

JVC

SCHEMATIC DIAGRAMS

COLOR TELEVISION

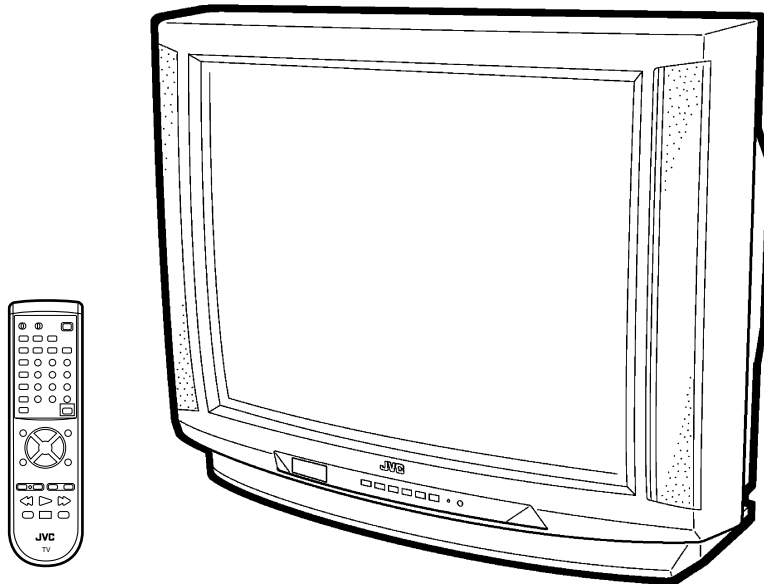
BASIC CHASSIS

GC

AV-27D502 /AR

AV-27D502 /AS

CD-ROM No. SML200201



AV-27D502 /AR AV-27D502 /AS 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 : 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 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 : 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 : [μ 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 [μ 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 : [μ H]
- Others : As specified

(4) Power Supply



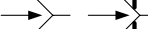
-  : B1
-  : B2(12V)
-  : 9V
-  : 5V

* 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) : (⏏) 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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SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR

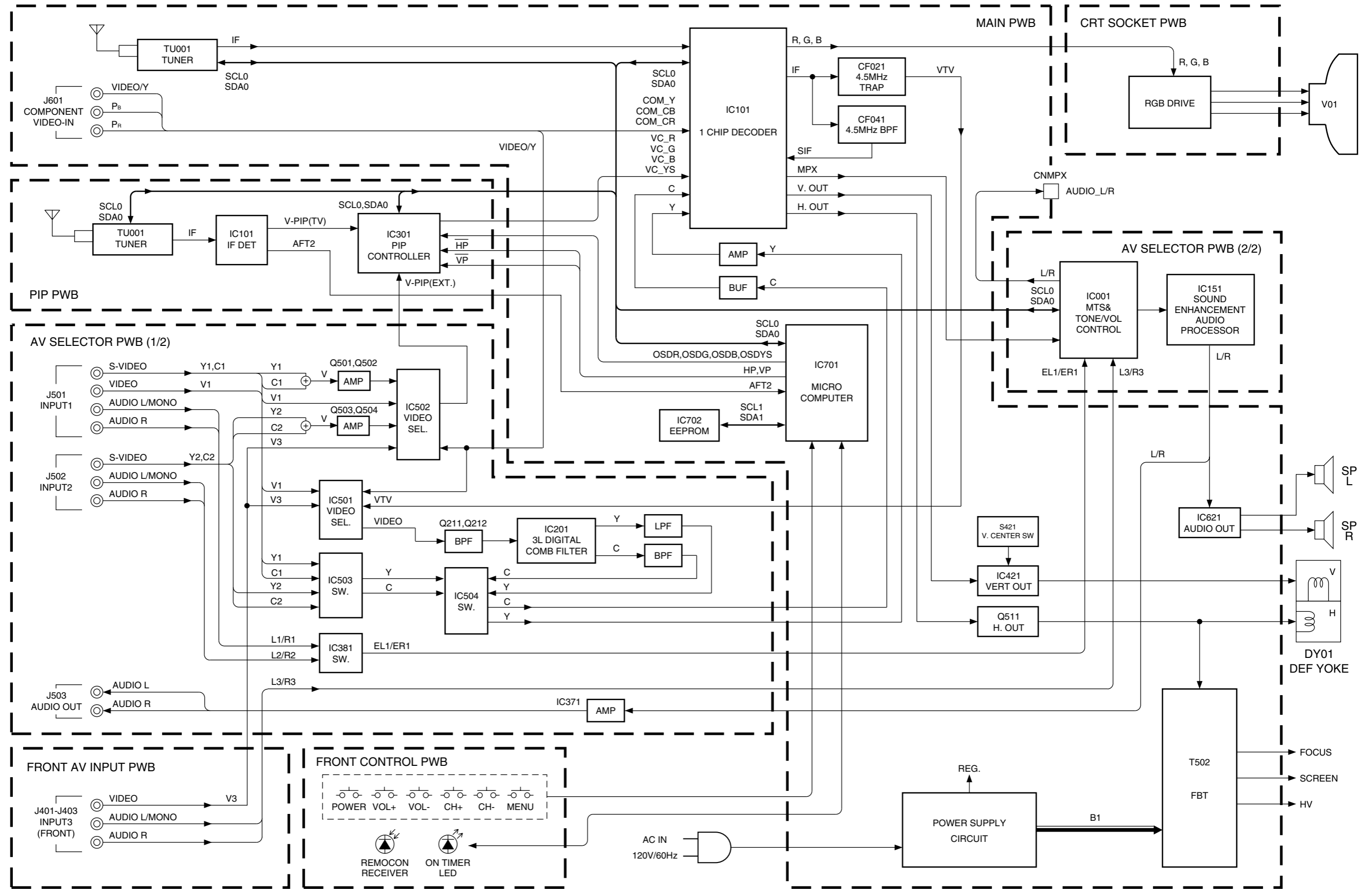
IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW

CHIP IC

TOP VIEW	

BLOCK DIAGRAM

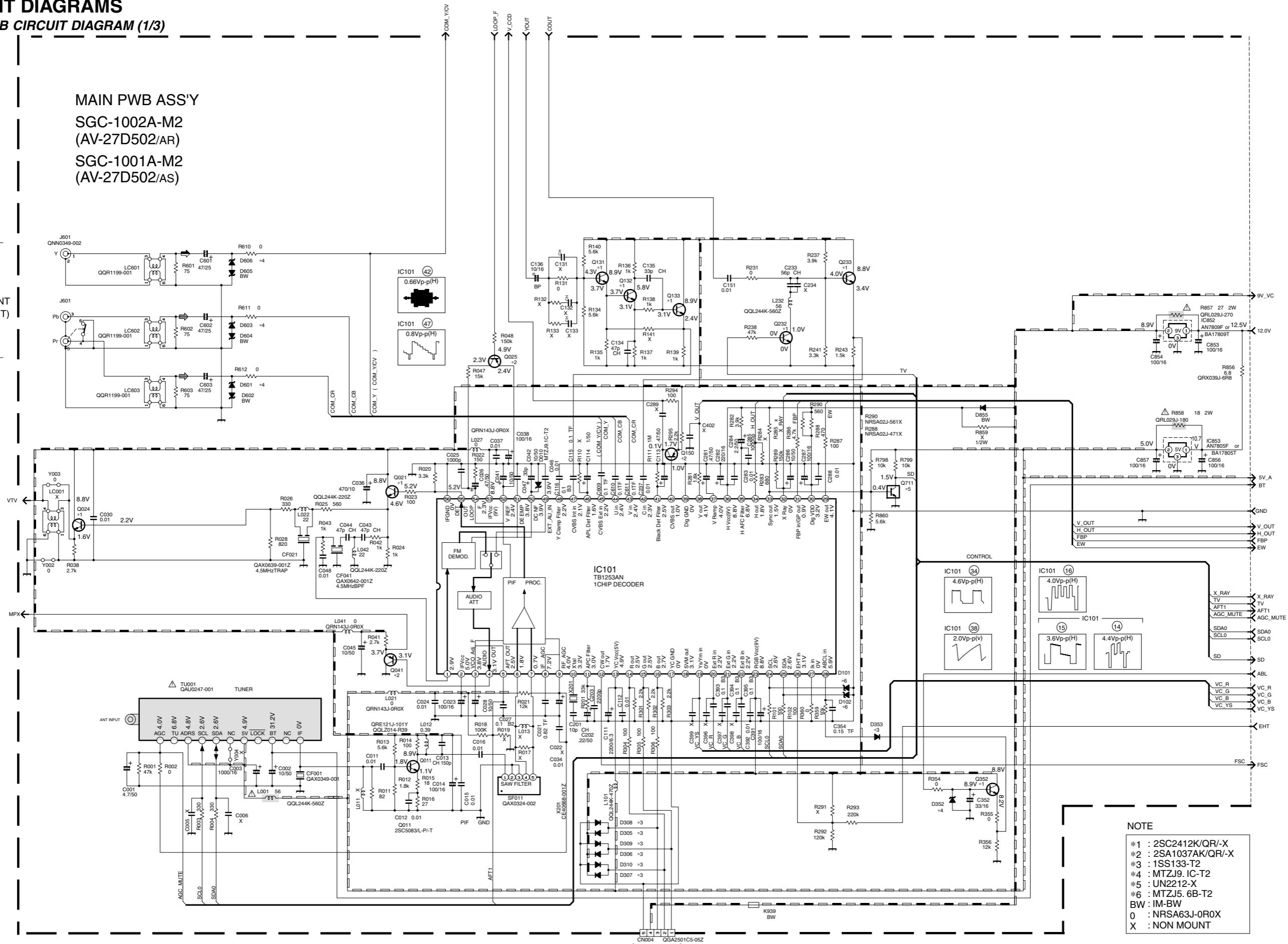


CIRCUIT DIAGRAMS

MAIN PWB CIRCUIT DIAGRAM (1/3)

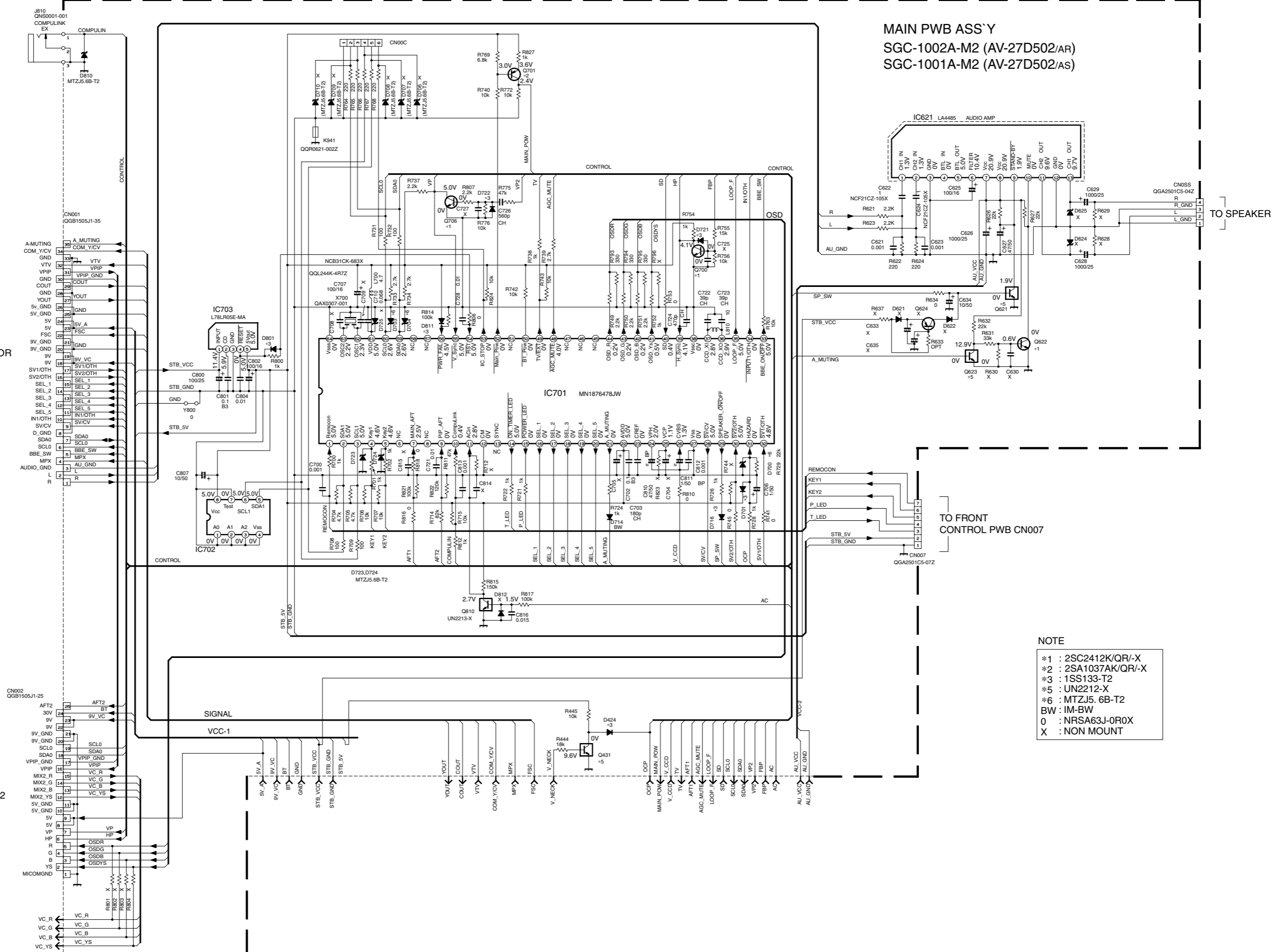
INPUT-2
(COMPONENT
VIDEO INPUT)

MAIN PWB ASS'Y
SGC-1002A-M2
(AV-27D502/AR)
SGC-1001A-M2
(AV-27D502/AS)



NOTE
*1 : 2SC2412K/QR/-X
*2 : 2SA1037AK/QR/-X
*3 : 1SS133-T2
*4 : MTZJ9. IC-T2
*5 : UN2212-X
*6 : MTZJ5. 6B-T2
BW : IM-BW
0 : NRSA63J-0R0X
X : NON MOUNT

MAIN PWB CIRCUIT DIAGRAM (2/3)



MAIN PWB ASS'Y
 SGC-1002A-M2 (AV-27D502/AR)
 SGC-1001A-M2 (AV-27D502/AS)

