

# JVC

## SCHEMATIC DIAGRAMS

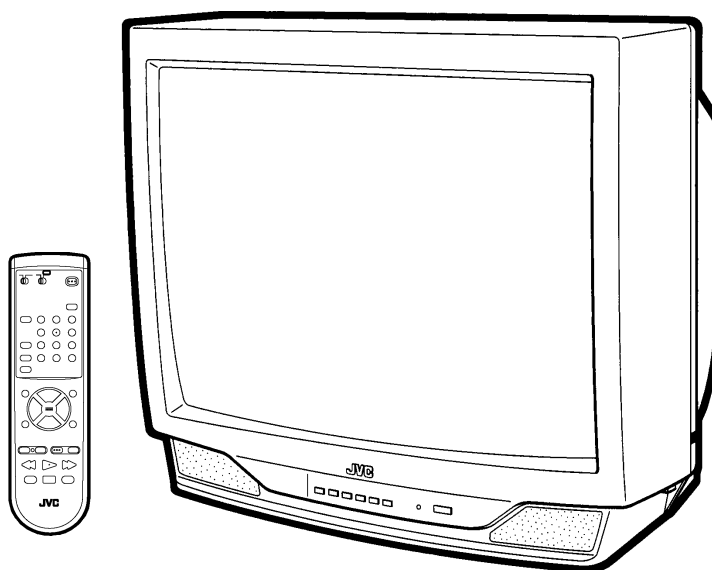
### COLOR TELEVISION

# AV-27230/IS

BASIC CHASSIS

FD

CD-ROM No.SML200104



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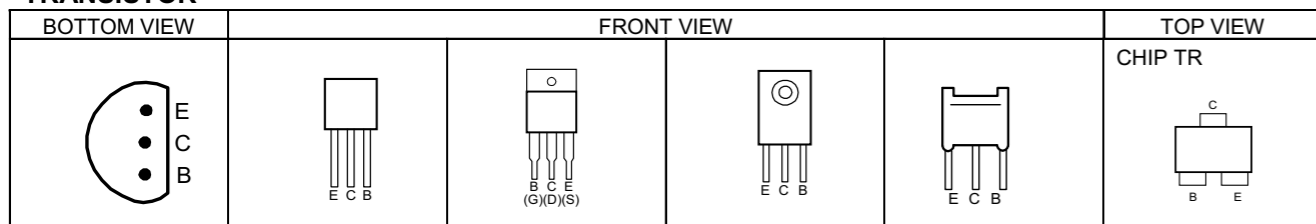
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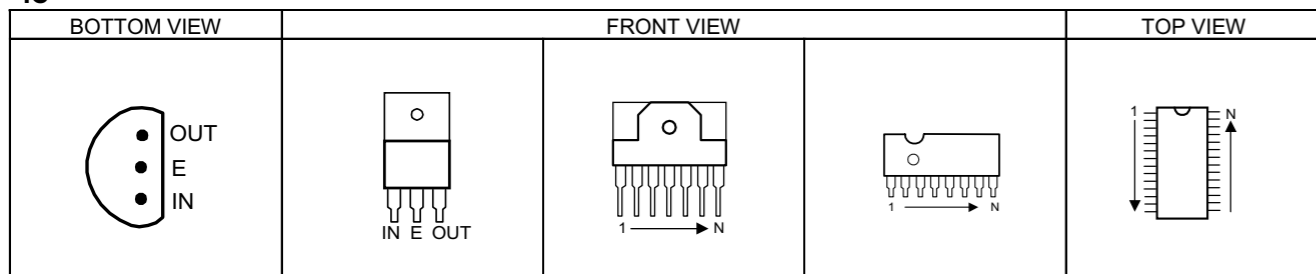
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## SEMICONDUCTOR SHAPES

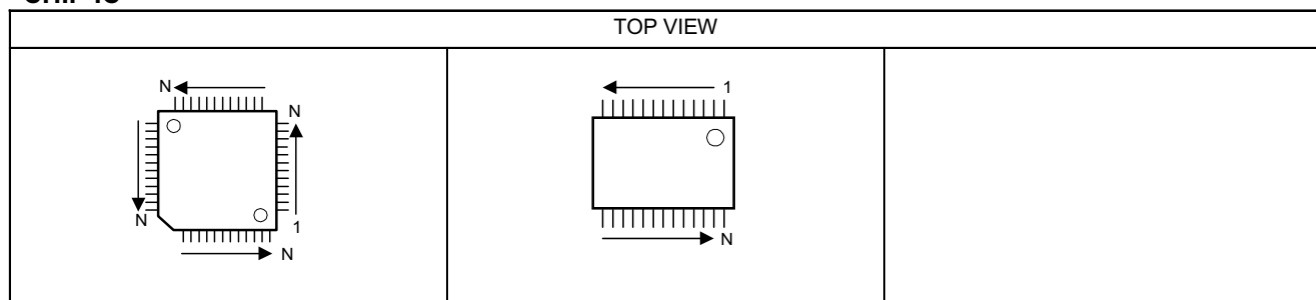
### TRANSISTOR



### IC



### CHIP IC



# STANDARD CIRCUIT DIAGRAM

## NOTE ON USING CIRCUIT DIAGRAMS

### 1. SAFETY

The components identified by the  $\Delta$  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 : Color 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→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 :Unflammable 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
- :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

