

JVC

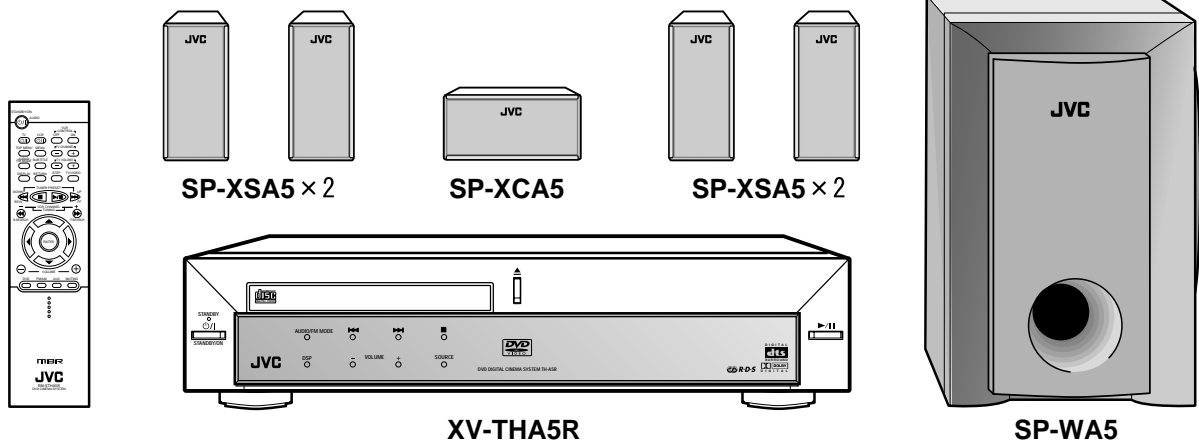
SERVICE MANUAL

DVD DIGITAL CINEMA SYSTEM

TH-A5R

Area suffix

B	-----	U.K.
E	-----	Continental Europe
EN	-----	Northern Europe
EV	-----	Eastern Europe
EE	----	Russian Federation



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Safety Precautions

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

5. Leakage current check (Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

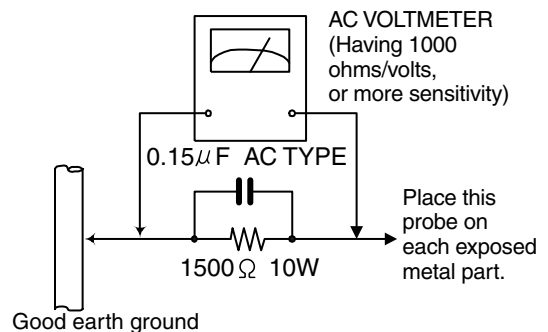
Do not use a line isolation transformer during this check.

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

- Alternate check method

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

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



Warning

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


CAUTION

Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.

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


(This regulation does not correspond to J and C version.)

Safety precautions (U.K only)

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits.
2. Any unauthorised design alterations or additions will void the manufacturer's guarantee ; furthermore the manufacturer cannot accept responsibility for personal injury or property damage resulting therefrom.
3. Essential safety critical components are identified by () on the Parts List and by shading on the schematics, and must never be replaced by parts other than those listed in the manual. Please note however that many electrical and mechanical parts in the product have special safety related characteristics. These characteristics are often not evident from visual inspection. Parts other than specified by the manufacturer may not have the same safety characteristics as the recommended replacement parts shown in the Parts List of the Service Manual and may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

Warning

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 **CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The compact disc player uses invisible laserradiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

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

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

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

VARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

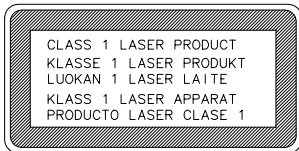
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstrålning ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

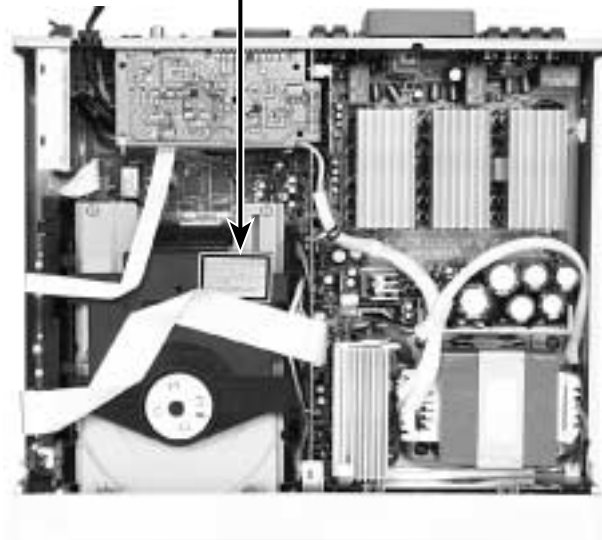
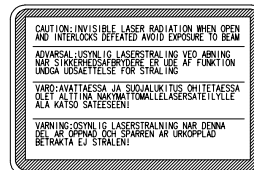
ADVARSEL : Usynlig laserstrålning ved åbning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

CLASS 1 LASER PRODUCT



WARNING LABEL



Preventing static electricity

1. Grounding to prevent damage by static electricity

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

2. About the earth processing for the destruction prevention by static electricity

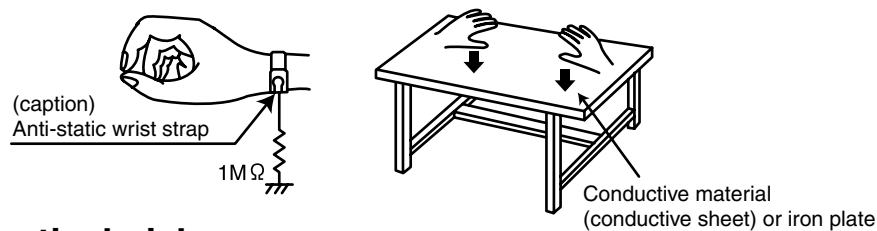
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as CD players. Be careful to use proper grounding in the area where repairs are being performed.

2-1 Ground the workbench

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

2-2 Ground yourself

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



3. Handling the optical pickup

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

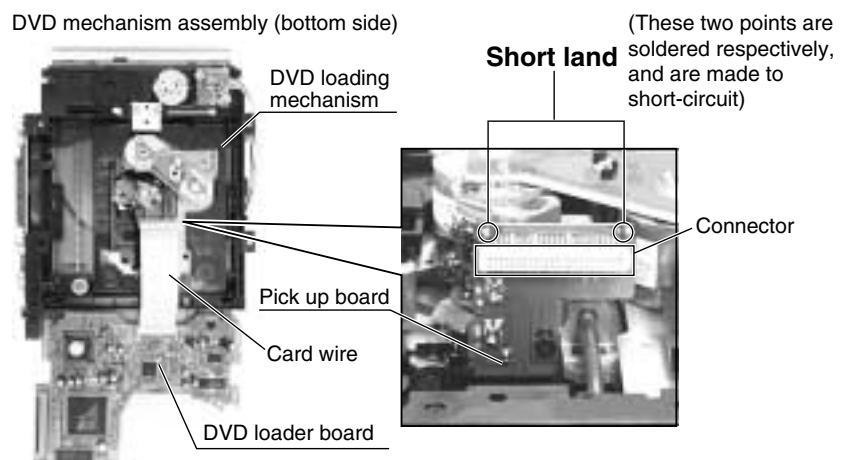
4. Handling the traverse unit (optical pickup)

1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.
2. Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.
3. Handle the flexible cable carefully as it may break when subjected to strong force.
4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for pick-up and how to detach the substrate.**

1. Solder is put up before the card wire is removed from connector on the pick up board as shown in Figure. (When the wire is removed without putting up solder, the CD pick-up assembly might destroy.)
2. Please remove solder after connecting the card wire with when you install picking up in the substrate.



Disassembly method

■ Removing the top cover (See Fig.1)

1. Remove the four screws **A** attaching the top cover on the both sides of the body.
2. Remove the two screws **B** on the back of the body.
3. Remove the top cover from behind in the direction of the arrow while pulling both sides outward.

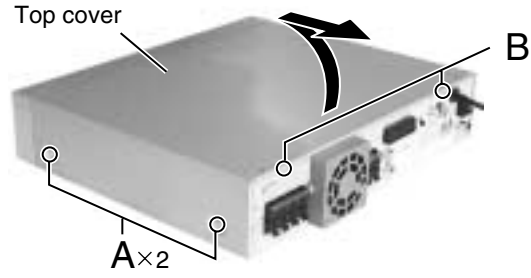


Fig.1

■ Removing the front panel assembly (See Fig.2A, 2B and 3)

- Prior to performing the following procedure, remove the top cover.
1. Remove the one screw **a** and remove the earth wier.
 2. Remove the three screws **C** attaching the front panel assembly on the bottom of the body.
 3. Remove the two screws **D** attaching the front panel assembly on the both sides of the body.
 4. Remove the claw1, claw2 and claw3, and detach the front panel assembly toward the front.
 5. Disconnect the card wire from the connector DW20 on the DSP board.

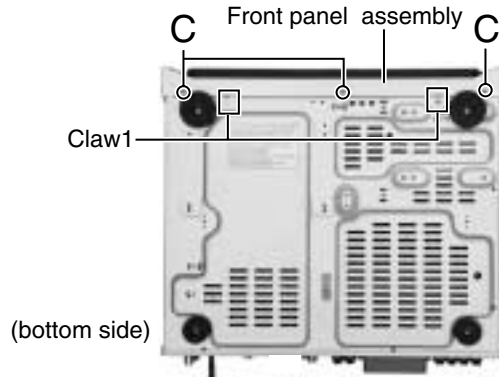


Fig.2A

■ Removing the power cord (See Fig.4)

- Prior to performing the following procedure, remove the top cover.
1. Cut off the tie band, if needed.
 2. Disconnect the power cord from the connector CW1 on the main board and pull up the cord stopper upward.

Notes: The power cord is exchangeable.

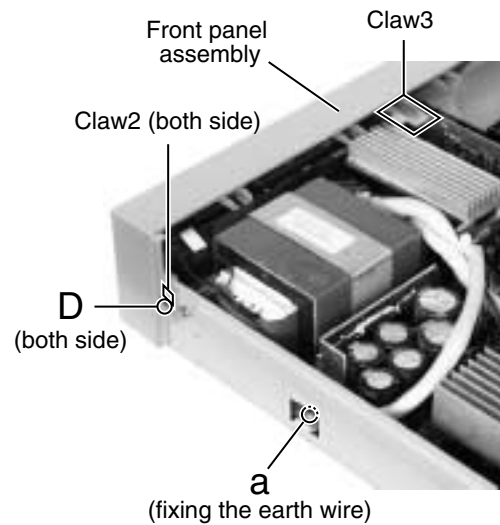


Fig.2B

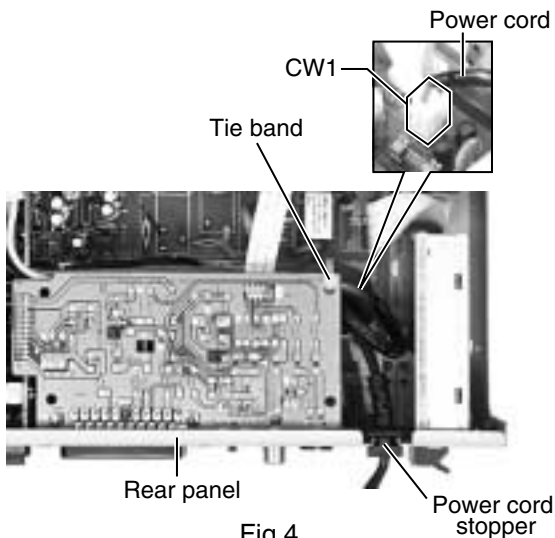


Fig.4

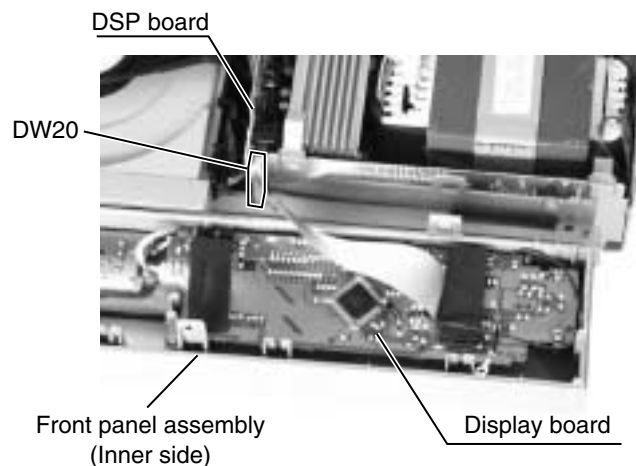
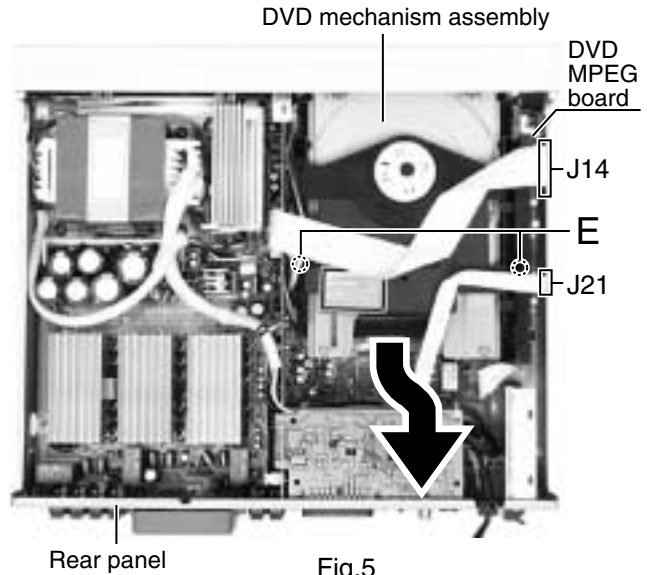


Fig.3

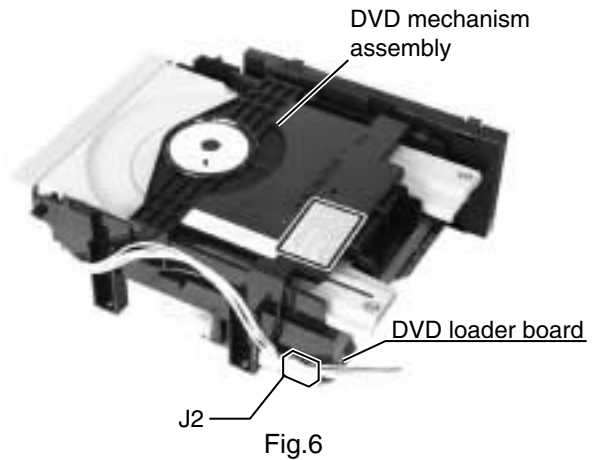
■ Removing the DVD mechanism assembly (See Fig.5 and 6)

- Prior to performing the following procedure, remove the top cover.
1. Disconnect the card wire from the connector J14 and J21 on the DVD MPEG board.
 2. Remove the two screws **E** attaching the DVD mechanism assembly and pull up with drawing out.
 3. Disconnect the harness from the connector J2 on the DVD loader board.



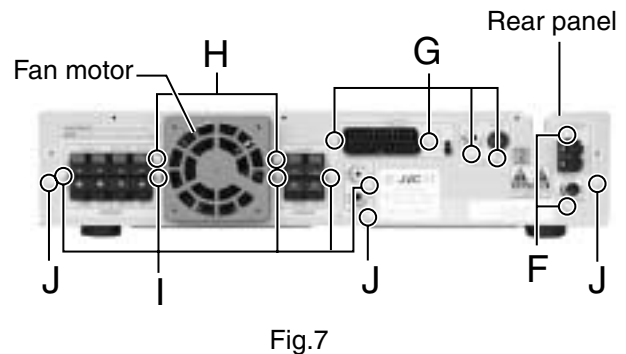
■ Removing the rear panel (See Fig.7 and 8)

- Prior to performing the following procedure, remove the top cover and power cord.
1. Disconnect the harness from the connector NW11 on the DSP board.
 2. Remove the two screws **F**, four screws **G**, and five screws **I** attaching the each boards to the rear panel.
 3. Remove the three screws **J** attaching the rear panel on the back of the body.



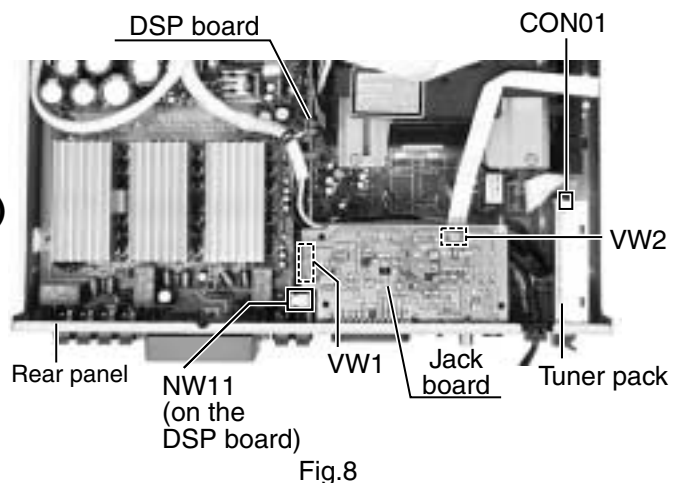
■ Removing the tuner pack (See Fig.7 and 8)

- Prior to performing the following procedure, remove the top cover.
1. Disconnect the card wire from the connector CON01 on the tuner pack.
 2. Remove the two screws **F** attaching the tuner pack to the rear panel.



■ Removing the jack board (See Fig.7 and 8)

- Prior to performing the following procedure, remove the top cover.
1. Disconnect the card wire from the connector VW2 on the jack board.
 2. Remove the four screws **G** attaching the jack board to the rear panel.
 3. Disconnect the connector VW1 on the jack board and pull up the jack board.



■ Removing the fan motor (See Fig.7 and 8)

- Prior to performing the following procedures, remove the top cover .
1. Disconnect the harness from the connector NW11 on the DSP board .
 2. Removing the two screws **H** attaching the fan motor on the rear panel.

■ Removing the DSP board (See Fig.9)

• Prior to performing the following procedure, remove the top cover, front panel assembly and jack board.

1. Untied the harness band and disconnect the harness from the connector CW2 on the main board.
2. Disconnect the harness from the connector NW11 on the DSP board.
3. Disconnect the card wire from the connector VW12 on the DSP board.
4. Pull up the DSP board from the front side upwards disconnecting the connector DW10, DW13, DW14 and DW15.

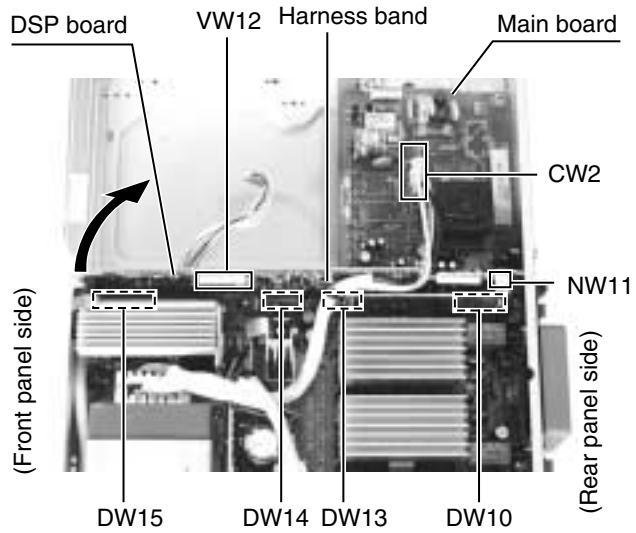


Fig.9

■ Removing the main board (See Fig.10)

• Prior to performing the following procedure, remove the top cover, front panel assembly, DVD mechanism assembly, jack board and DSP board.

1. Disconnect the card wire from the connector CW4 and CW8 on the main board.
2. Disconnect the harness from the connector CW3 on the main board.
3. Remove the five screws I attaching the speaker terminals and jack to the rear panel (see fig.7).
4. Remove the six screws **K1** (short) and one screw **K2** (long) attaching the main board.
5. When the rear panel is not removed, pull up the main board from front side.

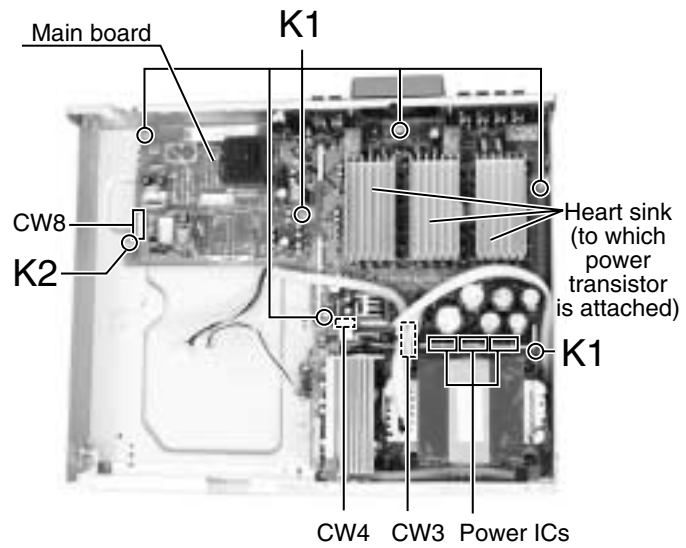


Fig.10

■ Removing the power transistor & power IC (See Fig.10 and 11)

• Prior to performing the following procedure, remove the top cover, front panel assembly, DVD mechanism assembly, jack board, DSP board and main board.

1. After removing the solder part soldered to the main board, remove each screw and remove the heat sink from Power transistor.
2. After removing the solder part soldered to the main board, remove each screw and remove the heat sink from Power IC.

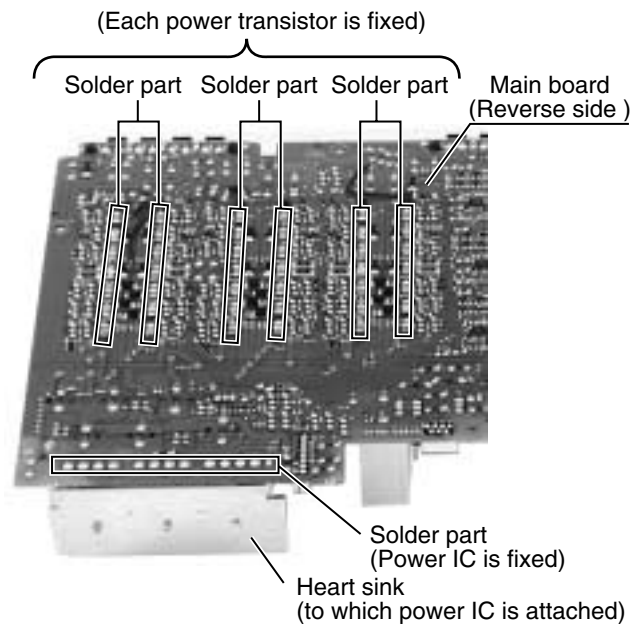


Fig.11

■ Removing the DVD power board

(See Fig.12)

- Prior to performing the following procedure, remove the top cover, front panel assembly and DSP board.
1. Disconnect the harness and card wire from the connector PW1, PW2 and PW5 on the DVD power board.
 2. Remove the one screw **L1** (short) and two screws **L2** (long) attaching the DVD power board.

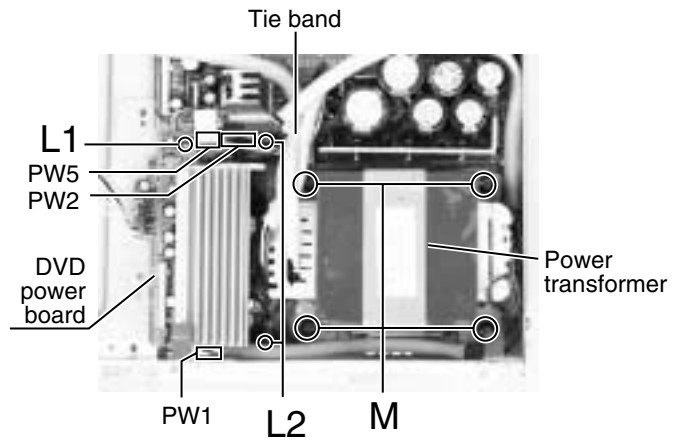


Fig.12

■ Removing the power transformer

(See Fig.12)

- Prior to performing the following procedure, remove the top cover.
1. Cut off the tie band fixing the harness, if needed.
 2. Disconnect the harness from the connector CW2 on the main board (see fig.9) and PW1, PW2 on the DVD power board.
 3. Remove the four screws **M** attaching the power transformer.

<Front panel assembly section>

■ Removing the display board & switch board

(See Fig.1 and 2)

- Prior to performing the following procedure, remove the top cover and the front panel assembly.
1. Disconnect the card wire from the connector FW1 on the display board.
 2. Remove the five screws **A** attaching the display board on the inner of the front panel assembly.
 3. Remove the four screws **B** attaching the switch board on the inner of the front panel assembly.
 4. Disconnect the harness from connector FW2 on the display board, if needed.

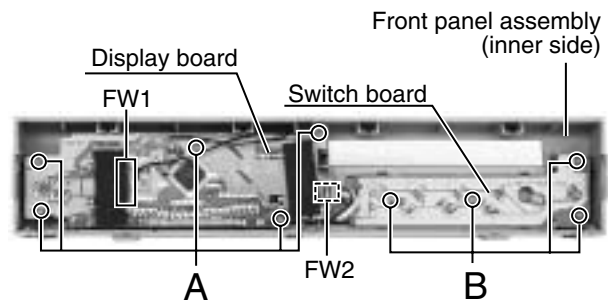


Fig.1

■ Removing the front window

(See Fig.2 and 3)

- Prior to performing the following procedure, remove the top cover, front panel assembly, display board and switch board.
1. Remove the switch buttons, if needed.
 2. Remove the three screws **C** attaching the front window on the front panel.
 3. Remove the eight claws fixing the front window on the front panel.

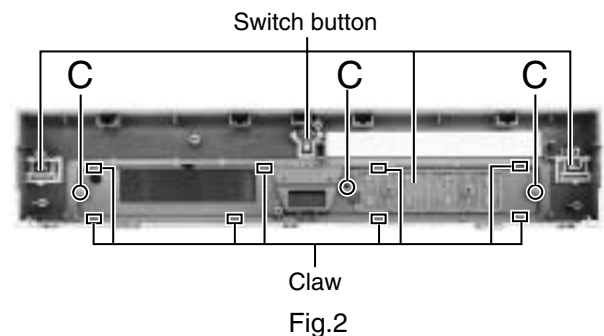


Fig.2

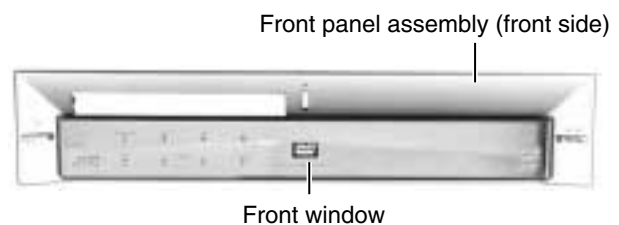


Fig.3

<DVD mechanism assembly section>

■ Removing the DVD loader board

(See Fig.1 to 3)

- Prior to performing the following procedure, remove the top cover and DVD mechanism assembly.
1. Disconnect the card wire from the connector J6 on the DVD MPEG board.
 2. Disconnect the harness from the connector on the motor board.
 3. Disconnect the harness from the connector J5 on the DVD loader board.
 4. Remove the four screws **A** attaching the DVD loader board to DVD mechanism assembly.

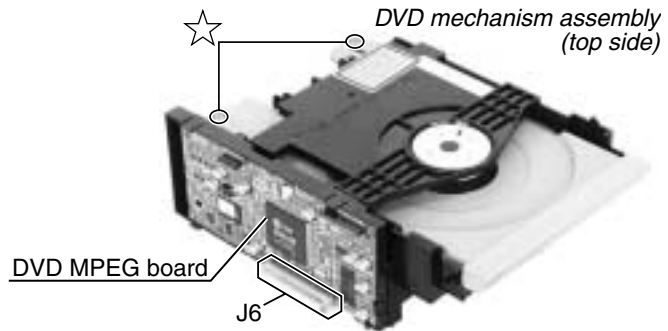


Fig.1

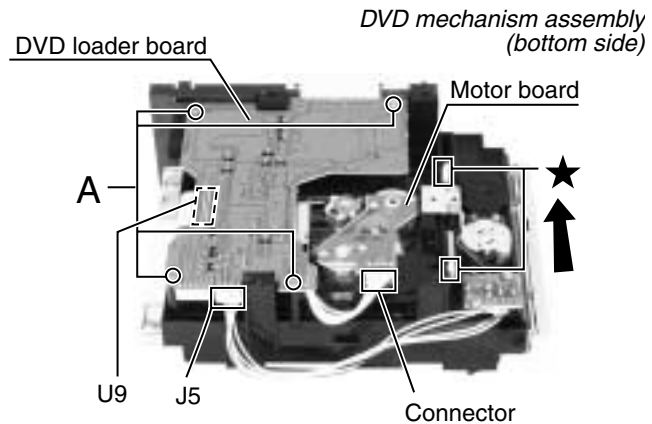


Fig.2

CAUTION!!

(see fig.3)

Before removing the card wire which connects the pickup board and DVD loader board, solder the two soldering parts and make it short-circuit. Moreover, while having removed the card wire, don't remove these solder.

5. Disconnect the card wire from the connector U9 on the DVD loader board.

ONE POINT

■ How to eject the DVD tray manually (see fig.2)

The white lever of the ★ mark is moved in the direction of the arrow. Then, the tray will be opened.

Moreover, the tray is separable from a DVD mechanism assembly by removing two screws of the ☆ mark (see fig.1) and drawing out the tray.

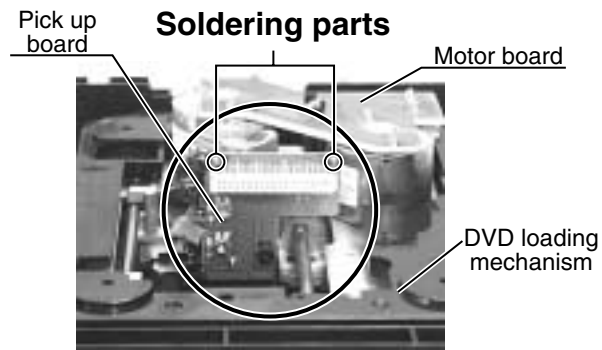


Fig.3

■ Removing the DVD loading mechanism (See Fig.4)

- Prior to performing the following procedure, remove the top cover, DVD mechanism assembly and DVD loader board.
1. Remove the two screws **B** and remove the bracket.
 2. Remove the one screw **C** fixing the DVD loading mechanism.
 3. Move the lever in the direction of the arrow **X**.
 4. Remove the DVD loading mechanism from the DVD mechanism assembly by moving it in the direction of the arrow **Y**.

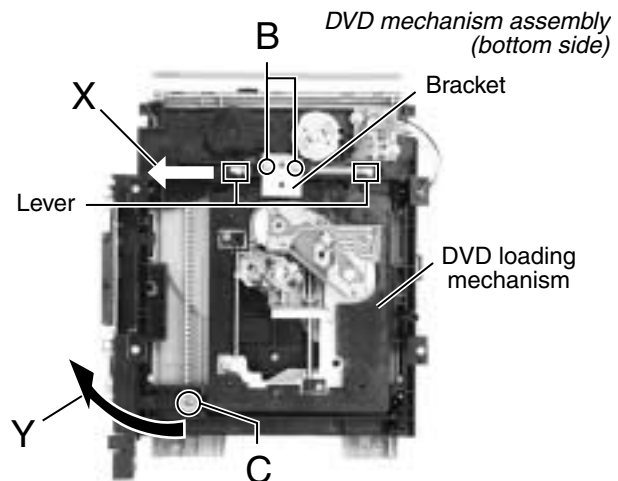


Fig.4

■ Removing the DVD traverse mechanism
(See Fig.5)

- Prior to performing the following procedure, remove the top cover, DVD mechanism assembly, DVD loader board and DVD loading mechanism.
1. Remove the four screws **D** attaching the DVD traverse mechanism to DVD loading mechanism.

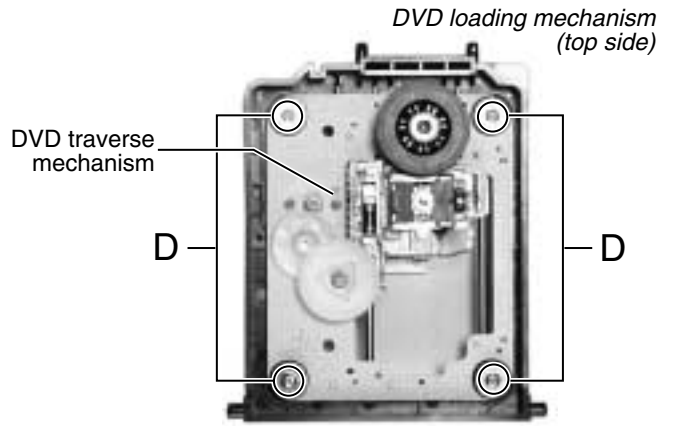


Fig.5

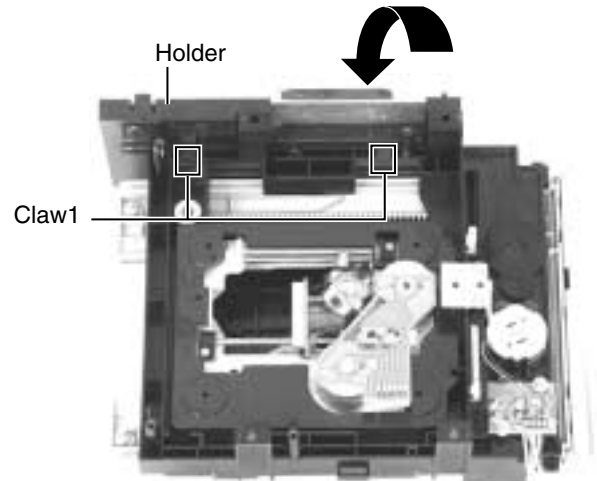
■ Removing the holder & DVD MPEG board
(See Fig.6 and 7)

- Prior to performing the following procedure, remove the top cover, DVD mechanism assembly and DVD loader board.

1. Remove the two claws1, and remove the holder from the DVD mechanism assembly as it is pushed down.

Notes: When removing only the DVD MPEG board, it is not necessary to remove this holder.

2. Remove the four claws2 and remove the DVD MPEG board from the holder.



DVD mechanism assembly (bottom side)
Fig.6

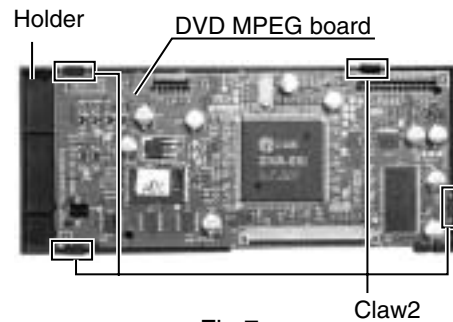


Fig.7

ONE POINT

- **When inserting DVD MPEG board in holder.** (see fig.8)

Insert in after uniting with a lower claws, when inserting DVD MPEG board in holder.

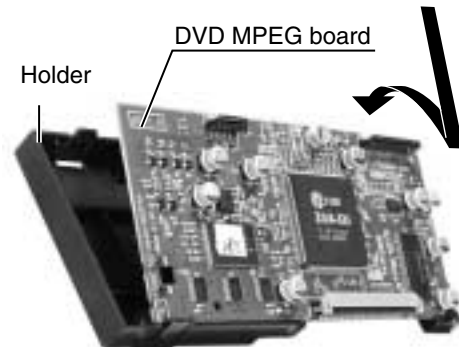


Fig.8

<Speaker section>

[SP-XSA5 / Satellite speaker]

- It is exchange in a unit.

[SP-XCA5 / Center speaker]

- It is exchange in a unit.

[SP-WA5 / Woofer]

■ Removing the speaker unit

(See Fig.1 to 3)

1. Remove the four bosses and remove the net assembly.

Notes: It will be good to use the tool with a flat tip, since it is hard to remove. Please take care not to damage the cabinet at this time.

