DVD Player

DVP9000S/00/69

Service
Service
Service

Service Manual

TABLE OF CONTENTS

CLASS 1
LASER PRODUCT

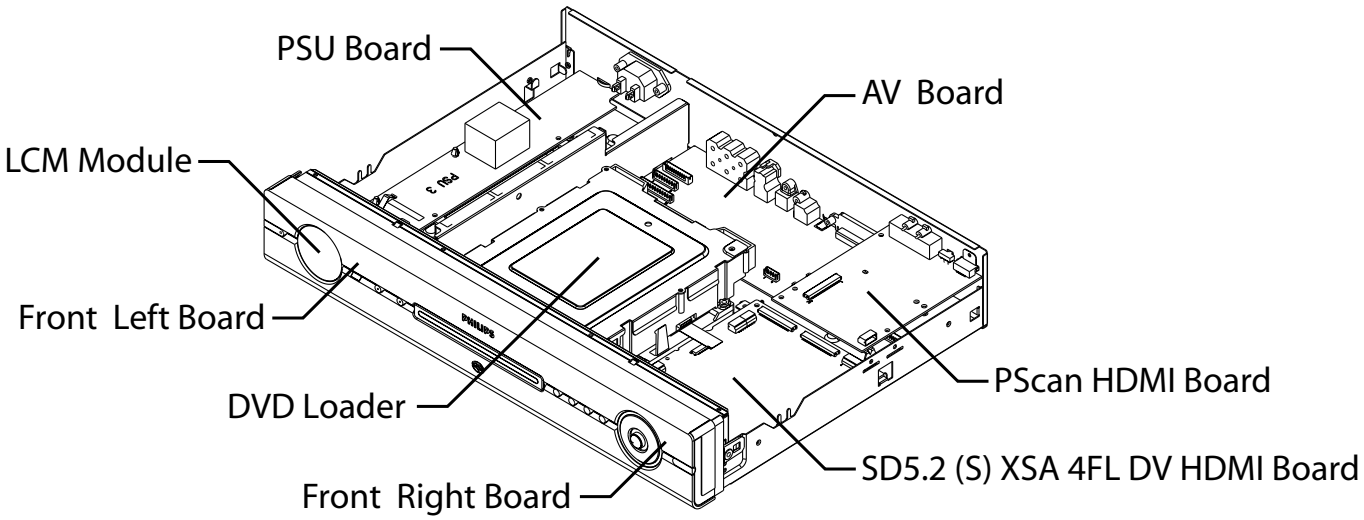
Published by BB0441 Service AV Systems Printed in The Netherlands Subject to modification

GB 3139 785 30880

Version 1.0

PHILIPS

LOCATION OF PC BOARDS



VERSION VARIATIONS:

Type /Versions: / Features & Board in used:	DVP9000S							
	/00	/69						
Aux-In								
Digital In								
TV-In								
Audio Out (2 Channel/6 Channel)	x	x						
Digital Out (Coaxial/Optical)	x	x						
Video Out (Video/S-Video)	x	x						
SCART	x							
Y/Pb/Pr (YUV) Component Video Output	x	x						
Progressive Scan	x	x						
Voltage Selector								
HDMI	x	x						

SPECIFICATIONS

GENERAL:

Mains voltage : 220-240V for /00
110-127V/220-240V for /69
Mains frequency : 50/60Hz
Power consumption : 25W
< 1W at Standby
Dimension centre unit : 435 x 79 x 315mm

AUDIO PERFORMANCE:

Output Voltage	:	2.0Vrms
Channel Unbalance (1kHz)	:	< 0.5dB
Crosstalk (1kHz)	:	115dB
Crosstalk (20Hz-20kHz)	:	100dB
Freq. Response (20Hz-20kHz)	:	< 0.2dB
THD (1kHz)	:	95dB
THD (20Hz-20kHz)	:	90dB

AUDIO FORMAT:

MPEG	:	Compressed Digital
Dolby Digital	:	16, 20, 24 bits
PCM	:	fs, 44.1, 48, 96 kHz
MP3 (ISO 9660)	:	96, 112, 128, 256 kbps & variable bit rate fs, 32, 44.1, 48 kHz

VIDEO PERFORMANCE:

Video Output [1] : $1.0V_{p-p}$

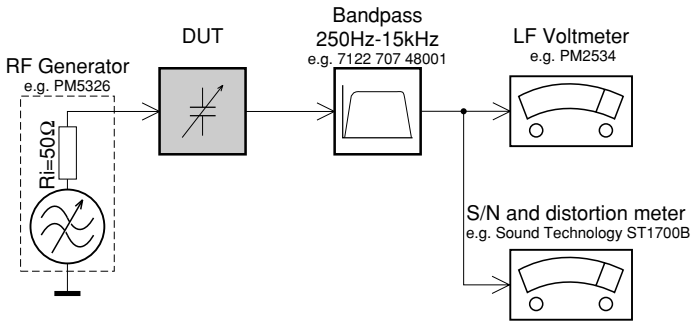
S-Video Output [1]
Y : $1.0V_{p-p}$
C : $0.3V_{p-p}$

Component Video Output [1]
Y : $1.0V_{p-p}$
PbPr : $0.7V_{p-p}$

[1] Output terminals to be terminated with 75Ω

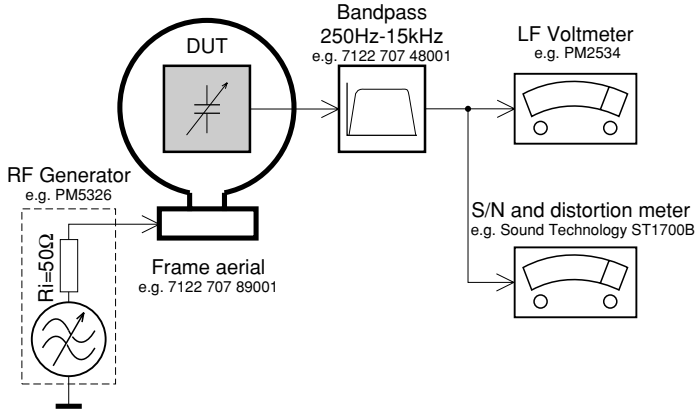
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

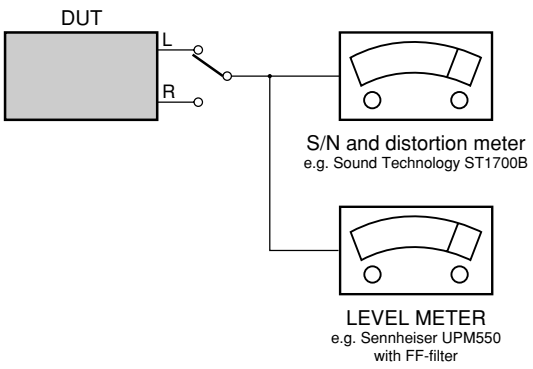
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

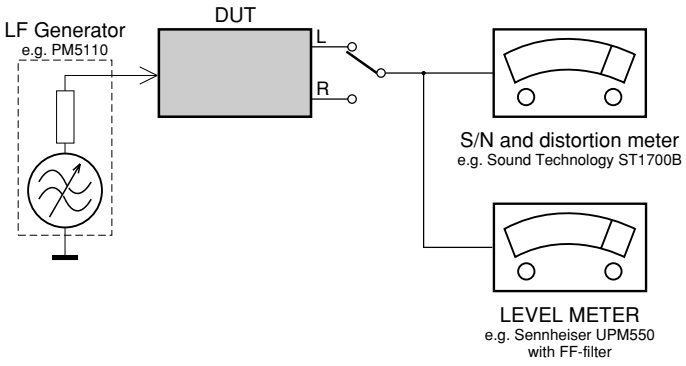
CD

Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



Recorder

Use Universal Test Cassette **CrO2** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071



SERVICE AIDS

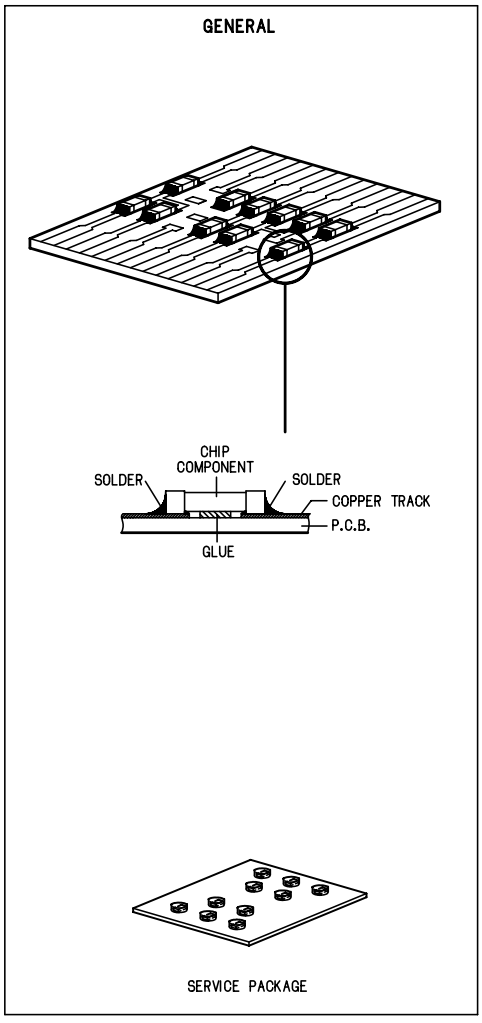
Service Tools:

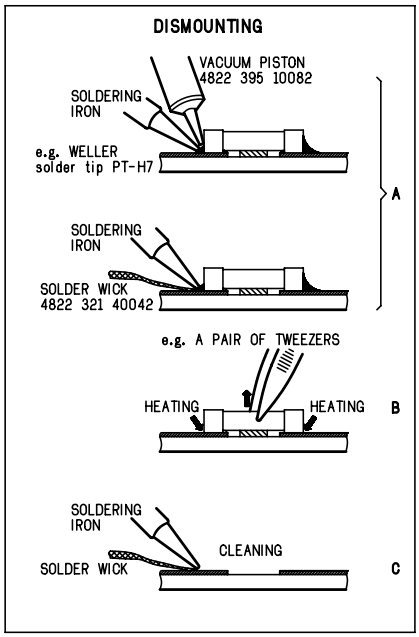
Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6 - T20 ..... 4822 395 50145
Torx driver T10 extended 4822 395 50423

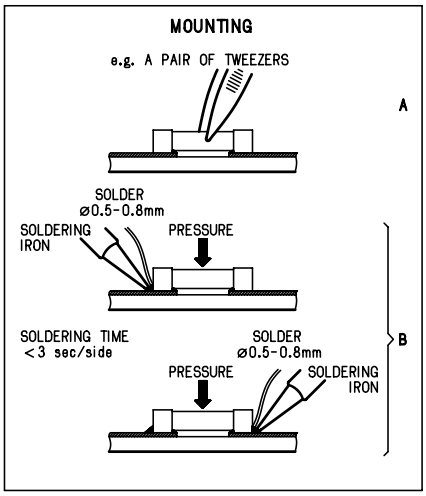
Compact Disc:

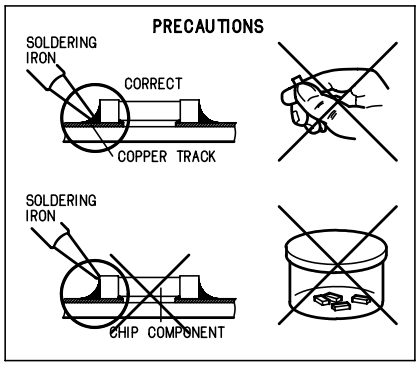
SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in Test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

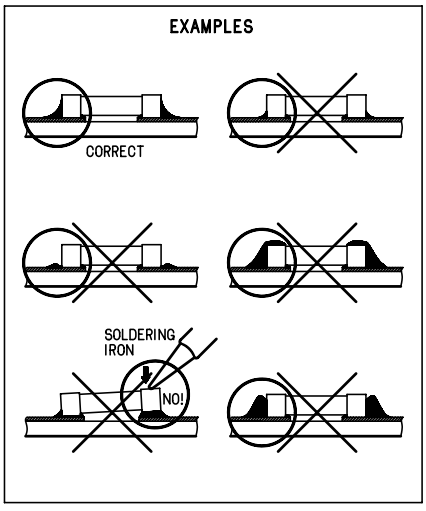
HANDLING CHIP COMPONENTS











ESD

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB) ESD PROTECTION EQUIPMENT:

Complete Kit ESD3 (small tablemat, wristband, connection box, extention cable and earth cable) 4822 310 10671
Wristband tester 4822 344 13999

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used

Safety components are marked by the symbol ⚠.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

De Veiligheidsonderdelen zijn aangeduid met het symbool ⚠

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utiliséés les piéces de rechange identiques à celles spécifiées.

Less composants de sécurité sont marqués ⚠

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Original zustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

Componenty di sicurezza sono marcati con ⚠

(GB)

After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA.

CLASS 1
LASER PRODUCT

(GB) Warning !

Invisible laser radiation when open.
Avoid direct exposure to beam.

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(SF) Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

(DK) Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(F)

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

DISMANTLING INSTRUCTIONS

Dismantling of the DVD Loader

1) The tray can be manually open by inserting a screw driver and push the lever in the direction as shown in Figure 1 to unlock the tray before sliding it out.

2) Slide out the tray and remove the Cover Tray assembly (pos 113 + pos 115 + pos 117) as shown in Figure 2.

3) Loosen 7 screws to remove the Cover Top (pos 197).
   - 2 screw each on the left & right side
   - 3 screws on the rear

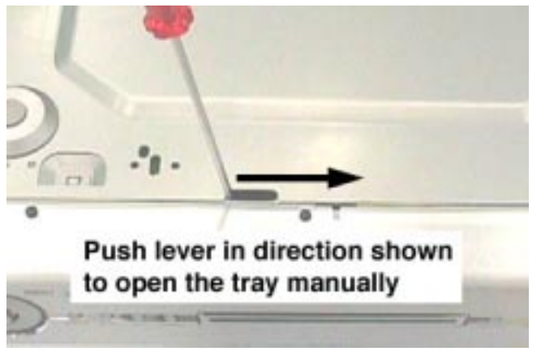


Figure 1

4) Loosen 4 screws D (see Figure 5) to remove the DVD Loader (pos 1003-0001).

5) Loosen 3 screws E (see Figure 5) to remove the Plate Shield (pos 191) from the DVD Loader.

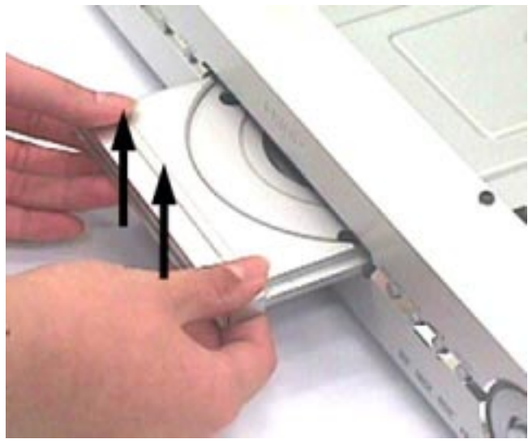


Figure 2

Dismantling of the PSCAN HDMI Board, AV Board, PSU Board and SD5.2 (S) XSA 4FL DV HDMI Board

1) Loosen 3 screws A (see Figure 3 & 4) to remove the PSCAN HDMI Board (pos 1006).

2) Loosen 7 screws B (see Figure 3) and uncatch C1 (see Figure 5) to remove the AV Board (pos 1002).

3) Loosen 2 screws G and uncatch 2 catches C2 (see Figure 5) to remove the PSU Board (pos 1004).

4) Loosen 4 screws F (see Figure 5) to remove the SD5.2 (S) XSA 4FL DV HDMI Board (pos 1003-1001).

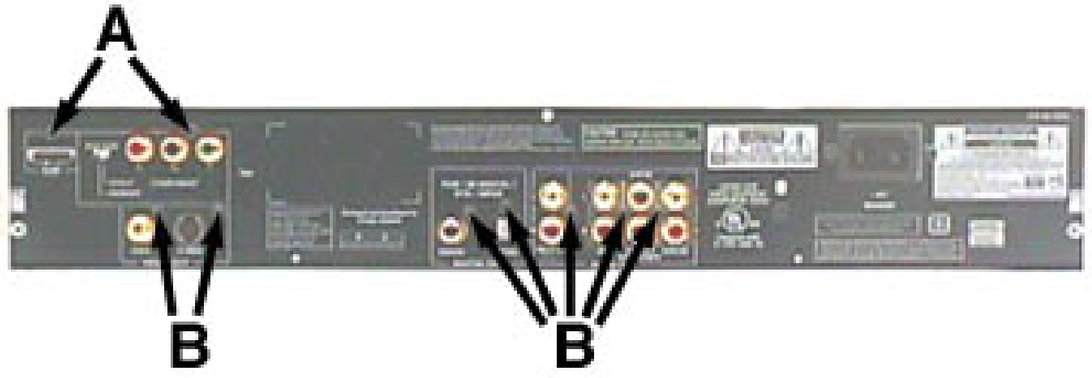


Figure 3

2-1

Figure 5

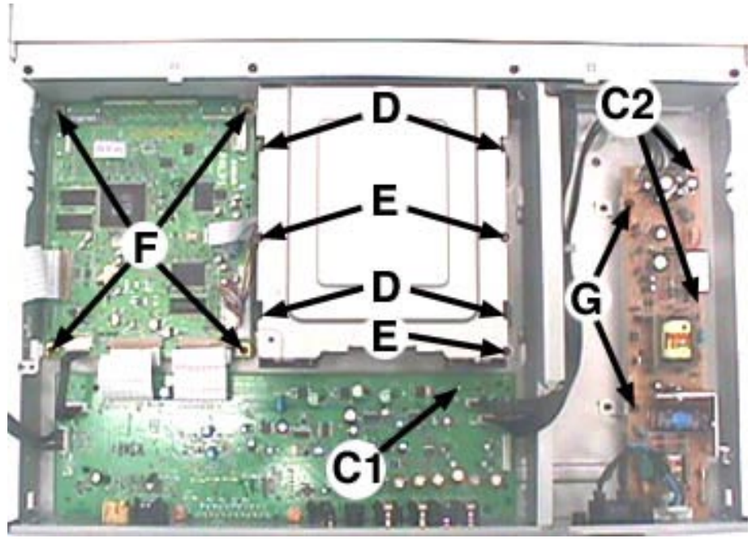


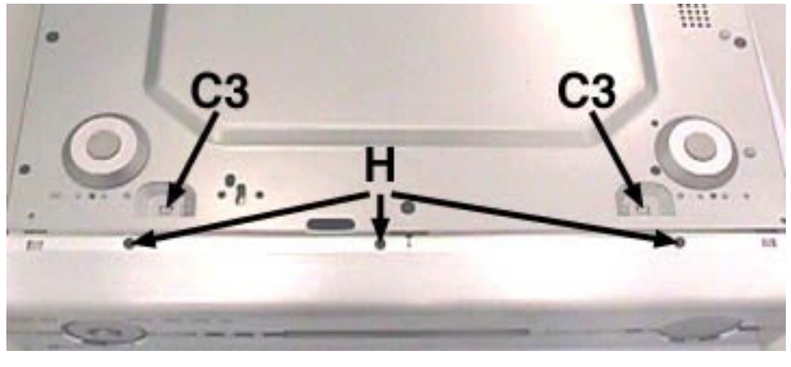
Figure 4

Detaching the Cabinet Front assembly

1) Loosen 7 screws H (see Figure 6 & 7) and uncatch 2 catches C3 (see Figure 7) to detach the Cabinet Front assembly from the Frame (pos 161) by sliding it out towards the front.
   - see Service position C

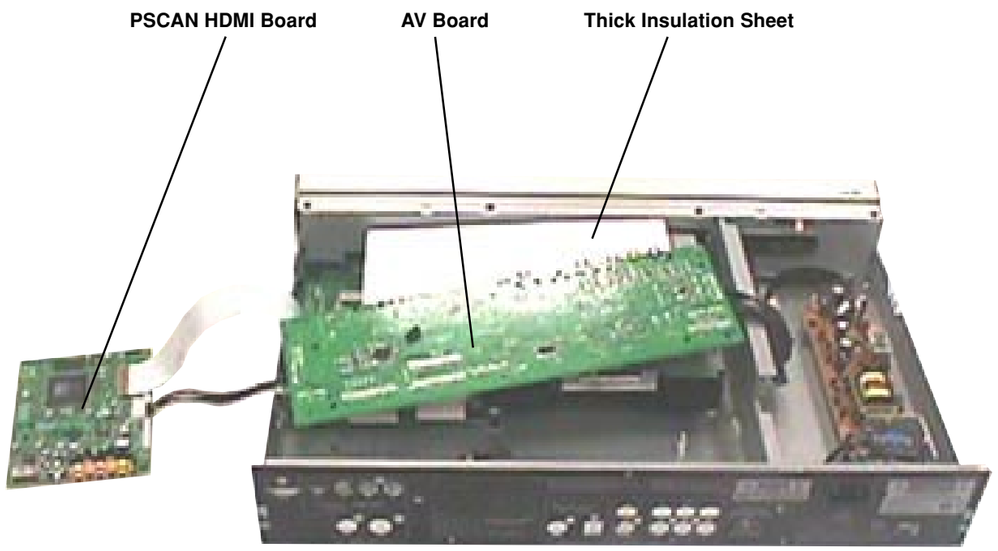
Figure 6

Figure 7



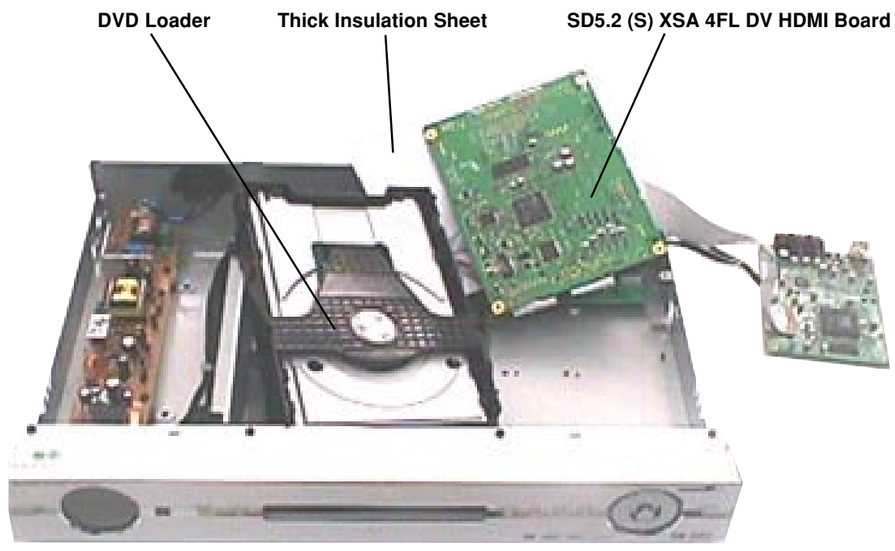
SERVICE POSITIONS

Service position A

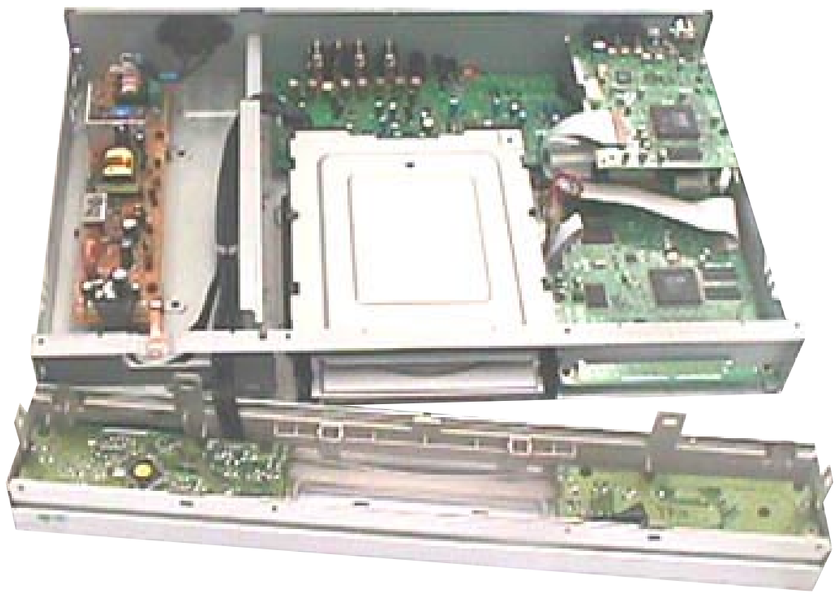


2-2

Service position B



Service position C



Diagnostic Software

1. Definitions and Abbreviations

Definitions

Control PC	Automatic test equipment, part of the production control system in the factory, to control the execution of Diagnostic Nuclei in the DVD player.
Diagnostic Nucleus	Part of the Diagnostic Software. Each nucleus contains an atomic and software independent diagnostic test, testing a functional part of the DVD player hardware on component level.
Script	Part of the Diagnostic Software. Each script contains a sequence of Diagnostic Nuclei to be executed.
Service PC	PC used by a service- or repairman to communicate with the Diagnostic Software in the DVD player.

Abbreviations

BHDS	Basic Hardware Diagnostic Software
BDS	Basic Diagnostic Software
FDS	Full Diagnostic Software
HSI	Hardware Software Interface
OSD	On Screen Display
PWB	Printed Wire Board
RC	Remote Control
ZiVa5	the single-chip DVD backend processor from LSI Logic
SACD	Super Audio CD
SD5.2	Standard Design DVD-SACD Module – 5th generation

2. Product Overview

The purpose of the DVD Diagnostic Software is to support the user (factory and service) in diagnosing the DVD player. The context of the diagnostic software consists of:

- Service PC, a personal computer with a terminal emulation program that emulates a simple ASCII terminal. The Service PC is connected to the RS232 port of the DVD player and is used for Level 2 / Second Line diagnostic mode. The Service PC is operated by a service personnel or repairman.
- Local Keyboard, input device of the DVD player hardware, used during power-on and during the execution of the Player Test Script.
- Test Pin, input device of the DVD player hardware, used during power-on.
- Local Display, output devices of the DVD player hardware, used by the Player Test Script and Dealer Test Script to output messages and test results.
- Control PC, a computer system in the factory connected to the RS232 port of the DVD player, used during Level 1 diagnostic mode to communicate with the Diagnostic Software (bi-directional).
- DVD Player Hardware, all the DVD player hardware which is subject to the Diagnostic Software.

The DVD has only one single RS232 port, implying that all interfaces using this port are mutually exclusive. The Full Diagnostic Software (FDS) is aimed to support service and repair and can present menus and receive commands via a Service PC.

The Diagnostic Software contains a large number of tiny Diagnostic Nuclei. Each nucleus contains an atomic and software independent diagnostic test, testing a functional part of the DVD player hardware on component level. Each Diagnostic Nucleus works directly on the DVD player hardware, no drivers will be used. Each Diagnostic Nucleus returns a Result indicating if and which error was detected (e.g. faulty SDRAM chip).

It is possible to combine these diagnostic nuclei in a Script to create a high level test like a player test, a script can be as simple as a sequence of executed Diagnostic Nuclei. The Diagnostic Software contains standard scripts for dealer and player test. Each script returns a Result indicating if and which error was detected (e.g. faulty module).

During power-on the Selector (part of the DVD boot sequence) will check the presence of certain triggers (signal on Test Pin, key combinations on local keyboard). Via the Selector the appropriate diagnostic mode will be activated:

Power-on condition	**Activate diagnostic mode:**		**Short Description**
	Name used in Factory	***Name used in Service***	
OPEN & PLAY key pressed	(Dealer Script)	Dealer test	Fully automatic stand-alone test without any user intervention resulting in one overall result: passed or not passed. No SDRAM tests are performed prior to DSW startup.
OPEN & STOP key pressed	Level 3 or Player test (Player Script)	First Line	Automatic test sequence with user intervention and use of screen/audio test device (i.e. a television set). The result will be an indication of which board is faulty. No SDRAM tests are performed prior to DSW startup.
Test pin active & 'C' character received from RS232 Port	Level 1 or Module test in production line	-	Externally (Control PC) controlled test sequence via a simple command line interface. Each command activates one Diagnostic Nucleus. SDRAM tests are performed prior to DSW startup.
Test pin active & 'M' character received from RS232 Port	Level 2 or Module test for repair	Second Line	Externally (Service PC) controlled test sequence via a simple menu driven interface. Each menu selection activates a Diagnostic Nucleus or a Standard Script. SDRAM tests are performed prior to DSW startup.

Note: Some players do not have a power-on key, in such cases, the player must be powered-on by connecting the power-cable.

The Selector, Command Handler and Menu Handler are the heart of the Diagnostic Software and will be referenced as the Diagnostic Engine in the context of this document. They form a framework in which Diagnostic Nuclei and standard Scripts can be added via a well-defined software interface. The actual contents of the Menu Handler are part of the FDS.

3. Product Functions

Dealer diagnostics (For I2C Master Modules only)

The dealer diagnostic mode can be activated by pushing the script activation keys during power-on. The script activation keys vary depending on the model used.

This test consists of running a predefined script (Dealer Test Script). The script controls the execution of a number of diagnostic tests. No external input is required during the execution of the script. During the execution a progress indicator will be displayed on the local display. At the end of the script one message is returned indicating if a failure in the DVD player is detected or not. The message will be displayed on the local display. No external test equipment is required.

DVD Project/Model	Dealer Script mode activation key
DVP900 – All series	Press and hold OPEN and PLAY key

First Line & Level 3 diagnostics (For I2C Master Modules only)

The First Line & Level 3 diagnostic mode can be activated by pushing the script activation keys during power-on. The script activation keys vary depending on the model used.

This test consists of running a predefined script (Player Test Script). The script controls the execution of a number of diagnostic nuclei. The first group of Diagnostic Nuclei in this script will check the local display and the local keyboard and will output the result on the local display before it continues with the remaining Diagnostic Nuclei of the script. The Diagnostic Nuclei for the readout of the error log and the Basic Engine will also be part of the predefined script. During execution of the script input from the local keyboard is required for confirmation of

certain steps. At the end of the script a message is returned indicating if a failure in one of the modules (Basic Engine, Digital PWB or Display PWB) is detected or not. The message will be displayed on the local display. The test will be done with a closed player and requires equipment for testing audio and video (e.g. a television set).

DVD Project/Model	Player Script mode activation key
DVP900– All series	Press and hold OPEN and STOP key

Level 1 diagnostics
The Level 1 diagnostic mode can be activated by making the test pin active (pull to 'L') during power-on and subsequently, sending a 'C' character to the RS232 port. The execution of Diagnostic Nuclei is under external control via a simple command line interface. There is no standard Level 1 Script embedded in the Diagnostic software. Each command activates one Diagnostic Nucleus. In case a Diagnostic Nucleus detects a failure it will try to give an indication via Result which component(s) or connection(s) is (are) failing. Result consists of an error number and an error string. These will be sent to the Control PC. The error string contains the textual equivalent of the error number extended with additional detailed error information. The required external test equipment will be part of the Control PC.

Second Line & Level 2 diagnostics
The Second Line & Level 2 diagnostic mode will be activated by making the test pin active during power-on and sending a 'M' character to the RS232 port. The execution of Diagnostic Nuclei is under external control via the terminal program on the Service PC with a simple menu driven interface. In case a Diagnostic Nucleus detects a failure it will try to give an indication via Result of which component(s) or connection(s) is(are) failing. Result consists of an error number and an error string. These will be sent to the service PC. The error string contains the textual equivalent of the error number extended with additional detailed error information. The required external test equipment will be part of the standard repair suite.

4. Functional Requirements

Diagnostic Engine
The diagnostic Engine consists of the following objects:
- Selector (partly implemented in the DVD boot sequence)
- Command Handler
- Menu Handler

The actual contents of the Menu Handler are part of the FDS.

Scripts
Each script controls the execution of Diagnostic Nuclei. There is no direct interaction from the script with the hardware. A script can be a sequence of Diagnostic Nuclei and can also contain branches and loops. Results of the execution of a Script are given back to the user. The Scripts will be embedded in the ROM of the DVD player and will be written in C-code as part of sources of the Diagnostic Software (there is no script interpreter).

The following script objects are defined for the Basic Diagnostic Software:
- Dealer Test Script
- Player Test Script

Diagnostic Nuclei
Each nucleus contains an atomic and independent diagnostic test, testing a functional part of the DVD player hardware on component level. Each Nucleus returns a result message to its caller. Some tests (e.g. generating a color bar) can only return an "OK" result. Internal communication will be done via a uniform interface between the diagnostic Engine, Scripts and the Diagnostic Nuclei.

The diagnostic Engine can only operate if a certain (minimal) set of hardware is functioning properly. To test this set of hardware, a set of basic diagnostic nuclei is embedded in the DVD player. Each basic diagnostic nucleus will only test that part of the hardware which is required for execution of the diagnostic Engine, e.g. a RAM test will only test that part of RAM that is used by the diagnostic engine. After the Diagnostic Engine is operational it is possible to do a full RAM diagnostic. All basic diagnostic nuclei start with prefix 'Basic'.

In the overview each Diagnostic Nucleus consists of a reference number, a reference name and remarks. Reference number and name are coupled and one of them is enough for unique identification.

Since this document caters to more than one SD module, and not all modules support the same set of test nuclei, a note is placed in the remarks of each test to indicate whether this applies to a specific module or not. Otherwise it is assumed that the test is supported by all platforms.

Basic Diagnostic Nuclei

Ref. #	Reference Name	Remark
1	BasicSpAcc	Serial port Access test/initialization
2	CompProcInfo	Display processor specific info (LOR register, Chip Revision)

Processor and Peripherals

Ref. #	Reference Name	Remark
6	PapChksFl	Calculate and Verify Checksum FLASH
7a	PapUclkAclkCdda	External uClock A_CLK in CD-DA mode (SD5.2 only)
7b	PapUclkAclkDvd	External uClock A_CLK in DVD mode (SD5.2 only)
7c	PapUclkAclkDvd96	External uClock A_CLK in DVD (96kHz) mode (SD5.2 only)
8a	PapSgsAclkCdda	Internal PLL CLK in CD-DA mode
8b	PapSgsAclkDvd	Internal PLL CLK in DVD mode
8c	PapSgsAclkDvd96	Internal PLL CLK in DVD (96kHz) mode
10	PapFlashWrAcc	Tests Backend flash write access function
11	PapI2cNvram	I2C NVRAM access
12	PapI2cDisp	I2C / Sio Bus - Display PWB communications check
13	PapUdeEcho / PapAtapiEcho	UDE Echo (SD5.2) / ATAPI bus echo (SD5.12/SD5.31)
14	PapUdePass	Enter UDE Pass-through mode (SD5.2 only)
15	PapNvramWrR	NVRAM Write Read
62	PapChksSum	Show checksums stored in flash

Components

Ref. #	Reference Name	Remark
16	CompSdramWrR	SDRAM Write Read

Audio

Ref. #	Reference Name	Remark
18a	AudioDeemp0On	Audio Deemphasization 0 On
18b	AudioDeemp0Off	Audio Deemphasization 0 Off
18c	AudioDeemp1On	Audio Deemphasization 1 On
18d	AudioDeemp1Off	Audio Deemphasization 1 Off
18e	AudioDeemp0TristateOn	Audio Deemphasization 0 Tristate On
18f	AudioDeemp0TristateOff	Audio Deemphasization 0 Tristate On
18g	AudioDeemp1TristateOn	Audio Deemphasization 1 Tristate On
18h	AudioDeemp1TristateOff	Audio Deemphasization 1 Tristate Off
19a	AudioMuteOn	Audio Mute On
19b	AudioMuteOff	Audio Mute Off
20a	AudioPinkNoiseOn	Audio Pinknoise On
20b	AudioPinkNoiseOff	Audio Pinknoise (or beep tone) Off
21a	AudioSineOn	Audio Sine signal On/Off
21b	AudioSineBurst	Audio Sine signal Burst

Video

Ref. #	Reference Name	Remark
22a	InitProgressiveBoard	Initialize Progressive Scan Board
23a	VideoColDencOnPAL	Colourbar (PAL) DENC On
23b	VideoColDencOff	Colourbar DENC/Digital Video Off
23c	VideoColDencOnNTSC	Colourbar (NTSC) DENC On
23d	AudioVideoHDMIon	Audio Video HDMI On
23e	AudioVideoHDMIoff	Audio Video HDMI Off
24a	VideoProgMPEGon	Progressive - Digital Video Colour bar ON (SD5.2 only)

24b	VideoYuvMPEGon	Enhanced YUV - Digital Video Colour bar ON
25a	VideoScartLo	Scart Low (SD5.2 only)
25b	VideoScartMi	Scart Medium (SD5.2 only)
25c	VideoScartHi	Scart High (SD5.2 only)
54	VideoScartSwComm	Scart Switch communication (SD5.2 only)
55a	VideoScartSwDvd	Scart Switch Dvd (SD5.2 only)
55b	VideoScartSwPass	Scart Switch Pass-through (SD5.2 only)
57a	VideoScartPinLo	PIO-pins used for Scart-switching
57b	VideoScartPinMi	PIO-pins used for Scart-switching
57c	VideoScartPinHi	PIO-pins used for Scart-switching
61a	VideoColOutRGB	Enable Video Output to RGB
61b	VideoColOutYUV	Enable Video Output to YUV

DisplayPWB (slave processor)

Ref. #	Reference Name	Remark
26	DispVer	Version number (SD5.2 only)
27	DispKeyb	Keyboard (SD5.2 only)
28	DispRc	Remote Control (SD5.2 only)
29	DispLed	LEDs (SD5.2 only)
30a	DispDisplay	VFT Display test (SD5.2 only)
30b	DispLCDisplay	LCD display test (SD5.2 only)
30c	DispLCDBkLight	LCD Backlight test (SD5.2 only)
60	DispP50	P50 loopback test (SD5.2 only)

Log (error logging in NVRAM)

Ref. #	Reference Name	Remark
31	LogReadErr	Read last Errors
32	LogReadBits	Read errors Bits
33	LogReset	Reset

Miscellaneous

Ref. #	Reference Name	Remark
34	MiscReadConfig	Read Configuration area from NVRAM
35	MiscNvramReset	NVRAM Reset
36	MiscNvramMod	Modify NVRAM contents
46	MiscApplVer	Read version of application software
47a	MiscTrayOpenNr	Read the number of times the tray opened
47b	MiscPowerOnTime	Read the total time the player's power has been on
47c	MiscPlayTimeCddaVcd	Read the Playtime of CDDA and VCD discs
47d	MiscPlayTimeDvd	Read the Playtime of DVD discs

Basic Engine

Ref. #	Reference Name	Remark
37	BeVer	Version number
38a	BeFocusOn	Focus On
38b	BeFocusOff	Focus Off
39a	BeDiscmotorOn	Discmotor On
39b	BeDiscmotorOff	Discmotor Off
40a	BeRadialOn	Radial control On
40b	BeRadialOff	Radial control Off
41a	BeSledgeIn	Sledge Inwards
41b	BeSledgeOut	Sledge Outwards
42a	BeGroovesIn	jump Grooves to Inside
42b	BeGroovesMid	jump Grooves to Middle
42c	BeGroovesOut	jump Grooves to Outside
43a	BeTrayIn	Tray In
43b	BeTrayOut	Tray Out
44	BeReset	Reset Basic Engine
58a	LaserCdOn	CD Laser on

58b	LaserCdOff	CD Laser off
58c	LaserDvdOn	DVD Laser on
58d	LaserDvdOff	DVD Laser off

Furore IC

Ref. #	Reference Name	Remark
62	Furore_SdramWrR	Furore SDRAM Write Read test (SD5.2 only)
63	Furore_SdramWrRFast	Furore SDRAM interconnection test (SD5.2 only)
64	Furore_Id	Furore version ID check (SD5.2 only)
83	Furore_Reset	Furore reset (SD5.2 only)
84a	Furore_High	Sets Furore output pins DSD_PCM0-9 to high (SD5.2 only)
84b	Furore_Low	Sets Furore output pins DSD_PCM0-9 to low (SD5.2 only)

Audio DAC related

Ref. #	Reference Name	Remark
65	DAC_I2C	Resets DAC and check I2C communication with DAC (SD5.2 only)
66a	DAC_I2CEnable	Enable I2C communication to AV board (SD5.2 only)
66b	DAC_I2CDisable	Disable I2C communication to AV board (SD5.2 only)
67a	DAC_ClockInternal	Uses internal clock from monoboard for DAC (256fs) (SD5.2 only)
67b	DAC_ClockExternal	Uses external clock for DAC (384fs) (SD5.2 only)
68a	DAC_AudioPreMuteOn	Enable Audio Pre-mute pin (SD5.2 only)
68b	DAC_AudioPreMuteOff	Disable Audio Pre-mute pin (SD5.2 only)
69a	DAC_CenterOn	Enable Center on pin (SD5.2 only)
69b	DAC_CenterOff	Disable Center on pin (SD5.2 only)
79	DAC_Reset	Resets DAC (SD5.2 only)
80a	DAC_ModeCDDA	Sets DAC to CDDA mode (SD5.2 only)
80b	DAC_ModeDVD48	Sets DAC to DVD mode (48kHz) (SD5.2 only)
80c	DAC_ModeDVD96	Sets DAC to DVD mode (96kHz) (SD5.2 only)
80d	DAC_ModeDSD	Sets DAC to DSD mode (SD5.2 only)
81a	DAC_LowPowerStandbyOn	Enable Low Power Standby (SD5.2 only)
81b	DAC_LowPowerStandbyOff	Disable Low Power Standby (SD5.2 only)
82a	DAC_UpsamplingFreq192k	Sets Upsampling frequency to 192kHz (SD5.2 only)
82b	DAC_UpsamplingFreq96k	Sets Upsampling frequency to 96kHz (SD5.2 only)
82c	DAC_UpsamplingOn	Enable upsampling (SD5.2 only)
82d	DAC_UpsamplingOff	Disable upsampling (SD5.2 only)

Basic Engine - Special Diagnostics

Ref. #	Reference Name	Remark
70	BedReadFlashID	Read flash memory manufacturer and device ID
71	BedCalcRomChksum	Calculate ROM checksum

RS232

Ref. #	Reference Name	Remark
93a	Rs232cI2cCheck	RS232 I2C communication check
93b	Rs232TxRxCheck	RS232 transmit receive check
93c	Rs232cCtsRtsCheck	RS232 Cts Rts check
93d	Rs232cIrPortCheck	RS232 port check
93e	Rs232cStbyCtrlCheck	RS232 standby control check

5. Description of Diagnostic Engine

Selector

During initialization of the Diagnostic Software the Selector will first execute the required Basic Diagnostic Nuclei (nuclei of which the names start with the word “Basic”) to ensure correct operation. In case one of the basic diagnostics fails an error code and message will be communicated to the outside world via the RS232. In case all basic diagnostics are passed successfully, the selector will activate the appropriate diagnostic mode.

