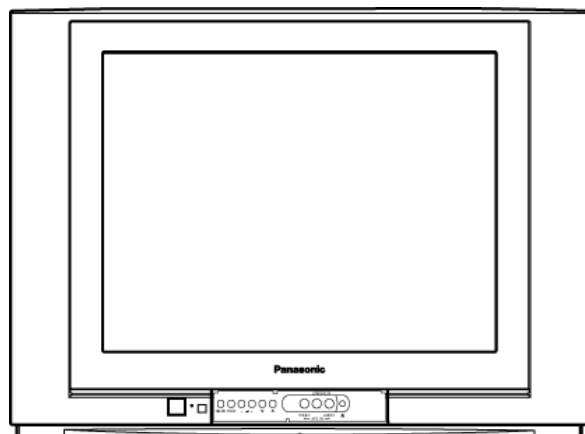


Service Manual

Colour Television



TX-21FG25R

GP4N Chassis

Specification

Power Source	AC Auto 160-240 V, 50/60 Hz	Video	31.5 MHz (D, K) / 32.5 MHz (B, G)
Power Consumption	96 W		32.0 MHz (I) / 32.5 MHz (M)
	Standby condition : 2 W	Sound	33.57 MHz (PAL) /
Aerial Terminal	Impedance : 75Ω, Coaxial type	Colour	33.6 MHz (SECAM)
Tuning System	Frequency Synthesizer		34.42 MHz (NTSC) /
	Auto Search Tuning		33.75 MHz (SECAM)
	Pos : 100 Positions	Receiving Stereo Sound System	AV STEREO
Receiving System	17 Systems	Video/Audio/Terminals	
Receiving Channels	Regular TV	AV 1, 2, 3	
VHF BAND	2-12 (PAL/SECAM B, K1)	Y / P _B / P _R	(Phone Type) Y:1.0Vp-p 75Ω PB,
	0-12 (PAL B AUST.)		PR:0.7Vp-p 75Ω Video 1.0Vp-p
	1-9 (PAL B N.Z.)		75Ω Audio Approx. 400mV 47KΩ
	1-12 (PAL/SECAM D)		Video 1.0Vp-p 75Ω
	1-12 (NTSC M Japan)	Monitor Out	Audio Approx. 400mV 47KΩ
	2-13 (NTSC M U.S.A)	High Voltage	27.5±1.5 at zero
UHF BAND	21-69 (PAL G, H, I/SECAM G, K, K1)		beam current
	28-69 (PAL B AUST.)	Picture Tube	A51LXR195X Type 21 (51 cm)
	13-57 (PAL D, K)		Measured diagonally,
	13-62 (NTSC M Japan)		104° deflection
	14-69 (NTSC M U.S.A.)	Audio Output	16 W speaker
CATV	S1-S20 (OSCAR)	Dimensions (W x D x H)	648 mm x 488 mm x 472 mm
	1-125 (U.S.A. CATV)	Weight (Mass)	24 kg (Net)
	C13-C49 (JAPAN)		
	S21-S41 (HYPER)		
	Z1-Z37 (CHINA)	Note:	
	5A, 9A (AUST)	Specifications are subject to change without notice. Mass and dimensions shown are approximate.	
Intermediate Frequency	38.0 MHz		

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.

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1 Safety Precautions

1.1. General Guide

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis. Fig. 1.

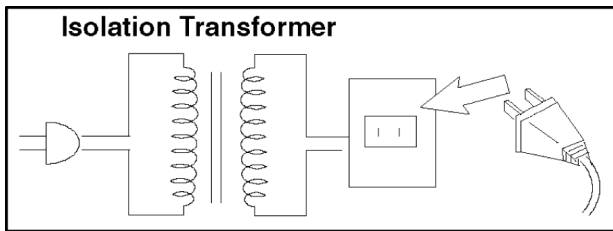


Fig. 1

2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, observe that all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations, are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC outlet.
5. Potential, as high as **29kV** kV is present when this receiver is in operation. Operation of the receiver without the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube.

After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug. Fig. 2.

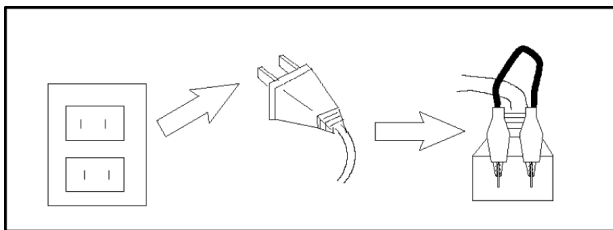


Fig. 2

2. Turn on the receiver's power switch.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between **4 MΩ and 20 MΩ**. When the exposed metal does not have a return path to the chassis, the reading must be zero.

1.3. Leakage Current Hot Check (See Fig. 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2 kΩ, 10 W resistor in series with an exposed metallic part on the receiver and an earth such as a water pipe.
3. Use an AC voltmeter, with high impedance type, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point. Fig. 3.

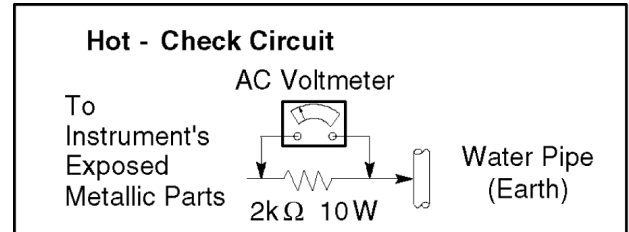


Fig. 3

5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential any point should not exceed **1.0 V rms**. In the case of a measurement being outside of the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and re-checked before it is returned to the customer. Fig. 4.

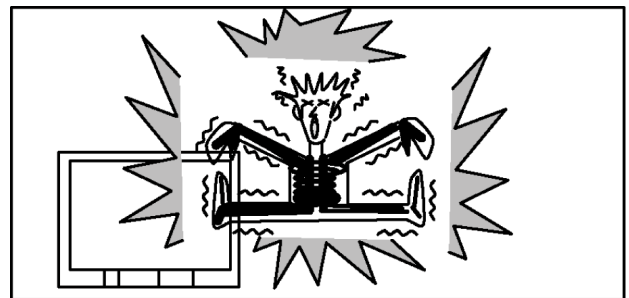


Fig. 4

1.4. X-Radiation

Warning :

1. The potential sources of X-Radiation in TV sets are the EHT section and the picture tube.
2. When using a picture tube test rig for service, ensure that the rig is capable of handling **29 kV** without causing X-Radiation.

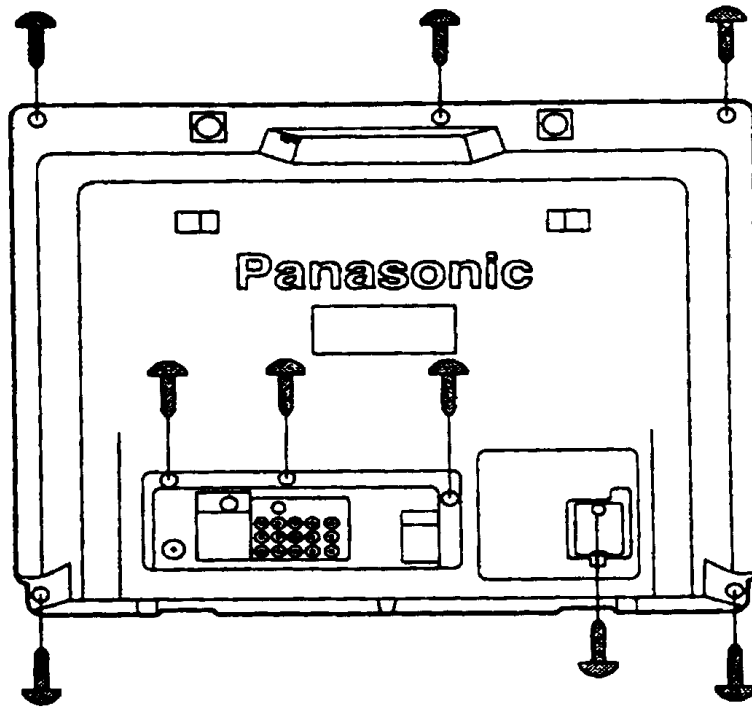
Note: It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Measure the High Voltage. The meter reading should indicate **27.5 ± 1.5kV**. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent the possibility of X-Radiation, it is essential to use the specified picture tube.

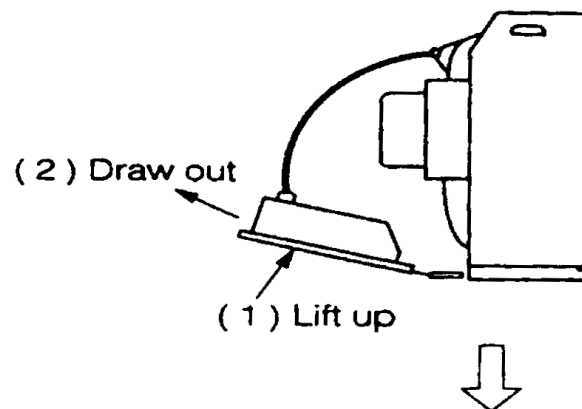
2 Service Hints

2.1. HOW TO MOVE CHASSIS INTO SERVICE POSITION.

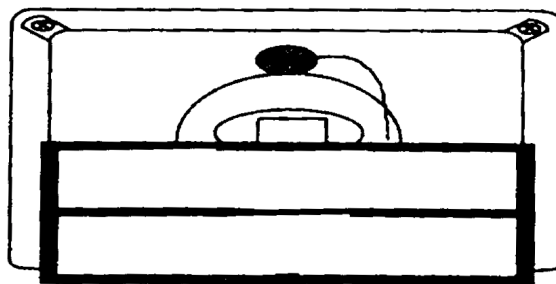
1. Remove 9 screws.



2. Draw out Main Chassis.



3. Stand the Main Chassis.



3 Market Mode Function

3.1. Service Mode Access

1. Set timer ON.
2. Press remote's RECALL (□) and panel's volume down key simultaneously to enter SERVICE 1.
3. Set to normal mode : Press the volume down button on front, together press the off timer button on remote control.

3.2. Service Mode 1 Controls

- | | |
|--|--|
| 1. Key 3 / 4
previous / next service 1 item | 5. Volume -
decrement of selected item |
| 2. Key 8 / 9
adjust user brightness (-/+) | 6. OK (remote)
store / save selected item |
| 3. Program up / down
program position up / down | 7. Normal (remote)
exit service mode |
| 4. Volume +
increment of selected item | |

3.3. Service Mode 1 Function

- | | |
|-----------------------------|----------------------------|
| 1. H-POS
-128~127 | 11. ANGEL
-128~127 |
| 2. V-POS
-128~127 | 12. BOW
-128~127 |
| 3. H-AMP
-128~127 | 13. DVCO
-128~127 |
| 4. V-AMP
-128~127 | 14. H-POS
-128~127 |
| 5. EW-AMP1
-128~127 | 15. G-CUT OFF
N / A |
| 6. LOW_Corner
-128~127 | 16. B-CUT OFF
0~511 |
| 7. TRAPEZ 1
-128~127 | 17. R-DRIVE
0~511 |
| 8. UPPER_Corner
-128~127 | 18. G-DRIVE
0~511 |
| 9. V-LIN
-128~127 | 19. B-DRIVE
0~511 |
| 10. V-SYM
-128~127 | 20. SUB-Bright
-128~127 |

3.4. Service Mode 2 Controls (OPTION data 1 ~ 3)

- | | |
|--|--|
| 1. Key 3 / 4
previous / next service 2 item | 5. Volume -
decrement of selected item |
| 2. Key 8 / 9
toggle for options bit 0 - 7 | 6. OK (remote)
store / save selected item |
| 3. Program up / down
program position up / down | 7. Normal (remote)
exit service mode |
| 4. Volume +
increment of selected item | |

NOTE: Service mode 2 options bit refer to each model spec.

4 Adjustment Procedure

4.1. Adjustment Procedure

4.1.1. +B Voltage

Item / preparation

1. Operate the TV set.
2. Set control as follows :
Brightness minimum
Contrast minimum

Adjustment procedure

1. Confirm the DC voltage at the indicated test points, as follows :
TPA 15 : $3.3 \pm 0.2V$
TPA 16 : $141 \pm 2V$
TPA 17 : $8 \pm 0.2V$
TPA 18 : $1.8 \pm 0.2V$
TPA 19 : $5 \pm 0.2V$
TPA 20 : $175 \pm 15V$

4.1.2. High Voltage

Item / preparation

1. Receive the crosshatch pattern.
2. Set to 0 Beam.
Screen VR minimum
Contrast minimum

Adjustment procedure

1. Connect a DC voltage meter to D866 and confirm the +B voltage is $141.0 \pm 2V$.
2. Connect a high frequency voltmeter to heater and confirm that voltage reads 6.3 ± 0.28 (VRMS).
3. Normalize the brightness and contrast.

4.2. COLOUR PURITY

1. Set Bright and Contrast controls to their maximum positions.
2. Operate the TV set over 60 minutes.
3. Full degauss the picture tube by using an external degaussing coil. By rotating R-B static convergence magnet.
4. Apply a crosshatch pattern signal and adjust roughly the static convergence magnets.
5. Apply a green pattern signal.
6. Loosen a clamp screw for the Deflection Yoke and move the Deflection Yoke as close to the purity magnet as possible.
7. Adjust the purity magnet so that a vertical green field is obtained at the center of the screen.

