

Service Manual

Blu-ray Disc Player

Model No. **DMP-BD30PP**
DMP-BD30PL



Vol. 1
Colour
(K).....Black Type

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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.

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1 Safety Precaution

1.1. General guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage current cold check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

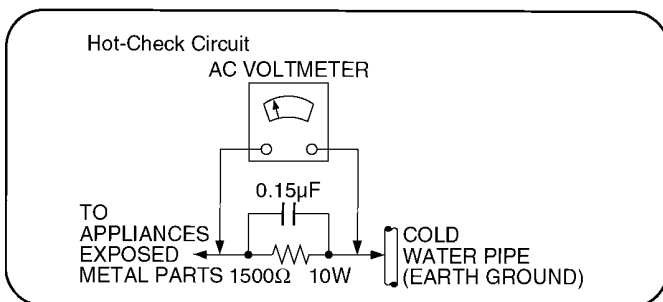


Figure 1

1.1.2. Leakage current hot check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $1.5k\Omega$, 10 watts resistor, in parallel with a $0.15\mu F$ capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliampere. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

1.2. Caution for fuse replacement

(For English)

CAUTION:

Replace with the same type fuse:
(Manufacturer: Hollyland, Type: 50T, 1.6A, 250V)

(For Canadian French)

ATTENTION:

Utiliser un fusible de rechange de même type:
(Fabricant: Hollyland, Type: 50T, 1.6A, 250V)

2 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatic Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatic Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistor-sand semiconductor **chip** components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as **anti-static (ESD protected)** can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by \triangle in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2.2. Precaution of Laser Diode

CAUTION:

This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.

Wave length: 785 nm (CDs)/662 nm (DVDs)/405 nm (BDs)

Maximum output radiation power from pickup: 100 μ W/VDE

Laser radiation from the pickup lens is safety level, but be sure the followings:

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



Product complies with DHHS Rules 21 CFR Subchapter J in effect at date of manufacture.
Matsushita Electric Industrial Co., Ltd.
Kadoma, Osaka, Japan

ACHTUNG:

Dieses Produkt enthält eine Laserdiode.

Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

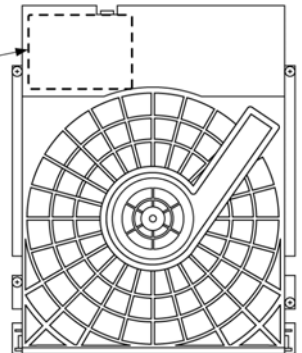
Wellenlänge: 785 nm (CDs)/662 nm (DVDs)/405 nm (BDs)

Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE

Die Strahlung der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

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

DANGER - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. FDA 21 CFR/Class IIIb	
CAUTION - CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM. IEC60825-1 +A2/Class 3B	
ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE. CLASSE 3B. EN CAS D'OUVERTURE, EVITER UNE EXPOSITION AU FAISCEAU.	
FORSIGTIG - SYNLIG OG USYNLIG LASERSTRÅLING KLASSE 3B. NÅR LAGET ER ÅBENT, UNDGÅ AT BLIVE UDSAT FOR STRÅLEN.	
VARO - AVATTAESSA OLET ALTITINA LUOKAN 3B NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTELYÄ. VÄRÖ ALTISTUMISTA SÄTEELLE.	
WARNING - KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK EXPOSERING FÖR STRÅLEN.	
VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG KLASSE 3B. WENN ABDECKUNG GEÖFFNET, NICHT DEM STRAHL AUSSETZEN.	
注意 - 打开时有可见及不可见激光辐射。避免光束照射。	
注意 - ここを開くと可視及び不可視レーザー光が出ます。ビームを見たり、触れたりしないでください。VOL1J70	



CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

2.3. Service caution based on legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of "PbF" is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF
---	------------

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used.
(Definition: The letter of **PbF** is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
 - RFKZ03D01K----- (0.3mm 100g Reel)
 - RFKZ06D01K----- (0.6mm 100g Reel)
 - RFKZ10D01K----- (1.0mm 100g Reel)

Note

* Ingredient: tin (Sn), 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

3 Service Navigation

3.1. Service Information

This service manual contains technical information which will allow service personnel's to understand and service this model.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

1) This service manual does not contain the following information, because of the impossibility of servicing at component level.

- * Schematic Diagram, Block Diagram and P.C.B. layout of Digital P.C.B..
- * Parts List for individual parts of Digital P.C.B..
- * Exploded View and Parts List for individual parts of BD/DVD drive.

2) The following category are recycle module part. Please send them to Central Repair Center.

- * Digital P.C.B. (BD30PP/PL : RFKB76160A)

3) For BD/DVD drive, it depends on area to defferent recycle system.
Please refer to service policy in detail.

- * BD/DVD drive (VXY2001)

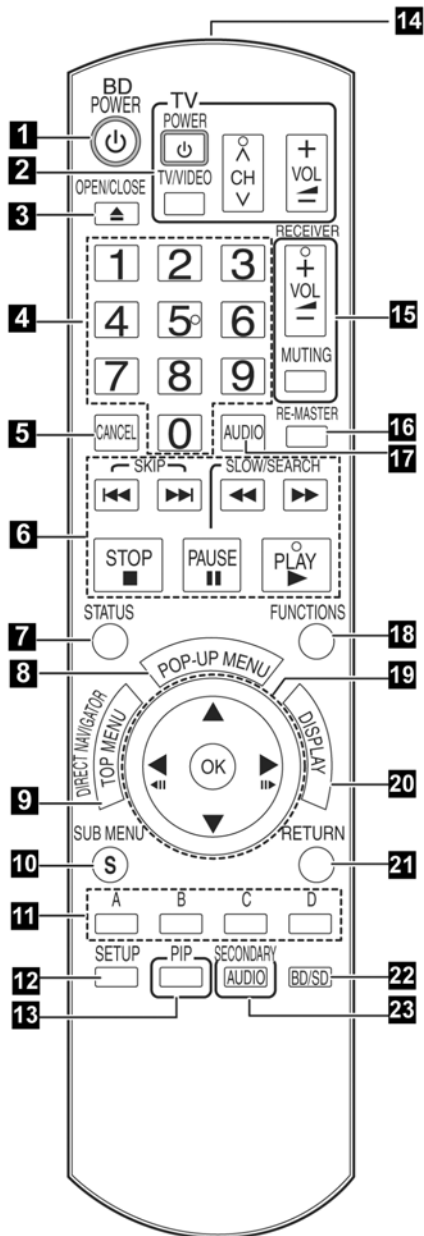
4 Specifications

Power supply	AC120 V, 60 Hz
Power consumption	Approx. 25 W
Power consumption in standby mode	Less than 1 W
Optical pick-up	System with 2 lenses, (405 nm wavelength for BDs, 662 nm wavelength for DVDs, 785 nm wavelength for CDs)
Media	
Playable discs	<p>BD-Video BD-ROM Version 2 (Final Standard Profile)</p> <p>BD-RE Version 3 (Single Layer/Dual Layer, JPEG)</p> <p>BD-R Version 2 (Single Layer/Dual Layer)</p> <p>DVD - RAM DVD Video Recording format, AVCHD format, JPEG</p> <p>DVD-R/ DVD-R DL/ DVD-RW Video(*1), DVD Video Recording format, AVCHD format(*1)</p> <p>+R/+R DL/ +RW Video(*1), AVCHD format(*1)</p> <p>DVD-VIDEO DVD-Video format</p> <p>CD-Audio CD-DA</p> <p>CD-R/CD-RW CD-DA, JPEG(*2), MP3(*2)</p> <p>(*1) Finalizing is necessary.</p> <p>(*2) ISO9660 level 1 or 2 (except for extended formats), Joliet.</p> <p>This unit is compatible with multi-session.</p> <p>This unit is not compatible with packet writing.</p>
SD Card	<p>SD Memory Card (*3) formatted FAT12, FAT16, FAT32 (*4)</p> <p>JPEG, AVCHD format</p> <p>(*3) includes SDHC card</p> <p>includes miniSD™ cards (need a miniSD™ adaptor)</p> <p>includes microSD™ cards (need a microSD™ adaptor)</p> <p>(*4) not support long file name.</p>
Contents	
JPEG SD card CD-R/RW DVD-RAM BD-RE	<p>Pixels: 34x34 ~ 5120x3840</p> <p>Sub sampling: 4:2:2, 4:2:0</p> <p>motion JPEG not supported</p> <p>SD card: JPEG conforming DCF (Design rule for Camera File System)</p> <p>Thawing Time: Approx. 2sec (7M pixels)</p> <p>Maximum numbers of folders and files;</p> <p>Maximum folders: 99(CD) / 300(SD card) / 300(DVD-RAM) / 300(BD-RE)</p> <p>Maximum files: 999(CD) / 3000(SD card) / 3000(DVD-RAM) / 9999(BD-RE)</p>
MP3 (CD-R/RW)	<p>Compression rate: 32kbps ~ 320kbps</p> <p>Sampling rate: 16kHz, 22.05kHz, 24kHz, 32kHz, 44.1kHz, 48kHz</p>
AVCHD (H.264) (SD card, DVD)	AVCHD format V1.0
Playable discs	<p>BD-ROM(SL/DL): compliant Ver.1.3</p> <p>BD-RE(SL/DL): BD-MV</p> <p>BD-R(SL/DL): BD-MV</p> <p>DVD-ROM(SL/DL): DVD-Video</p> <p>DVD-RAM: DVD-VR</p> <p>DVD-R: DVD-Video</p> <p>DVD-VR</p> <p>DVD-R(DL): DVD-Video</p> <p>DVD-VR</p> <p>DVD-RW: DVD-Video</p> <p>DVD-VR</p> <p>+R: Video</p> <p>+R(DL): Video</p> <p>+RW: Video</p> <p>CD-ROM, CD-R/RW: CD-DA</p>

HDMI	480p(525p)/1080i(1125i)/720p(750p)/1080p(1125p) HDMI™ (Deep color™, High Bit rate Audio) HDAVI (EZ-sync) Ver.2
Region number	Region No.1(PP), No.4(PL): DVD-Video Region No.A: BD-Video
Signal system	NTSC
Video output	Output level: 1.0 Vp-p (75 Ω) Output connector: Pin jack (1 system)
S - video output	Y output level: 1.0 Vp-p (75 Ω) C output level: 0.286 Vp-p (75 Ω) at Burst Output connector: S terminal (1 system)
Component video output (1080i/720p/480p/480i)	Y output level: 1.0 Vp-p (75 Ω) P _B output level: 0.7 Vp-p (75 Ω) P _R output level: 0.7 Vp-p (75 Ω) Output connector: Pin jack (Y: green, P _B : blue, P _R : red) (1 system)
Audio output	Output level: 2 Vrms (1 kHz 0 dB) Output connector: Pin jack Number of connectors(PP): 2 channel; 2 system (PL): 2 channel; 1 system 5.1 channel discrete output (5.1 channel); 1 system
Audio performance	<p>Frequency response</p> <ul style="list-style-type: none"> •DVD (linear audio) 4 Hz - 22 kHz (48kHz sampling) 4 Hz - 44 kHz (96kHz sampling) •CD-Audio 4 Hz - 20 kHz <p>S/N ratio 115dB</p> <p>Dynamic range 100dB</p> <p>Total harmonic distortion 0.003%</p>
Digital audio output	Optical digital output Optical terminal Coaxial digital output Pin jack
HDMI AV output	Outputformat 1080p/1080i/720p/480p Output Connector TypeA(19pin)
Others	
Dimensions	<p>Excluding the projecting parts: 430 (W) × 59 (H) × 313 (D) mm [Approx. 16 15/16 "(W) × 2 5/16" (H) × 12 5/16" (D)]</p> <p>Including the projecting parts: 430 (W) × 85 (H) × 320 (D) mm [Approx. 16 15/16 "(W) × 3 3/8" (H) × 12 5/8" (D)]</p>
Mass	Approx. 3.3 kg (7.3 lbs)
Operating Temperature range	5°C - 35°C (41°F - 95°F)
Operating Humidity range	10 %-80 % RH (no condensation)
LASER Specification	
Wave Length	405 nm(BDs), 662 nm(DVDs), 785 nm(CDs)
Laser Power	No hazardous radiation is emitted with the safety protection.
Solder	These models use lead free solder (PbF)

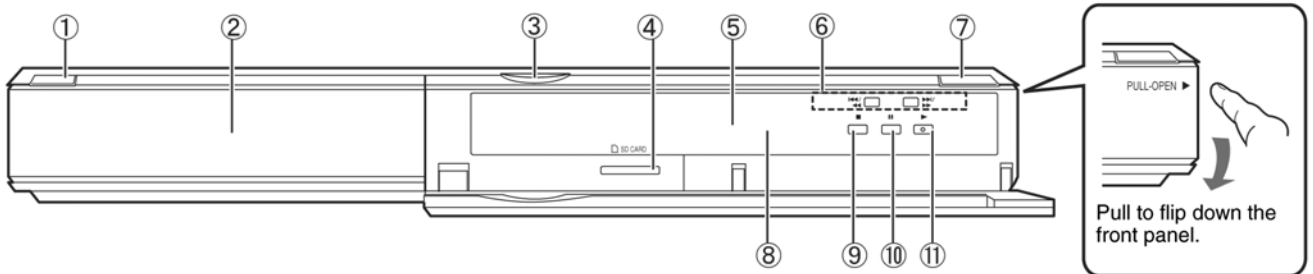
Notes : Mass and dimensions are approximate.
Specifications are subject to change without notice.

5 Location of Controls and Components



- 1** Turn the unit on and off
- 2 TV operation buttons**
You can operate the TV through the unit's remote control.
[TV POWER] : Turn the television on and off
[TV/VIDEO] : Switch the input channel
[A V CH] : Channel select
[+ - VOL] : Adjust the volume
- 3** Open or close the disc tray
- 4 Numbered buttons**
Select title numbers, etc./Enter numbers
- 5** Cancel
- 6 Basic playback control buttons**
- 7** Show status messages
- 8** Show Pop-up menu
- 9** Show Top menu/Direct Navigator
- 10** Show sub menu
- 11** These buttons are used when operating a BD-Video disc that includes Java™ applications (BD-J). For more information about operating this kind of disc, please read the instructions that came with the disc.
The [A] and [B] buttons are also used with the "Title View", "Picture View" and "Album View" screens .
- 12** Show Setup menu
- 13** Switch on/off Secondary Video (Picture-in-picture)
- 14** Transmit the remote control signal
- 15 Receiver operation buttons**
You can operate an amplifier/receiver through the unit's remote control.
[+ - VOL] : Adjust the volume
[MUTING] : Mute the sound
- 16** Reproduce more natural audio
- 17** Select audio
- 18** Show FUNCTIONS menu
- 19** Selection/OK, Frame-by-frame
- 20** Show on-screen menu
- 21** Return to previous screen
- 22** Select disc drive or SD card drive
- 23** Switch on/off Secondary Audio

CAUTION
Do not place objects in front of the unit. The disc tray may collide with objects when it is opened, and this may cause injury.



- 1 POWER button (POWER /I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2** Disc tray
- 3** SD Card LED
It is possible to set the LED to turn on/off.
- 4** SD card slot
- 5** Display

Disc indicator **SD** SD card indicator

The indicator blinks when reading data from a disc or card.

- 6** Search/Slow-motion/Skip
Search: Press and hold (During play)
Slow-motion: Press and hold (During pause)
Skip: Press
- 7** Open or close the disc tray
- 8** Remote control signal sensor
- 9** Stop
- 10** Pause
- 11** Start play

6 Operation Instructions

6.1. Taking out the Disc from BD/DVD Drive Unit when the Disc cannot be ejected by OPEN/CLOSE button

6.1.1. Forcible Disc Eject

6.1.1.1. When the power can be turned off.

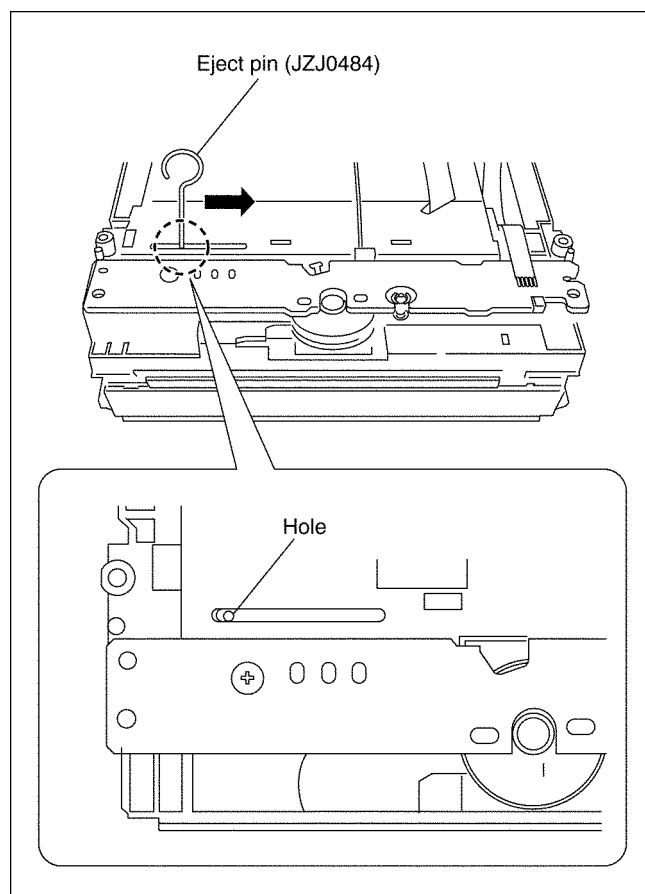
1. Turn off the power and press [SKIP FWD] and [PAUSE] keys on the front panel simultaneously for 5 seconds.

6.1.1.2. When the power can not be turned off.

1. Press [POWER] key on the front panel for over 10 seconds to turn off the power forcibly, and press [SKIP FWD] and [PAUSE] keys on the front panel simultaneously for 5 seconds.

6.1.2. When the Forcible Disc Eject can not be done.

1. Turn off the power and pull out AC cord.
2. Remove the Top Cover and BD/DVD Drive.
3. Insert Eject Pin (JZJ0484) into the hole on the bottom of BD/DVD Drive and slide the Eject Pin in the direction of the arrow to eject tray slightly.



4. Pull out tray by hand.

7 Service Mode

7.1. Self-Diagnosis and Special Mode Setting

7.1.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by **Self-Diagnosis Display** when any error has occurred.

U**, **H**** and **F**** are stored in memory and held.

You can check latest error code by transmitting [0] [1] of Remote Controller in Service Mode.

Automatic Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
U30	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">SET *</div> <p>* is remote controller code of the main unit. Display for 5 seconds.</p>
U59	Abnormal inner temperature detected	Display appears when the drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U59</div> <p>U59 is displayed for 30 minutes.</p>
U71	HDMI incompatible error (HDCP incompatible)	Display this error when the equipment (compatible with DVI such as TV, amplifier etc.) connected to the unit by HDMI is incompatible with HDCP. *HDCP=High-bandwidth Digital Content Protection	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U71</div>
U72	HDMI connection error (communication error)	This error is displayed when there are any communication problems with the unit and the equipments (TV, amplifier etc.) connected to the unit by HDMI. (or when there is a problem with the HDMI cable)	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U72</div> <p>U72 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.</p>
U73	HDMI connection error (authentication error)	when authentication error occurs while the equipments (TV, amplifier etc.) are connected by HDMI. (or when there is a problem with the HDMI cable)	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">U73</div> <p>U73 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.</p>
F99	Hang-up	Displayed when communication error has occurred between Main microprocessor (MV2-PLUS (IC60009)) and Timer microprocessor (IC7501).	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">F99</div> <p>Displayed is left until the [POWER] key is pressed.</p>
H19	Inoperative fan motor	When inoperative fan motor is detected after powered on, the power is turned off automatically. The event is saved in memory.	No display	No display
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	No display
F34	Initialization error when main microprocessor is started up for program recording	When initialization error is detected after starting up main microprocessor MV2-PLUS (IC60009), the power is turned off automatically. The event is saved in memory.	No display	No display
F58	Drive hardware error	When drive unit error is detected, the event is saved in memory.	No display	No display

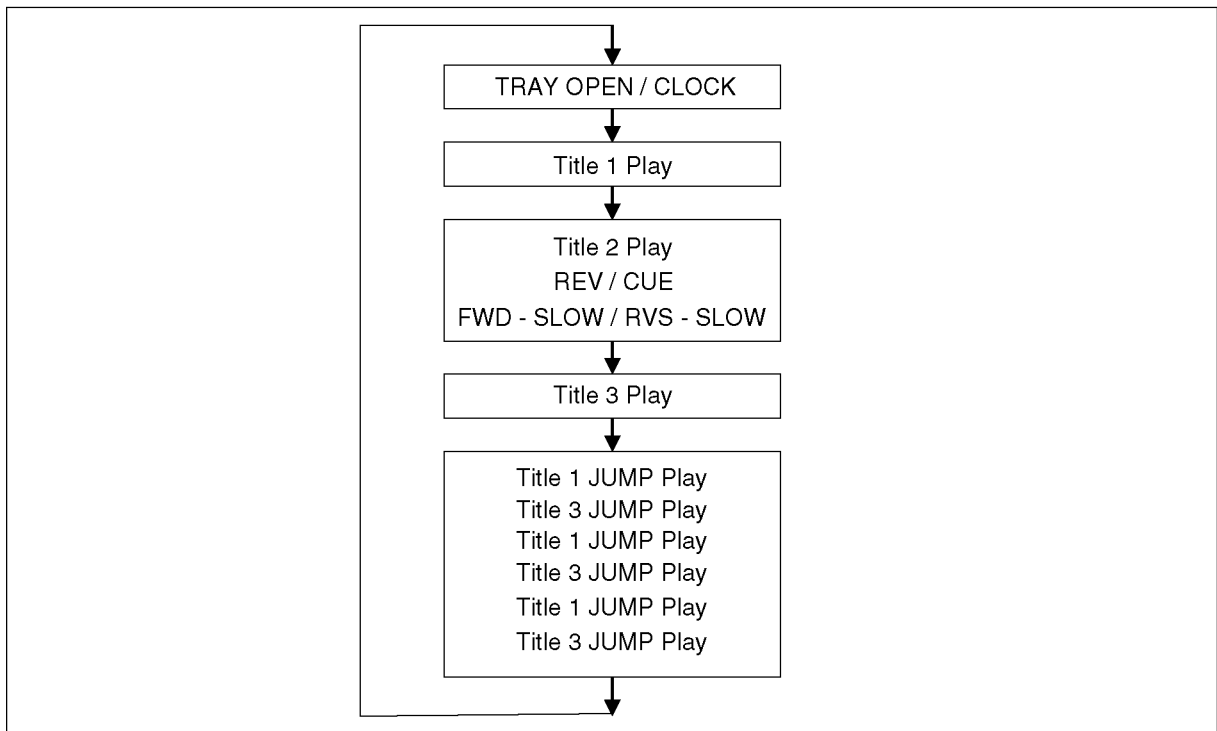
Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
UNSUPPORT	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally in case of the disc is dirty.	This disc is incompatible.	<div style="border: 1px solid black; padding: 5px; text-align: center;">UNSUP</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">PORT</div> <p>Display for 5 seconds.</p>
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	Cannot read. Please check the disc.	<div style="border: 1px solid black; padding: 5px; text-align: center;">NOREAD</div>
HARD ERR	Drive error	The drive detected a hard error.	DVD drive error.	<p>Display for 5 seconds.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">HARD</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">ERR</div>
IR ERR	IR communication error	[IR ERR] is displayed when communication between Timer microprocessor and IR microprocessor fails.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">IR ERR</div>
SELF CHECK	Restoration operation	Since the power cord fell out during a power failure or operation, it is under restoration operation. *It will OK, if a display disappears automatically. If a display does not disappear, there is the possibility that defective Digital P.C.B. / DVD drive.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">SELF</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">CHECK</div>
PLEASE WAIT	Unit is in termination process	Unit is in termination process now. BYE is displayed and power will be turned off.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">PLEASE</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">WAIT</div>
UNFORMAT	Unformatted disc error	You have inserted an unformatted DVD-RAM or DVD-RW that is unformatted or recorded on other equipment.	The disc is not formatted properly.	<div style="border: 1px solid black; padding: 5px; text-align: center;">UNFOR</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">MAT</div>
No PLAY	When there is a viewing restriction on a BD-Video or DVD-Video.	Rating password is set.	No display	<div style="border: 1px solid black; padding: 5px; text-align: center;">No PLAY</div>

7.1.2. Special Modes Setting

Item		FL display	Key operation
Mode name	Description		
TEST Mode	*All the main unit's parameters are initialized.	<div style="border: 1px solid black; padding: 5px; text-align: center;">TEST</div>	Press [STOP], [SKIP FWD] and [OPEN/CLOSE] keys simultaneously for five seconds when power is off.
Rating password	The audiovisual level setting password is initialized to Level 8 .	<div style="border: 1px solid black; padding: 5px; text-align: center;">INIT</div>	Open the tray, and press [SKIP REV] and [PLAY] simultaneously for 5 seconds.
Service Mode	Setting every kind of modes for servicing. *Details are described in 7.1.3. Service Mode at a glance .	<div style="border: 1px solid black; padding: 5px; text-align: center;">SERV</div>	When the power is off, press [SKIP FWD], [OPEN/CLOSE] and [PAUSE] keys simultaneously for 5 seconds.
BD-ROM history cleaning	< Persistent Storage > of BD-ROM standard is cleaned. Screen display: [The player's history data has been cleared] is displayed for five seconds.	<div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div> <p>Same display as before execution.</p>	When disc is not in tray, press [STOP] and [POWER] keys simultaneously for 5 seconds.
Forced disc eject	Removing a disc that cannot be ejected. The tray will open and unit will shift to P-off mode. While Demonstration Lock is being set, this Forced disc eject function is not accepted.	<p>The display before execution leaves.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div>	When the power is off, press [SKIP FWD] and [PAUSE] keys simultaneously for 5 seconds.

Item		FL display	Key operation
Mode name	Description		Front Key
Forced power-off	When the power button is not effective while power is ON, turn off the power forcibly.	Display in P-off mode.	Press [POWER] key over than 10 seconds.
Aging	Perform sequence of modes as * Aging Description shown below continually.	Display following the then mode.	When the power is ON, press [STOP], [POWER] and [OPEN/CLOSE] simultaneously for over 5 seconds and less than 10 seconds. NOTE1: If Unit has not turned into Aging mode by operations shown above, execute TEST MODE once and re-execute operation shown above. (*All the main unit's parameters include tuner are initialized by TEST mode.) NOTE2: If the unit has hung-up because of pressing keys for over 10 seconds, once turn off the power, and re-execute this command. *When releasing Aging mode, press [POWER] key over 10 seconds.

Aging Contents (Example):



Item		FL display	Key operation
Mode name	Description		Front Key
Demonstration lock/unlock	Ejection of the disc is prohibited. The lock setting is effective until unlocking the tray and not released by Main unit initialization of service mode.	*When lock the tray. <div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">LOCK</div> LOCK is displayed for 3 seconds.	When the power is on (SS mode), press [SKIP FWD] and [OPEN/CLOSE] keys simultaneously for 5 seconds. Note: When a disc is not in tray, this setting is not effective.
		*When unlock the tray. <div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">UNLOCK</div> UNLOCK is displayed for 3 seconds.	When the power is on (SS mode), press [SKIP FWD] and [OPEN/CLOSE] keys simultaneously for 5 seconds.
		*When press OPEN/CLOSE key while the tray being locked. <div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">LOCK</div> Display LOCK for 3 seconds.	Press [OPEN/CLOSE] key while the tray is being locked.
Progressive initialization	The progressive setting is initialized to Interlace.	The display before execution leaves. <div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">*****</div>	When the power is on (SS mode), press [STOP] and [PLAY] simultaneously for 5 seconds.

7.1.3. Service Modes at a glance

Service mode setting: While the power is off, press [SKIP FWD], [PAUSE] and [OPEN / CLOSE] simultaneously for five seconds.

Item		FL display	Key operation (Remote controller key)
Mode name	Description		
Release Items	Item of Service Mode executing is cancelled.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">SERV</div>	Press [0] [0] or [Return] in service mode.
Error Code Display	Last Error Code of U/H/F held by Timer is displayed on FL. *Details are described in 7.1.1. Self-Diagnosis Functions .	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">♣ □ □</div> <p>*♣ shows U/H/F. □□ shows number.</p> <p>If any error history dose not exist, [F00] is displayed.</p>	Press [0] [1] in service mode
ROM Version Display	1. Region code (displayed for 5 sec.) 2. Main firm version (displayed for 5 sec.) 3. Timer firm version (displayed for 5 sec.) 4. Drive firm version (displayed for 5 sec.) 5. ROM correction version (left displayed)	<p>1. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">NO\$%</div></p> <p>\$: Region of DVD (Example: 1,2.....) %: Region of BD (Example: A,B.....)</p> <p>2. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div></p> <p>3. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div></p> <p>4. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div></p> <p>5. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">***</div></p> <p>* are version displays.</p>	Press [0] [2] in service mode
Drive check	Simple quality of BD/DVD drive.	<p>When BD/DVD drive is OK</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DRV OK</div> <p>When BD/DVD drive is NG</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">DRV NG</div> <p>*If the date of the present or the trouble occurred time is incorrect, it may be not able to judge correctly.</p>	Press [3] [8] in service mode.
Laser Used Time Indicatoion	Check laser used time (hours) of drive.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">*****</div> <p>I(****) is the used time display in hour. ILaser used time of DVD/ CD in Playback/Recording mode is counted.</p>	Press [4] [1] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
BD/DVD drive last error	BD/DVD drive error code display.	<p>1. Error Number is displayed for 5 seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">NO **</div> <p>2. Time when the error has occurred is display for 5 seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DDhhmm</div> <p>DD : Day hh : Hour mm : Minute</p> <p>3. Last drive error (1/2) is displayed for 5 seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">*****</div> <p>00 : Bad disc 03 : Bad disc 04 : Bad disc or drive malfunction</p> <p>4. Last drive error (2/2) is displayed for five seconds.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">*****</div> <p>5. Error occurring disc type is displayed for 5 seconds.</p> <p>DVD-RW</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDRW</div> <p>CD-R</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CDR</div> <p>CD-RW</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CDRW</div> <p>DVD+R</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDPR</div> <p>DVD+RW</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDPRW</div> <p>BD-ROM</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">BDROM</div>	Press [4] [2] in service mode.

