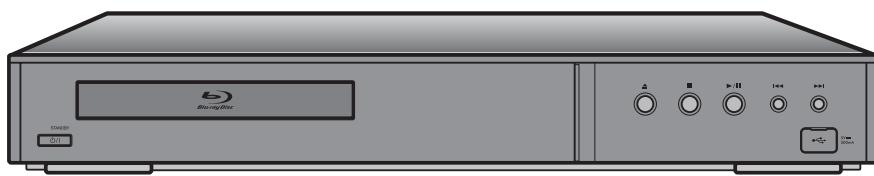




# SERVICE MANUAL

BLU-RAY DISC PLAYER

**XV-BP1J, XV-BP1C, XV-BP1B,  
XV-BP1E, XV-BP1EN, XV-BP1EV,  
XV-BP1EE, XV-BP1US,  
XV-BP1UX, XV-BP1UJ**



(Except J,C,UJ)

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

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# SPECIFICATION

For Northern America

| General                |   |
|------------------------|---|
| Power requirements     | AC 120 V~, 60 Hz  |
| Power consumption      | 18W   |
| Dimensions (W × H × D) | Approx. 16.9 x 2.1 x 9.7 inches (430 x 54 x 245 mm) without foot                                |
| Net Weight (Approx.)   | 6.2 lbs (2.8 kg)  |
| Operating temperature  | 41 °F to 95 °F (5 °C to 35 °C)  |
| Operating humidity     | 5 % to 90 %   |
| Outputs                |   |
| VIDEO OUT              | 1.0 V (p-p), 75 Ω, sync negative, RCA jack × 1  |
| COMPONENT VIDEO OUT    | (Y) 1.0 V (p-p), 75 Ω, sync negative, RCA jack × 1<br>(Pb)/(Pr) 0.7 V (p-p), 75 Ω, RCA jack × 2 |
| HDMI OUT (video/audio) | 19 pin (HDMI standard, Type A)  |
| ANALOG AUDIO OUT       | 2.0 Vrms (1 kHz, 0 dB), 600 Ω, RCA jack (L, R) × 1  |
| DIGITAL OUT (COAXIAL)  | 0.5 V (p-p), 75 Ω, RCA jack × 1   |
| DIGITAL OUT (OPTICAL)  | 3 V (p-p), Optical jack × 1   |
| System                 |   |
| Laser                  | Semiconductor laser, wavelength: 405nm / 650 nm   |
| Signal system          | Standard NTSC Color TV system   |
| Frequency response     | 20 Hz to 20 kHz (48 kHz, 96 kHz, 192 kHz sampling)  |
| Signal-to-noise ratio  | More than 100 dB (ANALOG OUT connectors only)   |
| Harmonic distortion    | Less than 0.008%  |
| Dynamic range          | More than 95 dB   |
| LAN port               | Ethernet jack × 1, 10BASE-T/100BASE-TX  |

Design and specifications are subject to change without prior notice.

**For Europe**

| <b>General</b>         |   |
|------------------------|---|
| Power requirements     | AC 220-240 V ~, 50/60 Hz  |
| Power consumption      | 18W   |
| Dimensions (W × H × D) | Approx. 430 × 54 × 245 mm without foot  |
| Net Weight (Approx.)   | 2.8 kg  |
| Operating temperature  | 5 °C to 35 °C   |
| Operating humidity     | 5 % to 90 %   |
| <b>Outputs</b>         |   |
| VIDEO OUT              | 1.0 V (p-p), 75 Ω, sync negative, RCA jack × 1  |
| COMPONENT VIDEO OUT    | (Y) 1.0 V (p-p), 75 Ω, sync negative, RCA jack × 1<br>(Pb)/(Pr) 0.7 V (p-p), 75 Ω, RCA jack × 2 |
| HDMI OUT (video/audio) | 19 pin (HDMI standard, Type A)  |
| ANALOGUE AUDIO OUT     | 2.0 Vrms (1 kHz, 0 dB), 600 Ω, RCA jack (L, R) × 1  |
| DIGITAL OUT (COAXIAL)  | 0.5 V (p-p), 75 Ω, RCA jack × 1   |
| DIGITAL OUT (OPTICAL)  | 3 V (p-p), Optical jack × 1   |
| <b>System</b>          |   |
| Laser                  | Semiconductor laser, wavelength: 405nm / 650 nm   |
| Signal system          | Standard PAL/NTSC Colour TV system  |
| Frequency response     | 20 Hz to 20 kHz (48 kHz, 96 kHz, 192 kHz sampling)  |
| Signal-to-noise ratio  | More than 100 dB (ANALOGUE OUT connectors only)   |
| Harmonic distortion    | Less than 0.008%  |
| Dynamic range          | More than 95 dB   |
| LAN port               | Ethernet jack × 1, 10BASE-T/100BASE-TX  |
| Bus power supply       | DC 5 V 500 mA   |

Design and specifications are subject to change without prior notice.

## For Asia

| General                |  |
|------------------------|--|
| Power requirements     | AC 110-240 V ~, 50/60 Hz                           |
| Power consumption      | 18W  |
| Dimensions (W × H × D) | Approx. 430 × 54 × 245 mm without foot             |
| Net Weight (Approx.)   | 2.8 kg   |
| Operating temperature  | 5 °C to 35 °C                                      |
| Operating humidity     | 5 % to 90 %  |
| Outputs                |  |
| VIDEO OUT              | 1.0 V (p-p), 75 Ω, sync negative, RCA jack × 1     |
| COMPONENT VIDEO OUT    | (Y) 1.0 V (p-p), 75 Ω, sync negative, RCA jack × 1 |
|                        | (Pb)/(Pr) 0.7 V (p-p), 75 Ω, RCA jack × 2          |
| HDMI OUT (video/audio) | 19 pin (HDMI standard, Type A)                     |
| ANALOGUE AUDIO OUT     | 2.0 Vrms (1 kHz, 0 dB), 600 Ω, RCA jack (L, R) × 1 |
| DIGITAL OUT (COAXIAL)  | 0.5 V (p-p), 75 Ω, RCA jack × 1                    |
| DIGITAL OUT (OPTICAL)  | 3 V (p-p), Optical jack × 1                        |
| System                 |  |
| Laser                  | Semiconductor laser, wavelength: 405nm / 650 nm    |
| Signal system          | Standard PAL/NTSC Colour TV system                 |
| Frequency response     | 20 Hz to 20 kHz (48 kHz, 96 kHz, 192 kHz sampling) |
| Signal-to-noise ratio  | More than 100 dB (ANALOGUE OUT connectors only)    |
| Harmonic distortion    | Less than 0.008%                                   |
| Dynamic range          | More than 95 dB                                    |
| LAN port               | Ethernet jack × 1, 10BASE-T/100BASE-TX             |
| Bus power supply       | DC 5 V 500 mA                                      |

Design and specifications are subject to change without prior notice.

# SECTION 1

## PRECAUTION

### 1.1 Safety Precautions

- (1) This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturers warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by ( $\Delta$ ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
- (4) The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
- (5) Leakage shock hazard testing

After reassembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).

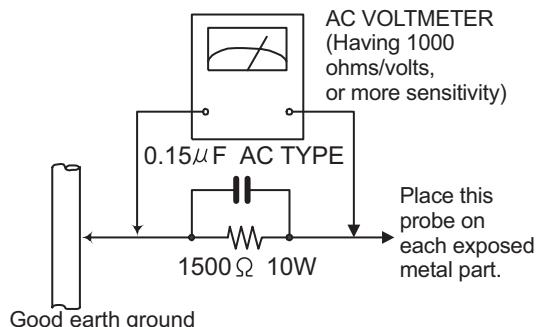
- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 $\Omega$  per volt or more sensitivity in the following manner. Connect a 1,500 $\Omega$  10W resistor paralleled by a 0.15 $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC

voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



### 1.2 Warning

- (1) This equipment has been designed and manufactured to meet international safety standards.
- (2) It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
- (3) Repairs must be made in accordance with the relevant safety standards.
- (4) It is essential that safety critical components are replaced by approved parts.
- (5) If mains voltage selector is provided, check setting for local voltage.

### 1.3 Caution

**Burrs formed during molding may be left over on some parts of the chassis.**

**Therefore, pay attention to such burrs in the case of performing repair of this system.**

### 1.4 Critical parts for safety

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (- - -), diode (| |) and ICP (●) or identified by the " $\Delta$ " mark nearby are critical for safety. When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (This regulation dose not Except the J and C version)

## 1.5 Preventing static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

### 1.5.1 Grounding to prevent damage by static electricity

Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as laser products.

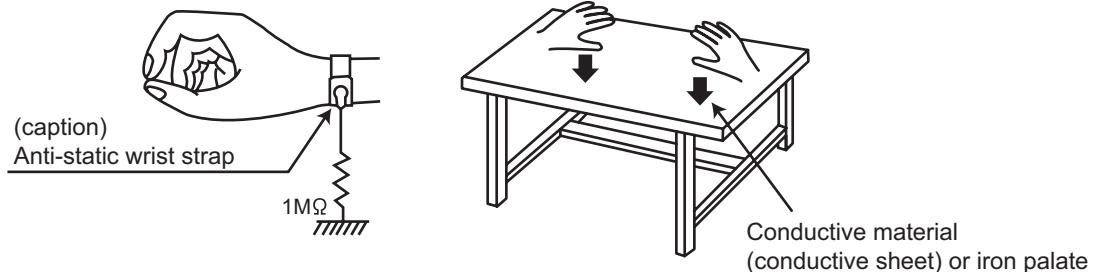
Be careful to use proper grounding in the area where repairs are being performed.

#### (1) Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

#### (2) Ground yourself

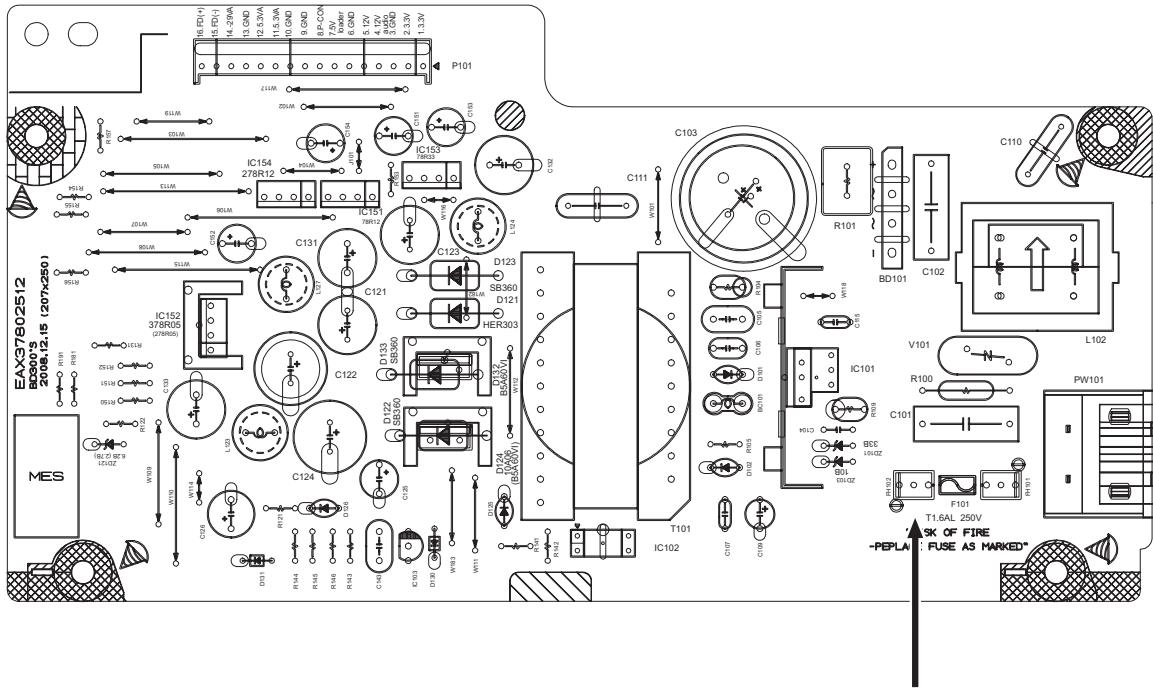
Use an anti-static wrist strap to release any static electricity built up in your body.



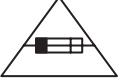
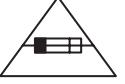
#### (3) Handling the optical pickup

- In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition.  
(Refer to the text.)
- Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

## 1.6 Importance administering point on the safety



fast blow type / type à fusion rapide

| Full Fuse Replacement Marking  | Marquage Pour Le Remplacement Complet De Fusible  |
|--|---|
| Graphic symbol mark<br>(This symbol means fast blow type fuse.)  | Le symbole graphique (Ce symbole signifie fusible de type à fusion rapide.)   |
|  should be read as follows ;          |  doit être interprété comme suit ;                |
| FUSE CAUTION   | PRECAUTIONS SUR LES FUSIBLES  |
| FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSES ;<br><br>F901 : 3.5A 125V | POUR UNE PROTECTION CONTINUE CONTRE DES RISQUES D'INCENDIE, remplacer SEULEMENT PAR UN FUSIBLE DU MEME TYPE ;<br><br>F901 : 3.5A 125V |

## 1.7 Important for laser products

### 1.CLASS 1 LASER PRODUCT

#### 2.CAUTION :

(For U.S.A.) Visible and/or invisible class II laser radiation when open. Do not stare into beam.  
 (Others) Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments.

**3.CAUTION :** Visible and/or invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

**4.CAUTION :** This laser product uses visible and/or invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

(For U.S.A.)

**CAUTION :** Visible and/or invisible class II laser radiation when open. Do not stare into beam.

(Others)

**CAUTION :** Visible and/or invisible class 1M laser radiation when open. Do not view directly with optical instruments

**ACHTUNG:** Sichtbare und/oder unsichtbare Laserstrahlung der Klasse 1M bei offenen Abdeckungen. Nicht direkt mit optischen Instrumenten betrachten.

**ATTENTION:** Rayonnement laser visible et/ou invisible de classe 1M une fois ouvert. Ne pas regarder directement avec des instruments optiques.

**VOORZICHTIG:** Zichtbare en/of onzichtbare klasse 1M laserstralen indien geopend. Bekijk niet direct met optische instrumenten.

**ATTENZIONE:** Radiazione laser in classe 1M visibile e/o invisibile quando aperto. Non osservare direttamente con strumenti ottici.

**WARNING:** Synlig och/eller osynlig laserstrålning, klass 1M, när denna del är öppnad. Betrakta ej strålen med optiska instrument.

**VARO!**: Avattaessa olet alittina näkyvälle ja/tai näkymättömälle luokan 1M lasersateilylle. Älä tarkastele sitä optisen laitteen läpi.

**ADVARSEL:** Synlig og/eller usynlig klasse 1M-laserstråling ved åbning. Se ikke direkte med optiske instrumenter.

**AVISO:** Radiación láser de clase 1M visible y/o invisible cuando está abierto. No mirar directamente con instrumental óptico.

**PRECAUÇÃO:** Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe directamente com instrumentos ópticos.

**5.CAUTION :** If safety switches malfunction, the laser is able to function.

**6.CAUTION :** Use of controls, adjustments or performance of procedures other than those specified here in may result in hazardous radiation exposure.



**CAUTION Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

**PRECAUÇÃO:** Radiação laser de classe 1M visível e/ou invisível quando aberto. Não olhe diretamente com instrumentos ópticos.

**ПРЕДУПРЕЖДЕНИЕ:** В открытом состоянии происходит видимое и/или невидимое излучение лазера класса 1М. Не смотрите непосредственно в оптические инструменты.

**UWAGA:** Otwarcie spowoduje narażenie na widzialne i/lub niewidzialne promieniowanie lasera klasy 1M. Nie patrzeć bezpośrednio w przyrządy optyczne.

**UPOZORNĚNÍ:** Při otevření vydává viditelné popř. neviditelné laserové ozáření třídy 1M. Nedívajte se do otvoru přímo s optickými nástroji.

**FIGYELMEZETÉS:** Látható és/vagy láthatatlan 1M osztályú sugárzás nyitott állapotban. Ne nézze közvetlenül optikai műszerekkel.

**注意 :** 打開蓋板可能會產生可見或不可見的 1M 級鐳射。  
 不要使用光學儀器直接進行窺視。

**注意：** 打开盖板可能会产生可见或不可见的 1M 级镭射。  
 不要使用光学仪器直接进行窥视。

**تنبيه:** يوجد إشعاع ليزري مرئي أو غير مرئي من الفئة 1M عندما يكون الجهاز مفتوحاً. يجب النظر مباشرة داخل الجهاز باستخدام أدوات بصريّة.

**احتیاط:** هنگامی که باز گردد، تشعشع مرئی و یا نامرئی کلاس 1M لیزر وجود دارد. با لوازم چشمی مستقیماً به آن نگاه نکنید.

**주의:** 개방하면 가시 및/또는 비가시 클래스 1M 레이저 방사선이 나옵니다. 광학 기구로 직접 들여다보지 마십시오.

## REPRODUCTION AND POSITION OF LABELS and PRINT WARNING LABEL and PRINT



|   |  |   |   |  |  |
|---|--|---|---|--|--|
| <b>CAUTION</b><br>VISIBLE AND/OR INVISIBLE CLASS 1M LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.<br>IEC60825-1:2001 (ENG) | <b>ATTENTION</b><br>RAYONNEMENT LASER VISIBLE ET/OU INVISIBLE DE CLASSE 1M QUANDO ESTA ABERTO. NO MIRAR DIRECTEMENTE CON INSTRUMENTOS OPTICOS. (FRA) | <b>AVISO</b><br>RADIACION LASER VISIBLE Y/O INVISIBLE DE CLASE 1M CUANDO ESTA ABIERTO. NO MIRAR DIRECTAMENTE CON INSTRUMENTAL OPTICO. (ESP) | <b>WARNING</b><br>SYNLIG OCH/ELLER OSYNLIG LASERSTRÄLLNING, KLASSE 1M, NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN MED OPTISKA INSTRUMENT. (SWE) | <b>注意</b><br>ここを聞くと可視及び/または不可視のクラス 1M レーザー輻射が出現します。光学装置で直接見ないでください。(JPN) | <b>CAUTION</b><br>VISIBLE AND/OR INVISIBLE CLASS II LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.<br>FDA 21 CFR (ENG)<br>LV44603-003A (SWE) |
|---|--|---|---|--|--|

## **SECTION 2**

### **SPECIFIC SERVICE INSTRUCTIONS**

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

## SECTION 3 DISASSEMBLY

### 3.1 Main body

#### 3.1.1 Removing the Top cover (See Fig.1)

- (1) Remove the three screws **A** attaching the Top cover.

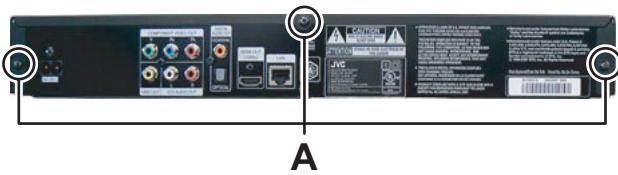


Fig.1

#### 3.1.2 Removing the Front panel (See Fig.2 to 4)

- (1) Disconnect the card wire from Front panel connected to connector [CN202](#) of the Main board. (See Fig.2)
- (2) Disengage four hooks **a** engaged top side of the Front panel. (See Fig.2)

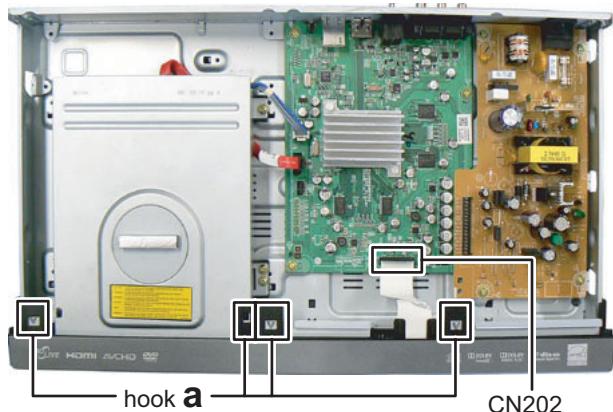


Fig.2

- (3) Disengage two hooks **b** engaged both side of the Front panel. (See Fig.3)

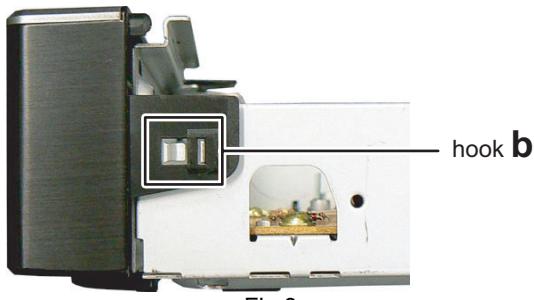


Fig.3

- (4) Disengage three hooks **c** engaged bottom side of the Front panel. (See Fig.4)

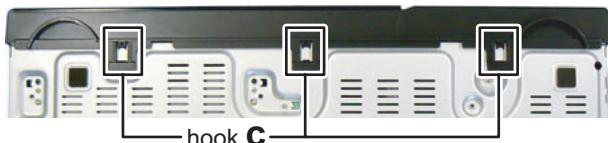


Fig.4

### 3.2 Removing the Blu-ray drive unit (See Fig.5)

- (1) Disconnect the connector wire from Blu-ray drive unit connected to connector [CN801](#) of the Main board.
- (2) Disconnect the FFC cable connected to connector [CN802](#) of the Main board.
- (3) Remove the four screws **B** attaching the Blu-ray drive unit.

