

Service Manual

Blu-ray Disc Player

Model No. **DMP-BD75GA**

DMP-BD75GC

DMP-BD75GN

DMP-BD75GT

DMP-BD75GW

DMP-BD75PU



Vol. 2

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 Precautions

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 $5.2M\Omega$.

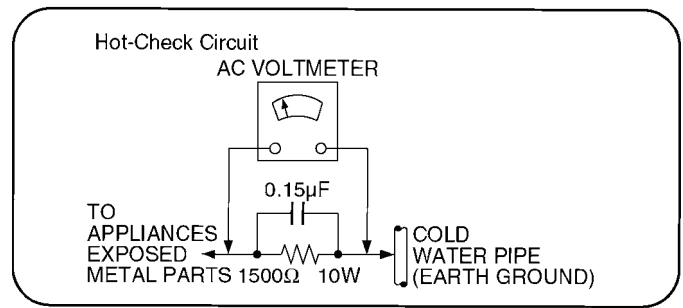
When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

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.

1.1.2. 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



1.2. Caution for fuse replacement

(For English)

CAUTION:

Replace with the same type fuse:
(Manufacturer: Hollyland, Type: SCT, T2A, 250V)

(For Canadian French)

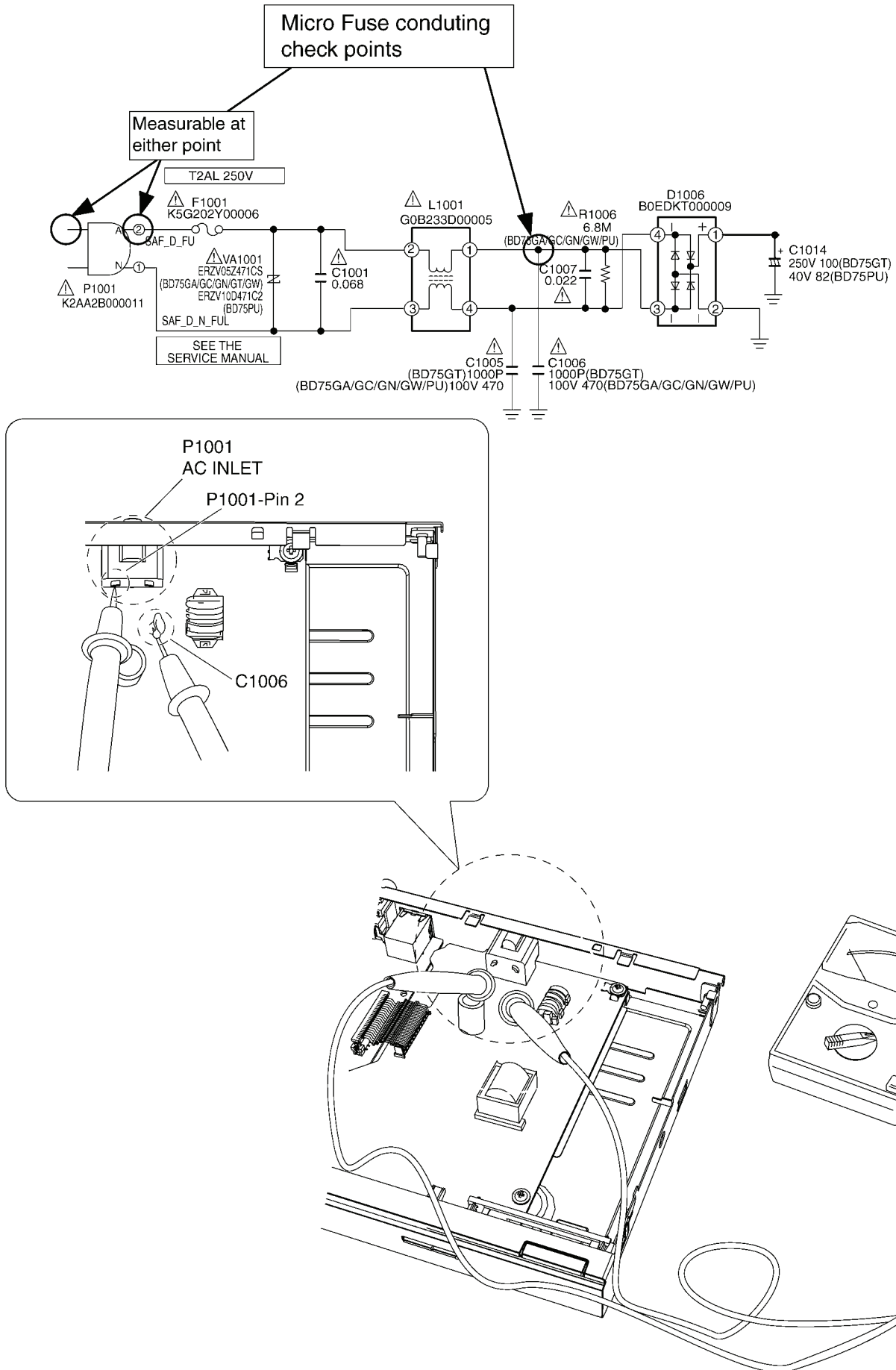
ATTENTION:

Utiliser un fusible de rechange de même type:
(Fabricant: Hollyland, Type: SCT, T2A, 250V)

1.2.1. Micro Fuse conducting check

This unit uses the Micro Fuse.

Check the Micro Fuse conducting using the Tester at the check points below.



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 transistors and 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  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. Service caution based on legal restrictions

2.2.1. 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.
RFKZ03D01KS----- (0.3mm 100g Reel)
RFKZ06D01KS----- (0.6mm 100g Reel)
RFKZ10D01KS----- (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%

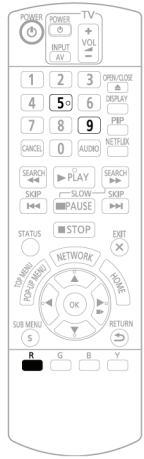
3 Service Navigation

3.1. Combination of Multiple Pressing on the Remote Control

Press multi-buttons (in combination) on the remote control simultaneously for operations, such as initialization or service mode, etc. There are no multiple pressing functions on the previous remote controls, thus, please be sure to use the supplied remote control.

3.2. Entering Special Modes with Combination of Multiple Pressing on the Remote Control

Enter the following special modes by multiple pressing functions on the supplied remote control. After entering each mode, switch to the desired menus for operation.

Disclosure mode	Nondisclosure mode 1	Nondisclosure mode 2
[OK] [Blue] [Yellow]	[6] [7] [Yellow]	[5] [9] [Red]
		

◆ **Menu switch:** ↓ mark.

Right cursor (remote control),
or
[Power] (main unit)

◆ **Operating menu:**

[OK] (remote control)
or
[O/C] (main unit)

※ Release from special modes automatically after the operation.

◆ **Release from special modes:**

- Press other buttons in no connection with the above operations.
- No operation for over 2 min.
- Press and hold [Power] on main unit (forced to turn off).

3.2.1. Disclosure mode (Combination of multiple pressing: [OK] [Blue] [Yellow])

Press and hold [OK] [Blue] [Yellow] on the remote control simultaneously for 5 sec., then "00 RET" is displayed on FL display window.

Power	Disc	FL display	Key operation	Function	Remarks
ON	Yes/No	00 RET	No	No	
	No	03 VL	OK	Release from BD/DVD video play restriction	Release from the aging restriction on BD video and DVD video play.
	Yes/No	04 PRG	OK (Press and hold)	Progressive initialization	Initialize the progressive settings, and switch to the interlaced display. Press and hold [Stop] (not [OK]) (on the remote control or main unit) to switch to "10 OCL" (setting shop lock mode)
	Yes/No	06 FT0	OK	Force tray open	When O/C button is invalid, the tray of BD Drive is forced to open. If the tray still cannot be opened in this mode, please refer to "6.1.2 When the Forcible Disc Eject can not be done " in Vol.1.
	Yes/No	07 DC	OK (Press and hold)	Deep Color initialization	Initialize Deep Color.
	Yes/No	08 FIN	OK (Press and hold)	Reset to factory default setting	Reset all to factory default settings, including Quick Start and Network related settings.
	Yes/No	10 OCL	OK	Shop lock mode setting/release ([O/C] is invalid/valid, while setting/release this mode.)	When "04 PRG" is displayed, press and hold [Stop] (on the remote control or main unit) to switch to other displays. Press [OK] to only lock the tray switch. * Even turn ON/OFF the power, it is still in locking.

3.2.2. Nondisclosure mode 1 (Combination of multiple pressing: [6] [7] [Yellow])

Press and hold [6] [7] [Yellow] on the remote control simultaneously for 5 sec., then [50 RET] is displayed on FL display window.

Power	Disc	FL display	Key operation	Function	Remarks
ON	No	50 RET	No	No	
		↓			
		51 NOP	OK	No	When "51 NOP" is displayed, press and hold [Stop] (on the remote control or main unit) to switch to "52 BRE" (delete BD-ROM history settings)
		52 BRE	OK	BD-ROM history delete	When "51 NOP" is displayed, press and hold [Stop] (on the remote control or main unit) to switch to other displays. Press [OK] to delete BD video history.

3.2.3. Nondisclosure mode 2 (Combination of multiple pressing: [5] [9] [Red])

Press and hold [5] [9] [Red] on the remote control simultaneously for about 5 sec., then "70 RET" is displayed on FL display window.

Power	Disc	FL display	Key operation	Function	Remarks
ON	Yes/No	70 RET	No	No	
		↓			
		80 SRV	OK	Switch to service mode	Press [OK], then "HELLO" is displayed, and wait about 30 sec. until "SERV" is displayed.
	Yes	↓			
		81 AIG	OK	Switch to aging mode	
	Yes/No	↓			
		86 DST	OK	Switch to Drive aging mode	Do not apply in normal service.
		↓			
		91 SPD	OK	Special display	Do not apply in normal service.

4 Specifications

Power supply:	AC220V-240V, 50/60Hz (BD75GA/GC/GW) AC110V, 60Hz (BD75GT) AC220V-240V, 50Hz (BD75GN) AC110V-240V, 50/60Hz (BD75PU)
Power consumption:	Approx. 12W (BD75GA/GC/GN/GT/GW) Approx. 14W(BD75PU)
in standby mode:	Approx. 0.2W (BD75GA/GC/GN/GW/PU) Approx. 0.1W(BD75GT)
in quick start standby mode:	Approx. 3.6W (BD75GA/GC/GN/GW) Approx. 3.3W (BD75GT) Approx. 3.8W (BD75PU)
Operating temperature range:	+5°C to +35°C(+41 to +95°F)
Operating humidity range:	10% - 80%RH (no condensation)
Signal system:	PAL/NTSC (BD75GA/GC/GN/GT/GW) NTSC (BD75PU)
Video output:	
output level:	1.0Vp-p (75Ω)
output connector:	Pin jack (1 System)
Video performance:	
Horizontal resolution:	More than 500 lines
Video S/N ratio:	More than 65dB
Audio output:	
output level:	2 Vrms (1kHz, 0dB)
output connector:	Pin jack
number of connector:	2 channel 1 system
Audio performance:	
Frequency response:	
DVD(linear audio):	4Hz-22kHz (48kHz sampling) 4Hz-44kHz (96kHz sampling)
CD-Audio:	4Hz-20kHz
S/N ratio:	100dB
Dynamic range:	100dB
Total harmonic distortion:	0.004%
HDMI AV output:	
Output connector:	TypeA (19pin), 1 system
USB slot:	
USB 2.0:	1 system
Ethernet:	
10BASE-T/100BASE-TX:	1 system
Regional Code:	DVD: #3(BD75GA/GT) BD: Region A DVD: #2(BD75GC) BD: Region B DVD: #5(BD75GW) BD: Region C DVD: #4(BD75GN) BD: Region B DVD: #4(BD75PU) BD: Region A
Media:	
Playable discs:	
BD-Video(BD-LIVE, BONUSVIEW):	BD-ROM Version2.3

BD-RE:	Version3 (Single Layer/Dual Layer), JPEG
BD-R:	Version2 (Single Layer/Dual Layer), MKV(*4, *5, *6), DivX(*4, *5, *7)
DVD-R:	DVD-Video format (*1), DVD Video Recording format(*1), AVCHD format(*1), JPEG(*2), MP3(*2), MKV(*2, *3, *5, *6), DivX(*2, *3, *5, *7)
DVD-R DL:	DVD-Video format (*1), DVD Video Recording format(*1), AVCHD format(*1), JPEG(*2), MP3(*2), MKV(*2, *3, *5, *6), DivX(*2, *3, *5, *7)
DVD-RW:	DVD-Video format (*1), DVD Video Recording format(*1), AVCHD format(*1)
+R:	Video(*1), AVCHD format(*1)
+R DL:	Video(*1), AVCHD format(*1)
+RW:	Video(*1), AVCHD format(*1)
DVD-Video:	DVD-Video format
CD-Audio:	CD-DA
CD-R/CD-RW:	CD-DA, JPEG(*2), MP3(*2), MKV(*2, *5, *6), DivX(*2, *5, *7)

*1: Finalizing is necessary.

*2: ISO9660 level1 or 2(except for extended formats), Joliet.

This unit is compatible with multi-session.

This unit is not compatible with packet writing.

*3: UDF1.02 without ISO9660, UDF1.5 with ISO9660.

*4: UDF2.5.

*5: Maximum number of folders recognizable:300 folders.
(including the root folder)

Maximum number of files recognizable:200 files.

*6: MPEG-4 ASP. Level 4. AAC-LC, MP3, Dolby Digital audio, DTS and PCM can be decoded.

*7: DivX Certified to play DivX video up to HD 1080p, including premium content.

GMC(Global Motion Compensation) is not supported.

USB device:

USB Standard:	USB2.0 High Speed
Format:	FAT12, FAT16, FAT32, MP3, JPEG, MKV, DivX

Contents:

JPEG:

CD-R/RW, BD-RE, DVD-R,USB device:

Pixels: 34x34~8192x8192

Sub Sampling: 4:2:2, 4:2:0

Motion JPEG not supported

Maximum numbers of folders and files:

	CD	BD-RE	DVD-R	USB device
Maximum folder	500	500	500	500
Maximum files(*8)	10000	10000	10000	10000

*8: Total of the JPEG.

MP3:

CD-R, CD-RW, DVD-R, USB device:

Compression rate: 32kbps~320kbps

Sampling rate: 44.1kHz, 48kHz

AVCHD (H.264):

DVD: AVCHD format V1.0

HDMI: 480p(525p)/576p(625p)(BD75GA/GC/GN/GT/GW)/1080i(1125i)/720p(750p)/1080p(1125p)
HDMI (V.1.4a)
(This unit supports "HDAVI Control 1" function.)

Playable discs

BD-ROM(SL/DL): (SL:Single Layer/DL;Dual Layer)	compliant Ver.1.3
BD-RE(SL/DL): (SL:Single Layer/DL;Dual Layer)	BD-MV
BD-R(SL/DL): (SL:Single Layer/DL;Dual Layer)	BD-MV
DVD-ROM(SL/DL): (SL:Single Layer/DL;Dual Layer)	DVD-Video
DVD-R:	DVD-Video DVD-VR
DVD-R(DL):	DVD-Video DVD-VR
DVD-RW:	DVD-Video DVD-VR
+R:	Video
+R(DL):	Video
+RW:	Video
CD:	CD-DA, CD-Video, CD-R/RW
Optical pick-up:	System with 2 lenses
Wave length:	790 nm(CDs) 655 nm(DVDs) 405 nm(BDs)
LASER specification	
Class 1 LASER Product	
Wave length:	790 nm(CDs) 655 nm(DVDs) 405 nm(BDs)
Laser power:	No hazardous radiation is emitted with the safety protection
Playable discs	
BD-ROM(SL/DL): (SL:Single Layer/DL;Dual Layer)	compliant Ver.1.3
BD-RE(SL/DL): (SL:Single Layer/DL;Dual Layer)	BD-MV
BD-R(SL/DL): (SL:Single Layer/DL;Dual Layer)	BD-MV
DVD-ROM(SL/DL): (SL:Single Layer/DL;Dual Layer)	DVD-Video
DVD-R:	DVD-Video DVD-VR
DVD-R(DL):	DVD-Video DVD-VR
DVD-RW:	DVD-Video DVD-VR
+R:	Video
+R(DL):	Video
+RW:	Video
CD:	CD-DA, CD-Video, CD-R/RW
Optical pick-up:	System with 2 lenses
Wave length:	790 nm(CDs) 655 nm(DVDs) 405 nm(BDs)
LASER specification	
Class 1 LASER Product	
Wave length:	790 nm(CDs) 655 nm(DVDs) 405 nm(BDs)
Laser power:	No hazardous radiation is emitted with the safety protection
Dimensions:	
	430mm(W) 35mm(H) 179mm(D) (excluding the projecting parts) 185mm(D) (including the projecting parts)
Mass:	Approx. 1.6 kg
Solder:	This model uses lead free solder(PbF).
Note:	Specifications are subject to change without notice.