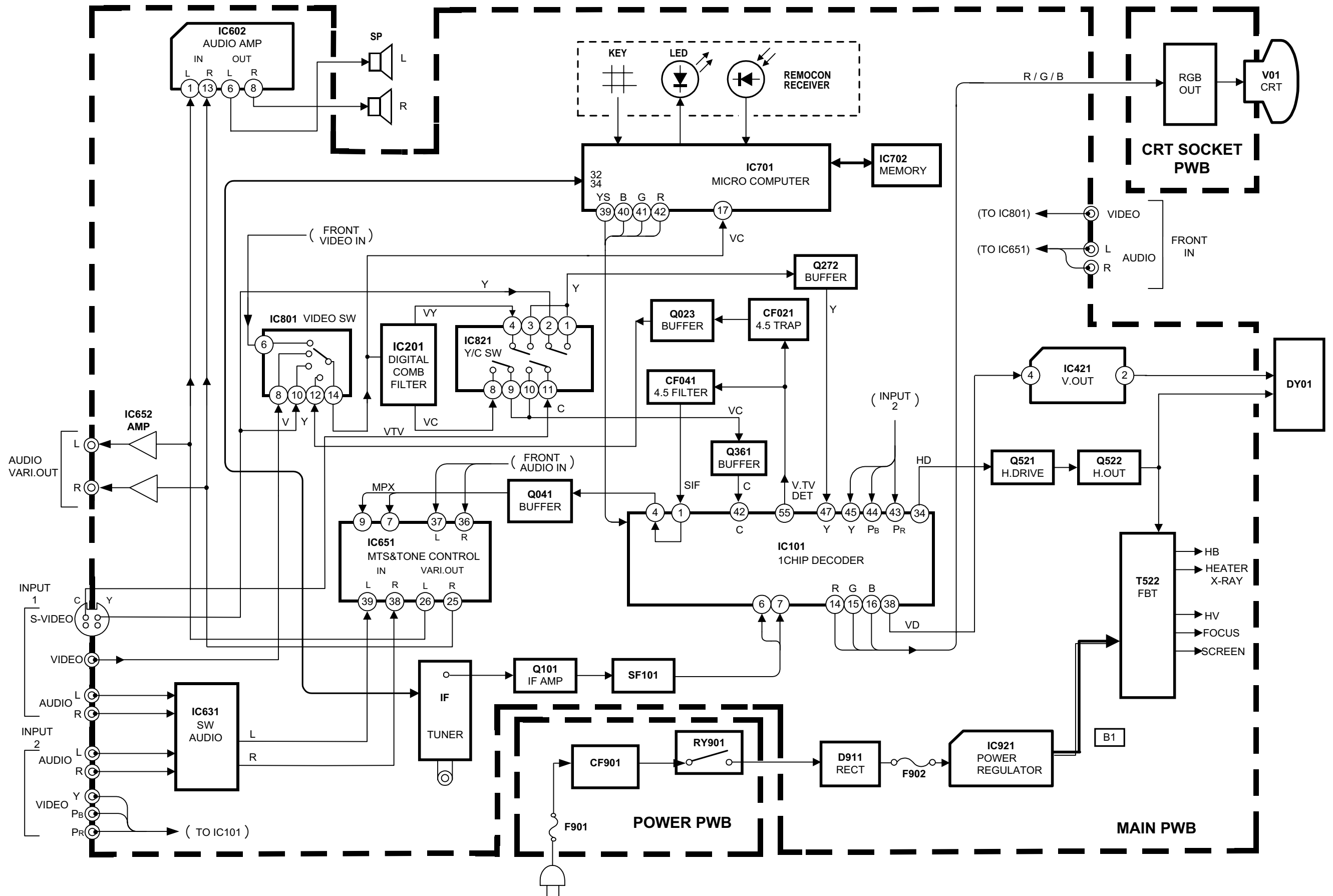
## 5.NOTE FOR REPAIRING SERVICE

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.