Command Handler
The Command Handler handles all commands from the Control PC. Commands will be received as ASCII strings via the RS232 port. All commands received is interpreted by the Command Handler and only correct commands result in the execution of the matching Diagnostic Nucleus. Illegal commands result in an error message to the Control PC.

Menu Handler
The Menu Handler (part of the Full Diagnostic Software) handles all menus and selections to and from the Service PC. The interface consists of simple text menus with sub-menus. A menu selection results in the execution of the matching Diagnostic Nucleus. Only valid menu selections will be accepted.

6. Description of Script Objects

Dealer test (for I2C Master Modules Only)
The Dealer Test Script object performs the Dealer test by executing a few Diagnostic Nucleus which do not need any user intervention and are meaningful on a stand alone DVD player. During the execution of the Dealer test a progress indicator will be displayed on the local display.

In general the Diagnostic Nuclei with a large test scope (i.e. testing many components at once) will be executed first.

When a Diagnostic Nucleus detects a fault a message indicating that the test is not passed will be displayed on the local display [ERROR] and the Dealer test will terminate. If all Diagnostic Nuclei are passed successfully a message indicating that the test is passed [PASS] will be displayed on the local display and the Dealer test will terminate. The only way to continue after termination is via a power down of the DVD player.

Player test (for I2C Master Modules Only)
The Player Test Script object performs the Player test by executing all available Diagnostic nuclei which are meaningful on a DVD player which is connected to audio/video test equipment (e.g. a television set). Some Diagnostic Nuclei require user intervention.

The first phase will check the following modules:
- Display PWB (communication, display, backlight, LEDs, keyboard, RC, P50)
- Basic Engine (communication, mechanical)
- Digital PWB (all components)

For each module all the available Diagnostic Nuclei which are meaningful for that module will be executed. Some Diagnostic Nuclei require user intervention. After all tests have been executed an indication will be given on the local display which module is most likely to be faulty. Also, the error code of the last detected error will be displayed. To continue, push the PLAY key on the local keyboard, the second phase will be entered automatically. The test of the module Display PWB consists of the Diagnostic Nuclei PapI2cDisp, DispDisplay, DispLCDisplay, DispLCDBkLight , DispLed, DispKeyb and DispRc and can be aborted at any moment by switching the power off.

The second phase is the read out of the error log and error bits from the NVRAM. Only a part of the information will be displayed on the local display at the time. With the keys: STOP key and OPEN/CLOSE (EJECT) key, it will be possible to walk through the whole error log and bits in a controlled way. The loop phase can be entered by pushing the PLAY key on the local keyboard.

The loop phase will check the following modules:
- Display PWB (communication)
- Basic Engine (communication)
- Digital PWB (all components)

For each module all the available Diagnostic Nuclei which are meaningful for that module will be executed. None of the Diagnostic Nuclei require any user intervention. After all tests have been executed an indication will be given on the local display which module is most likely to be faulty. Also, the error code of the last detected error will be displayed. A loop counter on the local display will be incremented and the loop phase will start all over again.

7. Description of Diagnostic Nucleus Objects

BasicSpAcc
This is a Basic Diagnostic Nucleus required for correct operation of the Diagnostic Software.
Checks and initializes RS232 port and outputs a message that the Diagnostic software has been started.

CompProcInfo
Reads and display processor specific information. This platform specific function allows the user to read certain registers in the chip at runtime that would be helpful in getting info on the current chip used. For ZiVA5, the Latched-On-Reset register contents and the Chip Revision register contents are read and displayed.

PapChksFlash
Calculates and verifies the checksum of the backend FLASH or ROM. This includes the entire binary ROM image checksum.

PapUclkAclkCdda, PapUclkAclkDvd, PapUclkAclkDvd96 (for SD5.2 only)
Diagnostic Nucleus PapUclkAclkCdda switches clock A_CLK from the microclock to 16.93 MHz(CD_DA).
Diagnostic Nucleus PapUclkAclkDvd switches clock A_CLK from the microclock to 18.43 MHz(DVD).
Diagnostic Nucleus PapUclkAclkDvd96 switches clock A_CLK from the microclock to 36.86 MHz(DVD).
Correct operation cannot be detected by the Diagnostic Software but must be checked with external equipment (e.g. a frequency counter).

Note: This nucleus will only work if the external clock is available on board.

PapSgsAclkCdda, PapSgsAclkDvd, PapSgsAclkDvd96
Diagnostic Nucleus PapSgsAclkCdda switches the PCM clock to 16.93MHz(CD_DA).
Diagnostic Nucleus PapSgsAclkDvd switches the PCM clock to 18.43 MHz(DVD).
Diagnostic Nucleus PapSgsAclkDvd96 switches the PCM clock to 36.86 MHz(DVD).

Correct operation cannot be detected by the Diagnostic Software but must be checked with external equipment (e.g. a frequency counter).

PapFlashWrAcc
Reads out the Flash ROM's Chip Identification Number. This nucleus tests the write access by writing a defined sequence of data to the FLASH chip, to be able to read the FLASH ID number.

PapI2cNvram
Checks the I2C interface with the NVRAM by reading from an arbitrary address.

PapI2cDisp (for SD5.2 only)
Checks the I2C or SIO bus interface with the slave processor on the display PWB with the echo command.

PapUDEEcho (SD5.2) / PapAtapiEcho (SD5.12/SD5.31)
Checks the UDE / ATAPI interface to the basic engine with an 'echo' command. This tests the hardware communications interface between the loader and the backend processor.

PapUDEPass (for SD5.2 only)
Switches the RS232 port and the UDE port in pass-through mode. The only way to exit this nucleus is via a power off of the DVD player.

PapNvramWrR
Non destructive pattern test (checker board) of **all** locations in the NVRAM. This Nucleus can detect stuck at faults and permanent coupling errors in the NVRAM chip.

VidPortOutAA, VidPortOut55 (for SD5.2 only)
Writes the value 0xAA to the Digital Video Interface port of the ZiVa5 ITU-656 ports.
Writes the value 0x55 to the Digital Video Interface port of the ZiVa5 ITU-656 ports.

AudioMuteOn, AudioMuteOff
Diagnostic Nucleus AudioMuteOn switches the audio mute on.
Diagnostic Nucleus AudioMuteOff switches the audio mute off.

Correct operation cannot be detected by the Diagnostic Software but must be checked externally.

Note: The audio will be muted by the DAC.

AudioPinkNoiseOn, AudioPinkNoiseOff
Diagnostic Nucleus AudioPinkNoiseOn will generate a pink noise internally on the ZiVa5 chip, which will be passed to the DAC where it is converted to an analogue audio signal.
Diagnostic AudioPinkNoiseOff will switch off the pink noise generated with AudioPinkNoiseOn.
The signal will also be passed to the digital outputs. For a 6 channel player the signal must be available on all 6 analogue audio channels.

Correct operation cannot be detected by the Diagnostic Software but must be checked externally.

AudioSineOn, AudioSineBurst
Nucleus AudioSineOn will generate a sine signal of 1 kHz on the analogue output. The sine signal digital data are stored in the audio buffer in the SDRAM, passed through the audio decoder and without any further processing to the audio DAC where it is converted to an analogue audio signal.
The signal will also be passed to the digital outputs.

Correct operation cannot be detected by the Diagnostic Software but must be checked externally. The sine signal can be stopped by pressing the STOP key on the DVD player or by sending a '#' character via hyperterminal.

Nucleus AudioSineBurst will generate a sine signal of 1 kHz on the analogue output that lasts for about four seconds. The generation of the signal is the same as in AudioSineOn.

Correct operation cannot be detected by the Diagnostic Software but must be checked externally.

Note: In the player script the test AudioSineOn will be used.

VideoColDencOnPAL, VideoColDencOff, VideoColDencOnNTSC
Diagnostic Nucleus VideoColDencOnPAL enables colour bar (PAL format) in the DENC in the ZiVa5 chip.
Diagnostic Nucleus VideoColDencOff disables colour bar in the DENC and the digital video outputs in the ZiVa5 chip.
Diagnostic Nucleus VideoColDencOnNTSC enables colour bar (NTSC format) in the DENC in the ZiVa5 chip.
The signal must be simultaneously available on the RGB, Y/C and CVBS outputs. The RGB and CVBS signals will be present on the SCART, while the Y/C signal will only be available on the Y/C connector.

Correct operation cannot be detected by the Diagnostic Software but must be checked externally.

VideoProgMPEGon, VideoYuvMPEGon (for SD5.2 only)
VideoProgMPEGon outputs a colourbar pattern on the TV using the external progressive board connected to the DVD module.
VideoYuvMPEGon outputs a colourbar pattern on the TV using the external "enhanced-YUV" board connected to the DVD module.

VideoScartLo, VideoScartMi, VideoScartHi (for SD5.2 only)
VideoScartLo steers pin16 on the SCART connector with the value Low (0 to 2V)
VideoScartMi steers pin16 on the SCART connector with the value Medium (4.5 to 7V)
VideoScartHi steers pin16 on the SCART connector with the value High (9.5 to 12V).

Correct operation cannot be detected by the Diagnostic Software but must be checked externally.

DispVer (for SD5.2 only)
Gets the version number of the slave processor on the Display PWB.

DispKeyb (for SD5.2 only)
Checks that all keys will be pressed once (arbitrary sequence). Feed back will be given via the local display for each key that has been pressed.

DispRc (for SD5.2 only)
Displays Header, System and Command code for each received RC code on the local display.. The remote control test can be left by pressing the PLAY key on the local keyboard.

DispLed (for SD5.2 only)
Lights all local LEDs until the PLAY key on the local keyboard is pressed.

DispDisplay, DispLCDisplay, DispLCDBacklight (for SD5.2 only)
- For VFT-display only: Displays test patterns on the local display until the PLAY key on the local keyboard is pressed. Test patterns can be walked through by pressing the OPEN/CLOSE (EJECT) key (next pattern) .
- For LCD-display only: Displays test patterns on the local display until the PLAY key on the local keyboard is pressed. Test patterns can be walked through by pressing the OPEN/CLOSE (EJECT) key (next pattern) .
- For LCD-display only: Sets the backlight intensity to different levels (LOW – DIM – BRIGHT) until the PLAY key on the local keyboard is pressed. Test patterns can be walked through by pressing the OPEN/CLOSE (EJECT) key (next pattern) .

LogReadErr
Read error log from NVRAM and output the data as error numbers only.

LogReadBits
Read error bits from NVRAM and output the numbers of the error bits which are set. Each error bit will get a number, starting from 1 (bit 0 in first byte of error bit area) to N*8 (bit 7 in last byte of error bit area) where N is the number of bytes in the error bit area.

LogReset
Reset all error log and bits in the NVRAM.

MiscReadConfig
Read configuration area from NVRAM and output as raw data.

MiscNvramReset
Reset the whole NVRAM to zero.

MiscNvramMod
Read/Modify any location in NVRAM.

BeVer
Get version number of the Basic Engine / Loader used.

BeFocusOn, BeFocusOff
Diagnostic Nucleus BeFocusOn puts the laser of the BE into focus (focus loop).
Diagnostic Nucleus BeFocusOff switches the focus loop off.

BeDiscmotorOn, BeDiscmotorOff
Diagnostic Nuclei BeDiscmotorOn switches the disc motor (=spindle motor) on.
Diagnostic Nuclei BeDiscmotorOff switches the disc motor (=spindle motor) off.

BeRadialOn, BeRadialOff
Diagnostic Nuclei BeRadialOn closes the radial loop.
Diagnostic Nuclei BeRadialoff opens the radial loop.

BeSledgeIn, BeSledgeOut
Diagnostic Nuclei BeSledgeIn moves the sledge fully inwards.
Diagnostic Nuclei BeSledgeOut moves the sledge fully outwards.

BeGroovesIn, BeGroovesMid, BeGroovesOut
Diagnostic Nuclei BeGroovesIn lets the laser spot jump to the inside limit of the disc.
Diagnostic Nuclei BeGroovesMid lets the laser spot jump to the middle of the disc.
Diagnostic Nuclei BeGroovesOut lets the laser spot jump to the outside limit of the disc.

BeTrayIn, BeTrayOut
Diagnostic Nucleus BeTrayIn closes the disc tray.
Diagnostic Nucleus BeTrayOut opens the disc tray.

BeReset
Resets the Basic Engine.

MiscApplVer
Read the version of the application software from a fixed location in the NVRAM.

MiscTrayOpenNr, MiscPowerOnTime, MiscPlayTimeCddaVcd, MiscPlayTimeDvd
MiscTrayOpenNr reads the number of times the tray has opened
MiscPowerOnTime reads the total time the player has been powered on
MiscPlayTimeCddaVcd reads the total playtime of CDDA and VCD discs
MiscPlayTimeDvd reads the total playtime of DVD discs

VideoScartSwComm (for SD5.2 only)
VideoScartSwComm checks the I2C interface with the scart switch on the Audio/Video board.

VideoScartSwDvd, VideoScartSwPass (for SD5.2 only)
VideoScartSwDvd and VideoScartSwPass sets the scart switch IC on the Audio/Video board to give out DVD signal or pass-through the auxiliary Scart input.

VideoScartPinLo. VideoScartPinMi, VideoScartPinHi
VideoScartPinLo, VideoScartPinMi and VideoScartPinHi are used to toggle the PIO-pins that were used in DVDv2A to set the level of the Scart-pin 8. These PIO-pins may have a different meaning.

LaserCdOn, LaserCdOff, LaserDvdOn, LaserDvdOff
Diagnostic Nucleus LaserCdOn/LaserDvdOn puts the selected laser on.
Diagnostic Nucleus LaserCdOff/LaserDvdOff switches the laser off.

DispP50 (for SD5.2 only)
DispP50 performs a loop-back test on the P50 communication present on the front panel.

VideoColOutRGB, VideoColOutYUV
VideoColOutRGB and VideoColOutYUV nuclei configures the DENC on the ZiVa5 chip to output either RGB format or YUV format respectively.

PapChksSum
The PapChksSum nucleus displays the value of the binary image checksum stored in the backend flash.

FURORE_SdramWrR (for SD5.2 only)
Checks the SDRAM memory of the FURORE SDRAM. Checking is done with a data bus test, an address bus test and finally a device test.

FURORE_SdramWrRFast (for SD5.2 only)
Checks the lower and upper memory portion of the FURORE SDRAM. Checking is done faster compared to FURORE_SdramWrRLow, FURORE_SdramWrRHigh because the device test is skipped. Checking is done with a data bus test, and finally an address bus test.

FURORE_Id (for SD5.2 only)
This nucleus gets the revision ID of the FURORE chip.

DAC_I2C, DAC_I2Cenable, DAC_I2Cdisable (for SD5.2 only)
This nucleus checks the interface between the I2C controller on the ZiVa5 and the external DAC board.

DAC_ClockInternal, DAC_ClockExternal (for SD5.2 only)
These nuclei select the final clock input to the audio DAC.
- Internal clock means the PCM clock from the monoboard is used.
- External clock means the DSD clock on the AV board is used.

DAC_AudioPreMuteOn, DAC_ AudioPreMuteOff (for SD5.2 only)
This nucleus selects Audio Pre-mute on/off.

DAC_CentreOn, DAC_ CentreOff (for SD5.2 only)
This nucleus selects the centre on/off.

BedReadFlashID
Loads a special diagnostic firmware on the front engine which reads the Flash device and manufacturer's ID .

BedCalcRomChkSum
Loads a special diagnostic firmware on the front engine that calculates the checksum of the front engine ROM.

BedScratchTest
Loads a special diagnostic firmware on the front engine that checks the scratch detector circuit of the front engine.

DAC_Reset
This nucleus resets the DAC board.

DAC_ModeCDDA, DAC_ModeDVD48, DAC_ModeDVD96, DAC_ModeDSD (for SD5.2 only)
- DAC_ModeCDDA switches the DACs into CDDA mode.
- DAC_ModeDVD48 switches the DACs into DVD 48 kHz mode.
- DAC_ModeDVD96 switches the DACs into DVD 96 kHz mode.
- DAC_ModeDSD switches the DACs into DVD DSD mode.

DAC_LowPowerStandbyOn, DAC_LowPowerStandbyOff (for SD5.2 only)
DAC_LowPowerStandbyOn switches the Low power standby mode on, removing power supply to SCART switch IC.
DAC_LowPowerStandbyOff switches the Low power standby mode off, enabling power supply to SCART switch IC.

DAC_UpSamplingFreq192k, DAC_ UpSamplingFreq96k, DAC_UpSamplingOn, DAC_ UpSamplingOff (for SD5.2 only)
These nuclei select whether upsampling should be activated and at what frequency.

Furore_Reset (for SD5.2 only)
This nucleus resets the Furore IC.

Furore_High, Furore_Low (for SD5.2 only)
These nucleus sets the output lines DSD_PCM0-9 to either high or low.

Procedure to upgrade software

1) Power up the set.
2) Open tray by press "OPEN/CLOSE" button on the set or press and hold "STOP" button on the RC.
3) Place upgrade disc onto tray and close.
4) The set will response and display shows [READING] follow by [UPGRADING].
   Caution: Do not press any buttons or interrupt the mains supply during the upgrading process, otherwise the set may become defective.
5) The whole process should not take more than 3 minutes.
6) Tray will open indicating that the upgrading process is completed. The set display will continue to show [UPGRADING].
7) Take out the upgrade disc from the tray and switch off the mains supply.
8) Power up the set again. Tray will close and go to standby automatically.
   Note : If the set does not go to standby automatically, give it sufficient time (about 1 minute) to initialize NVM etc. then press "STANDBY" button to go to standby.

Procedure for check Software version

1) Power up the set.
2) Open tray by press "OPEN/CLOSE" button on the set or press and hold "STOP" button on the RC.
3) Press "DISC MENU" button on the RC.
4) The TV screen will shows:

Copyright(c)
PHILIPS 2002-03
*SD5.2-9000S-**XX***

04Oct2004
17:34
YYYYYYYY
A1160-129
C3091-178
UDE28.0001.07
FE Ver:08

XX = software version number
YYYYYYYY = slash version

Reprogramming of DVD Version Matrix

After repair, the customer setting and region code may be lost. Reprogramming will put the set back in the state in which it has left the factory, ie. with the default setting and the allowed region code.

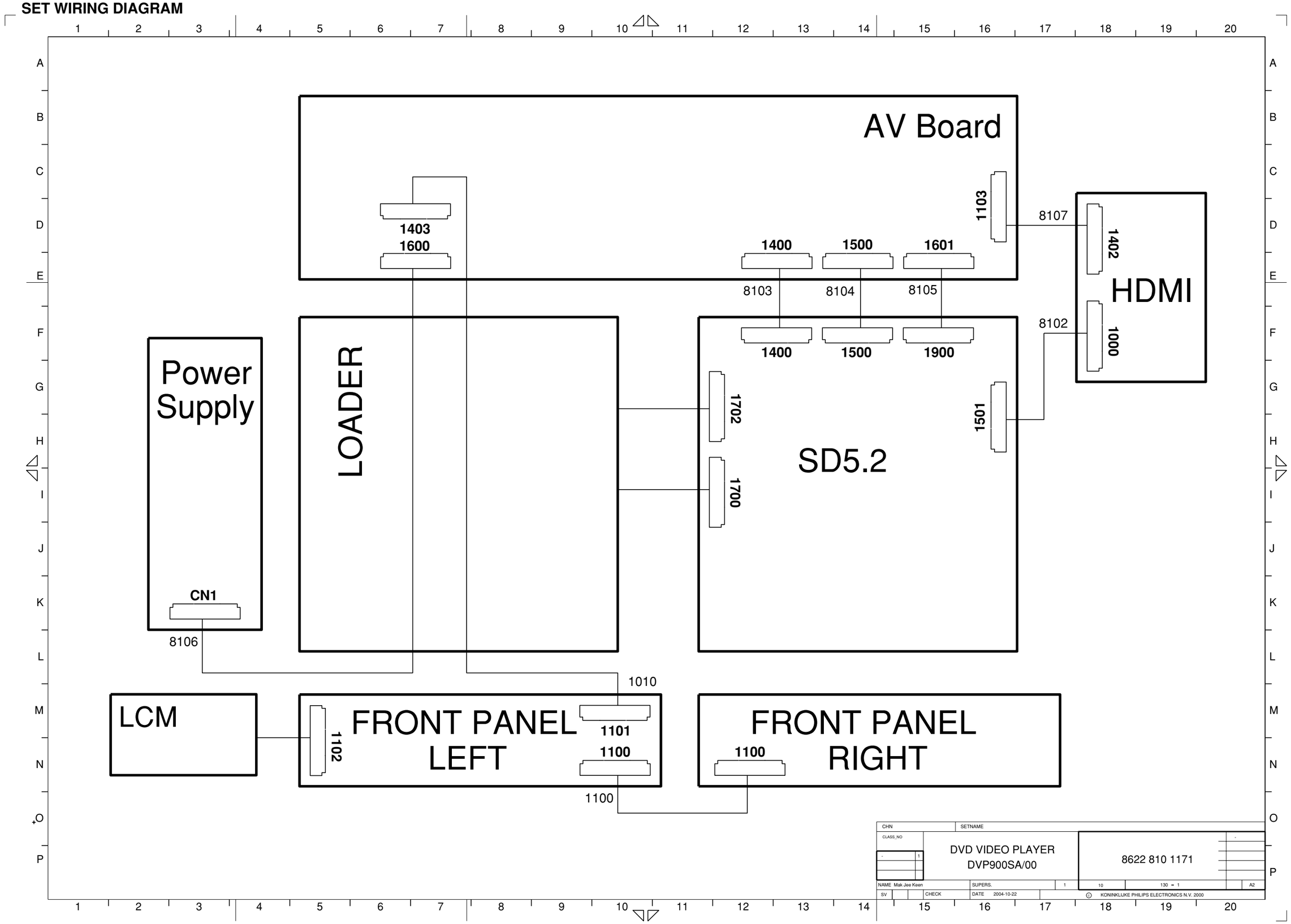
Model	Region	Slash Version
DVP9000S/00	Europe	22201700
DVP9000S/69	AP	32301700

To reprogram do as follows:

1) Power up the set.
2) Press buttons <PLAY> <1> <5> <9> on the RC.
3) The set display shows [_ _ _ _ _ _ _ _].
4) Press now successively the following keys:
   <2> <2> <2> <0> <1> <7> <0> <0> - for DVP9000S/00
   <3> <2> <3> <0> <1> <7> <0> <0> - for DVP9000S/69
5) Press button <PLAY> again on the RC.
6) Wait for the set to reboot by itself (less than 1 minute) to confirm that the set has been reprogrammed.

4-1

SET WIRING DIAGRAM



5-1

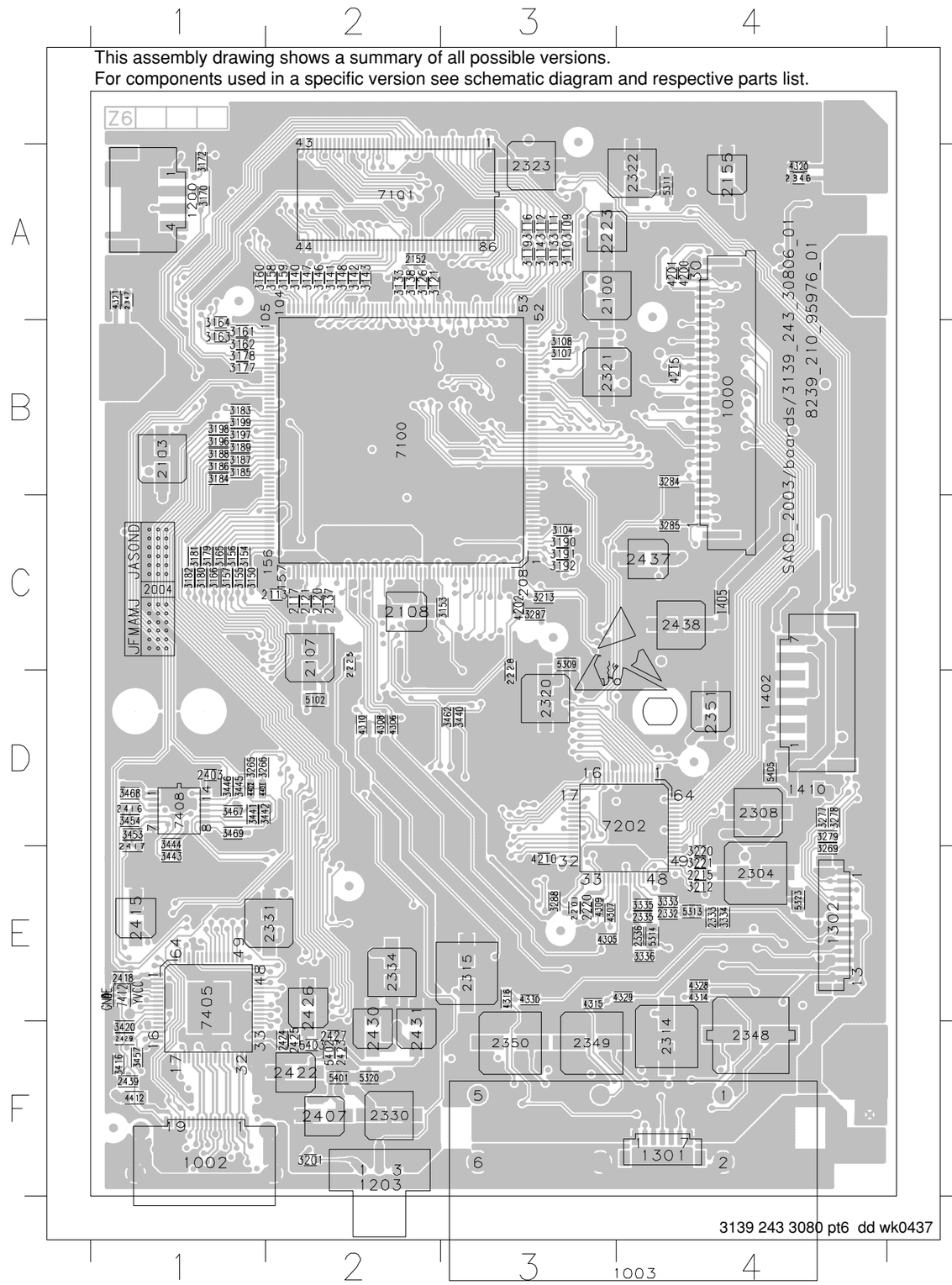
PSCAN HDMI BOARD

TABLE OF CONTENTS

5-2

PSCAN HDMI BOARD - TOP VIEW LAYOUT

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram and respective parts list.

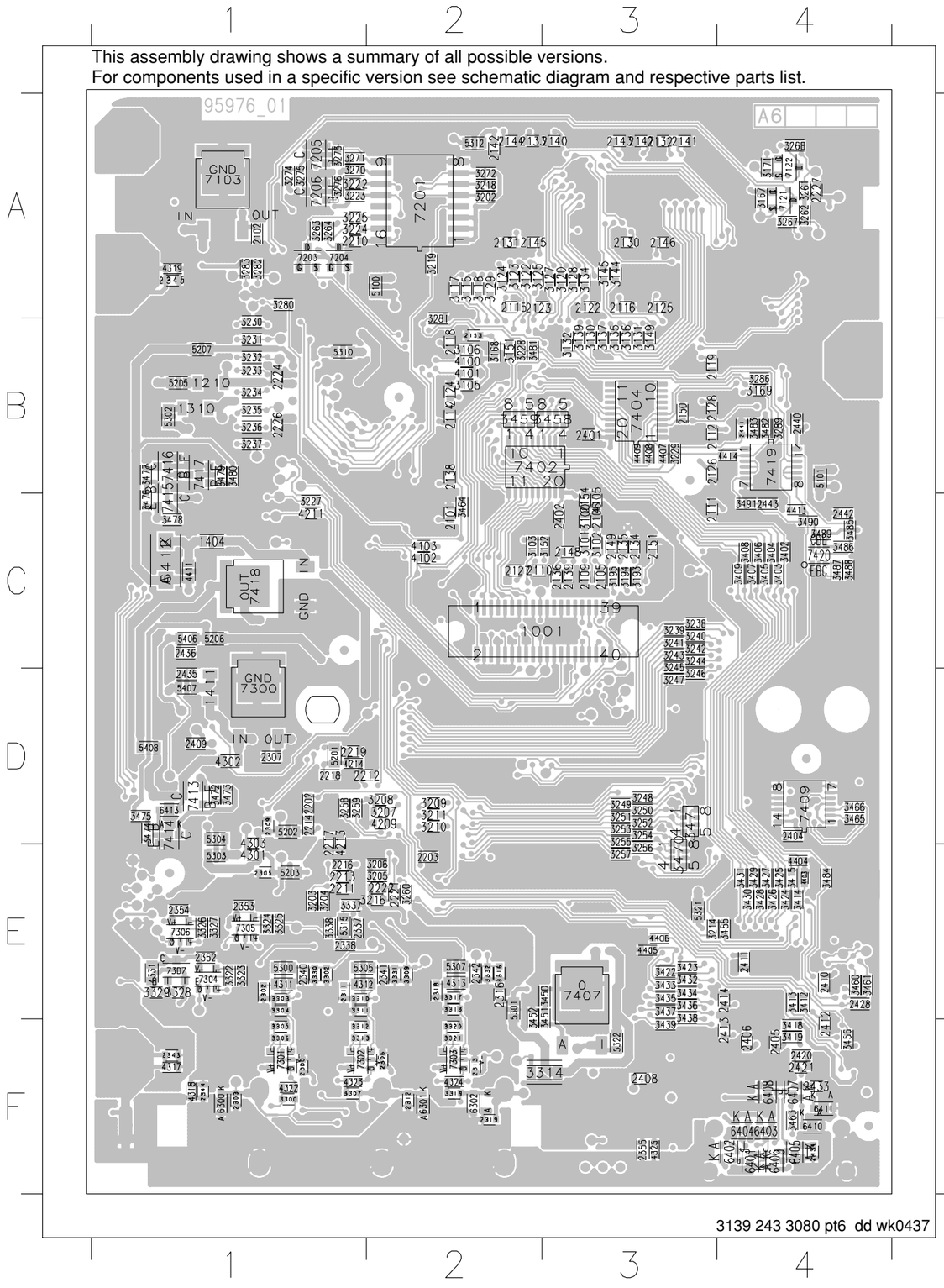


1000 B4	2437 C4	3201 F2	5320 F2
1002 F1	2438 C4	3212 E4	5323 E4
1200 A1	2439 F1	3213 C3	5401 F2
1203 F2	3104 C3	3220 E4	5402 F2
1301 F4	3107 B3	3221 E4	5403 F2
1302 E4	3108 B3	3265 D1	5405 D4
1402 D4	3109 A3	3266 D1	7100 B2
1405 C4	3110 A3	3269 E4	7101 A2
1410 D4	3111 A3	3277 D4	7202 D4
2100 A3	3112 A3	3278 D4	7405 E1
2103 B1	3113 A3	3279 D4	7408 D1
2107 C2	3114 A3	3284 B4	7412 E1
2108 C2	3116 A3	3285 C4	
2113 C2	3119 A3	3287 C3	
2117 C2	3121 A2	3288 E3	
2120 C2	3126 A2	3333 E4	
2121 C2	3133 A2	3334 E4	
2137 C2	3138 A2	3335 E4	
2152 A2	3140 A2	3336 E4	
2155 A4	3141 A2	3416 F1	
2201 E3	3142 A2	3420 F1	
2215 E4	3143 A2	3440 D3	
2220 E3	3146 A2	3441 D1	
2223 A3	3147 A2	3442 D1	
2225 C2	3148 A2	3443 E1	
2228 D3	3150 C1	3444 D1	
2304 E4	3153 C3	3445 D1	
2308 D4	3154 C1	3446 D1	
2314 F4	3155 C1	3453 D1	
2315 E3	3156 C1	3454 D1	
2320 D3	3157 C1	3457 F1	
2321 B3	3158 A2	3462 D3	
2322 A4	3159 A2	3467 D1	
2323 A3	3160 A1	3468 D1	
2330 F2	3161 B1	3469 D1	
2331 E2	3162 B1	4200 A4	
2332 E4	3163 B1	4201 A4	
2333 E4	3164 B1	4202 C3	
2334 E2	3165 C1	4210 E3	
2335 E4	3166 C1	4215 B4	
2336 E4	3170 A1	4305 E3	
2346 A4	3172 A1	4306 D2	
2347 A1	3177 B1	4307 E3	
2348 F4	3178 B1	4308 D2	
2349 F3	3179 C1	4309 E3	
2350 F3	3180 C1	4310 D2	
2351 D4	3181 C1	4314 E4	
2403 D1	3182 C1	4315 E3	
2407 F2	3183 B1	4316 E3	
2415 E1	3184 B1	4320 A4	
2416 D1	3185 B1	4321 A1	
2417 E1	3186 B1	4328 E4	
2418 E1	3187 B1	4329 E4	
2422 F2	3188 B1	4330 E3	
2423 F2	3189 B1	4401 D1	
2424 F2	3190 C3	4402 D1	
2425 F2	3191 C3	4412 F1	
2426 E2	3192 C3	5102 D2	
2427 F2	3196 B1	5309 C3	
2429 F1	3197 B1	5311 A4	
2430 F2	3198 B1	5313 E4	
2431 F2	3199 B1	5314 E4	

5-3

PSCAN HDMI BOARD - BOTTOM VIEW LAYOUT

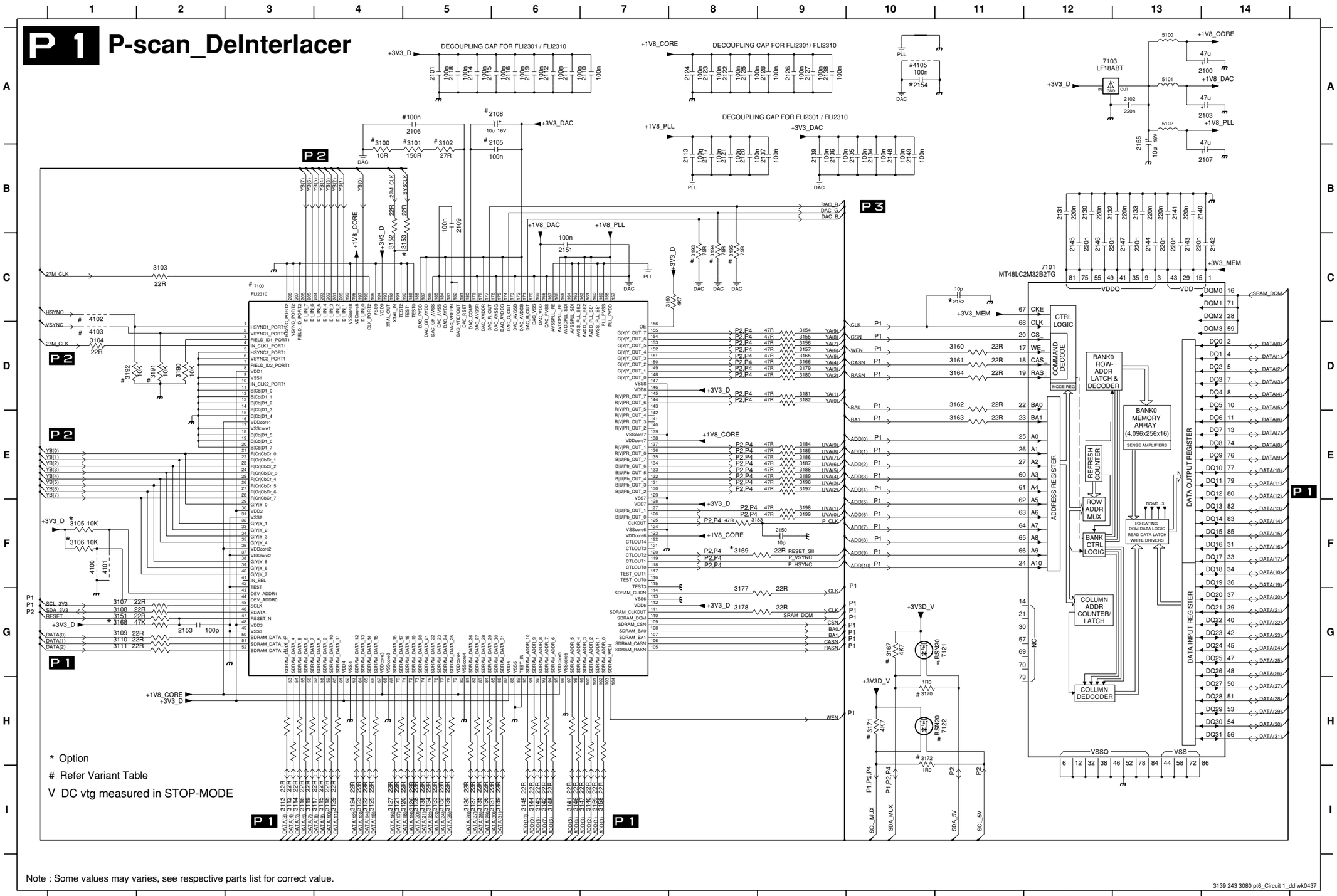
This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram and respective parts list.