4.1.3. NTSC TINT COLOUR

Item / preparation

1. Connect oscilloscope probe to TPL1 (R OUT) with $10k\Omega$ series resistor.
2. Press Main Menu and set system to use AV-NTSC (3.58 MHz).
DYNAMIC Normal
Channel CLR Set STD

Adjustment procedure

1. Adjust Sub-Tint so that No. 2, 3 and 4 becomes level waveform is similar to Fig. 3.
2. Confirm phase at Tint is changes more than ± 15 by Tint control.
3. Confirm that colour level is maximum when colour DAC is adjusted to maximum position.

Note: Use remote control only when adjusting user mode to Sub-Tint.

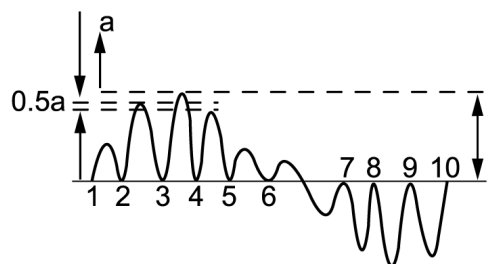
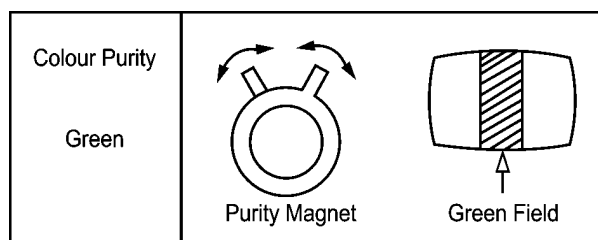
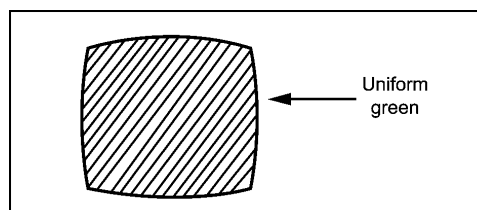


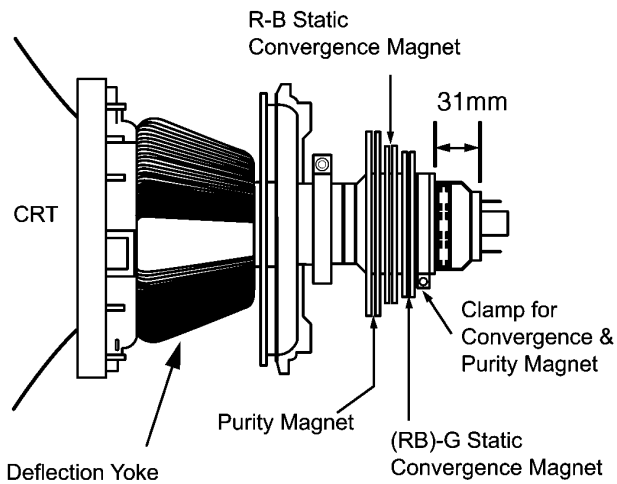
Fig. 3



8. Slowly press the Deflection Yoke and set it where a uniform green field is obtained.



9. Adjust roughly the Low Light controls and make sure that a uniform white field is obtained.
10. Tighten the clamp screw.

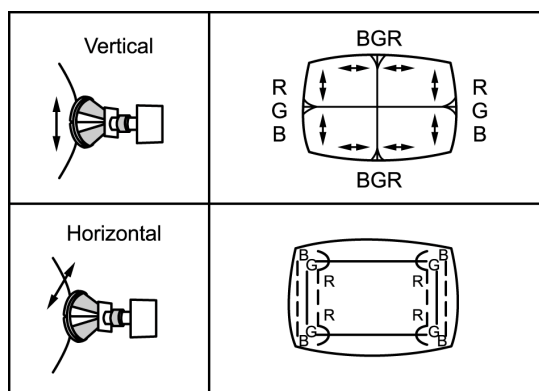


4.3. CONVERGENCE

1. Apply a crosshatch pattern signal and set Contrast control to the maximum position.
2. Adjust Bright control to obtain a clear pattern.
3. Adjust Red and Blue line at center of the screen.

Vertical Convergence Red & Blue	Slide magnetic tabs toward or away from each other. R-B Static Convergence Magnet
Horizontal Convergence Red & Blue	Rotate both magnetic rings together. R-B Static Convergence Magnet

4. Adjust Red and Blue with Green line at center of the screen by rotating (RB)-G static convergence magnet.
5. Lock convergence magnets with silicone sealer.
6. Remove the DY wedges and slightly tilt the Deflection Yoke vertically.



7. Fix the Deflection Yoke by re-inserting the DY wedges.
8. If purity error is found, repeat "Colour Purity" adjustment.

4.4. WHITE BALANCE (MARKET MODE CHK 4)

Preparation

1. Receive a colour bar signal with colour "OFF", and operate the TV set for more than 30 minutes.
2. Set the picture menu to "DYNAMIC NORMAL" and the AI to off.
3. Connect an oscilloscope to KG on L BOARD.
4. Set the TV set to Market Mode : white balance adjustment (CHK 4).
5. Screen VR : Min.
6. Set the data level of RGB CUT OFF / DRIVE and SUB BRIGHT.

Adjustment

1. Select G-CUTOFF adjustment mode and collapse vertical scan.
2. Adjust G-CUTOFF control to become the DC=0 V to video level at 180 V as shown in Fig. 1.

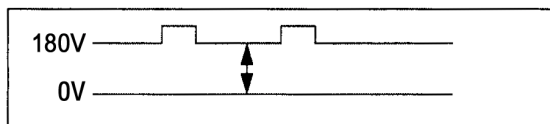
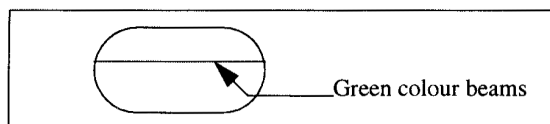


Fig. 1

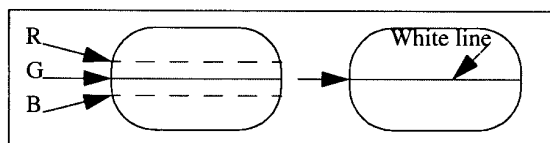
3. Slowly turn the screen control clockwise until a green colour horizontal line appears on the picture tube. This is the setting point for the screen control.

Note:

Do not adjust the G-CUTOFF setting in the following procedure.



4. Adjust the remaining R and B-CUTOFF controls so as to get a white horizontal line on the screen.



5. Return to full field SCAN by pushing the position 5 key on the remote control.
6. Adjust the R-Drive and B-Drive controls as to obtain a uniform white on the white bar of the greyscale pattern.
7. Confirm correct B/W rendition and greyscale tracking or repeat CUTOFF and drive control setup.

Note:

Write down the original value for each address adjustment before adjusting anything.

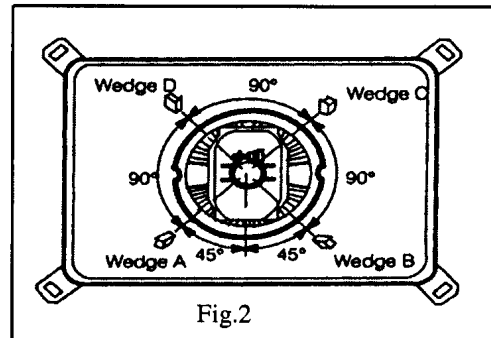


Fig.2

8. Wedge A shown in Fig. 2 should be fixed within a range of 45° to the left of the vertical line as shown.
9. After inserting wedge A, insert wedges B, C and D. The wedges should be set 90° apart from each other.
10. Be certain that the four wedges are firmly fixed and the Deflection Yoke is tightly clamped in place otherwise the Deflection Yoke may shift its position and cause a loss of convergence and purity.

4.5. ADJUSTMENT OF CRT VRS

NOTE: FOR FLAT CRT ONLY

PREPARATION

1. Set DY to CRT not to tilt up and down left and right deflection.
2. Set CY to CRT and set CY magnet primarily.
 Pur Mg : Set Pur Mg that 2 magnets are (top position)
 VRS Mag : Set VRS Mg that 2 magnets are (horizontal position) only 21", 25" & 29"
3. Set geomagnetic corection DAC. AS IN TABLE 1.

ADJUSTMENT

1. Receive the white balance pattern.
2. Adjust V-CENTER.
3. Set R, B CUT OFF to minimum, and set G CUT OFF to center.
4. Receive the aging pattern.
5. Set 2 magnet of vertical position to up and down equally so that center part of CRT (Fig 4)

	MANNUAL	AUTO
DAC	0	1

TABLE 1

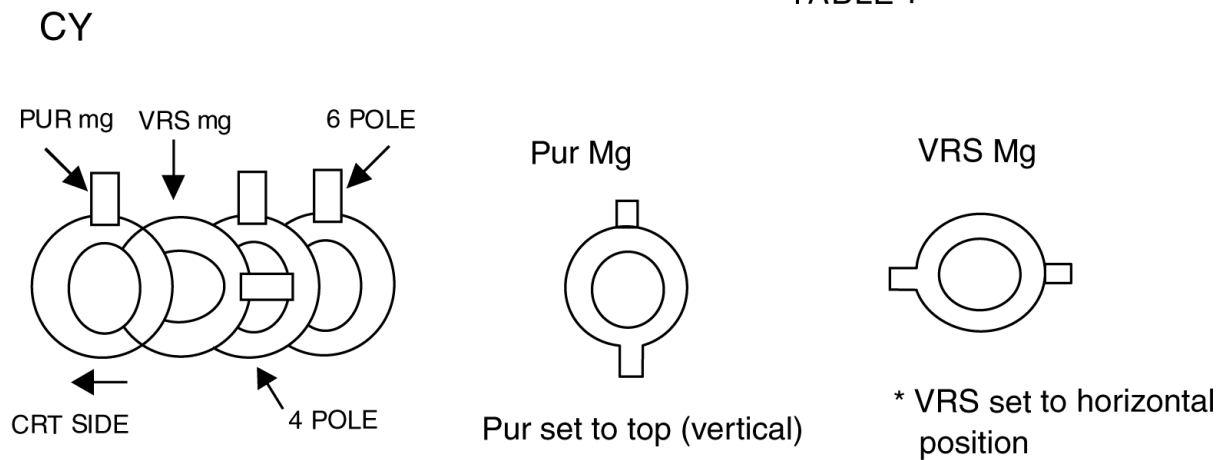


FIG 3

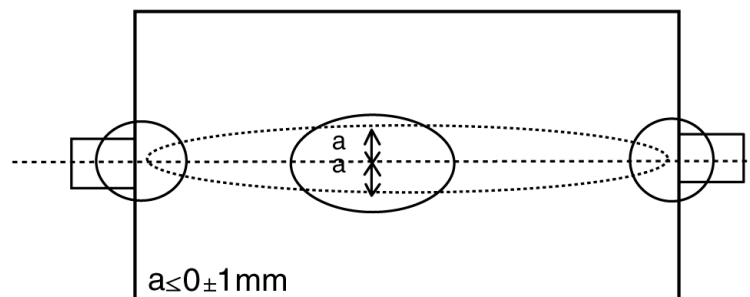
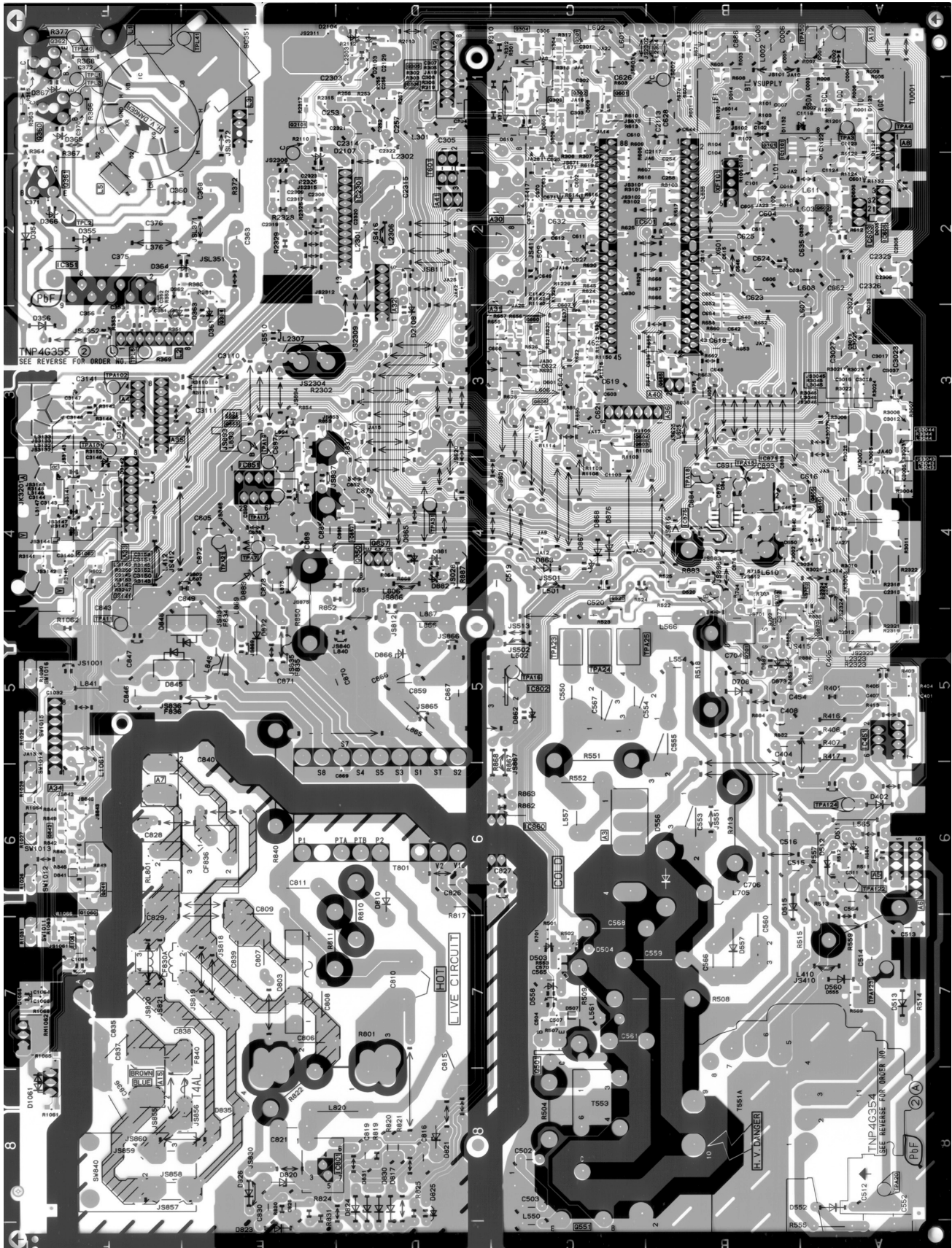


FIG 4

5 Conductor Views

5.1. D Board



6 Schematic Diagrams

6.1. SCHEMATIC DIAGRAM FOR GP4 CHASSIS

Important Safety Notice

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

Notes:

1. Resistor

All resistors are carbon 1/4W resistor, unless marked as follows:

Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).

