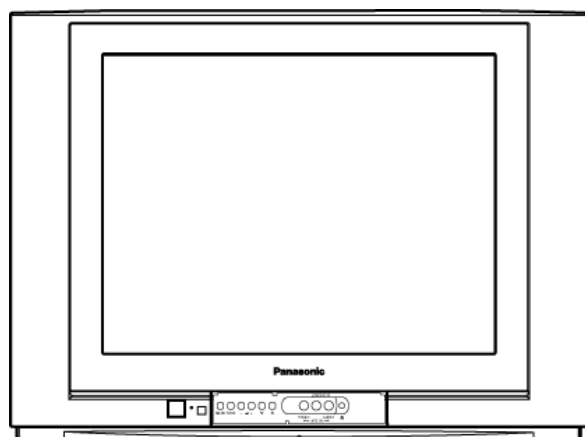


Service Manual

Colour Television



TC-29EG20TS

GP41 Chassis

Specification

Power Source	AC SINGLE 220-240 V, 50/60 Hz	Intermediate Frequency	38.0 MHz
Power Consumption	98 W	Video	31.5 MHz (D, K) / 32.5 MHz (B, G)
	Standby condition : 2 W		32.0 MHz (I) / 32.5 MHz (M)
Aerial Terminal	Impedance : 75Ω, Coaxial type	Sound	33.57 MHz (PAL) /
Tuning System	Frequency Synthesizer	Colour	33.6 MHz (SECAM)
	Auto Search Tuning		34.42 MHz (NTSC) /
	Pos : 100 Positions		33.75 MHz (SECAM)
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	31.0 (±1) at zero
UHF BAND	21-69 (PAL G, H, I/SECAM G, K, K1)		beam current
	28-69 (PAL B AUST.)	Picture Tube	A68LZU185X Type 29 (67.6 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)	786 mm x 508 mm x 578 mm
	1-125 (U.S.A. CATV)	Weight (Mass)	43 kg (Net)
	C13-C49 (JAPAN)		
	S21-S41 (HYPER)		
	Z1-Z37 (CHINA)		
	5A, 9A (AUST)		

Note:

Specifications are subject to change without notice. Mass and dimensions shown are approximate.

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.

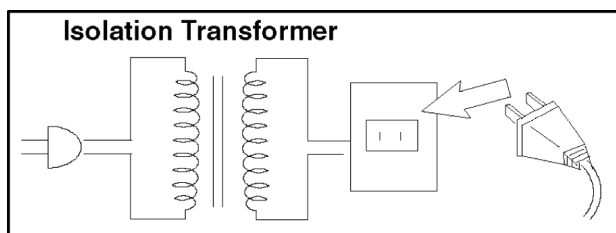


Fig. 1

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 **32kV** 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.

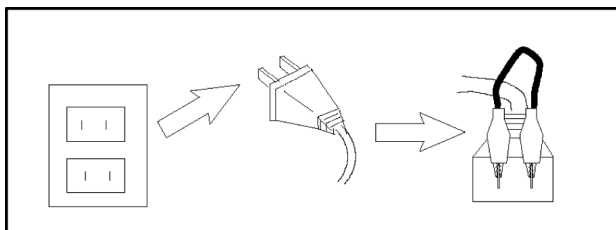


Fig. 2

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, aerals, 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.

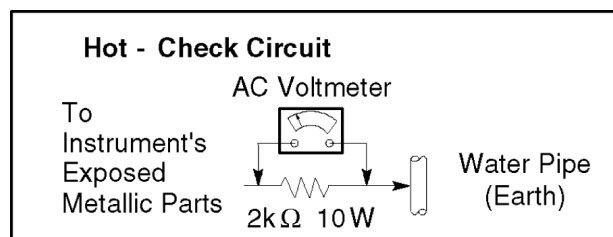


Fig. 3

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.

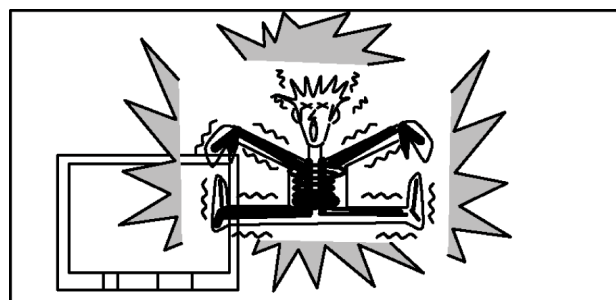


Fig. 4

1.4. X-Radiation

Warning :

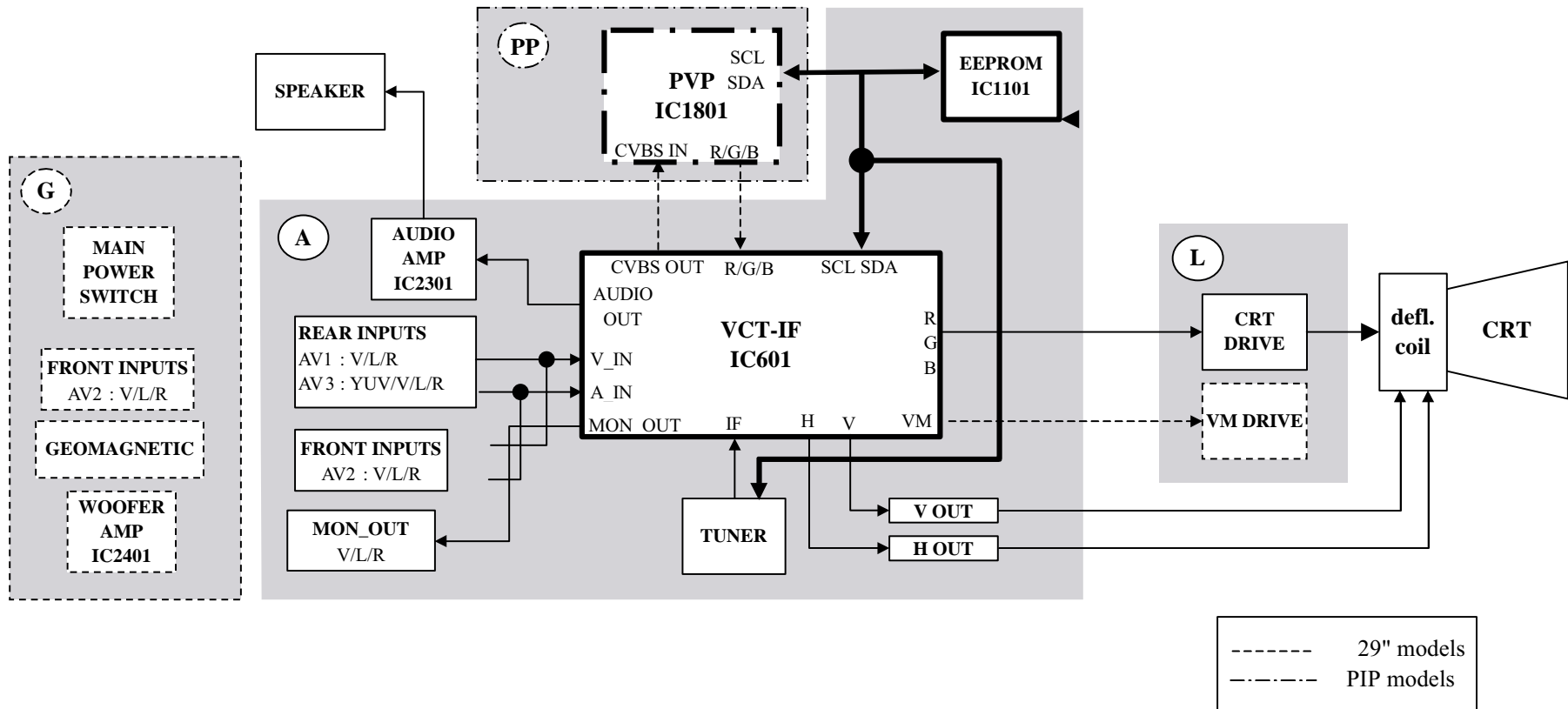
1. The potential sources of X-Radiation in TV sets are the EHT section and the picture tube.
2. When using a picture tube test rig for service, ensure that the rig is capable of handling **30 kV** without causing X-Radiation.

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 **31.0 ± 1.0kV**. 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.

1.5. GP41 Block Diagram

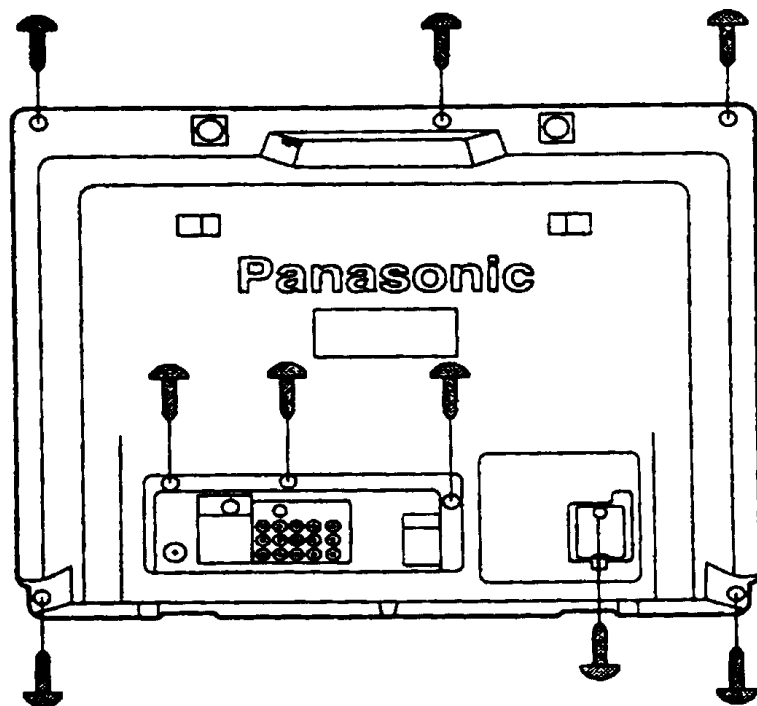
GP41 CHASSIS BLOCK DIAGRAM



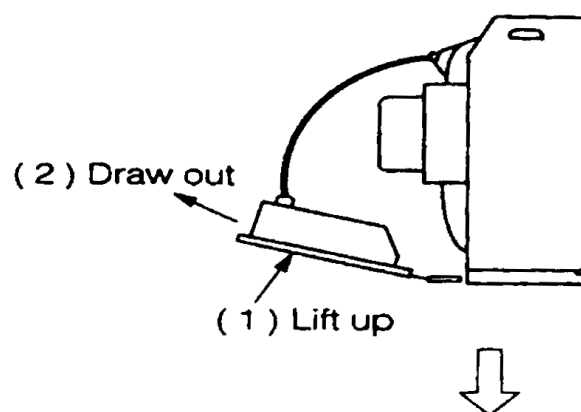
2 Service Hints

2.1. HOW TO MOVE CHASSIS INTO SERVICE POSITION.

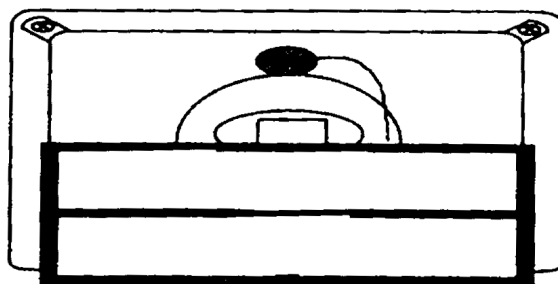
1. Remove 9 screws.



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 : $3.35 \pm 0.2V$
 TPA 16 : $141 \pm 2V$
 TPA 17 : $8.2 \pm 0.3V$
 TPA 18 : $1.9 \pm 0.2V$
 TPA 19 : $5.2 \pm 0.2V$
 TPA 20 : $220 \pm 15V$

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.

4.1.3. NTSC TINT COLOUR

Item / preparation

1. Connect oscilloscope probe to TPL1 (R OUT) with 10k Ω 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.

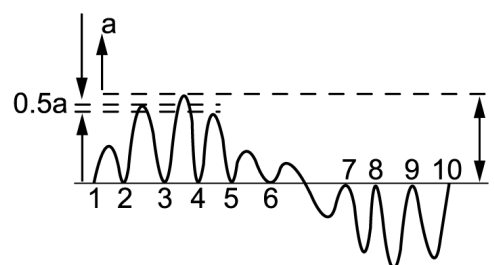
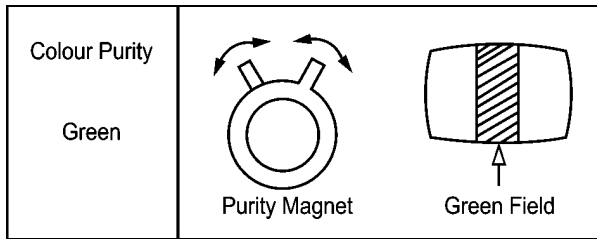


Fig. 3

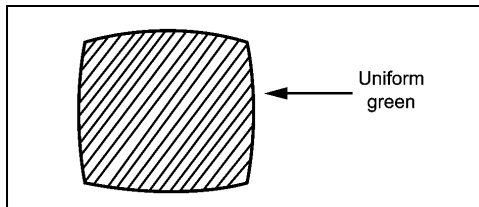
4.2. COLOUR PURITY

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.

