

# Service Manual

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AD0203067C2

# Service Manual

DVD/CD Player

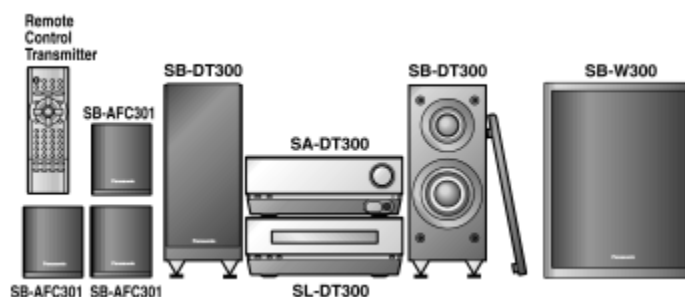


- SL-DT300EG

Traverse Deck: RAE1813Z Mechanism Series

Colour

(S).....Silver Type



Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

| System              | SC-DT300  |
|---------------------|-----------|
| DVD/CD player       | SL-DT300  |
| AV control receiver | SA-DT300  |
| Front speakers*     | SB-DT300  |
| Center speaker*     | SB-AFC301 |
| Surround speakers*  | SB-AFC301 |
| Subwoofer*          | SB-W300   |

\* : Made in Singapore.

## Specifications

### Discs played

DVD-Audio, DVD-Video,  
DVD-R (DVD-Video formatted discs),  
CD (CD-DA), Video-CD,  
CD-R/RW (CD-DA, Video-CD, MP3 formatted discs)

### Audio

Number of channels: 5.1 (FL, FR, SL, SR, C, SW)

### Video

Signal system: PAL, PAL60/NTSC  
Output terminal: RCA terminal (composite video)  
S terminal (Y, C)

### Pickup

Beam source: Semiconductor laser  
Wavelength: 658/790 nm

### General

Dimensions (WxHxD): 190x73x335 mm  
Mass: 1.8 kg

Notes: Specifications are subject to change without notice.  
Mass and dimensions are approximate.

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"Dolby", "Pro Logic" and the double-D symbol are trademarks of  
Dolby Laboratories.

Manufactured under license from Digital Theater Systems, Inc. US  
Pat. No. 5,451,942, 5,956,674, 5,974,380, 5,978,762 and other  
world-wide patents issued and pending. "DTS" and "DTS Digital  
Surround" are registered trademarks of Digital Theater Systems,  
Inc. © 1996, 2000 Digital Theater Systems, Inc. All rights reserved.

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## WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# Panasonic

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# 1 Note

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Refer to the service manual for Model No. SA-DT300 (Order No. AD0203066C2) for information on Accessories and Packaging.

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## 2 Handling Precautions for Traverse Deck

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The laser diode in the optical pick-up may break down due to potential difference caused by static electricity of clothes or human body.

So be careful of electrostatic breakdown during repair of the optical pick-up.

### [2.1 Handling of optical pick-up](#)

### [2.2 Grounding for electrostatic breakdown prevention](#)

#### [2.2.1 Human body grounding](#)

#### [2.2.2 Work table grounding](#)

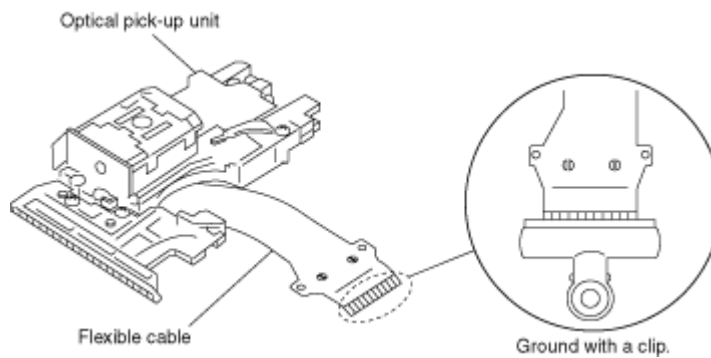
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## 2.1 Handling of optical pick-up

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1. Do not subject the optical pick-up to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin or similar object is inserted into the flexible board (FFC board). Refer to [Fig. 2-1](#).  
When removing or connecting the shortpin, finish the job in as short time as possible.
3. Be careful not to apply excessive stress to the flexible board (FFC board).
4. Do not turn the variable resistor (Laser power adjustment).

Fig. 2-1.



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## 2.2 Grounding for electrostatic breakdown prevention

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[2.2.1 Human body grounding](#)

[2.2.2 Work table grounding](#)

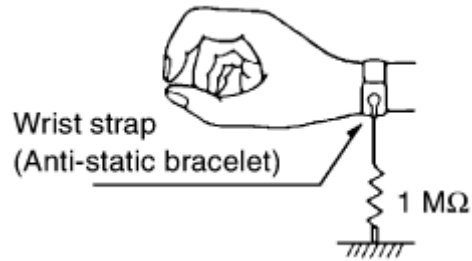
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## 2.2.1 Human body grounding

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Use the antistatic wrist strap to discharge the static electricity from your body. Refer to [Fig. 2-2](#).

Fig. 2-2.



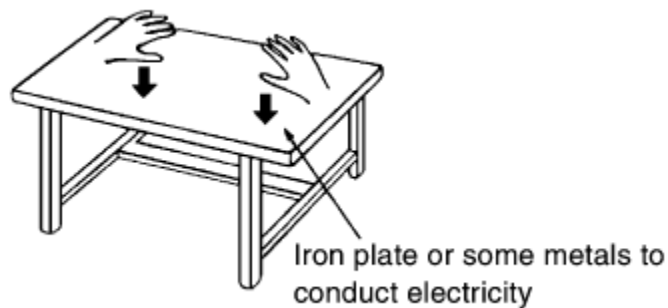
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## 2.2.2 Work table grounding

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Put a conductive material (sheet) or steel sheet on the area where the optical pick-up is placed and ground the sheet. Refer to [Fig. 2-3](#).

Fig. 2-3.



### Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So take care not to let your clothes touch the optical pick-up.

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## 3 Precaution of Laser Diode

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**CAUTION:**

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF I  
SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXP

**CAUTION:** This product utilizes a laser diode with the unit turned "on", invisible laser rad  
Wave length: 658/790 nm

Maximum output radiation power from pick-up: 100  $\mu$ W/VDE

Laser radiation from the pick-up unit is safety level, but be sure the followings

1. Do not disassemble the pick-up unit, since radiation from exposed laser di
2. Do not adjust the variable resistor on the pick-up unit. It was already adjust
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick-up lens for a long time.

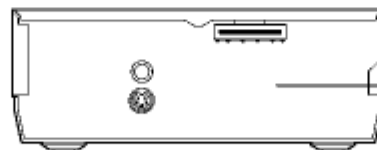
**ACHTUNG:** Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird un  
adgestrahlt.

Wellenlänge: 658/790 nm

Maximale Strahlungsleistung der Lasereinheit: 100  $\mu$ W/VDE

Die strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte bea

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laser
2. Den werksseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.



(Back of product)



**LUOKAN 1 LASE**  
**KLASS 1 LASER**

|                  |                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------|
| <b>DANGER</b>    | - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN.<br>AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)   |
| <b>CAUTION</b>   | - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN.<br>AVOID EXPOSURE TO BEAM. (IEC60825-1)          |
| <b>ATTENTION</b> | - RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE.<br>EXPOSITION DANGEREUSE AU FAISCEAU.  |
| <b>ADVARSEL</b>  | - SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING.<br>UNDGÅ UDSÆTTELSE FOR STRÅLING.                     |
| <b>VARO!</b>     | - AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN<br>LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.            |
| <b>VARNING</b>   | - SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL<br>ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.                |
| <b>ADVARSEL</b>  | - SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES.<br>UNNGÅ EKSPONERING FOR STRÅLEN.               |
| <b>VORSICHT</b>  | - SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG<br>GEOFFNET. NICHT DEM STRAHL AUSSETZEN. |
| <b>注意</b>        | - 打开时有可见及不可见激光辐射。避免激光束照射。                                                                           |
| <b>注意</b>        | - ここを開くと可視及び不可視のレーザー光が出ます。                                                                          |

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## 7.1 Service tool and equipment

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| Applications    | Parts Name               | Parts Number                                          |
|-----------------|--------------------------|-------------------------------------------------------|
| Tilt adjustment | DVD test disc            | DVDT-S15 or DVDT-S01                                  |
|                 | Hexagonal wrench         | Commercially available (2mm)                          |
| Inspection      | Extension cable (22 pin) | JGS0116                                               |
|                 | Extension cable (26 pin) | JGS0098                                               |
| Others          | Screw lock               | RZZ0L01                                               |
|                 | Grease                   | JGS0091,JGS0092                                       |
| Confirmation    | CD test disc             | PVCD-K06 or any other<br>commercially available disc. |
|                 | VCD test disc            |                                                       |
|                 | Recovery disc            | RFKZD5TR006                                           |

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## 7.2 Important points in adjustments

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[7.2.1 Important points in optical adjustments](#)

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## 7.2.1 Important points in optical adjustments

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- Before starting optical adjustment, be sure to take an antistatic measures.
- Optical pick-up tilt adjustment is needed after replacement of the following components.
  1. Optical pick-up unit
  2. Spindle motor unit
  3. Optical pick-up peripheral parts (such as rail)

### Remarks:

Adjustment is generally unnecessary after replacing other parts of traverse unit. However, make an adjustment if there is noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pick-up. Adjustment is generally unnecessary after replacing the traverse unit.

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## 7.3 Storing and handling test discs

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Surface precision is vital for DVD test discs. Be sure to store and handling them carefully.

- Do not place discs directly onto the workbench etc., after use.
- Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in cool place where they are not exposed to direct sunlight or air from air conditioners.
- Accurate adjustment will not possible if the disc is warped when placed on a surface made of glass etc.. If it is warped, use a new test disc to make optical adjustments.
- If adjustment is performed with a warped disc, the adjustment will be incorrect and some discs will not be playable.

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## 7.4 Optical pick-up adjustment

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[7.4.1 Optical pick-up tilt adjustment](#)

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## 7.4.1 Optical pick-up tilt adjustment

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| Measurement point                          | Adjustment point            | Mode                                          | Disc                 |
|--------------------------------------------|-----------------------------|-----------------------------------------------|----------------------|
|                                            | Tangential adjustment screw | T1 (inner periphery) play                     | DVDT-S15 or DVDT-S01 |
|                                            | Tilt adjustment screw       | T43 (outer periphery) play                    |                      |
| Measurement equipment                      |                             | Adjustment value                              |                      |
| None (Use the LCD indication on SA-DT300.) |                             | Adjust the jitter value to the minimum level. |                      |

### 7.4.1.1 Adjustment procedures

1. While pressing “STOP” button on the player, press “5” button on the remote control unit.
2. Confirm that “J\_xxx\_yyy\_zz” is shown on the display of the AV control receiver (SA-DT300).

For your reference:

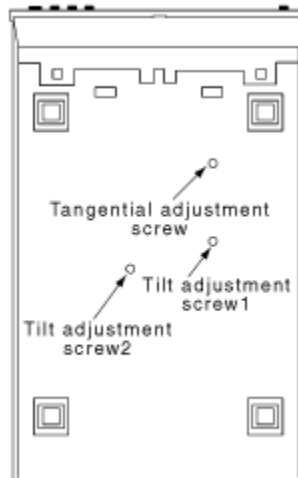
“yyy” and “zz” shown to the right have nothing to do with jitter value. “yyy” is the error counter, while “zz” is the focus drive value.

Note:

Jitter value appears on the display of the AV control receiver (SA-DT300).

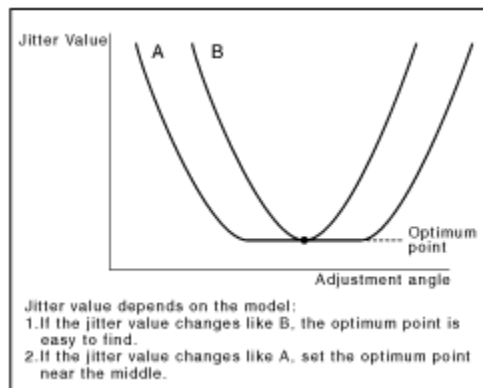
3. Play test disc T1 (inner periphery).
4. Adjust tangential adjustment screw so that the jitter value is minimized. Refer to [Fig. 7-1](#) .
5. Play test disc T43 (outer periphery).
6. Adjust tilt adjustment screw1 so that the jitter value is minimized. Refer to [Fig. 7-1](#) .
7. Play test disc T43 (outer periphery).
8. Adjust tilt adjustment screw2 so that the jitter value is minimized. Refer to [Fig. 7-1](#) .
9. Repeat adjusting tilt adjustment screw1 and 2 alternately until the jitter value is minimized.

Fig. 7-1



### 7.4.1.2 Important point

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



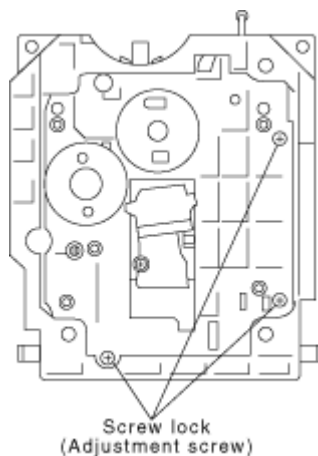
### 7.4.1.3 Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screws in position using screw lock.

### 7.4.1.4 Procedure for screw lock

1. After the adjustment is performed, reassemble top cover, clamper base, disc tray and traverse unit.
2. Lay the traverse unit upside down, fix adjustment screw with screw lock. Refer to [Fig. 7-2](#) .
3. After fixing, assemble traverse unit, disc tray, clamper base, top cover.

Fig. 7-2



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## 7.5 Electrical confirmation

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Perform this confirmation after replacing P.C.B.

[7.5.1 Video output \(luminance signal\) confirmation](#)

[7.5.2 Video output \(chrominance signal\) confirmation](#)

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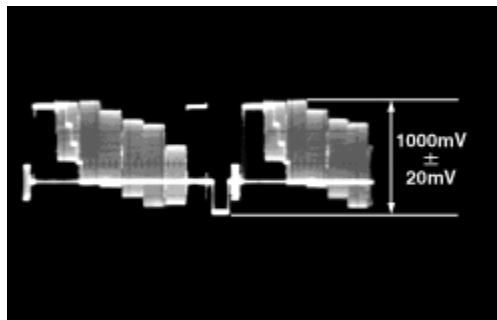
## 7.5.1 Video output (luminance signal) confirmation

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| Measurement point                   | Mode                                                                    | Disc                 |
|-------------------------------------|-------------------------------------------------------------------------|----------------------|
| Video output terminal               | Color bar 75%<br>PLAY(Title 46): DVD-T-S15<br>PLAY(Title 12): DVD-T-S01 | DVDT-S15 or DVDT-S01 |
| Measurement equipment               | Confirmation value                                                      |                      |
| Oscilloscope<br>200mV/div10μsec/div | 1000mVp-p±20mV                                                          |                      |

Purpose: To maintain video signal output compatibility.

1. Connect the oscilloscope to the video output terminal and terminate at 75Ω.
2. Confirm that the luminance signal (Y+S) level is 1000mVp-p±20mV.



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# 8 New Servicing Method for DVD Player (5 th generation models)

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- With the 5 th generation models, new self–diagnosis function and new servicing method described below are additionally available.

## [8.1 Firmware updating and recovery with disc](#)

## [8.2 New self–diagnosis function](#)

## [8.3 How to use recovery disc](#)

### [8.3.1 Performing recovery](#)

### [8.3.2 Updating firmware](#)

## [8.4 Fault diagnosis using new self–diagnosis function](#)

## [8.5 Overview of each functions](#)

### [8.5.1 Cumulative operation time display function](#)

## [8.6 Service Precautions](#)

### [8.6.1 Recovery after the DVD player is repaired](#)

### [8.6.2 Firmware version–up of the DVD player](#)

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## 8.1 Firmware updating and recovery with disc

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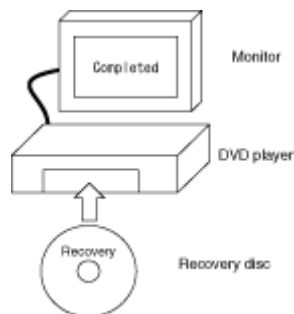
- Recovery
- Firmware updating

Simply run the recovery disc. Then both of the above operations are automatically performed.

Commercially available CD-R can now perform updating and recovery process, making it easier to update the version.

Recovery process: Optimization of player after replacement of FROM, EEPROM and module P.C.B.

Version updating: Firmware updating for improved operability and performance



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## 8.2 New self–diagnosis function

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- Cumulative operation time display function (Spindle motor and DVD/CD laser)
- ADSC internal RAM display function
- Other: Increased number of last errors storage

1 event →20 events

Utilization of the above functions, in combination with servicing procedures, is expected to contribute to higher efficiency of fault diagnosis.

### [Purposes]

Operation time display function: For fault finding of spindle motor or laser that has limited service life

ADSC internal RAM display function: For faulty part identification in servo system using the learned values

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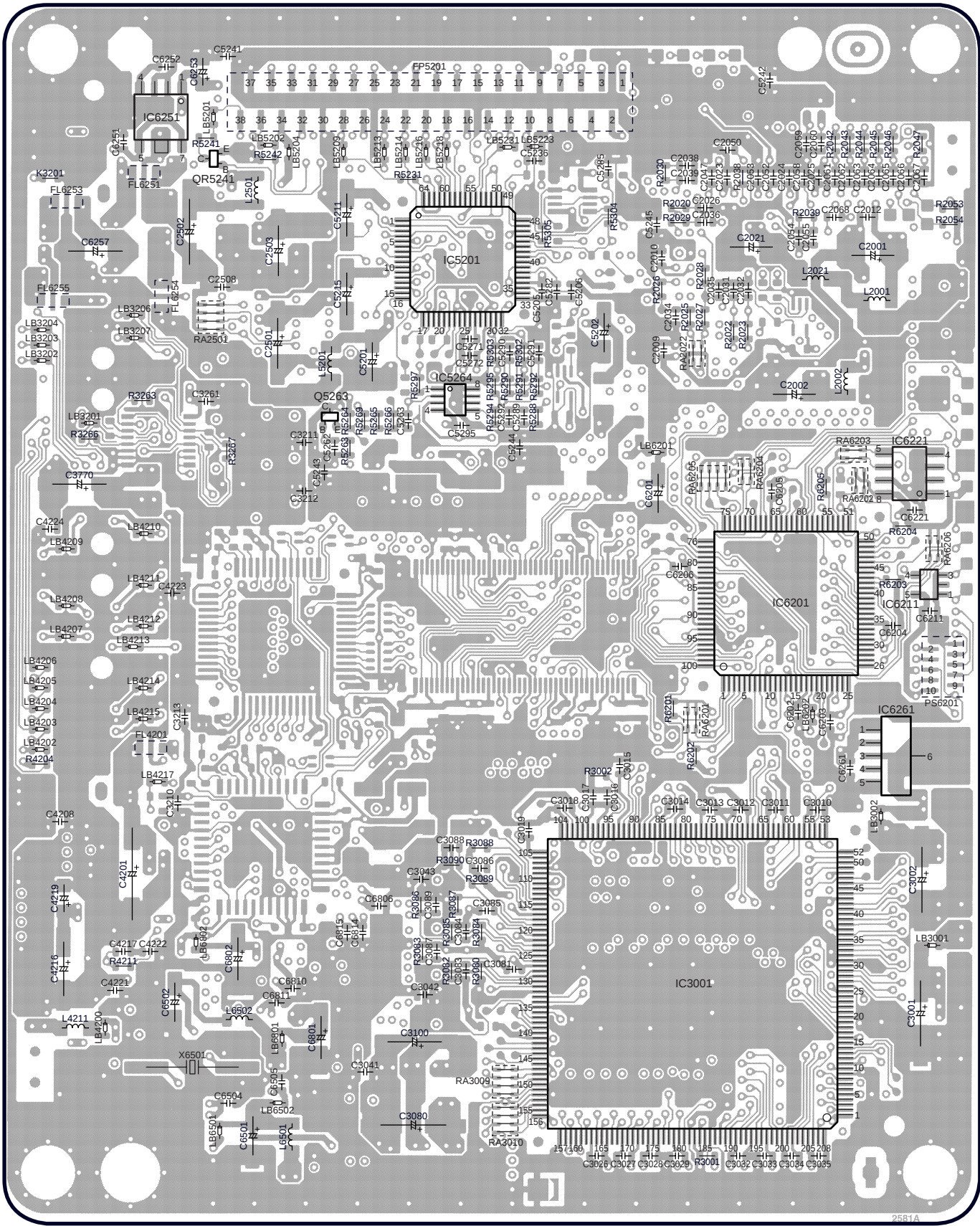
C



A

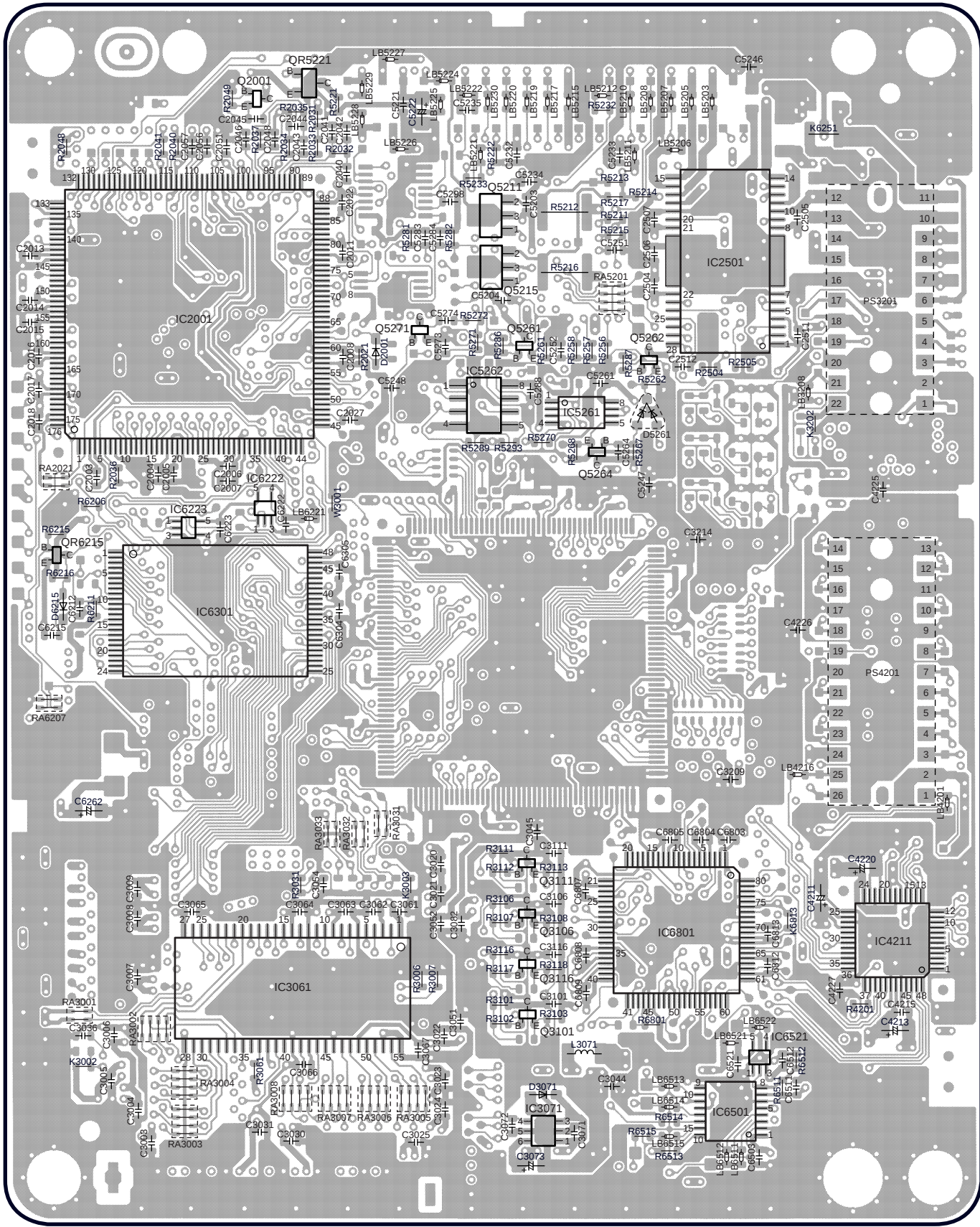


B DVD MODULE P.C.B. (SIDE : A)



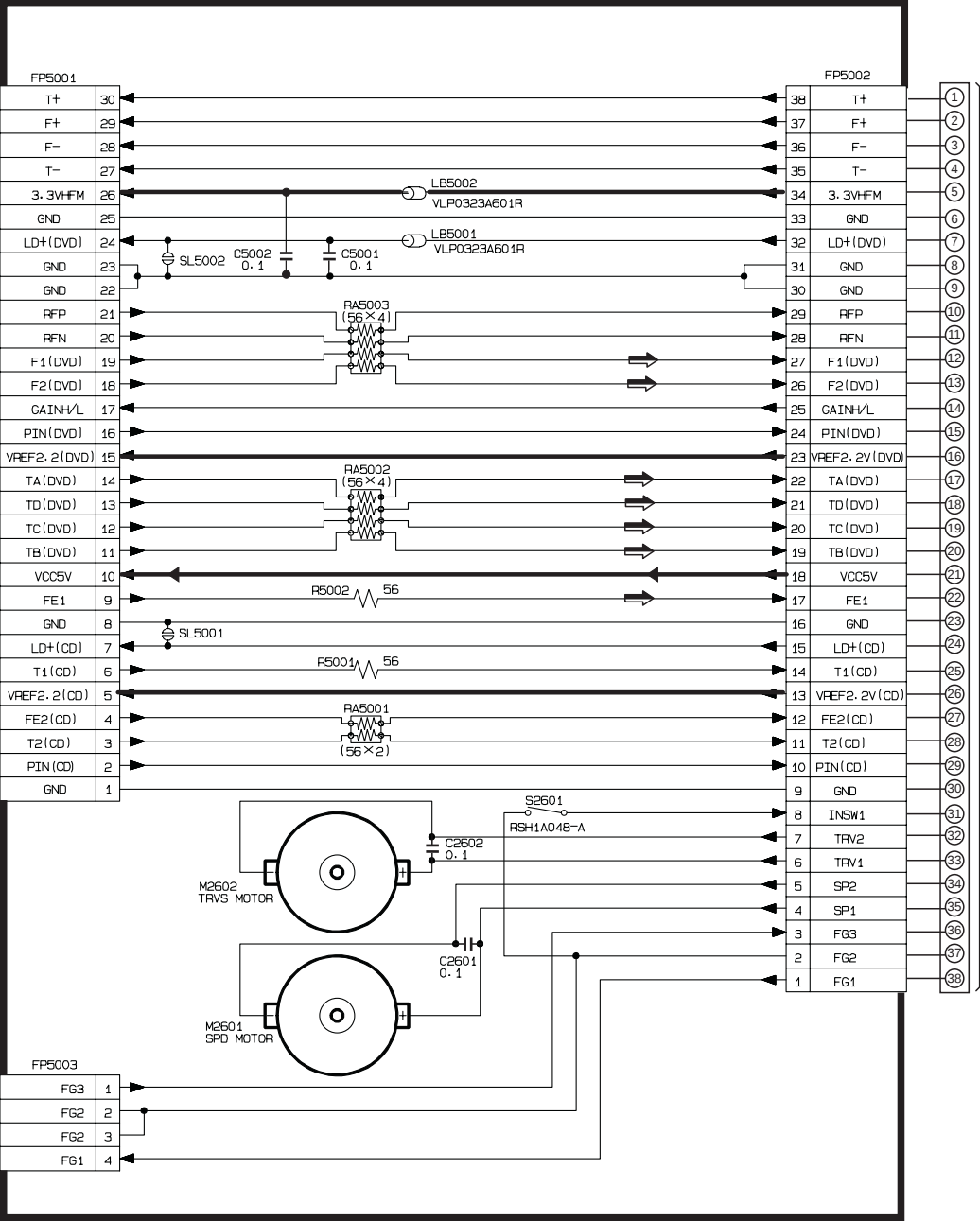
(REP3379G-N)

B DVD MODULE P.C.B. (SIDE : B)



NOTE:  
The number which noted at the connectors on the schematic diagram as  
"SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2"  
indicates the schematic diagram serial number located on the left corner in the schematic diagram.

