

Service
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Service Manual



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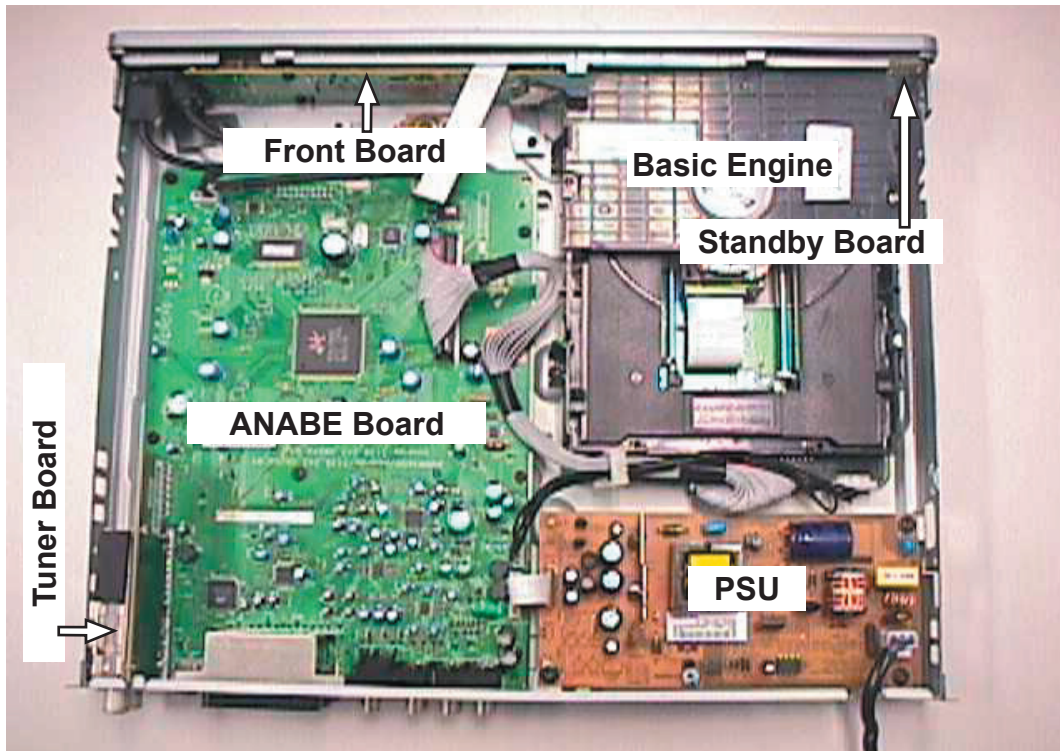
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1. Technical Specifications and Connection Facilities

1.1 PCB Locations



1.2 General:

Mains Voltage	: 220 - 240V
Mains Frequency	: ~50 Hz
Power Consumption	: 18 W (typical)
Standby Power Consumption	: < 3W
Eco Standby Power Consumption	: < 2W

Audio Performance (Analogue Mono):

Frequency Response (100 Hz - 12kHz) relative to 1 KHz	: 0 ± 3 dB
S/N unweighted (RMS, 20Hz to 20 kHz)	: ≥ 45 dB
Harmonic Distortion at 1 kHz (FM +/- 25 kHz)	: ≤ 1.5 %

1.3 RF Tuner (Analogue)

Test equipment	: Fluke 54200 TV Signal generator
Test streams	: PAL BG Philips Standard test pattern

Audio Performance (NICAM Stereo/Dual)

Frequency Response (40Hz - 15kHz) relative to 1 KHz	: 0 ± 3 dB
S/N unweighted (RMS, 20Hz - 20 kHz)	: ≥ 30 dB
Harmonic Distortion at 1 kHz	: ≤ 0.5 %

1.3.1 System

B/G, I, L/L', D/K

1.3.2 RF - Loop Through:

Frequency range	: 47-862 MHz
Gain active mode	: 2 +/- 4 dB
Gain standby mode (Passive Loop Through)	: -4 dB to 0 dB

1.3.3 Receiver:

Output of Euro connector/Cinch to be used for measurements (direct output from front end)

Video Performance:

Frequency response (0 - 4.4 MHz)	: 0 ± 3 dB
Group delay (0 - 4.4 MHz)	: -50 ± 150 nsec

1.3.4 Tuning

Tuning Frequency Range	: 45.25 MHz – 857 MHz
Antenna Level for 40dB S/N (video unweighted) at 75Ω	: < 40 dBμV (High End) ≤ 60 dBμV (Low End)

Automatic Search Tuning

Scanning time auto search without RF Signal	: 3 minutes (typical)
Stop level (vision carrier)	: ≥ 40 dBμV
Maximum tuning error during operation (drift)	: ± 100 kHz

Tuning Principles:

Automatic system recognition (B/G, I, L/L', D/K)
Manual Selection in "Store" mode
Storage of frequencies at each random position number

1.4 Analogue Inputs / Outputs

1.4.1. Audio/Video Input Connectors (EXT3)

AUDIO IN-Cinch L/R

Input voltage : 2.2Vrms max
 Input impedance : > 10kΩ

VIDEO IN (CVBS-Cinch)

Input voltage : 1Vpp ± 3dB
 Input impedance : 75Ω

1.4.2. Audio/Video Output Connectors

AUDIO-Cinch L/R

Output voltage : 2Vrms max.
 Output impedance : > 10kΩ

VIDEO (CVBS-Cinch)

Output Voltage : 1Vpp ± 3dB
 Output impedance : 75Ω

VIDEO (S-VIDEO-Hosiden)

According to IEC 933-5
 Superimposed DC-level on pin 4 (load > 100 kΩ)
 <2.4V is detected as 4:3 aspect ratio
 >3.5V is detected as 16:9 aspect ratio
 Input Voltage Y : 1Vpp ± 3dB
 Input Impedance Y : 75Ω
 Input Voltage C : 300mVpp ± 3dB
 Input Impedance C : 75Ω

1.5. Digital Inputs/Outputs

1.5.1. DV IN (IEEE 1394)

Implementation standard according:
 IEEE Std 1394-1995
 IEC61883 - Part1
 IEC61883 - Part 2 SD-DVCR (02-01-1997)

Specification of consumer use digital VCR's using 6.3mm magnetic tape – dec.1994
 Mechanical connection according to Annex of IEC 61883-1

1.5.2. USB

Compatibility : USB 1.1
 Type of connector : Series A Connector

1.5.3. HDMI

HDMI Version : HDMI 1.3
 Type of connector : Type A HDMI connector

1.5.4. Digital Output

DIGITAL AUDIO – Cinch

LPCM : according IEC 60958
 MPEG 1, MPEG 2, AC3 : according IEC 61937
 DTS : according IEC 61937 + addendum

1.6 Video Performance

1.6.1 SNR

PAL

RGB	CVBS	Y/C
≥ 55 dB	Luminance: ≥ 55 dB Chroma: ≥ 55 dB (AM) ≥ 52 dB (PM)	Y: ≥ 57 dB C: ≥ 57 dB (AM) ≥ 54 dB (PM)

NTSC

CVBS	Y/C
Luminance: ≥ 55 dB Chroma: ≥ 54 dB (AM) ≥ 54 dB (PM)	Y: ≥ 55 dB C: ≥ 54 dB (AM) ≥ 54 dB (PM)

1.6.2. Bandwidth

PAL

RGB	CVBS	Y/C
0.5-4 MHz:+1dB/-2dB 4.8 MHz: -3dB 5.8 MHz: -6dB	0.5-4 MHz:+1dB/-2dB 4.8 MHz: -3dB 5.8 MHz: -6dB	Y: 4.8MHz-3dB C: 700 kHz

NTSC

CVBS	Y/C
4.2 MHz: -3dB 5.8 MHz: -6dB	Y: 4.2 MHz-3dB C: ≥ 700 kHz

1.7. Audio Performance CDDA (PCM)

Cinch Output Rear

Output voltage 2 channel mode : 2Vrms ± 1dB
 Channel unbalance (1kHz) : < 1dB
 Crosstalk 1 kHz : > 95 dB
 Crosstalk 16Hz-20 kHz : > 80 dB
 Signal to noise ratio (unweighted) : > 85 dB (RMS, 20 Hz, AES17, 20 kHz filter)
 Signal to noise ratio (A-weighted) : > 85 dB (RMS, 20 Hz, AES17, 20 kHz filter)
 Dynamic range 1 kHz : > 85 dB (AES17, 20 kHz filter)
 Distortion and noise 1 kHz : > 80 dB (AES17, 20 kHz filter)
 Distortion and noise 16Hz-20 kHz : > 70dB (AES17, 20 kHz filter)
 Intermodulation distortion : > 70dB
 Mute : ≤ -85 dB (during spin-up, pause and access)
 Outband Attenuation : > 40 dB (above 30 kHz)

1.8. Dimension and Weight

Set Dimension W x H x D : 360 x 53 x 307 mm
 Net Weight : 2.3 kg

1.9. Laser Output Power & Wavelength

1.9.1. DVD

Light Output Power : 100 mW (CW)
Wavelength : 650 nm

1.9.2. CD

Light Output power : 5 mW
Wavelength : 780nm

1.11. Supported Disc Types and Media Speed for Recording

Disc	Media Speeds
DVD+R/-R	1x ~ 16x
DVD+RW	2.4x ~ 8x
DVD-RW	1x ~ 16x
DVD+RDL	2.4x ~ 8x

1.10. Playability


Video Playback		
1	Playback Media: CD-R/CD-RW, DVD+R/+RW, DVD-R/-RW, DVD-Video, Video CD/SVCD, DVD+R DL, USB flash drive	x
2	Compression Format: MPEG2, MPEG1, DivX	x
Audio Playback		
1	Playback Media: Audio CD, CD-R/RW, DVD+R DL, DVD+R/+RW, DVD-R/-RW, MP3-CD, MP3- DVD, USB flash drive, WMA-CD	x
2	Compression Format: Dolby Digital, MP3, MPEG2 Multichannel, PCM, WMA	x
3	MP3 bit rates: 32-256 kbps and VBR	x
Still Picture Playback		
1	Playback Media: CD-R/RW, DVD+R DL, DVD+R/+RW, DVD-R/-RW, Picture CD, USB flash drive	x
2	Picture Compression Format: JPEG	x
3	Picture Enhancement: Rotate, Zoom	x

2. Safety Information, General Notes & Lead Free Requirements

2.1 Safety Instructions

2.1.1 General Safety

Safety regulations require that during a repair:

- Connect the unit to the mains via an isolation transformer.
- Replace safety components, indicated by the symbol , only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, you must return the unit in its original condition. Pay, in particular, attention to the following points:

- Route the wires/cables correctly, and fix them with the mounted cable clamps.
- Check the insulation of the mains lead for external damage.
- Check the electrical DC resistance between the mains plug and the secondary side:
 1. Unplug the mains cord, and connect a wire between the two pins of the mains plug.
 2. Set the mains switch to the 'on' position (keep the mains cord unplugged!).
 3. Measure the resistance value between the mains plug and the front panel, controls, and chassis bottom.
 4. Repair or correct unit when the resistance measurement is less than 1 MΩ.
 5. Verify this, before you return the unit to the customer/user (ref. UL-standard no. 1492).
 6. Switch the unit 'off', and remove the wire between the two pins of the mains plug.

2.1.2 Laser Safety

This unit employs a laser. Only qualified service personnel may remove the cover, or attempt to service this device (due to possible eye injury).

Laser Device Unit

Type	: Semiconductor laser GaAlAs
Wavelength	: 650 nm (DVD) 780 nm (VCD/CD)
Output Power	: 20 mW (DVD+RW writing) 0.8 mW (DVD reading) 0.3 mW (VCD/CD reading)
Beam divergence	: 60 degree




Figure 2-1

Note: Use of controls or adjustments or performance of procedure other than those specified herein, may result in hazardous radiation exposure. Avoid direct exposure to beam.

2.2 Warnings

2.2.1 General

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD, ). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are at the same potential as the mass of the set by a wristband with resistance. Keep components and tools at this same potential. Available ESD protection equipment:
 - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
 - Wristband tester 4822 344 13999.
- Be careful during measurements in the live voltage section. The primary side of the power supply, including the heatsink, carries live mains voltage when you connect the player to the mains (even when the player is 'off!'). It is possible to touch copper tracks and/or components in this unshielded primary area, when you service the player. Service personnel must take precautions to prevent touching this area or components in this area. A 'lightning stroke' and a stripe-marked printing on the printed wiring board, indicate the primary side of the power supply.
- Never replace modules, or components, while the unit is 'on'.

2.2.2 Laser

- The use of optical instruments with this product, will increase eye hazard.
- Only qualified service personnel may remove the cover or attempt to service this device, due to possible eye injury.
- Repair handling should take place as much as possible with a disc loaded inside the player.
- Text below is placed inside the unit, on the laser cover shield:

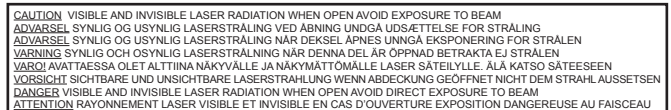


Figure 2-2

2.2.3 Notes

Dolby

Manufactured under licence from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. ©1992-1997 Dolby Laboratories, Inc. All rights reserved.



Figure 2-3

Trusurround

TRUSURROUND, SRS and symbol (fig 2-4) are trademarks of SRS Labs, Inc. TRUSURROUND technology is manufactured under licence from SRS labs, Inc.



Figure 2-4

Video Plus

"Video Plus+" and "PlusCode" are registered trademarks of the Gemstar Development Corporation. The "Video Plus+" system is manufactured under licence from the Gemstar Development Corporation.



Figure 2-5

Macrovision

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners.

Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

2.3 Lead Free Requirement**Information about Lead-free produced sets**

Philips CE is starting production of lead-free sets from 1.1.2005 onwards.

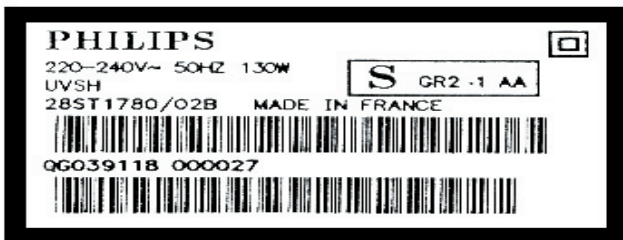
INDENTIFICATION:

Regardless of special logo (not always indicated)



One must treat all sets from **1 Jan 2005** onwards, according next rules.

Example S/N:



Bottom line of typeplate gives a 14-digit S/N. Digit 5&6 is the year, digit 7&8 is the week number, so in this case 1991 wk 18

So from 0501 onwards = from 1 Jan 2005 onwards

Important note: In fact also products of year 2004 must be treated in this way as long as you avoid mixing solder-alloys (leaded/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-pate is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
 - Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
 - o To reach at least a solder-temperature of 400°C,
 - o To stabilize the adjusted temperature at the solder-tip
 - o To exchange solder-tips for different applications.
 - Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
 - Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded and lead-free). If one cannot avoid or does not know whether product is lead-free, clean carefully the solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
 - Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
 - **Special information for BGA-ICs:**
 - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use the lead-free temperature profile, in case of doubt)
 - lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. (MSL=Moisture Sensitivity Level). This will be communicated via AYS-website.
 - Do not re-use BGAs at all.
 - For sets produced before 1.1.2005 (except products of 2004), containing leaded solder-alloy and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
 - On our website www.atyourservice.ce.Philips.com you find more information to:
 - BGA-de-/soldering (+ baking instructions)
 - Heating-profiles of BGAs and other ICs used in Philips-sets
- You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

Register your product and get support at:
www.philips.com/welcome

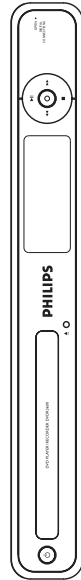
DVDR3600

Quick Start Guide

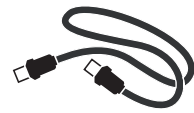


- 1** Connect
- 2** Set up
- 3** Enjoy

What's in the box?



DVD Player/Recorder



RF Antenna Cable



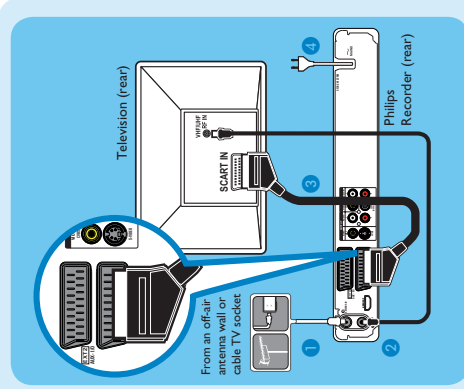
Remote Control
and 2 batteries

PHILIPS

1 Connect

Basic Connection

Before Connecting
 Select one of the following basic connections (**A** or **B**) according to the type of connecting devices you have.

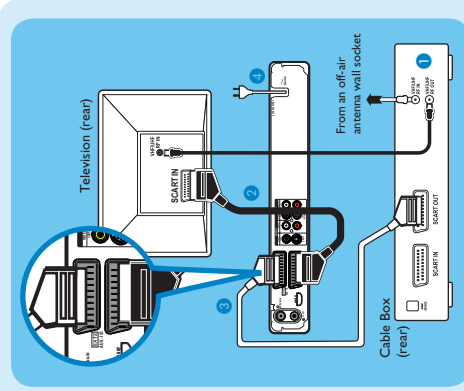


Option A

Use this connection if you are connecting the antenna cable directly from the antenna wall socket or from a cable TV socket.

- 1** Unplug the antenna cable that is connected to your TV and plug it into the **ANTENNA-IN** socket on this recorder.
- 2** Connect the supplied RF antenna cable from the **TV-OUT** socket on the recorder to the Antenna In socket on the TV.
- 3** Connect a scart cable (not supplied) from the **EXT1 TO TV-IO** socket on the recorder to the Scart input socket on your TV.
- 4** Plug in the power cord from the recorder to an AC power outlet.

Note See the accompanying user manual for other possible connections (e.g. Composite Video, Component Video, S-VIDEO).



Option B

Use this connection if your current antenna cable is connected through a cable box with a Scart output socket.

- 1** Keep the existing antenna connection from the cable box to your TV.
- 2** Connect a scart cable (not supplied) from the **EXT1 TO TV-IO** socket on the recorder to the Scart input socket on your TV.
- 3** Connect another scart cable (not supplied) from the **EXT2 AUX-IO** socket on the recorder to the Scart output socket on the Cable Box.
- 4** Plug in the power cord from the recorder to an AC power outlet.

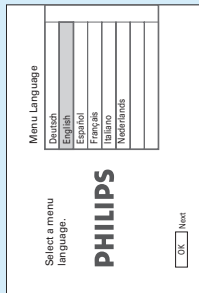
3. Directions For Use

The following excerpt of the Quick Use Guide serves as an introduction to the set.
 The Complete Direction for the Use can be downloaded in different languages from the internet site of Philips Customer care Center:
www.p4c.philips.com

2 Set up

A Finding the viewing channel

- Press on the recorder.
- Switch on the TV and other connected devices (e.g. Cable Box, Satellite Receiver). The installation menu is displayed.



- In case you don't see the recorder's installation menu, press the channel down button on the TV's remote control repeatedly (or AV/SELECT,) until you see the menu. This is the correct viewing channel for the recorder.

B Start basic setup

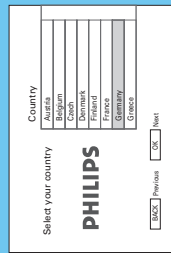
Use the recorder's remote control and follow the on-screen instructions to complete the installation.

Note Press keys to toggle through the options. Press to select an item. To confirm your selection, press **OK**.

- Select the menu display language.



- Select the country of your residence.



- Set the date.
Use the **numeric keypad 0-9** or keys to enter the correct date. Press **OK** to confirm.

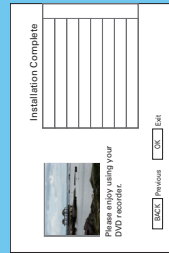
- Set the time.
Use the **numeric keypad 0-9** or keys to enter the correct time. Press **OK** to confirm.

- Select the eco mode.

- Automatic channel search begins.

Note If you have used Option B in 'Basic Connection', press **OK** to skip channel search and proceed to the next step. No preset channels will be stored.

- All available TV channels are stored.



- Press **OK** to exit.

The recorder is now ready for use.

3 Enjoy

A Record from TV or an external device

- Insert a recordable DVD disc in the tray.



- To record a TV programme, Press **0 - 9** to select the preset channel to record.

Note If you have used Option B in 'Basic Connection', press **SOURCE** repeatedly to select 'EXTZ'. Use the remote control of your cable box to select the TV programme to record.

- To record from a connected device, press **SOURCE** repeatedly to select the video source to record (DV, EXT2 or EXT3).

Note Press **REC MODE** repeatedly to select a preferred recording mode.

