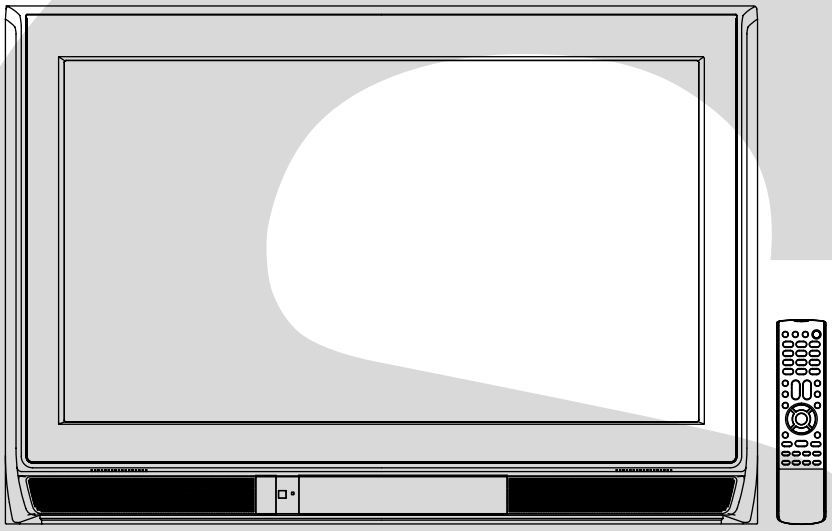
TOSHIBA

FILE NO. 050-200617GR
(MFR'S VERSION A)

SERVICE MANUAL

COLOR TELEVISION

30HF66



The above model is classified as a green product (*1), as indicated by the underlined serial number. This Service Manual describes replacement parts for the green product. When repairing this green product, use the part(s) described in this manual and lead-free solder (*2).

For (*1) and (*2), see the next page.

DOCUMENT CREATED IN JAPAN, May, 2006 GREEN

(*1) GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing lead.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

(*2) LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the CE industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

WARNING

This product is manufactured using lead free solder.

DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT !

The melting temperature of lead-free solder is higher than that of leaded solder by 86°F to 104°F (30°C to 40°C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product — especially when soldering large components, through-hole pins, and on PCBs — as the level of heat required to melt lead-free solder is high.

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Headphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT

When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Befor applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

TABLE OF CONTENTS

GENERAL SPECIFICATIONS

G-1	**TV System**	CRT	CRT Size / Visual Size		30 inch / 760mmV
			CRT Type		Flat (16:9)
			Magnetic Field BV/BH		+0.45G/0.18G
		Color System			NTSC
		Display Capability			1080i/540p
		Speaker			2 Speaker
			Position		Front
			Size		1.8 x 3.9 Inch
			Impedance		8 ohm
		Sound Output	MAX		5.0W+5.0W
			10%(Typical)		- W
		NTSC3.58+4.43 /PAL60Hz			No
G-2	**Tuning System**	Broadcasting System	Analog		US System M
			Digital		ATSC(8VSB)/QAM
		Tuner and	System		1Tuner
		Receive CH	Destination		USA(W/ CABLE)
		CH Coverage			2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84
		Intermediate	Digital		44.00MHz
		Frequency	Analog	Picture(FP)	45.75MHz
				Sound(FS)	41.25MHz
				FP-FS	4.50MHz
		Preset CH			No
		Stereo/Dual TV Sound			Yes
		Tuner Sound Muting			Yes
G-3	**Power**	Power Source	AC		120V AC 60Hz
			DC		
		Power Consumption		at AC	
					195 W at AC 120 V 60 Hz
			Stand by (at AC)		1 W at AC 120 V 60 Hz
			Per Year		-- kWh/Year
		Energy Star			Yes
		Protector	Power Fuse		Yes
			Safety Circuit		Yes
			IC Protector(Micro Fuse)		Yes
G-4	**Regulation**		Safety		UL
			Radiation		FCC
			X-Radiation		DHHS
G-5	**Temperature**		Operation		+5oC ~ +40oC
			Storage		-20oC ~ +60oC
G-6	**Operating Humidity**				Less than 80% RH
G-7	**OSD Language**				English French Spanish
G-8	**Clock and Timer**	Clock			Yes
		Sleep Timer	Max Time		120 Min
			Step		10 Min
		On Timer/Off Timer	Program		Yes(1 Program)
		Game Timer			Yes
		Wake Up Timer			No
		Timer Back-up (at Power Off Mode)	more than		-- Min Sec

GENERAL SPECIFICATIONS

G-9	**Remote Control**	Unit		RC-KK
		Glow in Dark Remocon		Yes
		Remocon Format		TOSHIBA
		Format		TOSHIBA
		Custom Code		40-BF h
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		44
		Keys	Power	Yes
			Input	Yes
			Display	Yes
			Mute	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			100 / +10	Yes
			CH Return / Ent	Yes
			CH +	Yes
			CH -	Yes
			VOL +	Yes
			VOL -	Yes
			SLEEP	Yes
			Picture Size	Yes
			UP	Yes
			LEFT / FAV -	Yes
			MENU/ENTER/DVD MENU	Yes
			RIGHT / FAV +	Yes
			DOWN	Yes
			EXIT	Yes
		Multi Brand Keys	TV	Yes
			CBL/SAT	Yes
			VCR	Yes
			DVD	Yes
			ENTER	Yes
			PAUSE	Yes
			PLAY	Yes
			STOP	Yes
			REW	Yes
			FF	Yes
			SKIP/SEARCH|<<	Yes
			SKIP/SEARCH>>|	Yes
			TOP MENU	Yes
			REC	Yes
			CLEAR	Yes
			TV/VCR	Yes

GENERAL SPECIFICATIONS

G-10	**Features**	Picture	Brightness, Contrast, Color, Tint, Sharpness		Yes
			Mode (Picture preference)		Yes
			Color Temperature		Yes
		Audio	MTS		Yes
			Tone Control (Bass, Treble, Balance)		Yes
			Stable Sound		Yes
			BBE		Yes(Digital)
			SRS WOW(SRS 3D/Focus/Tru Bass)		No
			Variable Audio Out		Yes
		Tuning	TV/CABLE		Yes
			CH Program		Yes
			Add/ Delete		Yes
		Label	CH Label		Yes
			Video Label		Yes
		Favorite CH			Yes
		Lock	Hotel Lock		No
			Channel Lock		Yes
			Video Lock		Yes
			Panel Lock		Yes
		Auto Shut Off			Yes
		Auto Setup			Yes
		Power On Memory			Yes
		V-Chip			Yes
			Type		USA, ORION Type
		RRT			No
		Image Tilt			Yes
		SVM Circuit			Yes
		Comb Filter			Yes 3 -D
		Cable Clear			Yes
		Cinema Mode			Yes
		Display Format			Yes
		Aspect			No
		Closed Caption			Yes
		CC Advance			Yes
		Picture Size			Yes
		Picture Scroll			Yes
		FBT Leak Test Protect			Yes
		Menu=Volume Up+Volume Down			Yes
		POD (Point Of Deployment)			No
		TV Guide (EPG)			No
		Digital Out	Dolby Digital		Yes
			MPEG		No
			PCM		Yes
			DTS		No
		HDMI Input			Yes
			VGA (640x480)		Yes (60Hz)
			720x480i (4:3)		Yes (60Hz)
			720x480i (16:9)		Yes (60Hz)
			720x480p (4:3)		Yes (60Hz)
			720x480p (16:9)		Yes (60Hz)
			720x576i (4:3)		No
			720x576i (16:9)		No
			720x576p (4:3)		No
			720x576p (16:9)		No
			1280x720p		Yes (60Hz)
			1920x1080i		Yes (60Hz)
		Component Input			Yes
			720x480i (4:3)		Yes (60Hz)
			720x480i (16:9)		Yes (60Hz)
			720x480p (4:3)		Yes (60Hz)
			720x480p (16:9)		Yes (60Hz)
			720x576i (4:3)		No
			720x576i (16:9)		No
			720x576p (4:3)		No
			720x576p (16:9)		No
			1280x720p		Yes (60Hz)
			1920x1080i		Yes (60Hz)

GENERAL SPECIFICATIONS

G-11	**Accessories**	Owner's Manual	Language	English / Spanish
			W/ Warranty	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	
			Terminal	
		Loop Antenna		No
			Terminal	-
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Station List		No
		Important Safety Instruction		No
		Dew/AHC Caution Sheet		No
		AC Plug Adapter		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-4 x 2 pcs
			OEM Brand	No
		AC Cord		No
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		Yes
		PTB Sheet		No
		ESP Card		No
		300 ohm to 75 ohm Antenna Adapter		No
		Information Sheet(for HDMI)		No
		Sheet Information(RETURN)		No
		Sheet Information(for IMPORTANT NOTICE)		Yes

GENERAL SPECIFICATIONS

G-12	**Interface**	Switch	Front	Power	Yes
				Channel Up/Menu Up	Yes
				Channel Down/Menu Down	Yes
				Volume Up/Menu Right	Yes
				Volume Down/Menu Left	Yes
		Indicator		Power	Yes(RED)
				Stand-by	No
				On Timer	No
		Terminals	Front	Video Input = VIDEO3	RCA
				Audio Input = VIDEO3	RCA x 2 (L/MONO,R)
				S Input = VIDEO3	Yes
				Other Terminal	No
			Rear	Video Input(Rear1) = VIDEO1	RCA
				Video Input(Rear2) = VIDEO2	RCA
				S Input = VIDEO1	Yes
				S Input = VIDEO2	Yes
				Audio Input(Rear1) = VIDEO1	RCA x 2 (L/MONO,R)
				Audio Input(Rear2) = VIDEO2	RCA x 2 (L/MONO,R)
				Video Output	No
				Audio Output	RCA x 2(Variable)
				Component Input1(w/ Analog Audio L/R)	RCA x 5 (L/MONO,R)
				Component Input2(w/ Analog Audio L/R)	RCA x 5 (L/MONO,R)
				HDMI Input1(w/ Analog Audio L/R)	HDMI x 1(RCA x 2 L/MONO,R)
				HDMI Input2(w/ Analog Audio L/R)	No
				Digital Audio Out	Coaxial x 1
				Cable Card Slot	No
				IR Blaster	No
				VHF/UHF Antenna Input	F Type
				AC Outlet	No
G-13	**Set Size**			Approx. W x D x H (mm)	796 x 563 x 549.2
G-14	**Weight**			Net (Approx.)	53.5 kg (118.0 lbs)
				Gross (Approx.)	62.0kg (136.7lbs)
G-15	**Carton**		Master Carton		No
				Content	--- Sets
				Material	-- /--
				Dimensions W x D x H(mm)	-- x -- x --
				Description of Origin	No
			Gift Box	Material	Double/Brown
				Dimensions W x D x H(mm)	916 x 691 x 711
				Description of Origin	No
			Drop Test		Natural Dropping At 1 Corner / 2 Edges / 4 Surfaces
				Height (cm)	40 (ORION SPEC:25)
			Container Stuffing		129 Sets/40' container
G-16	**Material**		Cabinet	Cabinet Front	PS 94V0 DECABROM
				Cabinet Rear	PS 94V0 NON-DECABROM
			PCB	Non-Halogen Demand	No
				Eyelet Demand	Yes
G-17	**Environment**		Environmental standard requirement (by buyer)		Green procurement of TOSHIBA
				Pb-free	Phase3(Phase3A)

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

* After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
* Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 1-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground.
   While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver.
   A cracking noise will be heard as the voltage is discharged.

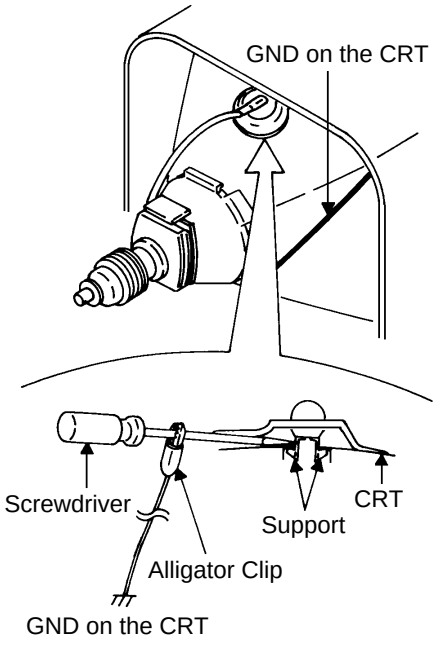


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. **(Refer to Fig. 1-2.)**

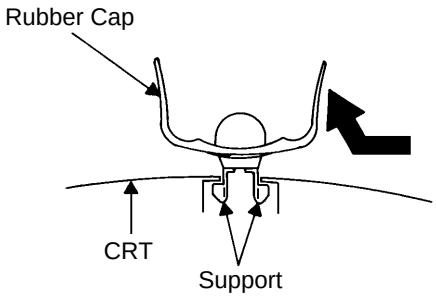


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 1-3.)**

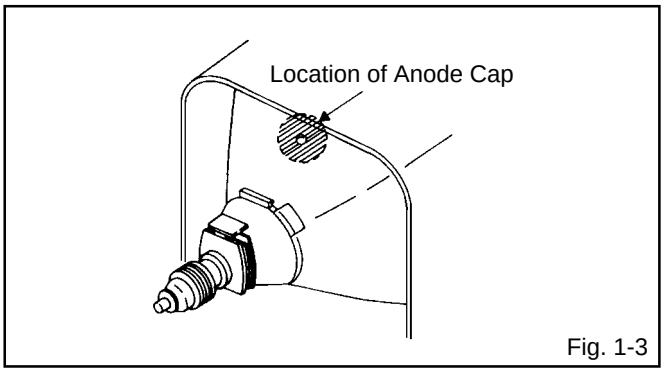


Fig. 1-3

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 1-4.)**

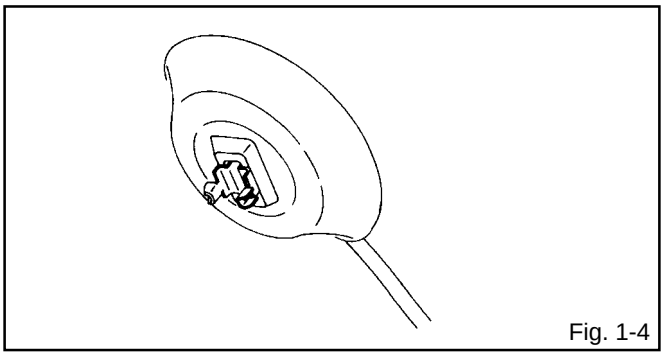


Fig. 1-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 1-5**.

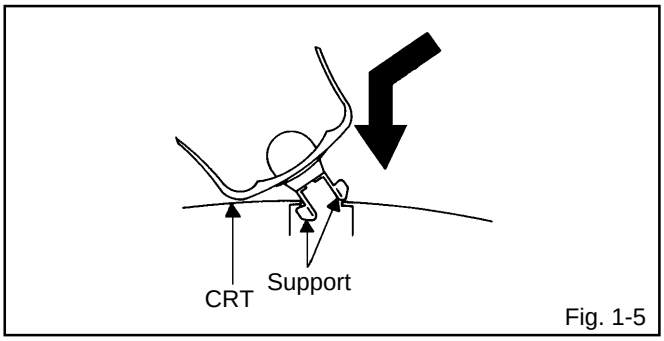


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

DISASSEMBLY INSTRUCTIONS

2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put the Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 2-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

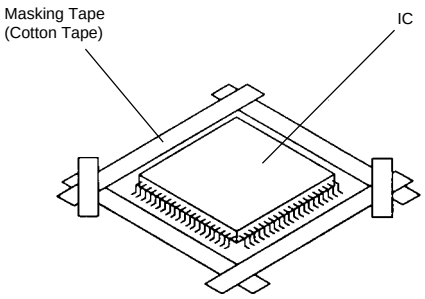


Fig. 2-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 2-2.)**

   NOTE

   Do not add the rotating and the back and forth directions force on the IC, until IC can move back and forth easily after desoldering the IC leads completely.

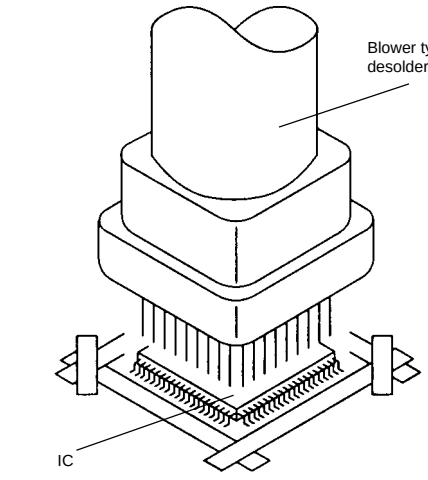


Fig. 2-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 2-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

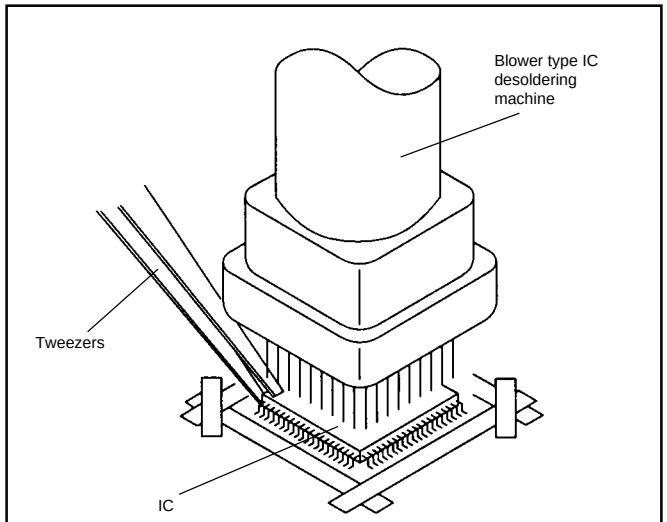


Fig. 2-3

4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 2-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

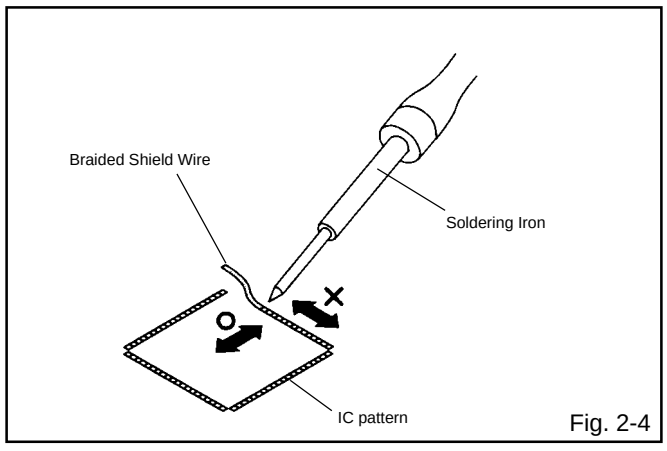


Fig. 2-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**

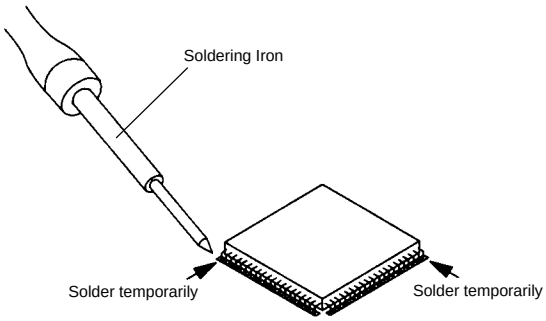


Fig. 2-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**

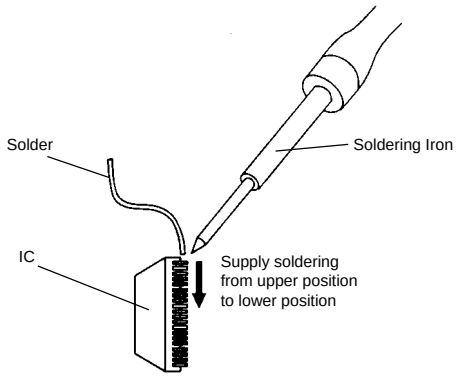


Fig. 2-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

   NOTE

   Do not absorb the solder to excess.

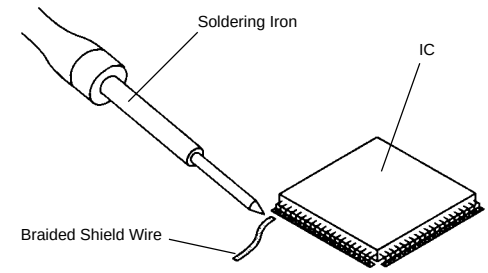


Fig. 2-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 2-8.)**

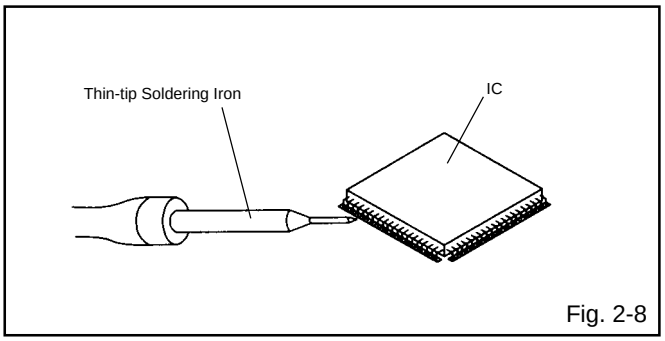


Fig. 2-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 2 seconds.

Set Key	Remocon Key	Operations
VOL. (-) MIN	0	Releasing of V-CHIP PASSWORD.
VOL. (-) MIN	1	Initialization of factory data. NOTE: Do not use this for normal servicing. If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
VOL. (-) MIN	8	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	6	Check for the firmware version. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

WHEN REPLACING EEPROM (MEMORY) IC

CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS, MICON VERSION AND DIGITAL TV MICON FIRMWARE VERSION

Initial total of MEMORY IC, POWER ON total hours, MICON VERSION and Digital TV MICON Firmware VERSION can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".
Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. To Confirm the check sum, press both VOL. DOWN button on the set and Channel button **(8)** on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, power on total hours, micon version and Digital TV MICON Firmware version, turn off the power.

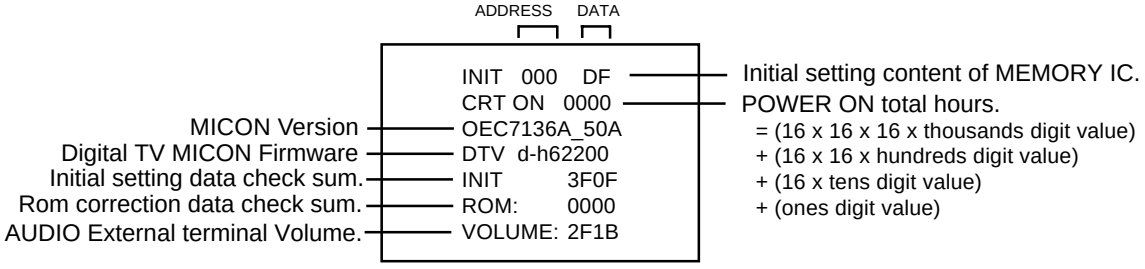


FIG. 1

WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	DF	A2	09	C5	E6	09	97	98	82	E4	03	03	0F	93	03	8C
10	00	05	60	70	00	00	00	00	00	D8	67	0F	15	07	00	00
20	72	00	01	20	00	00	00	00	00	00	00	0A	98	30	04	76
30	77	05	00	20	10	03	00	22	74	B1	01	07	07	00	00	00
40	8F	96	40	00	27	0A	EA	80	13	00	00	35	00	72	99	59
50	59	99	5E	00	79	14	0D	19	08	16	00	00	00	00	00	FE
60	08	D6	D9	DB	15	00	00	26	06	07	09	04	04	04	04	00
70	86	86	86	86	00	00	00	00	00	00	00	00	00	00	00	00
80	00	00	05	00	00	00	00	00	00	00	00	00	00	00	00	00
90	00	00	00	00	00	00	00	00	00	00	00	30	37	3F	44	46
A0	48	49	4A	4C	4E	4F	51	54	56	59	5B	5D	60	63	65	68
B0	6A	6B	6D	6E	6F	70	71	71	72	72	73	73	74	74	75	75
C0	75	75	76	76	77	77	78	78	78	78	79	79	79	79	7A	7A
D0	7B	7B	7C	7C	7C	7C	7D	7D	7D	7E	7E	00	00	00	04	00
E0	00	18	00	00	00	00	00	00	00	00	00	00	00	00	00	00
F0	00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
100	04	00	04	00	04	00	04	00	04	00	04	00	00	00	00	00
110	00	00	00	44	01	77	45	99	60	03	00	04	00	04	00	04
120	00	04	00	04	00	00	00	04	00	04	00	04	00	D0	04	00
130	04	00	04	00	00	00	00	00	00	00	00	00	00	00	00	00
140	00	00	00	00	00	00	00	00	00	00	00	03	03	14	00	00
150	63	2F	82	01	79	21	08	2A	04	04	04	04	00	84	84	84
160	84	00	04	04	04	04	00	84	84	84	84	00	00	00	00	00
170	00	00	00	00	85	00	00	00	00	00	00	00	00	00	00	00
180	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
190	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
200	01	01	01	00	01	01	10	1C	1C	02	01	00	18	0C	1C	15
210	02	01	00	---	---	---	---	---	---	---	---	---	---	---	---	---
0500	30	37	3F	44	46	48	49	4A	4C	4E	4F	51	54	56	59	5B
0510	5D	60	63	65	68	6A	6B	6D	6E	6F	70	71	71	72	72	73
0520	73	74	74	75	75	75	75	76	76	77	77	78	78	78	78	79
0530	79	79	79	7A	7A	7B	7B	7C	7C	7C	7C	7D	7D	7D	7D	7D
0540	16	1A	1D	20	23	26	29	2C	2F	32	35	38	3B	3E	41	44
0550	46	48	4A	4B	4C	4D	4E	4F	50	51	52	54	56	58	5A	5C
0560	5D	5E	5F	60	61	62	63	64	64	65	65	66	66	67	67	68
0570	68	68	68	69	69	69	69	6A	6A	6A	6A	6B	6B	6B	6B	6C

Table 1

WHEN REPLACING EEPROM (MEMORY) IC

CONFIRMATION OF INITIAL DATA

1. Enter DATA SET mode by setting VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 1.
3. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
4. Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
6. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 3 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

9. Turn POWER on.
10. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
11. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

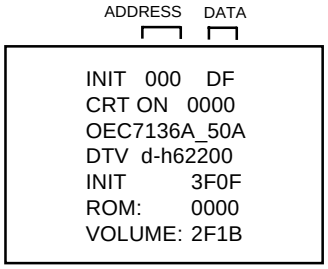
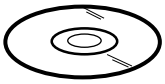


FIG. 1

RE-WRITE FOR DIGITAL SOFT FIRMWARE

JG176 USA HD DTV ROM DISC



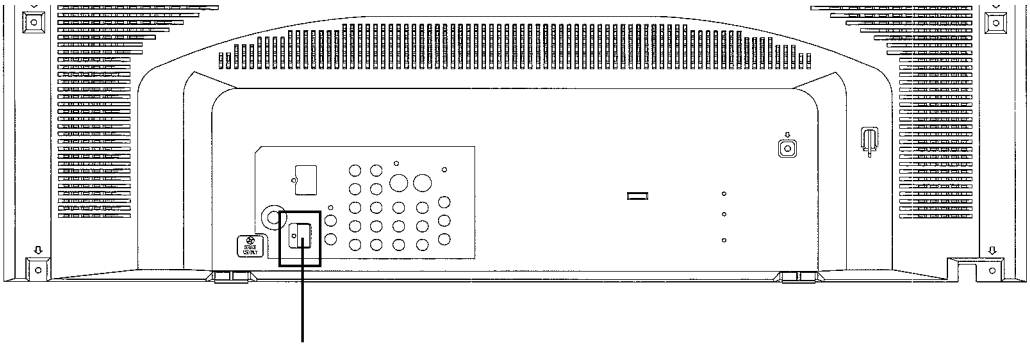
Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176105	USA HD DTV ROM DISC	Up-Date of the Firmware

NOTE: The operating manual for Re-writing is included in USA HD DTV ROM DISC (JG176).

