

JVC

SCHEMATIC DIAGRAMS

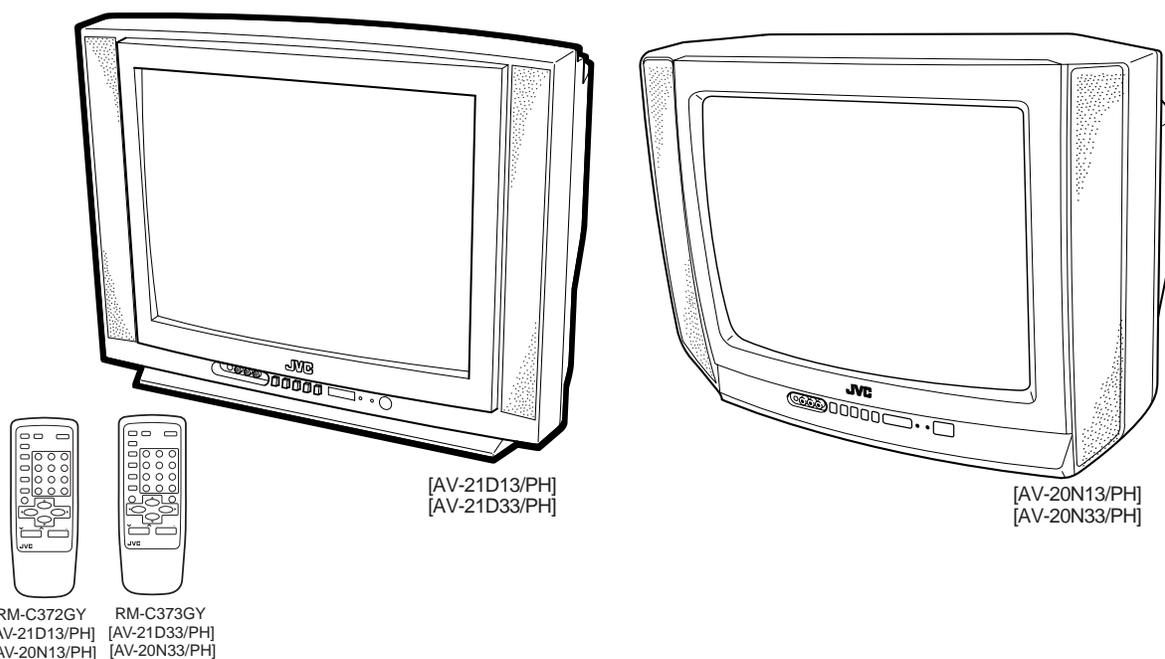
COLOUR TELEVISION

AV-21D13/PH
AV-21D33/PH
AV-20N13/PH
AV-20N33/PH

BASIC CHASSIS

GA2

CD-ROM No.SML200208



CONTENTS

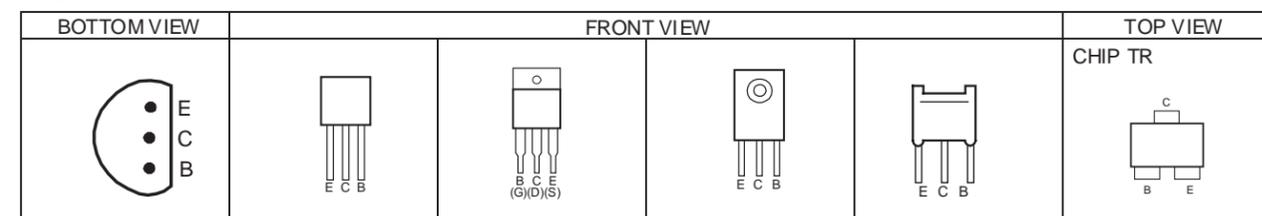
■ NOTE ON USING CIRCUIT DIAGRAMS	2-1
■ SEMICONDUCTOR SHAPES	2-2
■ BLOCK DIAGRAM	2-3
■ CIRCUIT DIAGRAMS	2-7
■ PATTERN DIAGRAMS	2-15
■ CHANNEL CHART	2-21

CONTENTS

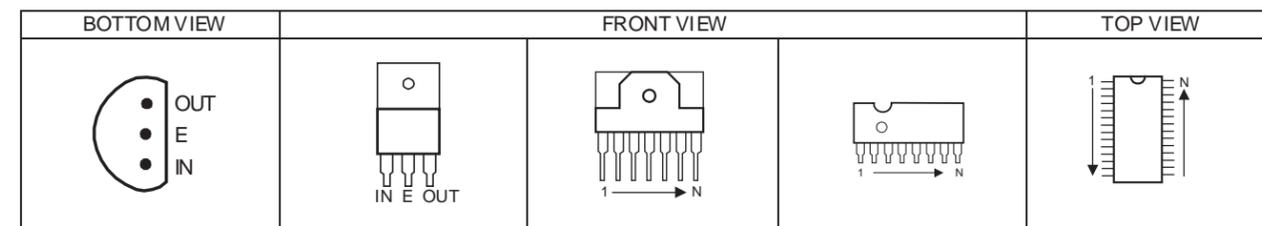
SEMICONDUCTOR SHAPES	2-2
BLOCK DIAGRAM	
[AV-21D13,AV-20N13]	2-3
[AV-21D33,AV-20N33]	2-5
CIRCUIT DIAGRAMS	
[AV-21D13,AV-20N13]	
MAIN PWB CIRCUIT DIAGRAM	2-7
MAIN PWB & CRT SOCKET PWB CIRCUIT DIAGRAM	2-9
[AV-21D33,AV-20N33]	
MAIN PWB CIRCUIT DIAGRAM	2-11
MAIN PWB & CRT SOCKET PWB CIRCUIT DIAGRAM	2-13
PATTERN DIAGRAMS	
[AV-21D13,AV-20N13]	
MAIN PWB PATTERN	2-15
CRT SOCKET PWB PATTERN (Within MAIN PWB)	2-19
[AV-21D33,AV-20N33]	
MAIN PWB PATTERN	2-17
CRT SOCKET PWB PATTERN (Within MAIN PWB)	2-20
CHANNEL CHART	2-21