Record Quality	Hours of recording that can be stored on a recordable DVD (variable)
HQ (high quality)	DVD+R/DVD+RW
SP (standard play)	DVD-R
LP (long play)	Disable Layer
SLP (super long play)	1 1 hr 55 mins
	2 3 hrs 40 mins
	2.5 4 hrs 35 mins
	3 5 hrs 30 mins
	4 6 hrs 20 mins
	6 12 hrs

- Press to start recording. Press again to add recording time in 30 minutes increments.

- To end recording, press . 'UPDATE' is displayed on the recorder.

- To playback the recording, press **DISC**, select the title and press .

Start playback

A Play from disc

- Press to open the disc tray. Load a disc and close the disc tray.
- Press **DISC MENU**.
- Use keys to reach the title/file you want to play and press to start.

B Play from USB device

- Insert the USB device to the USB port.
- Press **USB** to show the contents list.
- Select the preferred content and press **right**.
- Select a data file (MP3, WMA, DivX and JPEG) and press to start playback.

Need help?

User Manual

See the user manual that came with your Philips recorder.



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12 NC 3139 245 2920 I

4. Mechanical Instructions

Note : The position numbers given here refer to the Exploded view in chapter 9

4.1 Dismantling of the DVD Tray Cover manually

- 1) Insert a screw-driver into the slot provided at the bottom of the set and push in the direction as shown in Figure 1 to unlock before sliding the Tray Cover 110 out.

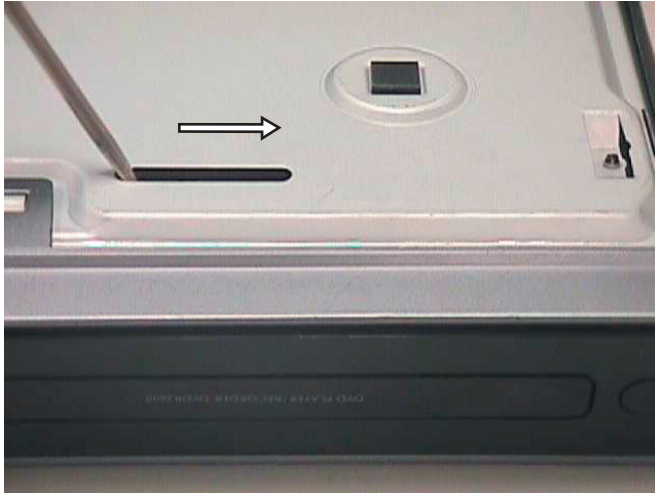


Figure 1: Unlock the Tray loader

- 2) Remove the Tray Cover 110 as shown in Figure 2.

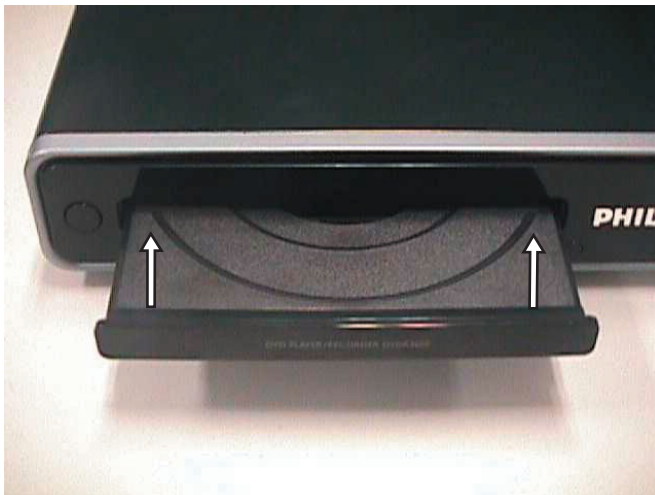


Figure 2: Remove Tray Cover

4.2 Dismantling of the Front Complete Assembly

- 1) Remove 5 screws to loosen Top cover 240 .
- 2) Remove 2 screws on the frame 161 as shown in figure 3. Remove 2 more screws from each side of the front panel as shown in figure 4.a and figure 4.b. Then detach the Front Complete Assembly 900.

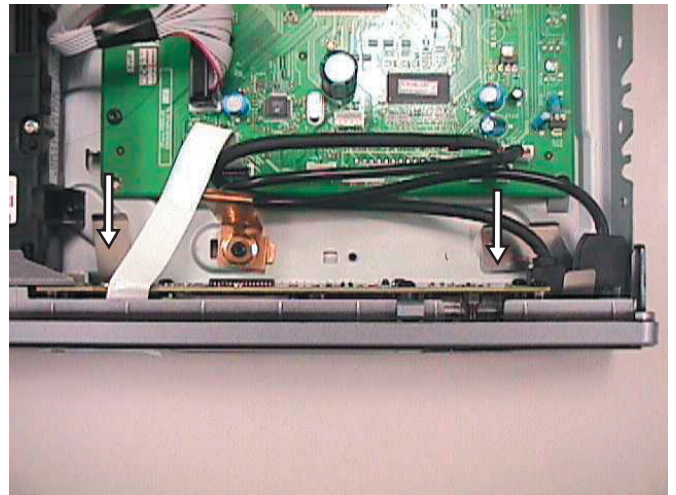


Figure 3 - Unscrew the screws on the frame



Figure 4.a – Unscrew the side screw

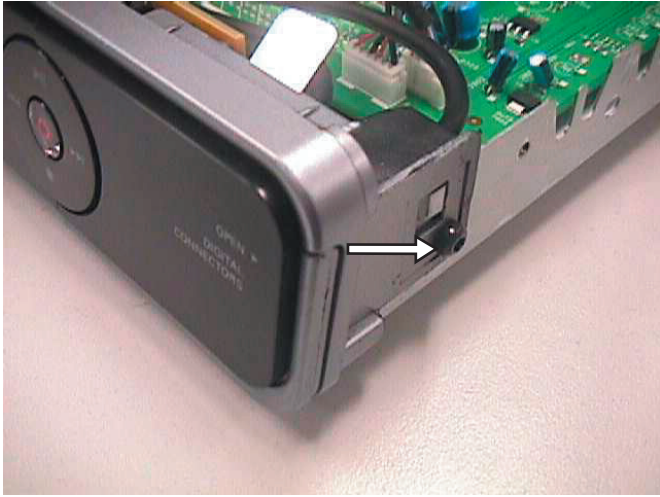


Figure 4-b - Unscrew the side screw

- 3) Remove 2 screws to detach the Loader Shield Bracket 198. Front Panel Service Position is shown in figure 5.



Figure 5. Front Panel Service Position

4.3 Dismantling of the Basic Engine

- 1) Remove 4 mounting screws as shown in figure 6 to dismantle the Basic Engine 1001.

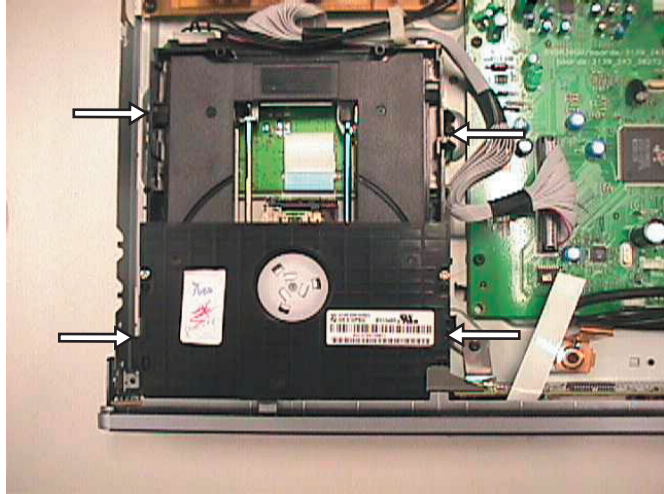


Figure 6. Remove the screws to dismantle the basic engine

- 2) Flip over the Basic Engine 1001 to remove 4 screws from the PCB protection plate. Service Position of the Basic Engine is shown in Figure 7..

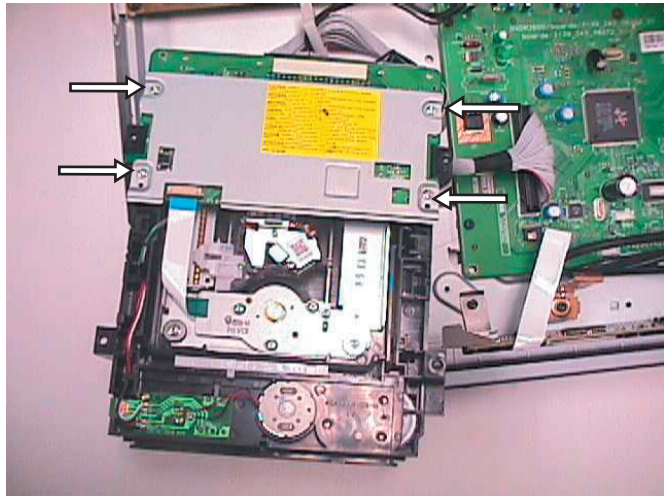


Figure 7. Basic engine service position

4.4 Dismantling of the PSU Board

- 1) Remove 3 screws and release 2 spacers as shown in figure 8 to dismantle the PSU Board 1002..

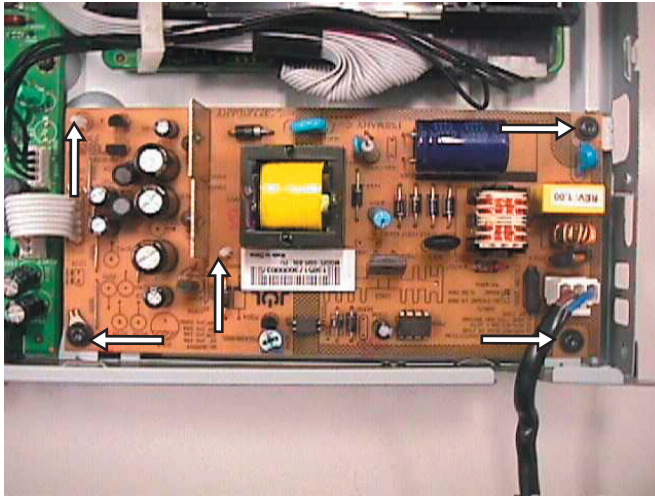


Figure 8- Unscrew the screws and release the spacers

- 2) Service Position for PSU Board 1002 is shown in figure 9.

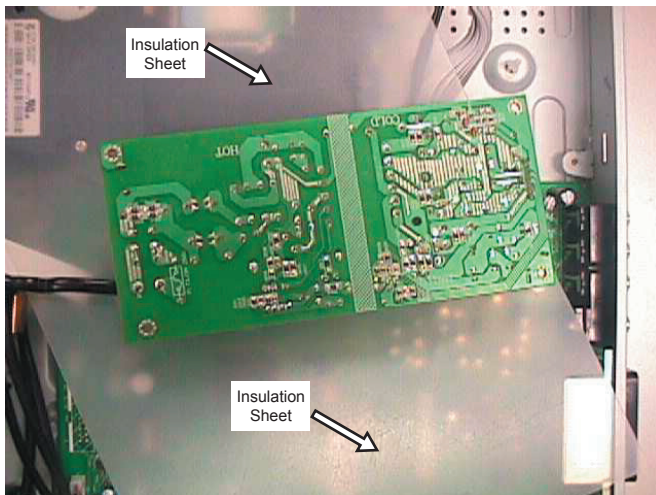


Figure 9- PSU Board service position (Beware of the cable connection to ANABE Board)

4.5 Dismantling of the ANABE Board and Tuner Board

- 1) Remove 5 screws on the frame 161 as shown in figure 10.

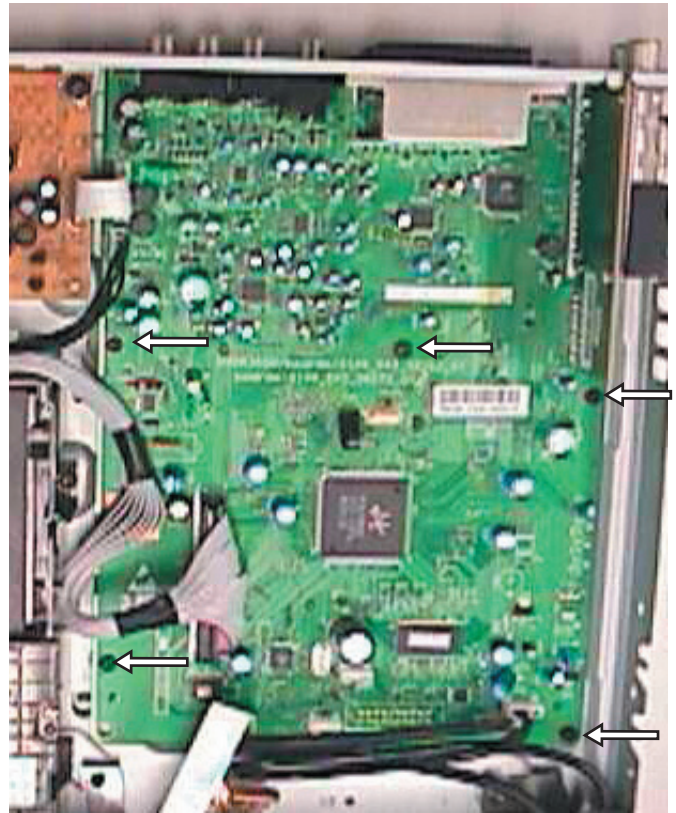


Figure 10- Remove the screws on the frame

- 2) Remove 7 screws on the rear plate 230 as shown in figure 11. Then Dismantle the ANABE Board 1003..

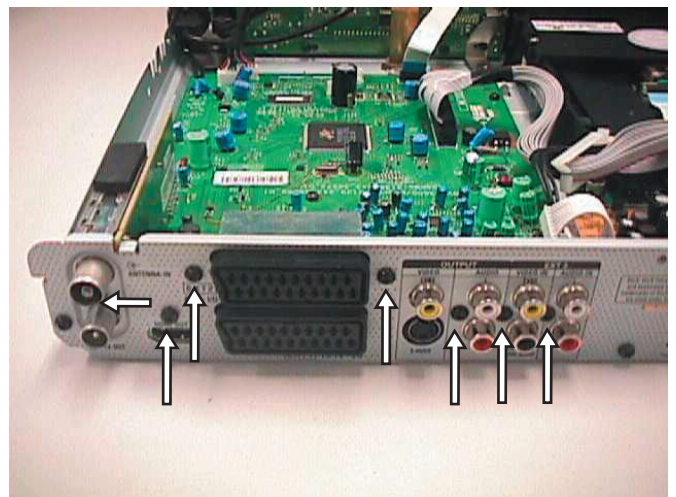
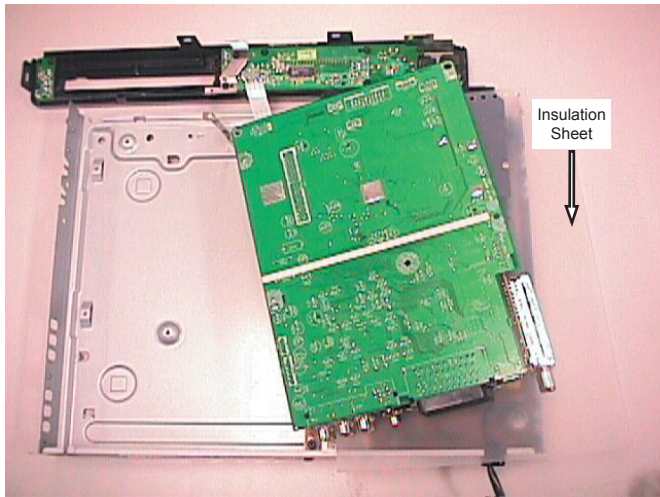


Figure 11- Remove the screws on the rear plate

3) ANABE Board service position is shown in figure 12.



**Figure 12-ANABE Board Service Position
(Front Panel also dismantled)**

Note: beware of the cable connection from PSU Board

5. Firmware Upgrading

5.1. Preparation to upgrade firmware

- Download the latest software release package.
- Extract the files from ZIP archive (Do not rename the filenames).
- Start the CD Burning Software and create a new CD project (data disc) with the following settings:
 - File System: Joliet
 - Format: MODE 2/CDROM XA
 - Recording Mode: SINGLE SESSION (TRACK-AT-ONCE), FINALIZE CD
 Note: Long file name is necessary for the preparation of the upgrade disc.
- Place the extracted files into the root directory of the new CD project.
- Burn the data onto the CDRs or CD-RWs.

5.2. Procedures to apply the Software Upgrade

- Open the tray and load the Upgrade CDROM with *Software upgrade file*.
- Close the tray and set will display:
"UPdAtE?"
And, with the dialog box titled "Upgrade", the OSD will display:
"Do you want to upgrade firmware?"
- Choose the <OK> button.
- The set will display:
"SW DL->.BUSY..."
And, with the dialog box titled "Upgrade", the OSD will display:
"Upgrading Do not power off the recorder. Please wait..."
- When the upgrade process is finished, the tray will then open automatically and the set will display:
"DONE"
And, with the dialog box titled "Upgrade", the OSD will display:
"Please take out the disc. Press OK to end upgrading"
- Take out the disc, and press <OK> button.
- The set will reset. Then the set has been successfully upgraded.

Note: Do not press any buttons or interrupt the mains supply during the upgrading process, otherwise the set may become defective.

5.3. How to read out the firmware version to confirm set has been upgraded

- Power up the set and close tray with no disc.
- Press "System Menu"
- Press <8> <1> <0> <5> in succession.
- The set will display a version information dialog box

The figure below shows the version information displayed by DVDR3600/31 running backend software version (software release version) R03_06 and optical drive firmware 68.09.26.00.

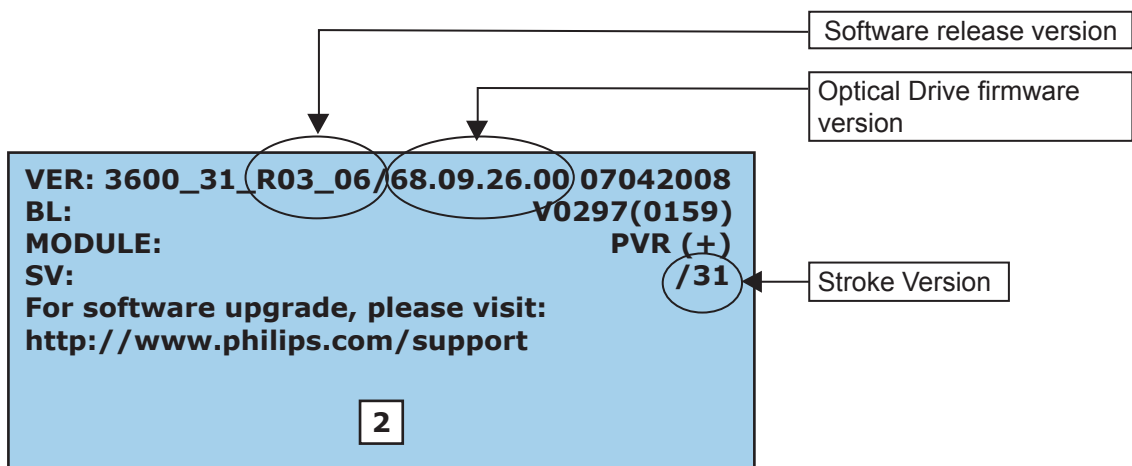


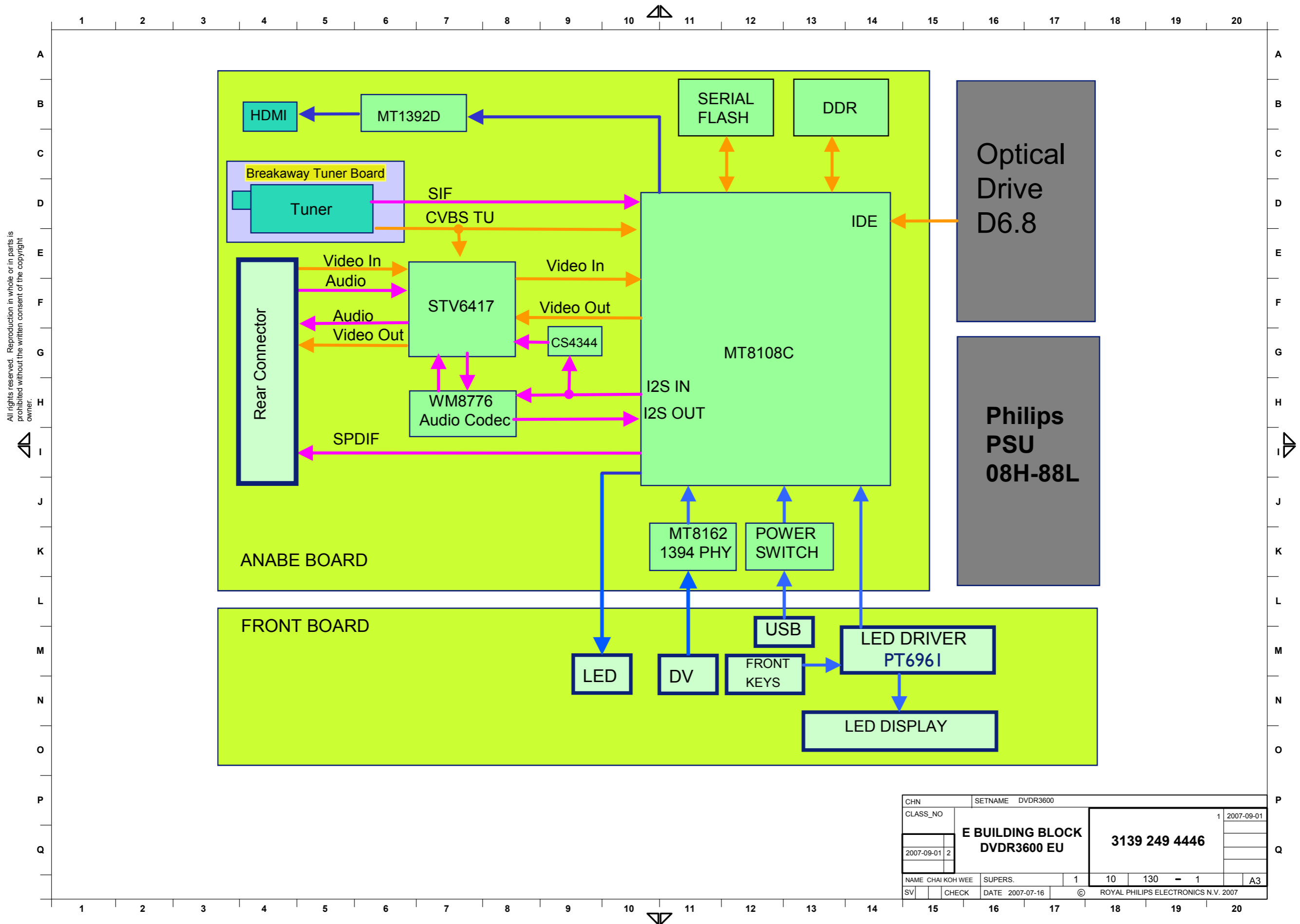
Figure: Firmware Information shown by DVDR3600/31

5.4. Restore the Dynamic Stroke Version

It is important to restore the Dynamic Stroke version of the set before returning the set to the customer. Follow the steps below to restore dynamic stroke versions:

- Close DVD tray with no disc
- Enter the following RC sequence:
 - <3> <6> <0> <0> <0> <5> <OK> for /05
 - <3> <6> <0> <0> <3> <1> <OK> for /31
 - <3> <6> <0> <0> <5> <8> <OK> for /58
- If the RC command is accepted successfully, the message “Stroke Version Changed to /<YY>” will be displayed on the OSD with the dialog box titled “Region”. Only the standby button would be operational after stroke version change.

