

# JVC

## SCHEMATIC DIAGRAMS

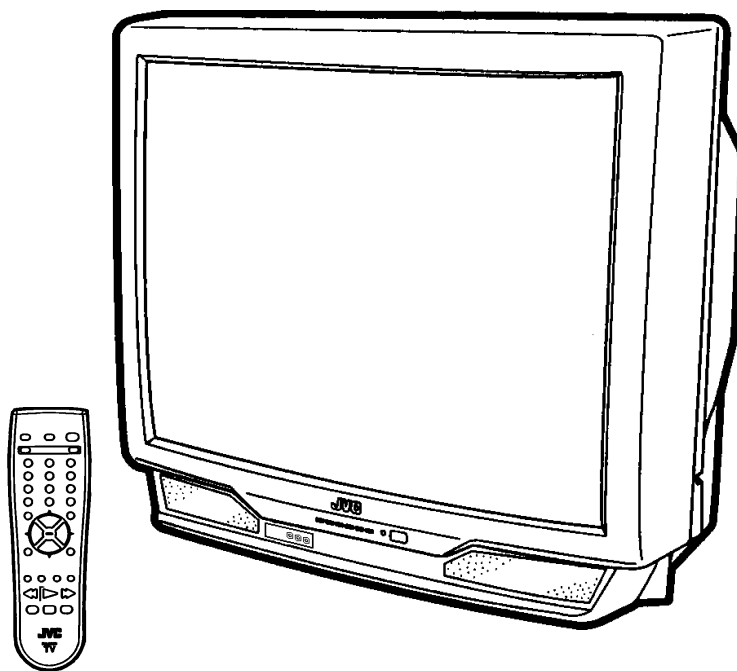
### COLOR TELEVISION

# AV-27GFH/2

CD-ROM No.SML200106

BASIC CHASSIS

GF



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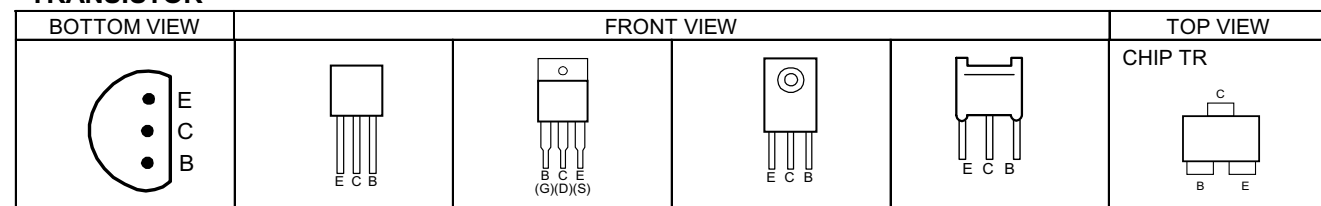
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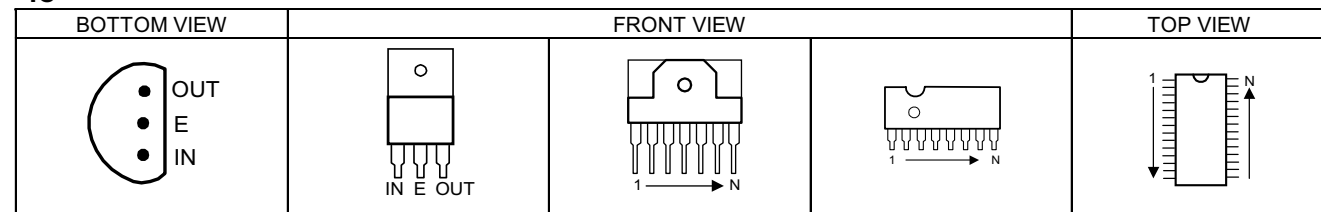
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## SEMICONDUCTOR SHAPES

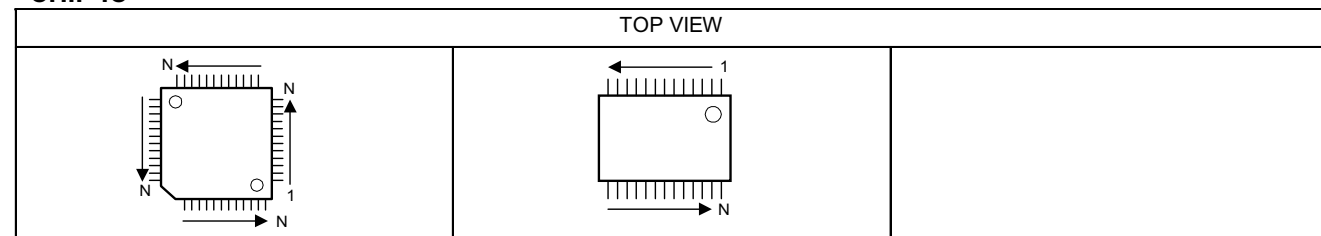
### TRANSISTOR



### IC



### CHIP IC



# AV-27GFH/z 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.

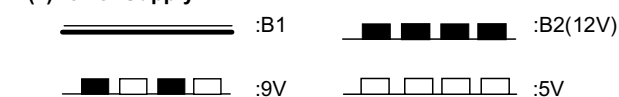
- (1)Input signal : Color bar signal
  - (2)Setting positions of each knob/button and variable resistor :Original setting position when shipped
  - (3)Internal resistance of tester :DC 20k $\Omega$ /V
  - (4)Oscilloscope sweeping time :H  $\Rightarrow$  20 $\mu$ S/div  
:V  $\Rightarrow$  5mS/div  
:Others  $\Rightarrow$  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.