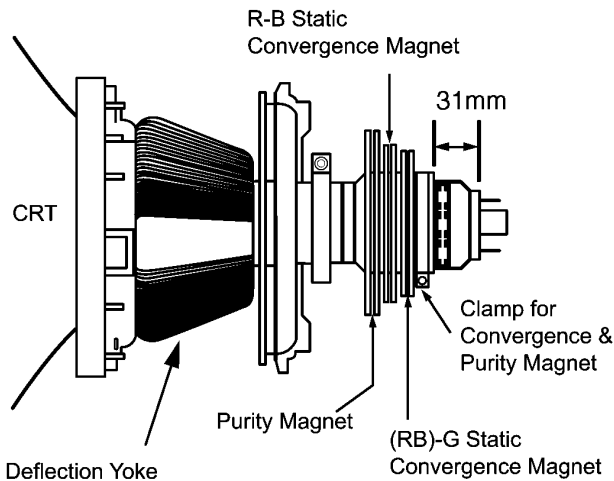
7. Adjust the purity magnet so that a vertical green field is obtained at the center of the screen.



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

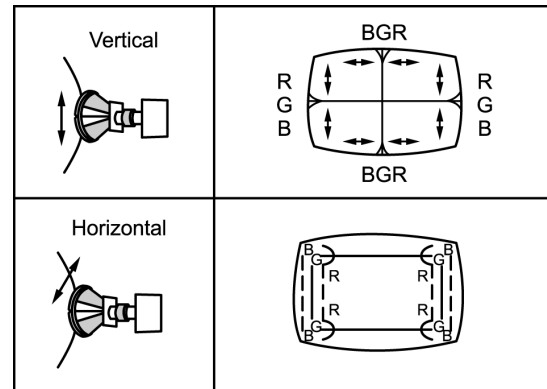


9. Adjust roughly the Low Light controls and make sure that a uniform white field is obtained.
10. Tighten the clamp screw.



by rotating (RB)-G static convergence magnet.

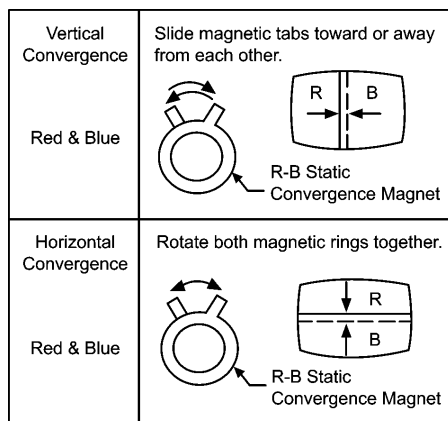
5. Lock convergence magnets with silicone sealer.
6. Remove the DY wedges and slightly tilt the Deflection Yoke vertically.



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

4.3. 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.



4. Adjust Red and Blue with Green line at center of the screen

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.

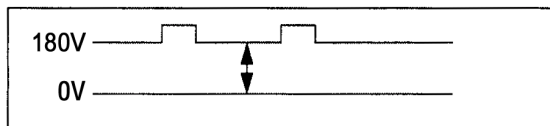
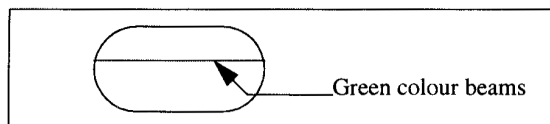


Fig. 1

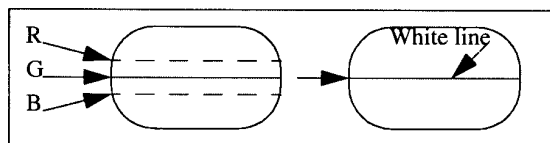
3. Slowly turn the screen control clockwise until a green colour horizontal line appears on the picture tube. This is the setting point for the screen control.

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.

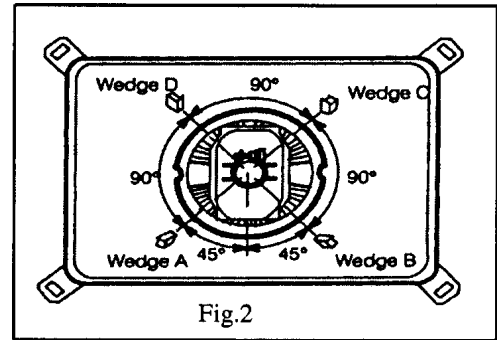


Fig.2

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

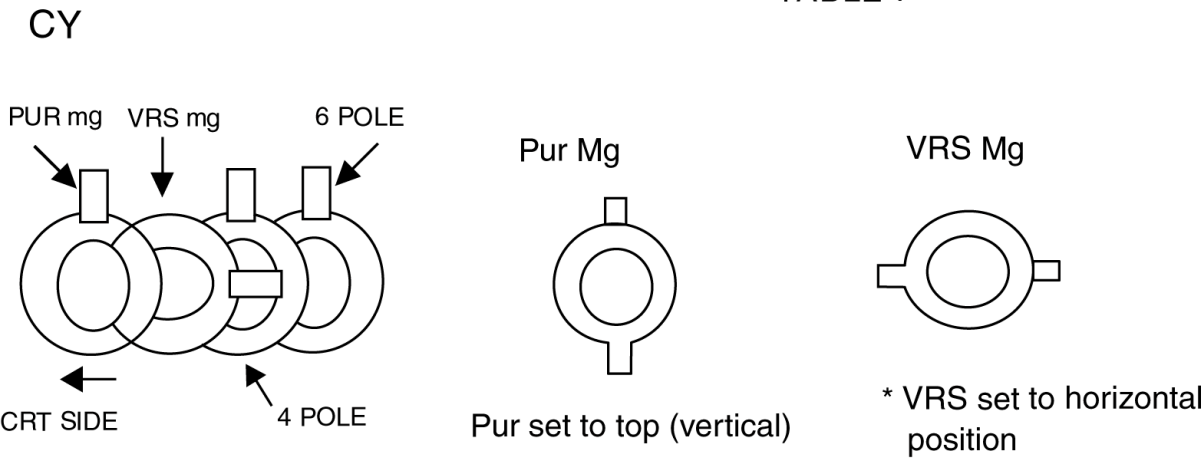


FIG 3

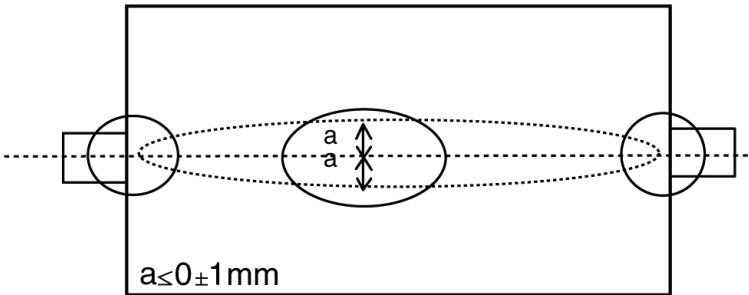
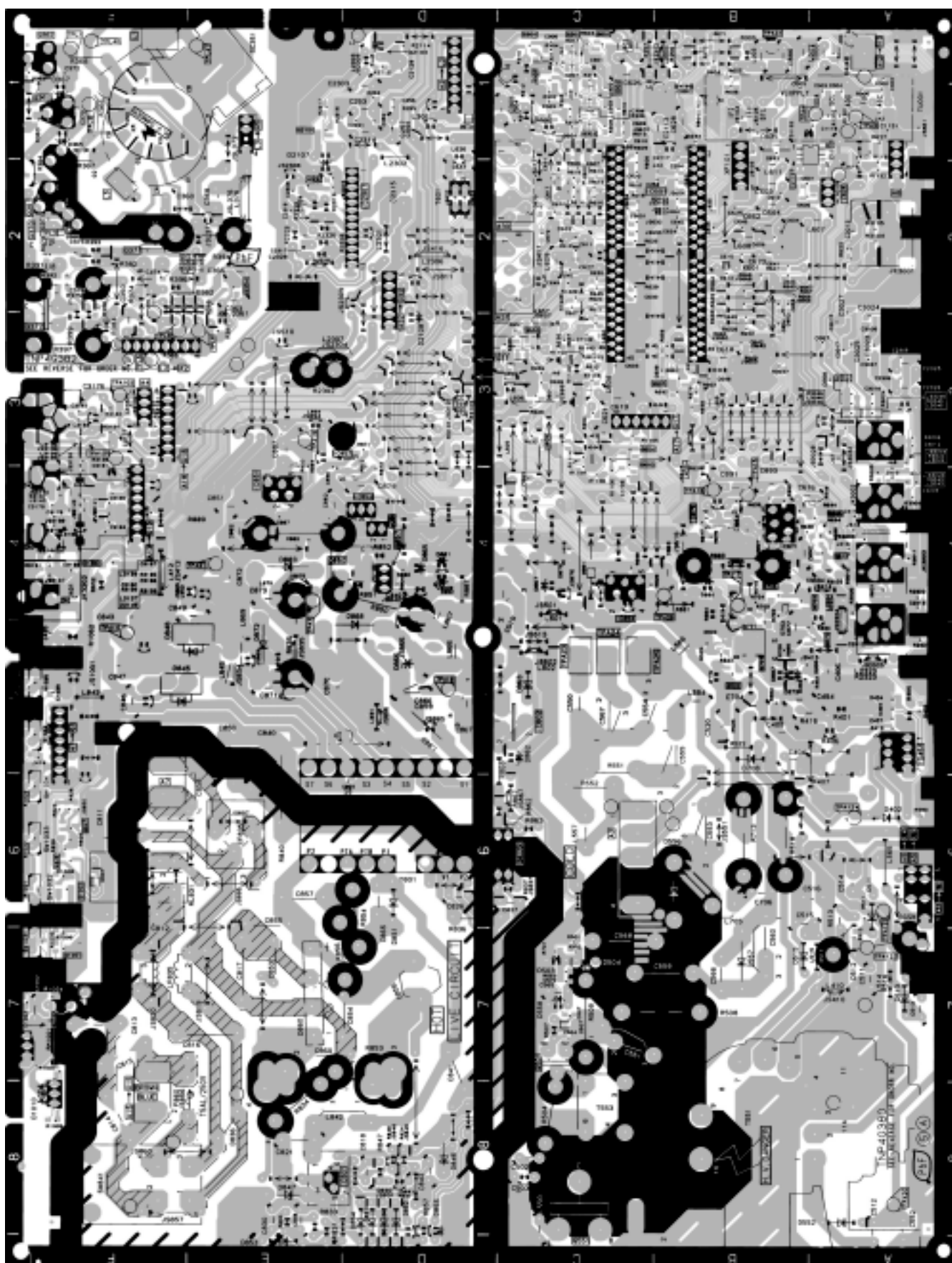


FIG 4

5 Conductor Views

5.1. A 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	$\text{---} \text{H} \text{---}$: Electrolytic
\textcircled{M}	: Polyester	$\text{NP} \text{---} \text{H} \text{---}$: Bipolar
\textcircled{m}	: Metalized Polyester	\textcircled{T}	: Dipped Tantalum
\boxtimes	: Polypropylene	\textcircled{Z}	: Z-Type

3. Coil

Unit of inductance is μ F, unless otherwise noted.

4. Test Point

\bigcirc : Test Point position

5. Earth Symbol

$\text{---} \text{H} \text{---}$: 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.

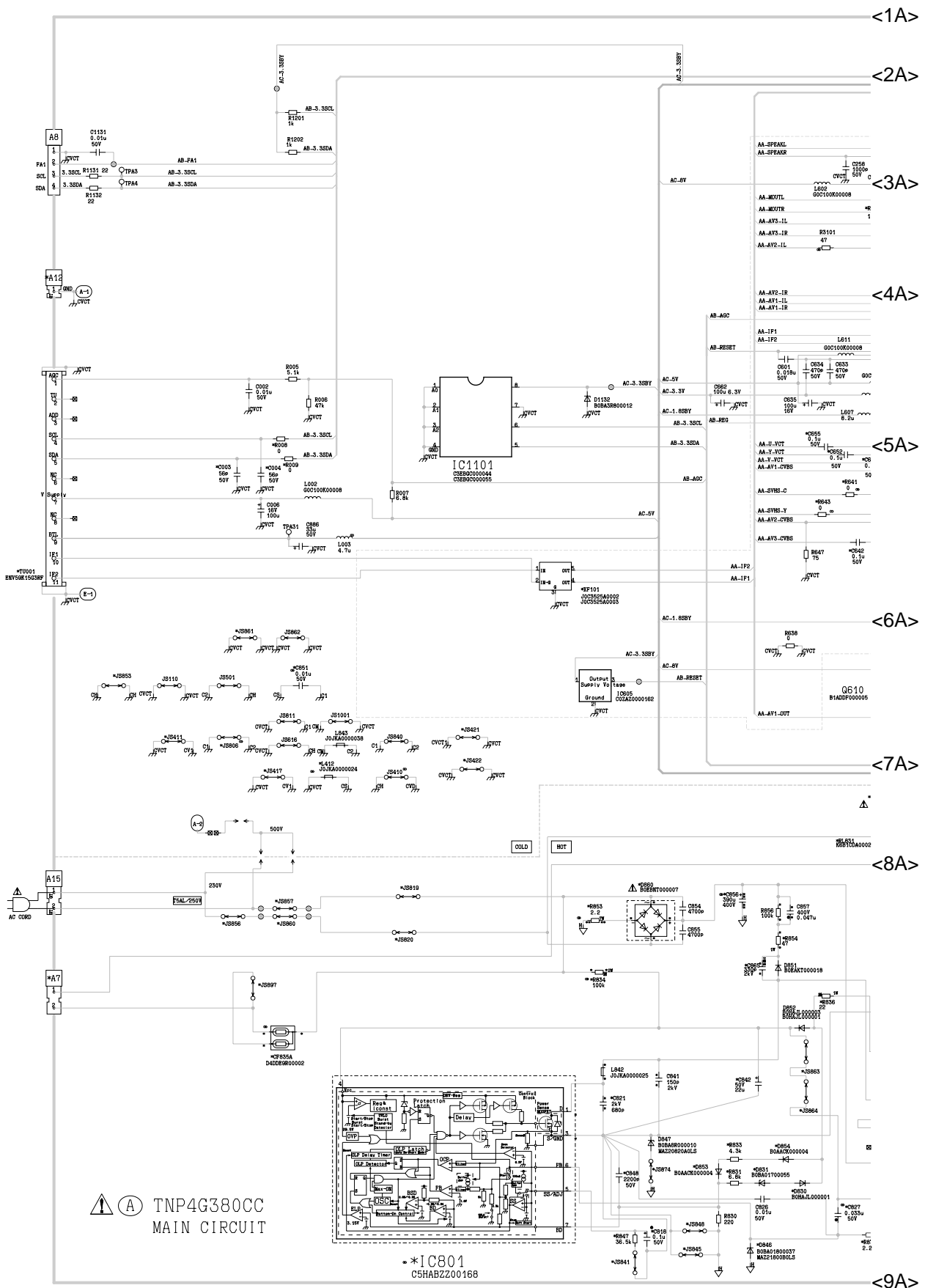
All circuits, except the Power Circuit, are cold.