Item		FL display	Key operation (Remote controller key)												
Mode name	Description														
		BD-RE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">BDRE</div> BD-R <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">BDR</div> DVD ROM <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVD</div> CD <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">CD</div> RAM (2.6GB) <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">RAM26</div> RAM (4.7GB) <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">RAM47</div> DVD-R <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">DVDR</div> Others <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">MEDIA*</div> <small>* is displayed the respeced value from RTSC.</small>													
		6. Disc maker ID is displayed for 5 seconds. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">*****</div> 7. Factor of drive error (hexadecimal) occurring is left displayed. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">* * + + □ □</div> <small>* * : Error occurring operation code (This is not used)</small> <small>+ + : Error occurring disc type</small> <table border="1" style="margin-left: 20px; margin-top: 5px;"> <tr><td>0</td><td>DVD-ROM</td></tr> <tr><td>1</td><td>CD</td></tr> <tr><td>2</td><td>2.6GB DVD-RAM</td></tr> <tr><td>3</td><td>4.7GB DVD-RAM</td></tr> <tr><td>4</td><td>DVD-R</td></tr> <tr><td>After 5</td><td>Others</td></tr> </table>	0	DVD-ROM	1	CD	2	2.6GB DVD-RAM	3	4.7GB DVD-RAM	4	DVD-R	After 5	Others	In case that the maker cannot be identified, display is black out.
0	DVD-ROM														
1	CD														
2	2.6GB DVD-RAM														
3	4.7GB DVD-RAM														
4	DVD-R														
After 5	Others														

Item		FL display	Key operation (Remote controller key)																																																																																									
Mode name	Description																																																																																											
		<input type="checkbox"/> <input type="checkbox"/> : Error occurring disc situation <table border="1"> <thead> <tr> <th rowspan="2">Display</th> <th colspan="4">Detail</th> </tr> <tr> <th>Disc distinction</th> <th>With or without Cartridge</th> <th>Disc cart-ridge state</th> <th>Size</th> </tr> </thead> <tbody> <tr><td>00</td><td>OK</td><td>With</td><td>Not opened</td><td>12cm</td></tr> <tr><td>10</td><td>OK</td><td>With</td><td>Not opened</td><td>8cm</td></tr> <tr><td>20</td><td>OK</td><td>With</td><td>Opened</td><td>12cm</td></tr> <tr><td>30</td><td>OK</td><td>With</td><td>Opened</td><td>8cm</td></tr> <tr><td>40</td><td>OK</td><td>Without</td><td>Not opened</td><td>12cm</td></tr> <tr><td>50</td><td>OK</td><td>Without</td><td>Not opened</td><td>8cm</td></tr> <tr><td>60</td><td>OK</td><td>Without</td><td>Opened</td><td>12cm</td></tr> <tr><td>70</td><td>OK</td><td>Without</td><td>Opened</td><td>8cm</td></tr> <tr><td>80</td><td>NG</td><td>With</td><td>Not opened</td><td>12cm</td></tr> <tr><td>90</td><td>NG</td><td>With</td><td>Not opened</td><td>8cm</td></tr> <tr><td>A0</td><td>NG</td><td>With</td><td>Opened</td><td>12cm</td></tr> <tr><td>B0</td><td>NG</td><td>With</td><td>Opened</td><td>8cm</td></tr> <tr><td>C0</td><td>NG</td><td>Without</td><td>Not opened</td><td>12cm</td></tr> <tr><td>D0</td><td>NG</td><td>Without</td><td>Not opened</td><td>8cm</td></tr> <tr><td>E0</td><td>NG</td><td>Without</td><td>Opened</td><td>12cm</td></tr> <tr><td>F0</td><td>NG</td><td>Without</td><td>Opened</td><td>8cm</td></tr> </tbody> </table>	Display	Detail				Disc distinction	With or without Cartridge	Disc cart-ridge state	Size	00	OK	With	Not opened	12cm	10	OK	With	Not opened	8cm	20	OK	With	Opened	12cm	30	OK	With	Opened	8cm	40	OK	Without	Not opened	12cm	50	OK	Without	Not opened	8cm	60	OK	Without	Opened	12cm	70	OK	Without	Opened	8cm	80	NG	With	Not opened	12cm	90	NG	With	Not opened	8cm	A0	NG	With	Opened	12cm	B0	NG	With	Opened	8cm	C0	NG	Without	Not opened	12cm	D0	NG	Without	Not opened	8cm	E0	NG	Without	Opened	12cm	F0	NG	Without	Opened	8cm	
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F0	NG	Without	Opened	8cm																																																																																								
CEC (H) output	Check of the CEC terminal high output of HDMI.	When the check is OK <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHOK</div> When the check is NG <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHNG</div>	Press [5] [5] in service mode.																																																																																									
CEC (L) output	Check of the CEC terminal low output of HDMI.	When the check is OK <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHOK</div> When the check is NG <div style="border: 1px solid black; padding: 5px; text-align: center;">CECHNG</div>	Press [5] [6] in service mode.																																																																																									
Tray OPEN/CLOSE Test	The DVD drive tray is opened and closed repeatedly.	<div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div> * is number of open/close cycle times.	Press [9] [1] in service mode *When releasing this mode, press the [POWER] button of Remote Controller more than 10 seconds.																																																																																									
Delete the Laser Used Time	Laser used time stored in the memory of the unit is deleted.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [5] in service mode.																																																																																									
Delete the Last Drive Error	Delete the Last Drive Error information stored on the DVD Drive.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [6] in service mode.																																																																																									
Delete the Error History	Delete Error History information stored on the unit.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [7] in service mode.																																																																																									
Error code initialization	Initialization of the last error code held by timer (Write in F00)	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [8] in service mode.																																																																																									
Initialize Service	Last Drive Error, Error history and Error Codes stored on the unit are initialized to factory setting.	<div style="border: 1px solid black; padding: 5px; text-align: center;">CLR</div>	Press [9] [9] in service mode.																																																																																									
Finishing service mode	Release Service Mode.	Display in STOP (SS) mode. <div style="border: 1px solid black; padding: 5px; text-align: center;">*****</div>	Press power button on the front panel or Remote controller in service mode.																																																																																									

8 Service Fixture & Tools

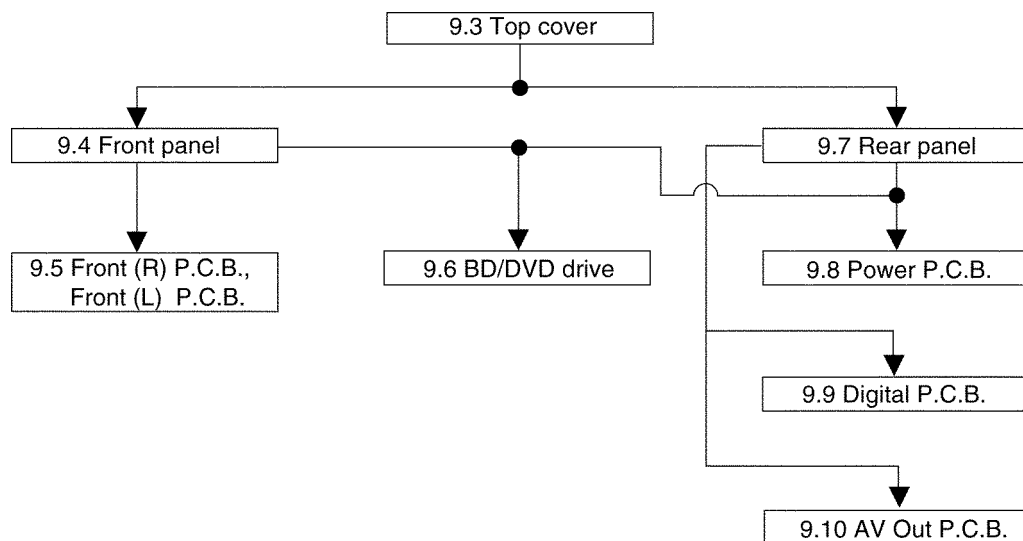
Part Number	Description	Pcs	Compatibility
RFKZ0216	Extension Cable (AV Out P.C.B. - Digital P.C.B./ 23 Pin)	2	Same as EH55 Series
	Extension Cable (Power P.C.B. - Digital P.C.B. / 23 Pin)	2	
RFKZ0366	Extension FFC (BD/DVD Drive - Digital P.C.B. / 40 Pin)	1	Same as EH55 Series
RFKZ0169	Extension Cable (Power P.C.B. - BD/DVD Drive / 4 Pin)	1	Same as E50/E100 Series
RFKZ0323	Extension Cable (Power P.C.B. - Digital P.C.B. / 9 Pin)	1	Same as BD10
RFKZ0324	Extension Cable (Power P.C.B. - Front (R) P.C.B. / 18 Pin)	1	New
JZS0484	Eject Pin	1	Same as ES15/ E50 Series
RFKZ03D01K	Lead Free Solder (0.3mm/100g Reel)	-	Same as EH55 Series
RFKZ06D01K	Lead Free Solder (0.6mm/100g Reel)	-	Same as EH55 Series
RFKZ10D01K	Lead Free Solder (1.0mm/100g Reel))	-	Same as EH55 Series
RFKZ0316	Solder Remover (Lead free 10W temperature Solder/180g)	-	Same as EH55 Series
RFKZ0328	Flux	-	Same as EH55 Series
RFKZ0329	Bottle of Flux	-	Same as EH55 Series

9 Disassembly and Assembly Instructions

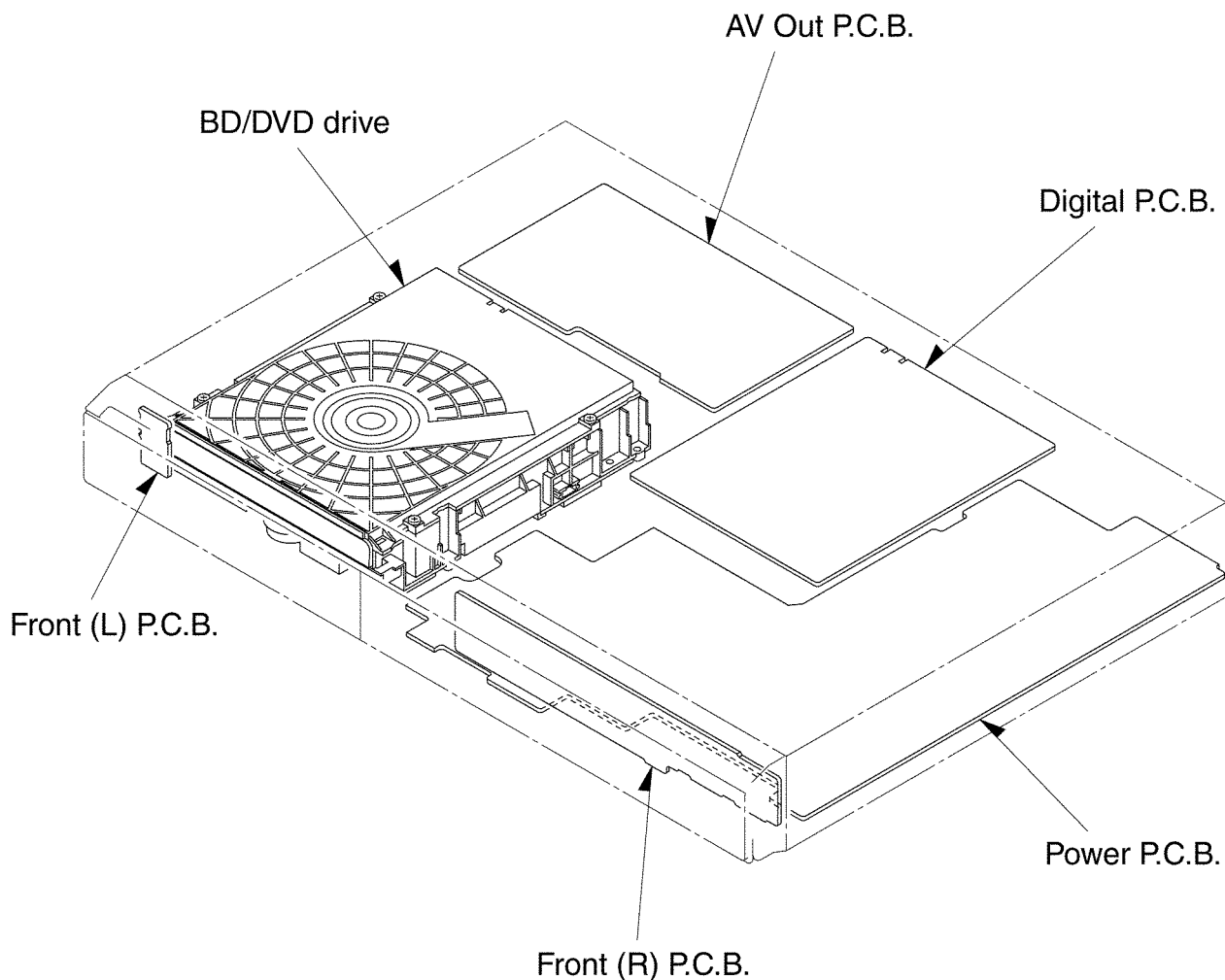
9.1. Disassembly Flow Chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.

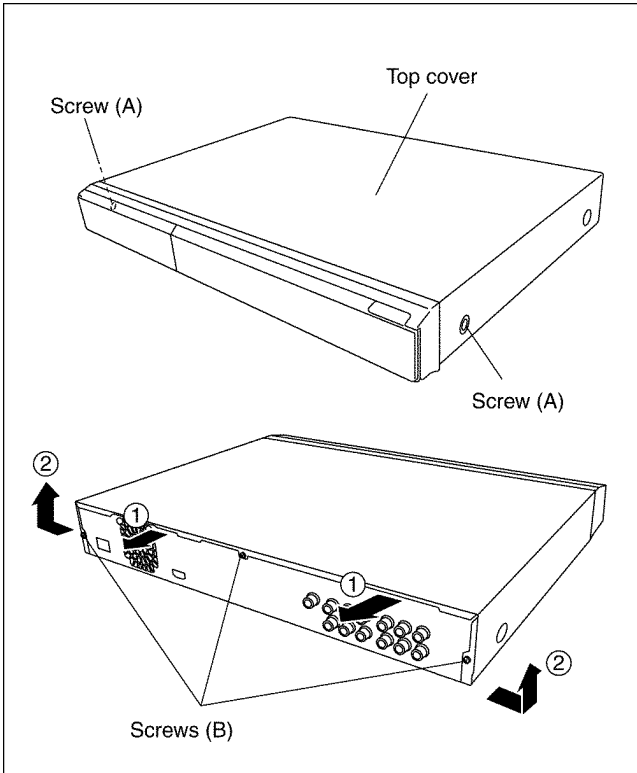


9.2. P.C.B. Positions



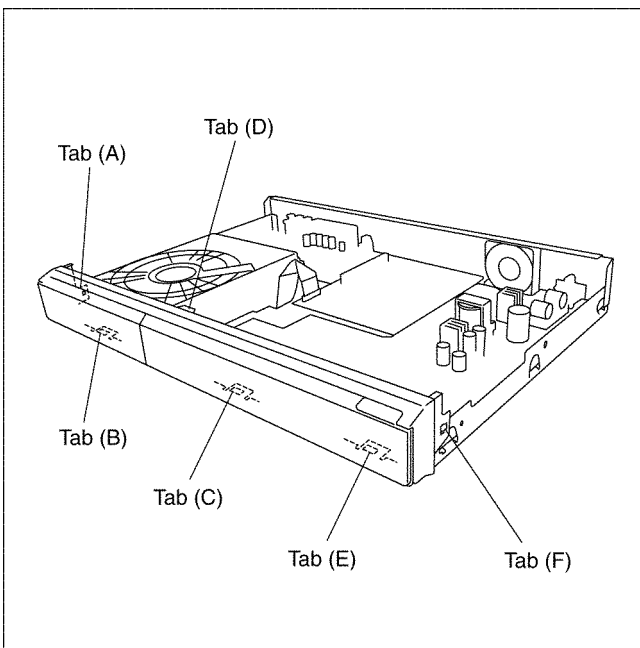
9.3. Top cover

1. Remove the 2 screws (A) and 3 screws (B).
2. Slide top case rearward and open the both ends at rear side of the top case a little and lift the top case in the direction of the arrows.



9.4. Front panel

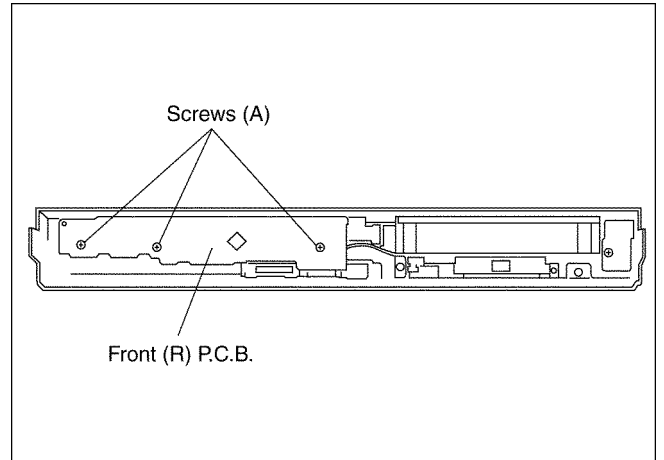
1. Unlock 6 tabs (A) - (F) turn.
Pull with the front panel in the direction of your side.



9.5. Front (R) P.C.B., Front (L) P.C.B.

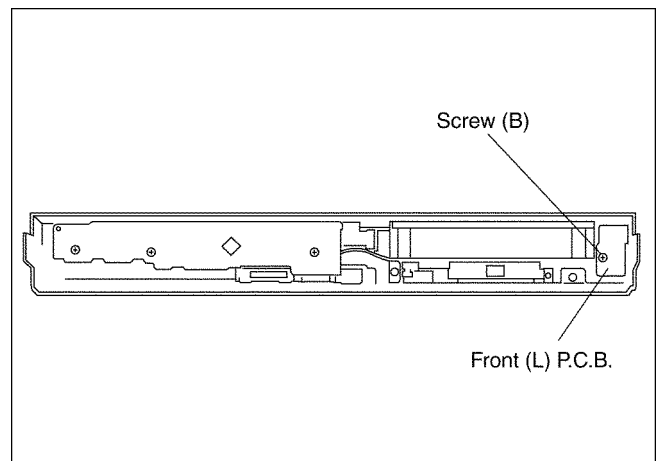
9.5.1. Front (R) P.C.B.

1. Remove the 3 screws (A).
2. Remove the Front (R) P.C.B.



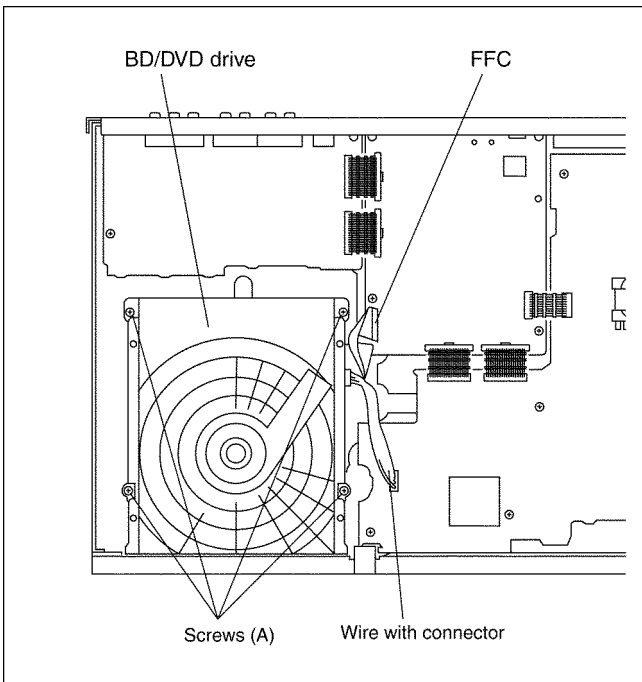
9.5.2. Front (L) P.C.B.

1. Remove the screw (B).
2. Remove the Front (L) P.C.B.



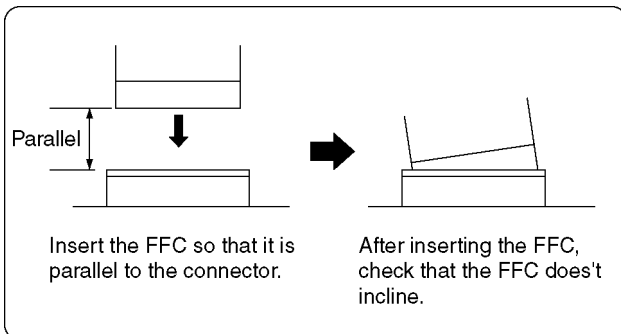
9.6. BD/DVD drive

1. Remove the FFC and wire with connector.
2. Remove the 4 screws (A) to remove the BD/DVD drive.



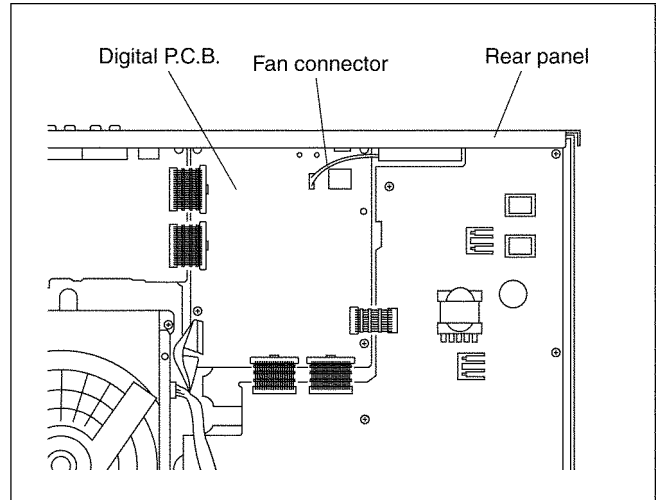
CAUTION:

When replacing BD/DVD drive, pay attention as below.

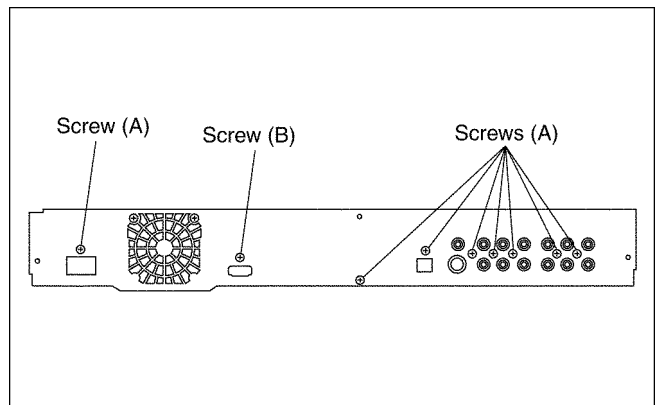


9.7. Rear panel

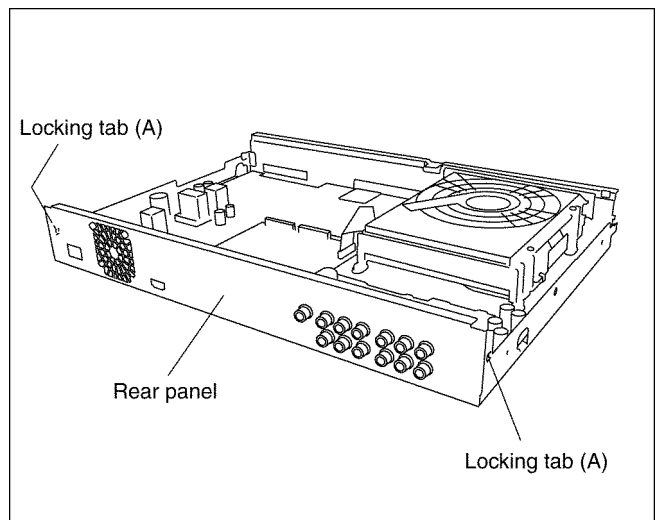
1. Remove the fan connector from Digital P.C.B..



2. Remove the 8 screws (A) and screw (B).

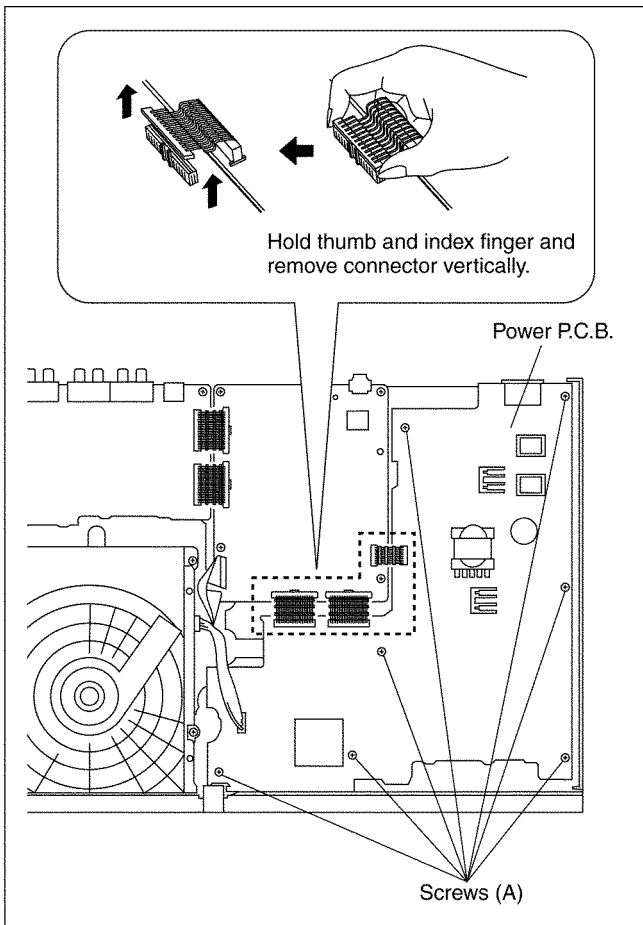


3. Unlock 2 locking tabs (A) to remove the rear panel.



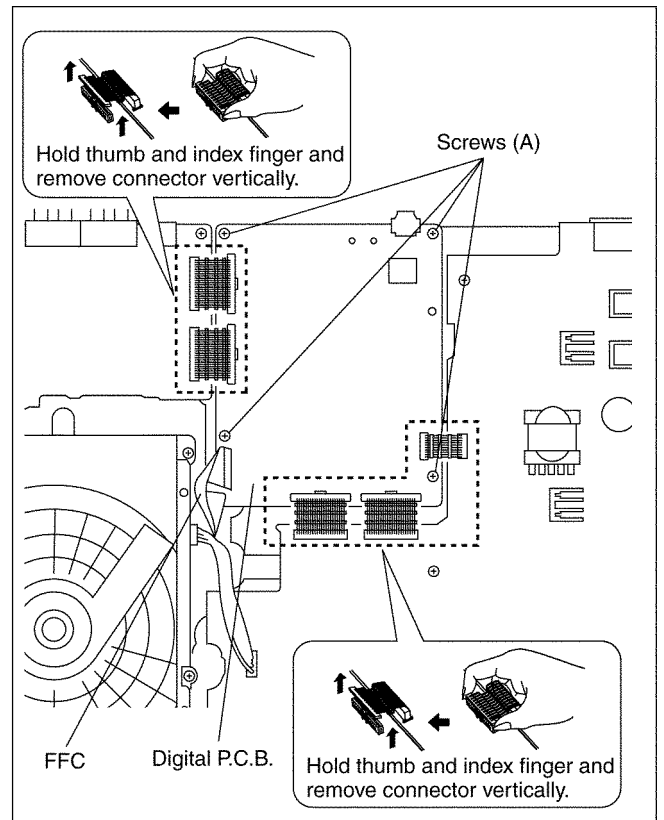
9.8. Power P.C.B.

1. Remove 7 screws (A) and 3 connectors to remove Power P.C.B.



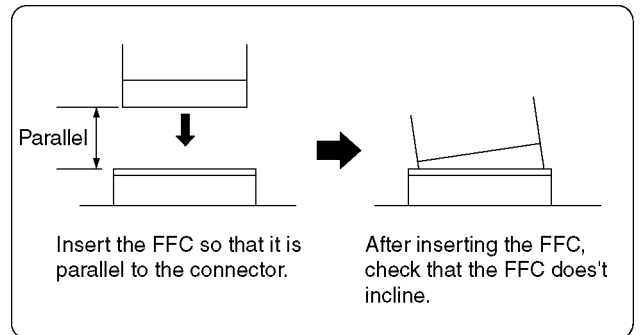
9.9. Digital P.C.B.

1. Remove the FFC.
2. Remove 4 screws (A) and 5 connectors to remove Digital P.C.B..



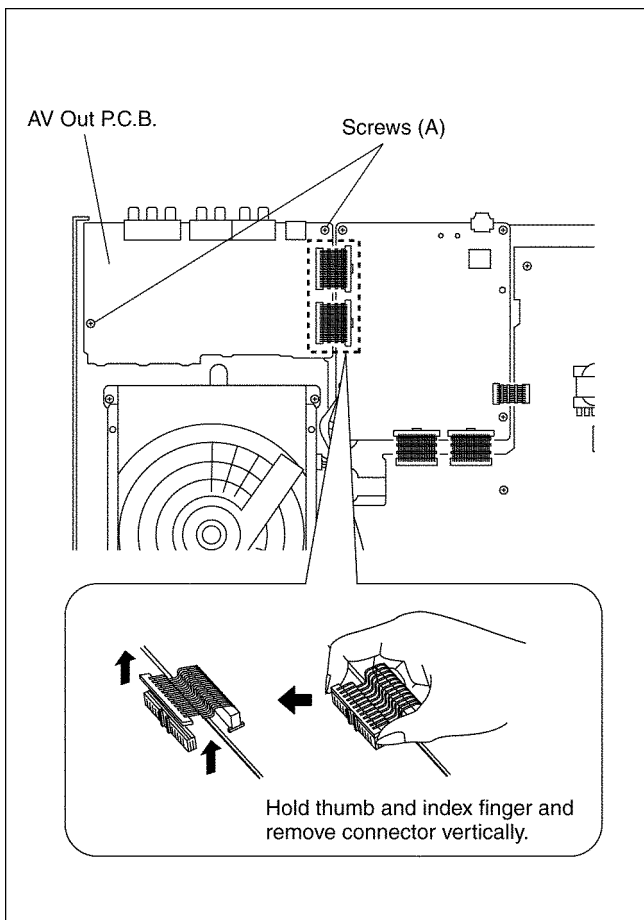
CAUTION:

When replacing Digital P.C.B., pay attention as below.



9.10. AV Out P.C.B.

1. Remove 2 screws (A) and 2 connectors to remove AV Out P.C.B.



10 Measurements and Adjustments

10.1. Service Positions

Note:

For description of the disassembling procedure, see the section 9.

10.1.1. Checking and Repairing of Power P.C.B.

1. Top Cover

Remove 3 Screws on rear.

Remove 2 Screws on side.

Remove Top Cover.

2. Front Panel

Unlock the 6 Tabs that is locking Front Panel Ass'y and Bottom Chassis.

Remove the Front Panel Ass'y.

3. Power P.C.B.

Remove the 9 Screws that is fixing the Rear Panel.

Disconnect the Fan Connector, and remove the Rear Panel.

Disconnect the Cable from the BD/DVD Drive.

Disconnect the 2 Connectors (23 pin) and the Connector (9 pin) between Power and Digital P.C.B.

Remove the 7 Screws, and remove the Power P.C.B..

Install the Rear Panel back and connect the Fan Connector again.

Connect Extension Cables shown below.

Between Power P.C.B. and Digital P.C.B.: (RFKZ0216) 23pin x 2

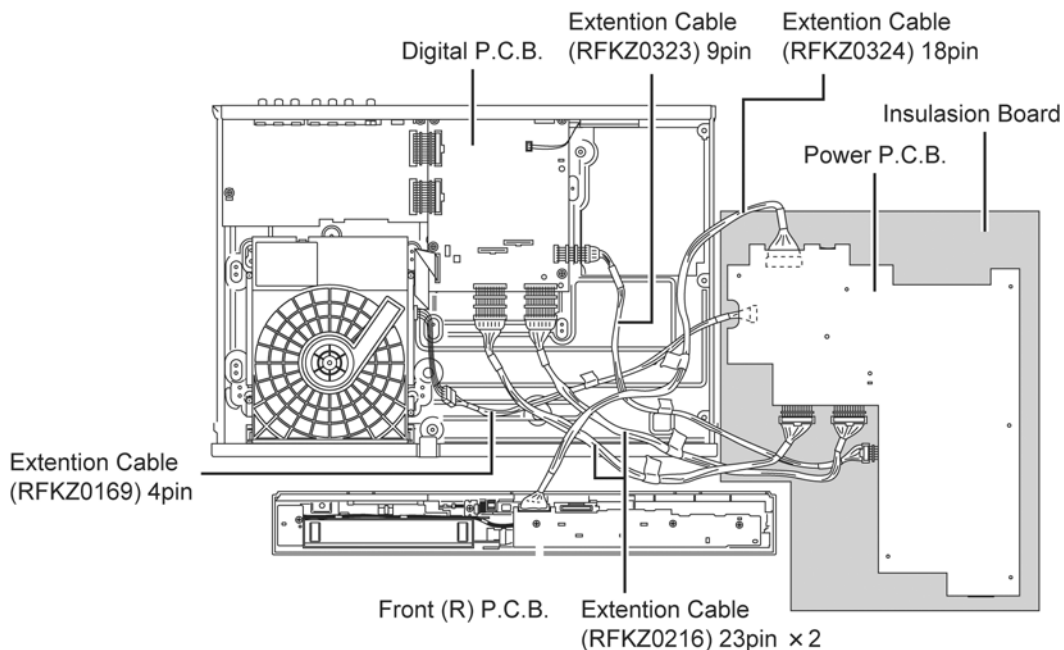
Between Power P.C.B. and Digital P.C.B.: (RFKZ0323) 9pin

Between Power P.C.B. and Front (R) P.C.B.: (RFKZ0324) 18pin

Between Power P.C.B. and BD/DVD Drive : (RFKZ0169) 4pin

Caution:

Red wire should be connected to pin1.



10.1.2. Checking and Repairing of BD/DVD Drive

1. Top Cover

Remove 3 Screws on rear.

Remove 2 Screws on side.

Remove Top Cover.

2. BD/DVD Drive

Remove the 4 Screws that is fixing the BD/DVD Drive.

Disconnect the FFC (40pin) from the Connector on the Digital P.C.B.

Disconnect the Cable (4pin) from the Connector on the Power P.C.B.

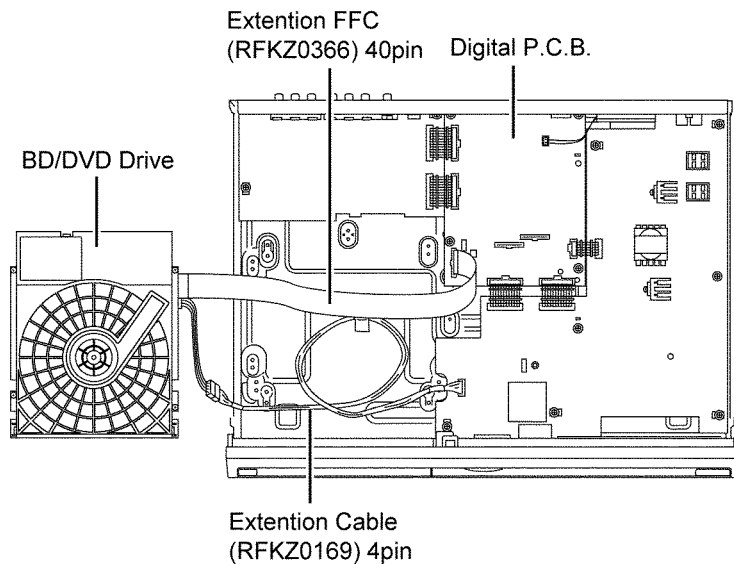
Remove the BD/DVD Drive.

Connect Extension FFC and Extension Cables shown below.

- Between BD/DVD Drive and Digital P.C.B.: (RFKZ0366) 40pin
- Between BD/DVD Drive and Power P.C.B.: (RFKZ0169) 4pin

Caution:

Red wire should be connected to pin1.



10.1.3. Checking and Repairing of AV Out P.C.B.

1. Top Cover

Remove 3 Screws on rear.

Remove 2 Screws on side.

Remove Top Cover.

2. AV Out P.C.B.

Remove the 9 Screws that is fixing the Rear Panel.

Disconnect the Fan Connector, and remove the Rear Panel.

Disconnect the 2 Connectors (23pin) between AV Out and Digital P.C.B.

Remove the 2 Screws, and remove the AV Out P.C.B.

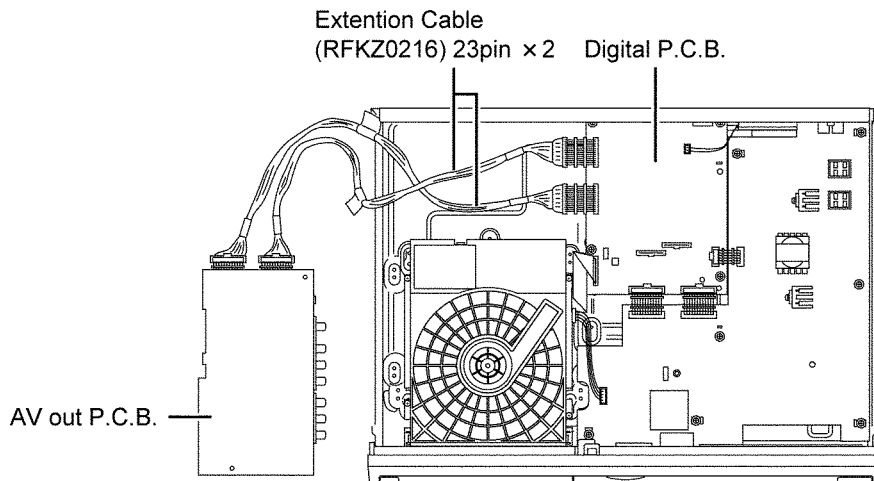
Install the Rear Panel back and connect the Fan Connector again.

Connect the Extension Cables shown below.

- Between AV Out P.C.B. and Digital P.C.B.: (RFKZ0216) 23pin x 2

Caution:

Red wire should be connected to pin1.



10.1.4. Checking and Repairing of Digital P.C.B.

1. Top Cover

Remove 3 Screws on rear.

Remove 2 Screws on side.

Remove Top Cover.

2. Digital P.C.B.

Remove the 9 Screws that is fixing the Rear Panel.

Disconnect the Fan Connector, and remove the Rear Panel.

Disconnect the 2 Connectors (23 pin) and the Connector (9 pin) between Digital and Power P.C.B.

Disconnect the 2 Connectors (23 pin) between Digital and AV Out P.C.B.

Disconnect the FFC between Digital P.C.B. and the BD/DVD Drive.

Remove the 4 Screws, and remove the Digital P.C.B.

3. Fan Motor

Remove the 2 Screws that is fixing the Fan Motor on the Rear Panel.