# BLOCK DIAGRAM



CIRCUIT DIAGRAMS MAIN PWB CIRCUIT DIAGRAM

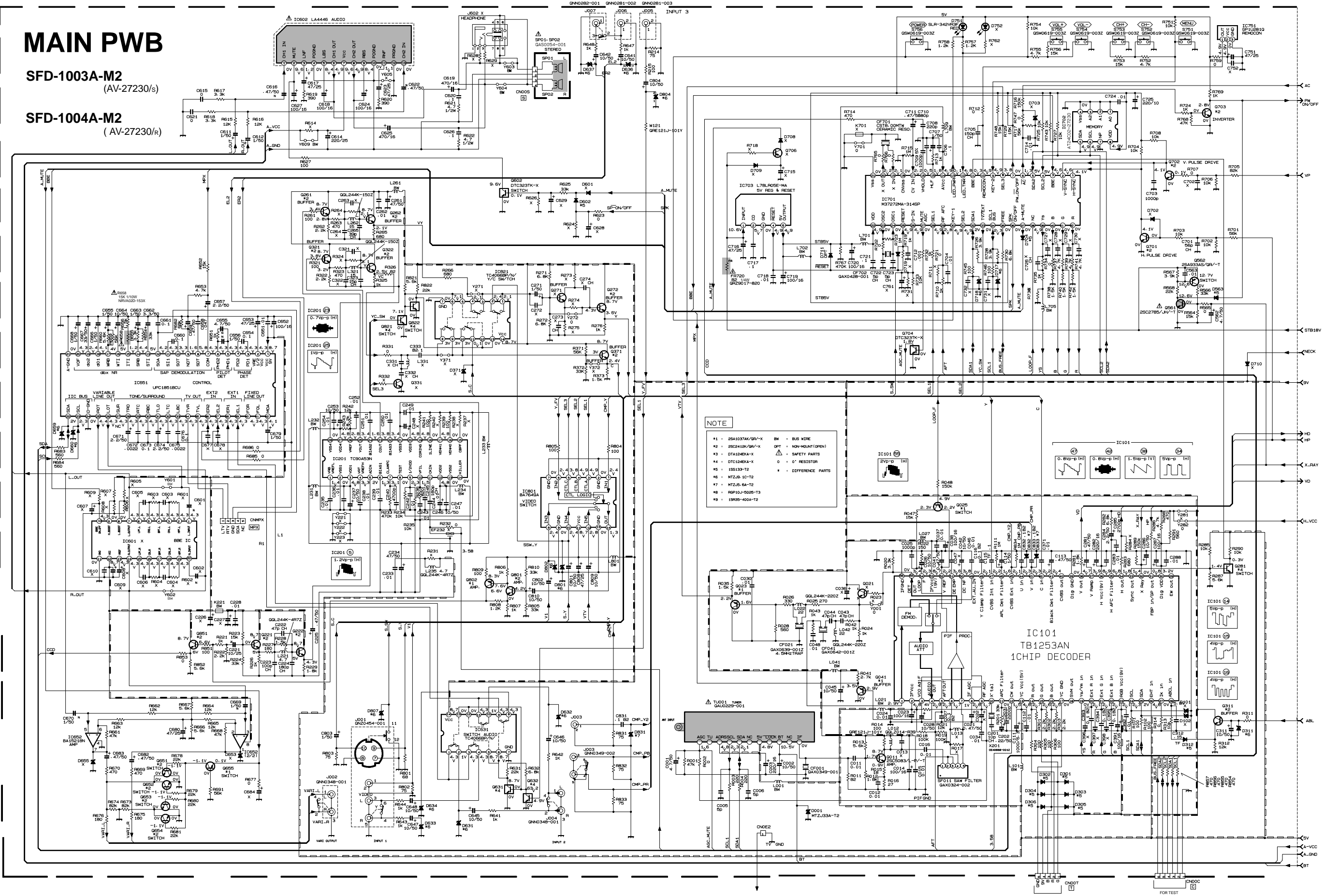
NOTE

●For the parts marked " \* " in the circuit diagram, refer to the parts list.

MAIN PWB

SFD-1003A-M2 (AV-27230/s)

SFD-1004A-M2 (AV-27230/r)