Precautions

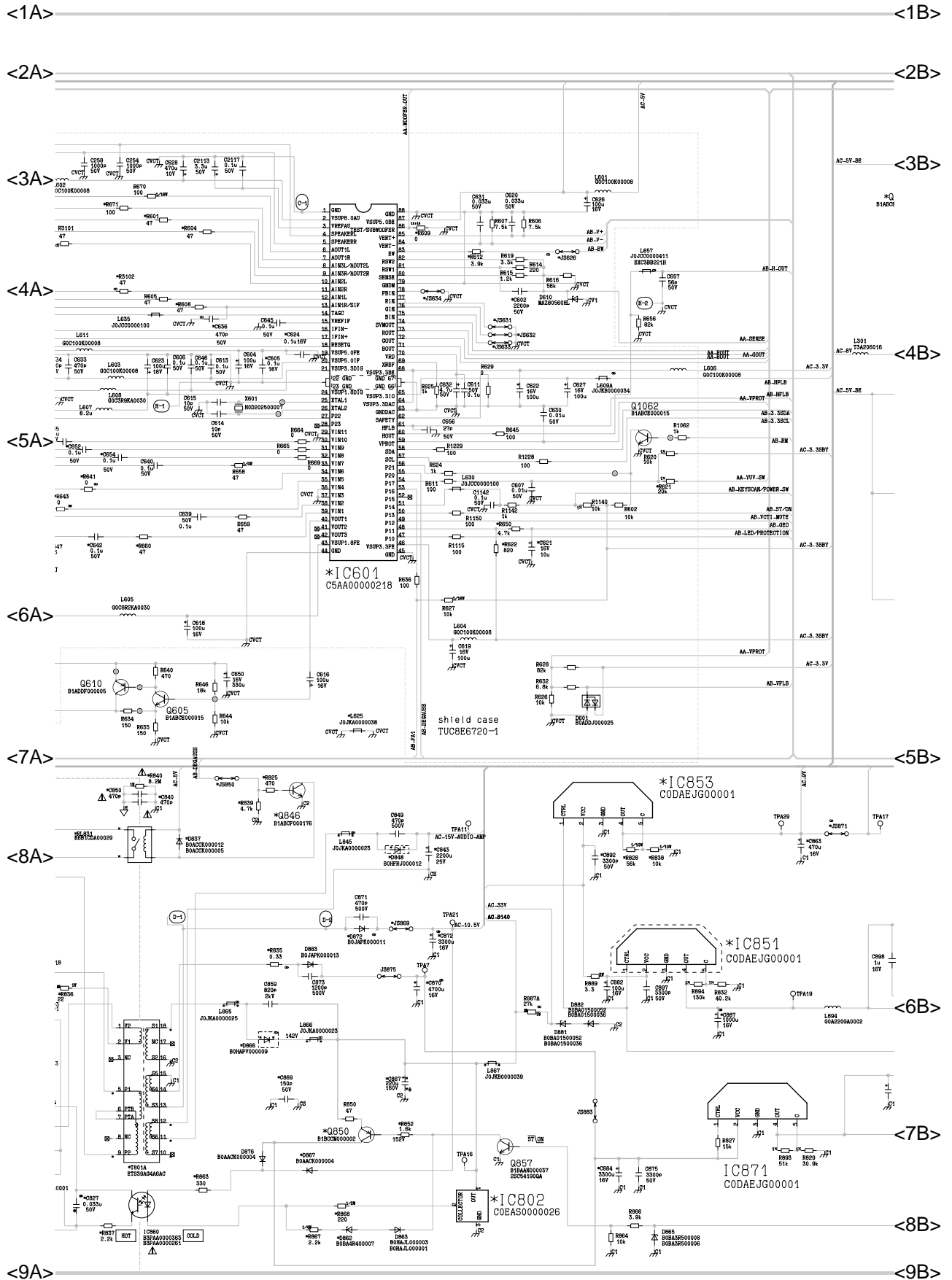
- a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
 - b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
 - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a 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. A Board

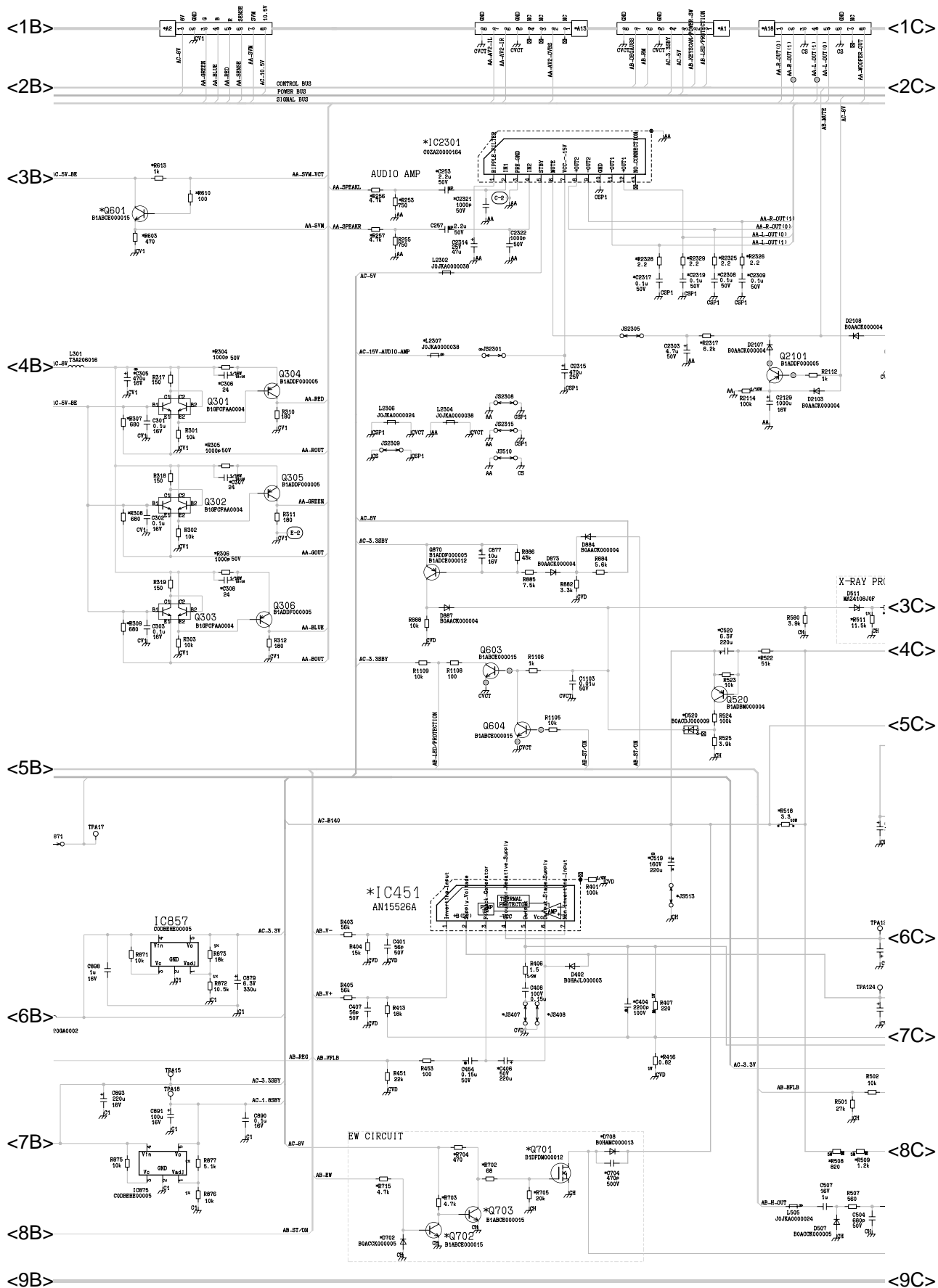
6.2.1. A Board (1/5)



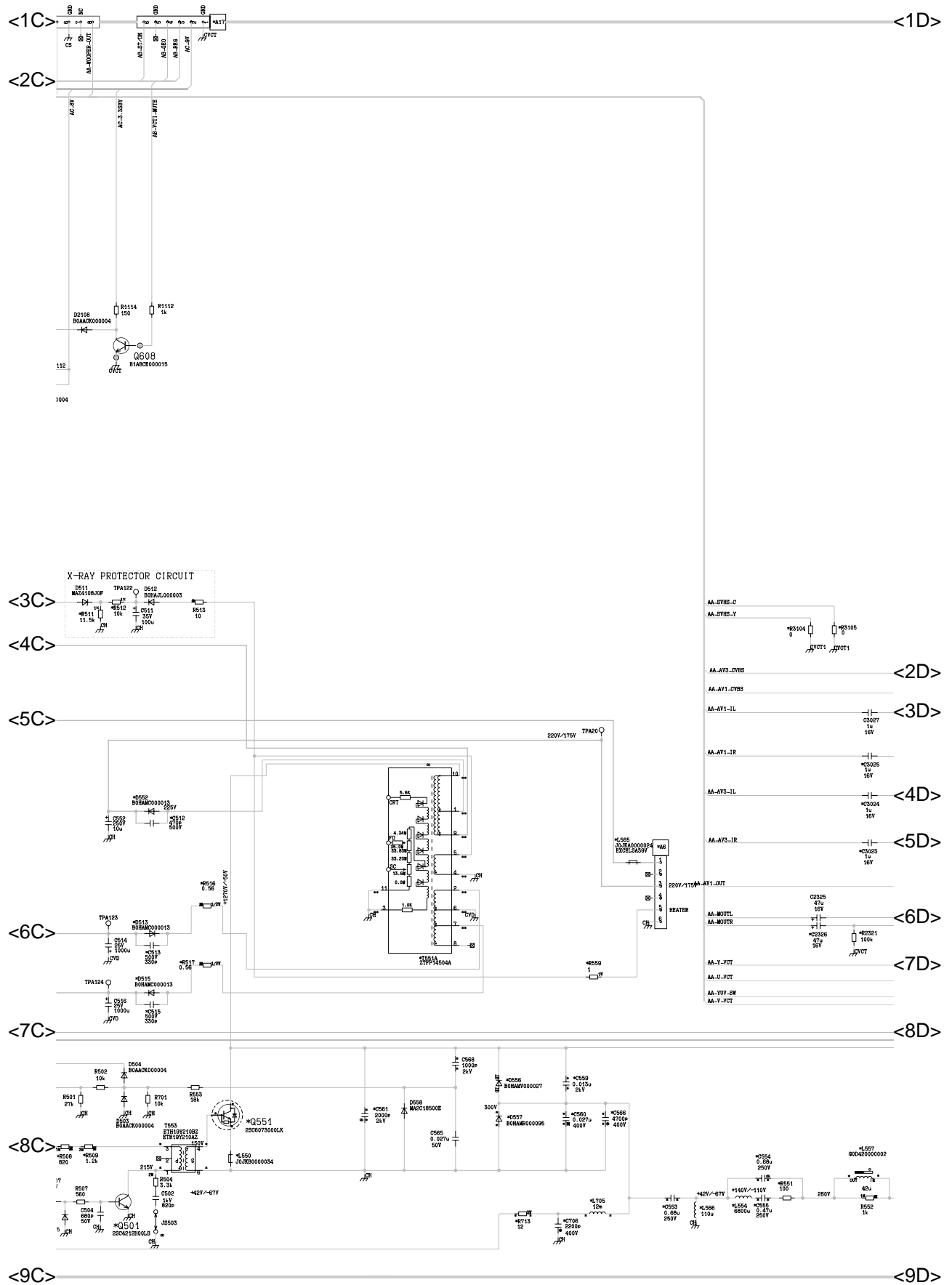
6.2.2. A Board (2/5)