1001 C3	2226 B1	3124 A2	3246 D3	3331 E2	3483 B4	5406 C1
1210 B1	2227 A4	3125 A2	3247 D3	3332 E2	3484 E4	5407 D1
1310 B1	2300 F1	3127 A3	3248 D3	3337 E1	3485 C4	5408 D1
1404 C1	2302 E1	3128 A3	3249 D3	3338 E1	3486 C4	6300 F1
1411 D1	2303 F1	3129 A2	3250 D3	3402 C4	3487 C4	6301 F2
2101 C2	2305 E1	3130 B3	3251 D3	3403 C4	3488 C4	6302 F2
2102 A1	2306 F2	3131 B3	3252 D3	3404 C4	3489 C4	6401 F4
2105 C3	2307 D1	3132 B3	3253 D3	3405 C4	3490 C4	6402 F4
2106 C3	2309 D1	3134 A3	3254 D3	3406 C4	3491 C4	6403 F4
2109 C3	2311 E1	3135 B3	3255 D3	3407 C4	4100 B2	6404 F4
2110 C2	2312 F2	3136 B3	3256 E3	3408 C4	4101 B2	6405 F4
2111 C3	2313 F2	3137 B3	3257 E3	3409 C4	4102 C2	6406 F4
2112 B3	2316 E2	3139 B3	3258 D1	3412 E4	4103 C2	6407 F4
2114 B2	2318 E2	3144 A3	3259 D1	3413 E4	4105 C3	6408 F4
2115 A2	2319 F2	3145 A3	3260 E2	3414 E4	4209 D2	6410 F4
2116 A3	2337 E1	3149 B3	3261 A4	3415 E4	4211 C1	6411 F4
2118 B2	2338 E1	3151 B2	3262 A4	3418 F4	4213 D1	6412 C1
2119 B3	2340 E1	3152 C3	3263 A1	3419 F4	4214 D1	6413 D1
2122 A3	2341 E2	3167 A4	3264 A1	3422 E3	4301 E1	7103 A1
2123 A2	2342 E2	3168 B2	3267 A4	3423 E3	4302 D1	7121 A4
2124 B2	2343 F1	3169 B4	3268 A4	3424 E4	4303 D1	7122 A4
2125 A3	2344 F1	3171 A4	3270 A1	3425 E4	4311 E1	7201 A2
2126 B3	2345 A1	3193 C3	3271 A1	3426 E4	4312 E1	7203 A1
2127 C2	2352 E1	3194 C3	3272 A2	3427 E4	4313 E2	7204 A1
2128 B3	2353 E1	3195 C3	3273 A1	3428 E4	4317 F1	7205 A1
2130 A3	2354 E1	3202 A2	3274 A1	3429 E4	4318 F1	7206 A1
2131 A2	2355 F3	3203 E1	3275 A1	3430 E4	4319 A1	7300 D1
2132 A3	2401 B3	3204 E1	3276 A1	3431 E4	4322 F1	7301 F1
2133 A2	2402 C3	3205 E2	3280 A1	3432 E3	4323 F1	7302 F1
2134 C3	2404 D4	3206 E2	3281 B2	3433 E3	4324 F2	7303 F2
2135 C3	2405 F4	3207 D2	3282 A1	3434 E3	4325 F3	7304 E1
2136 C3	2406 F4	3208 D2	3283 A1	3435 E3	4331 E1	7305 E1
2138 B2	2408 F3	3209 D2	3286 B4	3436 E3	4403 E4	7306 E1
2139 C3	2409 D1	3210 D2	3289 B4	3437 E3	4404 E4	7307 E1
2140 A3	2410 E4	3211 D2	3300 F1	3438 E3	4405 E3	7402 B2
2141 A3	2411 E4	3214 E3	3302 E1	3439 F3	4406 E3	7404 B3
2142 A2	2412 F4	3216 E2	3303 E1	3450 E3	4407 B3	7407 E3
2143 A3	2413 F4	3218 A2	3304 E1	3451 E3	4408 B3	7409 D4
2144 A2	2414 E4	3219 A2	3305 F1	3452 E2	4409 B3	7413 D1
2145 A2	2420 F4	3222 A1	3306 F1	3455 E4	4411 C1	7414 D1
2146 A3	2421 F4	3223 A1	3307 F1	3456 F4	4413 C4	7415 C1
2147 A3	2428 E4	3224 A1	3309 E2	3458 B3	4414 B4	7416 B1
2148 C3	2433 F4	3225 A1	3310 E1	3459 B2	5100 A2	7417 B1
2149 C3	2434 F4	3227 C1	3311 E1	3460 E4	5101 B4	7418 C1
2150 B3	2435 D1	3228 B2	3312 F1	3461 E4	5201 D1	7419 B4
2151 C3	2436 C1	3229 B3	3313 F1	3463 F4	5202 D1	7420 C4
2153 B2	2440 B4	3230 B1	3314 F3	3464 C2	5203 E1	
2154 C3	2441 B4	3231 B1	3316 E2	3465 D4	5205 B1	
2202 D1	2442 C4	3232 B1	3317 E2	3466 D4	5206 C1	
2203 E2	2443 C4	3233 B1	3318 E2	3470 E3	5207 B1	
2210 A1	3100 C3	3234 B1	3319 F2	3471 D3	5300 E1	
2211 E1	3101 C3	3235 B1	3320 F2	3472 D1	5301 E2	
2212 D1	3102 C3	3236 B1	3321 F2	3473 D1	5302 B1	
2213 E1	3103 C2	3237 B1	3322 E1	3474 D1	5303 E1	
2214 D1	3105 B2	3238 C3	3323 E1	3475 D1	5304 D1	
2216 E1	3106 B2	3239 C3	3324 E1	3476 C1	5305 E1	
2217 D1	3115 A2	3240 C3	3325 E1	3477 B1	5307 E2	
2218 D1	3117 A2	3241 C3	3326 E1	3478 C1	5310 B1	
2219 D1	3118 A2	3242 C3	3327 E1	3479 B1	5312 A2	
2221 E2	3120 A3	3243 C3	3328 E1	3480 B1	5315 E1	
2222 E2	3122 A2	3244 C3	3329 E1	3481 B2	5321 E3	
2224 B1	3123 A2	3245 C3	3330 E1	3482 B4	5322 F3	

5-4

PSCAN HDMI BOARD - CIRCUIT DIAGRAM (PART 1)

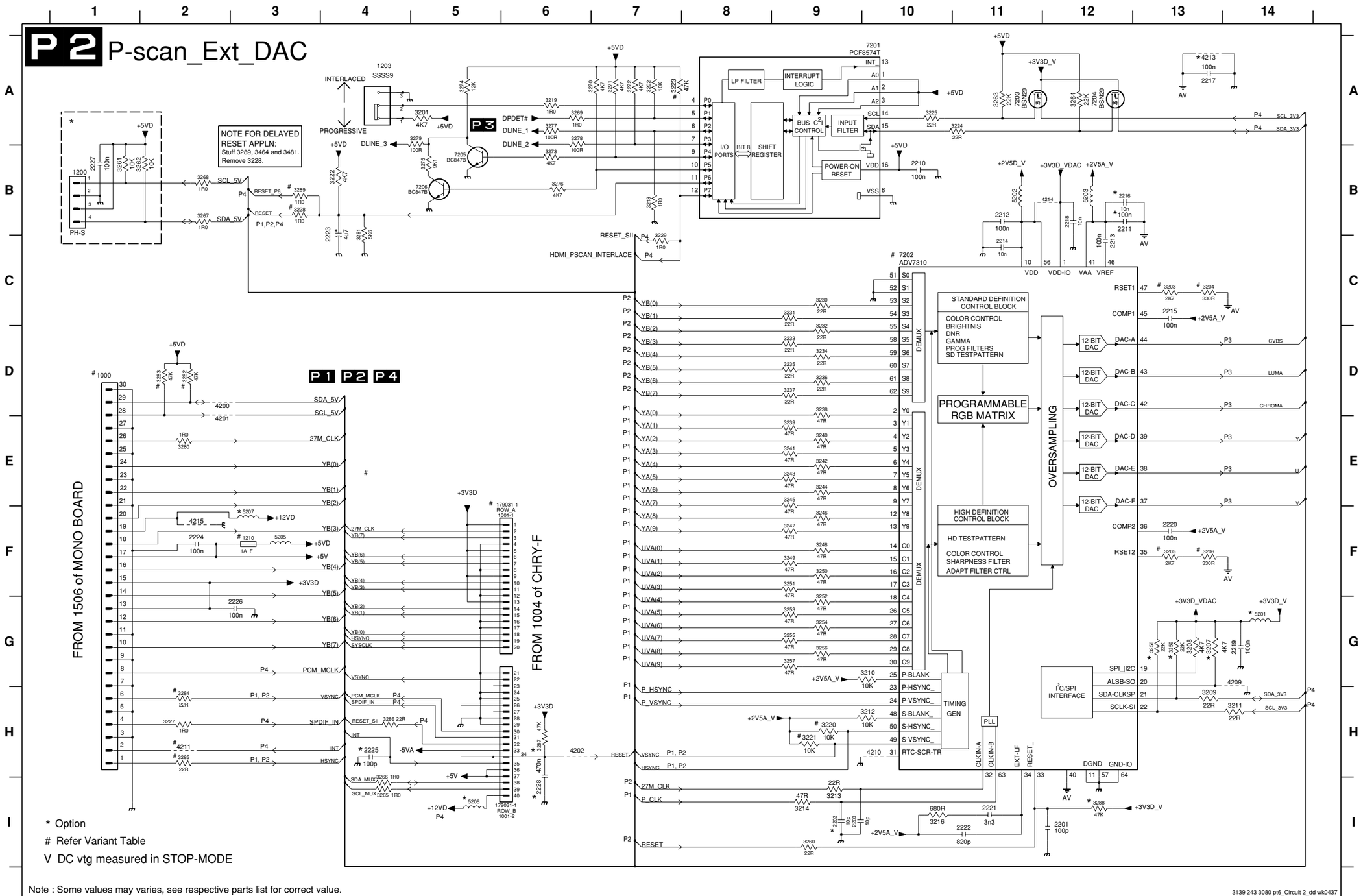


Ref Des / Variant	2105	2106	2108	3100	3101	3102	3171	3167	3170	3172	3191	3192	3193	3194	3195	4102	4103	7100	7121	7122
DVDR755	100n	100n	10u 16V	10R	150R	27R	NOT USED	NOT USED	1R0	1R0	10K	10K	75R	75R	75R	NOT USED	NOT USED	FLI2301	NOT USED	NOT USED
YDVS1500	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	4k7	4k7	NOT USED	NOT USED	10K	10K	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	FLI2310	BSN20	BSN20
YDVS2500	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	1R0	1R0	10K	10K	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	FLI2310	NOT USED	NOT USED
YDVC950	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	1R0	1R0	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	USED	USED	FLI2310	NOT USED	NOT USED

2100 A14	3162 D11		
2101 A5	3163 E11		
2102 A13	3164 D11		
2103 A14	3165 D9		
2105 B6	3166 D9		
2106 A5	3167 G10		
2107 B14	3168 G1		
2108 A6	3169 F8		
2109 B5	3170 H10		
2110 A7	3171 H10		
2111 A6	3172 H10		
2112 A6	3177 G8		
2113 B8	3178 G8		
2114 A5	3179 D9		
2115 A5	3180 D9		
2116 A6	3181 D9		
2117 B8	3182 D9		
2118 A5	3183 F6		
2119 A6	3184 E9		
2120 B8	3185 E9		
2121 B8	3186 E9		
2122 A8	3187 E9		
2123 A8	3188 E9		
2124 A8	3189 E9		
2125 A8	3190 D2		
2126 A9	3191 D2		
2127 A9	3192 D1		
2128 A9	3193 C8		
2130 B12	3194 C8		
2131 B12	3195 C8		
2132 B12	3196 E9		
2133 B13	3197 E9		
2134 B10	3198 F9		
2135 B10	3199 F9		
2136 B9	4100 F1		
2137 B9	4101 F1		
2138 A9	4102 C1		
2139 B9	4103 D1		
2140 B13	4105 A10		
2141 B13	5100 A13		
2142 C14	5101 A13		
2143 C13	5102 A13		
2144 C13	7100 C3		
2145 C12	7101 C12		
2146 C12	7103 A12		
2147 C13	7121 G11		
2148 B10	7122 H11		
2149 B10			
2150 F9			
2151 C6			
2152 C11			
2153 G2			
2154 A10			
2155 A13			
3100 B4			
3101 B5			
3102 B5			
3103 C2			
3104 D1			
3105 F1			
3106 F1			
3107 G1			
3108 G1			
3109 G1			
3110 G1			
3111 G1			
3112 I3			
3113 I3			
3114 I3			
3115 I4			
3116 I3			
3117 I3			
3118 I4			
3119 I3			
3120 I4			
3121 I4			
3122 I4			
3123 I4			
3124 I4			
3125 I4			
3126 I5			
3127 I4			
3128 I5			
3129 I4			
3130 I5			
3131 I5			
3132 I5			
3133 I5			
3134 I5			
3135 I5			
3136 I5			
3137 I5			
3138 I5			
3139 I5			
3140 I7			
3141 I6			
3142 I6			
3143 I6			
3144 I6			
3145 I6			
3146 I6			
3147 I7			
3148 I6			
3149 I6			
3150 C8			
3151 G1			
3152 C4			
3153 C5			
3154 D9			
3155 D9			
3156 D9			
3157 D9			
3158 I7			
3159 I7			
3160 D11			
3161 D11			

5-5

PSCAN HDMI BOARD - CIRCUIT DIAGRAM (PART 2)



Variant / Ref Des	1000	1001	1210	IA0 Block	AV4 Block	7202	3203 3205	3204 3206	3282 3283	3284 3285	3220 3221	3223	3229 4211
DVDR755	NOT USED	USED	F 1A	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	USED	NOT USED	NOT USED
YDVS1500	USED	NOT USED	1206 0R	USED	USED	ADV7320	2K7	330R	USED	NOT USED	USED	4K7	NOT USED
YDVS2500	USED	NOT USED	1206 0R	USED	USED	ADV7310	2K7	330R	USED	NOT USED	USED	47K	USED
YDVC950	USED	NOT USED	1206 0R	USED	USED	ADV7300	1K5	22R	USED	USED	NOT USED	47K	USED

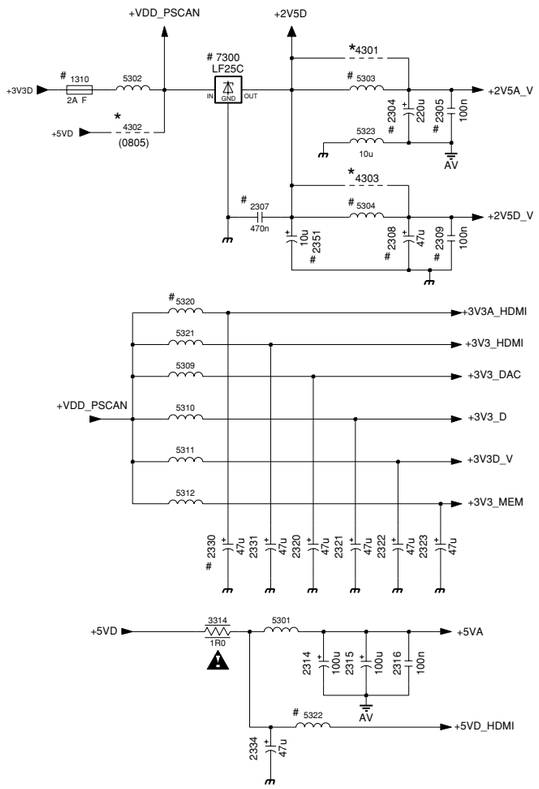
NOTE FOR DVDR755 APPLN:
If 5V for HDMI socket from external source, 5205 is in to supply 5V circuitry. 5206 is out and provisional. See P4.

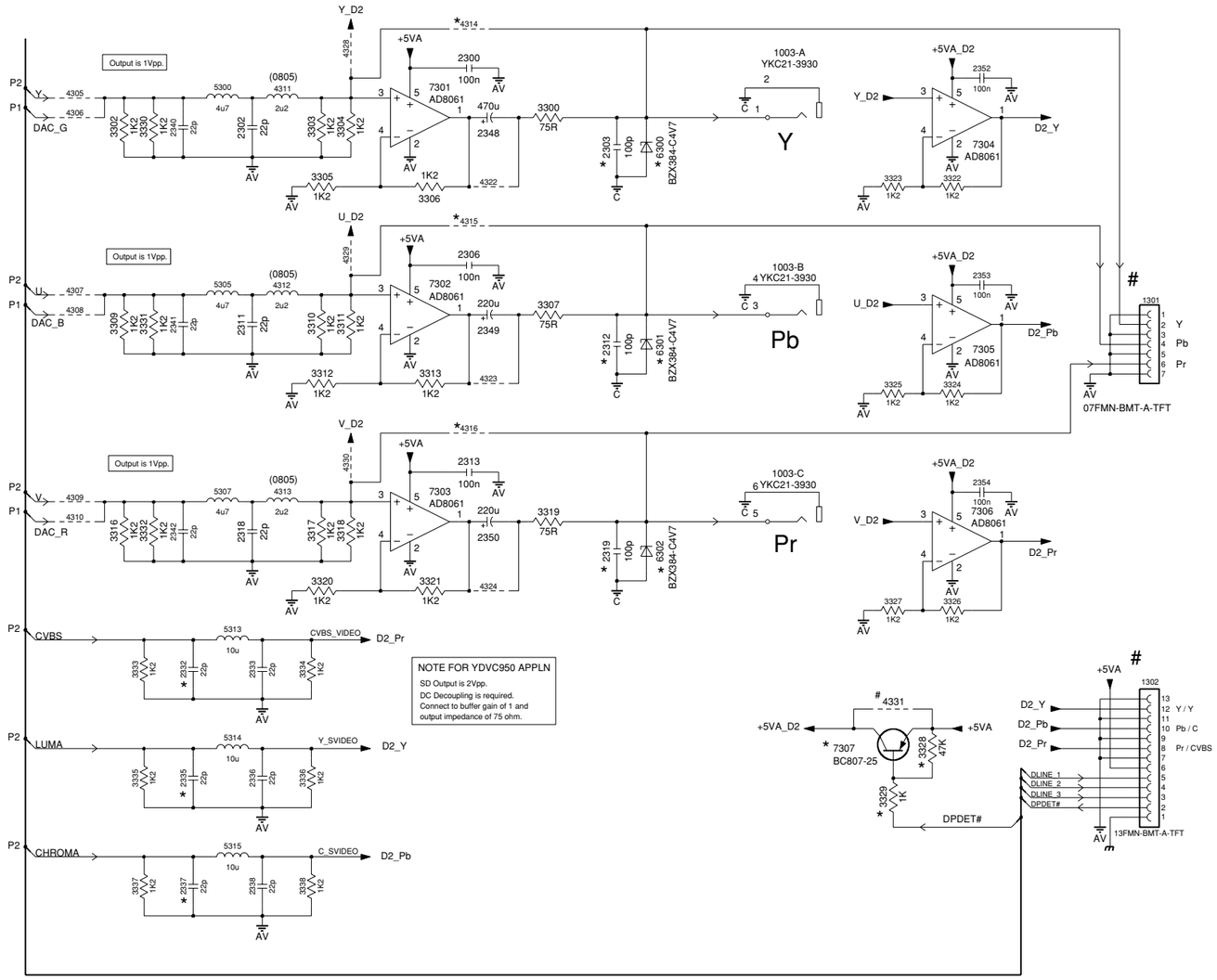
NOTE FOR VIDEO DAC 7202 APPLN:
ADV7320 supports CGMS 625P.
ADV7320 must be used for EU version.
Running change to ADV7320 for other regions.

5-6

PSCAN HDMI BOARD - CIRCUIT DIAGRAM (PART 3)

P 3 P-scan_VideoBuffer





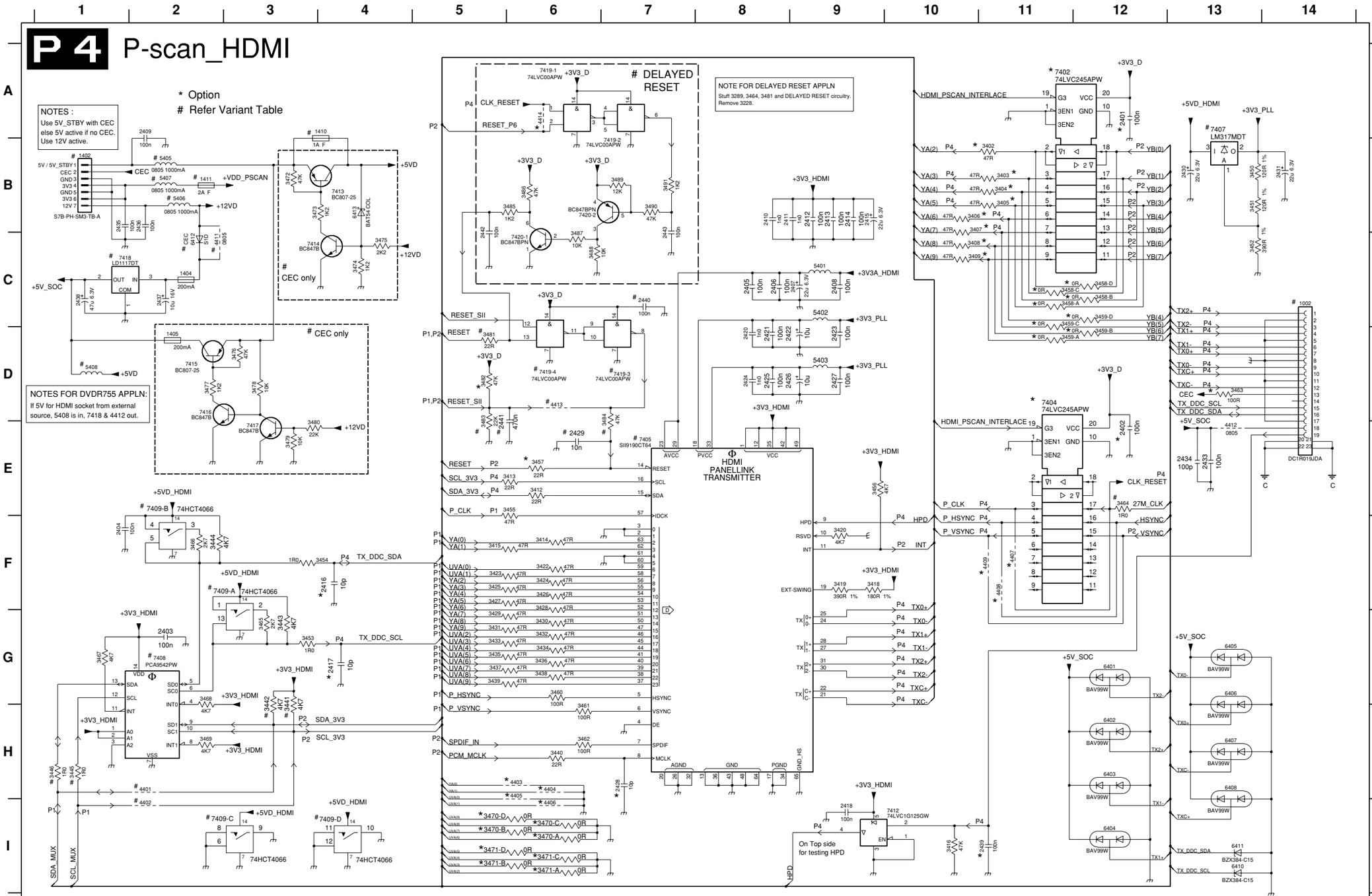
3139 243 3080 pt6_Circuit 3_dd wk0437

Ref Des / Variant	1003	1301	1302	1310	2302 2311 2318	2340 2341 2342	3302 3309 3316	3330 3331 3332	3303 3310 3317	3304 3311 3318	5300 5305 5307	4311 4312 4313	2348 2349 2350	4322 4323 4324	4305 4307 4309	4306 4308 4310	4328 4329 4330	4331 7304 7305 7306	CVBS FILTER	LUMA FILTER	CHROMA FILTER	2304 2305 2308 2309	5303 5304 2307	7300
DVDR755	NOT USED	USED	NOT USED	F 2A	100p	150p	150R	NOT USED	NOT USED	150R	1u8	1u0	NOT USED	USED	NOT USED	USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
YDVS1500	USED	NOT USED	JAPAN VER	1206 0R	22p	22p	1K2	1K2	1K2	1K2	4u7	2u2	USED	NOT USED	USED	NOT USED	JAPAN VER	JAPAN VER	NOT USED	NOT USED	NOT USED	USED	USED	USED
YDVS2500	USED	NOT USED	JAPAN VER	1206 0R	22p	22p	1K2	1K2	1K2	1K2	4u7	2u2	USED	NOT USED	USED	NOT USED	JAPAN VER	JAPAN VER	NOT USED	NOT USED	NOT USED	USED	USED	USED
YDVC950	USED	NOT USED	USED	1206 0R	22p	22p	1K2	1K2	1K2	1K2	4u7	2u2	USED	NOT USED	USED	NOT USED	NOT USED	NOT USED	USED	USED	USED	USED	USED	USED

1003-A B11 1003-B D11 1003-C E11 1301 D13 1302 G13 1310 B1 2300 B8 2302 C7 2303 C9 2304 B3 2305 B4 2306 C8 2307 C2 2308 C3 2309 C4 2311 D7 2312 D9 2313 E8 2314 F3 2315 F3 2316 F3 2318 E7 2319 F9 2320 E3 2321 E3 2322 E3 2323 E3 2330 E2 2331 E2 2332 F6 2333 F7 2334 G2 2335 G6 2336 G7 2337 H6 2338 H7 2340 C6 2341 D6 2342 E6 2343 I3 2344 I2 2345 H3 2346 H4 2347 I4 2348 C8 2349 D8 2350 E8 2351 C3 2352 B12 2353 D12 2354 E12 2355 H2 3300 B9 3302 C6 3303 C7 3304 C7 3305 C7 3306 C8 3307 D9 3309 D6 3310 D7 3311 D7 3312 D7 3313 D8 3314 F2 3316 E6 3317 E7 3318 E7 3319 E9 3320 F7 3321 F8 3322 C12 3323 C11 3324 D12 3325 D11 3326 F12 3327 F11 3328 G12 3329 G11 3330 C6 3331 D6 3332 E6 3333 F6 3334 F7 3335 G6 3336 G7 3337 H6 3338 H7 4301 B3 4302 B1 4303 C3 4305 B5 4306 B5 4307 D5 4308 D5 4309 E5 4310 E5 4311 B7 4312 D7 4313 E7 4314 B8 4315 C8 4316 E8 4317 I3 4318 I2 4319 I3 4320 I4 4321 I4 4322 C8 4323 D8 4324 F8 4325 I2 4328 B7 4329 C7 4330 E7 4331 G11 5300 B6 5301 F2 5302 B1 5303 B3 5304 C3 5305 D6 5307 E6 5309 D2 5310 D2 5311 E2 5312 E2 5313 F7 5314 G7 5315 H7 5320 D2 5321 D2 5322 F3 5323 C3 6300 C10 6301 D10 6302 F10 7300 B2 7301 B8 7302 D8 7303 E8 7304 C12 7305 D12 7306 E12 7307 G11

5-7

PSCAN HDMI BOARD - CIRCUIT DIAGRAM (PART 4)



Note : Some values may varies, see respective parts list for correct value.

3139 243 3080 pt6_Circuit 4_dd wk0437

Ref Des / Variant	1002 7405 7408 7409	7407 7412	4401 4402	3441 3442 3445 3446	7402 7404	1402 5405 5406 5407	1404 4411 7418	5408	4412	1410	1411	3483	2441	3481	3484	2429	4413	7419 2440 3464
DVDR755	USED	USED	NOT USED	USED	NOT USED	NOT USED	NOT USED	USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	22R	100P	USED	NOT USED
YDVS1500	NOT USED	NOT USED	USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	22K	NOT USED	22R	NOT USED	NOT USED	NOT USED	USED
YDVS2500	USED	USED	NOT USED	USED	NOT USED	USED	USED	NOT USED	USED	F 1A	F 2A	22K	470n	22R	47K	10N	NOT USED	USED
YDVC950	USED	USED	NOT USED	USED	NOT USED	USED	USED	NOT USED	USED	F 1A	F 2A	22K	470n	22R	47K	10N	NOT USED	USED

1002 C14
1402 B1
1404 C2
1405 D2
1410 A4
1411 B2
2401 A12
2402 E12
2403 G2
2404 F1
2405 C8
2406 C8
2407 C9
2408 C9
2409 A2
2410 B8
2411 B8
2412 B9
2413 B9
2414 B9
2415 B9
2416 F4
2417 G4
2418 I9
2420 D8
2421 D8
2422 D9
2423 D9
2424 D8
2425 D8
2426 D9
2427 D9
2428 H7
2429 E6
2430 B13
2431 B14
2433 E13
2434 E13
2435 B1
2436 B2
2437 C2
2438 C1
2439 I1
2440 C7
2441 E5
2442 C5
2443 C7
3402 B11
3403 B11
3404 B11
3405 B11
3406 B10
3407 B10
3408 C10
3409 C10
3412 E6
3413 E6
3414 F6
3415 F5
3416 I10
3418 F9
3419 F9
3420 F9
3422 F6
3423 F5
3424 F6
3425 F5
3426 F6
3427 F5
3428 F6
3429 G5
3430 G6
3431 G5
3432 G6
3433 G5
3434 G6
3435 G5
3436 G6
3437 G5
3438 G6
3439 G5
3440 H6
3441 G3
3442 G3
3443 G3
3444 F2
3445 H1
3446 H1
3450 B13
3451 B13
3452 C13
3453 G3
3454 F4
3455 E6
3456 E9
3457 E6
3458-A C11
3458-B C12
3458-C C11
3458-D C12
3459-A D11
3459-B D12
3459-C C11
3459-D C12
3460 G6
3461 H6
3462 H6
3463 D13
3464 E12
3465 G3
3466 F2
3467 G1
3468 G2
3469 H2
3470-A I6
3470-B I5
3470-C I6
3470-D I5
3471-A I6
3471-B I5
3471-C I6
3471-D I5
3472 B3
3473 B3
3474 C4
3475 C4
3476 D3
3477 D2
3478 D3
3479 E3
3480 E3
3481 D5
3482 D5
3483 E5
3484 D7
3485 B6
3486 B6
3487 C6
3488 C6
3489 B7
3490 B7
3491 B7
4401 H2
4402 I2
4403 H6
4404 H6
4405 H6
4406 I6
4407 F11
4408 F11
4409 F11
4411 C2
4412 E13
4413 D6
4414 A6
5401 C9
5402 C9
5403 D9
5405 B2
5406 B2
5407 B2
5408 D1
6401 G12
6402 H12
6403 H12
6404 I12
6405 G13
6406 G13
6407 H13
6408 H13
6410 I13
6411 I13
6412 C2
6413 B4
7402 A11
7404 D11
7405 E7
7407 A13
7408 G2
7409-A F2
7409-B E2
7409-C I2
7409-D I4
7412 I10
7413 B4
7414 C4
7415 D2
7416 D2
7417 E3
7418 C1
7419-1 A6
7419-2 B7
7419-3 D7
7419-4 D6
7420-1 C6
7420-2 B6

MISCELLANEOUS

1000	2422 025 17451	FLEX CONNECTOR 30P
1002	2422 033 00505	SOCKET HDMI 19P
1003	2422 026 05191	CINCH SOCKET 3P (Y/Pb/Pr)
1203	2422 127 00557	SWITCH SLID 1P 2POS 12V 5MM (Scan Mode)
1210	4822 051 10008	0R 5% 0,25W
1310	4822 051 10008	0R 5% 0,25W
1404	2422 549 45815	RESETTABLE FUSE 200MA SMD0805
1410	2422 086 11102	FUSE SM F 1A 125V UL R
1411	2422 086 11103	FUSE SM F 2A 125V UL R

CAPACITORS

2100	4822 124 11131	47uF 6,3V
2103	4822 124 11131	47uF 6,3V
2107	4822 124 11131	47uF 6,3V
2155	4822 124 23002	10uF 16V
2223	2020 021 91729	4,7uF 20% 35V
2304	4822 124 81059	220uF 20% 4V
2308	4822 124 11131	47uF 6,3V
2314	4822 124 12095	100uF 20% 16V
2315	4822 124 12095	100uF 20% 16V
2320	4822 124 11131	47uF 6,3V
2321	4822 124 11131	47uF 6,3V
2322	4822 124 11131	47uF 6,3V
2323	4822 124 11131	47uF 6,3V
2330	4822 124 11131	47uF 6,3V
2331	4822 124 11131	47uF 6,3V
2334	4822 124 11131	47uF 6,3V
2348	2020 012 93795	470uF 20% 16V
2349	4822 124 81059	220uF 20% 4V
2350	4822 124 81059	220uF 20% 4V
2351	4822 124 23002	10uF 16V
2407	4822 124 23237	22uF 6,3V
2415	4822 124 23237	22uF 6,3V
2422	4822 124 23002	10uF 16V
2430	4822 124 23237	22uF 6,3V
2431	4822 124 23237	22uF 6,3V
2437	4822 124 23002	10uF 16V
2438	4822 124 11131	47uF 6,3V

RESISTORS

3314	4822 117 11151	⚠	1R 5%

COILS & FILTERS

4311	4822 157 10586	FXD IND SM 0805 2,2uH 10%
4312	4822 157 10586	FXD IND SM 0805 2,2uH 10%
4313	4822 157 10586	FXD IND SM 0805 2,2uH 10%
5100	4822 157 11716	FXD IND 0805 100MHz 30R
5101	4822 157 71206	FXD IND 0805 100MHz 600R
5102	4822 157 71206	FXD IND 0805 100MHz 600R
5202	4822 157 11716	FXD IND 0805 100MHz 30R
5203	4822 157 11716	FXD IND 0805 100MHz 30R
5205	4822 157 11716	FXD IND 0805 100MHz 30R
5300	4822 157 10977	FXD IND SM 0805 4,7uH 10%
5301	4822 157 11716	FXD IND 0805 100MHz 30R
5302	4822 157 11716	FXD IND 0805 100MHz 30R
5303	4822 157 11716	FXD IND 0805 100MHz 30R
5304	4822 157 11716	FXD IND 0805 100MHz 30R
5305	4822 157 10977	FXD IND SM 0805 4,7uH 10%
5307	4822 157 10977	FXD IND SM 0805 4,7uH 10%
5309	4822 157 71206	FXD IND 0805 100MHz 600R
5310	4822 157 11716	FXD IND 0805 100MHz 30R
5311	4822 157 71206	FXD IND 0805 100MHz 600R
5312	4822 157 11716	FXD IND 0805 100MHz 30R
5320	4822 157 11716	FXD IND 0805 100MHz 30R
5321	4822 157 11716	FXD IND 0805 100MHz 30R
5322	4822 157 11716	FXD IND 0805 100MHz 30R
5323	3198 018 31090	FXD IND SM 0805 10U 10%
5401	4822 157 11716	FXD IND 0805 100MHz 30R
5402	2422 549 43062	FXD IND 0603 100MHz 600R
5403	2422 549 43062	FXD IND 0603 100MHz 600R
5405	4822 157 11716	FXD IND 0805 100MHz 30R
5406	4822 157 11716	FXD IND 0805 100MHz 30R
5407	4822 157 11716	FXD IND 0805 100MHz 30R

DIODES

6401	4822 130 10328	BAV99W
6402	4822 130 10328	BAV99W
6403	4822 130 10328	BAV99W
6404	4822 130 10328	BAV99W
6405	4822 130 10328	BAV99W
6406	4822 130 10328	BAV99W
6407	4822 130 10328	BAV99W
6408	4822 130 10328	BAV99W

TRANSISTORS & INTEGRATED CIRCUITS

7100	9322 205 05671	IC SM FLI2310-LF-BD
7101	9322 166 71668	IC SM MT48LC2M32B2TG-6
7103	9322 179 78668	IC SM LF18ABDT
7201	5322 209 11578	IC SM PCF8574T
7202	9322 199 46671	IC SM ADV7310KST
7203	9965 000 04199	FET SIG SM BSN20
7204	9965 000 04199	FET SIG SM BSN20
7300	9322 142 88668	IC SM LF25CDT
7301	9322 167 49685	IC SM AD8061ART
7302	9322 167 49685	IC SM AD8061ART
7303	9322 167 49685	IC SM AD8061ART
7405	9322 208 99671	IC SM SII9190CTG64
7407	9322 124 43668	IC SM LM317MDT
7408	9352 640 68118	IC SM PCA9542PW
7409	9351 875 10118	IC SM 74HCT4066PW

5-8

ELECTRICAL PARTS LIST - PSCAN HDMI BOARD

7412	9352 687 20125	IC SM 74LVC1G125GW
7418	9322 202 58668	IC SM LD1117DT50

Note : Only the parts mentioned in this list are normal service spare parts.

