUIT DIAGRAM [AV-29L91-BK]



**NOTE**

- X : OPTION (NON MOUNT)
- BW : BUS WIRE
- 0 : NRSA63J-0R0X
- \*1 : 2SC2412K/QR/-X
- \*2 : 2SA1037AK/QR/-X
- \*3 : MA111-X
- \*7 : 2SC1740S/QR/-T
- \*8 : 2SA933AS/QR/-T
- \*9 : CE41492-001Z
- ⊕ : LOW B GND
- ⊖ : HIGH B GND

FRONT CONTROL PWB CIRCUIT DIAGRAM [AV-29L91-BK]

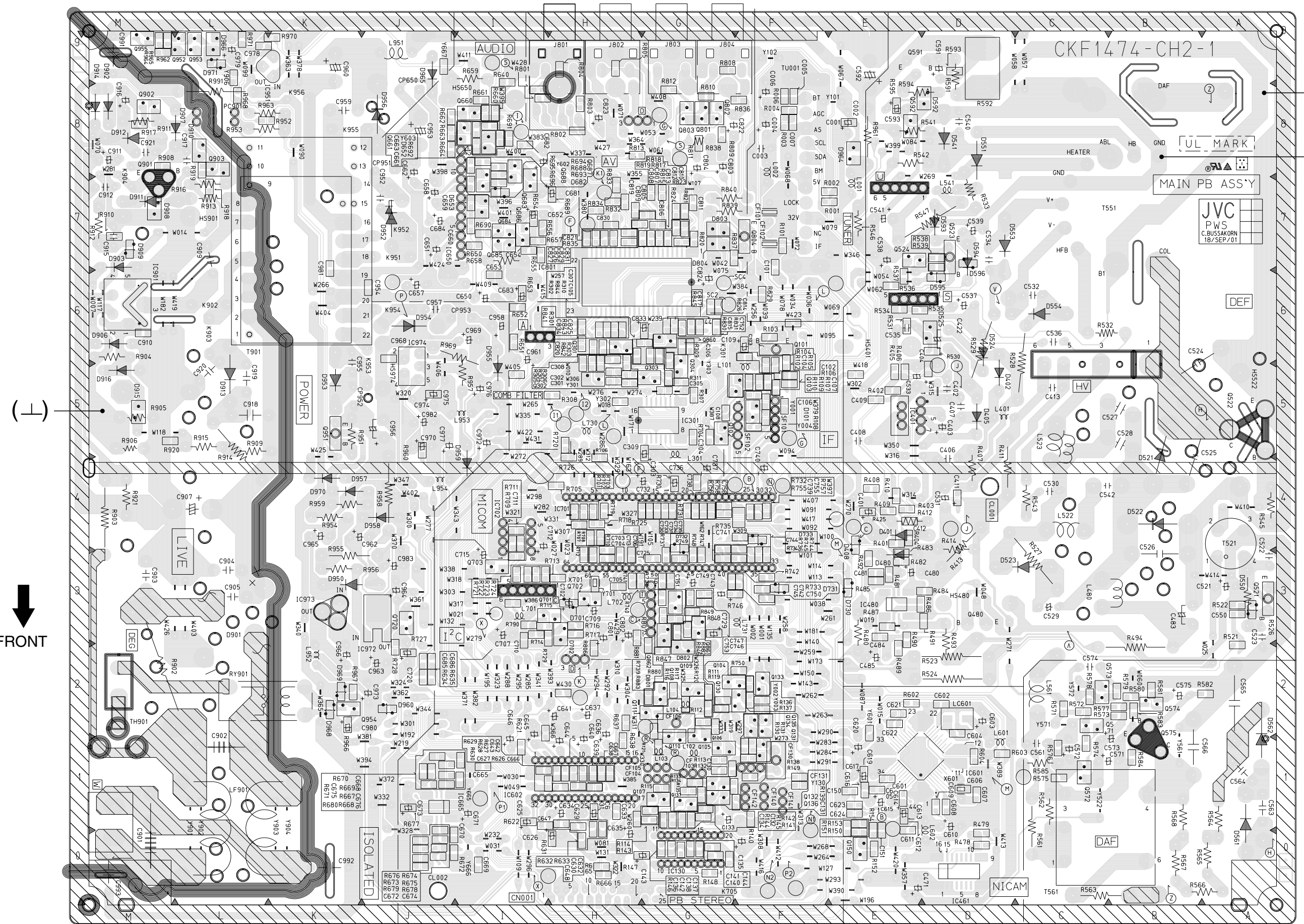


**NOTE**

- X : OPTION (NON MOUNT)
- BW : BUS WIRE
- 0 : NRSA63J-0R0X
- \*1 : 2SC2412K/QR/-X
- \*2 : 2SA1037AK/QR/-X
- \*3 : MA111-X

PATTERN DIAGRAMS [AV-29L91-BK]  
MAIN PWB PATTERN [AV-29L91-BK]