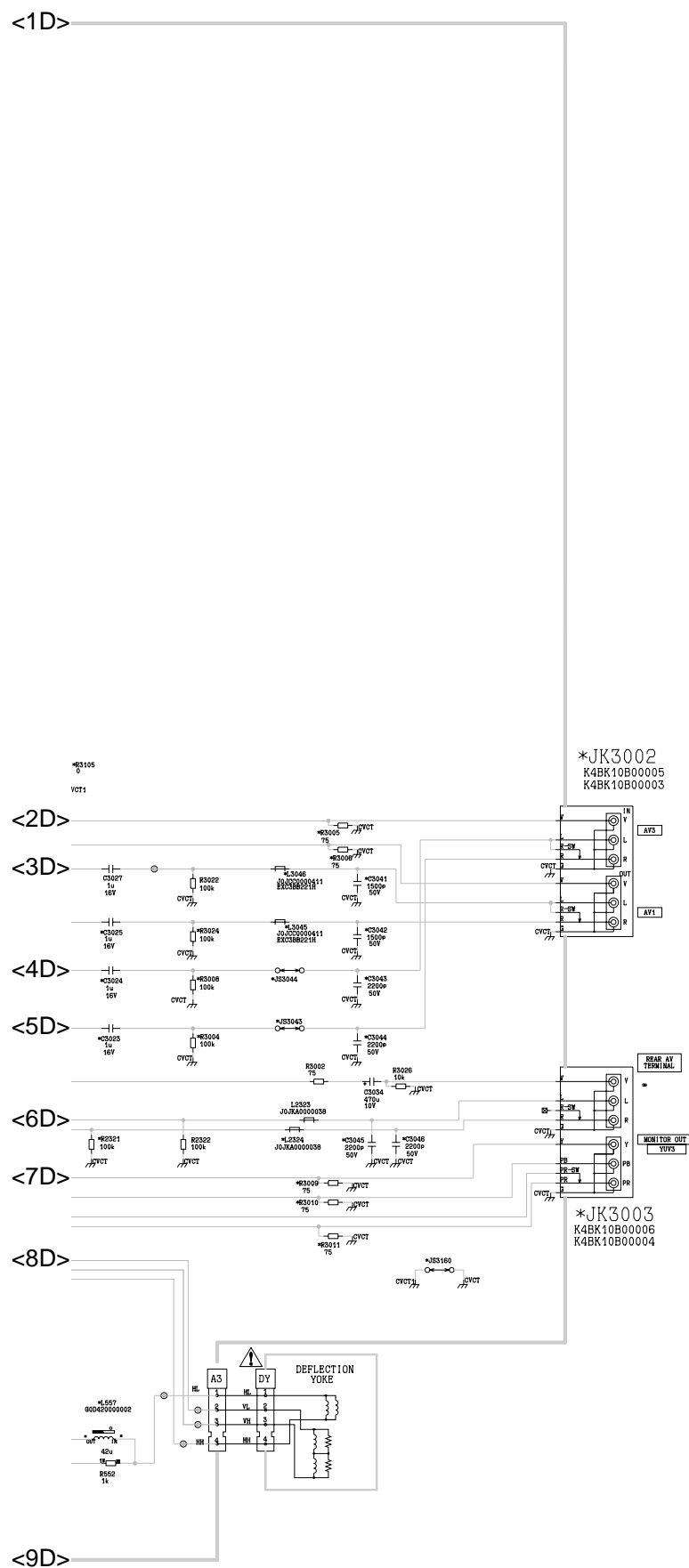
6.2.3. A Board (3/5)



6.2.4. A Board (4/5)

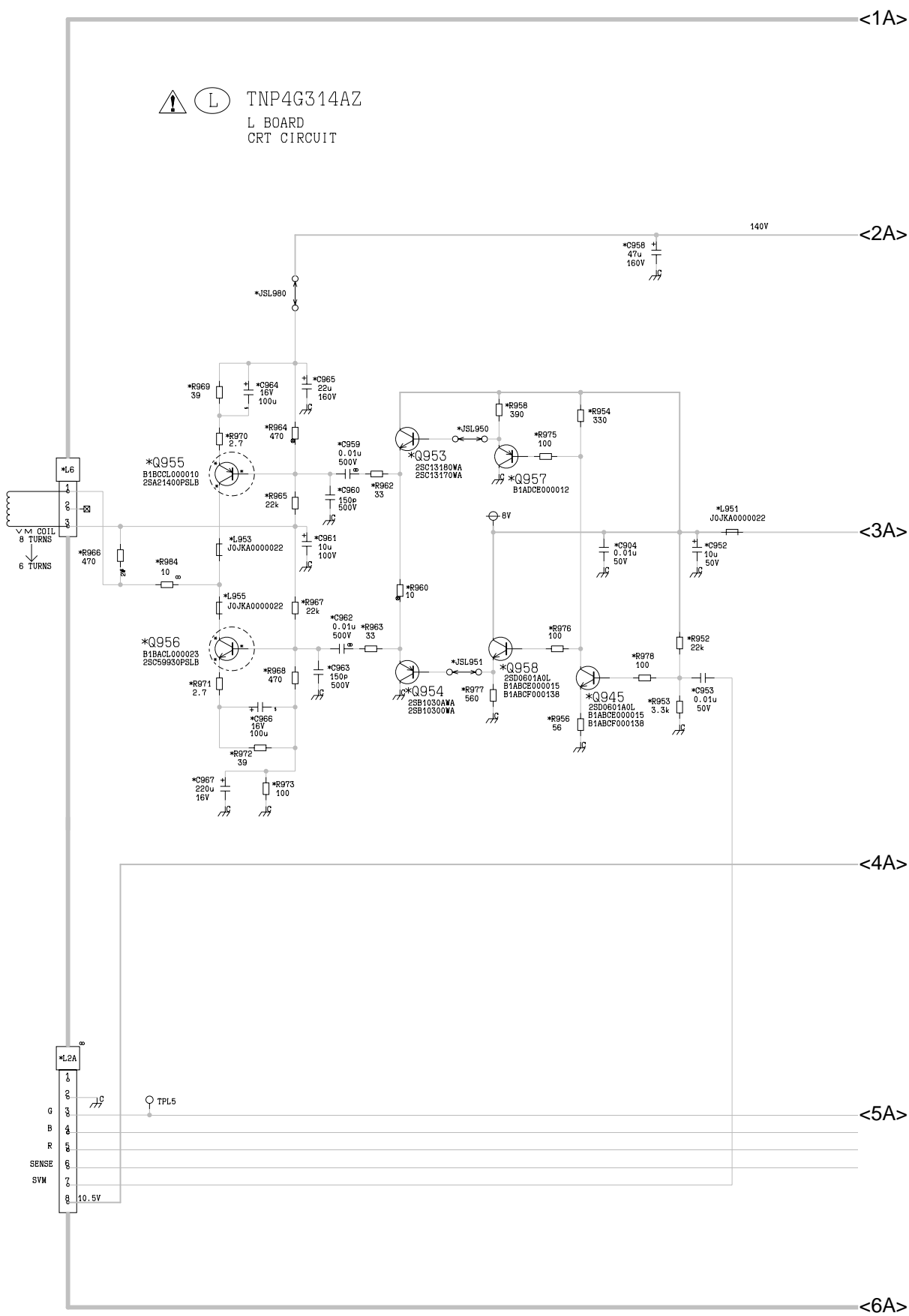


6.2.5. A Board (5/5)

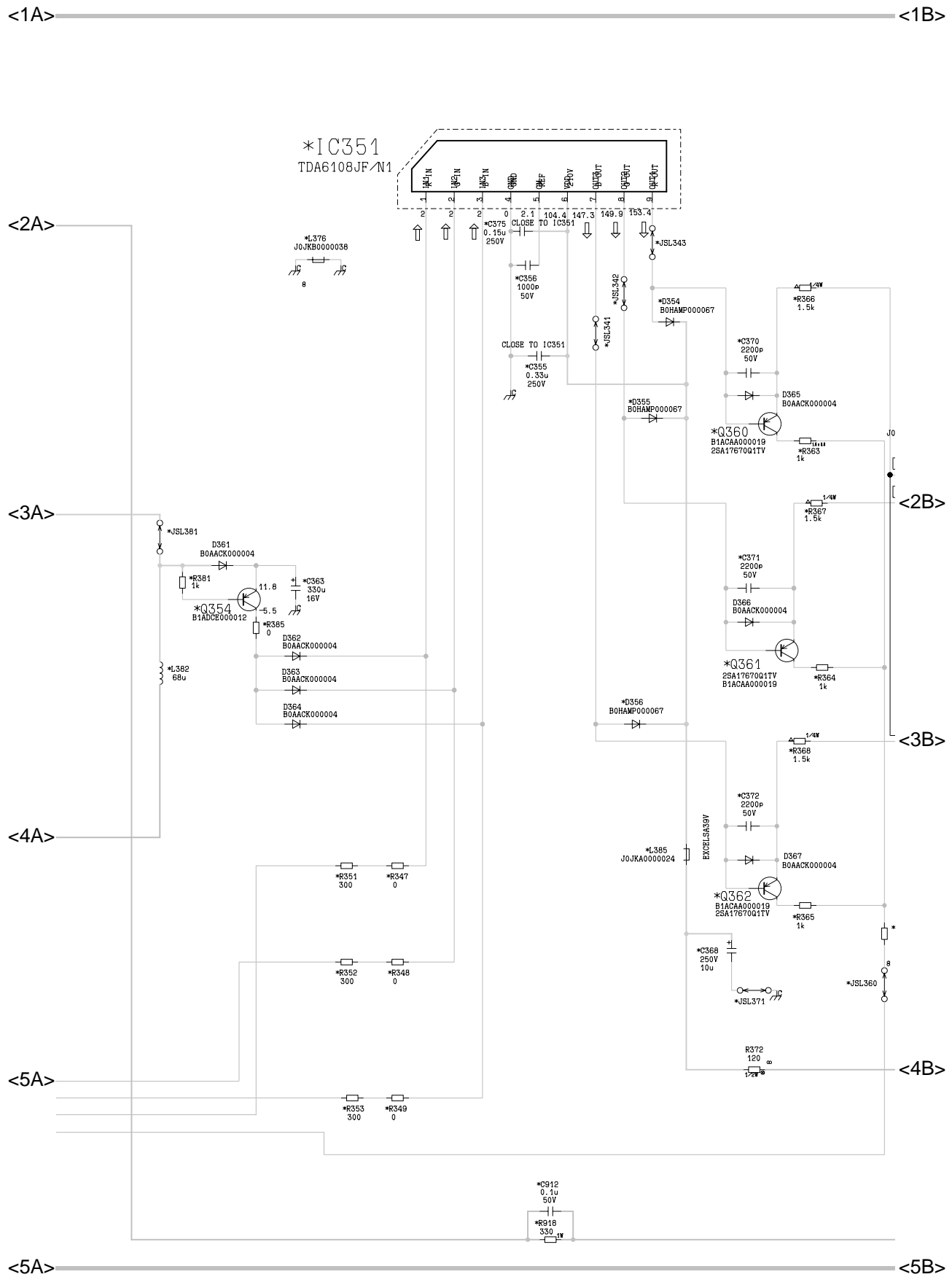


6.3. L Board

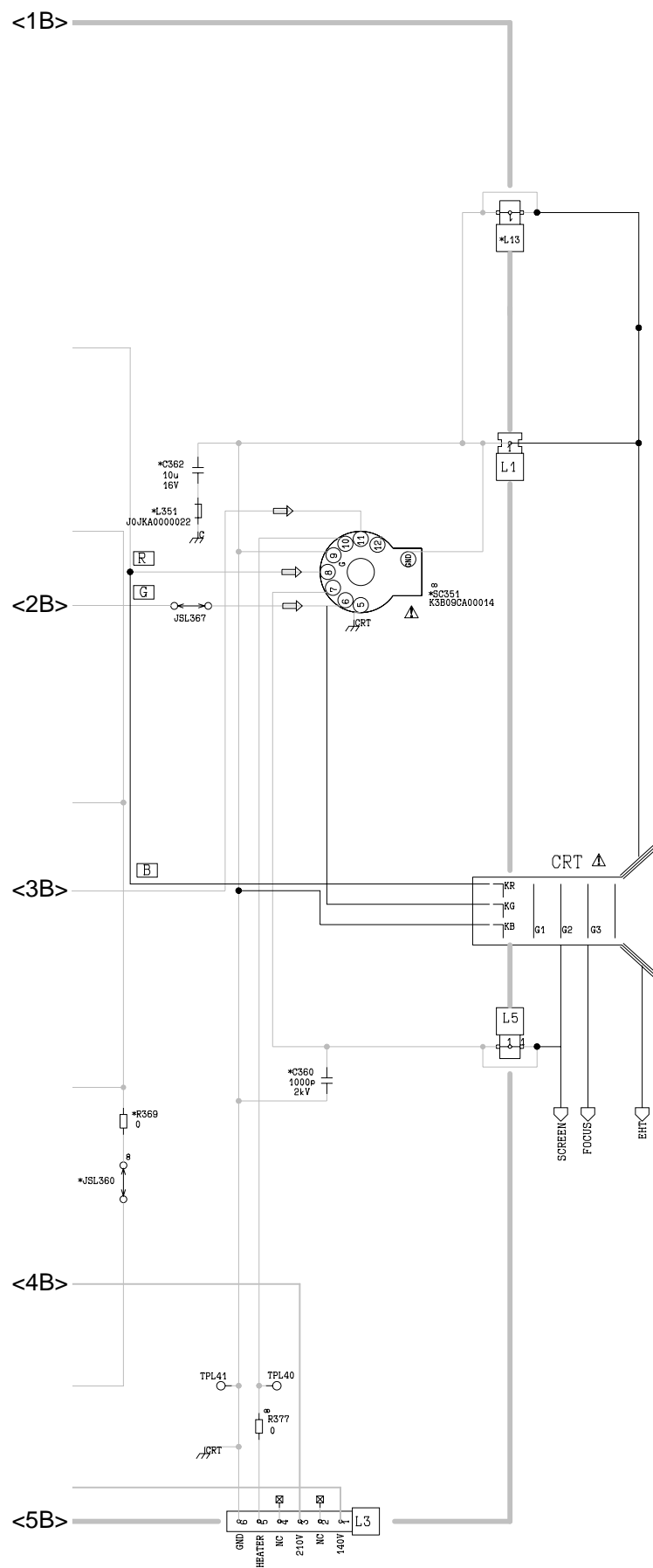
6.3.1. L Board (1/3)



