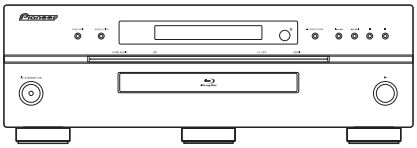
Pioneer

Service Manual



BDP-09FD

ORDER NO.
RRV3865

Blu-ray Disc PLAYER

BDP-09FD

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	DVD Region No.	BD Region No.	Remarks
BDP-09FD	KU/CA	AC 120 V	1	A	

For details, refer to "Important Check Points for good servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T-ZZY-001 DEC. 2008 Printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains certain electrical parts contain chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

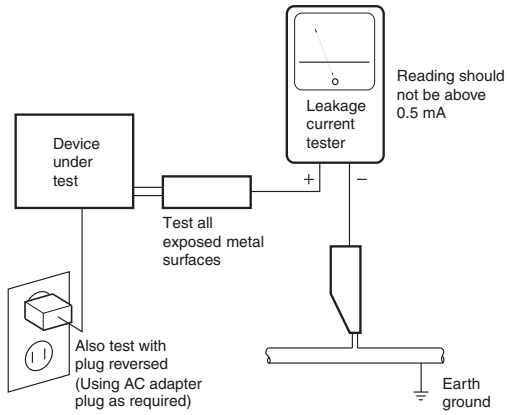
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

WARNING !

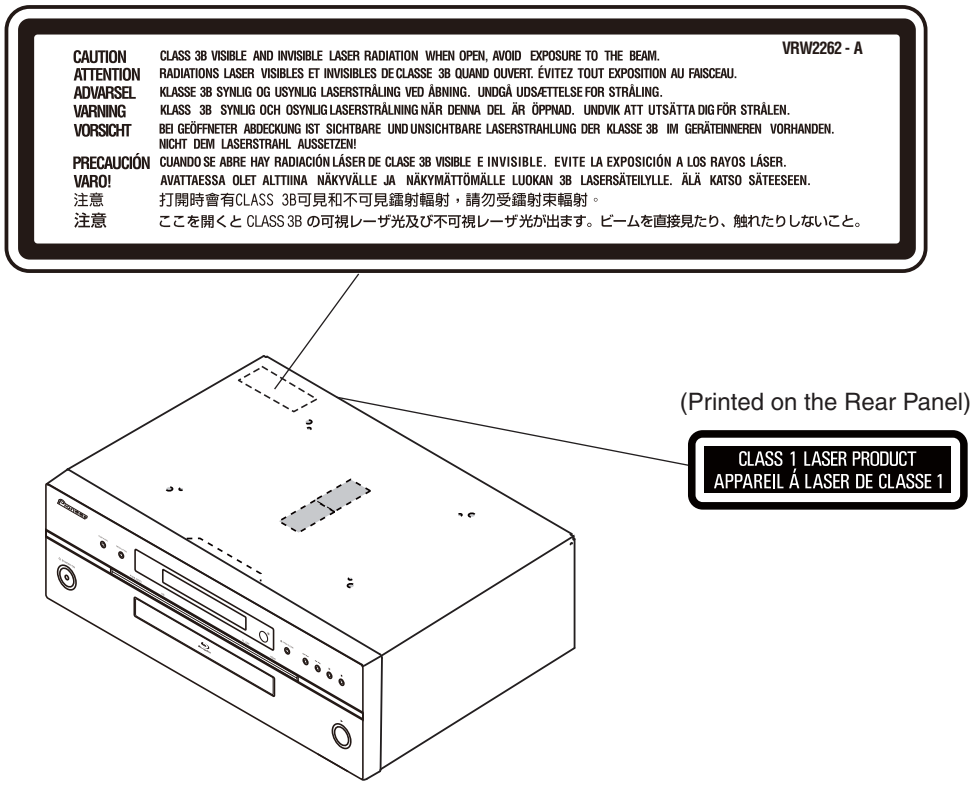
THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR **CLASS 1**.
A SPECIALLY INSTRUCTED PERSON SHOULD DO SERVICING OPERATION OF THE APPARATUS.

Laser Pickup specifications and Laser characteristics

For BD	Wave length : 405 nm Operating output : 0.95 mW CW, Class 1M Maximum output : Class 2 (under fault condition)
For DVD	Wave length : 660 nm Operating output : 1.06 mW CW, Class 1M Maximum output : Class 2M (under fault condition)
For CD	Wave length : 785 nm Operating output : 1.34 mW CW, Class 1M Maximum output : Class 1M (under fault condition)

LABEL CHECK

The following caution label appears on your unit.
Location: inside of the unit



[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 ºC.
  Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 ºC in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:
- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

1.2 NOTE ON DISASSEMBLING/REASSEMBLING

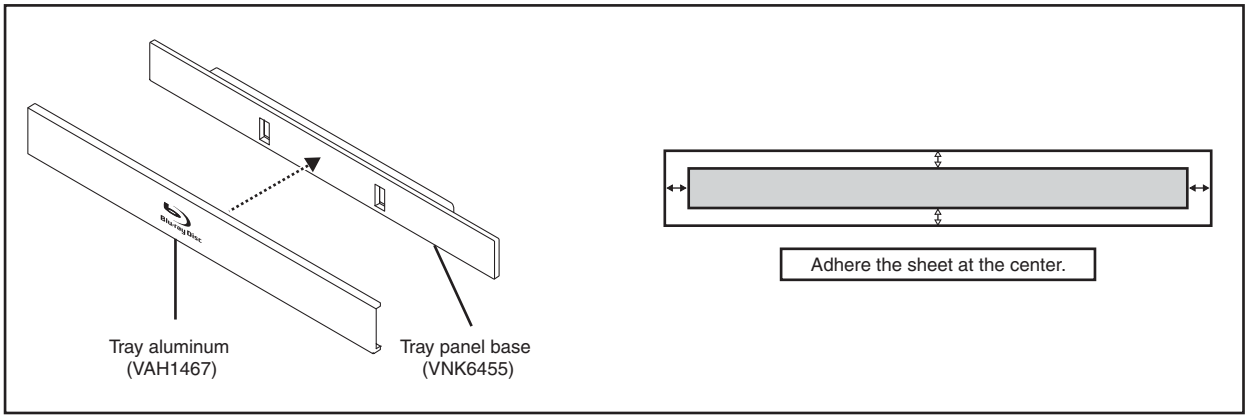
- For improvement of audio quality, many special screws and acetate tapes are used in this unit. Be careful when disassembling/reassembling this unit, and be sure to restore the unit to its original state.

1.3 NOTE ON REPLACING IC9011

- As IC9011 (ROM) on the SERVICE MAIN Assy is fixed to the board with a special adhesive, it is not provided as a service part. If replacement of IC9011 (ROM) is required, replace the entire SERVICE MAIN Assy.

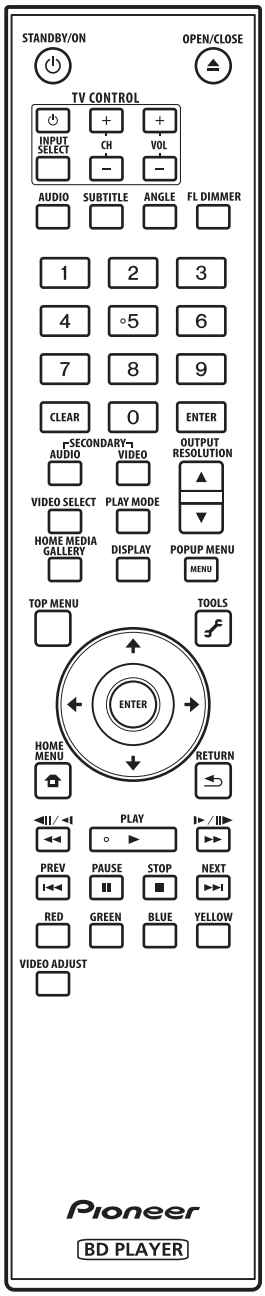
1.4 NOTE ON REPLACING THE TRAY PANEL BASE AND TRAY ALUMINUM

- As the tray aluminum (VAH1467) and the tray panel base (VNK6455) are strongly adhered with double-back tape, replace both parts when either needs to be replaced.
  For attachment, adhere the tray aluminum (VAH1467) so that it is placed at the center of the tray panel base (VNK6455).

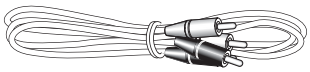


2. SPECIFICATIONS
2.1 ACCESSORIES

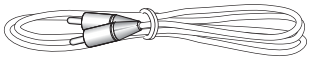
Remote control x 1
(VXX3316)



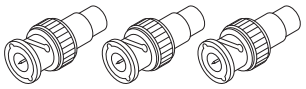
Audio cable (white/red) x 1
(VDE1064) L=1.5 m



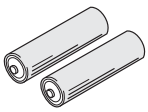
Video cable (yellow) x 1
(VDE1065) L=1.5 m



BNC-RCA adapter x 3
(AKX1052)
Use this to connect an RCA pin type cable to the **COMPONENT VIDEO** terminal.



AA/R6 dry cell batteries x 2



LAN cable x 1
(VDE1098)

Power cord x 1
(ADG7061)

Warranty card

Operating instructions
(VRB1508)

2.2 SPECIFICATIONS

Model			BDP-09FD
Type			Blu-ray Disc PLAYER
Rated voltage			AC 120 V
Rated frequency			60 Hz
Power consumption			58 W
Power consumption (standby)			0.3 W
Weight			14.3 kg (31 lb 9 oz)
External dimensions (inc luding projecting parts)			420 mm (W) x 143 mm (H) x 365 mm (D) ($16\,^{9}/_{16}$ in. (W) x $5\,^{11}/_{16}$ in. (H) x $14\,^{6}/_{16}$ in. (D))
Tolerable operating temperature			+5 °C to +35 °C (+41 °F to +95 °F)
Tolerable operating humidity			5 % to 85 % (no condensation)
Output terminals	HDMI		2 sets, 19-pin: 5 V, 250 mA (Total value for the HDMI OUT (MAIN) and HDMI OUT (SUB) terminals)
	Video outputs	Video	1 set, RCA jack: 1.0 Vp-p (75 Ω)
		S-Video	1 set, S-Video jack: Y (luminance): 1.0 Vp-p (75 Ω) C (color): 0.286 Vp-p (75 Ω)
		Component video	1 set, BNC jacks: Y: 1.0 Vp-p (75 Ω) P_B, P_R: 0.7 Vp-p (75 Ω)
	Audio outputs	7.1-channel (multi-channel: front left/ right, surround left/right, center, surround back left/right, subwoofer)	1 set, Number of channels: 8, RCA jacks
		Audio output level	200 mVrms (1 kHz, –20 dB)
		Frequency response	4 Hz to 88 kHz (192 kHz sampling)
		S/N ratio	115 dB
		Dynamic range	103 dB
		Total harmonic distortion	0.0015 %
		Wow & flutter	Below measurable limits (±0.001 % W. PEAK)
	Digital audio outputs	Optical	1 set, Optical digital jack
		Coaxial	1 set, RCA jack
LAN			1 set, Ethernet jack (100BASE-TX)
Control		Input	1 set, Minijack (3.5 ø)

Note

- The specifications and design of this product are subject to change without notice.
- This product includes FontAvenue® fonts licensed by NEC Corporation.
  FontAvenue is a registered trademark of NEC Corporation.

2.3 DISC/CONTENT FORMAT

[1] Playable discs

Discs with the logo marks below indicated on the disc label, package or jacket can be played.

Disc type		Logo	Application format					
			BDMV[1]	BDAV	DVD-Video	DVD VR	CD-DA DTS-CD	DATA-DISC[2]
BD	BD-ROM	Blu-ray Disc	✓	✓	✗	✗	✗	✗
	BD-R		✓	✓	✗	✗	✗	✗
	BD-RE		✓	✓	✗	✗	✗	✗
DVD	DVD-ROM	DVD VIDEO / DVD ROM	✓	✗	✓	✗	✗	✓
	DVD-R	DVD R	✓	✗	✓	✓	✗	✓
	DVD-R DL (Dual Layer)	DVD R R DL	✓	✗	✓	✓	✗	✓
	DVD-RW	DVD RW	✓	✗	✓	✓	✗	✓
	DVD+R		✓	✗	✓	✗	✗	✓
	DVD+RW		✓	✗	✓	✗	✗	✓
CD	CD-DA (Audio CD)	COMPACT disc DIGITAL AUDIO	✗	✗	✗	✗	✓	✗
	CD-R		✗	✗	✗	✗	✓	✓
	CD-RW		✗	✗	✗	✗	✓	✓
	CD-ROM		✗	✗	✗	✗	✓	✓

1. Including the AVCHD format.
2. Discs on which video, image or audio files are recorded

❖ Discs that cannot be played

- Non-finalized (Non-closed) BD-R discs in the BDMV format
- HD DVDs
- DVD Audio discs
- DVD-RAM discs
- Non-finalized DVD-R/-RW/+R/+RW discs in the DVD-Video format and AVCHD format
- Non-finalized Dual Layer DVD-R discs in the DVD VR format
- Non-finalized CD-R/-RW discs
- SACDs
- Video CDs
- SVCDs

This player conforms to NTSC standards. Discs for which “NTSC” is indicated on the disc label, package or jacket can be played.

Note

- Some discs cannot be played, even if one of the logo marks on the previous page is indicated.
- To play 8 cm discs, set the disc in the 8 cm disc depression in the center of the disc tray. No adapter is necessary. 8 cm BD-ROMs cannot be played.

❖ About audio formats

The following audio formats are supported on this player:

- Dolby TrueHD
- Dolby Digital Plus
- Dolby Digital
- DTS-HD Master Audio
- DTS-HD High Resolution Audio
- DTS Digital Surround
- MPEG
- MPEG-2 AAC
- Linear PCM

To enjoy the surround sound of Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio and DTS-HD High Resolution Audio, it is recommended to connect the player to an AV receiver or amplifier compatible with these audio formats using an HDMI cable. After loading a BD containing sound in one of these audio formats, select the audio format on the menu screen.

DOLBY TRUEHD

DOLBY DIGITAL PLUS

DOLBY DIGITAL

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

dts-HD™ Advanced Digital Out

Manufactured under license under U.S. Patent #: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS is a registered trademark and the DTS logos, Symbol, DTS-HD and DTS-HD Advanced Digital Out are trademarks of DTS, Inc. © 1996-2007 DTS, Inc. All Rights Reserved.

❖ Playing BDs

- BDs (BDMV) compatible with the formats below can be played.
  - – Blu-ray Disc Read-Only (ROM) Format Version 2
  - – Blu-ray Disc Recordable (R) Format Version 2 (finalize (close) them before playing them on this player)
  - – Blu-ray Disc Rewritable (RE) Format Version 3

  This player supports BD-ROM Profile 1 Version 1.1. BONUSVIEW Functions such as playback of secondary video (Picture-in-Picture) and secondary audio can be used. For details on secondary video and secondary audio playback, refer to the disc’s instructions.

BONUS *VIEW* ™

“BONUSVIEW” is trademark of Blu-ray Disc Association.

When a BD-ROM is played, additional data may be stored in the player’s memory area (local storage). If the message indicating low memory (local storage) appears, erase the BDMV data.

- BDs (BDAV) compatible with the formats below can be played.
  - – Blu-ray Disc Recordable (R) Format Version 1
  - – Blu-ray Disc Rewritable (RE) Format Version 2
- Dual Layer BDs can be played.
- Video, image and audio files recorded on BDs cannot be played.
- 8 cm BD-ROMs cannot be played.

❖ Playing DVDs

- DVD-Video can be played.
- DVD-R/-RW/+R/+RW discs recorded in the DVD-Video format can be played (finalize them before playing them on this player).
- DVD-R/-RW discs recorded in the VR format (Video Recording format) can be played.

RW COMPATIBLE

This label indicates playback compatibility with DVD-RW discs recorded in VR format (Video Recording format). However, for discs recorded with a record-only-once encrypted program, playback can only be achieved using a CPRM compatible device.

- DVDs recorded in the AVCHD format can be played (finalize them before playing them on this player).

“AVCHD” and the “AVCHD” logo are trademarks of Panasonic Corporation and Sony Corporation.

- Video, image and audio files recorded on DVD-R/-RW/+R/+RW discs can be played. See Playable files below.
- Dual Layer DVDs can be played. However, non-finalized Dual Layer DVD-R discs recorded in the VR format cannot be played (finalize them before playing them on this player).
- HD DVD, DVD Audio and DVD-RAM discs cannot be played.

❖ About region numbers

Blu-ray Disc Player and BD-ROM or DVD-Video discs are assigned region numbers according to the region in which they are sold.

This player’s region numbers are:

- BD-ROM: A
- DVD-Video: 1

Discs not including these numbers cannot be played. Discs playable on this player are as shown below.

- BDs: A (including A) and ALL 
- DVDs: 1 (including 1) and ALL 

❖ Playing CDs

- Audio CDs (CD-DAs and DTS-CDs) can be played.
- Video, image and audio files recorded on CDs can be played. See Playable files below.
- CD-R/-RW discs that are not finalized cannot be played.
- SACD, Video CD and Super VCD discs cannot be played.
- Regarding copy protected CDs: This player is designed to conform to the specifications of the Audio CD format. This player does not support the playback or function of discs that do not conform to these specifications.

❖ DualDisc playback

A DualDisc is a new two-sided disc, one side of which contains DVD content — video, audio, etc. — while the other side contains non-DVD content such as digital audio material.

The DVD side of a DualDisc can be played on this player (excluding any DVD-Audio content).

The non-DVD, audio side of the disc is not compatible with this player.

It is possible that when loading or ejecting a DualDisc, the opposite side to that being played will be scratched. Scratched discs may not be playable.

For more detailed information on the DualDisc specification, please refer to the disc manufacturer or disc retailer.

❖ Playing discs created on computers or BD/DVD recorders

- It may not be possible to play discs recorded using a computer due to the application settings or computer’s environment settings. Record discs in a format playable on this player. For details, contact the dealer.
- It may not be possible to play discs recorded using a computer or a BD/DVD recorder, if burn quality is not good due to characteristics of the disc, scratches, dirt on the disc, dirt on the recorder’s lens, etc.

[2] Playable files

Video, image and audio files recorded on DVDs and CDs can be played.

Caution

- In DVD, only the one recorded by the ISO 9660 file system can be played.
- Some files may not be playable.
- For some files, it may not be possible to use certain functions during playback.
- It may not be possible to play some files, even if they have the extension of a file playable on this player.
- Files protected by DRM (Digital Rights Management) cannot be played (not including DivX VOD files).

❖ Supported video file formats

- **DivX**

DivX is a media technology created by DivX, Inc. DivX media files contain not only video but also advanced media features like subtitles and alternate audiotracks, etc.

Conform to the size under 720 x 480 pixels.

DivX files encoded with GMC/Qpel option cannot be played.

Only audio signals with MP3 or Dolby Digital (AC3) format are output.

Note that files other than the ones containing DivX video cannot be played, even if they have the extension “.avi”.

Official DivX®Certified product.

Plays all versions of DivX®video (including DivX® 6) with standard playback of DivX® media files.

DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

Note

- DivX VOD files are protected by DRM. They can only be played on registered devices.
  - You may be requested by the file distributor to input the DivX VOD registration code for authorization of the player in order to play DivX VOD files. This player's DivX VOD registration code can be checked at **Initial Setup → Playback → DivX VOD → Registration Code**.
  - DivX VOD files for which the player's DivX VOD registration code is not authorized cannot be played (**Authorization Error** is displayed).
  - The number of views is restricted for some DivX VOD files. When such files are played on this player, the remaining number of views is displayed. Files for which the remaining number of views has reached 0 cannot be played (**Rental Expired** is displayed). Files for which the number of views is not restricted can be played as many times as you like (the remaining number of views is not displayed).

❖ Supported image file formats

- **JPEG**
  File format: JFIF Ver1.02/Exif Ver.2.2
  Resolution: Up to 4096 x 4096 pixels
  Only baseline JPEG files are supported.

Supported audio file formats

- **Windows Media™ Audio 9 (WMA9)**
  Bit rate: Up to 192 kbps
  Sampling frequencies: 22.05 kHz, 32 kHz, 44.1 kHz and 48 kHz

  Windows Media is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

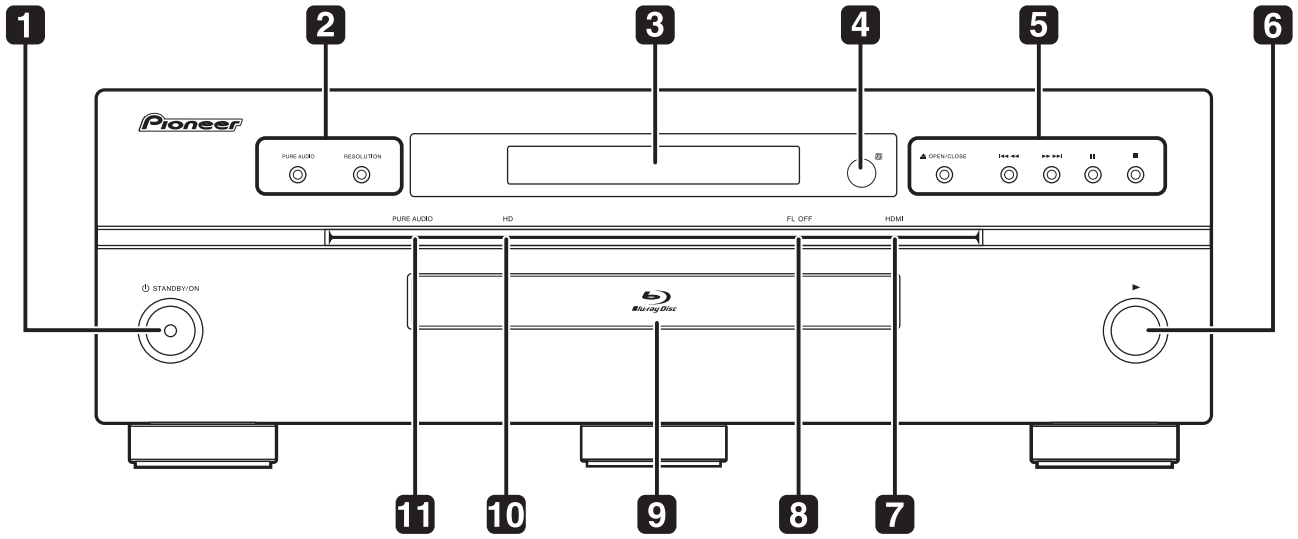
  This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from Microsoft Licensing, Inc.
- **MPEG-1 Audio Layer 3 (MP3)**
  Bit rate: Up to 320 kbps
  Sampling frequencies: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz and 48 kHz

Playable file extensions

- **Video files**
  .divx and .avi
- **Image files**
  .jpg and .jpeg
- **Audio files**
  .wma and .mp3

2.4 PANEL FACILITIES

[1] Front Panel



1 ⏻ STANDBY/ON
Press to turn the power on and off.

2 PURE AUDIO – High quality audio signals with any extraneous noise eliminated are output.
RESOLUTION – Press to switch the output video resolution from **HDMI OUT** or **COMPONENT VIDEO** output terminals.

3 Front panel display

4 Remote control sensor
Point the remote control to this, then operate it within approximately 23 feet.

The player may have trouble capturing remote control signals if there is a fluorescent light nearby. If this happens, move the player away from the fluorescent light.

5 ⏏ OPEN/CLOSE – Press to open and close the disc tray.
I◀◀/◀◀ – Press to skip to the beginning of the previous title/ chapter/track/file. Press and hold to start reverse scanning.

▶▶/▶▶I – Press to skip to the beginning of the next title/ chapter/track/file. Press and hold to start forward scanning.

II – Press during playback to pause. Press again to restart playback.

■ – Press to stop playback.

6 ►
Press to start playback.

7 HDMI indicator
This lights when an HDMI-compatible device is connected to an **HDMI OUT (MAIN)** or **HDMI OUT (SUB)** terminal.

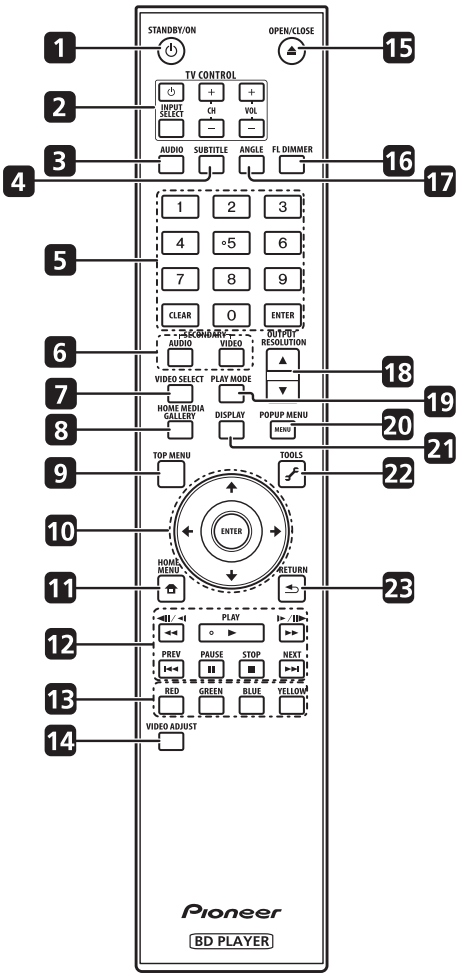
8 FL OFF indicator
This lights when **Off** is selected with **FL DIMMER**.

9 Disc tray

10 HD indicator
This lights when an HDMI cable is connected and video signals are being output with a resolution of 1080/24p, 1080/60i, 1080/60p or 720/60p. It also lights when a component video cable is connected and video signals are being output with a resolution of 1080/60i or 720/60p.

11 PURE AUDIO indicator
This lights when **PURE AUDIO** is set to **Mode 1** or **Mode 2**.

[2] Remote Control



1 ⏻ STANDBY/ON
Press to turn the power on and off.

2 TV CONTROL
Your TV can be controlled using the player's remote control.
⏻ – Press to turn the TV's power on and off.
INPUT SELECT – Press to switch the TV's input.
CH +/– – Press to select the TV channel.
VOL +/– – Press to adjust the volume.

3 AUDIO
Press to switch the audio streams/channels.

4 SUBTITLE
Press to switch the subtitles.

5 Number buttons – Use these to select and play the title/chapter/track you want to view or listen to and to select items from menus.
CLEAR – Press to clear the numeric number, etc.
ENTER – Press to execute the selected item or enter a setting that has been changed, etc.

6 SECONDARY AUDIO – When playing a BD-ROM on which secondary audio is recorded, press to switch to the secondary audio.
SECONDARY VIDEO – When playing a BD-ROM on which secondary video (Picture-in-Picture) is recorded, press to switch to the secondary video.

7 VIDEO SELECT
Press to switch the video output signal to be viewed between the one output from the **HDMI OUT (MAIN)** terminal, the **HDMI OUT (SUB)** terminal and an analog output terminal (**COMPONENT VIDEO**, **S-VIDEO** or **VIDEO** output terminals).

8 HOME MEDIA GALLERY
Press to display/hide the Home Media Gallery screen.

9 TOP MENU
Press to display the top menu of the BD-ROM or DVD-Video.

10 ↑/↓/←/→ – Use to select items, change settings and move the cursor.
ENTER – Press to execute the selected item or enter a setting that has been changed, etc.

11 HOME MENU
Press to display/hide the Home Menu.

12 ► PLAY – Press to start playback.
❚❚ PAUSE – Press to pause playback. Press again to restart playback.
■ STOP – Press to stop playback.
⏮ PREV/ ⏭ NEXT – Press to skip to the beginning of the previous/next title/chapter/track/file.
◄◄/◄❚❚/◄❙ – Press during playback to start reverse scanning. While playback is paused, press for step reverse playback. Press and hold while playback is paused for reverse slow motion playback.
❙►/❚❚►/►► – Press during playback to start forward scanning. While playback is paused, press for step forward playback. Press and hold while playback is paused for forward slow motion playback.

13 RED/GREEN/BLUE/YELLOW
Use these to navigate BD-ROM menus.

14 VIDEO ADJUST
Press to display/hide the Video Adjust menu.

15 ⏏ OPEN/CLOSE
Press to open and close the disc tray.

16 FL DIMMER
Press to switch the brightness of the front panel display.
The **FL OFF** indicator lights when **Off** is selected.

17 ANGLE
Press to switch the BD-ROM or DVD-Video camera angles.

18 OUTPUT RESOLUTION
Use these to switch the output video resolution from the **HDMI OUT** or **COMPONENT VIDEO** output terminals.

19 PLAY MODE
Press to display/hide the Play Mode screen.

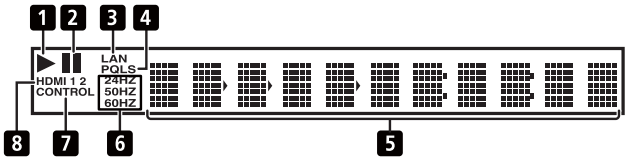
20 POP UP MENU/MENU
Press to display the BD-ROM or DVD-Video menus.

21 DISPLAY
Press to display disc information.

22 TOOLS
Press to display/hide the **TOOLS** menu.

23 RETURN
Press to return to the previous screen.

[3] Front Panel Display



1 ►
Lights during playback.

2 II
Lights when playback is paused.

3 LAN
Lights when there is an active local area network (LAN) connection.

4 PQLS
Lights when the PQLS function is activated.

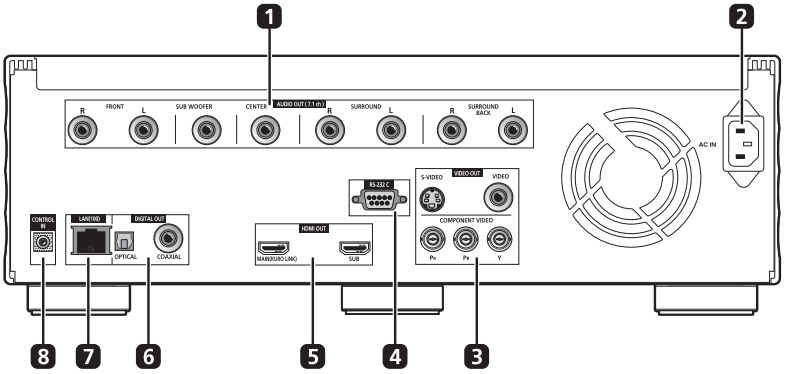
5 Character display
Displays the title/chapter/track number, elapsed time, etc.

6 24HZ/50HZ/60HZ
The frequency of the video frame or field being output lights.

7 CONTROL
Lights when the KURO LINK function is activated.

8 HDMI 1 2
HDMI 1 lights when **VIDEO SELECT** is pressed and the **HDMI OUT (MAIN)** terminal is selected. **HDMI 2** lights when the **HDMI OUT (SUB)** terminal is selected.

[4] Rear Panel



1 AUDIO OUT (7.1 ch) terminals
Connect with the multi-channel (7.1- or 5.1-channel) audio input terminals on an AV receiver or amplifier, etc..
To connect to the 2-channel audio input terminals on a TV, etc., connect to **FRONT (L/R)**.

2 AC IN
Connect the power cord here.

3 VIDEO OUT terminals
VIDEO – Connect with the video input terminal on a TV, AV receiver or amplifier, etc..

S-VIDEO – Connect with the S-Video input terminal on a TV, AV receiver or amplifier, etc..

COMPONENT VIDEO (BNC jacks) – Connect with the component video input terminals on a TV, AV receiver or amplifier, etc..

4 RS-232C terminal
This terminal is not used.

5 HDMI OUT terminals
MAIN (KURO LINK) – Connect with an HDMI-compatible TV, AV receiver or amplifier, etc..

SUB – Connect with an HDMI-compatible TV, projector, etc..
This terminal outputs linear PCM 2-channel audio signals.
Do not connect an AV receiver or amplifier to this terminal.
Also note that the KURO LINK function will not work for devices connected to this terminal.

6 DIGITAL OUT (COAXIAL/OPTICAL) terminals
Connect with the digital audio input terminal on an AV receiver or amplifier, etc..

7 LAN (100) terminal
Ethernet port for 100BASE-TX (100 Mbps) network connection.

8 CONTROL IN terminal
Use to control this player from the remote sensor of another Pioneer component with a **CONTROL OUT** terminal and bearing the IR mark. Connect the **CONTROL OUT** terminal of the other component to **CONTROL IN** on this player using a mini-plug cord (commercially available).

Caution

- Be sure to connect cables for outputting the audio and video signals.
- When connected via System Control, point the remote control toward the connected component (such as an AV receiver or amplifier). The remote will not work correctly when pointed at this player.
- You cannot use System Control with components that do not have a System Control terminal or with components manufactured by companies other than Pioneer.

3. BASIC ITEMS FOR SERVICE
3.1 CHECK POINTS AFTER SERVICING

Items to be checked after repair (BD players)

To ensure the quality of the product after repair, check the recommended items shown below:

No.	Procedures	Item to be checked
1	Check the version of the firmware in Service mode.	The version must be the latest. If the version is not the latest, update the firmware.
2	Check if all the symptoms pointed out by the customer have been addressed. If a symptom pointed out by the customer is attributable to a particular disc, that disc must be played back. If the symptoms are related to the PQLS (Precision Quartz Lock System), check PQLS operations. (For checking PQLS operations, connection with an amplifier* that supports the PQLS is required.)	The symptoms in question must not be reproduced. Video, audio, and operations must be normal. For checking PQLS operations, connect the player with the customer's amplifier then check that "PQLS" is lit in the display window on the unit. (See [3] Front Panel Display in "2.4 PANEL FACILITIES.")
3	Measure playback error rates at the innermost and outermost tracks, by playing back the following discs: BD-ROM test disc (GGV1308) DVD test disc (GGV1025)	The error rates must be 1.0e-3 or less. This procedure can determine if the drive is degraded.
4	Check playback of a CD disc (track search).	Audio and operations, such as a search, must be normal.
5	Check playback of a DVD disc (menu operations, title/chapter search).	Video, audio, and operations, such as a search, must be normal.
6	Check playback of a BD disc (menu operations, title/chapter search).	Video, audio, and operations, such as a search, must be normal.
7	Check the cabinet.	Check for any scratches or dirt that have been made or attached on the cabinet after receiving the product for repair.

* (ex.) SC-LX81, SC-LX71.

See the table below for the items to be checked regarding video and audio:

Item to be checked regarding video	Item to be checked regarding audio
Block noise	Distortion
Horizontal noise	Noise
Dot noise	Volume too low
Disturbed image (video jumpiness)	Volume too high
Too dark	Volume fluctuating
Too bright	Sound interrupted
Color disappearance	
Mottled color	

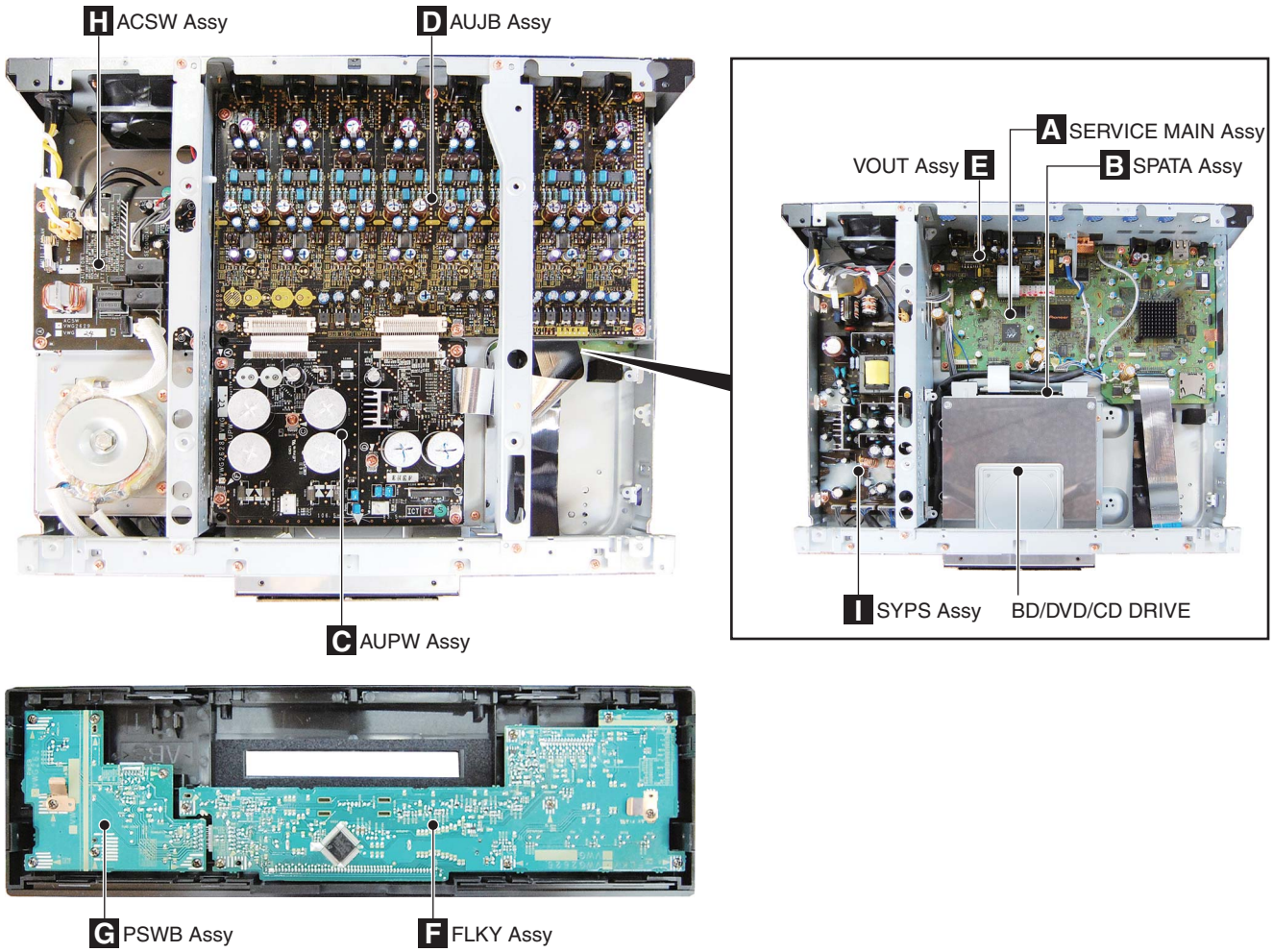
■ Cleaning

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

3.2 PCB LOCATIONS



NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

LIST OF ASSEMBLIES

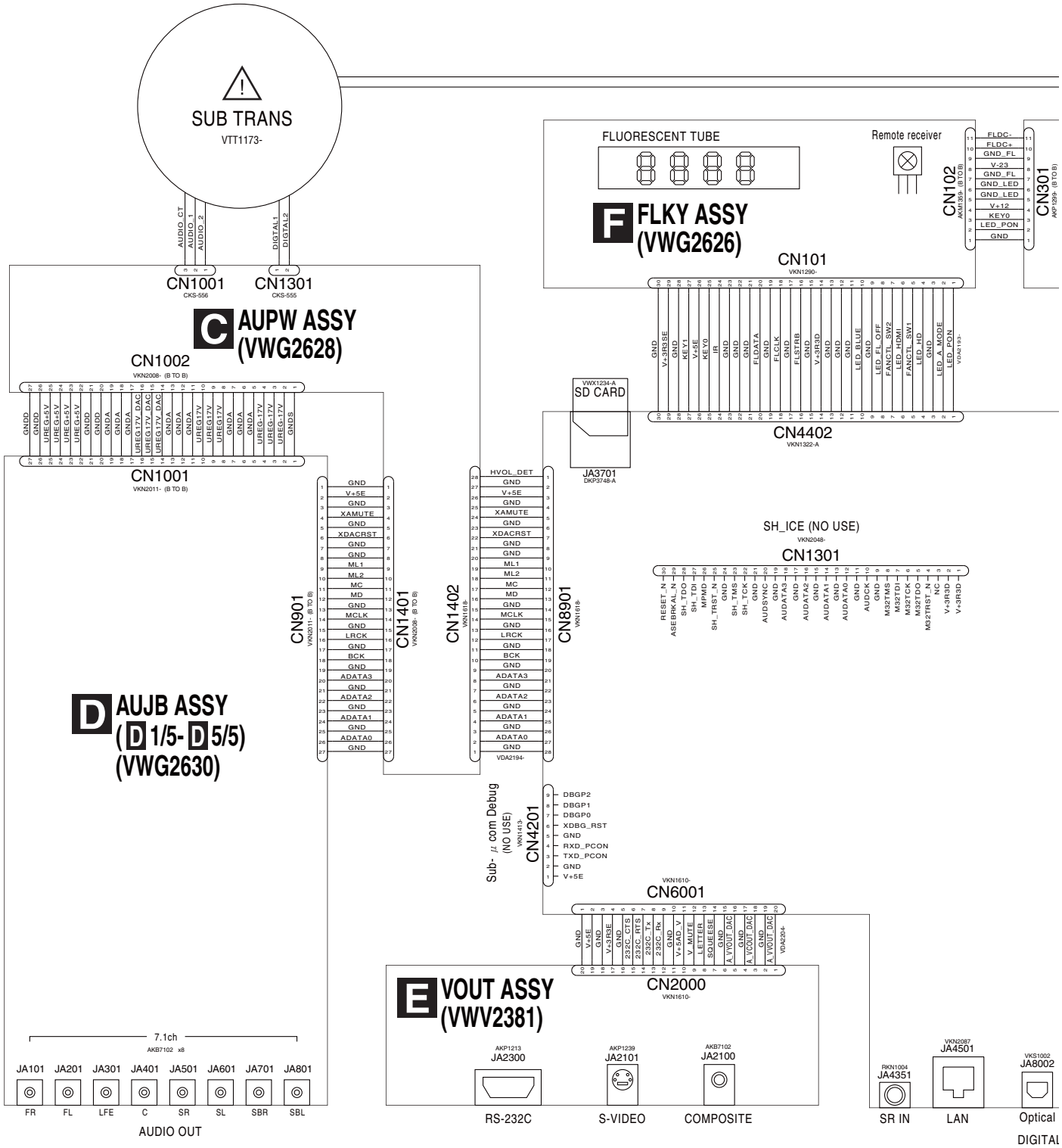
Mark	No.	Description	Part No.
NSP	1..	FLKB ASSY	VWM2482
	2..	FLKY ASSY	VWG2626
	2..	PSWB ASSY	VWG2627
NSP	1..	AVJB ASSY	VWM2483
	2..	AUJB ASSY	VWG2630
	2..	VOUT ASSY	VWV2381
NSP	1..	AUPB ASSY	VWM2484
	2..	AUPW ASSY	VWG2628
	2..	ACSW ASSY	VWG2629
	1..	SERVICE MAIN ASSY	VXX3348
NSP	2..	MAIN ASSY	VWV2382
	2..	SPATA ASSY	VWV2387
⚠	1..	SYPS ASSY	VWR1422
	1..	BD/DVD/CD DRIVE (BDR-L04H-XA/XV/5)	VXX3343

3.3 JIGS LIST

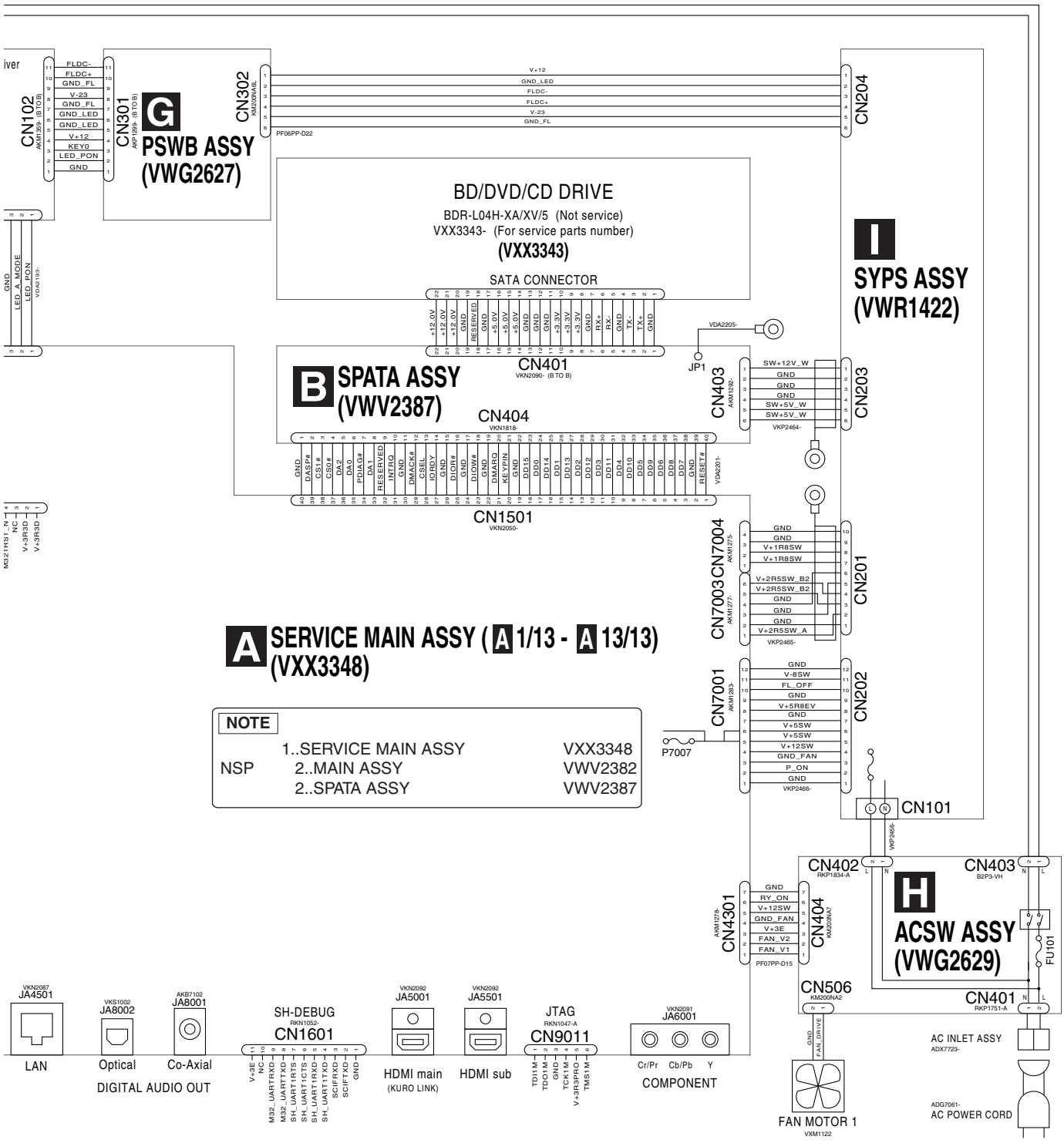
■ Jigs List

Name	Jig No.	Remarks
Service Remote Control Unit	GGF1067	Adjustment, diagnosis
DVD Test Disc (DVD-Video)	GGV1025	Check of DVD-Video
BD-ROM Test Disc	GGV1308	Check of BD-ROM
ID Data Disc for Blu-ray player	GGV1334	Diagnosis (ID data setting)
Disc Ejection Rod	GGF1529	Emergency Disc Ejection

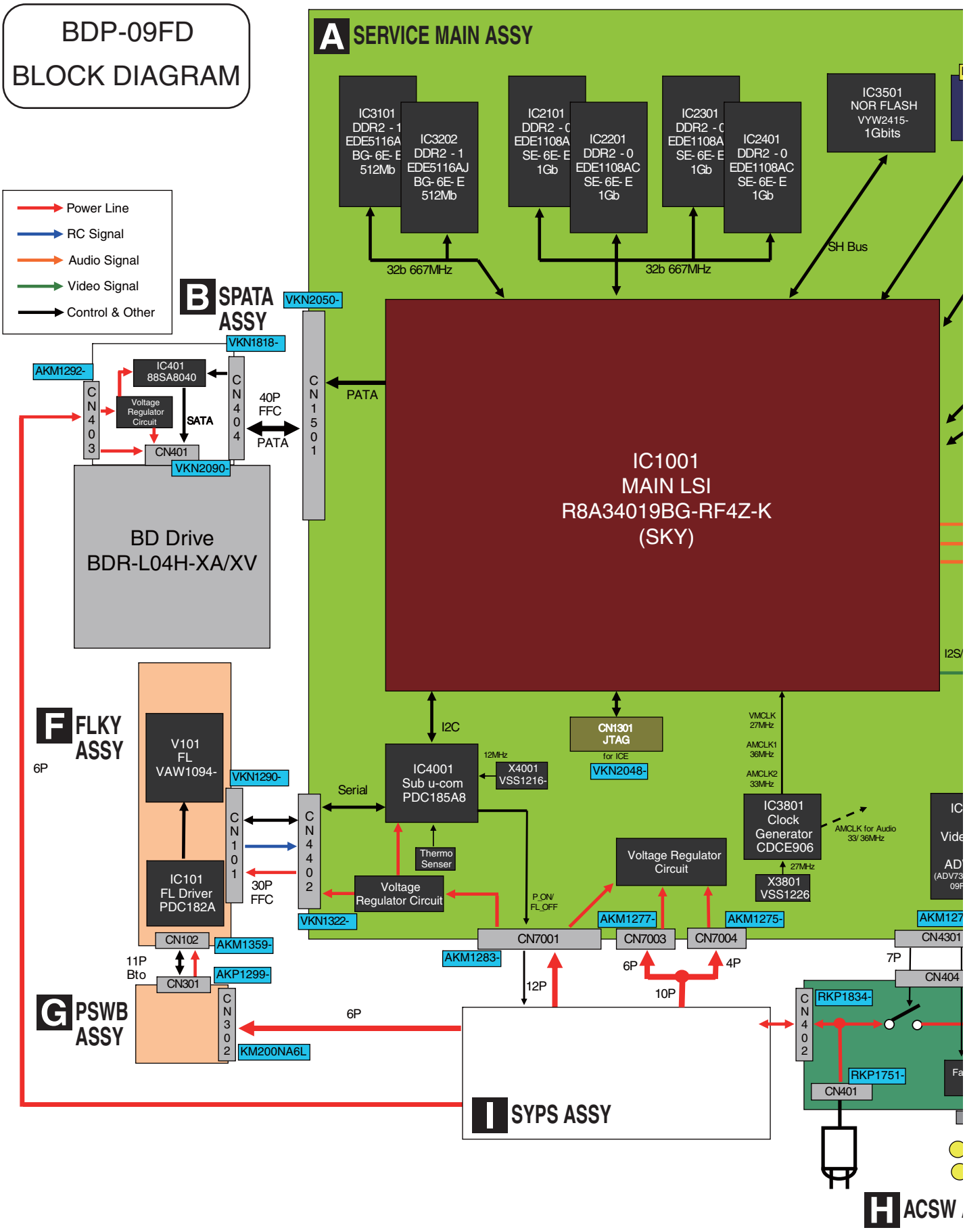
4. BLOCK DIAGRAM
4.1 OVERALL WIRING DIAGRAM

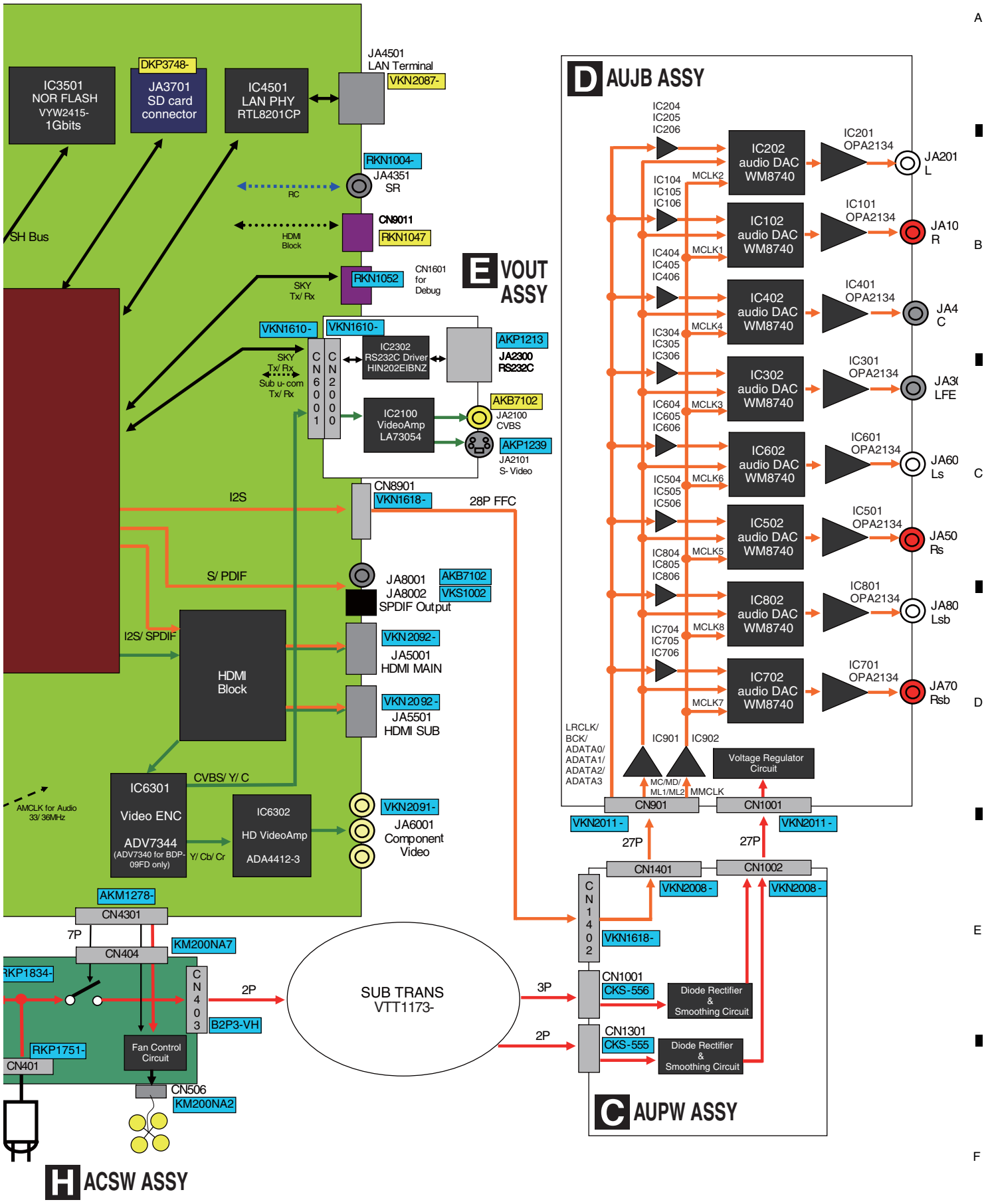


- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- : The power supply is shown with the marked box.

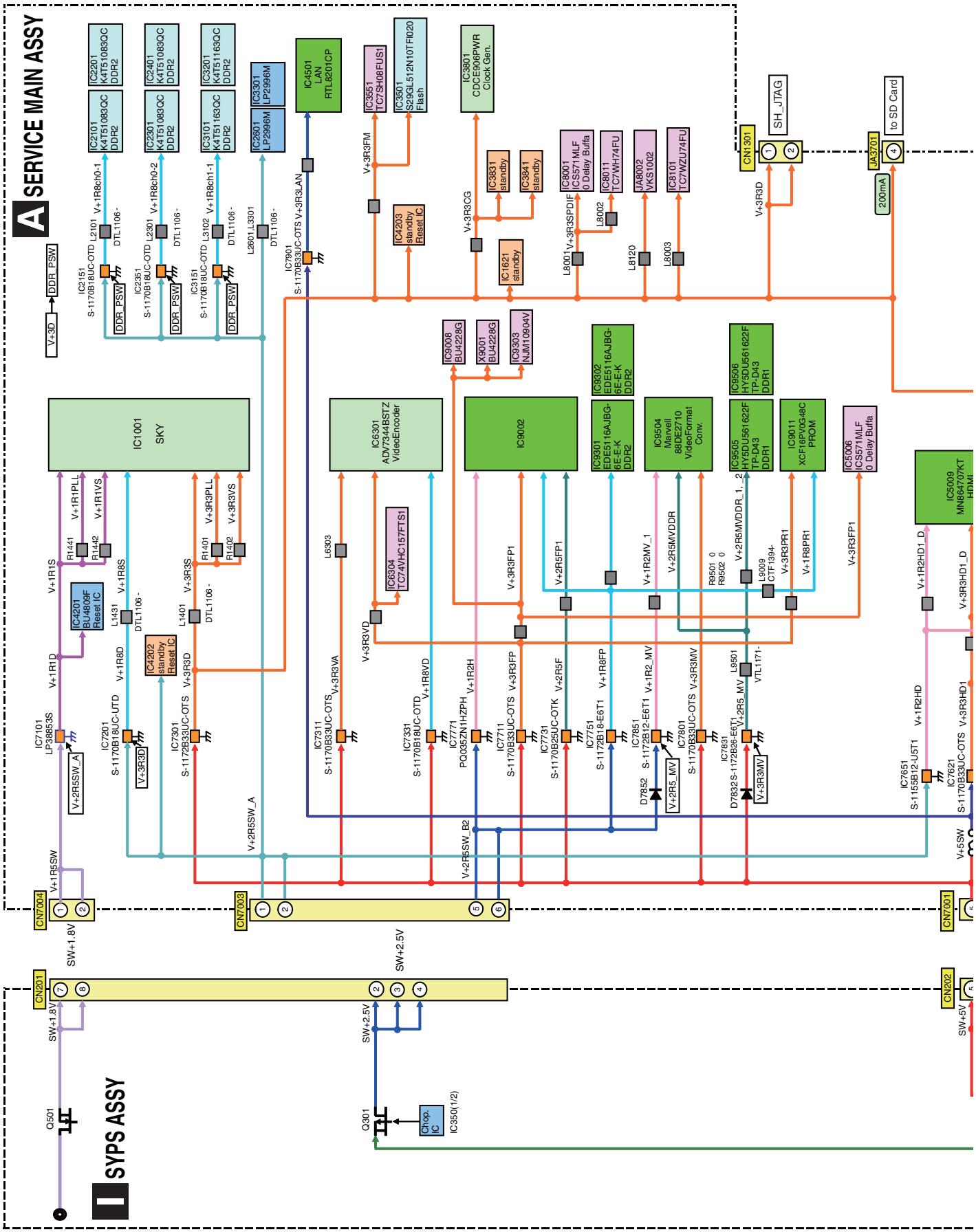


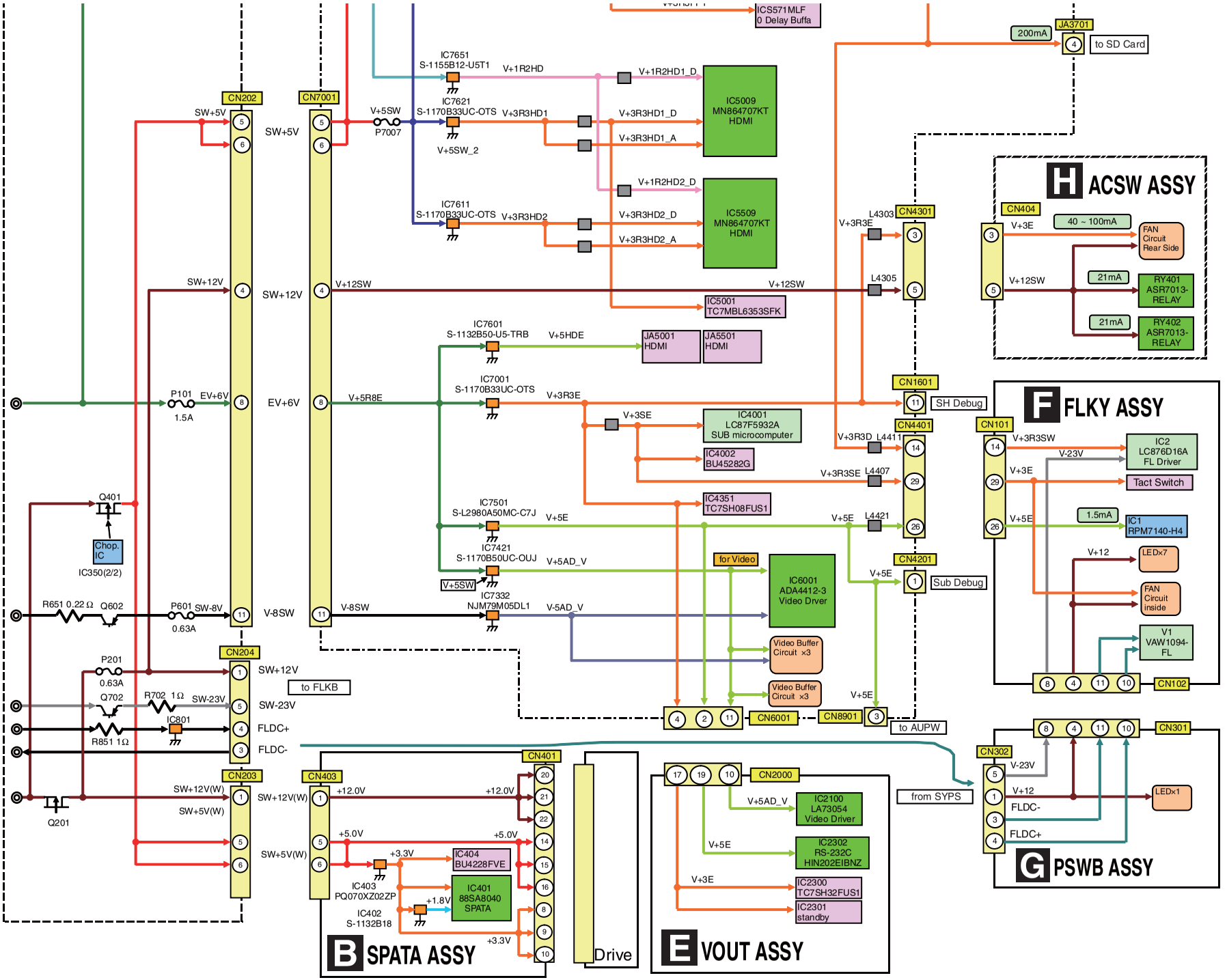
4.2 BLOCK DIAGRAM

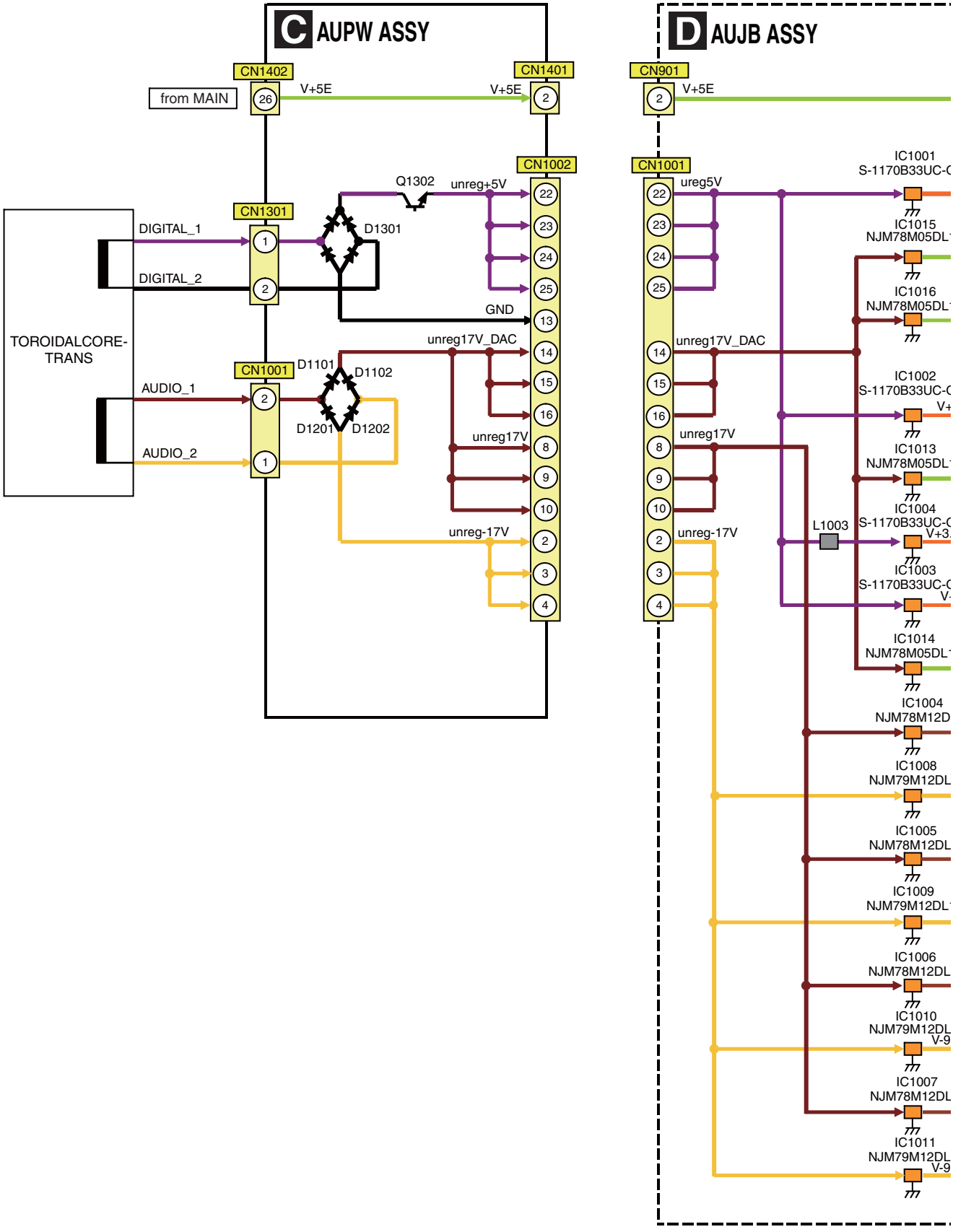



IC3501
NOR FLASH
VYW2415-
1Gbits
DKP3748-
JA3701
SD card
connector
IC4501
LAN PHY
RTL8201CP
JA4501
LAN Terminal
VKN2087-
RKN1004-
JA4351
SR
RC
CN9011
HDMI
Block
RKN1047
SH Bus
RKN1052
CN1601
for
Debug
SKY
Tx/ Rx
E VOUT
ASSY
VKN1610-
VKN1610-
SKY
Tx/ Rx
Sub u- com
Tx/ Rx
CN6001
CN2000
IC2302
RS232C Driver
HIN202EIBNZ
AKP1213
JA2300
RS232C
IC2100
VideoAmp
LA73054
AKB7102
JA2100
CVBS
AKP1239
JA2101
S- Video
CN8901
VKN1618-
28P FFC
I2S
S/ PDIF
JA8001
JA8002
SPDIF Output
AKB7102
VKS1002
I2S/ SPDIF
HDMI
Block
VKN2092-
JA5001
HDMI MAIN
VKN2092-
JA5501
HDMI SUB
CVBS/ Y/ C
IC6301
Video ENC
ADV7344
(ADV7340 for BDP-09FD only)
AMCLK for Audio
33/ 36MHz
IC6302
HD VideoAmp
ADA4412-3
Y/ Cb/ Cr
VKN2091-
JA6001
Component
Video
AKM1278-
CN4301
7P
CN404
KM200NA7
RKP1834-
CN403
2P
B2P3-VH
RKP1751-
CN401
Fan Control
Circuit
CN506
KM200NA2
H ACSW ASSY
SUB TRANS
VTT1173-
3P
2P
CN1402
VKN1618-
CN1001
CKS-556
Diode Rectifier
&
Smoothing Circuit
CN1301
CKS-555
Diode Rectifier
&
Smoothing Circuit
C AUPW ASSY
D AUJB ASSY
IC204
IC205
IC206
IC202
audio DAC
WM8740
IC201
OPA2134
JA201
L
MCLK2
IC104
IC105
IC106
IC102
audio DAC
WM8740
IC101
OPA2134
JA10
R
MCLK1
IC404
IC405
IC406
IC402
audio DAC
WM8740
IC401
OPA2134
JA4
C
MCLK4
IC304
IC305
IC306
IC302
audio DAC
WM8740
IC301
OPA2134
JA3(
LFE
MCLK3
IC604
IC605
IC606
IC602
audio DAC
WM8740
IC601
OPA2134
JA60
Ls
MCLK6
IC504
IC505
IC506
IC502
audio DAC
WM8740
IC501
OPA2134
JA50
Rs
MCLK5
IC804
IC805
IC806
IC802
audio DAC
WM8740
IC801
OPA2134
JA80
Lsb
MCLK8
IC704
IC705
IC706
IC702
audio DAC
WM8740
IC701
OPA2134
JA70
Rsb
MCLK7
LRCLK/
BCK/
ADATA0/
ADATA1/
ADATA2/
ADATA3
IC901
IC902
Voltage Regulator
Circuit
MC/MD/
ML1/ML2
MMCLK
CN901
CN1001
VKN2011 -
VKN2011 -
27P
27P
CN1401
CN1002
VKN2008 -
VKN2008 -

