

Issue Date: 31st May 2005

SERVICE MANUAL



SPECIFICATIONS:

Disc Types	DVD, DVD-A, DVD-V, MP3, CD-RW, CD-R, CD-DA, Kodak Picture CD DIVX
Audio Formats	5.1 and Stereo Downmix LPCM 16 bit 44.1kHz Dolby Digital 5.1 24 bit 96kHz DTS Output (digital audio out only) DVD Audio 2 Channel 24 bit 192kHz DVD Audio 5.1 (MLP) 24 bit 96kHz
Video	Composite Video (CVBS) S-Video (SVHS) RGB DVI-D (Digital Video Interface) Component (YCbCr) PAL/NTSC Interlaced/Progressive Scan
THD (unweighed)	<0.01%
Dynamic Range	>103dB
Frequency Response	5Hz – 20kHz
Video Amplitude	1.0V pk-pk (75 ohms)
S-Video Amplitude	Y: 1.0V pk-pk (75 ohms) C: 0.286V pk-pk (75 ohms)
Power Supply	100-240V AC~50/60Hz
Max Power Consumption	40W
Dimensions (mm) (H x W x D)	55 x 430 x 263
Weight (kg)	2.56kg

AP19472/1

DVD79 SERVICE MANUAL

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

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

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

Caution

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

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

IMPORTANT SAFETY NOTICE

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

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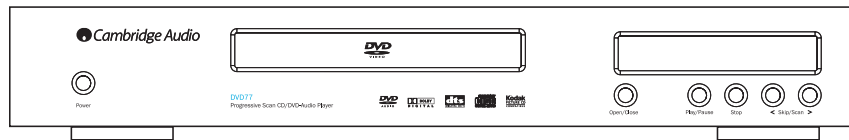
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FRONT PANEL CONTROLS



POWER

Power switch

Open/Close

Allows you to open and close the disc tray to load a disc. The disc will begin loading when the tray is closed. Pressing Play will also close the tray and start the Disc.

Play/Pause

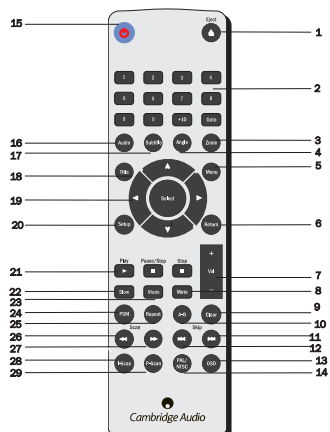
Plays the disc and pauses play.

Stop

Stops the Disc playing. If Play is pressed shortly afterwards, the DVD will resume play in the place where it was stopped. A Compact disc will stop and a message will appear on screen. Press PLAY to continue.

Skip/Scan

Allows for skipping between the chapters on the DVD disc or tracks on a CD.



USING THE REMOTE HANDSET

When you have unpacked your remote handset, insert the supplied AAA batteries to activate it. The remote can control all of the standard playback options but is also important in setting up your DVD player as many of the menus are most easily accessed from the remote.

- | | |
|-------------------|---------------------|
| 1. Eject | 16. Audio |
| 2. Number buttons | 17. Subtitle |
| 3. Zoom | 18. Title |
| 4. Angle | 19. Select |
| 5. Menu | 20. Setup |
| 6. Return | 21. Play/Stop/Pause |
| 7. Volume | 22. Slow |
| 8. Mute | 23. Mode |
| 9. Clear | 24. PSM |
| 10. A-B Button | 25. Repeat |
| 11. Skip Fwd | 26. Scan Prev |
| 12. Skip Back | 27. Scan Rev |
| 13. OSD | 28. I-Scan |
| 14. PAL/NTSC | 29. P-Scan |
| 15. Standby | |

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The laser diode in the traverse unit (optical pickup) may break down due to static electricity of clothes or human body. Use due caution to electrostatic breakdown when servicing and handling the laser diode.

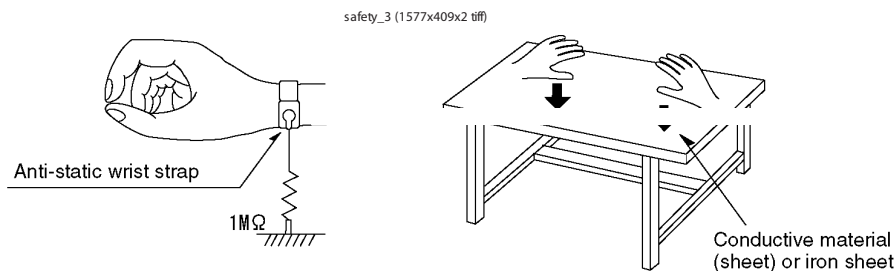
Some devices such as the DVD player use the optical pickup(laser diode)and the optical pickup will be damaged

1. Worktable grounding

Put a conductive material sheet on the area where the optical pickup is placed, and ground the sheet.

2. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body.



3. Handling of optical pickup

3.1. To keep the good quality of the optical pickup maintenance parts during transportation and before installation, the both ends of the laser diode are short-circuited.After replacing the parts with new ones, remove the short circuit according to the correct procedure. (See this Technical Guide).

3.2. Do not use a tester to check the laser diode for the optical pickup .This will damage the laser diode due to the power supply in the tester.

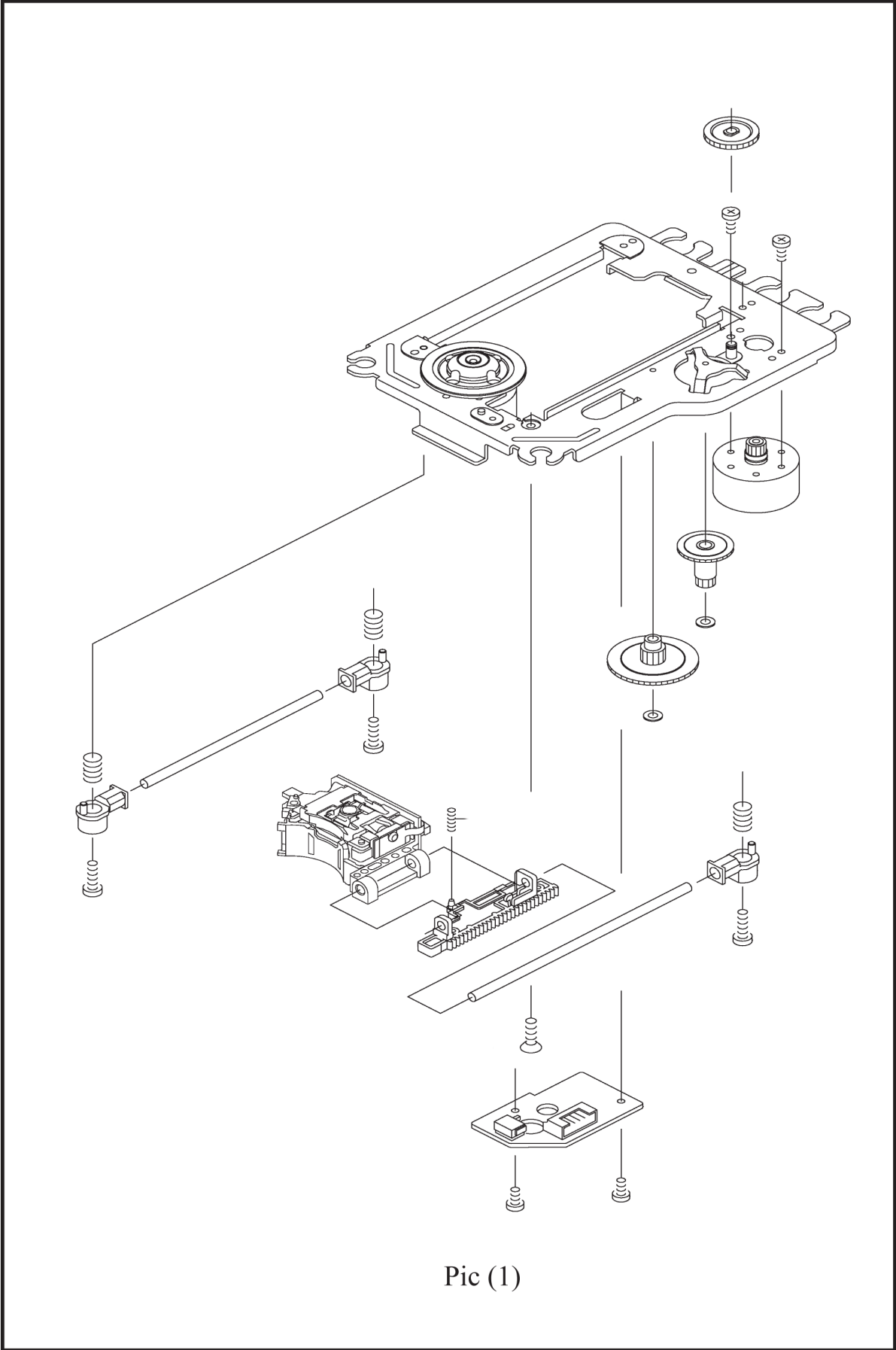
4. Handling precautions for Traverse Unit (Optical Pickup)

4.1. Do not give a considerable shock to the traverse unit(optical pickup)as it has an extremely high-precise structure.

4.2. When replacing the optical pickup, install the flexible cable and cut is short land with a nipper. See the optical pickup replacement procedure in this Technical Guide. Before replacing the traverse unit, remove the short pin for preventingstatic electricity and install a new unit. Connect the connector as quickly as possible.

4.3. The flexible cable may be cut if an excessive force is applied to it. Use caution when handling the cable.

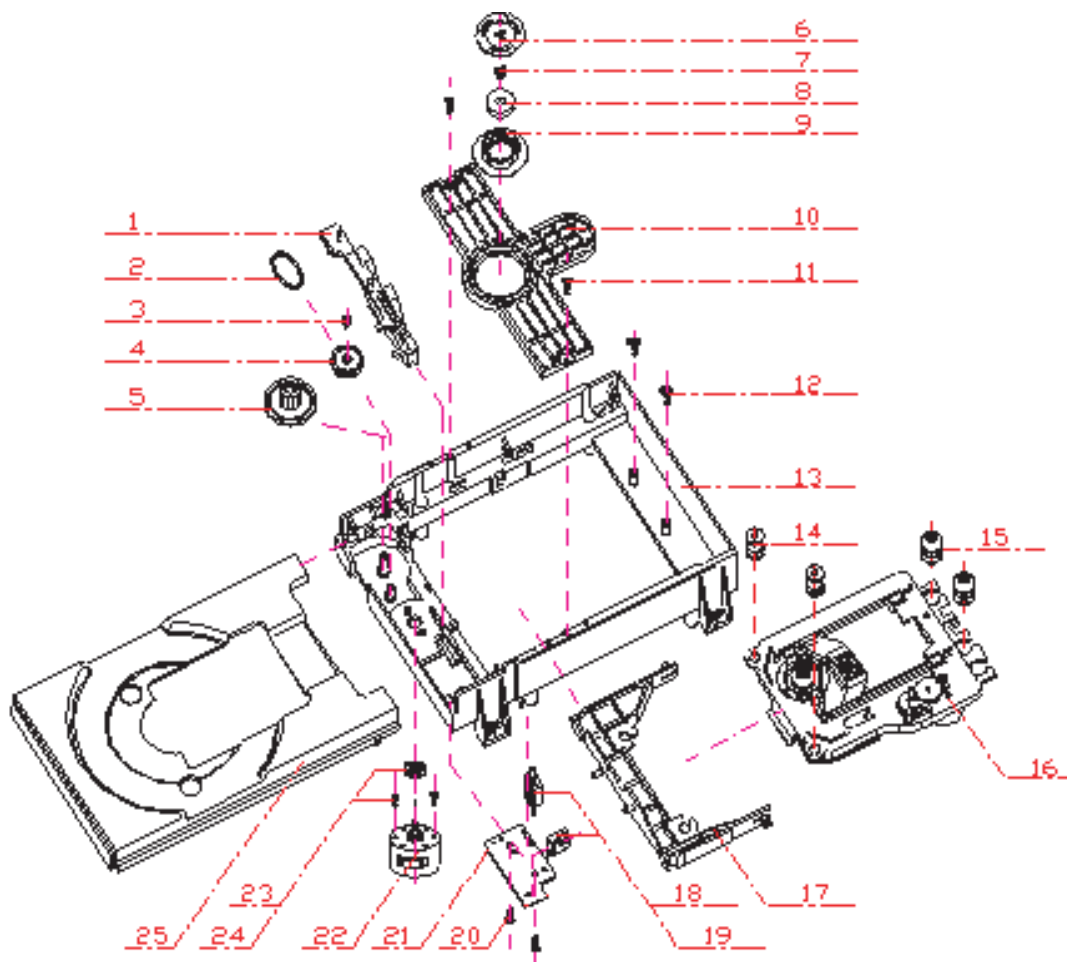
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Pic (1)

Mechanism Unit Exploded Diagram

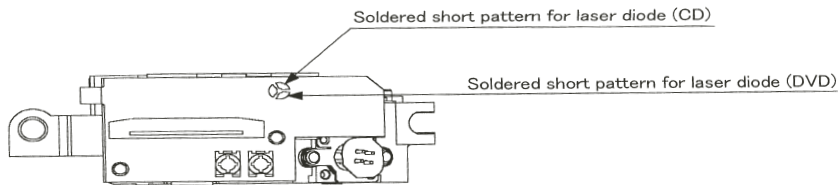
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- | | |
|-----------------------------------|--------------------------|
| 1. bracket | 14. front silicon rubber |
| 2. belt | 15. Back silicon rubber |
| 3. screw | 16. Pick-up |
| 4. belt wheel | 17. Pick-up |
| 5. gearwheel | 18. switch |
| 6. iron chip | 19. Five-pin flat plug |
| 7. Immobility mechanism equipment | 20. screw |
| 8. Magnet | 21. PCB |
| 9. Platen | 22. motor |
| 10. Bridge bracket | 23. Motor wheel |
| 11. screw | 24. screw |
| 12. screw | 25. tray |
| 13. Big bracket | |

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Short the parts of LD circuit pattern by soldering.



5.3.2 Cautions on assembly and adjustment

Make sure that the workbenches, jigs, tips, tips of soldering irons and measuring instruments are grounded, and that personnel wear wrist straps for ground.