$\bigcirc$	: Nonflammable	$\boxtimes$	: Metal Oxide
$\triangle$	: Solid	$\odot$	: Metal Film
$\boxplus$	: Wire Wound	$\otimes$	: Fuse

2. Capacitor

All capacitors are ceramic 50V capacitor, unless marked as follows:

Unit of capacitance is μ F, unless otherwise noted.

$\otimes$	: Temperature Compensation	$\begin{array}{c} + \\ \text{---} \text{---} \end{array}$	: Electrolytic
$\textcircled{M}$	: Polyester	$\begin{array}{c} \text{NP} \\ \text{---} \text{---} \end{array}$	: Bipolar
$\textcircled{m}$	: Metalized Polyester	$\textcircled{T}$	: Dipped Tantalum
$\boxtimes$	: Polypropylene	$\textcircled{Z}$	: Z-Type

3. Coil

Unit of inductance is μ H, unless otherwise noted.

4. Test Point

$\bigcirc$: Test Point position

5. Earth Symbol

$\text{---} \text{---}$: Chassis Earth (Cold) $\downarrow$: Line Earth (Hot)

6. Voltage Measurement

Voltage is measured by a DC voltmeter.

Conditions of the measurement are the following:

Power Source AC 110-240V, 50/60 Hz

Receiving Signal Colour Bar signal (RF)

All customer's controls Maximum positions

7. Number in red circle indicates waveform number.

(See waveform pattern table.)

8. When arrow mark ($\nearrow$) is found, connection is easily found from the direction of arrow

9. Indicates the major signal flow. $\Rightarrow$: Video $\Rightarrow$: Audio

10. This schematic diagram is the latest at the time of printing and subject to change without notice.

Remarks:

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.

The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.

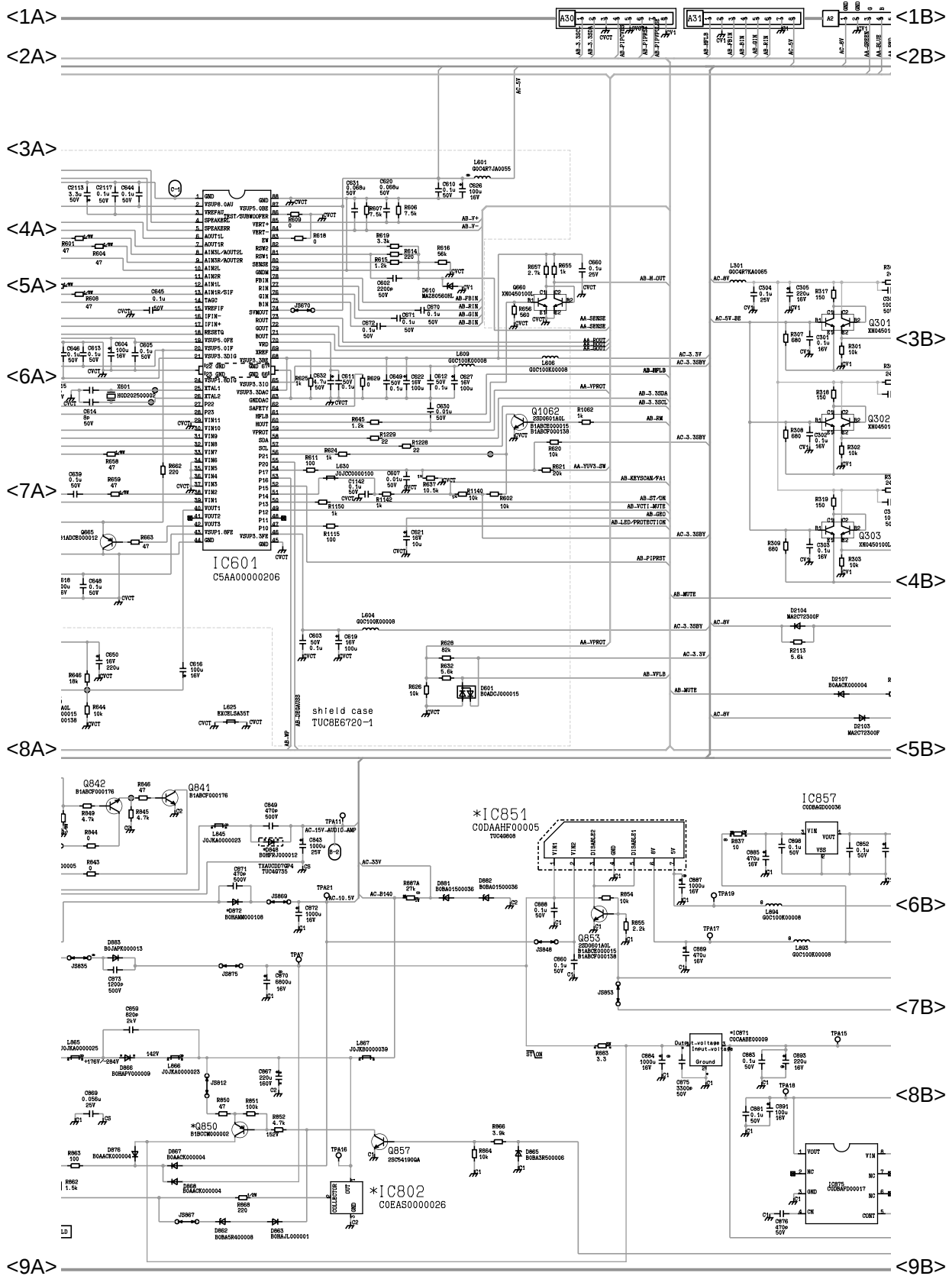
All circuits, except the Power Circuit, are cold.

Precautions

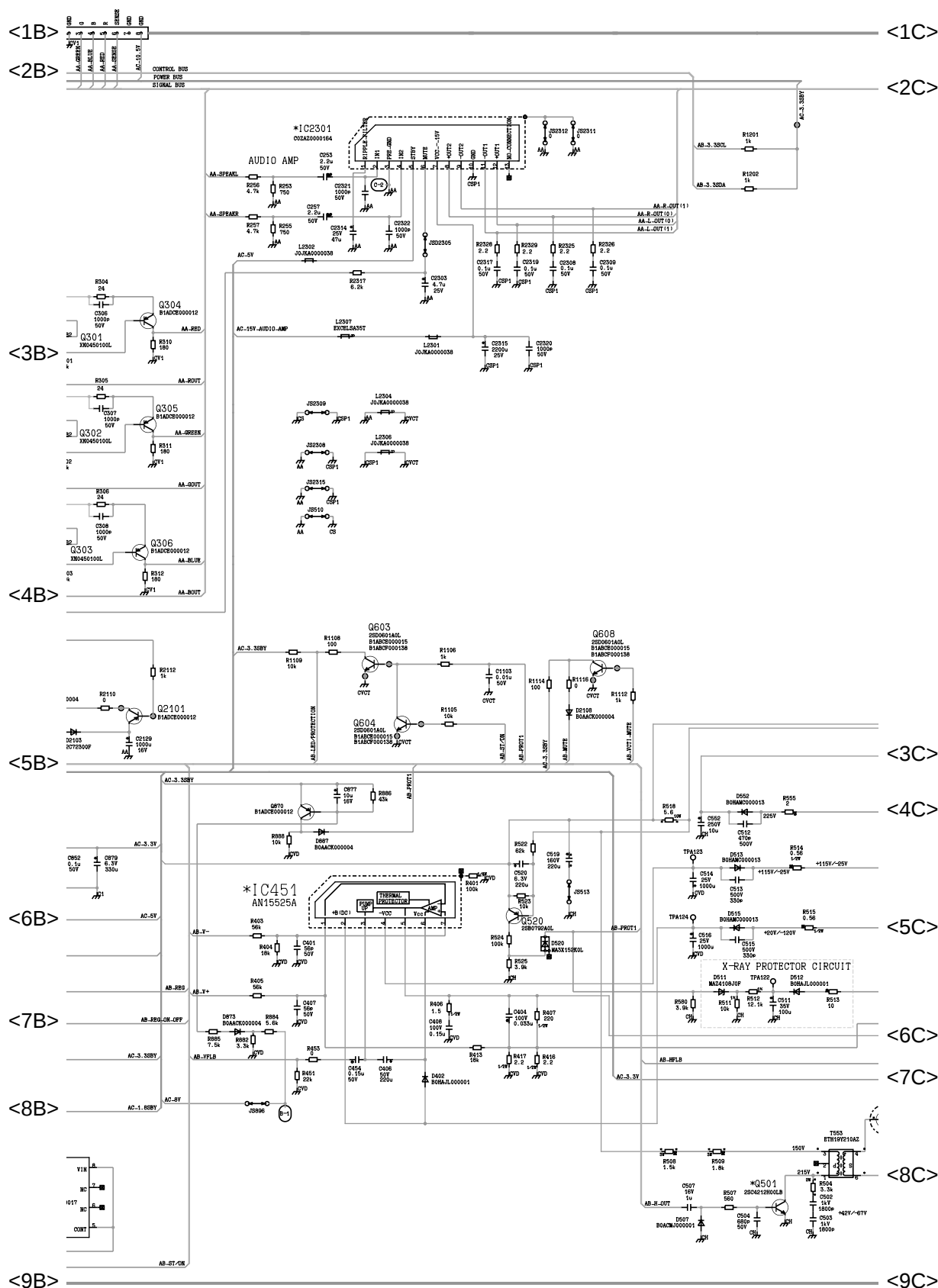
- a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
 - b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
 - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
Connect the earth of instruments to the earth connection of the circuit being measured.
 - d. Make sure to disconnect the power plug before removing the chassis.
2. Following diodes are interchangeable.
MA150- MA162 (Replacement part)



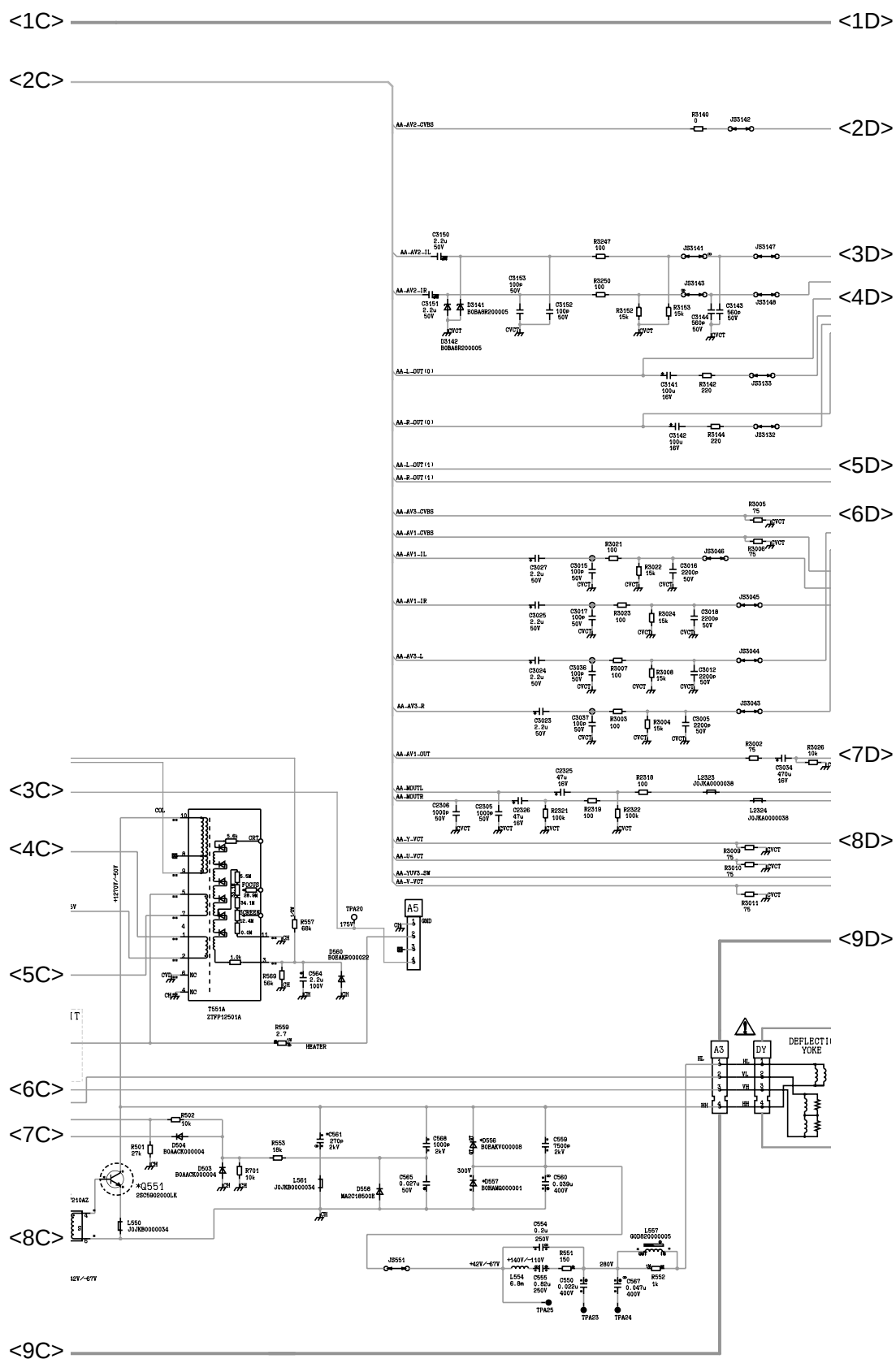
6.2.2. A Board (2/5)