SEMICONDUCTOR SHAPES

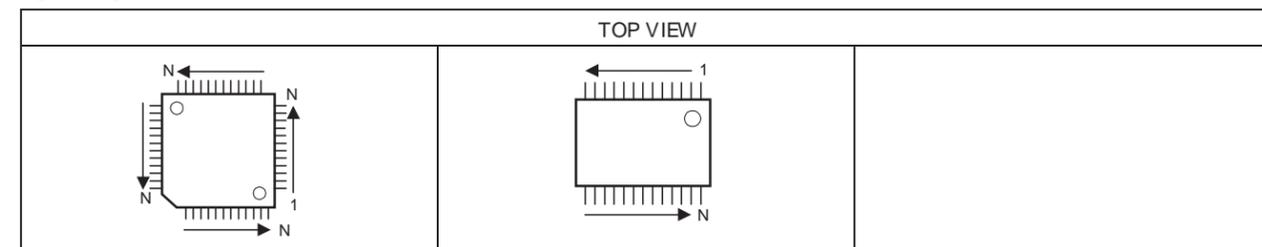
TRANSISTOR



IC



CHIP IC



AV-21D13/PH,AV-21D33/PH AV-20N13/PH,AV-20N33/PH 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 :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 :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

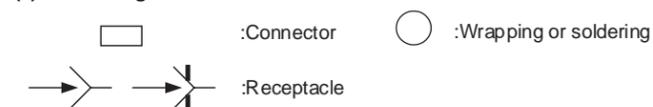


* Respective voltage values are indicated

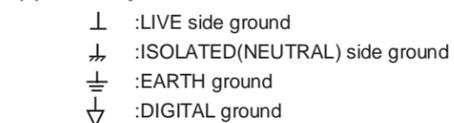
(5)Test point



(6)Connecting method



(7)Ground symbol



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.

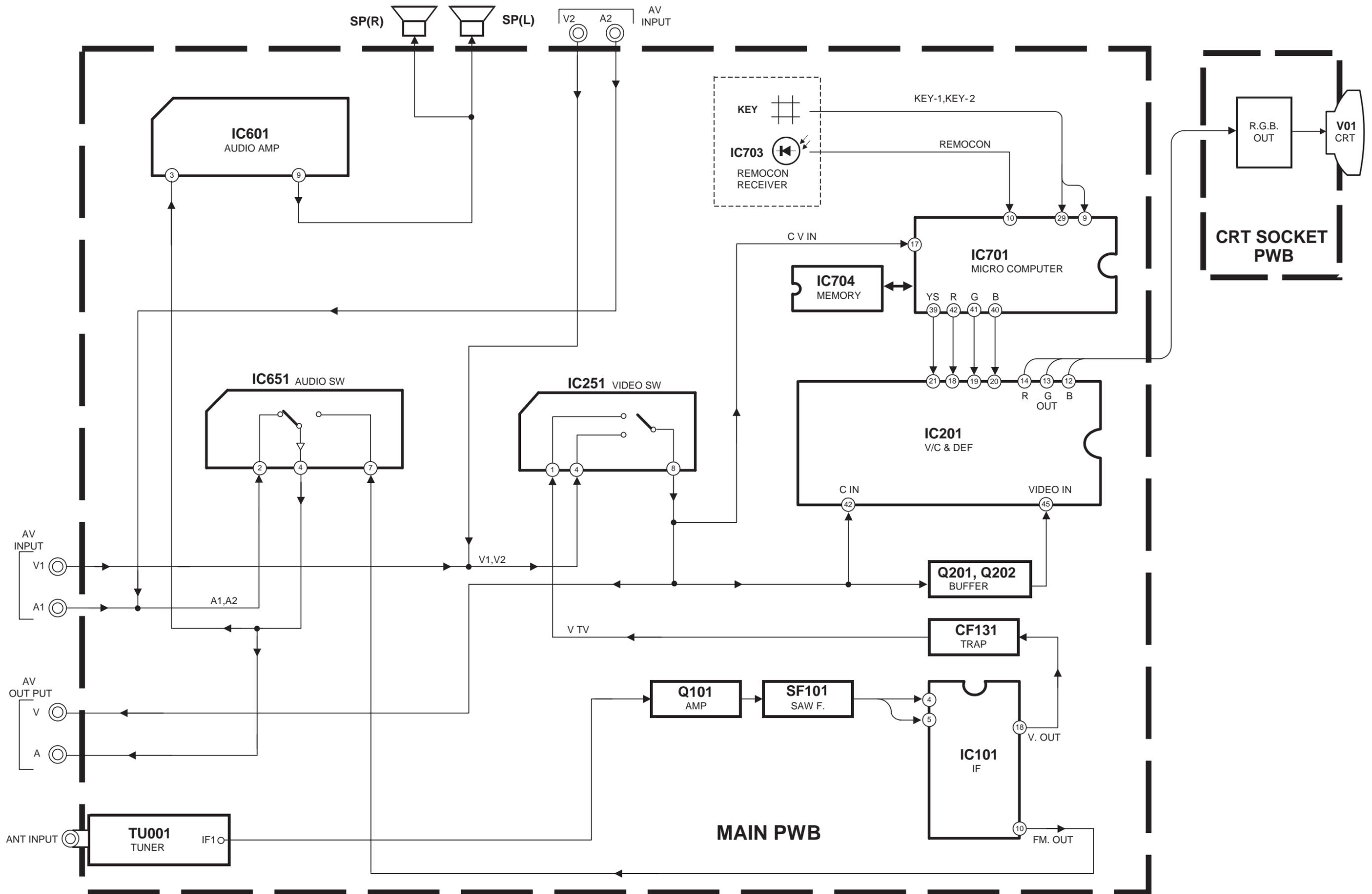
- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (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.