4.3 POWER BLOCK DIAGRAM




BDP-09FD
CN202
CN7001
SW+5V
SW+12V
EV+6V
V-8SW
P101
1.5A
P601 SW-8V
0.63A
R651 0.22Ω
Q602
Q401
Chop. IC
IC350(2/2)
P201
0.63A
Q702
R702 1Ω
SW-23V
R851 1Ω
IC801
Q201
CN204
CN203
SW+12V(W)
SW+5V(W)
FLDC+
FLDC-
to FLKB
V+5SW
P7007
IC7651
S-1155B12-U5T1
V+1R2HD
IC7621
S-1170B33UC-OTS
V+3R3HD1
V+5SW_2
IC7611
S-1170B33UC-OTS
V+3R3HD2
V+1R2HD1_D
V+3R3HD1_D
V+3R3HD1_A
V+1R2HD2_D
V+3R3HD2_D
V+3R3HD2_A
IC5009
MN864707KT
HDMI
IC5509
MN864707KT
HDMI
IC5001
TC7MBL6353SFK
V+12SW
IC7601
S-1132B50-U5-TRB
V+5HDE
JA5001
HDMI
JA5501
HDMI
IC7001
S-1170B33UC-OTS
V+5R8E
V+3R3E
V+3SE
IC4001
LC87F5932A
SUB microcomputer
IC4002
BU45282G
IC7501
S-L2980A50MC-C7J
V+5E
IC7421
S-1170B50UC-OUJ
V+5AD_V
IC7332
NJM79M05DL1
IC4351
TC7SH08FUS1
for Video
IC6001
ADA4412-3
Video Drver
Video Buffer Circuit ×3
Video Buffer Circuit ×3
CN6001
CN8901
to AUPW
ICS571MLF
0 Delay Buffa
200mA
JA3701
to SD Card
L4303
L4305
CN4301
V+3R3E
V+12SW
H ACSW ASSY
CN404
40 ~ 100mA
FAN Circuit Rear Side
21mA
RY401 ASR7013-RELAY
21mA
RY402 ASR7013-RELAY
CN1601
SH Debug
CN4401
V+3R3D
L4411
V+3R3SE
L4407
L4421
CN4201
Sub Debug
F FLKY ASSY
CN101
V+3R3SW
V-23V
V+3E
V+5E
IC2 LC876D16A FL Driver
Tact Switch
1.5mA
IC1 RPM7140-H4
V+12
LEDx7
FAN Circuit inside
V1 VAW1094-FL
CN102
CN301
CN302
LEDx1
G PSWB ASSY
from SYPS
CN401
CN403
+12.0V
+5.0V
+3.3V
+1.8V
IC404 BU4228FVE
IC403 PQ070XZ02ZP
IC402 S-1132B18
IC401 88SA8040 SPATA
B SPATA ASSY
Drive
CN2000
V+5AD_V
IC2100 LA73054 Video Driver
IC2302 RS-232C HIN202EIBNZ
IC2300 TC7SH32FUS1
IC2301 standby
E VOUT ASSY


C AUPW ASSY
CN1402
from MAIN
26
V+5E
CN1401
V+5E
2
CN1002
Q1302
unreg+5V
22
23
24
25
CN1301
DIGITAL_1
1
D1301
DIGITAL_2
2
GND
13
TOROIDALCORE-
TRANS
unreg17V_DAC
14
15
16
CN1001
D1101
D1102
AUDIO_1
2
D1201
D1202
unreg17V
8
9
10
AUDIO_2
1
unreg-17V
2
3
4
D AUJB ASSY
CN901
2
V+5E
CN1001
ureg5V
22
23
24
25
unreg17V_DAC
14
15
16
unreg17V
8
9
10
unreg-17V
2
3
4
L1003
IC1001
S-1170B33UC-
IC1015
NJM78M05DL
IC1016
NJM78M05DL
IC1002
S-1170B33UC-
V+
IC1013
NJM78M05DL
IC1004
S-1170B33UC-
V+3
IC1003
S-1170B33UC-
V-
IC1014
NJM78M05DL
IC1004
NJM78M12D
IC1008
NJM79M12DL
IC1005
NJM78M12DL
IC1009
NJM79M12DL
IC1006
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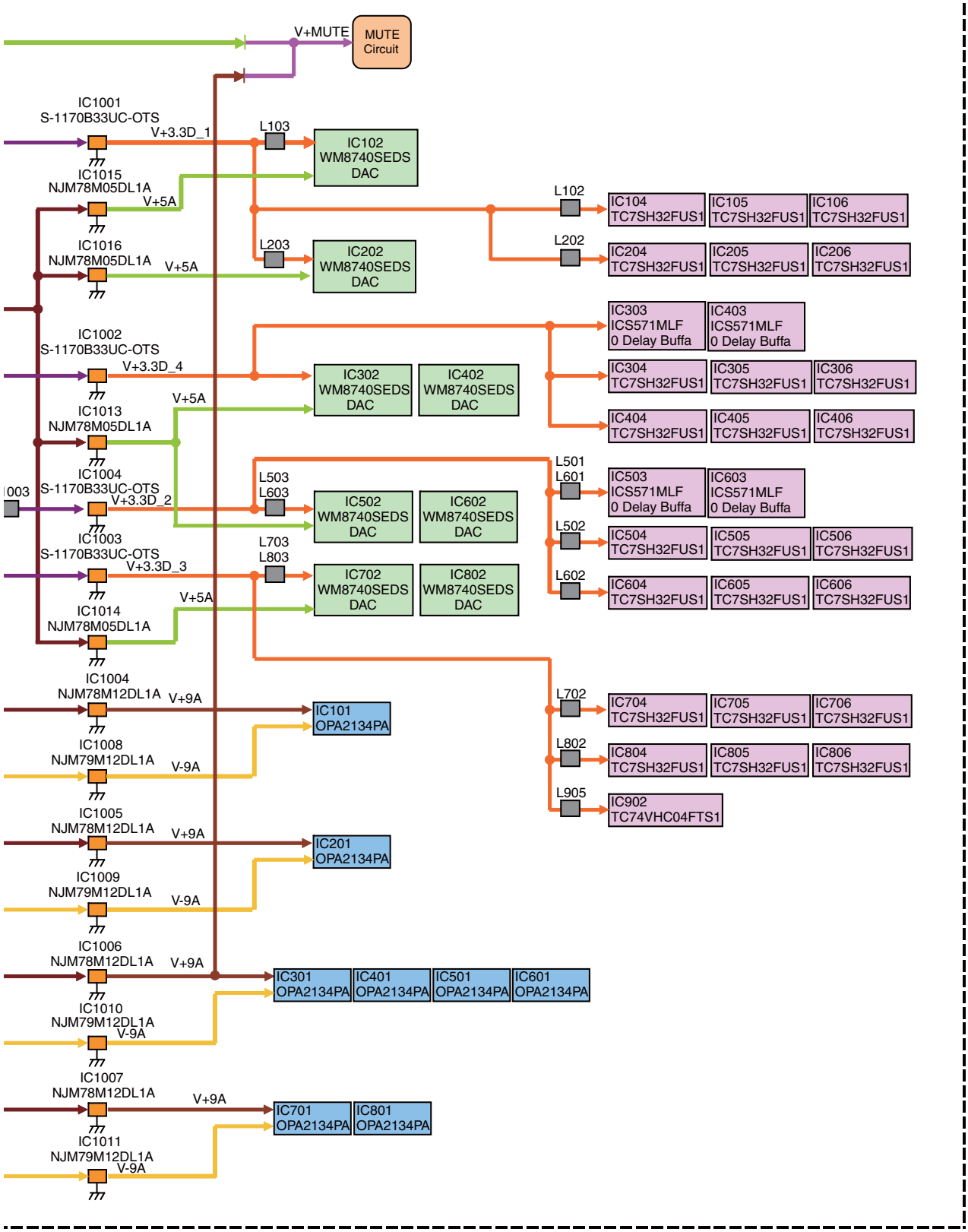
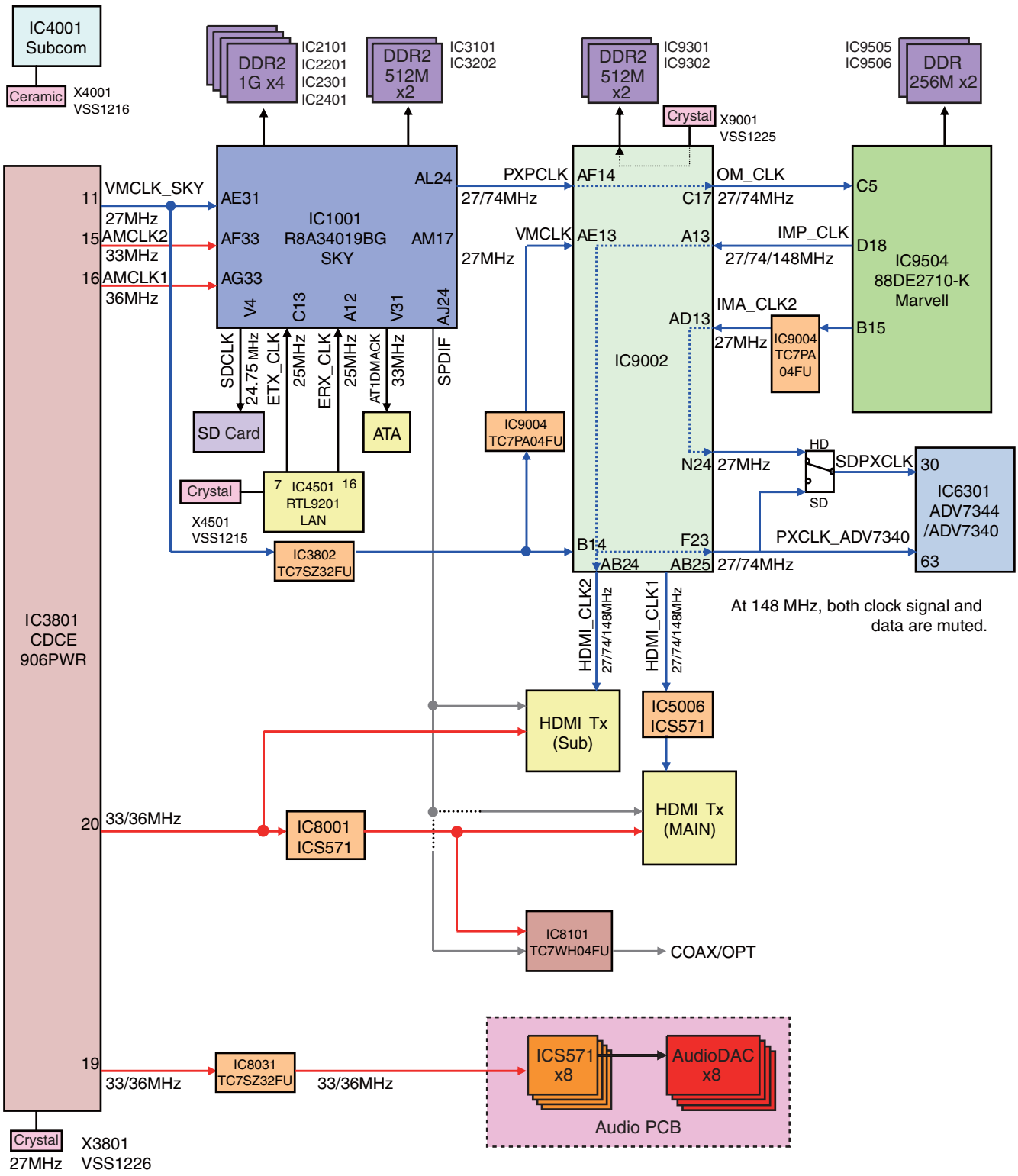
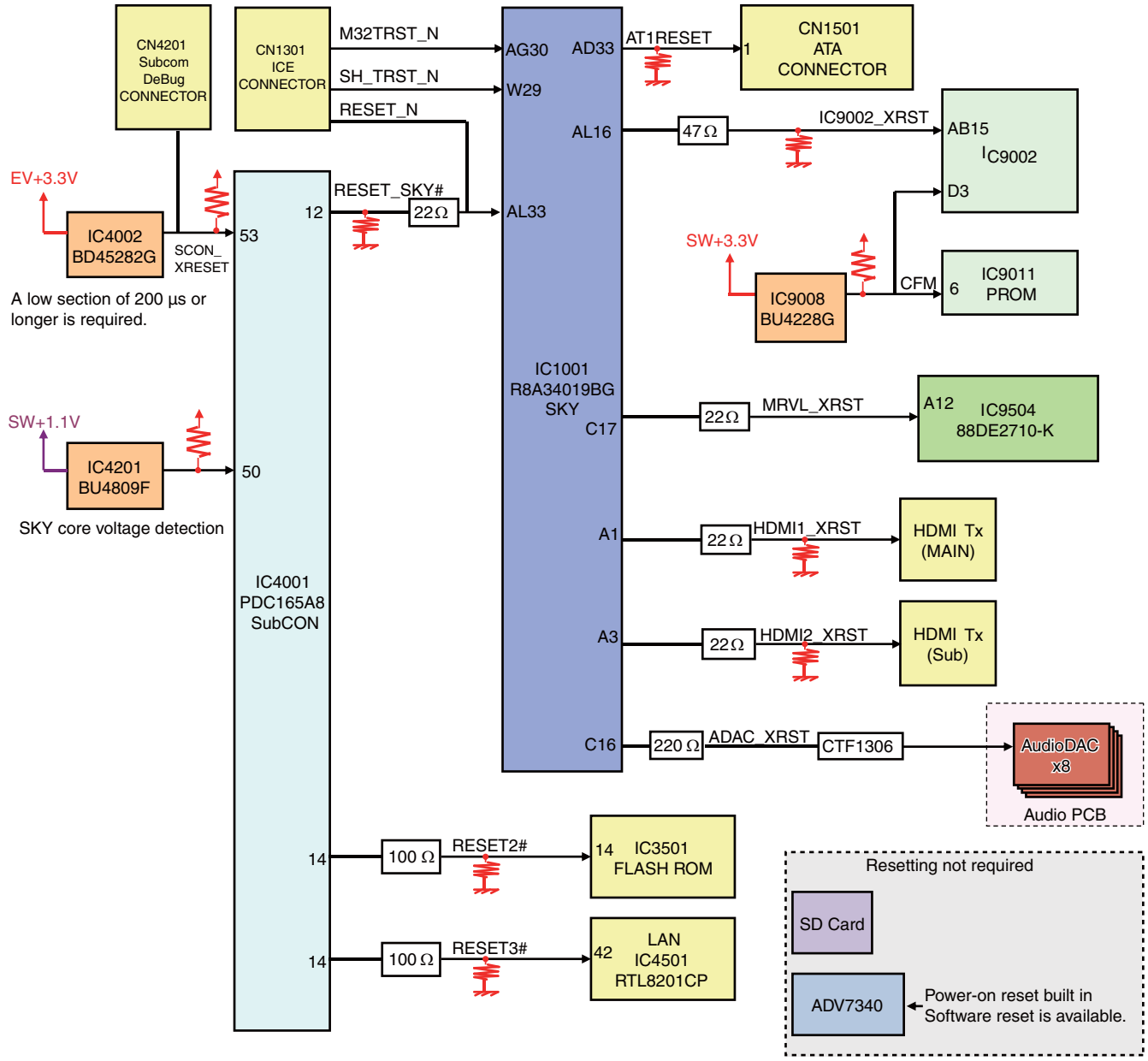
IC1010
NJM79M12DL
V-9
IC1007
NJM78M12DL
IC1011
NJM79M12DL
V-9


V+MUTE
MUTE Circuit
IC1001 S-1170B33UC-OTS
V+3.3D_1
L103
IC102 WM8740SEDS DAC
IC1015 NJM78M05DL1A
V+5A
L102
IC104 TC7SH32FUS1
IC105 TC7SH32FUS1
IC106 TC7SH32FUS1
L202
IC204 TC7SH32FUS1
IC205 TC7SH32FUS1
IC206 TC7SH32FUS1
IC1016 NJM78M05DL1A
V+5A
L203
IC202 WM8740SEDS DAC
IC303 ICS571MLF 0 Delay Buffa
IC403 ICS571MLF 0 Delay Buffa
IC1002 S-1170B33UC-OTS
V+3.3D_4
IC302 WM8740SEDS DAC
IC402 WM8740SEDS DAC
IC304 TC7SH32FUS1
IC305 TC7SH32FUS1
IC306 TC7SH32FUS1
V+5A
IC1013 NJM78M05DL1A
IC404 TC7SH32FUS1
IC405 TC7SH32FUS1
IC406 TC7SH32FUS1
L501
L601
IC503 ICS571MLF 0 Delay Buffa
IC603 ICS571MLF 0 Delay Buffa
IC1004 S-1170B33UC-OTS
V+3.3D_2
L503
L603
IC502 WM8740SEDS DAC
IC602 WM8740SEDS DAC
L502
IC504 TC7SH32FUS1
IC505 TC7SH32FUS1
IC506 TC7SH32FUS1
IC1003 S-1170B33UC-OTS
V+3.3D_3
L703
L803
IC702 WM8740SEDS DAC
IC802 WM8740SEDS DAC
L602
IC604 TC7SH32FUS1
IC605 TC7SH32FUS1
IC606 TC7SH32FUS1
V+5A
IC1014 NJM78M05DL1A
IC1004 NJM78M12DL1A
V+9A
IC101 OPA2134PA
L702
IC704 TC7SH32FUS1
IC705 TC7SH32FUS1
IC706 TC7SH32FUS1
IC1008 NJM79M12DL1A
V-9A
L802
IC804 TC7SH32FUS1
IC805 TC7SH32FUS1
IC806 TC7SH32FUS1
IC1005 NJM78M12DL1A
V+9A
IC201 OPA2134PA
L905
IC902 TC74VHC04FTS1
IC1009 NJM79M12DL1A
V-9A
IC1006 NJM78M12DL1A
V+9A
IC301 OPA2134PA
IC401 OPA2134PA
IC501 OPA2134PA
IC601 OPA2134PA
IC1010 NJM79M12DL1A
V-9A
IC1007 NJM78M12DL1A
V+9A
IC701 OPA2134PA
IC801 OPA2134PA
IC1011 NJM79M12DL1A
V-9A

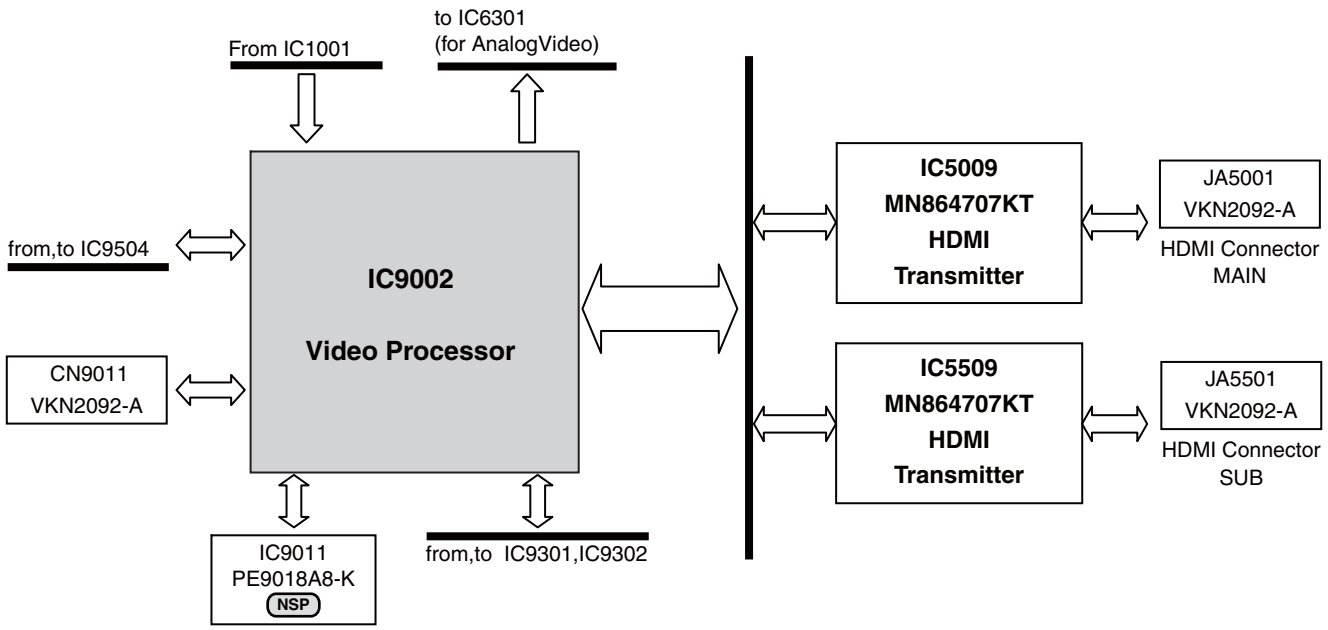
4.4 CLOCK BLOCK DIAGRAM



4.5 RESET BLOCK DIAGRAM



4.6 VIDEO BLOCK DIAGRAM



Digital video signals from IC1001 are processed at IC9002 and IC9504 then output to IC5009, IC5509, and IC6301. If only either an HDMI or analog video signal is output, check the reset and clock signals from around the relevant IC:

No HDMI MAIN video output available: Relevant IC: IC5009
No HDMI SUB video output available: Relevant IC: IC5509
No analog video output available: Relevant IC: IC6301

If no video signal is output, check the reset and clock signals from around IC9002 and IC9504.

5. DIAGNOSIS
5.1 POWER ON SEQUENCE

① Pressing of the POWER key is detected by the IC4001 Submicrocomputer on the MAIN Assy. The IC4001 then outputs a POWER_ON signal to the SYPS Assy.

↓

② After receiving the POWER_ON signal, the SYPS Assy activates, secondary Power[SW+12 V], setting it to ON.

↓

③ The R8A34019BG (IC1001), the core LSI, starts up. {RS-232C connector CN1601, log it to ON}

↓

④ Communication between the R8A34019BG and the DDR2 SDRAM starts.

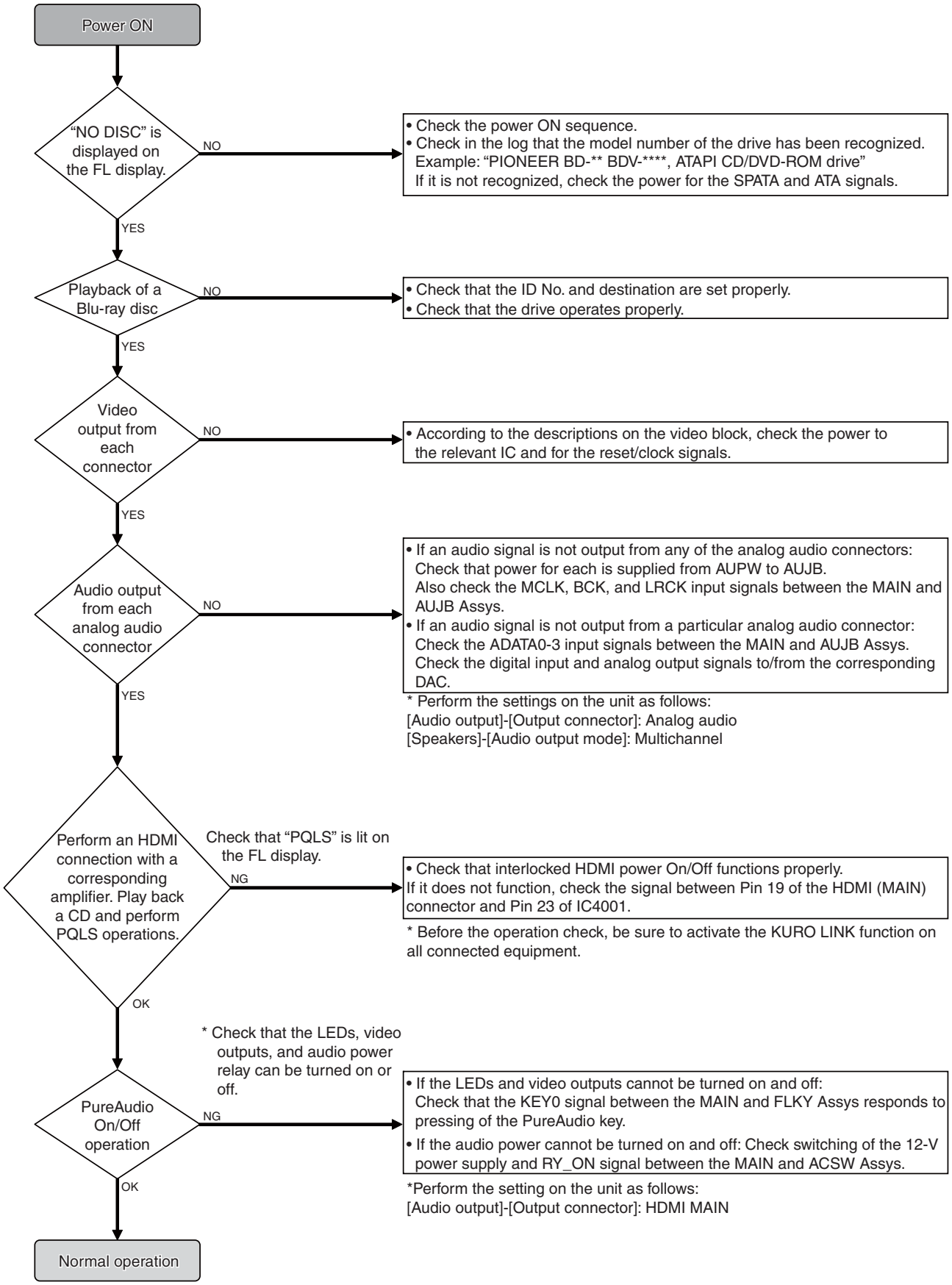
↓

⑤ Communication between the R8A34019BG and the FLASH_IC starts.

↓

It takes about 1 minute to complete the startup process.

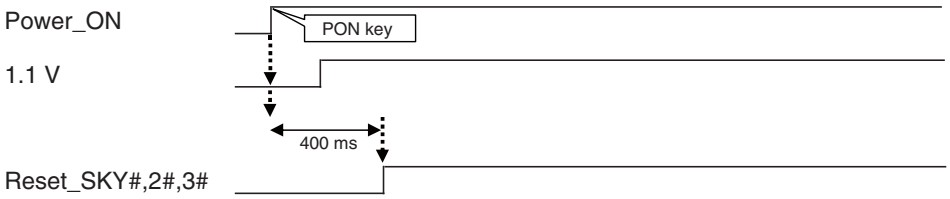
5.2 TROUBLE SHOOTING



5.3 RESET ON SEQUENCE

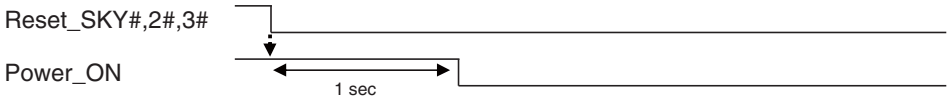
[On start-up]

①Receiving Power ON key, sub-microcomputer turns Power_ON signal to ”H”.
②Receiving Power ON signal, power turns each SW power to ”ON”.
③1.1 V turns ON.
④Sub-microcomputer is (after 400 ms) to Reset_SKY#, Reset 2#, Reset 3# ”L” turn to ”H”.



[At normal end]

①Sub-microcomputer detects the pushing of Power key, then notifies PowerOFF to R8A34019BG by I^2C.
②Receiving PowerOFF notification, R8A34019BG conducts end processing.
③R8A34019BG instructs PowerOFF to sub-microcomputer by I^2C.
④Sub-microcomputer turns Reset_SKY#, Reset 2#,Reset 3#,to ”L”, and after 1 sec, PowerON signal to ”L”.
⑤After 50msec, power turns each SW power to OFF.

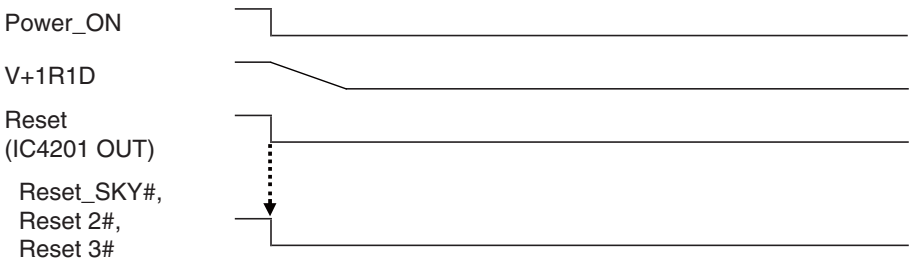


[Power abnormality]

*Reset operation in the case of 1.1 V drop.
Determine if ResetG becomes ”L”, then turn Reset# - Reset3# to “L”.

[At abnormal end]

①ACOFF
②By turning V+1R1D to OFF, ResetG# turns to ”L” by ResetIC.



6. SERVICE MODE
6.1 OSD

[1] INDICATION ITEMS FOR THE OSDS FOR DEBUGGING

Remote Control Unit Command	Screen	Indication Items for the OSDs	Remarks
[ESC]+[DISP]	1st screen	Service Indication (software information)	Refer to "[3] SERVICE INFORMATION DISPLAY"
		Product serial No./destination	
		Model No.	
		Released version No.	
		Revision No.	
		Submicrocomputer version data	
		Drive model No.	
		Drive version No.	
		Drive serial No.	
		DVD-Video region No.	
		BD-ROM region No.	
		CPRM ID	
		MAC address	
		FPGA version No.	
	2nd screen	OSD Filter	Refer to "[4] OSD FILTER SETTING"
		Setup value of the OSD FILTER	
[ESC]+[SIDE-B]	1st screen	Specifications 1 for error rate measurement (with OK/NG judgment)	Refer to "[6] ERROR RATE MEASUREMENT 1 AND OK/NG JUDGMENT"
		Results of error rate measurement OK/NG	
[ESC]+[DISP]+[2]	1st screen	Specifications 2 for error rate measurement (for continuous playback)	Not Used
		Title/Chapter data	
		Playback duration data	
		LgcSct address data	
		Error rate data (error rate value)	
[ESC]+[DISP]+[3]	1st screen	ATA/ATAPI DEBUG OSD-Command history (ALL)	
		Packet command from the host	
		Error data from the status register	
	2nd screen	ATA/ATAPI DEBUG OSD-Command history (ERROR)	
		Packet command that has been failed	
		Error Code	
		Command-specific information	
	3rd screen	ATA/ATAPI DEBUG OSD-Drive maintenance data	Refer to "[7] ATA/ATAPI DEBUG OSD"
		Power ON/accumulated power-on duration	
		LD read power-on duration for the BD	
		LD read power-on duration for the DVD	
		Serial No. of the PU	
	4th screen	ATA/ATAPI DEBUG OSD-Judgment of LD degradation	Refer to "[7] ATA/ATAPI DEBUG OSD"
		Judgment of degradation of the LD for the BD (OK/NG)	
		Judgment of degradation of the LD for the DVD (OK/NG)	
		Judgment of degradation of the LD for the CD (OK/NG)	
		Temperature inside the writer	
[ESC]+[DISP]+[4]		Results of self-diagnosis	Refer to "[5] SELF-DIAGNOSIS RESULT DISPLAY"
		Version/Revision Nos. of the SKY chip	
		HDMI transmitter IC check	
		Communication check of the submicrocomputer	
		PLL synthesizer check	
		DRIVE check	

Remote Control Unit Command	Screen	Indication Items for the OSDs	Remarks
[ESC]+[DISP]+[5]		AV output data	
		Video data	*These data are to be used merely as a guide, as they were designed to be used for product development.
		Video encoder data	
		Component output resolution	
		HDMI output resolution	
		Frame rate	
		Content resolution	
		Content aspect ratio	
		Data on VBID and WSS	
		CGMS-A/Copyright	
		APS	
		MacroVision	
		Aspect	
		Audio data	
		Sampling frequency	
		Category code (Number of Bits & definition)	
		Word Length	
		C/L bit: Indications on number of bits & status (Free/Once/Disable)	
		Audio muting status	
		LPCM/BitStream output	
		Number of output channels	
		HDMI ACP Type	
[ESC]+[DISP]+[6]		HDMI data	Not Used
[ESC]+[DISP]+[7]		Connection status	
[ESC]+[DISP]+[8]		User Interface data	Not Used
		Logs for received keys	
[ESC]+[DISP]+[9]		Contents data	
		BD-ROM	
		HDMV	
		BD-J	
		Authoring maker	
		Total number of titles	
		BD-R/RE	
		BDMV	
		BDAV	
		AVCHD	
		Authoring maker	
		Total number of titles	
		DVD	
		BDMV	
		AVCHD	
		DVD-Video	
		DVD VR	
		Authoring maker	
		Total number of titles	
		CD	
		Total number of titles	
		PC-FILES	
		Total number of files	

Remote Control Unit Command	Screen	Indication Items for the OSDs	Remarks
[ESC]+[DISP]+[10]		Playback data (BD-ROM)	
		Title No.	
		Chapter No.	
		Elapsed time within a title	
		Video data	
		Primary Video Stream	
		Secondary Video Stream	
		Resolution	
		Source video aspect ratio	
		Frame rate	
		AACS data	
		CPI	
		CCI	
		APS	
		ICT	
		DOT	
		Audio data	
		Primary Audio Stream	
		Secondary Audio Stream	
[ESC]+[DISP]+[11]		Playback data (BD-R/RE)	
		Title No.	
		Chapter No.	
		Elapsed time within a title	
		Navigation data	
		Playback stream format	
		SESF	
		ISDB	
		Video data	
		Video stream data	
		Playlist data (Virtual/Real-PlayList)	
		Playlist No.	
		Resolution	
		Source video aspect ratio	
		Frame rate	
		AACS data	
		CPI	
		CCI	
		APS	
		ICT	
		DOT	
		Audio data	
		Audio Stream data	

Remote Control Unit Command	Screen	Indication Items for the OSDs	Remarks
[ESC]+[DISP]+[12]	1st screen	Playback data (DVD)	
		Playback status data (PLAY, PAUSE, etc.)	
		Navigation data	
		Title No.	
		Chapter No.	
		Numbers of all chapters in a title	
		Elapsed time within a title	
		Elapsed time within a chapter	
		Number of multi-angles	
		Number of the selected multi-angle	
		Number of audio streams	
		Number of selected audio	
		Number of sub-pictures	
		No. of the selected sub-picture or OFF	
	2nd screen	Video data	
		Frame rate	
		Resolution	
		Aspect ratio	
		Progressive frame data	
		Repeat first field data	
		Maximum quantity/current quantity of video stream buffer	
		Audio data	
		Codec type	
		Sampling frequency	
		Number of channels	
		(With LPCM) Quantization bit rate	
		Maximum quantity/current quantity of audio stream buffer	
[ESC]+[DISP]+[13]	1st screen	Playback data (A/V decoder)	
		Primary A/V decoder data for DVD and BD	
		Error data of the video decoder	
		Error data of the audio decoder	
	2nd screen	Secondary A/V decoder data for BD	
		Error data of the video decoder	
		Error data of the audio decoder	
[ESC]+[DISP]+[14]		Playback data (CD)	
		Audio data	
		Playback track/all tracks	
		Playback duration of the track	
		Playback duration of the disc	
		Total duration of the track	
		Total duration of the disc	

Remote Control Unit Command	Screen	Indication Items for the OSDs	Remarks
[ESC]+[DISP]+[15]	1st screen	Playback data (PC Files)	
		Movie	
		Format (MPEG1/MPEG2-PS/MPEG2-TS/WMV…)	
		Resolution	
		NTSC/PAL	
		Aspect	
		File name	
	2nd screen	Music	
		Format (MP3,WMA,WAV ...)	
		Fs	
		Bitrate	
		Channel number	
		Track name	
	3rd screen	Photo	
		Format (JPEG/GIF/PNG ...)	
		Resolution (Pixel)	
		Aspect	
		Date	
		File name	
[ESC]+[AMON]+[TEST]		Destination setting screen	Refer to “8.3 MODEL SETTING”
		Input/setting of destination	
[ESC]+[STEREO]		CPRM ID Registration screen	Refer to “8.4 CPRM ID NUMBER AND DATA SETTING”
		ID registration	This screen is displayed when no ID is set.
		CPRM ID Clearing screen	
		Clearing of the registered ID	This screen is displayed when the ID has been set.
[ESC]+[CHP/TIM]+[3]		Ethernet Check Mode	Refer to “[8] ETHERNET CHECK MODE”

* For details on how to shift screens, see "[2] OUTLINE OF SERVICE MODE".

[2] OUTLINE OF SERVICE MODE

1. Overview

On Service Indication screens, data that are retained by the System Controller are displayed with the aid of the remote control unit for service (GGF1067). (Not for use by general users)
The maximum display area for on-screen displays is 64 one-byte characters (widthwise) × 17 lines (lengthwise).

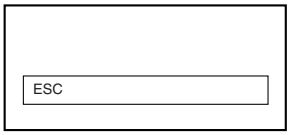
2. How to Operate

To display indications for servicing, use the remote control unit for service.

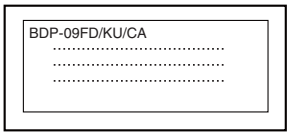
• How to enter Service Indication mode

Input of the following keys is accepted both in Normal Startup mode and Service mode.

(1) Without any GUI displayed, press the ESC key.



(2) Then press the DISP key. The 1st screen (version data, etc.) is displayed.



1st screen (version data, etc.)

(3) To shift to a subsequent screen, press the corresponding key:
2 key : 2nd screen: Error rate measurement 2 (for continuous playback)
3 key : 3rd screen: ATA/ATAPI DEBUG OSD

• How to exit Service Indication mode

Press the ESC key.

• How to shift between screens

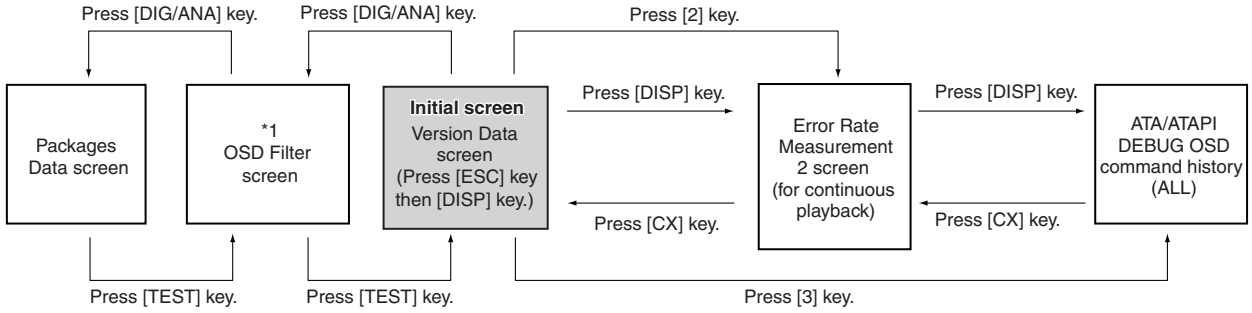
To shift to the next screen, press the DISP key. To shift to the previous screen, press the CX key.

• How to shift between subscreens

To shift to the next subscreen, press the DIG/ANA key. To shift to the previous subscreen, press the TEST key.

3. Overview of Screen Shifting

An overview of screen shifting in Service Indication mode is given below.



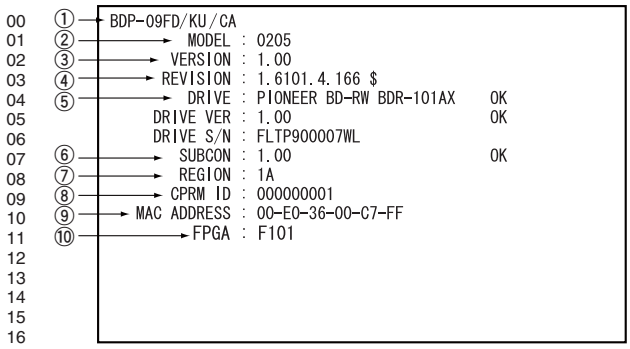
To exit any screen, press the [ESC] key.

*1 Set the OSD Filter to ON when a symptom such as greeking is generated while a monitor from a manufacturer other than Pioneer is connected (initial setting: OFF). For details, see "[4] OSD FILTER SETTING."

[3] SERVICE INFORMATION DISPLAY

To display the first screen of the service information display, press the [ESC] then [DISP] keys.
You can check the destination and region number of the product and the version number of the firmware.
Before starting servicing, check the destination and region number of the product and check the version of the firmware to be sure it is the latest.

• 1st screen (version data, etc)



① Data on the model: Model name/destination
If the model name and destination are not set properly, the language may not be displayed properly.
Check that they are properly set.

② MODEL: Model No.

③ VERSION: Release version
Check the version of the firmware to be sure it is the latest.

④ REVISION: SVN Revision No.

⑤ DRIVE: Data on the built-in drive
Drive name: Judged as OK: The name assigned by the application program coincided with that obtained by the command.
Judged as NG: The name assigned by the application program did not coincide with that obtained by the command.
DRIVE VER: Version of the firmware
Judged as OK: The version assigned by the application program coincided with that obtained by the command.
Judged as NG: The version assigned by the application program did not coincide with that obtained by the command.
DRIVE S/N: Drive serial No.

⑥ SUBCON: Firmware version of the submicrocomputer (PIC)
Judged as OK : The version assigned by the application program coincided with that obtained by the command.
Judged as NG+ : The version obtained by the command is newer than that assigned by the application program.
Judged as NG- : The version obtained by the command is older than that assigned by the application program.

⑦ REGION: Region codes for DVD-VIDEO and BD-ROM of the player
The above screen example shows that the DVD region code is 1 and the BD region code is A.
If a region has not been set, "VIRGIN ROM" is displayed for the DVD, and "F" is displayed for BD.

⑧ CPRM ID: CPRM key No.
If it has not been set, "?????????" is displayed.

⑨ MAC ADDRESS: MAC ADDRESS value
If it has not been set, "????????????????" is displayed.

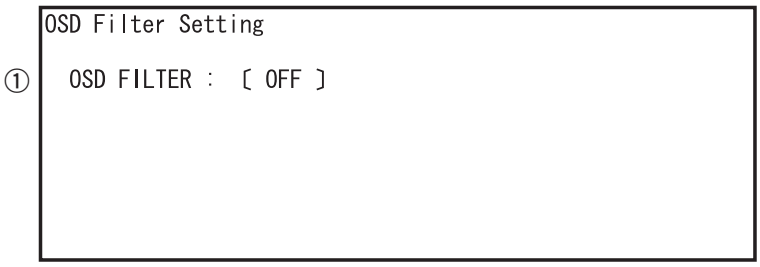
⑩ FPGA: FPGA version

• 2nd screen (OSD FILTER SETTING)
* For details on the OSD FILTER SCREEN, see the "[4] OSD FILTER SETTING".

[4] OSD FILTER SETTING

While a monitor from a manufacturer other than Pioneer is connected, symptoms such as greeking and improper video display may be generated. In such a case, set the OSD FILTER to ON in OSD FILTER SETTING mode then check the video display. The initial setting of OSD FILTER is OFF. Normally, set it to OFF.
To enter this mode, press the [ESC] then [DISP] keys to display the service screen.
Then press the [DIG/ANA] key once to switch to the OSD Filter Setting screen.
Input of the above keys are accepted both in Normal Startup mode and Checker mode.

• OSD FILTER SETTING screen



① OSD FILTER SETTING value ON
OFF

initial setting : OFF

Key operations of the OSD FILTER SETTING screen

Key	Operation	Setting value (*: Default)	Remarks
[<x3], [x3>]	For switching the OSD FILTER SETTING between ON or OFF	OFF/ON (*)	[<x3]: To set the OSD Brightness Filter to OFF [x3>]: To set the OSD Brightness Filter to ON
[ESC]	For clearing data or exiting the current mode	–	–

* Use the remote control unit for service for key operation.
* A setting becomes valid as soon as it is set. The setting value will be stored in nonvolatile memory, as with the setting values of the main unit. Therefore, the changed setting value will be retained upon the next power-on.
* About factory preset
  • If the ESC then CLEAR keys are pressed ("No power off" command) for factory presetting, the setting will be reset to default (ON).
  • If the STOP and POWER keys on the main unit are pressed simultaneously for factory presetting, the current setting will be retained.

[5] SELF-DIAGNOSIS RESULT DISPLAY

Each time the power is turned ON a self-diagnosis is performed during startup, and its result can be used for a failure analysis.
Press the [ESC], [DISP], then [4] keys, in that order, to display the result of the self-diagnosis performed during startup through communication. Any abnormality that is generated after startup will not be displayed.

• Specifications of indications for the results of self-diagnosis

```
Result of Self-Diagnostic
①   SKY Chip Info       : 2.00
②   HDMI Transmitter    : OK
③   SUBCON              : OK
④   PLL Synthesizer     : OK
⑤   DRIVE               : PIONEER BD-RW BDV-102X OK
```

① SKY Chip Info: Version and revision Nos. of the SKY Chip
② HDMI Transmitter: Result of checking communications with the SII9134CTU
③ SUBCON: Result of checking communications with the LC87F5932A
④ PLL Synthesizer: Result of checking communications with the CDCE906
⑤ DRIVE: Result of checking communications with the BD drive

[6] ERROR RATE MEASUREMENT 1 AND OK/NG JUDGMENT

Use the error rate measurement for failure judgment of the DRIVE Assy or a disc.
If a measured error rate is outside the range of the standard values, check if the DRIVE Assy is in failure, by comparing the product or the DRIVE Assy with a product or DRIVE Assy in normal state.
To measure the error rate for a certain duration, press the ESC then SIDE-B keys only during playback. The result of judgment (OK/NG) will be displayed on the FL display and as an OSD.
To exit Error Rate Measurement mode, press the ESC key while the error rate is being measured.
After exiting Error Rate Measurement mode, if the ESC then SIDE-B keys are pressed again to reenter Error Rate Measurement mode, measurement of the error rate will start from the beginning.
The error rate is measured for up to 5 sessions, and the displayed result is updated after measurement for each session is performed.
At the end of 5 sessions, the average error rate for the entire measurement range will be displayed. If measurement sessions are interrupted before 5 sessions, the average error rate up to the point of interruption will be calculated and displayed.

A result will be judged as NG if the measured error rate exceeded the reference value. See "OK/NG judgment" below.
(Only when the average error rate is judged as NG, the tray will be opened.)

Display Formats on the FL display and as an OSD

Operation	Display format	
	FL	OSD
Only during playback, if keys are pressed, calculation of error rate is started, and the results are displayed on the FL display and as an OSD. The symbol (-) (which indicates that measurement is not finished) flashes.	ER x.xE-x (At lights out) ER x.xE-x- (At lighting)	ERR RATE : x.xE-x (At lights out) ERR RATE : x.xE-x- (At lighting)
The result of measurement is displayed.		
If error rate measurement is completed before playback finishes, the average error rate, the symbol (*) (which indicates that the measurement is completed) and the judgment result (OK/NG) will be displayed on the FL and as an OSD. (When NG is displayed, if the tray is opened, the indications on the FL display and screen will be retained.)	ER x.xE-x*	ERR RATE : x.xE-* OK (NG: OSD whole screen display with red)
If error rate measurement is not completed before playback finishes, the average error rate, the symbol (-) (which indicates that measurement is not finished) and the judgment result (ERROR) that indicates that the error rate measurement has not been completed will be displayed on the FL display and as an OSD.	ER x.xE-x-	ERR RATE : x.xE-x- ERROR

* The layout for OSD depends on the mounting.
* "x.xE-X" in the above table indicates an error rate. E.g.: 3.5E-5 = $3.5X10^{-5}$

OK/NG judgment

Disc type	Reference value	Indication
DVD	$1.0x10^{-3}$	OK/NG
BD	$1.0x10^{-3}$	OK/NG
CD	No error rate measurement	

[7] ATA/ATAPI DEBUG OSD

Performance data of the DRIVE Assy can be confirmed. Refer to the fourth screen, shown below, for the judgments on degradation of LDs and use them as a guide for replacement of the DRIVE Assy.
Replace the DRIVE Assy if any of the LDs is judged as NG.
To display the first screen, press the [ESC], [DISP], then [3] keys, in that order.
To display the third screen, press the [DIG/ANA] key twice.

• 3rd screen (ATA/ATAPI DEBUG OSD-Drive maintenance data)

```
ATA/ATAPI Drive MaintenanceInfo

①  PowerON 0102:56
②  BD  0056:48
③  DVD 0023:48
④  CD  0034:04
⑤  PU Serial 00075898
```

① Accumulated power-on duration
② LD read power-on duration for the BD
③ LD read power-on duration for the DVD.
④ LD read power-on duration for the CD.
⑤ Serial No. of the PU

The power-on duration and error logs that the writer manages are displayed.

• 4th screen (ATA/ATAPI DEBUG OSD-Judgment of degradation of LDs)

```
ATA/ATAPI - LD Degrade

  BD :104 %  OK
  DVD: 96 %  OK
  CD :101 %  OK
  TMP: 41 ℃
```

It is indicated to what extent the LDs (for BD, DVD, and CD) of the drive have degraded. To update the on-screen data, content and updating conditions, see Table 1 below:

Table 1: Display content and updating conditions

Display Item	Display Content
BD	Judgment of degradation of the LD for BD. NG with a rate of 120% or higher
DVD	Judgment of degradation of the LD for DVD. NG with a rate of 120% or higher
CD	Judgment of degradation of the LD for CD. NG with a rate of 120% or higher
TMP	Current temperature inside the writer

[8] ETHERNET CHECK MODE

Note: To use this mode, a PC that supports LAN and RS-232C connection and LAN environment are required.

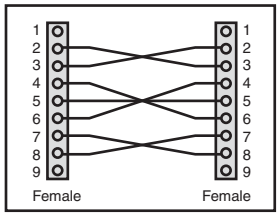
In this mode, the result of communication via the Ethernet connector is displayed.

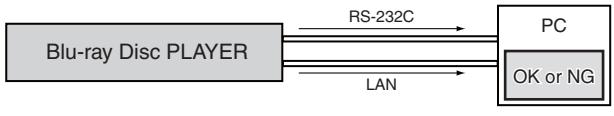
1. Connect the Blu-ray disc player and the PC via a LAN cable and RS-232C cable (Interlink cross cable).

2. Perform the network settings of the PC, as follows:
   IP Address : 192.168.0.200
   Subnet Mask : 255.255.255.0

3. Start up the terminal software* of the PC then perform the port settings, as shown below. Improper settings will lead to failure in communication.
* Example of how to access the port settings when Windows is used:
  From the Start menu, select All Programs, Accessories, Communications, then Hyper Terminal Software.
   Baud rate : 115200
   Data : 8 bits
   Parity : None
   Stop : 1 bit
   Flow : None

Connection diagram of the Interlink cross cable
DSB 9Pin





4. Press the [ESC], [CHP/TIM], then [3] keys, in that order, to send a ping from the player to the PC. “OK” will be displayed on the terminal software of the PC within 10 seconds if Ethernet communication is properly performed.
   If “NG” is displayed, improper LAN or RS-232C connection settings, connection error, or failure in the player may be suspected.

7. DISASSEMBLY

Note 1: Do NOT look directly into the pickup lens. The laser beam may cause eye injury.
Note 2: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Diagnosis of PCB's

1 Exterior Section

● **Top alminum**

① Remove the one screw. (ABA1011)

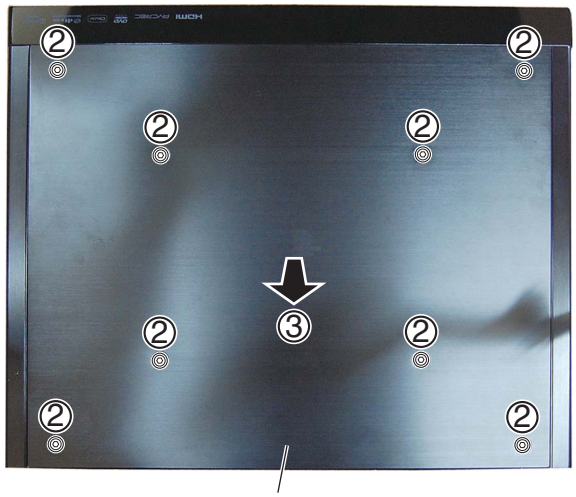
● **Rear view**

② Remove the eight screws. (VBA1115)

③ Remove the top alminum.

● **Reference**

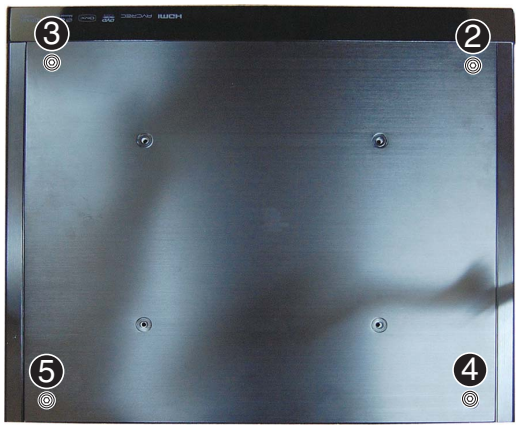
VBA1115



Top alminum

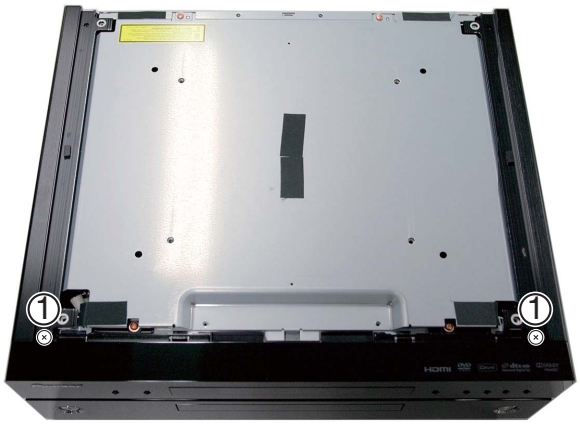
● **Screw tightening order**

The other screws are random order.



● Side alminum L and R

① Remove the two screws. (BBZ30P080FCC)

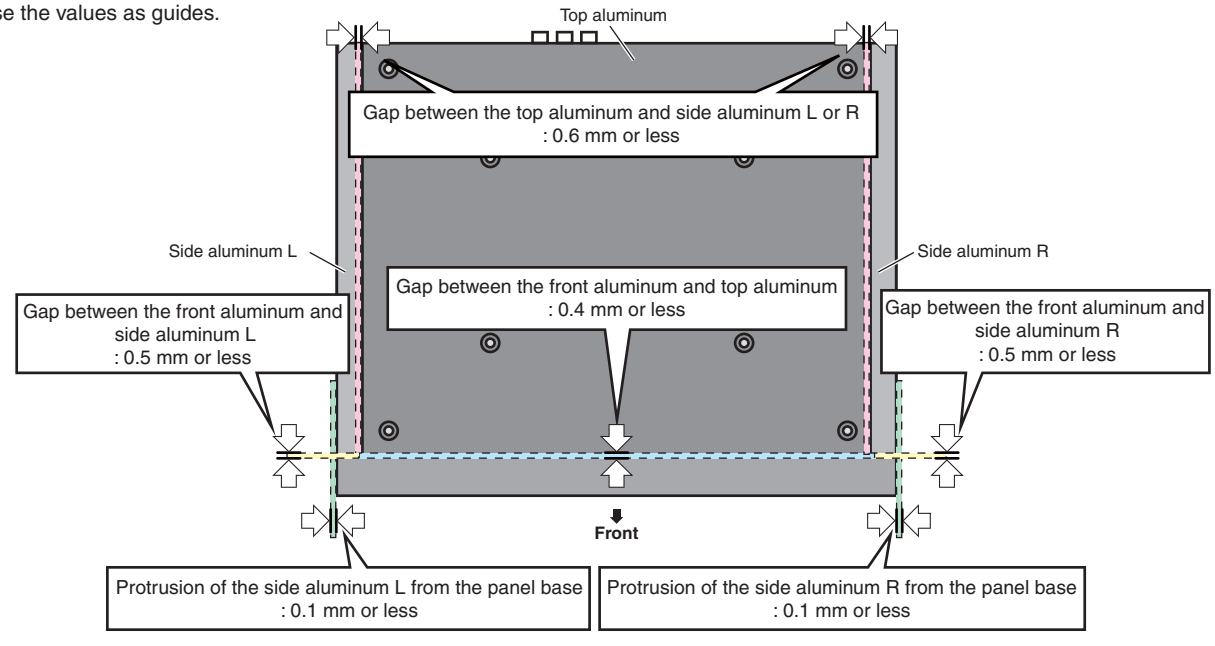


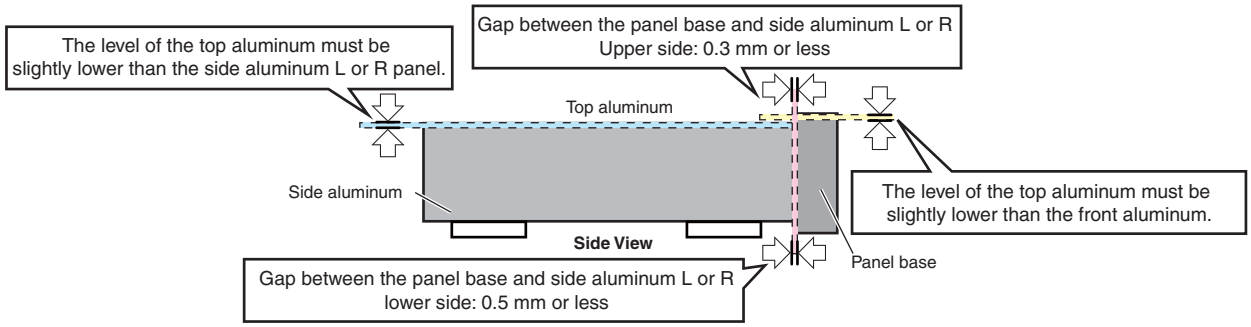
② Remove the four screws. (VBA1115)

③ Remove the side alminums L and R.

● Points to be checked during reassembling

When reassembling, check the following points.
Use the values as guides.





BDP-09FD

● Bonnet S

① Remove the six screws. (VBA1111)

● **Reference**

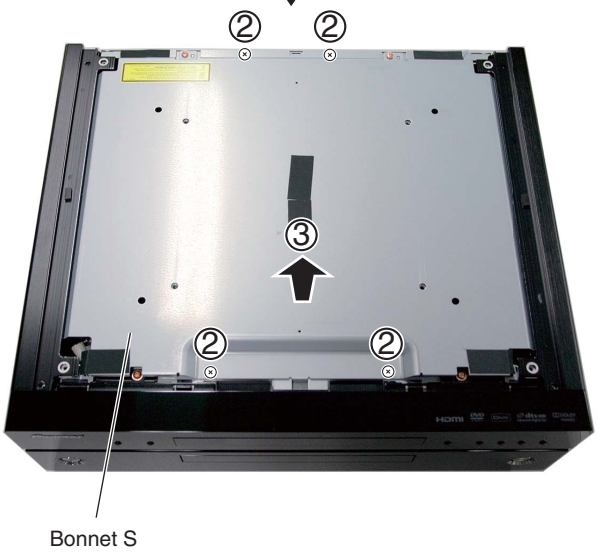
VBA1111

② Remove the four screws. (ABZ30P050FTC)

③ Remove the bonnet S.

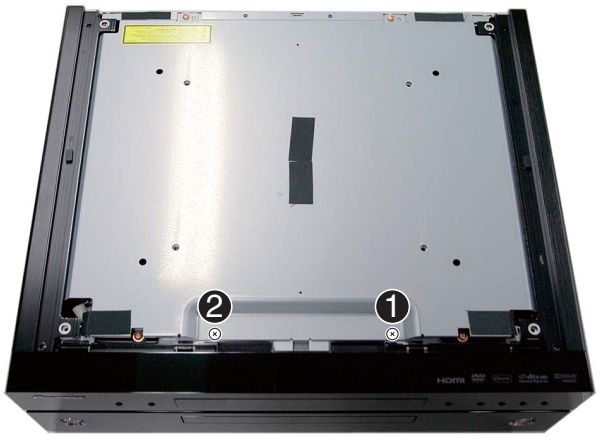
● **Reference**

ABZ30P050FTC



● **Screw tightening order**

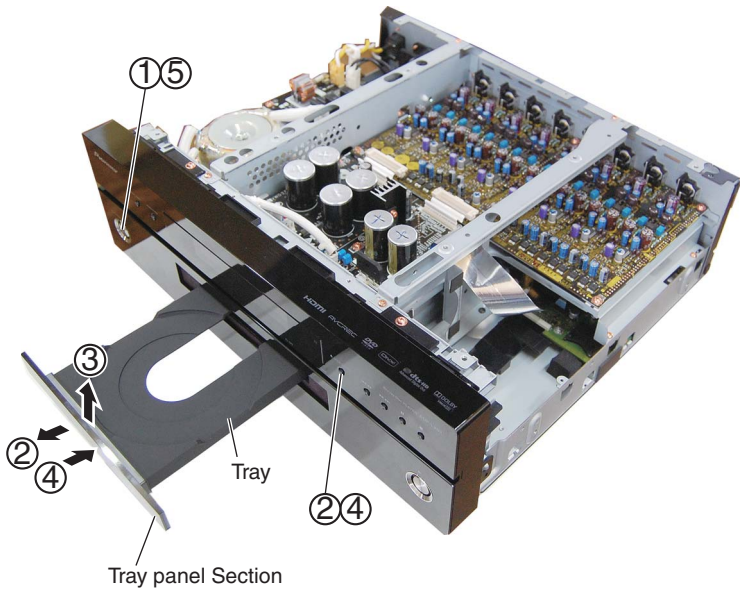
The other screws are random order.



BDP-09FD

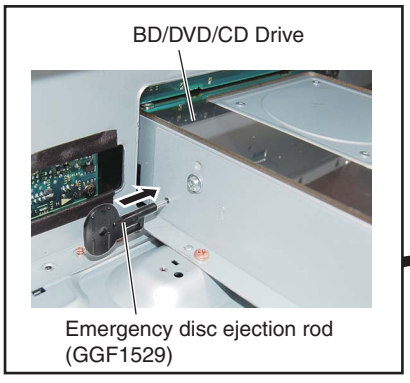
2 Tray Panel Section

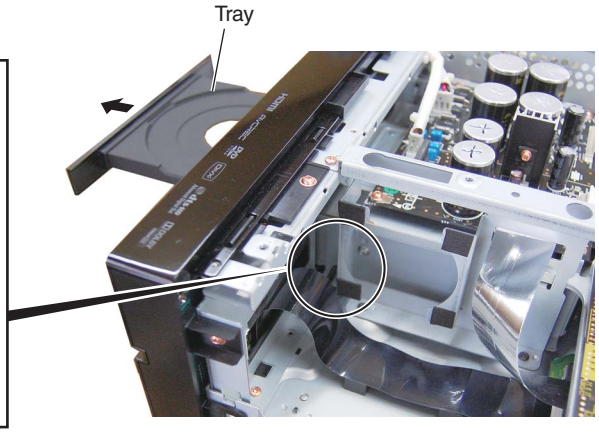
① Press the ⏻ STANDBY/ON button to turn on the power.
② Press the ⏏ OPEN/CLOSE button to open the tray.
③ Remove the tray panel Section.
④ Press the ⏏ OPEN/CLOSE button to close the tray.
⑤ Press the ⏻ STANDBY/ON button to turn off the power.



● How to open the tray when the power cannot be turned on

When the tray cannot be opened because the power cannot be turned on, it can be opened using the emergency disc ejection rod (GGF1529).
(A long, thin rod about 1 mm in diameter can be used in place of the rod.)

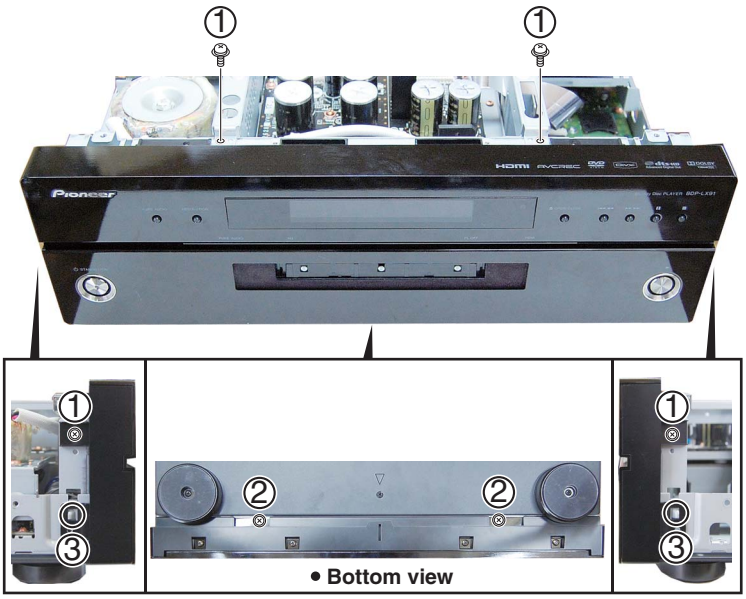




BDP-09FD

3 Front Panel Section

① Remove the four screws. (ABZ30P050FTC)
② Remove the two screws. (ABZ30P080FCC)
③ Unhook the two hooks.



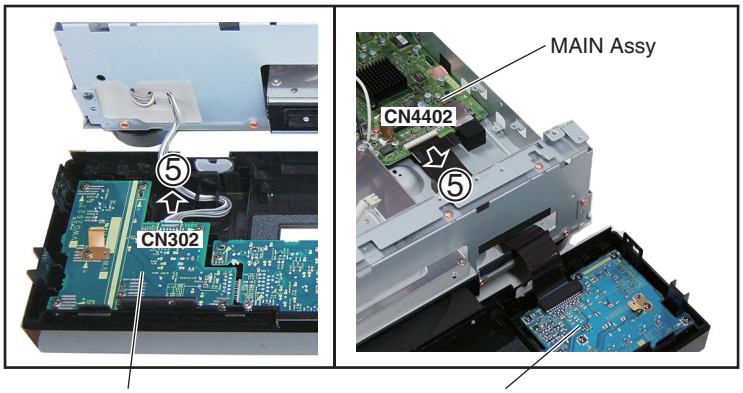
• **Reference**
ABZ30P050FTC

• **Reference**
ABZ30P080FCC

④ Remove the front panel Section.

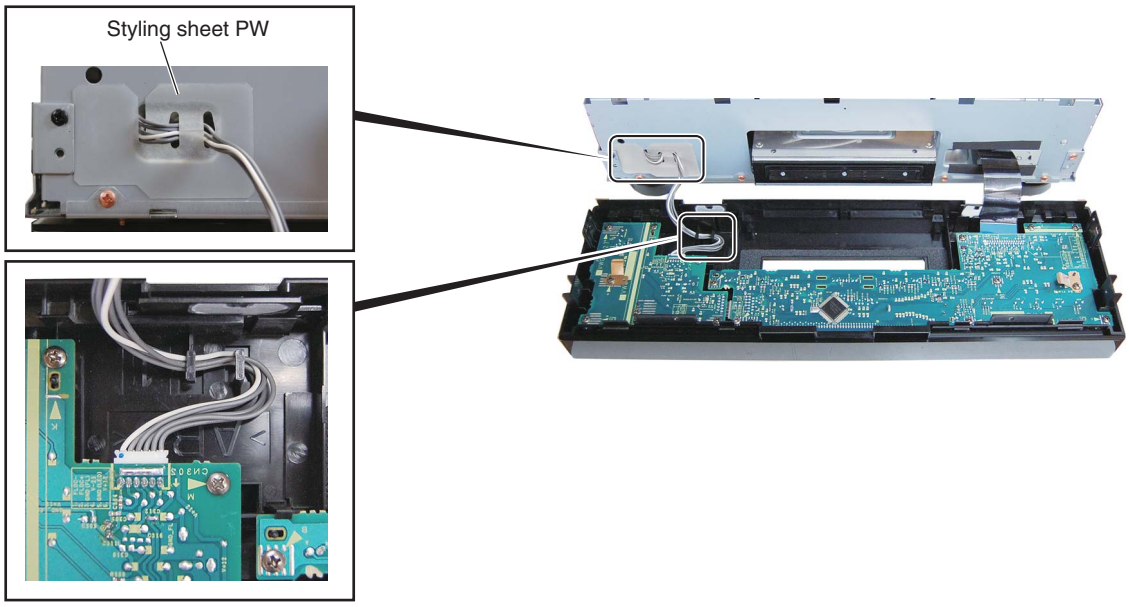
Front panel Section

⑤ Disconnect the one connector and one flexible cables.

