Service Manual

[TOP](#) [NEXT](#)

MTNC030835A1

B19 Canada:B02

Service Manual

HDTV Monitor

Simplified

- PT-53TW53G
  PT-56TW53G

P8

Please file and use this manual together with the service manual for PT-53WX53G order number MTNC030518C1.

law.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

TOP NEXT

Table Of Contents

1 Safety precautions

General guidelines

An isolation transformer should always be used during the servicing of a receiver whose chassis is not isolated from AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injuryfrom electrical shocks. It will also protect the receiver from being damaged by accidental shorting that may occur during servicing.

When servicing, observe the original lead dress, especially in the high voltage circuit. Replace all damaged parts (also parts that show signs of overheating.)

Always replace protective devices, such as fish paper, isolation resistors and capacitors, and shields after servicing the receiver. Use only manufacturer’s recommended rating for fuses, circuits breakers, etc.

High potentials are present when this receiver is operating. Operation of the receiver without the rear cover introduces danger for electrical shock. Servicing should not be performed by anyone who is not thoroughly familiar with the necessary precautionswhen servicing high voltage equipment.

Extreme care should be practiced when handling the picture tube. Rough handling may cause it to implode due to atmospheric pressure. (14.7 lbs per sq. in.). Do not nick or scratch the glass or subject it to any undue pressure. When handling, usesafety goggles and heavy gloves for protection. Discharge the picture tube by shorting the anode to chassis ground (not to the cabinet or to other mounting hardware). When discharging connect cold ground (i.e. dag ground lead) to the anode with a wellinsulated wire or use a grounding probe.Avoid prolonged exposure at close range to unshielded areas of the picture tube to prevent exposure to x ray radiation.

The test picture tube used for servicing the chassis at the bench should incorporate safety glass and magnetic shielding. The safety glass provide shielding for the tube viewing area against x ray radiation as well as implosion. The magnetic shieldlimits the x ray radiation around the bell of the picture tube in addition to the restricting magnetic effects. When using a picture tube test jig for service, ensure that the jig is capable of handling 50kV without causing x ray radiation.

Before returning a serviced receiver to the owner, the service technician must thoroughly test the unit to ensure that is completely safe to operate. Do not use a line isolation transformer when testing.

Leakage current cold check

Unplug the A.C. cord and connect a jumper between the two plug prongs.Measure the resistance between the jumpered AC plug and expose metallic parts such as screwheads, antenna terminals, control shafts, etc. If the exposed metallic part has a returnpath to the chassis, the reading should be between 240kΩ and 5.2MΩ. If the exposed metallic part does not have a return path to the chassis, the reading should be infinite.

Leakage current hot check

Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during the check.

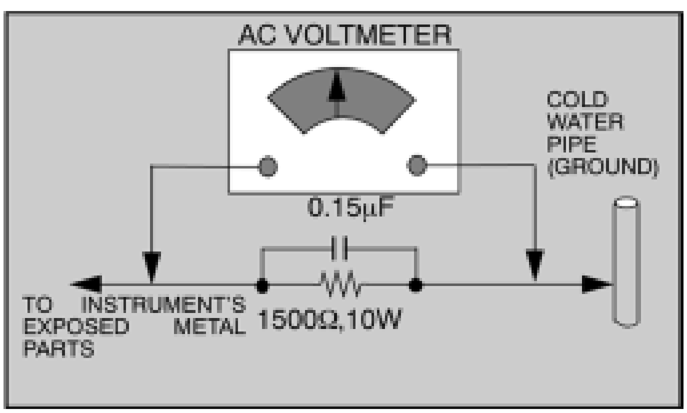
Connect a 1.5kΩ 10 watt resistor in parallel with a 0.15 µ F capacitor between an exposed metallic part and ground. Use earth ground, for example a water pipe.

Using a DVM with a 1000 ohms/volt sensitivity or higher, measure the AC potential across the resistor.

Repeat the procedure and measure the voltage present with all other exposed metallic parts.

Verify that any potential does not exceed 0.75 volt RMS. A leakage current tester (such a Simpson model 229, Sencore model PR57 or equivalent) may be used in the above procedure, in which case any current measure must not exceed 0.5 milliampere.If any measurement is out of the specified limits, there is a possibility of a shock hazard and the receiver must be repaired and rechecked before it is returned to the customer.

Hot check circuit



Insulation test

Connect an insulation tester between an exposed metallic part and A.C. line. Apply 1080VAC/60Hz for 1 second. Confirm that the current measurement is 0.5mA ~ 2.0mA. Repeat test with other metallic exposed parts.

X ray radiation

WARNING

The potential source of x ray radiation in the PTV set is in the high voltage section and the picture tube.

NOTE

It is important to use an accurate, calibrated high voltage meter.

Apply all black video signals (1080i) and confirm high voltage measures 31.5 ± 1.0kV. If the high voltage is not within the range, change C514 to 1800pF, 2000pF, 2400pF or 2700pF until the desired value is obtained.ApplyNTSC white pattern and confirm the high voltage measures 30.1 ± 1.5kV. Apply HD 1080i white pattern and confirm the high voltage measures 30.1 ± 1.5kV.

2 About lead free solder (PbF)

TOP PREVIOUS NEXT

NOTE

Lead is listed as (Pb) in the periodic table of elements.
In the information below, Pb will refer to lead solder, and PbF will refer to Lead Free Solder.
The lead free solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).
Thatis Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

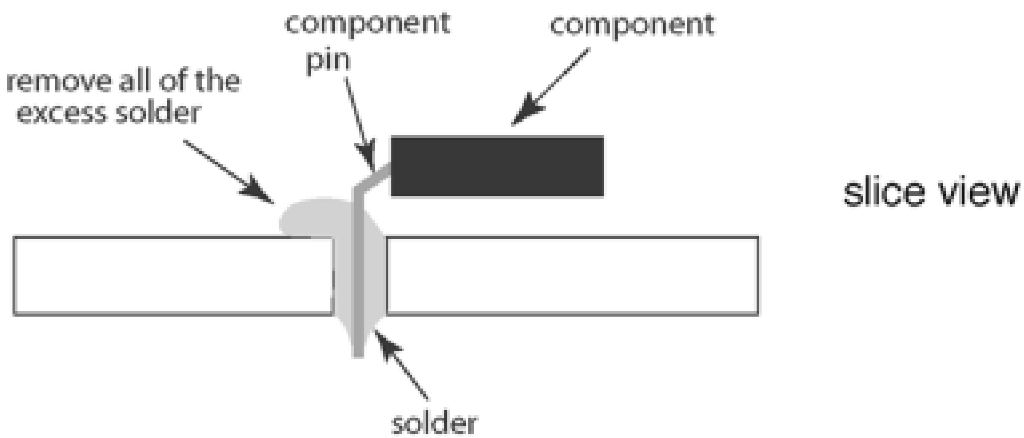
This model uses Pb Free solder in it’s manufacture due to environmental conservation issues. For service and repair work, we’d suggest the use of Pb free solder as well, although Pb solder may be used.
PCBs manufacturedusing lead free solder will have the “PbF” or a leaf symbol stamped on the back of PCB.

CAUTION

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30 ~ 40 °C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).

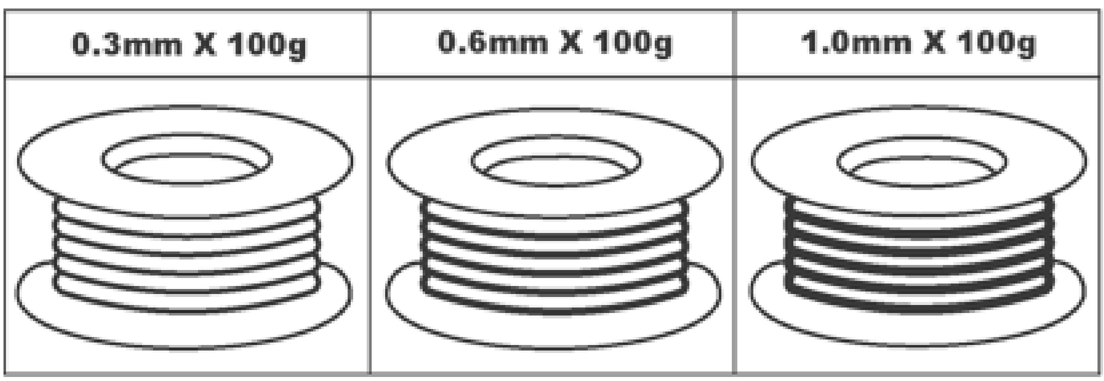
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).
  If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If thisis not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.

- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side.



Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also beused.



TOP PREVIOUS NEXT

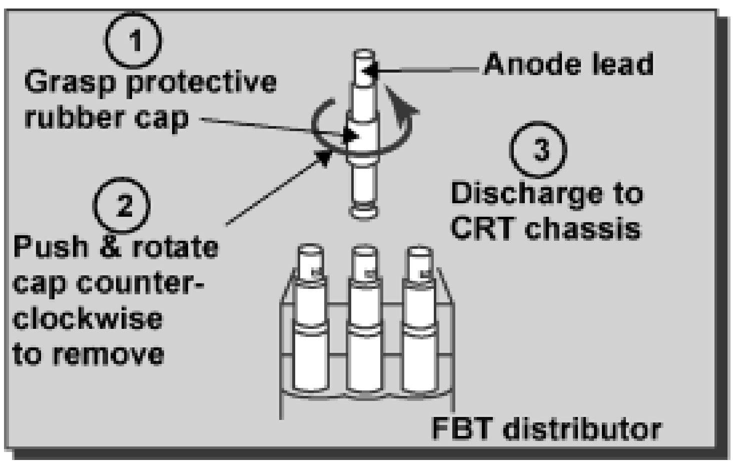
3 Important safety tests

TOP PREVIOUS NEXT

Measuring H.V.

The anode caps are cemented to the CRTs. To gain access for high voltage measurement, remove the red CRT's anode lead from the flyback transformer distributor. Grasp the anode lead protective cap at its bottom and squeeze it against thelocking cap body inside, rotate 1/4 turn counter clockwise and pull the anode lead sleeve out of the FBT distributor. Connect a high voltage positive lead from your H.V. meter to the FBT distributor, and the common negative lead to cold ground

FBT leads removal



Note:

Reinsert the anode lead into the FBT distributor until it is tightly and fully seated. Turn the locking cap clockwise to lock in place.

(EHT) Protector operation check

With the cabinet back removed, apply a nominal 120V A.C. to the PTV.

Over voltage test

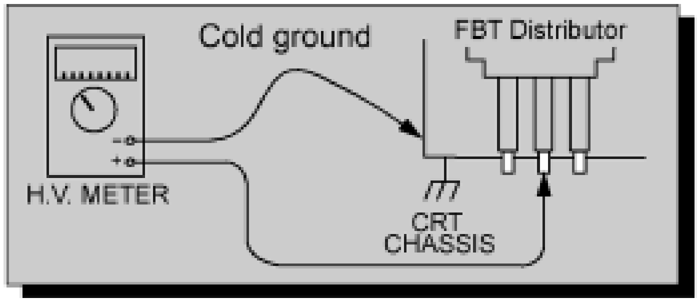
Preparation:

1. Turn PTV “OFF”

2. Connect a NTSC signal generator to the antenna terminal.

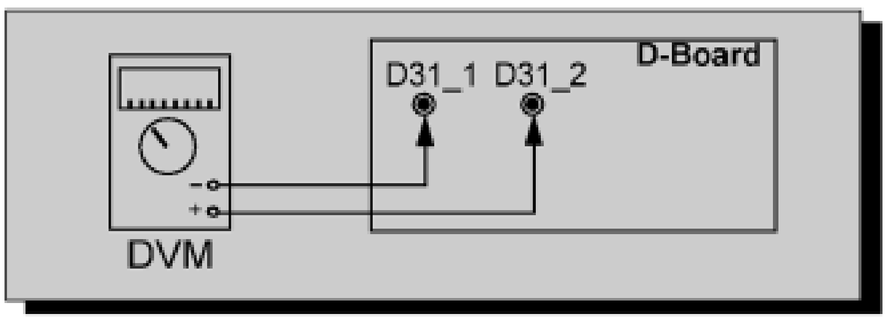
3. Connect DVM positive lead to D31 pin 2 and negative lead to D31 pin 1 on D-Board

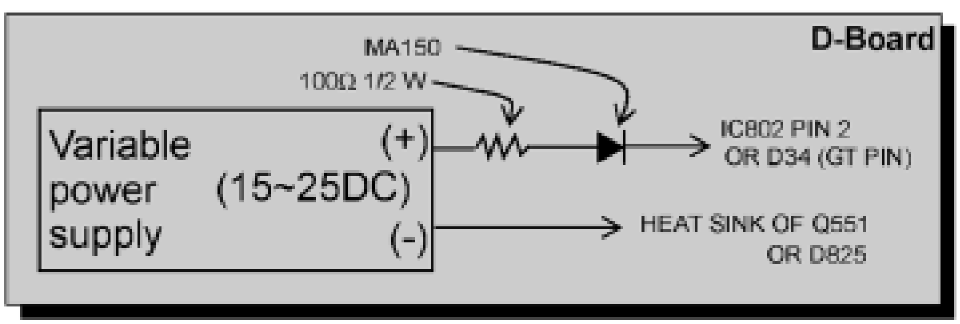
H.V. measurement



4. Connect a H.V. meter (static type, class 0.1) with high voltage leads to high voltage distributor on FBT.

DVM and power supply connection





5. Connect the 15 ~ 25 V DC variable power supply positive lead to D34 or IC802 pin 2 (D Board) and negative lead to heat sink of Q551 or D825

Procedures:

1. Apply a NTSC white pattern.

2. Turn PTV ON.

3. Adjust the picture or brightness controls so that the DVM reads 12.4 ± 0.4 volts.

4. Increase the variable power supply until set turns off. The set should turn off at 12.4 ± 0.4 volts (DVM) and high voltage less than 36.4kV.

5. If the DVM reading is other than 12.4 ± 0.4 volts, readjust picture or brightness control and repeat steps 3.

6. Turn off the variable supply and confirm that the set will turn on with the remote control.

4 Service notes

TOP PREVIOUS NEXT

NOTE

These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.

Leadless chip component (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chips capacitor or resistor board solder pads may have holes through the board,however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitor may also be limited for the same reason. It is recommended that identical components be used.

Chip resistor have a three digit numerical resistance code, 1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6kΩ resistor, 0 = 0Ω (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

Component removal

1. Use solder wick to remove solder from component end caps or terminal.

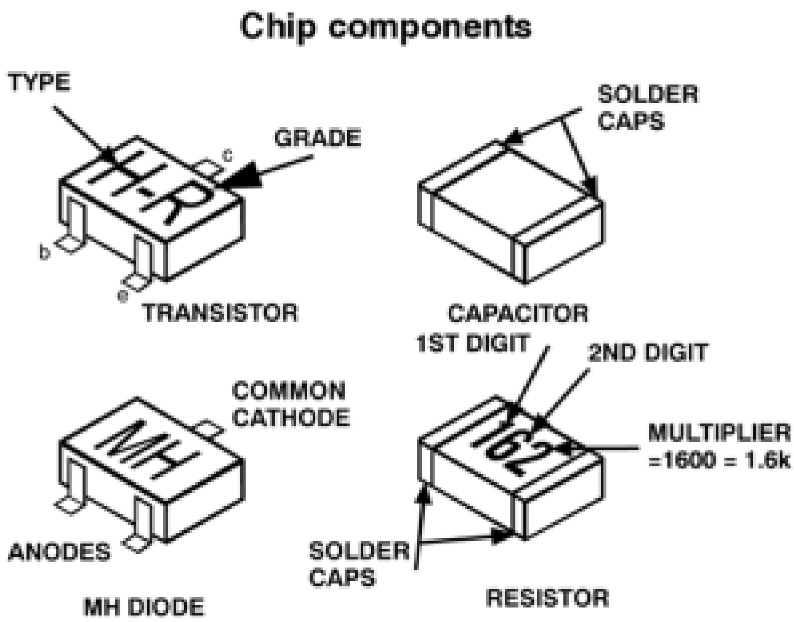
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.

3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal.

Chip component installation

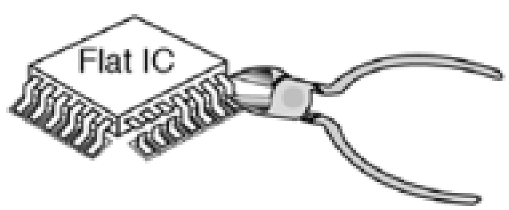
1. Put a small amount of solder on the board soldering pads.

2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds.

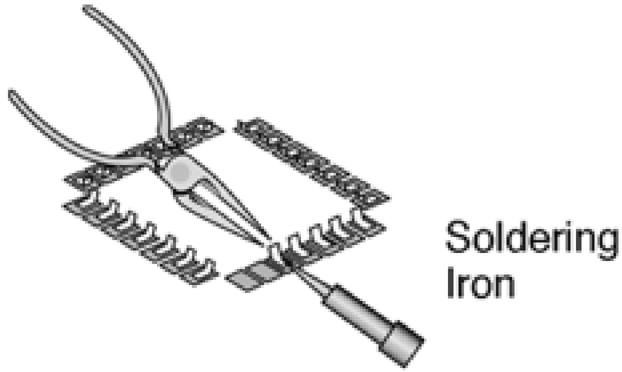


How to replace flat ic (required tools)

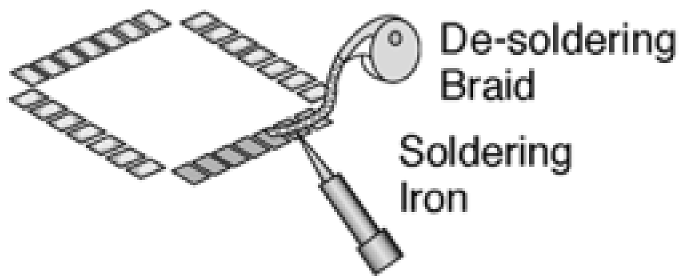
1. Remove the solder from all of the pins of a Flat IC by using a desolder braid



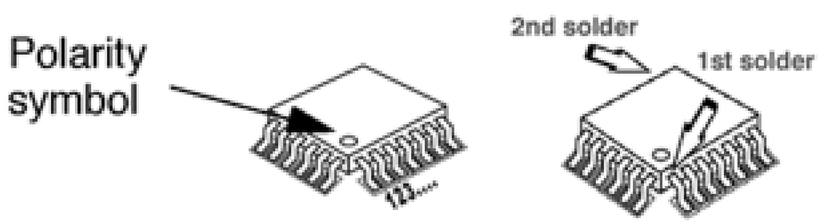
2. Put the iron wire under the pins of the Flat IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



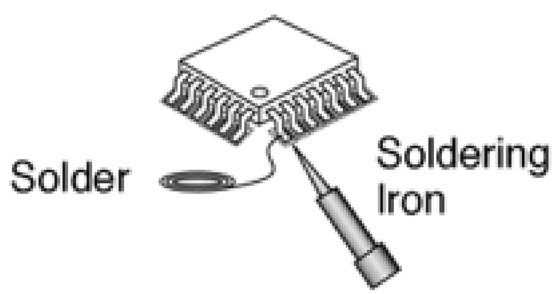
3. Remove the solder from all the pads of the Flat IC by using a de solder braid



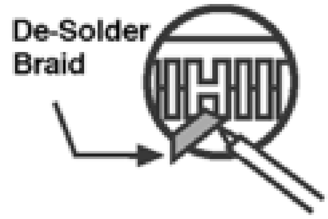
4. Position the new Flat IC in place (apply the pins of the Flat IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol



5. Solder all pins to the soldering pads using a fine tipped soldering iron



6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de solder braid as shown in the figure below



IMPORTANT

To protect against possible damage to the solid state devices due to arcing or static discharge, make certain that all ground wires are securely connected

CAUTION

The power supply circuit is above earth ground and the chassis cannot be polarized. Use an isolation transformer when servicing the receiver to avoid damage to the test equipment or to the chassis. Connect the test equipment to the proper ground(HOT or COLD) when servicing, or incorrect voltages will be measured.

WARNING

This receiver has been designed to meet or exceed applicable safety and x ray radiation protection as specified by government agencies and independent testing laboratories.

To maintain original product safety design standards relative to x ray radiation and shock and fire hazard, parts indicated with the symbol ⚠ on the schematic must be replaced with identical parts. Order parts from the manufacturer’sparts center using the parts numbers shown in this service manual, or provide the chassis number and the part reference number.

For optimum performance and reliability, all other parts should be replaced with components of identical specification.

TOP PREVIOUS NEXT

5 PTV Location of controls

Quick reference control operation	
1	**Power** - Press to turn ON or OFF.
2	**Volume** - Press to adjust sound level, or to adjust audio menus, video menus, and select operating features when menus are displayed
3	**Channel** - Press to select programmed channels. Press to highlight desired features when menus are displayed. Also use to select cable converter box channels after programming remote control infra-red codes (the TV/AUX/CABLE switch must be set in CABLE position).
4	**Action** - Press to display main menu and access on screen feature and adjustment menus.
5	**TV/Video** - Press to select TV or one of the video inputs, for the main picture or the PIP frame (when PIP frame is displayed).

6 Receiver feature table

TOP PREVIOUS NEXT

FEATURE/MODEL	PT-53TW53G / PT-56TW53G
CHASSIS	AP827
MICRO	256K
MENU LANGUAGE	ENG/SPAN/FR
CLOSE CAPTION	X
V-CHIP (USA/CANADA	X
CHANNEL INFO BANNER	X
VIDEO INPUT SKIP	SKIP
CHANNEL COUNT	181
PIP (1T), 2T PIP (2T), 2T SPLIT	2T SPLIT
2RF	X
REMOTE CONTROL (W/LIGHT)	EUR7603Z90
CRT SUPPLIER	MDDA (CENTAUR)
SCREEN	W/PROT SCREEN
CHASSIS	P8W
COMB FILTER	MOTION ADP, 3D Y/C
HEC/VEC (X=BOTH)	X
NEW YNR	X
VM	X (DIGITAL)
V/A NORM (X=BOTH)	X
COLOR TEMP	X
AIP	X
PRESET/INPUT LABELING	X
VIDEO PICTURE MEMORY	X
DIGITAL SCAN RATE	1080i, 480p
NTSC LINE DOUBLER	480p PROGRESSIVE (NEW)
MTS/SAP/DBX	X
BUILT-IN AUDIO POWER	60W
No. OF SPEAKERS	6

BASS/BALANCE/TREBLE CONTROL	X
AI SOUND	X
SURROUND	X
SPATIALIZER/BBE	BBE
A/V IN (REAR/FRONT)	4(3/1)
A/V PROGRAM OUT	X
AUDIO OUT (FAO: F, VAO:V)	F, V
COMPONENT INPUT (Y, Pb, Pr)	2
S-VHS INPUT (REAR/FRONT)	2/1
HDMI/HDCP INPUT	DVI/HDCP

Note:

Specifications are subject to change without notice or obligation.