2. Remove the eight screws **A** attaching the speaker unit to cabinet.

3. Disconnect the code from the two terminals of the speaker unit.

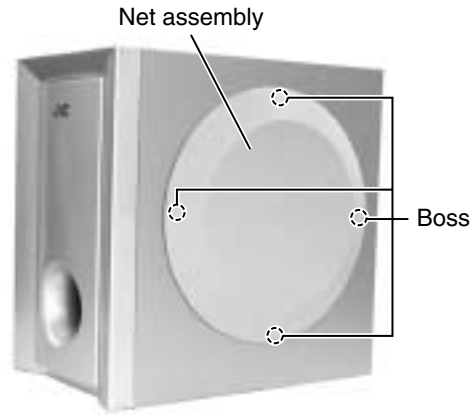


Fig.1

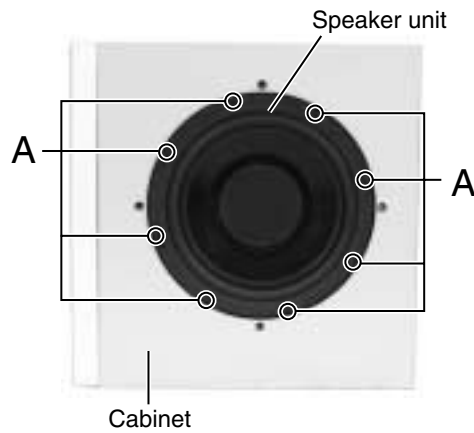
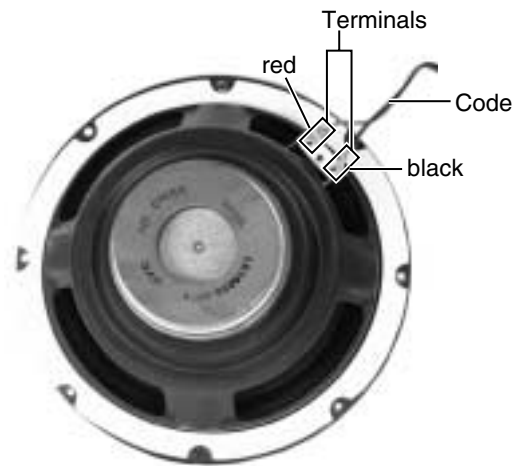


Fig.2



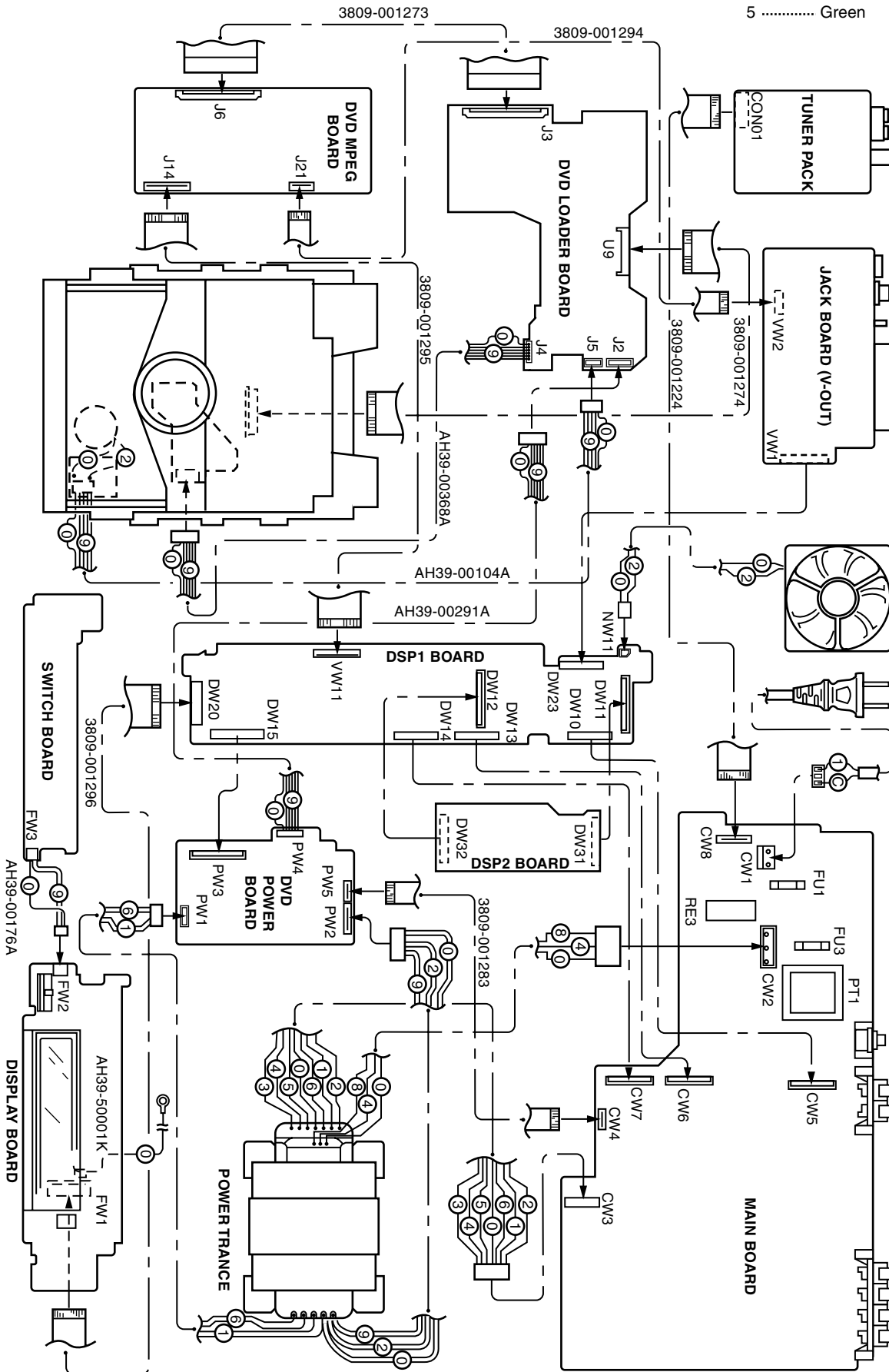
Speaker unit (reverse side)

Fig.3

Wiring connection

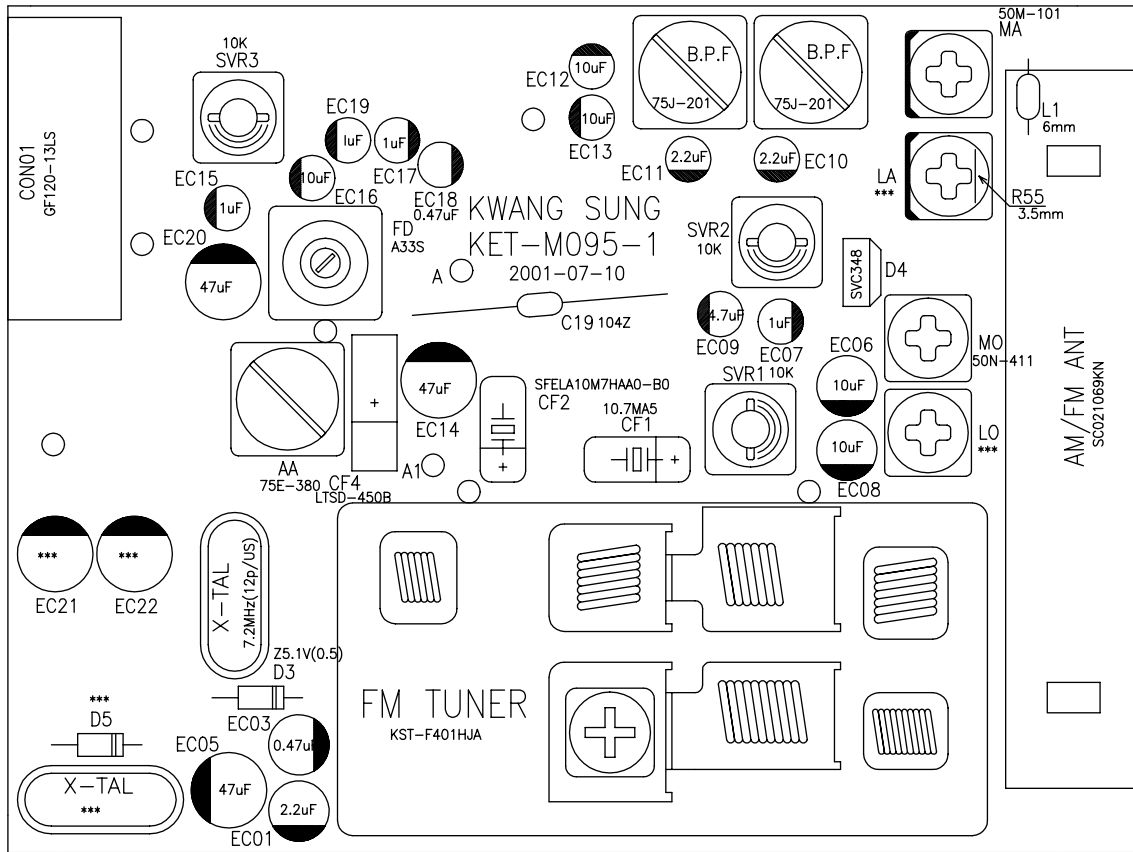
Color codes are shown below.

- | | | | |
|---------|--------|---------|--------|
| 1 | Brown | 6 | Blue |
| 2 | Red | 7 | Violet |
| 3 | Orange | 8 | Gray |
| 4 | Yellow | 9 | White |
| 5 | Green | 0 | Black |



Adjustment method

1. Tuner



*Adjustment Location of Tuner PCB

ITEAM	AM(MW) OSC Adjustment	AM(MW) RF Adjustment
Received FREQ.	522~1629 KHz	603 KHz
Adjustment point	MO	MA
Output	1~7.0V	Maximum Output(Fig1-1)

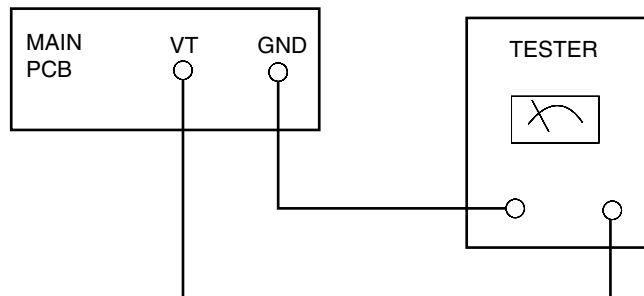


Fig 1-1 OSC Voltage

FM THD Adjustment	
SSG FREQ.	98 MHz
Adjustment point (FD)	FM DETECTOR COIL
Output	60 dB
Minimum Distortion (0.4% below) (Figure 1-2)	

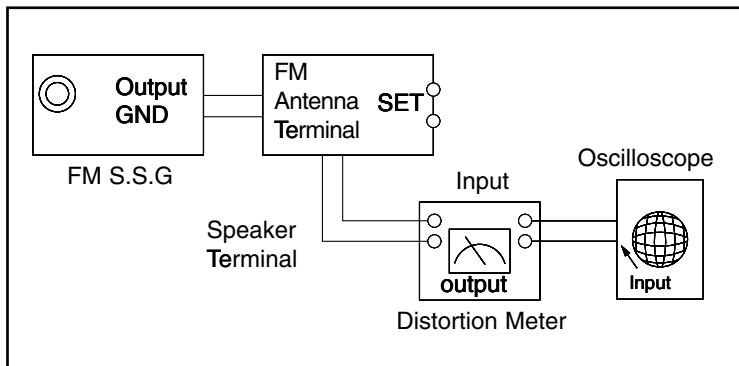


Figure1-2 IF CENTER and THD Adjustment

FM Search Level Adjustment	
SSG FREQ.	98 MHz
Adjustment point (SVR3)	BEACON SENSITIVITY SEMI-VR(20K)
Output	28 dB(dB)
Adjust SVR1 so that "TUNED" of FL T is lighted (Figure 1-3)	

*Adjust FM S.S.G level to 28dB

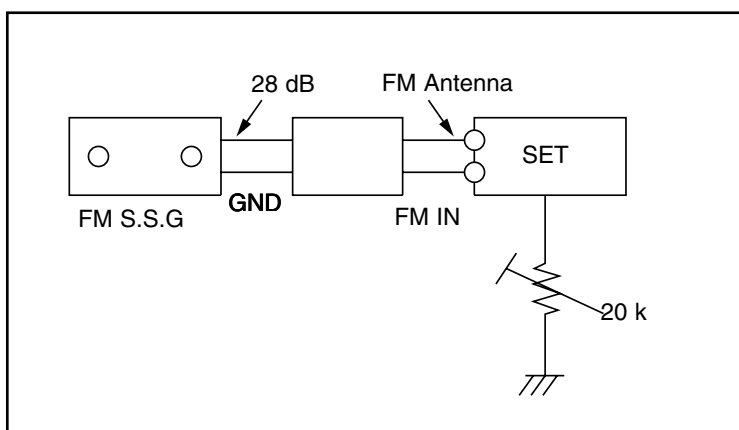


Figure1-3 FM Auto Search Level Adjustment

AM(MW) I.F Adjustment	
SSG FREQ.	450 kHz
Frequency	522 kHz
Adjustment point	AA
Maximum output (Figure 1-4)	

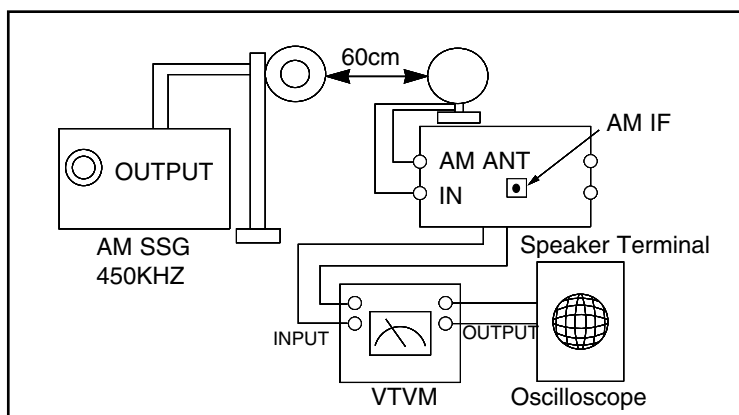


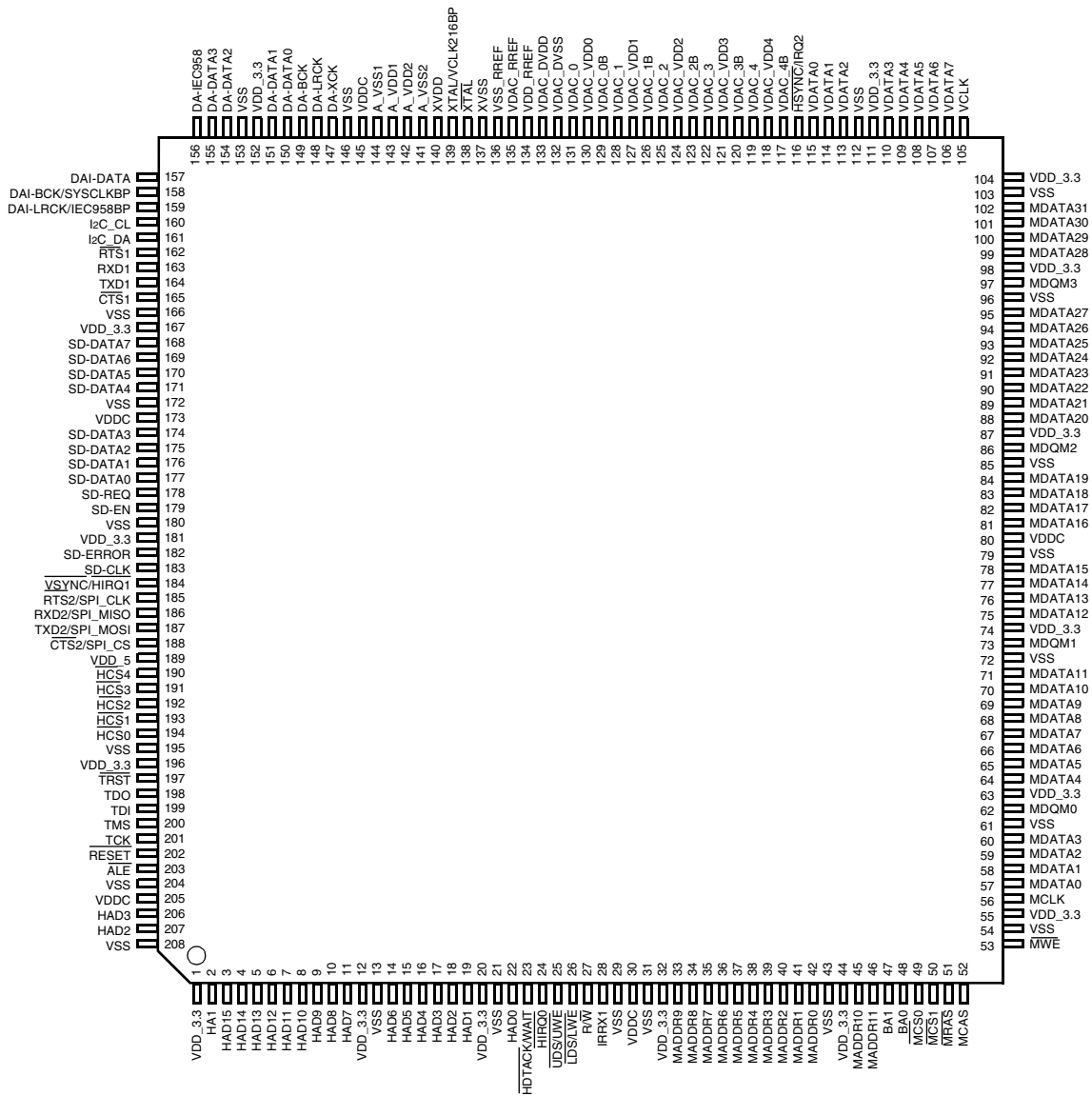
Figure1-4 AM I.F Adjustment

Notes: This set is a non-adjusted set fundamentally. It is adjusted when the tuner pack is exchanged.

Description of major ICs

■ ZiVA-5 (U8) : DVD controller

1. Pin layout



2. Pin function

(1/4)

	Name	Pin No.	Type ¹	Description
System Services	RESET	202	I	Active Low Reset. Assert for at least 5-milliseconds in the presence of clock to reset the entire chip.
	VCLK	105	I/O	Video clock that outputs 27 MHz.
	XOUT	138	O	Crystal output. When the internal DCXO is used, a 13.5 MHz crystal should be connected between this pin and the XIN pin.
	XIN/bypass clk_216	139	I	Crystal input. When the internal DCXO is used, a 13.5 MHz crystal should be connected between this pin and the XOUT pin. When an external oscillator or VCXO is used, its output should be connected to this pin. When configured for an external bypass clock, a 216 MHz clock should be connected to this pin. The frequency of an external VCXO can be either 27 or 13.5 MHz.

1. I - input, O - output, OD - open drain, PU - requires external pull-up resistor.

2. Pin function

(2/4)

	Name	Pin No.	Type ¹	Description
Power and Ground	VNW	189	Power	5-V supply voltage for 5V-tolerant I/O signals.
	VDDP	12, 20, 111, 152, 167, 181, 196	Power	3.3-V supply voltage for I/O signals
	VDD25	32, 44, 55, 63, 74, 87, 98, 104	Power	3.3-V supply voltage for SDRAM I/O signals
	XVDD	140	Power	3.3V Crystal interface power
	VDD	30, 80, 145, 173, 205	Power	1.8-V supply voltage for core logic
	VDD_VDAC[4:0]	118, 121, 124, 127, 130	Power	Analog Video DAC Power
	VDAC_DVDD	133		3.3V Digital supply for 5 DACs
	A_VDD[2:1]	142, 143		3.3-V Analog PLL Power
	VDAC_REFVDD	134	Power	3.3V Analog Video Reference Voltage
	GNDP	13, 21, 112, 153, 166, 180, 195, 208	Ground	Ground for I/O signals
	GND	29, 79, 146, 172, 204	Ground	Ground for core logic
	GND25	31, 43, 54, 61, 72, 85, 96, 103	Ground	Ground for SDRAM I/O signals
	VDAC_DVSS	132	Ground	Digital VSS for DACs
	AVSS[2:1]	141, 144	Ground	Analog PLL Ground
VDAC_REFVSS	136	Ground	Video Analog Ground	
XVSS	137	Ground	Crystal interface ground	
Host Interface	HCS[4:2]/GPIO[41:43]	190-192	O	Host chip select. Host asserts HCS to select the controller for a read or write operation. The falling edge of this signal triggers the read or write operation. General Purpose I/Os 41, 42, and 43, respectively.
	HCS[1:0]	193, 192	I	Host chip select. Host asserts HCS to select the controller for a read or write operation. The falling edge of this signal triggers the read or write operation.
	HA[3:1]	206, 207, 2	I/O	Host (muxed address) address bus. 3-bit address bus selects one of eight host inter-face registers. These signals are not muxed in ATAPI master mode.
	HA[15:0]	3-11, 14-19, 22	I/O	HA[15:0] is the 16-bit (muxed address and data) bi-directional host data bus through which the host writes data to the decoder Code FIFO. MSB of the 32-bit word is writ-ten first. The host also reads and writes the decoder internal registers and local SDRAM/ROM via HA[7:0]. These signals are not muxed for ATAPI master mode.
	HDTACK/WAIT	23	I/OD	Host Data Transfer Acknowledge.
	HIRQ0	24	I/O	Host interrupt. Open drain signal, must be pulled-up via 4.7k Ω to 3.3 volts. Driven high for 10 ns before tristate.
	HUDS/UWE	25	I/O	Host Upper Data Strobe. Host high byte data, HA[15:8], is valid when this pin is active.
	HLDS/LWE	26	I/O	Host Lower Data Strobe. Host low byte data, HA[7:0], is valid when this pin is active.
	HREAD	27	I/O	Read/write strobe
	ALE	203	I/O	Address latch enable
SDRAM Interface	MCS[1:0]	50, 49	O	Memory chip select.
	MCAS	52	O	Active LOW SDRAM Column Address Strobe.
	MRAS	51	O	Active LOW SDRAM Row Address Strobe.
	MDQM[3:0]	97, 86, 73, 62	O	These pins are the bytes masks corresponding to MD[7:0], [15:8], [23:16] and [31:24]. They allow for byte reads/writes to SDRAM.
	MA[11:0]	46, 45, 33-42	O	SDRAM Address
	MD[31:0]	102-99, 95-88, 84-81, 78-75, 71-64, 60-57	I/O	SDRAM Data
	MWE	53	O	SDRAM Write Enable. Specifies transaction to SDRAM: read (=1) or write (=0).
	MCLK	56	O	SDRAM Clock
	BA[1:0]	47, 48	O	SDRAM bank select
Digital Video Input/Output	HSYNC/HIRQ2/ GPIO1[9]	116	I/O	Horizontal sync. The decoder begins outputting pixel data for a new horizontal line after the falling (active) edge of HSYNC. Host Interrupt Request 2 General Purpose I/O 9
	VCLK	105	I/O	Video clock. Clocks out data on input. VDATA[7:0]. Clock is typically 27 MHz.
	VDATA[7:0]/GPIO[1:7]	106-110, 113-115	I/O	Video data bus. Byte serial CbYCrY data synchronous with VCLK. At powerup, the decoder does not drive VDATA. During boot-up, the decoder uses configuration parameters to drive or 3-state VDATA. General Purpose I/Os [1:7]
	VSYNC/HIRQ1/ GPIO36	184	I/O	Vertical sync. Bi-directional, the decoder outputs the top border of a new field on the first HSYNC after the falling edge of VSYNC. VSYNC can accept vertical synchroni-zation or top/bottom field notification from an external source. (VSYNC HIGH = bot-tom field. VSYNC LOW = Top field) Active Low Host Interrupt Pin General Purpose I/O 36

1. I - input, O - output, OD - open drain, PU - requires external pull-up resistor.

2. Pin function

(3/4)

	Name	Pin No.	Type ¹	Description
Parallel DVD/CD or Serial CD Interface	SDDATA[7]/VDATA2[7] /HDMARQ/GPIO24	168	I	Compressed data from DVD DSP. Bit 7. In parallel mode, bit 7 is the first (earliest in time) bit in the bitstream, while bit 0 is the last bit. Video Data Bus 2, Bit 7 Host DMA Request General Purpose I/O 24
	SDDATA6/VDATA2[6] /HXCVR_EN/GPIO25	169	I	Compressed data from DVD DSP. Bit 6. Video Data Bus 2, Bit 6 ATAPI Transceiver Enable General Purpose I/O 25
	SDDATA5/VDATA2[5] HDMACK/GPIO26	170	I	Compressed data from DVD DSP. Bit 5. Video Data Bus 2, Bit 5 Host DMA Acknowledge General Purpose I/O 26
	SDDATA4/VDATA2[4] GPIO27	171	I	Compressed data from DVD DSP. Bit 4. Video Data Bus 2, Bit 4 General Purpose I/O 27
	SDDATA3/ VDATA2[3]/GPIO28	174	I	Compressed data from DVD DSP. Bit 3. Video Data Bus 2, Bit 3 General Purpose I/O 28
	SDDATA2/ VDATA2[2]/GPIO29	175	I	Compressed data from DVD DSP. Bit 2. Video Data Bus 2, Bit 2 General Purpose I/O 29
	SDDATA1/ VDATA2[1]/GPIO30	176	I	Compressed data from DVD DSP. Bit 1. Video Data Bus 2, Bit 1 General Purpose I/O 30
	SDDATA0/ VDATA2[0]/GPIO31	177	I	In serial mode, bit 0 should be used as the input, with the unused bits either used as GPIOs or tied to ground. Video Data Bus 2, Bit 0 General Purpose I/O 31
	SDCLK	183	I	Data clock. The maximum frequency is 25 MHz for parallel mode, and ??? MHz for serial mode. The polarity of this signal is programmable.
	SDERROR	182	I	Error in input data. This signal carries the error bit associated with the channel data type (if set, the byte is corrupted).
	SDEN/GPIO33	179	I	Data enable. Assertion indicates that data on SDDATA[7:0] is valid. The polarity of this signal is programmable. General Purpose I/O [33]
SDREQ/GPIO32	178	O	Bitstream request. controller asserts SDREQ to indicate that the bitstream input buffer has available space. General Purpose I/O 32	
Analog Video Output	VDAC_[4B:0B]	117, 120, 123, 126, 129	Analog O	Video DAC Bias Bits[4:0]
	VDAC_4	119	Analog O	DAC video output format: R, V, C, or CVBS. Macrovision encoded.
	VDAC_3V	122	Analog O	DAC video output format: B, U, C, or CVBS. Macrovision encoded.
	DAC_2	125	Analog O	DAC video output format: G or Y. Macrovision encoded.
	VDAC_1	128	Analog O	DAC video output format: C. Macrovision encoded.
	VDAC_0	131	Analog O	DAC video output format: CVBS or Y. Macrovision encoded.
	VDAC_REF	135	Analog I	Video DACs Reference Resistor. Connecting to pin 136 through a 1.18K+/- 1% resistor is required.
	VCLK	105	I/O	System clock that drives internal PLLs. ZIVA-5 27-MHz TTL oscillator. (See description of VCLK for Digital Video Output.) Also optional video clock for internal PLLs or external encoder.
Audio Interface	ADATA[3:0]/GPIO[4:1]	155, 154, 151, 150	O	PCM Data Out. Eight channels. Serial audio samples relative to BCK and LRCK. General Purpose I/Os [4:1]
	BCK	149	O	PCM Bit Clock. BCK can be either 48 or 32 times the sampling frequency
	LRCK	148	O	PCM Left Clock. Identifies the channel for each sample. The polarity is programmable.
	XCK	147	I/O	Audio External Frequency clock input or output. BCK and LRCK are derived from this clock.
	IEC958/GPIO14	156	O	PCM data out (IEC-958 format) or compressed data out (IEC-1937 format). General Purpose I/O [14]
Digital Mic In	DAI_DATA/GPIO15	157	I	PCM data input. General Purpose I/O [15]
	DAI_BCK/ BYPASS_SYSCLK/ GPIO16	158	I	PCM input bit clock. BYPASS_SYSCLK: Alternate function TBS. General Purpose I/O [16]
	DAI_LRCK/ IEC958BP/GPIO17	159	I	PCM left/right clock. IEC958 input bypass General Purpose I/O [17]

1. I - input, O - output, OD - open drain, PU - requires external pull-up resistor.

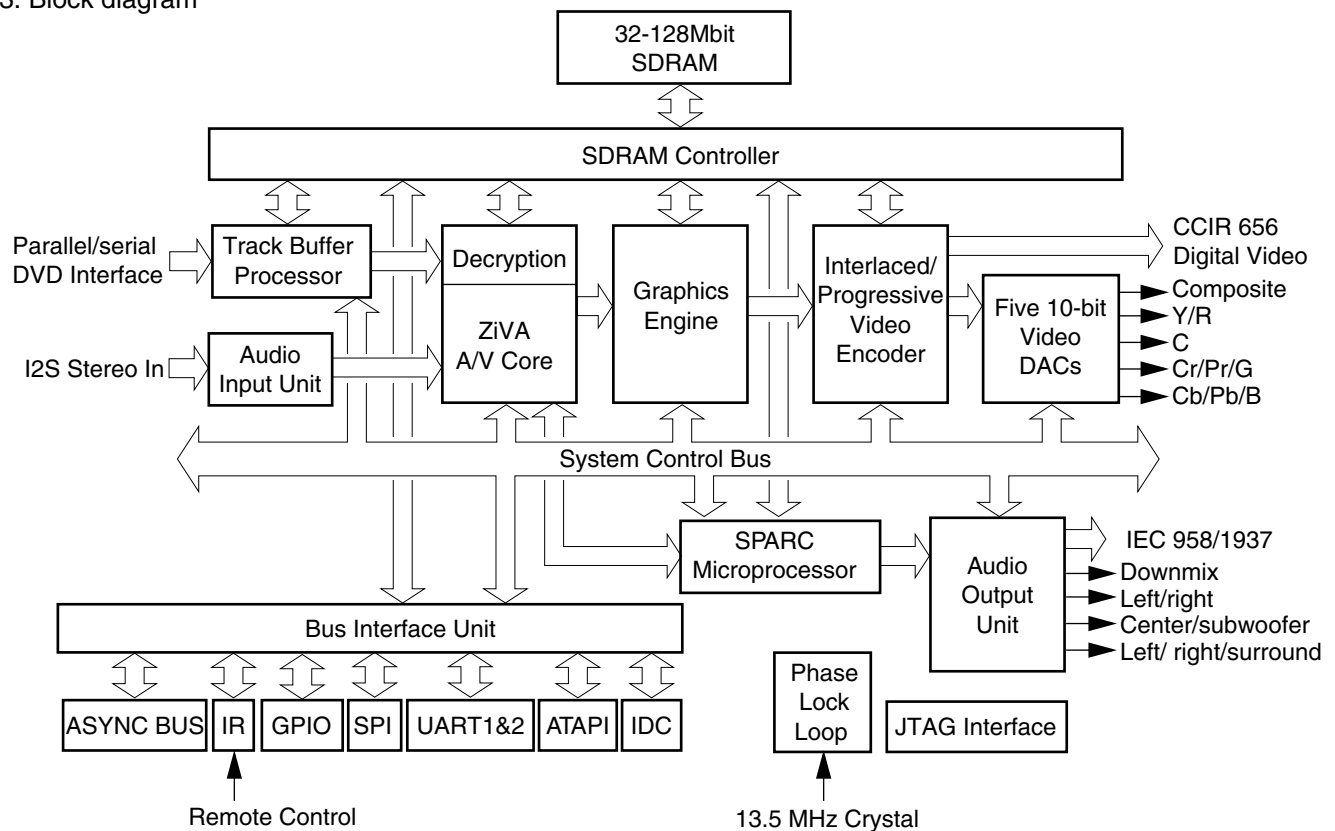
2. Pin function

(4/4)

	Name	Pin No.	Type ¹	Description
IR	IRRX1/GPIO0	28	I	IR Remote Receive. This input connects to an integrated (photo diode, band pass, demodulator) IR receiver. General Purpose I/O 0
	IDC_CL/GPIO18	160	I/O	Serial clock signal for IDC data transfer. It should be pulled up to the positive supply voltage, depending on the device) using an external pull-up resistor. General Purpose I/O [18]
IDC	IDC_DA/GPIO19	161		Serial data signal for IDC data transfer. It should be pulled up to the supply voltage using an external pull-up resistor. General Purpose I/O [19]
	RTS1/GPIO20	162	O	Ready to send, UART1 General Purpose I/O [20]
UART1	RXD1/GPIO21	163	I	Receive data, UART1 General Purpose I/O [21]
	TXD1/GPIO22	164	O	Transmit data, UART1 General Purpose I/O [22]
	CTS1/GPIO23	165	I	Clear to send, UART1 General Purpose I/O [23]
UART2	RTS2/SPI_CLK/ GPIO37	185	O	Ready to send, UART2 Serial Peripheral Interface Clock General Purpose I/O [37]
	RXD2/SPI_MISO/ GPIO38	186	I	Receive data, UART2 Serial Peripheral Interface - Master Input/Slave Output General Purpose I/O [38]
	TXD2/SPI_MOSI/ GPIO39	187	O	Transmit data, UART2 Serial Peripheral Interface - Master Output/Slave Input General Purpose I/O [39]
	CTS2/SPI_CS/ GPIO40	188	I	Clear to send, UART2 Serial Peripheral Interface ???? General Purpose I/O [40]
JTAG	TRST	197	I	Test reset. BST reset - resets the TAP controller. This signal must be pulled low.
	TDO	198	O	Test data Out. BST serial data output.
	TDI/GPIO	199	I	Test data In. BST serial data chain input. General Purpose Input pin 0.
	TMS/GPI1	200	I	Test mode select. Controls state of test access port (TAP) controller. General Purpose Input pin 1.
	TCK	201	I	Test clock. Boundary scan test (BST) serial data clock.

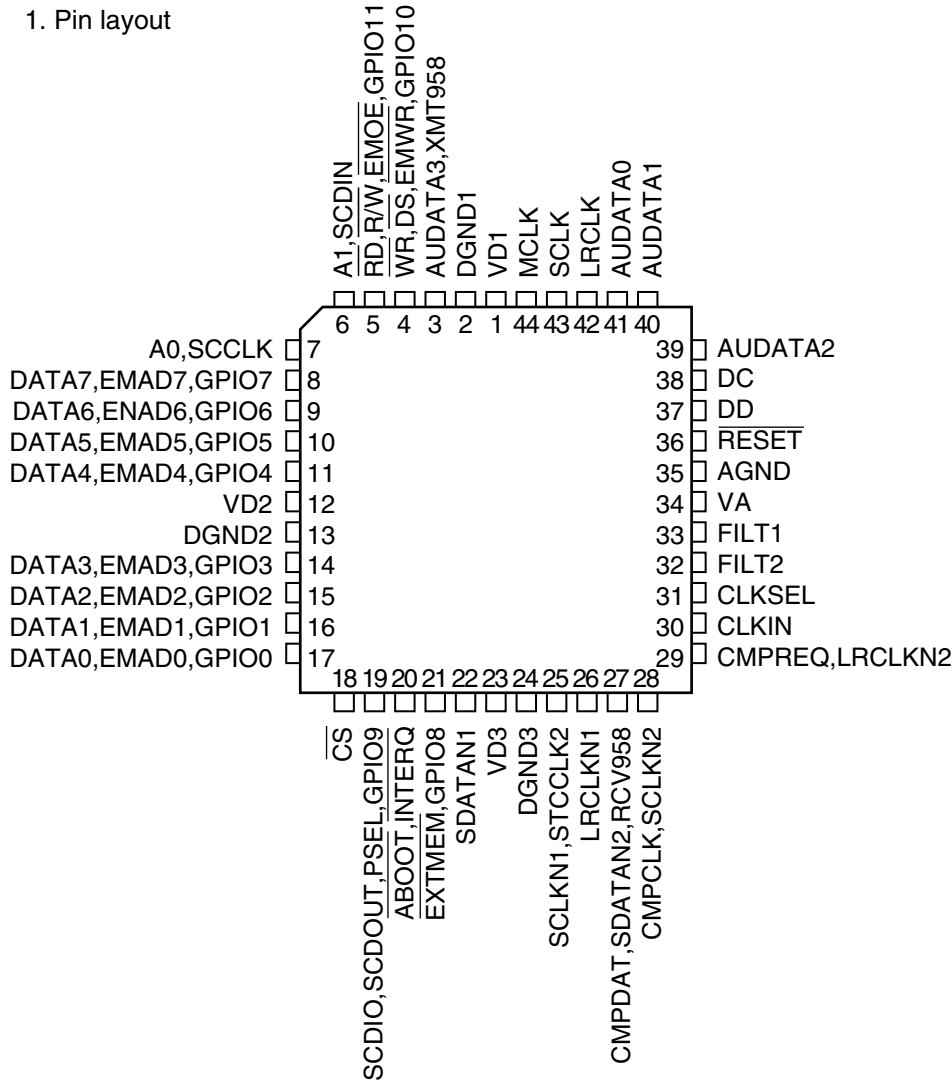
1. I - input, O - output, OD - open drain, PU - requires external pull-up resistor.