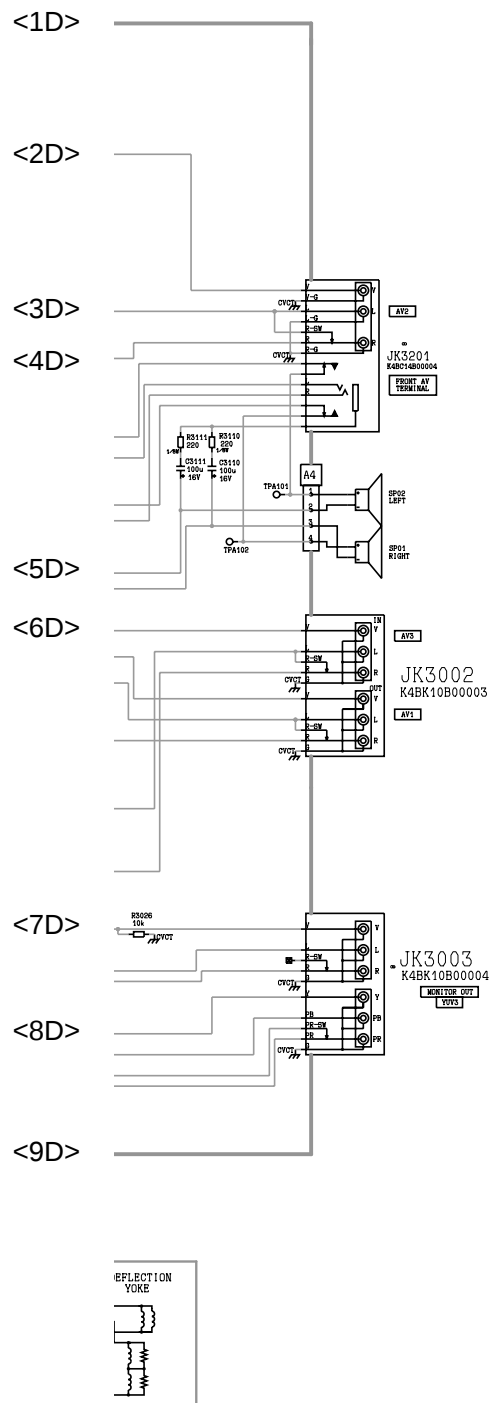
6.2.3. A Board (3/5)



6.2.4. A Board (4/5)

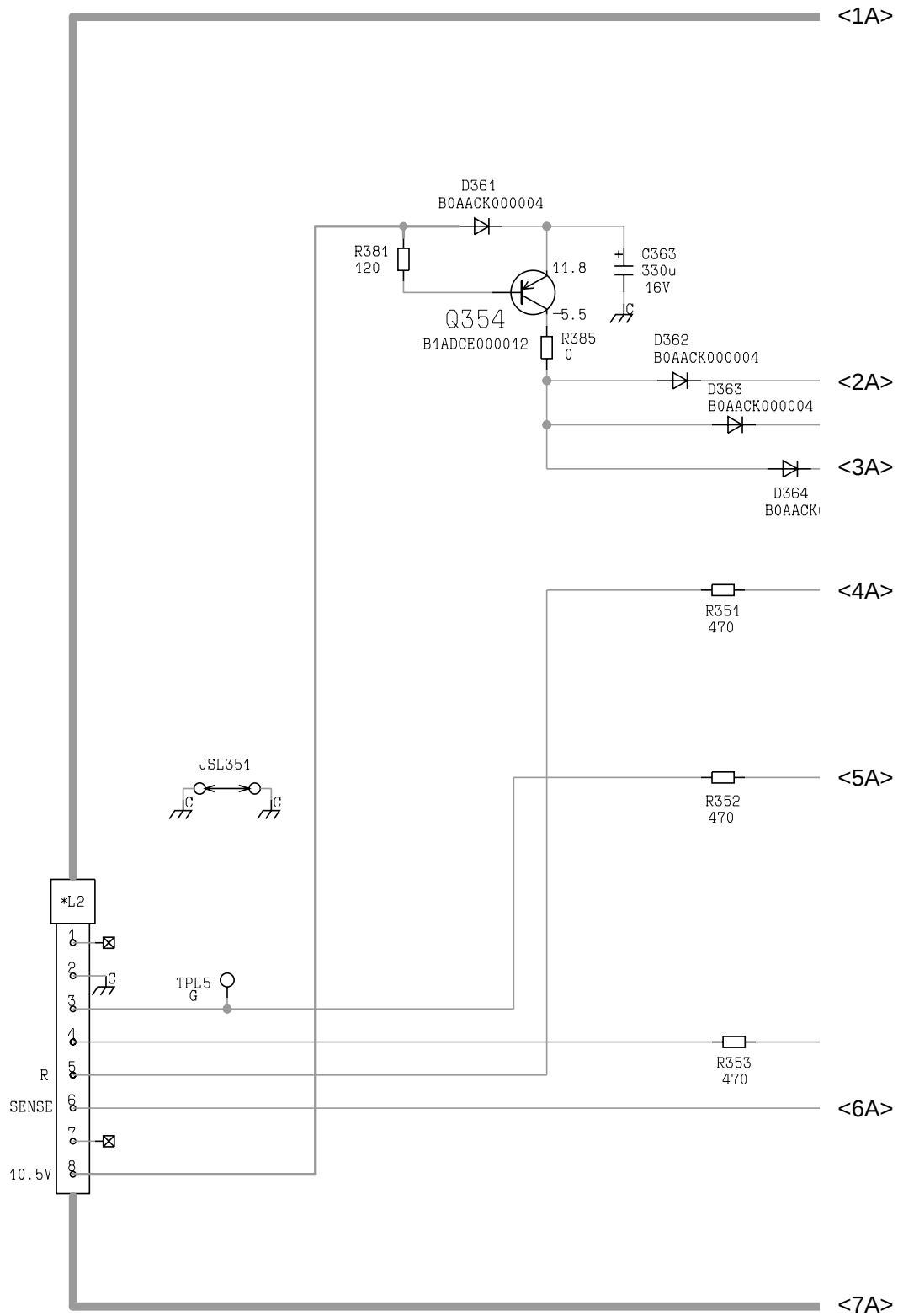


6.2.5. A Board (5/5)

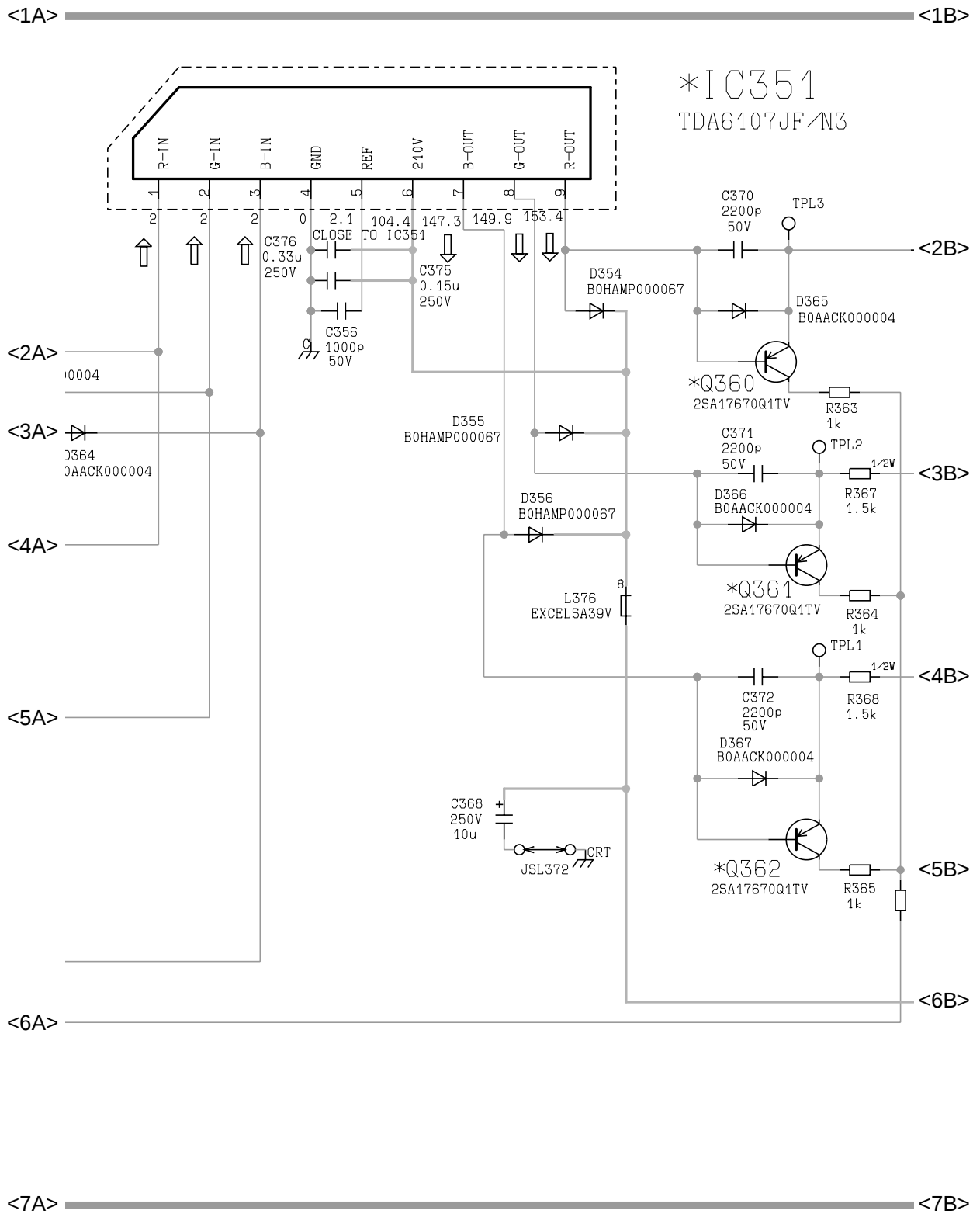


6.3. L Board

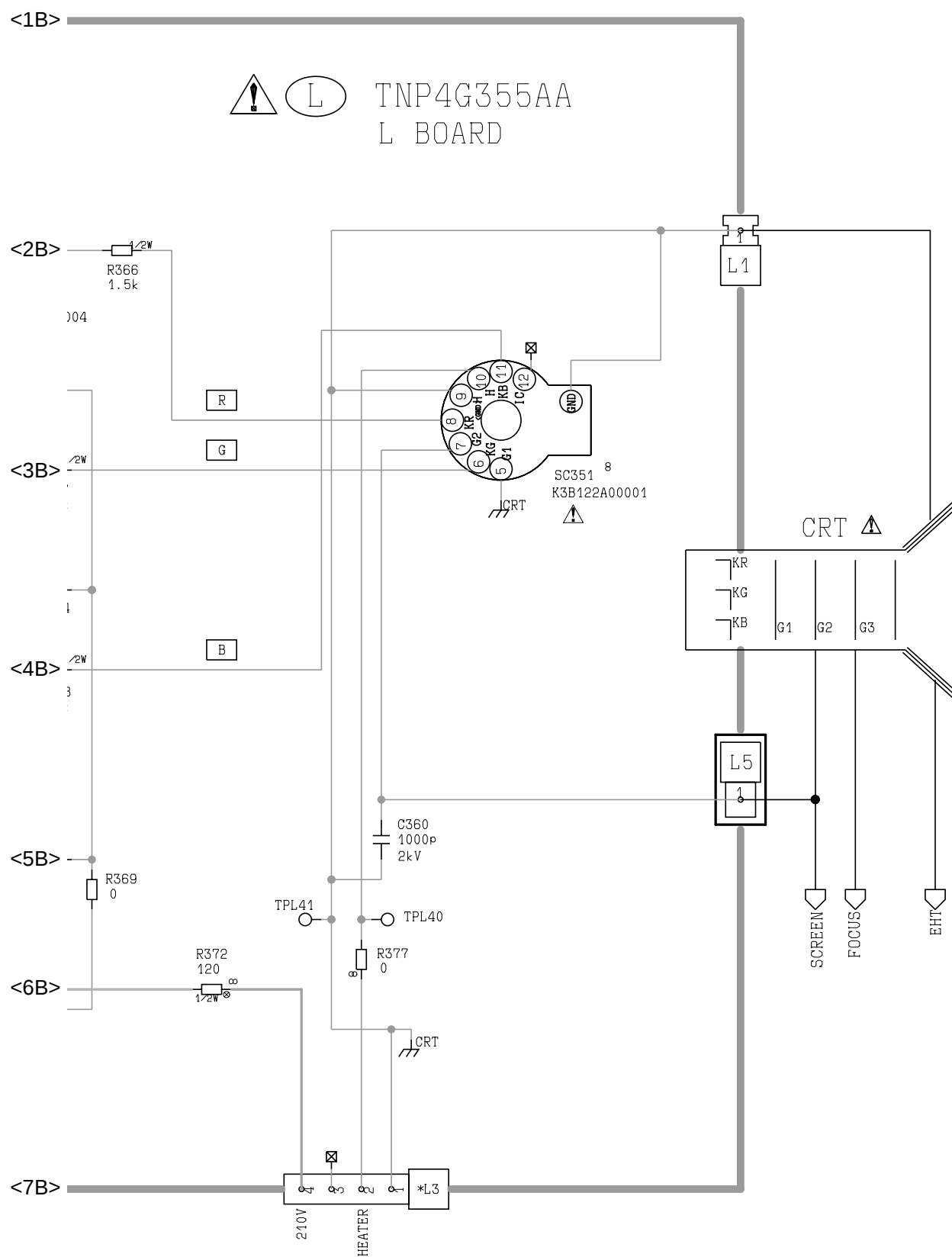
6.3.1. L Board (1/3)