NOTE

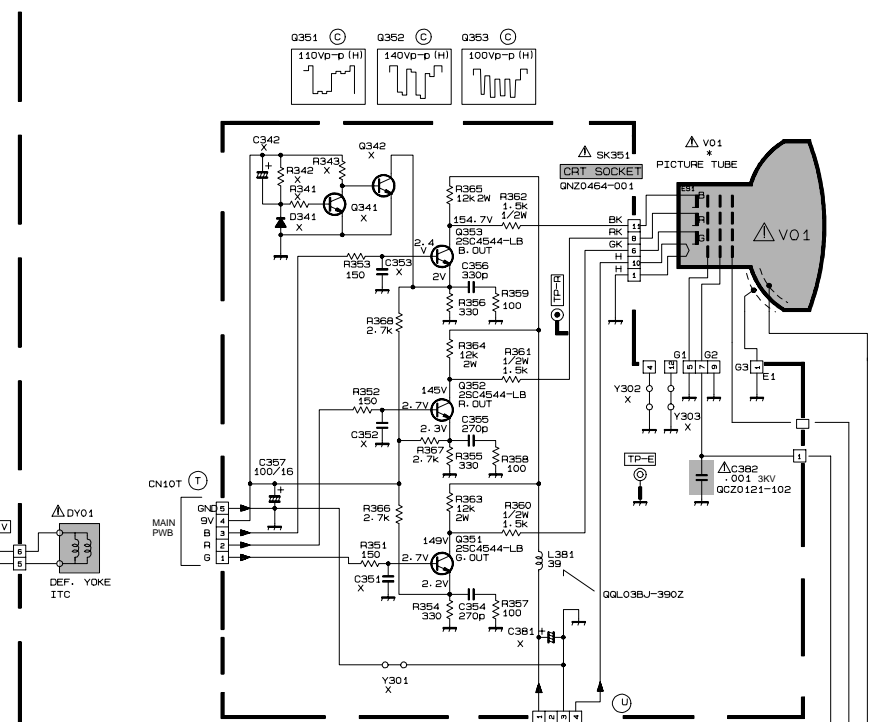
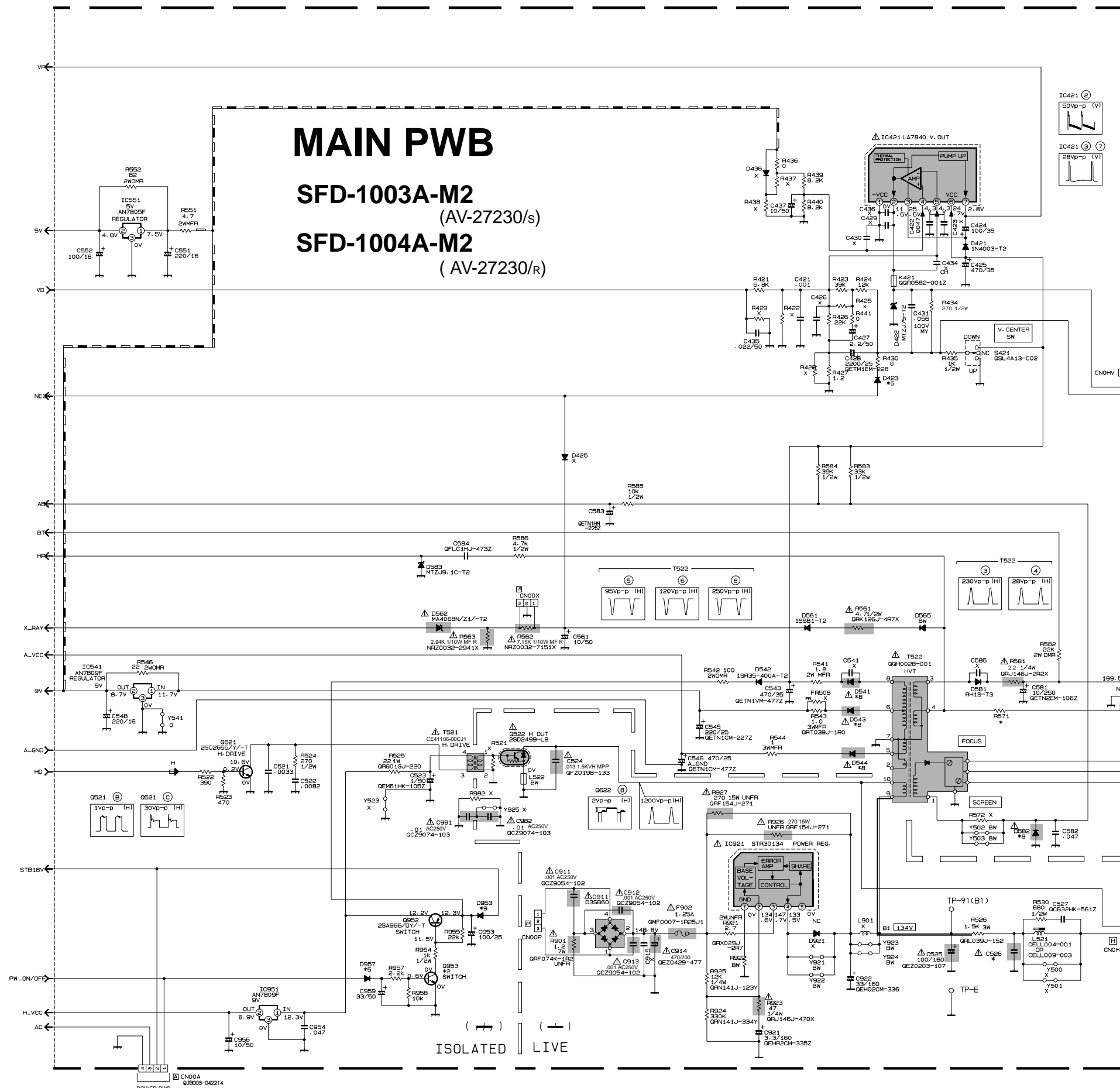
- \* 1. 25A1037AK/GR-X    BW    BUS WIRE
- \* 2. 25C2418K/GR-X    OPT    NON-MOUNT (OPEN)
- \* 3. DT1A124EX-X    △    SAFETY PARTS
- \* 4. DTC124EX-X    ○    0° RESISTOR
- \* 5. 15S133-T2    ◆    DIFFERENCE PARTS
- \* 6. MTZJ5-1C-T2
- \* 7. MTZJ5-6A-T2
- \* 8. RFP10J-5025-T3
- \* 9. 19R89-60A-T2

IC101  
TB1253AN  
1CHIP DECODER

MAIN PWB, CRT SOCKET PWB CIRCUIT DIAGRAM

NOTE

For the parts marked " \* " in the circuit diagram, refer to the parts list.