Remove the Fan Motor.

Connect Extension FFC and Cables shown below.

Between Digital P.C.B. and Power P.C.B.: (RFKZ0216) 23pin x 2

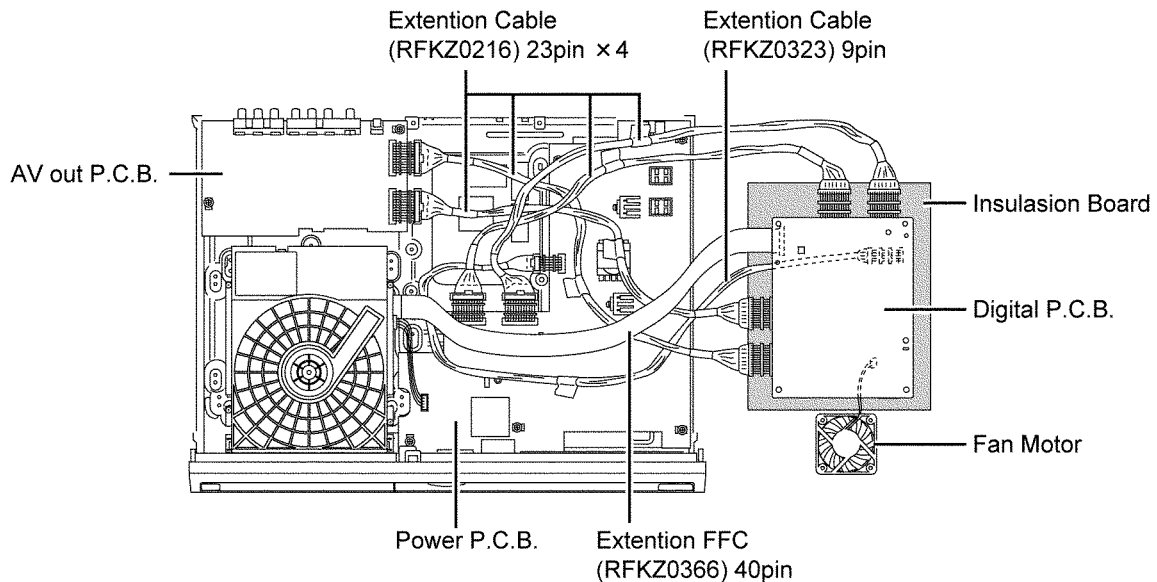
Between Digital P.C.B. and AV Out P.C.B.: (RFKZ0216) 23pin x 2

Between Digital P.C.B. and Power P.C.B.: (RFKZ0323) 9pin

Between Digital P.C.B. and BD/DVD Drive: (RFKZ0366) 40pin

Caution:

Red wire should be connected to pin1.



10.1.5. Caution for Replacing Parts

10.1.5.1. Notice after replacing Digital P.C.B.

After replacing Digital P.C.B., **TEST** is displayed on FL.
Once power off, and start-up again.

10.1.5.2. Items that should be done after replacing parts

√: Necessary —: Unnecessary

Items that Should be done	Updating Firmware (Note 1)
Replacing Parts	
Digital P.C.B.	√

Note 1:

Download latest Firmware and burn it on CD-R or CD-RW, and update Firmware.

10.1.5.3. Standard Inspection Specifications after Making Repairs

After making repairs, we recommend performing the following inspection, to check normal operation.

No.	Procedure	Item to Check
1	Turn on the power, and confirm items pointed out.	Items pointed out should reappear.
2	Insert RAM disc.	The Panasonic RAM disc should be recognized.
4	Perform playback for one minute using the RAM disc.	No abnormality should be seen in the picture, sound or operation. *Panasonic DVD-RAM disc should be used when recording and playback.
5	Perform playback for one minute using the BD-Video disc.	No abnormality should be seen in the picture, sound or operation.
6	If a problem is caused by a BD-Video disc, VCD, DVD-R, DVD-Video, Audio-CD, or MP3, playback the test disc.	No abnormality should be seen in the picture, sound or operation.
7	After checking and making repairs, upgrade the firmware to the latest version.	Make sure that [UPD OK] appears in the FL displays. *[UNSUPPORT] display means the unit is already updated to newest same version. Then version up is not necessary.
8	Transfer [9][9] in the service mode setting, and initialize the service settings (return various settings and error information to their default values. The laser time is not included in this initialization).	Make sure that [CLR] appears in the FL display. After checking it, turn the power off.

Use the following checklist to establish the judgment criteria for the picture and sound.

Item	Contents	Check	Item	Contents	Check
Picture	Block noise		Sound	Distorted sound	
	Crosscut noise			Noise (static, background noise, etc.)	
	Dot noise			The sound level is too low.	
	Picture disruption			The sound level is too high.	
	Not bright enough			The sound level changes.	
	Too bright				
	Flickering color				
Color fading					

Service Manual

Diagrams and Replacement Parts List

Blu-ray Disc Player

Model No.

DMP-BD30PP

DMP-BD30PL

Vol. 1
Colour
(K).....Black Type

S1. About Indication of The Schematic Diagram

S1.1. Important Safety Notice

COMPONENTS IDENTIFIED WITH THE MARK \triangle HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

1. Although reference number of the parts is indicated on the P.C.B. drawing and/or schematic diagrams, it is NOT mounted on the P.C.B. when it is displayed with "\$" mark.
2. It is only the "Test Round" and no terminal (Pin) is available on the P.C.B. when the TP (Test Point) indicated as "●" mark.
3. The voltage being indicated on the schematic diagram is measured in "Standard-Playback" mode when there is no specify mode is mentioned.
4. Although the voltage and waveform available on here is measured with standard frame, it may be differ from actual measurement due to modification of circuit and so on.
5. The voltage being indicated here may be include observational-error (deviation) due to internal-resistance and/or reactance of equipment. Therefore, handle the value indicated on here as reference.
6. Use the parts number indicated on the Replacement Parts List .
7. Indication on Schematic diagrams:

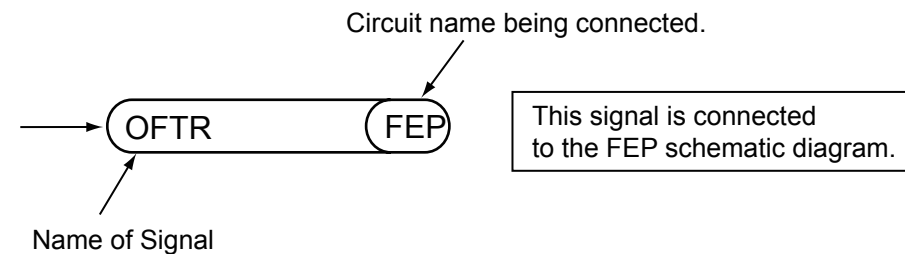


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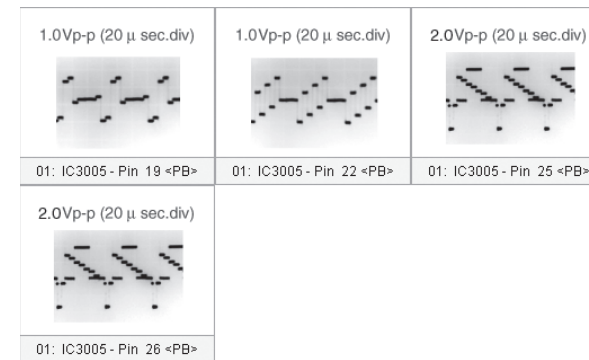
S2. Voltage and Waveform Chart

Note) 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.

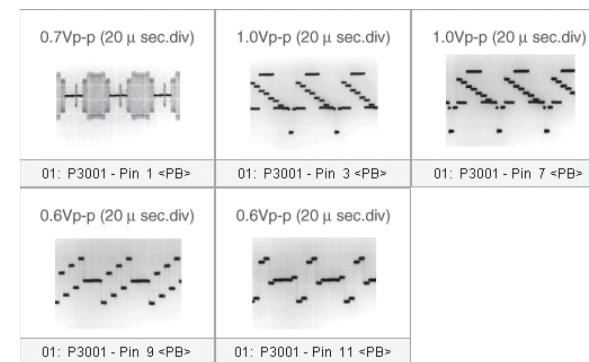
S2.1. AV Main P.C.B.

REF No.	PIN No.	PB	STOP	REF No.	PIN No.	PB	STOP	REF No.	PIN No.	PB	STOP
IC3005	1	2.4	2.4	P3001	2	0	0	Q4007	C	0	0
IC3005	2	0	0	P3001	3	1.2	1.2	Q4007	B	-5.8	0.7
IC3005	3	0	0	P3001	4	0	0	Q4008	E	0	0
IC3005	4	5	5	P3001	5	0	0	Q4008	C	0	0
IC3005	5	1.8	1.6	P3001	6	0	0	Q4008	B	-5.8	0.7
IC3005	6	0	0	P3001	7	1.4	1.4	Q4009	E	0	0
IC3005	7	3	3	P3001	8	3.2	3.2	Q4009	C	0	0
IC3005	8	0	0	P3001	9	1.3	1.3	Q4009	B	-5.8	0.7
IC3005	9	0	0	P3001	10	3.2	3.2	Q4012	E	0	0
IC3005	10	0	0	P3001	11	1.5	1.5	Q4012	C	0	0
IC3005	11	5	5	P3001	12	0	0	Q4012	B	-5.8	0.7
IC3005	12	1.8	1.8	P3001	13	0	0	Q4013	E	0	0
IC3005	13	0	0	P3001	14	0	0	Q4013	C	0	0
IC3005	14	2.4	2.4	P3001	15	3.3	3.3	Q4013	B	-5.8	0.7
IC3005	15	0	0	P3001	16	0	0	Q4014	E	0	0
IC3005	16	2.4	2.4	P3001	17	0	0	Q4014	C	0	0
IC3005	17	0	0	P3001	18	3.3	3.3	Q4014	B	-5.8	0.7
IC3005	18	0	0	P3001	19	5.9	5.9	Q4015	E	0	0
IC3005	19	2.4	2.4	P3001	20	3.3	3.3	Q4015	C	0	0
IC3005	20	0	0	P3001	21	0	0	Q4015	B	-5.8	0.7
IC3005	21	0	0	P3001	22	3.3	3.3	QR3006	E	0	0
IC3005	22	2.4	2.4	P3001	23	3.1	3.1	QR3006	C	0	0
IC3005	23	0	0	P4001	1	1.6	1.6	QR3006	B	1.9	1.9
IC3005	24	0	0	P4001	2	5	5	QR3008	E	0	0
IC3005	25	2	1.7	P4001	3	2.6	2.6	QR3008	C	0	0
IC3005	26	2	1.7	P4001	4	0	0	QR3008	B	1.9	1.9
IC3005	27	0	0	P4001	5	2.6	2.6	QR4001	1	0	0
IC3005	28	5	5	P4001	6	0	0	QR4001	2	0	0
IC3005	29	2	1.6	P4001	7	2.6	2.6	QR4001	3	12.2	12.2
IC3005	30	2	1.6	P4001	8	0	0	QR4001	4	12.1	12.1
IC3005	31	0	0	P4001	9	2.6	2.6	QR4001	5	3.1	3.1
IC3005	32	2	1.6	P4001	10	0	0	QR4001	6	0	0
IC3005	33	2	1.6	P4001	11	2.6	2.6	QR4002	E	0.1	1.8
IC3005	34	2.4	2.4	P4001	12	0	0	QR4002	C	-5.8	1.3
IC3005	35	0	0	P4001	13	0	0	QR4002	B	0	0
IC3005	36	0	0	P4001	14	0	0	QR4003	1	-11.7	-11.7
IC3005	37	0	0	P4001	15	2.5	2.5	QR4003	2	0	0
IC3005	38	0	0	P4001	16	0	0	QR4003	3	12.2	12.2
IC3101	1	5.9	5.9	P4001	17	0	3.3	QR4003	4	12.1	12.1
IC3101	2	0	0	P4001	18	4.2	4.2	QR4003	5	12.1	12.1
IC3101	3	3.3	3.3	P4001	19	3.3	3.3	QR4003	6	-11.8	-11.8
IC3101	4	1.3	1.3	P4001	20	11.6	11.6	QR4004	1	0	0
IC3101	5	0	0	P4001	21	12.2	12.2	QR4004	2	0	0
IC3101	6	5	5	P4001	22	-11.2	-11.2	QR4004	3	12.2	12.2
IC3401	1	1.6	1.6	P4001	23	-11.8	-11.8	QR4004	4	12.1	12.1
IC3401	2	5	5	Q3401	E	1.9	1.9	QR4004	5	3.3	3.3
IC3401	3	0	0	Q3401	C	5	5	QR4004	6	0	0
IC3601	1	0	0	Q3401	B	2.4	2.4	QR4005	E	0	0
IC3601	2	0	0	Q4002	E	0	0	QR4005	C	3.1	0
IC3601	3	3.3	3.3	Q4002	C	0	1.8	QR4005	B	0	3.3
IC3601	4	0	0	Q4002	B	0.7	0				
IC3601	5	3.3	3.3	Q4004	E	11.6	11.6				
IC3601	6	3.3	3.3	Q4004	C	12.2	12.2				
IC3601	7	0	0	Q4004	B	12.1	12.2				
IC3601	8	3.3	3.3	Q4005	E	-11.2	-11.2				
IC4001	1	5.9	5.9	Q4005	C	-11.8	-11.8				
IC4001	2	3.3	3.3	Q4005	B	-11.5	-11.5				
IC4001	3	5	5	Q4006	E	0	0				
IC4001	4	-	-	Q4006	C	0	0				
IC4001	5	0	0	Q4006	B	-5.8	0.7				
P3001	1	1.4	1.4	Q4007	E	0	0				

<IC3005>



<P3001>



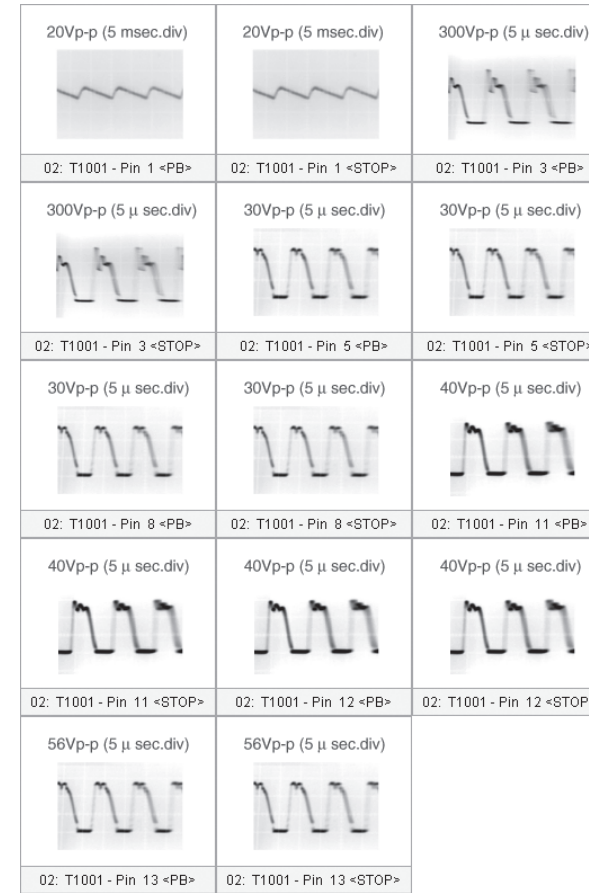
S2.2. Power/Timer P.C.B.

REF No.	PIN No.	PB	STOP	REF No.	PIN No.	PB	STOP	REF No.	PIN No.	PB	STOP
IC1021	1	2.5	2.5	IC7501	19	3.1	3.1	IC7501	80	3.3	3.3
IC1021	2	1.7	1.7	IC7501	20	3.3	3.3	IC7501	81	0	0
IC1021	3	0	0	IC7501	21	3.3	3.3	IC7501	82	0	0
IC1021	4	14.8	14.8	IC7501	22	0	0	IC7501	83	0	0
IC1021	5	0	0	IC7501	23	0	0	IC7501	84	0	0
IC1021	6	-	-	IC7501	24	3.3	3.3	IC7501	85	0	0
IC1021	7	-	-	IC7501	25	3.3	3.3	IC7501	86	0	0
IC1021	8	-	-	IC7501	26	3.3	3.3	IC7501	87	0	0
IC1021	9	-	-	IC7501	27	3.3	3.3	IC7501	88	0	0
IC1101	1	8.1	8.1	IC7501	28	3.1	3.1	IC7501	89	0	0
IC1101	2	2.4	2.4	IC7501	29	3.3	3.3	IC7501	90	0	0
IC1101	3	0	0	IC7501	30	0	0	IC7501	91	3.3	3.3
IC1102	1	-15	-15	IC7501	31	0	0	IC7501	92	0.1	0.1
IC1102	2	-	-	IC7501	32	0	0	IC7501	93	0.1	0.1
IC1102	3	-13.8	-13.8	IC7501	33	3.3	3.3	IC7501	94	0	0
IC1102	4	-17.5	-17.5	IC7501	34	3.3	3.3	IC7501	95	0	0
IC1102	5	-13	-13	IC7501	35	3.3	3.3	IC7501	96	3.3	3.3
IC1102	6	-	-	IC7501	36	3.3	3.3	IC7501	97	0	0
IC1102	7	-	-	IC7501	37	0	0	IC7501	98	0	0
IC1102	8	-13	-13	IC7501	38	3	3	IC7501	99	2.5	2.5
IC1103	1	12.2	12.2	IC7501	39	0	0	IC7501	100	0	0
IC1103	2	4.5	4.5	IC7501	40	3.2	3.2	IC7503	1	3.3	3.3
IC1103	3	1.2	1.2	IC7501	41	0	0	IC7503	2	7.9	7.9
IC1103	4	1.3	1.3	IC7501	42	-	-	IC7503	3	0	0
IC1103	5	1.4	1.4	IC7501	43	-	-	IC7503	4	-	-
IC1103	6	0	0	IC7501	44	-	-	IC7503	5	-	-
IC1103	7	7.6	7.6	IC7501	45	-	-	IC7504	1	5.4	5.4
IC1103	8	12.2	12.2	IC7501	46	-	-	IC7504	2	1.3	1.3
IC1104	1	4.6	4.6	IC7501	47	-	-	IC7504	3	1.3	1.3
IC1104	2	5.9	5.9	IC7501	48	-	-	IC7504	4	0	0
IC1104	3	0	0	IC7501	49	-	-	IC7504	5	0	0
IC1104	4	5	5	IC7501	50	-	-	IC7504	6	-	-
IC1104	5	1.2	1.2	IC7501	51	-	-	IC7504	7	-	-
IC1651	1	3.3	3.3	IC7501	52	-	-	IC7504	8	12.2	12.2
IC1651	2	0	0	IC7501	53	-	-	IC7512	1	0	0
IC1651	3	1.3	1.3	IC7501	54	-	-	IC7512	2	0	0
IC1651	4	3.3	3.3	IC7501	55	-	-	IC7512	3	-	-
IC1651	5	5.9	5.9	IC7501	56	-	-	IC7512	4	3.3	3.3
IC1653	1	5.9	5.9	IC7501	57	-	-	IC7512	5	3.3	3.3
IC1653	2	0	0	IC7501	58	-	-				
IC1653	3	1.3	1.3	IC7501	59	-	-				
IC1653	4	4	4	IC7501	60	-	-				
IC1653	5	5.9	5.9	IC7501	61	-	-				
IC7501	1	0.8	0.8	IC7501	62	-	-				
IC7501	2	0	0	IC7501	63	-	-				
IC7501	3	3	3	IC7501	64	-	-				
IC7501	4	3.3	3.3	IC7501	65	-	-				
IC7501	5	3.1	3.1	IC7501	66	-	-				
IC7501	6	3.3	3.3	IC7501	67	0	0				
IC7501	7	0	0	IC7501	68	-	-				
IC7501	8	3.3	3.3	IC7501	69	3	3				
IC7501	9	3.3	3.3	IC7501	70	-	-				
IC7501	10	1.8	1.8	IC7501	71	-	-				
IC7501	11	1.6	1.6	IC7501	72	-	-				
IC7501	12	0	0	IC7501	73	-	-				
IC7501	13	1.2	1.2	IC7501	74	-	-				
IC7501	14	1.6	1.6	IC7501	75	1.6	1.6				
IC7501	15	0	0	IC7501	76	3.3	3.3				
IC7501	16	3.3	3.3	IC7501	77	3.3	3.3				
IC7501	17	3.3	3.3	IC7501	78	3.3	3.3				
IC7501	18	3.3	3.3	IC7501	79	3.3	3.3				

S2.3. Front R P.C.B.

REF No.	PIN No.	PB	STOP	REF No.	PIN No.	PB	STOP	REF No.	PIN No.	PB	STOP
P1102	1	0	0	Q1023	4	0.1	0.1	T1001	13	-	-
P1102	2	0	0	Q1101	E	-20.1	-20.1	T1001	14	-	-
P1102	3	0	0	Q1101	C	-24.3	-24.3	T1001	15	-	-
P1102	4	0	0	Q1101	B	-20.8	-20.8	T1001	16	-	-
P1102	5	5.9	5.9	Q1102	1	12.2	12.2	T1001	17	-	-
P1102	6	5.9	5.9	Q1102	2	12.2	12.2				
P1102	7	12.2	12.2	Q1102	3	12.2	12.2				
P1102	8	12.2	12.2	Q1102	4	6.6	6.6				
P1102	9	-11.8	-11.8	Q1102	5	12.1	12.1				
P7503	1	3.3	3.3	Q1102	6	12.1	12.1				
P7503	2	3.3	3.3	Q1102	7	12.1	12.1				
P7503	3	3.3	3.3	Q1102	8	12.1	12.1				
P7503	4	3.3	3.3	Q1104	1	12.2	12.2				
P7503	5	0	0	Q1104	2	12.2	12.2				
P7503	6	3.3	3.3	Q1104	3	12.2	12.2				
P7503	7	0	0	Q1104	4	7.6	7.6				
P7503	8	3.3	3.3	Q1104	5	5.9	5.9				
P7503	9	3.3	3.3	Q1104	6	5.9	5.9				
P7503	10	3.3	3.3	Q1104	7	5.9	5.9				
P7503	11	3.3	3.3	Q1104	8	5.9	5.9				
P7503	12	0	0	Q1106	E	-12	-12				
P7503	13	0	0	Q1106	C	-14.7	-14.7				
P7503	14	0	0	Q1106	B	-12.6	-12.6				
P7503	15	-	-	Q1107	E	0	0				
P7503	16	0.1	0.1	Q1107	C	0	0				
P7503	17	0	0	Q1107	B	0.7	0.7				
P7503	18	3.3	3.3	Q1651	E	0	0				
P7503	19	0	0	Q1651	C	3.2	3.2				
P7503	20	3.3	3.3	Q1651	B	0.1	0.1				
P7503	21	0	0	Q7506	E	-15.1	-15.1				
P7503	22	0	0	Q7506	C	-15.1	-15.1				
P7503	23	0	0	Q7506	B	-14.4	-14.4				
P7504	1	3.3	3.3	Q7509	E	5	5				
P7504	2	3.1	3.1	Q7509	C	12.2	12.2				
P7504	3	3.3	3.3	Q7509	B	5.3	5.3				
P7504	4	0	0	QR1101	E	0	0				
P7504	5	0	0	QR1101	C	0	0				
P7504	6	3.2	3.2	QR1101	B	0	0				
P7504	7	3.1	3.1	QR1102	E	0	0				
P7504	8	3.3	3.3	QR1102	C	0	0				
P7504	9	3.3	3.3	QR1102	B	4.6	4.6				
P7504	10	0	0	QR1105	E	0	0				
P7504	11	3.3	3.3	QR1105	C	0	0				
P7504	12	3.4	3.4	QR1105	B	3.2	3.2				
P7504	13	3.1	3.1	QR1651	E	0	0				
P7504	14	3.3	3.3	QR1651	C	0.1	0.1				
P7504	15	3.3	3.3	QR1651	B	3.3	3.3				
P7504	16	3.3	3.3	QR1652	E	3.3	3.3				
P7504	17	0	0	QR1652	C	3.2	3.2				
P7504	18	6.3	6.3	QR1652	B	0.1	0.1				
P7504	19	0	0	QR7502	E	3.3	3.3				
P7504	20	0	0	QR7502	C	3.2	3.2				
P7504	21	0	0	QR7502	B	0	0				
P7504	22	0	0	T1001	1	-	-				
P7504	23	0	0	T1001	2	-	-				
Q1021	E	0	0	T1001	3	-	-				
Q1021	C	6.9	6.9	T1001	4	-	-				
Q1021	B	0.1	0.1	T1001	5	-	-				
Q1022	1	9.2	9.2	T1001	6	0	0				
Q1022	2	8.1	8.1	T1001	7	-	-				
Q1022	3	0	0	T1001	8	-	-				
Q1022	4	1.7	1.7	T1001	9	0	0				
Q1023	1	1.1	1.1	T1001	10	0	0				
Q1023	2	0	0	T1001	11	-	-				
Q1023	3	0	0	T1001	12	-	-				

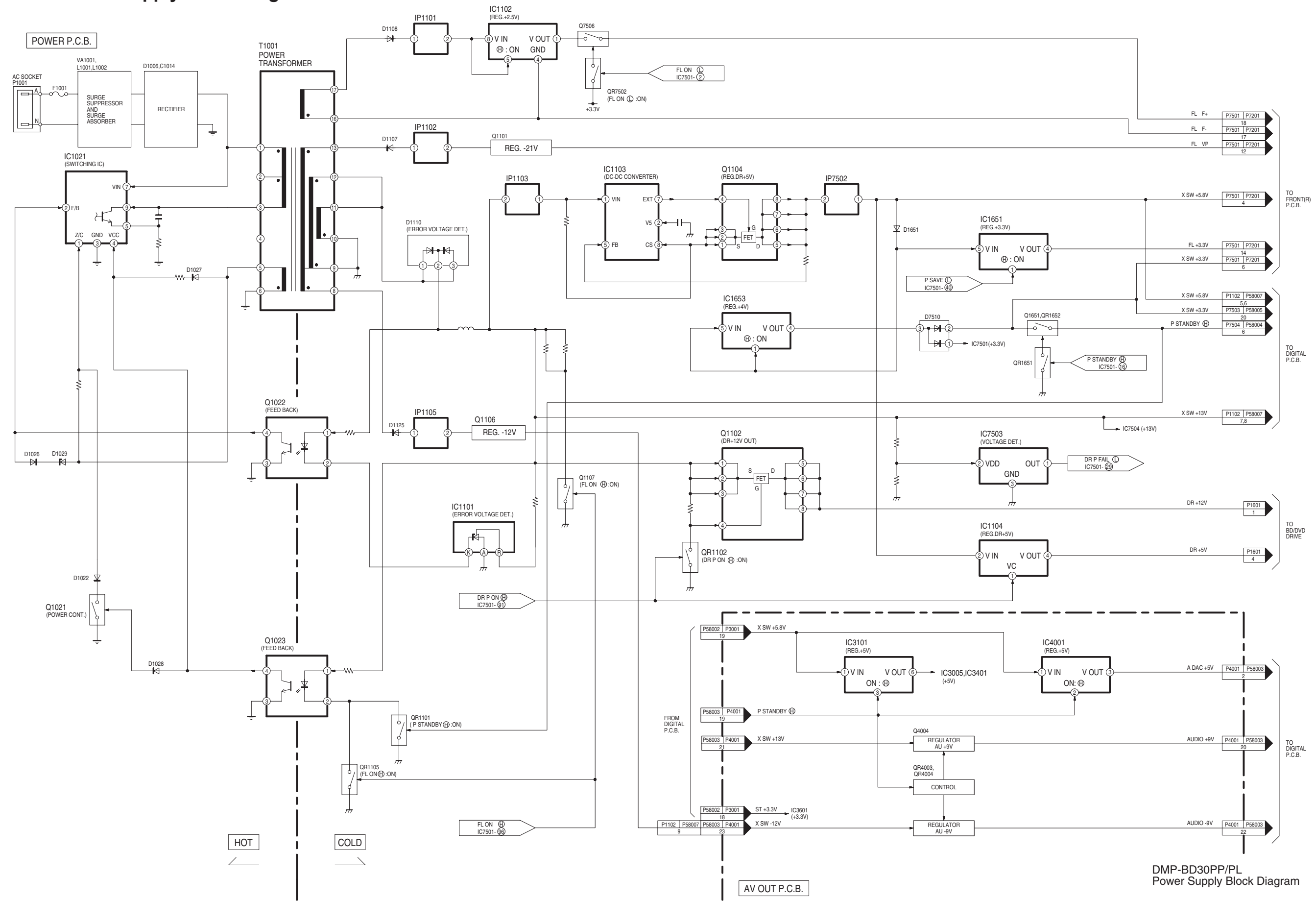
<T1001>



REF No.	PIN No.	PB	STOP
IC7201	1	3.2	3.2
IC7201	2	-	-
IC7201	3	-	-
IC7201	4	-	-
IC7201	5	1.9	1.9
IC7201	6	3.2	3.2
IC7201	7	3.2	3.2
IC7201	8	3.2	3.2
IC7201	9	3.2	3.2
IC7201	10	0	0
IC7201	11	0	0
IC7201	12	0	0
IC7201	13	3.3	3.3
IC7201	14	-19.1	-19.1
IC7201	15	-19.1	-19.1
IC7201	16	-15.6	-15.6
IC7201	17	-19.1	-19.1
IC7201	18	-19.1	-19.1
IC7201	19	-19.1	-19.1
IC7201	20	-15.6	-15.6
IC7201	21	-18.3	-18.3
IC7201	22	-15.6	-15.6
IC7201	23	-12.9	-12.9
IC7201	24	-15.6	-15.6
IC7201	25	-18.3	-18.3
IC7201	26	-18.3	-18.3
IC7201	27	-19.1	-19.1
IC7201	28	-19.1	-19.1
IC7201	29	-18.3	-18.3
IC7201	30	-20.1	-20.1
IC7201	31	-	-
IC7201	32	-	-
IC7201	33	-	-
IC7201	34	-	-
IC7201	35	-	-
IC7201	36	-18	-18
IC7201	37	-18	-18
IC7201	38	-18	-18
IC7201	39	-18	-18
IC7201	40	-18	-18
IC7201	41	-18.1	-18.1
IC7201	42	-18.1	-18.1
IC7201	43	3.3	3.3
IC7201	44	0	0
Q7201	E	0	0
Q7201	C	0	0
Q7201	B	0.7	0.7

S3. Block Diagram

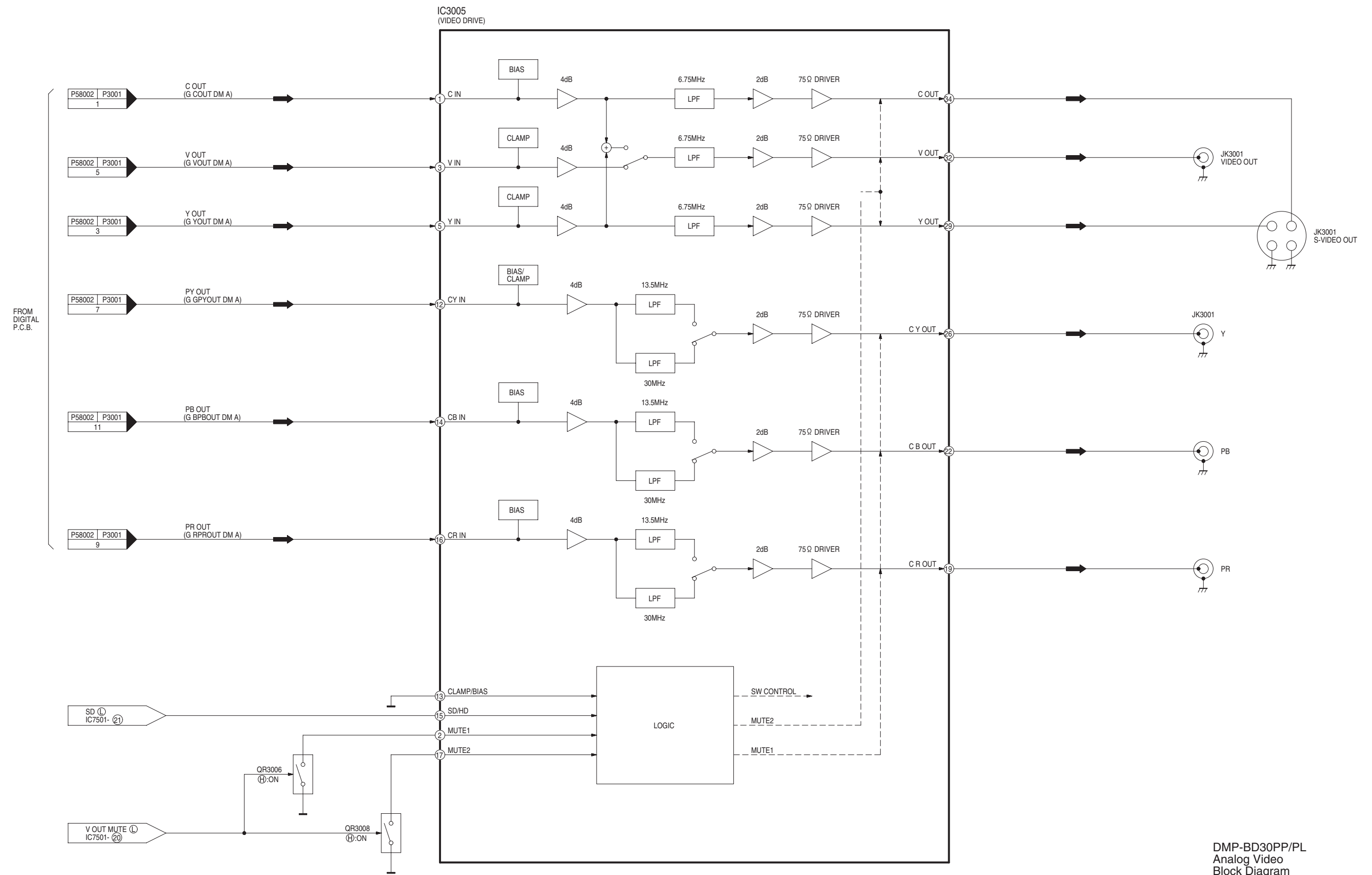
S3.1. Power Supply Block Diagram



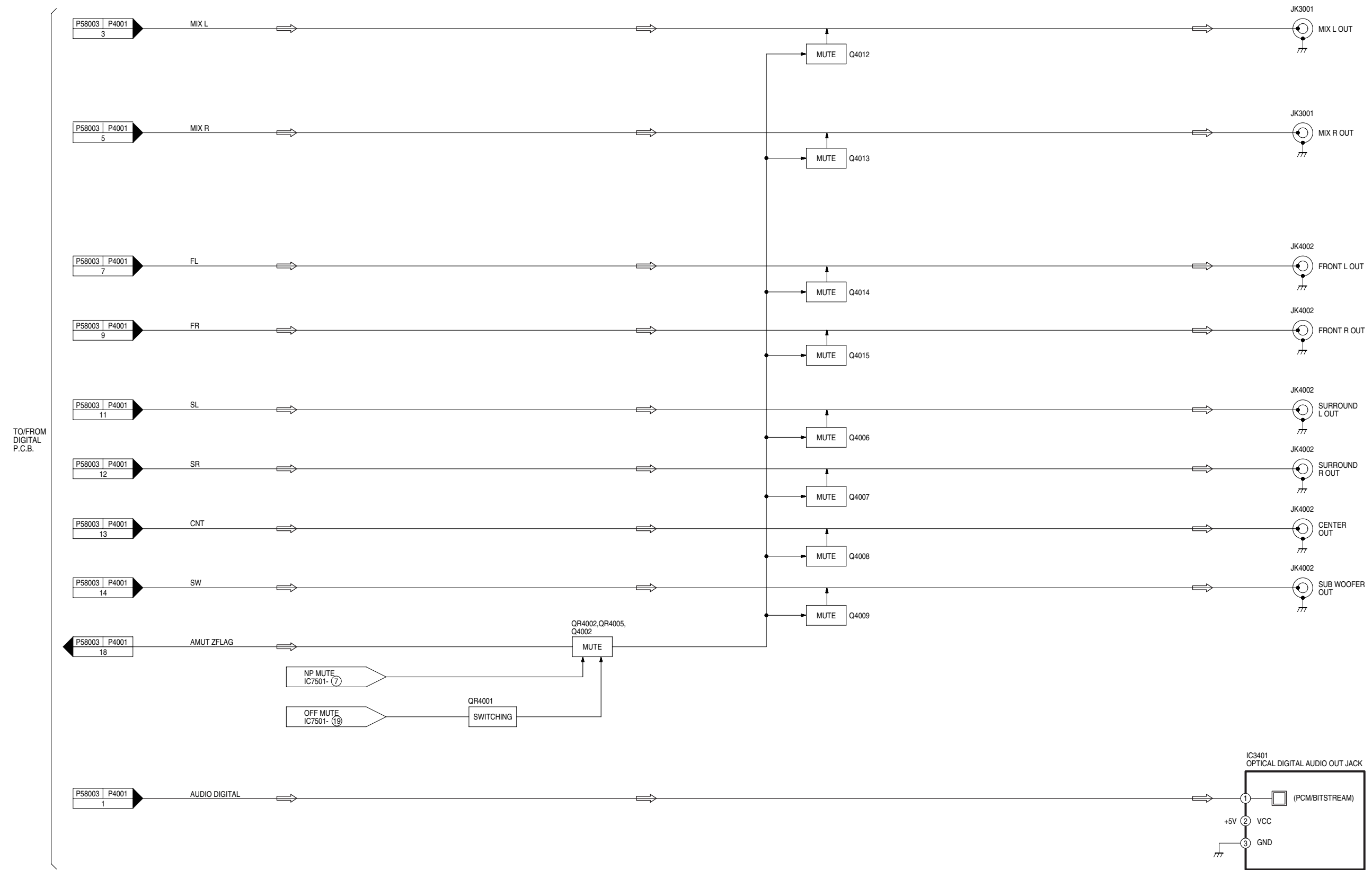
DMP-BD30PP/PL
Power Supply Block Diagram