3. Block diagram

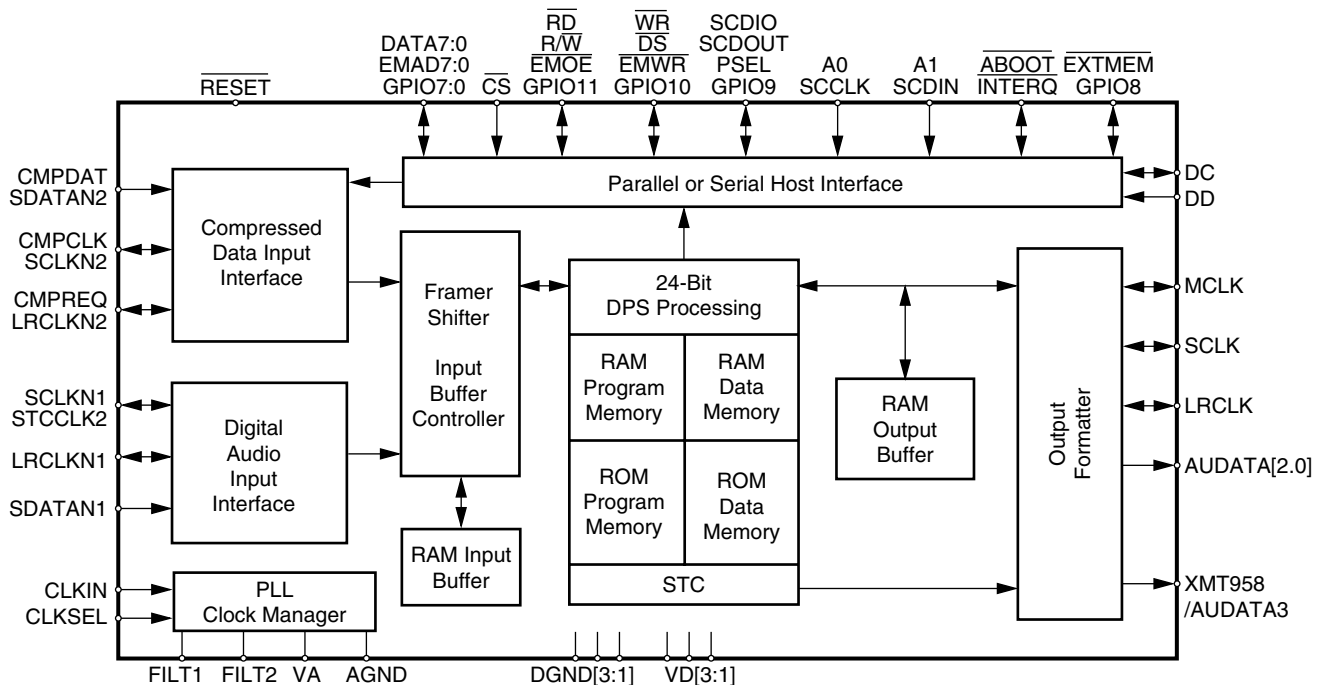


■ CS493292 (DIC11) : Audio decoder

1. Pin layout



2. Block diagram

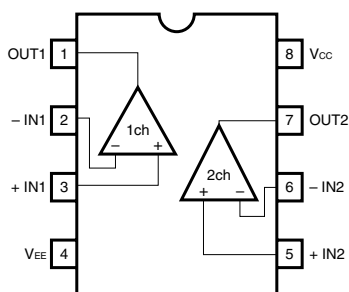


3. Pin function

Pin No.	Symbol	Function
1,12,23	VD1,VD2,VD3	Digital Positive Supply
2,13,24	DGND1,DGND2,DGND3	Digital Supply Ground
3	AUDATA3,XMT958	SPDIF Transmitter Output, Digital Audio Output 3
4	WR,DS,EMWR,GPIO10	Host write strobe or Host data strobe or External Memory write enable or General purpose input& output Number 10
5	RD,R/W,EMOE,GPIO11	Host Parallel Output Enable or Host Parallel R/W or External Memory Output Enable or General Purpose Input & Output Number11
6	A1,SCDIN	Host Address Bit One or SPI Serial Control Data Input
7	A0,SCCLK	Host Parallel Address Bit Zero or Serial Control Port Clock
8	DATA7,EMAD7,GPIO7	Data Bus
9	DATA6,ENAD6,GPIO6	Data Bus
10	DATA5,EMAD5,GPIO5	Data Bus
11	DATA4,EMAD4,GPIO4	Data Bus
14	DATA3,EMAD3,GPIO3	Data Bus
15	DATA2,EMAD2,GPIO2	Data Bus
16	DATA1,EMAD1,GPIO1	Data Bus
17	DATA0,EMAD0,GPIO0	Data Bus
18	CS	Host Parallel Chip Select, Host Serial SPI Chip Select
19	SCDIO,SCDOUT,PSEL,GPIO9	Serial Control Port Data Input and Output, Parallel Port Type Select
20	ABOOT,INTERQ	Control Port Interrupt Request, Automatic Boot Enable
21	EXTMEM,GPIO8	External Memory Chip Select or General Purpose Input & Output Number 8
22	SDATAN1	PCM Audio Data Input Number One
25	SCLKN1,STCCLK2	PCM Audio Input Bit Clock
26	LRCLKN1	PCM Audio Input Sample Rata Clock
27	CMPDAT,SDATAN2	PCM Audio Data Input Number Tow
28	CMPCLK,SCLKN2	PCM Audio Input bit Clock
29	CMPREQ,LRCLKM2	PCM Audio Input Sample Rate Clock
30	CLKIN	Master Clock Input
31	CLKSEL	DSP Clock Select
32	FILT1	Phase Locked Loop Filter
33	TILT2	Phase-Locked Loop Filter
34	VA	Analog Positive Supply
35	AGND	Analog Supply Ground
36	RESET	Master Reset Input
37	DC	Reserved
38	DD	Reserved
39	AUDATA2	Digital Audio Output 2
40	AUDATA1	Digital Audio Output 1
41	AUDATA0	Digital Audio Output 0
42	LRCLK	Audio Output Sample Rate Clock
43	SCLK	Audio Output Bit Clock
44	MCLK	Audio Master Clock

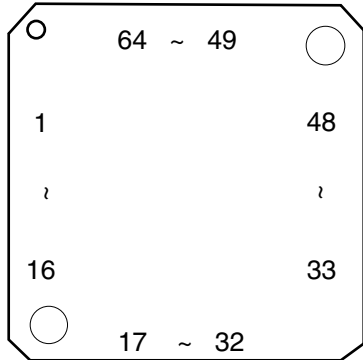
■ **BA4560 (IC2, IC5, IC6, IC7, CIC11, CIC13, FIC2, FIC4, FIC5, FIC6, FIC11, RIC11, RIC13)**
: Dual op amp.

1. Pin layout



■ SP3721A (U7) : DVD driver

1.Pin layout



2.Pin function

(1/2)

Pin No.	Symbol	I/O	Function
1	DVDRFP	I	RF Signal Inputs. Differential RF signal attenuator input pins.
2	DVDRFN		
3,4	PD1,PD2	I	CD Photo detector Interface Inputs. Inputs from the CD photo detector error outputs.
5~6	A2,B2	I	Photo Detector Interface Inputs. AC coupled inputs for the DPD from the main beam Photo detector matrix outputs.
7~ 8	C2,D2		
9	CP	I/O	Differential Phase tracking LPF pin. An external capacitance is connected between this pin and the CN pin.
10	CN	I/O	Differential Phase tracking LPF pin. An external capacitance is connected between this pin and the CP pin.
11~14	A,B,C,D	I	Photo Detector Interface Inputs. Inputs from the main beam Photo detector matrix outputs.
15~16	E,F	I	CD tracking Error Inputs. Inputs from the CD photo detector error outputs.
17	CDTE	-	CD Tracking. E-F Opamp output for feedback.
18	VCI2	-	Reference Voltage input. DC bias voltage input for the servo input reference.
19	NC	-	No Connect.
20	VNB	-	Ground. Ground pin for the servo block.
21	DVDPD	I	APC Input. DVD APC input pin from the monitor photo diode.
22	DVDLD	O	APC output. DVD APC output pin to control the laser power.
23	CDPD	I	APC Input. DVD APC input pin from the monitor photo diode.
24	CDLD	O	APC output. DVD APC output pin to control the laser power.
25	LDON#	I	APC output. on/off. APC output control pin. A low level activates the LD output. (open high)
26	VC	-	Reference Voltage output. This pin provides the internal DC bias reference voltage (+2.5+ fix). Output impedance is less than 50 ohms.
27	VCI	-	Reference Voltage input. DC bias voltage input for the servo input reference.
28	VPB	-	Power. Power supply pin for the servo block.
29	MIRR	O	Mirror Detect Output. Mirror Detect comparator output. Pseudo CMOS output.
30	MP	-	MIRR signal Peak hold pin. An external capacitance is connected to between this pin and VPB.
31	MB	-	MIRR signal Bottom hold pin. An external capacitance is connected to between this pin and VPB.
32	FDCHG#	I	Low Impedance Enable. A TTL compatible input pin that activates the FDCHG switches. A low level activates the switches and the falling edge of the internal FDCHG triggers the fast decay for the NIRR bottom hold circuit. (open high)
33	MLPF	-	MIRR signal LPF pin. An external capacitance is connected between this pin and VPB.

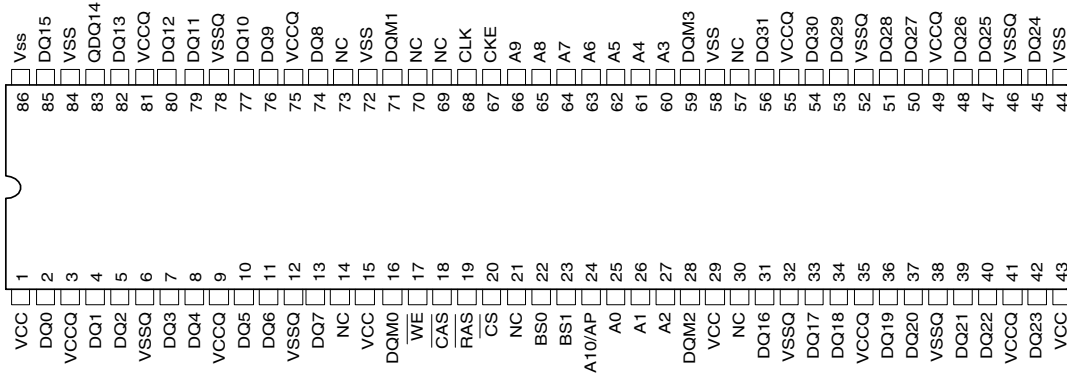
2.Pin function

(2/2)

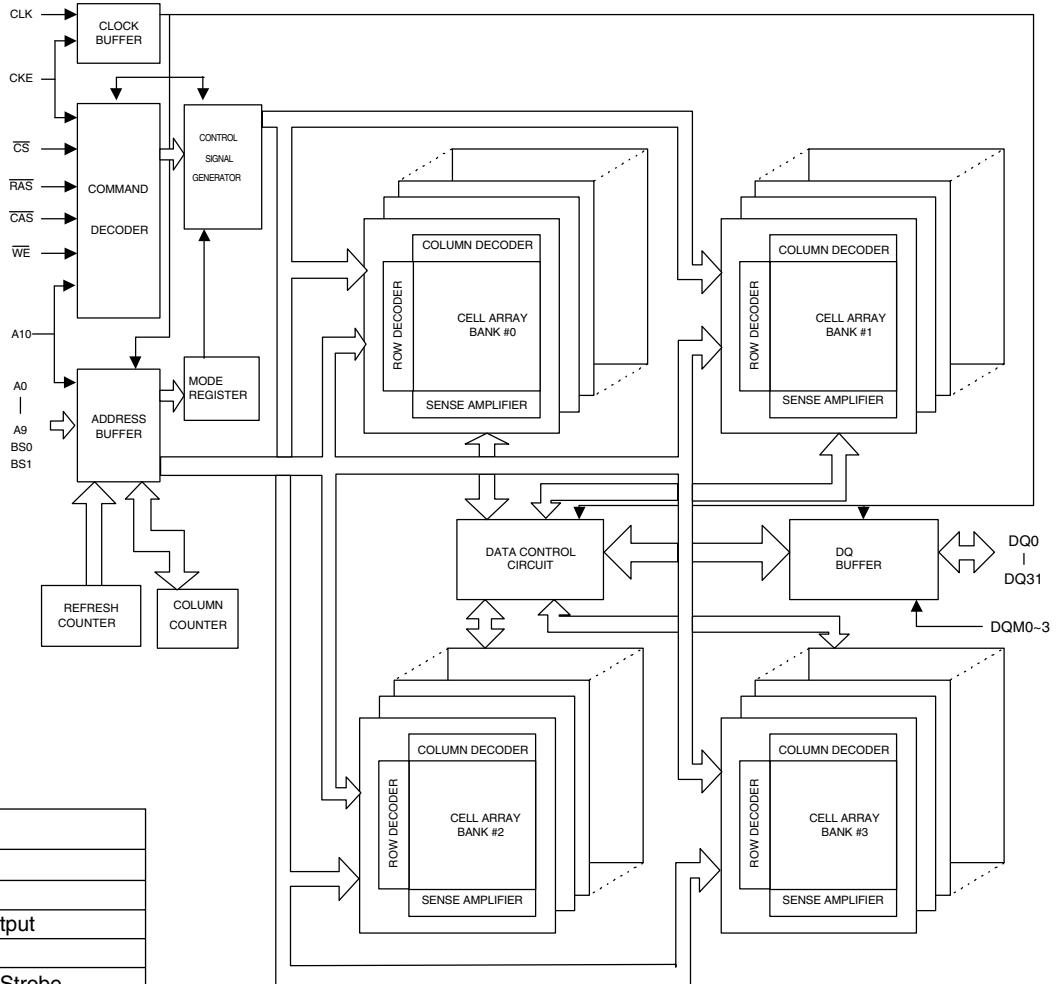
Pin No.	Symbol	I/O	Function
34	MEVO	O	SIGO Bottom Envelope Output. Bottom envelope for Mirror detection.
35	MIN	I	RF signal Input for Mirror. AC coupled inputs for the mirror detection circuit from the pull-in signal output. (PI)
36	PI	O	Pull-in Signal Output. The summing signal output of A,B,C,D or PD1, PD2 for mirror detection. Reference to VCI.
37	DFT	O	Defect Output. Pseudo CMOS output. When a defect is detected, the DFT output goes high. Also the servo AGC output can be monitored at this pin, When CAR bits 7-4 are '0011'.
38	TPH	-	PI Top Hold pin. An external capacitance is connected between this pin and VPB.
39	MEV	-	SIGO Bottom Envelope pin. An external capacitance is connected between this pin and VPB.
40	MEI	I	Mirror Envelope Input. The SIGO envelope input pin.
41	TE	O	Tracking Error Signal Output. Tracking error output reference to VCI.
42	FE	O	Focusing Error Signal Output. Focus error output reference to VCI.
43	CE	O	Center Error Signal Output. Center error out put reference to VCI.
44	LCN	-	Center Error LPF pin. An external capacitance is connected between this pin and the LCP pin.
45	LCP	-	Center Error LPF pin. An external capacitance is connected between this pin and the LCN pin.
46	SCLK	I	Serial Clock. Serial Clock CMOS input. The clock applied to this pin is synchronized with the data applied to SDATA. (Not to be left open).
47	SDATA	I/O	Serial Data. Serial data bi-directional CMOS pin. NRZ programming data for the internal registers is applied to this input. (Not to be left open)
48	SDEN	I	Serial Data Enable. Serial enable CMOS input. A high level input enables the serial port. (Not to be left open)
49	HOLD1	I	Hold Control. ATTL compatible control pin which, when pulled high, disables the RF AFC charge pump and holds the RE AGC amplifier gain at its present value. (open high)
50	VNA	-	Ground. Ground pin for the RF block and serial port.
51	FNN	O	Differential Normal Output. Filter normal outputs.
52	FNP	O	Differential Normal Output. Filter normal outputs.
53	DIP	I	Analog inputs for RF Single Buffer. Differential analog inputs to the RF single-ended output buffer and full wave rectifier.
54	DIN	I	Analog inputs for RF Single Buffer. Differential analog inputs to the RF single-ended output buffer and full wave rectifier.
55	RX	-	Reference Resistor Input. An external 8.2 kohm, 1% resistor is connected from this pin to ground to establish a precise PTAT (proportional to absolute temperature) reference current for the filter.
56	BYP	I/O	The RF AGC integration capacitor CBYP, is connected between BYP and VPA.
57	SIGO	O	Single Ended Normal Output. Single-ended RF output.
58	VPA	-	Power. Power supply pin for the RF block and serial port.
59	AIP	I	AGC Amplifier Inputs. Differential AGC amplifier input pins.
60	AIN	I	AGC Amplifier Inputs. Differential AGC amplifier input pins.
61	ATON	O	Differential Attenuator Output. Attenuator outputs.
62	ATOP	O	Differential Attenuator Output. Attenuator outputs.
63	CDRF	I	RF Signal Input. Single-ended RF signal attenuator input pin.
64	CDRFDC	O	CD RF Signal Output. Single ended CD RF summing output.

W986432DH (U5) : SDRAM

1. Pin layout



2. Block diagram

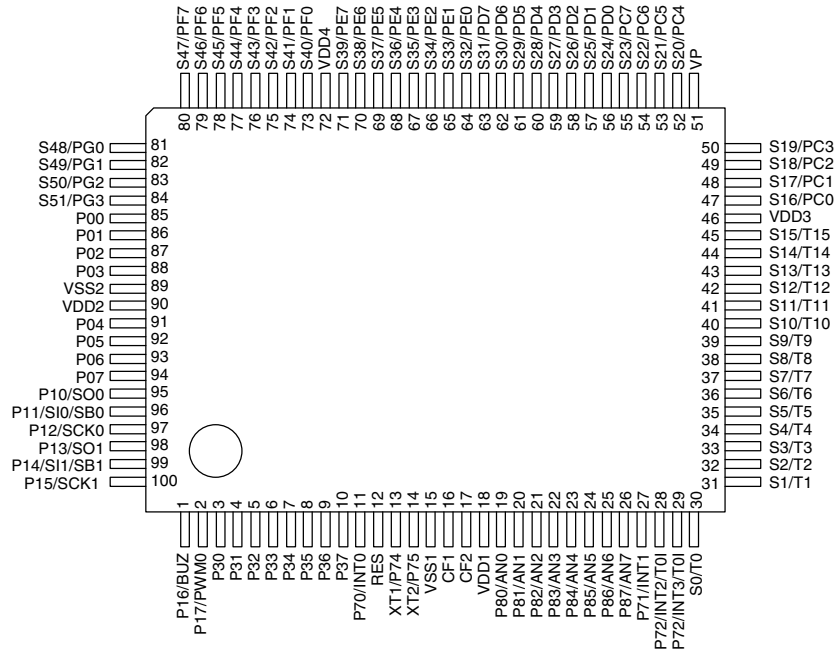


3. Pin function

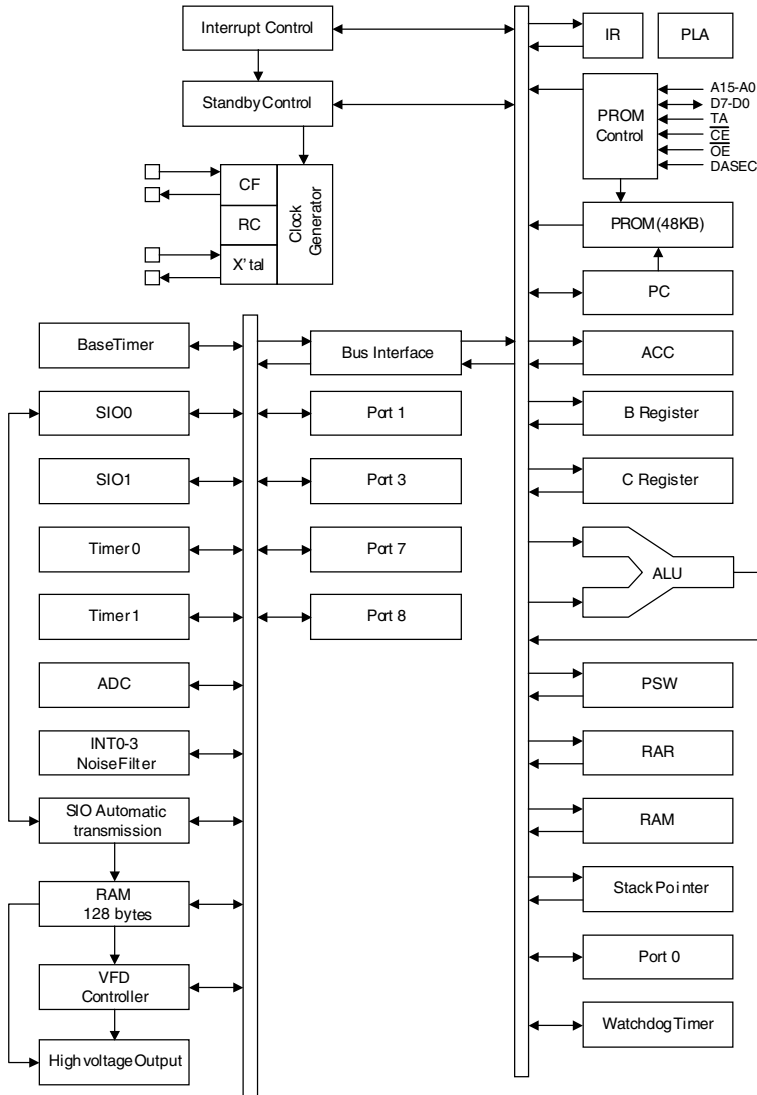
Symbol	Function
A0-A10	Address
BS0, BS1	Bank Select
DQ0-DQ31	Data Input/Output
CS	Chip Select
RAS	Row Address Strobe
CAS	Column Address Strobe
WE	Write Enable
DQM0-DQM3	Input/output mask
CLK	Clock Inputs
CKE	Clock Enable
VCC	Power(+3.3V)
VSS	Ground
VCCQ	Power(+3.3V) for I/O buffer
VSSQ	Ground for I/O buffer
NC	No Connection

LC86P6548 (UIC1) : Microcontroller

1.Pin layout

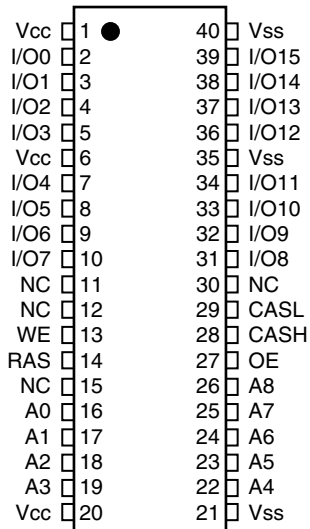


2.Block diagram



■ M11B416256A (U1) : DRAM

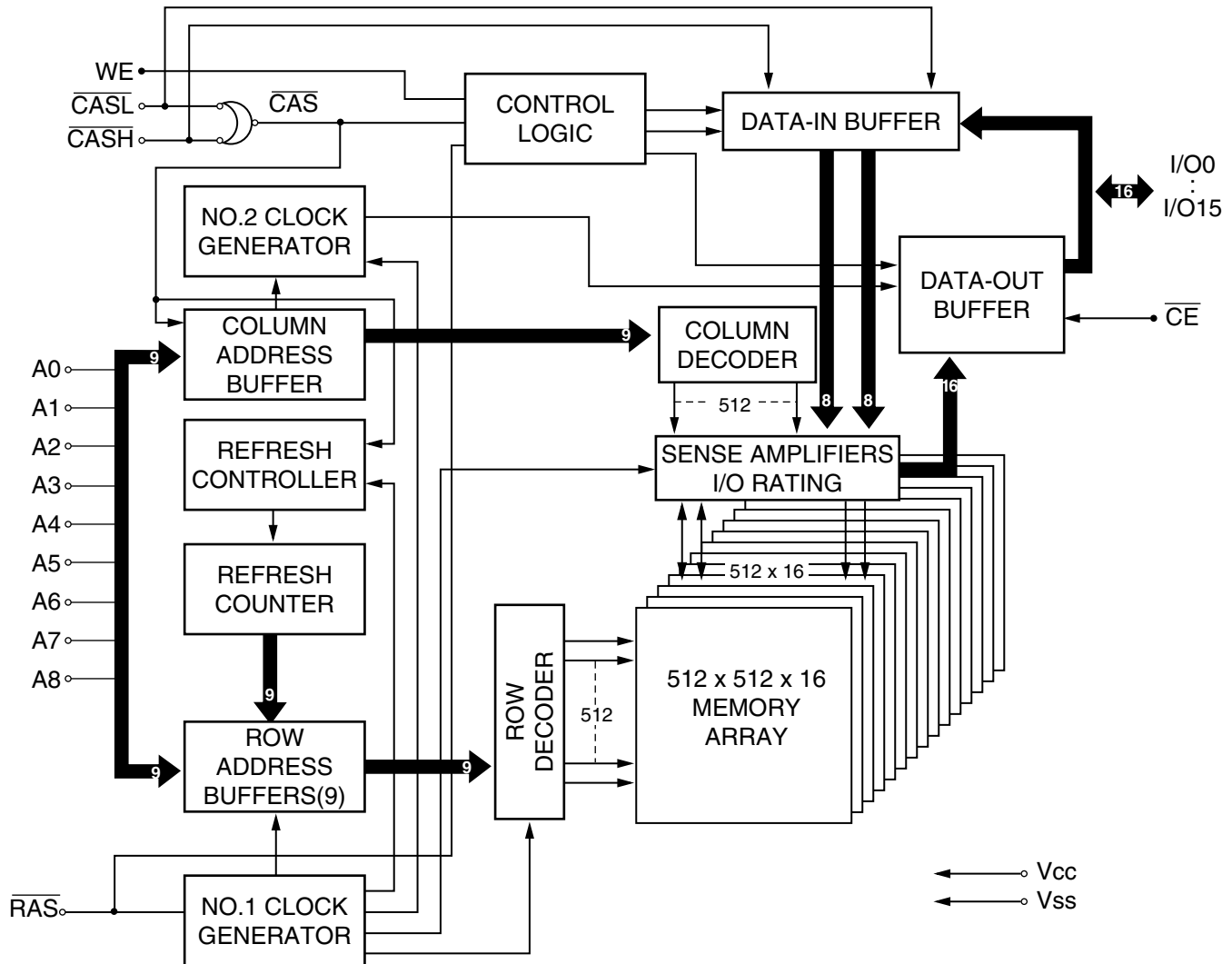
1. Pin layout



2. Pin function

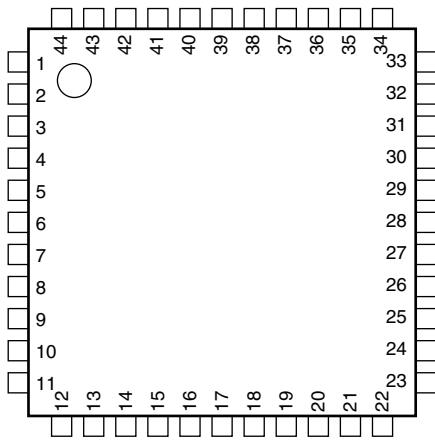
Pin No.	Symbol	I/O	Function
16~19,22~26	A0~A10	I	Address Input
14	RAS	I	Row Address Strobe
28	CASH	I	Column Address Strobe/Upper Byte Control
29	CASL	I	Column Address Strobe/Lower Byte Control
13	WE	I	Write Enable
27	OE	I	Output Enable
2~5,7~10,31~34,36~39	I/O0~I/O15	I/O	Data Input/ Ountput
1,6,20	Vcc	Supply	Power, 5V
21,35,40	Vss	Ground	Ground
11,12,15,30	NC	-	No Connect

3. Block diagram



■ M6759 (U3) : MTP microcontroller

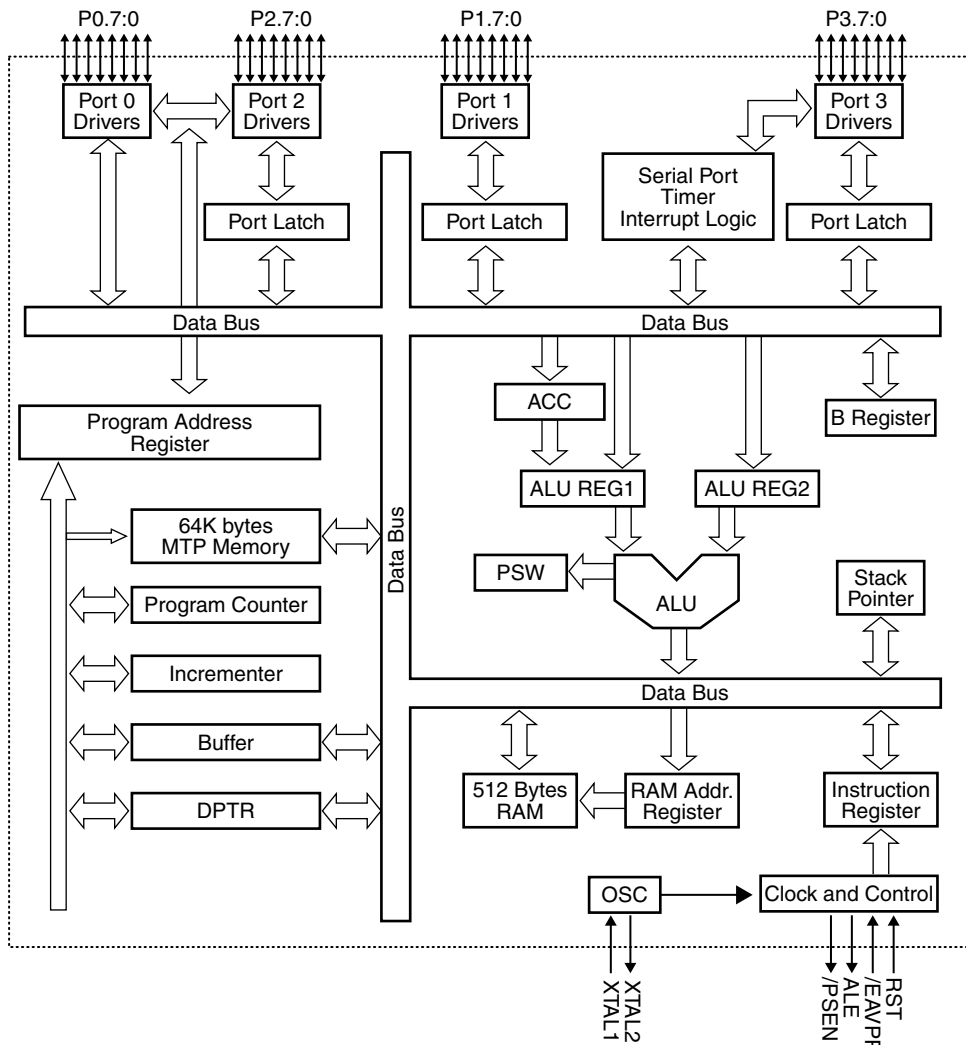
1. Pin layout



2. Pin function

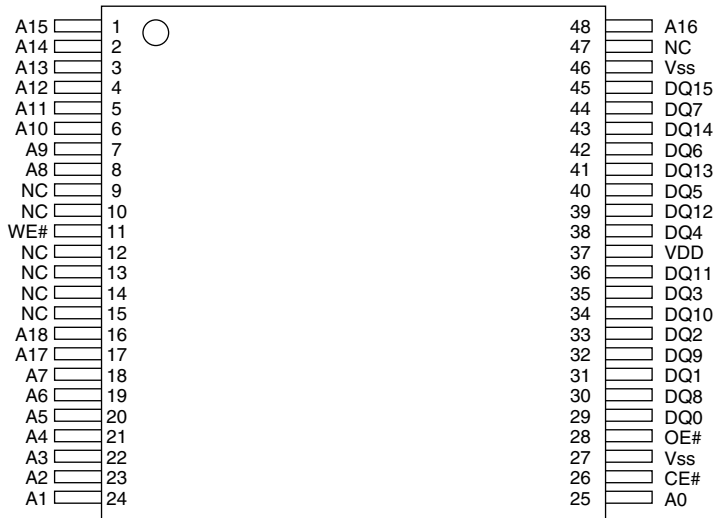
Pin No.	Symbol	I/O	Description
44	VDD	I	Power supply for internal operation, 5V input
22	GND	I	Ground
36,37,38,39, 40,41,42,43,	P0.7-P0.0 AD7-0	I/O	8 bits bi-directional I/O port Multiplexed address/data bus
10	RST	I	Reset signal
21	XTAL1	I	Crystal In
20	XTAL2	O	Crystal out
32	/PSEN	O	Program Store Enable Output
33	ALE	O	Address Latch Enable
9,8,7,6, 5,4,3,2	P1.7-P1.0 T2EX(P1.1) T2(P1.0)	I/O	8 bits bi-directional I/O port External timer/counter 2 trigger External timer/counter 2.
31,30,29,28, 27,26,25,24	P2.7 A15-A8	I/O	8 bits bi-directional I/O port
19,18,17,16, 15,14,13,11	P3.7-P3.0 /RD(P3.7) /WR(P3.6) T1(P3.5) T0(P3.4) /INT1(P3.3) /INT0(P3.2) TXD(P3.1) RXD(P3.0)	I/O	8-bit bi-directional I/O port External data memory read strobe External data memory write strobe External timer/counter 1 External timer/counter . External interrupt 1 (Negative Edge Detect) External interrupt 0 (Negative Edge Detect) Serial port output Serial port input
35	/EAVPP	I	
1,12,23,34	NC	-	

3. Block diagram

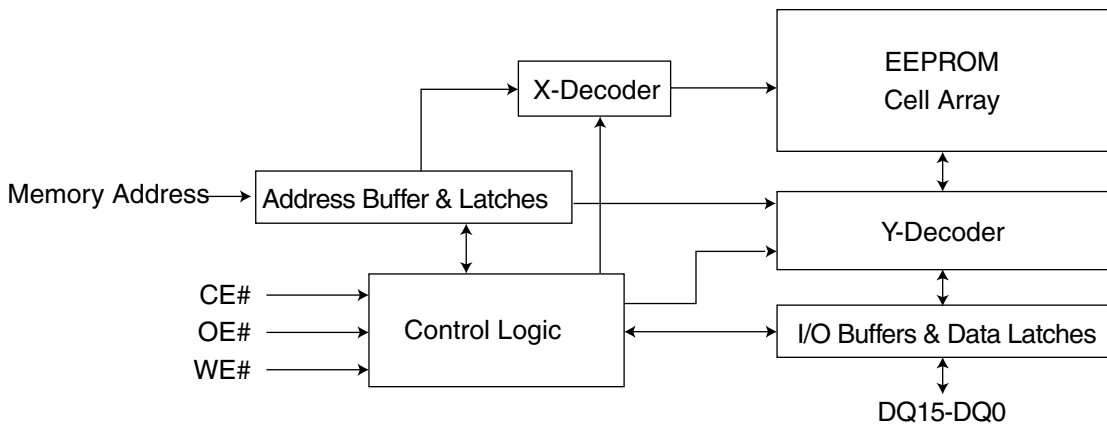


■ SST39VF800A (U6) : 8M Flash memory

1. Pin layout



2. Block diagram

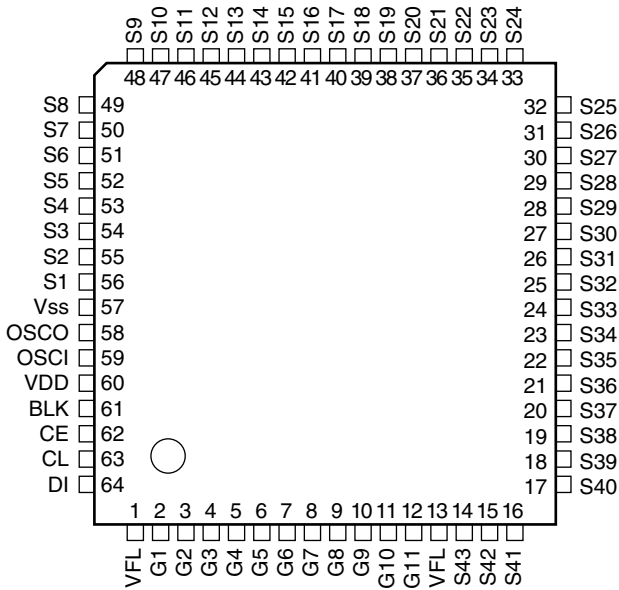


3. Pin function

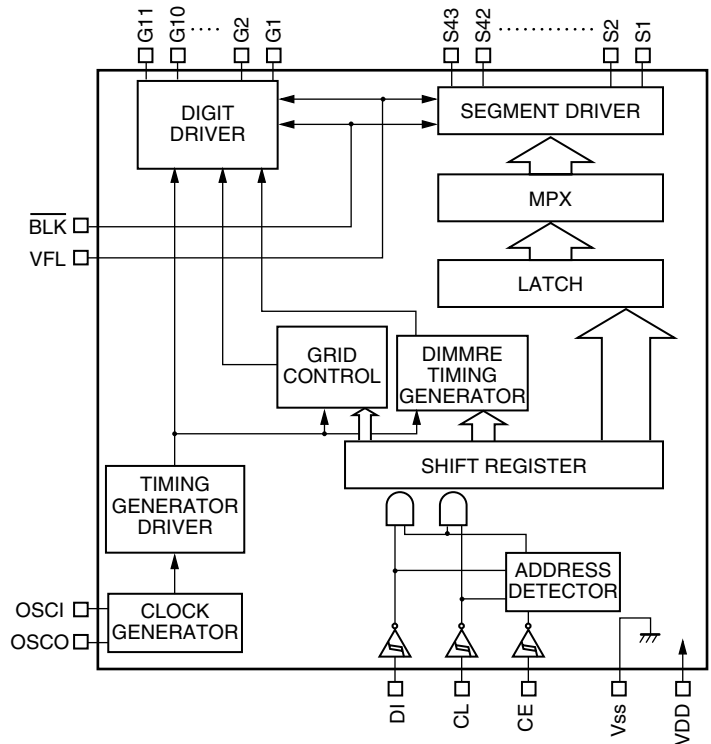
Symbol	Pin name	Function
AMS- A0	Address Inputs	To provide memory addresses. During Sector-Erase AMS-A11 address lines will select the sector. During Block-Erase AMS-A15 address lines will select the block.
DQ15- DQ0	Data Input/Output	To output data during Read cycles and receive input data during Write cycles. Data is internally latched during a Write cycle. The outputs are in tri-state when OE# or CE# is high.
CE#	Chip Enable	To activate the device when CE# is low.
OE#	Output Enable	To gate the data output buffers.
WE#	Write Enable	To control the Write operations.
VDD	Power Supply	To provide power supply voltage: 2.7-3.6V
Vss	Ground	
NC	No Connection	Unconnected pins.

■ LC75725E (UIC10) : VFD driver

1. Pin layout



2. Block diagram

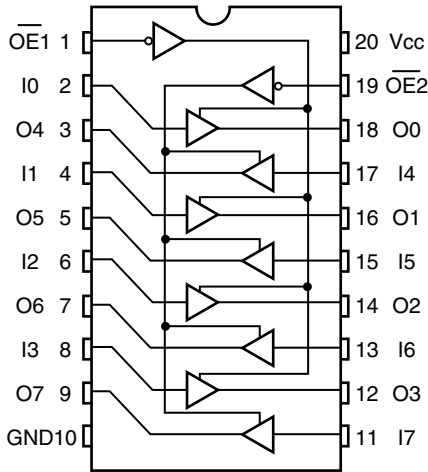


3. Pin function

Pin No.	Symbol	I/O	Function
1,13	VFL	-	Driver block power supply connection. (Both pins must be connected.)
60	VDD	-	Logic block power supply connection. Provide a voltage between 4.5 and 5.5V.
57	Vss	-	Power supply connection. Connect to the ground.
59	OSCI	I	Oscillator connection. An oscillator circuit is formed by connecting an external resistor and capacitor to these pins.
58	OSCO	O	
61	BLK	I	Display off contort input. BLK = Low (Vss)...Display off.(S1 to S43 and G1 to G11 at VFL level.) BLK = High (VDD)...Display on. Note that serial data can be transferred while the display is turned off.
63	CL	I	Serial data transfer inputs. These pins must be connected to the system microcontroller. CL: Synchronization clock DI: Transfer data CE: Chip enable
64	DI		
62	CE		
2-12	G1-G11	O	Digit outputs. These pins are P-channel open drain outputs with pull-down resistors.
56-14	S1-S43	O	Segment outputs for displaying the display data transferred by serial data input. These pins are P-channel open drain outputs with pull-down resistors.