6.3.2. L Board (2/3)

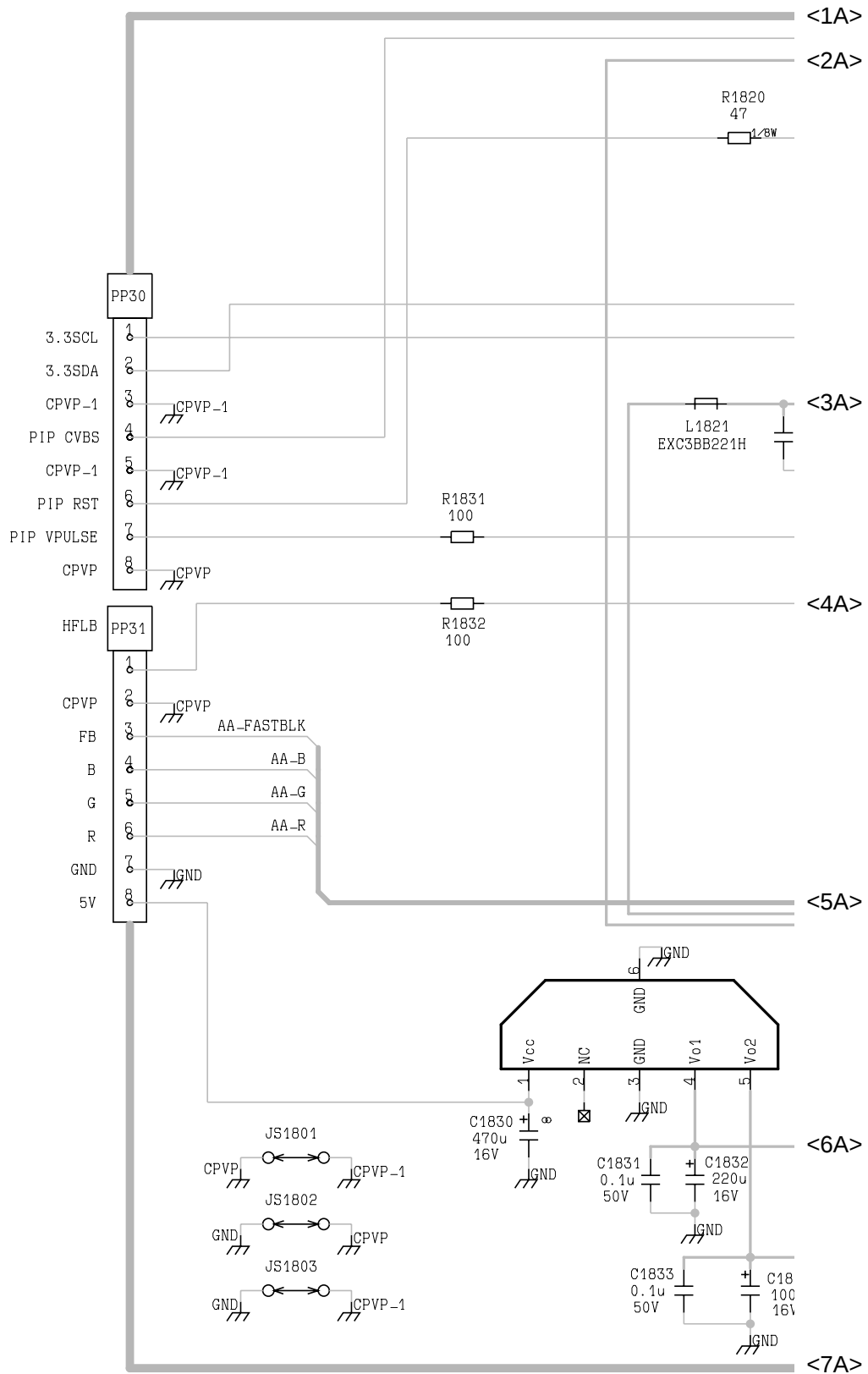


6.3.3. L Board (3/3)

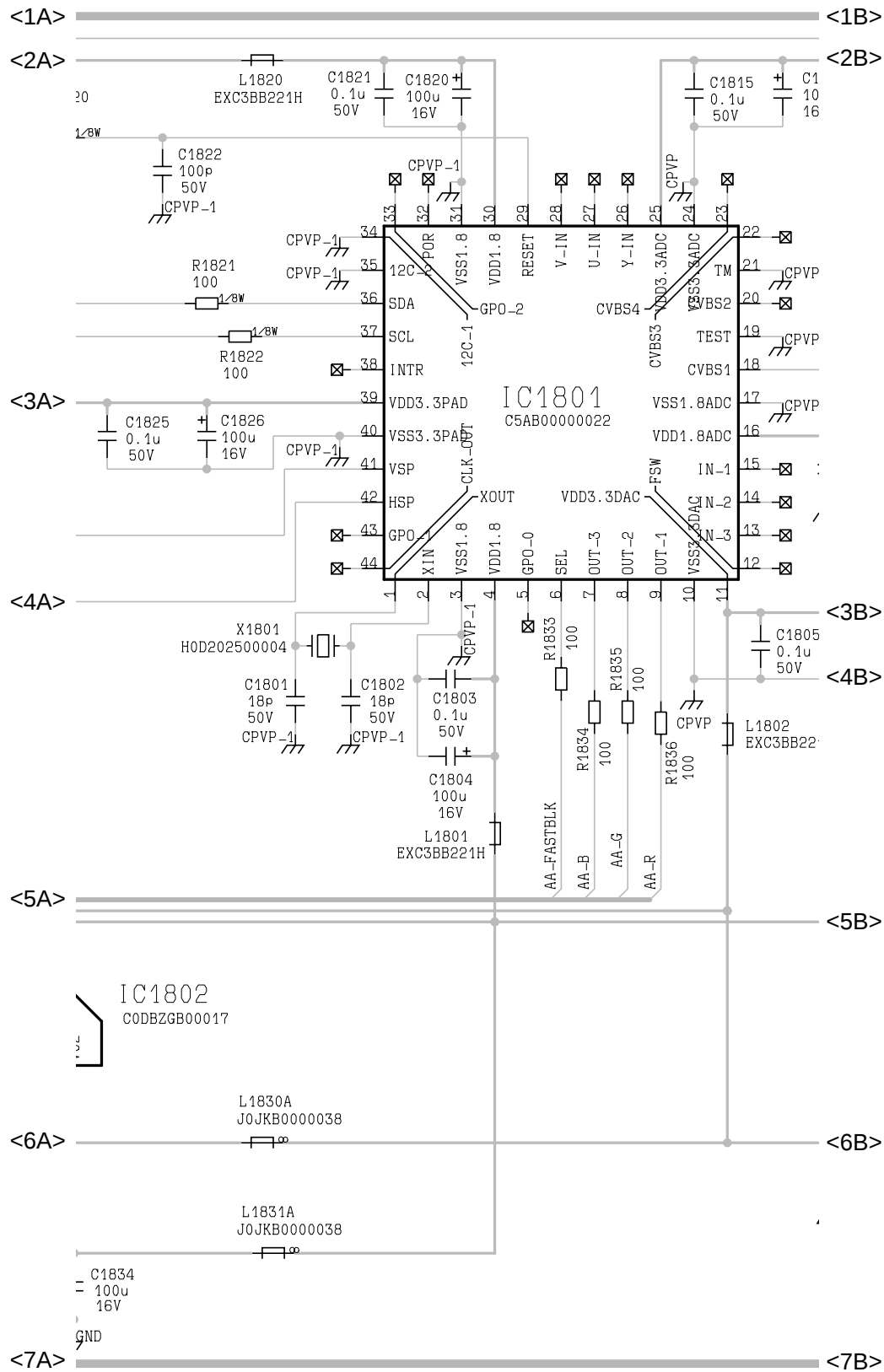


6.4. PP Board

6.4.1. PP Board (1/3)



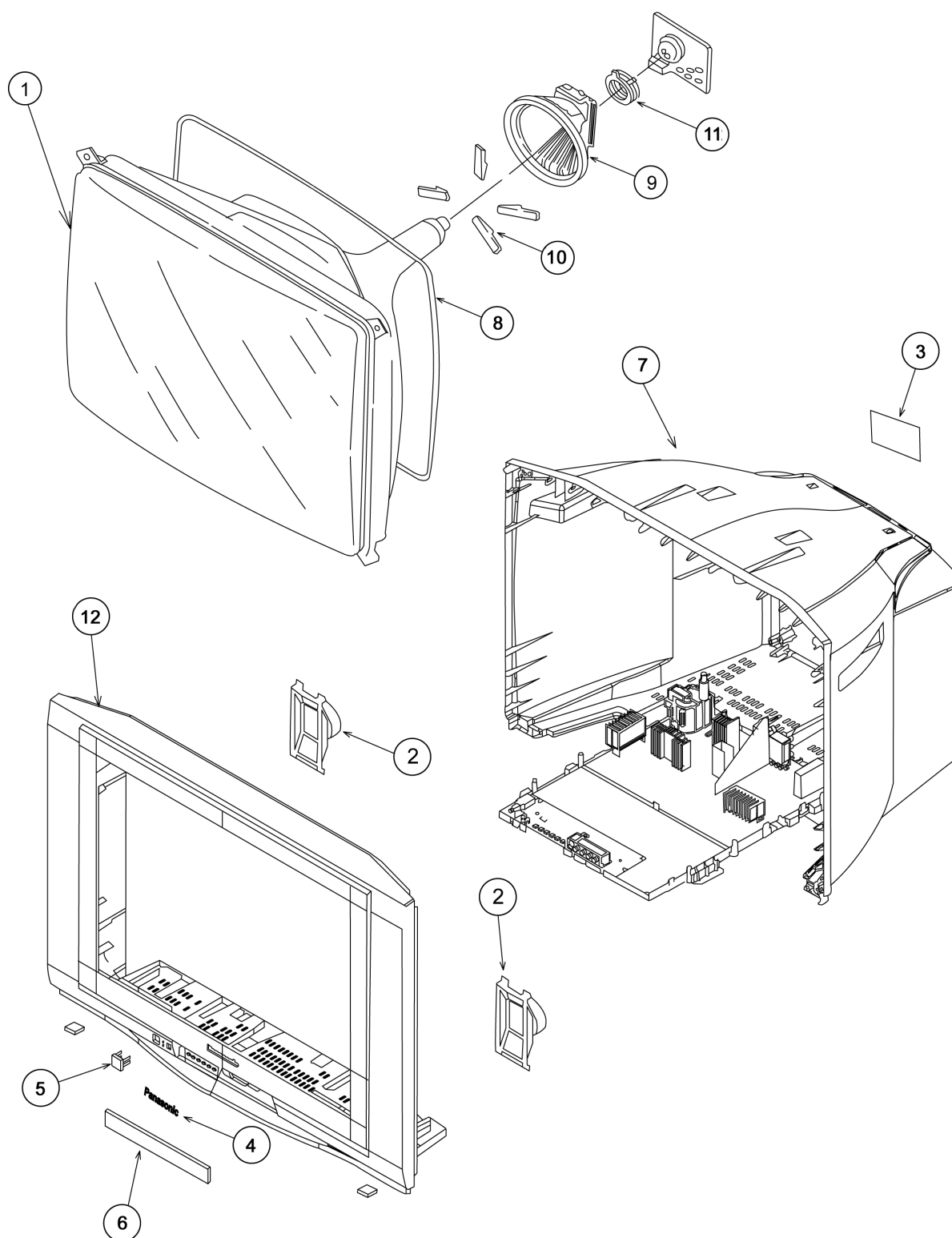
6.4.2. PP Board (2/3)



7 Parts Locations

PARTS LOCATION

Note: The number on mechanical parts indicates Ref. No. of Replacement Parts List.



