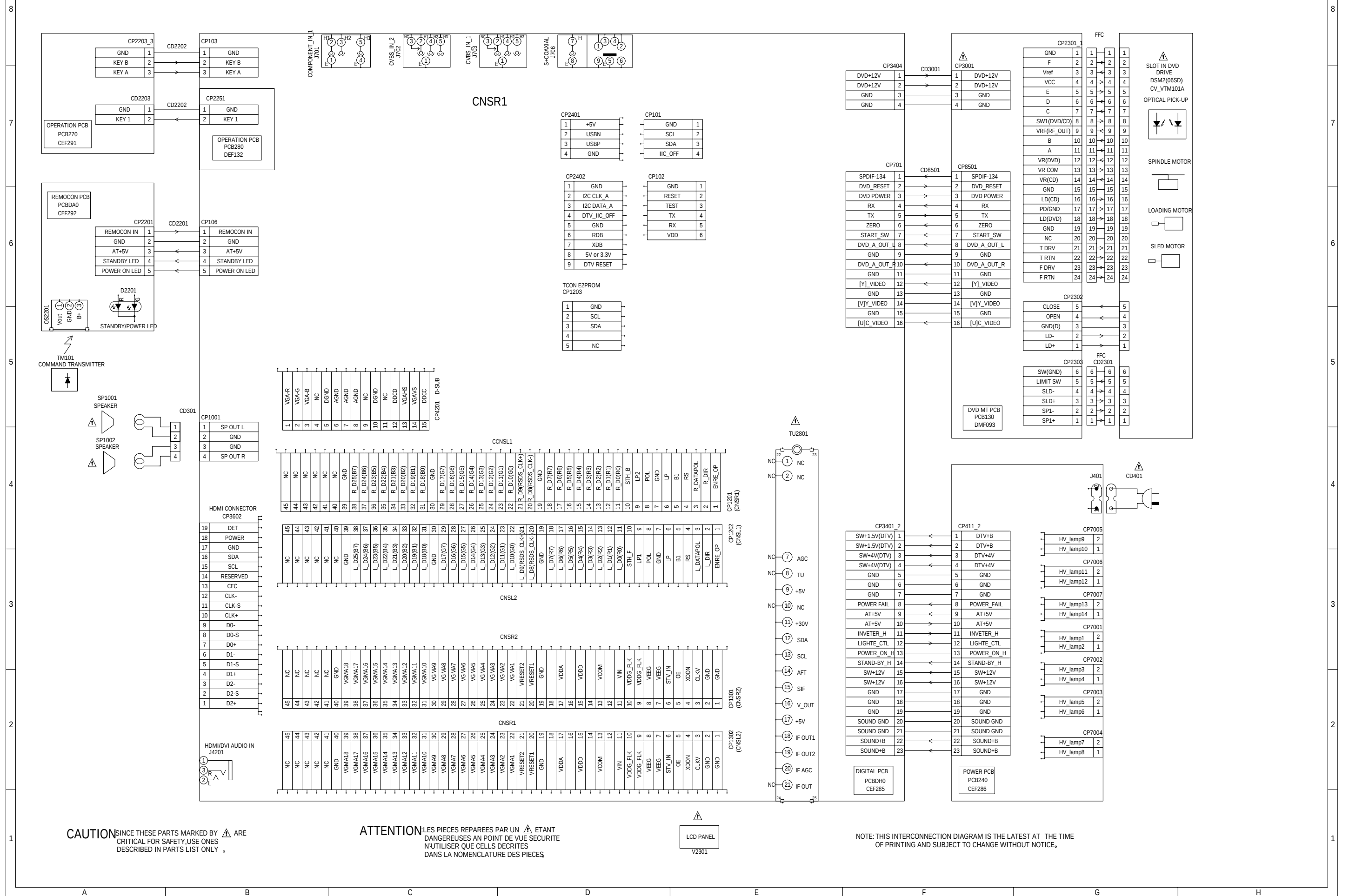
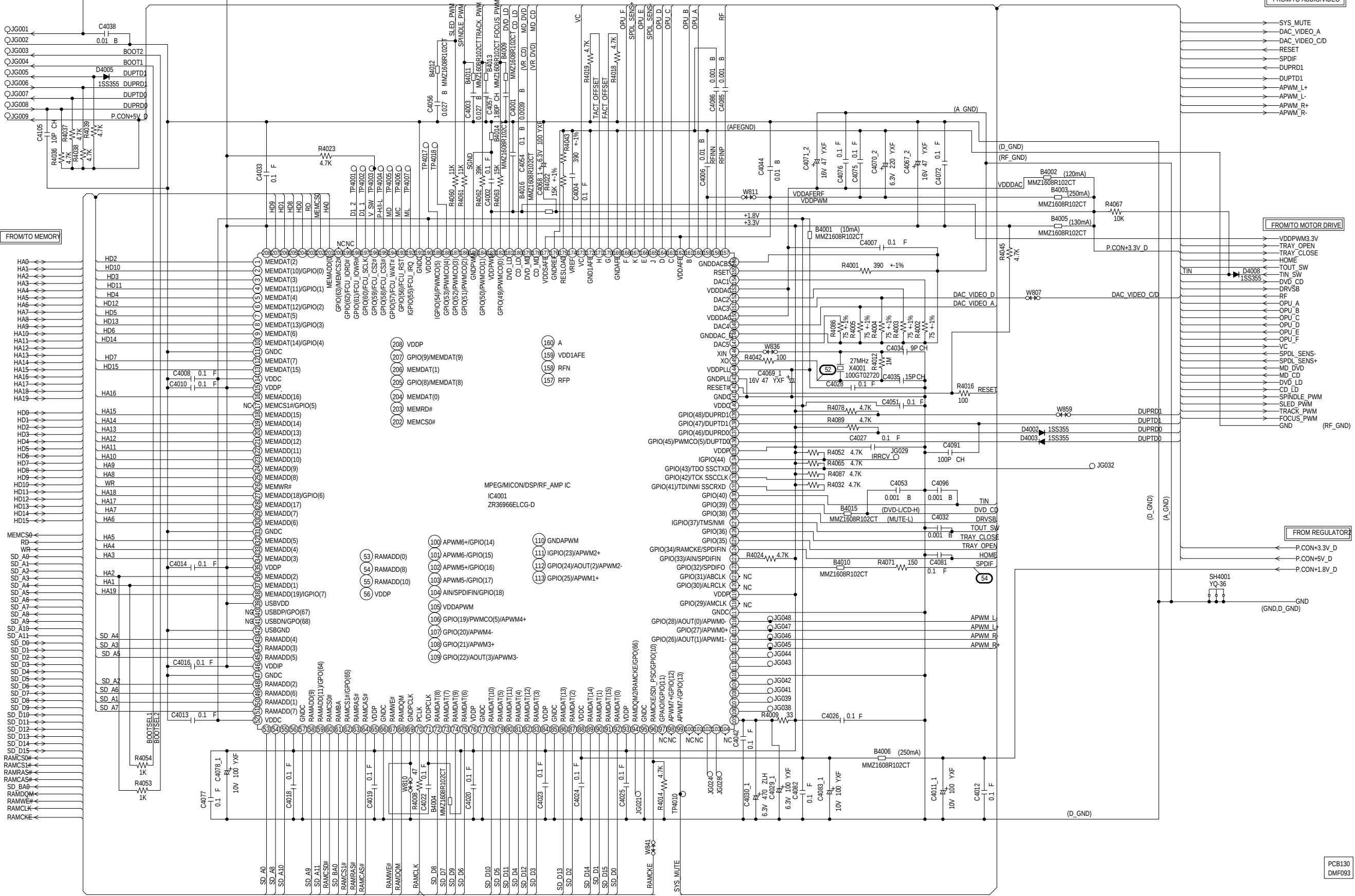


INTERCONNECTION DIAGRAM



(DVD MT PCB)



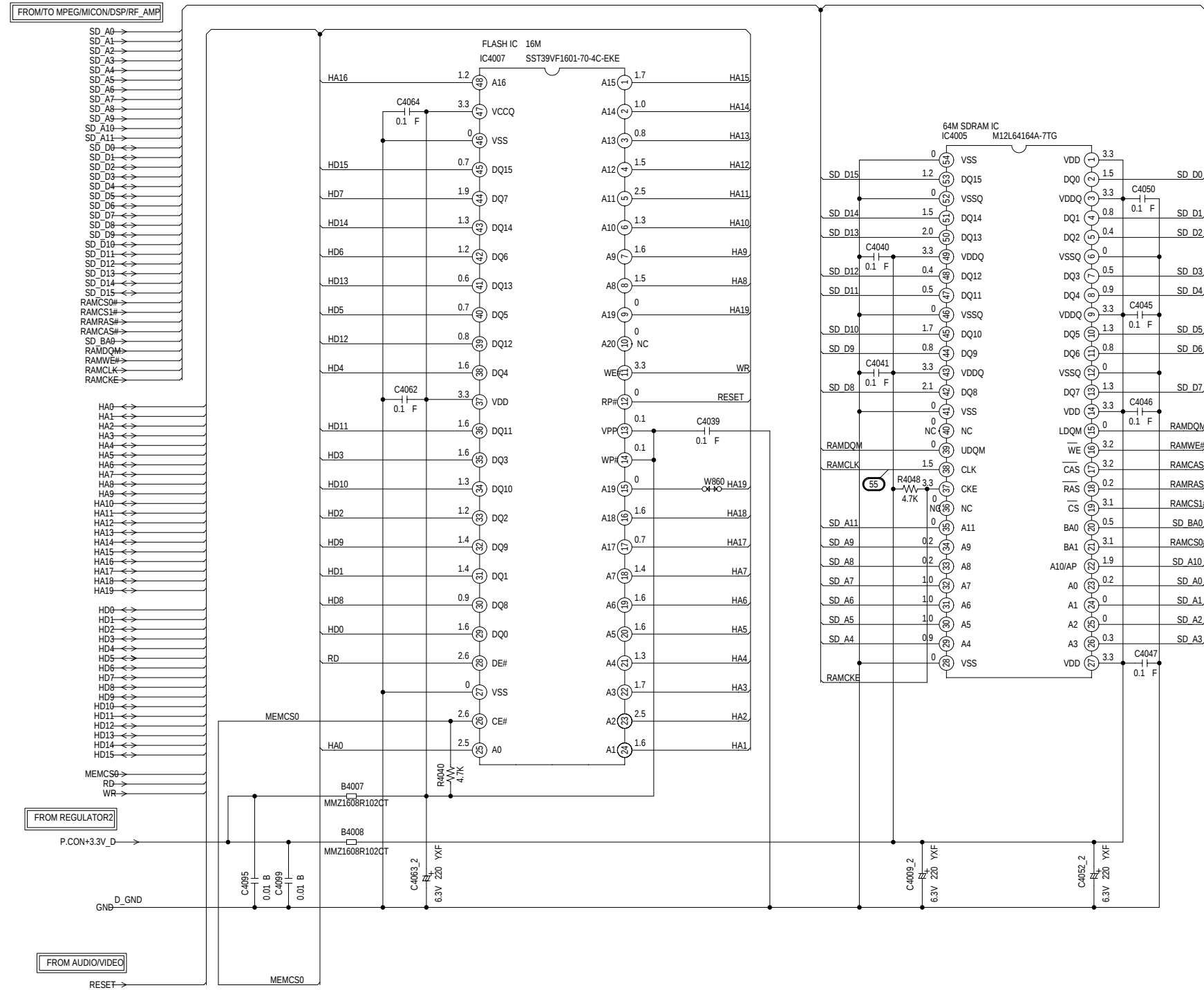
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTIC

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DMF093

MEMORY SCHEMATIC DIAGRAM

(DVD MT PCB)

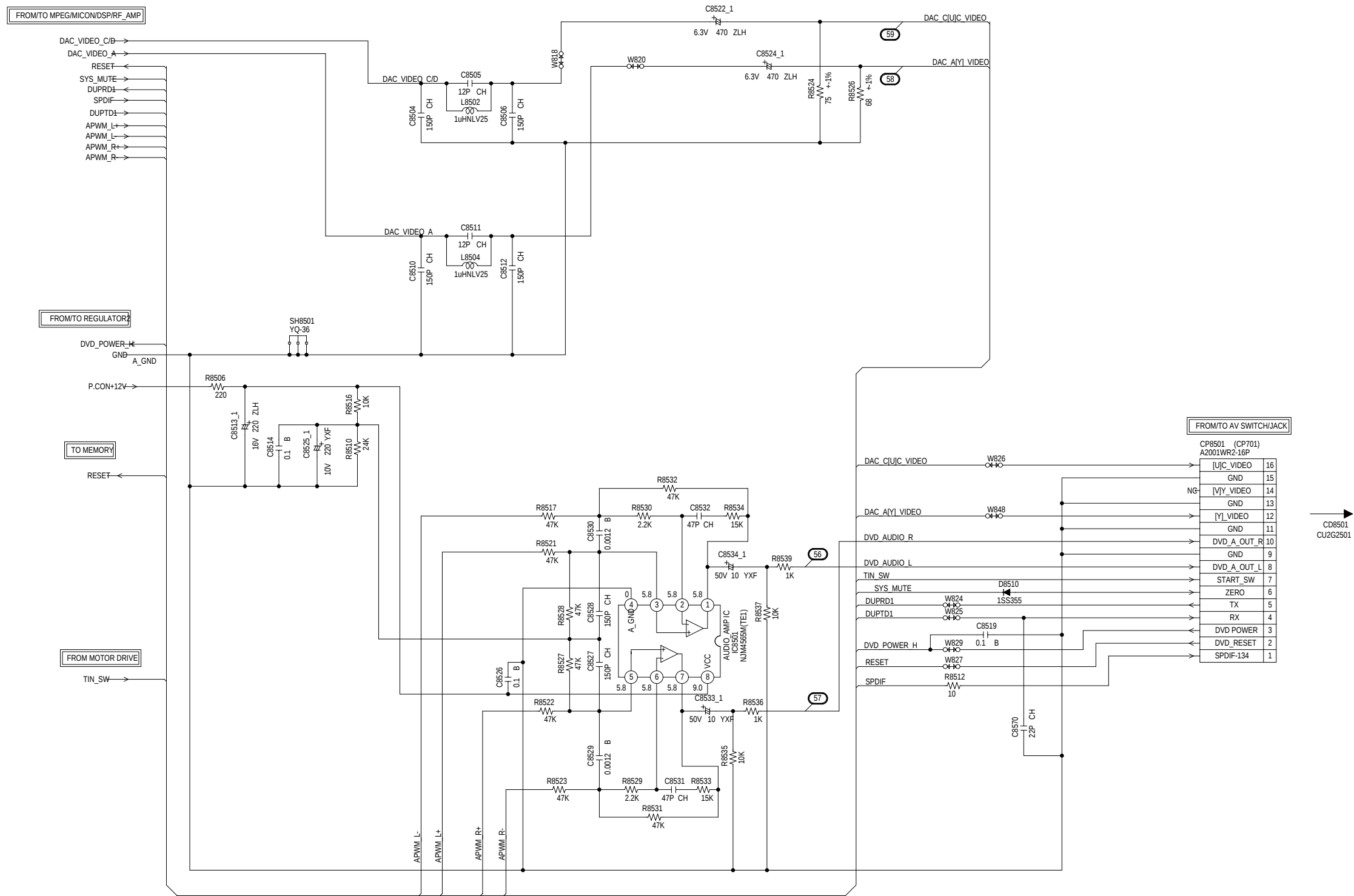


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DMF093

AUDIO/VIDEO SCHEMATIC DIAGRAM
(DVD MT PCB)



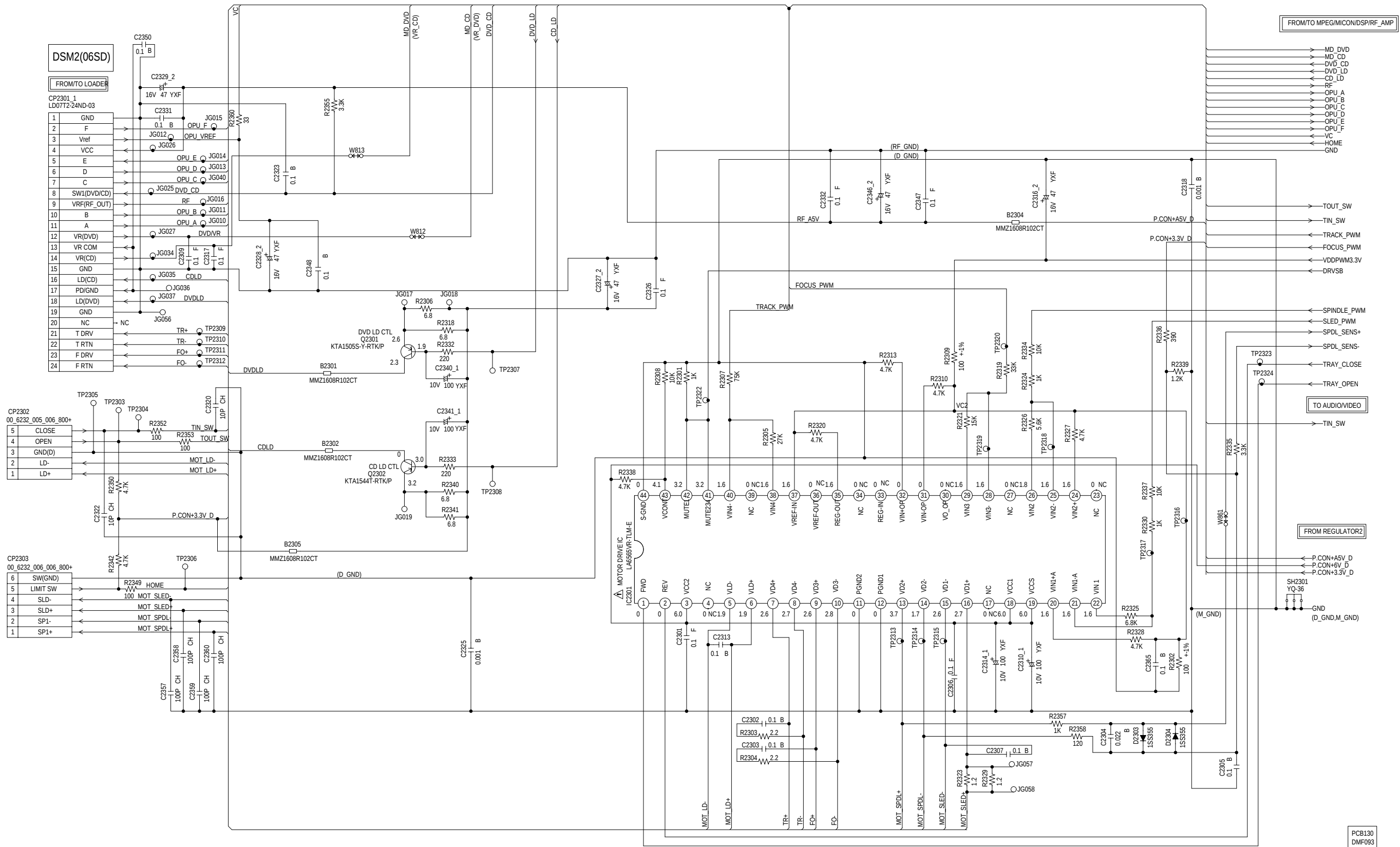
NOTE:THE DC VOLTAGE EACH PART WAS
MEASURED WITH THE DIGITAL TESTER
DURING PLAYBACK.

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

PCB130
DMF093

MOTOR DRIVE SCHEMATIC DIAGRAM

(DVD MT PCB)



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

ATTENTION: LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

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

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DMF093

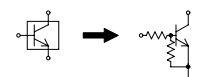
(DVD MT PCB)



CAUTION F3001 IS MANUFACTURED BY COOPER INDUSTRIES INC.,
TYPE 1206FA-T.