5 Service Mode

5.1. Self-Diagnosis and Special Mode Setting

5.1.1. Self-Diagnosis Functions

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

U 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	SET * * is remote controller code of the main unit. Display for 5 seconds.
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. The event is saved in memory as well.	No display	U59 U59 is displayed for 30 minutes.
U71	HDMI incompatible error (HDMI 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 (High-bandwidth Digital Content Protection).	No display	U71
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) The display disappears only when the connection is released. Neither the button operation nor the passage of the fixed time disappear the display.	No display	U72 U72 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.
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) The display disappears only when the connection is released. Neither the button operation nor the passage of the fixed time disappear the display.	No display	U73 U73 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.
U76	Connection error	Display this error when the equipment (compatible with DVI such as TV, amplifier etc.) connected to the unit by HDMI is incompatible with HDCP (High-bandwidth Digital Content Protection).	No display	U76
U77	Illegal disc error	This error is displayed when it becomes impossible to reproduce because of copyright illegal information.	No display	U77
U88	Restoration is operation. (When the disc is in the disc tray)	This error is displayed when there is a disc in the disc tray or abnormality is confirmed during playback. It is shown that the restoration to return the main unit operation normally is operating. It becomes possible to use as soon as not the breakdown but the U88 display disappears.	No display	U88 Display for 30 seconds.
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 initialization error is detected after starting up main microprocessor, the power is turned off automatically. The event is saved in memory.	No display	No display

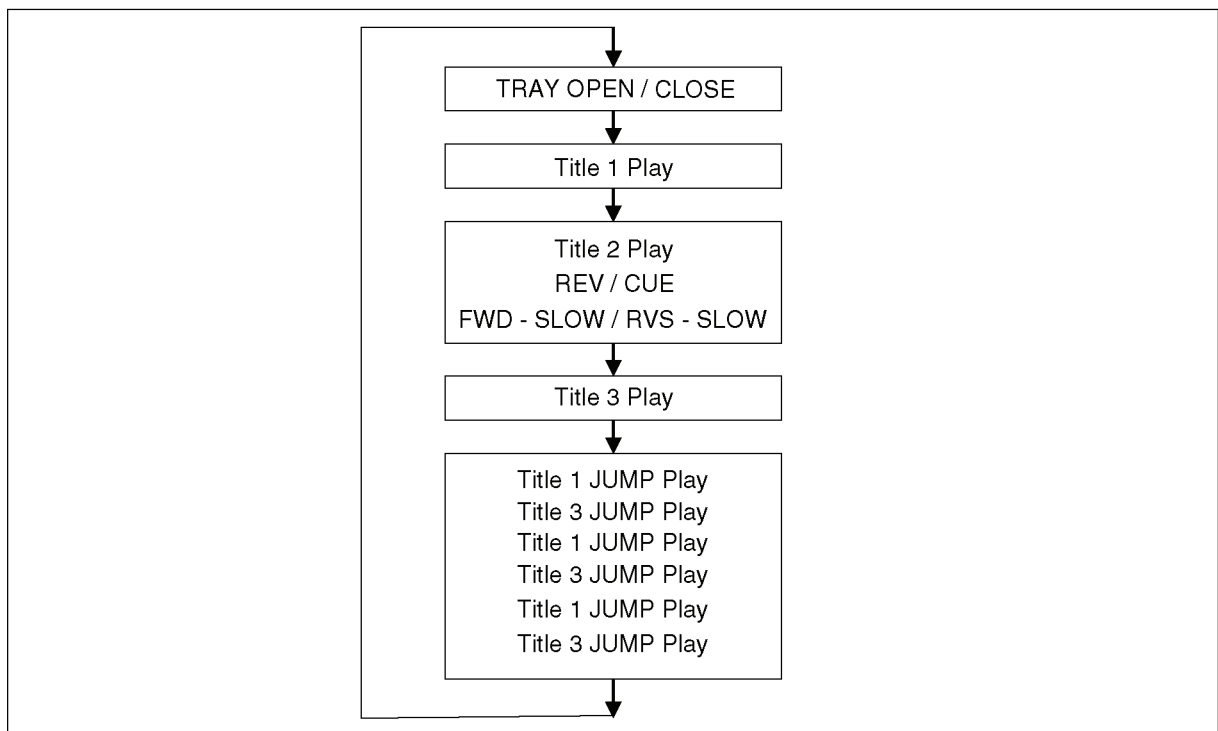
Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
F58	Drive hardware error	When drive unit error is detected, the event is saved in memory.	No display	No display
F74	HDMI Device Key Communication error.	This error is displayed when the information error is occurred at HDMI device key loading.	No display	F74
F75	HDMI incompatible error (HDMI 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 (High-bandwidth Digital Content Protection).	No display	F75
F99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	No display	F99 Displayed is left until the [POWER] key is pressed.
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."	UNSUPPORT It is displayed for 5 seconds. The character indication flows sideways.
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."	No READ
HARD ERR	Drive error	The drive detected a hard error.	"BD drive error."	HARD ERR It is display for 5 seconds. The character indication flows sideways.
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. / BD Drive.	No display	SELF CHECK The character indication flows sideways.
UNFORMAT	Unformatted disc error	This error is displayed when the unformatted DVD-RAM or DVD-RW recorded by another make of recorder is inserted.	No display	UNFORMAT This disc is not formatted properly. Format the disc in DISC MANAGEMENT?
PLEASE WAIT	Unit is in termination process	Unit is in termination process now. "BYE" is displayed and power will be turned off.	No display	PLEASEWAIT The character indication flows sideways.
No PLAY	When there is a viewing restriction on a BD-Video or DVD-Video.	Rating password is set.	No display	No PLAY

5.1.2. Special Modes Setting

Item		FL display	Key operation Front Key
Mode name	Description		
Rating password	The audiovisual level setting password is initialized to Level 8.	① 00 RET ② 03 VL	① While the unit is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "03 VL" is displayed on the unit's display. ③ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
Service Mode	Setting every kind of modes for servicing. *Details are described in 7.1.3. (BD) Service Mode at a glance.	② 70 RET ③ 80 SRV ④ HELLO -- SERV	① Turn the power on. ② Press the [5] [9] and [R] button simultaneously for five seconds, then [70 RET] is displayed on FL. ③ Press the [▶] button to select until [80 SRV] is displayed on FL. ④ Press the [OK] button. *The command is transmitted by attached remote control.
BD-ROM history cleaning	< Persistent Storage> of BD-ROM standard is cleaned.	① 50 RET ② 51 NOP ③ 52 BRE ④ FINISH	① When the power is on, disc is not in tray, press and hold [6], [7] and [Y] on the remote control at the same time for more than 5 seconds. - "50 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "51 NOP" is displayed on the unit's display. ③ Press and hold [STOP] on the remote control until "52 BRE" is displayed on the unit's display. ④ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
Forced disc eject	Removing a disc that cannot be ejected. While Demonstration Lock is being set, this Forced disc eject function is not accepted.	① 00 RET ② 06 FTO	① While the unit is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "06 FTO" is displayed on the unit's display. ③ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
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 4 seconds.

Item		FL display	Key operation
Mode name	Description		Front Key
Aging	Perform sequence of modes as * Aging Description shown below continually.	Display following the then mode.	① Turn the power on. ② Press the [5] [9] and [R] button simultaneously for five seconds, then [70 RET] is displayed on FL. ③ Press the [▶] button to select until [81 AIG] is displayed on FL. ④ Press the [OK] button . *The command is transmitted by attached remote control. NOTE1: 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 4 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. ① 00 RET ② 04 PRG ③ 10 OCL ④ LOCK "LOCK" is displayed for 3 seconds.	① When the power is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "04 PRG" is displayed on the unit's display. ③ Press and hold [STOP] on the remote control until "10 OCL" is displayed on the unit's display. ④ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
		*When unlock the tray. ① 00 RET ② 04 PRG ③ 10 OCL ④ UNLOCK "UNLOCK" is displayed for 3 seconds.	① When the power is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "04 PRG" is displayed on the unit's display. ③ Press and hold [STOP] on the remote control until "10 OCL" is displayed on the unit's display. ④ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
		*When press [OPEN/CLOSE] key while the tray being locked. LOCK Display LOCK for 3 seconds.	Press [OPEN/CLOSE] key while the tray is being locked.
Progressive initialization	The progressive setting is initialized to Interlace.	① 00 RET ② 04 PRG	① When the power is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "04 PRG" is displayed on the unit's display. ③ Press and hold [OK] on the remote control or [OPEN/CLOSE] on the unit.
Default setting	The date of Menu, Mode and EEPROM setting, etc. is set to the default condition in factory.	① 00 RET ② 08 FIN ③ no disc--bye	① While the unit is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "08 FIN" is displayed on the unit's display. ③ Press and hold [OK] on the remote control or [OPEN/CLOSE] on the unit for at least 3 seconds.

5.1.3. Service Modes at a glance

Information necessary for service can be displayed.

Service mode setting:

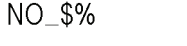
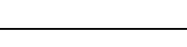
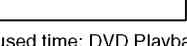
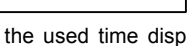
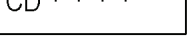
1. Turn the power on.
2. Press the [5] [9] and [R] button simultaneously for five seconds, then [70 RET] is displayed on FL.
3. Press the [▶] button to select until [80 SRV] is displayed on FL.
4. Press the [OK] button.
5. It is displayed on FL as [HELLO-->SERV].: It is shown to have entered the service mode.
6. The command is transmitted by attached remote control.

Method of making clear service mode: Press the power button (power off).

The display of information to each command is as follows.

NOTE:

Do not use it excluding the designated command.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Release Items	Item of Service Mode executing is cancelled.	SERV_	Press [0] [0] or [Return] in service mode.
Error Code Display	Last Error Code of U/F held by Timer is displayed on FL. *Details are described in 7.1.1. Self-Diagnosis Functions.	 *● shows U/F. ○○ shows number. If any error history dose not exist, [F00] is displayed.	Press [0] [1] in service mode
ROM Version Display	The display contents are switched over every 5 seconds. 1. Region code 2. Main firm version 3. Boot View version 4. Timer firm version 5. Drive firm version	1.  \$: Region of DVD (Example: 1,2.....) %: Region of BD (Example: A,B.....) 2.  3.  4.  5. 	Press [0] [2] in service mode
Laser Used Time Indication	Check laser used time (hours) of drive.	Laser used time: BD Playback  Laser used time: DVD Playback  Laser used time: CD Playing  ● (****) is the used time display in hour. ● Laser used time of BD/ DVD/ CD in Playback mode is counted.	Press [4] [1] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
BD drive last error	BD drive error code display.	1. Error Number is displayed for 5 seconds. NO ** 2. Time when the error has occurred is display for 5 seconds. YYMMDD YY: Year MM: Month DD: Day 3. Last drive error (1/2) is displayed for 5 seconds. ***** 00 : Bad disc 03 : Bad disc 04 : Bad disc or drive malfunction 4. Last drive error (2/2) is displayed for five seconds. ***** 5. Error occurring disc type is displayed for 5 seconds. DVD ROM DVD CD CD DVD-RAM (2.6GB) RAM26 DVD-RAM (4.7GB) RAM47 DVD-R DVDR DVD-RW DVDRW CD-R CDR	Press [4] [2] in service mode.

Item		FL display	Key operation (Remote controller key)												
Mode name	Description														
		CD-RW CDRW DVD+R DVDPR DVD+RW DVDPRW BD-ROM BDROM BD-RE BDRE BD-R BDR Others MEDIA* * is displayed the respecod value from RTSC. 6. Disc maker ID is displayed for 5 seconds. ***** 7. Factor of drive error (hexadeci- mal) occurring is left displayed. * * + + & & * * : Error occurring operation code (This is not used) + + : Error occurring disc type <table><tr><td>00</td><td>DVD-ROM</td></tr><tr><td>01</td><td>CD</td></tr><tr><td>02</td><td>2.6GB DVD-RAM</td></tr><tr><td>03</td><td>4.7GB DVD-RAM</td></tr><tr><td>04</td><td>DVD-R</td></tr><tr><td>After 05</td><td>Others</td></tr></table>	00	DVD-ROM	01	CD	02	2.6GB DVD-RAM	03	4.7GB DVD-RAM	04	DVD-R	After 05	Others	In case that the maker cannot be identified, display is blackout.
00	DVD-ROM														
01	CD														
02	2.6GB DVD-RAM														
03	4.7GB DVD-RAM														
04	DVD-R														
After 05	Others														

Item		FL display	Key operation (Remote controller key)																																																																							
Mode name	Description																																																																									
		&& : Error occurring disc situation <table border="1"> <thead> <tr> <th rowspan="2">Display</th><th colspan="3">Detail</th></tr> <tr> <th>Disc distinction</th><th>With or without Cartridge</th><th>Disc cart-ridge state</th></tr> </thead> <tbody> <tr><td>00</td><td>OK</td><td>With</td><td>Not opened</td></tr> <tr><td>10</td><td>OK</td><td>With</td><td>Not opened</td></tr> <tr><td>20</td><td>OK</td><td>With</td><td>Opened</td></tr> <tr><td>30</td><td>OK</td><td>With</td><td>Opened</td></tr> <tr><td>40</td><td>OK</td><td>Without</td><td>Not opened</td></tr> <tr><td>50</td><td>OK</td><td>Without</td><td>Not opened</td></tr> <tr><td>60</td><td>OK</td><td>Without</td><td>Opened</td></tr> <tr><td>70</td><td>OK</td><td>Without</td><td>Opened</td></tr> <tr><td>80</td><td>NG</td><td>With</td><td>Not opened</td></tr> <tr><td>90</td><td>NG</td><td>With</td><td>Not opened</td></tr> <tr><td>A0</td><td>NG</td><td>With</td><td>Opened</td></tr> <tr><td>B0</td><td>NG</td><td>With</td><td>Opened</td></tr> <tr><td>C0</td><td>NG</td><td>Without</td><td>Not opened</td></tr> <tr><td>D0</td><td>NG</td><td>Without</td><td>Not opened</td></tr> <tr><td>E0</td><td>NG</td><td>Without</td><td>Opened</td></tr> <tr><td>F0</td><td>NG</td><td>Without</td><td>Opened</td></tr> </tbody> </table> 8. When the last error doesn't exist . NO DATA	Display	Detail			Disc distinction	With or without Cartridge	Disc cart-ridge state	00	OK	With	Not opened	10	OK	With	Not opened	20	OK	With	Opened	30	OK	With	Opened	40	OK	Without	Not opened	50	OK	Without	Not opened	60	OK	Without	Opened	70	OK	Without	Opened	80	NG	With	Not opened	90	NG	With	Not opened	A0	NG	With	Opened	B0	NG	With	Opened	C0	NG	Without	Not opened	D0	NG	Without	Not opened	E0	NG	Without	Opened	F0	NG	Without	Opened	
Display	Detail																																																																									
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80	NG	With	Not opened																																																																							
90	NG	With	Not opened																																																																							
A0	NG	With	Opened																																																																							
B0	NG	With	Opened																																																																							
C0	NG	Without	Not opened																																																																							
D0	NG	Without	Not opened																																																																							
E0	NG	Without	Opened																																																																							
F0	NG	Without	Opened																																																																							
CEC (H) output	The CEC terminal high output of HDMI.	CEC HI	Press [5] [5] in service mode.																																																																							
CEC (L) output	The CEC terminal low output of HDMI.	CEC LO	Press [5] [6] in service mode.																																																																							
Manufacturing Date	Read out the manufacturing date of the unit.	YYMMDD YY: Year MM: Month DD: Day	Press[6][1]in service mode.																																																																							
Tray OPEN/CLOSE Test	The BD drive tray is opened and closed repeatedly.	***** * is number of open/close cycle times.	Press [9] [1] in service mode *When releasing this mode, press the [POWER] button of Remotes Controller more than 10 seconds.																																																																							
Delete the Laser Used Time	Laser used time information stored in the memory of the unit is deleted.	CLR	Press [9] [5] in service mode.																																																																							
Delete the Last Drive Error	Laser Drive Error information stored on the BD Drive is deleted.	CLR	Press [9] [6] in service mode.																																																																							
Delete the Error History	Error History information stored on the unit is deleted.	CLR	Press [9] [7] in service mode.																																																																							
Initialization of the Error code	Last Error Code information stored by timer is deleted. (Write in F00)	CLR	Press [9] [8] in service mode.																																																																							
Initialization of the Service Mode	Last Drive Error, Error History and Error code information stored on the unit are initialized to factory setting.	CLR	Press [9] [9] in service mode.																																																																							
Release Service Mode	Release Service Mode and turns the Power Off.	***** Display in STOP (SS) mode.	Press [POWER] button on the front panel or Remote controller in service mode.																																																																							

6 Service Fixture & Tools

Part Number	Description	Pcs	Compatibility
RFKZ0216	Extension Cable (Digital P.C.B. - Power P.C.B. / 23 Pin)	1	Same as BD60 Series
RFKZ03D01KS	Lead Free Solder (0.3mm/100g Reel)		Same as BD60 Series
RFKZ06D01KS	Lead Free Solder (0.6mm/100g Reel)		Same as BD60 Series
RFKZ10D01KS	Lead Free Solder (1.0mm/100g Reel)		Same as BD60 Series
RFKZ0316	Solder Remover (Lead free low temperature Solder/50g)		Same as BD60 Series
RFKZ0328	Flux		Same as BD60 Series

* The above parts are supplied by AVC-CSC-SPC.

7 Measurements and Adjustments

7.1. Service Positions

Note:

For description of the disassembling procedure, see the section 9. (Vol. 1)

7.1.1. Checking and Repairing of Digital P.C.B. Module

1. Top Case

Remove the 3 Screws (A).

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.

2. Front Panel ass'y

Remove the Tray top.

Unlock 6 tabs turn and Remove Front Panel.

3. Rear Panel

Remove 4 Screws (one of the HDMI) to remove the Rear Panel.

4. Digital P.C.B.

Disconnect the connector (23Pin) between Power P.C.B. and Digital P.C.B..

Remove 6 Screws to remove Digital P.C.B. and BD Drive.