- 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



\*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

### 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 :1/10 [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]

## 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) : ( $\neq$ ) 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.

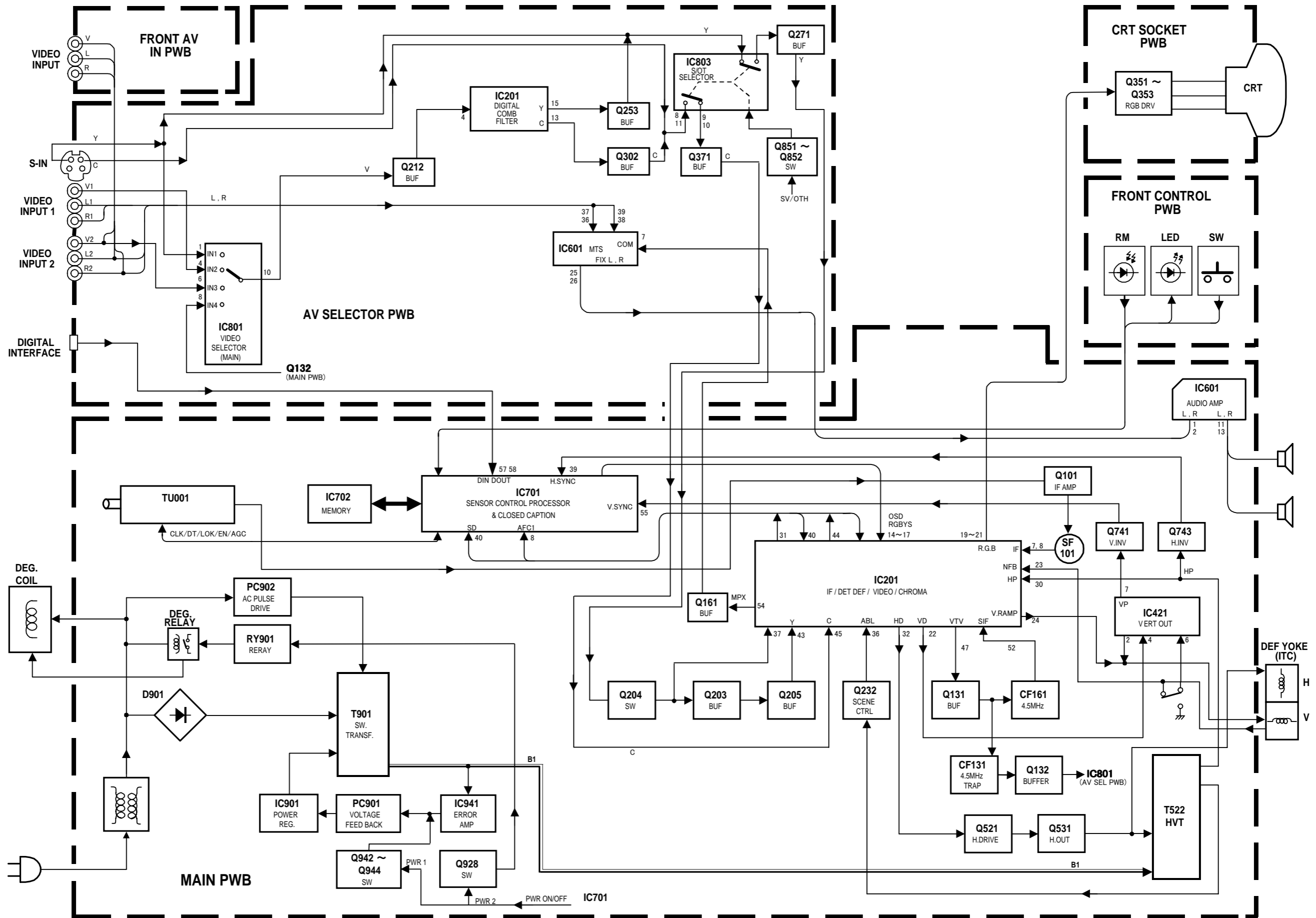
◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