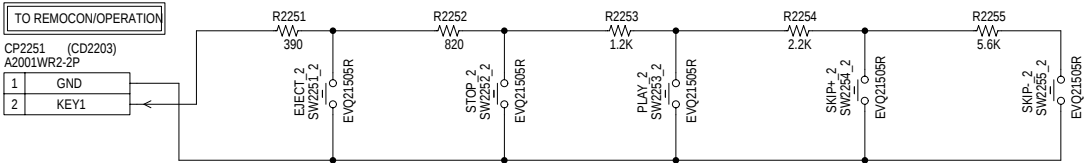
ATTENTION LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES

CAUTION: DIGITAL TRANSISTOR



OPERATION2 SCHEMATIC DIAGRAM

(OPERATION2 PCB)



PCB280
DEF132

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

ASIC SCHEMATIC DIAGRAM
(DIGITAL PCB)

TO LVDS

R7<
R6<
R5<
R4<
R3<
R2<
R1<
R0<
G7<
G6<
G5<
G4<
G3<
G2<
G1<
G0<
B7<
B6<
B5<
B4<
B3<
B2<
B1<
B0<
DCLK1<
DHS<
DVS<
DEN<

FROM INTERFACE_HDMI IC

DVIDATA0->
DVIDATA1->
DVIDATA2->
DVIDATA3->
DVIDATA4->
DVIDATA5->
DVIDATA6->
DVIDATA7->
DVIDATA8->
DVIDATA9->
DVIDATA10->
DVIDATA11->
DVIDATA12->
DVIDATA13->
DVIDATA14->
DVIDATA15->
DVIDATA16->
DVIDATA17->
DVIDATA18->
DVIDATA19->
DVIDATA20->
DVIDATA21->
DVIDATA22->
DVIDATA23->
DVICLK->
DVIHSYNC->
DVI VSYNC->
DVIDE->

FROM VIDEO AD CONVERTER

DVIDATA0->
DVIDATA1->
DVIDATA2->
DVIDATA3->
DVIDATA4->
DVIDATA5->
DVIDATA6->
DVIDATA7->
DVIDATA8->
DVIDATA9->
DVIDATA10->
DVIDATA11->
DVIDATA12->
DVIDATA13->
DVIDATA14->
DVIDATA15->
DVIDATA16->
DVIDATA17->
DVIDATA18->
DVIDATA19->
DVIDATA20->
DVIDATA21->
DVIDATA22->
DVIDATA23->
DVICLK->
DVIHSYNC->
DVI VSYNC->
DVIDE->

X_RESET_OUT#

FROM MICON

DTV_RESET->

FROM FLASH

DTV_RESET->

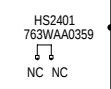
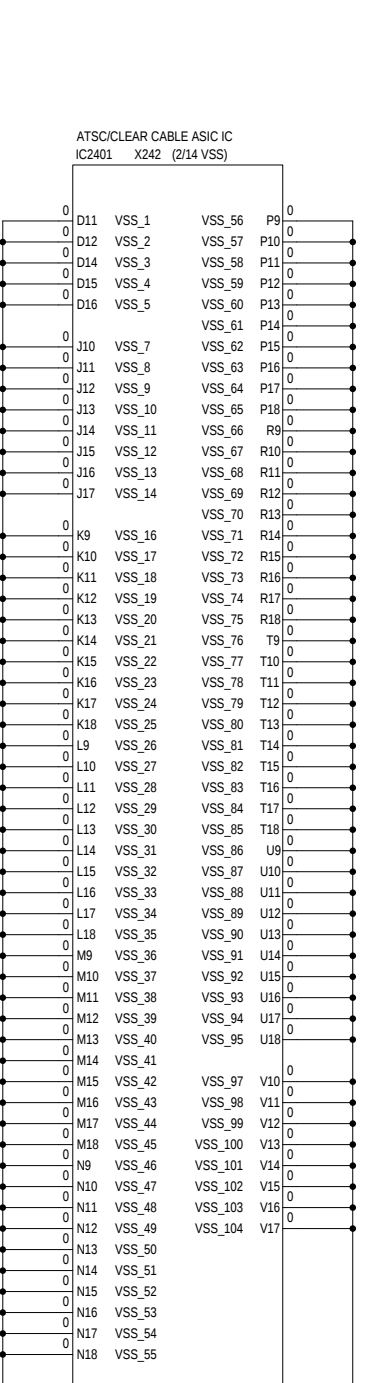
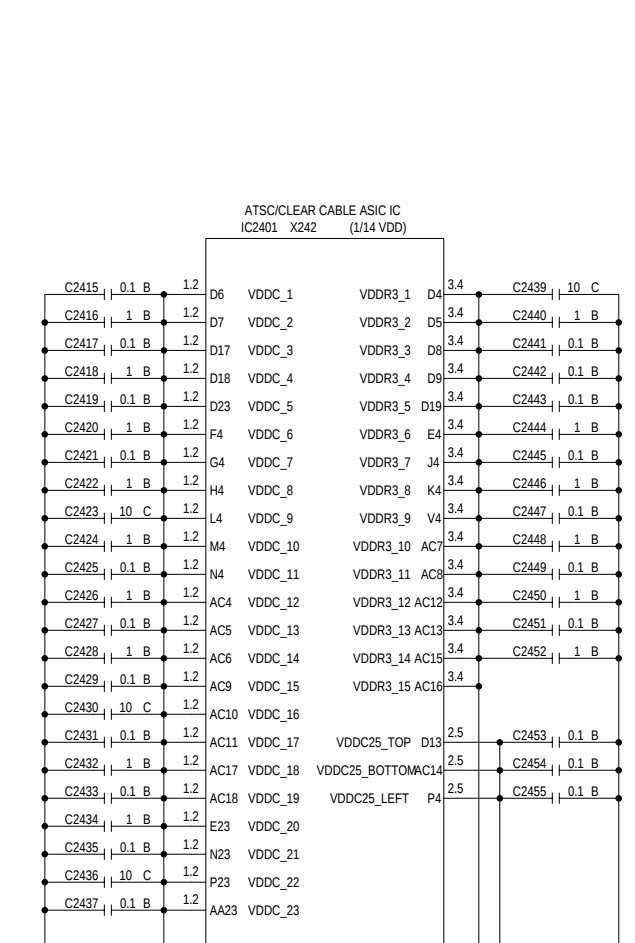
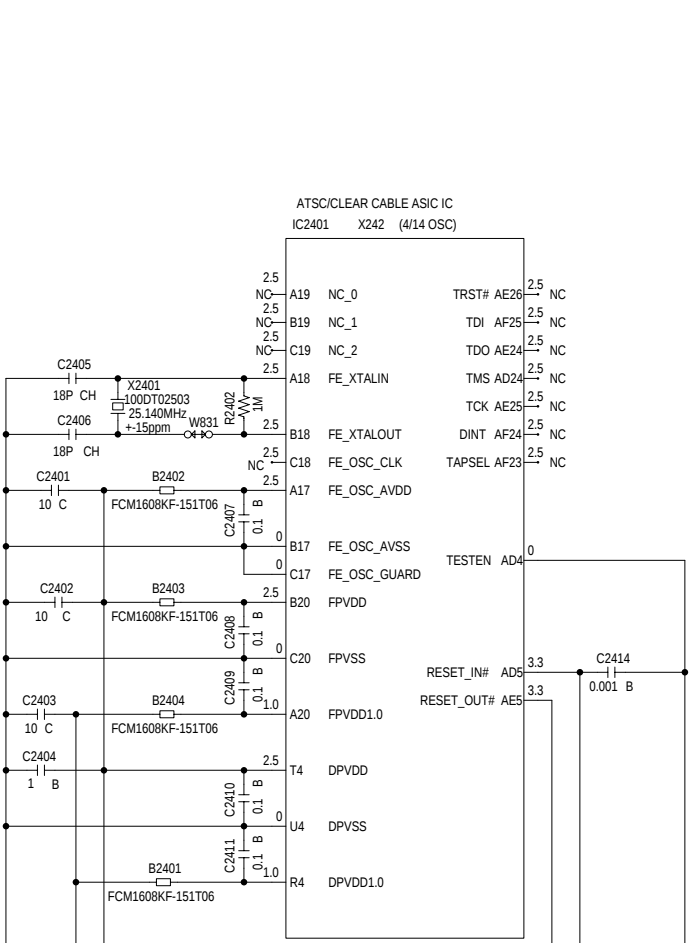
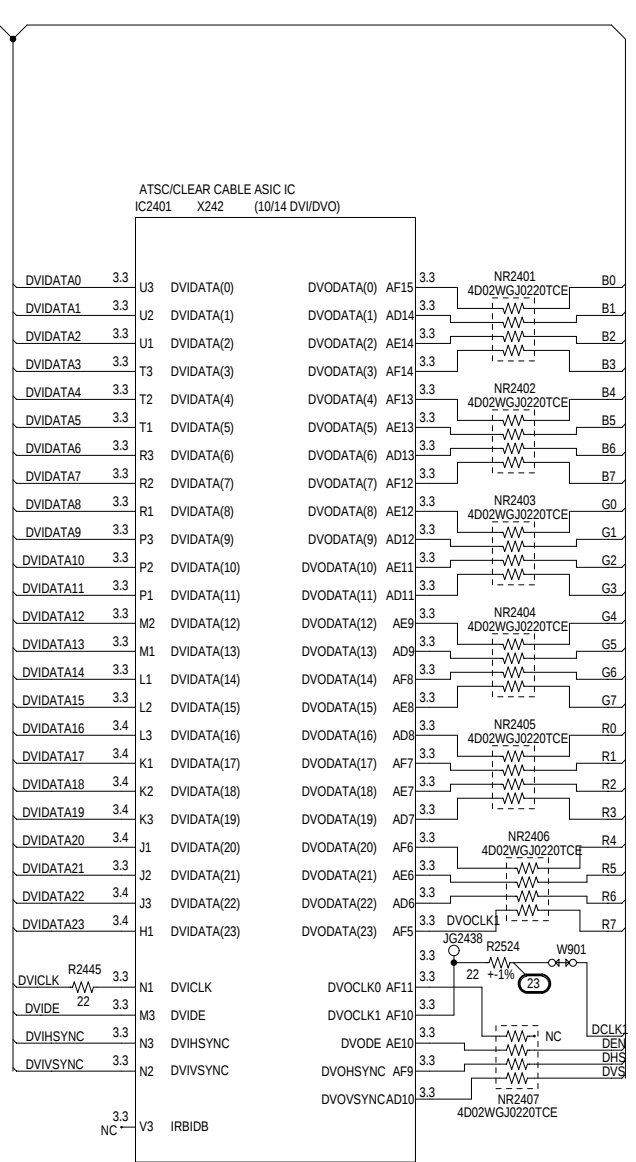
FROM POWER3

VDDC_1.0V->

+2.5V_I0->

+3.3V->

GND

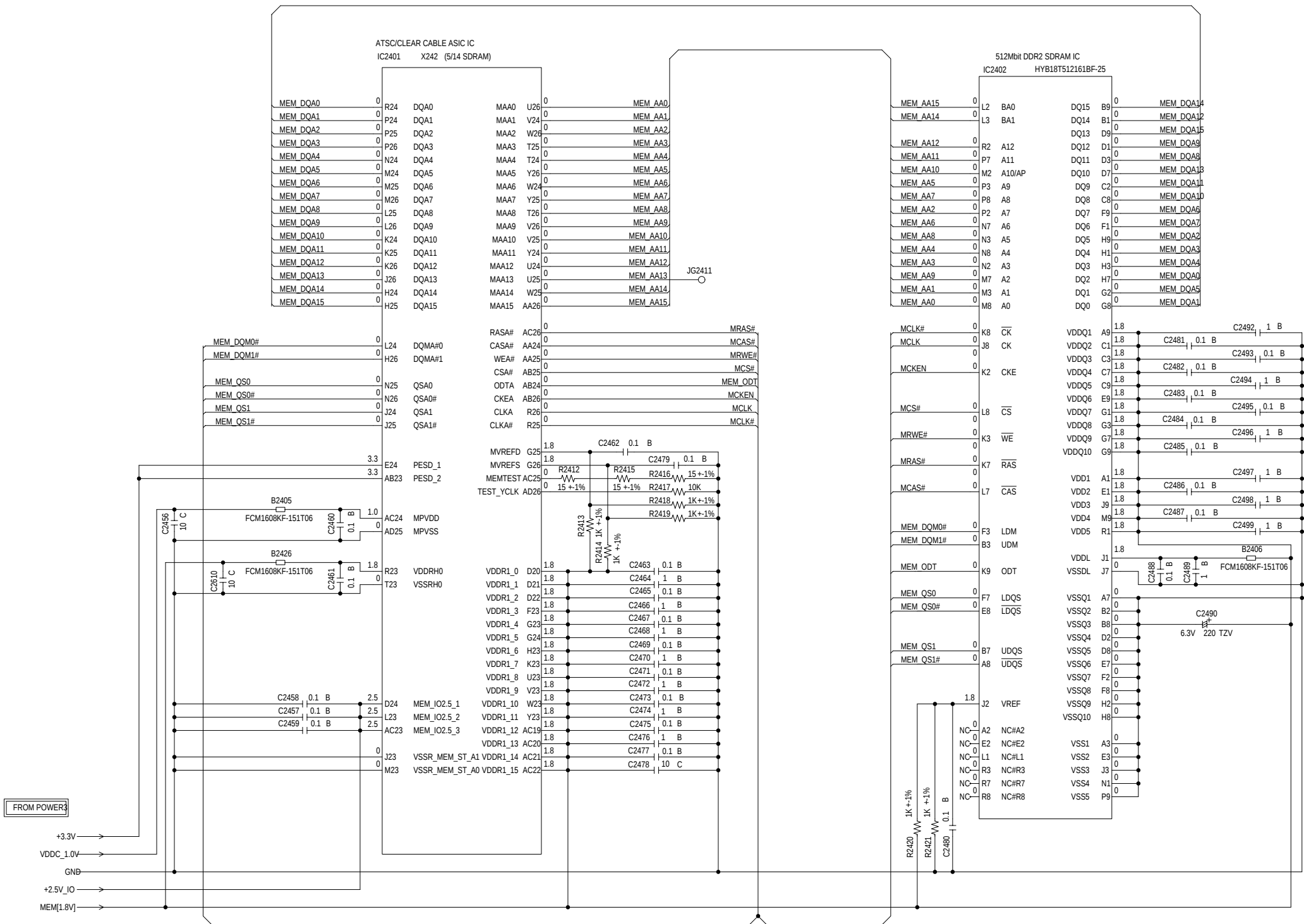


PCBDH0
CEF285

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.

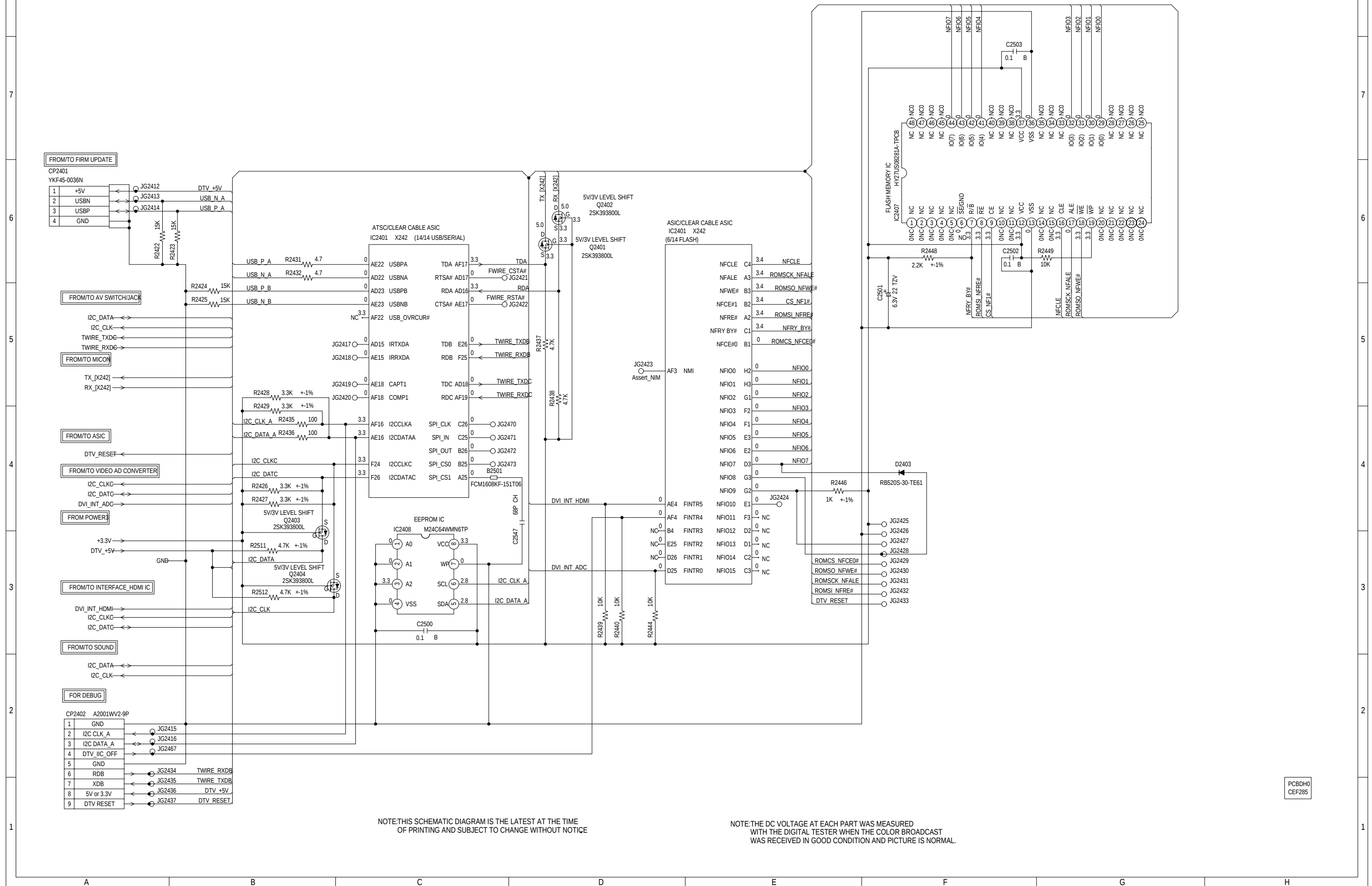
SDRAM SCHEMATIC DIAGRAM
(DIGITAL PCB)



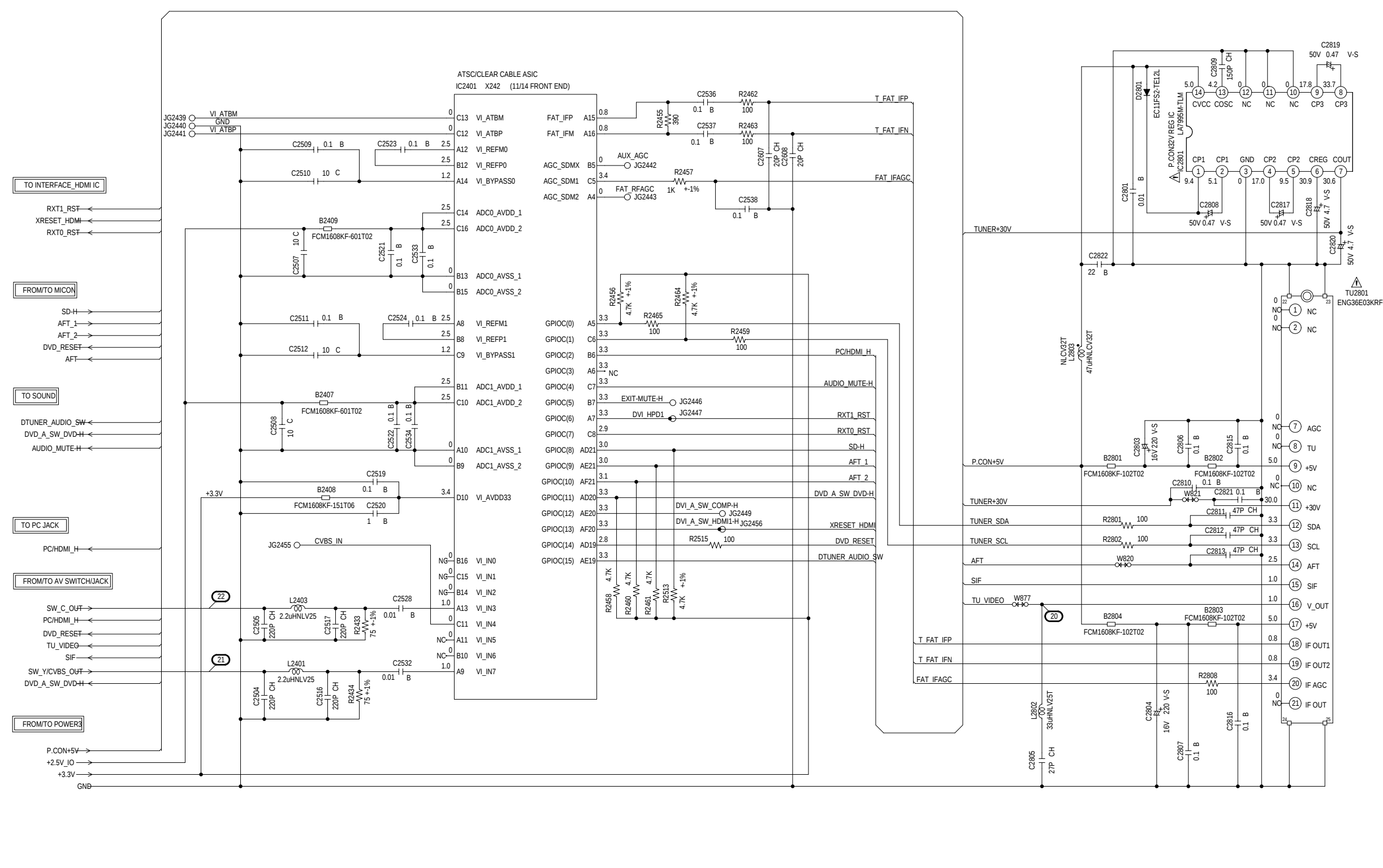
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