**A** TERMINAL SERVO CIRCUIT      ➡ : POSITIVE VOLTAGE LINE      ➡ : VIDEO/AUDIO SIGNAL LINE



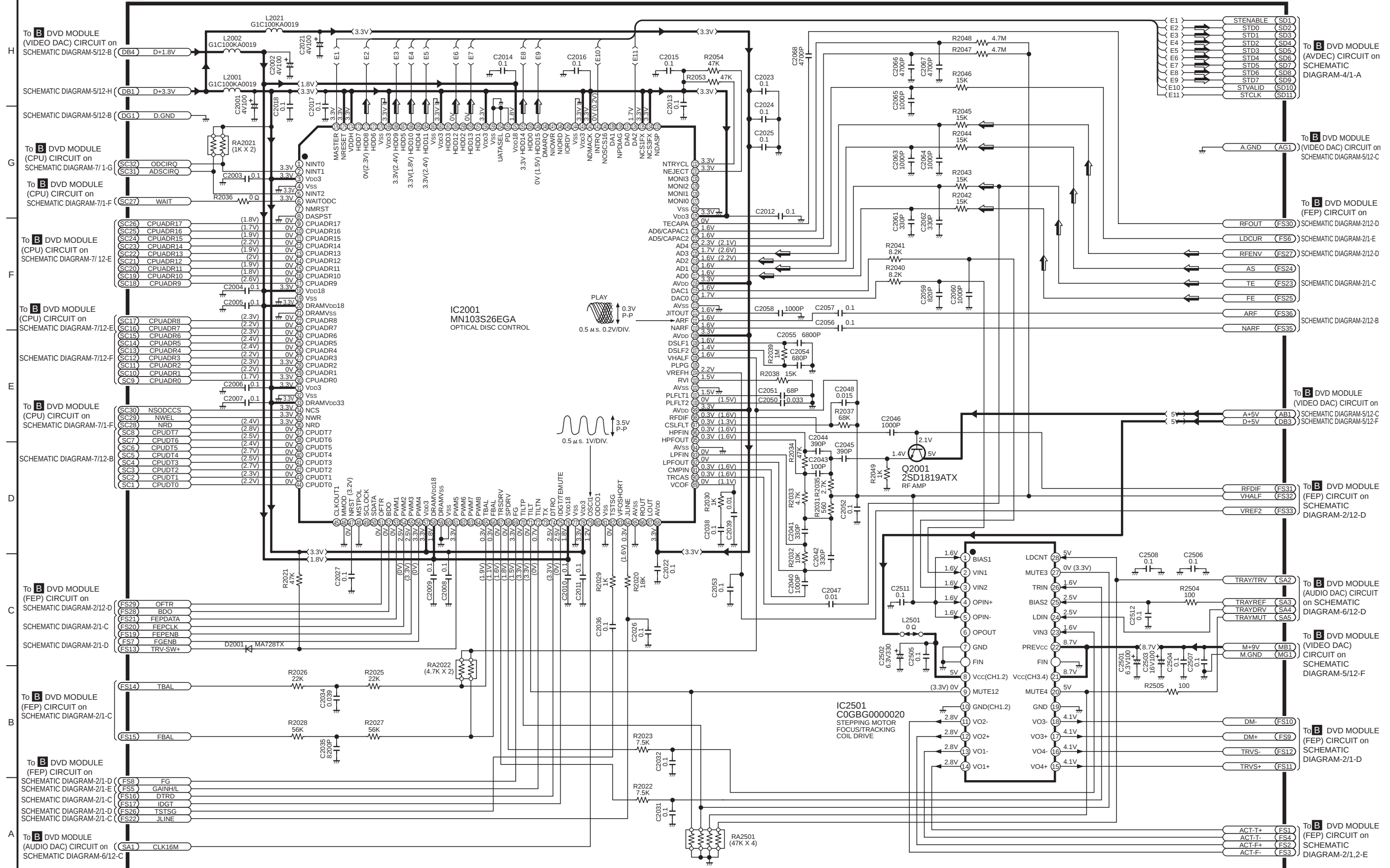
To **B** DVD MODULE(FEP) CIRCUIT  
(FP5201) on SCHEMATIC DIAGRAM-2/2-F-H

## B DVD MODULE(FEP) CIRCUIT



## B DVD MODULE(SODC) CIRCUIT

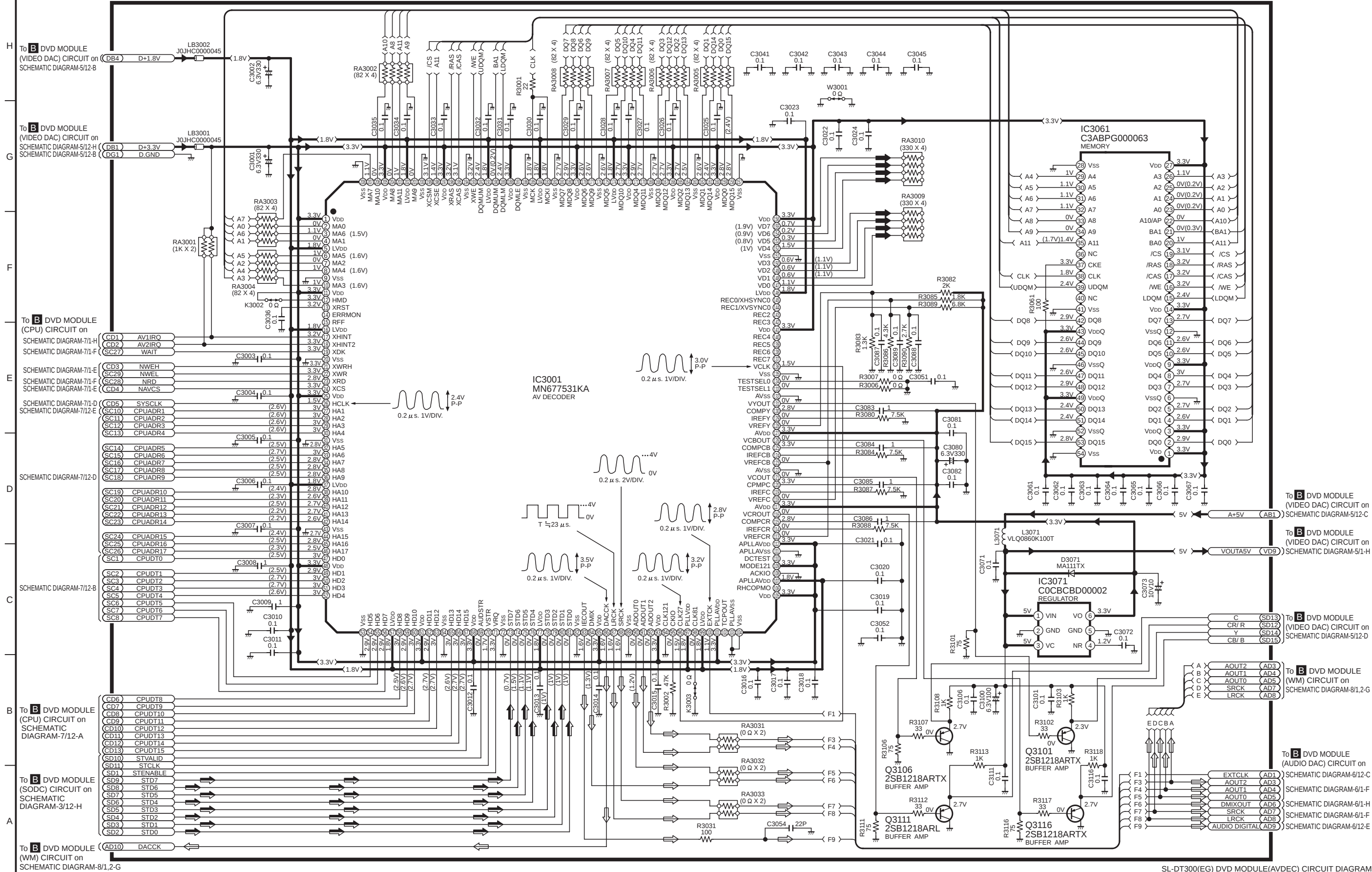
→ : POSITIVE VOLTAGE LINE    ⇨ : VIDEO/ AUDIO SIGNAL LINE



## SCHEMATIC DIAGRAM-4

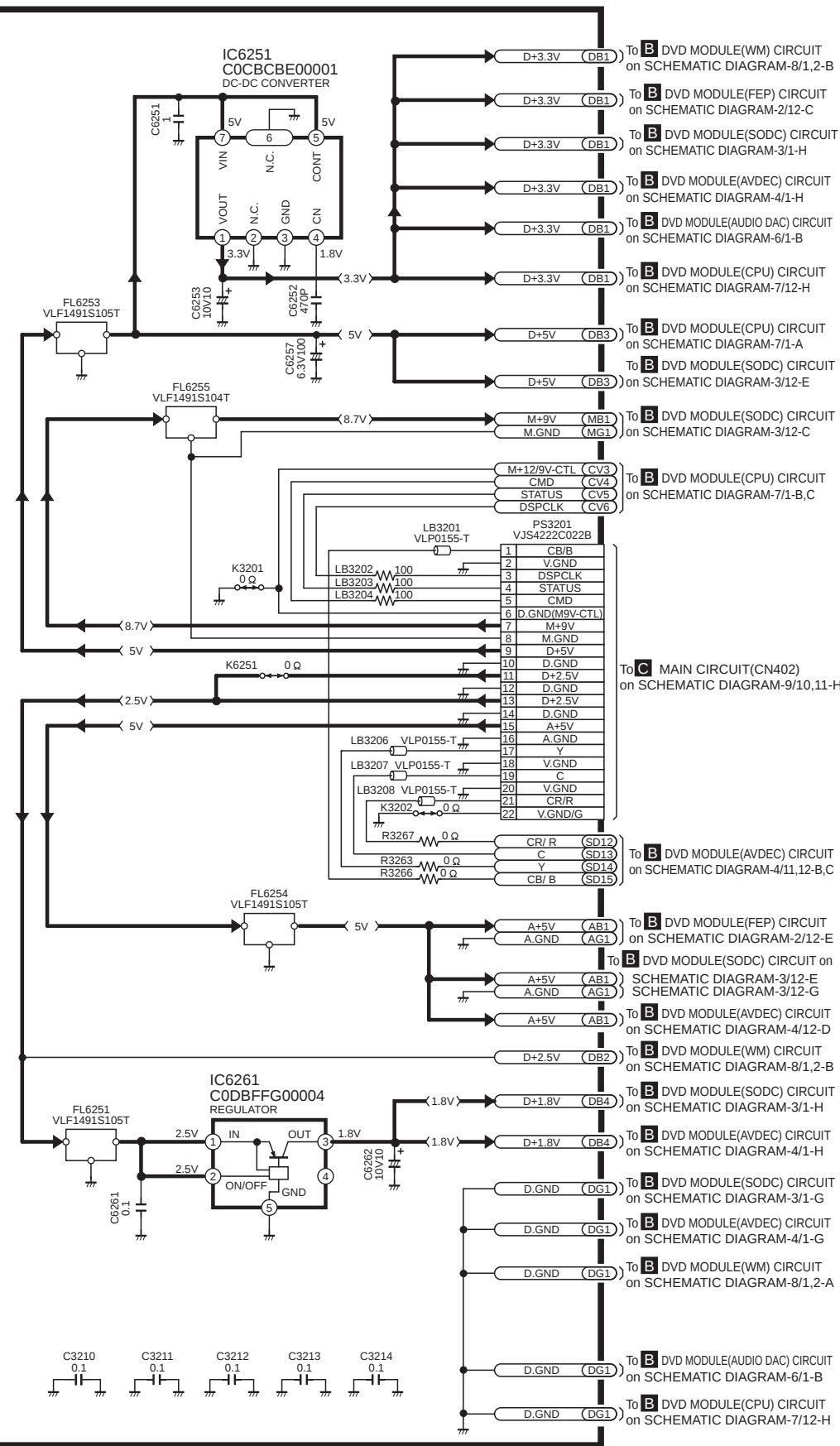
## B DVD MODULE(AVDEC) CIRCUIT

→ : POSITIVE VOLTAGE LINE → : VIDEO/ AUDIO SIGNAL LINE → : VIDEO SIGNAL LINE → : AUDIO SIGNAL LINE



## B DVD MODULE(VIDEO DAC) CIRCUIT

→ : POSITIVE VOLTAGE LINE    ➡ : VIDEO SIGNAL LINE



### SL-DT300(EG) DVD MODULE(VIDEO DAC) CIRCUIT DIAGRAM

# SCHEMATIC DIAGRAM-6

## B DVD MODULE(AUDIO DAC) CIRCUIT

→ :POSITIVE VOLTAGE LINE ⇨ :AUDIO SIGNAL LINE

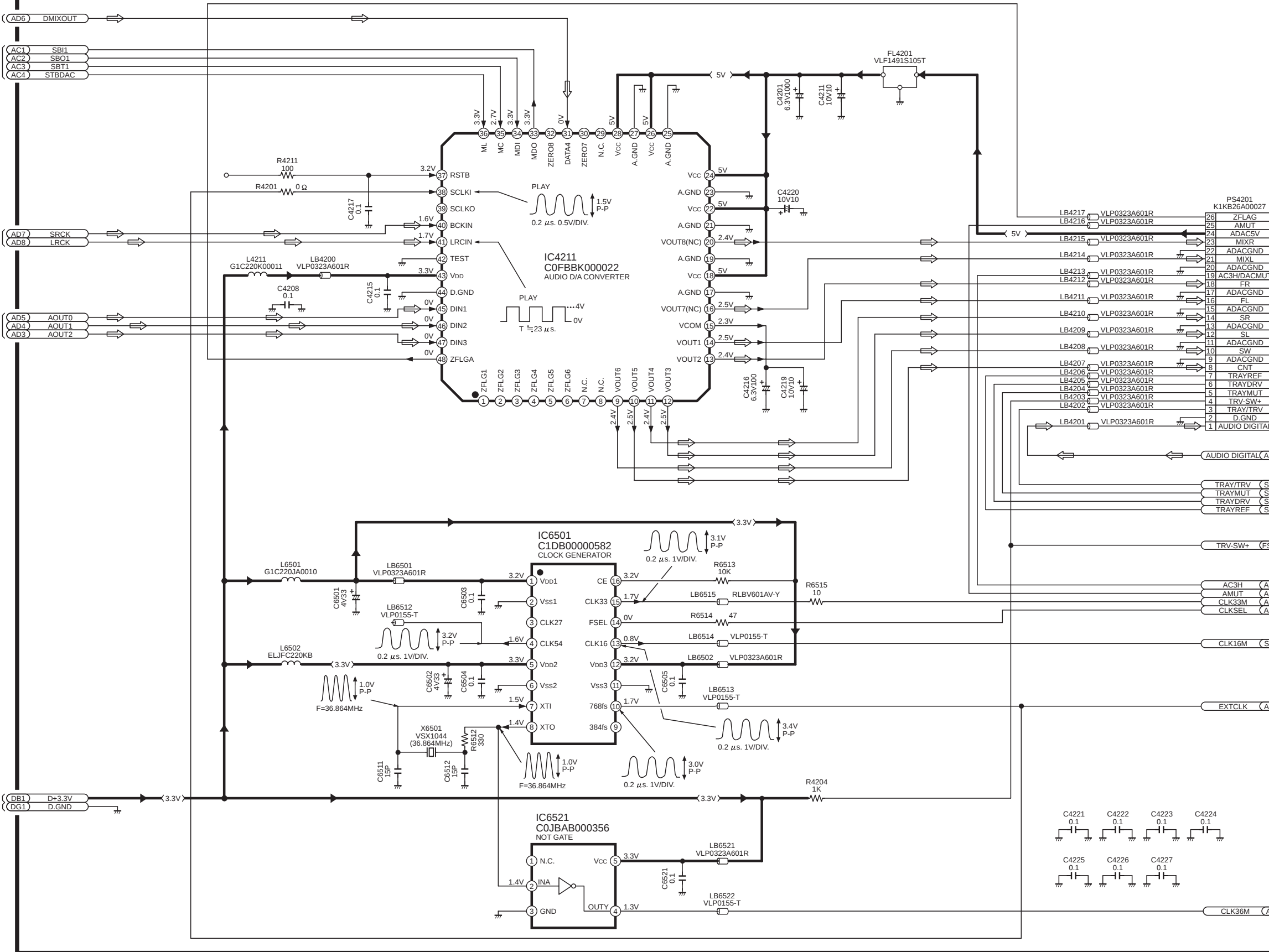
To B DVD MODULE  
(AVDEC) CIRCUIT on  
SCHEMATIC DIAGRAM-4/12-A

To B DVD MODULE  
(CPU) CIRCUIT on  
SCHEMATIC DIAGRAM-7/12-G

To B DVD MODULE  
(AVDEC) CIRCUIT on  
SCHEMATIC DIAGRAM-4/12-A

To B DVD MODULE  
(AVDEC) CIRCUIT on  
SCHEMATIC DIAGRAM-4/12-A

To B DVD MODULE  
(VIDEO DAC) CIRCUIT on  
SCHEMATIC DIAGRAM-5/12-H  
SCHEMATIC DIAGRAM-5/12-A



To C MAIN CIRCUIT  
(CN403) on  
SCHEMATIC DIAGRAM-9/ 7,8-H

To B DVD MODULE  
(AVDEC) CIRCUIT on  
SCHEMATIC DIAGRAM-4/12-A

To B DVD MODULE  
(SODC) CIRCUIT on  
SCHEMATIC DIAGRAM-3/12-C

To B DVD MODULE  
(FEP) CIRCUIT on  
SCHEMATIC DIAGRAM-2/1-D

To B DVD MODULE  
(CPU) CIRCUIT on  
SCHEMATIC DIAGRAM-7/12-G

To B DVD MODULE  
(SODC) CIRCUIT on  
SCHEMATIC DIAGRAM-7/1-E

To B DVD MODULE  
(SODC) CIRCUIT on  
SCHEMATIC DIAGRAM-3/1-A

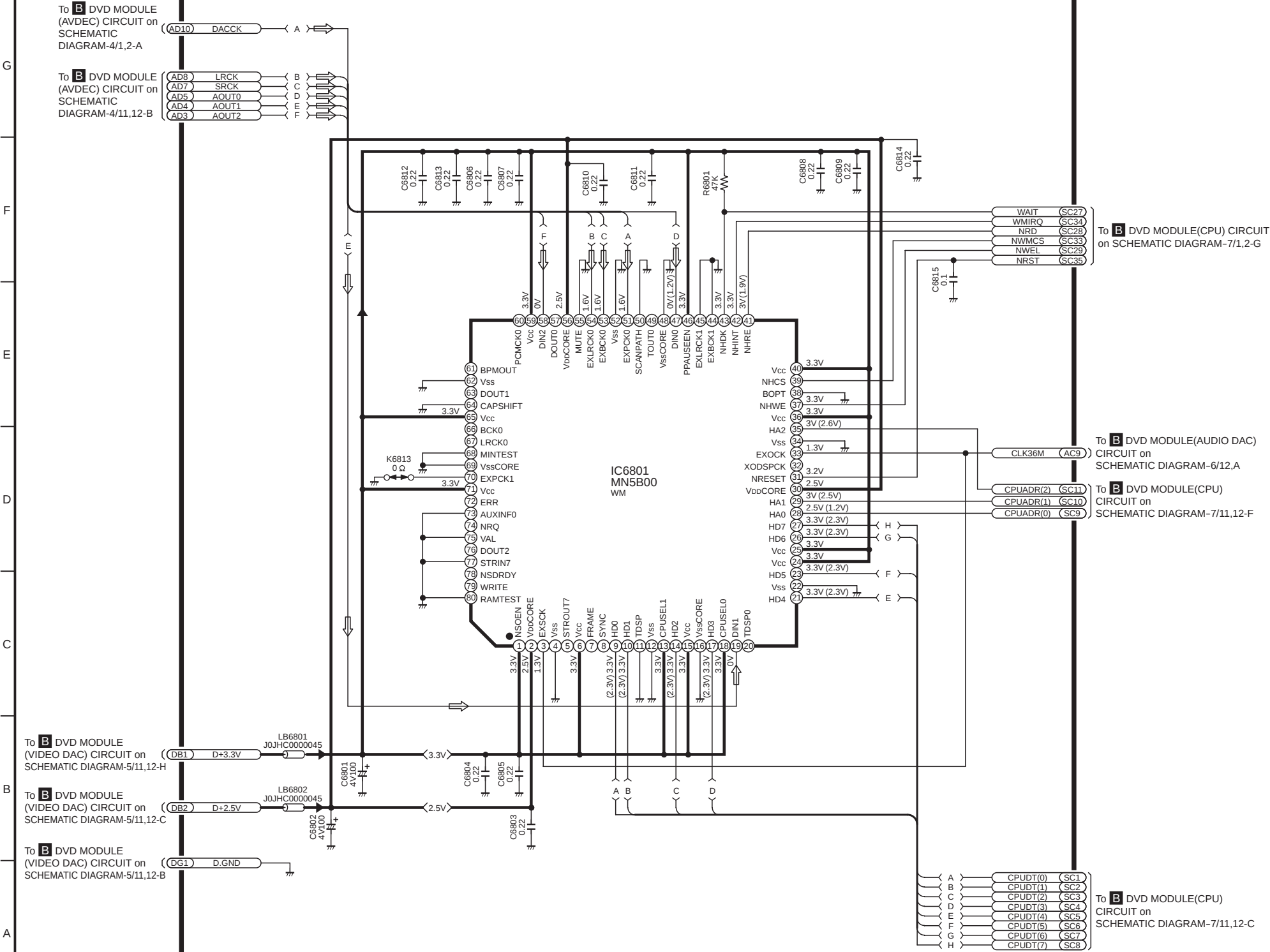
To B DVD MODULE  
(AVDEC) CIRCUIT on  
SCHEMATIC DIAGRAM-4/12-B