TOP PREVIOUS NEXT

7 Board description table

TOP PREVIOUS NEXT

BOARD	PART NUMBER	DESCRIPTION
A-BOARD	TNP2AH045AA	MAIN CHASSIS
D-BOARD	TNP2AH046	POWER SUPPLY
* DC-BOARD	TNP2AA120	CONVERGENCE CIRCUIT
* DV-BOARD	TNP2AA114	DVI BOARD
* DG-BOARD	TNP2AA126	PIP PROCESSING, SPLIT, SEARCH, FORMATS
LB-BOARD	TNP2AA147	BLUE PRT
LR-BOARD	TNP2AA145	RED PRT
LG-BOARD	TNP2AA146	GREEN PRT
K-BOARD	TNP2AA138	FRONT KEY BOARD
G-BOARD	TNP2AA137	FRONT A/V BOARD
R-BOARD	TNPA0615AB	IR BOARD

NOTE

When ordering a replacement board assembly, append an “S” to the board number

EXAMPLE

To order the A Board, the replacement board is TNP2AH045AAS

*NOTE

The DC-Board, DG-Board and DV-Board are non-serviceable boards, except for DV-Board audio connector and DVI connector. If any of these boards or DV-Board components are defective, replace it with a new one.

TOP PREVIOUS NEXT

8 Disassembly for service

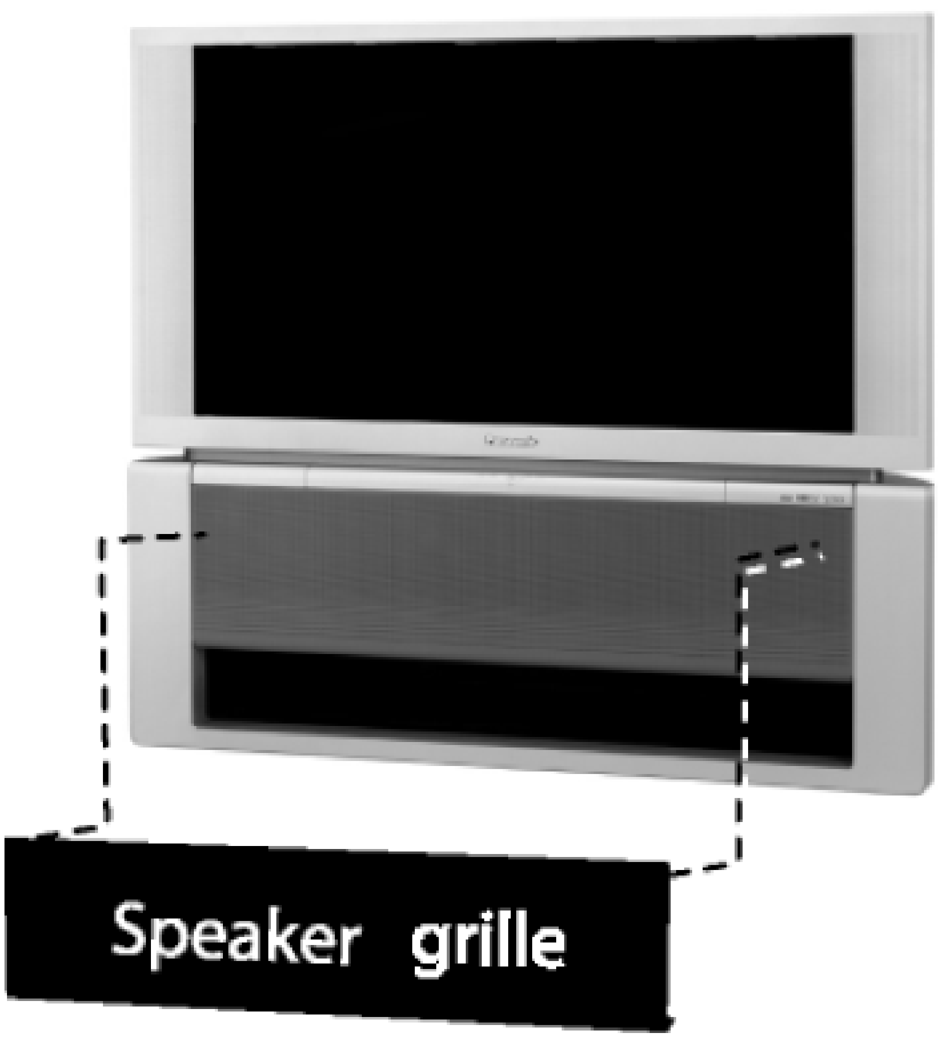
NOTE:

Board ground wires may have to be disconnected to disassemble some boards. All ground wires must be reconnected using jumper leads, if necessary, before power is applied to PTV for service.

Speaker grille removal

The speaker grille, it is secured to the cabinet of the PTV. Grip panel from the sides and middle upper part, gently pull forward to remove. When reassembling, make certain to firmly press on the panel where the insertion points (6) are located,one at each corner and one at the middle top and bottom

Speaker grille removal (may vary)



Speakers replacement

1. Remove the speaker grille.

2. Each speaker is secured to the cabinet with (4) screws.

3. Disconnect the R and L speaker lead connectors from the speaker units.

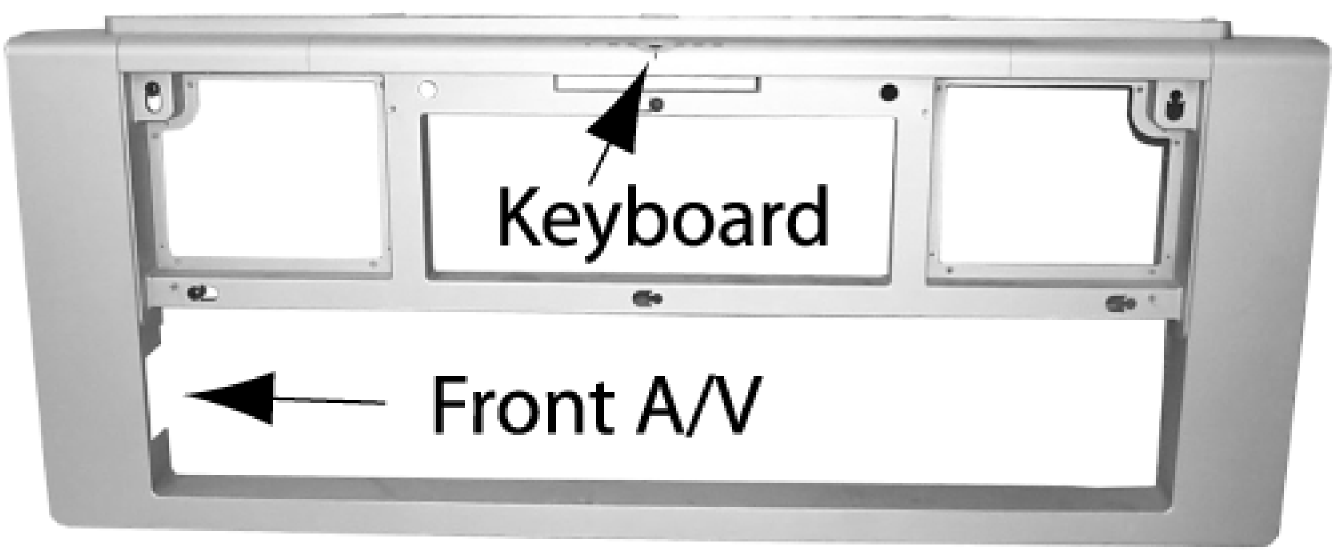
Keyboard and front A/V inputs removal

1. Remove the speaker grille.

2. Remove the plastic frame by removing the screws around the lower speakers area. Unpplug the connectors from K and G board.

3. Unplug the connectors from the keyboard and front A/V inputs assemblies. Remove the screws affixing the keyboard to the plastic frame; the front front A/V inputs are located screwd on the left side of the plastic frame.

Plastic frame



Front cabinet removal

1. Remove the speaker grille.

2. Remove the plastic frame by removing the screws around the lower speaker areas.

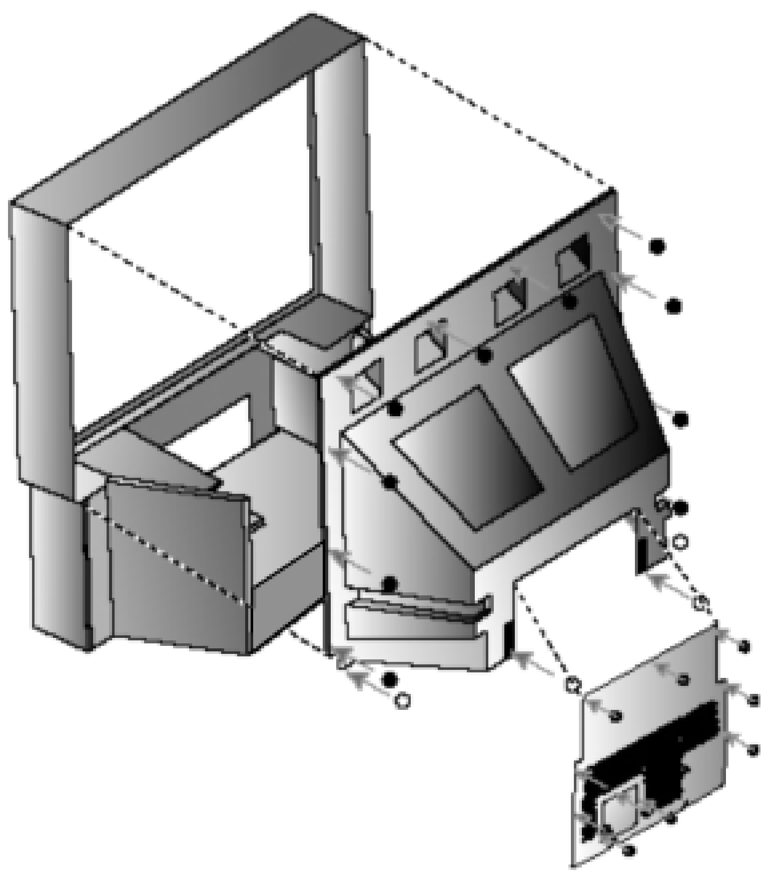
3. Remove the screws from the front cabinet located on the front bottom.

4. Remove all the screws from the back cabinet that holds the front cabinet (top and sides).

Back lower cover removal

1. Remove all the screws around the perimeter, marked with arrows.

Back lower cabinet removal



Back cabinet removal

1. Remove the speaker grille.

2. Remove the plastic frame by removing the screws around the lower speaker areas.

3. Remove the screws from the front cabinet located on the lower side.

4. Remove all the screws from the back cabinet that holds the front cabinet (top and sides).

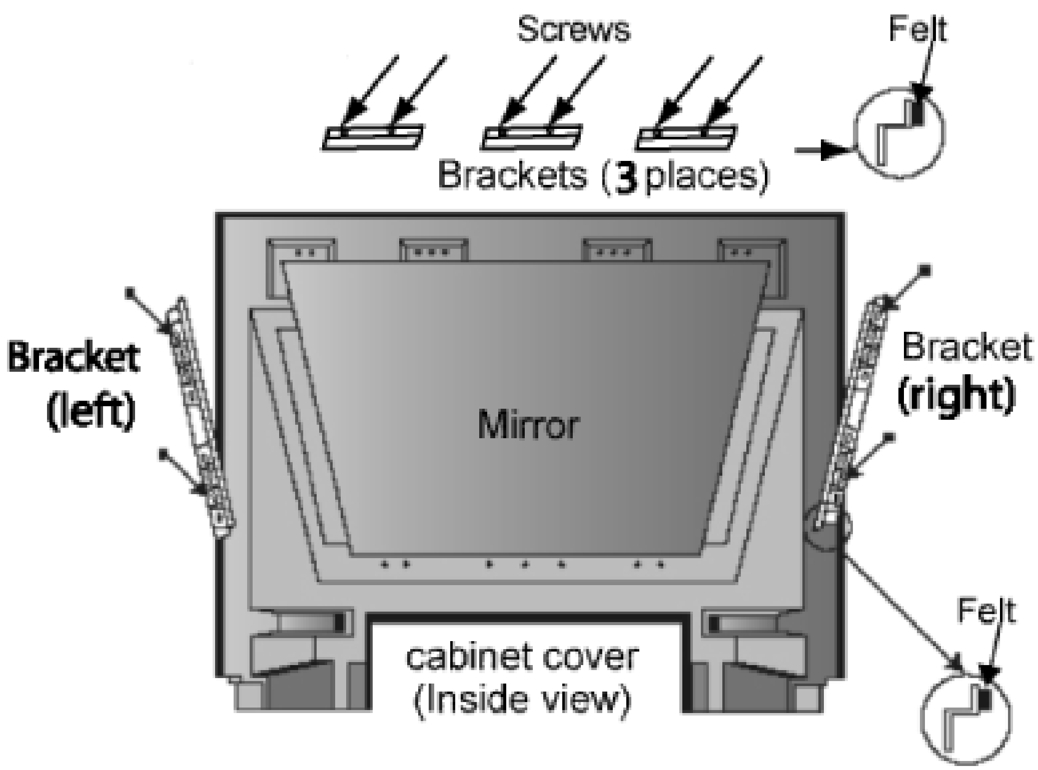
5. Remove the back lower cover

6. Remove all the screws from the lower sides of theback cabinet.

Mirror removal

The mirror is attached inside the back cabinet cover. Carefully remove the cabinet cover to access its interior surface and remove the screws securing the brackets that hold the mirror at the top and sides to the mirror.

Mirror removal



Screen assembly

1. Remove the front cabinet. See front cabinet removal procedure above.

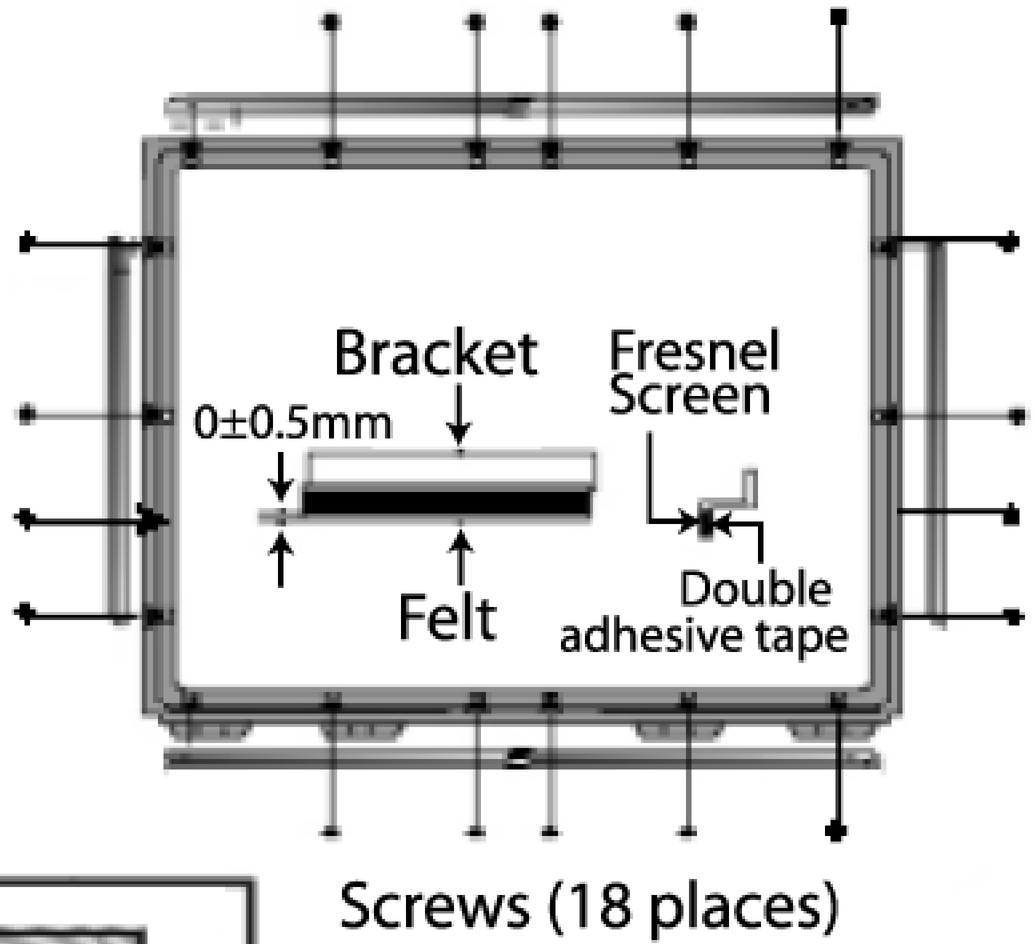
2. Place screen frame face down on a soft surface.

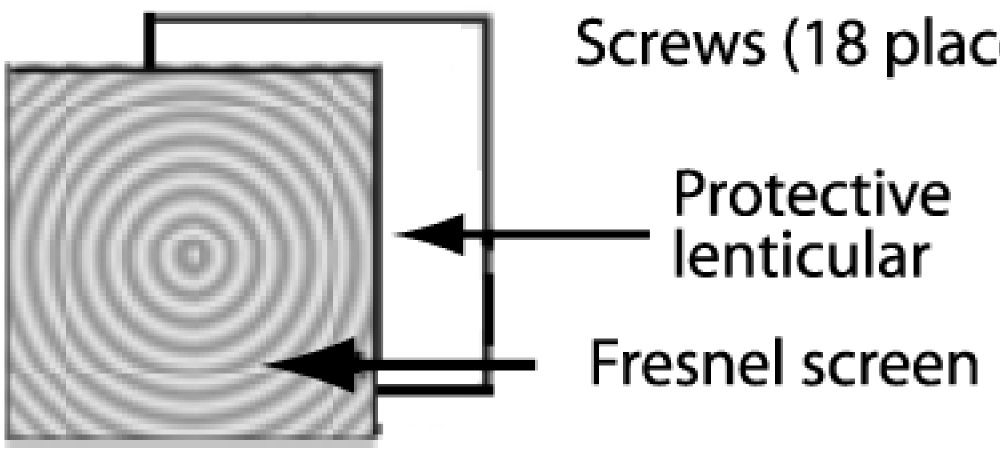
3. Remove all screen brackets

   Note:

   The brackets are painted black (permanent marker) on the edge to prevent reflection on image.

Screen assembly





Note:

The Protective and lenticular screens are in one screen (Protective lenticular)

Main chassis block

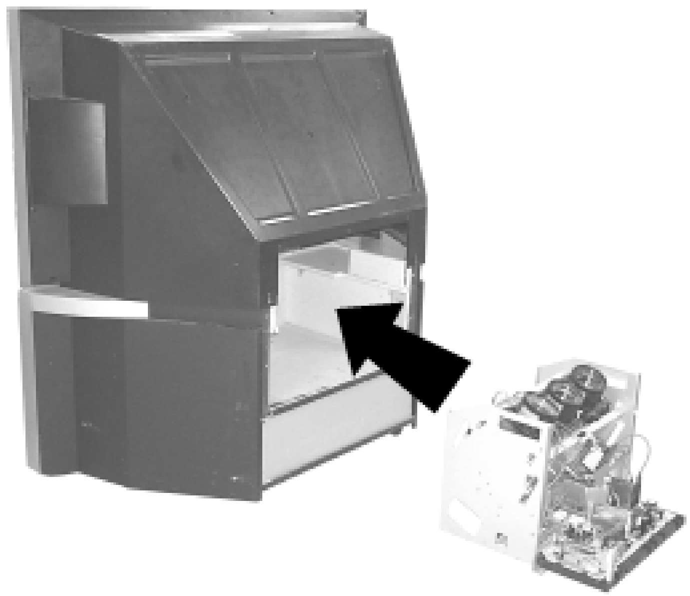
1. Remove the back lower cabinet cover.

2. The main chassis block is secured to the cabinet by screws at front, behind the Speaker Grill and inside on the bottom of the optical frame).

3. Remove the horizontal barrier panel at the back of the cabinet.

4. Unplug connectors (keyboard, front A/V and speaker connectors) and pull out the main chassis block.

Chassis removal



[8.1 Chassis assembly]

[8.2 Disassembly for CRT replacement]

[8.3 PTV screen assemblies]

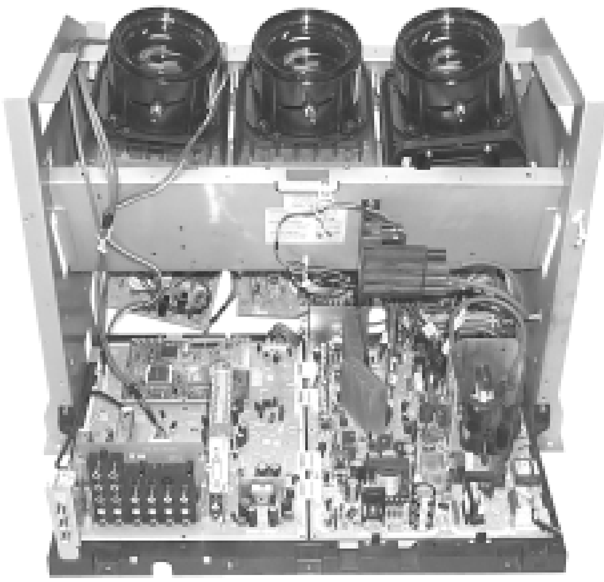
[8.4 Screen assemblies warning]

TOP PREVIOUS NEXT

8.1 Chassis assembly

The chassis assembly shown in figure includes all the electrical and optical (light box) components

Chassis front view



A-Board

1. A-Board is secured to the chassis tray with five screws.

2. The A-Board is mated to the D-Board by four flexible connectors (male side of connectors): A1, A2, A3 & A4. To remove this board, unplug the connectors on the A-Board pulling from the sides of each connector.