FLASH SCHEMATIC DIAGRAM (DIGITAL PCB)



FRONT END SCHEMATIC DIAGRAM
(DIGITAL PCB)



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

PCBDH0
CEF285

(DIGITAL PCB)

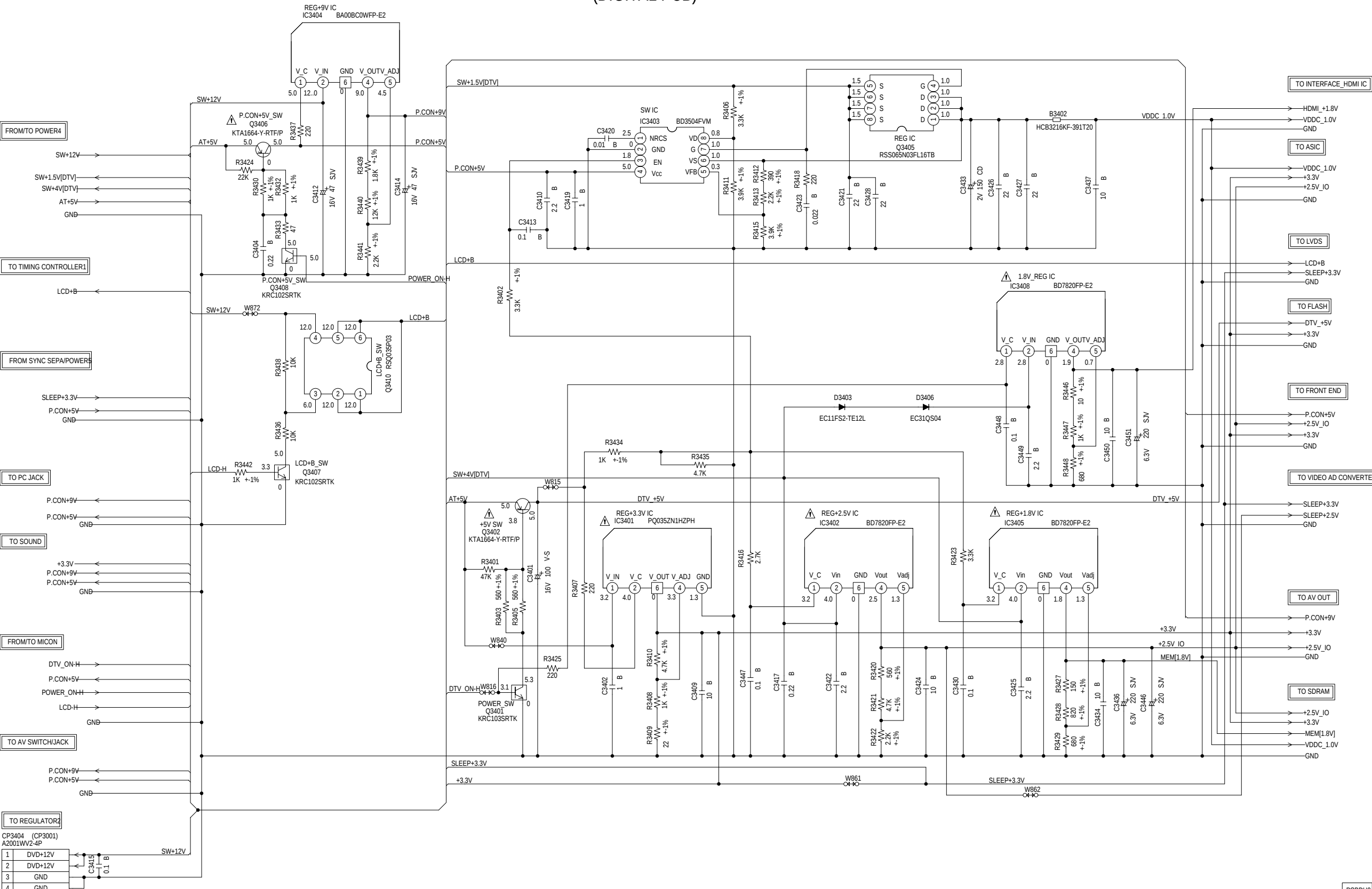


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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.

PCBDH0
CEF285

(DIGITAL PCB)



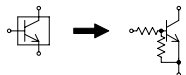
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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

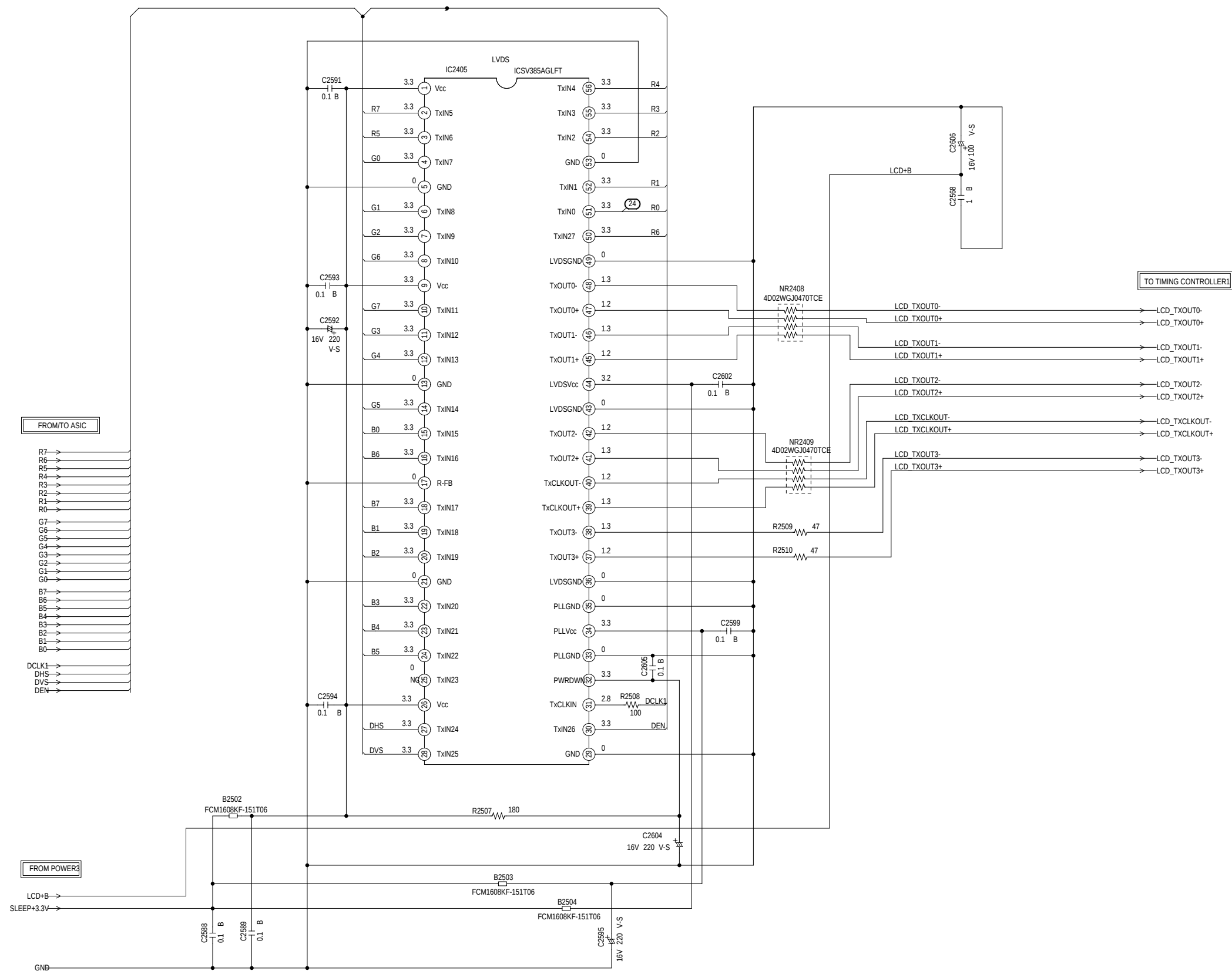
CAUTION SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

ATTENTION LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES

CAUTION: DIGITAL TRANSISTOR



LVDS SHEMATIC DIAGRAM
(DIGITAL PCB)



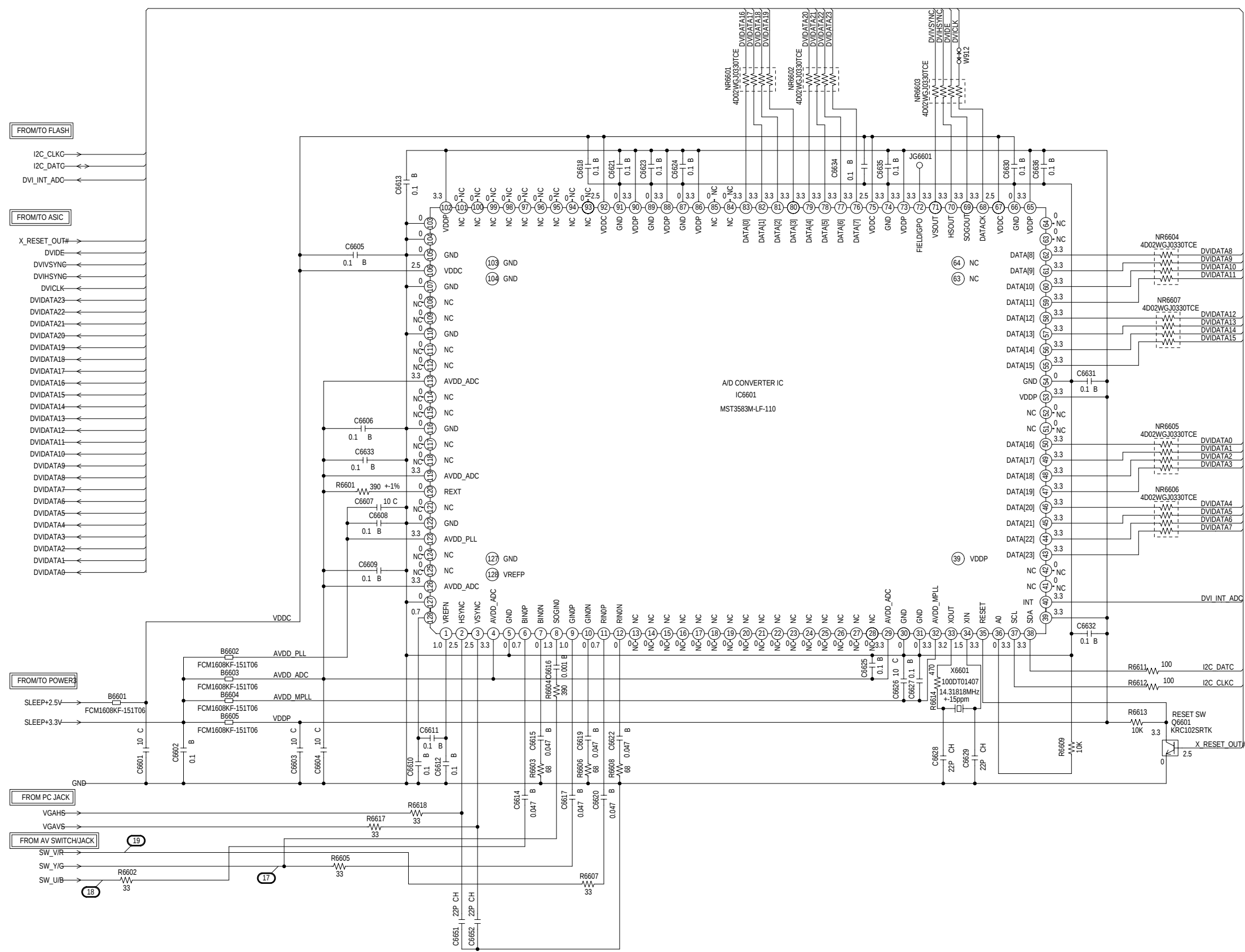
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

PCBDH0
CEF285

VIDEO AD CONVERTER SCHEMATIC DIAGRAM

(DIGITAL PCB)



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.

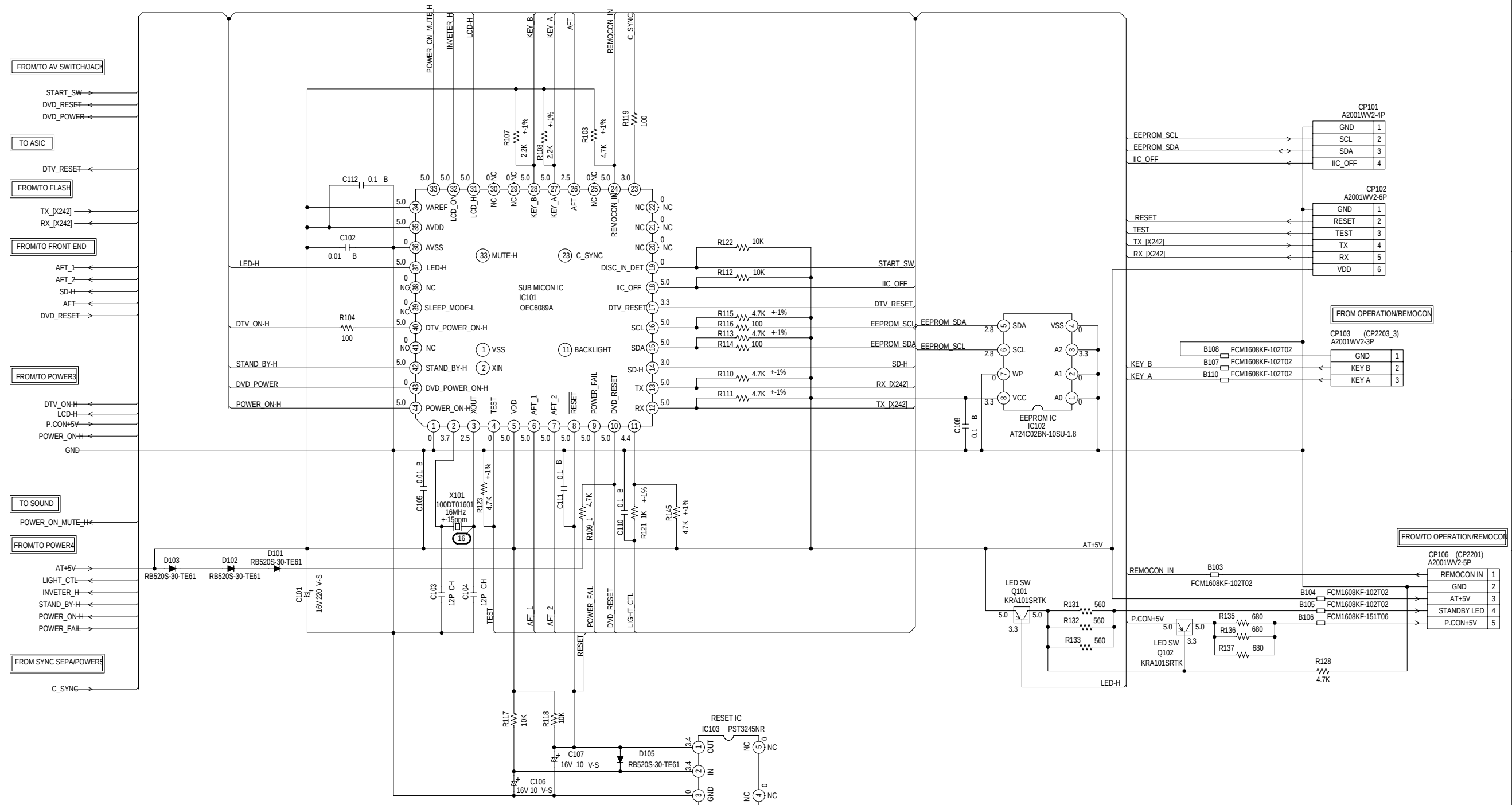
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

CAUTION: DIGITAL TRANSISTOR



PC8DH0
CEF285

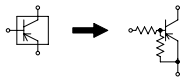
MICON SCHEMATIC DIAGRAM
(DIGITAL PCB)



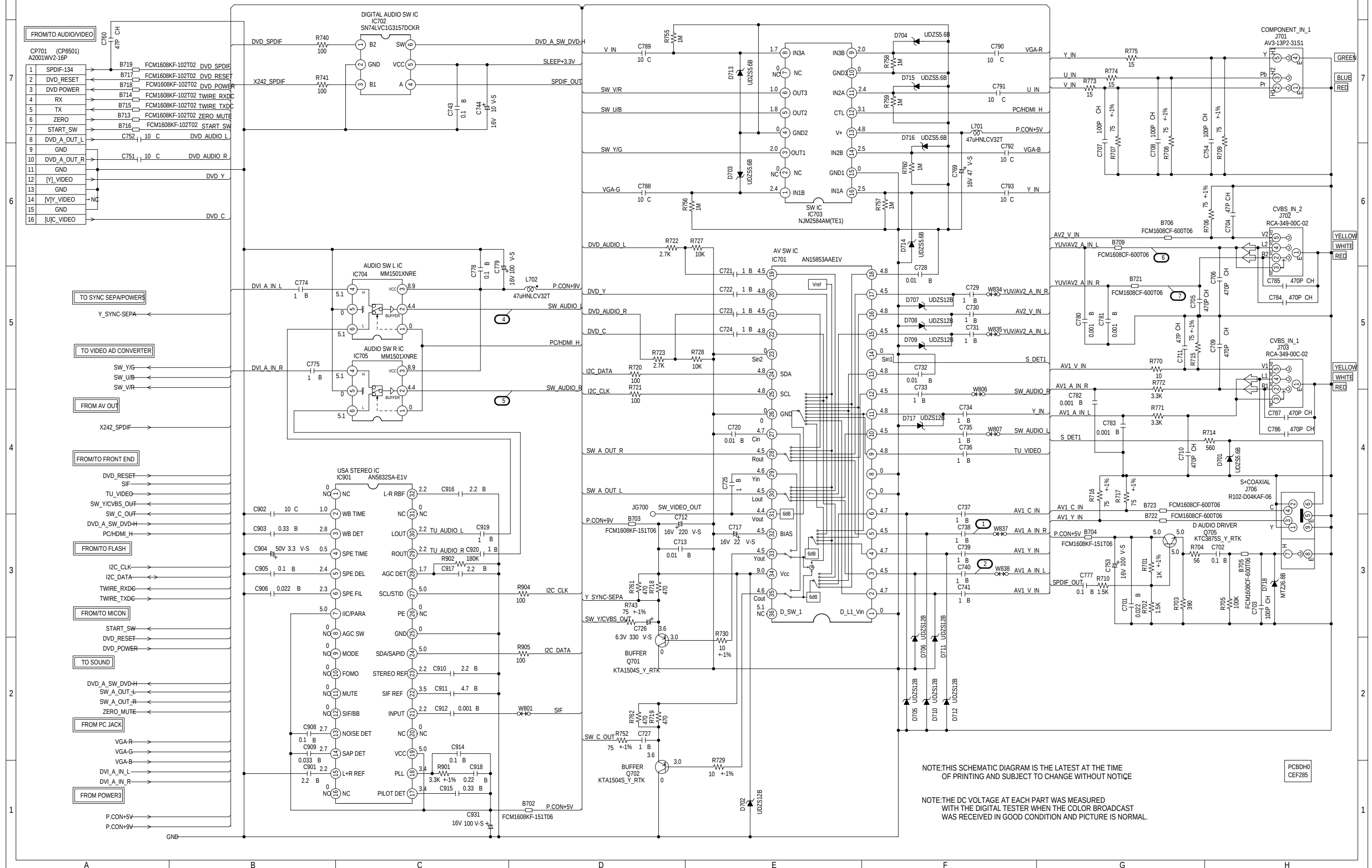
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