Prepare the following tools for Up-Date of the Firmware.

1 Computer of WINDOWS2000
2 USB Flash Memory **(Use only SanDisk Cruzer Mini USB Flash Drive 256Mb)**

SET (REAR)



ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease (YG6260M) , remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Multi-sound Generator
4. Pattern Generator

On-Screen Display Adjustment

1. In the condition of NO indication on the screen.
2. Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

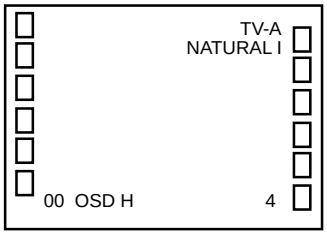


Fig. 1-1

3. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for AV, CS, HD-MI and DIGITAL mode, press the TV/VIDEO button on the remote control to set to the AV, CS, DIGITAL and HD-MI mode. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION	NO.	FUNCTION
00	OSD H	20	CORNER	40	R-Y PHASE
01	CUT OFF	21	C.PARA	41	G-Y GAIN
02	H.POSI	22	C.SAW	42	G-Y PHASE
03	V.POSI	23	V.SYMM	43	BRI.CENT
04	H. SIZE	24	R.BIAS	44	BRI.MAX
05	V. SIZE	25	G.BIAS	45	BRI.MIN
06	V. LIN	26	B.BIAS	46	CONT.CENT
07	V-EHT	27	R.DRV	47	CONT.MAX
08	H-EHT	28	B.DRV	48	CONT.MIN
09	V-BLK P	29	R.BIAS(C)	49	COL.CENT
10	V-BLK S	30	G.BIAS(C)	50	COL.MAX
11	V.CENT	31	B.BIAS(C)	51	COL.MIN
12	V.LIMIT	32	R.DRV(C)	52	SUB CONT
13	V.CORR	33	B.DRV(C)	53	TINT
14	V.S.CORR	34	R.BIAS(W)	54	SHARP.CENT
15	EW PARA	35	G.BIAS(W)	55	SHARP.MAX
16	TRAPEZIUM	36	B.BIAS(W)	56	SHARP.MIN
17	COR.TOP	37	R.DRV(W)	57	TILT.CENT
18	COR.BTM	38	B.DRV(W)	58	TEST STEREO
19	S.CORR	39	R-Y GAIN	59	TEST AUDIO

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CUT OFF

1. Place the set in Aging Test for more than 15 minutes.
2. Place the set in AV MODE without signal.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(01)** on the remote control to select "CUT OFF".
5. Adjust the **Screen Volume** until a dim raster is obtained.

2-2: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(24)** on the remote control to select “R.BIAS”.
5. Press the CH. UP/DOWN button on the remote control to select the “R.BIAS”, “G.BIAS”, “B.BIAS”, “R.DRV”, “B.DRV”, “R.BIAS(C)”, “G.BIAS(C)”, “B.BIAS(C)”, “R.DRV(C)”, “B.DRV(C)”, “R.BIAS(W)”, “G.BIAS(W)”, “B.BIAS(W)”, “R.DRV(W)” or “B.DRV(W)”.
6. Adjust the VOL. UP/DOWN button on the remote control to whiten the R.BIAS, G.BIAS, B.BIAS, R.DRV, B.DRV, R.BIAS(C), G.BIAS(C), B.BIAS(C), R.DRV(C), B.DRV(C), R.BIAS(W), G.BIAS(W), B.BIAS(W), R.DRV(W) and B.DRV(W)”at each step tone sections equally.
7. Perform the above adjustments 5 and 6 until the white color is achieved.

ELECTRICAL ADJUSTMENTS

2-3: DOUBLE FOCUS

1. Receive the cross hatch signal from the Pattern Generator.
2. Turn the **F1 VR** and **F2 VR** fully clockwise once. **(Refer to Fig. 2-1)**
3. Adjust the **F1 VR** so that the screen becomes clearest. Then adjust the **F2 VR**.

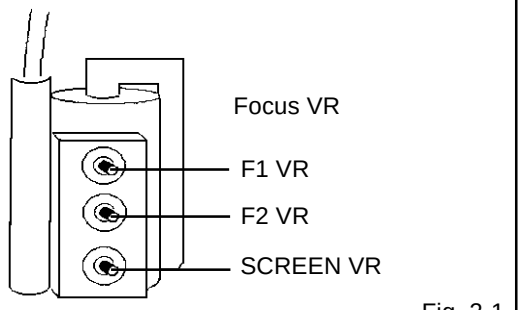


Fig. 2-1

2-4: BRIGHT CENT

1. Receive the monoscope pattern. (RF Input)
2. Press the PIC SIZE button on the remote control to select the FULL screen mode.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "BRI CENT".
5. Press the UP/DOWN button on the remote control until the white 5.4% is starting to be visible.
6. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~5.
7. Receive the monoscope pattern.
8. Press the TV/VIDEO button on the remote control to set to the CS mode.Then perform the above adjustments 2~5.
9. Receive the monoscope pattern.
10. Press the TV/VIDEO button on the remote control to set to the HD-MI mode.Then perform the above adjustments 2~5.

2-5: SUB CONTRAST

1. Set the screen mode to FULL.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(52)** on the remote control to select "SUB CONT".
3. Check if the step No. SUB CONT is "16".
4. Receive a broadcast and check if the picture is normal.
5. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 1~4.
6. Press the TV/VIDEO button on the remote control to set to the CS mode. Then perform the above adjustments 1~4.
7. Press the TV/VIDEO button on the remote control to set to the HD-MI mode. Then perform the above adjustments 1~4.

2-6: HORIZONTAL POSITION/ HORIZONTAL SIZE

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the VOL. UP/DOWN button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Press the PIC SIZE button on the remote control to select the FULL screen mode.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "H.POSI".
7. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes becomes minimum.
8. Receive the monoscope pattern.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(04)** on the remote control to select “H. SIZE”.
10. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes 8±3%.

2-7: VERTICAL CENT/ VERTICAL SIZE

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the VOL. UP/DOWN button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Press the PIC SIZE button on the remote control to select the FULL screen mode.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(11)** on the remote control to select “V. CENT”.
8. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shadow mask. **(Refer to Fig. 2-2)**
9. Receive the monoscope pattern.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select “V. SIZE”.
11. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8±3%.

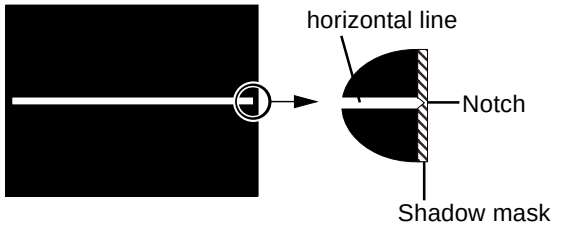


Fig. 2-2

ELECTRICAL ADJUSTMENTS

2-8: E/W PARA

1. Receive the crosshatch signal from the Pattern Generator.
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(15)** on the remote control to select “EW PARA”.
5. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.
6. Set the screen mode to 16:9.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-9: TRAPEZIUM

1. Receive the crosshatch signal from the Pattern Generator.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the VOL. UP/DOWN button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(16)** on the remote control to select “TRAPEZIUM”.
8. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-10: COR TOP/BTM

1. Receive the crosshatch signal from the Pattern Generator.
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(17)** on the remote control to select “COR. TOP”.
5. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(18)** on the remote control to select “COR. BTM”.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-11: OSD POSITION

1. Receive the monoscope pattern from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(00)** on the remote control to select "OSD H".
4. Press the LEFT/RIGHT button on the remote control until the difference of A and B becomes minimum. **(Refer to Fig. 2-3)**

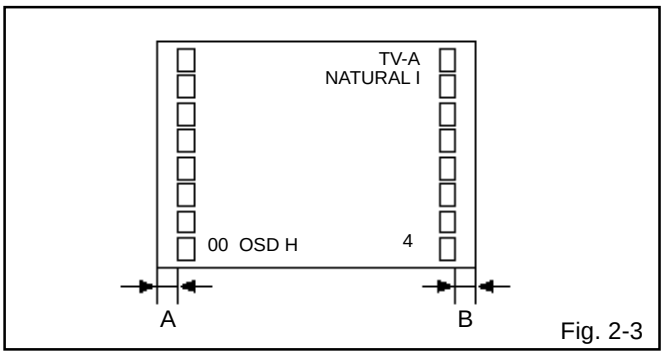


Fig. 2-3

2-12: TINT/COLOR CENT

1. Receive the ANALOG color bar pattern.
2. Connect the oscilloscope to **TP806**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(53)** on the remote control to select "TINT".
4. Press the VOL. UP/DOWN button on the remote control until the section "A" becomes as straight line. **(Refer to Fig. 2-4)**
5. Connect the oscilloscope to **TP805**.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(49)** on the remote control to select "COL.CENT".
7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 110 ± 10% of the white level. **(Refer to Fig. 2-5)**
8. Please check whether the waveform of **TP806** is straight line. If is not a straight line, adjust to TINT again.
9. Receive the DIGITAL color bar pattern.
10. Then perform the above adjustments 2~8.
11. Receive the color bar pattern. (Audio Video Input)
12. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~8.
13. Receive the color bar pattern.
14. Press the TV/VIDEO button on the remote control to set to the CS mode. Then perform the above adjustments 2~8.
15. Receive the color bar pattern.
16. Press the TV/VIDEO button on the remote control to set to the HD-MI mode. Then perform the above adjustments 2~8.

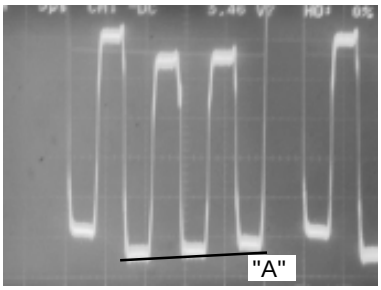


Fig. 2-4

ELECTRICAL ADJUSTMENTS

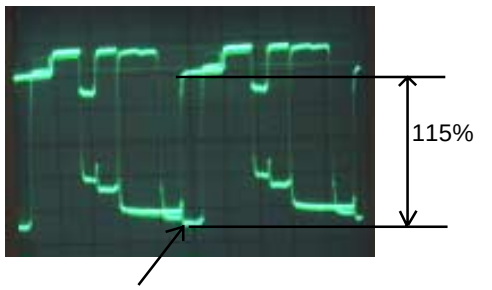


Fig. 2-5

2-13: TILT

1. Connect the digital voltmeter between **W843** and **W844**.
2. Receive the crosshatch signal from the Pattern Generator.
3. Press the PIC SIZE button on the remote control to select the FULL screen mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(57)** on the remote control to select "TILT CENT".
6. Press the VOL. UP/DOWN button on the remote control until the voltage become minimum(0V).

2-14: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below.

NO.	FUNCTION	RF	AV	CS	HD-MI	DIGITAL
03	V.POSI	01	01	01	01	01
07	V-EHT	05	05	05	05	05
08	H-EHT	06	06	06	06	06
09	V-BLK P	00	00	00	00	00
10	V-BLK S	00	00	00	00	00
12	V.LIMIT	00	00	00	00	00
13	V.CORR	10	10	10	10	10
14	V.S.CORR	45	45	45	45	45
19	S.CORR	22	22	22	22	22
20	CORNER	20	20	20	20	20
21	C.PARA	07	07	07	07	07
22	C.SAW	07	07	07	07	07
23	V.SYMM	128	128	128	128	128
39	R-Y GAIN	15	15	15	15	15
40	R-Y PHASE	15	15	15	15	15
41	G-Y GAIN	03	03	03	03	03
42	G-Y PHASE	00	00	00	00	00
44	BRI.MAX	210	210	210	210	210
45	BRI.MIN	100	100	100	100	100
46	CONT.CENT	65	65	65	65	65
47	CONT.MAX	80	80	80	80	80
48	CONT.MIN	30	30	30	30	30
50	COL.MAX	100	100	95	90	100
51	COL.MIN	00	00	00	00	00
54	SHARP.CENT	77	77	77	77	77
55	SHARP.MAX	127	127	127	127	127
56	SHARP.MIN	00	00	00	00	00
58	TEST STEREO	00	00	00	00	00
59	TEST AUDIO	00	00	00	00	00

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue color.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

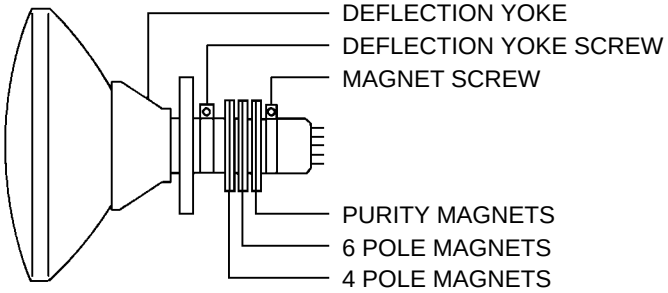


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**

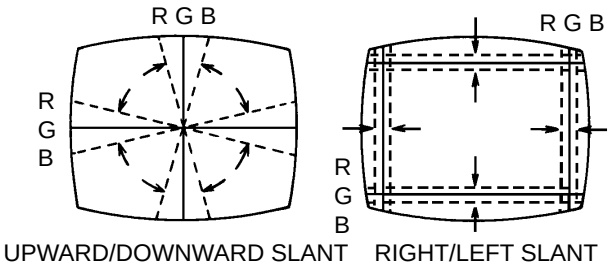


Fig. 3-2-a

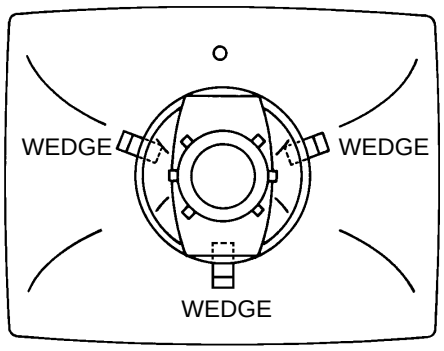
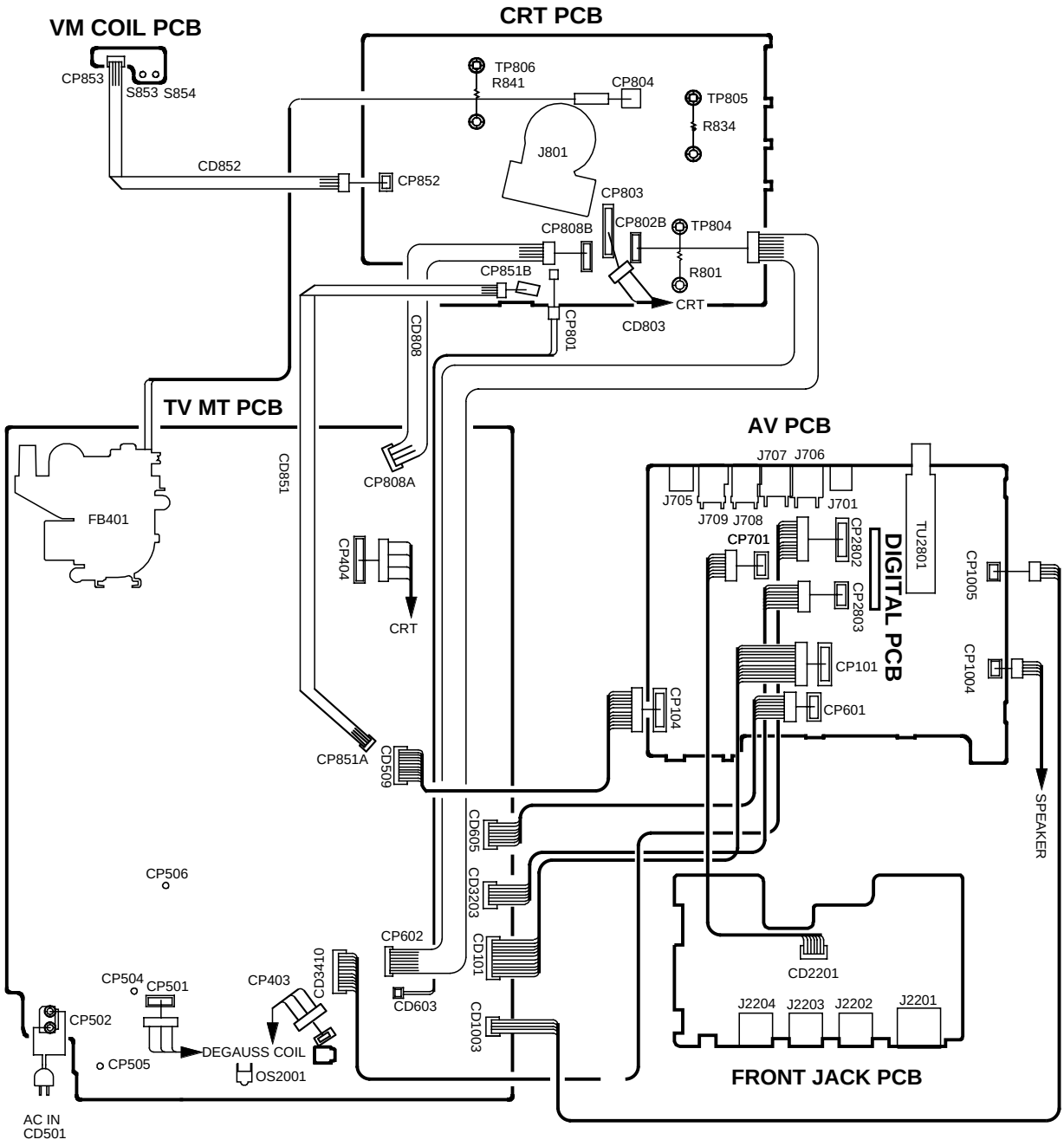


Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

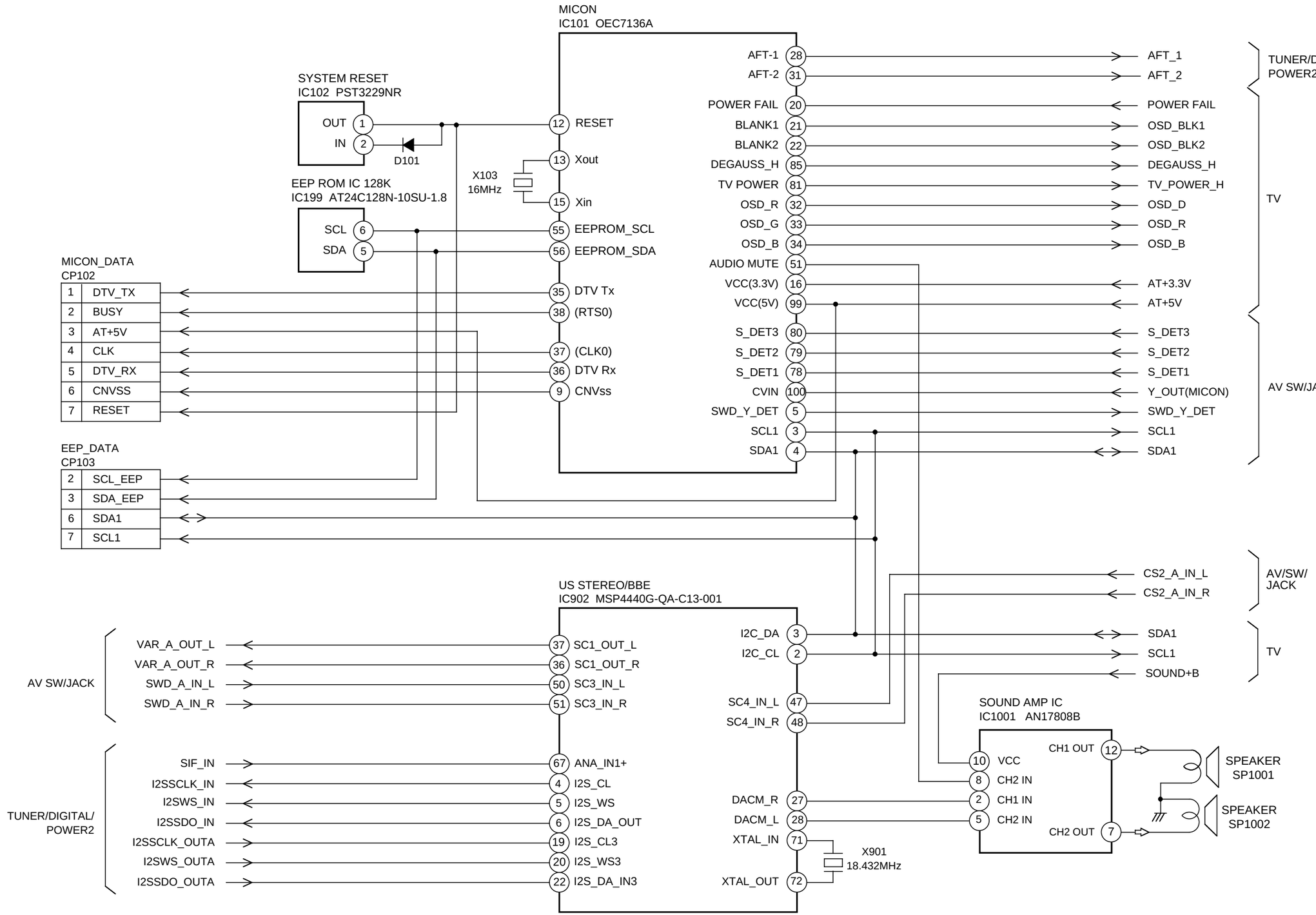
4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



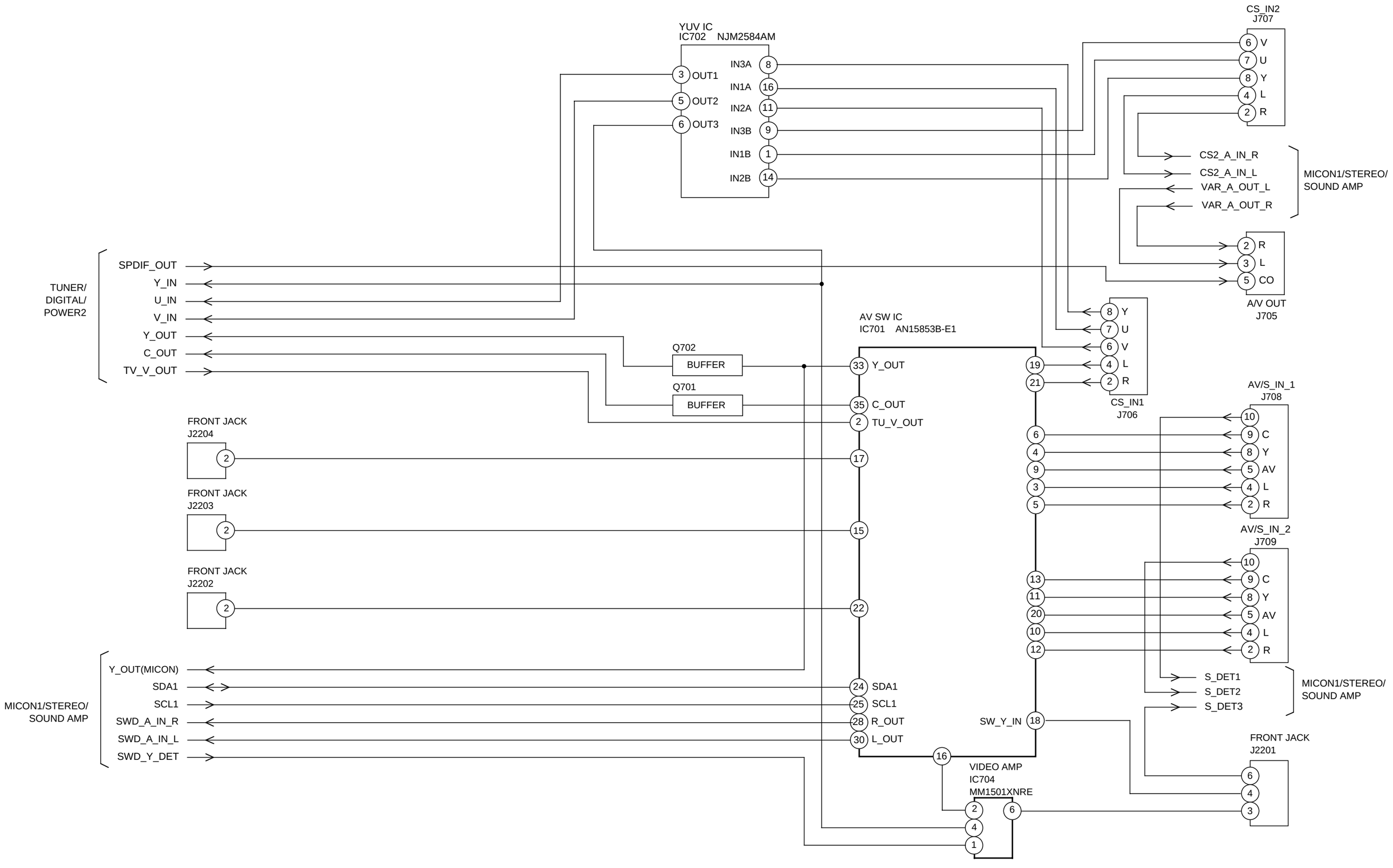
TV BLOCK DIAGRAM

RY501
DEGAUSS RELAY
CD507
DEGAUSS COIL
Q503
RELAY DRIVE
CD501
AC IN
F501
D506, D507
D510, D511
TRANSFORMER
T501
Q513
REGULATOR
Q514
SW
POWER FAIL
DTV_POWER_ON-H
AT+5V_A
AT+30V
AT+4V
AT+5V
AT+3.3V
AT+5V
TUNER/DIGITAL/
POWER2
MICON1/STEREO/
SOUND AMP
RY502
DEGAUSS RELAY
Q502
RELAY DRIVE
POWER CTL.
IC502
STR-W6753
FEED BACK
IC503
PS2561AL1-1-V(W)
REGULATOR
IC504
KIA431A-AT
REGULATOR
IC506
KIA431A-AT
D520~D523
D525~D528
TRANSFORMER
T502
REGULATOR
IC505
KIA278R09PI
FEED BACK
IC501
PS2561AL1-1-V(W)
Q504, Q505
SWITCHING
SOUND+B
MICON1/STEREO/
SOUND AMP
PROGRESSIVE IC
IC603 TA1360ANG
DEGAUSS_H
TV_POWER_H
OSD_BLK1
OSD_BLK2
OSD_R
OSD_G
OSD_B
SDA1
SCL1
MICON1/
STEREO/
SOUND AMP
19 DEF/DAC Vcc
55 Y/C Vcc
50 Ys2(ANALOG OSD)
51 Ys1(ANALOG OSD)
52 Ym/P-MUTE/BLK
39 ANALOG OSD R IN
38 ANALOG OSD G IN
37 ANALOG OSD B IN
31 SDA
30 SCL
14 SYNC IN
3 Y1 IN
4 Cb1/Pb1 IN
5 Cr1/Pr1 IN
Y_OUT
U_OUT
Y_OUT
TUNER/DIGITAL/
POWER2
R OUT 43
G OUT 42
B OUT 41
VSM OUT 54
VP OUT 27
H-OUT 26
Q606
BUFFER
Q802, Q811
RED AMP
Q607
BUFFER
Q801, Q810
GREEN AMP
Q608
BUFFER
Q803, Q812
BLUE AMP
Q605
BUFFER
Q852, Q853, Q860
AMP
PIN CUSHION
IC602 TA1317ANG
V.OUTPUT
IC401 LA78041
Q401
H.DRIVE
T401
Q403
FL OUT
J801
Q854~Q859
SW
V801
CRT
DY
FB401
HV
S
F1
F2
DF
SF