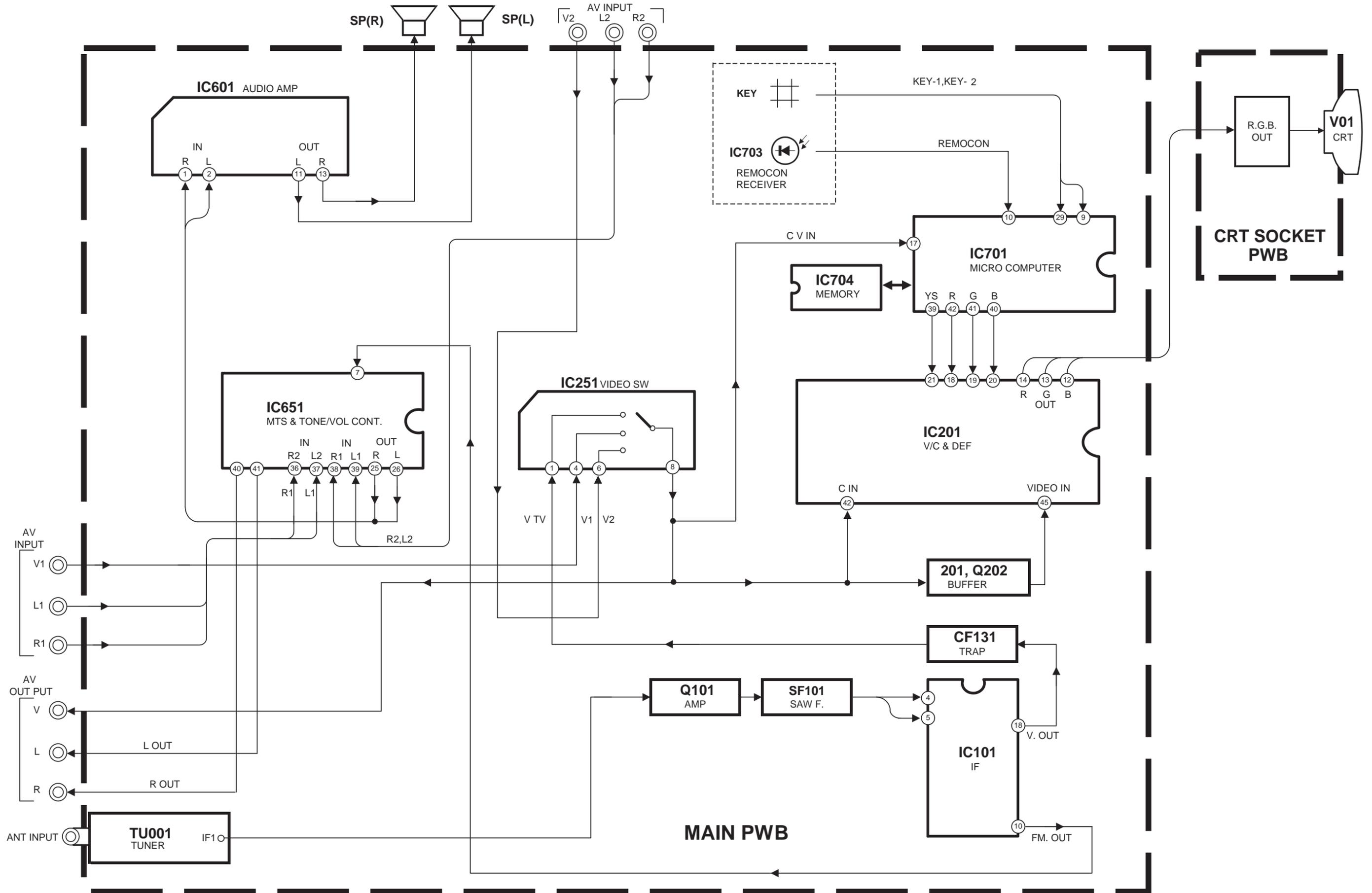
BLOCK DIAGRAM [AV-21D13,AV-20N13]



BLOCK DIAGRAM [AV-21D33,AV-20N33]

AV-21D33,AV-20N33

AV-21D33,AV-20N33

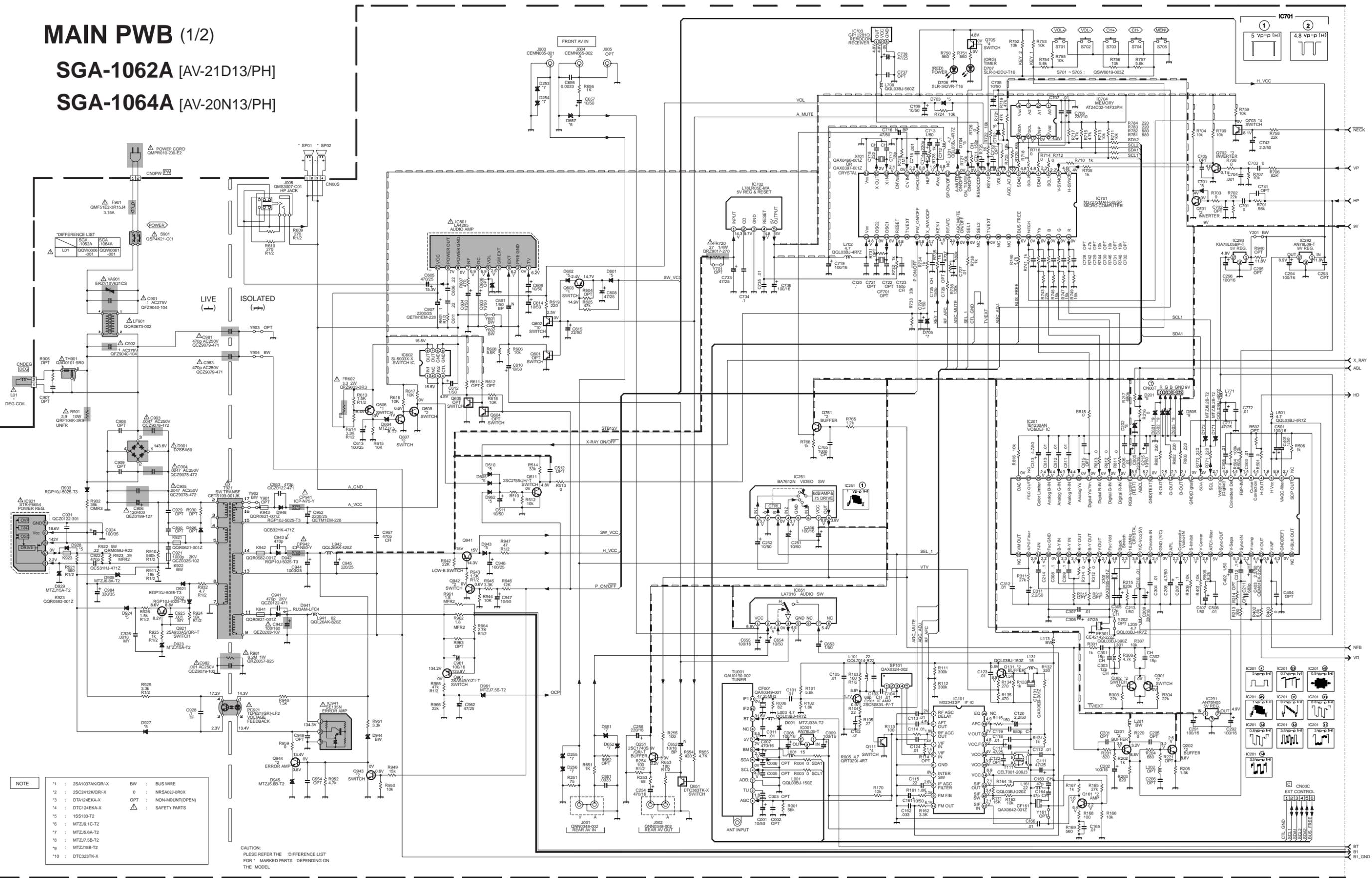


CIRCUIT DIAGRAMS MAIN PWB CIRCUIT DIAGRAMS [AV-21D13,AV-20N13]

