

TOSHIBA

FILE NO. 020-200403

SERVICE MANUAL

LCD Color Television

32HL84

A large, light gray, stylized number '9' graphic is positioned in the lower half of the page, partially overlapping the model number text.



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SERVICE SAFETY PRECAUTIONS

- The caution items shown here describe major safety issues and should always be observed.
- The meanings of the various indications are as follows.

 WARNING	Indicates a hypothetical situation in which service personnel and nearby third parties, or even end users due to a product defect after the service operation is completed, could possibly be in danger of injury or even death in the event of operational error.
 CAUTION	Indicates a hypothetical situation in which service personnel and nearby third parties, or even end users after the service operation is completed, could possibly be in danger of injury, or where there could be physical damage in the event of operational error.

* Physical damage means major damage to a home, furnishings and other possessions.

Examples of marks

 SHOCK HAZARD	The Δ indicates caution (including danger and warning). The actual meaning of this caution is indicated inside the Δ or nearby illustrations or text. The example shown to the left indicates the danger of "electrical shock".
 PROHIBIT DISASSEMBLING	The \otimes indicates a forbidden action. The actual meaning of this caution is indicated inside the \otimes or nearby illustrations or text. The example shown to the left indicates that disassembly is forbidden.
 UNPLUG	The \bullet indicates a forced action (an action that must be performed). The actual meaning of this forced action is indicated by \bullet or nearby illustrations or text. The example shown to the left indicates that the power plug must be disconnected.

 WARNING	
 KEEP CHILDREN AWAY	<ul style="list-style-type: none"> Always advise users to keep children away. There is danger of injury to children from tools, disassembled products, etc.
 UNPLUG	<ul style="list-style-type: none"> Always disconnect the power plug before starting work whenever power is not required. Failure to disconnect the power plug before starting work can result in electrical shock.
 SHOCK HAZARD	<ul style="list-style-type: none"> Depending on the model, use an insulation transformer or wear gloves when servicing with the power on, and disconnect the power plug to avoid electrical shock when replacing parts. In some cases, alternating current is also impressed in the chassis, so electrical shock is possible if the chassis is contacted with the power on.
 USE SPECIFIED PARTS	<ul style="list-style-type: none"> Always use the replacement parts specified for the particular model when making repairs. The parts used in products have the necessary safety characteristics such as inflammability, voltage resistance, etc.; therefore, use only replacement parts that have these same characteristics. Use only the specified parts when the ⚠ mark is included in a circuit diagram or parts list.
 CAUTION FOR WIRING	<ul style="list-style-type: none"> Parts mounting and routing of the wiring should be the same as that used originally. For safety purposes, insulating materials such as tubing or tape is sometimes used and printed circuit boards are sometimes mounted floating. Also make sure that wiring is routed and clamped to avoid parts that generate heat and which use high voltage. Always follow the original scheme.
 CAUTION FOR ASSEMBLING / WIRING	<ul style="list-style-type: none"> After a repair has been completed, reassemble all disassembled parts, and route and reconnect the wiring, in accordance with the original scheme. Do not allow internal wiring to be pinched by cabinets, panels, etc. Any error in reassembly or wiring can result in electrical leakage, flame, etc., and may be hazardous.
 CHECK INSULATION RESISTANCE	<ul style="list-style-type: none"> After completing the work, disconnect the power plug from the outlet, remove the antenna, turn on the power switch. Then, use a 500V insulation resistance meter to check the insulation resistance of the antenna terminal, other metallic parts and between the prongs of the power plug to make sure that the insulation resistance is 1M Ω or more. The set will require inspection and repair if the insulation resistance is below this value.
 PROHIBIT REMODELING	<ul style="list-style-type: none"> Never remodel the product in any way. Remodeling can result in improper operation, malfunction, or electrical leakage and flame, which may be hazardous

HANDLING THE LCD MODULE

Safety Precautions

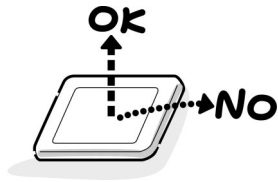
In the event that the screen is damaged or the liquid crystal (fluid) leaks, do not breathe in or drink this fluid. Also, never touch this fluid.

Such actions could cause toxicity or skin irritation. If this fluid should enter the mouth, rinse the mouth thoroughly with water. If the fluid should contact the skin or clothing, wipe off with alcohol, etc., and rinse thoroughly with water. If the fluid should enter the eyes, immediately rinse the eyes thoroughly with running water.

Precautions for Handling the LCD Module

The LCD module can easily be damaged during disassembly or reassembly; therefore, always observe the following precautions when handling the module.

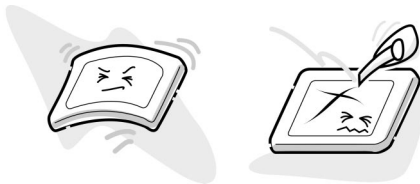
1. When attaching the LCD module to the LCD cover, position it appropriately and fasten at the position where the display can be viewed most conveniently.



2. Carefully align the holes at all four corners of the LCD module with the corresponding holes in the LCD cover and fasten with screws. Do not strongly push on the module because any impact can adversely affect the performance. Also use caution when handling the polarized screen because it can easily be damaged.

CAUTION

The metal edges of the LCD module are sharp, so use caution to avoid injury.



3. If the panel surface becomes soiled, wipe with cotton or a soft cloth. If this does not remove the soiling, breathe on the surface and then wipe again.

If the panel surface is extremely soiled, use a CRT cleaner as a cleaner. Wipe off the panel surface by drop the cleaner on the cloth. Do not drop the cleaner on the panel. Pay attention not to scratch the panel surface.



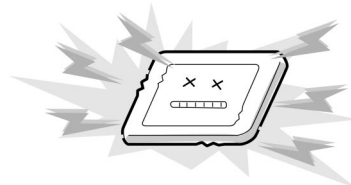
4. Leaving water or other fluids on the panel screen for an extended period of time can result in discoloration or stripes. Immediately remove any type of fluid from the screen.



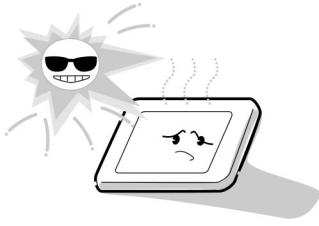
5. Glass is used in the panel, so do not drop or strike with hard objects. Such actions can damage the panel.



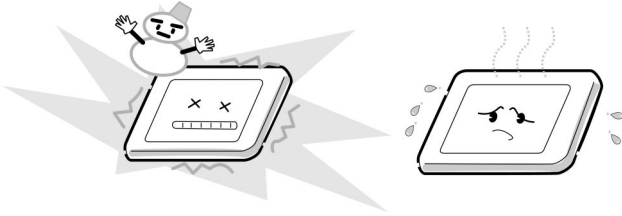
6. CMOS-LSI circuitry is used in the LCD module, so avoid damage due to static electricity. When handling the module, use a wrist ground or anchor ground.



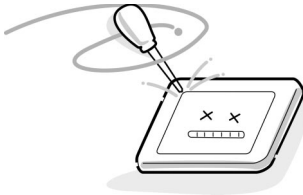
7. Do not expose the LCD module to direct sunlight or strong ultraviolet rays for an extended period of time.



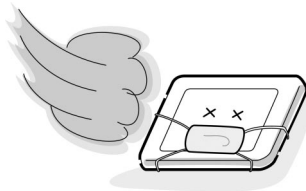
8. Do not store the LCD module below the temperature conditions described in the specifications. Failure to do so could result in freezing of the liquid crystal due to cold air or loss of resilience or other damage.



9. Do not disassemble the LCD module. Such actions could result in improper operation.



10. When transporting the LCD module, do not use packing containing epoxy resin (amine) or silicon resin (alcohol or oxim). The gas generated by these materials can cause loss of polarity.



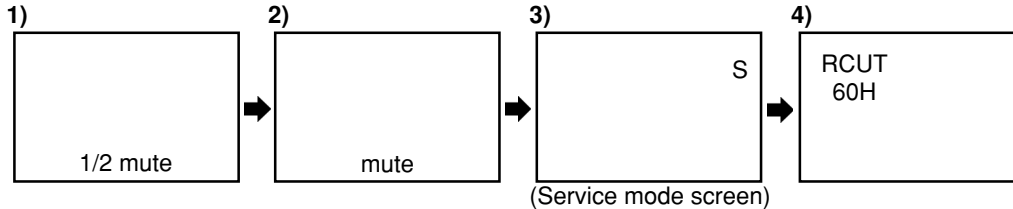
SERVICE MODE

ENTERING TO SERVICE MODE

- 1) Press the "MUTE" button once on the remote control, "1/2 MUTE" is displayed on the screen.
- 2) Press the "MUTE" button again, "MUTE" is displayed on the screen.
- 3) Press the "MENU" button on the TV while pressing the "MUTE" button on the remote control, "S" may appear on the screen. Then enter to the service mode.
- 4) Press the "MENU" button on the remote control, adjustment item appears on the screen.

NOTE

Adjustment items may change by pressing the "CH▼ ▲" buttons on the remote control.



* EXIT FROM SERVICE MODE-Turn off the "POWER" of the TV or remote control.

Built-in signal

- When press the "INPUT" source selection button on the remote controller during service mode, generate the built-in test video signal for servicing.

Built-in test video signal (Use for the adjustment such as white balance, etc.)
General broadcasting signal => red monochrome => green monochrome => blue monochrome => white signal => black cross bar => built-in signal OFF

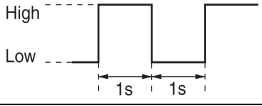
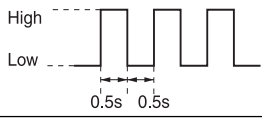
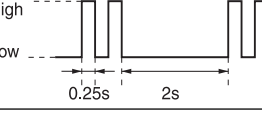

CAUTION

For the video system adjustment, never attempt to initialize the data unless initial setting data is exceed incorrectly.

Adjustment items	Adjustment procedure
Brightness correction (BRTC)	<ol style="list-style-type: none"> 1) Receive a general broadcasting program, then press "MENU" button on the remote control, set the unicolor to minimum (00) and brightness to standard (00) in order to display the "Setting menu" => "Picture setting" => "Picture adjustment" by pressing the cursor buttons "◀ ▶ ▼ ▲". 2) Select BRTC (brightness correction) using the cursor buttons "CH▼ ▲" on the remote control, fine adjust the black signal to be black using the "VOL ▼ ▲" buttons on the remote control. After the adjustment, set "unicolor" back to initialize data.
White balance (RCUT) (GCUT) (BCUT)	<ol style="list-style-type: none"> 1) Enter the service mode, press the "INPUT" source setting button on the remote control to generate the built-in white signal. 2) Adjust the data of items RCUT, GCUT and BCUT for proper white-balanced picture in low light area. <p>* For high light area, GDRV and RDRV items can be adjusted for proper white-balanced picture.</p>

TROUBLESHOOTING DIAGNOSIS FUNCTION

1. DIAGNOSIS FUNCTION FOR LED INDICATION

LED	CAUSE
<p>LED is lit in 1 second at intervals of 1 second.</p> 	<p>Short-circuit detection of BUS line</p> <hr style="border-top: 1px dashed black;"/> <p>BUS line may possibly be short-circuit (SDA to SCL), or BUS line (SDA, SCL) is grounded.</p>
<p>LED is lit in 0.5 at intervals of 0.5 second.</p> 	<p>Overcurrent limiter detection</p> <hr style="border-top: 1px dashed black;"/> <p>POWER terminal on TV microprocessor becomes LOW at 2 seconds or more.</p>
<p>LED is lit in 0.25 second at intervals of 2 second.</p> 	<p>Interruption of FAN motor function detection</p> <hr style="border-top: 1px dashed black;"/> <p>No. 53 terminal on TV microprocessor becomes HIGH for 30 seconds.</p>
<p>LED is lit in 5 seconds at intervals of 5 seconds.</p> 	<p>Abnormal sound detection</p> <hr style="border-top: 1px dashed black;"/> <p>P4 terminal of QS10 becomes LOW for 15 seconds during Speaker is activated.</p>

High : Lighting Low : No Lighting

2. SELF DIAGNOSIS FUNCTION

- 1) Press "9" button on the remote control during display of adjustment menu in the service mode.
- 2) During diagnosis, the following displays are shown.

<SELF CHECK>

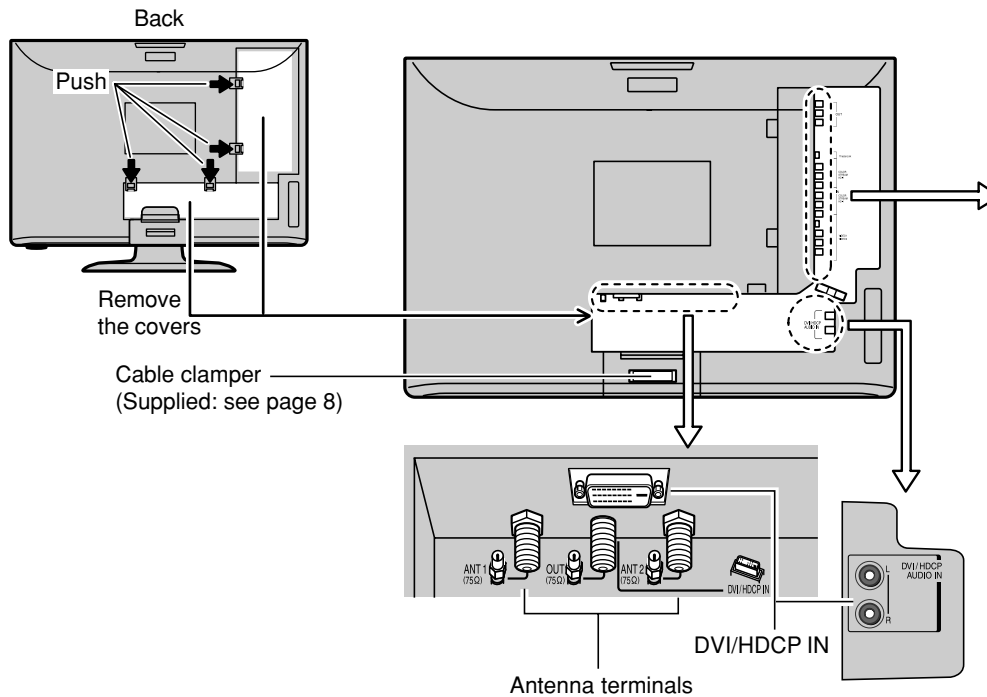
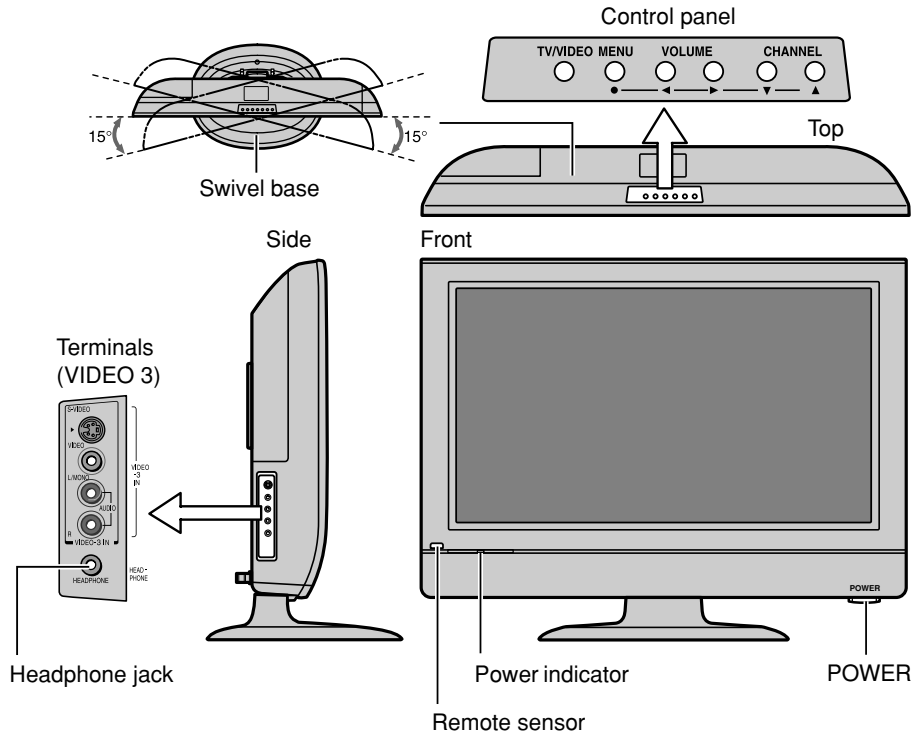
①	NO 12345678
②	POWER : 000
③	BUS LINE : OK
④	BUS CONT : OK
⑤	BLOCK : MAIN SUB
⑥	SET ID : 01
⑦	EEP VER : 02
⑧	OPT 1 : 05 OPT 2 : 70
⑨	SW VER : LCD/May 9 2003 18 : 29 : 58
⑩	DVI BEP NO 2300 SW VER : 0C ERR CODE : 01 E2P VER : 10
⑪	TIME : 05

- ① Part number of microprocessor
- ② Operation number of protecting circuit -----"00" is normal.
When indication is other than "00", overcurrent is apt to flow, and circuit parts may possibly be damaged.
- ③ BUS LINE -----"OK" is normal.
When indication shows "NG (Green: OK, Red: NG)", the BUS line may possibly be short-circuit.
- ④ BUS CONT-----"OK" is normal.
When indication shows "Q uuu (Green: OK, Red: NG)", the device with the number may possibly be damaged.
- ⑤ BLOCK
MAIN : Main picture display --Green indication
Main picture does not display--Red indication
SUB : Sub picture display --Green indication
Sub picture does not display--Red indication
- ⑥ ID number of this unit.
- ⑦ EEP of soft version information
- ⑧ Data number of OPT1 and OPT2
- ⑨ Software version information of host microprocessor (date indication)
- ⑩ DVI NO : DVI number information
DVI ERR CODE : DVI status code number
BEP SW VER : Software version information for BEP microprocessor
BEP E2P VER : Software version information for BEP E2P
- ⑪ Total hour of turn the TV on. (Unit: hour)

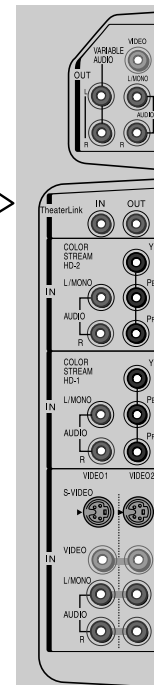
*INITIALIZATION OF SELF DIAGNOSIS DATA

- 1) Enter the service mode, then select any register item.
- 2) Press and hold the RECALL button on the remote control, then press the CHANNEL up button on the TV. The initialization has been completed.

LOCATION OF CONTROLS



- Terminals**
- VIDEO/AUDIO OUT
 - VARIABLE AUDIO



- Terminals**
- VIDEO 1 IN
 - VIDEO 2 IN
 - ColorStream HD-1/2
 - TheaterLink IN/OUT

Learning about the remote control

The buttons used for operating the TV only are described here. For a complete list of the remote control's functions, see the "Remote Control functional key chart" on pages 19–20.

POWER turns the TV on and off

SLEEP allows access to the automatic TV shut-off function (page 53)

LIGHT The first press of the LIGHT button lights the keypad and turns on the Illumination mode. With the Illumination mode on, pressing any other key lights the keypad for 5 seconds (10 seconds if you're in programming mode). Subsequent presses of the LIGHT button toggle between turning the Illumination mode on and off.

Channel Numbers (0-9, 100) allow direct access to channels (page 30)

MODE cycles through the six device modes: TV, CABLE/SAT, VCR, DVD, AUDIO1, and AUDIO2. The mode indicator light will remain lit for a few seconds (page 21).