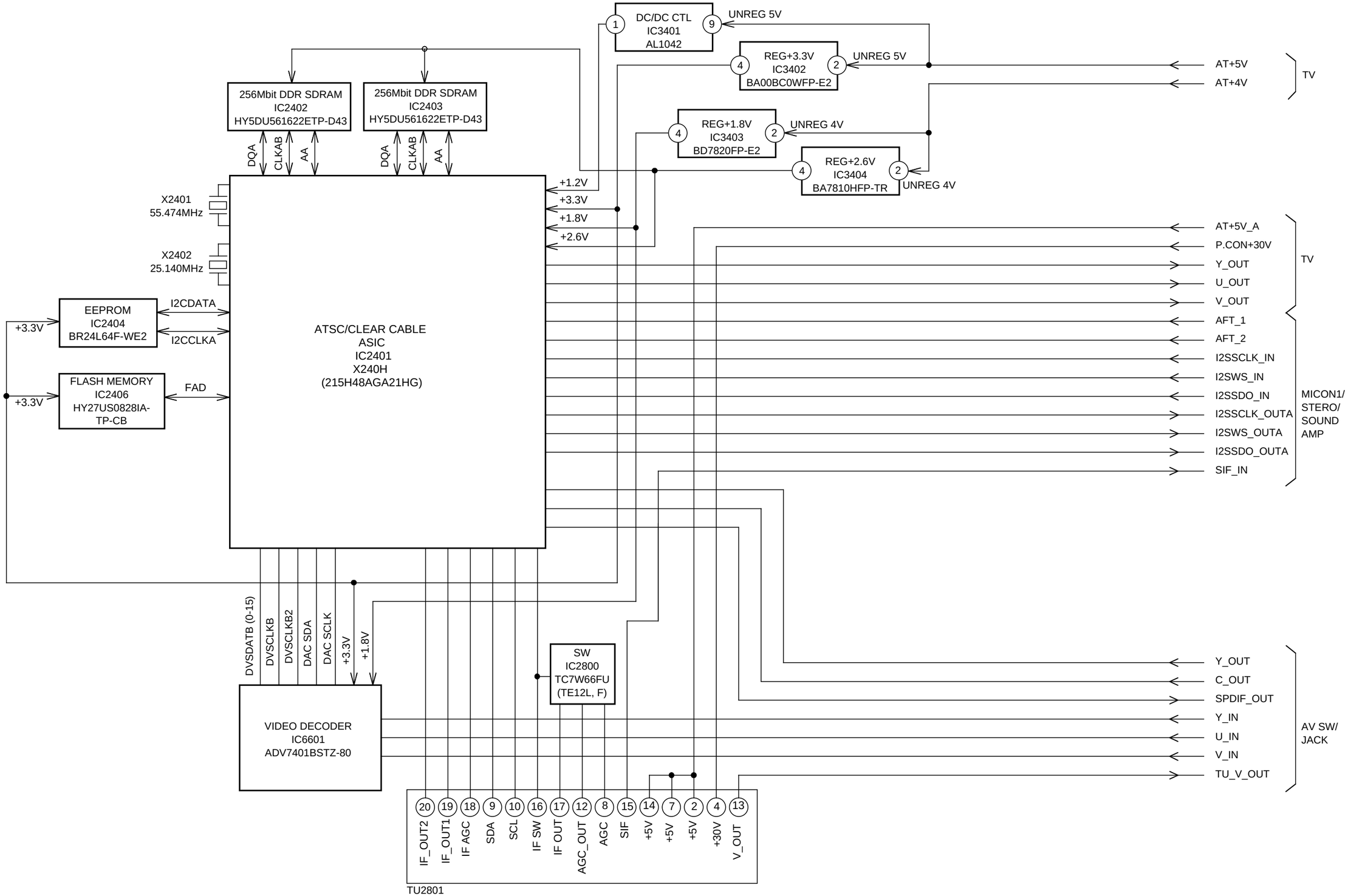
MICON1/STEREO/SOUND AMP BLOCK DIAGRAM



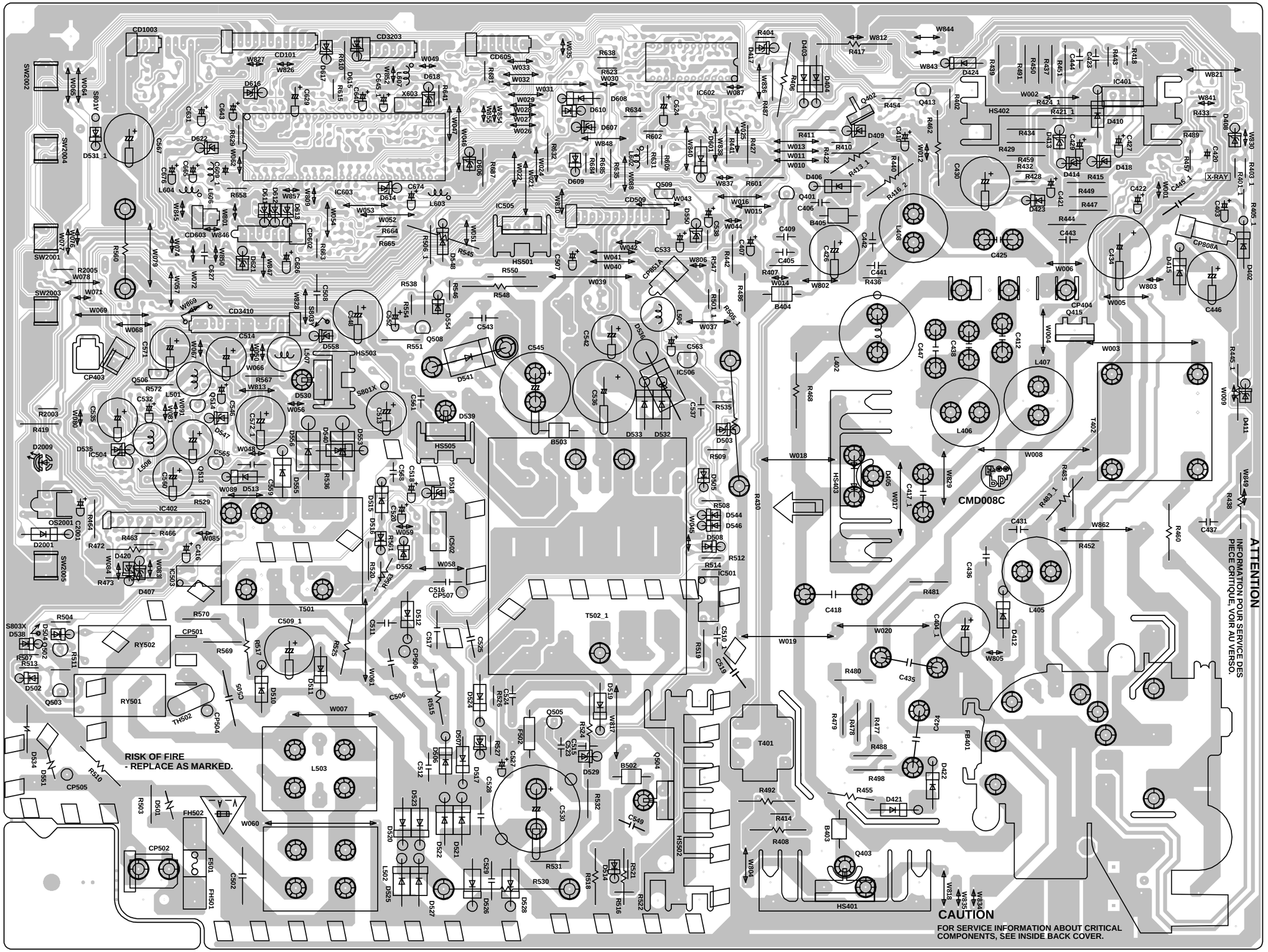
AV SW/JACK BLOCK DIAGRAM



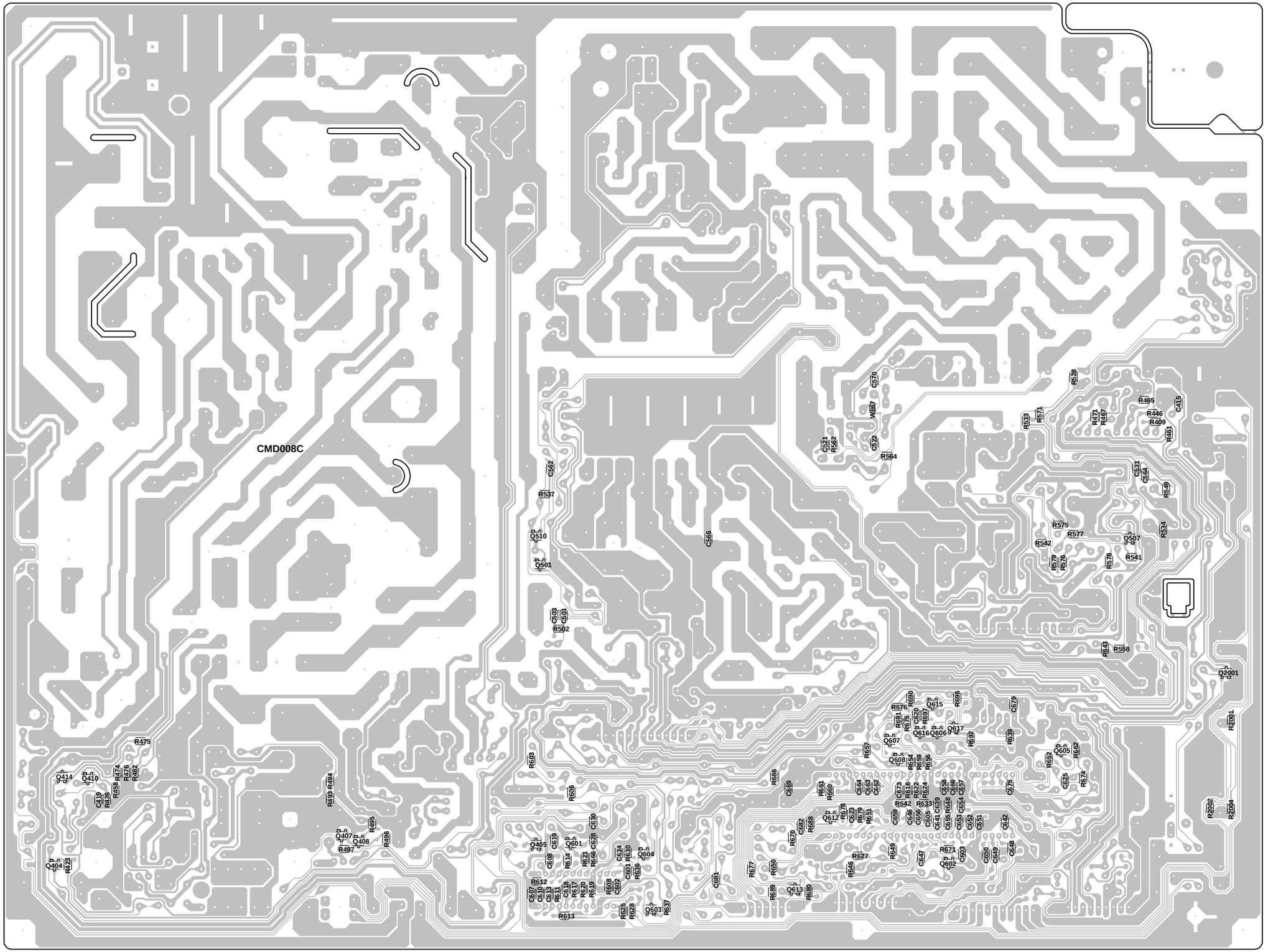
TUNER/DIGITAL/POWER2 BLOCK DIAGRAM



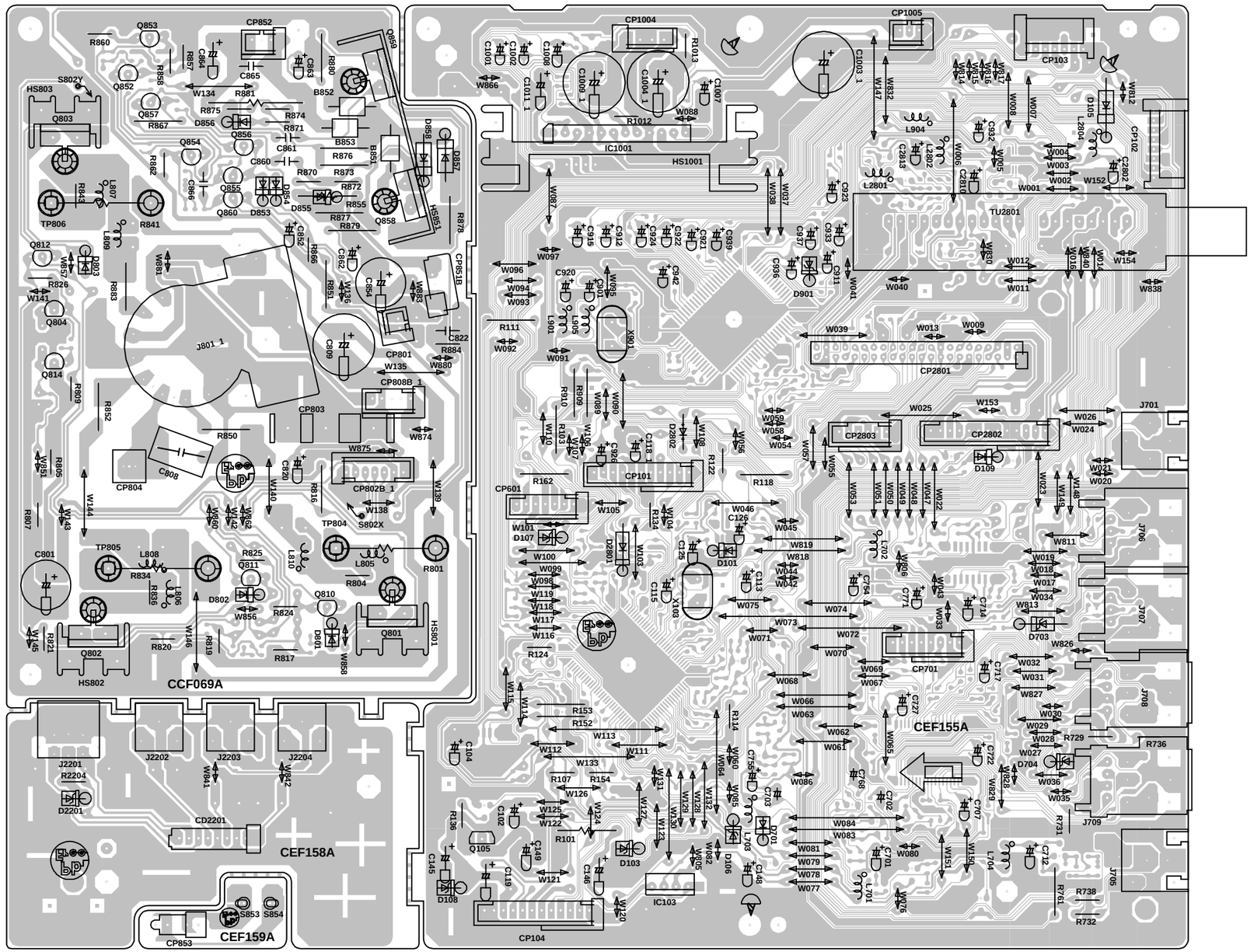
PRINTED CIRCUIT BOARDS
TV MT (INSERTED PARTS)
SOLDER SIDE



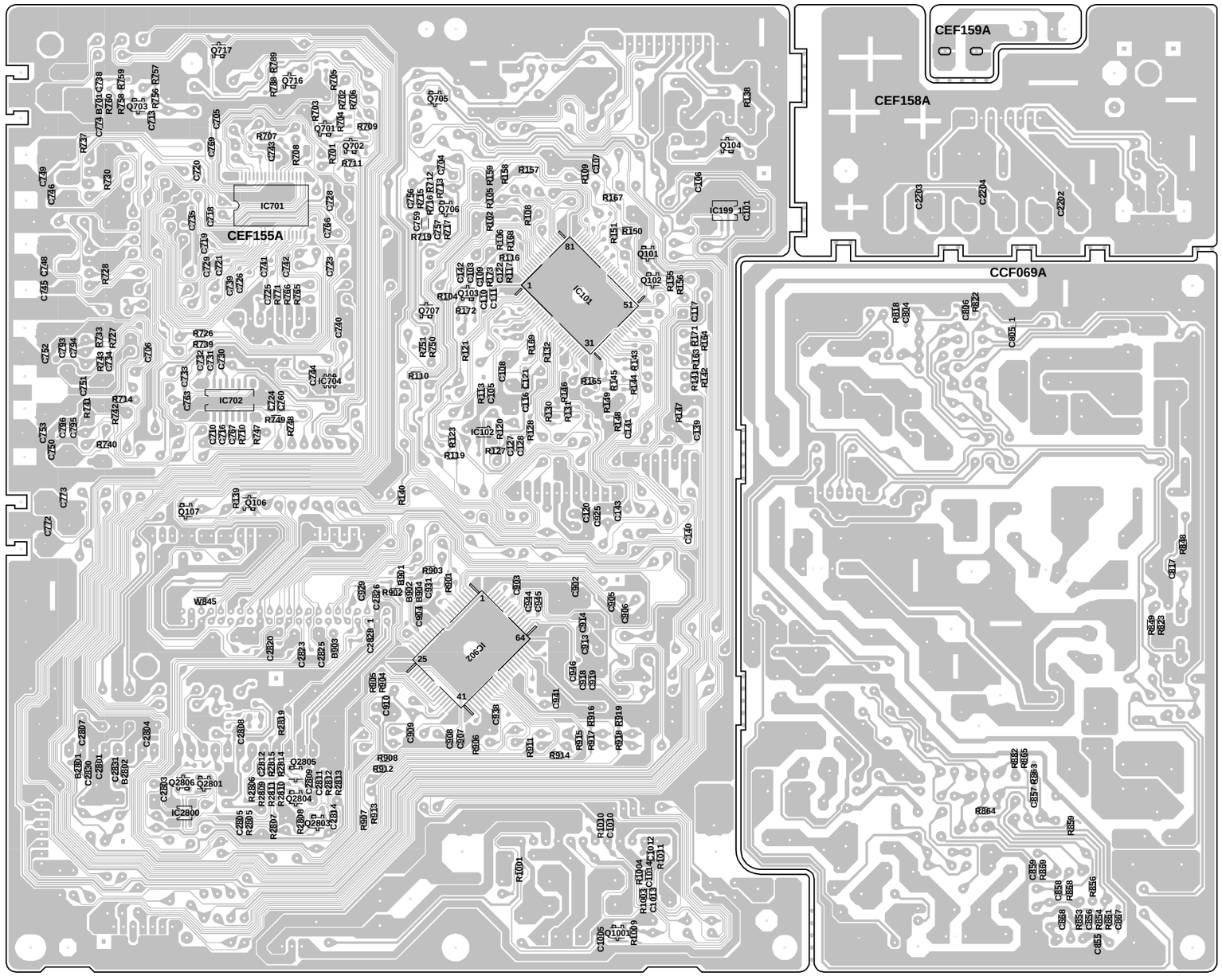
PRINTED CIRCUIT BOARDS
TV MT (CHIP MOUNTED PARTS)
SOLDER SIDE



PRINTED CIRCUIT BOARDS
AV/CRT/VM COIL/FRONT JACK (INSERTED PARTS)
SOLDER SIDE



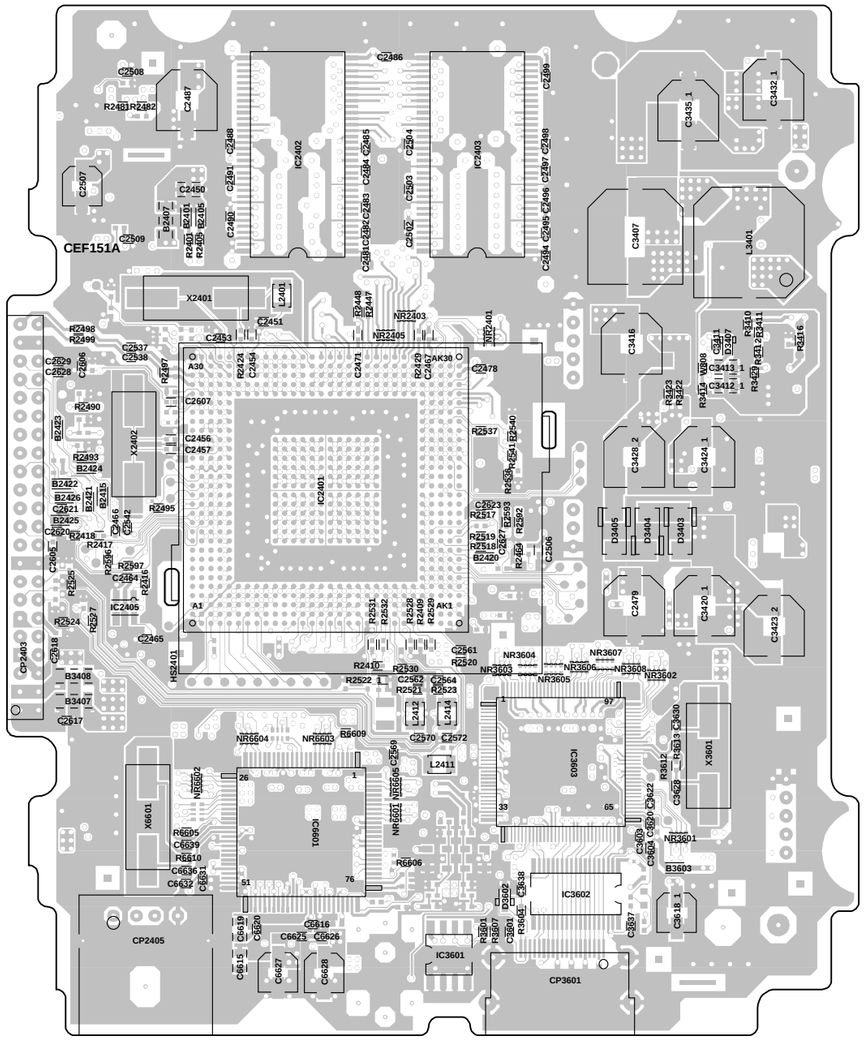
PRINTED CIRCUIT BOARDS
AV/CRT/VM COIL/FRONT JACK (CHIP MOUNTED PARTS)
SOLDER SIDE



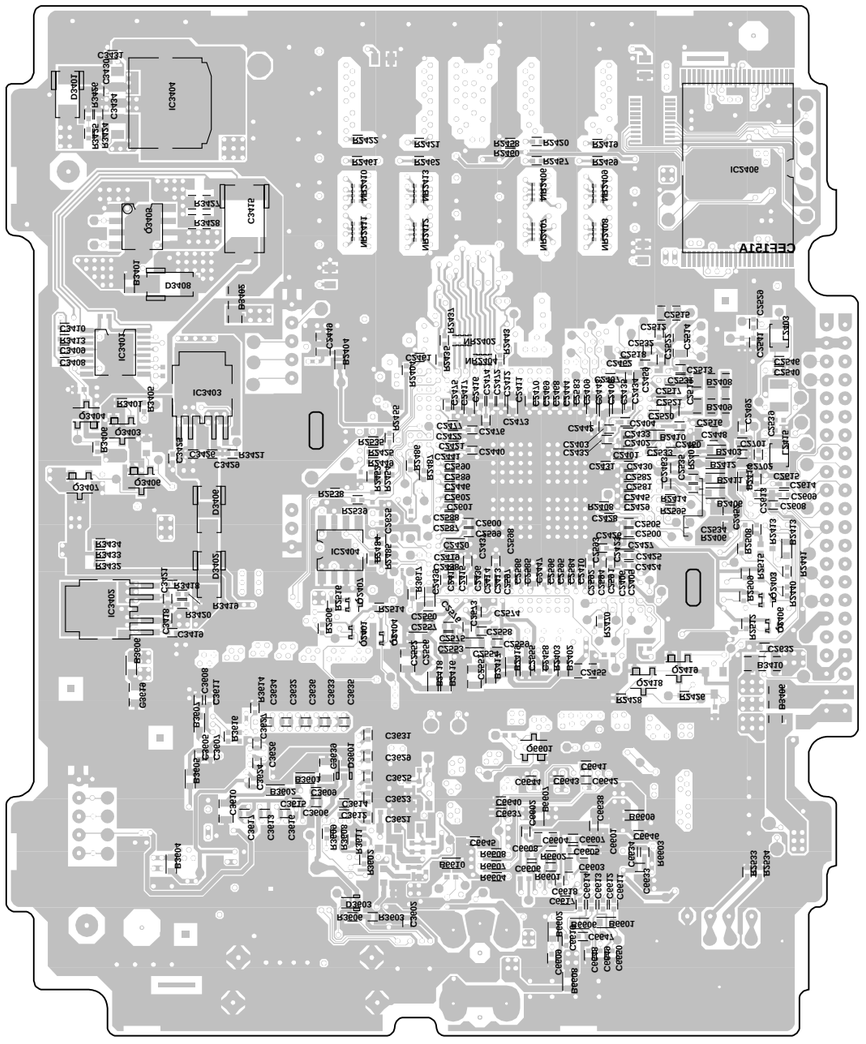
F-7

PRINTED CIRCUIT BOARDS

DIGITAL (TOP SIDE)



DIGITAL (BOTTOM SIDE)



CHROMA/PROGRESSIVE/PIN SCHEMATIC DIAGRAM

(TV MT PCB)

FROM/TO OPERATION

SCL1
SDA1
Y_OUT
PB_OUT
PR_OUT

FROM/TO TV POWER

GND
P.CON+5V
UNREG+12V
P.CON+9V

FROM/TO DEFLECTION

ACL
ACL_PIN
H_DRV+B
V_F/B
EW_F/B
CENTER_DAC
EW_OUT
AFC
H.OUT

FROM/TO CRT/SVM

CP602(CP802B_1)
B2013H02-7P

CUT_OFF(9V)	7
GND(SIGNAL)	6
R.OUT	5
G.OUT	4
B.OUT	3
NC	2
P.CON+12V	1

FROM/TO CRT/SVM

CD603 (CP801)
CU225201

VM COIL	1
GND	2

FROM/TO OPERATION

OSD_BLK1
OSD_BLK2
OSD_R
OSD_G
OSD_B
H_SYNC
V_SYNC

FROM/TO DEFLECTION

ABL_SW1

PCB070
CMD008

PROGRESSIVE IC
IC603
TA1360ANG

1	DARK AREA DET FILTER	56	APL FILTER
2	BPH FILTER	55	Y/C Vcc
3	Y1 IN	54	VSM OUT
4	Cb1/Pb1 IN	53	ABCL IN
5	Cr1/Pr1 IN	52	Ym/P-MUTE/BLK
6	Y/C GND	51	Ys1(ANALOG OSD)
7	LIGHT AREA DET FILTER	50	Ys2(ANALOG OSD)
8	Y2 IN	49	Ys3(ANALOG RGB)
9	Cb2/Pb2 IN	48	R S/H
10	Cr2/Pr2 IN	47	G S/H
11	COLOR LIMITER	46	B S/H
12	VSM FILTER	45	Ik IN
13	H-FREQ SW1	44	RGB GND
14	SYNC IN	43	R OUT
15	VD IN	42	G OUT
16	HD IN	41	B OUT
17	SCP IN	40	RGB Vcc
18	CP OUT	39	ANALOG OSD R IN
19	DEF/DAC Vcc	38	ANALOG OSD G IN
20	AFC FILTER	37	ANALOG OSD B IN
21	H VCO	36	DAC2 (ACB PLUSE)
22	H-FREQ SW2	35	ANALOG R IN
23	H CURVE CORRECTION	34	ANALOG G IN
24	FBP IN	33	ANALOG B IN
25	DEF/DAC GND	32	I2L GND
26	H-OUT	31	SDA
27	VP OUT	30	SCL
28	DAC1(SYNC OUT)	29	I2L Vdd