To B DVD MODULE  
(WM) CIRCUIT on  
SCHEMATIC DIAGRAM-8/ 7,8-D



B DVD MODULE(WM) CIRCUIT

➔ :POSITIVE VOLTAGE LINE ➡ :AUDIO SIGNAL LINE



SL-DT300(EG) DVD MODULE(WM) CIRCUIT DIAGRAM

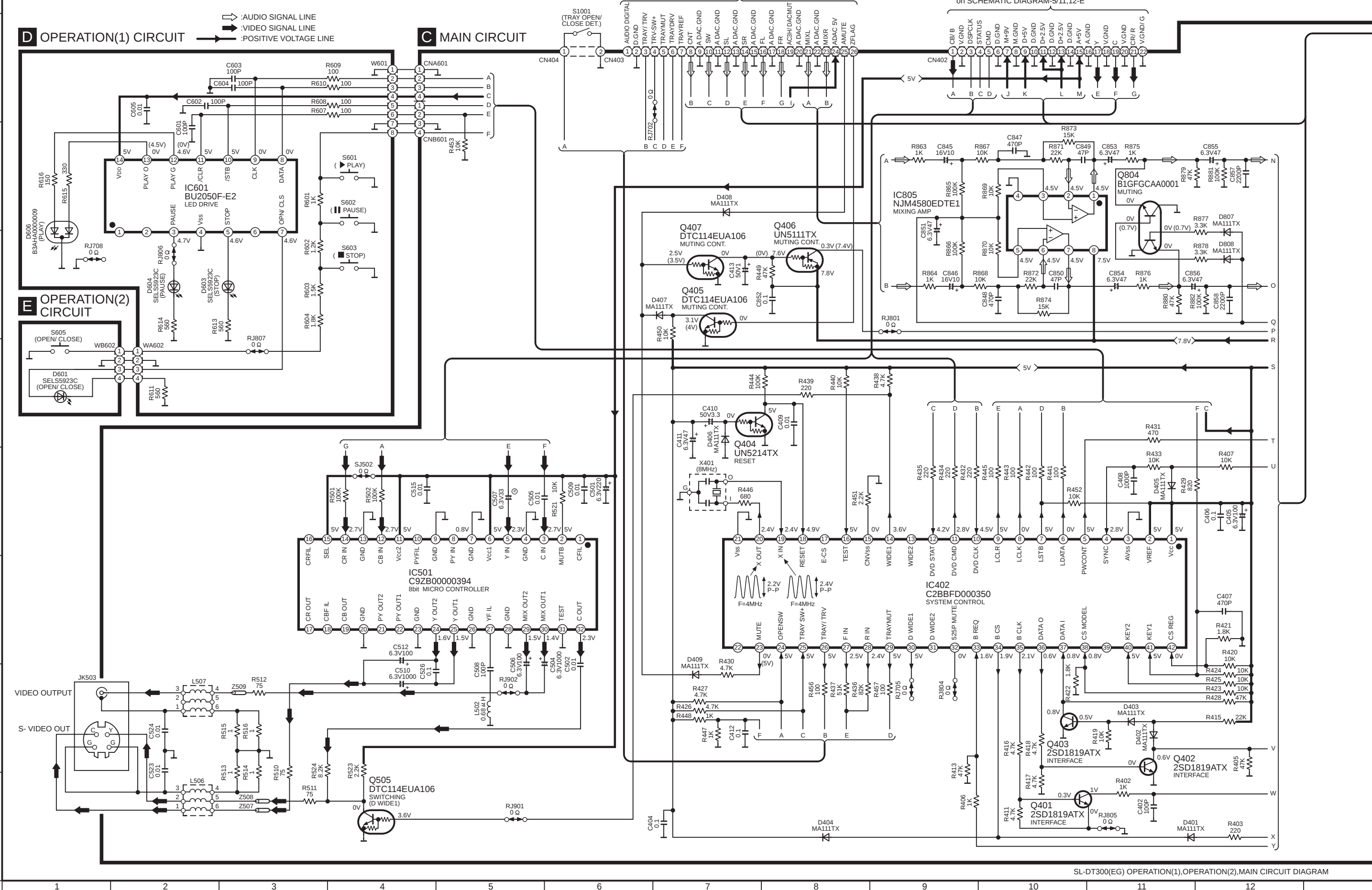
## SCHEMATIC DIAGRAM-9

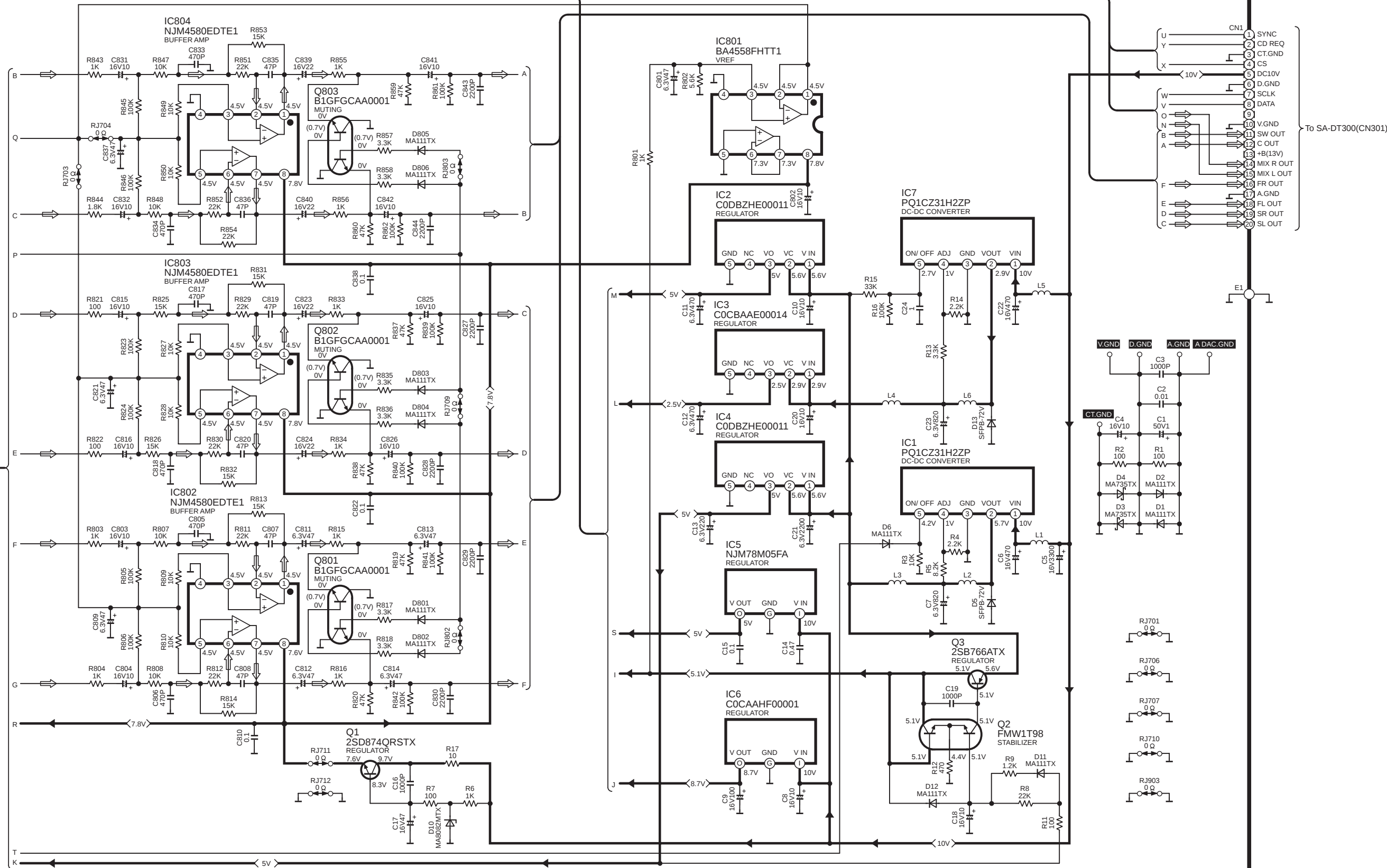
## D OPERATION(1) CIRCUIT

→ :AUDIO SIGNAL LINE  
→ :VIDEO SIGNAL LINE  
→ :POSITIVE VOLTAGE LINE

## C MAIN CIRCUIT

## E OPERATION(2) CIRCUIT



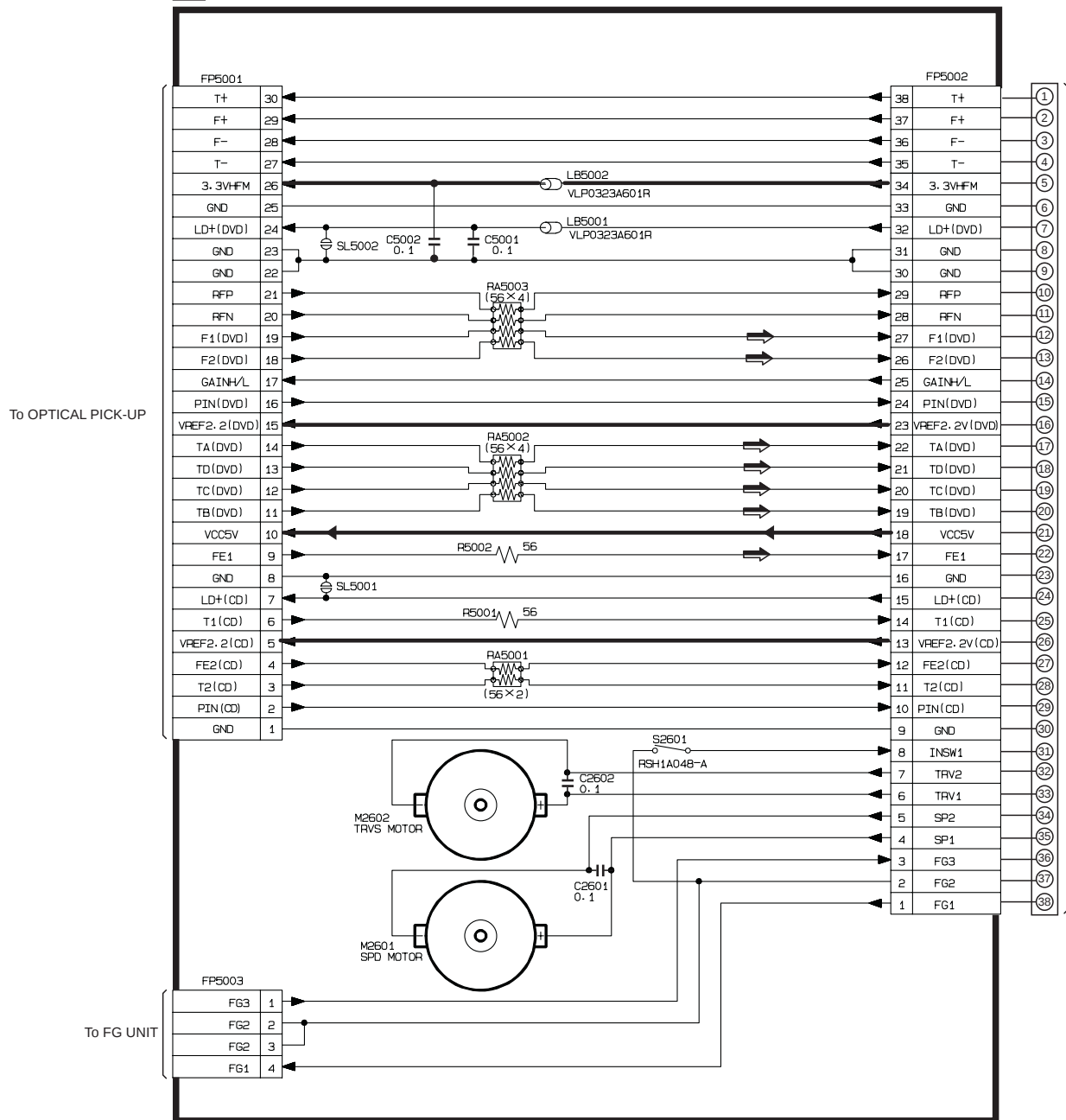


# SCHEMATIC DIAGRAM-1

## NOTE:

The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.