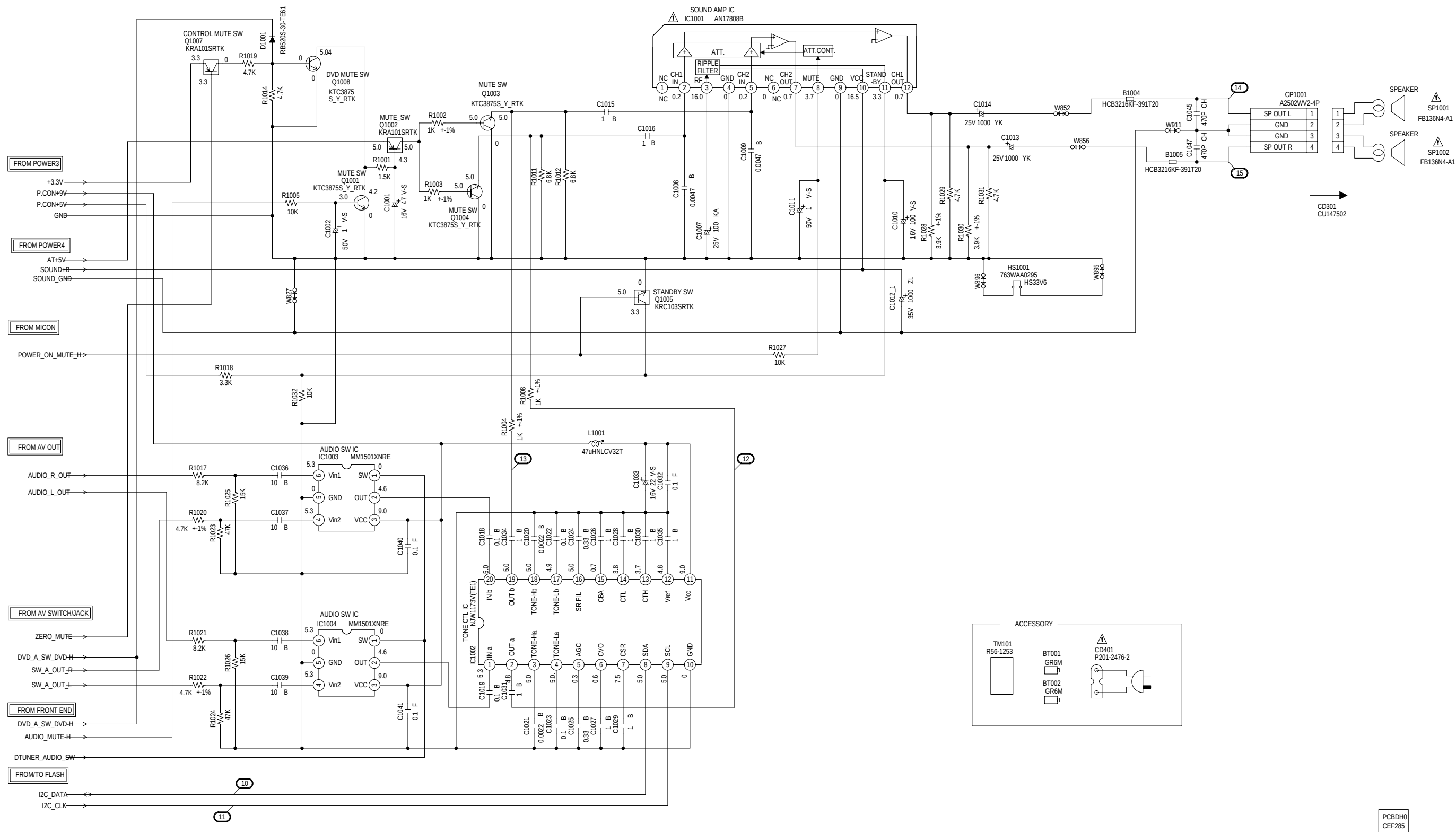
CAUTION: DIGITAL TRANSISTOR



AV SWITCH/JACK SCHEMATIC DIAGRAM (DIGITAL PCB)



SOUND SCHEMATIC DIAGRAM
(DIGITAL PCB)



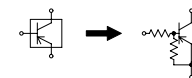
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

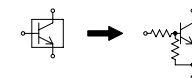
CAUTION: SINCE THESE PARTS MARKED BY A ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

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

CAUTION: DIGITAL TRANSISTOR

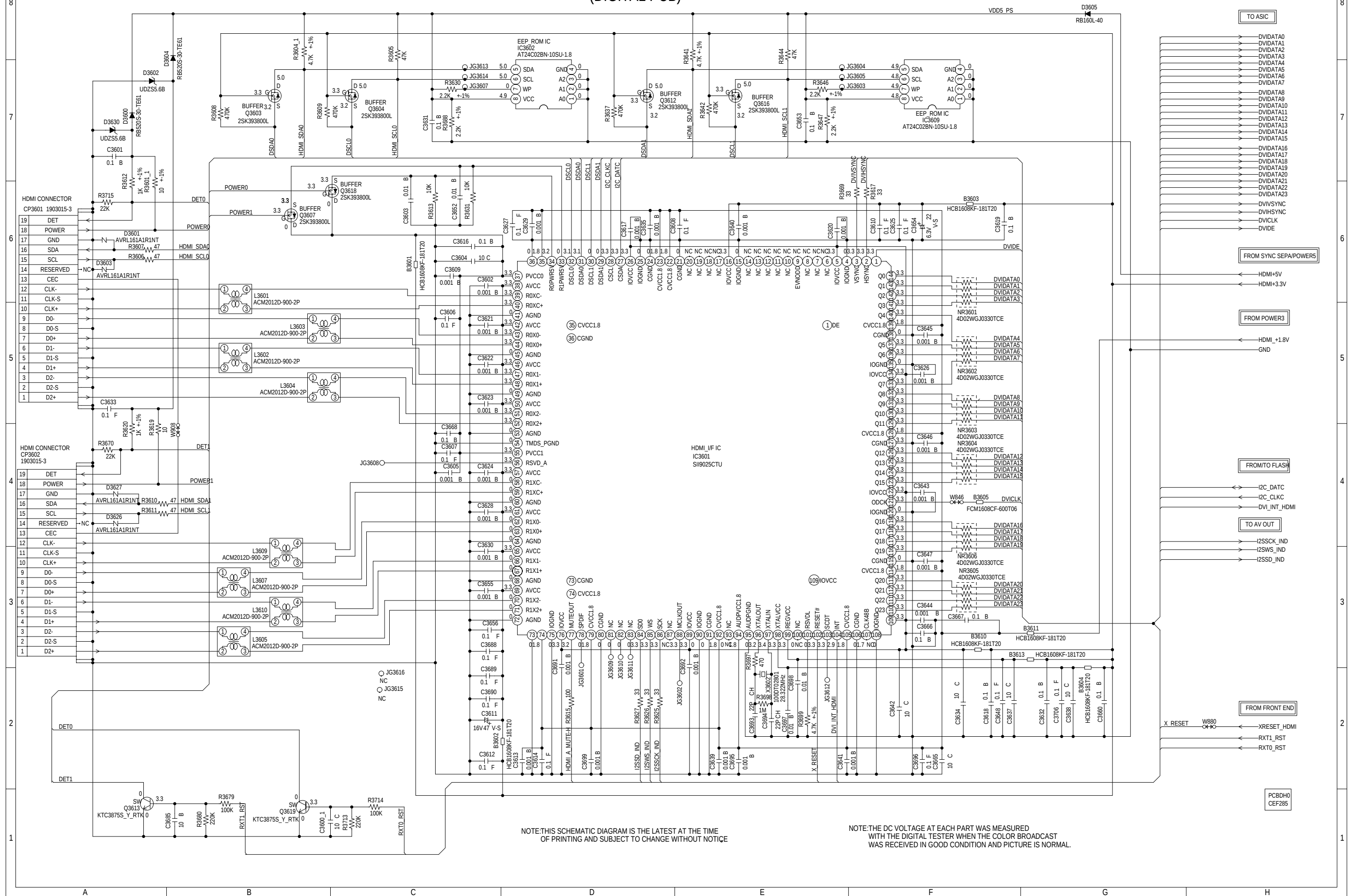


CAUTION: DIGITAL TRANSISTOR

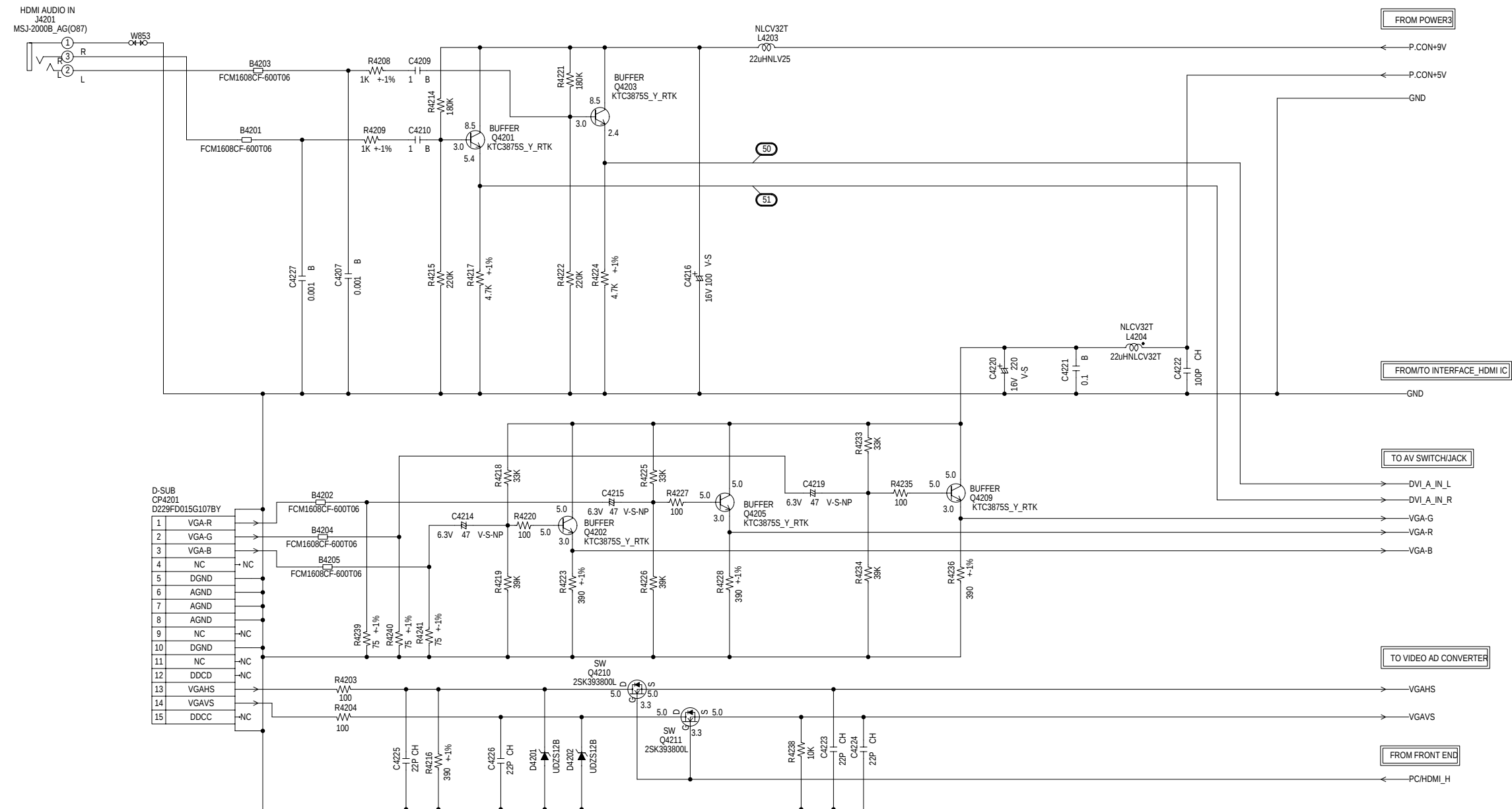


PCBDH0
CEF285

INTERFACE_HDMI IC SCHEMATIC DIAGRAM (DIGITAL PCB)



PC JACK SCHEMATIC DIAGRAM (DIGITAL PCB)

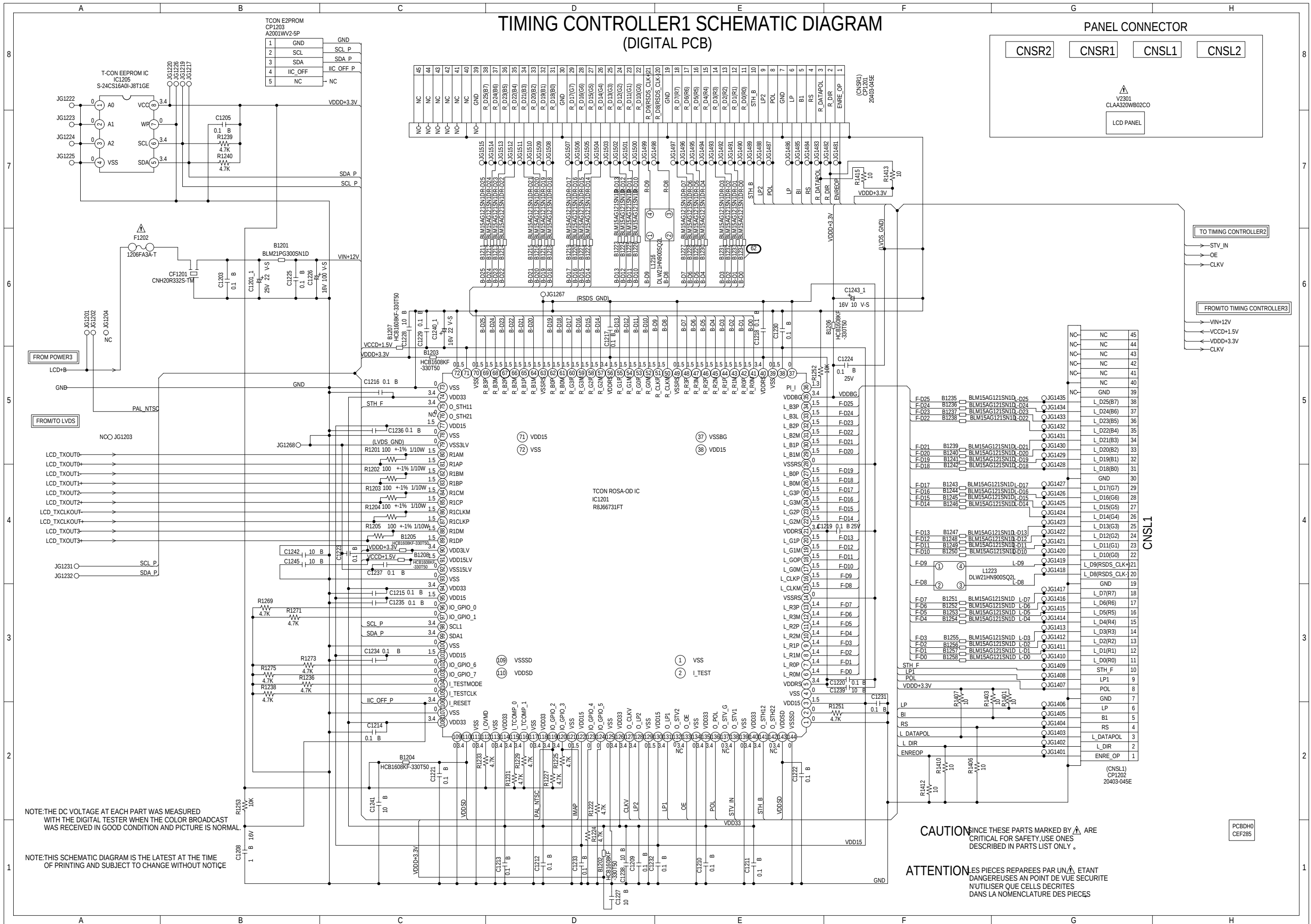


NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

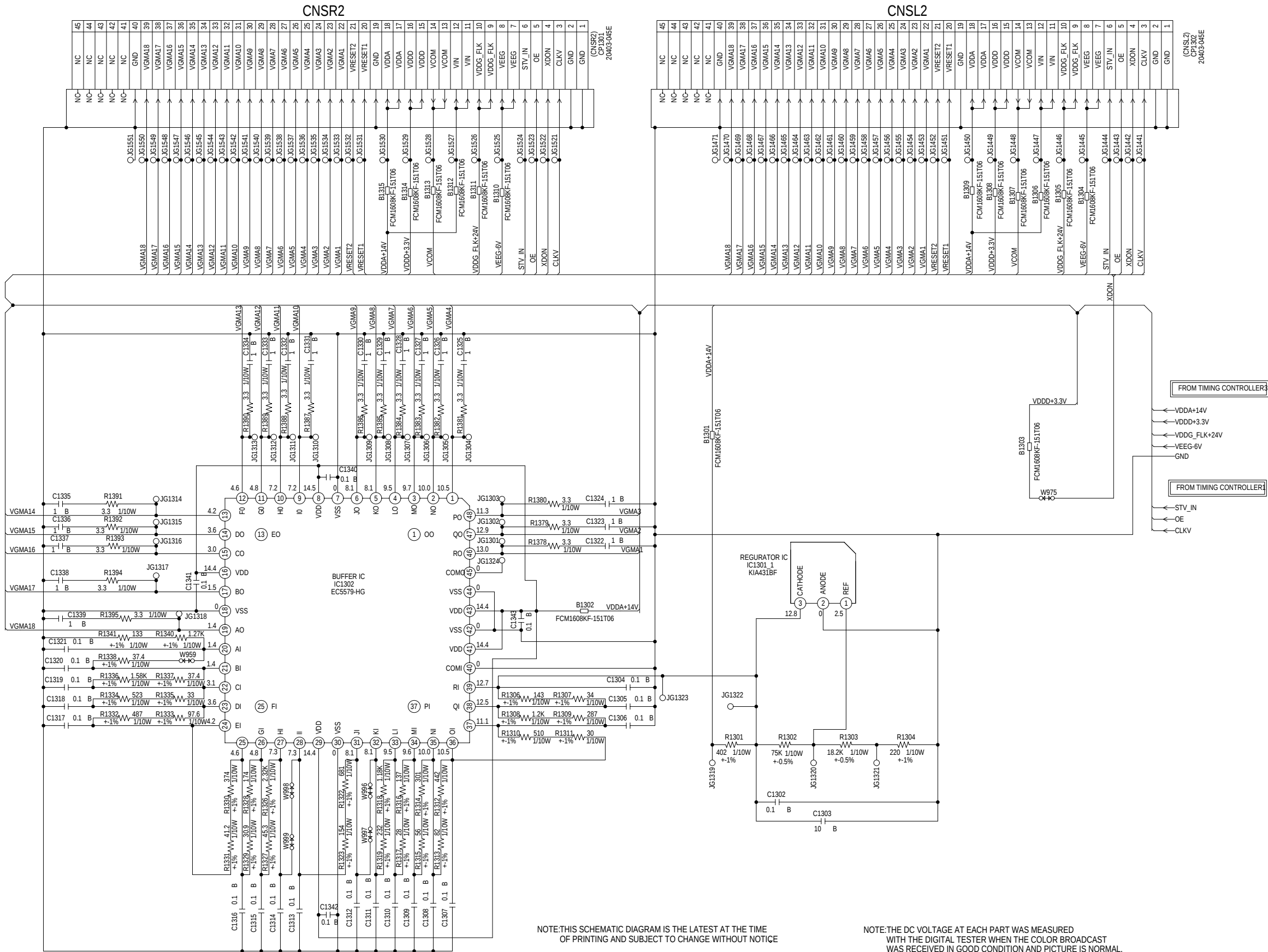
PCBDH0
CEF285

TIMING CONTROLLER1 SCHEMATIC DIAGRAM (DIGITAL PCB)

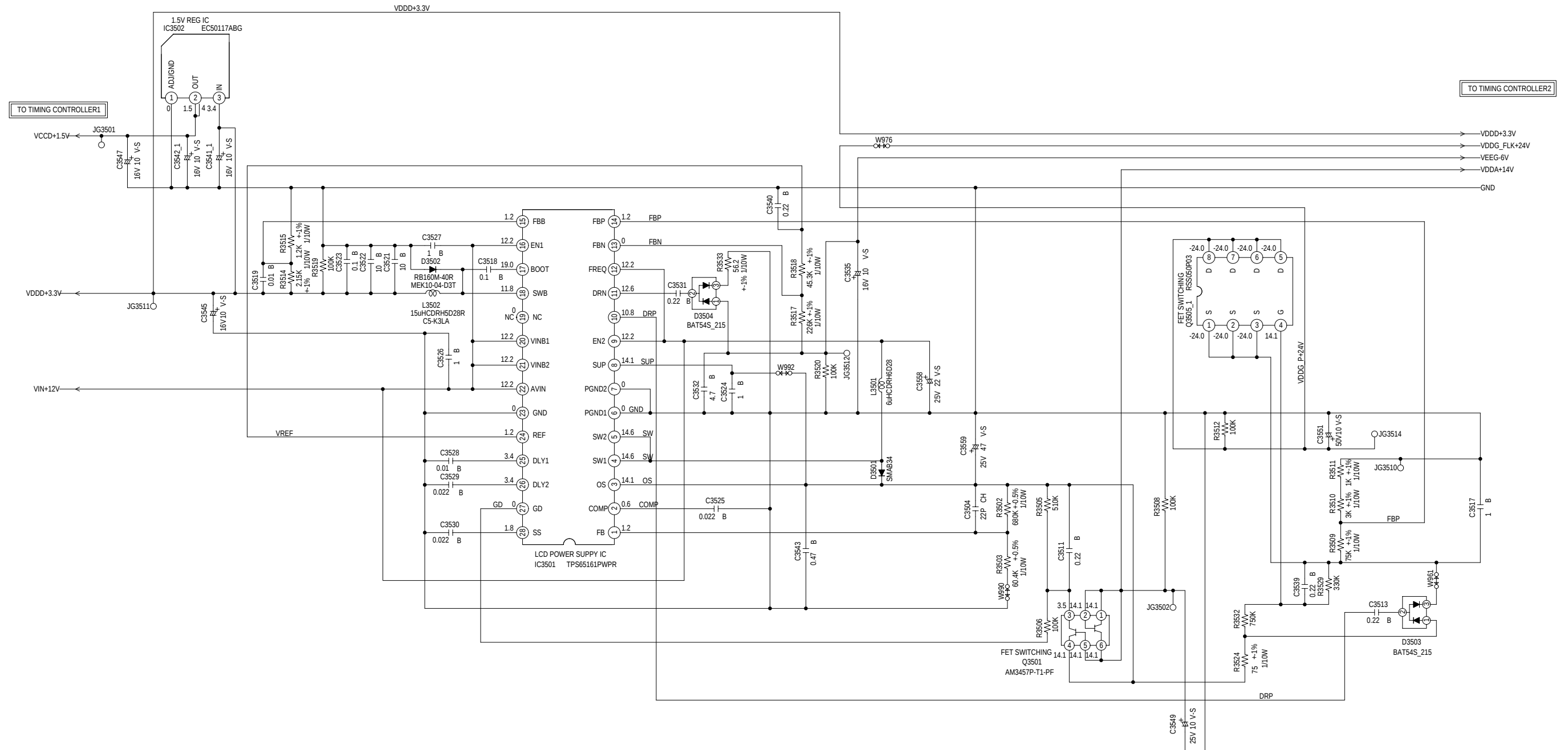


TIMING CONTROLLER2 SCHEMATIC DIAGRAM (DIGITAL PCB)