PIN CUSHION
IC602
TA1317ANG

1	Vref	2	CENTER DAC	3	EHT IN	4	V DRIVE	5	V-DC REF	6	V NF	7	Vcc	8	EW PWN	9	ANALOG GND	10	EW FD	11	EW FILTER	12	FBP IN
24	AGC FILTER	23	V RAMP FILTER	22	TC FILTER	21	Vin	20	BLK OUT	19	CENTER OUT	18	V-DF OUT	17	LVP IN	16	H-DF OUT	15	DIGITAL GND	14	SCL	13	SDA

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

G-1

G-2

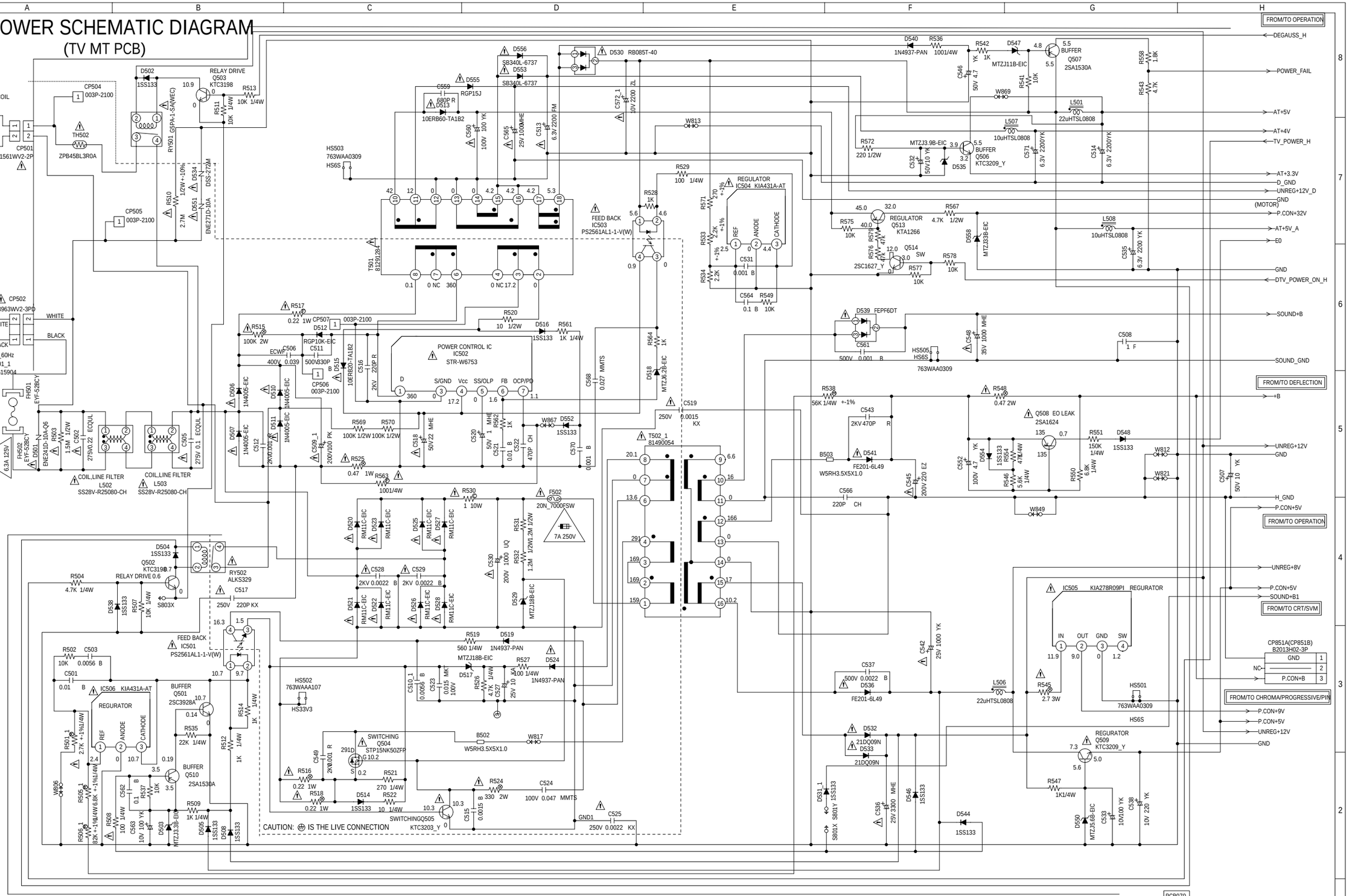
DEFLECTION SCHEMATIC DIAGRAM

(TV MT PCB)

TO TILT COIL
CP403 A2502WV2-2P
1 TILT_DR[+]
2 TILT_DR[-]
T1 W843
T2 W844
TILT TEST
R464 10 1/2W
C415 0.33 B
OP AMP IC402 LA6510
VSENCE1 OUT1 VIN1 +VIN1 VEE +VIN2 -VIN2 OUT2 VSENCE2 VCC
11.5 11.9 4.2 2.9 0 4.5 4.2 11.9 11.5 13.5
R409 2.2
R446 180K
R463 15K 1/4W
R466 10K 1/4W
R467 120K
R471 2.2
C416 16V 100 YK
R472 12 1W
R473 12 1W
R461 18K
R465 8.3K
R419 1K 1/4W
D407 MTZJ15B-EIC
D420 MTZJ15B-EIC
V.OUTPUT IC401 LA78041
THERMAL PROTECTION
AMP
PUMP UP
VCC GND
4.0 25.0 0 0 12.0 25.0 4.0
C427 35V 100 YK
R418 1.2K 1/4W
C423 500V 10P SL
D410 11E1-EIC
R443 1.2K 1/4W
HS402 763WAAA105 HS33V2
R424_1 18K +-1% 1/4W
R432 18K 1/4W
C429 35V 100 YK
D418 MTZJ33B-EIC
R421_1 18K +-1% 1/4W
R428 680 1/4W
C421 50V 4.7K
C430 25V 2200 MHE
R429 2.2 1/2W
R434 2.2 1/2W
R459 2.7 1/2W
D413 MTZJ33B-EIC
C444 100V 0.22 MKT
R451 1 1/2W
R462 220 3W
D414 MTZJ33B-EIC
R447 560 1/2W
R449 560 1/2W
R415 560 1/2W
C443 100V 0.12 MKT
R450 1.5K 1/2W
R491 1.5K 1/2W
R437 1.5K 1/2W
R439 2.2K 1/2W
R454 1K 1/4W
R423 100
Q404 2SC3928A BUFFER 3.6 12.0 3.0
FROM/TO DY
CP404 B06B-DVS-L_(LF)
6 5 NG 4 3 NG 2 1
L402 ELH5L7150N
R455 68 1/2W
R468 470 2W
D421 RGP02-16E
D422 RGP02-16E
R457 8.2K 1/4W
R433 8.2K 1/4W
V.PARA BORA Q410 2SC3928A 21.6 1.1 0.6
V.PARA BORA Q414 2SC3928A 25.6 21.6 21.1
C420 50V 10 NA
C422 25V 47 YK
R458 1.2K
R489 1.2K 1/4W
R474 10K
R476 10K
Q415 2SC4634 V.PARABORA 3.9 3.3
R426 4.7K
C419 0.056 B
W841
R475 56K
R488 220K 1/2W
R477 47K 1/2W
R478 47K 1/2W
R479 150K 1/2W
R480 150K 1/2W
R481 270K 1/2W
C424 1.5KV 0.0068 MPP
C435 1.5KV 0.0068 MPP
R482 2.7K
FB401 3730001F
1300 COL
205 E180
135 B+
NC DAF
105.0 AFC
0 HEATER
0 GND
NC E15
27.0 E25
ABL
W862
L405 ELC18B391L
R483_1 22 2W
C401 1000 0.033 MMTS
R485 12K 1/2W
T402 86290014
0.1 367
386 NC
370 NC
9.5 401
R460 220 1/2W +-10%
TO CRT
CD803 (CP803) CU83036A
1 2 3
5 7 1
11 6 8 10 9
B G R
V801 W76QEP270XVBL
ANORD
FOCUS 1
FOCUS 2
SCREEN
FROM/TO CRT/SVM
CP808A(CP808B_1) B2013H02-5P
180V 1
NC 2
NC 3
GND 4
HEATER 5
PCB070 CMD008
FROM/TO CHROMA/PROGRESSIVE/PIN
V_F/B
H.OUT
H_DRV+B
CENTER_DAC
AFC
ACL_PIN
ACL
EW_OUT
EW_F/B
FROM/TO OPERATION
TILT_DRIVE
X-RAY
FROM/TO TV POWER
P.CON+5V
UNREG+12V
H_GND
GND
+B
FROM/TO CHROMA/PROGRESSIVE/PIN
ABL_SW1
C410 50V 10 YK
R494 5.6K
D423 1SS133
R493 47K
R495 1K
Q408 SW 2SC3928A
R496 1K
Q407 SW 2SC3928A
R497 1K
D424 1SS133
H.DRIVE Q401 2SC3328_Y(TPE6_F) 17.3 0.4 0
C409 B
C405 330P M
R407 330 1/2W
C407 50V 22 MHE
W802
T401 ETH19K208AZ
R408 0.22 1W
W804
B403 W5RH3.5X5X1.0
12 20 1300 FL OUT Q403 2SC5904000LI 0
W818
HS8V HS401 763WAAA103
R406 68 2W
D403 11E1-EIC
D404 11E1-EIC
R417 270 2W
R410 1001/4W
C406 500V 220P B
D406 RGP10J-EIC
B404 W5RH3.5X5X1.0
B405 W5RH3.5X5X1.0
R416_2 2.2 1W
ELC18B103LM
L408 14
L407 ELC18B151EN
R413_1 2.2 1W
E/W SWITCHING Q402 2SK2920(Q) 55 D 4.5 G 0 S
R411 39K 1/4W
R422 3.9K 1/4W
C441 100V 0.047 MMTS
R436 10K 1/4W
C425 250V 3.3 FMS
C442 100V 0.082 MKT
R440 1K 1/4W
C426 250V 22 YK
D409 MTZJ15B-EIC
C434 35V 2200 MHE
D405 FMQ-3GULF027-102
HS403 763WAAA103 HS8V
C417_1 630V 0.01 PP
C418 1.5KV 0.0075 MPP
C412 250V 0.27 PMS
C438 400V 0.033 PMS
C447 630V 0.015 PP
L406 ELC18B151LK
C436 500V 0.001 B
D412 1N4937-PAN
W805
C438 400V 0.033 PMS
C447 630V 0.015 PP
L406 ELC18B151LK
C436 500V 0.001 B
D412 1N4937-PAN
W805
PROTECT TEST
W834
W835
D411 MTZJ9.1B-EIC
R445_1 3.3 1W
R430 1.8 10W
W830
R427 56K 1/4W
Q405 SW RT1N141C 4.6 0
R442 R486 5.6K 1/2W
R441 5.6K 1/4W
D417 MTZJ39B-EIC
R404 220K 1/4W
W840
D408 MTZJ5.6B-EIC
X-RAY
R403_1 18K +-1% 1/4W
R405_1 15K +-1% 1/4W
D402 AU02A-EIC
R401_1 2.2K +-1% 1/4W
C403 100V 22 YK
C404_1 160V 47 ED
W803
D415 AU02A-EIC
C446 250V 22 MHE
R452 270K 1/2W
C445_1 630V 0.01 PP
R487 10K 1/2W
R438 2.7K 1W
C437 500V 150P B
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY 。
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。
CAUTION: DIGITAL TRANSISTOR

TV POWER SCHEMATIC DIAGRAM

(TV MT PCB)



6.3A 125V

7A 250V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F501) AND 7A 250V(F502)

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V (F501) ET 7A 250V(F502)

CAUTION F502 IS MANUFACTURED BY SKYGATE CO.,LTD TYPE 20N

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

OPERATION SCHEMATIC DIAGRAM

(TV MT PCB)

FROM/TO MICON

CD509 (CP104) CU2C2001

12	GND
11	GND
10	AT+5.2V
9	AT+3.3V
8	UNREG+8V
7	UNREG+12V
6	NC
5	TUNER+30V(E0)
4	POWER_FAIL
3	STANDBY_L
2	DEGAUSS_H
1	TV_POWER_H

FROM/TO TV POWER

TV_POWER_H
DEGAUSS_H
SOUND+B1
POWER_FAIL
UNREG+8V
AT+3.3V
P.CON+5V
SOUND+B
SOUND_GND
GND
P.CON+32V
(MOTOR) GND
UNREG+12V_B
AT+5V_A
AT+4V
E0
AT+5V
DTV_POWER_ON_H
D_GND

W828
W810

FROM/TO DEFLECTION

X-RAY
TILT_DRIVE

D615 MTZJ9.1B-EIC
D616 MTZJ9.1B-EIC
D617 MTZJ9.1B-EIC

FROM/TO MICON

CD605(CP601) CU273302

1	H_SYNC
2	V_SYNC
3	OSD_R
4	OSD_G
5	OSD_B
6	SDA1
7	SCL1

FROM/TO CHROMA/PROGRESSIVE/PIN

SCL1
SDA1
OSD_B
OSD_G
OSD_R
V_SYNC
H_SYNC

PR_OUT
PB_OUT
Y_OUT

C631 50V4.7 YK

OSD_BLK1
OSD_BLK2

FROM/TO MICON

CD101 (CP101) CU2B3301

11	OSD_BLK2
10	OSD_BLK1
9	X-RAY
8	H_CONTROL NC
7	PROTECT NC
6	TILT_DRIVE
5	GND
4	NC
3	KEY_B
2	KEY_A
1	REMOCON

R2001 560
SW2001 EVQ21505R CH UP
SW2002 EVQ21505R VOL UP
SW2003 EVQ21505R CH DOWN
SW2004 EVQ21505R VOL DOWN
SW2005 EVQ21505R POWER
R2002 2.7K
R2004 560

OS2001 ROM-V338SY
B+ 5.0
GND 0
Vout 4.9

R2003 47 1/4W
C2001 25V10 KA

D2001 SB140-EIC

LED SW0
Q2001 RT1N241C
4.9
0.2

POWER ON
SLR-342VCT32 D2009 RED LED
R2005 1/4W 270

FROM/TO SOUND AMP

CD1003 (CP1005) CU234801

SOUND+B	1
SOUND_GND	2
GND	3

(CD1003_1)

R560 1 7W
C567 1uF 25V 2200 YK

FROM/TO TUNER

CD3410(CP2802) CU2D4801

+30V	1
M_GND	2
+12V	3
GND	4
GND	5
UNREG+5V	6
UNREG+5V	7
UNREG+4V	8
UNREG+4V	9
REG+5V	10
DTV_ON_H	11
D GND	12
D GND	13

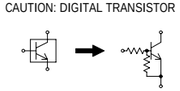
FROM/TO TUNER

CD3203 (CP2803) CU262601

Y(G)	1
GND	2
U(B)	3
GND	4
V(R)	5
GND	6

PCB070
CMD008

CAUTION: DIGITAL TRANSISTOR



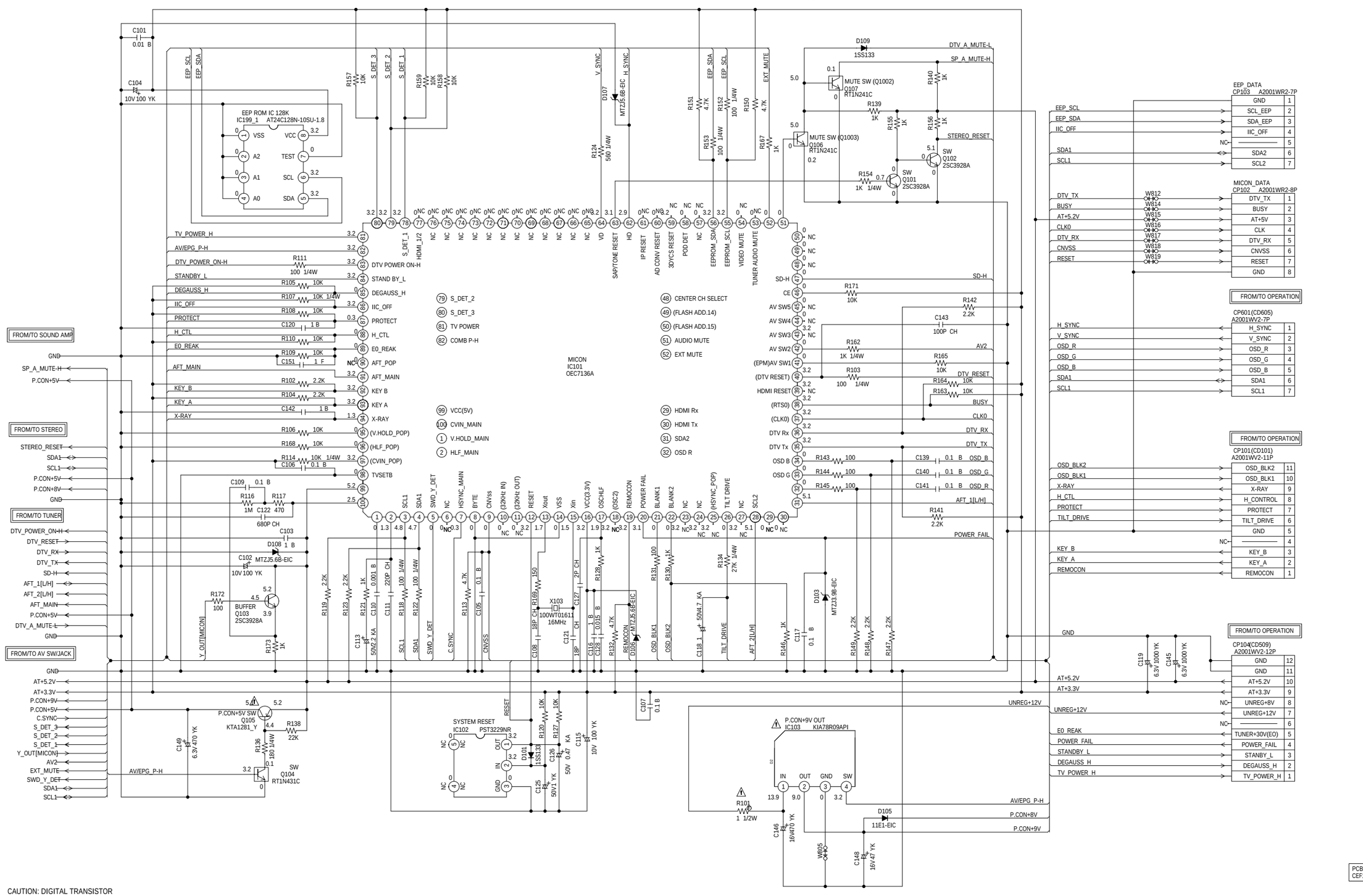
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

MICON SCHEMATIC DIAGRAM (AV PCB)



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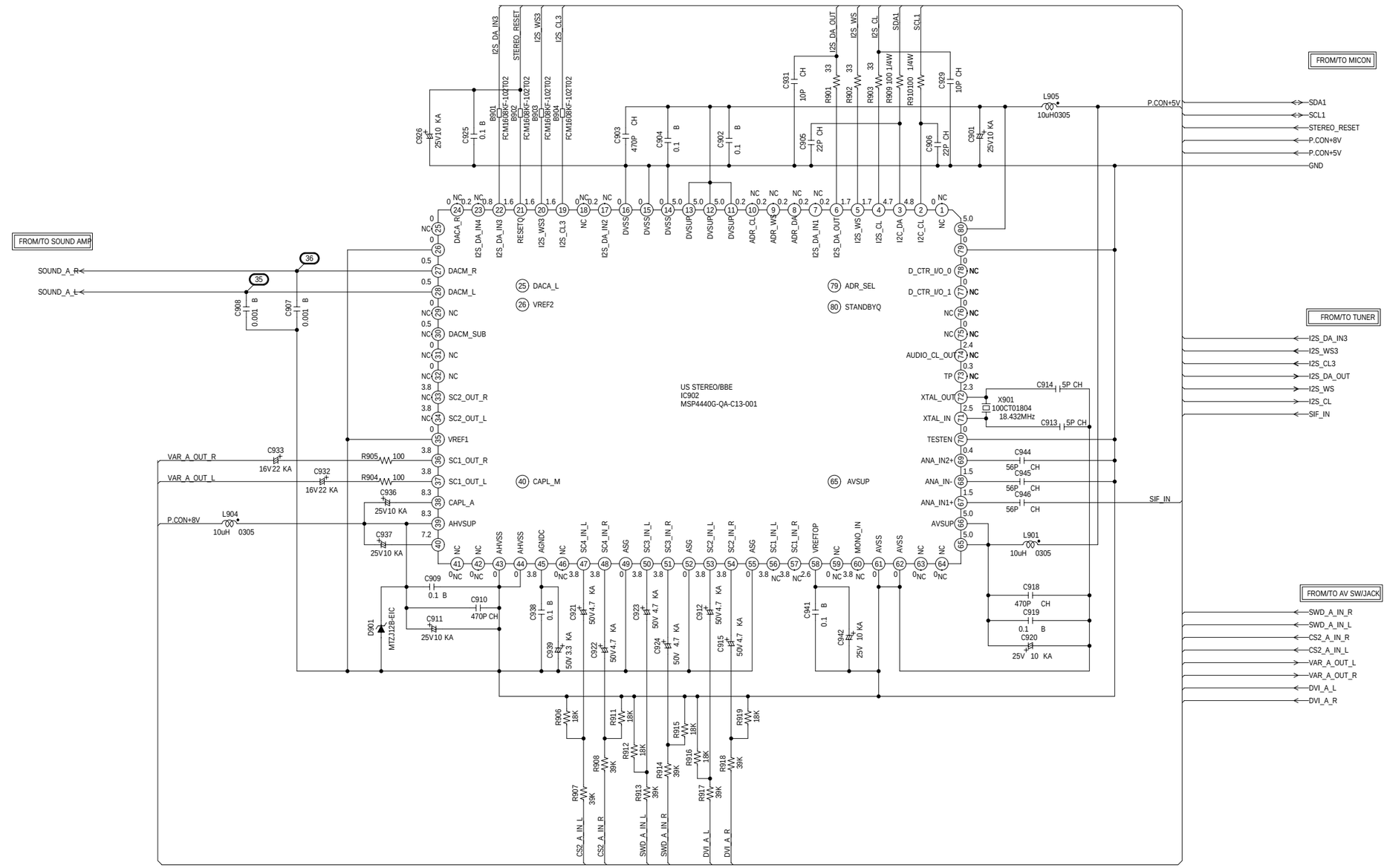
STEREO SCHEMATIC DIAGRAM

(AV PCB)



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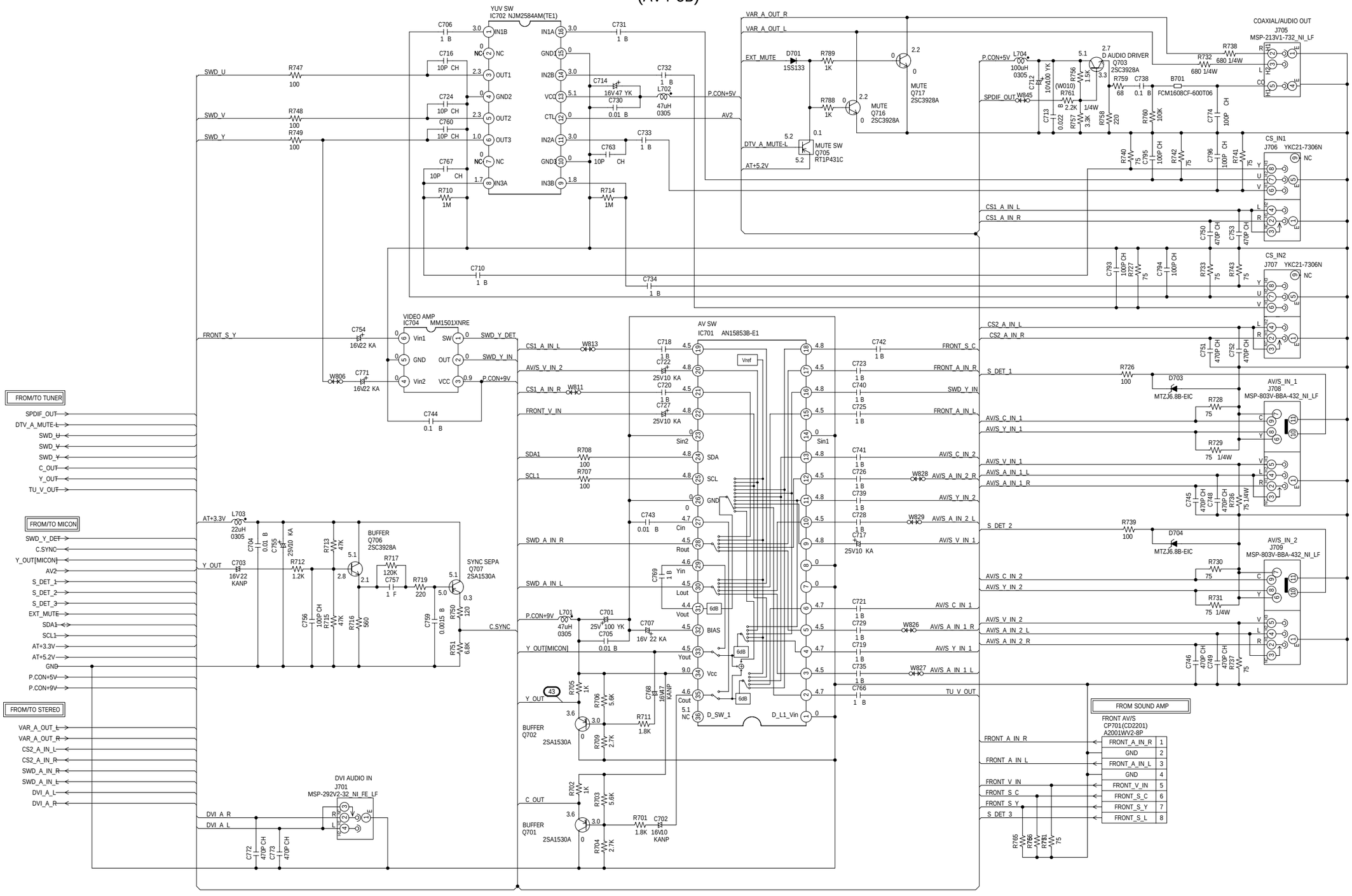
PCBD20
CEF155

AV SW/JACK SCHEMATIC DIAGRAM

(AV PCB)