6. Overall Block Diagrams

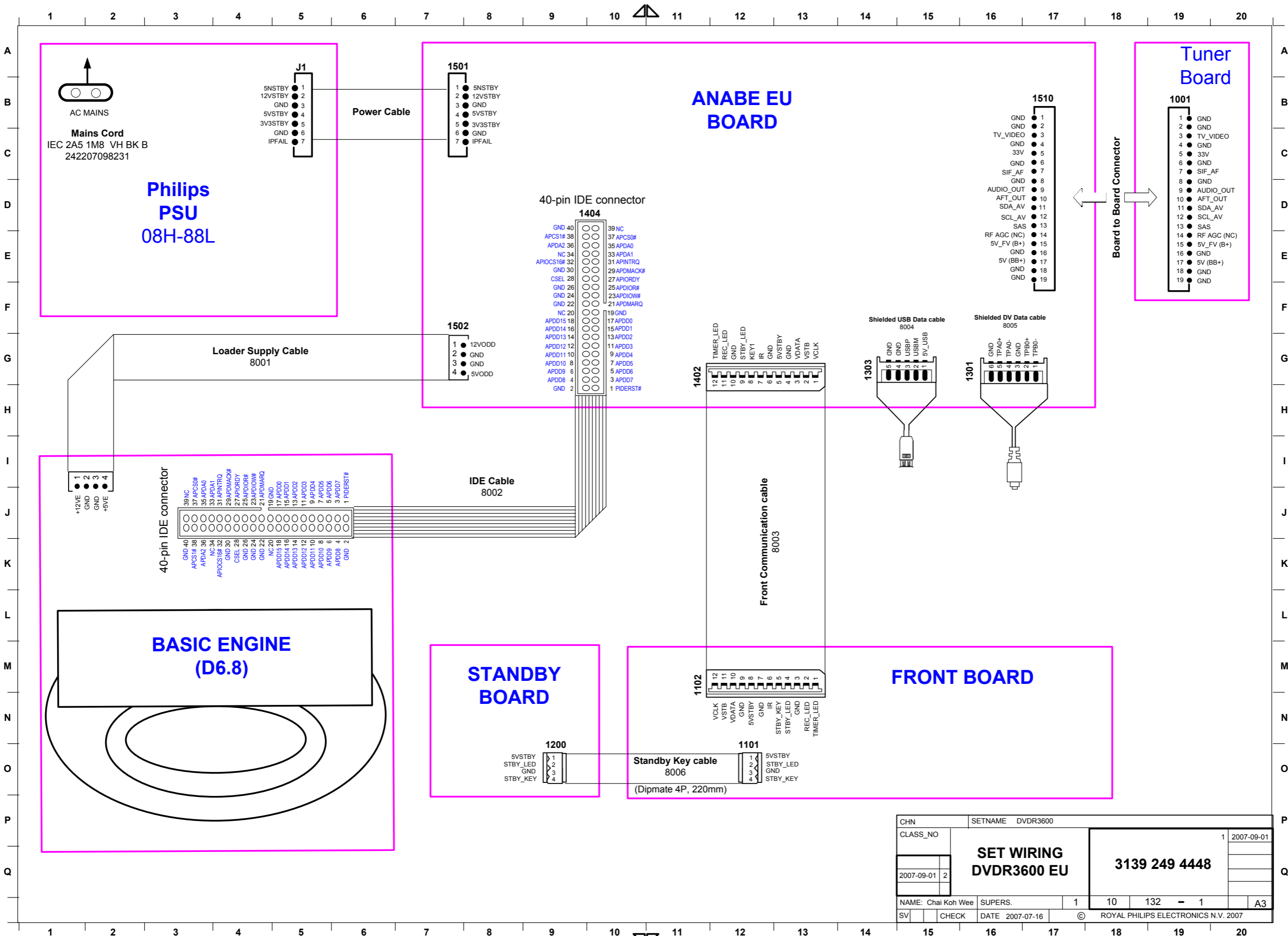


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CHN	SETNAME	DVDR3600	
CLASS_NO	E BUILDING BLOCK DVDR3600 EU		1 2007-09-01
2007-09-01	2	3139 249 4446	
NAME	CHAI KOH WEE	SUPERS.	1
SV	CHECK	DATE	2007-07-16
		10	130 - 1
		A3	
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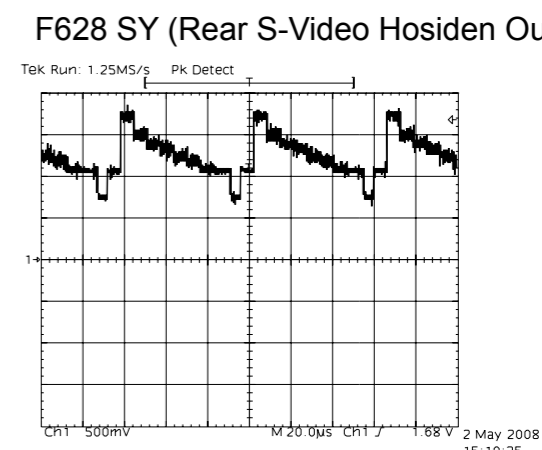
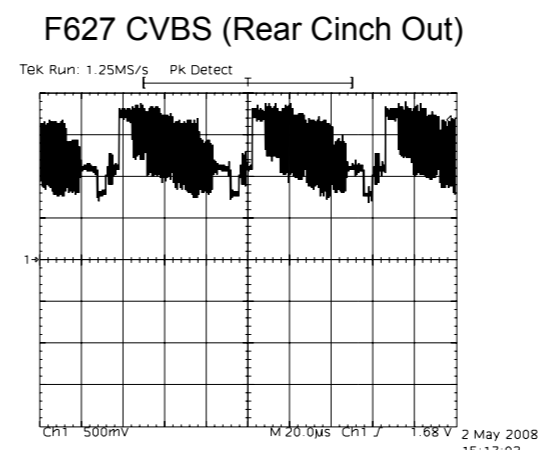
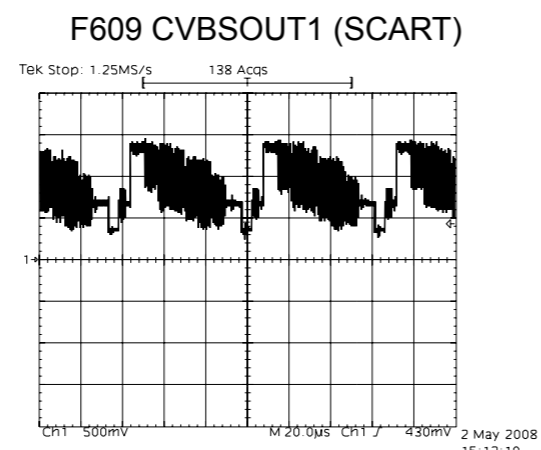
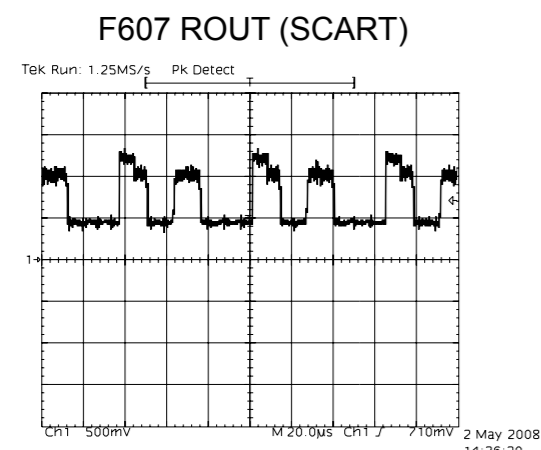
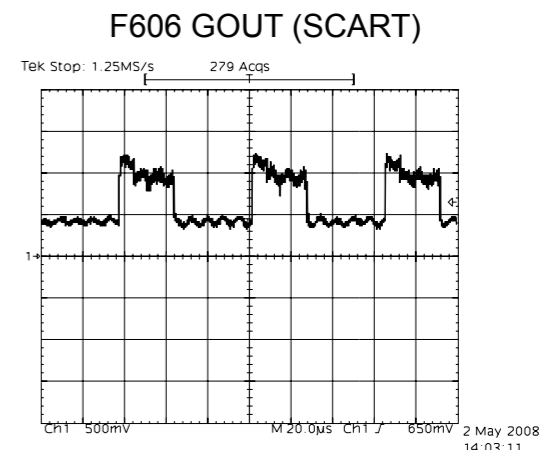
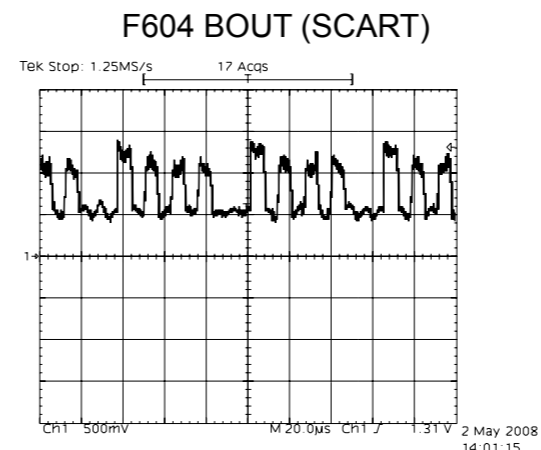
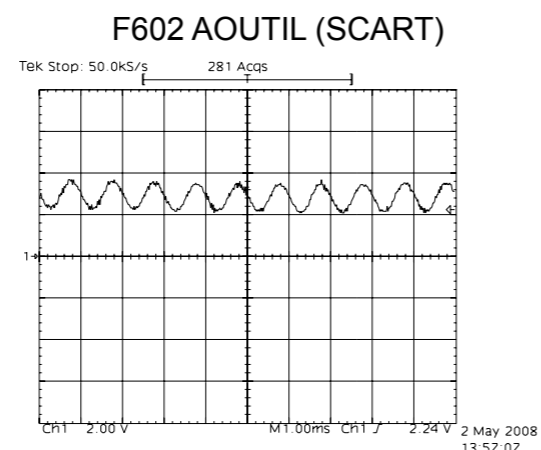
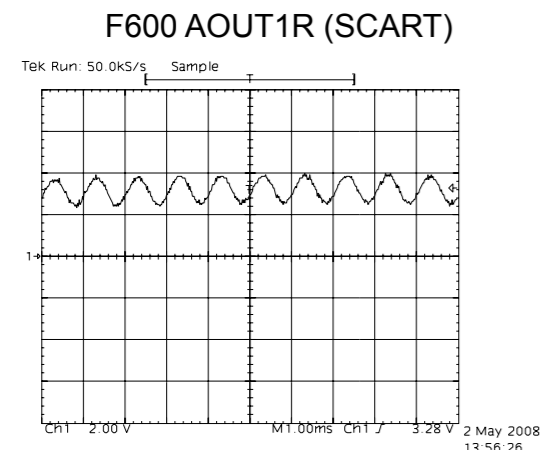
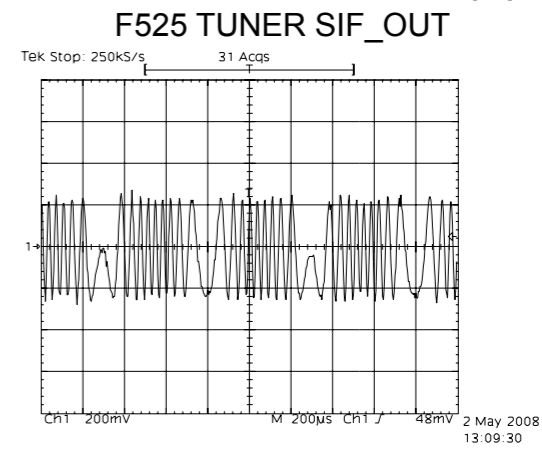
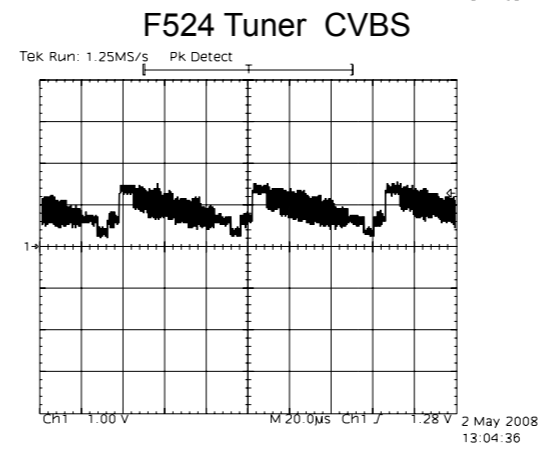
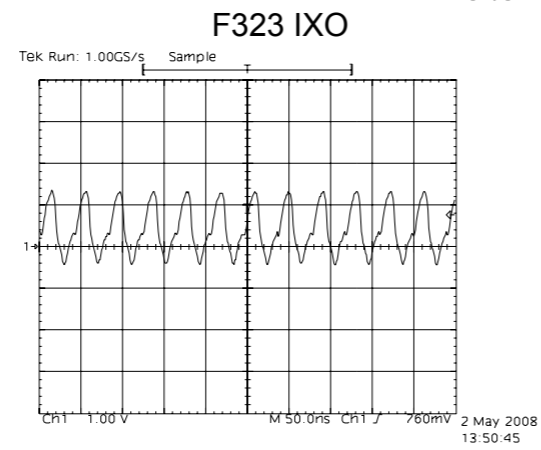
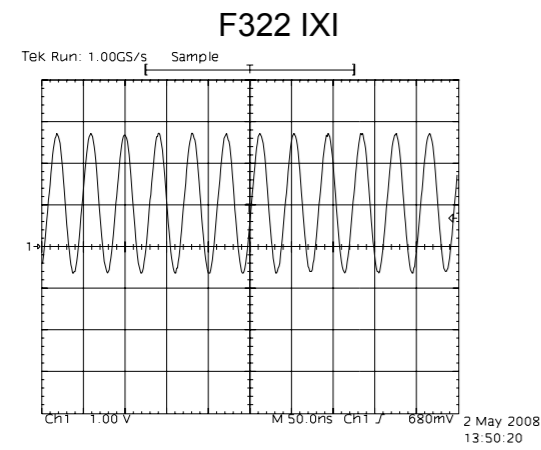
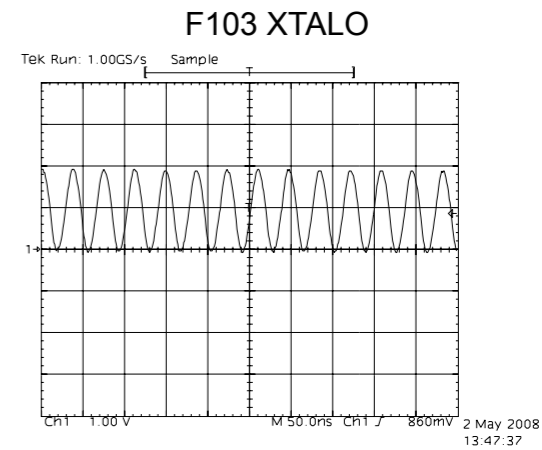
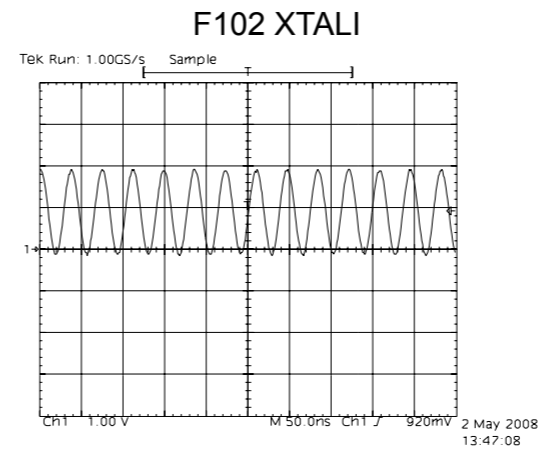
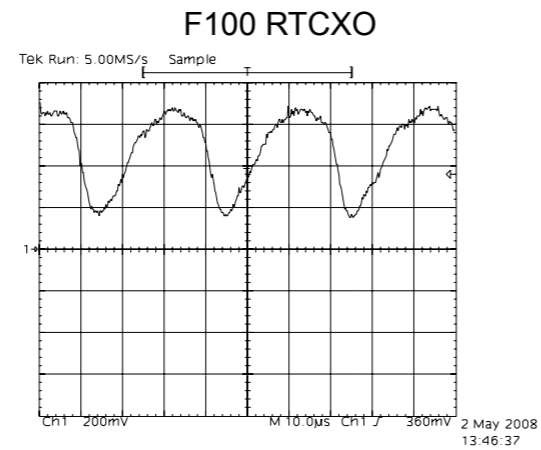
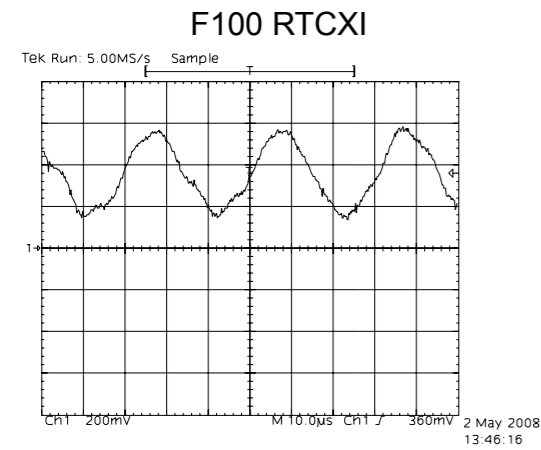
Wiring Diagram

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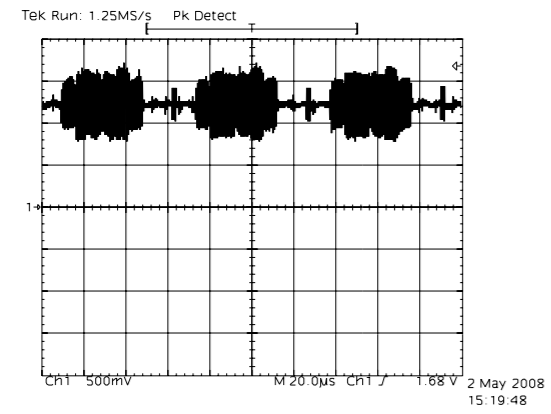
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CLASS_NO		1 2007-09-01
SET WIRING DVDR3600 EU		3139 249 4448
NAME: Chai Koh Wee	SUPERS.	1
SV	CHECK	DATE 2007-07-16
		© ROYAL PHILIPS ELECTRONICS N.V. 2007

ANABE Board Waveforms

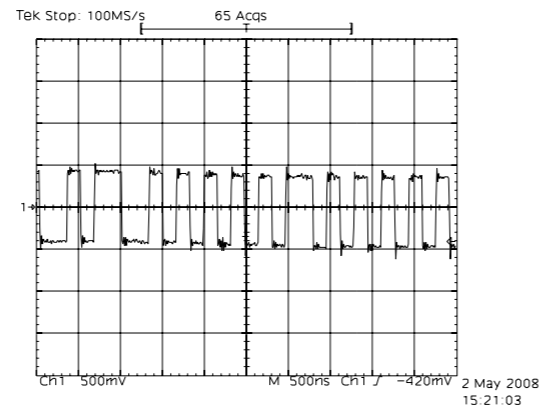


ANABE Board Waveforms

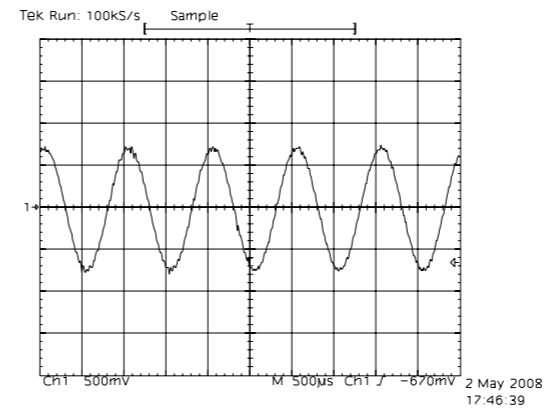
F629 SC (Rear S-Video Hosiden Out)



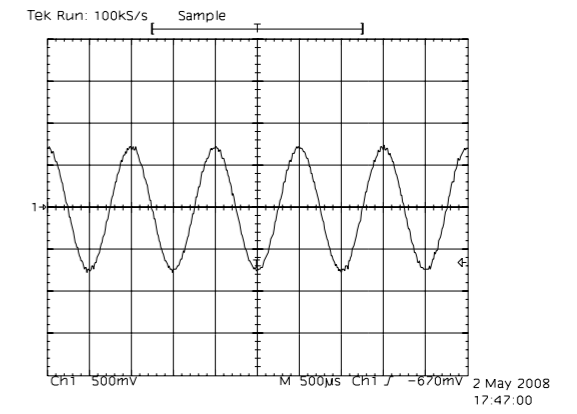
F651 SPDIF (Rear Digital Out Cinch)



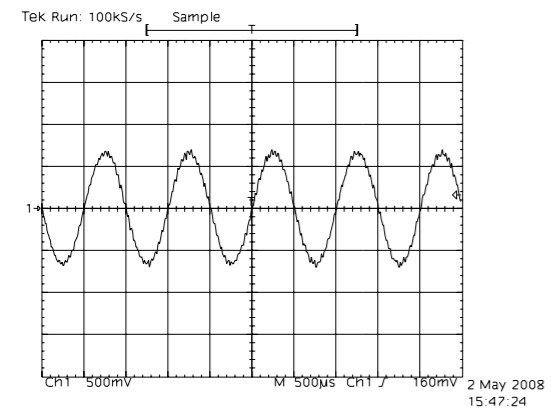
F708 L_Out (Audio Cinch)



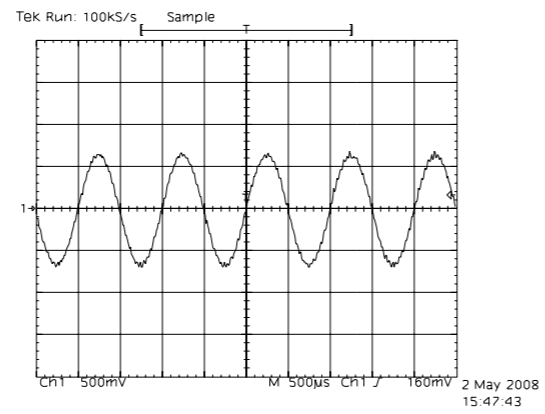
F709 R_Out (Audio Cinch)



F733 8776 ROUT audio

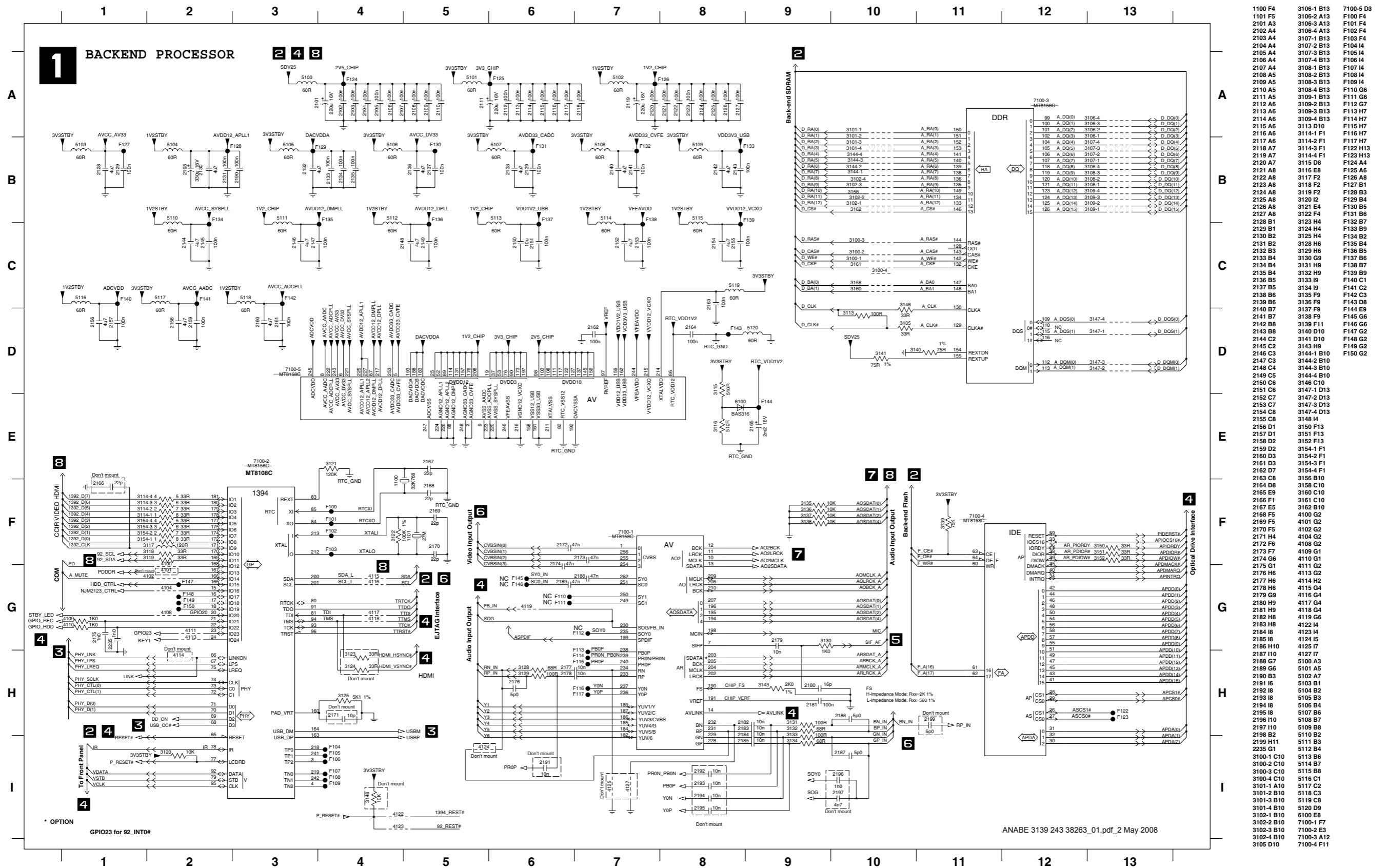


F734 8776 LOU audio

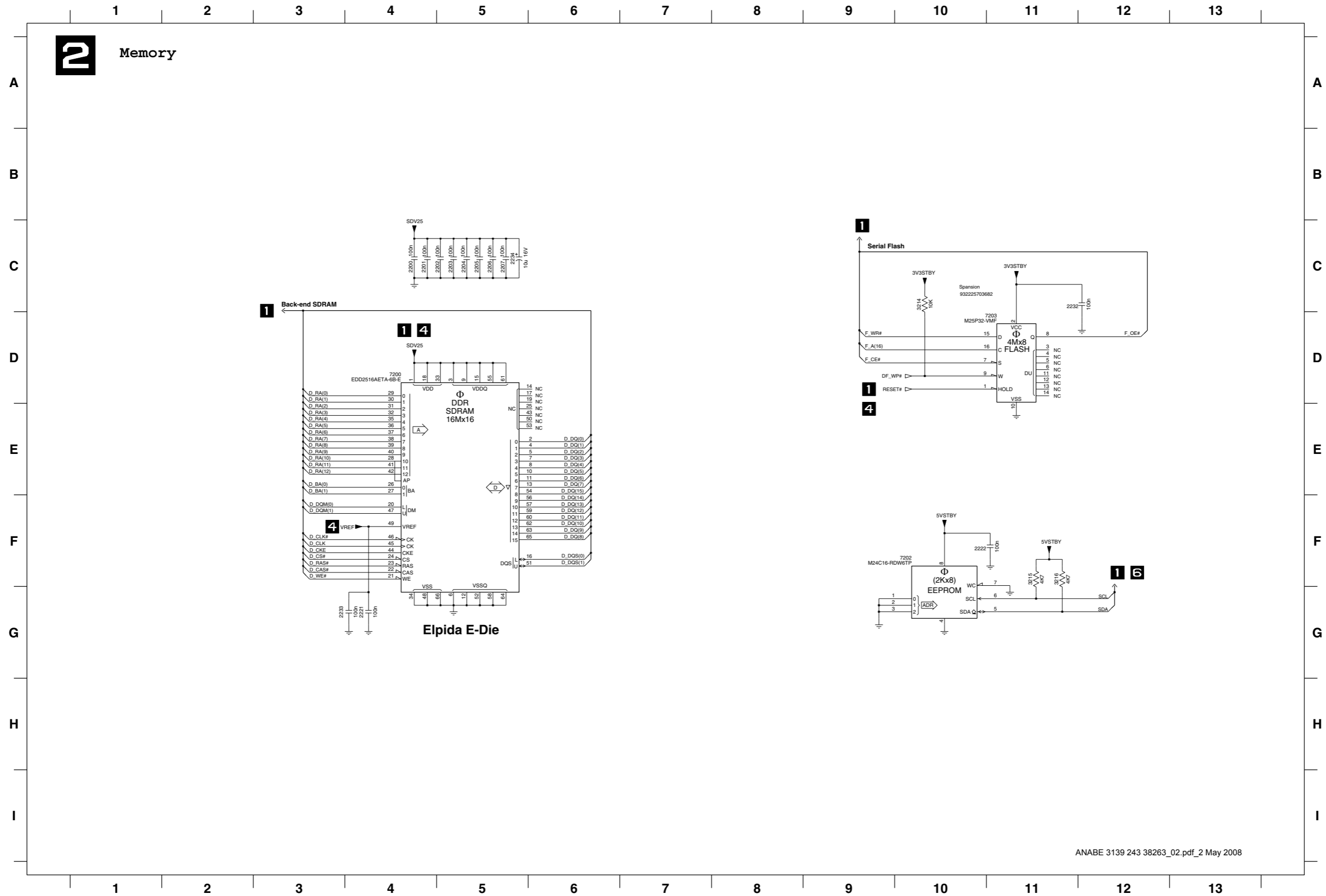


7. Circuit Diagrams and PWB Layouts

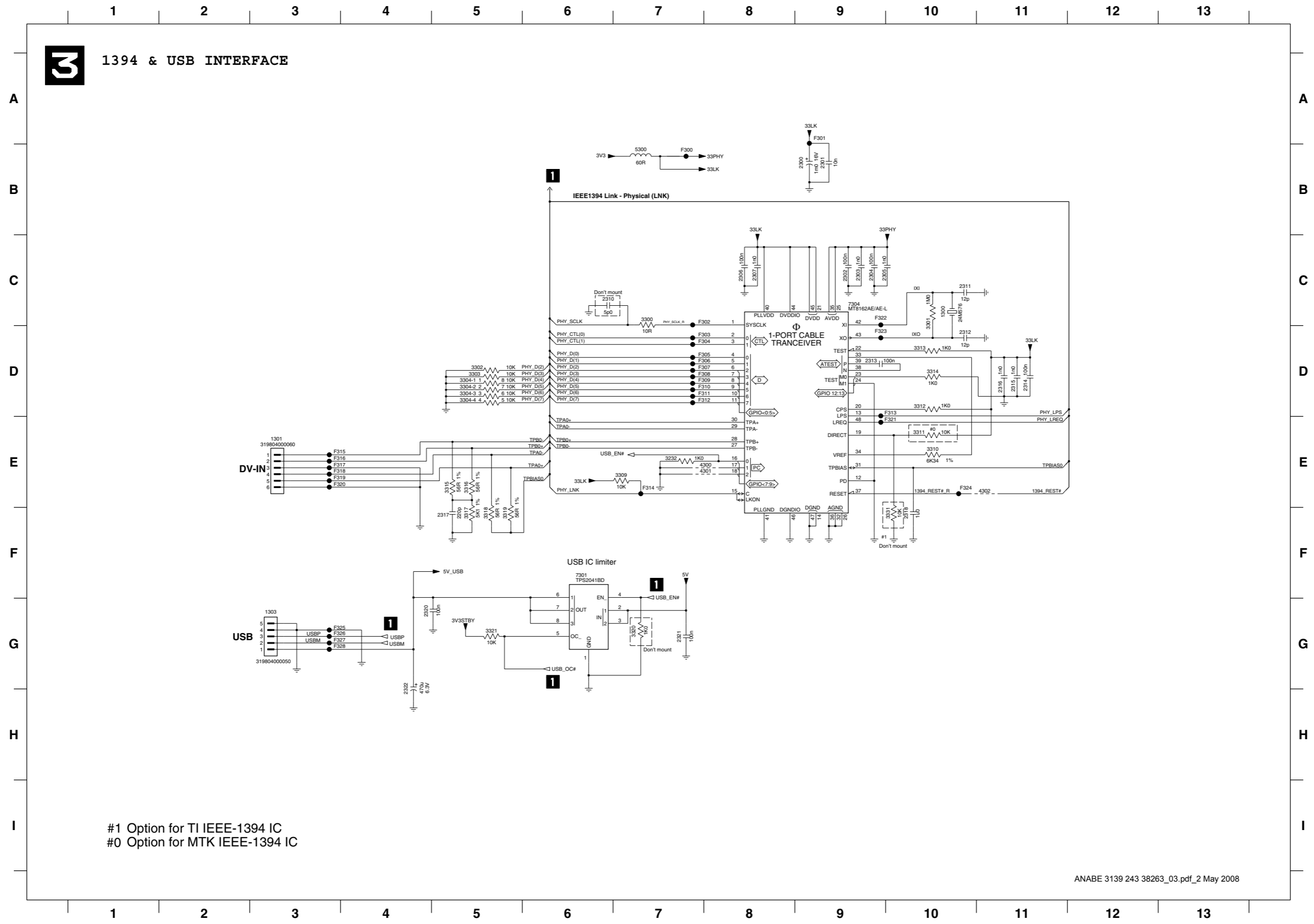
ANABE: Backend Processor



ANABE: Memory



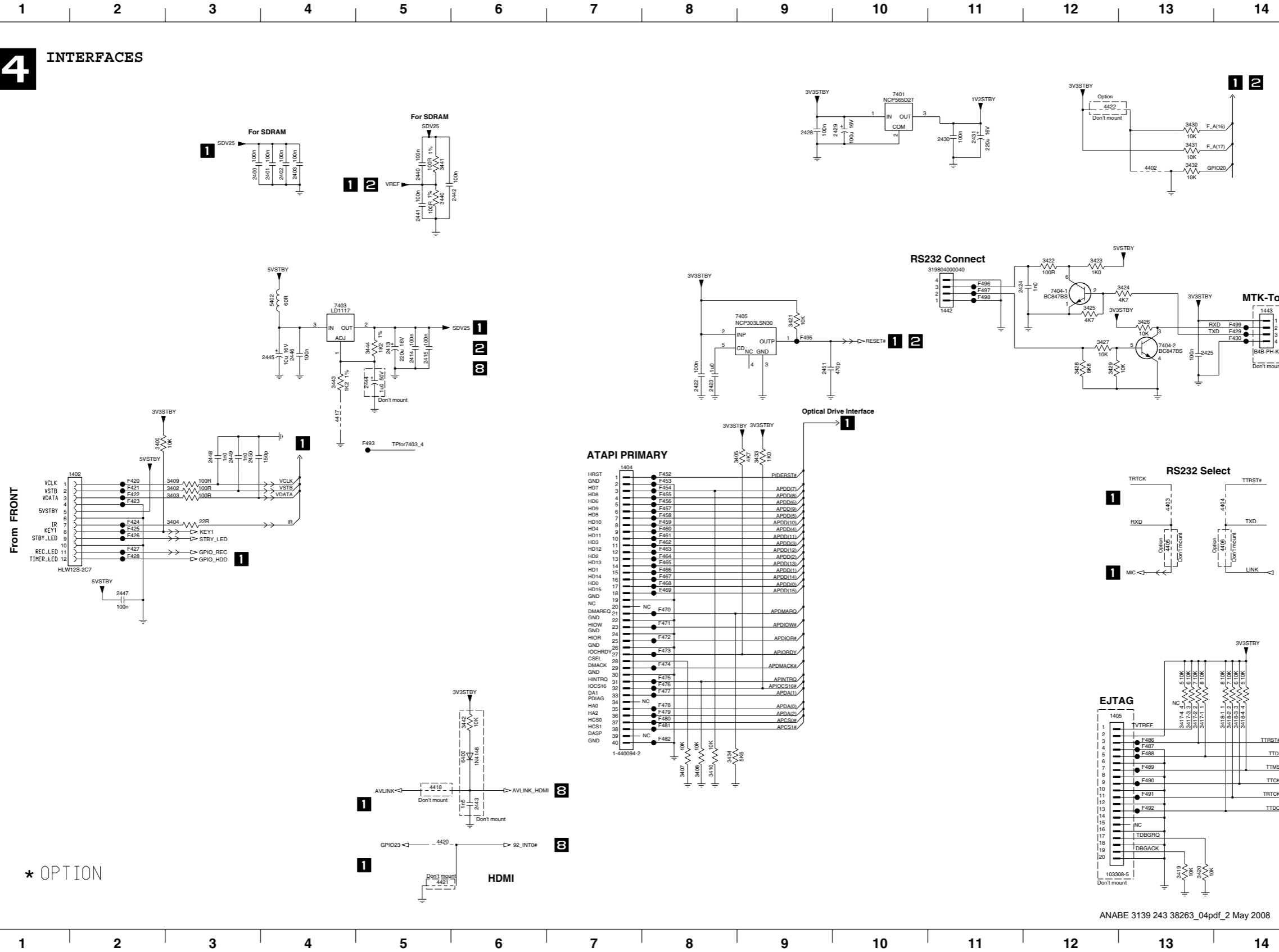
ANABE: 1394 & USB Interface



- 1300 C10
- 1301 E3
- 1303 G3
- 2300 B9
- 2301 B9
- 2302 C9
- 2303 C9
- 2304 C9
- 2305 C10
- 2306 C8
- 2307 C8
- 2310 C6
- 2311 C10
- 2312 D10
- 2313 D9
- 2314 D11
- 2315 D11
- 2316 D11
- 2317 F5
- 2318 F10
- 2320 G4
- 2321 G7
- 2322 G4
- 2323 E7
- 3230 C7
- 3300 C10
- 3302 D5
- 3303 D5
- 3304-1 D5
- 3304-2 D5
- 3304-3 D5
- 3304-4 D5
- 3309 E7
- 3310 E10
- 3311 E10
- 3312 D10
- 3313 D10
- 3314 D10
- 3315 E5
- 3316 E5
- 3317 F5
- 3318 F5
- 3319 F5
- 3320 G7
- 3321 G5
- 3331 F10
- 4300 E8
- 4301 E8
- 4302 E11
- 5300 B7
- 7301 F6
- 7304 C9
- F300 B7
- F301 A9
- F302 C8
- F303 D8
- F304 D8
- F305 D8
- F306 D8
- F307 D8
- F308 D8
- F309 D8
- F310 D8
- F311 D8
- F312 D8
- F313 D10
- F314 E7
- F315 E3
- F316 E3
- F317 E3
- F318 E3
- F319 E3
- F320 E3
- F321 E10
- F322 C9
- F323 D9
- F324 E10
- F325 G3
- F326 G3
- F327 G3
- F328 G3

ANABE: Interfaces

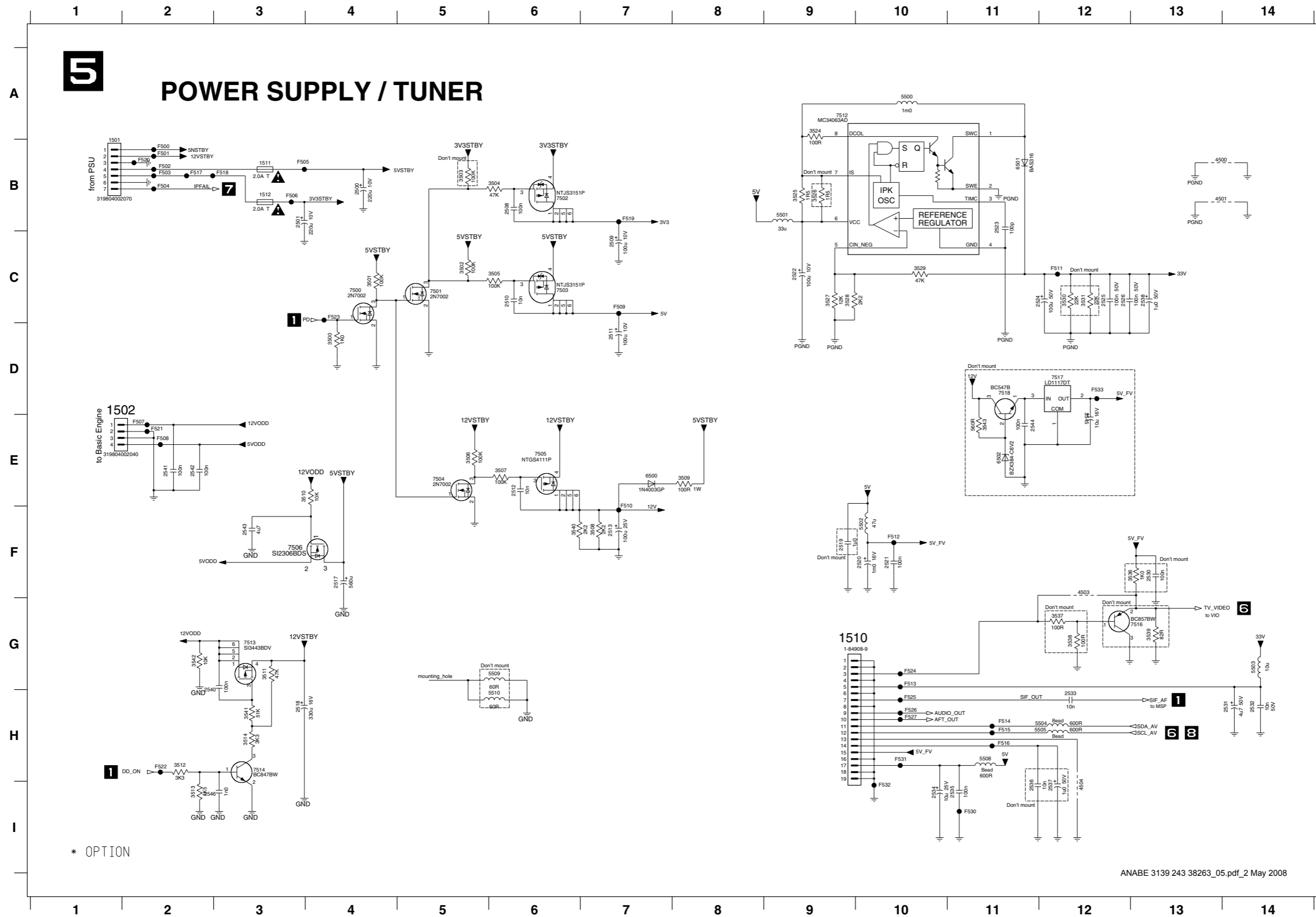
4 INTERFACES



- 1402 E2 F467 F8
- 1404 E7 F468 F8
- 1405 H12 F469 F8
- 1442 C11 F470 F8
- 1443 C14 F471 G8
- 2400 B3 F472 G8
- 2401 B4 F473 G8
- 2402 B4 F474 G8
- 2403 B4 F475 G8
- 2413 D5 F476 G8
- 2414 D5 F477 G8
- 2415 D5 F478 G8
- 2422 D8 F479 G8
- 2423 D8 F480 H8
- 2424 C11 F481 H8
- 2425 D13 F482 H8
- 2428 A9 F483 H13
- 2429 A10 F487 H13
- 2430 A11 F488 H13
- 2431 A11 F489 H13
- 2440 B5 F490 H13
- 2441 B5 F491 H13
- 2442 B6 F492 H13
- 2443 H6 F493 E5
- 2444 D5 F495 D9
- 2445 D4 F496 C11
- 2446 D4 F497 C11
- 2447 F2 F498 C11
- 2448 E3 F499 C14
- 2449 E3
- 2450 E3
- 2451 D9
- 3400 E2
- 3402 E3
- 3403 E3
- 3404 F3
- 3405 E9
- 3408 H8
- 3409 E3
- 3410 H8
- 3417-1 H13
- 3417-2 H13
- 3417-3 H13
- 3417-4 H13
- 3418-1 H14
- 3418-2 H14
- 3418-3 H14
- 3418-4 H14
- 3419 I13
- 3420 I13
- 3421 C9
- 3422 C12
- 3423 C12
- 3424 C13
- 3425 C12
- 3426 C13
- 3427 D12
- 3428 D12
- 3429 D12
- 3430 A13
- 3431 B13
- 3432 B13
- 3433 E9
- 3434 H8
- 3440 B5
- 3441 B5
- 3442 H6
- 3443 D4
- 3444 D5
- 4402 B13
- 4403 E13
- 4404 E14
- 4405 F13
- 4406 F14
- 4417 D4
- 4418 H5
- 4420 I5
- 4421 I5
- 4422 A12
- 5402 C4
- 6400 H6
- 7401 A10
- 7403 C4
- 7404-1 C12
- 7404-2 D13
- 7405 C9
- F420 E2
- F421 E2
- F422 E2
- F423 E2
- F424 F2
- F425 F2
- F426 F2
- F427 F2
- F428 F2
- F429 D14
- F430 D14
- F452 E8
- F453 E8
- F454 E8
- F455 E8
- F456 E8
- F457 E8
- F458 E8
- F459 F8
- F460 F8
- F461 F8
- F462 F8
- F463 F8
- F464 F8
- F465 F8
- F466 F8

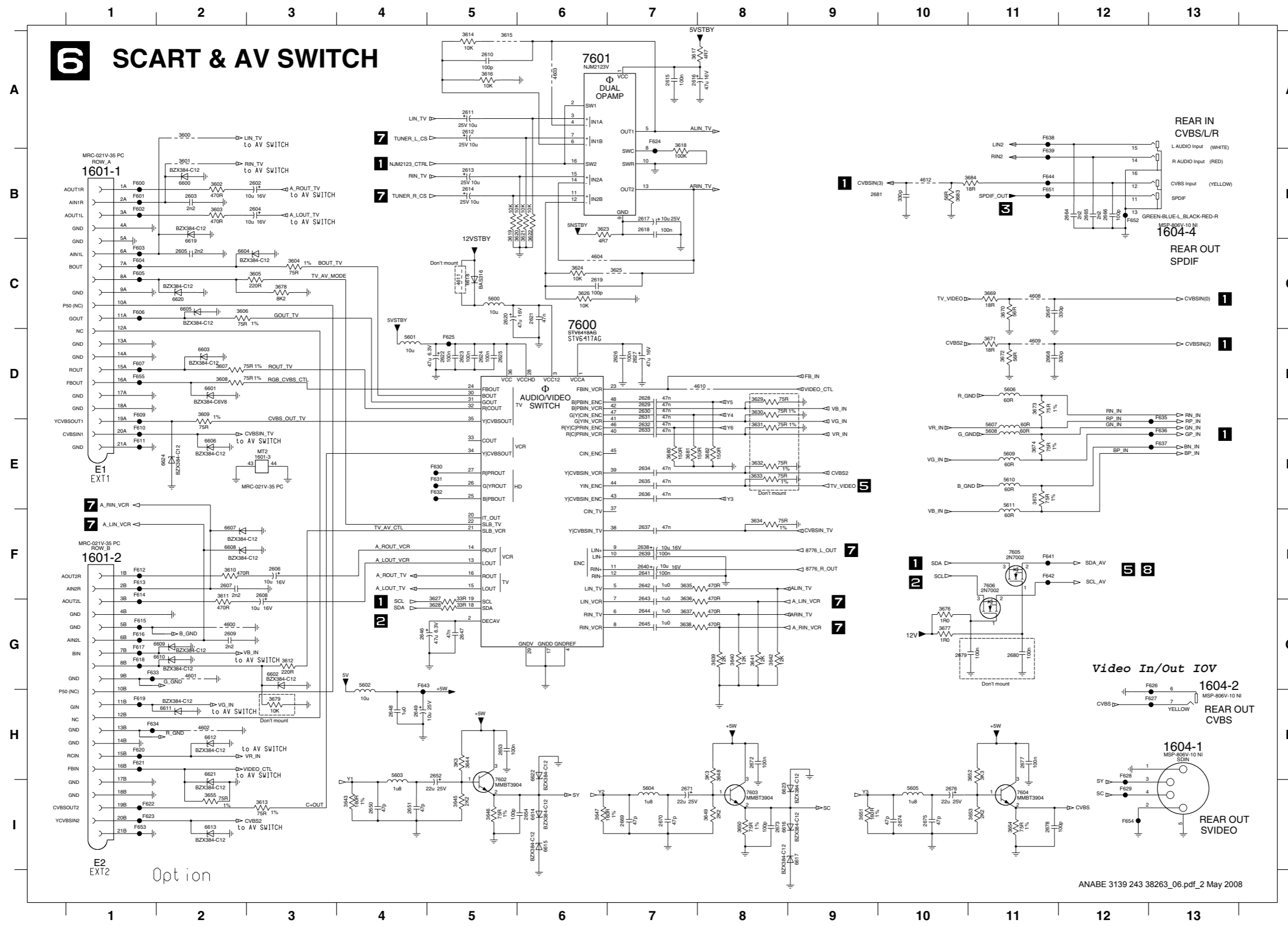
* OPTION

ANABE: Power Supply/Tuner

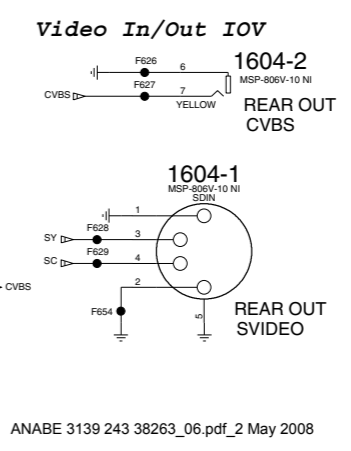


- 1501 B1
- 1502 D1
- 1510 G10
- 1511 B3
- 1512 B3
- 2500 B4
- 2501 B3
- 2508 B6
- 2509 C7
- 2510 C6
- 2511 D7
- 2512 E6
- 2513 F7
- 2517 F4
- 2518 H3
- 2519 F9
- 2520 F10
- 2521 F10
- 2522 C9
- 2523 B11
- 2524 C12
- 2525 C12
- 2526 C12
- 2530 F13
- 2531 H14
- 2532 H14
- 2533 H12
- 2534 H10
- 2535 I11
- 2536 H11
- 2537 H2
- 2538 C13
- 2540 G2
- 2541 E2
- 2542 E2
- 2543 F3
- 2544 E11
- 2545 E12
- 2546 I2
- 3500 D4
- 3501 C4
- 3502 C5
- 3503 B5
- 3504 B6
- 3505 C6
- 3506 E5
- 3507 E6
- 3508 F7
- 3509 E8
- 3510 E3
- 3511 G3
- 3512 H2
- 3513 I2
- 3514 H3
- 3524 A9
- 3525 B9
- 3526 B9
- 3527 C9
- 3528 C9
- 3529 C10
- 3530 C12
- 3531 C12
- 3536 F13
- 3537 G12
- 3538 G12
- 3539 G13
- 3540 F6
- 3541 H3
- 3542 G2
- 3543 E11
- 4500 B13
- 4501 B13
- 4503 F12
- 4504 H2
- 5500 A10
- 5501 B9
- 5502 F10
- 5503 G14
- 5504 H12
- 5505 H12
- 5508 H11
- 5509 C6
- 5510 H6
- 6500 E7
- 6501 B11
- 6502 E11
- 7500 C4
- 7501 C5
- 7502 B6
- 7503 C6
- 7504 E5
- 7505 E6
- 7506 F3
- 7512 A9
- 7513 G3
- 7514 H3
- 7516 G13
- 7517 D12
- 7518 D11
- F500 B2
- F501 B2
- F502 B2
- F503 B2
- F504 B2
- F505 B3
- F506 B3
- F507 E2
- F508 E2
- F509 C7
- F510 F7
- F511 C12
- F512 F10
- F513 G10
- F514 H11
- F515 H11
- F516 H11
- F517 B2
- F518 B3
- F519 B7
- F520 B2
- F521 E2
- F522 H2
- F523 C4
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- F526 H10
- F527 H10
- F530 H11
- F531 H10
- F532 H10
- F533 D12

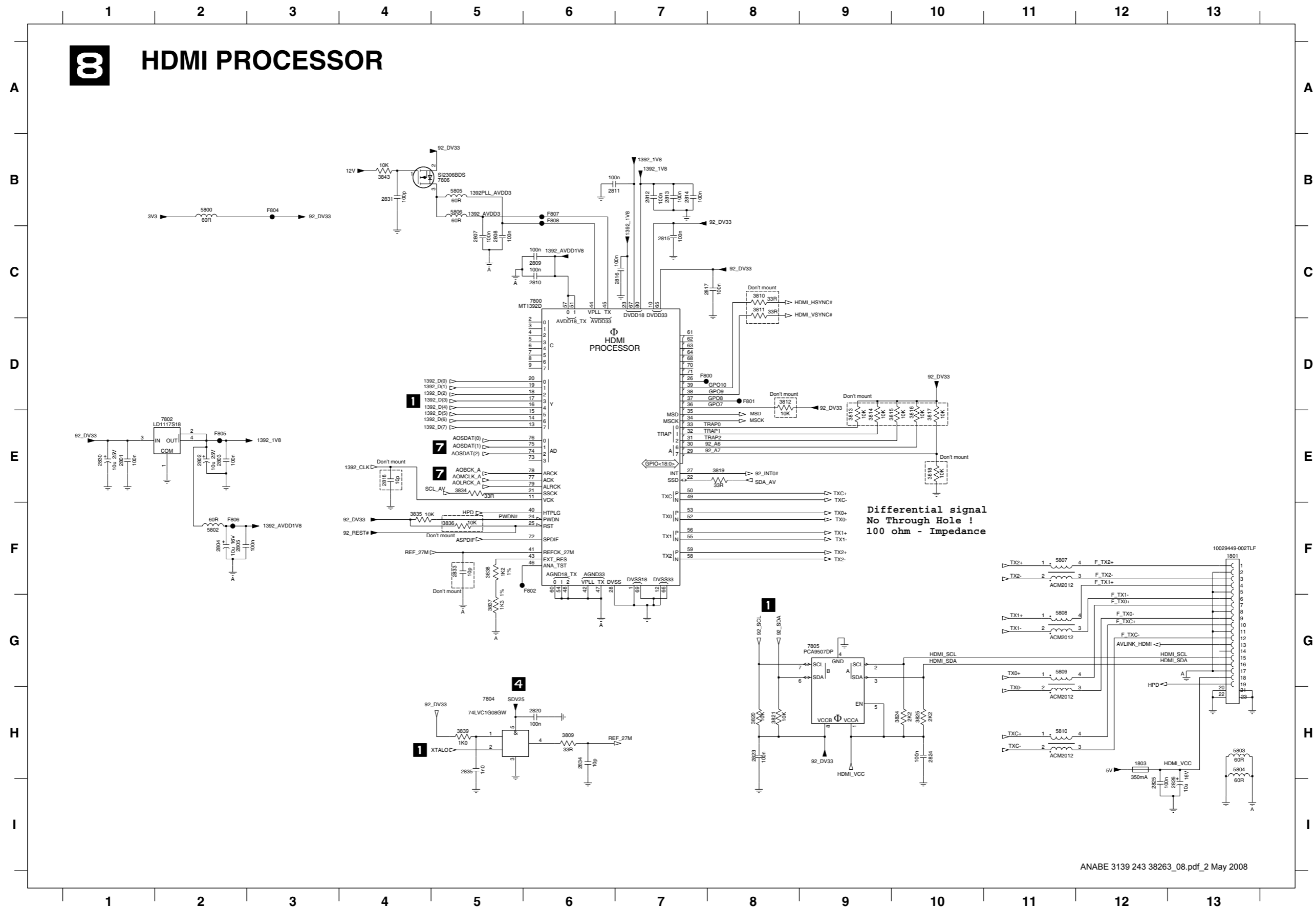
ANABE: Video



1601-1 B1	3639 G8	F630 E5
1601-2 F1	3640 G8	F631 E5
1601-3 E3	3641 G8	F632 E5
1604-1 H13	3642 G8	F633 G1
1604-2 H13	3643 H4	F634 H1
1604-4 B13	3644 H5	F635 E13
2602 B3	3645 I5	F636 E13
2603 B2	3646 I5	F637 E13
2604 B3	3647 I6	F638 A11
2605 C2	3648 H8	F639 B11
2606 F3	3649 I8	F641 F11
2607 F2	3650 I8	F642 F11
2608 F3	3651 I9	F643 G4
2609 G2	3652 H10	F644 B11
2610 A5	3653 I11	F651 B11
2611 A5	3654 I11	F652 B12
2612 A5	3655 I2	F653 I1
2613 B5	3656 C11	F654 I12
2614 B5	3657 C11	F655 D1
2615 A7	3658 I11	
2616 A7	3659 I11	
2617 B7	3660 I11	
2618 B7	3661 E11	
2619 C8	3662 E8	
2620 C5	3663 G10	
2621 C6	3664 G10	
2622 D5	3665 C13	
2623 D5	3666 H7	
2624 D5	3667 E7	
2625 D5	3668 E7	
2626 D7	3669 B10	
2627 D7	3670 B10	
2628 D7	3671 B11	
2629 D7	3672 D11	
2630 D7	3673 D11	
2631 D7	3674 E11	
2632 E7	3675 E11	
2633 E7	3676 G10	
2634 E7	3677 G10	
2635 E7	3678 C13	
2636 E7	3679 H3	
2637 F7	3680 E7	
2638 F7	3681 E7	
2639 F7	3682 E8	
2640 F7	3683 B10	
2641 F7	3684 B11	
2642 F7	3685 G2	
2643 G7	3686 H2	
2644 G7	3687 A6	
2645 G7	3688 C6	
2646 G4	3689 C11	
2647 G5	3690 D11	
2648 H4	3691 D8	
2649 H4	3692 E7	
2650 H4	3693 E7	
2651 H4	3694 D11	
2652 H5	3695 C5	
2653 H5	3696 D4	
2654 I6	3697 D4	
2655 I10	3698 G2	
2656 I12	3699 G2	
2657 I12	3700 G2	
2658 I11	3701 G2	
2659 I7	3702 I7	
2660 I2	3703 I7	
2661 I2	3704 I7	
2662 I2	3705 H2	
2663 I2	3706 H2	
2664 B12	3707 I8	
2665 B12	3708 I8	
2666 B12	3709 I8	
2667 C11	3710 I8	
2668 D11	3711 I8	
2669 I7	3712 I8	
2670 I7	3713 I8	
2671 I7	3714 I8	
2672 H8	3715 I8	
2673 I8	3716 I8	
2674 I10	3717 I8	
2675 I10	3718 I8	
2676 I10	3719 I8	
2677 H11	3720 I8	
2678 I11	3721 I8	
2679 C10	3722 I8	
2680 G11	3723 I8	
2681 B9	3724 H2	
3600 A2	3725 H6	
3601 B2	3726 H6	
3602 B2	3727 E2	
3603 B2	3728 E2	
3604 C3	3729 A7	
3605 C3	3730 I5	
3606 C2	3731 I8	
3607 D2	3732 I8	
3608 D2	3733 I8	
3609 D2	3734 I8	
3610 F2	3735 I8	
3611 F2	3736 I8	
3612 G3	3737 I8	
3613 I3	3738 I8	
3614 A5	3739 I8	
3615 A5	3740 I8	
3616 A5	3741 I8	
3617 A7	3742 I8	
3618 A7	3743 I8	
3619 B5	3744 I8	
3620 B6	3745 I8	
3621 B6	3746 I8	
3622 B6	3747 I8	
3623 B6	3748 I8	
3624 C5	3749 I8	
3625 C7	3750 I8	
3626 C6	3751 G1	
3627 G5	3752 G1	
3628 G5	3753 H1	
3629 D8	3754 H1	
3630 D8	3755 H1	
3631 E8	3756 I1	
3632 E8	3757 I1	
3633 E8	3758 A7	
3634 F8	3759 D5	
3635 F7	3760 G13	
3636 G7	3761 H13	
3637 G7	3762 H12	
3638 G7	3763 H12	

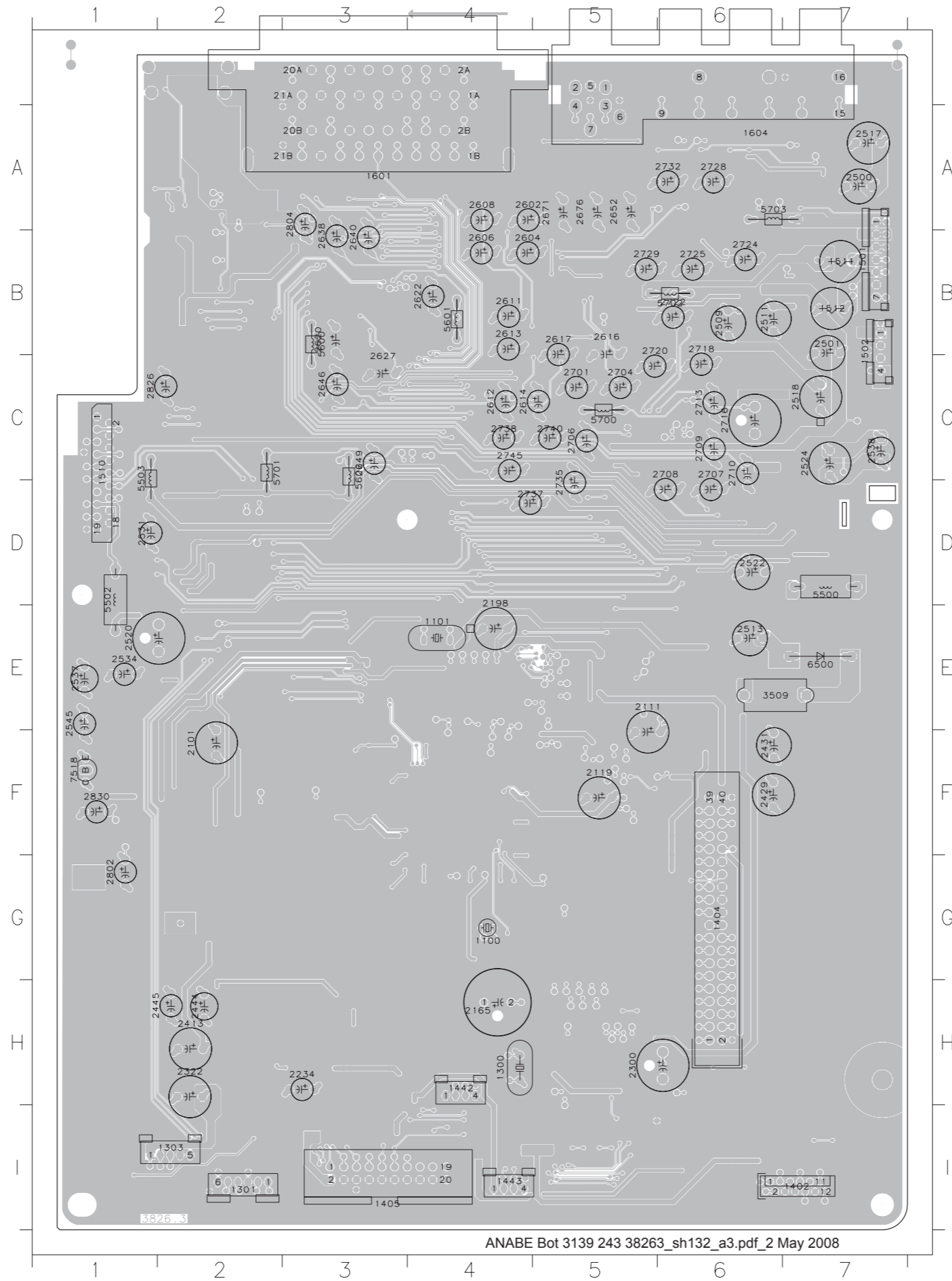


ANABE: HDMI Processor



- 1801 F13
- 1803 H12
- 2801 E1
- 2802 E2
- 2803 E2
- 2804 F2
- 2805 F2
- 2807 C5
- 2808 C5
- 2809 C5
- 2810 C6
- 2811 B6
- 2812 B7
- 2813 B7
- 2814 B7
- 2815 C7
- 2816 C7
- 2817 C8
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- 2825 I12
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- 2830 E1
- 2831 B4
- 2833 F5
- 2834 H6
- 2835 H5
- 2809 H6
- 3810 C8
- 3811 C8
- 3812 D8
- 3813 E9
- 3814 E9
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- 3816 E10
- 3817 E10
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- 3819 E8
- 3820 H8
- 3821 H8
- 3824 H10
- 3825 H10
- 3834 E5
- 3835 F4
- 3836 F5
- 3837 G5
- 3838 F5
- 3839 H5
- 3843 B4
- 5800 B2
- 5802 F2
- 5803 H13
- 5804 H13
- 5805 B5
- 5806 B5
- 5807 F11
- 5808 G11
- 5809 G11
- 5810 H11
- 7800 C6
- 7802 E2
- 7804 H5
- 7805 G9
- 7806 B5
- F800 D7
- F801 D8
- F802 F6
- F804 B3
- F805 E2
- F806 F2
- F807 B6
- F808 B6

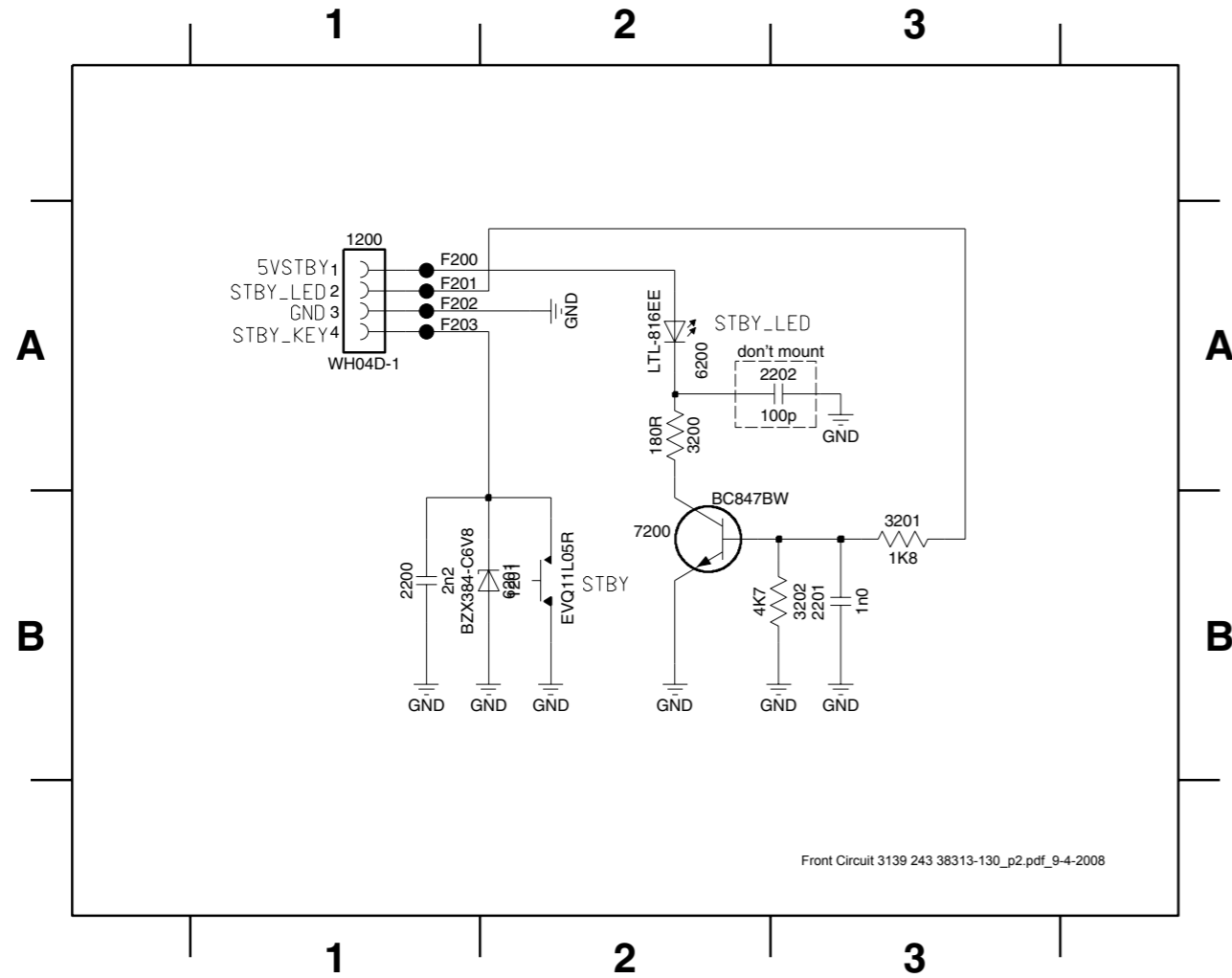
Layout: ANABE (Bottom View)



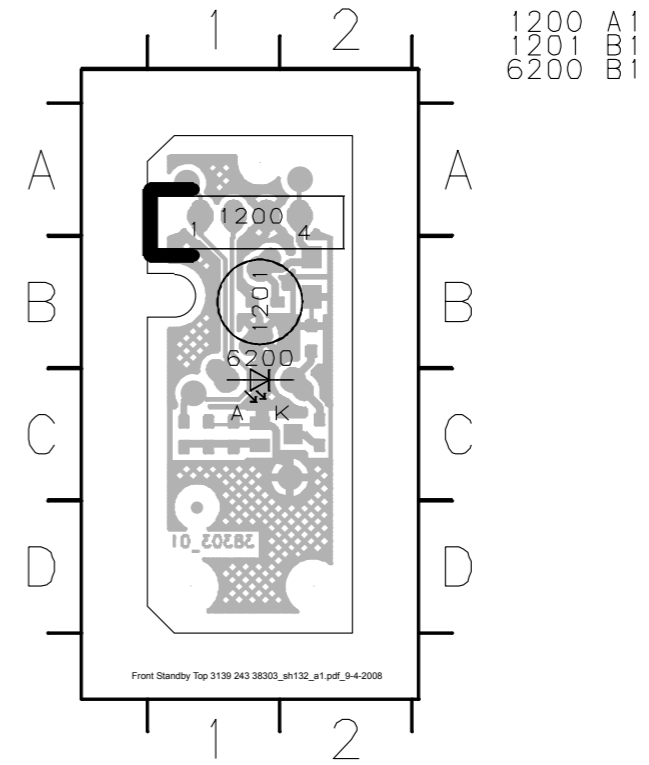
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Front: Standby (STBY)

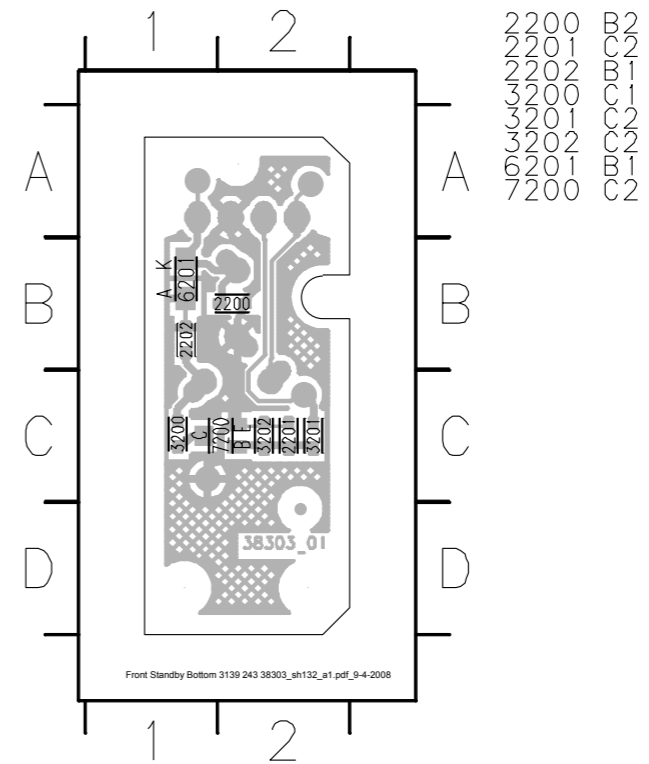
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 1201 B2 2201 B3 3200 A2 3202 B3 6201 B2 F200 A1 F202 A1



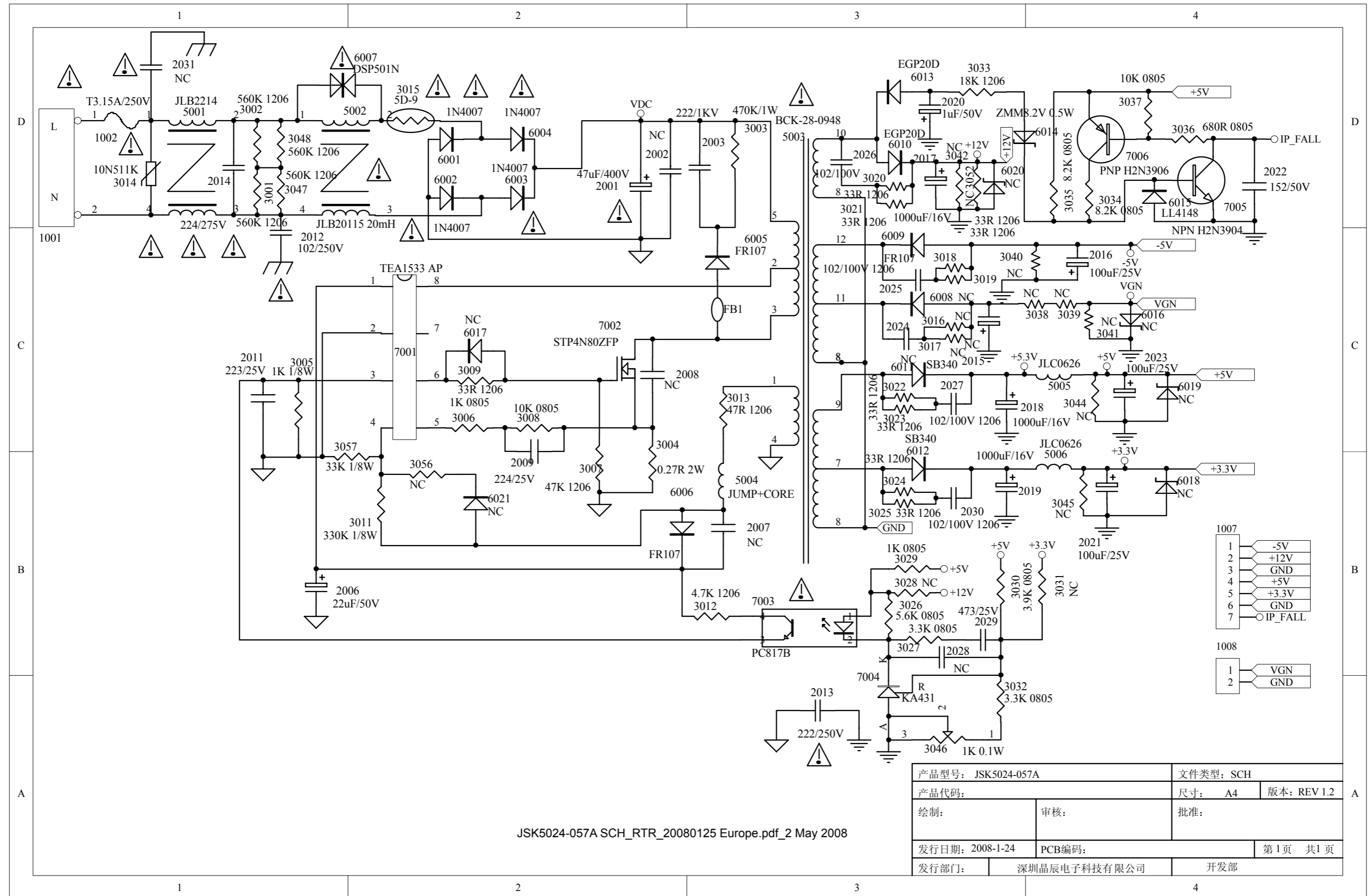
Front: Standby (STBY) (Top View)



Front: Standby (STBY) (Top View)



Power Supply Unit: Schematic



JSK5024-057A SCH_RTR_20080125 Europe.pdf_2 May 2008

产品型号: JSK5024-057A		文件类型: SCH	
产品代码:		尺寸: A4	版本: REV 1.2
绘制:	审核:	批准:	
发行日期: 2008-1-24	PCB编码:	第 1 页 共 1 页	
发行部门:	深圳晶辰电子科技有限公司	开发部	

Power Supply Unit: Layout

**The PSU
Layout is not
available**

8. IC Internal Block Diagram

8.1. Front Board

IC7101-PT6961-LED Driver IC

Block Diagram

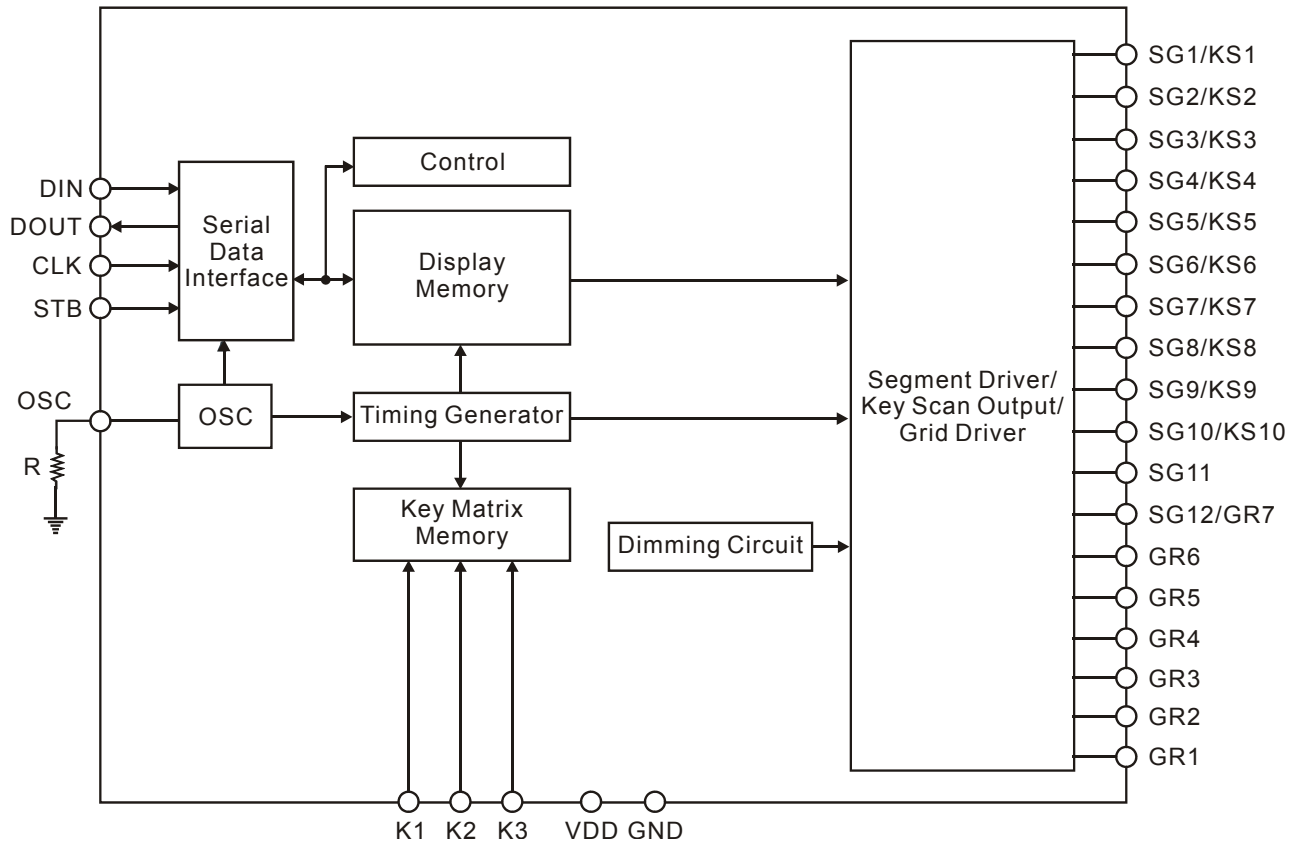


Figure 8-1

PIN CONFIGURATION

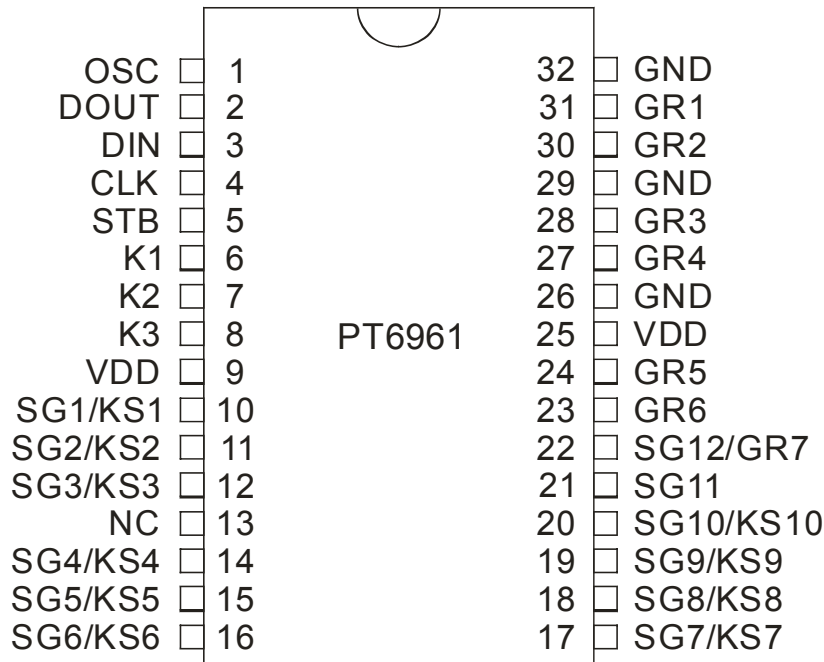


Figure 8-2

Pin Name	I/O	Description	Pin No.
OSC	I	Oscillator Input Pin A resistor is connected to this pin to determine the oscillation frequency	1
DOUT	O	Data Output Pin (N-Channel, Open-Drain) This pin outputs serial data at the falling edge of the shift clock.	2
DIN	I	Data Input Pin This pin inputs serial data at the rising edge of the shift clock (starting from the lower bit)	3
CLK	I	Clock Input Pin This pin reads serial data at the rising edge and outputs data at the falling edge.	4
STB	I	Serial Interface Strobe Pin The data input after the STB has fallen is processed as a command. When this pin is HIGH", CLK is ignored.	5
K1 ~ K3	I	Key Data Input Pins The data sent to these pins are latched at the end of the display cycle. (Internal Pull-Low Resistor)	6, 7, 8
VDD	-	Power Supply	9, 25
SG1/KS1 ~ SG10/KS10	O	Segment Output Pins (p-channel, open drain) Also acts as the Key Source	10 ~ 12, 14 ~ 20
NC	-	No Connection	13
SG11	O	Segment Output pins (P-Channel, open drain)	21
SG12/GR7	O	Segment/Grid Output Pins	22
GR6 ~ GR1	O	Grid Output Pins	23, 24, 27, 28, 30, 31
GND	-	Ground Pin	26, 29, 32

8.2. ANABE Board

IC7301-STMPS2141-USB IC Limiter

Block Diagram

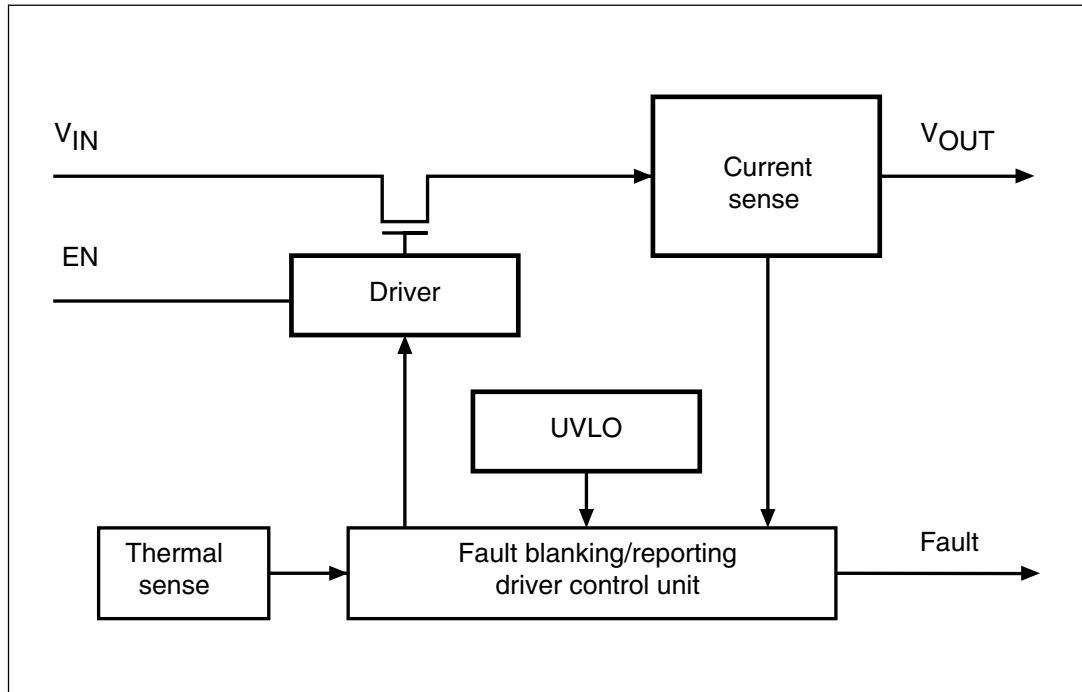
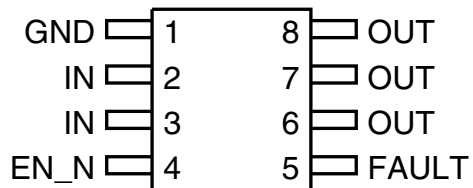


Figure 8-3

Pin Description



SO8\TSSOP8

Figure 8-4

Pin N°			Name	Function
SO8	TSSOP8	SOT23-5L		
1	1	2	GND	Ground
2	2	5	IN	2.7V - 5.5V Input
3	3	-	IN	2.7V - 5.5V Input
4	4	4	EN	Enable for power switch
5	5	3	FAULT	Open drain FAULT indicator, Active Low
6	6	1	OUT	Output of power switch
7	7	-	OUT	Output of power switch
8	8	-	OUT	Output of power switch

IC7304-MT8162- IEEE 1394a-2000 One-Port Cable Transceiver

Pin Diagram

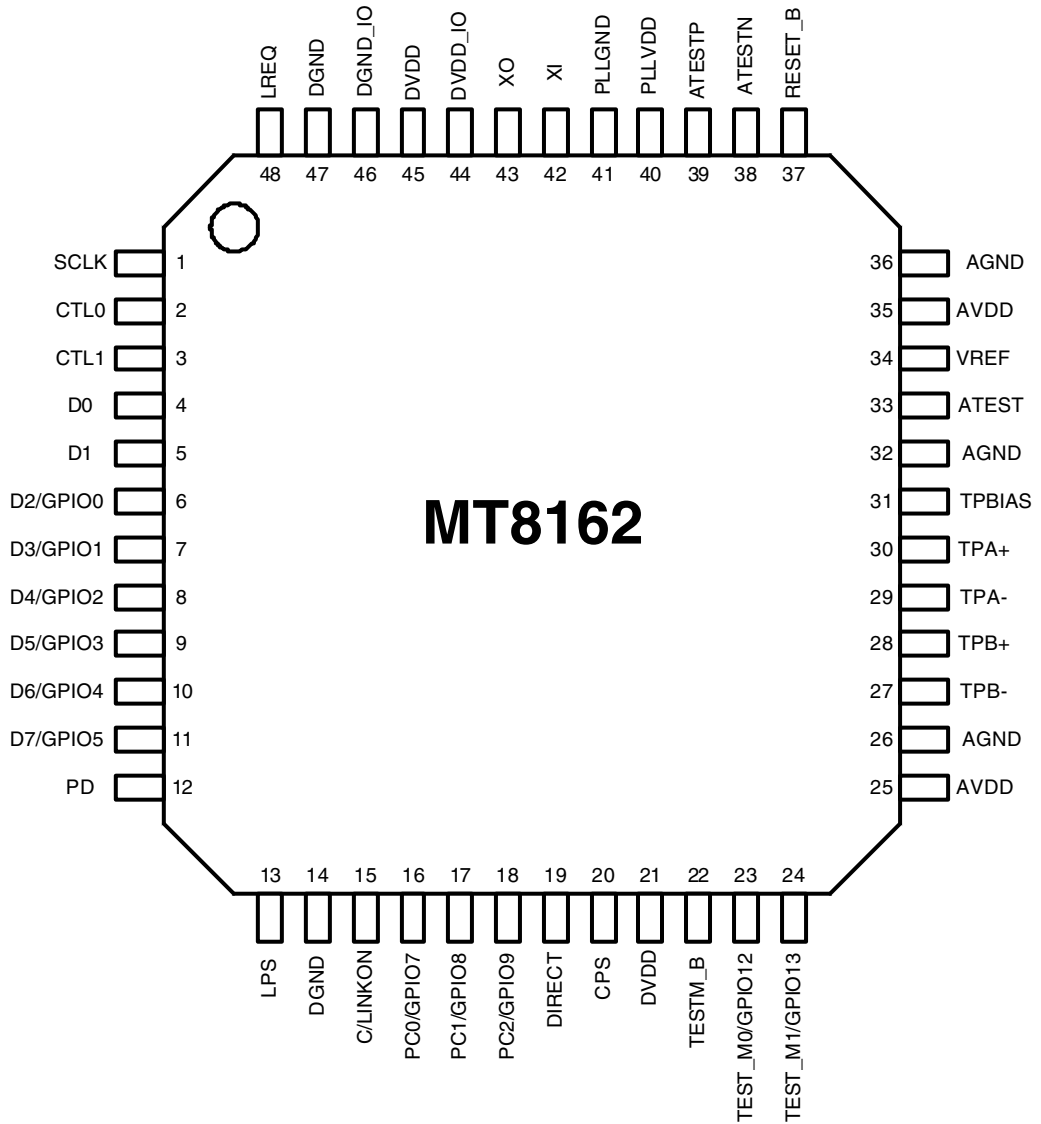


Figure 8-5

Pin Description

Pin number	Symbol	Type	Description
1	SCLK	O	System clock
2-3	CTL0 CTL1	IO	Control lines. The signals control the communication between the LLC. Bus holders are built in these signals.
4-11	D0 D1 D2/GPIO0 D3/GPIO1 D4/GPIO2 D5/GPIO3 D6/GPIO4 D7/GPIO5	IO	Data lines. The data signals between the MT8162 and the LLC. Bus holders are built in these signals. D2~D3 can be used as GPIOs at S100 mode and D4~D5 can be used as GPIOs at S100/S200 mode. The GPIOs are controlled by the GPIO_O, GPIO_I, and GPIO_OE registers.
12	PD	I	Ultra power-down signal. All internal circuit except the cable-active monitor turns off by asserting the PD input.
13	LPS	I	Link power status. Indicates that link is powered and functional. When the MT8162 detects the LPS input remains low for more than 25.6us, the LLC interface is put into low-power state and SCLK output is inactive.
14,47	DGND	GND	Digital ground.
15	C/LINKON	IO	At power on reset, the value is latched as the contender input. After power on reset, the pin functions as the LinkOn signal. It signals the occurrence of link-on event. Frequency of this signal is 6MHz.
16-18	PC0/GPIO7 PC1/GPIO8 PC2/GPIO9	IO	Power class programming inputs. These signals set the default power class of the PHY on power on reset. After reset, these terminals can be used as GPIOs controlled by registers.
19	DIRECT	I	Link interface isolation control. The signal sets high to disable differentiator outputs for the CTL0, CTL1, D0~D7, and LREQ signals.
20	CPS	I	Cable power status input. This terminal is normally connected to cable power through 400K resistor. It drives an internal comparator used to detect the cable power status.
21,45	DVDD	VDD	Digital circuit power.
22	TESTEN_B	I	Test mode enable signal. This input is used in manufacturing test. It is an active low signal. For normal operation, this signal should be tied to high.
23-24	TEST_M0/ GPIO12 TEST_M1/ GPIO13	IO	Test mode selection. These signals are used in manufacturing test. The signals set the test mode of the MT8162 on power on reset. For normal operation, both are tied to ground through 10k resistors and can be used as GPIO controlled by registers.
25, 35	AVDD	VDD	Analog circuit power.
26, 36	AGND	GND	Analog circuit ground
27	TPB-	IO	Twisted differential pair B
28	TPB	IO	
29	TPA-	IO	Twisted differential pair A
30	TPA+	IO	
31	TPBIAS	IO	Twisted pair bias output. This signal provides the 1.86V nominal bias voltage needed for proper operation of the twisted-pair cable transceiver.
32	AGND	GND	Analog circuit ground.

Pin number	Symbol	Type	Description
33	ATEST	IO	Analog test terminal. This signal is used in manufacturing test.
34	VREF	IO	Analog reference voltage input.
37	RESET_B	I	Power-on reset. This is an active low signal.
38,39	ATESTN ATESTP	IO	Analog test terminal
40	PLLVDD	VDD	PLL circuit power
41	PLLGND	DNG	PLL circuit ground
42 43	XI XO	IO	Crystal inputs. These terminal connect to a 24.576MHz parallel resonant fundamental mode crystal.
44	DVDD_IO	VDD	Digital IO power
46	DGND_IO	DNG	Digital IO ground
48	LREQ	I	Link request. The LLC uses this signal to indicate a service request to the MT8162. Bus holder is built in it.

IC7405-NCP303LSN30-Voltage Detector

Block Diagram

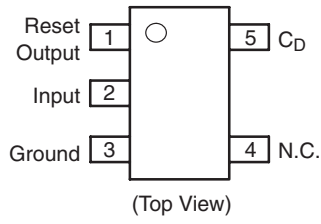


Figure 8-6

Pin Description

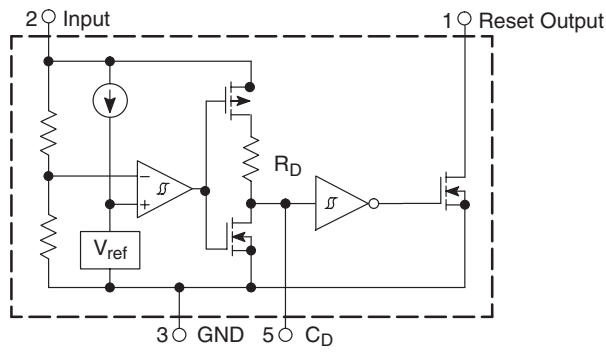


Figure 8-7

IC7700-WM8776 – Stereo CODEC with 5 Channel I/P Multiplexer

Block Diagram

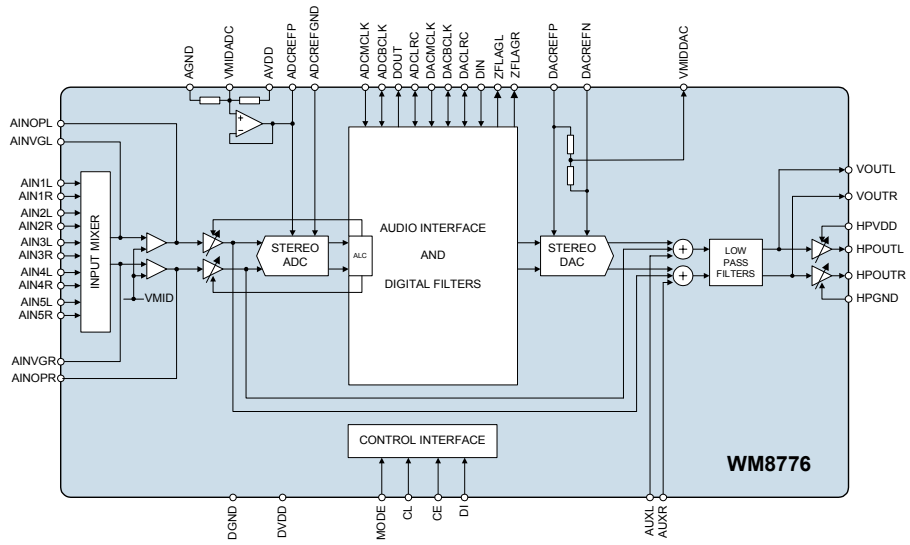


Figure 8-8

Pin Diagram

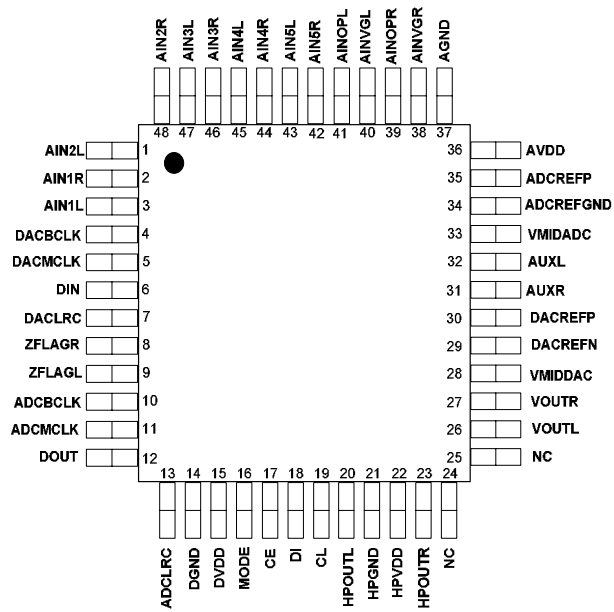


Figure 8-9

Pin Description

PIN	NAME	TYPE	DESCRIPTION
1	AIN2L	Analogue Input	Channel 2 left input multiplexor virtual ground
2	AIN1R	Analogue Input	Channel 1 right input multiplexor virtual ground
3	AIN1L	Analogue Input	Channel 1 left input multiplexor virtual ground
4	DACBCLK	Digital input/output	DAC audio interface bit clock
5	DACMCLK	Digital input	Master DAC clock; 256, 384, 512 or 768fs (fs = word clock frequency)
6	DIN	Digital Input	DAC data input
7	DACLRC	Digital input/output	DAC left/right word clock
8	ZFLAGR	Open Drain output	DAC Right Zero Flag output (external pull-up resistor required)
9	ZFLAGL	Open Drain output	DAC Left Zero Flag output (external pull-up resistor required)
10	ADCBCLK	Digital input/output	ADC audio interface bit clock
11	ADCMCLK	Digital input	ADC audio interface master clock
12	DOUT	Digital output	ADC data output
13	ADCLRC	Digital input/output	ADC left/right word clock
14	DGND	Supply	Digital negative supply
15	DVDD	Supply	Digital positive supply
16	MODE	Digital input	Control interface mode select (5V tolerant)
17	CE	Digital input	Serial interface Latch signal (5V tolerant)
18	DI	Digital input	Serial interface data (5V tolerant)
19	CL	Digital input	Serial interface clock (5V tolerant)
20	HPOUTL	Analogue Output	Headphone left channel output
21	HPGND	Supply	Headphone negative supply
22	HPVDD	Supply	Headphone positive supply
23	HPOUTR	Analogue Output	Headphone right channel output
24	NC	Not bonded	
25	NC	Not bonded	
26	VOUTL	Analogue output	DAC channel left output
27	VOUTR	Analogue output	DAC channel right output
28	VMIDDAC	Analogue output	DAC midrail decoupling pin ; 10uF external decoupling
29	DACREFN	Analogue input	DAC negative reference input
30	DACREFFP	Analogue input	DAC positive reference input
31	AUXR	Analogue input	DAC mixer right channel input
32	AUXL	Analogue input	DAC mixer left channel input
33	VMIDADC	Analogue Output	ADC midrail divider decoupling pin; 10uF external decoupling
34	ADCREFGND	Supply	ADC negative supply and substrate connection
35	ADCREFFP	Analogue Output	ADC positive reference decoupling pin; 10uF external decoupling
36	AVDD	Supply	Analogue positive supply
37	AGND	Supply	Analogue negative supply and subVstrate connection
38	AINVGR	Analogue Input	Right channel multiplexor virtual ground
39	AINOPR	Analogue Output	Right channel multiplexor output
40	AINVGL	Analogue Input	Left channel multiplexor virtual ground
41	AINOPL	Analogue Output	Left channel multiplexor output
42	AIN5R	Analogue Input	Channel 5 right input multiplexor virtual ground
43	AIN5L	Analogue Input	Channel 5 left input multiplexor virtual ground
44	AIN4R	Analogue Input	Channel 4 right input multiplexor virtual ground
45	AIN4L	Analogue Input	Channel 4 left input multiplexor virtual ground
46	AIN3R	Analogue Input	Channel 3 right input multiplexor virtual ground
47	AIN3L	Analogue Input	Channel 3 left input multiplexor virtual ground
48	AIN2R	Analogue Input	Channel 2 right input multiplexor virtual ground

Note : Digital input pins have Schmitt trigger input buffers and pins 16, 17, 18 and 19 are 5V tolerant.

IC7711-CS4344 10-pin, 24-Bit, 192 kHz Stereo D/A Converter

Block Diagram

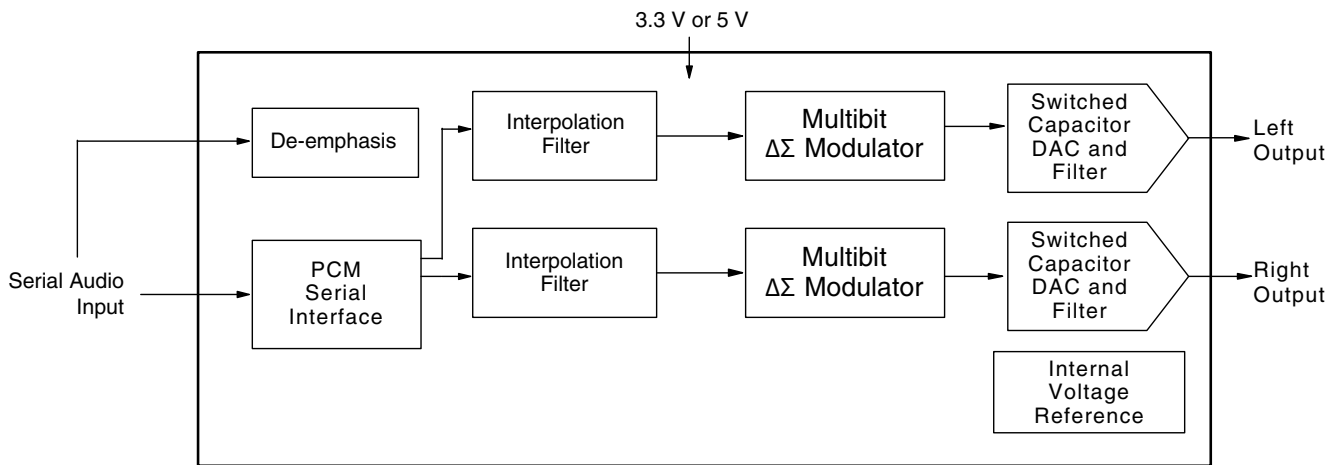


Figure 8-10

Pin Diagram

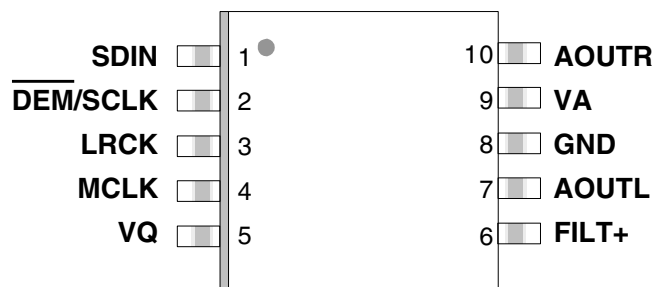


Figure 8-11

Pin Descriptions

Pin Name	#	Pin Description
SDIN	1	Serial Audio Data Input (<i>Input</i>) - Input for two's complement serial audio data.
$\overline{\text{DEM/SCLK}}$	2	De-Emphasis/External Serial Clock Input (<i>Input</i>) - used for de-emphasis filter control or external serial clock input.
LRCK	3	Left Right Clock (<i>Input</i>) - Determines which channel, Left or Right, is currently active on the serial audio data line.
MCLK	4	Master Clock (<i>Input</i>) - Clock source for the delta-sigma modulator and digital filters.
VQ	5	Quiescent Voltage (<i>Output</i>) - Filter connection for internal quiescent voltage.
FILT+	6	Positive Voltage Reference (<i>Output</i>) - Positive reference voltage for the internal sampling circuits.
AOUTL	7	Left Channel Analog Output (<i>Output</i>) - The full scale analog output level is specified in the Analog Characteristics specification table.
GND	8	Ground (<i>Input</i>) - ground reference.
VA	9	Analog Power (<i>Input</i>) - Positive power for the analog and digital sections.
AOUTR	10	Right Channel Analog Output (<i>Output</i>) - The full scale analog output level is specified in the Analog Characteristics specification table.

IC7600-STV6417-Audio/Video Switch

Video Block Diagram

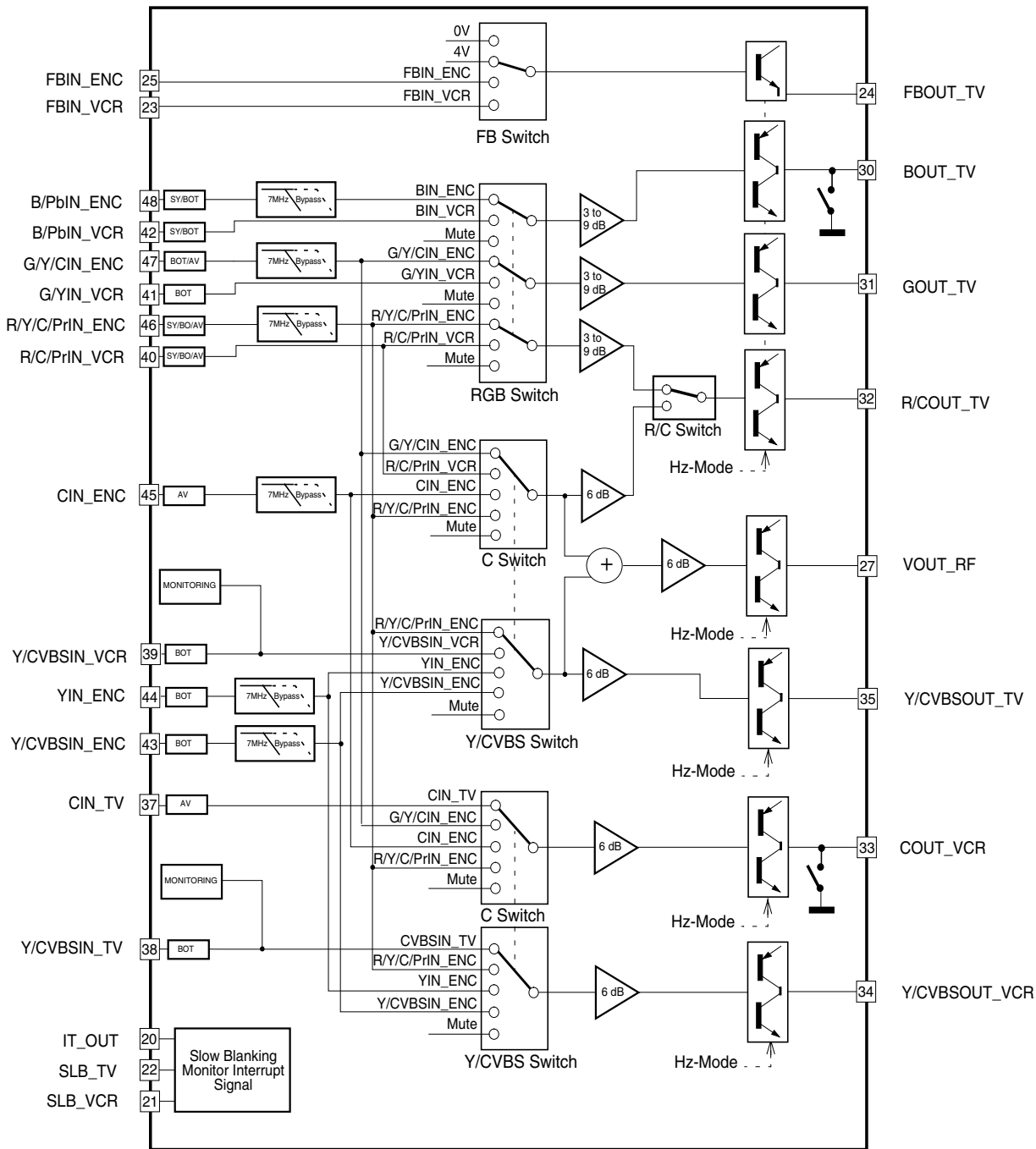


Figure 8-12

Audio Block Diagram

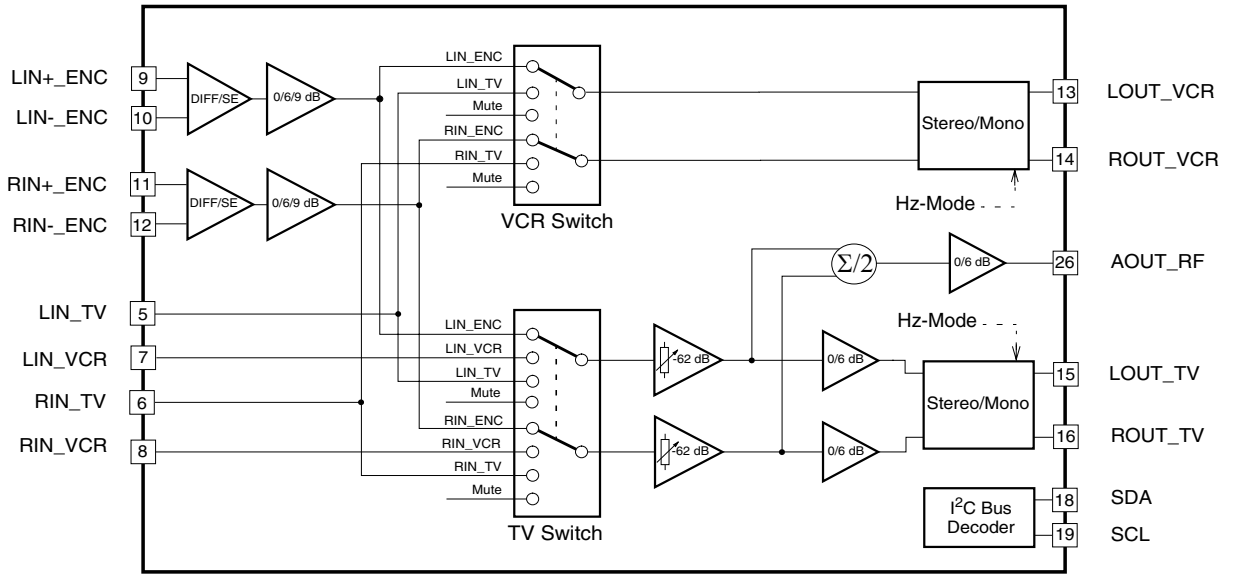


Figure 8-13

Pin Diagram

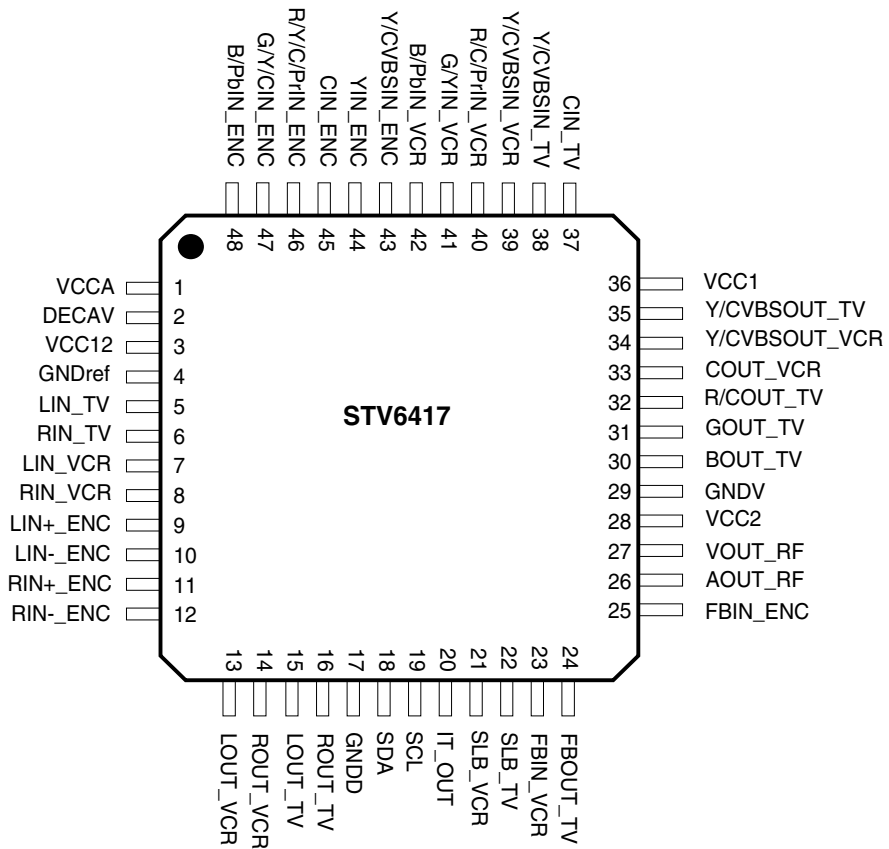


Figure 8-14

Pin Description

Pin No.	Symbol	Description
1	VCCA	9V Audio Supply Voltage Output (must be decoupled by capacitors)
2	DECAV	Audio/VideoDecoupling Capacitor
3	VCC12	12V Supply Voltage input
4	GNDref	Audio/Video Reference Voltage Ground
5	LIN_TV	Audio Left, Input from TV SCART
6	RIN_TV	Audio Right, Input from VCR SCART
7	LIN_VCR	Audio Left, Input from TV SCART
8	RIN_VCR	Audio Right, Input from VCR SCART
9	LIN+_ENC	Positive Audio Left, Input from Encoder
10	LIN-_ENC	Negative Audio Left, Input from Encoder
11	RIN+_ENC	Positive Audio Right, Input from Encoder
12	RIN-_ENC	Negative Audio Right, Input from Encoder
13	LOUT_VCR	Audio Left Output to VCR SCART
14	ROUT_VCR	Audio Right Output to VCR SCART
15	LOUT_TV	Audio Left Output to TV SCART
16	ROUT_TV	Audio Right Output to TV SCART
17	GNDD	Digital Ground
18	SDA	I ² C Bus Data
19	SCL	I ² C Bus Clock
20	IT_OUT	Interrupt Output
21	SLB_VCR	Slow Blanking Input/Output from VCR SCART
22	SLB_TV	Slow Blanking Input/Output from TV SCART
23	FBIN_VCR	Fast Blanking Input from VCR SCART
24	FBOUT_TV	Fast Blanking Output to TV SCART
25	FBIN_ENC	Fast Blanking Input from Encoder
26	AOUT_RF	Audio (L+R) Output to RF Modulator
27	VOUT_RF	CVBS Video Output to RF Modulator
28	VCC2	+5V Video Output and Digital Supply
29	GNDV	Video-Audio Ground

Pin Description

Pin No.	Symbol	Description
30	BOUT_TV	Blue Output to TV SCART
31	GOUT_TV	Green Output to TV SCART
32	R/COUT_TV	Red/Chroma Output to TV SCART
33	COUT_VCR	Chroma Output to VCR SCART
34	Y/CVBSOUT_VCR	Y/CVBS Output to VCR SCART
35	Y/CVBSOUT_TV	Y/CVBS Output to TV SCART
36	VCC1	+5V Video Input Supply
37	CIN_TV	Chroma Input to TV SCART
38	Y/CVBSIN_TV	Y/CVBS input to TV SCART
39	Y/CVBSIN_VCR	Y/CVBS input to VCR SCART
40	R/C/PrIN_VCR	Red/Chroma/Pr Input to VCR SCART
41	G/YIN_VCR	Green Input to VCR SCART
42	B/PbIN_VCR	Blue/Pb Input to VCR SCART
43	Y/CVBSIN_ENC	Y/CVBS input to Encoder
44	YIN_ENC	Y Input to Encoder
45	CIN_ENC	Chroma Input to Encoder
46	R/Y/C/PrIN_ENC	Red/Chroma/Pr Input to Encoder
47	G/Y/CIN_ENC	Green/Chroma Input to Encoder
48	B/PbIN_ENC	Blue/Pb Input to Encoder

Exploded View

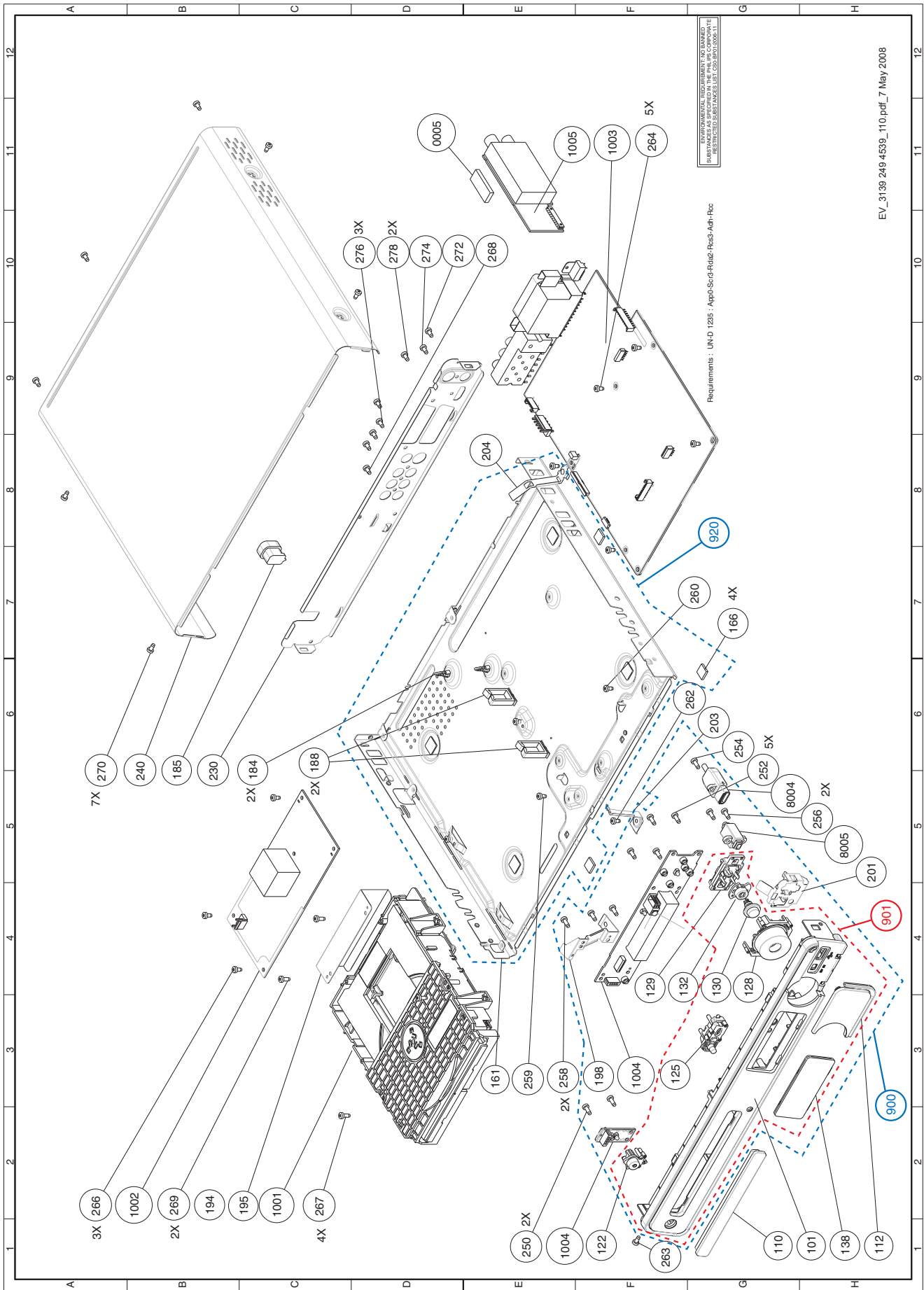


Figure 9-1

DVDR3600/31/58

0110	313924418251	COVER TRAY DVDR3600
0185	313911426671	BUSH, AC CORD
0195	313924321061	ISOLATION SHEET DVDR3600
0203	313924126261	SPRING EMC
0204	313924128271	SPRING EMC HDR3800
0230	313924127561	PLATE REAR DVDR3600
0240	313924127581	COVER TOP DVDR3600
0345	242207098236	△ MAINSCORD UK /05 only
0345	242207098231	△ MAINS CORD IEC /31/58 only
0900	314302768621	FRONT COMPLETE DVDR3600
0920	314302768631	FRAME ASSY DVDR3600
0341	242254901855	REMOTE CONTR DVDR3600-AP-EU B
0487	242207600885	RF CONNECTING CABLE
1001	313924800551	DRIVE D6.8 OPEN
1002	313924713851	△ PSU Module 08H-88L_EU
1003	313924853391	PCBAS DVDR3600 EU ANABE BOARD
1005	313924853481	PCBAS DVDR3600 TUNER BOARD
8001	313924103791	CBLE EH 04P/220/04P LC-L UL
8002	313924103841	CBLE IDE 40P/280/40P IDE UL EX

10 REVISION LIST

Version 1.0

* Initial Release