(Buffers Reference voltage for Gamma Correction)



TIMING CONTROLLER3 SCHEMATIC DIAGRAM (DIGITAL PCB)
(TCON POWER)

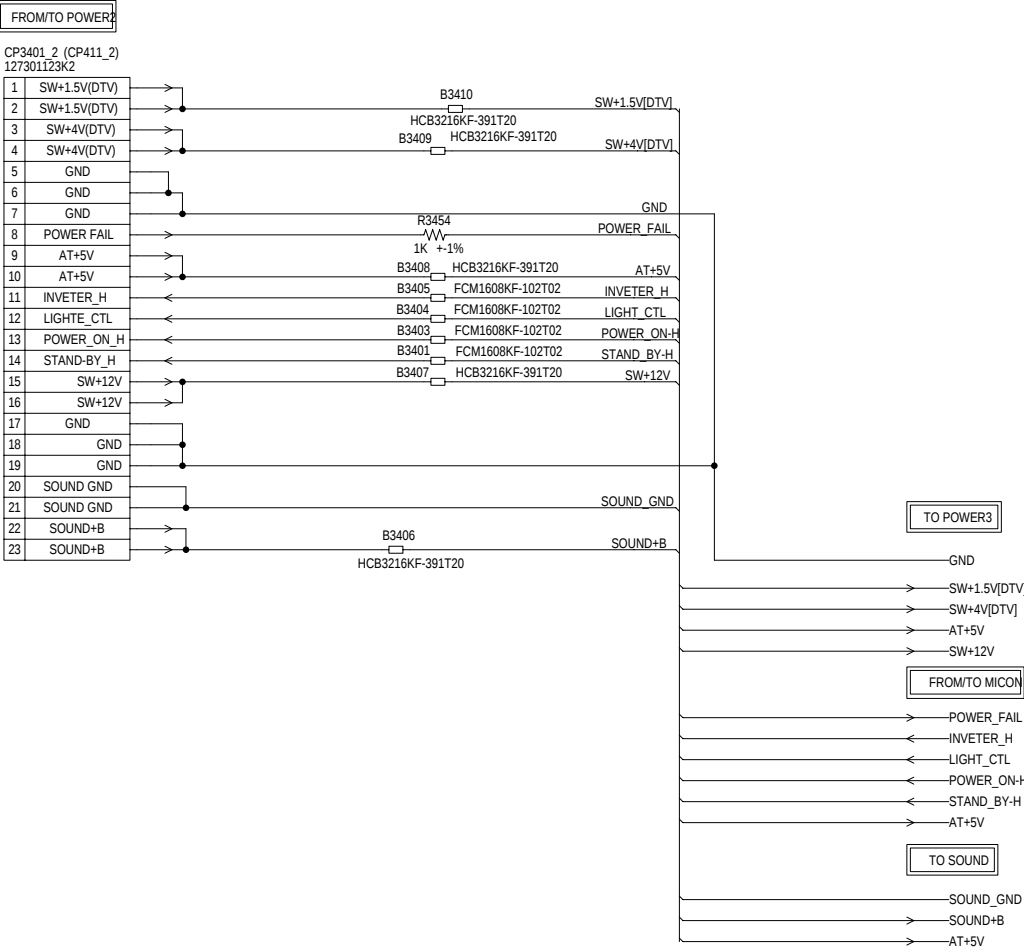


NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

PCBDH0
CEF285

POWER4 SCHEMATIC DIAGRAM
(DIGITAL PCB)

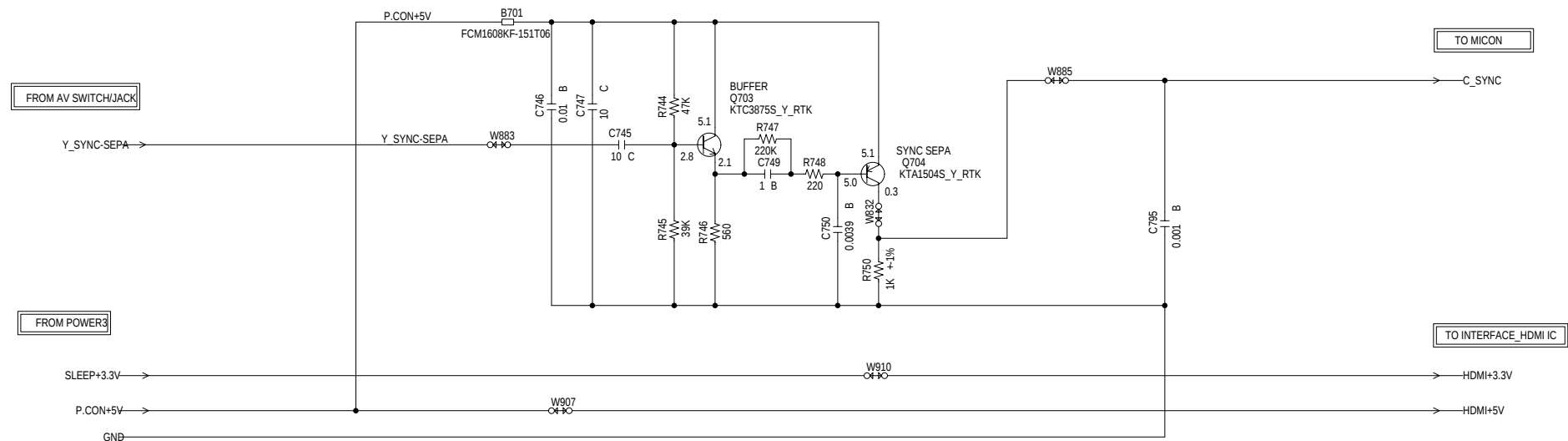


NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTIÇE

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.

PCBDH0
CEF285

SYNC SEPA/POWER5 SCHEMATIC DIAGRAM
(DIGITAL PCB)

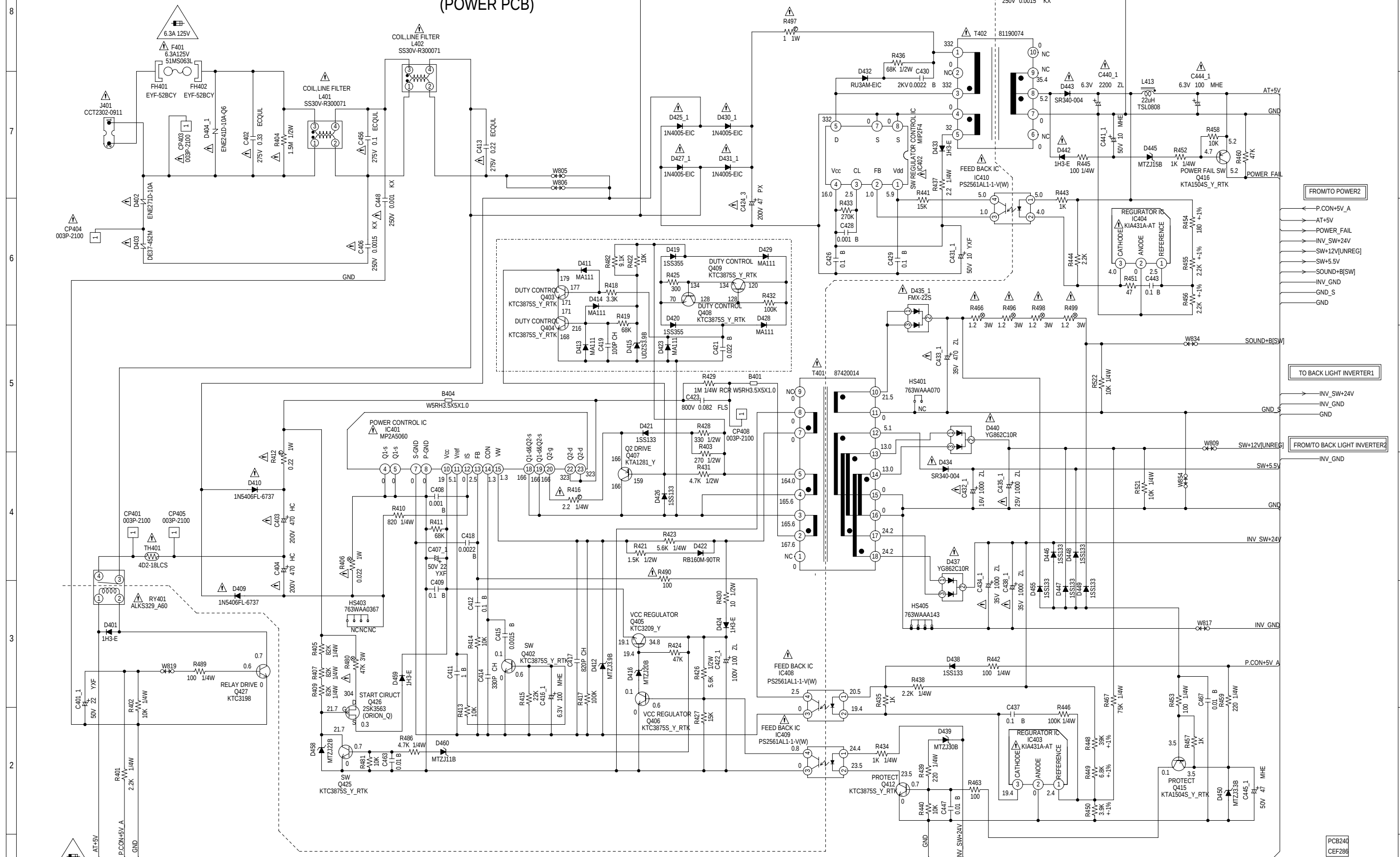


NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

PC8DH0
CEF285

POWER1 SCHEMATIC DIAGRAM (POWER PCB)



CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE
6.3A125V(F401)

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE
N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A125V(F401)

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

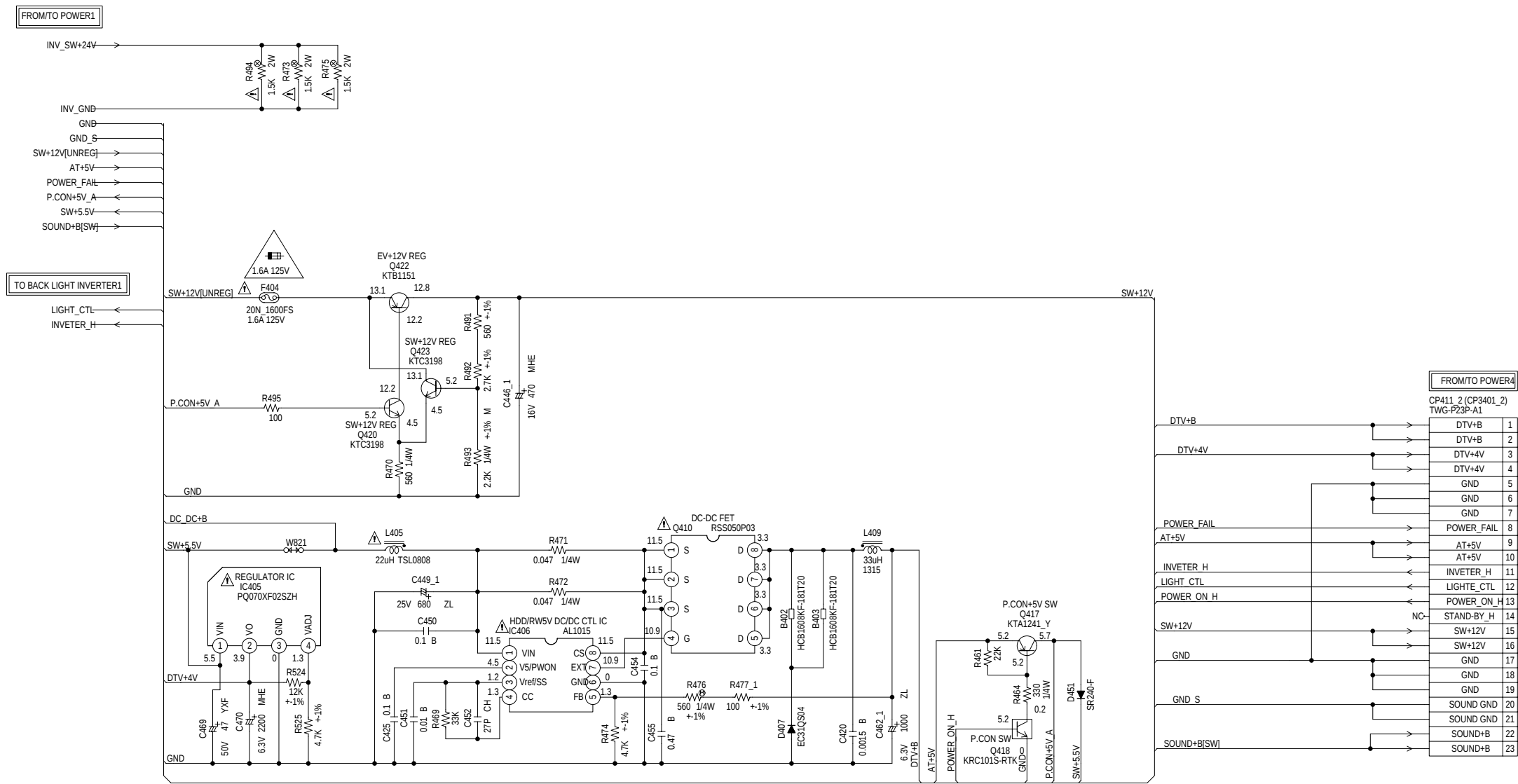
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

ATTENTION: LES PIECES REPARÉES PAR UN  ETANT
DANGEREUSES AU POINT DE VUE SECURITE
N'UTILISER QUE CELLES DECRIRES
DANS LA NOMENCLATURE DES PIECES

PCB240
CEF286

POWER2 SCHEMATIC DIAGRAM
(POWER PCB)



CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 1.6A125V(F404).

CAUTION: F404 IS MANUFACTURED BY SKYGATE TYPE 20N.

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

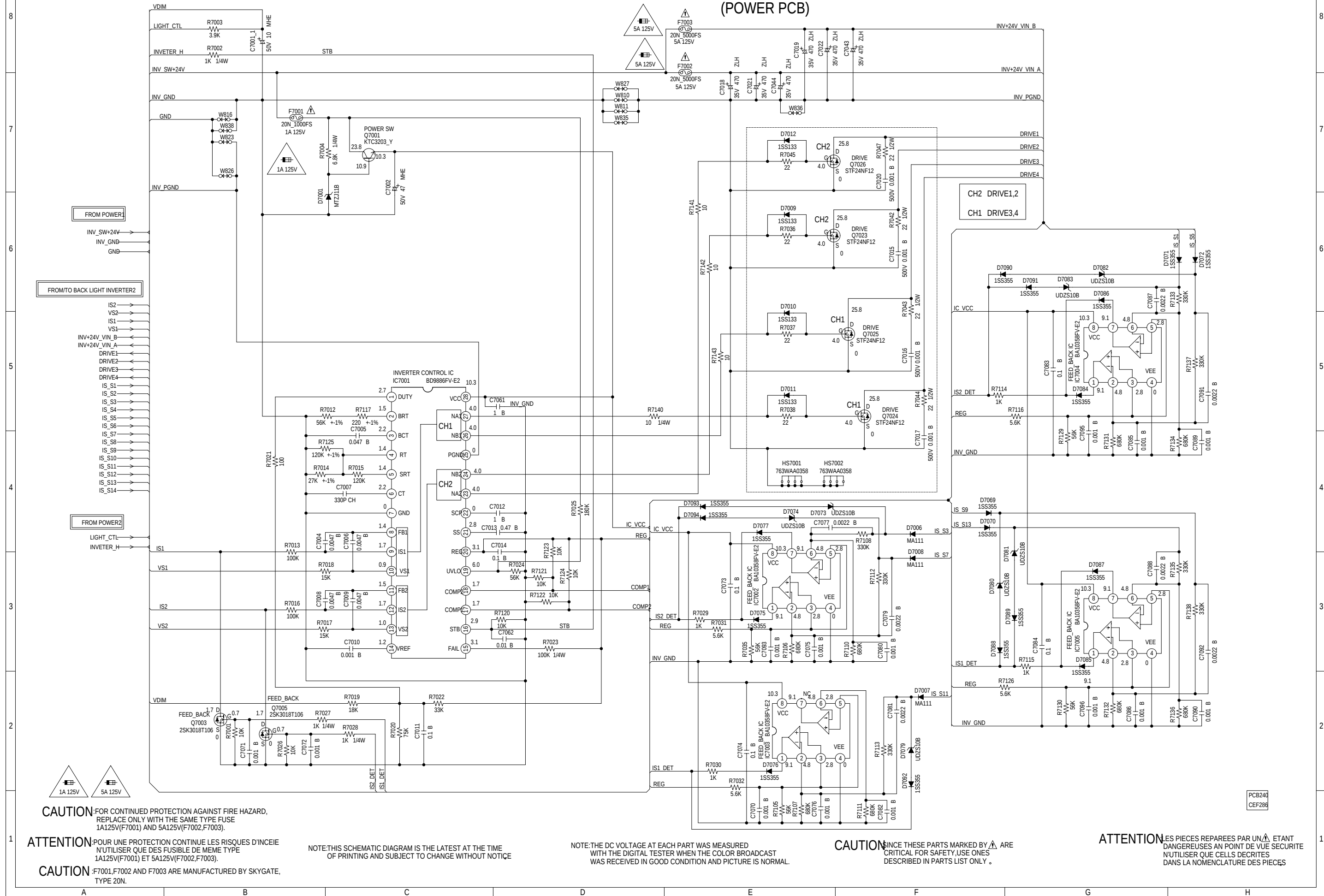
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

ATTENTION: LES PIECES REPARÉES PAR UN ÉTANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES

CAUTION: DIGITAL TRANSISTOR

BACK LIGHT INVERTER1 SCHEMATIC DIAGRAM
(POWER PCB)



CAUTION FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE
1A125V(F7001) AND 5A125V(F7002,F7003).

ATTENTION POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEINDE
N'UTILISER QUE DES FUSIBLES DE MEME TYPE
1A125V(F7001) ET 5A125V(F7002,F7003).

CAUTION F7001,F7002 AND F7003 ARE MANUFACTURED BY SKYGATE,
TYPE 20N.

