

# JVC

## SCHEMATIC DIAGRAMS

### COLOUR TELEVISION

BASIC CHASSIS

CH

**AV-20N83** /BK    **AV-21D83** /VT  
**AV-21D83** /BK    **AV-20N83** /VT

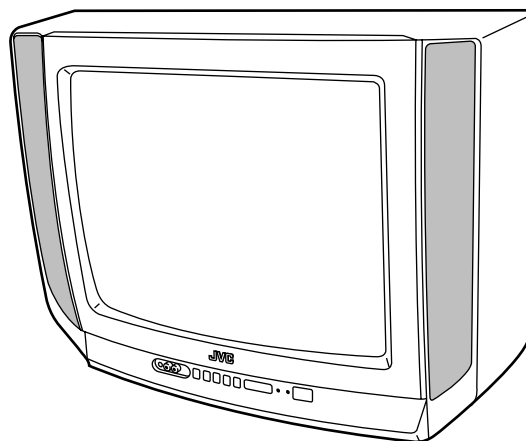
CD-ROM No. SML200212



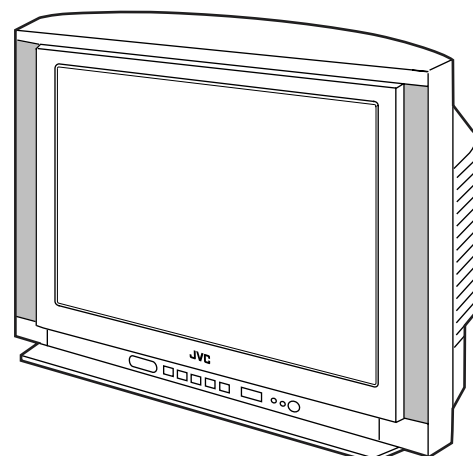
RM-C1017-1H  
[AV-20N83/BK]  
[AV-21D83/BK]



RM-C1027-1H  
[AV-21D83/VT]  
[AV-20N83/VT]



[AV-20N83/BK, AV-20N83/VT]



[AV-21D83/BK, AV-21D83/VT]

# AV-20N83/BK AV-21D83/BK AV-21D83/VT AV-20N83/VT

## 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]



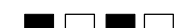
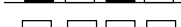
- Type

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



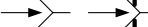
 : B1  
 : B2(12V)  
 : 9V  
 : 5V

\* 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

$\perp$  : LIVE side ground  
 $\nmid$  : ISOLATED(NEUTRAL) side ground  
 $\equiv$  : EARTH ground  
 $\downarrow$  : 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) : ( $\nmid$ ) 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 the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time with a measuring apparatus ( oscilloscope, etc.). 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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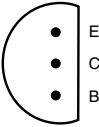

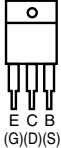
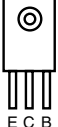

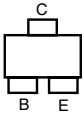
PATTERN DIAGRAMS

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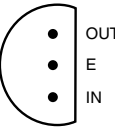
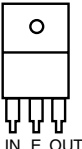
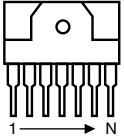
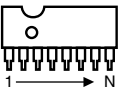
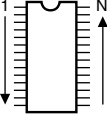
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## SEMICONDUCTOR SHAPES

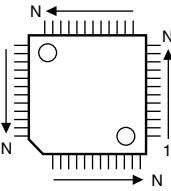
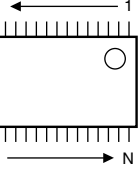
### TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