#### ◇ NOTE

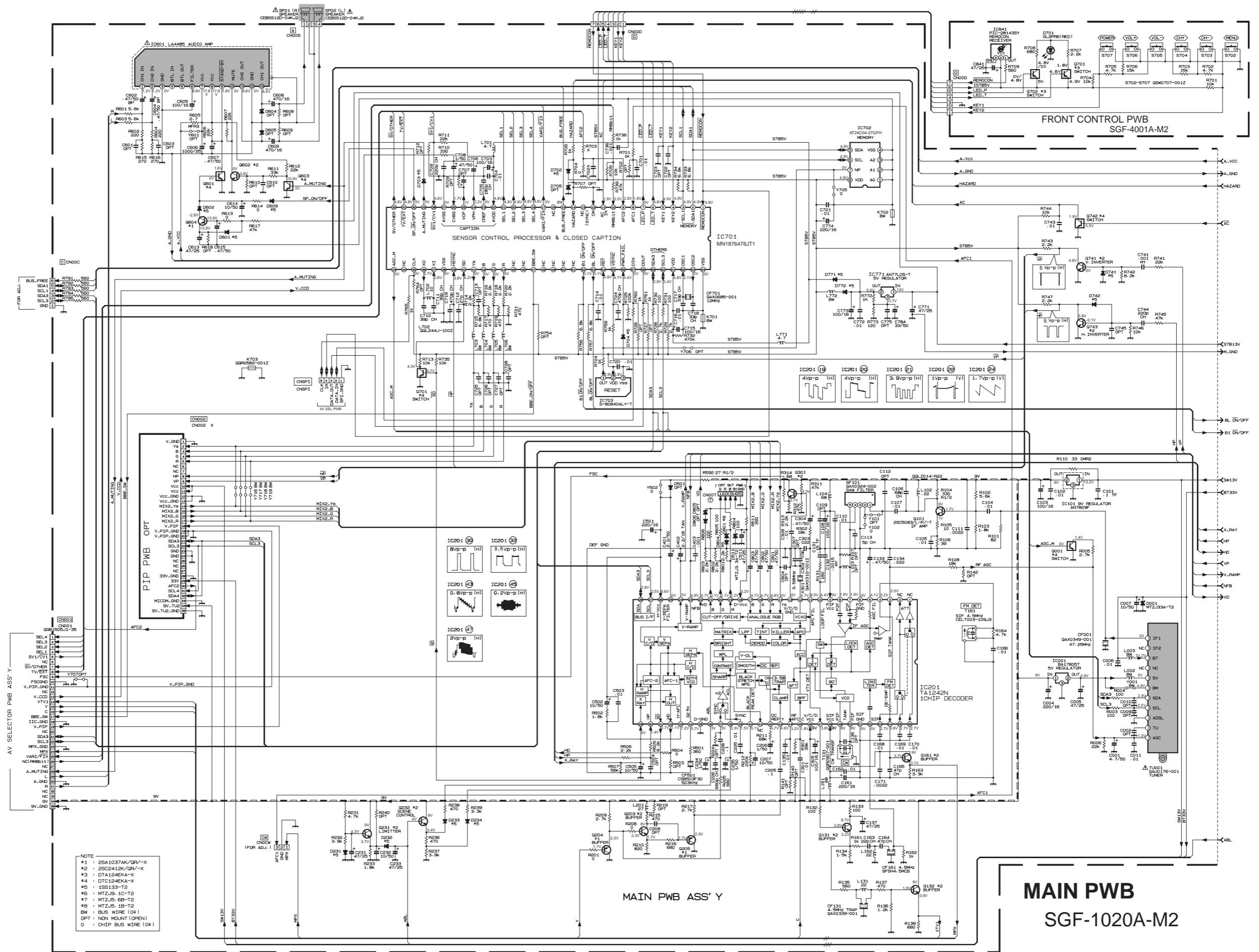
Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.

When ordering parts, please use the numbers that appear in the Parts List.