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

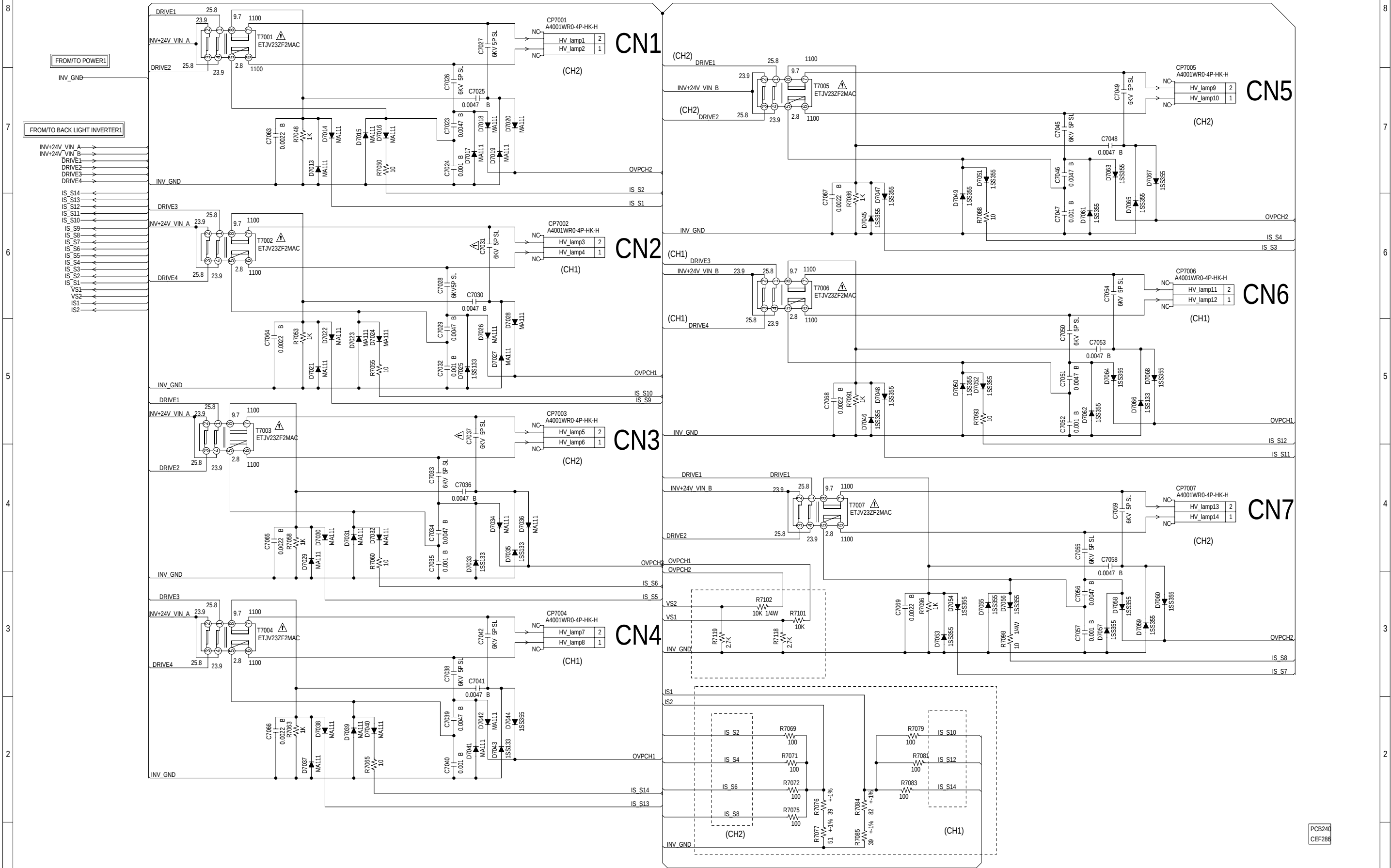
NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

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

PCB24Q
CEF286

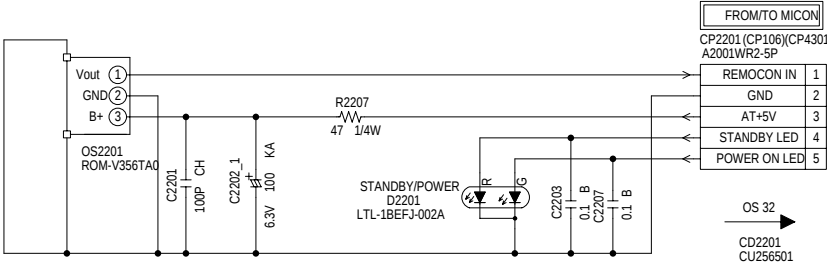
BACK LIGHT INVERTER2 SCHEMATIC DIAGRAM (POWER PCB)



PCB240
CEF286

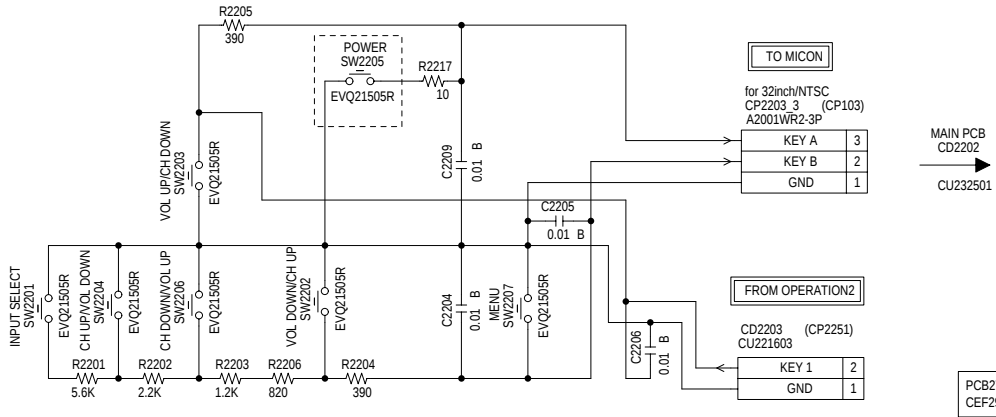
OPERATION/REMOCON SCHEMATIC DIAGRAM

(REMOCON PCB)



PCBDA0
CEF292

(OPERATION PCB)



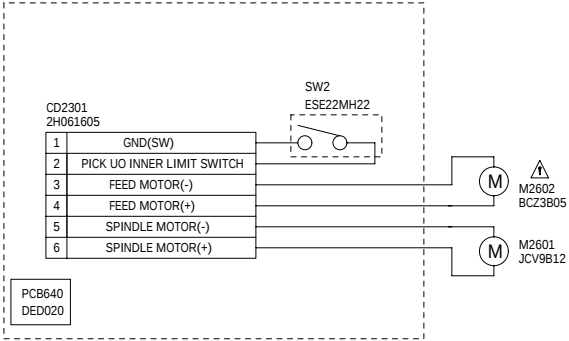
PCB270
CEF291

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

SW SCHEMATIC DIAGRAM

(SW PCB)



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

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

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

SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than a the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. DOWN (Minimum)	0	2 sec.	Releasing of V-CHIP PASSWORD.
TV mode	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
DVD mode (No disc)	VOL. DOWN (Minimum)	4	2 sec.	Initialization of factory DVD data.
DVD mode (No disc)	VOL. DOWN (Minimum)	5	2 sec.	DVD Write mode. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: Do not use this for normal servicing.
TV mode	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
TV mode	VOL. DOWN (Minimum)	8	2 sec.	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).
DVD mode (No disc)	STOP	1	2 sec.	Check of the firmware version. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: Do not use this for normal servicing.
DVD mode (No disc)	STOP	7	2 sec.	Releasing of PARENTAL LOCK. Refer to the "PARENTAL CONTROL - RATING LEVEL".

WHEN REPLACING EEPROM (MEMORY) IC

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

Initial total of MEMORY IC, POWER ON total hours and MICON 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. 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, turn off the power.

NOTE: The each item value might be different according to each set.

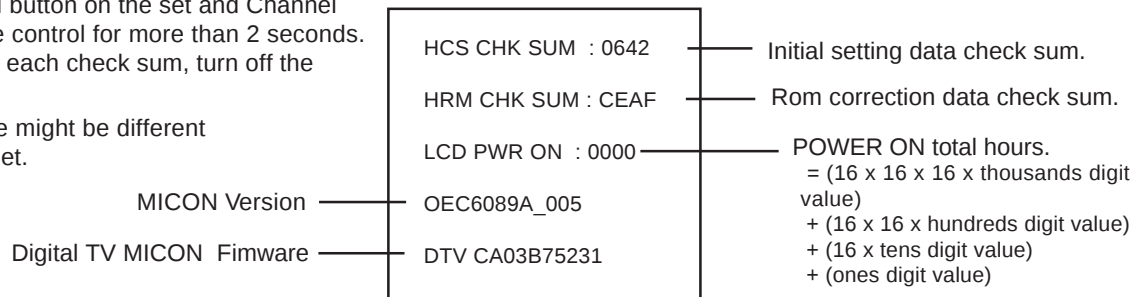


FIG. 1

CONFIRMATION OF INITIAL DATA

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 INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. 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 2**.

ADDRESS	DATA
HCS 00	0B
HRM 0600	01
OEC6089A_005	
DTV CA03B75231	

FIG. 2

4. ADDRESS is now selected and should "blink". Using the Channel UP/DOWN button on the remote, step through the ADDRESS until Press VOL. UP/DOWN button to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using Channel UP/DOWN button until required DATA value has been selected.
6. Pressing VOL. UP/DOWN button will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 4 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 on the Power.
 10. Set the VOLUME to minimum.
 11. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
 12. 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.

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.
- 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 (**YG6260M**) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damage to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

2. BASIC ADJUSTMENTS

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button **(9)** on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in **Fig. 2-1**.

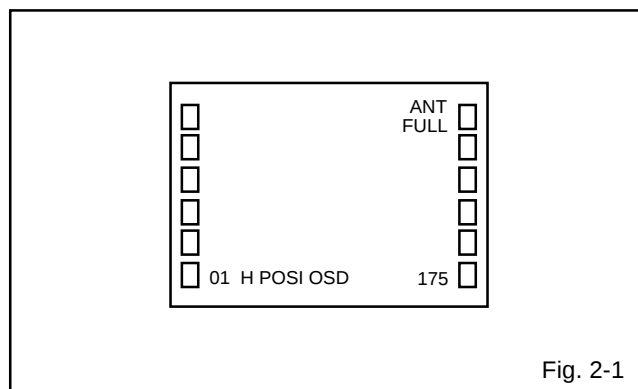


Fig. 2-1

3. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 2-2**.
4. Press the MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for ANT, VIDEO, COLORSTREAM HD, HDMI and PC mode, press the INPUT SELECT button on the remote control to set to the ANT, VIDEO, COLORSTREAM HD, HDMI and PC mode.
6. 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
01	H POSI OSD	21	H POSI 60
02	V POSI OSD	22	V POSI 60
03	R DRIVE (N)	23	BAK LIGHT CENT
04	R CUT OFF (N)	24	BAK LIGHT MAX
05	G DRIVE (N)	25	BAK LIGHT MIN
06	G CUT OFF (N)	26	BRIGHT CENT
07	B DRIVE (N)	27	BRIGHT MAX
08	B CUT OFF (N)	28	BRIGHT MIN
09	R DRIVE (C)	29	TINT
10	R CUT OFF (C)	30	SHARP CENTER
11	G DRIVE (C)	31	SHARP MAX
12	G CUT OFF (C)	32	SHARP MIN
13	B DRIVE (C)	33	CONTRAST CENTER
14	B CUT OFF (C)	34	CONTRAST MAX
15	R DRIVE (W)	35	CONTRAST MIN
16	R CUT OFF (W)	36	COLOR CENT
17	G DRIVE (W)	37	COLOR MAX
18	G CUT OFF (W)	38	COLOR MIN
19	B DRIVE (W)	39	CONTRAST 40
20	B CUT OFF (W)	40	Flicker test

Fig. 2-2

2-1: FLICKER

NOTE: The following adjustment is necessary for changing the DIGITAL PCB and Panel module.

1. Activate the adjustment mode display of **Fig. 2-1** and press the Channel UP/DOWN button to select "40 Flicker test". (**Refer to Fig. 2-3**)
2. Check if the screen is flashing.
3. Turn Variable Resistor, and adjust it not appear FLICKER (FLASHING). (**Refer to Fig. 2-4**)

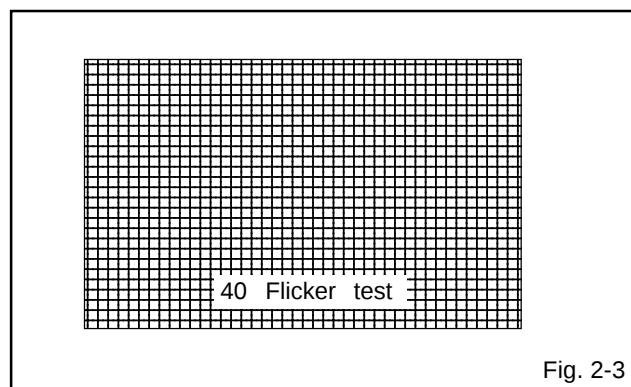


Fig. 2-3

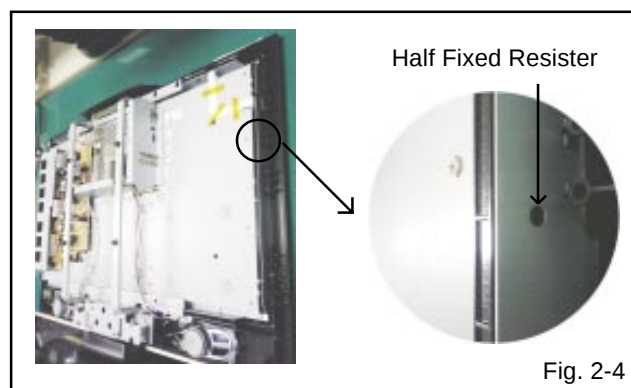


Fig. 2-4

ELECTRICAL ADJUSTMENTS

2-2: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Press the INPUT SELECT button on the remote control to set to the VIDEO mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(03)** on the remote control to select "R DRIVE (N)".
6. Press the CH. UP/DOWN button on the remote control to select the "R CUT OFF(N)", "B DRIVE(N)", "B CUT OFF(N)", "R DRIVE(C)", "R CUT OFF(C)", "B DRIVE(C)", "B CUT OFF(C)", "R DRIVE(W)", "R CUT OFF(W)", "B DRIVE(W)" or "B CUT OFF(W)".
7. Adjust the VOL. UP/DOWN button on the remote control to whiten the R CUT OFF(N), B DRIVE(N), B CUT OFF(N), R DRIVE(C), R CUT OFF(C), B DRIVE(C), B CUT OFF(C), R DRIVE(W), R CUT OFF(W), B DRIVE(W) and B CUT OFF(W) at each step tone sections equally.
8. Perform the above adjustments 6 and 7 until the white color is achieved.

2-3: CONTRAST MAX

1. Receive the monoscope pattern. (RF Input)
2. Press the INPUT SELECT button on the remote control to set to the ANT mode.
3. Set the screen mode to FULL.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(34)** on the remote control to select "CONT MAX".
6. Press the VOL. UP/DOWN button on the remote control until the white color is looked like a white.
7. Receive the monoscope pattern. (VIDEO Input)
8. Press the INPUT SELECT button on the remote control to set to the VIDEO mode. Then perform the above adjustments 3~6.
9. Playback the DVD(480i) disc. (COLORSTREAM HD Input)
10. Press the INPUT SELECT button on the remote control to set to the COLORSTREAM HD mode. Then perform the above adjustments 3~6.
11. Playback the DVD(480i) disc. (HDMI Input)
12. Press the INPUT SELECT button on the remote control to set to the HDMI mode. Then perform the above adjustments 3~6.

2-4: BRIGHT CENT

1. Receive the monoscope pattern. (RF Input)
2. Press the INPUT SELECT button on the remote control to set to the ANT mode.
3. Set the screen mode to FULL.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(26)** on the remote control to select "BRIGHT CENT".
6. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "102".
7. Press the INPUT SELECT button on the remote control to set to the VIDEO mode. Then perform the above adjustments 3~6.
8. Playback the DVD(480i) disc. (COLORSTREAM HD Input)
9. Press the INPUT SELECT button on the remote control to set to the COLORSTREAM HD mode. Then perform the above adjustments 3~6.
10. Playback the DVD(480i) disc. (HDMI Input)
11. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
12. Set the screen mode to FULL.
13. Using the remote control, set the brightness and contrast to normal position.
14. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(26)** on the remote control to select "BRIGHT CENT".
15. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "114".

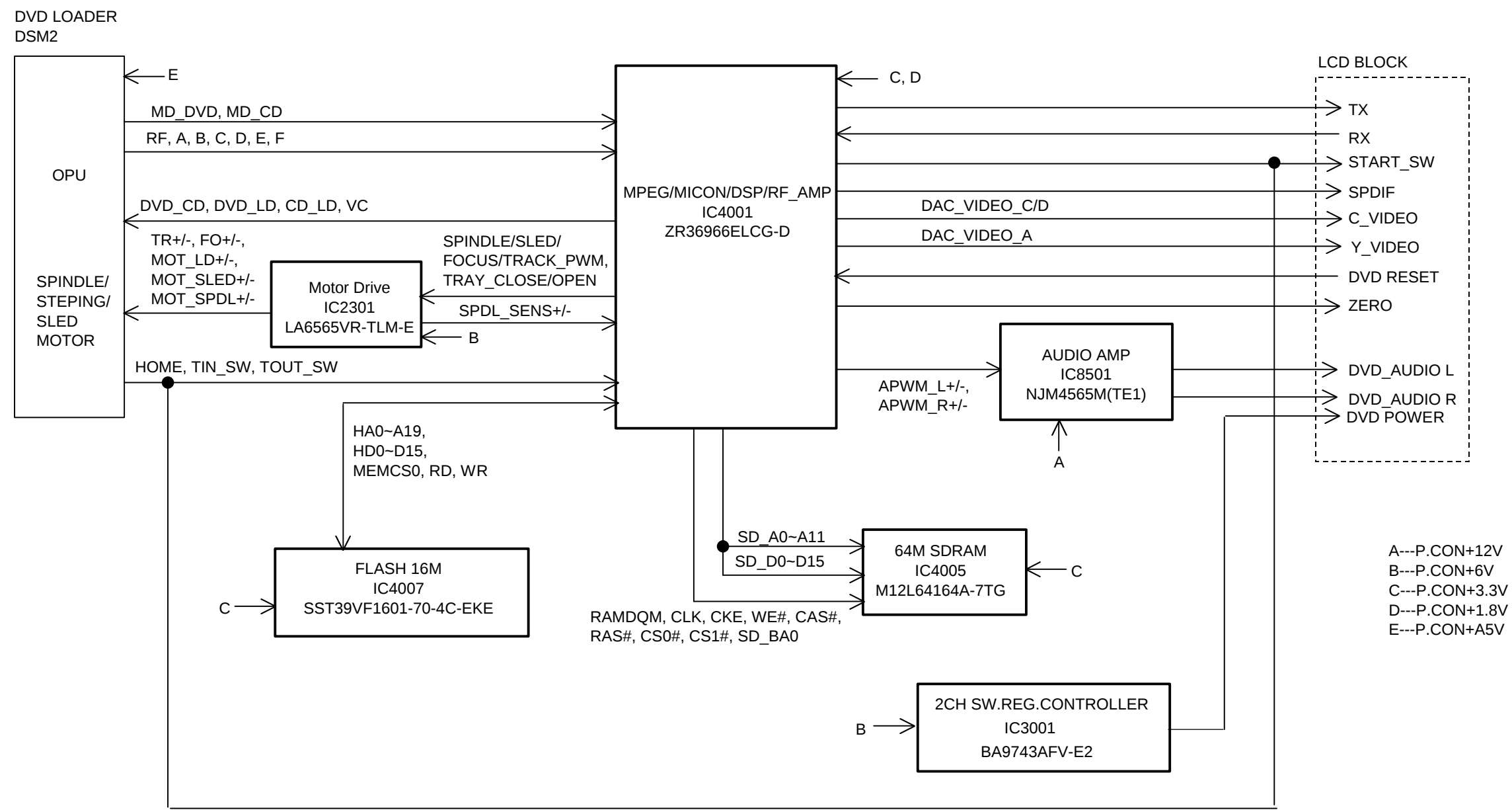
ELECTRICAL ADJUSTMENTS

2-4: Confirmation of Fixed Value (Step No.)