MAIN PWB (1/2)

SGA-1062A [AV-21D13/PH]

SGA-1064A [AV-20N13/PH]

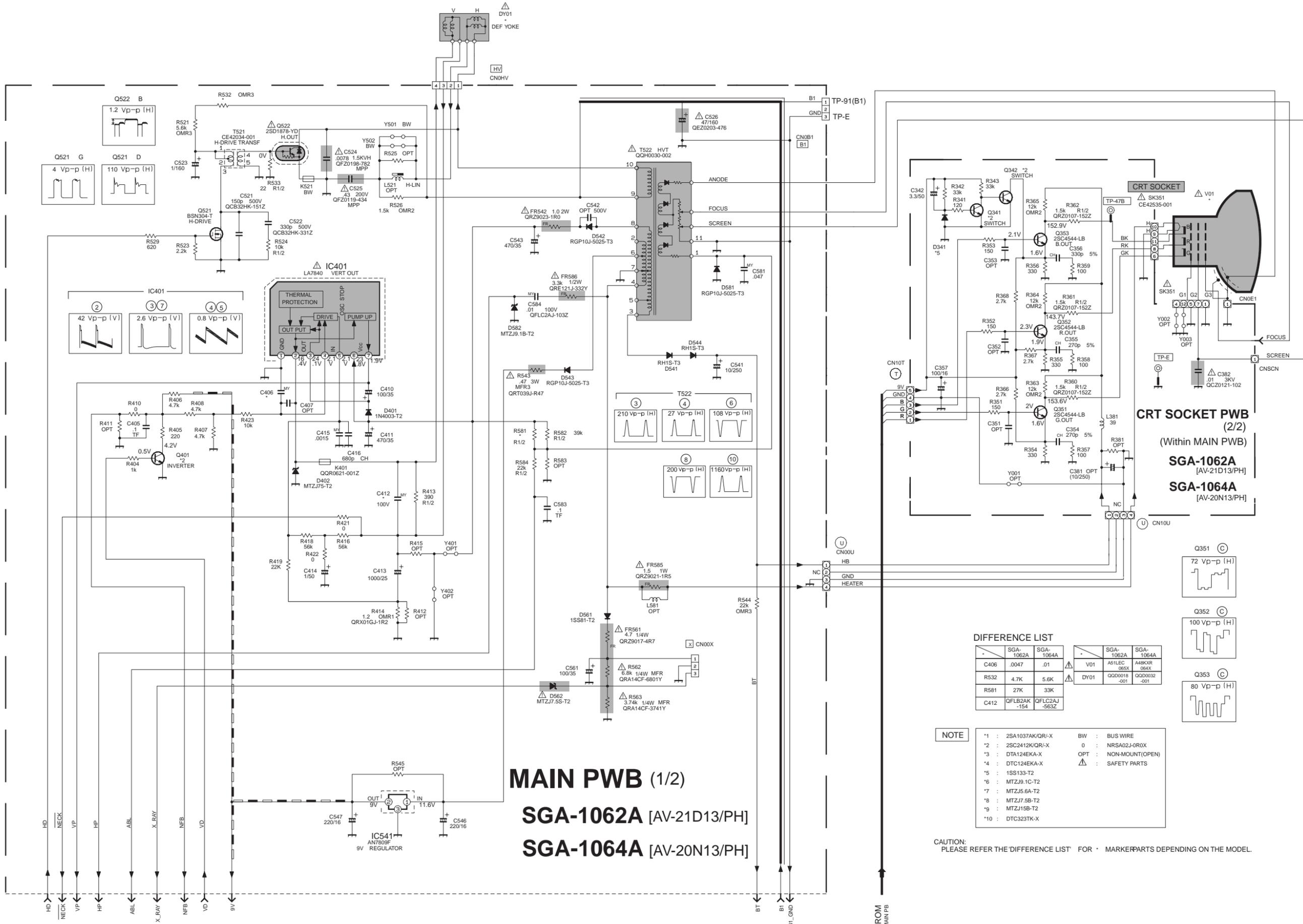


NOTE

1 : 2SA1037AKQR-X	BW : BUS WIRE
2 : 2SC2412KQR-X	0 : NRS0A2J-OROX
3 : DTA124KA-X	OPT : NON-MOUNT(OPEN)
4 : DTC124KA-X	Δ : SAFETY PARTS
5 : 1SS133-T2	
6 : MTZJ9.1C-T2	
7 : MTZJ5.6A-T2	
8 : MTZJ7.5B-T2	
9 : MTZJ15B-T2	
10 : DTC323TK-X	

CAUTION:
PLEASE REFER THE "DIFFERENCE LIST" FOR * MARKED PARTS DEPENDING ON THE MODEL

MAIN PWB & CRT SOCKET PWB CIRCUIT DIAGRAM [AV-21D13,AV-20N13]



MAIN PWB (1/2)
SGA-1062A [AV-21D13/PH]
SGA-1064A [AV-20N13/PH]