CKF1474-CH2-1



B1



MAIN PB ASS'Y

JVC  
PWS  
C.BUSSAKORN  
18/SEP/01

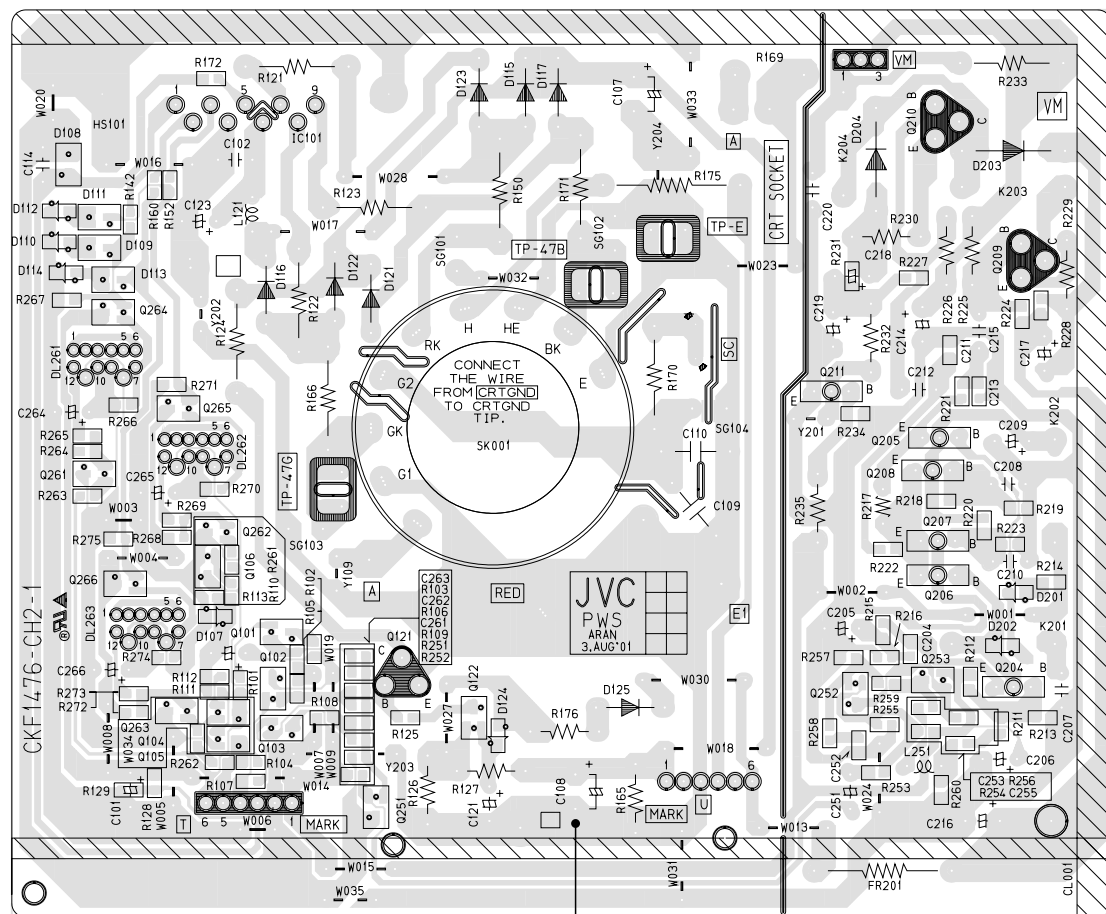


FRONT

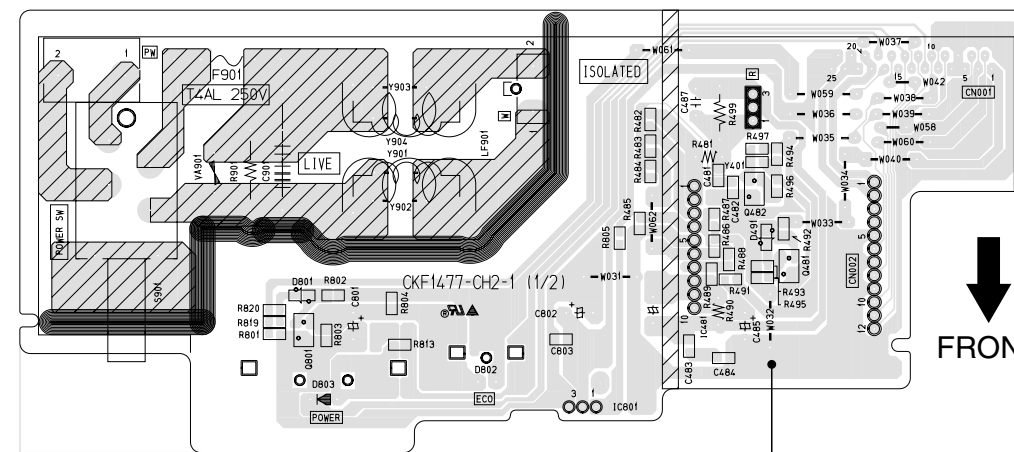
CRT SOCKET PWB PATTERN [AV-29L91-BK]