FRONT BOARD

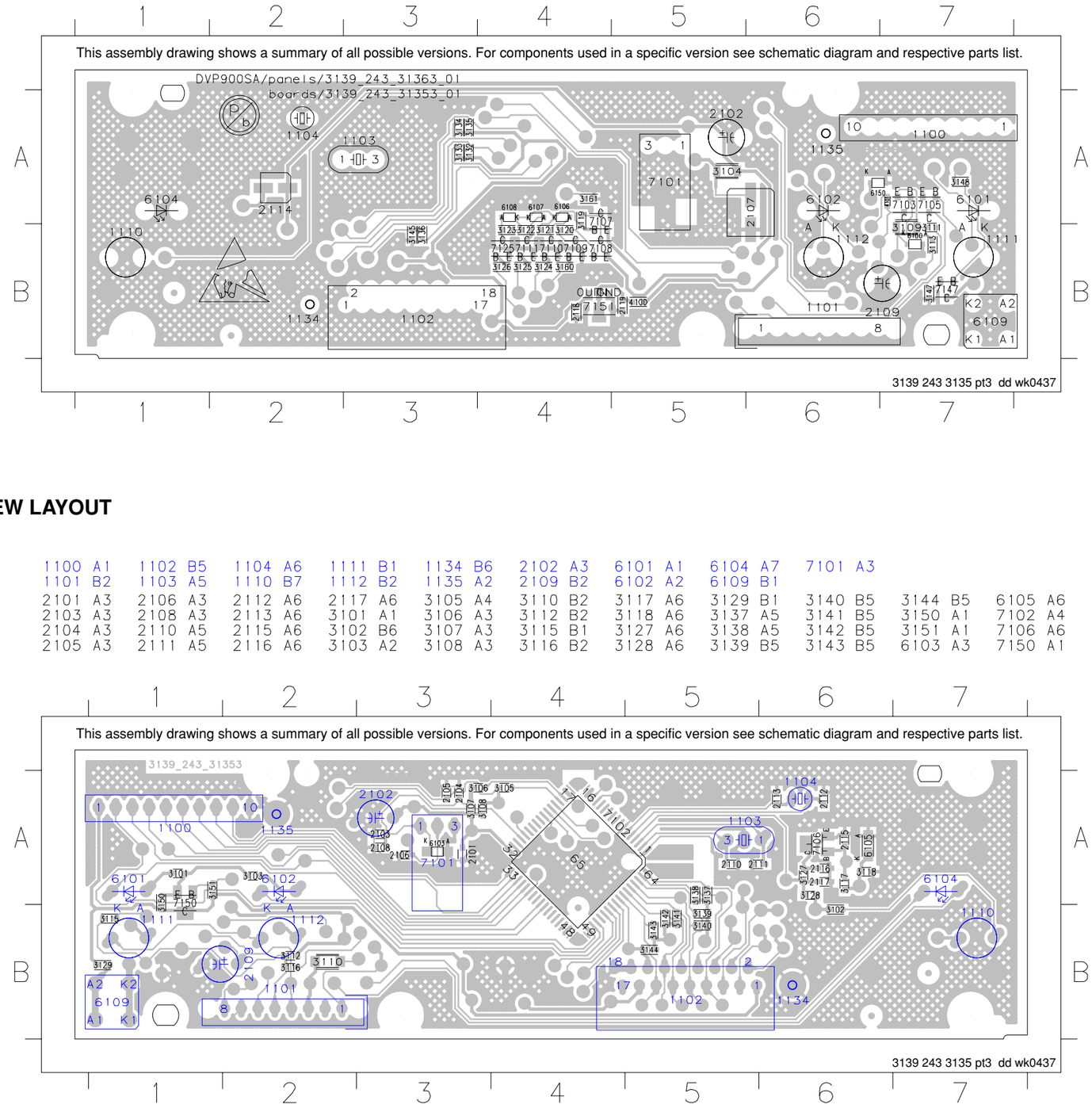
TABLE OF CONTENTS

6-1

6-2

FRONT LEFT BOARD - TOP VIEW LAYOUT

1100 A7	1111 B7	2109 B7	3111 B7	3123 B4	3134 A3	3160 B4	6102 A6	6150 A6	7109 B4
1101 B6	1112 B6	2114 A2	3113 B7	3124 B4	3135 A3	3161 A4	6104 A1	7101 A5	7110 B4
1102 B3	1134 B2	2118 B4	3119 A4	3125 B4	3136 B3	4100 B5	6106 A4	7103 A7	7111 B4
1103 A3	1135 A6	2119 B5	3120 B4	3126 B4	3145 B3	4101 A7	6107 A4	7105 A7	7125 B4
1104 A2	2102 A5	3104 A5	3121 B4	3132 A3	3147 B7	6100 B7	6108 A4	7107 A4	7147 B7
1110 B1	2107 A6	3109 B7	3122 B4	3133 A3	3148 A7	6101 A7	6109 B7	7108 B4	7151 B4

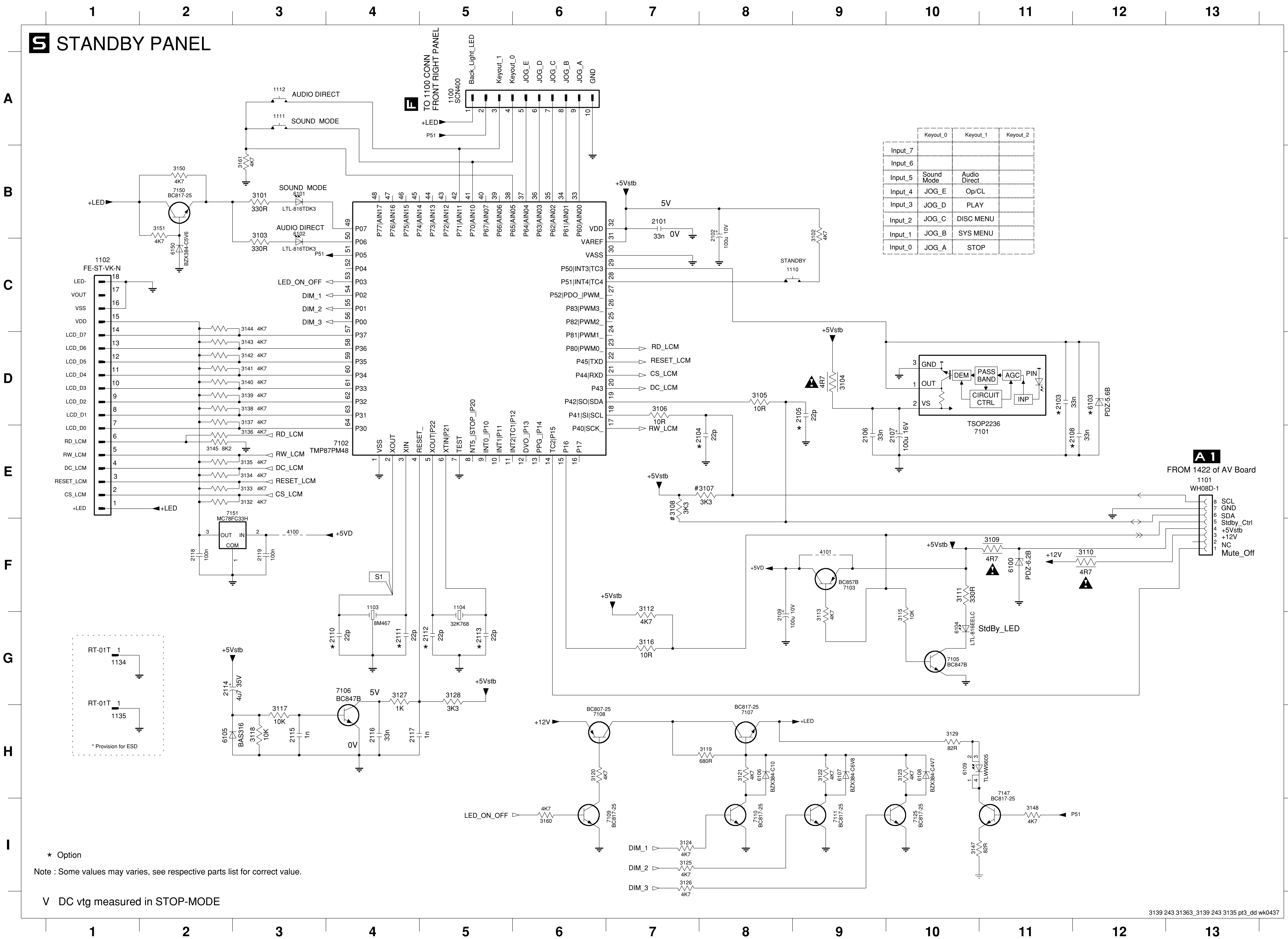


FRONT LEFT BOARD - BOTTOM VIEW LAYOUT

1100 A1	1102 B5	1104 A6	1111 B1	1134 B6	2102 A3	6101 A1	6104 A7	7101 A3
1101 B2	1103 A5	1110 B7	1112 B2	1135 A2	2109 B2	6102 A2	6109 B1	

2101 A3	2106 A3	2112 A6	2117 A6	3105 A4	3110 B2	3117 A6	3129 B1	3140 B5	3144 B5	6105 A6
2103 A3	2108 A3	2113 A6	3101 A1	3106 A3	3112 B2	3118 A6	3137 A5	3141 B5	3150 A1	7102 A4
2104 A3	2110 A5	2115 A6	3102 B6	3107 A3	3115 B1	3127 A6	3138 A5	3142 B5	3151 A1	7106 A6
2105 A3	2111 A5	2116 A6	3103 A2	3108 A3	3116 B2	3128 A6	3139 B5	3143 B5	6103 A3	7150 A1

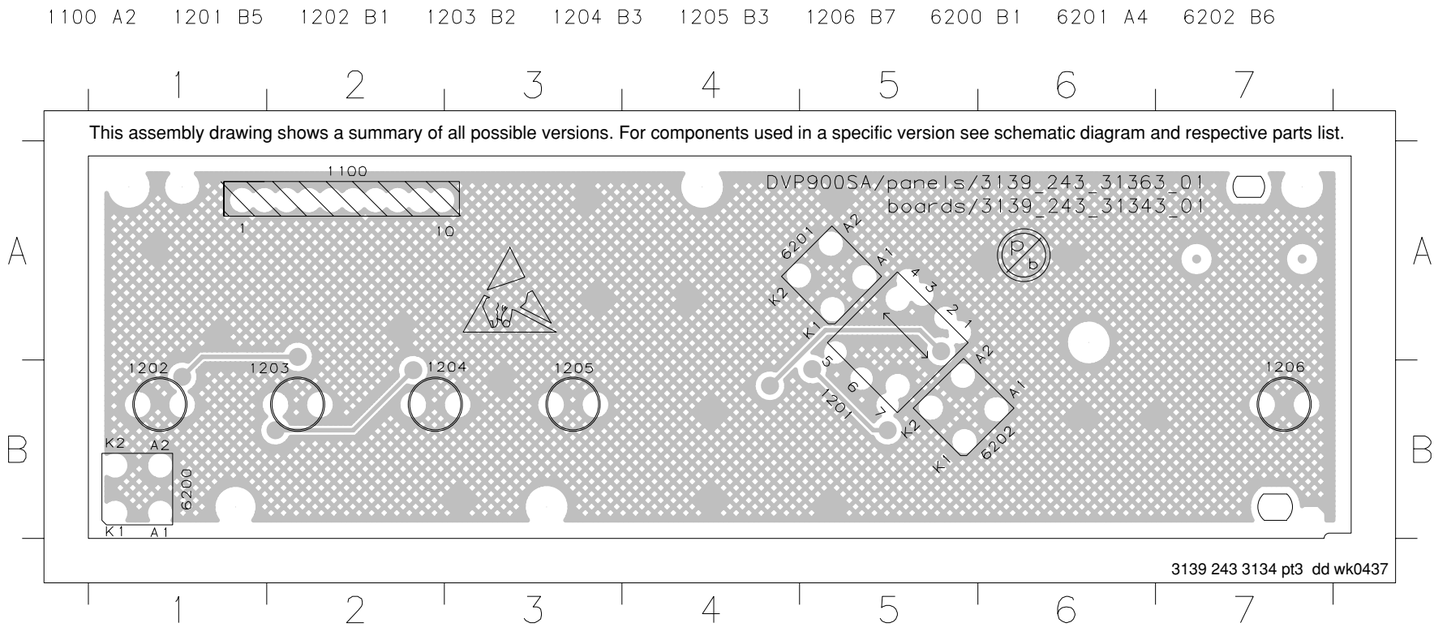
FRONT LEFT BOARD - CIRCUIT DIAGRAM



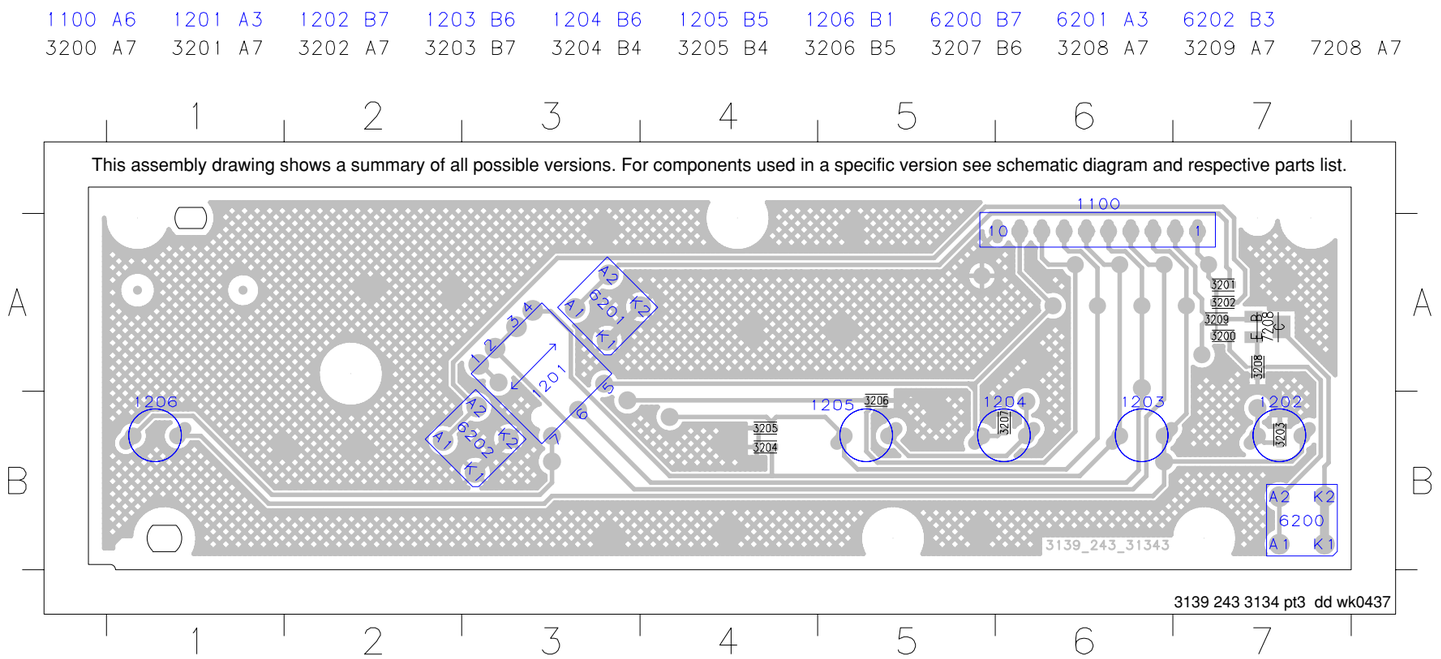
1100 A5
1101 E13
1102 C1
1103 F4
1104 F5
1110 C8
1111 A3
1112 A3
1134 G1
1135 H1
2101 B7
2102 B8
2103 D11
2104 E8
2105 D9
2106 E9
2107 E10
2108 E12
2109 G8
2110 G4
2111 G4
2112 G5
2113 G5
2114 G2
2115 H3
2116 H4
2117 H4
2118 F2
2119 F3
3101 B3
3102 B9
3103 B3
3104 D9
3105 D8
3106 D7
3107 E8
3108 E7
3109 F11
3110 F12
3111 F10
3112 F7
3113 G9
3115 G10
3116 G7
3117 H3
3118 H3
3119 H8
3120 H6
3121 H8
3122 H9
3123 H10
3124 I7
3125 I7
3126 I7
3127 G4
3128 G5
3129 H10
3132 E3
3133 E3
3134 E3
3135 E3
3136 E3
3137 D3
3138 D3
3139 D3
3140 D3
3141 D3
3142 D3
3143 D3
3144 C3
3145 E2
3147 I10
3148 I11
3150 B2
3151 B2
3160 I6
3161 B3
4100 F3
4101 F9
6100 F11
6101 B3
6102 B3
6103 D12
6104 G10
6105 H2
6106 H8
6107 H9
6108 H10
6109 H10
6150 C2
7101 E11
7102 E4
7103 F9
7105 G10
7106 G4
7107 H8
7108 H6
7109 I7
7110 I8
7111 I9
7125 I10
7147 H11
7150 B2
7151 E2

6-4

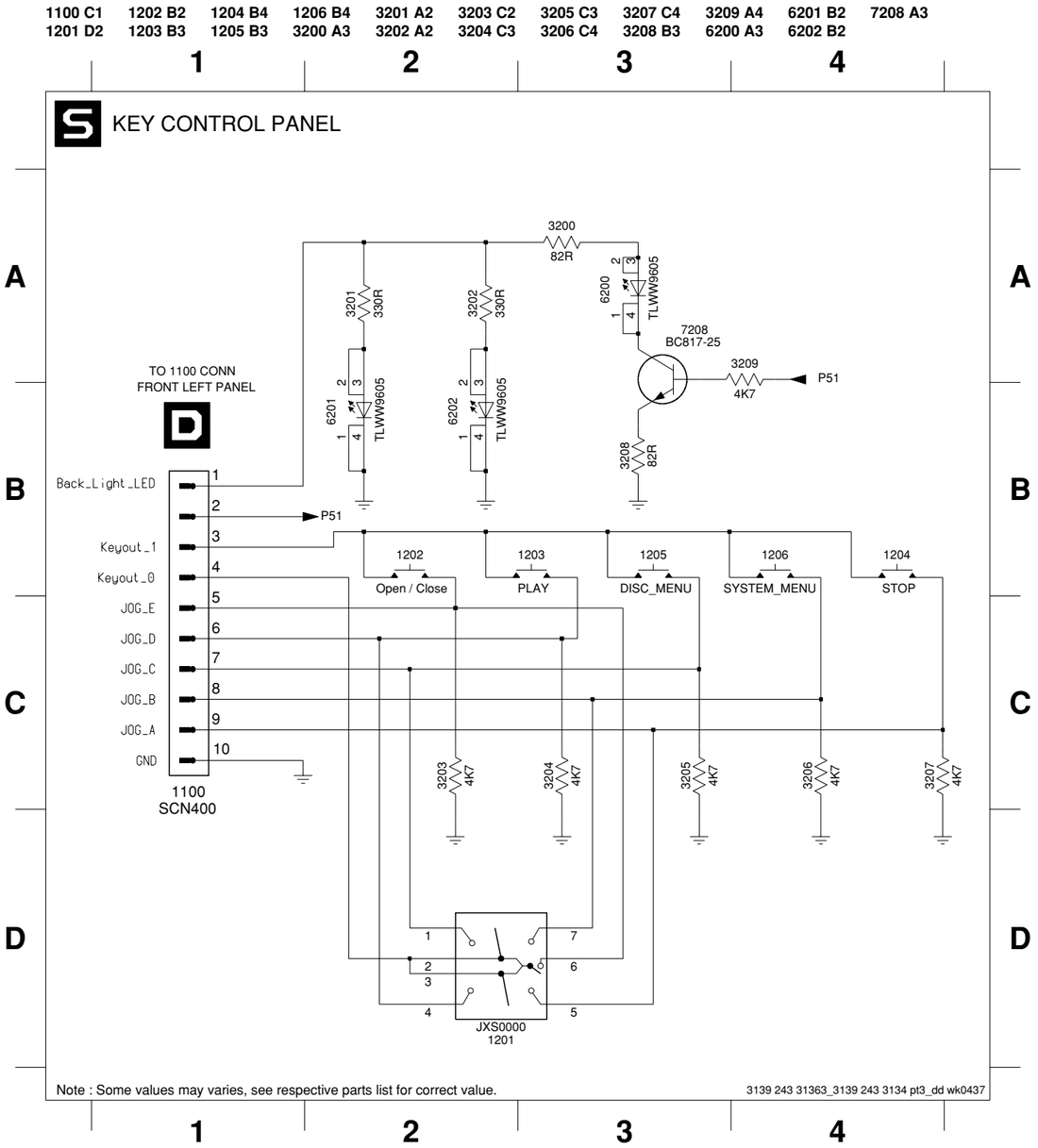
FRONT RIGHT BOARD - TOP VIEW LAYOUT



FRONT RIGHT BOARD - BOTTOM VIEW LAYOUT



FRONT RIGHT BOARD - CIRCUIT DIAGRAM



ELECTRICAL PARTS LIST - FRONT LEFT BOARD

MISCELLANEOUS

1001	3139 248 83821	PCBAS FRONT LEFT
1102	4822 265 11184	FLEX CONNECTOR 18P
1103	2422 540 98519	RES CER 8,467MHz
1104	4822 242 70938	RES XTL 32,768KHz
1110	4822 276 13775	TACT SWITCH
1111	4822 276 13775	TACT SWITCH
1112	4822 276 13775	TACT SWITCH

CAPACITORS

2107	4822 124 12095	100uF 20% 16V
2114	2020 021 91729	4,7uF 20% 35V

RESISTORS

3104	4822 117 11152	⚠ 4R7 5%
3109	4822 117 11152	⚠ 4R7 5%
3110	4822 117 11152	⚠ 4R7 5%

DIODES

6100	9340 548 54115	DIO REG SM PDZ6.2B
6101	9322 190 55676	LED VS LTL-816TDK3
6102	9322 190 55676	LED VS LTL-816TDK3
6104	9322 179 76676	LED VS LTL-816EELC
6105	4822 130 11397	DIO SIG SM BAS316
6106	4822 130 11551	DIO REG SM BZX384-C10
6107	4822 130 11416	DIO REG SM BZX384-C6V8
6108	4822 130 11148	DIO REG SM BZX384-C4V7
6109	9322 209 36667	LED VS TLWW9605
6150	3198 020 55680	DIO REG SM BZX384-C5V6

TRANSISTORS & INTEGRATED CIRCUITS

7101	9322 155 82667	IR RECEIVER TSOP2236YA1
7102	3139 240 50971	IC TMP87CM48DF
7103	4822 130 60373	BC857B
7105	5322 130 60159	BC847B
7106	5322 130 60159	BC847B
7107	4822 130 42804	BC817-25
7108	3198 010 43130	BC807-25
7109	4822 130 42804	BC817-25
7110	4822 130 42804	BC817-25
7111	4822 130 42804	BC817-25
7125	4822 130 42804	BC817-25
7147	4822 130 42804	BC817-25
7150	4822 130 42804	BC817-25
7151	9322 119 42685	IC SM MC78FC33H

Note : Only the parts mentioned in this list are normal service spare parts.

ELECTRICAL PARTS LIST - FRONT RIGHT BOARD

MISCELLANEOUS

1002	3139 248 83811	PCBAS FRONT RIGHT
1201	2422 129 17158	SWITCH TACT NAV 1P 5POS JXS0000
1202	4822 276 13775	TACT SWITCH
1203	4822 276 13775	TACT SWITCH
1204	4822 276 13775	TACT SWITCH
1205	4822 276 13775	TACT SWITCH
1206	4822 276 13775	TACT SWITCH

DIODES

6200	9322 209 36667	LED VS TLWW9605
6201	9322 209 36667	LED VS TLWW9605
6202	9322 209 36667	LED VS TLWW9605

TRANSISTORS & INTEGRATED CIRCUITS

7208	4822 130 42804	BC817-25

Note : Only the parts mentioned in this list are normal service spare parts.

AV BOARD

TABLE OF CONTENTS

7-1

BRIEF INTRODUCTION OF THE AV BOARD

The AV Board consists of the following features :

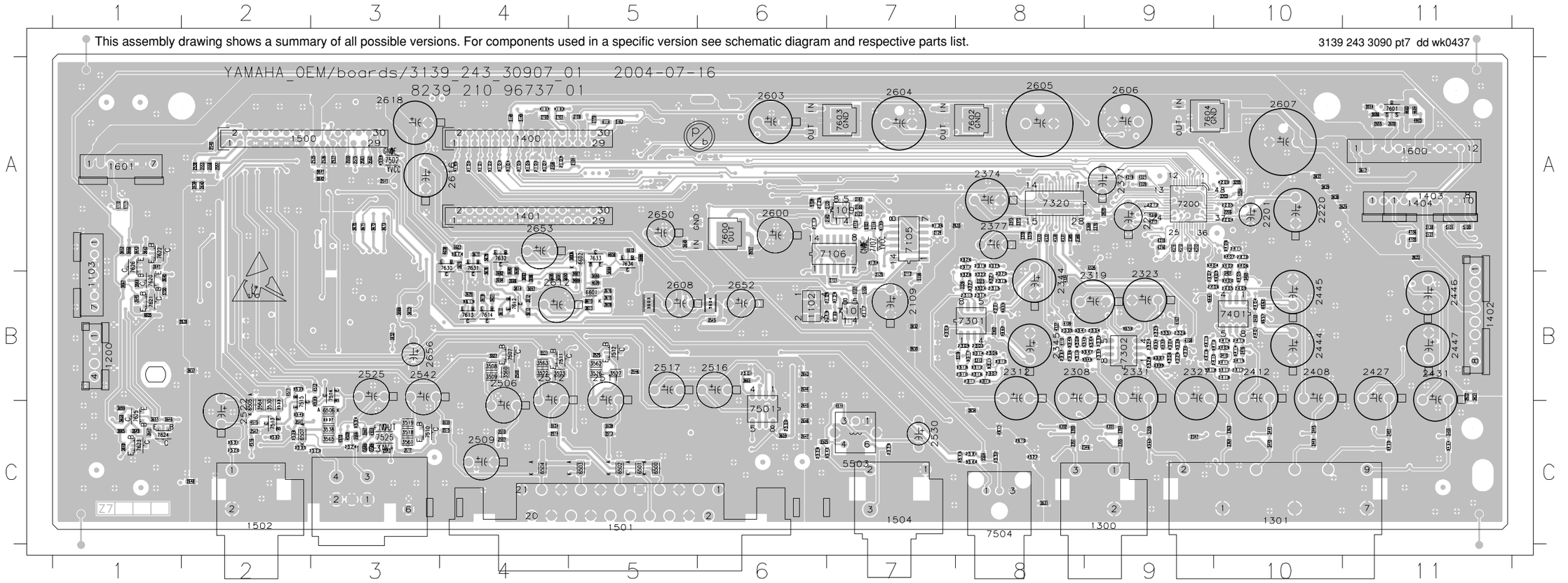
A. VIDEO OUTPUT
- CVBS
- S-Video
- Scart RGB (For Europe Model)

B. AUDIO OUTPUT
- 2 Channel / 6 Channel
- Coaxial / Optical

7-2

AV BOARD - TOP VIEW LAYOUT

1102 B6	2119 B7	2314 B8	2372 A8	2446 B11	2537 A3	2626 A10	3100 A4	3312 B8	3347 B9	3417 B10	3531 C2	3568 C3	3647 C1	3681 B5	4111 A1	4337 B8	6500 C5	7514 B3
1103 B1	2121 B7	2315 B8	2373 A8	2447 B11	2539 A2	2627 A10	3101 A4	3313 B8	3349 B9	3418 B9	3532 C2	3569 C3	3648 C1	3682 B4	4112 A1	4503 C3	6501 C5	7515 C2
1200 B1	2122 A7	2316 B8	2374 A8	2500 C6	2540 A2	2629 A10	3102 A4	3314 B8	3350 C8	3440 C10	3533 C2	3573 A3	3649 C1	3683 A5	4113 A7	4508 A3	6502 C5	7525 C3
1300 C9	2123 A7	2317 A8	2377 A8	2501 B6	2541 A3	2630 B7	3103 A4	3315 B8	3351 C8	3441 C10	3534 C3	3600 A11	3650 C1	3684 A5	4114 A5	4509 C3	6503 C5	7600 A6
1301 C10	2124 A7	2318 A8	2378 A8	2506 B4	2542 B3	2631 C8	3104 A4	3316 B8	3354 C9	3444 C10	3535 C2	3603 B5	3651 C1	3685 B5	4200 A10	4510 C3	6504 C4	7601 A11
1400 A4	2125 B7	2319 B9	2379 A8	2507 C4	2543 C3	2632 B7	3105 A4	3317 B8	3355 C9	3445 C10	3536 C3	3604 B6	3652 A1	3686 A5	4211 A9	4511 B2	6505 C2	7602 A8
1401 A4	2126 A6	2323 B9	2380 A8	2509 C4	2544 B4	2633 A8	3106 A4	3318 B8	3359 C9	3450 C11	3537 C3	3609 B5	3655 B8	3688 A11	4212 A9	4512 B3	6506 C3	7603 A7
1402 B11	2127 A11	2324 B9	2401 B10	2511 B5	2545 B6	2634 C8	3107 A4	3319 B8	3360 C9	3451 C11	3538 C3	3610 B5	3656 B9	3689 B5	4213 A9	4514 C7	6507 C2	7604 A9
1403 A11	2128 A11	2325 B9	2402 B10	2512 B4	2546 B5	2637 B2	3108 A4	3320 B8	3363 C10	3454 C11	3539 B2	3611 B5	3657 B10	3690 A4	4214 A9	4515 C2	6601 B5	7612 B4
1404 A11	2201 A10	2326 B9	2404 B10	2513 C5	2547 C2	2638 B2	3109 A5	3321 B8	3364 C10	3455 C11	3540 C2	3612 B4	3659 C6	3691 B4	4215 A9	4516 C2	6602 A5	7613 B4
1500 A2	2204 A10	2327 B9	2405 B10	2514 C4	2600 A6	2639 A2	3110 A5	3322 B8	3385 A8	3460 B10	3541 C2	3613 B4	3660 B8	3692 B4	4216 A9	4600 A11	7101 B7	7614 B4
1501 C5	2205 A10	2328 B9	2406 B9	2515 C4	2603 A6	2640 A2	3129 B7	3323 B8	3400 B10	3507 B4	3542 C7	3614 B4	3661 B9	3693 B4	4217 A9	4603 A11	7105 A7	7620 B1
1502 C2	2206 A10	2329 B9	2407 B9	2516 B6	2604 A7	2641 A3	3130 B7	3324 B8	3401 B10	3508 B4	3543 C8	3615 B5	3662 B10	3694 B4	4218 A9	4604 A11	7106 A7	7621 B1
1503 C3	2211 A9	2330 B9	2408 B10	2517 B5	2605 A8	2642 A3	3131 B7	3325 A8	3402 A10	3509 B4	3544 C8	3616 B5	3664 B6	3695 B4	4219 A9	4605 B1	7107 A7	7622 A1
1504 C7	2212 A9	2331 B9	2409 B10	2520 C2	2606 A9	2643 B6	3134 A7	3326 A8	3403 B10	3510 C4	3550 A3	3617 B4	3665 C1	3696 B4	4220 A9	4606 A5	7109 A7	7623 C1
1600 A11	2220 A10	2332 B9	2410 A10	2522 C2	2607 A10	2644 B6	3135 A7	3327 B8	3404 A9	3517 C3	3551 A3	3618 B4	3666 A1	3697 B4	4221 A9	4607 A4	7200 A9	7624 C1
1601 A1	2301 B8	2333 B9	2411 A10	2523 C3	2608 B5	2645 C6	3136 A7	3328 B8	3405 B10	3518 C3	3552 A3	3619 B4	3667 B1	3698 B4	4301 C9	4608 A4	7301 B8	7625 C1
2100 A4	2302 B8	2334 B9	2412 B10	2524 C3	2610 C8	2646 C6	3148 A4	3329 B8	3406 A10	3519 C3	3553 A2	3620 B4	3669 B3	3699 C1	4302 C8	4609 B5	7302 B9	7626 A1
2101 A4	2303 B7	2335 B8	2413 B10	2525 B3	2611 C8	2647 C6	3149 A4	3331 B9	3407 A10	3520 C4	3556 A2	3621 B4	3670 A3	3700 B1	4304 B9	4610 A5	7320 A8	7630 A4
2102 A4	2305 B8	2336 B8	2414 B10	2526 C2	2612 B4	2648 C2	3160 A7	3333 B9	3408 A10	3521 B4	3557 A2	3623 B3	3671 A3	4100 A4	4306 B9	5100 A11	7401 B10	7631 A4
2103 A4	2306 B8	2337 B8	2415 B9	2527 C8	2616 A4	2649 A5	3161 A7	3334 B9	3409 B10	3522 B4	3560 B4	3632 B3	3672 A3	4103 A4	4308 B8	5101 A11	7501 C6	7632 A4
2104 A5	2307 B8	2344 B8	2416 B9	2528 C6	2617 A11	2650 A5	3162 A7	3336 B9	3410 B10	3523 B4	3561 C3	3640 B1	3673 A3	4104 A4	4310 B8	5104 B7	7502 A3	7633 A5
2105 B7	2308 B8	2345 B8	2417 B10	2529 C7	2618 A3	2651 A6	3163 A5	3337 B9	3411 B10	3524 C4	3562 B5	3641 A1	3674 A4	4105 A11	4330 A8	5106 B7	7504 C8	7634 A5
2109 B7	2309 B8	2346 C9	2418 B10	2530 C7	2620 A9	2652 B6	3203 A10	3339 B9	3412 B10	3525 B5	3563 B4	3642 A1	3675 A4	4106 A11	4331 A8	5107 A7	7507 B4	
2112 B7	2310 B8	2347 C9	2427 B11	2531 C8	2621 B11	2653 A4	3204 A10	3341 B8	3413 B9	3526 B5	3564 C2	3643 A1	3676 A4	4107 B9	4332 A8	5109 A6	7510 C3	
2113 A6	2311 B8	2369 A9	2431 B11	2532 C8	2622 B11	2654 A11	3205 A10	3343 B8	3414 B10	3527 B5	3565 C3	3644 B1	3677 A4	4108 B9	4333 A8	5503 C7	7511 B4	
2114 A7	2312 B8	2370 A9	2444 B10	2535 A3	2623 A11	2655 A11	3310 B8	3344 B9	3415 B10	3528 C5	3566 C3	3645 B1	3678 A4	4109 B8	4334 B8	5504 C8	7512 B5	
2117 B7	2313 B8	2371 A9	2445 B10	2536 A3	2624 A11	2656 B3	3311 B8	3346 B8	3416 B10	3530 C2	3567 C3	3646 C1	3680 A4	4110 B8	4335 A9	5505 C6	7513 C2	