NOTE

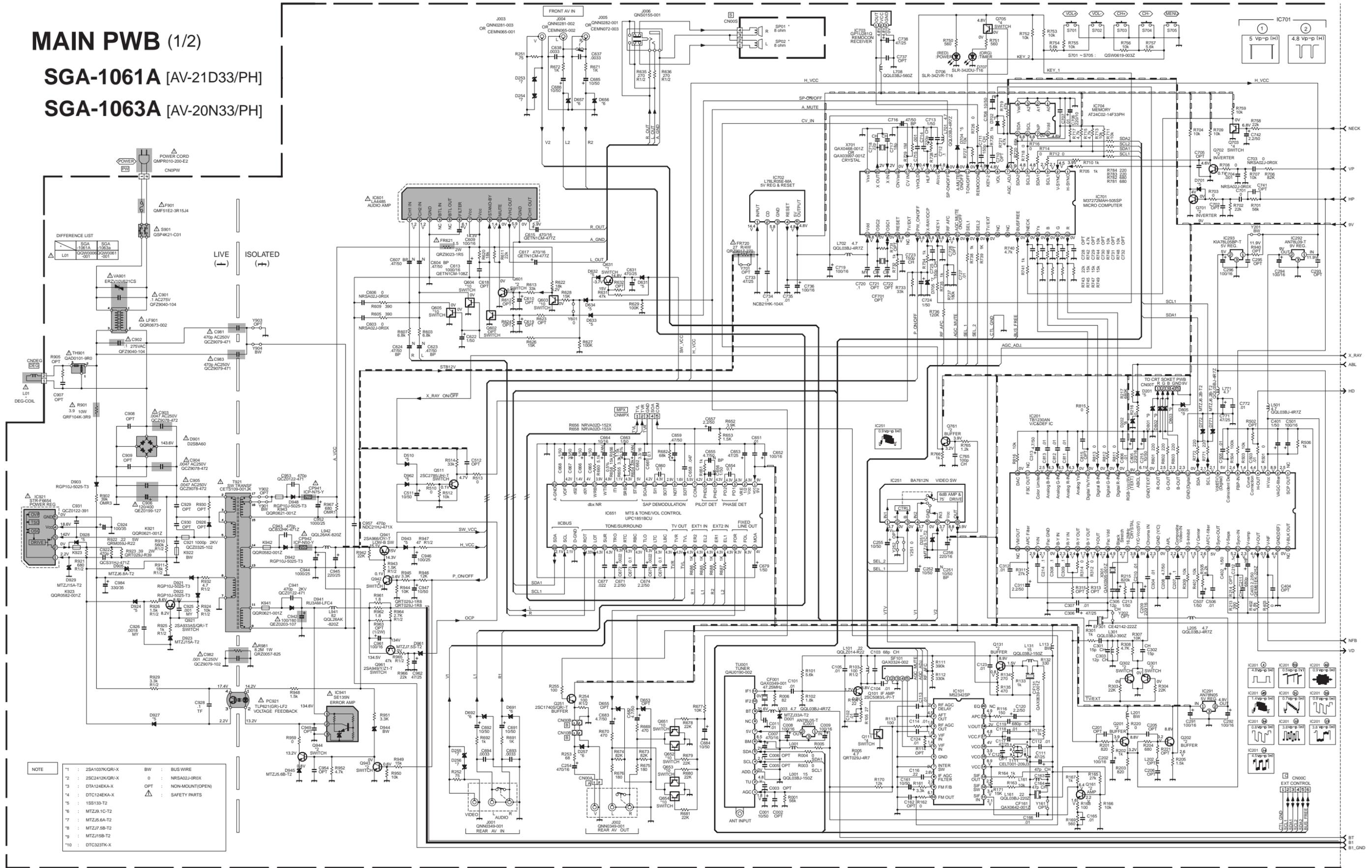
*1 : 2SA1037AK/QRI-X	BW : BUS WIRE
*2 : 2SC2412K/QRI-X	0 : NRSA02J-OR0X
*3 : DTA124EKA-X	OPT : NON-MOUNT(OPEN)
*4 : DTC124EKA-X	△ : SAFETY PARTS
*5 : 1SS133-T2	
*6 : MTZJ9.1C-T2	
*7 : MTZJ5.6A-T2	
*8 : MTZJ7.5B-T2	
*9 : MTZJ15B-T2	
*10 : DTC323TK-X	

CAUTION: PLEASE REFER THE 'DIFFERENCE LIST' FOR MARKER PARTS DEPENDING ON THE MODEL.

MAIN PWB (1/2)

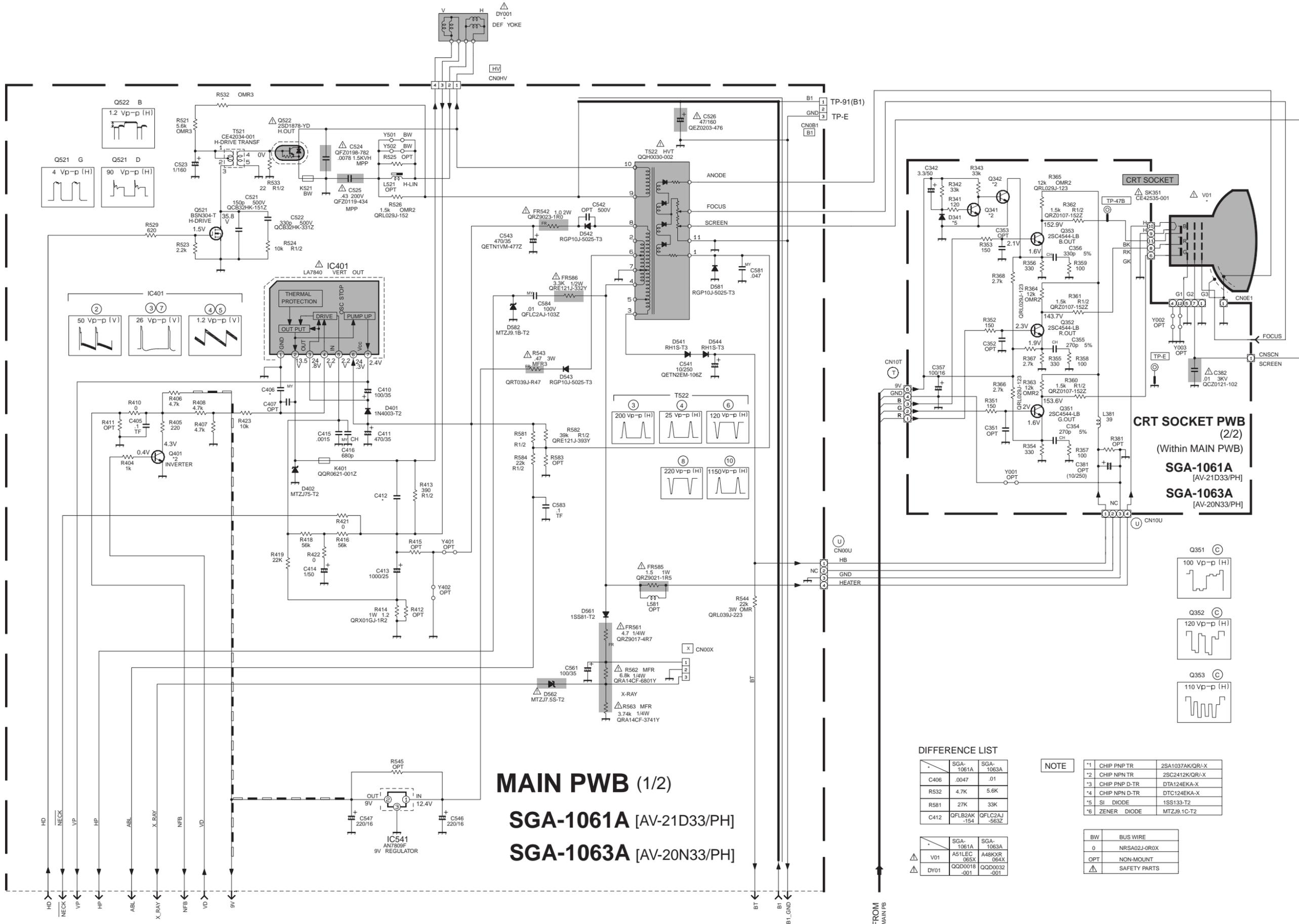
SGA-1061A [AV-21D33/PH]