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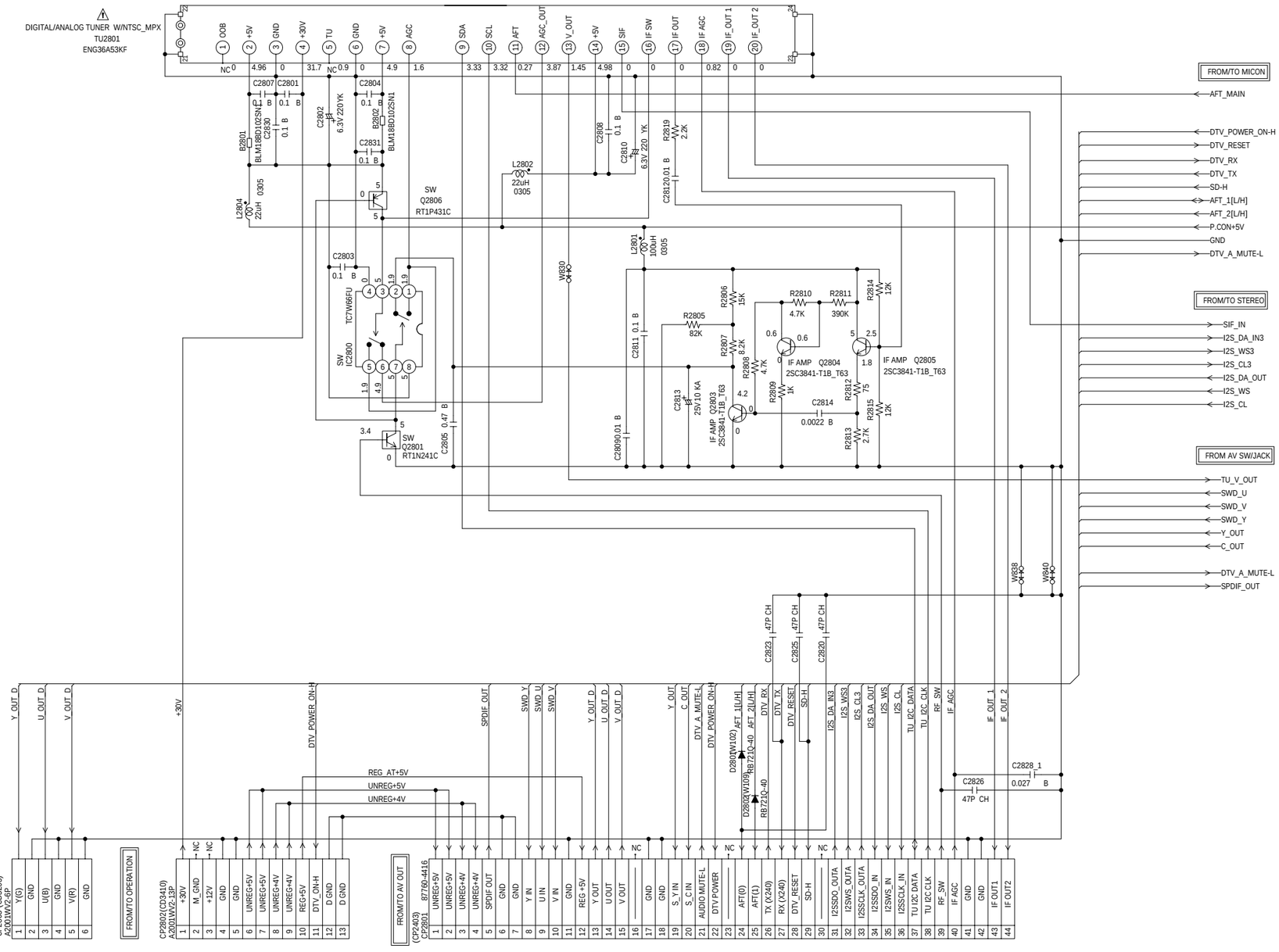
CAUTION: DIGITAL TRANSISTOR

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

TUNER SCHEMATIC DIAGRAM

(AV PCB)



CAUTION: DIGITAL TRANSISTOR

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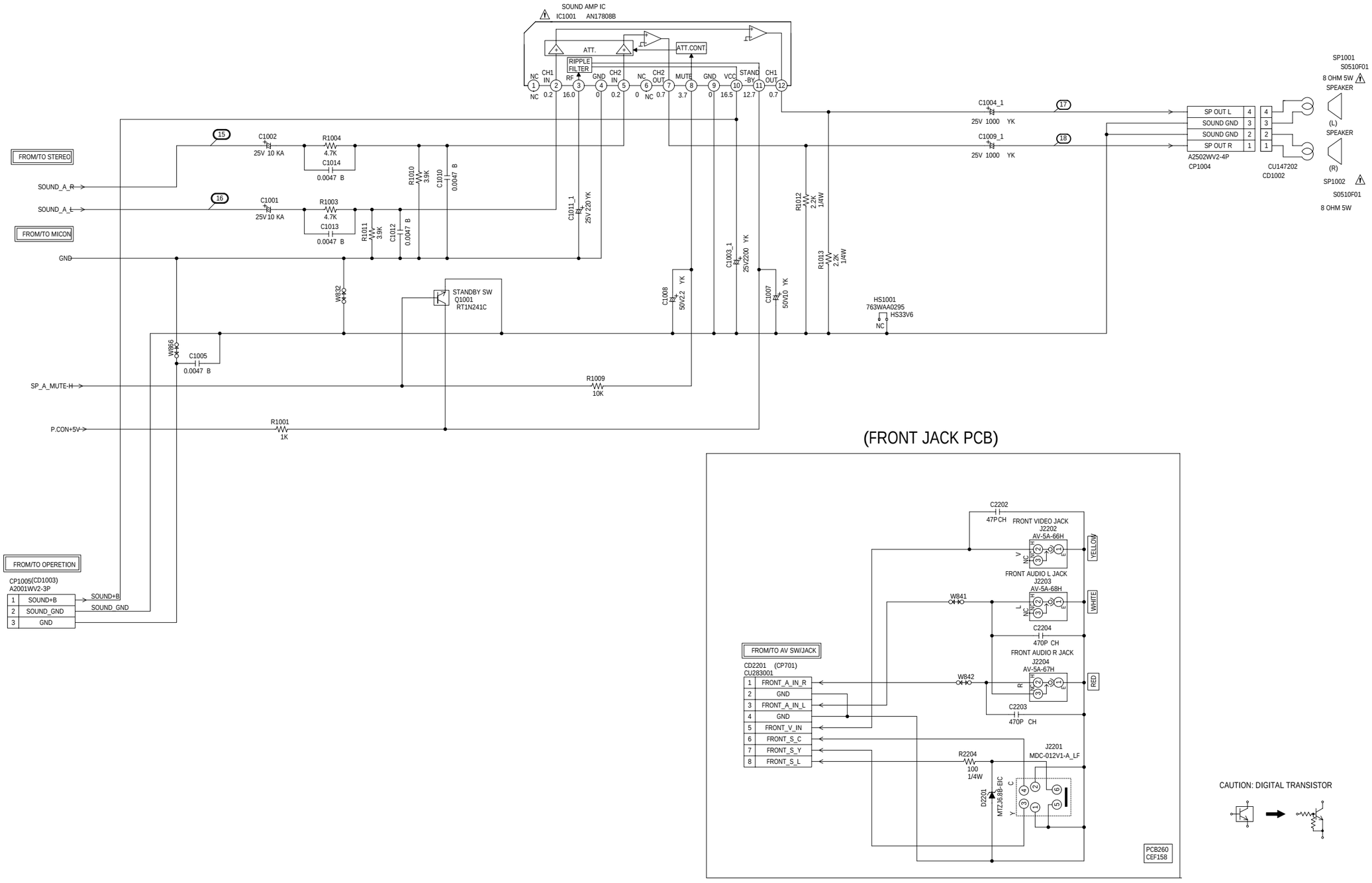
PCBD20
CEF155

SOUND AMP SCHEMATIC DIAGRAM
(AV PCB)



(FRONT JACK PCB)

CAUTION: DIGITAL TRANSISTOR

PCB070
CEF155

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CRT/SVM SCHEMATIC DIAGRAM (CRT PCB)

CRT BLOCK

SVM BLOCK

FROM/TO CHROMA/PROGRESSIVE/PIN

CP802B_1 (CP602)
A2001WV2-7P

7	CUT_OFF(9V)
6	GND(SIGNAL)
5	R.OUT
4	G.OUT
3	B.OUT
2	NC
1	P.CON+12V

FROM/TO TV POWER

CP851B (CP851A)
52147-0310

GND	1
NC	2
P.CON+B	3

FROM/TO VM COIL

CP852 (CP853)
A2001WV2-3P

VM1	1
NC	2
VM2	3

FROM/TO DEFLECTION

CP808B_1(CP808A)
A2001WV2-5P

5	HEATER
4	GND
3	NC
2	NC
1	180V

CP803(CD803)
A2361WV2-3P

3	GND
2	GND
1	GND

CP804
005P-2100

1	SCREEN

FROM/TO CHROMA/PROGRESSIVE/PIN

CP801 (CD603)
A2001WV2-2P

2	GND
1	VM COIL

(VM COIL PCB)

PCBD80
CEF159

FROM/TO CRT/SVM

CP853 (CP852)
B2013H02-3P

CD852_1
CU232001

FROM/TO VM COIL

S853

S854

PCB110
CCF069

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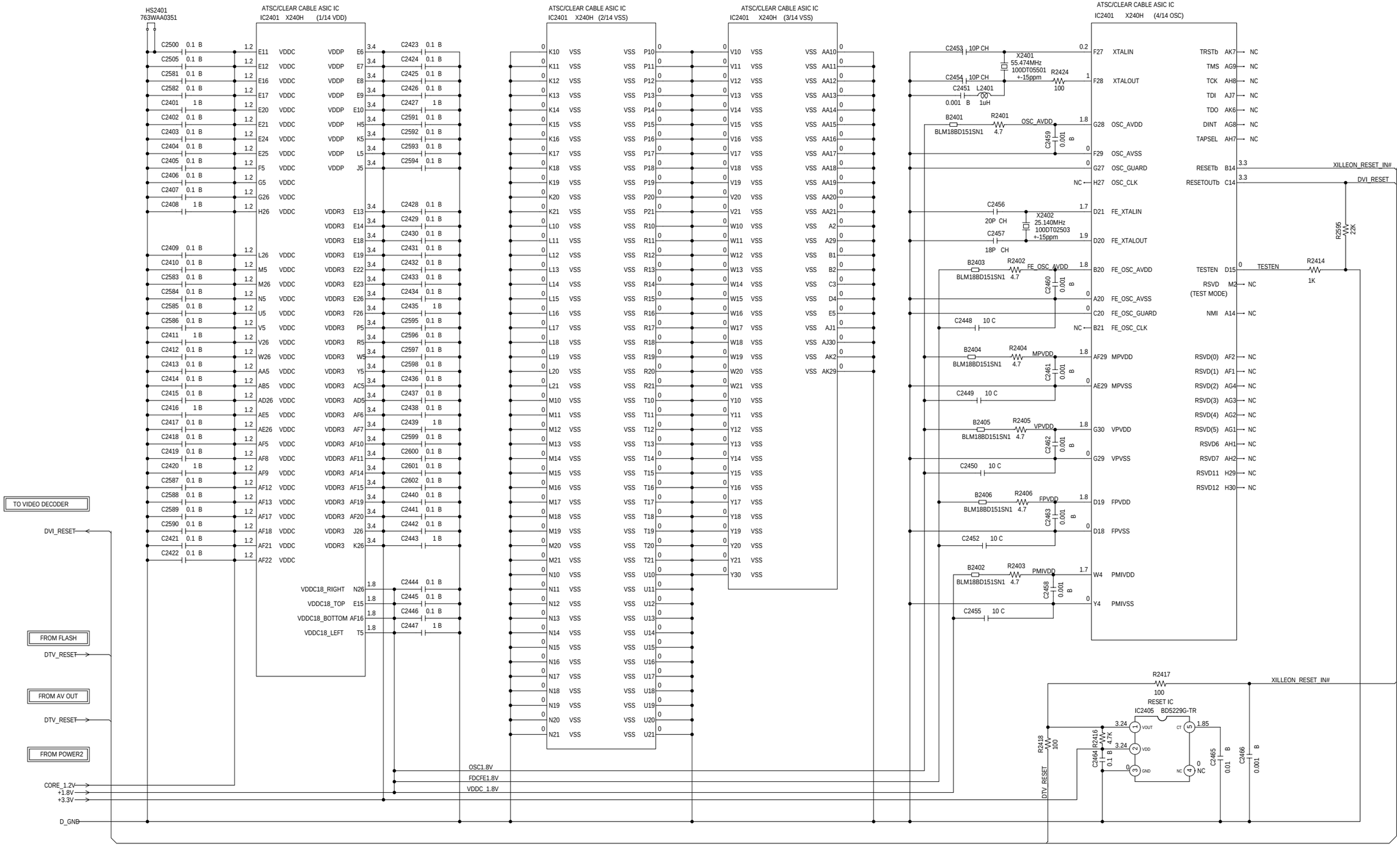
ASIC SCHEMATIC DIAGRAM
(DIGITAL PCB)



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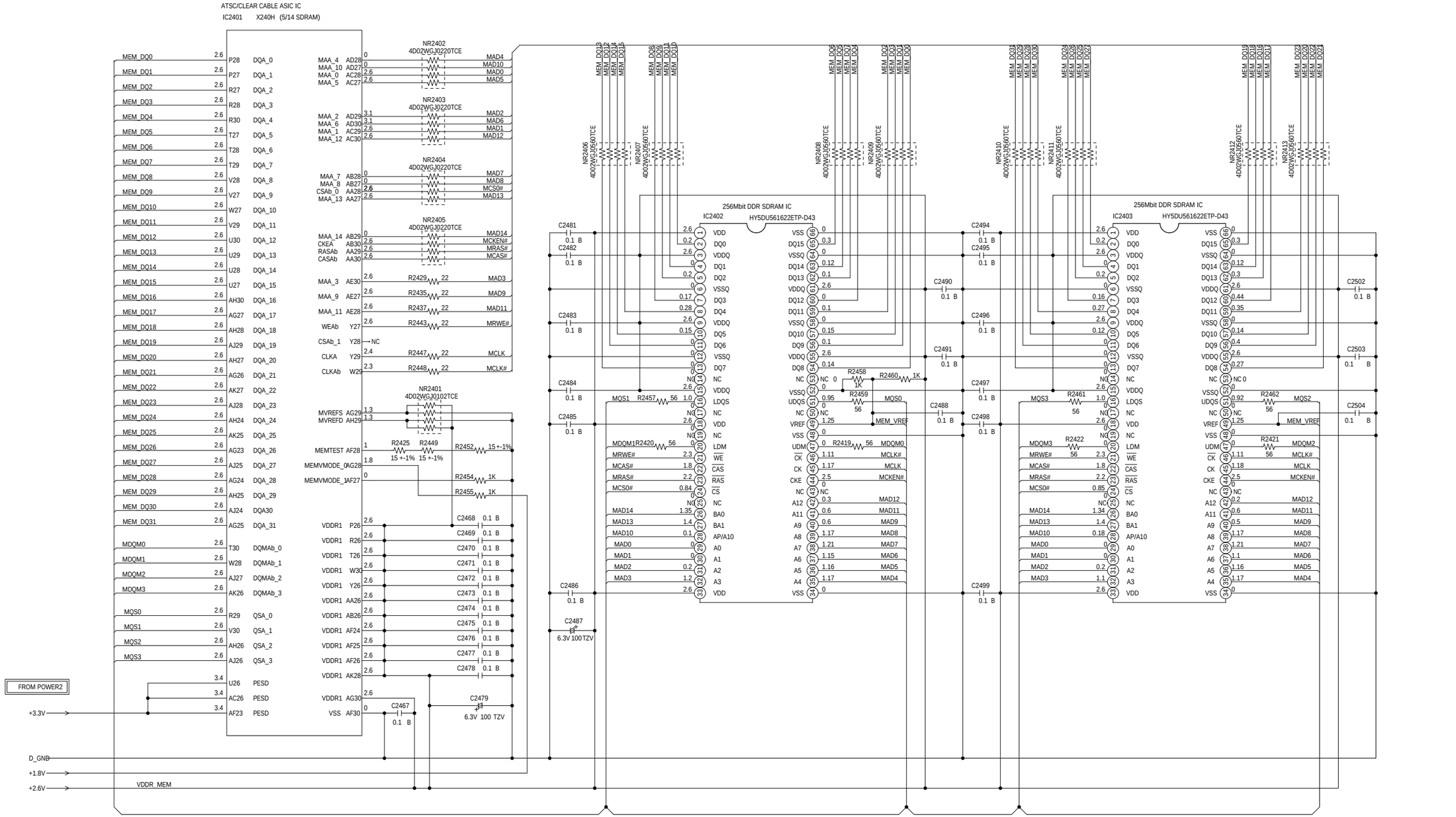
SDRAM SCHEMATIC DIAGRAM

(DIGITAL PCB)



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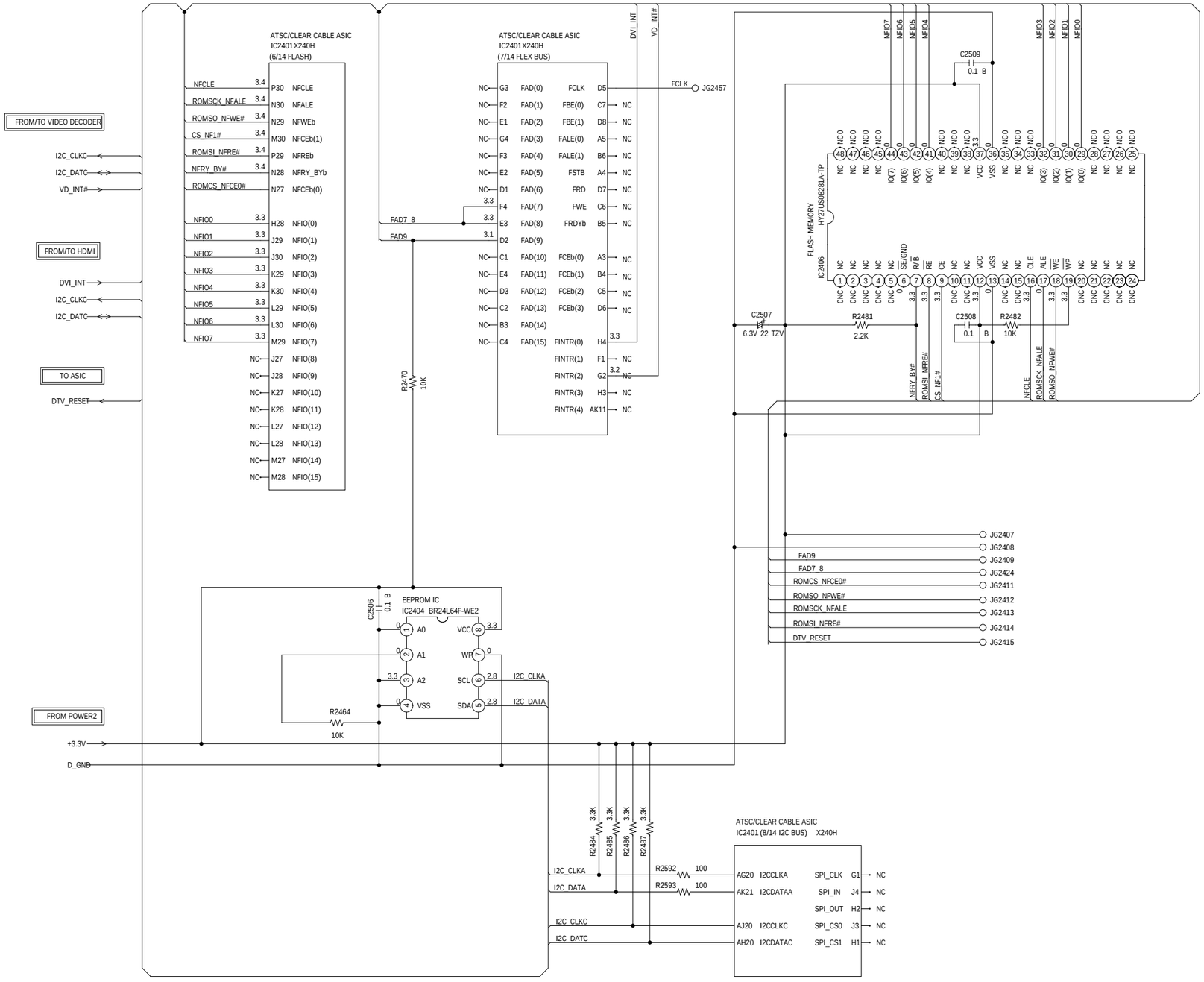
PCBDH0
CEF151

FLASH SCHEMATIC DIAGRAM

(DIGITAL PCB)



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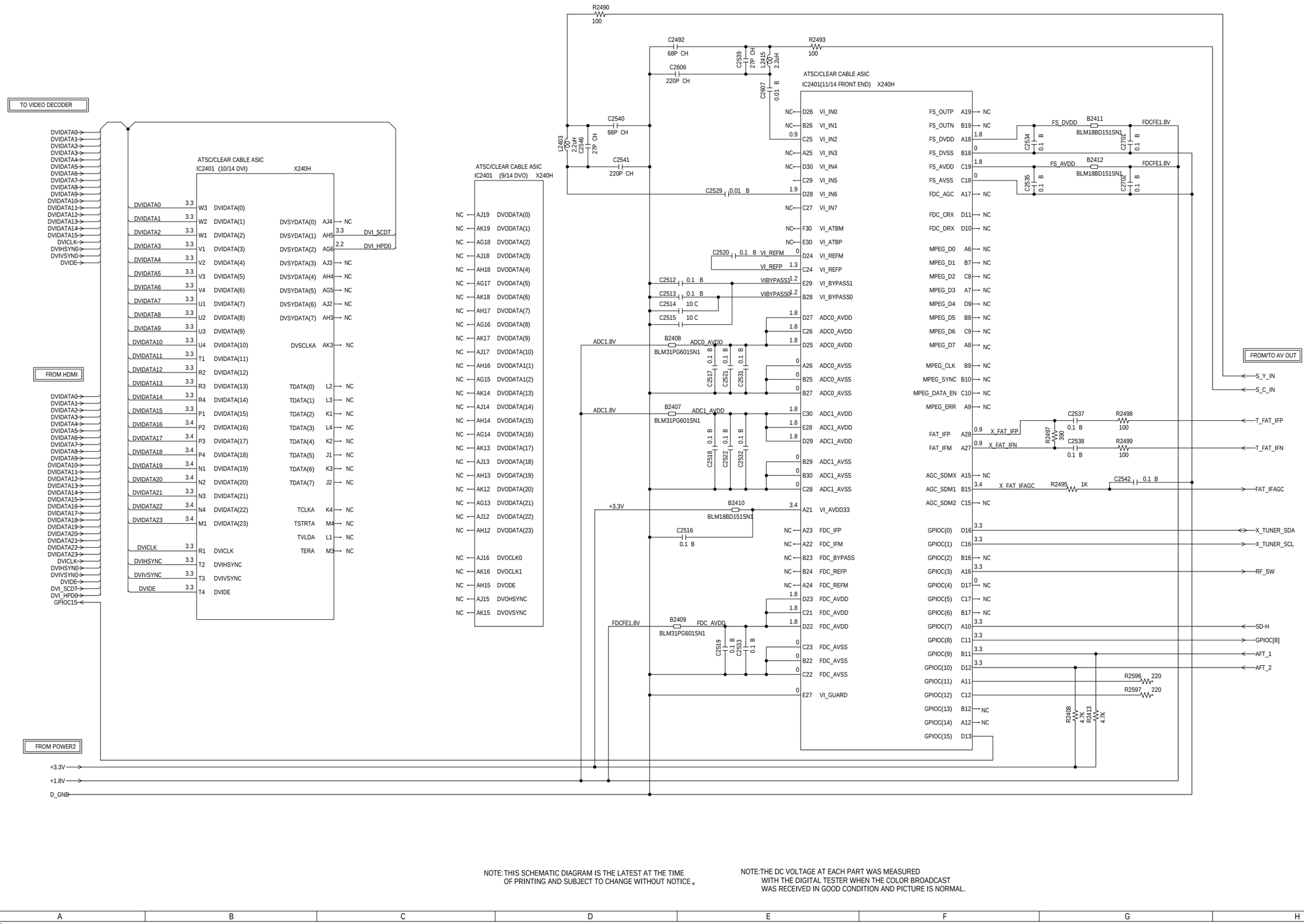
FRONT END SCHEMATIC DIAGRAM

(DIGITAL PCB)



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AV OUT SCHEMATIC DIAGRAM

(DIGITAL PCB)

FOR FIRM UPDATE — CP2405 C33F-004-5079A — +5V, USBN, USBP, GND, GND, GND, GND

FROM/TO TUNER — CP2403 87GA445 (CP2601) — UNREG+5V, UNREG+5V, UNREG+4V, UNREG+4V, SPDIF OUT, GND, GND, Y IN, U IN, V IN, GND, REG +5V, Y OUT, U OUT, V OUT, NC, GND, GND, S_Y IN, S_C IN, AUDIO MUTE-L, DTV POWER, NC, AFT(0), AFT(1), TX (X240), RX (X240), DTV_RESET, SD-H, NC, I2SSDO_OUTA, I2SWS_OUTA, I2SSCLK_OUTA, I2SSDO_IN, I2SWS_IN, I2SSCLK_IN, TU I2C DATA, TU I2C CLK, RF_SW, IF AGC, GND, GND, IF OUT1, IF OUT2

C2617 0.1 B; C2618 0.1 B

BLM31PG601SN1: B3407 (UNREG+5V), B3406 (UNREG+4V), B3408 (UNREG+4V), B3410 (AT+5V)

R2533 15K; R2534 15K

C2632 47P CH; C2605 47P CH; C2608 47P CH

C2609 47P CH; C2613 47P CH; C2620 47P CH; C2621 47P CH; C2614 47P CH; C2615 47P CH; C2628 47P CH; C2629 47P CH

BLM18BD102SN1: B2413 (AFT_1), B2414 (AFT_2), B2425 (TX_[X240]), B2426 (RX_[X240]), B2415 (DTV_RESET), B2422 (TUNER_SDA), B2421 (TUNER_SCL), B2423 (RF_SW), B2424 (FAT_IFAGC)

AT+5V; USB_N_A; USB_P_A; Y_IN; U_IN; V_IN; U[PB]_OUT; V[PR]_OUT; S_Y_IN; S_C_IN; A_MUT-L; DTV_ON-H; I2SDATA_OUTA; I2SWS_OUTA; I2SCLK_OUTA; I2SDATA_INC; I2SWS_INC; I2SCLK_INC; T_FAT_IFP; T_FAT_IFN

C2623 47P CH; C2625 47P CH; C2627 47P CH

R2517 22; R2518 22; R2519 22

A_MUT-L / HDMI MUTE SW

Q2418 2SC3928A (5.1 / 0); R242610K; Q2419 RT1N241C (3.3 / 0); R2428 10K; GPIOC[8]; HDMI MUTE SW

LEVEL_SHIFT

Q2407 KTK5132E (I2SCLK_INC, 3.3 / 2.3); Q2404 KTK5132E (I2SWS_INC, 2.6 / 1.7); Q2401 KTK5132E (I2SDATA_INC, 2.6 / 1.7); R2506 3.3K; R2514 3.3K; R2516 3.3K; +3.3V