PIC SIZE cycles through the five picture sizes: Natural, Theater Wide 1, 2, 3, and Full (page 34)

FAVORITE allows access to the favorite channel search function (page 41)

MENU allows access to on-screen programming menus (page 26)

ENTER sets programming menu information (page 26)

▲▼◀▶ select or adjust programming menus (page 26)

FAV ▲▼ cycles through favorite channels (page 32)

CH ▲▼ cycles through programmed channels (page 29)

VOL ▲▼ adjusts the volume level

EXIT exits the programming menus (page 26)

INPUT selects the video input source (page 50)

MUTE mutes the sound (page 54)

RECALL displays on-screen information (page 60)

CH RTN returns to the last viewed channels (page 31)

POP CH ▲▼ selects the POP (picture-out-picture) channel (page 38)

SPLIT turns the POP feature on and off (page 38)

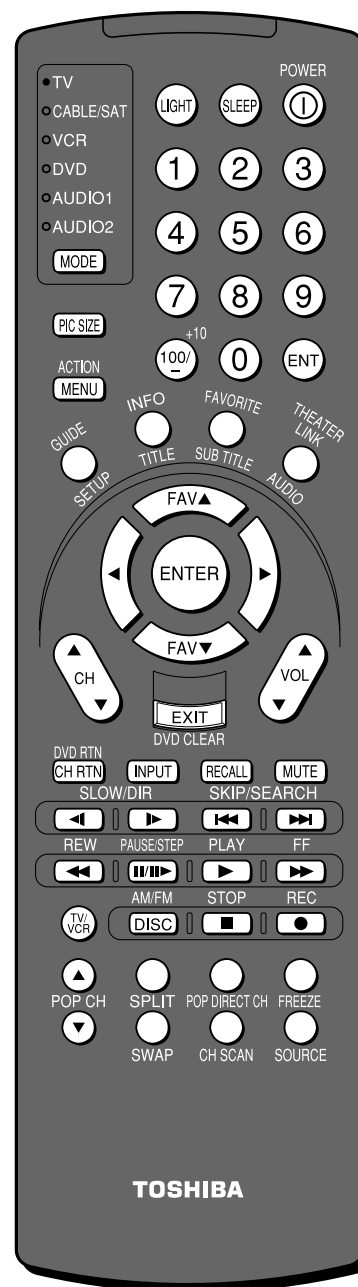
CH SCAN allows access to the programmed channel search function (page 40)

FREEZE freezes the POP picture (page 39)

SWAP switches the main and POP pictures (page 39)

POP DIRECT CH allows direct access to POP channels (page 38)

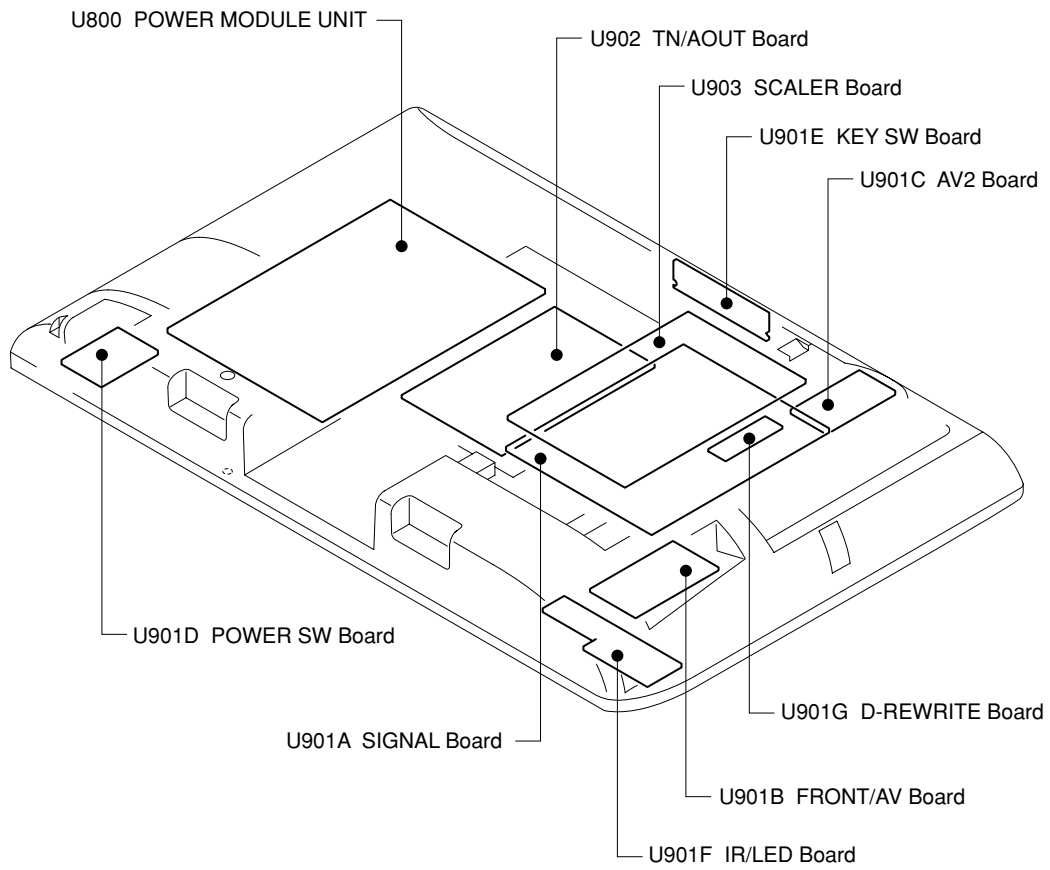
SOURCE selects the POP picture source (page 38)



Note:

The error message "Not Available" will appear if you press a key for a function that is not available.

LAYOUT OF MAJOR BOARDS

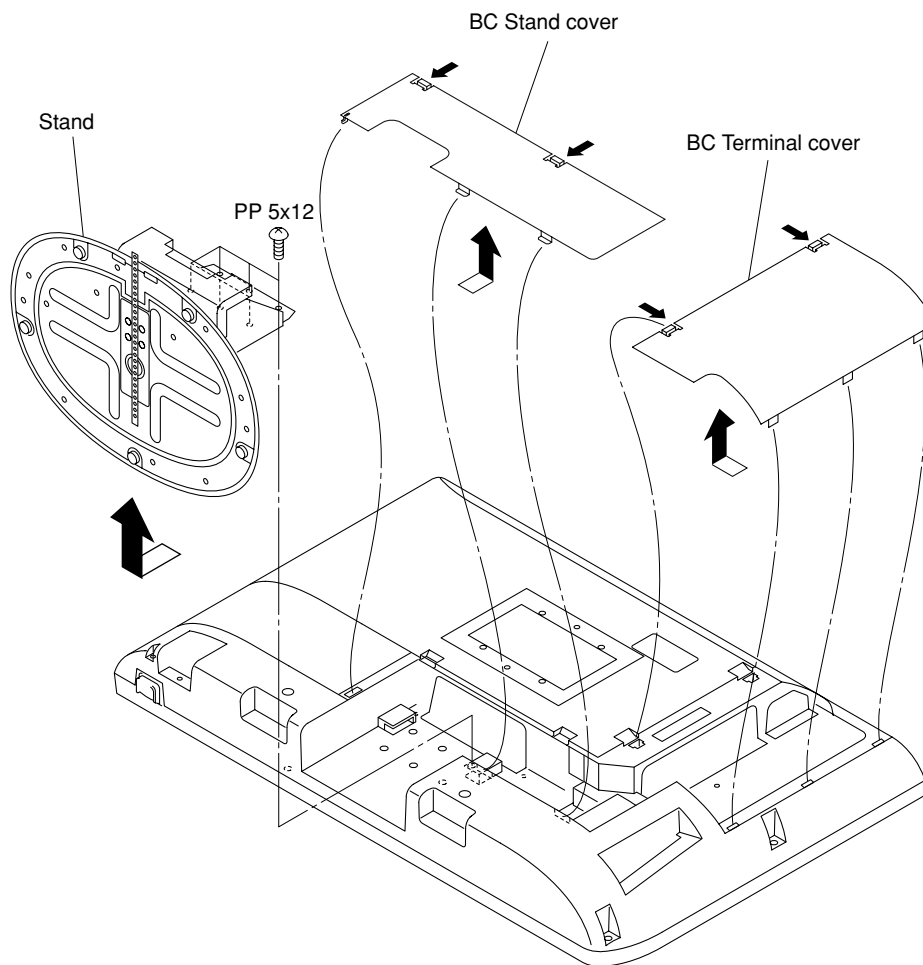


MECHANICAL DISASSEMBLY

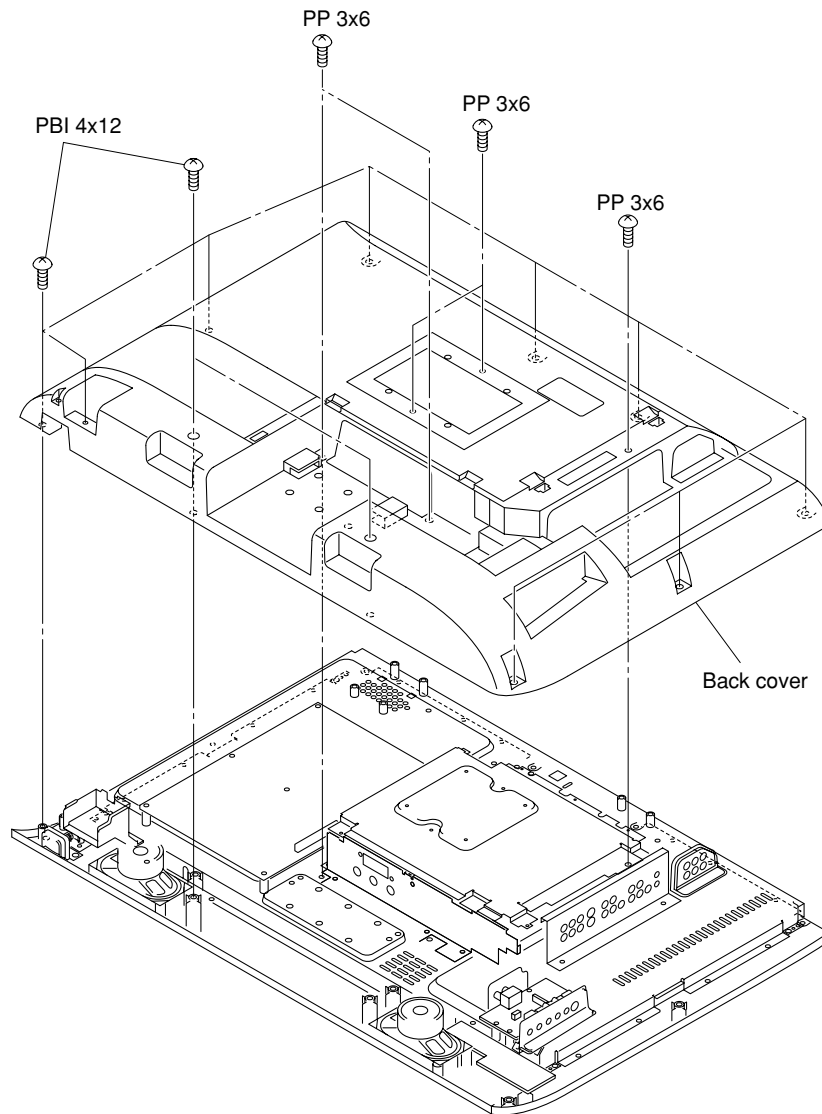
• **Note:** Be sure to lay down the main body (by placing its screen downward) for disassembly.

1. Removing the back cover

- 1) Remove the BC stand cover.
- 2) Remove the BC terminal cover.
- 3) Remove 6 screws, then remove the stand.

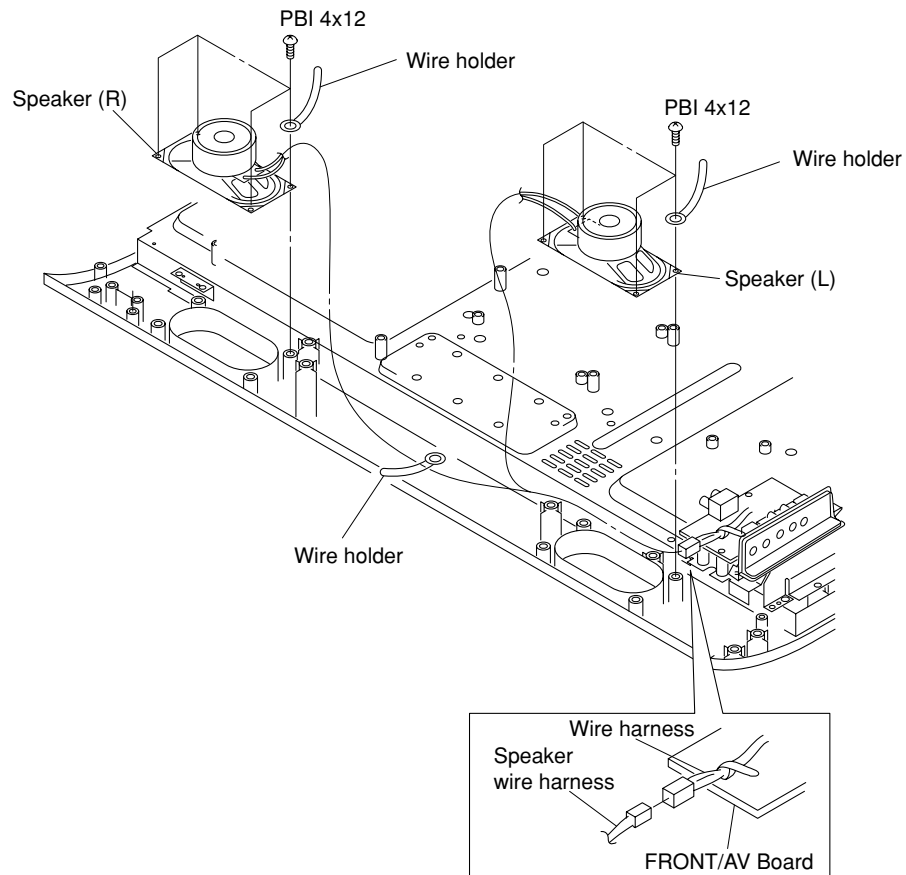


- 4) Remove 11 screws (PBI 4x12).
- 5) Remove 5 screws (PP 3x6).
- 6) Remove the back cover.



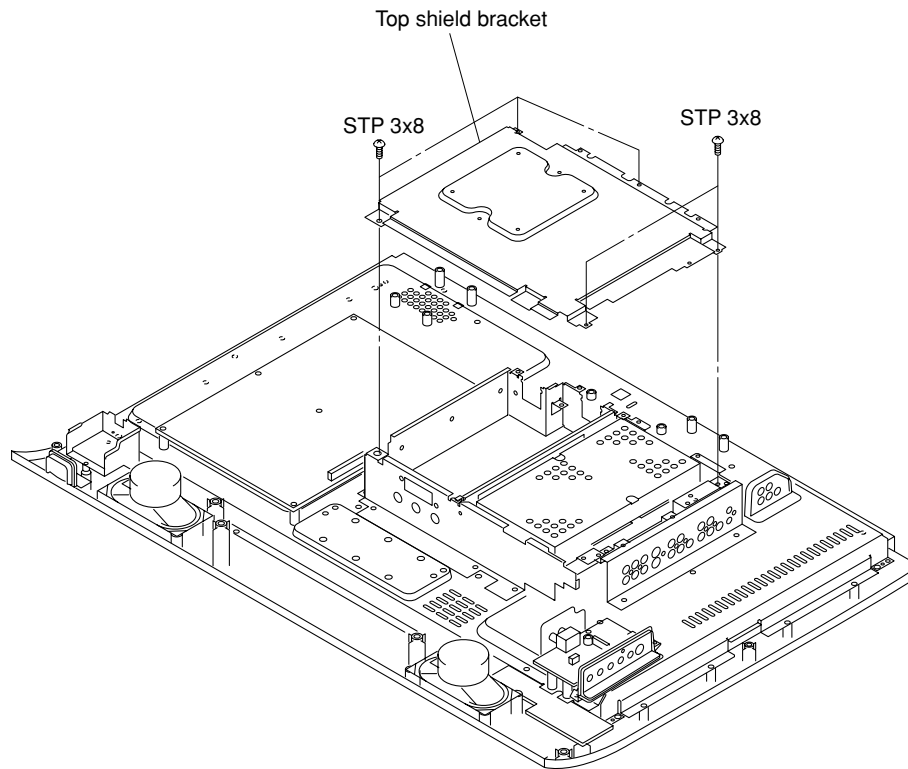
2. Removing the speakers

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Disconnect the speaker wire harness on the Front/AV board.
- 3) Remove the wire harness of the 3 wire holders.
- 4) Remove 4 screws, then remove the left speaker and wire holder.
- 5) Remove 4 screws, then remove the right speaker and wire holder.



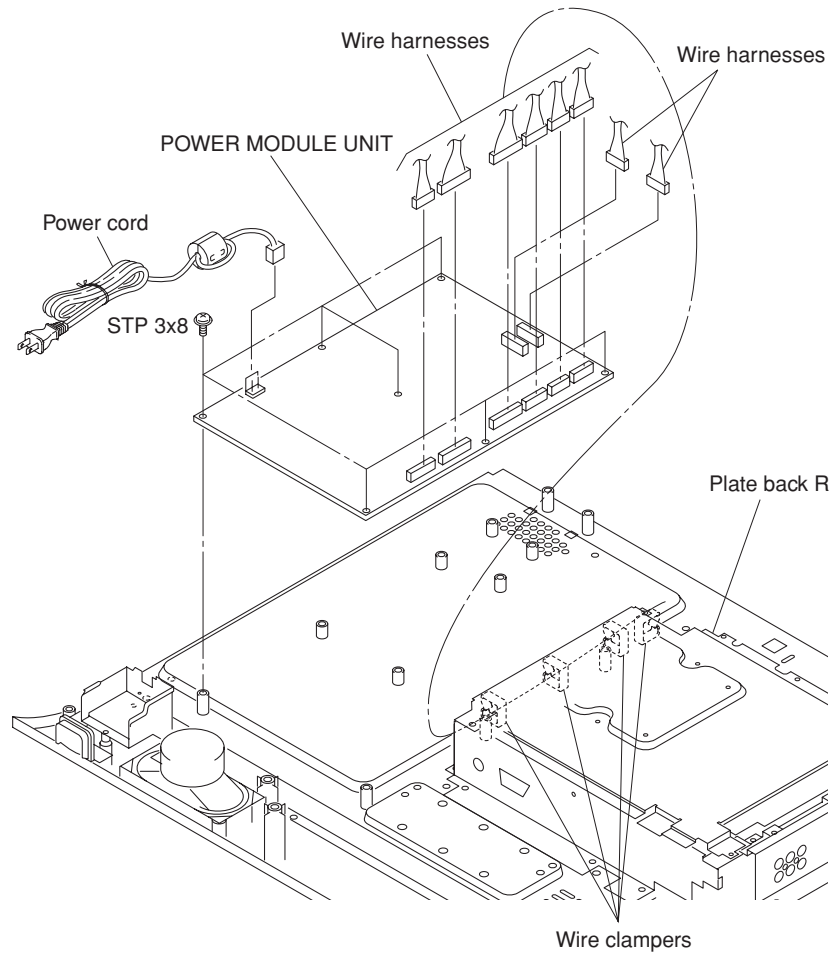
3. Removing the top shield bracket

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove 5 screws, then remove the top shield bracket.



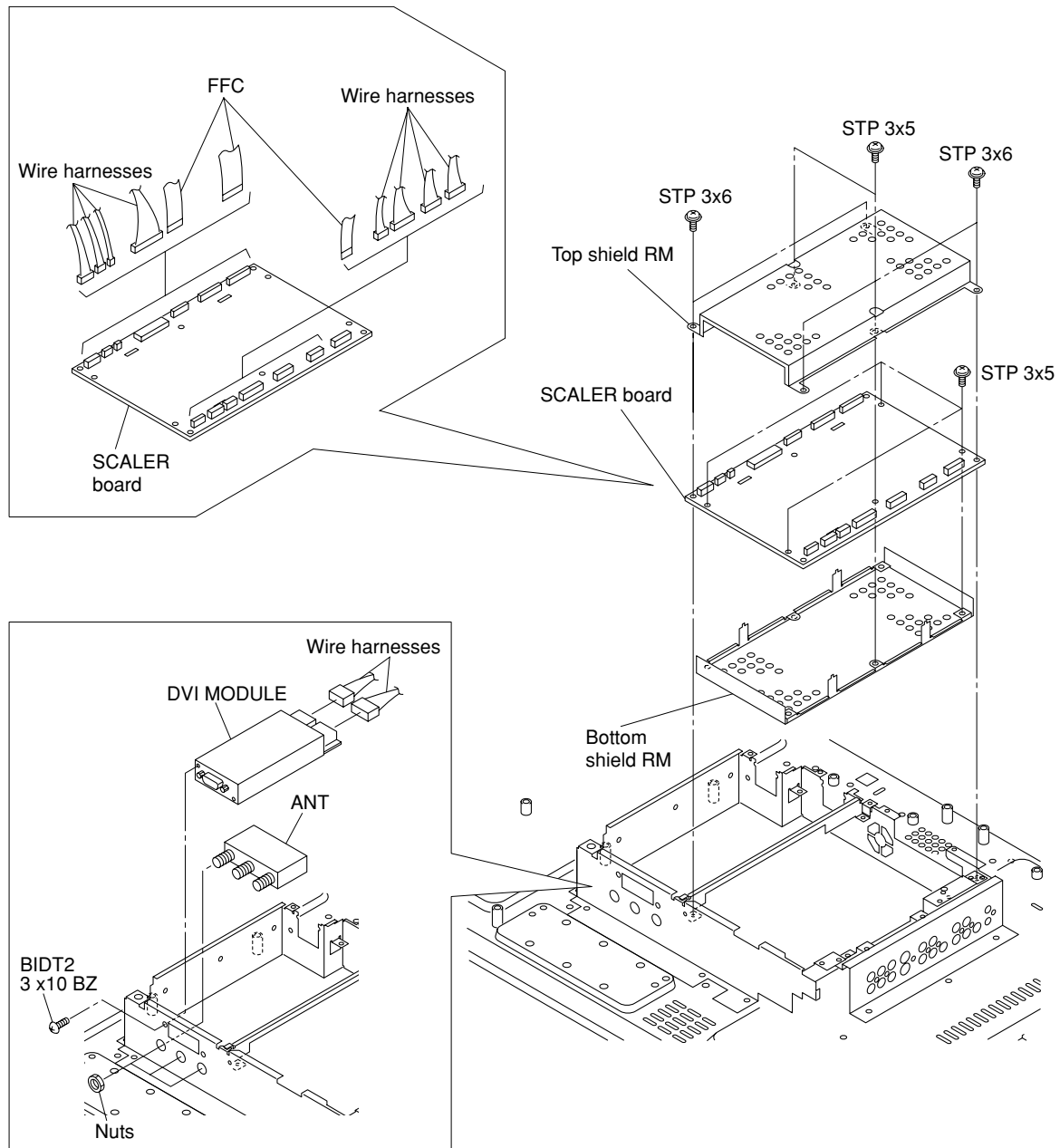
4. Removing the Power Module unit

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Disconnect the power cord from the connector.
- 3) Remove the 3 wire harnesses from the 3 wire clampers on the plate back R.
- 4) Disconnect the 8 wire harnesses from the 8 connectors on the Power Module unit.
- 5) Remove 7 screws, then remove the Power Module unit.