SGA-1063A [AV-20N33/PH]

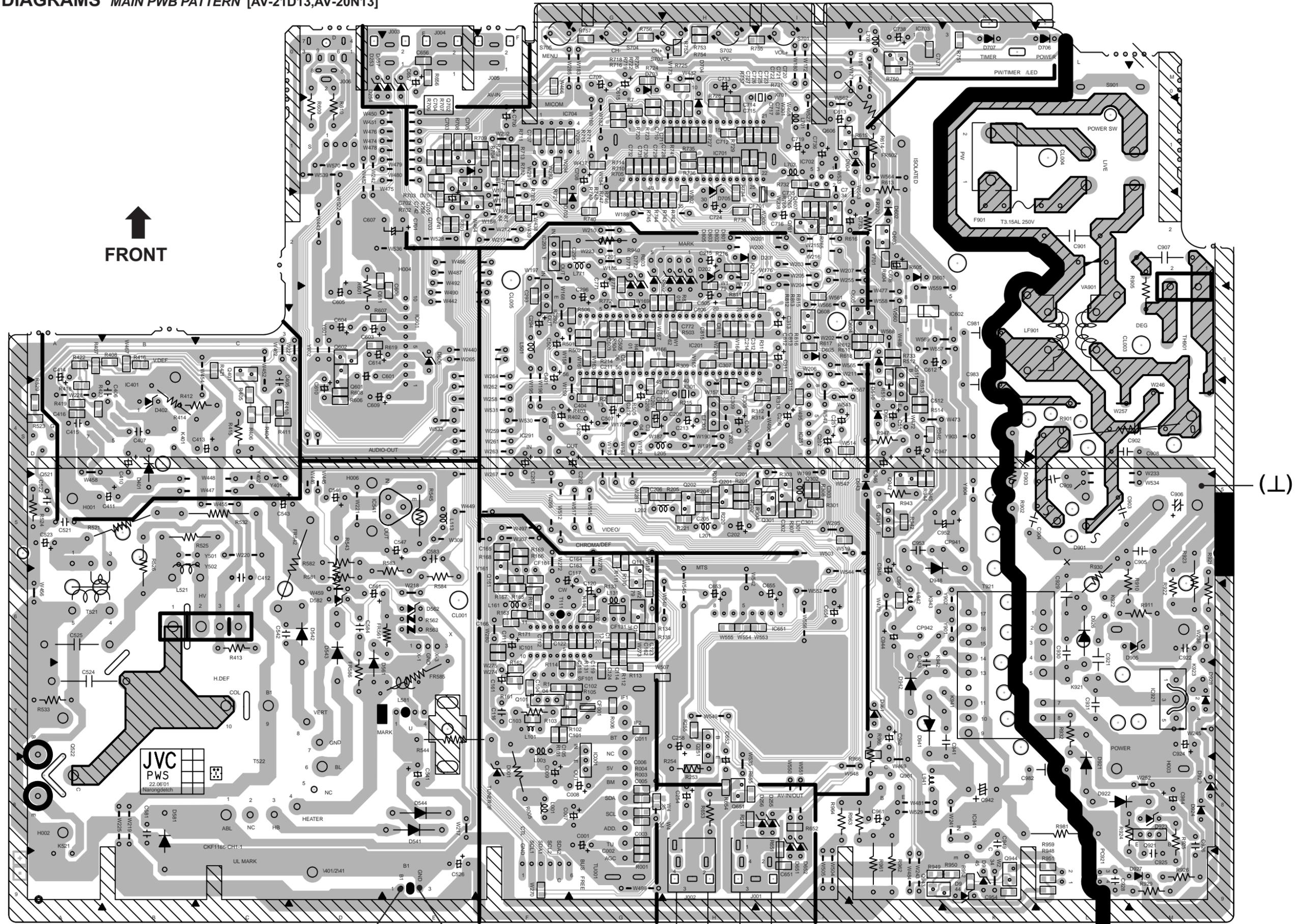


NOTE

*1	: 2SA107K-ORV-X	BW	: BUS WIRE
*2	: 2SC2412K-ORV-X	0	: NRSAG2J-OROX
*3	: DTA124EKA-X	OPT	: NON-MOUNT(OPEN)
*4	: DTC124EKA-X	Δ	: SAFETY PARTS
*5	: 1S8133-T2		
*6	: MTZJ9.1C-T2		
*7	: MTZJ5.6A-T2		
*8	: MTZJ7.5B-T2		
*9	: MTZJ15B-T2		
*10	: DTC323T-K		