TO AV SELECTOR
 PWB CN001

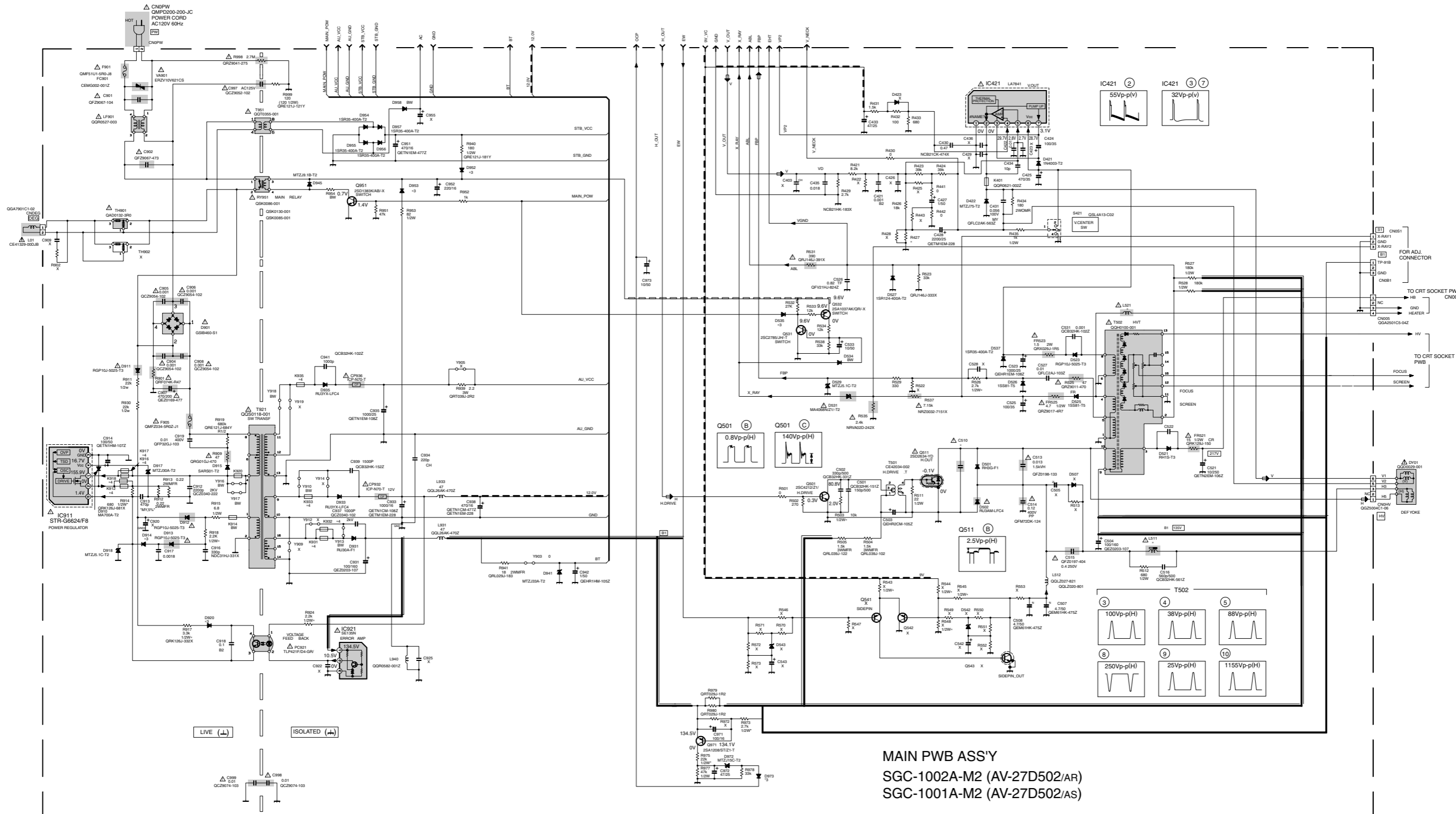
TO PIP
 PWB CN002

TO FRONT
 CONTROL PWB CN007

TO SPEAKER

- NOTE
- *1 : 2SC2412K/QR/-X
 - *2 : 2SA1037AK/QR/-X
 - *3 : 1SS133-T2
 - *5 : UN2212-X
 - *6 : MTZJ5.6B-T2
 - BW : IM-BW
 - 0 : NRSA63J-0R0X
 - X : NON MOUNT

MAIN PWB CIRCUIT DIAGRAM (3/3)



MAIN PWB ASS'Y
SGC-1002A-M2 (AV-27D502/AR)
SGC-1001A-M2 (AV-27D502/AS)

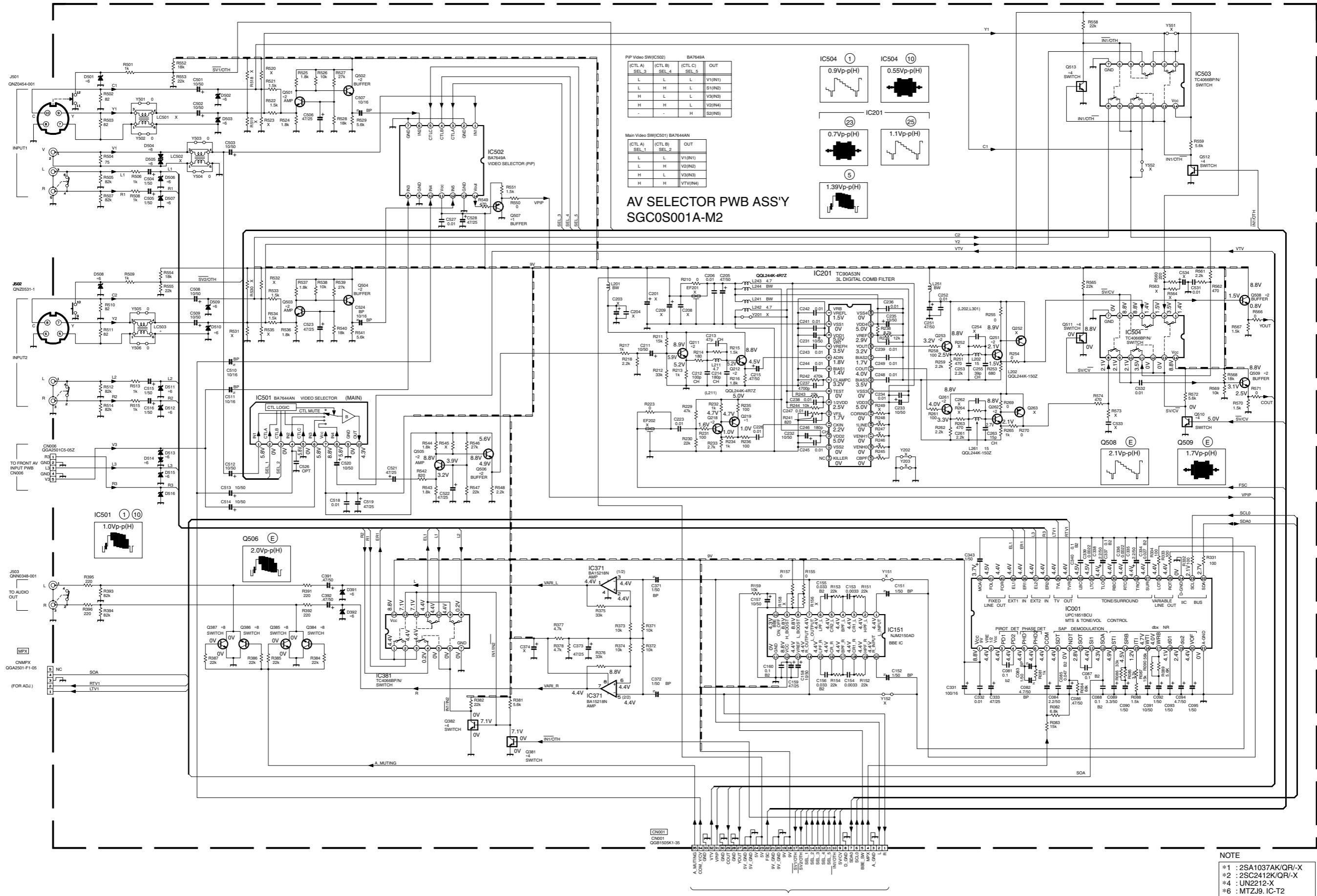
* DIFFERENCE LIST (* PARTS)