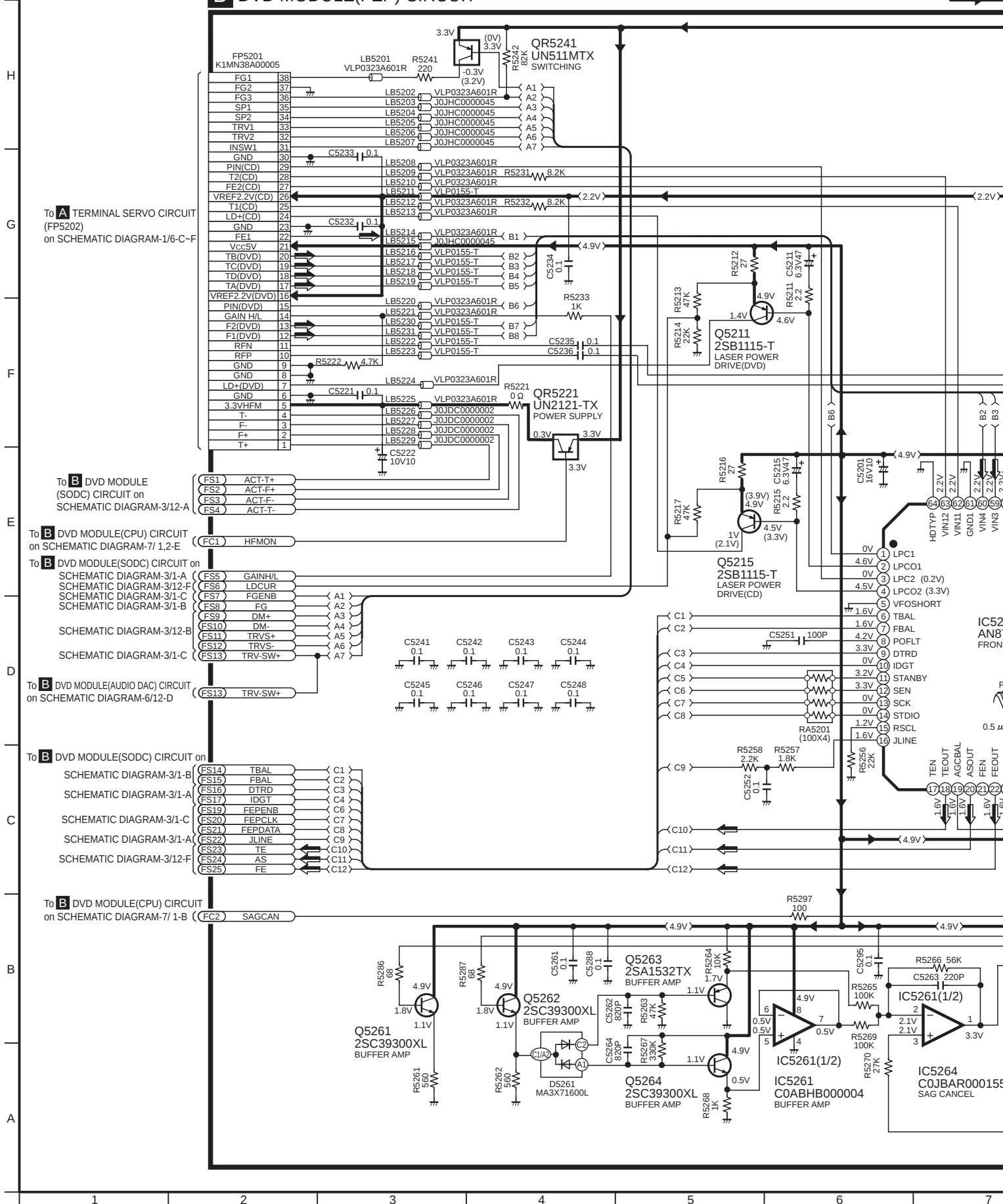
## A TERMINAL SERVO CIRCUIT

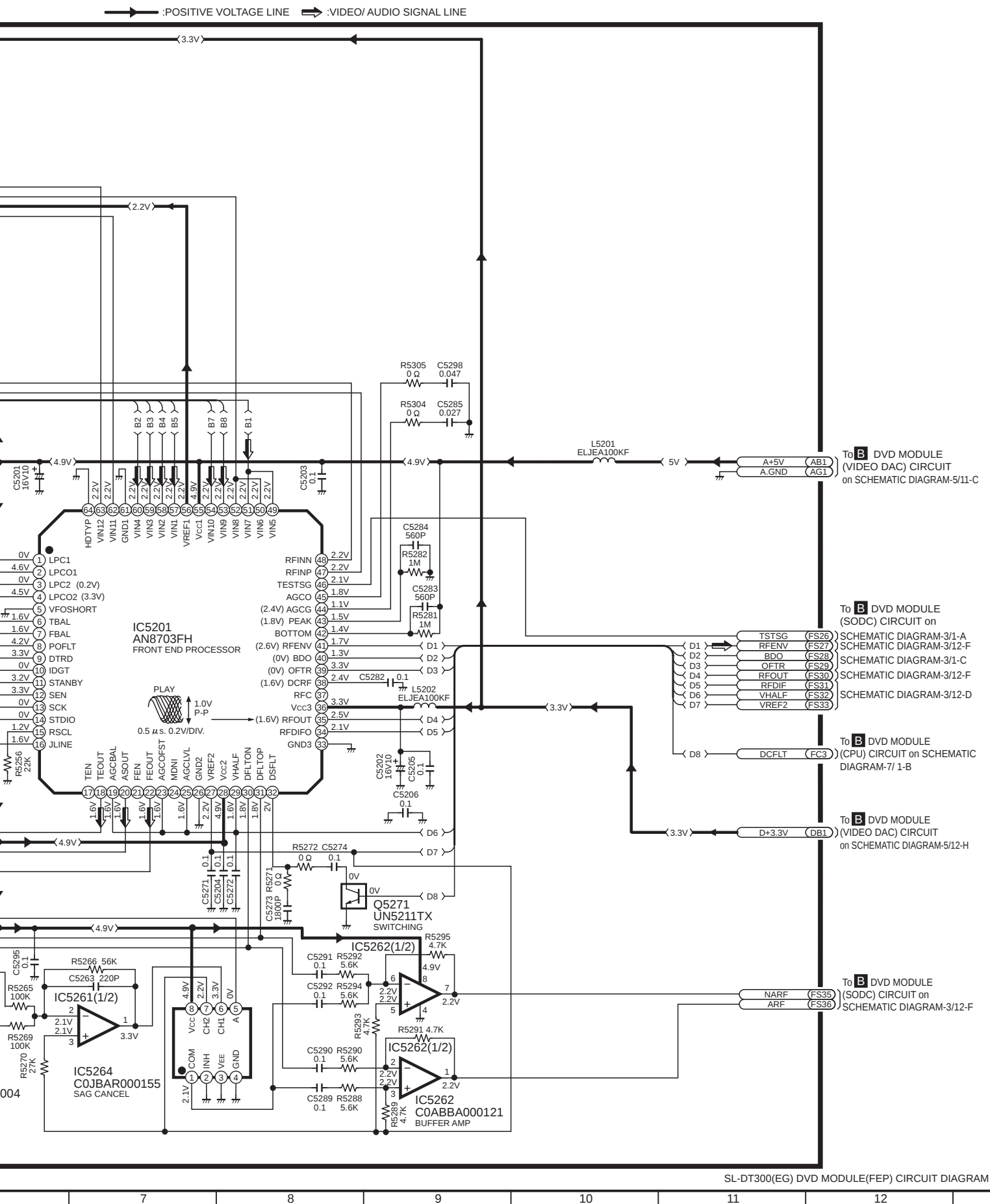


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- 38

To **B** DVD MODULE(FEP) CIRCUIT  
(FP5201) on SCHEMATIC DIAGRAM-2/2-F~H

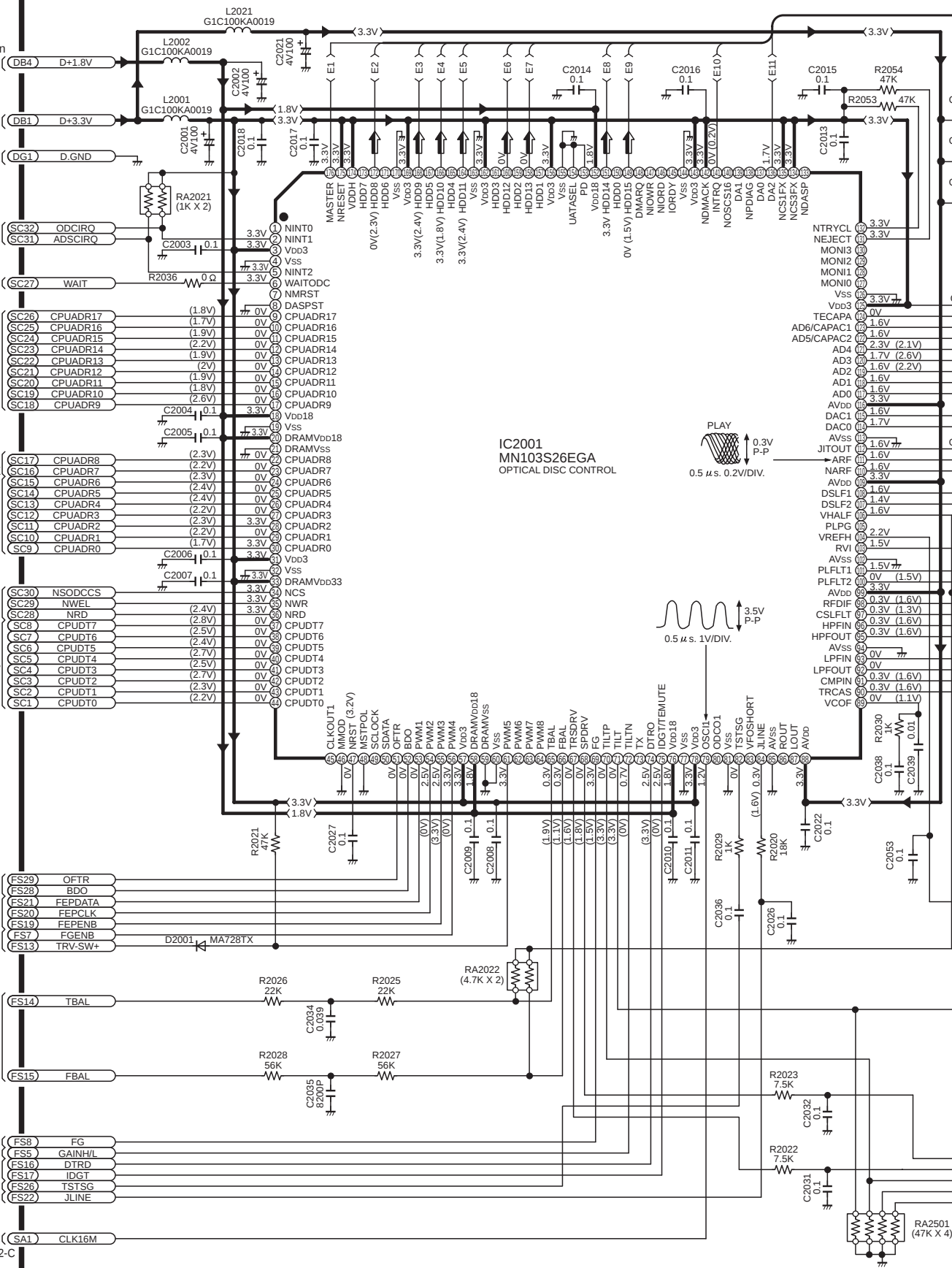
## B DVD MODULE(FEP) CIRCUIT



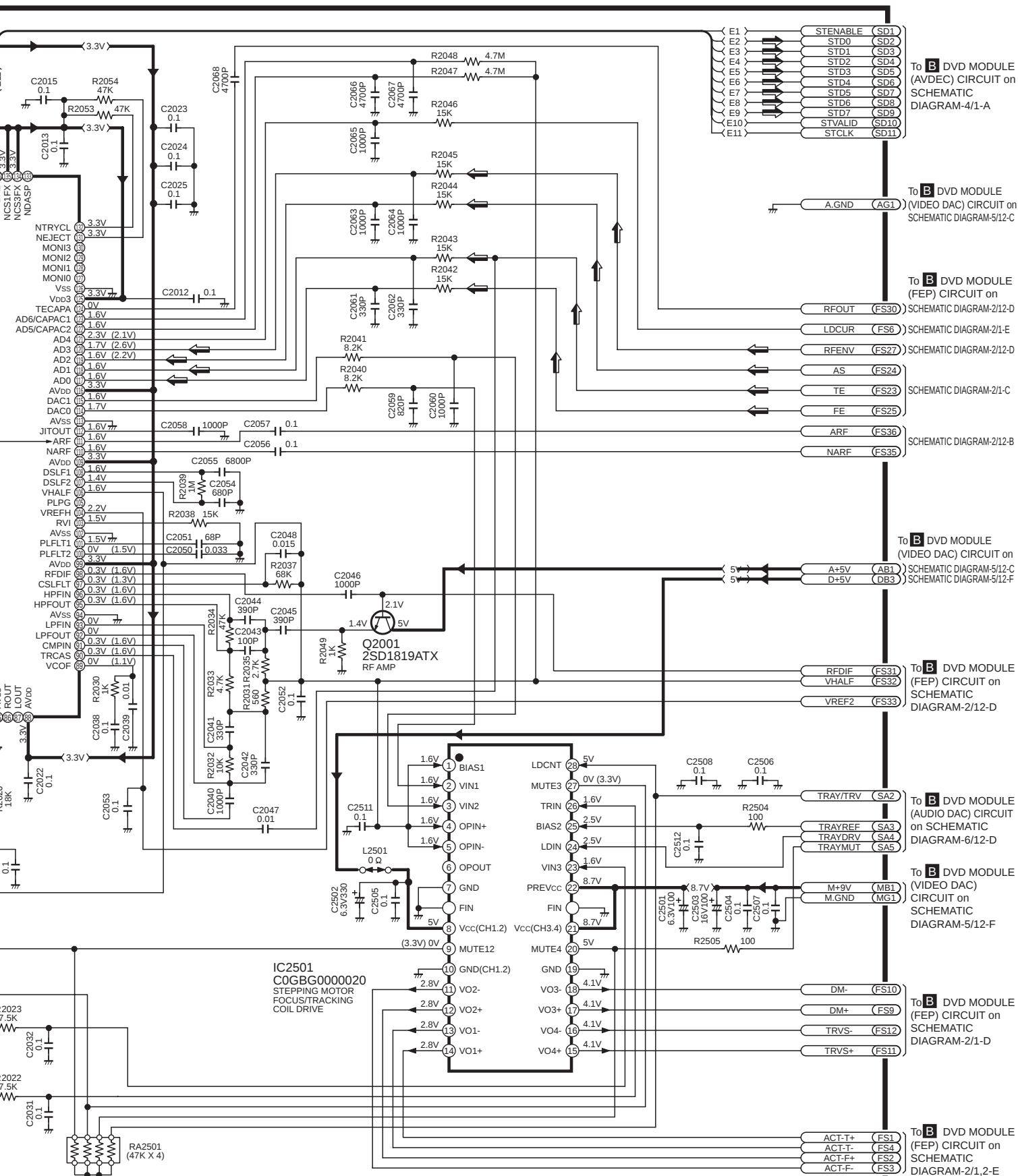


SL-DT300(EG) DVD MODULE(FEP) CIRCUIT DIAGRAM

## B DVD MODULE(SODC) CIRCUIT



SIGNAL LINE



# SCHEMATIC DIAGRAM-4

## B DVD MODULE(AVDEC) CIRCUIT

→ : POSITIVE VOLTAGE LINE → : VIDEO/AUDIO SIGNAL LINE → : VIDEO SIGNAL LINE →

To B DVD MODULE  
(VIDEO DAC) CIRCUIT on  
SCHEMATIC DIAGRAM-5/12-B

To B DVD MODULE  
(VIDEO DAC) CIRCUIT on  
SCHEMATIC DIAGRAM-5/12-H  
SCHEMATIC DIAGRAM-5/12-B

To B DVD MODULE  
(CPU) CIRCUIT on  
SCHEMATIC DIAGRAM-7/1-H  
SCHEMATIC DIAGRAM-7/1-F

SCHEMATIC DIAGRAM-7/1-E  
SCHEMATIC DIAGRAM-7/1-F  
SCHEMATIC DIAGRAM-7/1-E

SCHEMATIC DIAGRAM-7/1-D  
SCHEMATIC DIAGRAM-7/12-E

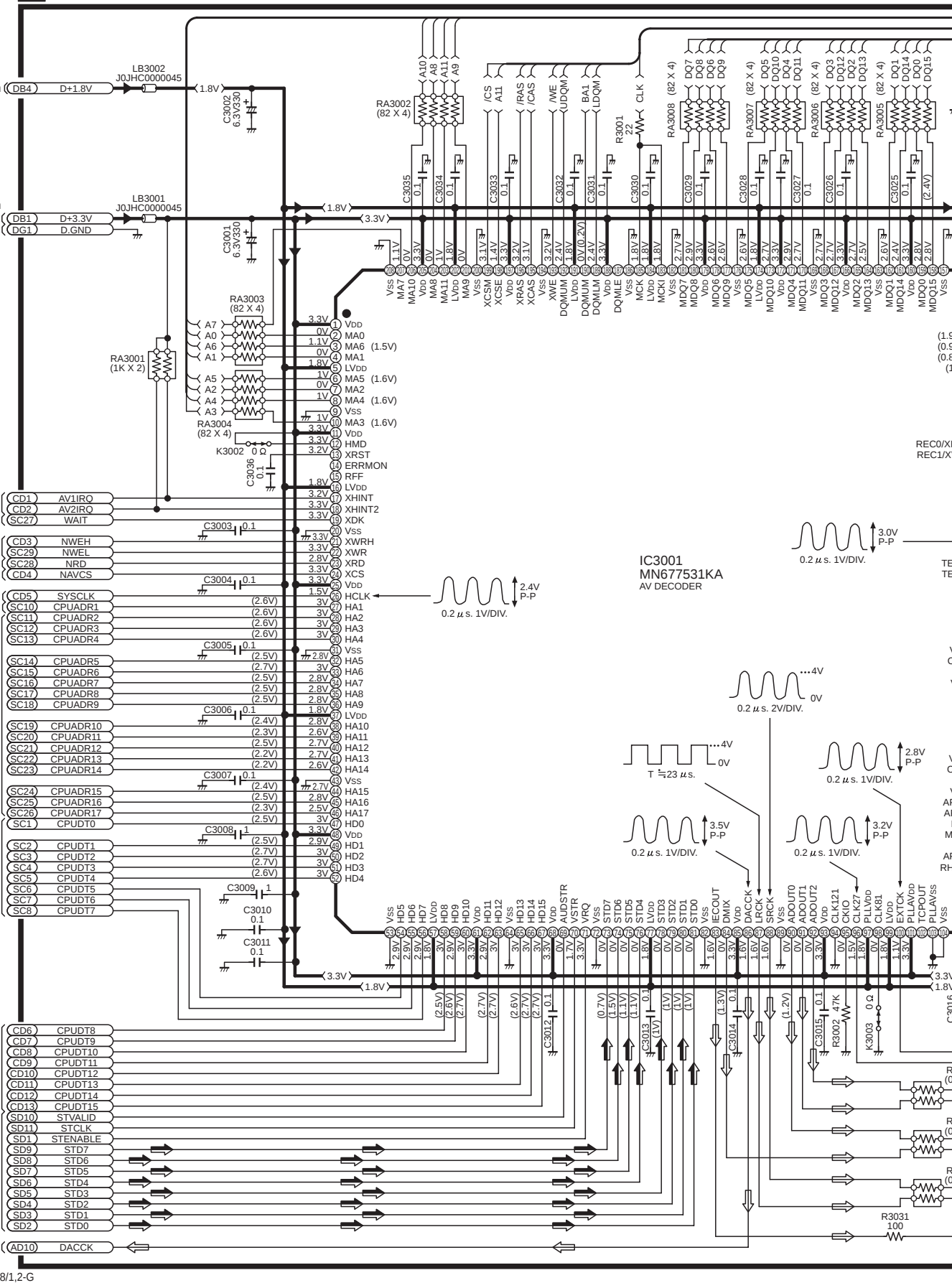
SCHEMATIC DIAGRAM-7/12-D

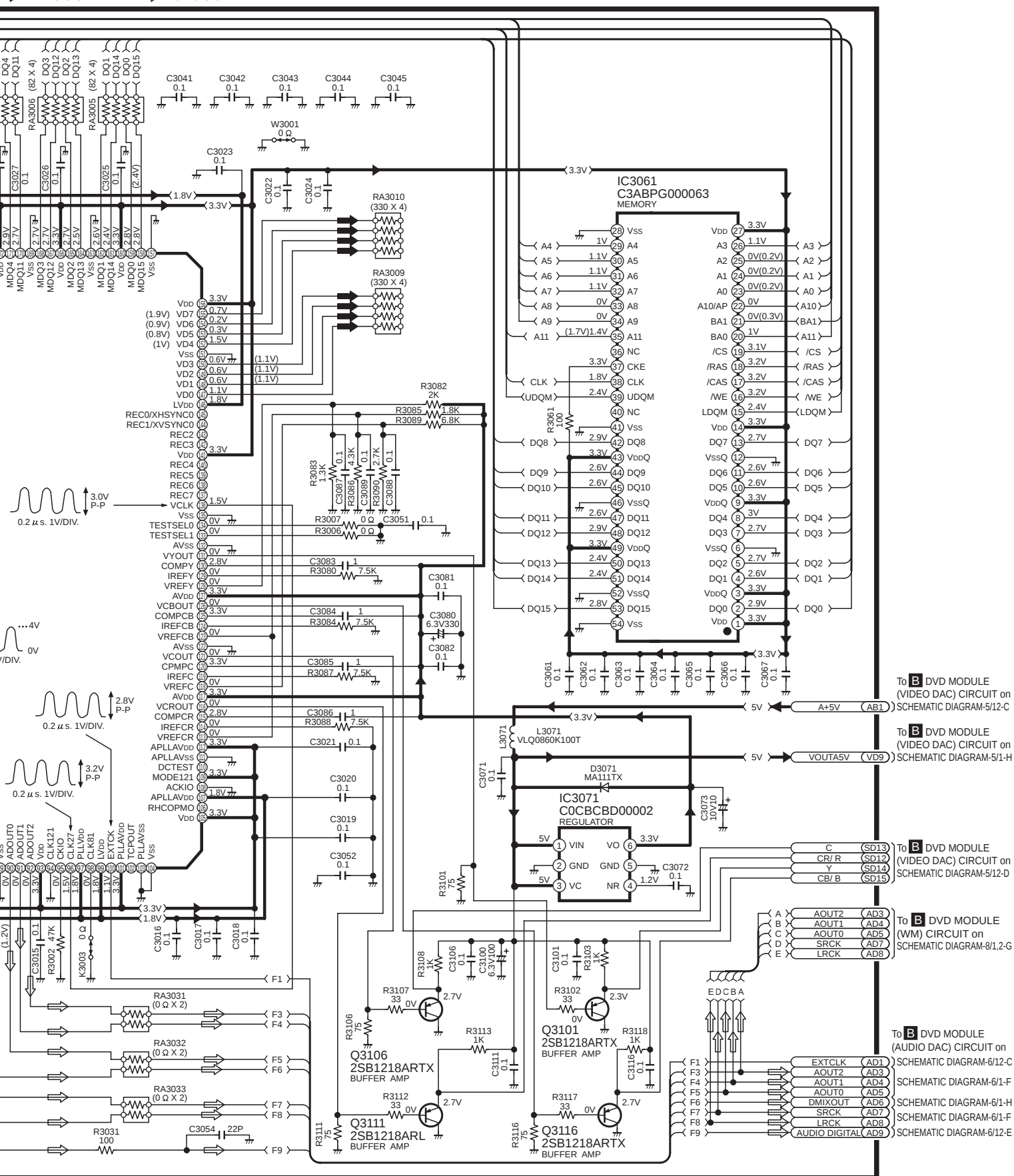
SCHEMATIC DIAGRAM-7/12-B

To B DVD MODULE  
(CPU) CIRCUIT on  
SCHEMATIC  
DIAGRAM-7/12-A

To B DVD MODULE  
(SODC) CIRCUIT on  
SCHEMATIC  
DIAGRAM-3/12-H

To B DVD MODULE  
(WM) CIRCUIT on  
SCHEMATIC DIAGRAM-8/1,2-G





SL-DT300(EG) DVD MODULE(AVDEC) CIRCUIT DIAGRAM



SCHEMATIC DIAGRAM-5

**B** DVD MODULE(VIDEO DAC) CIRCUIT

→ : POSITIVE VOLTAGE LINE    → : VIDEO SIGNAL LINE

H

G

F

E

D

C

B

A

1

2

3

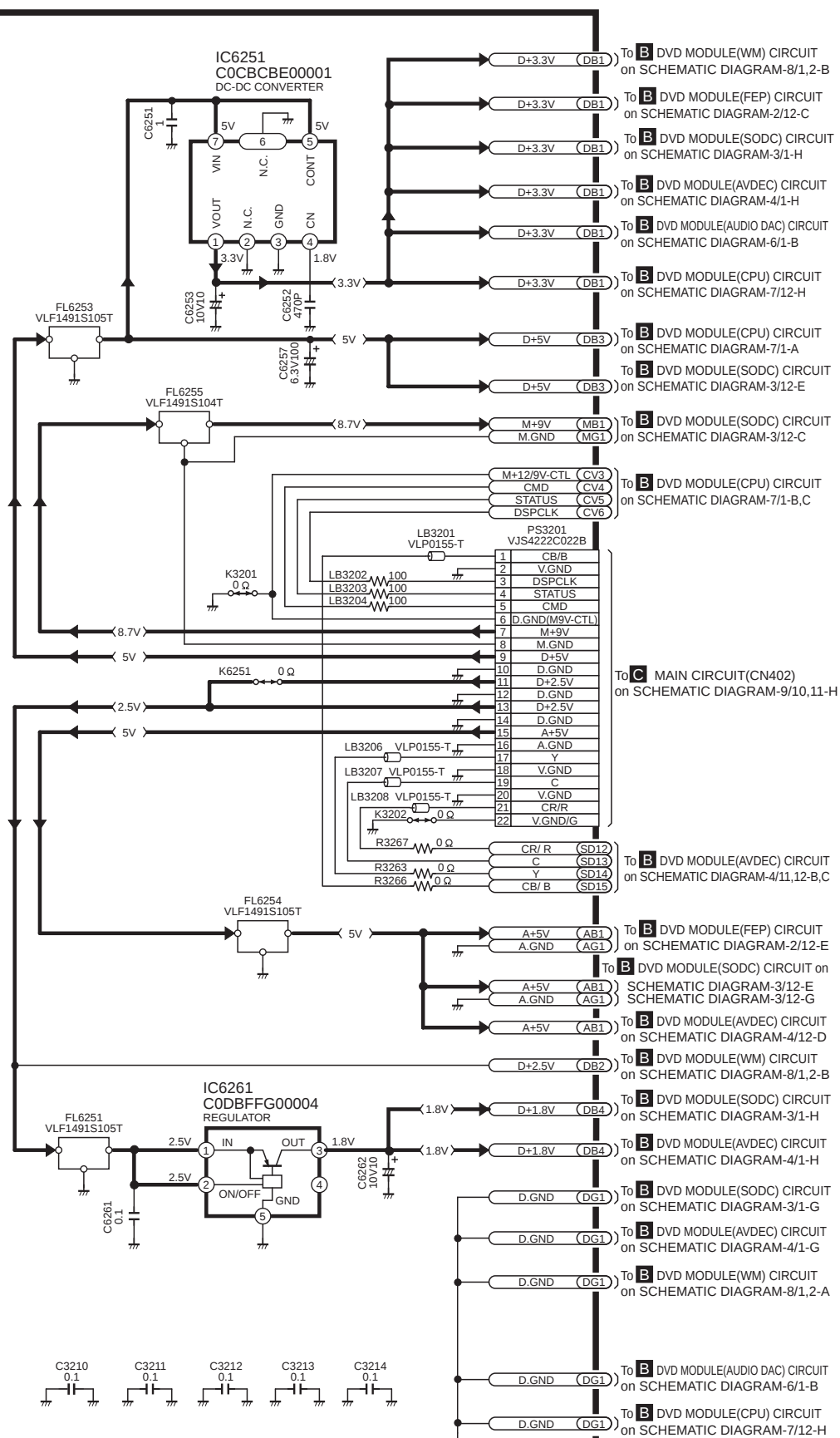
4

5

6

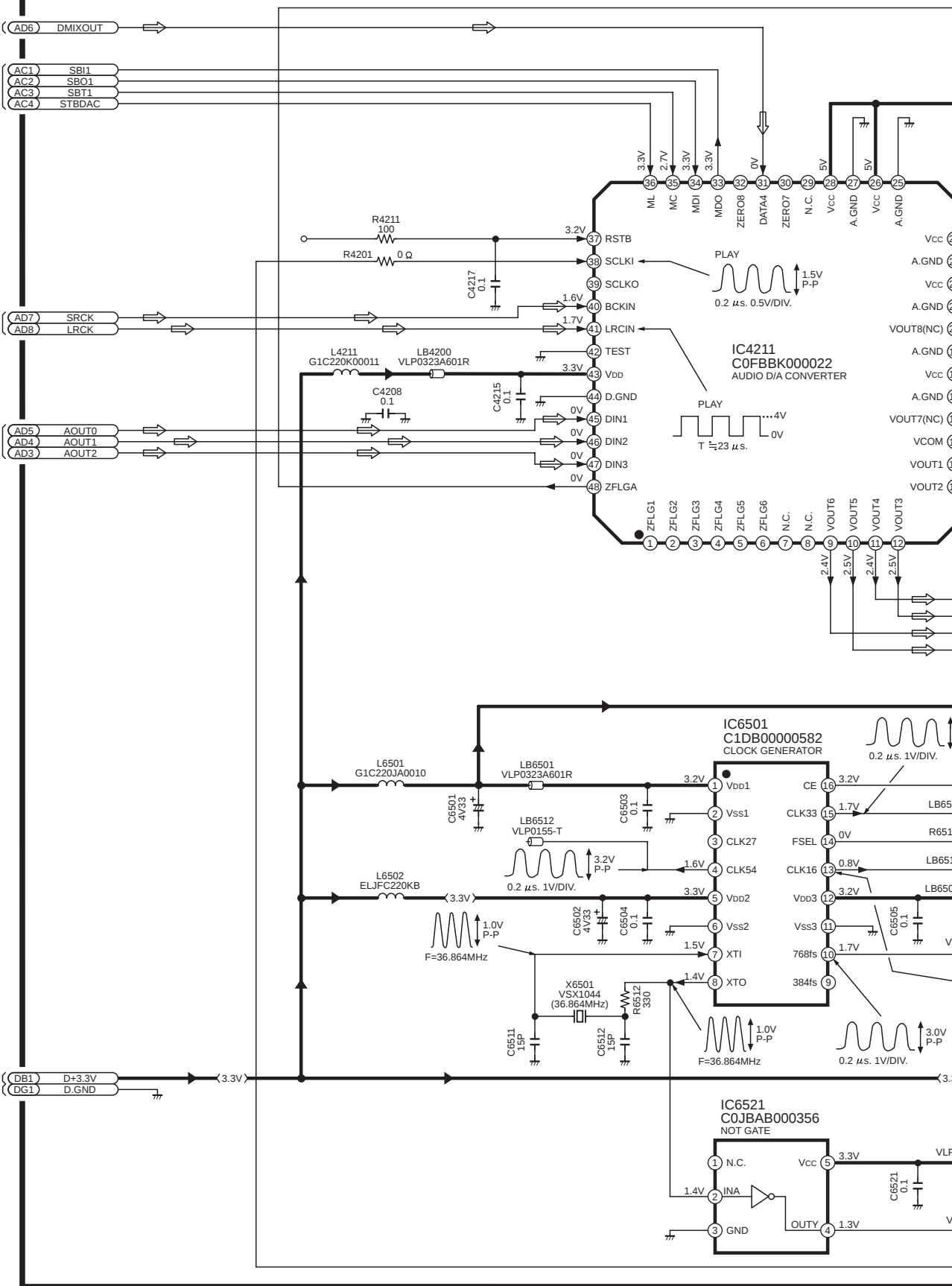
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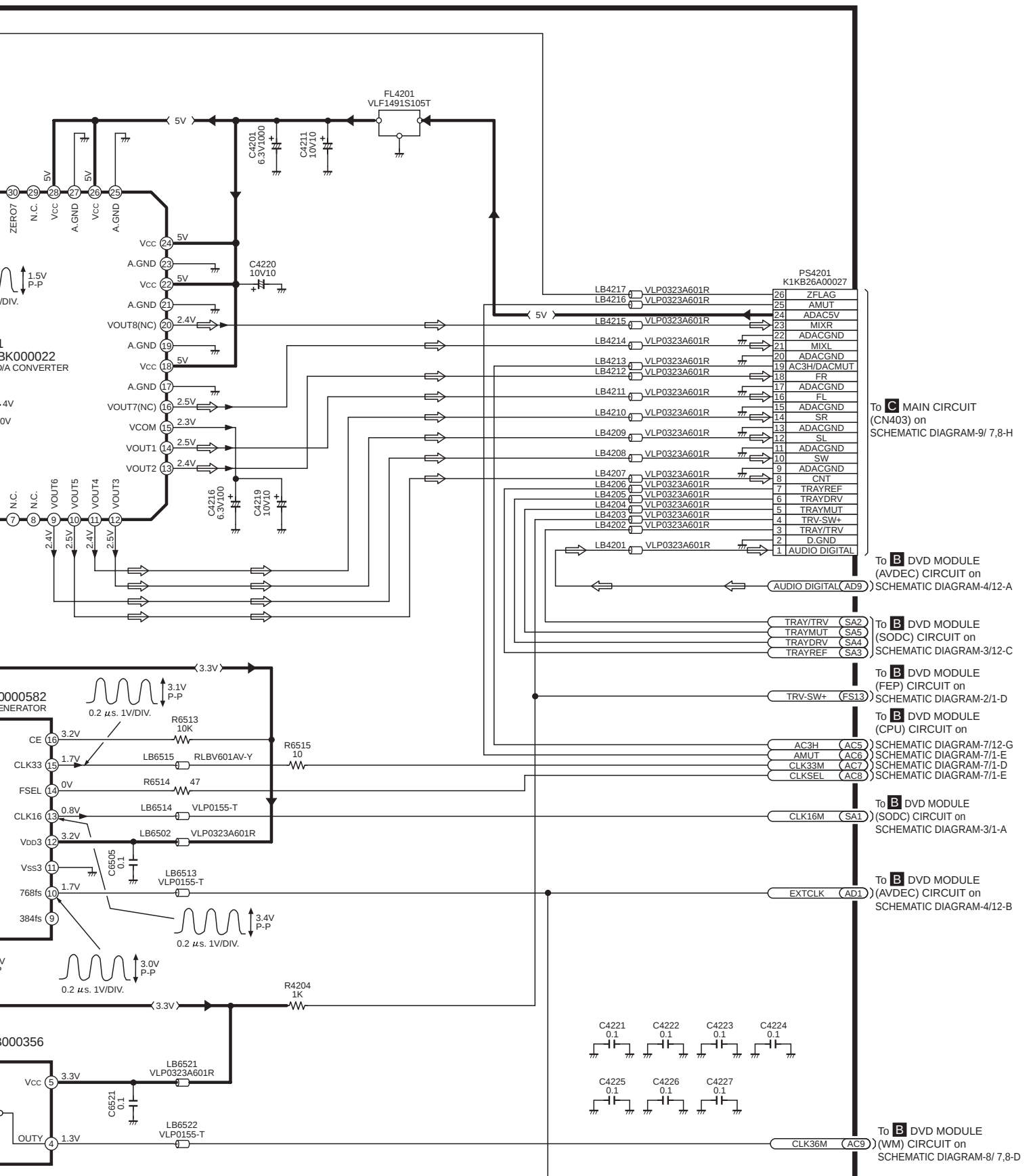




## B DVD MODULE(AUDIO DAC) CIRCUIT

To **B** DVD MODULE  
(VIDEO DAC) CIRCUIT on  
SCHEMATIC DIAGRAM-5/12-H  
SCHEMATIC DIAGRAM-5/12-A





SL-DT300(EG) DVD MODULE(AUDIO DAC) CIRCUIT DIAGRAM

## B DVD MODULE(CPU) CIRCUIT

H

G

F

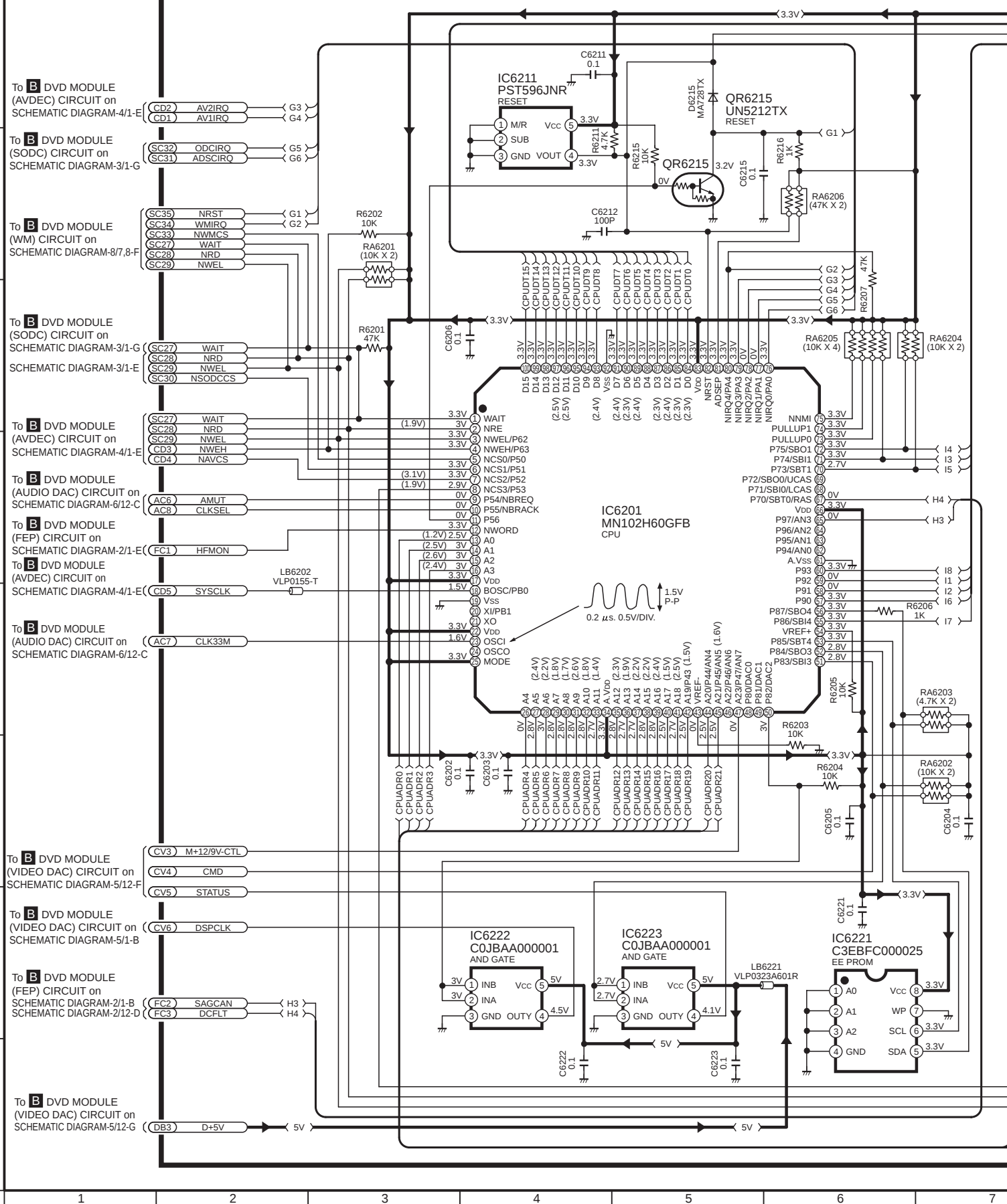
E

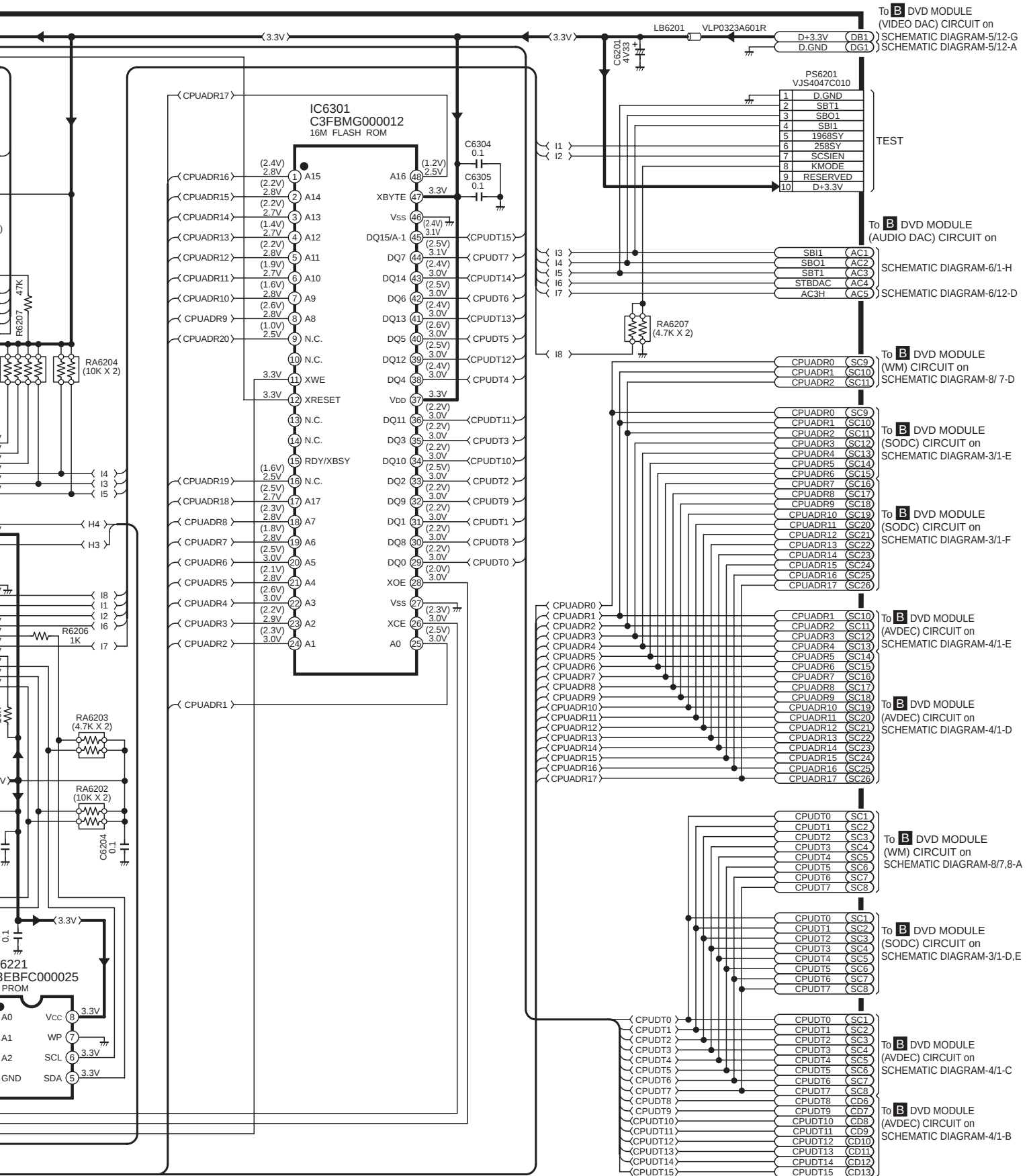
D

C

B

A





SL-DT300(EG) DVD MODULE(CPU) CIRCUIT DIAGRAM

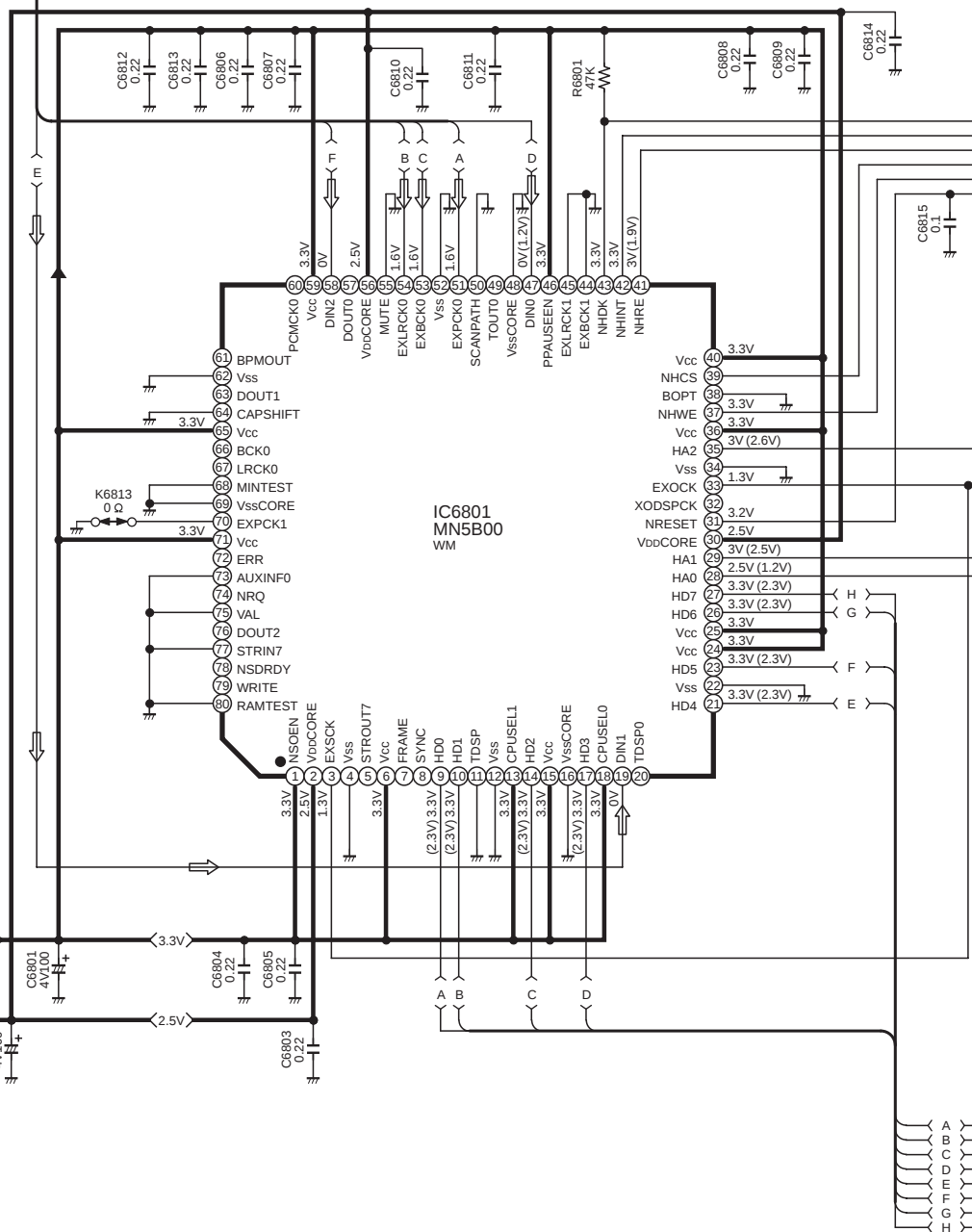
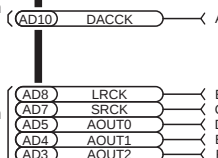
# SCHEMATIC DIAGRAM-8

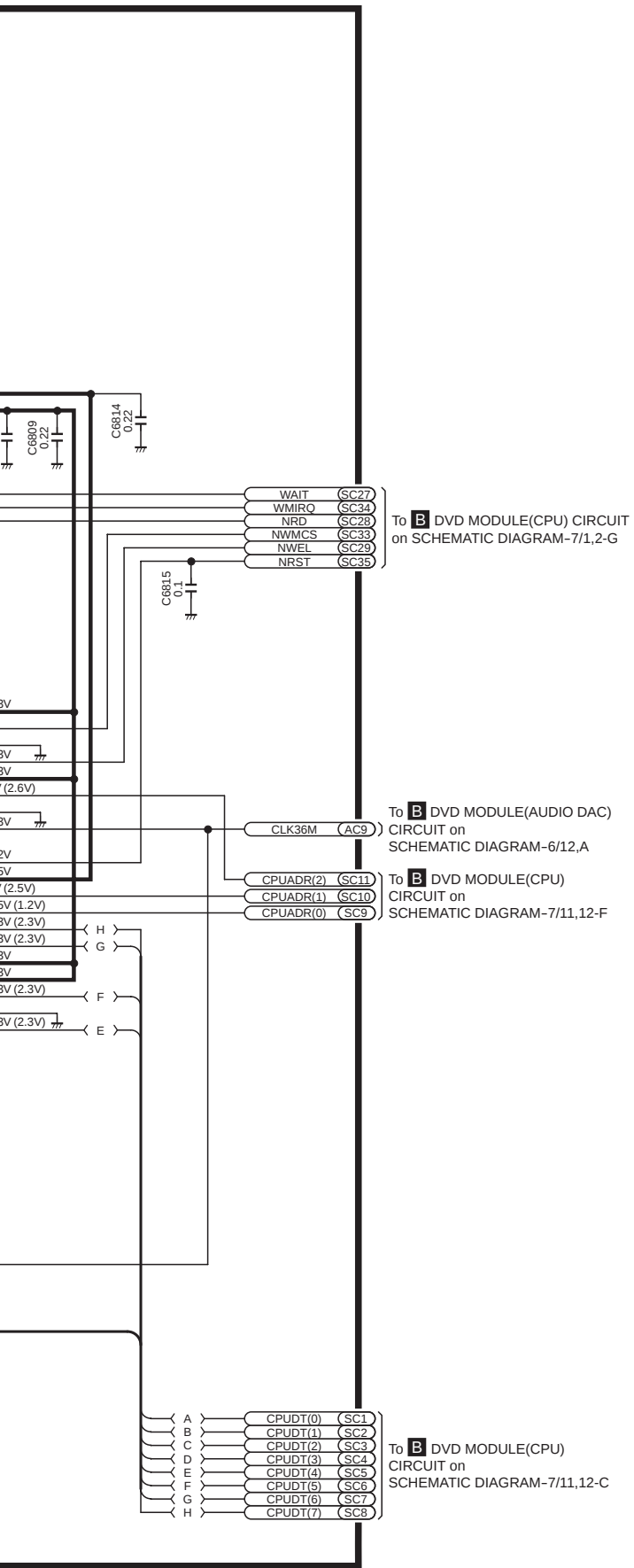
## B DVD MODULE(WM) CIRCUIT

→ : POSITIVE VOLTAGE LINE ⇨ : AUDIO SIGNAL LINE

To B DVD MODULE  
(AVDEC) CIRCUIT on  
SCHEMATIC  
DIAGRAM-4/1,2-A

To B DVD MODULE  
(AVDEC) CIRCUIT on  
SCHEMATIC  
DIAGRAM-4/11,12-B





SL-DT300(EG) DVD MODULE(WM) CIRCUIT DIAGRAM

7

8

9

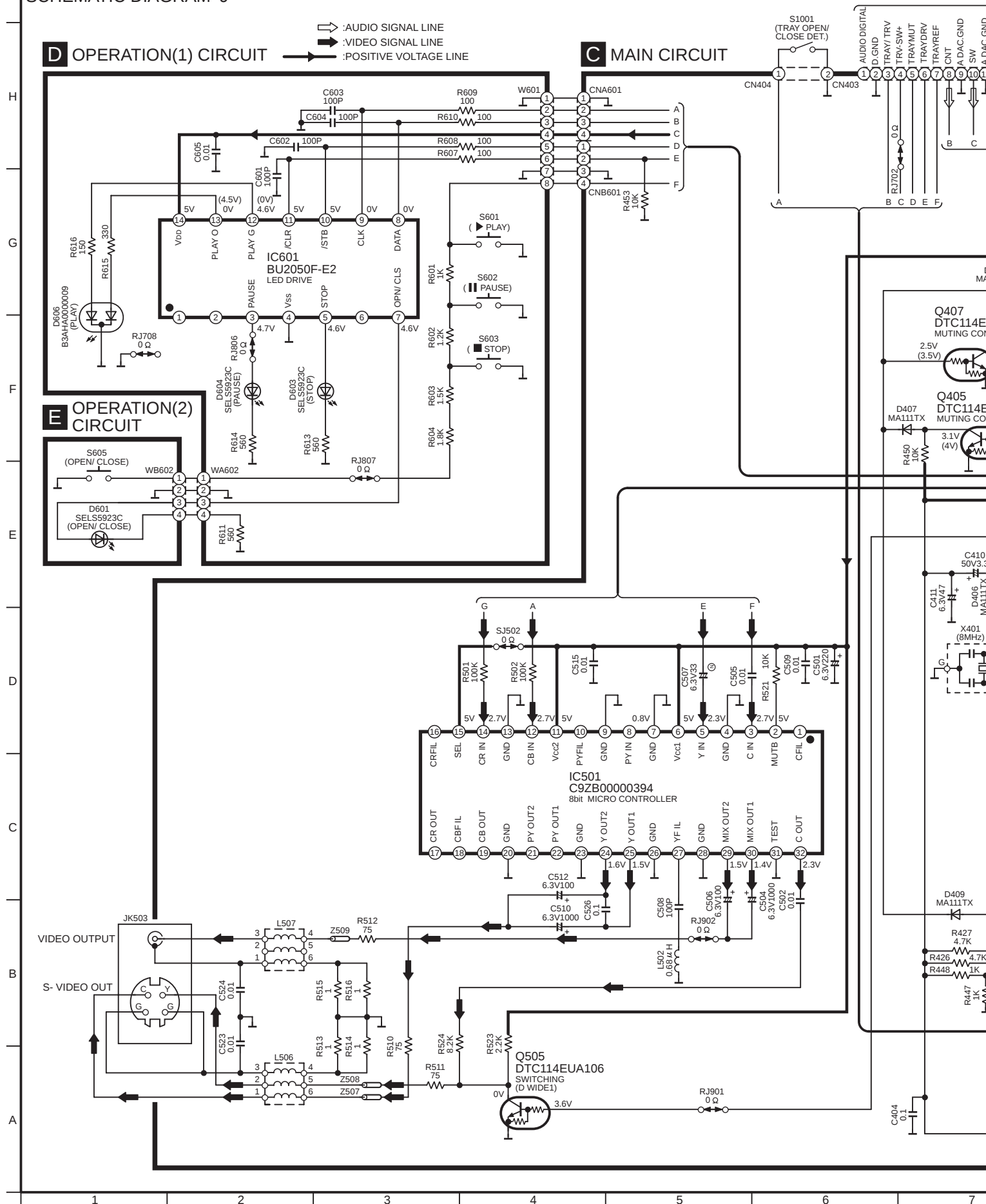
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11