Open the LD short lands quickly with a soldering iron after a circuit is connected.

Keep the power source of the pick-up protected from internal and external sources of electrical noise.

Refrain from operation and storage in atmospheres containing corrosive gases (such as H_2S , SO_2 , NO_2 and Cl_2) or toxic gases or in locations containing substances (especially from the organic silicon, cyan, formalin and phenol groups) which emit toxic gases. It is particularly important to ensure that none of the above substances are present inside the unit. Otherwise, the motor may no longer run.

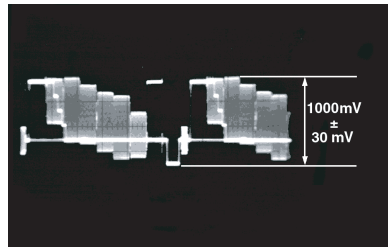
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Do these confirmations after replacing a P.C.B. - (Luminance Signal)

Measurement point	Mode	Disc
Video output terminal	Color bar 75% PLAY(Title 46):DVDT-S15 PLAY(Title 12):DVDT-S01	DVDT-S15 or DVDT-S01
Measuring equipment,tools	Confirmation value	
200mV/dir,10 μ sec/dir	1000mVp-p \pm 30mV	

Purpose:To maintain video signal output compatibility.

- 1.Connect the oscilloscope to the video output terminal and terminate at 75 ohm.
- 2.Confirm that luminance signal(Y+S)level is 1000mVp-p \pm 30mV

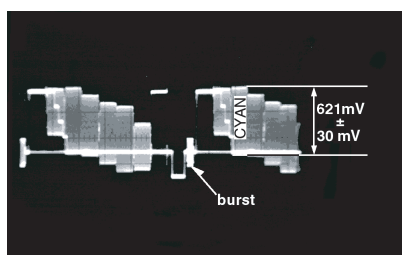


(Chrominance Signal)

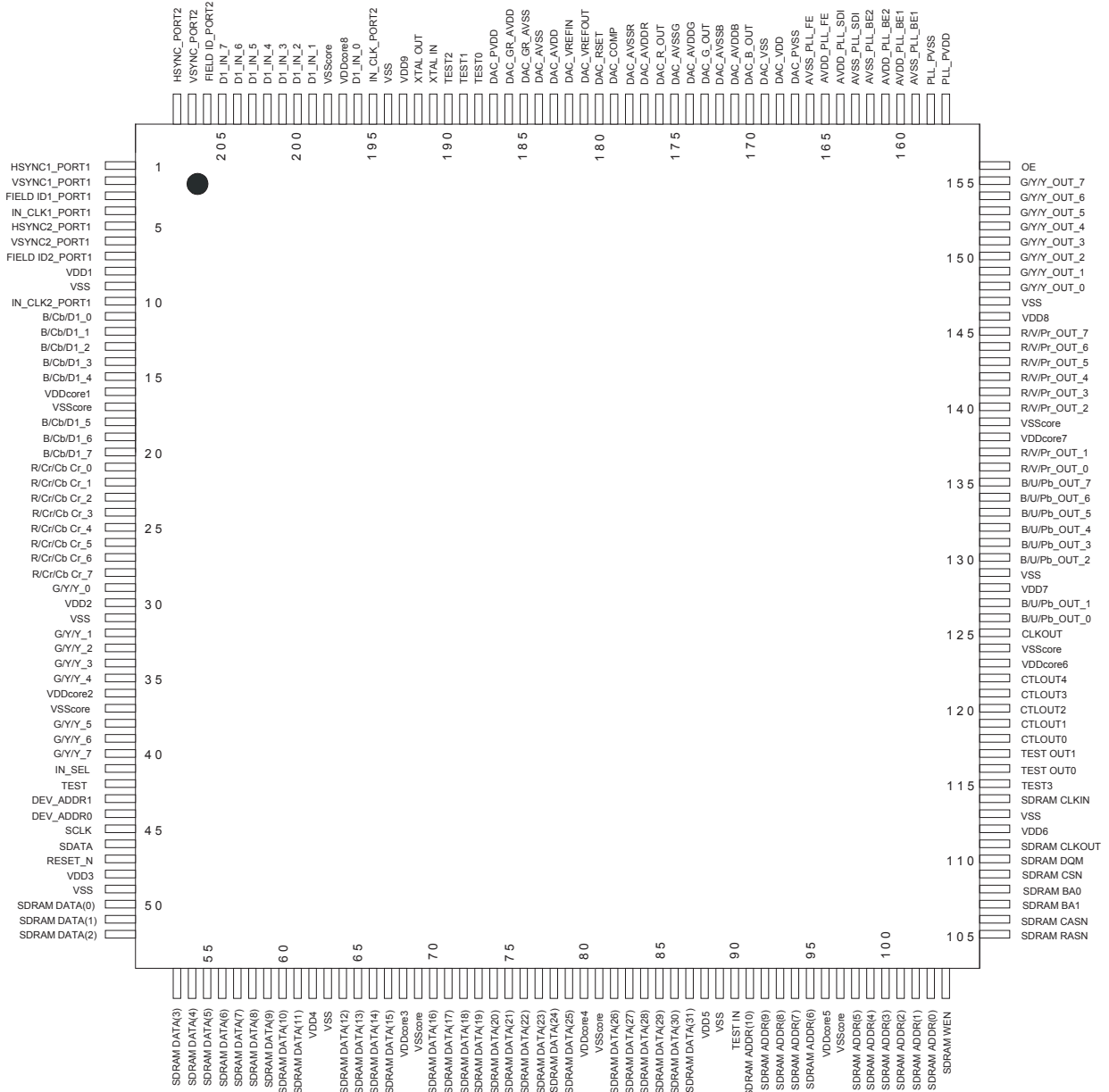
Measurement point	Mode	Disc
Video output terminal	Color bar 75% PLAY(Title 46):DVDT-S15 PLAY(Title 12):DVDT-S01	DVDT-S15 or DVDT-S01
Measuring equipment,tools Screwdriver,Oscilloscope	Confirmation value	
200mV/dir,10 μ sec/dir	621mVp-p \pm 30mV	

Purpose:To maintain video signal output compatibility.

- 1.Connect the oscilloscope to the video output terminal and terminate at 75 ohme.
- 2.Confirm that the chrominance signal(C)level is 621 mVp-p \pm 30mV



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(U201) Pin Diagram

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Pin No	Pin Name	I/O Type	Vol tage Tolerance	Drive	Internal Pull up/ Pulldown	Description
1	HSYNC1_PORT1	Input	5v			Horizontal sync or reference -CTL1 of Port 1
2	VSYNC1_PORT1	Input	5v			Vertical sync or reference -CTL1 of Port 1
3	FIELD ID1_PORT1	Input	5v			Odd/Even Field identification -CTL1 of Port 1
4	IN_CLK1_PORT1	Input	5v			Data Clock input -CTL1 of Port 1
5	HSYNC2_PORT1	Input	5v			Horizontal sync or reference -CTL2 of Port 1
6	VSYNC2_PORT1	Input	5v			Vertical sync or reference -CTL2 of Port 1
7	FIELD ID2_PORT1	Input	5v			Odd/Even Field identification -CTL2 of Port 1
8	VDD1	Power				3.3 V - Power pin for IO
9	VSS	Ground				Ground
10	IN_CLK2_PORT1	Input	5v			Data Clock input -CTL2 of Port 1
11	B/Cb/D1_0	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
12	B/Cb/D1_1	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
13	B/Cb/D1_2	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
14	B/Cb/D1_3	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
15	B/Cb/D1_4	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
16	VDDcore1	Power				1.8 V - Power pin for core
17	VSScore	Ground				Ground
18	B/Cb/D1_5	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
19	B/Cb/D1_6	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
20	B/Cb/D1_7	Input	5v			Port 1 - Digital video input (Blue/Cb/D1)
21	R/Cr/Cb Cr_0	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
22	R/Cr/Cb Cr_1	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
23	R/Cr/Cb Cr_2	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
24	R/Cr/Cb Cr_3	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
25	R/Cr/Cb Cr_4	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
26	R/Cr/Cb Cr_5	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
27	R/Cr/Cb Cr_6	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
28	R/Cr/Cb Cr_7	Input	5v			Port 1 - Digital video input (Red/Cr/CrCb)
29	G/Y/Y_0	Input	5v			Port 1 - Digital video input (Green/Y)
30	VDD2	Power				3.3 V - Power pin for IO
31	VSS	Ground				Ground
32	G/Y/Y_1	Input	5v			Port 1 - Digital video input (Green/Y)
33	G/Y/Y_2	Input	5v			Port 1 - Digital video input (Green/Y)
34	G/Y/Y_3	Input	5v			Port 1 - Digital video input (Green/Y)
35	G/Y/Y_4	Input	5v			Port 1 - Digital video input (Green/Y)
36	VDDcore2	Power				1.8 V - Power pin for core
37	VSScore	Ground				Ground
38	G/Y/Y_5	Input	5v			Port 1 - Digital video input (Green/Y)
39	G/Y/Y_6	Input	5v			Port 1 - Digital video input (Green/Y)
40	G/Y/Y_7	Input	5v			Port 1 - Digital video input (Green/Y)
41	IN_SEL	Output	5v	8 mA		Output to select external video mux
42	TEST	Input	5v			Connect to Ground
43	DEV_ADDR1	Input	5v			Device address setting 1

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Pin No	Pin Name	I/O Type	Voltage Tolerance	Drive	Internal Pull up/ Pulldown	Description
44	DEV_ADDR0	Input	5v			Device address setting 0
45	SCLK	I/O	5v	8 mA		2-wire serial control bus clock
46	SDATA	I/O	5v	8 mA		2-wire serial control bus data
47	RESET_N	Input	5v		PU	Reset
48	VDD3	Power				3.3 V – Power pin for IO
49	VSS	Ground				Ground
50	SDRAM DATA(0)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
51	SDRAM DATA(1)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
52	SDRAM DATA(2)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
53	SDRAM DATA(3)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
54	SDRAM DATA(4)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
55	SDRAM DATA(5)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
56	SDRAM DATA(6)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
57	SDRAM DATA(7)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
58	SDRAM DATA(8)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
59	SDRAM DATA(9)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
60	SDRAM DATA(10)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
61	SDRAM DATA(11)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
62	VDD4	Power				3.3 V – Power pin for IO
63	VSS	Ground				Ground
64	SDRAM DATA(12)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
65	SDRAM DATA(13)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
66	SDRAM DATA(14)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
67	SDRAM DATA(15)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
68	VDDcore3	Power				1.8 V - Power pin for core
69	VSScore	Ground				Ground
70	SDRAM DATA(16)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
71	SDRAM DATA(17)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
72	SDRAM DATA(18)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
73	SDRAM DATA(19)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
74	SDRAM DATA(20)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
75	SDRAM DATA(21)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
76	SDRAM DATA(22)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
77	SDRAM DATA(23)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
78	SDRAM DATA(24)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
79	SDRAM DATA(25)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
80	VDDcore4	Power				1.8 V – Power pin for core
81	VSScore	Ground				Ground
82	SDRAM DATA(26)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
83	SDRAM DATA(27)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
84	SDRAM DATA(28)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
85	SDRAM DATA(29)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
86	SDRAM DATA(30)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
87	SDRAM DATA(31)	Tristate I/O	5v	4 mA	PD	SDRAM data bus *
88	VDD5	Power				3.3 V – Power pin for IO

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Pin No	Pin Name	I/O Type	Vol tage Tolerance	Drive	Internal Pull up/ Pulldown	Description
130	B/U/Pb_OUT_2	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
131	B/U/Pb_OUT_3	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
132	B/U/Pb_OUT_4	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
133	B/U/Pb_OUT_5	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
134	B/U/Pb_OUT_6	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
135	B/U/Pb_OUT_7	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
136	R/V/Pr_OUT_0	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
137	R/V/Pr_OUT_1	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
138	VDDcore7	Power				1.8 V – Power pin for core
139	VSScore	Ground				Ground
140	R/V/Pr_OUT_2	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
141	R/V/Pr_OUT_3	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
142	R/V/Pr_OUT_4	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
143	R/V/Pr_OUT_5	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
144	R/V/Pr_OUT_6	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
145	R/V/Pr_OUT_7	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
146	VDD8	Power				3.3 V – Power pin for IO
147	VSS	Ground				Ground
148	G/Y/Y_OUT_0	Tristate O/P	5v	8 mA		Digital video output – Green/Y
149	G/Y/Y_OUT_1	Tristate O/P	5v	8 mA		Digital video output – Green/Y
150	G/Y/Y_OUT_2	Tristate O/P	5v	8 mA		Digital video output – Green/Y
151	G/Y/Y_OUT_3	Tristate O/P	5v	8 mA		Digital video output – Green/Y
152	G/Y/Y_OUT_4	Tristate O/P	5v	8 mA		Digital video output – Green/Y
153	G/Y/Y_OUT_5	Tristate O/P	5v	8 mA		Digital video output – Green/Y
154	G/Y/Y_OUT_6	Tristate O/P	5v	8 mA		Digital video output – Green/Y
155	G/Y/Y_OUT_7	Tristate O/P	5v	8 mA		Digital video output – Green/Y
156	OE	Input	5v			Output data enable for Digital video output
157	PLL_PVDD	Power				1.8 V – Power pin for PLL pads
158	PLL_PVSS	Ground				Ground for PLL pads
159	AVSS_PLL_BE1	Ground				PLL Ground
160	AVDD_PLL_BE1	Power				1.8 V – Power pin for PLL
161	AVDD_PLL_BE2	Power				1.8 V – Power pin for PLL
162	AVSS_PLL_BE2	Ground				PLL Ground
163	AVSS_PLL_SDI	Ground				PLL Ground
164	AVDD_PLL_SDI	Power				1.8 V – Power pin for PLL
165	AVDD_PLL_FE	Power				1.8 V – Power pin for PLL
166	AVSS_PLL_FE	Ground				PLL Ground
167	DAC_PVSS	Ground				Ground for DAC pads
168	DAC_VDD	Power				1.8 V – Digital power pin for DAC
169	DAC_VSS	Ground				DAC digital Ground
170	DAC_BOUT	Output		34 mA		Analog B/U output
171	DAC_AVDDDB	Power				3.3 V – Analog power pin for B channel
172	DAC_AVSSB	Ground				Analog Ground for B channel
173	DAC_GOUT	Output		34 mA		Analog G/Y output
174	DAC_AVDDG	Power				3.3 V – Analog power pin for G channel