S3.2. Analog Video Block Diagram

← VIDEO MAIN SIGNAL

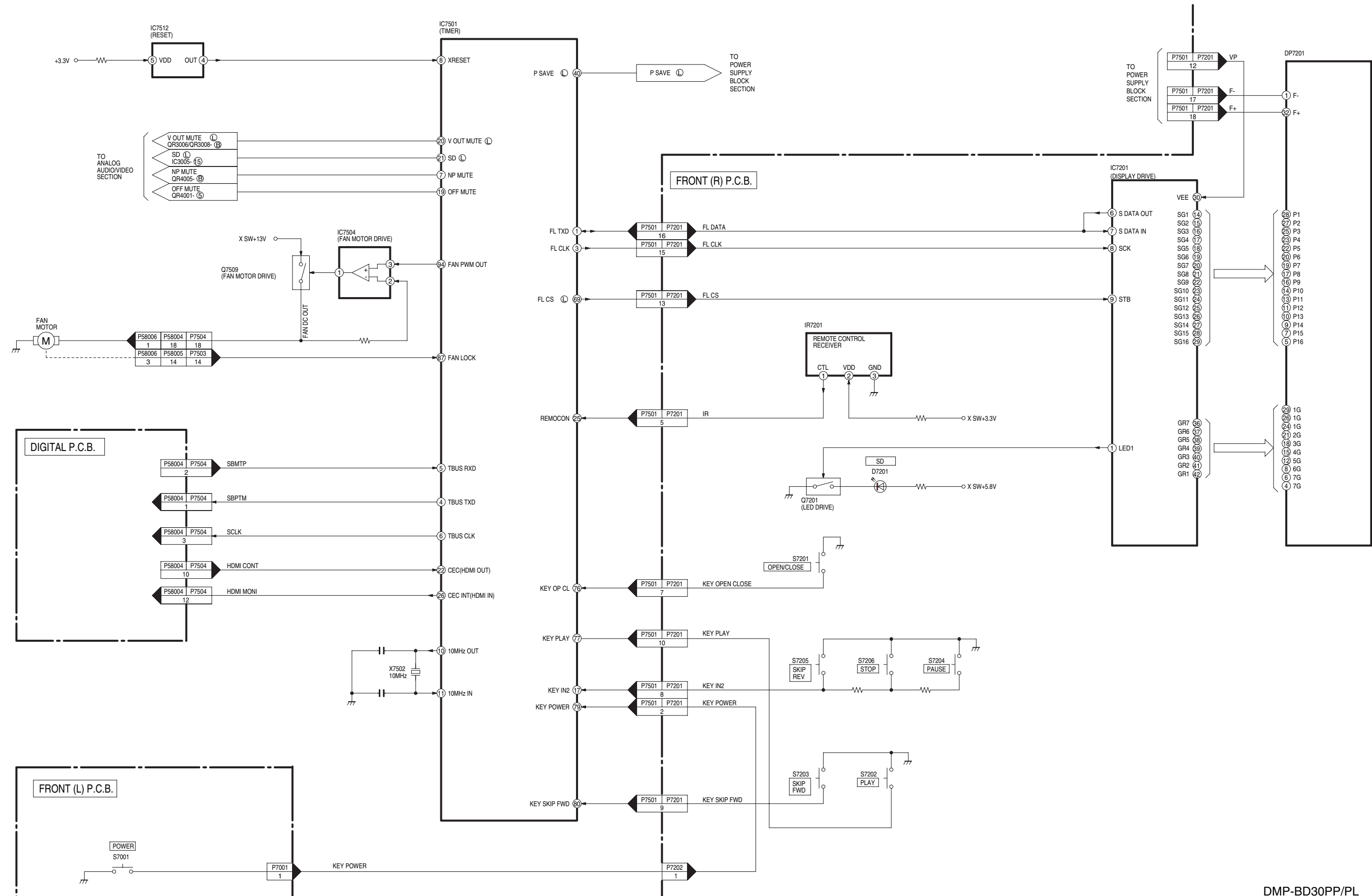


S3.3. Analog Audio Block Diagram



DMP-BD30PP/PL
Analog Audio
Block Diagram

S3.4. Timer Block Diagram



DMP-BD30PP/PL
Timer
Block Diagram

S4. Schematic Diagram

S4.1. Interconnection Diagram

1/4

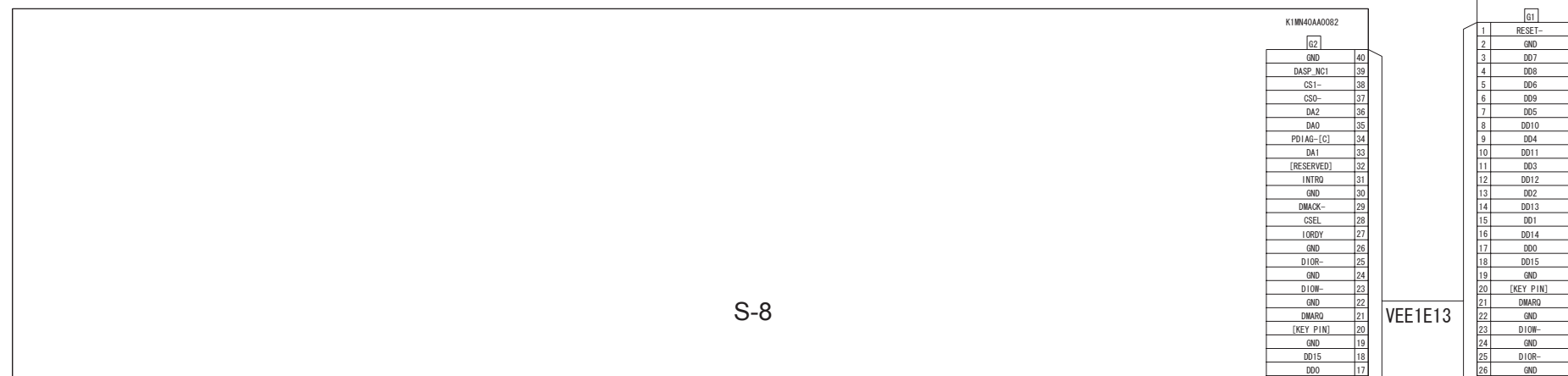
DMP-BD30PP/PL
Interconnection Diagram

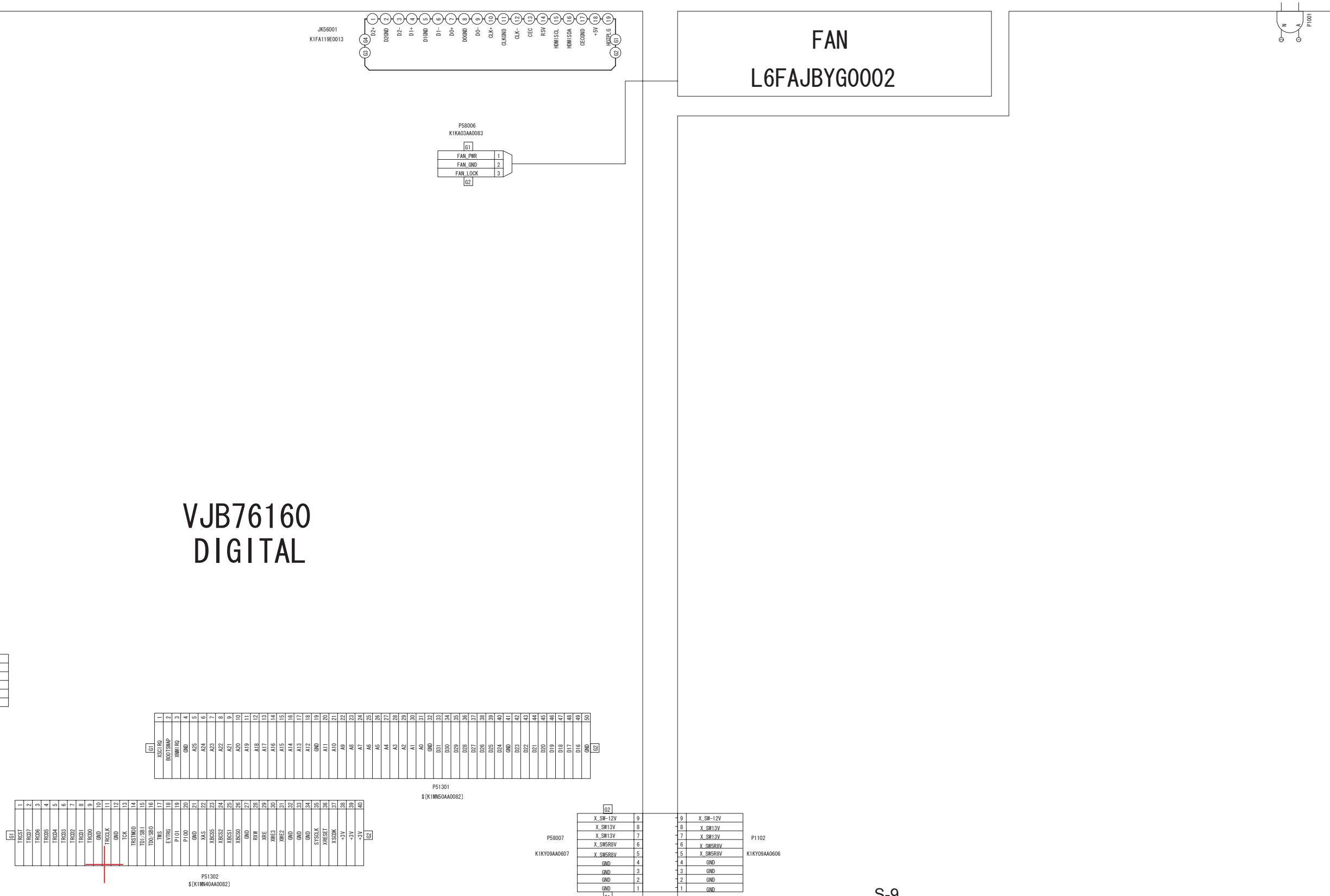
N
M
L
K
J
I
H
G



VJB73152
AV MAIN

VJB7
DIG





VJB76162 BD3PPV1

DRIVE

VJB76165
FRONT L

P7001 K1KA03A0301	
1	KEY_POWER
2	LED_STANDBY
3	GND

VEE1E02 (PP) / VEE1E12 (EG)

P7202 K1KA03A0301	
1	KEY_POWER
2	LED_STANDBY
3	GND

VJB76166
FRONT R

P7201
K1KA18800034

1	GND
2	KEY_POWER
3	GND
4	X_SWBREV
5	IR
6	X_SWREV
7	KEY_OPEN_CLOSE
8	KEY_IN2
9	KEY_SKIP_FWD
10	KEY_PLAY
11	LED_STANDBY
12	FL_VP
13	FL_CS
14	FL_SERV
15	FL_CLK
16	FL_LD
17	FL_F-
18	FL_F+

P7501
K1KB18800017

P7502 K1KA06A0188	
1	SW_UART
2	XRESET
3	MAX_RD
4	GND
5	3REV
6	MAX_TD

VWJ2010

4	DR_5V
3	DR_GND
2	DR_GND
1	DR_12V

K1KA04A0301
P201

4	DR_5V
3	DR_GND
2	DR_GND
1	DR_12V

K1KA04A0301
P201

P7503
K1KY23A0606

1	WP
2	CD
3	DAT1
4	DAT0
5	CLK
6	SM13REV
7	DND
8	GND
9	DAT3
10	DAT2
11	3PHE
12	PKS_STATE
13	FL_VP
14	FL_CS
15	3PBOOT
16	SD_BOOT
17	DND
18	XPKREV
19	DND
20	X_SWREV
21	RBB_H
22	YC_H
23	WIDE_H

P5005
K1Y23A0607

1	WP
2	CD
3	DAT1
4	DAT0
5	CLK
6	SM13REV
7	DND
8	GND
9	DAT3
10	DAT2
11	3PHE
12	PKS_STATE
13	FL_VP
14	FL_CS
15	3PBOOT
16	SD_BOOT
17	DND
18	XPKREV
19	DND
20	X_SWREV
21	RBB_H
22	YC_H
23	WIDE_H

VEE1E13

33	DA1
32	[RESERVED]
31	INTRO
30	GND
29	DMACK-
28	CSEL
27	IORDY
26	GND
25	D1OR-
24	GND
23	D1OW-
22	GND
21	DMARQ
20	[KEY PIN]
19	GND
18	DD15
17	DD0
16	DD14
15	DD1
14	DD13
13	DD2
12	DD12
11	DD3
10	DD11

10	DD1
9	DD0
8	DD10
7	DD11
6	DD12
5	DD13
4	DD14
3	DD15
2	DD0
1	[KEY PIN]
0	DMARQ
33	DA1
32	[RESERVED]
31	INTRO
30	GND
29	DMACK-
28	CSEL
27	IORDY
26	GND
25	D1OR-
24	GND
23	D1OW-
22	GND
21	DMARQ
20	[KEY PIN]
19	GND
18	DD15
17	DD0
16	DD14
15	DD1
14	DD13
13	DD2
12	DD12
11	DD3
10	DD11

1	TRDST
2	TRD07
3	TRD06
4	TRD05
5	TRD04
6	TRD03
7	TRD02
8	TRD01
9	GND
10	TRD00
11	TRD0K
12	GND
13	TICK
14	TRSTW0
15	TD1/S01
16	TD0/S00
17	TRIS
18	ENTIRE
19	P100
20	GND
21	7AS
22	RES55
23	RES52
24	RES51
25	RES50

P51302
K1HW40A0082

3/4

DMP-BD30PP/PL
Interconnection Diagram

1	RES17
2	RES17
3	RES17
4	RES17
5	RES17
6	RES17
7	RES17
8	RES17
9	RES17
10	RES17
11	RES17
12	RES17
13	RES17
14	RES17
15	RES17
16	RES17
17	RES17
18	RES17
19	RES17
20	RES17
21	RES17
22	RES17
23	RES17
24	RES17
25	RES17
26	RES17
27	RES17
28	RES17
29	RES17
30	RES17
31	RES17
32	RES17
33	RES17
34	RES17
35	RES17
36	RES17
37	RES17
38	RES17
39	RES17
40	RES17

P51302
\$[K1M40A00082]

\$[K1M50A00082]

9	X_SW-12V
8	X_SW13V
7	X_SW13V
6	X_SW88V
5	X_SW88V
4	GND
3	GND
2	GND
1	GND

P1102
K1KY09AA0606

5	CLK
6	SW138V
7	DAND
8	DAND
9	DAND
10	DAND
11	DAND
12	DAND
13	DAND
14	DAND
15	DAND
16	DAND
17	DAND
18	DAND
19	DAND
20	DAND
21	DAND
22	DAND
23	DAND

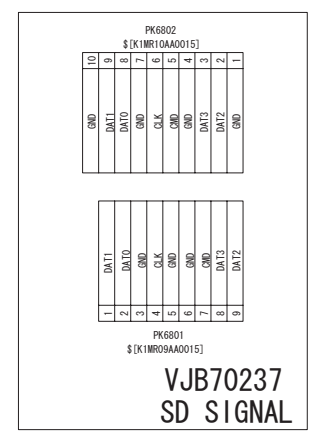
P58004
K1KY23AA0607

1	SP1M
2	SP1M
3	SCLK
4	DAND
5	MP MUTE
6	P_STANBY_H
7	OFF MUTE
8	V_OUT MUTE_L
9	SD_L
10	HDMI CONT
11	P1M OFF_H
12	HDMI CONT
13	P1M OFF_H
14	HDMI CONT
15	P1M OFF_H
16	P1M OFF_H
17	P1M OFF_H
18	FAN_PWM
19	FAN_GND
20	ASND
21	ASND
22	DAND
23	DAND

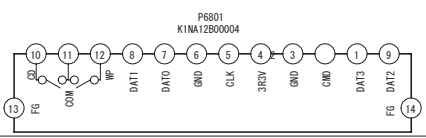
P7504
K1KY23AA0606

P7502
\$[K1KA06A0188]

1	SW_UART
2	XRESET
3	MAX_RD
4	GND
5	3R3V
6	MAX_TD

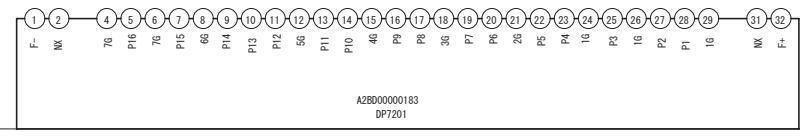


VJB71126/71131 POWER



9	KEY_SLP_FND
10	KEY_PLAY
11	LED_STANBY
12	FL_VP
13	FL_US
14	FL_US
15	FL_US
16	FL_US
17	FL_US
18	FL_US

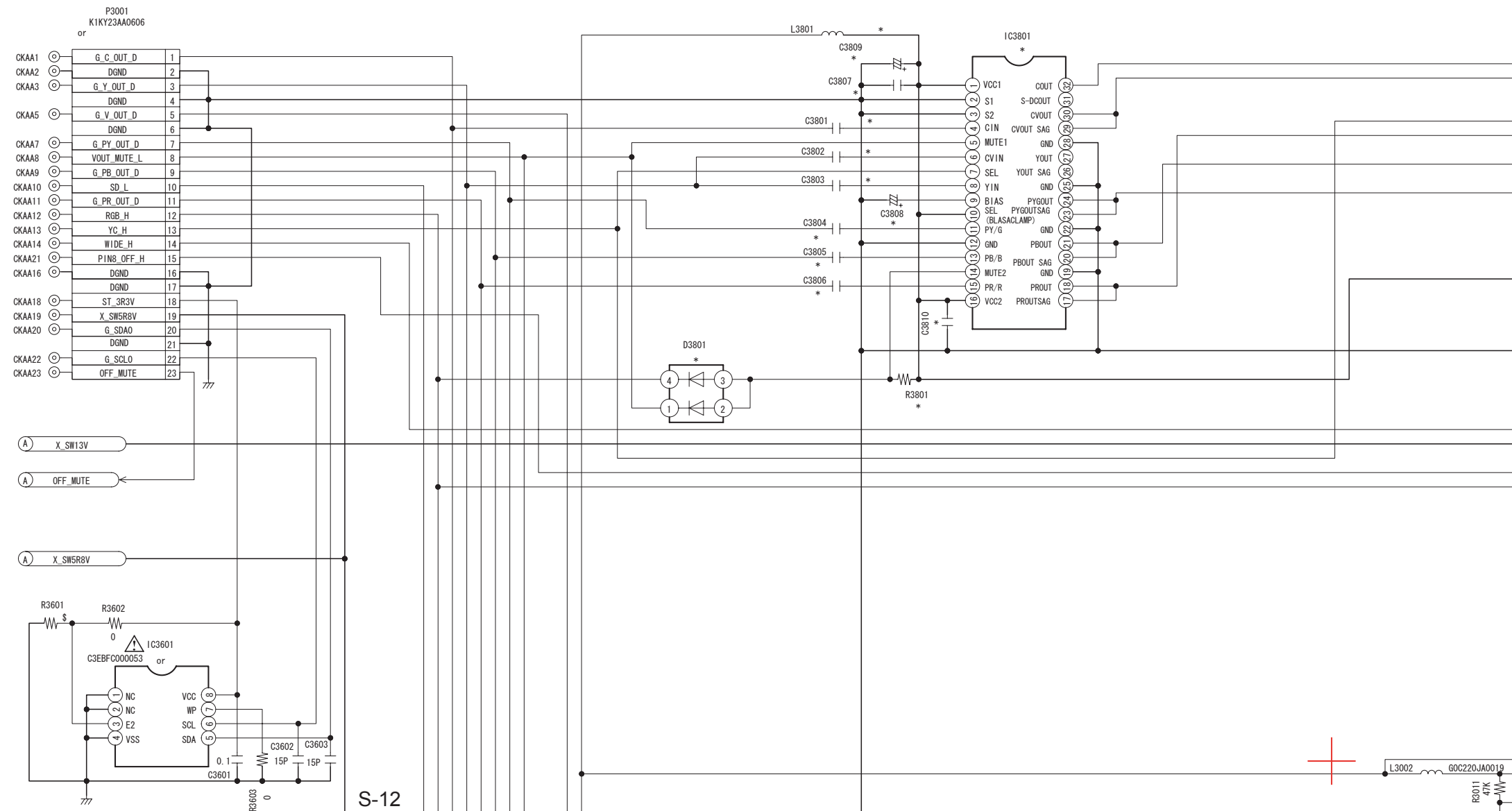
VJB76166
FRONT R



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S4.2. Video_Out (V) Schematic Diagram

1/4 DMP-BD30PP/PL
Video_Out Section
(AV Main P.C.B. (1/2))
Schematic Diagram (V)



S-12

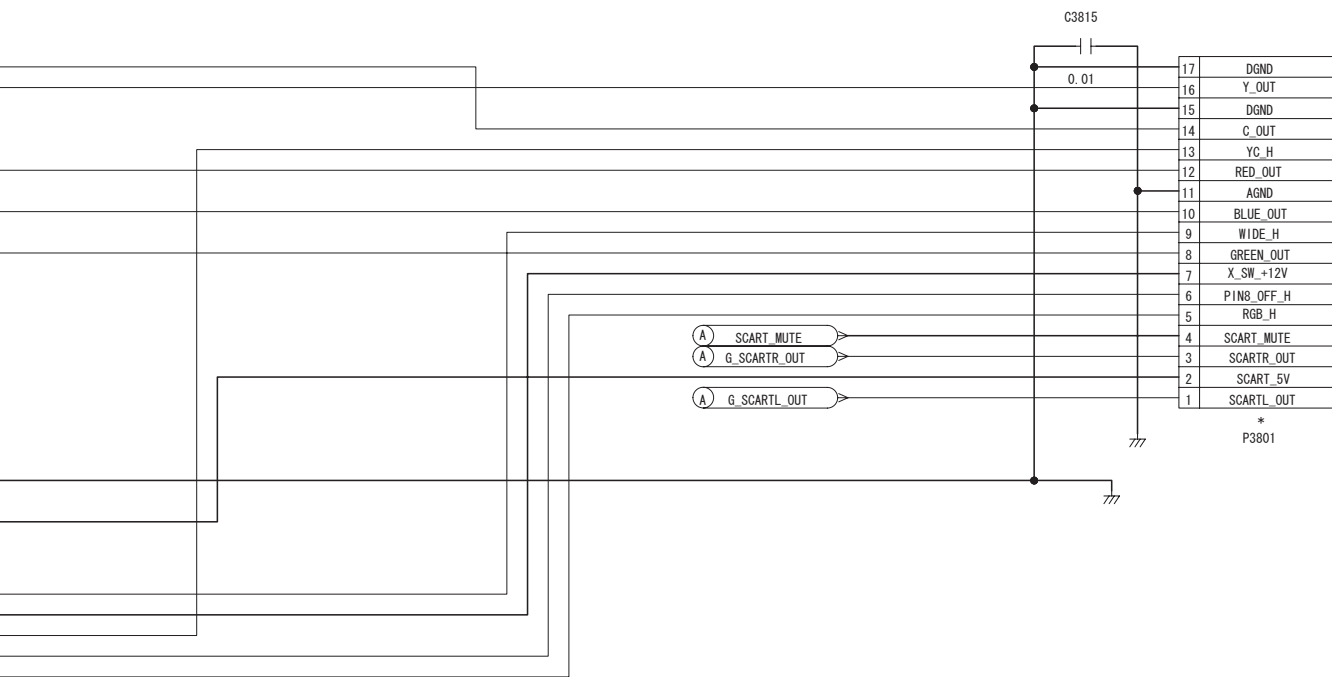
L3002 G0C220JA0019

R3011 47K

R3006

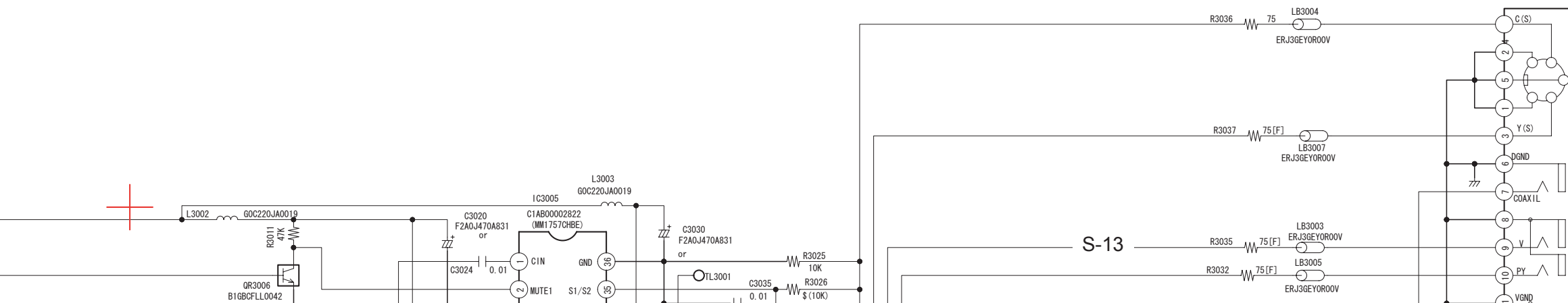
B1GBCLL0042

QR3006



VariationCategory1

	DMP-BD30PP/PL	DMP-BD30E6/EE/GN/GCS	
C3801	\$	\$	
C3802	\$	\$	
C3803	\$	\$	
C3804	\$	\$	
C3805	\$	\$	
C3806	\$	\$	
C3807	\$	\$	
C3808	\$	\$	
C3809	\$	\$	
C3810	\$	\$	
D3002	VWJ0795-5	VWJ0795-5	
D3801	\$	\$	
IC3401	B3ZAZ0000016	B3ZAZ0000017	
IC3801	\$	\$	
L3801	\$	\$	
P3801	\$	\$	
QR3007	\$	\$	
R3012	\$	\$	
R3801	\$	\$	



JK3001
K2H4616R0009
-806Y-14 MI FE RF LF (P8)





H
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D
C
B
A

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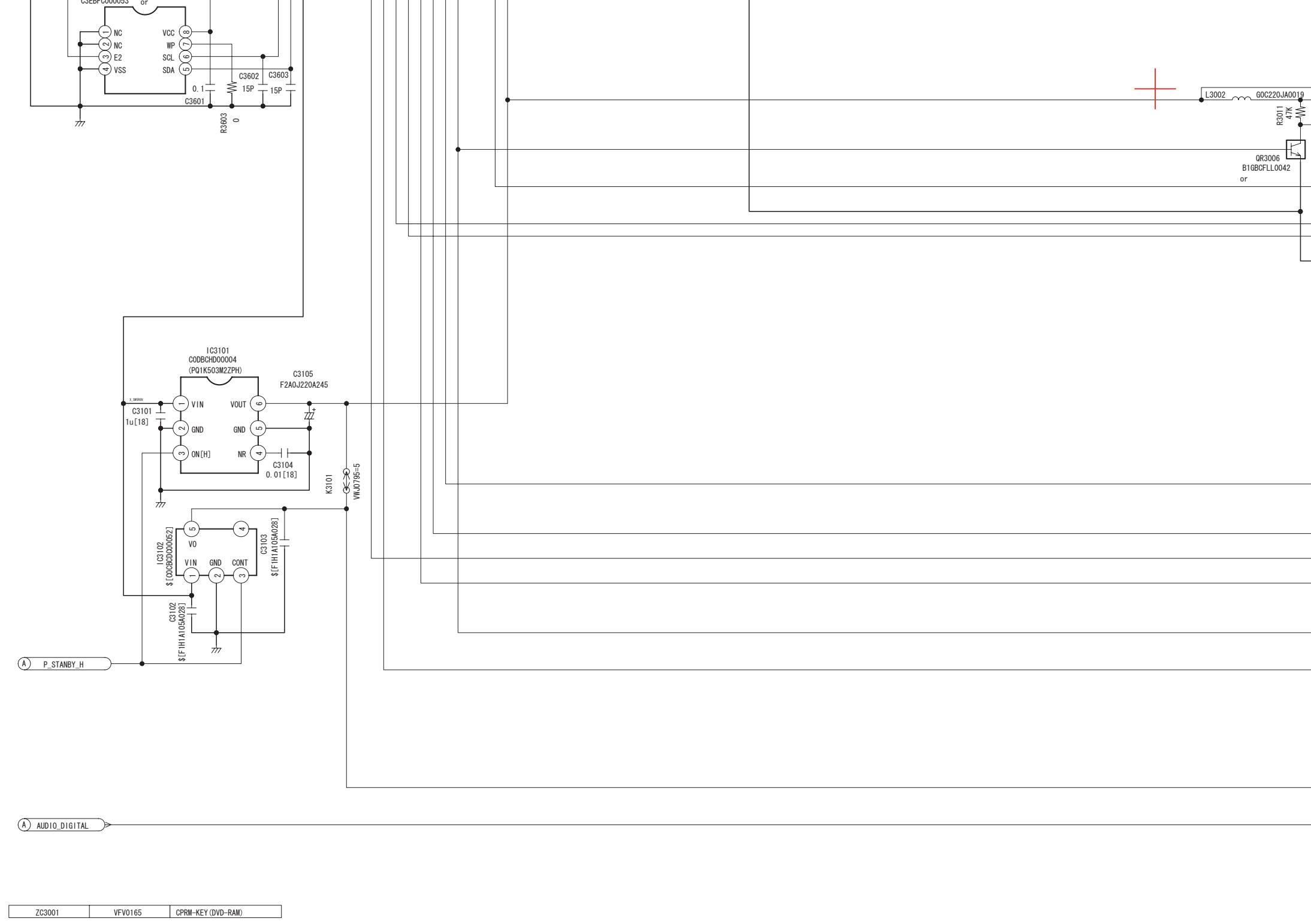
8