FRONT CONTROL PWB PATTERN [AV-29L91-BK]

- FRONT CONTROL (1/2) -

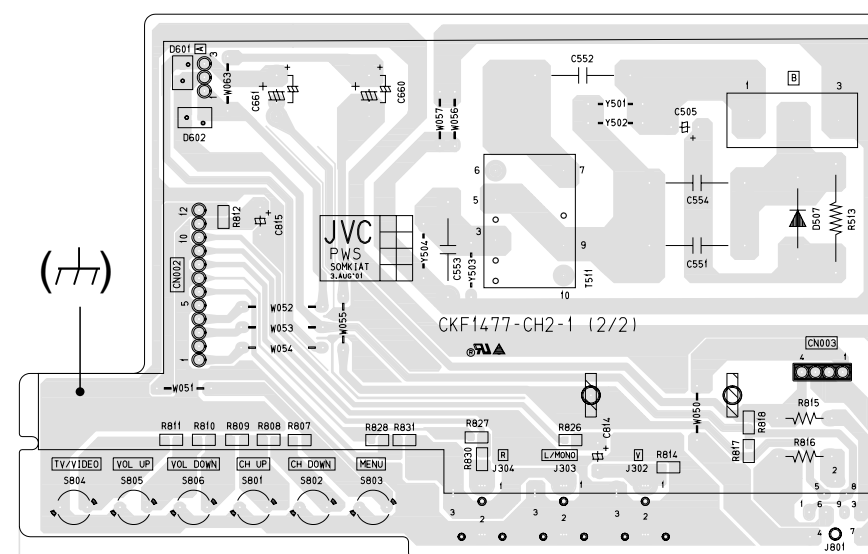


TOP  
↑



↓  
FRONT

- FRONT CONTROL (2/2) -



↓  
FRONT



# JVC

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