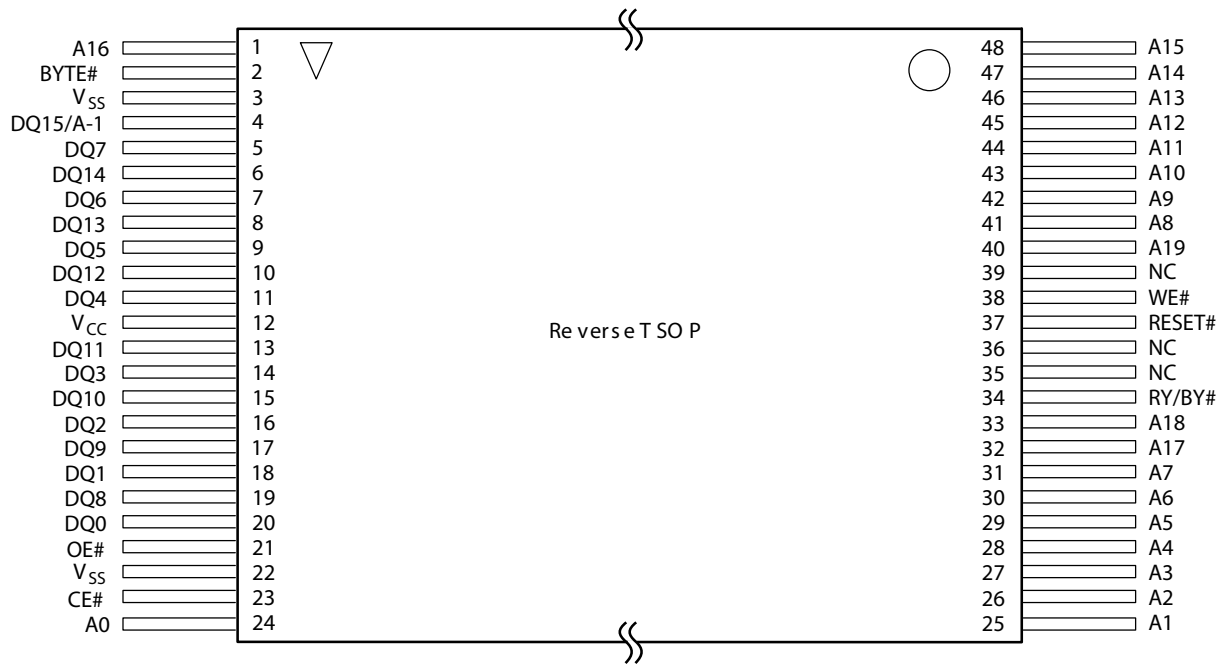
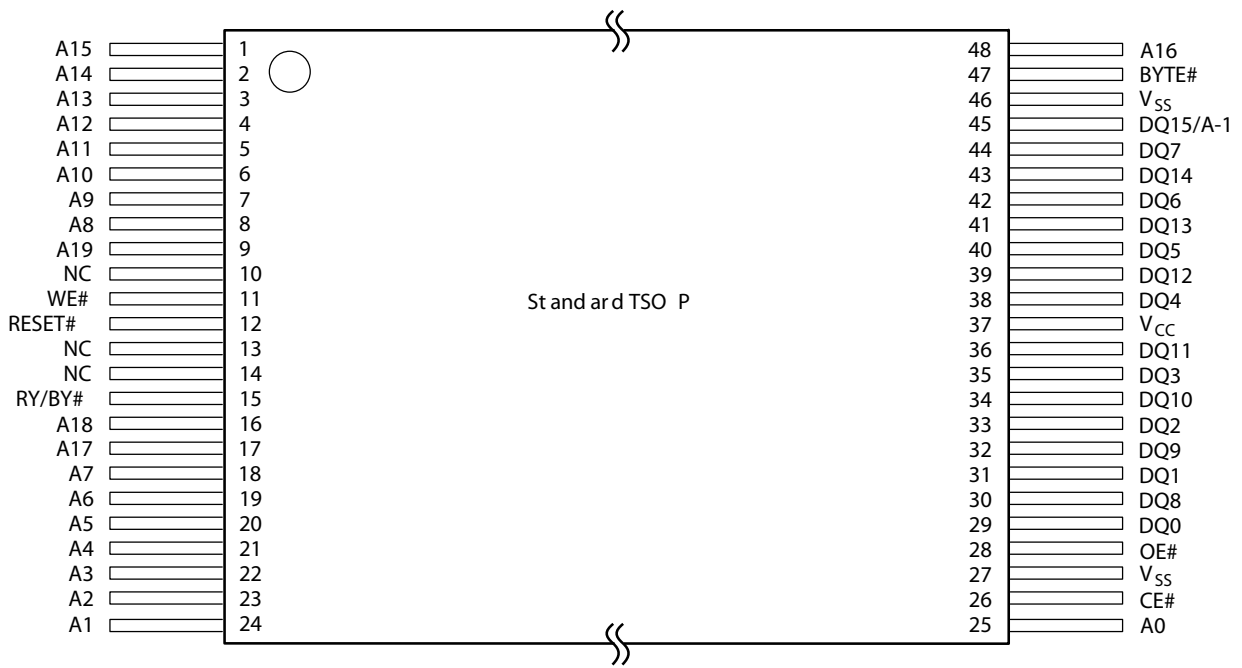
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Pin No	Pin Name	I/O Type	Voltage Tolerance	Drive	Internal Pull up/ Pulldown	Description
130	B/U/Pb_OUT_2	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
131	B/U/Pb_OUT_3	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
132	B/U/Pb_OUT_4	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
133	B/U/Pb_OUT_5	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
134	B/U/Pb_OUT_6	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
135	B/U/Pb_OUT_7	Tristate O/P	5v	8 mA		Digital video output – Blue/U/Pb
136	R/V/Pr_OUT_0	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
137	R/V/Pr_OUT_1	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
138	VDDcore7	Power				1.8 V – Power pin for core
139	VSScore	Ground				Ground
140	R/V/Pr_OUT_2	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
141	R/V/Pr_OUT_3	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
142	R/V/Pr_OUT_4	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
143	R/V/Pr_OUT_5	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
144	R/V/Pr_OUT_6	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
145	R/V/Pr_OUT_7	Tristate O/P	5v	8 mA		Digital video output – Red/V/Pr
146	VDD8	Power				3.3 V – Power pin for IO
147	VSS	Ground				Ground
148	G/Y/Y_OUT_0	Tristate O/P	5v	8 mA		Digital video output – Green/Y
149	G/Y/Y_OUT_1	Tristate O/P	5v	8 mA		Digital video output – Green/Y
150	G/Y/Y_OUT_2	Tristate O/P	5v	8 mA		Digital video output – Green/Y
151	G/Y/Y_OUT_3	Tristate O/P	5v	8 mA		Digital video output – Green/Y
152	G/Y/Y_OUT_4	Tristate O/P	5v	8 mA		Digital video output – Green/Y
153	G/Y/Y_OUT_5	Tristate O/P	5v	8 mA		Digital video output – Green/Y
154	G/Y/Y_OUT_6	Tristate O/P	5v	8 mA		Digital video output – Green/Y
155	G/Y/Y_OUT_7	Tristate O/P	5v	8 mA		Digital video output – Green/Y
156	OE	Input	5v			Output data enable for Digital video output
157	PLL_PVDD	Power				1.8 V – Power pin for PLL pads
158	PLL_PVSS	Ground				Ground for PLL pads
159	AVSS_PLL_BE1	Ground				PLL Ground
160	AVDD_PLL_BE1	Power				1.8 V – Power pin for PLL
161	AVDD_PLL_BE2	Power				1.8 V – Power pin for PLL
162	AVSS_PLL_BE2	Ground				PLL Ground
163	AVSS_PLL_SDI	Ground				PLL Ground
164	AVDD_PLL_SDI	Power				1.8 V – Power pin for PLL
165	AVDD_PLL_FE	Power				1.8 V – Power pin for PLL
166	AVSS_PLL_FE	Ground				PLL Ground
167	DAC_PVSS	Ground				Ground for DAC pads
168	DAC_VDD	Power				1.8 V – Digital power pin for DAC
169	DAC_VSS	Ground				DAC digital Ground
170	DAC_BOUT	Output		34 mA		Analog B/U output
171	DAC_AVDDDB	Power				3.3 V – Analog power pin for B channel
172	DAC_AVSSB	Ground				Analog Ground for B channel
173	DAC_GOUT	Output		34 mA		Analog G/Y output
174	DAC_AVDDG	Power				3.3 V – Analog power pin for G channel

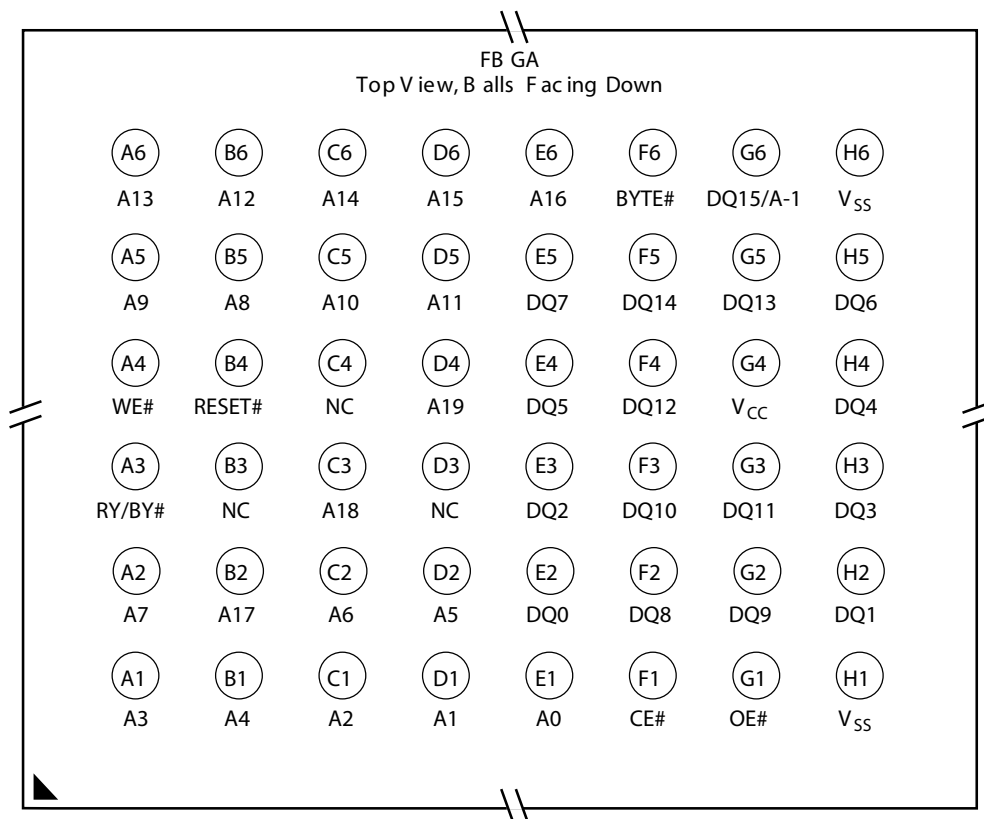
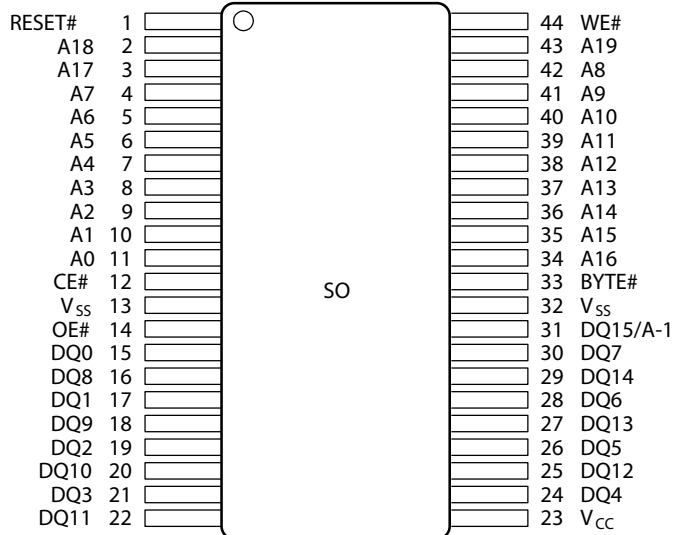
Cambridge Audio DVD79 DVD Player

Pin No	Pin Name	I/O Type	Voltage Tolerance	Drive	Internal Pull up/ Pulldown	Description
175	DAC_AVSSG	Ground				Analog Ground for G channel
176	DAC_ROUT	Output		34 mA		Analog R/V output
177	DAC_AVDDR	Power				3.3 V – Analog power pin for R channel
178	DAC_AVSSR	Ground				Analog Ground for R channel
179	DAC_COMP	Output				Compensation for video DACs
180	DAC_RSET	Output				Current setting resistor for video DACs
181	DAC_VREFOUT	Output				1.28 V Internally generated voltage reference for video DACs
182	DAC_VREFIN	Input				External Voltage reference for video DACs
183	DAC_AVDD	Power				3.3 V – Analog power pin for DAC
184	DAC_AVSS	Ground				Analog Ground for DAC
185	DAC_GR_AVSS	Ground				Ground for DAC Guard ring
186	DAC_GR_AVDD	Power				3.3 V – Power pin for DAC Guard ring
187	DAC_PVDD	Power				3.3 V –Power pin for DAC pads
188	TEST0	Input	5v			Test pin – connect to ground
189	TEST1	Input	5v			Test pin – connect to ground
190	TEST2	Input	5v			Test pin – connect to ground
191	XTAL IN	Input				External parallel crystal oscillator
192	XTAL OUT	Output				External parallel crystal oscillator
193	VDD9	Power				3.3 V - Power pin for IO
194	VSS	Ground				Ground
195	IN_CLK_PORT 2	Input	5v	4 mA		Port 2 - Data Clock input
196	D1_IN_0	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
197	VDDcore8	Power				1.8 V – Power pin for core
198	VSScore	Ground				Ground
199	D1_IN_1	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
200	D1_IN_2	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
201	D1_IN_3	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
202	D1_IN_4	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
203	D1_IN_5	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
204	D1_IN_6	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
205	D1_IN_7	Input	5v	4 mA		Port 2 - ITU-R BT656 digital data input
206	FIELD ID_PORT 2	Input	5v	4 mA		Port 2 - Odd/Even Field identification
207	VSYNC_PORT 2	Input	5v	4 mA		Port 2 - Vertical sync or reference
208	HSYNC_PORT 2	Input	5v	4 mA		Port 2 - Horizontal sync or reference

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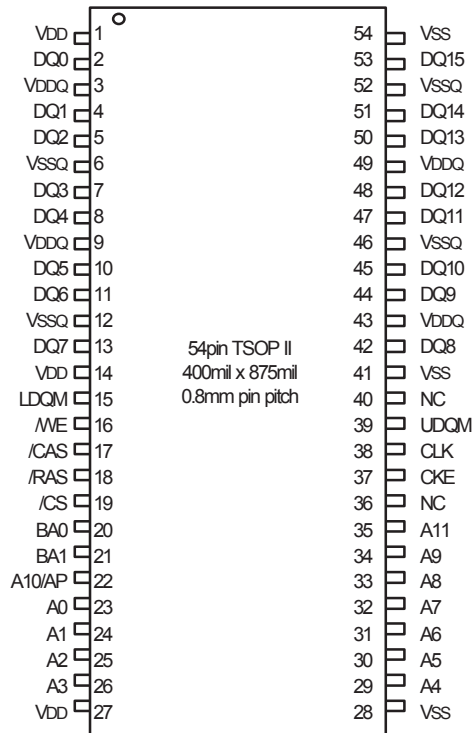
Special Handling Instructions

Special handling is required for Flash Memory products in FBGA packages.