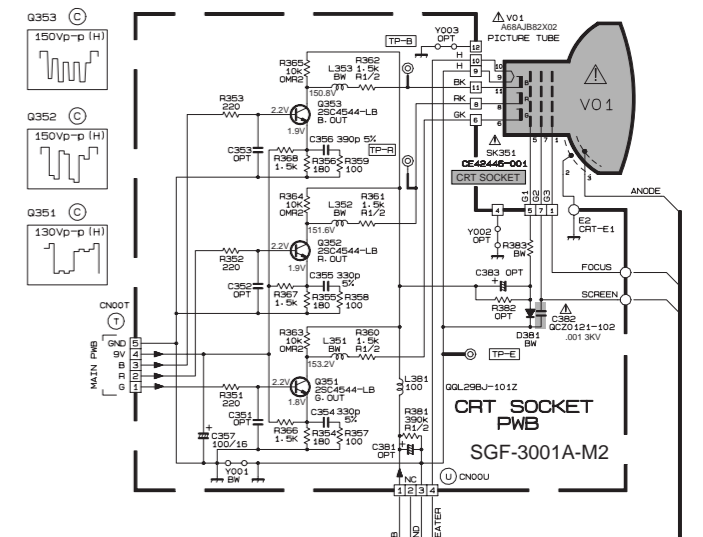
BLOCK DIAGRAM



CIRCUIT DIAGRAMS  
MAIN PWB &  
FRONT CONTROL PWB  
CIRCUIT DIAGRAM

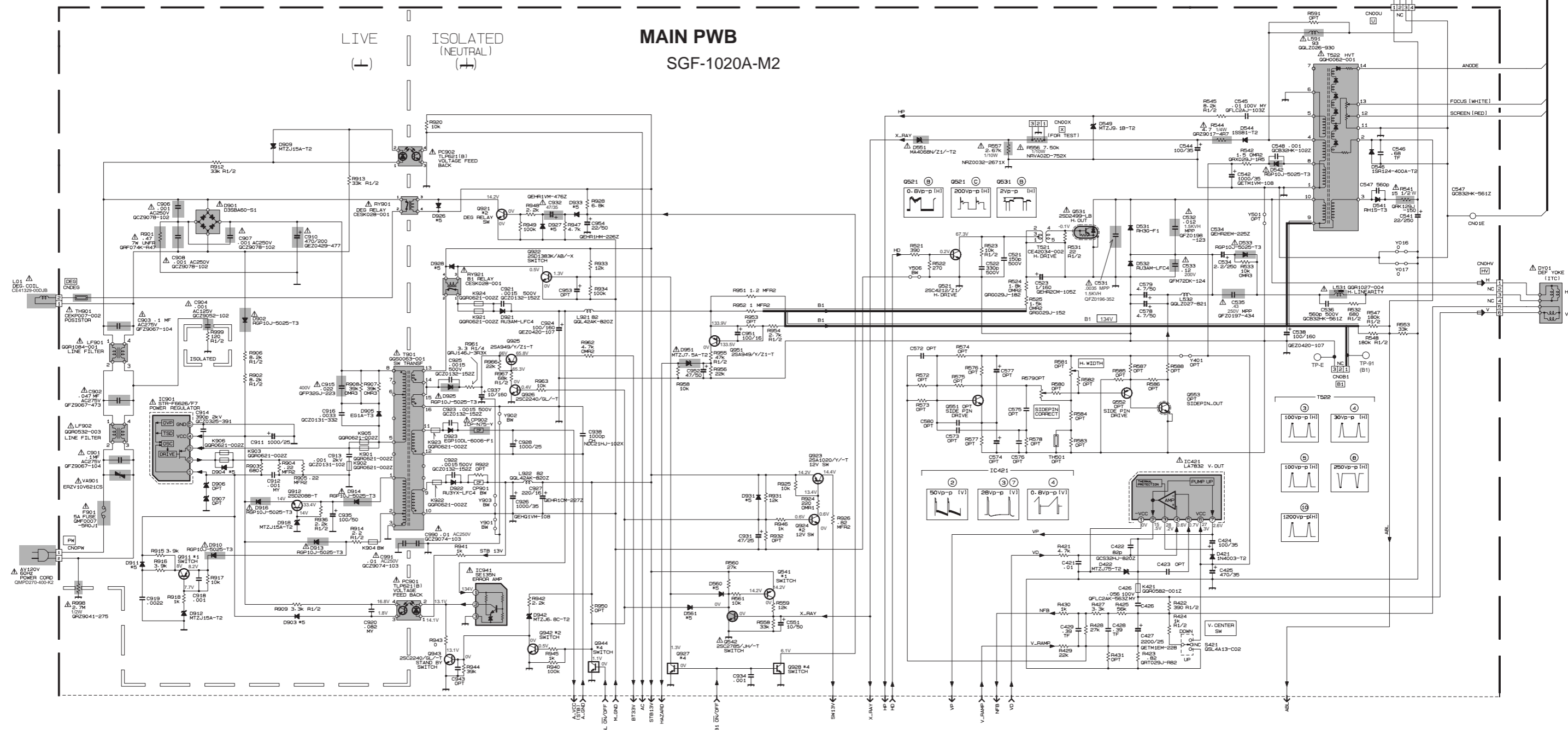


MAIN PWB & CRT SOCKET PWB CIRCUIT DIAGRAM

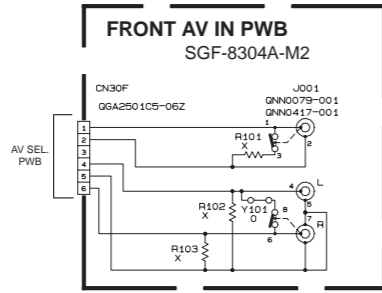


**MAIN PWB**  
SGF-1020A-M2

LIVE (⊖)      ISOLATED (NEUTRAL) (⊕)