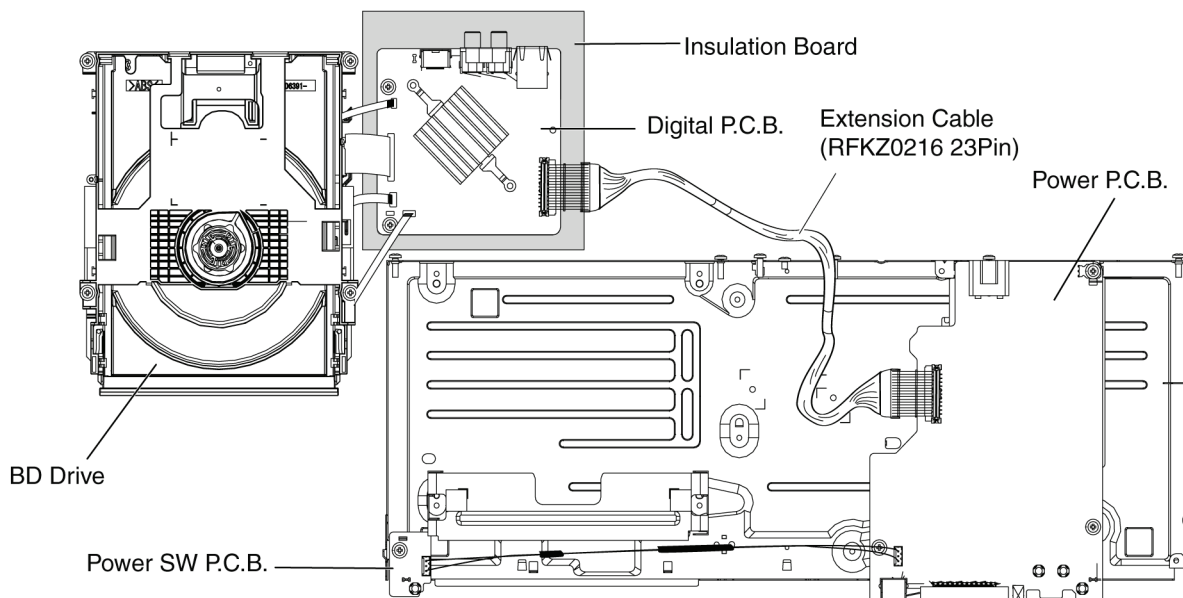
Put Digital P.C.B. on the Insulation Board.

Connect Extension Cables shown below.

Between Power P.C.B. and Digital P.C.B.:(RFKZ0216) 23 Pin

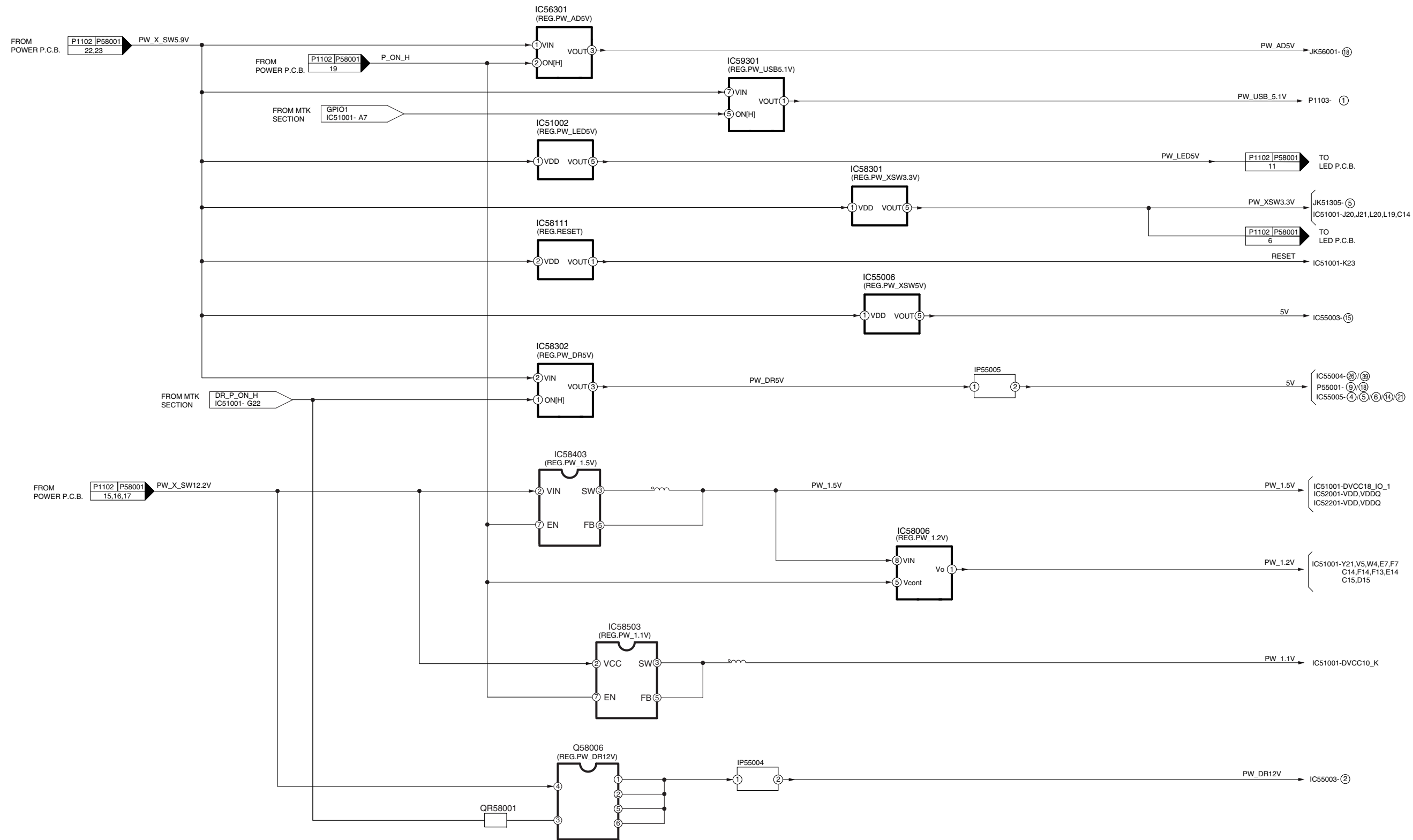
Caution :

1. Red wire should be connected to pin 1.



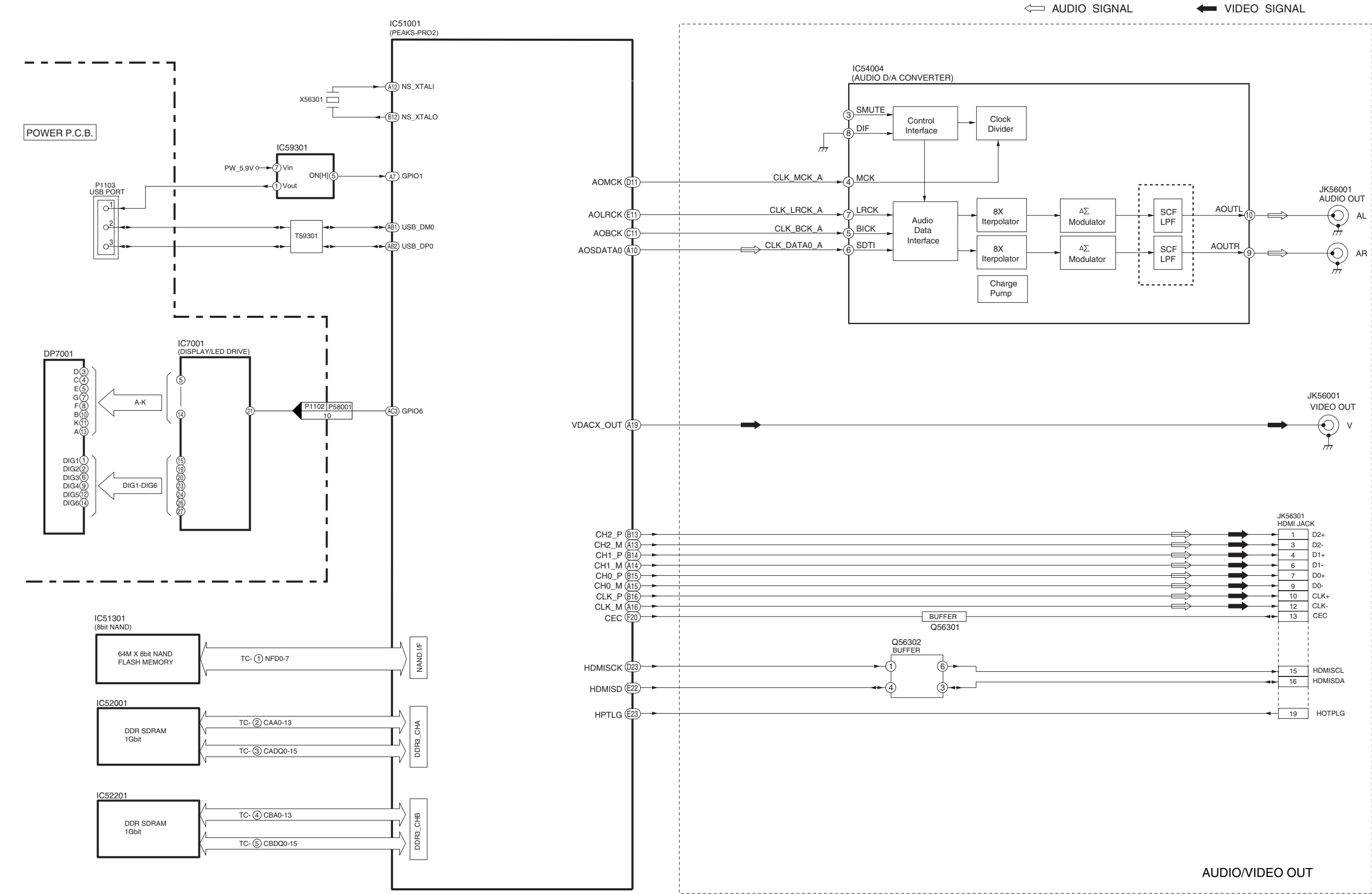
8 Block Diagram

8.1. Digital P.C.B. Regulator Block Diagram



DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL P.C.B. REGULATOR BLOCK DIAGRAM

8.2. Digital (Back End Section) Block Diagram



DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL BLOCK DIAGRAM

8.3. IC Pin Terminal Chart

IC Pin Terminal Chart (TC 1 - TC 5)

TC	IC51001 / PEAKS-PRO2		SIGNAL NAME	IC52001 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
1	RA0	AA12	CAA0	N3	A0
	RA1	AB15	CAA1	P7	A1
	RA2	AE13	CAA2	P3	A2
	RA3	AB12	CAA3	N2	A3
	RA4	AA15	CAA4	P8	A4
	RA5	Y12	CAA5	P2	A5
	RA6	Y16	CAA6	R8	A6
	RA7	AD13	CAA7	R2	A7
	RA8	AA16	CAA8	T8	A8
	RA9	AC14	CAA9	R3	A9
	RA10	AD14	CAA10	L7	A10(AP)
	RA11	Y15	CAA11	R7	A11
	RA12	AE14	CAA12	N7	A12(/BC)
	RA13	AB14	CAA13	T3	A13

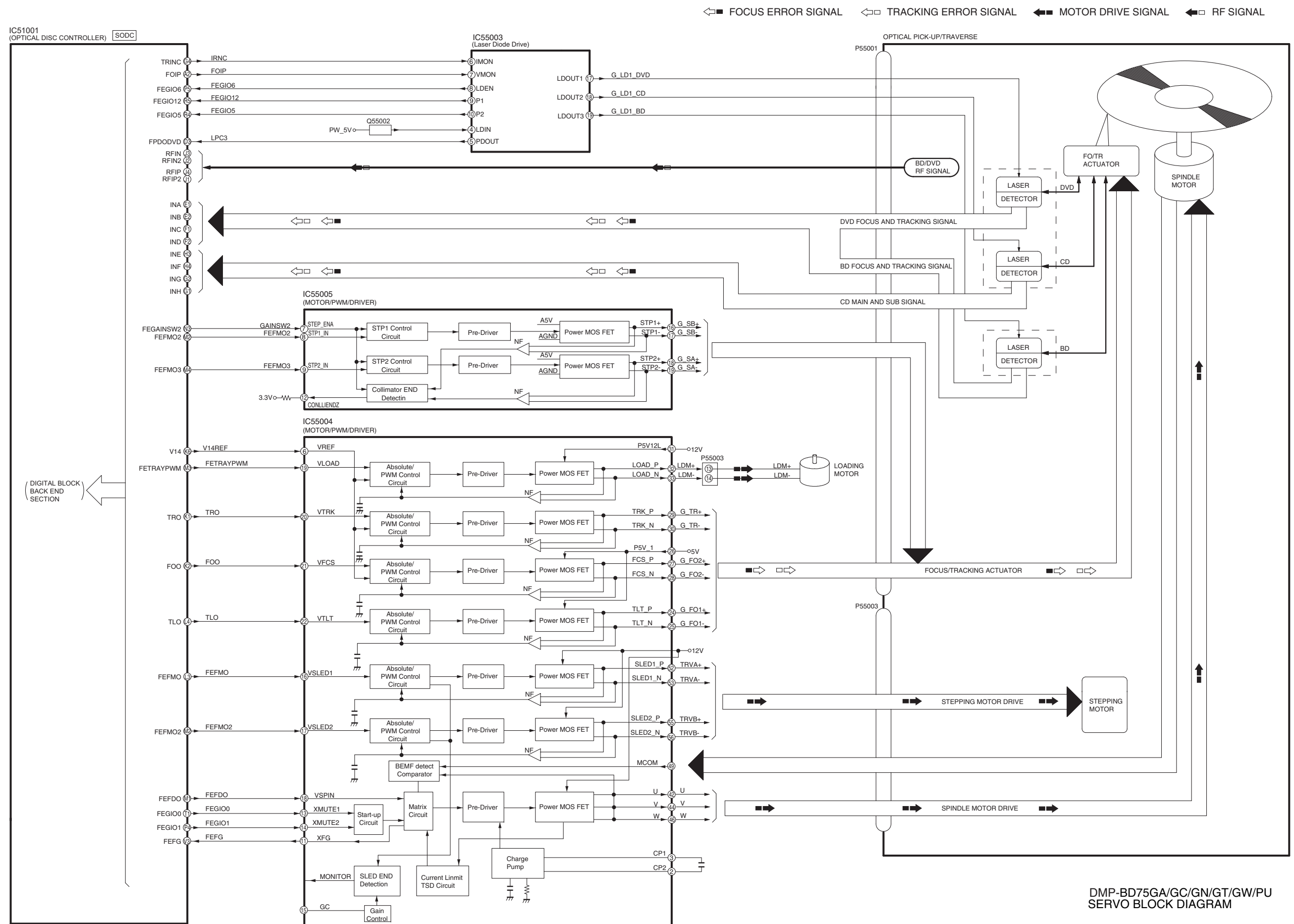
TC	IC51001 / PEAKS-PRO2		SIGNAL NAME	IC52201 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
3	RA0_B	AB23	CBA0	N3	A0
	RA1_B	V22	CBA1	P7	A1
	RA2_B	AC25	CBA2	P3	A2
	RA3_B	AC24	CBA3	N2	A3
	RA4_B	V23	CBA4	P8	A4
	RA5_B	AA23	CBA5	P2	A5
	RA6_B	U24	CBA6	R8	A6
	RA7_B	Y22	CBA7	R2	A7
	RA8_B	U25	CBA8	T8	A8
	RA9_B	Y23	CBA9	R3	A9
	RA10_B	W24	CBA10	L7	A10(AP)
	RA11_B	U23	CBA11	R7	A11
	RA12_B	W25	CBA12	N7	A12(/BC)
	RA13_B	Y24	CBA13	T3	A13

TC	IC51001 / PEAKS-PRO2		SIGNAL NAME	IC51301 / 8BIT-NAND	
	Port Name	Pin No		Pin No	Port Name
5	NFD0	C23	NFD0	29	IO0
	NFD1	A25	NFD1	30	IO1
	NFD2	B24	NFD2	31	IO2
	NFD3	B25	NFD3	32	IO3
	NFD4	C24	NFD4	41	IO4
	NFD5	C25	NFD5	42	IO5
	NFD6	D24	NFD6	43	IO6
	NFD7	D25	NFD7	44	IO7

TC	IC51001 / PEAKS-PRO2		SIGNAL NAME	IC52001 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
2	RDQ0	AE16	CADQ0	E3	DQL0
	RDQ1	AD16	CADQ1	F2	DQL2
	RDQ2	AC16	CADQ2	G2	DQL6
	RDQ3	AB16	CADQ3	H3	DQL4
	RDQ4	AD21	CADQ4	H7	DQL7
	RDQ5	AE21	CADQ5	H8	DQL5
	RDQ6	AC20	CADQ6	F8	DQL3
	RDQ7	Y18	CADQ7	F7	DQL1
	RDQ8	AE17	CADQ8	A2	DQU5
	RDQ9	AD17	CADQ9	C2	DQU3
	RDQ10	AC18	CADQ10	A3	DQU7
	RDQ11	AA17	CADQ11	A7	DQU4
	RDQ12	AA19	CADQ12	C8	DQU2
	RDQ13	AC19	CADQ13	D7	DQU0
	RDQ14	AA18	CADQ14	B8	DQU6
	RDQ15	AB19	CADQ15	C3	DQU1