Flash memory devices in FBGA packages may be damaged if exposed to ultrasonic cleaning methods. The package and/or data integrity may be compromised if the package body is exposed to temperatures above 150°C for prolonged periods of time.

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PIN CONFIGURATION



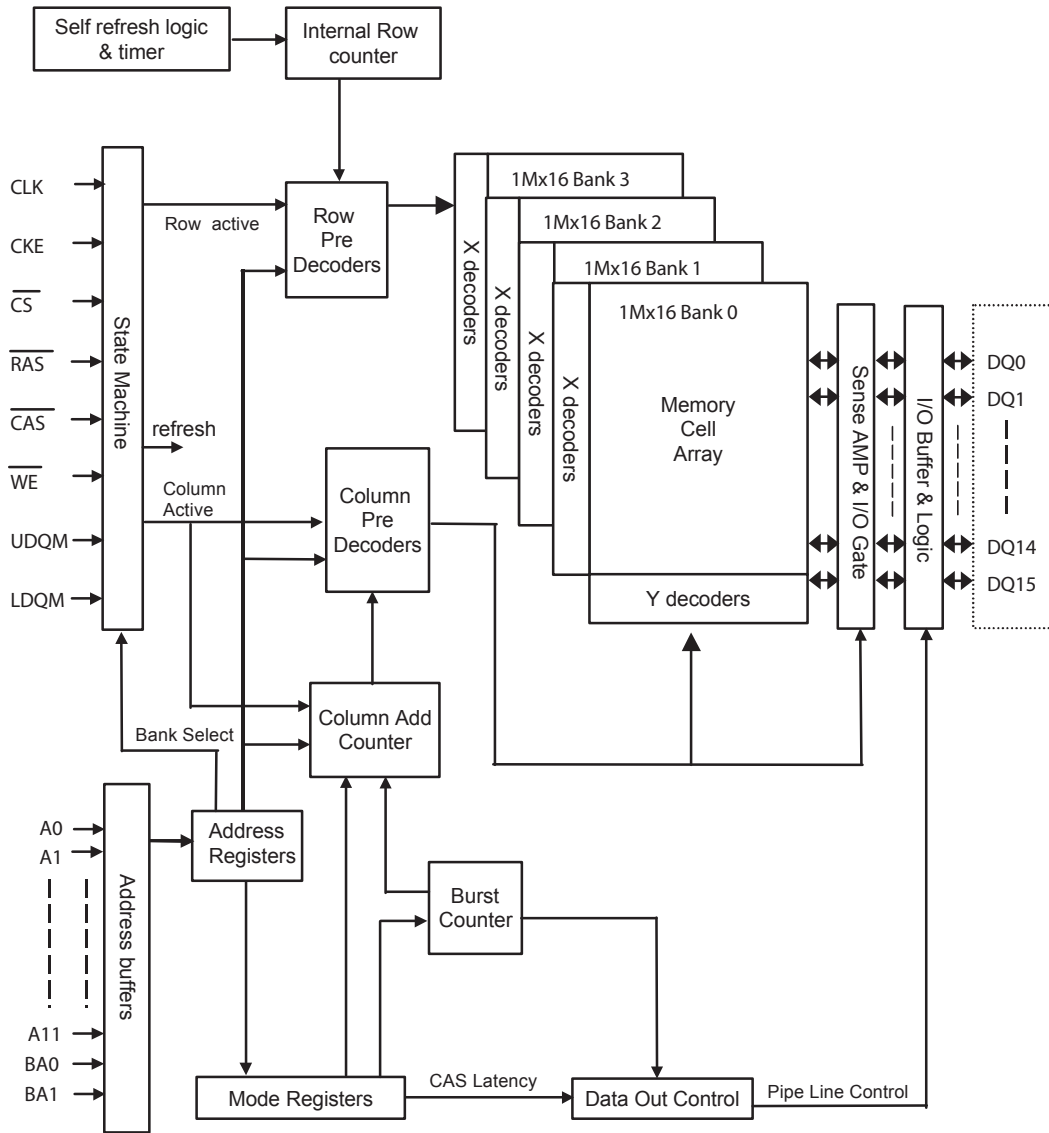
PIN DESCRIPTION

PIN	PIN NAME	DESCRIPTION
CLK	Clock	The system clock input. All other inputs are registered to the SDRAM on the rising edge of CLK
CKE	Clock Enable	Controls internal clock signal and when deactivated, the SDRAM will be one of the states among power down, suspend or self refresh
\overline{CS}	Chip Select	Enables or disables all inputs except CLK, CKE and DQM
BA0,BA1	Bank Address	Selects bank to be activated during \overline{RAS} activity Selects bank to be read/written during \overline{CAS} activity
A0 ~ A11	Address	Row Address : RA0 ~ RA11, Column Address : CA0 ~ CA7 Auto-precharge flag : A10
\overline{RAS} , \overline{CAS} , \overline{WE}	Row Address Strobe, Column Address Strobe, Write Enable	\overline{RAS} , \overline{CAS} and \overline{WE} define the operation Refer function truth table for details
LDQM, UDQM	Data Input/Output Mask	Controls output buffers in read mode and masks input data in write mode
DQ0 ~ DQ15	Data Input/Output	Multiplexed data input / output pin
VDD/VSS	Power Supply/Ground	Power supply for internal circuits and input buffers
VDDQ/VSSQ	Data Output Power/Ground	Power supply for output buffers
NC	No Connection	No connection

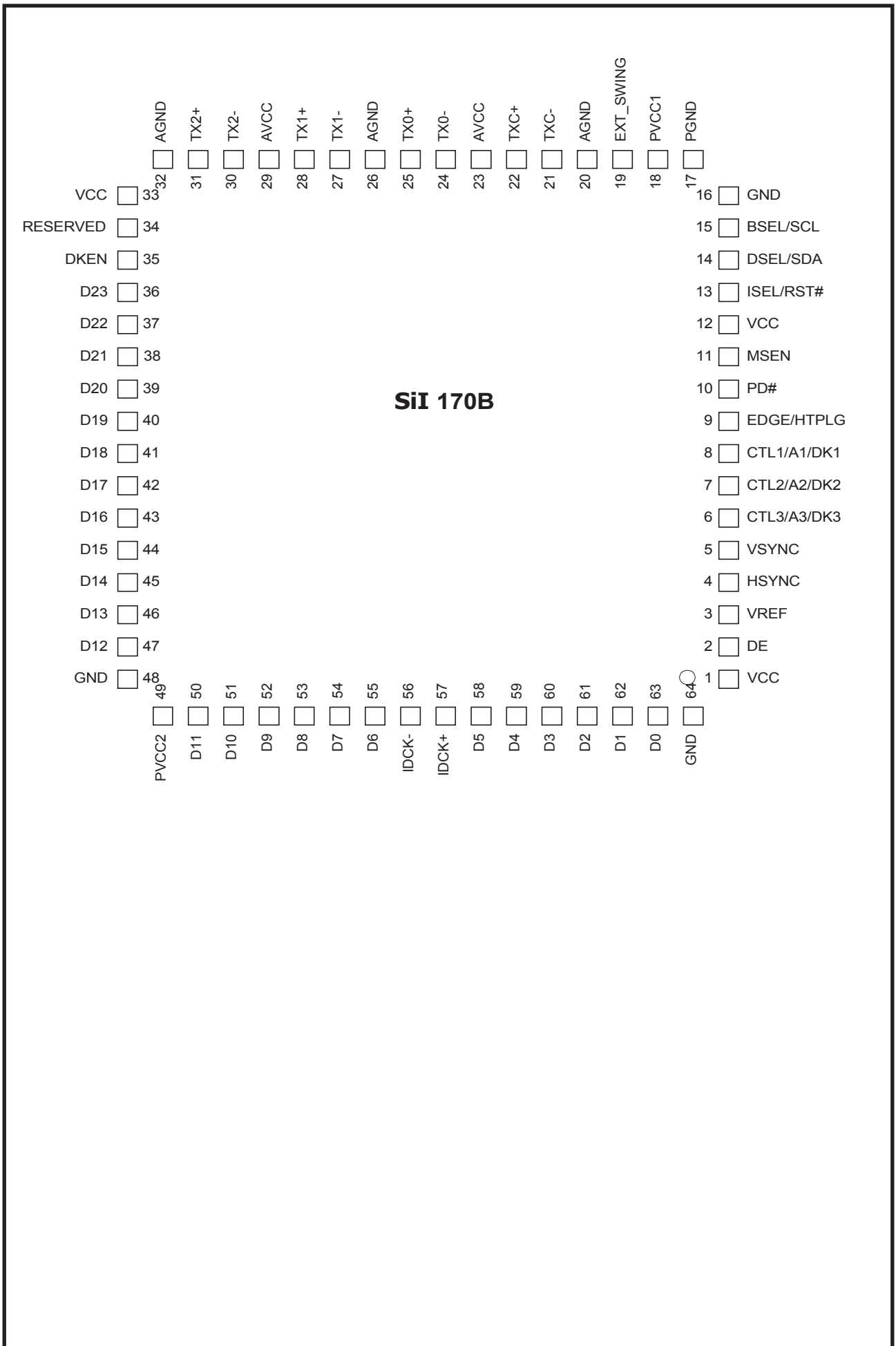
Cambridge Audio DVD79 DVD Player

FUNCTIONAL BLOCK DIAGRAM

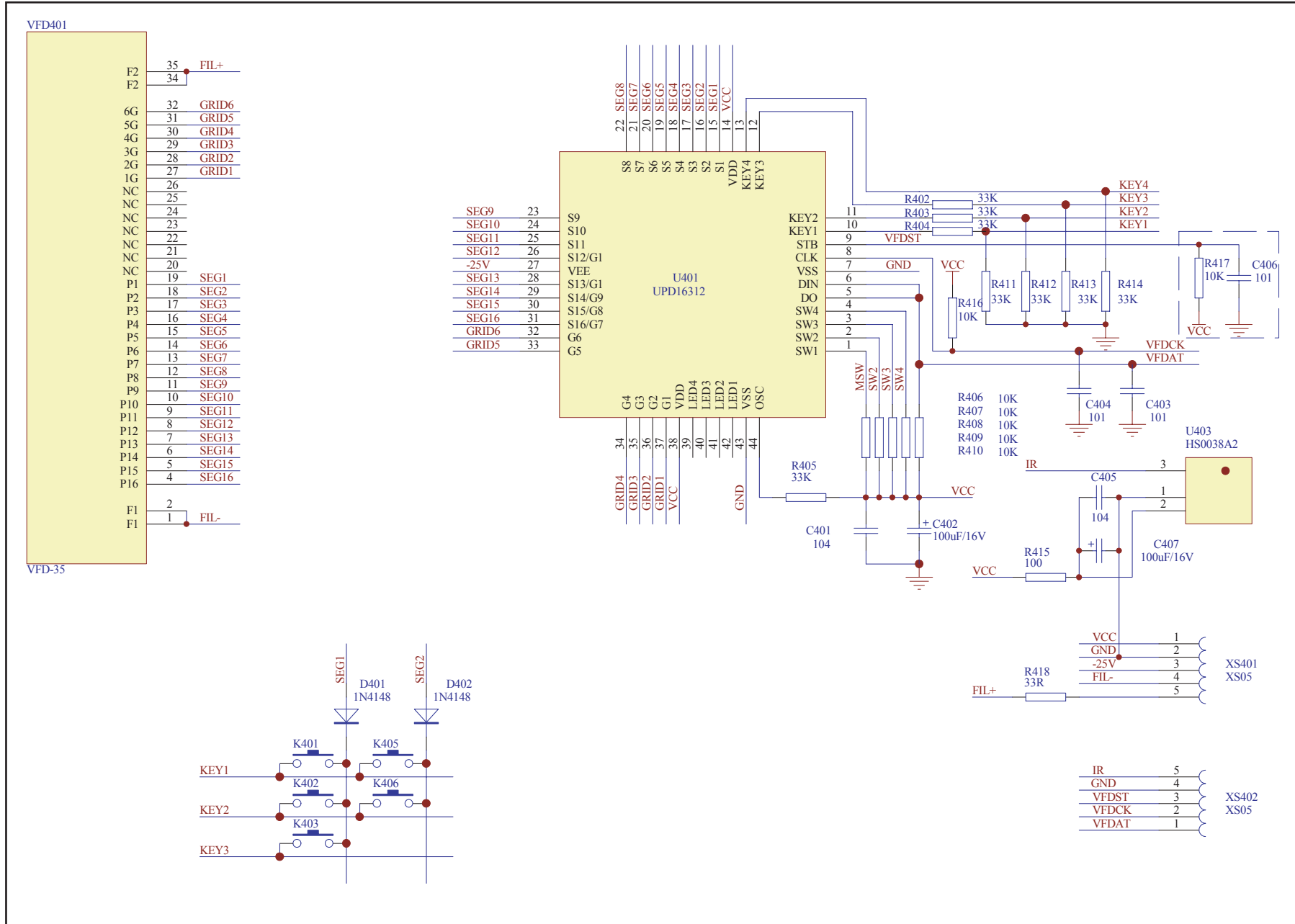
1Mbit x 4banks x 16 I/O Synchronous DRAM