6.3.2. L Board (2/3)

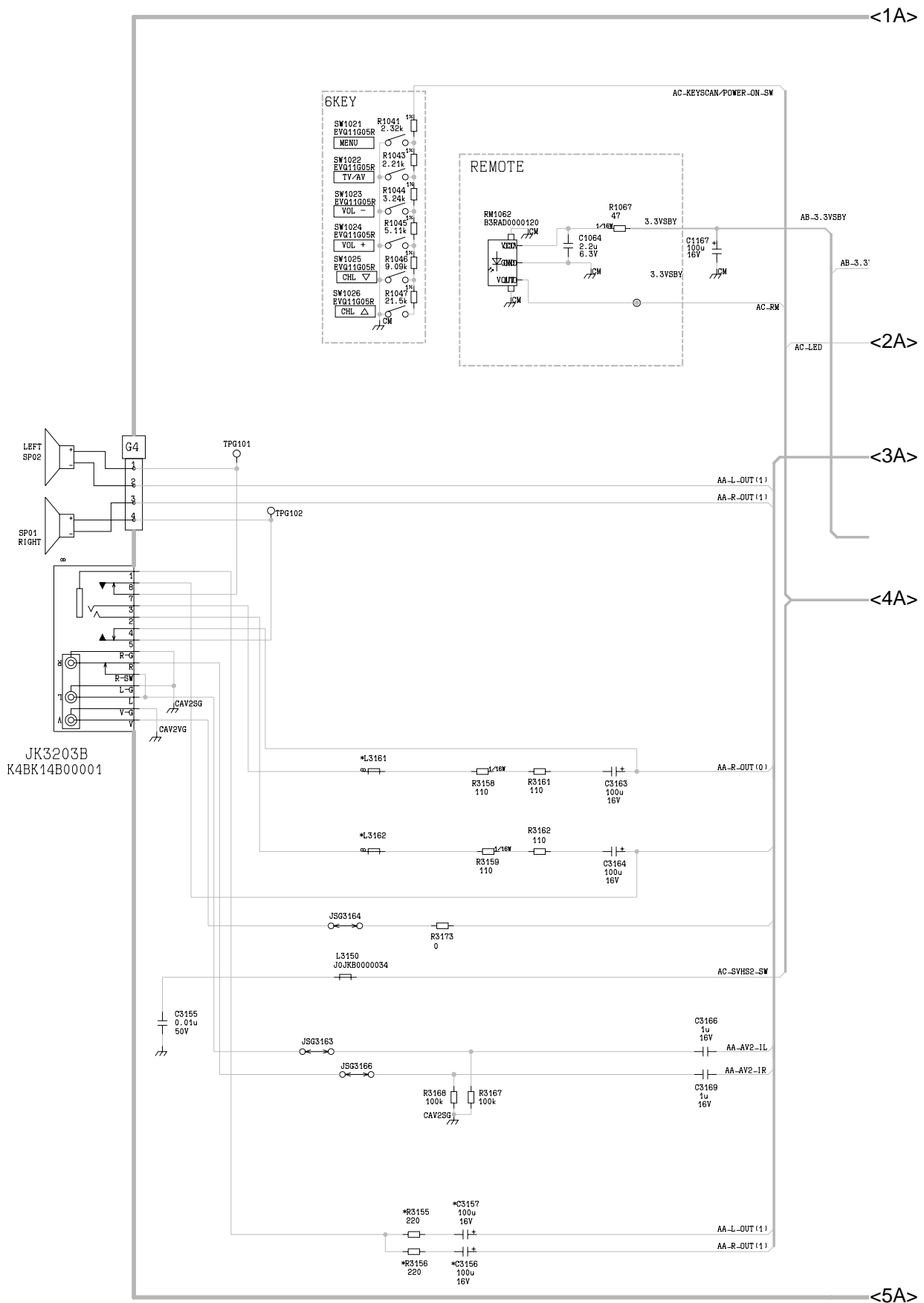


6.3.3. L Board (3/3)

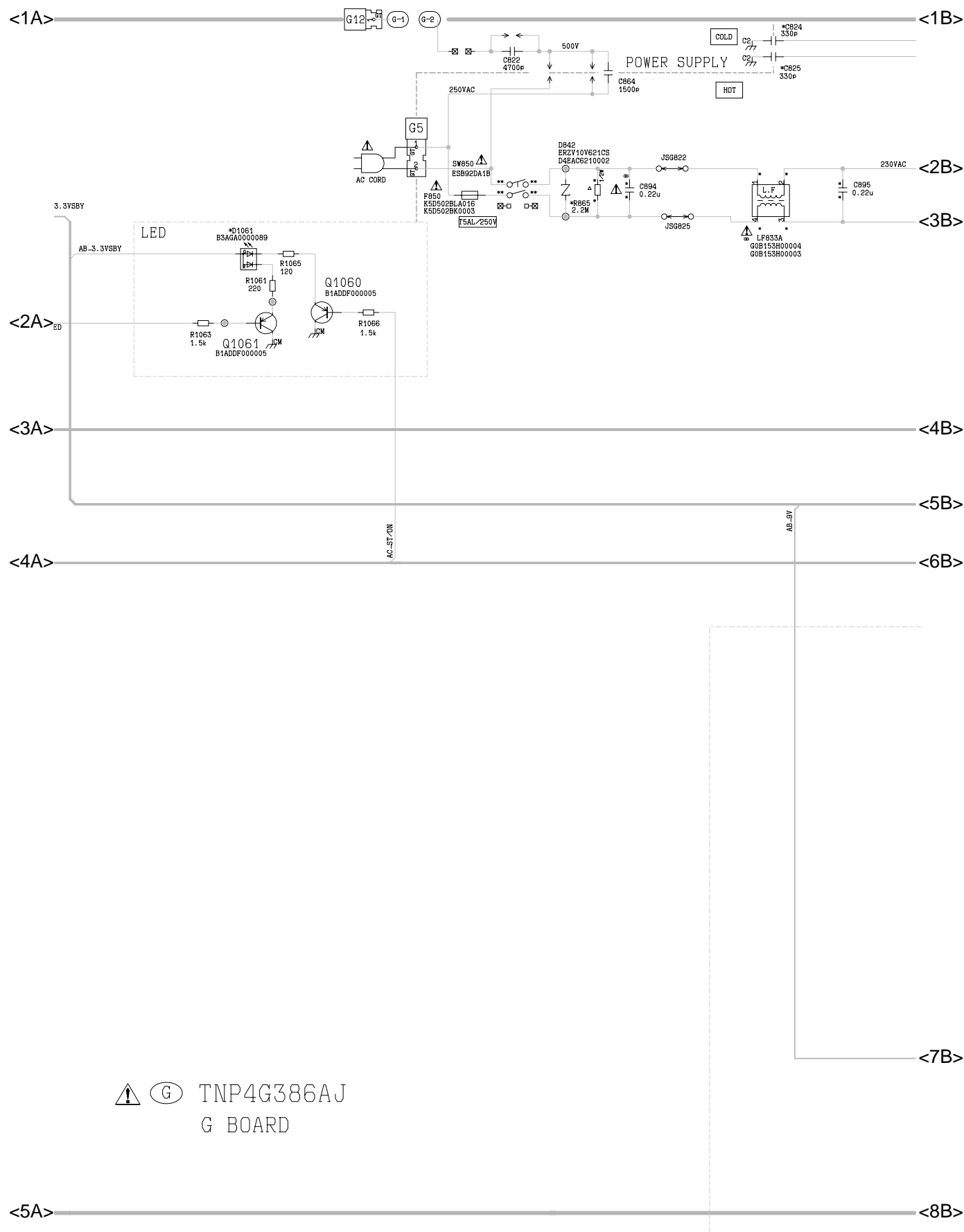


6.4. G Board

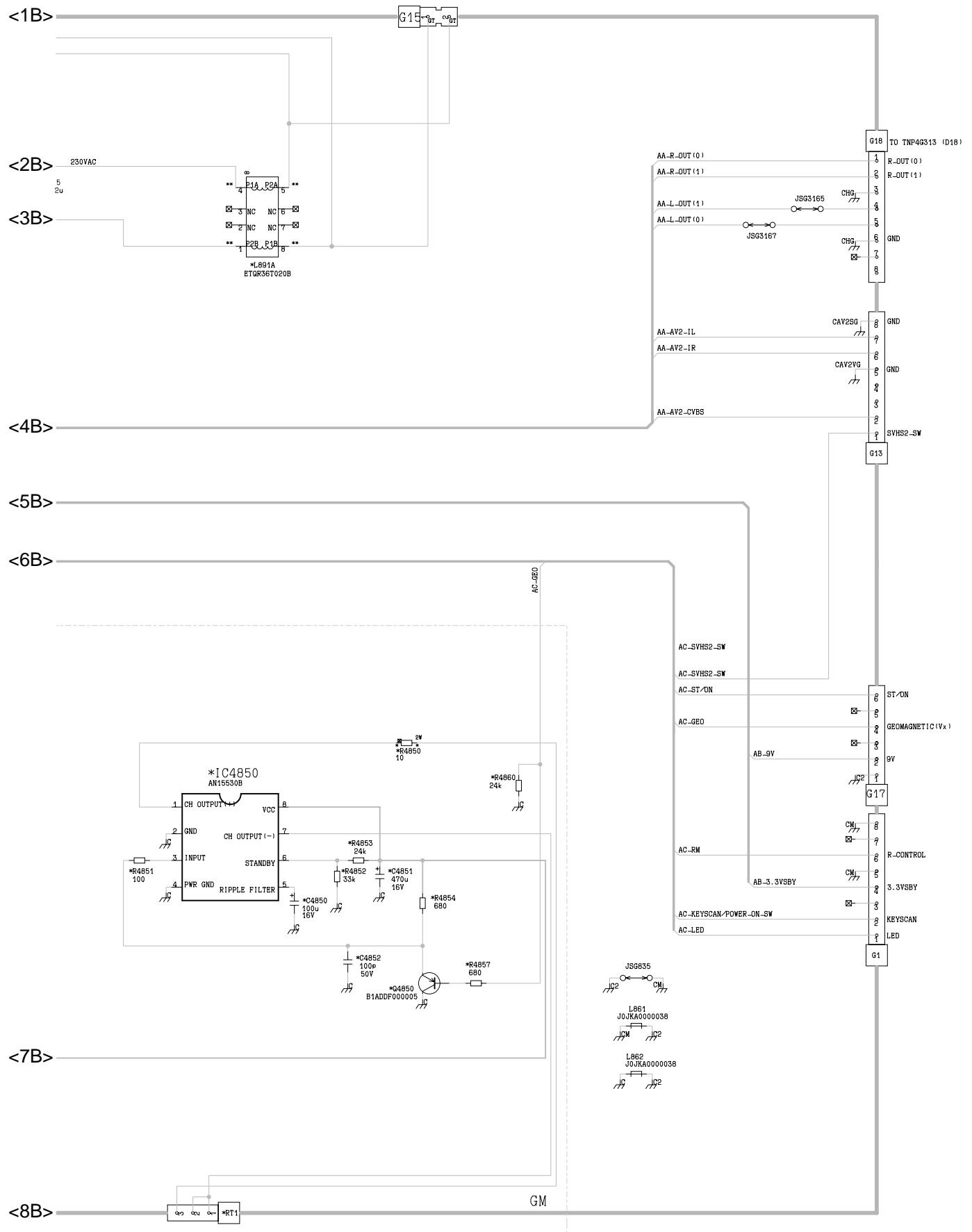
6.4.1. G Board (1/3)



6.4.2. G Board (2/3)



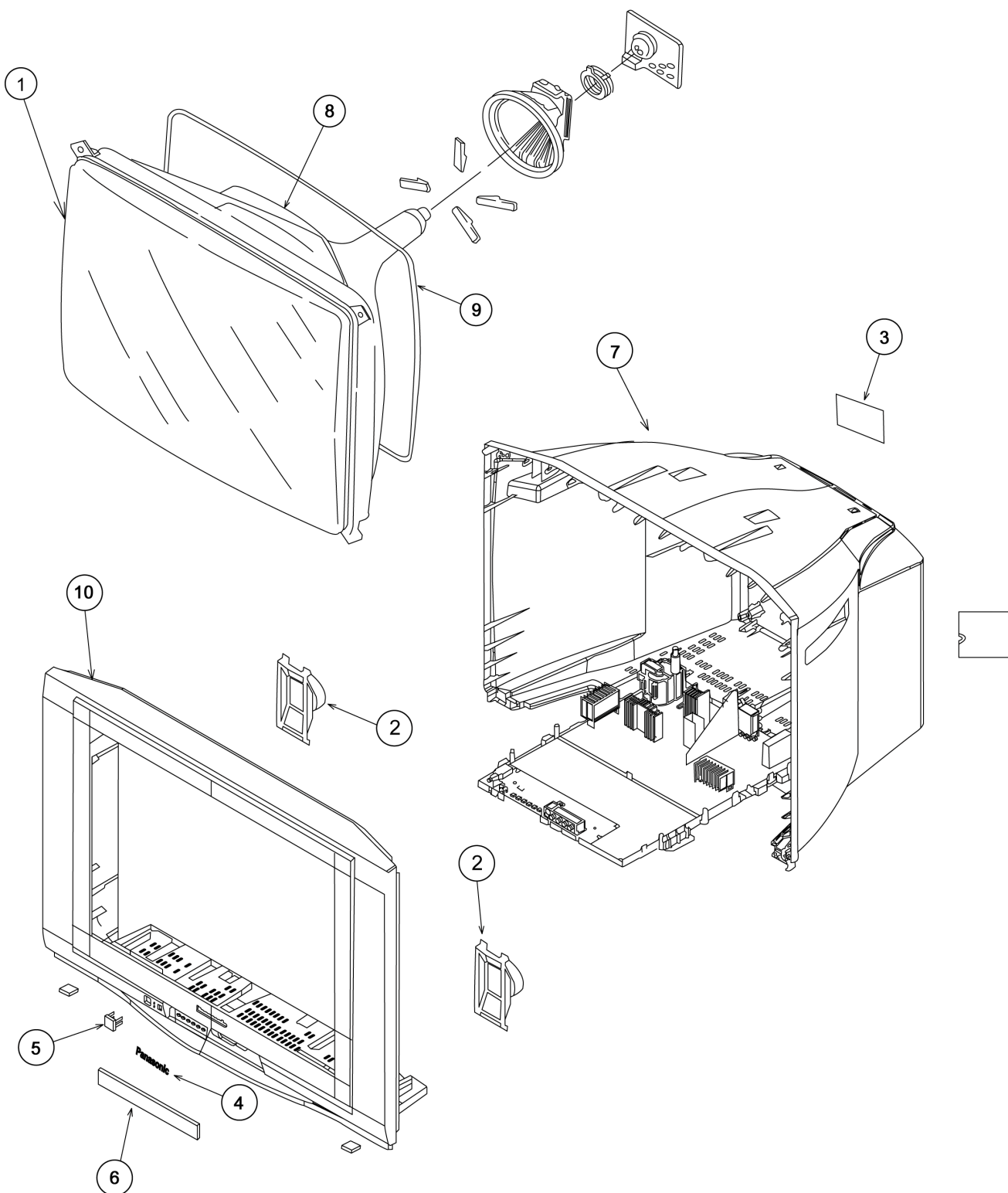
6.4.3. G Board (3/3)