■ **74VHCT244A (DIC12) : Buffer/Line driver**

1. Pin layout



2. Pin function

Symbol	Function
$\overline{OE1}, \overline{OE2}$	3-STATE Output Enable Inputs
I0-I7	Inputs
O0-O7	3-STATE Outputs

3. Truth table

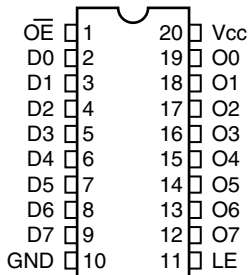
Inputs		Outputs (Pins12,14,16,18)
$\overline{OE1}$	In	
L	L	L
L	H	H
H	X	Z

Inputs		Outputs (Pins3,5,7,9)
$\overline{OE2}$	In	
L	L	L
L	H	H
H	X	Z

H:HIGH Voltage Level
L:LOW Voltage Level
I:Immaterial
Z:High Impedance

■ **74LVT573 (U10, U11, U12) : Latch**

1. Pin layout



2. Pin function

Symbol	Function
D0-D7	Data Inputs
LE	Latch Enable Input
OE	Output Enable Input
O0-O7	3-STATE Latch Outputs

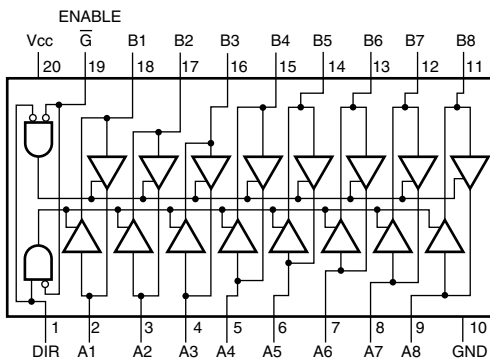
3. Truth table

Inputs			Outputs
LE	OE	Dn	On
X	H	X	Z
H	L	L	L
H	L	H	H
L	L	X	O0

H:HIGH Voltage Level
L:LOW Voltage Level
Z:High Impedance
X:Immaterial
O0:Previous O0 before HIGH to LOW transition of Latch Enable

■ **MM74HCT245 (U15) : Transceiver**

1. Pin layout



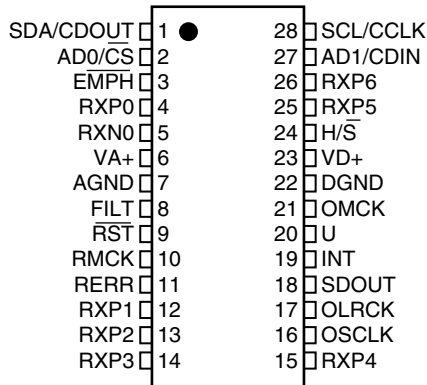
2. Truth table

Control Inputs		Operation
\overline{G}	DIR	245
L	L	B data to A bus
L	H	A data to B bus
H	X	isolation

H=HIGH Level
L=LOW Level
X=Irrelevant

■ CS8415A (DIC14) : Digital audio receiver

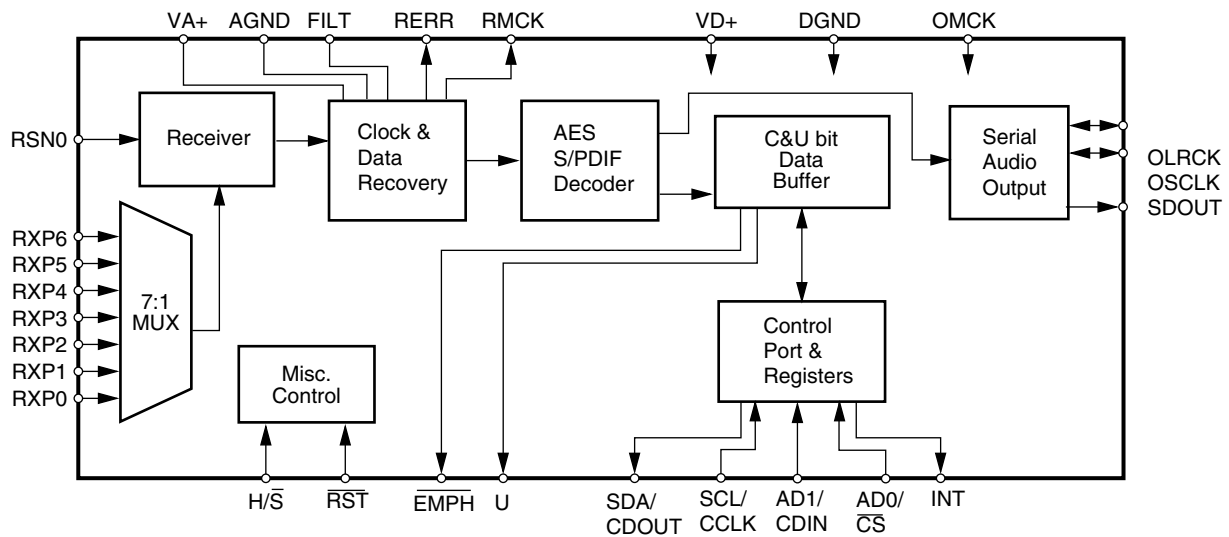
1. Pin layout



2. Pin function

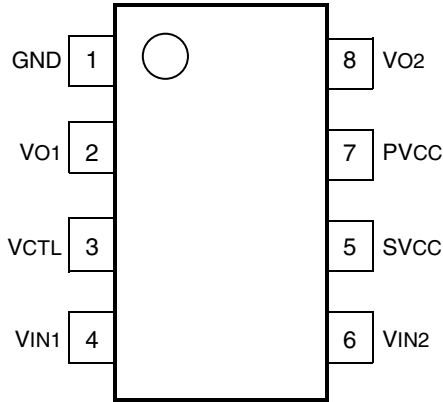
Pin No.	Symbol	I/O	Function
1	SDA/CDOUT	I/O	Serial Control Data I/O(I2C) / Data Out(SPI)
2	AD0/CS	I/O	Address Bit 0(I2C) / Control Port Chip Select(SPI)
3	EMPH	O	Pre-Emphasis
4	RXP0	I	AES3/SPDIF Receiver Power
5	RXN0		
6	VA+	I	Positive Analog Power
7	AGND	I	Analog Ground
8	FILT	O	PLL Loop Filter
9	RST	O	Reset
10	RMCK	I/O	Input Section Recovered Master Clock
11	RERR	O	Receiver Error
12,13 14,15 25,26	RXP1,RXP2 RXP3,RXP4 RXP5,RXP6	I	Additional AES3/SPDIF Receiver Port
16	OSCLK	I/O	Serial Audio Output Bit Clock
17	OLRCK	I/O	Serial Audio Output Left/Right Clock
18	SDOUT	O	Serial Audio Output Data
19	INT	O	Interrupt
20	U	O	User Data
21	OMCK	I	System Clock
22	DGND	I	Digital Ground
23	VD+	I	Positive Digital Power
24	H/S	I	Hardware/Software Mode Control
27	AD1/CDIN	I	Address Bit 1(I2C) / serial Control Data in (SPI)
28	SCL/CCLK	I	Control Port Clock

3. Block diagram

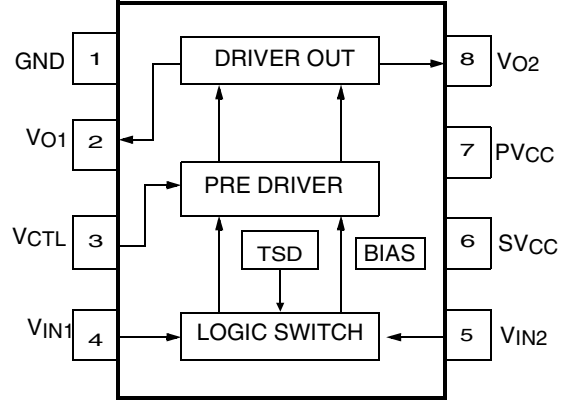


FAN8082 (U10) : DC motor driver

1. Pin layout



2. Block diagram

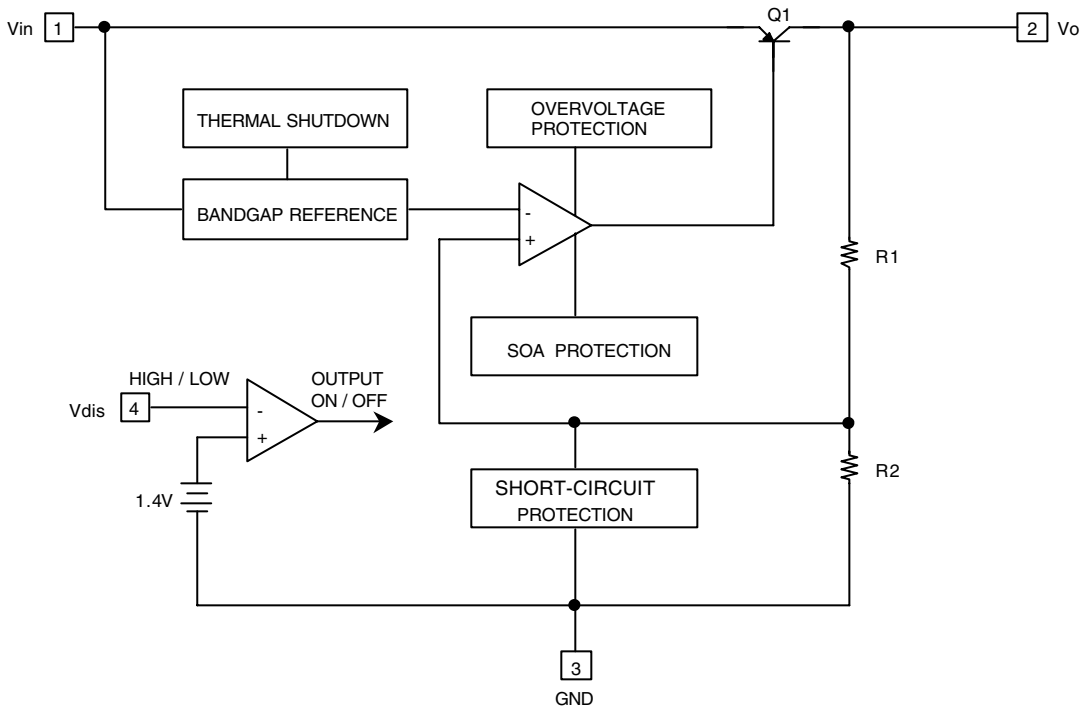


3. Pin function

Pin No.	Symbol	I/O	Function
1	GND	-	Ground
2	VO1	O	Output 1
3	VCTL	I	Motor speed control
4	VIN1	I	Input 1
5	VIN2	I	Input 2
6	SVCC	-	Supply voltage (Signal)
7	PVCC	-	Supply voltage (Power)
8	VO2	O	Output 2

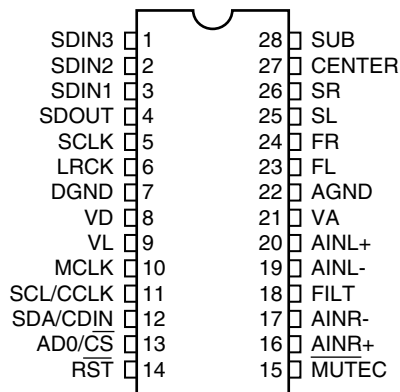
KA78R05 (PQ2,PQ6)/ KA78R08 (PQ5)/ KA278R05 (PQ1)/ KA278R33 (PQ4) : Regulator

1. Block diagram



■ **CS4228A (DIC15) : D/A converter**

1. Pin layout

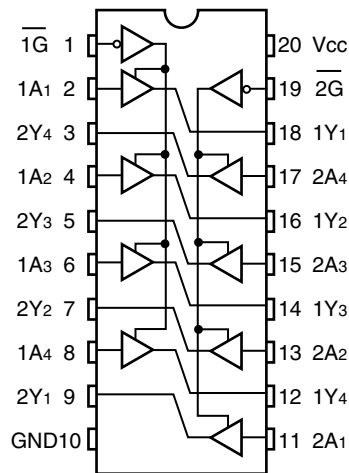


2. Pin function

Pin No.	Symbol	Function
1,2,3	SDIN1 SDIN2 SDIN3	Serial Audio Data In
4	SDOUT	Serial Audio Data Out
5	SCLK	Serial Clock
6	LRCK	Left/Right Clock
7	DGND	Digital Ground
8	VD	Digital Power
9	VL	Digital Interface Power
10	MCLK	Master Clock
11	SCL/CCLK	Serial Control Interface Clock
12	SDA/CDIN	Serial Control Data I/O
13	ADO/CS	Address Bit 0/ Chip Select
14	RST	Reset
15	MUTE C	Mute Control
16,17 19,20	AINR+,AINR- AINL+,AINL-	Differential Analog Inputs
18	FILT	Internal Voltage Filter
21	VA	Analog Power
22	AGND	Analog Ground
23,24,25 26,27,28	FR,FL,SR,SL SUB,CENTER	Analog Outputs

■ **74LCX244 (DIC13) : Bus buffer**

1. Pin layout



2. Pin function

Pin No.	Symbol	Function
1	1G	Output Enable Input
2,4,6,8	1A1 to 1A4	Data Inputs
9,7,5,3	2Y1 to 2Y4	Data Outputs
11,13,15 17	2A1 to 2A4	Data Inputs
18,16,14 12	1Y1 to 1Y4	Data Outputs
19	2G	Outputs Enable Input
10	GND	Ground(0V)
20	Vcc	Positive Supply Voltage

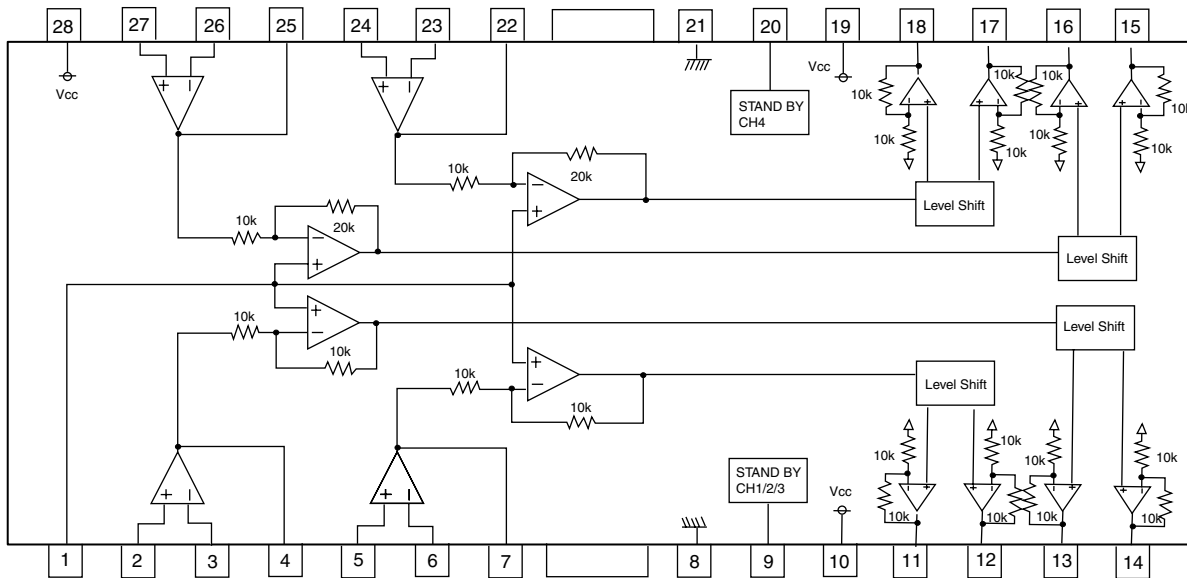
3. Truth table

INPUT		OUTPUT
1G	An	Yn
L	L	L
L	H	H
H	X	Z

X:"H"or"L"
Z:High impedance

■ BA5983FM (U6) : 4CH driver

1. Block diagram



2. Pin function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	BLAS IN	I	Input for Bias-amplifier	15	VO4(+)	O	Non inverted output of CH4
2	OPIN1(+)	I	Non inverting input for CH1 OP-AMP	16	VO4(-)	O	Inverted output of CH4
3	OPIN1(-)	I	Inverting input for CH1 OP-AMP	17	VO3(+)	O	Non inverted output of CH3
4	OPOUT1	O	Output for CH1 OP-AMP	18	VO3(-)	O	Inverted output of CH3
5	OPIN2(+)	I	Non inverting input for CH2 OP-AMP	19	PowVcc2	-	Vcc for CH3/4 power block
6	OPIN2(-)	I	Inverting input for CH2 OP-AMP	20	STBY2	I	Input for Ch4 stand by control
7	OPOUT2	O	Output for CH2 OP-AMP	21	GND	-	Substrate ground
8	GND	-	Substrate ground	22	OPOUT3	O	Output for CH3 OP-AMP
9	STBY1	I	Input for CH1/2/3 stand by control	23	OPIN3(-)	I	Inverting input for CH3 OP-AMP
10	PowVcc1	-	Vcc for CH1/2 power block	24	OPIN3(+)	I	Non inverting input for CH3 OP-AMP
11	VO2(-)	O	Inverted output of CH2	25	OPOUT4	O	Output for CH4 OP-AMP
12	VO2(+)	O	Non inverted output of CH2	26	OPIN4(-)	I	Inverting input for CH4 OP-AMP
13	VO1(-)	O	Inverted output of CH1	27	OPIN4(+)	I	Non inverting input for CH4 OP-AMP
14	VO1(+)	O	Non inverted output of CH1	28	PreVcc	-	Vcc for pre block

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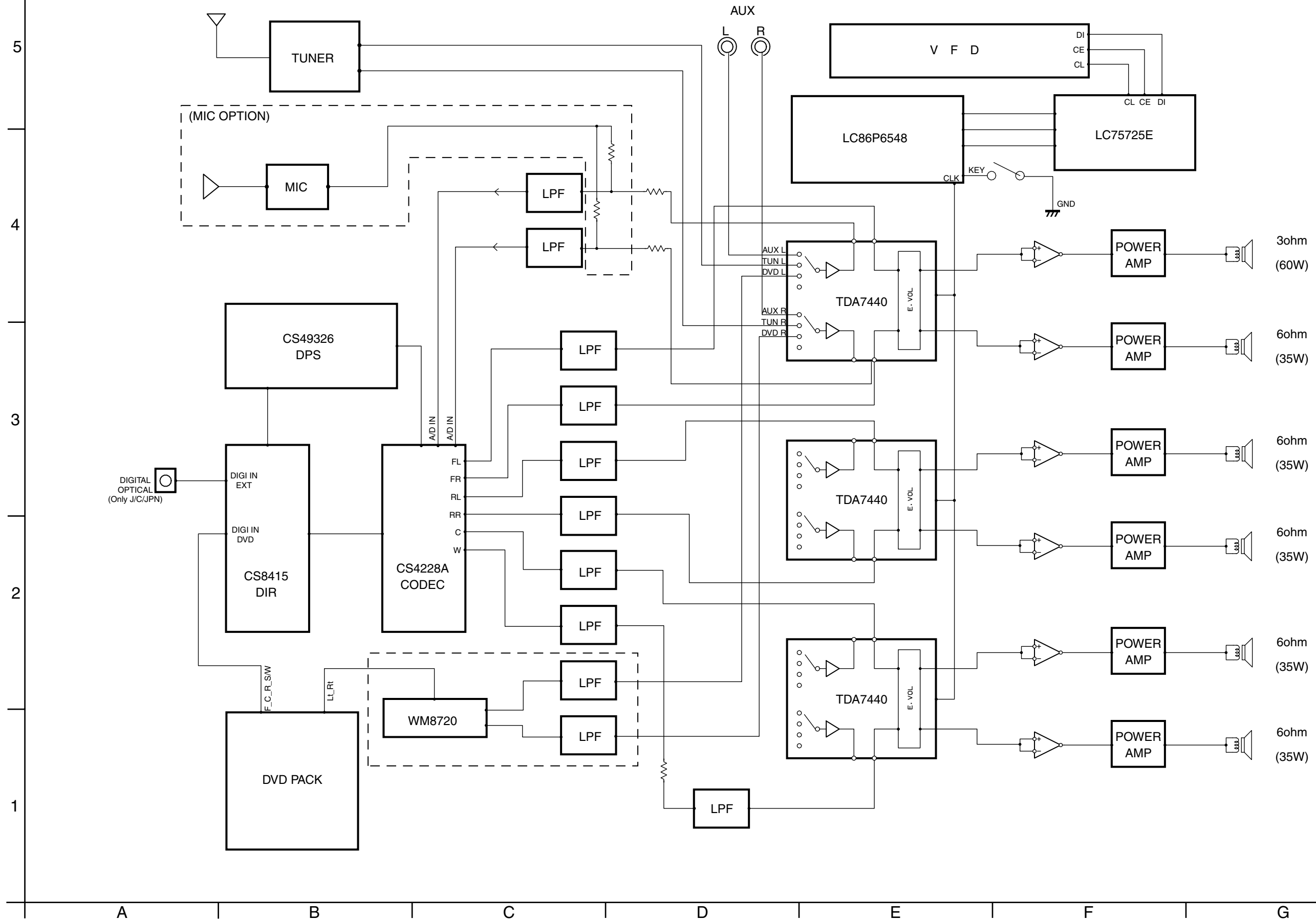
VICTOR COMPANY OF JAPAN, LIMITED

AUDIO & COMMUNICATION BUSINESS DIVISION

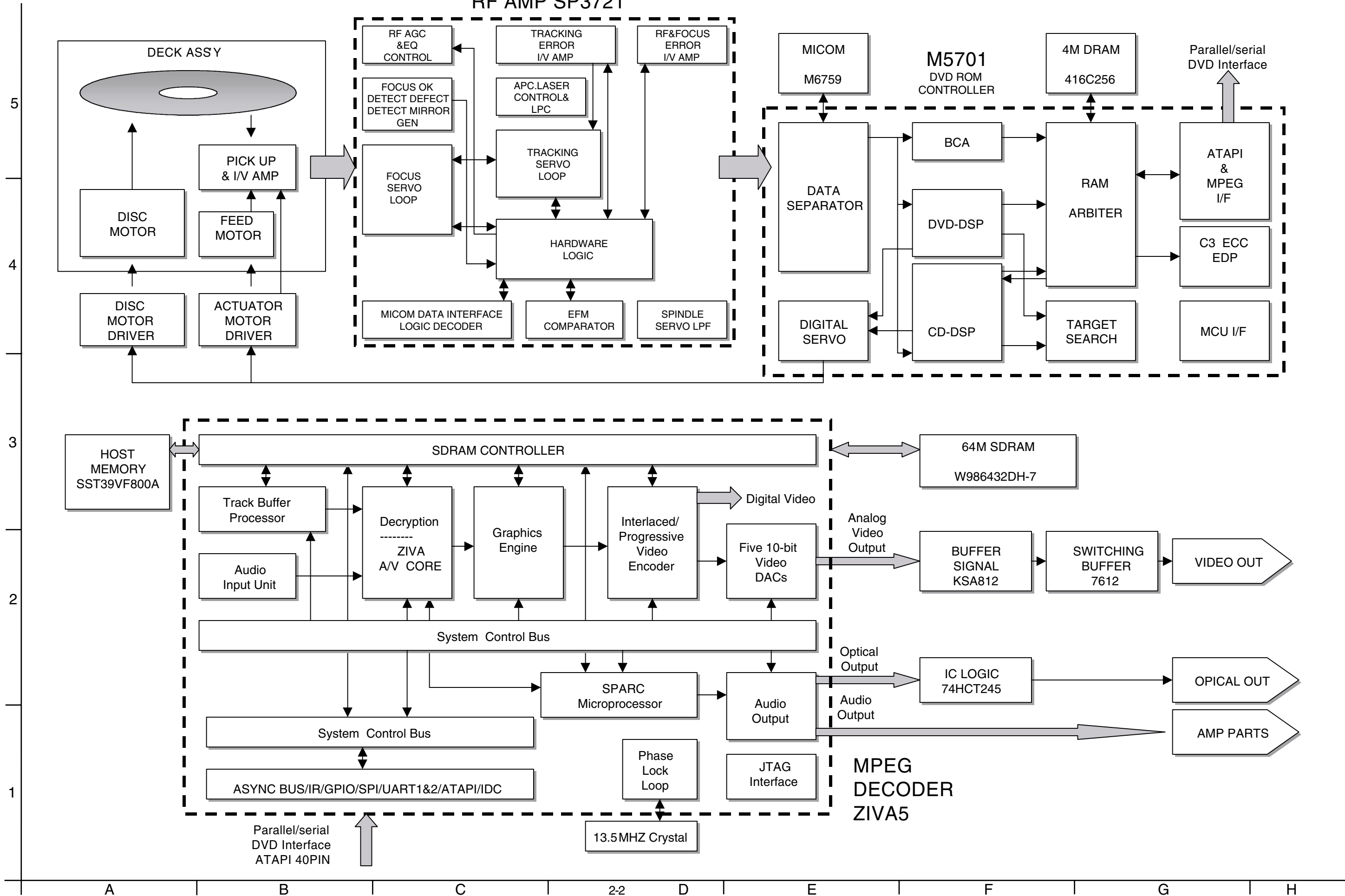
PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

Block diagrams

■ Main section

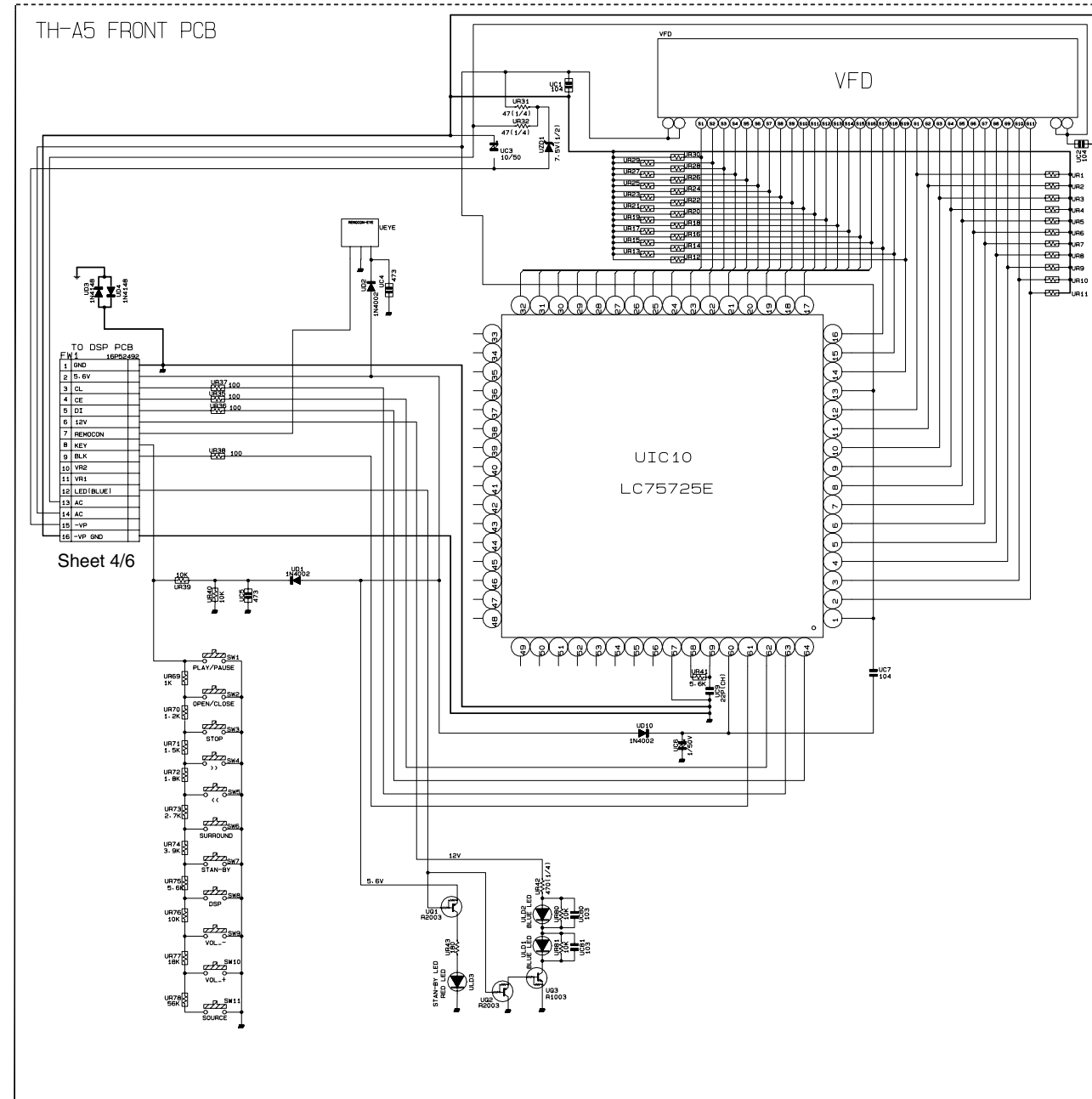


■ DVD mecha block section

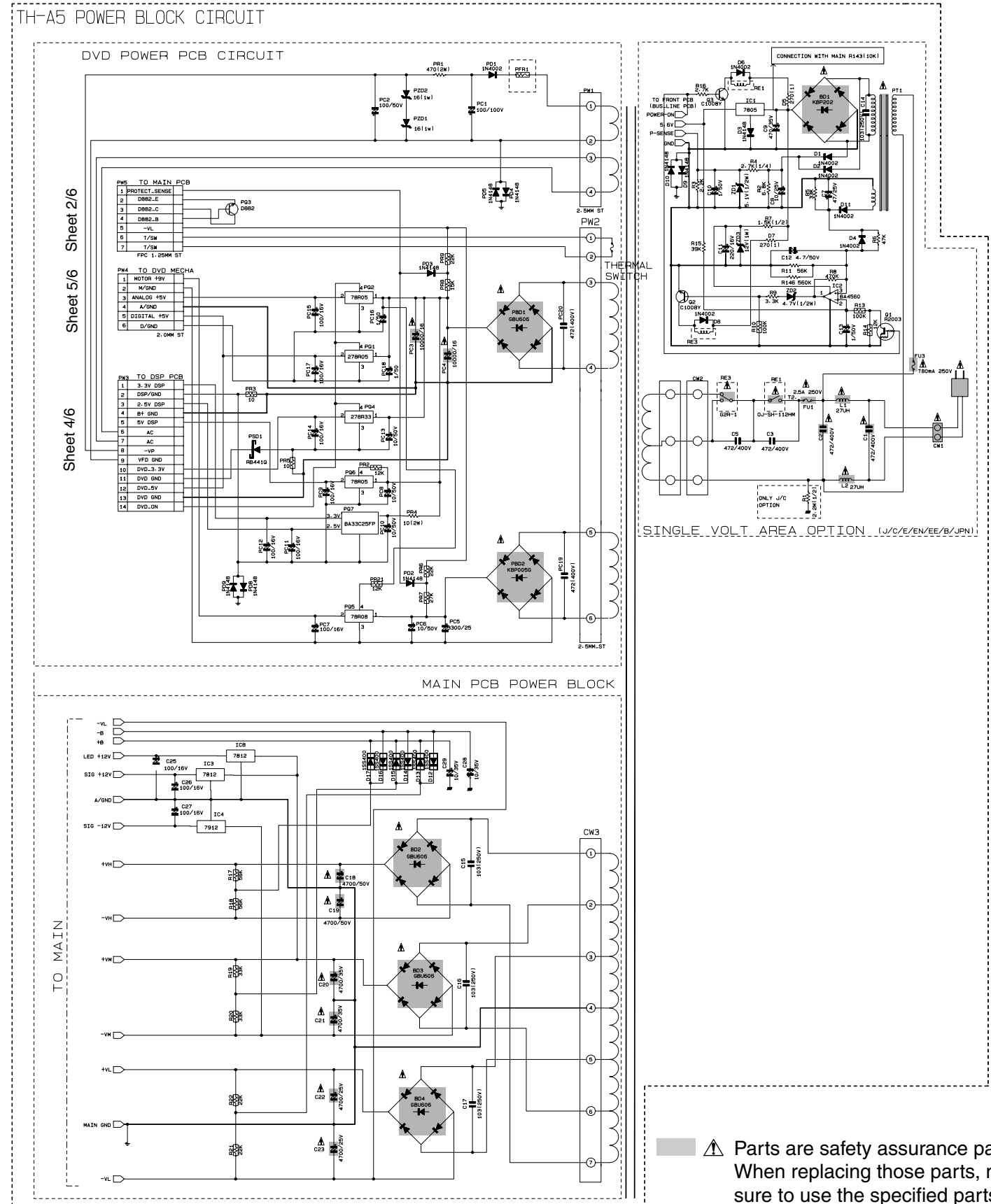


Standard schematic diagrams

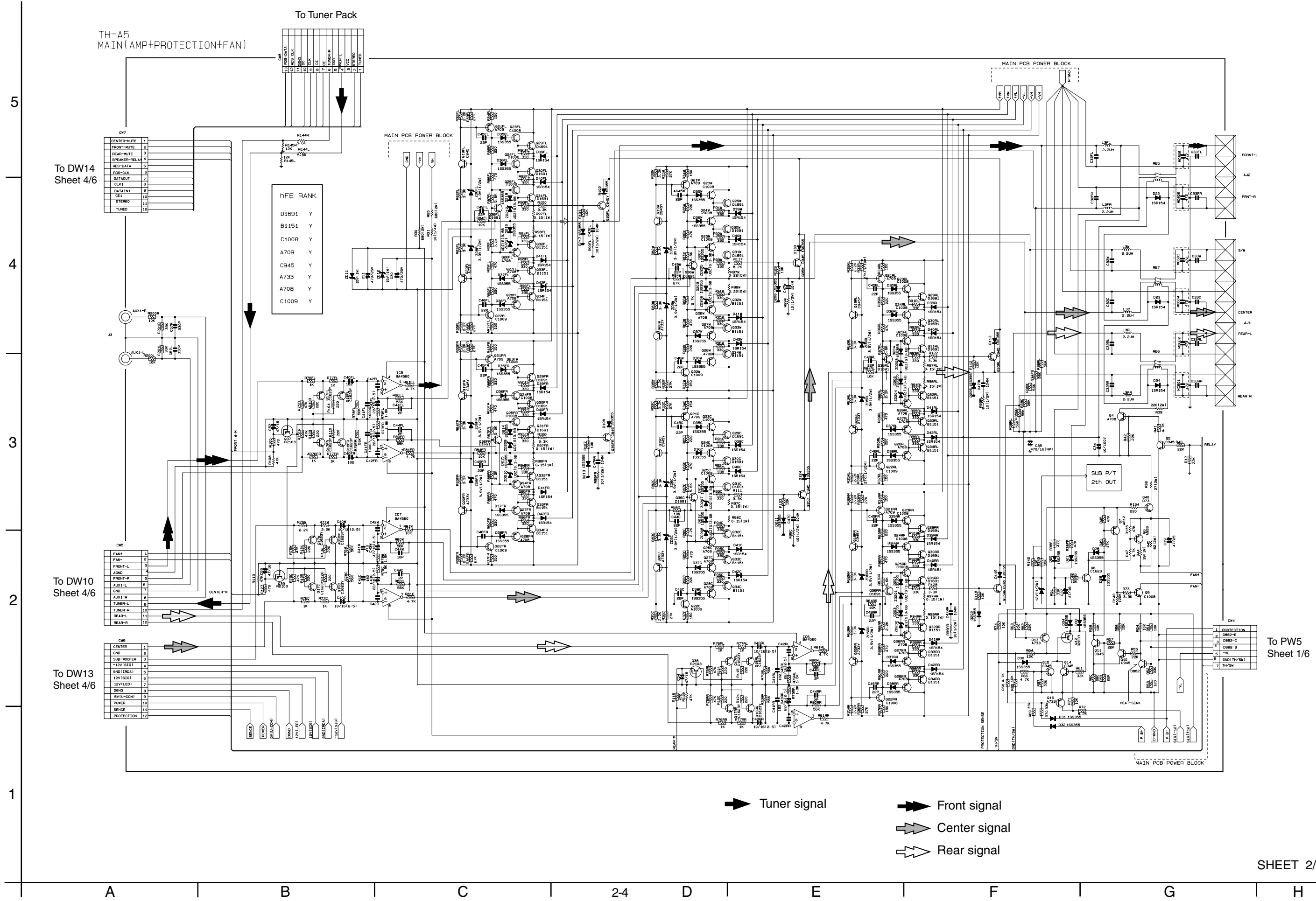
FL display & System control section / Power supply section



SHEET NUMBER	CIRCUIT DESCRIPTION
1/6	FL display & System control / Power supply
2/6	Main
3/6	Video signal output
4/6	DSP
5/6	DVD loader
6/6	DVD MPEG