9

10

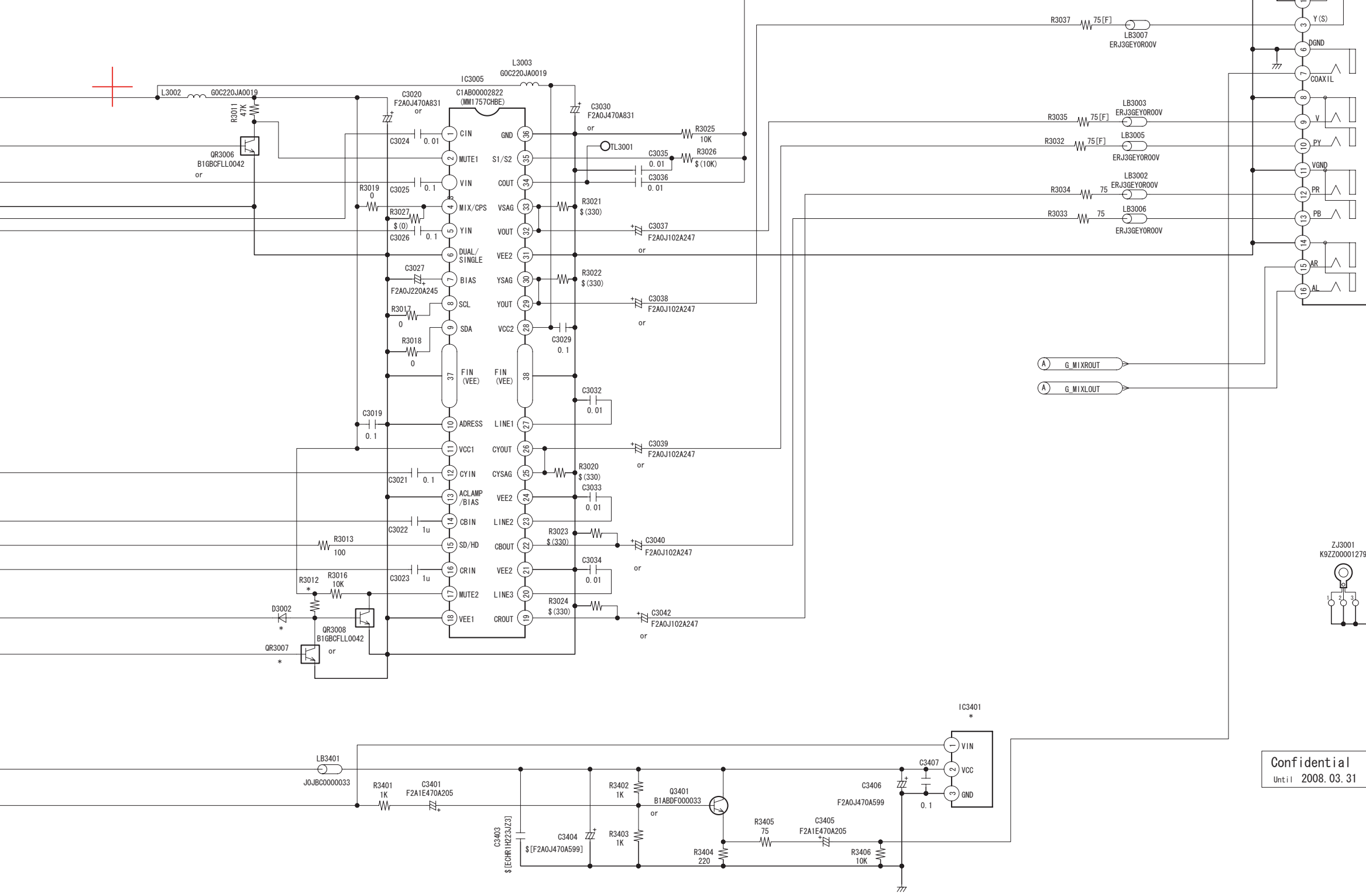
11

12

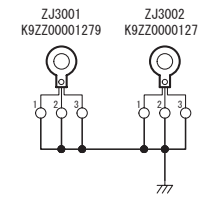


		DMP-BD30PP/PL Video_Out Section (AV Main P.C.B. (1/2)) Schematic Diagram (V)
3/4		





JK3001
K2H4816R0009
(MSP-806V-1.4 N1 FE RF LF (PB))



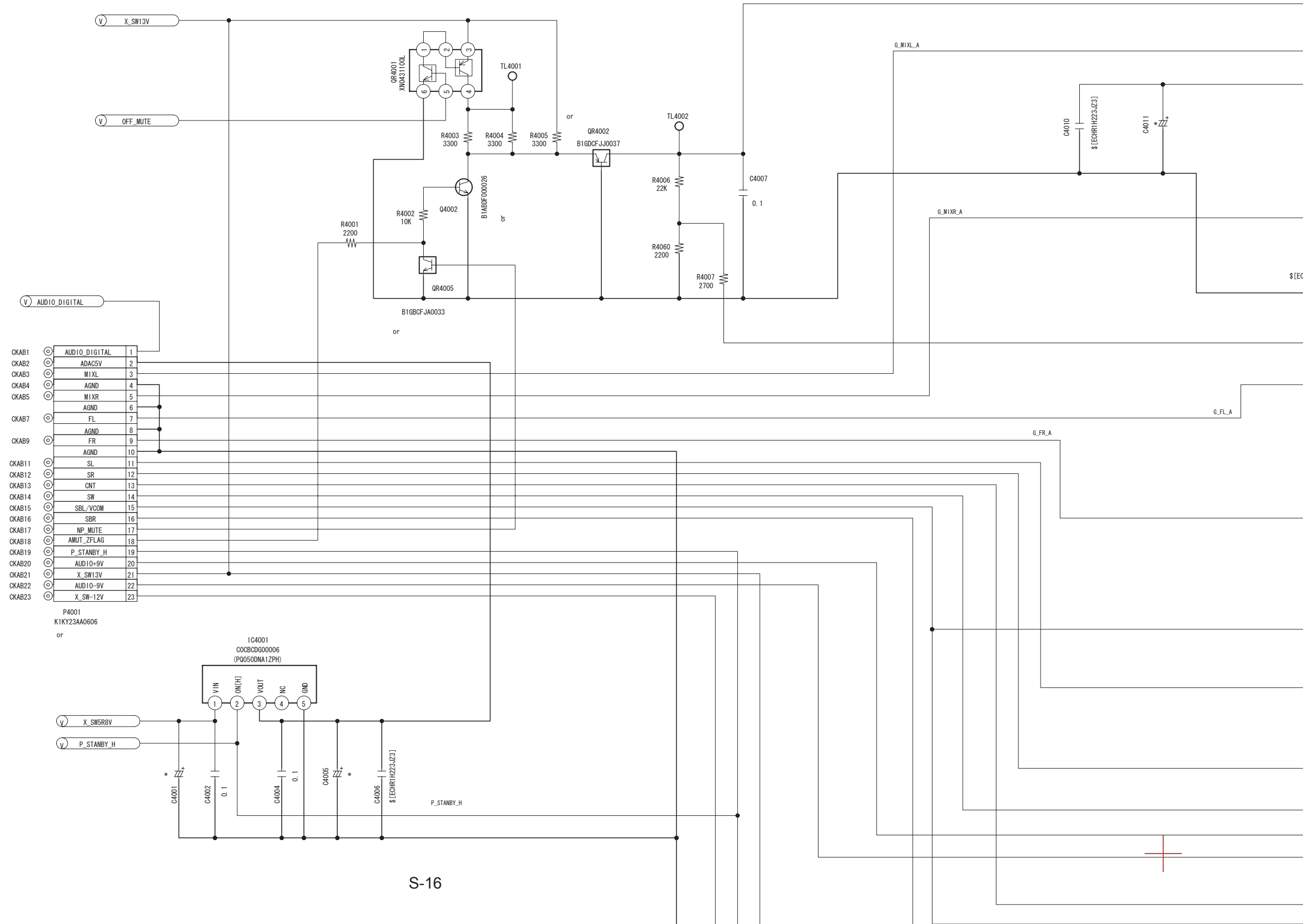
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Until 2008.03.31

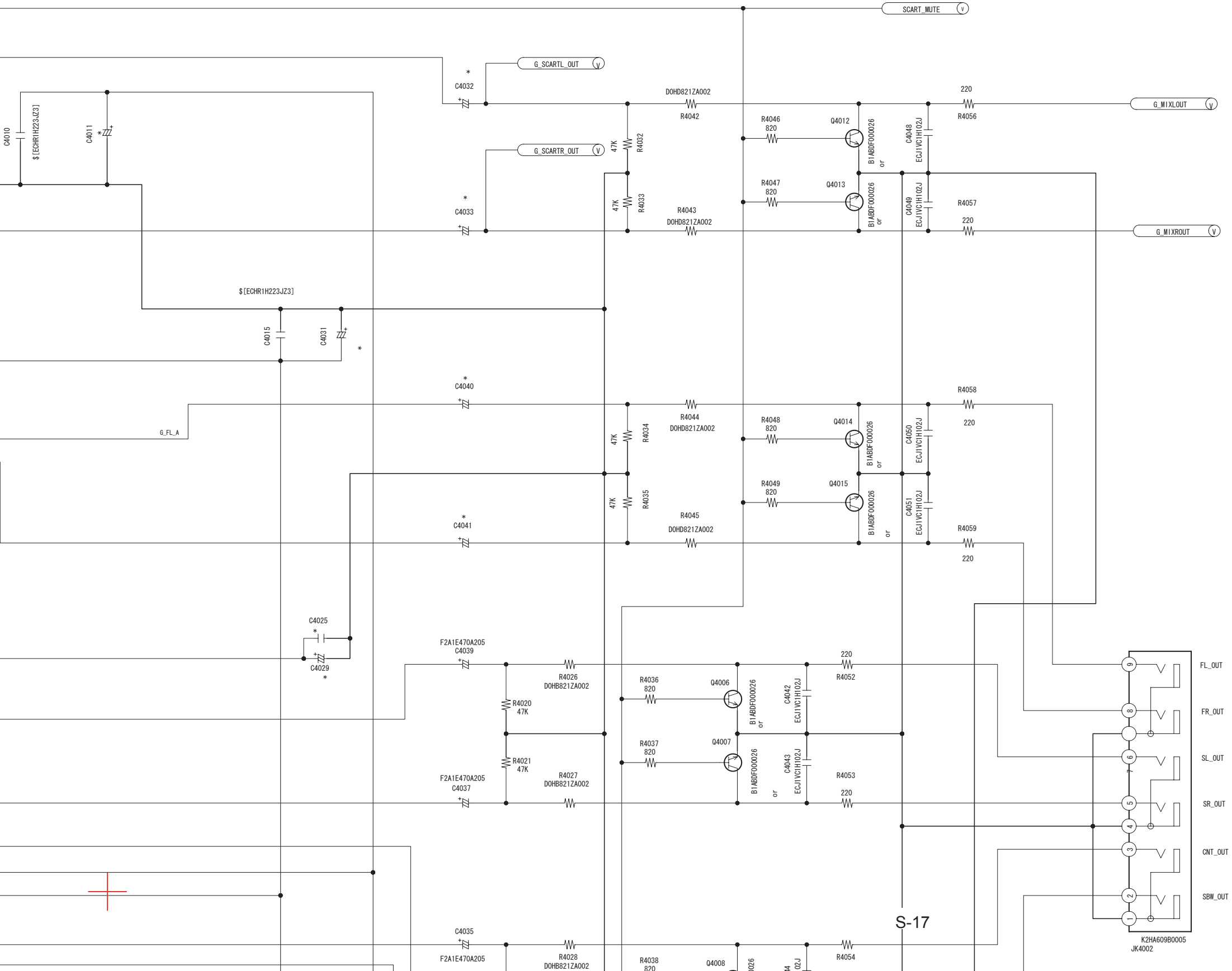
[PP]

DMP-BD30PP/PL
Video_Out Section
(AV Main P.C.B. (1/2))
Schematic Diagram (V)
4/4

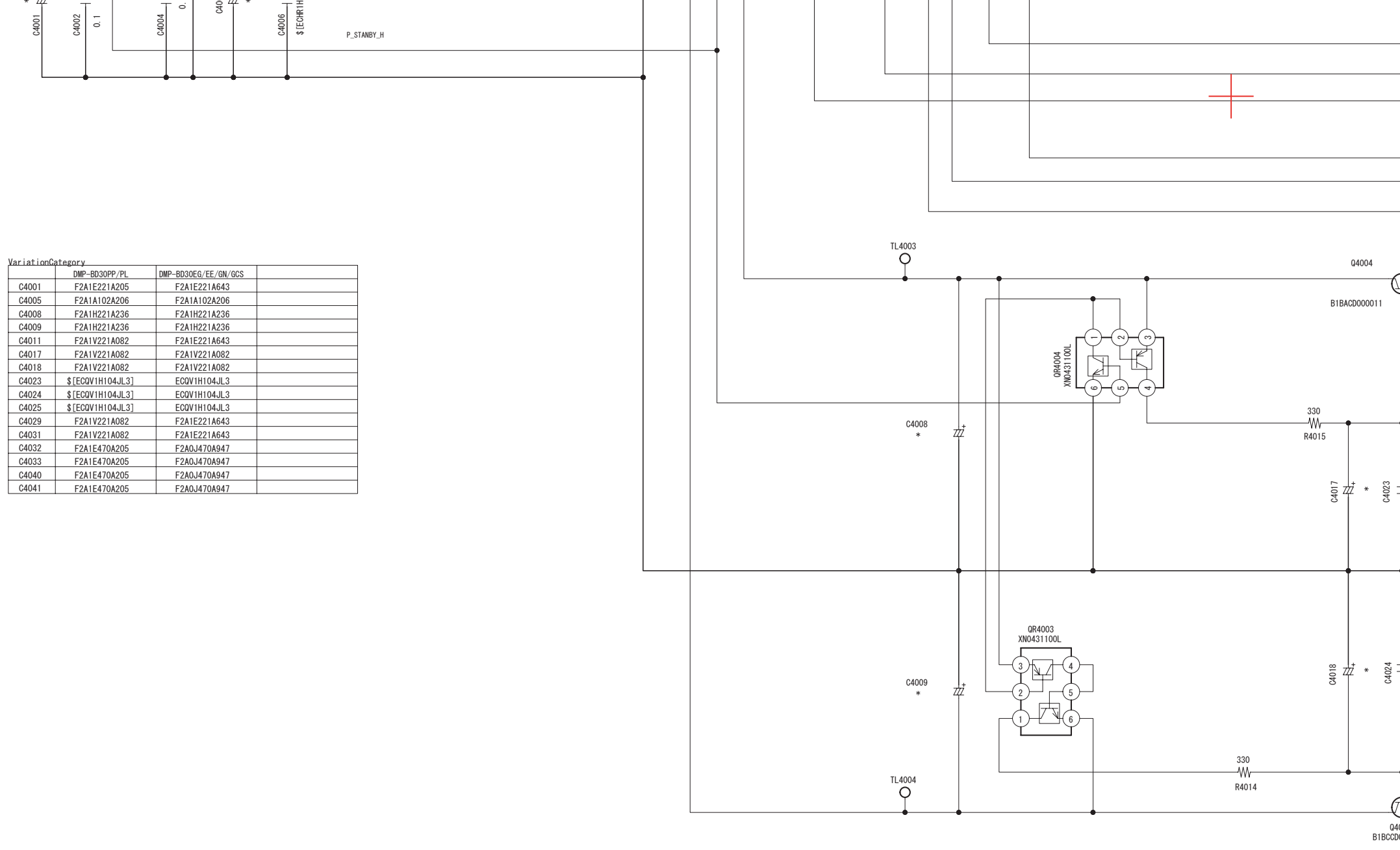
S4.3. Audio_Main (A) Schematic Diagram

1/4 DMP-BD30PP/PL
Audio_Main Section
(AV Main P.C.B. (2/2))
Schematic Diagram (A)





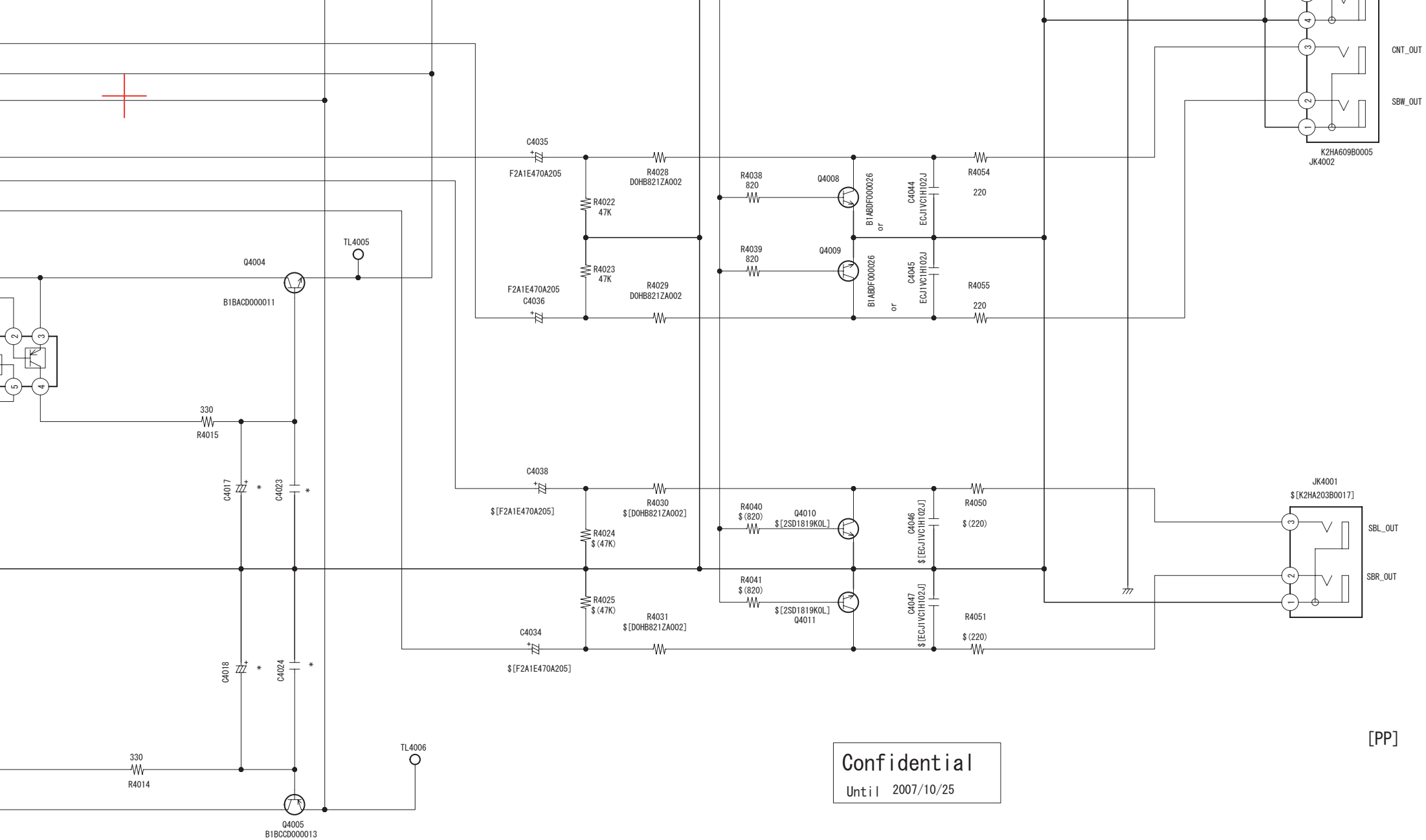
H
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F
E
D
C
B
A



VariationCategory	DMP-BD30PP/PL	DMP-BD30EG/EE/GN/GCS
C4001	F2A1E221A205	F2A1E221A643
C4005	F2A1A102A206	F2A1A102A206
C4008	F2A1H221A236	F2A1H221A236
C4009	F2A1H221A236	F2A1H221A236
C4011	F2A1V221A082	F2A1E221A643
C4017	F2A1V221A082	F2A1V221A082
C4018	F2A1V221A082	F2A1V221A082
C4023	\$(ECQV1H104JL3)	ECQV1H104JL3
C4024	\$(ECQV1H104JL3)	ECQV1H104JL3
C4025	\$(ECQV1H104JL3)	ECQV1H104JL3
C4029	F2A1V221A082	F2A1E221A643
C4031	F2A1V221A082	F2A1E221A643
C4032	F2A1E470A205	F2A0J470A947
C4033	F2A1E470A205	F2A0J470A947
C4040	F2A1E470A205	F2A0J470A947
C4041	F2A1E470A205	F2A0J470A947

3/4	

 DMP-BD30PP/PL
 Audio_Main Section
 (AV Main P.C.B. (2/2))
 Schematic Diagram (A)



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[PP]

DMP-BD30PP/PL
Audio_Main Section
(AV Main P.C.B. (2/2))
Schematic Diagram (A)

4/4

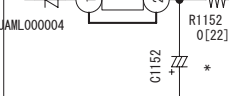
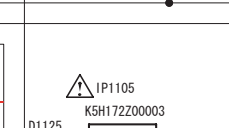
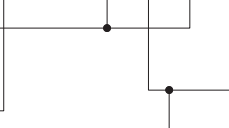
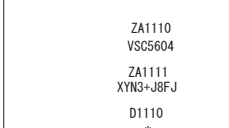
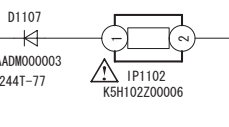
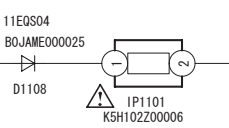
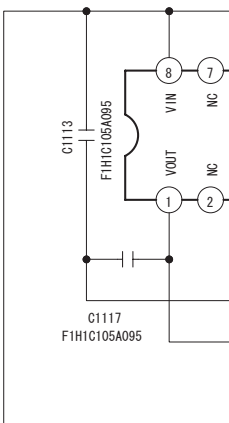
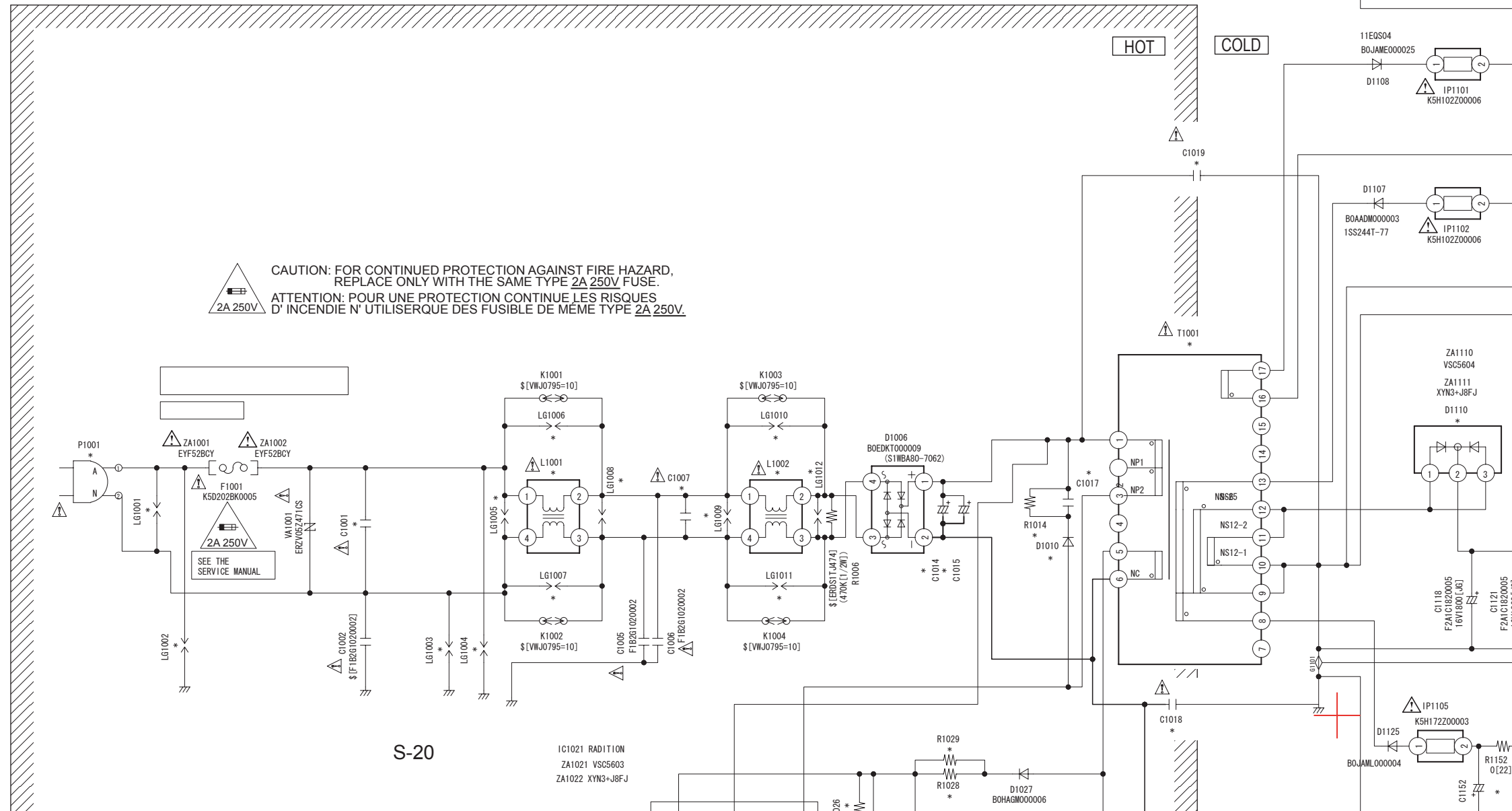
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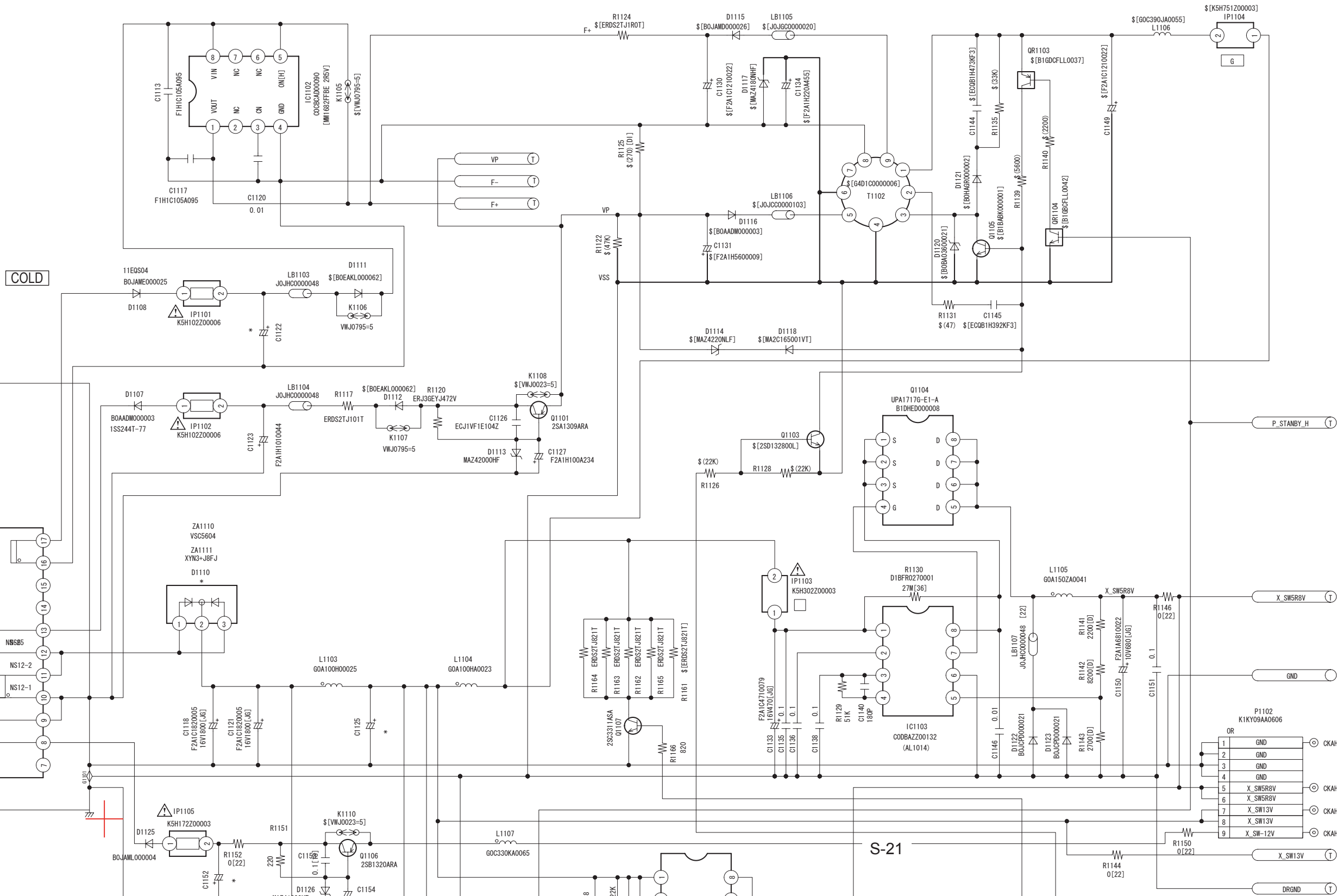
S4.4. Power_P (P) Schematic Diagram

1/4 DMP-BD30PP/PL
Power_P Section
(Power/Timer P.C.B. (1/2))
Schematic Diagram (P)

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CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 2A 250V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCENDIE N'UTILISER QUE DES FUSIBLES DE MÊME TYPE 2A 250V.







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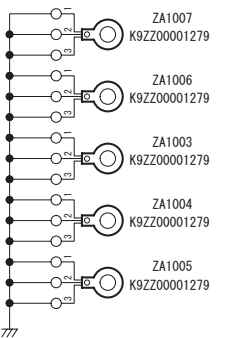
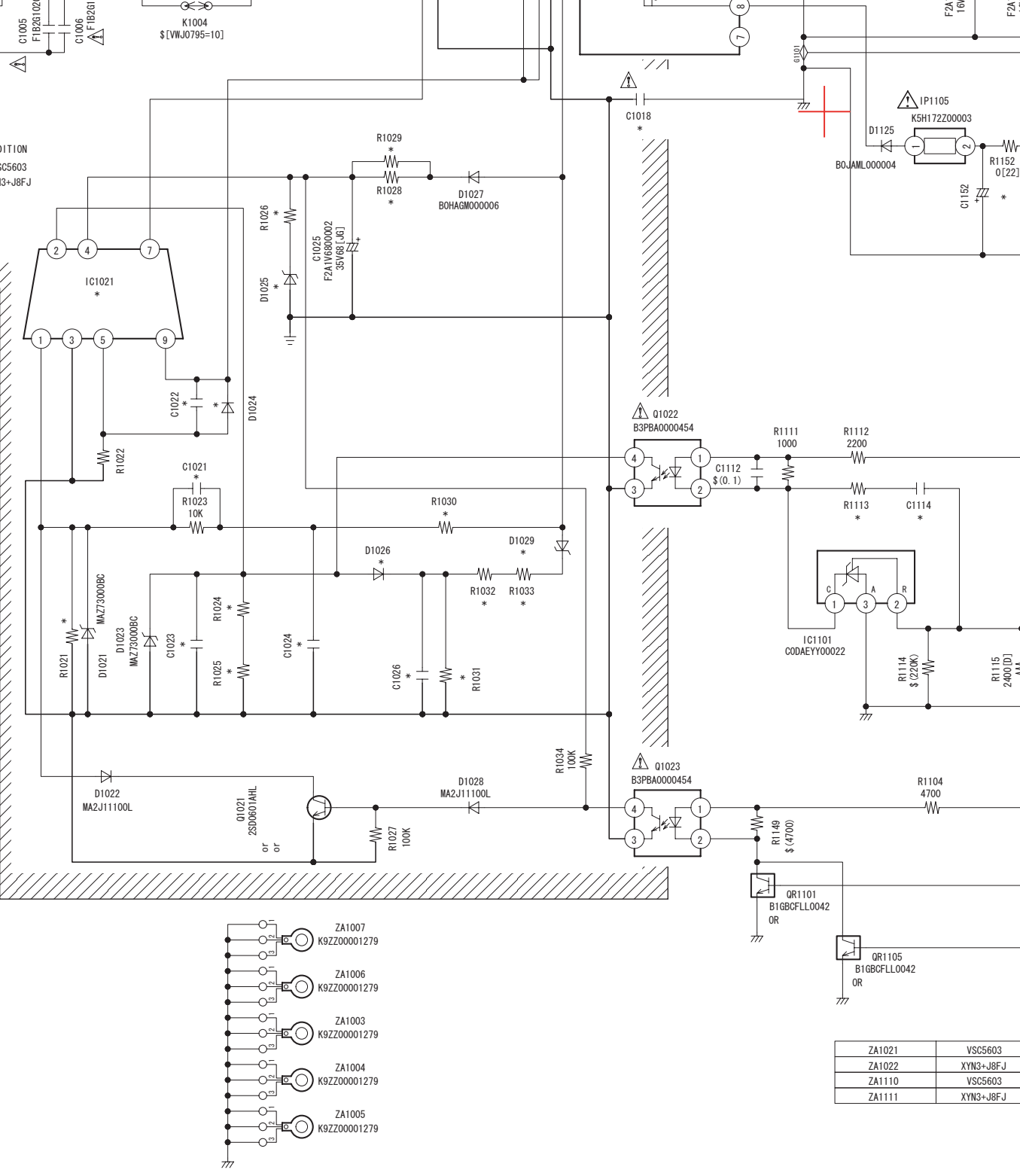
9

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VariationCategory	DMP-BD30PP	DMP-BD30PL	DMP-BD30EG/EE/GN/GCS
C1001	ECQU2A683MLC	ECQU2A683MLC	ECQU2A683MLC
C1007	ECQU2A223MLC	ECQU2A223MLC	ECQU2A223MLC
C1014	F2B2E1510004	F2B2E1510004	F2B2W4700003
C1015	\$(EETHC2E151HY)	\$(EETHC2E151HY)	\$(EETHC2E151HY)
C1017	\$(F1B3A3320011)	\$(F1B3A3320011)	F1B3A3320011
C1018	F1B2G1020002	F1B2G1020002	ECKWNA102MEV
C1019	\$(F1B2G1020002)	\$(F1B2G1020002)	\$(ECKWNA102MEV)
C1021	\$(470P)	\$(470P)	\$(470P)
C1022	F1B3A2720001	F1B3A2720001	KAR-F1A00001
C1023	470P	470P	470P
C1024	100P	100P	100P
C1026	2200P	2200P	3300P
C1114	0.1	0.1	0.1
C1122	F2A0J6800003	F2A0J6800003	F2A1A5600003
C1124	0.1	0.1	0.1
C1125	F2A1C102A236	F2A1C102A236	EGA1CPX102E
C1152	F2A1V2210049	F2A1V2210049	F2A1E221A643
C1154	F2A1E221A205	F2A1E221A205	F2A1E221A643
D1010	\$(BOHADV000001)	\$(BOHADV000001)	BOHADV000001
D1024	\$(BOHADV000001)	\$(BOHADV000001)	BOHADV000001
D1025	MAZ4150NMF	MAZ4150NMF	MAZ41600MF
D1026	MA2C165001VT	MA2C165001VT	BOJAML000011
D1029	MAZ41200MF	MAZ41200MF	MAZ41000MF
D1110	BOJBSG000010	BOJBSG000010	BOJBSL000002
IC1021	CODACZH00035	CODACZH00035	CODACZH00017
L1001	GOB100E00002	GOB100E00002	GOB233D00001
L1002	GOB100E00002	GOB100E00002	GOB233D00001
LG1001	\$(LGS-3.5)	\$(LGS-3.5)	\$(LGS-3.5)
LG1002	\$(LGS-6.2)	\$(LGS-6.2)	\$(LGS-6.2)
LG1003	\$(LGS-6.2)	\$(LGS-6.2)	\$(LGS-6.2)
LG1004	\$(LGS-6.2)	\$(LGS-6.2)	\$(LGS-6.2)
LG1005	\$(LGS-3.5)	\$(LGS-3.5)	\$(LGS-3.5)
LG1006	\$(LGS-1.5)	\$(LGS-1.5)	\$(LGS-1.5)
LG1007	\$(LGS-1.5)	\$(LGS-1.5)	\$(LGS-1.5)
LG1008	\$(LGS-3.5)	\$(LGS-3.5)	\$(LGS-3.5)
LG1009	\$(LGS-3.5)	\$(LGS-3.5)	\$(LGS-3.5)
LG1010	\$(LGS-1.5)	\$(LGS-1.5)	\$(LGS-1.5)
LG1011	\$(LGS-1.5)	\$(LGS-1.5)	\$(LGS-1.5)
LG1012	\$(LGS-3.5)	\$(LGS-3.5)	\$(LGS-3.5)
P1001	K2AB2H000004	K2AA2H000007	K2AA2H000007
R1014	\$(ERG2SJ683P)	\$(ERG2SJ683P)	ERG2SJ104P
R1021	\$(10K)	\$(10K)	\$(10K)
R1022	ERX2SZJR10E	ERX2SZJR10E	ERX2SZJR20E
R1024	15k[D]	15k[D]	15k[D]
R1025	1000[D]	1000[D]	2200[D]
R1026	ERDS2TJ151T	ERDS2TJ151T	ERDS2TJ221T
R1028	10	10	22
R1029	10	10	22
R1030	2700	2700	1500
R1031	\$(100K)	\$(100K)	\$(100K)
R1032	2200[D]	2200[D]	5100[D]
R1033	3300[D]	3300[D]	4700[D]
R1113	10k	10k	1k
R1116	2.2k	2.2k	2.2k
T1001	G4D2A0000289	G4D2A0000289	KAR-G4D00016