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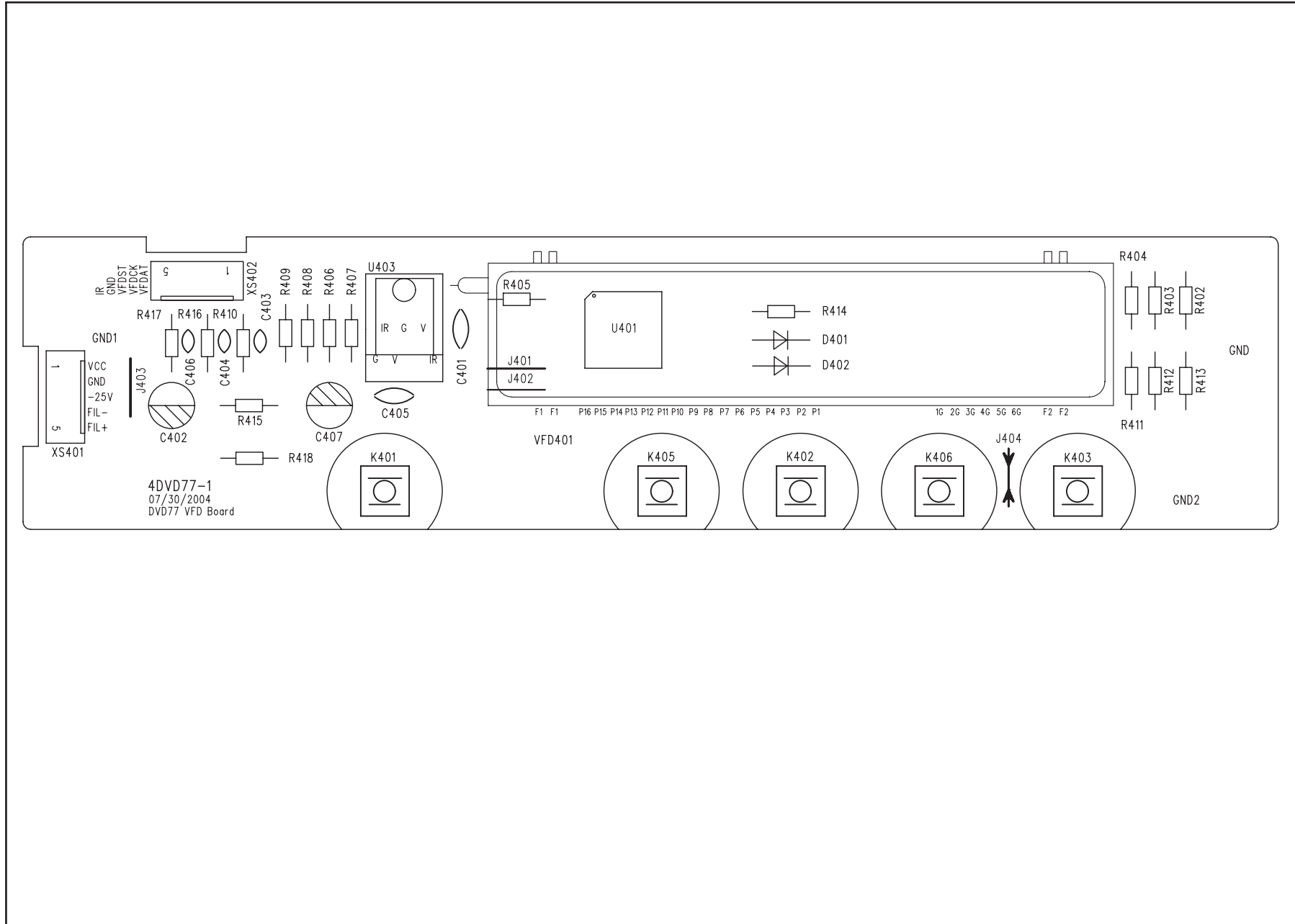


Cambridge Audio DVD79 DVD Player



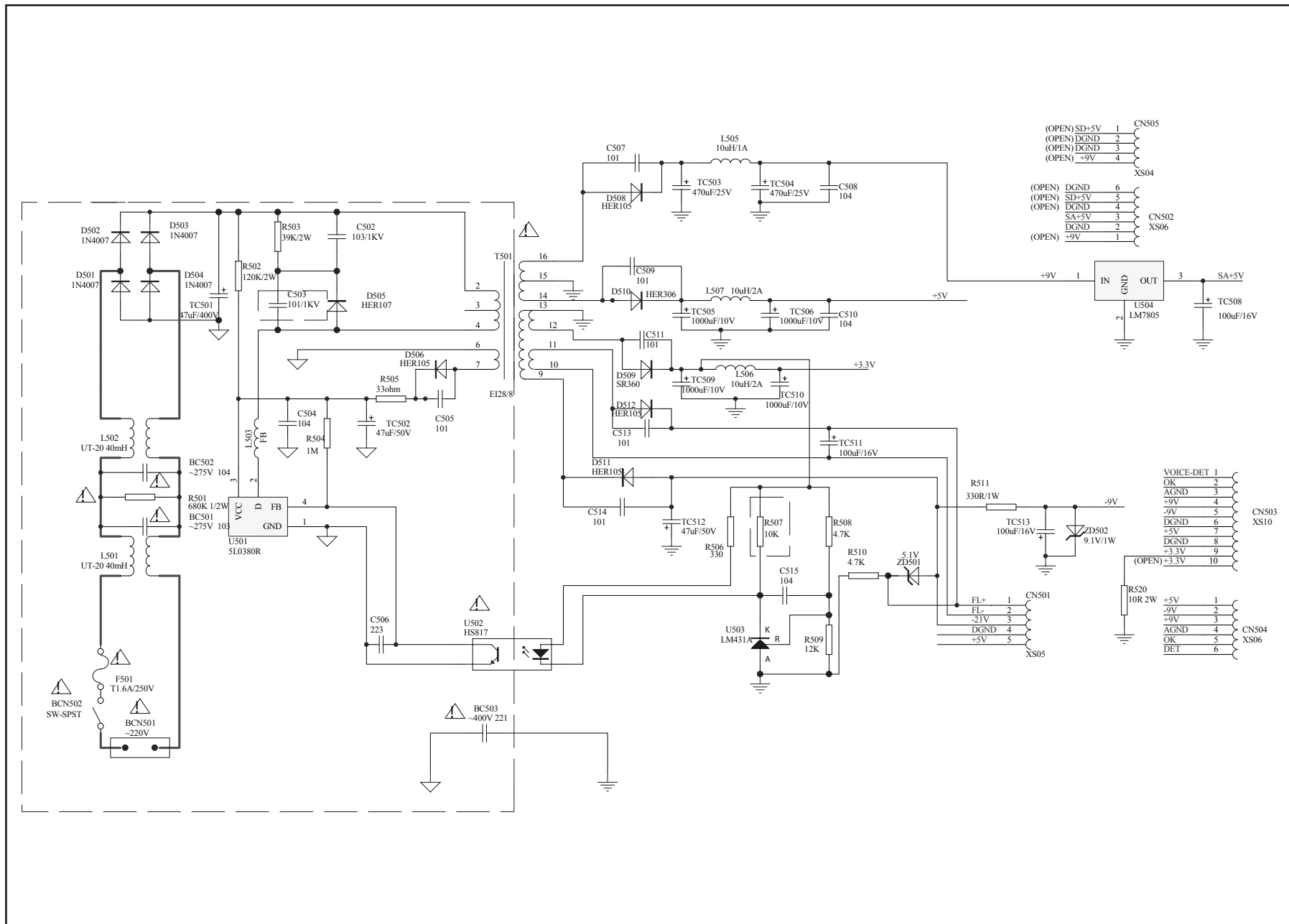
Front Panel Display PCB Schematic

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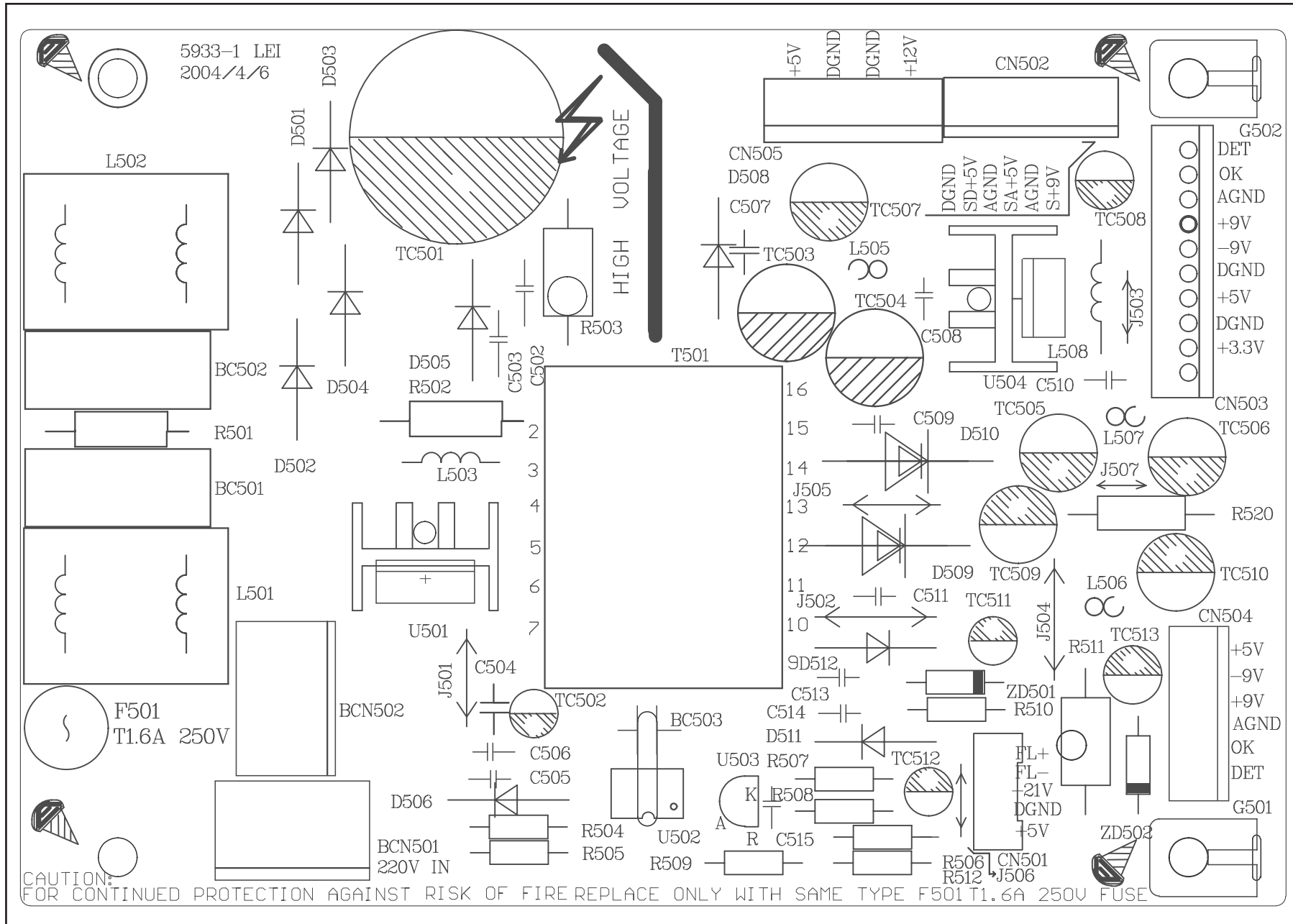
Front Panel PCB Layout

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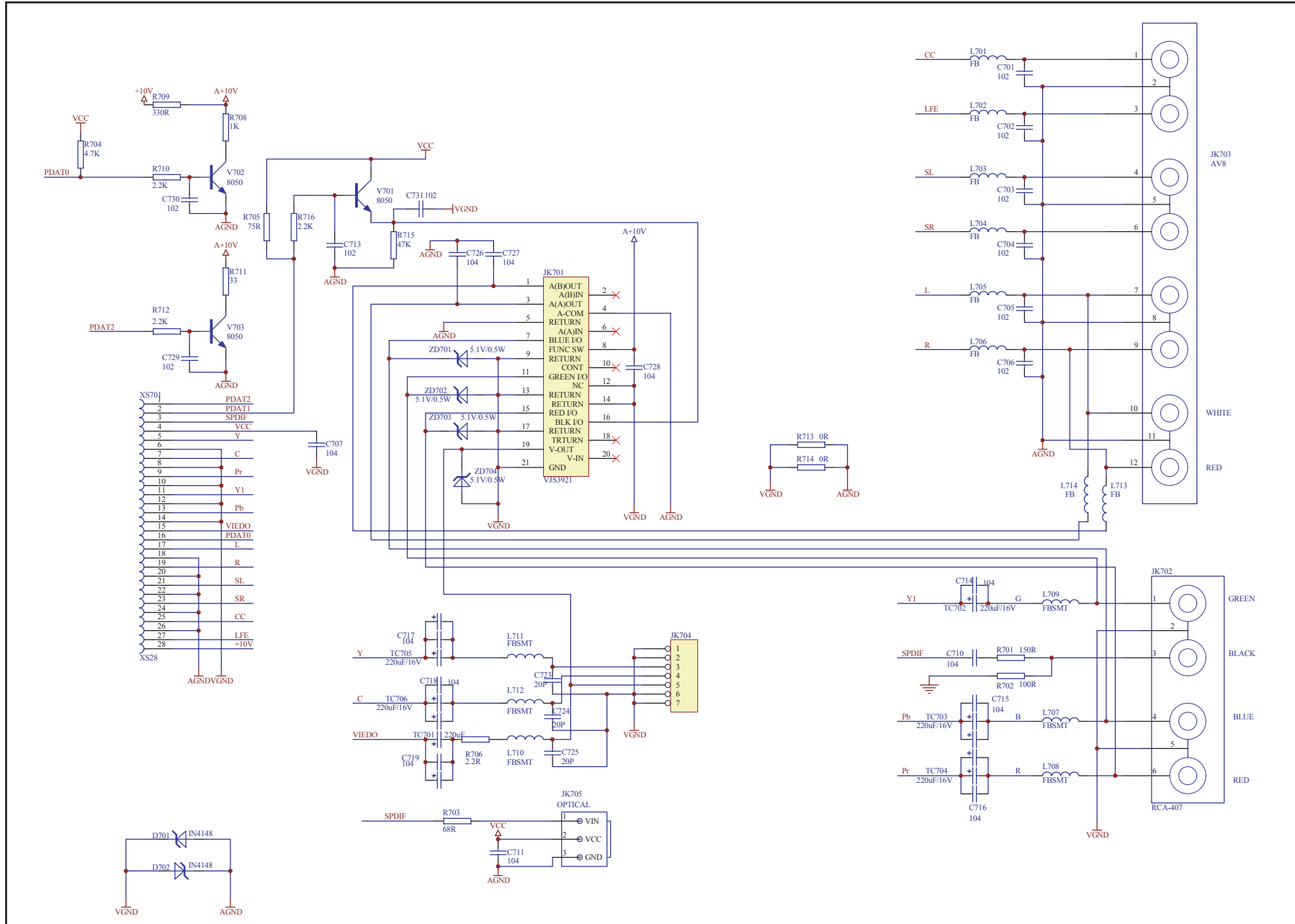
Power Supply PCB Schematic