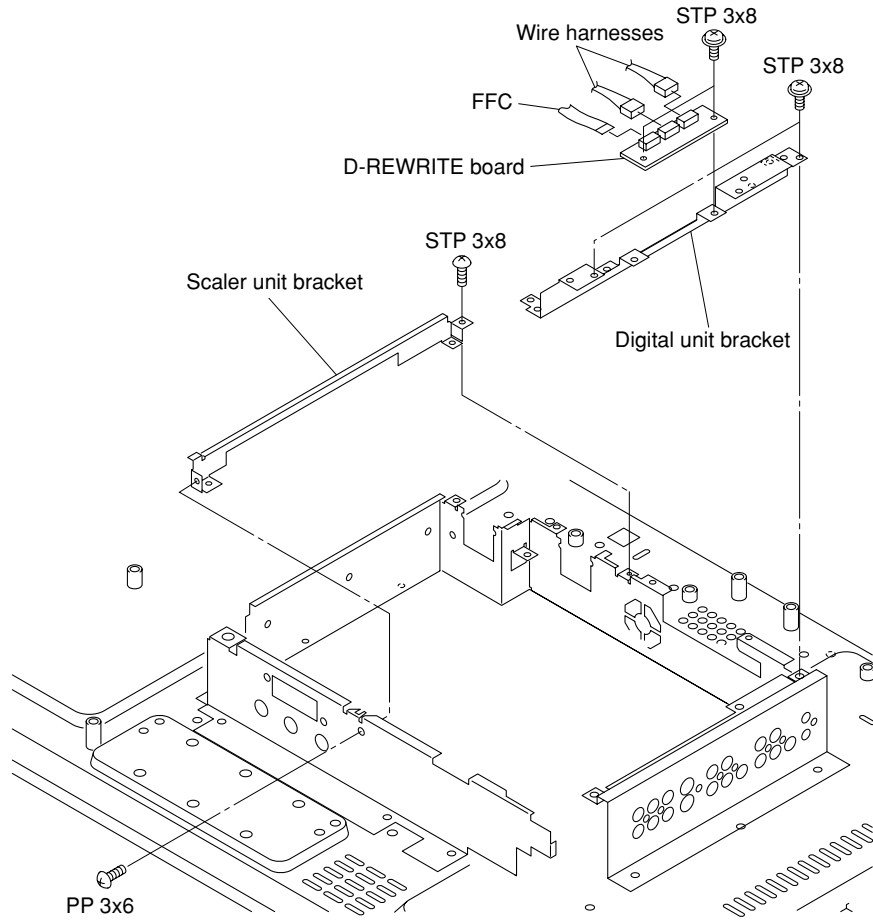
5. Removing the Scaler board, DVI MODULE and ANT

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove the top shield bracket. (Refer to Item 3.)
- 3) Remove 4 screws (STP3x6) and 2 screws (STP3x5), then remove the top shield RM.
- 4) Disconnect the 8 wire harnesses and 2 FFC from the Scaler board.
- 5) Remove 4 screws (STP3x5), then remove the Scaler board and bottom shield RM.
- 6) Disconnect the 2 wire harnesses from the DVI MODULE.
- 7) Remove 2 screws (BIDT2 3x10 BZ), then remove the DVI MODULE.
- 8) Remove 3 nuts, then remove the ANT.



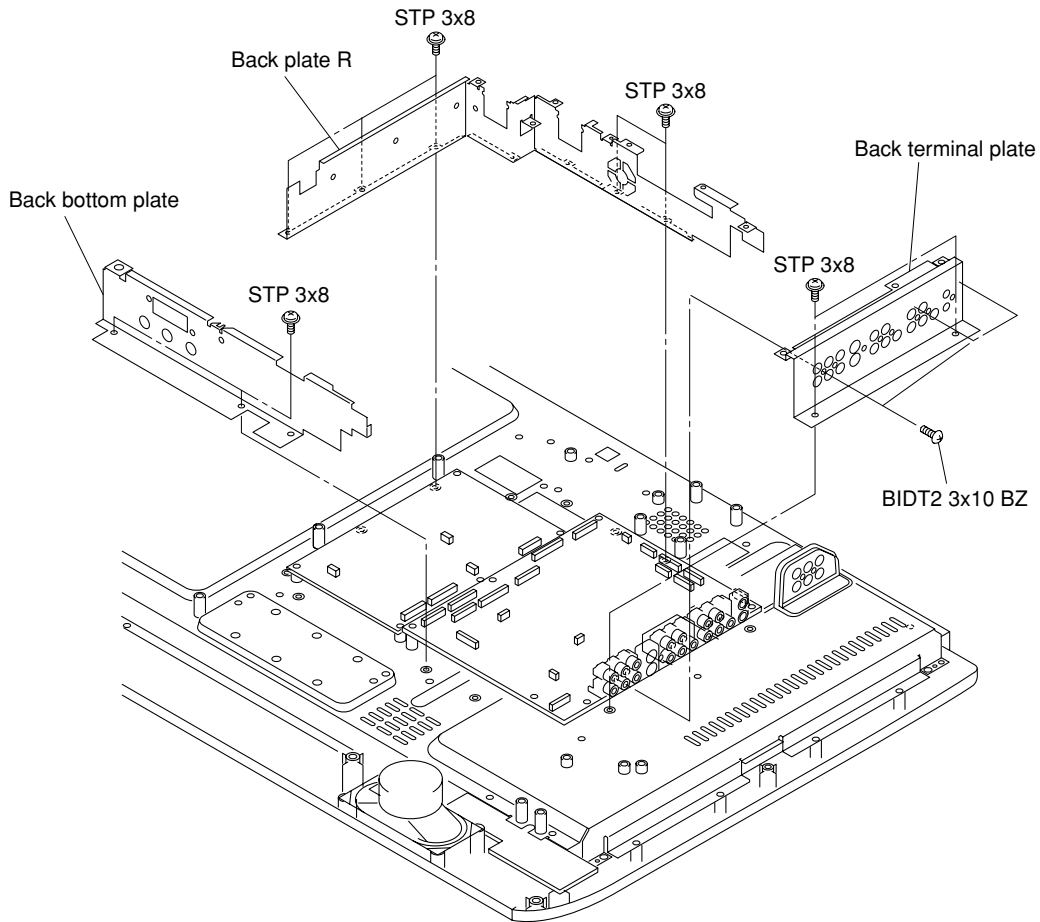
6. Removing the D-Rewrite board

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove the top shield bracket. (Refer to Item 3.)
- 3) Remove the Scaler board, DVI MODULE and ANT. (Refer to Item 5.)
- 4) Remove 2 screws, then remove the D-Rewrite board.
- 5) Disconnect the 2 wire harnesses and 1 FFC on the D-Rewrite board.
- 6) Remove 2 screws, then remove the digital unit bracket.
- 7) Remove 2 screws, then remove the scaler unit bracket.



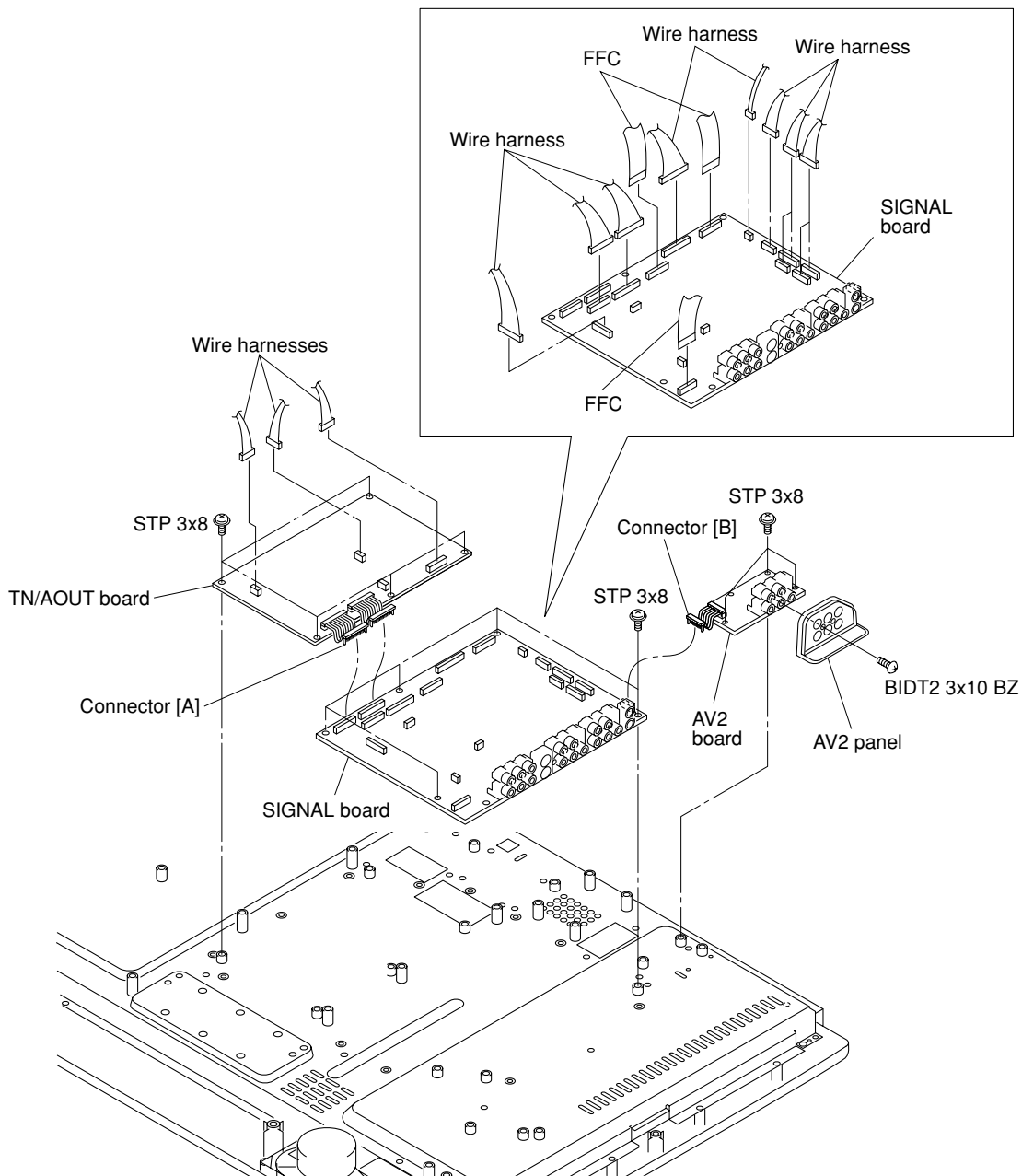
7. Removing the back terminal plate, back bottom plate and back R plate

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove the top shield bracket. (Refer to Item 3.)
- 3) Remove the Scaler board, DVI MODULE and ANT. (Refer to Item 5.)
- 4) Remove the D-Rewrite board. (Refer to Item 6.)
- 5) Remove 5 screws (BIDT 2 3x10BZ) and 2 screws, then remove the back terminal plate.
- 6) Remove 2 screws (STP 3x8), then remove the back bottom plate.
- 7) Remove 5 screws (STP 3x8), then remove the back R plate.



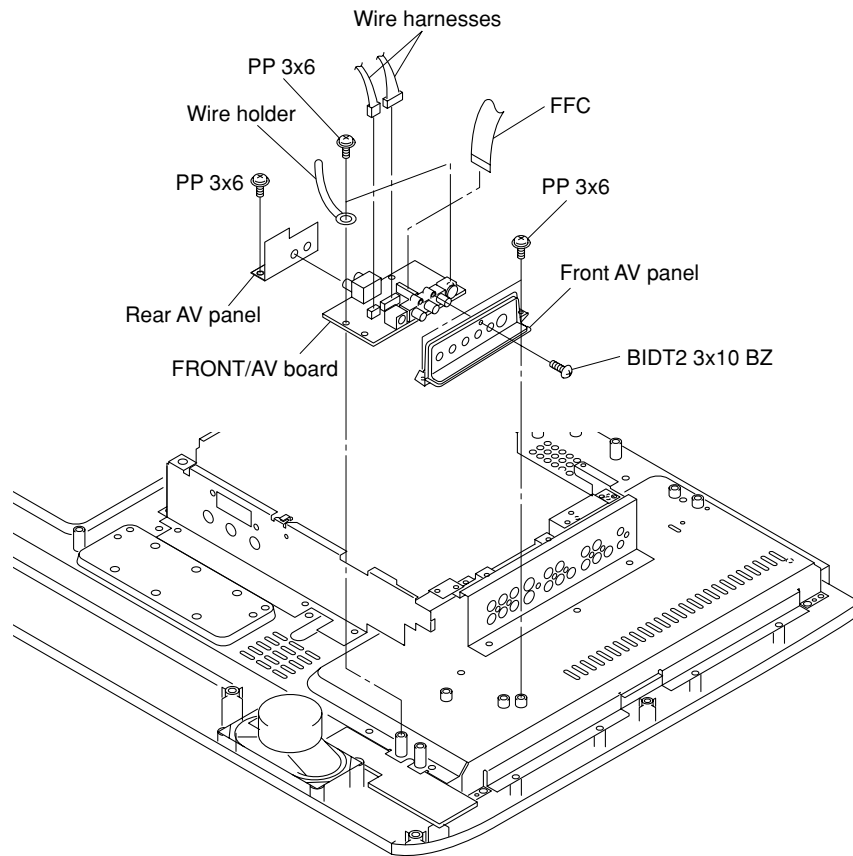
8. Removing the TN/AOUT, AV2 and Signal boards

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove the top shield bracket. (Refer to Item 3.)
- 3) Remove the Scaler board, DVI MODULE and ANT. (Refer to Item 5.)
- 4) Remove the D-Rewrite board. (Refer to Item 6.)
- 5) Remove the back plates. (Refer to Item 7.)
- 6) Remove the connector [A] and 3 harnesses from the TN/AOUT board.
- 7) Remove 5 screws (STP 3x8), then remove the TN/AOUT board.
- 8) Remove the connector [B] from the Signal board.
- 9) Remove 3 screws (STP 3x8), then remove the AV2 board.
- 10) Remove 1 screw (BIDT2 3x10BZ), then remove the AV2 panel.
- 11) Remove the 6 wire harnesses and 2 FFC from the Signal board.
- 12) Remove 5 screws (STP 3x8), then remove the Signal board.



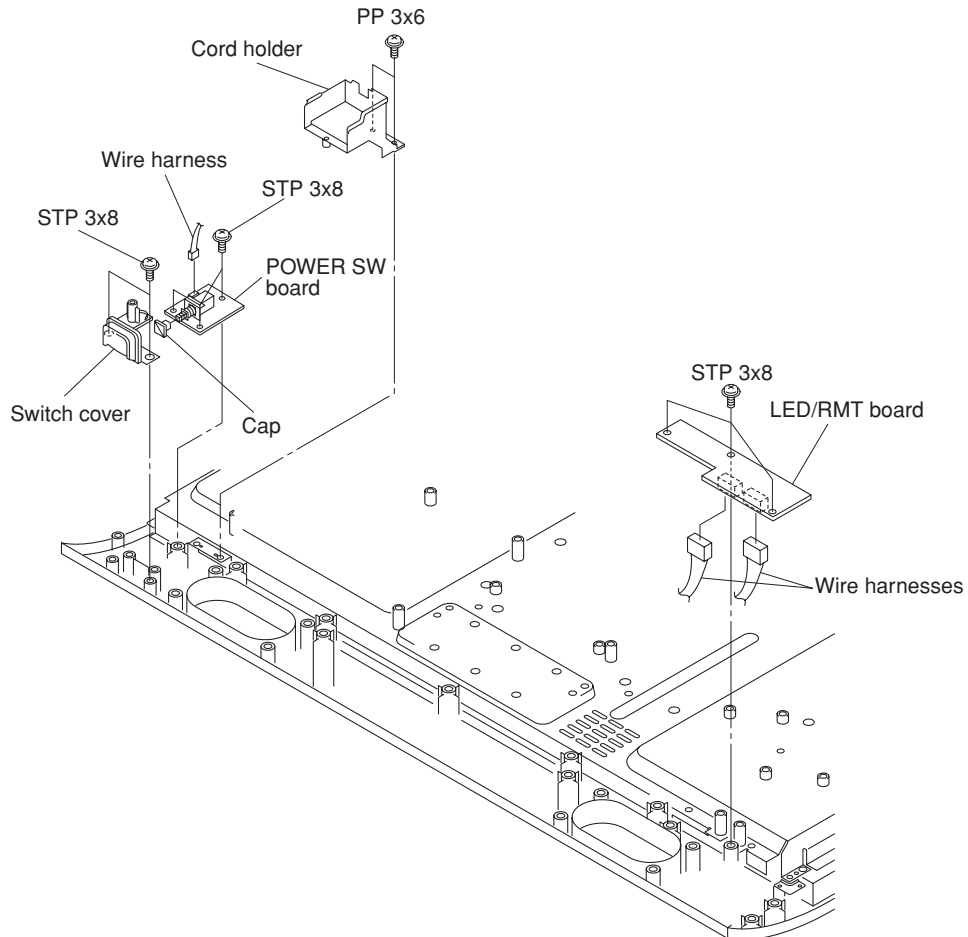
9. Removing the Front /AV board

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove 1 screw (BIDT2 3x10 BZ).
- 3) Remove 2 screws (PP 3x6), then remove the front AV panel.
- 4) Remove 1 screw (PP 3x6), then remove the rear AV panel.
- 5) Disconnect the 2 wire harnesses and 1 FFC from the Front/AV board.
- 6) Remove 2 screws (PP 3x6), then remove the wire holder and Front/AV board.



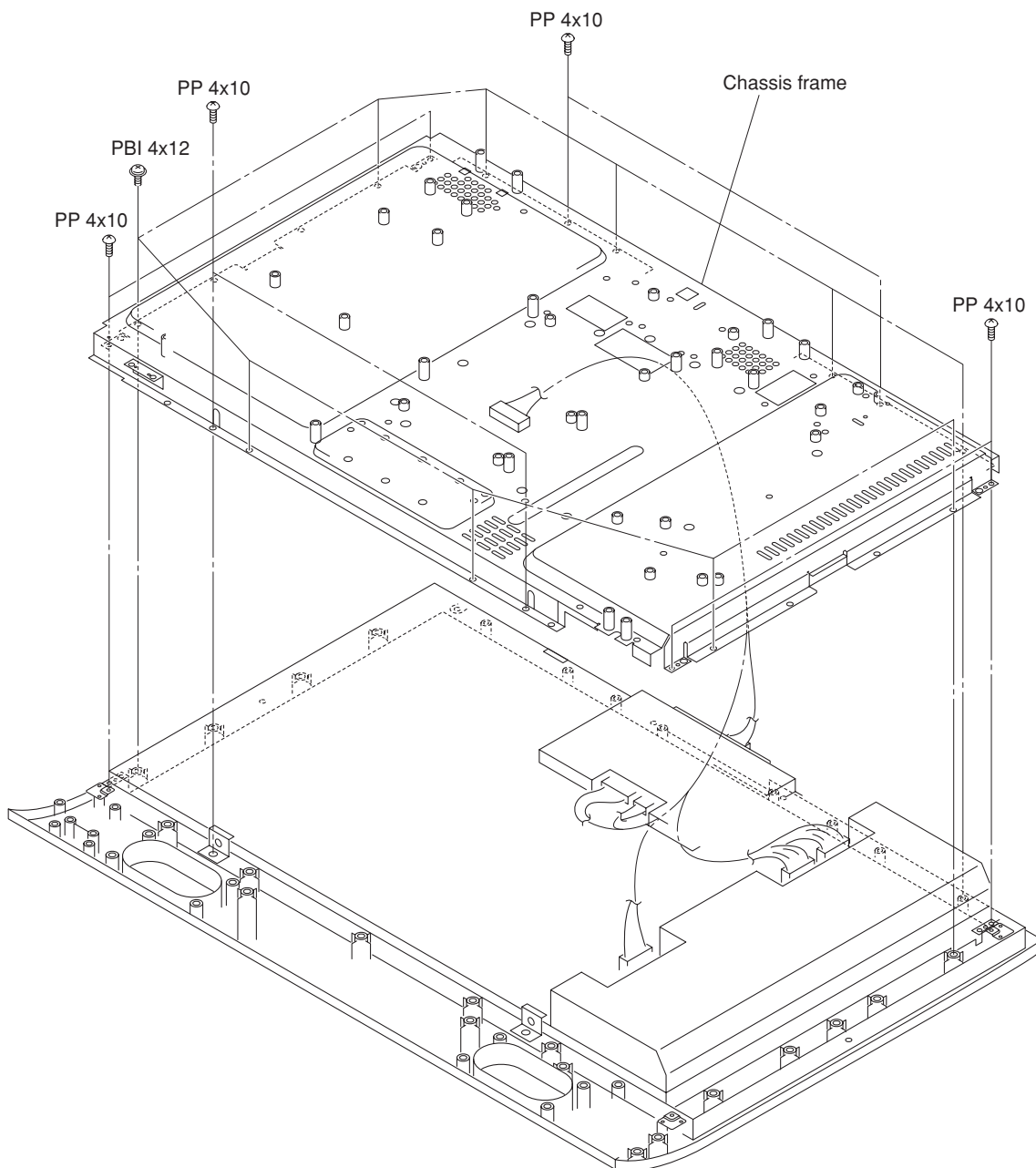
10. Removing the Power SW and LED/RMT boards

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove 3 screws (STP 3x8), then remove the LED/RMT board.
- 3) Disconnect the 2 wire harnesses from the connector on the LED/RMT board.
- 4) Remove 2 screws (PP 3x6), then remove the cord holder.
- 5) Remove 2 screws (STP 3x8), then remove the switch cover and cap.
- 6) Disconnect the wire harness from the connector on the Power SW board.
- 7) Remove 3 screws (STP 3x8), then remove the Power SW board.