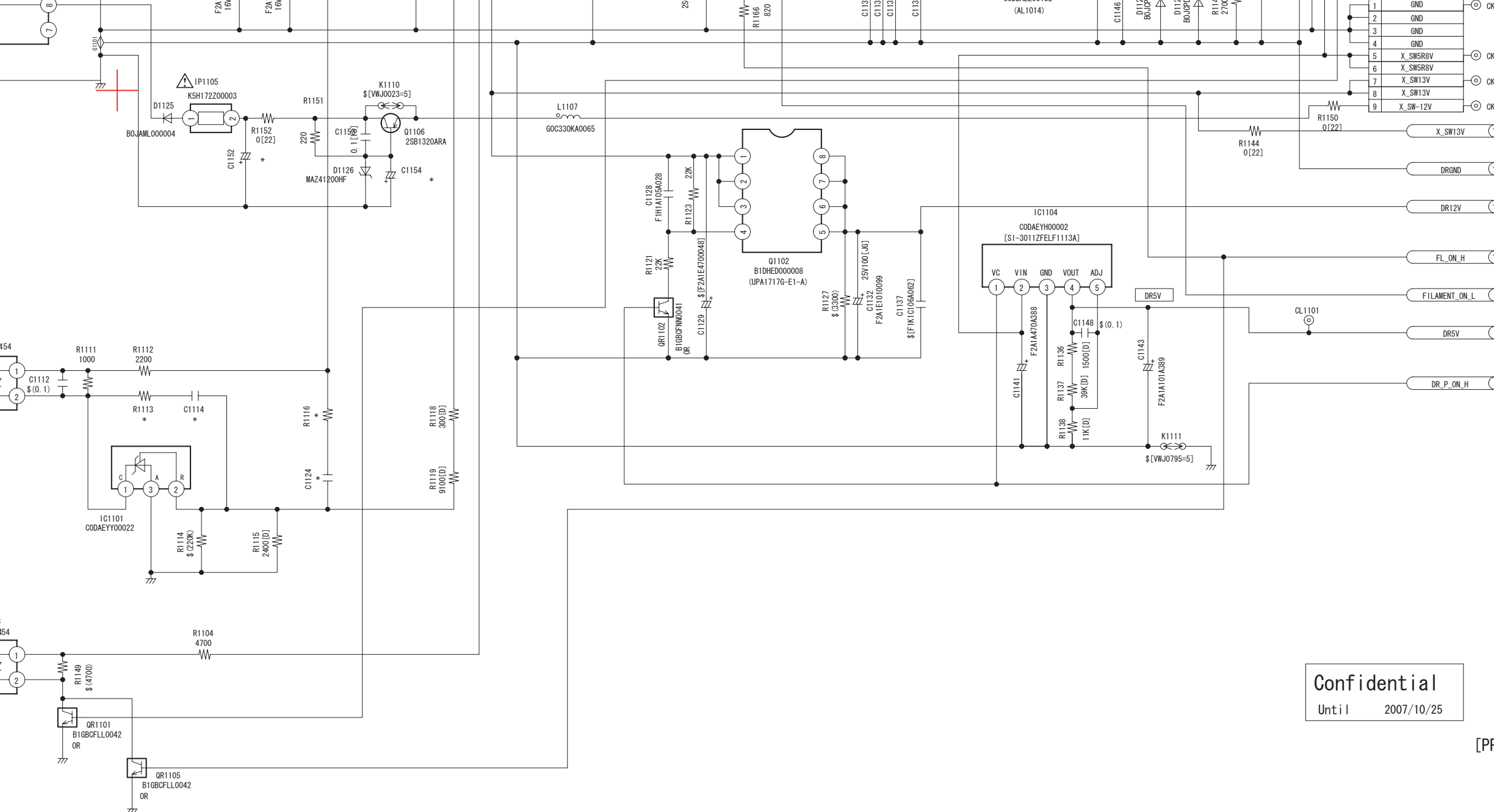


ZA1021	VSC5603
ZA1022	XYN3+J8FJ
ZA1110	VSC5603
ZA1111	XYN3+J8FJ

DMP-BD30PP/PL
Power_P Section
(Power/Timer P.C.B. (1/2))
Schematic Diagram (P)

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Confidential
Until 2007/10/25

[PP]

ZA1021	VSC5603
ZA1022	XYN3+J8FJ
ZA1110	VSC5603
ZA1111	XYN3+J8FJ

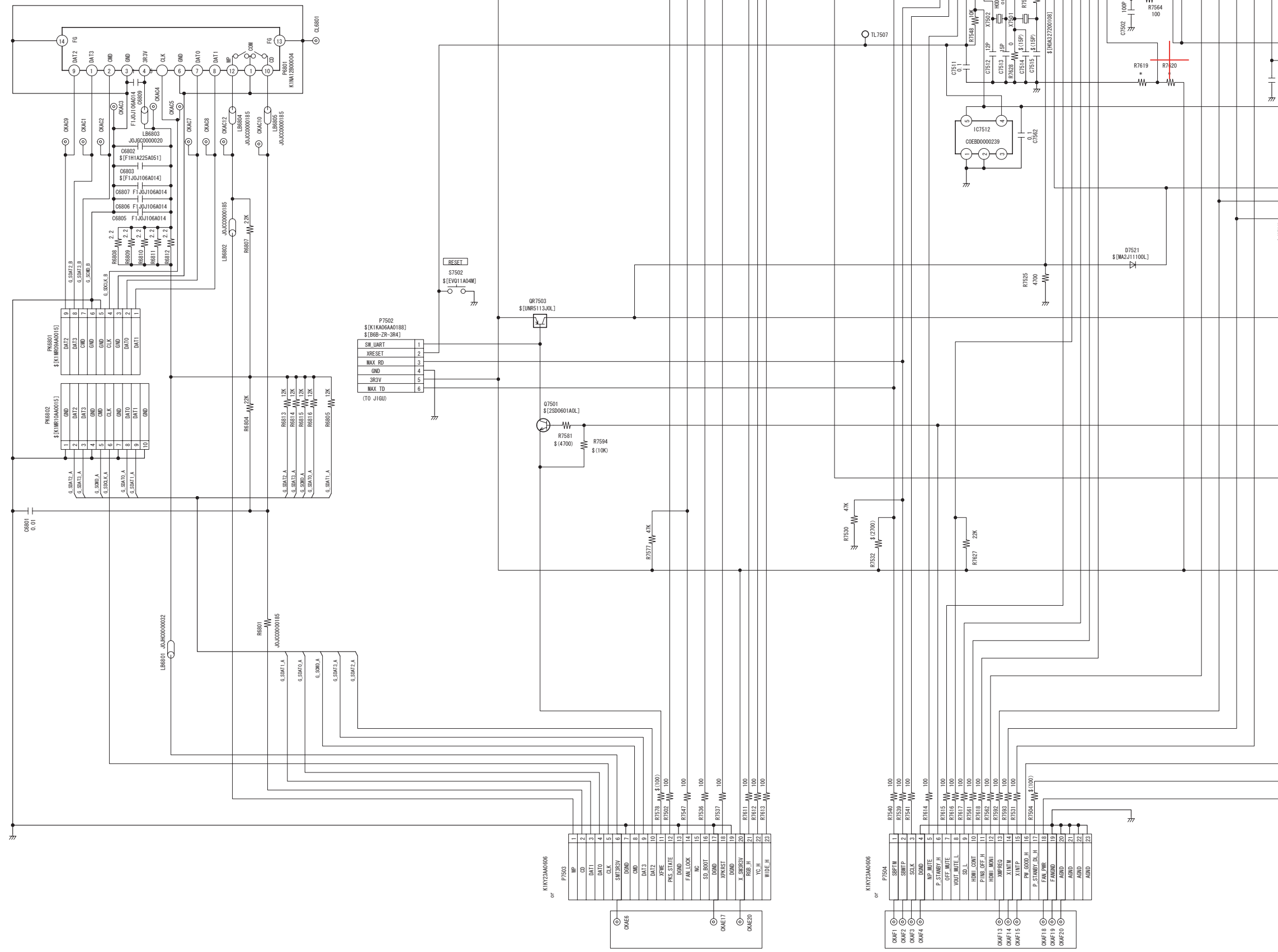
DMP-BD30PP/PL
Power_P Section
(Power/Timer P.C.B. (1/2))
Schematic Diagram (P)

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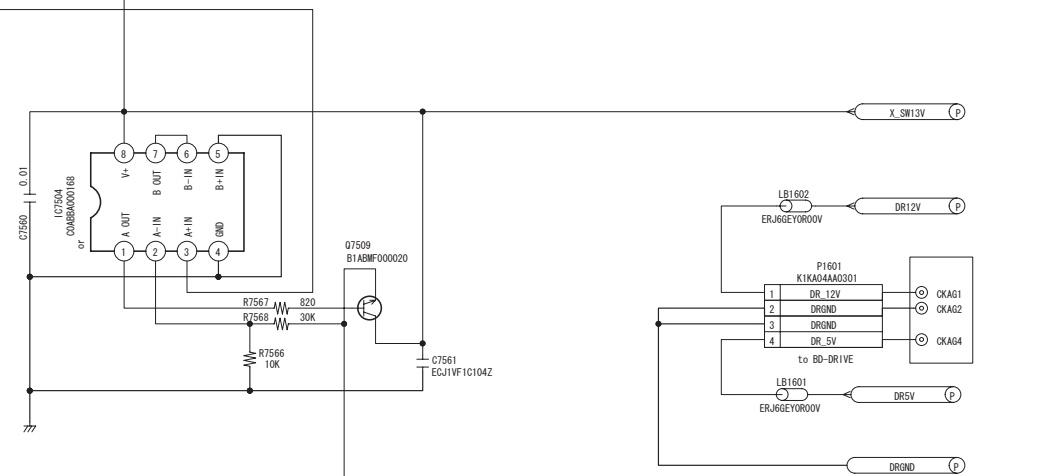
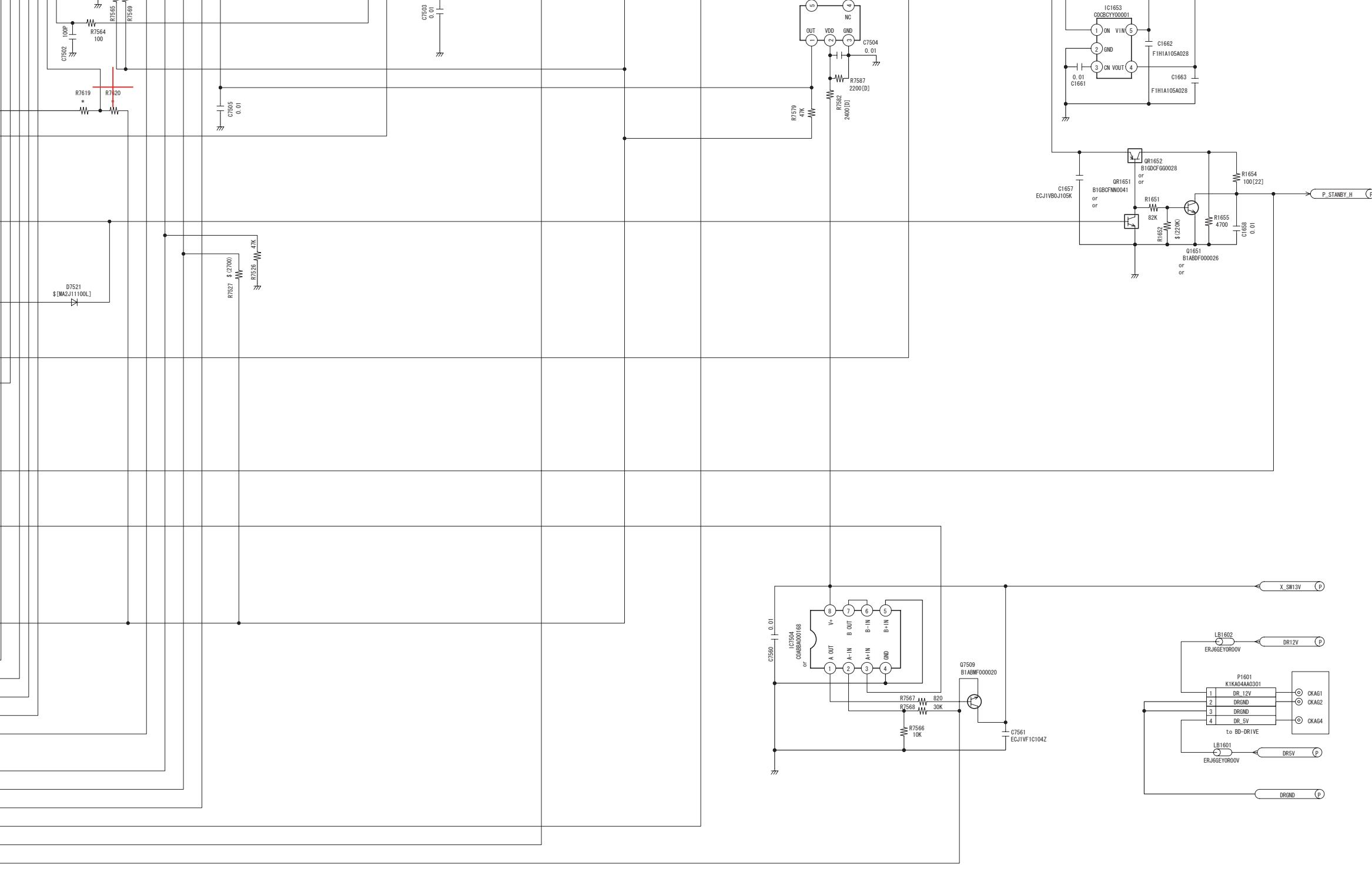
1 2 3 4 5 6 7 8 9 10 11 12



3/4

DMP-BD30PP/PL
Timer Section
(Power/Timer P.C.B. (2/2))
Schematic Diagram (T)





[MP]

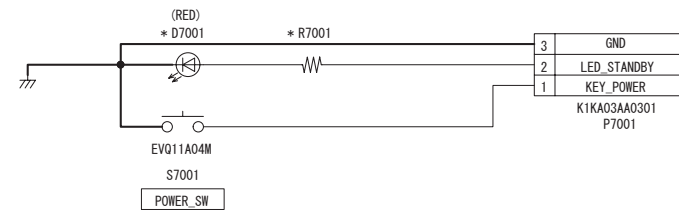
2007/10/25

DMP-BD30PP/PL
 Timer Section
 (Power/Timer P.C.B. (2/2))
 Schematic Diagram (T)

4/4

S4.6. Front_L Schematic Diagram

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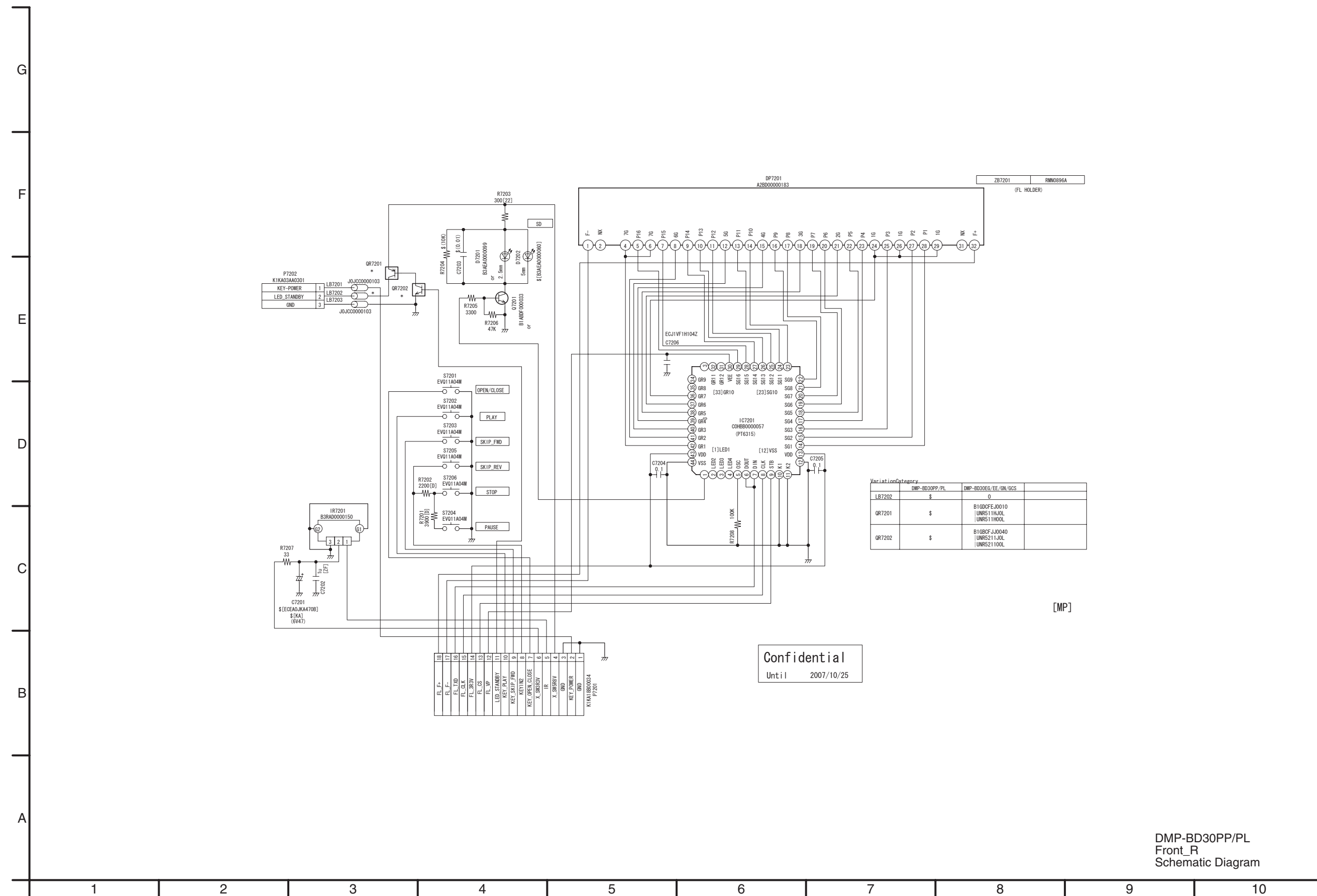
[PP]

VariationCategory			
	DMP-BD30PP/PL	DMP-BD30EG/EE/GN/GCS	
D7001	\$	B3AAA0000791	
R7001	\$	300[22]	

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DMP-BD30PP/PL
Front_L
Schematic Diagram

S4.7. Front_R Schematic Diagram

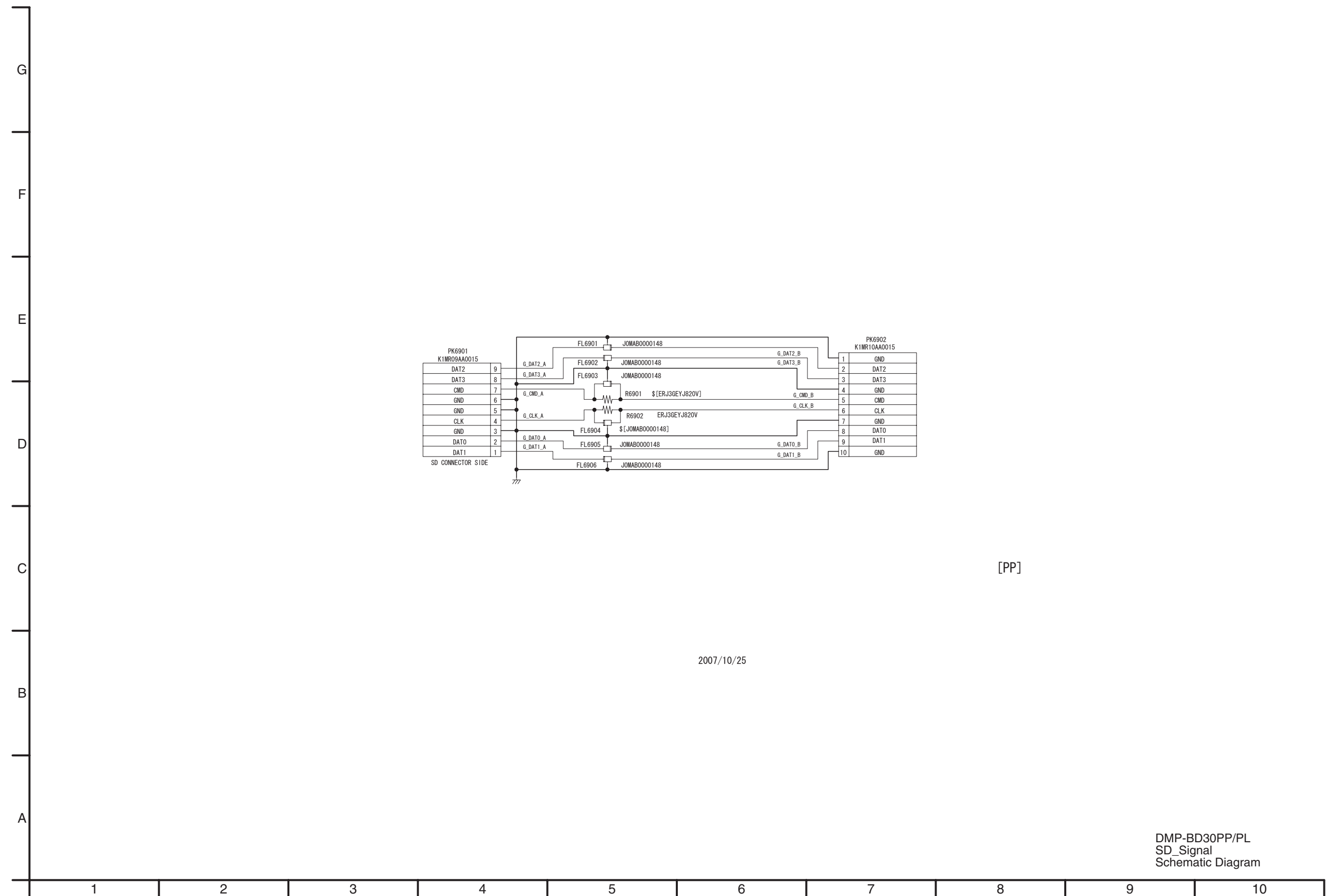


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Until 2007/10/25

[MP]

DMP-BD30PP/PL
Front_R
Schematic Diagram

S4.8. SD_Signal Schematic Diagram



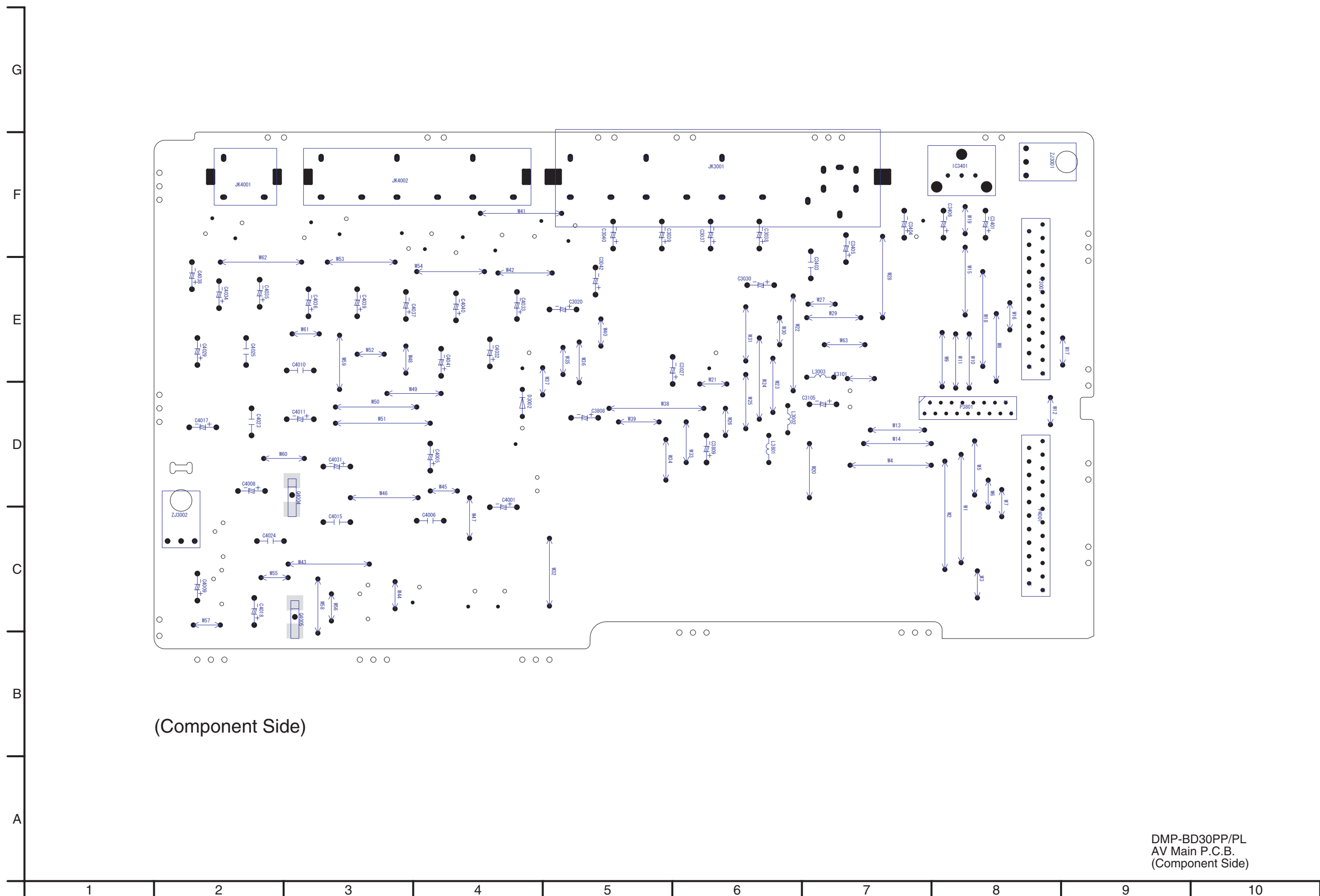
[PP]

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S5. Print Circuit Board

S5.1. AV Main P.C.B.

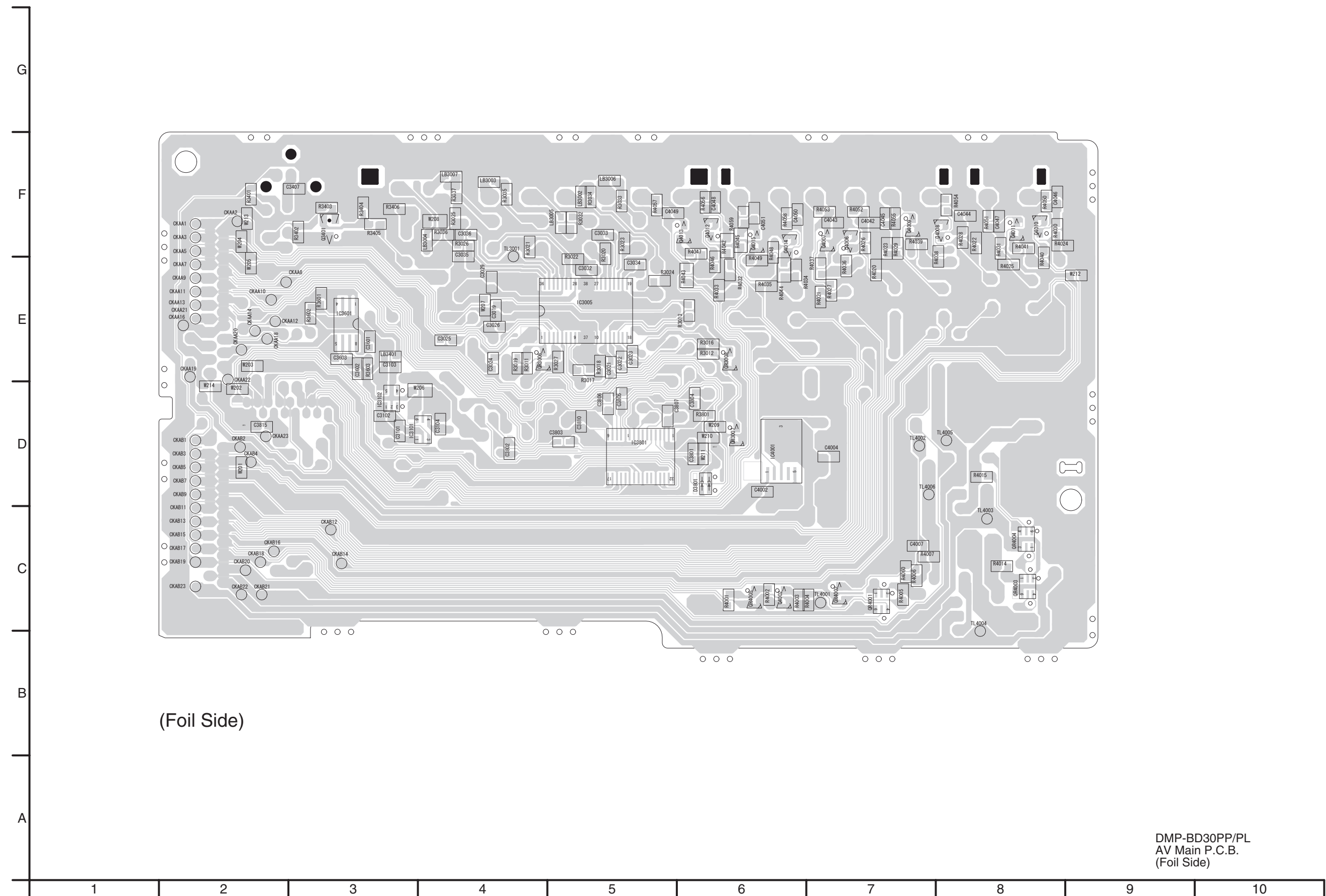
S5.1.1. AV Main P.C.B. (Component Side)



(Component Side)

DMP-BD30PP/PL
AV Main P.C.B.
(Component Side)

S5.1.2. AV Main P.C.B. (Foil Side)



(Foil Side)

DMP-BD30PP/PL
AV Main P.C.B.
(Foil Side)

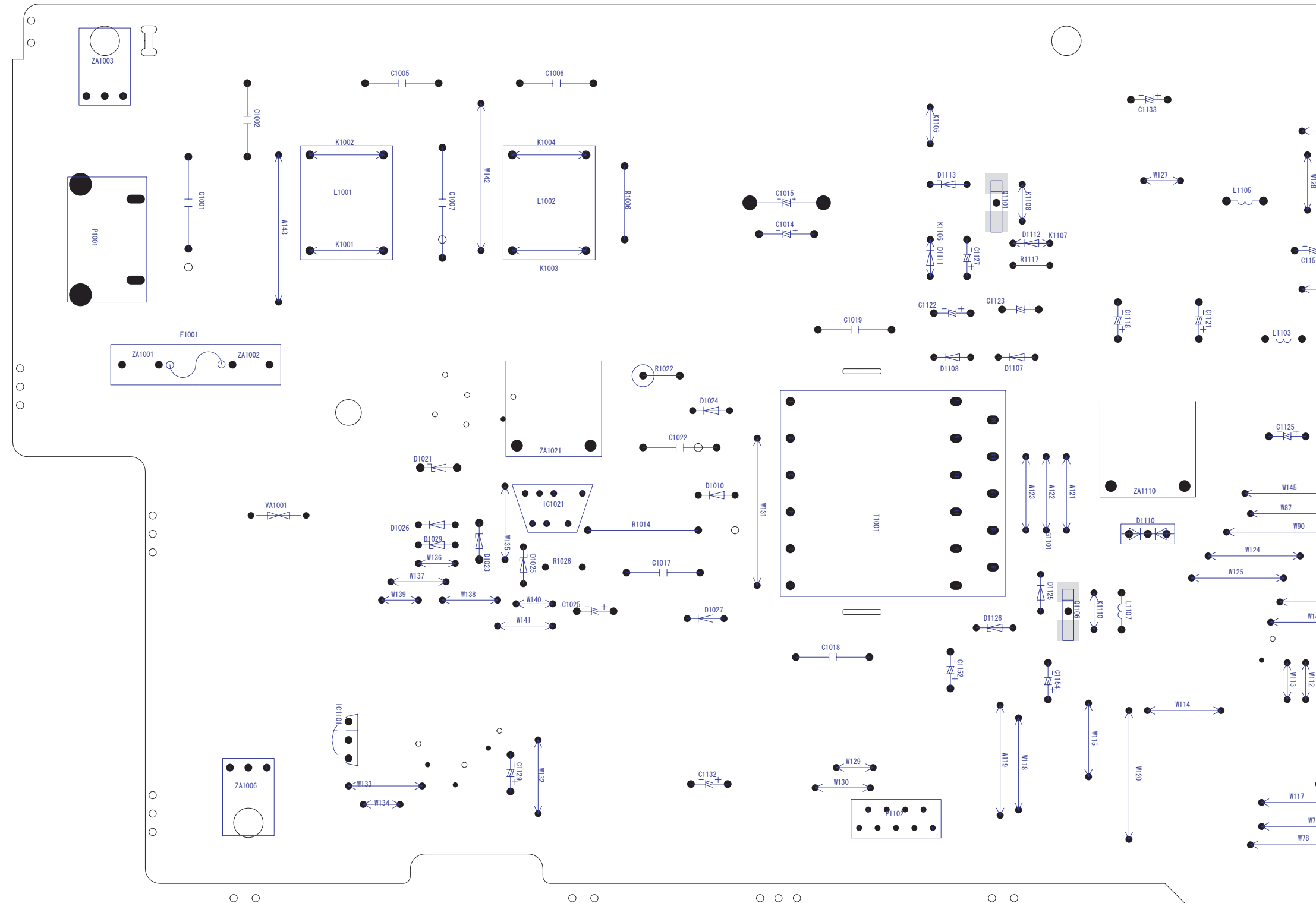
S5.2. Power/Timer P.C.B.