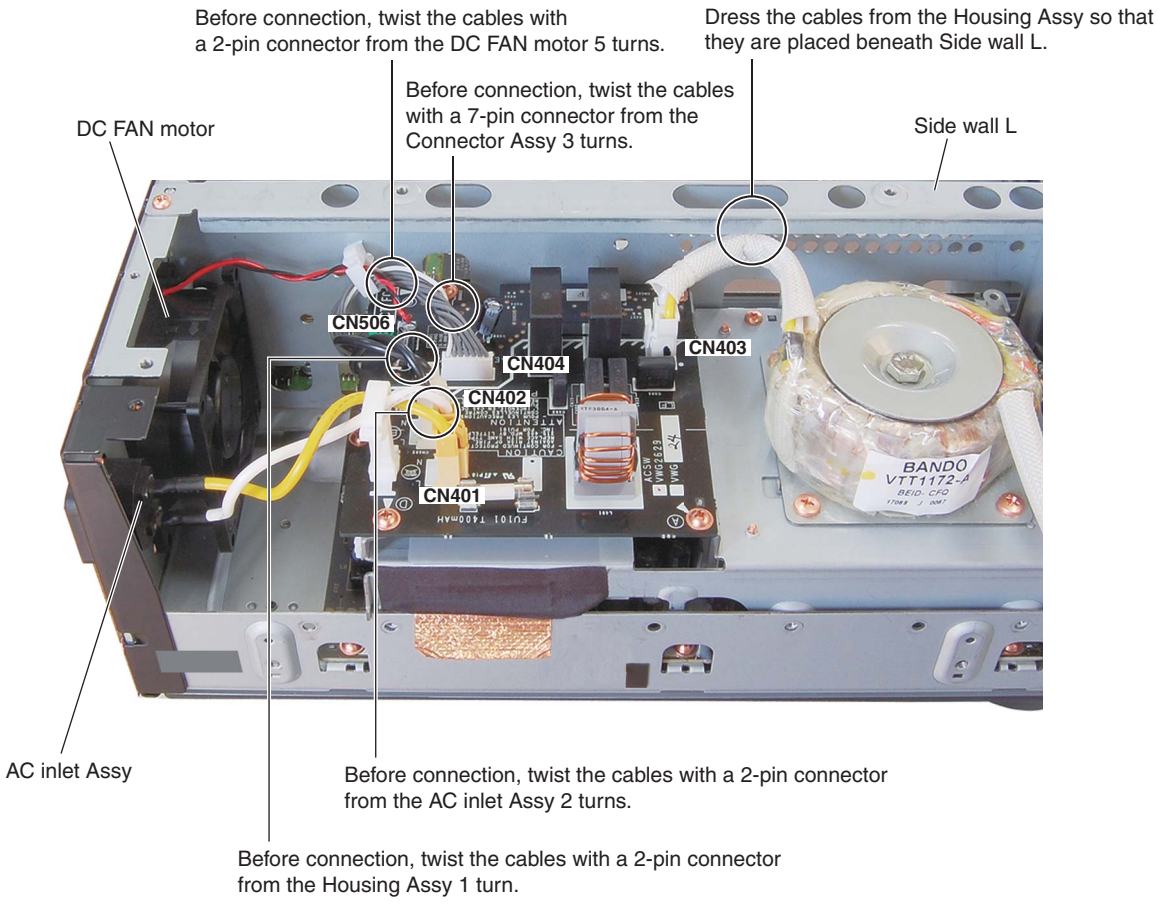


BDP-09FD

Wire Styling of the Front Panel Section



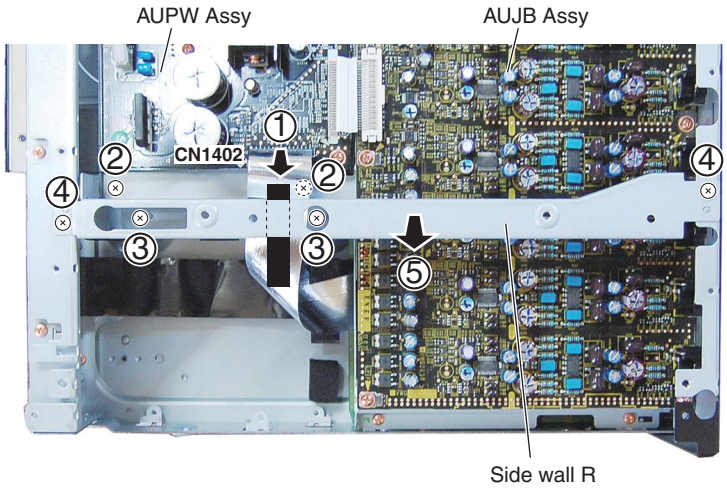
Notes on Wiring the ACSW Assy



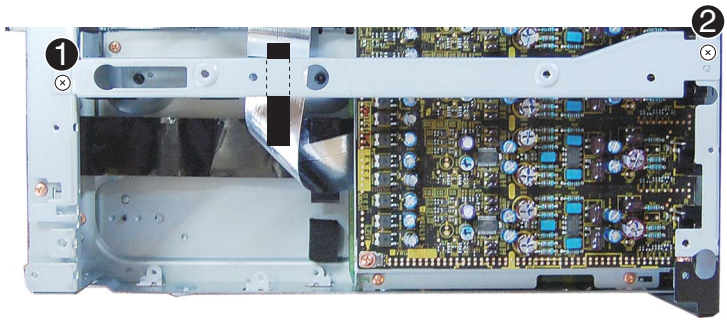
4 Sub Chassis Section

● **Side wall R**

① Disconnect the one flexible cable.
② Remove the two screws. (BBZ30P060FCC)
③ Remove the two screws. (ABA1207)
④ Remove the two screws. (BBZ30P060FCC)
⑤ Remove the side wall R.



● **Screw tightening order**
The other screws are random order.



● **Sub chassis**

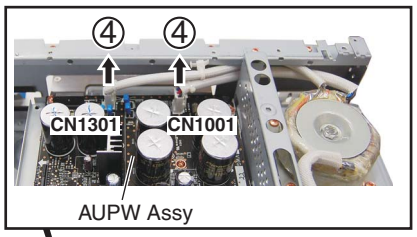
① Remove the eight screws. (BBZ30P080FCC)
② Remove the three screws. (BBZ30P060FCC)

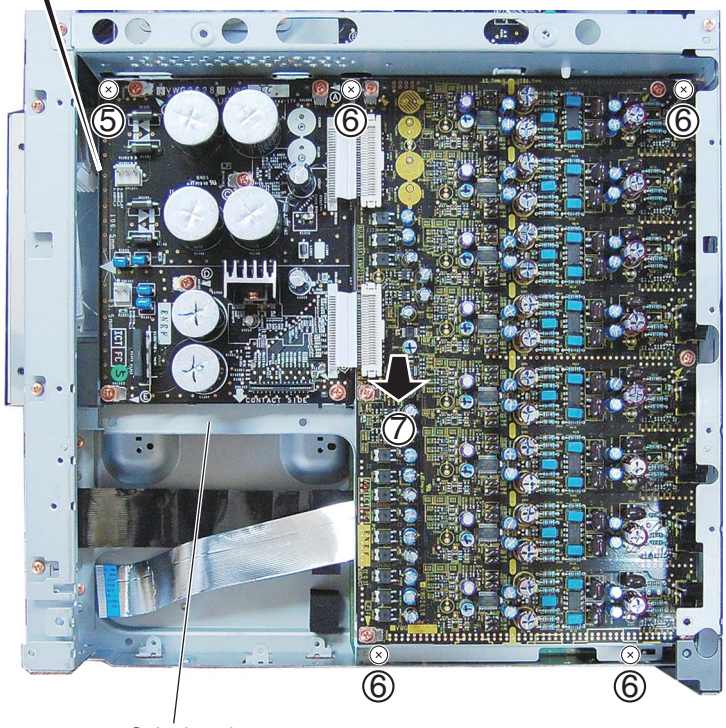
● **Rear view**

● **Screw tightening order**
The other screws are random order.

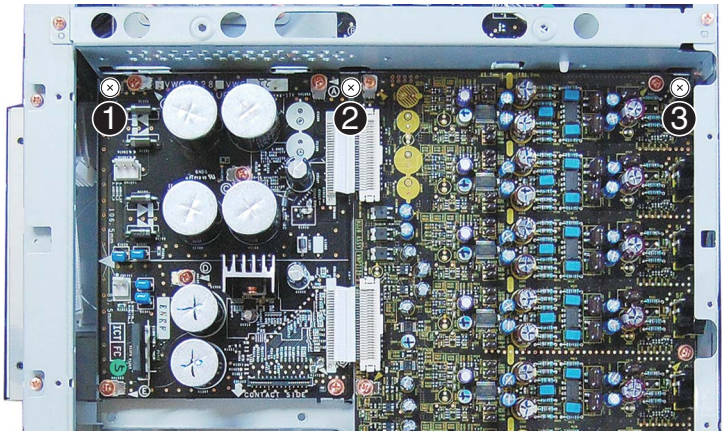
BDP-09FD

④ Disconnect the two connectors.
⑤ Remove the one screw. (ABA1207)
⑥ Remove the four screws. (BBZ30P060FCC)
⑦ Remove the sub chassis with PCBs.





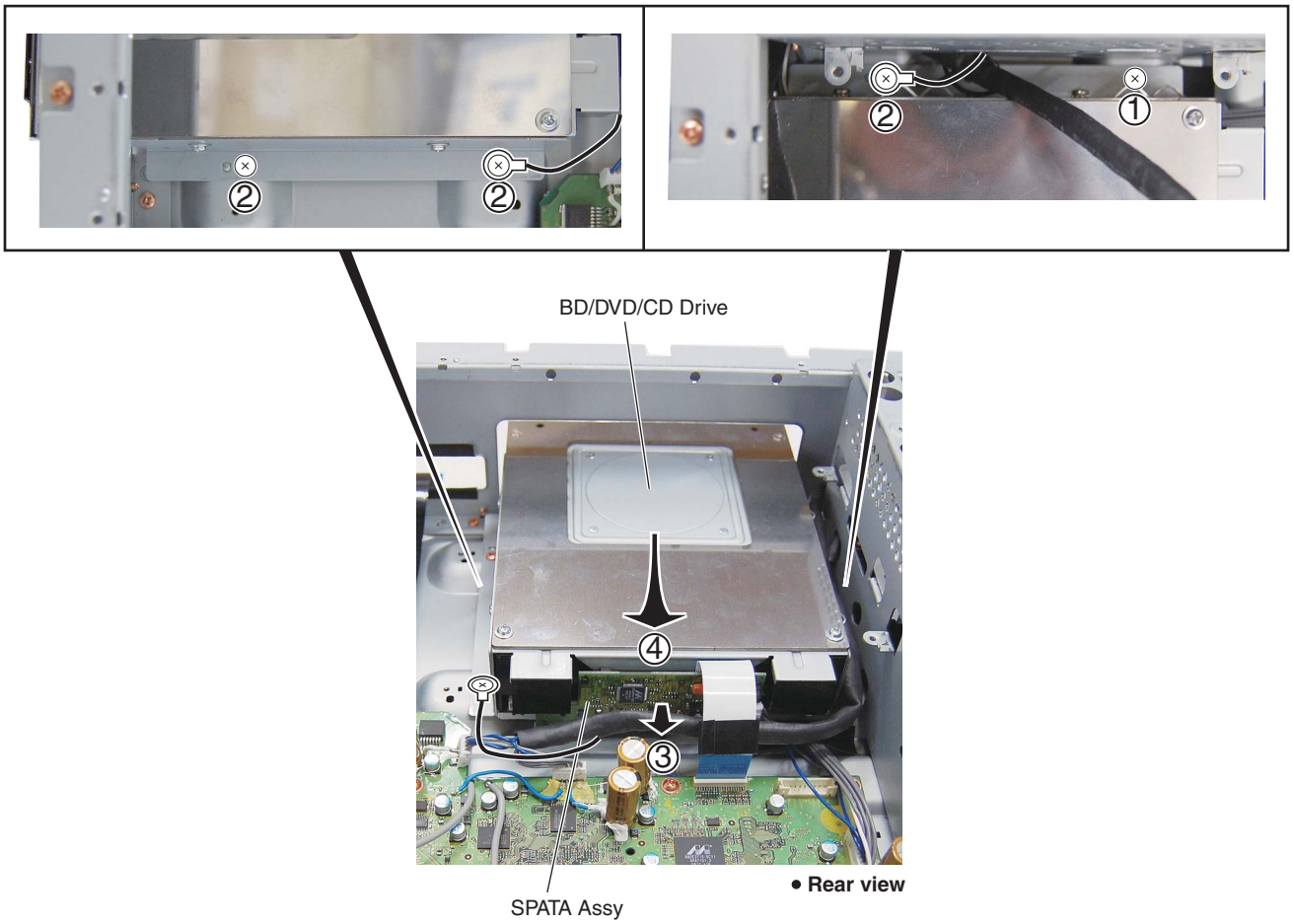
• **Screw tightening order**
The other screws are random order.



BDP-09FD

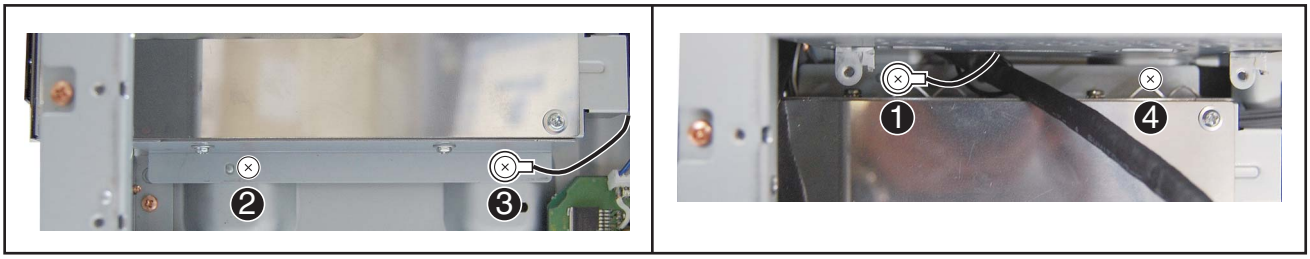
5 BD/DVD/CD Drive

① Remove the one screw. (BBT30P060FTB)
② Remove the three screws. (BBZ30P060FCC)
③ Remove the SPATA Assy.
④ Remove the BD/DVD/CD Drive.



• **Rear view**

• **Screw tightening order**
The other screws are random order.



BDP-09FD

6 Rear Panel Section

● **VOUT Assy**

① Remove the two hex headed screws. (ABA7078)
② Remove the one screw. (BBZ30P060FCC)
③ Remove the two screws. (BBZ30P080FCC)

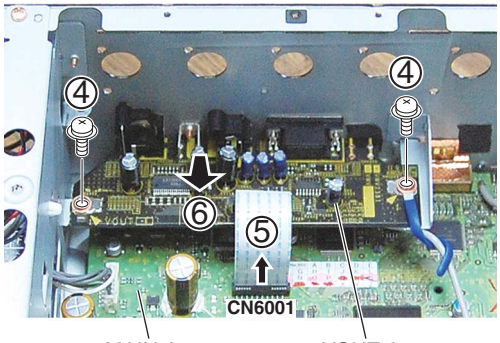
● **Reference**
ABA7078

● **Rear view**

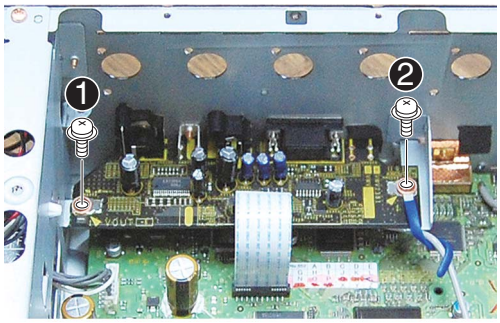
● **Screw tightening order**
The other screws are random order.

④ Remove the two screws. (ABA1011)
⑤ Disconnect the one flexible cable.
⑥ Remove the VOUT Assy.

● **Reference**
ABA1011



● **Screw tightening order**
The other screws are random order.

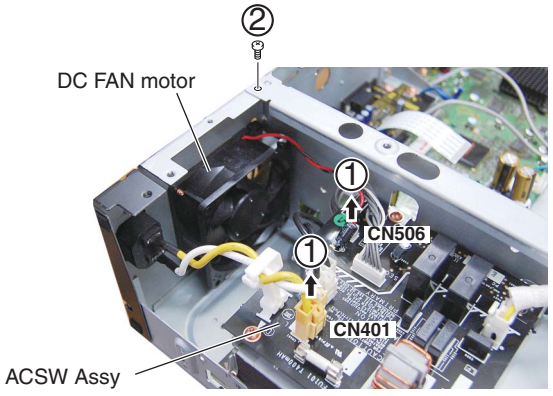


BDP-09FD

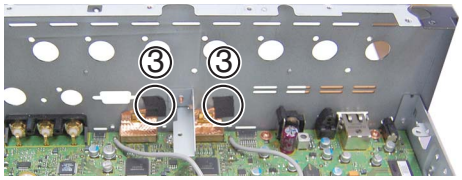
● Rear panel

① Disconnect the two connector.

② Remove the one screw. (BBZ30P060FCC)



③ Remove the two tapes.



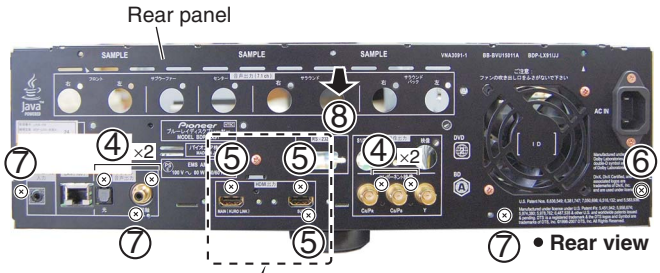
④ Remove the four screws. (BBZ30P080FCC)

⑤ Remove the three screws. (VBA1119)

⑥ Remove the one screw. (IBP30P090FCC)

⑦ Remove the three screws. (ABA1011)

⑧ Remove the rear panel.



Note:
Do not use an electric screwdriver.
If the screw is over-tightened, the screw thread may be damaged.

● Reference

VBA1119	IBP30P090FCC

● Screw tightening order

The other screws are random order.

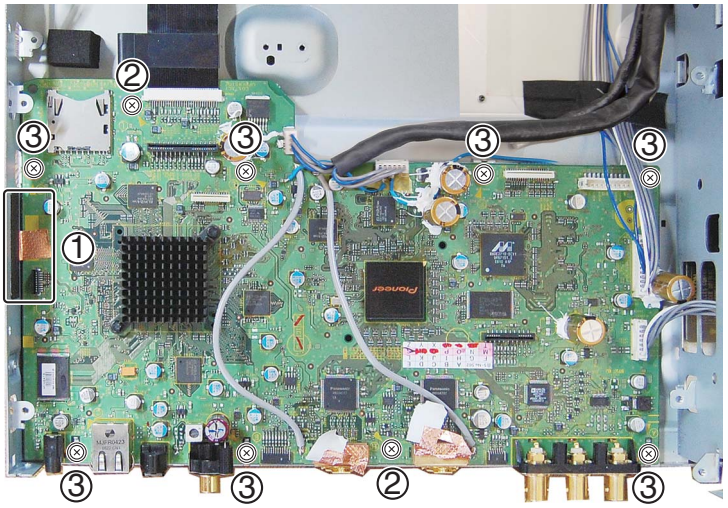
BDP-09FD

7 MAIN Assy

① Remove the one tape.
② Remove the two screws. (AMZ30P060FTC)
③ Remove the seven screws. (ABA1011)

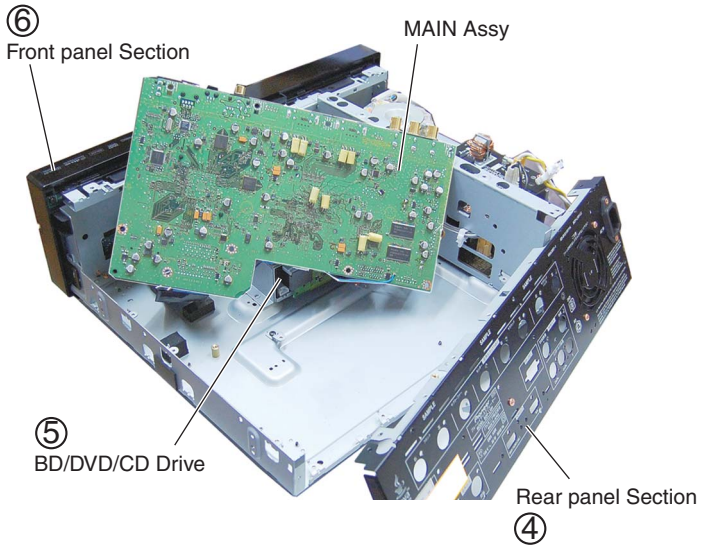
• **Reference**

ABA1011

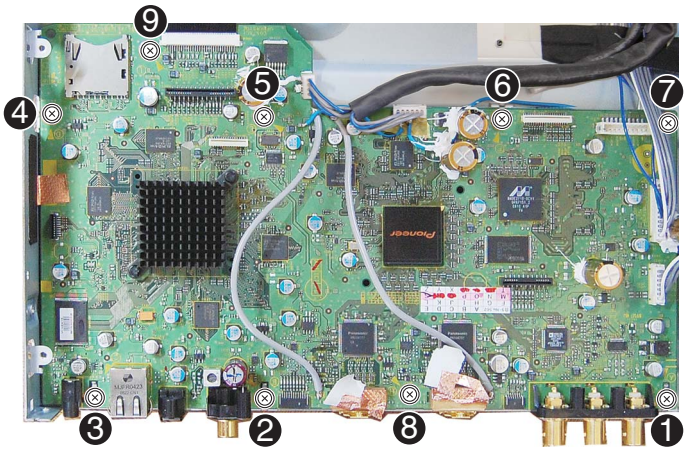


④ Reassembling the rear panel Section.
⑤ Reassembling the BD/DVD/CD Drive.
⑥ Reassembling the front panel Section.
⑦ Arrange the unit as shown in the photo below.

Diagnosis



• **Screw tightening order**

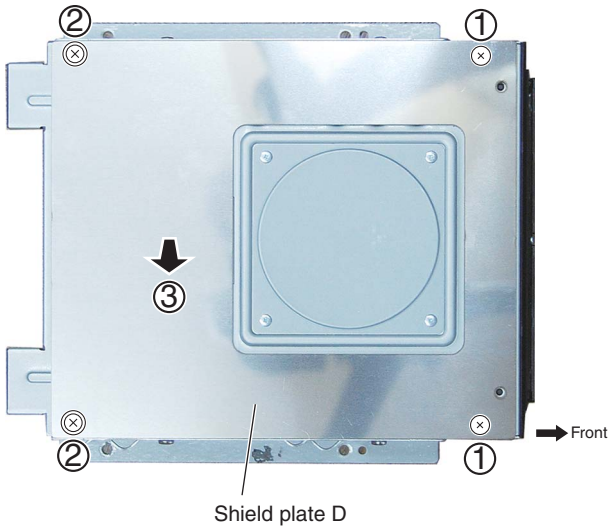


Cleaning the Pickup Lens

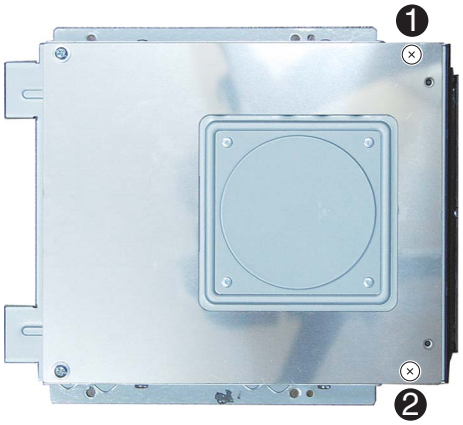
● Shield plate D

① Remove the two screws. (VBA1088)
② Remove the two screws. (AMZ30P060FTC)
③ Remove the shield plate D.

● **Reference**
VBA1088



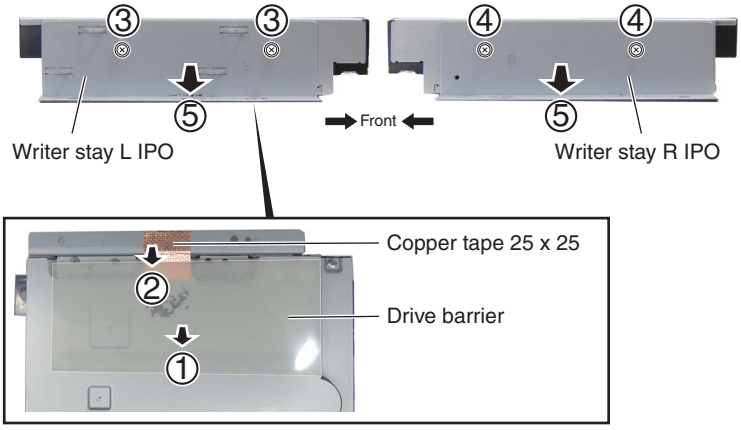
● **Screw tightening order**
The other screws are random order.



● Writer stays L and R

① Remove the drive barrier.
② Remove the copper tape 25 x 25.
③ Remove the two screws. (BMP30P060FNI)
④ Remove the two screws. (AMZ30P060FTC)
⑤ Remove the writer stays L and R.

● **Reference**
BMP30P060FNI

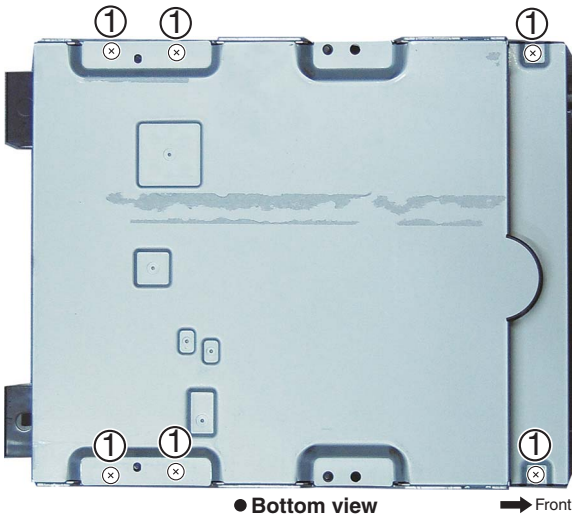


● **Screw tightening order**

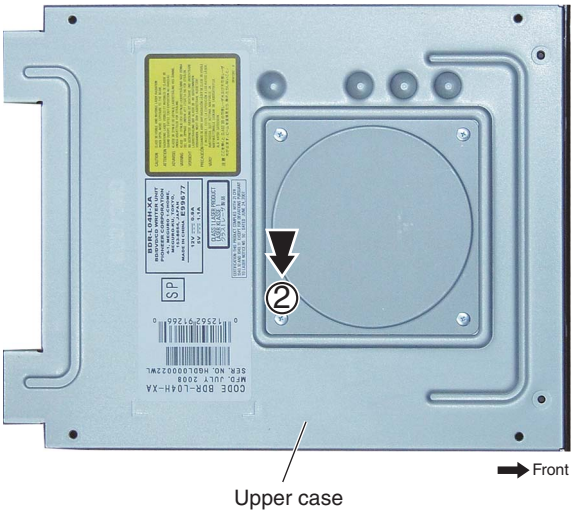
BDP-09FD

● Upper case

① Remove the six screws.

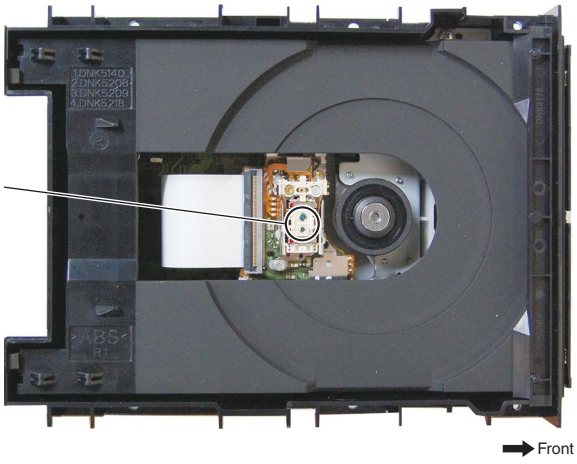


② Remove the upper case.



Before shipment, be sure to clean the pickup lenses, using the following cleaning materials:

Cleaning liquid : GEM1004
Cleaning paper : GED-008



8. EACH SETTING AND ADJUSTMENT
8.1 NECESSARY ADJUSTMENT POINTS

Note : Be sure to update the firmware before starting adjustments or settings.
If you do not, the screen for the subsequent settings will not be displayed.

When	Adjustment Points
■ Exchange Parts of Mechanism Assy	
Exchange the DRIVE ASSY	**Mechanical point** • None
	Electric point • FIRMWARE UPDATE • ID NUMBER and DATA SETTING
■ Exchange PCB Assy	
Exchange MAIN ASSY	**Mechanical point** • None
	Electric point • FIRMWARE UPDATE • ID NUMBER and DATA SETTING • MODEL SETTING

8.2 FIRMWARE UPDATE

UPDATE PROCEDURE

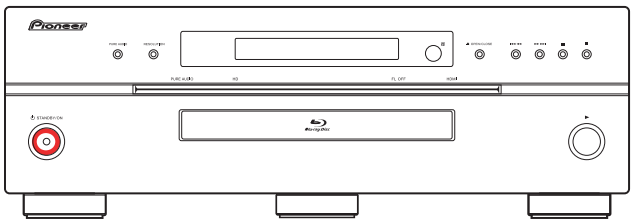
After the DRIVE or MAIN Assy is replaced, be sure to update the firmware before starting any adjustment/setting.

1. Plug a power cable into the unit.
2. Press the "STANDBY/ON" button to switch the unit on.
3. Press the "OPEN/CLOSE" button to open the disctray.
4. Place an UPDATE disc on the tray.
5. Press the "OPEN/CLOSE" button on the front panel to begin the application update.

   * FL display indicates "DL OK" and the unit automatically switches into standby with the tray opening.

   * The update time takes 5 to 30 minutes, it changes depending on the version.

DO NOT unplug the power cable or press the standby button until the unit switches into standby mode.



6. Remove the UPDATE disc from the tray.
7. Press the "STANDBY/ON" button to switch the unit on, and check if FL display indicates "DL OK". The update is completed if FL display indicates "DL OK".

8.3 MODEL SETTING

After updating the firmware, perform the model name and destination settings, as shown below.
After replacement of the unit, the screen shown below will be displayed. Based on the model name and destination settings, the language and video outputs will be automatically set.

■ Destination Setting Screen

```
[ Check  Mode  for  Model  Setting ]
Input  the  number  using  the  remote  for  Service.

> ----

Input   No.     Model
[ 0131      :   BDP-LX91/WY5     ]
[ 0132      :   BDP-LX91/WV5     ]
[ 0133      :   BDP-LX91/WS5     ]
[ 0134      :   BDP-09FD/KU/CA   ]
[ 0135      :   BDP-LX91/JJ      ]
[ 0136      :   BDP-LX91/WL      ]
[ 0137      :   BDP-LX91/WPW     ]
[ 0138      :   BDP-LX91/LF      ]
```

Fig. 1

- The screen for setting the destination region will be analogous to the screen shown in Fig. 1.
- A proportional font will be used.
- Entering a 4-digit number is possible with the remote control unit for service (Fig. 2).
- To exit the Destination Setting screen, press the ESC key.

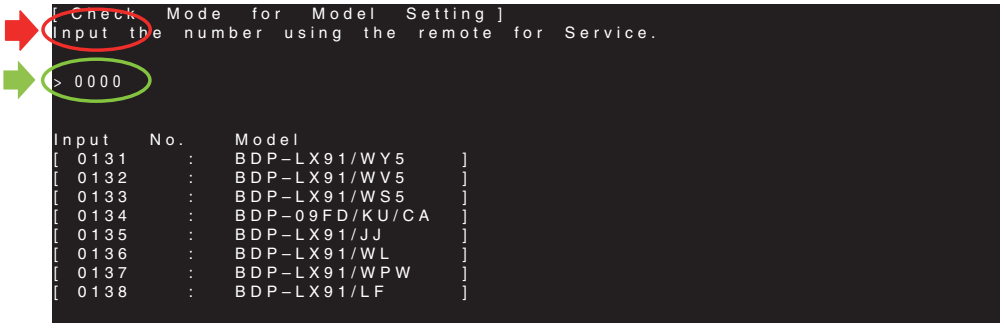


Fig. 2

- **On input keys**

Key	Operation
Keys 0-9 on the remote control unit for service	For inputting numerics.
CLEAR key on the remote control unit for service	For canceling input numerics and returning to the initial display.

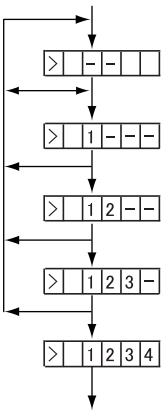
Keys other than those mentioned above will not be accepted.

- Once all 4 digits are input, that number is set.
  -> If a number corresponding to the input number does not exist, the error message will be displayed. (Fig. 3)
  -> After the error message is displayed, no key input will be accepted. (Unplug the power cord.)

```
[ Check  Mode  for  Model  Setting ]
Input  the  number  using  the  remote  for  Service.

> 0000



 NG!

 Pull out a Power plug from a socket.
```

Fig. 3

• The first input numeric is displayed at the rightmost position then will be shifted to the left with subsequent key inputs, as shown below:



No input
A "1" is input. (Even if a nonvalid numeric is input, the error message will not be displayed at this stage.)

A "2" is input. (Even if a nonvalid numeric is input, the error message will not be displayed at this stage.)
When the CLEAR key is pressed, the screen will return to the initial display.

A "3" is input. (Even if a nonvalid numeric is input, the error message will not be displayed at this stage.)
When the CLEAR key is pressed, the screen will return to the initial display.

A "4" is input. (If the input 4-digit number is not a valid number, "> 1234" is instantly [0.2 sec] displayed. Then an error message will be displayed.)
When the CLEAR key is pressed, the screen will return to the initial display.

The above "> 1234" is instantly (0.2 sec) displayed
then the Model Setting screen will be cleared.

• To correct the input data, press the CLEAR key on the remote control unit for service.
All the input numerics will be cleared.

• On the model indications

• The model number then the destination are indicated in the Model column.
• A full model number is indicated (16 one-byte characters at maximum).
• The model numbers and destinations are displayed in alphabetical and ascending numeric orders, from the top line in the left column.

• If the corresponding number exists:
-> The model and region numbers are displayed for 2 sec. (Fig. 4)
-> Then the unit will be turned off.

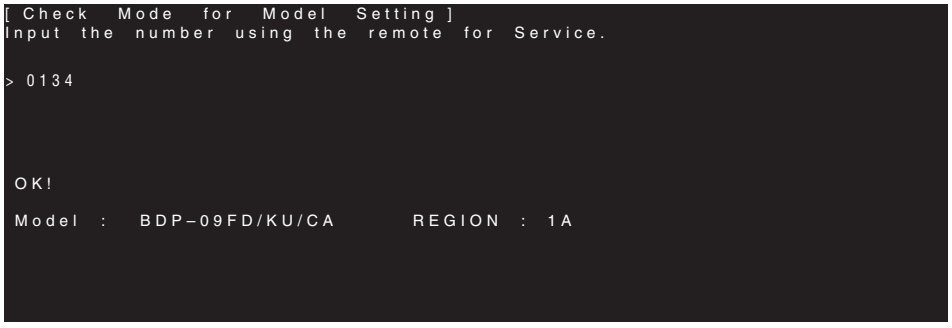


Fig. 4

• FL display

While the Model Setting screen is displayed:
MODEL SET

If the input model number exists:
MODEL OK (After this indication is displayed for 2 sec, the unit is turned off.)

If the input model number does not exist:
MODEL ERR

8.4 CPRM ID NUMBER AND DATA SETTING

After updating the firmware, set the ID No. and ID data.

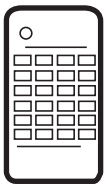
[Purposes]

- An individual ID number and ID data (AACS, CPRM, BD+, Windows Media DRM, and MAC address) must be input at the same time. All data are determined according to the data on the ID data disc. If the number and data are not set correctly with the following procedure, the unit does not work properly. You will find the ID number to be labeled on the rear panel.

This setting is Necessary When:

- When the DRIVE Assy or MAIN Assy is replaced.

[Tools to be used]



Remote control unit for servicing
(GGF1067)

ID Disc for Blu-ray Player
(GGV1334)

[Notes]

Important: If no ID label is found on the rear panel, write down the specified ID number by checking it on the version check screen ([ESC] + [DISP]).

- Input the ID number while the unit is in Stop mode.
- After the data are read from the ID data disc, the disc will automatically be unloaded.
- Each time a key input succeeds, the screen background becomes blue. If a key input fails, the screen background becomes red.

■ CPRM ID Registration Mode

• Conditions for entering CPRM ID Registration mode
During Playback Stop mode, press the ESC then STEREO keys.
The above key inputs are accepted only during Normal Playback Stop mode.

• Conditions for exiting CPRM ID Registration mode
Press the CLEAR key to return to Normal mode.

• How to input the ID No. and ID data
① To enter Input mode, press the ESC then STEREO keys.
② After entering Input mode, input a 9-digit ID No. (The number is displayed on the FL display.)
The ID No. is described on the ID label located on the rear panel of the product.

② →
```
[Player's ID Number Settig]
 ID Number ?
 >---------

<CLEAR> Exit


Input ID Number !
```

③ After the 9-digit ID No. is input, the SEARCH key will be accepted. If it is pressed, the ID No. will be displayed.

③ →
```
[Player's ID Number Settig]
 ID Number ?
 >000000001  OK ?

<SEARCH> Enter


Input ID Number !
```

④ After the ID No. is set, the unit awaits ID data input. ("INSERT ID DATA" is displayed on the FL display.)
Load the ID data disc in the disc tray. As soon as the tray is closed, reading of the data will start.

④ →
```
[Player's ID Number Settig]


<CLEAR> Exit


Insert The ID Data Disc !
```

⑤ During data reading, the indications below will be displayed. ("LOAD ID DATA" is displayed on the FL display.)

⑤ →
```
[Player's ID Number Settig]


Loading The ID Data Disc !
```

⑥ After reading of the ID data is completed, writing of the data on the flash ROM will start. ("WRITE ID DATA" is displayed on the FL display.)

⑥ →
```
[Player's ID Number Settig]


Wait Rom Writing !
```

⑦ Upon completion of writing on the flash ROM, "Rom Write OK!" will be displayed. ("ID DATA OK" will be displayed on the FL display.)
The background color of the screen will change to blue when writing of various key data is successfully completed. If writing fails, the background color will change to red.

⑧ Upon completion of writing, press the CLEAR key to exit Input mode.

When writing is successfully completed

⑦ →, ⑧ →
```
[Player's ID Number Settig]


Rom Write OK !


<CLEAR> Exit
```

When writing fails
```
[Player's ID Number Settig]


Rom Write NG !


<CLEAR> Exit
```

■ CPRM ID Registration Mode 2

• How to clear the ID No.

① With the ID No. set, press the ESC then STEREO keys.
② Input the same number as the set ID No.

②→

```
[Player's ID Number Settig]
 ID Number ?
 [000000001]
 Compare
 >---------

 <CLEAR> Exit
 <STEREO> ID Data Setting Mode
 Input ID Number !
```

③ Press the STOP key after the 9-digit number is input. Only when the input number and the set number coincide, the set ID No. will be erased, and the unit will exit this mode.
If the numbers do not coincide, the screen will return to that in Step ②.
(The STOP key is not accepted after input of a 9-digit number is finished.)

③→

```
[Player's ID Number Settig]
 ID Number ?
 [000000001]
 Compare
 >000000001 OK?

 <STOP> Memory Clear
 <STEREO> ID Data Setting Mode
 Input ID Number !
```

• Example of the FL display during numeric input for the ID No.

When the numerics 0, 1, and 2 are input, in that order:
[012]

* If an ID No. is already registered, the registered ID No. is displayed before you enter any numeric. (The registered ID No. also remains displayed when a wrong ID No. is input [NG].)

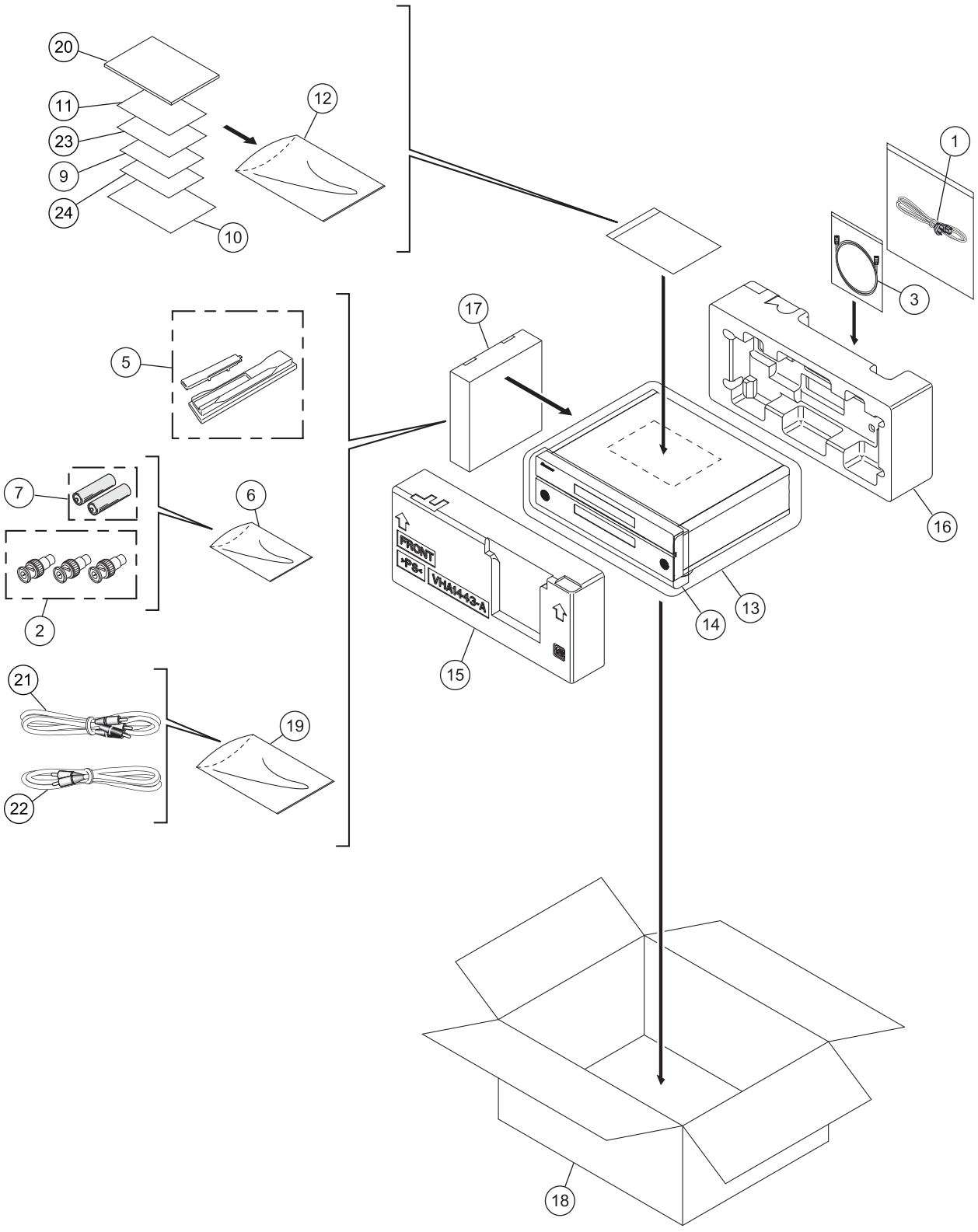
Before any numeric is input (registered ID: 012345678)
[012345678]

When the first digit (0) is input
[0]

9. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

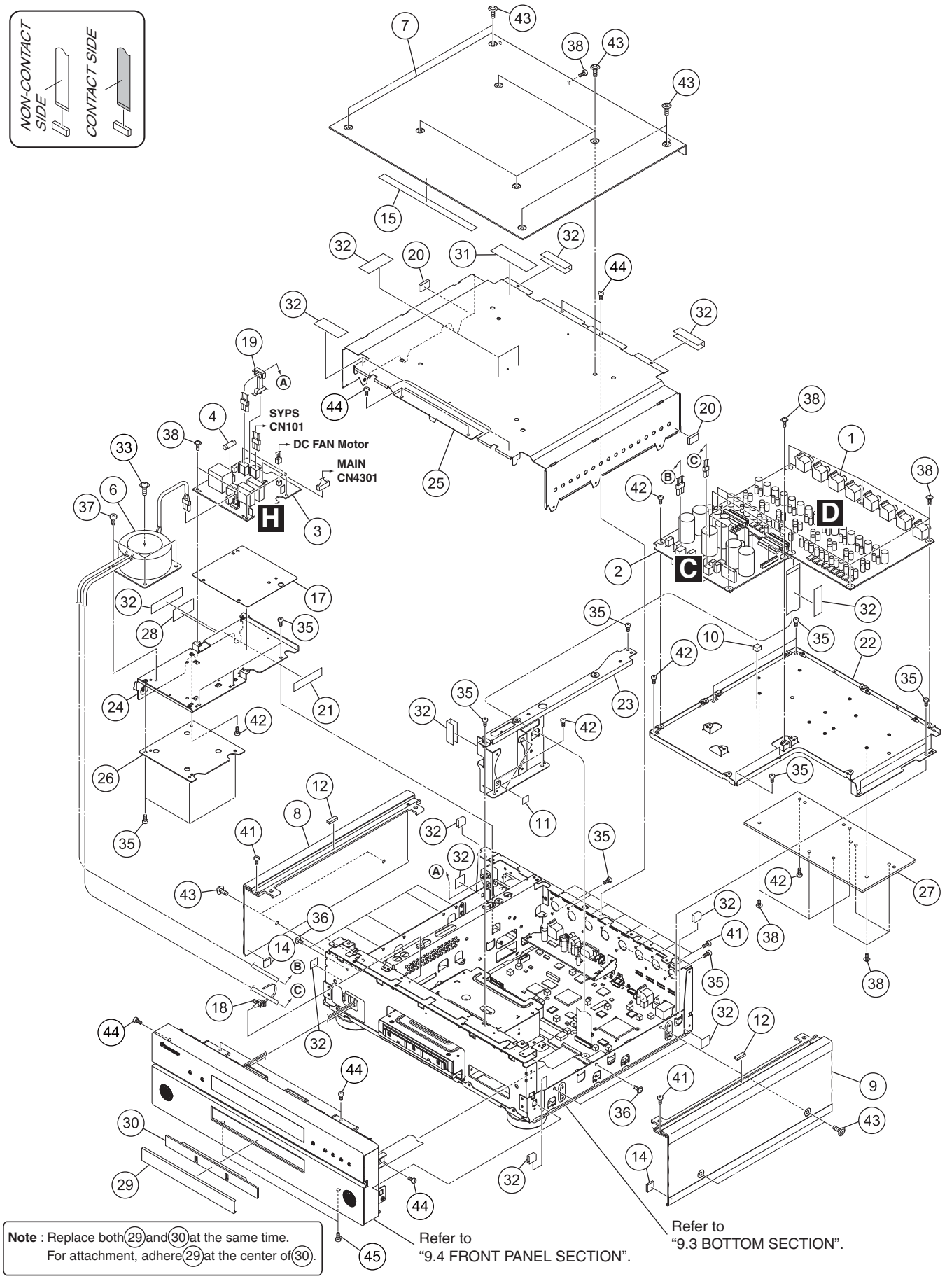
9.1 PACKING SECTION



PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	Power Cord	ADG7061
	2	BNC-RCA adapter	AKX1052
	3	LAN cable	VDE1098
	4	•••••	
	5	Remote control	VXX3316
NSP	6	Cover	CEG-201
NSP	7	AA/R6 dry cell batteries	VEM1039
	8	•••••	
NSP	9	Update Guide	VRY1171
NSP	10	Warranty card	ARY1026
	11	User card	ARY1176
NSP	12	Polyethylene Bag	Z21-038
	13	Mirror Mat Sheet	DHL1006
	14	Protection Film	VEC2637
	15	Front Pad	VHA1443
	16	Rear Pad	VHA1444
	17	Accessory Box	VHC1182
	18	Packing Case	VHG2903
	19	Polyethylene Bag	VHL1051
	20	Operating Instructions (English)	VRB1508
	21	Audio cable (white/red plugs)	VDE1064
	22	Video cable (yellow plugs)	VDE1065
NSP	23	Caution	VRR1099
NSP	24	Update Guide	VRY1184

9.2 EXTERIOR SECTION



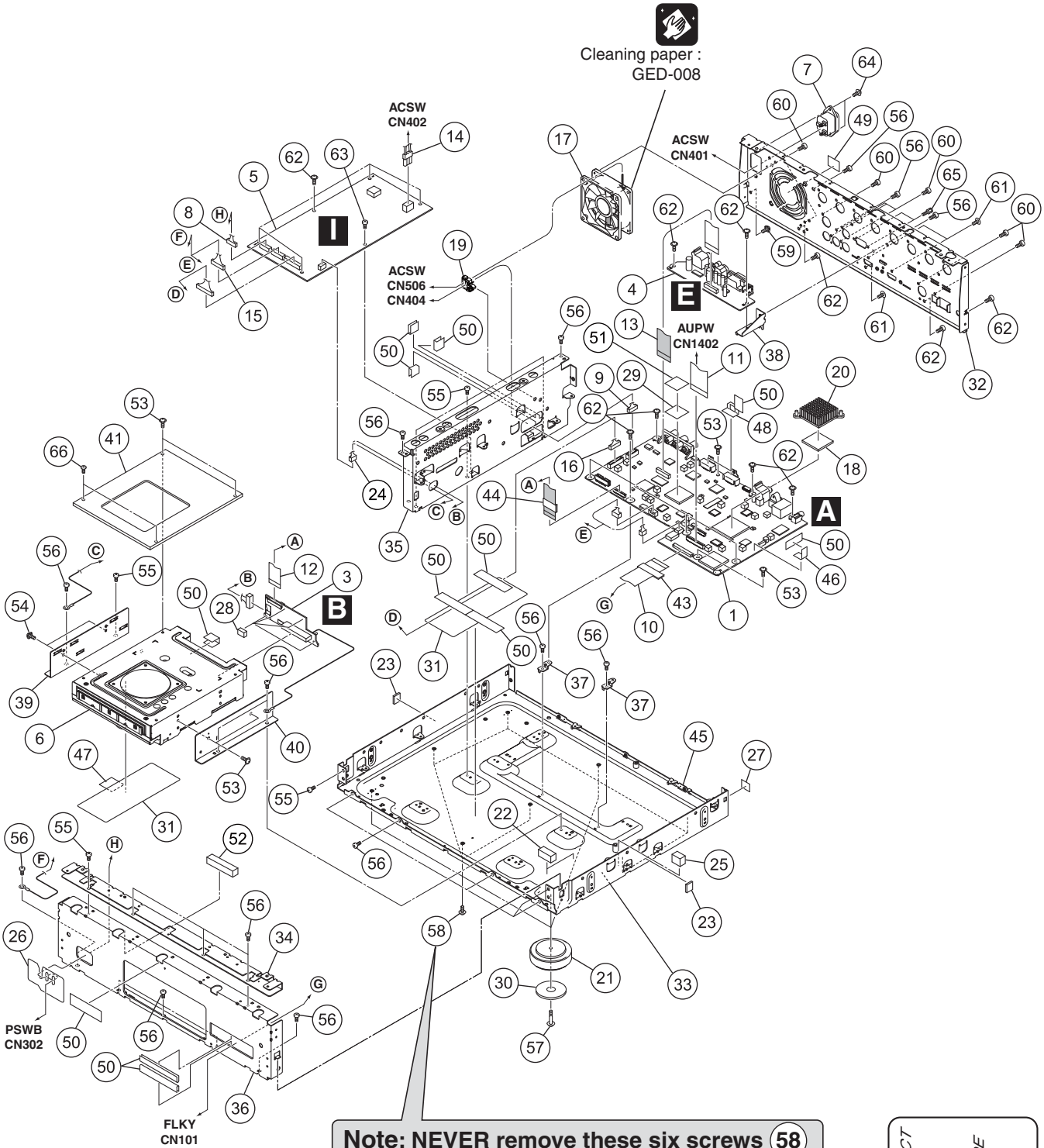
Note : Replace both (29) and (30) at the same time.
For attachment, adhere (29) at the center of (30).

EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	AUJB Assy	VWG2630
	2	AUPW Assy	VWG2628
	3	ACSW Assy	VWG2629
⚠	4	Fuse (FU101: 1 A)	REK1136
	5	• • • • •	
⚠	6	Toroidalcore-Trans	VTT1173
	7	Top Aluminum	VAH1457
	8	Side Aluminum L	VAH1458
	9	Side Aluminum R	VAH1459
	10	Rubber Spacer	VEB1422
	11	Rubber Spacer	VEB1424
	12	Rubber Spacer	VEB1441
	13	• • • • •	
	14	Rubber Spacer S	VEB1440
	15	Rubber Spacer	VEB1433
	16	• • • • •	
	17	Barrier	VEC2620
	18	Reuse Band	VEC2635
	19	Reuse Clamp 125	VEC2636
	20	Gasket 20 x 5T	VEC2649
	21	Barrier	VEC2660
NSP	22	Sub Chassis	VNB1067
NSP	23	Side Wall R	VNE2495
NSP	24	Trans Stay	VNE2496
NSP	25	Bonnet S	VNE2513
NSP	26	Trans Support	VNE2517
NSP	27	Shield Plate S	VNF1146
	28	Copper Tape T	VEF1073
	29	Tray Aluminum	VAH1467
	30	Tray Panel Base	VNK6455
	31	Laser Caution Label	VRW2262
	32	Acetate Tape (19 mm)	GYH1030
	33	Screw	VBA1056
	34	• • • • •	
	35	Screw	BBZ30P060FCC
	36	Screw (FE)	VBA1111
	37	Screw	BCZ40P080FCC
	38	Screw (steel)	ABA1011
	39	• • • • •	
	40	• • • • •	
	41	Screw	BBZ30P080FCC
	42	Screw (steel)	ABA1207
	43	Screw (FE)	VBA1115
	44	Screw	ABZ30P050FTC
	45	Screw	ABZ30P080FCC

9.3 BOTTOM SECTION

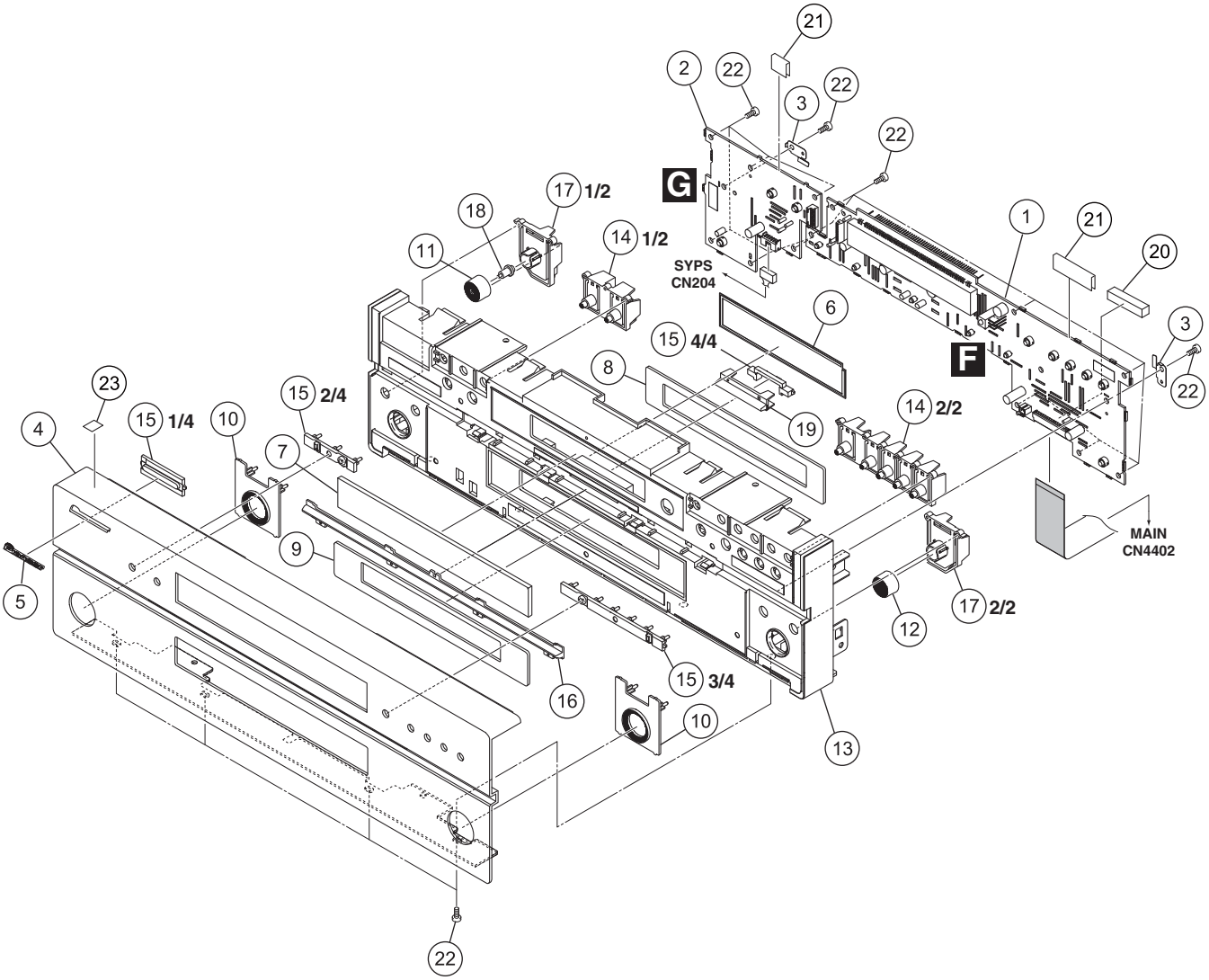
1 SERVICE MAIN Assy
- MAIN Assy
- 3 SPATA Assy

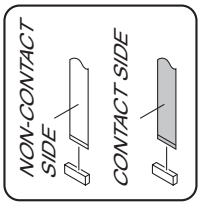


BOTTOM SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	SERVICE MAIN Assy	VXX3348
	2	•••••	
	3	SPATA Assy	VWV2387
	4	VOUT Assy	VWV2381
⚠	5	SYPS Assy	VWR1422
	6	BD/DVD/CD Drive (BDR-L04H-XA/XV/5)	VXX3343
⚠	7	AC Inlet Assy	ADX7723
	8	Connector Assy (P6)	PF06PP-D22
	9	Connector Assy	PF07PP-D15
	10	Flexible Cable (30P) Rev	VDA2193
	11	Flexible Cable (28P)	VDA2194
	12	Flexible Cable (40P)	VDA2201
	13	Flexible Cable (20P)	VDA2204
⚠	14	Housing Assy (2P)	VKP2456
	15	Housing Assy (10P)	VKP2465
	16	Housing Assy (12P)	VKP2466
	17	DC Fan Motor	VXM1122
	18	Thermal Sheet B	AEB1417
	19	Reuse Clamp	AEC2129
	20	Heat Sink B	ANH1645
	21	Insulator 56	ANL7028
	22	Rubber Spacer 1	VEB1387
	23	Rubber Spacer S	VEB1440
	24	Housing Assy (6P)	VKP2464
	25	SD Card Block 18T	VEB1434
	26	Styling Sheet PW	VEC2617
	27	Spacer BC	VEC2647
	28	PCB Spacer	VEC2662
	29	Double Faced Tape	VEC2655
	30	Cushion	VEC2656
	31	Drive Barrier	VEC2661
	32	Rear Panel	VNA3093
NSP	33	Bottom Plate	VNB1070
NSP	34	Front Stay S	VNE2493
NSP	35	Side Wall L	VNE2494
NSP	36	Front Stay IPO	VNE2501
NSP	37	PCB Stay IPO	VNE2502
NSP	38	PCB Stay C	VNE2511
NSP	39	Writer Stay L IPO	VNE2526
NSP	40	Writer Stay R IPO	VNE2527
NSP	41	Shield Plate D	VNF1147
	42	•••••	
	43	Ferrite Core	VTX1004
	44	Ferrite Core	VTX1005
NSP	45	Base Chassis Assy	VXA2967
	46	Copper Tape 13 x 25	VEF1070
	47	Copper Tape 25 x 25	VEF1071
	48	Copper Tape HDMI	VEF1072
NSP	49	ID Label Assy	VXW1023
	50	Acetate Tape (19 mm)	GYH1030
	51	PCB (LOGOB)	VNP2145
	52	Styling Spacer	VEB1438
	53	Screw	AMZ30P060FTC
	54	Screw	BMP30P060FNI
	55	Screw	BBT30P060FTB
	56	Screw	BBZ30P060FCC
	57	Screw (FE)	VBA1116
	58	Screw	IBZ30P080FCC
	59	Screw	IBP30P090FCC
	60	Screw	BBZ30P080FCC
	61	Screw (FE)	VBA1119
	62	Screw (steel)	ABA1011
	63	Screw (steel)	ABA1207
	64	Screw	CBZ30P080FCC
	65	Screw 2.85 x 7 (BS)	ABA7078
	66	Screw (FE)	VBA1088

9.4 FRONT PANEL SECTION



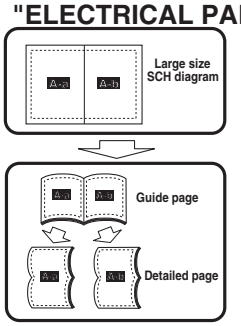


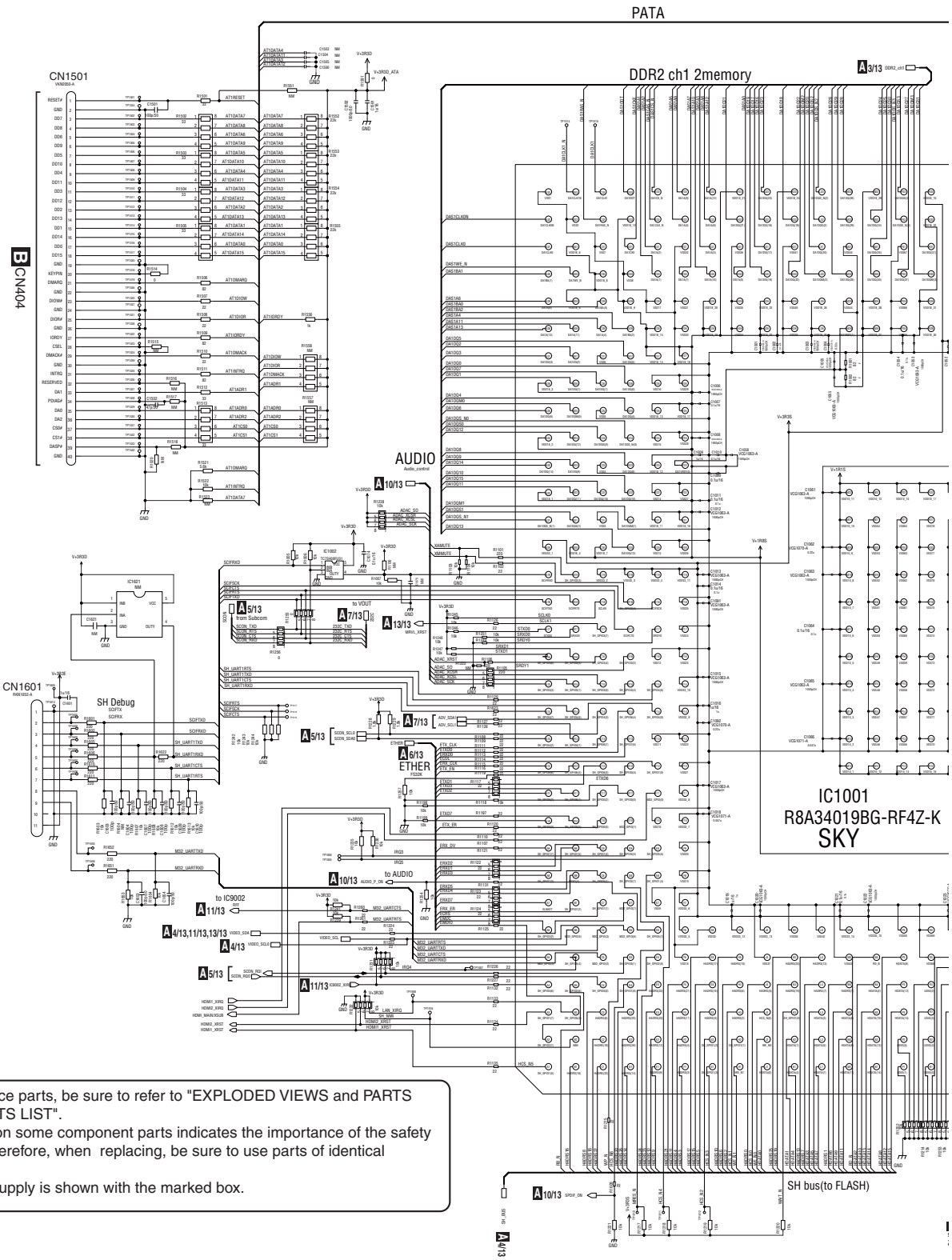
FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	FLKY Assy	VWG2626
	2	PSWB Assy	VWG2627
	3	Earth Plate	VBK1166
	4	Front Aluminum	VAH1469
	5	Pioneer Badge G	VAM1159
	6	FL Filter IPO	VEC2605
	7	FL Lens 4.0	VEC2619
	8	Drive Cushion	VEC2625
	9	Front Cushion	VEC2626
	10	Ring	VNK6382
	11	Key Top PW	VNK6380
	12	Key Top PL	VNK6381
	13	Panel Base	VNK6354
	14	Function Key	VNK6357
	15	Holder Assy	VNK6398
	16	Information Bar	VNK6409
	17	Key Base PW/PL IPO	VNK6412
	18	Key Lens IPO	VNK6417
	19	IB Lens V5SEL IPO	VNK6440
	20	Styling Spacer	VEB1438
	21	Acetate Tape (19 mm)	GYH1030
	22	Screw	BPZ30P080FBN
NSP	23	Energy Star Label	AAX8022

10. SCHEMATIC DIAGRAM
10.1 SERVICE MAIN ASSY (1/13)(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



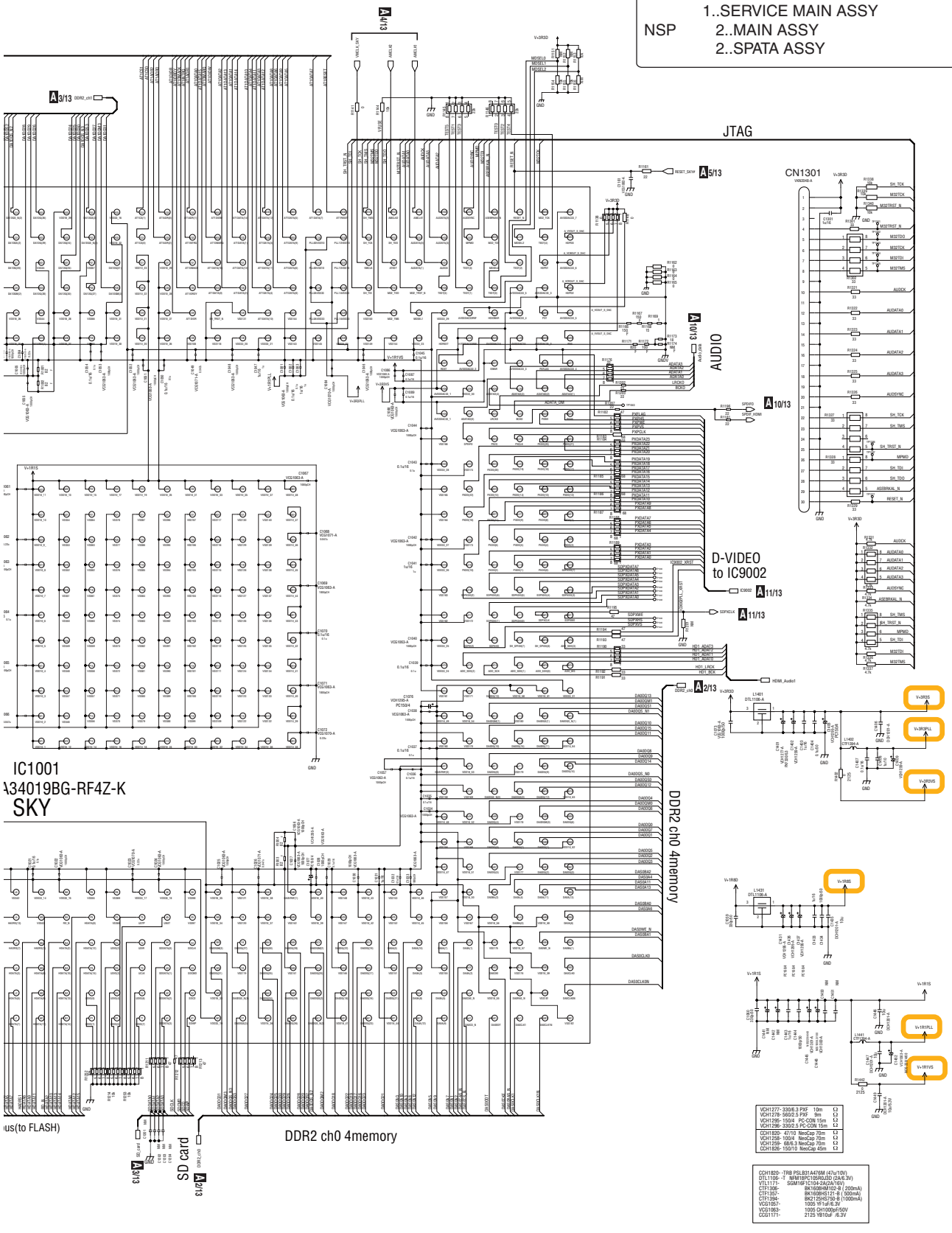


- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- ⬭ : The power supply is shown with the marked box.