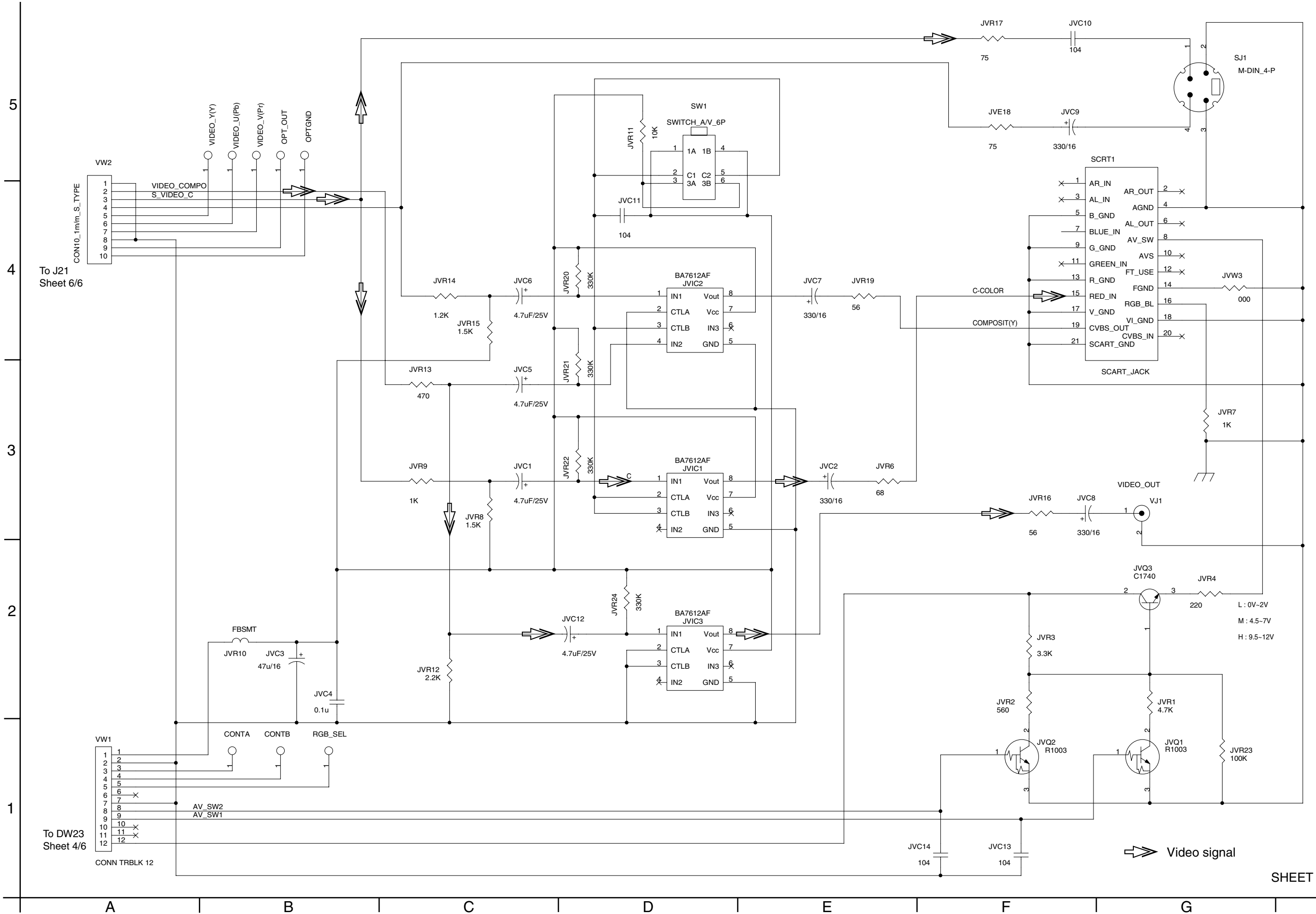


■ Main section



- ➡ Tuner signal
- ➡ Front signal
- ➡ Center signal
- ➡ Rear signal

Video signal output section



To J21 Sheet 6/6

To DW23 Sheet 4/6

■ DSP section

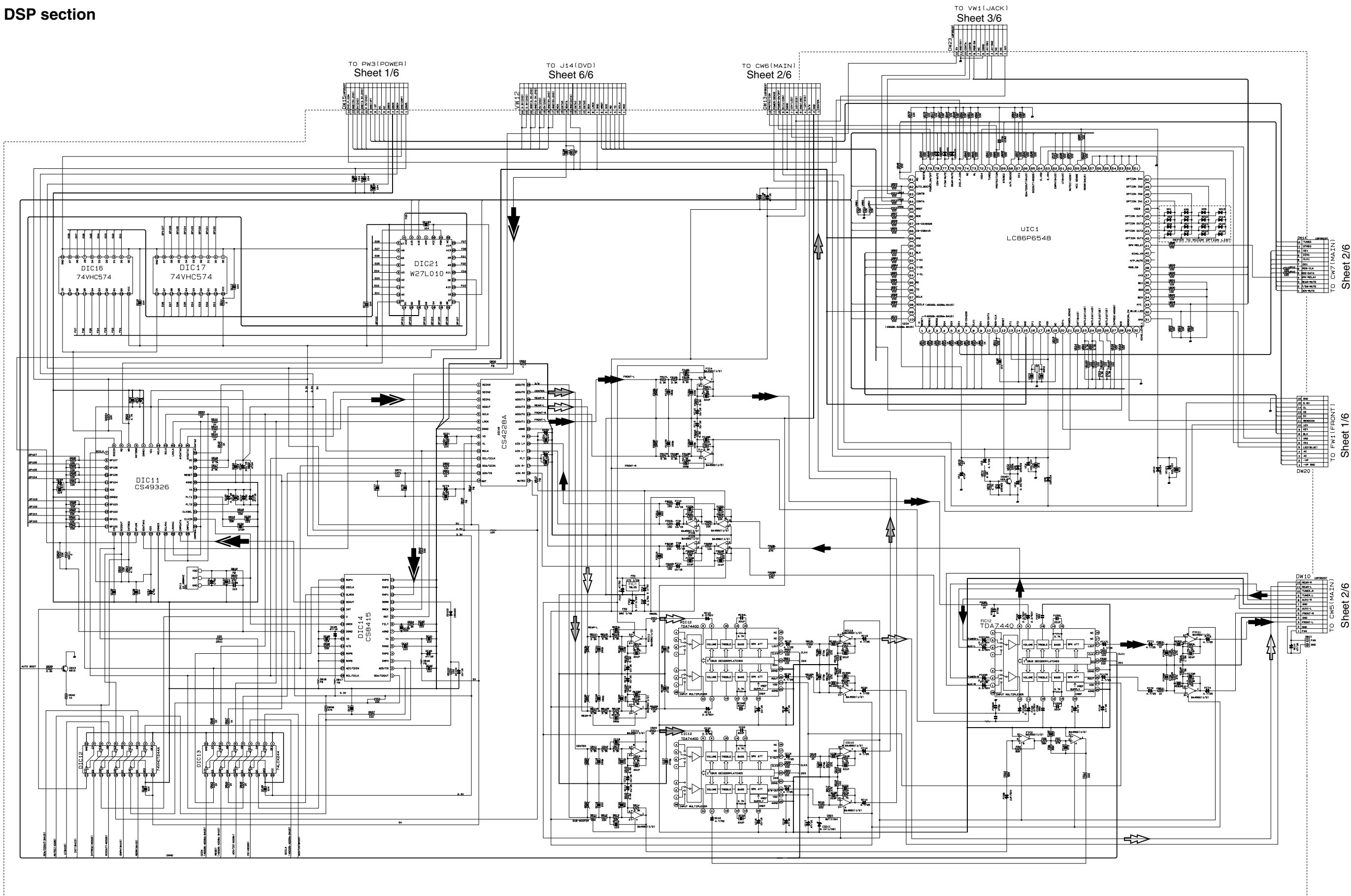
5

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2

1



- ➡ Tuner signal
- ➡ Front signal
- ➡ Digital audio signal
- ➡ Center signal
- ⏏ Rear signal

DVD loader section

5

4

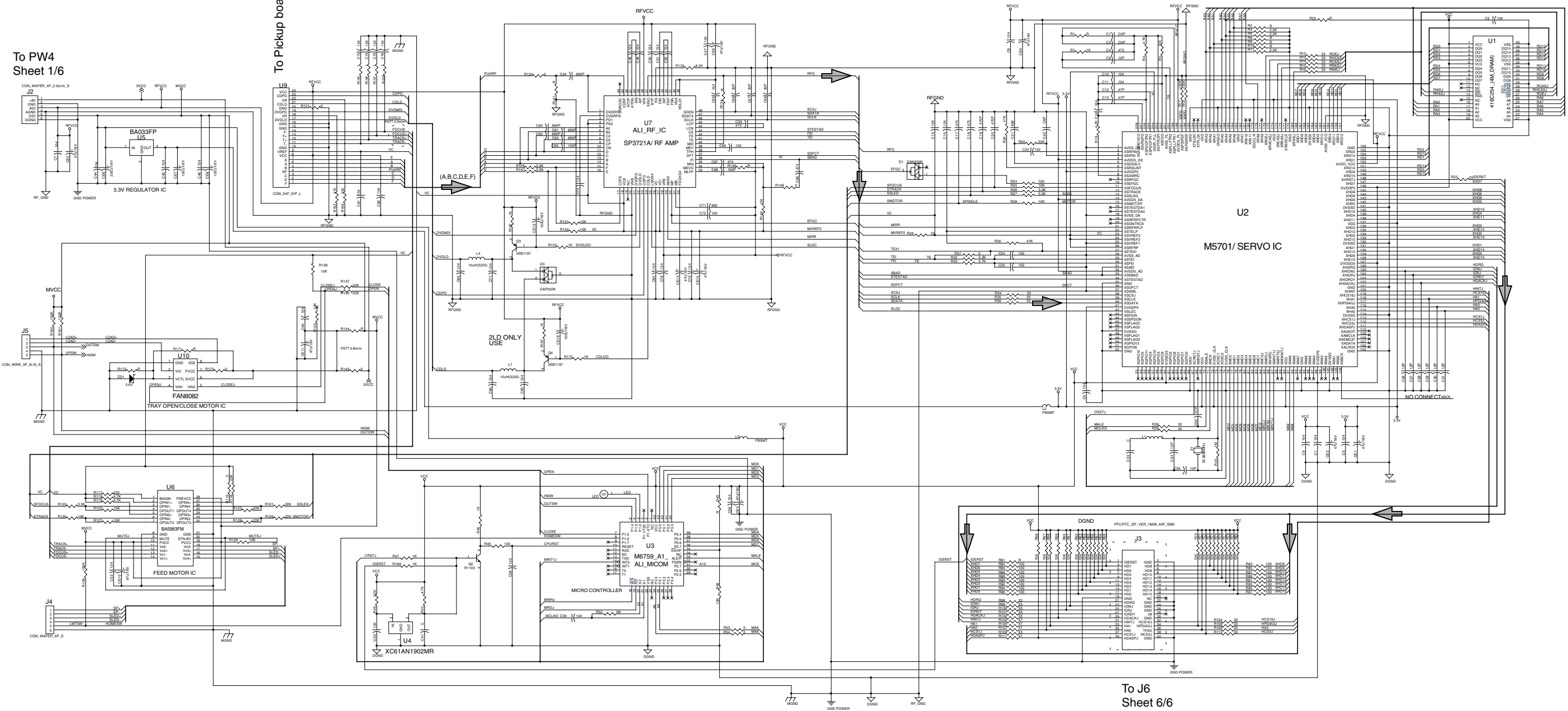
3

2

1

To PW4
Sheet 1/6

To Pickup board



U2
M5701/ SERVO IC

To J6
Sheet 6/6

➔ Digital data signal

DVD MPEG section

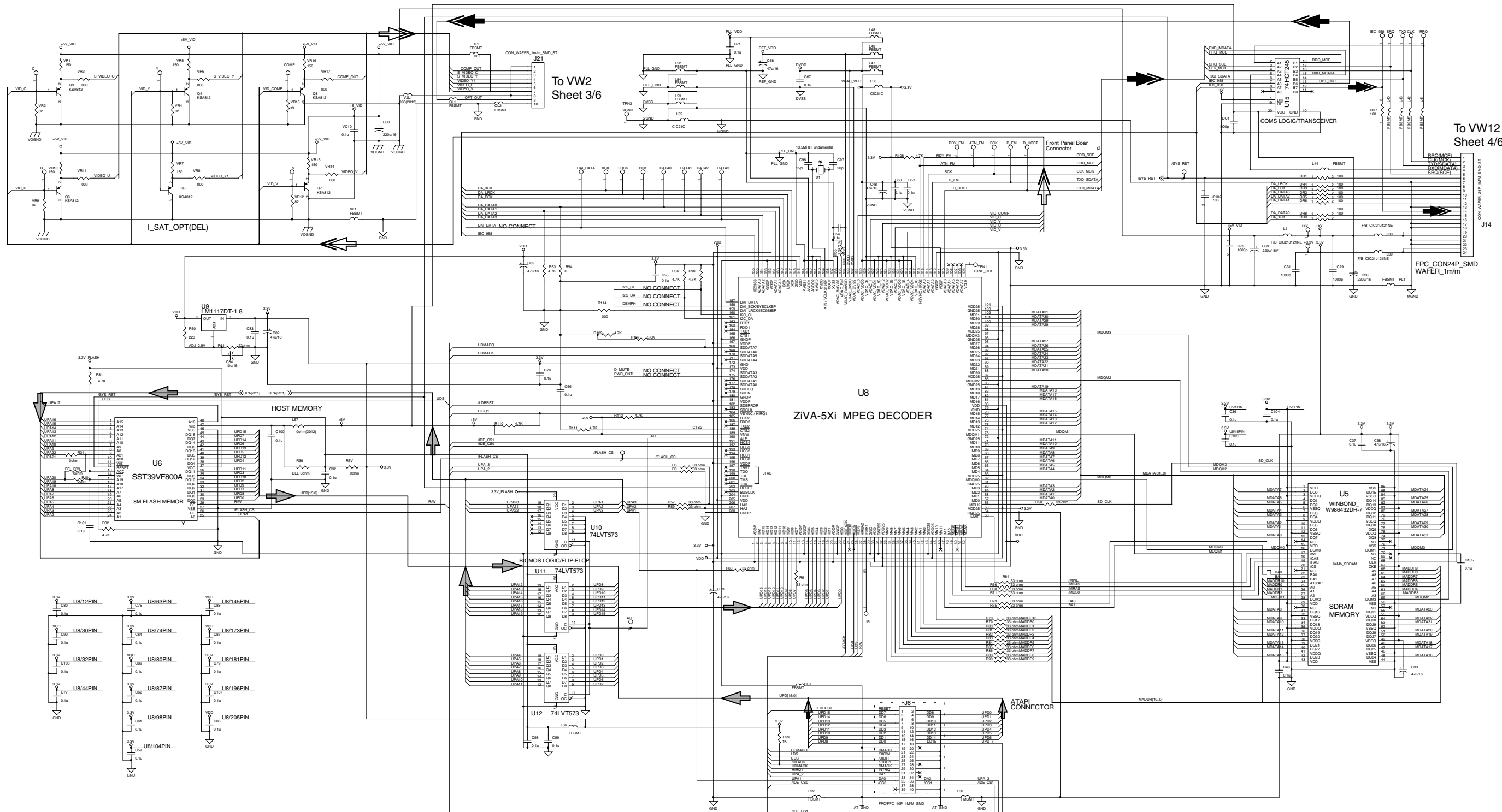
5

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1



To VW2 Sheet 3/6

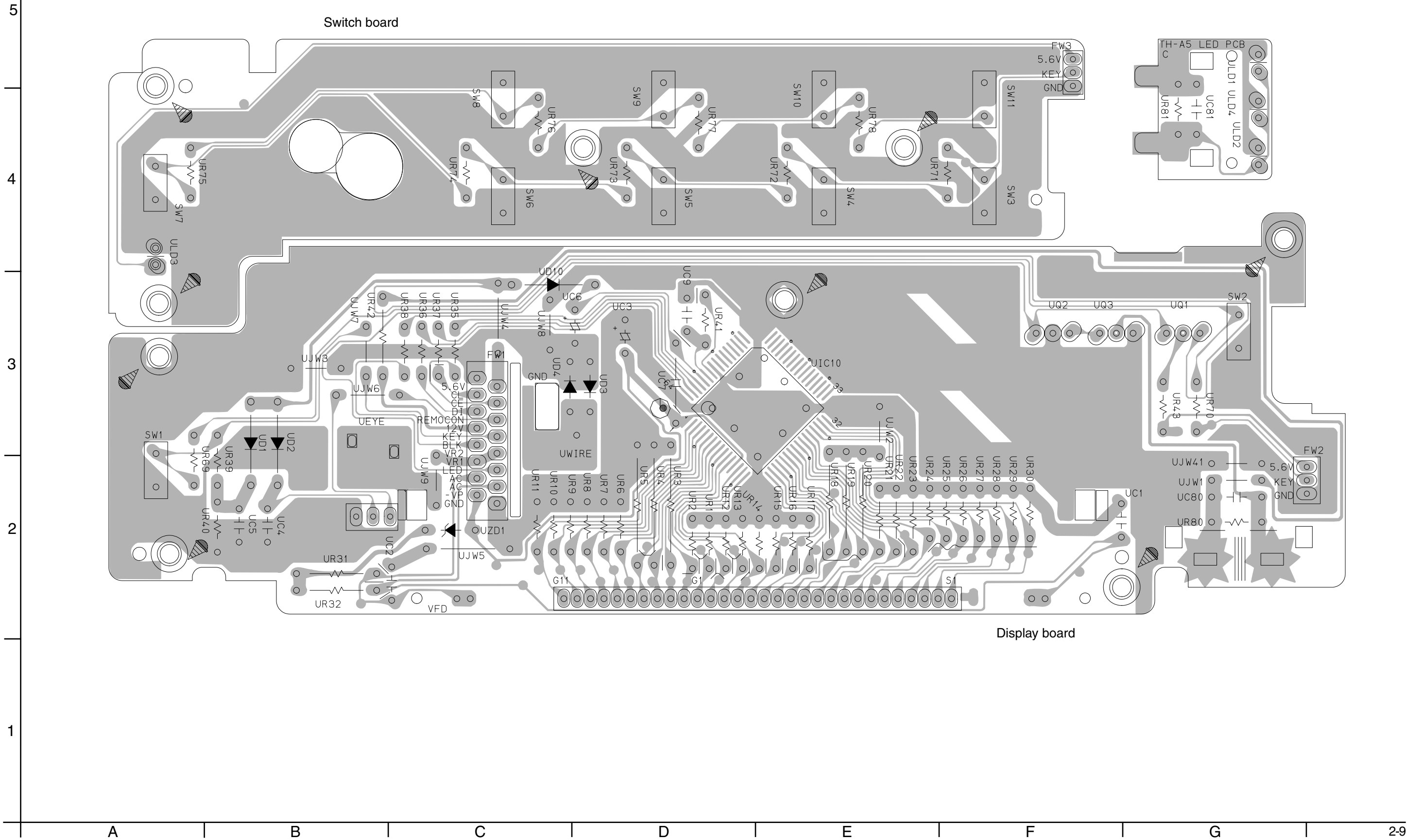
To VW12 Sheet 4/6

To J3 Sheet 5/6

- Digital data signal
- Digital audio signal
- Video signal

Printed circuit boards

■ Front board



■ Main board (Forward side)

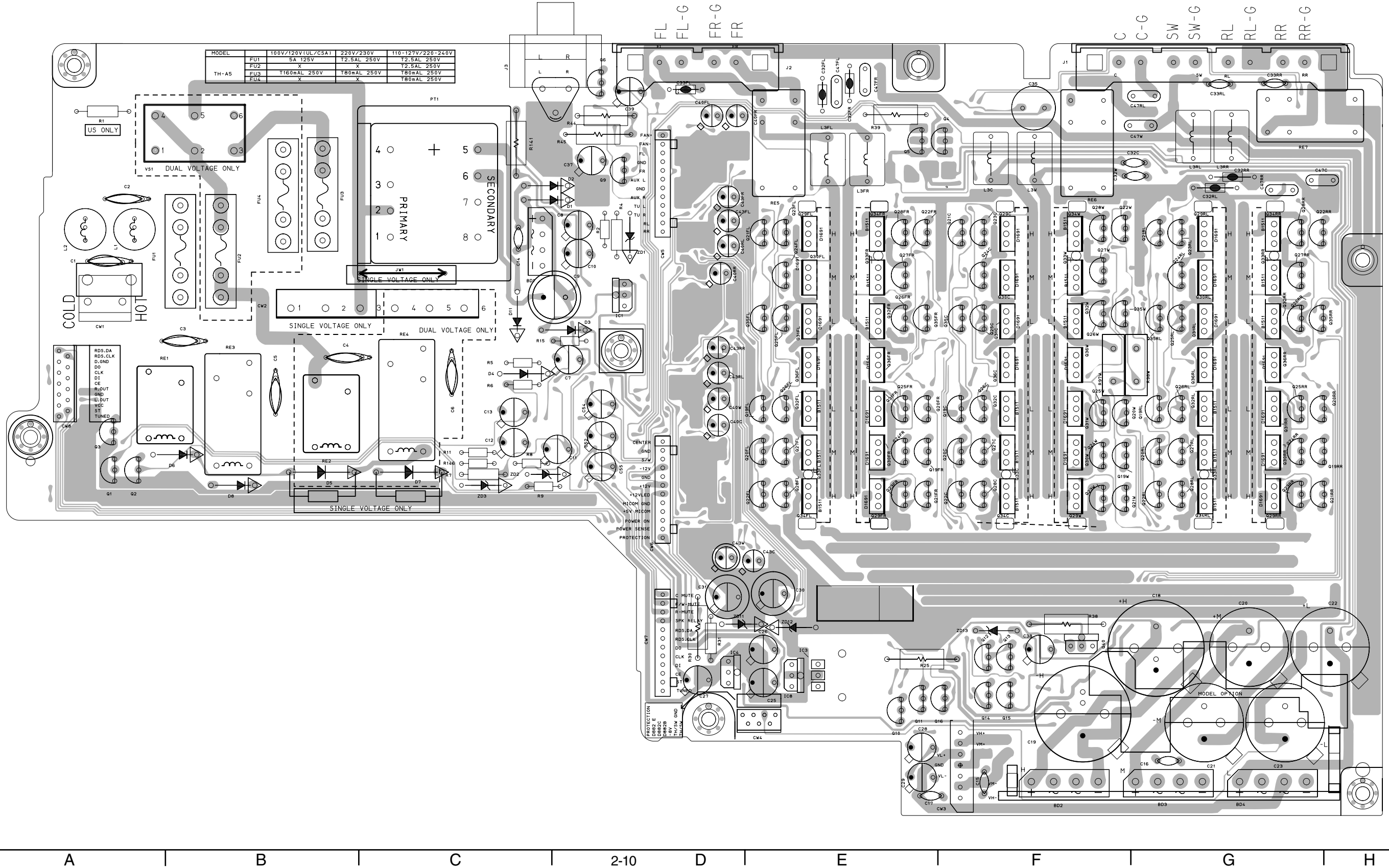
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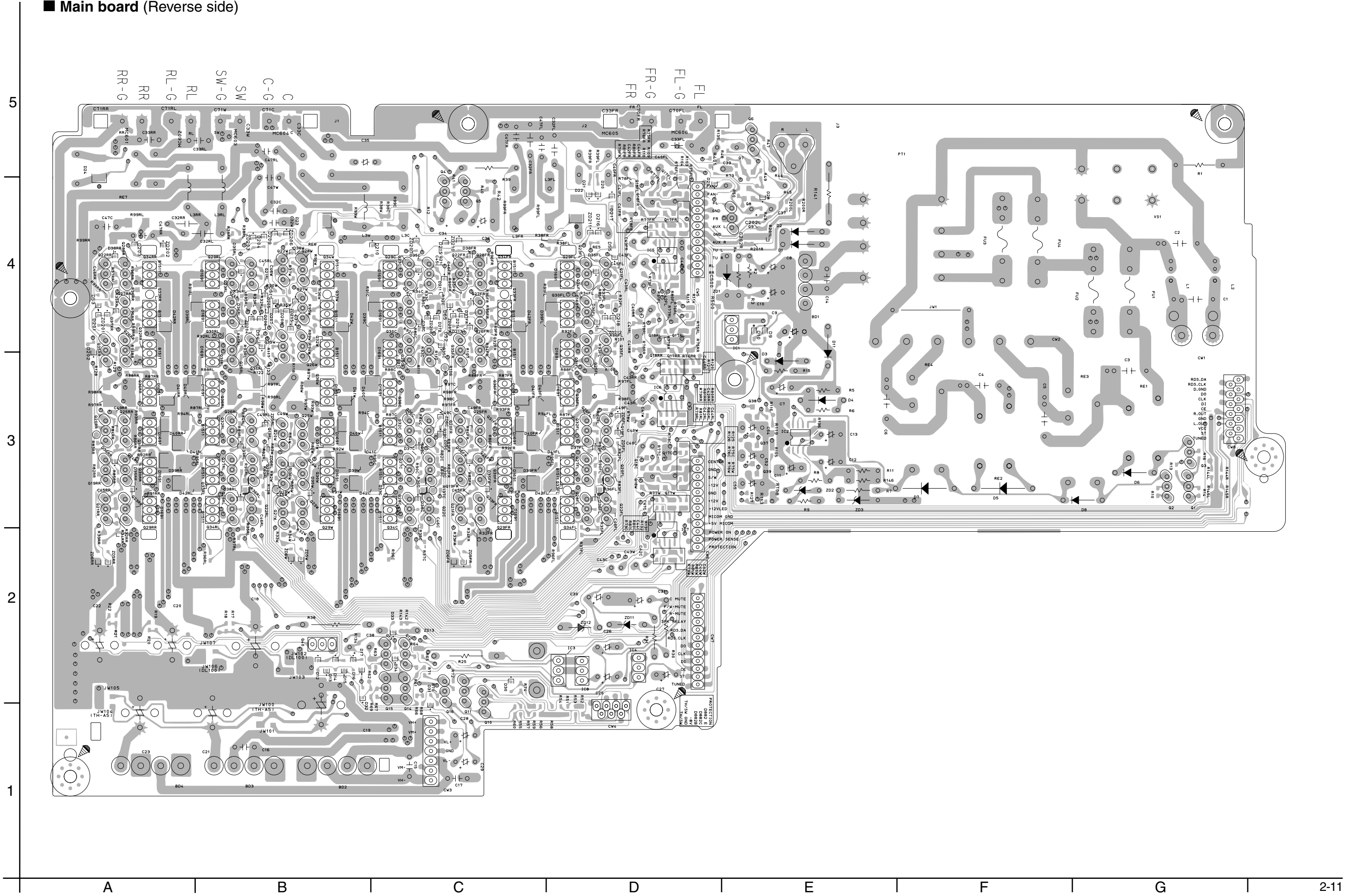
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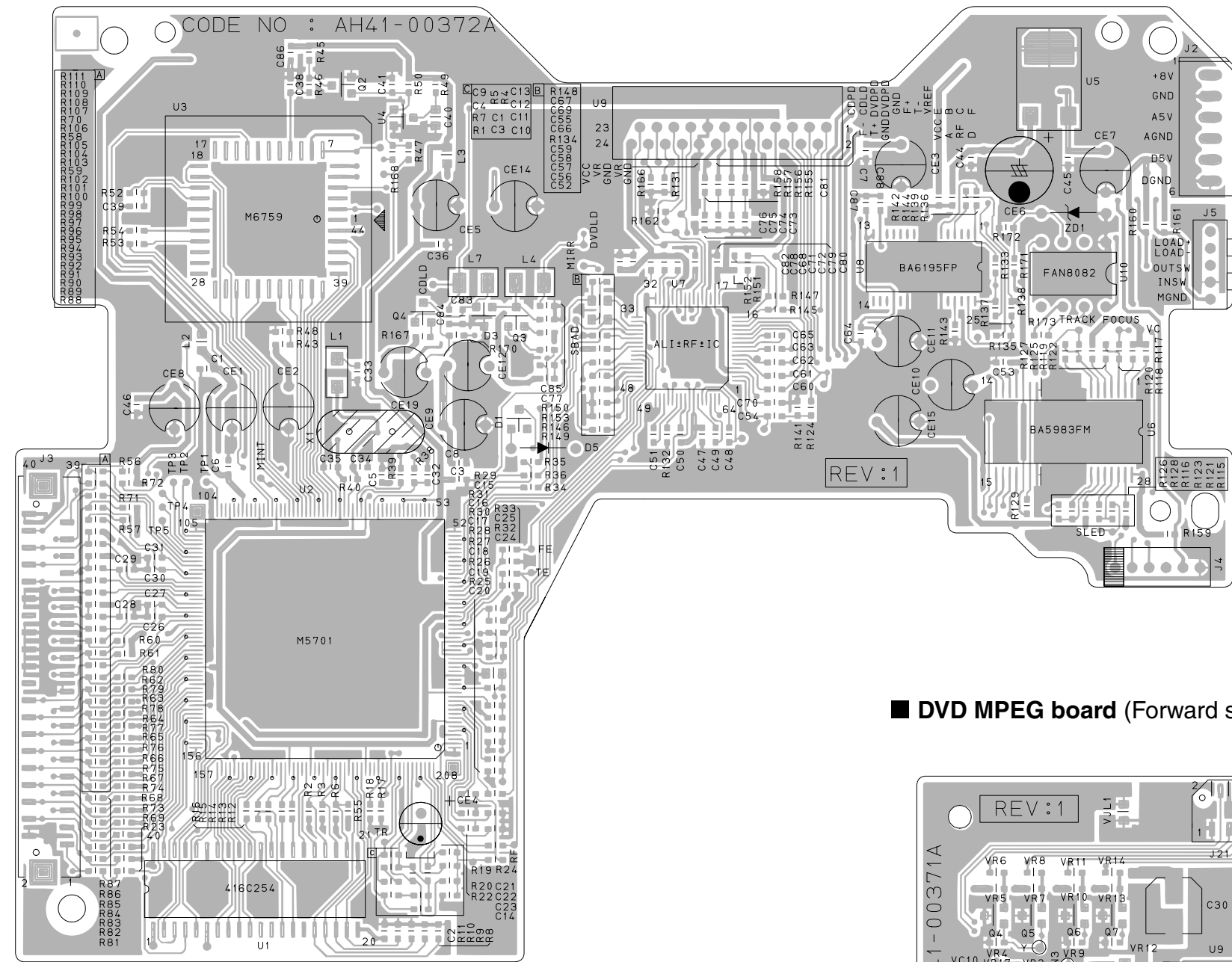


A B C 2-10 D E F G H

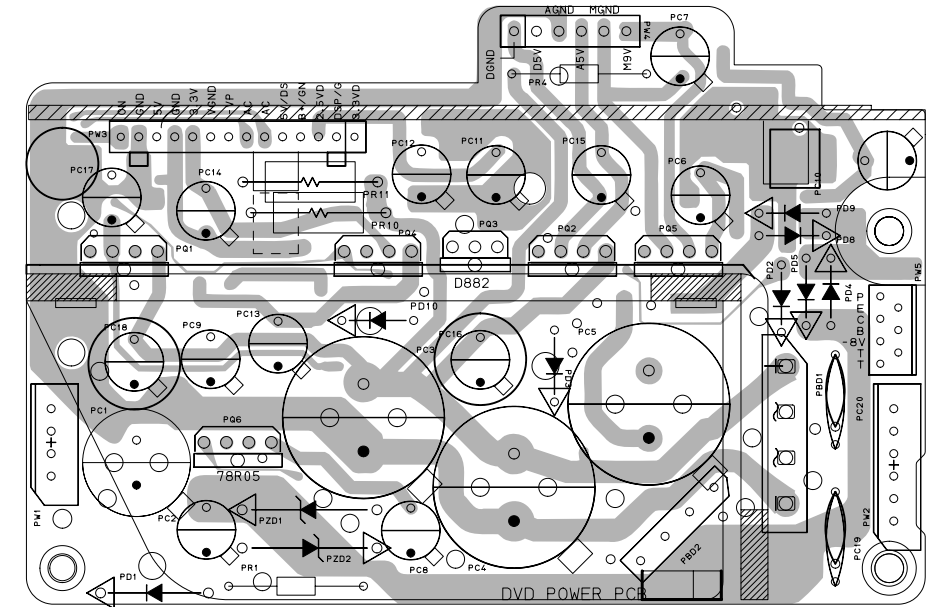
■ Main board (Reverse side)



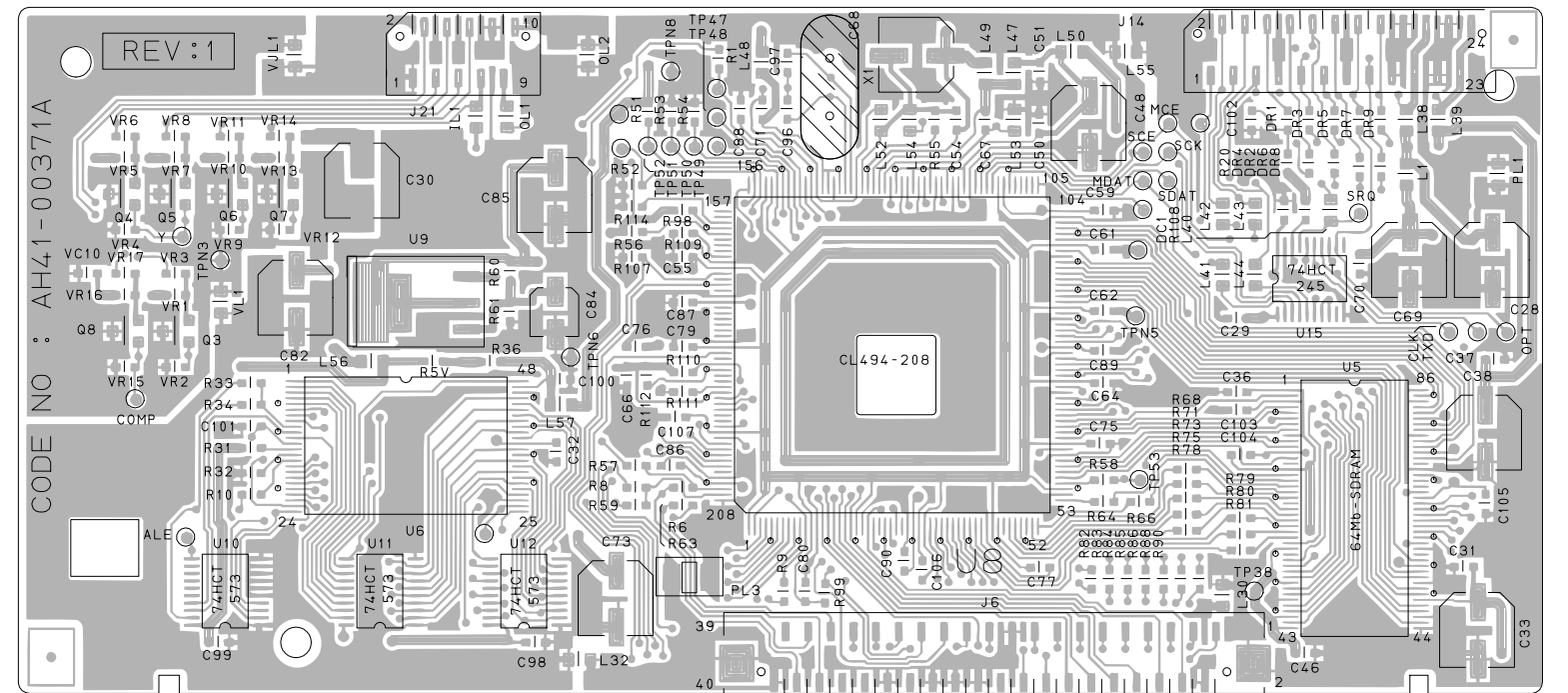
■ DVD loader board (Forward side)



■ DVD power board (Forward side)



■ DVD MPEG board (Forward side)



5

4

3

2

1

A

B

C

2-12

D

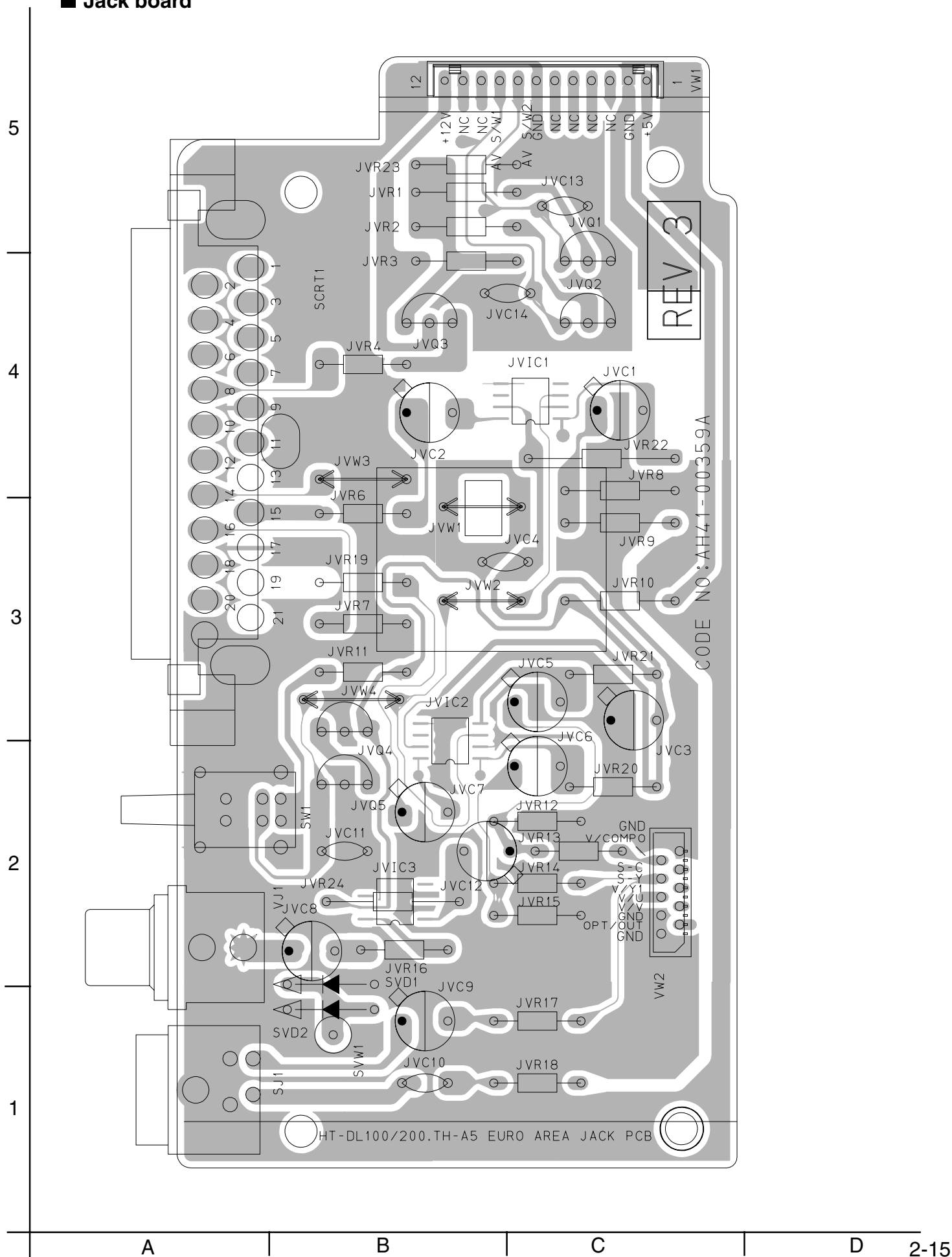
E

F

G

H

■ Jack board



PARTS LIST

[TH-A5R]