Cambridge Audio DVD79 DVD Player



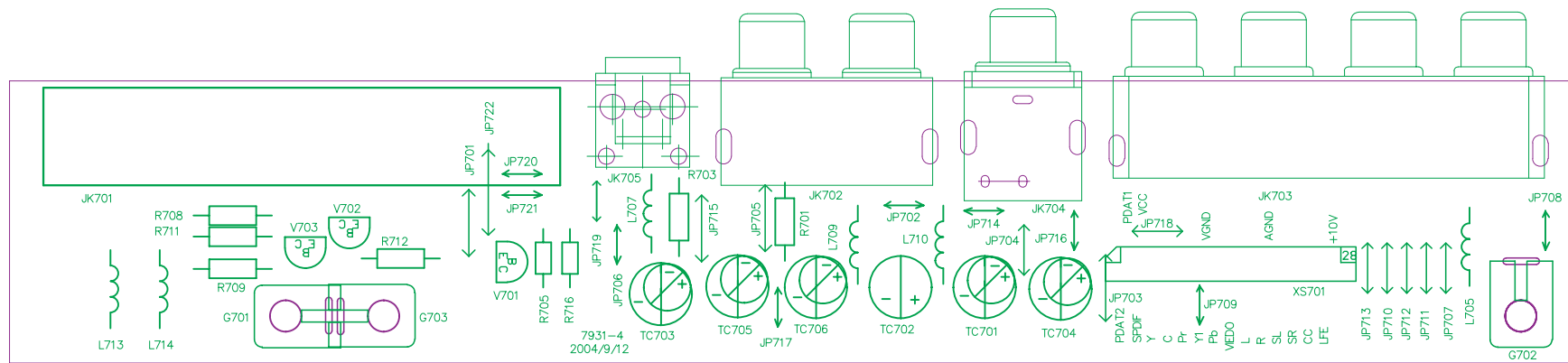
Power Supply PCB Layout

Cambridge Audio DVD79 DVD Player



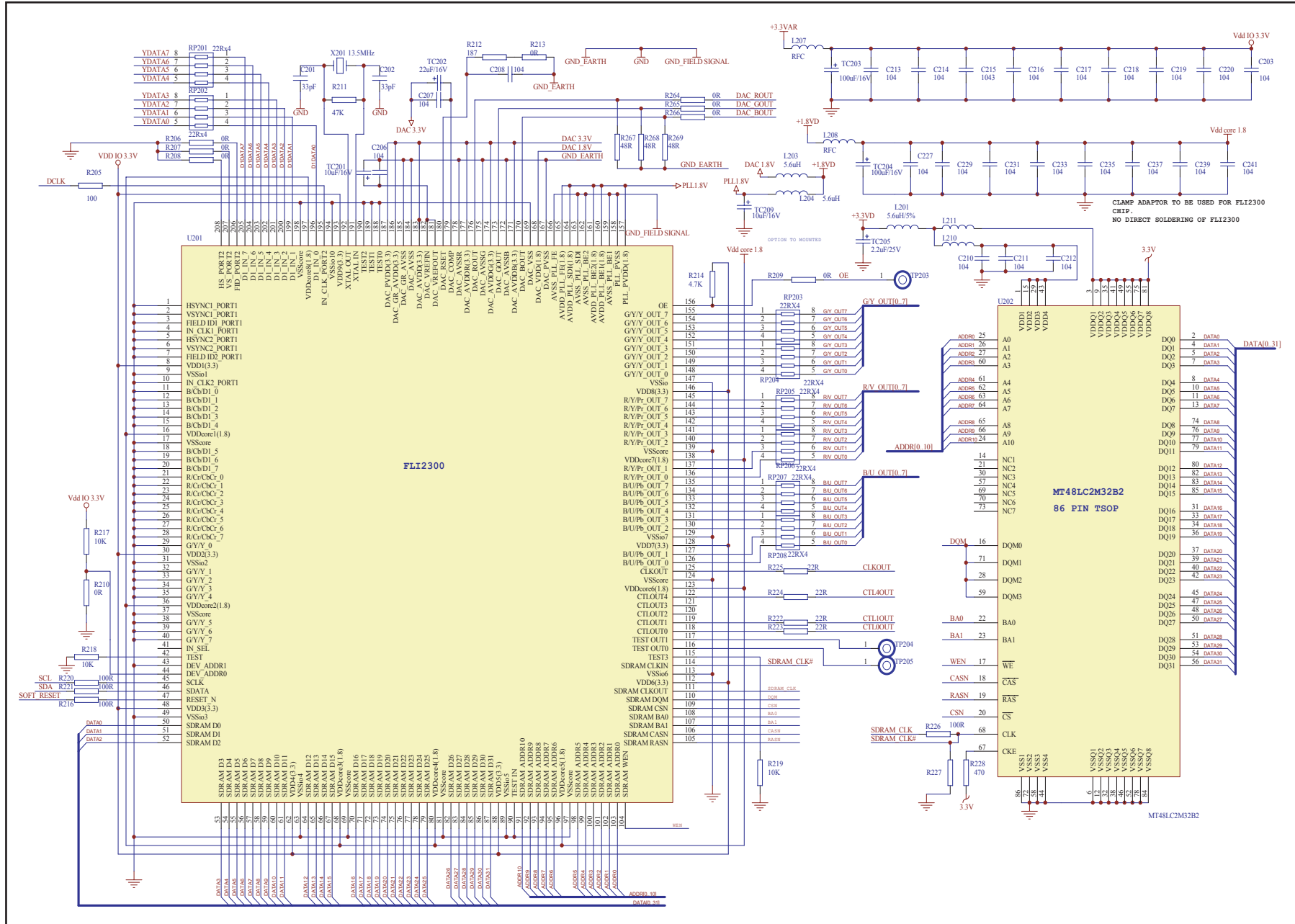
Output PCB Schematic

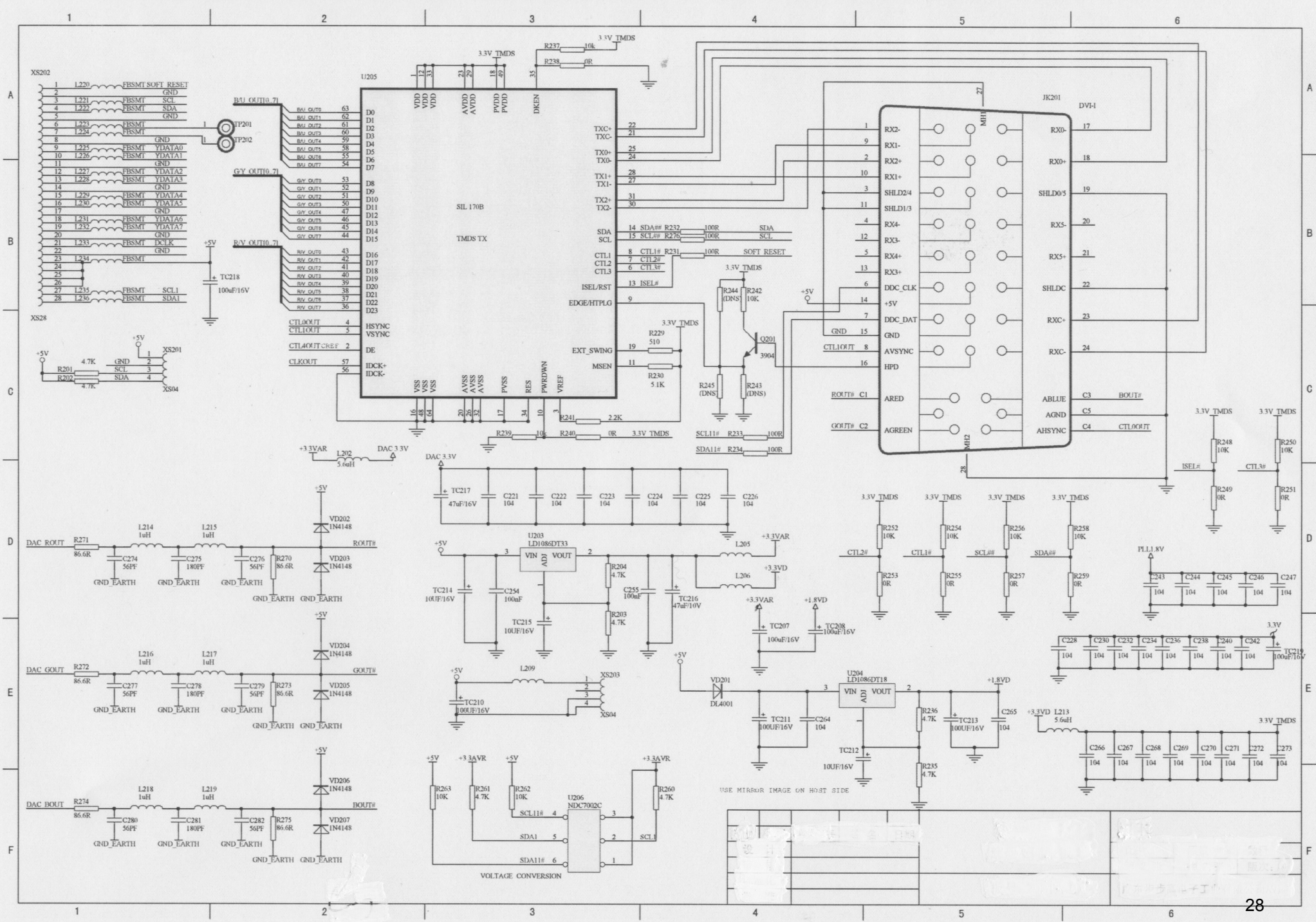
Cambridge Audio DVD79 DVD Player



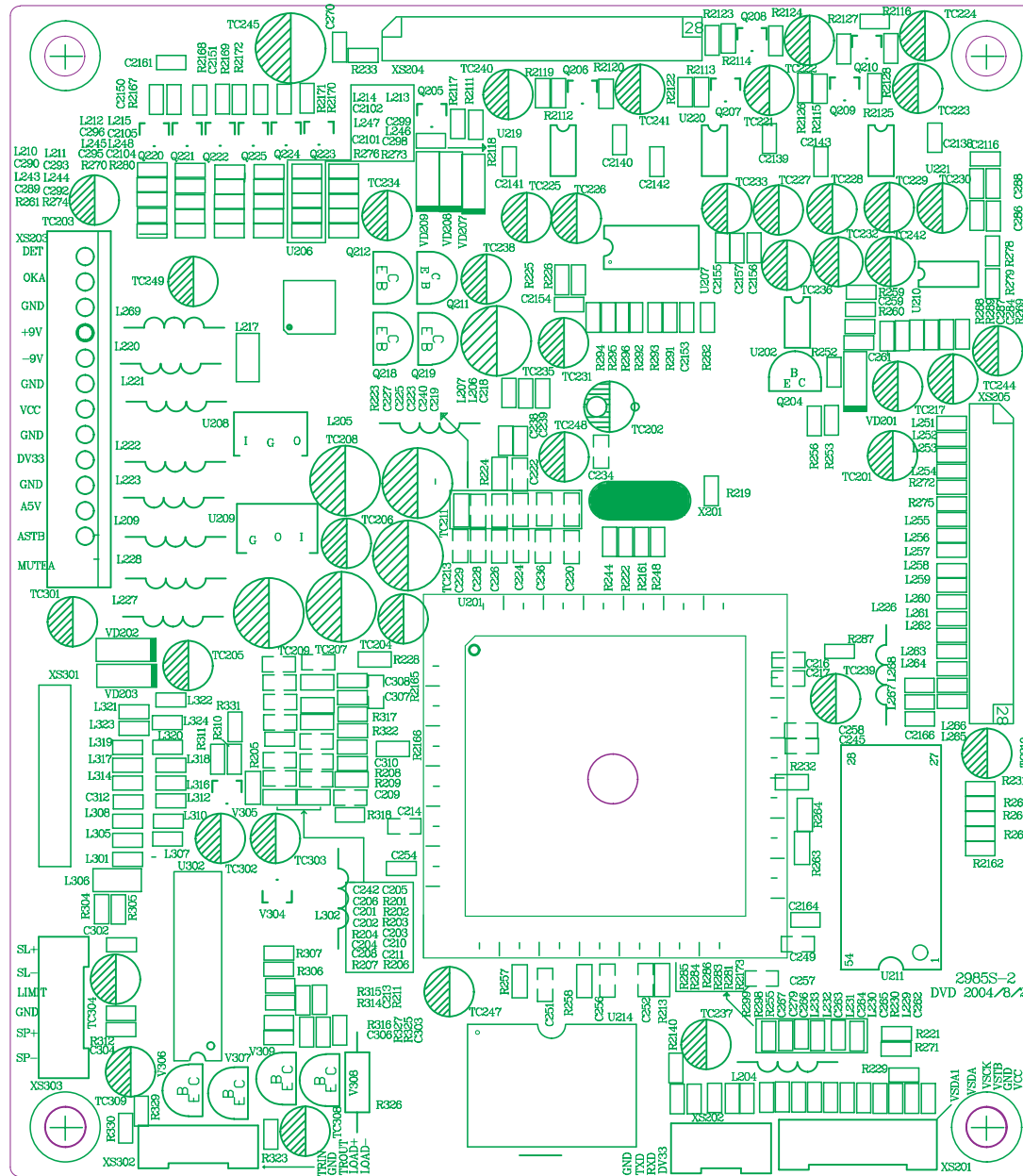
Output PCB Layout

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Main PCB Board Layout

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1. POWER BOARD

NUMBER	MATERIAL	SPECIFICATIONS/PART NUMBER	UNIT	QUANTITY	LOCATION
0000273	CARBON FILM RESISTOR	1/4W33 Ω ±5% SHAPED 10	PCS	1	R505
0000278	CARBON FILM RESISTOR	1/4W330 Ω ±5% SHAPED 10	PCS	1	R506
0000289	CARBON FILM RESISTOR	1/4W4.7K±5% SHAPED 10	PCS	1	R510
0010134	METAL OXIDE FILM RESISTOR	1W330 Ω ±5% SHAPED R 15×8	PCS	1	R511
0000294	CARBON FILM RESISTOR	1/4W10K±5% SHAPED 10	PCS	1	R507
0000310	METAL FILM RESISTOR	1/4W1M Ω ±5% SHAPED 10	PCS	1	R504
0010128	METAL FILM RESISTOR	1/4W3.9K±1%	PCS	1	R508
0010101	METAL FILM RESISTOR	1/4W12K±1% SHAPED 10	PCS	1	R509
0010135	METAL OXIDE FILM RESISTOR	2W39K±5% SHAPED FLAT 15×9	PCS	1	R503
0010159	METAL OXIDE FILM RESISTOR	2W39K±5% SHAPED FLAT 15×7	PCS	1	R503
0010148	METAL OXIDE FILM RESISTOR	2W120K±5% SHAPED FLAT 15×7	PCS	1	R502
0070001	HIGH VOLTAGE RESISTOR	1/2W680K±5%	PCS	1	R501
0200105	PORCELAIN CAPACITOR	50V 100P ±10% 5mm	PCS	6	C505,C507,C509,C511,C514,C513
0200138	PORCELAIN CAPACITOR	50V 104 ±20% 5mm	PCS	4	C504,C508,C510,C515
0200223	PORCELAIN CAPACITOR	1000V 101 +80%-20% 7.5mm	PCS	1	C503
0200228	PORCELAIN CAPACITOR	1000V 101 ±10% 7.5mm	PCS	1	C503

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0200224	PORCELAIN CAPACITOR	1000V 103 +80%-20% 7.5mm	PCS	1	C502
0200229	CERAMIC CAPACITOR	400VAC 471 ±10% 10mm	PCS	1	BC503
0210023	TERYLENE CAPACITOR	100V 223 ±10% 5mm	PCS	1	C506
0210066	TERYLENE CAPACITOR	275V 104 ±20% 15mm	PCS	2	BC502,BC501
0210070	TERYLENE CAPACITOR	275V 104 ±10% 15mm	PCS	2	BC502,BC501
0260327	CD	GZ16V100U±20%6×12 2.5	PCS	3	TC508,TC513,TC511
0260027	CD	CD11 16V100U±20%6×12 2.5	PCS	3	TC508,TC513,TC511
0260096	CD	CD110 16V100U±20%6× 12 2.5	PCS	3	TC508,TC513,TC511
0260175	CD	CD11C 16V100U+20%- 15%6×7 2.5	PCS	3	TC508,TC513,TC511
0260201	CD	CD11C 16V100U±20%6×7 2.5	PCS	3	TC508,TC513,TC511
0260042	CD	CD11 25V470U+20%- 10%10×16 5	PCS	2	TC503,TC504
0260043	CD	CD11 25V470U±20%10× 16 5	PCS	2	TC503,TC504
0260163	CD	CD11 50V47U±20%6×12 2.5	PCS	2	TC502,TC512
0260015	CD	CD11 10V1000U±20%8× 16 3.5	PCS	4	TC505,TC506,TC509,TC510
0260237	CD	CD11 10V1000U±20%8× 14 3.5	PCS	4	TC505,TC506,TC509,TC510
0260252	CD	GS 10V1000U±20%8×16 3.5	PCS	4	TC505,TC506,TC509,TC510
0260352	CD	GS 10V1000U±20%8×14 3.5	PCS	4	TC505,TC506,TC509,TC510
0260265	CD	LP3 400V47U±20%22×28 10	PCS	1	TC501
0260266	CD	LS 400V47U±20%22×25 10	PCS	1	TC501
0390057	MAGNETIC BEADS INDUCTOR	RH354708	PCS	1	L503
0410010	CHOKER COIL	VERTICAL 10UH 1A 5mm	PCS	1	L505
0410011	CHOKER COIL	VERTICAL 10UH 2A 5mm	PCS	2	L506,L507

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0460282	SWITCHING POWER TRANSFORMER	BCK-28-0286	PCS	1	T501
0570013	DIODE	HER105	PCS	4	D506,D508,D511,D512
0680007	SCHOTTKY DIODE	SR360	PCS	2	D509,D510
0570014	DIODE	HER107	PCS	1	D505
0570005	DIODE	1N4007	PCS	4	D501~D504
0580054	VOLTAGE REGULATOR	9.1V 1W	PCS	1	ZD502
0880765	IC	5L0380R YDTU	PCS	1	U501
0880553	IC	LM431ACZ TO-92	PCS	1	U503
0880581	IC	TL431C TO-226AA(LP)	PCS	1	U503
0880800	IC	431L TO-92	PCS	1	U503
0880888	IC	KA431AZ TO-92	PCS	1	U503
1000004	POWER GRID FILTER	UT-20 40mH \pm 20% 10x13	PCS	2	L502,L501
1080011	PHOTOELECTRIC COUPLER	HS817	PCS	1	U502
0880379	IC	LM7805 GOLD SEALED TO-220	PCS	1	U504
1563118	PCB	5933-1	PCS	1	
1940029	SOCKET	9P 2.5mm	PCS	1	CN503
1940001	SOCKET	2P 2.5mm	PCS	1	CN502
1940045	SOCKET	2P 8.0mm 2#	PCS	2	BCN501,BCN502
2100003	CONNECTION CORDS	Φ 0.6 SHAPED 7.5mm	PCS	2	J506,J503
2100004	CONNECTION CORDS	Φ 0.6 SHAPED 10mm	PCS	2	J501,J505
2100006	CONNECTION CORDS	Φ 0.6 SHAPED 12.5mm	PCS	2	J504,J502
2100010	CONNECTION CORDS	Φ 0.6 SHAPED 5mm	PCS	1	J507
2300021	FUSE	T1.6AL 250V	PCS	1	F501
3580039	HEAT RADIATION BOARD	11x15x25 AB009K	PCS	2	U501,U504 FOR HEAT RADIATION
3580054	HEAT RADIATION BOARD	11x15x25 WHITE AB905	PCS	2	U501,U504 FOR HEAT RADIATION