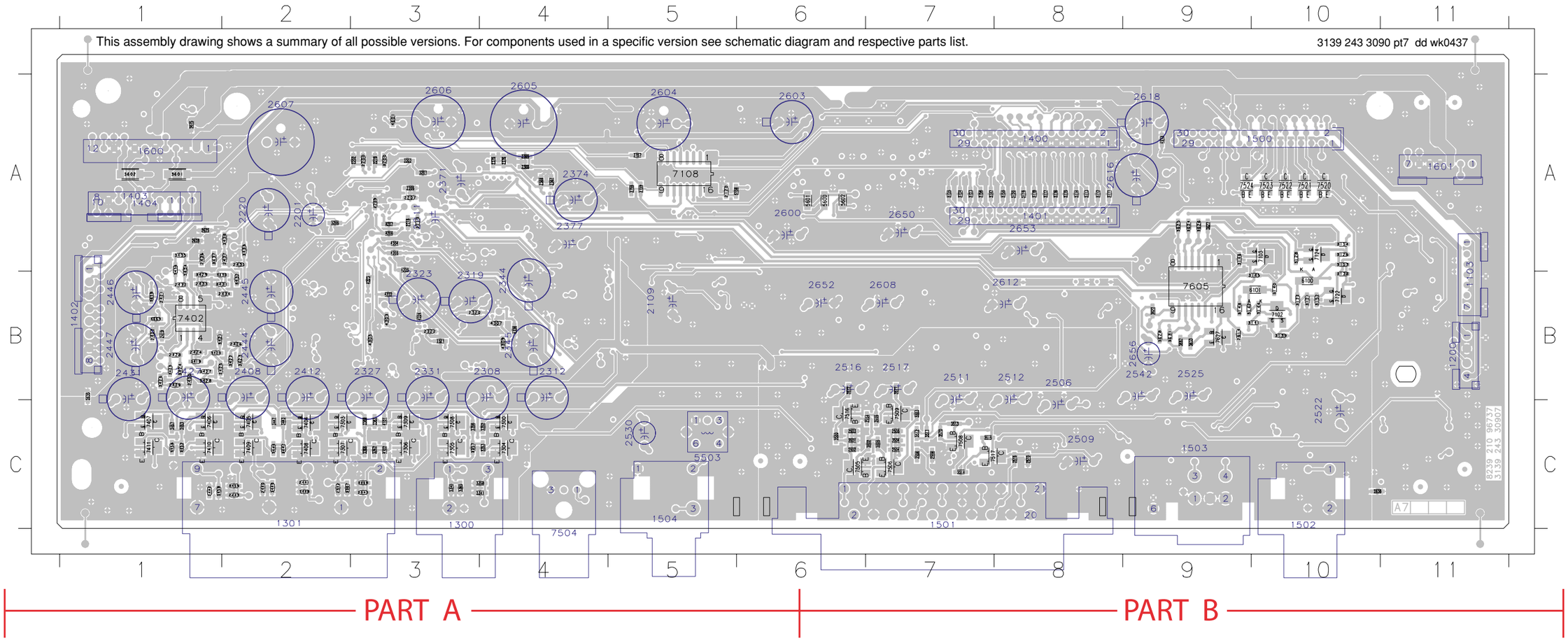


7-3

AV BOARD - BOTTOM VIEW LAYOUT

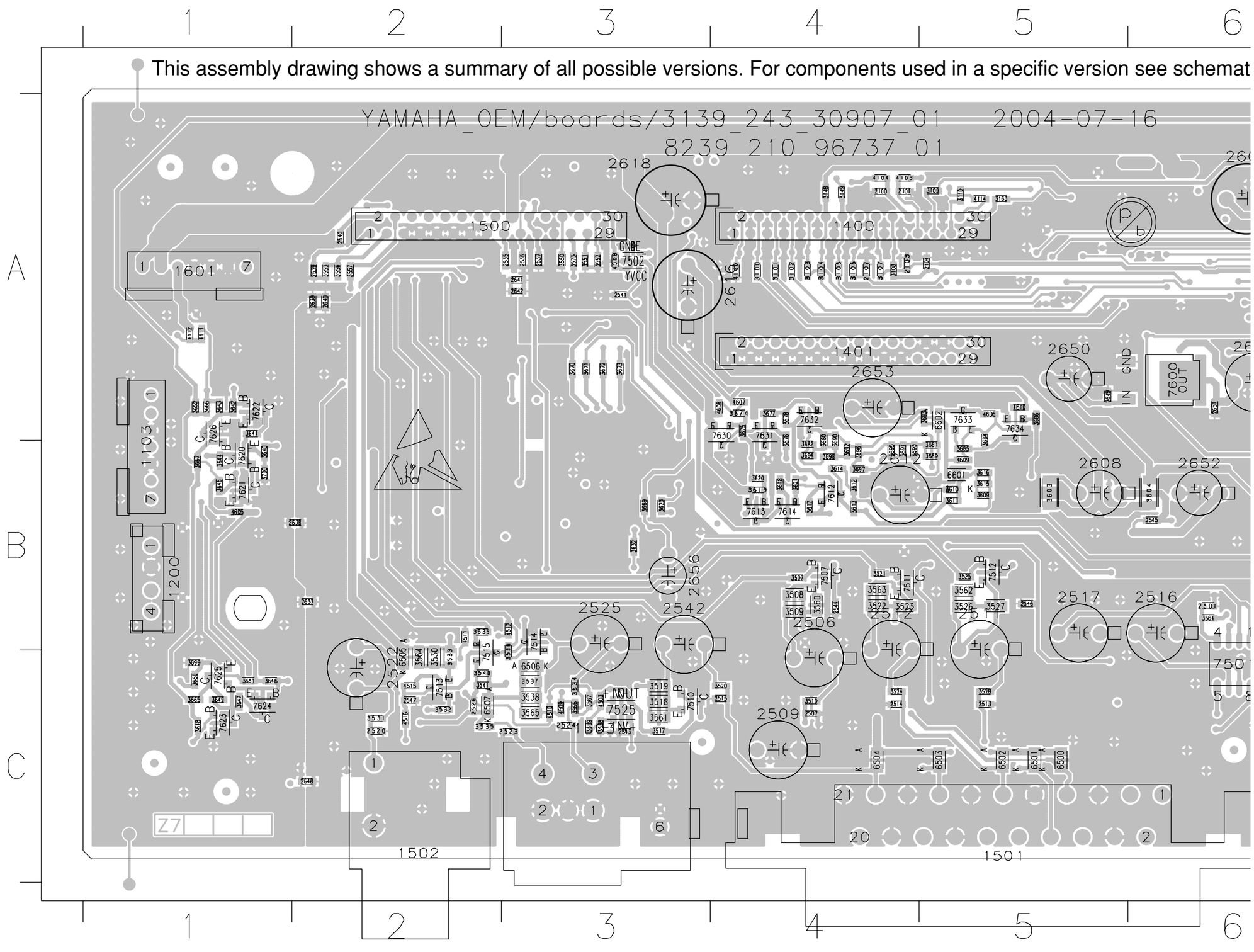
1103 B11 1200 B11 1300 C3 1301 C2 1400 A8 1401 A8 1402 B1 1403 A1 1404 A1 1500 A10 1501 C7 1502 C10 1503 C9 1504 C5 1600 A1 1601 A11 2109 B5 2201 A2 2211 A3 2220 A2 2308 B4 2312 B4 2319 B3 2323 B3 2327 B3 2331 B3 2344 B4 2345 B4 2371 A3 2374 A4 2377 A4 2408 B2 2412 B1 2427 B1 2431 B1 2444 B2 2445 B2 2446 B1 2447 B1 2506 B8 2509 C8 2511 B7 2512 B8 2516 B6 2517 B7 2522 C10 2525 B9 2530 C5 2542 B9 2600 A6 2603 A6 2604 A5 2605 A4 2606 A3 2607 A2 2608 B7 2612 B8 2616 A8 2618 A9 2650 A7 2652 B6 2653 A8 2656 B9 5503 C5 7504 C4

2120 A5 2200 A3 2202 A3 2207 A3 2208 A3 2209 A3 2213 A3 2218 A3 2219 A3 2320 B3 2321 B3 2322 B3 2340 C3 2341 C4 2342 C2 2343 C3 2365 A4 2366 A4 2367 A4 2368 A4 2375 A4 2376 A4 2419 B1 2421 B1 2422 B1 2424 B1 2425 B1 2426 B2 2428 B1 2429 B1 2430 B1 2432 B1 2433 B1 2434 B2 2435 A2 2436 A1 2437 A2 2440 C2 2441 C2 2442 C1 2443 C2 2502 C6 2503 C6 2504 C7 2505 C7 2508 C7 2510 C8 2614 B9 2615 A1 2625 A1 2628 A1 2635 B1 2636 C10 3111 A8 3112 A8 3113 A8 3114 A8 3115 A8 3116 A8 3117 A8 3118 A8 3119 A8 3120 A8 3121 B10 3122 B10 3123 A7 3124 A7 3125 A7 3126 A10 3128 A10 3138 B10 3139 B10 3140 B10 3141 B10 3142 B9 3143 B9 3144 B10 3145 B10 3146 A9 3147 A7 3152 B10 3153 A10 3154 A10 3155 A8 3156 A7 3157 A5 3158 A5 3159 A5 3200 A3 3201 A3 3202 A3 3206 A2 3352 C4 3353 C4 3356 C3 3357 C3 3358 C4 3361 C3 3362 C3 3365 C3 3366 C3 3367 C2 3368 C3 3369 C3 3419 B1 3420 B1 3421 B1 3422 B2 3423 B2 3424 B1 3425 B1 3426 B1 3427 B1 3428 B1 3429 B1 3430 B2 3431 B2 3432 B2 3433 A2 3434 A1 3435 A1 3436 A1 3437 A1 3438 A2 3442 C2 3443 C2 3446 C2 3447 C2 3448 C2 3449 C2 3452 C1 3453 C1 3456 C1 3457 C1 3458 C1 3459 C2 3500 C6 3501 C6 3502 C7 3503 C7 3504 C7 3505 C7 3506 C7 3511 C7 3512 C7 3513 C7 3514 C7 3515 C7 3516 C8 3554 C7 3555 C7 3570 C7 3571 B7 3572 B6 3601 A1 3602 A1 3622 B9 3624 A9 3625 A9 3626 A9 3627 A9 3628 B9 3631 B9 3633 B9 3658 B1 3663 B1 3687 B9 4101 C3 4102 C3 4204 A3 4205 A3 4206 A3 4207 A3 4222 B3 4223 B3 4224 B3 4225 A3 4303 B3 4305 B3 4307 B4 4309 B4 4336 B4 4513 A9 4601 A3 5108 A5 5600 A6 5601 A6 5602 A6 6100 B10 6101 B10 7102 B10 7103 A10 7108 A5 7122 B10 7124 A10 7300 C4 7303 C2 7304 C4 7305 C3 7306 C3 7307 C2 7308 C3 7309 C3 7402 B1 7404 C2 7405 C2 7406 C1 7407 C1 7408 C2 7409 C2 7410 C1 7411 C1 7505 C6 7506 C7 7508 C7 7509 C7 7516 C6 7517 C7 7520 A10 7521 A10 7522 A10 7523 A10 7524 A9 7605 B9 7627 B9



7-4

AV BOARD - TOP VIEW LAYOUT (PART A)



7-5

AV BOARD - CIRCUIT DIAGRAM (PART 1)

A 1 Digital Audio Master_Clk Generation & Switchng

CLK_SEL	M_CLK
Hi	AV_CLK
Low	MB_CLK

FROM 1013 OF SD4.0SA MONO BOARD M 1 Ø

TO 1127 DISPLAY BOARD D

AV/MB MASTER CLOCK SWITCH

DSD/PCM DATA SWITCH

* OPTIONAL

Note : Some values may varies, see respective parts list for correct value.

V DC vtg measured in STOP-MODE

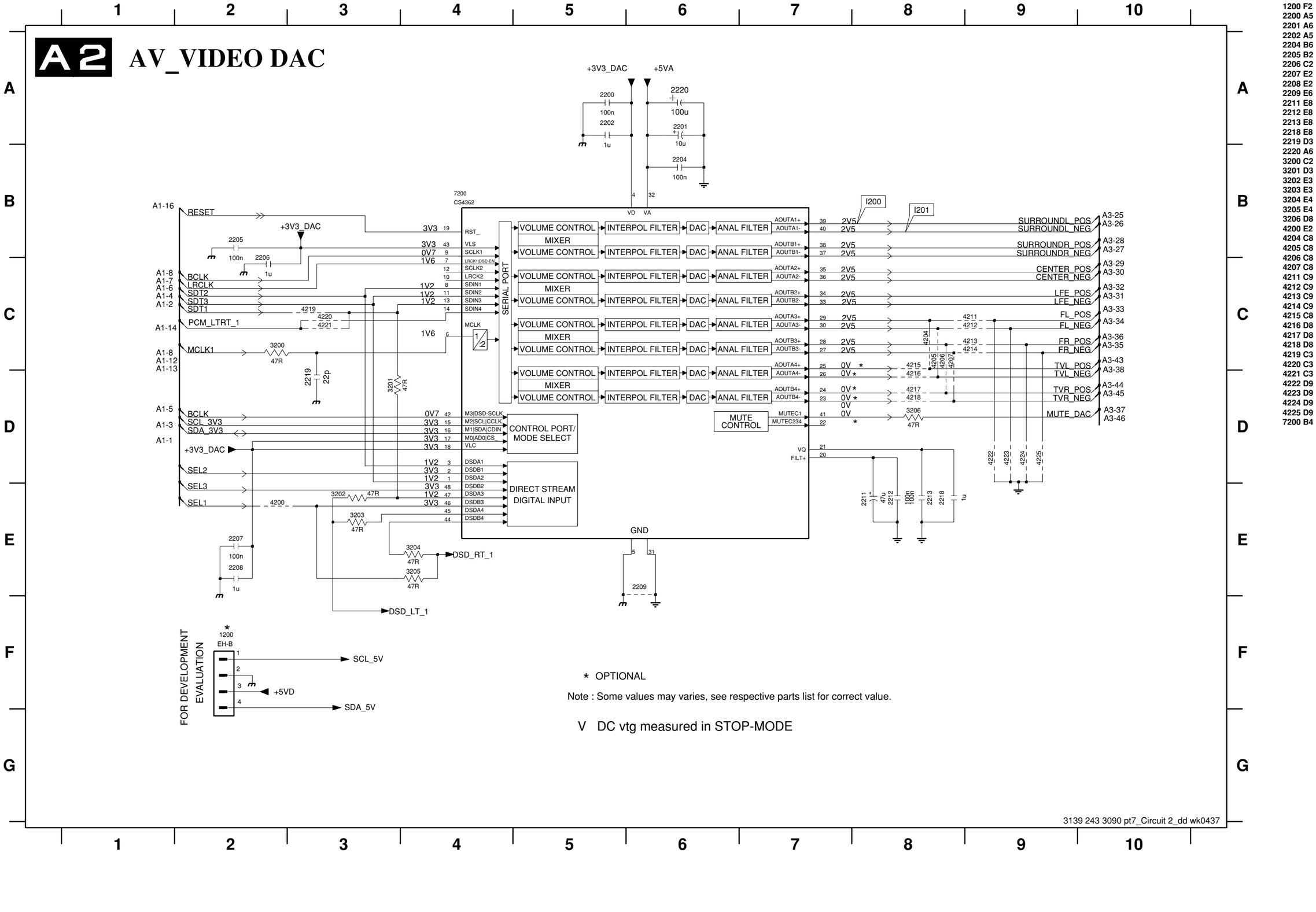
3139 243 3090 pt7_Circuit 1_dd wk0437

1102 D7
1103 B9
1400 B2
1401 B1
1402 G1
1403 I2
1404 I1
2100 E2
2101 E2
2102 D3
2103 E3
2104 E3
2105 E6
2109 D8
2112 F8
2113 H7
2114 H9
2117 D8
2119 E7
2120 A13
2121 D9
2122 E8
2123 F10
2124 H10
2125 I8
2126 E9
2127 I1
2128 I1
3100 B3
3101 C3
3102 C3
3103 C3
3104 D3
3105 D3
3106 D3
3107 D3
3108 E3
3109 E2
3110 F2
3111 B1
3112 B1
3113 C1
3114 C1
3115 C1
3116 D1
3117 D1
3118 D1
3119 D1
3120 E1
3123 F1
3124 F1
3125 F1
3129 D7
3130 D7
3131 D9
3134 H7
3135 I9
3136 G9
3139 F12
3140 F12
3141 G12
3142 G13
3143 G13
3144 G12
3145 H12
3146 H12
3147 E1
3148 C3
3149 D3
3155 E1
3156 E1
3157 B13
3158 B13
3159 C13
3160 E8
3161 F9
3162 E10
3163 F2
4100 B3
4103 E3
4104 E3
4105 I4
4106 I4
4111 B9
4112 B9
4113 F7
4114 F2
5100 H3
5101 H3
5104 C8
5106 F7
5107 H8
5108 A13
5109 E9
6101 F13
7101-1 C6
7101-2 D8
7101-3 D8
7102 G12
7103 H12
7105-A G6
7105-B G8
7105-C G7
7105-D F6
7106-A H6
7107 H8
7108 A12
7109-1 D10
7109-2 E10
7109-3 E9

7-6

AV BOARD - CIRCUIT DIAGRAM (PART 2)

A2 AV_VIDEO DAC



* OPTIONAL

Note : Some values may varies, see respective parts list for correct value.

V DC vtg measured in STOP-MODE

3139 243 3090 pt7_Circuit 2_dd wk0437

1200 F2
2200 A5
2201 A6
2202 A5
2204 B6
2205 B2
2206 C2
2207 E2
2208 E2
2209 E6
2211 E8
2212 E8
2213 E8
2218 E8
2219 D3
2220 A6
3200 C2
3201 D3
3202 E3
3203 E3
3204 E4
3205 E4
3206 D8
4200 E2
4204 C8
4205 C8
4206 C8
4207 C8
4211 C9
4212 C9
4213 C9
4214 C9
4215 C8
4216 D8
4217 D8
4218 D8
4219 C3
4220 C3
4221 C3
4222 D9
4223 D9
4224 D9
4225 D9
7200 B4

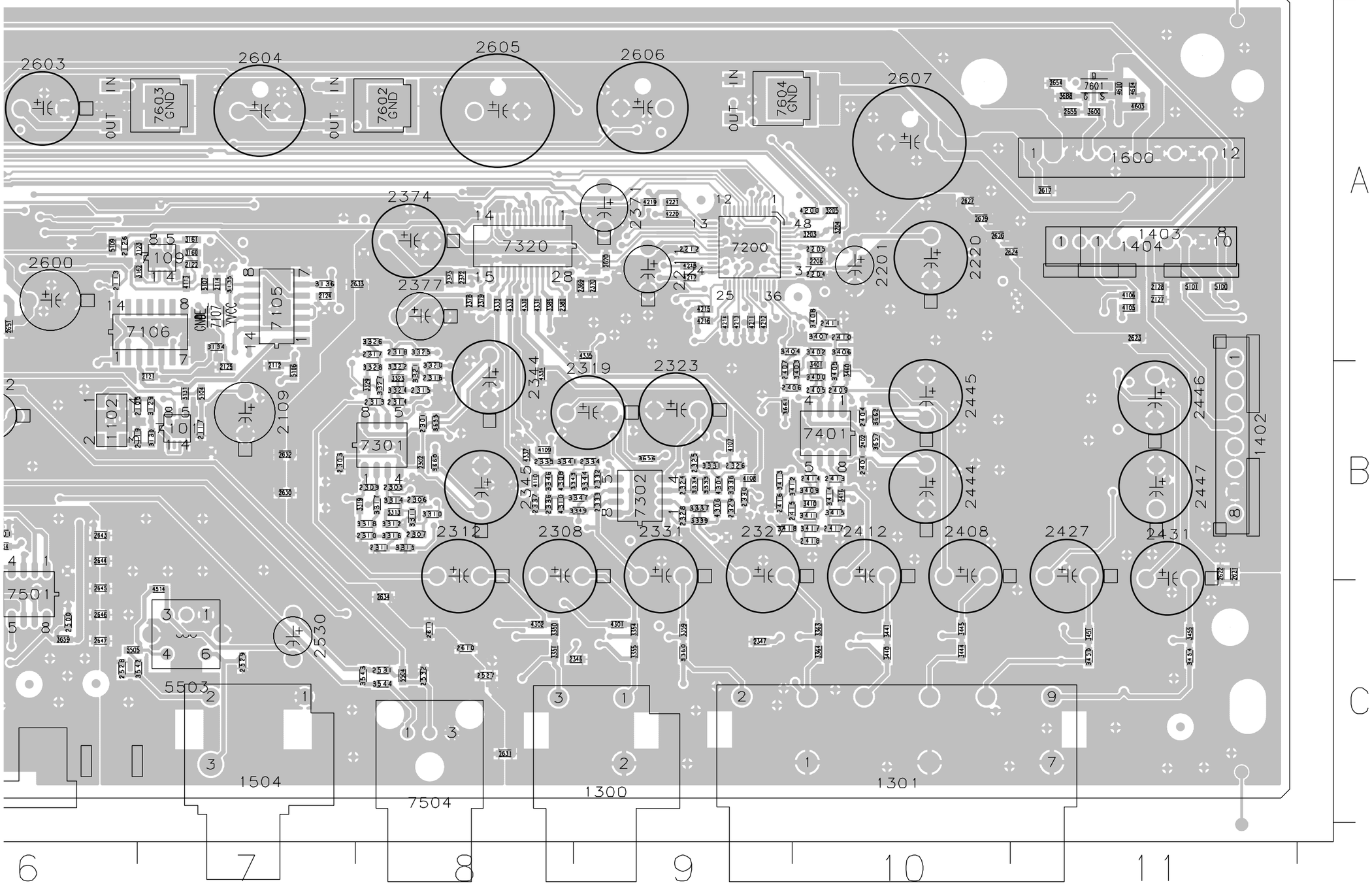
7-7

AV BOARD - TOP VIEW LAYOUT (PART B)

6 7 8 9 10 11

ematic diagram and respective parts list.

3139 243 3090 pt7 dd wk0437



A

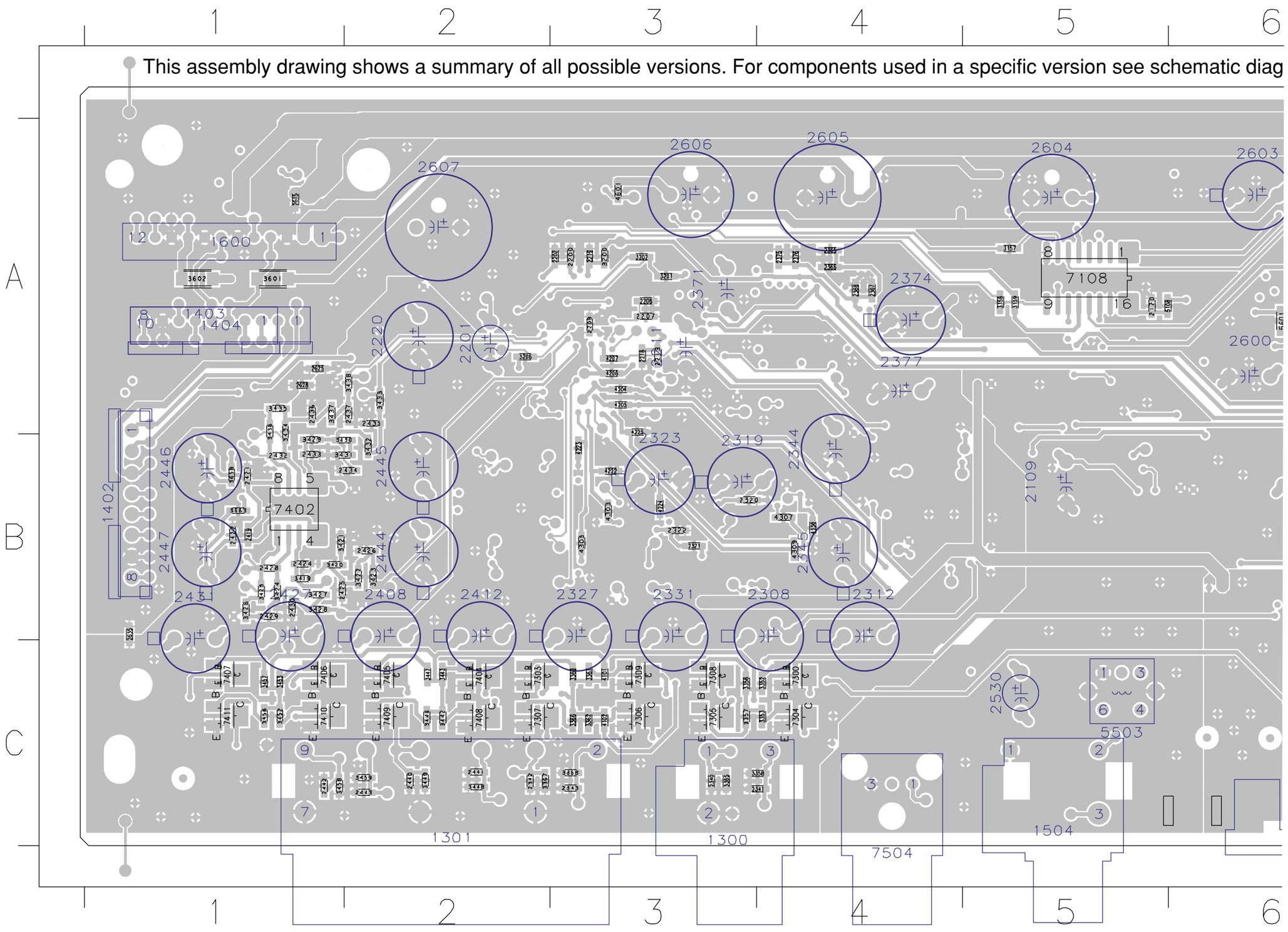
B

C

6 7 8 9 10 11

7-8

AV BOARD - BOTTOM VIEW LAYOUT (PART A)

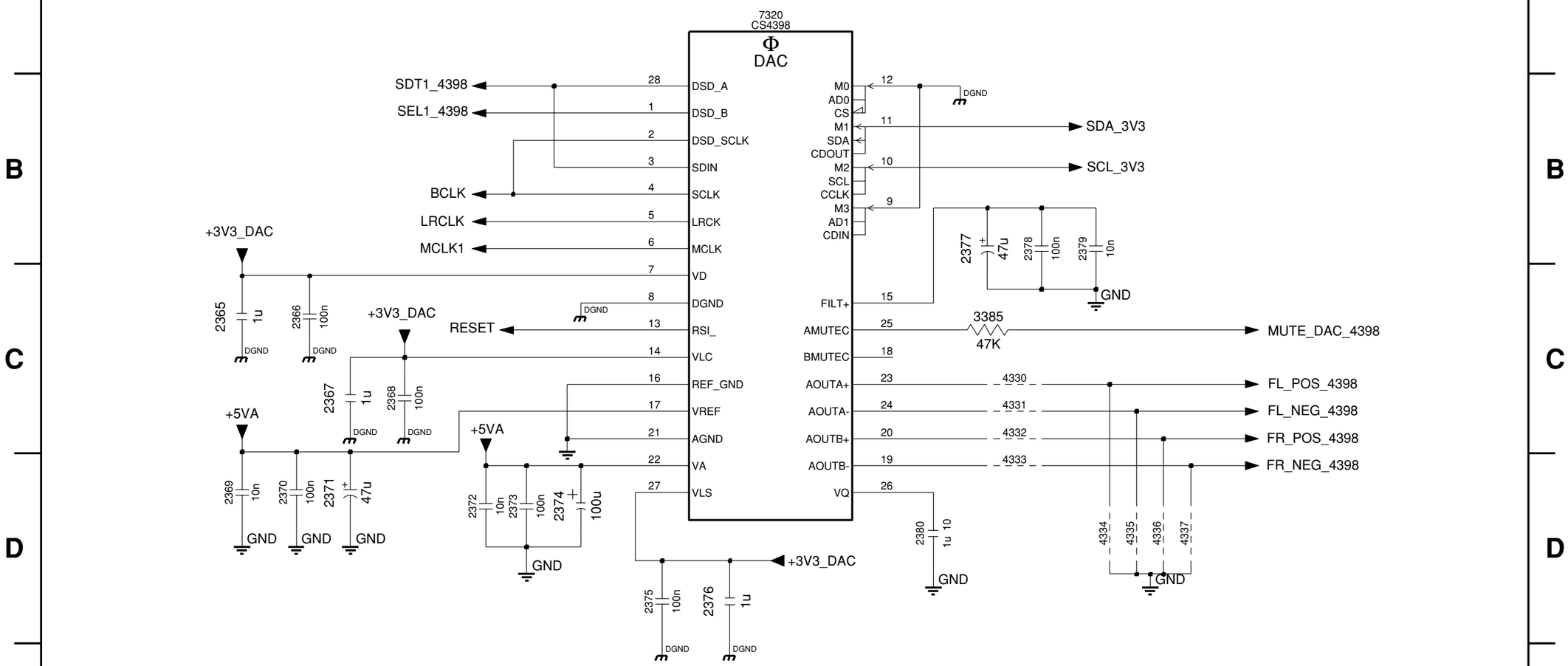


7-9

AV BOARD - CIRCUIT DIAGRAM (PART 3)

2365 C1
2366 C1
2367 C2
2368 C2
2369 D1
2370 D1
2371 D2
2372 D2
2373 D3
2374 D3
2375 D3
2376 D4
2377 B5
2378 B5
2379 B6
2380 D5
3385 C5
4330 C5
4331 C5
4332 C5
4333 D5
4334 D6
4335 D6
4336 D6
4337 D6
7320 A4

A3 AV_AUDIO_Front & TV Channels



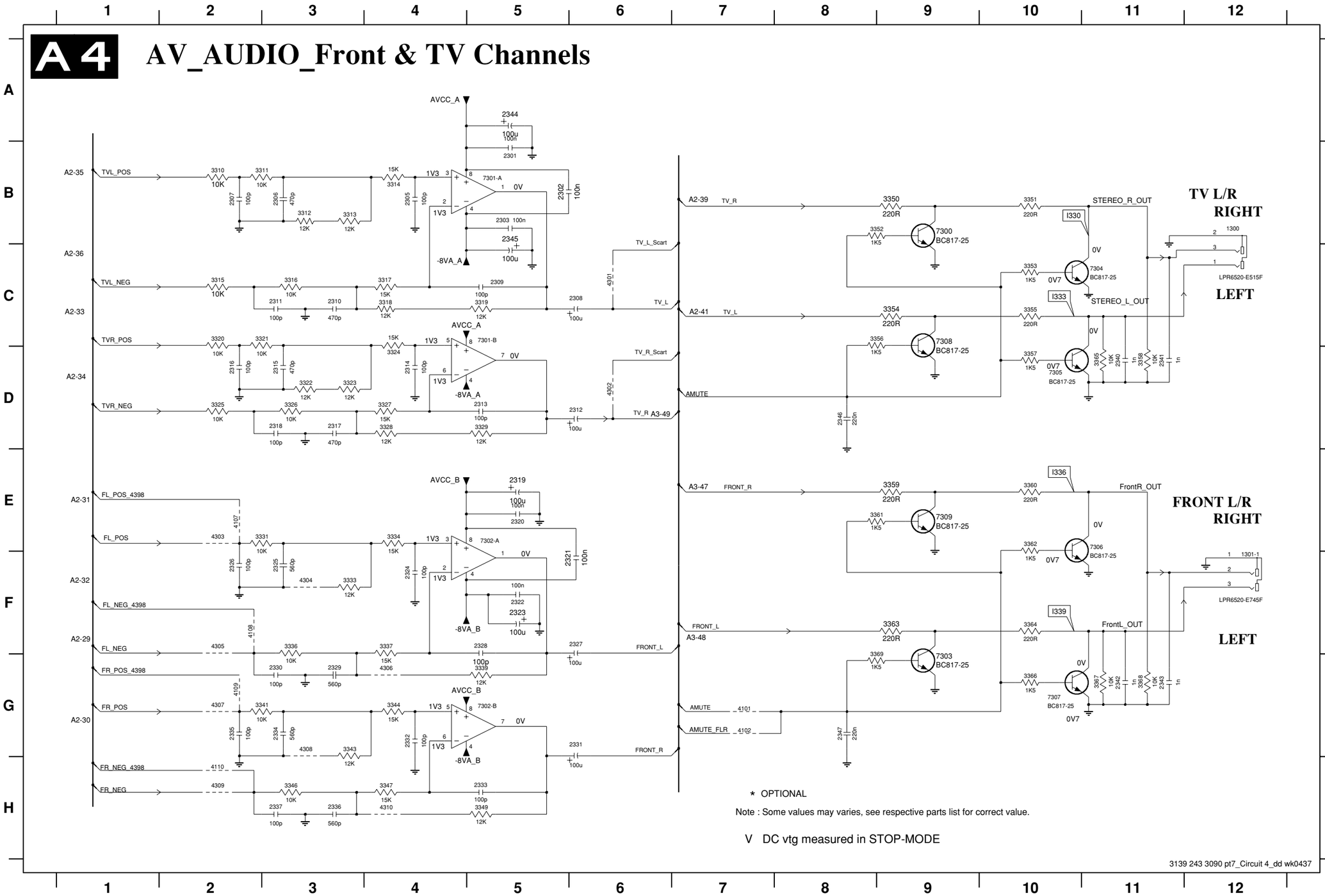
Note : Some values may varies, see respective parts list for correct value.

3139 243 3090 pt7_Circuit 3_dd wk0437

7-10

AV BOARD - CIRCUIT DIAGRAM (PART 4)

A4 AV_AUDIO_Front & TV Channels



* OPTIONAL

Note : Some values may varies, see respective parts list for correct value.

V DC vtg measured in STOP-MODE

3139 243 3090 pt7_Circuit 4_dd wk0437

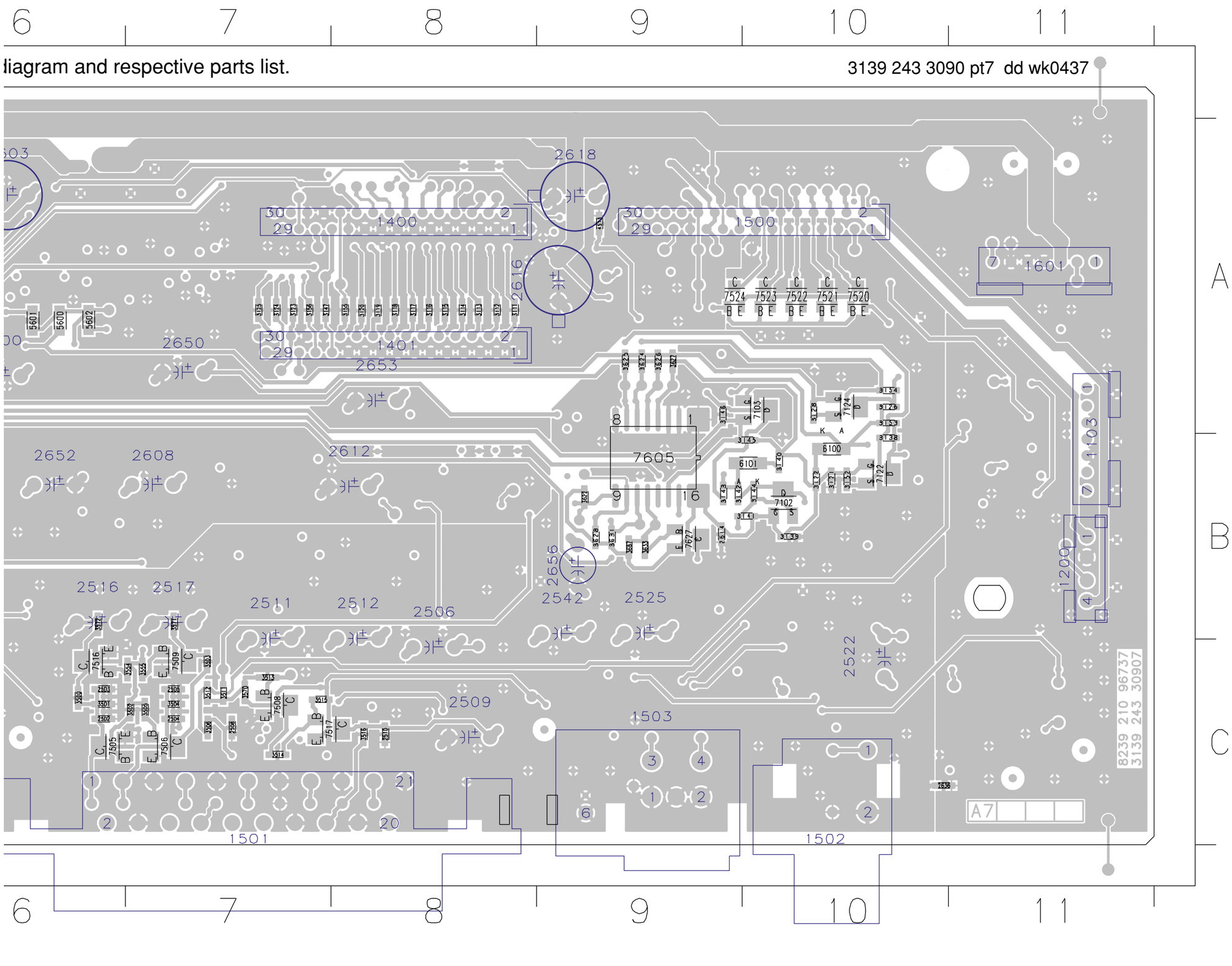
1300 B12
1301-1 F12
2301 B5
2302 B5
2303 B5
2305 B4
2306 B3
2307 B2
2308 C6
2309 C5
2310 C3
2311 C3
2312 D6
2313 D5
2314 D4
2315 D3
2316 D2
2317 D3
2318 D3
2319 E5
2320 E5
2321 F6
2322 F5
2323 F5
2324 F4
2325 F3
2326 F2
2327 F6
2328 F5
2329 G3
2330 G3
2331 G6
2332 G4
2333 H5
2334 G3
2335 G2
2336 H3
2337 H3
2340 D11
2341 D11
2342 G11
2343 G11
2344 A5
2345 B5
2346 D8
2347 G8
3310 B2
3311 B3
3312 B3
3313 B3
3314 B4
3315 C2
3316 C3
3317 C4
3318 C4
3319 C5
3320 C2
3321 C3
3322 D3
3323 D3
3324 D4
3325 D2
3326 D3
3327 D4
3328 D4
3329 D5
3331 E3
3333 F3
3334 E4
3336 F3
3337 F4
3339 G5
3341 G3
3343 G3
3344 G4
3346 H3
3347 H4
3349 H5
3350 B9
3351 B10
3352 B9
3353 C10
3354 C9
3355 C10
3356 C9
3357 D10
3358 D11
3359 E9
3360 E10
3361 E9
3362 E10
3363 F9
3364 F10
3365 D11
3366 G10
3367 G11
3368 G11
3369 G9
4101 G7
4102 G7
4107 E2
4108 F2
4109 G2
4110 H2
4301 C6
4302 D6
4303 E2
4304 F3
4305 F2
4306 G4
4307 G2
4308 G3
4309 H2
4310 H4
7300 B9
7301-A B5
7301-B C5
7302-A E5
7302-B G5
7303 G9
7304 C11
7305 D10
7306 E11
7307 G10
7308 C9
7309 E9

7-11

AV BOARD - BOTTOM VIEW LAYOUT (PART B)

liagram and respective parts list.