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

Area suffix	
B -----	U.K.
E -----	Continental Europe
EN -----	Northern Europe
EV -----	Eastern Europe
EE -----	Russia

- Contents -

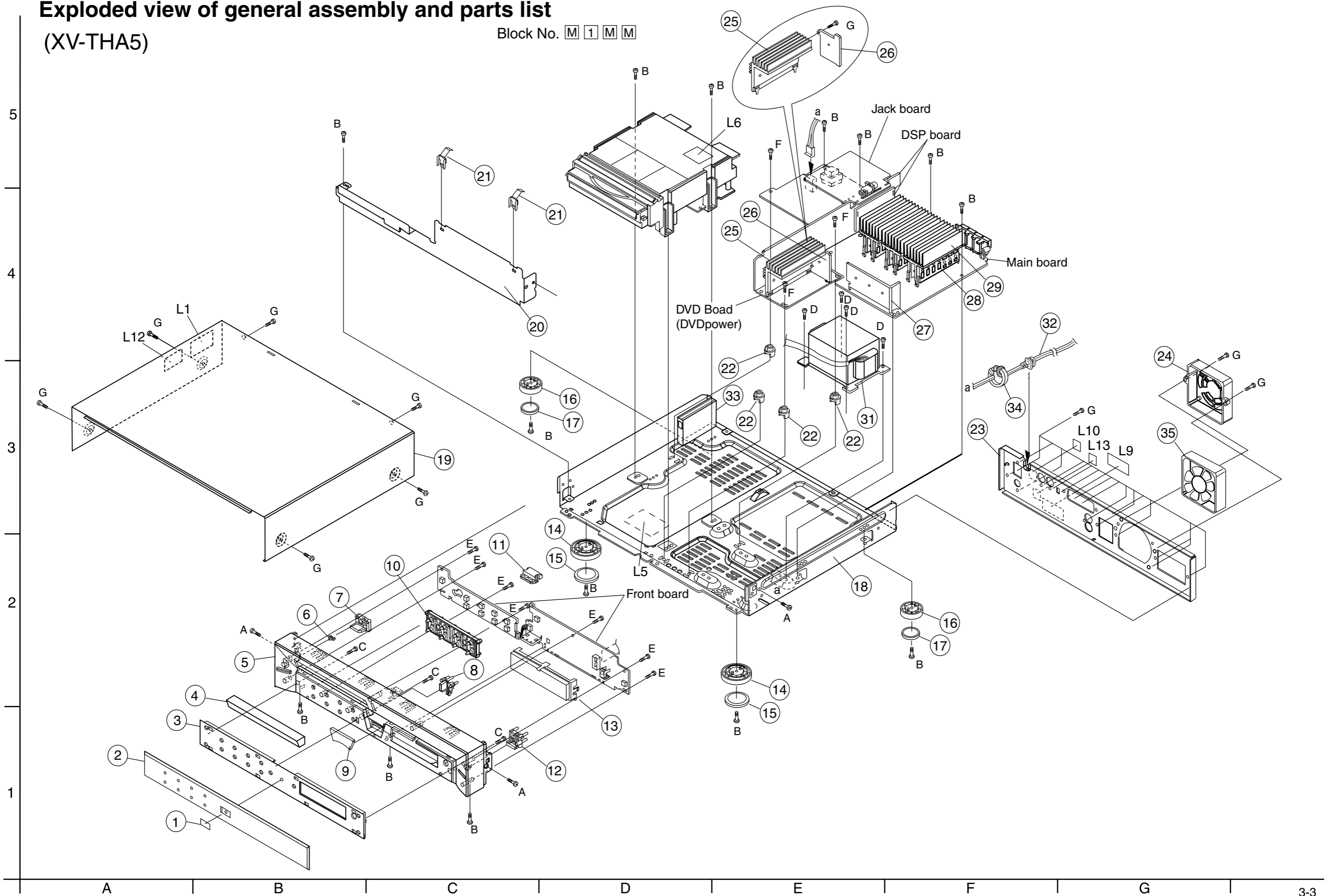
Exploded view of general assembly and parts list (Block No.M1)XV-THA5	3- 3
Exploded view of general assembly and parts list (Block No.M2)SP-WA5	3- 5
DVD mechanism assembly and parts list (Block No.MJ)	3- 6
Electrical parts list (Block No.01~06)	3- 8
Packing materials and accessories parts list (Block No.M3,M5)	3-27

< MEMO >

Exploded view of general assembly and parts list

(XV-THA5)

Block No. M 1 M M



TH-A5R

■ Parts list (General assembly) XV-THA5

Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A	6002-000126	SCREW-TAPPING	2	FH 3*10 BLK	
	B	6003-000398	SCREW-TAP TITE	16	BH 2S 3*6 YEL	
	C	6003-000276	SCREW-TAP TITE	27	BH M3*10 YEL	
	D	AH60-10107A	SCREW-TAP TITE	4	M4*6 YEL	
	E	AH60-10020D	SCREW-TAP TITE	9	RH 2.6*8 YEL	
	F	6003-000278	SCREW-TAP TITE	3	BH 3*14 YEL	
	G	AH60-00025A	SCREW-TAP TITE	24	BH 3*10 SILVER	
	1	AH64-01539A	BADGE-DVD	1		
	2	AH64-01540A	WINDOW-FRONT	1		
	3	AH61-00834A	CAP-FRONT	1		
	4	AH64-01453A	DOOR-TRAY	1		
	5	AH64-01452A	CABINET-FRONT	1		
	6	AH67-00129A	LENS-POWER	1		
	7	AH64-01454A	KNOB-POWER	1		
	8	AH64-01455A	KNOB-OPEN	1		
	9	AH67-00128A	LENS-FRONT	1		
	10	AH64-01457A	KNOB-FUNCTION	1		
	11	AH61-00836A	HOLDER-LED	1		
	12	AH64-01456A	KNOB-PLAY	1		
	13	AH61-00835A	HOLDER-VFD	1		
	14	AH61-00766A	HOLDER-FOOT,F	2		
	15	AH69-00503A	CUSHION-FOOT,F	2		
	16	AH61-00777A	HOLDER-FOOT,B	2		
	17	AH69-00503B	CUSHION-FOOT,B	2		
	18	AH64-01357A	CABINET-BOTTOM	1		
	19	AH64-01358C	CABINET-TOP	1		
	20	AH63-00383A	SHIELD-FRONT	1		
	21	AH63-00388B	SHIELD-TOP	2		
	22	AH61-00774A	HOLDER-PCB	4		
	23	AH64-01359B	CABINET-REAR	1		
	24	AH63-00303A	COVER-FAN	1		
	25	AH62-00051C	HEAT-SINK D	1		
	26	AH62-00051D	HEAT-SINK B	1		
	27	AH62-00052A	HEAT-SINK DIO	1		
	28	AH61-00779A	HOLDER-IC	6		
	29	AH62-00050A	HEAT-SINK M	3		
△	31	AH26-00142C	POWER TRANS	1		
△	32	AH39-00258P	POWER CORD	1		B
△		AH39-00257F	POWER CORD	1		E,EN,EV,EE
	33	AH40-00017A	TUNER PACK	1		B,E,EN,EV
		AH40-00020A	TUNER PACK	1		EE
	34	3301-001525	FERRITE CORE	1		
	35	AH31-00029A	MOTOR FAN	1		
	L 1	AH68-50482B	LABEL-CLASS 1	1		
	L 5	AH68-00967A	LABEL-DTS	1		
	L 6	AH68-50275D	STICKER-CD	1		
	L 9	AH68-00989E	LABEL-RATING	1		EE
		AH68-00989C	LABEL-RATING	1		B

TH-A5R

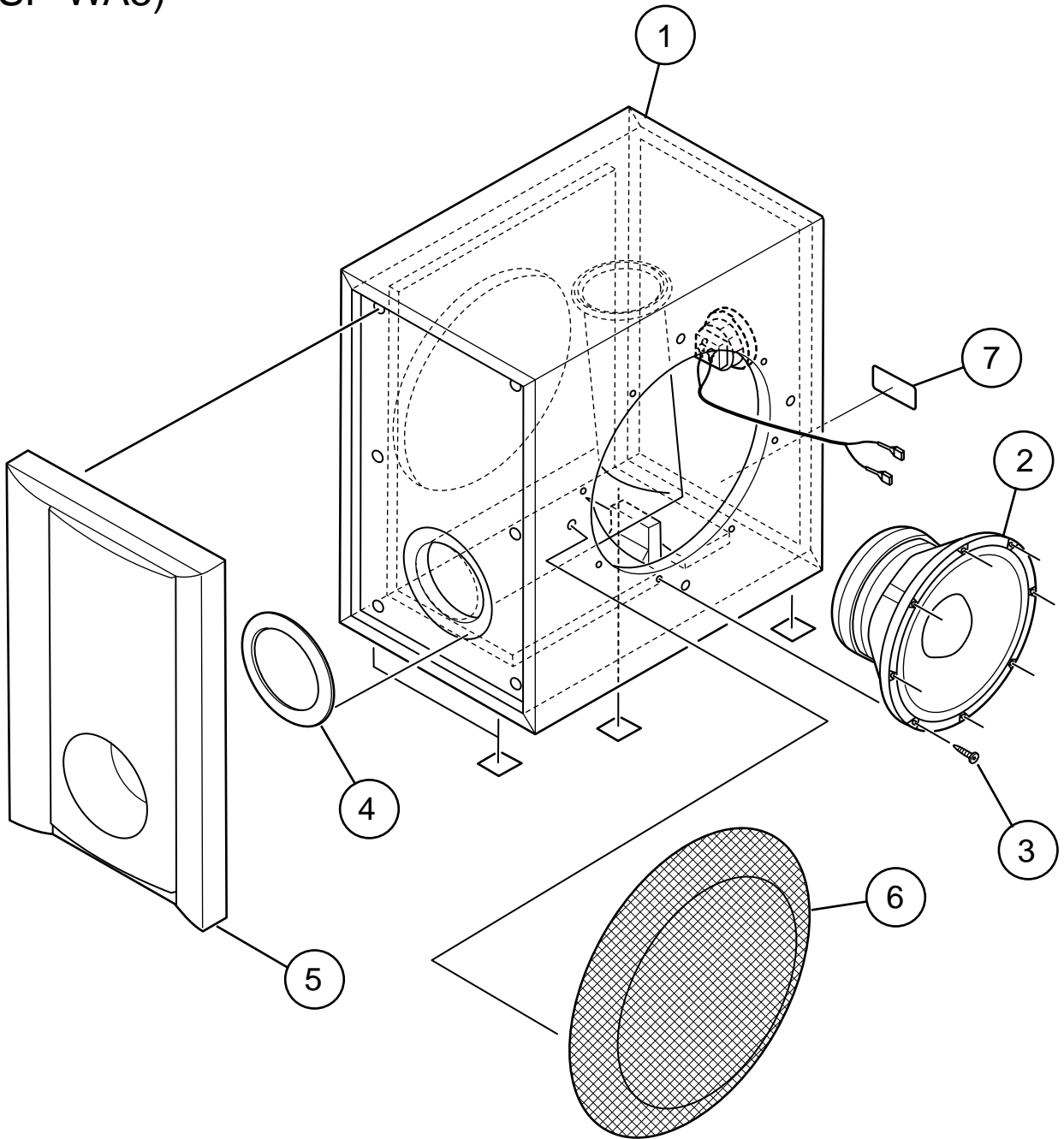
■ Parts list (General assembly) XV-THA5

Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	L 9	AH68-00989D	LABEL-RATING	1		E,EN,EV
	L 10	AH68-00093G	LABEL	1		B,E,EN,EV
		AH68-00093N	LABEL	1		EE
	L 12	AH68-00486A	CAUTION LABEL	1		EV
	L 13	AH68-00331A	LABEL	1		EE

Exploded view of general assembly and parts list (SP-WA5)

Block No. M 2 M M



Parts list (General assembly)SP-WA5

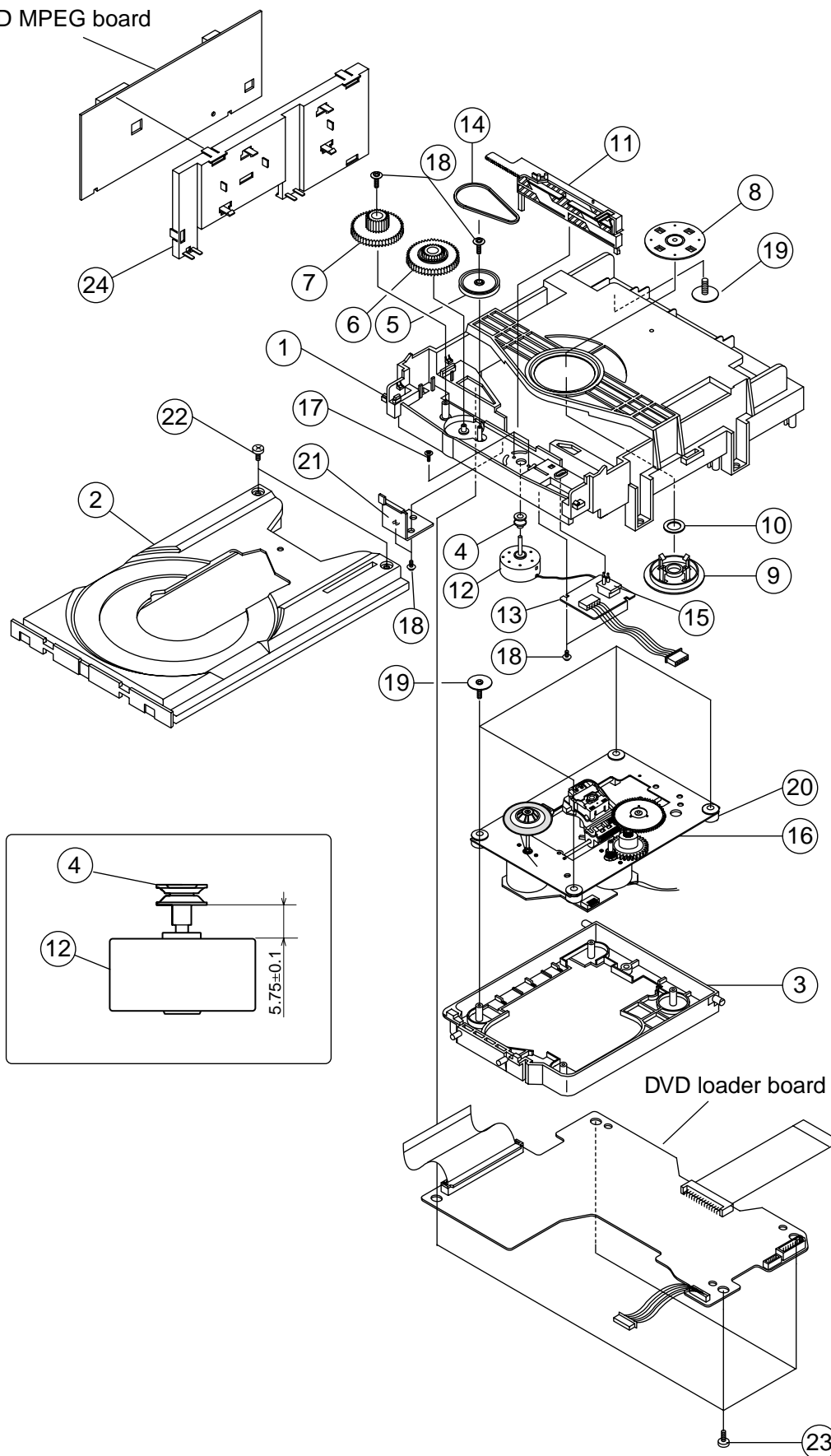
Block No. M2MM

Item	Parts number	Parts name	Q'ty	Description	Area
1	AA000026-01	CABINET	1		
2	CR200027-01	SPEAKER	1	LE10020-007A	
3	70-059-416-02	SCREW	8		
4	29-100-086-01	PACKING RING	1		
5	53-000-158-11	ORNAMENT	1	LV21155-002A	
6	99-200-019-01	NET ASSY	1	LV33134-001A	
7	60-001-856-01	RATING LABEL	1		

DVD mechanism assembly and parts list

Block No. M J M M

DVD MPEG board



■ Parts list (DVD mechanism)

Block No. MJMM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	AH61-00746A	BASE-MAIN	1	BLK	
	2	AH63-00294A	TRAY-DISC	1	D/GRAY	
	3	AH66-00159A	LEVER-LIFT	1	BLK	
	4	AH66-00160A	PULLEY-MOTOR	1		
	5	AH66-00161A	GEAR-PULLEY	1		
	6	AH66-00162A	GEAR-MIDDLE	1		
	7	AH66-00163A	GEAR-TRAY	1		
	8	AH66-00164A	CLAMPER-UPPER	1	UPPER	
	9	AH66-00165A	CLAMPER-LOWER	1	LOWER	
	10	AH61-00747A	BRACKET-CHUCK	1	T1.0	
	11	AH66-00166A	SLIDE-CAM	1		
	12	AH31-00030A	MOTOR-DC	1	RF-300CA-11440	
	13	-----	PCB-SWITCH	1	26.5 X 21.6	
	14	AH66-00167A	BELT-PULLEY	1	CR 1.5	
	15	3409-001119	SWITCH-DETECTOR	1	JDS2200	
	16	AH59-00130A	DVD DECK	1	CMS-S21MG6	
	17	6001-001257	SCREW-MACHINE	2	1.7 X 3(W4.5)	
	18	AJ60-10001A	SCREW-TAP	6	2 X 5(W7)	
	19	6003-001210	SCREW-TAP	5	2.6 X 6(W12)	
	20	AH73-00025B	RUBBER-CD	4	BUTYL 15	
	21	AH61-00958A	BRACKET-GUIDE	1	SECC 1.0T	
	22	6003-000283	SCREW-TAP	2	3 X 8	
	23	6003-000276	SCREW-TAP	4	3 X 10	
	24	AH61-00828A	HOLDER-PCB	1	ABS BLK	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	AR48	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			C41FR	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
△	BD1	0402-001077	BRIDGE DIODE	KBP202G,200V			C41RL	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
△	BD2	0402-001258	BRIDGE DIODE	GBU606,6A,600V			C41RR	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
△	BD3	0402-001258	BRIDGE DIODE	GBU606,6A,600V			C41W	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
△	BD4	0402-001258	BRIDGE DIODE	GBU606,6A,600V			C43C	2401-000909	E.CAPACITOR	22UF,20%,16V	
	CW1	3711-000190	CONNECTOR	1WALL,2P,7.92MM			C43FL	2401-000909	E.CAPACITOR	22UF,20%,16V	
	CW2	3711-004848	CONNECTOR	BOX,3P,7.92MM,S			C43FR	2401-000909	E.CAPACITOR	22UF,20%,16V	
	CW3	3711-001098	CONNECTOR	BOX,7P,2.5MM,ST			C43RL	2401-000909	E.CAPACITOR	22UF,20%,16V	
	CW4	3708-001311	CONNECTOR	SCB-1107-00-2,7			C43RR	2401-000909	E.CAPACITOR	22UF,20%,16V	
	CW5	3711-004110	CONNECTOR	3WALL,12P,2MM,S			C43W	2401-001502	E.CAPACITOR	47UF,20%,16V	
	CW6	3711-004110	CONNECTOR	3WALL,12P,2MM,S			C44C	2203-000704	CHIP CAPACITOR	0.002NF,0.25PF	
	CW7	3711-004110	CONNECTOR	3WALL,12P,2MM,S			C44FL	2203-000704	CHIP CAPACITOR	0.002NF,0.25PF	
	CW8	3708-001094	CONNECTOR	13P,1.25MM,ST			C44FR	2203-000704	CHIP CAPACITOR	0.002NF,0.25PF	
△	C1	2201-000546	C.CAPASITOR	4.7NF,20%,400V			C44RL	2203-000704	CHIP CAPACITOR	0.002NF,0.25PF	
	C10	2401-001912	E.CAPACITOR	1UF,20%,50V			C44RR	2203-000704	CHIP CAPACITOR	0.002NF,0.25PF	
	C11	2401-000795	E.CAPACITOR	220UF,20%,16V			C44W	2203-000280	CHIP CAPACITOR	10PF,0.5PF,50V,	
	C12	2401-001954	E.CAPACITOR	4.7UF,20%,50V			C47C	2301-000375	M.CAPACITOR	100NF,10%,50V	
	C13	2401-001912	E.CAPACITOR	1UF,20%,50V			C47FL	2301-000375	M.CAPACITOR	100NF,10%,50V	
	C14	2201-000161	C.CAPACITOR	10NF,+80-20%,50			C47FR	2301-000375	M.CAPACITOR	100NF,10%,50V	
	C15	2201-000161	C.CAPACITOR	10NF,+80-20%,50			C47RL	2301-000375	M.CAPASITOR	100NF,10%,50V	
	C16	2201-000161	C.CAPACITOR	10NF,+80-20%,50			C47RR	2301-000375	M.CAPASITOR	100NF,10%,50V	
	C17	2201-000161	C.CAPACITOR	10NF,+80-20%,50			C47W	2301-000375	M.CAPACITOR	100NF,10%,50V	
△	C18	2401-002258	E.CAPACITOR	4700UF,20%,50V			C5	2201-000546	C.CAPASITOR	4.7NF,20%,400V	
△	C19	2401-002258	E.CAPACITOR	4700UF,20%,50V			C52	2401-001975	E.CAPACITOR	47UF,20%,16V	
△	C2	2201-000546	C.CAPASITOR	4.7NF,20%,400V			C54	2401-001975	E.CAPACITOR	47UF,20%,16V	
△	C20	2401-003116	E.CAPACITOR	4700UF,20%,35V			C55	2401-001975	E.CAPACITOR	47UF,20%,16V	
	C202L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V			C7	2401-001538	E.CAPACITOR	47UF,20%,25V	
	C202R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V			C70FL	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
△	C21	2401-003116	E.CAPACITOR	4700UF,20%,35V			C70FR	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
△	C22	2401-001959	E.CAPACITOR	4700UF,20%,25V			C71C	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
△	C23	2401-001959	E.CAPACITOR	4700UF,20%,25V			C71RL	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
	C25	2401-001895	E.CAPACITOR	100UF,20%,16V			C71RR	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
	C26	2401-001895	E.CAPACITOR	100UF,20%,16V			C71W	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
	C27	2401-001895	E.CAPACITOR	100UF,20%,16V			C8	2401-000438	E.CAPACITOR	10UF,20%,25V	
	C28	2401-000459	E.CAPACITOR	10UF,20%,35V			C9	2401-001413	E.CAPACITOR	470UF,20%,35V	
	C29	2401-000459	E.CAPACITOR	10UF,20%,35V			D1	0402-000127	DIODE	1N4002,100V	
	C3	2201-000546	C.CAPASITOR	4.7NF,20%,400V			D10	0401-001090	DIODE	1SS355	
	C30	2401-001969	E.CAPACITOR	470UF,20%,25V			D11	0402-000127	DIODE	1N4002,100V	
	C31	2401-001969	E.CAPACITOR	470UF,20%,25V			D12	0401-001090	DIODE	1SS355	
	C32C	2201-000300	C.CAPACITOR	1NF,20%,50V			D13	0401-001090	DIODE	1SS355	
	C32FL	2202-000796	C.CAPACITOR	1NF,10%,50V			D14	0401-001090	DIODE	1SS355	
	C32FR	2202-000796	C.CAPACITOR	1NF,10%,50V			D15	0401-001090	DIODE	1SS355	
	C32RL	2202-000796	C.CAPACITOR	1NF,10%,50V			D16	0401-001090	DIODE	1SS355	
	C32RR	2202-000796	C.CAPACITOR	1NF,10%,50V			D17	0401-001090	DIODE	1SS355	
	C32W	2201-000300	C.CAPACITOR	1NF,20%,50V			D2	0402-000127	DIODE	1N4002,100V	
	C33C	2203-000440	CHIP CAPACITOR	1NF,10%,50V			D20	0401-001090	DIODE	1SS355	
	C33FL	2202-000796	C.CAPACITOR	1NF,10%,50V			D201	0401-001090	DIODE	1SS355	
	C33FR	2203-000440	CHIP CAPACITOR	1NF,10%,50V			D202	0401-001090	DIODE	1SS355	
	C33RL	2201-000300	C.CAPACITOR	1NF,20%,50V			D203	0401-001090	DIODE	1SS355	
	C33RR	2201-000300	C.CAPACITOR	1NF,20%,50V			D204	0401-001090	DIODE	1SS355	
	C33W	2203-000440	CHIP CAPACITOR	1NF,10%,50V			D205	0401-001090	DIODE	1SS355	
	C34	2401-000385	E.CAPACITOR	10UF,20%,100V			D206	0401-001090	DIODE	1SS355	
	C35	2401-001361	E.CAPACITOR	470UF,16V,BP			D207	0401-001090	DIODE	1SS355	
	C37	2401-001975	E.CAPACITOR	47UF,20%,16V			D208	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	C39	2401-001538	E.CAPACITOR	47UF,20%,25V,			D209	0401-001090	DIODE	1SS355	
	C40C	2401-000407	E.CAPACITOR	10UF,20%,16V			D21	0401-001090	DIODE	1SS355	
	C40FL	2401-000407	E.CAPACITOR	10UF,20%,16V			D210	0401-001090	DIODE	1SS355	
	C40FR	2401-000407	E.CAPACITOR	10UF,20%,16V			D211	0401-001090	DIODE	1SS355	
	C40RL	2401-000407	E.CAPACITOR	10UF,20%,16V			D212	0401-001090	DIODE	1SS355	
	C40RR	2401-000407	E.CAPACITOR	10UF,20%,16V			D213	0401-001090	DIODE	1SS355	
	C40W	2401-000407	E.CAPACITOR	10UF,20%,16V			D214	0401-001090	DIODE	1SS355	
	C41C	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V			D215	0401-001090	DIODE	1SS355	
	C41FL	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V			D216	0401-001090	DIODE	1SS355	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	D217	0401-001090	DIODE	1SS355	
	D218	0401-001090	DIODE	1SS355	
	D22	0402-000309	DIODE	1SR154-400,400V	
	D23	0402-000309	DIODE	1SR154-400,400V	
	D24	0402-000309	DIODE	1SR154-400,400V	
	D28	0401-000900	DIODE	1SS355	
	D29	0401-001090	DIODE	1SS355	
	D3	0401-000101	DIODE	1N4148,100V	
	D30	0401-001090	DIODE	1SS355	
	D31	0401-001090	DIODE	1SS355	
	D32	0401-001090	DIODE	1SS355	
	D33	0401-001090	DIODE	1SS355	
	D34	0401-001090	DIODE	1SS355	
	D35C	0401-001090	DIODE	1SS355	
	D35FL	0401-001090	DIODE	1SS355	
	D35FR	0401-001090	DIODE	1SS355	
	D35RL	0401-001090	DIODE	1SS355	
	D35RR	0401-001090	DIODE	1SS355	
	D35W	0401-001090	DIODE	1SS355	
	D36C	0401-001090	DIODE	1SS355	
	D36FL	0401-001090	DIODE	1SS355	
	D36FR	0401-001090	DIODE	1SS355	
	D36RL	0401-001090	DIODE	1SS355	
	D36RR	0401-001090	DIODE	1SS355	
	D36W	0401-001090	DIODE	1SS355	
	D37C	0401-001090	DIODE	1SS355	
	D37FL	0401-001090	DIODE	1SS355	
	D37FR	0401-001090	DIODE	1SS355	
	D37RL	0401-001090	DIODE	1SS355	
	D37RR	0401-001090	DIODE	1SS355	
	D37W	0401-001090	DIODE	1SS355	
	D38C	0401-001090	DIODE	1SS355	
	D38FL	0401-001090	DIODE	1SS355	
	D38FR	0401-001090	DIODE	1SS355	
	D38RL	0401-001090	DIODE	1SS355	
	D38RR	0401-001090	DIODE	1SS355	
	D38W	0401-001090	DIODE	1SS355	
	D39C	0402-000309	DIODE	1SR154-400,400V	
	D39FL	0402-000309	DIODE	1SR154-400,400V	
	D39FR	0402-000309	DIODE	1SR154-400,400V	
	D39RL	0402-000309	DIODE	1SR154-400,400V	
	D39RR	0402-000309	DIODE	1SR154-400,400V	
	D39W	0402-001484	DIODE	S2B,100V,1.5A	
	D4	0402-000127	DIODE	1N4002,100V	
	D40C	0402-000309	DIODE	1SR154-400,400V	
	D40FL	0402-000309	DIODE	1SR154-400,400V	
	D40FR	0402-000309	DIODE	1SR154-400,400V	
	D40RL	0402-000309	DIODE	1SR154-400,400V	
	D40RR	0402-000309	DIODE	1SR154-400,400V	
	D40W	0402-000309	DIODE	1SR154-400,400V	
	D41C	0402-000309	DIODE	1SR154-400,400V	
	D41FL	0402-000309	DIODE	1SR154-400,400V	
	D41FR	0402-000309	DIODE	1SR154-400,400V	
	D41RL	0402-000309	DIODE	1SR154-400,400V	
	D41RR	0402-000309	DIODE	1SR154-400,400V	
	D41W	0402-000309	DIODE	1SR154-400,400V	
	D42C	0402-000309	DIODE	1SR154-400,400V	
	D42FL	0402-000309	DIODE	1SR154-400,400V	
	D42FR	0402-000309	DIODE	1SR154-400,400V	
	D42RL	0402-000309	DIODE	1SR154-400,400V	
	D42RR	0402-000309	DIODE	1SR154-400,400V	
	D42W	0402-001484	DIODE	S2B,100V,1.5A	
	D5	2003-000603	OMF RESISTOR	270OHM,5%,1W	

△	Item	Parts number	Parts name	Remarks	Area
	D51	0401-001090	DIODE	1SS355	
	D52	0401-001090	DIODE	1SS355	
	D53	0401-001090	DIODE	1SS355	
	D54	0401-001090	DIODE	1SS355	
	D55	0401-001090	DIODE	1SS355	
	D6	0402-000127	DIODE	1N4002,100V	
	D65	0401-001090	DIODE	1SS355	
	D7	2003-000603	OMF RESISTOR	270OHM,5%,1W	
	D8	0402-000127	DIODE	1N4002,100V	
	D9	0401-001090	DIODE	1SS355	
△	FU1	3601-000216	FUSE	250V,2.5A,TIME-	
△	FU3	3601-000319	FUSE	80MA(15.5MM)	
	IC1	1203-000276	IC	KA7805-AB	
	IC2	1201-000163	IC	4560,SOPP,150MI	
	IC3	1203-000242	IC	7812,TO-220	
	IC4	1203-000110	IC	KA7912-AB	
	IC5	1201-000163	IC	4560,SOPP,150MI	
	IC6	1201-000163	IC	4560,SOPP,150MI	
	IC7	1201-000163	IC	4560,SOPP,150MI	
	IC8	1203-000242	IC	7812,TO-220	
	JW100	2007-000033	CHIP RESISTOR	0OHM,5%,1/8W	
	JW102	2007-000033	CHIP RESISTOR	0OHM,5%,1/8W	
	JW104	2007-000033	CHIP RESISTOR	0OHM,5%,1/8W	
	JW106	2007-000033	CHIP RESISTOR	0OHM,5%,1/8W	
	J1	3716-001173	TERMINAL BLOCK	SOLDERP,12.5MM	
	J2	3716-001132	TERMINAL BLOCK	P40420421P-RED,	
	J3	3722-001727	PIN JACK	2P,3PI,NI-P,BLK	
△	L1	AH27-10001F	COIL	27UH	
△	L2	AH27-10001F	COIL	27UH	
	L3C	AH27-90001A	SPRING COIL	2.2UH,SPRING	
	L3FL	AH27-90001A	SPRING COIL	2.2UH,SPRING	
	L3FR	AH27-90001A	SPRING COIL	2.2UH,SPRING	
	L3RL	AH27-90001A	SPRING COIL	2.2UH,SPRING	
	L3RR	AH27-90001A	SPRING COIL	2.2UH,SPRING	
	L3W	AH27-90001A	SPRING COIL	2.2UH,SPRING	
	MC601	2203-000888	CHIP CAPACITOR	4.7NF,10%,50V	
	MC602	2203-000888	CHIP CAPACITOR	4.7NF,10%,50V	
	MC603	2203-000888	CHIP CAPACITOR	4.7NF,10%,50V	
	MC604	2203-000888	CHIP CAPACITOR	4.7NF,10%,50V	
	MC605	2203-000888	CHIP CAPACITOR	4.7NF,10%,50V	
	MC606	2203-000888	CHIP CAPACITOR	4.7NF,10%,50V	
	MR18	2007-000106	CHIP RESISTOR	220KOHM,5%,1/16	
	MR19	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
△	PBD1	0402-001258	BRIDGE DIODE	GBU606,6A,600V	
△	PBD2	0402-001408	BRIDGE DIODE	KBP005G,50V	
	PC1	2401-000230	E.CAPACITOR	100UF,20%,100V	
	PC10	2401-000475	E.CAPACITOR	10UF,20%,50V	
	PC11	2401-001895	E.CAPACITOR	100UF,20%,16V	
	PC12	2401-001895	E.CAPACITOR	100UF,20%,16V	
	PC13	2401-000475	E.CAPACITOR	10UF,20%,50V	
	PC14	2401-001895	E.CAPACITOR	100UF,20%,16V	
	PC15	2401-001895	E.CAPACITOR	100UF,20%,16V	
	PC16	2401-000475	E.CAPACITOR	10UF,20%,50V	
	PC17	2401-001895	E.CAPACITOR	100UF,20%,16V	
	PC18	2401-000475	E.CAPACITOR	10UF,20%,50V	
	PC19	2201-000546	C.CAPASITOR	4.7NF,20%,400V	
	PC2	2401-000357	E.CAPACITOR	100UF,0.2,50V	
	PC20	2201-000546	C.CAPASITOR	4.7NF,20%,400V	
△	PC3	2401-001879	E.CAPACITOR	10000UF,20%,16V	
△	PC4	2401-001879	E.CAPACITOR	10000UF,20%,16V	
	PC5	2401-001052	E.CAPACITOR	3300UF,20%,25V	
	PC6	2401-000475	E.CAPACITOR	10UF,20%,50V	
	PC7	2401-001895	E.CAPACITOR	100UF,20%,16V	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	PC8	2401-000475	E.CAPACITOR	10UF,20%,50V			Q2	0501-000010	TRANSISTOR	KSC1008,NPN	
	PC9	2401-001895	E.CAPACITOR	100UF,20%,16V			Q20C	0501-000303	TRANSISTOR	KSA733,PNP	
	PD1	0402-000127	DIODE	1N4002,100V			Q20FL	0501-000303	TRANSISTOR	KSA733,PNP	
	PD10	0404-000156	SCHOTTKY DIODE	RB441Q,10V			Q20FR	0501-000303	TRANSISTOR	KSA733,PNP	
	PD2	0401-000101	DIODE	1N4148,100V			Q20RL	0501-000303	TRANSISTOR	KSA733,PNP	
	PD3	0401-000101	DIODE	1N4148,100V			Q20RR	0501-000303	TRANSISTOR	KSA733,PNP	
	PD4	0401-000101	DIODE	1N4148,100V			Q20W	0501-000303	TRANSISTOR	KSA733,PNP	
	PD5	0401-000101	DIODE	1N4148,100V			Q21C	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	PD7	0401-000101	DIODE	1N4148,100V			Q21FL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	PD8	0401-000101	DIODE	1N4148,100V			Q21FR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	PD9	0401-000101	DIODE	1N4148,100V			Q21RL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	PQ1	1203-001006	IC	78R05,T0-220F,4			Q21RR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	PQ2	1203-001006	IC	78R05,T0-220F,4			Q21W	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	PQ3	0502-000303	TRANSISTOR	KSD882,NPN,1W			Q22C	0501-000010	TRANSISTOR	KSC1008,NPN	
	PQ4	1203-001586	IC	278R33,,4P			Q22FL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PQ5	1203-001697	IC	78R08 T0-220 4P			Q22FR	0501-000010	TRANSISTOR	KSC1008,NPN	
	PQ6	1203-001006	IC	78R05,T0-220F,4			Q22RL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PQ7	1203-002296	IC	BA3254FP-E2			Q22RR	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR1	2003-000701	OMF RESISTOR	470OHM,5%,2W			Q22W	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR10	2003-000629	OMF RESISTOR	3.3OHM,5%,2W			Q23C	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR11	2003-000629	OMF RESISTOR	3.3OHM,5%,2W			Q23FL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR2	2007-000091	CHIP RESISTOR	12KOHM,5%,1/16W			Q23FR	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR21	2007-000091	CHIP RESISTOR	12KOHM,5%,1/16W			Q23RL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR3	2007-000309	CHIP RESISTOR	10OHM,5%,1/16W			Q23RR	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR4	2003-000471	OMF RESISTOR	10OHM,5%,2W			Q23W	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR5	2007-000309	CHIP RESISTOR	10OHM,5%,1/16W			Q24C	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR6	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W			Q24FL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR7	2007-000129	CHIP RESISTOR	27KOHM,5%,1/16W			Q24FR	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR8	2007-000092	CHIP RESISTOR	15KOHM,5%,1/16W			Q24RL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PR9	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W			Q24RR	0501-000010	TRANSISTOR	KSC1008,NPN	
△	PT1	AH26-00143C	POWER TRANS	HT-DL1006,276V			Q24W	0501-000010	TRANSISTOR	KSC1008,NPN	
	PW1	3711-000963	CONNECTOR	BOX,4P,2.5MM,ST			Q25C	0501-000010	TRANSISTOR	KSC1008,NPN	
	PW2	3711-003111	CONNECTOR	BOX,6P,2.5MM,ST			Q25FL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PW3	3711-004109	CONNECTOR	3WALL,14P,2MM,S			Q25FR	0501-000010	TRANSISTOR	KSC1008,NPN	
	PW5	3708-001311	CONNECTOR	SCB-1107-00-2,7			Q25RL	0501-000010	TRANSISTOR	KSC1008,NPN	
	PZD1	0403-000564	ZENER DIODE	TZP16A,16V,1W,			Q25RR	0501-000010	TRANSISTOR	KSC1008,NPN	
	PZD2	0403-000564	ZENER DIODE	TZP16A,16V,1W,			Q25W	0501-000010	TRANSISTOR	KSC1008,NPN	
	Q1	0504-000118	TRANSISTOR	KSR1003,NPN,300			Q26C	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q10	0501-000398	TRANSISTOR	KSC945,NPN			Q26FL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q11	0501-000398	TRANSISTOR	KSC945,NPN			Q26FR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q12	0504-001003	TRANSISTOR	KSR2003TA			Q26RL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q13	0501-000303	TRANSISTOR	KSA733,PNP			Q26RR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q14	0501-000398	TRANSISTOR	KSC945,NPN			Q26W	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q15	0501-000398	TRANSISTOR	KSC945,NPN			Q27C	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q16	0501-000303	TRANSISTOR	KSA733,PNP			Q27FL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q17C	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q27FR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q17FL	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q27RL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q17FR	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q27RR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q17RL	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q27W	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q17RR	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q28C	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q17W	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q28FL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q18C	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q28FR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q18FL	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q28RL	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q18FR	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q28RR	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q18RL	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q28W	0501-000294	TRANSISTOR	KSA708-Y,PNP	
	Q18RR	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q29C	0502-001048	TRANSISTOR	KSD1691,NPN	
	Q18W	0501-000341	TRANSISTOR	KSC1623-L,NPN			Q29FL	0502-001048	TRANSISTOR	KSD1691,NPN	
	Q19C	0501-000398	TRANSISTOR	KSC945,NPN			Q29FR	0502-001048	TRANSISTOR	KSD1691,NPN	
	Q19FL	0501-000398	TRANSISTOR	KSC945,NPN			Q29RL	0502-001048	TRANSISTOR	KSD1691,NPN	
	Q19FR	0501-000398	TRANSISTOR	KSC945,NPN			Q29RR	0502-001048	TRANSISTOR	KSD1691,NPN	
	Q19RL	0501-000398	TRANSISTOR	KSC945,NPN			Q29W	0502-001048	TRANSISTOR	KSD1691,NPN	
	Q19RR	0501-000398	TRANSISTOR	KSC945,NPN			Q3	0501-000010	TRANSISTOR	KSC1008,NPN	
	Q19W	0501-000398	TRANSISTOR	KSC945,NPN			Q30C	0502-001048	TRANSISTOR	KSD1691,NPN	