S5.2.1. Power/Timer P.C.B. (Component Side)

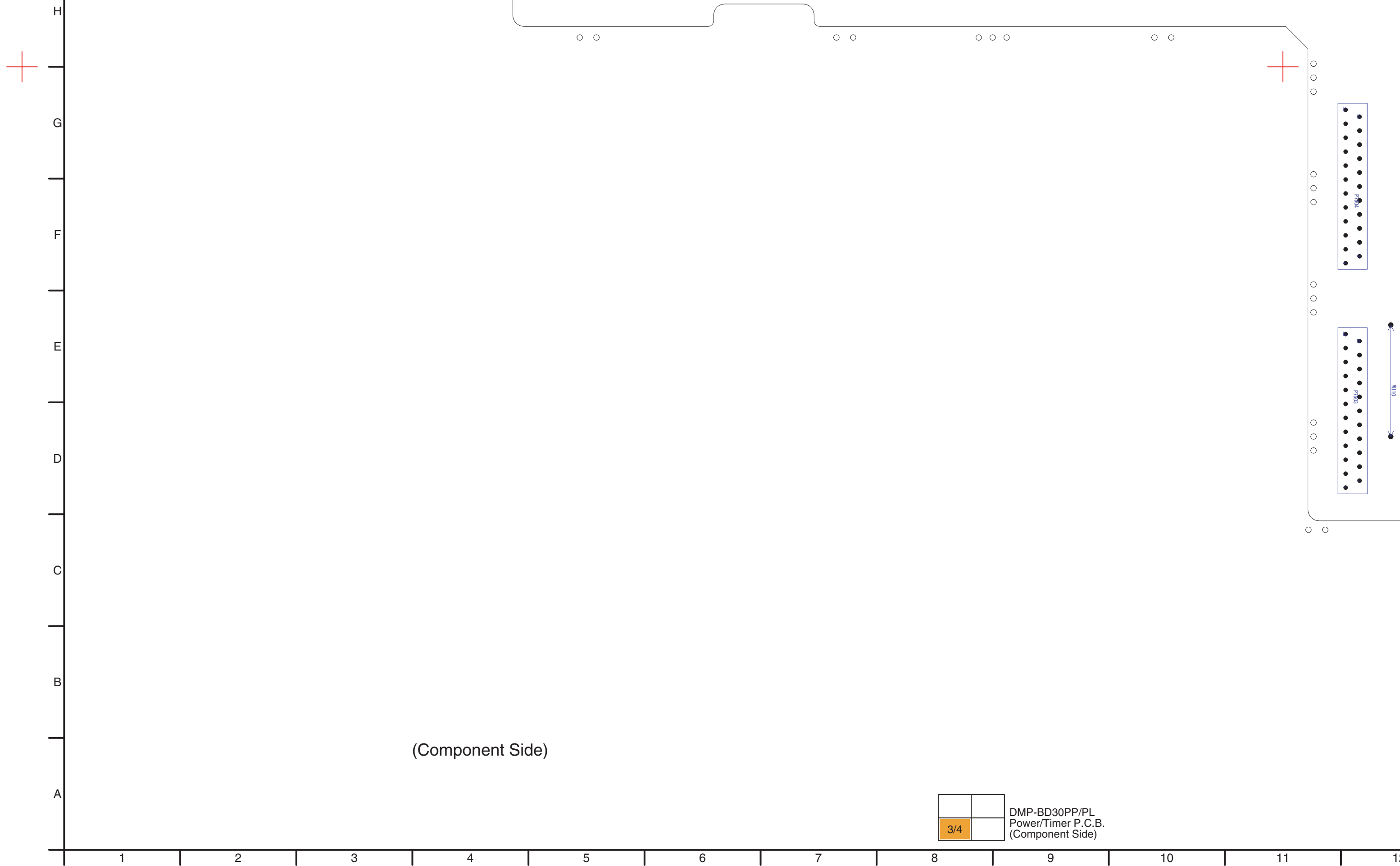
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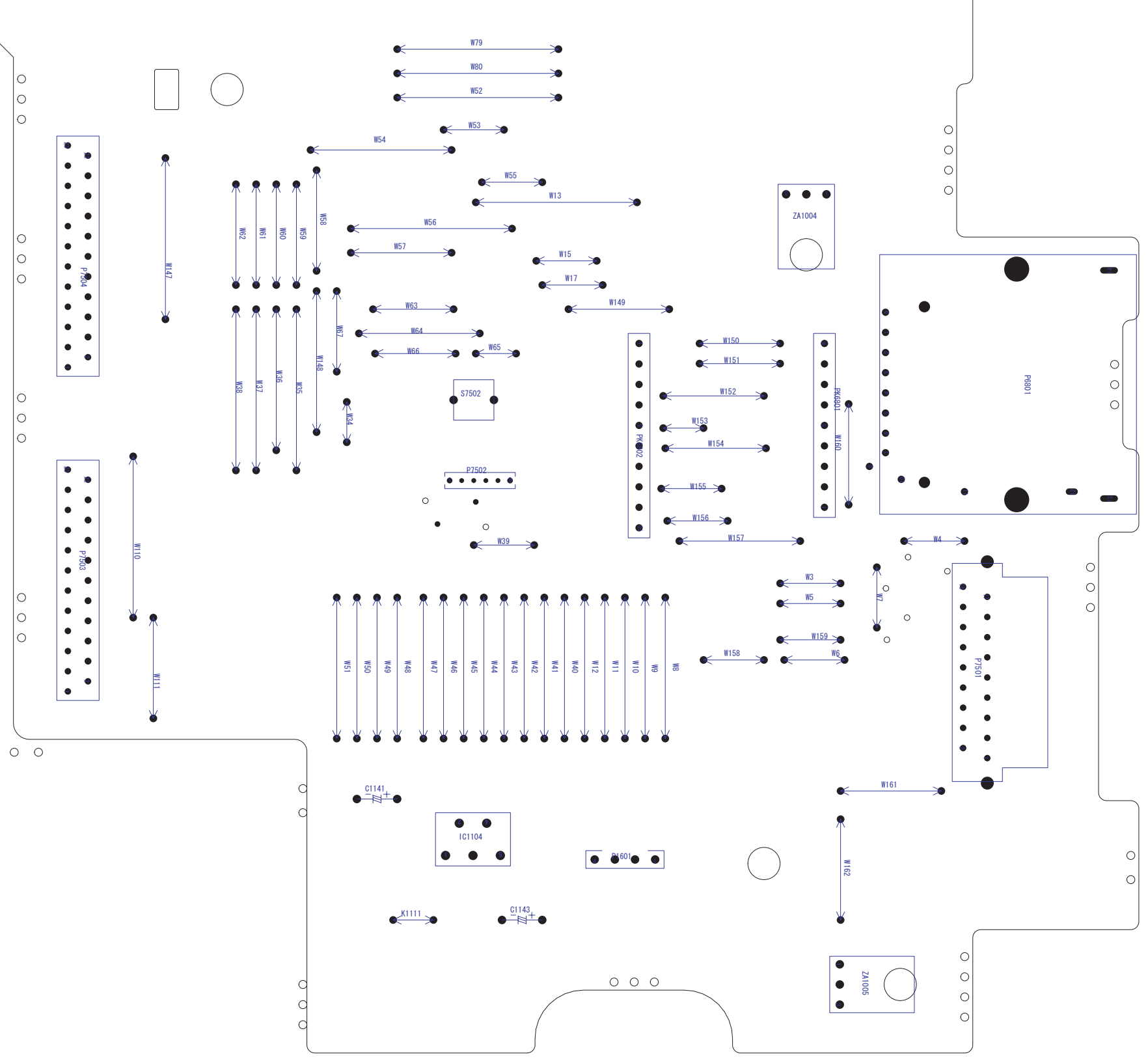
DMP-BD30PP/PL
Power/Timer P.C.B.
(Component Side)

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		DMP-BD30PP/PL Power/Timer P.C.B. (Component Side)
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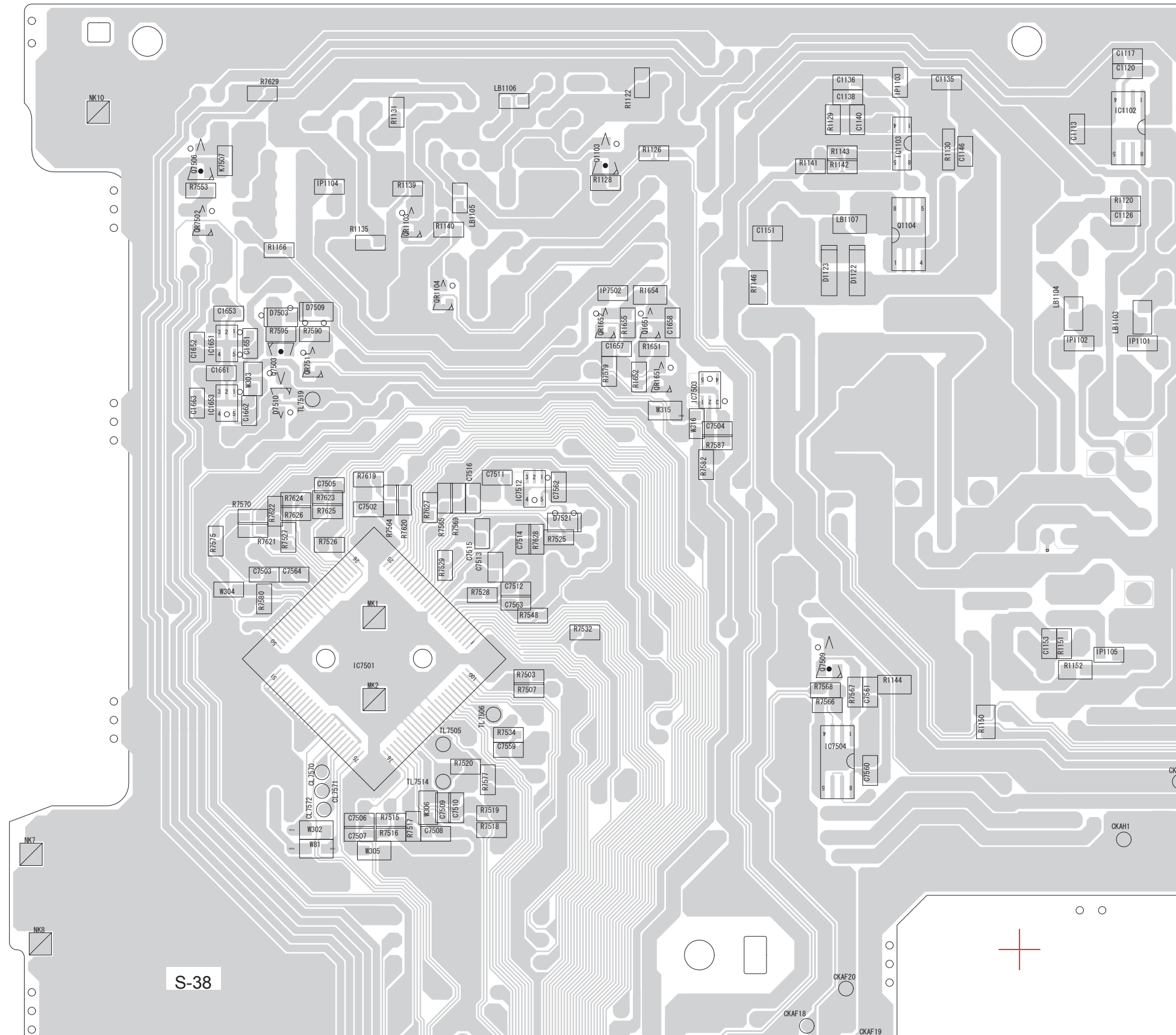
11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21



S5.2.2. Power/Timer P.C.B. (Foil Side)

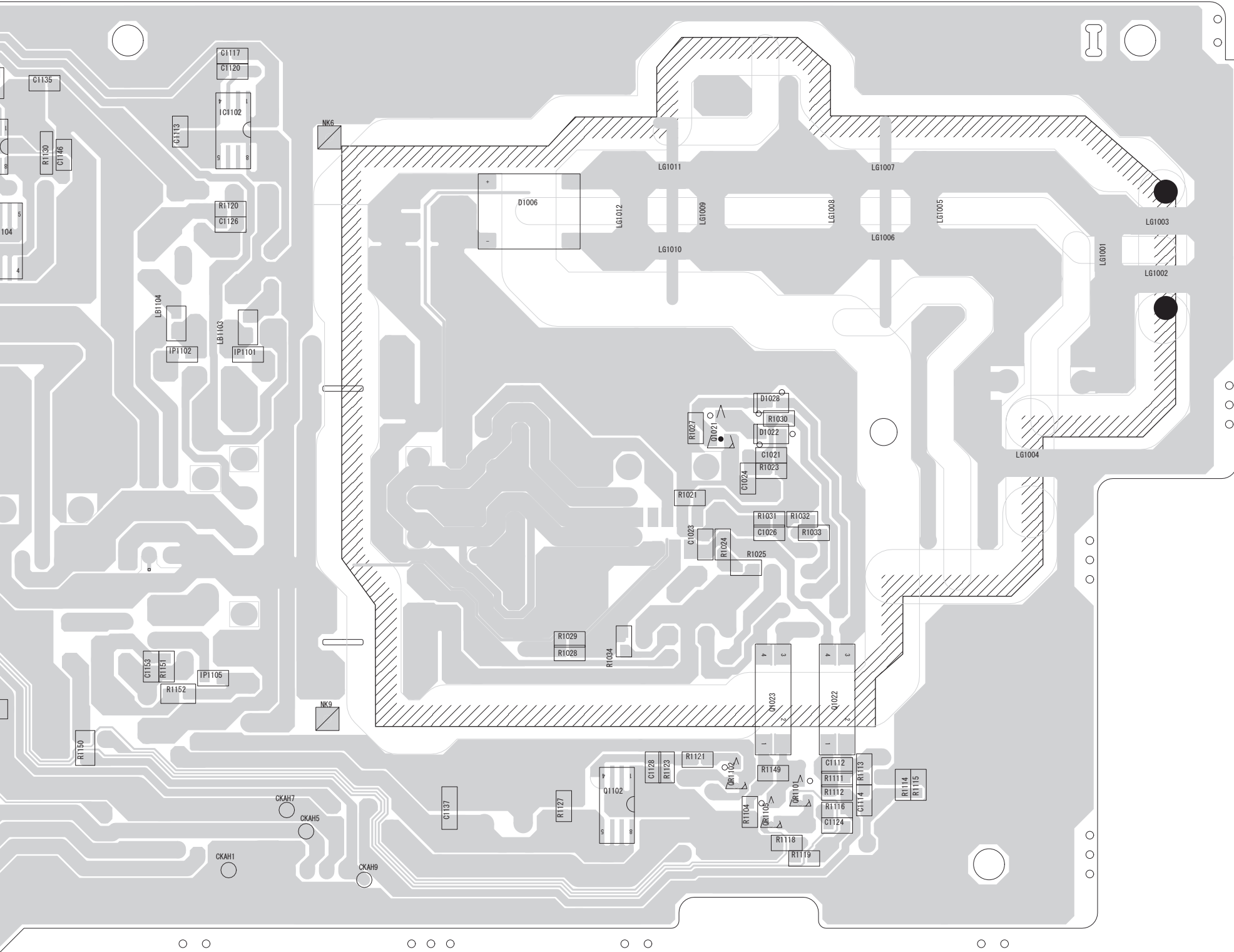
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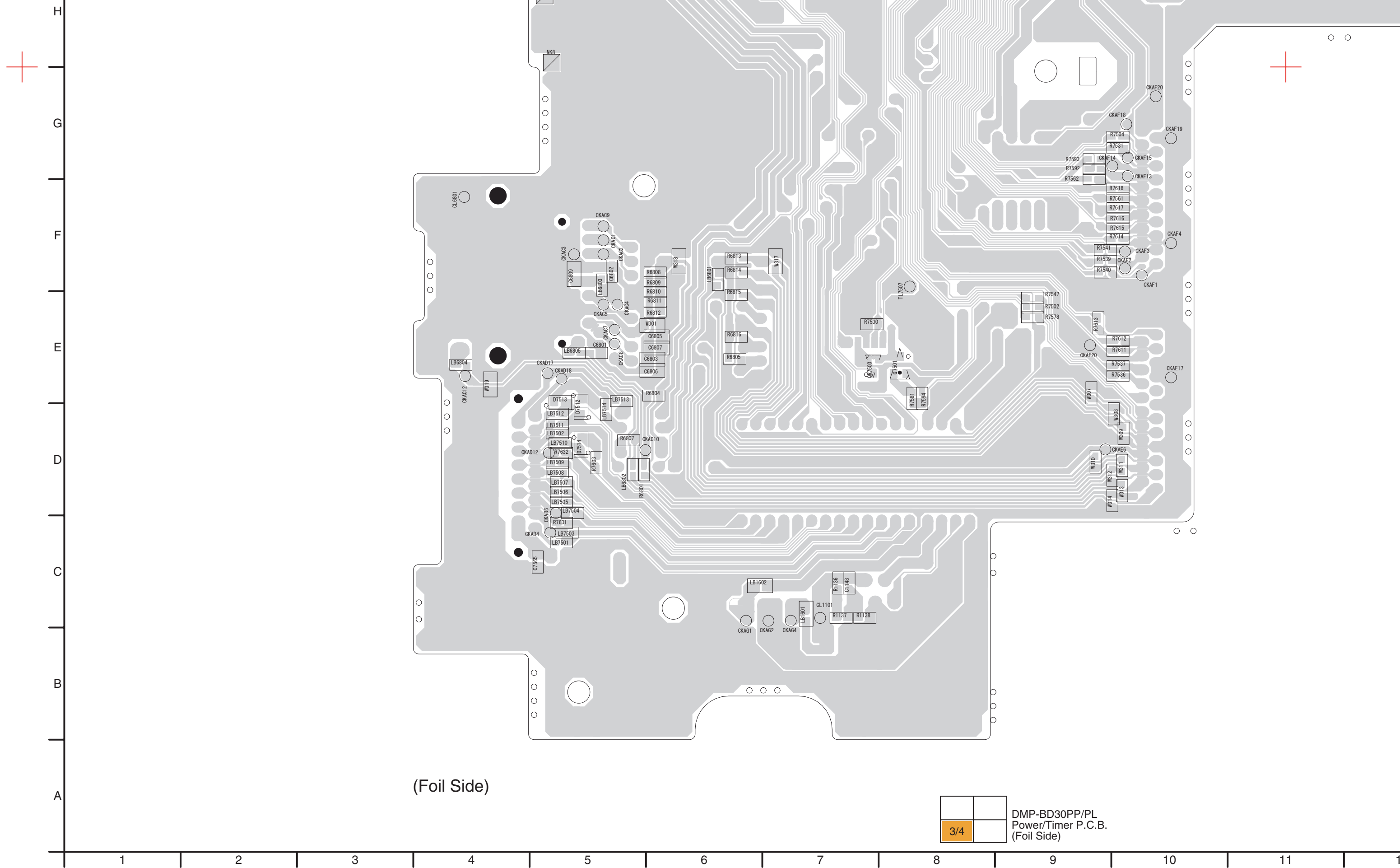
DMP-BD30PP/PL
Power/Timer P.C.B.
(Foil Side)



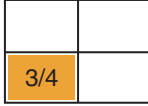
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(Foil Side)



DMP-BD30PP/PL
Power/Timer P.C.B.
(Foil Side)



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DMP-BD30PP/PL
Power/Timer P.C.B.
(Foil Side)

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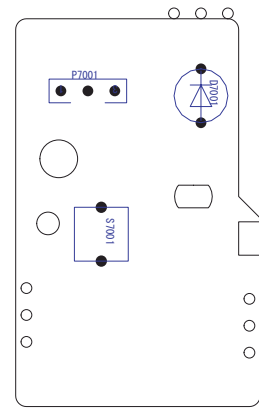
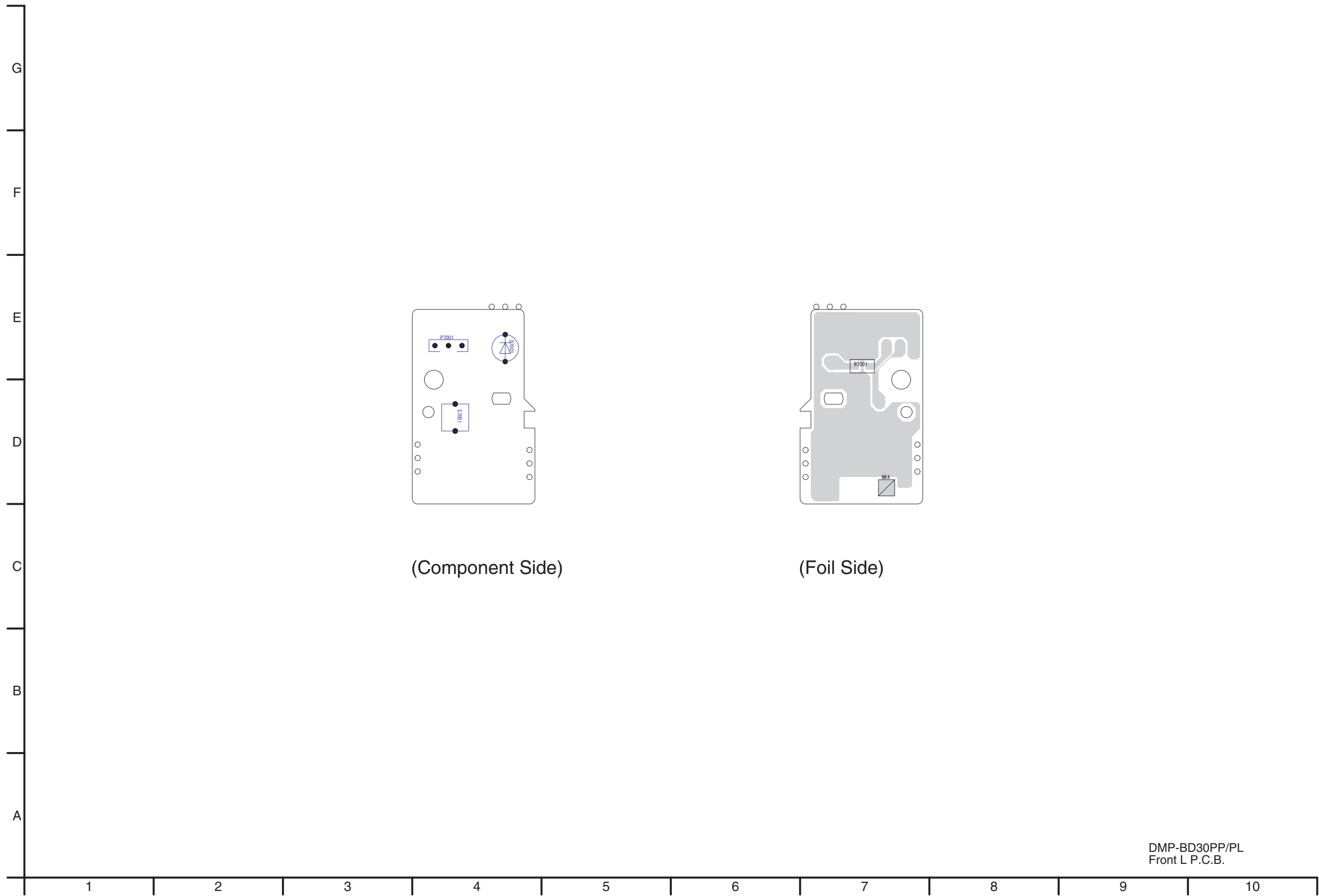
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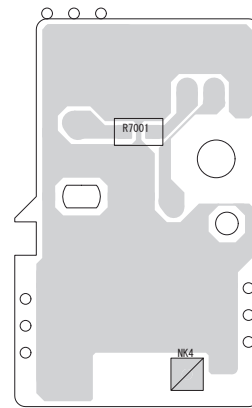
21



S5.3. Front L P.C.B.

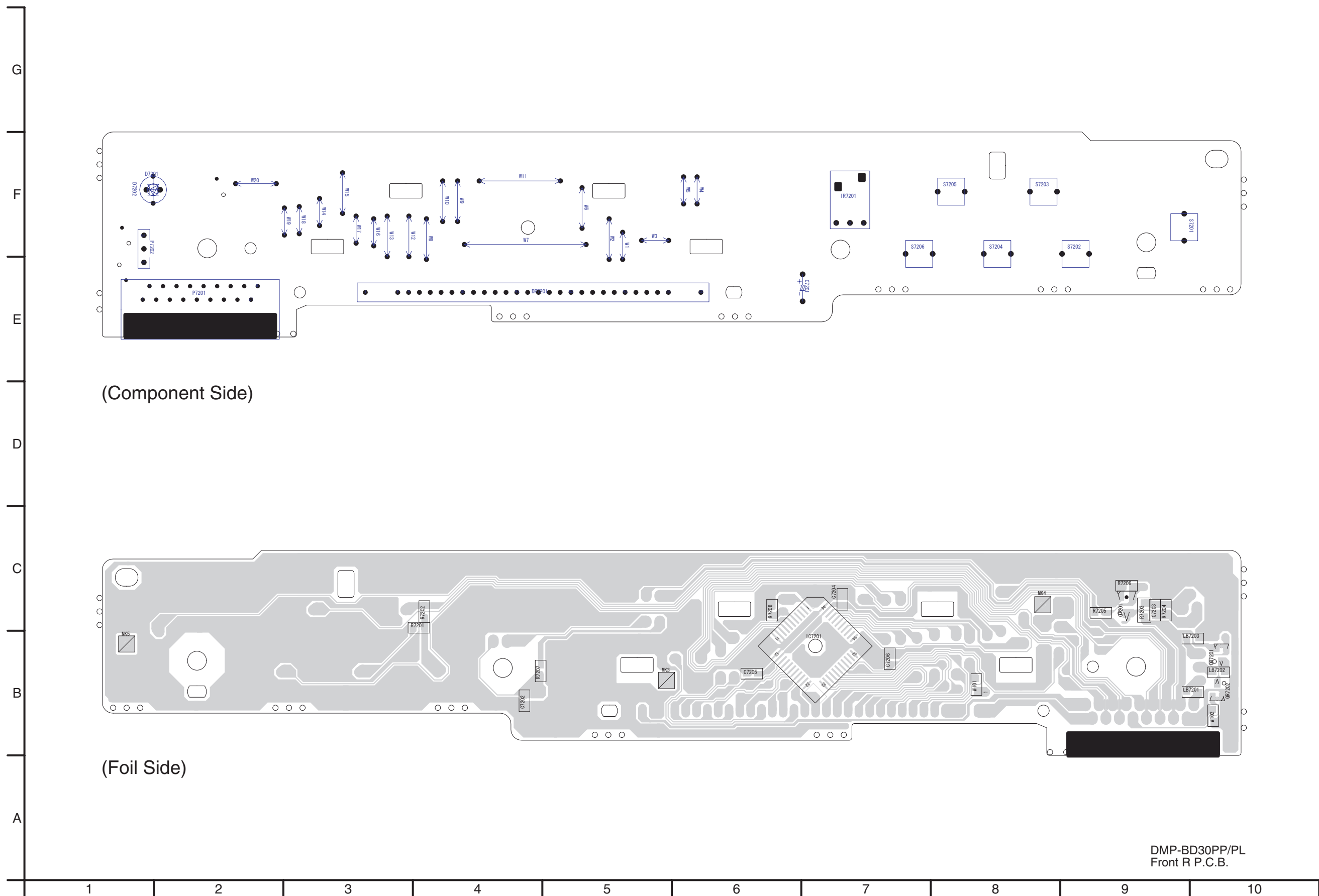


(Component Side)



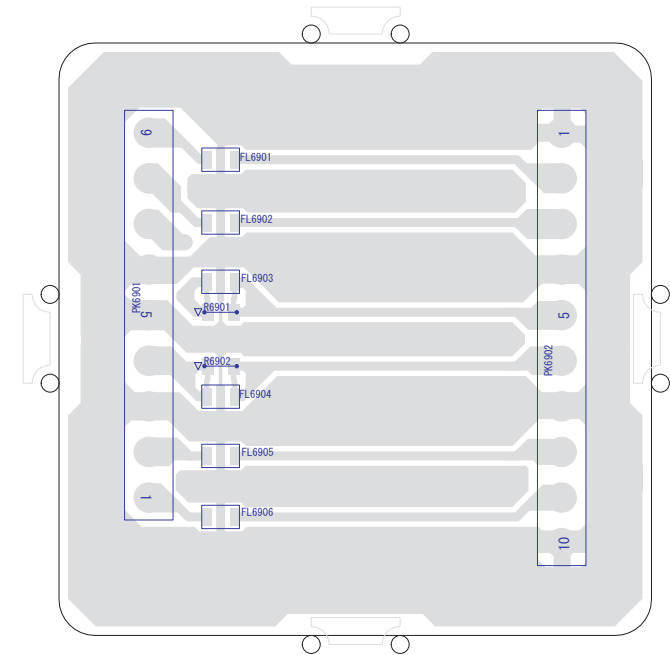
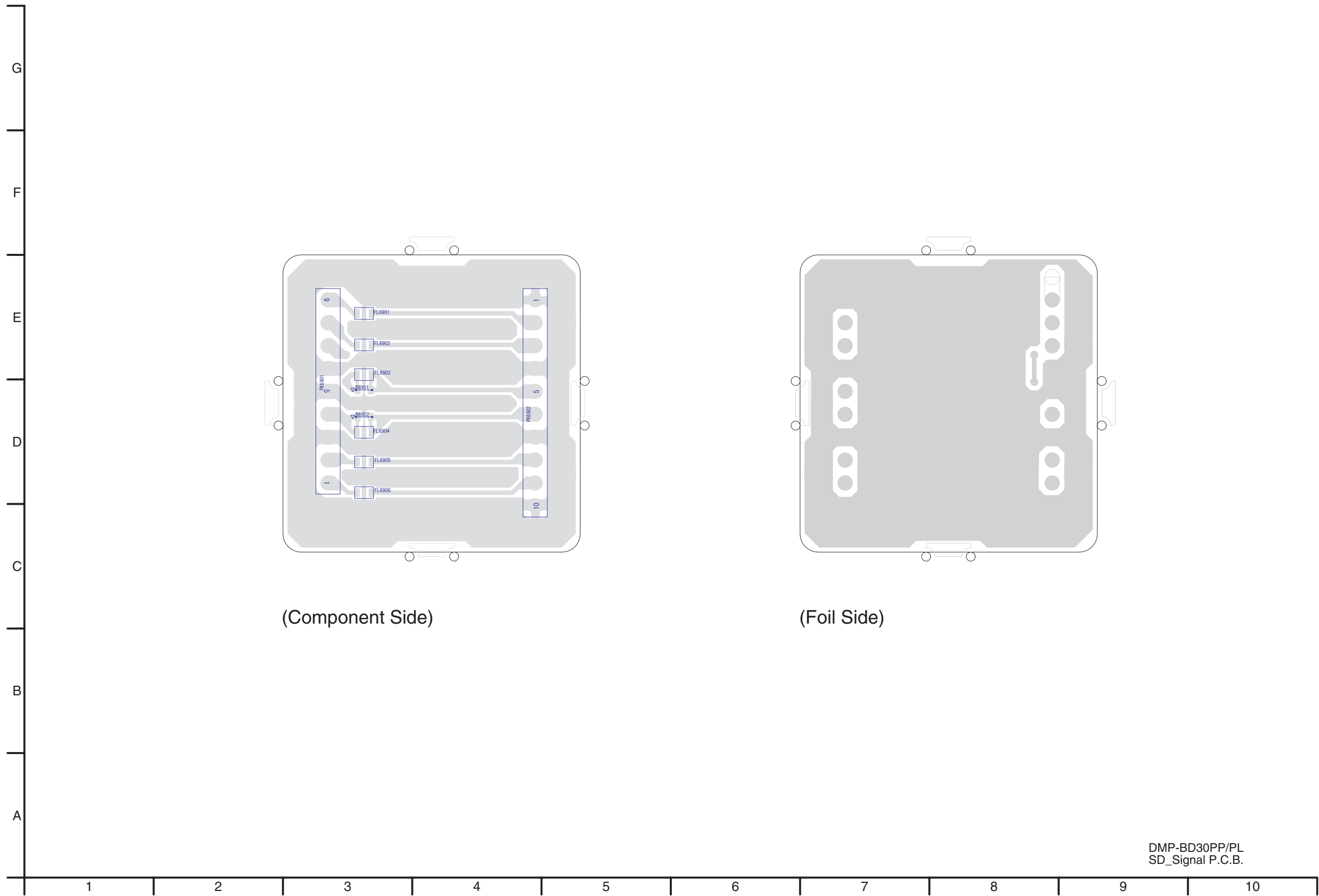
(Foil Side)

S5.4. Front R P.C.B.

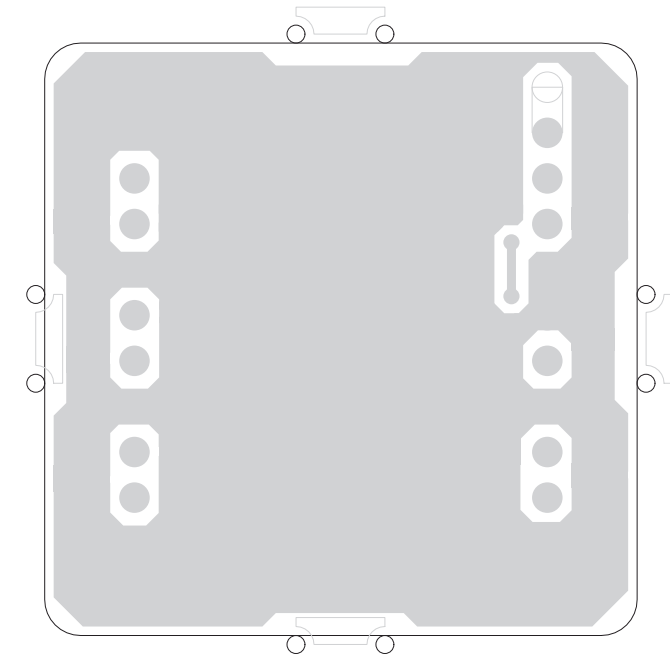


DMP-BD30PP/PL
Front R P.C.B.