0580006	VOLTAGE REGULATOR DIODE	5.1V 1/2W	PCS	1	ZD501

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1940024	SOCKET	5P 2.0mm	PCS	1	CN501
3870115	GROUND CHIP OF POWER BOARD	AB903	PCS	2	G501~G502
4000073	TAPPING SCREW	BT 3×8 BLACK	PCS	2	FIXED HEAT RADIATION BOARD

2. AV BOARD

NUMBER	MATERIAL	SPECIFICATIONS/PART NUMBER	UNIT	ANTI	LOCATION
0000171	CARBON FILM RESISTOR	1/4W68• ±5%	PCS	1	R703
0090181	SMD RESISTOR	1/16W 100• ±5% 0603	PCS	1	R702
0000181	CARBON FILM RESISTOR	1/4W220• ±5%	PCS	1	R701
0000185	SMD RESISTOR	1/4W330• ±5%	PCS	1	R709
0090002	SMD RESISTOR	1/16W 2.2• ±5% 0603	PCS	1	R706
0000195	CARBON FILM RESISTOR	1/4W1K±5%	PCS	1	R711
0000167	CARBON FILM RESISTOR	1/4W33• ±5%	PCS	1	R708
0000027	CARBON FILM RESISTOR	1/6W2.2K±5%	PCS	2	R712,R716
0090017	SMD RESISTOR	1/16W 2.2K ±5% 0603	PCS	1	R710
0090019	SMD RESISTOR	1/16W 4.7K ±5% 0603	PCS	1	R704
0000133	CARBON FILM RESISTOR	1/6W4.7K±5% SHAPED 7.5	PCS	1	R705
0310066	SMD CAPACITOR	50V 102 ±10% 0603	PCS	6	C701~C706
0310234	SMD CAPACITOR	16V 105 +80%-20% 0603	PCS	1	C707
0310058	SMD CAPACITOR	25V 104 +80%-20% 0603	PCS	4	C710,C711,C728,C731
0310084	SMD CAPACITOR	50V 104 +80%-20% 0603	PCS	4	C710,C711,C728,C731
0700007	SMD TRIODE	1N4148	PCS	2	D701,D702

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0700001	SMD TRIODE	LS4148	PCS	2	D701,D702
0700002	SMD TRIODE	LL4148	PCS	2	D701,D702
0700004	SMD VOLTAGE REGULATOR DIODE	5.1V 1/2W	PCS	4	ZD701~ZD704
0780050	TRIODE	S8050D	PCS	3	V701~V703
0260028	CD	CD11 16V220U±20%6×12 2.5	PCS	5	TC701,TC703~TC706
0260352	CD	GS 10V1000U±20%8×14 3.5	PCS	1	TC702
0260237	CD	CD11 10V1000U±20%8× 14 3.5	PCS	1	TC702
0260252	CD	GS 10V1000U±20%8×16 3.5	PCS	1	TC702
0260015	CD	CD11 10V1000U±20%8× 16 3.5	PCS	1	TC702
0390057	MAGNETIC BEADS INDUCTOR	RH354708	PCS	6	L705,L707,L709,L710,L713,L714
0390095	SMD MAGNETIC BEADS	FCM1608K-221T05	PCS	8	L701~L704,L706,L708,L711,L712
1090050	ELECTRO- OPTIC TRANSFORME R	TP01A	PCS	1	JK705
1090024	ELECTRO- OPTIC TRANSFORME R	TX179AT	PCS	1	JK705
1910091	TERMINAL SOCKET	CS-09 GOLD PLATED	PCS	1	JK704
1910089	TERMINAL SOCKET	AV8-8.4-6G-3 GOLD PLATED	PCS	1	JK703
1860029	SCART SOCKET	SCART-01	PCS	1	JK701
1940140	CABLE SOCKET	14P 1.0mm DUAL FLAT LINE PLUG	PCS	1	XS701
1910090	TERMINAL SOCKET	AV4-8.4-6G-3 GOLD PLATED	PCS	1	JK702

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2150206	SCREEN-SHIELDED CORD	26# 200 1P SCREEN SHIELDED WITH WELDING PIECE HOLE Φ 4.2	PCS	1	
2100010	CONNECTION CORDS	Φ 0.6 SHAPED 5mm	PCS	10	JP702,P706,JP708,JP709,JP714,JP716,JP717,JP719~JP721
2100004	CONNECTION CORDS	Φ 0.6 SHAPED 10mm	PCS	4	JP701,JP703,JP705,JP715
2100003	CONNECTION CORDS	Φ 0.6 SHAPED 7.5mm	PCS	7	JP704,JP707,JP710~JP713,JP718
2100006	CONNECTION CORDS	Φ 0.6 SHAPED 12.5mm	PCS	1	JP722
1563447	PCB	7931-4	PCS	1	
3. SUBSIDIARY AV BOARD					
NUMBER	MATERIAL	SPECIFICATION/PART NUMBER	UNIT	QUANTITY	LOCATION
90001	SMD RESISTOR	1/16W 0 Ω \pm 5% 0603	PCS	15	R206~R209,R226,R240,R242,R249 ,R251,R253,R255,R259,R264,R265 ,R266
0090005	SMD RESISTOR	1/16W 33 \cdot \pm 5% 0603	PCS	5	R222,R223,R224,R225 ,R213
0100019	SMD RESISTOR NETWORKS	1/16W33 \cdot \pm 5% 8P	PCS	8	RP203~RP208,RP201,RP202
0090181	SMD RESISTOR	1/16W 100 \cdot \pm 5% 0603	PCS	6	R205,R216,R220,R221,R233,R234
0090232	SMD RESISTOR	1/16W 150 \cdot \pm 5% 0603	PCS	1	R212
0090011	SMD RESISTOR	1/16W 470 \cdot \pm 5% 0603	PCS	1	R228
0090249	SMD RESISTOR	1/16W 510 \cdot \pm 5% 0603	PCS	1	R229
0090015	SMD RESISTOR	1/16W 1.2K \pm 5% 0603	PCS	1	R204
0090016	SMD RESISTOR	1/16W 1.5K \pm 5% 0603	PCS	1	R235
0090223	SMD RESISTOR	1/16W 2K \pm 5% 0603	PCS	1	R203
0090017	SMD RESISTOR	1/16W 2.2K \pm 5% 0603	PCS	1	R241
0090018	SMD RESISTOR	1/16W 3.3K \pm 5% 0603	PCS	1	R236
0090019	SMD RESISTOR	1/16W 4.7K \pm 5% 0603	PCS	1	R214
0090020	SMD RESISTOR	1/16W 5.1K \pm 5% 0603	PCS	1	R230
0090023	SMD RESISTOR	1/16W 10K \pm 5% 0603	PCS	6	R217~R219,R243,R256 ,R237
0090029	SMD RESISTOR	1/16W 47K \pm 5% 0603	PCS	1	R211
0260019	CD	CD11 16V10U \pm 20%5 \times 11 2	PCS	5	TC201,TC209,TC212,TC214,TC215
0260021	CD	CD11 16V22U \pm 20%5 \times 11 2	PCS	1	TC202
0260025	CD	CD11 16V47U \pm 20%5 \times 11 2	PCS	2	TC205,TC217
0260028	CD	CD11 16V220U \pm 20%6 \times 12 2.5	PCS	1	TC216