   NOTE:

   Some tie wraps that secure the wire dressings may need to be unfastened for chassis removal.

D-Board

1. D-Board is secured to the chassis tray with five screws.

2. The D-Board is mated to the A-Board by four connectors (female side of connectors): D1, D2,

D3 & D4. To remove this board, unplug the connectors on the A-Board pulling from the sides of each connector.

NOTE:

Some tie-wraps that secure the wire dressings may need to be unfastened for chassis removal.

DG-Board

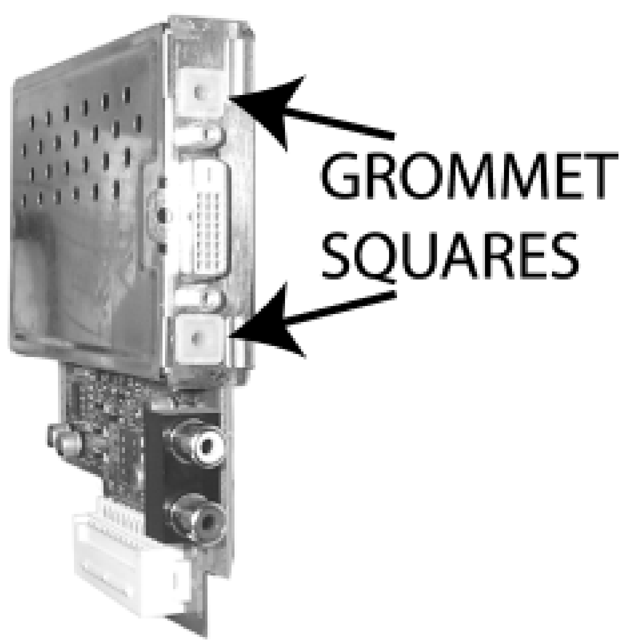
1. Plugs onto the D-Board at the A16, A17 and A18 (DG1, DG2 and DG3 respectively) connectors.

   NOTE:

   This board is non-serviceable.
   When removing this board pull carefully.

DV-Board

1. Plugs onto the A-Board at the A5 (DV1) connectors.
2. This board has two Grommet squares, be careful to do not screw too tight, otherwise this grommet screw hole will get stripped.



NOTE:

This board is non-serviceable. Except for JK002 (DVI AUDIO CONNECTOR) and JK002 (DVI

CONNECTOR)
When removing this board pull carefully.

DC-Board

1. Plugs onto the D-Board at the D21, D22 and D23 (DC1, DC2 and DC3 respectively) connectors.

   NOTE:

   This board is non-serviceable.
   When removing this board pull carefully.

R-Board

1. This board is secured to the upper front side of the light box by one screw, and plugged to R1 connector from A51 on A-Board

LR, LG and LB Board

1. Each board is plugged into the socket on the PRT neck, LR-Board on red PRT, LG-Board on green PRT and LB-Board on blue PRT.

TOP PREVIOUS NEXT

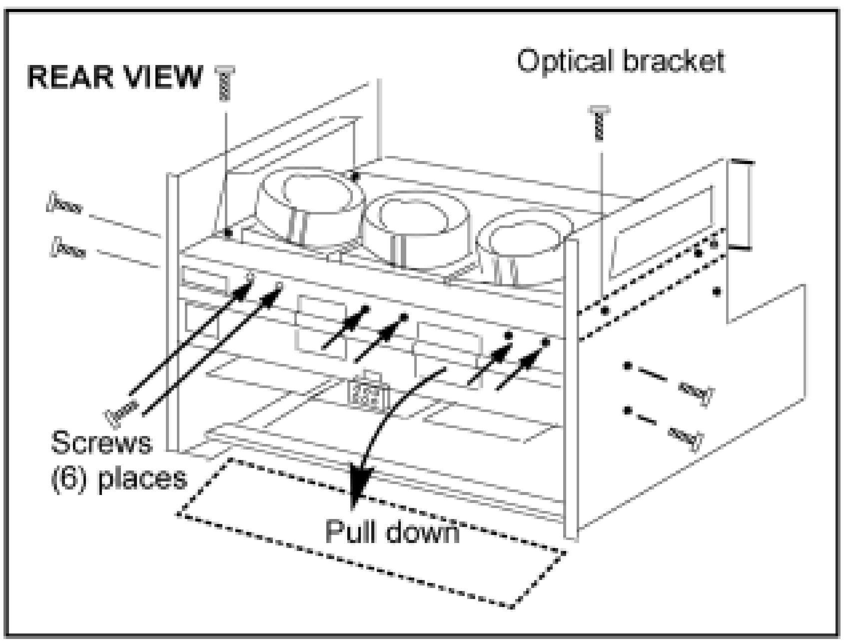
8.2 Disassembly for CRT replacement

To facilitate CRT replacement, the complete CRT mounting chassis does not need to be removed.

1. Remove the main chassis block from the cabinet.

2. Remove the optical bracket metal cover (rear side) by removing (6) screws from back, (2) screws from top, and (2) screws from each side.

CRT replacement



3. Remove the defective CRT anode lead from the high voltage distributor block that is mounted on the flyback transformer. Discharge to CRT chassis.

4. Unplug connectors from the B-Board. See board layout. B9 for red, B10 for green, or B11 for blue

5. Unplug the defective CRT black DAG ground connector from the CRT Board.

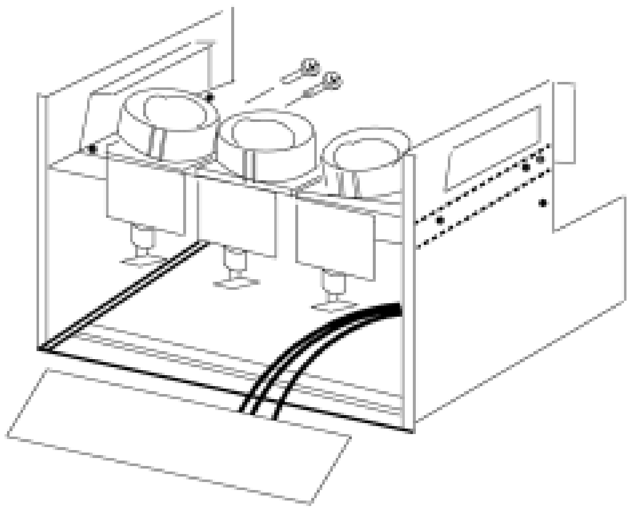
6. Remove the CRT Board from the defective CRT neck.

7. Remove (2) screws from the defective CRT housing.

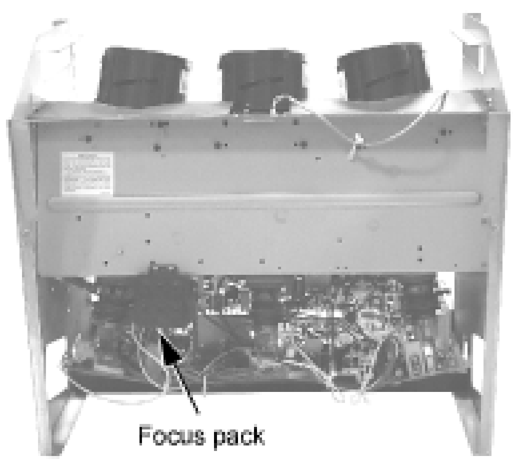
Caution:

Do not remove the (4) CRT lens screws and Support the CRT assembly when loosening screws.

CRT replacement



Focus pack location



8. Release CRT anode lead from CRT chassis wire clamp and all other wires from holders.

9. Loosen a screw that secures the DY and remove it from the CRT neck.

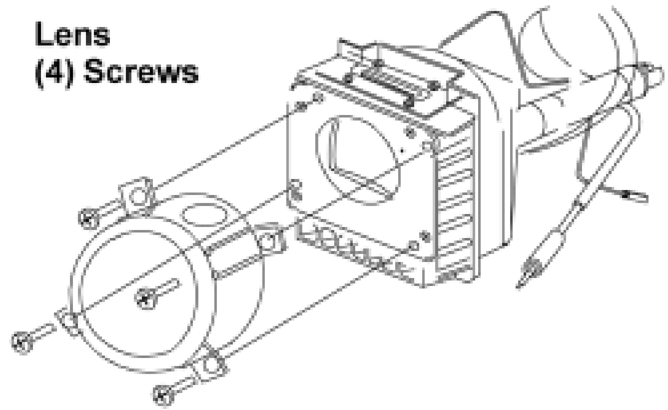
Caution:

To insure protection against x ray radiation, the lens must be mounted in place at all times when power is applied to the PTV

CRT replacement

1. Remove CRT focus lens assembly (4 screws)

CRT assembly

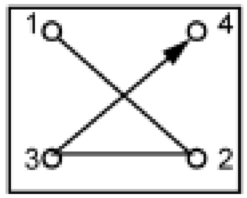


2. Lay CRT face down on a soft cloth.
3. Note position of yoke with centering tabs and remove from defective CRT.
4. Remove CRT DAG ground from defective CRT. Mount it on the replacement CRT exactly as it was on the defective CRT.

   Note:

   Replacement CRT is supplied with H.V. anode lead attached.
5. Wire the anode lead wire.
6. Install yoke with other CRT neck assemblies on CRT neck in the same order and position as removed from the defective CRT.
7. Press yoke against bell of CRT and tighten the clamp just snug enough so it will not easily shift.
8. Assemble CRT focus lens assembly to new CRT with (4) screws. Make sure focus lens adjustment nut is in the same location as on other CRT focus lens

CRT screw tightening order



Note:

Please assemble with screws in the order shown and tighten with the same torque.

Optical block position adjustment

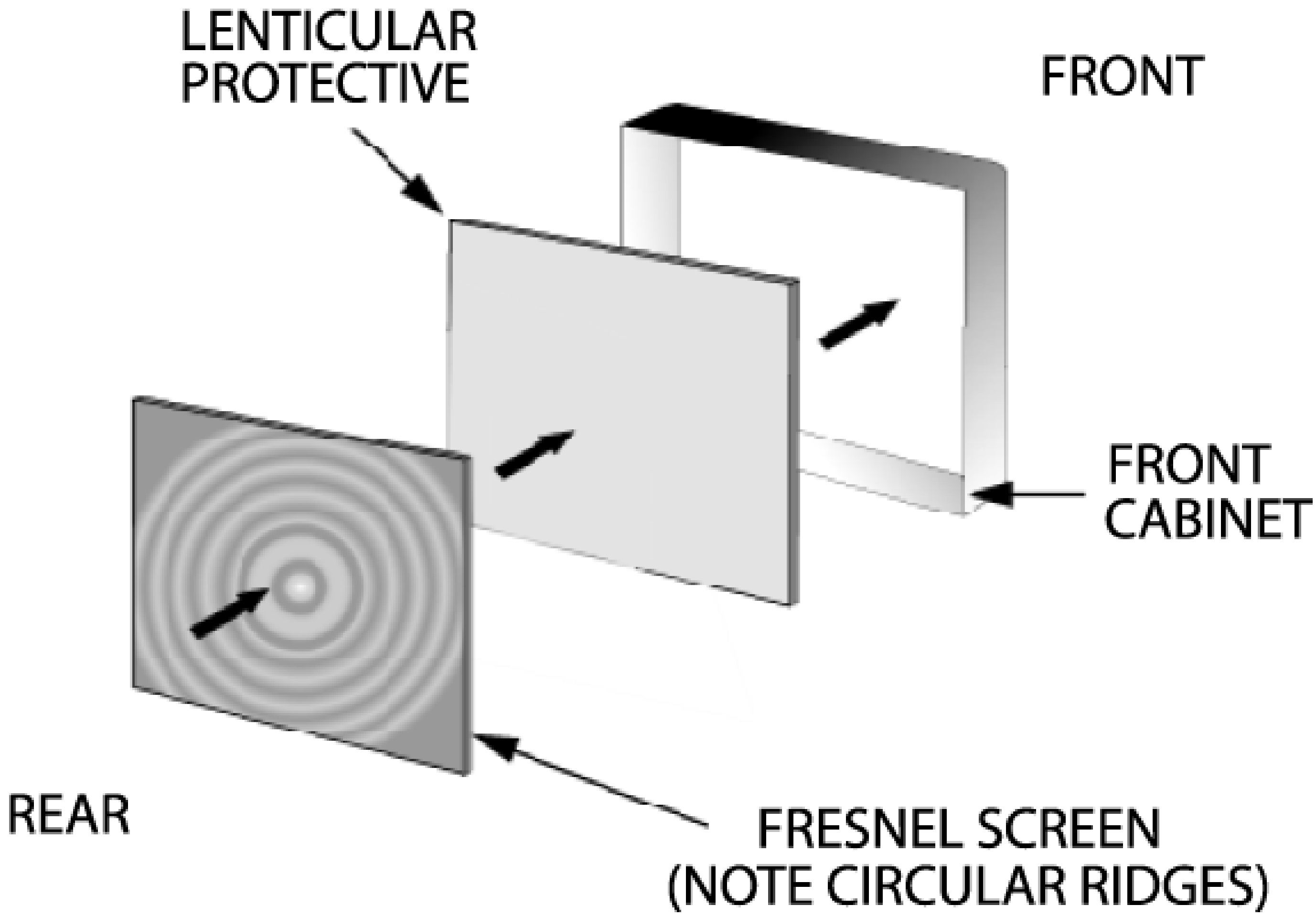
The optical block mounting has holes to allow for the different size projection screens. These mounts will adjust to projection screens. If the optical block is removed for service or is replaced, it is important that the correct mounting holesare used.

TOP PREVIOUS NEXT

8.3 PTV screen assemblies

TOP PREVIOUS NEXT

Screen assemblies



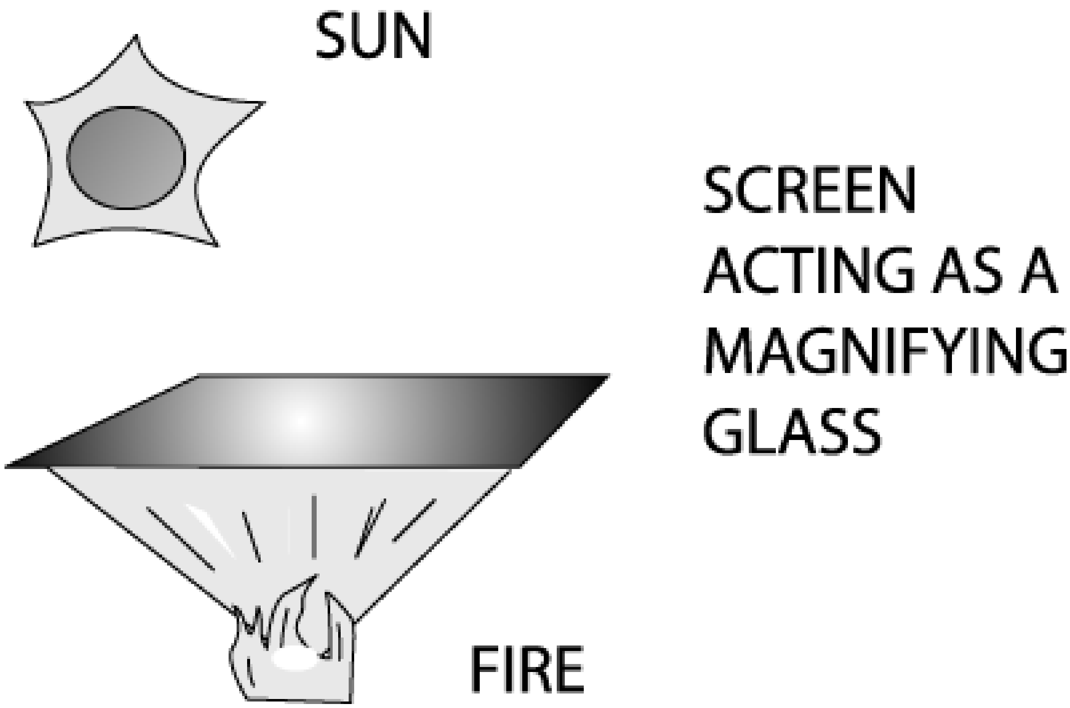
Note:

The Protective and lenticular screens are in one screen (Protective lenticular)

TOP PREVIOUS NEXT

8.4 Screen assemblies warning

When storing or disposing of screen assemblies, be sure not to place them in direct sunlight. These screens may act as a magnifying glass and could cause a fire.



9 Conductor views

9.1 K and G-Board printed circuit

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

10 Schematics

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

10.1 Schematic diagrams notes

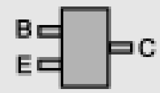
TOP PREVIOUS NEXT

Notes:

IMPORTANT SAFETY NOTICE

THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES THAT ARE IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURERS SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS DESIGNATED WITH A ⚠ IN THE SCHEMATIC.

CHIP TRANSISTOR LEAD DESIGNATION



SCHEMATIC NOTES

1. Resistors are carbon 1/4W unless noted otherwise.
2. Capacitors are ceramic 50V unless noted otherwise.
3. Coil value notes is inductance in µH.
4. Test point indicated by ; Test point but no pin .
5. Components indicated with ⚠ are critical parts and replacement should be made with manufacture specified replacement parts only.
6. (**BOLD LINE**) indicates the route of B+ supply.
7. The schematic diagrams are current at the time of printing and are subject to change without notice.
8. Ground symbol indicates **HOT GROUND CONNECTION**; indicates COLD GROUND.

NOTE: All other component symbols are used for engineering design purposes.

VOLTAGE MEASUREMENTS

1. Voltage measurement:
   - AC input to the Receiver is 120V. NTSC (HD, 1125i & 525P when applicable) signal generator is connected to the antenna of the Receiver. (Color bar pattern of 100 IRE white and 7.5 IRE black.)
   - All Picture and Audio adjustments are set to Normalize.
     TV ANT/CABLE - (Set-Up Menu) in TV/ANT Mode
     Volume - Min.
     TV/Video SW - TV position
     Audio Mode - Stereo
   - Voltage readings are nominal and may vary ±10% on active devices. Some voltage reading will vary with signal strength and picture content.
   - Supply voltages are nominal.
2. Ground symbol indicates ground lead connection of meter.
   Incorrect ground connection will result in erroneous readings.

*CAUTION: **Incorrect ground connection of the test equipment will result in erroneous readings.***

WAVEFORM MEASUREMENTS

1. ③ indicates waveform measurement. (Measurement can be taken at the best accessible location in common to the indicated point.)
2. Taken with an NTSC signal generator connected to the antenna terminal. (NTSC color bar pattern of 8 bars of EIA colors, 100 IRE white and 7.5 IRE black.)
3. Customer Controls (Picture/Audio Menu) are set to Normalize. Volume is set to "MIN".
4. All video and color waveforms are taken with a wideband scope and a probe with low capacitance (10 to 1). Shape and peak altitudes may vary depending on the type of Oscilloscope used and its settings.
5. Ground symbol shown on waveform number indicates (Hot) ground lead connection of the Oscilloscope.

CAUTION: Incorrect ground connection of

2. Taken with an NTSC signal generator connected to the antenna terminal. (NTSC color bar pattern of 8 bars of EIA colors, 100 IRE white and 7.5 IRE black.)
3. Customer Controls (Picture/Audio Menu) are set to Normalize. Volume is set to "MIN".

depending on the type of Oscilloscope used and its settings.

5. Ground symbol shown on waveform number indicates (Hot) ground lead connection of the Oscilloscope.

CAUTION: Incorrect ground connection of the test equipment will result in erroneous readings.

TOP PREVIOUS NEXT

10.2 Notas de los diagramas esquematicos

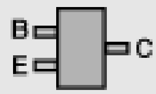
TOP PREVIOUS NEXT

Notas

NOTA DE SEGURIDAD

LOS DIAGRAMAS ELÉCTRICOS INCLUYEN CARACTERÍSTICAS ESPECIALES MUY IMPORTANTES PARA LA PROTECCIÓN CONTRA RAYOS-X, QUEMADURAS Y DESCARGAS ELÉCTRICAS. CUANDO SE DE SERVICIO ES IMPORTANTE USAR PARA REEMPLAZO DE COMPONENTES CRITICOS, SOLO PARTES ESPECIFICADAS POR EL FABRICANTES. LOS COMPONENTES CRITICOS ESTAN SEÑALADOS EN LOS DIAGRAMAS POR EL SIMBOLO ⚠.

IDENTIFICACIÓN DE TERMINALES PARA TRANSISTORES EN *CHIP*



NOTAS DE LOS DIAGRAMAS

1. Las Resistencias son de Carbón de 1/4W, a menos que se indique otra característica.
2. Los Capacitores son de Cerámica para 50V, a menos que se indique otra característica.
3. El valor indicado de las Bobinas es la inductancia expresada en µH.
4. Los puntos de prueba en la terminal de algún componente son indicados por . Los puntos de prueba fuera de los componentes se indican con .
5. Los componentes señalados con el símbolo ⚠ son considerados componentes críticos y deben ser reemplazados sólo con las partes especificadas por el fabricante.
6. (**LINEA GRUESA**) indica las líneas de alimentación de los Voltajes B+.
7. Los diagramas eléctricos están sujetos a cambio sin previo aviso.
8. El símbolo indica que es una conexión a **Tierra Caliente** y el símbolo indica conexión a **Tierra Fría**.

***NOTA:** Los demas símbolos de componentes incluidos son usados con fines de diseño.*

MEDICIÓN DE VOLTAJES

1. Medición de voltaje:
   - El voltaje de entrada al Receptor es de 120V de Corriente Alterna. Un generador de patrones con formato NTSC se conecta a la entrada de la antena. (Patrón de Barras de Colores con 100 IREs para el Blanco y 7.5 IREs para el Negro.)
   - Los ajustes de los Menus Picture y Audio se normalizan.
     En el Menú Set-Up, en la opción ANTENA, se selecciona el modo de CABLE.
     El nivel de Volumen se minimiza.
     De los modos TV y Video, seleccionar el modo TV.
     Seleccionar modo Estereo del Audio.
   - Las mediciones de los voltajes son nominales y pueden variar hasta 10% en componentes en funcionamiento. Las lecturas de los voltajes pueden variar por la potencia de la señal y el contenido de la imagen.
   - Las fuentes de voltajes son nominales.
2. El símbolo indica el tipo de tierra que se utiliza en la conexión del medidor.