FROM HDMI: HDMI_A_MUTE-H, I2SCLK_IND, I2SWS_IND, I2SDATA_IND, XCE

ATSC/CLEAR CABLE ASIC — IC2401 (12/14 I2S AUDIO) X240H

AG7 I2SSCK_INC; AH6 I2SWS_INC; AJ5 I2SSD_INC; AK4 I2SSCK_IND; AJ6 I2SWS_IND; AK5 I2SSD_IND

I2SWS_OUTA AK9; I2SSCK_OUTA AH10; I2SSOSCK_OUTA AJ10 → NC; I2SSD_OUTA AG11; I2SWS_OUTB AK10 → NC; I2SSCK_OUTB AH11 → NC; I2SSD_OUTB AJ11 → NC; I2SSOSCK_OUTB AG12 → NC; SPDIF_OUTA AJ9

B2420 BLM18BD151SN1

ATSC/CLEAR CABLE ASIC — IC2401 X240H (13/14 VIDEO ENCODER)

HSYNC_OUT AJ8 → NC; VSYNC_OUT AH9 → NC; HSYNC2_OUT AG10 → NC; VSYNC2_OUT AK8 → NC

R AC2 3.9 DAC0_R; G AC1 3.9 DAC1_G; B AD2 1.1 DAC2_B; COMP AD1 1.2 DAC3_COMP R2528 33; RSET AE1 1 QRSET R2529 680 R2409 33; C_R AB2 3.9 DAC4_R R2530 33; Y_G AA2 1.1 DAC5_G R2531 33; COMP_B AA1 1.4 DAC6_B; R2SET AB1 1 TRSET R2532 680 R2410 33; R2522_1 33

FROM/TO POWER2

DTV_ON-H; UNREG+5V; UNREG+4V_M; UNREG+4V; AT+5V; +3.3V; +1.8V; +2.6V; D_GND

VDDC_1.8V; DAC_2.5V; C2551 10 C; C2552 10 C; C2553 1 B; B2416 BLM18BD151SN1

X_TUNER_SDA; X_TUNER_SCL; TUNER_SCL; TUNER_SDA; TWIRE_TXDC; TWIRE_RXDC; RX_[X240]; TX_[X240]

R2515 4.7K; R2508 4.7K; R2441 100; R2440 100; R2512 4.7K; R2509 4.7K

LEVEL_SHIFT

Q2403 KTK5132E (3.3 / 3.3); Q2406 KTK5132E (3.3 / 3.3)

DAC_VDDI

B2417 BLM18BD151SN1; C2554 1 B; C2558 0.1 B; AE2 VDDDI 1.8; AF3 VSSDI 0

VDD2DI Y2 1.8; VSS2DI Y1 0; C2573 0.1 B

DAC_AVDDQ

B2419 BLM18BD151SN1; C2555 1 B; C2559 0.1 B; AC3 AVDDQ 1.9; AD4 AVSSQ 0

A2DDQ Y3 1.8; A2VSSQ AA4 0; C2574 0.1 B

DAC1_AVDD

B2418 BLM18BD151SN1; C2556 1 B; C2557 0.1 B; C2560 0.1 B; AE4 A1VDD 2.6; AF4 A1VDD 2.6; AD3 AVSSN 0; AE3 AVSSN 0

DAC2_AVDD

A2VDD AB4 2.6; A2VDD AC4 2.6; A2VSSN AA3 0; A2VSSN AB3 0; C2575 0.1 B; C2576 0.1 B

R2535 15K; R2536 15K

ATSC/CLEAR CABLE ASIC — IC2401 (14/14 USB/SERIAL) X240H

USBA_P 0; USBA_N 0; USBB_P 0; USBB_N 0; R2537 3.3 100K

AH23 USBPA; AG22 USBNA; AK24 USBPB; AJ23 USBNB; AK23 USB_OVRCUR; AG19 IRRXDA; AK20 IRTXDA; AH19 IRBIDB; A13 CAPT1; D14 COMP1

RDA AJ21 → NC; TDA AH21 → NC; CTSAb AK22 → NC; RTSAb AG21 → NC; RDB AJ22 → NC; TDB AH22 → NC; RDC C13 3.3 TWIRE_RXDC; TDC B13 3.3 TWIRE_TXDC

R2538 4.7; R2539 4.7; R2540 4.7; R2541 4.7; USB_P_A; USB_N_A; USB_P_B; USB_N_B; +3.3V; XCE

V[PR]_OUT

R2523 75 +-1%; C2564 47P CH; L2414 0.47uH; 56; C2572 47P CH; R2527 75 +-1%

Y_OUT

R2521 75 +-1%; C2562 47P CH; L2412 0.47uH; 57; C2570 47P CH; R2525 75 +-1%

U[PB]_OUT

R2520 75 +-1%; C2561 47P CH; L2411 0.47uH; 58; C2569 47P CH; R2524 75 +-1%

FROM/TO FRONT END: T_FAT_IFP, T_FAT_IFN, FAT_IFAGC, X_TUNER_SDA, X_TUNER_SCL, RF_SW, AFT_1, AFT_2, SD-H, S_Y_IN, S_C_IN, GPIOC[8]

TO ASIC: DTV_RESET

TO VIDEO DECODER: Y_IN, U_IN, V_IN, D_GND

PCBDH0 CEF151

CAUTION: DIGITAL TRANSISTOR

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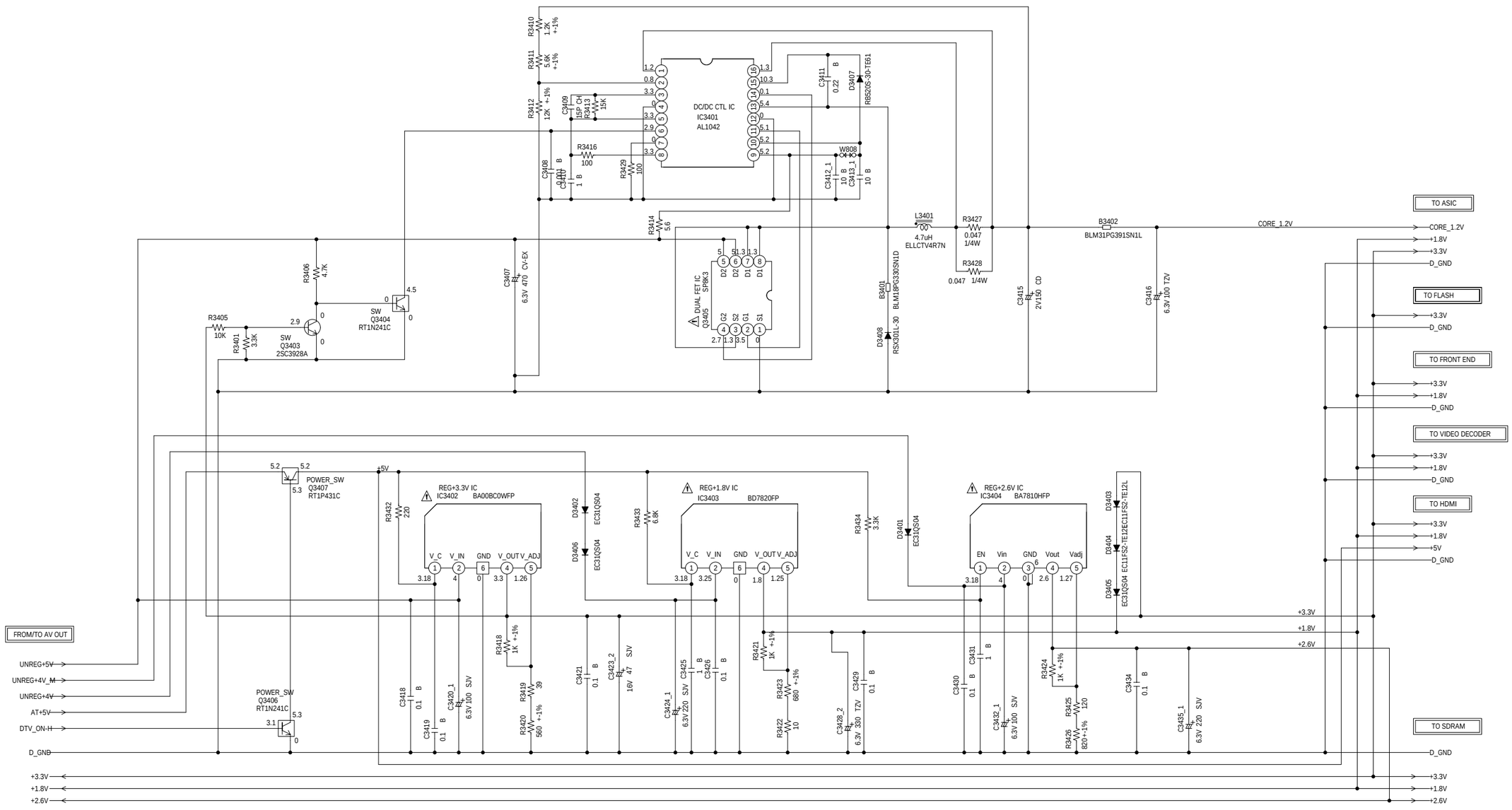
POWER2 SCHEMATIC DIAGRAM

(DIGITAL PCB)



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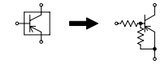
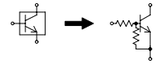


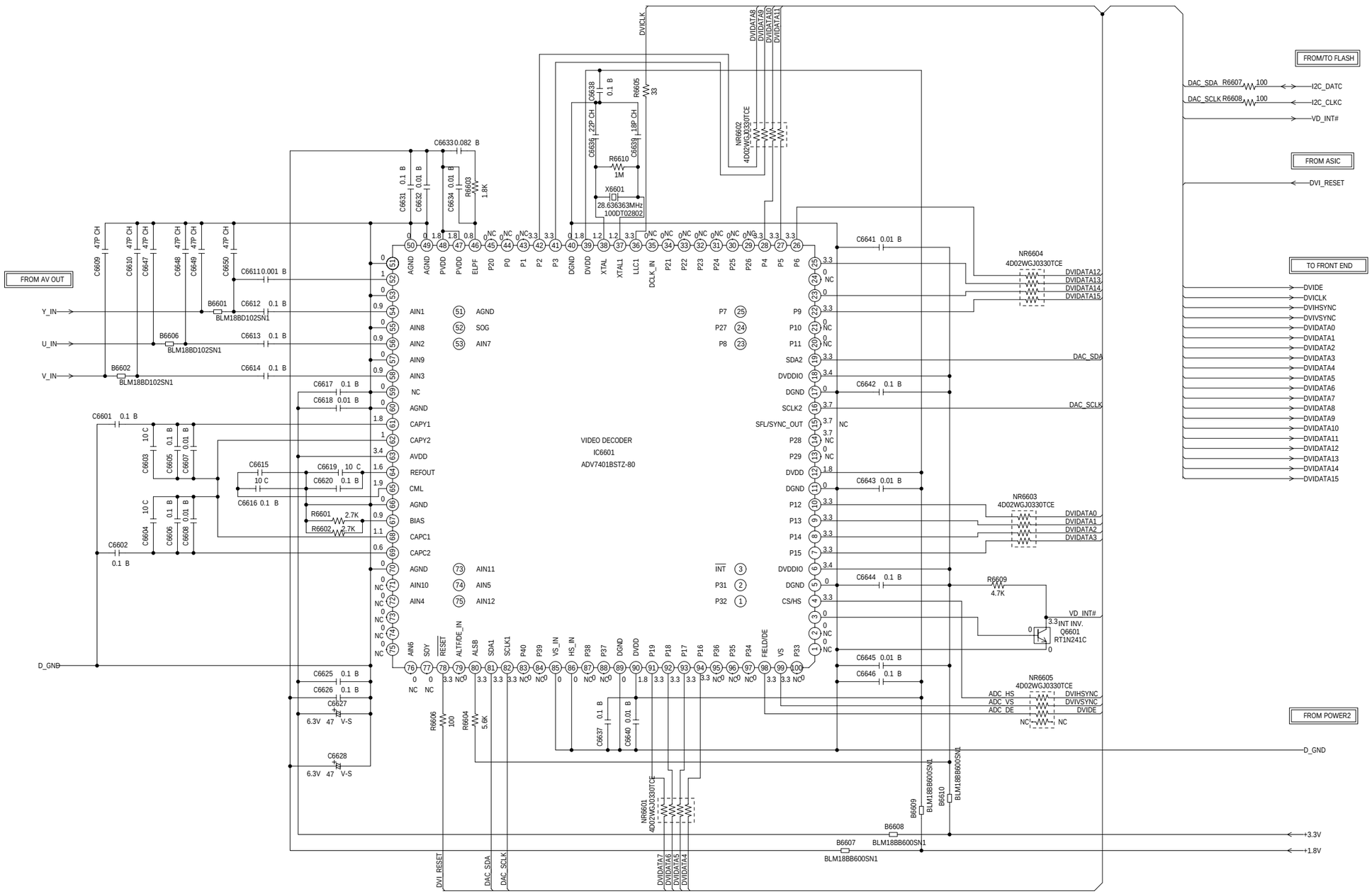
CAUTION: DIGITAL TRANSISTOR



PCBDH0
CEF151

VIDEO DECODER SCHEMATIC DIAGRAM

(DIGITAL PCB)



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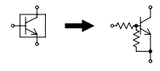
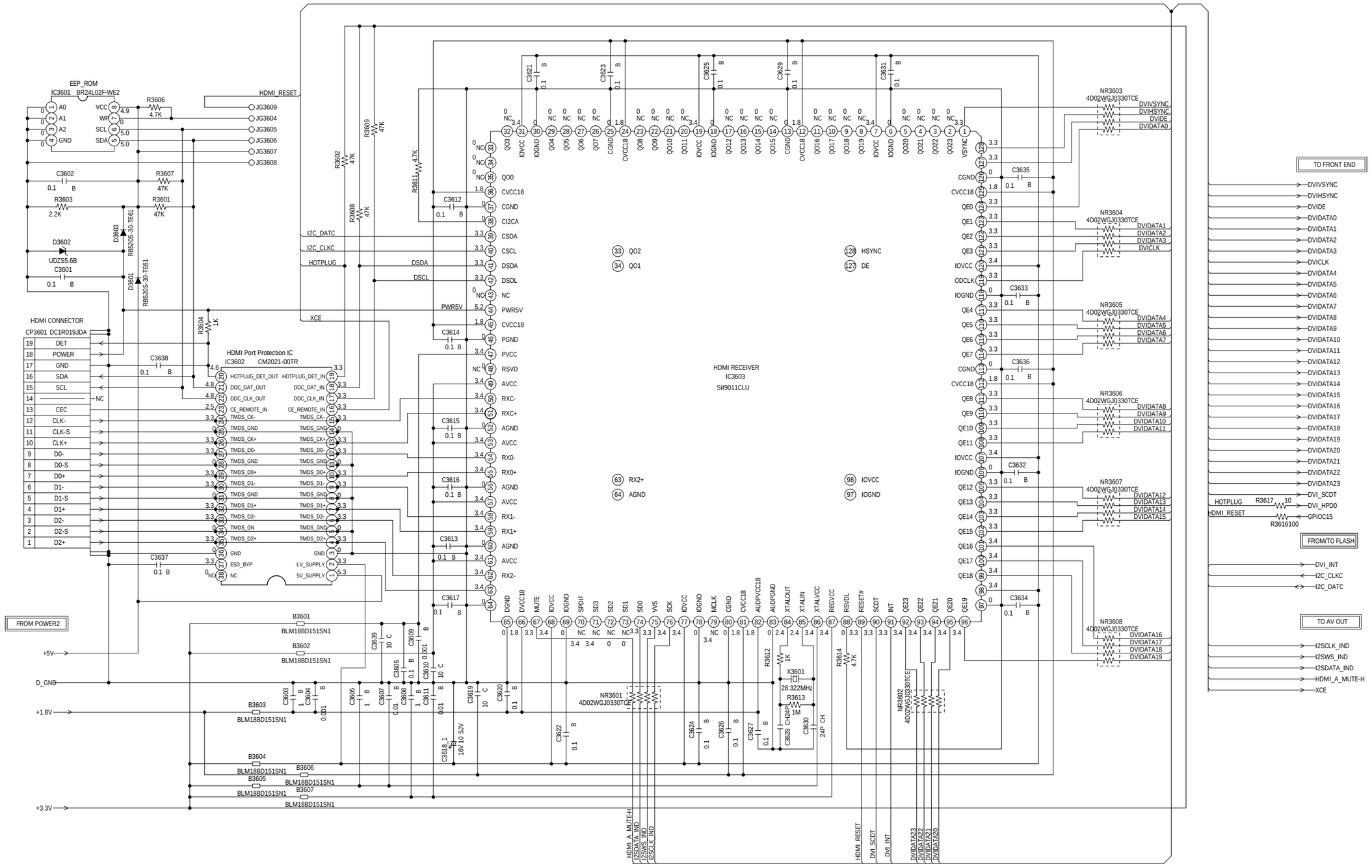


HDMI SCHEMATIC DIAGRAM

(DIGITAL PCB)



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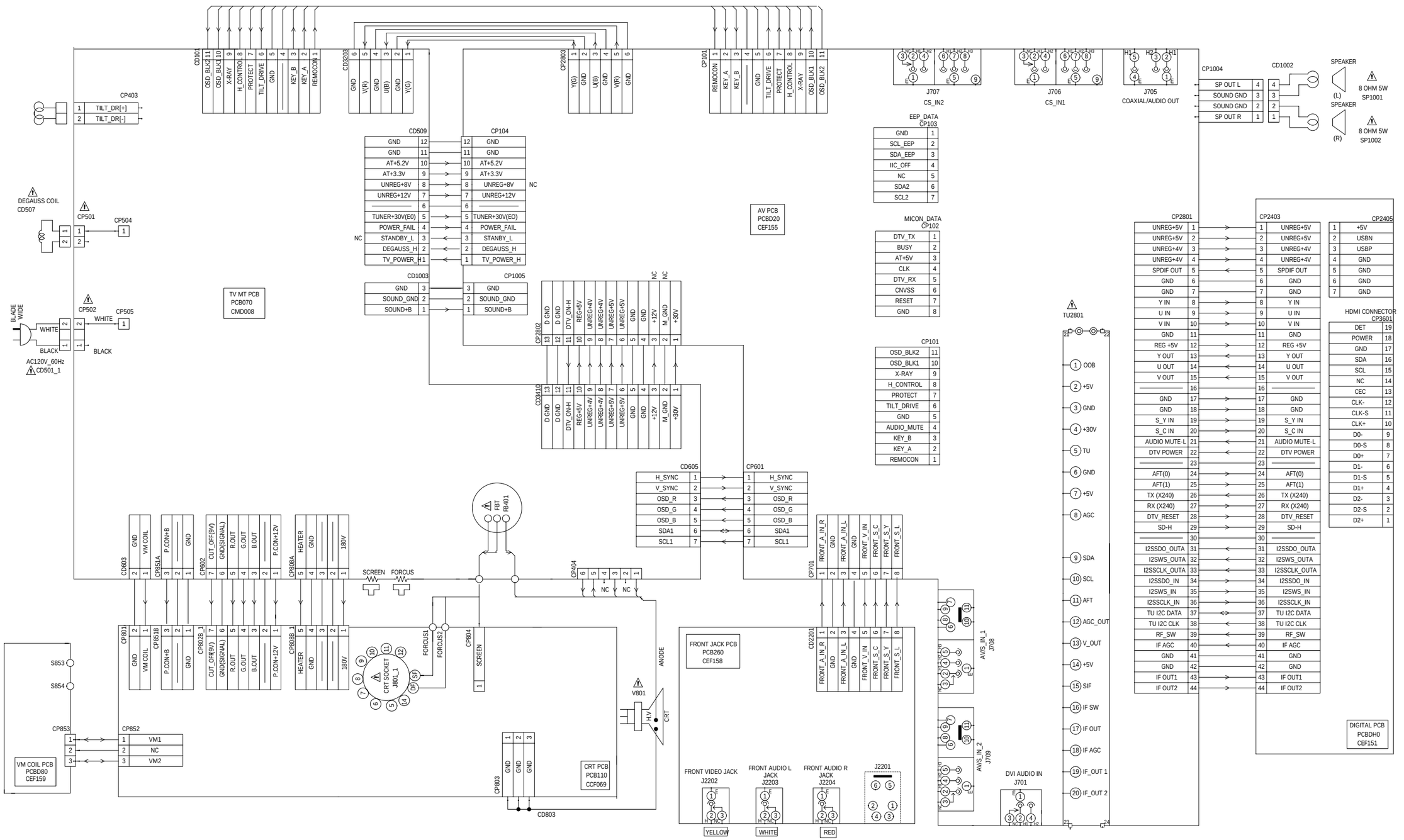
INTERCONNECTION DIAGRAM



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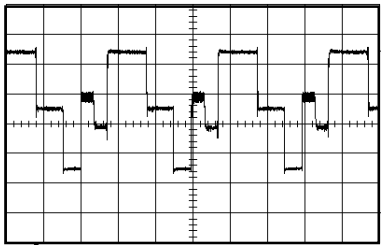
WAVEFORMS