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 : $\pm 3\text{pF}$
T : Tantalum	J : $\pm 5\text{pF}$
	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	A68LZU185X26	ITC	△
2	EASG15S509A2	SPEAKER	
	EUR7717040R	REMOTE CONTROL	
3	TBM4G1384	MODEL NAME PLATE	△
4	TBM4G3017A	PANASONIC BADGE	
5	TEX4G90602	POWER BUTTON	
6	TKP4G13531	DOOR	
7	TKU4GA2120-1	BACK COVER	
8	TLK4G9083X	ROTATION COIL	△
9	TLK4G9100X	DEGAUSSING COIL	△
NLA	TNP4G314AZ	L BOARD	△
NLA	TNP4G380CC	A BOARD	△
NLA	TNP4G386AJ	G BOARD	△
	TQB4G5086	FAN BAG	
	TSX4G195L-1	AC POWER CORD	△
10	TXFKY03ER17	CABINET ASSY	
	CAPACITORS		
C002	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C003	ECJ1VC1H560J	C 56PF, J, 50V	
C004	ECJ1VC1H560J	C 56PF, J, 50V	
C006	F2A1C101A310	E 100UF, 16V	
C1064	ECJ2FB0J225K	C 2.2UF, J, 6.3V	
C1103	FLJ1H103A590	C 0.01UF, J, 50V	
C1131	FLJ1H103A590	C 0.01UF, J, 50V	
C1142	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C1167	F2A1C101A310	E 100UF, 16V	
C2113	F2A1H3R3A317	E 3.3UF, 50V	
C2117	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2129	F2A1C102A159	E 1000UF, 16V	
C2303	F2A1H4R7A317	E 4.7UF, 50V	
C2308	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2309	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2314	F2A1E470A270	E 47UF, 25V	
C2315	F2A1E471A299	E 470UF, 25V	
C2317	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2319	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C2321	FLJ1H102A018	E 1000UF, 50V	
C2322	FLJ1H102A018	E 1000UF, 50V	
C2325	F2A1C470A310	E 47UF, 16V	
C2326	F2A1C470A310	E 47UF, 16V	
C253	ECEA1HN2R2U	E 2.2UF, 50V	
C254	FLJ1H102A018	E 1000UF, 50V	
C257	ECEA1HN2R2U	E 2.2UF, 50V	
C258	FLJ1H102A018	E 1000UF, 50V	
C301	ECJ2VB1C104K	C 0.1UF, K, 16V	
C302	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3023	ECJ1VF1C105Z	C 1UF, Z, 16V	
C3024	ECJ1VF1C105Z	C 1UF, Z, 16V	
C3025	ECJ1VF1C105Z	C 1UF, Z, 16V	
C3027	ECJ1VF1C105Z	C 1UF, Z, 16V	
C303	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3034	F2A1A471A274	E 470UF, 10V	
C3041	ECJ2VC1H152J	C 1500PF, J, 50V	
C3042	ECJ2VC1H152J	C 1500PF, J, 50V	
C3043	ECJ2VC1H222J	C 2200PF, J, 50V	
C3044	ECJ2VC1H222J	C 2200PF, J, 50V	
C3045	ECJ2VC1H222J	C 2200PF, J, 50V	
C3046	ECJ2VC1H222J	C 2200PF, J, 50V	
C305	F2A1C471A339	E 470UF, 16V	
C306	D0GB240JA008	F 24UF, J, 1/16W	
C307	D0GB240JA008	F 24UF, J, 1/16W	
C308	D0GB240JA008	F 24UF, J, 1/16W	
C3155	FLJ1H103A590	C 0.01UF, J, 50V	
C3156	F2A1C101A310	E 100UF, 16V	
C3157	F2A1C101A310	E 100UF, 16V	
C3163	F2A1C101A310	E 100UF, 16V	
C3164	F2A1C101A310	E 100UF, 16V	
C3166	ECJ1VF1C105Z	E 1UF, 16V	
C3169	ECJ1VF1C105Z	E 1UF, 16V	
C355	ECWF2334JSR	P 0.33UF, J, 250V	
C356	ECJ1VC1H102J	C 1000PF, J, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C360	ECKW3D102KBP	C 1000PF, K, 2KV	
C362	ECEA1CN100U	E 10UF, 16V	
C363	F2A1C331A159	E 330UF, 16V	
C368	ECA2EM100B	E 10UF, 250V	
C370	FLJ1H222A590	C 2200PF, 50V	
C371	FLJ1H222A590	C 2200PF, 50V	
C372	FLJ1H222A590	C 2200PF, 50V	
C375	ECWF2154JSR	P 0.15UF, J, 250V	
C401	ECJ1VC1H560J	C 56PF, J, 50V	
C404	ECQB1222JF	P 2200PF, J, 100V	
C406	F2A1H221A247	E 220UF, 50V	
C407	ECJ1VC1H560J	C 56PF, J, 50V	
C408	ECQB1154JF	P 0.15UF, J, 100V	
C454	ECQV1H154JM	P 0.15UF, J, 50V	
C4850	F2A1C101A310	E 100UF, 16V	
C4851	F2A1C471A339	E 470UF, 16V	
C4852	ECJ1VC1H101J	C 100PF, J, 50V	
C502	ECKR3A821KBP	C 820PF, K, 1KV	
C504	FLJ1H681A590	C 680PF, J, 50V	
C507	ECJ1VF1C105Z	C 1UF, J, 16V	
C511	F2A1V101A246	E 100UF, 35V	
C512	FLB2H471A025	C 470PF, 500V	
C513	FLB2H331A025	C 330PF, 500V	
C514	F2A1E102A225	E 1000UF, 25V	
C515	FLB2H331A025	C 330PF, 500V	△
C516	F2A1E102A225	E 1000UF, 25V	
C519	F2A2C2210013	E 220UF, 160V	
C520	F2A0J221A317	E 220UF, 6.3V	
C552	F2A2E1000023	E 10UF, 250V	
C553	F0C2E684A040	P 0.56UF, 250V	
C554	F0C2E684A040	P 0.68UF, 250V	
C555	F0C2E564A088	P 0.027UF, 50V	
C559	ECWH20133JVB	P 0.013UF, 2kV	
C560	ECQF4273JZH	P 0.027UF, 400V	
C561	F0C3D202A003	P 1000PF, 2kV	
C565	F0A1H273A039	C 0.027UF, 50V	
C566	ECQM4472JZ	P 4700PF, J, 400V	
C568	F0C3D102A003	P 1000PF, 2kV	
C601	FLJ1H183A021	C 0.018UF, 50V	
C602	ECJ1VB1H222K	C 2200PF, K, 50V	
C604	F2A1C101A310	E 100UF, 16V	
C605	ECJ2VB1C104K	C 0.1UF, K, 16V	
C606	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C607	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C611	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C613	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C614	ECJ1VC1H100C	C 10PF, C, 50V	
C615	ECJ1VC1H100C	C 10PF, C, 50V	
C616	F2A1C101A310	E 100UF, 16V	
C618	F2A1C101A310	E 100UF, 16V	
C619	F2A1C101A310	E 100UF, 16V	
C620	ECJ1VB1H333K	C 0.033UF, K, 50V	
C621	F2A1C1000079	E 10UF, 16V	
C622	F2A1C101A310	E 100UF, 16V	
C623	F2A1C101A310	E 100UF, 16V	
C624	ECJ2VB1C104K	C 0.1UF, K, 16V	
C626	F2A1C101A310	E 100UF, 16V	
C627	F2A1C101A310	E 100UF, 16V	
C628	F2A1A471A274	E 470UF, 10V	
C630	ECJ1VF1H103Z	C 0.01UF, Z, 50V	
C631	ECJ1VB1H333K	C 0.033UF, K, 50V	
C632	F2A1H4R7A317	E 4.7UF, 50V	
C633	ECJ1VC1H471J	C 470PF, J, 50V	
C634	ECJ1VC1H471J	C 470PF, J, 50V	
C635	F2A1C101A310	E 100UF, 16V	
C636	ECJ1VC1H471J	C 470PF, J, 50V	
C639	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C640	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C642	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C645	ECJ1VF1H104Z	C 0.1UF, Z, 50V	
C646	ECJ1VF1H104Z	C 0.1UF, Z, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C650	F2A1C331A339	E 330UF, 16V	
C652	ECJ1VVF1H104Z	C 0.1UF, Z, 50V	
C654	ECJ1VVF1H104Z	C 0.1UF, Z, 50V	
C655	ECJ1VVF1H104Z	C 0.1UF, Z, 50V	
C656	ECJ1VC1H270J	C 27PF, J, 50V	
C657	ECJ1VC1H560J	C 56PF, J, 50V	
C662	F2A0J101A317	E 100UF, 6.3V	
C704	F1B2H471A025	C 470PF, 500V	△
C706	ECQM4222JZ	P 2200PF, 400V	△
C818	ECQB1H104JF	P 0.1UF, 50V	
C821	ECKW3D681KBP	C 680PF, K, 2KV	
C822	ECKCNA472ME7	C 4700PF, M,	
C824	F1A2E331A002	C 330PF, M,	
C825	F1A2E331A002	C 330PF, M,	
C826	F0A1H103A039	CAPACITOR	
C827	ECQB1H333JF	P 0.033UF, J, 50V	
C840	ECKCNA471MB7	C 470PF, M,	
C841	ECKW3D151KBR	C 150PF, K, 2KV	
C842	F2A1H2200033	E 22UF, 50V	
C843	F2A1E222A224	E 2200UF, 25V	
C848	ECQB1H222JF	P 2200PF, J, 50V	
C849	F1B2H471A025	C 470PF, 500V	△
C850	ECKCNA471MB7	C 470PF, M,	
C851	F0A1H103A039	P 0.01UF, 50V	
C854	ECKWAE472ZED	C 4700PF, Z,500V	△
C855	ECKWAE472ZED	C 4700PF, Z,500V	△
C856	F2B2G3910006	E 330PF, 2kv	
C857	ECQM4473JZ	P 0.047UF, J,400V	
C859	ECKW3D821KBP	C 820PF, K, 2KV	
C863	F2A1C4710045	E 470UF, 16V	
C864	ECKCNA152ME7	C 1500PF, M,	
C865	ECKW3D331JBP	C 330PF, J, 2KV	
C867	F2A2C2210013	E 220UF, 160V	
C869	ECJ1VC1H151J	C 150PF, J, 50V	
C870	F2A1C472A260	E 4700UF, 16V	
C871	F1B2H471A025	C 470PF, 500V	
C872	F2A1C332A260	E 3300UF, 16V	
C873	L6Y5P4B122K	C 1200PF, K,500V	△
C875	F1J1H332A021	E 4700UF, 16V	
C877	F2A1C1000079	C 470PF, 500V	△
C879	F2A0J331A260	E 3300UF, 16V	
C882	F2A1C101A310	E 100UF, 16V	
C884	F2A1C332A182	E 3300UF, 16V	
C886	F2A1H330A342	E 33UF, 50V	
C887	F2A1C102A159	E 1000UF, 16V	
C890	ECJ1VB1C104K	C 0.1UF, K, 16V	
C891	F2A1C101A310	E 100UF, 16V	
C892	F1J1H332A021	C 3300PF, 50V	
C893	F2A1C221A338	E 22UF, 160V	
C894	F0CAF224A066	P 0.22UF	
C895	F0CAF224A066	P 0.22UF	
C897	F1J1H332A021	C 3300PF, 50V	
C898	ECJ1VFC105Z	C 1UF, Z, 16V	
C904	F1B1H103A013	C 0.01UF, 50V	
C912	ECJ1VVF1H104Z	C 0.1UF, Z, 50V	
C952	ECA1HHG100	E 10UF, 50V	
C953	F1B1H103A013	C 0.01UF, 50V	
C958	F2A2C4700020	E 47UF, 160V	
C959	F1B2H1030028	C 0.01UF, 500V	△
C960	F1A2H151A035	C 150PF, 500V	△
C961	F2A2A1000016	C 10UF, 100V	
C962	F1B2H1030028	C 0.01UF, 500V	△
C963	F1A2H151A035	C 150PF, 500V	△
C964	ECA1CHG101	E 100UF, 16V	
C965	F2A2C2200010	E 22UF, 160V	
C966	ECA1CHG101	E 100UF, 16V	
C967	F2A1C221A338	E 220UF, 16V	
	DIODES		
D1061	B3AGA0000089	DIODE	
D1132	B0BA3R800012	DIODE	
D2103	B0AACK000004	DIODE	
D2107	B0AACK000004	DIODE	
D2108	B0AACK000004	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
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	B0HAJL000003	DIODE	
D503	B0AACK000004	DIODE	
D504	B0AACK000004	DIODE	
D507	B0ACCK000005	DIODE	
D511	MA4108J	DIODE	
D512	B0HAJL000003	DIODE	
D513	EU02	DIODE	
D515	EU02	DIODE	
D520	B0ACDJ000009	DIODE	
D552	EU02	DIODE	
D556	B0HAMV000027	DIODE	
D557	B0HAMR000095	DIODE	
D558	MA185	DIODE	
D601	B0ADDJ000025	DIODE	
D610	MAZ80560HL	DIODE	
D702	B0ACCK000005	DIODE	
D708	EU02	DIODE	
D830	B0HAJL000001	DIODE	
D831	B0BA01700055	DIODE	
D837	B0ACCK000012	DIODE	
D842	ERZV10V621CS	VARISTOR	
D846	B0BA01800037	ZENER DIODE	
D847	B0BA8R000010	DIODE	
D848	FMLG12S	DIODE	
D851	B0EAKT000018	DIODE	
D852	B0HAJL000003	DIODE	
D853	B0AACK000004	DIODE	
D854	B0AACK000004	DIODE	
D860	B0EBNT000007	DIODE	
D862	B0BA4R400007	ZENER DIODE	
D863	B0HAJL000003	DIODE	
D865	B0BA3R500008	DIODE	
D866	B0HAPV000009	DIODE	
D867	B0AACK000004	DIODE	
D872	B0JAPK000011	DIODE	
D873	B0AACK000004	DIODE	
D876	B0AACK000004	DIODE	
D881	B0BA01500052	DIODE	
D882	B0BA01500052	DIODE	
D883	B0JAPK000013	DIODE	
D884	B0AACK000004	DIODE	
D887	B0AACK000004	DIODE	
	INTEDGRATED CIRCUITS		
IC1101	TVR4GAS549	EEPROM IC	
IC2301	C0ZAZ0000164	IC	
IC351	TDA6108JF/N1	IC	
IC451	AN15526A	IC	
IC4850	AN15530B	IC	
IC601	TVR4G19-8	FLASH MEMORY IC	
IC605	C0ZAZ0000162	IC	
IC801	C5HABZZ00168	IC, HYBRID	△
IC802	C0EAS0000026	IC	
IC851	C0DAEJG00001	IC, POWER SUPPLY	
IC853	C0DAEJG00001	IC, POWER SUPPLY	
IC857	C0DBEHE00005	IC, POWER SUPPLY	
IC860	B3PAA0000363	PHOTO COUPLER	△
IC871	C0DAEJG00001	IC, POWER SUPPLY	
IC875	C0DBEHE00005	IC, POWER SUPPLY	
	COILS		
L002	G0C100K00008	COIL	
L003	G0C4R7JA0055	PEAKING COIL	
L2302	J0JKA0000038	BEAD CORE	