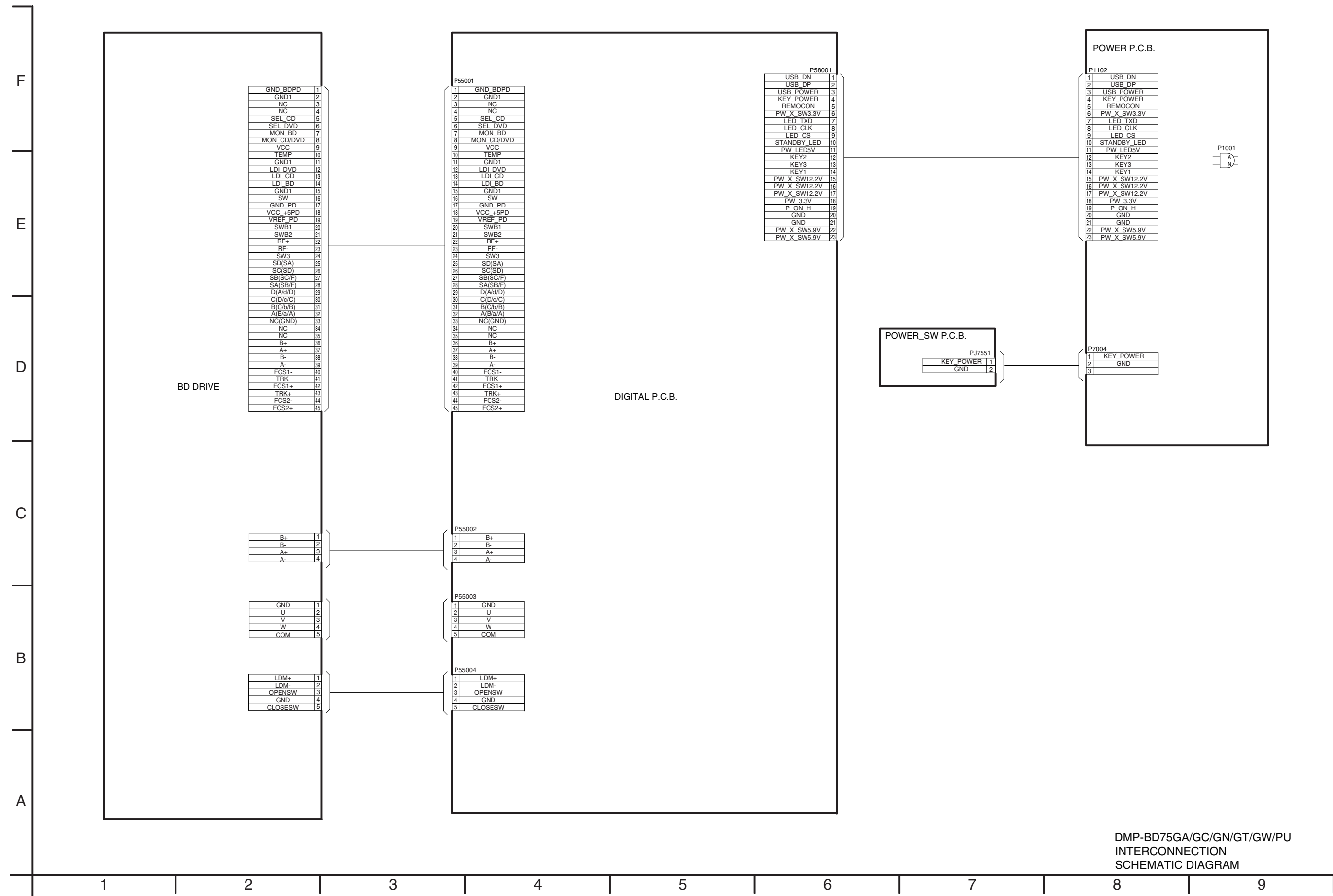
TC	IC51001 / PEAKS-PRO2		SIGNAL NAME	IC52201 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
4	RDQ0_B	U21	CBDQ0	E3	DQL0
	RDQ1_B	U20	CBDQ1	F2	DQL2
	RDQ2_B	T24	CBDQ2	G2	DQL6
	RDQ3_B	T25	CBDQ3	H3	DQL4
	RDQ4_B	M20	CBDQ4	H7	DQL7
	RDQ5_B	M23	CBDQ5	H8	DQL5
	RDQ6_B	M22	CBDQ6	F8	DQL3
	RDQ7_B	M21	CBDQ7	F7	DQL1
	RDQ8_B	R22	CBDQ8	A2	DQU5
	RDQ9_B	R23	CBDQ9	C2	DQU3
	RDQ10_B	P23	CBDQ10	A3	DQU7
	RDQ11_B	P22	CBDQ11	A7	DQU4
	RDQ12_B	P20	CBDQ12	C8	DQU2
	RDQ13_B	R20	CBDQ13	D7	DQU0
	RDQ14_B	R21	CBDQ14	B8	DQU6
	RDQ15_B	P21	CBDQ15	C3	DQU1