8 Replacement Parts List

8.1. Replacement Parts List Notes

Important Safety Notice

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

RTL (Retention Time Limited)

Note: Printed circuit board assembly with “NLA” is no longer available after production discontinuation of the complete set.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

Type	Allowance
------	-----------

2. Capacitor

Example:

ECKF1H103ZF C 0.01UF, Z, 50V

 Type Allowance

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

Type	Allowance
C : Ceramic	C : $\pm 0.25\text{pF}$
E : Electrolytic	D : $\pm 0.5\text{pF}$
P : Polyester	F : $\pm 1\text{pF}$
Polypropylene	G : $\pm 3\text{pF}$
	J : $\pm 5\text{pF}$
T : Tantalum	K : $\pm 10\text{pF}$
	L : $\pm 15\text{pF}$
	M : $\pm 20\text{pF}$
	P : $+100\%$, -0%
	Z : $+80\%$, -20%

8.2. Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
1	A51LXR195X	PICTURE TUBE	△
2	EASG15S02H2	SPEAKER	
	N2QAJB000144	REMOTE CONTROL	
3	TBM4G1214	MODEL NAME PLATE	△
4	TBM4G3013	PANASONIC BADGE	
5	TBX4G90411	POWER BUTTON	
	TES4G206	COIL SPRING	
	TES4G214	SPRING (POWER BUTTON)	
	TKK4G8603	SPEAKER BRACKET	
	TKP4G11744	AC CORD BRACKET	
	TKP4G13291	DOOR	
7	TKU4GA1350	BACK COVER	
8	TLK4G9037S	DEGAUSSING COIL	△
9	TLY4G337T	DEFLECTION YOKE	△
10	TMM4G503	RUBBER WEDGE	
	TMM4G904	RUBBER WASHER	
	TMZ4G9818-1	CHASSIS RAIL (L)	
	TMZ4G9824	CHASSIS RAIL (R)	
NLA	TNP4G354AA	A BOARD	△
NLA	TNP4G355AA	L BOARD	△
NLA	TNP4G356AA	PP BOARD	△
11	TP-5400PW	CONVERGENCE YOKE	
	TPE4G14036	SET COVER	
	TQB4G3883	FAN BAG	
	TSM4011	MAGNET	
	TSN63115-4	PURITY MAGNET	
	TSX4G166H	AC POWER CORD	△
12	TXFKY02CG16	CABINET ASSY	
	TXFPC01CG16	CARTON	
	TXFPD01CG14	CUSHION (TOP)	
	TXFPD02CG14	CUSHION (BOTTOM)	
	CAPACITORS		
C002	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C003	ECJ2VC1H560J	C 56PF, J, 50V	
C004	ECJ2VC1H560J	C 56PF, J, 50V	
C005	F1J1H104A578	C 0.1UF, 50V	
C006	ECA1CM101B	E 100UF, 16V	
C007	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C008	ECA1HM010B	E 1UF, 50V	
C014	ECJ2VB1H103K	C 0.01UF, K, 50V	
C015	ECJ2VB1H102J	C 1000PF, 50V	
C101	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C102	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C1032	F1J1H104A578	C 0.1UF, 50V	
C104	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C1064	ECJ2VF1C105Z	C 1UF, Z, 16V	
C1065	ECA1CM101B	E 100UF, 16V	
C1066	ECJ2VC1H331J	C 330PF, J, 50V	
C1103	ECJ2VB1H103K	C 0.01UF, K, 50V	
C1118	ECJ2VF1C105Z	C 1UF, Z, 16V	
C1122	F2A0J1020040	ELECTROLYTIC CAPACITOR	
C1123	ECJ2VC1H560J	C 56PF, J, 50V	
C1124	ECJ2VC1H560J	C 56PF, J, 50V	
C1142	F1J1H104A578	C 0.1UF, 50V	
C1801	ECJ2VC1H180J	C 18PF, J, 50V	
C1802	ECJ2VC1H180J	C 18PF, J, 50V	
C1803	F1J1H104A578	C 0.1UF, 50V	
C1804	ECA1CM101B	E 100UF, 16V	
C1805	F1J1H104A578	C 0.1UF, 50V	
C1806	ECA1CM101B	E 100UF, 16V	
C1810	F1J1H104A578	C 0.1UF, 50V	
C1811	ECA1CM101B	E 100UF, 16V	
C1812	F1J1H104A578	C 0.1UF, 50V	
C1815	F1J1H104A578	C 0.1UF, 50V	
C1816	ECA1CM101B	E 100UF, 16V	
C1820	ECA1CM101B	E 100UF, 16V	
C1821	F1J1H104A578	C 0.1UF, 50V	
C1822	ECUX1H101JCX	C 100PF, J, 50V	
C1825	F1J1H104A578	C 0.1UF, 50V	
C1826	ECA1CM101B	E 100UF, 16V	
C1830	F2A1C4710045	ELECTROLYTIC CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C1831	ECUX1H104KBX	C 0.1UF, K, 50V	
C1832	ECA1CM221B	E 220UF, 16V	
C1833	F1J1H104A717	C 0.1UF, 50V	
C1834	ECA1CM101B	E 100UF, 16V	
C2113	ECA1HM3R3B	E 3.3UF, 50V	
C2117	F1J1H104A578	C 0.1UF, 50V	
C2129	ECA1CM102B	E 1000UF, 16V	
C2303	ECEA1EKS4R7	E 4.7UF, 25V	
C2305	ECJ2VB1H102J	C 1000PF, 50V	
C2306	ECJ2VB1H102J	C 1000PF, 50V	
C2308	F1J1H104A578	C 0.1UF, 50V	
C2309	F1J1H104A578	C 0.1UF, 50V	
C2314	F2A1E470A149	E 47UF, 25V	
C2315	F2B1E222A005	ELECTROLYTIC CAPACITOR	
C2317	F1J1H104A578	C 0.1UF, 50V	
C2319	F1J1H104A578	C 0.1UF, 50V	
C2320	ECJ2VB1H102J	C 1000PF, 50V	
C2321	ECJ2VB1H102J	C 1000PF, 50V	
C2322	ECJ2VB1H102J	C 1000PF, 50V	
C2325	ECA1CM470B	E 47UF, 16V	
C2326	ECA1CM470B	E 47UF, 16V	
C253	ECEA1HN2R2U	E 2.2UF, 50V	
C254	ECJ2VB1H102J	C 1000PF, 50V	
C257	ECEA1HN2R2U	E 2.2UF, 50V	
C258	ECJ2VB1H102J	C 1000PF, 50V	
C3005	F1J1H222A721	CERAMIC CAPACITOR	
C301	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3012	F1J1H222A721	CERAMIC CAPACITOR	
C3015	ECUX1H101JCX	C 100PF, J, 50V	
C3016	F1J1H222A721	CERAMIC CAPACITOR	
C3017	ECUX1H101JCX	C 100PF, J, 50V	
C3018	F1J1H222A721	CERAMIC CAPACITOR	
C302	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3023	F2A1H2R2A246	ELECTROLYTIC CAPACITOR	
C3024	F2A1H2R2A246	ELECTROLYTIC CAPACITOR	
C3025	F2A1H2R2A246	ELECTROLYTIC CAPACITOR	
C3027	F2A1H2R2A246	ELECTROLYTIC CAPACITOR	
C303	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3034	F2A1C4710045	ELECTROLYTIC CAPACITOR	
C3036	ECUX1H101JCX	C 100PF, J, 50V	
C3037	ECUX1H101JCX	C 100PF, J, 50V	
C304	ECJ2VF1E104Z	C 0.1UF, Z, 25V	
C305	ECA1CM221B	E 220UF, 16V	
C306	ECJ2VB1H102J	C 1000PF, 50V	
C307	ECJ2VB1H102J	C 1000PF, 50V	
C308	ECJ2VB1H102J	C 1000PF, 50V	
C3110	ECA1CM101B	E 100UF, 16V	
C3111	ECA1CM101B	E 100UF, 16V	
C3141	ECA1CM101B	E 100UF, 16V	
C3142	ECA1CM101B	E 100UF, 16V	
C3143	ECJ2VC1H561J	C 560PF, J, 50V	
C3144	ECJ2VC1H561J	C 560PF, J, 50V	
C3150	F2A1H2R2A246	ELECTROLYTIC CAPACITOR	
C3151	F2A1H2R2A246	ELECTROLYTIC CAPACITOR	
C3152	ECUX1H101JCX	C 100PF, J, 50V	
C3153	ECUX1H101JCX	C 100PF, J, 50V	
C356	ECJ2VB1H102J	C 1000PF, 50V	
C360	ECKW3D102KBP	C 1000PF, K, 2KV	
C363	ECA1CM331B	E 330UF, 16V	
C368	F2A2E100A025	ELECTROLYTIC CAPACITOR	
C370	ECJ2VF1H222Z	C 2200PF, Z, 50V	
C371	ECJ2VF1H222Z	C 2200PF, Z, 50V	
C372	ECJ2VF1H222Z	C 2200PF, Z, 50V	
C375	ECWF2154JSR	PLASTIC FILM CAPACITOR	
C376	ECWF2334JBB	PLASTIC FILM CAPACITOR	
C401	ECJ2VC1H560J	C 56PF, J, 50V	
C404	ECQB1333JF	PLASTIC FILM CAPACITOR	
C406	F2A1H221A247	ELECTROLYTIC CAPACITOR	
C407	ECJ2VC1H560J	C 56PF, J, 50V	
C408	ECQB1154JF	PLASTIC FILM CAPACITOR	
C454	ECQV1H154JM	P 0.15UF, J, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C502	ECKR3A182KBP	C 1800PF, K, 1KV	
C503	ECKR3A182KBP	C 1800PF, K, 1KV	
C504	ECJ2VB1H681K	C 680PF, K, 50V	
C507	ECJ2VF1C105Z	C 1UF, Z, 16V	
C511	ECA1VM101B	E 100UF, 35V	
C512	F1B2H471A025	CERAMIC CAPACITOR	
C513	F1B2H331A025	CERAMIC CAPACITOR	
C514	F2A1E102A151	ELECTROLYTIC CAPACITOR	
C515	F1B2H331A025	CERAMIC CAPACITOR	
C516	F2A1E102A151	ELECTROLYTIC CAPACITOR	
C519	EEUED2C221E	ELECTROLYTIC CAPACITOR	
C520	ECA0JM221B	E 220UF, 6.3V	
C550	ECQM4223JZ	P 0.022UF, J, 400V	
C552	F2A2E100A025	ELECTROLYTIC CAPACITOR	
C554	F0C2E204A039	PLASTIC FILM CAPACITOR	
C555	ECQE2824KF	P 0.82UF, K, 250V	
C559	ECWH20752JVB	PLASTIC FILM CAPACITOR	
C560	ECQM4393JZ	P 0.039UF, J, 400V	
C561	ECKW3D271JBR	CERAMIC CAPACITOR	
C564	F2A2A2R2A042	ELECTROLYTIC CAPACITOR	
C565	ECQB1H273JF	P 0.027UF, J, 50V	
C567	ECQM4473JZ	P 0.047UF, J, 400V	
C568	ECWH20102JVY	P 1000PF, J, 2KV	
C601	ECJ2VB1H183K	C 0.018UF, K, 50V	
C602	ECJ2VB1H222K	C 2200PF, K, 50V	
C603	F1J1H104A578	CERAMIC CAPACITOR	
C604	ECA1CM101B	E 100UF, 16V	
C605	F1J1H104A578	CERAMIC CAPACITOR	
C606	F1J1H104A578	CERAMIC CAPACITOR	
C607	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C610	F1J1H104A578	CERAMIC CAPACITOR	
C611	F1J1H104A578	CERAMIC CAPACITOR	
C612	F1J1H104A578	CERAMIC CAPACITOR	
C613	F1J1H104A578	CERAMIC CAPACITOR	
C614	ECJ2VC1H080C	CERAMIC CAPACITOR	
C615	ECJ2VC1H080C	CERAMIC CAPACITOR	
C616	ECA1CM101B	E 100UF, 16V	
C618	ECA1CM101B	E 100UF, 16V	
C619	ECA1CM101B	E 100UF, 16V	
C620	ECJ2VF1H683Z	C 0.068UF, Z, 50V	
C621	ECA1CM100B	E 10UF, 16V	
C622	ECA1CM101B	E 100UF, 16V	
C623	ECA1CM101B	E 100UF, 16V	
C626	ECA1CM101B	E 100UF, 16V	
C627	ECA1CM101B	E 100UF, 16V	
C628	ECA1AM471B	E 470UF, 10V	
C630	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C631	ECJ2VF1H683Z	C 0.068UF, Z, 50V	
C632	ECA1HM4R7B	E 4.7UF, 50V	
C633	ECJ2VC1H471J	C 470PF, J, 50V	
C634	ECJ2VC1H471J	C 470PF, J, 50V	
C635	ECA1CM101B	E 100UF, 16V	
C639	F1J1H104A578	CERAMIC CAPACITOR	
C640	F1J1H104A578	CERAMIC CAPACITOR	
C642	F1J1H104A578	CERAMIC CAPACITOR	
C644	F1J1H104A578	CERAMIC CAPACITOR	
C645	F1J1H104A578	CERAMIC CAPACITOR	
C646	F1J1H104A578	CERAMIC CAPACITOR	
C648	F1J1H104A578	CERAMIC CAPACITOR	
C649	F1J1H104A578	CERAMIC CAPACITOR	
C650	ECA1CM221B	E 220UF, 16V	
C652	F1J1H104A578	CERAMIC CAPACITOR	
C654	F1J1H104A578	CERAMIC CAPACITOR	
C655	F1J1H104A578	CERAMIC CAPACITOR	
C660	ECJ2VF1E104Z	C 0.1UF, Z, 25V	
C662	ECA0JM101B	E 100UF, 6.3V	
C670	F1J1H104A578	CERAMIC CAPACITOR	
C671	F1J1H104A578	CERAMIC CAPACITOR	
C672	F1J1H104A578	CERAMIC CAPACITOR	
C805	ECQB1H103JF	P 0.01UF, 50V	△
C806	ECKWAE472ZED	C 4700PF, Z, 500V	△
C807	ECKWAE472ZED	C 4700PF, Z, 500V	△
C808	ECKWAE472ZED	C 4700PF, Z, 500V	△