Ref. No.	Part No.	Part Name & Description	Remarks
L2304	J0JKA0000038	BEAD CORE	
L2306	J0JKA0000024	EMI FILTER	
L2307	J0JKA0000038	BEAD CORE	
L2323	J0JKA0000038	BEAD CORE	
L2324	J0JKA0000038	BEAD CORE	
L3045	J0JCC0000411	BEAD CORE	
L3046	J0JCC0000411	BEAD CORE	
L3150	J0JKB0000034	EMI FILTER	
L3161	TSK1045	BEAD CORE	
L3162	TSK1045	BEAD CORE	
L351	J0JKA0000022	BEAD CORE	
L376	J0JKB0000038	COIL	
L382	TALL08T680KA	INDUCTION COIL	
L385	J0JKA0000024	EMI FILTER	
L412	J0JKA0000024	EMI FILTER	
L505	J0JKA0000024	EMI FILTER	
L550	J0JKB0000034	EMI FILTER	
L554	ELC08D682E	CHOKO COIL	
L557	G0D42000002	COIL	
L565	J0JKA0000024	EMI FILTER	
L566	G0B111F00001	CHOKO COIL	
L601	G0C100K00008	COIL	
L602	G0C100K00008	COIL	
L603	G0C100K00008	COIL	
L604	G0C100K00008	COIL	
L605	TALV35VB8R2K	PEAKING COIL	
L606	G0C100K00008	COIL	
L607	TALV35VB8R2K	PEAKING COIL	
L608	G0C3R9KA0030	PEAKING COIL	
L609	J0JKB0000034	EMI FILTER	
L611	G0C100K00008	COIL	
L625	J0JKA0000038	BEAD CORE	
L630	TSK1032	BEAD CORE	
L635	TSK1032	BEAD CORE	
L657	J0JCC0000411	BEAD CORE	
L705	ELC10D123E	CHOKO COIL	
L842	J0JKA0000025	BEAD CORE	
L843	J0JKA0000038	BEAD CORE	
L845	J0JKA0000023	BEAD CORE	
L861	J0JKA0000038	BEAD CORE	
L862	J0JKA0000038	BEAD CORE	
L865	J0JKA0000025	BEAD CORE	
L866	J0JKA0000023	BEAD CORE	
L867	J0JKB0000039	EMI FILTER	
L891	ETQR36T020B	CHOKO COIL	
L894	G0A220GA0002	CHOKO COIL	
L951	J0JKA0000022	BEAD CORE	
L953	J0JKA0000022	BEAD CORE	
L955	J0JKA0000022	BEAD CORE	
LF833	G0B153H00004	LINE FILTER	
	TRANSISTORS		
Q1060	BIADDF000005	TRANSISTOR	
Q1061	BIADDF000005	TRANSISTOR	
Q1062	BIABCE000015	TRANSISTOR	
Q2101	BIADDF000005	TRANSISTOR	
Q301	BIGFCFAA0004	TRANSISTOR	
Q302	BIGFCFAA0004	TRANSISTOR	
Q303	BIGFCFAA0004	TRANSISTOR	
Q304	BIADDF000005	TRANSISTOR	
Q305	BIADDF000005	TRANSISTOR	
Q306	BIADDF000005	TRANSISTOR	
Q354	BIADCE000012	TRANSISTOR	
Q360	BIACAA000019	TRANSISTOR	
Q361	BIACAA000019	TRANSISTOR	
Q362	BIACAA000019	TRANSISTOR	
Q4850	BIADDF000005	TRANSISTOR	
Q501	2SC4212H	TRANSISTOR	
Q520	BIADBM000004	TRANSISTOR	
Q551	2SC6073000LK	TRANSISTOR	
Q601	BIABCE000015	TRANSISTOR	
Q603	BIABCE000015	TRANSISTOR	
Q604	BIABCE000015	TRANSISTOR	
Q605	BIABCE000015	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q608	BIABCE000015	TRANSISTOR	
Q610	BIADDF000005	TRANSISTOR	
Q701	BIIDFDM000012	TRANSISTOR	
Q702	BIABCE000015	TRANSISTOR	
Q703	BIABCE000015	TRANSISTOR	
Q846	BIABCF000176	TRANSISTOR	
Q850	BIABCE000002	TRANSISTOR	
Q857	BIABAN000037	TRANSISTOR	
Q870	BIADDF000005	TRANSISTOR	
Q945	2SD0601A0L	TRANSISTOR	
Q953	2SC1318	TRANSISTOR	
Q954	2SB1030A	TRANSISTOR	
Q955	BIABCE000010	TRANSISTOR	
Q956	BIABCE000023	TRANSISTOR	
Q957	BIADCE000012	TRANSISTOR	
Q958	2SD0601A0L	TRANSISTOR	
	RESISTORS		
R005	D0GB512JA008	F 5.1KOHM,J,1W	
R006	ERJ3GEYJ473	M 47KOHM,J,1/16W	
R007	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R008	ERJ3GEYJ0R00	M 0OHM,J,1/16W	
R009	ERJ3GEYJ0R00	M 0OHM,J,1/16W	
R1041	ERJ3EKF2321	M2.32KOHM,F,1/16W	
R1043	ERJ3EKF2211	M2.21KOHM,F,1/16W	
R1044	ERJ3EKF3241	M3.24KOHM,F,1/16W	
R1045	ERJ3EKF5111	M5.11KOHM,F,1/16W	
R1046	ERJ3EKF9091	M9.09KOHM,F,1/16W	
R1047	ERJ3EKF2152	M21.5KOHM,F,1/16W	
R1061	ERJ3GEYJ221	M 220OHM,J,1/16W	
R1062	ERDS2TJ102	C 1KOHM,J, 1/4W	
R1063	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	
R1065	ERJ3GEYJ121	M 120OHM,J,1/16W	
R1066	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	
R1067	ERJ3GEYJ470	M 470OHM,J,1/16W	
R1105	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1106	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R1108	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1109	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R1112	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R1114	ERJ3GEYJ151	M 150OHM,J,1/16W	
R1115	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1131	ERJ3GEYJ220	M 220OHM,J,1/16W	
R1132	ERJ3GEYJ220	M 220OHM,J,1/16W	
R1140	DIAC1002A094	M 10KOHM,F,1/16W	
R1142	ERJ3EKF1001	M 1KOHM,F,1/16W	
R1150	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1201	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R1202	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R1228	ERJ3GEYJ101	M 100OHM,J,1/16W	
R1229	ERJ3GEYJ101	M 100OHM,J,1/16W	
R2112	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R2114	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R2317	D0GB622JA008	F 6.2KOHM,J,1/2W	
R2321	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R2322	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R2325	D0AE2R2JA046	C 2.2OHM,J, 1/10W	
R2326	D0AE2R2JA046	C 2.2OHM,J, 1/10W	
R2328	D0AE2R2JA046	C 2.2OHM,J, 1/10W	
R2329	D0AE2R2JA046	C 2.2OHM,J, 1/10W	
R253	D0GB751JA008	F 750OHM,J,1/2W	
R255	D0GB751JA008	F 750OHM,J,1/2W	
R256	ERDS2TJ472	C 4.7KOHM,J, 1/4W	
R257	ERDS2TJ472	C 4.7KOHM,J, 1/4W	
R3002	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3004	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R3005	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3006	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3008	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R3009	ERJ3GEYJ750	M 750OHM,J,1/16W	
R301	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R3010	ERJ3GEYJ750	M 750OHM,J,1/16W	
R3011	ERJ3GEYJ750	M 750OHM,J,1/16W	
R302	ERJ3GEYJ103	M 10KOHM,J,1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
R3022	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R3024	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R3026	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R303	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R304	ECJ1VB1H102K	C 1000PF, K, 50V	
R305	ECJ1VB1H102K	C 1000PF, K, 50V	
R306	ECJ1VB1H102K	C 1000PF, K, 50V	
R307	ERJ3GEYJ681	M 680OHM,J,1/16W	
R308	ERJ3GEYJ681	M 680OHM,J,1/16W	
R309	ERJ3GEYJ681	M 680OHM,J,1/16W	
R310	D0AE181JA046	C 180OHM,J,1/4W	
R3101	ERDS2TJ470	C 47OHM,J, 1/4W	
R3102	ERDS2TJ470	C 47OHM,J, 1/4W	
R3104	ERJ3GEY0R00	M 0OHM,J,1/16W	
R3105	ERJ3GEY0R00	M 0OHM,J,1/16W	
R311	D0AE181JA046	C 180OHM,J,1/4W	
R312	D0AE181JA046	C 180OHM,J,1/4W	
R3155	ERJ3GEYJ221	M 220OHM,J,1/16W	
R3156	ERJ3GEYJ221	M 220OHM,J,1/16W	
R3158	D0GB111JA008	F 110OHM,J,1/16W	
R3159	D0GB111JA008	F 110OHM,J,1/16W	
R3161	D0GB111JA008	F 110OHM,J,1/16W	
R3162	D0GB111JA008	F 110OHM,J,1/16W	
R3167	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R3168	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R317	ERJ3GEYJ151	M 150OHM,J,1/16W	
R3173	ERJ3GEY0R00	M 0OHM,J,1/16W	
R318	ERJ3GEYJ151	M 150OHM,J,1/16W	
R319	ERJ3GEYJ151	M 150OHM,J,1/16W	
R347	ERJ3GEY0R00	M 0OHM,J,1/16W	
R348	ERJ3GEY0R00	M 0OHM,J,1/16W	
R349	ERJ3GEY0R00	M 0OHM,J,1/16W	
R351	D0GB301JA008	F 300OHM,J,1/16W	
R352	D0GB301JA008	F 300OHM,J,1/16W	
R353	D0GB301JA008	F 300OHM,J,1/16W	
R363	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R364	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R365	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R366	ERC14GK152	S 1.5KOHM,J, 1/4W	
R367	ERC14GK152	S 1.5KOHM,J, 1/4W	
R368	ERC14GK152	S 1.5KOHM,J, 1/4W	
R369	ERJ3GEY0R00	M 0OHM,J,1/16W	
R372	ERQ12AJ121P	F 120OHM,J,1/2W	
R381	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R385	ERJ3GEY0R00	M 0OHM,J,1/16W	
R401	ERDS2TJ104	C 100KOHM,J, 1/4W	
R403	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R404	ERJ3GEYJ153	M 15KOHM,J,1/16W	
R405	ERDS2TJ563	C 56KOHM,J, 1/4W	
R406	ERDS1TJ1R5	C 1.5OHM,J, 1/2W	
R407	ERGLSJ221E	M 220OHM,J, 1W	
R413	ERJ3GEYJ183	M 18KOHM,J,1/16W	
R416	ERX1SJR82E	M 0.82OHM,J,1W	
R451	ERJ3GEYJ223	M 22KOHM,J,1/16W	
R453	ERJ3GEYJ101	M 100OHM,J,1/16W	
R4850	ERG2FJ100H	M 10OHM,J, 2W	
R4851	ERJ3GEYJ101	M 100OHM,J,1/16W	
R4852	ERJ3GEYJ333	M 33KOHM,J,1/16W	
R4853	ERJ3GEYJ243	M 24KOHM,J,1/16W	
R4854	ERJ3GEYJ681	M 680OHM,J,1/16W	
R4857	ERJ3GEYJ681	M 680OHM,J,1/16W	
R4860	ERJ3GEYJ243	M 24KOHM,J,1/16W	
R501	ERJ3GEYJ273	M 27KOHM,J,1/16W	
R502	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R504	ERG2SJS332H	M 3.3KOHM,J, 2W	
R507	ERDS2TJ561	C 560OHM,J, 1/4W	
R508	ERG3FJ821H	M 820OHM,J, 3W	
R509	ERG3FJ122	M 1.2KOHM,J, 3W	
R511	ERJ3EKF1152	M 11.5KOHM, 1/10W	
R512	ERJ3EKF1002	M 10KOHM,F,1/16W	
R513	ERQ14AJ100E	F 10OHM,J, 1/4W	
R516	ERX12SJR56P	M 0.56OHM, 1/2W	
R517	ERX12SJR56P	M 0.56OHM, 1/2W	