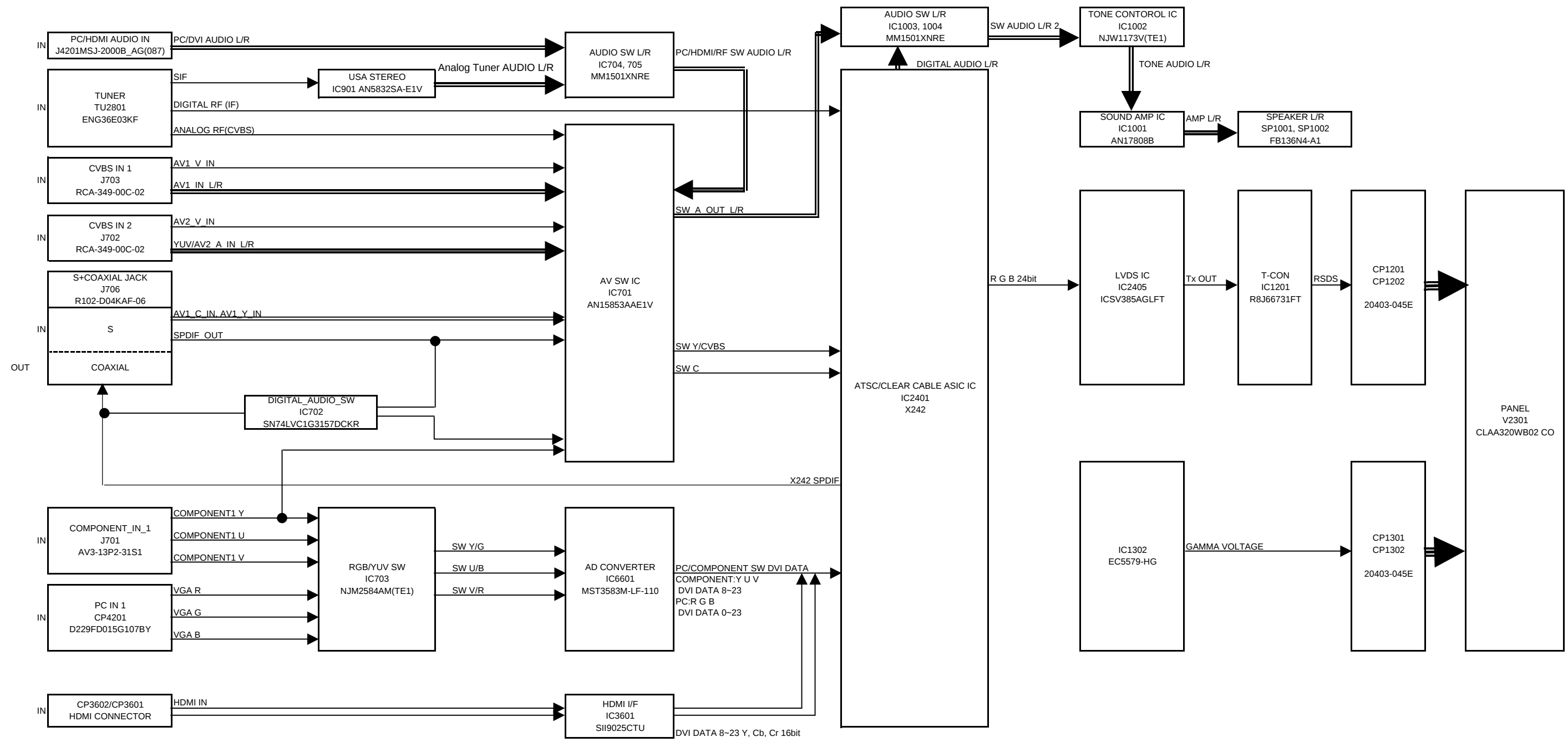
Please check if the fixed values of each of the adjustment item is set correctly referring below.
(ANT/VIDEO/COLORSTREAM HD/HDMI/PC/DVD/DIGITAL)

NO.	FUNCTION	ANT	VIDEO		COLORSTREAM HD				HDMI					PC							DVD	DIGITAL			
			CVBS	S(Y/C)	480i	480p	720p	1080i	VGA	480i	480p	720p	1080i	640*480	720*400	800*600	1024*768	1280*768	1280*720	848*480	1360*768	480i	480p	720p	1080i
		Step No.																							
1	H POSI OSD	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
2	V POSI OSD	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
3	R.DRIVE (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	128	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ
4	R CUTOFF (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
5	G DRIVE (N)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
6	G CUTOFF (N)	128	128	128	128	128	128	128	128	128	128	128	128	x	x	x	x	x	x	x	x	128	128	128	128
7	B DRIVE (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	128	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ
8	B CUTOFF (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
9	R.DRIVE (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
10	R CUTOFF (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
11	G DRIVE (C)	128	128	128	128	128	128	128	128	128	128	128	128	x	x	x	x	x	x	x	x	128	128	128	128
12	G CUTOFF (C)	128	128	128	128	128	128	128	128	128	128	128	128	x	x	x	x	x	x	x	x	128	128	128	128
13	B DRIVE (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
14	B CUTOFF (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
15	R.DRIVE (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
16	R CUTOFF (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
17	G DRIVE (W)	128	128	128	128	128	128	128	128	128	128	128	128	x	x	x	x	x	x	x	x	128	128	128	128
18	G CUTOFF (W)	128	128	128	128	128	128	128	128	128	128	128	128	x	x	x	x	x	x	x	x	128	128	128	128
19	B DRIVE (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
20	B CUTOFF (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	x	x	x	x	x	x	x	x	ADJ	ADJ	ADJ	ADJ
21	H POSI 60	233	233	233	233	233	233	233	233	233	233	233	233	256	256	256	256	256	256	256	256	233	233	233	233
22	V POSI 60	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
23	BAK LIGHT CENT	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	128	78	78	78
24	BAK LIGHT MAX	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	258	155	155	155
25	BAK LIGHT MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
26	BRIGHT CENT	102	102	102	102	122	122	122	114	114	114	114	114	128	128	128	128	128	128	128	128	ADJ	114	114	114
27	BRIGHT MAX	137	137	137	137	152	152	152	152	152	152	152	152	149	149	149	149	149	149	149	149	160	137	137	137
28	BRIGHT MIN	80	80	80	80	102	102	102	102	102	102	102	102	109	109	109	109	109	109	109	109	60	80	80	80
29	TINT	128	128	128	128	128	128	128	128	128	128	128	128	x	x	x	x	x	x	x	x	128	128	128	128
30	SHARP CENTER	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
31	SHARP MAX	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
32	SHARP MIN	110	110	110	110	110	110	110	110	110	110	110	110	100	100	100	100	100	100	100	100	110	50	50	50
33	CONT CENTER	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	90	90	90	90	90	90	90	90	ADJ	ADJ	ADJ	ADJ
34	CONT MAX	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	110	110	110	110	110	110	110	110	ADJ	ADJ	ADJ	ADJ
35	CONT MIN	80	80	80	80	50	50	50	50	50	50	50	50	45	45	45	45	45	45	45	45	80	80	80	80
36	COLOR CENT	150	150	150	160	160	160	160	170	160	170	170	170	x	x	x	x	x	x	x	x	160	170	170	170
37	COLOR MAX	175	170	170	175	180	230	230	200	190	200	200	200	x	x	x	x	x	x	x	x	215	205	205	205
38	COLOR MIN	0	0	0	0	0	0	0	0	0	0	0	0	x	x	x	x	x	x	x	x	0	0	0	0
39	CONT 40	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	100	100	100	100	100	100	100	100	ADJ	ADJ	ADJ	ADJ

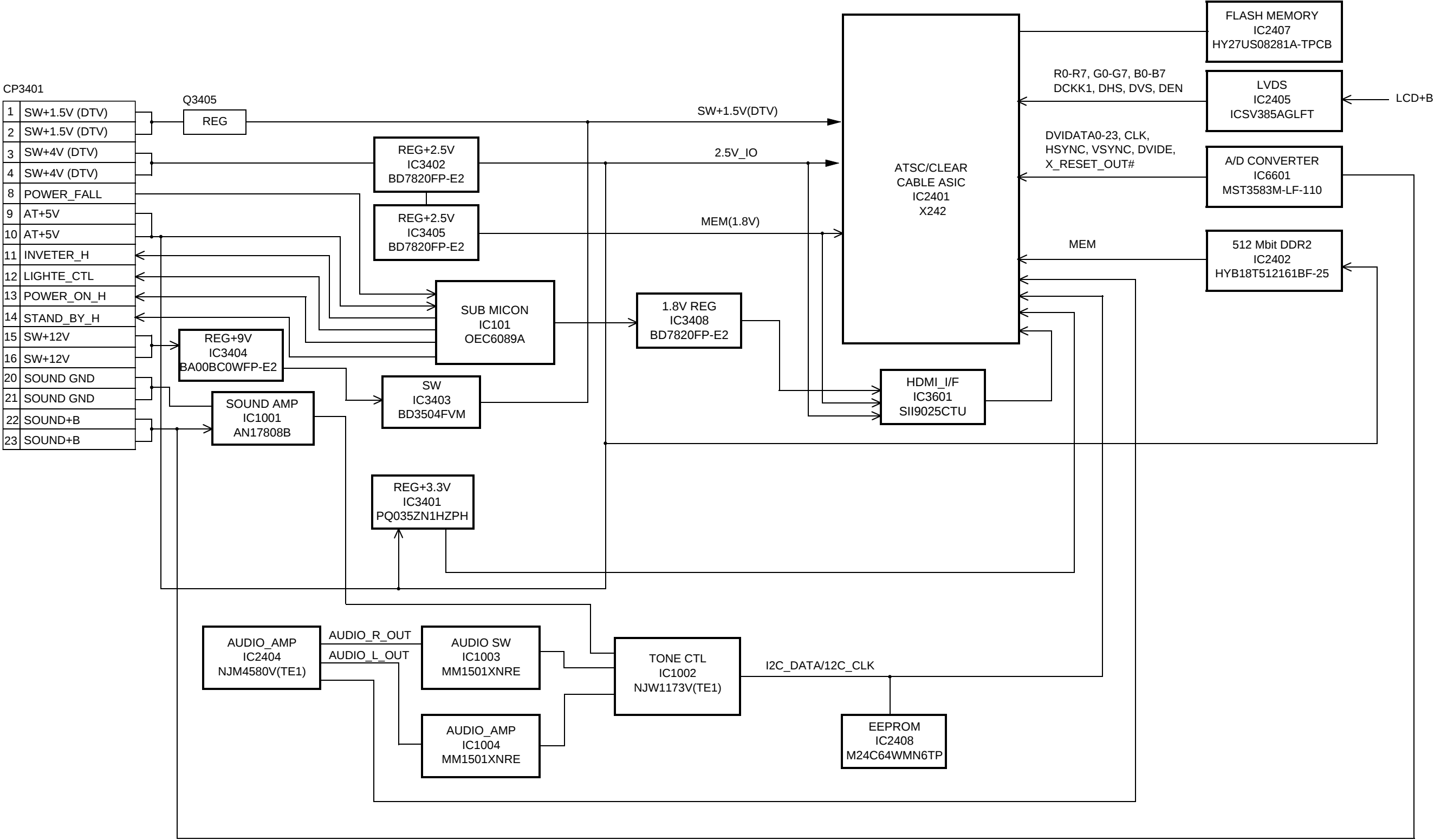
DVD BLOCK DIAGRAM



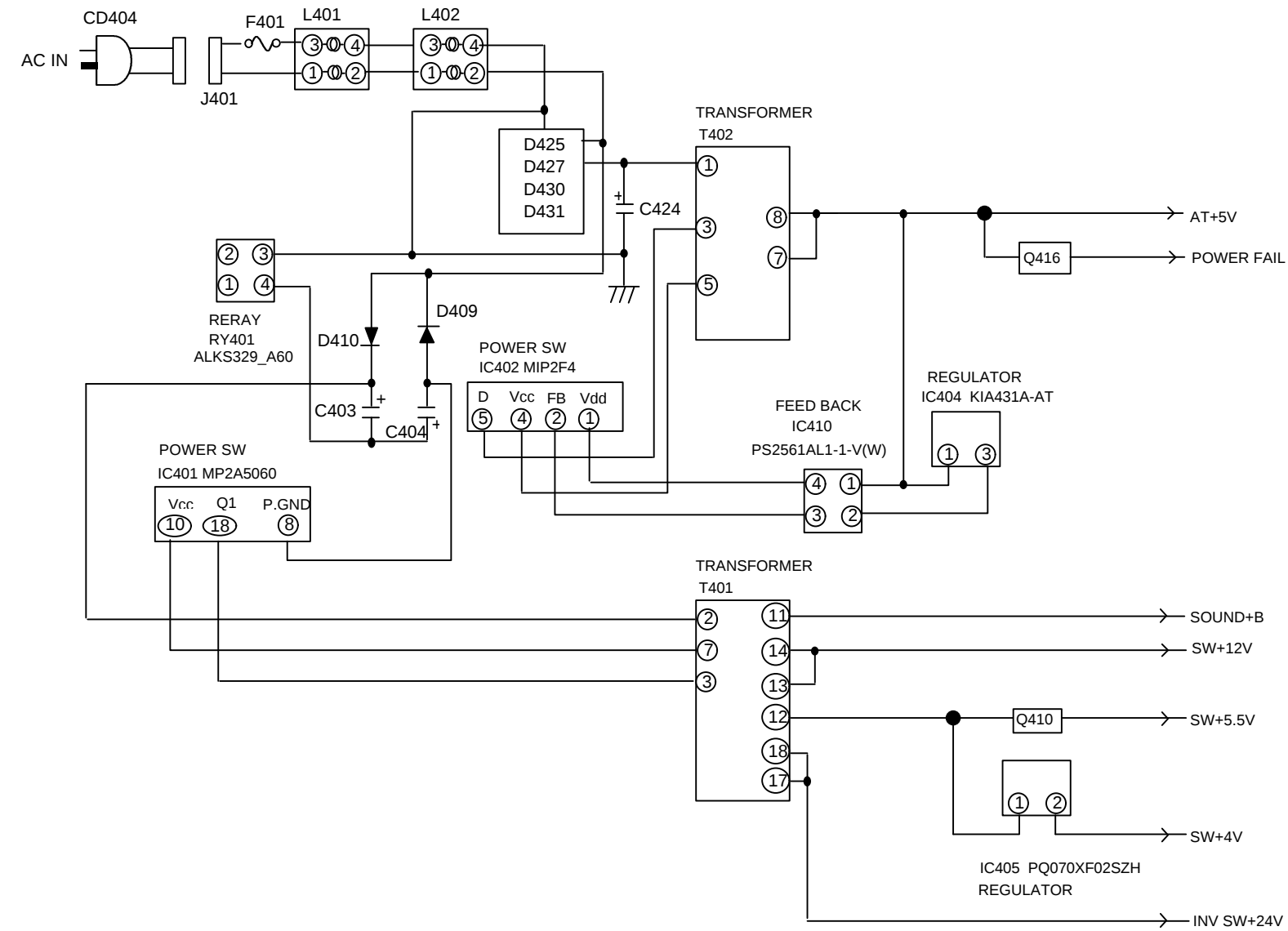
DIGITAL BLOCK DIAGRAM



POWER(DIGITAL PCB) BLOCK DIAGRAM



POWER BLOCK DIAGRAM



DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Back Cabinet and Angle Deck. **(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Slide the Belt Loading toward the arrow direction by hand to release the lock. **(Refer to Fig. 1)**
3. Take out the Disc from the DVD Deck. Be careful not to scratch on the Disc.

DVD Deck

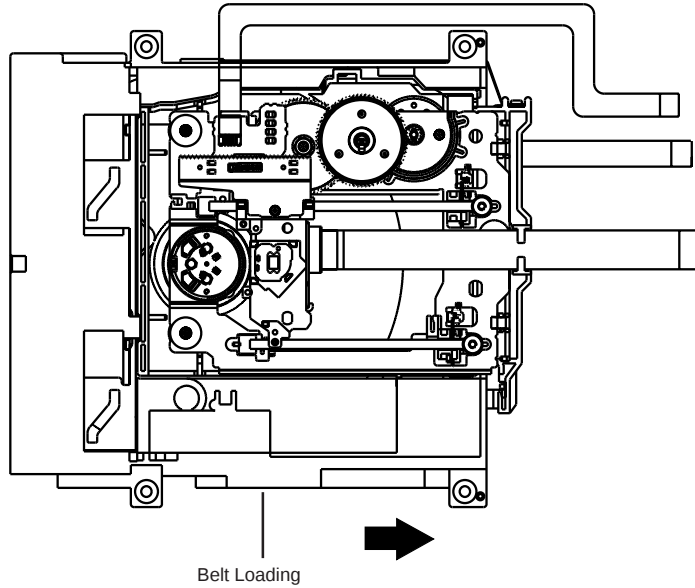


Fig. 1

PARENTAL CONTROL - RATING LEVEL

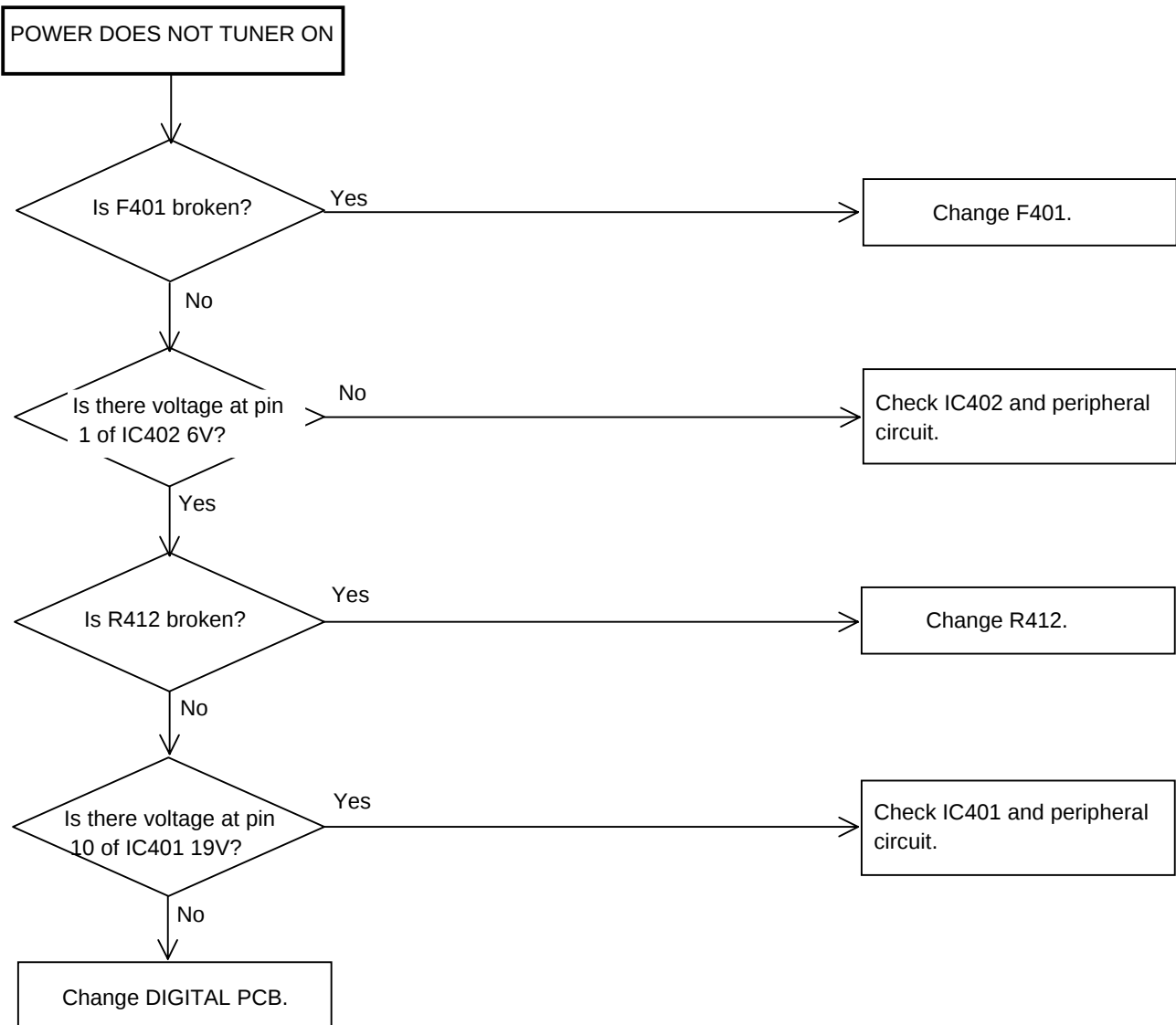
4 DIGIT PASSWORD CANCELLATION

If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

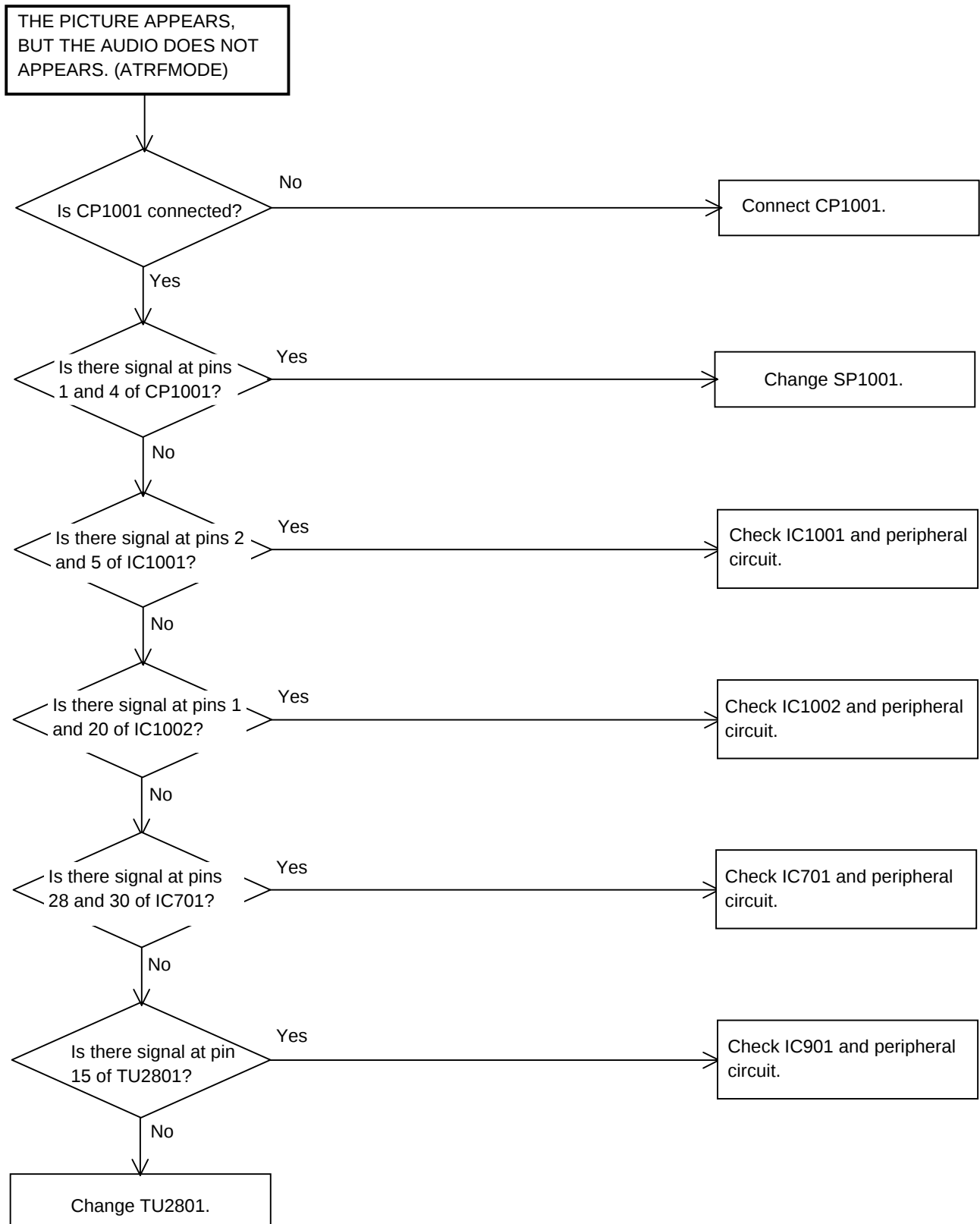
1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Check that "No disc" is displayed on the screen.
4. Press and hold the "STOP" button on the front panel.
5. Simultaneously press and hold the "7" key on the remote control unit.
6. Hold both keys for more than 2 seconds.
7. The On Screen Display message "PASSWORD CLEAR" will appear.
8. The 4 digit password has now been cleared.