8.4. Digital (Front End Section) Block Diagram



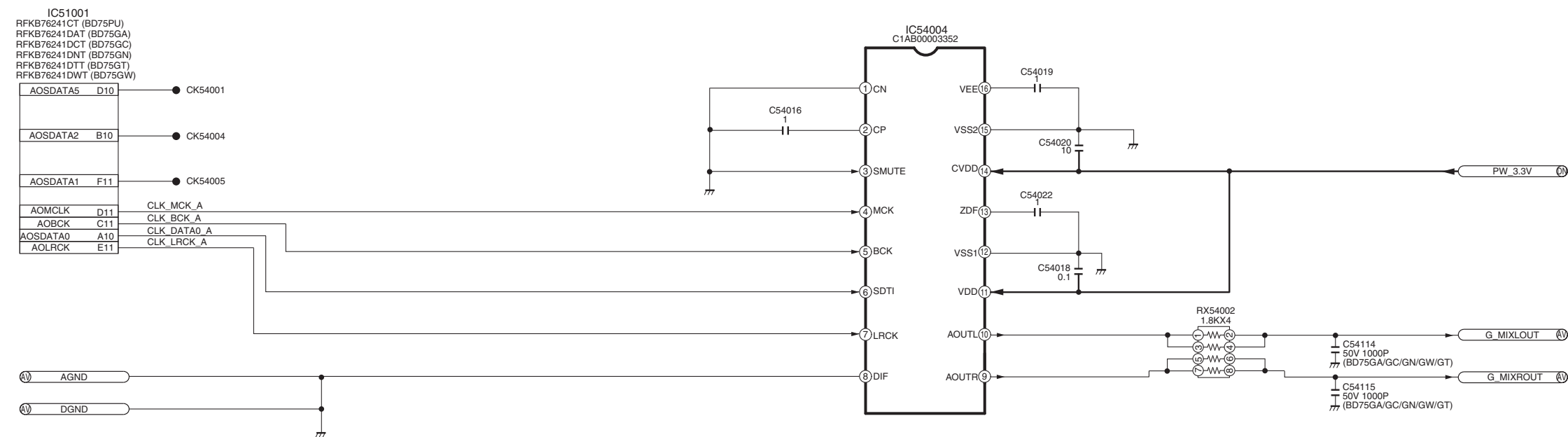
9 Schematic Diagram

9.1. Interconnection Schematic Diagram



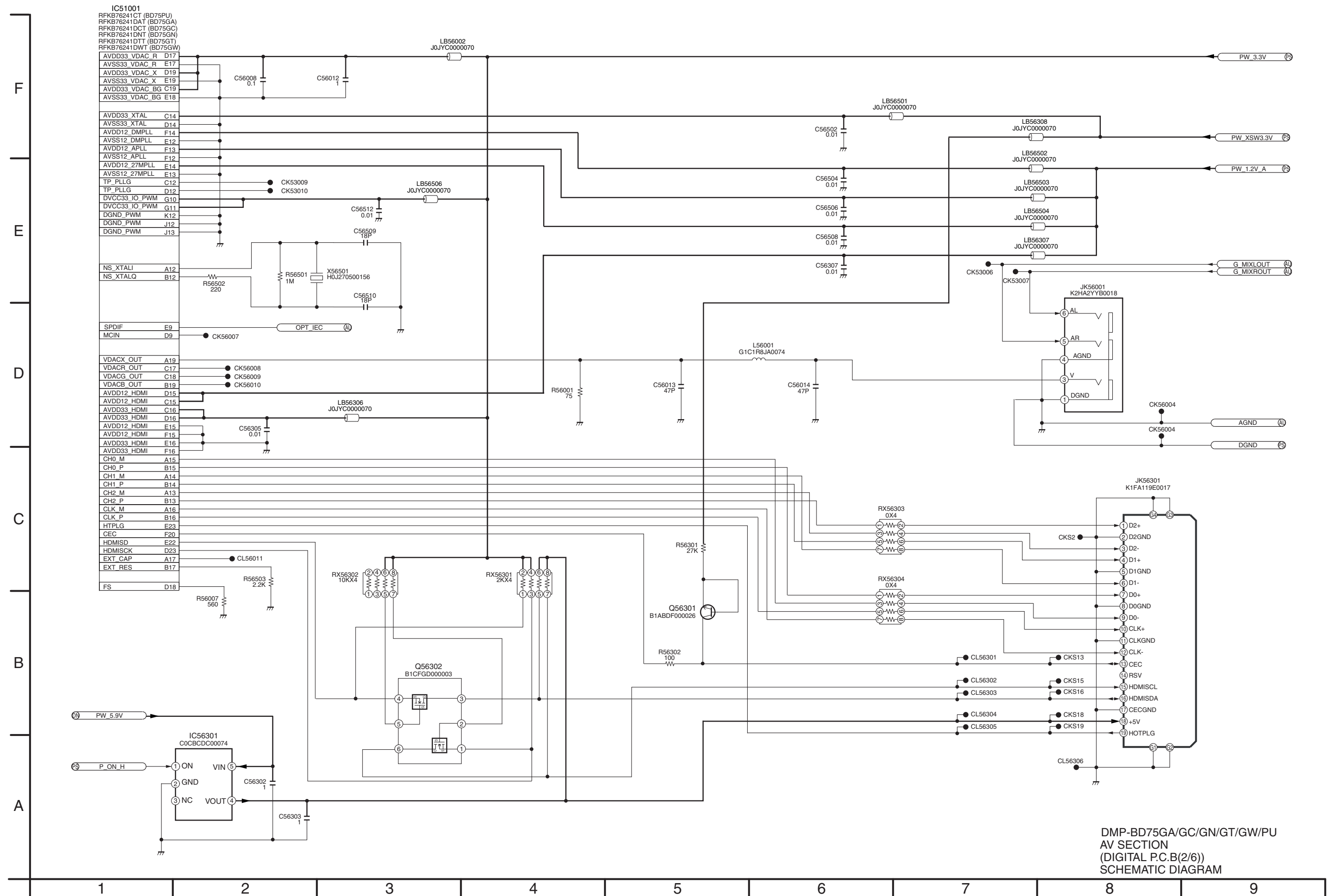
DMP-BD75GA/GC/GN/GT/GW/PU
INTERCONNECTION
SCHEMATIC DIAGRAM

9.2. AUDIO_DAC Section Schematic Diagram

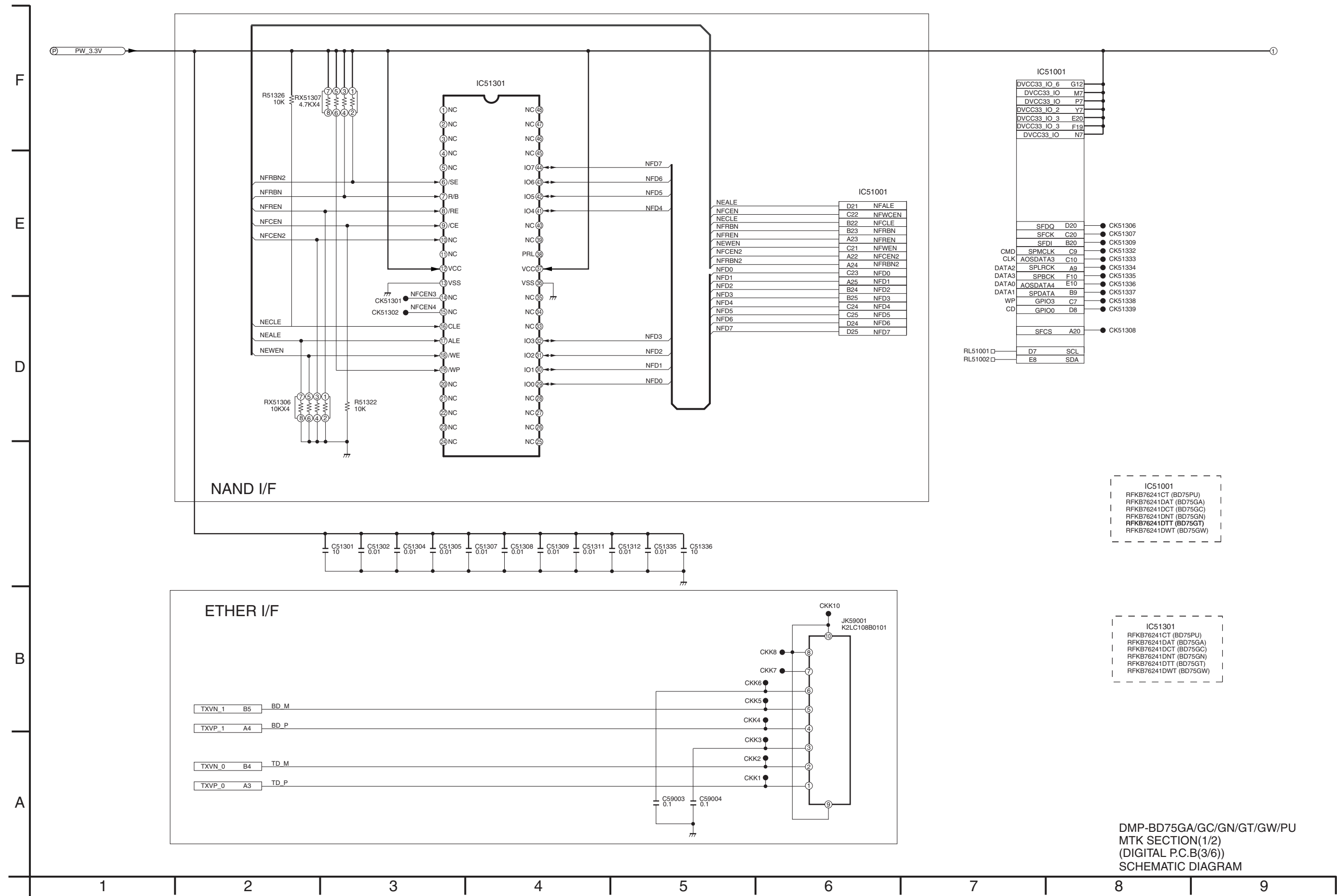


DMP-BD75GA/GC/GN/GT/GW/PU
AUDIO_DAC SECTION
(DIGITAL P.C.B(1/6))
SCHEMATIC DIAGRAM

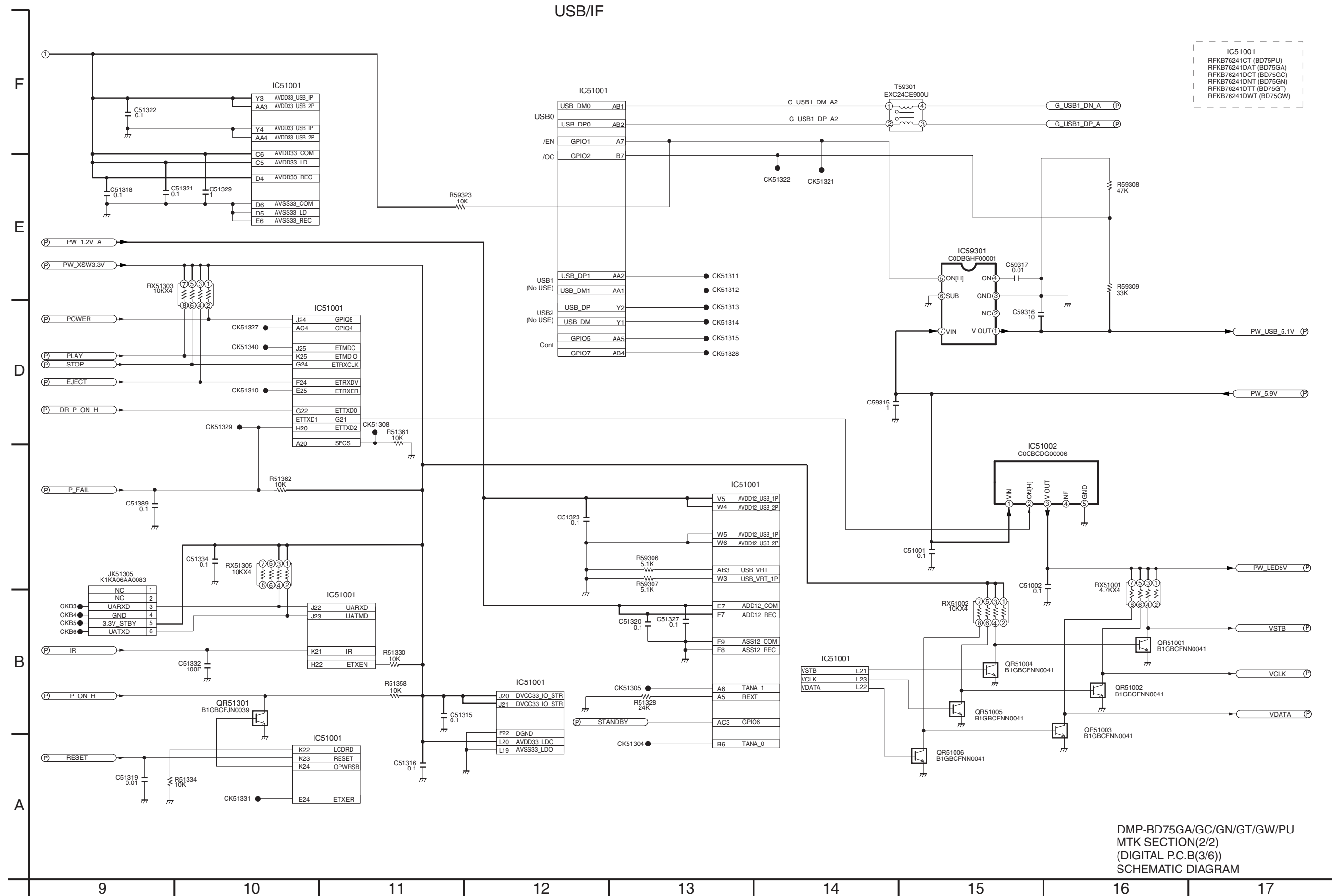
9.3. AV Section Schematic Diagram



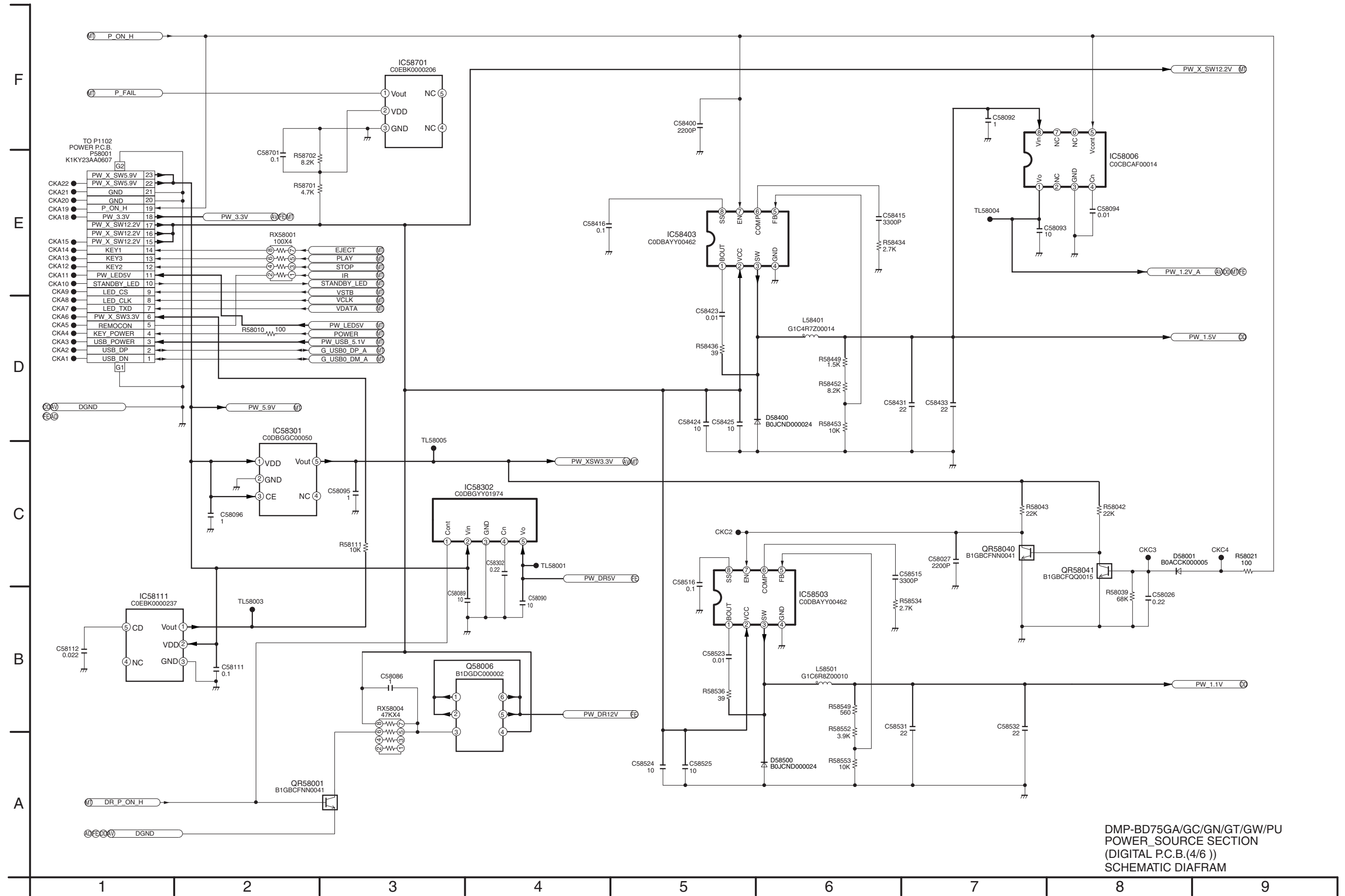
9.4. MTK Section Schematic Diagram (1/2)



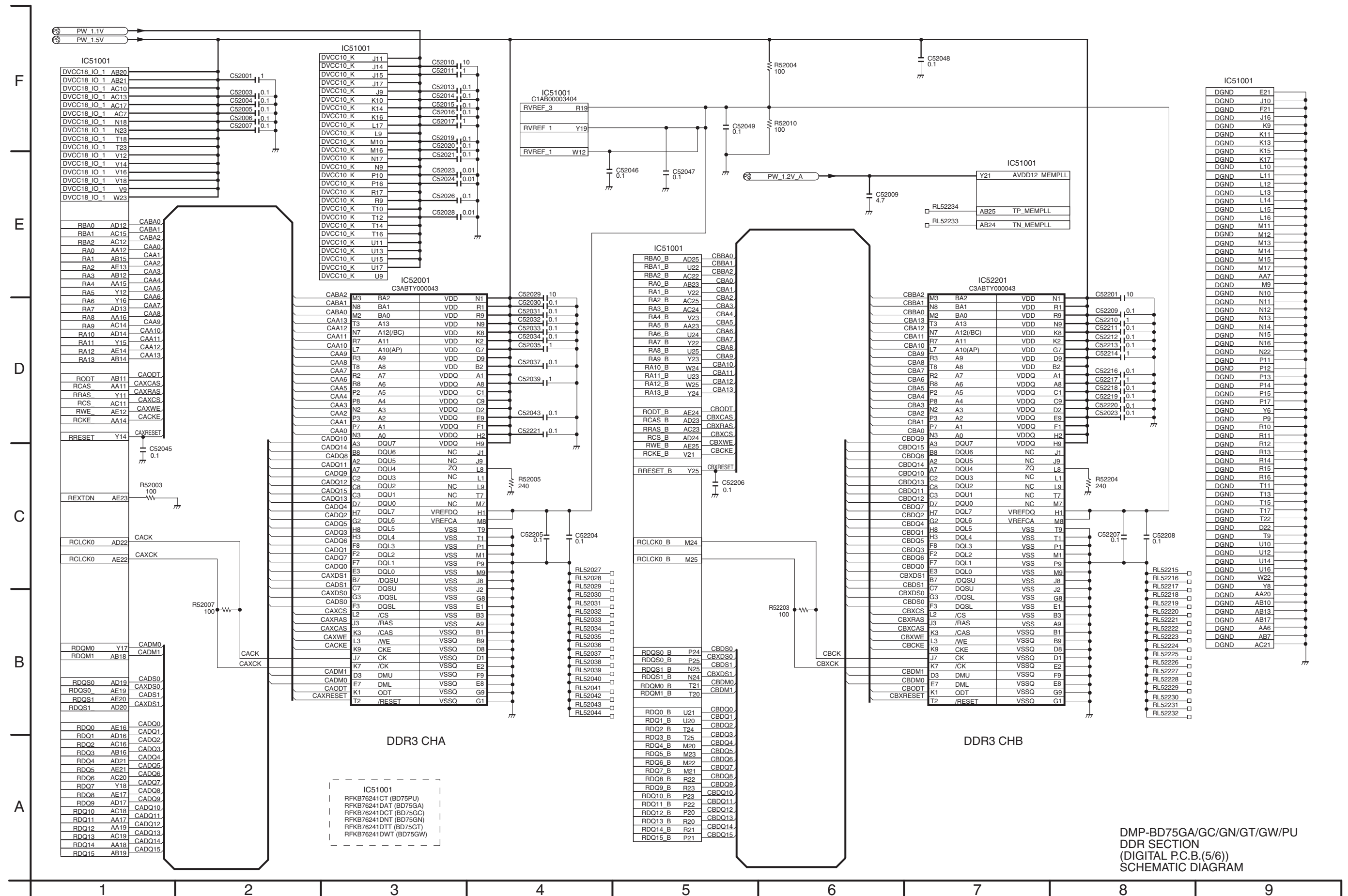
9.5. MTK Section Schematic Diagram (2/2)



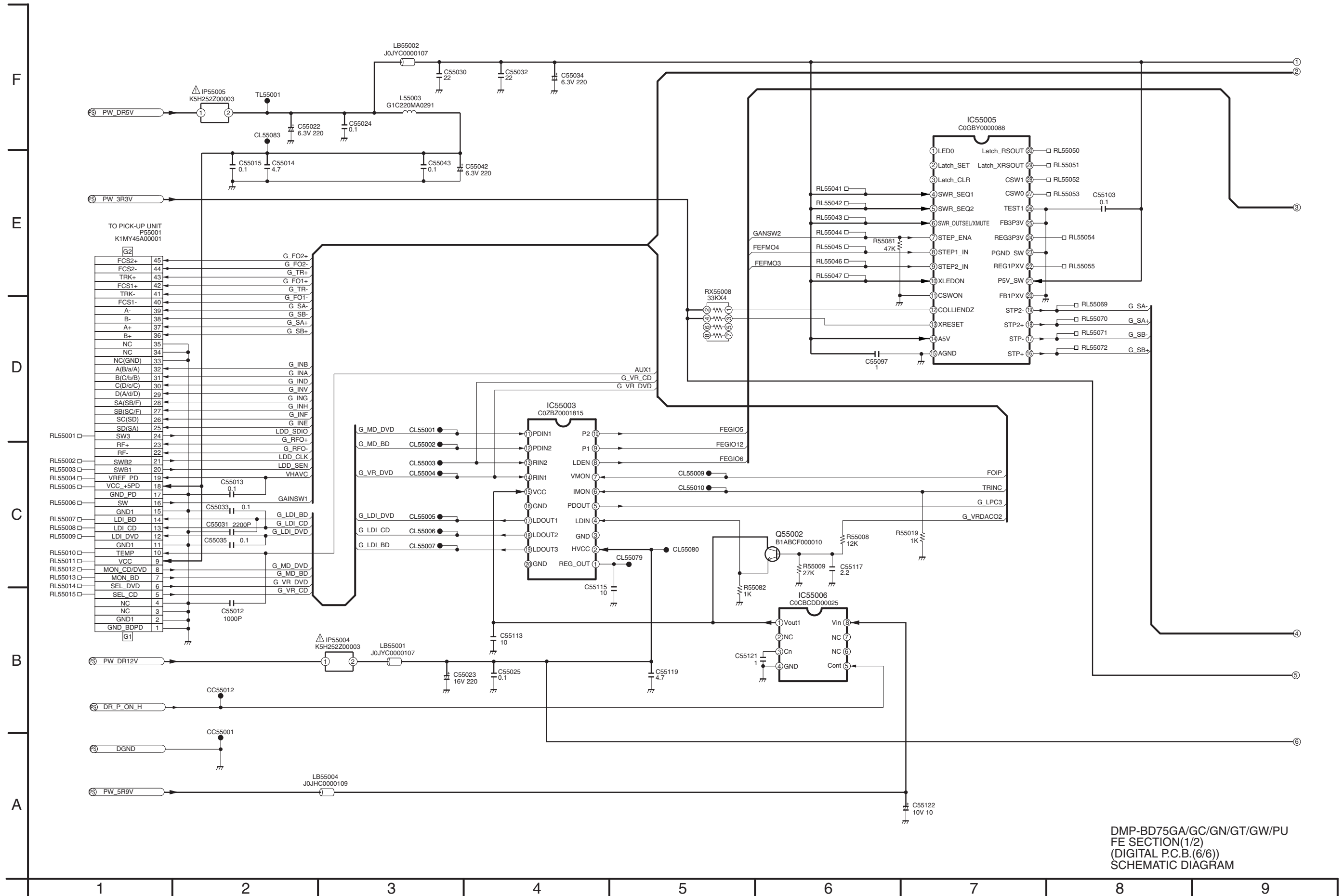
9.6. DIGITAL_NET Section Schematic Diagram



9.7. DDR Section Schematic Diagram

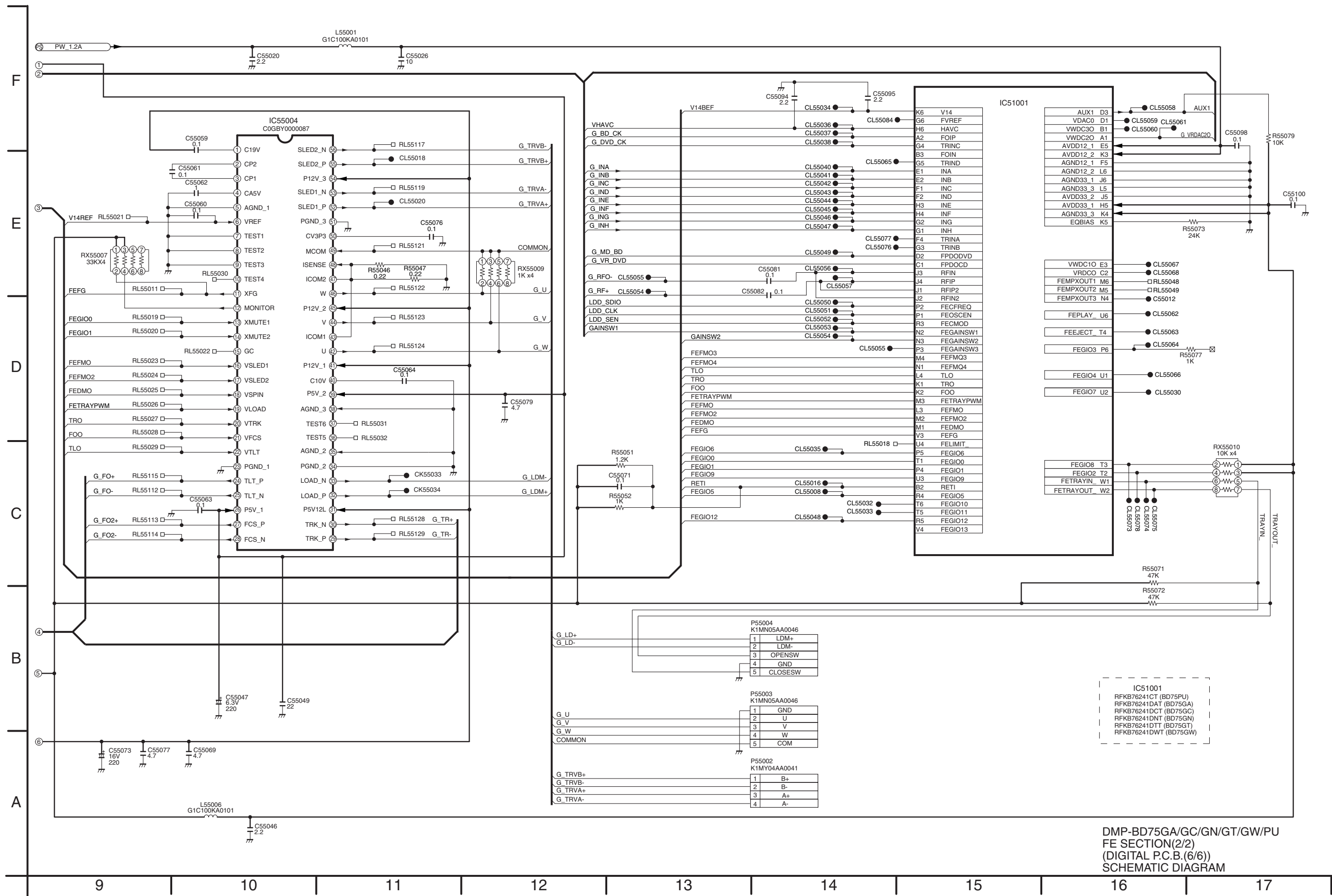


9.8. FE Section Schematic Diagram (1/2)



DMP-BD75GA/GC/GN/GT/GW/PU
FE SECTION(1/2)
(DIGITAL P.C.B.(6/6))
SCHEMATIC DIAGRAM

9.9. FE Section Schematic Diagram (2/2)



DMP-BD75GA/GC/GN/GT/GW/PU
FE SECTION(2/2)
(DIGITAL P.C.B.(6/6))
SCHEMATIC DIAGRAM

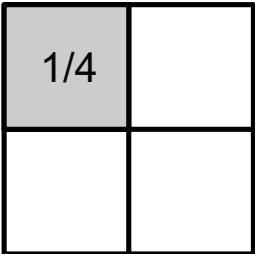
10 Printed Circuit Board

10.1. Digital P.C.B.

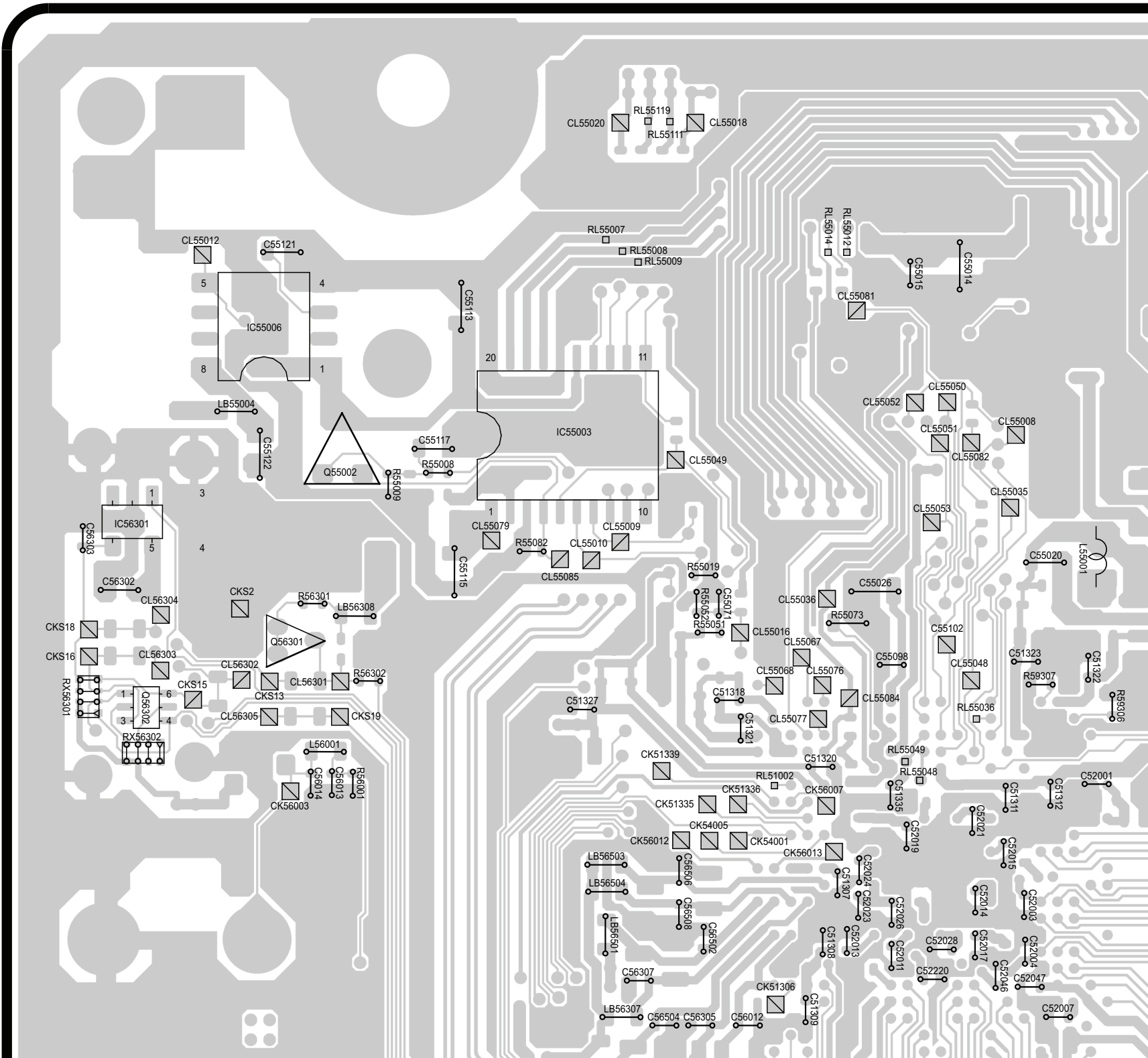
10.1.1. Digital P.C.B. (Component Side) (1/4)