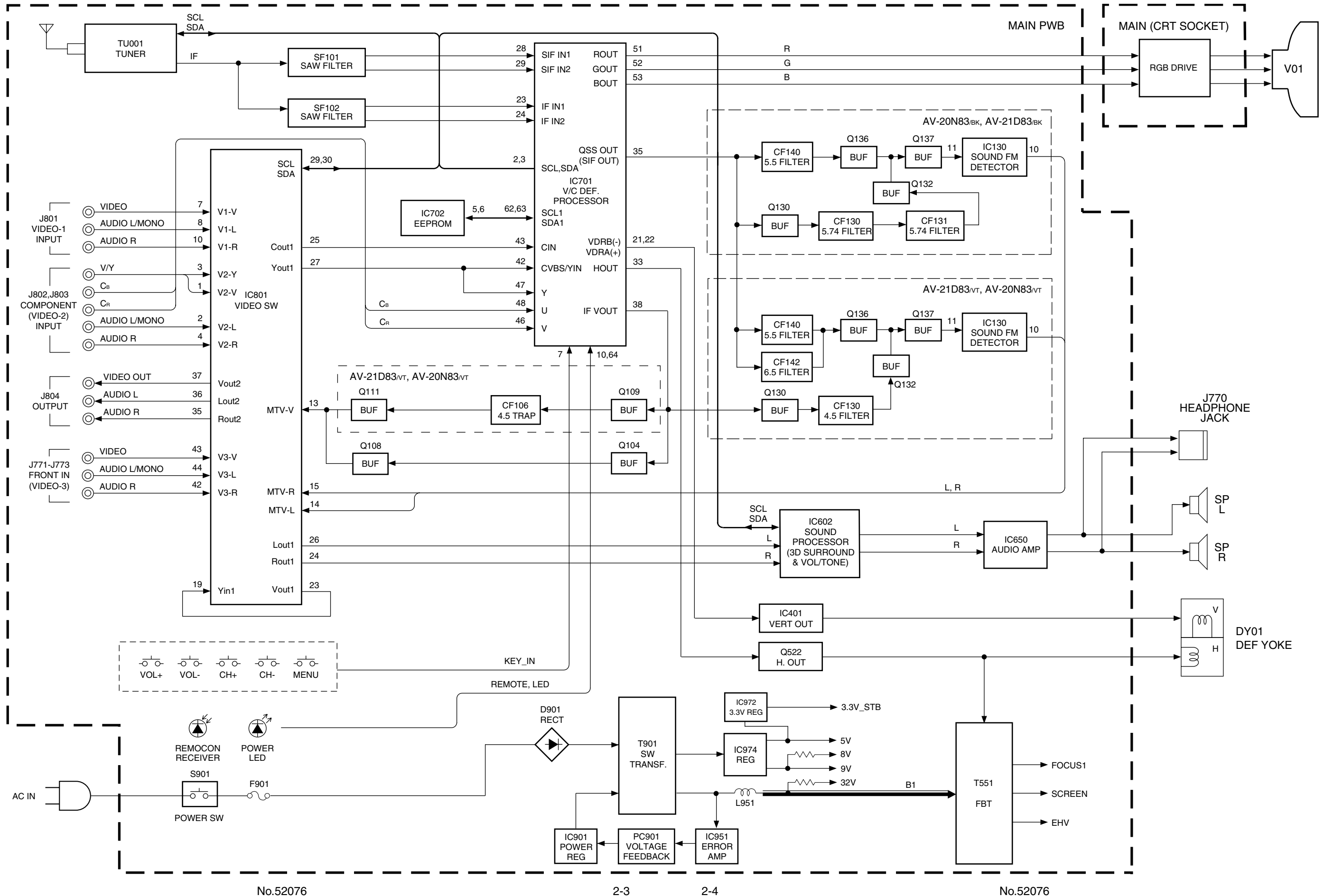
### IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