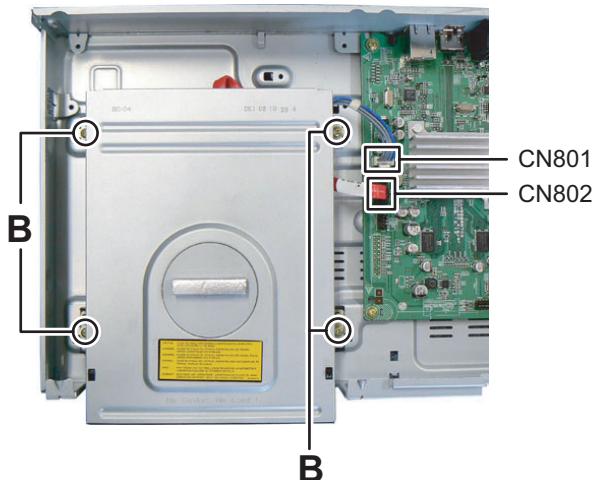


Fig.5

### 3.3 Removing the SMPS board (See Fig.6, 7)

- (1) Remove the one screw **C** attaching the AC jack. (See Fig.6)

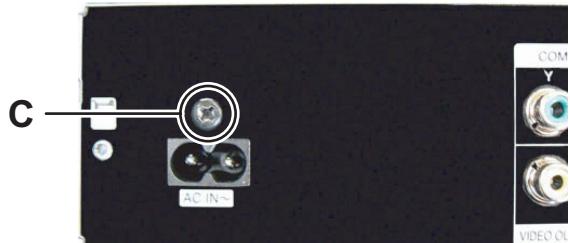


Fig.6

- (2) Remove the four screws **D** attaching the SMPS board. (See Fig.7)
- (3) Disconnect the B-B connector **P101** of the SMPS board from Main board. (See Fig.7)

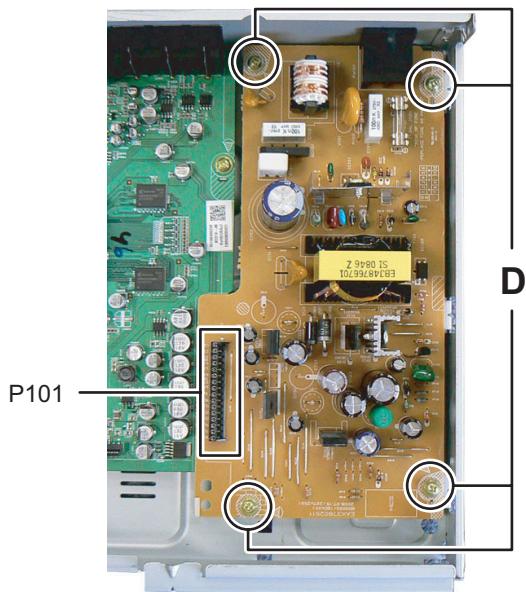


Fig.7

#### 3.4 Removing the Main board (See Fig.8, 9)

- (1) Remove the two screws **E** attaching the RCA jacks. (See Fig.8)
- (2) Remove the one screw **F** attaching the HDMI jack. (See Fig.8)

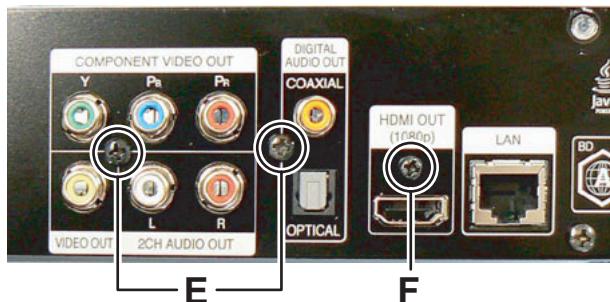


Fig.8

- (3) Remove the three screws **G** attaching the Main board. (See Fig.9)

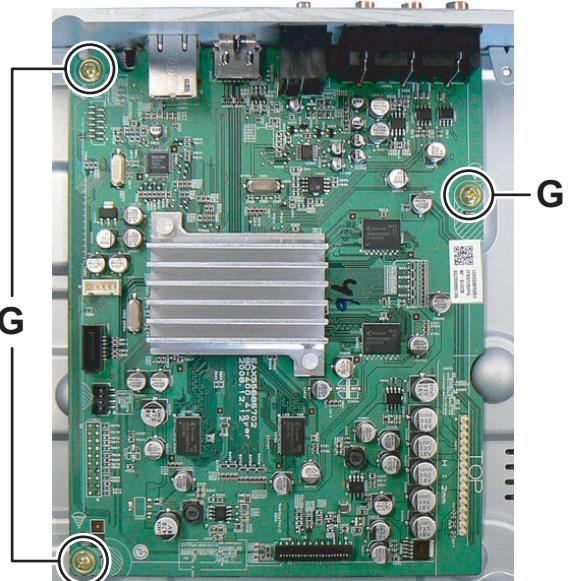


Fig.9

#### 3.5 Removing the Timer board (See Fig.10)

- (1) Remove the five screws **H** attaching the Timer board.

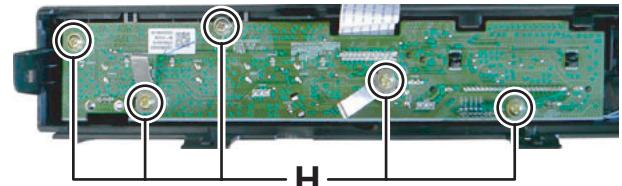


Fig.10

#### 3.6 Removing the Key board (See Fig.11)

- (1) Remove the one screw **J** attaching the Key board.

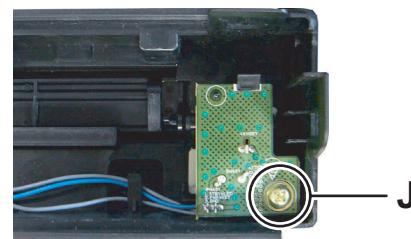


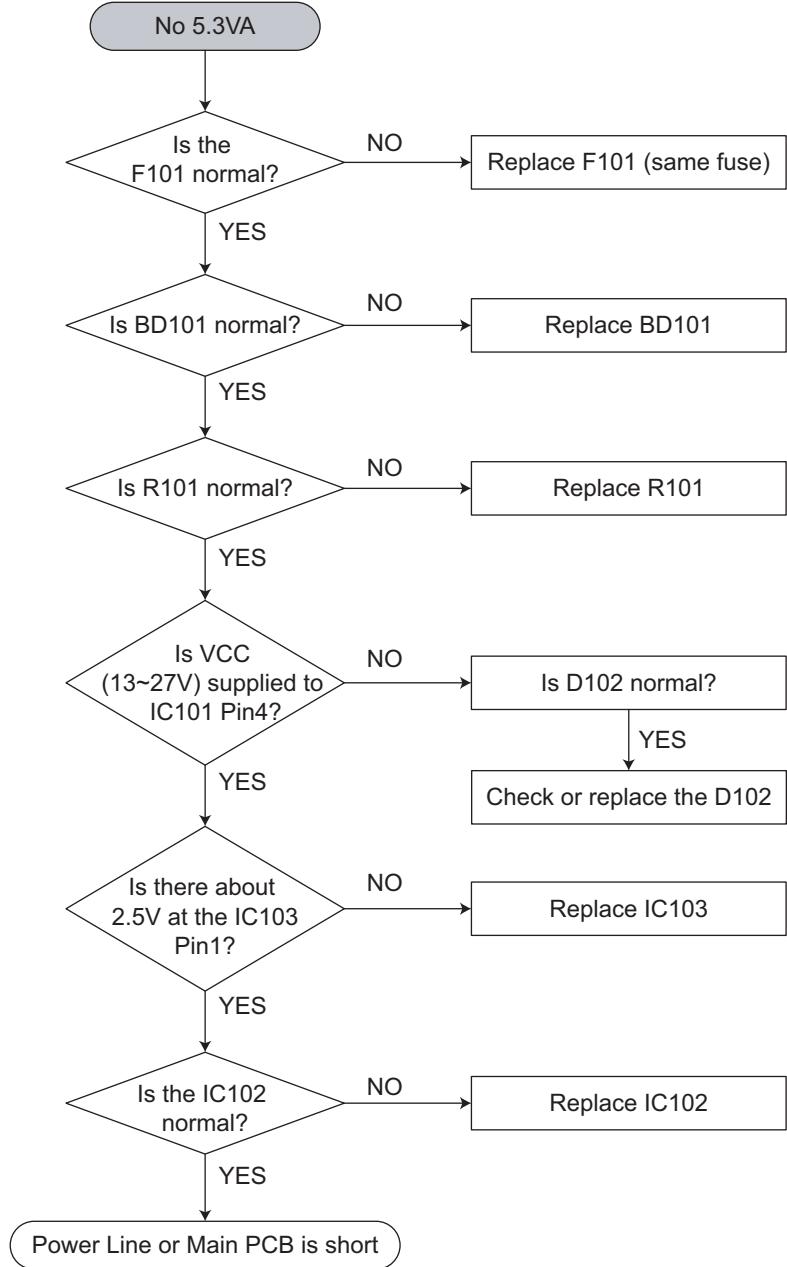
Fig.11

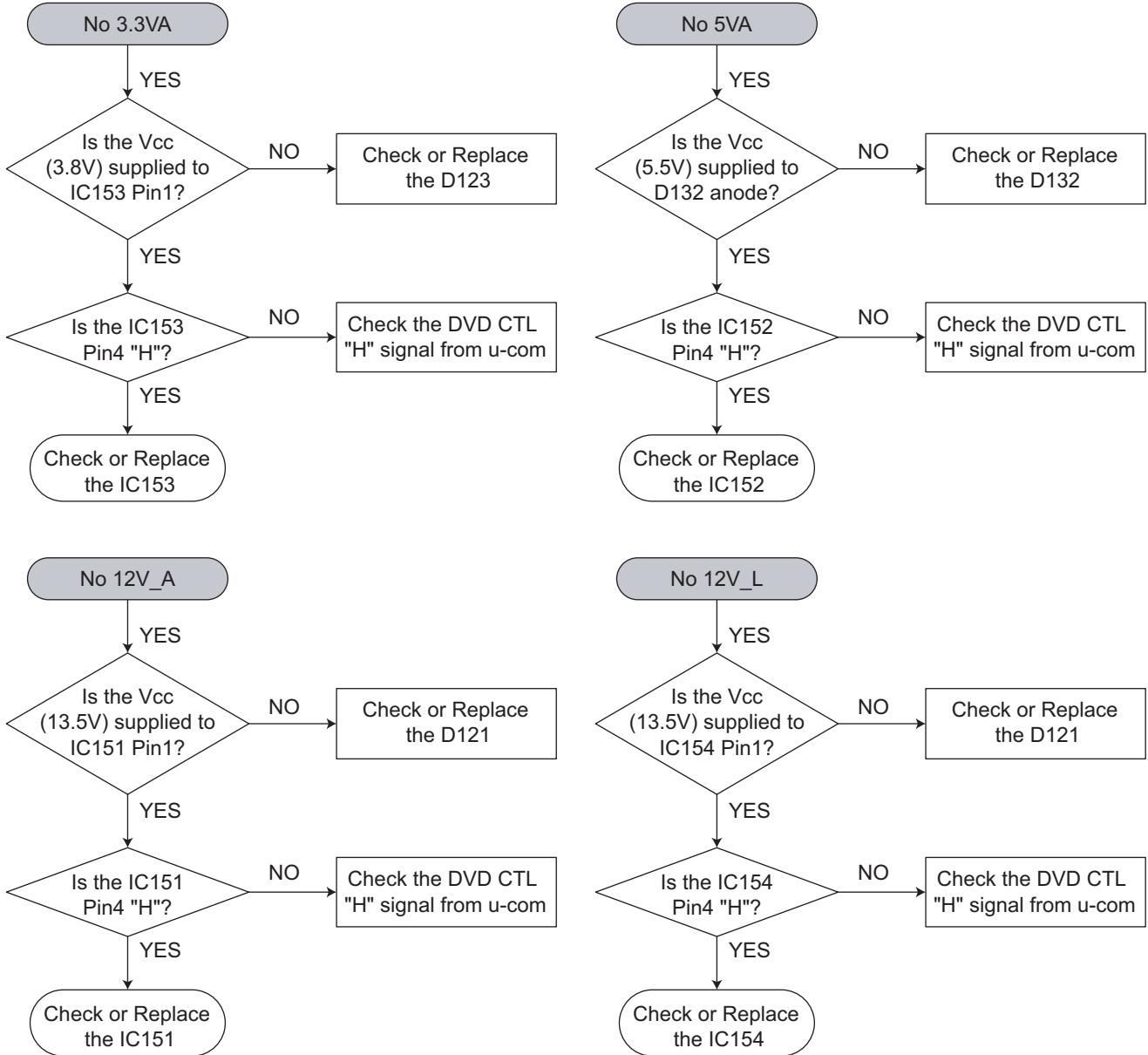
## SECTION 4 ADJUSTMENT

This service manual does not describe ADJUSTMENT.