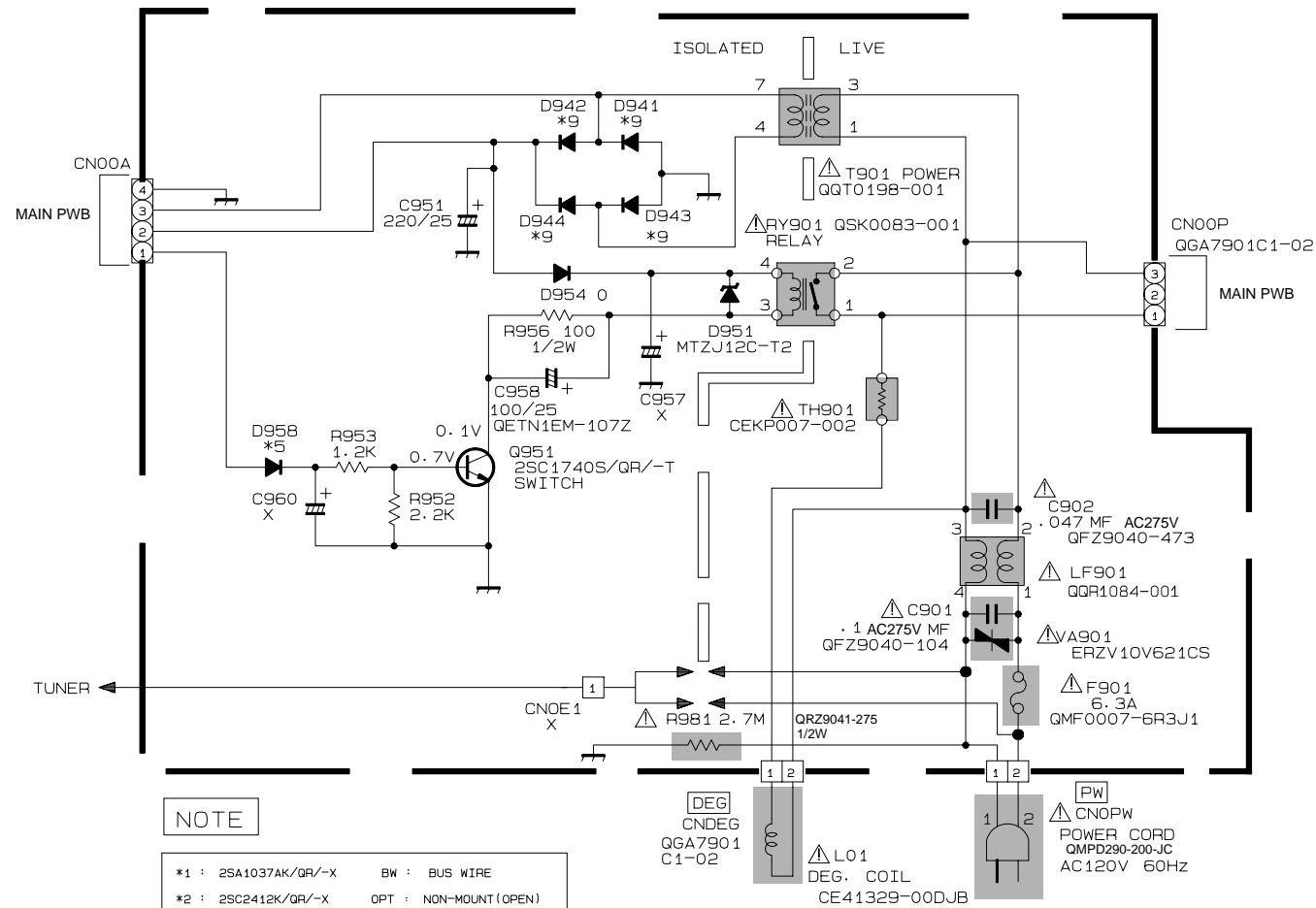
NOTE

*1	: 2SA1037AK/QR/-X	BW	: BUS WIRE
*2	: 2SC2412K/QR/-X	OPT	: NON-MOUNT (OPEN)
*3	: DTA124EKA-X	Δ	: SAFETY PARTS
*4	: DTC124EKA-X	0	: 0 RESISTOR
*5	: 1SS133-T2	*	: DIFFERENCE PARTS
*6	: MTZJ5. 1C-T2		
*7	: MTZJ5. 6A-T2		
*8	: RGP10J-5025-T3		
*9	: 1SR35-400A-T2		

**POWER PWB CIRCUIT DIAGRAM**

**NOTE**

●For the parts marked “ \* ” in the circuit diagram, refer to the parts list.