Ref. No.	Part No.	Part Name & Description	Remarks
C809	ECKWAE472ZED	C 4700PF, Z, 500V	△
C810	F2B2G2710010	ELECTROLYTIC CAPACITOR	
C811	ECQM4473JZ	P 0.047UF, J, 400V	
C815	ECKW3D151KBR	CERAMIC CAPACITOR	
C816	F2A1H3300037	ELECTROLYTIC CAPACITOR	
C819	ECA1HM010B	E 1UF, 50V	
C821	ECKW3D681KBP	C 680PF, K, 2KV	
C825	ECQB1H471JF	P 470PF, J, 50V	
C826	ECQB1H103JF	P 0.01UF, 50V	
C827	ECQV1H684JM	P 0.68UF, J, 50V	
C828	F1A2E681A002	CERAMIC CAPACITOR	
C829	F1A2E681A002	CERAMIC CAPACITOR	
C830	ECQB1H821KF	PLASTIC FILM CAPACITOR	
C835	ECKCNA472ME7	C 4700PF, M,	
C837	F1A2E152A001	CERAMIC CAPACITOR	
C838	ECQU2A224BN9	P 0.22UF, 250V	
C839	ECQU2A224BN9	P 0.22UF, 250V	
C840	F1A2E102A001	CERAMIC CAPACITOR	
C843	F2A1E102A223	ELECTROLYTIC CAPACITOR	
C849	F1B2H471A025	CERAMIC CAPACITOR	
C852	ECUX1H104KBX	C 0.1UF, K, 50V	
C859	ECKW3D821KBP	C 820PF, K, 2KV	
C860	ECUX1H104KBX	C 0.1UF, K, 50V	
C867	EEUED2C221E	ELECTROLYTIC CAPACITOR	
C869	ECJ2VB1E563K	CERAMIC CAPACITOR	
C870	F2A1C682A260	ELECTROLYTIC CAPACITOR	
C871	F1B2H471A025	CERAMIC CAPACITOR	
C872	F2A1C102A252	ELECTROLYTIC CAPACITOR	
C873	L6Y5P4B122K	C 1200PF, K, 500V	
C875	ECJ2VB1H332K	C 3300PF, K, 50V	
C876	ECJ2VB1H471K	C 470PF, K, 50V	
C877	ECA1CM100B	E 10UF, 16V	
C879	ECEA0JKA331	E 330UF, 6.3V	
C881	F1J1H104A717	CERAMIC CAPACITOR	
C883	ECUX1H104KBX	C 0.1UF, K, 50V	
C884	F2A1C1020060	ELECTROLYTIC CAPACITOR	
C885	F2A1C4710045	ELECTROLYTIC CAPACITOR	
C886	ECA1HM330B	E 33UF, 50V	
C887	ECA1CM102B	E 1000UF, 16V	
C888	ECUX1H104KBX	C 0.1UF, K, 50V	
C889	F2A1C4710045	ELECTROLYTIC CAPACITOR	
C891	ECA1CM101B	E 100UF, 16V	
C893	ECA1CM221B	E 220UF, 16V	
C898	ECUX1H104KBX	C 0.1UF, K, 50V	
	DIODES		
D1061	B3AGA0000089	DIODE	
D1132	MTZJ3.9A	ZENER DIODE	
D2103	MA723	DIODE	
D2104	MA723	DIODE	
D2107	B0AACK000004	DIODE	
D2108	B0AACK000004	DIODE	
D3141	MTZJ8.2C	ZENER DIODE	
D3142	MTZJ8.2C	ZENER DIODE	
D354	B0HAMP000067	DIODE	
D355	B0HAMP000067	DIODE	
D356	B0HAMP000067	DIODE	
D361	B0AACK000004	DIODE	
D362	B0AACK000004	DIODE	
D363	B0AACK000004	DIODE	
D364	B0AACK000004	DIODE	
D365	B0AACK000004	DIODE	
D366	B0AACK000004	DIODE	
D367	B0AACK000004	DIODE	
D402	B0HAJL000001	DIODE	
D503	B0AACK000004	DIODE	
D504	B0AACK000004	DIODE	
D507	B0ACMJ000001	DIODE	
D511	MA4108J	DIODE	
D512	B0HAJL000001	DIODE	
D513	EU02	DIODE	
D515	EU02	DIODE	
D520	MA152KTX	DIODE	
D552	EU02	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D556	ERB06-15	DIODE	
D557	B0HAMQ000001	DIODE	
D558	MA185	DIODE	
D560	B0EAKR000022	DIODE	
D601	B0ADCJ000015	DIODE	
D604	B0ACMJ000001	DIODE	
D803	B0EBNT000007	DIODE	
D810	B0EAKT000018	DIODE	
D817	B0HAJL000001	DIODE	
D820	MAZ20820A0LS	DIODE	
D821	MAZ20820A0LS	DIODE	
D823	B0AACK000004	DIODE	
D824	B0AACK000004	DIODE	
D825	MTZJ6.8C	ZENER DIODE	
D830	B0HAJL000001	DIODE	
D831	B0BA02700033	DIODE	
D835	ERZV10V621CS	VARISTOR	
D841	B0ACCK000005	DIODE	
D848	FMLG12S	DIODE	
D862	MTZJ5.6A	ZENER DIODE	
D863	B0HAJL000001	DIODE	
D865	MTZJ3.6A	ZENER DIODE	
D866	FMGG2CSLF665	DIODE	
D867	B0AACK000004	DIODE	
D868	B0AACK000004	DIODE	
D872	B0HAMM000108	DIODE	
D873	B0AACK000004	DIODE	
D876	B0AACK000004	DIODE	
D881	MTZJ16A	ZENER DIODE	
D882	MTZJ16A	ZENER DIODE	
D883	B0JAPK000013	DIODE	
D887	B0AACK000004	DIODE	
	INTEDGRATED CIRCUITS		
IC1101	TVR4GAS397	EEPROM IC	
IC1801	C5AB00000022	IC	△
IC1802	C0DBZGB00017	IC, POWER SUPPLY	
IC2301	C0ZAZ0000164	IC	
IC351	TDA6107JF/N3	IC	
IC451	AN15525A	IC	
IC601	TVR4G12-4	FLASH MEMORY IC	
IC605	C0ZAZ0000162	IC	
IC801	C5HABZZ00116	IC, POWER SUPPLY	
IC802	C0EAS0000026	IC	
IC851	C0DAAHF00005	IC, POWER SUPPLY	
IC857	C0DBAGD00036	IC, POWER SUPPLY	
IC860	B3PAA0000261	PHOTO COUPLER	△
IC871	C0CAABE00009	IC	
IC875	C0DBAFD00017	IC, POWER SUPPLY	
	COILS		
L002	G0C100K00008	COIL	
L101	G0CR68KA0030	PEAKING COIL	
L102	TALV35VB8R2K	PEAKING COIL	
L1061	G0C331KA0073	PEAKING COIL	
L1801	EXC3BB221H	CHIP BEAD CORE	
L1802	EXC3BB221H	CHIP BEAD CORE	
L1810	EXC3BB221H	CHIP BEAD CORE	
L1811	EXC3BB221H	CHIP BEAD CORE	
L1820	EXC3BB221H	CHIP BEAD CORE	
L1821	EXC3BB221H	CHIP BEAD CORE	
L1830	J0JKB0000038	COIL	
L1831	J0JKB0000038	COIL	
L2301	J0JKA0000038	BEAD CORE	
L2302	J0JKA0000038	BEAD CORE	
L2304	J0JKA0000038	BEAD CORE	
L2306	J0JKA0000038	BEAD CORE	
L2307	EXCELSA35T	BEAD CORE	
L2323	J0JKA0000038	BEAD CORE	
L2324	J0JKA0000038	BEAD CORE	
L301	G0C4R7KA0065	PEAKING COIL	
L376	EXCELSA39V	BEAD CORE	
L412	J0JKA0000024	EMI FILTER	
L550	J0JKB0000034	EMI FILTER	