### CHIP IC

TOP VIEW		
		

# BLOCK DIAGRAM

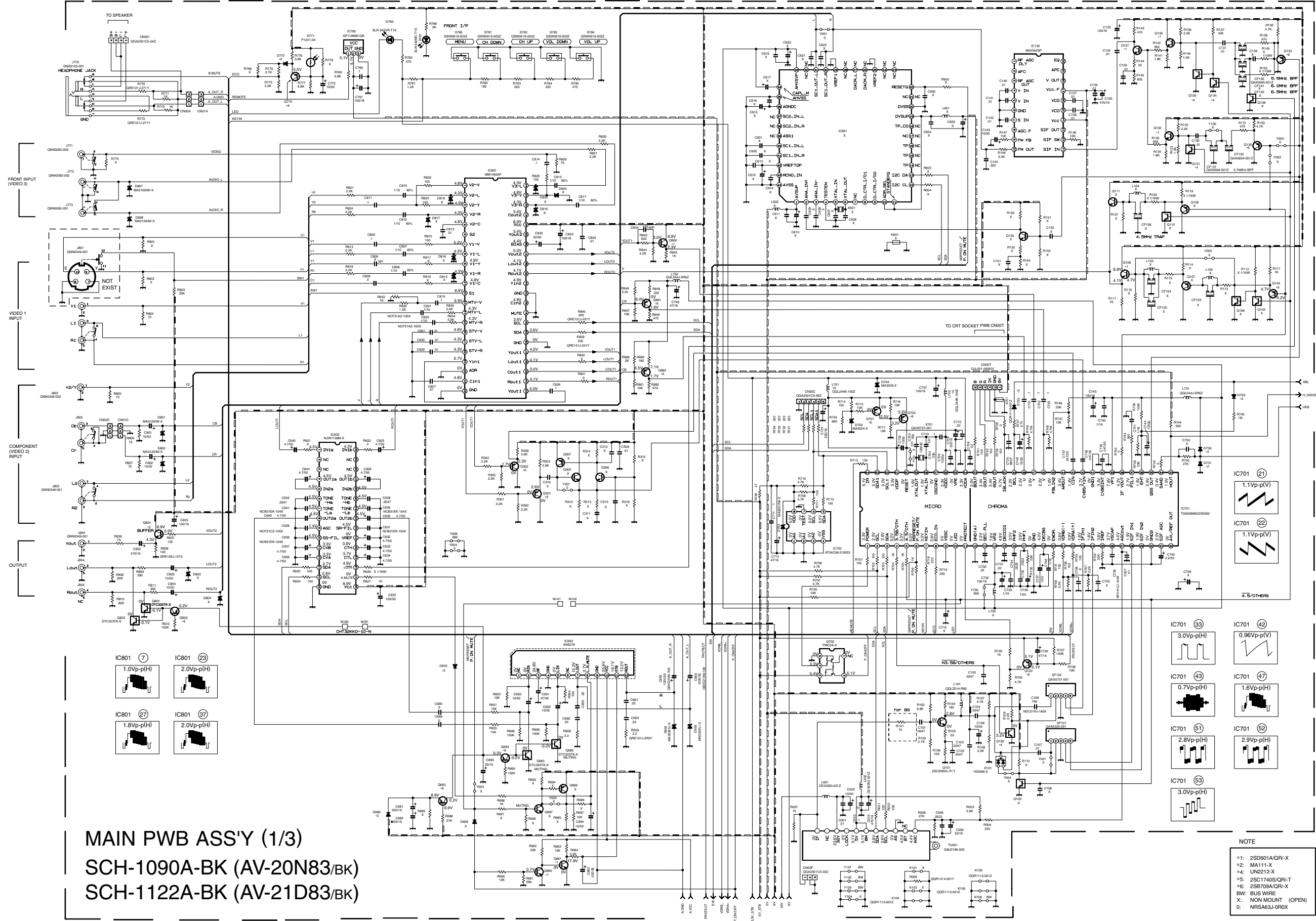


CIRCUIT DIAGRAMS

MAIN PWB CIRCUIT DIAGRAM (1/3) [AV-20N83/BK, AV-21D83/BK]