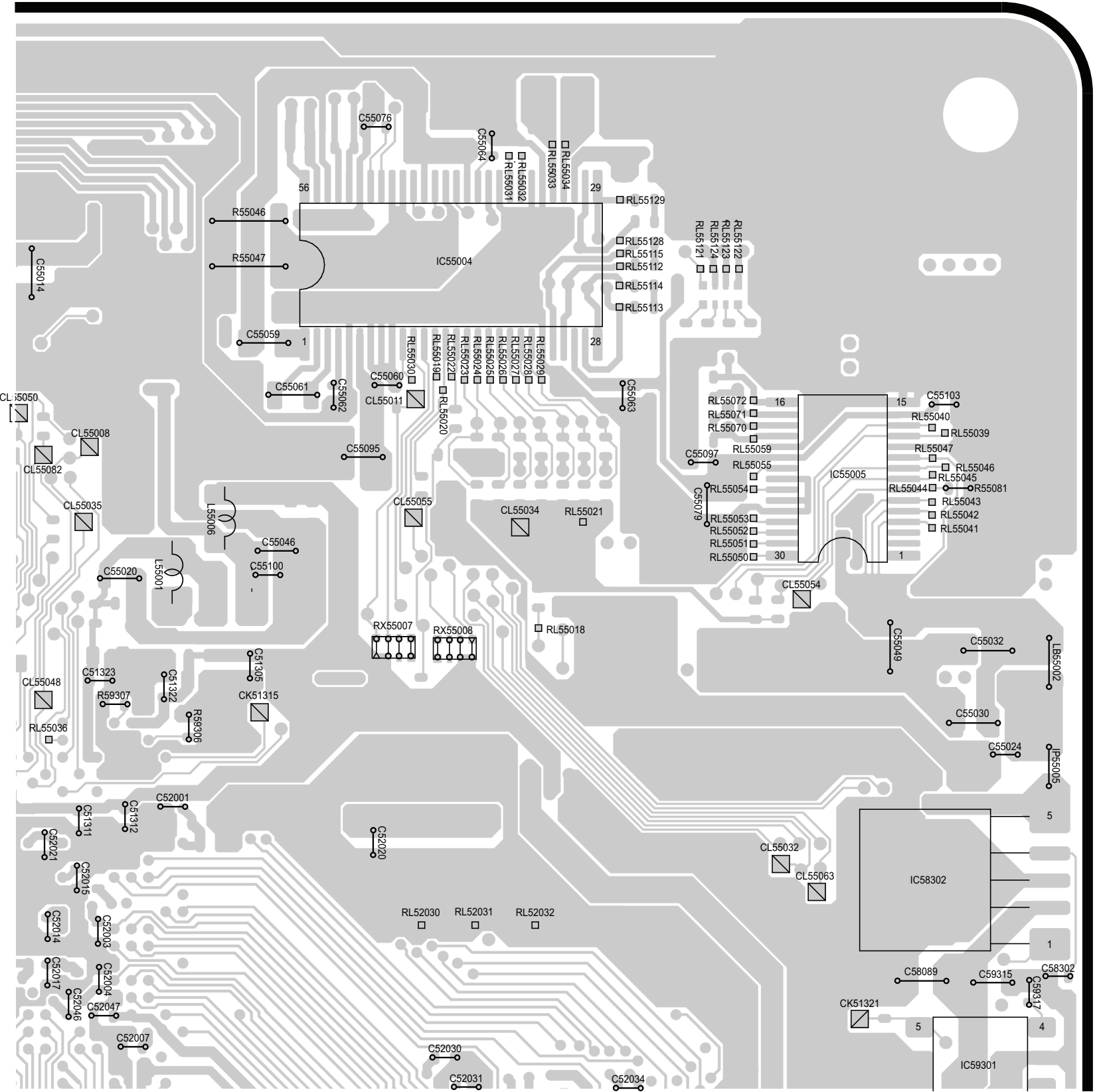
DIGITAL P.C.B.
(COMPONENT SIDE)

LOCATION MAP



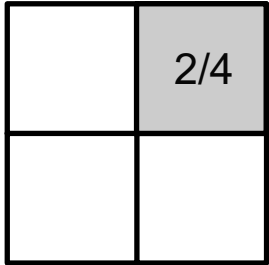
DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL P.C.B.
BD75PU: (RFKB76241CT)
BD75GA: (RFKB76241DAT)
BD75GC: (RFKB76241DCT)
BD75GN: (RFKB76241DNT)
BD75GT: (RFKB76241DTT)
BD75GW: (RFKB76241DWT)
(SECTION 1/4)





DIGITAL P.C.B.
(COMPONENT SIDE)

LOCATION MAP



DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL P.C.B.
BD75PU: (RFKB76241CT)
BD75GA: (RFKB76241DAT)
BD75GC: (RFKB76241DCT)
BD75GN: (RFKB76241DNT)
BD75GT: (RFKB76241DTT)
BD75GW: (RFKB76241DWT)
(SECTION 2/4)

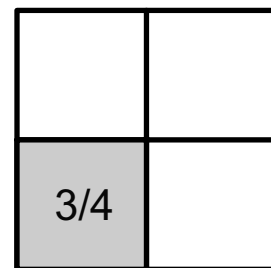
DIGITAL P.C.B. (COMPONENT SIDE)

C

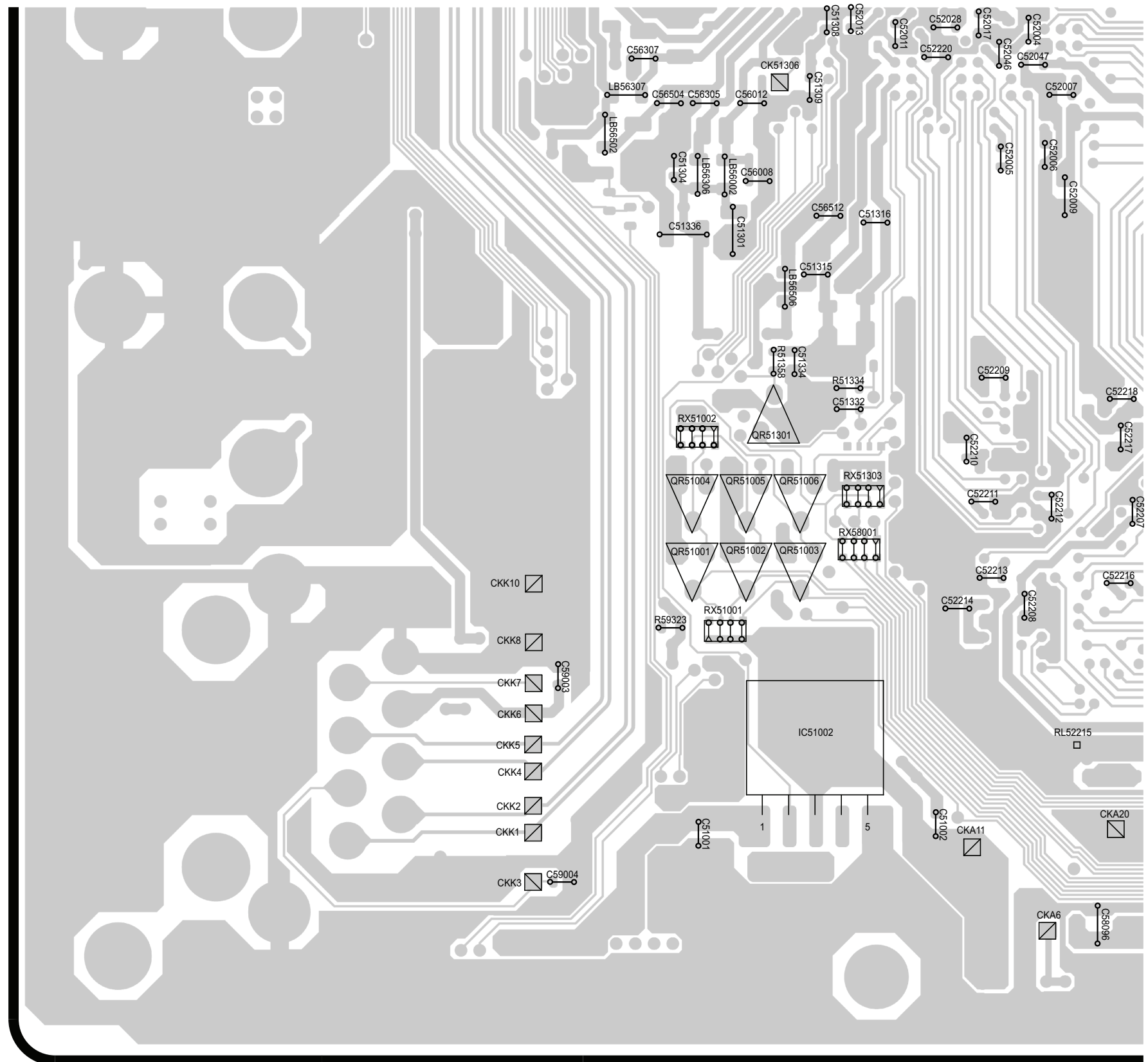
B

A

LOCATION MAP



DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL P.C.B.
BD75PU: (RFKB76241CT)
BD75GA: (RFKB76241DAT)
BD75GC: (RFKB76241DCT)
BD75GN: (RFKB76241DNT)
BD75GT: (RFKB76241DTT)
BD75GW: (RFKB76241DWT)
(SECTION 3/4)



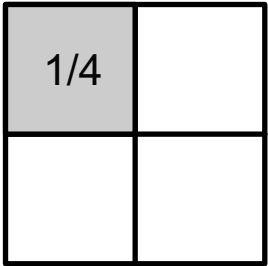
DIGITAL P.C.B.
(FOIL SIDE)

F

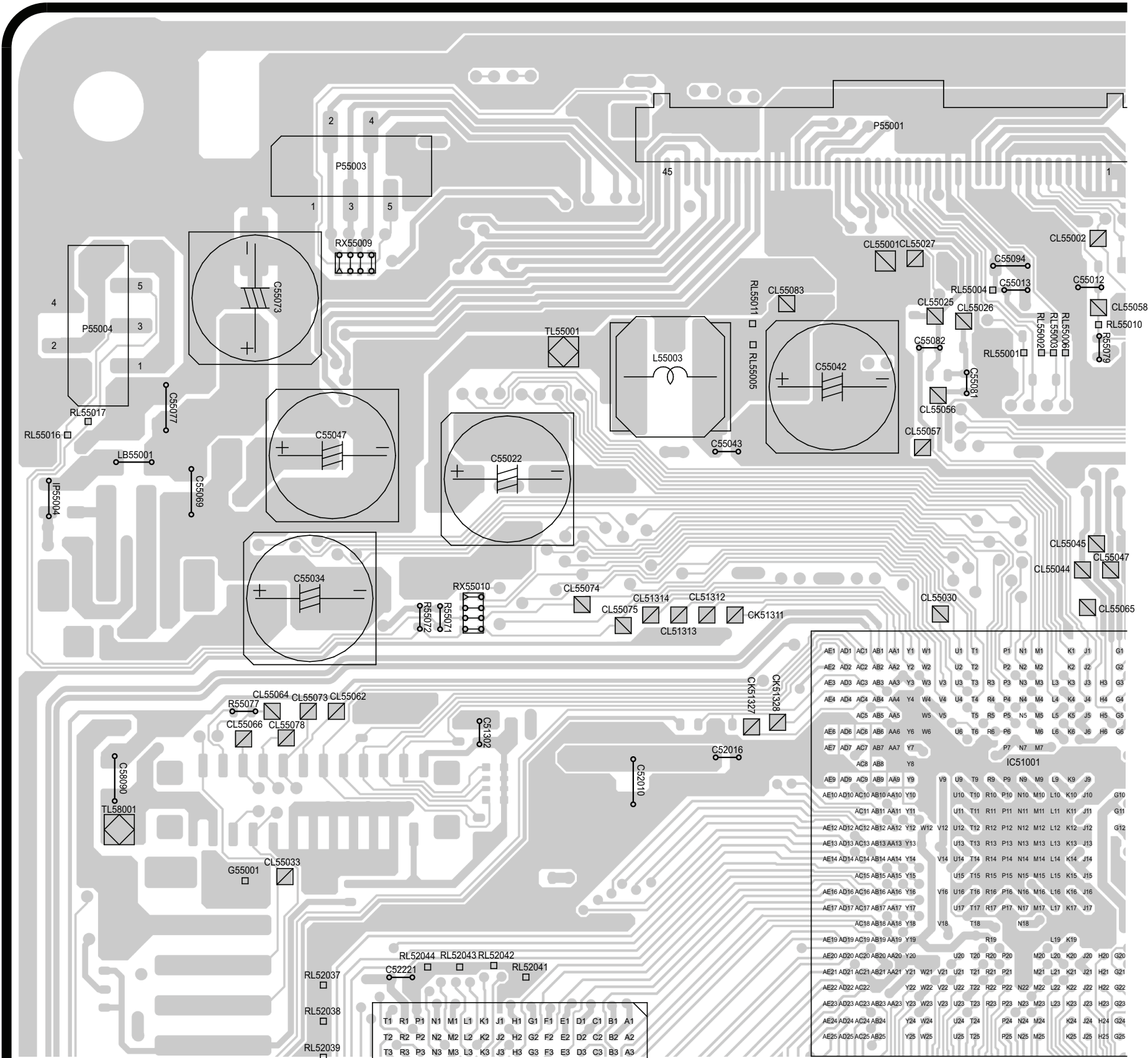
E

D

LOCATION MAP



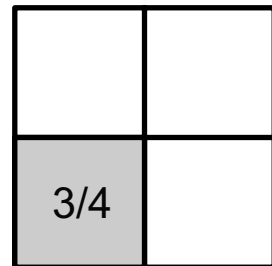
DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL P.C.B.
BD75PU: (RFKB76241CT)
BD75GA: (RFKB76241DAT)
BD75GC: (RFKB76241DCT)
BD75GN: (RFKB76241DNT)
BD75GT: (RFKB76241DTT)
BD75GW: (RFKB76241DWT)
(SECTION 1/4)



10.1.7. Digital P.C.B. (Foil Side) (3/4)

DIGITAL P.C.B. (FOIL SIDE)

LOCATION MAP



DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL P.C.B.