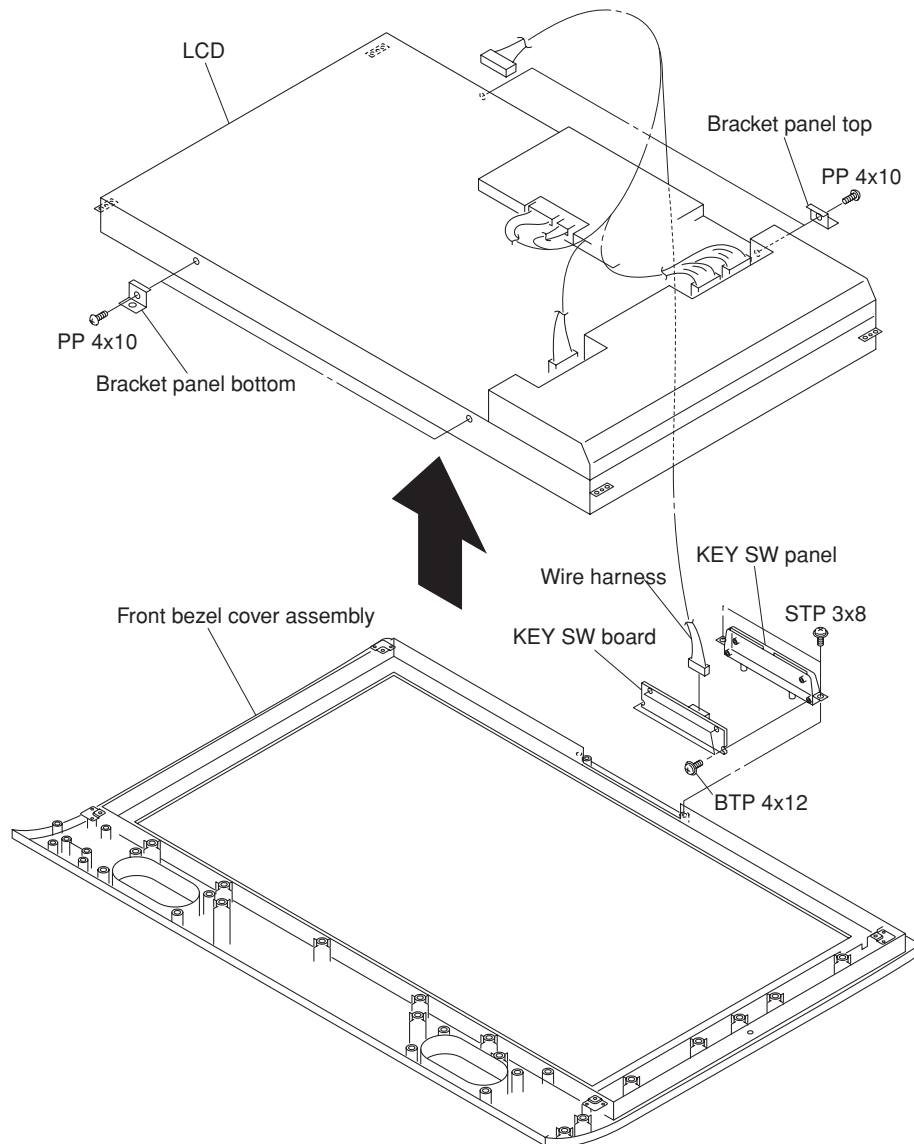
11. Removing the chassis frame

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove the speakers. (Refer to Item 2.)
- 3) Remove the top shield bracket. (Refer to Item 3.)
- 4) Remove Power Module unit. (Refer to Item 4.)
- 5) Remove the Scaler board, DVI MODULE and ANT. (Refer to Item 5.)
- 6) Remove the D-Rewrite board and bracket. (Refer to Item 6.)
- 7) Remove the back plate. (Refer to Item 7.)
- 8) Remove the TU/AOUT, AV2 and Signal boards. (Refer to Item 8.)
- 9) Remove the Front/AV board. (Refer to Item 9.)
- 10) Remove the Power SW and LED/RMT boards. (Refer to Item 10.)
- 11) Remove 10 screws (PBI 4x12) and 8screws (PP 4x10), then remove the chassis frame.



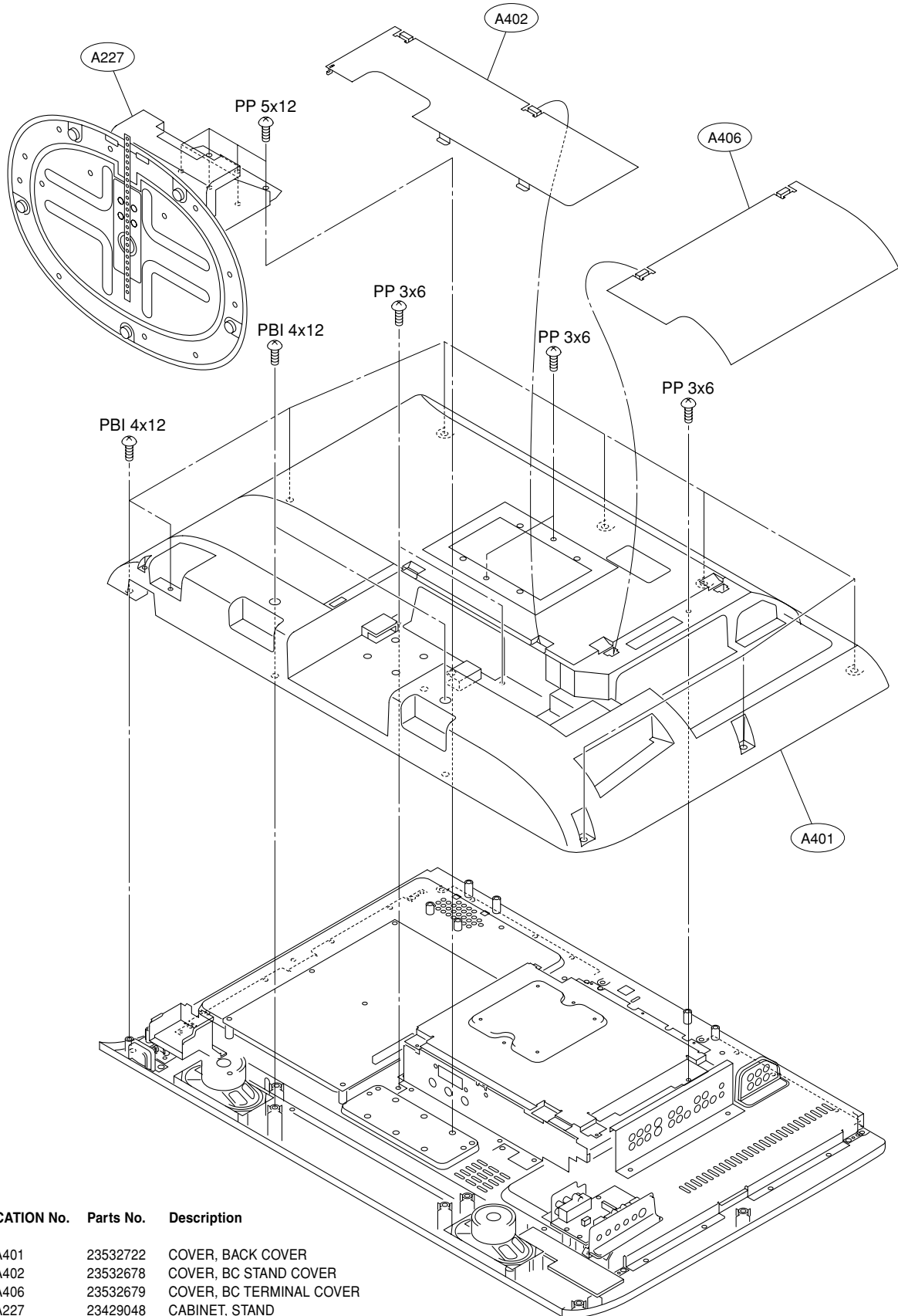
12. Removing the LCD and front bezel cover assembly

- 1) Remove the back cover. (Refer to Item 1.)
- 2) Remove the speakers. (Refer to Item 2.)
- 3) Remove the top shield bracket. (Refer to Item 3.)
- 4) Remove Power Module unit. (Refer to Item 4.)
- 5) Remove the Scaler board, DVI MODULE and ANT. (Refer to Item 5.)
- 6) Remove the D-Rewrite board and bracket. (Refer to Item 6.)
- 7) Remove the back plate. (Refer to Item 7.)
- 8) Remove the TU/AOUT,AV2 and Signal boards. (Refer to Item 8.)
- 9) Remove the Front/AV board. (Refer to Item 9.)
- 10) Remove the Power SW and LED/RMT boards. (Refer to Item 10.)
- 11) Remove the chassis frame. (Refer to Item 11.)
- 12) Remove 2 screws (STP 3x8), then remove the key SW panel.
- 13) Remove 2 screws (STP 3x8), then remove the Key SW board.
- 14) Disconnect the wire harness from the connector on the Key SW board.
- 15) Lift up the LCD slowly from the front bezel cover assembly toward to the arrow direction.
- 16) Remove 2 screws (PP 4x10), then remove the two bracket panels top.
- 17) Remove 2 screws (PP 4x10), then remove the two bracket panels bottom.



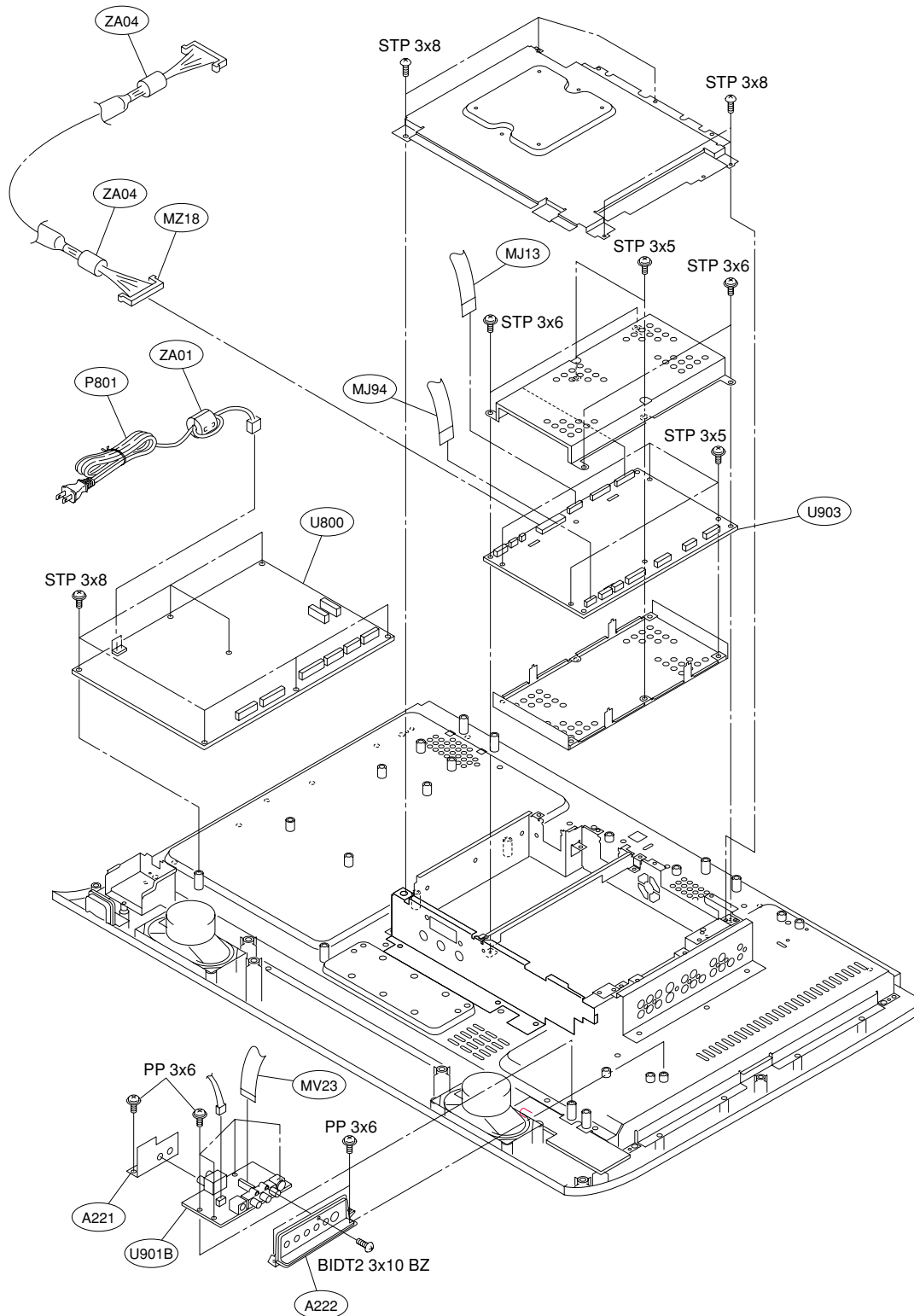
EXPLODED VIEWS

1. Cover Block



LOCATION No.	Parts No.	Description
A401	23532722	COVER, BACK COVER
A402	23532678	COVER, BC STAND COVER
A406	23532679	COVER, BC TERMINAL COVER
A227	23429048	CABINET, STAND
A501	23717176	SCREW, PP5X12+SW+W SZ
A502	23717175	SCREW, PP3X6+SW+W SZ
A505	23035004	SCREW, PBI4X12,SBN

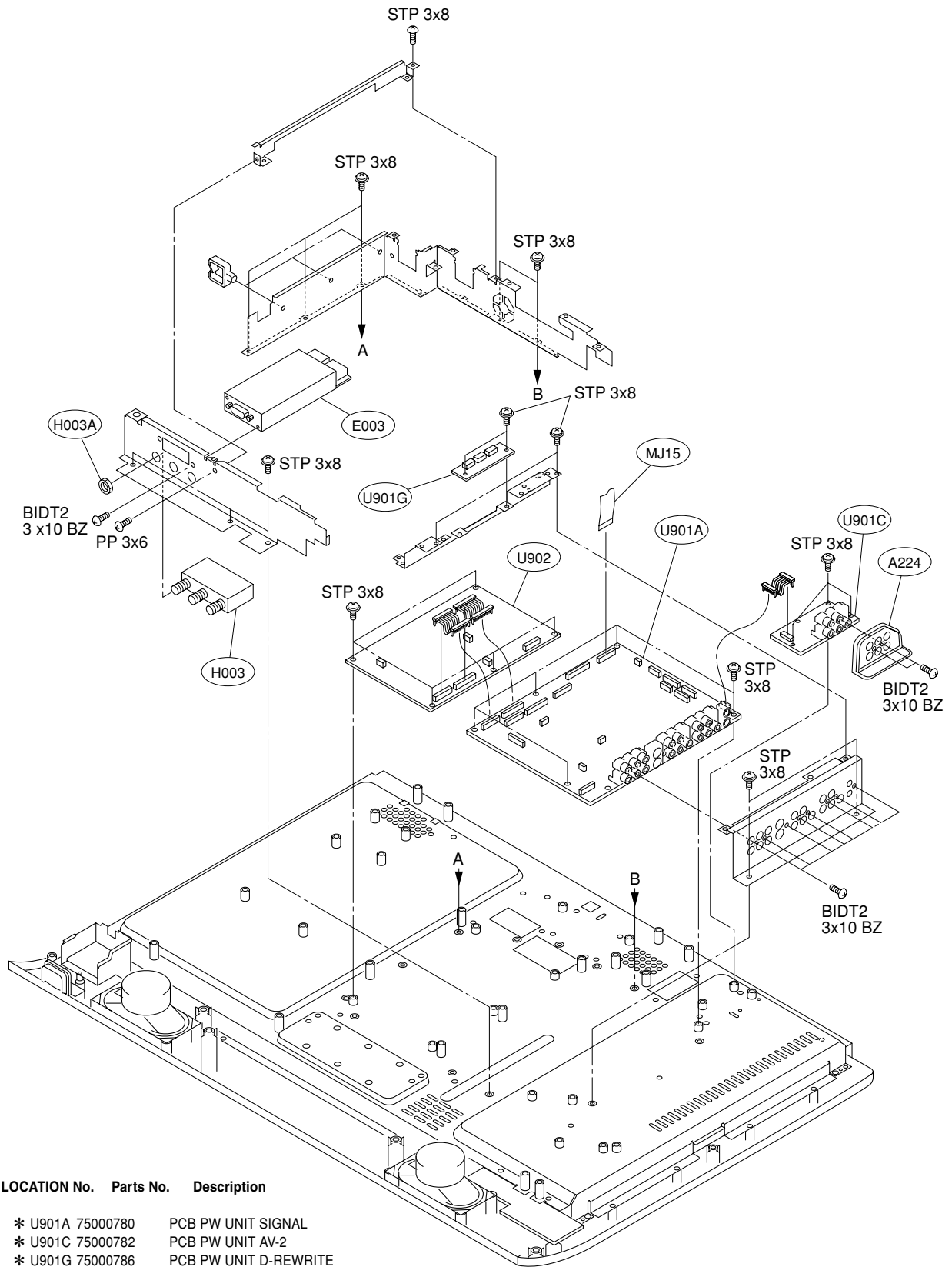
2. Chassis Block 1



LOCATION No.	Parts No.	Description
* U901B	75000781	PCB PW UNIT FRONT-AV
* U903	75000788	PCB PW UNIT SCALER
A221	23940037	PIECE, REAR AV ASSY
A222	23940038	PIECE, FRONT AV ASSY
MJ13	23389210	FFC CABLE, P0.5-40P
MJ18	23368868	CABLE, LVDS 300MM LVDS
MV23	23389213	FFC CABLE, P1.0-19P

LOCATION No.	Parts No.	Description
MJ94	23389212	FFC CABLE P1.0-11P,
△ P801	23372264	POWER CORD, U/C 125V10A HSV 5 CMC-02P 11111
* U800	23122467	UNIT, POWER BLOCK MODULE
ZA01	23103778	FERRITE CORE, TFE1008
ZA04	23103914	CORE, FERRITE CORE 15X22X7
A502	23717175	SCREW, PP3X6+SW+W SZ
A503	72471064	SCREW, BIDT2 3*10BZ

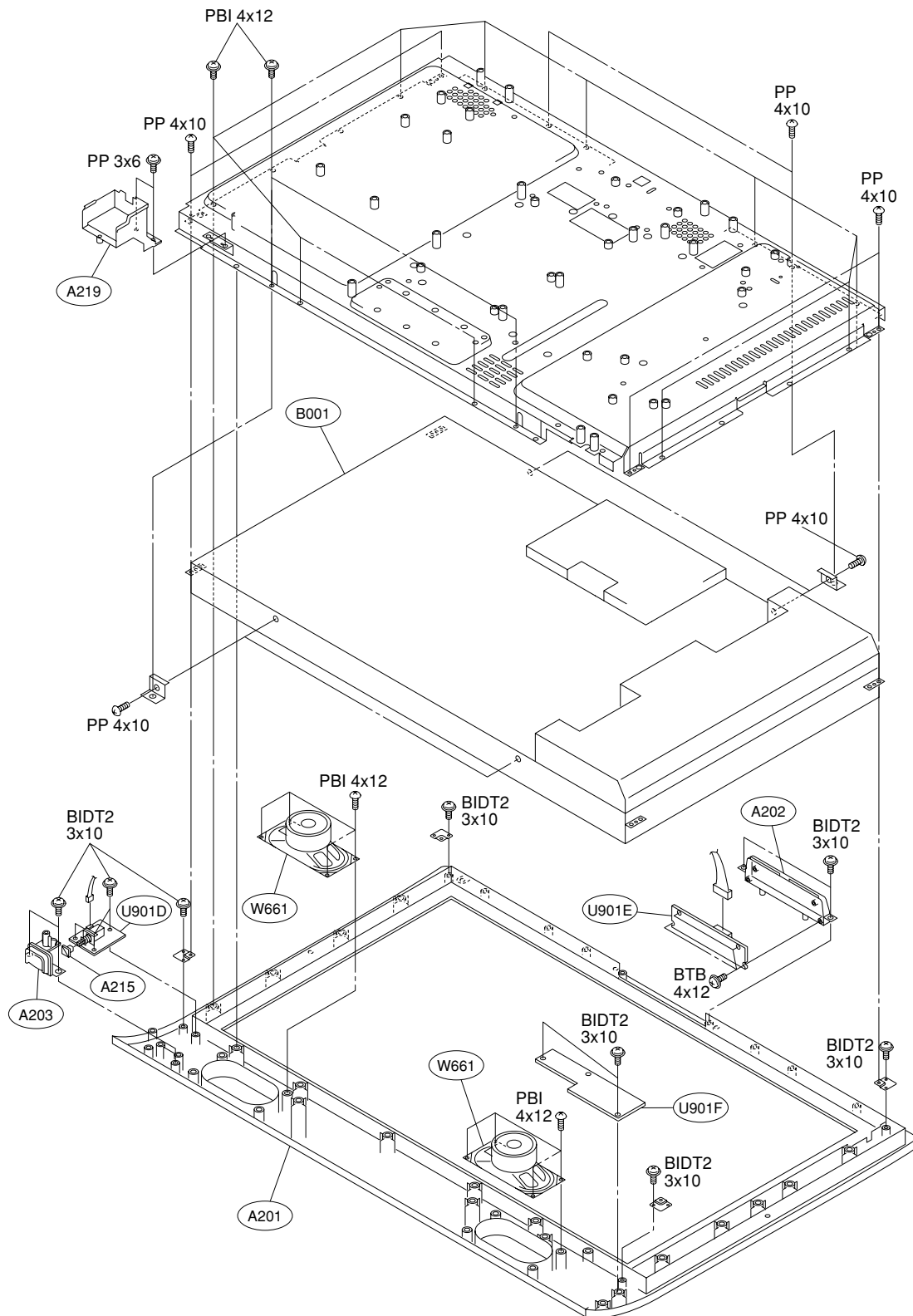
3. Chassis Block 2



LOCATION No. Parts No. Description

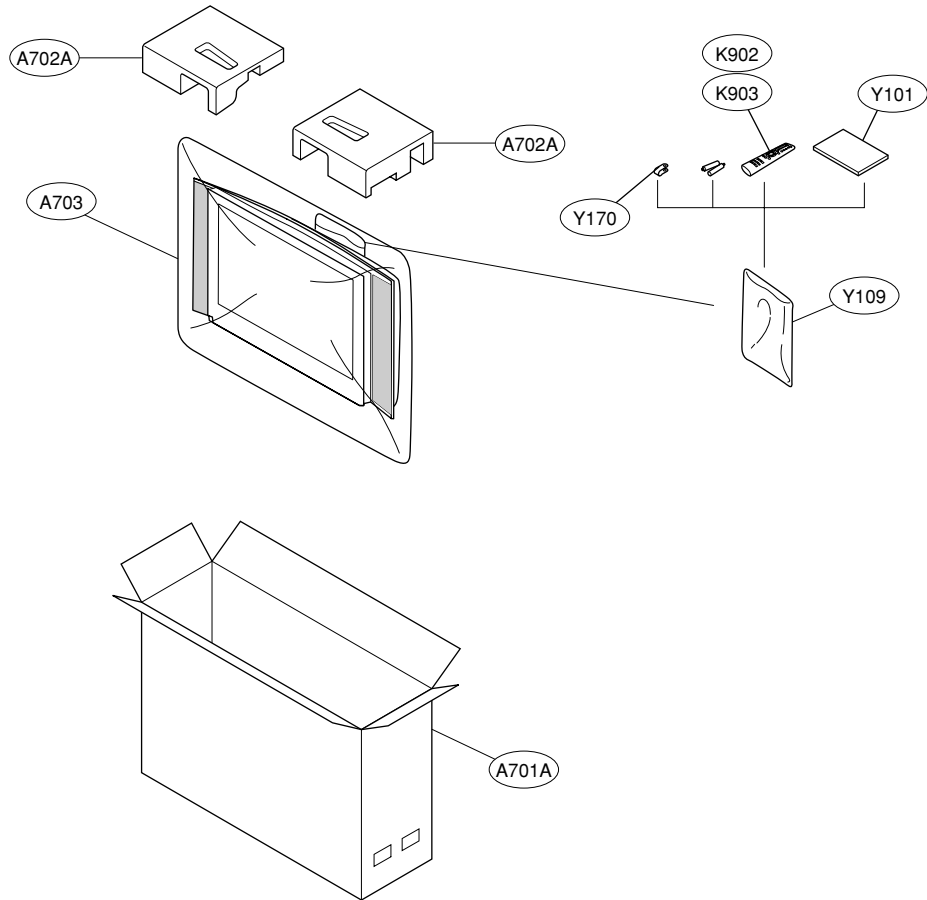
* U901A	75000780	PCB PW UNIT SIGNAL
* U901C	75000782	PCB PW UNIT AV-2
* U901G	75000786	PCB PW UNIT D-REWRITE
* U902	75000787	PCB PW UNIT TN/A-OUT 32HL84
A224	23940036	PIECE, TOP AV ASSY
E003	23148090	MODULE, 03DVI PD0647C
H003	23124083	ANTENNA SWITCH, 2I3O DW US RSU135
H003A	23740989	NUT, F-CONNECTOR 2H BS
MJ15	23389211	FFC CABLE, P1.0-25P
A502	23717175	SCREW, PP3X6+SW+W SZ
A503	72471064	SCREW, BIDT2 3*10BZ
A505	23035004	SCREW