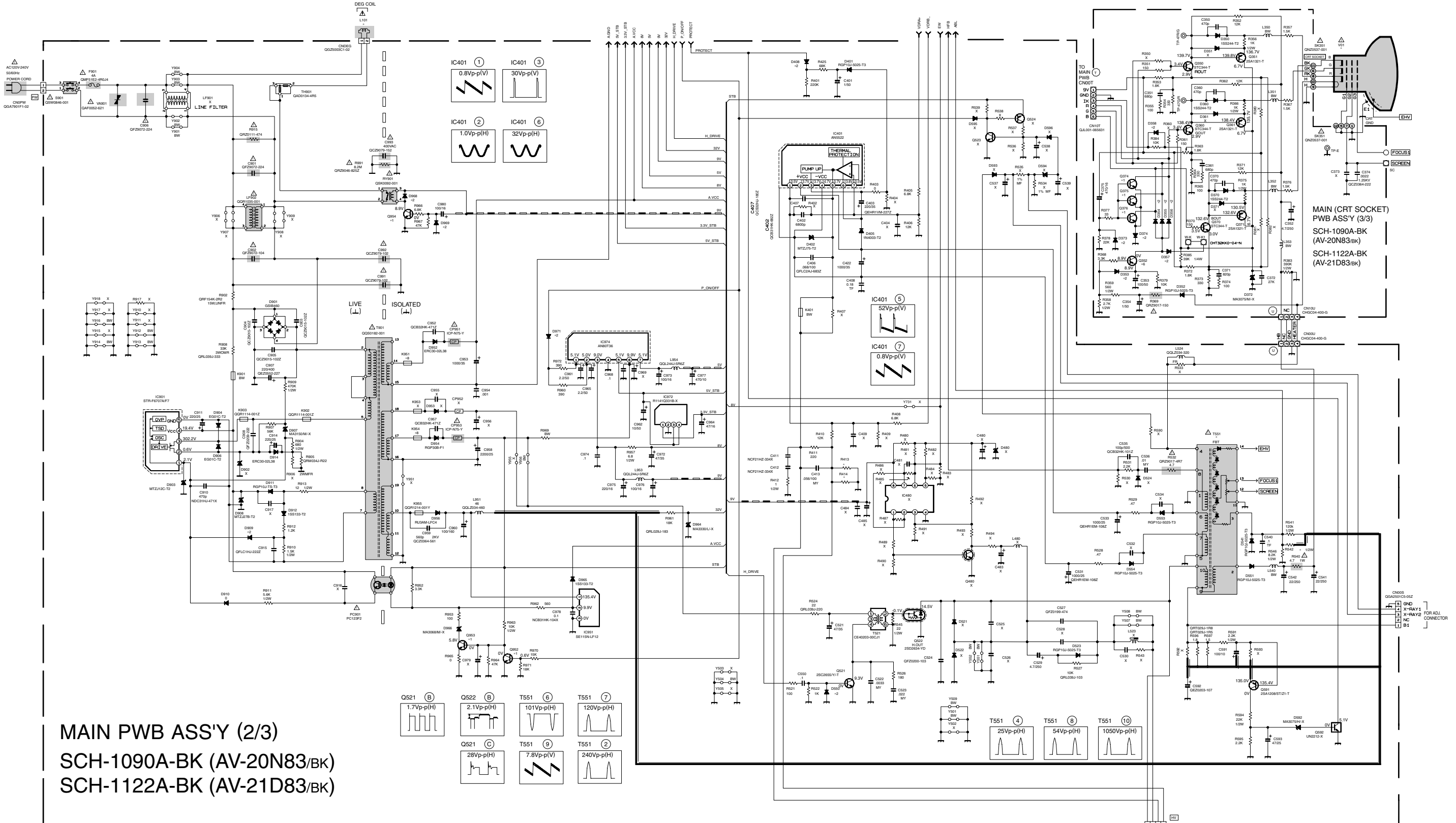
AV-20N83  
AV-21D83

AV-20N83  
AV-21D83



MAIN PWB ASS'Y (1/3)  
SCH-1090A-BK (AV-20N83/BK)  
SCH-1122A-BK (AV-21D83/BK)