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2150206	SCREEN-SHIELDED CORD	26# 200 1P SCREEN SHIELDED WITH WELDING PIECE HOLE Φ 4.2	PCS	1	
2100010	CONNECTION CORDS	Φ 0.6 SHAPED 5mm	PCS	10	JP702,P706,JP708,JP709,JP714,JP716,JP717,JP719~JP721
2100004	CONNECTION CORDS	Φ 0.6 SHAPED 10mm	PCS	4	JP701,JP703,JP705,JP715
2100003	CONNECTION CORDS	Φ 0.6 SHAPED 7.5mm	PCS	7	JP704,JP707,JP710~JP713,JP718
2100006	CONNECTION CORDS	Φ 0.6 SHAPED 12.5mm	PCS	1	JP722
1563447	PCB	7931-4	PCS	1	
3. SUBSIDIARY AV BOARD					
NUMBER	MATERIAL	SPECIFICATION/PART NUMBER	UNIT	QUANTITY	LOCATION
90001	SMD RESISTOR	1/16W 0 Ω \pm 5% 0603	PCS	15	R206~R209,R226,R240,R242,R249,R251,R253,R255,R259,R264,R265,R266
0090005	SMD RESISTOR	1/16W 33 \cdot \pm 5% 0603	PCS	5	R222,R223,R224,R225 ,R213
0100019	SMD RESISTOR NETWORKS	1/16W33 \cdot \pm 5% 8P	PCS	8	RP203~RP208,RP201,RP202
0090181	SMD RESISTOR	1/16W 100 \cdot \pm 5% 0603	PCS	6	R205,R216,R220,R221,R233,R234
0090232	SMD RESISTOR	1/16W 150 \cdot \pm 5% 0603	PCS	1	R212
0090011	SMD RESISTOR	1/16W 470 \cdot \pm 5% 0603	PCS	1	R228
0090249	SMD RESISTOR	1/16W 510 \cdot \pm 5% 0603	PCS	1	R229
0090015	SMD RESISTOR	1/16W 1.2K \pm 5% 0603	PCS	1	R204
0090016	SMD RESISTOR	1/16W 1.5K \pm 5% 0603	PCS	1	R235
0090223	SMD RESISTOR	1/16W 2K \pm 5% 0603	PCS	1	R203
0090017	SMD RESISTOR	1/16W 2.2K \pm 5% 0603	PCS	1	R241
0090018	SMD RESISTOR	1/16W 3.3K \pm 5% 0603	PCS	1	R236
0090019	SMD RESISTOR	1/16W 4.7K \pm 5% 0603	PCS	1	R214
0090020	SMD RESISTOR	1/16W 5.1K \pm 5% 0603	PCS	1	R230
0090023	SMD RESISTOR	1/16W 10K \pm 5% 0603	PCS	6	R217~R219,R243,R256 ,R237
0090029	SMD RESISTOR	1/16W 47K \pm 5% 0603	PCS	1	R211
0260019	CD	CD11 16V10U \pm 20%5 \times 11 2	PCS	5	TC201,TC209,TC212,TC214,TC215
0260021	CD	CD11 16V22U \pm 20%5 \times 11 2	PCS	1	TC202
0260025	CD	CD11 16V47U \pm 20%5 \times 11 2	PCS	2	TC205,TC217
0260028	CD	CD11 16V220U \pm 20%6 \times 12 2.5	PCS	1	TC216

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0260027	CD	CD11 16V100U±20%6×12 2.5	PCS	9	TC210,TC211,TC213,TC203,TC2 04,TC207,TC208,TC218,TC219
0310190	SMD CAPACITOR	50V 27P ±5% NPO 0603	PCS	2	C201,C202
0310084	SMD CAPACITOR	50V 104 +80%-20% 0603	PCS	54	C203,C206~C208,C210~C214,C21 6~C247,C264~C273,C254,C255 ,C215
0310058	SMD CAPACITOR	25V 104 +80%-20% 0603	PCS	54	C203,C206~C208,C210~C214,C21 6~C247,C264~C273,C254,C255 ,C215
0390095	SMD MAGNETIC BEADS	FCM1608K-221T05	PCS	19	L220~L236,L203,L204
0390057	MAGNETIC BEADS INDUCTOR	RH354708	PCS	10	L201,L202,L205,L206,L207,L208, L209,L210,L211,L213
0780040	SMD TRIODE	3904	PCS	1	Q201
1860055	DVI SOCKET	(24+5)P WINDING PLUG	PCS	1	JK201
0882175	IC	FLI2310-BD QFP	PCS	1	U201
0881501	IC	AMS1084CD TO-252	PCS	2	U203,U204
0882176	IC	MT48LC2M32B2 TSOP	PCS	1	U202
0882174	IC	SIL164CT64 QFP	PCS	1	U205
0960171	CRYSTAL OSCILLATOR	13.50MHZ 49-S	PCS	1	X201
1940140	CABLE SOCKET	14P 1.0mm DUAL FLAT LINE PLUG	PCS	1	XS202
1631905	PCB	C961-0		1	
4. MAIN FRONT PANEL					
NUMBER	MATERIAL	SPECIFICATION/PART NUMBER	UNIT	QUAN	LOCATION
5230060	SOFT SPONGE SPACER	10×12×3 DOUBLE- FACED, HARD	PCS	2	CONNECT VFD AND FRONT PANEL PCB
5230606	SOFT SPONGE SPACER	12×10×8 DOUBLE- FACED, HARD	PCS	1	CONNECT IR SENSOR AND FRONT PANEL PCB
0000268	CARBON FILM RESISTOR	1/4W2.2 Ω ±5% SHAPED 10	PCS	1	R418
0000175	CARBON FILM RESISTOR	1/4W100• ±5%	PCS	1	R415
0000040	CARBON FILM RESISTOR	1/6W10K±5%	PCS	7	R406~R410,R416,R417
0000137	CARBON FILM RESISTOR	1/6W10K±5% SHAPED 7.5	PCS	7	R406~R410,R416,R417

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0000231	CARBON FILM RESISTOR	1/4W51K±5%	PCS	1	R405
0260206	CD	CD11C 10V100U±20%5×7 2	PCS	2	C402,C407
0570006	DIODE	1N4148	PCS	2	D401,D402
0880440	IC	PT6312LQ QFP	PCS	1	U401
1200358	DISPLAY SCREEN	HNV 06SS98	PCS	1	U402
1340003	LIGHT TOUCH RESTORE SWITCH	HORIZONTAL 6×6×1	PCS	5	K401~K403,K405,K406
2100003	CONNECTION CORDS	Φ0.6 SHAPED 7.5mm	PCS	4	J401~J403,J404
2121570	FLAT CABLE	5-6P150 2.0 2 SOCKET WITH L NEEDLE REVERSE 5 CORD	PCS	1	XS402
2120976	FLAT CABLE	5P 320 2.0 2 SOCKET WITH L NEEDLE RECERSE	PCS	1	XS401
2360011	IR SENSOR	HS0038A2	PCS	1	U403
0000050	CARBON FILM RESISTOR	1/6W33K±5%	PCS	7	R402~R404,R411~R414
0200131	PORCELAIN CAPACITOR	50V 103 ±10% 5mm	PCS	2	C401,C405
1563321	PCB	4DVD77-1	PCS	1	
5. DECODE BOARD					
NUMBER	MATERIAL	SPECIFICATION/PART NUMBER	UNIT	QUAN	LOCATION
0090001	SMD RESISTOR	1/16W 0 Ω ±5% 0603	PCS	34	C2119,C2128,C2131,L210~L215,R201~R204,R212,R226,R228,R245,R247,R2161,R251,R255,R257,R258,R282,R298,R299,R303,R318,R331,R2159,R297,R236,R234,R249
0000375	CARBON FILM RESISTOR	1/4W2.2• ±5%	PCS	1	R326
0090272	SMD RESISTOR	1/16W1• ±5% 0603	PCS	6	R304~R307,R321,R340
0090003	SMD RESISTOR	1/16W 10• ±5% 0603	PCS	2	R301,R302
0090005	SMD RESISTOR	1/16W 33• ±5% 0603	PCS	16	R231,R232,R256,R263~R267,R291~R296,R2162 ,L202
0090232	SMD RESISTOR	1/16W 150• ±5% 0603	PCS	8	R2109,R2180,R2167~R2172
0090222	SMD RESISTOR	1/16W 160• ±5% 0603	PCS	6	R261,R270,R273,R274,R276,R280
0090009	SMD RESISTOR	1/16W 330• ±5% 0603	PCS	1	R2105
0090011	SMD RESISTOR	1/16W 470• ±5% 0603	PCS	2	R325,R327

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0090013	SMD RESISTOR	1/16W 680• ±5% 0603	PCS	2	R259,R260
0090014	SMD RESISTOR	1/16W 1K ±5% 0603	PCS	20	L225,R213,R215,R2101~R2104,R2117,R2118~R2128 ,R254
0090016	SMD RESISTOR	1/16W 1.5K ±5% 0603	PCS	3	R323,R324,R243
0090249	SMD RESISTOR	1/16W 510• ±5% 0603	PCS	1	R214
0090018	SMD RESISTOR	1/16W 3.3K ±5% 0603	PCS	1	R242
0090224	SMD RESISTOR	1/16W 3.9K ±5% 0603	PCS	1	R277
0090019	SMD RESISTOR	1/16W 4.7K ±5% 0603	PCS	16	R238~R240,R2130,R2131,R2134,R2135,R2138~R2140,R2142,R2143,R2146,R2147,R2150,R2151
0090021	SMD RESISTOR	1/16W 6.8K ±5% 0603	PCS	6	R2136,R2148,R2152~R2155
0090023	SMD RESISTOR	1/16W 10K ±5% 0603	PCS	12	R208,R229,R252,R309,R311,R313,R314,R329,R330,R339 ,R2164,R2106
0090024	SMD RESISTOR	1/16W 15K ±5% 0603	PCS	2	R209,R223
0090025	SMD RESISTOR	1/16W 20K ±5% 0603	PCS	4	R211,R312,R315,R316
0090255	SMD RESISTOR	1/16W24K±5% 0603	PCS	6	R2129,R2133,R2137,R2141,R2145,R2149
0090188	SMD RESISTOR	1/16W 18K ±5% 0603	PCS	1	R210
0090197	SMD RESISTOR	1/16W 150K ±5% 0603	PCS	2	R319,R320
0090231	PRECISIONSMD RESISTOR	1/16W 680K ±1% 0603	PCS	2	R317,R322
0090319	PRECISIONSMD RESISTOR	1/16W 750K ±1% 0603	PCS	1	R227
0090034	SMD RESISTOR	1/16W 100K ±5% 0603	PCS	10	R224,R308,R310,R2111~R2116 ,R246
0260019	CD	CD11 16V10U±20%5×11 2	PCS	19	TC201,TC202,TC217,TC221~TC233,TC236,TC240,TC241
0260028	CD	CD11 16V220U±20%6×12 2.5	PCS	9	TC207~TC209,TC211,TC213,TC235,TC245,TC301,TC203
0260025	CD	CD11 16V47U±20%5×11 2	PCS	15	TC204~TC206,TC210,TC234,TC237,TC302~TC304,TC308,TC309 ,TC247,TC248,TC239,TC249
0310085	SMD CAPACITOR	50V 20P ±5% NPO 0603	PCS	1	C222
0310190	SMD CAPACITOR	50V 27P ±5% NPO 0603	PCS	2	C275,C276
0310045	SMD CAPACITOR	50V 47P ±5% NPO 0603	PCS	17	C262~C265,C266,C289,C290,C292 ,C293,C295,C296,C298,C299,C2101,C2102,C2104,C2105
0310047	SMD CAPACITOR	50V 101 ±5% NPO 0603	PCS	8	C233,C2111,C2114,C2117,C2120,C2123,C2126,C206
0310051	SMD CAPACITOR	50V 331 ±5% NPO 0603	PCS	2	C212,C213

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0310048	SMD CAPACITOR	50V 151 ±5% NPO 0603	PCS	2	C304,C306
0310084	SMD CAPACITOR	50V 104 +80%-20% 0603	PCS	77	C207,C211,C214,C216,C217,C224,C226~C231,C234~C239,C241~C254,C256~C259,C267~C274,C279,C301~C303,C305,C309,C311,C312,C2138~C2143,C2153~C2157,C2161,C2163,C2169,C2166,C2174,C2175,C2168,C297,C280,C281,C282,C2152,C232,C255
0310058	SMD CAPACITOR	25V 104 +80%-20% 0603	PCS	77	C207,C211,C214,C216,C217,C224,C226~C231,C234~C239,C241~C254,C256~C259,C267~C274,C279,C301~C303,C305,C309,C311,C312,C2138~C2143,C2153~C2157,C2161,C2163,C2169,C2166,C2174,C2175,C2168,C297,C280,C281,C282,C2152,C232,C255
0310234	SMD CAPACITOR	16V 105 +80%-20% 0603	PCS	6	C201~C204,C221,C240
0310066	SMD CAPACITOR	50V 102 ±10% 0603	PCS	8	C2112,C2115,C2118,C2121,C2124,C2127,C223,C278
0310231	SMD CAPACITOR	50V 122 ±10% 0603	PCS	6	C2122,C2129,C2130,C2133,C2135,C2136
0310067	SMD CAPACITOR	50V 152 ±10% 0603	PCS	1	C215
0310068	SMD CAPACITOR	50V 222 ±10% 0603	PCS	2	C307,C310
0310201	SMD CAPACITOR	50V 153 ±10% 0603	PCS	1	C210
0310055	SMD CAPACITOR	16V 333 ±10% 0603	PCS	1	C225
0310056	SMD CAPACITOR	16V 473 ±10% 0603	PCS	2	C219,C220
0310362	SMD CAPACITOR	16V474 +80%-20% 0603	PCS	1	C218
0390044	SMD INDUCTOR	10UH ±10% 2012	PCS	3	L303,L306,L217
0390096	SMD INDUCTOR	1.8UH ±10% 1608	PCS	6	L243~L248
0390057	MAGNETIC BEADS INDUCTOR	RH354708	PCS	11	L205,L209,L220,L221,L222,L223,L227,L228,L226,L302,L269
0390095	SMD MAGNETIC BEADS	FCM1608K-221T05	PCS	53	L201,L203,L207~L208,L224,L234~L236,L238,L250,L309,L229~L233,L301,L304,L305,L307,L308,L310~L312,L314,L316~L324,L251~L268,R271
0090106	SMD RESISTOR	1/16W 4.7• ±5% 0603	PCS	1	L206