4. LCD and Front Bezel Block



LOCATION No.	Parts No.	Description	LOCATION No.	Parts No.	Description
* U901D	75000783	PCB PW UNIT POWER-SW	△ A219	23528374	HOLDER, HOLDER P CORD JPN
* U901E	75000784	PCB PW UNIT KEY	△ B001	23301560	LCD PANEL, LQ315T3LZ11
* U901F	75000785	PCB PW UNIT IR/LED	W661	23351156	SPEAKER, SPK1410AM, 60X120 8-OHM 10W
△ A201	23532681	COVER, FRONT BEZEL ASSY	A502	23717175	SCREW, PP3X6+SW+W SZ
A202	23940056	PIECE, PIECE KEY ASSY	A503	72471064	SCREW, BIDT2 3*10BZ
A203	23940025	PIECE, PIECE POWER ASSY	A504	23738071	SCREW, STP4X10+SW+W SZ
A215	23940043	PIECE, CAP P SWITCH	A505	23035004	SCREW

PACKING DISASSEMBLY



LOCATION No.	Parts No.	Description
A701A	23067664	CARTON, CASE 32HL84
A702A	23946766	PACKING, TOP PACKING 32HL84
A702B	23946767	PACKING, BOTTOM PACKING 32HL84
A703	23945143	BAG, PROTECTIVE, 35P2700
K902	23306504	REMOCON HAND UNIT IR, CTVUSA CT-90164
K903	23306465	REMOCON HAND UNIT, 57HX82
△ Y101	23566307	OWNERS MANUAL, ENG/FRE/SPA 32HL84
Y109	23945015	BAG, POLYETHYLENE COVER 250X400
Y170	23845800	WIRE HOLDER, NYLON66 D6.8

CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols "" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE. Do not degrade the safety of the receiver through improper servicing.

NOTICE:

- The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.
- The PC board assembly with * mark is no longer available after the end of the production.

Model : 32HL84

Capacitors CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
 Resistors CF : Carbon Film CC : Carbon Composition MF : Metal Film
 OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
CAPACITORS		
C102	24793221	ELECTROLYTIC, 10V 220UF M
C103	24109102	CERAMIC CHIP, 50V B 1000PF K
C104	24797479	ELECTROLYTIC, 50V 4.7UF M
C105	24763221	ELECTROLYTIC, 16V 220UF M
C108	24617009	ELECTROLYTIC, 10V 330UF M
C122	24092730	CERAMIC CHIP, 16V B 0.1UF K
C124	24109471	CERAMIC CHIP, 50V B 470PF K
C126	24109471	CERAMIC CHIP, 50V B 470PF K
C127	24763471	ELECTROLYTIC, 16V 470UF M
C131	24793221	ELECTROLYTIC, 10V 220UF M
C132	24763101	ELECTROLYTIC, 16V 100UF M
C133	24109102	CERAMIC CHIP, 50V B 1000PF K
C162	24109472	CERAMIC CHIP, 50V B 4700PF K
C172	24669339	ELECTROLYTIC, 50V 3.3UF M
C522	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C523	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C524	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C601	24092730	CERAMIC CHIP, 16V B 0.1UF K
C602	24109331	CERAMIC CHIP, 50V B 330PF K
C603	24092730	CERAMIC CHIP, 16V B 0.1UF K
C604	24092611	CERAMIC CHIP, 6.3V B 2.2UF K
C605	24109102	CERAMIC CHIP, 50V B 1000PF K
C606	24109102	CERAMIC CHIP, 50V B 1000PF K
C608	24092730	CERAMIC CHIP, 16V B 0.1UF K
C610	24092731	CERAMIC CHIP, 16V B 1UF K
C611	24092730	CERAMIC CHIP, 16V B 0.1UF K
C612	24761102	ELECTROLYTIC CE04G, 6.3V 1000UF M
C613	24092731	CERAMIC CHIP, 16V B 1UF K
C614	24092730	CERAMIC CHIP, 16V B 0.1UF K
C615	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
C620	24092463	CERAMIC CHIP, 16V B 0.22UF K
C621	24092730	CERAMIC CHIP, 16V B 0.1UF K
C622	24092463	CERAMIC CHIP, 16V B 0.22UF K
C623	24092463	CERAMIC CHIP, 16V B 0.22UF K
C624	24092730	CERAMIC CHIP, 16V B 0.1UF K
C625	24092463	CERAMIC CHIP, 16V B 0.22UF K
C627	24092730	CERAMIC CHIP, 16V B 0.1UF K
C629	24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
C630	24092730	CERAMIC CHIP, 16V B 0.1UF K
C631	24092463	CERAMIC CHIP, 16V B 0.22UF K
C632	24092463	CERAMIC CHIP, 16V B 0.22UF K
C635	24763221	ELECTROLYTIC, 16V 220UF M
C636	24763221	ELECTROLYTIC, 16V 220UF M
C640	24762102	ELECTROLYTIC, 04G 10V 1000UF M
C641	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A

Location No.	Parts No.	Description
C642	24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
C645	24815103	CERAMIC CHIP, 50V B 10000PF K
C646	24092738	CERAMIC CHIP, 25V B 0.47UF K
C647	24092738	CERAMIC CHIP, 25V B 0.47UF K
C648	24285104	CERAMIC CHIP, 50V B 0.1UF K
C649	24285104	CERAMIC CHIP, 50V B 0.1UF K
C653	24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
C661	24109102	CERAMIC CHIP, 50V B 1000PF K
C662	24109102	CERAMIC CHIP, 50V B 1000PF K
C663	24206108	ELECTROLYTIC 04W, 50V 0.1UF M 7L 3A
C665	24206100	ELECTROLYTIC, 50V 10UF M 7L 3A
C666	24206100	ELECTROLYTIC, 50V 10UF M 7L 3A
C667	24092538	CERAMIC CHIP, 10V F 1UF Z
C668	24092538	CERAMIC CHIP, 10V F 1UF Z
C669	24105221	CERAMIC CHIP, 50V CH 220PF J
C672	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
C673	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
C677	24109391	CERAMIC CHIP CK73B 50V 390PF K
C678	24109391	CERAMIC CHIP CK73B 50V 390PF K
C679	24105221	CERAMIC CHIP, 50V CH 220PF J
C687	24590152	PLASTIC FILM, 50V 1500PF J
C688	24590152	PLASTIC FILM, 50V 1500PF J
C691	24109103	CERAMIC CHIP, 50V B 0.01UF K
C692	24109103	CERAMIC CHIP, 50V B 0.01UF K
C693	24109103	CERAMIC CHIP, 50V B 0.01UF K
C694	24109103	CERAMIC CHIP, 50V B 0.01UF K
C927	24092730	CERAMIC CHIP, 16V B 0.1UF K
CB01	24794470	ELECTROLYTIC, 16V 47UF M
CB40	24092538	CERAMIC CHIP, 10V F 1UF Z
CB41	24109222	CERAMIC CHIP, 50V B 2200PF K
CB42	24105561	CERAMIC CHIP, 50V CH 560PF J
CB43	24109332	CERAMIC CHIP, 50V B 3300PF K
CB45	24092538	CERAMIC CHIP, 10V F 1UF Z
CB46	24109222	CERAMIC CHIP, 50V B 2200PF K
CB47	24105561	CERAMIC CHIP, 50V CH 560PF J
CB51	24590103	PLASTIC FILM, 50V 0.01UF J
CB52	24794470	ELECTROLYTIC, 16V 47UF M
CB53	24503041	PLASTIC FILM , 63V 0.1UF J
CB54	24109221	CERAMIC CHIP, 50V B 220PF K
CB55	24797010	ELECTROLYTIC, 50V 1UF M
CB56	24794470	ELECTROLYTIC, 16V 47UF M
CB57	24503041	PLASTIC FILM , 63V 0.1UF J
CB58	24794470	ELECTROLYTIC, 16V 47UF M
CB59	24590103	PLASTIC FILM, 50V 0.01UF J
CB60	24794100	ELECTROLYTIC, 16V 10UF M
CB61	24503041	PLASTIC FILM , 63V 0.1UF J

Location No.	Parts No.	Description
CC01	24109102	CERAMIC CHIP, 50V B 1000PF K
CC02	24109102	CERAMIC CHIP, 50V B 1000PF K
CC03	24109102	CERAMIC CHIP, 50V B 1000PF K
CC04	24109102	CERAMIC CHIP, 50V B 1000PF K
CC05	24109102	CERAMIC CHIP, 50V B 1000PF K
CC06	24109102	CERAMIC CHIP, 50V B 1000PF K
CC07	24109102	CERAMIC CHIP, 50V B 1000PF K
CC08	24109102	CERAMIC CHIP, 50V B 1000PF K
CC09	24109102	CERAMIC CHIP, 50V B 1000PF K
CC10	24109102	CERAMIC CHIP, 50V B 1000PF K
CC11	24109102	CERAMIC CHIP, 50V B 1000PF K
CC12	24109102	CERAMIC CHIP, 50V B 1000PF K
CC14	24109102	CERAMIC CHIP, 50V B 1000PF K
CC15	24109102	CERAMIC CHIP, 50V B 1000PF K
CC18	24109102	CERAMIC CHIP, 50V B 1000PF K
CC19	24109102	CERAMIC CHIP, 50V B 1000PF K
CC77	24105101	CERAMIC CHIP, 50V CH 100PF J
CC78	24105101	CERAMIC CHIP, 50V CH 100PF J
CC99	24591102	PLASTIC FILM, 50V 1000PF J
CD101	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD102	24105271	CERAMIC CHIP, 50V CH 270PF J
CD103	24105101	CERAMIC CHIP, 50V CH 100PF J
CD104	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD105	24105271	CERAMIC CHIP, 50V CH 270PF J
CD106	24105101	CERAMIC CHIP, 50V CH 100PF J
CD107	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CD111	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD112	24105561	CERAMIC CHIP, 50V CH 560PF J
CD113	24105101	CERAMIC CHIP, 50V CH 100PF J
CD114	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CD115	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD116	24105561	CERAMIC CHIP, 50V CH 560PF J
CD117	24105101	CERAMIC CHIP, 50V CH 100PF J
CD118	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD119	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD120	24092542	CERAMIC CHIP CK733 B 16V 1.0UF K
CD121	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD122	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD123	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD124	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD201	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD202	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD203	24092609	CERAMIC CHIP, 10V B 4,7UF K
CD204	24109471	CERAMIC CHIP, 50V B 470PF K
CD205	24109471	CERAMIC CHIP, 50V B 470PF K
CD206	24092628	CERAMIC CHIP, 0J B 10UF K
CD207	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD208	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD209	24793470	ELECTROLYTIC CE04G 10V 47UF M
CD210	24794470	ELECTROLYTIC, 16V 47UF M
CD211	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD212	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD213	24793470	ELECTROLYTIC CE04G 10V 47UF M
CD214	24793470	ELECTROLYTIC CE04G 10V 47UF M
CD215	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD216	24109102	CERAMIC CHIP, 50V B 1000PF K
CD217	24105270	CERAMIC CHIP, 50V CH 27PF J
CD218	24105100	CERAMIC CHIP, 50V CH 10PF D
CD219	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD220	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD221	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD222	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD223	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD224	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD225	24793470	ELECTROLYTIC CE04G 10V 47UF M
CD226	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD227	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CD228	24793470	ELECTROLYTIC CE04G 10V 47UF M
CD230	24109103	CERAMIC CHIP, 50V B 0.01UF K
CD233	24092628	CERAMIC CHIP, 0J B 10UF K
CD234	24092573	CERAMIC CHIP, 16V B 0.47UF K
CD235	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CS01	24092538	CERAMIC CHIP, 10V F 1UF Z
CS02	24092538	CERAMIC CHIP, 10V F 1UF Z
CS03	24092538	CERAMIC CHIP, 10V F 1UF Z
CS04	24092538	CERAMIC CHIP, 10V F 1UF Z

Location No.	Parts No.	Description
CS05	24092538	CERAMIC CHIP, 10V F 1UF Z
CS06	24092538	CERAMIC CHIP, 10V F 1UF Z
CS07	24092538	CERAMIC CHIP, 10V F 1UF Z
CS08	24092538	CERAMIC CHIP, 10V F 1UF Z
CS09	24092538	CERAMIC CHIP, 10V F 1UF Z
CS10	24092538	CERAMIC CHIP, 10V F 1UF Z
CS11	24092538	CERAMIC CHIP, 10V F 1UF Z
CS12	24092538	CERAMIC CHIP, 10V F 1UF Z
CS13	24092515	CERAMIC CHIP, 16V F 4.7UF Z
CS14	24092515	CERAMIC CHIP, 16V F 4.7UF Z
CS15	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CS16	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CS20	24092573	CERAMIC CHIP, 16V B 0.47UF K
CS21	24092515	CERAMIC CHIP, 16V F 4.7UF Z
CS22	24092515	CERAMIC CHIP, 16V F 4.7UF Z
CS23	24092538	CERAMIC CHIP, 10V F 1UF Z
CS24	24092538	CERAMIC CHIP, 10V F 1UF Z
CS25	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CS26	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CS27	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CS30	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CS31	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CS34	24092731	CERAMIC CHIP, 16V B 1UF K
CS35	24092731	CERAMIC CHIP, 16V B 1UF K
CS39	24092538	CERAMIC CHIP, 10V F 1UF Z
CS51	24092515	CERAMIC CHIP, 16V F 4.7UF Z
CS501	24797100	ELECTROLYTIC, 50V 10UF M
CS502	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CS503	24797100	ELECTROLYTIC, 50V 10UF M
CS510	24092542	CERAMIC CHIP CK733 B 16V 1.0UF K
CV01	24092621	CERAMIC CHIP, 10V B 1UF K
CV02	24092621	CERAMIC CHIP, 10V B 1UF K
CV03	24092621	CERAMIC CHIP, 10V B 1UF K
CV04	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV05	24092621	CERAMIC CHIP, 10V B 1UF K
CV06	24092621	CERAMIC CHIP, 10V B 1UF K
CV07	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV08	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CV09	24092621	CERAMIC CHIP, 10V B 1UF K
CV10	24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CV11	24092621	CERAMIC CHIP, 10V B 1UF K
CV12	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV13	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV14	24092621	CERAMIC CHIP, 10V B 1UF K
CV15	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV23	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CV24	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV38	24109102	CERAMIC CHIP, 50V B 1000PF K
CV39	24109102	CERAMIC CHIP, 50V B 1000PF K
CV40	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CV42	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV45	24092621	CERAMIC CHIP, 10V B 1UF K
CV46	24092621	CERAMIC CHIP, 10V B 1UF K
CV47	24092621	CERAMIC CHIP, 10V B 1UF K
CV48	24109332	CERAMIC CHIP, 50V B 3300PF K
CV64	24794471	ELECTROLYTIC, 16V 470UF M
CV65	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CV66	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV67	24085981	ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
CV68	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV73	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV79	24763471	ELECTROLYTIC, 16V 470UF M
CV80	24762102	ELECTROLYTIC, 04G 10V 1000UF M
CV81	24763471	ELECTROLYTIC, 16V 470UF M
CV82	24762102	ELECTROLYTIC, 04G 10V 1000UF M
CV121	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV237	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV238	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV239	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV243	24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CV244	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV245	24092441	CERAMIC CHIP, 16V F 1UF Z
CV246	24092441	CERAMIC CHIP, 16V F 1UF Z
CV247	24092441	CERAMIC CHIP, 16V F 1UF Z
CV248	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV249	24092441	CERAMIC CHIP, 16V F 1UF Z

Location No.	Parts No.	Description
CV250	24092441	CERAMIC CHIP, 16V F 1UF Z
CV251	24092441	CERAMIC CHIP, 16V F 1UF Z
CV252	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV253	24092441	CERAMIC CHIP, 16V F 1UF Z
CV254	24092441	CERAMIC CHIP, 16V F 1UF Z
CV255	24092441	CERAMIC CHIP, 16V F 1UF Z
CV256	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV257	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV258	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV259	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV261	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV263	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY101	24092441	CERAMIC CHIP, 16V F 1UF Z
CY102	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CY103	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CY104	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY105	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY106	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY107	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CY108	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CY109	24105101	CERAMIC CHIP, 50V CH 100PF J
CY111	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY112	24105181	CERAMIC CHIP, 50V CH 180PF J
CY113	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY114	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY115	24105390	CERAMIC CHIP, 50V CH 39PF J
CY116	24105470	CERAMIC CHIP, 50V CH 47PF J
CY117	24105180	CERAMIC CHIP, 50V CH 18PF J
CY501	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY502	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY504	24109222	CERAMIC CHIP, 50V B 2200PF K
CY505	24105120	CERAMIC CHIP, 50V CH 12PF J
CY506	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY508	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY512	24092463	CERAMIC CHIP, 16V B 0.22UF K
CY513	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY514	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY515	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY516	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY517	24092731	CERAMIC CHIP, 16V B 1UF K
CY524	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY525	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY526	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY538	24762102	ELECTROLYTIC, 04G 10V 1000UF M
CY539	24763471	ELECTROLYTIC, 16V 470UF M
CY540	24203101	ELECTROLYTIC, 16V 100UF M 7L 3A
CY541	24762471	ELECTROLYTIC, 04G 10V 470UF M
CY582	24105101	CERAMIC CHIP, 50V CH 100PF J
CY650	24591102	PLASTIC FILM, 50V 1000PF J
RESISTORS		
R102	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R103	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R104	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R110	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R120	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R121	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R133	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R134	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R135	24011273	CHIP, 1/20W 27K OHM J
R150	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R151	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
R152	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R264	24871750	CHIP, 1/8W 75 OHM J
R265	24871750	CHIP, 1/8W 75 OHM J
R266	24871750	CHIP, 1/8W 75 OHM J
R286	24871750	CHIP, 1/8W 75 OHM J
R287	24871750	CHIP, 1/8W 75 OHM J
R288	24871750	CHIP, 1/8W 75 OHM J
R563	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R600	24000665	FUSIBLE, 1/4W 15 OHM J
R601	24554470	OXIDE METAL FILM, 2W 47 OHM J
R604	24000606	CHIP, 1/16W 8.2K OHM F
R609	24011273	CHIP, 1/20W 27K OHM J
R610	24011124	CHIP, 1/20W 120K OHM J
R611	24011102	CHIP, METAL FILM, 1/20W 1K OHM J

Location No.	Parts No.	Description
R612	24011273	CHIP, 1/20W 27K OHM J
R613	24011124	CHIP, 1/20W 120K OHM J
R614	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R615	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R616	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R618	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R619	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R620	24871100	CHIP, 1/8W 10 OHM J
R623	24871100	CHIP, 1/8W 10 OHM J
R630	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R631	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R640	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R641	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R642	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R645	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R646	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R650	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R652	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R655	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R660	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
R661	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R662	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R667	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R670	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R671	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R672	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R673	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R674	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
R676	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R677	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R678	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R679	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R680	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R681	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R686	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R687	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R688	24871101	CHIP, 1/8W 100 OHM J
R690	24871101	CHIP, 1/8W 100 OHM J
R929	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA71	24011273	CHIP, 1/20W 27K OHM J
RA72	24011153	CHIP, METAL FILM, 1/20W 15K OHM J
RA73	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RA75	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
RA76	24011153	CHIP, METAL FILM, 1/20W 15K OHM J
RA80	24000445	CHIP JUMPER, 1608TYPE
RB01	24011391	CHIP, 1/20W 390 OHM J
RB04	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RB05	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB15	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RB19	24011470	CHIP, METAL FILM, 1/20W 47 OHM J
RB37	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RB38	24011105	CHIP, METAL FILM, 1/20W 1M OHM J
RB39	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB40	24011392	CHIP, 1/20W 3.9K OHM J
RB41	24011392	CHIP, 1/20W 3.9K OHM J
RB42	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB43	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RB44	24011105	CHIP, METAL FILM, 1/20W 1M OHM J
RB45	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB46	24011392	CHIP, 1/20W 3.9K OHM J
RB47	24011392	CHIP, 1/20W 3.9K OHM J
RB48	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB51	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
RB52	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB53	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB54	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB55	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
RB56	24011151	CHIP, METAL FILM, 1/20W 150 OHM J
RB57	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB58	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB59	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
RB60	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
RB62	24011272	CHIP, 1/20W 2.7K OHM J
RB63	24011271	CHIP, 1/20W 270 OHM J
RB64	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB65	24011221	CHIP, METAL FILM, 1/20W 220 OHM J