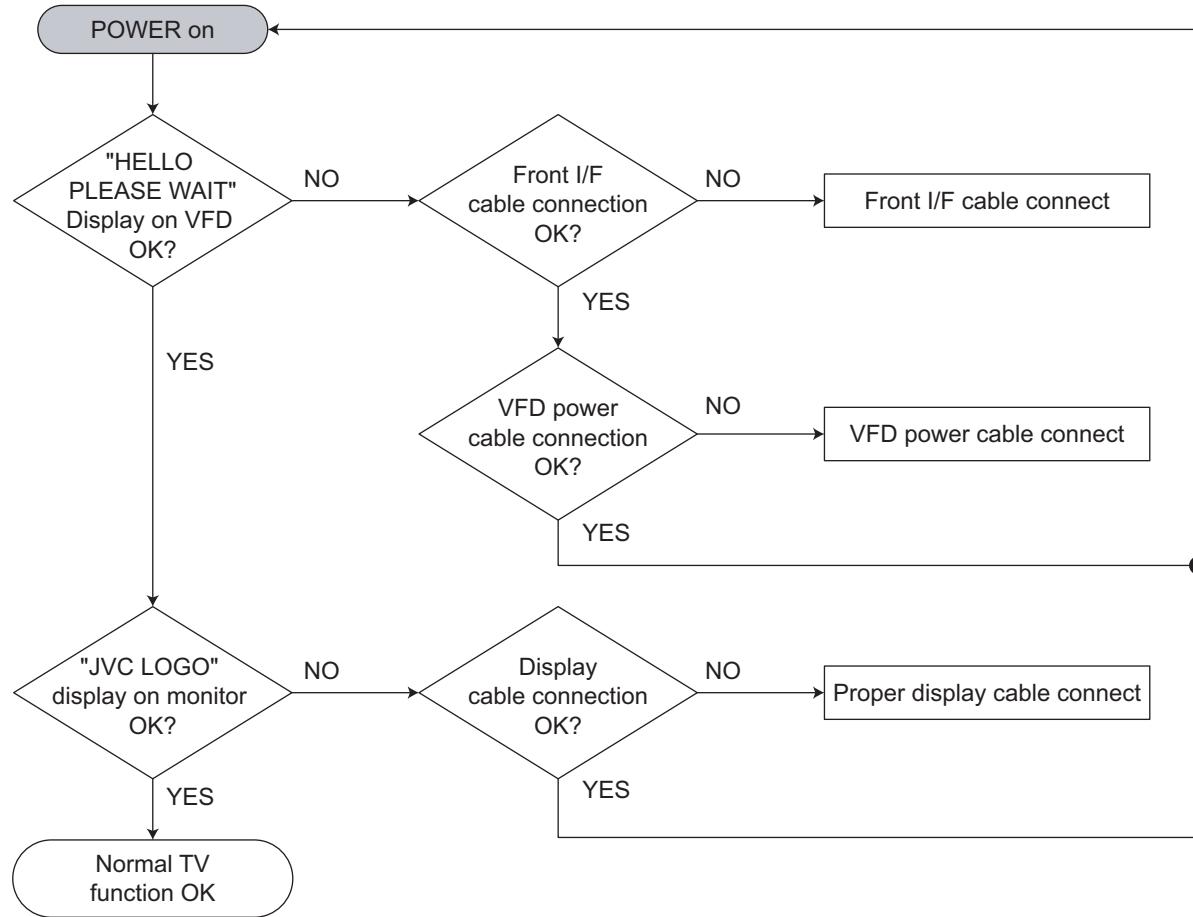
## SECTION 5 TROUBLESHOOTING

### 5.1 Power supply (SMPS)

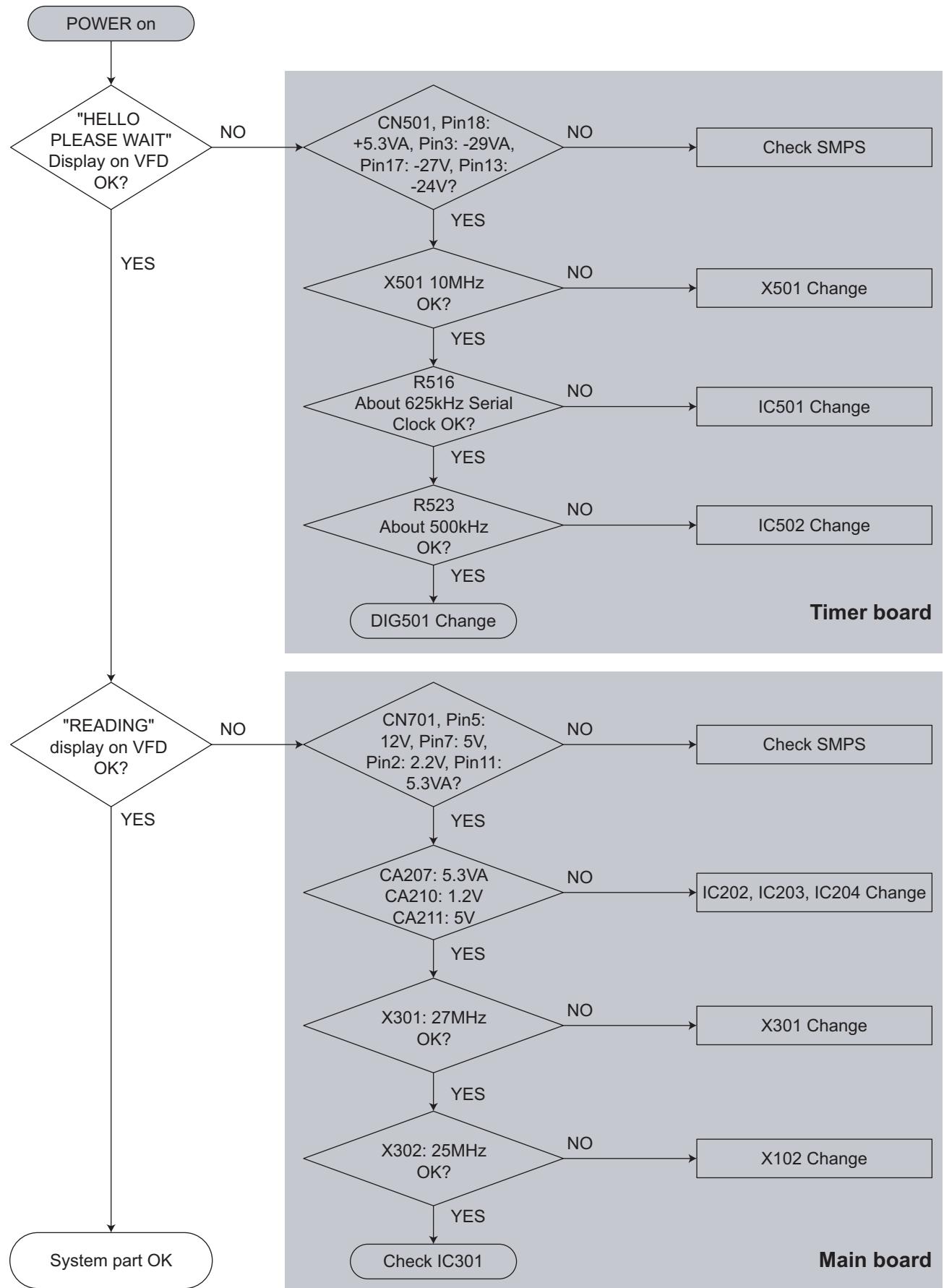




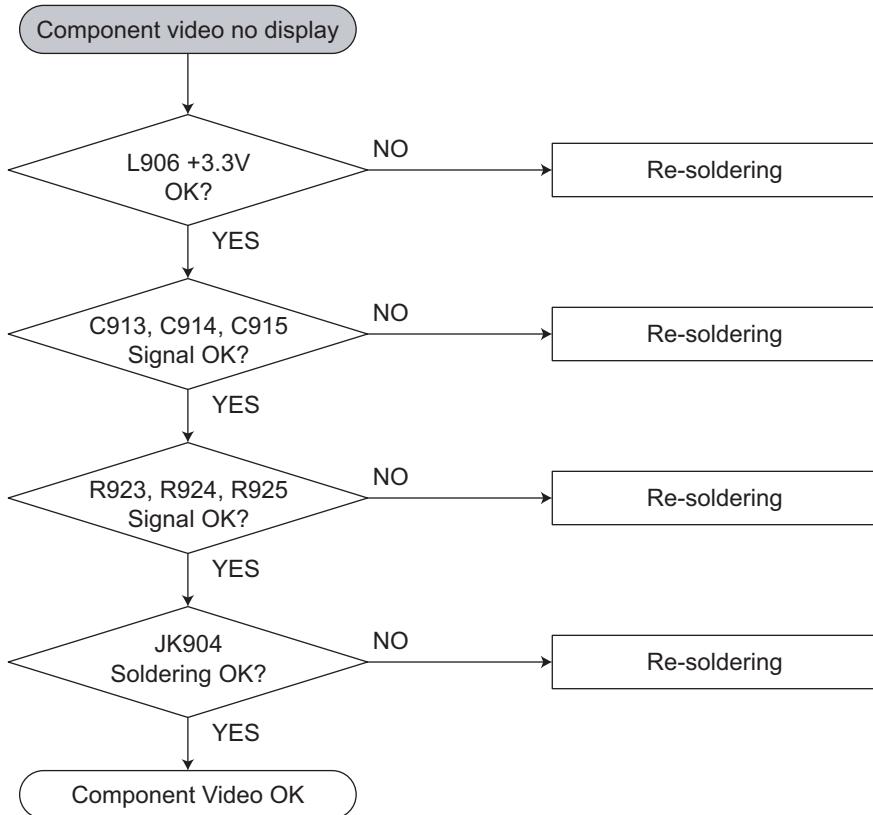
## 5.2 Power ON



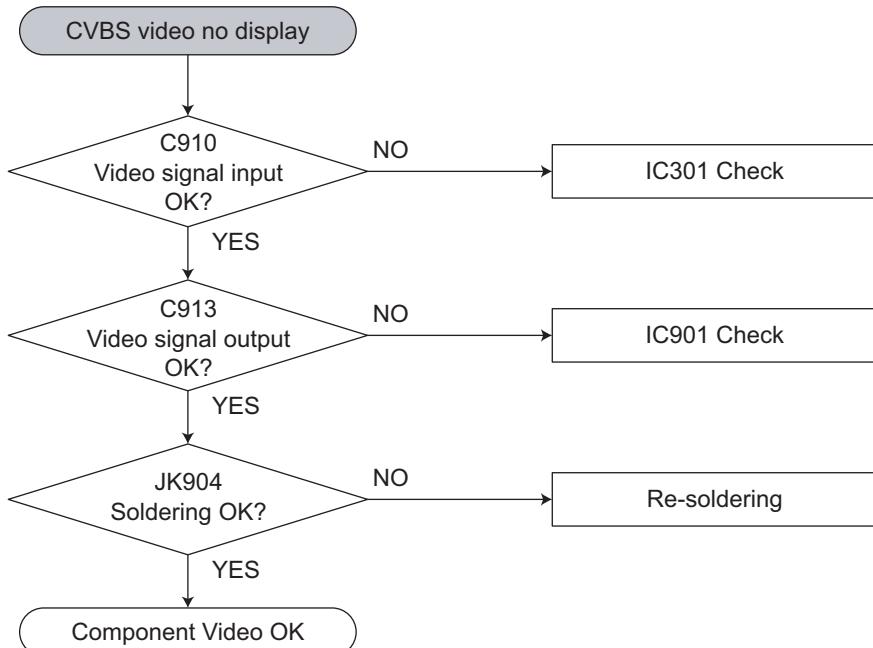
### 5.3 SYSTEM PART



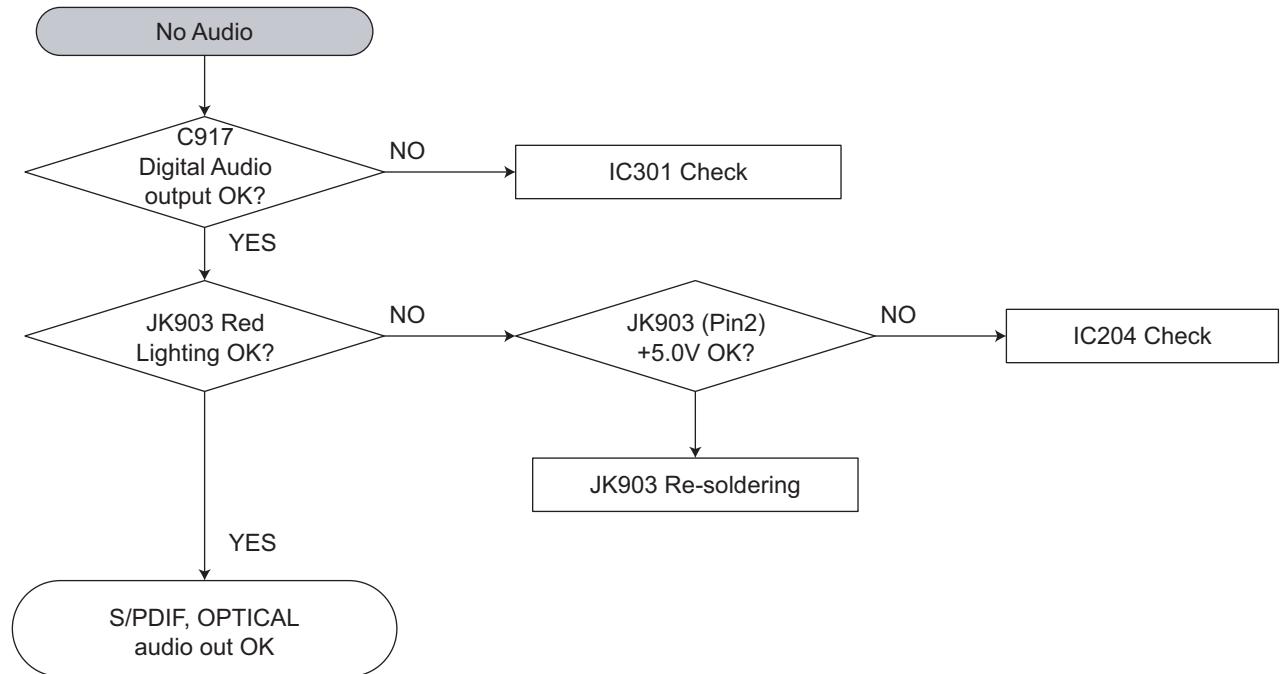
## 5.4 COMPONENT (Y,Pb,Pr) VIDEO OUT



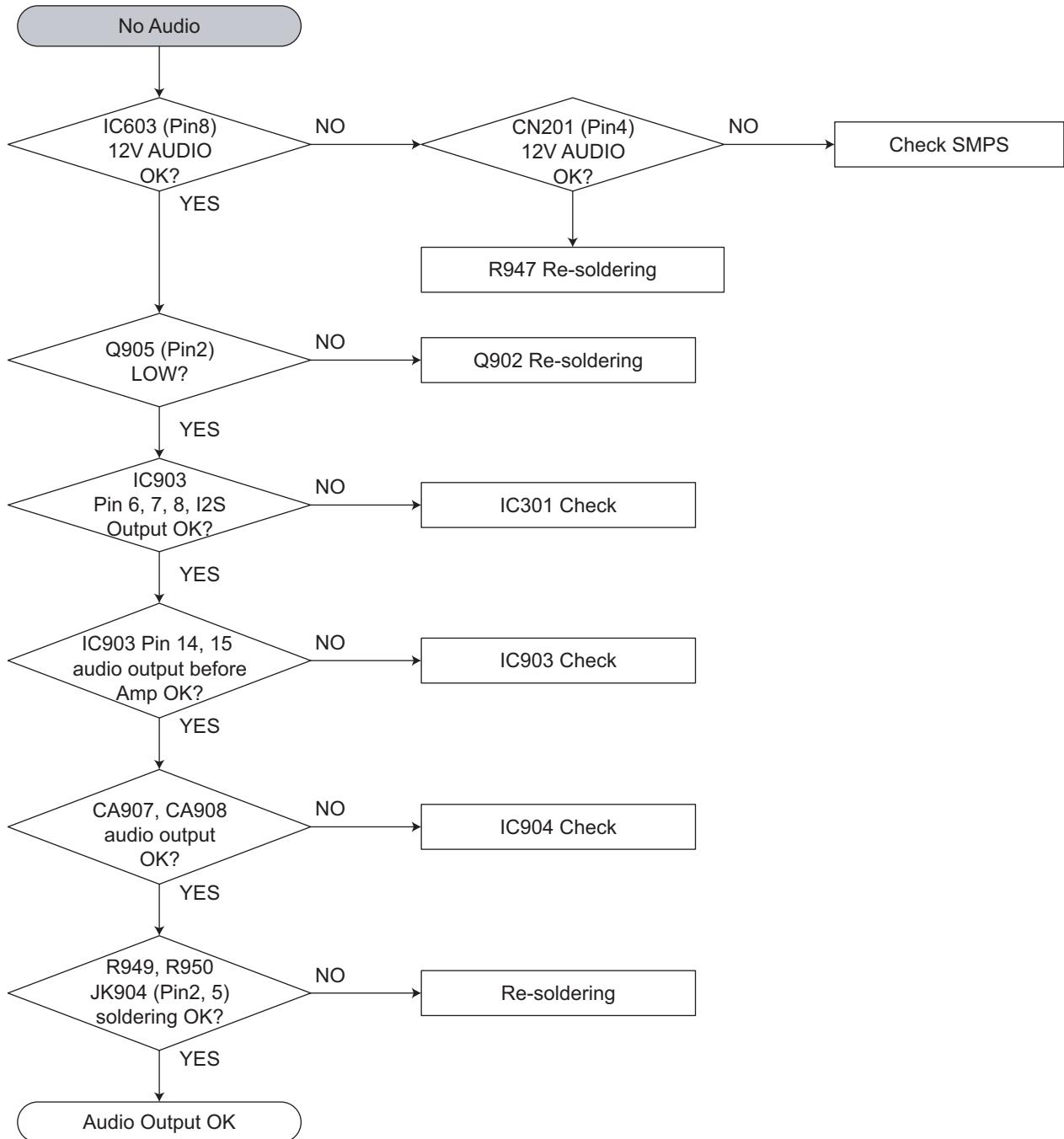
## 5.5 CVBS VIDEO OUT



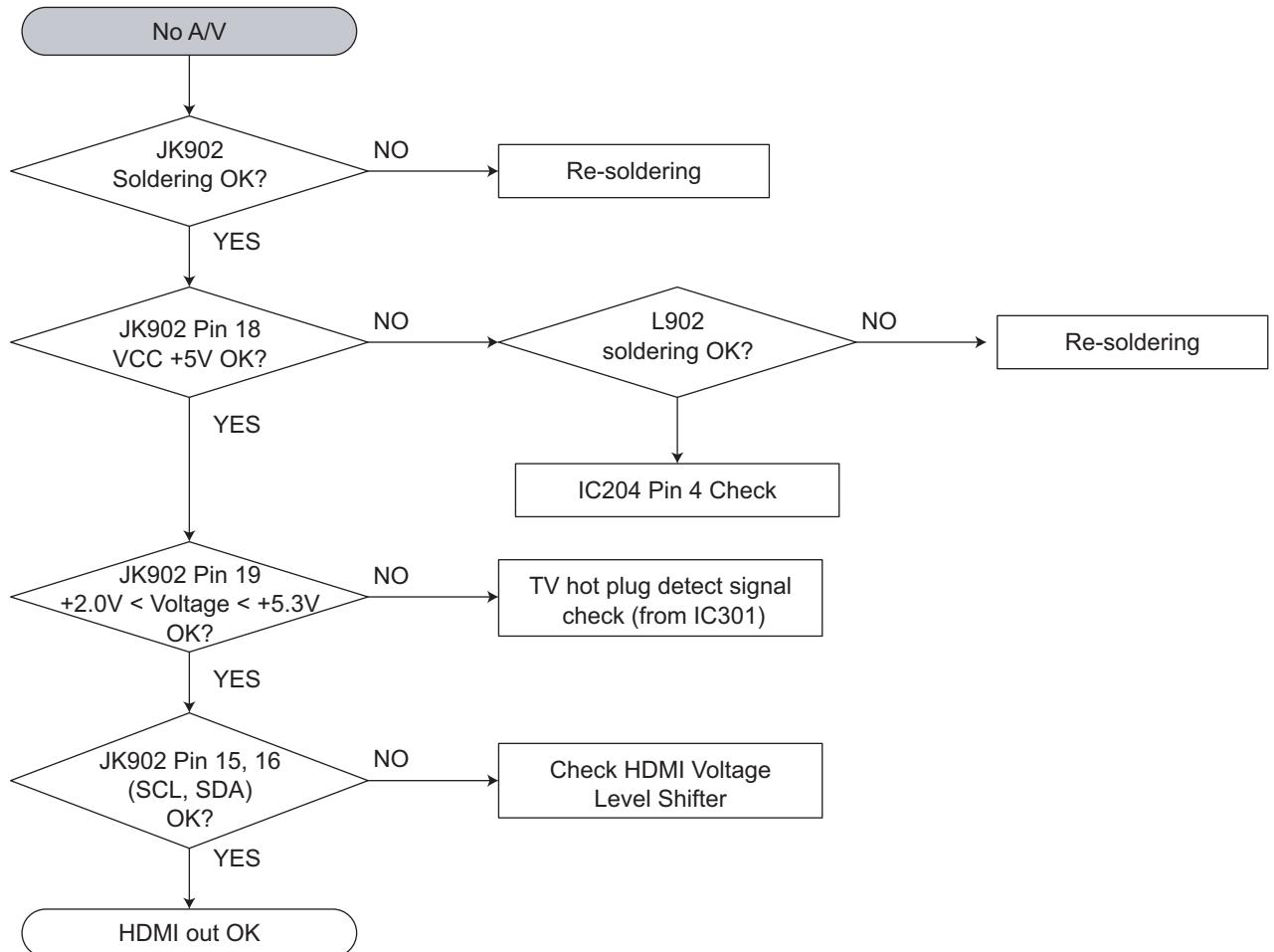
## 5.6 AUDIO (S/PDIF, OPTICAL)



## 5.7 AUDIO (ANALOG)



## 5.8 HDMI





**Victor Company of Japan, Limited**  
Audio/Video Systems Division 10-1, 1chome, Ohwatari-machi, Maebashi-city, 371-8543, Japan

---

(No. MB706<Rev.002>)

Printed in Japan  
VSE

# JVC

# SCHEMATIC DIAGRAMS

Blu-ray Disc Player

**XV-BP1J, XV-BP1C, XV-BP1B,  
XV-BP1E, XV-BP1EN, XV-BP1EV,  
XV-BP1EE, XV-BP1US, XV-BP1UX,  
XV-BP1UJ**

DVD-ROM No.SML2009Q1



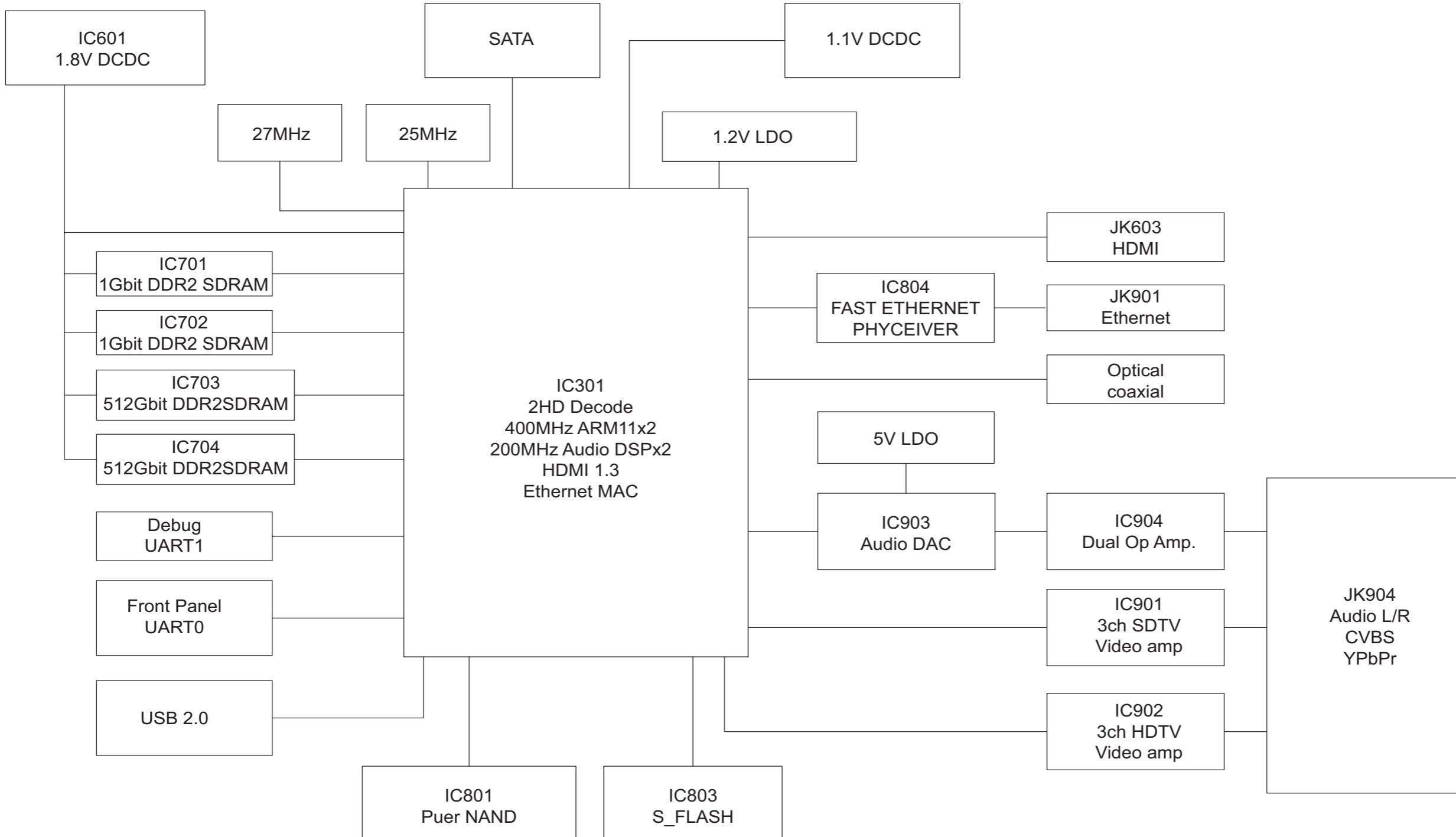
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

## Contents

|                             |            |
|-----------------------------|------------|
| Block diagrams              | 2-1        |
| Standard schematic diagrams | 2-2        |
| Printed circuit boards      | 2-11 to 12 |

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (—), diode (■) and ICP (●) or identified by the "Δ" mark nearby are critical for safety.