A 1/13 SERVICE MAIN ASSY (VXX3348)

A-b 1/13

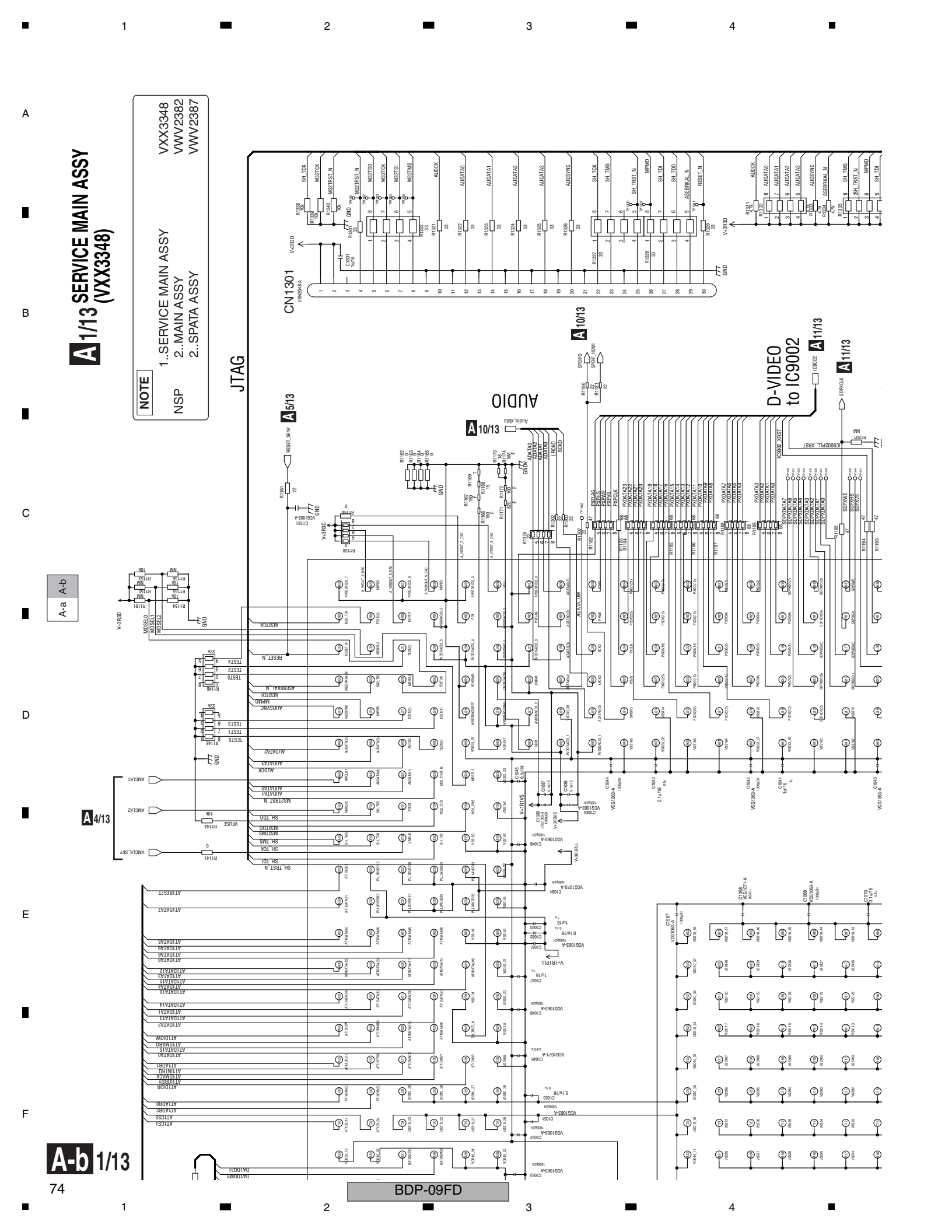
NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

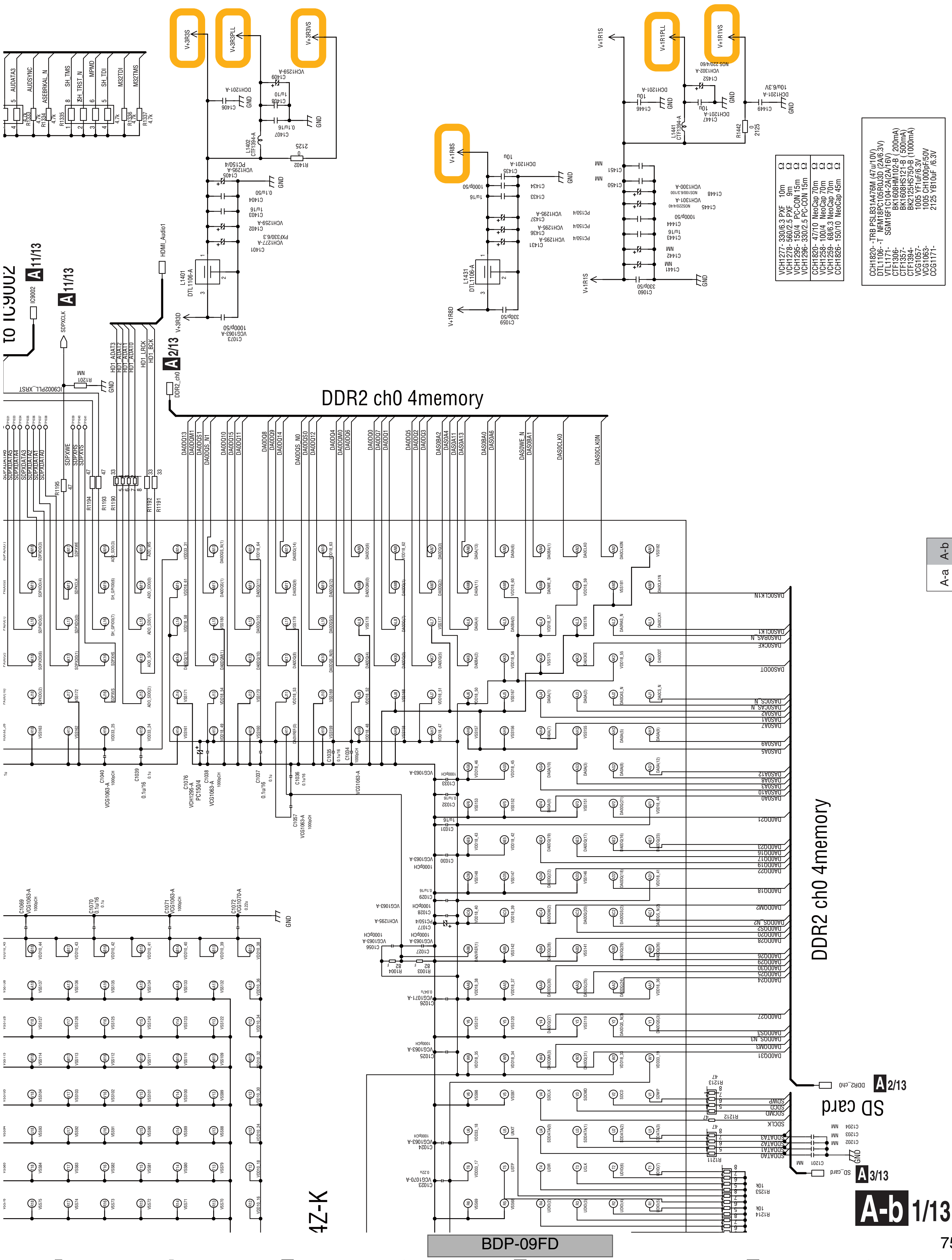


A 1/13 SERVICE MAIN ASSY (VXX3348)

		VXX3348
	1..SERVICE MAIN ASSY	VWV2382
NSP	2..MAIN ASSY	VWV2387
	2..SPATA ASSY	

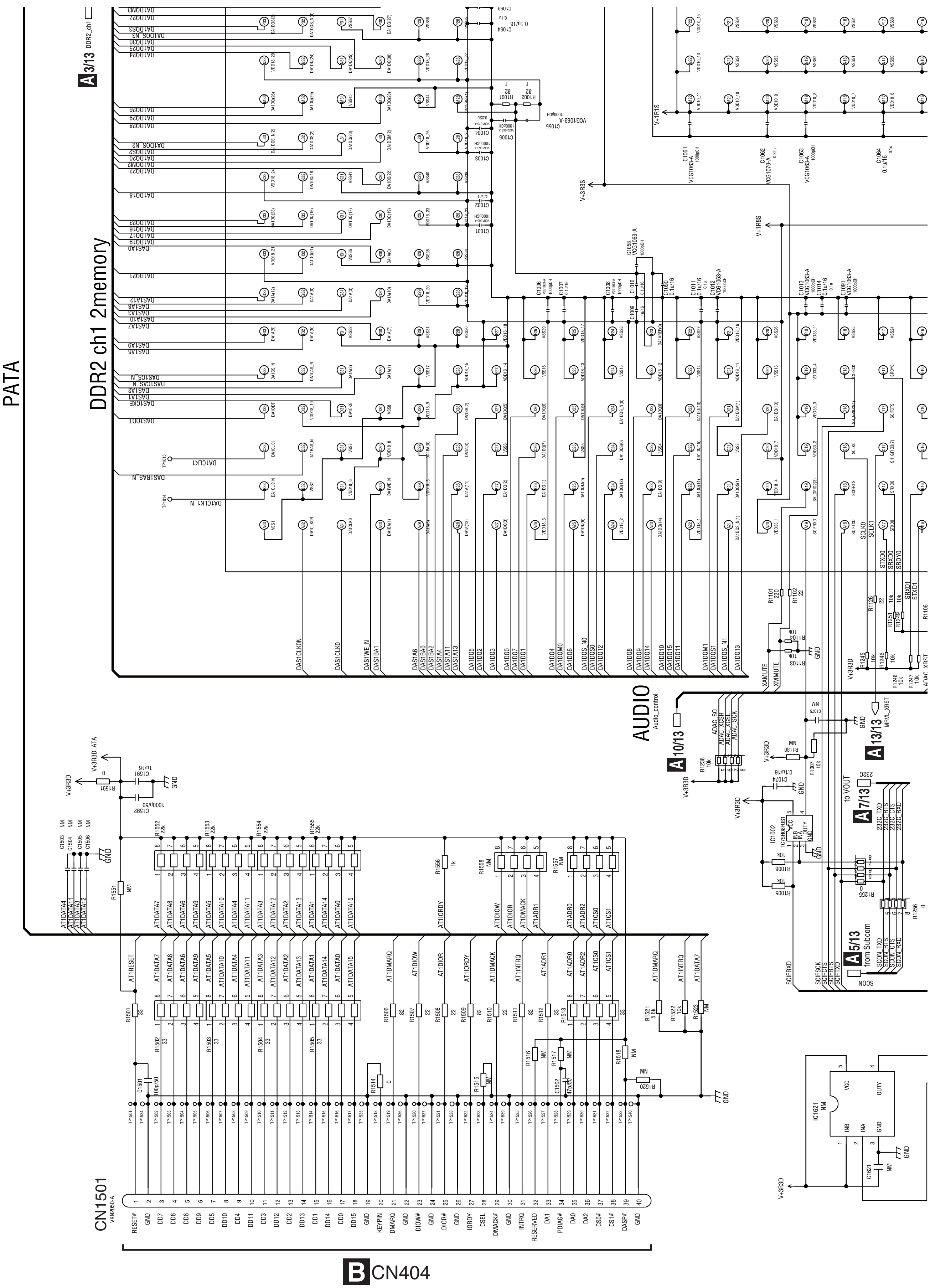
NOTE



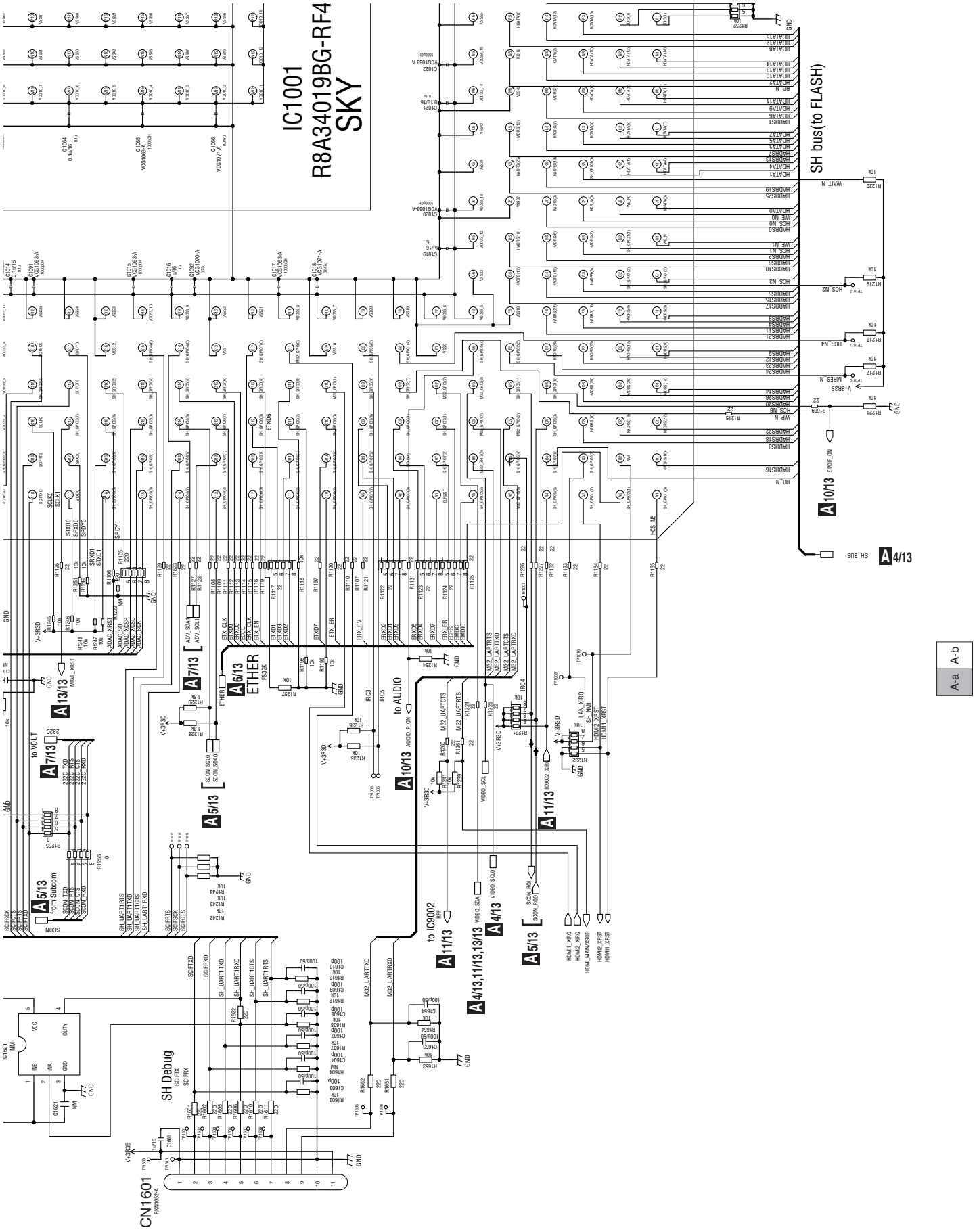

DDR2 ch0 4memory
DDR2 ch0 4memory
SD card
A-b 1/13

A
B
C
D
E
F

A-a A-b



A-a 1/13

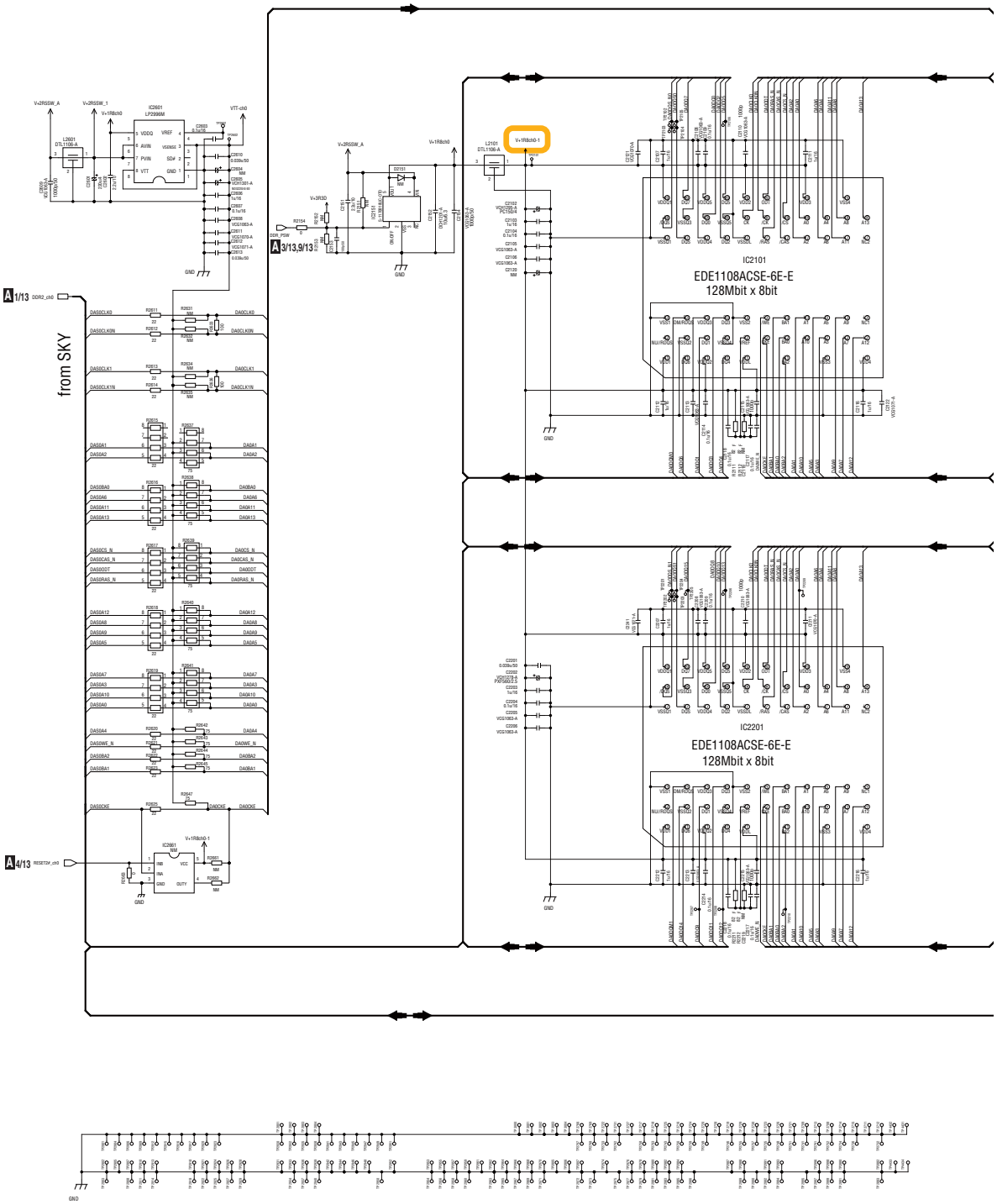

IC1001
R8A34019BG-RF4
SKY
SH bus(to FLASH)
SH Debug
CN1601
to VOUT
to AUDIO
to IC9002
ETHER
from Subcom
A-a 1/13

10.2 SERVICE MAIN ASSY (2/13)(GUIDE PAGE)

A

A-a 2/13

DDR2 ch0



B

C

D

E

F

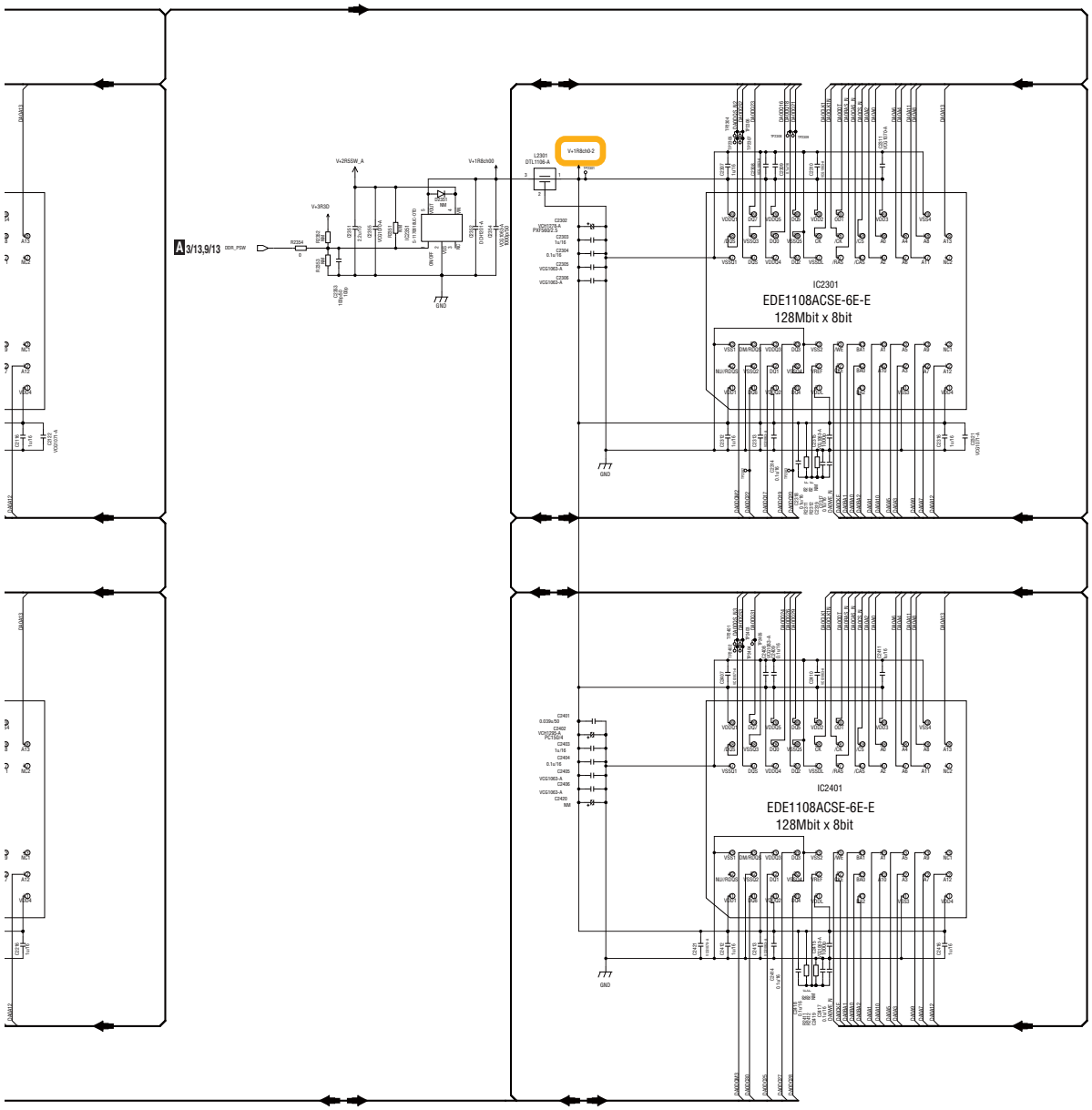
A 2/13 SERVICE MAIN ASSY (VXX3348)

A-b 2/13

DDR2 ch0

NOTE

	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387



NOTE

	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

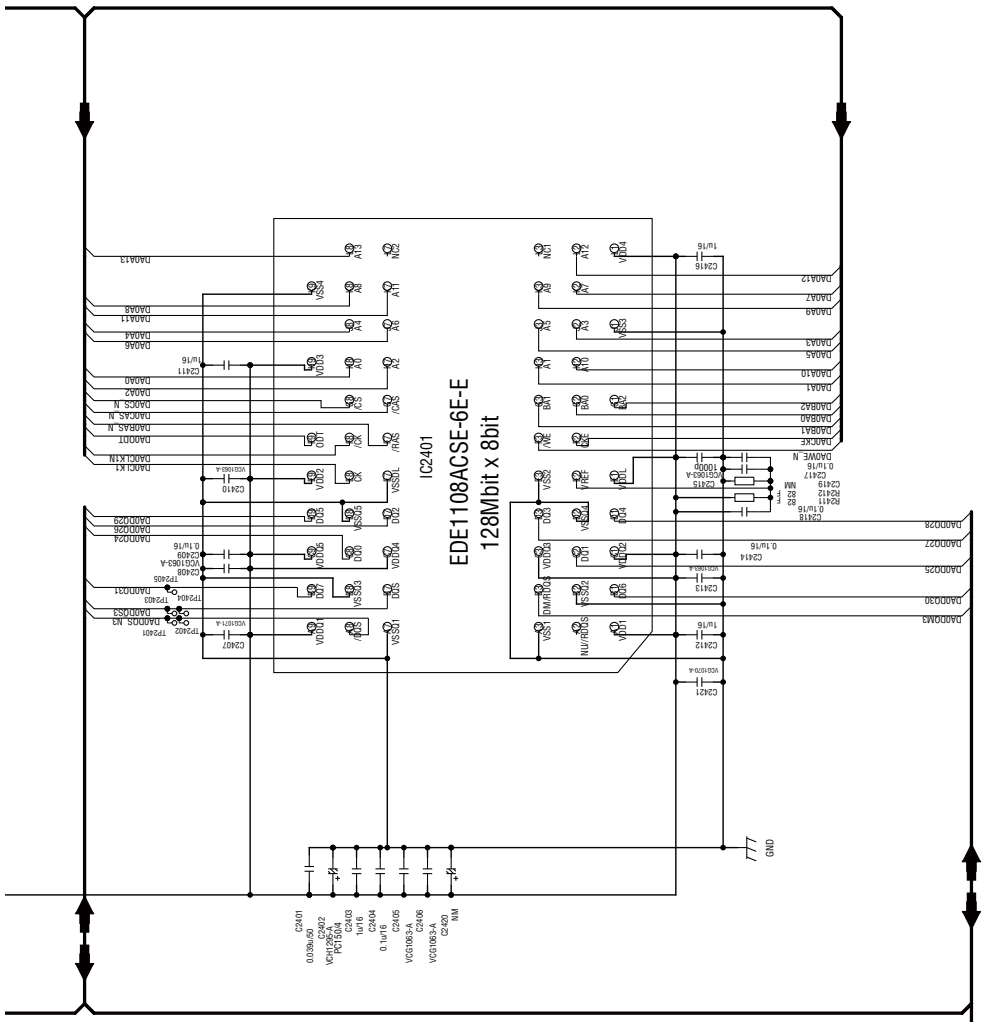
DDR2 ch0

A-a | A-b

IC2301
EDE1108ACSE-6E-E
128Mbit x 8bit

A 3/13,9/13

CCH1820- TRB PSLB31A476M (47u/10V)
DTL1106- T NFM18PC105R0J3D (2A/6.3V)
VTL1171- SGM16F1C104-2A(2A/16V)
CTF1306- BK1608HM102-B (200mA)
CTF1357- BK1608HS121-B (500mA)
CTF1364- BLM21PG331SN1 (1000mA)
VCG1057- 100S YF1uF/6.3V
VCG1063- 100S CH1000pF/50V
CCG1171- 2125 YB10uF /6.3V



A-a A-b

A

B

C

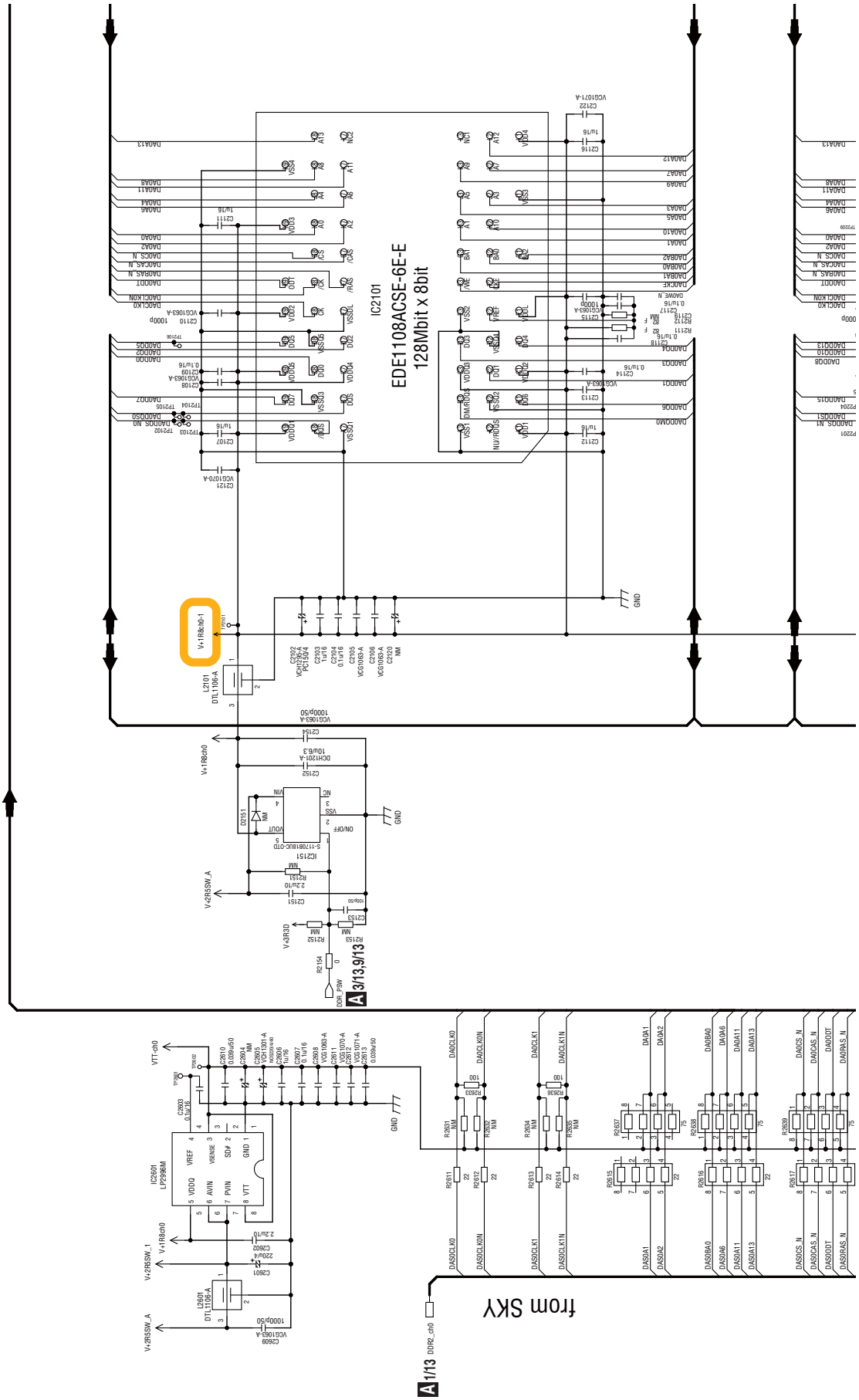
D

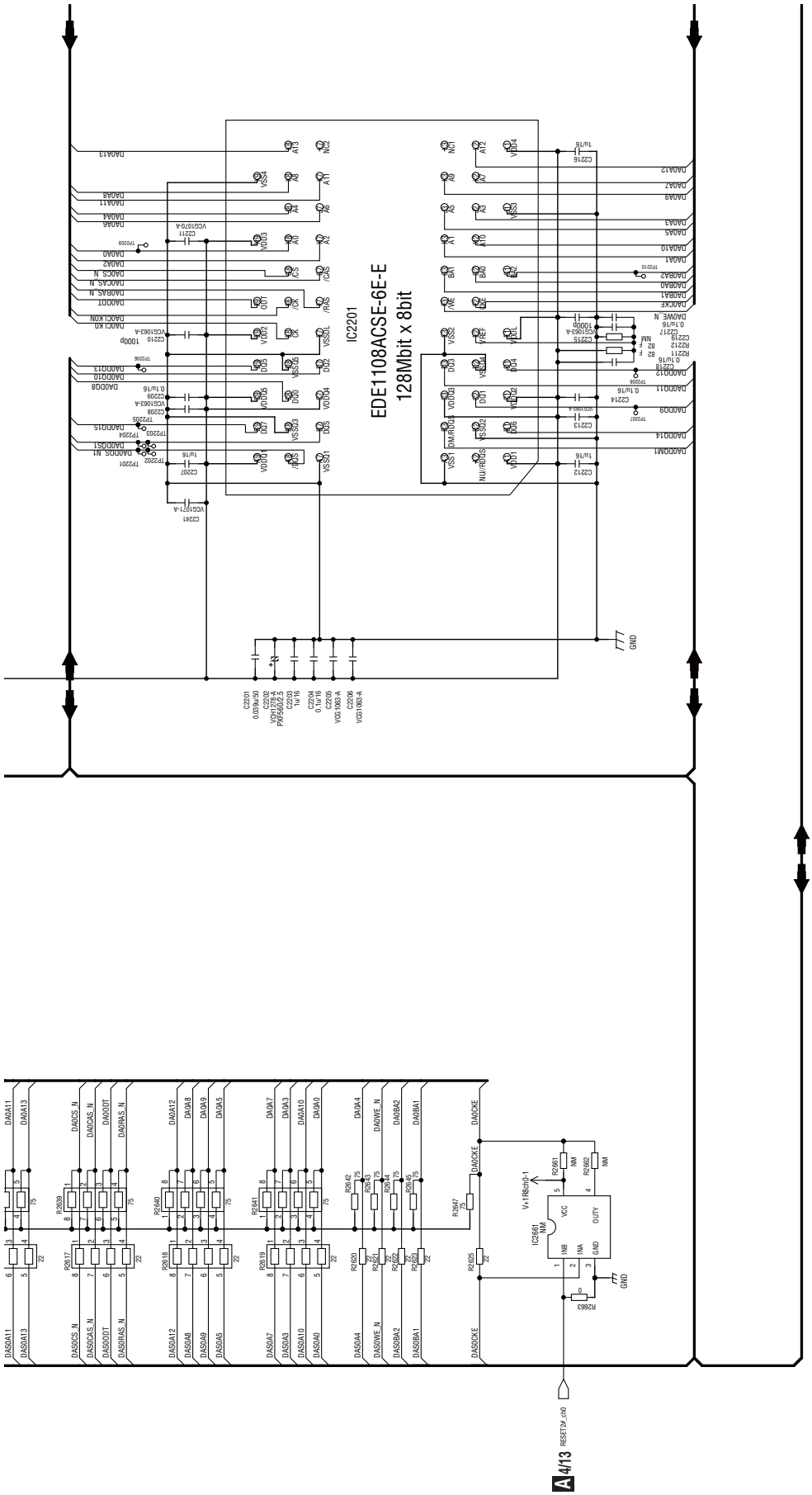
E

F

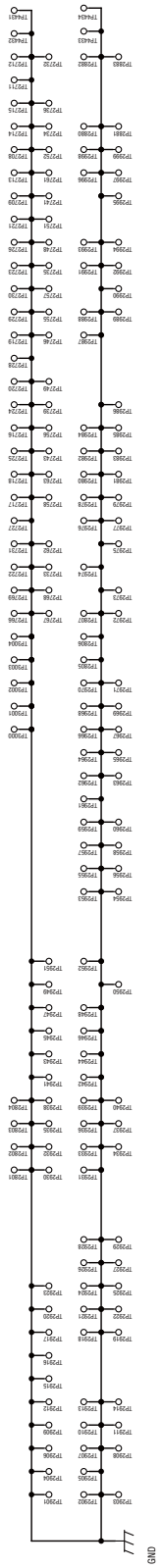
DDR2 ch0

A-b
A-a




IC2201
EDE1108ACSE-6E-E
128Mbit x 8bit
GND
DA0A11
DA0A13
DA0CS_N
DA0CAS_N
DA0ODT
DA0RAS_N
DA0A12
DA0A8
DA0A9
DA0A15
DA0A7
DA0A3
DA0A10
DA0A0
DA0A4
DA0WE_N
DA0BA2
DA0BA1
DA0CKE
DAS0A11
DAS0A13
DAS0CS_N
DAS0CAS_N
DAS0ODT
DAS0RAS_N
DAS0A12
DAS0A8
DAS0A9
DAS0A15
DAS0A7
DAS0A3
DAS0A10
DAS0A0
DAS0A4
DAS0WE_N
DAS0BA2
DAS0BA1
DAS0CKE
IC2661
NM
GND
RESET#_ctrl0

A 4/13


GND

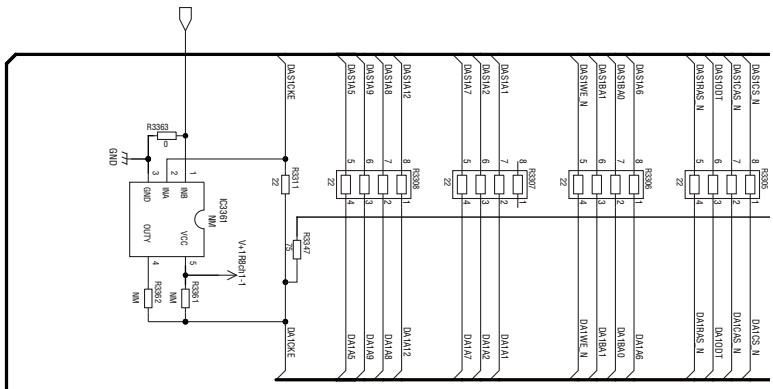
A-b
A-a

10.3 SERVICE MAIN ASSY (3/13)

VCH1277- 330/6.3 PXF 10m	Ω
VCH1278- 560/2.5 PXF 9m	Ω
VCH1295- 150/4 PC-CON 15m	Ω
VCH1296- 330/2.5 PC-CON 15m	Ω
CCH1820- 47/10 NeoCap 70m	Ω
VCH1258- 100/4 NeoCap 70m	Ω
VCH1259- 68/6.3 NeoCap 70m	Ω
CCH1826- 150/10 NeoCap 45m	Ω

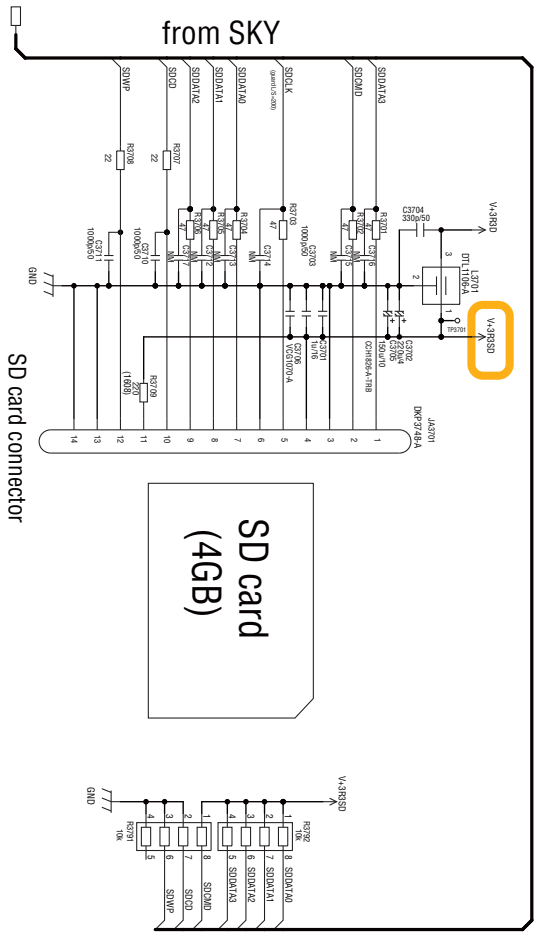
CCH1820-	-TRB PSLB31A476M (47u/10V)
DTL1106-	-T NFM18PC105R0J3D (2A/6.3V)
VTL1171-	SGM16F1C104-2A(2A/16V)
CTF1306-	BK1608HM102-B (200mA)
CTF1357-	BK1608HS121-B (500mA)
CTF1394-	BK2125HS750-B (1000mA)
VCG1057-	1005 YF1uF/6.3V
VCG1063-	1005 CH1000pF/50V
CCG1171-	2125 YB10uF /6.3V

A 5/13

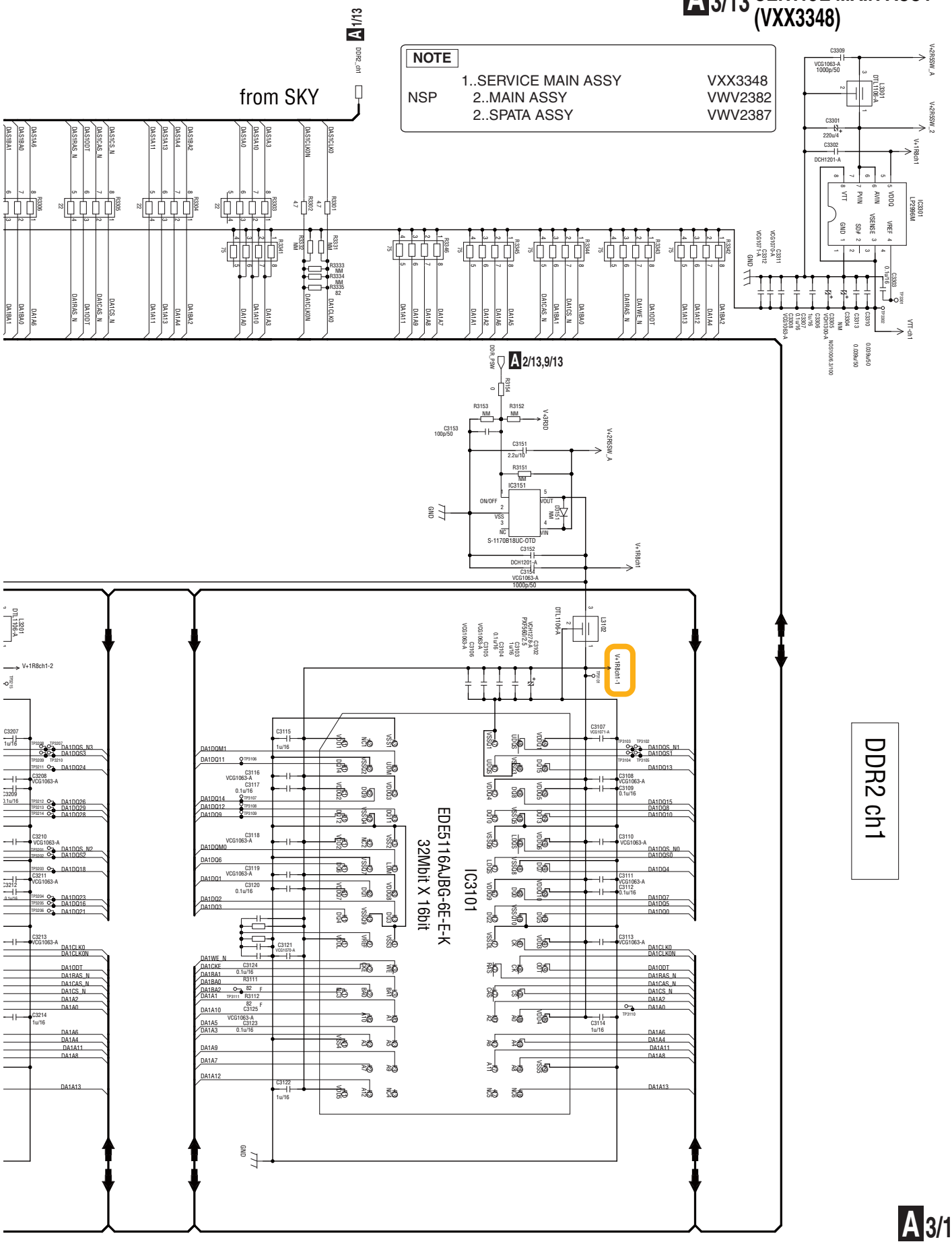


A 1/13

SD card

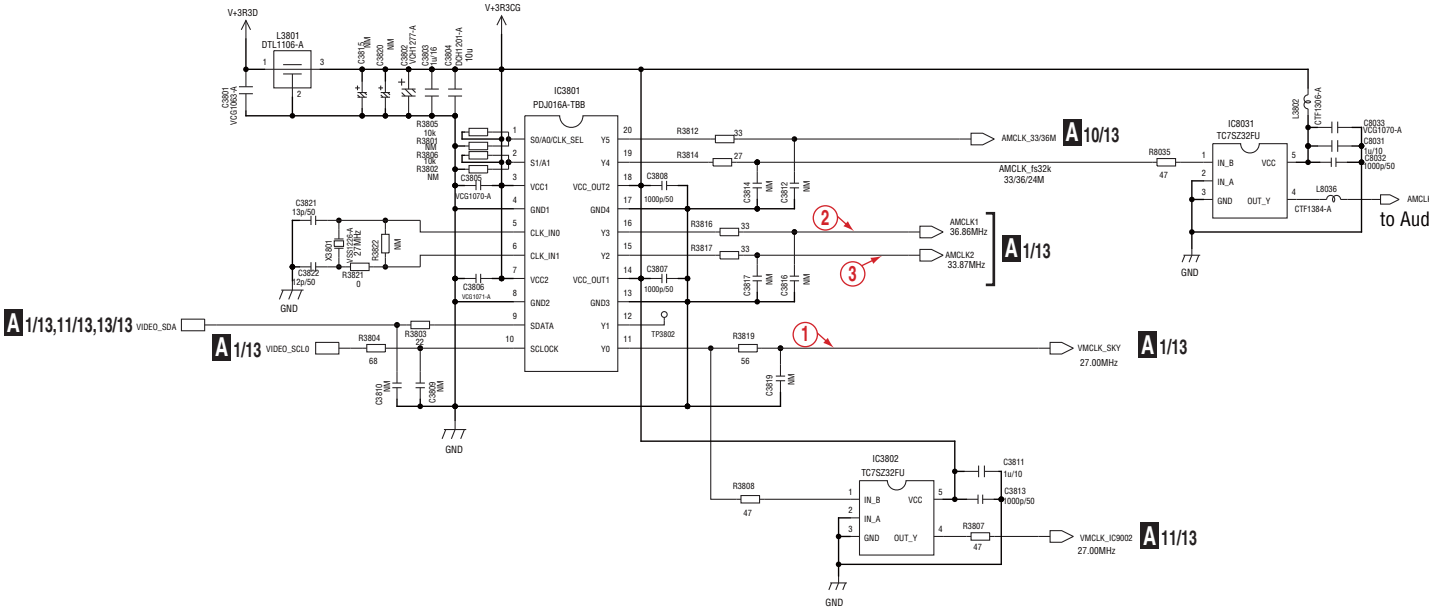


NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA SSY	VWV2387



10.4 SERVICE MAIN ASSY (4/13)

Clock Generator

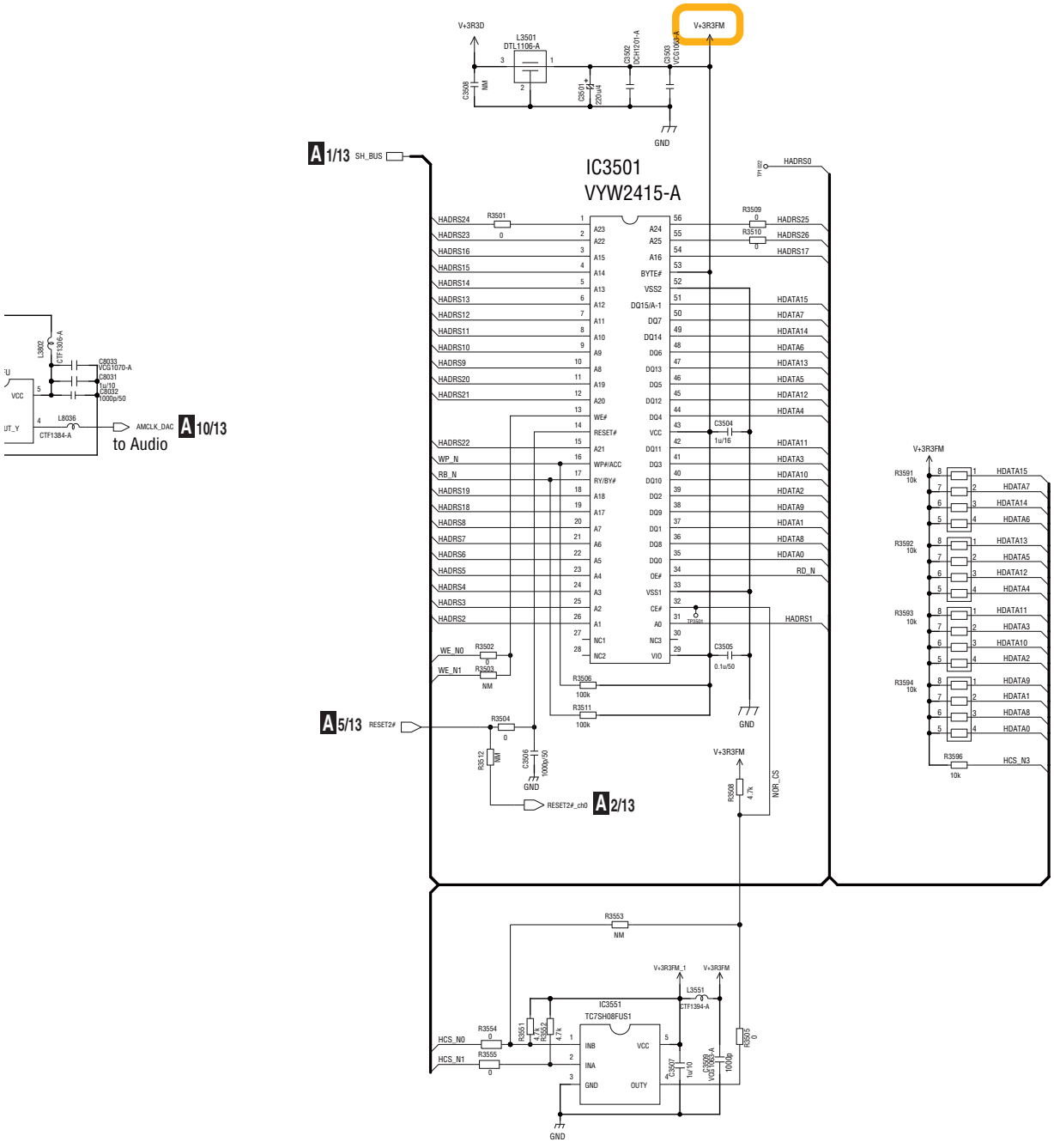


A4/13

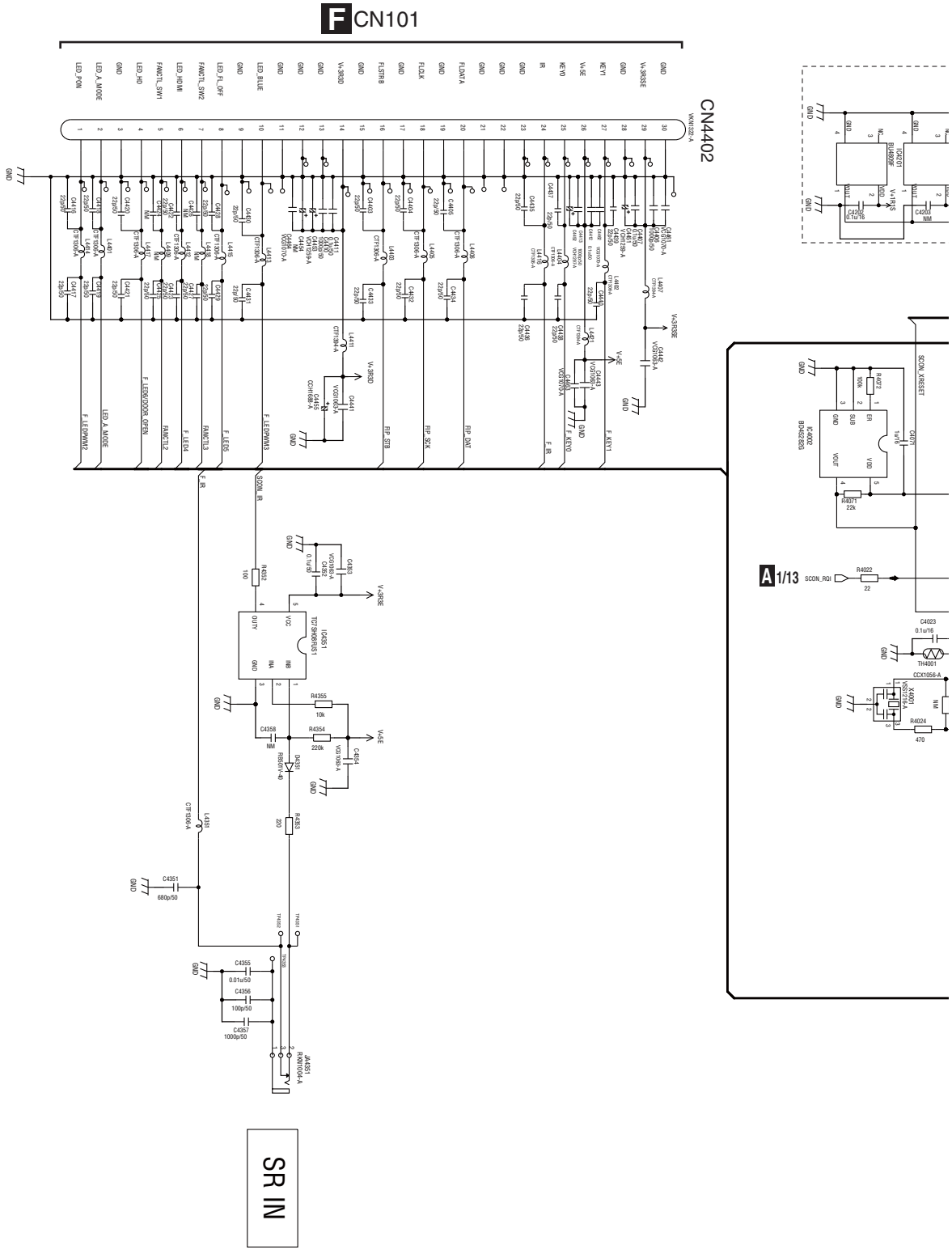
A 4/13 SERVICE MAIN ASSY (VXX3348)

NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

Nor FLASH



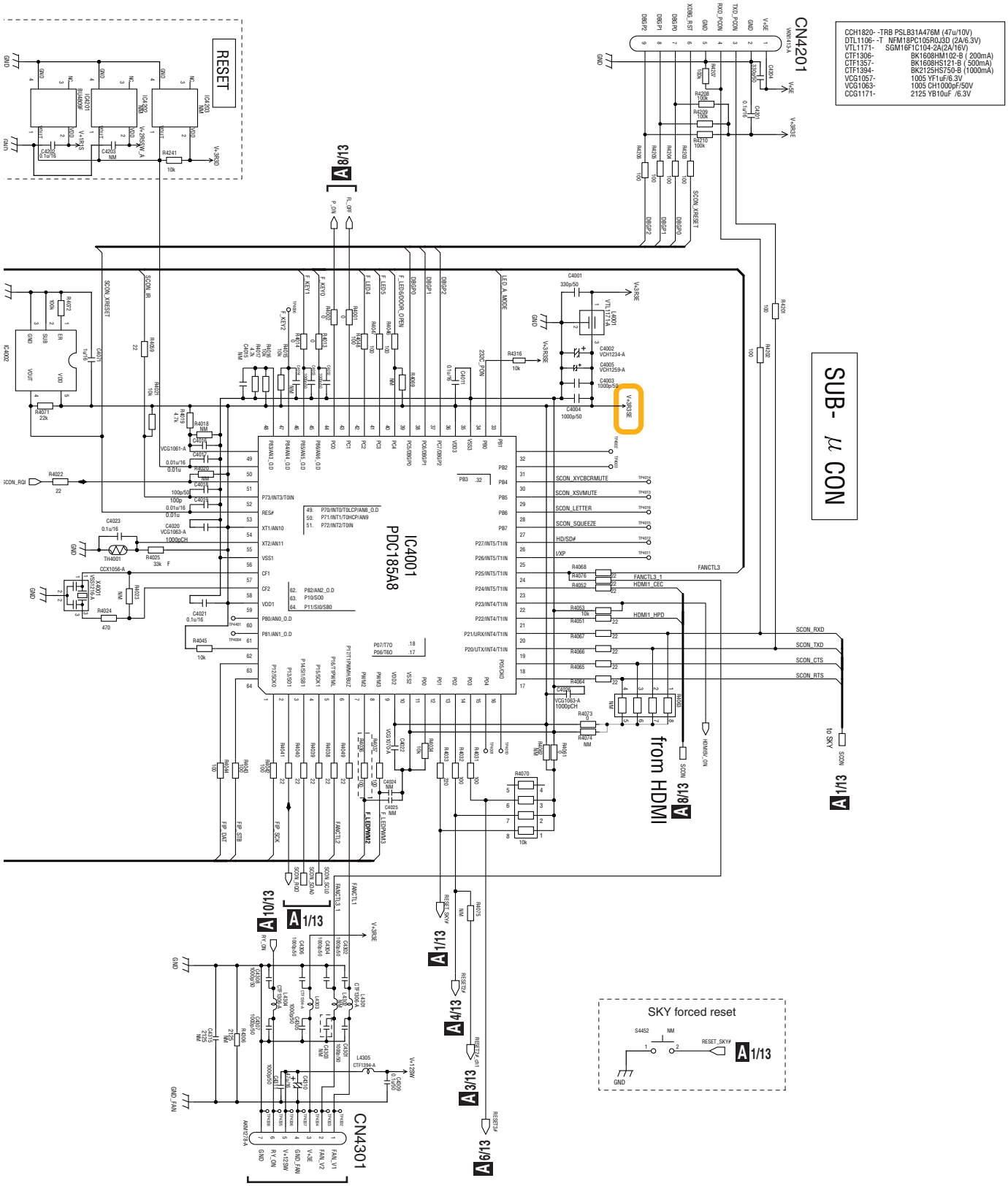
10.5 SERVICE MAIN ASSY (5/13)



NOTE

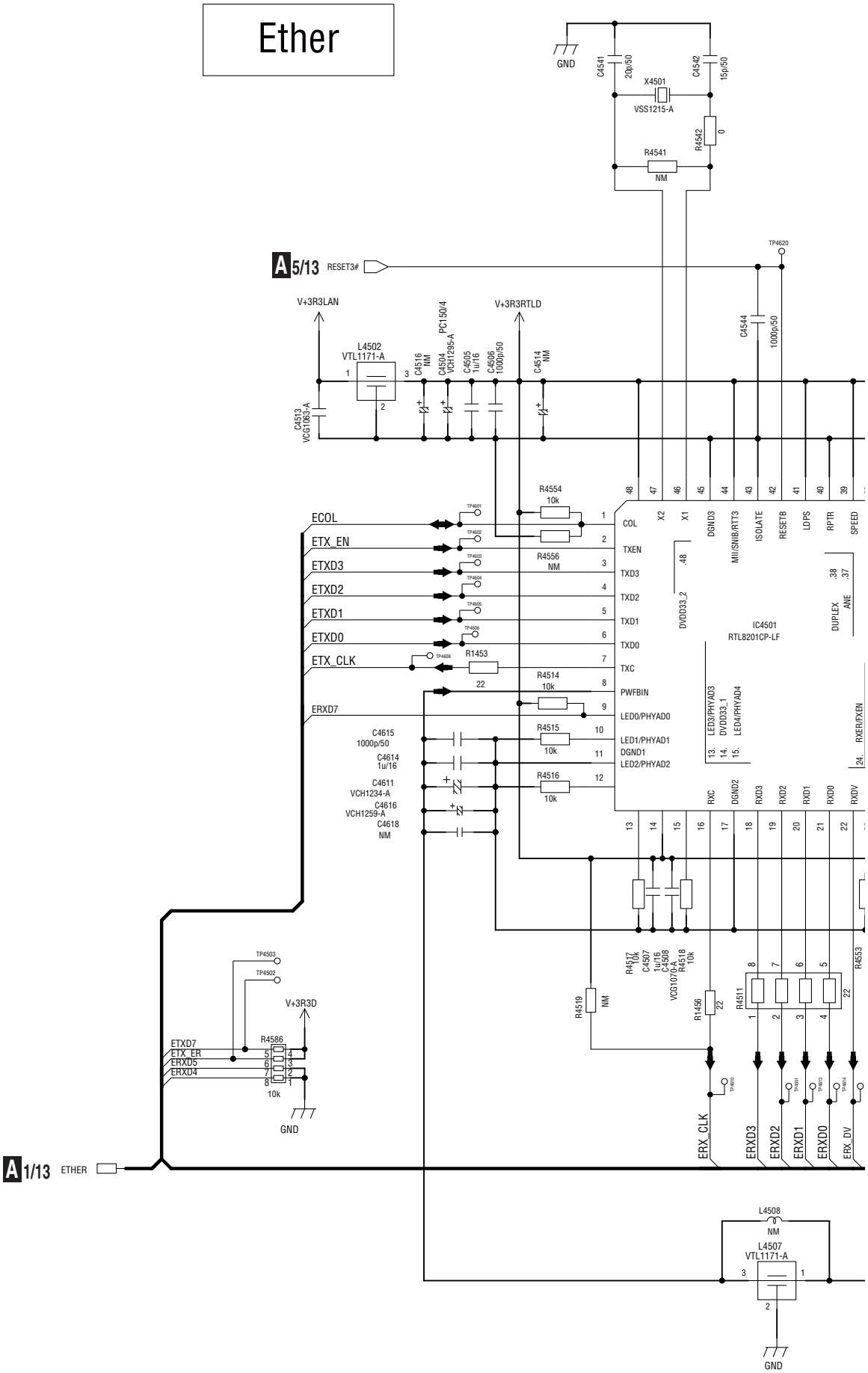
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

A 5/13 SERVICE MAIN ASSY (VXX3348)



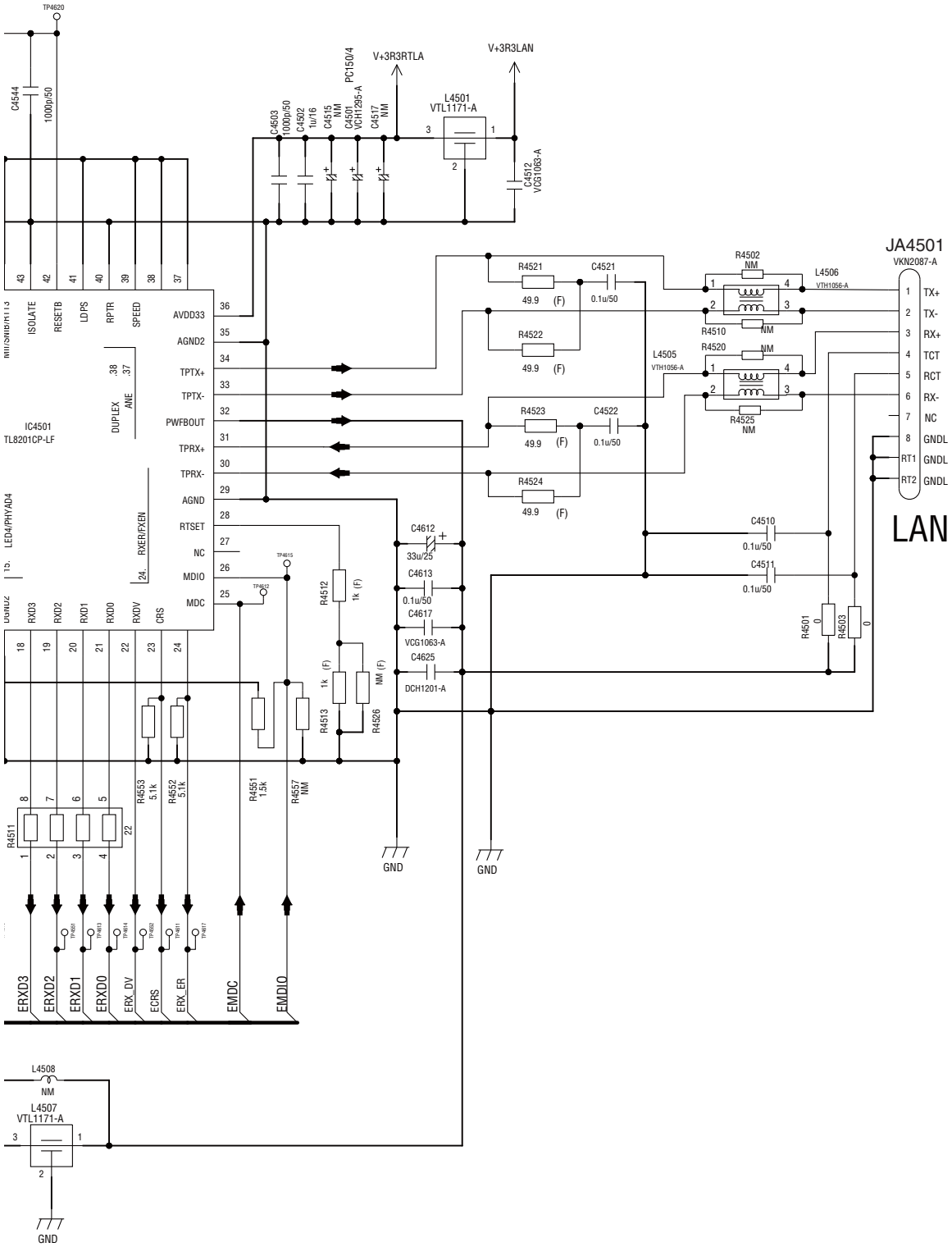
CCH1820- -TRB PSLB31A476M (47u/10V)
DTL1106- -T NFM18PC105R0J3D (2A/6.3V)
VTL1171- SGM16F1C104-2A(2A/16V)
CTF1306- BK1608HM102-B (200mA)
CTF1357- BK1608HS121-B (500mA)
CTF1394- BK2125HS750-B (1000mA)
VCG1057- 1005 YF1uF/6.3V
VCG1063- 1005 CH1000pF/50V
CCG1171- 2125 YB10uF /6.3V

10.6 SERVICE MAIN ASSY (6/13)



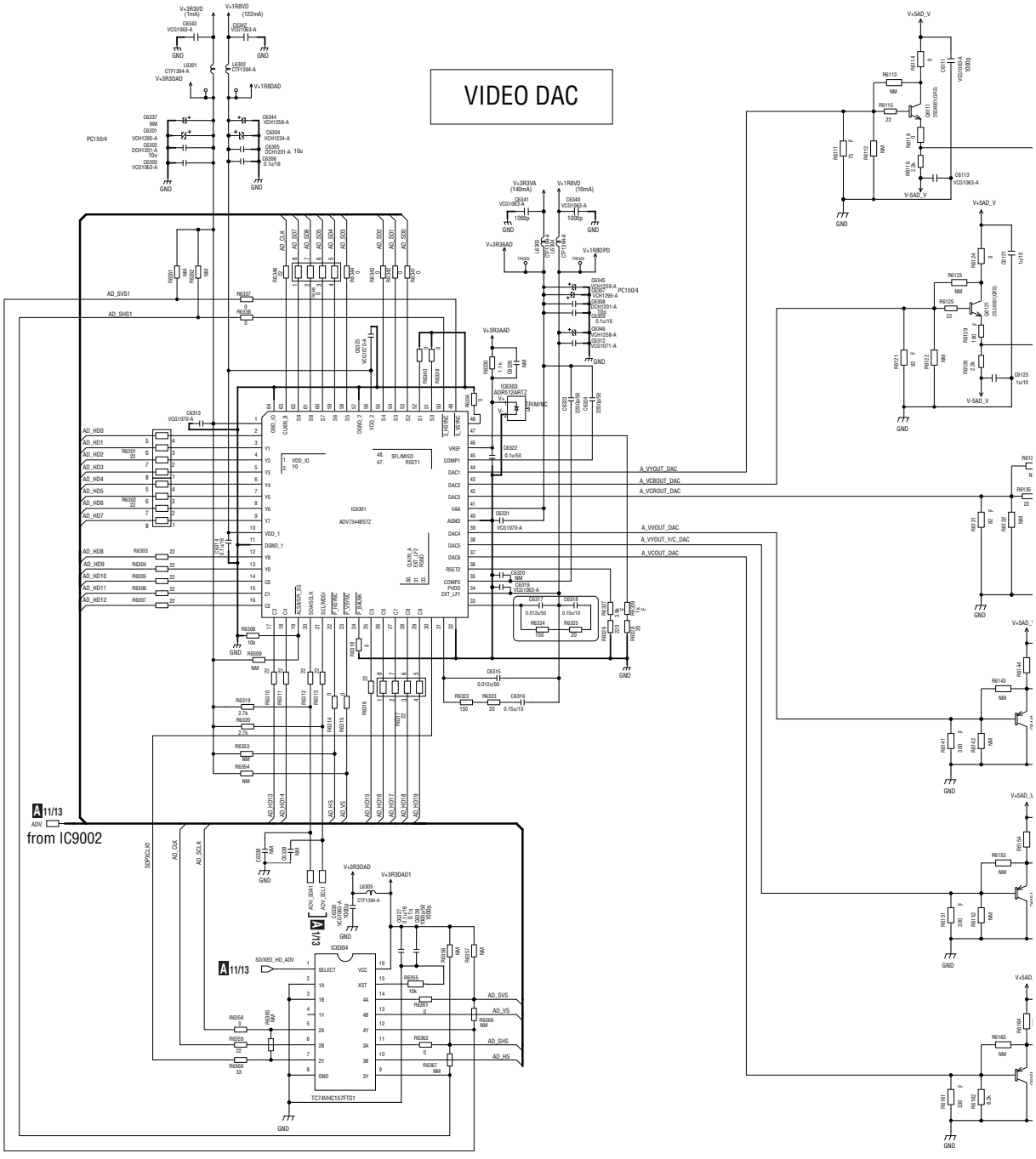
A6/13 SERVICE MAIN ASSY (VXX3348)

NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387



10.7 SERVICE MAIN ASSY (7/13)(GUIDE PAGE)

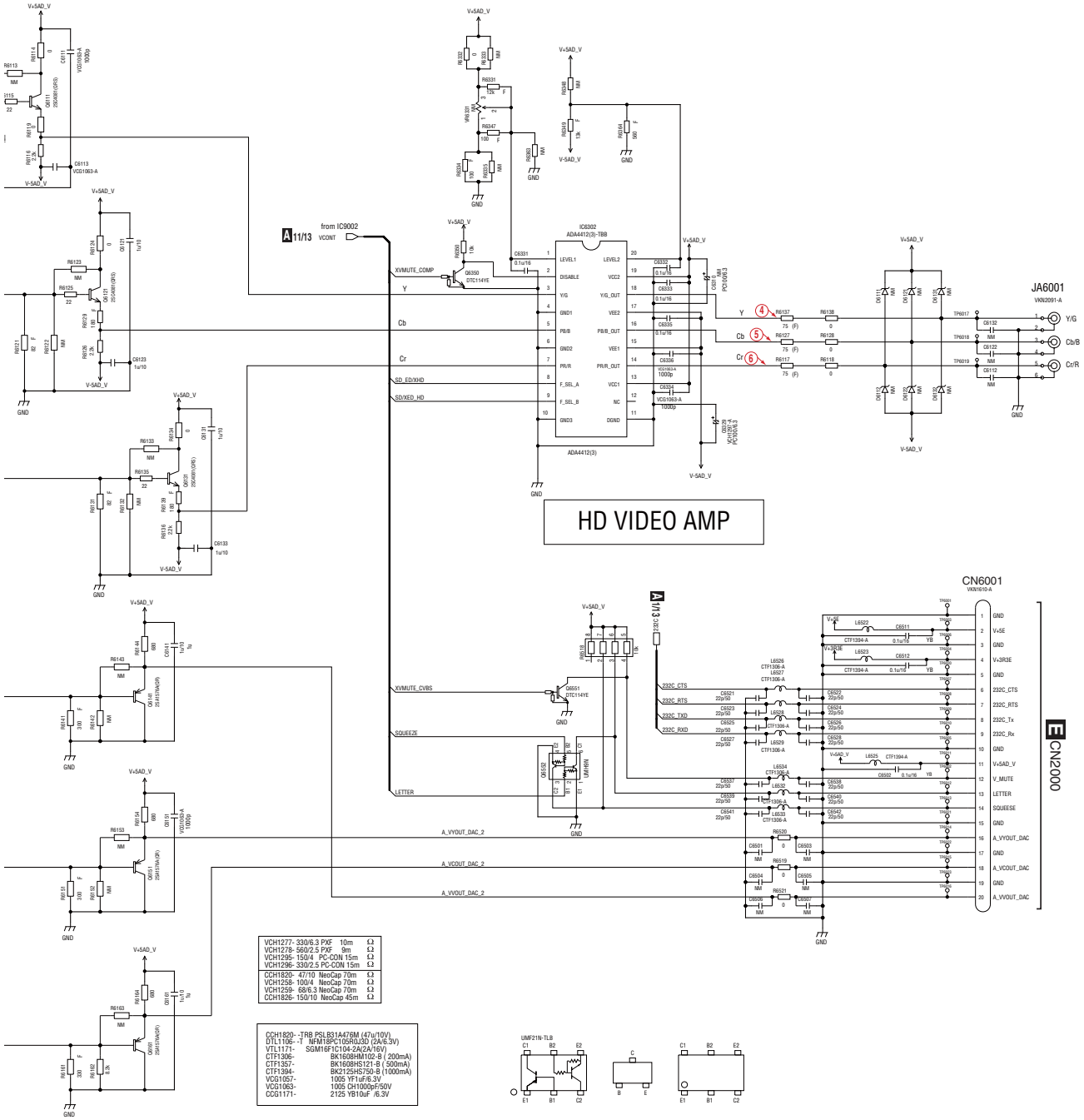
A-a 7/13



A-b 7/13

NOTE

	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

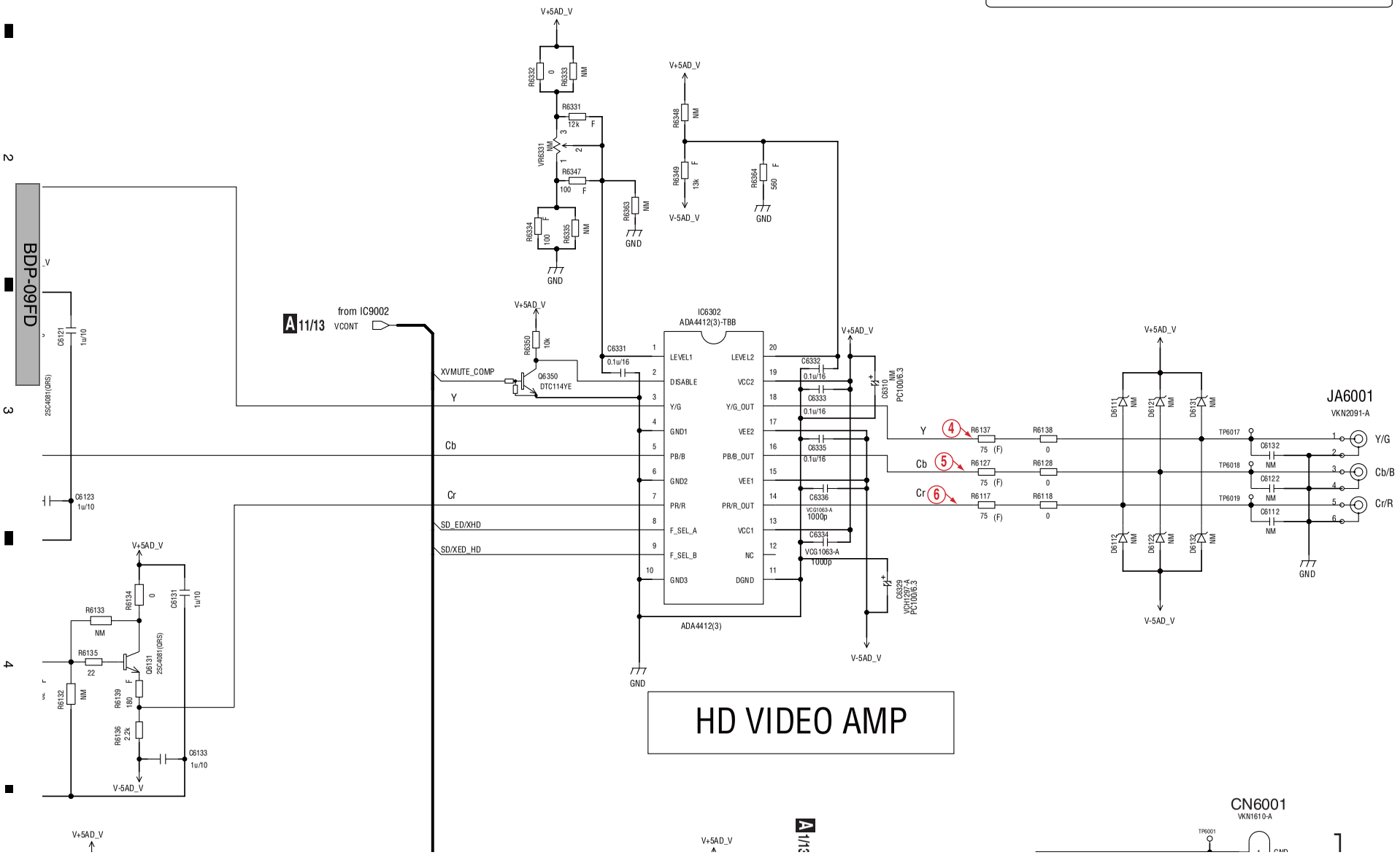


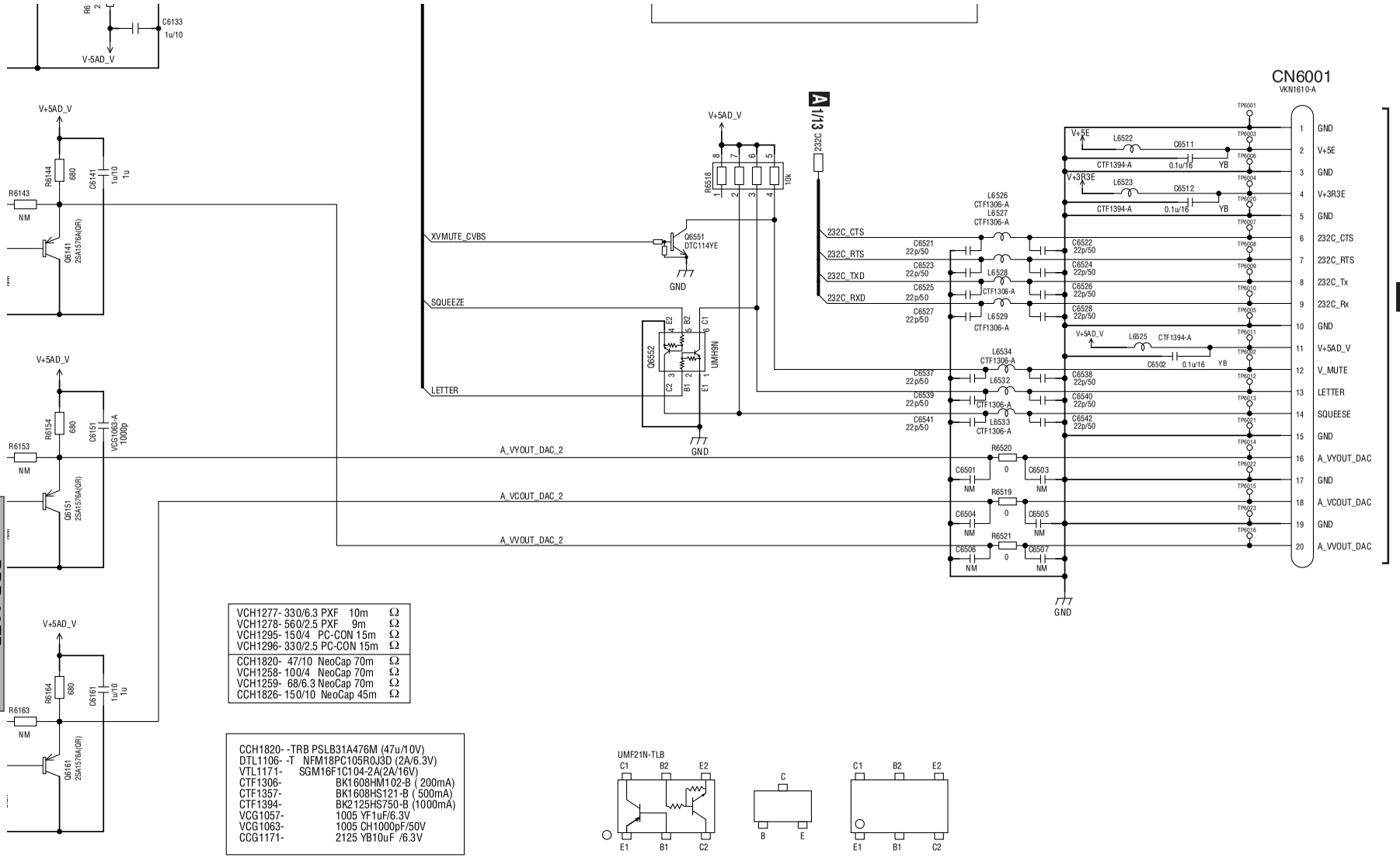
VCH1277- 330/6.3 PXF 10m	Ω
VCH1278- 560/2.5 PXF 9m	Ω
VCH1295- 150/4 PC-CON 15m	Ω
VCH1296- 330/2.5 PC-CON 15m	Ω
CCH1820- 47/10 NeoCap 70m	Ω
VCH1258- 100/4 NeoCap 70m	Ω
VCH1259- 68/6.3 NeoCap 70m	Ω
CCH1826- 150/10 NeoCap 45m	Ω

CCH1820- -TRB PSLB31A476M (47u/10V)	
DTL1106- -T NFM18PC105R0J3D (2A/6.3V)	
VTL1171- SGM16F1C104-2A(2A/16V)	
CTF1306-	BK1608HM102-B (200mA)
CTF1357-	BK1608HS121-B (500mA)
CTF1394-	BK2125HS750-B (1000mA)
VCG1057-	1005 YF1uF/6.3V
VCG1063-	1005 CH1000pF/50V
CCG1171-	2125 YB10uF /6.3V

A 7/13 SERVICE MAIN ASSY (VXX3348)

NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387





BDP-09FD

A-b 7/13

A

B

C

D

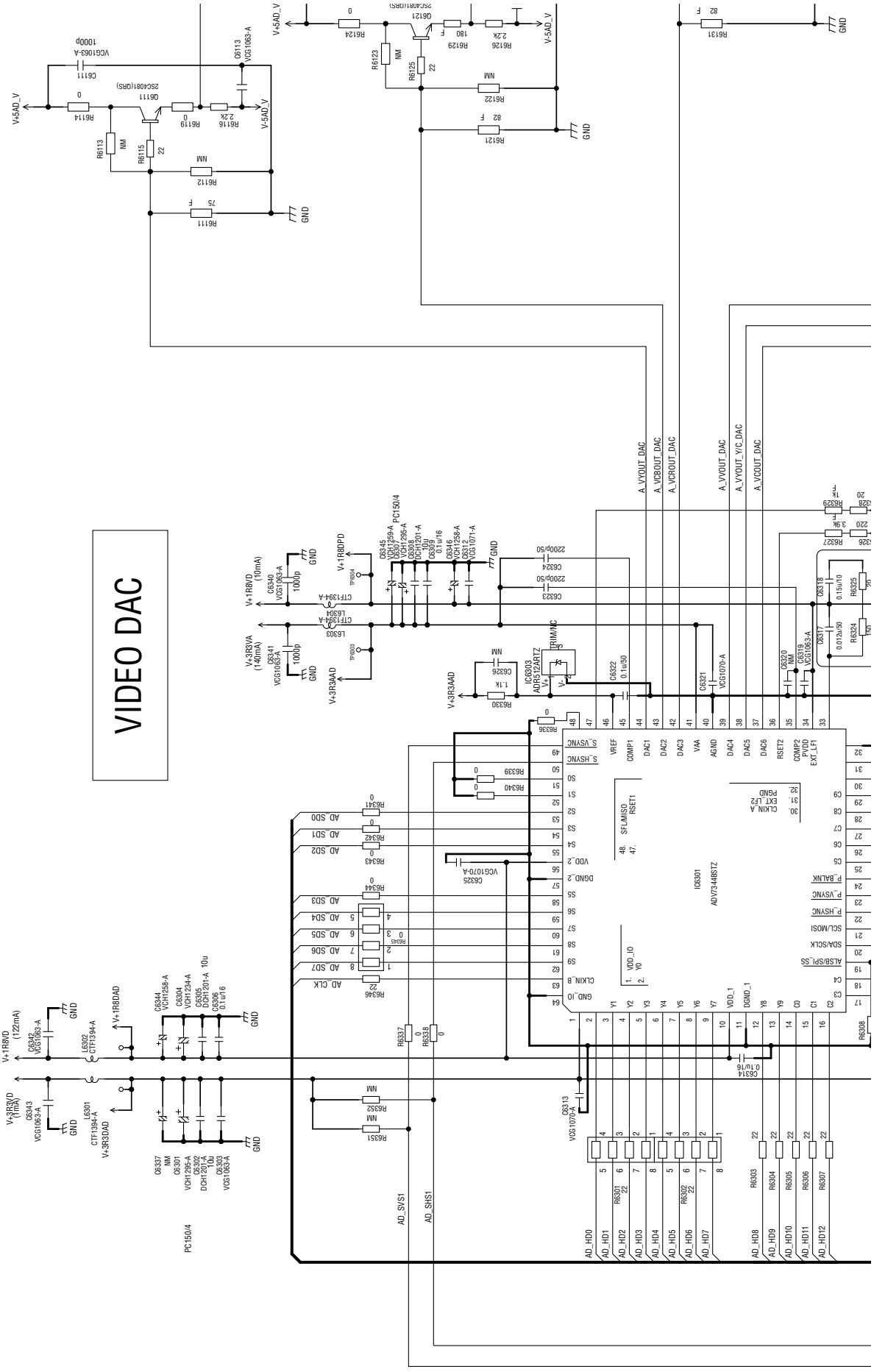
E

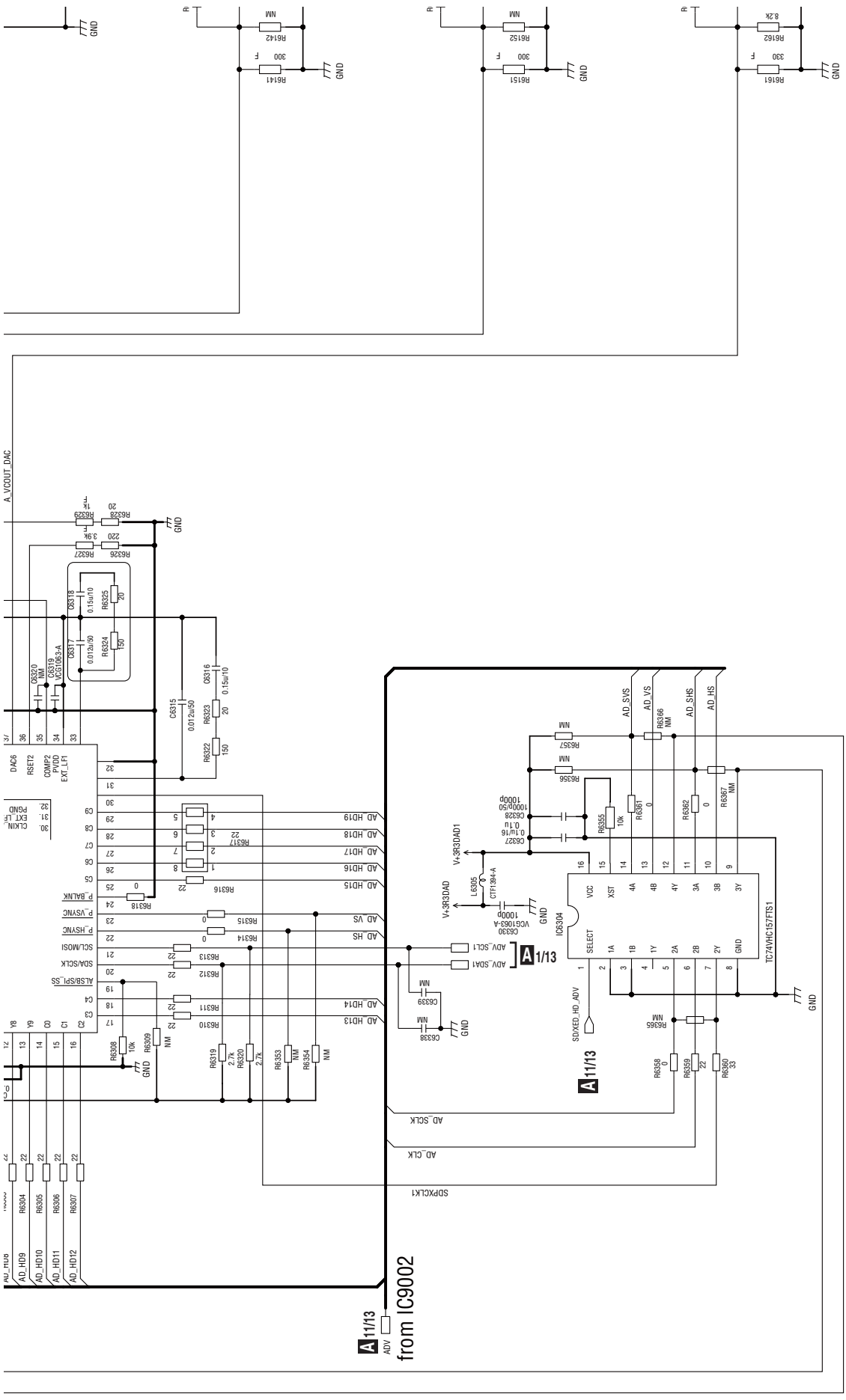
F

A-b

A-a

VIDEO DAC




A_VCOUT_DAC
AD_HD9
AD_HD10
AD_HD11
AD_HD12
AD_HD13
AD_HD14
AD_HD15
AD_HD16
AD_HD17
AD_HD18
AD_HD19
AD_VS
AD_HS
AD_SCLK
AD_CLK
SDPXCLK1
ADV_SCL1
ADV_SDA1
SDI/XED_HD_ADV
V+3R3DAD
V+3R3DAD1
GND
IC6304
TC74VHC157FTS1
A 1/13
A 11/13
from IC9002

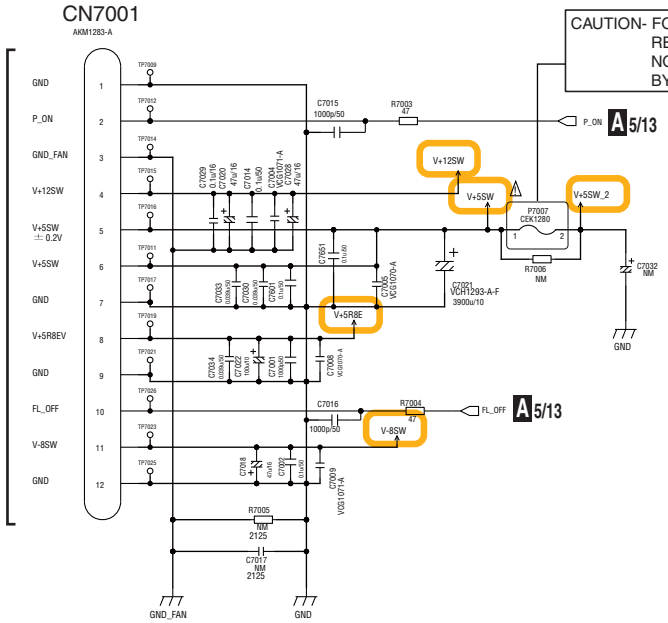
10.8 SERVICE MAIN ASSY (8/13)

A 8/13 SERVICE MAIN ASSY (VXX3348)

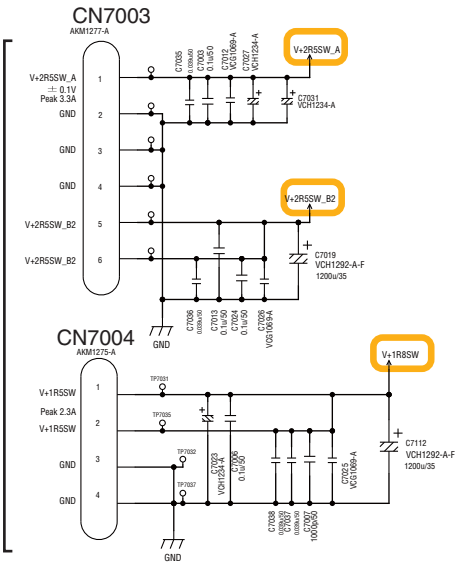
NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

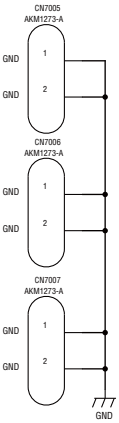
CAUTION- FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE ONLY WITH SAME TYPE
NO. 494001 (CEK1280) MFD.
BY LITTELFUSE INC. FOR P7007.

I CN202



I CN201

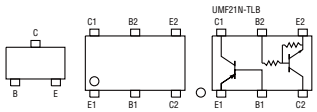




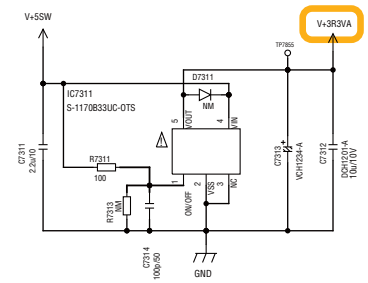
from SYPS

CCH1820-	-TRB PSLB31A476M (47u/10V)	
DTL1106-	-T NFM18PC105R0J3D (2A/6.3V)	
VTL1171-	SGM16F1C104-2A(2A/16V)	
CTF1306-	BK1608HM102-B (200mA)	
CTF1357-	BK1608HS121-B (500mA)	
CTF1394-	BK2125HS750-B (1000mA)	
VCG1057-	1005 YF1uF/6.3V	
VCG1063-	1005 CH1000pF/50V	
CCG1171-	2125 YB10uF /6.3V	

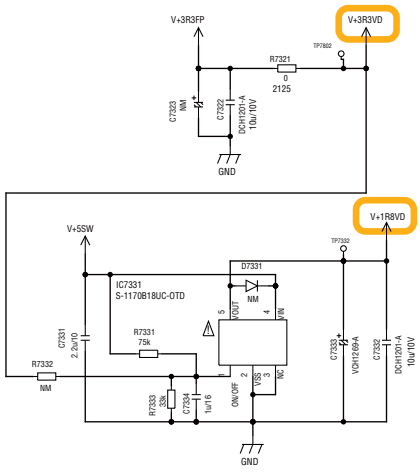
VCH1277-	330/6.3 PXF 10m	Ω
VCH1278-	560/2.5 PXF 9m	Ω
VCH1295-	150/4 PC-CON 15m	Ω
VCH1296-	330/2.5 PC-CON 15m	Ω
VCH1297-	100/6.3 PC-CON 15m	Ω
CCH1820-	47/10 NeoCap 70m	Ω
VCH1258-	100/4 NeoCap 70m	Ω
VCH1259-	68/6.3 NeoCap 70m	Ω
VCH1826-	150/10 NeoCap 45m	Ω



FOR ANALOG VIDEO

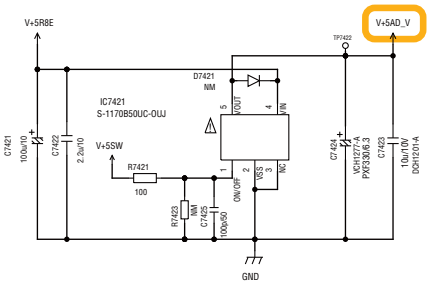


for VIDEO DAC Analog

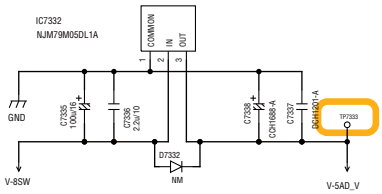


for VIDEO DAC Digital I/O

for VIDEO DAC Core

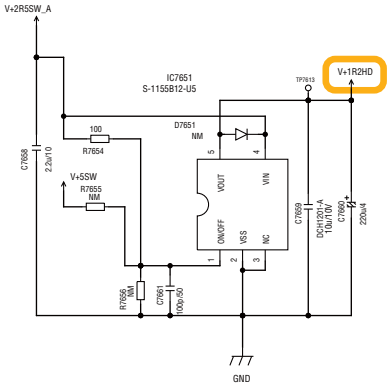


for VIDEO AMP +

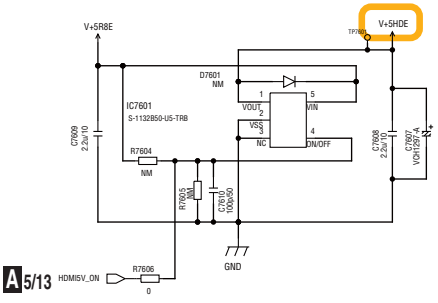


for VIDEO AMP -

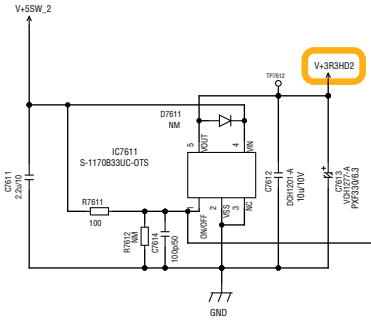
FOR HDMI



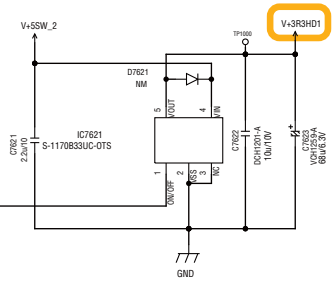
for HDMI_Tx_core



for HDMI_5V(CN,DDC,HPD,CEC)



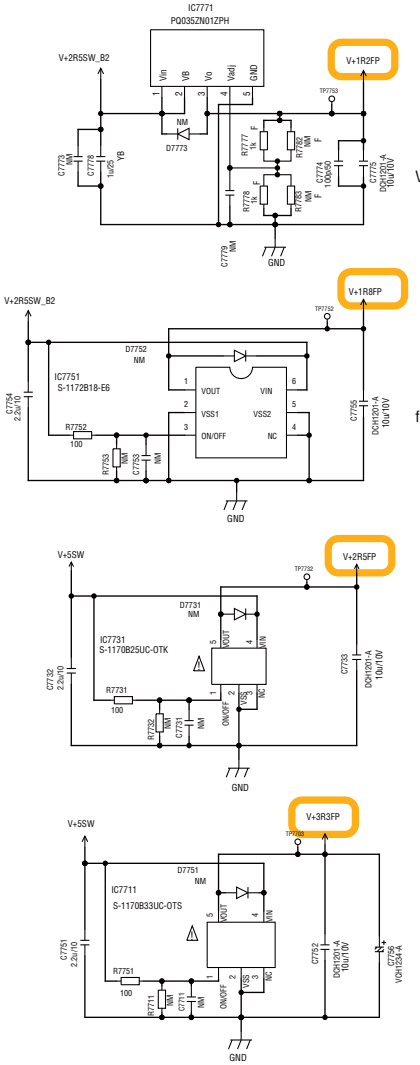
for HDMI_Tx_I/O SUB



for HDMI_Tx_I/O MAIN

10.9 SERVICE MAIN ASSY (9/13)

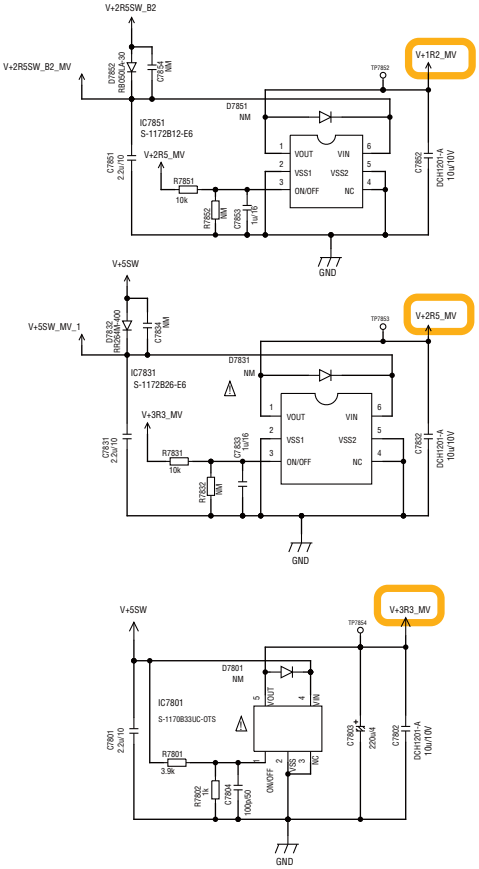
FOR IC9002



Vout = Vref x (1+R2/R1)

for DDR2

FOR MARVELL



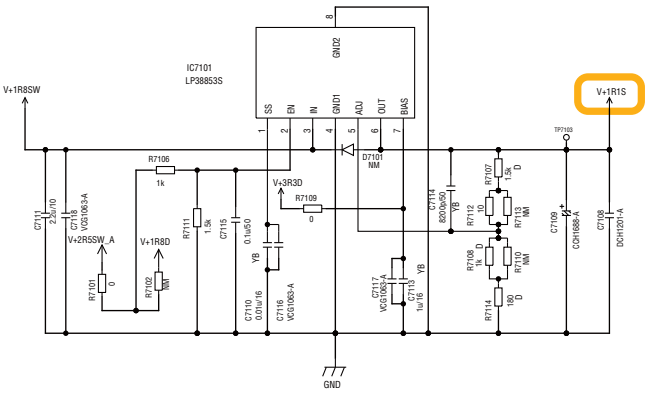
for Marvell core

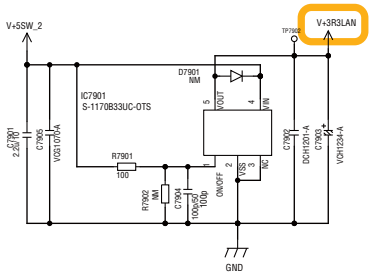
for Marvell(DDR)

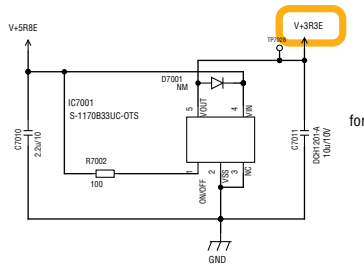
for Marvell I/O

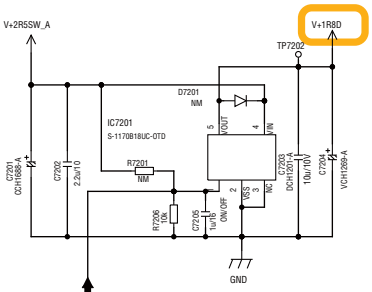
NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

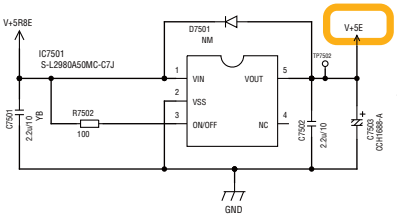
FOR SKY

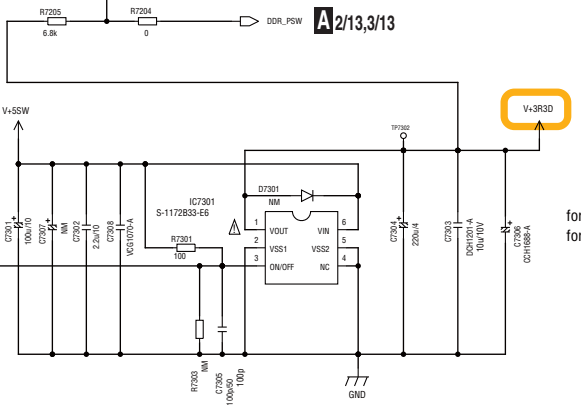




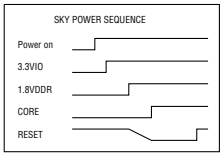




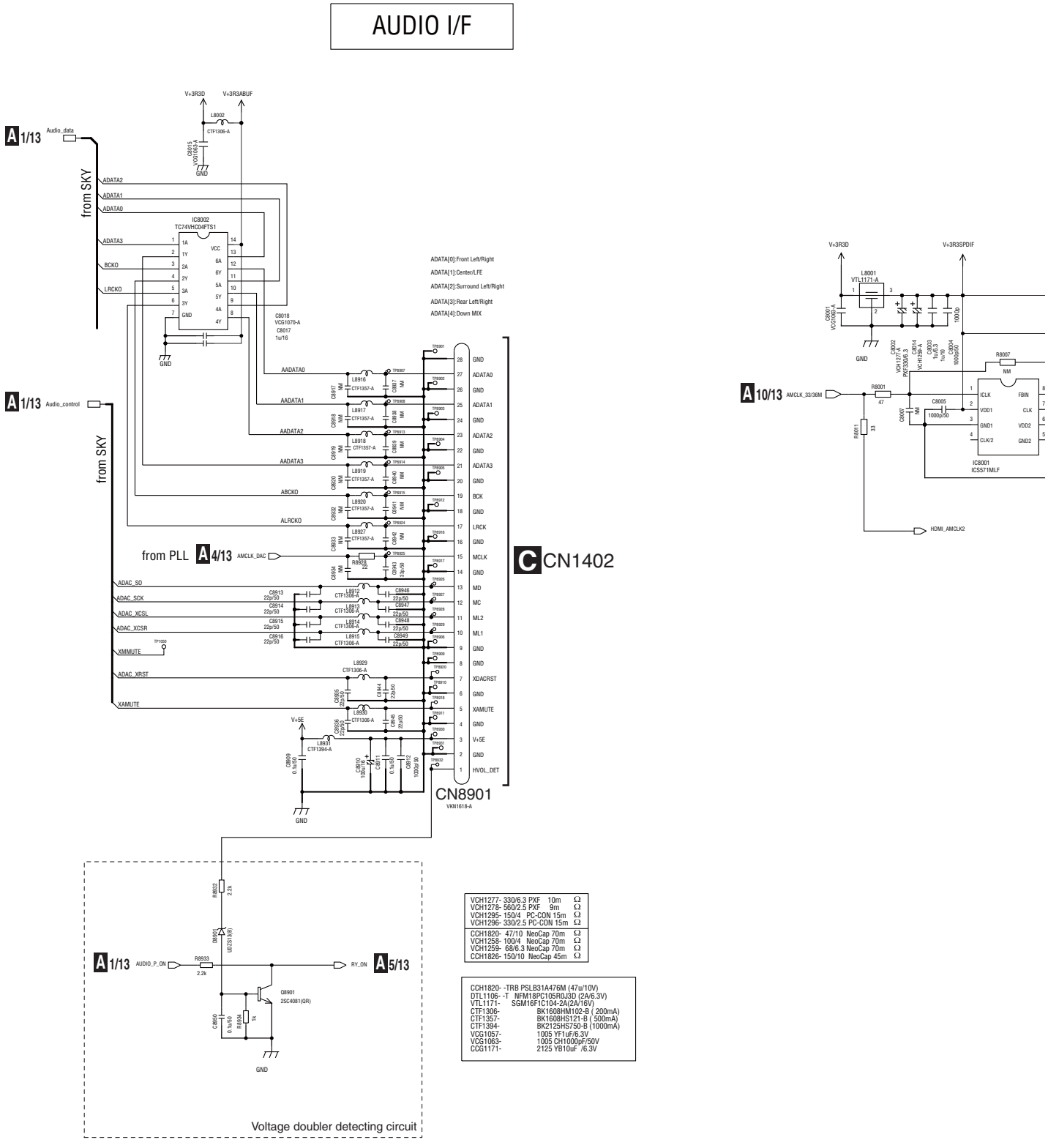




A 2/13,3/13



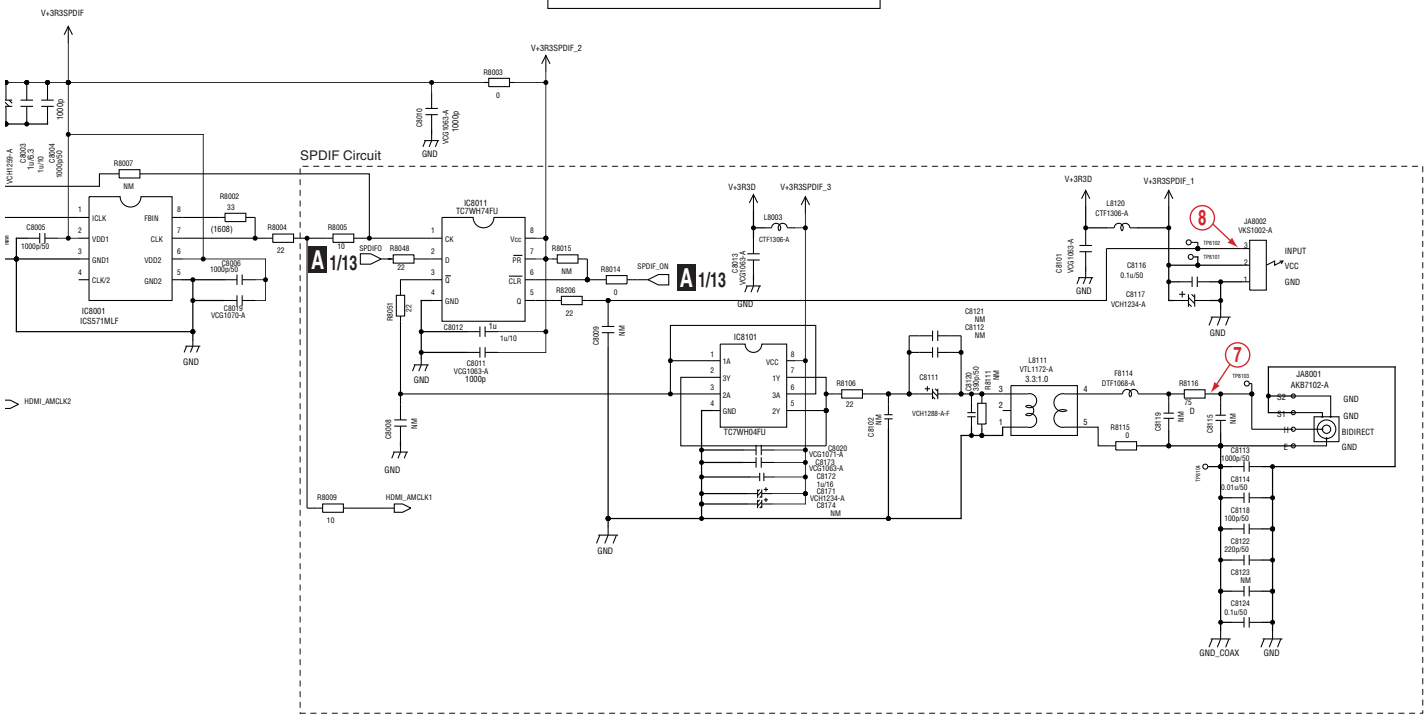
10.10 SERVICE MAIN ASSY (10/13)



A 10/13 SERVICE MAIN ASSY (VXX3348)

NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

Digital AUDIO



10.11 SERVICE MAIN ASSY (11/13)

A 11/13 SERVICE MAIN ASSY (VXX3348)

NOTE

	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

The schematic diagrams around IC9002 and HDMI are not included.
See the block diagram in “4.6 VIDEO BLOCK DIAGRAM.”

A

B

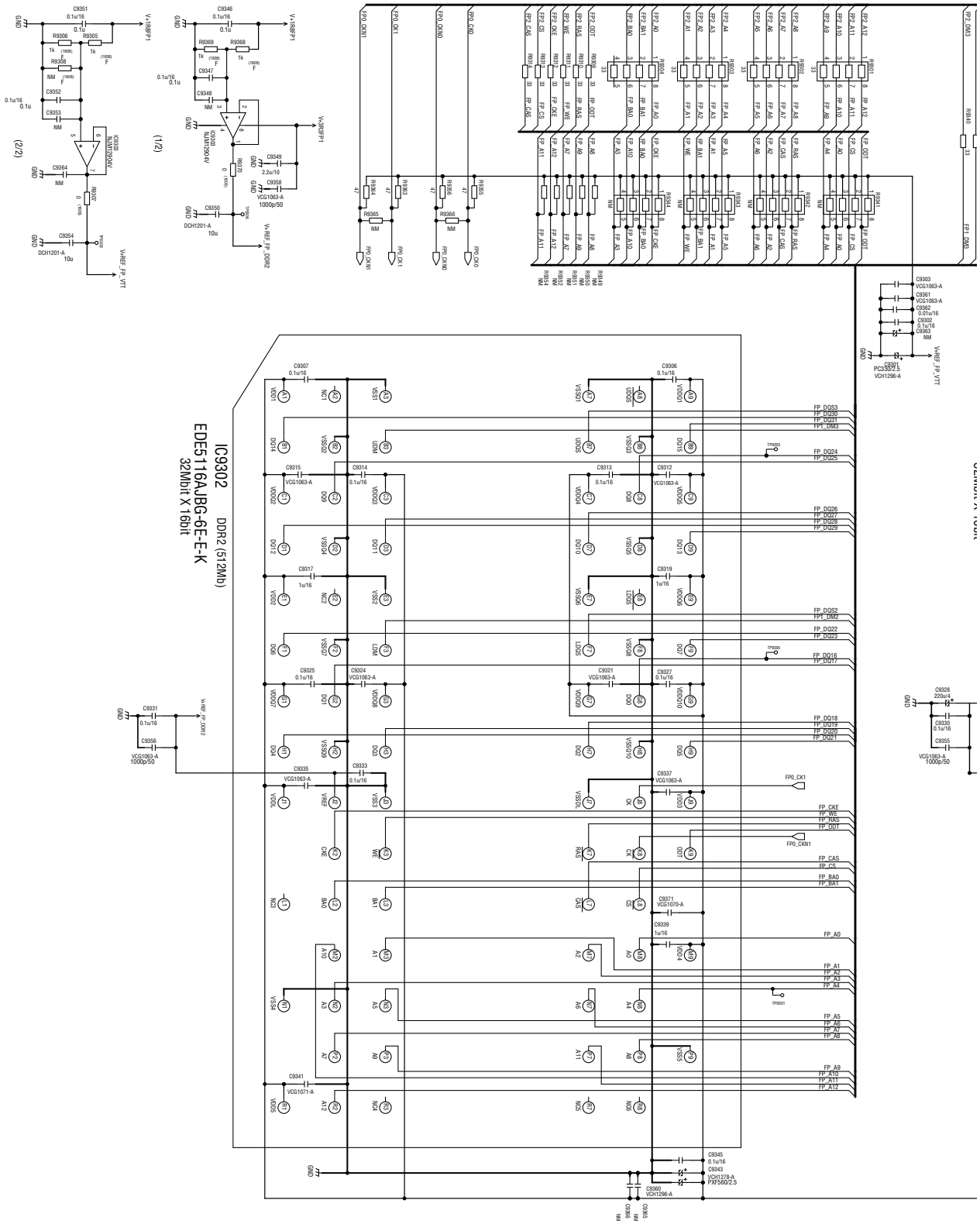
C

D

E

F

10.12 SERVICE MAIN ASSY (12/13)

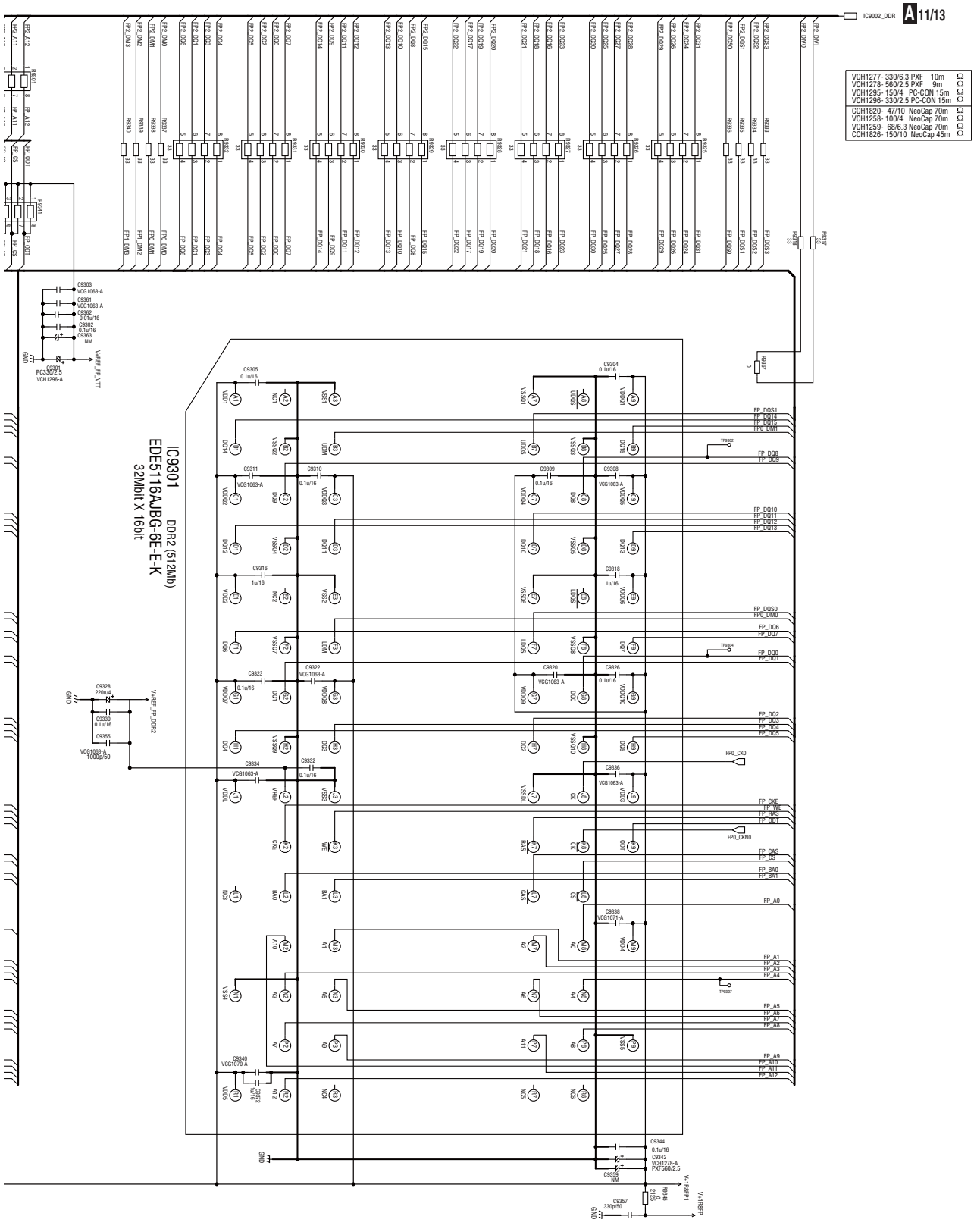


A12/13

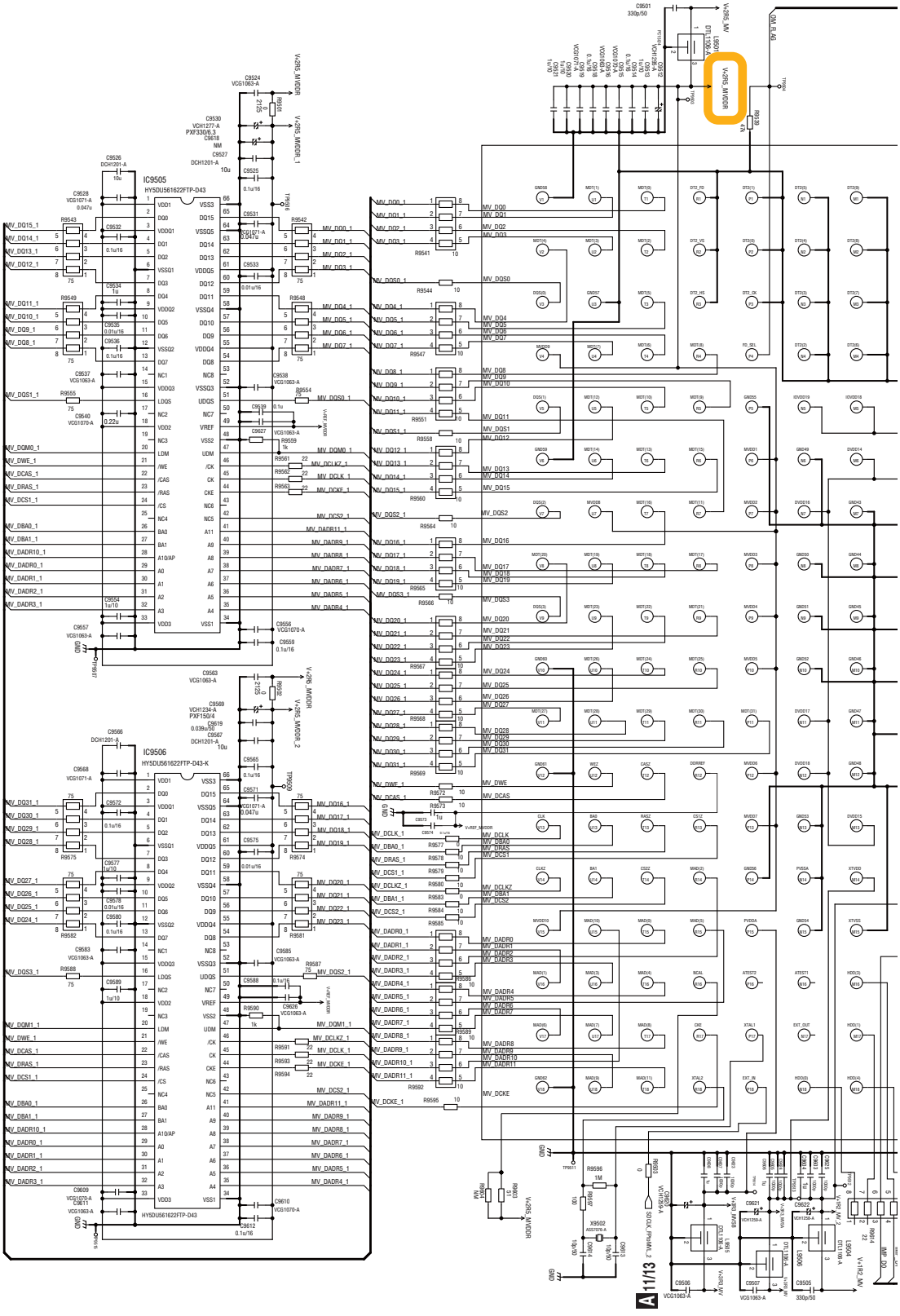
NOTE

	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

A 12/13 SERVICE MAIN ASSY (VXX3348)



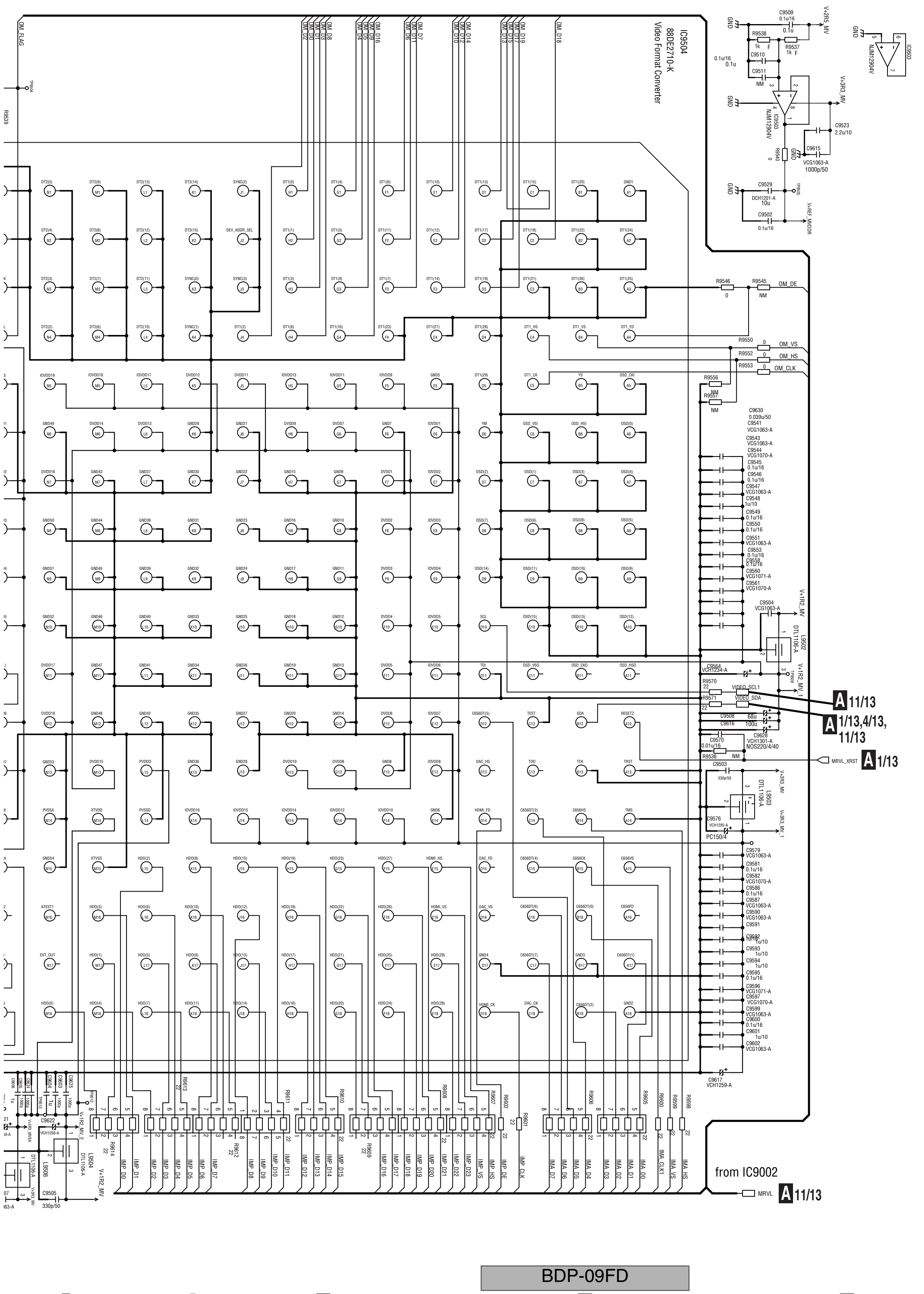
10.13 SERVICE MAIN ASSY (13/13)



NOTE		
	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

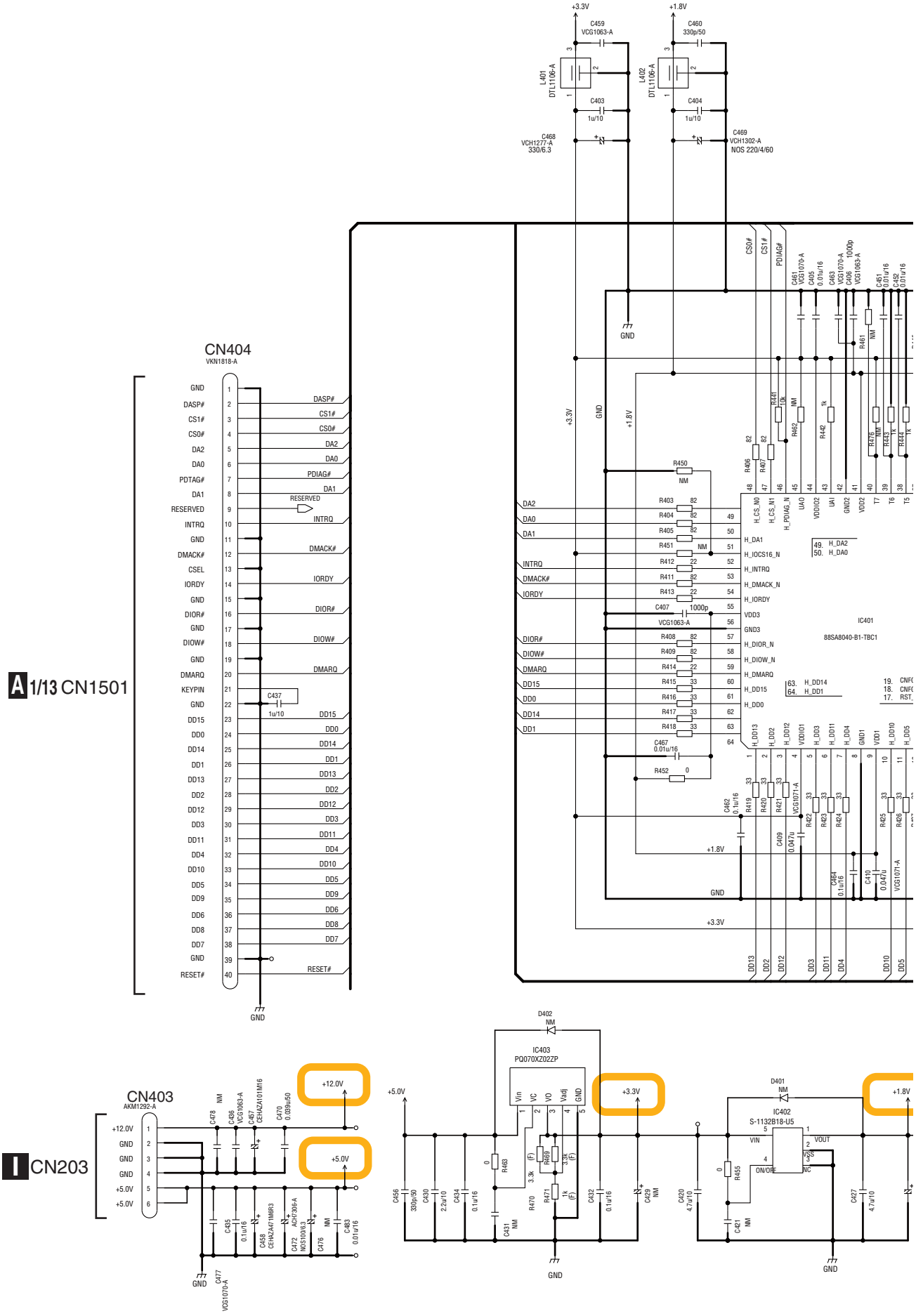
A 13/13 SERVICE MAIN ASSY (VXX3348)

A
B
C
D
E
F



A 13/13

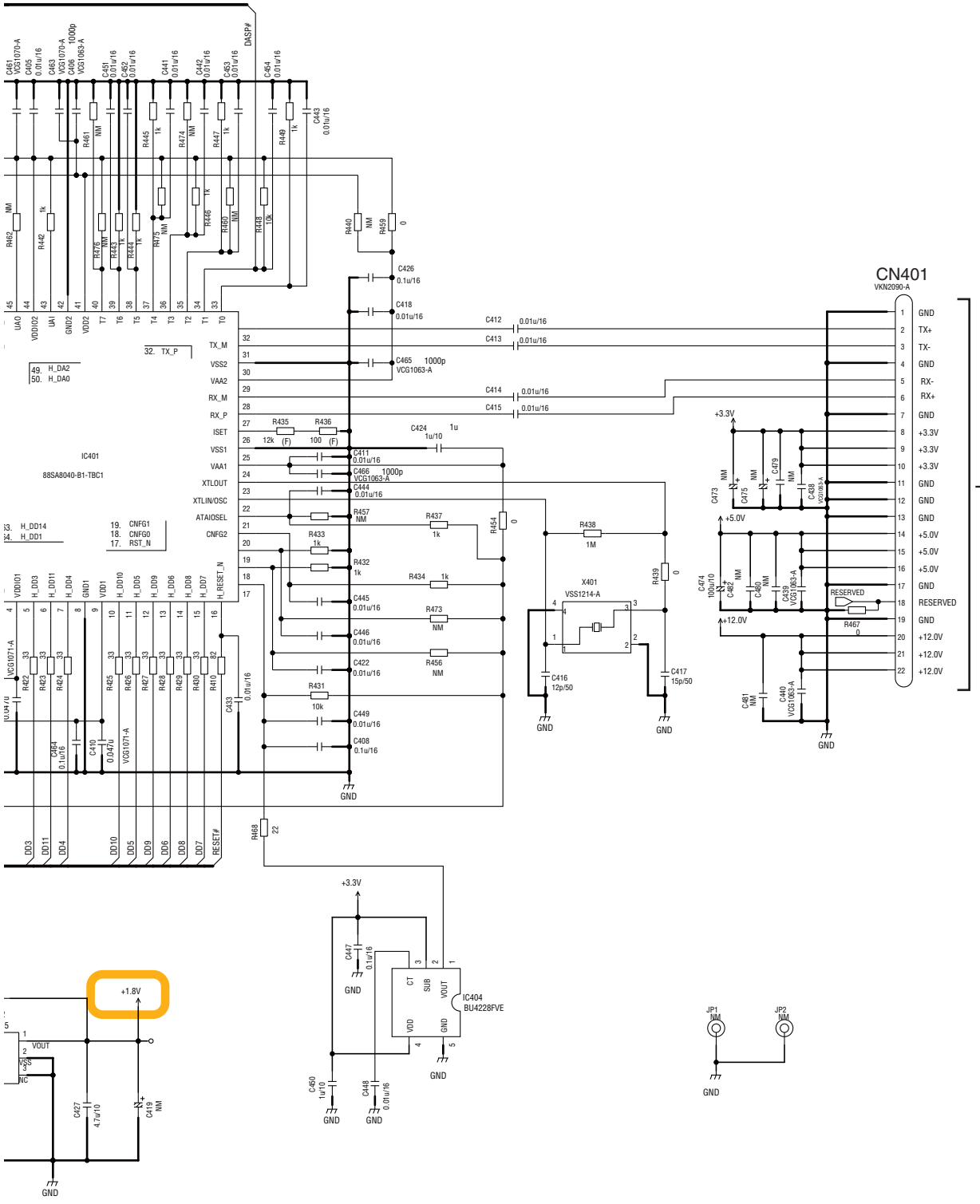
10.14 SPATA ASSY



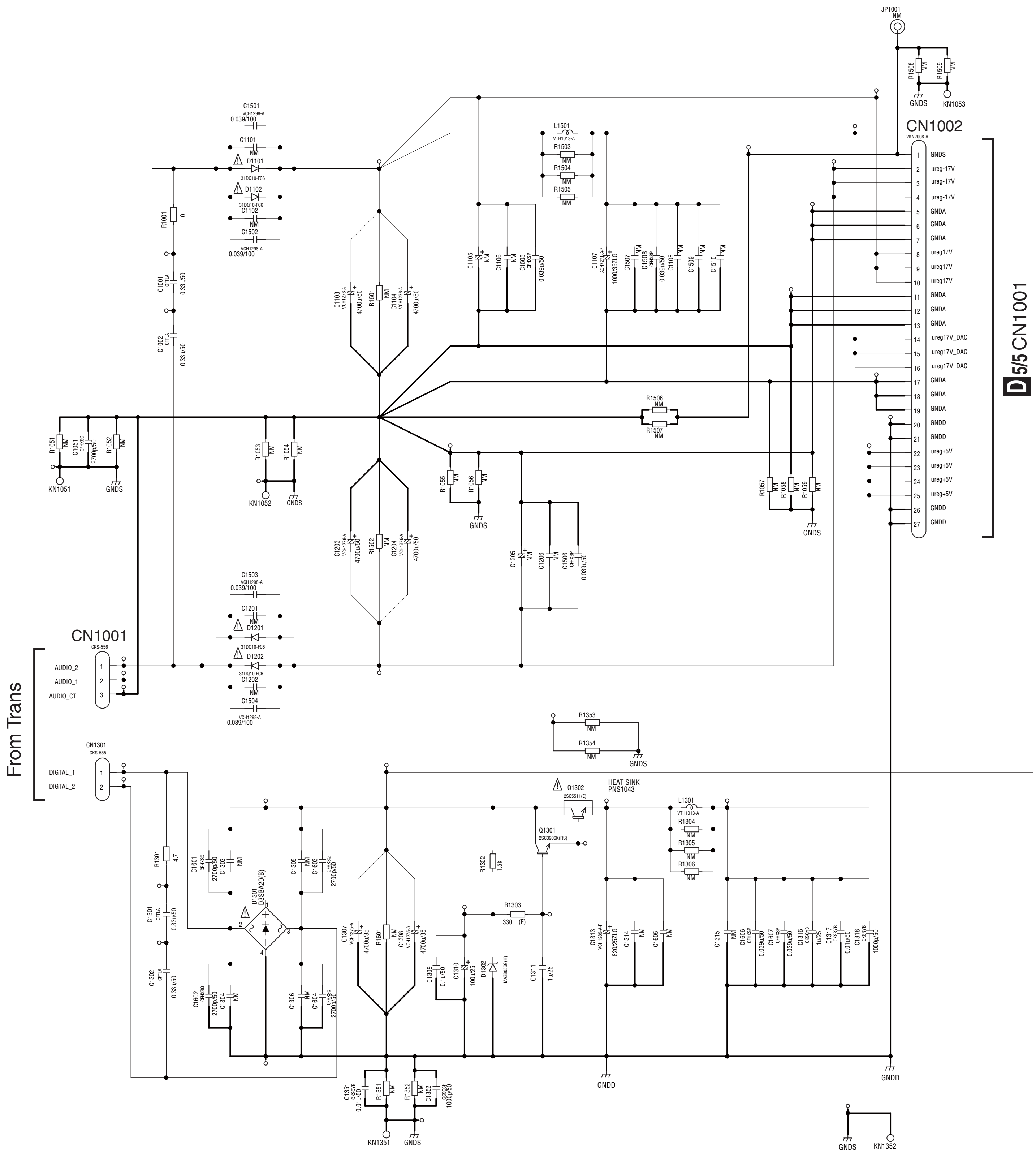
B SPATA ASSY (VWV2387)