Location No.	Parts No.	Description
RS103	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS112	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS116	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS500	24011393	CHIP, 1/20W 39K OHM J
RS501	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS504	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS505	24011393	CHIP, 1/20W 39K OHM J
RS506	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RS507	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RS515	24011392	CHIP, 1/20W 3.9K OHM J
RS516	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS517	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RT01	24019527	
RV01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV03	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV06	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV07	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV08	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV09	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV10	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV11	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV12	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV14	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RV15	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV19	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV20	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV21	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV26	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RV27	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV29	24552101	OXIDE METAL FILM, 1/2W 100 OHM J
RV30	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV33	24871750	CHIP, 1/8W 75 OHM J
RV34	24871750	CHIP, 1/8W 75 OHM J
RV35	24871750	CHIP, 1/8W 75 OHM J
RV36	24871750	CHIP, 1/8W 75 OHM J
RV37	24871750	CHIP, 1/8W 75 OHM J
RV40	24871750	CHIP, 1/8W 75 OHM J
RV41	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV60	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV61	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV62	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV66	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV70	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV71	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV72	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV73	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV74	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV75	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV76	24011272	CHIP, 1/20W 2.7K OHM J
RV77	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV78	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV79	24011272	CHIP, 1/20W 2.7K OHM J
RV87	24000445	CHIP JUMPER, 1608TYPE
RV88	24000445	CHIP JUMPER, 1608TYPE
RV89	24000445	CHIP JUMPER, 1608TYPE
RV90	24000445	CHIP JUMPER, 1608TYPE
RV91	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV92	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV93	24011470	CHIP, METAL FILM, 1/20W 47 OHM J
RV94	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV98	24000445	CHIP JUMPER, 1608TYPE
RV99	24000445	CHIP JUMPER, 1608TYPE
RV100	24000445	CHIP JUMPER, 1608TYPE
RV101	24000445	CHIP JUMPER, 1608TYPE
RV120	24871750	CHIP, 1/8W 75 OHM J
RV121	24871750	CHIP, 1/8W 75 OHM J
RV122	24871750	CHIP, 1/8W 75 OHM J
RV129	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV252	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV253	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV254	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV255	24871561	CHIP, 1/8W 560 OHM J
RV256	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV257	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV258	24011102	CHIP, METAL FILM, 1/20W 1K OHM J

Location No.	Parts No.	Description
RV259	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV260	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV261	24871561	CHIP, 1/8W 560 OHM J
RV323	24872101	CHIP, 1/16W 100 OHM J
RV324	24872101	CHIP, 1/16W 100 OHM J
RV325	24872101	CHIP, 1/16W 100 OHM J
RV330	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV331	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV332	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV337	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV338	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV346	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV347	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV348	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV351	24011330	CHIP, 1/20W 33 OHM J
RV352	24011330	CHIP, 1/20W 33 OHM J
RV353	24011330	CHIP, 1/20W 33 OHM J
RV354	24011330	CHIP, 1/20W 33 OHM J
RV355	24011330	CHIP, 1/20W 33 OHM J
RV356	24011330	CHIP, 1/20W 33 OHM J
RV357	24000445	CHIP JUMPER, 1608TYPE
RV358	24000445	CHIP JUMPER, 1608TYPE
RV359	24000445	CHIP JUMPER, 1608TYPE
RV368	24000445	CHIP JUMPER, 1608TYPE
RV369	24000445	CHIP JUMPER, 1608TYPE
RV370	24000445	CHIP JUMPER, 1608TYPE
RV371	24000445	CHIP JUMPER, 1608TYPE
RV372	24000445	CHIP JUMPER, 1608TYPE
RV373	24000445	CHIP JUMPER, 1608TYPE
RV374	24000445	CHIP JUMPER, 1608TYPE
RV375	24000445	CHIP JUMPER, 1608TYPE
RY101	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY102	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RY103	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY104	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY105	24011821	CHIP, 1/20W 820 OHM J
RY106	24000445	CHIP JUMPER, 1608TYPE
RY107	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY109	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RY110	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY501	24011303	CHIP, METAL FILM, 1/20W 30K OHM J
RY502	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY503	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RY504	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY505	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RY507	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY508	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY509	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY510	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY511	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY512	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY513	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY516	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY517	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY518	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY519	24000445	CHIP JUMPER, 1608TYPE
RY520	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY521	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY523	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY524	24011821	CHIP, 1/20W 820 OHM J
RY525	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY526	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY527	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY528	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY529	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY530	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY531	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY532	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY533	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY534	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY539	24011272	CHIP, 1/20W 2.7K OHM J
RY540	24011272	CHIP, 1/20W 2.7K OHM J
RY541	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RY542	24011392	CHIP, 1/20W 3.9K OHM J
RY543	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY545	24011101	CHIP, METAL FILM, 1/20W 100 OHM J

Location No.	Parts No.	Description
RY548	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY550	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RY551	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
RY552	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY553	24011330	CHIP, 1/20W 33 OHM J
RY554	24011330	CHIP, 1/20W 33 OHM J
RY555	24011330	CHIP, 1/20W 33 OHM J
RY560	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RY561	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RY562	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY573	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY575	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY576	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RY585	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY590	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY591	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY592	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
GJ113	24000445	CHIP JUMPER, 1608TYPE
GJ128	24000445	CHIP JUMPER, 1608TYPE
GR01	24000445	CHIP JUMPER, 1608TYPE
GR02	24000445	CHIP JUMPER, 1608TYPE
GR03	24000445	CHIP JUMPER, 1608TYPE
GR04	24000445	CHIP JUMPER, 1608TYPE
GR91	24000445	CHIP JUMPER, 1608TYPE
GR96	24000445	CHIP JUMPER, 1608TYPE
GR105	24000445	CHIP JUMPER, 1608TYPE
GR131	24000445	CHIP JUMPER, 1608TYPE
GR132	24000445	CHIP JUMPER, 1608TYPE
GR605	24000445	CHIP JUMPER, 1608TYPE
GR621	24000445	CHIP JUMPER, 1608TYPE
GR622	24000445	CHIP JUMPER, 1608TYPE
GR623	24000445	CHIP JUMPER, 1608TYPE
GRV13	24000445	CHIP JUMPER, 1608TYPE
GRV14	24000445	CHIP JUMPER, 1608TYPE
GRV21	24000445	CHIP JUMPER, 1608TYPE
GRV22	24000445	CHIP JUMPER, 1608TYPE
GRV23	24000445	CHIP JUMPER, 1608TYPE
GRV24	24000445	CHIP JUMPER, 1608TYPE
GRV25	24000445	CHIP JUMPER, 1608TYPE
GRV26	24000445	CHIP JUMPER, 1608TYPE
GRV27	24000445	CHIP JUMPER, 1608TYPE
GRV28	24000445	CHIP JUMPER, 1608TYPE
GRV29	24000445	CHIP JUMPER, 1608TYPE
GRV30	24000445	CHIP JUMPER, 1608TYPE
GRV31	24000445	CHIP JUMPER, 1608TYPE
GRV39	24000445	CHIP JUMPER, 1608TYPE
GRV54	24000445	CHIP JUMPER, 1608TYPE
GRV55	24000445	CHIP JUMPER, 1608TYPE
GRV56	24000445	CHIP JUMPER, 1608TYPE
GRV57	24000445	CHIP JUMPER, 1608TYPE
GRV58	24000445	CHIP JUMPER, 1608TYPE
GRV59	24000445	CHIP JUMPER, 1608TYPE
GRV84	24000445	CHIP JUMPER, 1608TYPE
GRV85	24000445	CHIP JUMPER, 1608TYPE
GRV86	24000445	CHIP JUMPER, 1608TYPE
GRV87	24000445	CHIP JUMPER, 1608TYPE
GRV88	24000445	CHIP JUMPER, 1608TYPE
GRV89	24000445	CHIP JUMPER, 1608TYPE
GRV90	24000445	CHIP JUMPER, 1608TYPE
GRV91	24000445	CHIP JUMPER, 1608TYPE
GSR05	24000445	CHIP JUMPER, 1608TYPE
GSR06	24000445	CHIP JUMPER, 1608TYPE
LD201	24000445	CHIP JUMPER, 1608TYPE
COILS & TRANSFORMERS		
L101	23289845	COIL, PEAKING, TRF4680AT
L103	23103828	INDUCTOR, BEAD, TEM2121M
L104	23103828	INDUCTOR, BEAD, TEM2121M
L132	23103828	INDUCTOR, BEAD, TEM2121M
L133	23103828	INDUCTOR, BEAD, TEM2121M
L134	23289845	COIL, PEAKING, TRF4680AT
L289	23248073	COIL, CHOKE, TLN3299D
L620	23246406	COIL, CHOKE, TLN3528AF
L622	23246406	COIL, CHOKE, TLN3528AF
L623	23246406	COIL, CHOKE, TLN3528AF
L625	23246406	COIL, CHOKE, TLN3528AF

Location No.	Parts No.	Description
L640	23289109	COIL, PEAKING, TRF41R0AF
L645	23103238	INDUCTOR, BEAD, TEM2121M
L655	23103233	INDUCTOR, BEAD, TEM2137AD
LB51	23246004	COIL, CHIP INDUCTER, TRF4R10CC
LB52	23237987	COIL, PEAKING, TRF4100AC
LC01	23103828	INDUCTOR, BEAD, TEM2121M
LC02	23103828	INDUCTOR, BEAD, TEM2121M
LC03	23103828	INDUCTOR, BEAD, TEM2121M
LC04	23103828	INDUCTOR, BEAD, TEM2121M
LD101	23103828	INDUCTOR, BEAD, TEM2121M
LD102	23103828	INDUCTOR, BEAD, TEM2121M
LD103	23103828	INDUCTOR, BEAD, TEM2121M
LD202	23246199	COIL, CHIP INDUCTOR, TRF42R2CG
LD203	23103828	INDUCTOR, BEAD, TEM2121M
LD204	23103828	INDUCTOR, BEAD, TEM2121M
LD205	23103828	INDUCTOR, BEAD, TEM2121M
LV09	23289840	COIL, PEAKING, TRF4100AT
LV13	23289840	COIL, PEAKING, TRF4100AT
LV42	23289840	COIL, PEAKING, TRF4100AT
LV270	23289840	COIL, PEAKING, TRF4100AT
LY012	23246253	INDUCTOR, CHIP 10MMH K COLTRF4100CN
LY100	23246223	COIL, CHIP INDUCTOR, TRF4330CG
LY101	23103827	INDUCTOR, BEAD, TEM2120M
LY102	23103827	INDUCTOR, BEAD, TEM2120M
LY103	23103230	INDUCTOR, BEAD, TEM2134AD
LY104	23246219	COIL, CHIP INDUCTOR, TRF4150CG
LY105	23246222	COIL, CHIP INDUCTOR, TRF4270CG
LY112	23103230	INDUCTOR, BEAD, TEM2134AD
LY501	23246253	INDUCTOR, CHIP 10MMH K COLTRF4100CN
GV12	23103828	INDUCTOR, BEAD, TEM2121M
GV13	23103828	INDUCTOR, BEAD, TEM2121M
SEMICONDUCTORS		
Q131	23314204	TRANSISTOR, 2SC2412K,Q
Q151	23314994	TRANSISTOR, 2SA1576A106
Q152	23314993	TRANSISTOR, 2SC4081 Q
Q610	23009368	IC, TA2024(T)
Q612	23314163	TRANSISTOR, 2SA1162-Y
Q620	23314475	TRANSISTOR, 2SC2712-Y
Q630	23009942	IC, LA4525-E
Q671	70114396	TRANSISTOR, 2SC3326B
Q672	70114396	TRANSISTOR, 2SC3326B
Q675	70114396	TRANSISTOR, 2SC3326B
Q676	70114396	TRANSISTOR, 2SC3326B
Q677	23114493	TRANSISTOR, RN2404
Q678	23314475	TRANSISTOR, 2SC2712-Y
Q679	23314475	TRANSISTOR, 2SC2712-Y
Q680	23314475	TRANSISTOR, 2SC2712-Y
Q922	70129444	IC, PST994D
QB01	23314475	TRANSISTOR, 2SC2712-Y
QB44	23205112	TRANSISTOR, 2SA1980UF-Y
QB45	23205116	TRANSISTOR, 2SC5343UF-Y
QB46	23205112	TRANSISTOR, 2SA1980UF-Y
QB47	23205116	TRANSISTOR, 2SC5343UF-Y
QB51	23319808	IC, M5218AP
QB52	23314475	TRANSISTOR, 2SC2712-Y
QB53	23314994	TRANSISTOR, 2SA1576A106
QB54	23314994	TRANSISTOR, 2SA1576A106
QB55	23314475	TRANSISTOR, 2SC2712-Y
QD101	23318820	IC, OPE AMP, BA10358F
QD102	23318820	IC, OPE AMP, BA10358F
QD201	23009932	IC, DIGITAL AUD DELAY QFP32 NJU26103FR1
QD202	23000462	IC, AUDIO CODEC PCM3001E
QD203	23905927	IC, TC7SH32FU
QD205	23318026	IC, TA78L05F
QD207	23085171	IC, MCU 1CHIP 8BIT 32K 28P 87C409BMG-5GR1
QD208	70200934	IC, PST9126NR
QS03	23314993	TRANSISTOR, 2SC4081 Q
QS04	23314993	TRANSISTOR, 2SC4081 Q
QS05	23009613	IC, CD4052BNSR
QS06	23009613	IC, CD4052BNSR
QS07	70114396	TRANSISTOR, 2SC3326B
QS08	70114396	TRANSISTOR, 2SC3326B
QS09	23114493	TRANSISTOR, RN2404
QS10	23904896	IC, JLC1562BF
QS11	23114499	TRANSISTOR, RN1404

Location No.	Parts No.	Description
QS12	23114499	TRANSISTOR, RN1404
QS13	23114499	TRANSISTOR, RN1404
QS14	23114499	TRANSISTOR, RN1404
QS15	23314993	TRANSISTOR, 2SC4081 Q
QS16	23114493	TRANSISTOR, RN2404
QS17	70114396	TRANSISTOR, 2SC3326B
QS18	70114396	TRANSISTOR, 2SC3326B
QS102	23318820	IC, OPE AMP, BA10358F
QV01	23906887	IC, CXA2069Q
QV04	23314993	TRANSISTOR, 2SC4081 Q
QV06	23314994	TRANSISTOR, 2SA1576A106
QV09	23314994	TRANSISTOR, 2SA1576A106
QV12	23009418	IC, 2IN-1OUTSW DRIVER MM1505XNRE
QV13	23314993	TRANSISTOR, 2SC4081 Q
QV70	23314993	TRANSISTOR, 2SC4081 Q
QV71	23314993	TRANSISTOR, 2SC4081 Q
QV72	23314994	TRANSISTOR, 2SA1576A106
QV73	23314994	TRANSISTOR, 2SA1576A106
QV246	23205045	TRANSISTOR, 2SA1037AKQ
QV247	23314475	TRANSISTOR, 2SC2712-Y
QV248	23205045	TRANSISTOR, 2SA1037AKQ
QV249	23314475	TRANSISTOR, 2SC2712-Y
QV254	23000360	IC, MM1519XQ
QY100	23906515	IC, TC90A45F
QY101	23314993	TRANSISTOR, 2SC4081 Q
QY102	23314993	TRANSISTOR, 2SC4081 Q
QY103	23314994	TRANSISTOR, 2SA1576A106
QY501	23000812	IC, TA1340F
QY502	23205014	TRANSISTOR, 2SC4667-O
QY503	23314994	TRANSISTOR, 2SA1576A106
QY504	23314994	TRANSISTOR, 2SA1576A106
QY507	23314993	TRANSISTOR, 2SC4081 Q
QY508	23314993	TRANSISTOR, 2SC4081 Q
QY509	23314993	TRANSISTOR, 2SC4081 Q
QY511	23314994	TRANSISTOR, 2SA1576A106
QY512	23314994	TRANSISTOR, 2SA1576A106
QY513	23314994	TRANSISTOR, 2SA1576A106
QY514	23314994	TRANSISTOR, 2SA1576A106
QY515	23314994	TRANSISTOR, 2SA1576A106
QY516	23314994	TRANSISTOR, 2SA1576A106
QY518	23314993	TRANSISTOR, 2SC4081 Q
QY520	23314993	TRANSISTOR, 2SC4081 Q
D608	23316591	DIODE, ZENER, MA8100-M
D611	23316231	DIODE, 1SS355
D612	23316231	DIODE, 1SS355
D613	23316231	DIODE, 1SS355
D614	23316231	DIODE, 1SS355
D615	23316231	DIODE, 1SS355
D617	23316231	DIODE, 1SS355
D620	23316231	DIODE, 1SS355
D621	23316231	DIODE, 1SS355
D622	23316231	DIODE, 1SS355
D623	23316231	DIODE, 1SS355
D624	23316231	DIODE, 1SS355
D625	23316231	DIODE, 1SS355
D626	23316231	DIODE, 1SS355
D627	23316231	DIODE, 1SS355
D628	23316231	DIODE, 1SS355
D629	23316231	DIODE, 1SS355
D640	23316231	DIODE, 1SS355
D641	23316231	DIODE, 1SS355
D642	23316231	DIODE, 1SS355
D643	23316231	DIODE, 1SS355
D646	23316231	DIODE, 1SS355
D656	23316604	DIODE, ZENER, MA8150-M, TX
D657	23316573	DIODE, ZENER, MA8062-L
D672	23316231	DIODE, 1SS355
D673	23316231	DIODE, 1SS355
DB01	23358564	DIODE, LED, SLR-56VC3FPQ
DB03	23358522	DIODE, LED, SIR-56SB3F
DB51	23358573	PHOTO DIODE, PIN 940NM HPI-2FER4
DB52	23316231	DIODE, 1SS355
DB53	23316231	DIODE, 1SS355
DB54	23316231	DIODE, 1SS355
DB76	23316231	DIODE, 1SS355
DB90	23316231	DIODE, 1SS355

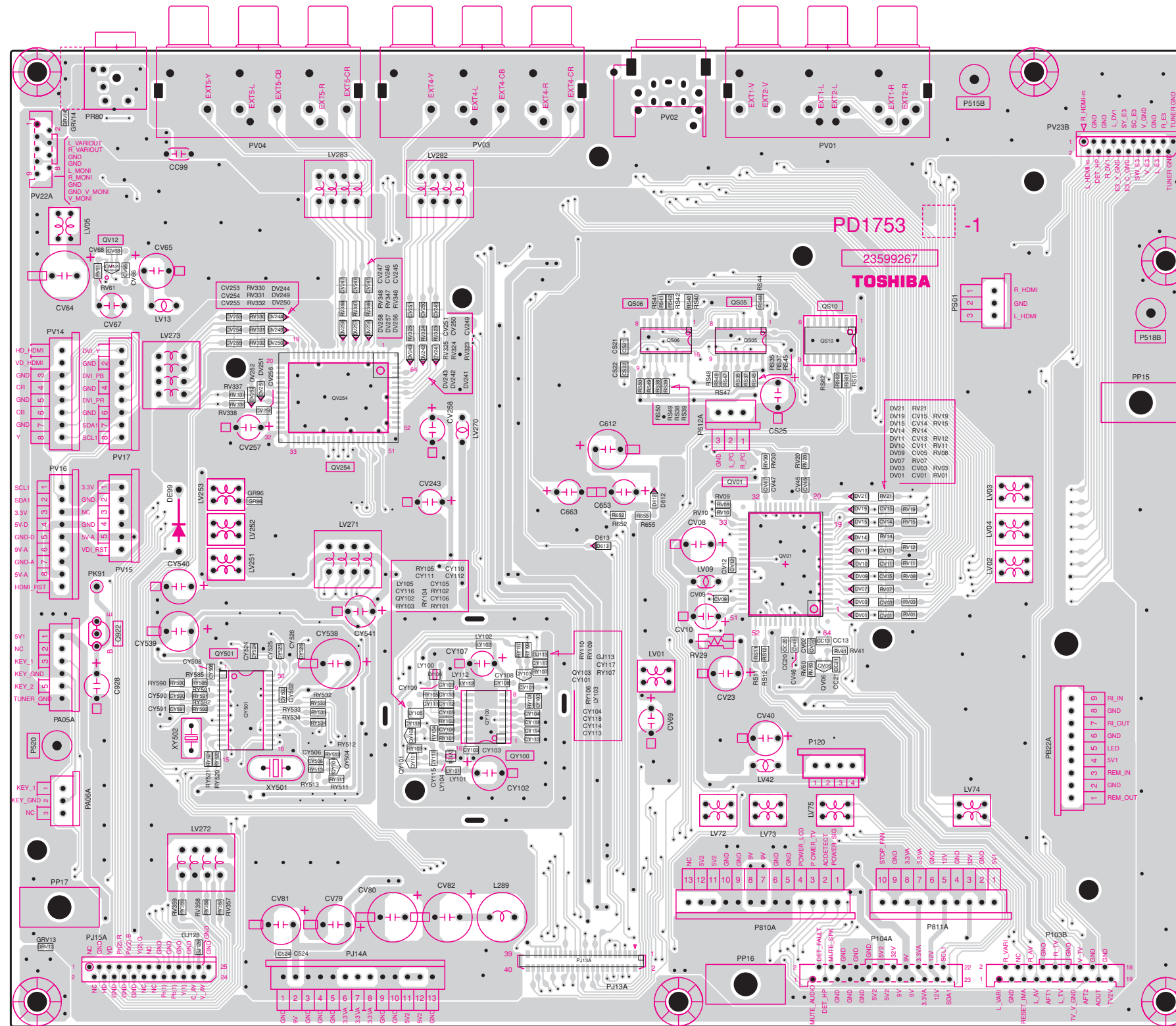
Location No.	Parts No.	Description
DD101	23316542	DIODE, ZENER, MA8039-L, TX
DD201	23118041	DIODE, MA111
DD202	23118041	DIODE, MA111
DD203	23118041	DIODE, MA111
DD204	23118041	DIODE, MA111
DD205	23118041	DIODE, MA111
DD206	23118041	DIODE, MA111
DD209	23118041	DIODE, MA111
DD210	23118041	DIODE, MA111
DE99	23118096	DIODE, RK34
DS102	23316571	DIODE, ZENER, MA8056-M
DV02	23316587	DIODE, ZENER, MA8091-L
DV03	23316587	DIODE, ZENER, MA8091-L
DV05	23316587	DIODE, ZENER, MA8091-L
DV07	23316577	DIODE, ZENER, MA8068-M
DV10	23316587	DIODE, ZENER, MA8091-L
DV11	23316587	DIODE, ZENER, MA8091-L
DV14	23316577	DIODE, ZENER, MA8068-M
DV19	23316587	DIODE, ZENER, MA8091-L
DV21	23316577	DIODE, ZENER, MA8068-M
DV241	23316587	DIODE, ZENER, MA8091-L
DV242	23316587	DIODE, ZENER, MA8091-L
DV243	23316587	DIODE, ZENER, MA8091-L
DV244	23316587	DIODE, ZENER, MA8091-L
DV249	23316587	DIODE, ZENER, MA8091-L
DV250	23316587	DIODE, ZENER, MA8091-L
DV251	23316577	DIODE, ZENER, MA8068-M
DV252	23316577	DIODE, ZENER, MA8068-M
DV256	23316587	DIODE, ZENER, MA8091-L
DV257	23316587	DIODE, ZENER, MA8091-L
DV258	23316587	DIODE, ZENER, MA8091-L
KB01	23000852	IC, REMOTE PHOTO RECEIVER, PIC-37043TE2
MISCELLANEOUS		
A501	23717176	SCREW, PP5X12+SW+W SZ
A502	23717175	SCREW, PP3X6+SW+W SZ
A503	72471064	SCREW, BIDT2 3*10BZ
A504	23738071	SCREW, STP4X10+SW+W SZ
△ B001	23301560	LCD PANEL, LQ315T3LZ11
H002	23148083	IF MODULE, US VSD BUFFER 6MTRAP MVUS52A
H003	23124087	ANTENNA SWITCH, RSU135X1, 2130 BUNPAI US
H003A	23740989	NUT, F-CONNECTOR 2H BS
MJ13	23389210	FFC CABLE, P0.5-40P 32HL84
MJ15	23389211	FFC CABLE, P1.0-25P 32HL84
MJ18	23368868	CABLE, LVDS 300MM LVDS
MJ94	23389212	FFC CABLE P1.0-11P, 32HL84
MV23	23389213	FFC CABLE, P1.0-19P 32HL84
N004	23969797	TAPE
P103B	23713495	SOCKET, TWG-P19X-A1
P105	23368577	CONNECTOR, PLUG, 3P 2.5MM G JST-EH, B3B-EH-F1-TV4
P601	23368578	CONNECTOR, PLUG 4P, 2.5MM G JST-EH, B4B-EH-F1-TV4
P613A	23368577	CONNECTOR, PLUG, 3P 2.5MM G JST-EH, B3B-EH-F1-TV4
P613B	23368577	CONNECTOR, PLUG, 3P 2.5MM G JST-EH, B3B-EH-F1-TV4
P661	23365500	EARPHON JACK
△ P801	23372264	POWER CORD, U/C 125V10A HSV 5 CMC-02P 11111
P809A	23367068	CONNECTOR, PLUG 8P, 2.5MM G JST-EH B8B-EH-F1-TV4
P810A	23367073	CONNECTOR, PLUG 13P
P811A	23367070	PLUG , NP 2.5MM G JST-EH B10B-EH-F1A
PB22A	23367069	CONNECTOR, PLUG, NP 2.5MM G JST-EH, B9B-EH-F1A
PJ13A	70164776	CONNECTOR, MINI, 52559-4017
PJ14A	23367073	CONNECTOR, PLUG 13P
PJ15A	23713449	CONNECTOR, 25P JST 25FMN-BTK-A
PJ93B	23368579	CONNECTOR, PLUG 5P, 2.5MM G JST-EH, B5B-EH-F1-TV4
PJ94B	23713435	CONNECTOR, 11P JST 11FMN-BTK-A
PP02	23845859	HOLDER, WIRE, PVC-C0AT, L=70MM
PP04	23974994	BAND, KESSOKU
PR80	23023218	JACK, FH13.5 2P STERE SMK LGA6502-0101
PS02	23365677	PHONO JACK 2P, YKC21-5450
PT01	23713570	CONNECTOR, BM03B-SRSS-TBT
PV01	23023231	JACK, PIN 6P JLC JACK-61
PV02	23023004	CONNECTOR, JACK, 2SOP JLC
PV03	23023224	JACK, PIN 5P JLC JACK-3
PV04	23023224	JACK, PIN 5P JLC JACK-3
PV05	23023225	JACK, PIN 5P JLC JACK-4
PV15	23368580	CONNECTOR, PLUG 8P, 2.5MM G JST-EH B6B-EH-F1-TV4
PV17	23367068	CONNECTOR, PLUG 8P, 2.5MM G JST-EH B8B-EH-F1-TV4