MAIN PWB CIRCUIT DIAGRAMS (2/3, 3/3) [AV-20N83/BK, AV-21D83/BK]



MAIN PWB ASS'Y (2/3)  
SCH-1090A-BK (AV-20N83/BK)  
SCH-1122A-BK (AV-21D83/BK)

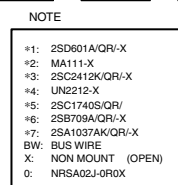
\* DIFFERENCE LIST (\* PARTS)

	△ DY01	△ V01	△ L01	R413	R414	△ T551	R542
SCH-1090A-BK	QQD0081-001	A48LWX10X	QQW0156-001	3.9Ω	68Ω	QQH0143-001	330KΩ
SCH-1122A-BK	CE20336-00A	A51LMV10X	QQW0157-001	2.7Ω	NOT USED	QQH0142-001	270KΩ

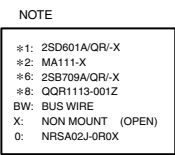
NOTE

- \*1: 2SD601A/QR-X
- \*2: MA111-X
- \*6: 2SB709A/QR-X
- \*8: QOR1113-001Z
- BW: BUS WIRE
- X: NON MOUNT (OPEN)
- 0: NRSAG3J-0R0X

MAIN PWB ASS'Y (1/3)  
SCH-1315A-CK (AV-21D83<sub>VT</sub>)  
SCH-1316A-CK (AV-20N83<sub>VT</sub>)



MAIN PWB ASS'Y (2/3)  
SCH-1315A-CK (AV-21D83<sub>NT</sub>)  
SCH-1316A-CK (AV-20N83<sub>NT</sub>)