***PRECAUCION:** Si no se utiliza la conexión a la tierra adecuada, se obtendrán mediciones equivocadas y podría dañar el equipo de medición.*

MEDICIÓN DE FORMAS DE ONDA

1. Un símbolo como ③ indica el punto para medir una señal. (La medición puede hacerse en el punto con mayor accesibilidad, siempre que sea común al indicado.)
2. Se midieron utilizando un generador con formato NTSC conectado a la terminal de la antena. (Patrón de 8 Barras de Colores

banda alta y con un punta de prueba de baja capacitancia (10 a 1). La forma y amplitud de las ondas puede variar según el tipo de osciloscopio que se utilice y sus características.

5. El símbolo de tierra que aparece junto al número de la forma de onda, indica que

una señal. (La medición puede hacerse en el punto con mayor accesibilidad, siempre que sea común al indicado.)

2. Se midieron utilizando un generador con formato NTSC conectado a la terminal de la antena. (Patrón de 8 Barras de Colores EAI, formato NTSC de 100 IREs para el Blanco y 7.5 IREs para el Negro.)
3. Los ajustes de usuario de los Menus PICTURE y AUDIO se normalizaron. Posteriormente el nivel de volumen se ajusta al mínimo.
4. Las formas de onda de Video y Color fueron tomadas con un osciloscopio de baja capacitancia (10 a 1). La forma y amplitud de las ondas puede variar según el tipo de osciloscopio que se utilice y sus características.
5. El símbolo de tierra ⏚ que aparece junto al número de la forma de onda, indica que se utiliza conexión a **Tierra Caliente** en el extremo negativo de la punta de prueba.

PRECAUCION: Si no se utiliza la conexión a la tierra adecuada, se obtendrán mediciones equivocadas y podría dañar el equipo de medición.

TOP PREVIOUS NEXT

10.3 A-Board schematic 1 of 5

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

10.4 A-Board schematic 2 of 5

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

10.5 A-Board schematic 3 of 5

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

10.6 A-Board schematic 4 of 5

TOP PREVIOUS NEXT

10.7 A-Board schematic 5 of 5

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

11 Parts location

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

12 Parts list

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT

12.1 Description of abbreviations guide

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use manufacturer's specified parts.

Abbreviation of part name and description

1. Resistor

Example :

ERD25TJ104 **C** 100KΩ, **J**, 1/4W

(**C**: Type, **J**: Allowance)

Type	Allowance
C : Carbon	F : ± 1%
F : Fuse	G : ± 2%
M : Metal Oxide Metal Film	J : ± 5% K : ± 10%
S : Solid	M : ± 20%
W : Wire Wound	

2. Capacitor

Example :

ECKF1H103ZF **C** 0.01µF, **Z**, 50V

(**C**: Type, **Z**: Allowance)

Type	Allowance
C : Carbon	C : ± 0.25pF
E : Electrolytic	D : ± 0.5pF
P : Polyester Polypropylene	F : ± 1pF G : ± 3%
T : Tantalum	J : ± 5%
	K : ± 10%
	L : ± 15%
	M : ± 20%
	P : ± 100%, -0%
	Z : ± 80%, -20%

12.2 Parts list

Ref. No.	Part No.	Part Name & Description	Remarks
CAPACITORS			
C001	ECA1CM470B	CAP E 47UF/16V PT-53TW53G	
C002	TCJ2VC1H220J	CAP C 22PF-J-50V	
C003	TCJ2VC1H220J	CAP C 22PF-J-50V	
C004	F2A1H4R7A162	CAP E 4.7UF-50V	
C005	F2A1H2R2A162	CAP E 2.2UF-50V	
C006	ECA0JM332E	CAP E 3300UF-6.3V	
C007	ECA1CM470B	CAP E 47UF/16V PT-53TW53G	
C008	F2A1H4R7A162	CAP E 4.7UF-50V	
C009	TCJ2VC1H220J	CAP C 22PF-J-50V	
C010	TCJ2VC1H220J	CAP C 22PF-J-50V	
C011	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C012	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C013	ECA0JM332E	CAP E 3300UF-6.3V	
C014	F2A1H2R2A162	CAP E 2.2UF-50V	
C017	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C018	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C021	F2A1HR22A162	CAP E .22UF-50V	
C022	F2A1HR22A162	CAP E .22UF-50V	
C033	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C051	EEUFC1E470B	CAP E 47UF-25V	
C052	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C301	F2A2E100A025	CAP E 10UF-250V	
C302	ECCR1H221JC5	CAP C 220PF-J-50V	
C304	ECKW2H103PU8	CAP C .01UF-P-500V	
C305	F2A1H470A162	CAP E 47UF-50V	
C306	F2A2E100A025	CAP E 10UF-250V	
C307	ECKR1H103ZF5	CAP C .01UF-Z-50V	

C312	ECKC3D102KBN	CAP C 1000PF-K-2KV	
C313	ECKR2H102KB5	CAP C 1000PF-K-500V	
C331	F2A1H470A162	CAP E 47UF-50V	
C332	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C333	F2A1H470A162	CAP E 47UF-50V	
C334	F2A2E470A026	CAP E 47UF-250V	
C335	ECCR1H221JC5	CAP C 220PF-J-50V	
C336	F2A1H470A162	CAP E 47UF-50V	
C337	F2A2E470A026	CAP E 47UF-250V	
C339	ECKW2H103PU8	CAP C .01UF-P-500V	
C340	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C341	F2A2E100A025	CAP E 10UF-250V	
C345	ECKC3D102KBN	CAP C 1000PF-K-2KV	
C346	ECKR2H102KB5	CAP C 1000PF-K-500V	
C361	F2A1C101A159	CAP E 100UF-16V	
C362	ECCR1H221JC5	CAP C 220PF-J-50V	
C364	ECKW2H103PU8	CAP C .01UF-P-500V	
C365	F2A2E100A025	CAP E 10UF-250V	
C366	F2A1H470A162	CAP E 47UF-50V	
C367	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C372	ECKC3D102KBN	CAP C 1000PF-K-2KV	
C373	ECKR2H102KB5	CAP C 1000PF-K-500V	
C374	F2A1C101A159	CAP E 100UF-16V	
C405	ECA1EHG102E	CAP E 1000UF-25V	
C406	ECA1EHG102E	CAP E 1000UF-25V	
C407	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C408	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C411	TCJ2VB1H822K	CAP C 8200PF-K-50V	
C412	ECQB1224KF3	CAP P .22UF-K-100V	
C413	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C414	TCJ2VB1H272K	CAP C 2700PF-K-50V	
C417	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C418	TCJ2VF1H223Z	CAP C .022UF-Z-50V	
C421	ECA1CEN100B	CAP E 10UF-16V	

C458	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C461	ECA1HHG221B	CAP E 220UF-50V	
C501	ECA1EM101B	CAP E 100UF-25V	
C502	ECQV1H105JL3	CAP P 1.0UF-J-50V	
C503	ECKR2H102KB5	CAP C 1000PF-K-500V	
C509	ECWF2474JSR	CAP P .47UF-J-200V	
C510	TCJ2VC1H221J	CAP C 220PF-J-50V	
C511	ECWH20222JVY	CAP P 2200PF-J-2KV	⚠
C512	ECWH20102JVY	CAP P 1000PF-J-2KV	⚠
C513	ECQF4103JZH	CAP P .01UF-J-400V	⚠
C514	ECWH20222JVY	CAP P 2200PF-J-2KV	⚠
C518	ECKW3D221JBP	CAP C 220PF-J-2KVDC	⚠
C519	ECKW3D221JBP	CAP C 220PF-J-2KVDC	⚠
C520	ECQB1H103JF3	CAP P .01UF-J-50V	⚠
C522	ECWH20182JVY	CAP P 1800PF-J-2KV	⚠
C523	ECWH20182JVY	CAP P 1800PF-J-2KV	⚠
C524	ECQB1224JF3	CAP P .22UF-J-100V	
C525	ECEA1HN220UB	CAP E 22UF/50V	
C526	F2A2E101A026	CAP E 100UF-250V	
C527	ECKR2H102KB5	CAP C 1000PF-K-500V	
C528	F2A1H470A162	CAP E 47UF-50V	⚠
C531	ECA160V33UE	CAP E 33UF/160V	
C533	ECKR2H101KB5	CAP C 100UF-K-500V	
C535	ECA1EM471E	CAP E 470UF-25V	
C601	EEUFC1C331B	CAP E 330UF-16V	
C602	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C701	F2A1C101A159	CAP E 100UF-16V	
C702	ECKR3D271KBP	CAP C 270PF-K-2KV	
C703	ECQM2104KZW	CAP P .1UF-K-200V	
C704	ECKR2H391KB5	CAP C 390PF-K-500V	
C707	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C708	ECQE1685KFB	CAP P 6.8UF-K-100V	
C801	ECQU2A104MNB	CAP P .10UF-M-250VAC	⚠
C802	ECQU2A823MNB	CAP P .082UF-M-250VAC	⚠

C803	ECKCNA222ME7	CAP C 2200PF-M-125V	⚠
C804	ECKCNA222ME7	CAP C 2200PF-M-125V	⚠
C805	ECKR2H472PU7	CAP C 4700PF-P-500V	⚠
C806	ECKR2H472PU7	CAP C 4700PF-P-500V	⚠
C807	ECKR2H472PU7	CAP C 4700PF-P-500V	⚠
C808	ECA1EM101B	CAP E 100UF-25V	
C809	TCJ2VB1E223K	CAP C .022UF-K-25V	
C810	EETED2D102C	CAP E 1000PF-200V	⚠
C812	ECA1EHG471B	CAP E 470UF-25V	
C814	ECKW3D102KBP	CAP C 1000PF-K-2KV	
C815	ECQB1H152JF3	CAP P 1500PF-J-50V	
C816	ECKW3D821KBP	CAP C 820PF-K-2KV	
C817	ECKW3D102KBP	CAP C 1000PF-K-2KV	
C819	ECQB1H102JF3	CAP P 1000PF-J-50V	
C820	ECQV1H334JL3	CAP P .33UF-J-50V	
C821	ECQB1H272KF3	CAP P 2700PF-K-50V	
C822	F2A1H220A162	CAP E 22UF-50V	
C823	TCJ2VC1H151J	CAP C 150PF-J-50V	
C824	EEUFC1V151B	CAP E 150UF-35V	
C825	ECKCNA102MBB	CAP C .001UF-M-125V	⚠
C826	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C830	EETHC2C471B	CAP E 470PF-160V	⚠
C831	ECKR3D821KBP	CAP C 820PF-K-2KV	
C832	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C834	EEUFC1V222E	CAP E 2200UF-35V	
C836	ECKR3A331KBP	CAP C 330PF-K-1KVDC	
C837	F2A1E472A135	CAP E 4700UF-25V	
C839	ECKR3A331KBP	CAP C 330PF-K-1KVDC	
C841	F2A1E472A135	CAP E 4700UF-25V	
C842	ECKR3A331KBP	CAP C 330PF-K-1KVDC	
C843	ECA1VM222B	CAP E 2200UF-35V	
C844	ECKR3A331KBP	CAP C 330PF-K-1KVDC	
C845	ECA1VM222B	CAP E 2200UF-35V	
C846	ECKR3A331KBP	CAP C 330PF-K-1KVDC	

C848	F2A1C101A159	CAP E 100UF-16V	
C849	ECKR1H223ZF5	CAP C .022UF-Z-50V	
C851	ECQV1H104JL3	CAP P .10UF-J-50V	
C852	ECA1EM101B	CAP E 100UF-25V	
C854	F2A1C101A159	CAP E 100UF-16V	
C855	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C876	ECJ3VF1H224Z	CAP C .22UF-Z-50V	
C877	ECA0JM221B	CAP E 220UF-6.3V	
C878	EEUFC1V561B	CAP E 560UF-35V	
C879	EEUFC1C471LB	CAP E 470UF-16V	
C880	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C881	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C882	ECA0JM221B	CAP E 220UF-6.3V	
C883	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C885	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C886	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C887	EEUFC1V561B	CAP E 560UF-35V	
C888	EEUFC1V561B	CAP E 560UF-35V	
C889	ECJ2YF1E474Z	CAP C .47UF-Z-25V	
C890	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C891	EEUFC1C471LB	CAP E 470UF-16V	
C892	F2A1C221A159	CAP E 220UF-16V	
C893	EEUFC1C471LB	CAP E 470UF-16V	
C895	ECJ3VF1H224Z	CAP C .22UF-Z-50V	
C896	ECJ3VF1H224Z	CAP C .22UF-Z-50V	
C897	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C902	ECQM2103KZ3	CAP P .01UF-K-200V	
C903	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C904	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C906	ECQM2103KZ3	CAP P .01UF-K-200V	
C907	F2A2C100A023	CAP E 10UF-160V	
C908	F2A1C101A159	CAP E 100UF-16V	
C909	F2A1C101A159	CAP E 100UF-16V	
C910	F2A2C100A023	CAP E 10UF-160V	

C912	F2A1H220A162	CAP E 22UF-50V	
C931	ECA1HM101B	CAP E 100UF-50V	
C932	TCJ2VB1H103K	CAP C .01UF-K-50V	
C933	F2A1C101A159	CAP E 100UF-16V	
C934	ECA1CM100B	CAP E 10UF-16V	
C935	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C936	TCJ2VB1H103K	CAP C .01UF-K-50V	
C939	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C940	ECQM2103KZ3	CAP P .01UF-K-200V	
C941	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C942	ECQM2103KZ3	CAP P .01UF-K-200V	
C943	F2A2C100A023	CAP E 10UF-160V	
C944	F2A1C101A159	CAP E 100UF-16V	
C945	F2A1C101A159	CAP E 100UF-16V	
C947	F2A2C100A023	CAP E 10UF-160V	
C962	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C963	ECQM2103KZ3	CAP P .01UF-K-200V	
C965	ECKR1H103ZF5	CAP C .01UF-Z-50V	
C966	ECQM2103KZ3	CAP P .01UF-K-200V	
C967	F2A2C100A023	CAP E 10UF-160V	
C968	F2A1C101A159	CAP E 100UF-16V	
C969	F2A1C101A159	CAP E 100UF-16V	
C970	F2A2C100A023	CAP E 10UF-160V	
C972	F2A1H220A162	CAP E 22UF-50V	
C1101	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C1102	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C1103	ECJ2VB1C104K	CAP C .1UF-K-16V	
C1105	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C1112	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C1113	ECEA1CKA101B	CAP E 100UF-16V	
C1502	ECQE6104KFB	CAP P 100UF-K-100V	
C1503	ECQE6104KFB	CAP P 100UF-K-100V	
C1504	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C1505	F2A1C101A159	CAP E 100UF-16V	

C1506	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C1508	F2A1C101A159	CAP E 100UF-16V	
C1509	ECEA1HKA010B	CAP E 1.0UF-50V PT-53TW53G	
C1509	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V PT-56TW53G	
C1510	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C1511	TCJ2VC1H471J	CAP C 470PF-J-50V	
C1513	ECEA1EN101UB	CAP E 100UF-25V	
C1514	F2A1C101A159	CAP E 100UF-16V	
C2202	F2A1H2R2A162	CAP E 2.2UF-50V	
C2203	F2A1H4R7A162	CAP E 4.7UF-50V	
C2204	ECSF1CE106VB	CAP E 10UF-16VE	
C2205	F2A1H1R0A162	CAP E 1.0UF-50V	
C2206	ECQB1H223JF3	CAP P .022UF-J-50V	
C2207	ECSF1CE335VB	CAP C 3.3UF-16V	
C2208	ECJ2VB1C104K	CAP C .1UF-K-16V	
C2209	ECJ2VB1C104K	CAP C .1UF-K-16V	
C2210	ECJ2VB1C104K	CAP C .1UF-K-16V	
C2211	F2A1H100A162	CAP E 10UF-50V	
C2212	ECQB1H473JF3	CAP P .047UF-J-50V	
C2213	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C2214	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C2215	F2A1C101A159	CAP E 100UF-16V	
C2218	F2A1HR47A162	CAP E .47UF-50V	
C2303	ECA1EM101B	CAP E 100UF-25V	
C2304	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C2305	EEUFC1E222E	CAP E 2200UF-25V	
C2306	EEUFC1E222E	CAP E 2200UF-25V	
C2307	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2308	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2310	ECQB1H224JF3	CAP P .22UF-J-50V	
C2313	ECQB1H224JF3	CAP P .22UF-J-50V	
C2314	TCJ3VB1H104K	CAP C .10UF-K-50V	
C2315	TCJ2VB1H471K	CAP C 470PF-K-50V	
C2317	TCJ2VB1H471K	CAP C 470PF-K-50V	

C2318	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C2319	TCJ2VB1H331K	CAP C 330PF-K-50V	
C2330	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C2331	F2A1H100A162	CAP E 10UF-50V	
C2332	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C2333	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C2334	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C2335	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C2337	ECA50YT2R2KB	CAP E 2.2UF-50V	
C2338	ECA50YT2R2KB	CAP E 2.2UF-50V	
C2341	TCJ2VB1H333K	CAP C .033UF-K-50V	
C2342	TCJ2VB1H333K	CAP C .033UF-K-50V	
C2343	ECEA1CN100UB	CAP E 10UF-16V	
C2344	ECQB1H224JF3	CAP P .22UF-J-50V	
C2345	EEUFC1E222E	CAP E 2200UF-25V	
C2346	TCJ2VB1H561K	CAP C 560PF-K-50V	
C2347	ECJ3VB1H104K	CAP C .1UF-K-50V	
C2348	F2A1H100A162	CAP E 10UF-50V	
C2349	ECEA1CN100UB	CAP E 10UF-16V	
C2350	TCJ2VB1H561K	CAP C 560PF-K-50V	
C2351	F1J1C225A083	CAP C 2.2UF-Z-16V	
C2352	EEUFC1E222E	CAP E 2200UF-25V	
C2354	TCJ2VB1H471K	CAP C 470PF-K-50V	
C2355	TCJ2VC1H270J	CAP C 27PF-J-50V	
C2356	TCJ2VB1H471K	CAP C 470PF-K-50V	
C2357	TCJ2VB1H331K	CAP C 330PF-K-50V	
C2358	ECJ3VB1H104K	CAP C .1UF-K-50V	
C2359	TCJ2VB1H331K	CAP C 330PF-K-50V	
C2360	ECJ3VB1H104K	CAP C .1UF-K-50V	
C2361	TCJ2VB1H471K	CAP C 470PF-K-50V	
C2362	TCJ2VB1H471K	CAP C 470PF-K-50V	
C2363	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C2364	ECJ3VB1H104K	CAP C .1UF-K-50V	
C2365	ECJ3VB1H104K	CAP C .1UF-K-50V	

C2366	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C2367	ECQB1H224JF3	CAP P .22UF-J-50V	
C2368	TCJ2VB1H333K	CAP C .033UF-K-50V	
C2369	TCJ2VB1H561K	CAP C 560PF-K-50V	
C2370	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2372	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C2373	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C2374	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2379	TCJ3VB1H104K	CAP C .10UF-K-50V	
C2380	TCJ2VB1H331K	CAP C 330PF-K-50V	
C2381	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C2382	TCJ2VB1H471K	CAP C 470PF-K-50V	
C2383	TCJ2VB1H471K	CAP C 470PF-K-50V	
C2384	TCJ2VC1H270J	CAP C 27PF-J-50V	
C2385	TCJ2VB1H561K	CAP C 560PF-K-50V	
C2386	TCJ2VB1H333K	CAP C .033UF-K-50V	
C2387	TCJ3VB1H104K	CAP C .10UF-K-50V	
C2388	F1J1C225A083	CAP C 2.2UF-Z-16V	
C2389	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2390	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2391	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2392	ECJ2VF1C474Z	CAP C .47UF-Z-16V	
C2393	ECJ2VB1H103K	CAP C .01UF-K-50V	
C2394	ECJ2VB1H103K	CAP C .01UF-K-50V	
C2451	ECEA1HN4R7UB	CAP E 4.7UF-50V	
C2452	ECEA1HN4R7UB	CAP E 4.7UF-50V	
C2453	TCJ2VB1H332K	CAP C .0033UF-K-50V	
C2454	TCJ2VB1H332K	CAP C .0033UF-K-50V	
C2455	TCJ2VB1H333K	CAP C .033UF-K-50V	
C2456	TCJ2VB1H333K	CAP C .033UF-K-50V	
C2457	TCJ2VB1H222K	CAP C 2200PF-K-50V PT-56TW53G	
C2457	TCJ2VB1H472K	CAP C 4700PF-K-50V PT-53TW53G	
C2458	TCJ2VB1H222K	CAP C 2200PF-K-50V PT-56TW53G	
C2458	TCJ2VB1H472K	CAP C 4700PF-K-50V PT-53TW53G	

C2459	ECJ2VB1C104K	CAP C .1UF-K-16V PT-53TW53G	
C2459	ECJ2VB1C224K	CAP C .22UF-K-16V PT-56TW53G	
C2460	ECJ2VB1C104K	CAP C .1UF-K-16V PT-53TW53G	
C2460	ECJ2VB1C224K	CAP C .22UF-K-16V PT-56TW53G	
C2461	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C2462	ECJ2VB1C104K	CAP C .1UF-K-16V	
C2463	ECJ2VB1C104K	CAP C .1UF-K-16V	
C2464	F2A1H4R7A162	CAP E 4.7UF-50V	
C2465	F2A1H4R7A162	CAP E 4.7UF-50V	
C2466	F2A1H4R7A162	CAP E 4.7UF-50V	
C2467	F2A1H4R7A162	CAP E 4.7UF-50V	
C2468	F2A1H4R7A162	CAP E 4.7UF-50V	
C2474	F2A1C101A159	CAP E 100UF-16V	
C2475	TCJ2VB1H103K	CAP C .01UF-K-50V	
C2507	F2A1C101A159	CAP E 100UF-16V	
C2513	ECJ2VB1C104K	CAP C .1UF-K-16V	
C2518	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3001	F2A1C101A159	CAP E 100UF-16V	
C3002	ECA1CM470B	CAP E 47UF/16V	
C3009	ECEA1CKA101B	CAP E 100UF-16V	
C3011	ECEA1CN100UB	CAP E 10UF-16V	
C3012	ECEA1CN100UB	CAP E 10UF-16V	
C3013	ECEA1CN100UB	CAP E 10UF-16V	
C3014	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3015	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3016	ECEA1CN100UB	CAP E 10UF-16V	
C3017	ECEA1CN100UB	CAP E 10UF-16V	
C3018	ECEA1CN100UB	CAP E 10UF-16V	
C3019	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3020	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3021	F2A1C471A159	CAP E 470UF-16V	
C3022	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C3023	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C3028	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	