12

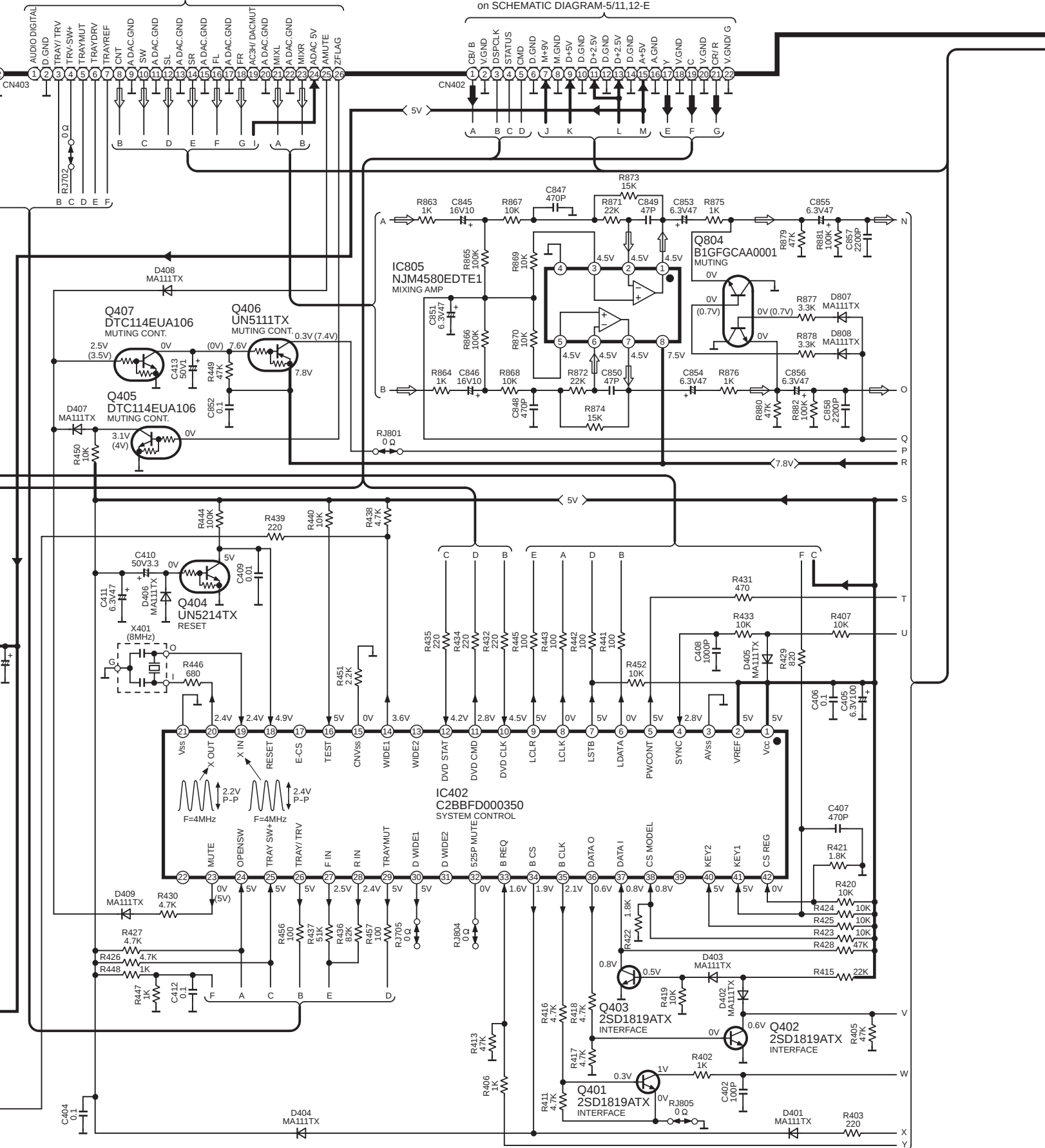
### SCHEMATIC DIAGRAM-9

To **B** DVD MODULE(AUDIO DAC)CIR



**B** DVD MODULE(AUDIO DAC)CIRCUIT(PS4201) on SCHEMATIC DIAGRAM-6/11,12-E,F

To **B** DVD MODULE(VIDEO DAC)CIRCUIT(PS3201)  
on SCHEMATIC DIAGRAM-5/11,12-E



### C MAIN CIRCUIT



⇒ :AUDIO SIGNAL LINE



---

14

---

15

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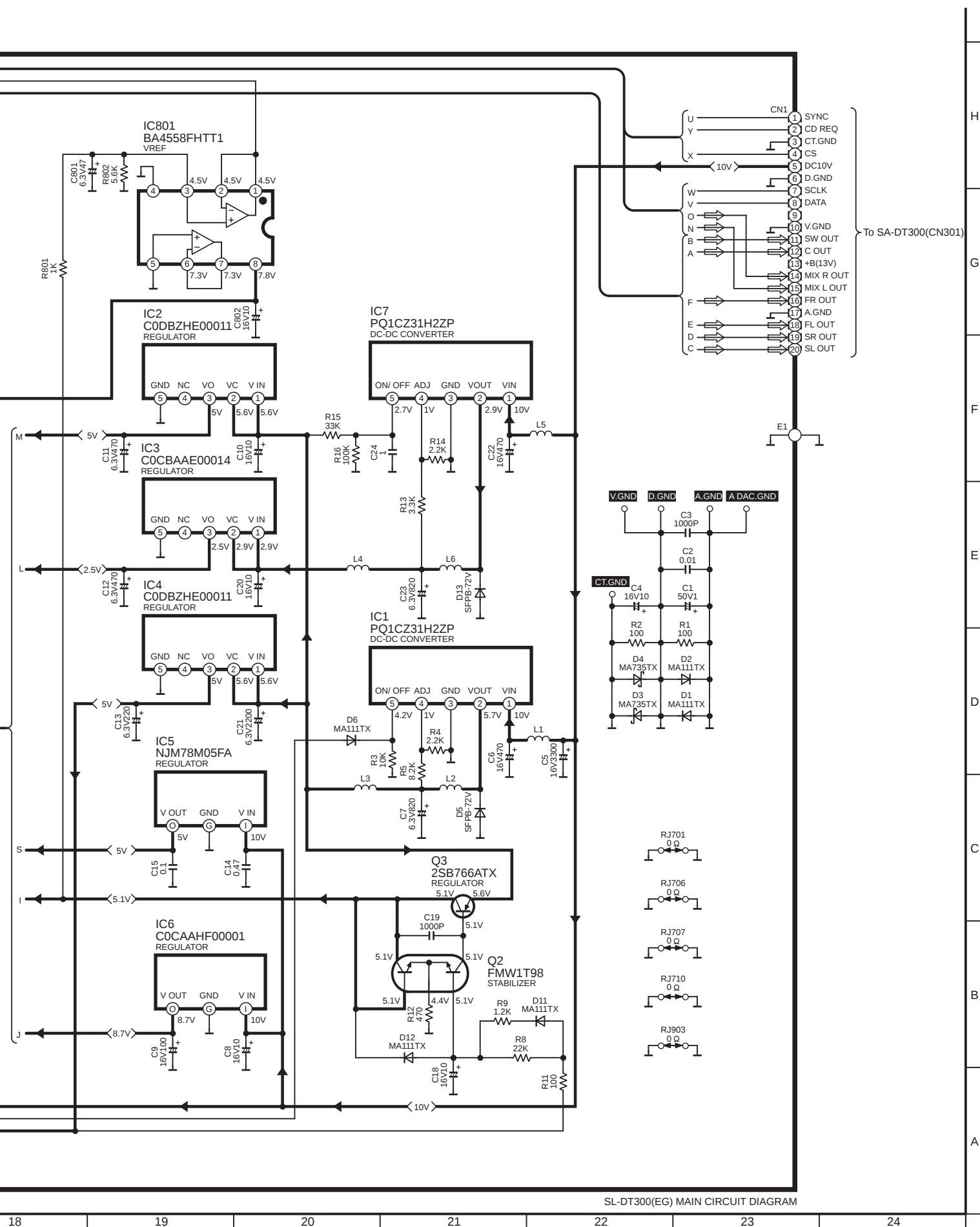
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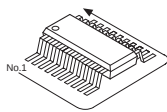
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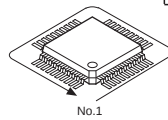
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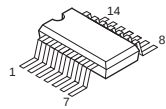
|              |       |              |       |
|--------------|-------|--------------|-------|
| C0CBCBD00002 | 6PIN  | C9ZB00000394 | 32PIN |
| C0ABHB000004 | 8PIN  | C2BBFD000350 | 42PIN |
| C0JBAR000155 | 8PIN  | NJM4580EDTE1 | 8PIN  |
| C0ABBA000121 | 8PIN  | C1DB00000582 | 16PIN |
| BU2050F-E2   | 14PIN |              |       |



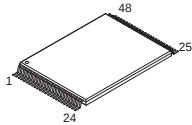
|             |        |             |        |
|-------------|--------|-------------|--------|
| MN103S26EGA | 176PIN | AN8703FH    | 64PIN  |
| MN102H60GFB | 100PIN | MN677531KA  | 208PIN |
| MN5B00      | 80PIN  | C0FBBK00022 | 48PIN  |



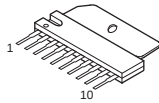
C0JBAS000138



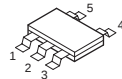
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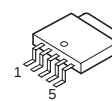
TA7291P



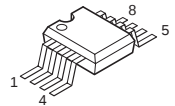
PST596JNR  
C0JBAB000356  
C0JBAA000001



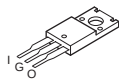
PQ1CZ31H2ZP  
C0DBZHE00011  
C0DBFFG00004  
C0CBAAE00014



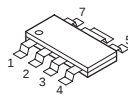
BA4558FHTT1  
C3EBFC000025



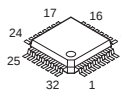
NJM78M05FA



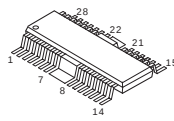
C0CBCBE00001



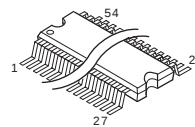
C0CAAHF00001



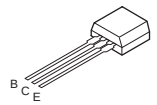
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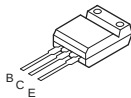
C3ABPG000063



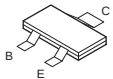
RVTDTTC143EST



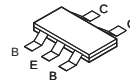
2SB1417PQTA



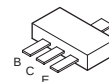
2SD1819ATX UN5211TX  
DTC114EUA106 UN5212TX  
UN2121-TX UN5214TX  
2SC39300XL UN511MTX  
2SA1532TX



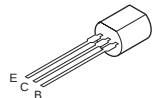
FMW1T98



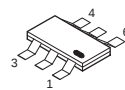
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2SB766ATX  
2SD874QRSTX



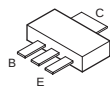
2SB621ARSTA



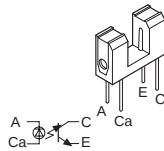
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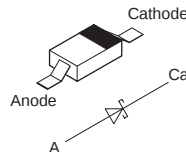
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2SD874QRSTX



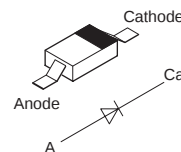
GP1S94



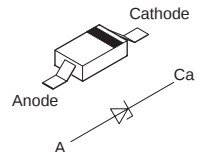
MA728TX  
MA735TX



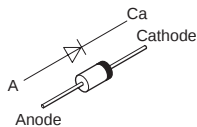
MA111TX  
SFPB-72X



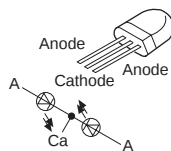
MA8082MTX



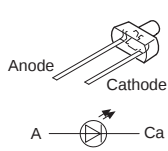
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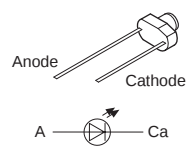
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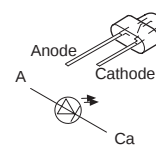
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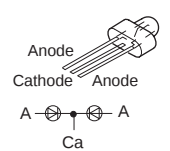
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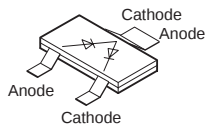
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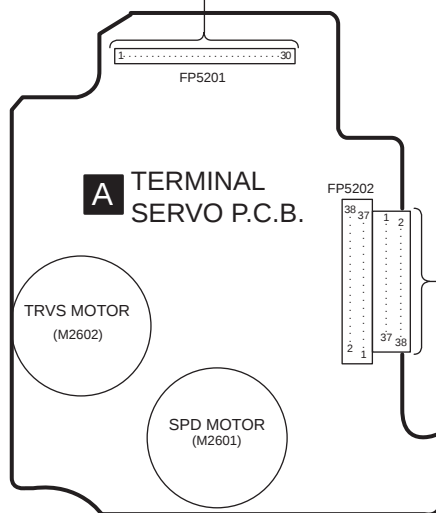
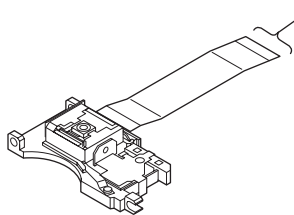


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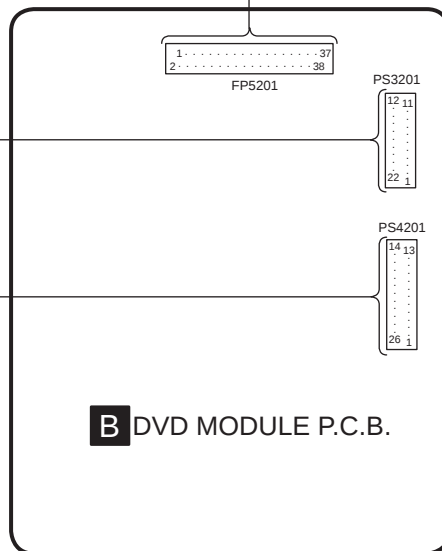
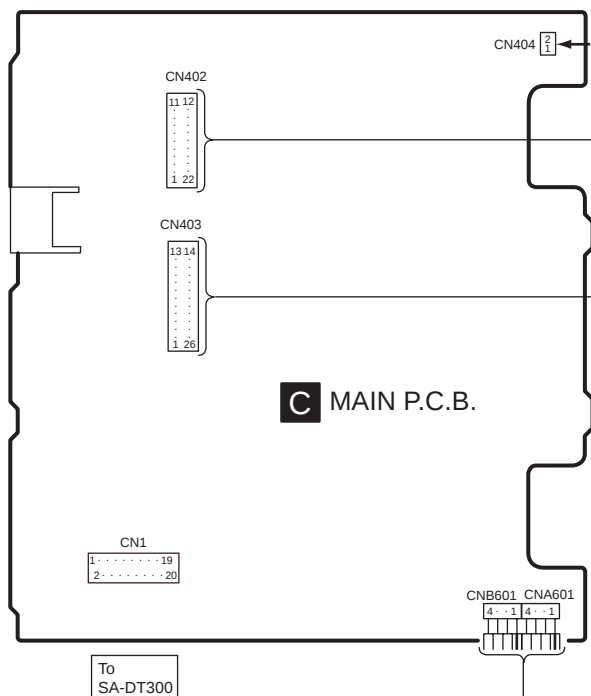




S1001  
(TRAY OPEN/CLOSE DET.)



VIDEO OUT  
/ S-VIDEO OUT



**D** OPERATION(1) P.C.B.

WA602

WB602

**E** OPERATION  
(2) P.C.B.

## 8.3.1 Performing recovery

[TOP](#) [PREVIOUS](#) [NEXT](#)

1. Load the recovery disc ([RFKZD5TR006](#)) on to the player and run it.
2. Recovery is performed automatically. When it is finished, a message appears on the screen.
3. Remove the recovery disc.
4. Turn off the power.

[TOP](#) [PREVIOUS](#) [NEXT](#)

## 8.3.2 Updating firmware

[TOP](#) [PREVIOUS](#) [NEXT](#)

1. Load the recovery disc on to the player and run it.
2. Firmware version of the player is automatically checked. Appropriate message appears whenever necessary.
3. Using remote controller's cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
4.
  - a. If Yes is selected, version updating is performed.
  - b. If No is selected, only recovery is performed.
5.
  - a. When updating is finished, remove the disc according to the message appearing on the screen.
  - b. Remove the disc according to the message appearing on the screen.
6. Turn off the power.

### Note:

- Do not turn off the power during updating.
- In case of error have occurred during updating due to power failure etc., replace the FROM and carry out updating again.
- With the display is being stand-by mode after it is finished, press “  
▶” button.
- It can be confirmed the version of firmware to turn on and then set the player to service mode after it is updated.

[TOP](#) [PREVIOUS](#) [NEXT](#)

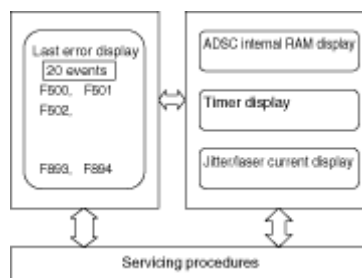
## 8.4 Fault diagnosis using new self–diagnosis function

[TOP](#) [PREVIOUS](#) [NEXT](#)

The 5 th generation DVD players have the additional new service modes as described above to further reinforce the diagnosis function.

These new functions are unable to bring sufficient results when they are used alone.

Effective fault diagnosis can be expected when multiple diagnostic methods are properly combined in accordance with the servicing procedures depending on specific fault status.



\* New servicing procedures are now under study to match with the newly developed self–diagnosis functions introduced here.

Details of the new servicing procedures will be informed in turn.

### 1. Cumulative operation time display function

For spindle motor and DVD/CD laser, the cumulative operation time is displayed.

When servicing, check the timer display and use it as information for fault diagnosis.

At the time of repair and replacement of these components, make sure to check the operation time and reset the timer after replacement.

Operation time of the replacement parts (spindle motor and laser) is the valuable information as actual data for future product quality.

Please save the records and supply information to us.

## 2. ADSC internal RAM display function

The function is to display the internal RAM data of ADSC servo processor.

The RAM data are the learned values of drive servo, memorizing those concerning focus and tracking, as well as data slice and equalizer.

\* This function is also a newly developed service mode. Its full utilization is still under study.

## 3. Others

- Increased number of last errors stored

1 event → 20 events

- Focus drive value display function

[TOP](#) [PREVIOUS](#) [NEXT](#)

## 8.5 Overview of each functions

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[8.5.1 Cumulative operation time display function](#)

[TOP](#) [PREVIOUS](#) [NEXT](#)

## 8.5.1 Cumulative operation time display function

[TOP](#) [PREVIOUS](#) [NEXT](#)

### 1. Operation/display

|              |                                                                    |
|--------------|--------------------------------------------------------------------|
| T1_0123_0123 | DVD/CD laser operation time<br>Unit: 10 hours in decimal notation  |
| T2_0123      | Spindle motor operation time<br>Unit: 10 hours in decimal notation |

Key operations are as follows.

Laser operation time.....In STOP mode, main unit “STOP” button and remote control “

▲” button

Spindle motor operation time.....In STOP mode, main unit “STOP” button and remote control “

▶” button

To reset the timer, perform the following while displaying the time with above key operation.

Laser operation time.....In STOP mode, main unit “STOP” button and “

▼” button

Spindle motor operation time.....In STOP mode, main unit “STOP” button and remote control “

◀” button

### 2. How to utilize

Reference information in fault diagnosis of laser or spindle motor system

Review of faulty point in repeated repair

[TOP](#) [PREVIOUS](#) [NEXT](#)

## 8.6 Service Precautions

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[8.6.1 Recovery after the DVD player is repaired](#)

[8.6.2 Firmware version-up of the DVD player](#)

[TOP](#) [PREVIOUS](#) [NEXT](#)

## 8.6.1 Recovery after the DVD player is repaired

[TOP](#) [PREVIOUS](#) [NEXT](#)

When a FROM or an EEPROM in and on the module P.C.B. has replaced, carry out the recovery disc processing to optimize the drive.

Playback the disc below to process the recovery automatically,

Recovery disc (Product number: [RFKZD5TR006](#) )

### Note:

This unit requires no initialization process carried out after the traditional DVD players were repaired.

When the recovery measure are taken, the customer setting will return to the factory setting as same as the procedure described in item of “User Initialization” in 5.2. is carried out. Write down the contents of the setting before recovery processing, and reset the player.

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## 8.6.2 Firmware version–up of the DVD player

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The firmware of the DVD player may be renewed to improve the quality including operability and playback ability to the substandard discs.

The version–up disc has also a recovery function so that you don't need use the recovery disc again.

### Note:

If the AC power supply is shut out during version–up due to a power failure, the version–up is improperly carried out.

In such a case, replace the FROM and carry out the version–up again.

The product number of the version–up disc will be noticed when it is supplied.

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# 9 Operation Checks and Components Replacement Procedure

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- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

[9.1 Checking for the DVD module P.C.B.](#)

[9.2 Checking for the operation \(1\) P.C.B.](#)

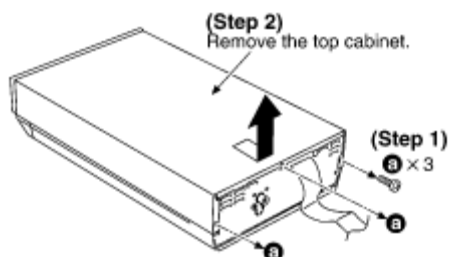
[9.3 Checking for the main P.C.B.](#)

[9.4 Replacement for the traverse deck ass'y and optical pick-up](#)

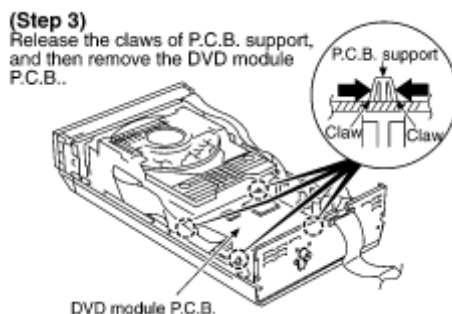
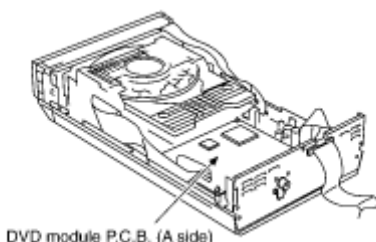
[TOP](#) [PREVIOUS](#) [NEXT](#)

## 9.1 Checking for the DVD module P.C.B.

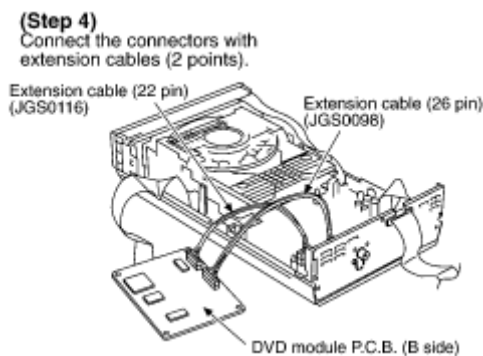
[TOP](#) [PREVIOUS](#) [NEXT](#)



- Check the DVD module P.C.B. (A side) as shown below.



- Check the DVD module P.C.B. (B side) as shown below.

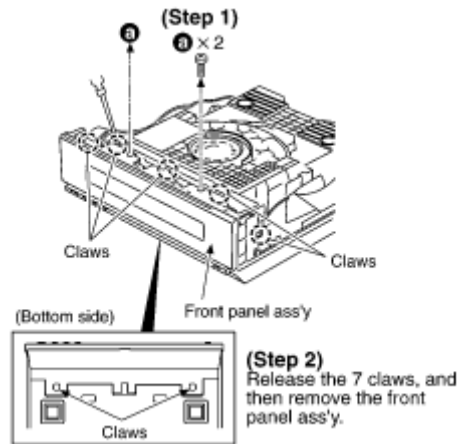


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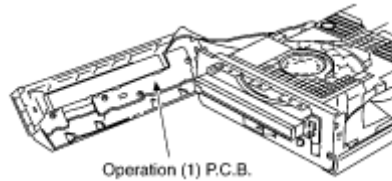
## 9.2 Checking for the operation (1) P.C.B.

[TOP](#) [PREVIOUS](#) [NEXT](#)

- Follow the (Step 1) , (Step 2) of item 9.1.



- Check the operation (1) P.C.B. as shown below.

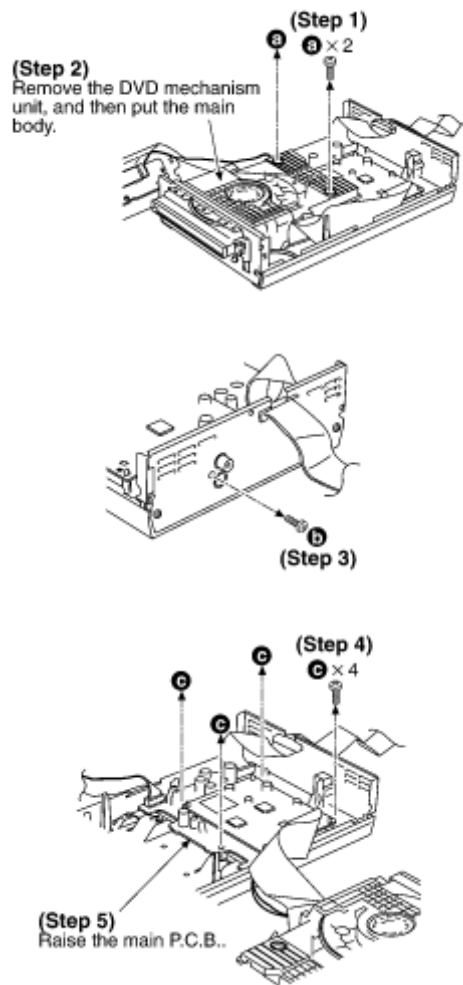


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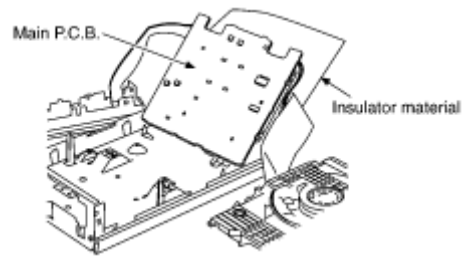
## 9.3 Checking for the main P.C.B.

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- Follow the (Step 1) , (Step 2) of item 9.1.
- Follow the (Step 1) , (Step 2) of item 9.2.



- Check the main P.C.B. as shown below.