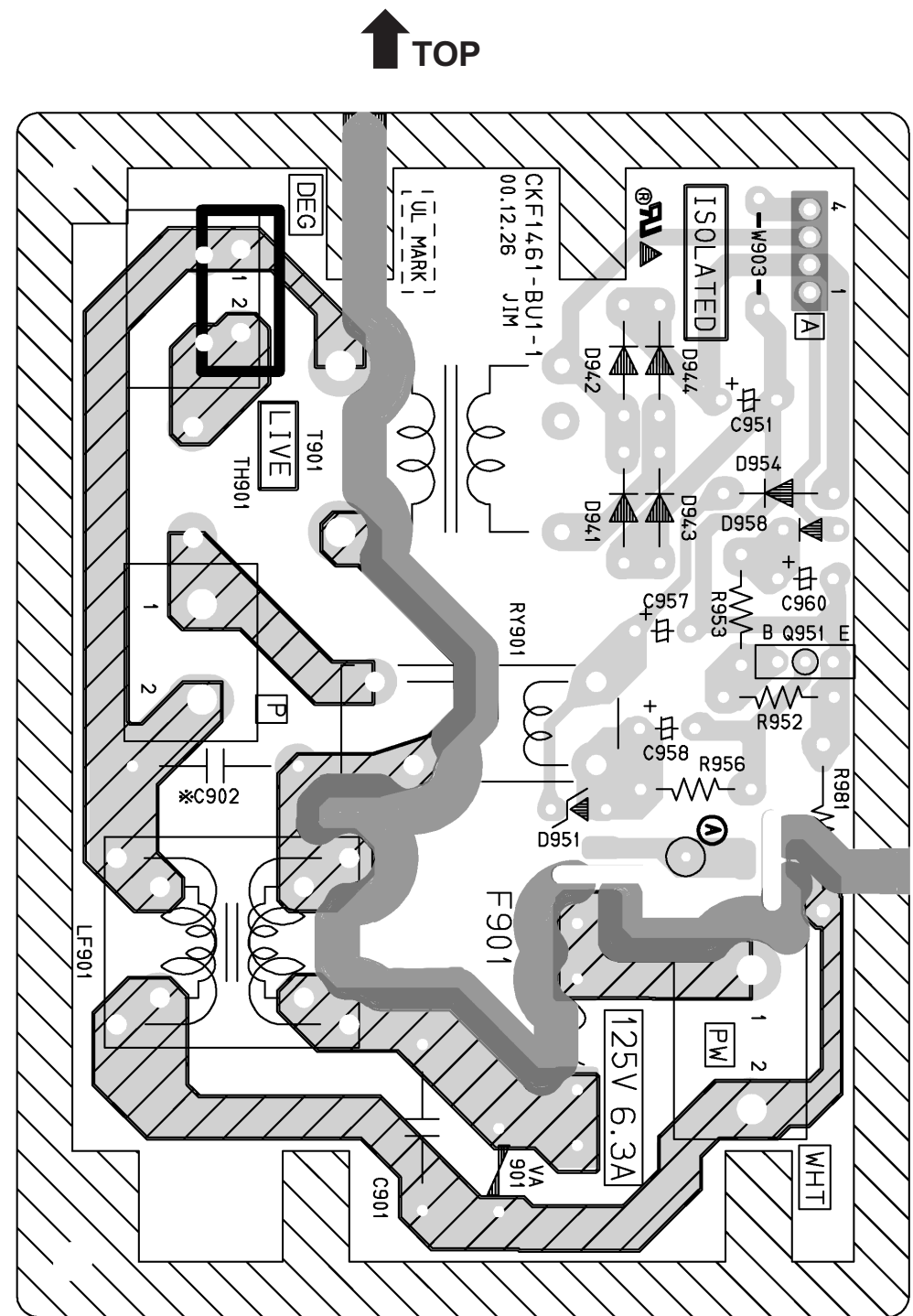
**NOTE**

- |                      |                              |
|----------------------|------------------------------|
| *1 : 2SA1037AK/QR/-X | BW : BUS WIRE                |
| *2 : 2SC2412K/QR/-X  | OPT : NON-MOUNT (OPEN)       |
| *3 : DTA124EKA-X     | △ : SAFETY PARTS             |
| *4 : DTC124EKA-X     | 0 : 0 <sup>th</sup> RESISTOR |
| *5 : 1SS133-T2       | * : DIFFERENCE PARTS         |
| *6 : MTZJ9.1C-T2     |                              |
| *7 : MTZJ5.6A-T2     |                              |
| *8 : RGP10J-5025-T3  |                              |
| *9 : 1SR35-400A-T2   |                              |