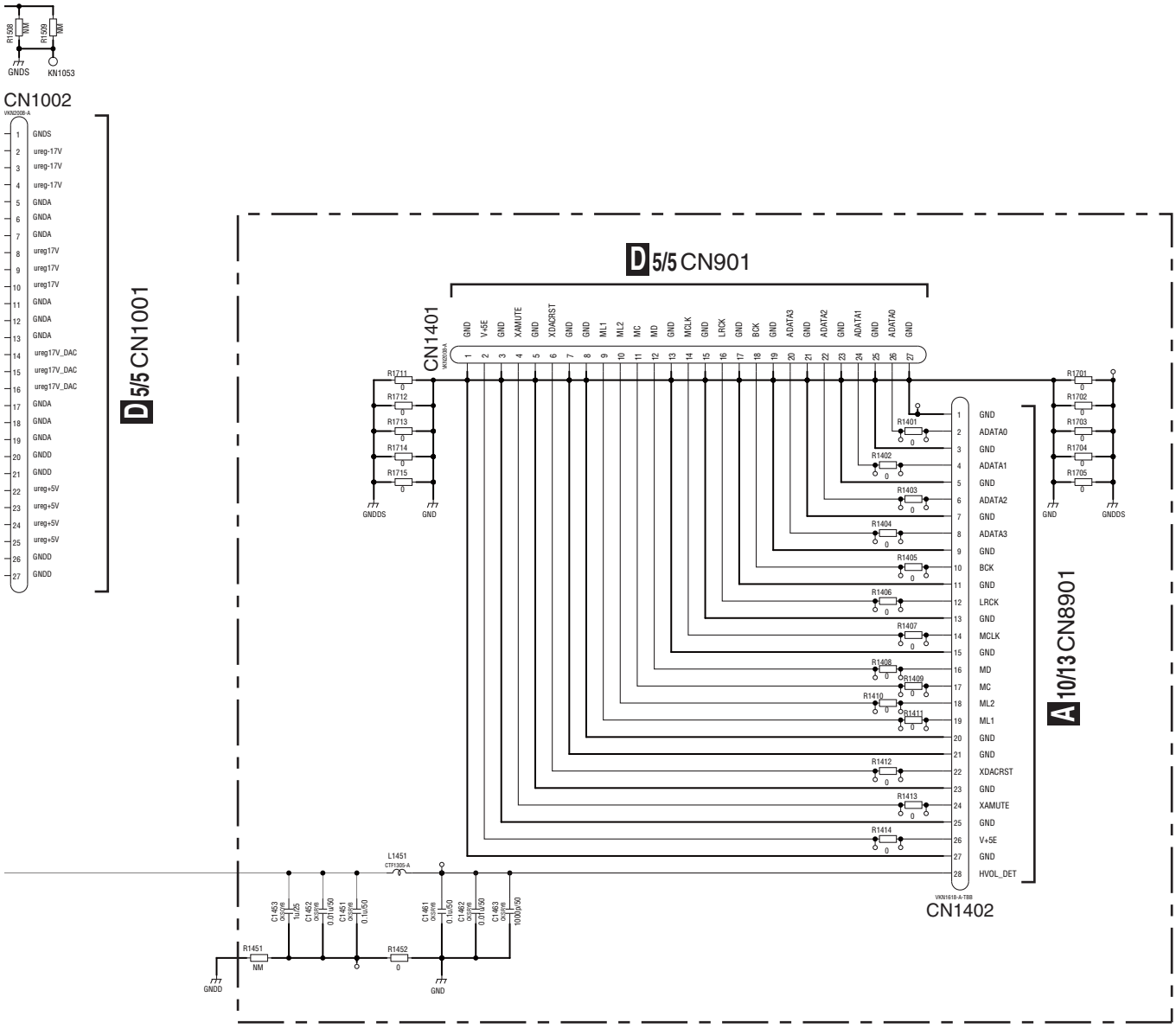
NOTE

	1..SERVICE MAIN ASSY	VXX3348
NSP	2..MAIN ASSY	VWV2382
	2..SPATA ASSY	VWV2387

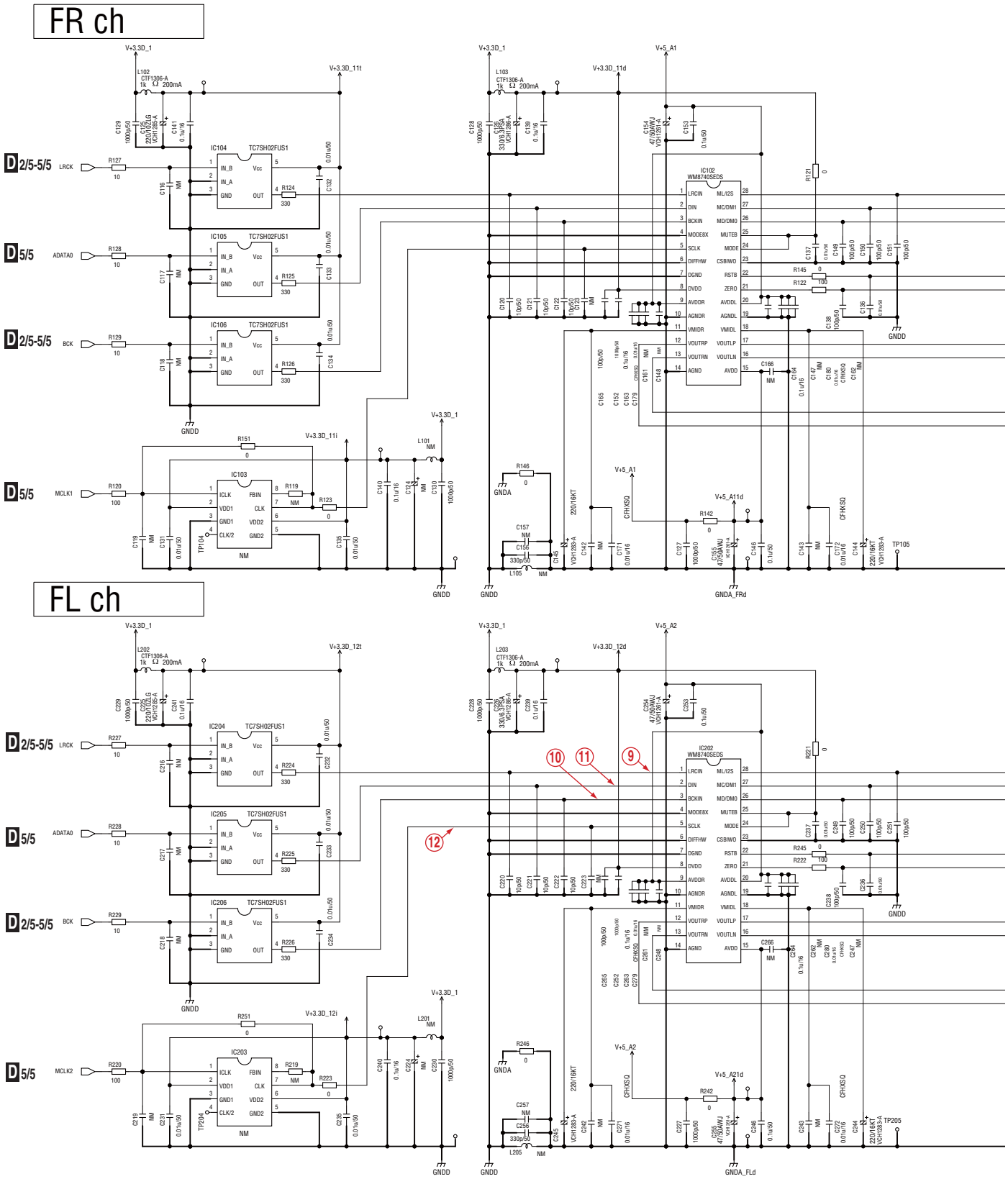


10.15 AUPW ASSY

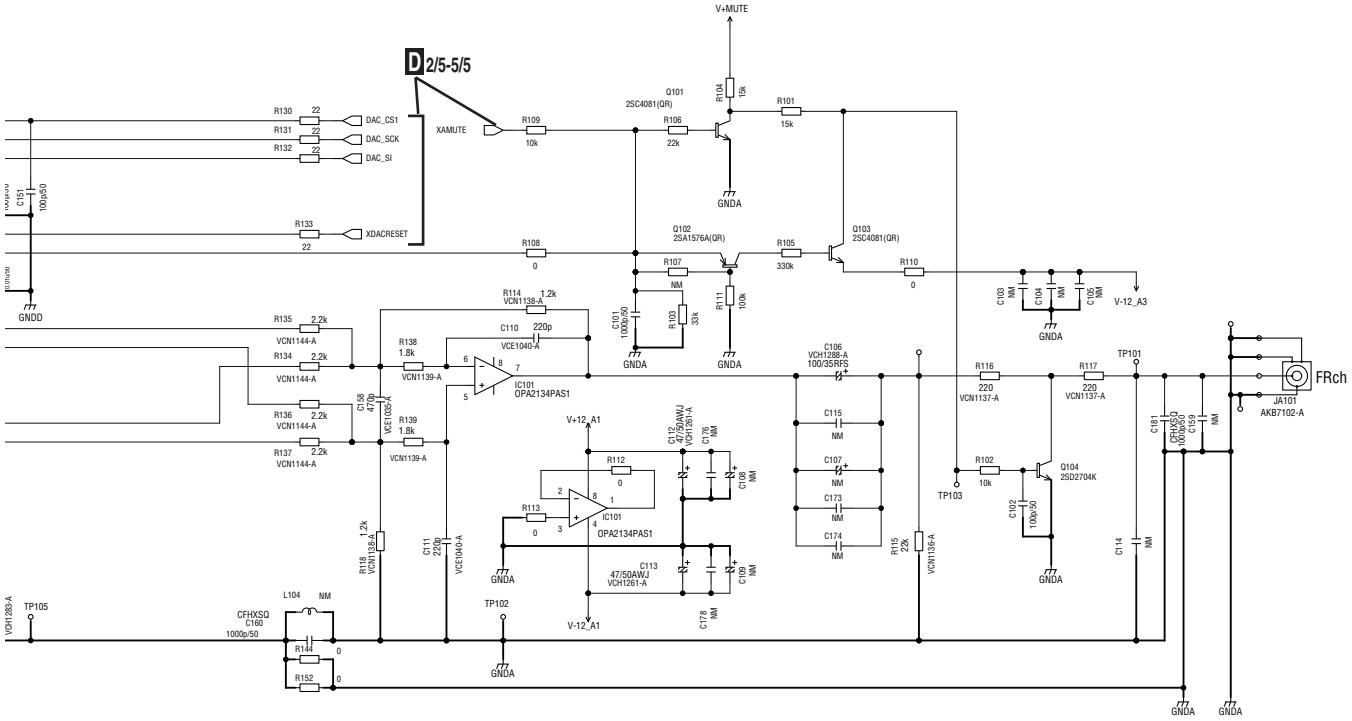


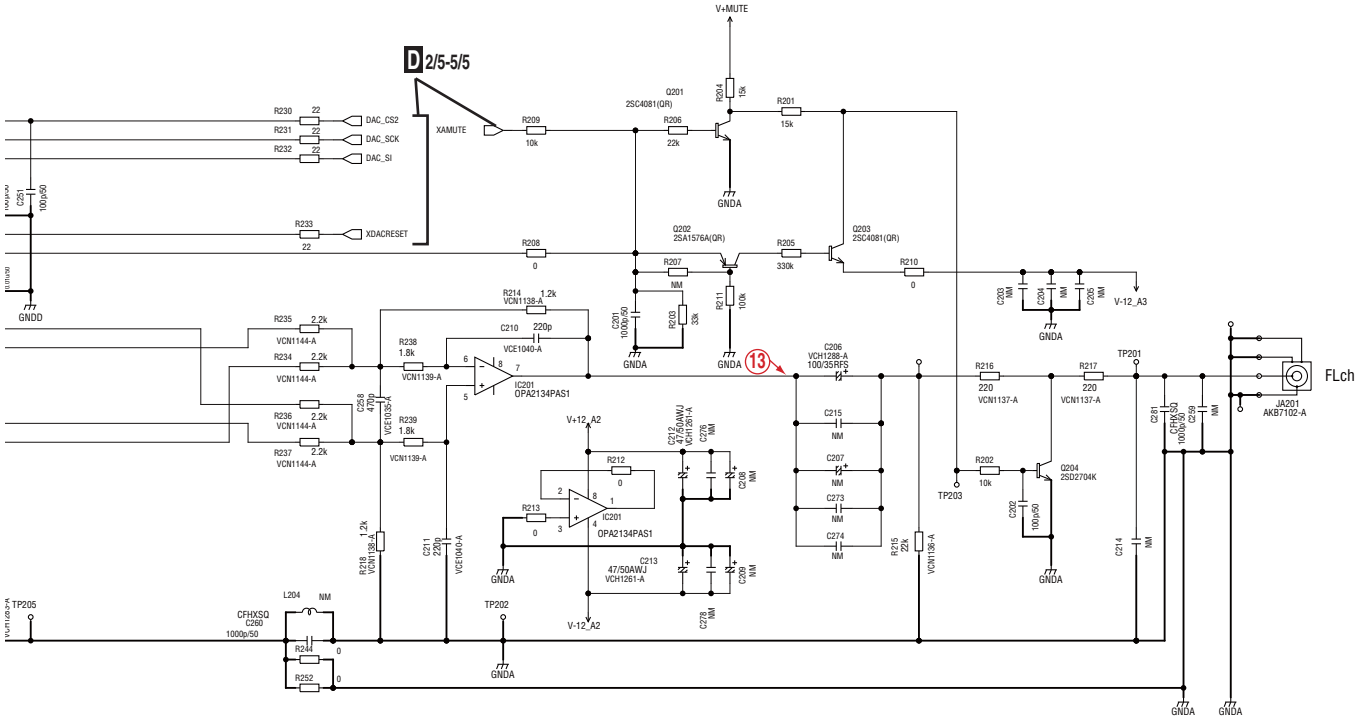

R1508 NM
R1509 NM
GNDS
KN1053
CN1002
VKN2508-A
1 GNDS
2 ureg-17V
3 ureg-17V
4 ureg-17V
5 GNDA
6 GNDA
7 GNDA
8 ureg17V
9 ureg17V
10 ureg17V
11 GNDA
12 GNDA
13 GNDA
14 ureg17V_DAC
15 ureg17V_DAC
16 ureg17V_DAC
17 GNDA
18 GNDA
19 GNDA
20 GNDD
21 GNDD
22 ureg+5V
23 ureg+5V
24 ureg+5V
25 ureg+5V
26 GNDD
27 GNDD
D 5/5 CN1001
D 5/5 CN901
CN1401
VKN1614
GND V+5E GND XAMUTE GND XDACRST GND GND ML1 ML2 MC MD GND MCLK GND LRCK GND BCK GND ADATA3 GND ADATA2 GND ADATA1 GND ADATA0 GND
R1711 R1712 R1713 R1714 R1715
GNDDS GND
R1701 R1702 R1703 R1704 R1705
GND GNDDS
R1401 R1402 R1403 R1404 R1405 R1406 R1407 R1408 R1409 R1410 R1411 R1412 R1413 R1414
1 GND
2 ADATA0
3 GND
4 ADATA1
5 GND
6 ADATA2
7 GND
8 ADATA3
9 GND
10 BCK
11 GND
12 LRCK
13 GND
14 MCLK
15 GND
16 MD
17 MC
18 ML2
19 ML1
20 GND
21 GND
22 XDACRST
23 GND
24 XAMUTE
25 GND
26 V+5E
27 GND
28 HVOL_DET
A 10/13 CN8901
VKN1618-A-TBB
CN1402
L1451
CTF1309-A
C1453 0.1u/25
C1452 0.01u/50
C1451 0.1u/50
C1461 0.1u/50
C1462 0.01u/50
C1463 1000p/50
R1451 NM
R1452 0
GNDD
GND

10.16 AUJB ASSY (1/5)

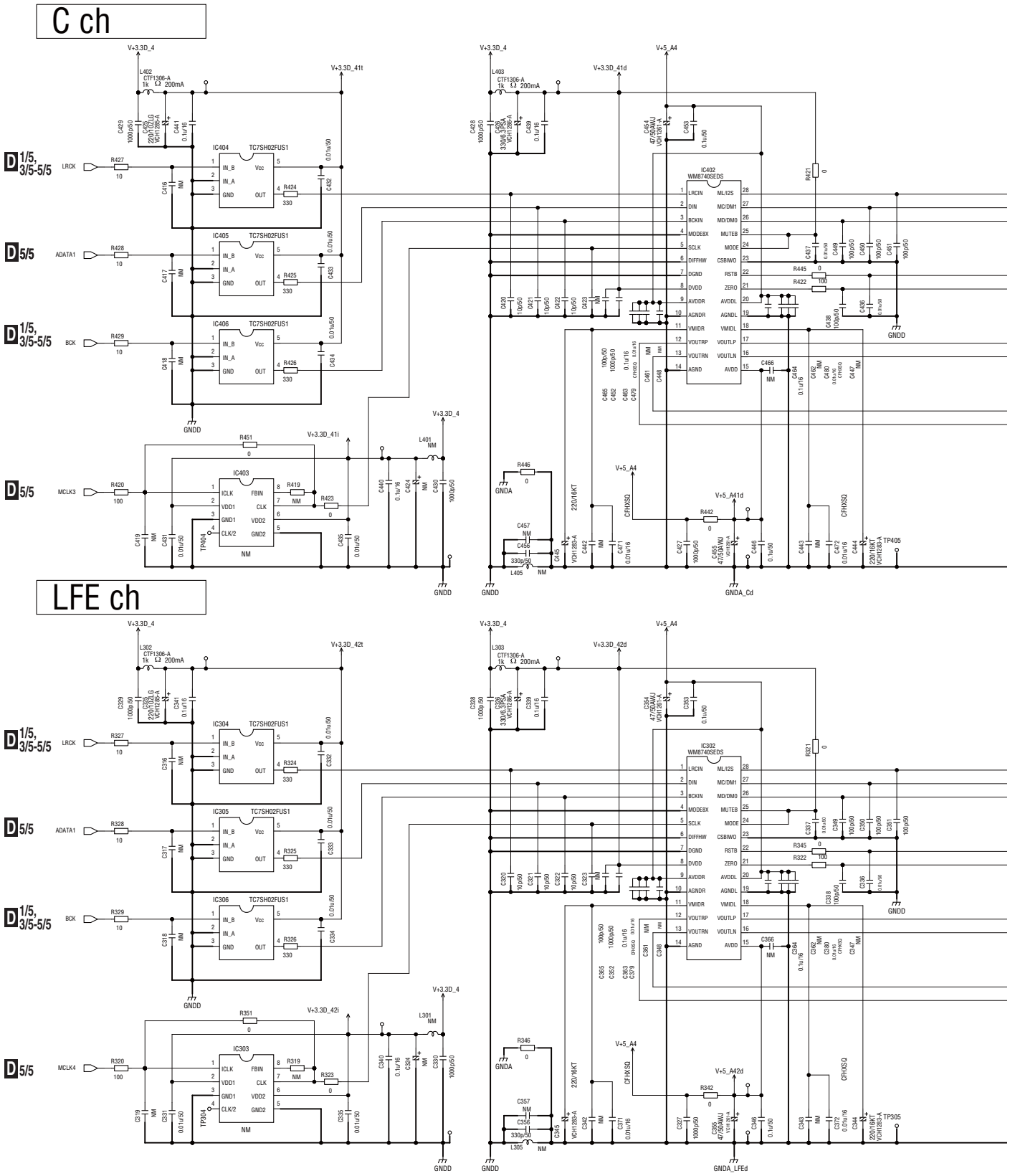


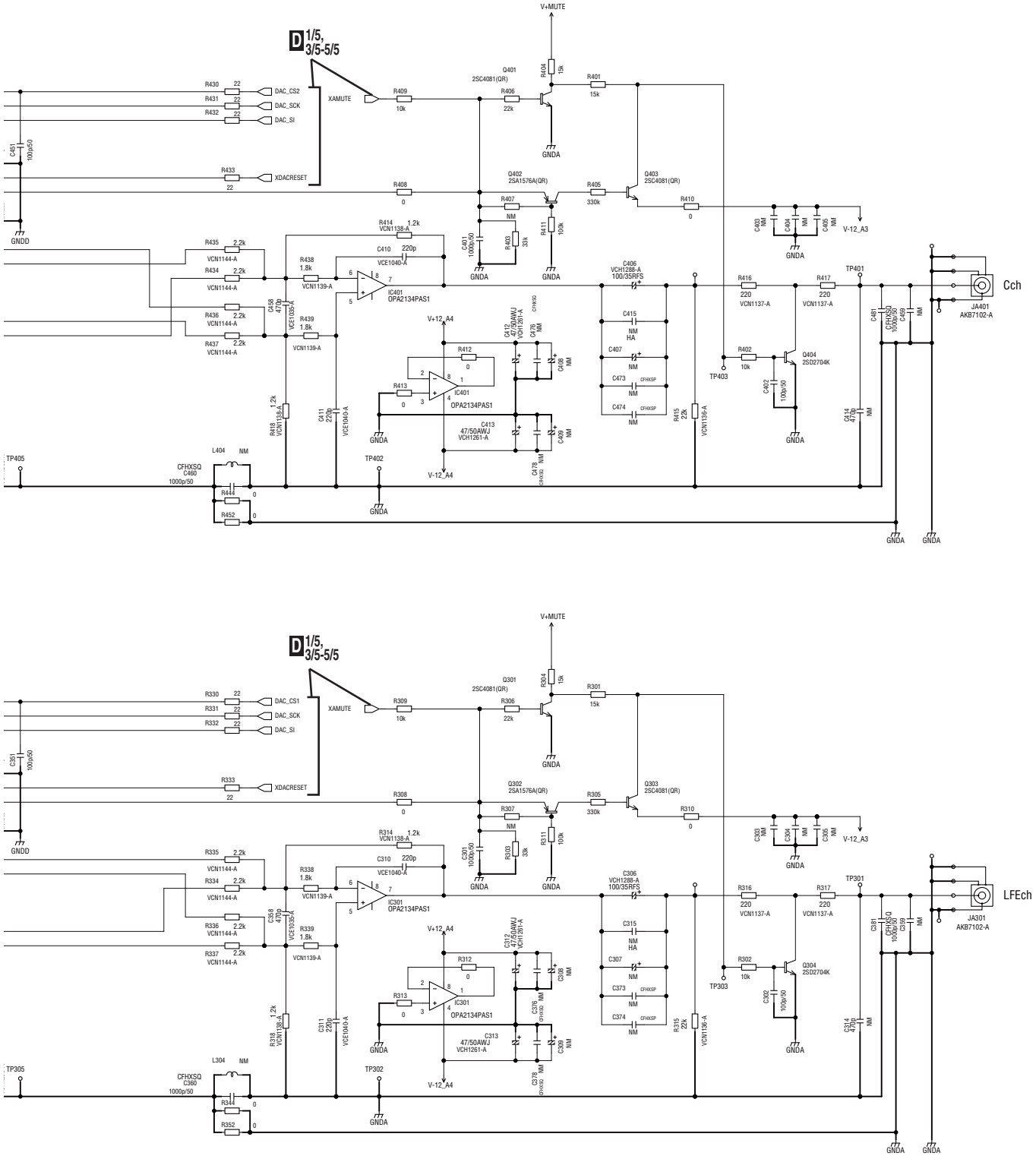
D 1/5 AUJB ASSY (VWG2630)





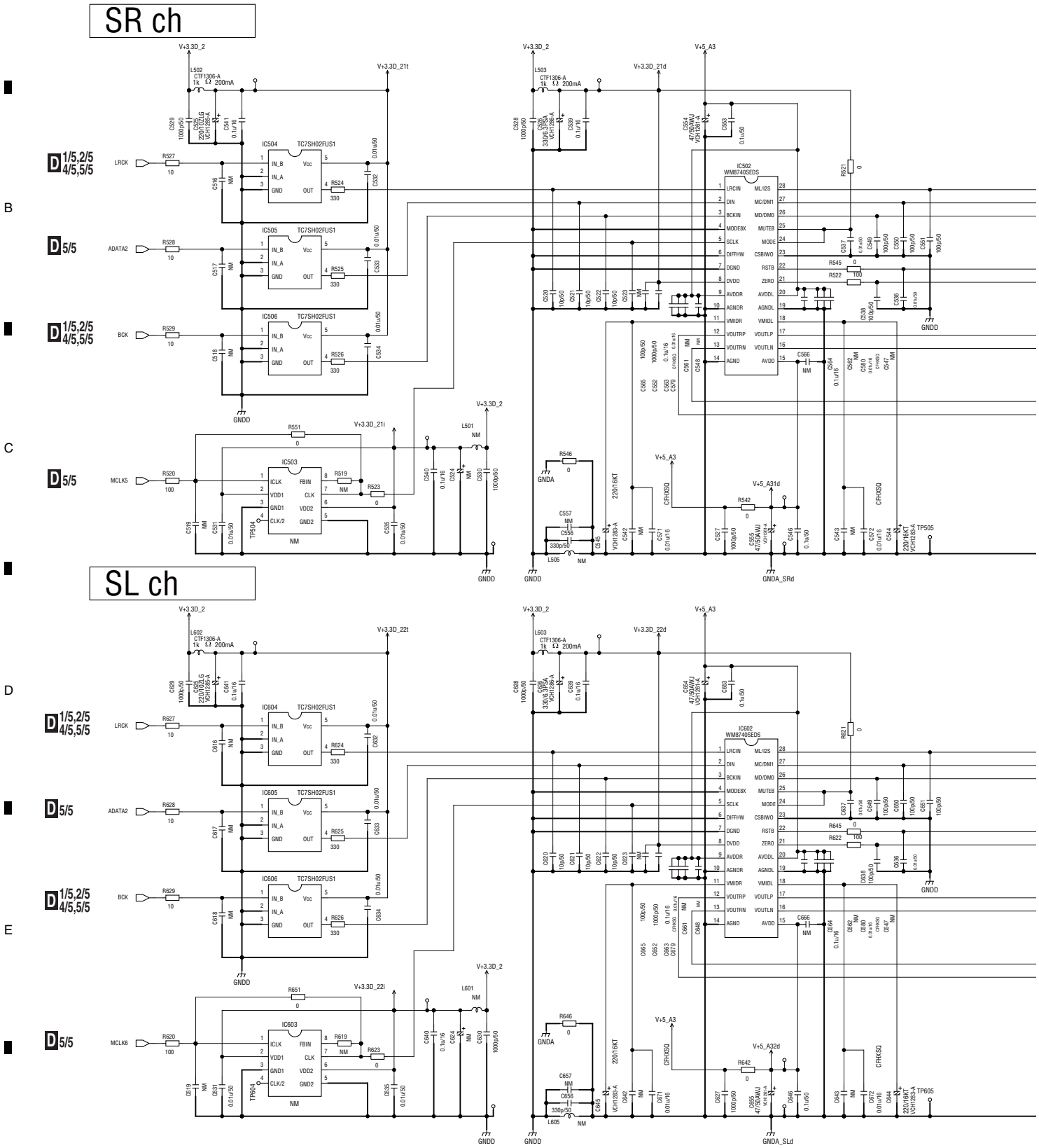
10.17 AUJB ASSY (2/5)




D 1/5, 3/5-5/5
V+MUTE
XAMUTE
DAC_CS2
DAC_SCK
DAC_SI
XDACRESET
Q401 2SC4081(QR)
Q402 2SA1576A(QR)
Q403 2SC4081(QR)
Q404 2SD2704K
IC401 OPA2134PAS1
C406 VCH1288-A 100/35RFS
C412 47/50AWJ VCH1261-A
C413 47/50AWJ VCH1261-A
V+12_A4
V-12_A4
V-12_A3
GNDD
GNDA
TP401
TP402
TP403
TP405
JA401 AKB7102-A
Cch
L404 NM
CFHXSQ C460 1000p/50

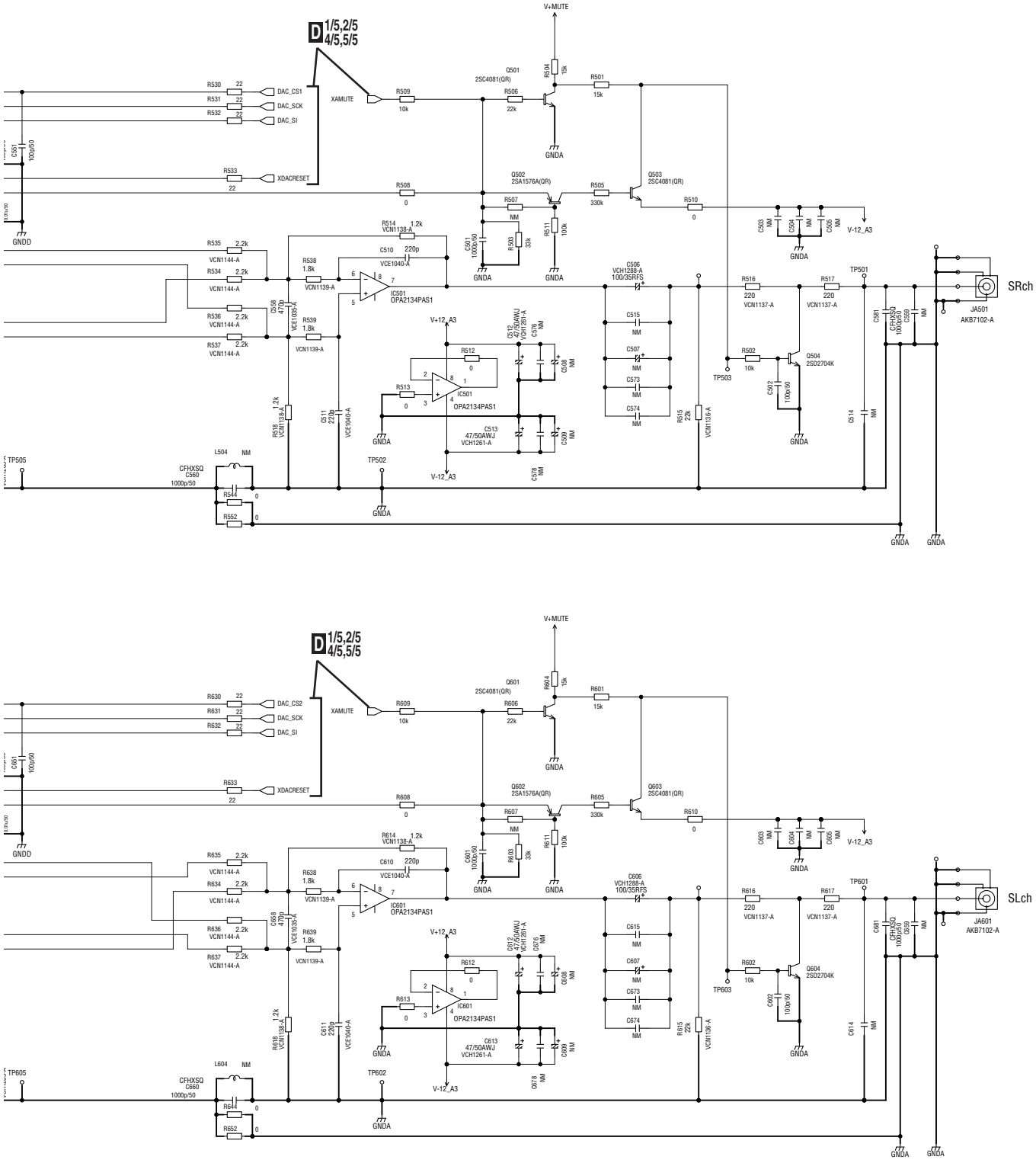
D 1/5, 3/5-5/5
V+MUTE
XAMUTE
DAC_CS1
DAC_SCK
DAC_SI
XDACRESET
Q301 2SC4081(QR)
Q302 2SA1576A(QR)
Q303 2SC4081(QR)
Q304 2SD2704K
IC301 OPA2134PAS1
C306 VCH1288-A 100/35RFS
C312 47/50AWJ VCH1261-A
C313 47/50AWJ VCH1261-A
V+12_A4
V-12_A4
V-12_A3
GNDD
GNDA
TP301
TP302
TP303
TP305
JA301 AKB7102-A
LFEch
L304 NM
CFHXSQ C360 1000p/50

10.18 AUJB ASSY (3/5)

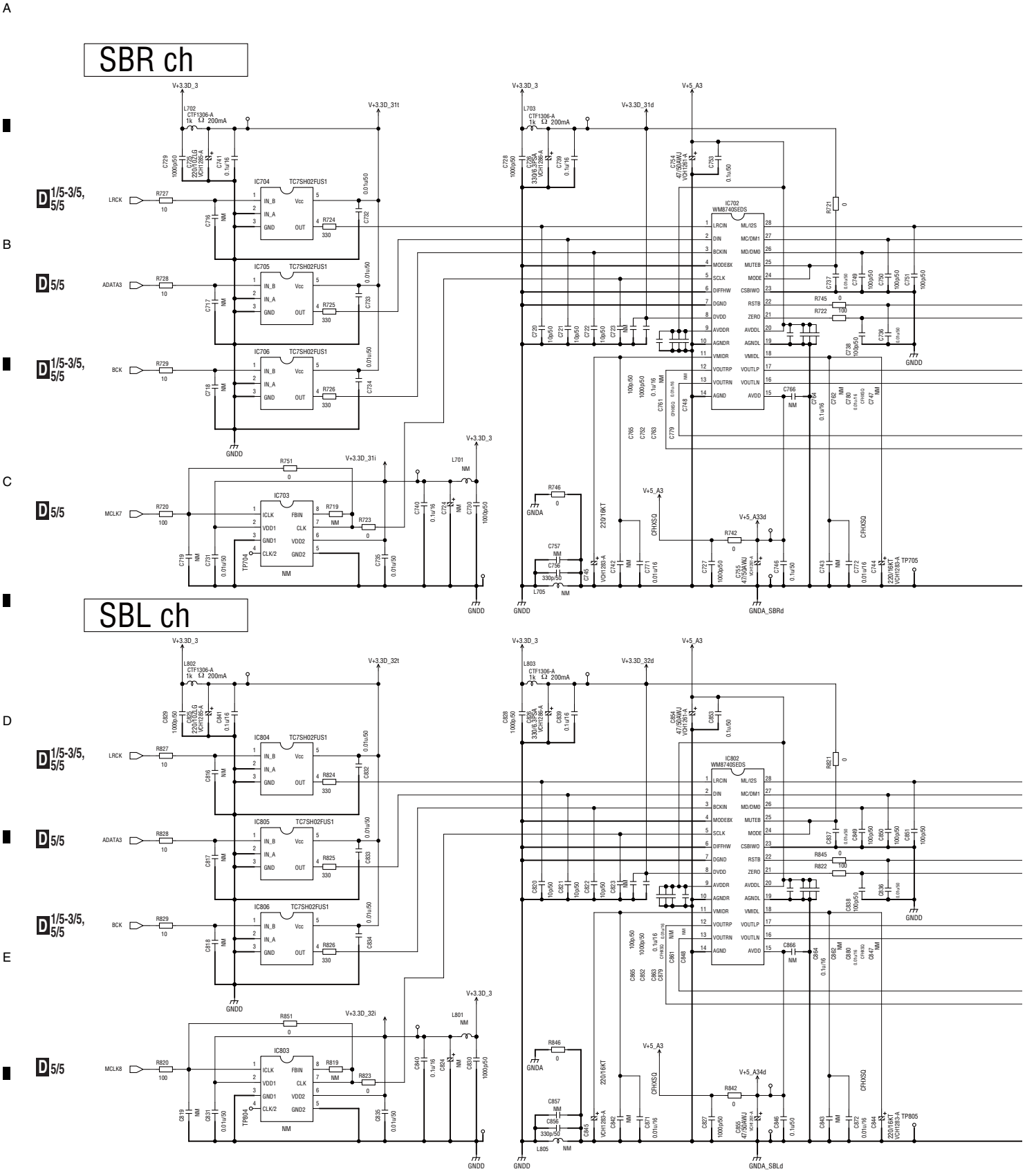


D 3/5

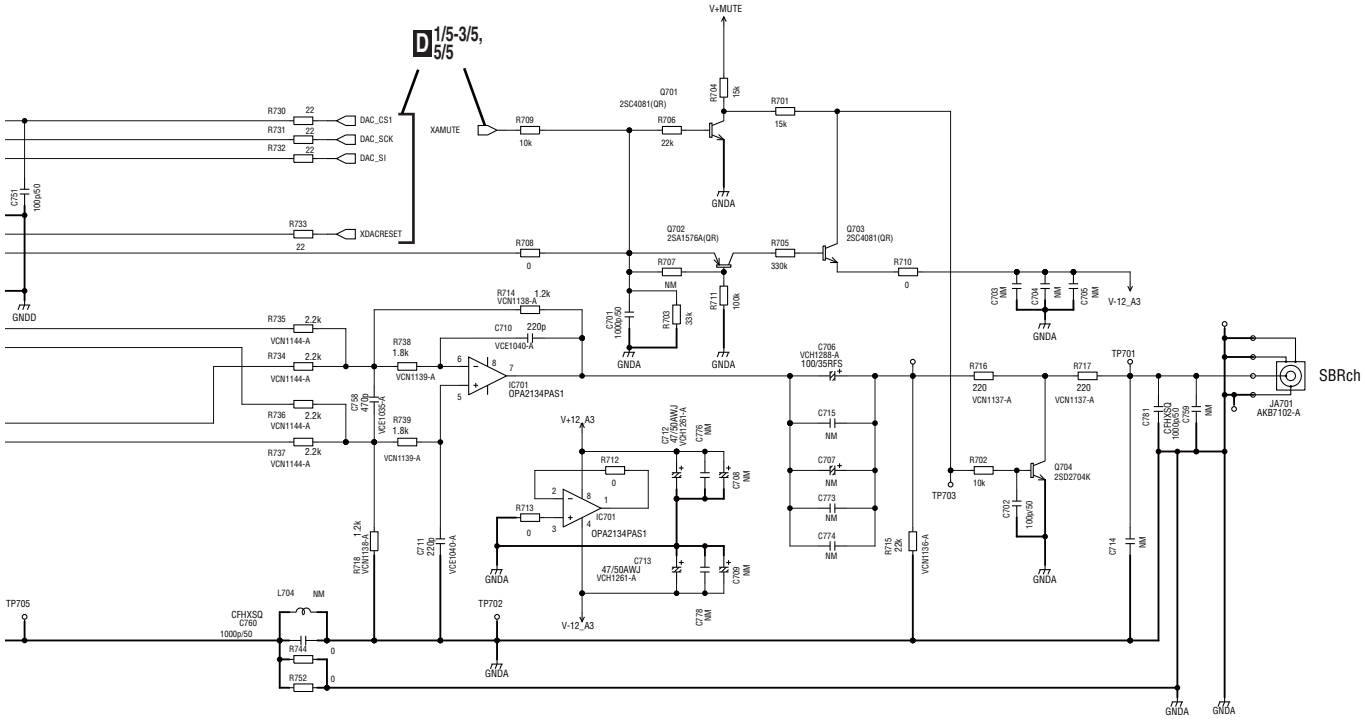
D 3/5 AUJB ASSY (VWG2630)

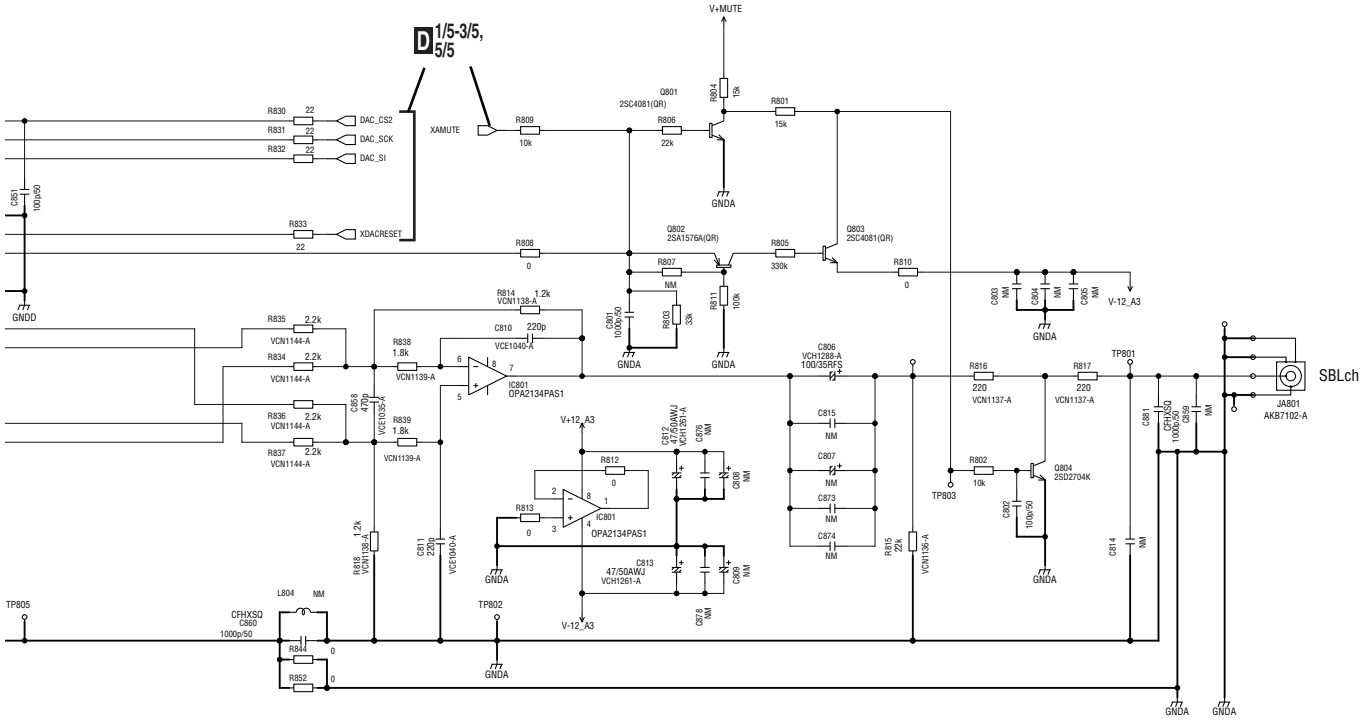


10.19 AUJB ASSY (4/5)

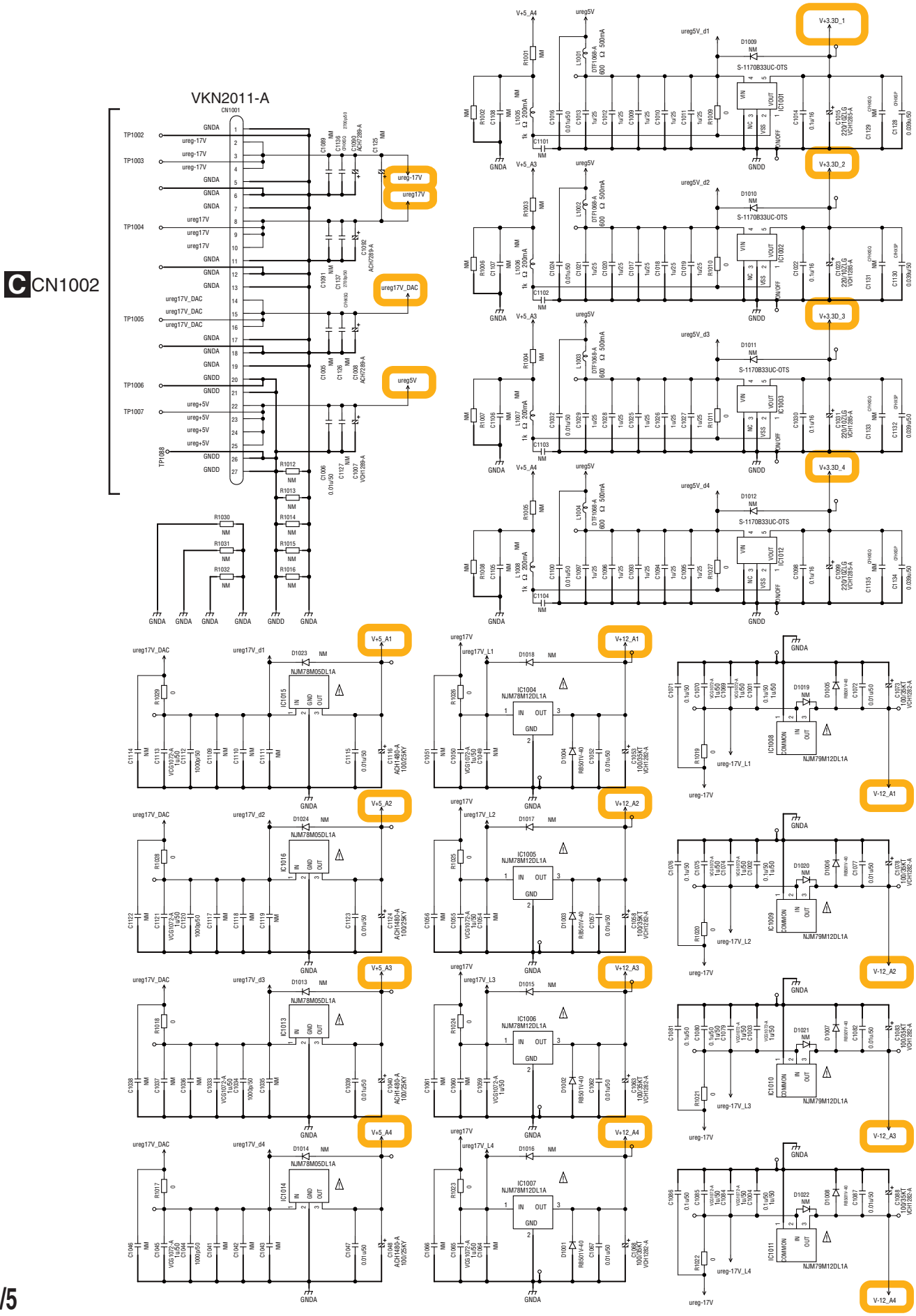


D 4/5 AUJB ASSY (VWG2630)

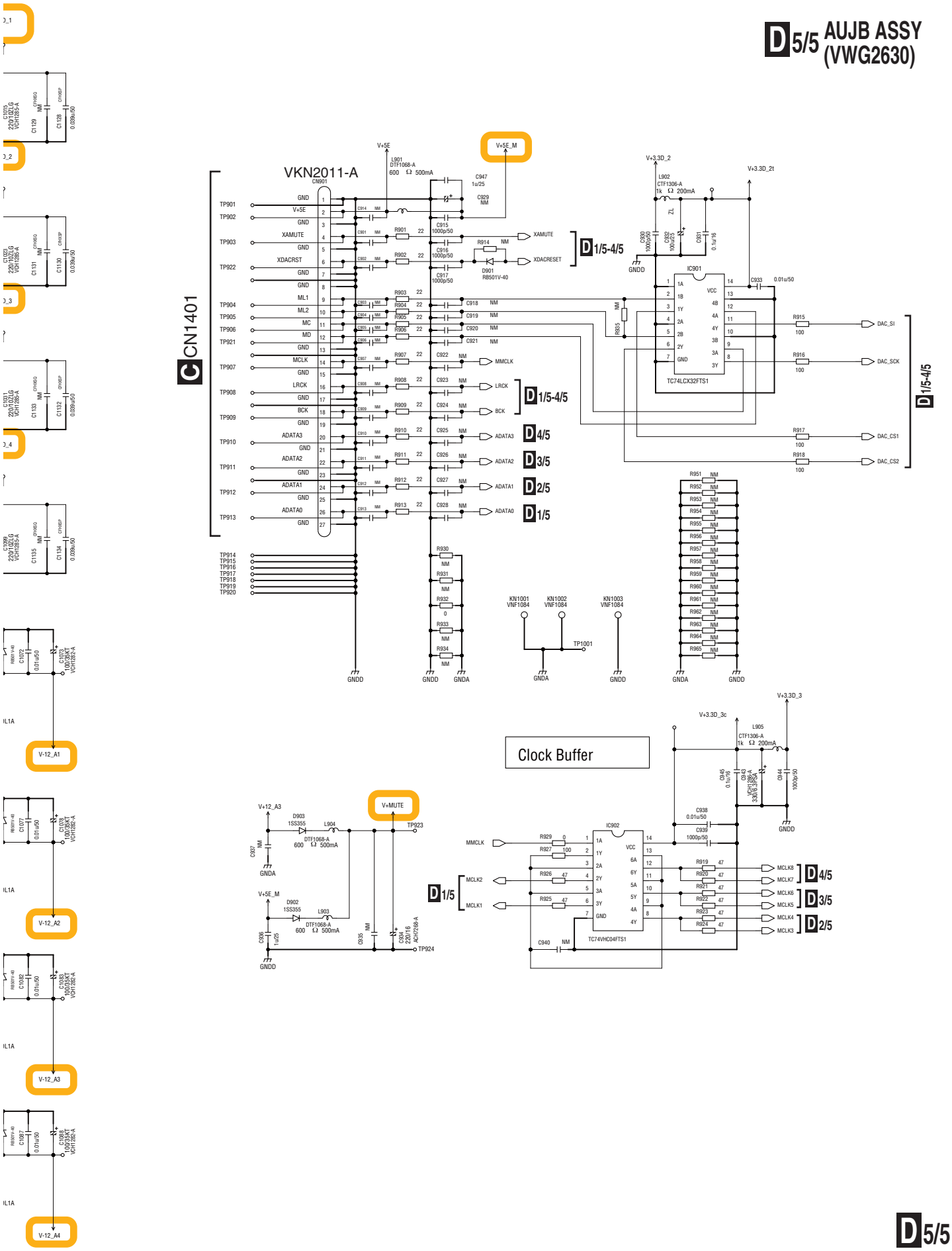




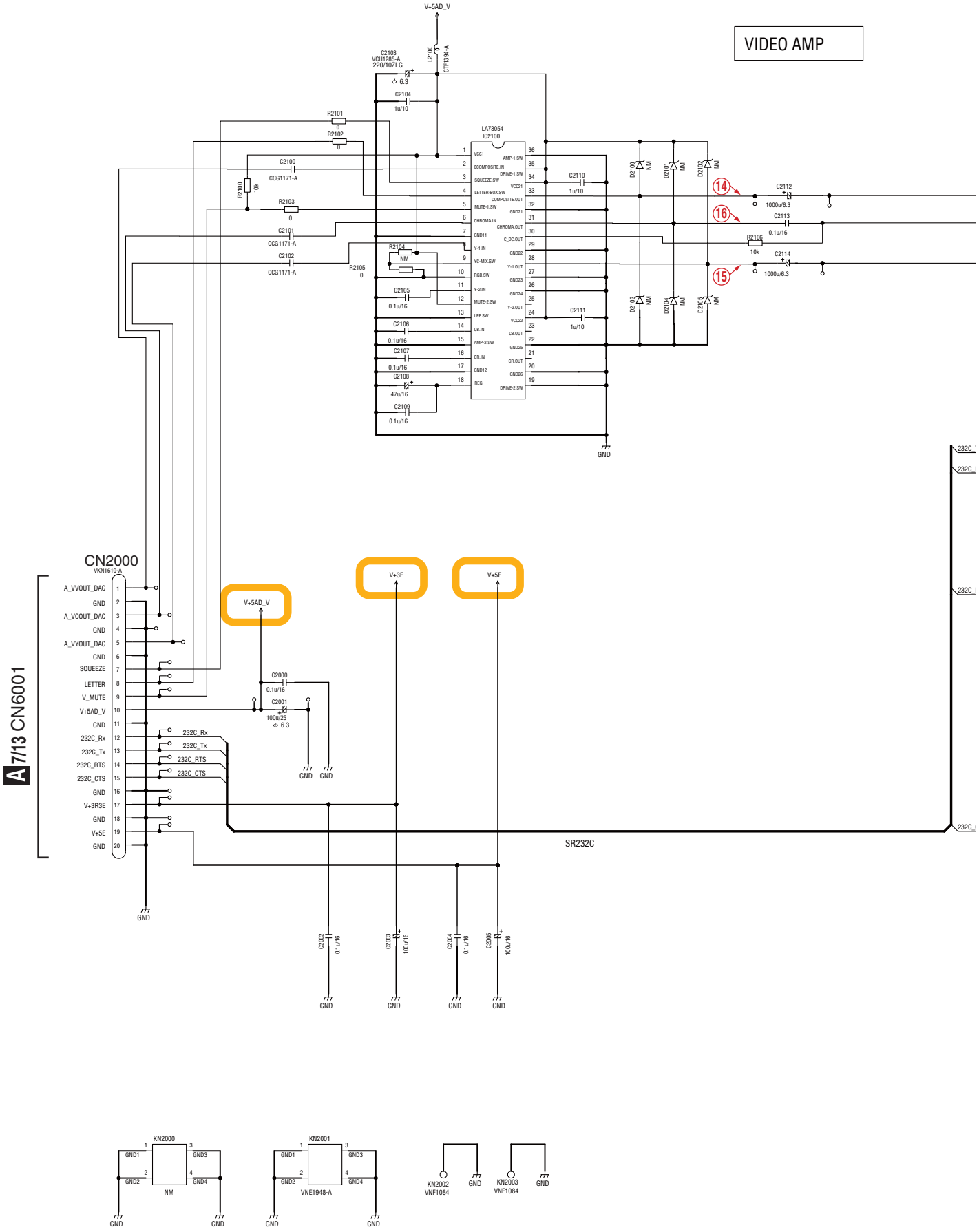
10.20 AUJB ASSY (5/5)

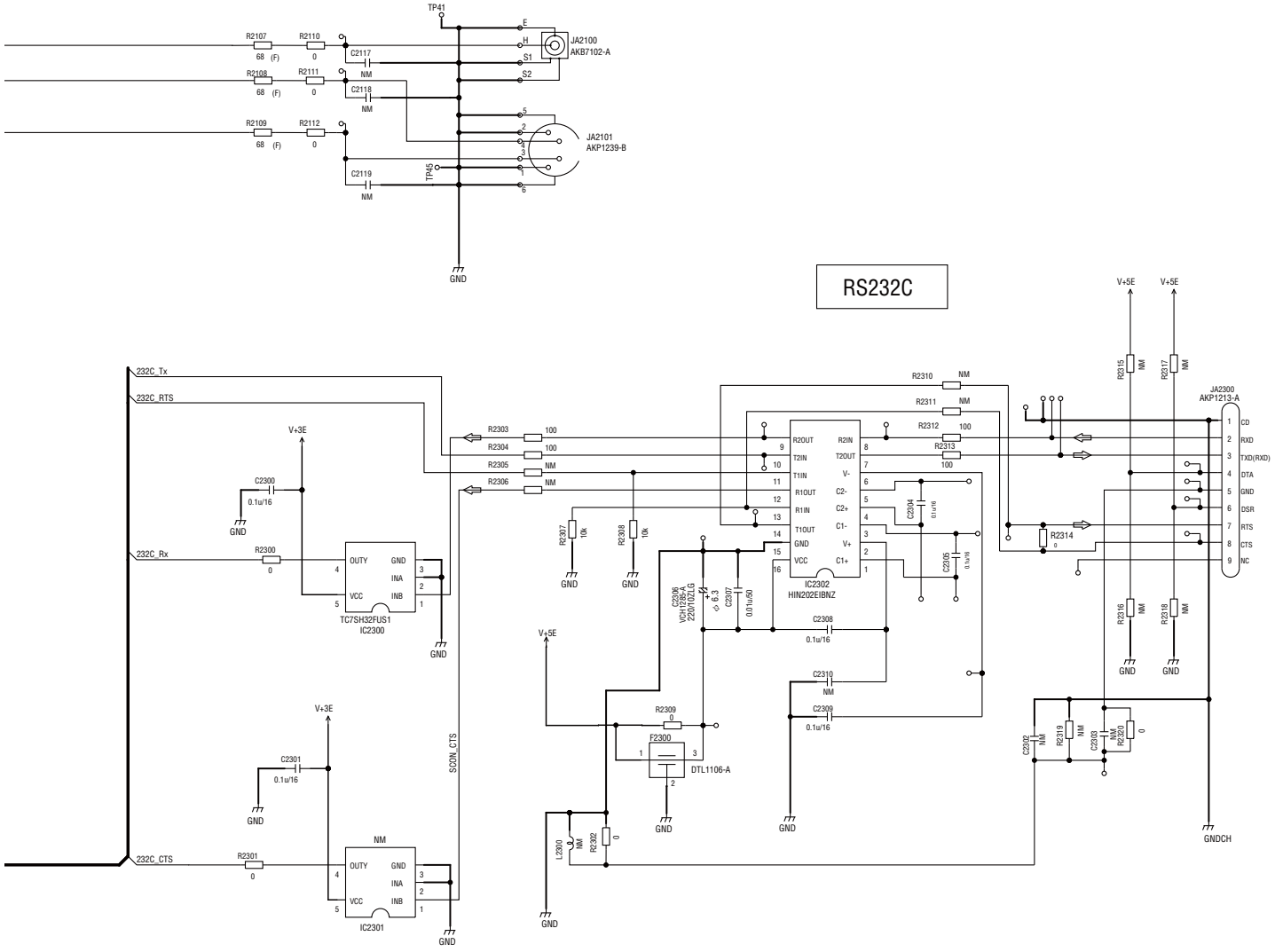


D 5/5 AUJB ASSY (VWG2630)

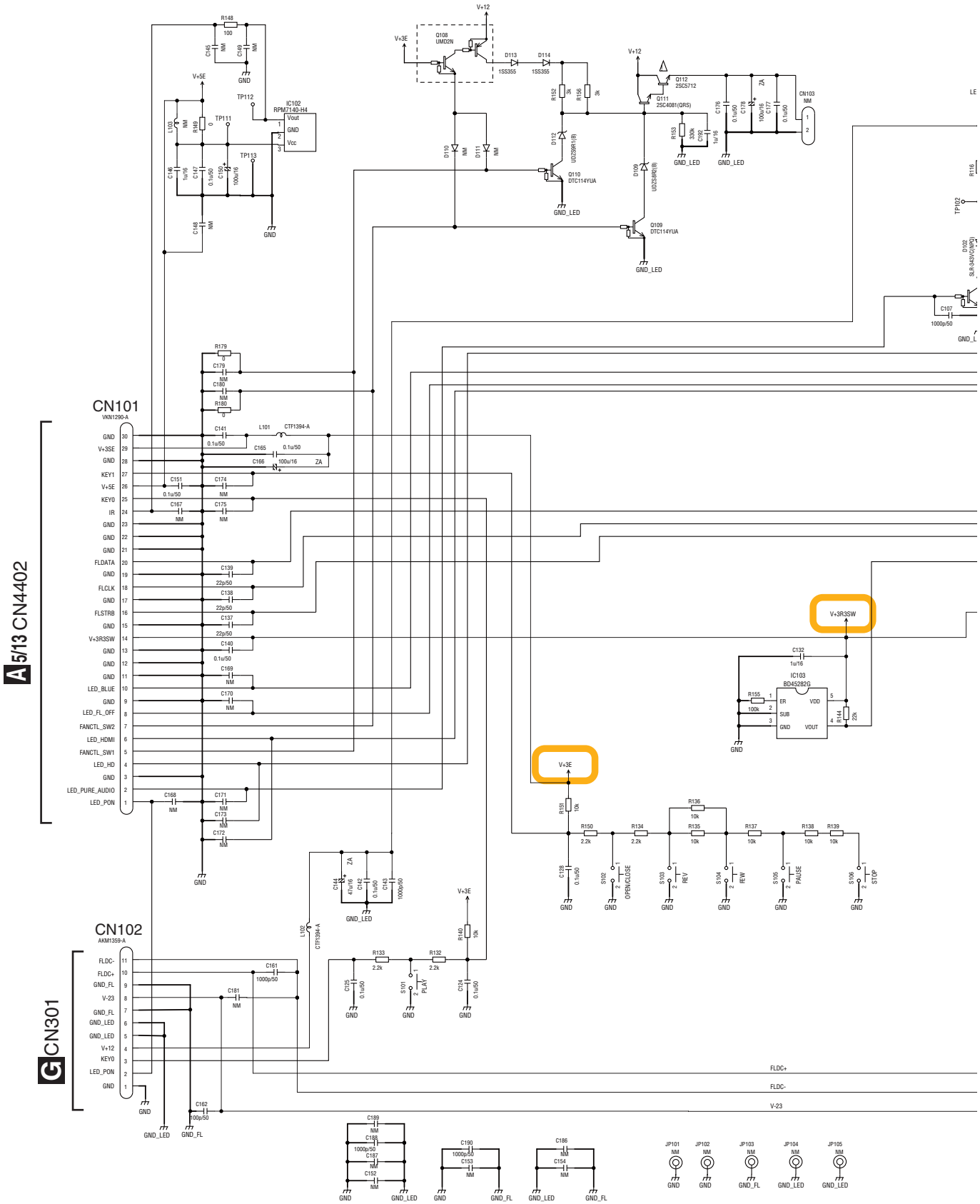


10.21 VOUT ASSY

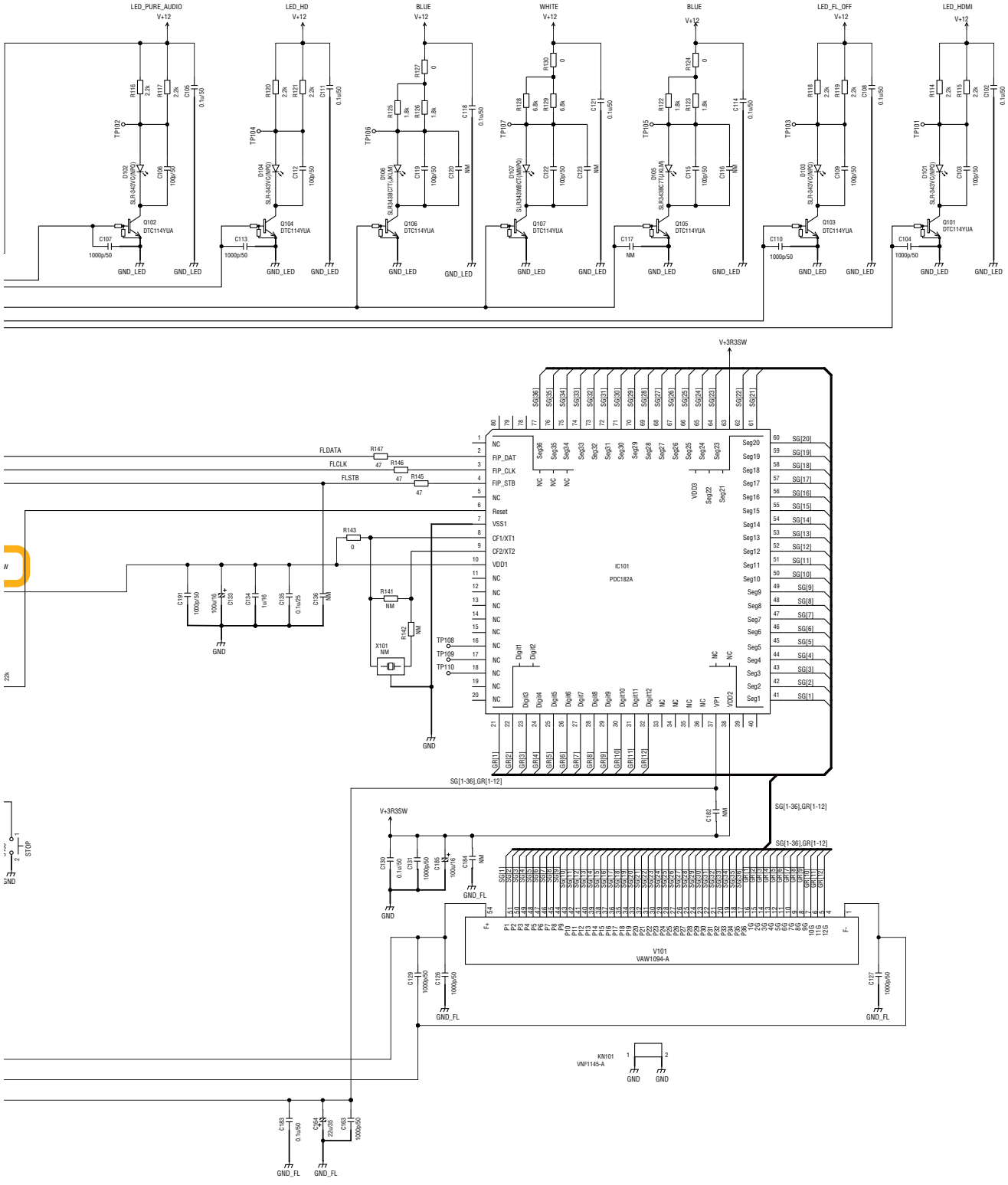



RS232C
TP41
JA2100
AKB7102-A
JA2101
AKP1239-B
TP45
R2107
R2108
R2109
R2110
R2111
R2112
C2117
C2118
C2119
GND
232C_Tx
232C_RTS
232C_Rx
232C_CTS
V+3E
V+5E
C2300
C2301
R2300
R2301
TC7SH32FUS1
IC2300
IC2301
SCON_CTS
R2303
R2304
R2305
R2306
R2307
R2308
R2309
R2310
R2311
R2312
R2313
R2314
R2315
R2316
R2317
R2318
R2319
R2320
C2302
C2303
C2304
C2305
C2306
C2307
C2308
C2309
C2310
F2300
DTL1106-A
L2300
R2302
IC2302
HIN202EIBNZ
JA2300
AKP1213-A
CD
RXD
TXD(RXD)
DTA
GND
DSR
RTS
CTS
NC
GNDCH

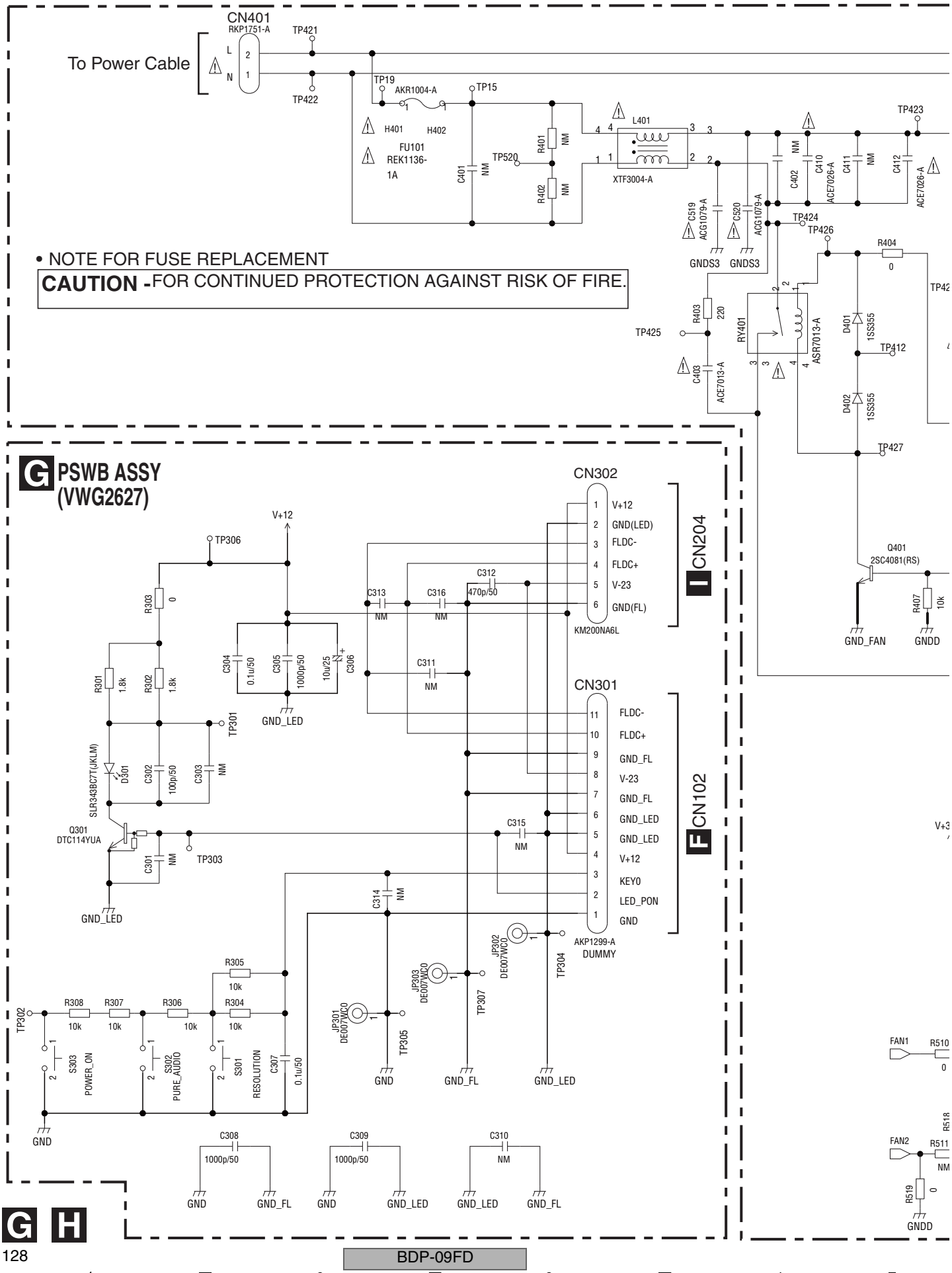
10.22 FLKY ASSY



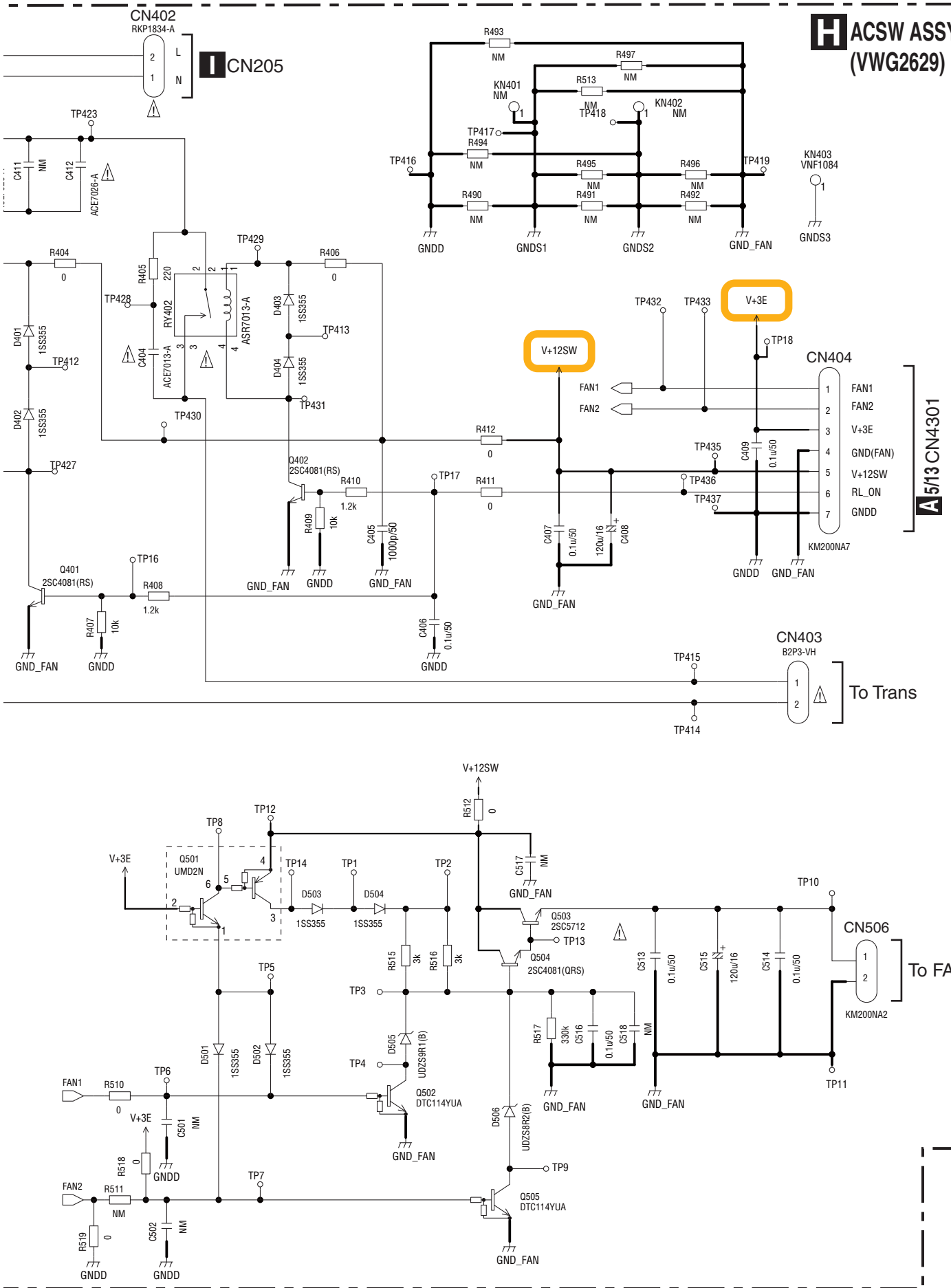
F FLKY ASSY (VWG2626)