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△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	Q30FL	0502-001048	TRANSISTOR	KSD1691,NPN			R106	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	Q30FR	0502-001048	TRANSISTOR	KSD1691,NPN			R107	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	Q30RL	0502-001048	TRANSISTOR	KSD1691,NPN			R108	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	Q30RR	0502-001048	TRANSISTOR	KSD1691,NPN			R109	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q30W	0502-001048	TRANSISTOR	KSD1691,NPN			R11	2001-000864	CARBON RESISTOR	56KOHM,5%,1/8W	
	Q31C	0502-001048	TRANSISTOR	KSD1691,NPN			R110	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q31FL	0502-001048	TRANSISTOR	KSD1691,NPN			R111	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	Q31FR	0502-001048	TRANSISTOR	KSD1691,NPN			R112	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	Q31RL	0502-001048	TRANSISTOR	KSD1691,NPN			R113	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	Q31RR	0502-001048	TRANSISTOR	KSD1691,NPN			R114	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q31W	0502-001048	TRANSISTOR	KSD1691,NPN			R115	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q32C	0502-001210	TRANSISTOR	KSB1151,PNP			R116	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	Q32FL	0502-001210	TRANSISTOR	KSB1151,PNP			R117	2007-001179	CHIP RESISTOR	8.2KOHM,5%,1/16	
	Q32FR	0502-001210	TRANSISTOR	KSB1151,PNP			R118	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	Q32RL	0502-001210	TRANSISTOR	KSB1151,PNP			R119	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	Q32RR	0502-001210	TRANSISTOR	KSB1151,PNP			R12	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	Q32W	0502-001210	TRANSISTOR	KSB1151,PNP			R120	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q33C	0502-001210	TRANSISTOR	KSB1151,PNP			R121	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q33FL	0502-001210	TRANSISTOR	KSB1151,PNP			R122	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	Q33FR	0502-001210	TRANSISTOR	KSB1151,PNP			R123	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	Q33RL	0502-001210	TRANSISTOR	KSB1151,PNP			R124	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	Q33RR	0502-001210	TRANSISTOR	KSB1151,PNP			R125	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q33W	0502-001210	TRANSISTOR	KSB1151,PNP			R126	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q34C	0502-001210	TRANSISTOR	KSB1151,PNP			R127	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	Q34FL	0502-001210	TRANSISTOR	KSB1151,PNP			R128	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	Q34FR	0502-001210	TRANSISTOR	KSB1151,PNP			R129	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	Q34RL	0502-001210	TRANSISTOR	KSB1151,PNP			R13	2007-000102	CHIP RESISTOR	100KOHM,5%,1/16	
	Q34RR	0502-001210	TRANSISTOR	KSB1151,PNP			R130	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	Q34W	0502-001210	TRANSISTOR	KSB1151,PNP			R131	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q35C	0501-000398	TRANSISTOR	KSC945,NPN			R132	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q35FL	0501-000398	TRANSISTOR	KSC945,NPN			R134	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	Q35FR	0501-000398	TRANSISTOR	KSC945,NPN			R135	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	Q35RL	0501-000398	TRANSISTOR	KSC945,NPN			R136	2007-000102	CHIP RESISTOR	100KOHM,5%,1/16	
	Q35RR	0501-000398	TRANSISTOR	KSC945,NPN			R137	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W	
	Q35W	0501-000398	TRANSISTOR	KSC945,NPN			R137C	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W	
	Q36C	0502-001048	TRANSISTOR	KSD1691,NPN			R14	2007-000091	CHIP RESISTOR	12KOHM,5%,1/16W	
	Q36FL	0502-001048	TRANSISTOR	KSD1691,NPN			R142	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	Q36FR	0502-001048	TRANSISTOR	KSD1691,NPN			R143	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	Q36RL	0502-001048	TRANSISTOR	KSD1691,NPN			R144L	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	Q36RR	0502-001048	TRANSISTOR	KSD1691,NPN			R144R	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	Q36W	0502-001048	TRANSISTOR	KSD1691,NPN			R145L	2007-000091	CHIP RESISTOR	12KOHM,5%,1/16W	
	Q37	0504-000156	TRANSISTOR	KSR2103,PNP,200			R145R	2007-000091	CHIP RESISTOR	12KOHM,5%,1/16W	
	Q38	0504-000156	TRANSISTOR	KSR2103,PNP,200			R146	2001-000850	CARBON RESISTOR	560KOHM,5%,1/8W	
	Q39	0504-000156	TRANSISTOR	KSR2103,PNP,200			R15	2001-000702	CARBON RESISTOR	39KOHM,5%,1/8W	
	Q4	0501-000294	TRANSISTOR	KSA708-Y,PNP			R16	2007-000081	CHIP RESISTOR	2.7KOHM,5%,1/16	
	Q40	0502-000299	TRANSISTOR	KSD73-Y,NPN			R17	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	Q5	0501-000398	TRANSISTOR	KSC945,NPN			R18	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	Q6	0501-000610	TRANSISTOR	KSA928A-Y,PNP			R19	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	Q7	0501-000314	TRANSISTOR	KSA812,PNP			R2	2001-000890	CARBON RESISTOR	6.8KOHM,5%,1/8W	
	Q8	0501-000341	TRANSISTOR	KSC1623-L,NPN			R20	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	Q9	0501-000010	TRANSISTOR	KSC1008,NPN			R200L	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
△	RE1	3501-001214	RELAY	12V,0.45W1FORMA			R200R	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
△	RE3	3501-001008	RELAY	G2R-1 DC12			R201L	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	RE5	3501-001197	RELAY	OSA-SS-212DM3			R201R	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	RE6	3501-001197	RELAY	OSA-SS-212DM3			R21	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	RE7	3501-001197	RELAY	OSA-SS-212DM3			R22	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	R10	2007-000102	CHIP RESISTOR	100KOHM,5%,1/16			R25	2003-000767	OMF RESISTOR	680OHM,5%,2W	
	R100	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R3	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R101	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			R30	2003-000765	OMF RESISTOR	680OHM,5%,1W	
	R102	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			R31	2001-000110	CARBON RESISTOR	10OHM,5%,1/4W	
	R103	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W			R32C	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R104	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W			R32FL	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R105	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W			R32FR	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	

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△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	R32RL	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R58	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R32RR	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R59	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	R32W	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R6	2001-000786	CARBON RESISTOR	47KOHM,5%,1/8W	
	R33C	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R60	2007-000120	CHIP RESISTOR	680OHM,5%,1/16W	
	R33FL	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R61	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	R33FR	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R62	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	R33RL	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R63	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R33RR	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R64	2007-000091	CHIP RESISTOR	12KOHM,5%,1/16W	
	R33W	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R65	2007-000130	CHIP RESISTOR	39KOHM,5%,1/16W	
	R34C	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R66	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	R34FL	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R67	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	R34FR	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R68	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	R34RL	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R69	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	R34RR	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R7	2001-001050	CARBON RESISTOR	1.5KOHM,5%,1/2W	
	R34W	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R70	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	R35C	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R71	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R35FL	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R72	2007-001179	CHIP RESISTOR	8.2KOHM,5%,1/16	
	R35FR	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R73	2007-000125	CHIP RESISTOR	3.9KOHM,5%,1/16	
	R35RL	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R74	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R35RR	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R75C	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	R35W	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			R75FL	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	R36C	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R75FR	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	R36FL	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R75RL	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	R36FR	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R75RR	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	R36RL	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R75W	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	R36RR	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R76C	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R36W	2007-000653	CHIP RESISTOR	27KOHM,5%,1/10W			R76FL	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R37C	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R76FR	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R37FL	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R76RL	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R37FR	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R76RR	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R37RL	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R76W	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R37RR	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R77C	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R37W	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			R77FL	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R38	2003-000710	OMF RESISTOR	47OHM,5%,2W			R77FR	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R38C	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			R77RL	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R38FL	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			R77RR	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	R38FR	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			R77W	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R38RL	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			R78C	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R38RR	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			R78FL	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R38W	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			R78FR	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R39	2003-000578	OMF RESISTOR	220OHM,5%,2W			R78RL	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R39FL	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			R78RR	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R39FR	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			R78W	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R4	2001-000050	CARBON RESISTOR	2.7KOHM,5%,1/4W			R79C	2007-000079	CHIP RESISTOR	1.8KOHM,5%,1/16	
	R40	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W			R79FL	2007-000079	CHIP RESISTOR	1.8KOHM,5%,1/16	
	R401	2007-000102	CHIP RESISTOR	100KOHM,5%,1/16			R79FR	2007-000079	CHIP RESISTOR	1.8KOHM,5%,1/16	
	R41	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16			R79RL	2007-000079	CHIP RESISTOR	1.8KOHM,5%,1/16	
	R42	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W			R79RR	2007-000079	CHIP RESISTOR	1.8KOHM,5%,1/16	
	R43	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W			R79W	2007-000079	CHIP RESISTOR	1.8KOHM,5%,1/16	
	R44	2003-000674	OMF RESISTOR	39OHM,5%,1W			R8	2001-000773	CARBON RESISTOR	470KOHM,5%,1/8W	
	R45	2003-000807	OMF RESISTOR	82OHM,5%,2W			R80C	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R47	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16			R80FL	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R48	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			R80FR	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R49	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			R80RL	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R5	2001-000660	CARBON RESISTOR	33KOHM,5%,1/8W			R80RR	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R50	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			R80W	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	R51	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			R81C	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	R52	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W			R81FL	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	R53	2007-000116	CHIP RESISTOR	120OHM,5%,1/16W			R81FR	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	R54	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			R81RL	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	R55	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W			R81RR	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	R56	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			R81W	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R57	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W			R82C	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	R82FL	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R82FR	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R82RL	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R82RR	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R82W	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R83C	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R83FL	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R83FR	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R83RL	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R83RR	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R83W	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	R84C	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R84FL	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R84FR	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R84RL	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R84RR	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	R84W	2007-000129	CHIP RESISTOR	27KOHM,5%,1/16W	
	R85C	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R85FL	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R85FR	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R85RL	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R85RR	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R85W	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R86C	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R86FL	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R86FR	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R86RL	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R86RR	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R86W	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R87C	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	R87FL	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	R87FR	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	R87RL	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	R87RR	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	R87W	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	R88C	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R88FL	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R88FR	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R88RL	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R88RR	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	R88W	2007-000081	CHIP RESISTOR	2.7KOHM,5%,1/16	
	R89C	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R89FL	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R89FR	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R89RL	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R89RR	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R89W	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	R9	2001-000591	CARBON RESISTOR	3.3KOHM,5%,1/8W	
	R90C	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R90FL	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R90FR	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R90RL	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R90RR	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R90W	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	R91C	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R91FL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R91FR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R91RL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R91RR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R91W	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R92C	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R92FL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R92FR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	

△	Item	Parts number	Parts name	Remarks	Area
	R92RL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R92RR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R92W	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R93C	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R93FL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R93FR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R93RL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R93RR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R93W	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R94C	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R94FL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R94FR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R94RL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R94RR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R94W	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R95C	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R95FL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R95FR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R95RL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R95RR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R95W	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R96C	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R96FL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R96FR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R96RL	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R96RR	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R96W	2007-000076	CHIP RESISTOR	330OHM,5%,1/16W	
	R97C	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R97FL	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R97FR	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R97RL	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R97RR	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R97W	2009-000018	OMF RESISTOR	0.22OHM,10%,5W,	
	R98C	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R98FL	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R98FR	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R98RL	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R98RR	2007-008317	CHIP RESISTOR	0.15OHM,5%,1W	
	R98W	2009-000018	OMF RESISTOR	0.22OHM,10%,5W,	
	R99C	2007-000310	CHIP RESISTOR	100HM,5%,1/2W	
	R99FL	2007-000310	CHIP RESISTOR	100HM,5%,1/2W	
	R99FR	2007-000310	CHIP RESISTOR	100HM,5%,1/2W	
	R99RL	2007-000310	CHIP RESISTOR	100HM,5%,1/2W	
	R99RR	2007-000310	CHIP RESISTOR	100HM,5%,1/2W	
	R99W	2007-000310	CHIP RESISTOR	100HM,5%,1/2W	
	ZD1	0403-000354	ZENER DIODE	UZ5.1B,5.1V,500	
	ZD11	0403-000382	ZENER DIODE	UZP15B,15V,1W,D	
	ZD12	0403-000382	ZENER DIODE	UZP15B,15V,1W,D	
	ZD13	0403-000004	ZENER DIODE	UZ12BM,12V,500	
	ZD2	0403-000352	ZENER DIODE	UZ4.7BM,500MW	
	ZD201	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD202	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD203	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD204	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD205	0401-001090	DIODE	1SS355	
	ZD206	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD207	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD208	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD209	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD210	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD211	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD212	0403-001376	ZENER DIODE	UDZ3.6B,3.6-3.8	
	ZD3	0403-000004	ZENER DIODE	UZ12BM,12V,500	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	ZD5C	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD5FL	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD5FR	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD5RL	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD5RR	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD5W	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD6C	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD6FL	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD6FR	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD6RL	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD6RR	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	
	ZD6W	0403-001079	ZENER DIODE	UDZ3.9B,7%,200M	

■ Electrical parts list (DSP board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area
	CC11	2401-000407	E.CAPACITOR	10UF,20%,16V	
	CC12	2401-000650	E.CAPACITOR	2.2UF,20%,50V	
	CC13	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	CC14	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	CC15	2401-000407	E.CAPACITOR	10UF,20%,16V	
	CC16	2401-001502	E CAPACITOR	47UF,20%,16V	
	CC17	2401-001502	E CAPACITOR	47UF,20%,16V	
	CC18	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	CC19	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	CC20	2203-000440	CHIP CAPACITOR	1NF,10%,50V	
	CC21	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	CC22	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	CC23	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	CC24	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	CC27	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	CIC11	1201-000163	IC	4560,SOPP,150MI	
	CIC12	1204-001465	IC	TDA7440D,28	
	CIC13	1201-000163	IC	4560,SOPP,150MI	
	CR11	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	CR12	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	CR13	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	CR14	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	CR15	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	CR16	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	CR17	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	CR18	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	CR19	2007-000120	CHIP RESISTOR	680OHM,5%,1/16W	
	CR21	2007-007361	CHIP RESISTOR	82OHM,5%,1/2W	
	CR30	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	CR31	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	CZD11	0403-001409	ZENER DIODE	RLZ9.1B.500MW	
	DB1	3301-000353	BEAD	BLM21A121SP	
	DB12	3301-000353	BEAD	BLM21A121SP	
	DB13	3301-000353	BEAD	BLM21A121SP	
	DB14	3301-000353	BEAD	BLM21A121SP	
	DB15	3301-000353	BEAD	BLM21A121SP	
	DB16	3301-000353	BEAD	BLM21A121SP	
	DB18	3301-000353	BEAD	BLM21A121SP	
	DB19	3301-000353	BEAD	BLM21A121SP	
	DB20	2007-000077	CHIP RESISTOR	470OHM,5%,1/16W	
	DB22	3301-000353	BEAD	BLM21A121SP	
	DB23	3301-000353	BEAD	BLM21A121SP	
	DB24	3301-000353	BEAD	BLM21A121SP	
	DB25	3301-000353	BEAD	BLM21A121SP	
	DB26	3301-000353	BEAD	BLM21A121SP	
	DB27	3301-000353	BEAD	BLM21A121SP	
	DB28	3301-000353	BEAD	BLM21A121SP	
	DB29	3301-000353	BEAD	BLM21A121SP	
	DB30	3301-000353	BEAD	BLM21A121SP	
	DC11	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC12	2401-000407	E.CAPACITOR	10UF,20%,16V	
	DC13	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC133	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC14	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC15	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC16	2401-000407	E.CAPACITOR	10UF,20%,16V	
	DC17	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC18	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC19	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC20	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC21	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC22	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC23	2203-005005	CHIP CAPACITOR	100NF,10%,16C	

△	Item	Parts number	Parts name	Remarks	Area
	DC24	2401-000243	E.CAPACITOR	100UF,20%,10V	
	DC25	2401-000650	E.CAPACITOR	2.2UF,20%,50V	
	DC26	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC27	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC28	2401-001502	E CAPACITOR	47UF,20%,16V	
	DC29	2203-000257	CHIP CAPACITOR	10NF,10%,50V	
	DC30	2203-001656	CHIP CAPACITOR	0.47NF,5%,50V,N	
	DC31	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC32	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC33	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC34	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC36	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC37	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC38	2203-000257	CHIP CAPACITOR	10NF,10%,50V	
	DC39	2203-000491	CHIP CAPACITOR	2.2NF,10%,50V	
	DC40	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC41	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC42	2401-001502	E CAPACITOR	47UF,20%,16V	
	DC43	2203-000257	CHIP CAPACITOR	10NF,10%,50V	
	DC44	2203-000257	CHIP CAPACITOR	10NF,10%,50V	
	DC45	2401-001502	E CAPACITOR	47UF,20%,16V	
	DC46	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC48	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC49	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC51	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC71	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC72	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC73	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DC74	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC86	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC87	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC88	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	DC89	2203-000257	CHIP CAPACITOR	10NF,10%,50V	
	DC91	2401-000588	E.CAPACITOR	1UF,20%,50V	
	DD11	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W	
	DIC11	1204-001841	IC	CS493292-CL,PLC	
	DIC12	0801-002564	IC	74VHCT244A,BUFF	
	DIC13	0802-001007	IC	74LCX244,BUFFER	
	DIC14	1001-001170	IC	CS8415A-CZ	
	DIC15	1204-001842	IC	CS4228A-KS,28P	
	DIC16	0801-002639	IC	74VHC574,20P	
	DIC17	0801-002639	IC	74VHC574,20P	
	DIC21	1103-001181	IC	27L010,32P	
	DQ13	0501-000314	TRANSISTOR	KSA812,PNP	
	DR12	2007-000113	CHIP RESISTOR	330OHM,5%,1/16W	
	DR13	2007-000113	CHIP RESISTOR	330OHM,5%,1/16W	
	DR14	2007-000113	CHIP RESISTOR	330OHM,5%,1/16W	
	DR15	2007-000113	CHIP RESISTOR	330OHM,5%,1/16W	
	DR16	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	DR17	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	DR18	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR19	2007-000134	CHIP RESISTOR	33KOHM,5%,1/16W	
	DR21	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	DR22	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR23	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR24	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR25	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR26	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR27	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR28	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR29	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR30	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	DR32	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	

■ Electrical parts list (DSP board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	DR33	2007-000113	CHIP RESISTOR	330HM,5%,1/16W			FC45R	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	DR34	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16			FC46L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	DR36	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			FC46R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	DR37	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W			FC47L	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	DR38	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			FC47R	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	DR39	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16			FC48L	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	DR40	2007-000309	CHIP RESISTOR	10OHM,5%,1/16W			FC48R	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	DR41	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W			FC49L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	DR42	2007-000113	CHIP RESISTOR	330HM,5%,1/16W			FC49R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	DR43	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			FC50L	2203-000440	CHIP CAPACITOR	1NF,10%,50V	
	DR44	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			FC50R	2203-000440	CHIP CAPACITOR	1NF,10%,50V	
	DR45	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			FC51L	2203-000491	CHIP CAPACITOR	2.2NF,10%,50V	
	DR46	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			FC51R	2203-000491	CHIP CAPACITOR	2.2NF,10%,50V	
	DR47	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			FC52L	2203-000236	CHIP CAPACITOR	100PF,5%,50V,NP	
	DR501	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			FC52R	2203-000236	CHIP CAPACITOR	100PF,5%,50V,NP	
	DR51	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			FC53L	2203-000236	CHIP CAPACITOR	100PF,5%,50V,NP	
	DR52	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W			FC53R	2203-000236	CHIP CAPACITOR	100PF,5%,50V,NP	
	DR61	2007-001167	CHIP RESISTOR	75OHM,5%,1/16W			FC55L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	DR62	2007-002425	CHIP RESISTOR	1OHM,5%,1/16W			FC55R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	DR71	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W			FC56	2203-001034	CHIP CAPACITOR	5.6NF,10%,50V	
	DW10	3710-001422	CONNECTOR	12P,2MM,ANGLE			FC57	2203-001034	CHIP CAPACITOR	5.6NF,10%,50V	
	DW11	3711-000426	CONNECTOR	3WALL,15P,2MM,S			FC58L	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	DW12	3711-000426	CONNECTOR	3WALL,15P,2MM,S			FC58R	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	DW13	3710-001422	CONNECTOR	12P,2MM,ANGLE			FC6	2401-000407	E.CAPACITOR	10UF,20%,16V	
	DW14	3710-001422	CONNECTOR	12P,2MM,ANGLE			FC60L	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	DW15	3710-001421	CONNECTOR	14P,2MM,ANGLE			FC60R	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	DW20	3708-000178	CONNECTOR	16P,1.25MM,ANGL			FC7	2401-000407	E.CAPACITOR	10UF,20%,16V	
	DW22	3708-001094	CONNECTOR	13P,1.25MM,STT			FC71	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	DW23	3710-001422	CONNECTOR	12P,2MM,ANGLE			FC72	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	DW31	3710-001734	CONNECTOR	15P,2MM,STT			FC73	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	DW32	3710-001734	CONNECTOR	15P,2MM,STT			FC73L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	DX11	2804-001446	OSCILLATOR	12.288MHZ,25PPM			FC73R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	FC1	2401-001889	E.CAPACITOR	100NF,20%,50V			FC74	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	FC10	2401-000407	E.CAPACITOR	10UF,20%,16V			FC8	2401-000407	E.CAPACITOR	10UF,20%,16V	
	FC11	2401-000407	E.CAPACITOR	10UF,20%,16V			FC9	2401-000407	E.CAPACITOR	10UF,20%,16V	
	FC12	2401-000407	E.CAPACITOR	10UF,20%,16V			FC99	2401-000588	E.CAPACITOR	1UF,20%,50V	
	FC13	2401-000407	E.CAPACITOR	10UF,20%,16V			FIC1	AC14-12001G	IC	KA78L05Z-TA,3P	
	FC14L	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FIC11	1201-000163	IC	4560,SOPP,150MI	
	FC14R	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FIC12	1204-001465	IC	TDA7440D,28	
	FC15	2401-001502	E.CAPACITOR	47UF,20%,16V			FIC2	1201-000163	IC	4560,SOPP,150MI	
	FC16	2401-000407	E.CAPACITOR	10UF,20%,16V			FIC4	1201-000163	IC	4560,SOPP,150MI	
	FC17L	2401-001238	E.CAPACITOR	4.7UF,20%,25V			FIC5	1201-000163	IC	4560,SOPP,150MI	
	FC17R	2401-001238	E.CAPACITOR	4.7UF,20%,25V			FIC6	1201-000163	IC	4560,SOPP,150MI	
	FC18	2401-000407	E.CAPACITOR	10UF,20%,16V			FR1	2007-000644	CHIP RESISTOR	270OHM,5%,1/2W	
	FC19L	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR10	2007-000101	CHIP RESISTOR	82KOHM,5%,1/16W	
	FC19R	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR11	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	FC2	2401-001889	E.CAPACITOR	100NF,20%,50V			FR12L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC20L	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR12R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC20R	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR13L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC23	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR13R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC24	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR14L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC25	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR14R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC26	2401-000650	E.CAPACITOR	2.2UF,20%,50V			FR15L	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	FC27	2401-001502	E.CAPACITOR	47UF,20%,16V			FR15R	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	FC28	2401-001502	E.CAPACITOR	47UF,20%,16V			FR16L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC3	2401-001324	E.CAPACITOR	470NF,20%,50V			FR16R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC41	2203-000888	CHIP CAPACITOR	4.7NF,10%,50V			FR17L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC42	2203-000604	CHIP CAPACITOR	22NF,10%,25V			FR17R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC43L	2203-000440	CHIP CAPACITOR	1NF,10%,50V			FR18L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC43R	2203-000440	CHIP CAPACITOR	1NF,10%,50V			FR18R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC44L	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V			FR19L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC44R	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V			FR19R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FC45L	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V			FR2	2007-007147	CHIP RESISTOR	680OHM,5%,1/4W	

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△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	FR20L	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16			RC36R	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	FR20R	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16			RC39L	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	FR21L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16			RC39R	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V	
	FR21R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16			RC51L	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	FR22L	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			RC51R	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V	
	FR22R	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			RIC11	1201-000163	IC	4560,SOPP,150MI	
	FR23L	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			RIC12	1204-001465	IC	TDA7440D,28	
	FR23R	2007-000402	CHIP RESISTOR	150OHM,5%,1/16W			RIC13	1201-000163	IC	4560,SOPP,150MI	
	FR24L	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			RR11L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR24R	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			RR11R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR25L	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			RR12L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR25R	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			RR12R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR26L	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			RR13L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR26R	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			RR13R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR28L	2007-000129	CHIP RESISTOR	27KOHM,5%,1/16W			RR14L	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR28R	2007-000129	CHIP RESISTOR	27KOHM,5%,1/16W			RR14R	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	FR31	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W			RR15L	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	FR32	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W			RR15R	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	FR34L	2007-000102	CHIP RESISTOR	100KOHM,5%,1/16			RR16L	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	FR34R	2007-000102	CHIP RESISTOR	100KOHM,5%,1/16			RR16R	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	FR35L	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			RR17L	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	FR35R	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			RR17R	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	FR36L	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W			RR18L	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	FR36R	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W			RR18R	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	FR4	2007-000101	CHIP RESISTOR	82KOHM,5%,1/16W			RR19L	2007-000120	CHIP RESISTOR	680OHM,5%,1/16W	
	FR5	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			RR19R	2007-000120	CHIP RESISTOR	680OHM,5%,1/16W	
	FR51L	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			RR20	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	FR51R	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W			RR21	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	FR52L	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			RR25L	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	FR52R	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W			RR25R	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	FR53L	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16			SC11	2401-000407	E.CAPACITOR	10UF,20%,16V	
	FR53R	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16			SC12	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	FR54L	2007-000123	CHIP RESISTOR	1.5KOHM,5%,1/16			SC13	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	FR54R	2007-000123	CHIP RESISTOR	1.5KOHM,5%,1/16			SC14	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	FR6	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W			SC18	2203-005221	CHIP CAPACITOR	15NF,10%,50V,	
	FR7	2007-000129	CHIP RESISTOR	27KOHM,5%,1/16W			SC19	2203-001389	CHIP CAPACITOR	12NF,10%,50V	
	FZD1	0403-001387	ZENER DIODE	UDZS5.1B,4.89-5			SC20	2203-001211	CHIP CAPACITOR	8.2NF,10%,50V	
	NC11	2401-001502	E CAPACITOR	47UF,20%,16V			SC22	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N	
	NW11	3711-000820	CONNECTOR	BOX,2P,2.5MM,ST			SC23	2203-000604	CHIP CAPACITOR	22NF,10%,25V	
	ODR11	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W			SR11	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	ODR20	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			SR12	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	ODR31	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W			SR13	2007-000094	CHIP RESISTOR	22KOHM,5%,1/16W	
	RC11	2401-000407	E.CAPACITOR	10UF,20%,16V			SR14	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	RC12	2401-000407	E.CAPACITOR	10UF,20%,16V			SR15	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1/16	
	RC13	2401-000650	E.CAPACITOR	2.2UF,20%,50V			SR16	2007-000075	CHIP RESISTOR	220OHM,5%,1/16W	
	RC14	2401-000650	E.CAPACITOR	2.2UF,20%,50V			SR17	2007-000097	CHIP RESISTOR	47KOHM,5%,1/16W	
	RC15	2401-001238	E.CAPACITOR	4.7UF,20%,25V			SR18	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	RC16	2401-001238	E.CAPACITOR	4.7UF,20%,25V			SR19	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	RC17	2401-000407	E.CAPACITOR	10UF,20%,16V			UC1	2409-000123	C-EDL	47000UF,4UA,5.5	
	RC18	2401-001502	E CAPACITOR	47UF,20%,16V			UC101	2401-000243	E.CAPACITOR	100UF,20%,10V	
	RC19	2401-001889	E.CAPACITOR	100NF,20%,50V			UC2	2401-001238	E.CAPACITOR	4.7UF,20%,25V	
	RC20	2401-001889	E.CAPACITOR	100NF,20%,50V			UC3	2401-000752	E.CAPACITOR	220NF,20%,50V	
	RC31L	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V			UC4	2401-000243	E.CAPACITOR	100UF,20%,10V	
	RC31R	2203-001554	CHIP CAPACITOR	1.8NF,10%,50V			UC46	2203-000236	CHIP CAPACITOR	100PF,5%,50V,NP	
	RC32L	2203-000440	CHIP CAPACITOR	1NF,10%,50V			UC5	2203-000062	CHIP CAPACITOR	47NF,+80-20%,50	
	RC32R	2203-000440	CHIP CAPACITOR	1NF,10%,50V			UC6	2203-005005	CHIP CAPACITOR	100NF,10%,16C	
	RC33L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N			UC82	2203-000604	CHIP CAPACITOR	22NF,10%,25V,	
	RC33R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N			UD10	0402-000309	DIODE	1SR154-400,400V	
	RC34L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N			UD4	0401-001090	DIODE	1SS355	
	RC34R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N			UD5	0401-001090	DIODE	1SS355	
	RC35L	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N			UD6	0402-000309	DIODE	1SR154-400,400V	
	RC35R	2203-000783	CHIP CAPACITOR	0.33NF,5%,50V,N			UD7	0401-001090	DIODE	1SS355	
	RC36L	2203-000531	CHIP CAPACITOR	2.7NF,10%,50V			UD8	0401-001090	DIODE	1SS355	

■ Electrical parts list (DSP board)

Block No. 02

△	Item	Parts number	Parts name	Remarks	Area
	UD9	0401-001090	DIODE	1SS355	
	UIC1	AH11-00049A	MICOM	HT-DL100,	
	UQ3	0501-000398	TRANSISTOR	KSC945,NPN	
	UR1	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR101	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR102	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR103	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR11	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR13	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR14	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR15	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR16	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	UR17	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	UR18	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR19	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR2	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR21	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR22	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR23	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR24	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR28	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR29	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR3	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR30	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR31	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR32	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR33	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR34	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR35	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR36	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR37	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR38	2007-000098	CHIP RESISTOR	56KOHM,5%,1/16W	
	UR39	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR4	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	UR40	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR41	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR42	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR43	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR44	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR45	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR46	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR47	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR48	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR49	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR5	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	UR50	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR51	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR52	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR53	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR54	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR55	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR56	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR57	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR58	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR59	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR6	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR60	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR61	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR62	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR63	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR64	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR65	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR66	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	

△	Item	Parts number	Parts name	Remarks	Area
	UR67	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR68	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR69	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR7	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR70	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR72	2007-000106	CHIP RESISTOR	220KOHM,5%,1/16	
	UR73	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1/16	
	UR74	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1/16	
	UR75	2007-000072	CHIP RESISTOR	47OHM,5%,1/16W	
	UR76	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W	
	UR77	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR78	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR79	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR8	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	UR80	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W	
	UR81	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR83	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR84	2007-000130	CHIP RESISTOR	39KOHM,5%,1/16W	
	UR85	2007-000090	CHIP RESISTOR	10KOHM,5%,1/16W	
	UR86	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR89	2007-000070	CHIP RESISTOR	0OHM,5%,1/16W	
	UR9	2007-000078	CHIP RESISTOR	1KOHM,5%,1/16W	
	UR90	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	UR91	2007-000082	CHIP RESISTOR	3.3KOHM,5%,1/16	
	UR95	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR96	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UR97	2007-000074	CHIP RESISTOR	100OHM,5%,1/16W	
	UX2	2802-001157	RESONATOR	6MHZX5.5X3MM	
	VW11	3708-001464	CONNECTOR	24P,1MM,STT	

■ Electrical parts list (Front board)

Block No. 03

△	Item	Parts number	Parts name	Remarks	Area
	FW1	3708-000451	CONNECTOR	16P,1.25MM,ST	
	FW2	3711-000906	CONNECTOR	BOX,3P,2MM,AN	
	SW1	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW10	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW11	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW2	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW3	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW4	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW5	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW6	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW7	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW8	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	SW9	3404-001182	TACT SWITCH	DC12V,50MA,100G	
	UC1	2201-000783	C.CAPACITOR	100NF,+80%20%,5	
	UC2	2201-000783	C.CAPACITOR	100NF,+80%20%,5	
	UC3	2401-000475	E.CAPACITOR	10UF,20%,50V	
	UC4	2201-000565	C.CAPACITOR	47NF,+80% -20%	
	UC5	2201-000565	C.CAPACITOR	47NF,+80% -20%	
	UC6	2401-001912	E.CAPACITOR	1UF,20%,50V	
	UC7	2201-000783	C.CAPACITOR	100NF,+80%20%,5	
	UC80	2202-000797	C.CAPACITOR	10NF,30%,16V,Y5	
	UC9	2201-000389	C.CAPACITOR	22PF,5%,50V,NPO	
	UD1	0402-000127	DIODE	1N4002,100V	
	UD10	0402-000127	DIODE	1N4002,100V	
	UD2	0402-000127	DIODE	1N4002,100V	
	UD3	0401-000101	DIODE	1N4148,100V	
	UD4	0401-000101	DIODE	1N4148,100V	
	UEYE	AC59-60060A	REMOCON EYE	GP1U281R,38KHZ	
	UIC10	1003-001403	IC	LC75725E,QFP,64	
	ULD3	0601-001238	LED	RED,650NM,2.5MM	
	ULD4	0601-001432	LED	470NM,3MM	
	UQ1	0504-001003	TRANSISTOR	KSR2003TA,300MW	
	UQ2	0504-001003	TRANSISTOR	KSR2003TA,300MW	
	UQ3	0504-000118	TRANSISTOR	KSR1003,NPN,300	
	UR31	2001-000023	CARBON RESISTOR	47OHM,5%,1/4W	
	UR32	2001-000023	CARBON RESISTOR	47OHM,5%,1/4W	
	UR35	2001-000281	CARBON RESISTOR	100OHM,5%,1/8W	
	UR36	2001-000281	CARBON RESISTOR	100OHM,5%,1/8W	
	UR37	2001-000281	CARBON RESISTOR	100OHM,5%,1/8W	
	UR38	2001-000281	CARBON RESISTOR	100OHM,5%,1/8W	
	UR39	2001-000290	CARBON RESISTOR	10KOHM,5%,1/8W	
	UR40	2001-000734	CARBON RESISTOR	4.7KOHM,5%,1/8W	
	UR41	2001-000802	CARBON RESISTOR	5.6KOHM,5%,1/8W	
	UR42	2001-000062	CARBON RESISTOR	470OHM,5%,1/4W	
	UR43	2001-000554	CARBON RESISTOR	270OHM,5%,1/8W	
	UR44	2001-000660	CARBON RESISTOR	33KOHM,5%,1/8W	
	UR45	2001-000864	CARBON RESISTOR	56KOHM,5%,1/8W	
	UR69	2001-000429	CARBON RESISTOR	1KOHM,5%,1/8W	
	UR70	2001-000221	CARBON RESISTOR	1.2KOHM,5%,1/8W	
	UR71	2001-000241	CARBON RESISTOR	1.5KOHM,5%,1/8W	
	UR72	2001-000258	CARBON RESISTOR	1.8KOHM,5%,1/8W	
	UR73	2001-000472	CARBON RESISTOR	2.7KOHM,5%,1/8W	
	UR74	2001-000613	CARBON RESISTOR	3.9KOHM,5%,1/8W	
	UR75	2001-000802	CARBON RESISTOR	5.6KOHM,5%,1/8W	
	UR76	2001-000290	CARBON RESISTOR	10KOHM,5%,1/8W	
	UR77	2001-000411	CARBON RESISTOR	18KOHM,5%,1/8W	
	UR78	2001-000864	CARBON RESISTOR	56KOHM,5%,1/8W	
	UR80	2001-000290	CARBON RESISTOR	10KOHM,5%,1/8W	
	UZD1	0403-000369	ZENER DIODE	UZ8.2BM.500MW	
	VFD	AH07-00056A	VFD	HNV-11SS34T	