C3030	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3031	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3032	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3033	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C3034	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3035	ECA0JM102B	CAP E 1000UF-6.3V	
C3036	F2A1C101A159	CAP E 100UF-16V	
C3037	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3038	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3039	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3040	ECJ2VF1C104Z	CAP C .1UF-Z-16V	
C3043	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3044	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3045	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3046	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3047	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3048	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3049	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3050	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3051	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3052	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3053	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3054	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3055	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3056	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3057	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3058	TCJ2VB1H103K	CAP C .01UF-K-50V	
C3059	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3060	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3062	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3064	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3065	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3067	ECEA1CKA101B	CAP E 100UF-16V	
C3068	ECEA1CKA101B	CAP E 100UF-16V	

C3069	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3071	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3072	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C3081	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3082	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3083	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3084	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3085	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3086	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3087	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3088	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3089	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3090	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3091	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3092	TCJ2VB1H152K	CAP C 1500PF-K-50V	
C3093	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3094	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3095	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3097	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3098	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3099	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3100	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3101	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3102	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3103	ECJ2VF1C105Z	CAP C 1.0UF-Z-16V	
C3105	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C3106	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C3109	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C3110	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C3111	TCJ2VB1H102K	CAP C 1000PF-K-50V	
C3112	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C3113	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C3114	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C3119	ECEA1CKA100B	CAP E 10UF-16V	

C4335	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C7001	ECJ3YF1E225Z	CAP C 22MF-Z-25V	
C7002	ECJ3YF1E225Z	CAP C 22MF-Z-25V	
C7004	ECA1EHG221B	CAP E 220UF-25V	
C7006	ECA1EHG221B	CAP E 220UF-25V	
C7015	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C7016	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C7017	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C7018	TCJ2VF1H103Z	CAP C .01UF-Z-50V	
C7032	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C7033	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C7034	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C7035	ECJ2VF1H104Z	CAP C .1UF-Z-50V	
C7060	ECA1CHG101B	CAP E 100UF-16V	
C7061	ECA1CHG101B	CAP E 100UF-16V	
C7150	F2A1V470A127	CAP E 47UF-35V	
C7165	F2A1V470A127	CAP E 47UF-35V	
DIODES			
D002	MAZ31500ML	DIODE ZENER	
D003	MAZ31500ML	DIODE ZENER	
D004	MAZ31500ML	DIODE ZENER	
D005	MAZ31500ML	DIODE ZENER	
D081	LN21RCPHL	DIODE LED	
D082	MAZ40560MF	DIODE ZENER	
D083	MAZ40560MF	DIODE ZENER	
D301	MA2C16700E	DIODE	
D302	MAZ41000LF	DIODE ZENER	
D303	TVSRM1V1	DIODE	
D304	MA2C165001VT	DIODE	
D306	MA2C165001VT	DIODE	
D307	MA2C165001VT	DIODE	
D312	MA2C18800E	DIODE	
D313	MA2C18800E	DIODE	
D314	MA2C18800E	DIODE	

D315	MA2C18800E	DIODE	
D331	MA2C165001VT	DIODE	
D334	MA2C165001VT	DIODE	
D335	MA2C165001VT	DIODE	
D339	MA2C18800E	DIODE	
D340	MA2C18800E	DIODE	
D341	MA2C18800E	DIODE	
D342	MA2C18800E	DIODE	
D361	MA2C165001VT	DIODE	
D363	MA2C165001VT	DIODE	
D364	MA2C165001VT	DIODE	
D369	MA2C18800E	DIODE	
D370	MA2C18800E	DIODE	
D371	MA2C18800E	DIODE	
D372	MA2C18800E	DIODE	
D407	MA3X152K0L	DIODE	
D409	MA3X152K0L	DIODE	
D410	MA3X152K0L	DIODE	
D411	MA3X152K0L	DIODE	
D451	B0EAKC000003	DIODE RECTIFIER	
D452	B0EAKC000003	DIODE RECTIFIER	
D453	B0EAKC000003	DIODE RECTIFIER	
D454	B0EAKC000003	DIODE RECTIFIER	
D455	B0EAKC000003	DIODE RECTIFIER	
D456	B0EAKC000003	DIODE RECTIFIER	
D458	B0EAKL000008	DIODE RECTIFIER	
D465	MAZ40390MF	DIODE ZENER	
D466	MA3X152K0L	DIODE	
D501	D1NL40V70	DIODE	
D502	MAZ31500ML	DIODE ZENER	
D503	B0HBRV000001	DIODE	
D504	MAZ42700MF	DIODE ZENER	
D509	MA2C165001VT	DIODE	
D510	MAZ40680LF	DIODE ZENER	

D511	B0HAHP000014	DIODE	
D512	D1NL40V70	DIODE	⚠
D513	MA2C165001VT	DIODE	
D515	D1NL40V70	DIODE	
D516	EU2YXV0	DIODE	
D519	AU02ZV0	DIODE	
D520	MA3X152K0L	DIODE	
D634	MA2C165001VT	DIODE	
D650	MAZ41100MF	DIODE ZENER	
D651	MAZ41100MF	DIODE ZENER	
D656	MAZ41100MF	DIODE ZENER	
D657	MAZ41100MF	DIODE ZENER	
D659	MAZ41100MF	DIODE ZENER	
D660	MAZ41100MF	DIODE ZENER	
D662	MAZ41100MF	DIODE ZENER	
D663	MAZ41100MF	DIODE ZENER	
D702	D1NL40V70	DIODE	
D801	D3SB80-4101	DIODE	⚠
D802	D4EAB3610002	DIODE	⚠
D815	MA2C165001VT	DIODE	
D816	MA2C70000F	DIODE	
D817	AU01ZV0	DIODE	
D818	MAZ32700LL	DIODE ZENER	
D819	B0BA01000046	DIODE ZENER	⚠
D822	B0AAGM000006	DIODE SWITCHING	
D825	SF5L60U-4000	DIODE	⚠
D827	SF5LC30-4115	DIODE	
D828	SF5LC30-4115	DIODE	
D829	SF5LC30-4115	DIODE	
D830	RL4ZLF-J6	DIODE	
D831	RL4ZLF-J6	DIODE	
D835	B0JAME000052	DIODE	
D837	MA3X152K0L	DIODE	
D870	B0JCME000025	DIODE	

D871	B0JCME000025	DIODE	
D876	B0JCME000025	DIODE	
D885	MA2062-BTP	DIODE	
D886	MA2120-ATP	DIODE	
D887	MA2062-BTP	DIODE	
D895	MA2C165001VT	DIODE	
D902	MA2C18800E	DIODE	
D933	MA2C18800E	DIODE	
D953	B0ZAZ0000047	DIODE	
D962	MA2C18800E	DIODE	
D973	B0ZAZ0000047	DIODE	
D983	B0ZAZ0000047	DIODE	
D1002	MA3X152K0L	DIODE	
D1502	B0HACW000001	DIODE	
D1503	MAZ30300LL	DIODE ZENER	⚠
D1504	B0HACW000001	DIODE	
D1505	MA2C0290BF	DIODE	
D1506	MAZ30510HL	DIODE	⚠
D1507	MAZ30300LL	DIODE ZENER	
D1510	MAZ30330LL	DIODE ZENER	
D1599	MA3X152K0L	DIODE	
D2320	MA3X152K0L	DIODE	
D2321	MA3X152K0L	DIODE	
D2323	MA3X152K0L	DIODE	
D2324	MA3X152K0L	DIODE	
D3001	MAZ31100ML	DIODE ZENER	
D3002	MAZ31100ML	DIODE ZENER	
D3003	MAZ31100ML	DIODE ZENER	
D3004	MAZ31100ML	DIODE ZENER	
D3005	MAZ31100ML	DIODE ZENER	
D3006	MAZ31100ML	DIODE ZENER	
D3007	MAZ31100ML	DIODE ZENER	
D3008	MAZ31100ML	DIODE ZENER	
D3009	MAZ31100ML	DIODE ZENER	

D3010	MAZ31100ML	DIODE ZENER	
D3011	MAZ31100ML	DIODE ZENER	
D3012	MAZ31100ML	DIODE ZENER	
D3013	MAZ31100ML	DIODE ZENER	
D3014	MAZ31100ML	DIODE ZENER	
D3015	MAZ31100ML	DIODE ZENER	
D3016	MAZ31100ML	DIODE ZENER	
D3017	MAZ31100ML	DIODE ZENER	
D3018	MAZ31100ML	DIODE ZENER	
D3019	MAZ31100ML	DIODE ZENER	
D3020	MAZ31100ML	DIODE ZENER	
D3021	MAZ31100ML	DIODE ZENER	
D3022	MAZ31100ML	DIODE ZENER	
D3023	MAZ31100ML	DIODE ZENER	
D3024	MAZ31100ML	DIODE ZENER	
D3025	MAZ31100ML	DIODE ZENER	
D3026	MAZ31100ML	DIODE ZENER	
D3027	MAZ31100ML	DIODE ZENER	
D3028	MAZ31100ML	DIODE ZENER	
D3029	MAZ31100ML	DIODE ZENER	
D3030	MAZ31100ML	DIODE ZENER	
D3031	MAZ31100ML	DIODE ZENER	
D3032	MAZ31100ML	DIODE ZENER	
D3033	MA3X152K0L	DIODE	
D3034	MA3X152K0L	DIODE	
D3035	MA3X152K0L	DIODE	
D7060	MA3X152K0L	DIODE	
FUSES			
F801	K5D632AD0002	FUSE 6.3A/125V	⚠
INTEGRATED CIRCUITS			
IC451	C1AA00000521	INT. CKT.	
IC701	AN6914S-E1	INT CKT	
IC801	AN8029	INT CKT	⚠
IC802	C0EAS0000025	INT. CKT.	⚠

IC804	B0EBKM000016	DIODE RECTIFIER	
IC805	AN78M12LB	INT CKT	
IC811	0N3171RLF	OPTO COUPLER	⚠
IC871	SI-8050J	INT CKT	
IC872	SI-8090J	INT CKT	
IC873	C0DAAZG00006	INT CKT	
IC880	AN78N12-LB	INT CKT	
IC1101	TVR2AJ159S	MPU EEPROM PT-53TW53G, PT-56TW53G	
IC1112	TVR2AJ158S	CONVERGENCE EEPROM PT-53TW53G, PT-56TW53G	
IC1501	AN6562S-E1	INT CKT	
IC2201	AN5849S-E1V	INT CKT	
IC2302	C1AA00000645	INT CKT	
IC2303	C1AA00000645	INT CKT	
IC2304	BA15218F-E2	INT CKT	
IC2451	C1BB00000772	INT CKT	
IC3001	C1AB00000460	INT CKT	
IC3002	AN15852A-VT	INT CKT	
IC7001	C5AA00000108	INT. CKT. (VIDEO)	
IC7002	C5AA00000108	INT. CKT. (VIDEO)	
COILS			
J106	EXCELSA35T	FERRITE BEAD	
J141	EXCELSA35T	FERRITE BEAD	
J210	EXCELSA35T	FERRITE BEAD	
J211	EXCELSA35T	FERRITE BEAD	
L001	ELESN330JA	COIL PEAKING 33UH PT-53TW53G	
L002	ELESN330JA	COIL PEAKING 33UH PT-53TW53G	
L003	ELELN100KA	COIL	
L004	ELELN100KA	COIL	
L006	ELESN100JA	COIL PEAKING 10UH	
L007	ELESN100JA	COIL PEAKING 10UH	
L301	ELEBD101KA	COIL PEAKING 100UH	
L302	ELESN100JA	COIL PEAKING 10UH	
L303	ELESN6R8JA	COIL PEAKING 6.8UH	
L304	ELESN4R7JA	COIL PEAKING 4.7UH	

L304	EXCELSA39V	FERRITE BEAD	
L305	EXCELSA39E	FERRITE BEAD	
L307	EXCELSA39V	FERRITE BEAD	
L323	EXCELSA39V	FERRITE BEAD	
L325	EXCELSA39E	FERRITE BEAD	
L331	ELESN100JA	COIL PEAKING 10UH	
L332	ELESN6R8JA	COIL PEAKING 6.8UH	
L333	G0C560KA0021	COIL PEAKING 56UH	
L334	ELESN4R7KA	COIL PEAKING 4.7UH	
L335	ELEBD101KA	COIL PEAKING 100UH	
L337	G0C560KA0021	COIL PEAKING 56UH	
L348	EXCELSA39V	FERRITE BEAD	
L361	ELEBD101KA	COIL PEAKING 100UH	
L362	ELESN100JA	COIL PEAKING 10UH	
L363	ELESN150JA	COIL PEAKING 15UH	
L364	ELESN4R7JA	COIL PEAKING 4.7UH	
L500	TALL08TR82MA	COIL	
L501	EXCELSA35T	FERRITE BEAD	
L510	EXCELDR25V	FERRITE BEAD	
L511	EXCELDR25V	FERRITE BEAD	
L515	EXCELDR25V	FERRITE BEAD	
L516	EXCELDR25V	FERRITE BEAD	
L555	ELH5L718	COIL	
L701	ELESN100KA	COIL PEAKING 10UH	
L702	EXCELSA35T	FERRITE BEAD	
L703	ELC18B152L	FILTER	
L704	ELC18B151G	FILTER	
L801	ELF18D650M	CHOKE AC LINE	⚠
L802	ELF21N035A	LINE FILTER	⚠
L805	EXCELDR25V	FERRITE BEAD	
L806	EXCELDR25V	FERRITE BEAD	
L808	EXCELDR35V	FERRITE BEAD	
L810	EXCELDR25V	FERRITE BEAD	
L811	EXCELDR25V	FERRITE BEAD	

L815	EXCELSA39E	FERRITE BEAD	
L816	EXCELSA39E	FERRITE BEAD	
L817	TALL08T680KA	COIL	
L819	EXCELDR35V	FERRITE BEAD	
L820	EXCELDR35V	FERRITE BEAD	
L821	EXCELDR35V	FERRITE BEAD	
L825	TALL08T330KA	COIL	
L826	TALL08T330KA	COIL	
L827	TALL08T330KA	COIL	
L876	G0ZZ00001909 I	INT CKT	
L879	G0ZZ00001909	INT CKT	
L880	G0ZZ00001909	INT CKT	
L885	ELELN470JA	COIL 47UH	
L886	EXCELDR35V	FERRITE BEAD	
L887	EXCELDR35V	FERRITE BEAD	
L888	TALL08T680KA	COIL	
L889	ELEKN101KA	COIL PEAKING 100UH	
L890	ELEKN101KA	COIL PEAKING 100UH	
L892	EXCELDR35V	FERRITE BEAD	
L893	EXCELDR35V	FERRITE BEAD	
L894	EXCELDR35V	FERRITE BEAD	
L895	TALL08T220KA	TRANSFORMER LINE FILTER	
L901	EXCELSA35T	FERRITE BEAD	
L902	EXCELSA35T	FERRITE BEAD	
L903	EXCELSA35T	FERRITE BEAD	
L931	ELESN100JA	COIL PEAKING 10UH	
L933	EXCELSA35T	FERRITE BEAD	
L934	EXCELSA35T	FERRITE BEAD	
L935	EXCELSA35T	FERRITE BEAD	
L961	EXCELSA35T	FERRITE BEAD	
L962	EXCELSA35T	FERRITE BEAD	
L963	EXCELSA35T	FERRITE BEAD	
L1101	ELESN100JA	COIL PEAKING 10UH	
L2201	ELESN100JA	COIL PEAKING 10UH	

L2331	ELC12E390	COIL	
L2332	ELC12E390	COIL	
L2333	ELC12E390	COIL	
L2334	EXCELDR35V	FERRITE BEAD	
L2335	EXCELDR35V	FERRITE BEAD	
L2338	ELC12E390	COIL	
L2339	EXCELDR35V	FERRITE BEAD	
L2340	EXCELDR35V	FERRITE BEAD	
L2341	TALL08T330KA	COIL	
L2342	TALL08T330KA	COIL	
L2502	ELESN100JA	COIL PEAKING 10UH	
L3003	ELESN102JA	COIL PEAKING 1000UH	
L3006	ELESN102JA	COIL PEAKING 1000UH	
L3008	ELESN560JA	COIL PEAKING 56UH	
L3009	ELESN100JA	COIL PEAKING 10UH	
L3010	ELESN560JA	COIL PEAKING 56UH	
L3011	ELESN100JA	COIL PEAKING 10UH	
L3012	ELJPA2R2MF	CHIP INDUCTOR 2.2UH	
L3013	ELJPA100KF	CHIP INDUCTOR 10UH	
L7001	EXCELSA39E	FERRITE BEAD	
L7002	EXCELSA39E	FERRITE BEAD	
L7003	EXCELSA39E	FERRITE BEAD	
L7004	EXCELSA39E	FERRITE BEAD	
L7005	EXCELSA39E	FERRITE BEAD	
L7006	EXCELSA39E	FERRITE BEAD	
TRANSISTORS			
Q031	2SD601ARTX	TRANSISTOR	
Q301	2SC1473A	TRANSISTOR	
Q302	2SC3526H	TRANSISTOR	
Q303	2SC1473A	TRANSISTOR	
Q331	2SC3526H	TRANSISTOR	
Q353	2SC3942LB	TRANSISTOR	
Q354	B1BAAN000025	TRANSISTOR	
Q355	B1BCAN000004	TRANSISTOR	

Q361	2SC3311ATA	TRANSISTOR	
Q362	2SC3311ATA	TRANSISTOR	
Q363	2SC3526H	TRANSISTOR	
Q364	2SA1309ATA	TRANSISTOR	
Q365	2SC3311ATA	TRANSISTOR	
Q366	2SC3311ATA	TRANSISTOR	
Q368	2SA1309ATA	TRANSISTOR	
Q373	2SC3942LB	TRANSISTOR	
Q374	B1BAAN000025	TRANSISTOR	
Q375	B1BCAN000004	TRANSISTOR	
Q393	2SC3942LB	TRANSISTOR	
Q394	B1BAAN000025	TRANSISTOR	
Q395	B1BCAN000004	TRANSISTOR	
Q406	2SD601ARTX	TRANSISTOR	
Q501	B1CEML000001	TRANSISTOR	
Q502	2SK2847LBMAT	TRANSISTOR	
Q503	2SD601ARTX	TRANSISTOR	
Q509	2SC1473QR	TRANSISTOR	
Q510	2SC1473QR	TRANSISTOR	
Q512	2SD601ARTX	TRANSISTOR	
Q513	2SD601ARTX	TRANSISTOR	
Q551	B1BAJW000001	TRANSISTOR	
Q606	2SD601ARTX	TRANSISTOR	
Q701	2SK2538000LB	TRANSISTOR	
Q801	2SK2917LB	TRANSISTOR	
Q802	2SD601ARTX	TRANSISTOR	
Q803	2SB709ARTX	TRANSISTOR	
Q854	2SA19610QAHW	TRANSISTOR	
Q901	2SB1321ARA	TRANSISTOR	
Q903	2SA720TA	TRANSISTOR	
Q904	2SD1992ARA	TRANSISTOR	
Q905	2SC1318ATA	TRANSISTOR	
Q906	2SC1318ATA	TRANSISTOR	
Q907	2SA720TA	TRANSISTOR	

Q931	2SD601ARTX	TRANSISTOR	
Q932	2SD601ARTX	TRANSISTOR	
Q933	2SD601ARTX	TRANSISTOR	
Q934	2SA720TA	TRANSISTOR	
Q935	2SC1318ATA	TRANSISTOR	
Q936	2SC1318ATA	TRANSISTOR	
Q937	2SA720TA	TRANSISTOR	
Q938	2SB1321ARA	TRANSISTOR	
Q941	2SD1992ARA	TRANSISTOR	
Q944	2SD601ARTX	TRANSISTOR	
Q945	2SB709ARTX	TRANSISTOR	
Q951	2SC3311ATA	TRANSISTOR	
Q952	2SC3311ATA	TRANSISTOR	
Q953	2SC3311ATA	TRANSISTOR	
Q955	2SA1248SRA	TRANSISTOR	
Q956	2SC3116SRA	TRANSISTOR	
Q957	2SA1248SRA	TRANSISTOR	
Q958	2SC3116SRA	TRANSISTOR	
Q959	2SA1248SRA	TRANSISTOR	
Q960	2SC3116SRA	TRANSISTOR	
Q961	2SB1321ARA	TRANSISTOR	
Q964	2SD1992ARA	TRANSISTOR	
Q965	2SA720TA	TRANSISTOR	
Q966	2SC1318ATA	TRANSISTOR	
Q967	2SC1318ATA	TRANSISTOR	
Q968	2SA720TA	TRANSISTOR	
Q1503	2SA1309ATA	TRANSISTOR	
Q1504	B1BAAV000003	TRANSISTOR	
Q1505	2SC3311ATA	TRANSISTOR	
Q2301	2SB709ARTX	TRANSISTOR	
Q2302	2SB709ARTX	TRANSISTOR	
Q2304	2SD601ARTX	TRANSISTOR	
Q2306	UN2215TX	TRANSISTOR	
Q2307	2SB709ARTX	TRANSISTOR	

Q2313	2SD601ARTX	TRANSISTOR	
Q2314	2SD601ARTX	TRANSISTOR	
Q2451	2SD601ARTX	TRANSISTOR	
Q2452	2SD601ARTX	TRANSISTOR	
Q2501	2SD601ARTX	TRANSISTOR	
Q2502	2SD601ARTX	TRANSISTOR	
Q2503	2SD601ARTX	TRANSISTOR	
Q2504	2SB709ARTX	TRANSISTOR	
Q2505	2SB709ARTX	TRANSISTOR	
Q2506	2SB709ARTX	TRANSISTOR	
Q2507	2SB709ARTX	TRANSISTOR	
Q2508	2SB709ARTX	TRANSISTOR	
Q2509	2SB709ARTX	TRANSISTOR	
Q2510	2SB709ARTX	TRANSISTOR	
Q3002	2SD601ARTX	TRANSISTOR	
Q3003	2SD601ARTX	TRANSISTOR	
Q3005	2SD601ARTX	TRANSISTOR	
Q3006	2SD601ARTX	TRANSISTOR	
Q3007	2SD601ARTX	TRANSISTOR	
Q3008	2SD601ARTX	TRANSISTOR	
Q3011	2SB709ARTX	TRANSISTOR	
Q3012	2SD601ARTX	TRANSISTOR	
Q3013	2SD601ARTX	TRANSISTOR	
Q3014	2SD601ARTX	TRANSISTOR	
Q3015	2SD601ARTX	TRANSISTOR	
Q7006	2SD601ARTX	TRANSISTOR	
Q7007	2SD601ARTX	TRANSISTOR	
Q7060	2SB709ARTX	TRANSISTOR	
Q7061	2SD601ARTX	TRANSISTOR	
RELAYS			
RL801	K6B1ADA00010	RELAY	⚠
RL802	K6B1ADA00010	RELAY	⚠
RESISTORS			
JS063	ERDS2TJ124T	RES C 120K-J-1/4W	