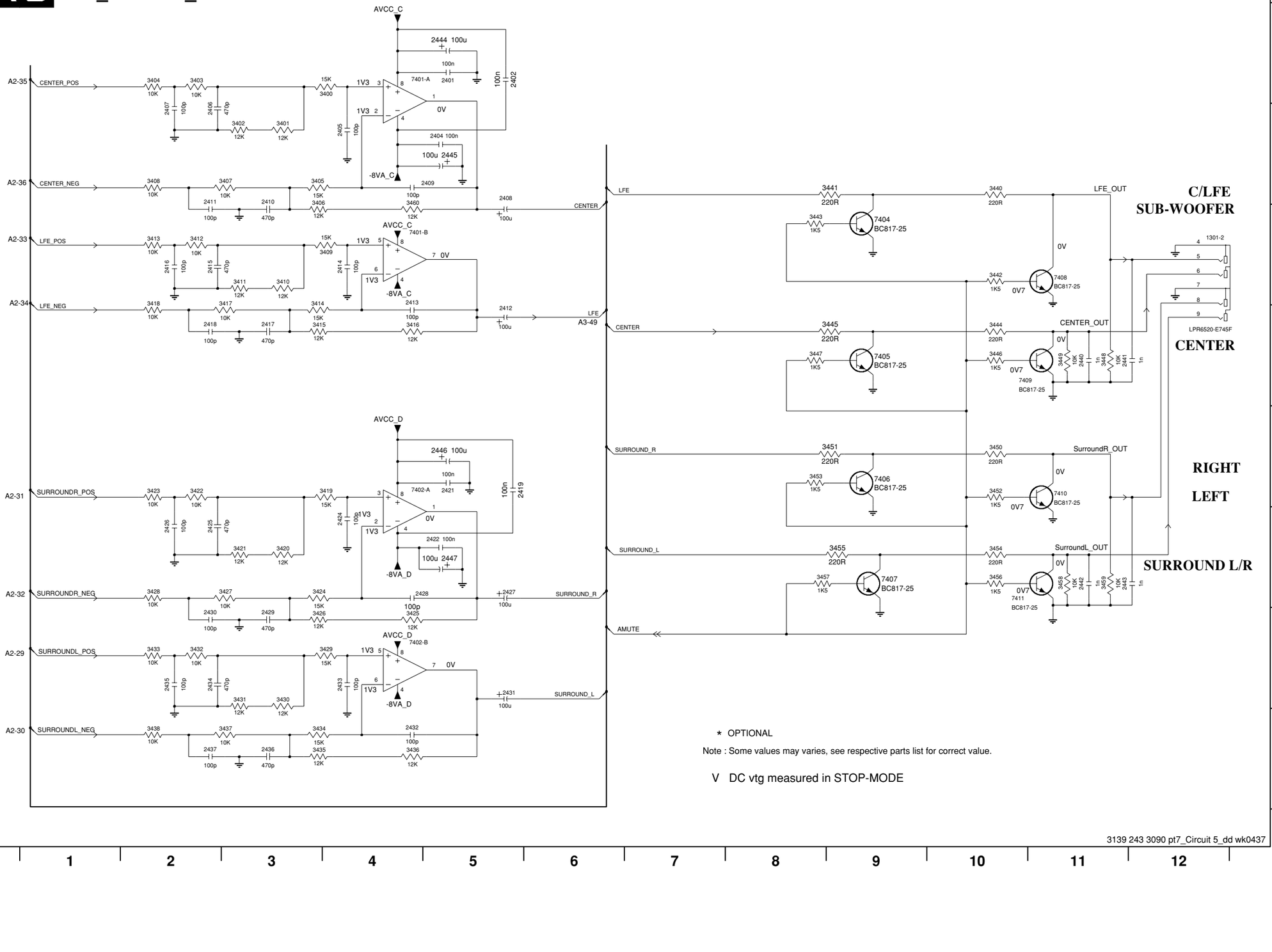
3139 243 3090 pt7 dd wk0437



7-12

AV BOARD - CIRCUIT DIAGRAM (PART 5)

A5 AV_AUDIO_C/FE & Surround Channels



* OPTIONAL

Note : Some values may varies, see respective parts list for correct value.

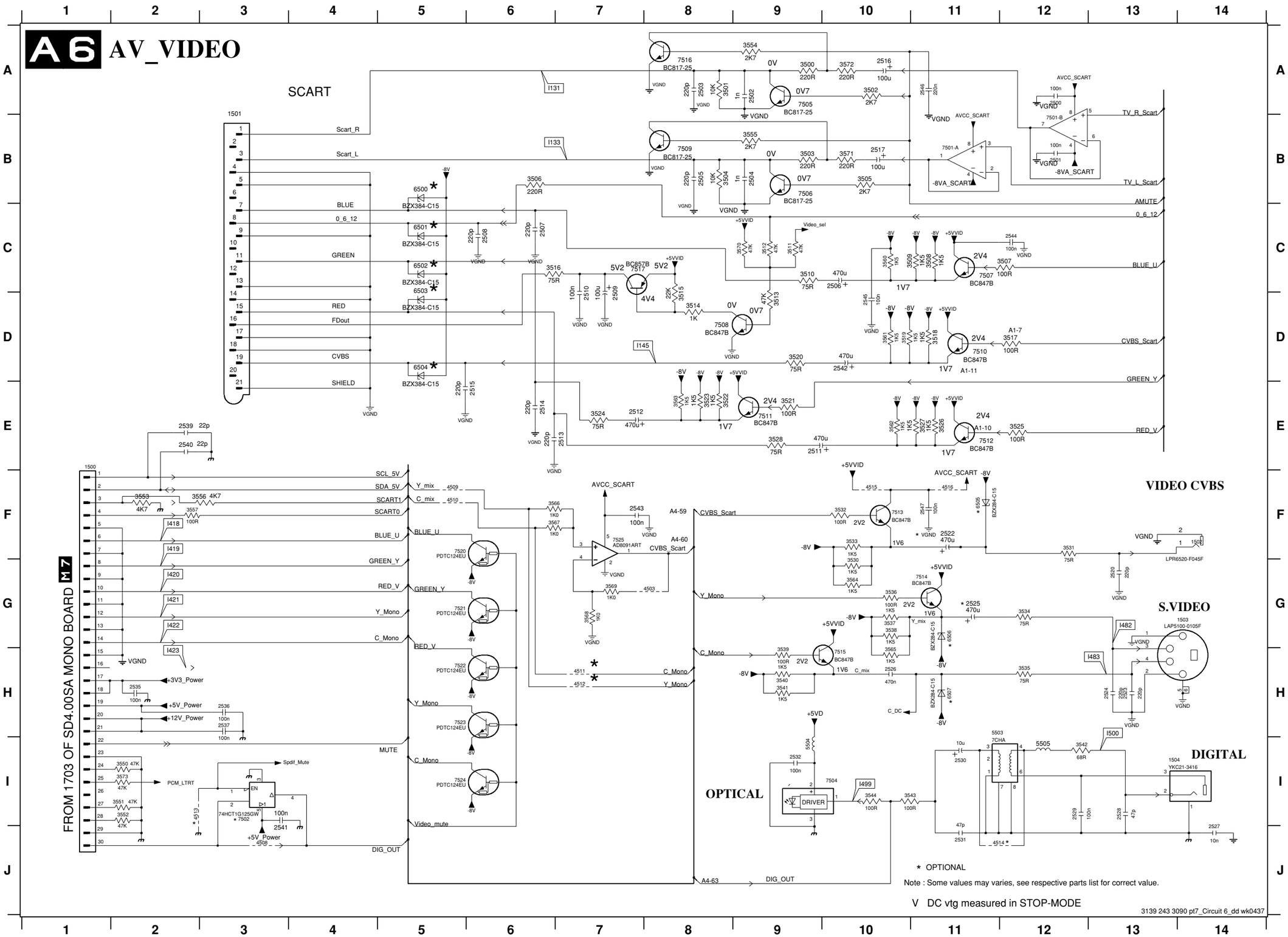
V DC vtg measured in STOP-MODE

3139 243 3090 pt7_Circuit 5_dd wk0437

1301-2 C12
2401 A5
2402 A5
2404 B5
2405 B4
2406 B2
2407 B2
2408 B5
2409 B5
2410 B3
2411 B2
2412 D5
2413 C4
2414 C4
2415 C2
2416 C2
2417 D3
2418 D2
2419 E5
2421 E5
2422 F5
2424 F4
2425 F2
2426 F2
2427 F5
2428 F4
2429 G3
2430 G2
2431 G5
2432 H4
2433 G4
2434 G2
2435 G2
2436 H3
2437 H2
2440 D11
2441 D11
2442 F11
2443 F11
2444 A5
2445 B5
2446 E5
2447 F5
3400 A4
3401 B3
3402 B3
3403 A2
3404 A2
3405 B3
3406 C3
3407 B3
3408 B2
3409 C4
3410 C3
3411 C3
3412 C2
3413 C2
3414 D3
3415 D3
3416 D4
3417 D3
3418 D2
3419 E4
3420 F3
3421 F3
3422 E2
3423 E2
3424 F3
3425 G4
3426 G3
3427 F3
3428 F2
3429 G4
3430 G3
3431 G3
3432 G2
3433 G2
3434 H3
3435 H3
3436 H4
3437 H3
3438 H2
3440 B10
3441 B9
3442 C10
3443 C8
3444 D10
3445 D9
3446 D10
3447 D8
3448 D11
3449 D11
3450 E10
3451 E9
3452 E10
3453 E8
3454 F10
3455 F9
3456 F10
3457 F8
3458 F11
3459 F11
3460 C4
7401-A A4
7401-B C4
7402-A E4
7402-B G4
7404 C9
7405 D9
7406 E9
7407 F9
7408 C11
7409 D10
7410 E11
7411 F10

7-13

AV BOARD - CIRCUIT DIAGRAM (PART 6)



1500 E1
1501 A3
1502 F14
1503 G14
1504 I13
2500 A12
2501 B12
2502 A9
2503 A8
2504 B9
2505 B8
2506 C10
2507 C6
2508 C6
2509 D7
2510 D7
2511 E9
2512 E7
2513 E7
2514 E6
2515 E6
2516 A10
2517 B10
2520 G13
2522 F11
2523 H13
2524 H13
2525 G11
2526 H10
2527 J14
2528 I13
2529 I12
2530 I11
2531 J11
2532 I9
2535 H2
2536 H3
2537 H3
2539 E2
2540 E2
2541 I3
2542 D10
2543 F7
2544 C12
2545 D10
2546 A11
2547 F11
3500 A9
3501 A8
3502 A10
3503 B9
3504 B8
3505 B10
3506 B6
3507 C12
3508 C11
3509 C11
3510 C9
3511 C9
3512 C9
3513 D9
3514 D8
3515 D8
3516 C6
3517 D12
3518 D11
3519 D10
3520 D9
3521 E9
3522 E8
3523 E8
3524 E7
3525 E12
3526 E11
3527 E11
3528 E9
3530 G10
3531 F12
3532 F10
3533 F10
3534 G12
3535 H12
3536 G10
3537 G10
3538 G10
3539 H9
3540 H9
3541 H9
3542 I12
3543 I10
3544 I10
3550 I2
3551 I2
3552 I2
3553 F2
3554 A9
3555 B9
3556 F2
3557 F2
3560 C10
3561 D10
3562 E10
3563 E8
3564 G10
3565 H10
3566 F6
3567 F6
3568 G7
3569 G7
3570 C9
3571 B10
3572 A10
3573 I2
4503 G8
4508 J3
4509 F5
4510 F5
4511 H7
4512 H7
4513 I2
4514 J11
4515 F10
4516 F11
5503 H11
5504 I9
5505 I12
6500 B5
6501 C5
6502 C5
6503 D5
6504 D5
6505 F11
6506 G11
6507 H11
7501-A B11
7501-B B12
7502 I3
7504 I10
7505 A9
7506 B9
7507 C11
7508 D8
7509 B8
7510 D11
7511 E9
7512 E11
7513 F10
7514 G11
7515 H10
7516 A8
7517 C7
7520 F5
7521 G5
7522 H5
7523 H5
7524 I5
7525 F7

7-14

AV BOARD - CIRCUIT DIAGRAM (PART 7)

A 7

FROM 0201 OF PSU

* OPTIONAL

Note : Some values may varies, see respective parts list for correct value.

3139 243 3090 pt7_Circuit 7_dd wk0437

1600 A7	3663 A4	3626 B2	3688 B10
1601 A6	3664 B4	3627 B2	3689 G12
2600 B12	3665 D3	3628 C2	3690 G12
2603 C13	3666 D6	3629 C2	3691 G12
2604 C12	3667 E4	3630 B3	3692 G12
2605 C11	3669 H7	3631 B3	3693 G12
2606 E13	3670 G7	3632 B3	3694 G12
2607 E13	3671 G7	3633 C3	3695 G12
2608 D11	3672 G7	3634 C3	3696 G12
2610 C9	3673 G7	3635 B1	3697 G12
2611 C9	3674 H10	3636 B4	3698 G12
2612 F13	3675 H9	3637 B4	3699 E1
2614 H3	3676 H9	3638 B4	3700 E8
2615 A10	3677 H11	3639 C4	4600 B11
2616 A10	3678 I11	3640 B4	4601 D13
2617 A9	3680 H12	3641 B4	4603 B11
2618 A8	3681 H12	3642 B4	4604 B11
2620 B1	3682 H12	3643 C4	4605 E4
2621 B1	3683 H13	3644 C4	4606 H13
2622 C1	3684 I12	3645 B5	4607 H9
2623 C1	3685 I13	3646 B5	4608 H10
2624 C1	3686 I12	3647 B5	4609 H12
2625 B2	3687 H7	3648 C5	4610 I12
2626 B2	3688 B10	3649 B12	5600 A13
2627 B2	3689 G12	3650 B12	5601 B13
2628 C2	3690 G12	3651 B12	5602 B13
2629 C2	3691 G12	3652 D13	6100 F2
2630 B3	3692 G12	3653 H13	6601 F13
2631 B3	3693 G12	3654 B10	6602 H13
2632 B3	3694 G12	3655 B10	7122 G2
2633 C3	3695 G12	3656 I6	7124 H2
2634 C3	3696 G12	3121 F2	7600 A12
2635 B1	3697 G12	3122 F2	7601 B10
2636 B4	3698 G12	3126 G3	7602 C12
2637 B4	3699 E1	3128 H1	7603 C13
2638 B4	3700 E8	3138 G2	7604 D13
2639 C4	4600 B11	3152 G2	7605 F3
2640 B4	4601 D13	3153 G2	7612 F11
2641 B4	4603 B11	3154 H2	7613 F10
2642 B4	4604 B11	3600 B9	7614 F10
2643 C4	4605 E4	3601 C11	7620 E8
2644 C4	4606 H13	3602 D12	7621 D7
2645 B5	4607 H9	3603 D10	7622 E7
2646 B5	4608 H10	3604 D10	7623 D3
2647 B5	4609 H12	3609 E12	7624 E3
2648 C5	4610 I12	3610 E13	7625 E1
2649 B12	5600 A13	3611 E12	7626 E5
2650 B12	5601 B13	3612 F12	7627 H7
2651 B12	5602 B13	3613 E12	7630 H10
2652 D13	6100 F2	3614 E12	7631 H10
2653 H13	6601 F13	3615 E12	7632 H11
2654 B10	6602 H13	3616 E12	7633 H13
2655 B10	7122 G2	3617 F11	7634 I12
2656 I6	7124 H2	3618 F11	
3121 F2	7600 A12	3619 E10	
3122 F2	7601 B10	3620 F9	
3126 G3	7602 C12	3621 F9	
3128 H1	7603 C13	3622 F7	
3138 G2	7604 D13	3623 H7	
3152 G2	7605 F3	3624 F7	
3153 G2	7612 F11	3625 F6	
3154 H2	7613 F10	3626 F6	
3600 B9	7614 F10	3627 F6	
3601 C11	7620 E8	3628 H6	
3602 D12	7621 D7	3631 I5	
3603 D10	7622 E7	3632 I6	
3604 D10	7623 D3	3633 H7	
3609 E12	7624 E3	3640 E8	
3610 E13	7625 E1	3641 E7	
3611 E12	7626 E5	3642 E6	
3612 F12	7627 H7	3643 E6	
3613 E12	7630 H10	3644 D7	
3614 E12	7631 H10	3645 D6	
3615 E12	7632 H11	3646 E3	
3616 E12	7633 H13	3647 E2	
3617 F11	7634 I12	3648 D3	
3618 F11		3649 D2	
3619 E10		3650 E1	
3620 F9		3651 E3	
3621 F9		3652 D5	
3622 F7		3655 A2	
3623 H7		3656 A2	
3624 F7		3657 A2	
3625 F6		3658 A2	
		3659 B2	
		3660 A4	
		3661 A4	
		3662 A4	

7-15

ELECTRICAL PARTS LIST - AV BOARD

ELECTRICAL PARTS LIST - AV BOARD

MISCELLANEOUS

0004	3139 241 00071	SPRING SCART	
0005	3139 241 00071	SPRING SCART	
1102	2422 543 01297	RES XTL SM 33M8688 16P	
1300	2422 026 05507	Cinch Socket 2P (2CH - L/R)	
1301	2422 026 05505	Cinch Socket 6P (6CH - Main L/R, Center, Subwoofer, Surround L/R)	
1400	2422 025 17433	Flex Connector 30P	
1500	2422 025 17433	Flex Connector 30P	
1501	2422 025 12352	Socket SCART 21P	/00
1502	2422 026 05506	Cinch Socket 1P (Video)	
1503	2422 026 05516	Socket MDIN 4P (S-Video)	
1504	4822 267 31626	Cinch Socket 1P (Coaxial)	

CAPACITORS

2308	2020 012 93792	100uF 20% 16V	
2312	2020 012 93792	100uF 20% 16V	
2319	4822 124 41584	100uF 20% 10V	
2323	4822 124 41584	100uF 20% 10V	
2327	2020 012 93792	100uF 20% 16V	
2331	2020 012 93792	100uF 20% 16V	
2344	4822 124 41584	100uF 20% 10V	
2345	4822 124 41584	100uF 20% 10V	
2374	2020 012 93792	100uF 20% 16V	
2408	2020 012 93792	100uF 20% 16V	
2412	2020 012 93792	100uF 20% 16V	
2427	2020 012 93792	100uF 20% 16V	
2431	2020 012 93792	100uF 20% 16V	
2444	4822 124 41584	100uF 20% 10V	
2445	4822 124 41584	100uF 20% 10V	
2446	4822 124 41584	100uF 20% 10V	
2447	4822 124 41584	100uF 20% 10V	

RESISTORS

3601	4822 051 20008		0R JUMPER
3602	4822 051 20008		0R JUMPER
3603	4822 117 11151	⚠	1R 5%
3604	4822 117 11151	⚠	1R 5%

COILS & FILTERS

5100	4822 157 11499	IND FXD 0603 100MHz 60R	
5101	4822 157 11499	IND FXD 0603 100MHz 60R	
5104	2422 549 43062	IND FXD 0603 100MHz 600R	
5106	2422 549 43062	IND FXD 0603 100MHz 600R	
5107	2422 549 43062	IND FXD 0603 100MHz 600R	
5108	2422 549 43062	IND FXD 0603 100MHz 600R	
5109	2422 549 43062	IND FXD 0603 100MHz 600R	
5503	4822 157 70601	IND VAR 7CHA 100uH 10%	
5504	2422 549 43062	IND FXD 0603 100MHz 600R	
5505	4822 157 11499	IND FXD 0603 100MHz 60R	
5600	2422 535 94092	FXD IND SM 0805 33U 20%	
5601	2422 535 94092	FXD IND SM 0805 33U 20%	
5602	2422 535 94092	FXD IND SM 0805 33U 20%	

DIODES

6500	4822 130 11522	BZX384-C15	/00
6501	4822 130 11522	BZX384-C15	
6502	4822 130 11522	BZX384-C15	/00
6503	4822 130 11522	BZX384-C15	/00
6504	4822 130 11522	BZX384-C15	/00
6505	4822 130 11087	BZX284-C15	
6506	4822 130 11087	BZX284-C15	
6507	4822 130 11087	BZX284-C15	
6601	4822 130 11397	BAS316	
6602	4822 130 11397	BAS316	

TRANSISTORS & INTEGRATED CIRCUITS

7101	9322 177 91685	IC SM TC7WHU04FU	
7102	9965 000 04199	FET SIG SM BSN20	
7103	9965 000 04199	FET SIG SM BSN20	
7105	9352 499 60118	IC SM 74LVC00AD	
7106	4822 209 17441	IC SM 74LVC74AD	
7107	9352 687 20125	IC SM 74LVC1G125GW	
7108	4822 209 17455	IC SM 74LVC157AD	
7109	9322 177 91685	IC SM TC7WHU04FU	
7122	9965 000 04199	FET SIG SM BSN200	
7124	9965 000 04199	FET SIG SM BSN20	
7200	9322 213 00671	IC SM CS4362-KQ-DX	
7300	4822 130 42804	BC817-25	
7301	9337 612 90668	IC SM NE5532AD	
7301	9352 202 10118	IC SM NE5532AD8	
7302	9322 067 00668	IC SM OP275GS	
7303	4822 130 42804	BC817-25	
7304	4822 130 42804	BC817-25	
7305	4822 130 42804	BC817-25	
7306	4822 130 42804	BC817-25	
7307	4822 130 42804	BC817-25	
7308	4822 130 42804	BC817-25	
7309	4822 130 42804	BC817-25	
7320	9322 198 54668	IC SM CS4398-CZ	
7401	9322 067 00668	IC SM OP275GS	
7402	9337 612 90668	IC SM NE5532AD	
7402	9352 202 10118	IC SM NE5532AD8	
7404	4822 130 42804	BC817-25	
7405	4822 130 42804	BC817-25	
7406	4822 130 42804	BC817-25	
7407	4822 130 42804	BC817-25	
7408	4822 130 42804	BC817-25	
7409	4822 130 42804	BC817-25	
7410	4822 130 42804	BC817-25	
7411	4822 130 42804	BC817-25	
7501	4822 209 30095	IC SM LM833D	/00
7502	9352 456 80115	IC SM 74HCT1G125GW	
7504	9322 175 41687	SOC FIB OPT JFJ1000	
7505	4822 130 42804	BC817-25	/00
7506	4822 130 42804	BC817-25	/00
7507	5322 130 60159	BC847B	/00
7508	5322 130 60159	BC847B	/00
7509	4822 130 42804	BC817-25	/00
7510	5322 130 60159	BC847B	/00
7511	5322 130 60159	BC847B	/00
7512	5322 130 60159	BC847B	/00
7513	5322 130 60159	BC847B	
7514	5322 130 60159	BC847B	
7515	5322 130 60159	BC847B	
7516	4822 130 42804	BC817-25	/00
7517	4822 130 60373	BC857B	/00
7525	9322 200 00685	IC SM AD8091ART	
7600	4822 209 17398	IC SM LD1117DT33	
7601	9322 163 53685	FET POW SM IRLML2502	
7602	9322 134 86668	IC SM LF80CDT	
7603	9322 140 81668	IC SM LF50CDT	
7604	9322 163 71668	IC SM MC79M08BDT	
7605	5322 209 11578	IC SM PCF8574T	
7612	5322 130 60159	BC847B	
7613	4822 130 60373	BC857B	
7614	4822 130 60373	BC857B	
7620	5322 130 60159	BC847B	/00
7621	5322 130 60159	BC847B	/00
7622	5322 130 60159	BC847B	/00
7623	5322 130 60159	BC847B	
7624	5322 130 60159	BC847B	
7625	5322 130 60159	BC847B	
7626	5322 130 60159	BC847B	/00
7627	4822 130 60373	BC857B	
7630	4822 130 60373	BC857B	
7631	4822 130 60373	BC857B	
7632	5322 130 60159	BC847B	

Note : Only the parts mentioned in this list are normal service spare parts.

MODULE SD5.2 (S) XSA 4FL DV HDMI

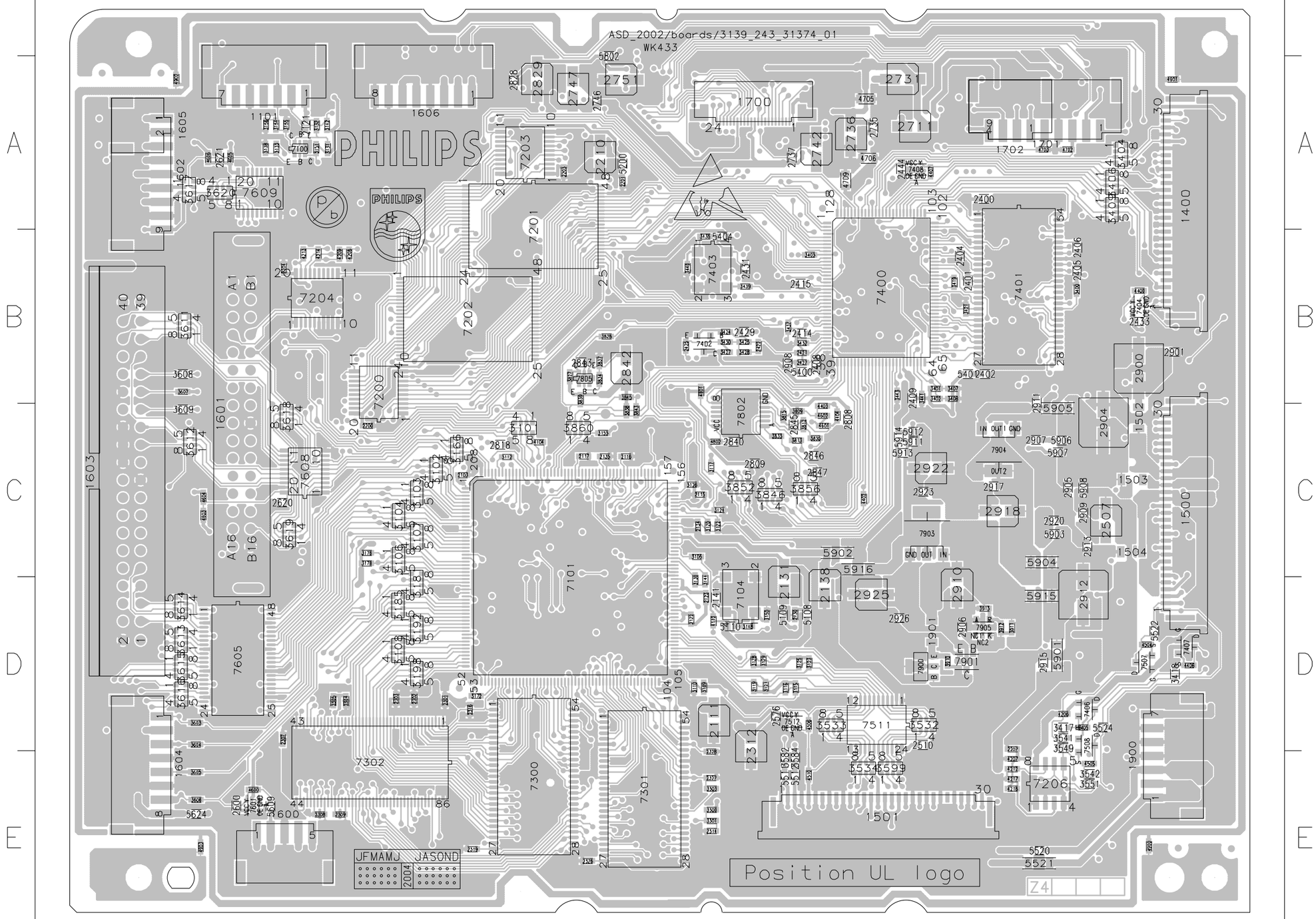
TABLE OF CONTENTS

8-1

8-2

TOP VIEW LAYOUT

This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.



3139 243 3137 pt4 dd wk0439

TOP VIEW LAYOUT MAPPING

1101 A2	2429 B4	3123 D5	3605 E1	4705 A5	7805 B3
1400 A7	2431 B4	3124 C4	3606 E1	4706 A5	7900 D5
1500 C7	2433 B7	3125 D5	3607 B1	4709 A5	7901 D6
1501 E5	2444 A5	3126 C4	3608 B1	4801 B4	7903 C5
1502 C7	2507 C6	3128 D4	3609 C1	4802 C4	7904 C6
1503 C7	2510 D5	3129 D4	3611 B1	4900 E7	7905 D6
1504 C7	2576 D5	3130 D4	3612 C1	4901 A7	
1600 E2	2600 E1	3131 A2	3613 D1	4902 A1	
1601 C1	2620 C2	3132 A2	3614 D1	4903 E1	
1602 A1	2621 A1	3133 A2	3615 D1	5108 D5	
1603 C1	2711 A5	3138 A2	3616 D1	5109 D5	
1604 E1	2731 A5	3142 A2	3617 A1	5110 D4	
1605 A1	2735 A5	3144 D4	3618 C2	5200 A4	
1606 A3	2736 A5	3148 D4	3619 C2	5400 B5	
1700 A4	2737 A5	3150 D5	3620 A1	5401 B6	
1701 A6	2742 A5	3151 A2	3809 C5	5404 B4	
1702 A6	2746 A4	3153 C4	3812 C5	5511 E5	
1900 E7	2747 A3	3154 A2	3813 C5	5512 E5	
1901 D5	2751 A4	3155 A2	3815 C5	5520 E6	
2103 C3	2808 C5	3156 A2	3827 B3	5521 E6	
2111 D4	2809 C4	3166 C3	3828 B4	5522 D7	
2115 C4	2818 C3	3172 D3	3833 C5	5524 D6	
2116 C4	2828 A3	3176 C2	3834 B4	5609 E2	
2117 C3	2829 A3	3178 C2	3835 C5	5624 E1	
2121 A2	2840 C4	3181 D3	3837 B4	5802 A4	
2122 D4	2842 B4	3185 D2	3838 C4	5901 D6	
2123 D4	2843 B3	3192 D3	3839 B3	5902 C5	
2130 D5	2845 C5	3198 D3	3843 C4	5903 C6	
2131 D5	2846 C5	3300 E4	3845 B4	5904 C6	
2134 C4	2847 C5	3301 E4	3846 C5	5905 C6	
2135 C4	2900 B7	3303 E4	3852 C4	5906 C6	
2138 D5	2901 B7	3400 B6	3856 C5	5907 C6	
2141 D4	2904 C6	3401 B5	3860 C3	5908 C6	
2200 C2	2905 C6	3402 B5	3910 D6	5911 C5	
2201 A4	2906 D6	3403 B5	3911 D6	5912 C5	
2203 A3	2907 C6	3404 A7	3912 D6	5913 C5	
2204 B2	2908 B5	3406 A7	3913 D6	5914 C5	
2207 D6	2909 C6	3407 B6	4104 C3	5915 D6	
2210 A4	2910 D6	3408 B6	4112 D4	5916 C5	
2301 D3	2911 B6	3409 A7	4206 D6	7100 A2	
2302 D2	2912 D6	3417 D6	4207 E6	7101 D3	
2303 D2	2913 C6	3418 D7	4208 B2	7104 D4	
2304 D2	2915 D6	3419 B6	4209 B2	7200 B2	
2305 D2	2917 C6	3421 B6	4212 E6	7201 A3	
2307 D2	2918 C6	3424 B4	4213 B2	7202 B3	
2308 E2	2920 C6	3425 B4	4214 B2	7203 A3	
2309 E2	2922 C5	3427 B4	4217 E6	7204 B2	
2312 D4	2923 C5	3428 B4	4218 E6	7206 E6	
2314 E4	2925 D5	3430 B4	4400 B7	7300 E3	
2316 D3	2926 D5	3432 B5	4402 C5	7301 E4	
2319 E3	3101 C3	3435 B4	4403 C5	7302 E2	
2326 E3	3102 C3	3437 B5	4404 C5	7400 B5	
2327 E4	3103 C3	3439 B4	4405 D6	7401 B6	
2328 E4	3104 C2	3440 B4	4406 D7	7402 B4	
2400 A6	3105 C4	3441 B5	4407 A5	7403 B4	
2401 B6	3106 C2	3443 B5	4504 D7	7404 B7	
2402 B6	3107 C3	3532 D5	4505 E6	7406 D6	
2404 B6	3108 D2	3533 D5	4506 D5	7407 D7	
2405 B6	3109 D4	3534 E5	4510 E5	7408 A5	
2406 B6	3110 D4	3541 D6	4600 E2	7507 D7	
2408 B5	3112 C3	3542 E6	4601 C5	7508 D6	
2409 B5	3115 D5	3549 D6	4602 C5	7511 D5	
2414 B5	3116 D5	3551 E6	4603 C1	7512 D5	
2415 B5	3117 C4	3582 E5	4604 C1	7601 E2	
2421 B5	3119 D4	3584 E5	4605 A1	7605 D1	
2422 B4	3120 C4	3599 E5	4606 A1	7608 C2	
2425 B4	3121 D5	3603 D1	4702 A6	7609 A2	
2427 B5	3122 C4	3604 D1	4703 A6	7802 C4	

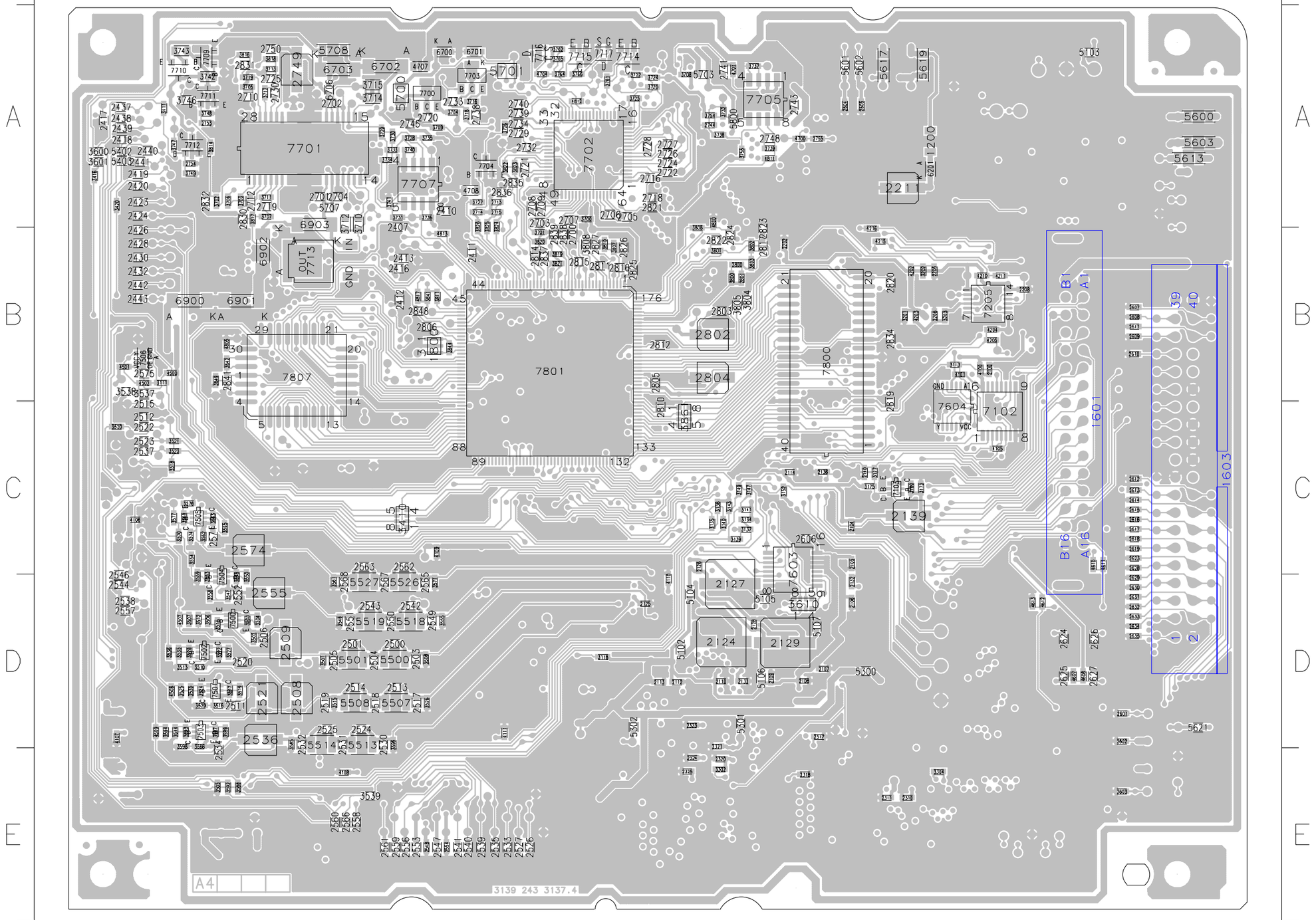
BOTTOM VIEW LAYOUT MAPPING

1200 A6	2509 D2	2612 C7	2803 B4	3512 D1	3712 A2	3861 C4	5619 A6
1800 B3	2511 D2	2613 C7	2804 B4	3513 D1	3713 A2	4100 B6	5621 D7
2100 B6	2512 C1	2614 C7	2805 B4	3515 D2	3714 A2	4101 B6	5700 A3
2104 C5	2513 D3	2615 C7	2806 B3	3516 D2	3715 A2	4105 C6	5701 A3
2105 C5	2514 D2	2616 C7	2810 C4	3517 D2	3716 A3	4106 C1	5703 A4
2106 D5	2515 C1	2617 C7	2811 B4	3518 C1	3717 A2	4107 D1	5706 A2
2107 D5	2517 D3	2618 C7	2812 B4	3519 D2	3718 A3	4108 E2	5707 A2
2108 D5	2518 D2	2619 C7	2814 B3	3520 C1	3719 A2	4109 C3	5708 A2
2109 D5	2519 D2	2623 C7	2815 B4	3521 C1	3720 A4	4110 D4	5800 A5
2110 D4	2520 D2	2624 D6	2816 B4	3522 D2	3722 A4	4111 D3	6201 A6
2112 D4	2521 D2	2625 D6	2817 B5	3523 C1	3724 A4	4202 B6	6700 A3
2113 D4	2522 C1	2626 D7	2819 C5	3524 D1	3725 A4	4203 B6	6701 A3
2114 C5	2523 C1	2627 D7	2820 B5	3525 D1	3726 A3	4204 B6	6702 A3
2124 D4	2524 D2	2628 C7	2821 A4	3526 D3	3727 A3	4205 B6	6703 A2
2125 D4	2525 D2	2629 D7	2822 B4	3527 D2	3728 A3	4210 B6	6900 B1
2126 C4	2526 E3	2630 D7	2823 B5	3528 D1	3729 A3	4211 B6	6901 B2
2127 D5	2527 E3	2631 D7	2824 B5	3529 D1	3730 A3	4215 B5	6902 B2
2128 D5	2530 D3	2632 D7	2825 B4	3530 D1	3731 A3	4216 B5	6903 A2
2129 D5	2531 D2	2633 D7	2826 B4	3535 D1	3732 A4	4500 B1	7102 C6
2132 D5	2532 D2	2634 D7	2827 B4	3536 D1	3733 A3	4501 B1	7103 C5
2133 D5	2533 E3	2635 D7	2830 A2	3537 B1	3734 A3	4502 B1	7205 B6
2136 C5	2534 E2	2700 B4	2831 A2	3538 B1	3735 A3	4507 D1	7500 D2
2139 C6	2535 E3	2701 A2	2832 A1	3539 E2	3736 A3	4508 D1	7501 D2
2140 C5	2536 D2	2702 A2	2834 B5	3544 D1	3737 A5	4509 D1	7502 D1
2202 B5	2537 C1	2703 A3	2835 A3	3546 D2	3738 A4	4607 D6	7503 D1
2205 B6	2538 D1	2704 A2	2836 A3	3547 D2	3739 A5	4608 D7	7504 D2
2206 B6	2539 E3	2705 A4	2837 B3	3548 D2	3740 A3	4610 C7	7505 C1
2208 B6	2540 E3	2706 A4	2838 B4	3550 D2	3741 A3	4611 C7	7506 B1
2211 A6	2541 E3	2707 A4	2839 B3	3553 D1	3742 A2	4612 D6	7603 C5
2310 E6	2542 D3	2708 A3	2841 B2	3554 C1	3743 A1	4613 D6	7604 C6
2311 E5	2543 D2	2709 A3	2848 B3	3555 D3	3746 A1	4700 A5	7700 A3
2317 D5	2544 D1	2710 A2	3111 B1	3558 D2	3747 A1	4701 A5	7701 A2
2318 E5	2546 D1	2712 A2	3113 B6	3559 D1	3748 A1	4704 A3	7702 A4
2320 E4	2547 E3	2713 A3	3118 D4	3561 D2	3749 A1	4707 A3	7703 A3
2321 D4	2548 E3	2714 A3	3134 C5	3562 C1	3754 A4	4708 A3	7704 A3
2323 D4	2549 D3	2715 A3	3135 C4	3563 C2	3755 A5	4800 A4	7705 A5
2324 E4	2550 D3	2716 A4	3136 C4	3565 C2	3761 A4	4805 B2	7707 A3
2325 E4	2551 D2	2718 A4	3137 C5	3569 C1	3762 A4	4811 A5	7709 A1
2407 A3	2552 D2	2719 A2	3139 C5	3570 C1	3764 A4	4812 A4	7710 A1
2410 A3	2553 E3	2720 A3	3140 C4	3571 D3	3765 A4	4813 B3	7711 A2
2411 B3	2554 E3	2721 A3	3141 C5	3574 C1	3766 A4	4817 B3	7712 A1
2412 B3	2555 D2	2722 A4	3143 C5	3576 C1	3800 B5	5102 D4	7713 B2
2413 B3	2556 E3	2724 A4	3147 C5	3577 C1	3801 B4	5103 A7	7714 A4
2416 B3	2557 D1	2725 A2	3149 C5	3585 D2	3802 B5	5104 D4	7715 A4
2417 A1	2558 E2	2726 A4	3152 C5	3586 D1	3803 B5	5105 D5	7716 A3
2418 A1	2559 E3	2727 A4	3173 C6	3587 D2	3804 B5	5106 D5	7717 A4
2419 A1	2560 E2	2728 A4	3175 C5	3588 E2	3805 B5	5107 D5	7800 B5
2420 A1	2561 E3	2729 A3	3177 C5	3589 D2	3806 B4	5300 D5	7801 B3
2423 A1	2562 C3	2730 A2	3180 C6	3592 E2	3807 B4	5301 D5	7807 B2
2424 A1	2563 C2	2732 A3	3201 B6	3593 D1	3808 B4	5302 D4	1601 C7
2426 B1	2565 D3	2733 A3	3202 B6	3594 D1	3810 B4	5402 A1	1603 C7
2428 B1	2566 E2	2734 A3	3203 B6	3595 D3	3811 B3	5403 A1	
2430 B1	2567 D3	2738 A3	3302 E4	3598 D1	3814 A2	5500 D3	
2432 B1	2568 D2	2739 A3	3304 E6	3600 A1	3816 A2	5501 D2	
2437 A1	2571 C2	2740 A3	3410 C3	3601 A1	3817 A2	5507 D3	
2438 A1	2574 C2	2741 A4	3411 A1	3610 D5	3818 A2	5508 D2	
2439 A1	2575 B1	2743 A5	3416 A1	3700 A4	3819 B4	5513 D2	
2440 A1	2601 D7	2744 A4	3420 A1	3701 B3	3820 B3	5514 D2	
2441 A1	2602 D7	2745 A3	3501 D2	3702 A2	3821 B4	5518 D3	
2442 B1	2603 E7	2748 A5	3502 D2	3703 A2	3822 A3	5519 D2	
2443 B1	2604 A5	2749 A2	3503 D2	3704 A3	3823 A3	5526 D3	
2500 D3	2605 A5	2750 A2	3504 D2	3705 A2	3824 A3	5527 D2	
2501 D2	2606 C5	2753 A1	3505 E2	3706 A2	3825 A3	5600 A7	
2503 D3	2607 B7	2754 A1	3506 D2	3707 A2	3826 A3	5601 A5	
2504 D2	2608 B7	2755 A5	3507 D1	3708 A4	3841 B3	5602 A5	
2505 D2	2609 B7	2800 B5	3508 D3	3709 A3	3842 B2	5603 A7	
2506 D2	2610 B7	2801 B5	3510 D1	3710 A2	3844 B3	5613 A7	
2508 D2	2611 B7	2802 B4	3511 D2	3711 A2	3849 B2	5617 A5	

8-4

BOTTOM VIEW LAYOUT

This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.