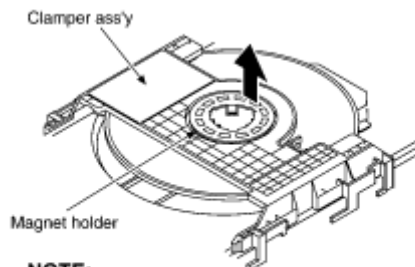
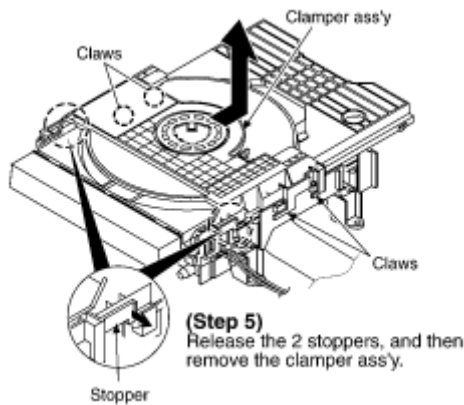
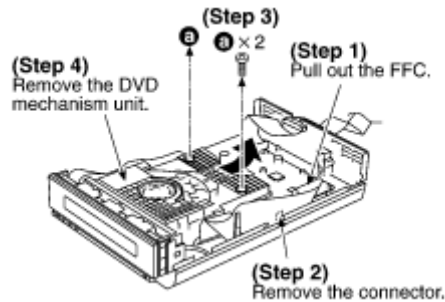


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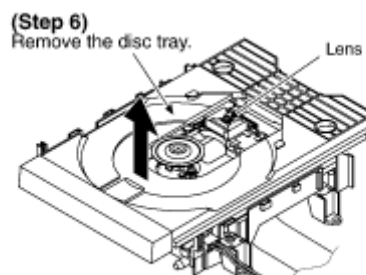
## 9.4 Replacement for the traverse deck ass'y and optical pick-up

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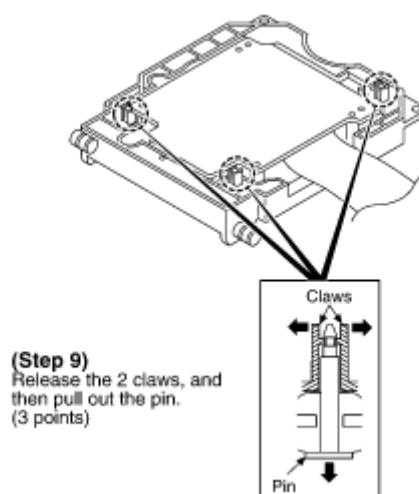
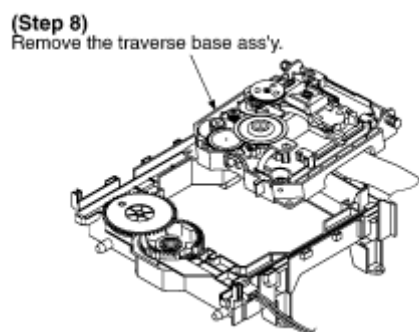
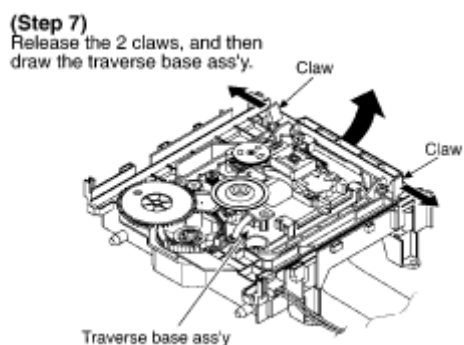
- Follow the (Step 1) , (Step 2) of item 9.1.



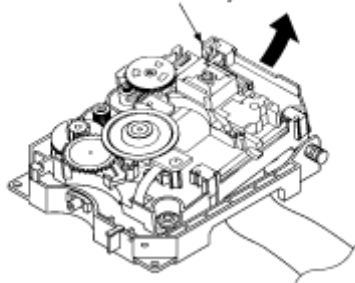
**NOTE:**  
When the traverse base ass'y is up, remove the clamber ass'y after lift up the magnet holder.



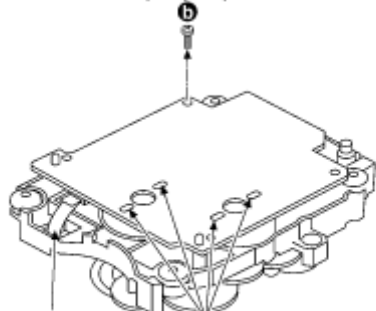
**NOTE:**  
Do not touch the lens of the optical pick-up.



**(Step 10)**  
Remove the traverse deck ass'y.



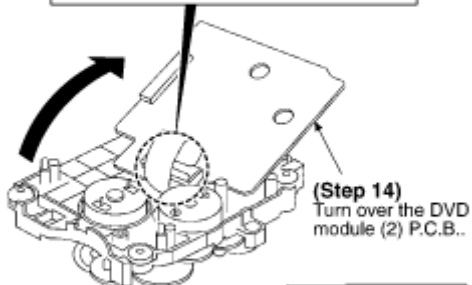
**(Step 11)**



**(Step 13)**  
Pull out the FFC.

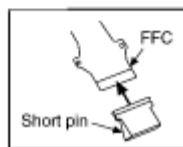
**(Step 12)**  
Unsolder the motor terminal  
(4 points)

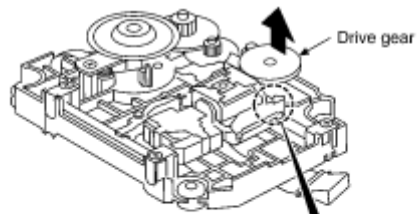
**(Step 15)**  
Remove the FFC from connector.



**(Step 14)**  
Turn over the DVD  
module (2) P.C.B..

**NOTE:**  
Insert a short pin into the FFC.



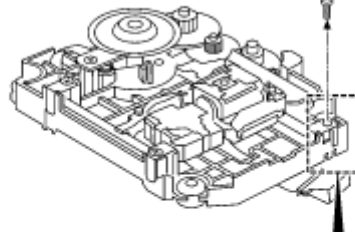


**(Step 16)**  
Release the 2 claws, and  
then remove drive gear.

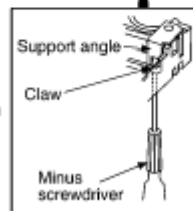


(Bottom side)

**(Step 17)**

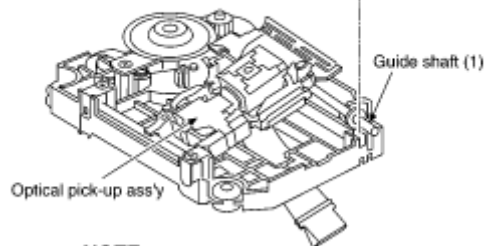


**(Step 18)**  
Release the claw, and then  
remove the support angle.

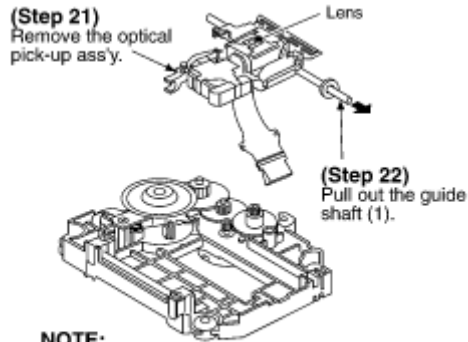


**(Step 20)**  
Lift up the optical pick-up ass'y,  
and then remove the guide  
shaft (1) from guide (A).

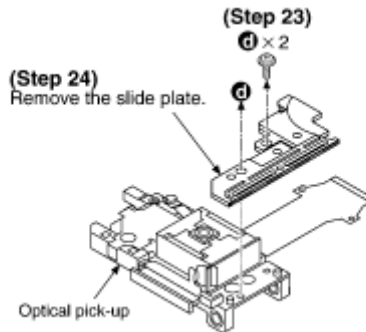
**(Step 19)**  
Remove the spring.



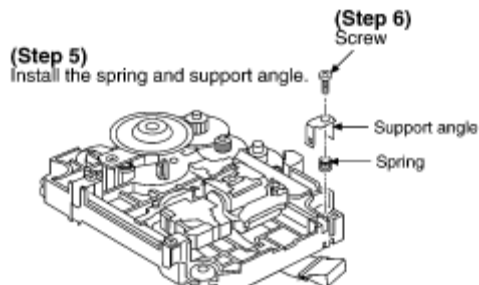
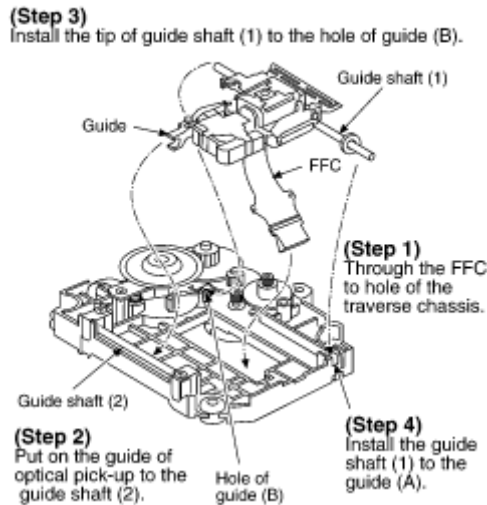
**NOTE:**  
Take care not to lose the spring.

**NOTE:**

1. Use care to prevent damage the optical pick-up, due to the precision construction.
2. Do not touch the lens of the optical pick-up.



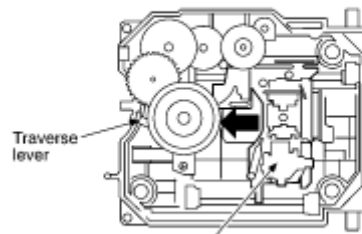
|                                                  |
|--------------------------------------------------|
| <b>Installation of the optical pick-up ass'y</b> |
|--------------------------------------------------|



### Installation of the traverse base ass'y

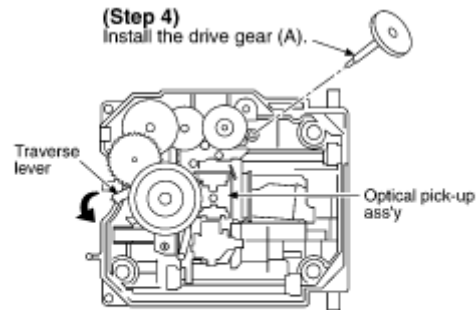
#### (Step 1)

Confirm the traverse lever's position as shown below.



#### (Step 2)

Slide the optical pick-up ass'y fully in the direction of arrow.



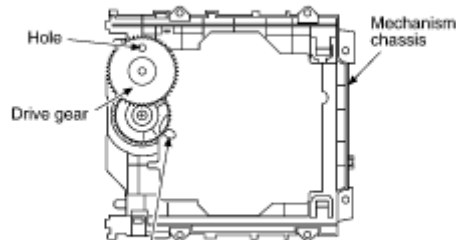
#### (Step 3)

Slide max the optical pick-up ass'y follow to the arrow. Then confirm the traverse lever would move to the direction of arrow.

[Preparation of traverse base ass'y is complete]

#### (Step 5)

Align the hole of drive gear to the hole of mechanism chassis.



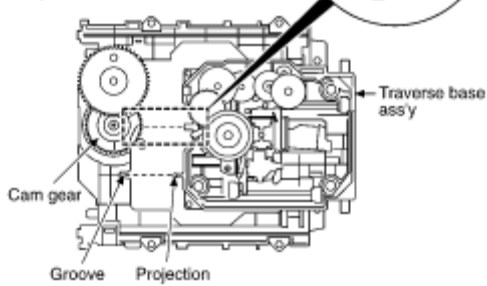
#### (Step 6)

Set the projection of cam gear as shown above.

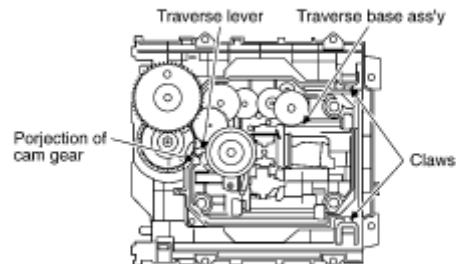
**(Step 7)**

Install the traverse base ass'y to mechanism chassis.

- (1. Put the pin of the traverse base ass'y into the groove of cam gear.
2. Put the projection of the traverse base ass'y into the groove of mechanism chassis.)

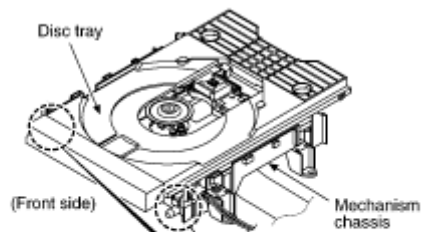
**(Step 8)**

With pressing the both side of claws in the direction of arrow, force the traverse base ass'y.

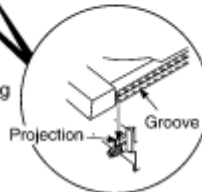
**(Step 9)**

Confirm the traverse lever and projection of cam gear as shown above.

**Installation of the disc tray**

**(Step 1)**

Install the disc tray after setting the projection of mechanism chassis to the front of groove in the disc tray.



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# 10 To Supply Power Source

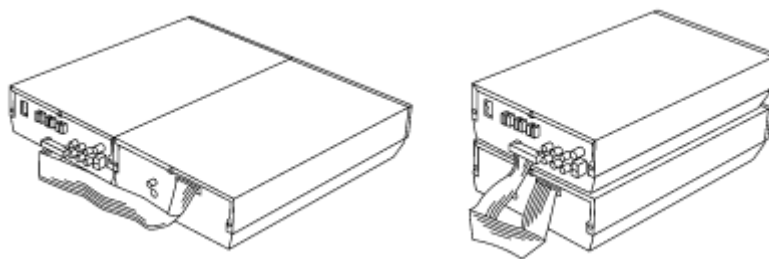
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This unit is designed to operate on power supplied from system connected.

When a component requires service, use the system connections to supply power source.

For system connections, refer to [Fig.10-1.](#)

Fig. 10-1.



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# 11 Schematic Diagram Notes

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- This schematic diagram may be modified at any time with the development of new technology.

## Notes:

- S601:

Play switch (



- S602:

Pause switch (



- S603:

Stop switch (



- S605:

Open/close switch (



- S1001:

Tray open/close detect switch in OFF position

- S2601:

Traverse switch in OFF position

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

- No mark

: Stop

- ( )

: Play

- Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts.

- Voltage and signal line

- 

: Positive voltage line

- 

: Audio signal line

- 

: Video signal line

- 

: Video/audio signal line

**Caution!**

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

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# 17 Terminal Function of ICs

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[17.1 IC402 \(C2BBFD000350\): System Control](#)

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# 17.1 IC402 (C2BBFD000350):

## System Control

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| Pin No. | Signal Name | I/O | Description                                                |
|---------|-------------|-----|------------------------------------------------------------|
| 1       | VCC         | I   | Power supply terminal                                      |
| 2       | VREF        | I   | Reference voltage input                                    |
| 3       | AVSS        | –   | GND                                                        |
| 4       | SYNC        | I   | Power failure detect signal input                          |
| 5       | PWCONT      | O   | DVD module power supply control signal output              |
| 6       | LDATA       | O   | Serial control signal output to LED driver IC              |
| 7       | LSTB        | O   | Serial control signal output to LED driver IC              |
| 8       | LCLK        | O   | Serial control signal output to LED driver IC              |
| 9       | LCLR        | O   | Serial control signal output to LED driver IC              |
| 10      | DVD CLK     | I   | Communication clock signal input from DVD system control   |
| 11      | DVD CMD     | O   | Communication command signal output for DVD system control |
| 12      | DVD STAT    | I   | Communication status signal input from DVD system control  |
| 13      | WIDE2       | –   | Not used, open                                             |
| 14      | WIDE1       | O   | Wide screen circuit change control output                  |
| 15      | CNVSS       | –   | GND                                                        |
| 16      | TEST        | I   | Test mode input                                            |
| 17      | E-CS        | –   | Not used, open                                             |
| 18      | RESET       | I   | System reset signal input                                  |
| 19      | X IN        | I   | Oscillation connect terminal (F=8MHz)                      |
| 20      | X OUT       | O   |                                                            |
| 21      | VSS         | –   | GND                                                        |
| 22      | NC          | –   | Not used, open                                             |
|         |             |     |                                                            |

|    |           |   |                                                                   |
|----|-----------|---|-------------------------------------------------------------------|
| 23 | MUTE      | O | Mute control output                                               |
| 24 | OPENSW    | I | Disc tray open switch signal input                                |
| 25 | TRAY SW+  | I | Disc tray close switch signal input                               |
| 26 | TRAY/TRV  | O | Disc tray/traverse drive change signal output                     |
| 27 | F IN      | O | Motor driver control output                                       |
| 28 | R IN      | O | Motor driver control output                                       |
| 29 | TRAYMUT   | O | Motor driver mute signal output                                   |
| 30 | D WIDE1   | O | D terminal wide screen circuit change control output              |
| 31 | D WIDE2   | – | Not used, open                                                    |
| 32 | 525P MUTE | – | Not used, connected to GND                                        |
| 33 | B REQ     | I | Serial communication request signal input from system control     |
| 34 | B CS      | O | Serial communication chip select signal output for system control |
| 35 | B CLK     | O | Serial communication clock signal output for system control       |
| 36 | DATA O    | O | Serial communication data signal output for system control        |
| 37 | DATA I    | I | Serial communication data signal input from system control        |
| 38 | CS MODEL  | I | Model change signal input                                         |
| 39 | NC        | – | Not used, open                                                    |
| 40 | KEY2      | I | Not used, connected to GND                                        |
| 41 | KEY1      | I | Operation key signal input                                        |
| 42 | CSREG     | I | Area select signal input                                          |

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# 18 Abbreviations

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| INITIAL/LOGO |          | ABBREVIATIONS               |
|--------------|----------|-----------------------------|
| A            | A0-UP    | ADDRESS                     |
|              | ACLK     | AUDIO CLOCK                 |
|              | AD0-UP   | ADDRESS BUS                 |
|              | ADATA    | AUDIO PES PACKET DATA       |
|              | ALE      | ADDRESS LATCH ENABLE        |
|              | AMUTE    | AUDIO MUTE                  |
|              | AREQ     | AUDIO PES PACKET REQUEST    |
|              | ARF      | AUDIO RF                    |
|              | ASI      | SERVO AMP INVERTED INPUT    |
|              | ASO      | SERVOAMP OUTPUT             |
|              | ASync    | AUDIO WORD DISTINCTION SYNC |
| B            | BCK      | BIT CLOCK (PCM)             |
|              | BCKIN    | BIT CLOCK INPUT             |
|              | BDO      | BLACK DROP OUT              |
|              | BLKCK    | SUB CODE BLOCK CLOCK        |
|              | BOTTOM   | CAP. FOR BOTTOM HOLD        |
|              | BYP      | BYPATH                      |
|              | BYTCK    | BYTE CLOCK                  |
| C            | CAV      | CONSTANT ANGULAR VELOCITY   |
|              | CBDO     | CAP. BLACK DROP OUT         |
|              | CD       | COMPACT DISC                |
|              | CDSCK    | CD SERIAL DATA CLOCK        |
|              | CDSRDATA | CD SERIAL DATA              |
|              | CDRF     | CD RF (EFM) SIGNAL          |
|              | CDV      | COMPACT DISC-VIDEO          |
|              | CHNDATA  | CHANNEL DATA                |
|              | CKSL     | SYSTEMCLOCK SELECT          |
|              | CLV      | CONSTANT LINEAR VELOCITY    |
|              | COFTR    | CAP. OFF TRACK              |
|              | CPA      | CPU ADDRESS                 |
|              | CPCS     | CPU CHIP SELECT             |
|              | CPDT     | CPU DATA                    |
|              | CPUADR   | CPU ADDRESS LATCH           |
|              | CPUADT   | CPU ADDRESS DATA BUS        |
|              | CPUIRQ   | CPU INTERRUPT REQUEST       |
|              | CPRD     | CPU READ ENABLE             |
|              | CPWR     | CPU WRITE ENABLE            |
|              | CS       | CHIPSELECT                  |
|              | CSyncIN  | COMPOSITE SYNC IN           |
|              | CSyncOUT | COMPOSITE SYNC OUT          |
| D            | DACCK    | D/A CONVERTER CLOCK         |
|              | DEEMP    | DEEMPHASIS BIT ON/OFF       |
|              | DEMPH    | DEEMPHASIS SWITCHING        |

|   |          |                                     |
|---|----------|-------------------------------------|
|   | DIG0-UP  | FL DIGIT OUTPUT                     |
|   | DIN      | DATA INPUT                          |
|   | DMSRCK   | DM SERIAL DATA READ CLOCK           |
|   | DMUTE    | DIGITAL MUTE CONTROL                |
|   | DO       | DROPOUT                             |
|   | DOUT0-UP | DATA OUTPUT                         |
|   | DRF      | DATA SLICE RF (BIAS)                |
|   | DRPOUT   | DROP OUT SIGNAL                     |
|   | DREQ     | DATA REQUEST                        |
|   | DRESP    | DATA RESPONSE                       |
|   | DSC      | DIGITAL SERVO CONTROLLER            |
|   | DSLIF    | DATA SLICE LOOP FILTER              |
|   | DVD      | DIGITAL VIDEO DISC                  |
| E | EC       | ERROR TORQUE CONTROL                |
|   | ECR      | ERROR TORQUE CONTROL<br>REFERENCE   |
|   | ENCSEL   | ENCODER SELECT                      |
|   | ETMCLK   | EXTERNAL M CLOCK<br>(81MHz/40.5MHz) |
|   | ETSCLK   | EXTERNAL S CLOCK (54MHz)            |
| F | FBAL     | FOCUS BALANCE                       |
|   | FCLK     | FRAME CLOCK                         |
|   | FE       | FOCUS ERROR                         |
|   | FFI      | FOCUS ERROR AMP INVERTED<br>INPUT   |
|   | FEO      | FOCUS ERROR AMP OUTPUT              |
|   | FG       | FREQUENCY GENERATOR                 |
|   | FSC      | FREQUENCY SUB CARRIER               |
|   | FSCK     | FS (384 OVERSAMPLING) CLOCK         |
| G | GND      | COMMON GROUNDING (EARTH)            |
| H | HA0-UP   | HOST ADDRESS                        |
|   | HD0-UP   | HOST DATA                           |
|   | HINT     | HOST INTERRUPT                      |
|   | HRXW     | HOST READ/WRITE                     |
| I | IECOUT   | IEC958 FORMAT DATA OUTPUT           |
|   | IPFLAG   | INTERPOLATION FLAG                  |
|   | IREF     | I (CURRENT) REFERENCE               |
|   | ISEL     | INTERFACE MODE SELECT               |
| L | LDON     | LASER DIODE CONTROL                 |
|   | LPC      | LASER POWER CONTROL                 |
|   | LRCK     | L CH/R CH DISTINCTION CLOCK         |
| M | MA0-UP   | MEMORY ADDRESS                      |
|   | MCK      | MEMORY CLOCK                        |
|   | MCKI     | MEMORY CLOCK INPUT                  |
|   | MCLK     | MEMORY SERIAL COMMAND<br>CLOCK      |
|   | MDATA    | MEMORY SERIAL COMMAND<br>DATA       |
|   | MDQ0-UP  | MEMORY DATA INPUT/OUTPUT            |
|   | MDQM     | MEMORY DATA I/OMASK                 |

|   |                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | MLD                                                                                                                                                                                                      | MEMORY SERIAL COMMAND LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|   | MPEG                                                                                                                                                                                                     | MOVING PICTURE EXPERTS GROUP                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| O | ODC<br>OFTR<br>OSCI<br>OSCO<br>OSD                                                                                                                                                                       | OPTICAL DISC CONTROLLER<br>OFF TRACKING<br>OSCILLATOR INPUT<br>OSCILLATOR OUTPUT<br>ON SCREEN DISPLAY                                                                                                                                                                                                                                                                                                                                                                                 |
| P | P1-UP<br>PCD<br><br>PCK<br>PDVD<br><br>PEAK<br>PLLCLK<br>PLLOK<br>PWMCTL<br>PWMDA<br>PWMOA, B                                                                                                            | PORT<br>CD TRACKING PHASE<br>DIFFERENCE<br>PLL CLOCK<br>DVD TRACKING PHASE<br>DIFFERENCE<br>CAP. FOR PEAK HOLD<br>CHANNEL PLL CLOCK<br>PLL LOCK<br>PWM OUTPUT CONTROL<br>PULSEWAVE MOTOR DRIVE A<br>PULSE WAVE MOTOR OUT A, B                                                                                                                                                                                                                                                         |
| R | RE<br>RFENV<br>RFO<br><br>RS<br>RSEL<br>RST<br>RSV                                                                                                                                                       | READ ENABLE<br>RF ENVELOPE<br>RF PHASE DIFFERENCE<br>OUTPUT<br>(CD-ROM) REGISTER SELECT<br>RF POLARITY SELECT<br>RESET<br>RESERVE                                                                                                                                                                                                                                                                                                                                                     |
| S | SBCK<br>SBI0, 1<br>SB00<br>SBT0, 1<br>SCK<br>SCKR<br><br>SCL<br>SCLK<br>SDA<br>SEG0-UP<br>SELCLK<br>SEN<br>SIN1, 2<br>SOUT1, 2<br>SPDI<br>SPDO<br>SPEN<br>SPRCLK<br>SPWCLK<br>SQCK<br>SQCX<br><br>SRDATA | SUB CODE CLOCK<br>SERIAL DATA INPUT<br>SERIAL DATA OUTPUT<br>SERIAL CLOCK<br>SERIAL DATA CLOCK<br>AUDIO SERIAL CLOCK<br>RECEIVER<br>SERIAL CLOCK<br>SERIAL CLOCK<br>SERIALDATA<br>FL SEGMENT OUTPUT<br>SELECT CLOCK<br>SERIAL PORT ENABLE<br>SERIAL DATA IN<br>SERIAL DATA OUT<br>SERIAL PORT DATA INPUT<br>SERIAL PORT DATA OUTPUT<br>SERIAL PORT R/W ENABLE<br>SERIAL PORT READ CLOCK<br>SERIALPORT WRITE CLOCK<br>SUB CODE Q CLOCK<br>SUB CODE Q DATA READ<br>CLOCK<br>SERIAL DATA |

|   |          |                                        |
|---|----------|----------------------------------------|
|   | SRMADR   | SRAM ADDRESS BUS                       |
|   | SRMDT0-7 | SRAM DATA BUS 0-7                      |
|   | SS       | START/STOP                             |
|   | STAT     | STATUS                                 |
|   | STCLK    | STREAM DATA CLOCK                      |
|   | STD0-UP  | STREAM DATA                            |
|   | STENABLE | STREAM DATA INPUT<br>ENABLE            |
|   | STSEL    | STREAMDATA POLARITY<br>SELECT          |
|   | STVALID  | STREAM DATA VALIDITY                   |
|   | SUBC     | SUB CODE SERIAL                        |
|   | SUBQ     | SUB CODE Q DATA                        |
|   | SYSCLK   | SYSTEM CLOCK                           |
| T | TE       | TRACKING ERROR                         |
|   | TIBAL    | BALANCE CONTROL                        |
|   | TID      | BALANCE OUTPUT 1                       |
|   | TIN      | BALANCE INPUT                          |
|   | TIP      | BALANCE INPUT                          |
|   | TIS      | BALANCE OUTPUT 2                       |
|   | TPSN     | OP AMP INPUT                           |
|   | TPSO     | OP AMP OUTPUT                          |
|   | TPSP     | OP AMP INVERTED INPUT                  |
|   | TRCRS    | TRACKCROSS SIGNAL                      |
|   | TRON     | TRACKING ON                            |
|   | TRSON    | TRAVERSE SERVO ON                      |
| V | VBANK    | V BLANKING                             |
|   | VCC      | COLLECTOR POWER SUPPLY<br>VOLTAGE      |
|   | VCDCONT  | VIDEO CD CONTROL<br>(TRACKING BALANCE) |
|   | VDD      | DRAIN POWER SUPPLY<br>VOLTAGE          |
|   | VFB      | VIDEO FEED BACK                        |
|   | VREF     | VOLTAGE REFERENCE                      |
|   | VSS      | SOURCEPOWER SUPPLY<br>VOLTAGE          |
| W | WAIT     | BUS CYCLE WAIT                         |
|   | WDCK     | WORD CLOCK                             |
|   | WEH      | WRITE ENABLE HIGH                      |
|   | WSR      | WORD SELECT RECEIVER                   |
| X | X        | X' TAL                                 |
|   | XALE     | X ADDRESS LATCH ENABLE                 |
|   | XAREQ    | X AUDIO DATA REQUEST                   |
|   | XCDROM   | X CD ROM CHIP SELECT                   |
|   | XCS      | X CHIP SELECT                          |
|   | XCSYNC   | X COMPOSITE SYNC                       |
|   | XDS      | X DATA STROBE                          |
|   | XHSYNCO  | X HORIZONTAL SYNC OUTPUT               |
|   | XHINT    | XH INTERRUPTREQUEST                    |
|   | XI       | X' TAL OSCILLATOR INPUT                |
|   | XINT     | X INTERRUPT                            |

|         |                               |
|---------|-------------------------------|
| XMW     | X MEMORY WRITE ENABLE         |
| XO      | X' TAL OSCILLATOR OUTPUT      |
| XRE     | X READ ENABLE                 |
| XSRMCE  | X SRAM CHIP ENABLE            |
| XSRMOE  | X SRAM OUTPUT ENABLE          |
| XSRMWE  | X SRAM WRITE ENABLE           |
| XVCS    | X V-DEC CHIPSELECT            |
| XVDS    | X V-DEC CONTROL BUS<br>STROBE |
| XVSYNCO | X VERTICAL SYNC OUTPUT        |