CHROMA/PROGRESSIVE/PIN

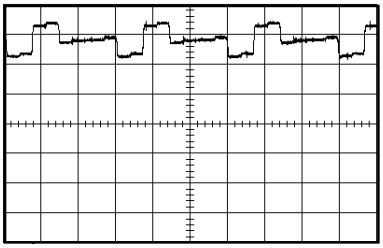
10µs
1.0V

1



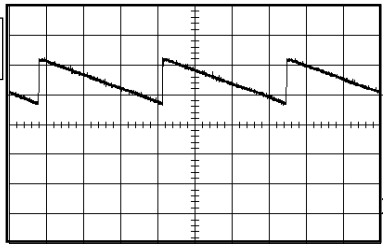
10µs
0.5V

6



5ms
1.0V

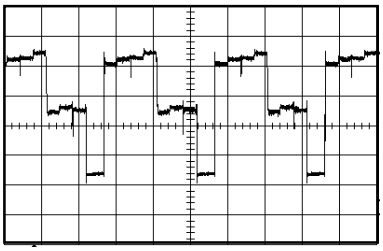
11



DEFLECTION

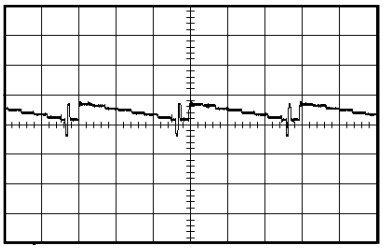
10µs
1.0V

2



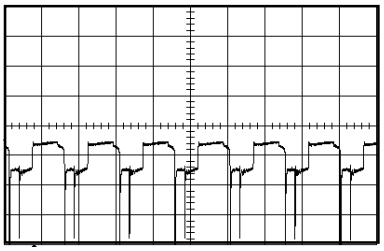
10µs
1.0V

7



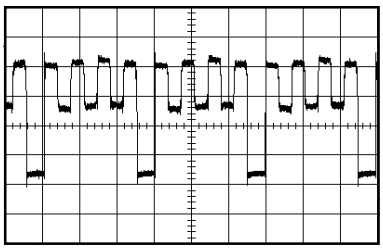
20µs
2.0V

12



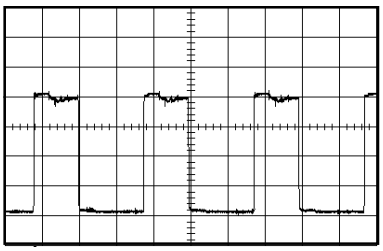
10µs
1.0V

3



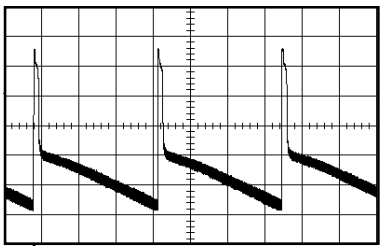
10µs
0.5V

8



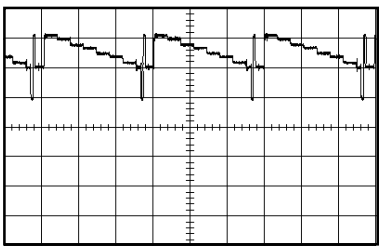
5ms
1.0V

13



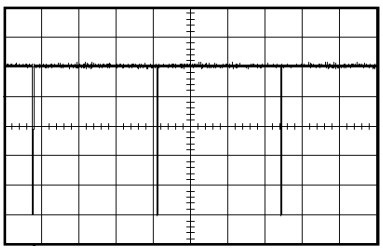
10µs
0.5V

4



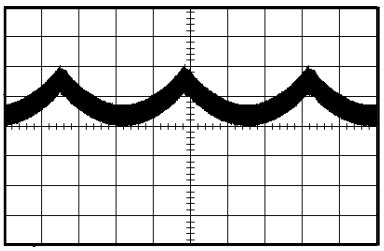
5ms
1.0V

9



5ms
5.0V

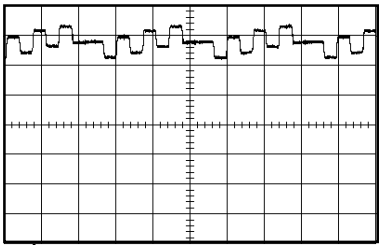
14



SOUND AMP/ FRONT AV

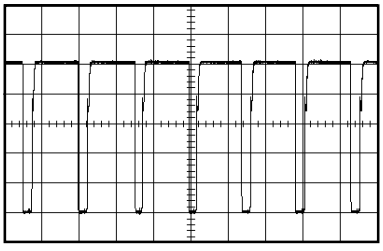
10µs
0.5V

5



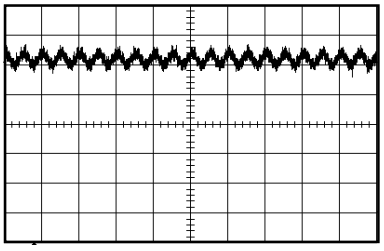
20µs
1.0V

10



5ms
200m

15

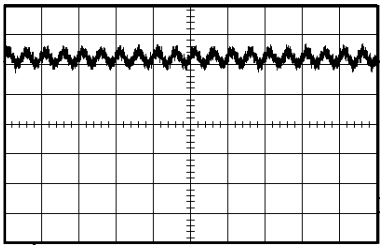


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

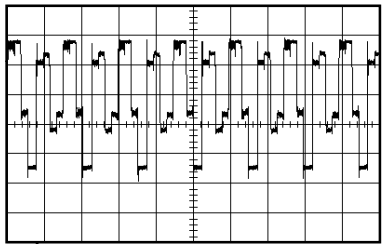
5ms
200m

⑯



20µs
1.0V

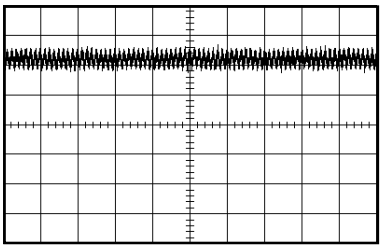
㉘



STEREO

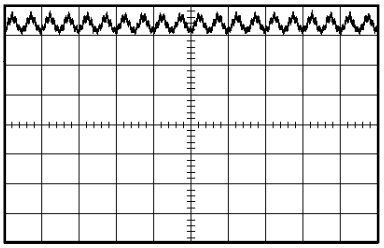
20ms
200mV

㉟



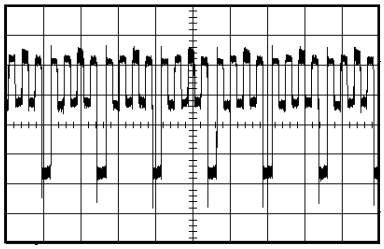
5ms
1.0V

⑰



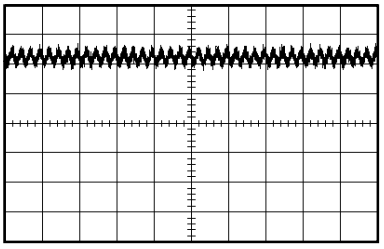
20µs
1.0V

㉙



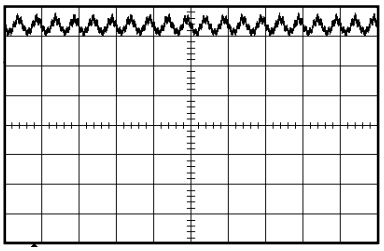
10ms
200mV

㊱



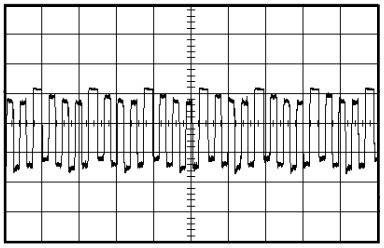
5ms
1.0V

⑱



20µs
50V

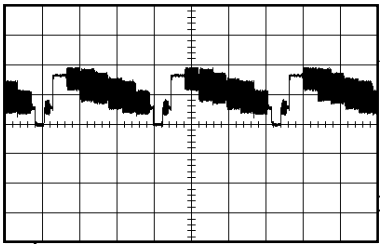
㉚



AV SW/JACK

20µs
1.0V

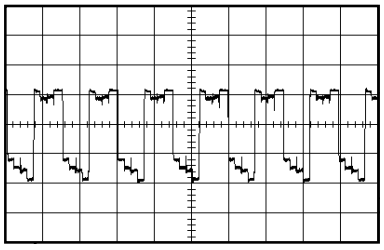
㊸



CRT/SVM

20µs
50V

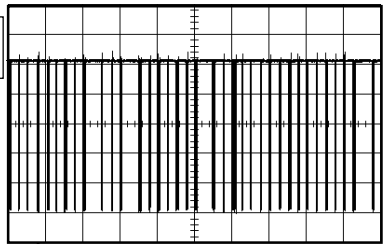
㉖



MICON

20ms
1.0V

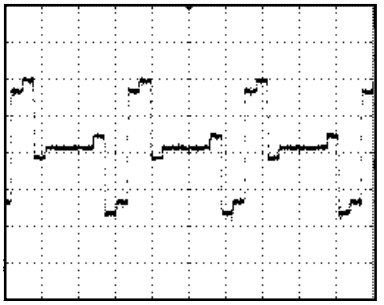
㉝



AV OUT

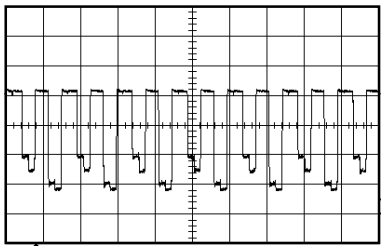
10µs
200mV

㊻



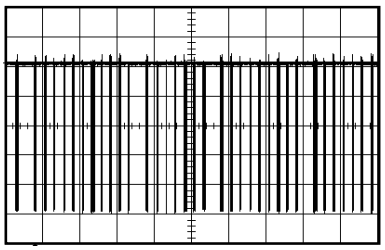
20µs
50V

㉗



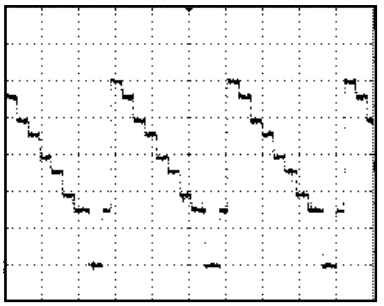
20ms
1.0V

㉞



10µs
200mV

㊼

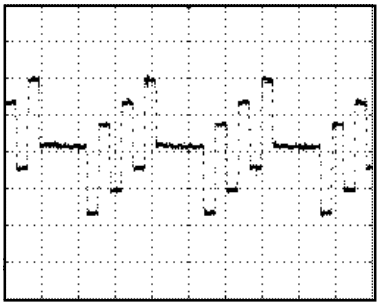


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

10µs
200mV

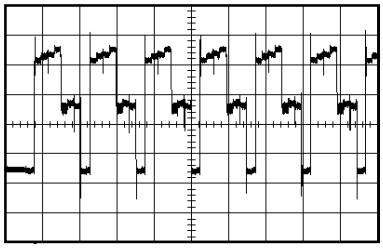
58



CRT/SVM

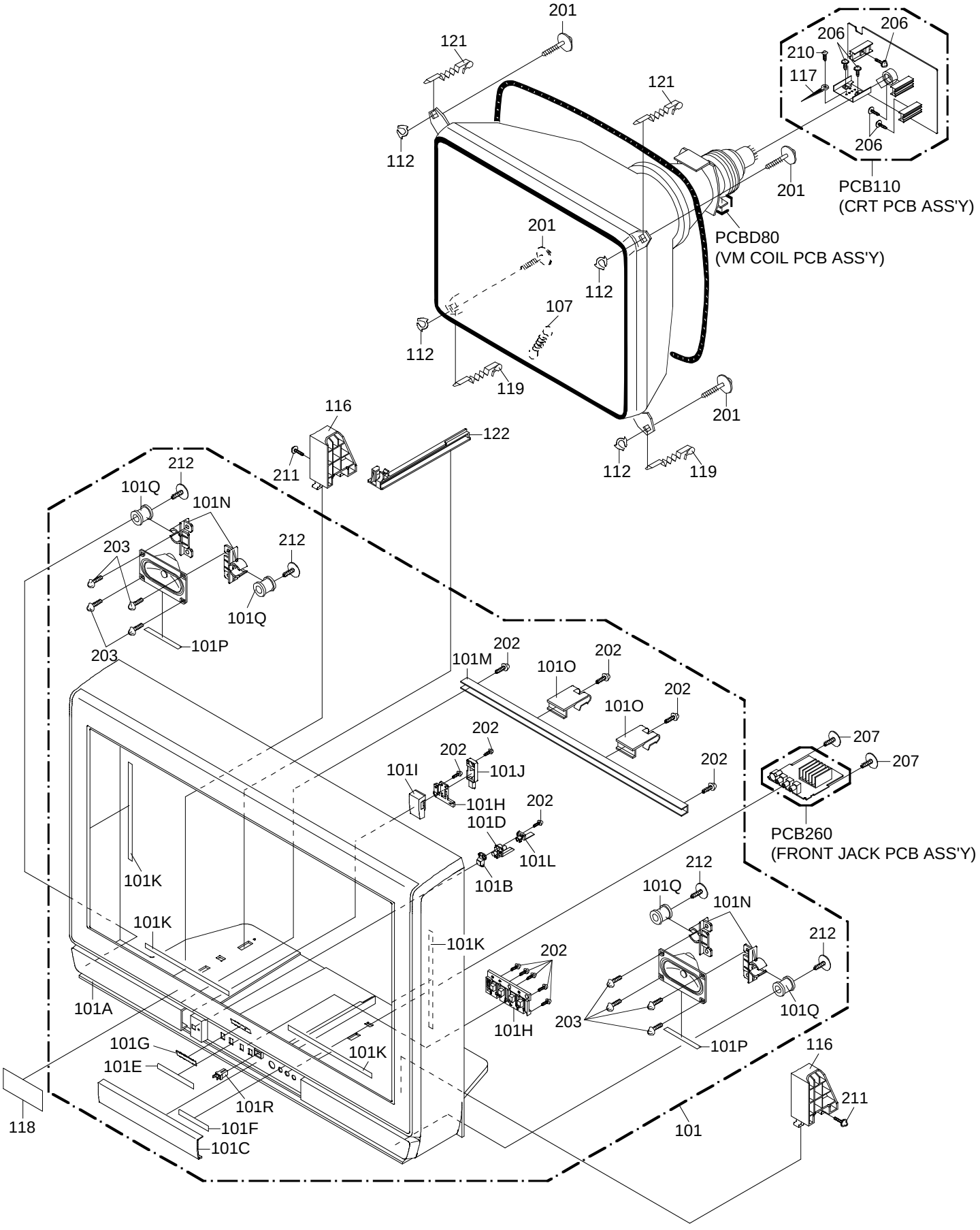
20µs
1.0V

60

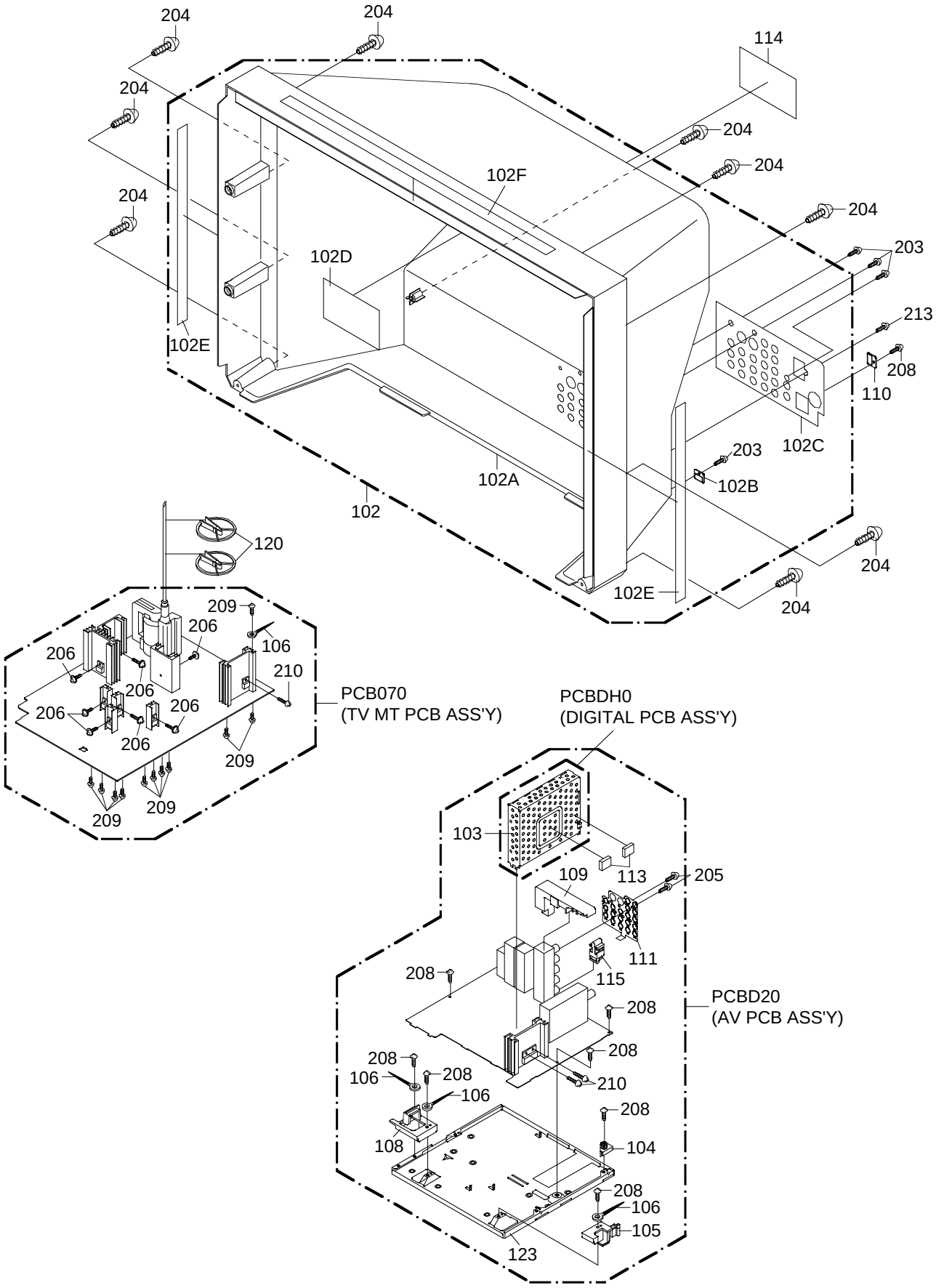


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

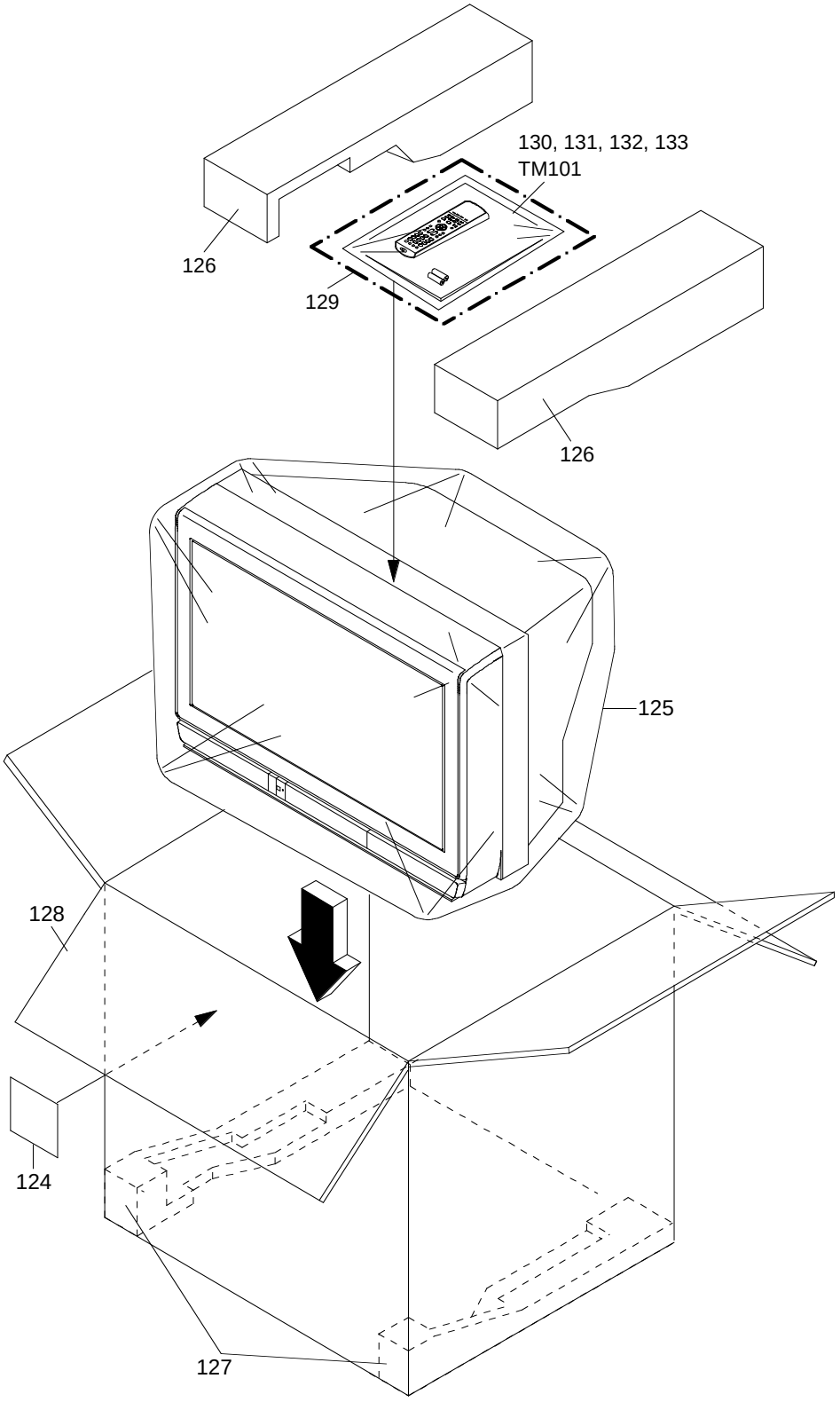
MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)



MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
101	75002735	7A7010222A	FRONT CABI ASS'Y
101A	75002708	701WPJ1417	CABINET,FRONT
101B	72799403	711WPA0210	PLATE,FRONT
101C	75002713	712WPJ0962	DOOR
101D	72799464	713WPA0334	GUIDE,REMOCON
101E	72799568	7230007791	SHEET,BUTTON
101F	72799569	7230007792	AV,LABEL
101G	72781985	7235490036	BADGE,BRAND
101H	72799752	735WPB0299	BUTTON,FRAME
101I	72799787	735WPJ0242	BUTTON,POWER
101J	72799819	738WPA0106	STOPPER BUTTON
101K	72796103	800WQ0A052	FELT SHEET
101L	72799910	761WPA0344	HOLDER,LED
101M	72795678	752WSAA083	ANGLE,FRONT
101N	72796254	761WPAA115	HOLDER SPEAKER
101O	72799904	761WPA0294	COIL,HOLDER
101P	72781200	800WF00062	CUSHION 55*5*T1
101Q	72794733	801WR00001	DAMPER SPEAKER
101R	72795058	890DL20000	DOOR LATCHES(DL2)
102	75002737	7A7020072A	BACK CABI ASS'Y
102A	75002711	702WPA1243	CABINET,BACK
102B	72783714	706WPA0013	COVER,CONNECTOR-1
102C	72783701	7230008102	SHEET,JACK
102D	75002722	7260000362	SHEET CRT SERVICEMAN
102E	72798774	800WQ0A045	FELT SHEET
102F	72798776	800WQ0A050	FELT,SHEET
103	72783702	752WSA0553	HDMI SHIELD,BOTTOM
104	72799911	761WPA0347	HOLDER,PCB-1
105	72799912	761WPA0348	HOLDER,PCB-2
106	72795699	899EFBA002	WIRING-CLIP
107	72795687	741WUA0021	SPRING EARTH
108	72799913	761WPA0349	HOLDER,PCB-3
109	72782489	761WPA0402	HOLDER,JACK
110	72783700	706WPA0009	COVER,CONNECTOR-1
111	72783717	752WSAA127	SHIELD AV JACK
112	72799963	769WSAA008	WASHER,CRT T=0.5
113	72798807	8965TS1010	CUSHION 65TS10-10(10*10*25)
114	75002714	7225490231	SHEET,RATING
115	72783713	761WPA0441	HOLDER,JACK
116	72783869	761WPA0419	HOLDER,CRT
117	72795680	8995034000	CORD CLIP UL CO.
118	75002717	7230008147	FILM DECORATION
119	72783298	762WPAA006	HOLDER CRT WIRE 2
120	72794734	899HV3T000	HOLDER ANODE WIRE
121	75002726	762WPAA005	HOLDER,CRT WIRE 2
122	72782471	761WPA0418	HOLDER,PCB RAIL
123	72783706	752WSA0571	PLATE,BOTTOM
124	75002718	7230008148	SHEET,BARCODE
125	72798696	791WHA0102	LAMIFILM BAG
126	75002727	792AHA0109	PACKAGE,TOP
127	75002728	792AHA0110	PACKAGE,BOTTOM
128	75002730	793ACD0517	GIFT BOX
129	75002740	A3W704J975	INSTRUCTION BOOK KIT
130	75002749	JA4LD300A	POLYBAG INSTRUCTION(RED CAUTION)
131	72781566	J3N11517A	REGISTRASTION CARD
132	75002745	J3W70421A	INSTRUCTION BOOK(E/S)
133	75002746	J3W70429A	INFORMATION SHEET(CHANNEL)

MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
201	72781286	8141H60D5U	SCREW,TAP TITE(P) GW20 6*45 CH HEXAGON
202	72798791	8110630A0U	SCREW TAP TITE(P) BRAZIER 3*10 CH
203	72798790	811063080U	SCREW TAP TITE(P) BRAZIER 3*8 CH
204	72798795	8117540B0U	SCREW TAP TITE(B0) TRUSS 4*20 CH
205	72781270	811033080U	SCREW TAP TITE(P) FLAT 3*8 CH
206	72798789	8109I30A0U	SCREW TAP TITE(B) WH7 3*10 CH
207	75002739	8166130A0U	SCREW,TAPPING(B0) WASHER16 3*10 CH
208	72798787	810923080U	SCREW TAP TITE(B) BIND 3*8 CH
209	72781251	810963080Q	SCREW TAP TITE(B) BRAZIER 3*8 STAINLESS
210	72798786	810763080U	SCREW TAP TITE(S) BRAZIER 3*8 CH
211	72798793	8110E3080U	SCREW TAP TITE(P) WH10 3*8 CH
212	72781295	8162540A6U	SCREW TAPPING (BO) WASHER 18
213	72781228	810213080U	SCREW,PAN M3*8

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			RESISTORS	
⚠R101	72794614	R65582010J	R,FUSE	1 OHM 1/2W
⚠R401	72783828	R4K1T4222F	R,METAL	2.2K OHM 1/4W
⚠R403	72781717	R4K1T4183F	R,METAL	18K OHM 1/4W
⚠R405	72783394	R4K1T4153F	R,METAL	15K OHM 1/4W
⚠R406	72795113	R3X18A680J	R,METAL OXIDE	68 OHM 2W
⚠R408	72797865	R3X181R22J	R,METAL OXIDE	0.22 OHM 1W
⚠R413	72798016	R655812R2J	R,FUSE	2.2 OHM 1W
⚠R416	72798016	R655812R2J	R,FUSE	2.2 OHM 1W
⚠R417	72797878	R3X18A271J	R,METAL OXIDE	270 OHM 2W
⚠R429	72794597	R002T22R2J	RC	2.2 OHM 1/2W
⚠R430	72797985	R5X2CF1R8J	R,CEMENT	1.8 OHM 10W
⚠R434	72794597	R002T22R2J	RC	2.2 OHM 1/2W
⚠R438	72781706	R3X181272J	R,METAL OXIDE	2.7K OHM 1W
⚠R445	72798017	R655813R3J	R,FUSE	3.3 OHM 1W
⚠R455	72798025	R65582680J	R,FUSE	68 OHM 1/2W
R460	72781666	R0G3K2221K	RC	220 OHM 1/2W
⚠R462	72797919	R3X28B221J	R,METAL OXIDE	220 OHM 3W
R468	72783829	R3K58A471J	R,METAL OXIDE	470 OHM 2W
⚠R472	72781672	R3K581120J	R,METAL OXIDE	12 OHM 1W
⚠R473	72781672	R3K581120J	R,METAL OXIDE	12 OHM 1W
⚠R483	72795990	R3K28A220J	R,METAL	22 OHM 2W
⚠R492	72794639	R3X181100J	R,METAL OXIDE	10 OHM 1W
⚠R501	72781719	R4K1T4272F	R,METAL	2.7K OHM 1/4W
⚠R503	72795500	R002T2155J	RC	1.5M OHM 1/2W
⚠R508	72794684	R002T4101J	RC	100 OHM 1/4W
⚠R510	72794631	R0G3K2275K	RC	2.7M OHM 1/2W
⚠R515	72781687	R3K58A104J	R,METAL OXIDE	100K OHM 2W
⚠R516	72797865	R3X181R22J	R,METAL OXIDE	0.22 OHM 1W
⚠R517	72794633	R63881R22J	R,FUSE	0.22 OHM 1W
⚠R518	72797865	R3X181R22J	R,METAL OXIDE	0.22 OHM 1W
⚠R524	72797881	R3X18A331J	R,METAL OXIDE	330 OHM 2W
⚠R525	72794636	R3X181R47J	R,METAL OXIDE	0.47 OHM 1W
⚠R530	72781732	R5X2CF010J	R,CEMENT	1 OHM 10W
⚠R545	72797923	R3X28B2R7J	R,METAL OXIDE	2.7 OHM 3W
⚠R548	72796018	R3X18AR47J	R,METAL OXIDE	0.47 OHM 2W
⚠R560	72795523	R5X2AE010J	R,CEMENT	1 OHM 7W
⚠R563	72794617	R65584101J	R,FUSE	100 OHM 1/4W
⚠R801	75002787	R5X2CE392J	R,CEMENT	3.9K OHM 7W
⚠R834	75002787	R5X2CE392J	R,CEMENT	3.9K OHM 7W
⚠R841	75002787	R5X2CE392J	R,CEMENT	3.9K OHM 7W
⚠R855	72798023	R65582151J	R,FUSE	150 OHM 1/2W
⚠R881	72797878	R3X18A271J	R,METAL OXIDE	270 OHM 2W
			CAPACITORS	
C151	72794375	CQGTF0416Z	CC	1 UF 50V F
⚠C403	72794396	E02LU8220M	CE	22 UF 100V
⚠C404	72781391	E61DFB470M	CE	47 UF 160V
⚠C412	72796346	P4J7F3274J	CMPP	0.27 UF 250V PMS
⚠C417	72797678	P3N1F5103J	CPP	0.01 UF 630V
⚠C418	72797727	P4N8FK752H	CMPP	0.0075UF 1.5KV
C424	72797725	P4N8FK682H	CMPP	0.0068UF 1.5KV
C425	72797693	P4J7F3335J	CMPP	3.3 UF 250V PMS
C426	72795570	E0ELFD220M	CE	22 UF 250V
⚠C429	72794380	E02LU4101M	CE	100 UF 35V
⚠C430	72794381	E5EZF3222M	CE	2200 UF 25V
⚠C431	72797668	P232W1333J	CMP	0.033 UF 100V MMTS
⚠C434	72797479	E5EZF4222M	CE	2200 UF 35V
C435	72797725	P4N8FK682H	CMPP	0.0068UF 1.5KV
C438	72784145	P4J7F4333J	CMPP	0.033 UF 400V PMS
C445	72797678	P3N1F5103J	CPP	0.01 UF 630V
⚠C446	72794394	E5EZFD220M	CE	22 UF 250V
C447	75002786	P3N1F5152J	CPP	0.0015UF 630V
⚠C502	72795566	P2122B224M	CMP	0.22 UF 275V ECQUL
⚠C505	72795567	P2122B104M	CMP	0.1 UF 275V ECQUL
C506	72794407	P411F4393J	CMPP	0.039 UF 400V ECWF
⚠C509	75002785	E62QFC101M	CE	100 UF 200V
C512	72794399	C0PLRR713K	CC	0.001 UF 2KV R
⚠C513	72797506	E61FF0222D	CE	2200 UF 6.3V
C516	72794414	C03L0R7H2K	CC	220 PF 2KV R
⚠C517	72781338	CD39B0MH2K	CC	220 PF 250V
⚠C518	72795808	E5EZU5220M	CE	22 UF 50V
⚠C519	72797128	CD39E0ME3M	CC	0.0015UF 250V
⚠C525	72794403	CD39E0MH3M	CC	0.0022UF 250V
⚠C528	72794440	C0JBB07H3K	CC	0.0022UF 2KV B
⚠C529	72794440	C0JBB07H3K	CC	0.0022UF 2KV B
⚠C530	72795809	E51DFC102M	CE	1000 UF 200V