8-5

CIRCUIT DIAGRAM (PART 1)

DVD DECODER

REF. NO.	HOST DRIVE		CRYSTAL		CLOCK SPEED			
	HIGH	LOW	27MHz	13.5MHz	108MHz	121.5MHz	135.0MHz	148.5MHz
3120	ON	OFF	X	X	X	X	X	X
3126	X	X	ON	OFF	X	X	X	X
3117	X	X	X	X	OFF	OFF	OFF	OFF
3124	X	X	X	X	ON	ON	OFF	OFF
3122	X	X	X	X	ON	OFF	ON	OFF

Pin #	LOR	Boot up state
187	Chip_mode_sel2	HIGH
162	Chip_mode_sel1	HIGH
164	Chip_mode_sel0	LOW
156	Bypass_sel1	LOW

POWER:
3V3B(GNDB), (305mA)
->V3V3B(VGNDB)
->D3V3B(DGNDB)
->REF3V3B(REFGNDB)
->PLL3V3B(PLLGNDB)
1V8B(GNDB), (650mA)
5VB(GNDB)

7101
ZiVA5

ZIVA_SDRAM

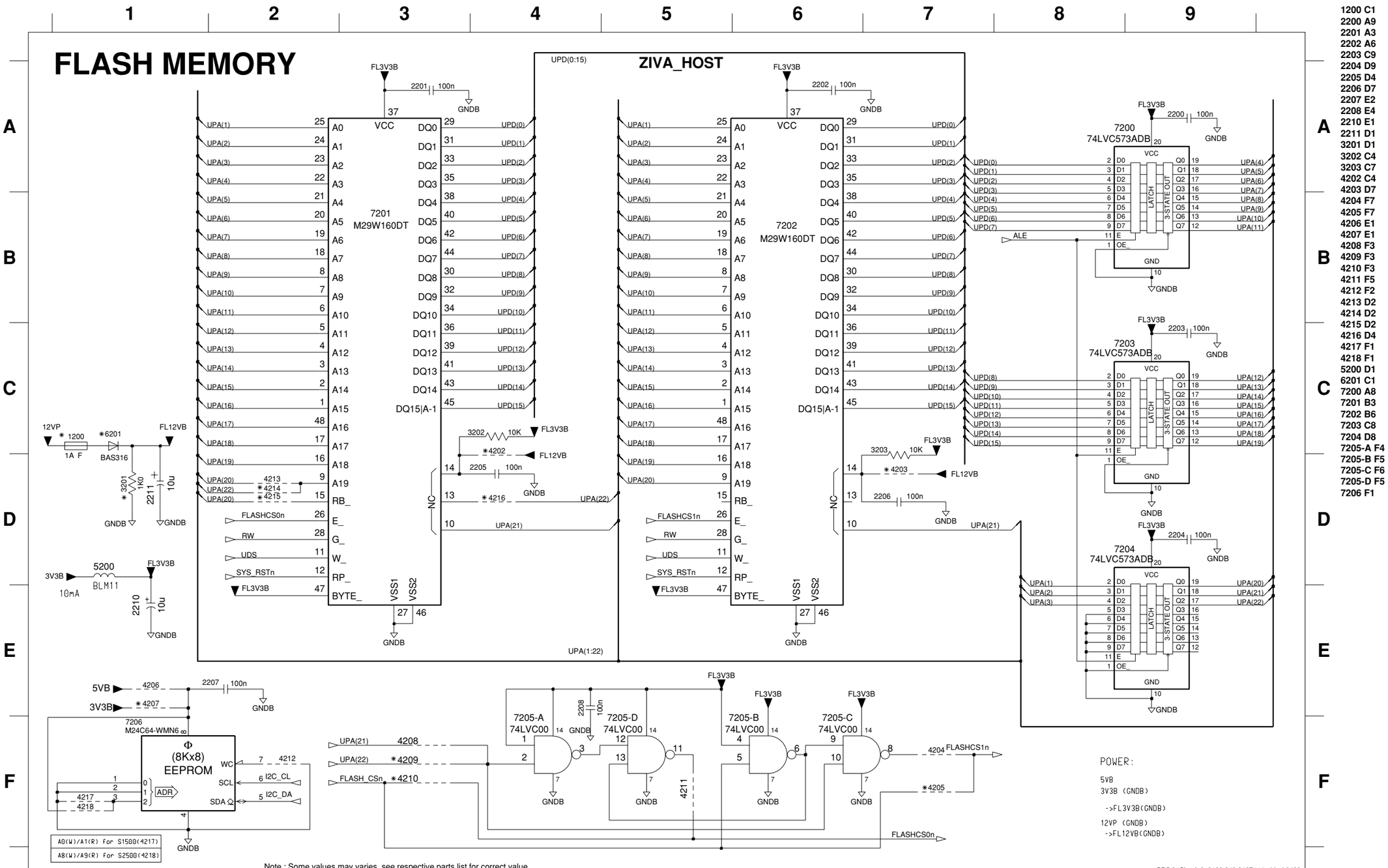
Note : Some values may varies, see respective parts list for correct value.

SD5.2_Circuit 1_3139 243 3137 pt4_dd wk0439

1101 I1	2100 E3	2103 C12	2104 C12
2105 C13	2106 C13	2107 C13	2108 C13
2109 C14	2110 C14	2111 C14	2112 D13
2113 D13	2114 D13	2115 D14	2116 D14
2117 D14	2121 G1	2122 D13	2123 D13
2124 D13	2125 D14	2126 F13	2127 F13
2128 G13	2129 G13	2130 H13	2131 H13
2132 I13	2133 I13	2134 I14	2135 I14
2136 I13	2138 I14	2139 H4	2140 H5
2141 A5	3101-A D2	3101-B D2	3101-C D2
3101-D D2	3102-A I7	3102-B I7	3102-C I7
3102-D I7	3103-A I7	3103-B I7	3103-C I7
3103-D I7	3104-A I7	3104-B I8	3104-C I8
3104-D I8	3105 B8	3106-A I8	3106-B I8
3106-C I8	3106-D I8	3107-A I8	3107-B I8
3107-C I8	3107-D I8	3108-A I10	3108-B I10
3108-C I10	3108-D I10	3109 C11	3110 C11
3111 B6	3112 G5	3113 D2	3115 B10
3116 B10	3117 B5	3118 B9	3119 B10
3120 B5	3121 B10	3122 B5	3123 B10
3124 B5	3125 B10	3126 B5	3128 B10
3129 B10	3130 C8	3131 F2	3132 G2
3133 G2	3134 C5	3135 C5	3136 C5
3137 C5	3138 G2	3139 D5	3140 D5
3141 D5	3142 H1	3143 D5	3144 B8
3147 E5	3148 A5	3149 E5	3150 A5
3151 H2	3152 E5	3153 E5	3154 I2
3155 I2	3156 I1	3166-A G5	3166-B G5
3166-C G5	3172 I10	3173 I4	3175 H5
3176 I8	3177 H5	3178 I8	3180 H4
3181-A I9	3181-B I9	3181-C I9	3181-D I9
3185-A I9	3185-B I9	3185-C I9	3185-D I9
3192-A I9	3192-B I9	3192-C I10	3192-D I10
3198-A I10	3198-B I10	3198-C I10	3198-D I10
4100 E2	4101 E2	4104 E3	4105 E3
4106 E14	4107 E14	4108 E14	4109 E14
4110 E14	4111 E14	4112 A8	5102 D14
5103 I1	5104 F14	5105 F14	5106 G14
5107 G14	5108 G14	5109 H14	5110 A6
7100-A G2	7100-B I2	7101 E8	7102 E2
7103-A H3	7103-B H5	7104 A6	

8-6

CIRCUIT DIAGRAM (PART 2)



Note : Some values may varies, see respective parts list for correct value.

SD5.2_Circuit 2_3139 243 3137 pt4_dd wk0439

1200 C1
2200 A9
2201 A3
2202 A6
2203 C9
2204 D9
2205 D4
2206 D7
2207 E2
2208 E4
2210 E1
2211 D1
3201 D1
3202 C4
3203 C7
4202 C4
4203 D7
4204 F7
4205 F7
4206 E1
4207 E1
4208 F3
4209 F3
4210 F3
4211 F5
4212 F2
4213 D2
4214 D2
4215 D2
4216 D4
4217 F1
4218 F1
5200 D1
6201 C1
7200 A8
7201 B3
7202 B6
7203 C8
7204 D8
7205-A F4
7205-B F5
7205-C F6
7205-D F5
7206 F1

FLASH TYPE	16Mbits A(0:19)	32Mbits A(0:20)	64Mbits A(0:21)
ST MACRONIX Light	M29W160 MX29LV160 M29KW016E	M29W320 MX29LV320 M29KW032E	M29W641 M29KW064E

JUMPER CONFIGURATION

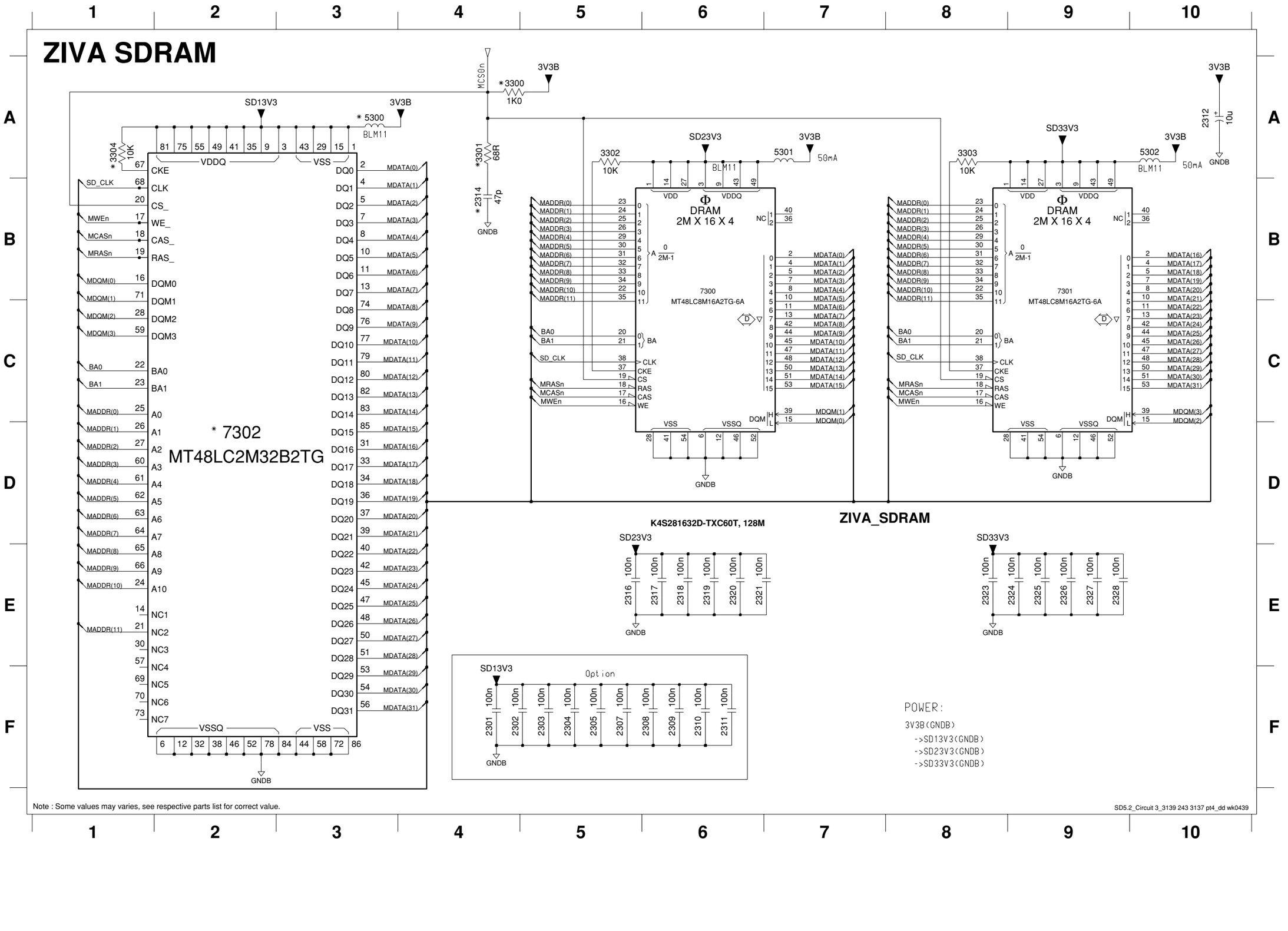
JUMPER	1 X 16Mb	1 X 32Mb	1 X 64Mb	1X64Mb_LIGHT	2 X 16Mb	32Mb + 16Mb
4202	OFF	OFF	OFF	ON	OFF	OFF
4203	OFF	OFF	OFF	ON	OFF	OFF
4204	OFF	OFF	OFF	OFF	ON	ON
4205	OFF	OFF	OFF	OFF	OFF	OFF
4208	OFF	OFF	OFF	OFF	ON	OFF
4209	OFF	OFF	OFF	OFF	OFF	ON
4210	ON	ON	ON	ON	OFF	OFF
4211	OFF	OFF	OFF	OFF	ON	ON
4213	ON	ON	OFF	ON	ON	ON
4214	OFF	OFF	ON	OFF	OFF	OFF
4215	OFF	OFF	ON	OFF	OFF	OFF
4216	OFF	OFF	ON	ON	OFF	OFF

FLASH CS			
FLASH_CSn	UPA21/UPA22	FLASH_CS0n	FLASH_CS1n
1	x	1	1
0	0	0	1
0	1	1	0

8-7

CIRCUIT DIAGRAM (PART 3)

ZIVA SDRAM



Note : Some values may varies, see respective parts list for correct value.

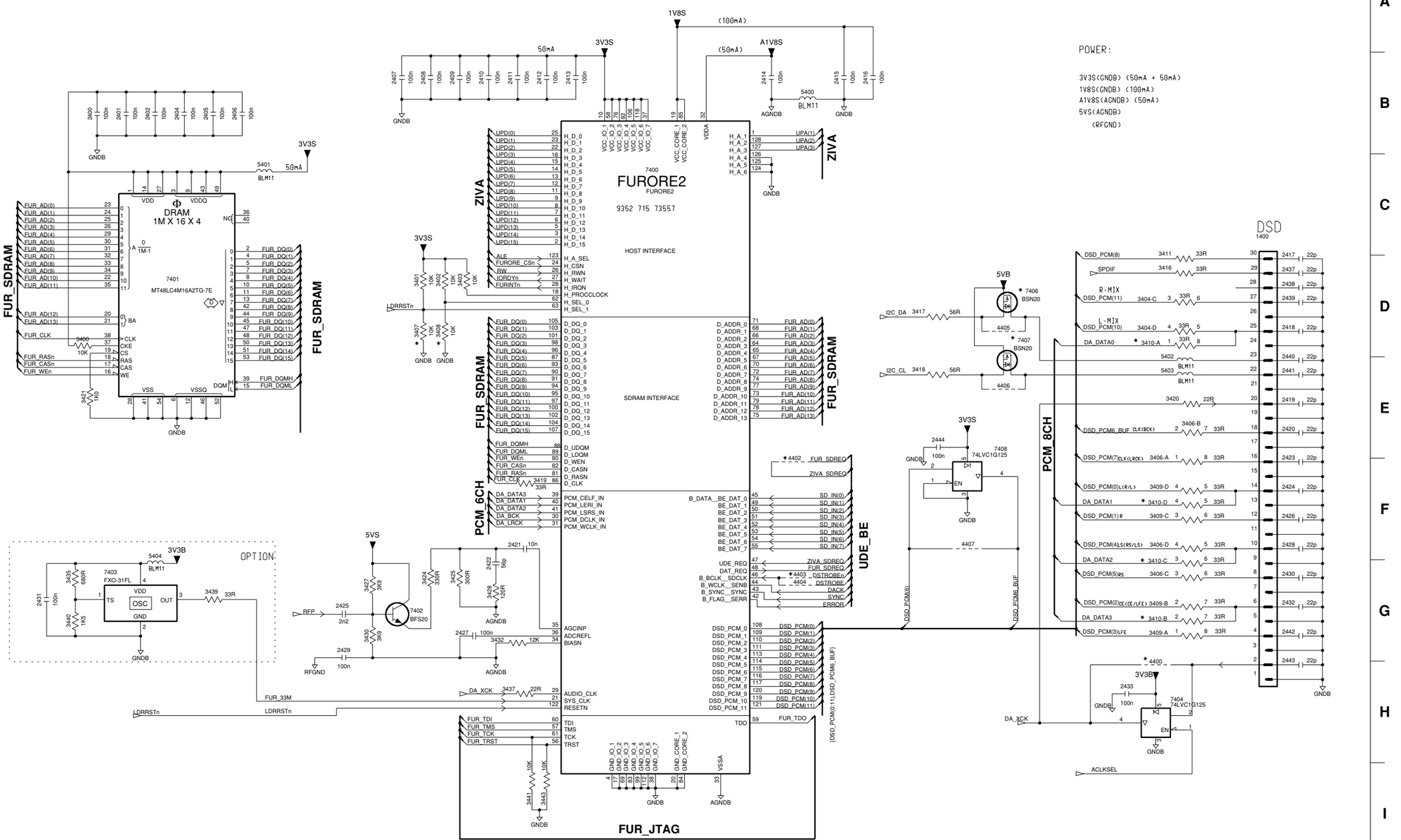
SD5.2_Circuit 3_3139 243 3137 pt4_dd wk0439

2301 F4
2302 F4
2303 F5
2304 F5
2305 F5
2307 F5
2308 F6
2309 F6
2310 F6
2311 F6
2312 A10
2314 B4
2316 E5
2317 E6
2318 E6
2319 E6
2320 E6
2321 E6
2323 E8
2324 E9
2325 E9
2326 E9
2327 E9
2328 E9
3300 A4
3301 A4
3302 A5
3303 A8
3304 A1
5300 A3
5301 A7
5302 A10
7300 B6
7301 B9
7302 D2

8-8

CIRCUIT DIAGRAM (PART 4)

FURORE AND SACD INTERFACE

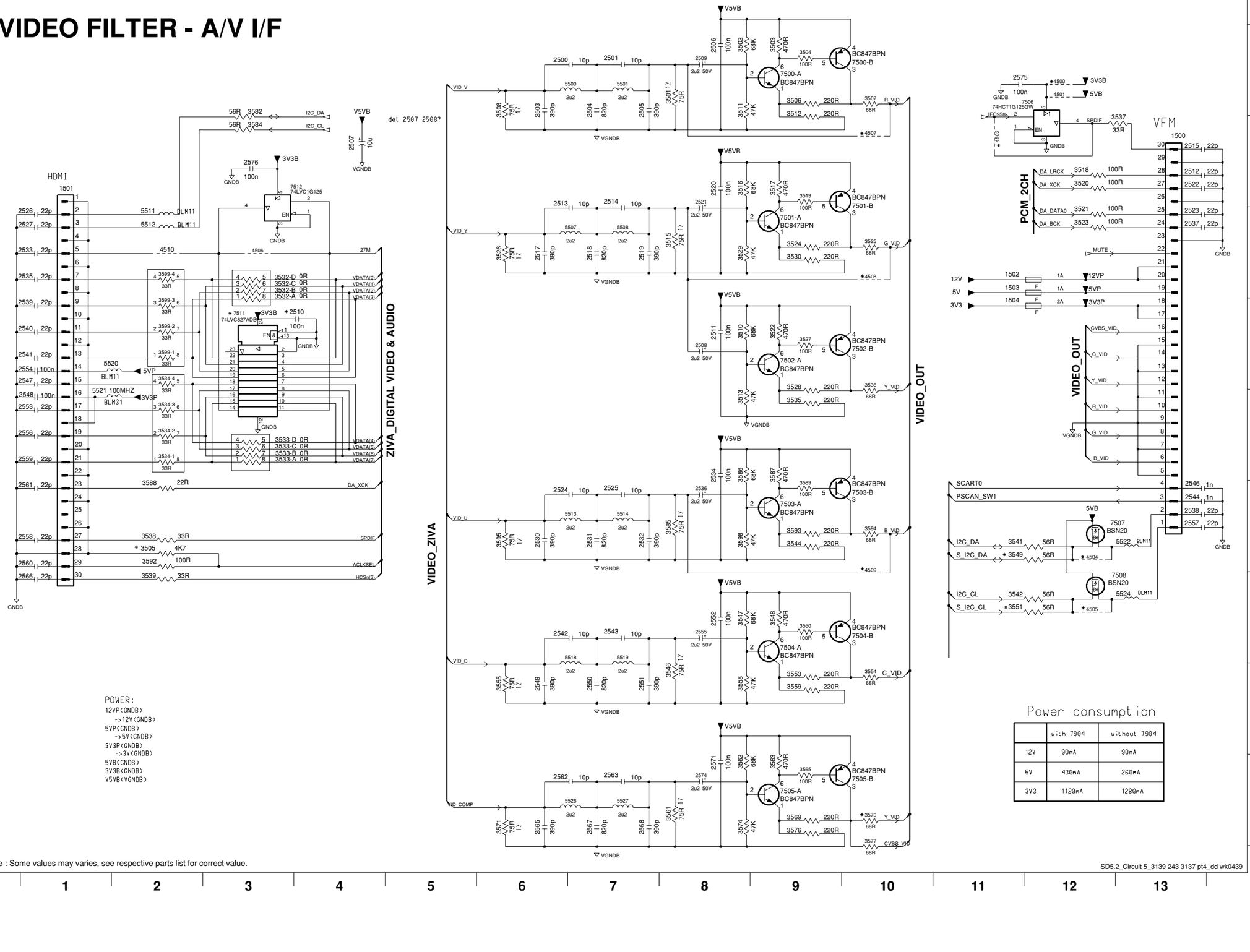


1400 C13
2400 B1
2401 B2
2402 B2
2404 B2
2405 B2
2406 B3
2407 B4
2408 B5
2409 B5
2410 B5
2411 B5
2412 B6
2413 B6
2414 B8
2415 B9
2416 B9
2417 D13
2418 D13
2419 E13
2420 E13
2421 F5
2422 G5
2423 F13
2424 F13
2425 G4
2426 F13
2427 G5
2428 F13
2429 G4
2430 G13
2431 G1
2432 G13
2433 H12
2437 D13
2438 D13
2439 D13
2440 E13
2441 E13
2442 G13
2443 H13
2444 E10
3400 D1
3401 D5
3402 D5
3403 D5
3404-C D12
3404-D D12
3406-A F12
3406-B E12
3406-C G12
3406-D F12
3407 D5
3408 D5
3409-A G12
3409-B G12
3409-C F12
3409-D F12
3410-A D12
3410-B G12
3410-C G12
3410-D F12
3411 D12
3416 D12
3417 D9
3418 E9
3419 F6
3420 E12
3421 E1
3424 G5
3425 G5
3427 G4
3428 G5
3430 G4
3432 G5
3435 G1
3437 H5
3439 G2
3440 G1
3441 I6
3443 I6
4400 H12
4402 E8
4403 G8
4404 G8
4405 D10
4406 E10
4407 F10
5400 B8
5401 C3
5402 E12
5403 E12
5404 F2
7400 C7
7401 D2
7402 G4
7403 G1
7404 H12
7406 D11
7407 D11
7408 E10

8-9

CIRCUIT DIAGRAM (PART 5)

VIDEO FILTER - A/V I/F



Note : Some values may varies, see respective parts list for correct value.

SD5.2_Circuit 5_3139 243 3137 pt4_dd wk0439

Power consumption

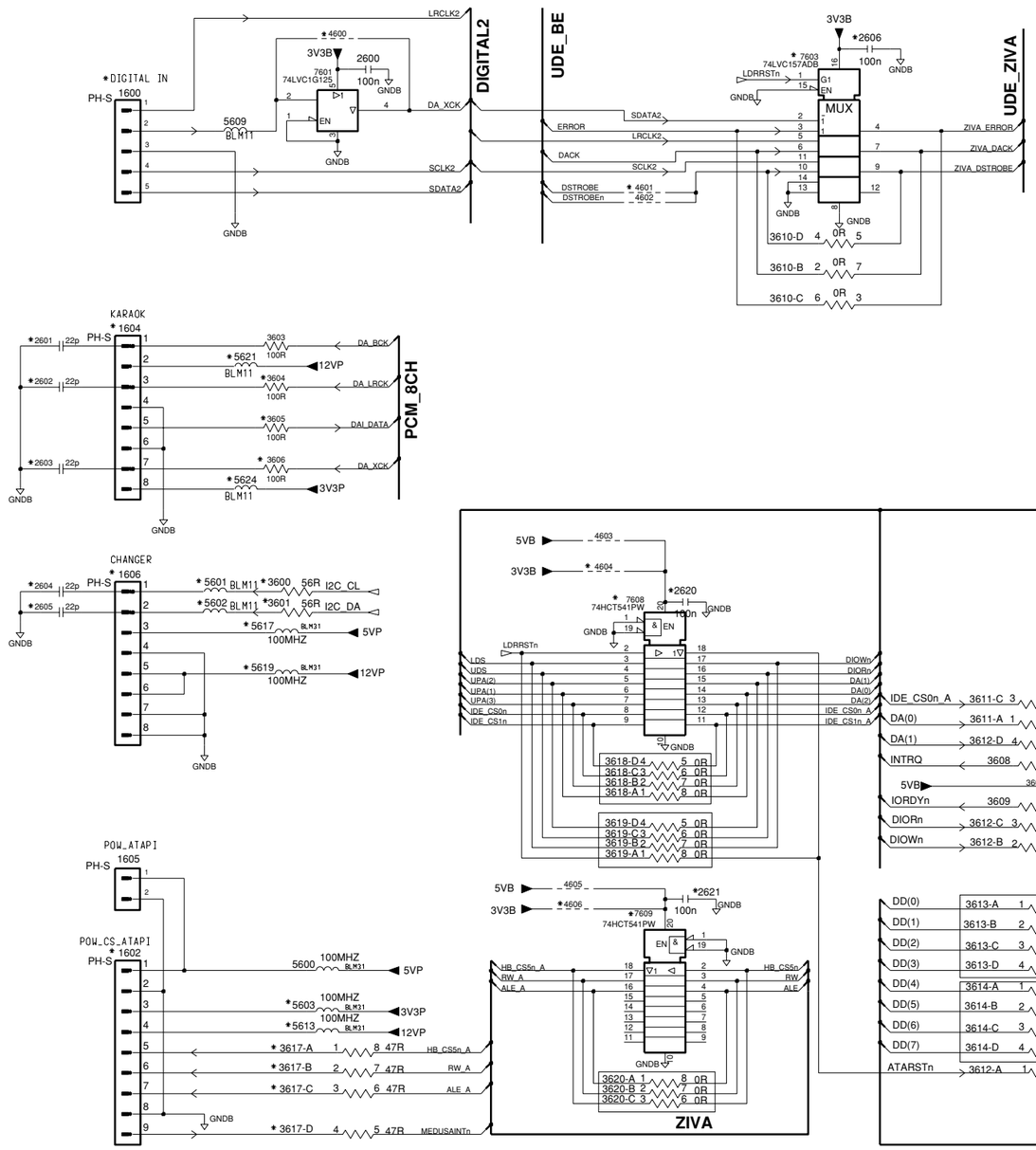
	with 7904	without 7904
12V	90mA	90mA
5V	430mA	260mA
3V3	1120mA	1280mA

1500 B13
1501 B1
1502 C11
1503 C11
1504 D11
2500 A6
2501 A7
2503 A6
2504 A7
2505 A7
2506 A8
2507 B4
2508 D8
2509 A8
2510 D4
2511 D8
2512 B13
2513 B6
2514 B7
2515 B13
2517 C6
2518 C7
2519 C7
2520 B8
2521 B8
2522 B13
2523 C13
2524 F6
2525 F7
2526 C1
2527 C1
2530 F6
2531 F7
2532 F7
2533 C1
2534 E8
2535 C1
2536 F8
2537 C13
2538 F13
2539 D1
2540 D1
2541 D1
2542 G6
2543 G7
2544 F13
2546 F13
2547 D1
2548 E1
2549 H6
2550 H7
2551 H7
2552 G8
2553 E1
2554 D1
2555 G8
2556 E1
2557 F13
2558 F1
2559 E1
2560 F1
2561 F1
2562 I6
2563 I7
2565 I6
2566 G1
2567 I7
2568 I7
2571 I8
2574 I8
2575 A11
2576 B3
3501 A8
3502 A8
3503 A9
3504 A9
3505 F2
3506 A9
3507 A10
3508 A6
3510 D8
3511 A8
3512 A9
3513 E8
3515 C8
3516 B8
3517 B9
3518 B12
3519 B9
3520 B12
3521 C12
3522 D9
3523 C12
3524 C9
3525 C10
3526 C6
3527 D9
3528 D9
3529 C8
3530 C9
3532-A D3
3532-B C3
3532-C C3
3532-D C3
3533-A E3
3533-B E3
3533-C E3
3533-D E3
3534-1 E2
3534-2 E2
3534-3 E2
3534-4 D2
3535 E9
3536 D10
3537 B13
3538 F2
3539 G2
3541 F11
3542 G11
3544 F9
3546 H8
3547 G8
3548 G9
3549 F11
3550 G9
3551 G11
3553 H9
3554 H10
3555 H6
3558 H8
3559 H9
3561 I8
3562 I8
3563 I9
3565 I9
3569 I9
3570 I10
3571 I6
3574 I8
3576 I9
3577 I10
3582 A3
3584 B3
3585 F8
3586 E8
3587 E9
3588 F2
3589 F9
3592 F2
3593 F9
3594 F10
3595 F6
3598 F8
3599-1 D2
3599-2 D2
3599-3 D2
3599-4 C2
4500 A12
4501 A12
4502 B11
4504 F12
4505 G12
4506 C3
4507 B10
4508 C10
4509 F10
4510 C2
5500 A7
5501 A7
5507 C7
5508 C7
5511 C2
5512 C2
5513 F7
5514 F7
5518 G7
5519 G7
5520 D1
5521 E1
5522 F13
5524 G13
5526 I7
5527 I7
7500-A A9
7500-B A10
7501-A C9
7501-B B10
7502-A D9
7502-B D10
7503-A F9
7503-B F10
7504-A G9
7504-B G10
7505-A I9
7505-B I10
7506 A12
7507 F13
7508 G13
7511 D3
7512 B3

8-10

CIRCUIT DIAGRAM (PART 6)

DIGITAL INPUT - HOST I/F - ATAPI I/F - E-LINK



POWER:

3V3B(GNDB) (50mA)
5VB(GNDB)

Note : Some values may varies, see respective parts list for correct value.