	△ L511	△ L521	△ C510	△ R427
SGC-1002A-M2	QQR1027-2	QQLZ018-560	QFZ0196-382	QRT029J-1R0
SGC-1001A-M2	QQR1027-4	QQLZ026-101	QFZ0196-472	QRT029J-R82

NOTE

- *3 : 1SS133-T2
- *4 : QQR0582-001Z
- BW : IM-BW
- 0 : NRSA63J-0R0X
- X : NON MOUNT

AV SELECTOR PWB CIRCUIT DIAGRAM



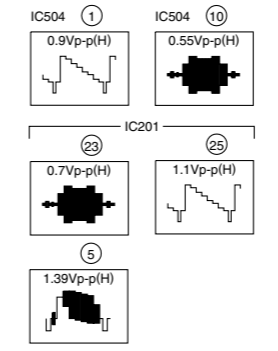
PIP Video SW(IC502) BA7649A

(CTL A) SEL 3	(CTL B) SEL 4	(CTL C) SEL 5	OUT
L	L	L	V1(H1)
L	H	L	S1(H2)
H	L	L	V3(H3)
H	H	L	V2(H4)
-	-	H	S2(H5)

Main Video SW(IC501) BA7644N

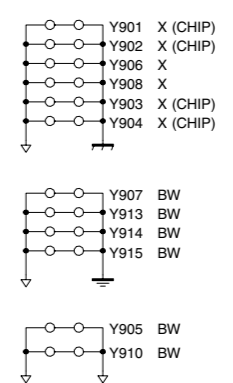
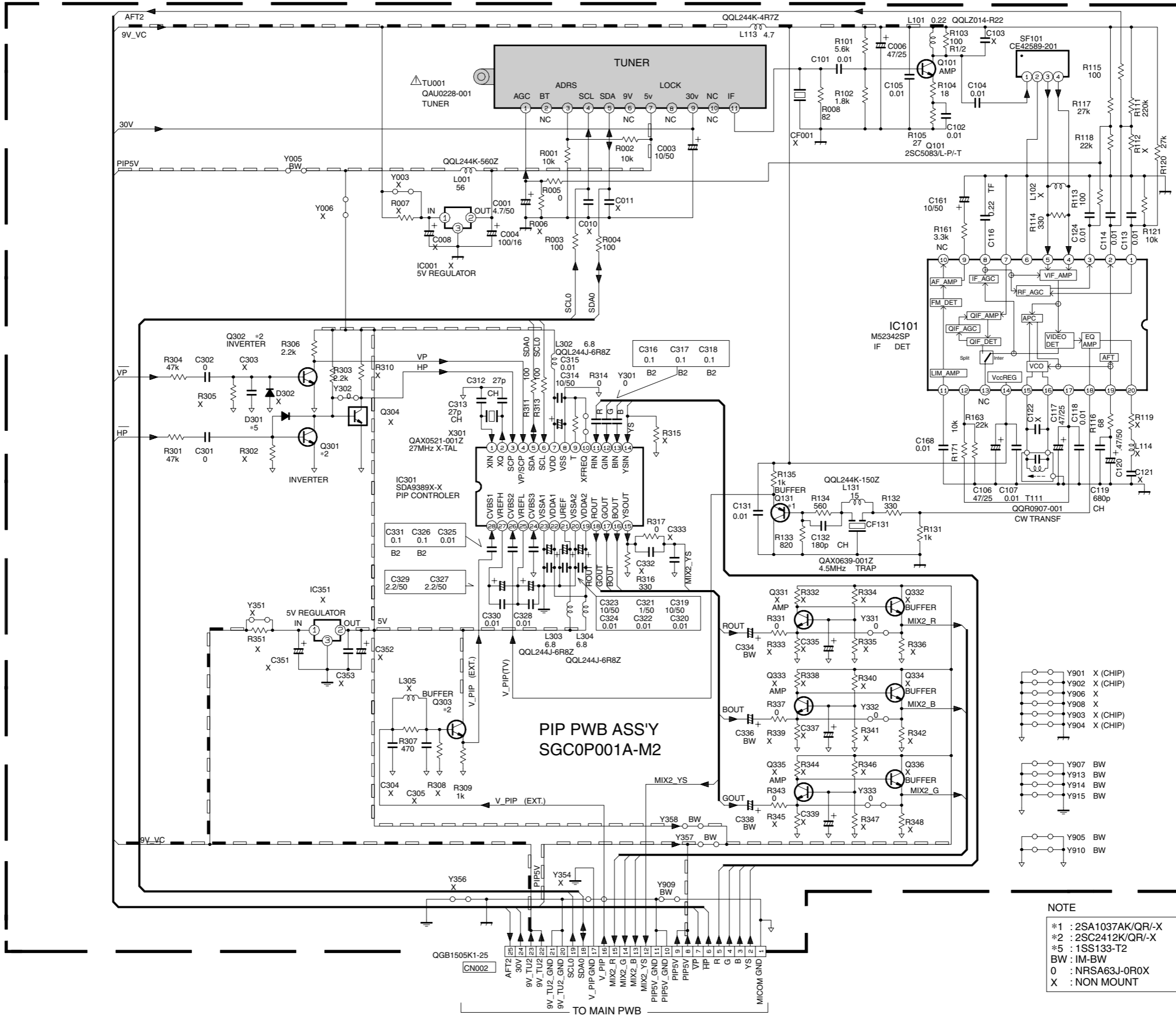
(CTL A) SEL 1	(CTL B) SEL 2	OUT
L	L	V1(H1)
L	H	V2(H2)
H	L	V3(H3)
H	H	V4(H4)

AV SELECTOR PWB ASS'Y
SGC0S001A-M2



- NOTE
- *1 : 2SA1037AK/QR/-X
 - *2 : 2SC2412K/QR/-X
 - *4 : UN2212-X
 - *6 : MTZJ9, IC-T2
 - *8 : DTC323TK-X
 - BW : IM-BW
 - 0 : NRS A63J-0R0X
 - X : NON MOUNT