**POWER PWB  
SFD-9001A-M2**

**PATTERN DIAGRAMS**

**POWER PWB PATTERN**



MAIN PWB, CRT SOCKET PWB PATTERN



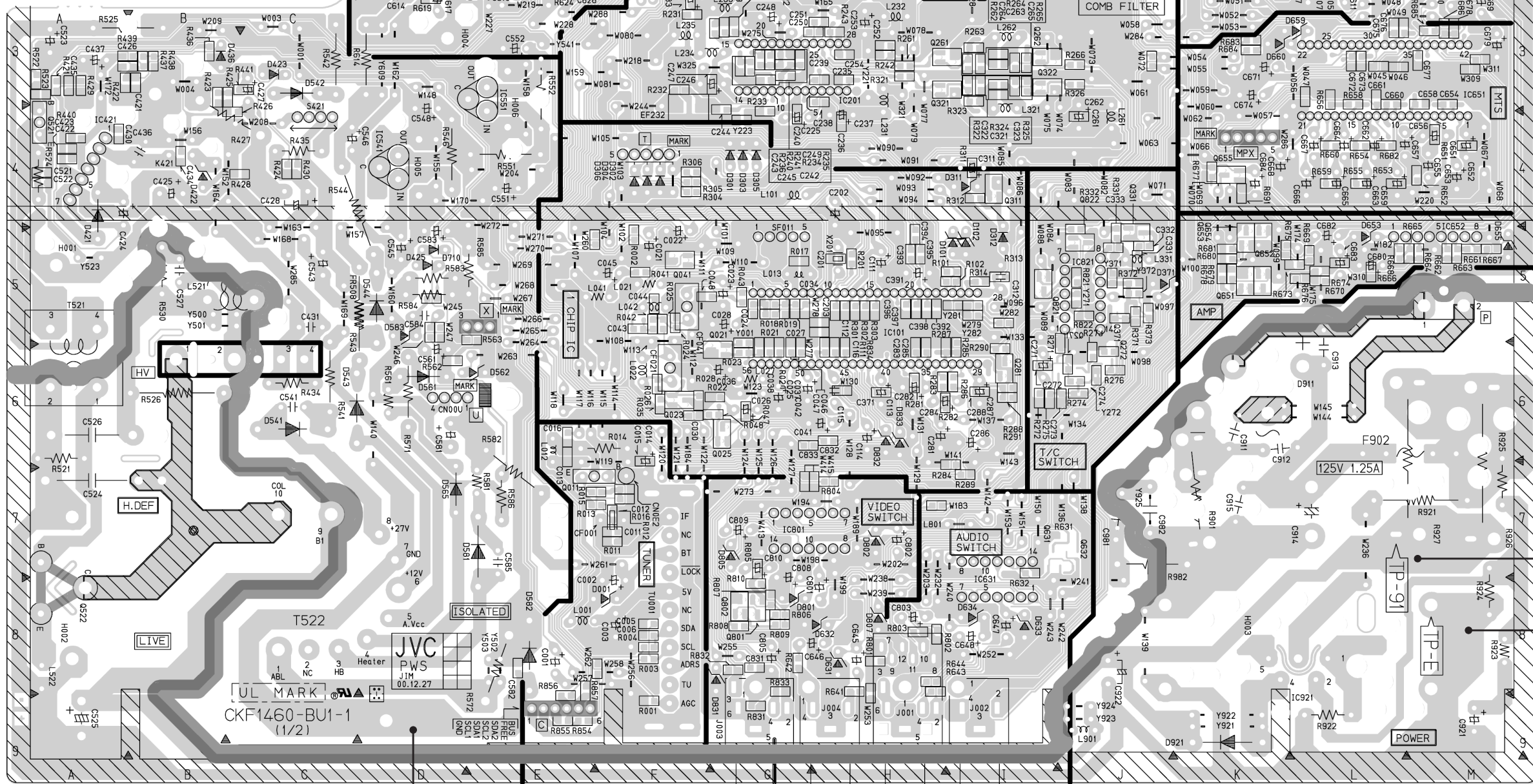
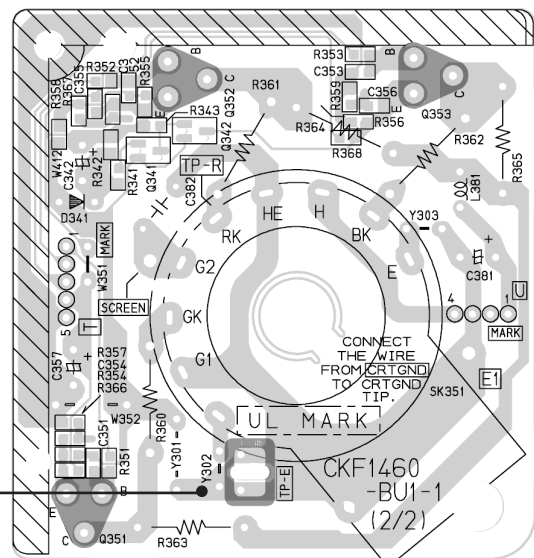
CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S) AND ROHM'S MFR'D TYPE CP(S): OR EQUIVALENT

CRT SOCKET PWB ASS'Y

FRONT

MAIN PWB ASS'Y

TOP



■ CHANNEL CHART (US)