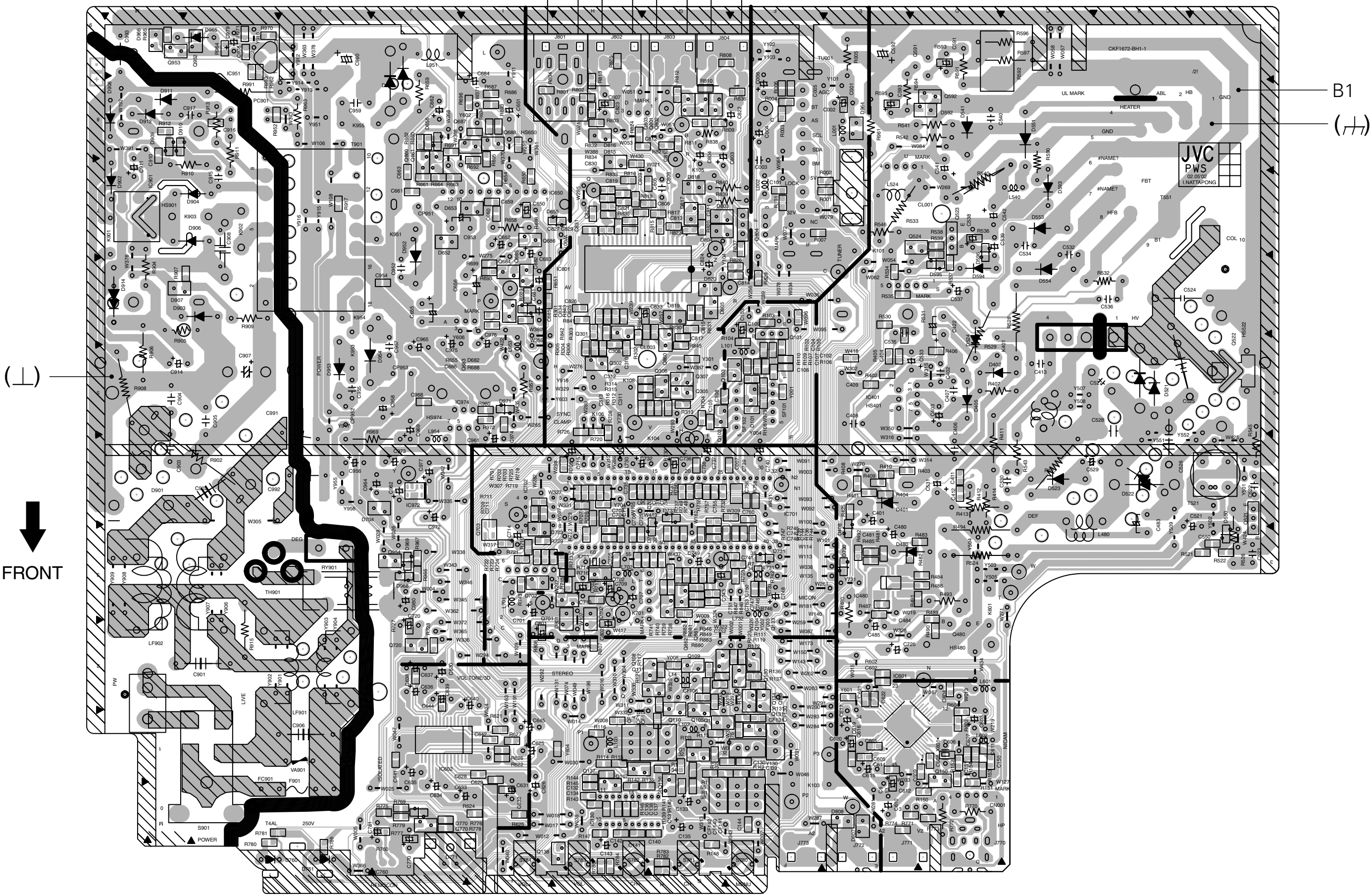




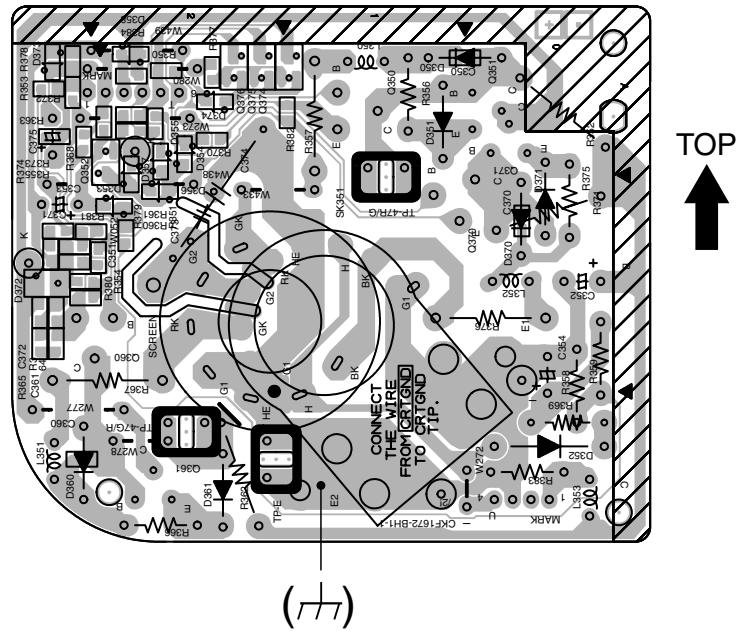
PATTERN DIAGRAMS  
MAIN PWB PATTERN

AV-20N83  
AV-21D83

AV-20N83  
AV-21D83



### MAIN PWB (CRT SOCKET) PATTERN





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AV20N83BK-BK #4  
AV21D83BK-BK #4

AV21D83VT-CK #4  
AV20N83VT-CK #4



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