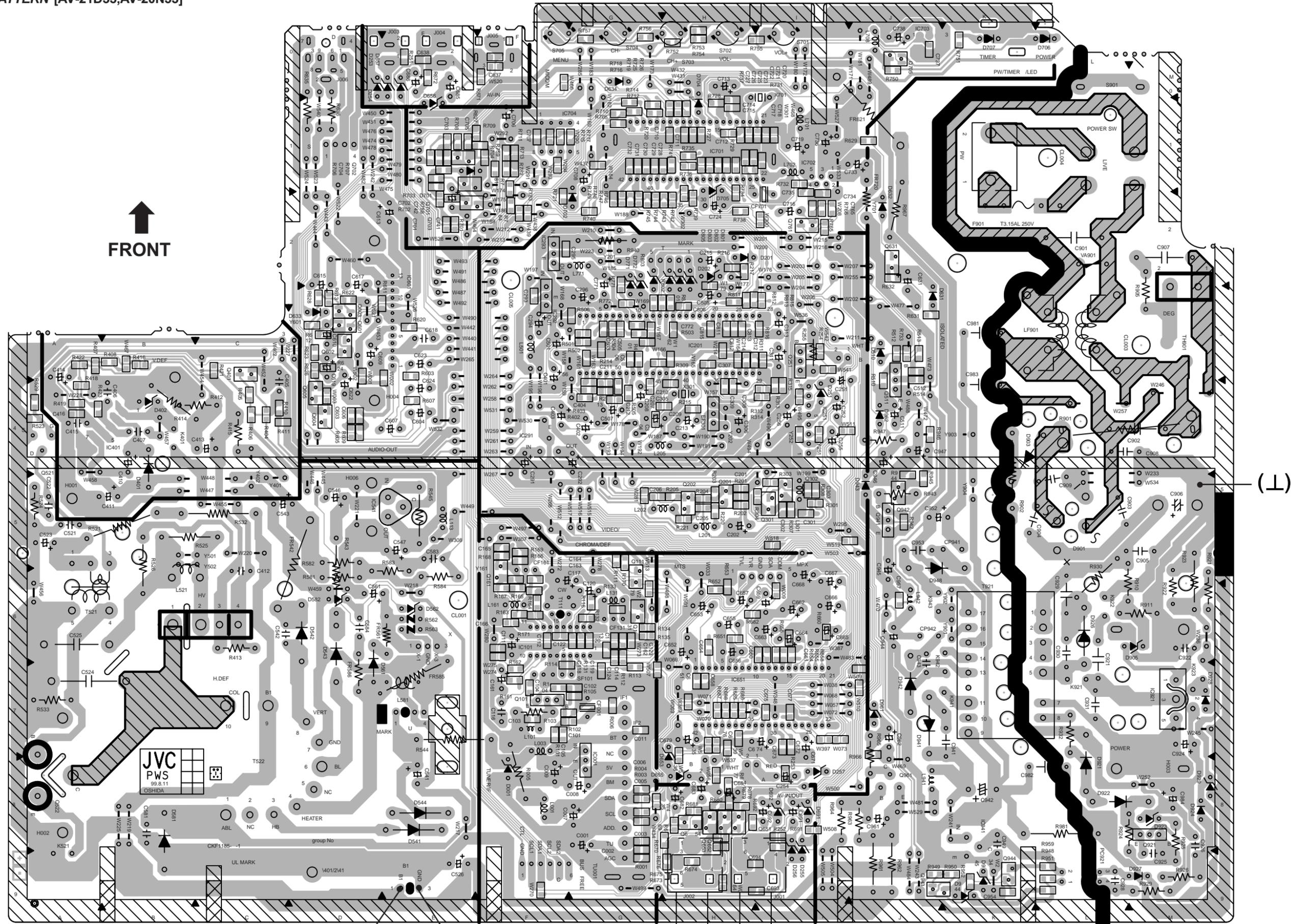


PATTERN DIAGRAMS MAIN PWB PATTERN [AV-21D13,AV-20N13]



FRONT

(F)