BD75PU: (RFKB76241CT)

BD75GA: (RFKB76241DAT)

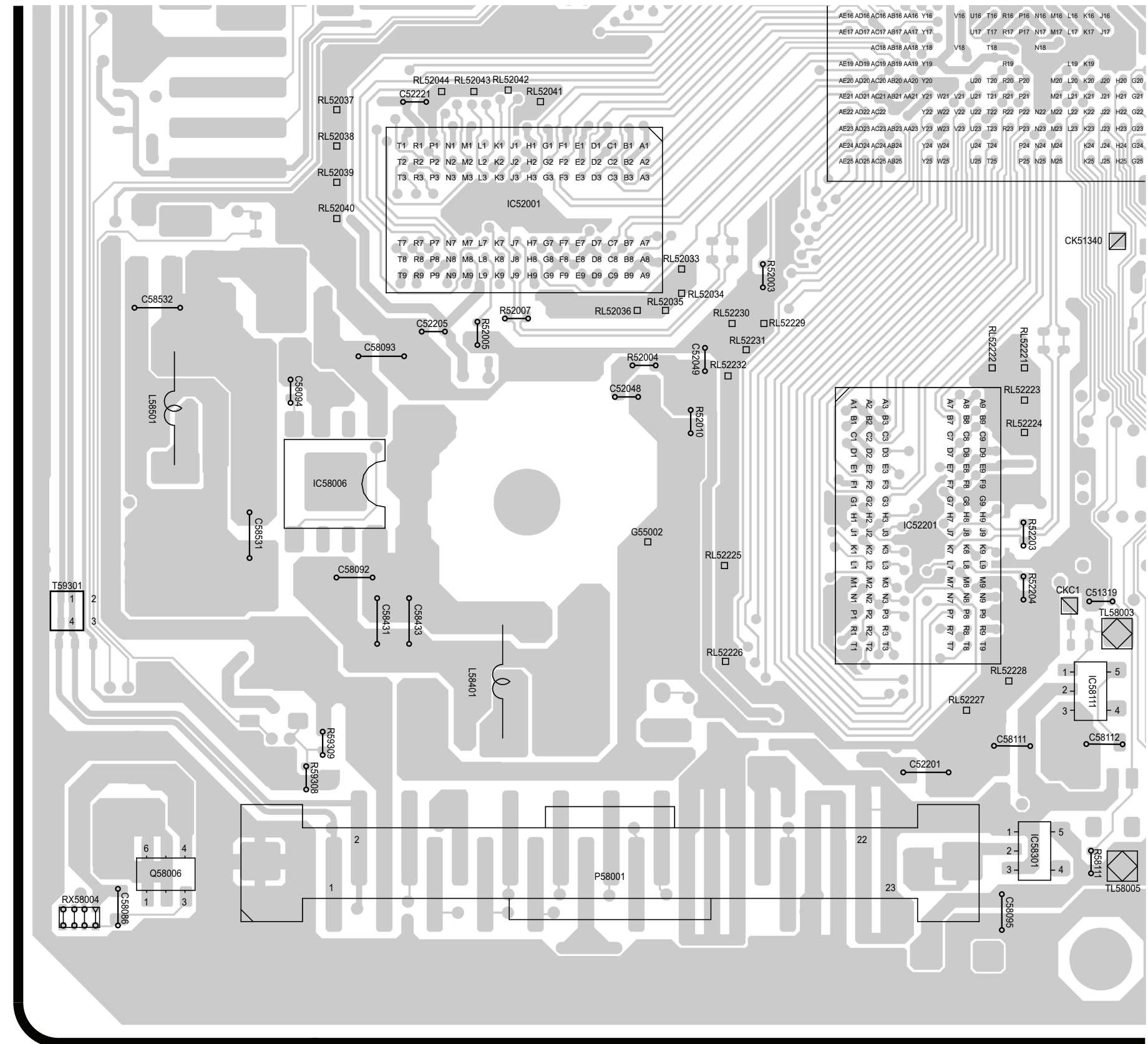
BD75GC: (RFKB76241DCT)

BD75GN: (RFKB76241DNT)

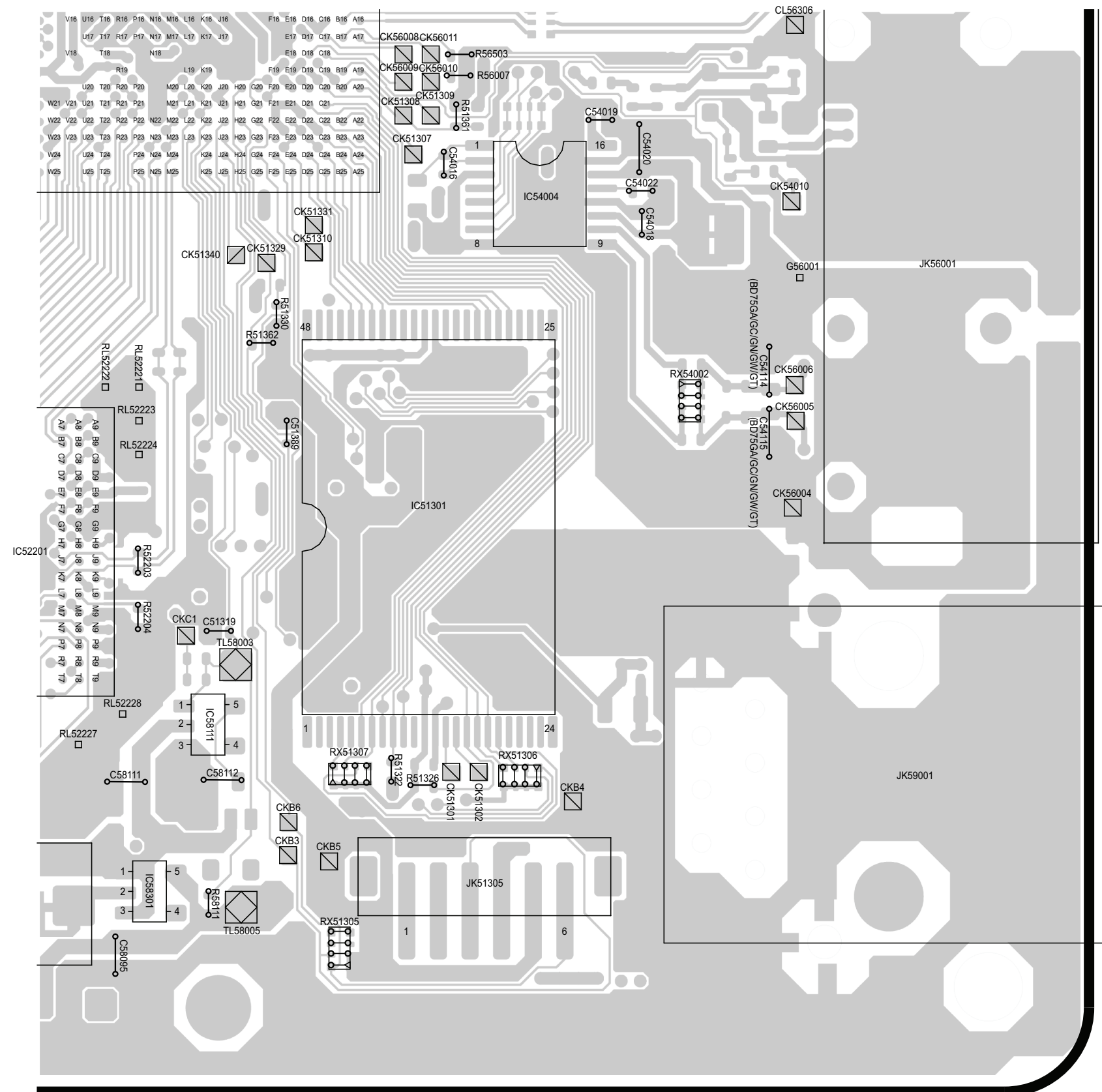
BD75GT: (RFKB76241DTT)

BD75GW: (RFKB76241DWT)

(SECTION 3/4)

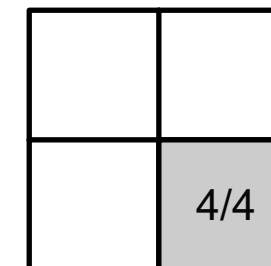


10.1.8. Digital P.C.B. (Foil Side) (4/4)



DIGITAL P.C.B. (FOIL SIDE)

LOCATION MAP



DMP-BD75GA/GC/GN/GT/GW/PU
DIGITAL P.C.B.
BD75PU: (RFKB76241CT)
BD75GA: (RFKB76241DAT)
BD75GC: (RFKB76241DCT)
BD75GN: (RFKB76241DNT)
BD75GT: (RFKB76241DTT)
BD75GW: (RFKB76241DWT)
(SECTION 4/4)

10.1.9. Digital P.C.B. Address Information

DIGITAL P.C.B.											
Transistors			CKB4	B-6	F	RL52029	C-7	C	RL55113	F-6	C
Q55002	E-3	C	CKB5	A-5	F	RL52030	D-6	C	RL55114	F-6	C
Q56301	E-3	C	CKB6	A-5	F	RL52031	D-6	C	RL55115	F-6	C
Q56302	D-2	C	CKC1	B-5	F	RL52032	D-6	C	RL55119	F-4	C
Q58006	A-2	F	CKC2	C-7	C	RL52033	C-4	F	RL55121	F-7	C
Transistor-resistors			CKC3	C-7	C	RL52034	C-4	F	RL55122	F-7	C
QR51001	B-4	C	CKC4	C-7	C	RL52035	C-4	F	RL55123	F-7	C
QR51002	B-4	C	CKK1	A-4	C	RL52036	C-4	F	RL55124	F-7	C
QR51003	B-4	C	CKK2	A-4	C	RL52037	C-3	F	RL55128	F-6	C
QR51004	B-4	C	CKK3	A-4	C	RL52038	C-3	F	RL55129	F-6	C
QR51005	B-4	C	CKK4	B-4	C	RL52039	C-3	F	TL55001	E-4	F
QR51006	B-4	C	CKK5	B-4	C	RL52040	C-3	F	TL58001	D-2	F
QR51301	C-4	C	CKK6	B-5	C	RL52041	C-3	F	TL58003	B-5	F
QR58001	A-7	C	CKK7	B-4	C	RL52042	D-3	F	TL58004	B-6	C
QR58040	C-7	C	CKK8	B-4	C	RL52043	D-3	F	TL58005	A-5	F
QR58041	C-7	C	CKK10	B-4	C	RL52044	D-3	F	IC Protectors		
Integrated Circuits			CL51311	E-4	F	RL52215	B-5	C	IP55005	D-8	C
IC51001	D-5	F	CL51312	E-4	F	RL52216	B-5	C	Connectors		
IC51002	B-4	C	CL51313	E-4	F	RL52217	B-5	C	JK51305	A-6	F
IC51301	B-6	F	CL51314	E-4	F	RL52218	B-6	C	JK56001	C-7	F
IC52001	C-3	F	CL50001	F-5	F	RL52219	B-6	C	JK56301	E-7	F
IC52201	B-5	F	CL55002	F-5	F	RL52220	B-6	C	JK59001	B-7	F
IC54004	C-6	F	CL55003	F-5	F	RL52221	C-5	F	P55001	F-5	F
IC55003	E-4	C	CL55004	F-5	F	RL52222	C-5	F	P55002	F-6	F
IC55004	F-6	C	CL55005	F-5	F	RL52223	C-5	F	P55003	F-3	F
IC55005	E-7	C	CL55006	F-5	F	RL52224	B-5	F	P55004	E-2	F
IC55006	E-3	C	CL55007	F-6	F	RL52225	B-4	F	P58001	A-4	F
IC56301	E-2	C	CL55008	E-5	C	RL52226	B-4	F			
IC58006	B-3	F	CL55011	E-6	C	RL52227	B-5	F			
IC58111	B-5	F	CL55025	E-5	F	RL52228	B-5	F			
IC58301	A-5	F	CL55026	E-5	F	RL52229	C-4	F			
IC58302	D-7	C	CL55027	F-5	F	RL52230	C-4	F			
IC58403	B-6	C	CL55030	E-5	F	RL52231	C-4	F			
IC58503	B-7	C	CL55032	D-7	C	RL52232	C-4	F			
IC58701	B-6	C	CL55033	D-3	F	RL52233	C-6	C			
IC59301	C-7	C	CL55034	E-6	C	RL52234	C-6	C			
Test Points			CL55035	E-5	C	RL55001	E-5	F			
CK51301	B-6	F	CL55036	E-4	C	RL55002	E-5	F			
CK51302	B-6	F	CL55037	E-6	F	RL55003	E-5	F			
CK51304	D-6	F	CL55038	E-6	F	RL55004	F-5	F			
CK51305	D-6	F	CL55039	E-6	F	RL55006	E-5	F			
CK51307	C-6	F	CL55040	E-5	F	RL55007	F-4	C			
CK51308	C-6	F	CL55041	E-5	F	RL55008	F-4	C			
CK51309	C-6	F	CL55042	E-5	F	RL55009	F-4	C			
CK51310	C-5	F	CL55043	E-5	F	RL55010	E-5	F			
CK51315	D-5	C	CL55045	E-5	F	RL55012	F-5	C			
CK51321	D-7	C	CL55046	E-5	F	RL55013	F-5	F			
CK51322	D-6	F	CL55047	E-5	F	RL55014	F-4	F			
CK51327	D-4	F	CL55048	D-5	C	RL55015	F-5	F			
CK51328	D-4	F	CL55049	E-4	C	RL55016	E-2	F			
CK51329	C-5	F	CL55050	E-5	C	RL55017	E-2	F			
CK51331	C-5	F	CL55051	E-5	C	RL55018	E-6	C			
CK51332	D-6	F	CL55052	E-5	C	RL55019	E-6	C			
CK51333	D-6	F	CL55053	E-5	C	RL55020	E-6	C			
CK51334	D-6	F	CL55054	E-7	C	RL55021	E-6	C			
CK51337	D-6	F	CL55055	E-6	C	RL55022	E-6	C			
CK51338	D-6	F	CL55056	E-5	F	RL55023	E-6	C			
CK51340	C-5	F	CL55057	E-5	F	RL55024	E-6	C			
CK54004	D-6	F	CL55058	E-5	F	RL55025	E-6	C			
CK54010	C-7	F	CL55059	E-6	F	RL55026	E-6	C			
CK56001	E-7	F	CL55060	E-6	F	RL55027	E-6	C			
CK56004	B-7	F	CL55061	E-6	F	RL55028	E-6	C			
CK56005	C-7	F	CL55062	D-3	F	RL55029	E-6	C			
CK56006	C-7	F	CL55063	D-7	C	RL55031	F-6	C			
CK56008	D-6	F	CL55064	D-3	F	RL55032	F-6	C			
CK56009	C-6	F	CL55065	E-5	F	RL55033	F-6	C			
CK56010	D-6	F	CL55066	D-3	F	RL55034	F-6	C			
CK56011	D-6	F	CL55067	E-4	C	RL55036	D-5	C			
CK56101	C-6	F	CL55068	D-4	C	RL55039	E-7	C			
CKA1	A-7	C	CL55073	D-3	F	RL55040	E-7	C			
CKA2	A-7	C	CL55074	E-4	F	RL55041	E-7	C			
CKA3	A-7	C	CL55075	E-4	F	RL55042	E-7	C			
CKA4	A-7	C	CL55076	D-4	C	RL55043	E-7	C			
CKA5	A-6	C	CL55077	D-4	C	RL55044	E-7	C			
CKA6	A-5	C	CL55078	D-3	F	RL55045	E-7	C			
CKA7	A-6	C	CL55079	E-3	C	RL55046	E-7	C			
CKA8	A-6	C	CL55080	E-6	F	RL55047	E-7	C			
CKA9	A-6	C	CL55082	E-5	C	RL55048	D-5	C			
CKA10	A-6	C	CL55084	D-5	C	RL55049	D-5	C			
CKA11	A-5	C	CL55085	E-4	C	RL55050	E-7	C			
CKA12	A-6	C	CL56301	D-3	C	RL55051	E-7	C			
CKA13	A-6	C	CL56302	D-3	C	RL55052	E-7	C			
CKA14	A-6	C	CL56303	E-2	C	RL55053	E-7	C			
CKA15	A-6	C	CL56305	D-3	C	RL55054	E-7	C			
CKA18	A-6	C	CL56306	D-7	F	RL55055	E-7	C			
CKA19	A-5	C	F55001	D-3	F	RL55059	E-7	C			
CKA20	A-5	C	G55002	B-4	F	RL55070	E-7	C			
CKA21	A-5	C	G56001	C-7	F	RL55071	E-7	C			
CKA22	A-5	C	RL51001	D-6	F	RL55072	E-7	C			
CKB3	A-5	F	RL52027	C-7	C	RL55111	F-4	C			
			RL52028	C-7	C	RL55112	F-6	C			

ADDRESS INFORMATION
C.....COMPONENT SIDE
F.....FOIL SIDE

11 Appendix for Schematic Diagram

11.1. Voltage and Waveform Chart

NOTE:

Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

11.1.1. Digital P.C.B.

Ref No.	P55001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	0	0	0	0.1	0	0	5.1	1.7	0	0	1.7	0	0	3.2	0	5.1	2.0	3.2
STOP	0	0	0	0	0	0.1	0	0	5.1	1.7	0	0	1.7	0	0	3.2	0	5.1	2.0	3.2
Ref No.	P55001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.2	2.0	3.2	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	0	0	0	1.8	1.8	1.7	0	1.7	0.2
STOP	3.2	2.0	3.2	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	0	0	0	1.8	1.8	1.7	0	1.7	0.2
Ref No.	P55001					P55002					P55003									
MODE	41	42	43	44	45		1	2	3	4		1	2	3	4	5				
PLAY	0.2	0.2	0.2	0.2	0.2		0	0	0	0		0	3.5	3.5	3.5	0				
STOP	0.2	0.2	0.2	0.2	0.2		0	0	0	0		0	3.5	3.5	3.5	0				
Ref No.	P55004																			
MODE	1	2	3	4	5															
PLAY	0.2	0.2	3.2	0	0															
STOP	0.2	0.2	3.2	0	0															
Ref No.	P58001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	5.0	3.3	3.3	3.3	0	5.0	5.0	3.3	3.3	3.3	3.3	0.9	12.0	12.0	12.0	3.3	3.3	0
STOP	0	0	5.0	3.3	3.3	3.3	0	5.0	5.0	3.3	3.3	3.3	3.3	0.9	12.0	12.0	12.0	3.3	3.3	0
Ref No.	P58001																			
MODE	21	22	23																	
PLAY	0	5.9	5.9																	
STOP	0	5.9	5.9																	