R001	ERJ6GEYJ221V	RES M 220-J-1/10W	
R002	ERJ6GEYJ221V	RES M 220-J-1/10W	
R013	ERG1SJ273P	RES M 27K-J-1W	
R015	ERG1SJ273P	RES M 27K-J-1W	
R016	ERJ6GEYJ221V	RES M 220-J-1/10W	
R017	ERJ6GEYJ221V	RES M 220-J-1/10W	
R026	ERJ6GEYJ101V	RES M 100-J-1/10W	
R031	ERJ6GEYJ223V	RES M 22K-J-1/10W	
R032	ERJ6GEYJ473V	RES M 47K-J-1/10W	
R033	ERJ6GEYJ220V	RES M 22-J-1/10W	
R072	ERDS2TJ101T	RES C 100-J-1/4W	
R073	ERDS2TJ471T	RES C 470-J-1/4W	
R080	ERDS2TJ222T	RES C 2.2K-J-1/4W	
R081	ERDS2TJ222T	RES C 2.2K-J-1/4W	
R082	ERDS2TJ332T	RES C 3.3K-J-1/4W	
R083	ERDS2TJ512T	RES C 5.1K-J-1/4W	
R084	ERDS2TJ912T	RES C 9.1K-J-1/4W	
R086	ERDS2TJ681T	RES C 680-J-1/4W	
R087	ERDS2TJ331T	RES C 330-J-1/4W	
R088	ERDS2TJ123T	RES C 12K-J-1/4W	
R301	ERDS1FJ394P	RES C 390K-J-1/2W	
R302	ERDS2TJ151T	RES C 150-J-1/4W	
R303	ER0S2THF2200	RES M 22-F-1/4W	
R304	ERDS2TJ334T	RES C 330K-J-1/4W	
R305	ER0S2THF2200	RES M 22-F-1/4W	
R306	ER0S2THF4700	RES M 47-F-1/4W	
R307	ERDS2TJ220T	RES C 22-J-1/4W	
R308	ERDS2TJ334T	RES C 330K-J-1/4W	
R310	ERDS2TJ183T	RES C 18K-J-1/4W	
R311	ERDS2TJ470T	RES C 47-J-1/4W	
R312	ERG7ZJ272	RES M 2.7K-J-7W	
R315	ERDS2TJ563T	RES C 56K-J-1/4W	
R316	ERDS2TJ821T	RES C 820-J-1/4W	
R319	ERG12SJ101P	RES M 100-J-1W	

R320	ERDS1FJ330P	RES C 33-J-1/2W	
R321	ERDS1FJ330P	RES C 33-J-1/2W	
R322	ERG12SJ101P	RES M 100-J-1W	
R325	ERDS2TJ473T	RES C 47K-J-1/4W	
R327	ERC12GK331D	RES C 330-K-1/2W	
R328	ERDS1TJ104T	RES C 100K-J-1/2W	
R331	ER0S2THF2200	RES M 22-F-1/4W	
R332	ERDS2TJ151T	RES C 150-J-1/4W	
R333	ER0S2THF2200	RES M 22-F-1/4W	
R334	ERDS2TJ220T	RES C 22-J-1/4W	
R335	ER0S2THF4700	RES M 47-F-1/4W	
R345	ERDS2TJ470T	RES C 47-J-1/4W	
R347	ERG7ZJ272	RES M 2.7K-J-7W	
R348	ERDS2TJ563T	RES C 56K-J-1/4W	
R349	ERDS2TJ821T	RES C 820-J-1/4W	
R350	ERG12SJ101P	RES M 100-J-1W	
R351	ERDS1FJ330P	RES C 33-J-1/2W	
R352	ERDS1FJ330P	RES C 33-J-1/2W	
R353	ERG12SJ101P	RES M 100-J-1W	
R354	ERDS2TJ473T	RES C 47K-J-1/4W	
R356	ERC12GK331D	RES C 330-K-1/2W	
R357	ERDS1TJ104T	RES C 100K-J-1/2W	
R361	ER0S2THF1302	RES M 13K-F-1/4W	
R362	ER0S2THF1002	RES M 10K-F-1/4W	
R363	ERDS2TJ220T	RES C 22-J-1/4W	
R364	ERDS2TJ102T	RES C 1K-J-1/4W	
R365	ERDS2TJ221T	RES C 220-J-1/4W	
R366	ERDS2TJ151T	RES C 150-J-1/4W	
R367	ER0S2THF2200	RES M 22-F-1/4W	
R368	ER0S2THF2200	RES M 22-F-1/4W	
R369	ERDS2TJ472T	RES C 4.7K-J-1/4	
R371	ER0S2THF4700	RES M 47-F-1/4W	
R372	ER0S2THF82R0	RES M 82.0-F-1/4W	
R375	ERDS2TJ470T	RES C 47-J-1/4W	

R376	ERG7ZJ272	RES M 2.7K-J-7W	
R379	ERDS2TJ563T	RES C 56K-J-1/4W	
R380	ERDS2TJ821T	RES C 820-J-1/4W	
R383	ERG12SJ101P	RES M 100-J-1W	
R384	ERDS1FJ330P	RES C 33-J-1/2W	
R385	ERDS1FJ330P	RES C 33-J-1/2W	
R386	ERG12SJ101P	RES M 100-J-1W	
R389	ERDS2TJ473T	RES C 47K-J-1/4W	
R390	ERC12GK331D	RES C 330-K-1/2W	
R391	ERDS1TJ104T	RES C 100K-J-1/2W	
R392	ER0S2THF8201	RES M 8.2K-F-1/4W	
R393	ER0S2THF8201	RES M 8.2K-F-1/4W	
R394	ERDS2TJ102T	RES C 1K-J-1/4W	
R395	ERDS2TJ221T	RES C 220-J-1/4W	
R396	ERDS2TJ472T	RES C 4.7K-J-1/4	
R397	ER0S2THF1201	RES M 1.2K-F-1/4W	
R398	ER0S2THF3300	RES M 323-F-1/4W	
R408	ERJ6GEYJ272V	RES M 2.7K-J-1/10W	
R409	ERDS2TJ563T	RES C 56K-J-1/4W	
R410	ERJ6GEYJ224V	RES M 220K-J-1/10W	
R411	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R412	ERJ6GEYJ682V	RES M 6.8K-J-1/10W	
R415	ERG3FJ331H	RES M 330-J-3W	
R421	ERJ6ENF2702V	RES M 27K-F-1/10W	
R422	ERJ6ENF1000V	RES M 100-F-1/10W	
R423	ERJ6ENF5601V	RES M 5.6K-F-1/10W	
R425	ERDS1FJ1R0T	RES C 1.0-J-1/2W	
R426	ERJ6ENF1502V	RES M 15K-F-1/10W	
R428	ERJ6ENF1002V	RES M 10K-F-1/10W	
R434	ERX12SJ1R8V	RES M 1.8-J-1/2W	
R435	ERX12SJ1R8V	RES M 1.8-J-1/2W	
R464	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R470	ERDS2TJ331T	RES C 330-J-1/4W	
R471	ERDS2TJ331T	RES C 330-J-1/4W	

R472	ERDS2TJ331T	RES C 330-J-1/4W	
R501	ERJ6GEYJ104V	RES M 100K-J-1/10W	
R502	ERJ6GEYJ680V	RES M 68-J-1/10W	
R503	ERG2FJ180H	RES M 18-J-2W	
R504	ERG3FJ271H	RES M 270-J-3W	
R505	ERG1SJ120P	RES M 12-J-1W	
R506	ERX1SJR47P	RES M .47-J-1W	
R512	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R513	ERDS2TJ471T	RES C 470-J-1/4W	
R514	ER0S2THF3322	RES M 33.2-F-1/4W	
R515	ER0S2THF4702	RES M 47K-F-1/4W	
R516	ERJ6GEYJ101V	RES M 100-J-1/10W	
R517	ERDS2TJ103T	RES C 10K-J-1/4W	
R518	ERX12SJR22V	RES M .22-J-1/2	
R519	ERQ12HKR22P	RES F .22-K-1/2W	
R520	ERQ12HJ330P	RES F 33-J-1/2W	⚠
R521	ER0S2THF2612	RES M 26.1K-F-1/4W	⚠
R522	ER0S2THF7151	RES M 7.15K-F-1/4W	⚠
R523	ERDS2TJ275T	RES C 2.7MEG-J-1/4W	
R525	ERJ6GEYJ272V	RES M 2.7K-J-1/10W	
R534	ER0S2THF1203	RES M 12K-F-1/4W	
R535	ERDS2TJ222T	RES C 2.2K-J-1/4W	
R536	ERDS2TJ101T	RES C 100-J-1/4W	
R537	ERJ6GEYJ272V	RES M 2.7K-J-1/10W	
R538	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R539	ERDS2TJ393T	RES C 39K-J-1/4W	
R541	ERDS2TJ563T	RES C 56K-J-1/4W	
R550	ER0S2THF1002	RES M 10K-F-1/4W	
R560	ERJ6GEYJ101V	RES M 100-J-1/10W	
R561	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R562	ERJ6GEYJ104V	RES M 100K-J-1/10W	
R621	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R622	ERJ6GEYJ152V	RES M 1.5K-J-1/10W	
R624	ERJ6GEYJ101V	RES M 100-J-1/10W	

R643	ERJ6GEYJ101V	RES M 100-J-1/10W	
R653	ERDS2TJ101T	RES C 100-J-1/4W	
R654	ERDS2TJ184T	RES C 180K-J-1/4W	
R655	ERDS2TJ184T	RES C 180K-J-1/4W	
R704	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R706	ERDS1FJ680T	RES C 68-J-1/2W	
R708	ERF5AK4R7H	RES W 4.7-K-5W	
R800	ERU5TCK1R5T	RES F 1.5-K-5W	⚠
R805	ERDS2TJ101T	RES C 100-J-1/4W	
R808	ERX12SZJR12P	RES M .12-J-1/2W	
R809	ERJ6GEYJ225V	RES M 2.2M-J-1/10W	
R810	ERX12SZJR12P	RES M .12-J-1/2W	
R811	ERX12SZJR12P	RES M .12-J-1/2W	
R812	ERDS2TJ103T	RES C 10K-J-1/4W	
R813	ERDS1FJ561T	RES C 560-J-1/2	
R814	ERDS2TJ4R7T	RES C 4.7-J-1/4W	
R815	ERJ6GEYJ301V	RES M 300-J-1/10W	
R816	ERDS2TJ471T	RES C 470-J-1/4W	
R817	ERJ6ENF2001V	RES M 2K-F-1/10W	
R818	ERDS1FJ100T	RES C 10-J-1/2W	
R820	ERDS1FJ470T	RES C 47-J-1/2W	
R822	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R832	ERD75TAJ825	RES C 8.2MEG-J-3/4W	⚠
R833	ERJ6GEYJ101V	RES M 100-J-1/10W	
R835	ERDS2TJ101T	RES C 100-J-1/4W	
R836	ERJ6GEYJ101V	RES M 100-J-1/10W	
R839	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R840	ERJ6GEYJ101V	RES M 100-J-1/10W	
R846	ERDS2TJ223T	RES C 22K-J-1/4W	
R847	ERDS2TJ272T	RES C 2.7K-J-1/4W	
R857	ERX1SJ1R0P	RES M 1.0-J-1W	
R858	ERX1SJ1R0P	RES M 1.0-J-1W	
R859	ERDS2TJ103T	RES C 10K-J-1/4W	
R860	ERDS1FJ222T	RES C 2200-J-1/2W	

R862	ERG3FJ333H	RES M 33K-J-3W	
R865	ERJ6GEYJ153V	RES M 15K-J-1/10W	
R866	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R867	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R880	TSF39402	FUSE 4.0A/125V	
R881	TSF39402	FUSE 4.0A/125V	
R888	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R889	ERJ6ENF1581V	RES M 158-F-1/10W	
R895	ERDS2TJ560T	RES C 56-J-1/4W	
R901	ERDS2FJ122T	RES C 1.2K-J-1/2W	
R902	ERDS2TJ103T	RES C 10K-J-1/4W	
R903	ERDS2TJ683T	RES C 68K-J-1/4W	
R904	ERDS2TJ683T	RES C 68K-J-1/4W	
R905	ERDS2TJ103T	RES C 10K-J-1/4W	
R906	ERDS2TJ122T	RES C 1.2K-J-1/4W	
R907	ERDS1FVJ390T	RES C 39-J-1/2W	
R908	ERDS1FVJ390T	RES C 39-J-1/2W	
R909	ERDS1FVJ8R2T	RES C 8.2-J-1/2W	
R910	ERDS2TJ8R2T	RES C 8.2-J-1/4W	
R911	ERG3SJS221H	RES M 220-J-3W	
R912	ERDS2TJ681T	RES C 680-J-1/4W	
R913	ERDS1FVJ152T	RES C 1.5K-J-1/2W	
R914	ERDS1FVJ152T	RES C 1.5K-J-1/2W	
R915	ERQ14AJ220P	RES F 22-J-1/4W	
R916	ERQ14AJ220P	RES F 22-J-1/4W	
R917	ERQ14AJ100P	RES F 10-J-1/4W	
R925	ERDS2TJ151T	RES C 150-J-1/4W	
R926	ERDS2TJ151T	RES C 150-J-1/4W	
R928	ERQ14AJ220P	RES F 22-J-1/4W	
R929	ERDS2TJ101T	RES C 100-J-1/4W	
R931	ERJ6GEYJ101V	RES M 100-J-1/10W	
R932	ERJ6GEYJ393V	RES M 39K-J-1/10W	
R933	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R934	ERJ6GEYJ153V	RES M 15K-J-1/10W	

R935	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R936	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R937	ERJ6GEYJ151V	RES M 150-J-1/10W	
R938	ERJ6GEYJ121V	RES M 120-J-1/10W	
R939	ERJ6GEYJ470V	RES M 47-J-1/10W	
R942	ERDS1FVJ152T	RES C 1.5K-J-1/2W	
R943	ERDS1FVJ152T	RES C 1.5K-J-1/2W	
R944	ERDS2TJ471T	RES C 470-J-1/4W	
R945	ERDS2TJ471T	RES C 470-J-1/4W	
R946	ERQ14AJ100P	RES F 10-J-1/4W	
R947	ERQ14AJ220P	RES F 22-J-1/4W	
R948	ERDS2FJ122T	RES C 1.2K-J-1/2W	
R949	ERDS2TJ103T	RES C 10K-J-1/4W	
R950	ERDS2TJ683T	RES C 68K-J-1/4W	
R951	ERDS2TJ683T	RES C 68K-J-1/4W	
R952	ERDS2TJ103T	RES C 10K-J-1/4W	
R953	ERDS2TJ122T	RES C 1.2K-J-1/4W	
R954	ERDS1FVJ390T	RES C 39-J-1/2W	
R955	ERDS1FVJ390T	RES C 39-J-1/2W	
R956	ERDS1FVJ8R2T	RES C 8.2-J-1/2W	
R957	ERDS2TJ8R2T	RES C 8.2-J-1/4W	
R958	ERG3SJS221H	RES M 220-J-3W	
R959	ERDS2TJ471T	RES C 470-J-1/4W	
R961	ERDS2FJ122T	RES C 1.2K-J-1/2W	
R962	ERDS2TJ103T	RES C 10K-J-1/4W	
R963	ERDS2TJ683T	RES C 68K-J-1/4W	
R964	ERDS2TJ683T	RES C 68K-J-1/4W	
R965	ERDS2TJ103T	RES C 10K-J-1/4W	
R966	ERDS2TJ122T	RES C 1.2K-J-1/4W	
R967	ERDS1FVJ390T	RES C 39-J-1/2W	
R968	ERDS1FVJ390T	RES C 39-J-1/2W	
R969	ERDS1FVJ8R2T	RES C 8.2-J-1/2W	
R970	ERDS2TJ8R2T	RES C 8.2-J-1/4W	
R971	ERG3SJS221H	RES M 220-J-3W	

R972	ERDS2TJ101T	RES C 100-J-1/4W	
R973	ERDS1FVJ152T	RES C 1.5K-J-1/2W	
R974	ERDS1FVJ152T	RES C 1.5K-J-1/2W	
R975	ERQ14AJ100P	RES F 10-J-1/4W	
R976	ERQ14AJ220P	RES F 22-J-1/4W	
R978	ERQ14AJ220P	RES F 22-J-1/4W	
R981	ERJ6GEYJ182V	RES M 1.8K-J-1/10W	
R983	ERJ6GEYJ470V	RES M 47-J-1/10W	
R984	ERJ6GEYJ330V	RES M 33-J-1/10W	
R985	ERJ6GEYJ330V	RES M 33-J-1/10W	
R1103	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1106	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1107	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1108	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1109	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1110	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1112	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1113	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1114	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1502	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R1503	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R1504	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R1505	ERDS2TJ102T	RES C 1K-J-1/4W	
R1506	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R1507	ERG3SJD152L	RES M 1.5K-J-3W	
R1508	ERJ6GEYJ152V	RES M 1.5K-J-1/10W	
R1509	ERDS2TJ102T	RES C 1K-J-1/4W	
R1510	ERG2SJD333L	RES M 33K-J-2W	
R1511	ERG2SJD333L	RES M 33K-J-2W	
R1512	ERJ6ENF2201V	RES M 2.2K-F-1/10W	
R1514	ERG2SJD333L	RES M 33K-J-2W	
R1515	ERJ6ENF1001V	RES M 1K-F-1/10W	
R1516	ERJ6GEYJ101V	RES M 100-J-1/10W	
R1517	ERJ6ENF3571V	RES M 3.57K-F-1/10W	

R1518	ERG2SJD333L	RES M 33K-J-2W	
R1519	ERDS2TJ101T	RES C 100-J-1/4W	
R1520	ERDS2TJ221T	RES C 220-J-1/4W	
R1521	ER0S2THF1500	RES M 150-F-1/4W	
R1522	ERC12GK103D	RES C 10K-K-1/2W	
R1523	ERDS2TJ104T	RES C 100K-J-1/4W	
R1524	ER0S2THF1401	RES M 140-F-1/4W	
R1527	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R1528	ERDS2TJ332T	RES C 3.3K-J-1/4W	
R1529	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R1532	ERJ6ENF2201V	RES M 2.2K-F-1/10W	
R1542	ERG2SJD333L	RES M 33K-J-2W	
R1544	ERJ6GEYJ471V	RES M 470-J-1/10W	
R1546	ERJ6GEYJ221V	RES M 220-J-1/10W	
R1599	ERJ6ENF9761V	RES M 9760-F-1/10W	
R2203	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R2206	ERDS2TJ102T	RES C 1K-J-1/4W	
R2207	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2221	ERJ6GEYJ101V	RES M 100-J-1/10W	
R2301	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2302	ERJ6GEYJ392V	RES M 3.9K-J-1/10W	
R2303	ERJ6GEYJ271V	RES M 270-J-1/10W	
R2304	ERJ6GEYJ473V	RES M 47K-J-1/10W	
R2305	ERJ6GEYJ223V	RES M 22K-J-1/10W	
R2307	ERJ6GEYJ223V	RES M 22K-J-1/10W	
R2308	ERJ6GEYJ183V	RES M 18K-J-1/10W	
R2309	ERJ6GEYJ683V	RES M 68K-J-1/10W	
R2310	ERJ6GEYJ223V	RES M 22K-J-1/10W	
R2311	ERJ6ENF1303V	RES M 130K-F-1/10W	
R2312	ERJ6GEYJ223V	RES M 22K-J-1/10W	
R2313	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2314	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2315	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	
R2316	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	

R2317	ERJ6GEYJ683V	RES M 68K-J-1/10W	
R2318	ERJ6ENF4701V	RES M 4.7K-F-1/10W PT-53TW53G	
R2318	ERJ6ENF5601V	RES M 5.6K-F-1/10W PT-56TW53G	
R2320	ERJ12YJ101U	RES M 100-J-1/2W	
R2321	ERJ6ENF5232V	RES M 5.32K-F-1/10W PT-53TW53G	
R2321	ERJ6ENF5362V	RES M 53.6K-F-1/10W PT-56TW53G	
R2322	ERJ6ENF1202V	RES M 12K-F-1/10	
R2324	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2325	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2326	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2327	ERJ6GEYJ473V	RES M 47K-J-1/10W	
R2328	ERJ6GEYJ273V	RES M 27K-J-1/10W	
R2329	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R2330	ERJ6ENF4701V	RES M 4.7K-F-1/10W PT-53TW53G	
R2330	ERJ6ENF5601V	RES M 5.6K-F-1/10W PT-56TW53G	
R2331	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2332	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2333	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R2334	ERJ6ENF1001V	RES M 1K-F-1/10W	
R2335	ERJ6ENF1001V	RES M 1K-F-1/10W	
R2336	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2337	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2338	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R2339	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2340	ERJ6ENF1201V	RES M 1.2K-F-1/10W	
R2341	ERJ6ENF1201V	RES M 1.2K-F-1/10W	
R2342	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2344	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R2345	ERJ6GEYJ273V	RES M 27K-J-1/10W	
R2346	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R2348	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2349	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2350	ERJ6ENF1202V	RES M 12K-F-1/10	
R2351	ERJ6GEYJ473V	RES M 47K-J-1/10W	

R2352	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R2353	ERJ6ENF4701V	RES M 4.7K-F-1/10W PT-53TW53G	
R2353	ERJ6ENF5601V	RES M 5.6K-F-1/10W PT-56TW53G	
R2354	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R2355	ERJ6GEYJ683V	RES M 68K-J-1/10W	
R2356	ERJ6GEYJ223V	RES M 22K-J-1/10W	
R2357	ERJ6ENF1303V	RES M 130K-F-1/10W	
R2358	ERJ6GEYJ223V	RES M 22K-J-1/10W	
R2359	ERJ6GEYJ683V	RES M 68K-J-1/10W	
R2360	ERJ6ENF4701V	RES M 4.7K-F-1/10W PT-53TW53G	
R2360	ERJ6ENF5601V	RES M 5.6K-F-1/10W PT-56TW53G	
R2362	ERJ12YJ101U	RES M 100-J-1/2W	
R2363	ERJ6ENF5232V	RES M 5.32K-F-1/10W PT-53TW53G	
R2363	ERJ6ENF5362V	RES M 53.6K-F-1/10W PT-56TW53G	
R2364	ERJ6ENF1202V	RES M 12K-F-1/10	
R2366	ERJ6ENF1202V	RES M 12K-F-1/10	
R2367	ERJ12YJ101U	RES M 100-J-1/2W	
R2368	ERJ6ENF5232V	RES M 5.32K-F-1/10W PT-53TW53G	
R2368	ERJ6ENF5362V	RES M 53.6K-F-1/10W PT-56TW53G	
R2369	ERJ12YJ101U	RES M 100-J-1/2W	
R2370	ERJ6ENF5232V	RES M 5.32K-F-1/10W PT-53TW53G	
R2370	ERJ6ENF5362V	RES M 53.6K-F-1/10W PT-56TW53G	
R2371	ERJ6ENF1201V	RES M 1.2K-F-1/10W	
R2372	ERJ6ENF1201V	RES M 1.2K-F-1/10W	
R2451	ERJ6GEYJ681V	RES M 680-J-1/10W	
R2452	ERJ6GEYJ681V	RES M 680-J-1/10W	
R2456	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2457	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R2460	ERJ6GEYJ101V	RES M 100-J-1/10W	
R2461	ERJ6GEYJ101V	RES M 100-J-1/10W	
R2501	ERJ6ENF1200V	RES M 120-F-1/10W	
R2502	ERJ6ENF2200V	RES M 220-F-1/10W	
R2503	ERJ6ENF2200V	RES M 220-F-1/10W	
R2504	ERJ6GEYJ101V	RES M 100-J-1/10W	

R2505	ERJ6ENF15R0V	RES M 15.0-F-1/10W	
R2506	ERJ6ENF15R0V	RES M 15.0-F-1/10W	
R2507	ERJ6GEYJ101V	RES M 100-J-1/10W	
R2508	ERJ6ENF2200V	RES M 220-F-1/10W	
R2509	ERJ6ENF1200V	RES M 120-F-1/10W	
R2510	ERJ6ENF2200V	RES M 220-F-1/10W	
R2511	ERJ6ENF1200V	RES M 120-F-1/10W	
R2512	ERJ6ENF2200V	RES M 220-F-1/10W	
R2513	ERJ6ENF15R0V	RES M 15.0-F-1/10W	
R2514	ERJ6ENF2200V	RES M 220-F-1/10W	
R2515	ERJ6GEYJ101V	RES M 100-J-1/10W	
R2519	ERJ6GEYJ560V	RES M 56-J-1/10W	
R2520	ERJ6GEYJ560V	RES M 56-J-1/10W	
R2537	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	
R2538	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	
R2539	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	
R2541	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	
R2542	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	
R2543	ERJ6GEYJ122V	RES M 1.2K-J-1/10W	
R2568	ERJ6ENF6801V	RES M 6.8K-F-1/10W	
R2569	ERJ6ENF8201V	RES M 8.2K-F-1/10W	
R2570	ERJ6GEYJ560V	RES M 56-J-1/10W	
R2573	ERJ6GEYJ201V	RES M 200-J-1/10W	
R2580	ERJ6GEYJ201V	RES M 200-J-1/10W	
R2587	ERJ6GEYJ201V	RES M 200-J-1/10W	
R3001	ERDS2TJ331T	RES C 330-J-1/4W	
R3002	ERDS2TJ331T	RES C 330-J-1/4W	
R3003	ERJ6GEYJ471V	RES M 470-J-1/10W	
R3004	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3005	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3006	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3007	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3008	ERJ6GEYJ750V	RES M 75-J-1/10W	
R3009	ERDS2TJ221T	RES C 220-J-1/4W	

R3010	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3011	ERDS2TJ221T	RES C 220-J-1/4W	
R3012	ERJ6GEYJ562V	RES M 5.6K-J-1/10W	
R3013	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3014	ERJ6GEYJ562V	RES M 5.6K-J-1/10W	
R3015	ERDS2TJ221T	RES C 220-J-1/4W	
R3016	ERDS2TJ562T	RES C 5.6K-J-1/4W	
R3017	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3018	ERJ6GEYJ562V	RES M 5.6K-J-1/10W	
R3019	ERJ6GEYJ562V	RES M 5.6K-J-1/10W	
R3020	ERDS2TJ221T	RES C 220-J-1/4W	
R3021	ERDS2TJ562T	RES C 5.6K-J-1/4W	
R3022	ERDS2TJ221T	RES C 220-J-1/4W	
R3023	ERDS2TJ562T	RES C 5.6K-J-1/4W	
R3024	ERDS2TJ562T	RES C 5.6K-J-1/4W	
R3025	ERJ6GEYJ562V	RES M 5.6K-J-1/10W	
R3026	ERDS2TJ221T	RES C 220-J-1/4W	
R3027	ERJ6GEYJ562V	RES M 5.6K-J-1/10W	
R3028	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3029	ERDS2TJ221T	RES C 220-J-1/4W	
R3030	ERDS2TJ221T	RES C 220-J-1/4W	
R3031	ERJ6GEYJ561V	RES M 560-J-1/10W	
R3032	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3033	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3034	ERJ6ENF3600V	RES M 360-F-1/10W	
R3035	ERJ6ENF3300V	RES M 330-F-1/10W	
R3036	ERJ6ENF3300V	RES M 330-F-1/10W	
R3037	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3038	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3039	ERJ6GEYJ750V	RES M 75-J-1/10W	
R3040	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R3041	ERDS2TJ221T	RES C 220-J-1/4W	
R3042	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3043	ERJ6GEYJ184V	RES M 180K-J-1/10W	

R3044	ERDS2TJ221T	RES C 220-J-1/4W	
R3045	ERJ6ENF3600V	RES M 360-F-1/10W	
R3046	ERDS2TJ221T	RES C 220-J-1/4W	
R3047	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3048	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3049	ERJ6GEYJ561V	RES M 560-J-1/10W	
R3050	ERJ6ENF3300V	RES M 330-F-1/10W	
R3051	ERJ6ENF3600V	RES M 360-F-1/10W	
R3052	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3053	ERJ6GEYJ184V	RES M 180K-J-1/10W	
R3054	ERJ6GEYJ560V	RES M 56-J-1/10W	
R3055	ERJ6GEYJ220V	RES M 22-J-1/10W	
R3056	ERJ6GEYJ561V	RES M 560-J-1/10W	
R3057	ERJ6GEYJ750V	RES M 75-J-1/10W	
R3058	ERJ6GEYJ560V	RES M 56-J-1/10W	
R3059	ERJ6GEYJ560V	RES M 56-J-1/10W	
R3060	ERJ6GEYJ560V	RES M 56-J-1/10W	
R3061	ERJ6GEYJ560V	RES M 56-J-1/10W	
R3062	ERJ6GEYJ560V	RES M 56-J-1/10W	
R3063	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3064	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3065	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3069	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3070	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3071	ERJ6GEYJ561V	RES M 560-J-1/10W	
R3072	ERJ6GEYJ561V	RES M 560-J-1/10W	
R3073	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3075	ERJ6GEYJ561V	RES M 560-J-1/10W	
R3078	ERJ6ENF3300V	RES M 330-F-1/10W	
R3079	ERJ6ENF3600V	RES M 360-F-1/10W	
R3081	ERJ6GEYJ331V	RES M 330-J-1/10W	
R3082	ERJ6GEYJ331V	RES M 330-J-1/10W	
R3083	ERJ6GEYJ331V	RES M 330-J-1/10W	
R3084	ERJ6GEYJ331V	RES M 330-J-1/10W	

R3085	ERJ6GEYJ220V	RES M 22-J-1/10W	
R3087	ERJ6GEYJ220V	RES M 22-J-1/10W	
R3088	ERJ6GEYJ220V	RES M 22-J-1/10W	
R3092	ERJ6GEYJ220V	RES M 22-J-1/10W	
R3094	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3095	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3096	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3099	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3100	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3101	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3102	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3103	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3104	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3105	ERJ6GEYJ271V	RES M 270-J-1/10W	
R3107	ERJ6GEYJ221V	RES M 220-J-1/10W	
R3108	ERDS2TJ221T	RES C 220-J-1/4W	
R3109	ERDS2TJ221T	RES C 220-J-1/4W	
R3110	ERDS2TJ102T	RES C 1K-J-1/4W	
R3111	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3112	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3116	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3120	ERJ6GEYJ271V	RES M 270-J-1/10W	
R3123	ERJ6GEYJ271V	RES M 270-J-1/10W	
R3127	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3128	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R3132	ERJ6GEYJ271V	RES M 270-J-1/10W	
R3135	ERJ6GEYJ271V	RES M 270-J-1/10W	
R3157	ERJ6GEYJ271V	RES M 270-J-1/10W	
R7001	ERG2FJ820H	RES M 82-J-2W	
R7002	ERG2FJ121H	RES M 120-J-2W	
R7003	ERG2FJ820H	RES M 82-J-2W	
R7004	ERG2FJ121H	RES M 120-J-2W	
R7005	ERG2FJ820H	RES M 82-J-2W	
R7006	ERG2FJ121H	RES M 120-J-2W	

R7011	ERX2FJ2R2H	RES M 2.2-J-2W	
R7012	ERX2FJ2R2H	RES M 2.2-J-2W	
R7013	ERX2FJ2R2H	RES M 2.2-J-2W	
R7014	ERX2FJ2R2H	RES M 2.2-J-2W	
R7015	ERX2FJ2R2H	RES M 2.2-J-2W	
R7016	ERX2FJ2R2H	RES M 2.2-J-2W	
R7023	ERJ6GEYJ273V	RES M 27K-J-1/10W	
R7024	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R7026	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R7027	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R7029	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R7030	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R7031	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R7032	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R7034	ERJ6GEYJ273V	RES M 27K-J-1/10W	
R7035	ERJ6GEYJ472V	RES M 4.7K-J-1/10W	
R7036	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
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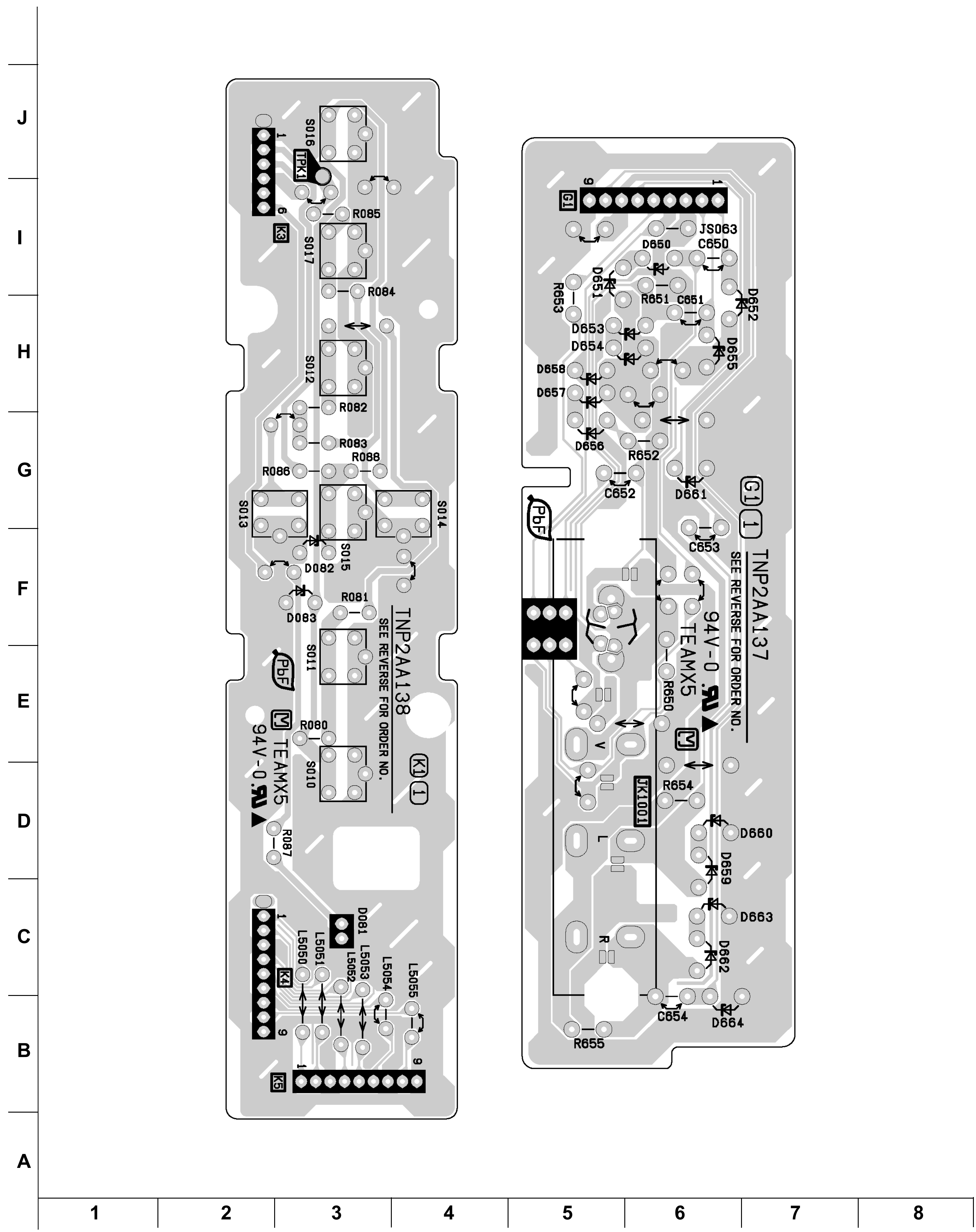
R7038	ERJ6GEYJ222V	RES M 2.2K-J-1/10W	
R7040	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7041	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7045	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7046	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7047	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7048	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7052	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R7055	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R7058	ERJ6GEYJ332V	RES M 3.3K-J-1/10W	
R7059	ERJ6GEYJ104V	RES M 100K-J-1/10W	
R7060	ERX1SJR27P	RES M .27-J-1W	
R7061	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R7062	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7063	ERJ6GEYJ103V	RES M 10K-J-1/10W	
R7064	ERJ6GEYJ103V	RES M 10K-J-1/10W	

R7065	ERJ6GEYJ102V	RES M 1K-J-1/10W	
R7066	ERX1SJR27P	RES M .27-J-1W	
SWITCHES			
S010	EVQPBD05R	SWITCH	
S011	EVQPBD05R	SWITCH	
S012	EVQPBD05R	SWITCH	
S013	EVQPBD05R	SWITCH	
S014	EVQPBD05R	SWITCH	
S015	EVQPBD05R	SWITCH	
S016	EVQPBD05R	SWITCH	
S017	EVQPBD05R	SWITCH	
TRANSFORMERS			
TPA005	ERD25V0T	RESISTOR PT-56TW53G	
TPA006	ERD25V0T	RESISTOR PT-56TW53G	
T501	ETH19K204AZ	TRANSFORMER	
T551	KFT7AA334F	TRANSFORMER FLYBACK	⚠
T801	ETS42AD495AD	TRANSFORMER	⚠
T802	ETP30KB941JG	TRANSFORMER	⚠
OTHERS			
TNR001	ENG36619G	MAIN TUNER	⚠
TNR002	ENG36620G	SUB TUNER	
M001	TSX2AA0381	LINE CORD	⚠
1	TXFCRT31GSER	BLUE CRT PT-53TW53G	
	TXFCRT32GSER	GREEN CRT PT-53TW53G	
	TXFCRT33GSER	RED CRT PT-53TW53G	
	TXFCRT34GSER	BLUE CRT PT-56TW53G	
	TXFCRT35GSER	GREEN CRT PT-56TW53G	
	TXFCRT36GSER	RED CRT PT-56TW53G	
M002	K3B10CA00006	CRT SOCKET	⚠
2	KDY2ASF83F	YOKE DEFLECTION	⚠
M003	TXF3A01ECV	DAG GROUND	
3	TKG2AF029	A/B LENS	
4	TKG2AA50121	MIRROR PT-53TW53G	
	TKG2AA50131	MIRROR PT-56TW53G	

5	TMW2AX0041B	MIRROR BRACKET SIDE	
6	TMW2AX0161	MIRROR BRACKET TOP	
7	TKG2AH50641	LENTICULAR AND PROTECTIVE SCREEN PT-53TW53G	
	TKG2AH50651	LENTICULAR AND PROTECTIVE SCREEN PT-56TW53G	
8	TKG2AH50661	FRESNELSCREEN PT-56TW53G	
	TKG2AH50631	FRESNEL SCREEN PT-53TW53G	
9	TKZ2AM50041C	SCREEN BRACKET PT-56TW53G	
	TKZ2A06011	SCREEN BRACKET PT-56TW53G	
	TMW2AX0171	SCREEN BRACKET PT-53TW53G	
	TMW2AX0181	CORNER BRACKET PT-53TW53G	
10	TKU2AC3101S	BACK CABINET PT-53TW53G	
	TKU2AC3601S	BACK CABINET PT-56TW53G	
11	TKB2AA0231S	WOOD CABINET PT-53TW53G	
	TKB2AA0241S	WOOD CABINET PT-56TW53G	
12	TKY2AA3902S	FRONT CABINET PT-53TW53G	
	TKY2AA4402S	FRONT CABINET PT-56TW53G	
13	TKD2AX3131	FRONT BOARD	
14	TXFKP12GSER	FRONT PLASTIC COVER PT-53TW53G	
	TXFKP14GSER	FRONT PLASTIC COVER PT-56TW53G	
15	TKU2AA03501	BACK TOP COVER PT-53TW53G	
	TKU2AA03701	BACK TOP COVER PT-56TW53G	
16	TKU2AA03601	BACK BOTTOM COVER PT-53TW53G	
	TKU2AA03801	BACK BOTTOM COVER PT-56TW53G	
M004	TBL2AH30071	CASTER	
17	TKD2AX3121S	INNER BARRIER BOARD PT-53TW53G	
18	EASG16P559A2	SPEAKER (WOOFER)	
19	EASG8P533A2	SPEAKER (MEDIUM)	
20	EASG5PH508A2	SPEAKER (TWEETER	
21	TKP2AA0792	SPEAKER GRILLE PT-53TW53G	
	TKP2AA0872	SPEAKER GRILLE PT-56TW53G	
22	TBX2AA2701	BUTTON 7-KEY	
23	TKP2AA0801	LED PANEL	
24	ENPE2A001	SPLITTER 2RF (U-LIM)	

25	TXFKP07GSER	REAR A/V BRACKET	
26	KFT7CP336F	DISTRIBUTOR	
M005	TXFJIG01SER	EEPROM COPY JIG	
JK1001	TJB2AA0481	TERMINAL A/V FRONT	
JK3001	TJB2AA0311	TERMINAL REAR A/V	
JK5001	DV2R024NKB	EDI CONNECTOR	
JK5002	TJB2AA0411	TERMINAL VIDEO	
27	TXFKP11GSER	FRONT A/V ASSEMBLY	
28	TKP2AA0812S	FRONT A/V DOOR	
29	D9ZZ00000079	FOCUS BLOCK	
M008	TXJJIG01SER	CONNECTOR 9 PINS PT-56TW53G	
M009	TXJJIG02SER	CONNECTOR 12 PINS PT-56TW53G	
M010	TMM2AE10171	GROMMET SQUARE	
ACCESORIES			
M011	TQB2AA0470-1	MANUAL OWNERS	
M012	EUR7603Z90	REMOTE CONTROL	
M013	UR76EC0303D	REMOTE CONTROL BATTERY COVER	