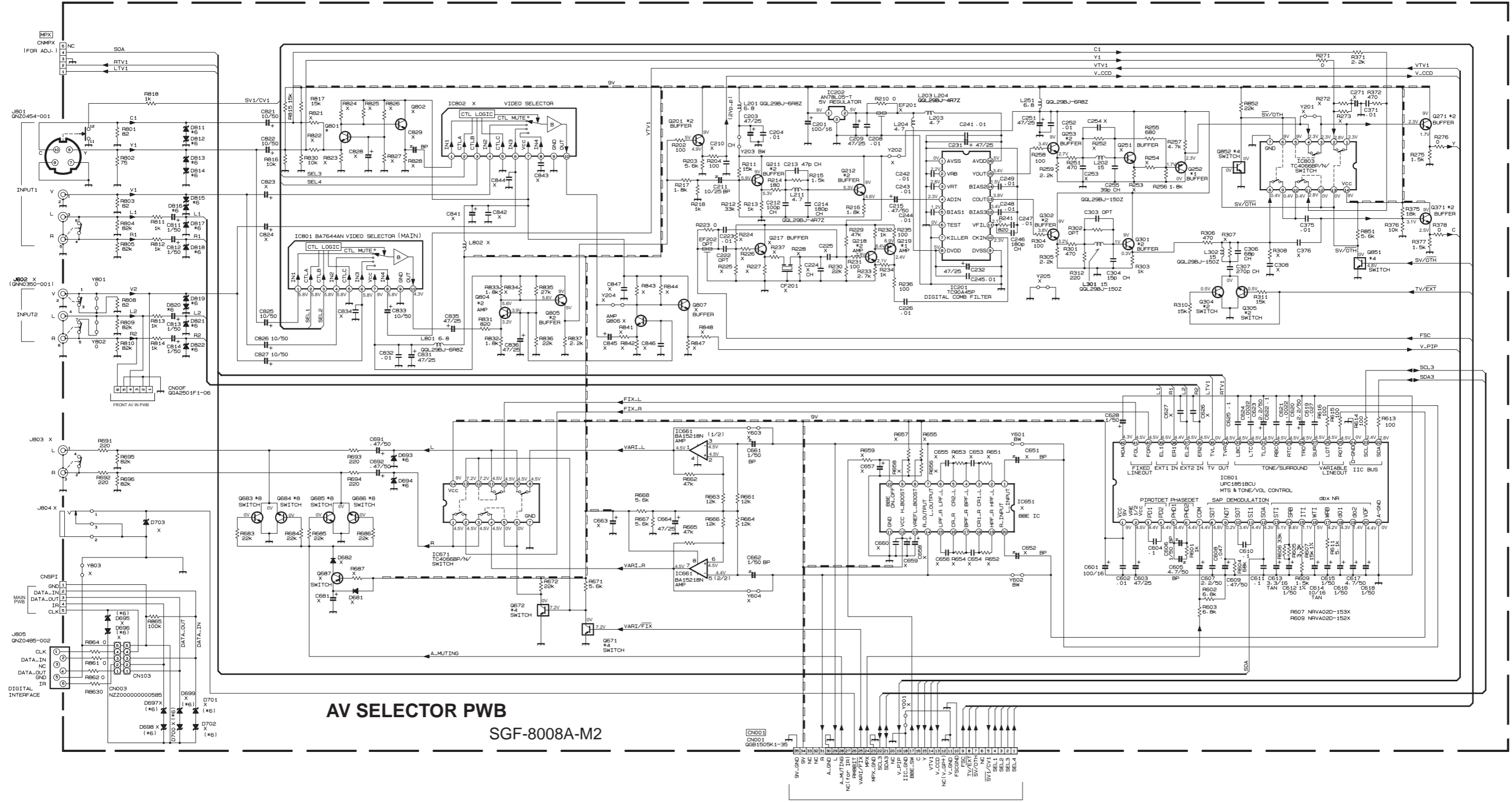


AV SELECTOR PWB & FRONT AV IN PWB CIRCUIT DIAGRAM



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

- NOTE
- \*1 : 25A1037AK/QV/-X
  - \*2 : 25C2412K/QV/-X
  - \*3 : DT1124KA-X
  - \*4 : DTC124KA-X
  - \*5 : 1SS133-T2
  - \*6 : MTZJ.1C-T2
  - \*7 : MTZJ.5.6B-T2
  - \*8 : DTC323TK-X
  - BW : BUS WIRE (0Ω)
  - OPT : NON MOUNT (OPEN)
  - 0 : CHIP BUS WIRE (0Ω)