## Block diagram



# Standard schematic diagrams

## ■ SMPS CIRCUIT DIAGRAM

### IMPORTANT SAFETY

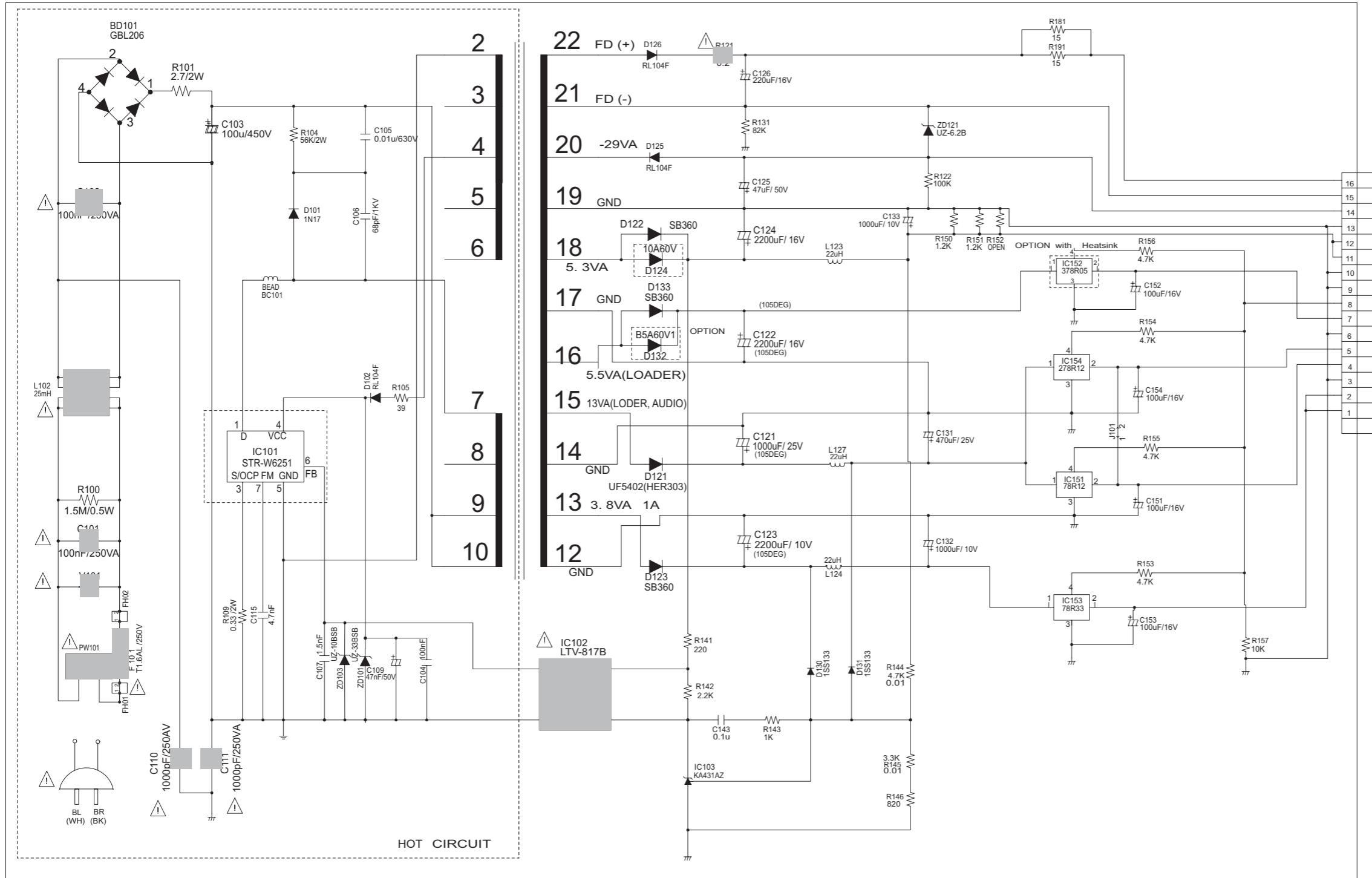
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE JVC. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE SHADED ON THE

SCHEMATIC FOR EASY IDENTIFICATION. THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

### NOTE:

1. Shaded (■) parts are critical for safety. Replace only with specified part number
2. Voltages are DC-measured with a digital voltmeter during Play mode.

T101EER3530

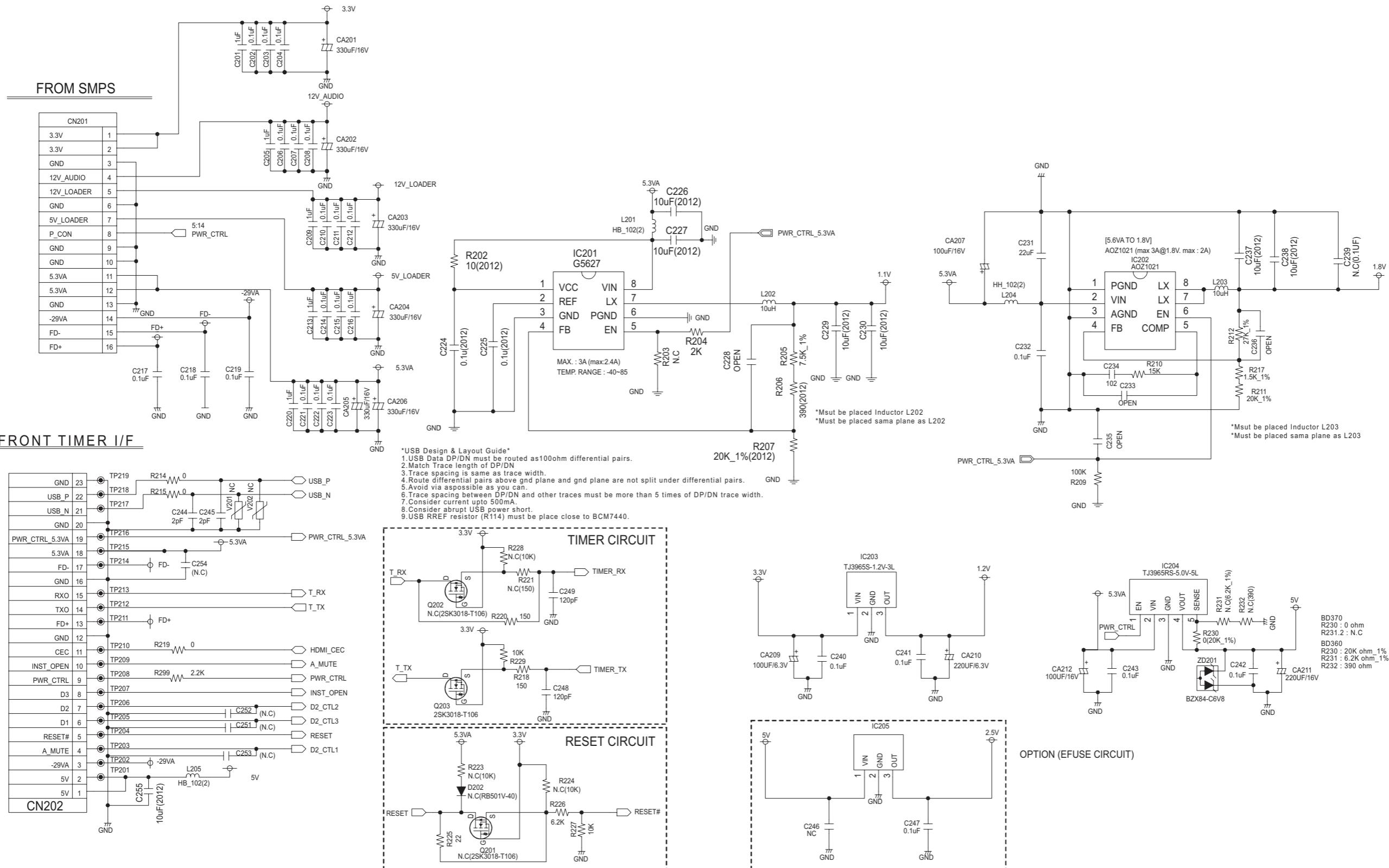


NOTES)  $\perp$  Symbol denotes AC ground.  
 $\not\perp$  Symbol denotes DC chassis ground.

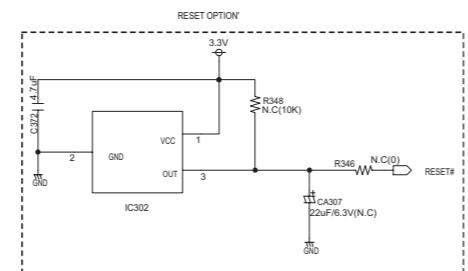
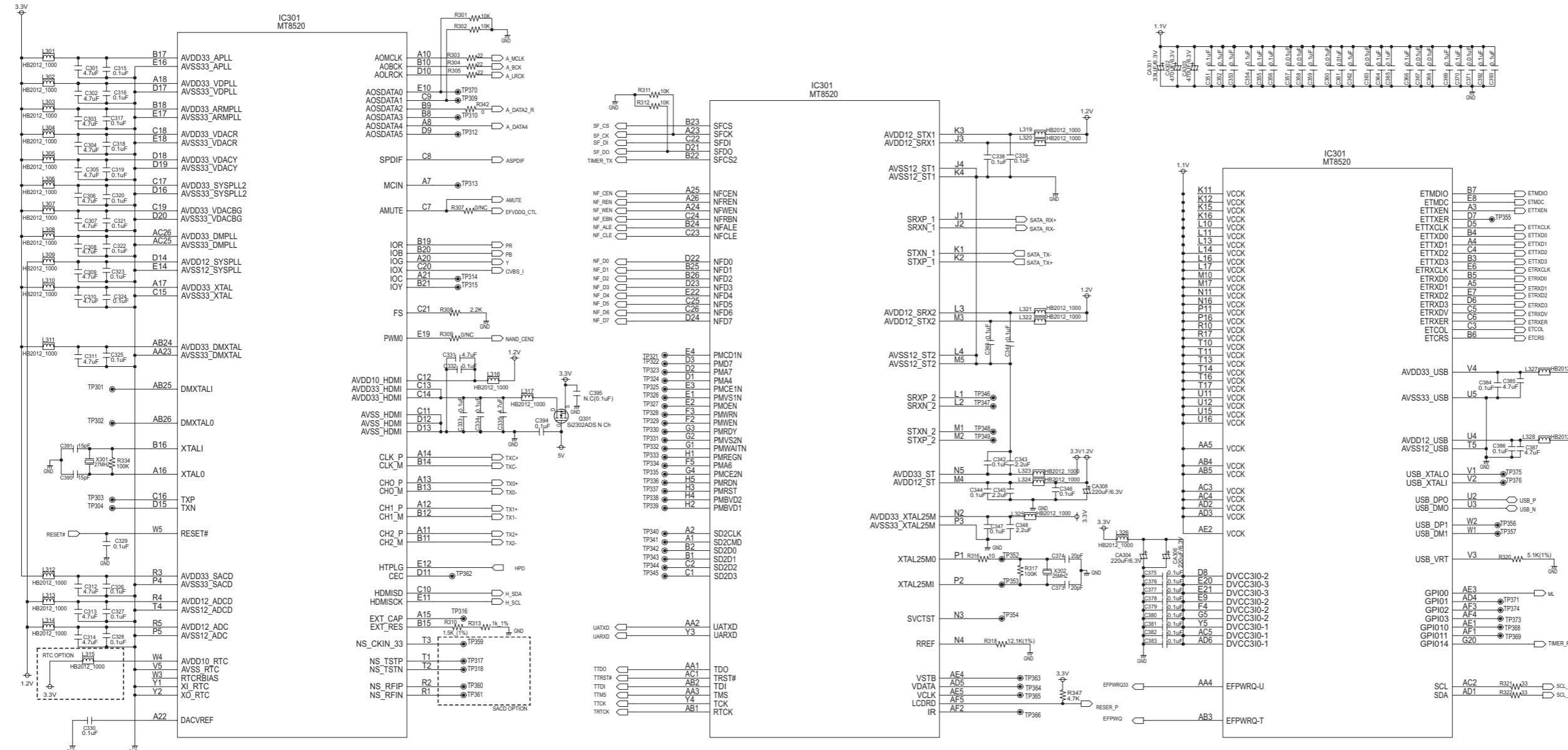
NOTES)  $\Delta$  Warning  
Parts that are shaded are critical  
With respect to risk of fire or  
electrical shock.

|          | C103       | L102  | D132               | D124        | D122        | D133  | C122  | IC152  | IC151        | J101  | ZD121 |      |
|----------|------------|-------|--------------------|-------------|-------------|-------|-------|--------|--------------|-------|-------|------|
| 120V     | 150uF/250V | BD300 | 04150ST            | 5A60V (H/S) | 10A60 (H/S) | X     | X     | 2200uF | 378B05 (H/S) | 78R12 | X     | 6.2B |
| 110~240V | 100uF/450V | BD400 | 146E (1463) (1465) | X           | X           | SB360 | SB360 | 1000uF | 278R05       | X     | 0     | 2.7B |