S5.5. SD_Signal P.C.B.



(Component Side)



(Foil Side)

S6. Abbreviation

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 SERVO AMP 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 SYSTEM CLOCK SELECT CLV CONSTANT LINEAR VELOCITY COFTR CAP. OFF TRACK CPA CPU ADDRESS CPCS CPU CHIP SELECT CPDT CPU DATA CPH1~3 CLOCK PULSE SOURCE DRIVE CPUADR CPU ADDRESS LATCH CPUADT CPU ADDRESS DATA BUS CPUIRQ CPU INTERRUPT REQUEST CPRD CPU READ ENABLE CPV GATE DRIVER CLOCK PULSE CPWR CPU WRITE ENABLE CS CHIP SELECT 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

INITIAL/LOGO		ABBREVIATIONS
	DO DOUT0~UP DRF DRPOUT DREQ DRESP DSC DSLIF DVD	DROP OUT DATA OUTPUT DATA SLICE RF (BIAS) DROP OUT SIGNAL DATA REQUEST DATA RESPONSE DIGITAL SERVO CONTROLLER DATA SLICE LOOP FILTER DIGITAL VIDEO DISC
E	EC ECR ENCSEL ETMCLK ETSCLK	ERROR TORQUE CONTROL ERROR TORQUE CONTROL REFERENCE ENCODER SELECT EXTERNAL M CLOCK (81MHz/40.5MHz) EXTERNAL S CLOCK (54MHz)
F	FBAL FCLK FE FFI FEO FG FSC FSCK	FOCUS BALANCE FRAME CLOCK FOCUS ERROR FOCUS ERROR AMP INVERTED INPUT FOCUS ERROR AMP OUTPUT FREQUENCY GENERATOR FREQUENCY SUB CARRIER FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP HD0~UP HINT HRXW	HOST ADDRESS HOST DATA HOST INTERRUPT HOST READ/WRITE
I	IECOUT IPFRAG IREF ISEL	IEC958 FORMAT DATA OUTPUT INTERPOLATION FLAG I (CURRENT) REFERENCE INTERFACE MODE SELECT
L	LDON LPC LRCK	LASER DIODE CONTROL LASER POWER CONTROL L CH/R CH DISTINCTION CLOCK
M	MA0~UP MCK MCKI MCLK MDATA MDQ0~UP MDQM MLD MPEG	MEMORY ADDRESS MEMORY CLOCK MEMORY CLOCK INPUT MEMORY SERIAL COMMAND CLOCK MEMORY SERIAL COMMAND DATA MEMORY DATA INPUT/OUTPUT MEMORY DATA I/O MASK MEMORY SERIAL COMMAND LOAD MOVING PICTURE EXPERTS GROUP
O	ODC OEH OEV 1, 2 OFTR OSCI OSCO	OPTICAL DISC CONTROLLER SOURCE DRIVER OUTPUT ENABLE GATE DRIVER OUTPUT ENABLE OFF TRACKING OSCILLATOR INPUT OSCILLATOR OUTPUT

INITIAL/LOGO	ABBREVIATIONS	
	OSD	ON SCREEN DISPLAY
P	P1~UP PCD PCK PDVD PEAK PLLCLK PLLOK PWMCTL PWMDA PWMOA, B	PORT CD TRACKING PHASE DIFFERENCE PLL CLOCK DVD TRACKING PHASE DIFFERENCE CAP. FOR PEAK HOLD CHANNEL PLL CLOCK PLL LOCK PWM OUTPUT CONTROL PULSE WAVE MOTOR DRIVE A PULSE WAVE MOTOR OUT A, B
R	RE RFENV RFO RS RSEL RST RSV	READ ENABLE RF ENVELOPE RF PHASE DIFFERENCE OUTPUT (CD-ROM) REGISTER SELECT RF POLARITY SELECT RESET RESERVE
S	SBI0, 1 SBO0 SBT0, 1 SCK SCKR SCL SCLK SDA SEG0~UP SELCLK SEN SIN1, 2 SOUT1, 2 SPDI SPDO SPEN SPRCLK SPWCLK SQCK SQCX SRDATA SRMADR SRMDT0~7 SS STAT STCLK STD0~UP STENABLE STH STSEL STV	SERIAL DATA INPUT SERIAL DATA OUTPUT SERIAL CLOCK SERIAL DATA CLOCK AUDIO SERIAL CLOCK RECEIVER SERIAL CLOCK SERIAL CLOCK SERIAL DATA FL SEGMENT OUTPUT SELECT CLOCK SERIAL PORT ENABLE SERIAL DATA IN SERIAL DATA OUT SERIAL PORT DATA INPUT SERIAL PORT DATA OUTPUT SERIAL PORT R/W ENABLE SERIAL PORT READ CLOCK SERIAL PORT WRITE CLOCK SUB CODE Q CLOCK SUB CODE Q DATA READ CLOCK SERIAL DATA SRAM ADDRESS BUS SRAM DATA BUS 0~7 START/STOP STATUS STREAM DATA CLOCK STREAM DATA STREAM DATA INPUT ENABLE SOURCE START PULSE STREAM DATA POLARITY SELECT GATE DRIVER SCAN START PULSE

INITIAL/LOGO	ABBREVIATIONS
	STVALID STREAM DATA VALIDITY SUBC SUB CODE SERIAL SBCK SUB CODE CLOCK 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 TRACK CROSS SIGNAL TRON TRACKING ON TRSON TRAVERSE SERVO ON
V	VBLANK V BLANKING VCC COLLECTOR POWER SUPPLY VOLTAGE VDCONT VIDEO CD CONTROL (TRACKING BALANCE) VDD DRAIN POWER SUPPLY VOLTAGE VFB VIDEO FEED BACK VREF VOLTAGE REFERENCE VSS SOURCE POWER SUPPLY 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 INTERRUPT REQUEST 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 CHIP SELECT XVDS X V-DEC CONTROL BUS STROBE XVSYNCO X VERTICAL SYNC OUTPUT

S7. Replacement Parts List

- Note: 1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark \triangle have the special characteristics for safety.
When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.
4. The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

E.S.D. standards for Electrostatically Sensitive Devices, refer to “PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES” section.

DMP-BD30PP-K

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC7501	MN67793KD	IC	1		R1023	D0GB103JA057	1/10W 10K	1	
IC7503	COEBK0000206	IC	1		R1024	ERJ3RBD153	1/16W 15K	1	
IC7504	COABBA000168	IC	1		R1025	ERJ3RBD102	1/16W 1K	1	
IC7512	COEBD0000239	IC	1		R1026	ERDS2FJ151	1/4W 150	1	
△ IP1101	K5H102Z00006	IC PROTECTOR	1		R1027	ERJ3GEYJ104	1/10W 100K	1	
△ IP1102	K5H102Z00006	IC PROTECTOR	1		R1028	ERJ3GEYJ100	1/10W 10	1	
△ IP1103	K5H302Z00003	IC PROTECTOR	1		R1029	ERJ3GEYJ100	1/10W 10	1	
△ IP1105	K5H172Z00003	IC PROTECTOR	1		R1030	ERJ3GEYJ272	1/10W 2.7K	1	
△ IP7502	K5H751Z00003	IC PROTECTOR	1		R1032	ERJ3RBD222	1/16W 2.2K	1	
					R1033	ERA3YED332	1/16W 3.3K	1	
					R1034	ERJ3GEYJ104	1/10W 100K	1	
△ L1001	G0B100E00002	COIL 10UH	1		R1104	ERJ3GEYJ472	1/10W 4.7K	1	
△ L1002	G0B100E00002	COIL 10UH	1		R1111	D0GB102JA057	1/10W 1K	1	
L1103	G0A100H00025	COIL 10UH	1		R1112	ERJ3GEYJ222	1/10W 2.2K	1	
L1104	G0A100HA0023	COIL 10UH	1		R1113	D0GB103JA057	1/10W 10K	1	
L1105	G0A150ZA0041	COIL 15UH	1		R1115	ERJ3RBD242	1/16W 2.4K	1	
L1107	G0C330KA0065	COIL 33UH	1		R1116	ERJ3GEYJ222	1/10W 2.2K	1	
					R1117	ERDS2FJ101	1/4W 100	1	
LB1103	J0JHC0000048	FILTER	1		R1118	ERJ3RBD301	1/16W 300	1	
LB1104	J0JHC0000048	FILTER	1		R1119	ERJ3RBD912	1/16W 9.1K	1	
LB1107	J0JHC0000048	FILTER	1		R1120	ERJ3GEYJ472	1/10W 4.7K	1	
LB1601	ERJ6GEY0R00V	1/8W 0	1		R1121	ERJ3GEYJ223	1/10W 22K	1	
LB1602	ERJ6GEY0R00V	1/8W 0	1		R1123	ERJ3GEYJ223	1/10W 22K	1	
LB6801	J0JHC0000032	COIL	1		R1129	ERJ3EKF5102	1/10W 51K	1	
LB6802	J0JCC0000185	COIL	1		R1130	D1BFR0270001	1/2W 0.027	1	
LB6803	J0JGC0000020	COIL	1		R1136	ERJ3RBD152	1/16W 1.5K	1	
LB6804	J0JCC0000185	COIL	1		R1137	ERJ3RBD393	1/16W 39K	1	
LB6805	J0JCC0000185	COIL	1		R1138	ERJ3RBD113	1/16W 11K	1	
LB7501	J0JCC0000185	COIL	1		R1141	ERJ3RBD222	1/16W 2.2K	1	
LB7502	J0JGC0000020	COIL	1		R1142	ERJ3RBD822	1/10W 8.2K	1	
LB7503	J0JGC0000020	COIL	1		R1143	ERJ3RBD272	1/16W 2.7K	1	
LB7504	J0JGC0000020	COIL	1		R1144	ERJ6GEY0R00V	1/8W 0	1	
LB7505	J0JCC0000185	COIL	1		R1146	ERJ6GEY0R00V	1/8W 0	1	
LB7506	J0JCC0000185	COIL	1		R1150	ERJ6GEY0R00V	1/8W 0	1	
LB7507	J0JCC0000185	COIL	1		R1151	ERJ3GEYJ221	1/10W 220	1	
LB7508	J0JCC0000185	COIL	1		R1152	ERJ6GEY0R00V	1/8W 0	1	
LB7509	J0JCC0000185	COIL	1		R1162	ERDS2FJ821	1/4W 820	1	
LB7510	J0JCC0000185	COIL	1		R1163	ERDS2FJ821	1/4W 820	1	
LB7511	J0JCC0000185	COIL	1		R1164	ERDS2FJ821	1/4W 820	1	
LB7512	J0JCC0000185	COIL	1		R1165	ERDS2FJ821	1/4W 820	1	
LB7513	J0JGC0000020	COIL	1		R1166	ERJ3GEYJ821	1/10W 820	1	
LB7514	J0JGC0000020	COIL	1		R1651	ERJ3GEYJ823	1/10W 82K	1	
					R1654	ERJ6GEYJ101V	1/8W 100	1	
△ P1001	K2AA2H000007	AC INLET	1 (PL)		R1655	ERJ3GEYJ472	1/10W 4.7K	1	
△ P1001	K2AB2H000004	AC INLET	1 (PP)		R6801	J0JCC0000185	COIL	1	
P1102	K1KY09AA0606	CONNECTOR(9P)	1		R6804	ERJ3GEYJ223	1/10W 22K	1	
P1601	K1KA04AA0301	CONNECTOR(4P)	1		R6805	D0GB123JA057	1/10W 12K	1	
P6801	K1NA12B00004	CONNECTOR(12P)	1		R6807	ERJ3GEYJ223	1/10W 22K	1	
P7501	K1KB18B00017	CONNECTOR(18P)	1		R6808	D0GB2R2JA057	1/10W 2.2	1	
P7503	K1KY23AA0606	CONNECTOR(23P)	1		R6809	D0GB2R2JA057	1/10W 2.2	1	
P7504	K1KY23AA0606	CONNECTOR(23P)	1		R6810	D0GB2R2JA057	1/10W 2.2	1	
					R6811	D0GB2R2JA057	1/10W 2.2	1	
PK6901	K1MR09AA0015	CONNECTOR(9P)	1		R6812	D0GB2R2JA057	1/10W 2.2	1	
PK6902	K1MR10AA0015	CONNECTOR(10P)	1		R6813	D0GB123JA057	1/10W 12K	1	
					R6814	D0GB123JA057	1/10W 12K	1	
Q1021	2SD0601ARL	TRANSISTOR	1		R6815	D0GB123JA057	1/10W 12K	1	
△ Q1022	B3PBA0000454	TRANSISTOR	1		R6816	D0GB123JA057	1/10W 12K	1	
△ Q1023	B3PBA0000454	TRANSISTOR	1		R6902	ERJ3GEYJ820	1/10W 82	1	
Q1101	2SA1309AR	TRANSISTOR	1		R7502	ERJ3GEYJ101	1/10W 100	1	
Q1102	B1DHED000008	TRANSISTOR	1		R7503	D0GB473JA057	1/10W 47K	1	
Q1104	B1DHED000008	TRANSISTOR	1		R7515	D0GB103JA057	1/10W 10K	1	
Q1106	2SB1320A-R	TRANSISTOR	1		R7516	D0GB103JA057	1/10W 10K	1	
Q1107	2SC3311AS	TRANSISTOR	1		R7517	D0GB103JA057	1/10W 10K	1	
Q1651	B1ABDF000026	TRANSISTOR	1		R7518	D0GB103JA057	1/10W 10K	1	
Q7506	B1ABGC000011	TRANSISTOR	1		R7519	D0GB103JA057	1/10W 10K	1	
Q7509	B1ABMF000020	TRANSISTOR	1		R7520	ERJ3GEYJ104	1/10W 100K	1	
					R7525	ERJ3GEYJ472	1/10W 4.7K	1	
QR1101	B1GBCFLL0042	TRANSISTOR	1		R7526	D0GB473JA057	1/10W 47K	1	
QR1102	B1GBCFNN0041	TRANSISTOR	1		R7528	ERJ3GEY0R00	1/10W 0	1	
QR1105	B1GBCFLL0042	TRANSISTOR	1		R7530	D0GB473JA057	1/10W 47K	1	
QR1651	B1GBCFNN0041	TRANSISTOR	1		R7531	ERJ3GEYJ101	1/10W 100	1	
QR1652	B1GDGFCG0028	TRANSISTOR	1		R7534	D0GB103JA057	1/10W 10K	1	
QR7502	B1GDGCFNN0024	TRANSISTOR	1		R7536	ERJ3GEYJ101	1/10W 100	1	
					R7537	ERJ3GEYJ101	1/10W 100	1	
R1022	ERX2SZJR10	2W 10	1		R7539	ERJ3GEYJ101	1/10W 100	1	

DMP-BD30PP-K

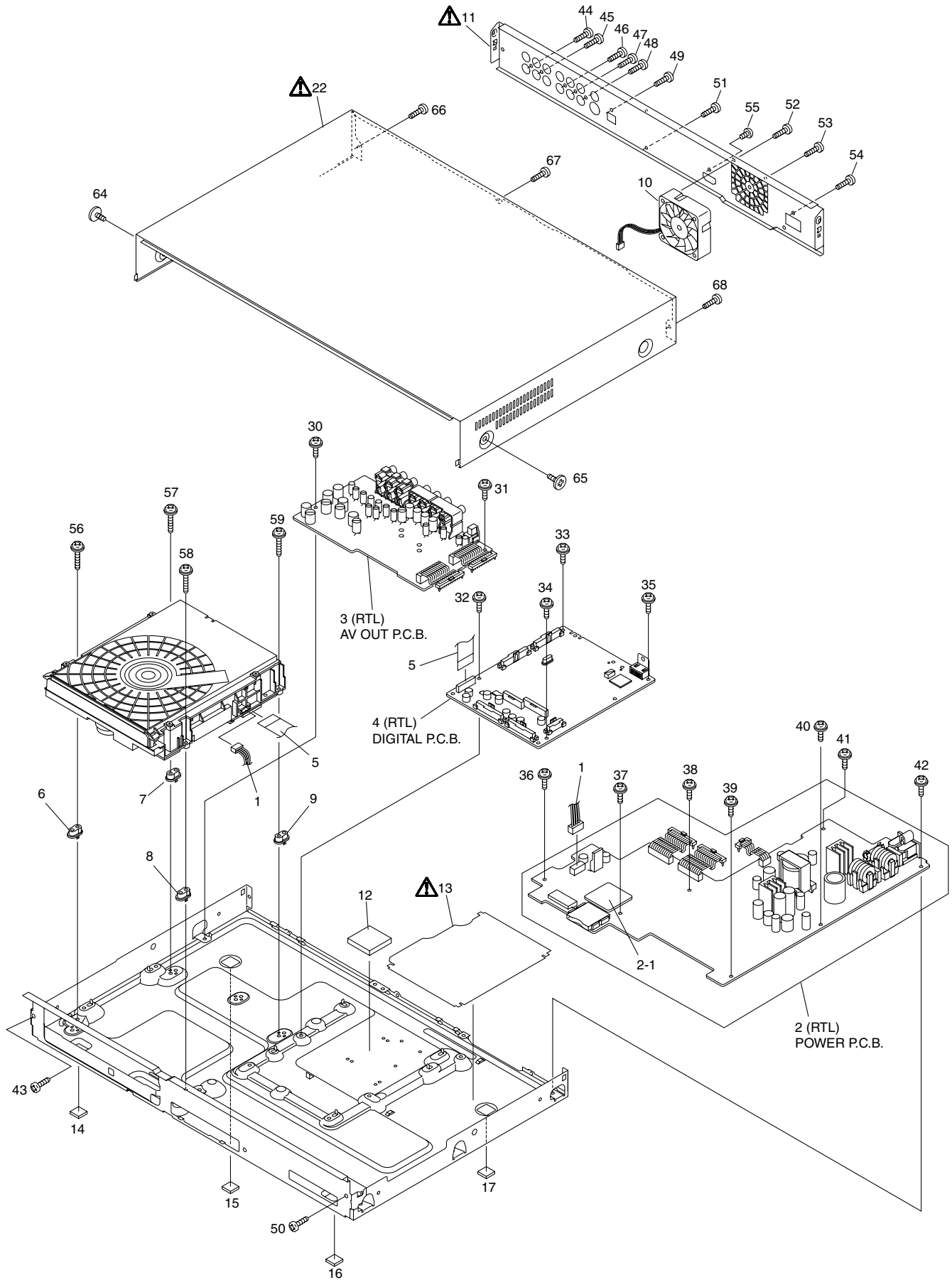
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R7540	ERJ3GEYJ101	1/10W 100	1		ZA1022	XYN3+J8FJ	SCREW	1	
R7541	ERJ3GEYJ101	1/10W 100	1		ZA1110	VSC5603	HEAT SINK	1	
R7547	ERJ3GEYJ101	1/10W 100	1		ZA1111	XYN3+J8FJ	SCREW	1	
R7548	D0GB103JA057	1/10W 10K	1						
R7553	D0GB103JA057	1/10W 10K	1						
R7561	ERJ3GEYJ101	1/10W 100	1		##	VEP76165A	FRONT(L)P.C.B.		(RTL)
R7562	ERJ3GEYJ101	1/10W 100	1		P7001	K1KA03AA0301	CONNECTOR(3P)	1	
R7564	ERJ3GEYJ101	1/10W 100	1		S7001	EVQ11A04M	SWITCH,POWER	1	
R7565	D0GB103JA057	1/10W 10K	1						
R7566	D0GB103JA057	1/10W 10K	1		##	VEP76166A	FRONT(R)P.C.B.		(RTL)
R7567	ERJ3GEYJ821	1/10W 820	1		C7202	ECJ1VF1A105Z	10V 1U	1	
R7568	ERJ3GEYJ303	1/10W 30K	1		C7204	ECJ1XB1C104K	16V 0.1U	1	
R7569	ERJ3RBD822	1/10W 8.2K	1		C7205	ECJ1XB1C104K	16V 0.1U	1	
R7570	D0GB473JA057	1/10W 47K	1		C7206	ECJ1VF1H104Z	50V 0.1U	1	
R7575	ERJ3GEYJ101	1/10W 100	1		D7201	B3AEA0000099	LED	1	
R7577	D0GB473JA057	1/10W 47K	1		DP7201	A2BD00000183	DISPLAY TUBE	1	
R7579	D0GB473JA057	1/10W 47K	1		IC7201	C0HBB0000057	IC	1	
R7582	ERJ3RBD242	1/16W 2.4K	1		IR7201	B3RAD0000150	REMOTE SENSOR	1	
R7587	ERJ3RBD222	1/16W 2.2K	1		LB7201	J0JCC0000103	COIL	1	
R7592	ERJ3GEYJ101	1/10W 100	1		LB7203	J0JCC0000103	COIL	1	
R7593	ERJ3GEYJ101	1/10W 100	1		P7201	K1KA18B00034	CONNECTOR(18P)	1	
R7603	D0GB103JA057	1/10W 10K	1		P7202	K1KA03AA0301	CONNECTOR(3P)	1	
R7611	ERJ3GEYJ101	1/10W 100	1		Q7201	B1ABDF000033	TRANSISTOR	1	
R7612	ERJ3GEYJ101	1/10W 100	1		R7201	ERJ3RBD392	1/16W 3.9K	1	
R7613	ERJ3GEYJ101	1/10W 100	1		R7202	ERJ3RBD222	1/16W 2.2K	1	
R7614	ERJ3GEYJ101	1/10W 100	1		R7203	ERJ6GEYJ301V	1/8W 300	1	
R7615	ERJ3GEYJ101	1/10W 100	1		R7205	ERJ3GEYJ332	1/10W 3.3K	1	
R7616	ERJ3GEYJ101	1/10W 100	1		R7206	D0GB473JA057	1/10W 47K	1	
R7617	ERJ3GEYJ101	1/10W 100	1		R7207	ERJ3GEYJ330	1/10W 33	1	
R7618	ERJ3GEYJ101	1/10W 100	1		R7208	ERJ3GEYJ104	1/10W 100K	1	
R7620	D0GB103JA057	1/10W 10K	1		S7201	EVQ11A04M	SWITCH,OPEN/CLOSE	1	
R7621	ERJ3GEY0R00	1/10W 0	1		S7202	EVQ11A04M	SWITCH,PLAY	1	
R7623	ERJ3GEY0R00	1/10W 0	1		S7203	EVQ11A04M	SWITCH,SKIP-FWD	1	
R7625	ERJ3GEY0R00	1/10W 0	1		S7204	EVQ11A04M	SWITCH,PAUSE	1	
R7627	ERJ3GEYJ223	1/10W 22K	1		S7205	EVQ11A04M	SWITCH,SKIP-REV	1	
R7628	ERJ3GEY0R00	1/10W 0	1		S7206	EVQ11A04M	SWITCH,STOP	1	
R7629	ERJ3RBD471	1/16W 470	1		W101	ERJ3GEY0R00	1/10W 0	1	
R7631	ERJ3GEY0R00	1/10W 0	1		W102	ERJ3GEY0R00	1/10W 0	1	
R7632	ERJ3GEY0R00	1/10W 0	1		ZB7201	RMN0896A	FL HOLDER	1	
△ T1001	G4D2A0000289	TRANSFORMER	1		##	VEP70237A	SD CONNECTOR BOARD		
△ VA1001	ERZV05Z471CS	VARISTOR	1		FL6901	J0MAB0000148	FILTER	1	
W81	ERJ6GEY0R00V	1/8W 0	1		FL6902	J0MAB0000148	FILTER	1	
W301	ERJ6GEY0R00V	1/8W 0	1		FL6903	J0MAB0000148	FILTER	1	
W302	ERJ6GEY0R00V	1/8W 0	1		FL6905	J0MAB0000148	FILTER	1	
W303	ERJ6GEY0R00V	1/8W 0	1		FL6906	J0MAB0000148	FILTER	1	
W304	ERJ3GEY0R00	1/10W 0	1		PK6901	K1MR09AA0015	CONNECTOR(9P)	1	
W305	ERJ6GEY0R00V	1/8W 0	1		PK6902	K1MR10AA0015	CONNECTOR(10P)	1	
W306	ERJ6GEY0R00V	1/8W 0	1		R6902	ERJ3GEYJ820	1/10W 82	1	
W307	ERJ3GEY0R00	1/10W 0	1						
W308	ERJ3GEY0R00	1/10W 0	1		##		M1 GAISO		
W309	ERJ3GEY0R00	1/10W 0	1		1	VEE1E13	WIRE WITH CONNECTOR(4P)	1	
W310	ERJ3GEY0R00	1/10W 0	1		2	VEP71126A	POWER P.C.B.	1	(RTL)(PP)
W311	ERJ3GEY0R00	1/10W 0	1		2-1	VEP70237A	SD CONNECTOR BOARD	1	
W312	ERJ3GEY0R00	1/10W 0	1						
W313	ERJ3GEY0R00	1/10W 0	1						
W314	ERJ3GEY0R00	1/10W 0	1						
W315	ERJ6GEY0R00V	1/8W 0	1						
W316	ERJ3GEY0R00	1/10W 0	1						
W317	ERJ6GEY0R00V	1/8W 0	1						
W318	ERJ6GEY0R00V	1/8W 0	1						
W319	ERJ6GEY0R00V	1/8W 0	1						
X7502	H0D100500018	CRYSTAL OSCILLATOR	1						
△ ZA1001	EYF52BCY	FUSE HOLDER	1						
△ ZA1002	EYF52BCY	FUSE HOLDER	1						
ZA1003	K9ZZ00001279	EARTH PLATE	1						
ZA1004	K9ZZ00001279	EARTH PLATE	1						
ZA1005	K9ZZ00001279	EARTH PLATE	1						
ZA1006	K9ZZ00001279	EARTH PLATE	1						
ZA1007	K9ZZ00001279	EARTH PLATE	1						
ZA1021	VSC5603	HEAT SINK	1						

DMP-BD30PP-K
M2 / M3

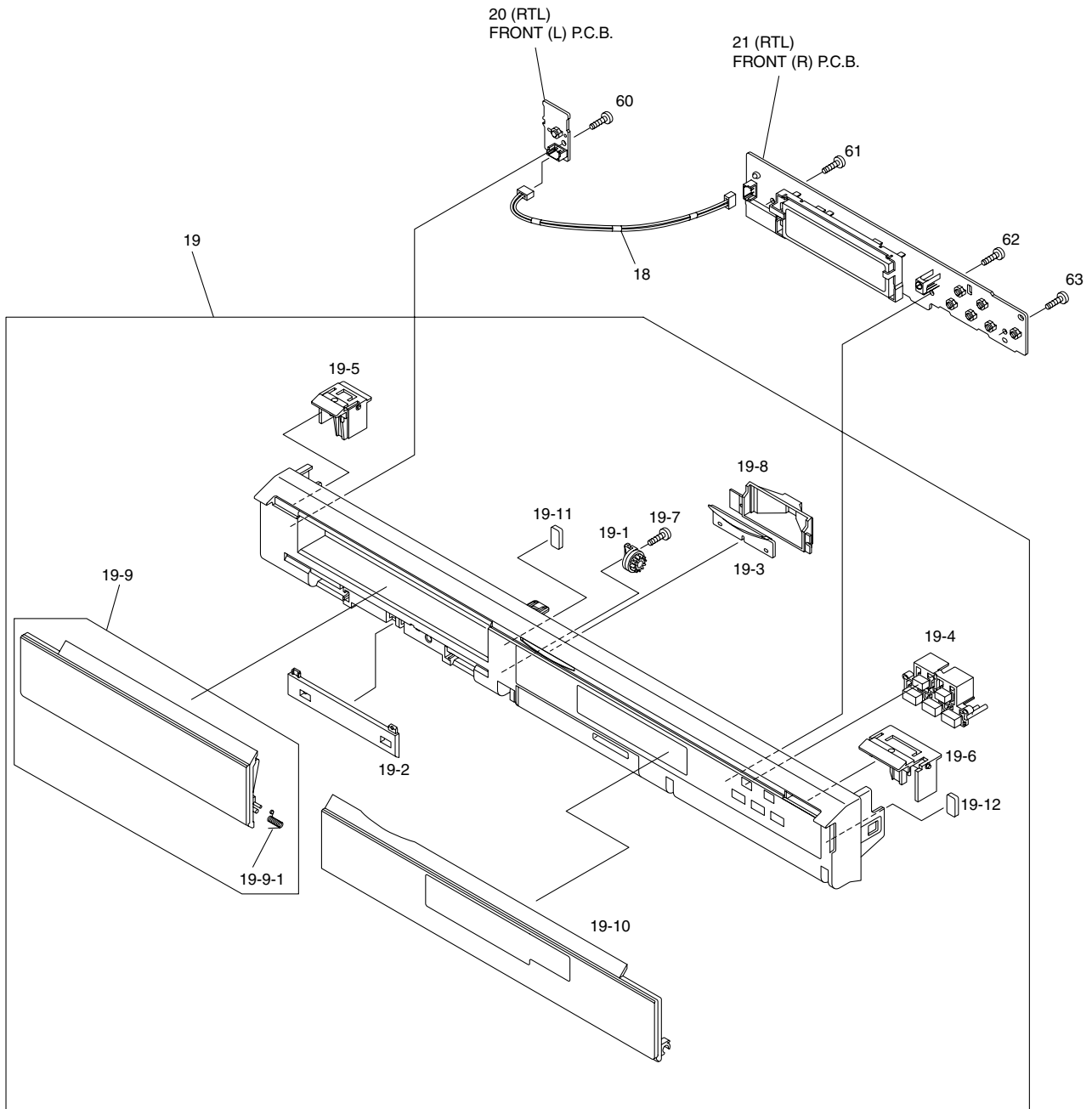
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
2	VEP71126B	POWER P.C.B.	1	(RTL)(PL)	60	RHD26045	SCREW	1	
3	RFKB73152A	AV OUT P.C.B.	1	(RTL)	61	RHD26045	SCREW	1	
4	RFKB76160A	DIGITAL P.C.B.	1	(RTL)	62	RHD26045	SCREW	1	
5	VWJ2010	FFC(40P)	1		63	RHD26045	SCREW	1	
6	RMX0404-1	DRIVE SPACER	1						
7	RMX0404-1	DRIVE SPACER	1						
8	RMX0404-1	DRIVE SPACER	1						
9	RMX0404-1	DRIVE SPACER	1						
10	L6FAJBYG0002	DC FAN MOTORS	1						
△ 11	RGR0379C-A2	REAR PANEL	1	(PP)	△ A1	K2CB2CB00022	AC CORD	1	(PP)
△ 11	RGR0379C-D	REAR PANEL	1	(PL)	△ A1	RJA0019-2K	AC CORD	1	(PL)
12	RSC0824	RADIATOR SHEET	1		△ A2	K2DA42E00001	POWER PLUG ADAPTOR	1	(PL)
△ 13	RMZ0926	BARRIER A	1		A3	K2KA6BA00003	AV CABLE	1	
14	RKA0137-K	FOOT RUBBER	1		A4	XZB15X30A04Z	POLYETHYLENE BAG	1	
15	RKA0137-K	FOOT RUBBER	1		A5	RPF0378	POLYETHYLENE BAG	1	
16	RKA0137-K	FOOT RUBBER	1		A6	RQT9037-Y	OPERATING INSTRUCTIONS	1	(PP)(IB)
17	RKA0137-K	FOOT RUBBER	1		A6	RQT9042-M	OPERATING INSTRUCTIONS	1	(PL)(IA)
△ 22	RKM0585-K	TOP CASE	1		A7	N2QAYB000184	REMOTE CONTROL UNITS	1	
23	VXY2001	BD/DVD DRIVE	1	(RTL)	A7-1	100300037800	BATTERY COVER	1	
30	RHD30111-3	SCREW	1		PC1	RPG8373	PACKING CASE	1	(PP)
31	RHD30111-3	SCREW	1		PC1	RPG8414	PACKING CASE	1	(PL)
32	RHD30111-3	SCREW	1		PC2	RPN2015	CUSHION	1	
33	RHD30111-3	SCREW	1		PC3	VPF0505	POLYETHYLENE BAG	1	
34	RHD30111-3	SCREW	1						
35	RHD30111-3	SCREW	1						
36	RHD30111-3	SCREW	1						
37	RHD30111-3	SCREW	1						
38	RHD30111-3	SCREW	1						
39	RHD30111-3	SCREW	1						
40	RHD30111-3	SCREW	1						
41	RHD30111-3	SCREW	1						
42	RHD30111-3	SCREW	1						
43	RHD30119-L	SCREW	1						
44	RHD30119-L	SCREW	1						
45	RHD30119-L	SCREW	1						
46	RHD30119-L	SCREW	1						
47	RHD30119-L	SCREW	1						
48	RHD30119-L	SCREW	1						
49	RHD30119-L	SCREW	1						
50	RHD30119-L	SCREW	1						
51	RHD30119-L	SCREW	1						
52	RHD30119-L	SCREW	1						
53	RHD30119-L	SCREW	1						
54	RHD30119-L	SCREW	1						
55	XSN3+4FJ	SCREW	1						
56	RHDC0003-1	SCREW	1						
57	RHDC0003-1	SCREW	1						
58	RHDC0003-1	SCREW	1						
59	RHDC0003-1	SCREW	1						
64	RHD30113-1K	SCREW	1						
65	RHD30113-1K	SCREW	1						
66	VHD0690-1	SCREW	1						
67	VHD0690-1	SCREW	1						
68	VHD0690-1	SCREW	1						
##		M2 GAISO							
18	VEE1E02	WIRE WITH CONNECTOR(3P)	1						
19	RYP1409C-K1	FRONT PANEL ASS'Y1	1						
19-1	RDG0620	OIL DAMPER	1						
19-2	RGK2098-K	HOLD PANEL	1						
19-3	RGL0712-Q	SD PANEL LIGHT	1						
19-4	RGU2550A-K	PLAY BUTTON	1						
19-5	RGU2551A-K	ROWER BUTTON	1						
19-6	RGU2552A-K	OPEN/CLOSE BUTTON	1						
19-7	RHD26045	SCREW	1						
19-8	RMR1854-W	SD REFLECTOR	1						
19-9	RYF0821C-K	TRAY DOOR ASS'Y	1						
19-9-1	RMB0875	BRINDER SPRING	1						
19-10	RYF0822C-K	DOOR ASS'Y	1						
19-11	VSQ1087-2	MAGNET	1						
19-12	VSQ1087-2	MAGNET	1						
20	VEP76165A	FRONT(L)P.C.B.	1	(RTL)					
21	VEP76166A	FRONT(R)P.C.B.	1	(RTL)					

S8. Exploded View

S8.1. Frame and Casing Section (1)



S8.2. Frame and Casing Section (2)



S8.3. Packing Parts and Accessories Section