TOP PREVIOUS


J
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S016
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S015
D082
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R081
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TNP2AA138
SEE REVERSE FOR ORDER NO.
K1
TEAMX5
94V-0
R080
S010
R087
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K4
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JS063
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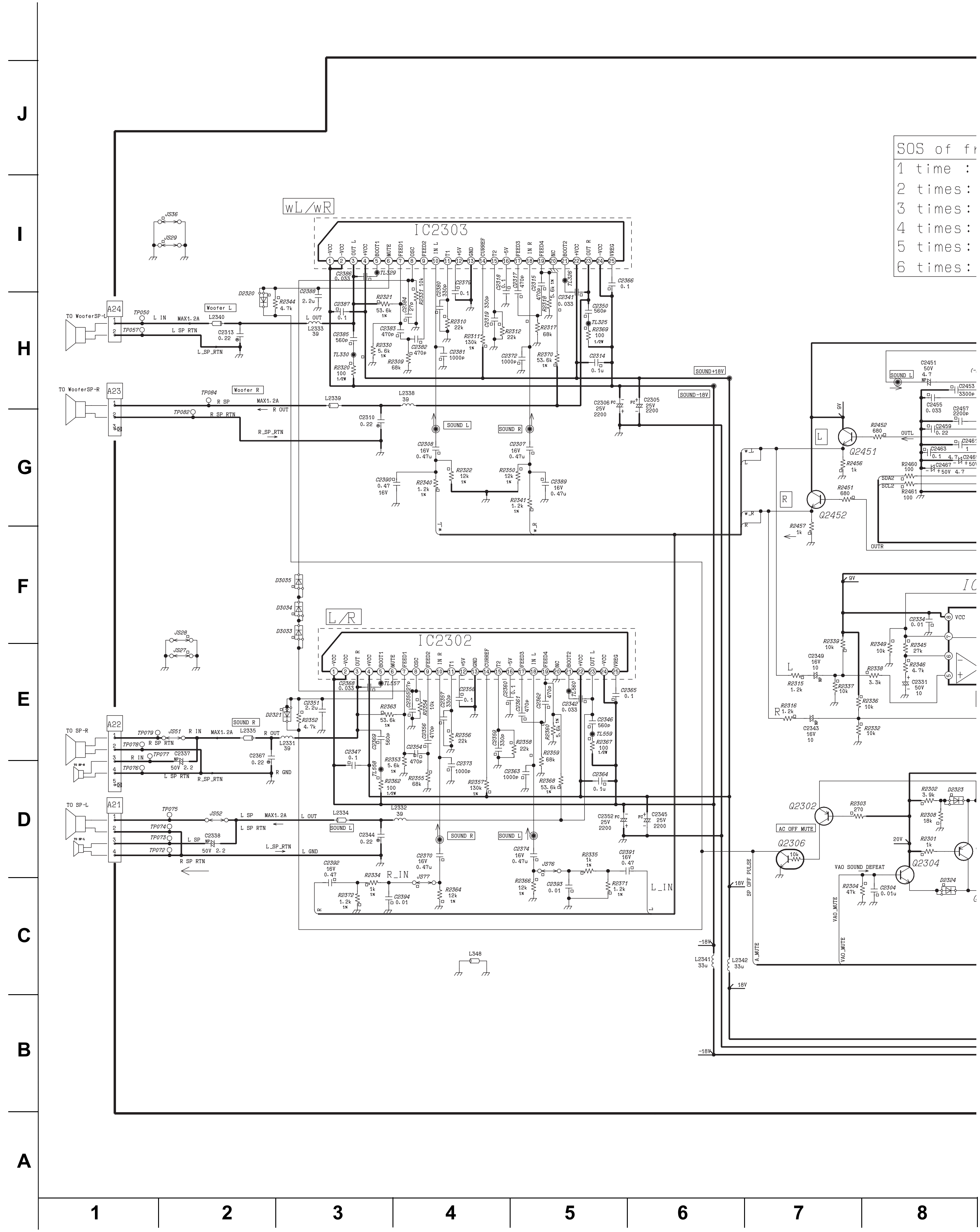
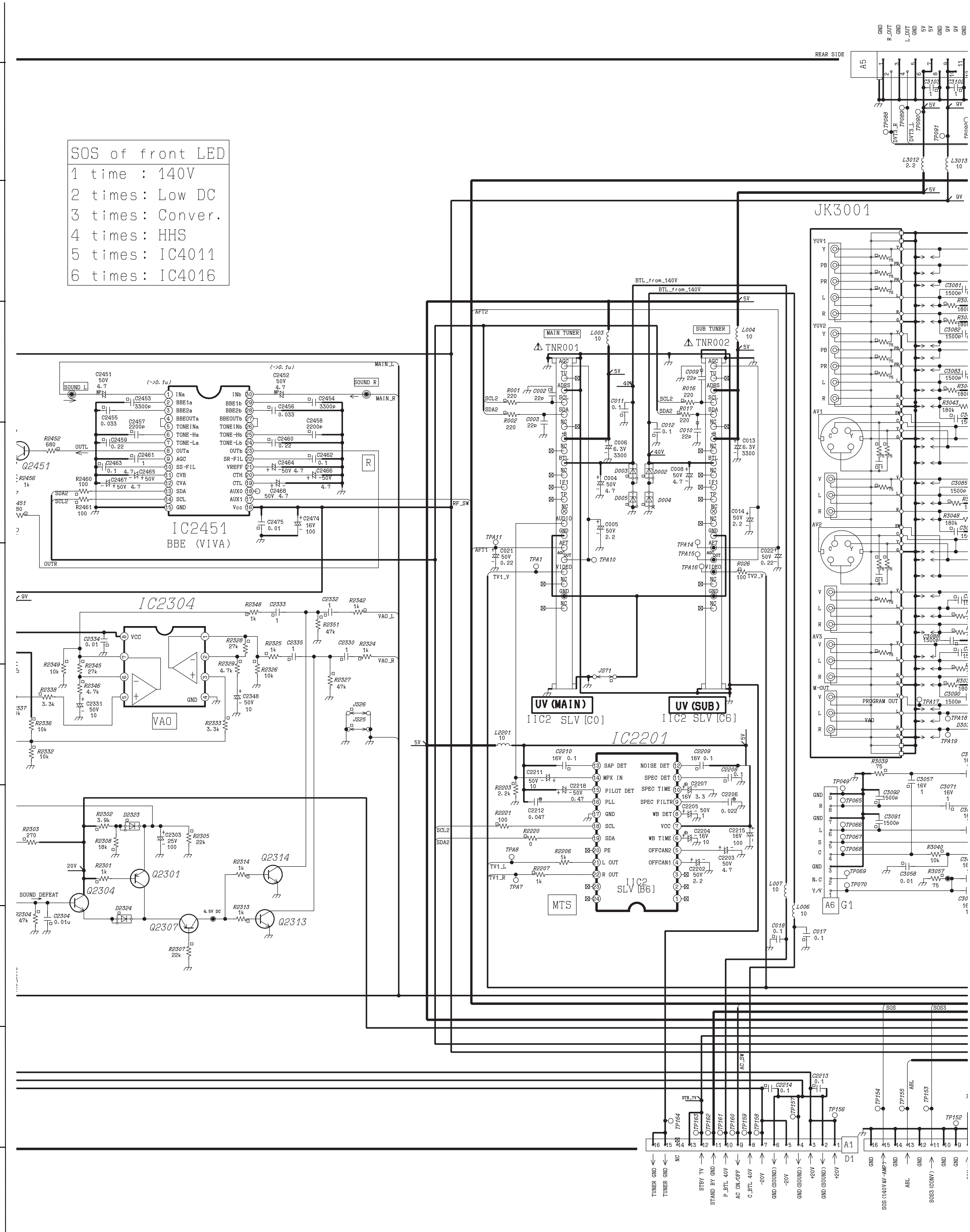


wL/wR
IC2303
L/R
IC2302
SOS of fr
1 time :
2 times:
3 times:
4 times:
5 times:
6 times:
TO WooferSP-L
TO WooferSP-R
TO SP-R
TO SP-L
SOUND+18V
SOUND-18V
AC OFF MUTE
VAO SOUND DEFEAT


SOS of front LED
1 time : 140V
2 times: Low DC
3 times: Conver.
4 times: HHS
5 times: IC4011
6 times: IC4016
IC2451
BBE (VIVA)
IC2304
VAO
IC2201
MTS
IIC2 SLV [B6]
MAIN TUNER
TNR001
SUB TUNER
TNR002
UV (MAIN)
IIC2 SLV [C0]
UV (SUB)
IIC2 SLV [C6]
JK3001
REAR SIDE
A5
A6
G1
A1
D1
Q2451
Q2301
Q2304
Q2307
Q2313
Q2314
SOUND L
SOUND R
SOUND DEFEAT
BTL_from_140V
PROGRAM OUT
YUV1
YUV2
AV1
AV2
AV3
M-OUT
TUNER GND
STBY 7V
STAND BY GND
P_BTL 40V
AC ON/OFF
C_BTL 40V
GND (SOUND)
SOS (140V&V-AMP)
ABL
SOS3 (CONV)
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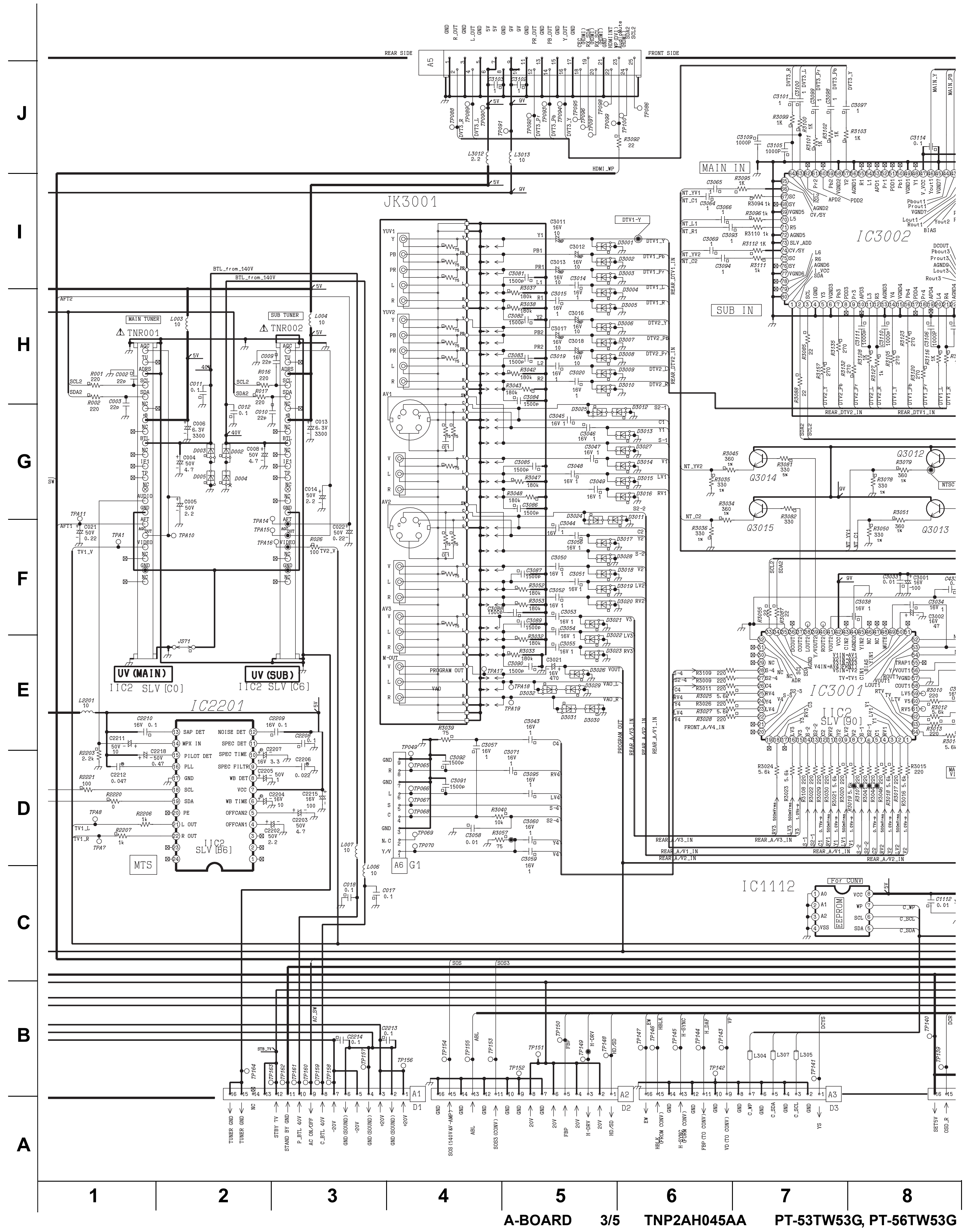
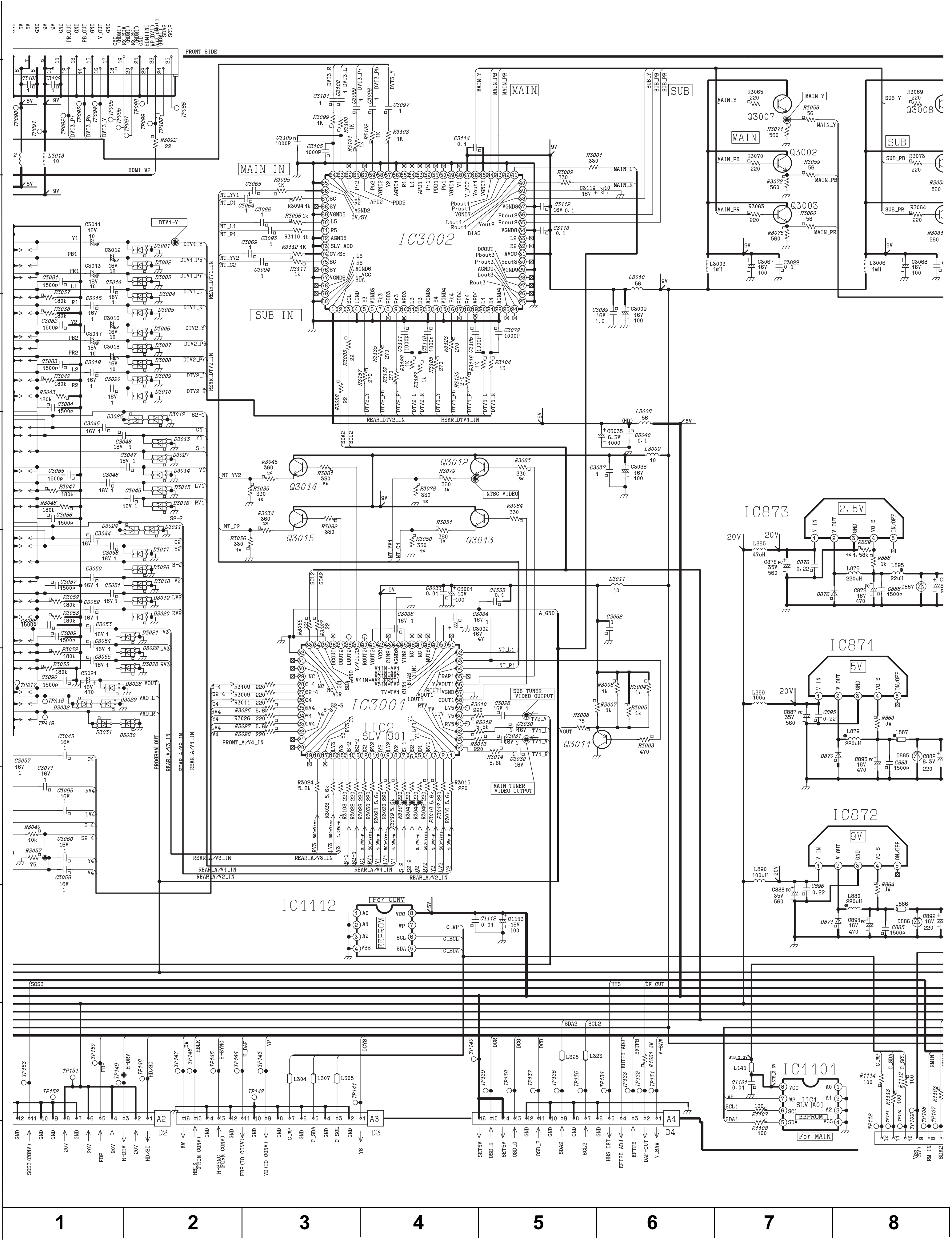
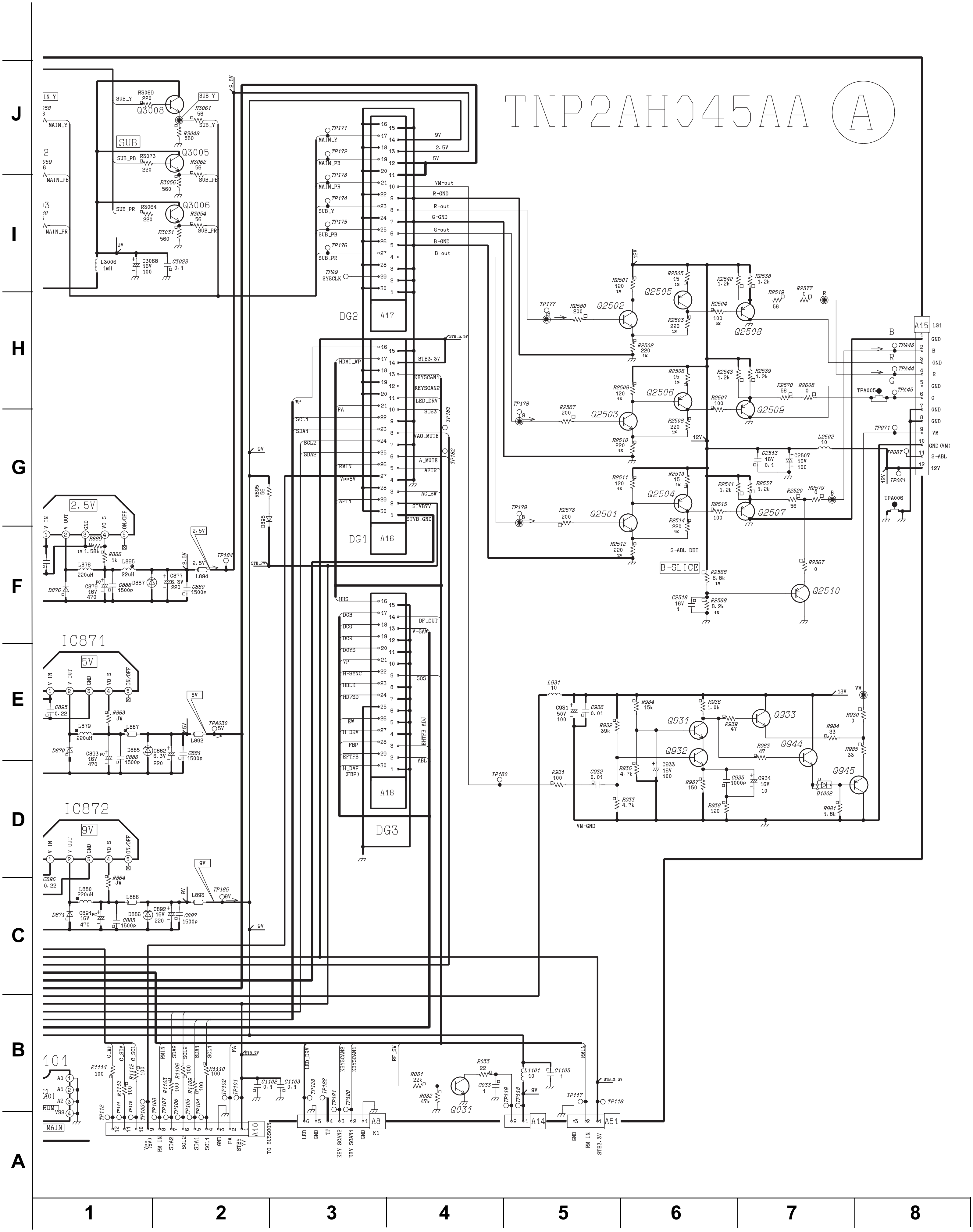
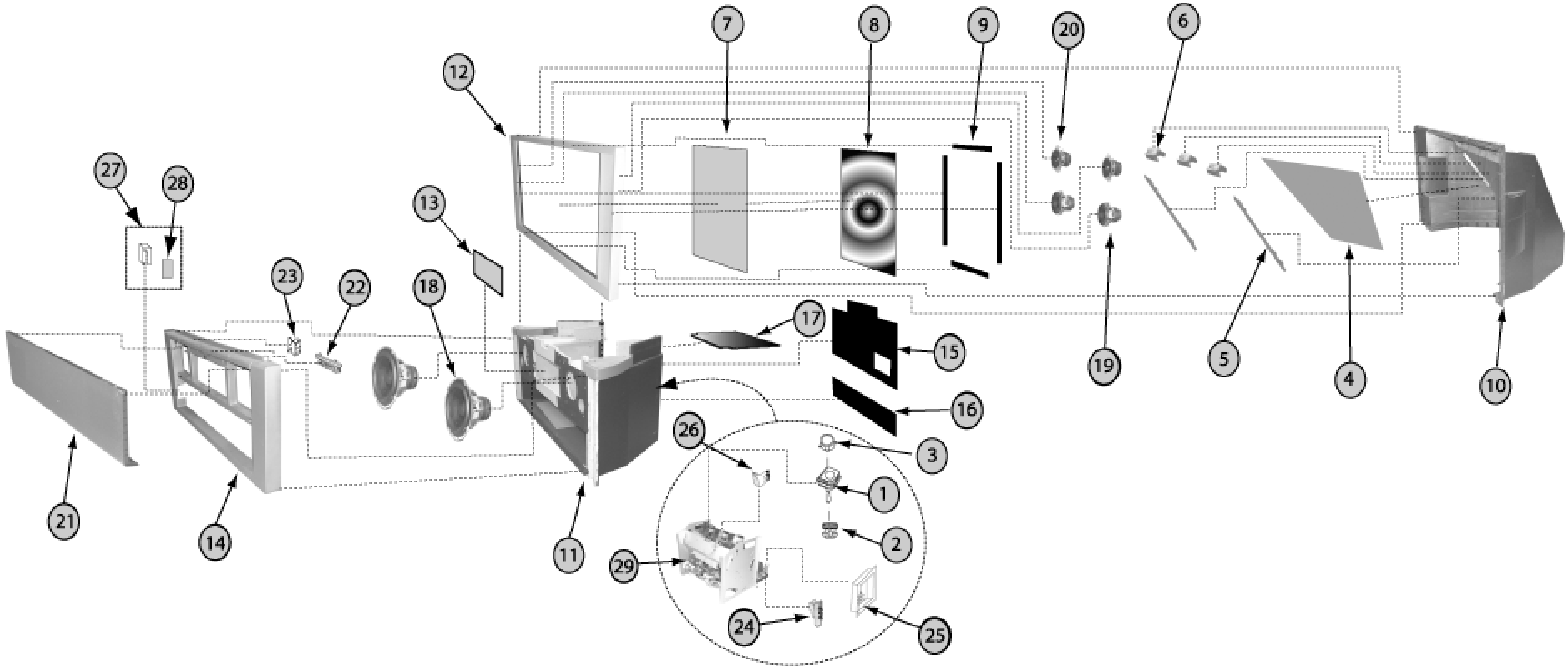


REAR SIDE
FRONT SIDE
A5
JK3001
MAIN IN
SUB IN
IC3002
MAIN TUNER
TNR001
SUB TUNER
TNR002
UV (MAIN)
IIC2 SLV [C0]
UV (SUB)
IIC2 SLV [C6]
IC2201
IIC2 SLV [B6]
MTS
IC3001
IIC2 SLV [90]
IC1112
For CONV
EEPROM
Q3012
Q3013
Q3014
Q3015
A1
A2
A3
A6
D1
D2
D3
G1



FRONT SIDE
MAIN IN
SUB IN
IC3002
MAIN
SUB
MAIN Y
DTV1-Y
NTSC VIDEO
IC3001
IIC2
SLV [90]
SUB TUNER VIDEO OUTPUT
MAIN TUNER VIDEO OUTPUT
IC873
2.5V
IC871
5V
IC872
9V
IC1112
For CONV
EEPROM
IC1101
For MAIN


TNP2AH045AA
A
DG1
DG2
DG3
A15
A16
A17
A18
B-SLICE
IC871
IC872
SUB
S-ABL DET
VM-GND



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