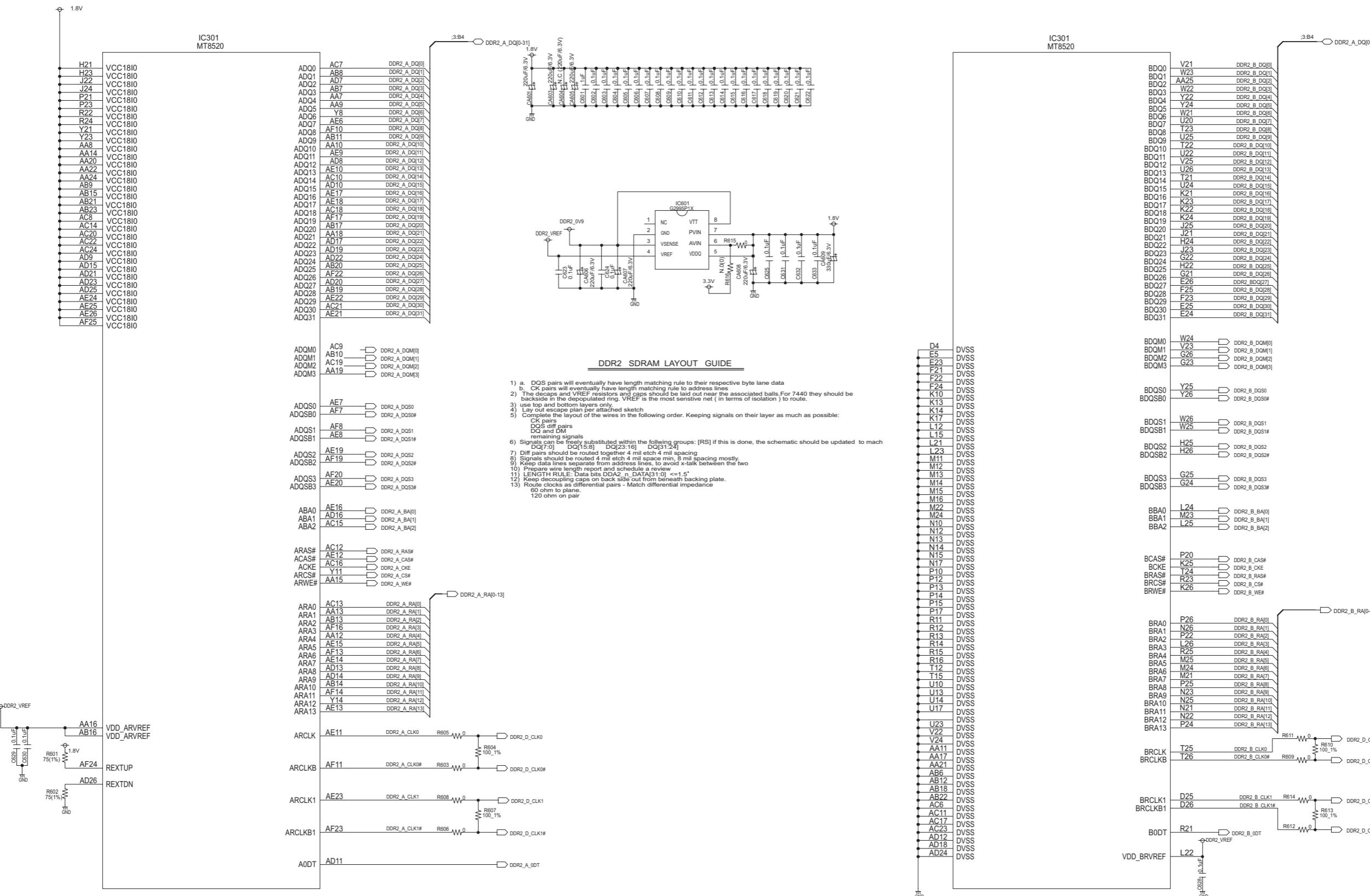
## ■ POWER/TIMER/USB CIRCUIT DIAGRAM



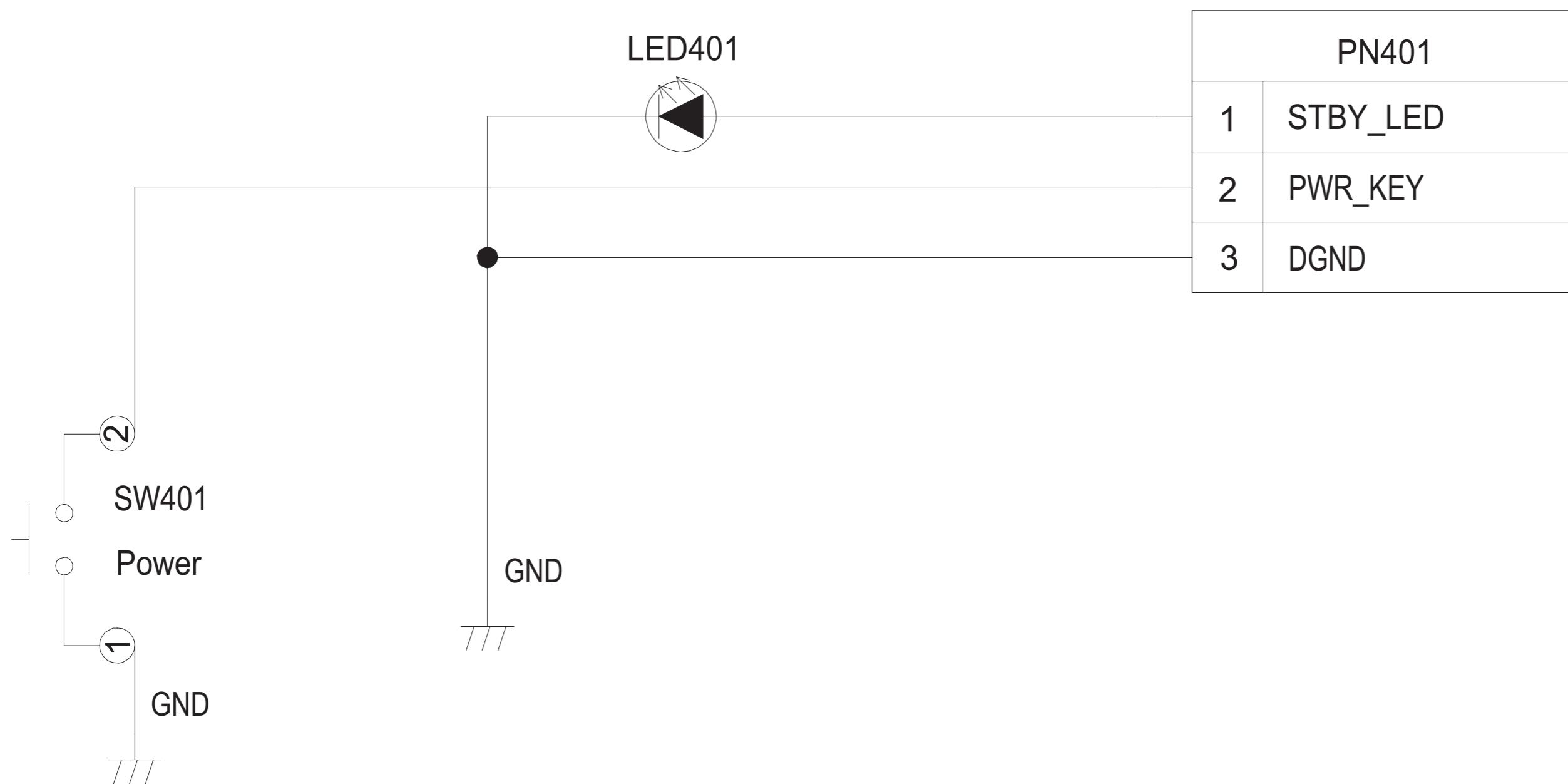
## ■ MPEG4-1 CIRCUIT DIAGRAM



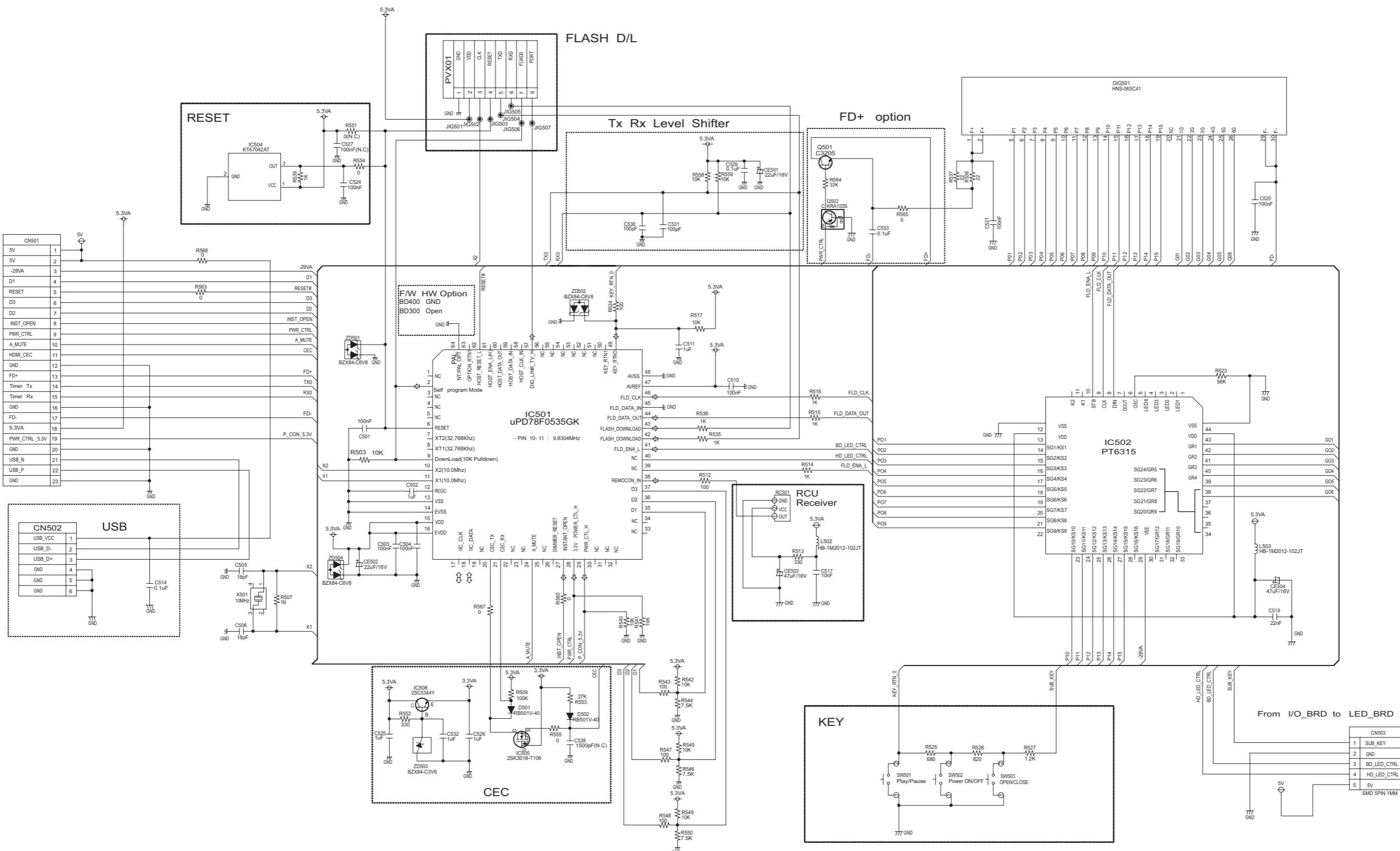
## ■ MPEG4-2 CIRCUIT DIAGRAM



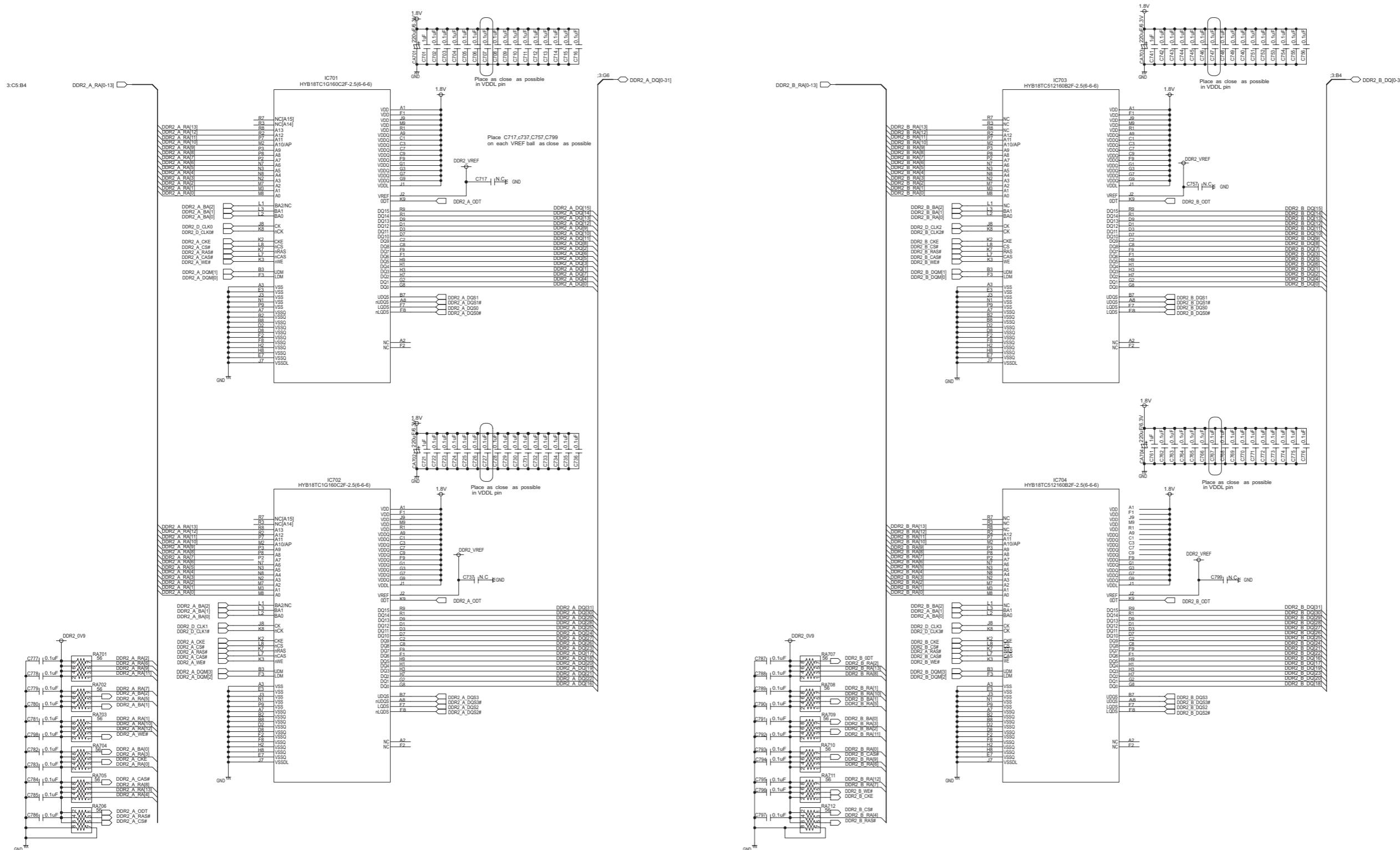
■ KEY CIRCUIT DIAGRAM



## ■ TIMER CIRCUIT DIAGRAM



■ DDR2-SDRAM CIRCUIT DIAGRAM



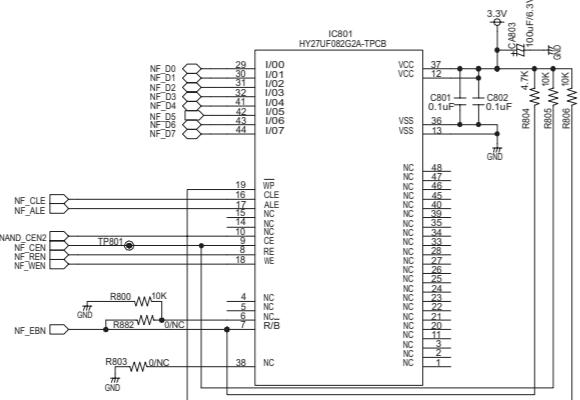
■ NAND/FLASH/ETHERNET CIRCUIT DIAGRAM

- SATA Design & Layout Guide\*
- 1. SATA Data & Power must be routed as 100ohm differential pairs.
- 2. Match Trace length of DP/DN
- 3. Trace spacing = same as trace width.
- 4. Route differential pairs above ground plane and gnd plane are not split under differentiator
- 5. Avoid via especially in differential pairs
- 6. Trace spacing between DP/DN and other trades must be more than 5 times of DP/DN
- 7. SATA Xtal/100 must be plane close to BMT7440.
- 8. Traces width must be 100mm
- 9. Place ac-coupling capacitor(CA05411,041,402,419) close to connector

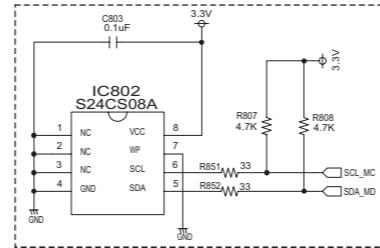
LODER SATA INTERFACE

\*IMPEDANCE MATCHING IS REQUIRED : 100 OHM (AT EACH DIFFERENTIAL LINE)  
\*TRACE LENGTH MUST BE LESS THAN 100mm

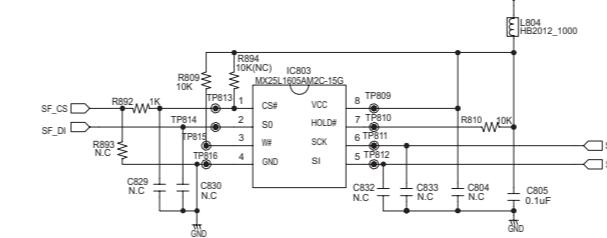
Pure NAND : 128MB (nCS0)



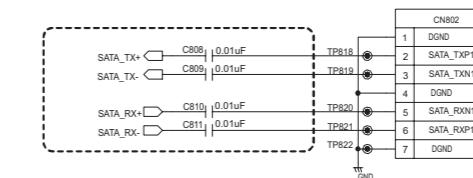
EEPROM OPTIC



## Serial Flash

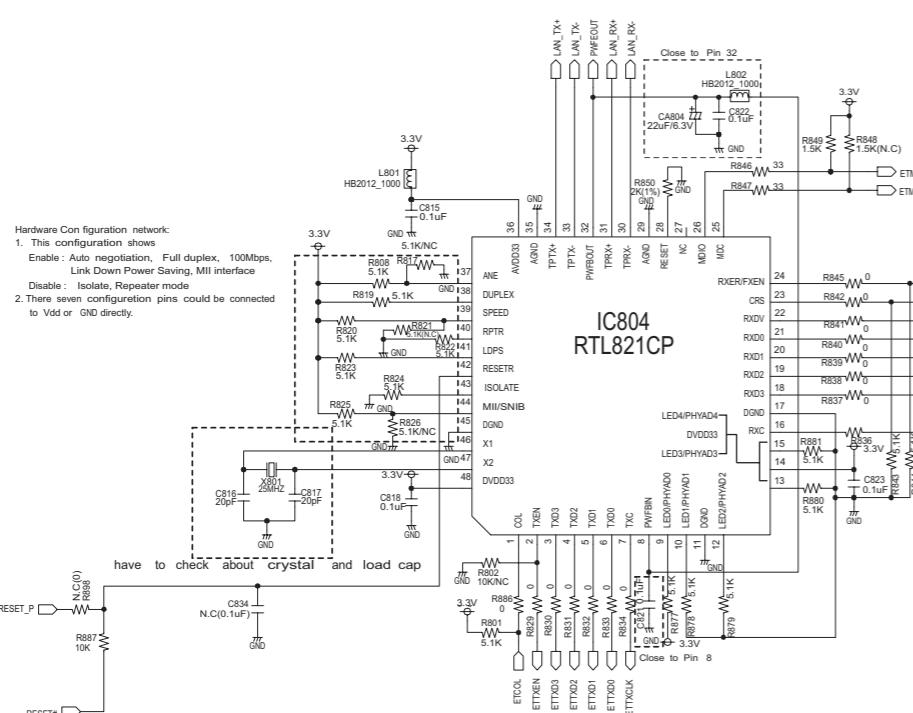


## RS232 Port

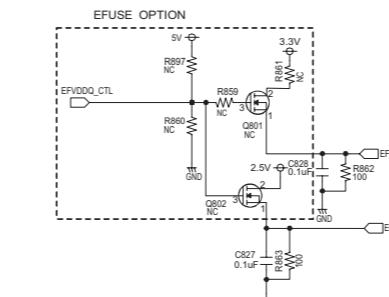


Hardware Configuration network:

1. This configuration shows  
Enable : Auto negotiation, Full duplex, 100Mbps,  
Link Down Power Saving, MII interface  
Disable : Isolate, Repeater mode
2. There seven configuration pins could be connected  
to Vdd or GND directly.



IC804  
RTL821CP



EE111SE Circuit



Have to find this connector

2-9

## ■ AV/HDMI CIRCUIT DIAGRAM

\*IMPEDANCE MATCHING IS REQUIRED : 100 OHM (AT EACH DIFFERENTIAL LINE)

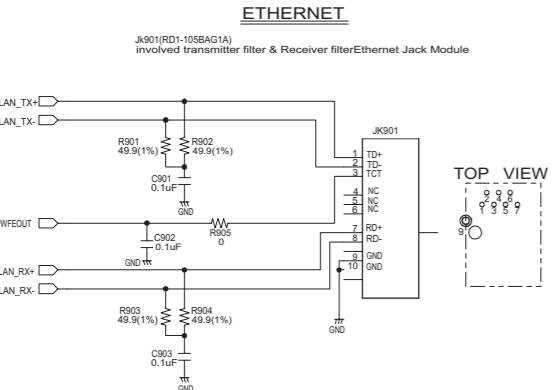
\*Ethernet Design & Layout Guide\*

- Ethernet Data D+/D- must be terminated as 100ohm differential pairs.
- Match trace length of DP/DN.
- Trace spacing is same as trace width.
- Route differential pairs above gnd plane and gnd plane are not split under differential pairs.
- Trace spacing between DP/DN and other traces must be more than 5 times of DP/DN trace width.
- EPHY\_RDAC resistor(R102) must be place close to BCM7440.

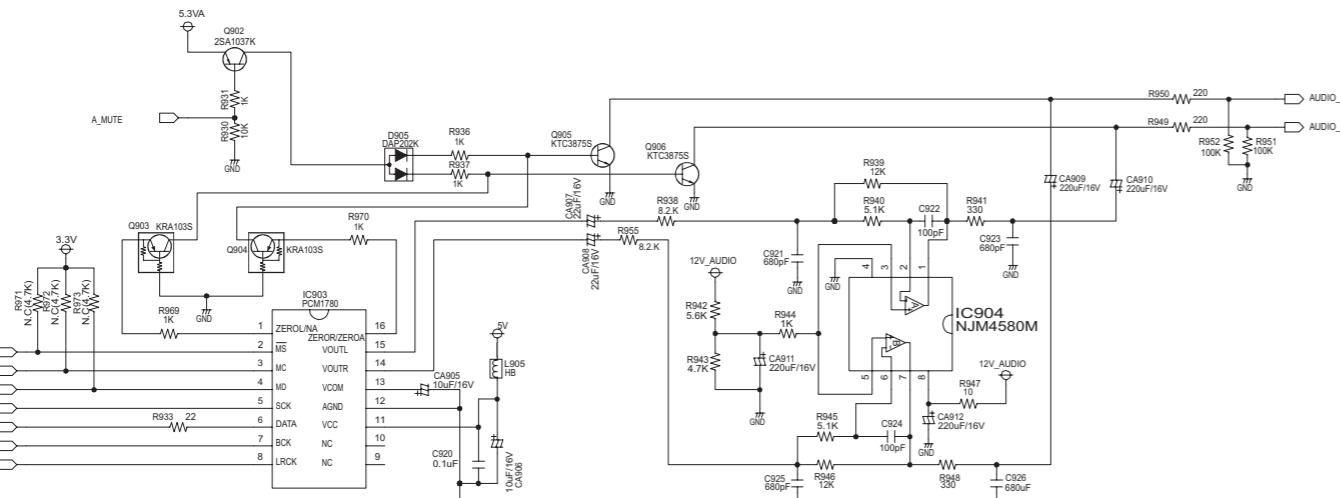
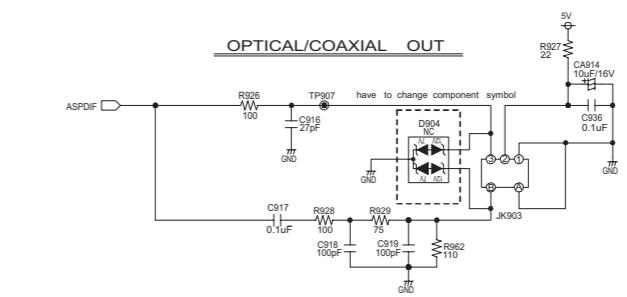
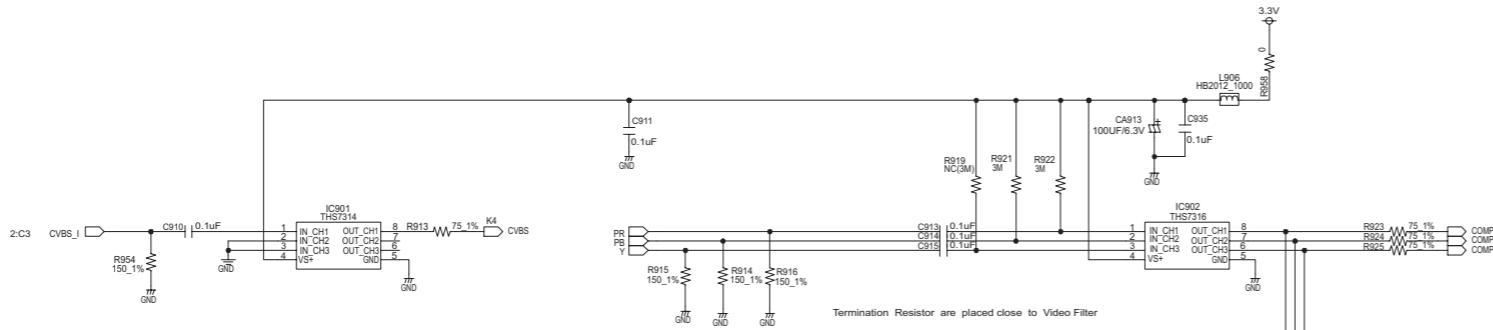
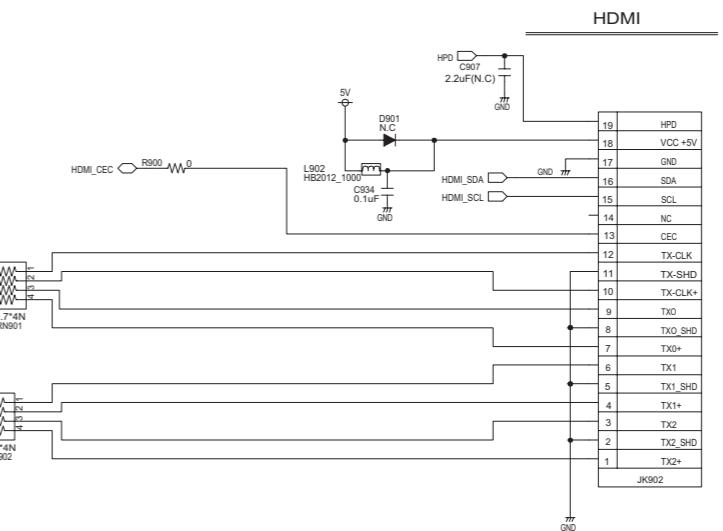
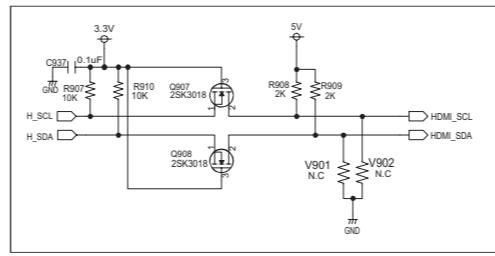
At each differential pair  
trace impedance must be  
100 ohm.

\*HDMI Design & Layout Guide\*

- HDMI differential pair signals must be routed as 100ohm differential pairs.
- Match Trace length of differential pairs.
- Trace spacing is same as trace width.
- Route differential pairs above gnd plane and gnd plane are not split under differential pairs.
- Avoid via as possible as you can.
- Trace spacing between DP/DN and other traces must be more than 5 times of DP/DN trace width.
- Trace Length must be less than 100mm.

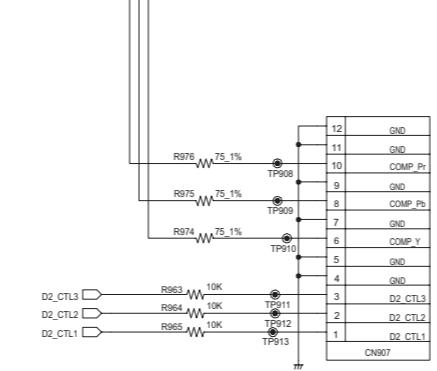


### HDMI Level Shifter



\*Audio & Video Signal Layout Guide\*

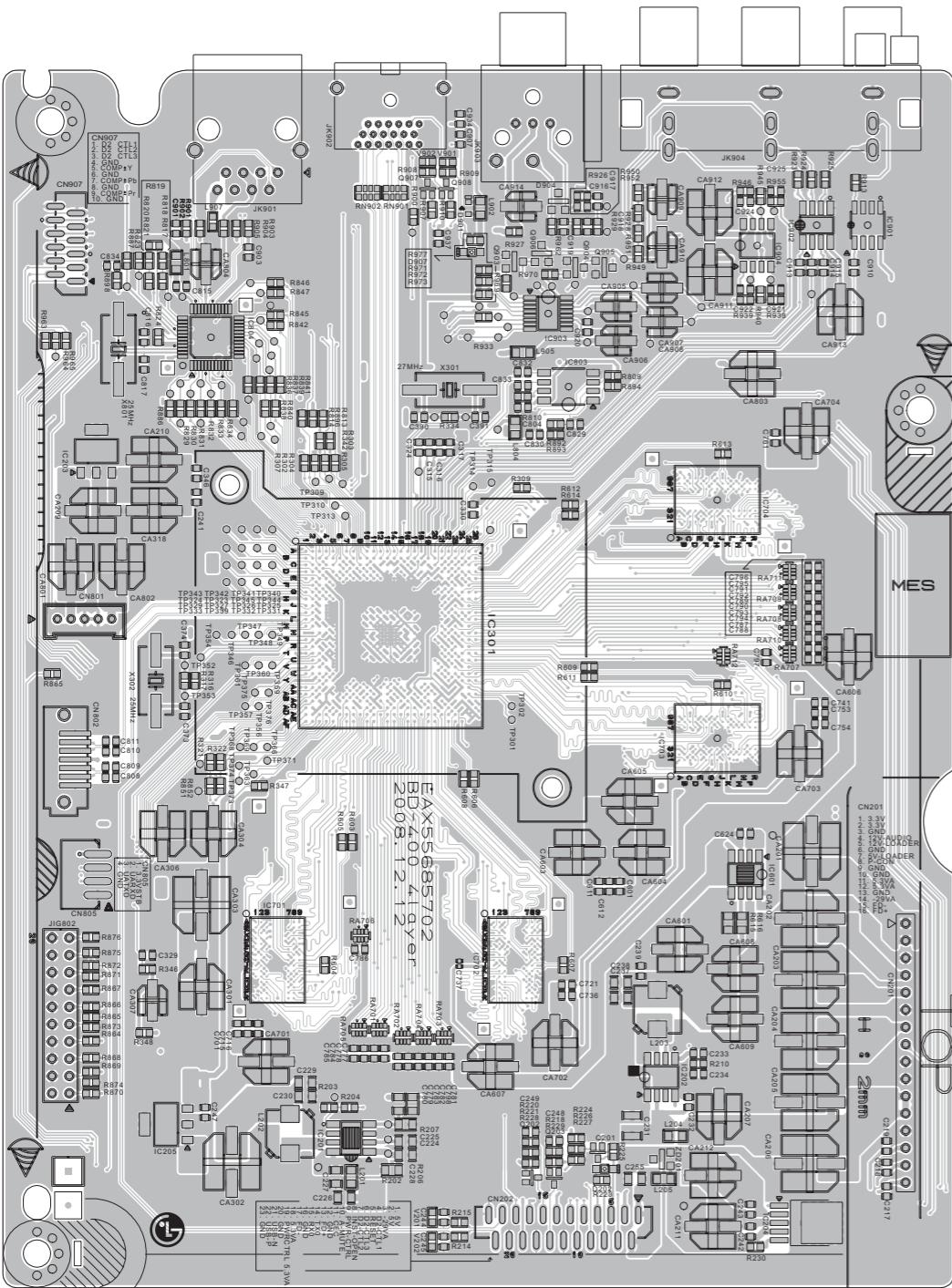
- Component & CVBS signal traces must be routed using signal to signal spacing is more than 0.25mm.
- Place R101,R107,VDAC\_BIAS resistors close to 7440
- Audio clock signals are might be needed damping resistors and damping resistors are placed close to 7440 -SCK,BCK,LCK



# **Printed circuit boards**

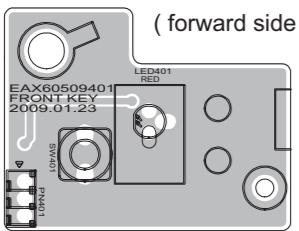
## ■ Main board (forward side)

( Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade) )

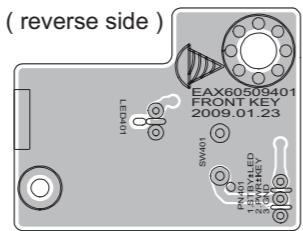


## ■ Key board

( Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade) )

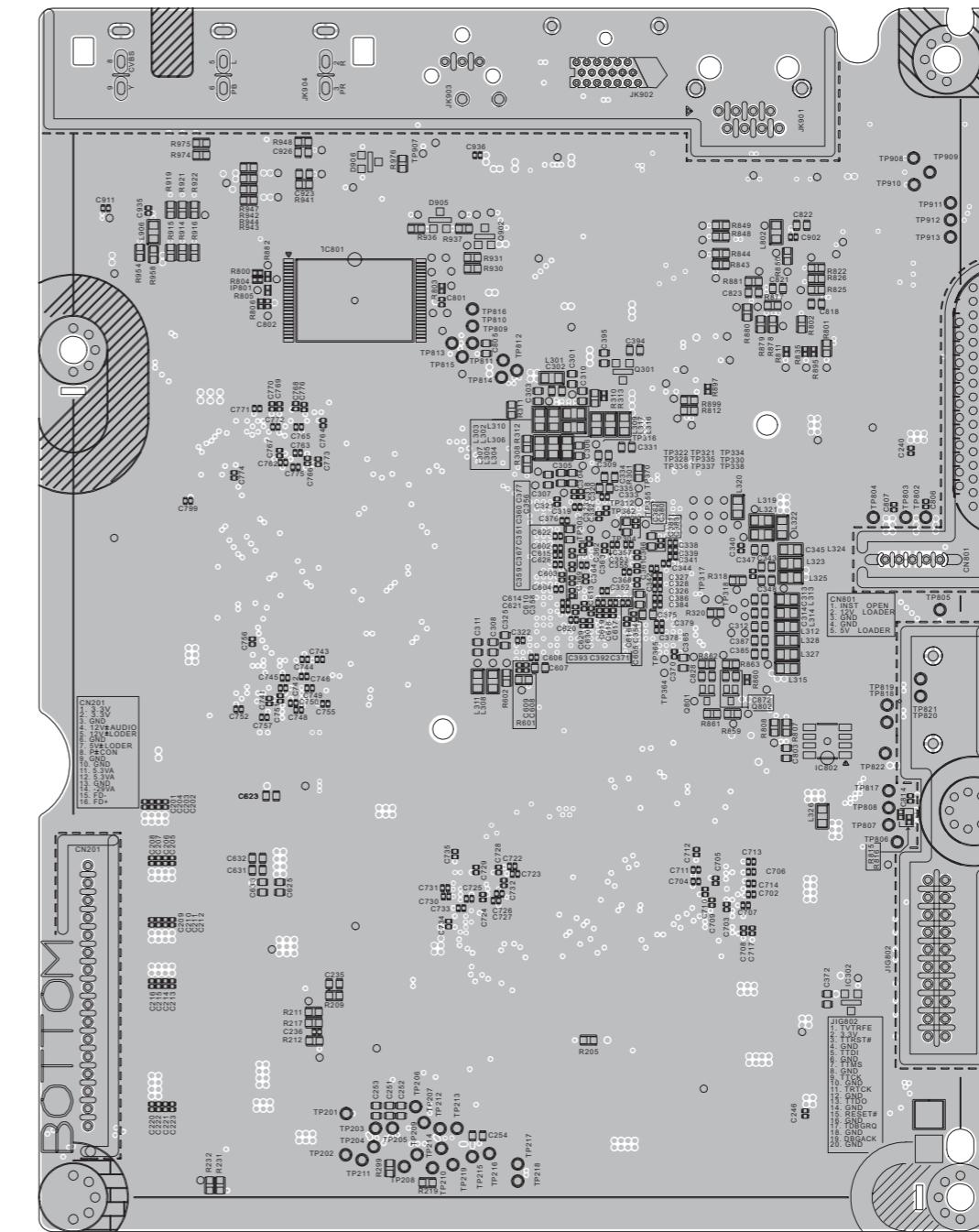


( reverse side )



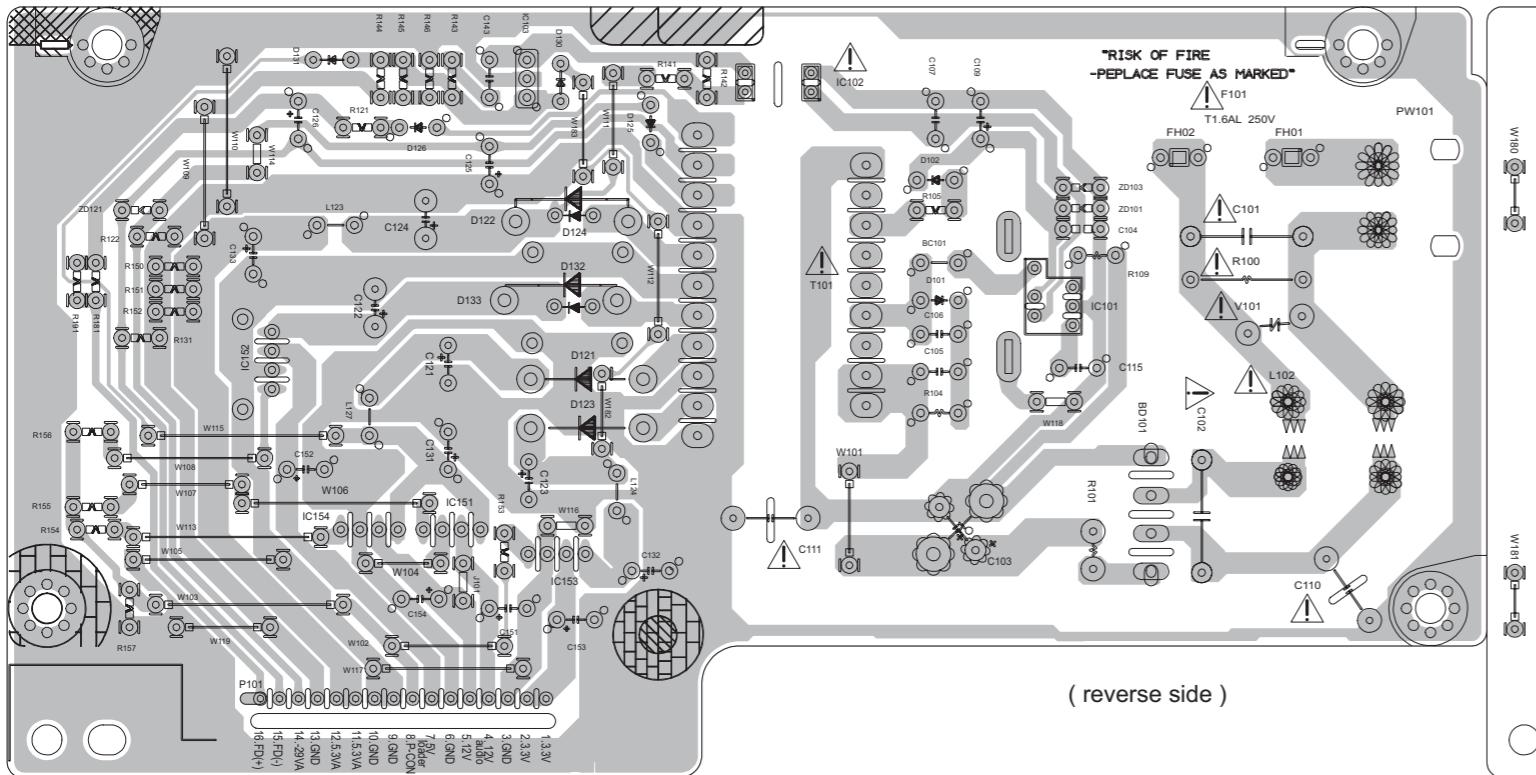
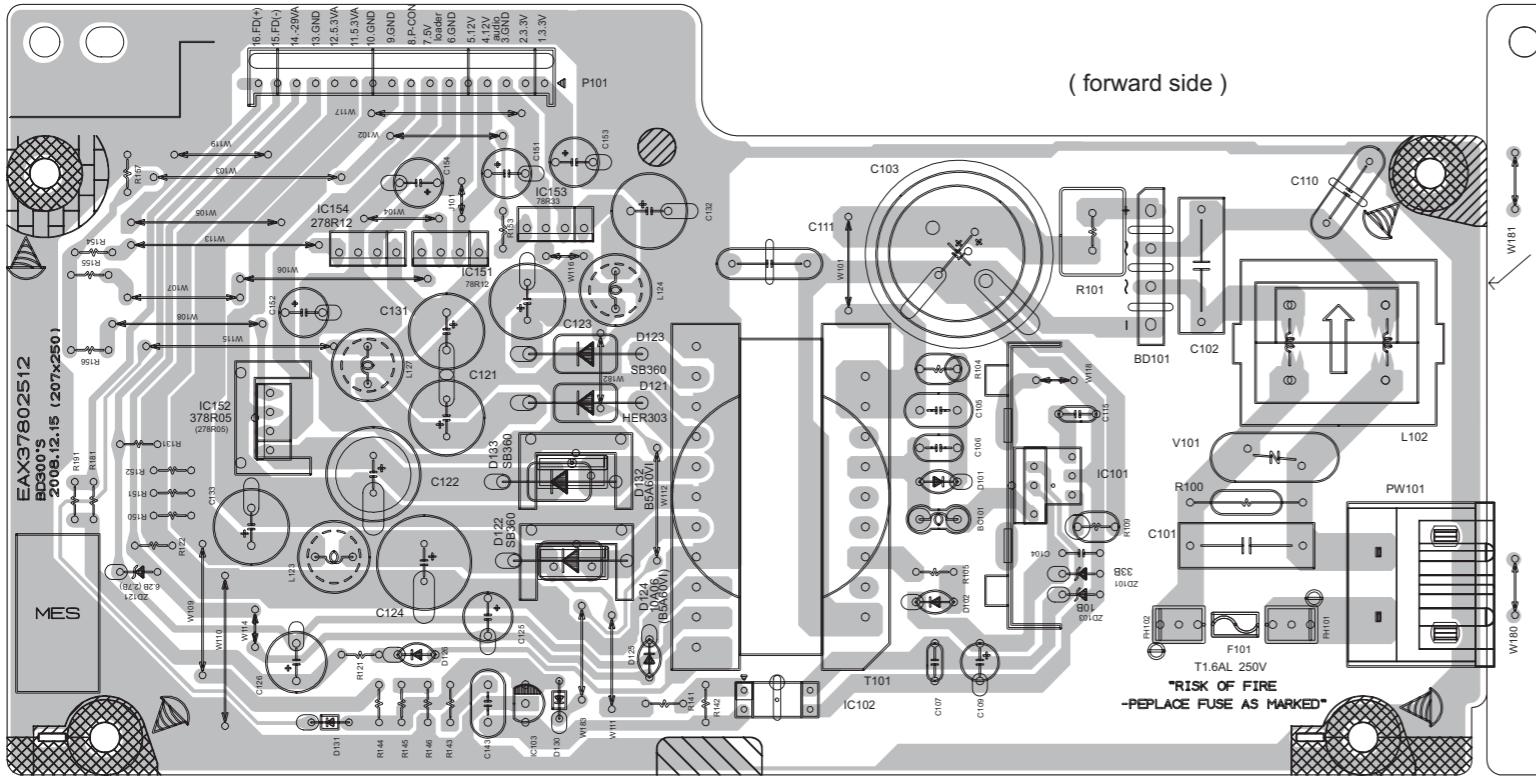
## ■ Main board (reverse side)

( Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade) )



## ■ SMPS board

( Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade) )

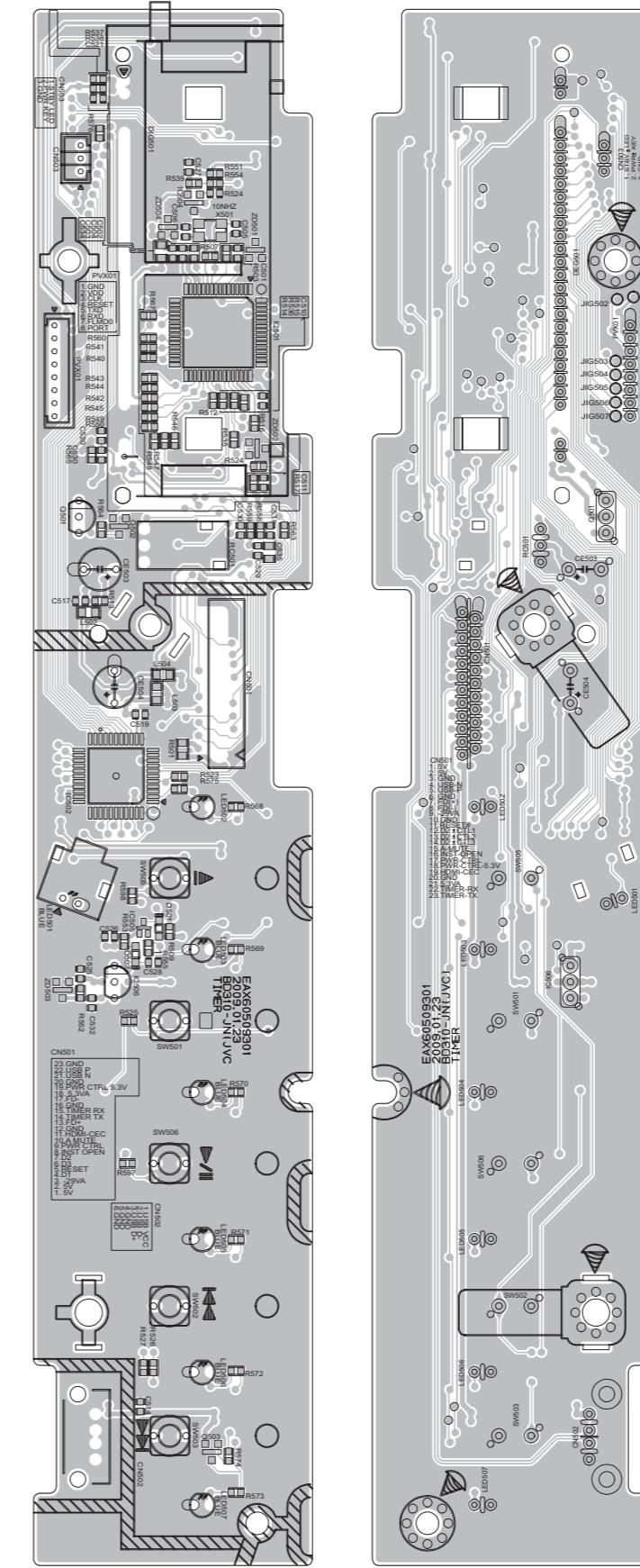


( forward side )

( reverse side )

## ■ Timer board

( Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade) )



( forward side )

( reverse side )

**< MEMO >**

# JVC

Victor Company of Japan, Limited

Audio/Video Systems Division 10-1, 1chome, Ohwatari-machi, Maebashi-city, 371-8543, Japan

(No.MB708SCH<Rev.001>)

Printed in Japan  
VSE

## PARTS LIST

XV-BP1J, XV-BP1C, XV-BP1B, XV-BP1E,  
XV-BP1EN, XV-BP1EV, XV-BP1EE, XV-BP1US,  
XV-BP1UX, XV-BP1UJ

| MODEL    | MARK | MODEL    | MARK | MODEL    | MARK |
|----------|------|----------|------|----------|------|
| XV-BP1J  | A    | XV-BP1C  | B    | XV-BP1B  | C    |
| XV-BP1E  | D    | XV-BP1EN | E    | XV-BP1EV | F    |
| XV-BP1EE | G    | XV-BP1US | H    | XV-BP1UX | I    |
| XV-BP1UJ | J    |          |      |          |      |

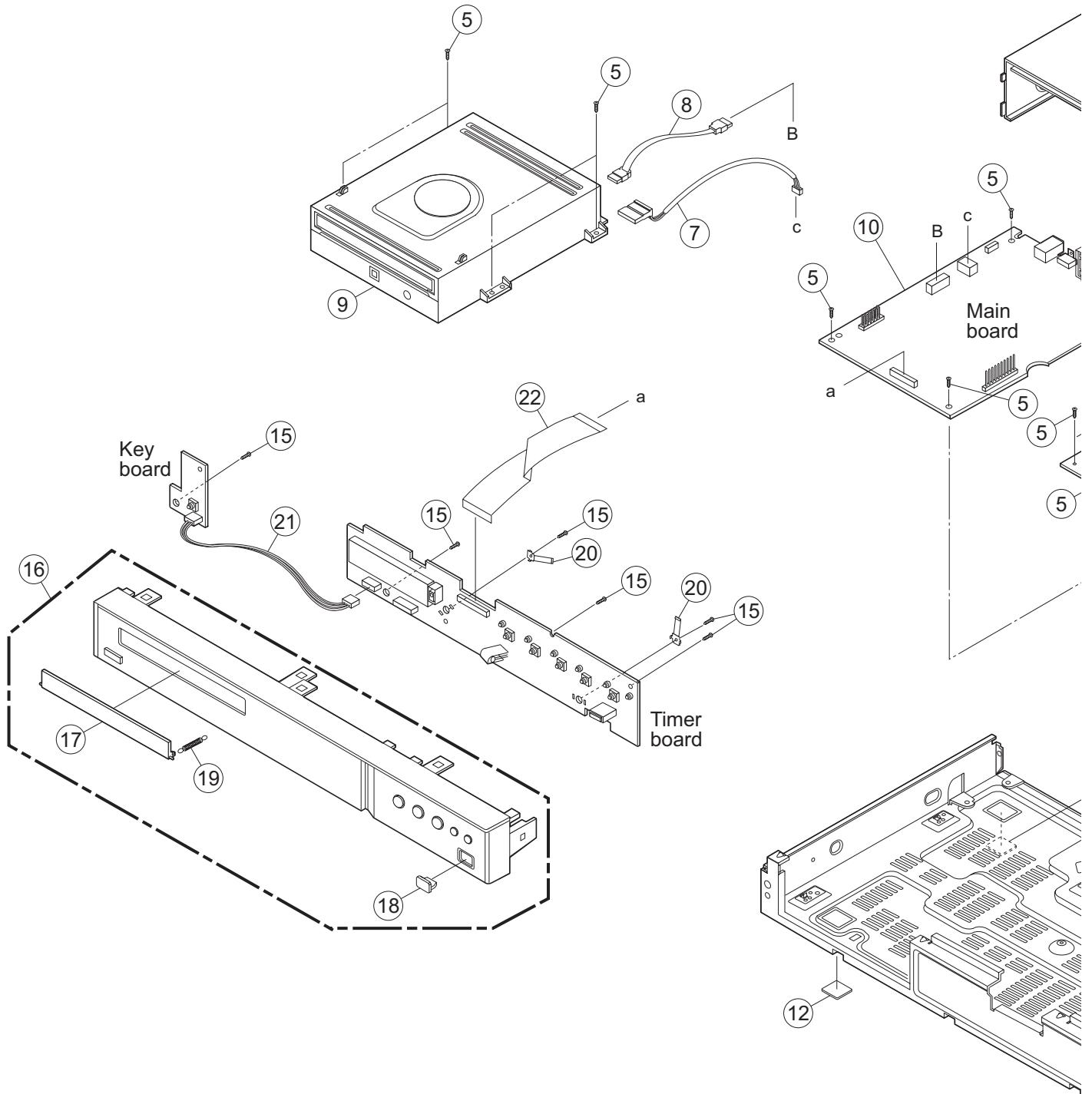
\* All printed circuit boards and its assemblies are not available as service parts.

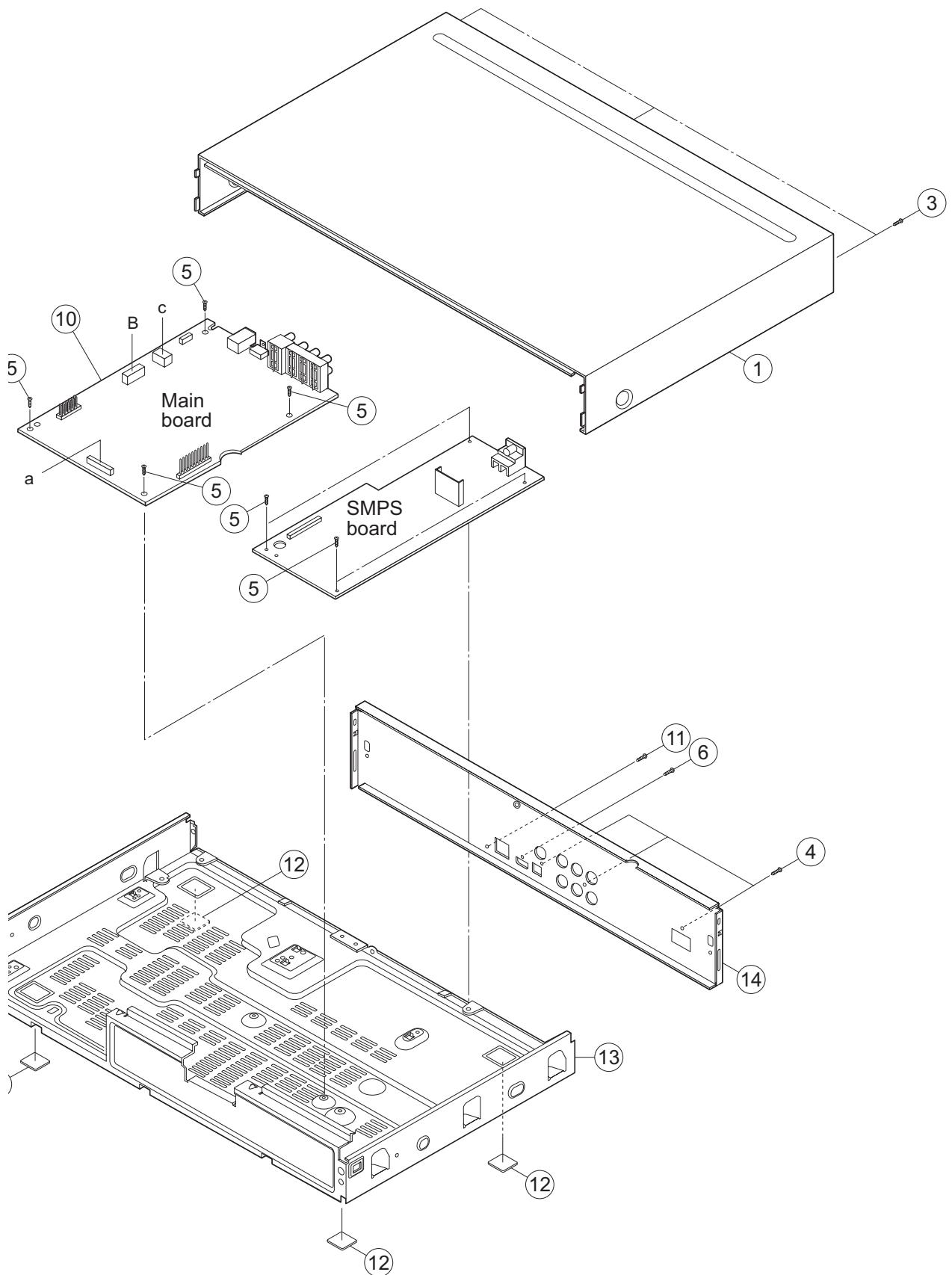
### - Contents -

|  |      |
|--|------|
| Exploded view of general assembly and parts list (Block No.M1) ..... | 3- 2 |
| Electrical parts list (Block No.01~02) .....                         | 3- 5 |
| Packing materials and accessories parts list (Block No.M3) .....     | 3- 8 |

# Exploded view of general assembly and parts list

Block No. M 1 M M





The parts without symbol number are not service.

## General Assembly

Block No. [M][1][M][M]

| △  | Symbol No. | Part No.       | Part Name        | Description     | Local             |
|----|------------|----------------|------------------|-----------------|-------------------|
| 1  |            | LG-MBN42965401 | TOP COVER        |                 | A,B,C,D,E,F,G,H,J |
| 1  |            | LG-MBN42965402 | TOP COVER        |                 | I                 |
| 3  |            | LG-1SZZR-0098H | SCREW            | 3MM 8MM(x3)     |                   |
| 4  |            | LG-1SZZR-0097N | SCREW            | 3MM 8MM(x3)     |                   |
| 5  |            | LG-1SZZR-0098J | SCREW            | 3MM 6.5MM(x12)  |                   |
| 6  |            | LG-353-022S    | SCREW            | 3MM 6MM         |                   |
| 7  |            | LG-EAD56862801 | HARNESS          | 5P              |                   |
| 8  |            | LG-EAD55660703 | FFC CABLE        | SATA DATA-200MM |                   |
| 9  |            | LG-EAZ54850411 | BD MECHA ASSY    |                 |                   |
| 10 |            | LG-EBR60310112 | MAIN BOARD ASSY  |                 | A,J               |
| 10 |            | LG-EBR60310133 | MAIN BOARD ASSY  |                 | B                 |
| 10 |            | LG-EBR60310135 | MAIN BOARD ASSY  |                 | C                 |
| 10 |            | LG-EBR60310134 | MAIN BOARD ASSY  |                 | D                 |
| 10 |            | LG-EBR60310136 | MAIN BOARD ASSY  |                 | E                 |
| 10 |            | LG-EBR60310137 | MAIN BOARD ASSY  |                 | F                 |
| 10 |            | LG-EBR60310145 | MAIN BOARD ASSY  |                 | G                 |
| 10 |            | LG-EBR60310138 | MAIN BOARD ASSY  |                 | H                 |
| 10 |            | LG-EBR60310139 | MAIN BOARD ASSY  |                 | I                 |
| 11 |            | LG-1SZZR-0097N | SCREW            | 3MM 8MM         |                   |
| 12 |            | LG-MCQ32325001 | DAMPER           | (x4)            |                   |
| 13 |            | LG-MBS42965001 | FRAME CHASSIS    |                 |                   |
| 14 |            | LG-MGC42965115 | REAR PANEL       |                 | A                 |
| 14 |            | LG-MGC42965125 | REAR PANEL       |                 | B                 |
| 14 |            | LG-MGC42965117 | REAR PANEL       |                 | C,D,E,F,I         |
| 14 |            | LG-MGC42965118 | REAR PANEL       |                 | G                 |
| 14 |            | LG-MGC42965116 | REAR PANEL       |                 | H,J               |
| 15 |            | LG-1SZZR-0098A | SCREW            | 3MM 10MM(x6)    |                   |
| 16 |            | LG-AGL71922609 | FRONT PANEL ASSY |                 | A,B,J             |
| 16 |            | LG-AGL71922604 | FRONT PANEL ASSY |                 | C,D,E,F,G,H,I     |
| 17 |            | LG-MJS60885201 | TRAY FITTING     |                 |                   |
| 18 |            | LG-MCK60886901 | USB COVER        |                 |                   |
| 19 |            | LG-4970R-0146D | SPRING           |                 |                   |
| 20 |            | LG-3300RCH001B | PLATE            | (x2)            |                   |
| 21 |            | LG-EAD35219505 | HARNESS          | 3P              |                   |
| 22 |            | LG-EAD50273002 | FFC WIRE         | 23P             |                   |

# Electrical parts list

## SMPs board

### Block No. [0][1]

| △ Symbol No. | Part No.          | Part Name       | Description       | Local   | △ Symbol No. | Part No.       | Part Name       | Description   | Local |
|--------------|-------------------|-----------------|-------------------|---------|--------------|----------------|-----------------|---------------|-------|
| △ PW101      | LG-EAG35192701    | POWER SOCKET    | 2P                |         | R104         | LG-0RS5602K619 | METAL FILM RES  | 56KΩ 5% 2W    |       |
| IC101        | LG-0IPMG78398A    | PWM IC          | STR-W6251         |         | R105         | LG-0RD0222F608 | CARBON FILM RES | 22Ω 5% 1/6W   |       |
| △ IC102      | PZ0IL817000B      | POSITION SENSOR | LTV-817B          |         | R109         | LG-0RS0330K618 | METAL FILM RES  | 0.33Ω 5% 2W   |       |
| △ IC102      | or LG-6500RDB010A | POSITION SENSOR | PC123YN2          |         | △ R121       | LG-0RF0200F708 | FUSE RESISTOR   | 0.2Ω 10% 1/6W |       |
| IC103        | LG-0IPMGUC004B    | REGULATOR IC    | TL431K-T92-B      |         | R122         | QRD161J-104Y   | C RESISTOR      | 100KΩ 1/6W J  |       |
| IC103        | or LG-0IKE431000A | REGULATOR IC    | KIA431            |         | R131         | LG-0RD8202F608 | CARBON FILM RES | 82KΩ 5% 1/6W  |       |
| IC103        | or LG-0ISS431000A | REGULATOR IC    | KA431AZ           |         | R141         | QRD161J-221    | C RESISTOR      | 220Ω 1/6W J   |       |
| IC152        | LG-EAN44022001    | REGULATOR IC    | A278R05PI         |         | R142         | QRD161J-222Y   | C RESISTOR      | 2.2kΩ 1/6W J  |       |
| IC152        | or LG-0IPMGKE047A | REGULATOR IC    | KIA278R05PI-CU    |         | R143         | QRE14J-102Y    | C RESISTOR      | 1kΩ 1/4W J    |       |
| IC153        | LG-EAN43506901    | REGULATOR IC    | A78R33PIC         |         | R144         | LG-0RN4701F408 | METAL FILM RES  | 4.7kΩ 1% 1/6W |       |
| IC153        | or LG-0IPMGKE006B | REGULATOR IC    | KIA78R33PI        |         | R145         | LG-0RN3301F408 | METAL FILM RES  | 3.3kΩ 1% 1/6W |       |
| IC153        | or LG-0IPMGGM002A | REGULATOR IC    | G9133             |         | R146         | LG-0RD8200F608 | CARBON FILM RES | 820Ω 5% 1/6W  |       |
| IC154        | LG-0IPMGKE048A    | REGULATOR IC    | KIA278R12PI-CU    |         | R153         | QRD161J-472Y   | C RESISTOR      | 4.7kΩ 1/6W J  |       |
| D101         | LG-0DRRE00163A    | RECTIFIER DIODE | 1KV 1.3V 5UA 25A  |         | R154         | QRD161J-472Y   | C RESISTOR      | 4.7kΩ 1/6W J  |       |
| D102         | LG-0DR104009BA    | RECTIFIER DIODE | 400V 1.3V 5UA 30A |         | R156         | QRD161J-472Y   | C RESISTOR      | 4.7kΩ 1/6W J  |       |
| D102         | or LG-0DRGF00239A | RECTIFIER DIODE | 400V 1.3V 5UA 30A |         | R157         | LG-0RD1002F608 | CARBON FILM RES | 10KΩ 5% 1/6W  |       |
| D121         | LG-EAH31951401    | SW DIODE        | 1.7V 200V 3A 150A |         | R181         | LG-0RD0152F608 | CARBON FILM RES | 15Ω 5% 1/6W   |       |
| D121         | or LG-0SDSI00110A | RECTIFIER DIODE | 200V 1V 5UA 150A  |         | R191         | LG-0RD0152F608 | CARBON FILM RES | 15Ω 5% 1/6W   |       |
| D123         | LG-0DSDI0090A     | SCHOTTKY DIODE  | 740MV 60V 3A      |         |              |                |                 |               |       |
| D123         | or LG-0DSTW00030A | SCHOTTKY DIODE  | 700MV 60V 3A      |         |              |                |                 |               |       |
| D124         | LG-0DSNH00020C    | SW DIODE        |                   |         |              |                |                 |               |       |
| D124         | or LG-0DSKE00141A | SCHOTTKY DIODE  | 550MV 60V 5A      |         |              |                |                 |               |       |
| D125         | LG-0DR104009BA    | RECTIFIER DIODE | 400V 1.3V 5UA 30A |         |              |                |                 |               |       |
| D125         | or LG-0DRGF00239A | RECTIFIER DIODE | 400V 1.3V 5UA 30A |         |              |                |                 |               |       |
| D126         | LG-0DR104009BA    | RECTIFIER DIODE | 400V 1.3V 5UA 30A |         |              |                |                 |               |       |
| D126         | or LG-0DRGF00239A | RECTIFIER DIODE | 400V 1.3V 5UA 30A |         |              |                |                 |               |       |
| D130         | 1SS133-T2         | SI DIODE        | 1SS133 1.2V 90V   |         |              |                |                 |               |       |
|              |                   |                 | 400MA 600MA 4N    |         |              |                |                 |               |       |
| D131         | 1SS133-T2         | SI DIODE        | 1SS133 1.2V 90V   |         |              |                |                 |               |       |
|              |                   |                 | 400MA 600MA 4N    |         |              |                |                 |               |       |
| D132         | LG-0DSNH00020B    | SW DIODE        | 60V 5V 7.85A      |         |              |                |                 |               |       |
| D132         | or LG-0DSKE00141B | SCHOTTKY DIODE  | 550MV 60V 5A      |         |              |                |                 |               |       |
| △ C101       | LG-624-088L       | FILM CAPACITOR  |                   |         |              |                |                 |               |       |
| △ C101       | or LG-624-088F    | FILM CAPACITOR  | 100NF 10% 275V    |         |              |                |                 |               |       |
| △ C101       | or LG-624-088S    | BOX CAPACITOR   |                   |         |              |                |                 |               |       |
| △ C101       | or LG-EAE39104801 | FILM CAPACITOR  |                   |         |              |                |                 |               |       |
| △ C102       | LG-624-088L       | FILM CAPACITOR  |                   |         |              |                |                 |               |       |
| △ C102       | or LG-624-088F    | FILM CAPACITOR  | 100NF 10% 275V    |         |              |                |                 |               |       |
| △ C102       | or LG-624-088S    | BOX CAPACITOR   |                   |         |              |                |                 |               |       |
| △ C102       | or LG-EAE39104801 | FILM CAPACITOR  |                   |         |              |                |                 |               |       |
| C103         | LG-0CE1076R610    | AL CAPACITOR    | 100UF 20% 250V    | A,B     |              |                |                 |               |       |
| C103         | LG-0CE686CV610    | AL CAPACITOR    | 68uF 20% 450V     | C,D,E,F |              |                |                 |               |       |
| C103         | LG-EAE60770601    | AL CAPACITOR    | 68uF              | G       |              |                |                 |               |       |
| C103         | LG-0CZR00033A     | AL CAPACITOR    | 100uF 450V 20%    | H,I,J   |              |                |                 |               |       |
| C104         | LG-0CN1040K948    | C CAPACITOR     | 100NF             |         |              |                |                 |               |       |
| C105         | LG-0CQ1031Y519    | FILM CAPACITOR  | 10NF 10% 630V     |         |              |                |                 |               |       |
| C106         | LG-624-087G       | C CAPACITOR     | 68PF/1KV SMPS     |         |              |                |                 |               |       |
| C107         | LG-0CQ2221N409    | FILM CAPACITOR  | 2.2NF 5% 100V     |         |              |                |                 |               |       |
| C109         | LG-624-085D       | AL CAPACITOR    | 47uF 20% 50V      |         |              |                |                 |               |       |
| △ C110       | LG-EAE42617701    | C CAPACITOR     | 1000PF            |         |              |                |                 |               |       |
| △ C110       | or LG-0CG1020U630 | C CAPACITOR     | 1000PF D 400V     |         |              |                |                 |               |       |
| △ C111       | LG-EAE42617701    | C CAPACITOR     | 1000PF            |         |              |                |                 |               |       |
| △ C111       | or LG-0CG1020U630 | C CAPACITOR     | 1000PF D 400V     |         |              |                |                 |               |       |
| C115         | LG-0CQ4721N409    | FILM CAPACITOR  | 4.7NF             |         |              |                |                 |               |       |
| C121         | LG-0CE108EH610    | AL CAPACITOR    | 1000UF 20%        |         |              |                |                 |               |       |
| C122         | LG-0CE108BF630    | AL CAPACITOR    | 1000UF 20%        |         |              |                |                 |               |       |
| C123         | LG-0CE108BF630    | AL CAPACITOR    | 1000UF 20%        |         |              |                |                 |               |       |
| C124         | LG-EAE34802401    | AL CAPACITOR    | 2200UF 20% 16V    |         |              |                |                 |               |       |
| C125         | LG-624-085D       | AL CAPACITOR    | 47uF 20% 50V      |         |              |                |                 |               |       |
| C126         | LG-0CE2276F638    | AL CAPACITOR    | 2200UF 20% 16V    |         |              |                |                 |               |       |
| C133         | LG-624-082H       | AL CAPACITOR    | 1000UF 20%        |         |              |                |                 |               |       |
| C143         | LG-0CQ1042K409    | FILM CAPACITOR  | 100NF 5% 50V      |         |              |                |                 |               |       |
| C151         | QET61CM-107Z      | E CAPACITOR     | 100uF 16V M       |         |              |                |                 |               |       |
| C152         | QET61CM-107Z      | E CAPACITOR     | 100uF 16V M       |         |              |                |                 |               |       |
| C153         | QET61CM-107Z      | E CAPACITOR     | 100uF 16V M       |         |              |                |                 |               |       |
| C154         | QET61CM-107Z      | E CAPACITOR     | 100uF 16V M       |         |              |                |                 |               |       |
| R100         | QRE121J-155Y      | C RESISTOR      | 1.5MΩ 1/2W J      |         |              |                |                 |               |       |
| R101         | LG-614-007A       | CEMENT RES      | 2.7Ω 5% 2W        |         |              |                |                 |               |       |

### Front board

### Block No. [0][2]

| △ Symbol No. | Part No.          | Part Name      | Description           | Local |
|--------------|-------------------|----------------|-----------------------|-------|
| IC501        | LG-EAN33391102    | MICON          | UPD78F0535GK(S)-UET-A |       |
| IC501        | or LG-EAN33391101 | MICON          | UPD78F0535GK-UET      |       |
| IC502        | LG-0IPRPPY002A    | DISP DRIVE IC  | PTC6315               |       |
| IC505        | LG-0TRRH80042A    | FET            | 2SK3018-T106          |       |
| IC506        | LG-0TR534409AA    | BIPOLAR TR     | 2SC5344Y              |       |
| Q501         | LG-0TR320509AB    | TRANSISTOR     | KTC3205-Y(KTC2236A)   |       |
| Q502         | LG-0TR103009AC    | BIPOLAR TR     | KRA103S-T1            |       |
| Q503         | LG-0TR150509AD    | BIPOLAR TR     | KTA1505S-Y            |       |
| D501         | LG-0DRRM00138A    | SCHOTTKY DIODE | 550MV 45V 100MA       |       |
| D502         | LG-0DRRM00138A    | SCHOTTKY DIODE | 550MV 45V 100MA       |       |
| C501         | LG-0CH1104K512    | C CAPACITOR    | 100NF 10% 16V         |       |
| C502         | LG-0CH1105F942    | C CAPACITOR    | 1uF                   |       |
| C503         | LG-0CH1104K512    | C CAPACITOR    | 100NF 10% 16V         |       |
| C504         | LG-0CH1104K512    | C CAPACITOR    | 100NF 10% 16V         |       |
| C505         | NDC31HJ-180X      | C CAPACITOR    | 18pF 50V J            |       |
| C506         | NDC31HJ-180X      | C CAPACITOR    | 18pF 50V J            |       |
| C510         | LG-0CH1104K512    | C CAPACITOR    | 100NF 10% 16V         |       |
| C511         | LG-0CH1105F942    | C CAPACITOR    | 1uF                   |       |
| C514         | LG-0CH1104K512    | C CAPACITOR    | 100NF 10% 16V         |       |
| C517         | LG-0CH1103K562    | C CAPACITOR    | 10NF 10% 50V          |       |
| C519         | LG-0CH1223K942    | C CAPACITOR    | 22NF                  |       |

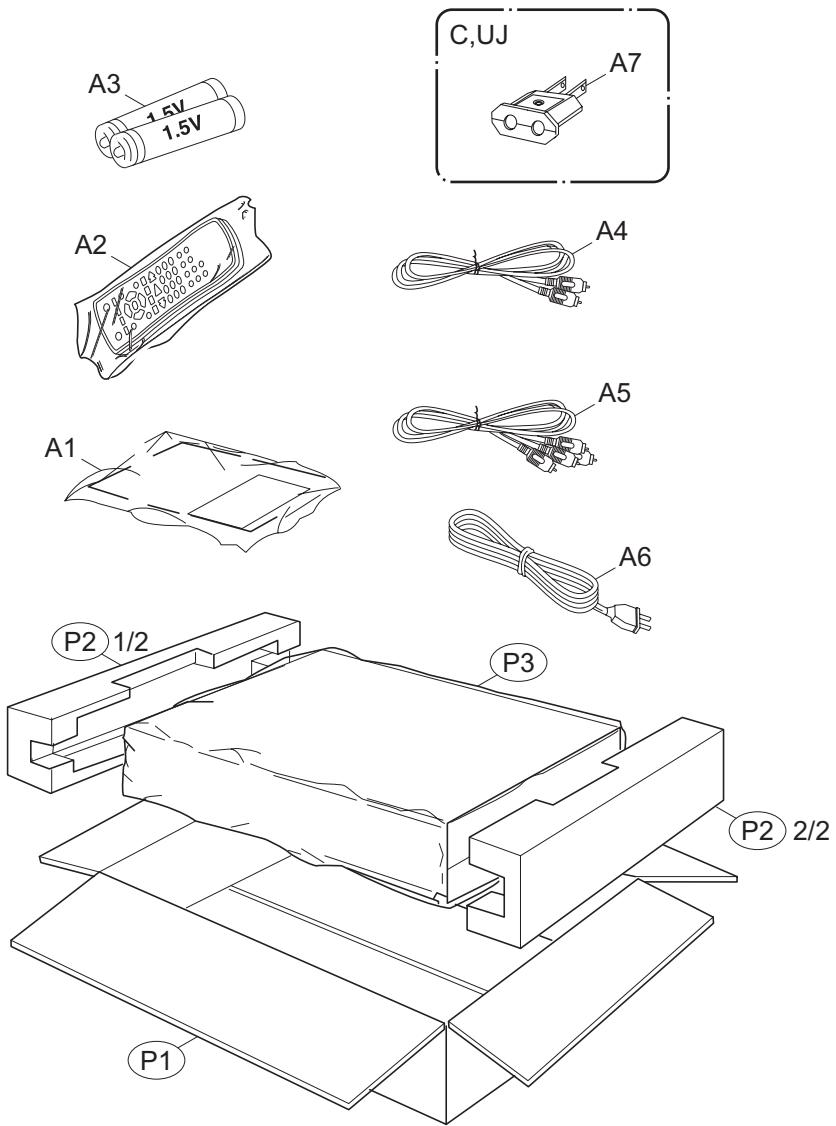
| △ Symbol No. | Part No.       | Part Name       | Description   | Local | △ Symbol No. | Part No.       | Part Name                 | Description  | Local |
|--------------|----------------|-----------------|---------------|-------|--------------|----------------|---------------------------|--------------|-------|
| C520         | LG-OCK104CKG6A | C CAPACITOR     | 100NF 10% 50V |       | LED503       | LG-EAV42536401 | LED                       |              |       |
| C521         | LG-OCK104CKG6A | C CAPACITOR     | 100NF 10% 50V |       | LED504       | LG-EAV42536401 | LED                       |              |       |
| C525         | LG-OCH1105F942 | C CAPACITOR     | 1UF           |       | LED505       | LG-EAV42536401 | LED                       |              |       |
| C526         | LG-OCH1105F942 | C CAPACITOR     | 1UF           |       | LED506       | LG-EAV42536401 | LED                       |              |       |
| C527         | LG-OCH1104K512 | C CAPACITOR     | 100NF 10% 16V |       | LED507       | LG-EAV42536401 | LED                       |              |       |
| C529         | LG-OCH1104K512 | C CAPACITOR     | 100NF 10% 16V |       | RC501        | LG-EAV41920401 | MODULE RECEIVER AT138ARF1 |              |       |
| C530         | NDC31HJ-101X   | C CAPACITOR     | 100pF 50V J   |       | SW401        | LG-556-219B    | TACT SWITCH               |              |       |
| C531         | NDC31HJ-101X   | C CAPACITOR     | 100pF 50V J   |       | SW501        | LG-556-219B    | TACT SWITCH               |              |       |
| C532         | LG-OCH1105F942 | C CAPACITOR     | 1UF           |       | SW502        | LG-556-219B    | TACT SWITCH               |              |       |
| C533         | LG-OCK104CKG6A | C CAPACITOR     | 100NF 10% 50V |       | SW503        | LG-556-219B    | TACT SWITCH               |              |       |
| C535         | LG-OCK106DD64A | C CAPACITOR     | 10UF 20% 10V  |       | SW505        | LG-556-219B    | TACT SWITCH               |              |       |
| R501         | LG-ORH0000D622 | RESISTOR        | 0Ω 5% 1/8W    |       | SW506        | LG-556-219B    | TACT SWITCH               |              |       |
| R503         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       | X501         | LG-EAW32265901 | CRYSTAL                   | 10MHZ        |       |
| R507         | NRSA63J-105X   | MG RESISTOR     | 1MΩ 1/16W J   |       | ZD501        | LG-0DZPH00118A | Z DIODE                   | 6.8V +5% 15Ω |       |
| R509         | NRSA63J-104X   | MG RESISTOR     | 100kΩ 1/16W J |       | ZD502        | LG-0DZPH00118A | Z DIODE                   | 6.8V +5% 15Ω |       |
| R512         | NRSA63J-101X   | MG RESISTOR     | 100Ω 1/16W J  |       | ZD503        | LG-0DZPH00079A | Z DIODE                   | 3.6V +5% 90Ω |       |
| R513         | NRSA63J-331X   | MG RESISTOR     | 330Ω 1/16W J  |       | ZD504        | LG-0DZPH00118A | Z DIODE                   | 6.8V +5% 15Ω |       |
| R514         | NRSA63J-102X   | MG RESISTOR     | 1kΩ 1/16W J   |       |              |                |                           |              |       |
| R515         | NRSA63J-102X   | MG RESISTOR     | 1kΩ 1/16W J   |       |              |                |                           |              |       |
| R516         | NRSA63J-102X   | MG RESISTOR     | 1kΩ 1/16W J   |       |              |                |                           |              |       |
| R517         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R523         | NRSA63J-563X   | MG RESISTOR     | 56kΩ 1/16W J  |       |              |                |                           |              |       |
| R524         | NRSA63J-101X   | MG RESISTOR     | 100Ω 1/16W J  |       |              |                |                           |              |       |
| R525         | NRSA63J-681X   | MG RESISTOR     | 680Ω 1/16W J  |       |              |                |                           |              |       |
| R526         | NRSA6AD-821W   | MG RESISTOR     | 820Ω 1/16W D  |       |              |                |                           |              |       |
| R527         | NRSA63J-122X   | MG RESISTOR     | 1.2kΩ 1/16W J |       |              |                |                           |              |       |
| R535         | NRSA63J-102X   | MG RESISTOR     | 1kΩ 1/16W J   |       |              |                |                           |              |       |
| R536         | NRSA63J-102X   | MG RESISTOR     | 1kΩ 1/16W J   |       |              |                |                           |              |       |
| R537         | LG-ORH0222C622 | RESISTOR        | 22Ω 5% 1/10W  |       |              |                |                           |              |       |
| R538         | LG-ORH0222C622 | RESISTOR        | 22Ω 5% 1/10W  |       |              |                |                           |              |       |
| R540         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R541         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R542         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R543         | NRSA63J-101X   | MG RESISTOR     | 100Ω 1/16W J  |       |              |                |                           |              |       |
| R544         | NRSA63J-752X   | MG RESISTOR     | 7.5kΩ 1/16W J |       |              |                |                           |              |       |
| R545         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R546         | NRSA63J-752X   | MG RESISTOR     | 7.5kΩ 1/16W J |       |              |                |                           |              |       |
| R547         | NRSA63J-101X   | MG RESISTOR     | 100Ω 1/16W J  |       |              |                |                           |              |       |
| R548         | NRSA63J-101X   | MG RESISTOR     | 100Ω 1/16W J  |       |              |                |                           |              |       |
| R549         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R550         | NRSA63J-752X   | MG RESISTOR     | 7.5kΩ 1/16W J |       |              |                |                           |              |       |
| R551         | NRSA63J-472X   | MG RESISTOR     | 4.7kΩ 1/16W J |       |              |                |                           |              |       |
| R552         | NRSA63J-331X   | MG RESISTOR     | 330Ω 1/16W J  |       |              |                |                           |              |       |
| R553         | NRSA6AD-273W   | MG RESISTOR     | 27kΩ 1/16W D  |       |              |                |                           |              |       |
| R555         | NRSA63J-0R0X   | MG RESISTOR     | 0Ω 1/10W J    |       |              |                |                           |              |       |
| R558         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R559         | NRSA63J-103X   | MG RESISTOR     | 10kΩ 1/16W J  |       |              |                |                           |              |       |
| R560         | NRSA63J-0R0X   | MG RESISTOR     | 0Ω 1/10W J    |       |              |                |                           |              |       |
| R563         | NRSA63J-0R0X   | MG RESISTOR     | 0Ω 1/10W J    |       |              |                |                           |              |       |
| R564         | LG-ORH3302C622 | RESISTOR        | 33kΩ 5% 1/10W |       |              |                |                           |              |       |
| R565         | NRSA63J-0R0X   | MG RESISTOR     | 0Ω 1/10W J    |       |              |                |                           |              |       |
| R567         | NRSA63J-0R0X   | MG RESISTOR     | 0Ω 1/10W J    |       |              |                |                           |              |       |
| R568         | LG-ORH1000C422 | RESISTOR        | 100Ω 1% 1/10W |       |              |                |                           |              |       |
| R569         | LG-ORH1000C422 | RESISTOR        | 100Ω 1% 1/10W |       |              |                |                           |              |       |
| R570         | LG-ORH1000C422 | RESISTOR        | 100Ω 1% 1/10W |       |              |                |                           |              |       |
| R571         | LG-ORH1000C422 | RESISTOR        | 100Ω 1% 1/10W |       |              |                |                           |              |       |
| R572         | LG-ORH1000C422 | RESISTOR        | 100Ω 1% 1/10W |       |              |                |                           |              |       |
| R573         | LG-ORH1000C422 | RESISTOR        | 100Ω 1% 1/10W |       |              |                |                           |              |       |
| R574         | NRSA63J-472X   | MG RESISTOR     | 4.7kΩ 1/16W J |       |              |                |                           |              |       |
| R575         | LG-ORH1800C622 | RESISTOR        | 180Ω 5% 1/10W |       |              |                |                           |              |       |
| R576         | LG-ORH1800C622 | RESISTOR        | 180Ω 5% 1/10W |       |              |                |                           |              |       |
| R597         | NRSA63J-222X   | MG RESISTOR     | 2.2kΩ 1/16W J |       |              |                |                           |              |       |
| R598         | NRSA63J-152X   | MG RESISTOR     | 1.5kΩ 1/16W J |       |              |                |                           |              |       |
| L502         | LG-6200HJC102A | BEAD FILTER     | 1000Ω         |       |              |                |                           |              |       |
| L503         | LG-6200HJC102A | BEAD FILTER     | 1000Ω         |       |              |                |                           |              |       |
| L504         | LG-6200HJC102A | BEAD FILTER     | 1000Ω         |       |              |                |                           |              |       |
| CE503        | LG-0CE4763F638 | AL CAPACITOR    | 47UF 20% 16V  |       |              |                |                           |              |       |
| CE504        | LG-0CE4763F638 | AL CAPACITOR    | 47UF 20% 16V  |       |              |                |                           |              |       |
| CN501        | LG-6630R-FB05W | FFC/FPC/PIC CON | 23P           |       |              |                |                           |              |       |
| CN502        | LG-EAG43125201 | USB CONNECTOR   |               |       |              |                |                           |              |       |
| CN503        | LG-561-711C    | CONNECTOR       | 3P            |       |              |                |                           |              |       |
| DIG501       | LG-EAJ49965601 | VFD             |               |       |              |                |                           |              |       |
| LED401       | LG-ODLAU0239AA | LED             |               |       |              |                |                           |              |       |
| LED501       | LG-EAV60667201 | LED             |               |       |              |                |                           |              |       |
| LED502       | LG-EAV42536401 | LED             |               |       |              |                |                           |              |       |

**<MEMO>**

## Packing materials and accessories parts list

Block No.  M  3  M  M

No additional / supplemental order of WARRANTY CARDS are available.



The parts without symbol number are not service.

## Packing and Accessories

Block No. [M][3][M][M]

| △   | Symbol No. | Part No.       | Part Name    | Description | Local         |
|-----|------------|----------------|--------------|-------------|---------------|
| A 1 |            | LG-AFN72974901 | INST ASSY    |             | A             |
| A 1 |            | LG-AFN72974903 | INST ASSY    |             | B             |
| A 1 |            | LG-AFN72974904 | INST ASSY    |             | C             |
| A 1 |            | LG-AFN72974905 | INST ASSY    |             | D             |
| A 1 |            | LG-AFN72974907 | INST ASSY    |             | E             |
| A 1 |            | LG-AFN72974906 | INST ASSY    |             | F             |
| A 1 |            | LG-AFN72974908 | INST ASSY    |             | G             |
| A 1 |            | LG-AFN72974909 | INST ASSY    |             | H             |
| A 1 |            | LG-AFN72974910 | INST ASSY    |             | I             |
| A 1 |            | LG-AFN72974902 | INST ASSY    |             | J             |
| A 2 |            | LG-AKB72909101 | REMOCON UNIT |             | A,B,J         |
| A 2 |            | LG-AKB72909001 | REMOCON UNIT |             | C,D,E,F,G     |
| A 2 |            | LG-AKB72910501 | REMOCON UNIT |             | H,I           |
| A 3 | -----      |                | BATTERY      | 1.5V(x2)    |               |
| A 4 |            | LG-6850R-PAA8F | RCA CABLE    |             | A,B,J         |
| A 4 |            | LG-6850R-PAA2F | RCA CABLE    | 1P          | C,D,E,F,G,H,I |
| A 5 |            | LG-6850R-PBA8H | RCA CABLE    |             | A,B,J         |
| A 5 |            | LG-6850R-PBA2H | RCA CABLE    | 1.2M 2P     | C,D,E,F,G,H,I |
| !   | A 6        | LG-6410RGHV01A | POWER CORD   |             | A,B           |
| !   | A 6        | LG-EAD36124401 | POWER CORD   |             | C             |
| !   | A 6        | LG-6410RCDV01A | POWER CORD   |             | D,E,F,G,H,I,J |
| !   | A 7        | LG-6634A00007A | AC PLUG      |             | B,J           |
| P 1 |            | LG-MAY61954831 | CARTON       |             | A,B,J         |
| P 1 |            | LG-MAY61954834 | CARTON       |             | C,D,E,F       |
| P 1 |            | LG-MAY61954835 | CARTON       |             | G             |
| P 1 |            | LG-MAY61954836 | CARTON       |             | H             |
| P 1 |            | LG-MAY61954837 | CARTON       |             | I             |
| P 2 |            | LG-MFZ47272602 | CUSHION      |             |               |
| P 3 |            | LG-3880SCS001E | POLY BAG     |             |               |