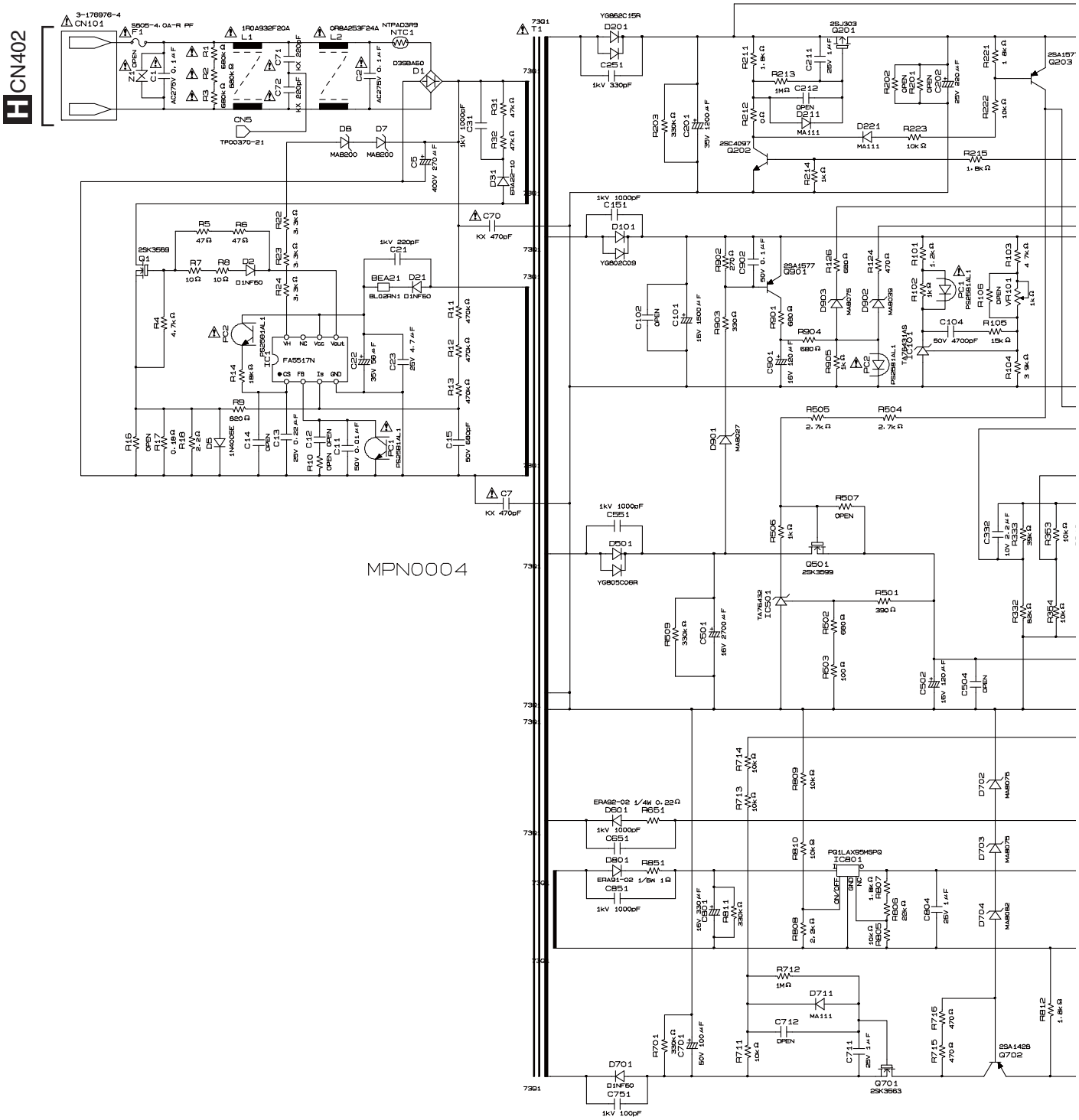
10.23 PSWB AND ACSW ASSY



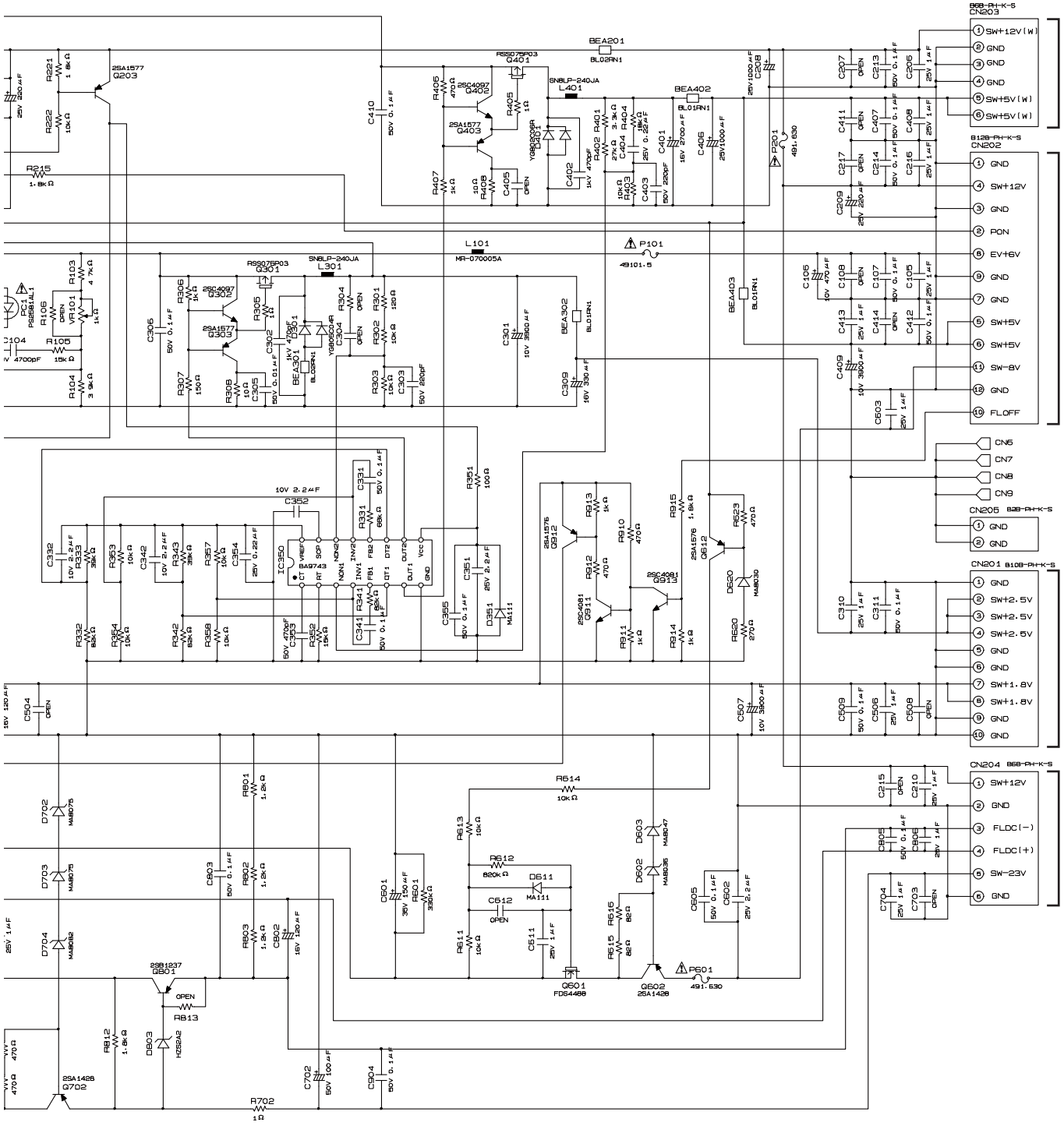
H ACSW ASSY (VWG2629)



10.24 SYPS ASSY



I SYPS ASSY (VWR1422)

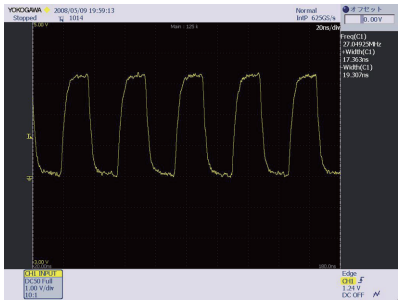


10.25 WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.

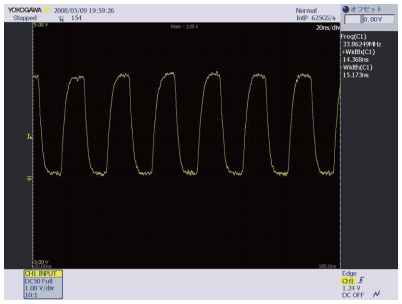
A MAIN ASSY

1 27 MHz VMCLK
R3819_IC3801
P-ON

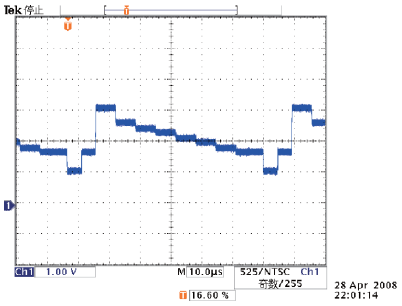


2 36.864 MHz AMCLK1
R3816_IC3801
P-ON

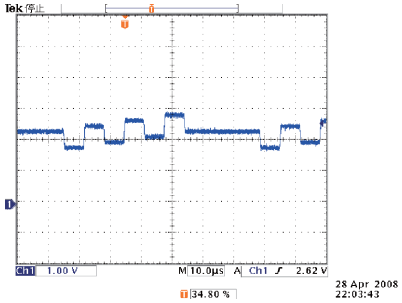
3 33.8688 MHz AMCLK2
R3817_IC3801
P-ON



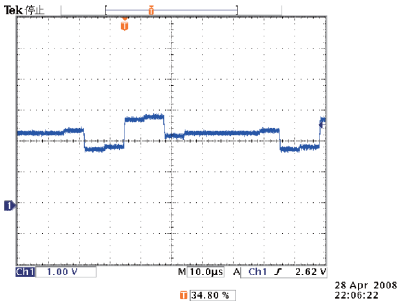
4 Component Y Out
IC6302_18pin
75% Color-bar A1 Disc 2-20



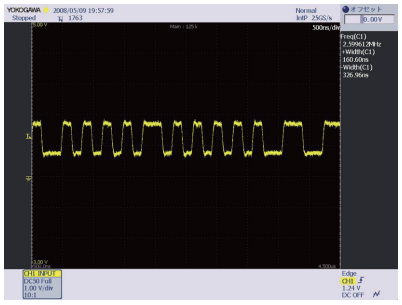
5 Cb Out
IC6302_16pin
75% Color-bar A1 Disc 2-20



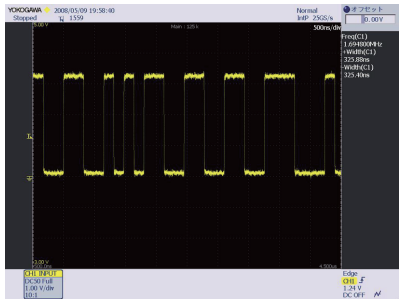
6 Cr Out
IC6302_14pin
75% Color-bar A1 Disc 2-20



7 CoAxicial Out
R8116_JA8001 side
1kHz 2Vrms A1 Disc 2-1

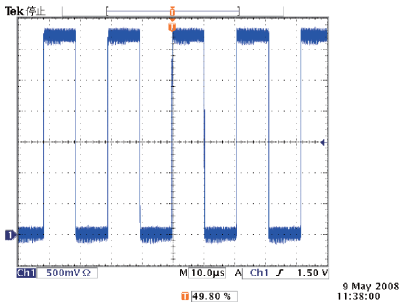


8 Optical Out
R8206_JA8002 side
1kHz 2Vrms A1 Disc 2-1

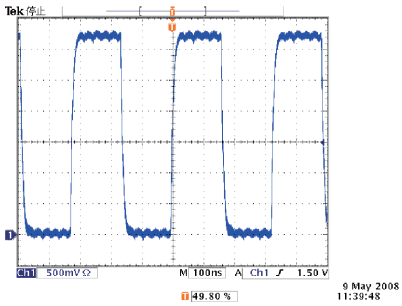


D AUJB ASSY

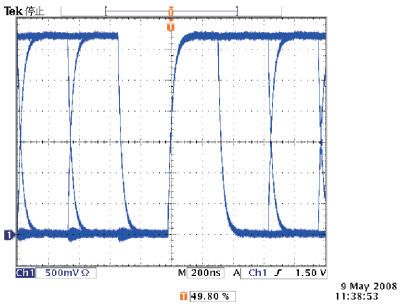
(9) LRCK
IC202_1pin
1kHz 2Vrms A1 Disc 2-1



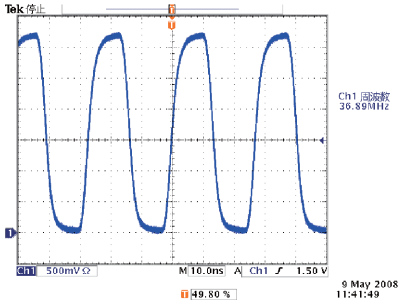
(10) BCK
IC202_3pin
1kHz 2Vrms A1 Disc 2-1



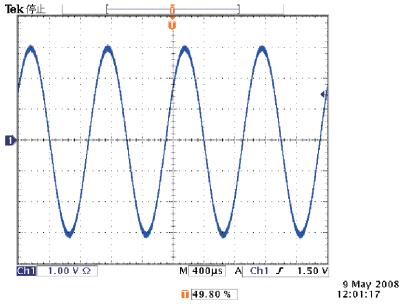
(11) ADATA0
IC202_2pin
1kHz 2Vrms A1 Disc 2-1



(12) MCLK
IC202_5pin
1kHz 2Vrms A1 Disc 2-1

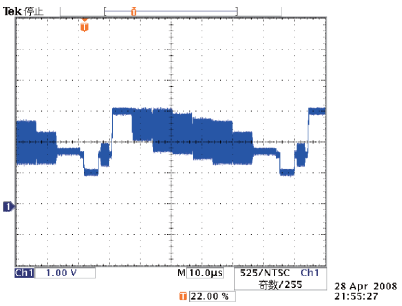


(13) LOUT
IC201_7pin
1kHz 2Vrms A1 Disc 2-1

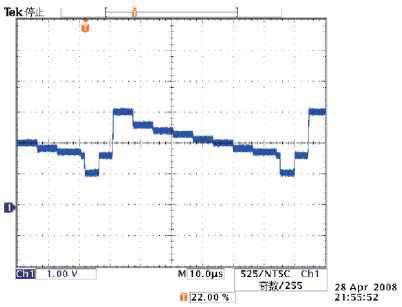


E VOUT ASSY

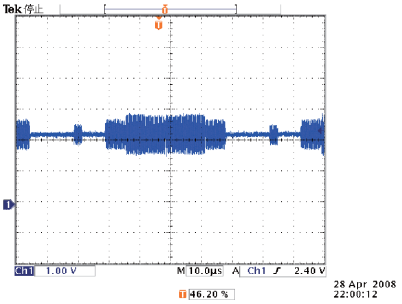
(14) Video Out
IC2100_33pin
75% Color-bar A1 Disc 2-20



(15) Y Out
IC2100_28pin
75% Color-bar A1 Disc 2-20



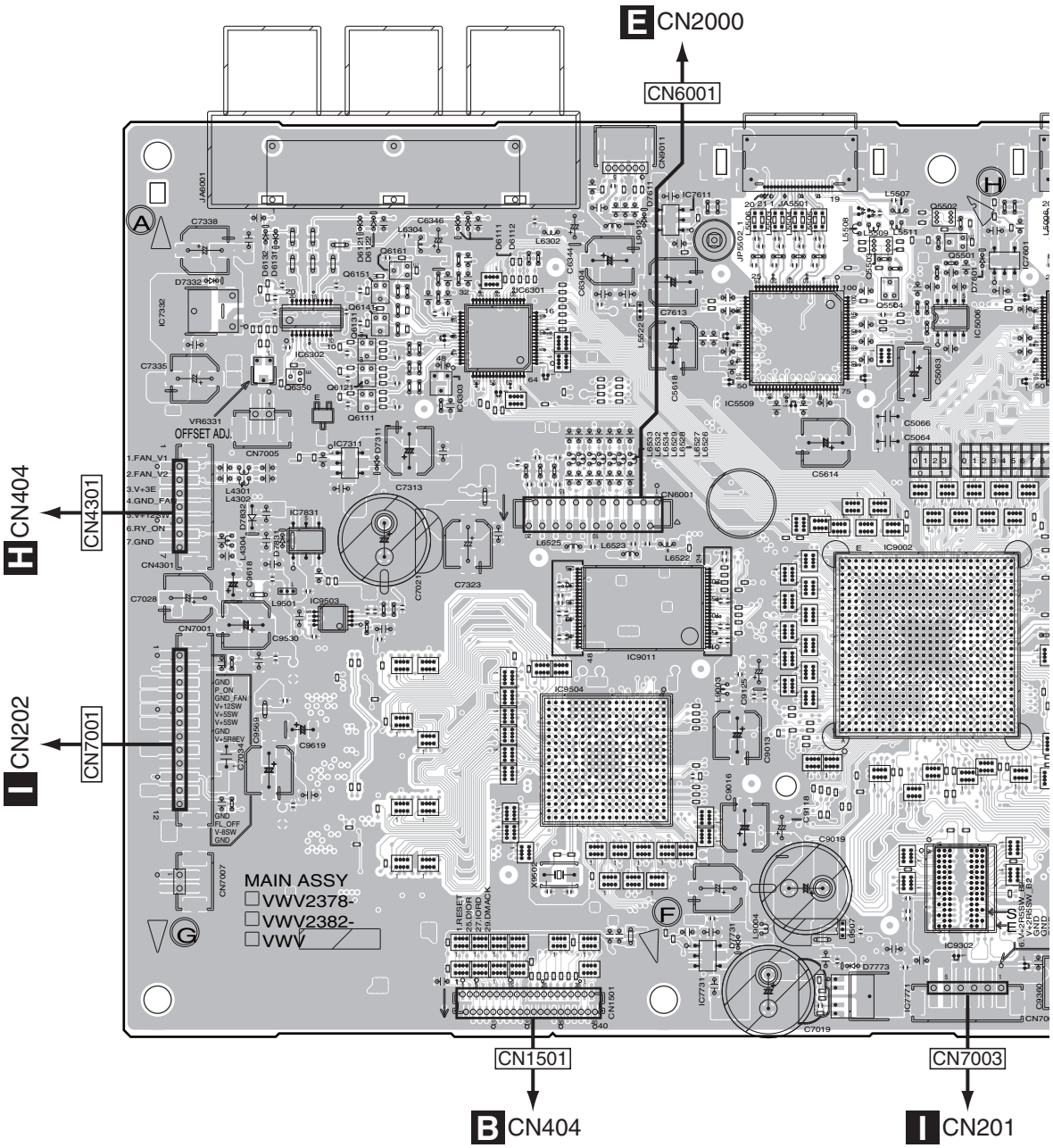
(16) C Out
IC2100_31pin
75% Color-bar A1 Disc 2-20



11. PCB CONNECTION DIAGRAM
11.1 SERVICE MAIN ASSY

SIDE A

A SERVICE MAIN ASSY



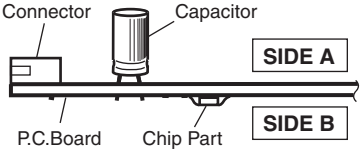
IC	Q
IC7611	
IC7501	Q5502
IC1621	Q5003
IC7601	Q5005 Q6161 Q5503 Q5501 Q6151 Q5002
IC5009	Q5001
IC6301 IC7901	Q5004
IC7332 IC4351	Q6141 Q5504
IC8011 IC8101	Q6131
IC5006	
IC6302 IC8001	
IC3501	
IC6303 IC2351	Q6350 Q6121
IC5509	Q6111
IC7311	
IC2301 IC4201	
IC4203	
IC4202	
IC7831	
IC9002	
IC1002	
IC9004 IC2201	
IC9503 IC4002	
IC9011	
IC9504	
IC3101	
IC8031	
IC9301	
IC1001	
IC3801	
IC3201	
IC9302	
IC7751	
IC7731	
IC3151	
IC7771	
IC7101	

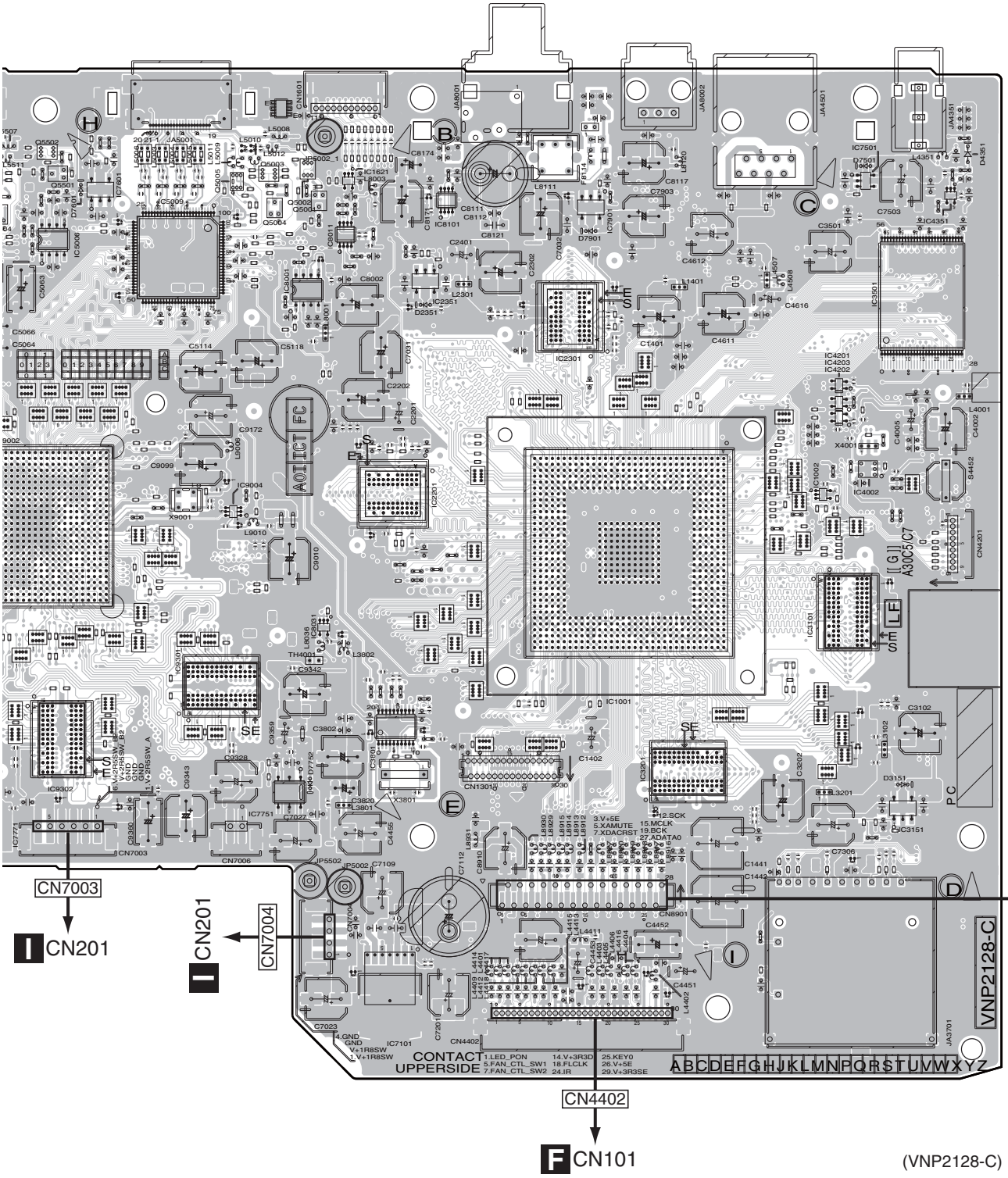
SIDE A

NOTE FOR PCB DIAGRAMS :

1. The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

2. View point of PCB diagrams.





(VNP2128-C)

SIDE B

A SERVICE MAIN ASSY

IC Q

IC7621
IC2601

IC5001
IC6304
IC4501
IC2151
IC3551

IC7421
IC2401
IC7331 Q6551
Q6552

IC7001
IC2661

IC7801
IC7651

IC4001
IC2101
IC9008

IC9505

IC9303

IC9506
IC3361

IC3802

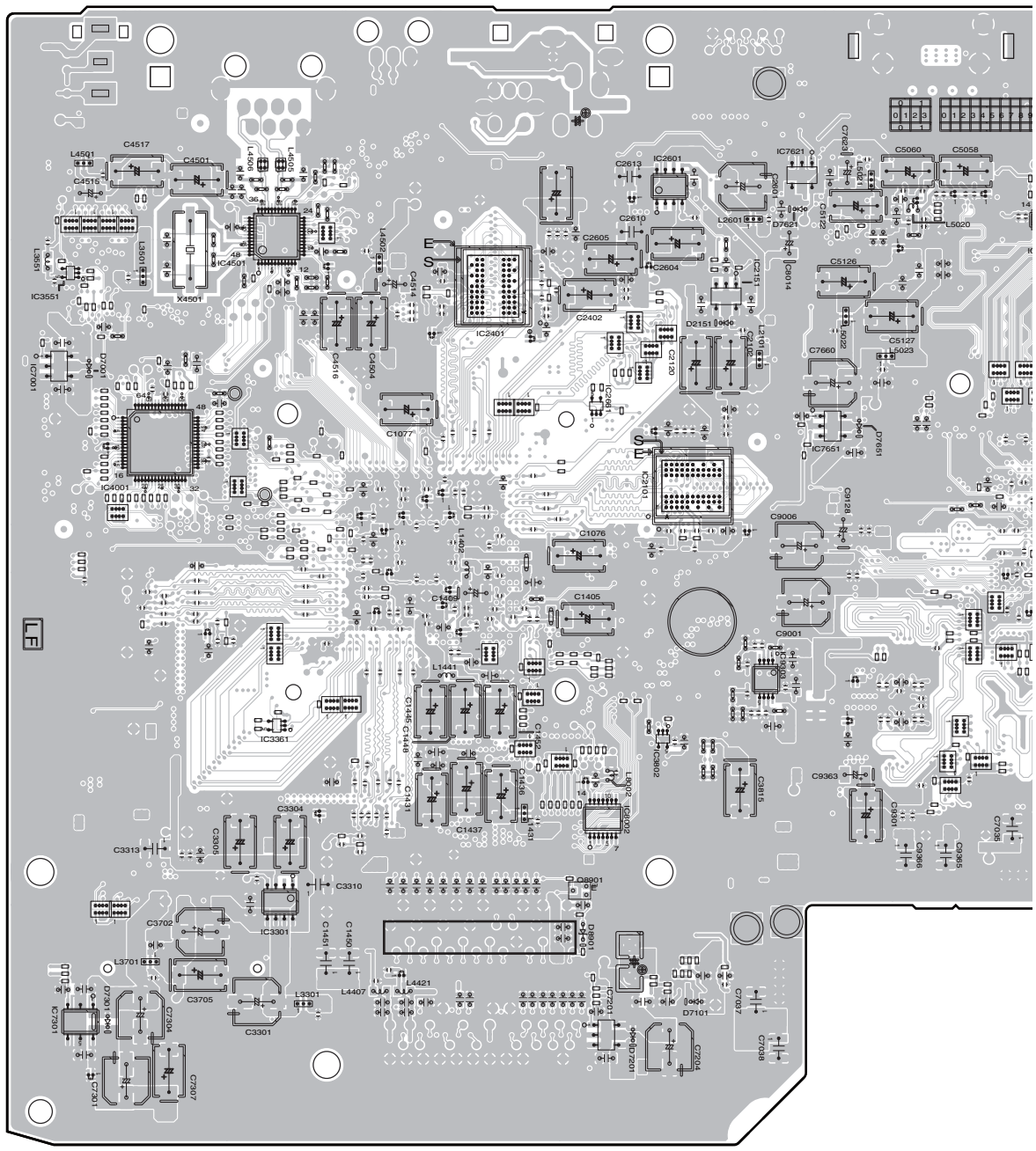
IC7711
IC8002

Q8901
IC7851

IC3301

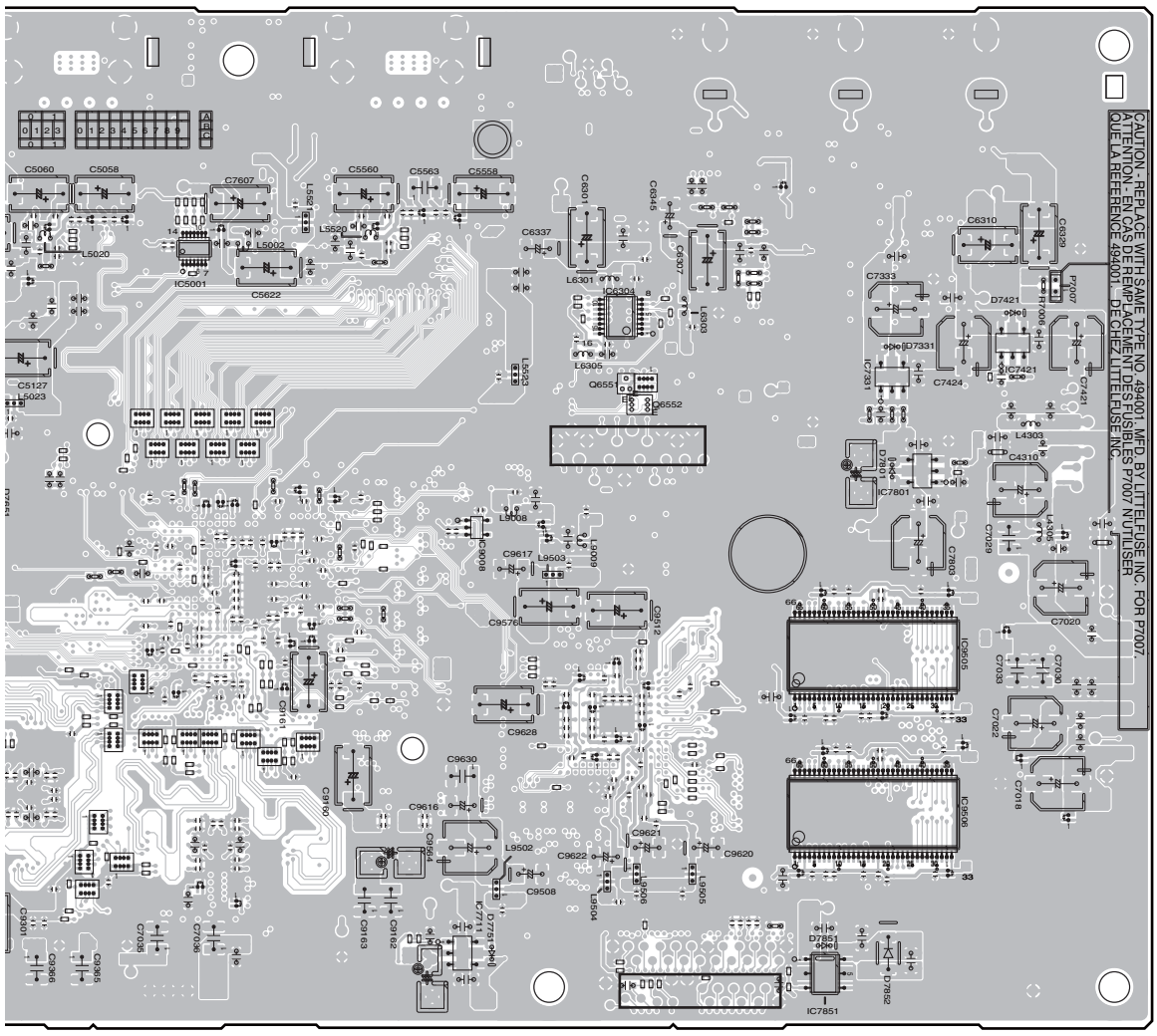
IC7201
IC7301

CN8901



SIDE B

CN6001



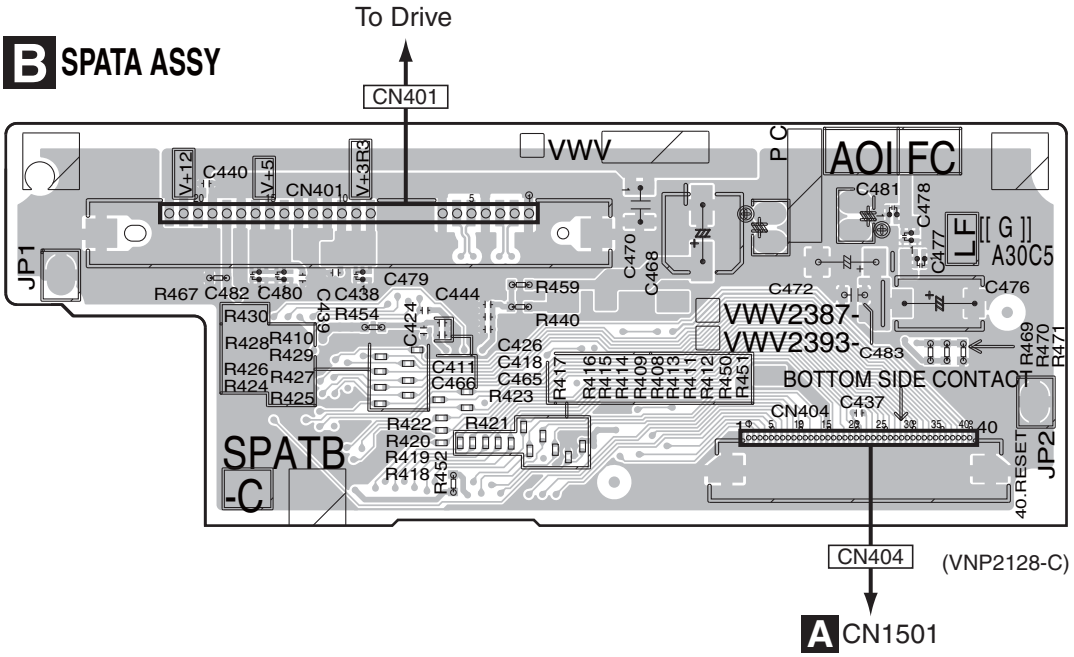
CN1501

(VNP2128-C)

11.2 SPATA ASSY

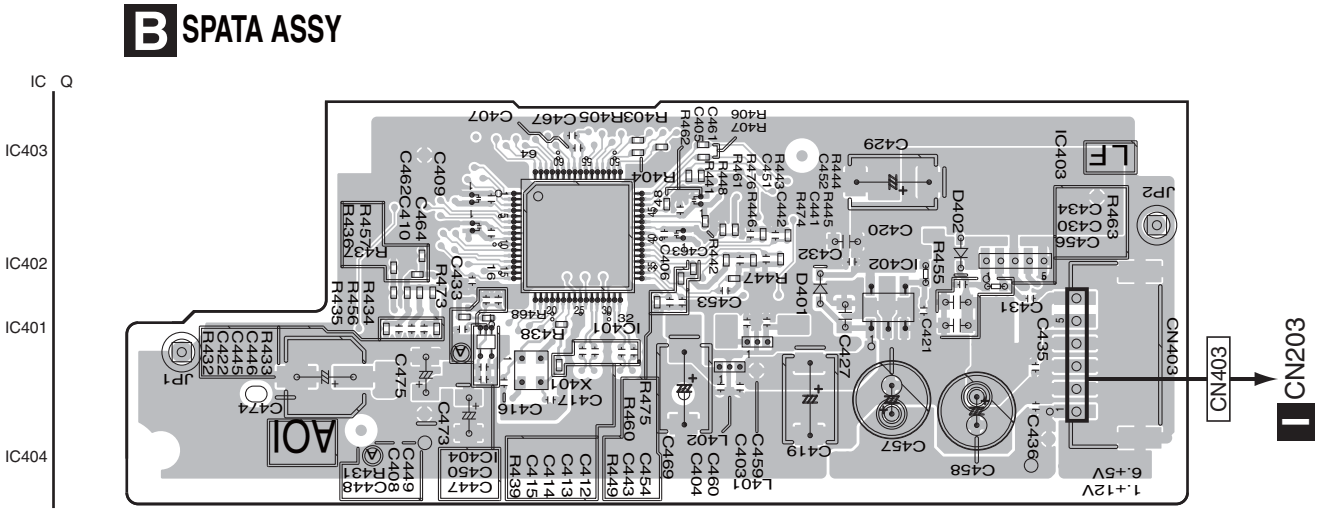
SIDE A

SIDE A



SIDE B

SIDE B



B

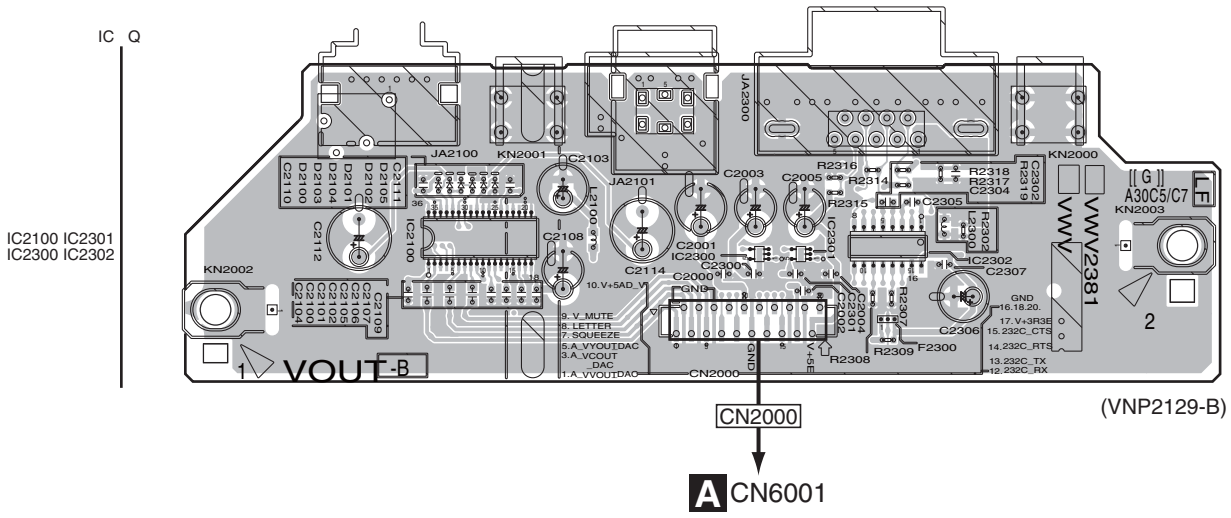
B

11.3 VOUT ASSY

SIDE A

SIDE A

E VOUT ASSY



(VNP2129-B)

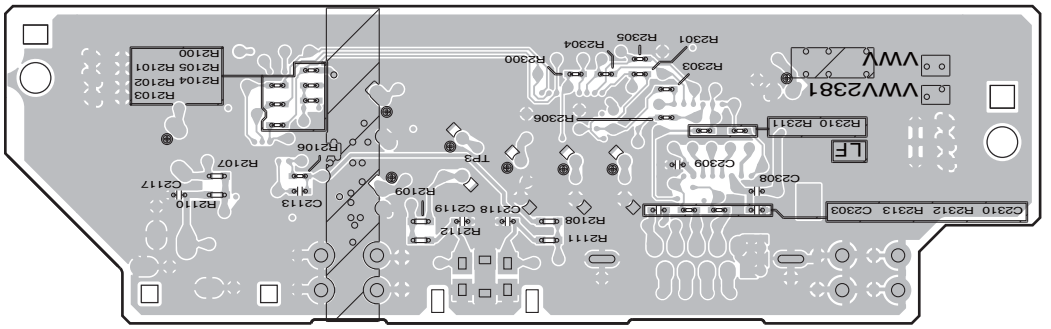
CN2000

A CN6001

SIDE B

SIDE B

E VOUT ASSY



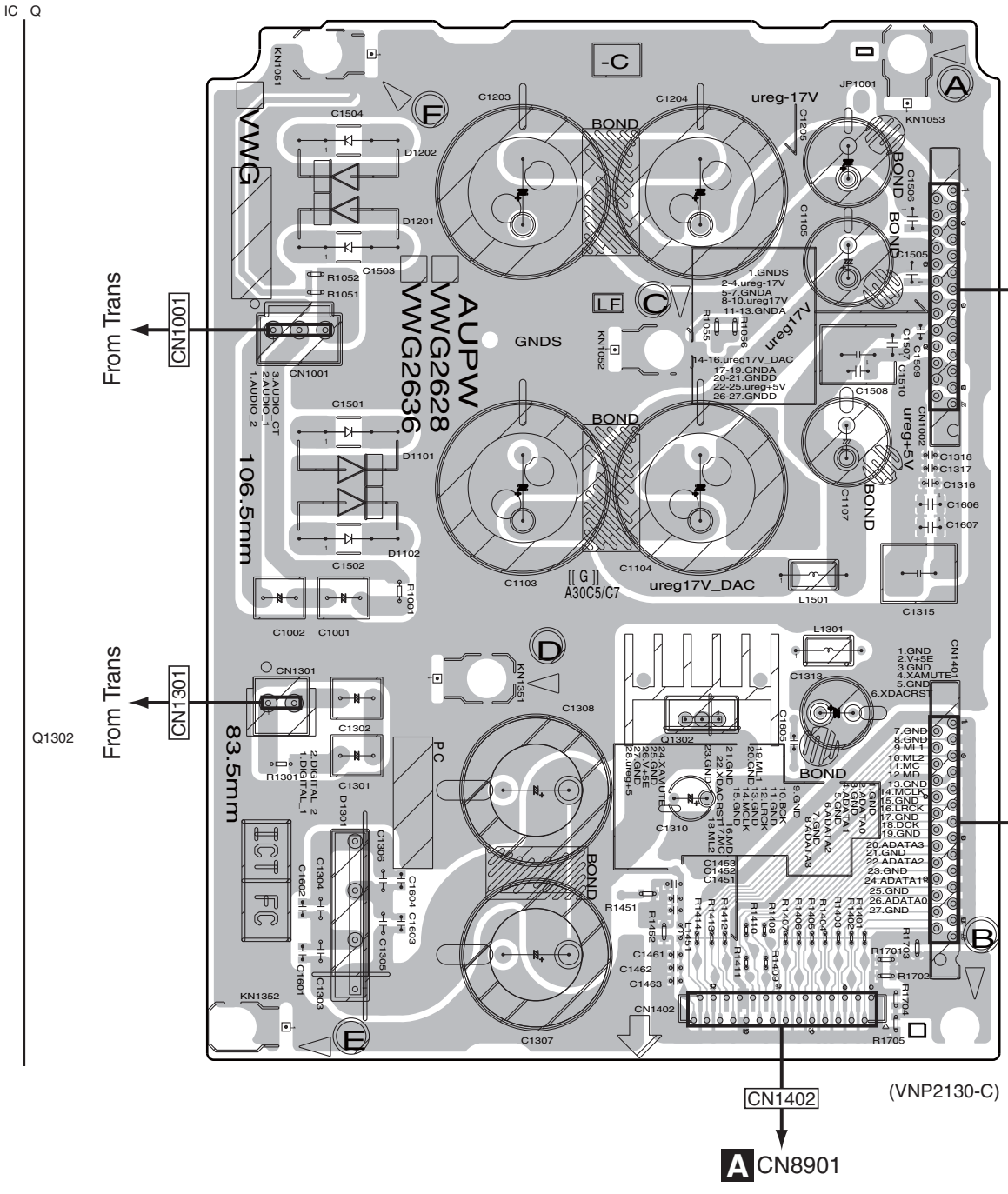
(VNP2129-B)

11.4 AUPW ASSY

SIDE A

SIDE A

C AUPW ASSY



SIDE B

SIDE B

A

B

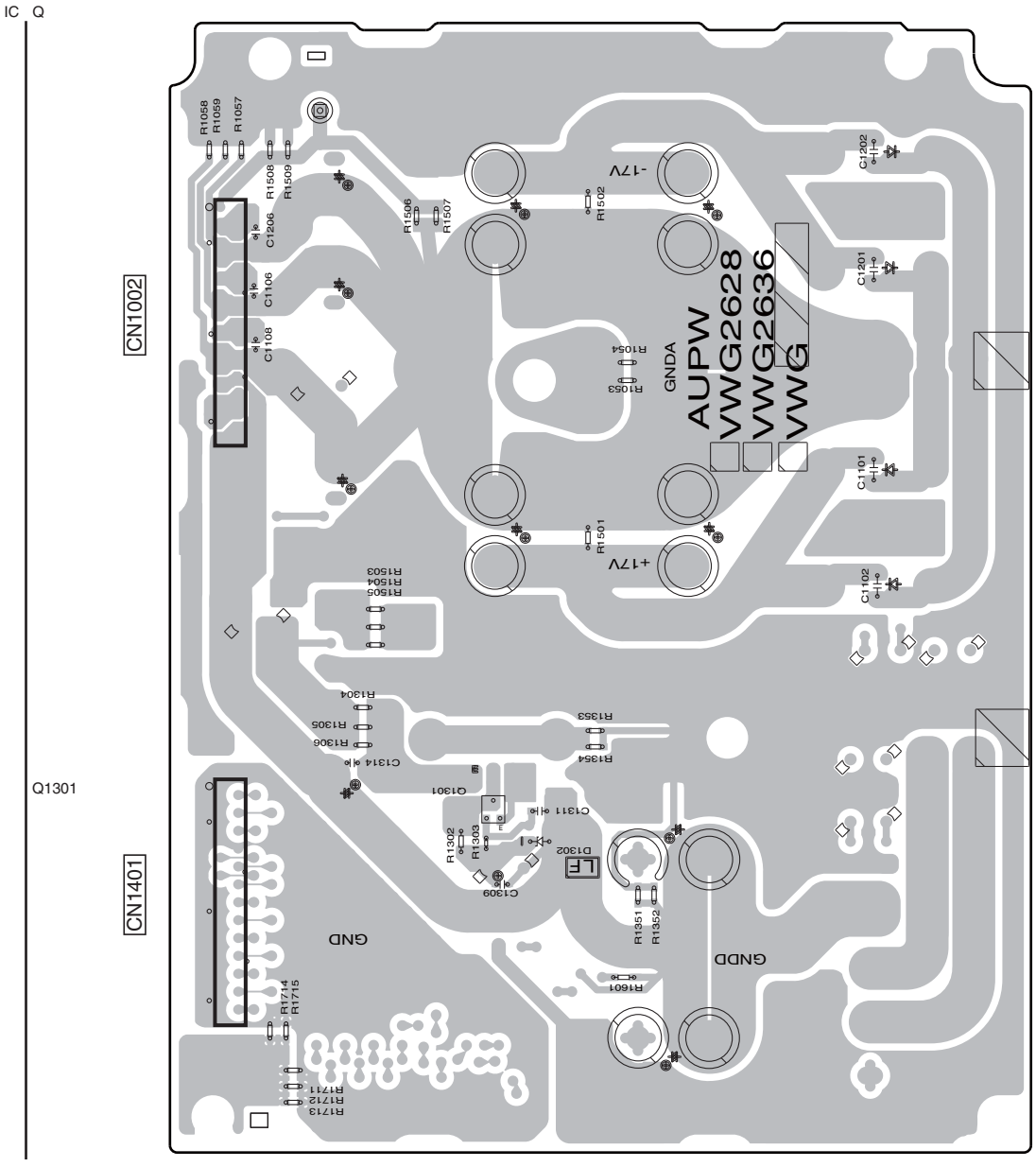
C

D

E

F

C AUPW ASSY



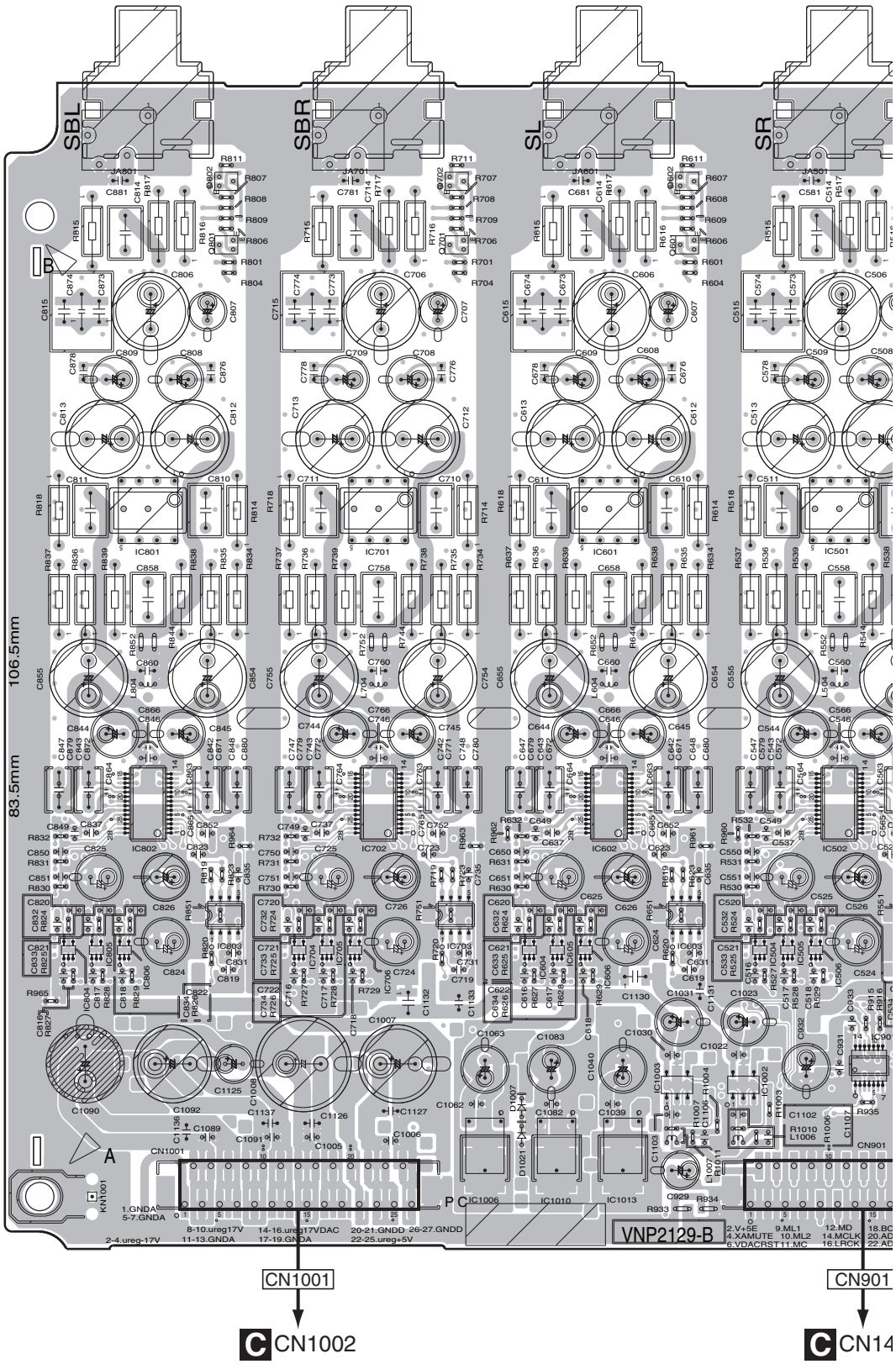
(VNP2130-C)

5 6 7 8

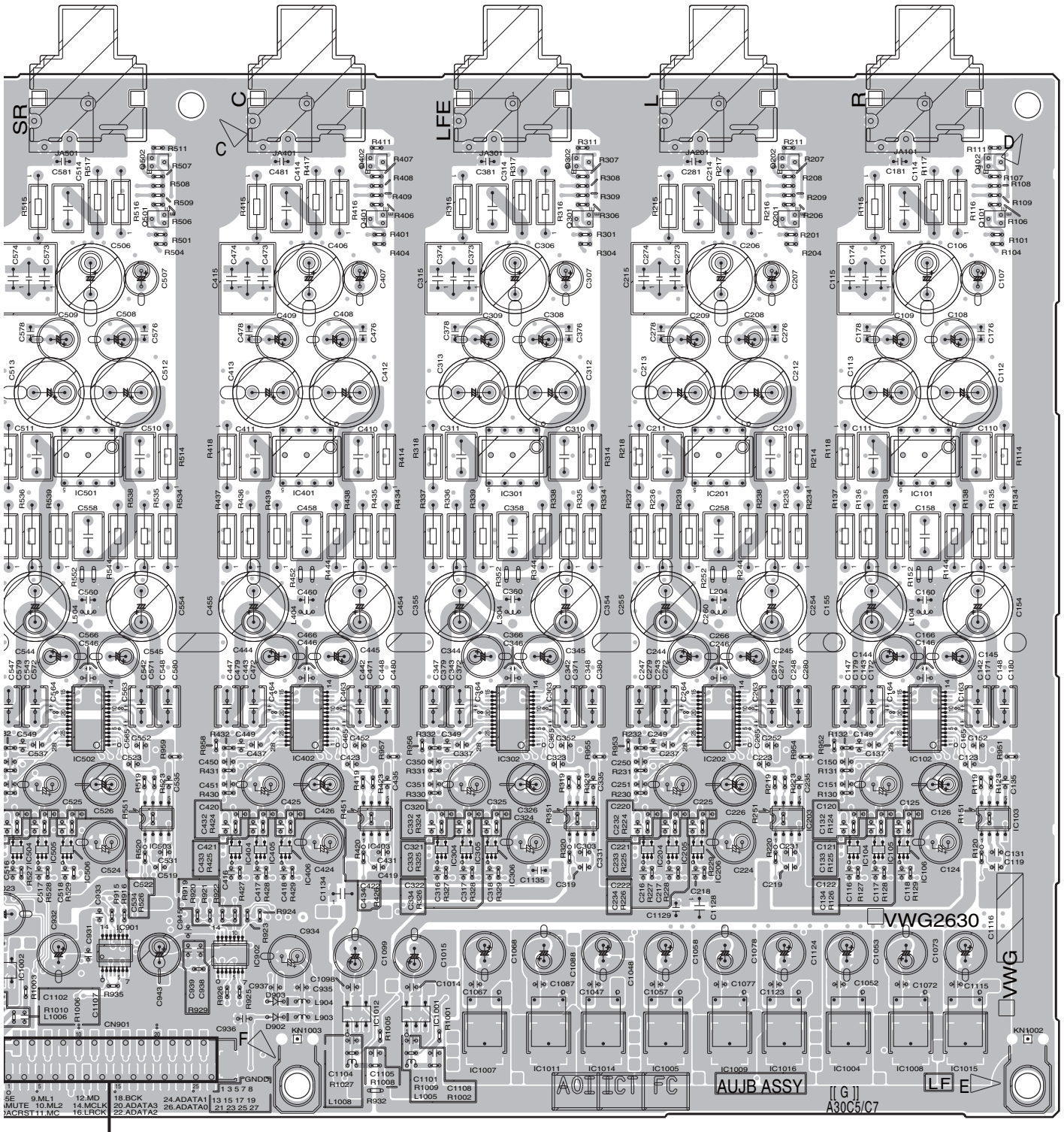
11.5 AUJB ASSY

SIDE A

D AUJB ASSY



SIDE A


SR
C
LFE
L
R
VWG2630
VWG
AUJB ASSY
A30C5/C7
CN901
CN1401
(VNP2129-B)

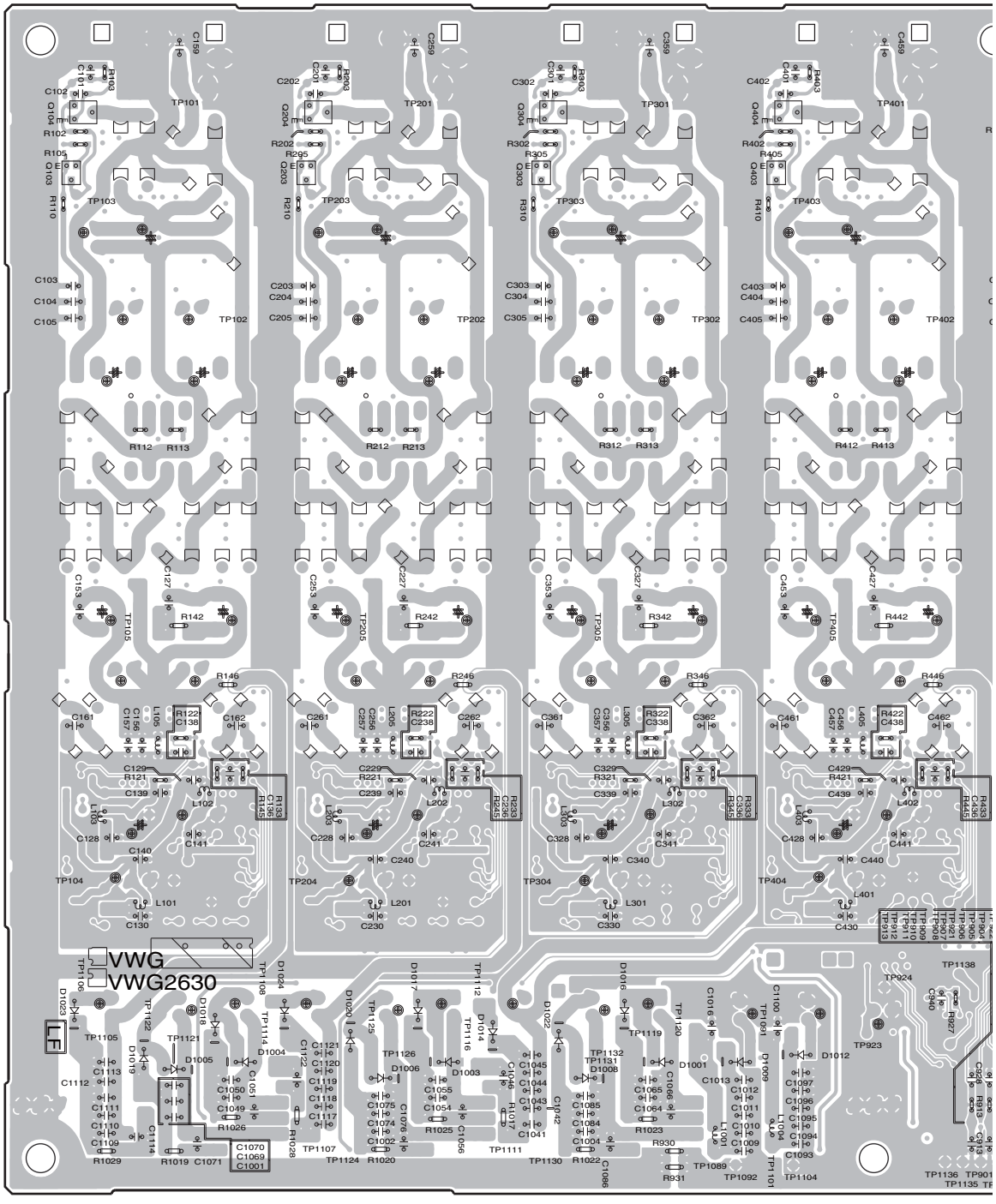
SIDE B

D AUJB ASSY

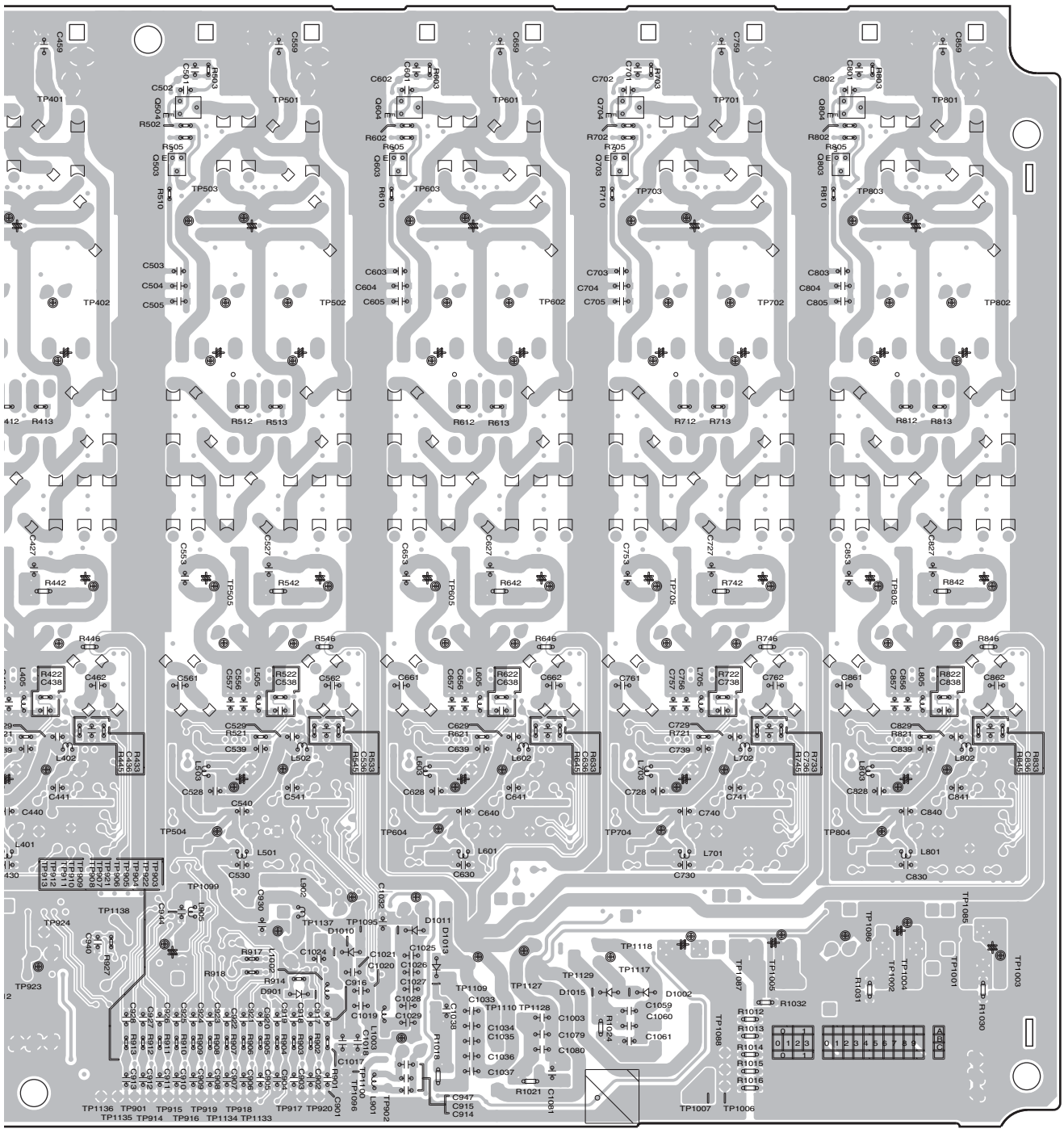
IC Q

Q104 Q304 Q504 Q704
Q204 Q404 Q604 Q804

Q103 Q303 Q503 Q703
Q203 Q403 Q603 Q803



SIDE B

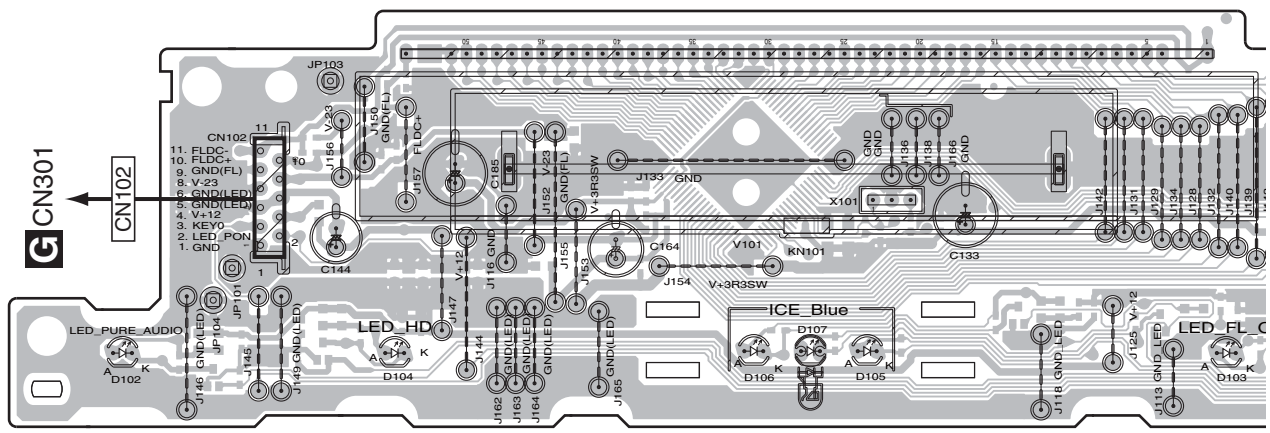


(VNP2129-B)

11.6 FLKY ASSY

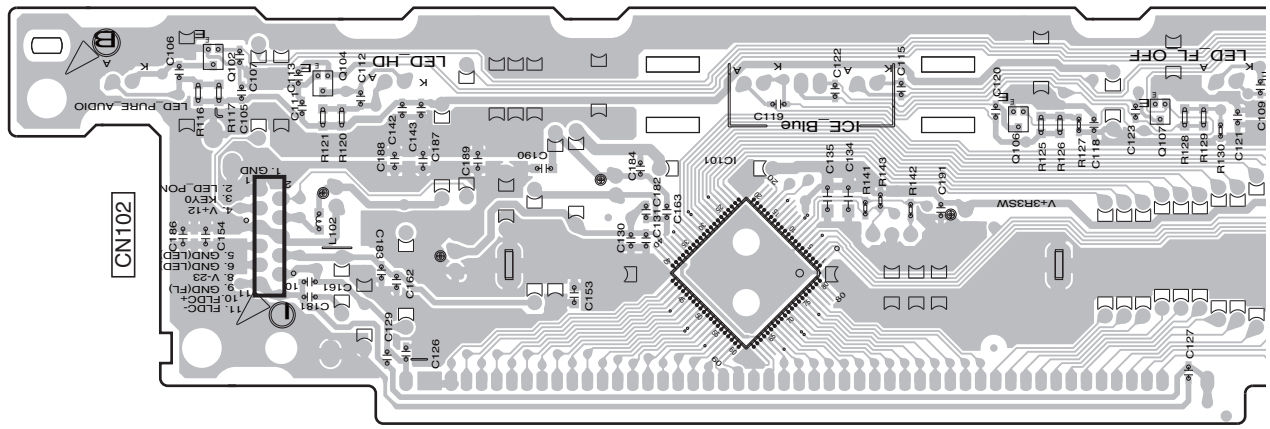
SIDE A

F FLKY ASSY



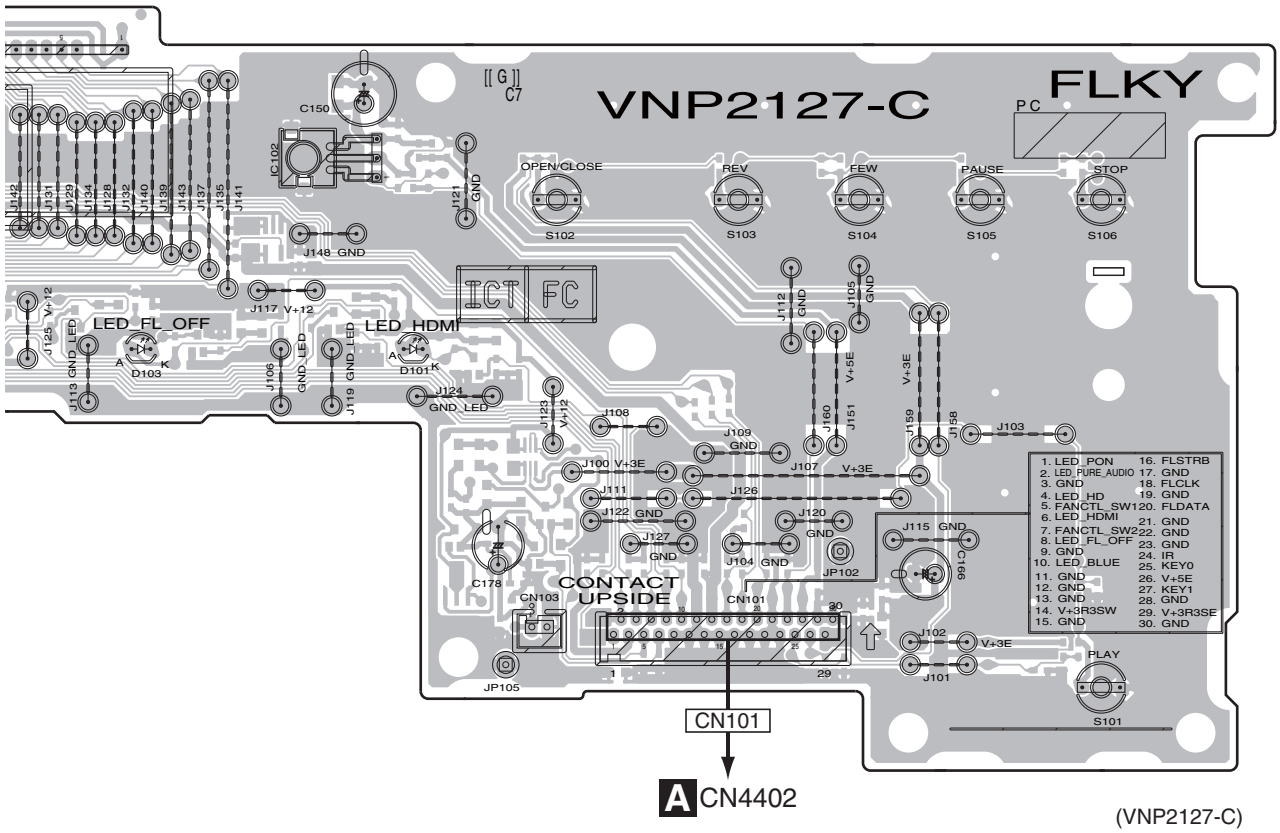
SIDE B

F FLKY ASSY



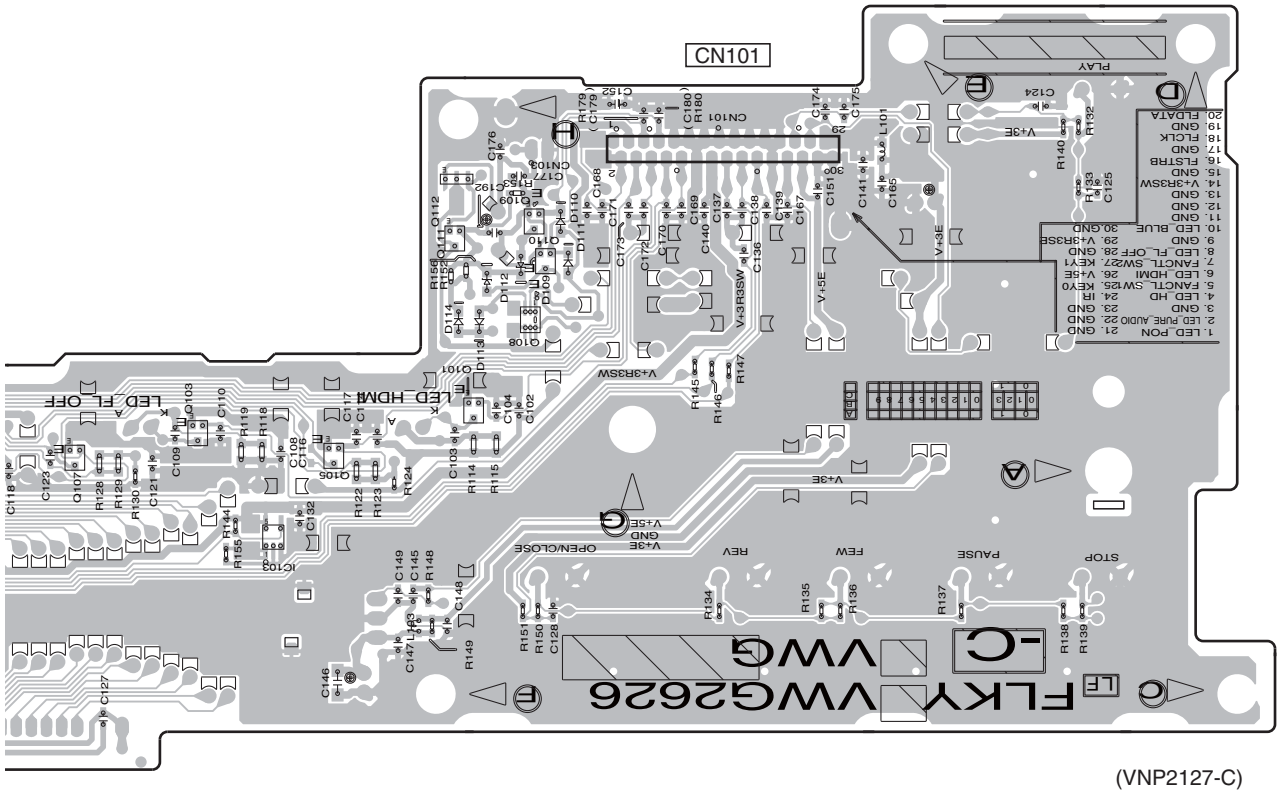
F

SIDE A



(VNP2127-C)