Ref. No.	Part No.	Part Name & Description	Remarks
R518	D0DK3R3J0002	W 3.3OHM,J,1/10W	
R522	ERDS2TJ513	C 51KOHM,J, 1/4W	
R523	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R524	ERDS2TJ104	C 100KOHM,J, 1/4W	
R525	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R551	ERGLFJ101P	M 1KOHM,J, 1W	
R552	ERGLSJ102P	M 1KOHM,J, 1W	
R553	ERJ3GEYJ183	M 18KOHM,J,1/16W	
R559	ERQ1CJPIR0S	F 1OHM,J, 1W	
R580	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R601	ERJ3GEYJ470	M 47OHM,J,1/16W	
R602	ERDS2TJ103	C 10KOHM,J, 1/4W	
R603	ERJ3GEYJ471	M 470OHM,J,1/16W	
R604	ERJ3GEYJ470	M 47OHM,J,1/16W	
R605	ERJ3GEYJ470	M 47OHM,J,1/16W	
R606	ERJ3GEYJ752	M 7.5KOHM,J,1/16W	
R607	ERJ3GEYJ752	M 7.5KOHM,J,1/16W	
R608	ERJ3GEYJ470	M 47OHM,J,1/16W	
R609	ERJ3GEY0R00	M 0OHM,J,1/16W	
R610	ERJ3GEYJ101	M 100OHM,J,1/16W	
R611	ERJ3GEYJ101	M 100OHM,J,1/16W	
R612	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R613	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R614	ERJ3GEYJ221	M 220OHM,J,1/16W	
R615	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	
R616	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R619	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R620	ERJ3EKF1002	M 10KOHM,F,1/16W	
R621	ERJ3EKF2002	M 20KOHM, 1/10W	
R622	ERJ3GEYJ821	M 820OHM,J,1/16W	
R624	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R625	ERJ3GEYJ102	M 1KOHM,J,1/16W	
R626	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R627	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R628	ERJ3GEYJ823	M 82KOHM,J,1/16W	
R629	ERJ3GEY0R00	M 0OHM,J,1/16W	
R632	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R634	ERJ3GEYJ151	M 150OHM,J,1/16W	
R635	ERJ3GEYJ151	M 150OHM,J,1/16W	
R636	ERJ3GEYJ101	M 100OHM,J,1/16W	
R638	ERJ3GEY0R00	M 0OHM,J,1/16W	
R640	ERJ3GEYJ471	M 470OHM,J,1/16W	
R641	ERJ3GEY0R00	M 0OHM,J,1/16W	
R643	ERJ3GEY0R00	M 0OHM,J,1/16W	
R644	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R645	ERJ3GEYJ101	M 100OHM,J,1/16W	
R646	ERJ3GEYJ183	M 18KOHM,J,1/16W	
R647	ERJ3GEYJ750	M 75OHM,J,1/16W	
R650	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R656	ERJ3GEYJ823	M 82KOHM,J,1/16W	
R658	ERDS2TJ470	C 47OHM,J, 1/4W	
R659	ERJ3GEYJ470	M 47OHM,J,1/16W	
R660	ERJ3GEYJ470	M 47OHM,J,1/16W	
R664	ERDS2T0T	C 0OHM, 1/4W	
R665	ERDS2T0T	C 0OHM, 1/4W	
R669	ERDS2T0T	C 0OHM, 1/4W	
R670	ERJ3GEYJ101	M 100OHM,J,1/16W	
R671	ERJ3GEYJ101	M 100OHM,J,1/16W	
R701	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R702	ERJ3GEYJ680	M 68OHM,J,1/16W	
R703	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R704	ERJ3GEYJ471	M 470OHM,J,1/16W	
R705	D0GB203JA008	F 20KOHM,J, 1W	
R713	ERG3SJS120H	M 12OHM,J, 3W	
R715	ERDS2TJ472	C 4.7KOHM,J, 1/4W	
R825	ERJ3GEYJ471	M 470OHM,J,1/16W	
R827	ERJ3GEYJ153	M 15KOHM,J,1/16W	
R828	ERJ3EKF5602	M 56KOHM, 1/10W	
R829	ERJ3EKF3092	F 30.9KOHM,J, 1/8W	
R830	ERDS2TJ221	C 220OHM,J, 1/4W	
R831	ERDS2TJ682	C 6.8KOHM,J, 1/4W	
R832	ERJ3EKF4022	F 40.2KOHM, 1/8W	
R833	D0AE432JA046	C 4.3KOHM,J, 1/4W	

Ref. No.	Part No.	Part Name & Description	Remarks
R834	ERG2FJ104H	M 100KOHM,J, 2W	
R835	ERQ1CJPR33S	F 0.330HM,J, 1W	
R836	ERGLSJ220P	M 220HM,J, 1W	
R837	ERDS2TJ222	C 2.2KOHM,J, 1/4W	
R838	ERJ3EKF1002	M 10KOHM,F,1/16W	
R839	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R840	RCR100TAJ825	C 8.2MOHM,J, 1W	
R847	ER0S2CHF3652	M 36.5KOHM,J,1/10W	
R850	ERG3SJS470H	M 470HM,J,1/10W	
R852	DOAE162JA046	C 1.6KOHM,J, 1/10W	
R853	D0D72R2KA002	W 2.20HM,K, 7W	△
R854	ERQ1ABJP470S	F 470HM,J, 1W	
R856	ERG2SJS104H	M 100KOHM,J, 2W	
R863	ERDS2TJ331	C 330OHM,J, 1/4W	
R864	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R865	ERC12ZGK225D	S 2.2MOHM,J, 1/2W	
R866	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R867	ERDS2TJ222	C 2.2KOHM,J, 1/4W	
R868	ERDS1TJ221	C 220OHM,J, 1/2W	
R871	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R872	ERJ3EKF1052	F 15KOHM,J, 1W	
R873	ERJ3EKF1802	M 18KOHM,F,1/16W	
R875	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R876	ERJ3EKF1002	M 10KOHM,F,1/16W	
R877	ERJ3EKF5101	F 27KOHM,J, 1W	
R882	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R884	ERDS2TJ562	C 5.6KOHM,J, 1/4W	
R885	ERJ3GEYJ752	M 7.5KOHM,J,1/16W	
R886	D0GB433JA008	F 43KOHM,J, 1W	
R887	ERGLSJ273P	M 27KOHM,J, 1W	
R888	ERJ3GEYJ103	M 10KOHM,J,1/16W	
R889	ERX3FJ3R3H	M 3.3OHM,J, 3W	
R893	ERJ3EKF5102	M 51KOHM, 1/10W	
R894	ERJ3EKF1303	M 130KOHM, 1/10W	
R918	ERQ1CJP331S	F 330OHM,J, 1W	
R952	ERJ3GEYJ223	M 22KOHM,J,1/16W	
R953	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R954	ERJ3GEYJ331	M 330OHM,J,1/16W	
R956	ERJ3GEYJ560	M 560HM,J,1/16W	
R958	ERJ3GEYJ391	M 390OHM,J,1/16W	
R960	ERQ14AJ100E	F 100HM,J, 1/4W	
R962	ERJ3GEYJ330	M 330HM,J,1/16W	
R963	ERDS2TJ330	C 330HM,J, 1/4W	
R964	ERQ14AJ471E	F 470OHM,J, 1/4W	
R965	ERDS2TJ223	C 22KOHM,J, 1/4W	
R966	ERG2SJ471E	M 470OHM,J, 2W	
R967	ERDS2TJ223	C 22KOHM,J, 1/4W	
R968	ERDS2TJ471	C 470OHM,J, 1/4W	
R969	ERDS2TJ390	C 390HM,J, 1/4W	
R970	ERDS2TJ2R7	C 2.7OHM,J, 1/4W	
R971	ERDS2TJ2R7	C 2.7OHM,J, 1/4W	
R972	ERDS2TJ390	C 390HM,J, 1/4W	
R973	ERDS2TJ101	C 100OHM,J, 1/4W	
R975	ERJ3GEYJ101	M 100OHM,J,1/16W	
R976	ERJ3GEYJ101	M 100OHM,J,1/16W	
R977	ERJ3GEYJ561	M 560OHM,J,1/16W	
R978	ERJ3GEYJ101	M 100OHM,J,1/16W	
R984	ERC14GK100	S 100HM,K,1/10W	
TRANSFORMERS			
T551	ZTFP14504A	FLYBACK TRANSFORMER	△
T553	ETH19Y210BZ	H DRIVE TRANS	△
T801	ETS39AG4A6AC	SWITCHING TRANSFORMER	△
OTHERS			
A1	K1KA08AA0659	CONNECTOR	
A13	K1KA08AA0659	CONNECTOR	
A17	K1KA06AA0659	CONNECTOR	
A18	K1KA08AA0659	CONNECTOR	
A2	K1KA08AA0659	CONNECTOR	
A6	K1KA06AA0659	CONNECTOR	
A8	K1KA04AA0093	CONNECTOR	
CF835	D4DDE9R00002	POSISTOR	△
F850	K5D502BLA016	FUSE	△
G4	K1KA04AA0190	CONNECTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
JA1	ERJ3GEY0R00	M 00HM,J,1/16W	
JA10	ERJ3GEY0R00	M 00HM,J,1/16W	
JA11	ERJ3GEY0R00	M 00HM,J,1/16W	
JA12	ERJ3GEY0R00	M 00HM,J,1/16W	
JA13	ERJ3GEY0R00	M 00HM,J,1/16W	
JA14	ERJ3GEY0R00	M 00HM,J,1/16W	
JA15	ERJ3GEY0R00	M 00HM,J,1/16W	
JA16	ERJ3GEY0R00	M 00HM,J,1/16W	
JA17	ERJ3GEY0R00	M 00HM,J,1/16W	
JA18	ERJ3GEY0R00	M 00HM,J,1/16W	
JA2	ERJ3GEY0R00	M 00HM,J,1/16W	
JA3	ERJ3GEY0R00	M 00HM,J,1/16W	
JA4	ERJ3GEY0R00	M 00HM,J,1/16W	
JA5	ERJ3GEY0R00	M 00HM,J,1/16W	
JA6	ERJ3GEY0R00	M 00HM,J,1/16W	
JA7	ERJ3GEY0R00	M 00HM,J,1/16W	
JA8	ERJ3GEY0R00	M 00HM,J,1/16W	
JA9	ERJ3GEY0R00	M 00HM,J,1/16W	
JK3002	K4BK10B00003	REAR AV TERMINAL	
JK3003	K4BK10B00004	REAR AV TERMINAL	
JK3203	K4BK14B00001	AV TERMINAL	
JS110	ERJ3GEY0R00	M 00HM,J,1/16W	
JS2315	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3043	ERJ3GEY0R00	M 00HM,J,1/16W	
JS3044	ERJ3GEY0R00	M 00HM,J,1/16W	
JS407	ERJ3GEY0R00	M 00HM,J,1/16W	
JS408	ERJ3GEY0R00	M 00HM,J,1/16W	
JS631	ERJ3GEY0R00	M 00HM,J,1/16W	
JS632	ERJ3GEY0R00	M 00HM,J,1/16W	
JS633	ERJ3GEY0R00	M 00HM,J,1/16W	
JS634	ERJ3GEY0R00	M 00HM,J,1/16W	
JS850	ERJ3GEY0R00	M 00HM,J,1/16W	
JS861	ERJ3GEY0R00	M 00HM,J,1/16W	
JSG3163	ERJ3GEY0R00	M 00HM,J,1/16W	
JSG3164	ERJ3GEY0R00	M 00HM,J,1/16W	
JSG3165	ERJ3GEY0R00	M 00HM,J,1/16W	
JSG3166	ERJ3GEY0R00	M 00HM,J,1/16W	
JSG3167	ERJ3GEY0R00	M 00HM,J,1/16W	
JSG835	ERJ3GEY0R00	M 00HM,J,1/16W	
JSL341	ERJ3GEY0R00	M 00HM,J,1/16W	
JSL342	ERJ3GEY0R00	M 00HM,J,1/16W	
JSL343	ERJ3GEY0R00	M 00HM,J,1/16W	
L2	K1KA08AA0659	CONNECTOR	
L3	K1KA06AA0659	CONNECTOR	
L5	K1ZZ00001301	CONNECTOR	
L6	K1KA03AA0190	CONNECTOR	
L13	K1ZZ00001300	CONNECTOR	
RL831	K6B1CDA00029	RELAY	△
RM1062	B3RAD0000120	REMOCON RECEIVER	
RT1	K1KA03AA0190	CONNECTOR	
SC351	K3B09CA00014	CRT SOCKET	△
SW1021	EVQ11G05R	SWITCH	
SW1022	EVQ11G05R	SWITCH	
SW1023	EVQ11G05R	SWITCH	
SW1024	EVQ11G05R	SWITCH	
SW1025	EVQ11G05R	SWITCH	
SW1026	EVQ11G05R	SWITCH	
SW850	ESB92DA1B	SWITCH	△
TU001	ENV59K15G3RF	TUNER	△
X601	H0D202500007	CRYSTAL OSC	△
XF101	J0C3525A0003	SAW FILTER	△