TROUBLESHOOTING GUIDE

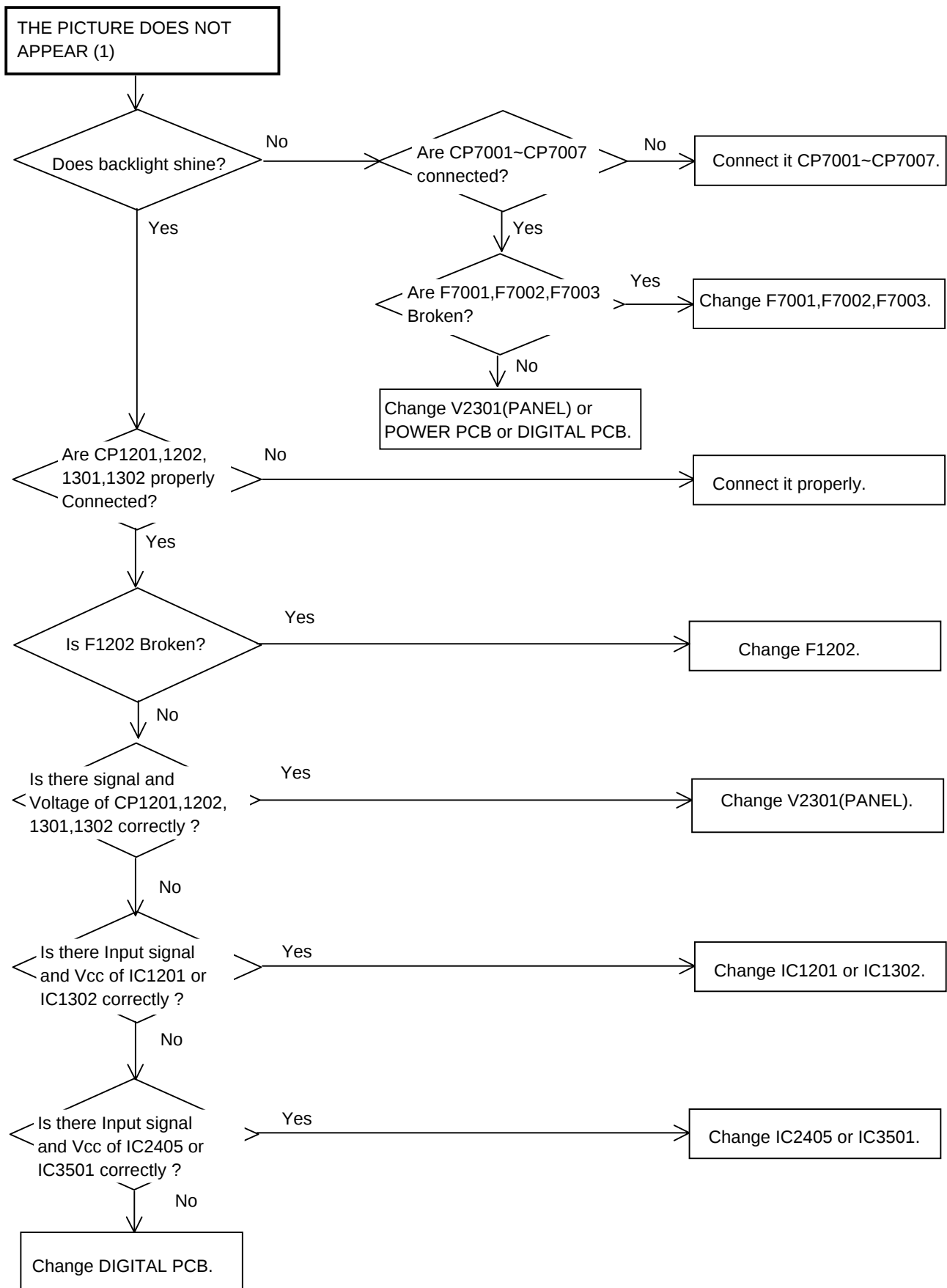
(LCD SECTION)



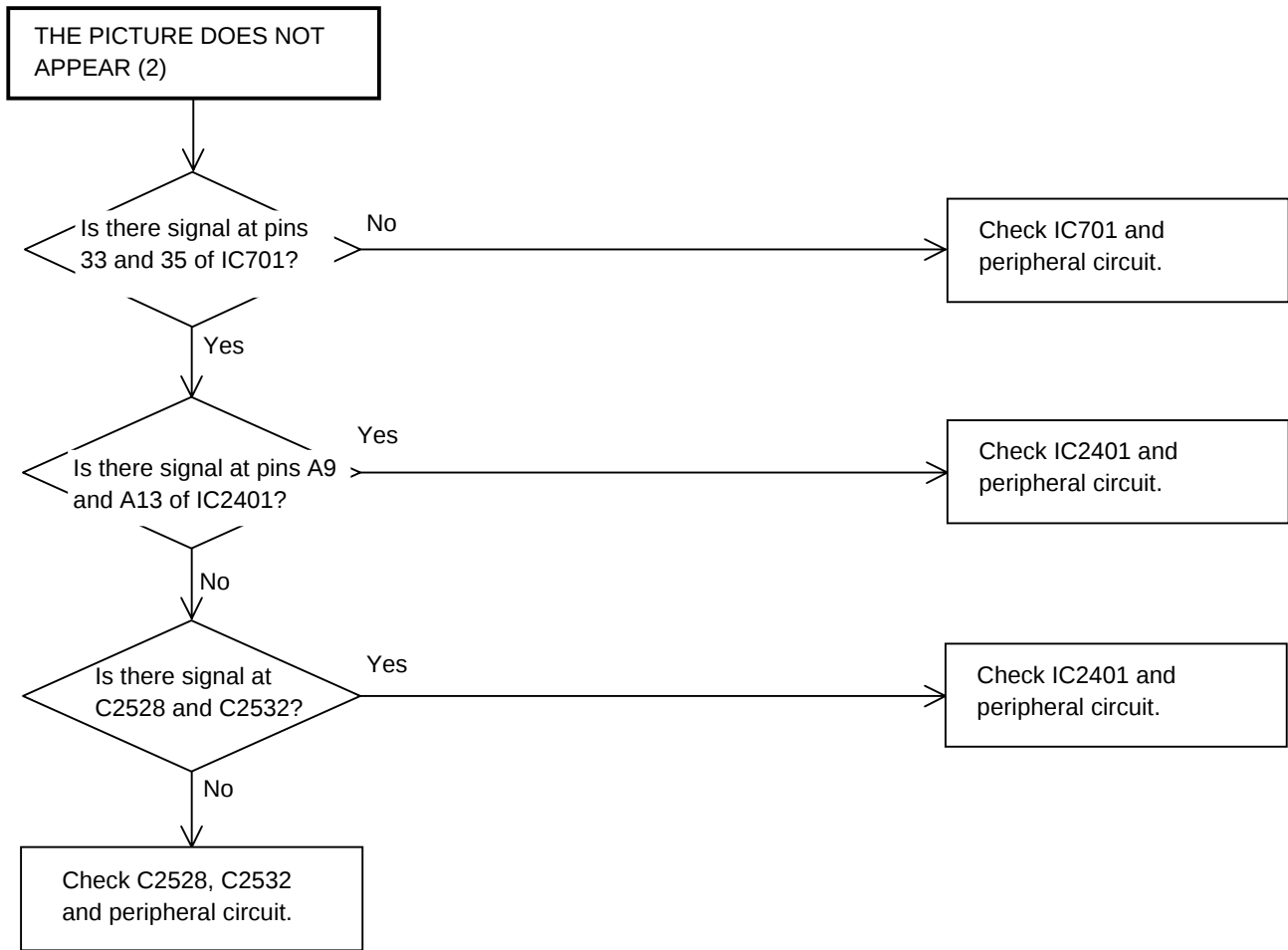
TROUBLESHOOTING GUIDE



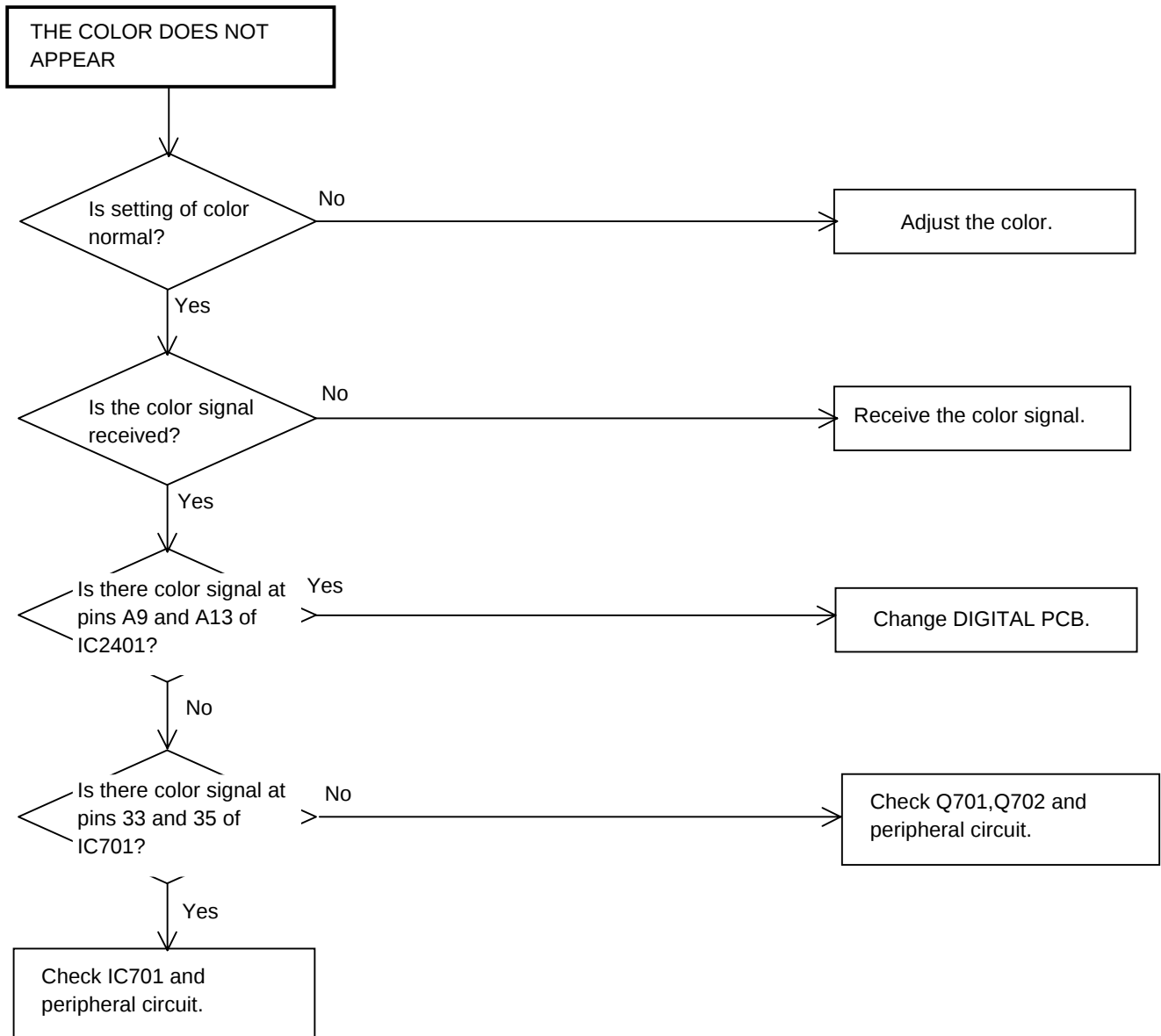
TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE

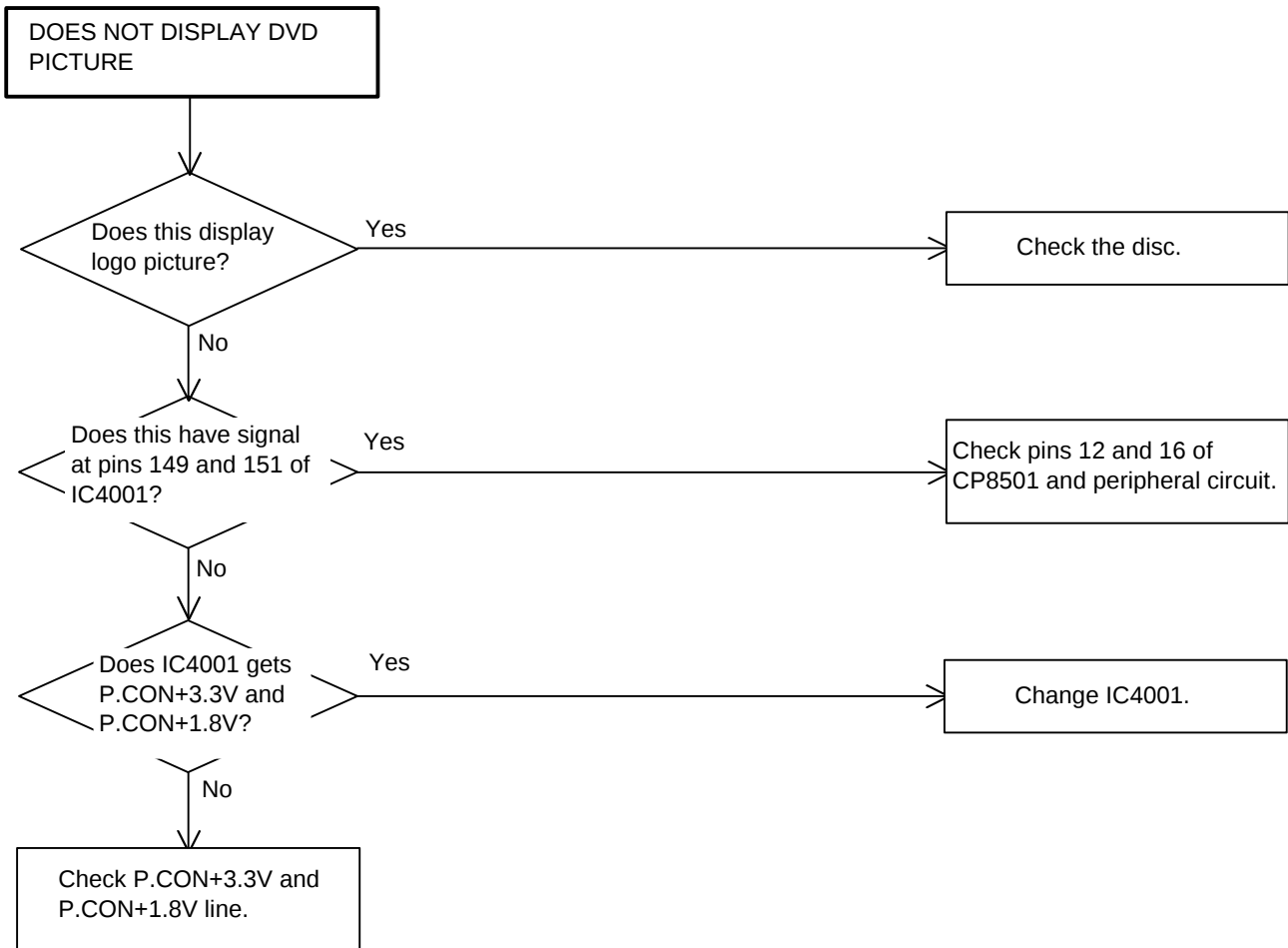


TROUBLESHOOTING GUIDE

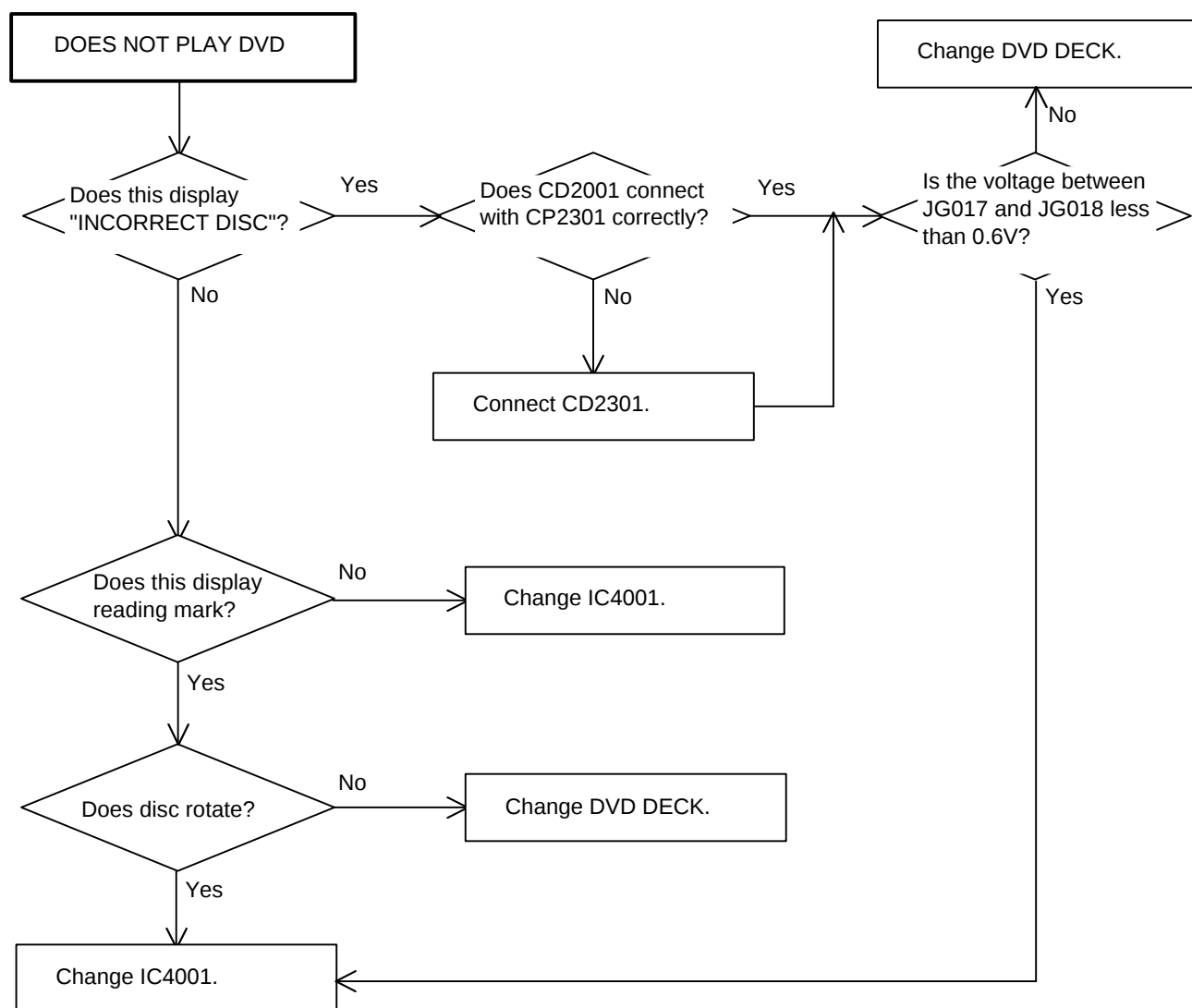


TROUBLESHOOTING GUIDE

(DVD SECTION)



TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE