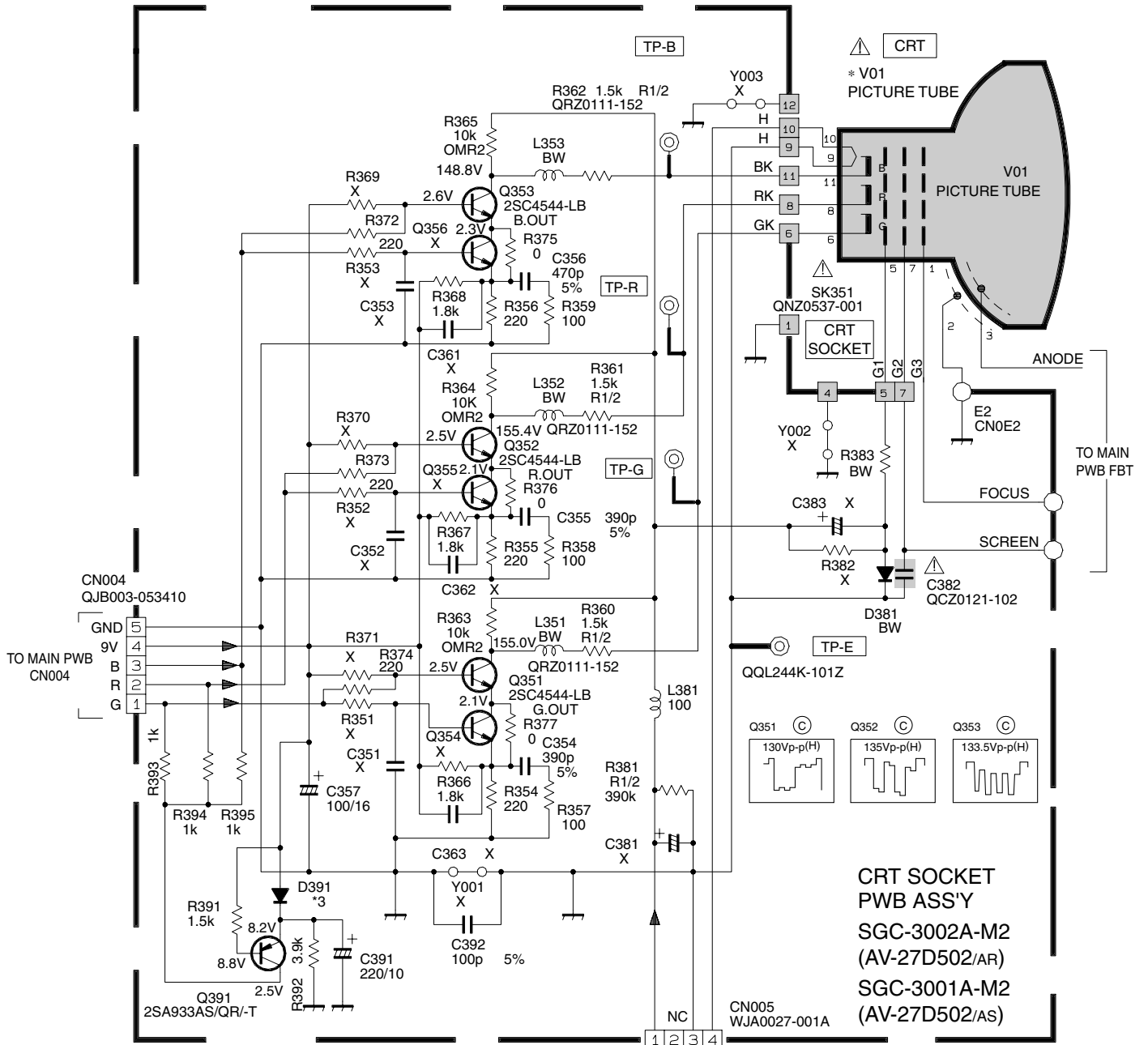
PIP PWB CIRCUIT DIAGRAM



NOTE

- *1 : 2SA1037AK/QR/-X
- *2 : 2SC2412K/QR/-X
- *5 : 1SS133-T2
- BW : IM-BW
- 0 : NRSA63J-0R0X
- X : NON MOUNT

CRT SOCKET PWB CIRCUIT DIAGRAM



* DIFFERENCE LIST (* PARTS)

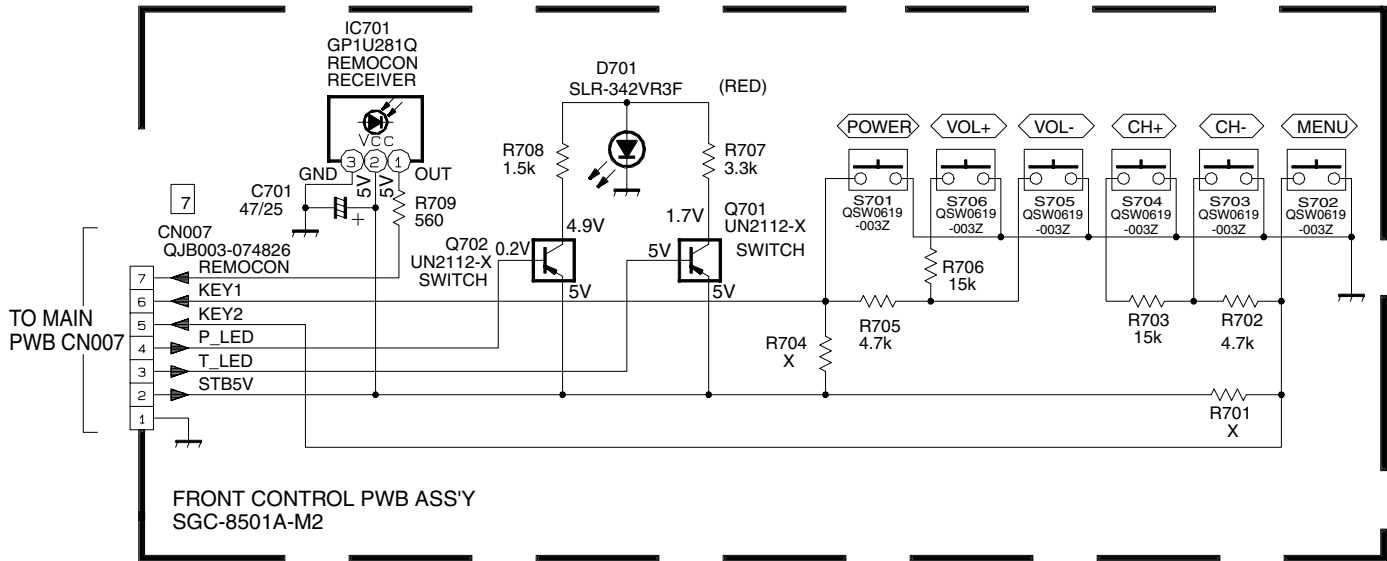
	SGC-3002A-M2	SGC-3001A-M2
	V01	A68QDN891X001

NOTE

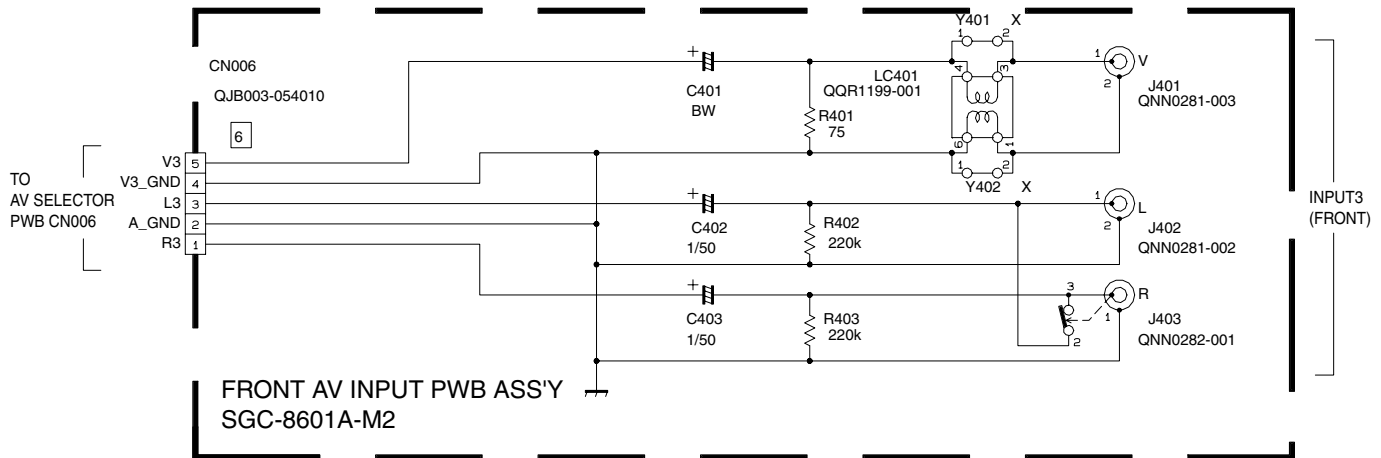
- *3 : 1SS133-T2
- BW : IM-BW
- X : NON MOUNT

FRONT CONTROL AND FRONT AV INPUT PWB CIRCUIT DIAGRAMS

-FRONT CONTROL-



-FRONT AV INPUT-



NOTE

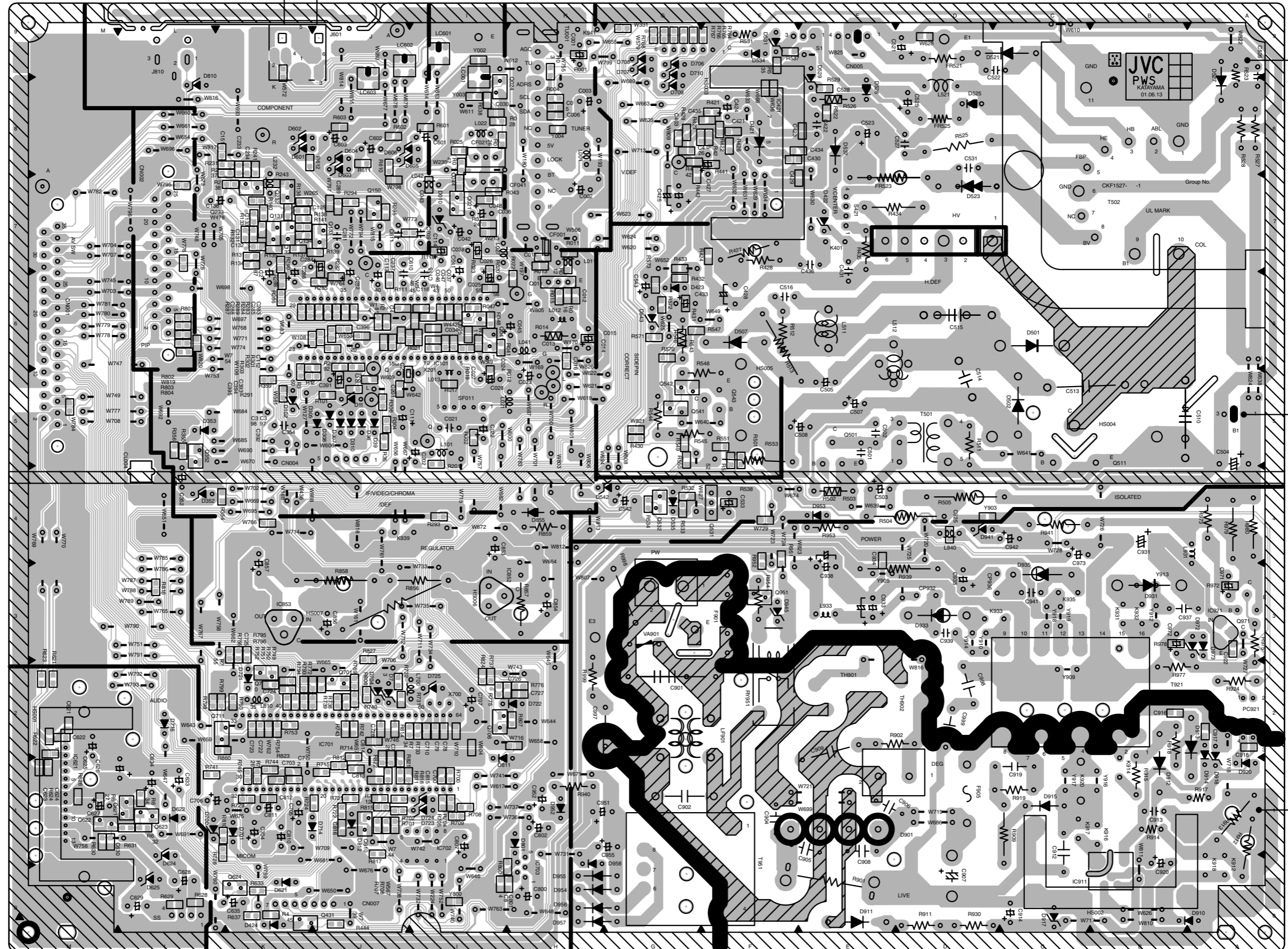
X : NON MOUNT

PATTERN DIAGRAMS

MAIN PWB PATTERN



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



FRONT

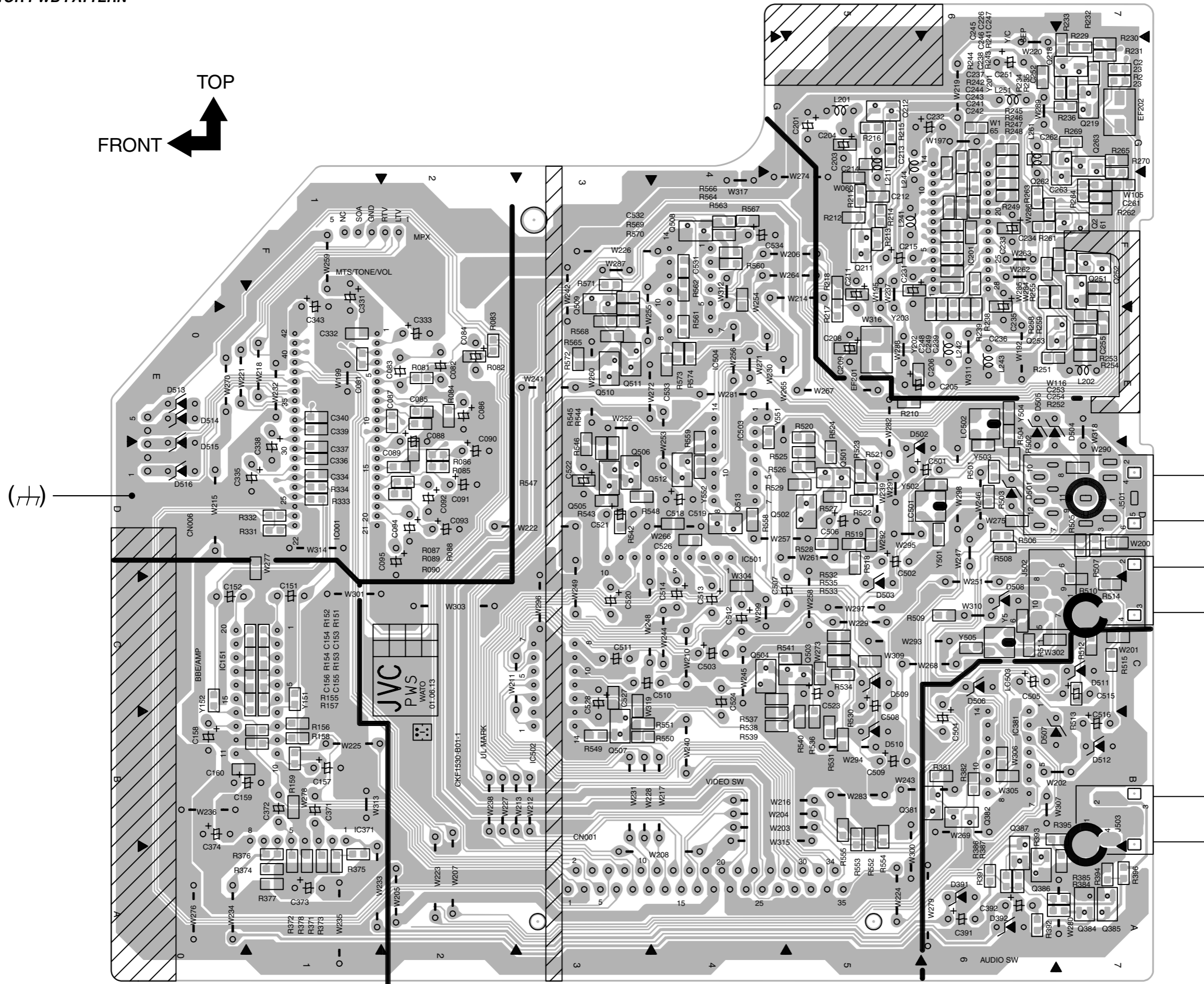
(H)

TP-91B(B1)

(T)

AV SELECTOR PWB PATTERN

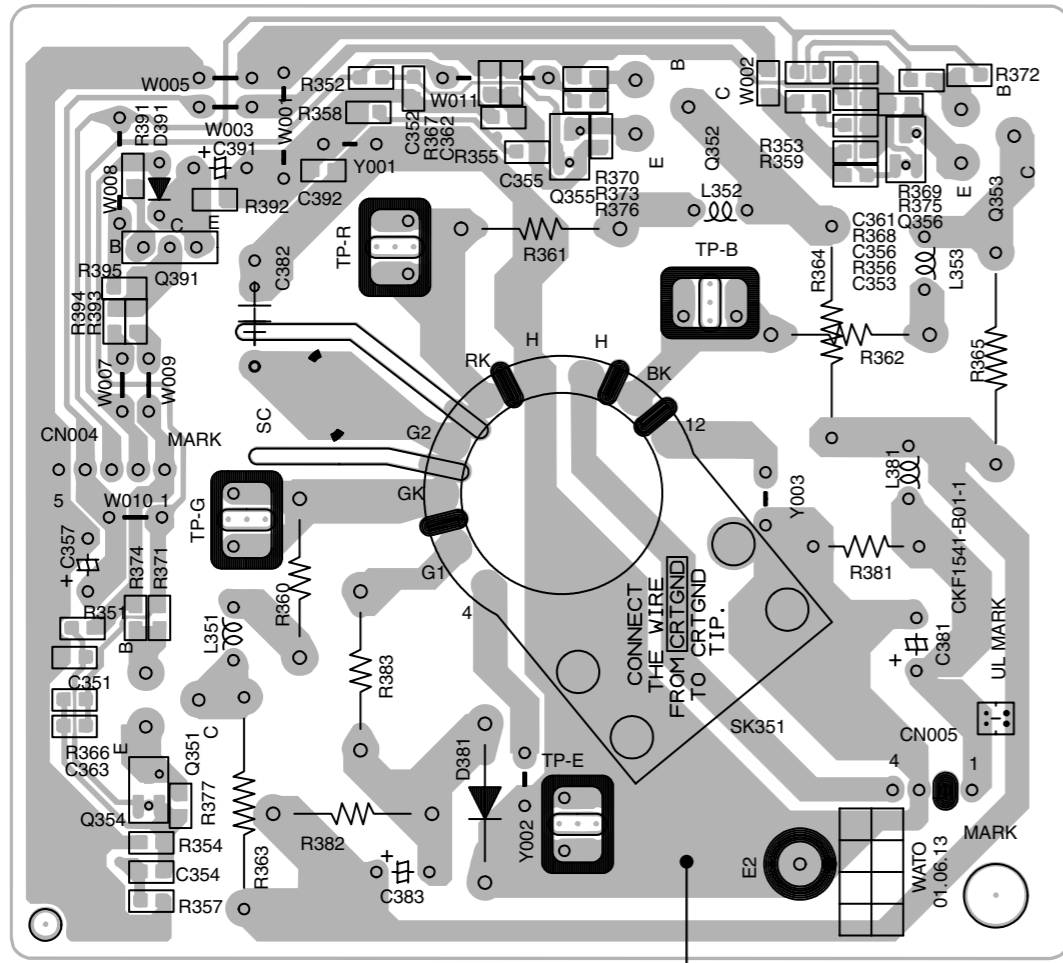
TOP
FRONT



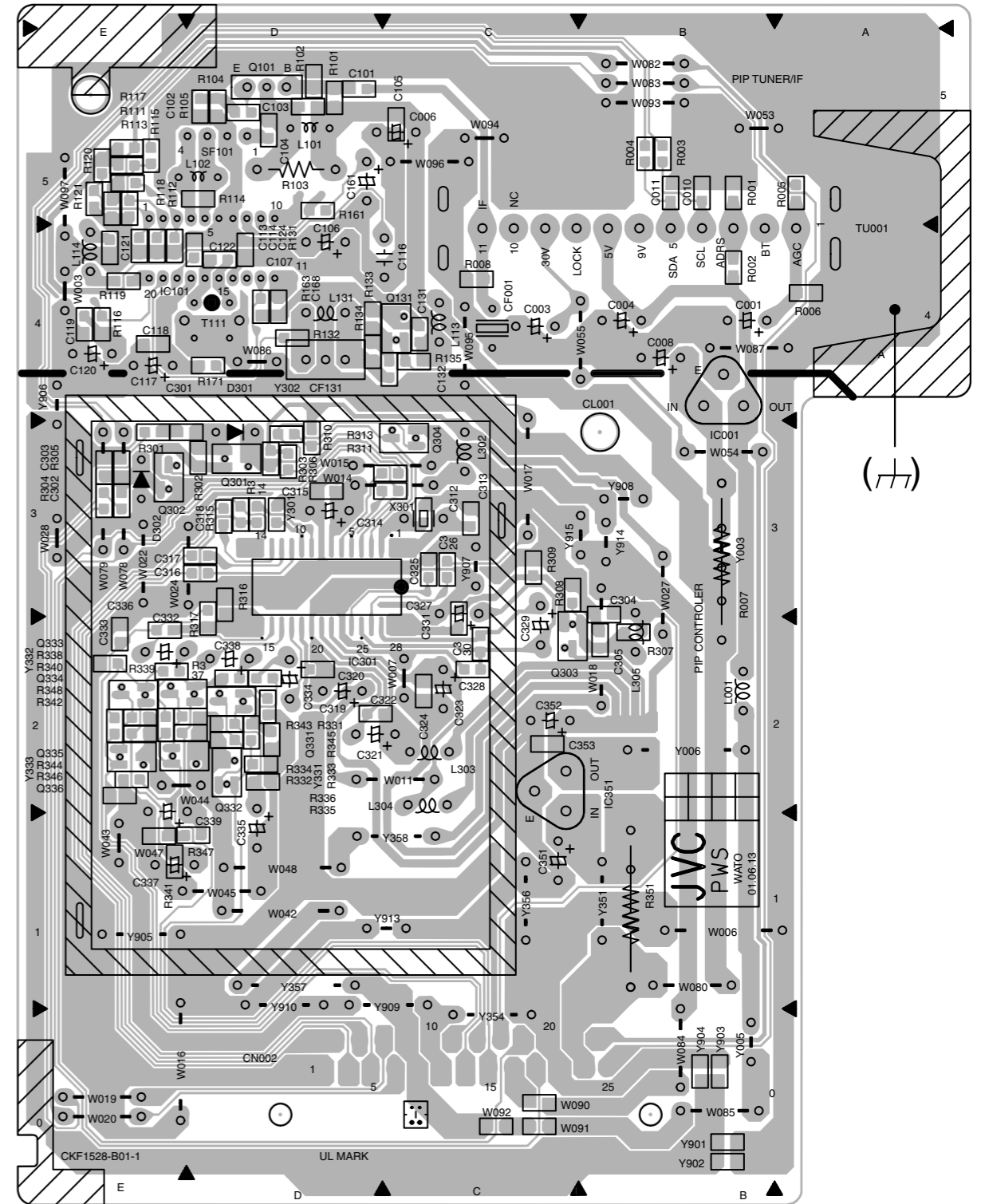
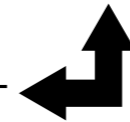
CRT SOCKET PWB PATTERN

PIP PWB PATTERN

TOP

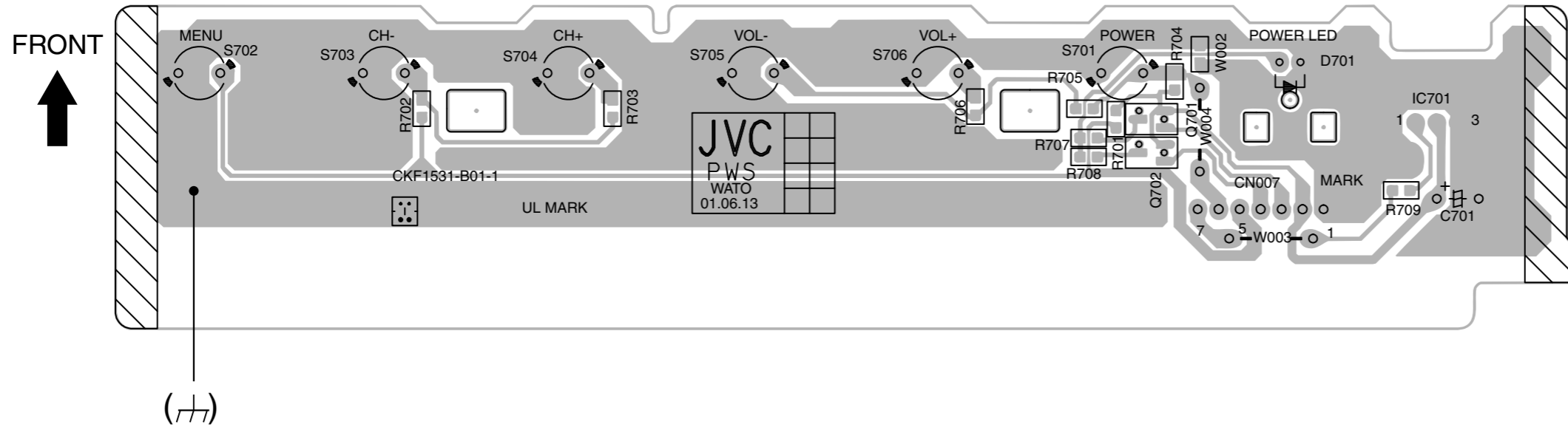


TOP
FRONT

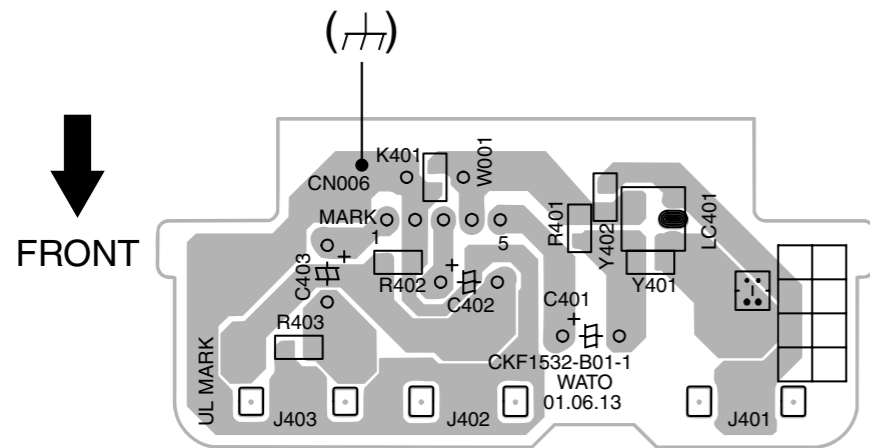


FRONT CONTROL AND FRONT AV INPUT PWB PATTERNS

- FRONT CONTROL -



- FRONT AV INPUT -



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			
			×		○	MID
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						
ULTRA	W+12 48	IV				
	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						
W+29 65						
W+30 66						
W+31 67						
W+32 68						
W+33 69						
W+34 70						

MODE		BAND	CHANNEL		TUNER BAND				
TV	CATV		REAL	DISP.					
×	○	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					
			W+48	84					
			W+49	85					
			W+50	86					
			W+51	87					
			W+52	88					
			W+53	89					
			W+54	90					
			W+55	91					
			W+56	92					
			W+57	93					
			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					
			SUB MID	A-8		01	I		
				A-4		96			
				A-3		97			
				A-2		98			
				A-1		99			
			○	×		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 (CA)

MODE		BAND	CHANNEL		TUNER BAND		
TV	CATV		REAL	DISP.			
○	○	VL	02		I		
			03				
			04				
			05				
			06				
			07				
		VH			08		
					09		
					10		
					11		
					12		
					13		
					13		
×	○	MID	A	14	II		
			B	15			
			C	16			
			D	17			
			E	18			
			F	19			
			G	20			
			H	21			
			I	22			
			22				
		SUPER			J	23	
					K	24	
					L	25	
					M	26	
					N	27	
					O	28	
					28		
					P	29	
					29		
					29		
		HYPER			W+1	37	III
					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.				
×	○	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				
			W+48	84				
			W+49	85				
			W+50	86				
			W+51	87				
			W+52	88				
			W+53	89				
			W+54	90				
			W+55	91				
			W+56	92				
			W+57	93				
			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							
○	×	SUB MID	A-8	01	I			
			A-4	96				
			○	×	UHF	A-3	97	II
						A-2	98	
○	×	UHF	A-1	99	IV			
			14	69				
TOTAL 180CH { VHF 124CH { UHF 56CH								
NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.								

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