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# 19 Replacement Parts List

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## Notes:

- Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

- The marking [RTL] indicates that retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- The marking <SPC> indicates in Remarks is supplied by Service Parts Center.
- All of other parts are supplied by MESA.

| Ref. No.  | Part No.    | Part Name & Description | Pcs | Remarks |
|-----------|-------------|-------------------------|-----|---------|
| <u>1</u>  | REX1118     | WIRE ASS'Y              | 1   |         |
| <u>2</u>  | REZ1452     | FFC(38P)                | 1   |         |
| 3         | XTB3+10J    | SCREW                   | 2   |         |
| <u>4</u>  | RYF0625-K   | DVD LID                 | 1   |         |
| <u>5</u>  | REX1116     | WIRE ASS'Y<br>(SYSTEM)  | 1   |         |
| <u>6</u>  | RGK1502-K   | BOTTOM COVER            | 1   |         |
| <u>7</u>  | RKA0137-K   | RUBBER                  | 4   |         |
| 8         | XTB3+8JFZ   | SCREW                   | 10  |         |
| 9         | XTBS3+8JFZ1 | SCREW                   | 6   |         |
| <u>10</u> | RGK1500A-S  | PANEL ORNAMENT          | 1   |         |
| <u>11</u> | RGK1504-S1  | BUTTON ORNAMENT         | 1   |         |
|           |             |                         |     |         |

|            |            |                            |   |                                                                                          |
|------------|------------|----------------------------|---|------------------------------------------------------------------------------------------|
| <u>12</u>  | RGP0918-K  | FRONT PANEL                | 1 |                                                                                          |
| <u>13</u>  | RGU2085-S  | BUTTON,PLAY                | 1 |                                                                                          |
| 14         | XTBS26+8J  | SCREW                      | 4 |                                                                                          |
| <u>15</u>  | RKM0463-S  | TOP COVER                  | 1 |                                                                                          |
| <u>16</u>  | RLBT4001-N | FERRITE CORE               | 1 | J0KD00000028                                                                             |
| <u>17</u>  | RMC0486    | ANGLE                      | 1 |                                                                                          |
| 301        | RHD17036   | SCREW                      | 2 | <SPC>                                                                                    |
| <u>302</u> | RMM0234-1  | TRV DRIVE RACK             | 1 | <SPC>                                                                                    |
| <u>303</u> | RAF3022A-1 | OPTICAL PICK-UP<br>ASS'Y   | 1 |  <SPC> |
| <u>304</u> | RJB2309A   | FFC                        | 1 | <SPC>                                                                                    |
| 305        | RHD14095   | SCREW                      | 1 | <SPC>                                                                                    |
| <u>306</u> | RJB2308A   | FFC                        | 1 | <SPC>                                                                                    |
| <u>307</u> | RXQ0742B   | TRV CHASSIS W/SP MOTOR     | 1 |                                                                                          |
| 308        | VHD1224    | SCREW                      | 4 | <SPC>                                                                                    |
| <u>309</u> | RMS0712    | FIXED PIN                  | 3 |                                                                                          |
| <u>310</u> | RMG0545-A1 | FLOATING RUBBER            | 4 | <SPC>                                                                                    |
| <u>311</u> | RMC0415    | ADJUST SPRING<br>HOLDER(A) | 3 | <SPC>                                                                                    |
| <u>313</u> | RME0320    | ADJUST SPRING              | 3 | <SPC>                                                                                    |
| <u>314</u> | RDG0501    | TRV GEAR(C)                | 1 | <SPC>                                                                                    |
| <u>315</u> | RME0319    | TRV GEAR SPRING            | 1 | <SPC>                                                                                    |
| <u>316</u> | RDG0500    | TRV GEAR(B)                | 1 | <SPC>                                                                                    |
| <u>317</u> | RDG0499    | TRV GEAR(A)                | 1 | <SPC>                                                                                    |
| <u>318</u> | RMS0710    | GEAR                       | 1 | <SPC>                                                                                    |
| <u>319</u> | RMG0558-K  | PCB RUBBER                 | 1 | <SPC>                                                                                    |
| 320        | RHD20060   | SCREW                      | 1 | <SPC>                                                                                    |
| <u>321</u> | RMS0711    | GUIDE SHAFT                | 1 | <SPC>                                                                                    |
| <u>322</u> | RMG0561-T  | CUSHION RUBBER             | 1 | <SPC>                                                                                    |
| <u>401</u> | RMR1318-X  | SPRING HOOK                | 1 | <SPC>                                                                                    |
| <u>402</u> | RMR1317-K1 | CLAMP PLATE                | 1 | <SPC>                                                                                    |
| <u>403</u> | RXQ0729    | MAGNET HOLDER<br>UNIT      | 1 | <SPC>                                                                                    |
| <u>404</u> | RXQ0724    | CLAMPER UNIT               | 1 | <SPC>                                                                                    |
| <u>405</u> | RME0318-1  | CLAMPER SPRING             | 1 | <SPC>                                                                                    |
| <u>406</u> | RMR1321-X  | SPRING HOLDER              | 1 | <SPC>                                                                                    |
| <u>407</u> | RGQ0280-K4 | TRAY                       | 1 |                                                                                          |
|            |            |                            |   |                                                                                          |

|            |              |                           |   |              |
|------------|--------------|---------------------------|---|--------------|
| <u>408</u> | RMR1323-K1   | MIDDLE CHASSIS            | 1 |              |
| 409        | XTW3+12S     | SCREW                     | 1 |              |
| 410        | XTV3+10J     | SCREW                     | 4 | <SPC>        |
| <u>411</u> | RXQ0727      | MECHANISM CHASSIS<br>UNIT | 1 |              |
|            |              |                           |   |              |
| C1         | ECA1HAK010XI | 50V 1U                    | 1 |              |
| C2         | ECUVNH103KBV | 50V 0.01U                 | 1 | F1H1H103A748 |
| C3         | ECJ1VB1H102K | 50V 1000P                 | 1 |              |
| C4         | ECA1CAK100XB | 16V 10U                   | 1 |              |
| C5         | ECA1CAM332XE | 16V 3300U                 | 1 |              |
| C6         | ECA1CAM471XB | 16V 470U                  | 1 |              |
| C7         | EEUFC0J821B  | 6.3V 820U                 | 1 |              |
| C8         | ECA1CAK100XB | 16V 10U                   | 1 |              |
| C9         | ECA1CAK101XB | 16V 100U                  | 1 |              |
| C10        | ECA1CAK100XB | 16V 10U                   | 1 |              |
| C11,12     | ECA0JAM471XB | 6.3V 470U                 | 2 |              |
| C13        | ECA0JAK221XH | 6.3V 220U                 | 1 |              |
| C14        | ECUVNC474KBN | 16V 0.47U                 | 1 | F1J1C474A091 |
| C15        | ECJ1VB1C104K | 16V 0.1U                  | 1 |              |
| C16        | ECJ1VB1H102K | 50V 1000P                 | 1 |              |
| C17        | ECA1CAK470XB | 16V 47U                   | 1 |              |
| C18        | ECA1CAK100XB | 16V 10U                   | 1 |              |
| C19        | ECJ1VB1H102K | 50V 1000P                 | 1 |              |
| C20        | ECA1CAK100XB | 16V 10U                   | 1 |              |
| C21        | ECA0JM222    | 6.3V 2200U                | 1 |              |
| C22        | ECA1CAM471XB | 16V 470U                  | 1 |              |
| C23        | EEUFC0J821B  | 6.3V 820U                 | 1 |              |
| C24        | ECUVNJ105KBV | 6.3V 1U                   | 1 | F1H0J105A002 |
| C402       | ECUV1H101JCV | 50V 100P                  | 1 | F1H1H101A004 |
| C404       | ECJ1VB1C104K | 16V 0.1U                  | 1 |              |
| C405       | EEAFC0J101B  | 6.3V 100U                 | 1 |              |
| C406       | ECJ1VB1C104K | 16V 0.1U                  | 1 |              |
| C407       | ECUV1H471JCV | 50V 470P                  | 1 |              |
| C408       | ECJ1VB1H102K | 50V 1000P                 | 1 |              |
| C409       | ECUVNH103KBV | 50V 0.01U                 | 1 | F1H1H103A748 |
| C410       | ECA1HAK3R3XB | 50V 3.3                   | 1 |              |

|         |              |            |   |              |
|---------|--------------|------------|---|--------------|
| C411    | ECA0JAK470XH | 6.3V 47U   | 1 |              |
| C412    | ECJ1VB1C104K | 16V 0.1U   | 1 |              |
| C413    | ECA1HAK010XI | 50V 1U     | 1 |              |
| C501    | ECA0JAK221XH | 6.3V 220U  | 1 |              |
| C502    | ECUVNH103KBV | 50V 0.01U  | 1 | F1H1H103A748 |
| C504    | ECA0JAM102XB | 6.3V 1000U | 1 |              |
| C505    | ECUVNH103KBV | 50V 0.01U  | 1 | F1H1H103A748 |
| C506    | ECA0JAK101XB | 6.3V 100U  | 1 |              |
| C507    | ECEA0JKN330  | 6.3V 33U   | 1 |              |
| C508    | ECUV1H101JCV | 50V 100P   | 1 | F1H1H101A004 |
| C509    | ECUVNH103KBV | 50V 0.01U  | 1 | F1H1H103A748 |
| C510    | ECA0JAM102XB | 6.3V 1000U | 1 |              |
| C512    | ECA0JAK101XB | 6.3V 100U  | 1 |              |
| C515    | ECUVNH103KBV | 50V 0.01U  | 1 | F1H1H103A748 |
| C523,24 | ECUVNH103KBV | 50V 0.01U  | 2 | F1H1H103A748 |
| C526    | ECJ1VB1C104K | 16V 0.1U   | 1 |              |
| C601-04 | ECUV1H101JCV | 50V 100P   | 4 | F1H1H101A004 |
| C605    | ECUVNH103KBV | 50V 0.01U  | 1 | F1H1H103A748 |
| C801    | ECA0JAK470XH | 6.3V 47U   | 1 |              |
| C802    | ECA1CAK101XB | 16V 100U   | 1 |              |
| C803,04 | ECA1CAK100XB | 16V 10U    | 2 |              |
| C805,06 | ECUV1H471JCV | 50V 470P   | 2 |              |
| C807,08 | ECUV1H470JCV | 50V 47P    | 2 | F1H1H470A736 |
| C809    | ECA0JAK470XH | 6.3V 47U   | 1 |              |
| C810    | ECJ1VB1C104K | 16V 0.1U   | 1 |              |
| C811-14 | ECA0JAK470XH | 6.3V 47U   | 4 |              |
| C815,16 | ECA1CAK100XB | 16V 10U    | 2 |              |
| C817,18 | ECUV1H471JCV | 50V 470P   | 2 |              |
| C819,20 | ECUV1H470JCV | 50V 47P    | 2 | F1H1H470A736 |
| C821    | ECA0JAK470XH | 6.3V 47U   | 1 |              |
| C822    | ECJ1VB1C104K | 16V 0.1U   | 1 |              |
| C823,24 | ECA1CAK220XB | 16V 22U    | 2 |              |
| C825,26 | ECA1CAK100XB | 16V 10U    | 2 |              |
| C827-30 | ECJ1VB1H222K | 50V 2200P  | 4 |              |
| C831,32 | ECA1CAK100XB | 16V 10U    | 2 |              |
| C833,34 | ECUV1H471JCV | 50V 470P   | 2 |              |
| C835,36 |              |            |   |              |

|          |              |            |    |              |
|----------|--------------|------------|----|--------------|
|          | ECUV1H470JCV | 50V 47P    | 2  | F1H1H470A736 |
| C837     | ECA0JAK470XH | 6.3V 47U   | 1  |              |
| C838     | ECJ1VB1C104K | 16V 0.1U   | 1  |              |
| C839,40  | ECA1CAK220XB | 16V 22U    | 2  |              |
| C841,42  | ECA1CAK100XB | 16V 10U    | 2  |              |
| C843,44  | ECJ1VB1H222K | 50V 2200P  | 2  |              |
| C845,46  | ECA1CAK100XB | 16V 10U    | 2  |              |
| C847,48  | ECUV1H471JCV | 50V 470P   | 2  |              |
| C849,50  | ECUV1H470JCV | 50V 47P    | 2  | F1H1H470A736 |
| C851     | ECA0JAK470XH | 6.3V 47U   | 1  |              |
| C852     | ECJ1VB1C104K | 16V 0.1U   | 1  |              |
| C853-56  | ECA0JAK470XH | 6.3V 47U   | 4  |              |
| C857,58  | ECJ1VB1H222K | 50V 2200P  | 2  |              |
| C2001,02 | ECEV0GA101SR | 4V 100U    | 2  |              |
| C2003-18 | ECUZNC104ZFV | 16V 0.1U   | 16 | F1H1C1040008 |
| C2021    | ECEV0GA101SR | 4V 100U    | 1  |              |
| C2022-25 | ECUZNC104ZFV | 16V 0.1U   | 4  | F1H1C1040008 |
| C2026    | ECJ1VB1C104K | 16V 0.1U   | 1  |              |
| C2027    | ECUZNC104ZFV | 16V 0.1U   | 1  | F1H1C1040008 |
| C2031,32 | ECJ1VB1C104K | 16V 0.1U   | 2  |              |
| C2034    | ECJ1VB1C393K | 16V 0.039U | 1  |              |
| C2035    | ECJ1VB1H822K | 50V 8200P  | 1  |              |
| C2036    | ECJ1VB1C104K | 16V 0.1U   | 1  |              |
| C2038    | ECJ1VB1C104K | 16V 0.1U   | 1  |              |
| C2039    | F1H1C103A071 | 16V 0.01U  | 1  |              |
| C2040    | ECUVNH102JCV | 50V 1000P  | 1  | F1H1H102A737 |
| C2041,42 | ECUV1H331JCV | 50V 330P   | 2  | F1H1H331A004 |
| C2043    | ECUV1H101JCV | 50V 100P   | 1  | F1H1H101A004 |
| C2044,45 | ECUV1H391JCV | 50V 390P   | 2  | F1H1H391A004 |
| C2046    | ECUVNH102JCV | 50V 1000P  | 1  | F1H1H102A737 |
| C2047    | F1H1C103A071 | 16V 0.01U  | 1  |              |
| C2048    | ECUVNE153KBV | 25V 0.015  | 1  | F1H1E153A050 |
| C2050    | ECUVNC333KBV | 16V 0.033U | 1  | F1H1C333A071 |
| C2051    | ECUV1H680JCV | 50V 68P    | 1  |              |
| C2052,53 | ECUZNC104ZFV | 16V 0.1U   | 2  | F1H1C1040008 |
| C2054    | ECUV1H681JCV | 50V 680P   | 1  | ECJ1VC1H681J |
| C2055    |              |            |    |              |

|          |              |            |    |              |
|----------|--------------|------------|----|--------------|
|          | ECJ1VB1H682K | 50V 6800P  | 1  |              |
| C2056,57 | ECJ1VB1C104K | 16V 0.1U   | 2  |              |
| C2058    | ECUVNH102JCV | 50V 1000P  | 1  | F1H1H102A737 |
| C2059    | ECUV1H821JCV | 50V 820P   | 1  |              |
| C2060    | ECUVNH102JCV | 50V 1000P  | 1  | F1H1H102A737 |
| C2061,62 | ECUV1H331JCV | 50V 330P   | 2  | F1H1H331A004 |
| C2063-65 | ECUVNH102JCV | 50V 1000P  | 3  | F1H1H102A737 |
| C2066-68 | ECJ1VB1H472K | 50V 4700P  | 3  |              |
| C2501    | EEVHB0J101P  | 6.3V 100U  | 1  |              |
| C2502    | ECEV0JA331P  | 6.3V 330U  | 1  |              |
| C2503    | ECEV1CA101WP | 16V 100U   | 1  |              |
| C2504-08 | ECUZNC104ZFV | 16V 0.1U   | 5  | F1H1C1040008 |
| C2511,12 | ECUZNC104ZFV | 16V 0.1U   | 2  | F1H1C1040008 |
| C2601,02 | ECJ1VF1C104Z | 16V 0.1U   | 2  | <SPC>        |
| C3001,02 | ECEV0JA331P  | 6.3V 330U  | 2  |              |
| C3003-07 | ECUZNC104ZFV | 16V 0.1U   | 5  | F1H1C1040008 |
| C3008,09 | ECUVNA105ZFV | 10V 1U     | 2  | F1H1A105A030 |
| C3010-36 | ECUZNC104ZFV | 16V 0.1U   | 27 | F1H1C1040008 |
| C3041-45 | ECUZNC104ZFV | 16V 0.1U   | 5  | F1H1C1040008 |
| C3051,52 | ECUZNC104ZFV | 16V 0.1U   | 2  | F1H1C1040008 |
| C3054    | ECUV1H220JCV | 50V 22P    | 1  | ECJ1VC1H220J |
| C3061-67 | ECUZNC104ZFV | 16V 0.1U   | 7  | F1H1C1040008 |
| C3071,72 | ECUZNC104ZFV | 16V 0.1U   | 2  | F1H1C1040008 |
| C3073    | F3F1A1060002 | 10V 10U    | 1  |              |
| C3080    | ECEV0JA331P  | 6.3V 330U  | 1  |              |
| C3081,82 | ECUZNC104ZFV | 16V 0.1U   | 2  | F1H1C1040008 |
| C3083-86 | ECUVNJ105KBV | 6.3V 1U    | 4  | F1H0J105A002 |
| C3087-89 | ECUZNC104ZFV | 16V 0.1U   | 3  | F1H1C1040008 |
| C3100    | EEVHB0J101P  | 6.3V 100U  | 1  |              |
| C3101    | ECUZNC104ZFV | 16V 0.1U   | 1  | F1H1C1040008 |
| C3106    | ECUZNC104ZFV | 16V 0.1U   | 1  | F1H1C1040008 |
| C3111    | ECUZNC104ZFV | 16V 0.1U   | 1  | F1H1C1040008 |
| C3116    | ECUZNC104ZFV | 16V 0.1U   | 1  | F1H1C1040008 |
| C3210-14 | ECUZNC104ZFV | 16V 0.1U   | 5  | F1H1C1040008 |
| C4201    | F2G0J102A015 | 6.3V 1000P | 1  |              |
| C4208    | ECUZNC104ZFV | 16V 0.1U   | 1  | F1H1C1040008 |
| C4211    |              |            |    |              |

|          |              |            |   |              |
|----------|--------------|------------|---|--------------|
|          | F3F1A1060002 | 10V 10U    | 1 |              |
| C4215    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C4216    | F2G0J101A015 | 6.3V 100P  | 1 |              |
| C4217    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C4219,20 | F3F1A1060002 | 10V 10U    | 2 |              |
| C4221-27 | ECUZNC104ZFV | 16V 0.1U   | 7 | F1H1C1040008 |
| C5001,02 | ECJ1VF1C104Z | 16V 0.1U   | 2 | <SPC>        |
| C5201,02 | EEVHB1C100R  | 16V 10U    | 2 |              |
| C5203-06 | ECUZNC104ZFV | 16V 0.1U   | 4 | F1H1C1040008 |
| C5211    | EEVHB0J470R  | 6.3V 47U   | 1 |              |
| C5215    | EEVHB0J470R  | 6.3V 47U   | 1 |              |
| C5221    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C5222    | F3F1A1060002 | 10V 10U    | 1 |              |
| C5232-34 | ECUZNC104ZFV | 16V 0.1U   | 3 | F1H1C1040008 |
| C5235,36 | ECJ1VB1C104K | 16V 0.1U   | 2 |              |
| C5241-48 | ECUZNC104ZFV | 16V 0.1U   | 8 | F1H1C1040008 |
| C5251    | ECUV1H101JCV | 50V 100P   | 1 | F1H1H101A004 |
| C5252    | ECJ1VB1C104K | 16V 0.1U   | 1 |              |
| C5261    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C5262    | ECUV1H821JCV | 50V 820P   | 1 |              |
| C5263    | ECUV1H221JCV | 50V 220U   | 1 | ECJ1VC1H221J |
| C5264    | ECUV1H821JCV | 50V 820P   | 1 |              |
| C5271,72 | ECUZNC104ZFV | 16V 0.1U   | 2 | F1H1C1040008 |
| C5273    | ECJ1VB1H182K | 50V 1800P  | 1 |              |
| C5274    | ECJ1VB1C104K | 16V 0.1U   | 1 |              |
| C5282    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C5283,84 | ECUV1H561JCV | 50V 560P   | 2 | F1H1H561A004 |
| C5285    | ECUV1C273KBV | 16V 0.027U | 1 | F1H1C2730001 |
| C5288    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C5289-92 | ECJ1VB1C104K | 16V 0.1U   | 4 |              |
| C5295    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C5298    | ECUVNC473KBV | 16V 0.047U | 1 | F1H1C473A071 |
| C6201    | ECEV0GA330SR | 4V 33U     | 1 |              |
| C6202-06 | ECUZNC104ZFV | 16V 0.1U   | 5 | F1H1C1040008 |
| C6211    | ECUZNC104ZFV | 16V 0.1U   | 1 | F1H1C1040008 |
| C6212    | ECUV1H101JCV | 50V 100P   | 1 | F1H1H101A004 |
| C6215    |              |            |   |              |

|          |              |                |    |              |
|----------|--------------|----------------|----|--------------|
|          | ECJ1VB1C104K | 16V 0.1U       | 1  |              |
| C6221-23 | ECUZNC104ZFV | 16V 0.1U       | 3  | F1H1C1040008 |
| C6251    | ECUVNA105ZFV | 10V 1U         | 1  | F1H1A105A030 |
| C6252    | ECUV1H471JCV | 50V 470P       | 1  |              |
| C6253    | F3F1A1060002 | 10V 10U        | 1  |              |
| C6257    | EEVHB0J101P  | 6.3V 100U      | 1  |              |
| C6261    | ECUZNC104ZFV | 16V 0.1U       | 1  | F1H1C1040008 |
| C6262    | F3F1A1060002 | 10V 10U        | 1  |              |
| C6304,05 | ECUZNC104ZFV | 16V 0.1U       | 2  | F1H1C1040008 |
| C6501,02 | ECEV0GA330SR | 4V 33U         | 2  |              |
| C6503-05 | ECUZNC104ZFV | 16V 0.1U       | 3  | F1H1C1040008 |
| C6511,12 | ECJ1VC1H150J | 50V 15P        | 2  |              |
| C6521    | ECUZNC104ZFV | 16V 0.1U       | 1  | F1H1C1040008 |
| C6801,02 | ECEV0GA101SR | 4V 100U        | 2  |              |
| C6803-14 | ECJ1VF1C224Z | 16V 0.22U      | 12 |              |
| C6815    | ECUZNC104ZFV | 16V 0.1U       | 1  | F1H1C1040008 |
|          |              |                |    |              |
| CN1      | RJS2A5520-1  | CONNECTOR(20P) | 1  | K1MP20A00005 |
| CN402    | K1KA22A00044 | CONNECTOR(22P) | 1  |              |
| CN403    | VJP4369E026B | CONNECTOR(26P) | 1  | K1KA26A00089 |
| CN404    | RJP2G18ZA    | CONNECTOR(2P)  | 1  | K1KA02A00229 |
|          |              |                |    |              |
| CNA601   | RJS1A6604T1  | CONNECTOR(4P)  | 1  | K1MP04A00008 |
|          |              |                |    |              |
| CNB601   | RJS1A6604T1  | CONNECTOR(4P)  | 1  | K1MP04A00008 |
|          |              |                |    |              |
| D1,D2    | MA2J11100L   | DIODE          | 2  |              |
| D3,D4    | MA735TX      | DIODE          | 2  | MA2Q73500L   |
| D5       | SFPB-72V     | DIODE          | 1  | B0JCPC000004 |
| D6       | MA2J11100L   | DIODE          | 1  |              |
| D10      | MA8082M      | DIODE          | 1  | MAZ80820M    |
| D11,12   | MA2J11100L   | DIODE          | 2  |              |
| D13      | SFPB-72V     | DIODE          | 1  | B0JCPC000004 |
| D401-09  | MA2J11100L   | DIODE          | 9  |              |
| D601     | SELS5923C    | LED            | 1  | B3ADA0000083 |
| D603,04  | SELS5923C    | LED            | 2  | B3ADA0000083 |
| D606     |              |                |    |              |

|               |               |             |   |              |
|---------------|---------------|-------------|---|--------------|
|               | B3AHA0000009  | DIODE       | 1 |              |
| D801-08       | MA2J11100L    | DIODE       | 8 |              |
| D2001         | MA2J72800L    | DIODE       | 1 |              |
| D3071         | MA2J11100L    | DIODE       | 1 |              |
| D5261         | MA3X71600L    | DIODE       | 1 |              |
| D6215         | MA2J72800L    | DIODE       | 1 |              |
|               |               |             |   |              |
| FL4201        | VLF1491S105T  | CHIP FILTER | 1 | F1J1A1050021 |
| FL6251        | VLF1491S105T  | CHIP FILTER | 1 | F1J1A1050021 |
| FL6253,<br>54 | VLF1491S105T  | CHIP FILTER | 2 | F1J1A1050021 |
| FL6255        | VLF1491S104T  | CHIP FILTER | 1 | F1J1E1040022 |
|               |               |             |   |              |
| FP5001        | K1MN30B00098  | CONNECTOR   | 1 | <SPC>        |
| FP5002        | K1MN38B00005  | CONNECTOR   | 1 | <SPC>        |
| FP5003        | K1MN04B00036  | CONNECTOR   | 1 | <SPC>        |
| FP5201        | K1MN38A00005  | CONNECTOR   | 1 |              |
|               |               |             |   |              |
| IC1           | PQ1CZ31H2ZP   | IC          | 1 |              |
| IC2           | C0DBZHE00011  | IC          | 1 |              |
| IC3           | C0DBCFCG00003 | IC          | 1 |              |
| IC4           | C0DBZHE00011  | IC          | 1 |              |
| IC5           | NJM78M05FA    | IC          | 1 | C0CAADE00007 |
| IC6           | C0CAAHF00001  | IC          | 1 |              |
| IC7           | PQ1CZ31H2ZP   | IC          | 1 |              |
| IC402         | C2BBFD000350  | IC          | 1 |              |
| IC501         | C9ZB00000394  | IC          | 1 |              |
| IC601         | BU2050F-E2    | IC          | 1 | C1BB00000573 |
| IC801         | BA4558FHTT1   | IC          | 1 | C0ABBB000210 |
| IC802-05      | NJM4580EDTE1  | IC          | 4 | C0ABBB000125 |
| IC2001        | MN103S26EGA   | IC          | 1 |              |
| IC2501        | C0GBG0000020  | IC          | 1 |              |
| IC3001        | MN677531KA    | IC          | 1 |              |
| IC3061        | C3ABPG000063  | IC          | 1 |              |
| IC3071        | C0CBCBD00002  | IC          | 1 |              |
| IC4211        | C0FBBK000022  | IC          | 1 |              |
| IC5201        | AN8703FH      | IC          | 1 |              |

|               |              |                            |   |              |
|---------------|--------------|----------------------------|---|--------------|
| IC5261        | C0ABHB000004 | IC                         | 1 |              |
| IC5262        | C0ABBA000121 | IC                         | 1 |              |
| IC5264        | C0JBAR000155 | IC                         | 1 |              |
| IC6201        | MN102H60GFB  | IC                         | 1 |              |
| IC6211        | PST596JNR    | IC                         | 1 | C0EBE0000070 |
| IC6221        | C3EBFC000025 | IC                         | 1 |              |
| IC6222,<br>23 | C0JBAA000001 | IC                         | 2 |              |
| IC6251        | C0CBCBE00001 | IC                         | 1 |              |
| IC6261        | C0DBFFG00004 | IC                         | 1 |              |
| IC6301        | RFKFMA502160 | IC                         | 1 | <SPC>        |
| IC6501        | C1DB00000582 | IC                         | 1 |              |
| IC6521        | C0JBAB000356 | IC                         | 1 |              |
| IC6801        | MN5B00       | IC                         | 1 |              |
|               |              |                            |   |              |
| JK503         | K1U208B00003 | JK,VIDEO/S-VIDEO<br>OUTPUT | 1 |              |
|               |              |                            |   |              |
| K3002.03      | ERJ3GEY0R00Z | CHIP JUMPER                | 2 |              |
| K3201.02      | ERJ3GEY0R00Z | CHIP JUMPER                | 2 |              |
| K6251         | ERJ14Y0R00   | CHIP JUMPER                | 1 |              |
| K6813         | ERJ3GEY0R00Z | CHIP JUMPER                | 1 |              |
|               |              |                            |   |              |
| L1            | G0A200D00002 | COIL                       | 1 |              |
| L2            | G0ZZ00001930 | COIL                       | 1 |              |
| L3-L5         | G0A200D00002 | COIL                       | 3 |              |
| L6            | G0ZZ00001930 | COIL                       | 1 |              |
| L502          | ELJFCR68KF   | COIL                       | 1 |              |
| L506.07       | G0BYYYY00016 | COIL                       | 2 |              |
| L2001.02      | G1C100KA0019 | COIL                       | 2 |              |
| L2021         | G1C100KA0019 | COIL                       | 1 |              |
| L2501         | ERJ14Y0R00   | CHIP JUMPER                | 1 |              |
| L3071         | G1C100KA0008 | COIL                       | 1 |              |
| L4211         | G1C220K00011 | COIL                       | 1 |              |
| L5201.02      | ELJEA100KF   | COIL                       | 2 |              |
| L6501         | G1C220JA0010 | COIL                       | 1 |              |
| L6502         | ELJFC220KF   | COIL                       | 1 |              |
|               |              |                            |   |              |

|               |              |             |    |                    |
|---------------|--------------|-------------|----|--------------------|
|               |              |             |    |                    |
| LB3001,<br>02 | J0JHC0000045 | COIL        | 2  |                    |
| LB3201        | VLP0155-T    | COIL        | 1  | J0JCC0000119       |
| LB3202-04     | ERJ3GEYJ101V | CHIP JUMPER | 3  |                    |
| LB3206-08     | VLP0155-T    | COIL        | 3  | J0JCC0000119       |
| LB4200-17     | VLP0323A601R | COIL        | 18 | J0JCC0000062       |
| LB5001,<br>02 | VLP0323A601R | COIL        | 2  | J0JCC0000062 <SPC> |
| LB5201,<br>02 | VLP0323A601R | COIL        | 2  | J0JCC0000062       |
| LB5203-07     | J0JHC0000045 | COIL        | 5  |                    |
| LB5208-10     | VLP0323A601R | COIL        | 3  | J0JCC0000062       |
| LB5211        | VLP0155-T    | COIL        | 1  | J0JCC0000119       |
| LB5212-14     | VLP0323A601R | COIL        | 3  | J0JCC0000062       |
| LB5215        | J0JHC0000045 | COIL        | 1  |                    |
| LB5216-19     | VLP0155-T    | COIL        | 4  | J0JCC0000119       |
| LB5220,<br>21 | VLP0323A601R | COIL        | 2  | J0JCC0000062       |
| LB5222,<br>23 | VLP0155-T    | COIL        | 2  | J0JCC0000119       |
| LB5224,<br>25 | VLP0323A601R | COIL        | 2  | J0JCC0000062       |
| LB5226-29     | VLP0174      | COIL        | 4  | J0JDC0000002       |
| LB5230,<br>31 | VLP0155-T    | COIL        | 2  | J0JCC0000119       |
| LB6201        | VLP0323A601R | COIL        | 1  | J0JCC0000062       |
| LB6202        | VLP0155-T    | COIL        | 1  | J0JCC0000119       |
| LB6221        | VLP0323A601R | COIL        | 1  | J0JCC0000062       |
| LB6501,<br>02 | VLP0323A601R | COIL        | 2  | J0JCC0000062       |
| LB6512-14     | VLP0155-T    | COIL        | 3  | J0JCC0000119       |
| LB6515        | J0JCC0000077 | COIL        | 1  |                    |
| LB6521        | VLP0323A601R | COIL        | 1  | J0JCC0000062       |
| LB6522        | VLP0155-T    | COIL        | 1  | J0JCC0000119       |
| LB6801,<br>02 | J0JHC0000045 | COIL        | 2  |                    |
|               |              |             |    |                    |
| <u>PCB1</u>   | REP3379G-N   | PCB ASS'Y   | 1  | [RTL]              |
|               |              |             |    |                    |

|               |              |            |   |              |
|---------------|--------------|------------|---|--------------|
| <u>PCB2</u>   | REP3324AB-S  | PCB ASS'Y  | 1 | [RTL]        |
| <u>PCB3</u>   | REP3324DA-S  | PCB ASS'Y  | 1 | [RTL]        |
| <u>PCB301</u> | REP3082A-1N  | PCB ASS'Y  | 1 | [RTL]<SPC>   |
|               |              |            |   |              |
| PS3201        | K1KB22A00025 | CONNECTOR  | 1 |              |
| PS4201        | K1KB26A00027 | CONNECTOR  | 1 |              |
| PS6201        | VJS4047C010  | CONNECTOR  | 1 | K1MN10A00030 |
|               |              |            |   |              |
| Q1            | 2SD874QRSTX  | TRANSISTOR | 1 | 2SD08740WL   |
| Q2            | FMW1T98      | TRANSISTOR | 1 |              |
| Q3            | 2SB766ATX    | TRANSISTOR | 1 | 2SB0766A0L   |
| Q401-03       | 2SD1819A0L   | TRANSISTOR | 3 |              |
| Q404          | UN5214TX     | TRANSISTOR | 1 | UNR521400L   |
| Q405          | DTC114EUA106 | TRANSISTOR | 1 | B1GBCFJJ0007 |
| Q406          | UN5111TX     | TRANSISTOR | 1 | UNR511100L   |
| Q407          | DTC114EUA106 | TRANSISTOR | 1 | B1GBCFJJ0007 |
| Q505          | DTC114EUA106 | TRANSISTOR | 1 | B1GBCFJJ0007 |
| Q801-04       | B1GFGCAA0001 | TRANSISTOR | 4 |              |
| Q2001         | 2SD1819A0L   | TRANSISTOR | 1 |              |
| Q3101         | 2SB1218ARL   | TRANSISTOR | 1 |              |
| Q3106         | 2SB1218ARL   | TRANSISTOR | 1 |              |
| Q3111         | 2SB1218ARL   | TRANSISTOR | 1 |              |
| Q3116         | 2SB1218ARL   | TRANSISTOR | 1 |              |
| Q5211         | 2SB1115-T    | TRANSISTOR | 1 | B1BDBF000004 |
| Q5215         | 2SB1115-T    | TRANSISTOR | 1 | B1BDBF000004 |
| Q5261,62      | 2SC39300XL   | TRANSISTOR | 2 |              |
| Q5263         | 2SA15320XL   | TRANSISTOR | 1 |              |
| Q5264         | 2SC39300XL   | TRANSISTOR | 1 |              |
| Q5271         | UNR521100L   | TRANSISTOR | 1 |              |
|               |              |            |   |              |
| QR5221        | UN2121-TX    | TRANSISTOR | 1 | UNR212100L   |
| QR5241        | UN511MTX     | TRANSISTOR | 1 | UNR511M00L   |
| QR6215        | UN5212TX     | TRANSISTOR | 1 | UNR521200L   |
|               |              |            |   |              |
| R1,R2         | ERJ3GEYJ101V | 1/16W 100  | 2 |              |
| R3            | ERJ3GEYJ103V | 1/16W 10K  | 1 | D0GB103JA002 |
| R4            |              |            |   |              |

|         |              |            |   |              |
|---------|--------------|------------|---|--------------|
|         | ERJ3GEYJ222V | 1/16W 2.2K | 1 |              |
| R5      | ERJ3GEYJ822V | 1/16W 8.2K | 1 | D0GB822JA002 |
| R6      | ERJ3GEYJ102V | 1/16W 1K   | 1 |              |
| R7      | ERJ3GEYJ101V | 1/16W 100  | 1 |              |
| R8      | ERJ3GEYJ223V | 1/16W 22K  | 1 | D0GB223JA002 |
| R9      | ERJ3GEYJ122V | 1/16W 1.2K | 1 |              |
| R11     | ERJ3GEYJ101V | 1/16W 100  | 1 |              |
| R12     | ERJ3GEYJ471V | 1/16W 470  | 1 |              |
| R13     | ERJ3GEYJ332V | 1/16W 3.3K | 1 | D0GB332JA002 |
| R14     | ERJ3GEYJ222V | 1/16W 2.2K | 1 |              |
| R15     | ERJ3GEYJ333V | 1/16W 33K  | 1 | D0GB333JA002 |
| R16     | ERJ3GEYJ104V | 1/16W 100K | 1 | D0GB104JA002 |
| R17     | ERD2FCG100   | 1/4W 10    | 1 |              |
| R402    | ERJ3GEYJ102V | 1/16W 1K   | 1 |              |
| R403    | ERJ3GEYJ221V | 1/16W 220  | 1 |              |
| R405    | ERJ3GEYJ473V | 1/16W 47K  | 1 | D0GB473JA002 |
| R406    | ERJ3GEYJ102V | 1/16W 1K   | 1 |              |
| R407    | ERJ3GEYJ103V | 1/16W 10K  | 1 | D0GB103JA002 |
| R411    | ERJ3GEYJ472V | 1/16W 4.7K | 1 |              |
| R413    | ERJ3GEYJ473V | 1/16W 47K  | 1 | D0GB473JA002 |
| R415    | ERJ3GEYJ223V | 1/16W 22K  | 1 | D0GB223JA002 |
| R416-18 | ERJ3GEYJ472V | 1/16W 4.7K | 3 |              |
| R419,20 | ERJ3GEYJ103V | 1/16W 10K  | 2 | D0GB103JA002 |
| R421    | ERJ3GEYJ182V | 1/16W 1.8K | 1 |              |
| R422    | ERJ3GEYJ332V | 1/16W 3.3K | 1 | D0GB332JA002 |
| R423-25 | ERJ3GEYJ103V | 1/16W 10K  | 3 | D0GB103JA002 |
| R426,27 | ERJ3GEYJ472V | 1/16W 4.7K | 2 |              |
| R428    | ERJ3GEYJ473V | 1/16W 47K  | 1 | D0GB473JA002 |
| R429    | ERJ3GEYJ821V | 1/16W 820  | 1 |              |
| R430    | ERJ3GEYJ472V | 1/16W 4.7K | 1 |              |
| R431    | ERJ3GEYJ471V | 1/16W 470  | 1 |              |
| R432    | ERJ3GEYJ221V | 1/16W 220  | 1 |              |
| R433    | ERJ3GEYJ103V | 1/16W 10K  | 1 | D0GB103JA002 |
| R434,35 | ERJ3GEYJ221V | 1/16W 220  | 2 |              |
| R436    | ERJ3GEYJ823V | 1/16W 82K  | 1 | D0GB823JA002 |
| R437    | ERJ3GEYJ513V | 1/16W 51K  | 1 |              |
| R438    |              |            |   |              |

|         |              |            |   |              |
|---------|--------------|------------|---|--------------|
|         | ERJ3GEYJ472V | 1/16W 4.7K | 1 |              |
| R439    | ERJ3GEYJ221V | 1/16W 220  | 1 |              |
| R440    | ERJ3GEYJ103V | 1/16W 10K  | 1 | D0GB103JA002 |
| R441-43 | ERJ3GEYJ101V | 1/16W 100  | 3 |              |
| R444    | ERJ3GEYJ104V | 1/16W 100K | 1 | D0GB104JA002 |
| R445    | ERJ3GEYJ101V | 1/16W 100  | 1 |              |
| R446    | ERJ3GEYJ681V | 1/16W 680  | 1 | D0GB681JA002 |
| R447,48 | ERJ3GEYJ102V | 1/16W 1K   | 2 |              |
| R449    | ERJ3GEYJ473V | 1/16W 47K  | 1 | D0GB473JA002 |
| R450    | ERJ3GEYJ103V | 1/16W 10K  | 1 | D0GB103JA002 |
| R451    | ERJ3GEYJ222V | 1/16W 2.2K | 1 |              |
| R452,53 | ERJ3GEYJ103V | 1/16W 10K  | 2 | D0GB103JA002 |
| R456,57 | ERJ3GEYJ101V | 1/16W 100  | 2 |              |
| R501,02 | ERJ3GEYJ104V | 1/16W 100K | 2 | D0GB104JA002 |
| R510-12 | ERJ3EKF75R0V | 1/16W 75   | 3 |              |
| R513-16 | ERJ3GEYJ1R0V | 1/16W 1    | 4 |              |
| R521    | ERJ3GEYJ103V | 1/16W 10K  | 1 | D0GB103JA002 |
| R523    | ERJ3GEYJ222V | 1/16W 2.2K | 1 |              |
| R524    | ERJ3GEYJ822V | 1/16W 8.2K | 1 | D0GB822JA002 |
| R601    | ERJ3GEYJ102V | 1/16W 1K   | 1 |              |
| R602    | ERJ3GEYJ122V | 1/16W 1.2K | 1 |              |
| R603    | ERJ3GEYJ152V | 1/16W 1.5K | 1 |              |
| R604    | ERJ3GEYJ182V | 1/16W 1.8K | 1 |              |
| R607-10 | ERJ3GEYJ101V | 1/16W 100  | 4 |              |
| R611    | MCR03PZHJ561 | 1/16W 560  | 1 |              |
| R613,14 | MCR03PZHJ561 | 1/16W 560  | 2 |              |
| R615    | ERJ3GEYJ331V | 1/16W 330  | 1 | D0GB331JA002 |
| R616    | ERJ3GEYJ151V | 1/16W 150  | 1 |              |
| R801    | ERJ3GEYJ102V | 1/16W 1K   | 1 |              |
| R802    | ERJ3GEYJ562V | 1/16W 5.6K | 1 | D0GB562JA002 |
| R803,04 | ERJ3GEYJ102V | 1/16W 1K   | 2 |              |
| R805,06 | ERJ3GEYJ104V | 1/16W 100K | 2 | D0GB104JA002 |
| R807-10 | ERJ3GEYJ103V | 1/16W 10K  | 4 | D0GB103JA002 |
| R811,12 | ERJ3GEYJ223V | 1/16W 22K  | 2 | D0GB223JA002 |
| R813,14 | ERJ3GEYJ153V | 1/16W 15K  | 2 |              |
| R815,16 | ERJ3GEYJ102V | 1/16W 1K   | 2 |              |
| R817,18 |              |            |   |              |

|          |              |            |   |              |
|----------|--------------|------------|---|--------------|
|          | ERJ3GEYJ332V | 1/16W 3.3K | 2 | D0GB332JA002 |
| R819,20  | ERJ3GEYJ473V | 1/16W 47K  | 2 | D0GB473JA002 |
| R821,22  | ERJ3GEYJ101V | 1/16W 100  | 2 |              |
| R823,24  | ERJ3GEYJ104V | 1/16W 100K | 2 | D0GB104JA002 |
| R825,26  | ERJ3GEYJ153V | 1/16W 15K  | 2 |              |
| R827,28  | ERJ3GEYJ103V | 1/16W 10K  | 2 | D0GB103JA002 |
| R829,30  | ERJ3GEYJ223V | 1/16W 22K  | 2 | D0GB223JA002 |
| R831,32  | ERJ3GEYJ153V | 1/16W 15K  | 2 |              |
| R833,34  | ERJ3GEYJ102V | 1/16W 1K   | 2 |              |
| R835,36  | ERJ3GEYJ332V | 1/16W 3.3K | 2 | D0GB332JA002 |
| R837,38  | ERJ3GEYJ473V | 1/16W 47K  | 2 | D0GB473JA002 |
| R839-42  | ERJ3GEYJ104V | 1/16W 100K | 4 | D0GB104JA002 |
| R843     | ERJ3GEYJ102V | 1/16W 1K   | 1 |              |
| R844     | ERJ3GEYJ182V | 1/16W 1.8K | 1 |              |
| R845,46  | ERJ3GEYJ104V | 1/16W 100K | 2 | D0GB104JA002 |
| R847-50  | ERJ3GEYJ103V | 1/16W 10K  | 4 | D0GB103JA002 |
| R851,52  | ERJ3GEYJ223V | 1/16W 22K  | 2 | D0GB223JA002 |
| R853     | ERJ3GEYJ153V | 1/16W 15K  | 1 |              |
| R854     | ERJ3GEYJ223V | 1/16W 22K  | 1 | D0GB223JA002 |
| R855,56  | ERJ3GEYJ102V | 1/16W 1K   | 2 |              |
| R857,58  | ERJ3GEYJ332V | 1/16W 3.3K | 2 | D0GB332JA002 |
| R859,60  | ERJ3GEYJ473V | 1/16W 47K  | 2 | D0GB473JA002 |
| R861,62  | ERJ3GEYJ104V | 1/16W 100K | 2 | D0GB104JA002 |
| R863,64  | ERJ3GEYJ102V | 1/16W 1K   | 2 |              |
| R865,66  | ERJ3GEYJ104V | 1/16W 100K | 2 | D0GB104JA002 |
| R867-70  | ERJ3GEYJ103V | 1/16W 10K  | 4 | D0GB103JA002 |
| R871,72  | ERJ3GEYJ223V | 1/16W 22K  | 2 | D0GB223JA002 |
| R873,74  | ERJ3GEYJ153V | 1/16W 15K  | 2 |              |
| R875,76  | ERJ3GEYJ102V | 1/16W 1K   | 2 |              |
| R877,78  | ERJ3GEYJ332V | 1/16W 3.3K | 2 | D0GB332JA002 |
| R879,80  | ERJ3GEYJ473V | 1/16W 47K  | 2 | D0GB473JA002 |
| R881,82  | ERJ3GEYJ104V | 1/16W 100K | 2 | D0GB104JA002 |
| R2020    | ERJ3GEYJ183V | 1/16W 18K  | 1 | D0GB183JA002 |
| R2021    | ERJ3GEYJ473V | 1/16W 47K  | 1 | D0GB473JA002 |
| R2022,23 | ERJ3GEYJ752V | 1/16W 7.5K | 2 |              |
| R2025,26 | ERJ3GEYJ223V | 1/16W 22K  | 2 | D0GB223JA002 |
| R2027,28 |              |            |   |              |

|          |              |             |   |              |
|----------|--------------|-------------|---|--------------|
|          | ERJ3GEYJ563V | 1/16W 56K   | 2 |              |
| R2029,30 | ERJ3GEYJ102V | 1/16W 1K    | 2 |              |
| R2031    | MCR03PZHJ561 | 1/16W 560   | 1 |              |
| R2032    | ERJ3GEYJ103Z | 1/16W 10K   | 1 |              |
| R2033    | ERJ3GEYJ472V | 1/16W 4.7K  | 1 |              |
| R2034    | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
| R2035    | ERJ3GEYJ272V | 1/16W 2.7K  | 1 |              |
| R2036    | ERJ3GEY0R00Z | CHIP JUMPER | 1 |              |
| R2037    | ERJ3GEYJ683V | 1/16W 68K   | 1 | D0GB683JA002 |
| R2038    | ERJ3GEYJ153V | 1/16W 15K   | 1 |              |
| R2039    | ERJ3GEYJ105V | 1/16W 1M    | 1 |              |
| R2040,41 | ERJ3GEYJ822V | 1/16W 8.2K  | 2 | D0GB822JA002 |
| R2042-47 | ERJ3GEYJ153V | 1/16W 15K   | 6 |              |
| R2048    | ERJ3GEYJ475V | 1/16W 4.7M  | 1 |              |
| R2049    | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R2053,54 | ERJ3GEYJ473V | 1/16W 47K   | 2 | D0GB473JA002 |
| R2504,05 | ERJ3GEYJ101V | 1/16W 100   | 2 |              |
| R3001    | ERJ3GEYJ220V | 1/16W 22    | 1 |              |
| R3002    | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
| R3006,07 | ERJ3GEY0R00Z | CHIP JUMPER | 2 |              |
| R3031    | ERJ3GEYJ101V | 1/16W 100   | 1 |              |
| R3061    | ERJ3GEYJ101V | 1/16W 100   | 1 |              |
| R3080    | ERJ3RBD752V  | 1/16W 7.5K  | 1 |              |
| R3082    | ERJ3RBD202V  | 1/16W 2K    | 1 |              |
| R3083    | ERJ3RBD132V  | 1/16W 1.3K  | 1 |              |
| R3084    | ERJ3RBD752V  | 1/16W 7.5K  | 1 |              |
| R3085    | ERJ3RBD183V  | 1/16W 18K   | 1 |              |
| R3086    | ERJ3RBD432V  | 1/16W 4.3K  | 1 |              |
| R3087,88 | ERJ3RBD752V  | 1/16W 7.5K  | 2 |              |
| R3089    | ERJ3RBD682   | 1/16W 6.8K  | 1 | ERJ3RBD682V  |
| R3090    | ERJ3RBD272V  | 1/16W 2.7K  | 1 |              |
| R3101    | ERJ3RED750V  | 1/16W 75    | 1 |              |
| R3102    | ERJ3GEYJ330V | 1/16W 33    | 1 | D0GB330JA002 |
| R3103    | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R3106    | ERJ3RED750V  | 1/16W 75    | 1 |              |
| R3107    | ERJ3GEYJ330V | 1/16W 33    | 1 | D0GB330JA002 |
| R3108    |              |             |   |              |

|          |              |             |   |              |
|----------|--------------|-------------|---|--------------|
|          | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R3111    | ERJ3RED750V  | 1/16W 75    | 1 |              |
| R3112    | ERJ3GEYJ330V | 1/16W 33    | 1 | D0GB330JA002 |
| R3113    | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R3116    | ERJ3RED750V  | 1/16W 75    | 1 |              |
| R3117    | ERJ3GEYJ330V | 1/16W 33    | 1 | D0GB330JA002 |
| R3118    | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R3263    | ERJ3GEY0R00Z | CHIP JUMPER | 1 |              |
| R3266,67 | ERJ3GEY0R00Z | CHIP JUMPER | 2 |              |
| R4201    | ERJ3GEY0R00Z | CHIP JUMPER | 1 |              |
| R4204    | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R4211    | ERJ3GEYJ101V | 1/16W 100   | 1 |              |
| R5001,02 | ERJ3GEYJ560V | 1/16W 56    | 2 | <SPC>        |
| R5211    | ERJ3GEYJ2R2V | 1/16W 2.2   | 1 | D0GB2R2JA002 |
| R5212    | ERJ12YJ270H  | 1/2W 27     | 1 |              |
| R5213    | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
| R5214    | ERJ3GEYJ223V | 1/16W 22K   | 1 | D0GB223JA002 |
| R5215    | ERJ3GEYJ2R2V | 1/16W 2.2   | 1 | D0GB2R2JA002 |
| R5216    | ERJ12YJ270H  | 1/2W 27     | 1 |              |
| R5217    | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
| R5221    | ERJ3GEY0R00Z | CHIP JUMPER | 1 |              |
| R5222    | ERJ3GEYJ472V | 1/16W 4.7K  | 1 |              |
| R5231,32 | ERJ3GEYJ822V | 1/16W 8.2K  | 2 | D0GB822JA002 |
| R5233    | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R5241    | ERJ3GEYJ221V | 1/16W 220   | 1 |              |
| R5242    | ERJ3GEYJ823V | 1/16W 82K   | 1 | D0GB823JA002 |
| R5256    | ERJ3GEYF223  | 1/16W 22K   | 1 |              |
| R5257    | ERJ3GEYJ182V | 1/16W 1.8K  | 1 |              |
| R5258    | ERJ3GEYJ222V | 1/16W 2.2K  | 1 |              |
| R5261,62 | MCR03PZHJ561 | 1/16W 560   | 2 |              |
| R5263    | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
| R5264    | ERJ3GEYJ103Z | 1/16W 10K   | 1 |              |
| R5265    | ERJ3GEYJ104V | 1/16W 100K  | 1 | D0GB104JA002 |
| R5266    | ERJ3GEYJ563V | 1/16W 56K   | 1 |              |
| R5267    | ERJ3GEYJ334V | 1/16W 330K  | 1 |              |
| R5268    | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R5269    |              |             |   |              |

|               |              |             |   |              |
|---------------|--------------|-------------|---|--------------|
|               | ERJ3GEYJ104V | 1/16W 100K  | 1 | D0GB104JA002 |
| R5270         | ERJ3GEYJ273V | 1/16W 27K   | 1 | D0GB273JA002 |
| R5271,72      | ERJ3GEY0R00Z | CHIP JUMPER | 2 |              |
| R5281,82      | ERJ3GEYJ105V | 1/16W 1M    | 2 |              |
| R5286,87      | ERJ3GEYJ680V | 1/16W 68    | 2 | D0GB680JA002 |
| R5288         | ERJ3GEYJ562V | 1/16W 5.6K  | 1 | D0GB562JA002 |
| R5289         | ERJ3GEYJ472V | 1/16W 4.7K  | 1 |              |
| R5290         | ERJ3GEYJ562V | 1/16W 5.6K  | 1 | D0GB562JA002 |
| R5291         | ERJ3GEYJ472V | 1/16W 4.7K  | 1 |              |
| R5292         | ERJ3GEYJ562V | 1/16W 5.6K  | 1 | D0GB562JA002 |
| R5293         | ERJ3GEYJ472V | 1/16W 4.7K  | 1 |              |
| R5294         | ERJ3GEYJ562V | 1/16W 5.6K  | 1 | D0GB562JA002 |
| R5295         | ERJ3GEYJ472V | 1/16W 4.7K  | 1 |              |
| R5297         | ERJ3GEYJ101V | 1/16W 100   | 1 |              |
| R5304,05      | ERJ3GEY0R00Z | CHIP JUMPER | 2 |              |
| R6201         | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
| R6202-05      | ERJ3GEYJ103Z | 1/16W 10K   | 4 |              |
| R6206         | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R6207         | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
| R6211         | ERJ3GEYJ472V | 1/16W 4.7K  | 1 |              |
| R6215         | ERJ3GEYJ103Z | 1/16W 10K   | 1 |              |
| R6216         | ERJ3GEYJ102V | 1/16W 1K    | 1 |              |
| R6512         | ERJ3RBD331V  | 1/16W 330   | 1 |              |
| R6513         | ERJ3GEYJ103Z | 1/16W 10K   | 1 |              |
| R6514         | ERJ3GEYJ470V | 1/16W 47    | 1 |              |
| R6515         | ERJ3GEYJ100V | 1/16W 10    | 1 |              |
| R6801         | ERJ3GEYJ473V | 1/16W 47K   | 1 | D0GB473JA002 |
|               |              |             |   |              |
| RA2021        | EXBV4V102JV  | 1/32W 1K    | 1 |              |
| RA2022        | EXBV4V472JV  | 1/32W 470   | 1 |              |
| RA2501        | EXBV8V473JV  | 1/16W 47K   | 1 |              |
| RA3001        | EXBV4V102JV  | 1/32W 1K    | 1 |              |
| RA3002-08     | EXBV8V820JV  | 1/16W 82    | 7 |              |
| RA3009,<br>10 | EXBV8V331JV  | 1/16W 330   | 2 |              |
| RA3031-33     | EXBV4VR000V  | 1/32W 0     | 3 |              |
| RA5001        | EXBV4V560J   | 1/32W 56    | 1 | <SPC>        |

|           |              |                            |    |              |
|-----------|--------------|----------------------------|----|--------------|
| RA5002,03 | EXBV8V560JV  | 1/16W 56                   | 2  | <SPC>        |
| RA5201    | EXBV8V101JV  | 1/16W 100                  | 1  |              |
| RA6201,02 | EXBV4V103JV  | 1/32W 10K                  | 2  |              |
| RA6203    | EXBV4V472JV  | 1/32W 470                  | 1  |              |
| RA6204    | EXBV4V103JV  | 1/32W 10K                  | 1  |              |
| RA6205    | EXBV8V103J   | 1/16W 10K                  | 1  | D0GZ103J0001 |
| RA6206    | EXBV4V473JV  | 1/32W 47K                  | 1  |              |
| RA6207    | EXBV4V472JV  | 1/32W 470                  | 1  |              |
|           |              |                            |    |              |
| RJ701-12  | ERJ3GEY0R00V | CHIP JUMPER                | 12 |              |
| RJ801-07  | ERJ6GEY0R00V | CHIP JUMPER                | 7  |              |
| RJ901-03  | ERJ8GEY0R00V | CHIP JUMPER                | 3  | D0YFR0000002 |
|           |              |                            |    |              |
| S601-03   | EVQPJG05Q    | SW,OPERATION               | 3  |              |
| S605      | EVQPJG05Q    | SW,OPEN/CLOSE              | 1  |              |
| S1001     | RSH1A049-U   | SW,TRAY OPEN/CLOSE<br>DET. | 1  | K0F111E00093 |
| SW2601    | RSH1A048-A   | SW,TRV                     | 1  | <SPC>        |
|           |              |                            |    |              |
| SJ502     | ERJ3GEY0R00V | CHIP JUMPER                | 1  |              |
|           |              |                            |    |              |
| W3001     | ERJ3GEY0R00Z | CHIP JUMPER                | 1  |              |
|           |              |                            |    |              |
| X401      | RSXY8M00D01T | OSCILLATOR                 | 1  | H2B800400005 |
| X6501     | H0J368500003 | OSCILLATOR                 | 1  |              |
|           |              |                            |    |              |
| Z507      | J0JBC0000015 | COMPONENTS<br>COMBINATION  | 1  |              |
| Z508      | J0JBC0000015 | COMPONENTS<br>COMBINATION  | 1  |              |
| Z509      | J0JBC0000015 | COMPONENTS<br>COMBINATION  | 1  |              |
|           |              |                            |    |              |

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