11.1.2. Abbreviations

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 CPUADR CPU ADDRESS LATCH CPUADT CPU ADDRESS DATA BUS CPUIRQ CPU INTERRUPT REQUEST CPRD CPU READ ENABLE 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 DO DROP OUT DOUT0~UP DATA OUTPUT DRF DATA SLICE RF (BIAS) DRPOUT DROP OUT SIGNAL DREQ DATA REQUEST DRESP DATA RESPONSE DSC DIGITAL SERVO CONTROLLER DSLF DATA SLICE LOOP FILTER DVD DIGITAL VIDEO DISC
E	EC ERROR TORQUE CONTROL ECR ERROR TORQUE CONTROL ENCSSEL REFERENCE ETMCLK ENCODER SELECT ETSCLK EXTERNAL M CLOCK (81MHz/40.5MHz) EXTERNAL S CLOCK (54MHz)
F	FBAL FOCUS BALANCE FCLK FRAME CLOCK FE FOCUS ERROR FFI FOCUS ERROR AMP INVERTED INPUT FEO FOCUS ERROR AMP OUTPUT FG FREQUENCY GENERATOR FSC FREQUENCY SUB CARRIER FSCK FS (384 OVER SAMPLING) CLOCK
G	GND COMMON GROUNDING (EARTH)
H	HA0~UP HOST ADDRESS HD0~UP HOST DATA HINT HOST INTERRUPT HRXW HOST READ/WRITE

INITIAL/LOGO	ABBREVIATIONS
I	IECOUT IEC958FORMATDATAOUTPUT IPFRAG INTERPOLATIONFLAG IREF I(CURRENT)REFERENCE ISEL INTERFACEMODESELECT
L	LDON LASERDIODECONTROL LPC LASERPOWERCONTROL LRCK LCH/RCHDISTINCTIONCLOCK
M	MA0~UP MEMORYADDRESS MCK MEMORYCLOCK MCKI MEMORYCLOCKINPUT MCLK MEMORYSERIALCOMMANDCLOCK MDATA MEMORYSERIALCOMMANDDATA MDQ0~UP MEMORYDATAINPUT/OUTPUT MDQM MEMORYDATAI/OMASK MLD MEMORYSERIALCOMMANDLOAD MPEG MOVINGPICTUREEXPERTSGROUP
O	ODC OPTICALDISCCONTROLLER OFTR OFFTRACKING OSCI OSCILLATORINPUT OSCO OSCILLATOROUTPUT OSD ONSCREENDISPLAY
P	P1~UP PORT PCD CDTRACKINGPHASEDIFFERENCE PCK PLLCLOCK PDVD DVDTRACKINGPHASEDIFFERENCE PEAK CAP.FORPEAKHOLD PLLCLK CHANNELPLLLOCK PLLCK PLLLOCK PWMCTL PWMOUTPUTCONTROL PWMDA PULSEWAVEMOTORDRIVEA PWMOA,B PULSEWAVEMOTOROUTA,B

INITIAL/LOGO	ABBREVIATIONS
R	RE READENABLE RFENV RFENVELOPE RFO RFPHASEDIFFERENCEOUTPUT RS (CD-ROM)REGISTERSELECT RSEL RFPOLARITYSELECT RST RESET RSV RESERVE
S	SBI0,1 SERIALDATAINPUT SBO0 SERIALDATAOUTPUT SBT0,1 SERIALCLOCK SCK SERIALDATAACLOCK SCKR AUDIOSERIALCLOCKRECEIVER SCL SERIALCLOCK SCLK SERIALCLOCK SDA SERIALDATA SEG0~UP FLSEGMENTOUTPUT SELCLK SELECTCLOCK SEN SERIALPORTENABLE SIN1,2 SERIALDATAIN SOUT1,2 SERIALDATAOUT SPDI SERIALPORTDATAINPUT SPDO SERIALPORTDATAOUTPUT SPEN SERIALPORTR/WENABLE SPRCLK SERIALPORTREADCLOCK SPWCLK SERIALPORTWRITECLOCK SQCK SUBCODEQCCLOCK SQCX SUBCODEQDATAREADCLOCK SRDATA SERIALDATA SRMADR SRAMADDRESSBUS SRMDT0~7 SRAMDATABUS0~7 SS START/STOP STAT STATUS STCLK STREAMDATAACLOCK STD0~UP STREAMDATA STENABLE STREAMDATAINPUTENABLE STSEL STREAMDATAPOARITYSELECT STVALID STREAMDATAVALIDITY SUBC SUBCODESERIAL SBCK SUBCODECLOCK SUBQ SUBCODEQDATA SYSCLK SYSTEMCLOCK

INITIAL/LOGO		ABBREVIATIONS
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

INITIAL/LOGO		ABBREVIATIONS
V	VBANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	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

11.2. Electrical Replacement Parts List

Notes:

*Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

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

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

*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

*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.

*All parts are supplied by CHPAVC.

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

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	■	RFKB76241CT	DIGITAL P.C.B.		E.S.D. BD75PU
	■	RFKB76241DNT	DIGITAL P.C.B.		E.S.D. BD75GN
	■	RFKB76241DCT	DIGITAL P.C.B.		E.S.D. BD75GC
	■	RFKB76241DAT	DIGITAL P.C.B.		E.S.D. BD75GA
	■	RFKB76241DTT	DIGITAL P.C.B.		E.S.D. BD75GT
	■	RFKB76241DWT	DIGITAL P.C.B.		E.S.D. BD75GW
	C51001	F1G1A1040006	10V 0.1U	1	
	C51002	F1G1A1040006	10V 0.1U	1	
	C51301	F1J0J106A020	6.3V 10U	1	
	C51302	F1G1C1030008	16V 0.01U	1	
	C51304	F1G1C1030008	16V 0.01U	1	
	C51305	F1G1C1030008	16V 0.01U	1	
	C51307	F1G1C1030008	16V 0.01U	1	
	C51308	F1G1C1030008	16V 0.01U	1	
	C51309	F1G1C1030008	16V 0.01U	1	
	C51311	F1G1C1030008	16V 0.01U	1	
	C51312	F1G1C1030008	16V 0.01U	1	
	C51315	F1G1A1040006	10V 0.1U	1	
	C51316	F1G1A1040006	10V 0.1U	1	
	C51318	F1G1A1040006	10V 0.1U	1	
	C51319	F1G1C1030008	16V 0.01U	1	
	C51320	F1G1A1040006	10V 0.1U	1	
	C51321	F1G1A1040006	10V 0.1U	1	
	C51322	F1G1A1040006	10V 0.1U	1	
	C51323	F1G1A1040006	10V 0.1U	1	
	C51327	F1G1A1040006	10V 0.1U	1	
	C51329	F1G0J1050007	6.3V 1U	1	
	C51332	F1G1H101A565	50V 100P	1	
	C51334	F1G1A1040006	10V 0.1U	1	
	C51335	F1G1C1030008	16V 0.01U	1	
	C51336	F1J0J106A020	6.3V 10U	1	
	C51389	F1G1A1040006	10V 0.1U	1	
	C52001	F1G0J1050007	6.3V 1U	1	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	C52003	F1G1A1040006	10V 0.1U	1	
	C52004	F1G1A1040006	10V 0.1U	1	
	C52005	F1G1A1040006	10V 0.1U	1	
	C52006	F1G1A1040006	10V 0.1U	1	
	C52007	F1G1A1040006	10V 0.1U	1	
	C52009	F1H0J4750004	6.3V 4.7U	1	
	C52010	F1J0J106A020	6.3V 10U	1	
	C52011	F1G0J1050007	6.3V 1U	1	
	C52013	F1G1A1040006	10V 0.1U	1	
	C52014	F1G1A1040006	10V 0.1U	1	
	C52015	F1G1A1040006	10V 0.1U	1	
	C52016	F1G1A1040006	10V 0.1U	1	
	C52017	F1G0J1050007	6.3V 1U	1	
	C52019	F1G1A1040006	10V 0.1U	1	
	C52020	F1G1A1040006	10V 0.1U	1	
	C52021	F1G1A1040006	10V 0.1U	1	
	C52023	F1G1C1030008	16V 0.01U	1	
	C52024	F1G1C1030008	16V 0.01U	1	
	C52026	F1G1A1040006	10V 0.1U	1	
	C52028	F1G1C1030008	16V 0.01U	1	
	C52029	F1J0J106A020	6.3V 10U	1	
	C52030	F1G1A1040006	10V 0.1U	1	
	C52031	F1G1A1040006	10V 0.1U	1	
	C52032	F1G1A1040006	10V 0.1U	1	
	C52033	F1G1A1040006	10V 0.1U	1	
	C52034	F1G1A1040006	10V 0.1U	1	
	C52035	F1G0J1050007	6.3V 1U	1	
	C52037	F1G1A1040006	10V 0.1U	1	
	C52039	F1G0J1050007	6.3V 1U	1	
	C52043	F1G1A1040006	10V 0.1U	1	
	C52045	F1G1A1040006	10V 0.1U	1	
	C52046	F1G1A1040006	10V 0.1U	1	
	C52047	F1G1A1040006	10V 0.1U	1	
	C52048	F1G1A1040006	10V 0.1U	1	
	C52049	F1G1A1040006	10V 0.1U	1	
	C52201	F1J0J106A020	6.3V 10U	1	
	C52204	F1G1A1040006	10V 0.1U	1	
	C52205	F1G1A1040006	10V 0.1U	1	
	C52206	F1G1A1040006	10V 0.1U	1	
	C52207	F1G1A1040006	10V 0.1U	1	
	C52208	F1G1A1040006	10V 0.1U	1	
	C52209	F1G1A1040006	10V 0.1U	1	
	C52210	F1G0J1050007	6.3V 1U	1	
	C52211	F1G1A1040006	10V 0.1U	1	
	C52212	F1G1A1040006	10V 0.1U	1	
	C52213	F1G1A1040006	10V 0.1U	1	
	C52214	F1G0J1050007	6.3V 1U	1	
	C52216	F1G1A1040006	10V 0.1U	1	
	C52217	F1G0J1050007	6.3V 1U	1	
	C52218	F1G1A1040006	10V 0.1U	1	
	C52219	F1G1A1040006	10V 0.1U	1	
	C52220	F1G1A1040006	10V 0.1U	1	
	C52221	F1G1A1040006	10V 0.1U	1	
	C52223	F1G1A1040006	10V 0.1U	1	
	C54016	F1G0J1050007	6.3V 1U	1	
	C54018	F1G1A1040006	10V 0.1U	1	
	C54019	F1G0J1050007	6.3V 1U	1	
	C54020	F1J0J106A020	6.3V 10U	1	
	C54022	F1G0J1050007	6.3V 1U	1	
	C54114	F1H1H102A004	50V 1000P	1	BD75GA/ GC/GN/ GW/GT
	C54115	F1H1H102A004	50V 1000P	1	BD75GA/ GC/GN/ GW/GT
	C55012	F1G1E102A086	25V 1000P	1	
	C55013	F1G1A104A012	10V 0.1U	1	
	C55014	F1J1C475A059	16V 4.7U	1	
	C55015	F1G1A104A012	10V 0.1U	1	
	C55020	F1H0J2250008	6.3V 2.2U	1	
	C55022	F2G0J221A065	6.3V 220U	1	
	C55023	F2G1C221A079	16V 220U	1	
	C55024	F1G1A104A012	10V 0.1U	1	
	C55025	F1G1C104A077	16V 0.1U	1	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	L58501	G1C4R7Z00014	COIL	1	
	LB55001	J0JYC0000107	COIL	1	
	LB55002	J0JYC0000107	COIL	1	
	LB55004	J0JHC0000109	COIL	1	
	LB56002	J0JYC0000070	COIL	1	
	LB56306	J0JYC0000070	COIL	1	
	LB56307	J0JYC0000070	COIL	1	
	LB56308	J0JYC0000070	COIL	1	
	LB56501	J0JYC0000070	COIL	1	
	LB56502	J0JYC0000070	COIL	1	
	LB56503	J0JYC0000070	COIL	1	
	LB56504	J0JYC0000070	COIL	1	
	LB56506	J0JYC0000070	COIL	1	
	P55001	K1MY45A00001	CONNECTOR (45P)	1	
	P55002	K1MY04AA0041	CONNECTOR (4P)	1	
	P55003	K1MN05AA0046	CONNECTOR (5P)	1	
	P55004	K1MN05AA0046	CONNECTOR (5P)	1	
	P58001	K1KY23AA0607	CONNECTOR (23P)	1	
	Q55002	B1ABCF000010	TRANSISTOR	1	E.S.D.
	Q56301	B1ABDF000026	TRANSISTOR	1	E.S.D.
	Q56302	B1CFGD000003	TRANSISTOR	1	E.S.D.
	Q58006	B1DGDC000002	TRANSISTOR	1	E.S.D.
	QR51001	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR51002	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR51003	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR51004	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR51005	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR51006	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR51301	B1GBCFJN0039	TRANSISTOR	1	E.S.D.
	QR58001	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR58040	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
	QR58041	B1GBCFQQ0015	TRANSISTOR	1	E.S.D.
	R51322	ERJ2GEJ103X	1/16W 10K	1	
	R51326	ERJ2GEJ103X	1/16W 10K	1	
	R51328	ERJ2RHD243X	1/16W 24K	1	
	R51330	ERJ2GEJ103X	1/16W 10K	1	
	R51334	ERJ2GEJ103X	1/16W 10K	1	
	R51358	ERJ2GEJ103X	1/16W 10K	1	
	R51361	ERJ2GEJ103X	1/16W 10K	1	
	R51362	ERJ2GEJ103X	1/16W 10K	1	
	R52003	ERJ2GEJ101X	1/16W 100	1	
	R52004	ERJ2RKF1000X	1/16W 100	1	
	R52005	ERJ2RKF2400X	1/16W 240	1	
	R52007	ERJ2GEJ101X	1/16W 100	1	
	R52010	ERJ2RKF1000X	1/16W 100	1	
	R52203	ERJ2GEJ101X	1/16W 100	1	
	R52204	ERJ2RKF2400X	1/16W 240	1	
	R55008	ERJ2GEJ123X	1/16W 12K	1	
	R55009	ERJ2GEJ273X	1/16W 27K	1	
	R55019	ERJ2GEJ102X	1/16W 1K	1	
	R55046	ERJ8RQJR22V	1/8W 0.22	1	
	R55047	ERJ8RQJR22V	1/8W 0.22	1	
	R55051	ERJ2GEJ122X	1/16W 1.2K	1	
	R55052	ERJ2GEJ102X	1/16W 1K	1	
	R55071	ERJ2GEJ473X	1/16W 47K	1	
	R55072	ERJ2GEJ473X	1/16W 47K	1	
	R55073	ERJ3EKF2402V	1/16W 24K	1	
	R55077	ERJ2GEJ102X	1/16W 1K	1	
	R55079	ERJ2GEJ103X	1/16W 10K	1	
	R55081	ERJ2GEJ473X	1/16W 47K	1	
	R55082	ERJ2GEJ102X	1/16W 1K	1	
	R56001	ERJ2RKF75R0X	1/16W 75	1	
	R56007	ERJ2RHD561X	1/16W 560	1	
	R56301	ERJ2GEJ273X	1/16W 27K	1	
	R56302	ERJ2GEJ101X	1/16W 100	1	
	R56501	ERJ2GEJ105X	1/16W 1M	1	
	R56502	ERJ2GEJ221X	1/16W 220	1	
	R56503	ERJ2RHD222X	1/16W 2.2K	1	
	R58010	ERJ2GEJ101X	1/16W 100	1	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	R58021	ERJ2GEJ101X	1/16W 100	1	
	R58039	ERJ2GEJ683X	1/16W 68K	1	
	R58042	ERJ2GEJ223X	1/16W 22K	1	
	R58043	ERJ2GEJ223X	1/16W 22K	1	
	R58111	ERJ2GEJ103X	1/16W 10K	1	
	R58434	ERJ2GEJ272X	1/16W 2.7K	1	
	R58436	ERJ3GEYJ390V	1/20W 39	1	
	R58449	ERJ2RHD152X	1/16W 1.5K	1	
	R58452	ERJ2RHD822X	1/16W 8.2K	1	
	R58453	ERJ2RHD103X	1/16W 10K	1	
	R58534	ERJ2GEJ272X	1/16W 2.7K	1	
	R58536	ERJ3GEYJ390V	1/20W 39	1	
	R58549	ERJ2RHD561X	1/16W 560	1	
	R58552	ERJ2RHD392X	1/16W 3.9K	1	
	R58553	ERJ2RHD103X	1/16W 10K	1	
	R58701	ERJ2GEJ472X	1/16W 4.7K	1	
	R58702	ERJ2GEJ822X	1/16W 8.2K	1	
	R59306	ERJ2RHD512X	1/16W 5.1K	1	
	R59307	ERJ2RHD512X	1/16W 5.1K	1	
	R59308	ERJ2GEJ473X	1/16W 47K	1	
	R59309	ERJ2GEJ333X	1/16W 33K	1	
	R59323	ERJ2GEJ103X	1/16W 10K	1	
	RX51001	D1H84724A024	RESISTOR-RESISTOR	1	
	RX51002	D1H81034A024	RESISTOR-RESISTOR	1	
	RX51303	D1H81034A024	RESISTOR-RESISTOR	1	
	RX51305	D1H81034A024	RESISTOR-RESISTOR	1	
	RX51306	D1H81034A024	RESISTOR-RESISTOR	1	
	RX51307	D1H84724A024	RESISTOR-RESISTOR	1	
	RX54002	D1H81824A024	RESISTOR-RESISTOR	1	
	RX55007	D1H83334A024	RESISTOR-RESISTOR	1	
	RX55008	D1H83334A024	RESISTOR-RESISTOR	1	
	RX55009	D1H81024A024	RESISTOR-RESISTOR	1	
	RX55010	D1H81034A024	RESISTOR-RESISTOR	1	
	RX56301	D1H82024A024	RESISTOR-RESISTOR	1	
	RX56302	D1H81034A024	RESISTOR-RESISTOR	1	
	RX56303	D1H8R0040009	RESISTOR-RESISTOR	1	
	RX56304	D1H8R0040009	RESISTOR-RESISTOR	1	
	RX58001	D1H81014A024	RESISTOR-RESISTOR	1	
	RX58004	D1H84734A024	RESISTOR-RESISTOR	1	
	T59301	EXC24CE900U	TRANSFORMER	1	
	X56501	H0J270500151	OSCILLATOR	1	