■ Electrical parts list (Jack board)

Block No. 04

△	Item	Parts number	Parts name	Remarks	Area
	JVC1	2401-001912	E.CAPACITOR	1UF,20%,50V	
	JVC10	2201-000783	C.CAPACITOR	100NF,+80%20%,5	
	JVC11	2201-000783	C.CAPACITOR	100NF,+80%20%,5	
	JVC2	2401-001102	E.CAPACITOR	330UF,20%,16V	
	JVC3	2401-001511	E.CAPACITOR	47UF,20%,16V	
	JVC4	2201-000783	C.CAPACITOR	100NF,+80%20%,5	
	JVC5	2401-001912	E.CAPACITOR	1UF,20%,50V	
	JVC6	2401-001912	E.CAPACITOR	1UF,20%,50V	
	JVC7	2401-001102	E.CAPACITOR	330UF,20%,16V	
	JVC8	2401-001102	E.CAPACITOR	330UF,20%,16V	
	JVC9	2401-001102	E.CAPACITOR	330UF,20%,16V	
	JVIC1	1001-001173	IC-RF AUDIO SWI	BA7612FSOICP	
	JVIC2	1001-001173	IC-RF AUDIO SWI	BA7612FSOICP	
	JVQ1	0504-000118	TRANSISTOR	KSR1003,NPN	
	JVQ2	0504-000118	TRANSISTOR	KSR1003,NPN	
	JVQ3	0501-000398	TRANSISTOR	KSC945,NPN	
	JVQ4	0504-001003	TRANSISTOR	KSR2003TA,300MW	
	JVQ5	0504-001003	TRANSISTOR	KSR2003TA,300MW	
	JVR1	2001-000449	CARBON RESISTOR	2.2KOHM,5%,1/8W	
	JVR10	3301-000297	BEAD	AA,3.6X1.2X5.7M	
	JVR11	2001-000290	CARBON RESISTOR	10KOHM,5%,1/8W	
	JVR12	2001-000221	CARBON RESISTOR	1.2KOHM,5%,1/8W	
	JVR13	2001-000429	CARBON RESISTOR	1KOHM,5%,1/8W	
	JVR14	2001-000429	CARBON RESISTOR	1KOHM,5%,1/8W	
	JVR15	2001-000221	CARBON RESISTOR	1.2KOHM,5%,1/8W	
	JVR16	2001-000429	CARBON RESISTOR	1KOHM,5%,1/8W	
	JVR17	2001-000969	CARBON RESISTOR	75OHM,5%,1/8W	
	JVR18	2001-000969	CARBON RESISTOR	75OHM,5%,1/8W	
	JVR19	2001-000969	CARBON RESISTOR	75OHM,5%,1/8W	
	JVR2	2001-000995	CARBON RESISTOR	820OHM,5%,1/8W	
	JVR3	2001-000449	CARBON RESISTOR	2.2KOHM,5%,1/8W	
	JVR4	2001-000780	CARBON RESISTOR	470OHM,5%,1/8W	
	JVR5	2001-000969	CARBON RESISTOR	75OHM,5%,1/8W	
	JVR6	2001-000969	CARBON RESISTOR	75OHM,5%,1/8W	
	JVR7	2001-001006	CARBON RESISTOR	820OHM,5%,1/8W	
	JVR8	2001-000221	CARBON RESISTOR	1.2KOHM,5%,1/8W	
	JVR9	2001-000429	CARBON RESISTOR	1KOHM,5%,1/8W	
	SVD1	0401-000101	DIODE	1N4148,100V	
	SVD2	0401-000101	DIODE	1N4148,100V	
	SW1	AH34-00015A	SWITCH SLIDE	KSA-2272AB,SLID	
	VR18	2001-000429	CARBON RESISTOR	1KOHM,5%,1/8W	
	VR32	2001-000273	CARBON RESISTOR	100KOHM,5%,1/8W	
	VR33	2001-000273	CARBON RESISTOR	100KOHM,5%,1/8W	
	VW1	3711-004110	CONNECTOR	12P,2MM,ST	
	VW2	3708-000347	CONNECTOR	10P,1.0MM,STT	

■ Electrical parts list (DVD Loader board)

Block No. 05

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	CE1	2401-001975	E.CAPACITOR	47UF,20%,16V			C59	2203-000972	CHIP CAPACITOR	47NF,10%,16V,,1	
	CE10	2401-001975	E.CAPACITOR	47UF,20%,16V			C6	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	CE11	2401-001975	E.CAPACITOR	47UF,20%,16V			C60	2203-001126	CHIP CAPACITOR	680PF,10%,50V,1	
	CE12	2401-001895	E.CAPACITOR	100UF,20%,16V			C61	2203-001126	CHIP CAPACITOR	680PF,10%,50V,1	
	CE14	2401-001975	E.CAPACITOR	47UF,20%,16V			C62	2203-001126	CHIP CAPACITOR	680PF,10%,50V,1	
	CE15	2401-001975	E.CAPACITOR	47UF,20%,16V			C63	2203-001126	CHIP CAPACITOR	680PF,10%,50V,1	
	CE19	2401-001895	E.CAPACITOR	100UF,20%,16V			C64	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	CE2	2401-001975	E.CAPACITOR	47UF,20%,16V			C65	2203-000236	CHIP CAPACITOR	100PF,5%,50V,16	
	CE3	2401-001975	E.CAPACITOR	47UF,20%,16V			C66	2203-000440	CHIP CAPACITOR	1NF,10%,50V,160	
	CE4	2401-001502	E.CAPACITOR	47UF,20%,16V			C67	2203-002494	CHIP CAPACITOR	470NF,10%,16V,2	
	CE5	2401-001975	E.CAPACITOR	47UF,20%,16V			C68	2203-000236	CHIP CAPACITOR	100PF,5%,50V,16	
	CE6	2401-000778	E.CAPACITOR	220UF,20%,10V			C69	2203-002494	CHIP CAPACITOR	470NF,10%,16V,2	
	CE7	2401-001895	E.CAPACITOR	100UF,20%,16V			C7	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	CE8	2401-001895	E.CAPACITOR	100UF,20%,16V			C70	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	CE9	2401-001975	E.CAPACITOR	47UF,20%,16V			C71	2203-001103	CHIP CAPACITOR	6.8NF,10%,50V,1	
	C1	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			C72	2203-000440	CHIP CAPACITOR	1NF,10%,50V,160	
	C10	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			C73	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C11	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			C74	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C12	2203-000998	CHIP CAPACITOR	0.047NF,5%,50V,			C75	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C13	2203-000998	CHIP CAPACITOR	0.047NF,5%,50V,			C76	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C14	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			C77	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C15	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			C78	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C16	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			C79	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C17	2203-002494	CHIP CAPACITOR	470NF,10%,16V,2			C8	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C18	2203-000972	CHIP CAPACITOR	47NF,10%,50V,1			C80	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C19	2203-001656	CHIP CAPACITOR	0.47NF,5%,50V,1			C81	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C2	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			C82	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C20	2203-001656	CHIP CAPACITOR	0.47NF,5%,50V,1			C83	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C21	2203-001103	CHIP CAPACITOR	6.8NF,10%,50V,1			C84	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C23	2203-000440	CHIP CAPACITOR	1NF,10%,50V,160			C85	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C24	2203-000440	CHIP CAPACITOR	1NF,10%,50V,160			C86	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C25	2203-000440	CHIP CAPACITOR	1NF,10%,50V,160			C87	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C26	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			C88	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	C27	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			C9	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,	
	C28	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			D1	0407-000114	DIODE	DAN202K,80V,100	
	C29	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			D3	0407-000116	DIODE	DAP202K,80V,100	
	C3	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			J2	3711-003111	CONNECTOR	BOX,6P,1R,2.5MM	
	C30	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			J3	3708-001645	CONNECTOR	40P,1.0MM,SMD	
	C31	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			J4	AH39-00368A	CONNECTOR	6P,50MM,#1007,6	
	C32	2203-000998	CHIP CAPACITOR	0.047NF,5%,50V,			J5	3711-001018	CONNECTOR	BOX,5P,1R,2MM,S	
	C34	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			L2	3301-001495	BEAD	AB,120OHM,2.0X1	
	C35	2203-001573	CHIP CAPACITOR	0.012NF,5%,50V,			L3	3301-001495	BEAD	AB,120OHM,2.0X1	
	C36	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L4	2703-000001	INDUCTOR	10UH,10%,2.5X3.	
	C38	2203-000257	CHIP CAPACITOR	10NF,10%,50V,16			L7	2703-000001	INDUCTOR	10UH,10%,2.5X3.	
	C39	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			Q2	0504-000128	TRANSISTOR	KSR1103,NPN	
	C4	2203-000972	CHIP CAPACITOR	47NF,10%,16V,,1			Q3	0501-000632	TRANSISTOR	2SB1198K,PNP	
	C40	2203-005261	CHIP CAPACITOR	1000NF,10%,25V,			Q4	0501-000632	TRANSISTOR	2SB1197K,PNP	
	C44	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R100	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C45	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R101	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C46	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R102	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C47	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R103	2007-000072	CHI RESISTOR	470HM,5%,1608	
	C48	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R104	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C49	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R105	2007-000072	CHI RESISTOR	470HM,5%,1608	
	C5	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R106	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C50	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R107	2007-000072	CHI RESISTOR	470HM,5%,1608	
	C51	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R108	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C52	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R109	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C53	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R11	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1608	
	C54	2203-001126	CHIP CAPACITOR	680PF,10%,50V,1			R110	2007-000113	CHIP RESISTOR	330HM,5%,1608	
	C55	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R111	2007-000072	CHI RESISTOR	470HM,5%,1608	
	C56	2203-001628	CHIP CAPACITOR	0.03NF,5%,50V,1			R115	2007-000070	CHI RESISTOR	00HM,5%,1608	
	C57	2203-001628	CHIP CAPACITOR	0.03NF,5%,50V,1			R116	2007-000094	CHIP RESISTOR	22KOHM,5%,1608	
	C58	2203-001628	CHIP CAPACITOR	0.03NF,5%,50V,1			R117	2007-000075	CHI RESISTOR	220HM,5%,1608	

■ Electrical parts list (DVD Loader board)

Block No. 05

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	R118	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608			R35	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R119	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608			R36	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R12	2007-000113	CHIP RESISTOR	33OHM,5%,1608			R38	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R120	2007-000082	CHI RESISTOR	3.3KOHM,5%,1608			R39	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R121	2007-000094	CHIP RESISTOR	22KOHM,5%,1608			R4	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	R122	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R45	2007-000078	CHI RESISTOR	1KOHM,5%,1608	
	R123	2007-000094	CHIP RESISTOR	22KOHM,5%,1608			R46	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R124	2007-000070	CHI RESISTOR	0OHM,5%,1608			R47	2007-000078	CHI RESISTOR	1KOHM,5%,1608	
	R125	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R48	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R126	2007-000094	CHIP RESISTOR	22KOHM,5%,1608			R49	2007-000094	CHIP RESISTOR	22KOHM,5%,1608	
	R127	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R5	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R128	2007-000094	CHIP RESISTOR	22KOHM,5%,1608			R50	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	R129	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R52	2007-000109	CHIP RESISTOR	1MOHM,5%,1608	
	R13	2007-000113	CHIP RESISTOR	33OHM,5%,1608			R53	2007-000070	CHI RESISTOR	0OHM,5%,1608	
	R131	2007-000070	CHI RESISTOR	0OHM,5%,1608			R54	2007-000070	CHI RESISTOR	0OHM,5%,1608	
	R132	2007-001179	CHIP RESISTOR	8.2KOHM,5%,1608			R56	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R135	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608			R57	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R137	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608			R58	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R14	2007-000113	CHIP RESISTOR	33OHM,5%,1608			R59	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R142	2007-000070	CHI RESISTOR	0OHM,5%,1608			R6	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1608	
	R143	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R60	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R145	2007-000082	CHI RESISTOR	3.3KOHM,5%,1608			R61	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R147	2007-000082	CHI RESISTOR	3.3KOHM,5%,1608			R62	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R148	2007-000070	CHI RESISTOR	0OHM,5%,1608			R63	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R149	2007-000109	CHIP RESISTOR	1MOHM,5%,1608			R64	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R15	2007-000113	CHIP RESISTOR	33OHM,5%,1608			R65	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R150	2007-000309	CHIP RESISTOR	10OHM,5%,1608			R66	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R151	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R67	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R152	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R68	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R153	2007-000078	CHI RESISTOR	1KOHM,5%,1608			R69	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R155	2007-002425	CHIP RESISTOR	1OHM,5%,1608			R7	2007-000078	CHI RESISTOR	1KOHM,5%,1608	
	R156	2007-002425	CHIP RESISTOR	1OHM,5%,1608			R70	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R157	2007-002425	CHIP RESISTOR	1OHM,5%,1608			R71	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R158	2007-002425	CHIP RESISTOR	1OHM,5%,1608			R72	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R159	2007-000102	CHIP RESISTOR	100KOHM,5%,1608			R73	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R16	2007-000113	CHIP RESISTOR	33OHM,5%,1608			R74	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R160	2007-000102	CHIP RESISTOR	100KOHM,5%,1608			R75	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R161	2007-000102	CHIP RESISTOR	100KOHM,5%,1608			R76	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R162	2007-000077	CHI RESISTOR	470OHM,5%,1608			R77	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R166	2007-000075	CHI RESISTOR	220OHM,5%,1608			R78	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R167	2007-000309	CHIP RESISTOR	10OHM,5%,1608			R79	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R168	2007-000078	CHI RESISTOR	1KOHM,5%,1608			R80	2007-000090	CHIP RESISTOR	10KOHM,5%,1608	
	R17	2007-000102	CHIP RESISTOR	100KOHM,5%,1608			R82	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R170	2007-000078	CHI RESISTOR	1KOHM,5%,1608			R83	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R171	2007-000078	CHI RESISTOR	1KOHM,5%,1608			R84	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R173	2007-000070	CHI RESISTOR	0OHM,5%,1608			R85	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R18	2007-000102	CHIP RESISTOR	100KOHM,5%,1608			R86	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R19	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608			R87	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R20	2007-000097	CHIP RESISTOR	47KOHM,5%,1608			R88	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R22	2007-000094	CHIP RESISTOR	22KOHM,5%,1608			R89	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R23	2007-000113	CHIP RESISTOR	33OHM,5%,1608			R90	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R24	2007-000074	CHI RESISTOR	100OHM,5%,1608			R91	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R25	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R92	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R26	2007-000082	CHI RESISTOR	3.3KOHM,5%,1608			R93	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R27	2007-000082	CHI RESISTOR	3.3KOHM,5%,1608			R94	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R28	2007-000090	CHIP RESISTOR	10KOHM,5%,1608			R95	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R29	2007-000113	CHIP RESISTOR	33OHM,5%,1608			R96	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R3	2007-000124	CHIP RESISTOR	2.2KOHM,5%,1608			R97	2007-000074	CHI RESISTOR	100OHM,5%,1608	
	R30	2007-000097	CHIP RESISTOR	47KOHM,5%,1608			R98	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R31	2007-000070	CHI RESISTOR	0OHM,5%,1608			R99	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R32	2007-000082	CHI RESISTOR	3.3KOHM,5%,1608			U1	1105-001372	IC	MHB416256A-35J	
	R33	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608			U10	1003-001418	IC	FAN8082,DIP,8P	
	R34	2007-000113	CHIP RESISTOR	33OHM,5%,1608			U2	1204-001871	IC	M5701,PQFP,208P	

■ Electrical parts list (DVD Loader board) Block No. 05

△	Item	Parts number	Parts name	Remarks	Area
	U3	0903-001246	IC	M6759,PLCC,44P	
	U4	1203-001369	IC	XC61CN1902MR	
	U5	1203-001293	IC	033,T0-252,3P	
	U6	1003-001305	IC	BA5983FM,HSOP,2	
	U7	1201-001790	IC	SP3721A,TQFP,64	
	U9	3708-001574	CONNECTOR	24P,1MM,ANGLE,S	
	X1	2801-003971	CRYSTAL	13.5MHZ,15PPM	
	ZD1	0403-000357	ZENER DIODE	5.6V,5.4-5.8V	

■ Electrical parts list (DVD MPEG board)

Block No. 06

△	Item	Parts number	Parts name	Remarks	Area	△	Item	Parts number	Parts name	Remarks	Area
	C100	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L1	3301-001495	BEAD	120OHM,2.0X1.2	
	C101	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L30	3301-000353	BEAD	BLM21A121SP	
	C102	2203-000257	CHIP CAPACITOR	10NF,10%,50V,16			L32	3301-000353	BEAD	BLM21A121SP	
	C103	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L38	3301-001495	BEAD	120OHM,2.0X1.2	
	C104	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L39	3301-001495	BEAD	120OHM,2.0X1.2	
	C105	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L40	3301-000353	BEAD	BLM21A121SP	
	C106	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L41	3301-000353	BEAD	BLM21A121SP	
	C107	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L42	3301-000353	BEAD	BLM21A121SP	
	C28	2402-001059	E.CAPACITOR	220UF,20%,6.7V			L43	3301-000353	BEAD	BLM21A121SP	
	C29	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L44	3301-000353	BEAD	BLM21A121SP	
	C30	2402-001059	E.CAPACITOR	220UF,20%,6.6V			L47	3301-000353	BEAD	BLM21A121SP	
	C31	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L48	3301-000353	BEAD	BLM21A121SP	
	C32	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L49	3301-000353	BEAD	BLM21A121SP	
	C33	2402-000179	E.CAPACITOR	47UF,20%,16V			L50	3301-001495	BEAD	120OHM,2.0X1.2	
	C36	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L52	3301-000353	BEAD	BLM21A121SP	
	C37	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L53	3301-000353	BEAD	BLM21A121SP	
	C38	2402-000179	E.CAPACITOR	47UF,20%,16V			L54	3301-000353	BEAD	BLM21A121SP	
	C46	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L55	3301-001495	BEAD	120OHM,2.0X1.2	
	C48	2402-000179	E.CAPACITOR	47UF,20%,16V			L56	3301-001495	BEAD	120OHM,2.0X1.2	
	C50	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			L57	2007-000029	CHIP RESISTOR	0OHM,5%,2012	
	C51	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			OL1	3301-000353	BEAD	BLM21A121SP	
	C54	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			OL2	3301-000353	BEAD	BLM21A121SP	
	C55	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			PL1	3301-000353	BEAD	BLM21A121SP	
	C59	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			PL2	2007-000029	CHIP RESISTOR	0OHM,5%,2012	
	C61	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			PL3	3301-000325	BEAD	AB,3.2X2.5X1.3M	
	C62	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			Q3	0501-000314	TRANSISTOR	KSA812,PNP,150M	
	C64	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			Q4	0501-000314	TRANSISTOR	KSA812,PNP,150M	
	C66	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			Q5	0501-000314	TRANSISTOR	KSA812,PNP,150M	
	C67	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			Q6	0501-000314	TRANSISTOR	KSA812,PNP,150M	
	C68	2402-000179	E.CAPACITOR	47UF,20%,16V			Q7	0501-000314	TRANSISTOR	KSA812,PNP,150M	
	C69	2402-001059	E.CAPACITOR	220UF,20%,6.5V			Q8	0501-000314	TRANSISTOR	KSA812,PNP,150M	
	C70	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R10	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	C71	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R107	2007-000086	CHIP RESISTOR	5.6KOHM,5%,1608	
	C73	2402-001059	E.CAPACITOR	220UF,20%,6.4V			R108	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C75	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R109	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C76	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R110	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C77	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R111	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C79	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R112	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C80	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R114	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	C82	2402-000179	E.CAPACITOR	47UF,20%,16V			R31	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C85	2402-001059	E.CAPACITOR	220UF,20%,6.3V			R32	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C86	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R34	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	C87	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R53	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C88	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R55	2007-000122	CHIP RESISTOR	1.2KOHM,5%,1608	
	C89	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R56	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	C90	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R57	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	C96	2203-000280	CHIP CAPACITOR	10PF,0.5PF,50V,			R58	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	C97	2203-000280	CHIP CAPACITOR	10PF,0.5PF,50V,			R59	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	C98	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R6	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	C99	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R61	2007-000071	CHIP RESISTOR	22OHM,5%,1608	
	DC1	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1			R63	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR1	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R64	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR2	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R66	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR3	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R68	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR4	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R71	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR5	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R73	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR6	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R75	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR7	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R78	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR8	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R79	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	DR9	2007-000074	CHIP RESISTOR	100OHM,5%,1608			R8	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	J14	3708-001615	CONNECTOR	24P,1MM,SMD-S,S			R80	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	J21	3708-001646	CONNECTOR	10P,1.0MM,SMD			R81	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	J6	3708-001645	CONNECTOR	40P,1.0MM,SMD			R82	2007-000113	CHIP RESISTOR	33OHM,5%,1608	

■ Electrical parts list (DVD MPEG board)

Block No. 06

△	Item	Parts number	Parts name	Remarks	Area
	R83	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R84	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R85	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R86	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R88	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R9	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	R90	2007-000113	CHIP RESISTOR	33OHM,5%,1608	
	R98	2007-000084	CHIP RESISTOR	4.7KOHM,5%,1608	
	R99	2007-000078	CHIP RESISTOR	1KOHM,5%,1608	
	U10	0802-001109	IC	74LVT575,TSS	
	U11	0802-001109	IC	74LVT574,TSS	
	U12	0802-001109	IC	74LVT573,TSS	
	U15	0801-002683	IC	74HCT245,TSSOP	
	U5	1105-001376	IC	W986432DH-7,TSO	
	U6	1107-001318	IC	SST39VF800A-70-	
	U8	1204-001863	IC	ZIVA-5,PQFP,208	
	U9	1203-002336	IC	LM1117,TO-252,3	
	VC10	2203-005005	CHIP CAPACITOR	100NF,10%,16C,1	
	VJL1	3301-000353	BEAD	BLM21A121SP	
	VL1	3301-000353	BEAD	BLM21A121SP	
	VR1	2007-000402	CHIP RESISTOR	150OHM,5%,1608	
	VR10	2007-000402	CHIP RESISTOR	150OHM,5%,1608	
	VR11	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	VR12	2007-000115	CHIP RESISTOR	82OHM,5%,1608	
	VR13	2007-000402	CHIP RESISTOR	150OHM,5%,1608	
	VR14	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	VR15	2007-000115	CHIP RESISTOR	82OHM,5%,1608	
	VR16	2007-000402	CHIP RESISTOR	150OHM,5%,1608	
	VR17	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	VR2	2007-000115	CHIP RESISTOR	82OHM,5%,1608	
	VR3	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	VR4	2007-000115	CHIP RESISTOR	82OHM,5%,1608	
	VR5	2007-000402	CHIP RESISTOR	150OHM,5%,1608	
	VR6	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	VR7	2007-000402	CHIP RESISTOR	150OHM,5%,1608	
	VR8	2007-000070	CHIP RESISTOR	0OHM,5%,1608	
	VR9	2007-000115	CHIP RESISTOR	82OHM,5%,1608	

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Packing materials and accessories parts list

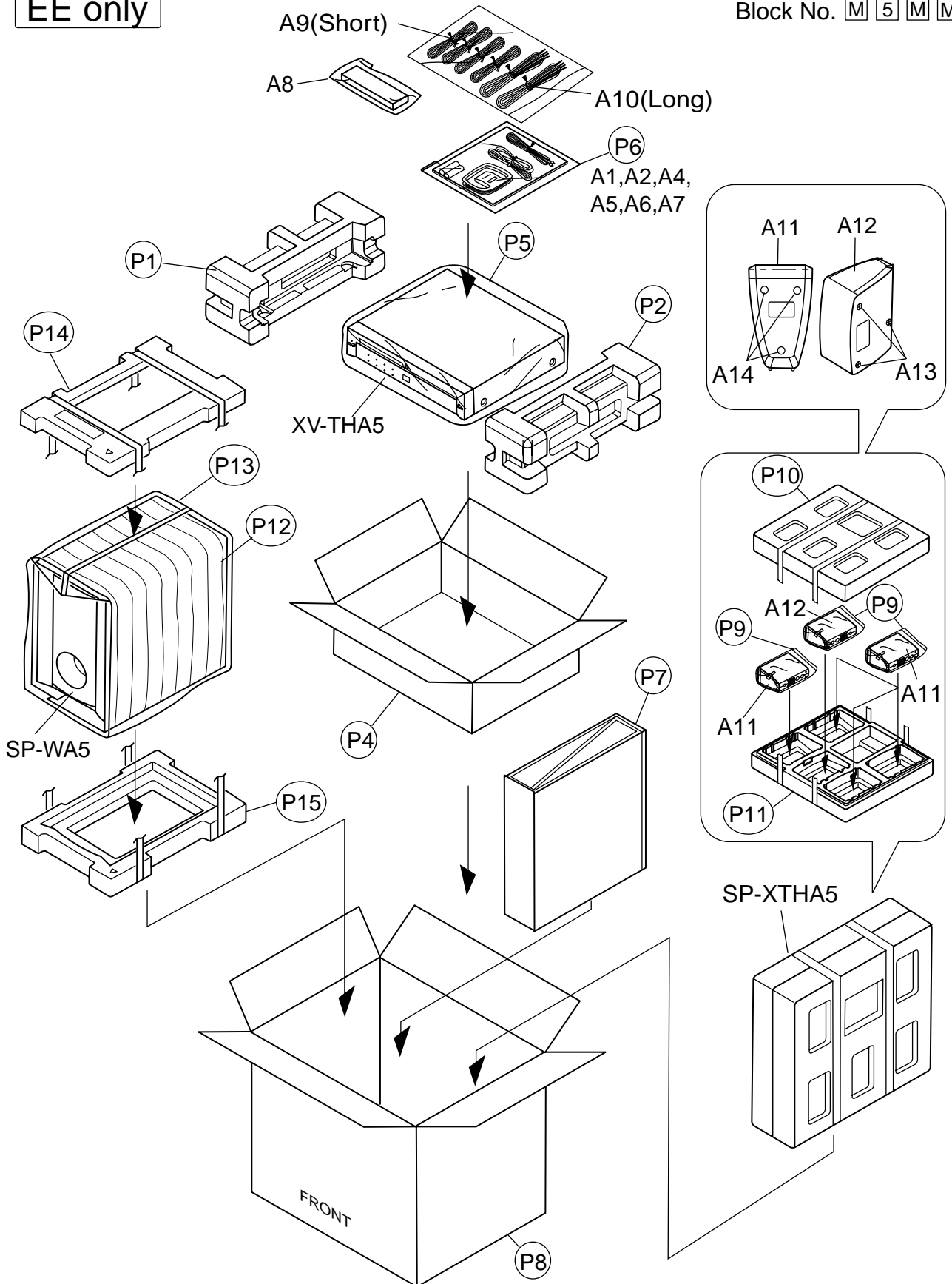
EE only

Block No.

M	3	M	M
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Block No.

M	5	M	M
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Packing materials and accessories parts list

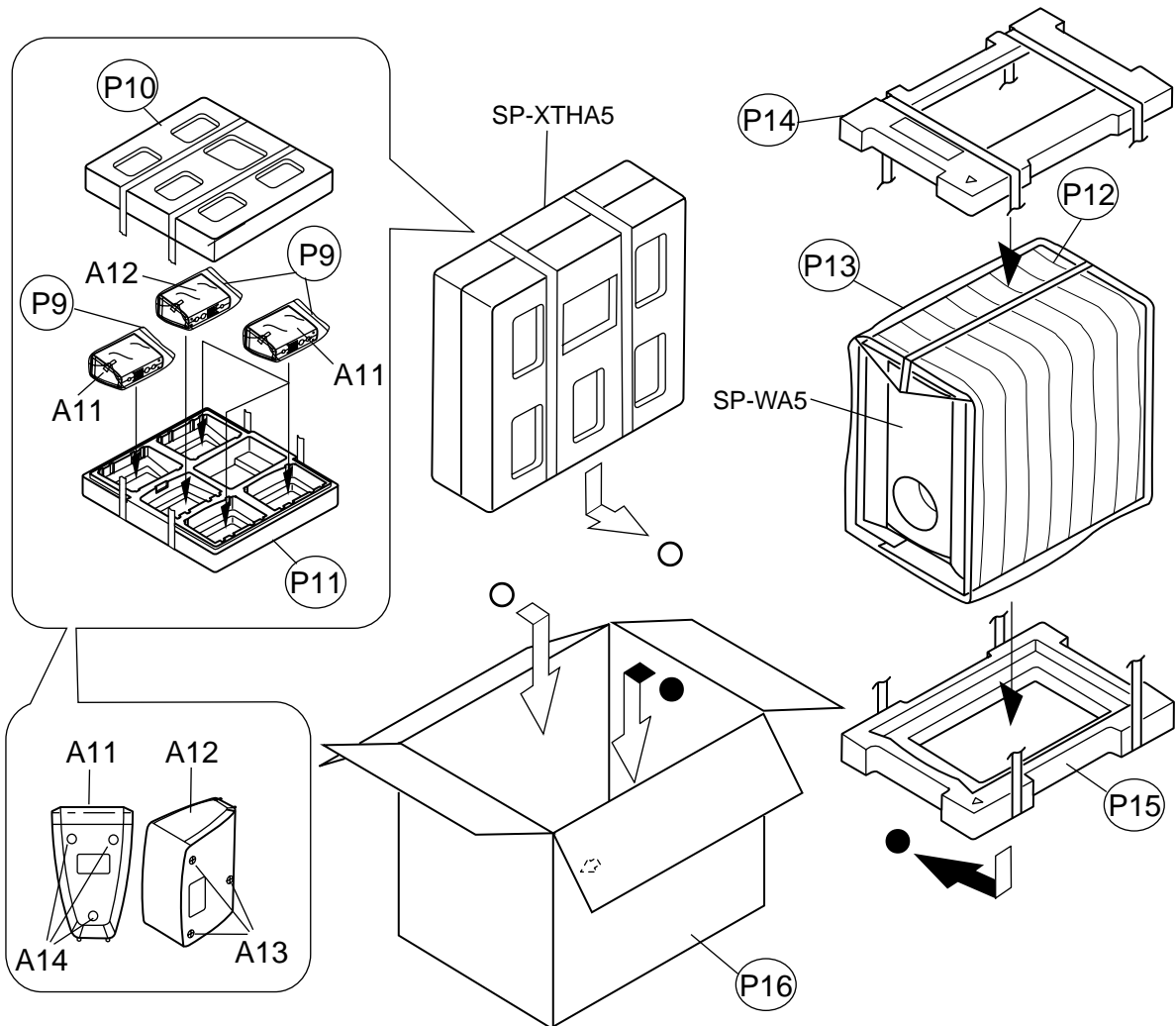
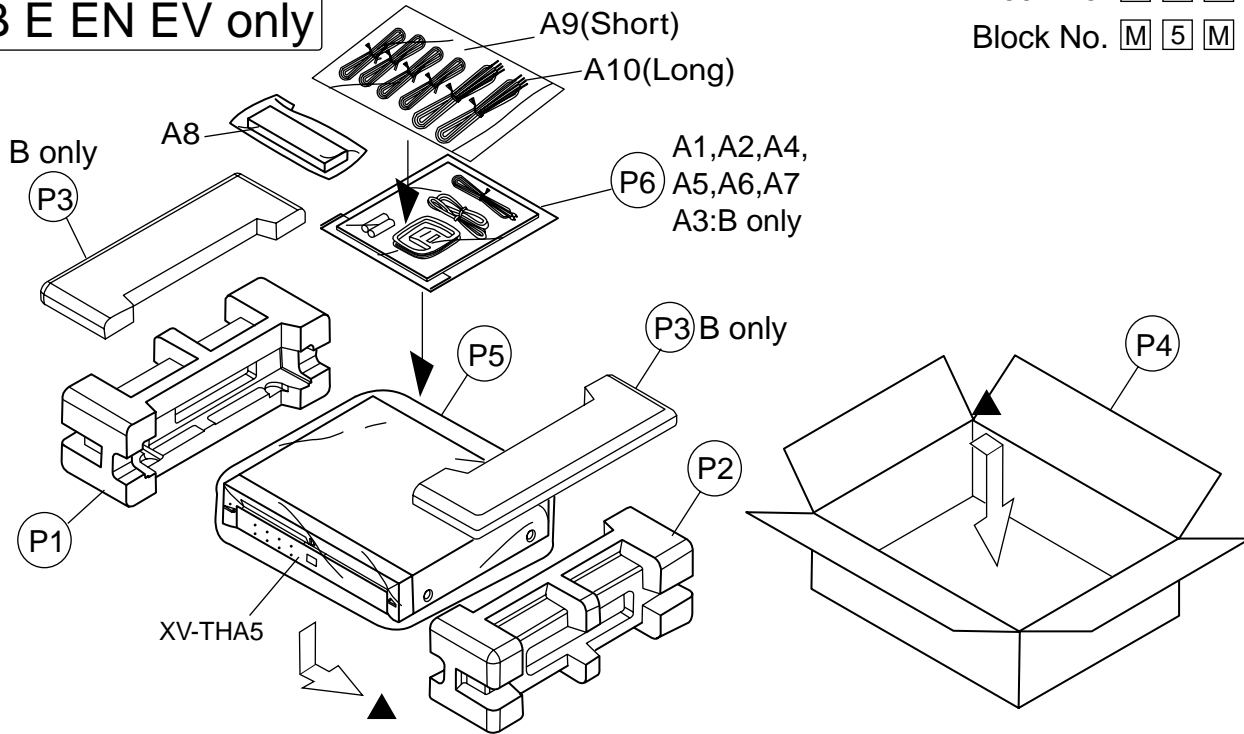
B E EN EV only

Block No.

M	3	M	M
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Block No.

M	5	M	M
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■ Parts list (Packing)

Block No. M3MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	AH69-00532A	CUSHION-SIDE,L	1		
	P 2	AH69-00533A	CUSHION-SIDE,R	1		
	P 3	AH69-00581A	CUSHION-PAD	2		B
	P 4	AH69-00552C	PACKING-CASE	1		E,EN,EV
		AH69-00552D	PACKING-CASE	1		B
		AH69-00552A	PACKING-CASE	1	DW-1 YEL	EE
	P 5	AH69-10081H	PE BAG-SET	1		
	P 6	AH69-00525B	PE BAG-I/B	1		
	P 7	AH69-00665A	PAD-ROLL	1		EE
	P 8	AH69-00664C	MASTER-CARTON	1		EE
	P 9	85-000-327-71	POLY BAG	5	SP-XSA5K,SP-XCA5K	
	P 10	80-000-474-01	TOP CUSHION	1	SP-XSA5K,SP-XCA5K	
	P 11	80-000-474-11	BOTTOM CUSHION	1	SP-XSA5K,SP-XCA5K	
	P 12	85-000-353-51	MIRROR MAT	1	SP-WA5	
	P 13	85-000-434-01	POLY BAG	1	SP-WA5	
	P 14	80-000-475-01	TOP CUSHION	1	SP-WA5	
	P 15	80-000-475-11	BOTTOM CUSHION	1	SP-WA5	
	P 16	83-000-447-11	CARTON	1	SPEAKER	B,E,EN,EV

■ Parts list (Accessories)

Block No. M5MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	AH68-01011E	INST.BOOK	1	GER FRE DUT	E
		AH68-01011F	INST.BOOK	1	GER FRE SPA ITA	EN
		AH68-01011F	INST.BOOK	1	SWE FIN DAN	EN
		AH68-01011K	INST.BOOK	1	RUS	EE
		AH68-01011G	INST.BOOK	1	POL HUN CZE	EV
		AH68-01011D	INST.BOOK	1	ENG	B
	A 2	AH68-00415D	GAURANTY CARD	1		B,E,EN,EE
		AH68-00415F	GAURANTY CARD	1		EV
	A 3	AH68-00415C	IMPORTANT CARD	1		B
	A 4	AH38-10001A	FM-ANT	1		
	A 5	AH42-20001P	AM-ANT	1		
	A 6	-----	BATTERY SET	1		
	A 7	AH39-40001V	RCA-CABLE	1		
	A 8	AH59-00129B	REMOCON	1		
	A 9	AH39-00375A	SPEAKER CORD	4	SHORT	
	A 10	AH39-00376A	SPEAKER CORD	2	LONG	
	A 11	SP-XSA5K	SPK.BOX	4		
	A 12	SP-XCA5K	SPK.BOX	1		
	A 13	90-000-053-01	FOOT	3	SP-XCA5K	
	A 14	90-000-053-11	FOOT	12	SP-XSA5K	