Ref. No.	Part No.	Part Name & Description	Remarks
L554	G0A682AA0006	PEAKING COIL	
L557	G0D820000005	LINEARITY COIL	
L561	J0JKB0000034	EMI FILTER	
L601	G0C4R7JA0055	PEAKING COIL	
L602	G0C100K00008	COIL	
L603	G0C4R7JA0055	PEAKING COIL	
L604	G0C100K00008	COIL	
L605	TALV35VB5R6K	PEAKING COIL	
L606	G0C100K00008	COIL	
L607	G0A3R3HA0011	CHOKE COIL	
L608	G0C4R7JA0055	PEAKING COIL	
L609	G0C100K00008	COIL	
L610	TALV35VB8R2K	PEAKING COIL	
L611	G0C4R7JA0055	PEAKING COIL	
L625	EXCELSA35T	BEAD CORE	
L630	TSK1032	BEAD CORE	
L635	TSK1032	BEAD CORE	
L820	J0JKA0000025	BEAD CORE	
L841	J0JKA0000038	BEAD CORE	
L845	J0JKA0000023	BEAD CORE	
L865	J0JKA0000025	BEAD CORE	
L866	J0JKA0000023	BEAD CORE	
L867	J0JKB0000039	EMI FILTER	
L893	G0C100K00008	COIL	
L894	G0C100K00008	COIL	
	TRANSISTORS		
Q101	2SC2480TX	TRANSISTOR	
Q1060	B1ADCE000012	TRANSISTOR	
Q1061	B1ADCE000012	TRANSISTOR	
Q1062	2SD0601A0L	TRANSISTOR	
Q2101	B1ADCE000012	TRANSISTOR	
Q301	XN0450100L	TRANSISTOR	
Q302	XN0450100L	TRANSISTOR	
Q303	XN0450100L	TRANSISTOR	
Q304	B1ADCE000012	TRANSISTOR	
Q305	B1ADCE000012	TRANSISTOR	
Q306	B1ADCE000012	TRANSISTOR	
Q354	B1ADCE000012	TRANSISTOR	
Q360	2SA17670Q	TRANSISTOR	
Q361	2SA17670Q	TRANSISTOR	
Q362	2SA17670Q	TRANSISTOR	
Q501	2SC4212H	TRANSISTOR	
Q520	2SB0792A0L	TRANSISTOR	
Q551	2SC5902000LK	TRANSISTOR	
Q603	2SD0601A0L	TRANSISTOR	
Q604	2SD0601A0L	TRANSISTOR	
Q605	2SD0601A0L	TRANSISTOR	
Q608	2SD0601A0L	TRANSISTOR	
Q610	B1ADCE000012	TRANSISTOR	
Q660	XN0450100L	TRANSISTOR	
Q665	B1ADCE000012	TRANSISTOR	
Q841	B1ABCF000176	TRANSISTOR	
Q842	B1ABCF000176	TRANSISTOR	
Q850	B1BCCM000002	TRANSISTOR	
Q853	2SD0601A0L	TRANSISTOR	
Q857	2SC54190QA	TRANSISTOR	
Q870	B1ADCE000012	TRANSISTOR	
	RESISTORS		
R001	ERJ6GEYJ101	M 1000HM, J, 1/10W	
R002	ERJ6GEYJ101	M 1000HM, J, 1/10W	
R003	ERJ6GEYJ153	M 15KOHM, J, 1/10W	
R005	ERJ6GEYJ512	M 5.1KOHM, J, 1/10W	
R006	ERJ6GEYJ473	M 47KOHM, J, 1/10W	
R007	ERJ6GEYJ682	M 6.8KOHM, J, 1/10W	
R008	ERJ6GEY0R00	M 00HM, J, 1/10W	
R010	ERJ6GEYJ101	M 1000HM, J, 1/10W	
R101	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R102	ERJ6GEYJ222	M 2.2KOHM, J, 1/10W	
R1026	ERJ6ENF2211	FIXED RESISTOR	
R1027	ERJ6ENF3241	M3.24KOHM, 1/10W	
R1028	ERJ6ENF5111	FIXED RESISTOR	
R1029	ERJ6ENF9091	M9.09KOHM, 1/10W	
R103	ERJ6GEYJ201	FIXED RESISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
R1030	ERJ6ENF2152	M21.5KOHM, 1/10W	
R1031	ERJ6ENF2321	FIXED RESISTOR	
R104	ERJ6GEYJ121	M 120OHM, J, 1/10W	
R1061	ERJ6GEYJ621	M 620OHM, J, 1/10W	
R1062	ERDS2TJ102	C 1KOHM, J, 1/4W	
R1063	ERJ6GEYJ152	M 1.5KOHM, J, 1/10W	
R1064	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R1065	ERJ6GEYJ121	M 120OHM, J, 1/10W	
R1066	ERJ6GEYJ152	M 1.5KOHM, J, 1/10W	
R1068	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R107	ERJ6GEYJ202	M 2KOHM, J, 1/10W	
R108	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R1105	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R1106	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R1108	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1109	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R1112	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R1114	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1115	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1116	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R1123	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R1124	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R1131	ERJ6GEYJ220	M 220HM, J, 1/10W	
R1132	ERJ6GEYJ220	M 220HM, J, 1/10W	
R1140	ERJ6ENF1002	M 10KOHM, 1/10W	
R1142	ERJ6ENF1001	M 1KOHM, 1/10W	
R1150	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R1201	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R1202	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R1228	ERJ6GEYJ220	M 220HM, J, 1/10W	
R1229	ERJ6GEYJ220	M 220HM, J, 1/10W	
R1820	ERJ6GEYJ470	M 470HM, J, 1/10W	
R1821	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1822	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1831	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1832	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1833	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1834	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1835	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1836	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R1840	ERJ6GEYJ220	M 220HM, J, 1/10W	
R2110	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R2112	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R2113	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	
R2317	ERJ6GEYJ622	M 6.2KOHM, J, 1/10W	
R2318	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R2319	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R2321	ERJ6GEYJ104	M 100KOHM, J, 1/10W	
R2322	ERJ6GEYJ104	M 100KOHM, J, 1/10W	
R2325	ERDS2TJ2R2	C 2.20HM, J, 1/4W	
R2326	ERDS2TJ2R2	C 2.20HM, J, 1/4W	
R2328	ERDS2TJ2R2	C 2.20HM, J, 1/4W	
R2329	ERDS2TJ2R2	C 2.20HM, J, 1/4W	
R253	ERJ6GEYJ751	M 750OHM, J, 1/10W	
R255	ERJ6GEYJ751	M 750OHM, J, 1/10W	
R256	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R257	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R3002	ERJ6GEYJ750	M 750HM, 1/10W	
R3003	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R3004	ERJ6GEYJ153	M 15KOHM, J, 1/10W	
R3005	ERJ6GEYJ750	M 750HM, 1/10W	
R3006	ERJ6GEYJ750	M 750HM, 1/10W	
R3007	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R3008	ERJ6GEYJ153	M 15KOHM, J, 1/10W	
R3009	ERJ6GEYJ750	M 750HM, 1/10W	
R301	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R3010	ERJ6GEYJ750	M 750HM, 1/10W	
R3011	ERJ6GEYJ750	M 750HM, 1/10W	
R302	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R3021	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R3022	ERJ6GEYJ153	M 15KOHM, J, 1/10W	
R3023	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R3024	ERJ6GEYJ153	M 15KOHM, J, 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R3026	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R303	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R304	ERJ6GEYJ240	FIXED RESISTOR	
R305	ERJ6GEYJ240	FIXED RESISTOR	
R306	ERJ6GEYJ240	FIXED RESISTOR	
R307	ERJ6GEYJ681	M 680OHM, J, 1/10W	
R308	ERJ6GEYJ681	M 680OHM, J, 1/10W	
R309	ERJ6GEYJ681	M 680OHM, J, 1/10W	
R310	D0AE181JA046	CARBON FILM RESISTOR	
R3101	ERJ6GEYJ470	M 470HM, J, 1/10W	
R3102	ERJ6GEYJ470	M 470HM, J, 1/10W	
R311	D0AE181JA046	CARBON FILM RESISTOR	
R3110	ERJ6GEYJ221	M 220OHM, J, 1/10W	
R3111	ERJ6GEYJ221	M 220OHM, J, 1/10W	
R312	D0AE181JA046	CARBON FILM RESISTOR	
R3140	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R3142	ERJ6GEYJ221	M 220OHM, J, 1/10W	
R3144	ERJ6GEYJ221	M 220OHM, J, 1/10W	
R3152	ERJ6GEYJ153	M 15KOHM, J, 1/10W	
R3153	ERJ6GEYJ153	M 15KOHM, J, 1/10W	
R317	ERJ6GEYJ151	M 150OHM, J, 1/10W	
R318	ERJ6GEYJ151	M 150OHM, J, 1/10W	
R319	ERJ6GEYJ151	M 150OHM, J, 1/10W	
R3247	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R3250	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R351	ERJ6GEYJ471	M 470OHM, J, 1/10W	
R352	ERJ6GEYJ471	M 470OHM, J, 1/10W	
R353	ERJ6GEYJ471	M 470OHM, J, 1/10W	
R363	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R364	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R365	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R366	ERDS1TJ152	C 1.5KOHM, J, 1/2W	
R367	ERDS1TJ152	C 1.5KOHM, J, 1/2W	
R368	ERDS1TJ152	C 1.5KOHM, J, 1/2W	
R369	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R372	ERQ12AJ121P	FUSE RESISTOR	
R381	ERJ6GEYJ121	M 120OHM, J, 1/10W	
R385	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R401	ERDS2TJ104	C 100KOHM, J, 1/4W	
R403	ERJ6GEYJ563	M 56KOHM, J, 1/10W	
R404	ERJ6GEYJ183	M 18KOHM, J, 1/10W	
R405	ERJ6GEYJ563	M 56KOHM, J, 1/10W	
R406	ERDS1TJ1R5	C 1.50HM, J, 1/2W	
R407	ERDS1TJ221	C 220OHM, J, 1/2W	
R413	ERJ6GEYJ183	M 18KOHM, J, 1/10W	
R416	ERDS1TJ2R2	C 2.20HM, J, 1/2W	
R417	ERDS1TJ2R2	C 2.20HM, J, 1/2W	
R451	ERJ6GEYJ223	M 22KOHM, J, 1/10W	
R453	ERJ6GEY0R00	M 0OHM, J, 1/10W	
R501	ERJ6GEYJ273	M 27KOHM, J, 1/10W	
R502	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R504	ERG2SJS332H	METAL OXIDE FILM RESISTOR	
R507	ERJ6GEYJ561	M 560OHM, J, 1/10W	
R508	ERG3FJ152H	M 1.5KOHM, J, 3W	
R509	ERG3FJ182H	M 1.8KOHM, J, 3W	
R511	ERJ6ENF1002	M 10KOHM, 1/10W	
R512	ERJ6ENF1212	FIXED RESISTOR	
R513	ERQ14AJ100E	F 100HM, J, 1/4W	
R514	ERX12SJR56P	M 0.560HM, 1/2W	
R515	ERX12SJR56P	M 0.560HM, 1/2W	
R518	D0DK5R6JA019	WIRE WOUND RESISTOR	
R522	ERJ6GEYJ623	FIXED RESISTOR	
R523	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R524	ERJ6GEYJ104	M 100KOHM, J, 1/10W	
R525	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	
R551	ERQ1CJP151S	FUSE RESISTOR	
R552	ERG1SJ102P	M 1KOHM, J, 1W	
R553	ERJ6GEYJ183	M 18KOHM, J, 1/10W	
R555	ERQ14AJ2R0P	F 2.00HM, J, 1/4W	
R557	ER050CHF6802	METAL FILM RESISTOR	
R559	ERQ1CJP2R7S	FUSE RESISTOR	
R569	ERJ6GEYJ563	M 56KOHM, J, 1/10W	
R580	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R601	ERJ6GEYJ470	M 470HM, J, 1/10W	
R602	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R604	ERJ6GEYJ470	M 470HM, J, 1/10W	
R605	ERJ6GEYJ470	M 470HM, J, 1/10W	
R606	ERJ6GEYJ752	M 7.5KOHM, J, 1/10W	
R607	ERJ6GEYJ752	M 7.5KOHM, J, 1/10W	
R608	ERJ6GEYJ470	M 470HM, J, 1/10W	
R609	ERJ6GEY0R00	M 00HM, J, 1/10W	
R611	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R614	ERJ6GEYJ221	M 220OHM, J, 1/10W	
R615	ERJ6GEYJ122	M 1.2KOHM, J, 1/10W	
R616	ERJ6GEYJ563	M 56KOHM, J, 1/10W	
R618	ERJ6GEY0R00	M 00HM, J, 1/10W	
R619	ERJ6GEYJ332	M 3.3KOHM, J, 1/10W	
R620	ERJ6ENF1002	M 10KOHM, 1/10W	
R621	ERJ6ENF2002	M 20KOHM, 1/10W	
R624	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R625	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R626	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R628	ERJ6GEYJ823	M 82KOHM, J, 1/10W	
R629	ERJ6GEY0R00	M 00HM, J, 1/10W	
R632	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	
R634	ERJ6GEYJ151	M 150OHM, J, 1/10W	
R635	ERJ6GEYJ151	M 150OHM, J, 1/10W	
R637	ERJ6ENF1052	FIXED RESISTOR	
R638	ERJ6GEY0R00	M 00HM, J, 1/10W	
R640	ERJ6GEYJ471	M 470OHM, J, 1/10W	
R644	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R645	ERJ6GEYJ122	M 1.2KOHM, J, 1/10W	
R646	ERJ6GEYJ183	M 18KOHM, J, 1/10W	
R647	ERJ6GEYJ750	M 750HM, 1/10W	
R655	ERJ6GEYJ102	M 1KOHM, J, 1/10W	
R656	ERJ6GEYJ561	M 560OHM, J, 1/10W	
R657	ERJ6GEYJ272	M 2.7KOHM, J, 1/10W	
R658	ERJ6GEYJ470	M 470HM, J, 1/10W	
R659	ERJ6GEYJ470	M 470HM, J, 1/10W	
R660	ERJ6GEYJ470	M 470HM, J, 1/10W	
R662	ERJ6GEYJ221	M 220OHM, J, 1/10W	
R663	ERJ6GEYJ470	M 470HM, J, 1/10W	
R670	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R671	ERJ6GEYJ101	M 100OHM, J, 1/10W	
R701	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R801	D0D72R2KA002	WIRE WOUND RESISTOR	⚠
R810	ERG2FJ470H	M 470HM, J, 2W	
R811	ERG2SJS104H	M 100KOHM, J, 2W	
R817	ERG1SJ100P	M 100HM, J, 1W	
R820	ERX12SJR27E	M 0.270HM, J, 1/2W	
R821	ERX12SJR27E	M 0.270HM, J, 1/2W	
R822	ERG2FJ104H	METAL OXIDE FILM RESISTOR	
R824	ERDS2TJ152	C 1.5KOHM, J, 1/4W	
R825	ERDS2TJ102	C 1KOHM, J, 1/4W	
R830	ERDS2TJ181	C 180OHM, J, 1/4W	
R831	ERDS2TJ243	C 24KOHM, J, 1/4W	
R837	ERG2FJ100H	M 100HM, J, 2W	
R840	ERD75TAJ825	C 8.2MOHM, J, 3/4W	
R842	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R843	ERJ6GEY0R00	M 00HM, J, 1/10W	
R844	ERJ6GEY0R00	M 00HM, J, 1/10W	
R845	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R846	ERJ6GEYJ470	M 470HM, J, 1/10W	
R849	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R850	ERG3SJS470H	METAL OXIDE FILM RESISTOR	
R851	ERDS2TJ104	C 100KOHM, J, 1/4W	
R852	ERDS2TJ472	C 4.7KOHM, J, 1/4W	
R854	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R855	ERJ6GEYJ222	M 2.2KOHM, J, 1/10W	
R862	ERDS2TJ152	C 1.5KOHM, J, 1/4W	
R863	ERDS2TJ101	C 100OHM, J, 1/4W	
R864	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
R866	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	
R868	ERDS1TJ221	C 220OHM, J, 1/2W	
R882	ERJ6GEYJ332	M 3.3KOHM, J, 1/10W	
R883	ERX3FJ3R3H	METAL FILM RESISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
R884	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	
R885	ERJ6GEYJ752	M 7.5KOHM, J, 1/10W	
R886	ERJ6GEYJ433	M 43KOHM, J, 1/10W	
R887A	ERG1SJ273P	M 27KOHM, J, 1W	
R888	ERJ6GEYJ103	M 10KOHM, J, 1/10W	
	TRANSFORMERS		
T551A	ZTFP12501A	FLYBACK TRANS	⚠
T553	ETH19Y210AZ	H DRIVE TRANS	⚠
T801	G4D3Z0000013	SWITCHING TRANS	⚠
	OTHERS		
A2	K1KA13A00140	CONNECTOR	
A4	K1KA04AA0190	CONNECTOR	
A5	K1KA04AA0190	CONNECTOR	
A8	K1KA04AA0093	CONNECTOR	
CF836	TAP4GA0005	POSISTOR	⚠
F840	K5D402BK0004	FUSE	⚠
JA1	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA10	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA11	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA12	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA13	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA14	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA15	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA16	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA17	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA18	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA19	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA2	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA20	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA21	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA22	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA23	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA25	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA26	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA27	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA28	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA29	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA3	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA30	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA4	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA40	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA41	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA42	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA6	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA7	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA8	ERJ6GEY0R00	M 00HM, J, 1/10W	
JA9	ERJ6GEY0R00	M 00HM, J, 1/10W	
JK3002	K4BK10B00003	REAR AV TERMINAL	
JK3003	K4BK10B00004	REAR AV TERMINAL	
JK3201	K4BC14B00004	FRONT AV TERMINAL	
JS101	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS2311	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS2312	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS2315	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3043	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3044	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3045	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3046	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3132	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3133	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3142	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3147	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS3148	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS612	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS670	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS843	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS846	ERJ6GEY0R00	M 00HM, J, 1/10W	
JS853	ERJ6GEY0R00	M 00HM, J, 1/10W	
L2	K1KA13A00140	CONNECTOR	
L3	K1KA04AA0190	CONNECTOR	
L5	K1Z200001312	CONNECTOR	
LF1810	J0HADK000001	EMI FILTER	
LF830A	ELF21V012S	LINE FILTER	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
RL801	K6B1CDA00029	RELAY	⚠
RM1062	B3RAC0000013	REMOCON RECEIVER	
SC351	K3B122A00001	CRT SOCKET	⚠
SW1011	EVQ11G05R	SWITCH	
SW1012	EVQ11G05R	SWITCH	
SW1013	EVQ11G05R	SWITCH	
SW1014	EVQ11G05R	SWITCH	
SW1015	EVQ11G05R	SWITCH	
SW1016	EVQ11G05R	SWITCH	
SW840	ESB92DA1B	SWITCH	⚠
T601	TSK1040	BEAD CORE	
TU001	ENV59K01G3RF	TUNER	⚠
X1801	H0D202500004	CRYSTAL OSC	
X601	H0D202500002	CRYSTAL OSC	
XF101	J0C3525A0002	DELAY LINE	⚠