SIDE B



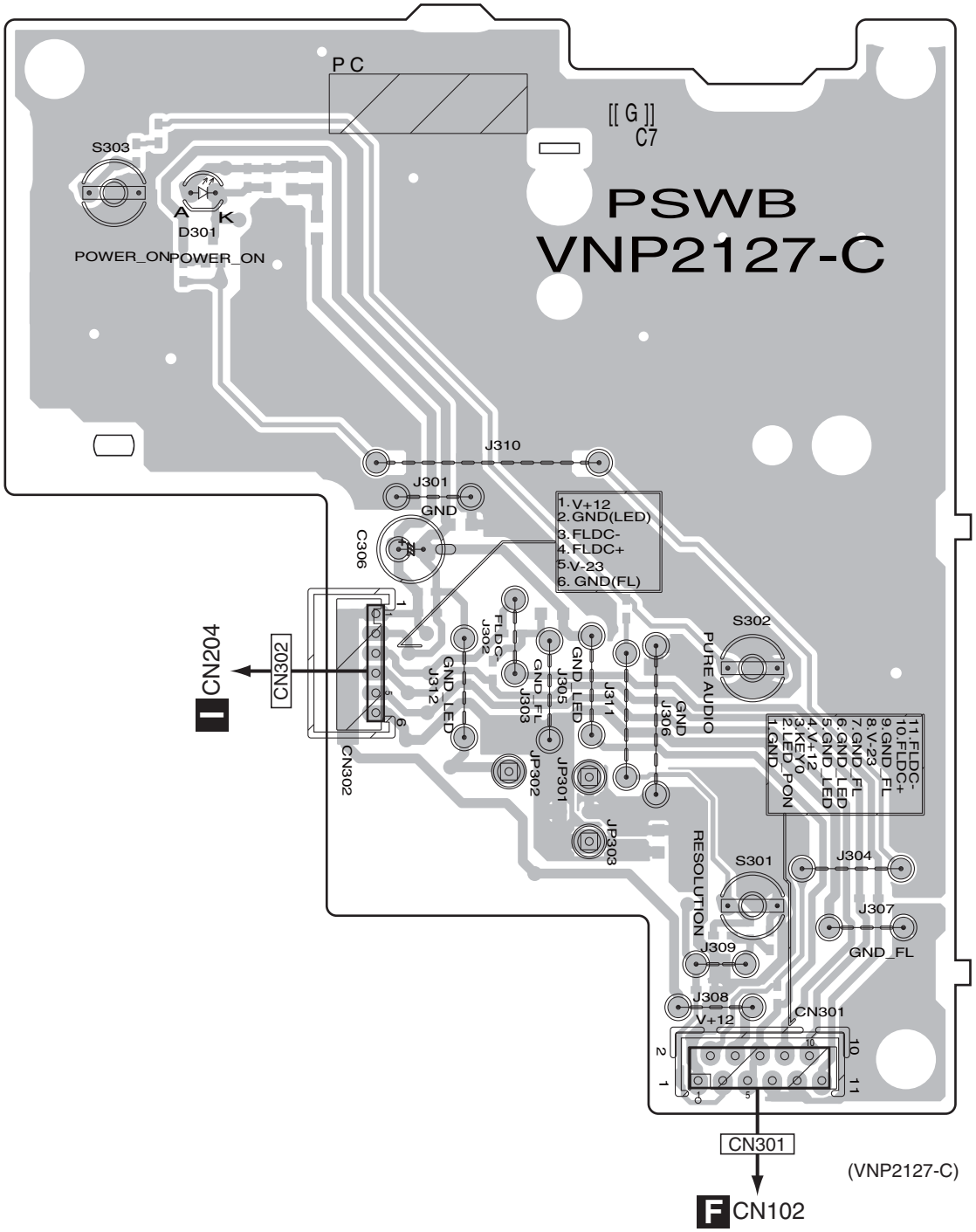
(VNP2127-C)

11.7 PSWB ASSY

SIDE A

SIDE A

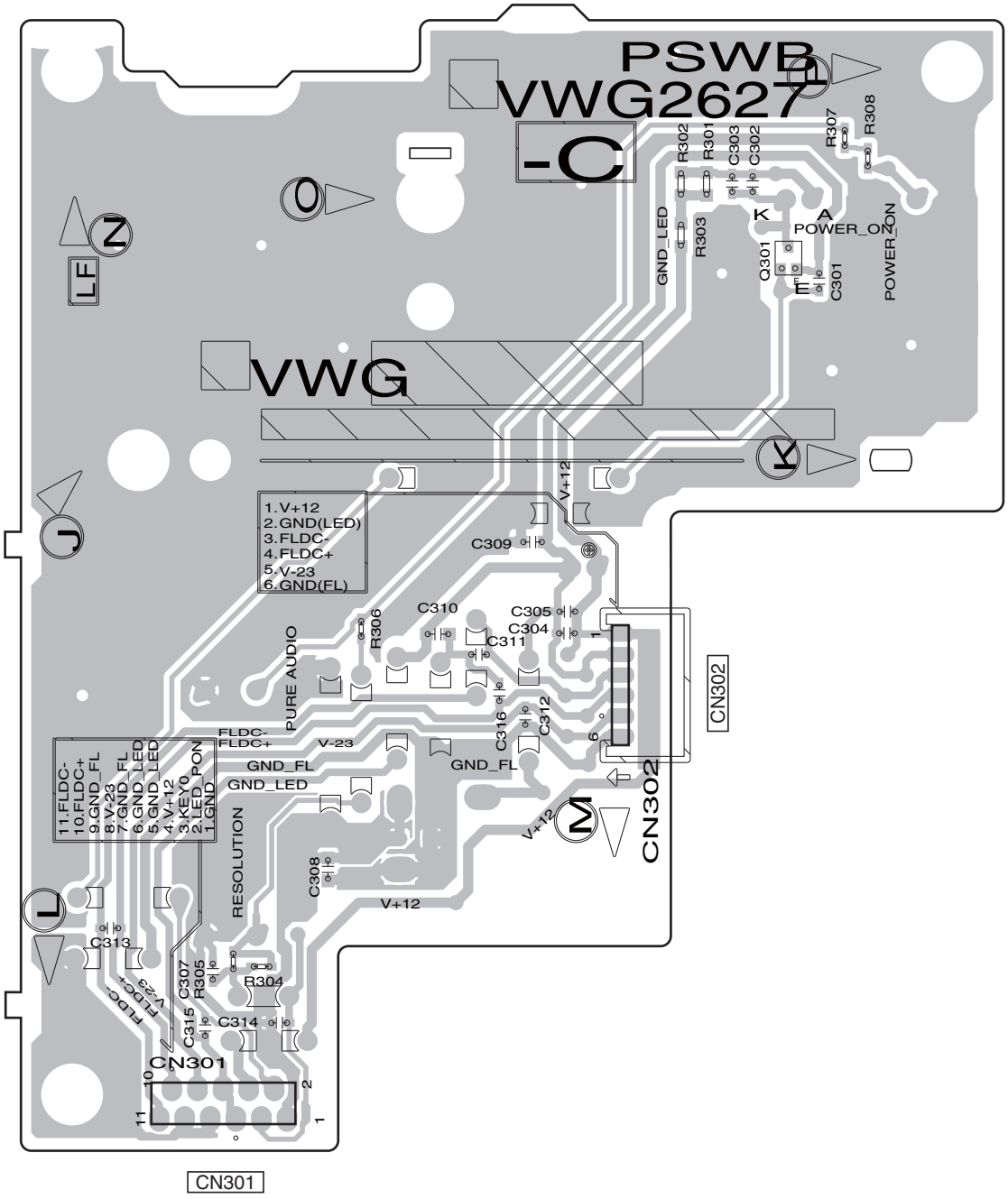
G PSWB ASSY



SIDE B

SIDE B

G PSWB ASSY



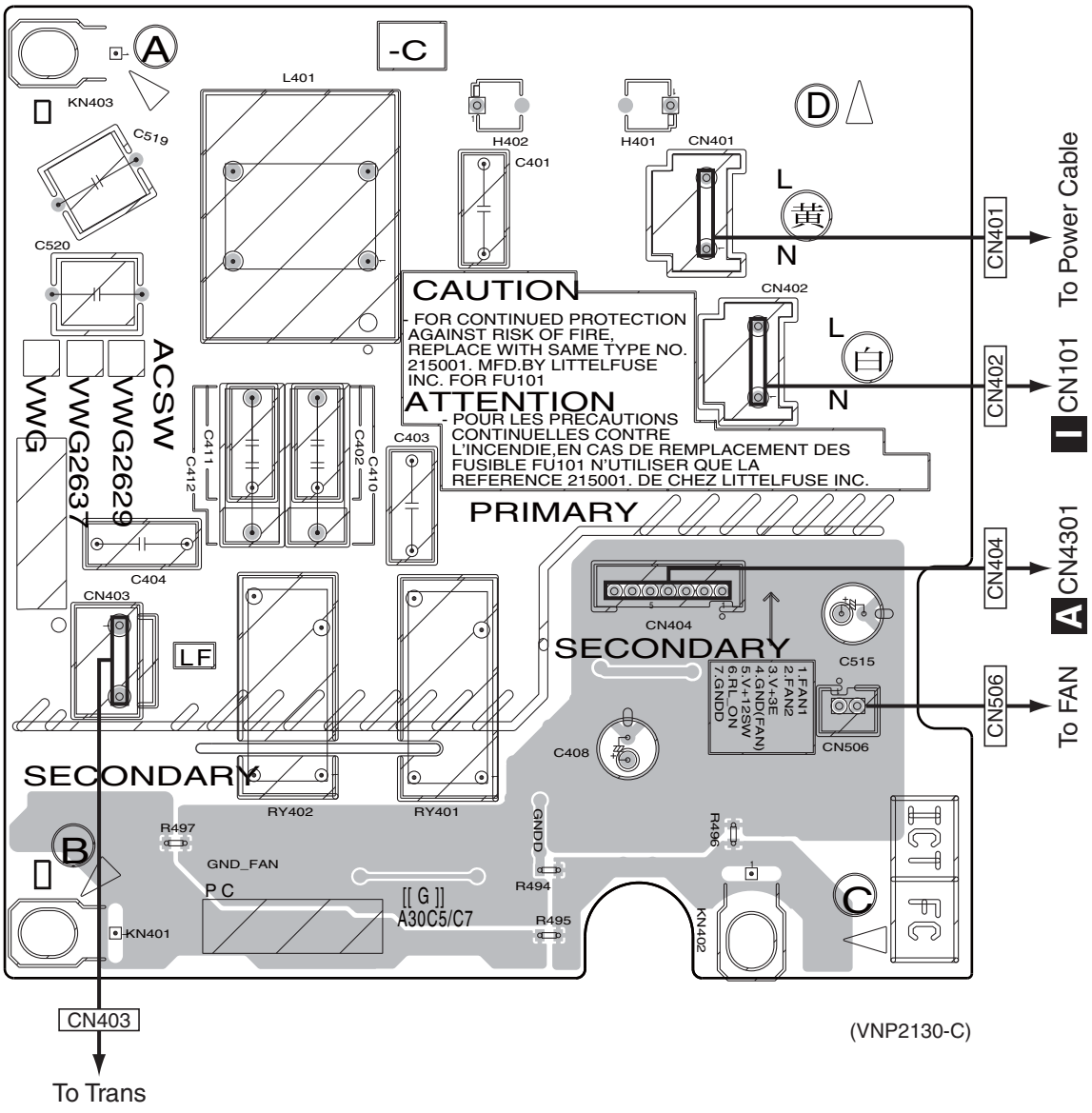
(VNP2127-C)

11.8 ACSW ASSY

SIDE A

SIDE A

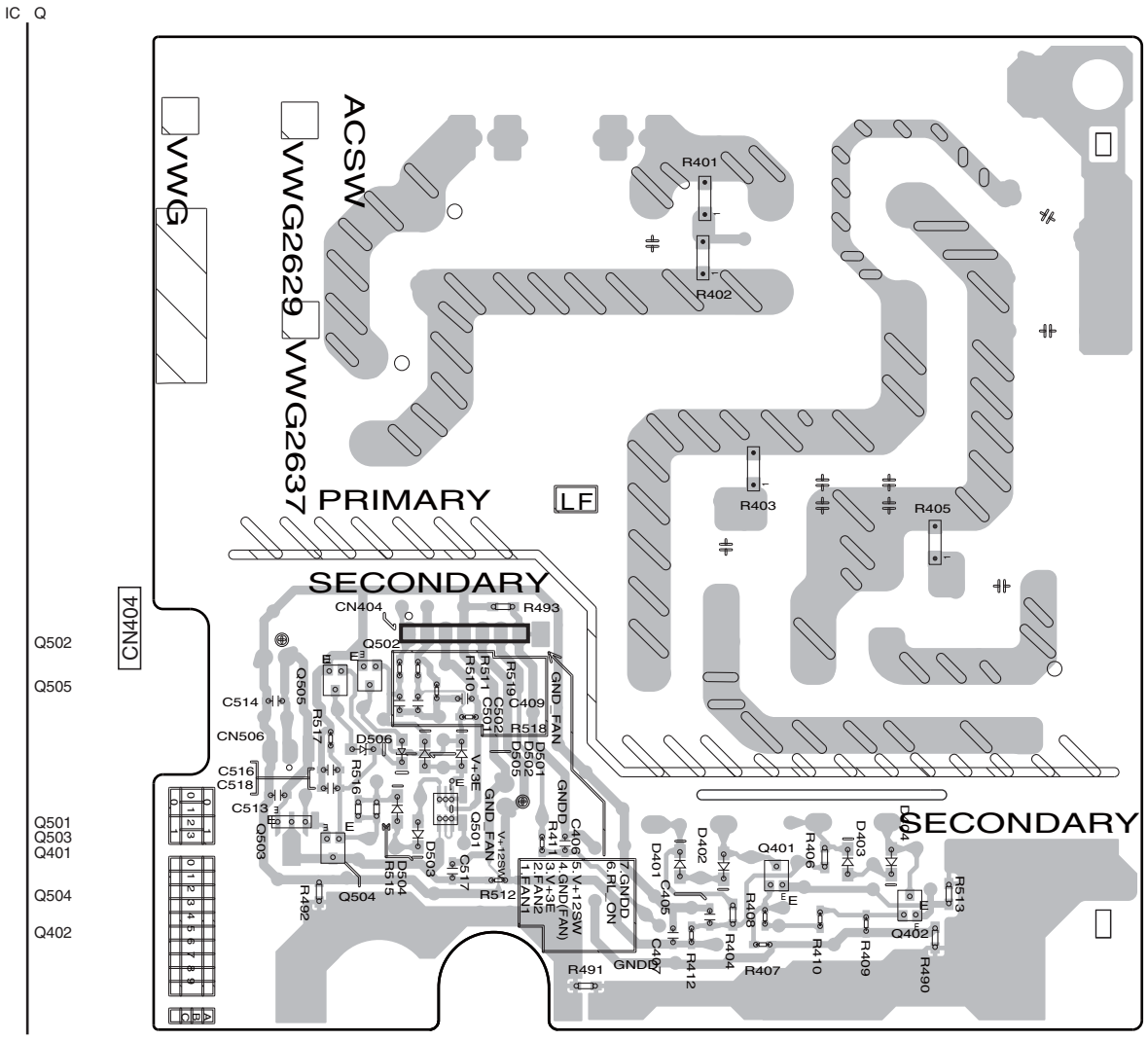
H ACSW ASSY



SIDE B

SIDE B

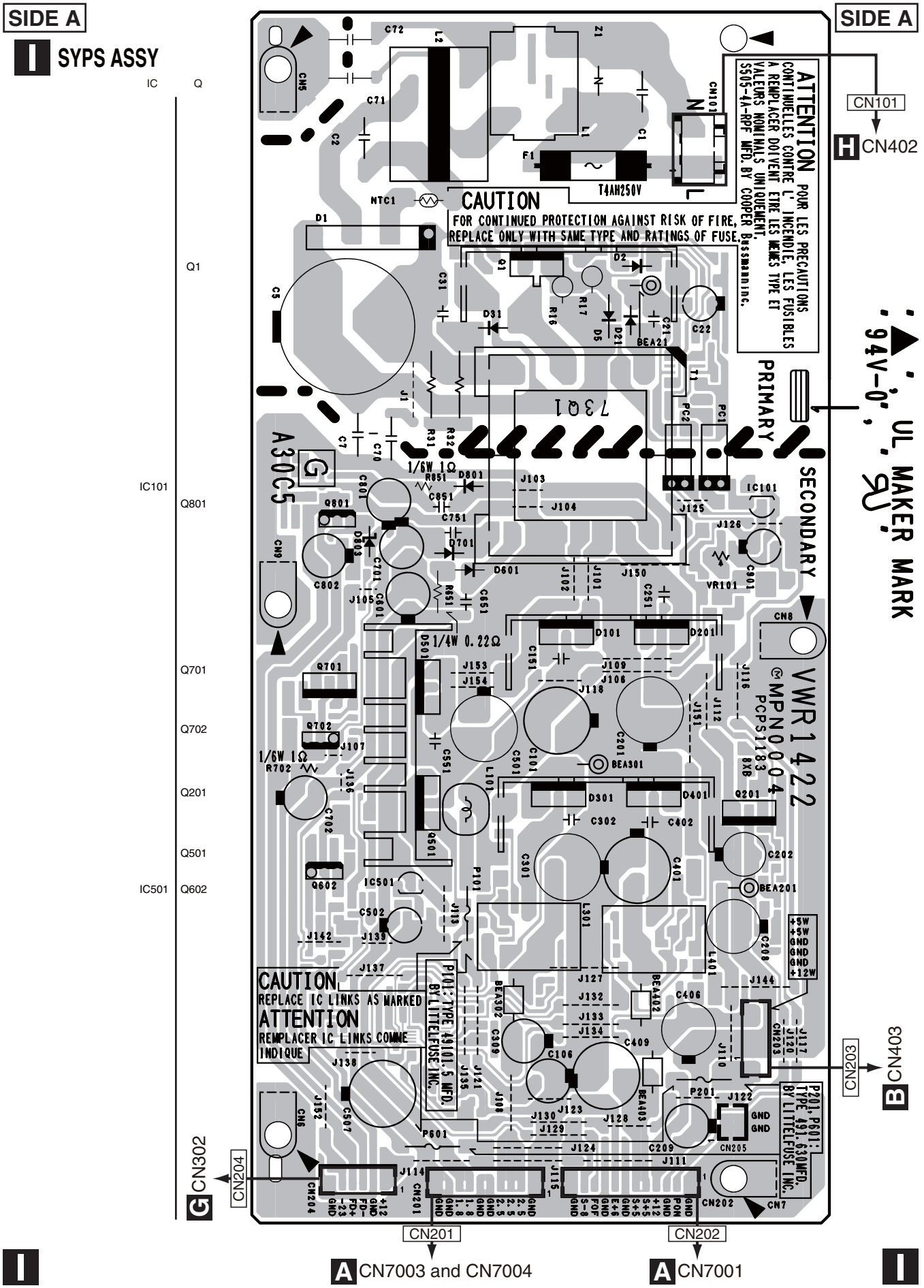
H ACSW ASSY



(VNP2130-C)

5 6 7 8

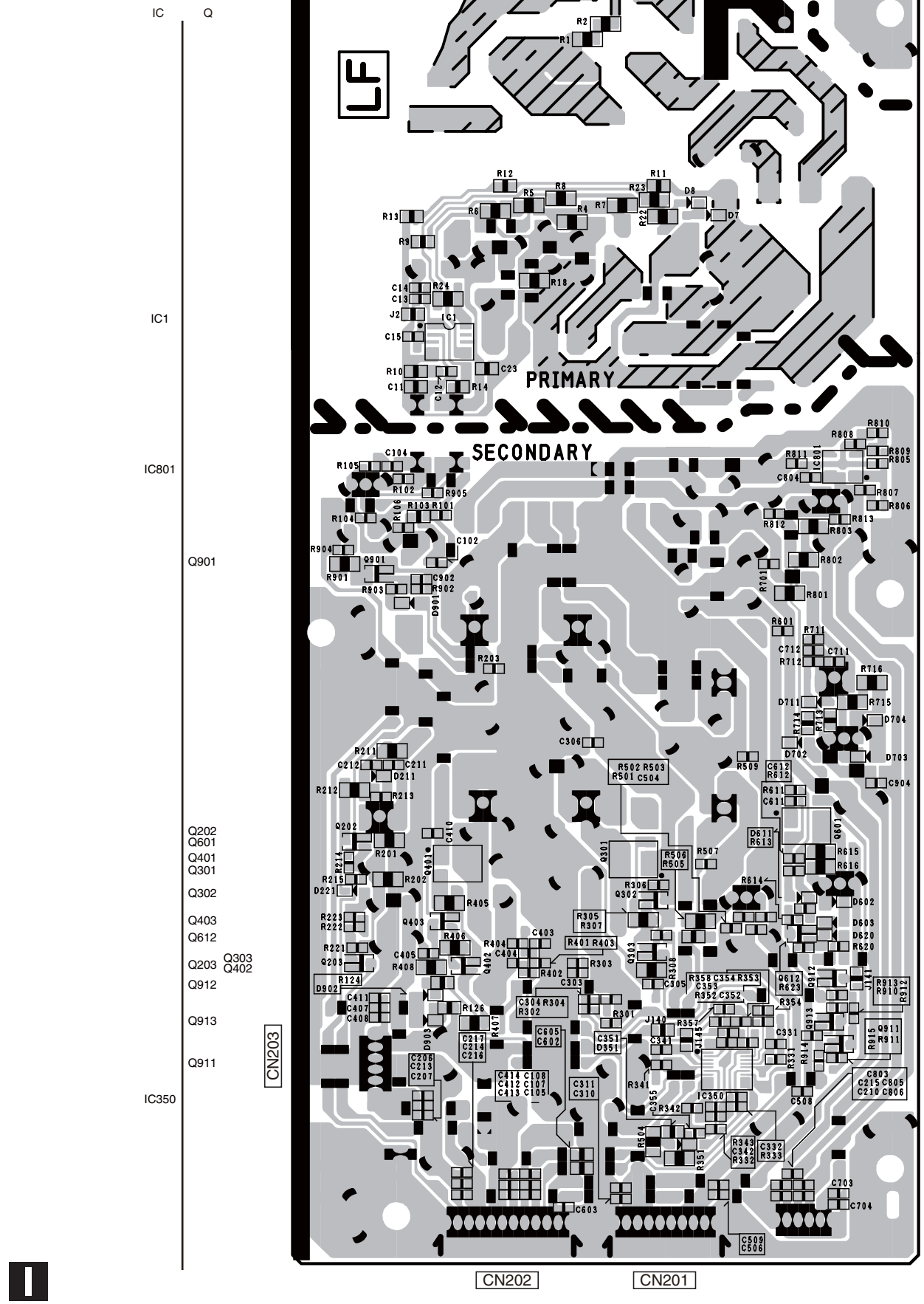
11.9 SYPS ASSY



SIDE B

SIDE B

SYPS ASSY



12. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω	→	*56 × 10^1*	→	*561* ····· *RD1/4PU [5][6][1] J*
47 kΩ	→	*47 × 10^3*	→	*473* ····· *RD1/4PU [4][7][3] J*
0.5 Ω	→	*R50*		····· *RN2H [R][5][0] K*
1 Ω	→	*1R0*		····· *RS1P [1][R][0] K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62 kΩ	→	*562 × 10^1*	→	*5621* ····· *RN1/4PC [5][6][2][1] F*

● *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
IC 301 (A, 91, 111) IC NJM2068V

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	..FLKB ASSY	VWM2482
	2	..FLKY ASSY	VWG2626
	2	..PSWB ASSY	VWG2627
NSP	1	..AVJB ASSY	VWM2483
	2	..AUJB ASSY	VWG2630
	2	..VOUT ASSY	VWV2381
NSP	1	..AUPB ASSY	VWM2484
	2	..AUPW ASSY	VWG2628
	2	..ACSW ASSY	VWG2629
	1	..SERVICE MAIN ASSY	VXX3348
NSP	2	..MAIN ASSY	VWV2382
	2	..SPATA ASSY	VWV2387
⚠	1	..SYPS ASSY	VWR1422

A SERVICE MAIN ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC	1001	R8A34019BG-RF4Z
	IC	1002,3551,4351	TC7SH08FUS1
	IC	2101,2201,2301,2401	EDE1108ACSE-6E-E
	IC	2151,2351,3151,7201	S-1170B18UC-OTD
	IC	2601,3301	LP2996M
	IC	3101,3201,9301,9302	EDE5116AJBG-6E-E
	IC	3501	VYW2415
	IC	3801	PDJ016A
	IC	3802,8031	TC7SZ32FU
	IC	4001	PDC185A8
	IC	4002	BD45282G
	IC	4201	BU4809F
	IC	4501	RTL8201CP-LF
	IC	5001	TC7MBL6353SFK
	IC	5006,8001	ICS571MLF
	IC	5009,5509	MN864707KT
	IC	6301	ADV7340BSTZ
	IC	6302	ADA4412(3)
	IC	6303	ADR512ARTZ
	IC	6304	TC74VHC157FTS1
	IC	7001,7611,7621,7901	S-1170B33UC-OTS
	IC	7101	LP38853S
⚠	IC	7301	S-1172B33-E6
⚠	IC	7311,7711,7801	S-1170B33UC-OTS
⚠	IC	7331	S-1170B18UC-OTD
	IC	7332	NJM79M05DL1A
	IC	7421	S-1170B50UC-OUJ
	IC	7501	S-L2980A50MC-C7J
	IC	7601	S-1132B50-U5
	IC	7651	S-1155B12-U5
⚠	IC	7731	S-1170B25UC-OTK
	IC	7751	S-1172B18-E6
	IC	7771	PQ035ZN01ZPH
⚠	IC	7831	S-1172B26-E6
	IC	7851	S-1172B12-E6
	IC	8002	TC74VHC04FTS1
	IC	8011	TC7WH74FU
	IC	8101	TC7WH04FU
	IC	9002	XC3S4000-5FGG676C
	IC	9004	TC7PA04FU
	IC	9008	BU4228G
	IC	9303,9503	NJM12904V
	IC	9504	88DE2710
	IC	9505,9506	HY5DU561622FTP-D43
	Q	5001,5501,6141,6151	2SA1576A
	Q	5002,5502	HN1C03FU
	Q	5003,5503	UMB1N
	Q	5004,5504	DTC124EUA
	Q	5005	UM6K1N
	Q	6111,6121,6131,8901	2SC4081
	Q	6161	2SA1576A
	Q	6350,6551	DTC114YE
	Q	6552	UMH9N
	D	4351	RB501V-40
	D	7832	RR264M-400
	D	7852	RB050LA-30
	D	8901	UDZS13(B)
⚠	TH	4001	CCX1056
MISCELLANEOUS			
	L	1401,1431,2101,2301 EMI FILTER	DTL1106
	L	1402,1441,3551,4303 INDUCTOR	CTF1394
	L	2601,3102,3201,3301 EMI FILTER	DTL1106

Mark	No.	Description	Part No.
L	3501,3701,3801	EMI FILTER	DTL1106
L	3802,4301,4304,4351	INDUCTOR	CTF1306
L	4001,4501,4502,4507	EMI FILTER	VTL1171
L	4305,4407,4411,4421	INDUCTOR	CTF1394
L	4401-4406,4412-4417	INDUCTOR	CTF1306
L	4505,4506	COIL	VTH1056
L	5002,5009-5012,5020	INDUCTOR	CTF1306
L	5003-5006,5503-5506	EMI FILTER	ATF1209
L	5008,5507,6301-6305	INDUCTOR	CTF1394
L	5021-5023,5521-5523	EMI FILTER	DTL1106
L	5508,5509,5511,5520	INDUCTOR	CTF1306
L	6522,6523,6525,8931	INDUCTOR	CTF1394
L	6526-6529,6532-6534	INDUCTOR	CTF1306
L	8001	EMI FILTER	VTL1171
L	8002,8003,8120	INDUCTOR	CTF1306
L	8036	INDUCTOR	CTF1384
L	8111	COIL	VTL1172
L	8912-8915,8929,8930	INDUCTOR	CTF1306
L	8916-8920,8927,9003	INDUCTOR	CTF1357
L	9004	INDUCTOR	CTF1357
L	9006,9008-9010	INDUCTOR	CTF1306
L	9012	INDUCTOR	CTF1394
L	9501-9507	EMI FILTER	DTL1106
F	8114	CHIP MAGNET CORE	DTF1068
JA	3701	SDCARD SLOTCONNECTOR	DKP3748
JA	4351	JACK	RKN1004
JA	4501	RJ45 CONNECTOR	VKN2087
JA	5001,5501	HDMI CONNECTOR	VKN2092
JA	6001	BNC CONNECTOR	VKN2091
JA	8001	PIN JACK(1P)	AKB7102
JA	8002	OPT. LINK OUT	VKS1002
KN	5001,5501	HDMI SHIELD(CU)	VNF1143
X	3801	CRYSTAL RESONATOR (27 MHz)	VSS1226
X	4001	CERAMIC RESONATOR (12 MHz)	VSS1216
X	4501	CRYSTAL (25 MHz)	VSS1215
X	9001	CRYSTAL RESONATOR (148.5 MHz)	VSS1225
X	9502	CRYSTAL RESONATOR (20 MHz)	ASS7076
CN	1301	CONNECTOR	VKN2048
CN	1501	CONNECTOR	VKN2050
CN	1601	11P CONNECTOR	RKN1052
CN	4201	9P CONNECTOR	VKN1413
CN	4301	CONNECTOR	AKM1278
CN	4402	30P CONNECTOR	VKN1322
CN	6001	20P CONNECTOR	VKN1610
CN	7001	CONNECTOR	AKM1283
CN	7003	CONNECTOR	AKM1277
CN	7004	CONNECTOR	AKM1275
CN	7005-7007	CONNECTOR	AKM1273
CN	8901	28P CONNECTOR	VKN1618
CN	9011	06P CONNECTOR	RKN1047
	3701	SD MEMORY CARD	VWX1234
⚠ P	7007	FUSE	CEK1280

RESISTORS

Mark	No.	Description	Part No.
R	1001-1004,2111,2112		RS1/16SS82R0F
R	1105		RAB4CQ221J
R	1111,1115,3803,5502		RS1/16S220J
R	1117,1122-1124,1176		RAB4CQ220J
R	1138,1255,1256,6345		RAB4CQ0R0J
R	1145,1146,1552-1555		RAB4CQ223J
R	1166,1167		RS1/16SS1500F
R	1171		RS1/16SS8200F
R	1172,6334,6347		RS1/16SS1000F
R	1182,1211,1213		RAB4CQ470J
R	1183,3804		RS1/16S680J
R	1184-1189		RAB4CQ680J
R	1190,1302,1327,1328		RAB4CQ330J
R	1191,1192,3812,3816		RS1/16S330J
R	1193-1195,3807,5003		RS1/16S470J
R	1214,1231,1232,1238		RAB4CQ103J
R	1252,1253,3591-3594		RAB4CQ103J
R	1332,1335		RAB4CQ472J
R	1402,1442,1591,6118		RS1/10S0R0J
R	1502-1505,1513		RAB4CQ330J
R	2154,2354,3154,4061		RS1/16S0R0J
R	2211,2212,2311,2312		RS1/16SS82R0F
R	2411,2412,3111,3112		RS1/16SS82R0F
R	2615-2619,3303-3308		RAB4CQ220J
R	2637-2641,3341-3346		RAB4CQ750J
R	3211,3212		RS1/16SS82R0F
R	3709,4353,6326		RS1/16S221J
R	3791,3792,4070,4586		RAB4CQ103J
R	3805,3806,4015,4241		RS1/16S103J
R	3814		RS1/16S270J
R	3817,8002,9121,9123		RS1/16S330J
R	3819		RS1/16S560J
R	4024		RS1/16S471J
R	4025		RS1/16SS3302F
R	4071		RS1/16S223J
R	4073,4303,4542,5001		RS1/16S0R0J
R	4316,4355,4514-4518		RS1/16S103J
R	4352,5063,5064,5542		RS1/16S101J
R	4354		RS1/16S224J
R	4498,4499		RS1/10SR0R0J
R	4511,6301,6302,6317		RAB4CQ220J
R	4512,4513,6329,9305		RS1/16S1001F
R	4521-4524		RS1/16S49R9F
R	4552,4553		RS1/16S512J
R	4554,6308		RS1/16S103J
R	5008,7003,7004,9127		RS1/16S470J
R	5012,5505,5508,6336		RS1/16S0R0J
R	5041,5047,5522,5528		RS1/16S272J
R	5083,5085		RS1/16SS2201F
R	5084		RS1/16SS4700F
R	5543,7421,7901		RS1/16S101J
R	5566,6518		RAB4CQ103J
R	6111		RS1/16S75R0F
R	6117,6127,6137		RS1/10S75R0F
R	6121,6131		RS1/16S82R0F
R	6128,6138,7321,8115		RS1/10S0R0J
R	6129,6139		RS1/16SS1800F
R	6141,6151		RS1/16SS3000F
R	6161		RS1/16S3300F
R	6162		RS1/16S822J
R	6319,6320		RS1/16S272J
R	6322,6324		RS1/16S151J
R	6323,6325,6328		RS1/16S200J
R	6327,7801		RS1/16S3901F
R	6330		RS1/16S112J

Mark	No.	Description	Part No.
	R	6331	RS1/16SS1202F
	R	6364	RS1/16SS5600F
	R	6519-6521,8003,8014	RS1/16S0R0J
A	R	7107	RS1/16SS1501D
	R	7108	RS1/16SS1001D
	R	7114	RS1/16SS1800D
	R	7331	RS1/16S753J
	R	7333	RS1/16S333J
	R	7777,7778	RS1/16SS1001F
	R	8048,8051,8106,8206	RS1/16S220J
	R	8116	RN1/16SC75R0D
	R	8928	RS1/16S220J
	R	9002,9345,9501,9502	RS1/10S0R0J
	R	9037-9044,9148-9150	RAB4CQ330J
B	R	9070,9071,9112	RAB4CQ0R0J
	R	9116-9119,9122	RAB4CQ0R0J
	R	9125,9135,9234,9307	RS1/16S0R0J
	R	9128,9173	RS1/16S470J
	R	9143,9167,9169,9174	RS1/16S330J
	R	9152,9153,9179-9185	RAB4CQ330J
	R	9206,9605-9614	RAB4CQ220J
	R	9240-9248,9252-9260	RAB4CQ330J
	R	9301-9304,9325-9332	RAB4CQ330J
	R	9306,9368,9369,9537	RS1/16S1001F
C	R	9370,9540	RS1/16S0R0J
	R	9538	RS1/16S1001F
	R	9541,9547,9551,9560	RAB4CQ100J
	R	9542,9543,9548,9549	RAB4CQ750J
	R	9565,9567-9569,9586	RAB4CQ100J
	R	9574,9575,9581,9582	RAB4CQ750J
	R	9589,9592	RAB4CQ100J
	Other Resistors		RS1/16SS###J

CAPACITORS

	C	1001,1003,1005,1006	VCG1063
D	C	1002,1007,1010,1011	CKSSYB104K16
	C	1004,1023,1062,1072	VCG1070
	C	1008,1012,1013,1015	VCG1063
	C	1009,1016,1019,1031	CKSRYB105K16
	C	1014,1021,1029,1032	CKSSYB104K16
	C	1017,1020,1022,1024	VCG1063
	C	1018,1026,1049,1066	VCG1071
	C	1025,1027,1028,1030	VCG1063
	C	1033,1034,1038,1040	VCG1063
	C	1035-1037,1039,1043	CKSSYB104K16
	C	1041,1047,1083,1301	CKSRYB105K16
E	C	1042,1044,1046,1048	VCG1063
	C	1045,1050,1054,1064	CKSSYB104K16
	C	1051-1053,1055-1058	VCG1063
	C	1059,1060,3704,4001	CCSSCH331J50
	C	1061,1063,1065,1067	VCG1063
	C	1068,2122,2241,2321	VCG1071
	C	1069,1071,1073,1081	VCG1063
	C	1070,1074,1082,1087	CKSSYB104K16
	C	1076,1077,1405,1431	VCH1295
	C	1084,1092,2121,2211	VCG1070
	C	1086,1088,1091,1161	VCG1063
F	C	1089,1090,1407,2104	CKSSYB104K16
	C	1401,3802,5118,5618	VCH1277
	C	1402,1409,4005,4451	VCH1259

Mark	No.	Description	Part No.
	C	1403,1433,1443,1591	CKSRYB105K16
	C	1404,3505,4309,4352	CKSRYB104K50
	C	1406,1435,1446,1447	DCH1201
	C	1408,3507,3811,5043	DCH1246
	C	1434,1444,1592,3506	CCSRCH102J50
	C	1436,1437,2102,2402	VCH1295
	C	1445,2605,9628	VCH1301
	C	1448,3305,5058,5063	VCH1300
	C	1449,2152,2352,3152	DCH1201
	C	1452,9161	VCH1302
	C	1501,2153,2353,3153	CCSRCH101J50
	C	1502	CCSRCH470J50
	C	1601,2103,2107,2111	CKSRYB105K16
	C	1603,1604,1607-1610	CCSSCH101J50
	C	1653,1654,7774	CCSSCH101J50
	C	2105,2106,2108,2110	VCG1063
	C	2109,2114,2117,2118	CKSSYB104K16
	C	2112,2116,2203,2207	CKSRYB105K16
	C	2113,2115,2154,2205	VCG1063
	C	2151,2351,2602,3151	CKSQYB225K10
	C	2201,2401,2610,2613	CFHXSP393J50
	C	2202,2302,3102,3202	VCH1278
	C	2204,2209,2214,2217	CKSSYB104K16
	C	2206,2208,2210,2213	VCG1063
	C	2212,2216,2303,2307	CKSRYB105K16
	C	2215,2305,2306,2308	VCG1063
	C	2218,2304,2309,2314	CKSSYB104K16
	C	2310,2313,2315,2354	VCG1063
	C	2311,2355,2421,2611	VCG1070
	C	2312,2316,2403,2411	CKSRYB105K16
	C	2317,2318,2404,2409	CKSSYB104K16
	C	2405,2406,2408,2410	VCG1063
	C	2407,2612,3107,3215	VCG1071
	C	2412,2416,2606,3103	CKSRYB105K16
	C	2413,2415,2608,2609	VCG1063
	C	2414,2417,2418,2603	CKSSYB104K16
	C	2601,3301,3702,7304	CEVLW221M4
	C	2607,3104,3109,3112	CKSSYB104K16
	C	3105,3106,3108,3110	VCG1063
	C	3111,3113,3116,3118	VCG1063
	C	3114,3115,3122,3203	CKSRYB105K16
	C	3117,3120,3123,3124	CKSSYB104K16
	C	3119,3125,3154,3205	VCG1063
	C	3121,3222,3311,3706	VCG1070
	C	3204,3209,3212,3217	CKSSYB104K16
	C	3206,3208,3210,3211	VCG1063
	C	3207,3214,3306,3504	CKSRYB105K16
	C	3213,3216,3218,3219	VCG1063
	C	3220,3223,3224,3303	CKSSYB104K16
	C	3221,3225,3308,3309	VCG1063
	C	3302,3502,3804,4625	DCH1201
	C	3307,4011,4021,4023	CKSSYB104K16
	C	3310,3313,5064,5563	CFHXSP393J50
	C	3312,3806,5019,5022	VCG1071
	C	3501,9328	CEVW221M4
	C	3503,3509,3801,4020	VCG1063
	C	3701,3803,4071,4502	CKSRYB105K16
	C	3703,3710,3711,3807	CCSRCH102J50
	C	3705	CCH1826

Mark	No.	Description	Part No.
C	3805,4022,4461-4464		VCG1070
C	3808,3813,4003,4004		CCSRCH102J50
C	3821		CCSSCH130J50
C	3822		CCSSCH120J50
C	4002,4611,6304,7023		VCH1234
C	4012,4013,4301,4302		CCSRCH102J50
C	4016		VCG1061
C	4017,4019,5061,5062		CKSSYB103K16
C	4018,4356,7305,7314		CCSRCH101J50
C	4026,4353,4354		VCG1063
C	4201,4202,5017,5128		CKSSYB104K16
C	4204,5020,5113,5121		CCSSCH331J50
C	4304-4308,4311,4357		CCSRCH102J50
C	4310,7018,7020		CEVLW470M16
C	4351		CCSRCH681J50
C	4355,8114		CKSRYB103K50
C	4403-4405,4416-4423		CCSRCH220J50
C	4406,4410,4413,4503		CCSRCH102J50
C	4407,4411,4412,4510		CKSRYB104K50
C	4425,4427-4440		CCSRCH220J50
C	4441-4443,4512,4513		VCG1063
C	4452,6329,7607		VCH1297
C	4453,4616,6345,7623		VCH1259
C	4455,7109,7201,7306		CCH1688
C	4501,4504,5060,5122		VCH1295
C	4505,4507,4614,5042		CKSRYB105K16
C	4506,4544,4615,5002		CCSRCH102J50
C	4508,5012,5016,5021		VCG1070
C	4511,4521,4522,4613		CKSRYB104K50
C	4541		CCSRCH200J50
C	4542		CCSRCH150J50
C	4612		CEVW330M25
C	4617,5023,5025,5032		VCG1063
C	5001,5006,5008,5011		CKSRYB104K50
C	5007,5010,5013,5015		CCSRCH102J50
C	5014,5024,5026,5115		CKSRYB104K50
C	5018,5510,6302,6305		DCH1201
C	5027,5505,5514,5561		VCG1071
C	5041,5116,5120,5124		CCSRCH102J50
C	5047,5048,5052,5055		VCG1063
C	5054,5065,5511,5513		VCG1070
C	5114,5614,9010,9342		VCH1278
C	5117,5512,5515,5522		VCG1063
C	5119,5123,5501,5504		CKSRYB104K50
C	5126,5558,5560,5622		VCH1295
C	5503,5506,5531,5542		CCSRCH102J50
C	5507,5508,5537,5540		CKSRYB104K50
C	5509,5539,6306,6309		CKSSYB104K16
C	5516,5517,7110,9362		CKSSYB103K16
C	5534,5535,5545,5547		VCG1063
C	5541,5615,5619,5623		CKSRYB104K50
C	5543,5616,5620,5624		CCSRCH102J50
C	5546,5562,6313,6321		VCG1070
C	5613,5621,6111,6113		VCG1063
C	5617,9002,9015,9018		CCSSCH331J50
C	6121,6123,6131,6133		DCH1246
C	6141,6161,8003,8012		DCH1246
C	6151,6303,6319,6330		VCG1063
C	6301,6307,9512,9576		VCH1295
C	6308,7011,7108,7203		DCH1201

Mark	No.	Description	Part No.
C	6312,7004,7009,8020		VCG1071
C	6314,6327,6331-6333		CKSSYB104K16
C	6315,6317		CKSRYB123K50
C	6316,6318		CKSRYB154K10
C	6322,7002,7003,7006		CKSRYB104K50
C	6323,6324		CKSRYB222K50
C	6325,7005,7008,7308		VCG1070
C	6328,7001,7007,7015		CCSRCH102J50
C	6334,6336,6340-6343		VCG1063
C	6335,6502,6511,6512		CKSSYB104K16
C	6344,6346,9128,9616		VCH1258
C	6521-6528,6537-6542		CCSRCH220J50
C	7010,7111,7202,7302		CKSQYB225K10
C	7012,7025,7026		VCG1069
C	7013,7014,7024,7115		CKSRYB104K50
C	7016,8004-8006,8032		CCSRCH102J50
C	7019,7112		VCH1292
C	7021,9019		VCH1293
C	7022,7301,7421		CEVLW101M10
C	7027,7031,7313,7756		VCH1234
C	7029		CFHXSP104J16
C	7030,7033-7038,9162		CFHXSP393J50
C	7113,7205,7334,7833		CKSRYB105K16
C	7114		CKSRYB822K50
C	7116-7118,8001,8010		VCG1063
C	7204,7333,9006		VCH1269
C	7303,7312,7322,7332		DCH1201
C	7311,7331,7336,7422		CKSQYB225K10
C	7335,8910		CEVW101M16
C	7337,7423,7612,7622		DCH1201
C	7338,7503		CCH1688
C	7424,7613,8002,9013		VCH1277
C	7425,7610,7614,7661		CCSRCH101J50
C	7501,7502,7608,7609		CKSQYB225K10
C	7601,7651,8116,8124		CKSRYB104K50
C	7611,7621,7658,7732		CKSQYB225K10
C	7659,7733,7752,7755		DCH1201
C	7660,7803		CEVLW221M4
C	7751,7754,7801,7831		CKSQYB225K10
C	7775,7802,7832,7852		DCH1201
C	7778		CKSQYB105K25
C	7804,7904,8118,9139		CCSRCH101J50
C	7851,7901,9349,9523		CKSQYB225K10
C	7853,8017,8172		CKSRYB105K16
C	7902,9129,9131,9155		DCH1201
C	7903,8117,8171,9099		VCH1234
C	7905,8018,8019,8033		VCG1070
C	8011,8013,8015,8101		VCG1063
C	8014,9118,9125,9508		VCH1259
C	8031,9026,9062,9080		DCH1246
C	8111		VCH1288
C	8113,8912		CCSRCH102J50
C	8120		CCSRCH391J50
C	8122		CCSRCH221J50
C	8173,9003,9009,9012		VCG1063
C	8909,8911,8950		CKSRYB104K50
C	8913-8916,8935,8936		CCSRCH220J50
C	8943		CCSRCH330J50
C	8944-8949		CCSRCH220J50

Mark	No.	Description	Part No.
	C	9007,9011,9014,9017	CKSSYB104K16
	C	9016,9530	VCH1277
	C	9020,9023,9024	CKSSYB104K16
	C	9021,9022,9027,9046	VCG1063
	C	9025,9034,9044,9045	VCG1070
	C	9028-9033,9036-9040	CKSSYB104K16
	C	9041,9065,9089,9113	VCG1071
	C	9042,9043,9047,9049	CKSSYB104K16
	C	9048,9053,9054	VCG1063
	C	9050,9052,9055,9056	CKSSYB104K16
	C	9051,9100,9121,9357	CCSSCH331J50
	C	9057-9059,9061,9063	VCG1063
	C	9060,9064,9066-9072	CKSSYB104K16
	C	9073,9085,9112,9116	VCG1070
	C	9074,9076,9077,9079	CKSSYB104K16
	C	9075,9078,9087,9092	VCG1063
	C	9081-9083,9086,9090	CKSSYB104K16
	C	9084,9088,9513,9520	DCH1246
	C	9091,9093,9095,9097	CKSSYB104K16
	C	9094,9096,9102,9104	VCG1063
	C	9098,9101,9103,9105	CKSSYB104K16
	C	9106,9108,9110,9111	CKSSYB104K16
	C	9107,9109,9114,9115	VCG1063
	C	9117,9122,9126,9133	CKSSYB104K16
	C	9119,9120,9338,9341	VCG1071
	C	9123	CKSSYB473K16
	C	9124,9127,9134,9136	VCG1063
	C	9130,9132,9174,9340	VCG1070
	C	9135,9137,9146,9148	CKSSYB104K16
	C	9138,9140,9141,9143	VCG1063
	C	9144,9147,9149,9151	VCG1063
	C	9150,9152,9154,9302	CKSSYB104K16
	C	9153,9157,9158,9303	VCG1063
	C	9230-9233	CCSRCH101J50
	C	9301	VCH1296
	C	9304-9307,9309,9310	CKSSYB104K16
	C	9308,9311,9312,9315	VCG1063
	C	9313,9314,9323	CKSSYB104K16
	C	9316-9319,9339,9372	CKSRYB105K16
	C	9320-9322,9324	VCG1063
	C	9325-9327,9330-9333	CKSSYB104K16
	C	9334-9337,9355,9356	VCG1063
	C	9343	VCH1278
	C	9344-9347,9351,9352	CKSSYB104K16
	C	9350,9354,9526,9527	DCH1201
	C	9358,9361,9504,9506	VCG1063
	C	9371,9515,9540,9544	VCG1070
	C	9501,9503,9505	CCSSCH331J50
	C	9502,9509,9510,9514	CKSSYB104K16
	C	9507,9516,9524,9537	VCG1063
	C	9518,9525,9532,9536	CKSSYB104K16
	C	9519,9528,9531,9560	VCG1071
	C	9521,9534,9548,9554	DCH1246
	C	9529,9566,9567	DCH1201
	C	9533,9535,9570,9575	CKSSYB103K16
	C	9538,9541,9543,9547	VCG1063
	C	9539,9545,9546,9549	CKSSYB104K16
	C	9550,9553,9558,9559	CKSSYB104K16
	C	9551,9557,9563,9579	VCG1063
	C	9556,9561,9582,9597	VCG1070
	C	9564,9569	VCH1234
	C	9565,9572,9574,9580	CKSSYB104K16
	C	9568,9571,9596	VCG1071
	C	9573,9577,9589	DCH1246
	C	9578	CKSSYB103K16
	C	9581,9586,9588,9591	CKSSYB104K16
	C	9583,9585,9587,9590	VCG1063
	C	9592-9594,9601,9604	DCH1246
	C	9595,9600,9612	CKSSYB104K16
	C	9599,9602,9603,9605	VCG1063
	C	9606,9608	DCH1246
	C	9607,9611,9615	VCG1063
	C	9609,9610	VCG1070
	C	9613,9614	CCSSCH100D50
	C	9617,9620,9621	VCH1259
	C	9619,9630	CFHXSP393J50
	C	9622	VCH1258
	C	9623-9627	VCG1063

B SPATA ASSY

SEMICONDUCTORS

	IC	401	88SA8040B1-TBC1
	IC	402	S-1132B18-U5
⚠	IC	403	PQ070XZ02ZP
	IC	404	BU4228FVE

MISCELLANEOUS

	L	401,402 EMI FILTER	DTL1106
	X	401 CRYSTAL (25 MHz)	VSS1214
	CN	401 22P_SATA_CONNECTOR	VKN2090
	CN	403 CONNECTOR	AKM1292
	CN	404 40P CONNECTOR	VKN1818
	JP	1 EARTH LEAD WIRE	VDA2205

RESISTORS

	R	435	RS1/16SS1202F
	R	436	RS1/16SS1000F
	R	452,454,455,459	RS1/16S0R0J
	R	463,467	RS1/16S0R0J
	R	469,470	RS1/16S3301F
	R	471	RS1/16S1001F
	Other Resistors		RS1/16SS###J

CAPACITORS

	C	403,404,424,437	DCH1246
	C	405,411-415,418	CKSSYB103K16
	C	406,407,436	VCG1063
	C	408,426,432,434	CKSSYB104K16
	C	409,410	VCG1071
	C	416	CCSSCH120J50
	C	417	CCSSCH150J50
	C	420,427	CKSQYB475K10
	C	422,433,441-446	CKSSYB103K16
	C	430	CKSQYB225K10
	C	435,447,462,464	CKSSYB104K16
	C	438-440,459,465	VCG1063
	C	448,449,451-454	CKSSYB103K16
	C	450	DCH1246
	C	456	CCSQCH331J50

Mark	No.	Description	Part No.
	C 457		CEHAZA101M16
	C 458		CEHAZA471M6R3
	C 460		CCSSCH331J50
	C 461,463,477		VCG1070
	C 466		VCG1063
	C 467		CKSSYB103K16
	C 468		VCH1277
	C 469		VCH1302
	C 470		CFHXSP393J50
	C 472		ACH7306
	C 474		CEVLW101M10
	C 483		CFHXSQ103J16

C AUPW ASSY

SEMICONDUCTORS

	Q	1301	2SC3906K
⚠	Q	1302	2SC5511
⚠	D	1101,1102,1201,1202	31DQ10-FC6
⚠	D	1301	D3SBA20(B)
	D	1302	MAZ8056G(H)

MISCELLANEOUS

	L	1301,1501 FERRITE BEADS	VTH1013
	L	1451 INDUCTOR	CTF1305
	KN	1051-1053 WRAPPING TERMINAL	VNF1084
	KN	1351,1352 WRAPPING TERMINAL	VNF1084
	CN	1001 PLUG	CKS-556
	CN	1002,1401 CONNECTOR	VKN2008
	CN	1301 PLUG	CKS-555
	CN	1402 28P CONNECTOR	VKN1618
		SCREW	PMH30P080FCC
		HEAT SINK	PNS1043

RESISTORS

	R	1303	RS1/10SR3300F
	R	1401-1414	RS1/10SR0R0J
	R	1452,1701-1705	RS1/8SQ0R0J
	R	1711-1715	RS1/8SQ0R0J
	Other Resistors		RS1/4SA###J

CAPACITORS

	C	1001,1002,1301,1302	CFTLA334J50
	C	1051,1601-1604	CFHXSQ272J50
	C	1103,1104,1203,1204	VCH1276
	C	1107	ACH7271
	C	1307,1308	VCH1275
	C	1309,1451,1461	CKSRYB104K50
	C	1310	CEHAT101M25
	C	1311,1316,1453	CKSQYB105K25
	C	1313	VCH1289
	C	1317,1452,1462	CKSRYB103K50
	C	1318,1463	CKSRYB102K50
	C	1351	CKSQYB103K50
	C	1352	CCSQCH102J50
	C	1501-1504	VCH1298
	C	1505,1506,1508,1606	CFHXSP393J50
	C	1607	CFHXSP393J50

D AUJB ASSY

Mark	No.	Description	Part No.

SEMICONDUCTORS

	IC	101,201,301,401	OPA2134PAS1
	IC	102,202,302,402	WM8740SEDS
	IC	104-106,204-206	TC7SH02FUS1
	IC	304-306,404-406	TC7SH02FUS1
	IC	501,601,701,801	OPA2134PAS1
	IC	502,602,702,802	WM8740SEDS
	IC	504-506,604-606	TC7SH02FUS1
	IC	704-706,804-806	TC7SH02FUS1
	IC	901	TC74LCX32FTS1
	IC	902	TC74VHC04FTS1
	IC	1001-1003,1012	S-1170B33UC-OTS
	IC	1004-1007	NJM78M12DL1A
	IC	1008-1011	NJM79M12DL1A
	IC	1013-1016	NJM78M05DL1A
	Q	101,103,201,203	2SC4081
	Q	102,202,302,402	2SA1576A
	Q	104,204,304,404	2SD2704K
	Q	301,303,401,403	2SC4081
	Q	501,503,601,603	2SC4081
	Q	502,602,702,802	2SA1576A
	Q	504,604,704,804	2SD2704K
	Q	701,703,801,803	2SC4081
	D	901,1001-1008	RB501V-40
	D	902,903	1SS355

MISCELLANEOUS

	L	102,103,202,203 INDUCTOR	CTF1306
	L	302,303,402,403 INDUCTOR	CTF1306
	L	502,503,602,603 INDUCTOR	CTF1306
	L	702,703,802,803 INDUCTOR	CTF1306
	L	901,903,904 CHIP MAGNET CORE	DTF1068
	L	902,905 INDUCTOR	CTF1306
	L	1001-1004 CHIP MAGNET CORE	DTF1068
	JA	101,201,301 PIN JACK(1P)	AKB7102
	JA	401,501,601 PIN JACK(1P)	AKB7102
	JA	701,801 PIN JACK(1P)	AKB7102
	KN	1001-1003 WRAPPING TERMINAL	VNF1084
	CN	901,1001 CONNECTOR	VKN2011

RESISTORS

	R	114,118,214,218	VCN1138
	R	115,215,315,415	VCN1136
	R	116,117,216,217	VCN1137
	R	134-137,234-237	VCN1144
	R	138,139,238,239	VCN1139
	R	142,144,146,152	RS1/8SQ0R0J
	R	242,244,246,252	RS1/8SQ0R0J
	R	314,318,414,418	VCN1138
	R	316,317,416,417	VCN1137
	R	334-337,434-437	VCN1144
	R	338,339,438,439	VCN1139
	R	342,344,346,352	RS1/8SQ0R0J
	R	442,444,446,452	RS1/8SQ0R0J
	R	514,518,614,618	VCN1138
	R	515,615,715,815	VCN1136
	R	516,517,616,617	VCN1137
	R	534-537,634-637	VCN1144
	R	538,539,638,639	VCN1139
	R	542,544,546,552	RS1/8SQ0R0J
	R	642,644,646,652	RS1/8SQ0R0J

Mark	No.	Description	Part No.
	R	714,718,814,818	VCN1138
	R	716,717,816,817	VCN1137
A	R	734-737,834-837	VCN1144
	R	738,739,838,839	VCN1139
	R	742,744,746,752	RS1/8SQ0R0J
	R	842,844,846,852	RS1/8SQ0R0J
	R	932,1017-1026,1028	RS1/8SQ0R0J
	R	1029	RS1/8SQ0R0J
	Other Resistors		RS1/16S###J
	CAPACITORS		
	C	101,127-130,152	CCSRCH102J50
	C	102,138,149-151	CCSRCH101J50
B	C	106,206,306,406	VCH1288
	C	110,111,210,211	VCE1040
	C	112,113,154,155	VCH1261
	C	120-122,220-222	CCSRCH100D50
	C	125,225,325,425	VCH1285
	C	126,226,326,426	VCH1286
	C	131-137,231-237	CKSRYB103K50
	C	139-141,239-241	CKSRYB104K16
	C	144,145,244,245	VCH1283
	C	146,246,346,446	CKSQYB104K50
	C	153,253,353,453	CKSRYB104K50
C	C	156,256,356,456	CCSRCH331J50
	C	158,258,358,458	VCE1035
	C	160,181,260,281	CFHXSQ102J50
	C	163,164,263,264	CKSSYB104K16
	C	165,265,365,465	CCSSCH101J50
	C	171,172,179,180	CFHXSQ103J16
	C	201,227-230,252	CCSRCH102J50
	C	202,238,249-251	CCSRCH101J50
	C	212,213,254,255	VCH1261
	C	271,272,279,280	CFHXSQ103J16
	C	301,327-330,352	CCSRCH102J50
D	C	302,338,349-351	CCSRCH101J50
	C	310,311,410,411	VCE1040
	C	312,313,354,355	VCH1261
	C	320-322,420-422	CCSRCH100D50
	C	331-337,431-437	CKSRYB103K50
	C	339-341,439-441	CKSRYB104K16
	C	344,345,444,445	VCH1283
	C	360,381,460,481	CFHXSQ102J50
	C	363,364,463,464	CKSSYB104K16
	C	371,372,379,380	CFHXSQ103J16
	C	401,427-430,452	CCSRCH102J50
E	C	402,438,449-451	CCSRCH101J50
	C	412,413,454,455	VCH1261
	C	471,472,479,480	CFHXSQ103J16
	C	501,527-530,552	CCSRCH102J50
	C	502,538,549-551	CCSRCH101J50
	C	506,606,706,806	VCH1288
	C	510,511,610,611	VCE1040
	C	512,513,554,555	VCH1261
	C	520-522,620-622	CCSRCH100D50
	C	525,625,725,825	VCH1285
F	C	526,626,726,826	VCH1286
	C	531-537,631-637	CKSRYB103K50
	C	539-541,639-641	CKSRYB104K16
	C	544,545,644,645	VCH1283
	C	546,646,746,846	CKSQYB104K50
	C	553,653,753,853	CKSRYB104K50
	C	556,656,756,856	CCSRCH331J50
	C	558,658,758,858	VCE1035
	C	560,581,660,681	CFHXSQ102J50
	C	563,564,663,664	CKSSYB104K16
	C	565,665,765,865	CCSSCH101J50
	C	571,572,579,580	CFHXSQ103J16
	C	601,627-630,652	CCSRCH102J50
	C	602,638,649-651	CCSRCH101J50
	C	612,613,654,655	VCH1261
	C	671,672,679,680	CFHXSQ103J16
	C	701,727-730,752	CCSRCH102J50
	C	702,738,749-751	CCSRCH101J50
	C	710,711,810,811	VCE1040
	C	712,713,754,755	VCH1261
	C	720-722,820-822	CCSRCH100D50
	C	731-737,831-837	CKSRYB103K50
	C	739-741,839-841	CKSRYB104K16
	C	744,745,844,845	VCH1283
	C	760,781,860,881	CFHXSQ102J50
	C	763,764,863,864	CKSSYB104K16
	C	771,772,779,780	CFHXSQ103J16
	C	801,827-830,852	CCSRCH102J50
	C	802,838,849-851	CCSRCH101J50
	C	812,813,854,855	VCH1261
	C	871,872,879,880	CFHXSQ103J16
	C	915-917,930,939	CCSRCH102J50
	C	931,945,1014,1022	CKSRYB104K16
	C	932	CEHAZL101M25
	C	933,938,1006,1016	CKSRYB103K50
	C	934	ACH7268
	C	936,947,1009-1013	CKSQYB105K25
	C	943	VCH1286
	C	944	CCSRCH102J50
	C	1001,1002,1004,1080	CKSQYB104K50
	C	1003,1033,1045,1050	VCG1072
	C	1007	VCH1289
	C	1008,1090,1092	ACH7289
	C	1015,1023,1031,1099	VCH1285
	C	1017-1021,1025-1029	CKSQYB105K25
	C	1024,1032,1039,1047	CKSRYB103K50
	C	1030,1098	CKSRYB104K16
	C	1034,1044,1112,1120	CCSQCH102J50
	C	1040,1048,1116,1124	ACH1480
	C	1052,1057,1062,1067	CKSRYB103K50
	C	1053,1058,1063,1068	VCH1282
	C	1055,1059,1065,1069	VCG1072
	C	1070,1074,1075,1079	VCG1072
	C	1071,1076,1081,1086	CKSRYB104K50
	C	1072,1077,1082,1087	CKSRYB103K50
	C	1073,1078,1083,1088	VCH1282
	C	1084,1085,1113,1121	VCG1072
	C	1093-1097	CKSQYB105K25
	C	1100,1115,1123	CKSRYB103K50
	C	1136,1137	CFHXSQ272J50

E VOUT ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
IC	2100		LA73054
IC	2300		TC7SH32FUS1
IC	2302		HIN202EIBNZ
MISCELLANEOUS			
L	2100	INDUCTOR	CTF1394
F	2300	EMI FILTER	DTL1106
JA	2100	PIN JACK(1P)	AKB7102
JA	2101	4P MINIDIN SOCKET(S)	AKP1239
JA	2300	9P D-SUB SOCKET	AKP1213
KN	2001	SCREW PLATE	VNE1948
KN	2002,2003	WRAPPING TERMINAL	VNF1084
CN	2000	20P CONNECTOR	VKN1610
RESISTORS			
R	2107-2109		RS1/10S68R0F
R	2110-2112		RS1/10S0R0J
R	2320		RS1/10SR0R0J
Other Resistors			RS1/16S###J
CAPACITORS			
C	2000,2002,2004		CKSRYB104K16
C	2001,2003,2005		CEAT101M16
C	2100-2102		CCG1171
C	2103,2306		VCH1285
C	2104,2110,2111		CKSRYB105K10
C	2105-2107,2109,2113		CKSRYB104K16
C	2108		CEAT470M16
C	2112,2114		CEAT102M6R3
C	2300,2301,2304,2305		CKSRYB104K16
C	2307		CKSRYB103K50
C	2308,2309		CKSRYB104K16

F FLKY ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
IC	101		PDC182A
IC	102		RPM7140-H4
IC	103		BD45282G
Q	101-107,109,110		DTC114YUA
Q	108		UMD2N
Q	111		2SC4081
⚠ Q	112		2SC5712
D	101-104		SLR-343VC(NPQ)
D	105,106		SLR343BC7T(JKLM)
D	107		SLR343WBCT(MNPQ)
D	109		UDZS8R2(B)
D	112		UDZS9R1(B)
D	113,114		1SS355
MISCELLANEOUS			
L	101,102	INDUCTOR	CTF1394
KN	101	FL HOLDER IPO(FE)	VNF1145
V	101	FLUORESCENT TUBE	VAW1094
S	101-106	SWITCH	VSG1024
CN	101	30P CONNECTOR	VKN1290
CN	102	CONNECTOR 11P	AKM1359
RESISTORS			
R	114-121		RS1/10S222J
R	122,123,125,126		RS1/10S182J
R	128,129		RS1/10S682J
R	152,156		RS1/10SR302J
R	153		RS1/10SR334J
R	179,180		RS1/10SR0R0J
Other Resistors			RS1/16S###J
CAPACITORS			
C	102,105,108,111		CKSRYB104K50
C	103,106,109,112		CCSRCH101J50
C	104,107,110,113		CCSRCH102J50
C	114,118,121,124		CKSRYB104K50
C	115,119,122,162		CCSRCH101J50
C	125,128,130		CKSRYB104K50
C	126,127,129,131		CCSRCH102J50
C	132,192		CKSRYB105K16
C	133,150,185		CEAL101M16
C	134,146		CKSYB105K16
C	135		CKSYB104K25
C	137-139		CCSRCH220J50
C	140-142,147,151		CKSRYB104K50
C	143,161,191		CCSRCH102J50
C	144		CEHAZA470M16
C	163,165,176,177		CKSRYB104K50
C	164		CEAL220M35
C	166,178		CEHAZA101M16
C	183		CKSRYB104K50
C	188,190		CCSQCH102J50

G PSWB ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
Q	301		DTC114YUA
D	301		SLR343BC7T(JKLM)
MISCELLANEOUS			
S	301-303	SWITCH	VSG1024
CN	301	CONNECTOR 11P	AKP1299
CN	302	L-PLUG(6P)	KM200NA6L
RESISTORS			
R	304-308		RS1/16S103J
Other Resistors			RS1/10S###J
CAPACITORS			
C	302		CCSRCH101J50
C	304,307		CKSRYB104K50
C	305		CCSRCH102J50
C	306		CCH1745
C	308,309		CCSQCH102J50
C	312		CCSRCH471J50

H ACSW ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
Q	401,402,504		2SC4081
Q	501		UMD2N
Q	503		2SC5712
Q	505		DTC114YUA
D	401-404,502,504		1SS355
⚠ D	503		1SS355

Mark	No.	Description	Part No.
	D 506		UDZS8R2(B)
		MISCELLANEOUS	
⚠	L 401	LINE FILTER	XTF3004
⚠	H 401,402	FUSE CLIP	AKR1004
	KN 403	WRAPPING TERMINAL	VNF1084
⚠	RY 401,402	JOE LOWPOWER RELAY	ASR7013
⚠	CN 401	AC CODE SOCKET	RKP1751
⚠	CN 402	AMP U-P CONNECTOR	RKP1834
⚠	CN 403	CONNECTOR	B2P3-VH
	CN 404	PLUG(7P)	KM200NA7
	CN 506	PLUG(2P)	KM200NA2
		RESISTORS	
	R 403,405		RS1/4S221J
	R 404,406		RS1/10S0R0J
	R 515,516		RS1/10SR302J
	Other Resistors		RS1/16S###J
		CAPACITORS	
⚠	C 403,404		ACE7013
	C 405,501		CCSRCH331J50
	C 406,407,409,513		CKSRYB104K50
	C 408,515		CCH1745
⚠	C 410,412		ACE7026
	C 514,516		CKSRYB104K50
⚠	C 519,520		ACG1079

I SYPS ASSY

SYPS ASSY has no service part.