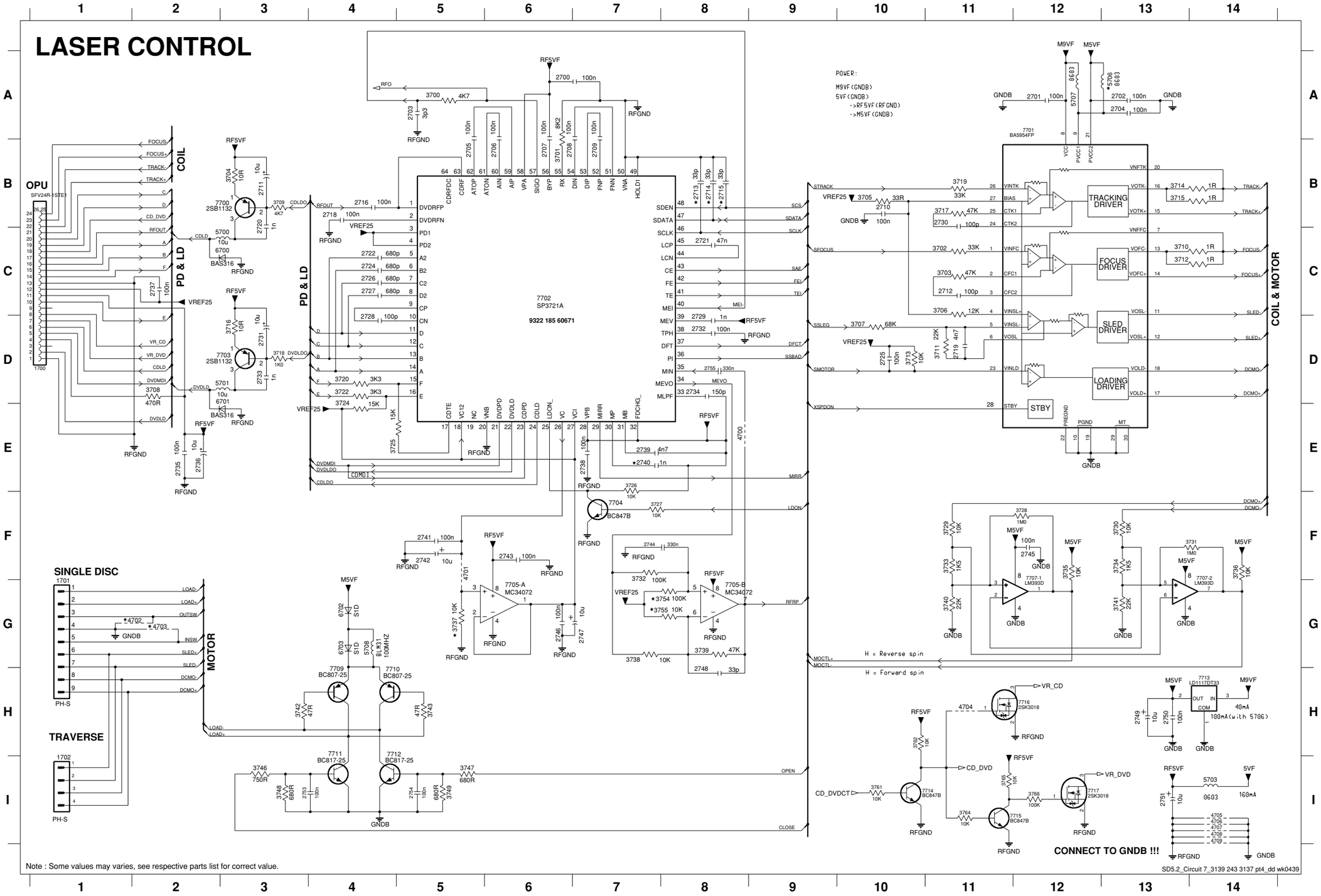
SD5.2_Circuit 6_3139 243 3137 pt4_dd wk0439

1600 B1
1601-1 B10
1601-2 B10
1602 H1
1603 F8
1604 D1
1605 G1
1606 E1
2600 B3
2601 D1
2602 D1
2603 E1
2604 E1
2605 F1
2606 B6
2607 F9
2608 F8
2609 F8
2610 F8
2611 F9
2612 G9
2613 H8
2614 H9
2615 H8
2616 H9
2617 H8
2618 H9
2619 H8
2620 E5
2621 H5
2623 H9
2624 G11
2625 G11
2626 G12
2627 G13
2628 H8
2629 H9
2630 H8
2631 H9
2632 H8
2633 H9
2634 I8
2635 I8
3600 E2
3601 F2
3603 D2
3604 D2
3605 D2
3606 E2
3607 G8
3608 G7
3609 G7
3610-B C6
3610-C C6
3610-D C6
3611-A F7
3611-B F9
3611-C F7
3611-D F9
3612-A I7
3612-B G7
3612-C G7
3612-D F7
3613-A H7
3613-B H7
3613-C H7
3613-D H7
3614-A H7
3614-B H7
3614-C H7
3614-D I7
3615-A H9
3615-B H9
3615-C H9
3615-D H9
3616-A H9
3616-B H9
3616-C H9
3616-D I9
3617-A I2
3617-B I2
3617-C I2
3617-D I2
3618-A G5
3618-B G5
3618-C G5
3618-D G5
3619-A G5
3619-B G5
3619-C G5
3619-D G5
3620-A I5
3620-B I5
3620-C I5
4600 B3
4601 C5
4602 C5
4603 E5
4604 E5
4605 G4
4606 H4
4607 F13
4608 F13
4610 E13
4611 E13
4612 F13
4613 F13
5600 H2
5601 E2
5602 F2
5603 H2
5609 B2
5613 H2
5617 F2
5619 F2
5621 D2
5624 E2
7601 B3
7603 B6
7604-A F11
7604-B F12
7604-C D12
7604-D D12
7605 G11
7608 F5
7609 H5

8-11

CIRCUIT DIAGRAM (PART 7)

LASER CONTROL



Note : Some values may varies, see respective parts list for correct value.

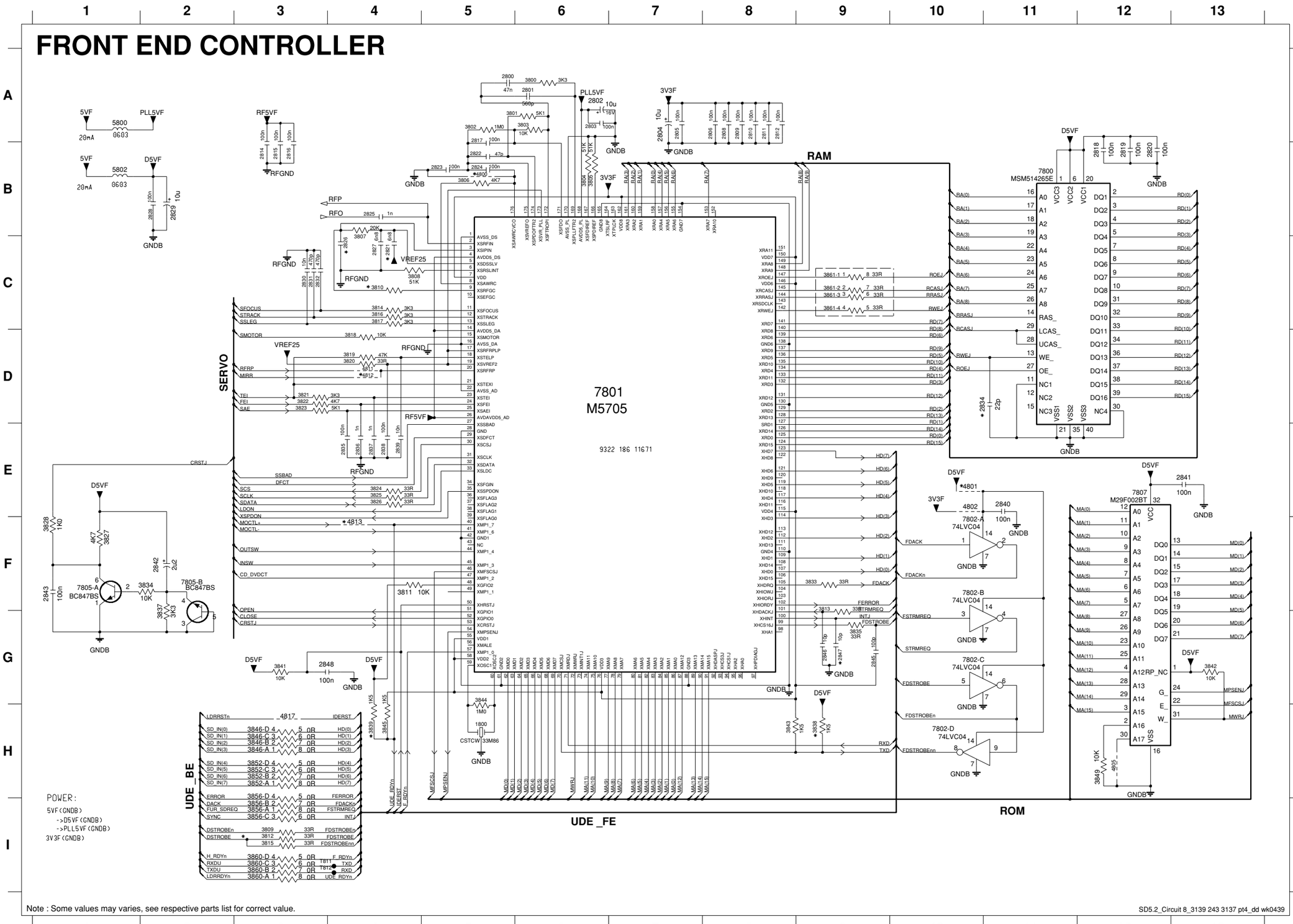
SD5.2_Circuit 7_3139 243 3137 pt4_dd wk0439

1700 D1
1701 G1
1702 I1
2700 A6
2701 A12
2702 A13
2703 A5
2704 A13
2705 B5
2706 B6
2707 B6
2708 B6
2709 B7
2710 B10
2711 B3
2712 C11
2713 B8
2714 B8
2715 B8
2716 B4
2718 B4
2719 D11
2720 B3
2721 C8
2722 C4
2724 C4
2725 D10
2726 C4
2727 C4
2728 D4
2729 D8
2730 B11
2731 D3
2732 D8
2733 D3
2734 D8
2735 E2
2736 E2
2737 C2
2738 E7
2739 E7
2740 E7
2741 F5
2742 F5
2743 F6
2744 F7
2745 F12
2746 G6
2747 G7
2748 H8
2749 H13
2750 H13
2751 I13
2753 I3
2754 I5
2755 D8
3700 A5
3701 B6
3702 C11
3703 C11
3704 B3
3705 B10
3706 C11
3707 D10
3708 D2
3709 B3
3710 C13
3711 D11
3712 C13
3713 D10
3714 B13
3715 B13
3716 D3
3717 B11
3718 D3
3719 B11
3720 D4
3722 D4
3724 E4
3725 E4
3726 E7
3727 F7
3728 F12
3729 F11
3730 F13
3731 F14
3732 G7
3733 F11
3734 F13
3735 F12
3736 F14
3737 G5
3738 G7
3739 G8
3740 G11
3741 G13
3742 H3
3743 H5
3746 I3
3747 I5
3748 I3
3749 I5
3754 G8
3755 G8
3761 I10
3762 H10
3764 I11
3765 I11
3766 I12
4700 E8
4701 F5
4702 G2
4703 G2
4704 H11
4705 I14
4706 I14
4707 I14
4708 I14
4709 I14
5700 C3
5701 D3
5703 I14
5706 A13
5707 A12
5708 G4
6700 C3
6701 D3
6702 G4
6703 G4
7700 B3
7701 A12
7702 C6
7703 D3
7704 F7
7705-A G6
7705-B G8
7707-1 F12
7707-2 F14
7709 G4
7710 G5
7711 H4
7712 I5
7713 H14
7714 I10
7715 I11
7716 H12
7717 I12

8-12

CIRCUIT DIAGRAM (PART 8)

FRONT END CONTROLLER



Note : Some values may varies, see respective parts list for correct value.

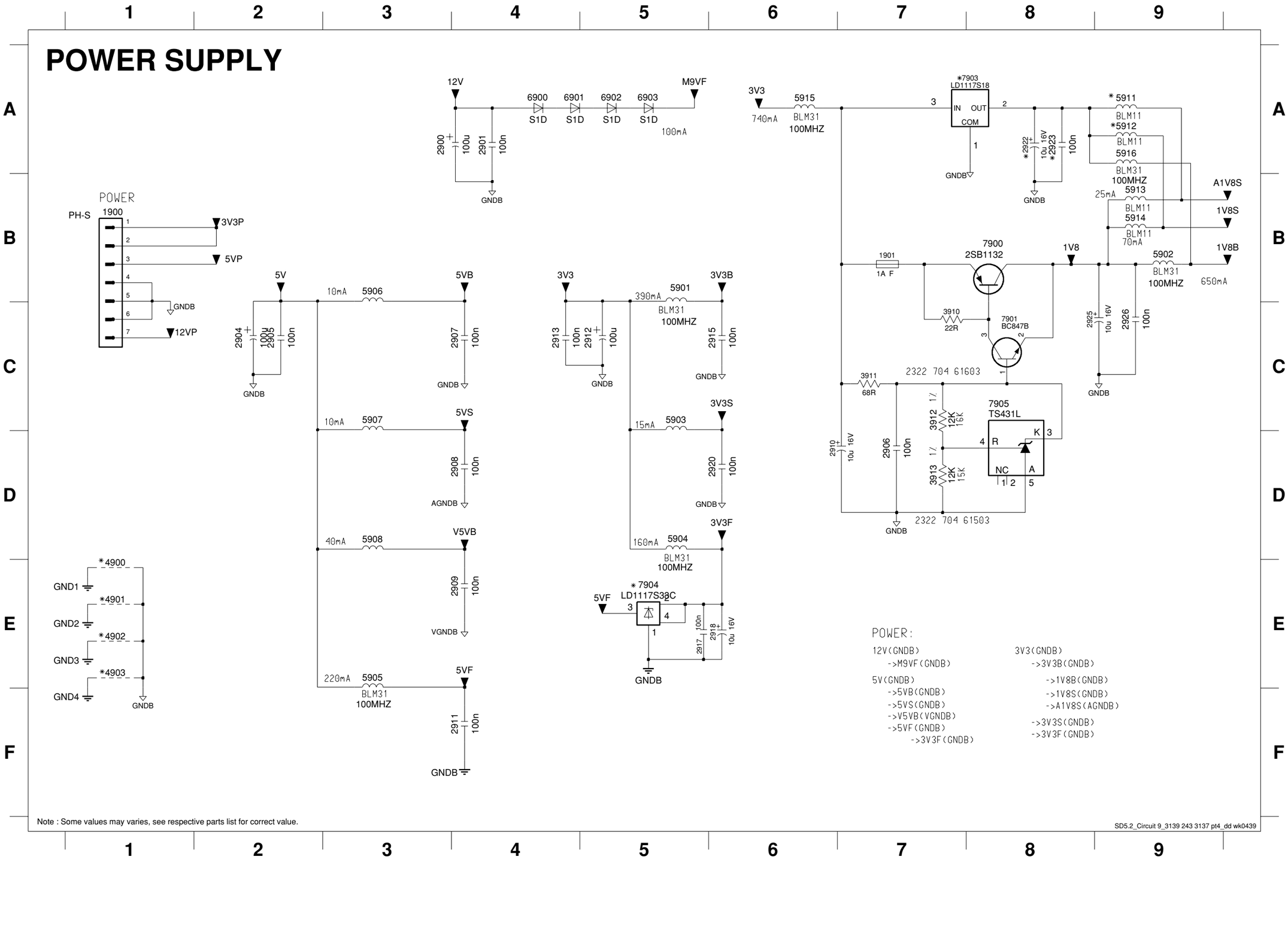
SD5.2_Circuit 8_3139 243 3137 pt4_dd wk0439

1800 H5
2800 A5
2801 A6
2802 A6
2803 A6
2804 A7
2805 A7
2806 A8
2808 A8
2809 A8
2810 A8
2811 A8
2812 A8
2814 B3
2815 B3
2816 B3
2817 A5
2818 B12
2819 B12
2820 B12
2821 C4
2822 B5
2823 B5
2824 B5
2825 B4
2826 C4
2827 C4
2828 B2
2829 B2
2830 C3
2831 C3
2832 C3
2834 D11
2835 E4
2836 E4
2837 E4
2838 E4
2839 E4
2840 E11
2841 E13
2842 F2
2843 F1
2845 G9
2846 G9
2847 G9
2848 G3
3800 A6
3801 A5
3802 A5
3803 A6
3804 B6
3805 B6
3806 B5
3807 C4
3808 C4
3809 I3
3810 C4
3811 F4
3812 I3
3813 F9
3814 C4
3815 I3
3816 C4
3817 C4
3818 D4
3819 D4
3820 D4
3821 D3
3822 D3
3823 D3
3824 E4
3825 E4
3826 E4
3827 F1
3828 F1
3833 F9
3834 F2
3835 G9
3837 G2
3838 H9
3839 H4
3841 G3
3842 G13
3843 H6
3844 G5
3845 H4
3846-A H3
3846-B H3
3846-C H3
3846-D H3
3849 H12
3852-A H3
3852-B H3
3852-C H3
3852-D H3
3856-A I3
3856-B I3
3856-C I3
3856-D I3
3860-A I3
3860-B I3
3860-C I3
3860-D I3
3861-1 C9
3861-2 C9
3861-3 C9
3861-4 C9
4800 B5
4801 E10
4802 E10
4805 H12
4811 D4
4812 D4
4813 F4
4817 H3
5800 A1
5802 B1
7800 B11
7801 D7
7802-A F10
7802-B F10
7802-C G10
7802-D H10
7805-A F1
7805-B F2
7807 E12
T811 I3
T812 I3

8-13

CIRCUIT DIAGRAM (PART 9)

POWER SUPPLY



1900 B1
1901 B7
2900 A3
2901 A4
2904 C2
2905 C2
2906 D7
2907 C4
2908 D4
2909 E4
2910 D6
2911 F4
2912 C5
2913 C4
2915 C6
2917 E5
2918 E6
2920 D6
2922 A8
2923 A8
2925 C8
2926 C9
3910 C7
3911 C7
3912 C7
3913 D7
4900 E1
4901 E1
4902 E1
4903 E1
5901 B5
5902 B9
5903 C5
5904 D5
5905 E3
5906 B3
5907 C3
5908 D3
5911 A9
5912 A9
5913 B9
5914 B9
5915 A6
5916 A9
6900 A4
6901 A4
6902 A5
6903 A5
7900 B8
7901 C8
7903 A8
7904 E5
7905 C8

Note : Some values may varies, see respective parts list for correct value.

SD5.2_Circuit 9_3139 243 3137 pt4_dd wk0439

PARTS LIST - MODULE SD5.2 (S) XSA 4FL DV HDMI

0001	3139 248 72052	LOADER A97SL ACTIMA SILVER
1001	3139 248 83641	PCBA SD5.2(S)XSA 4FL DV HDMI

Note : Only the parts mentioned in this list are normal service spare parts.

ELECTRICAL PARTS LIST - SD5.2 (S) XSA 4FL DV HDMI BOARD

MISCELLANEOUS

1400	2422 025 17451	FLEX CONNECTOR 30P
1500	2422 025 17451	FLEX CONNECTOR 30P
1501	2422 025 17451	FLEX CONNECTOR 30P
1502	2422 086 11102	FUSE SM F 1A 125V UL R
1503	2422 086 11102	FUSE SM F 1A 125V UL R
1504	2422 086 11103	FUSE SM F 2A 125V UL R
1700	2422 025 17871	FLEX CONNECTOR 24P
1800	2422 540 98538	RES CER SM 33M86 CSTCW
1901	2422 086 11102	FUSE SM F 1A 125V UL R

CAPACITORS

2111	4822 124 23002	10uF 16V
2124	4822 124 12095	100uF 20% 16V
2127	4822 124 12095	100uF 20% 16V
2129	4822 124 12095	100uF 20% 16V
2131	4822 124 23002	10uF 16V
2138	4822 124 23002	10uF 16V
2139	4822 124 23002	10uF 16V
2210	4822 124 23002	10uF 16V
2312	4822 124 23002	10uF 16V
2507	4822 124 23002	10uF 16V
2508	3198 030 82280	2,2uF 20% 50V
2509	3198 030 82280	2,2uF 20% 50V
2521	3198 030 82280	2,2uF 20% 50V
2536	3198 030 82280	2,2uF 20% 50V
2555	3198 030 82280	2,2uF 20% 50V
2574	3198 030 82280	2,2uF 20% 50V
2711	4822 124 23002	10uF 16V
2731	4822 124 23002	10uF 16V
2736	4822 124 23002	10uF 16V
2742	4822 124 23002	10uF 16V
2747	4822 124 23002	10uF 16V
2751	4822 124 23002	10uF 16V
2802	4822 124 23002	10uF 16V
2804	4822 124 23002	10uF 16V
2829	4822 124 23002	10uF 16V
2842	3198 030 82280	2,2uF 20% 50V
2900	4822 124 12095	100uF 20% 16V
2904	4822 124 12095	100uF 20% 16V
2910	4822 124 23002	10uF 16V
2912	4822 124 12095	100uF 20% 16V
2918	4822 124 23002	10uF 16V
2925	4822 124 23002	10uF 16V

RESISTORS

3101	3198 031 13390	RST NETW 1206 4X 33R 5%
3102	3198 031 13390	RST NETW 1206 4X 33R 5%
3103	3198 031 13390	RST NETW 1206 4X 33R 5%
3104	3198 031 13390	RST NETW 1206 4X 33R 5%
3106	3198 031 13390	RST NETW 1206 4X 33R 5%
3107	3198 031 13390	RST NETW 1206 4X 33R 5%
3108	3198 031 13390	RST NETW 1206 4X 33R 5%
3166	3198 031 13390	RST NETW 1206 4X 33R 5%
3181	3198 031 13390	RST NETW 1206 4X 33R 5%
3185	3198 031 13390	RST NETW 1206 4X 33R 5%
3192	3198 031 13390	RST NETW 1206 4X 33R 5%
3198	3198 031 13390	RST NETW 1206 4X 33R 5%
3404	3198 031 13390	RST NETW 1206 4X 33R 5%
3406	3198 031 13390	RST NETW 1206 4X 33R 5%
3409	3198 031 13390	RST NETW 1206 4X 33R 5%
3532	2120 108 94059	RST NETW SM RAC16 4X Jumper
3533	2120 108 94059	RST NETW SM RAC16 4X Jumper
3534	3198 031 13390	RST NETW 1206 4X 33R 5%
3599	3198 031 13390	RST NETW 1206 4X 33R 5%
3610	2120 108 94059	RST NETW SM RAC16 4X Jumper
3846	2120 108 94059	RST NETW SM RAC16 4X Jumper
3852	2120 108 94059	RST NETW SM RAC16 4X Jumper
3856	2120 108 94059	RST NETW SM RAC16 4X Jumper
3860	2120 108 94059	RST NETW SM RAC16 4X Jumper
3861	3198 031 13390	RST NETW 1206 4X 33R 5%

COILS & FILTERS

5102	4822 157 11499	IND FXD 0603 100MHz 60R
5103	4822 157 11499	IND FXD 0603 100MHz 60R
5104	4822 157 11499	IND FXD 0603 100MHz 60R
5105	4822 157 11499	IND FXD 0603 100MHz 60R
5106	4822 157 11499	IND FXD 0603 100MHz 60R
5107	4822 157 11499	IND FXD 0603 100MHz 60R
5108	4822 157 11499	IND FXD 0603 100MHz 60R
5109	4822 157 11499	IND FXD 0603 100MHz 60R
5110	4822 157 11499	IND FXD 0603 100MHz 60R
5200	4822 157 11499	IND FXD 0603 100MHz 60R
5301	4822 157 11499	IND FXD 0603 100MHz 60R
5302	4822 157 11499	IND FXD 0603 100MHz 60R
5400	4822 157 11499	IND FXD 0603 100MHz 60R
5401	4822 157 11499	IND FXD 0603 100MHz 60R
5404	4822 157 11499	IND FXD 0603 100MHz 60R
5500	4822 157 70299	FXD IND SM 1210 2,2uH 5%

8-14

ELECTRICAL PARTS LIST - SD5.2 (S) XSA 4FL DV HDMI BOARD

5501	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5507	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5508	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5511	4822 157 11499	IND FXD 0603 100MHz 60R
5512	4822 157 11499	IND FXD 0603 100MHz 60R
5513	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5514	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5518	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5519	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5522	4822 157 11499	IND FXD 0603 100MHz 60R
5524	4822 157 11499	IND FXD 0603 100MHz 60R
5526	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5527	4822 157 70299	FXD IND SM 1210 2,2uH 5%
5700	2422 536 00215	IND FXD SM 1008 10U 5%
5701	2422 536 00215	IND FXD SM 1008 10U 5%
5703	4822 157 11499	IND FXD 0603 100MHz 60R
5707	4822 157 11499	IND FXD 0603 100MHz 60R
5800	4822 157 11499	IND FXD 0603 100MHz 60R
5802	4822 157 11499	IND FXD 0603 100MHz 60R
5901	4822 157 11717	IND FXD 1206 100MHz 50R
5902	4822 157 11717	IND FXD 1206 100MHz 50R
5903	4822 157 11499	IND FXD 0603 100MHz 60R
5904	4822 157 11717	IND FXD 1206 100MHz 50R
5905	4822 157 11717	IND FXD 1206 100MHz 50R
5906	4822 157 11499	IND FXD 0603 100MHz 60R
5907	4822 157 11499	IND FXD 0603 100MHz 60R
5908	4822 157 11499	IND FXD 0603 100MHz 60R
5913	4822 157 11499	IND FXD 0603 100MHz 60R
5914	4822 157 11499	IND FXD 0603 100MHz 60R
5915	4822 157 11717	IND FXD 1206 100MHz 50R

DIODES

6700	4822 130 11397	DIO SIG SM BAS316
6701	4822 130 11397	DIO SIG SM BAS316
6702	9322 128 69685	DIO REC SM S1D
6703	9322 128 69685	DIO REC SM S1D
6900	9322 128 69685	DIO REC SM S1D
6901	9322 128 69685	DIO REC SM S1D
6902	9322 128 69685	DIO REC SM S1D
6903	9322 128 69685	DIO REC SM S1D

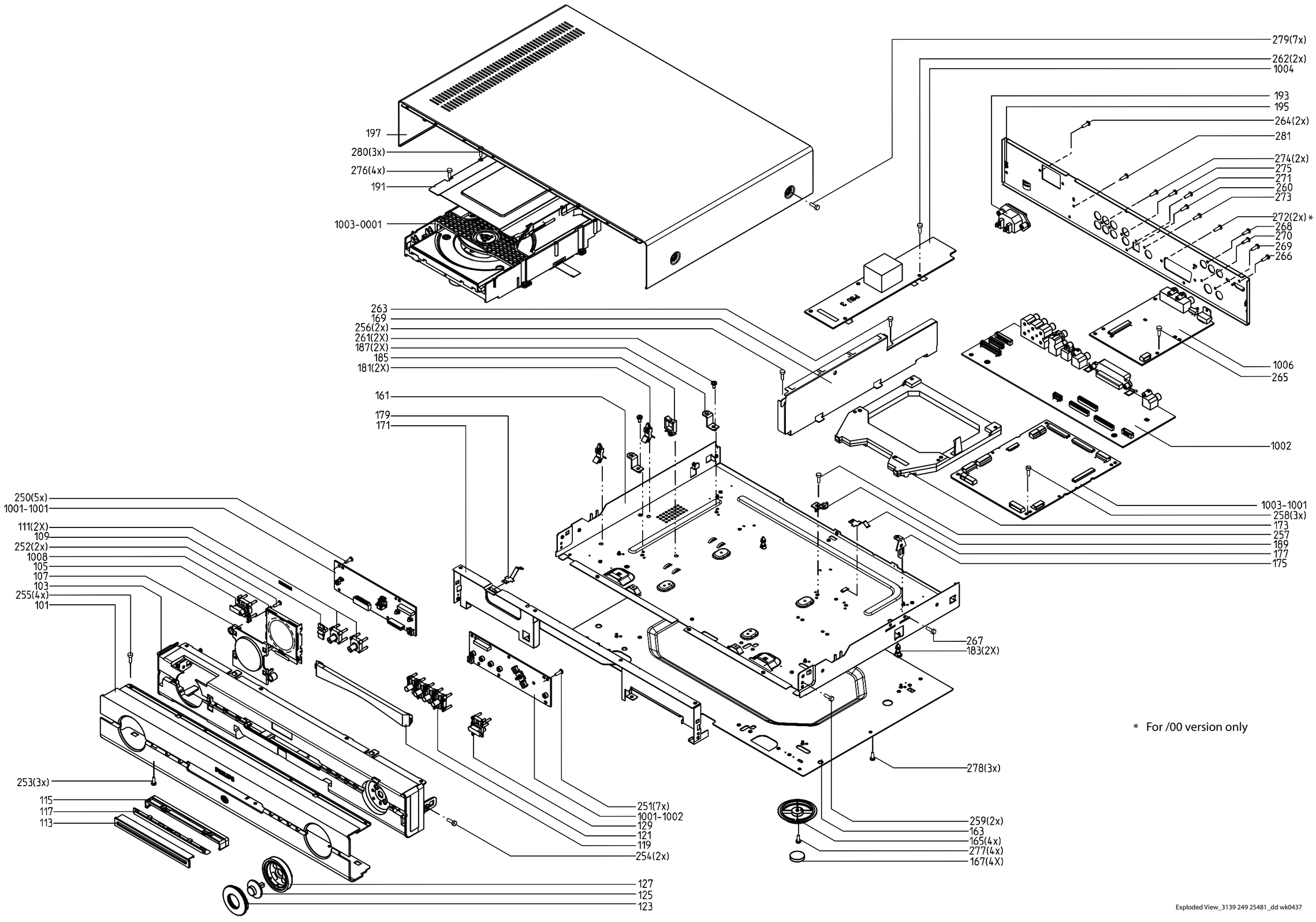
TRANSISTORS & INTEGRATED CIRCUITS

7100	9340 425 20115	TRA SIG SM BC847BS
7101	9322 202 25671	IC SM ZIVA-5X-C2
7103	9340 425 20115	TRA SIG SM BC847BS
7104	2722 171 08709	OSC XTL SM 27MHz 20P FXO-31
7200	9352 190 10118	IC SM 74LVC573ADB
7201	9322 190 54668	IC SM M29W320DT-70N1
7201	9322 191 28668	IC SM M29W320DT-70N6
7203	9352 190 10118	IC SM 74LVC573ADB
7204	9352 190 10118	IC SM 74LVC573ADB
7206	9322 130 41668	IC SM M24C64-WMN6
7300	9322 196 10668	IC SM MT48LC8M16A2TG-6A
7300	9322 197 09668	IC SM K4S281632ET-TC60
7301	9322 196 10668	IC SM MT48LC8M16A2TG-6A
7301	9322 197 09668	IC SM K4S281632ET-TC60
7400	9352 715 73557	IC SM SAA7329HL
7401	9322 166 67668	IC SM MT48LC4M16A2TG-7E
7401	9322 178 78668	IC SM K4S641632F-TC70
7401	9322 207 32668	IC SM K4S641632H-TC60
7402	5322 130 42718	TRA SIG SM BFS20
7403	2722 171 08744	OSC XTL SM 33MHz 15P FX0-31
7500	9340 425 30115	TRA SIG SM BC847BPN
7501	9340 425 30115	TRA SIG SM BC847BPN
7502	9340 425 30115	TRA SIG SM BC847BPN
7503	9340 425 30115	TRA SIG SM BC847BPN
7504	9340 425 30115	TRA SIG SM BC847BPN
7505	9340 425 30115	TRA SIG SM BC847BPN
7506	9352 687 20125	IC SM 74LVC1G125GW
7507	9965 000 04199	FET SIG SM BSN20
7508	9965 000 04199	FET SIG SM BSN20
7700	4822 130 11565	TRA POW SM 2SB1132
7701	9322 187 63668	IC SM BA5954FP
7702	9322 185 60671	IC SM SP3721AAA0PM
7703	4822 130 11565	TRA POW SM 2SB1132
7704	5322 130 60159	BC847B
7705	4822 209 32073	IC SM MC34072D
7707	5322 209 61472	IC SM LM393D
7709	3198 010 43130	BC807-25
7710	3198 010 43130	BC807-25
7711	4822 130 42804	BC817-25
7712	4822 130 42804	BC817-25
7713	9322 202 58668	IC SM LD1117DT50
7714	5322 130 60159	BC847B
7715	5322 130 60159	BC847B
7716	3141 018 51690	TRA SM 2SK3018
7717	3141 018 51690	TRA SM 2SK3018
7800	9322 174 02668	IC SM MSM514265C-60JS
7801	9322 186 11671	IC SM M5705
7802	9352 424 10118	IC SM 74LVC04ADB
7805	9340 425 20115	TRA SIG SM BC847BS
7807	9322 207 81668	IC SM M29F002BT-70K6
7807	4822 816 10944	IC SM M29F002BT-70K1
7900	4822 130 11565	TRA POW SM 2SB1132
7901	5322 130 60159	BC847B
7905	9322 146 75685	IC SM TS431IL

Note : Only the parts mentioned in this list are normal service spare parts.

9-1

SET MECHANICAL EXPLODED VIEW



* For /00 version only

Exploded View_3139 249 25481_dd wk0437

MECHANICAL & ACCESSORIES PARTS LIST - MAIN UNIT

0101	3139 241 60092	PANEL ORNAMENTAL AL	
0103	3139 244 05552	CABINET FRONT	
0105	3139 244 05541	BUTTON PWR STDBY CHROME	
0107	3139 244 05531	WINDOW DISPLAY	
0109	3139 244 05521	WINDOW IR	
0111	3139 244 05512	CAP AUD DIR/SOUND CHROME	
0113	3139 241 60081	COVER TRAY ORNAMENTAL AL	
0115	3139 244 05502	COVER TRAY	
0117	3139 244 05491	LIGHT BAR DVD TRAY	
0121	3139 244 05471	BUTTON SET CONTROL	
0123	3139 244 05461	COVER JOYSTICK FUNCTION	
0125	3139 244 05452	JOYSTICK FUNCTION	
0127	3139 244 05441	LIGHT RING FUNCTION	
0129	3139 244 05431	BUTTON MENU	
0165	9965 000 21117	PLASTIC FOOT	
0167	3103 304 74201	RUBBER FEET	
0173	3139 244 05561	BRACKET LOADER	
0177	3139 111 01470	SPRING GROUNDING	
0179	3139 111 01470	SPRING GROUNDING	
0181	2422 015 19105	SPACER LOCKING	
0183	3139 240 40061	SPACER - 8MM	
0185	2422 015 16892	SADDLE WIRE	
0193	2422 030 00408	MAINS SOCKET	
0333	3139 248 72131	REMOTE CONTROL	
0336	2422 070 00005 ⚠	MAINS CORD	
0338	2422 076 00304	CABLE CINCH 1M5 YE/RD/WH	/69
0340	3103 308 92610	CABLE AUDIO 2X2RCA MALE	/69
0341	4822 321 61579	VIDEO-CABLE	/69
0342	2422 076 00468 ⚠	CABLE SCART 1M1 SCART 21P	/00
1001	3139 248 83591	PCBAS FRONT	
1002	3139 248 83491	PCBAS AV	/00
1002	3139 248 83481	PCBAS AV	/69
1004	3139 248 71951 ⚠	MODULE PSU BIL PERF2003 WR HE	
1006	3139 248 82981	PCBAS PSCAN HDMI	
1008	3139 247 10921	LCM MODULE	
8102	3139 111 04261	FFC FOIL 30P/220/30P BD 1MMP	
8103	3139 241 00251	FFC FOIL 30P/080/30P BD 1MMP	
8104	3139 241 00251	FFC FOIL 30P/080/30P BD 1MMP	

Note : Only the parts mentioned in this list are normal service spare parts.

9-2

SCREW LISTS - MAIN UNIT

250	D3 x 10	
251	D3 x 10	
252	D3 x 10	
253	M3 x 6	
254	M3 x 6	
255	M3 x 6	
256	M3 x 6	
257	M3 x 6	
258	M3 x 6	
259	M3 x 6	
260	M3 x 6	
261	M3 x 6	
262	M3 x 6	
263	M3 x 6	
264	D3 x 10	
265	M3 x 6	
266	M3 x 6	
267	M3 x 6	
268	D3 x 10	
269	D3 x 10	
270	D3 x 10	
271	D3 x 10	
272	D3 x 10	/00
273	D3 x 10	
274	D3 x 10	
275	D3 x 10	
276	M3 x 18	
277	M3 x 6	
278	M3 x 6	
279	M3 x 6	
280	D3 x 10	
281	M3 x 6	

PSU BOARD

(For Information only)

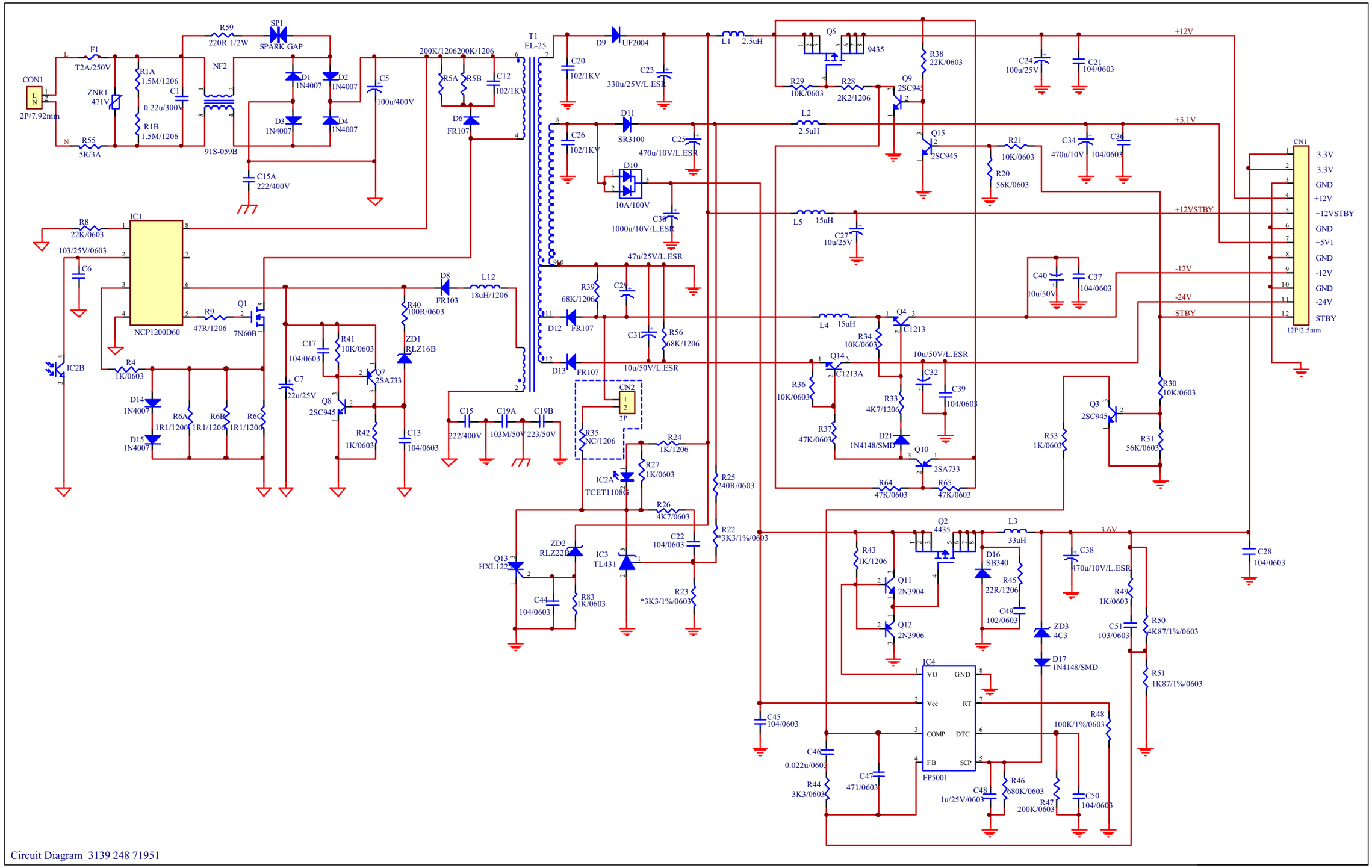
It is not recommended for component repair on this board but to replace the board when it becomes defective.
Therefore no service parts list is published in this chapter.

The only service part available for replacement is:
Module PSU BIL PERF2003 WR HE 3139 248 71951

TABLE OF CONTENTS

10-2

PSU BOARD - CIRCUIT DIAGRAM



Circuit Diagram_3139 248 71951