MODE		BAND	CHANNEL		TUNER BAND			
TV	CATV		REAL	DISP.				
○	○	VL	02	I				
			03					
			04					
			05					
			06					
			07					
	○	VH	08	II				
			09					
			10					
			11					
			12					
			13					
			14					
x	○	MID	A 14	I				
			B 15					
			C 16					
			D 17					
			E 18					
			F 19					
			G 20					
			H 21					
			I 22					
		○	SUPER	J 23	II			
				K 24				
				L 25				
				M 26				
				N 27				
				O 28				
				P 29				
				Q 30				
				R 31				
	S 32							
	T 33							
	U 34							
	V 35							
	W 36							
	○			○		HYPER	W+1 37	IV
							W+2 38	
							W+3 39	
							W+4 40	
		W+5 41						
		W+6 42						
		W+7 43						
		W+8 44						
		W+9 45						
		W+10 46						
		W+11 47						
		W+12 48						
		W+13 49						
W+14 50								
W+15 51								
W+16 52								
○		○	SUB MID		A-8 01	I		
					A-4 96			
	A-3 97							
	A-2 98							
	A-1 99							
	14							
	69							
	69							
TOTAL 180CH { VHF 124CH UHF 56CH								
NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.								

■ CHANNEL CHART (CA)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	W+35 71	I	
			W+36 72		
			W+37 73		
			W+38 74		
			W+39 75		
			W+40 76		
	○	VH	W+41 77	II	
			W+42 78		
			W+43 79		
			W+44 80		
			W+45 81		
			W+46 82		
			W+47 83		
x	○	MID	W+48 84	IV	
			W+49 85		
			W+50 86		
			W+51 87		
			W+52 88		
			W+53 89		
			W+54 90		
			W+55 91		
			W+56 92		
		○	SUPER	W+57 93	IV
				W+58 94	
				W+59 100	
				W+60 101	
				W+61 102	
				W+62 103	
				W+63 104	
				W+64 105	
				W+65 106	
	W+66 107				
	W+67 108				
	W+68 109				
	W+69 110				
	W+70 111				
	W+71 112				
	W+72 113				
	W+73 114				
	W+74 115				
	W+75 116				
	W+76 117				
	W+77 118				
	W+78 119				
	W+79 120				
	W+80 121				
	W+81 122				
	W+82 123				
	W+83 124				
W+84 125					
○	x	UHF	14	IV	
			69		
			69		
			69		
			69		
			69		
			69		
			69		
TOTAL 180CH { VHF 124CH UHF 56CH					
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MODE		BAND	CHANNEL		TUNER BAND			
TV	CATV		REAL	DISP.				
○	○	VL	02	I				
			03					
			04					
			05					
			06					
			07					
	○	VH	08	II				
			09					
			10					
			11					
			12					
			13					
			14					
x	○	MID	A 14	II				
			B 15					
			C 16					
			D 17					
			E 18					
			F 19					
			G 20					
			H 21					
			I 22					
		○	SUPER	J 23	III			
				K 24				
				L 25				
				M 26				
				N 27				
				O 28				
				P 29				
				Q 30				
				R 31				
	S 32							
	T 33							
	U 34							
	V 35							
	W 36							
	○			○		HYPER	W+1 37	IV
							W+2 38	
							W+3 39	
							W+4 40	
		W+5 41						
		W+6 42						
		W+7 43						
		W+8 44						
		W+9 45						
		W+10 46						
		W+11 47						
		W+12 48						
		W+13 49						
W+14 50								
W+15 51								
W+16 52								
○		○	SUB MID		W+17 53	IV		
					W+18 54			
	W+19 55							
	W+20 56							
	W+21 57							
	W+22 58							
	W+23 59							
	W+24 60							
○	○	ULTRA	W+25 61	IV				
			W+26 62					
			W+27 63					
			W+28 64					
			W+29 65					
			W+30 66					
			W+31 67					
			W+32 68					
W+33 69								
W+34 70								
TOTAL 180CH { VHF 124CH UHF 56CH								
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MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	W+35 71	I	
			W+36 72		
			W+37 73		
			W+38 74		
			W+39 75		
			W+40 76		
	○	VH	W+41 77	II	
			W+42 78		
			W+43 79		
			W+44 80		
			W+45 81		
			W+46 82		
			W+47 83		
x	○	MID	W+48 84	IV	
			W+49 85		
			W+50 86		
			W+51 87		
			W+52 88		
			W+53 89		
			W+54 90		
			W+55 91		
			W+56 92		
		○	SUPER	W+57 93	IV
				W+58 94	
				W+59 100	
				W+60 101	
				W+61 102	
				W+62 103	
				W+63 104	
				W+64 105	
				W+65 106	
	W+66 107				
	W+67 108				
	W+68 109				
	W+69 110				
	W+70 111				
	W+71 112				
	W+72 113				
	W+73 114				
	W+74 115				
	W+75 116				
	W+76 117				
	W+77 118				
	W+78 119				
	W+79 120				
	W+80 121				
	W+81 122				
	W+82 123				
	W+83 124				
W+84 125					
○	x	SUB MID	A-8 01	I	
			A-4 96		
			A-3 97		
			A-2 98		
			A-1 99		
			14		
			69		
			69		
TOTAL 180CH { VHF 124CH UHF 56CH					
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