Location No.	Parts No.	Description
PV22A	23713491	SOCKET, 127301109K2
PV23A	23713443	CONNECTOR, 19P JST 19FMN-BTK-A
PV23B	23713443	CONNECTOR, 19P JST 19FMN-BTK-A
PV60	23023228	PLUG, PIN 3P JLC YKC21-5676
PV61	23023107	JACK, Y/C JLC YKF51-5560, 14VL43
S801	23344335	SWITCH
SA01	23145226	SWITCH, 1C1P, PUSH
SA02	23145226	SWITCH, 1C1P, PUSH
SA03	23145226	SWITCH, 1C1P, PUSH
SA04	23145226	SWITCH, 1C1P, PUSH
SA06	23145226	SWITCH, 1C1P, PUSH
SA07	23145226	SWITCH, 1C1P, PUSH
W661	23351156	SPEAKER, SPK1410AM, 60X120 8-OHM 10W
XD01	23153588	CRYSTAL RESONATOR, 24.576MHZ CRYSTAL
XD02	23153533	CERAMIC RESONATOR, CERA RESO TCR1082AM
XY501	23153961	CRYSTAL, 3.58MHZ
XY502	23153721	CERAMIC RESONATOR, 503KHZ
Y170	23845800	WIRE HOLDER, NYLON66 D6.8
△ ZA01	23103778	FERRITE CORE, TFE1008
ZA04	23103914	CORE, FERRITE CORE 15X22X7 TFE1015AD
PC BOARD ASSEMBLIES		
*△ U800	23122467	UNIT, POWER BLOCK MODULE 1H198W
* U901A	75000780	PCB PW UNIT SIGNAL 32HL84
* U901B	75000781	PCB PW UNIT FRONT/AV 32HL84
* U901C	75000782	PCB PW UNIT AV2 32HL84
* U901D	75000783	PCB PW UNIT POWER-SW 32HL84
* U901E	75000784	PCB PW UNIT KEY 32HL84
* U901F	75000785	PCB PW UNIT IR/LED 32HL84
* U901G	75000786	PCB PW UNIT D-REWRITE 32HL84
* U902	75000787	PCB PW UNIT TN/A-OUT 32HL84
* U903	75000788	PCB PW UNIT SCALER 32HL84
TUNER		
△ H001	23321460	TUNER, US181CH IIC FON0 5V ELA52LX2
△ HY01	23321445	TUNER, TIF US IIC PH 181CH MONO EL973L
ACCESSORIES		
A701A	23067664	CARTON, CASE 32HL84
A702A	23946766	PACKING, TOP PACKING 32HL84
A702B	23946767	PACKING, BOTTOM PACKING 32HL84
A703	23945143	BAG, PROTECTIVE, 35P2700
K902	23306504	REMOCON HAND UNIT IR, CTVUSA CT-90164
K903	23306465	REMOCON HAND UNIT, 57HX82
△ Y101	23566307	OWNERS MANUAL, ENG/FRE/SPA 32HL84
Y109	23945015	BAG, POLYETHYLENE COVER 250X400
CABINET PARTS		
△ A201	23532681	COVER, FRONT BEZEL ASSY 32HL84
A202	23940056	PIECE, PIECE KEY ASSY 32HL84
A203	23940025	PIECE, PIECE POWER ASSY
A215	23940043	PIECE, CAP P SWITCH
△ A219	23528374	HOLDER, HOLDER P CORD JPN
A221	23940037	PIECE, REAR AV ASSY 32HL84
A222	23940038	PIECE, FRONT AV ASSY 32HL84
A224	23940036	PIECE, TOP AV ASSY 32HL84
△ A227	23429048	CABINET, STAND
△ A401	23532683	COVER, BACK COVER 32HL84
A402	23532624	COVER, BC STAND COVER
A406	23532625	COVER, BC TERMINAL COVER
A407	23950113	LABEL, SERIAL NUMBER, TTX3
E003	23148090	MODULE, 03DVI PD0647C

Location No.	Parts No.	Description
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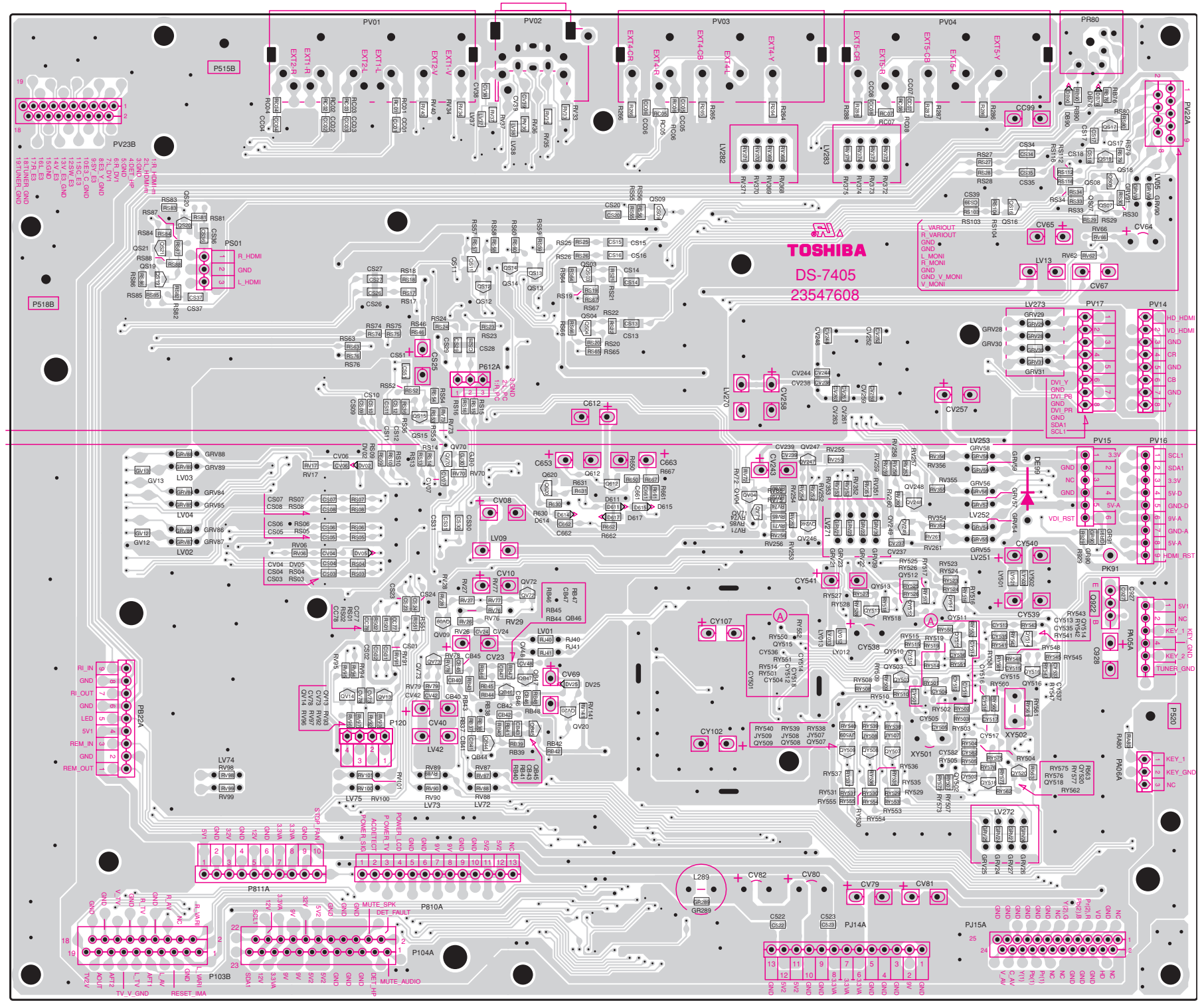
SIGNAL BOARD PD1753A1 (U901A)

TOP (COMPONENT) SIDE

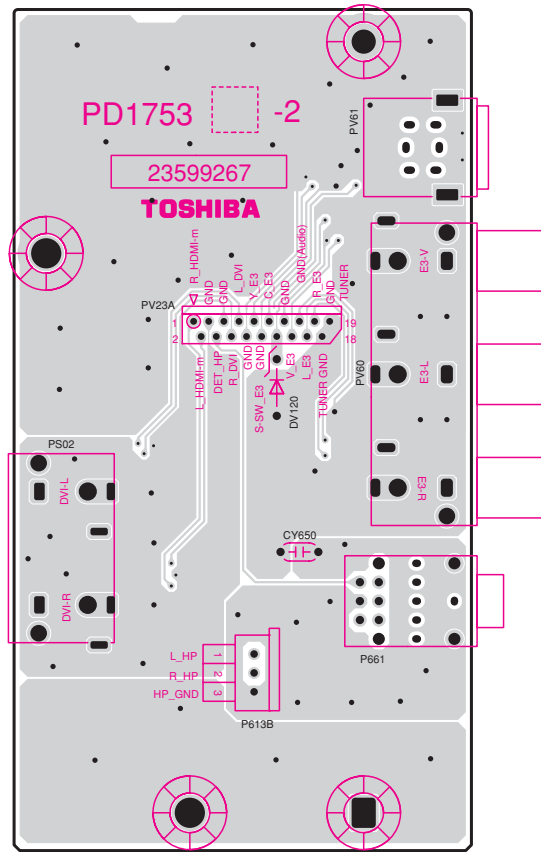


SIGNAL BOARD PD1753A1 (U901A)

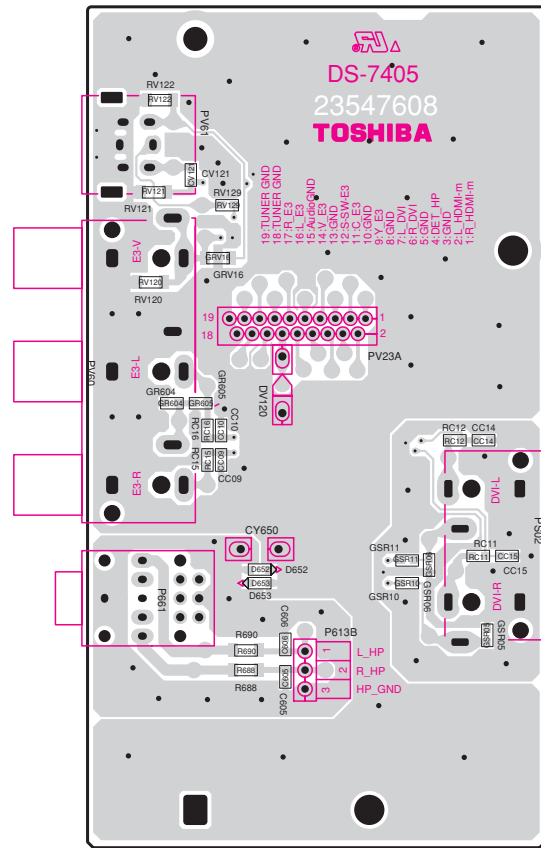
BOTTOM (FOIL) SIDE



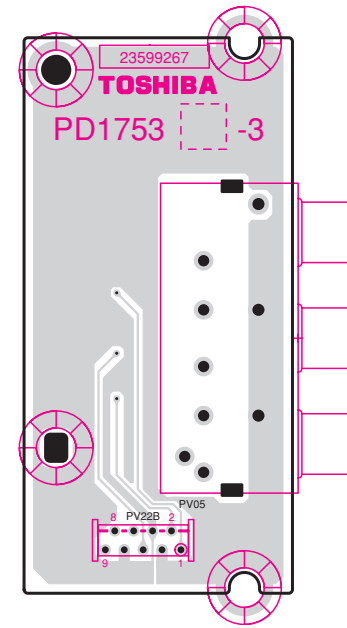
FRONT/AV BOARD PD1753A2 (U901B)
TOP (COMPONENT) SIDE



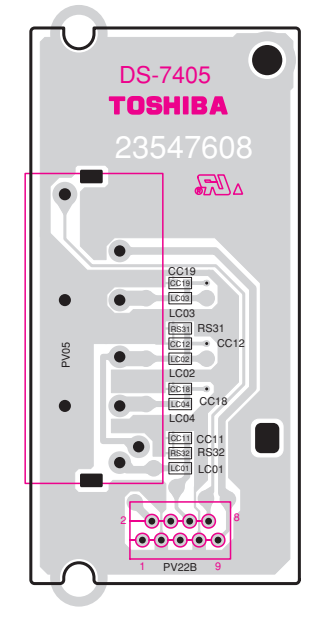
FRONT/AV BOARD PD1753A2 (U901B)
BOTTOM (FOIL) SIDE



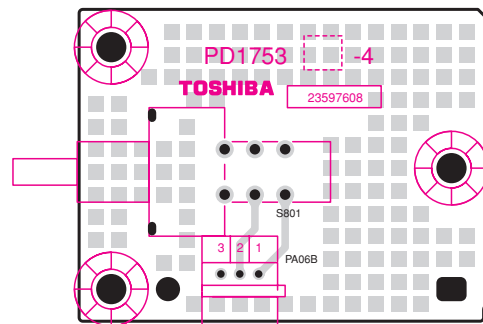
AV2 BOARD PD1753A3 (U901C)
TOP (COMPONENT) SIDE



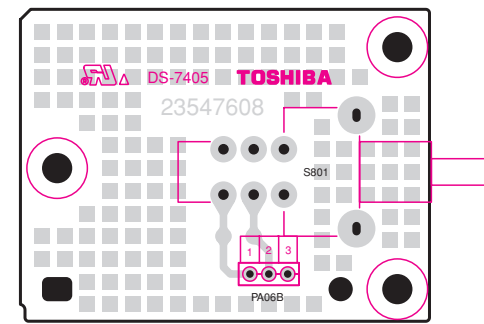
AV2 BOARD PD1753A3 (U901C)
BOTTOM (FOIL) SIDE



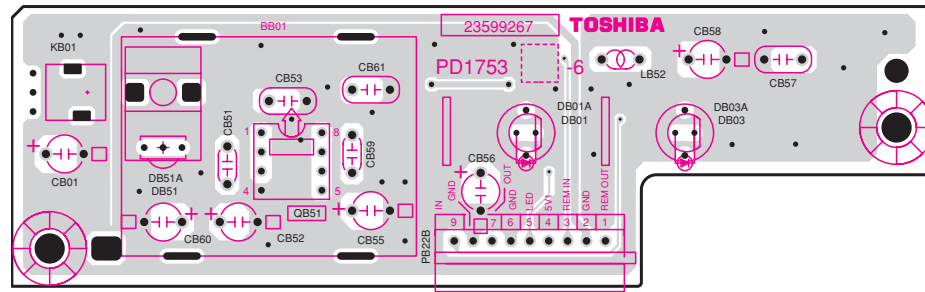
POWER SW BOARD PD1753A4 (U901D)
TOP (COMPONENT) SIDE



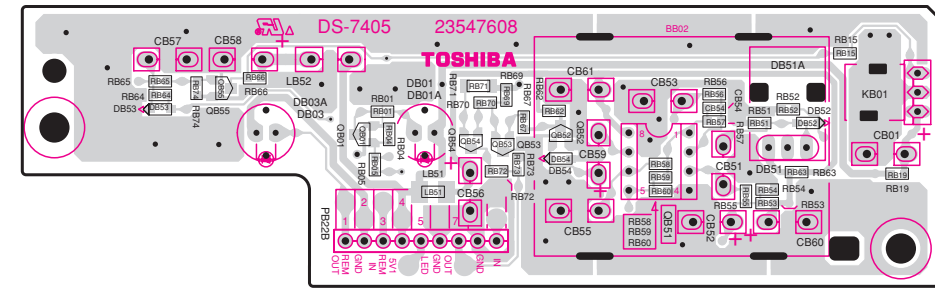
POWER SW BOARD PD1753A4 (U901D)
BOTTOM (FOIL) SIDE



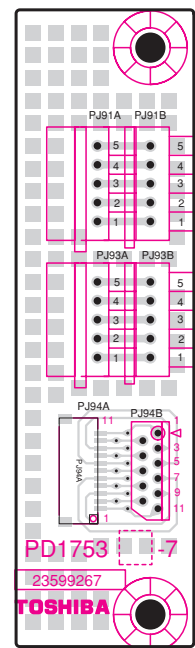
IR/LED BOARD PD1753A6 (U901F)
TOP (COMPONENT) SIDE



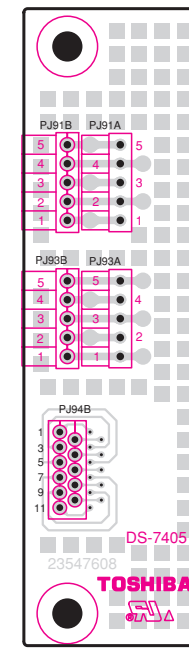
IR/LED BOARD PD1753A6 (U901F)
BOTTOM (FOIL) SIDE



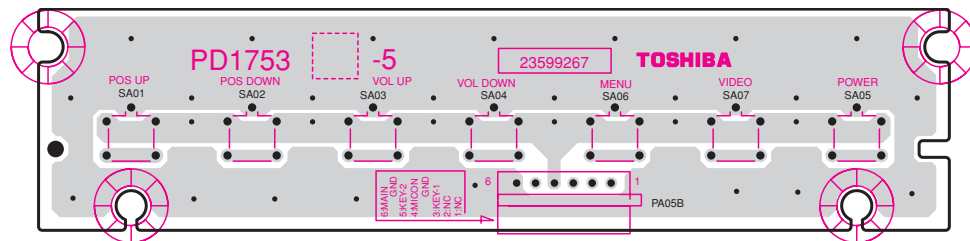
D-REWRITE BOARD PD1753A7 (U901G)
TOP (COMPONENT) SIDE