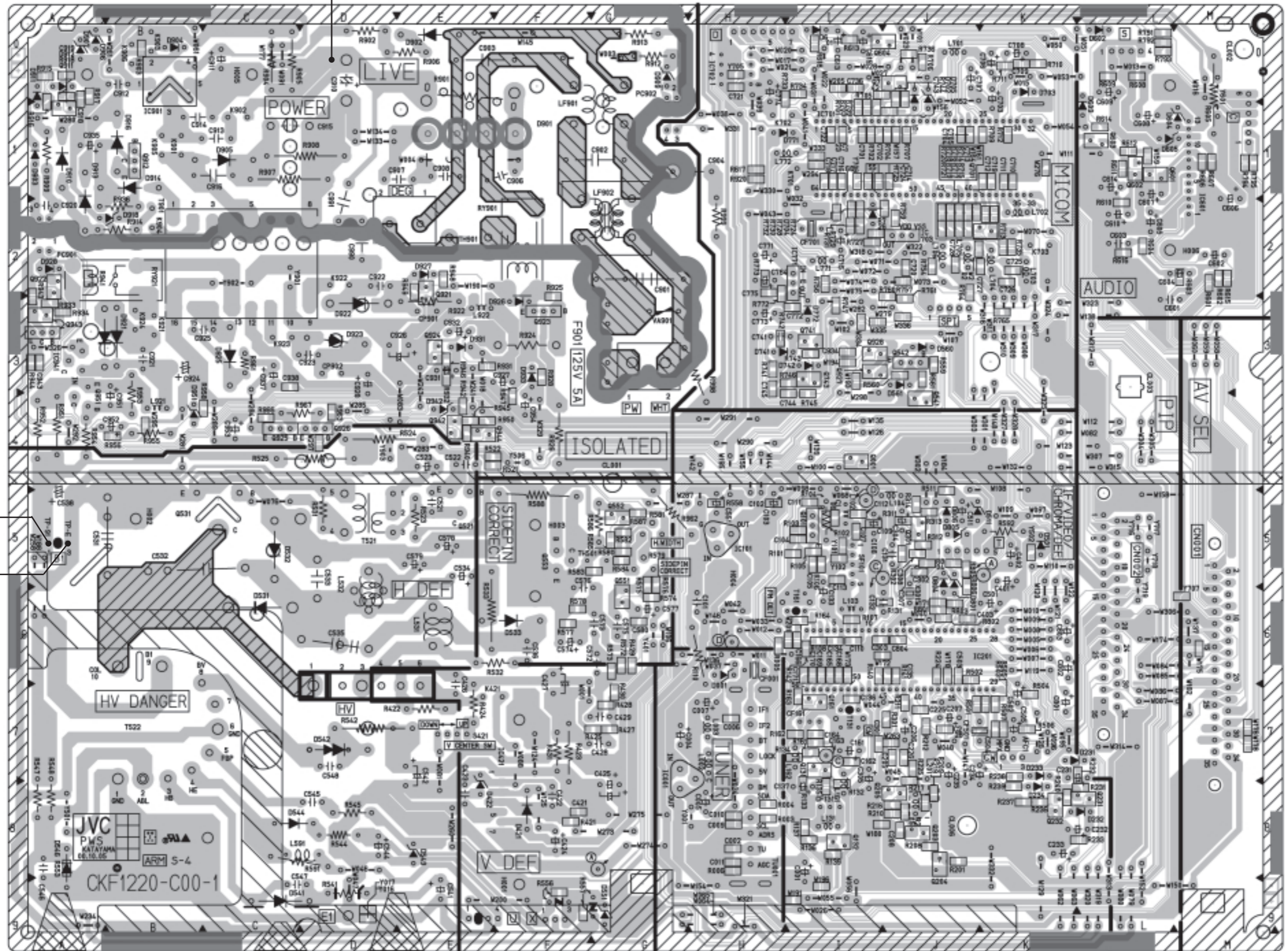


PATTERN DIAGRAMS MAIN PWB PATTERN

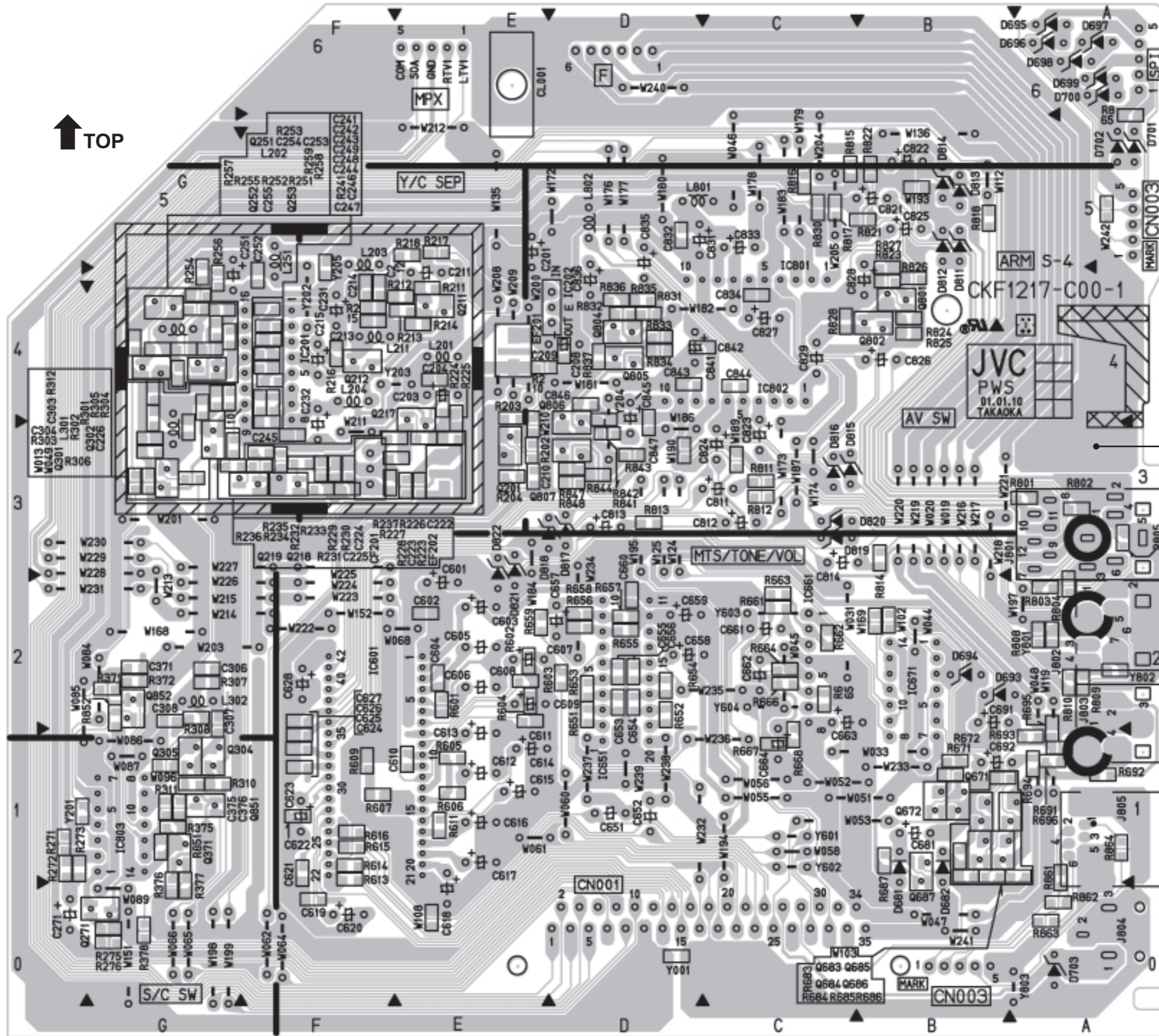
(⊥)

FRONT

TP-91 (B1)  
TP-E (H)



AV SELECTOR PWB PATTERN



↑ TOP

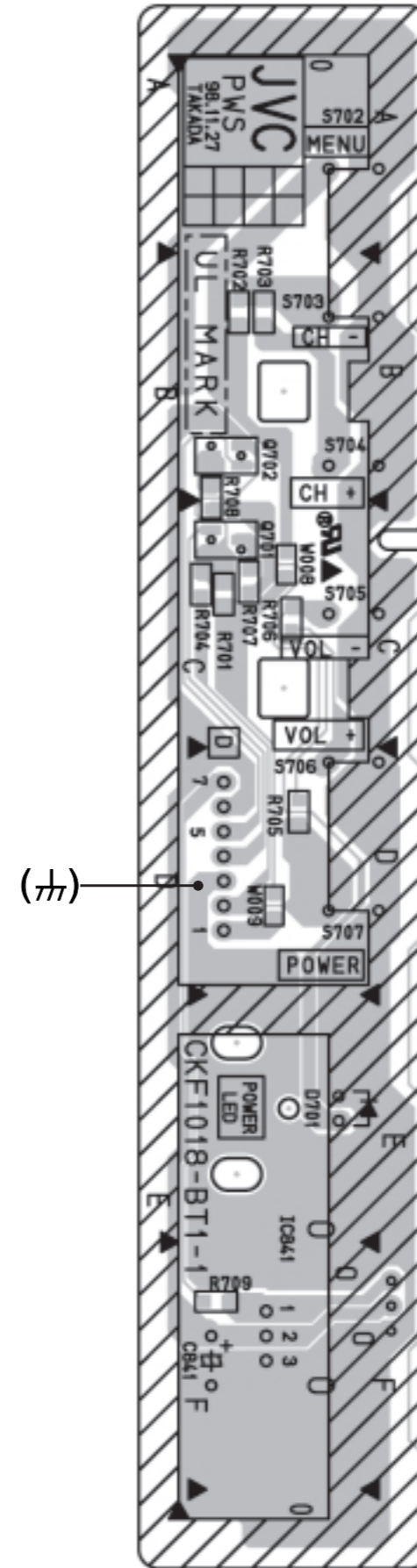
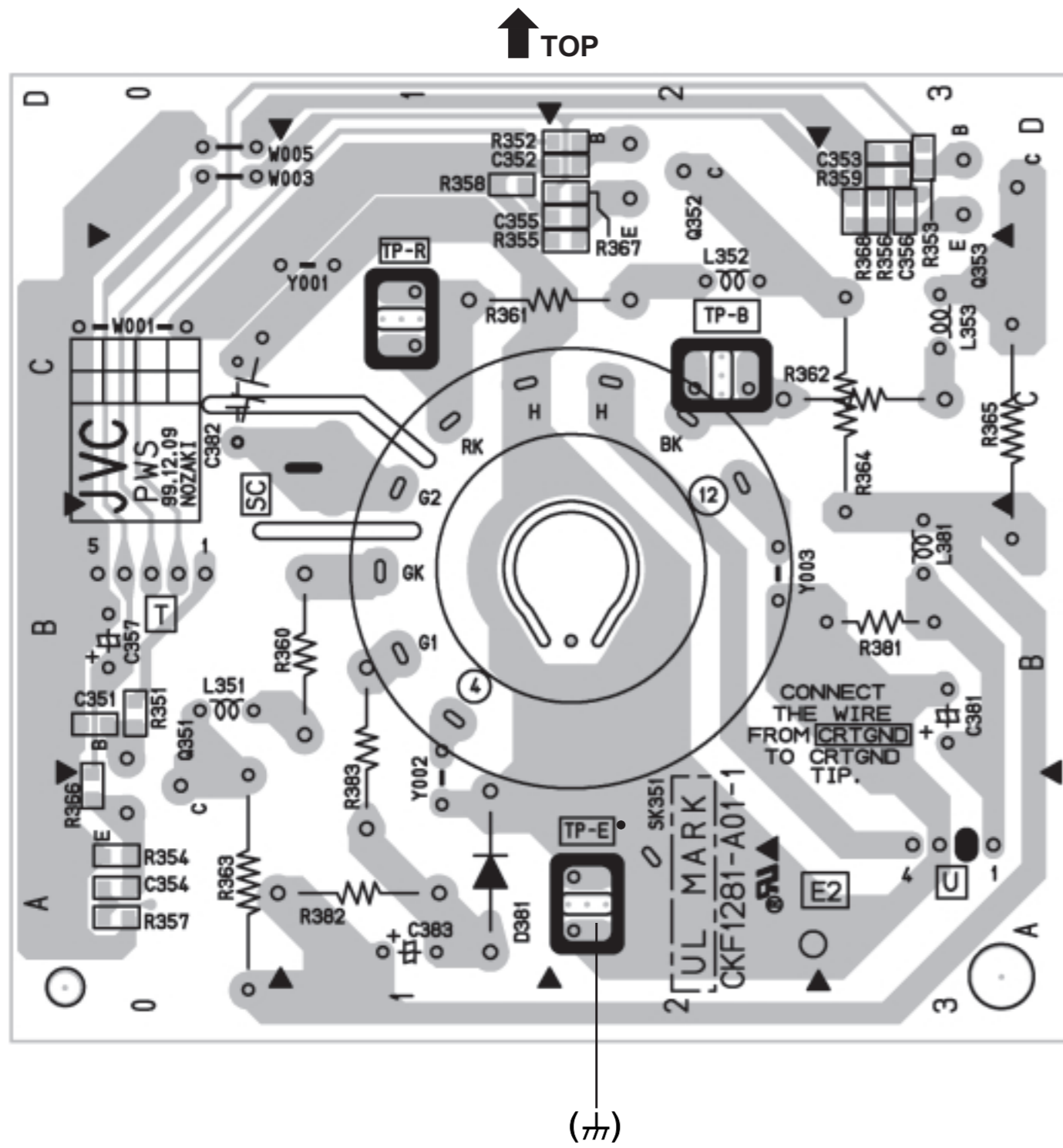
(7)



CRT SOCKET PWB PATTERN

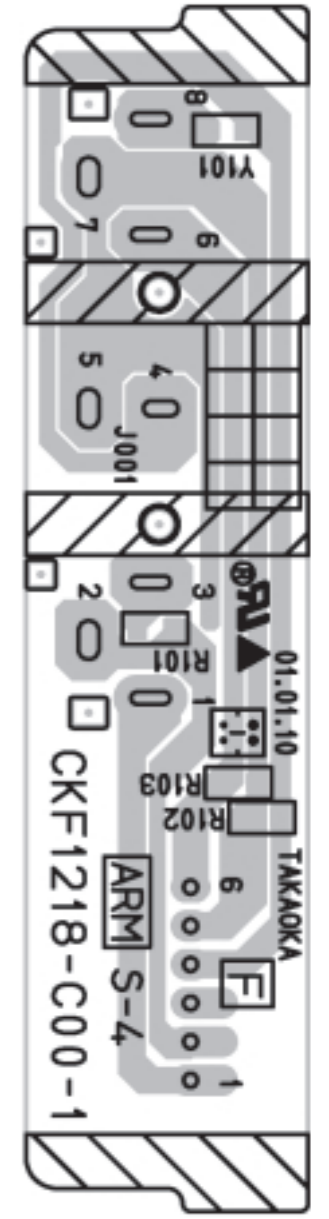
FRONT CONTROL PWB PATTERN

FRONT AV IN PWB PATTERN



FRONT

FRONT



■ 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		
			x		○
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				
HYPER	S 32	IV			
	T 33				
	U 34				
	V 35				
	W 36				
	W+1 37				
	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					
W+17 53					
W+18 54					
W+19 55					
W+20 56					
W+21 57					
W+22 58					
W+23 59					
W+24 60					
W+25 61					
W+26 62					
W+27 63					
W+28 64					
ULTRA	W+29 65	IV			
	W+30 66				
	W+31 67				
	W+32 68				
	W+33 69				
	W+34 70				

MODE		BAND	CHANNEL		TUNER BAND			
TV	CATV		REAL	DISP.				
x	○	ULTRA	W+35 71	IV				
			W+36 72					
			W+37 73					
			W+38 74					
			W+39 75					
			W+40 76					
			W+41 77					
			W+42 78					
			W+43 79					
			W+44 80					
			W+45 81					
			W+46 82					
			W+47 83					
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			W+56 92					
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			W+58 94					
			W+59 100					
			W+60 101					
			W+61 102					
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			W+65 106					
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			W+67 108					
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			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	
			○		x	UHF	14 } 69	IV
			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 (CAU)

S) ME		DANM	CHANNEL		TPNER DANM
TO	CATO		REAL	MBI	
○	○	VL	02	I	
			03		
			04		
			05		
			06		
			07		
		VH	08	II	
			09		
			10		
			11		
			12		
			13		
			x		○
B 15					
C 16					
D 17					
E 18					
F 19					
G 20					
H 21					
I 22					
PSUER	J 23	IV			
	K 24				
	L 25				
	M 26				
	N 27				
	O 28				
	U 29				
	Q 30				
	R 31				
HYUER	P 32	IV			
	T 33				
	S 34				
	V 35				
	W 36				
	W+1 37				
	W+2 38				
	W+3 39				
	W+4 40				
	W+5 41				
	W+6 42				
W+7 43					
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W+20 56					
W+21 57					
W+22 58					
W+23 59					
W+24 60					
W+25 61					
W+26 62					
W+27 63					
W+28 64					
SLTRA	W+29 65	IV			
	W+30 66				
	W+31 67				
	W+32 68				
	W+33 69				
	W+34 70				

S) ME		DANM	CHANNEL		TPNER DANM			
TO	CATO		REAL	MBI				
x	○	SLTRA	W+35 71	IV				
			W+36 72					
			W+37 73					
			W+38 74					
			W+39 75					
			W+40 76					
			W+41 77					
			W+42 78					
			W+43 79					
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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	PSB MID	A-8 01	I				
			A-4 96					
			A-3 97					
			A-2 98					
○	x	SHF	14 } 69	IV				
			69					
			TOTAL 180CH { VHF 124CH SHF 56CH					
			NOTE: TO RECEIVE THE PSBPCRIUTION OR UREMISM UROGRAMMING FROM CERTAIN CABLE COMUANIEP. PUECIAL ADAUTERP MAY BE REQSIED.					

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