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			CAPACITORS	
⚠C536	72795814	E5EZF3332M	CE	3300 UF 25V
⚠C542	72794360	E02LF3102M	CE	1000 UF 25V
C543	72797089	C03L0R7Q2K	CC	470 PF 2KV R
⚠C545	72796328	E61SFC221M	CE	220 UF 200V
⚠C548	72795831	E5EZF4102M	CE	1000 UF 35V
C549	72794393	C03L0R713K	CC	0.001 UF 2KV R
C559	72795630	C03L0R7U2K	CC	680 PF 2KV R
⚠C560	75002781	E02LT8101M	CE	100 UF 100V
⚠C565	72794410	E5EZF3102M	CE	1000 UF 25V
C567	72796340	E0ELF3222M	CE	2200 UF 25V
⚠C572	75002784	E62FF1222M	CE	2200 UF 10V
C808	72795857	C13DB0713K	CC	0.001 UF 2KV B
C809	72797430	E0ELFD330M	CE	33 UF 250V
C1003	72795574	E02LF3222M	CE	2200 UF 25V
C1004	72783739	E0EL03102M	CE	1000 UF 25V
C1009	72783739	E0EL03102M	CE	1000 UF 25V
			DIODES	
D101	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D103	72783213	D9WU03R92B	DIODE,ZENER	MTZJ3.9B-EIC
D105	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D106	72783214	D9WU05R62B	DIODE,ZENER	MTZJ5.6B-EIC
D107	72783214	D9WU05R62B	DIODE,ZENER	MTZJ5.6B-EIC
D108	72783214	D9WU05R62B	DIODE,ZENER	MTZJ5.6B-EIC
D109	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D402	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
⚠D403	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠D404	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠D405	72781370	DCBFMQ3GU0	DIODE	FMQ-3GULF027-102
D406	72796081	D2WXGP10J0	DIODE,RECTIFIER	RGP10J-EIC
D407	72783366	D9WU01502B	DIODE,ZENER	MTZJ15B-EIC
⚠D408	72783214	D9WU05R62B	DIODE,ZENER	MTZJ5.6B-EIC
D409	72783366	D9WU01502B	DIODE,ZENER	MTZJ15B-EIC
D410	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠D411	72783769	D9WU09R12B	DIODE,ZENER	MTZJ9.1B-EIC
⚠D412	72795543	D2MXN49370	DIODE,FAST RECOVERY	1N4937-PAN
D413	72781366	D9WU03302B	DIODE,ZENER	MTZJ33B-EIC
D414	72781366	D9WU03302B	DIODE,ZENER	MTZJ33B-EIC
⚠D415	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
D417	72783764	D9WU03902B	DIODE,ZENER	MTZJ39B-EIC
D418	72781366	D9WU03302B	DIODE,ZENER	MTZJ33B-EIC
D420	72783366	D9WU01502B	DIODE,ZENER	MTZJ15B-EIC
D421	72781360	D2WX0216E0	DIODE,SILICON	RGP02-16E
D422	72781360	D2WX0216E0	DIODE,SILICON	RGP02-16E
D423	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D424	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D501	72797313	D6CE24110A	DIODE,VARISTA	ENE241D-10A-Q6
D502	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D503	72781367	D9WU03R32B	DIODE,ZENER	MTZJ3.3B-EIC
D504	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D505	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D506	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D507	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
D508	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D510	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D511	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
D512	72797311	D2WXGP10K0	DIODE,RECTIFIER	RGP10K-EIC
⚠D513	72781355	D28T0ERB60	DIODE,RECTIFIER	10ERB60-TA1B2
D514	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D515	72796388	D28T0ERB20	DIODE,RECTIFIER	10ERB20-TA1B2
D516	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D517	72783211	D9WU01802B	DIODE,ZENER	MTZJ18B-EIC
D518	72783415	D9WU06R22B	DIODE,ZENER	MTZJ6.2B-EIC
D519	72795543	D2MXN49370	DIODE,FAST RECOVERY	1N4937-PAN
⚠D520	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D521	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D522	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D523	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D524	72795543	D2MXN49370	DIODE,FAST RECOVERY	1N4937-PAN
⚠D525	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D526	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D527	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D528	72794473	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
D529	72783211	D9WU01802B	DIODE,ZENER	MTZJ18B-EIC
⚠D530	72781353	D27A85T400	DIODE,SCHOTTKY	RB085T-40
D531	72794491	D1VT001330	DIODE,SILICON	1SS133T-77

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			DIODES	
⚠D532	72794480	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
⚠D533	72794480	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
⚠D534	72794484	DOU002720M	DIODE,VARISTA	DSS-272M-S00B
D535	72783213	D9WU03R92B	DIODE,ZENER	MTZJ3.9B-EIC
⚠D536	72794475	D2CF2016L0	DIODE,SILICON	FE201-6L49
D538	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D539	72782548	D230PF6DT0	DIODE,SILICON	FEPF6DT
D540	72795543	D2MXN49370	DIODE,FAST RECOVERY	1N4937-PAN
⚠D541	72794475	D2CF2016L0	DIODE,SILICON	FE201-6L49
D544	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D546	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D547	72783765	D9WU01102B	DIODE,ZENER	MTZJ11B-EIC
D548	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D550	72783214	D9WU05R62B	DIODE,ZENER	MTZJ5.6B-EIC
⚠D551	72795544	D6E027110A	DIODE,VARISTA	ENE271D-10A
D552	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D553	72796082	D2LKB340L0	DIODE,SCHOTTKY	SB340L-6737
D554	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D555	72794476	D23TGP15J0	DIODE,SILICON	RGP15J-G23
⚠D556	72796082	D2LKB340L0	DIODE,SCHOTTKY	SB340L-6737
D558	72781366	D9WU03302B	DIODE,ZENER	MTZJ33B-EIC
D601	72781355	D28T0ERB60	DIODE,RECTIFIER	10ERB60-TA1B2
D606	72783767	D9WU02R02B	DIODE,ZENER	MTZJ2.0B-EIC
D607	72783768	D9WU02702B	DIODE,ZENER	MTZJ27B-EIC
D608	72781355	D28T0ERB60	DIODE,RECTIFIER	10ERB60-TA1B2
D609	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D610	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D611	72783769	D9WU09R12B	DIODE,ZENER	MTZJ9.1B-EIC
D612	72783769	D9WU09R12B	DIODE,ZENER	MTZJ9.1B-EIC
D613	72783769	D9WU09R12B	DIODE,ZENER	MTZJ9.1B-EIC
D614	72781364	D9WU01202B	DIODE,ZENER	MTZJ12B-EIC
D615	72783769	D9WU09R12B	DIODE,ZENER	MTZJ9.1B-EIC
D616	72783769	D9WU09R12B	DIODE,ZENER	MTZJ9.1B-EIC
D617	72783769	D9WU09R12B	DIODE,ZENER	MTZJ9.1B-EIC
D618	72781364	D9WU01202B	DIODE,ZENER	MTZJ12B-EIC
D621	72783770	D9WU01302B	DIODE,ZENER	MTZJ13B-EIC
D622	72781364	D9WU01202B	DIODE,ZENER	MTZJ12B-EIC
D701	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D703	72781369	D9WU06R82B	DIODE,ZENER	MTZJ6.8B-EIC
D704	72781369	D9WU06R82B	DIODE,ZENER	MTZJ6.8B-EIC
D801	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D802	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D803	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D853	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D854	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D855	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D856	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D857	72796388	D28T0ERB20	DIODE,RECTIFIER	10ERB20-TA1B2
D858	72796388	D28T0ERB20	DIODE,RECTIFIER	10ERB20-TA1B2
D901	72781364	D9WU01202B	DIODE,ZENER	MTZJ12B-EIC
D2001	72795627	D2WXSB1400	DIODE,SCHOTTKY	SB140-EIC
D2009	72795529	0021721150	LED	SLR-342VCT32
D2201	72781369	D9WU06R82B	DIODE,ZENER	MTZJ6.8B-EIC
D2801	72783761	D1VTB721Q0	DIODE,SCHOTTKY	RB721Q-40 T-77
D2802	72783761	D1VTB721Q0	DIODE,SCHOTTKY	RB721Q-40 T-77
D3401	72797300	D28R1QS040	DIODE	EC31QS04-TE12L
D3402	72797300	D28R1QS040	DIODE	EC31QS04-TE12L
D3403	72783762	D28R11FS20	DIODE	EC11FS2-TE12L
D3404	72783762	D28R11FS20	DIODE	EC11FS2-TE12L
D3405	72797300	D28R1QS040	DIODE	EC31QS04-TE12L
D3406	72797300	D28R1QS040	DIODE	EC31QS04-TE12L
D3407	72781371	DD7R20S300	DIODE,SCHOTTKY BARRIER	RB520S-30-TE61
D3408	72783763	D27RX301L0	DIODE,SCHOTTKY	RSX301L-30TE25
D3601	72781371	DD7R20S300	DIODE,SCHOTTKY BARRIER	RB520S-30-TE61
D3602	72781375	DE7RB5R62B	DIODE,ZENER	UDZS5.6B TE-17
D3603	72781371	DD7R20S300	DIODE,SCHOTTKY BARRIER	RB520S-30-TE61
			ICS	
IC101	75002793	S3W704JM01	MEMORY DATA	OEC7136A
IC102	72795101	I9UF032290	IC	PST3229NR
⚠IC103	72796395	I1KA98R09A	IC	KIA78R09API
IC199	75002791	S3W704JE01	MEMORY DATA	AT24C128N-10SU-1.8
⚠IC401	72794507	I03TD80410	IC	LA78041
⚠IC402	72797545	I03S065100	IC	LA6510
⚠IC501	72794512	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠IC502	72781463	I2BT067530	IC	STR-W6753

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			ICS	
⚠IC503	72794512	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠IC504	72794508	I1KJ9A431A	IC	KIA431A-AT
⚠IC505	72795905	I1KA78R090	IC	KIA278R09PI
⚠IC506	72794508	I1KJ9A431A	IC	KIA431A-AT
IC602	72797548	I05DD13170	IC	TA1317ANG
IC603	72797549	I05DE13600	IC	TA1360ANG
IC701	72794501	I01F05853B	IC	AN15853B-E1
IC702	72797567	I0QF025840	IC	NJM2584AM(TE1)
IC704	72794502	I0UF015010	IC	MM1501XNRE
IC902	72783792	I19FF44400	IC	MSP4440G-QA-C13-001
⚠IC1001	72794497	I0FSP7808B	IC	AN17808B
IC2401	72783775	IFNME240H0	IC	X240H(215H48AGA21HG)
IC2402	72783776	ICLJ022ET5	IC	HY5DU561622ETP-D43
IC2403	72783776	ICLJ022ET5	IC	HY5DU561622ETP-D43
IC2404	72783777	I57F04L640	IC	BR24L64F-WE2
IC2405	72781496	I97F052290	IC	BD5229G-TR
IC2406	75002792	S3W704JF01	MEMORY DATA	HY27US08281A-TPCB
IC2800	72783369	I55J07W660	IC	TC7W66FU(TE12L,F)
IC3401	72783779	I1LF010420	IC	AL1042
⚠IC3402	72781440	I07F0C0WF0	IC	BA00BC0WFP-E2
⚠IC3403	72783780	I07F078200	IC	BD7820FP-E2
⚠IC3404	72783781	I07F00HFP0	IC	BA7810HFP-TR
IC3601	72796085	I57J0L02F0	IC	BR24L02F-WE2
IC3602	72783783	IG4F020210	IC	CM2021-00TR
IC3603	72783784	IG1F090110	IC	SII9011CLU
IC6601	72783790	IFDK074010	IC	ADV7401BSTZ-80
			TRANSISTORS	
Q101	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q102	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q103	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q104	72783821	TNRAA05002	COMPOUND TRANSISTOR	RT1N431C-T112-1
⚠Q105	72796092	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q106	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
Q107	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
⚠Q401	72798334	TC5TC3328Y	TRANSISTOR,SILICON	2SC3328_Y(TPE6_F)
⚠Q402	72781789	T250029200	FET	2SK2920(Q)
⚠Q403	72798339	TCKF059040	TRANSISTOR,SILICON	2SC5904000LI
Q404	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q405	72796427	TNRAB05004	COMPOUND TRANSISTOR	RT1N141C-T112-1
Q407	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q408	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q410	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q413	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q414	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q415	72781794	TC3F046340	TRANSISTOR,SILICON	2SC4634
Q501	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q502	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q503	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q504	72798351	TJXG15NK50	FET	STP15NK50ZFP
⚠Q505	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q506	72794570	TCAT03209Y	TRANSISTOR,SILICON	KTC3209_Y-AT
Q507	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
⚠Q508	72794569	TA3T016240	TRANSISTOR,SILICON	2SA1624-AA
⚠Q509	72794570	TCAT03209Y	TRANSISTOR,SILICON	KTC3209_Y-AT
Q510	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q513	72794578	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
Q514	72795480	TC5T01627Y	TRANSISTOR,SILICON	2SC1627_Y(TPE2)
Q601	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q602	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q603	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q604	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q605	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q606	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q607	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q608	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q612	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q613	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q615	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q616	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q617	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q701	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q702	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q703	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q705	72781807	TPRAA05002	COMPOUND TRANSISTOR	RT1P431C-T112-1
Q706	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			TRANSISTORS	
Q707	72795481	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q716	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q717	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
⚠Q801	72798331	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
⚠Q802	72798331	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
⚠Q803	72798331	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
Q804	72794578	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
⚠Q810	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q811	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q812	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q814	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q852	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q853	72794576	TCUT0752GY	TRANSISTOR,SILICON	2SC752(G)TM_Y(TP2
Q854	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q855	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q856	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q857	72794578	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
Q858	72794579	TA10021400	TRANSISTOR,SILICON	2SA2140
Q859	72794580	TC10059930	TRANSISTOR,SILICON	2SC5993
Q860	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q1001	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
Q2001	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
Q2401	72783825	T2AA5132E0	FET	KTK5132E-RTK/P
Q2403	72783825	T2AA5132E0	FET	KTK5132E-RTK/P
Q2404	72783825	T2AA5132E0	FET	KTK5132E-RTK/P
Q2406	72783825	T2AA5132E0	FET	KTK5132E-RTK/P
Q2407	72783825	T2AA5132E0	FET	KTK5132E-RTK/P
Q2418	72783826	T8RA039280	TRANSISTOR,SILICON	2SC3928A-T112-1R
Q2419	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
Q2801	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
Q2803	72783390	T82A03841Q	TRANSISTOR,SILICON	2SC3841-T1B_T63
Q2804	72783390	T82A03841Q	TRANSISTOR,SILICON	2SC3841-T1B_T63
Q2805	72783390	T82A03841Q	TRANSISTOR,SILICON	2SC3841-T1B_T63
Q2806	72781807	TPRAA05002	COMPOUND TRANSISTOR	RT1P431C-T112-1
Q3403	72783826	T8RA039280	TRANSISTOR SILICON	2SC3928A-T112-1R
Q3404	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
⚠Q3405	72783827	TJYASP8K30	FET	SP8K3 TB
Q3406	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
Q3407	72781807	TPRAA05002	COMPOUND TRANSISTOR	RT1P431C-T112-1
Q6601	72796429	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T112-1
			COILS &TRANSFORMERS	
L402	72798927	022R00042A	COIL,LINEARITY	ELH5L7150N
L405	72784148	02D3000089	COIL,CHOKE	ELC18B391LM
L406	72796650	02D3000063	COIL,CHOKE	ELC18B151LK
L407	72782570	02D3000073	COIL,CHOKE	ELC18B151EN
⚠L408	72798954	02D3000069	COIL,CHOKE	ELC18B103LM
L501	72796513	02167E220K	COIL	22 UH
⚠L502	72796642	029X000118	COIL,LINE FILTER	SS28V-R25080-CH
⚠L503	72796642	029X000118	COIL,LINE FILTER	SS28V-R25080-CH
L505	72796088	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
L506	72796513	02167E220K	COIL	22 UH
L507	72796087	02167E100K	COIL	10 UH
L508	72796087	02167E100K	COIL	10 UH
L509	72796088	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
L510	72796088	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
L602	72794526	02167F220J	COIL	22 UH
L603	72794526	02167F220J	COIL	22 UH
L604	72794526	02167F220J	COIL	22 UH
L606	72796571	021LA6220J	COIL	22 UH
L607	72794526	02167F220J	COIL	22 UH
L701	72796089	02167F470J	COIL	47 UH
L702	72796089	02167F470J	COIL	47 UH
L703	72794526	02167F220J	COIL	22 UH
L704	72794540	02167F101J	COIL	100 UH
L805	72796492	021673101J	COIL	100 UH
L806	72796492	021673101J	COIL	100 UH
L807	72796492	021673101J	COIL	100 UH
L808	72795932	02167F150J	COIL	15 UH
L809	72795932	02167F150J	COIL	15 UH
L810	72795932	02167F150J	COIL	15 UH
L901	72795062	02167F100J	COIL	10 UH
L904	72795062	02167F100J	COIL	10 UH
L905	72795062	02167F100J	COIL	10 UH
L2401	72798917	0216SD1R0J	COIL	1 UH
L2403	72783800	0216SD2R2J	COIL	2.2 UH

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			COILS &TRANSFORMERS	
L2411	72783384	0216SDR47J	COIL	0.47 UH
L2412	72783384	0216SDR47J	COIL	0.47 UH
L2414	72783384	0216SDR47J	COIL	0.47 UH
L2415	72783800	0216SD2R2J	COIL	2.2 UH
L2801	72794540	02167F101J	COIL	100 UH
L2802	72794526	02167F220J	COIL	22 UH
L2804	72794526	02167F220J	COIL	22 UH
L3401	72783801	0211M44R7M	COIL	4.7 UH
⚠T401	72796676	0450190181	TRANS,HORIZONTAL DRIVE	ETH19K208AZ
⚠T402	72798984	0486290014	TRANSFORMER,PULSE	86290014
⚠T501	72798972	0481291284	TRANSFORMER,SWITCHING	81291284
⚠T502	75002752	0481490054	TRANSFORMER,SWITCHING	81490054
			JACKS	
J701	72783798	060J411044	RCA JACK	MSP-292V2-32_NI_FE_LF(O87)
J705	72796737	060J411033	RCA JACK	MSP-213V1-732_NI_LF
J706	72799002	060Q431019	RCA JACK	YKC21-7306N
J707	72799002	060Q431019	RCA JACK	YKC21-7306N
J708	72799004	063D000078	JACK PLATE	MSP-803V-BBA-432_NI_LF
J709	72799004	063D000078	JACK PLATE	MSP-803V-BBA-432_NI_LF
⚠J801	72799009	066F130022	SOCKET,CATHODE RAY TUBE	ISDW03S-F
J2201	72799005	063D700010	JACK	MDC-012V1-A_LF
J2202	72783794	060K421056	RCA JACK	AV-5A-66H
J2203	72783795	060K421058	RCA JACK	AV-5A-68H
J2204	72783796	060K421057	RCA JACK	AV-5A-67H
			SWITCHES	
SW2001	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW2002	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW2003	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW2004	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW2005	72794688	0504101T34	SWITCH,TACT	EVQ21505R
			P.C.BOARD ASSEMBLIES	
PCB070	75002761	A3W704J070L	TV MT PCB ASS'Y	CMD008C
PCB110	75002762	A3W704J110L	CRT PCB ASS'Y	CCF069A
PCB260	75002763	A3W704J260L	FRONT JACK PCB ASS'Y	CEF158A
PCBD20	75002764	A3W704JD20L	AV PCB ASS'Y	CEF155A
PCBD80	75002765	A3W704JD80L	VM COIL PCB ASS'Y	CEF159A
PCBDH0	75002766	A3W704JDH0L	DIGITAL PCB ASS'Y	CEF151A
			MISCELLANEOUS	
B403	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B404	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B405	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B502	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B503	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B701	72783359	024HC56005	CORE,BEADS	FCM1608CF-600T06
B851	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B852	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B853	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B901	72783356	024HC51023	CORE,BEADS	FCM1608KF-102T02
B902	72783356	024HC51023	CORE,BEADS	FCM1608KF-102T02
B903	72783356	024HC51023	CORE,BEADS	FCM1608KF-102T02
B904	72783356	024HC51023	CORE,BEADS	FCM1608KF-102T02
B2401	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2402	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2403	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2404	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2405	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2406	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2407	72783736	024AC1601G	CORE,BEADS	BLM31PG601SN1L
B2408	72783736	024AC1601G	CORE,BEADS	BLM31PG601SN1L
B2409	72783736	024AC1601G	CORE,BEADS	BLM31PG601SN1L
B2410	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2411	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2412	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2413	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2414	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2415	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2416	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2417	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2418	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2419	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2420	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B2421	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2422	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2423	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2424	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			MISCELLANEOUS	
B2425	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2426	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2801	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B2802	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B3401	72783734	024AC5330J	CORE,BEADS	BLM18PG330SN1D
B3402	72783735	024AC1391G	CORE,BEADS	BLM31PG391SN1L
B3406	72783736	024AC1601G	CORE,BEADS	BLM31PG601SN1L
B3407	72783736	024AC1601G	CORE,BEADS	BLM31PG601SN1L
B3408	72783736	024AC1601G	CORE,BEADS	BLM31PG601SN1L
B3410	72783736	024AC1601G	CORE,BEADS	BLM31PG601SN1L
B3601	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B3602	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B3603	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B3604	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B3605	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B3606	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B3607	72783737	024AC5151E	CORE,BEADS	BLM18BD151SN1D
B6601	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B6602	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B6606	72798929	024AC5102F	CORE,BEADS	BLM18BD102SN1D
B6607	72798931	024AC5600E	CORE,BEADS	BLM18BB600SN1D
B6608	72798931	024AC5600E	CORE,BEADS	BLM18BB600SN1D
B6609	72798931	024AC5600E	CORE,BEADS	BLM18BB600SN1D
B6610	72798931	024AC5600E	CORE,BEADS	BLM18BB600SN1D
BT001	72799278	141R004016	BATTERY,MANGAN	GR03X-SP2
BT002	72799278	141R004016	BATTERY,MANGAN	GR03X-SP2
CD101	72796900	06CU2B3301	CORD,CONNECTOR	CU2B3301
⚠CD501	72795553	1209615904	CORD,AC BUSH	9615904
⚠CD507	72783898	028R300005	COIL,DEGAUSS	8R300005
CD509	72796902	06CU2C2001	CORD,CONNECTOR	CU2C2001
CD603	72796878	06CU225201	CORD,CONNECTOR	CU225201
CD605	72799141	06CU273302	CORD,CONNECTOR	CU273302
CD802	75002757	06CU276201	CORD,CONNECTOR	CU276201
CD802	75002802	WEL6862038	FLAT CABLE	AWM2468 AWG26 7C GRAY 620MM
CD803	72795883	06CU83036A	CORD,CONNECTOR	CU83036A
CD808	75002756	06CU253801	CORD,CONNECTOR	CU253801
CD808	72795059	WCL6838038	FLAT CABLE	AWM2468 AWG26 5C GRAY 380MM
CD851	75002801	WAL6858038	FLAT CABLE	AWM2468 AWG26 3C GRAY 580MM
CD852	72794464	06CU232001	CORD,CONNECTOR	CU232001
CP101	72796807	069S2B0629	CONNECTOR PCB SIDE	A2001WV2-11P
CP102	72783364	069S280639	CONNECTOR PCB SIDE	A2001WR2-8P
CP103	72796802	069S270639	CONNECTOR PCB SIDE	A2001WR2-7P
CP104	72796809	069S2C0629	CONNECTOR PCB SIDE	A2001WV2-12P
CP403	72796792	069S120419	CONNECTOR PCB SIDE	A2502WV2-2P
⚠CP404	72782003	069X460109	CONNECTOR PCB SIDE	B06B-DVS-L_(LF)
⚠CP501	72796821	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
⚠CP502	72796817	069S320419	CONNECTOR PCB SIDE	A3963WV2-3PD
CP504	72796768	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP505	72796768	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP506	72796825	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP507	72796825	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP601	72796801	069S270629	CONNECTOR PCB SIDE	A2001WV2-7P
CP602	72796753	067U007029	WIRE HOLDER	B2013H02-7P
CP701	72796803	069S280629	CONNECTOR PCB SIDE	A2001WV2-8P
CP801	72796080	069S220629	CONNECTOR PCB SIDE	A2001WV2-2P
CP803	72796818	069S330010	CONNECTOR PCB SIDE	A2361WV2-3P
CP804	72796824	069W010010	CONNECTOR PCB SIDE	005P-2100
CP852	72796794	069S230629	CONNECTOR PCB SIDE	A2001WV2-3P
CP853	72796749	067U003029	WIRE HOLDER	B2013H02-3P
CD1002	75002754	06CU147202	CORD CONNECTOR	CU147202
CD1003	75002755	06CU234801	CORD CONNECTOR	CU234801
CD2201	72799144	06CU283001	CORD CONNECTOR	CU283001
CD3203	72783747	06CU262601	CORD CONNECTOR	CU262601
CD3410	72783748	06CU2D4801	CORD CONNECTOR	CU2D4801
CP1004	72796793	069S140419	CONNECTOR PCB SIDE	A2502WV2-4P
CP1005	72796794	069S230629	CONNECTOR PCB SIDE	A2001WV2-3P
CP2403	72783756	06AR204410	CONNECTOR PCB SIDE	87760-4416
CP2405	72783757	069LAA1005	CONNECTOR PCB SIDE	C33F-004-5079A
CP2802	72796810	069S2D0629	CONNECTOR PCB SIDE	A2001WV2-13P
CP2803	72796800	069S260629	CONNECTOR PCB SIDE	A2001WV2-6P
CP3601	72799030	069HYJ3010	CONNECTOR PCB SIDE	DC1R019JDA
CP802B	72796801	069S270629	CONNECTOR PCB SIDE	A2001WV2-7P
CP808A	72796751	067U005049	WIRE HOLDER	B2013H02-5P
CP808B	72796798	069S250629	CONNECTOR PCB SIDE	A2001WV2-5P
CP851A	72796749	067U003029	WIRE HOLDER	B2013H02-3P

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			MISCELLANEOUS	
CP851B	72796779	069R230589	CONNECTOR PCB SIDE	52147-0310
EL0701	72797069	124116281A	EYE LET	XRY16X28BD
EL0702	72797070	124120301A	EYE LET	XRY20X30BD
EL1101	72797069	124116281A	EYE LET	XRY16X28BD
EL1102	72797070	124120301A	EYE LET	XRY20X30BD
⚠F501	72794493	081PC6R305	FUSE	51MS063L
⚠F502	72796952	0835A07005	MICRO FUSE	20N_7000FSW
⚠FB401	72798967	043730001F	TRANSFORMER,FLYBACK	3730001F
FH501	72794496	06710T0009	HOLDER,FUSE	EYF-52BCY
FH502	72794496	06710T0009	HOLDER,FUSE	EYF-52BCY
NR2401	72783802	110P4102M5	R,NETWORK	4D02WGJ0102TCE
NR2402	72783385	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2403	72783385	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2404	72783385	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2405	72783385	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2406	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2407	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2408	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2409	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2410	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2411	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2412	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2413	72783803	110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR3601	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3602	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3603	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3604	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3605	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3606	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3607	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3608	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6601	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6602	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6603	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6604	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6605	72783804	110P4330M5	R,NETWORK	4D02WGJ0330TCE
OS2001	75002759	077A038003	REMOTE RECEIVER	ROM-V338SY
⚠RY501	72794686	0560X20118	RELAY	G5PA-1-SA(WEC)
⚠RY502	72796048	0560V50118	RELAY	ALKS329
⚠SP1001	72796049	070Y447001	SPEAKER	S0510F01
⚠SP1002	72796049	070Y447001	SPEAKER	S0510F01
⚠TH502	72795546	DF5EL3R0A0	DEGAUSS ELEMENT	ZPB45BL3R0A
TM101	72799186	076D0KK010	TRANSMITTER	ORT204N7404359-U
⚠TU2801	72783832	0164100007	DIGITAL TUNER	ENG36A53KF
⚠V801	75002760	098T300503	CRT W/DY	W76QEP270XVBL
X103	72799226	100WT01611	CRYSTAL	HC-49/U-S
X603	72781949	1002R01502	CERAMIC OSCILLATOR	CSBLA503KECZF30-B0
X901	72783837	100CT01804	CRYSTAL	HC-49/U-S
X2401	72783833	100DT05501	CRYSTAL	SMD-49
X2402	72783834	100DT02503	CRYSTAL	SMD-49
X3601	72783835	100DT02801	CRYSTAL	SMD-49
X6601	72783836	100DT02802	CRYSTAL	SMD-49

RESISTOR

RC..... CARBON RESISTOR

CAPACITORS

CC..... CERAMIC CAPACITOR
CE..... ALUMI ELECTROLYTIC CAPACITOR
CP..... POLYESTER CAPACITOR
CPP..... POLYPROPYLENE CAPACITOR
CPL..... PLASTIC CAPACITOR
CMP..... METAL POLYESTER CAPACITOR
CMPL..... METAL PLASTIC CAPACITOR
CMPP..... METAL POLYPROPYLENE CAPACITOR

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