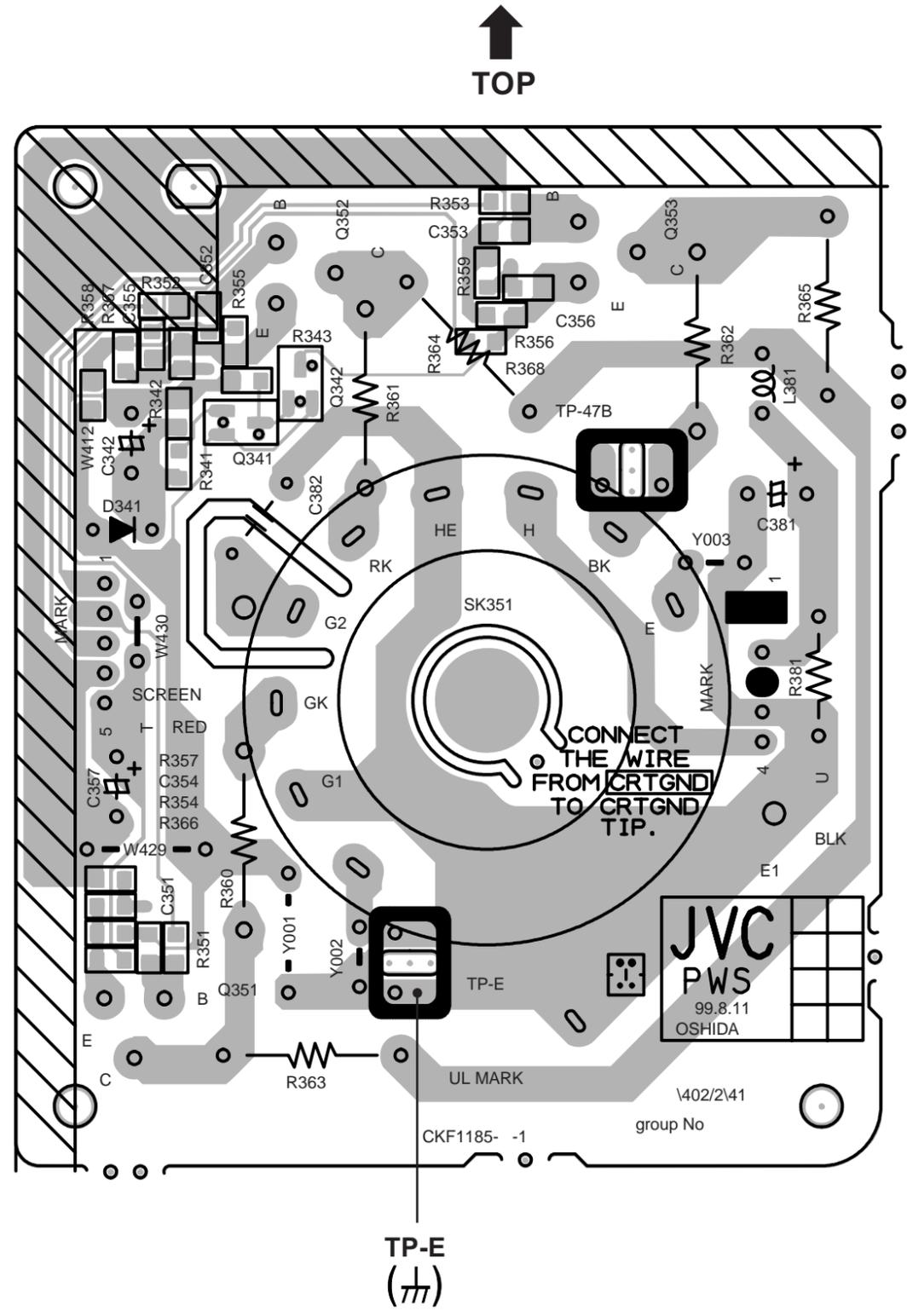
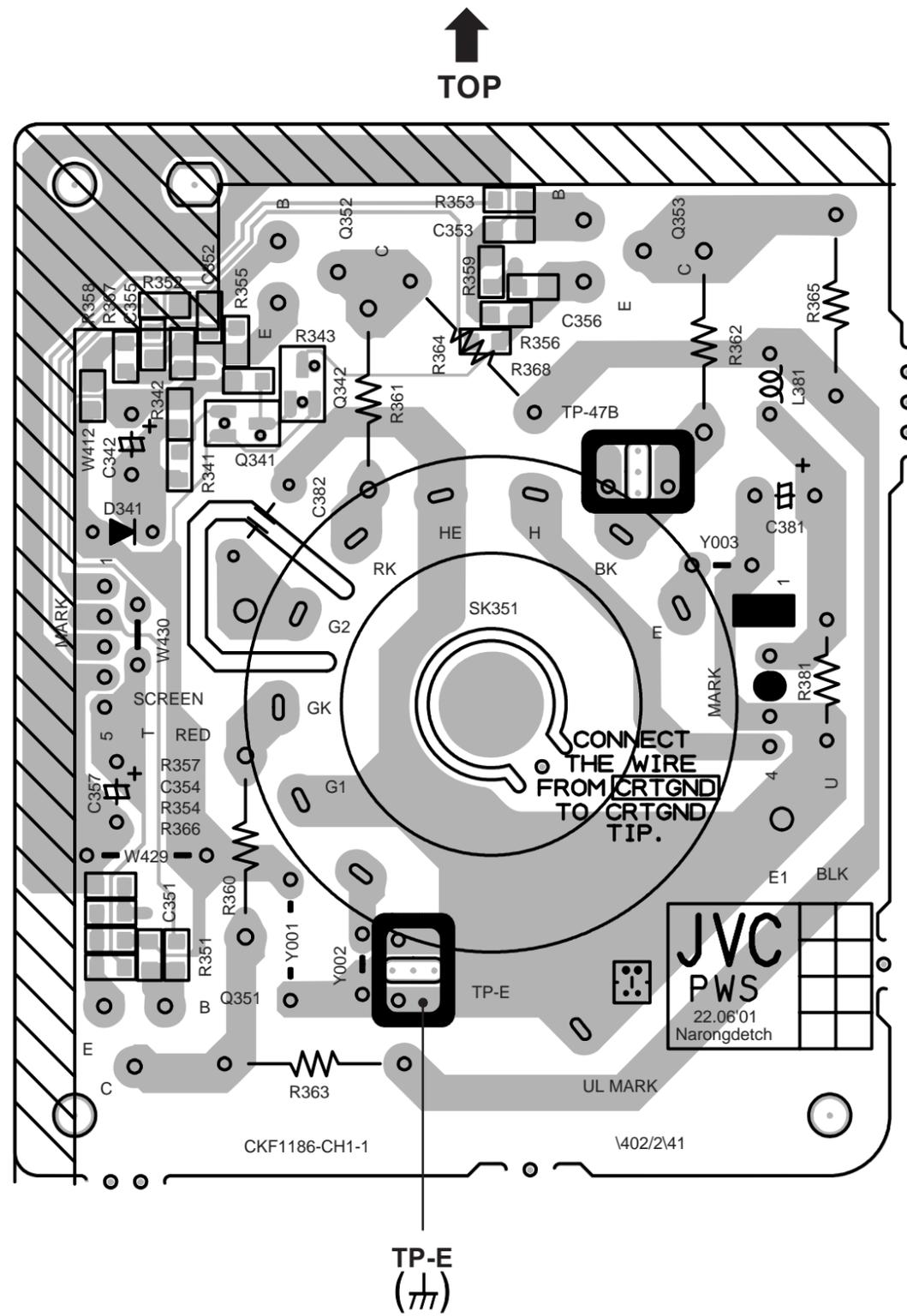


FRONT

(T)

CRT SOCKET PWB PATTERN [AV-21D13,AV-20N13]

CRT SOCKET PWB PATTERN [AV-21D33,AV20N33]



CHANNEL CHART

MODE		BAND	CHANNEL	TUNER BAND			
TV	CATV		DISP.				
○	○	VL	02	I			
			03				
			04				
			05				
			06				
			07				
	○	○	VH	08	II		
				09			
				10			
				11			
				12			
				13			
				14			
×	○	MID	15	I			
			16				
			17				
			18				
			19				
			20				
			21				
		22					
		○	○		SUPER	Q 23	II
						24	
						25	
						26	
						27	
						28	
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	○		○	HYPER	37	IV	
					38		
					39		
					40		
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		46					
		47					
		48					
		49					
		50					
51							
52							
○		○			ULTRA		53
	54						
	55						
	56						
	57						
	58						
○	○	ULTRA	59	IV			
			60				
			61				
			62				
○	○	ULTRA	63	IV			
			64				
			65				
			66				
			67				
			68				
			69				
			70				

MODE		BAND	CHANNEL	TUNER BAND				
TV	CATV		DISP.					
○	×	ULTRA	71	IV				
			72					
			73					
			74					
			75					
			76					
			77					
			78					
			79					
			80					
			81					
			82					
			83					
			84					
			85					
			86					
			87					
			○		×	SUB MID	96	I
97								
98								
99								
○	×	UHF		14			IV	
				15				
				16				
				17				
				18				
				19				
TOTAL 180CH { VHF 124CH UHF 56CH								
NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.								

JVC

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