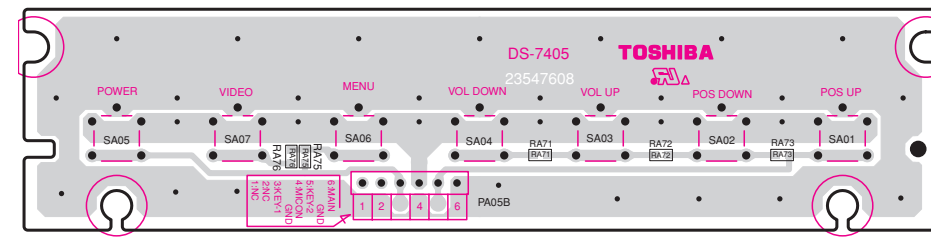
D-REWRITE BOARD PD1753A7 (U901G)
BOTTOM (FOIL) SIDE



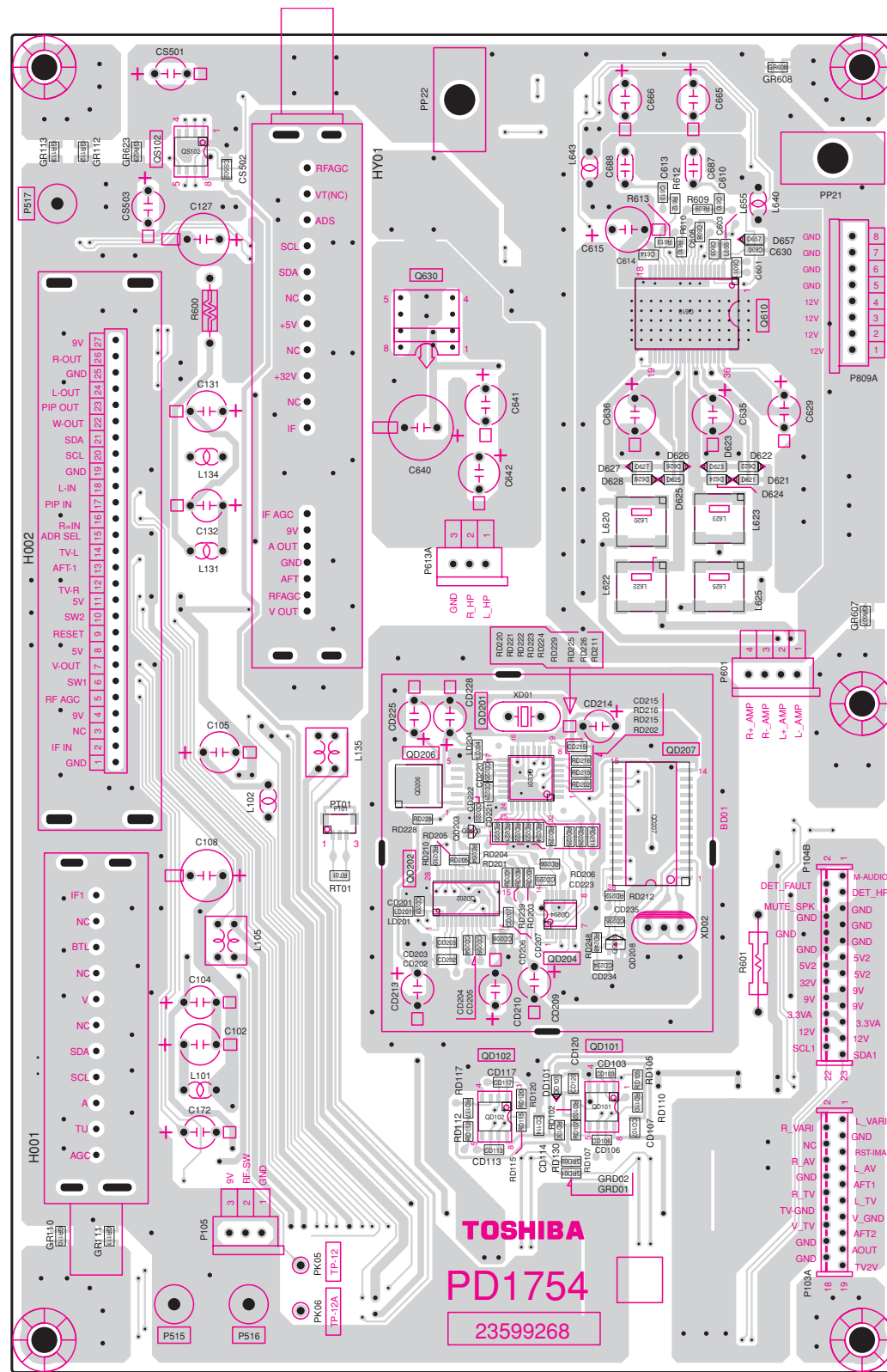
KEY BOARD PD1753A5 (U901E)
TOP (COMPONENT) SIDE



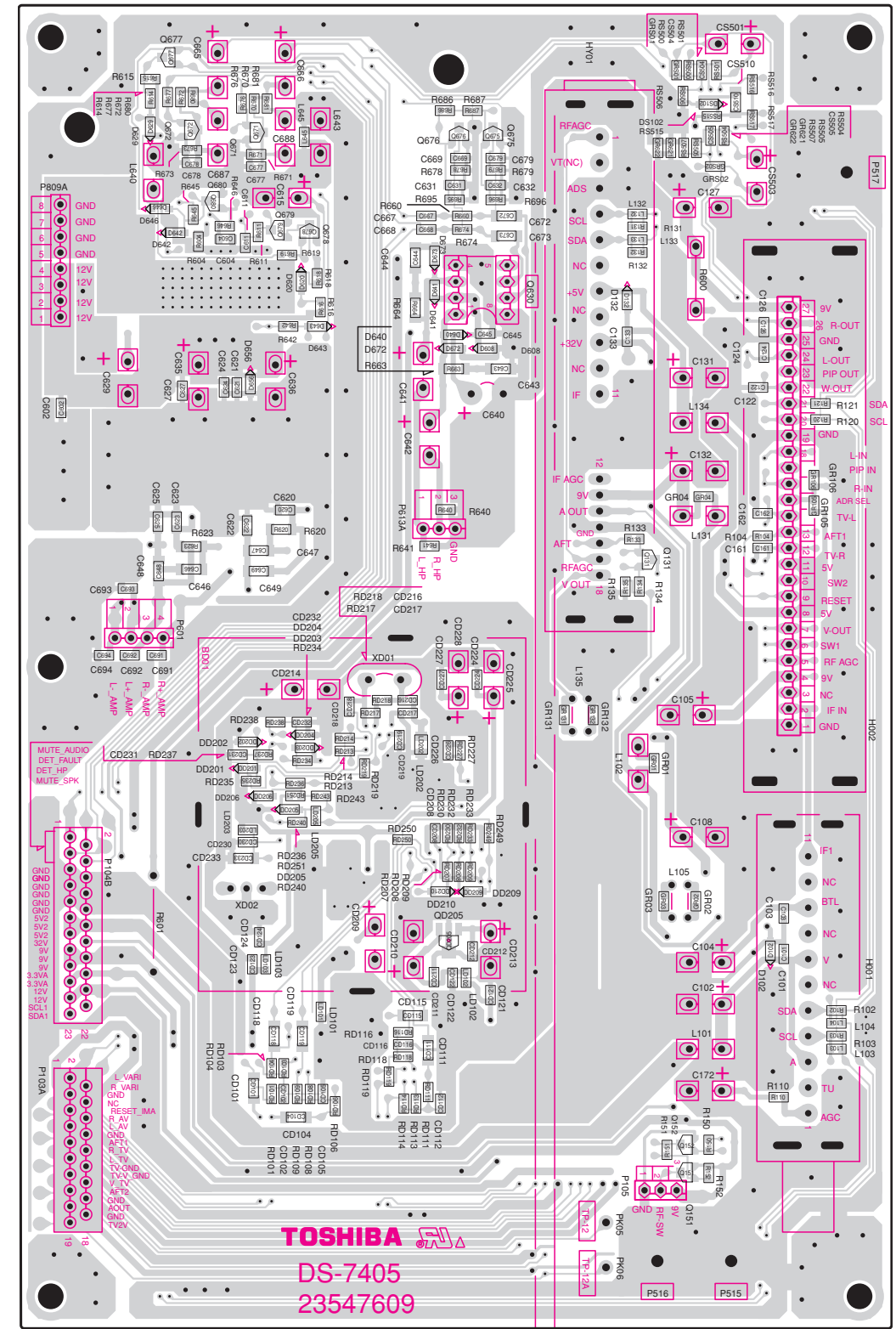
KEY BOARD PD1753A5 (U901E)
BOTTOM (FOIL) SIDE



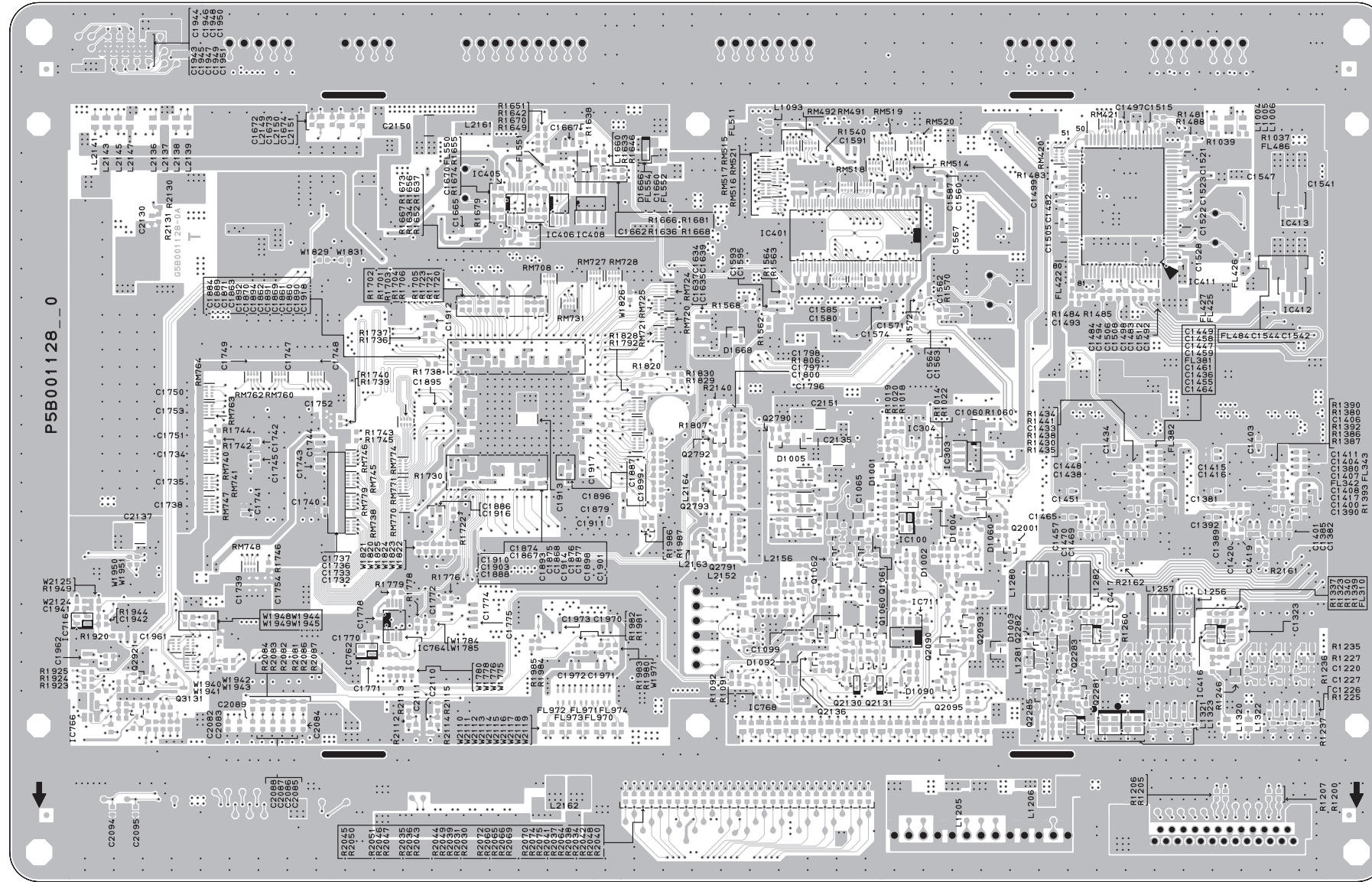
TN/A-OUT BOARD PD1754A1 (U902)
TOP (COMPONENT) SIDE



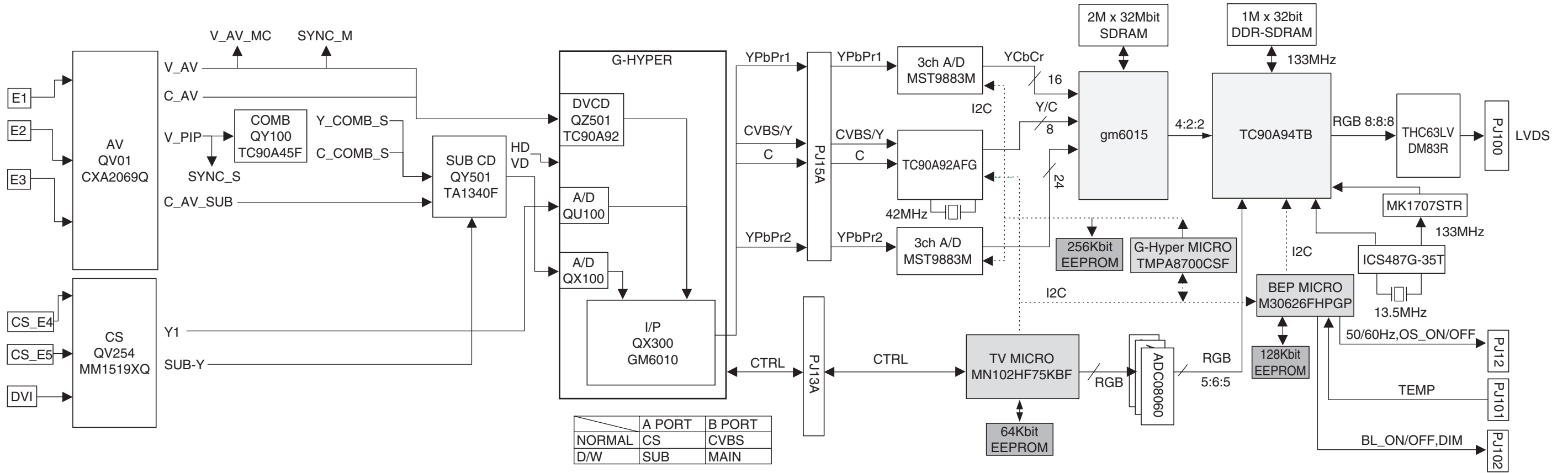
TN/A-OUT BOARD PD1754A1 (U902)
BOTTOM (FOIL) SIDE



SCALER BOARD PD1755-1 (U903)
BOTTOM (FOIL) SIDE



CIRCUIT BLOCK DIAGRAM





SCHEMATIC DIAGRAM

MODEL : 32HL84

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols " \triangle " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon composition of 1/2 watt
1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
K = $\pm 10\%$ G = $\pm 2\%$ F = $\pm 1\%$
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF , and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.
 Electrolytic capacitor  Mylar capacitor
3. The parts indicated with " \triangle " have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage at 220 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary $\pm 20\%$ except H.V.

■ **SCHEMATIC DIAGRAM STRUCTURE:**

SIGNAL Circuit	CONNECTOR	[SHEET- 1/7 ]	.....	1/57
	AV	[SHEET- 2/7 ]	.....	2/57
	TERMINAL	[SHEET- 3/7 ]	.....	3/57
	COLOR DIFFERENCE SWITCHING	[SHEET- 4/7 ]	.....	4/57
	V/C	[SHEET- 5/7 ]	.....	5/57
	HDMI_VARI	[SHEET- 6/7 ]	.....	6/57
	Audio-MUTE	[SHEET- 7/7 ]	.....	7/57
TN-AOUT Circuit	CONNECTOR	[SHEET- 1/8 ]	.....	8/57
	TIF & MA	[SHEET- 2/8 ]	.....	9/57
	IMA MOPULE	[SHEET- 3/8 ]	.....	10/57
	A-OUT	[SHEET- 4/8 ]	.....	11/57
	HP-AMP	[SHEET- 5/8 ]	.....	12/57
	TEMP SENSOR	[SHEET- 6/8 ]	.....	13/57
	LipSync DIGITAL PART	[SHEET- 7/8 ]	.....	14/57
	LipSync ANALOG PART	[SHEET- 8/8 ]	.....	15/57
CONT Circuit	KEY	[SHEET- 1/2 ]	.....	16/57
	POWER SW	[SHEET- 2/2 ]	.....	17/57
DATA_REWRITE Circuit			.....	18/57
FRONT-AV Circuit	AV-1	[SHEET- 1/2 ]	.....	19/57
	AV-2	[SHEET- 2/2 ]	.....	20/57
IR-PASS/RMT/LED Circuit			.....	21/57
SCALER Circuit	DIGITAL INPUT	[SHEET- 1/36 ]	.....	22/57
	CAPTURE INPUT	[SHEET- 2/36 ]	.....	23/57
	MEMORY CONNECTION	[SHEET- 3/36 ]	.....	24/57
	PLL	[SHEET- 4/36 ]	.....	25/57
	OSD FOR NORTH AMERICA	[SHEET- 5/36 ]	.....	26/57
	IIC	[SHEET- 6/36 ]	.....	27/57
	US OSD SYNC GENERATOR	[SHEET- 7/36 ]	.....	28/57
	POWER	[SHEET- 8/36 ]	.....	29/57
	SUB MICOM (1)	[SHEET- 9/36 ]	.....	30/57
	SUB MICOM (2)	[SHEET- 10/36 ]	.....	31/57
	SUB MICOM (3)	[SHEET- 11/36 ]	.....	32/57
	LVDS OUT	[SHEET- 12/36 ]	.....	33/57
	POWER CONNECTOR AND DIMMING	[SHEET- 13/36 ]	.....	34/57
	CONNECTOR BETWEEN SIGNAL BOARD	[SHEET- 14/36 ]	.....	35/57
	EMI FIL 2	[SHEET- 15/36 ]	.....	36/57
	LVDS POWER AND OTHERS	[SHEET- 16/36 ]	.....	37/57
	LVDS OUT (SHARP LCD)	[SHEET- 17/36 ]	.....	38/57
	CONNECTOR	[SHEET- 18/36 ]	.....	39/57
	3CHADC1_LPF	[SHEET- 19/36 ]	.....	40/57
	3CHADC2_LPF	[SHEET- 20/36 ]	.....	41/57
	DVCD_LPF	[SHEET- 21/36 ]	.....	42/57
	3CHADC HD/VD	[SHEET- 22/36 ]	.....	43/57
	3CHADC1	[SHEET- 23/36 ]	.....	44/57
	3CHADC2	[SHEET- 24/36 ]	.....	45/57
	DVCD TC90A92AFG	[SHEET- 25/36 ]	.....	46/57
	DVCD_POWER	[SHEET- 26/36 ]	.....	47/57
	GENESIS-1	[SHEET- 27/36 ]	.....	48/57
	GENESIS-2	[SHEET- 28/36 ]	.....	49/57
	SDRAM	[SHEET- 29/36 ]	.....	50/57
	GENESIS_POWER	[SHEET- 30/36 ]	.....	51/57
	GENESIS_CPU	[SHEET- 31/36 ]	.....	52/57
	OSD MICON 1/4	[SHEET- 32/36 ]	.....	53/57
	OSD MICON 2/4	[SHEET- 33/36 ]	.....	54/57
	OSD MICON 3/4	[SHEET- 34/36 ]	.....	55/57
	OSD MICON 4/4	[SHEET- 35/36 ]	.....	56/57
	DC/DC CONVERTER	[SHEET- 36/36 ]	.....	57/57

SPECIFICATIONS	
MODEL	32HL84
Television System	NTSC standard
Channel Coverage	VHF: 2 through 13 UHF: 14 through 69 Cable TV: Mid band (A-8 through A-1, A through I) Super band (J through W) Hyper band (AA through ZZ, AAA, BBB) Ultra band (65 through 94, 100 through 125)
Power Source	120 V AC, 60 Hz
Power Consumption	140W (average)
Number of picture Elements	1366 (H) dots x 768 (V) dots
Audio Power	10 W + 10 W
Speaker Type	Two 2-3/8 x 4-3/4 inches (60 x 120 mm)
Video/Audio Terminals	<p>S-VIDEO INPUT Y: 1 V (p-p), 75 ohms, negative sync. C: 0.286 V (p-p) (burst signal), 75 ohms</p> <p>VIDEO/AUDIO INPUT VIDEO: 1 V (p-p), 75 ohms, negative sync. AUDIO: 150 mV (rms) (30% modulation equivalent, 22k ohms or more)</p> <p>ColorStream® (component video) INPUT Y: 1V (p-p), 75 ohms PR: 0.7 V (p-p), 75 ohms PB: 0.7 V (p-p), 75 ohms AUDIO: 150 mV (rms), 22k ohms or more</p> <p>VIDEO/AUDIO OUTPUT VIDEO: 1 V (p-p), 75 ohms, negative sync. AUDIO: 150 mV (rms) (30% modulation equivalent, 2.2k ohms or less)</p> <p>VARIABLE AUDIO OUTPUT 0300 mV (rms) (30% modulation equivalent, 2.2k ohms or less)</p> <p>DVI/HDCP INPUT HDCP complian E-EDID* 1.3 compliant DVI-D uncompressed, high-speed, digital single-link connection Suggested input scan rates: 1080i, 720p, 480p, 480i</p> <p style="text-align: right;">*E-EDID = Enhanced-Extended Display Identificatio</p>
Headphones jack	3.5 mm stereo
TheaterLink	OUTPUT: 3 V (p-p), 10k ohms INPUT 3 V (p-p) to 5 V (p-p), PCM (Toshiba TV code) over 38k Hz carrier
Dimensions (Including stand)	Width: 32-1/4 inches (819 mm) Height: 25-25/64 inches (645 mm) Depth: 12-1/8 inches (308 mm)
Mass (weight)	62-11/64 lbs (28.2 kg)
Operating condition	Temperature: 32°F-95°F (0°C-35°C) Humidity: 20-80% (No moisture condensation)

* Please refer to owner's manual in detail.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN