

## 4 Self Check Function

### 4.1. Self Check

1. Self Check is used to automatically check the bus lines and hexadecimal codes of the TV set.
2. To get into the Self Check mode, press the "DOWN" button on the customer's controls at the front of the set, at the same time pressing the "MENU" button on the remote control. The screen that will show is represented by Figure 4.
3. Press both "OFF TIMER" button on the remote control and "DOWN" key button on the control panel.

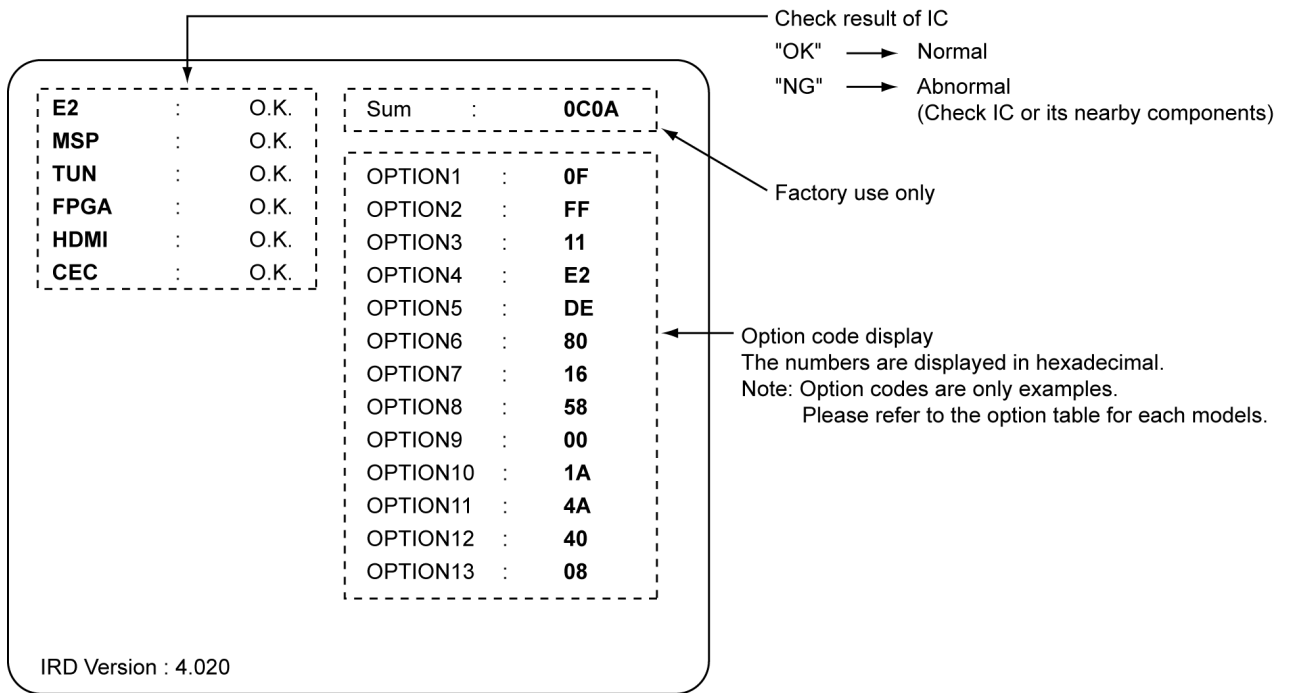


Figure 4

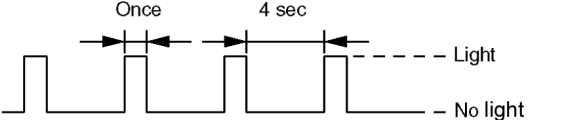





### 4.2. Power LED Blinking Timing Chart

#### 1. Subject

Information of LED blinking timing chart.

#### 2. Contents

When an abnormality has occurred in the unit, the protection circuit operates and resets to standby mode. At this time, the defective block can be identified by the number of blinks of the Power LED on the front panel of the unit.

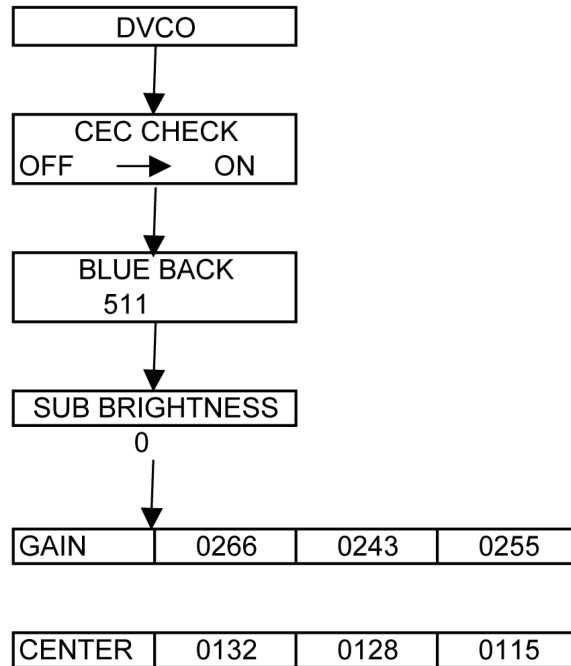
No. of blinks	Blinking timing	Contents	Check point
1		Inverter SOS (24 V line Inverter in LCD panel)	POWER UNIT LCD PANEL
3		SOS BT 30 V/ SOUND 18 V/ PANEL 12 V/	AP-BOARD H-BOARD
4		Sub 9 V	AP-BOARD
5		Sub 5 V	AP-BOARD
6		Main 9 V	AP-BOARD
8		Main 3.3 V	AP-BOARD

## 8 Service Mode Adjustment

Set channel 99, then set the timer to 30 min. Press the “RECALL” button on the remote control and the “-” button on the LCD panel.

### 8.1. SERVICE 1

1. Press the red button (on the remote control) for adjustment below.



### 8.2. SERVICE 2

1. Select CEC CHECK mode in service 1, then press the “HOLD” button (on the remote control) to enter service 2.

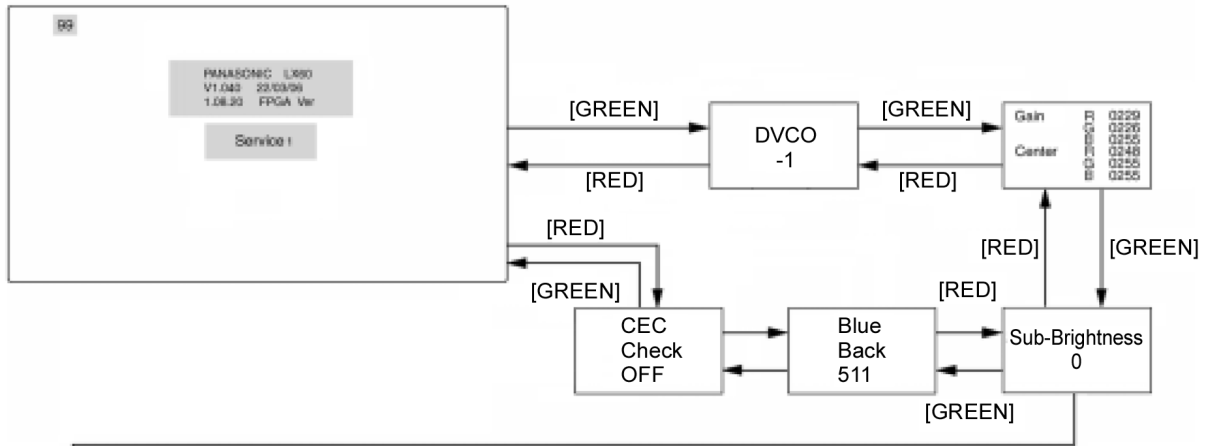
### 8.3. Self Check Mode

1. Press the “TIMER” button (on the remote control) and the “DOWN” button on the LCD panel.
2. Press the “NORMALIZE” button (on the remote control) to Exit.

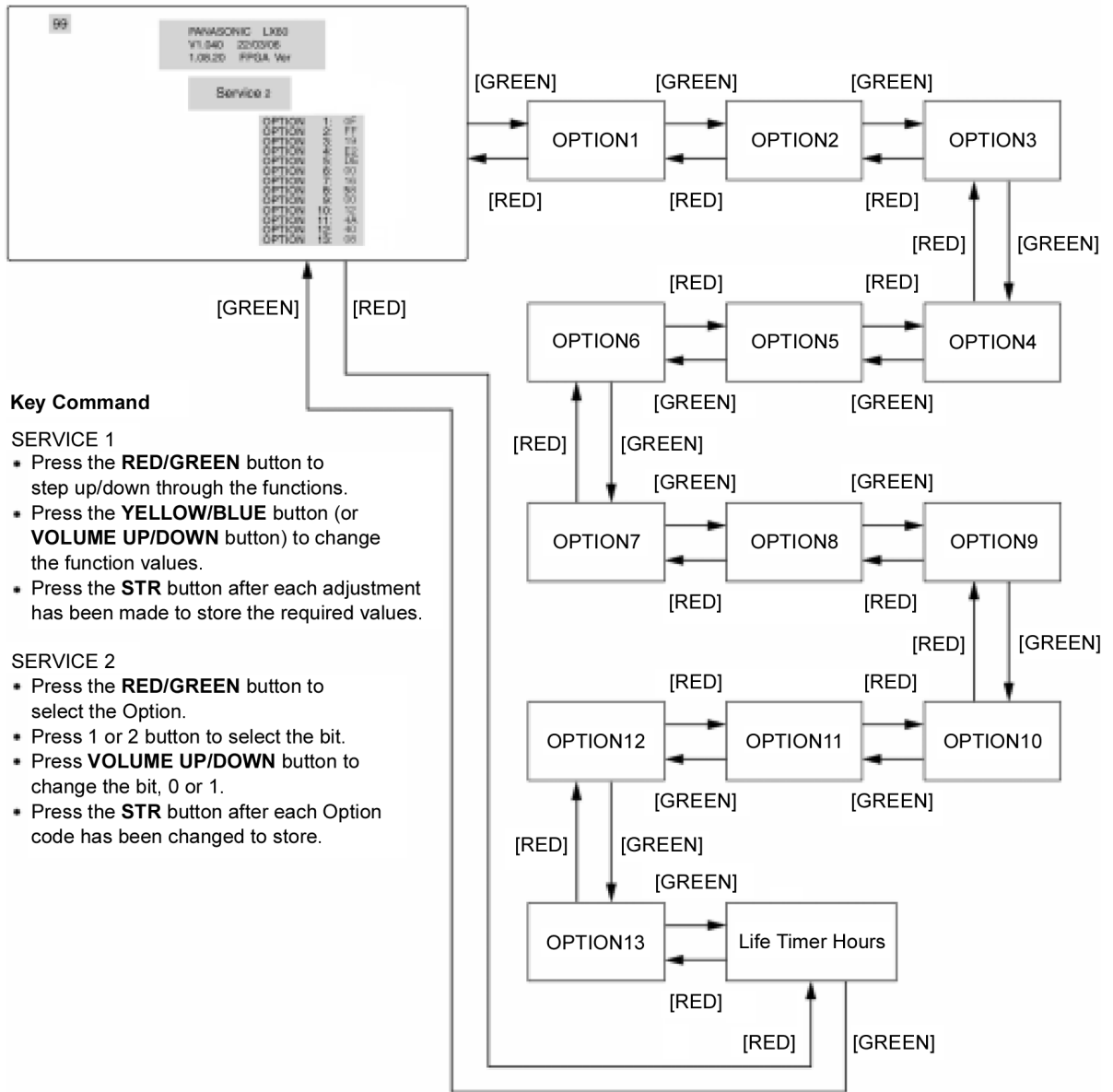
### 8.4. Hotel Mode Adjustment

1. Press the “VOLUME DOWN” button on the TV panel while pressing the “TV/AV” button on the remote control.
2. Press the “MENU” button on the remote control to Exit the Hotel Mode Function.

**SERVICE 1**



**SERVICE 2**



**Key Command**

**SERVICE 1**

- Press the **RED/GREEN** button to step up/down through the functions.
- Press the **YELLOW/BLUE** button (or **VOLUME UP/DOWN** button) to change the function values.
- Press the **STR** button after each adjustment has been made to store the required values.

**SERVICE 2**

- Press the **RED/GREEN** button to select the Option.
- Press 1 or 2 button to select the bit.
- Press **VOLUME UP/DOWN** button to change the bit, 0 or 1.
- Press the **STR** button after each Option code has been changed to store.

## 9 Adjustment

### 9.1. Voltage Chart of A Board

Power Name	Test point	Specification	
		ON	STANDBY
MAIN_5 V	TP1823	5.0 ± 0.25 V	-
PANEL_12 V	TP1815	12.0 ± 0.50 V	-
BT_30 V	TP1820	30.0 V ± 2.0 V	-
24 V	TP1818	24.0 ± 1.2 V	-
MAIN_8 V	TP1822	8.15 V ± 0.4 V	-
STB_6 V	TP1805	6.0 V ± 0.25 V	6.0 V ± 0.25 V
STB_3.3 V	TP1835	3.30 ± 0.17 V	3.30 ± 0.17 V
STB_1.8 V	TP1837	1.89 ± 0.09 V	1.89 ± 0.09 V
SOUND_13.3 V	TP1816	13.3 ± 0.6 V	-

### 9.2. Voltage Chart of P board

Power Name	Test point	Specification	
		ON	STANDBY
MAIN_5 V	TPP008	5.0 ± 0.25 V	-
PANEL_12 V	TPP005	12.0 ± 0.50 V	-
BT_30 V	TPP015	30.0 V ± 2.0 V	-
24 V	TPP007	24.0 ± 1.2 V	-
MAIN_8 V	TPP006	8.0 V ± 0.4 V	-
STB_6 V	TPP013	6.0 V ± 0.25 V	6.0 V ± 0.25 V
STB_3.3 V	TPP009	3.30 ± 0.17 V	3.30 ± 0.17 V
SOUND_13.3 V	TPP002	13.3 V ± 0.6 V	-


### 9.3. DVCO Adjustment

Measuring instrument	Instrument name	Connect to	Remarks
	1. Remote control composite output device	AVI AV input terminal	
Adjust	Procedure		Remarks
	<p>&lt;DVCO Adjustment&gt;</p> <ol style="list-style-type: none"> <li>AVI PAL/fp = 4.43361875 MHz Receive the colour bar pattern at AVI composite video. *Signal generator : PAL/fp = 4.43361875 MHz (ref.)</li> <li>Service 1 Go to "DVCO" under Service 1 by pressing "FA" + "4" on the remote control.</li> <li>Perform automatic adjustment of DVCO using the blue key. (About 3 sec.) *DVCO (START) The display colour of DVCO shows as black (START) → red (under adjustment) → black (completion)</li> </ol>		<p>RF/PAL</p> <p>[Another method] Receive the PAL colour bar pattern at RF.</p> <p>EEPROM Address of DVCO Adjustment value 238 ~ 239</p>

# 11 Schematic Diagram

## 11.1. Schematic Diagram 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.

#### Notes :

##### 1. Resistor

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

##### 2. Capacitor

Unit of capacitance is  $\mu$ F unless otherwise noted.



##### 3. Coil

Unit of inductance is  $\mu$ F unless otherwise noted.

##### 4. Test Point

 : Test Point position

##### 5. Earth Symbol

 : Chassis Earth (Cold)  : Line Earth (Hot)

##### 6. Voltage Measurement

Voltage is measured using DC voltmeter.

Conditions of the measurement are the following :

Power Source.....AC AUTO 110-240 V, 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 an arrow mark (  ) is found, connection is easily found from the direction of the arrow.

9. Indicates the major signal flow: Video  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:

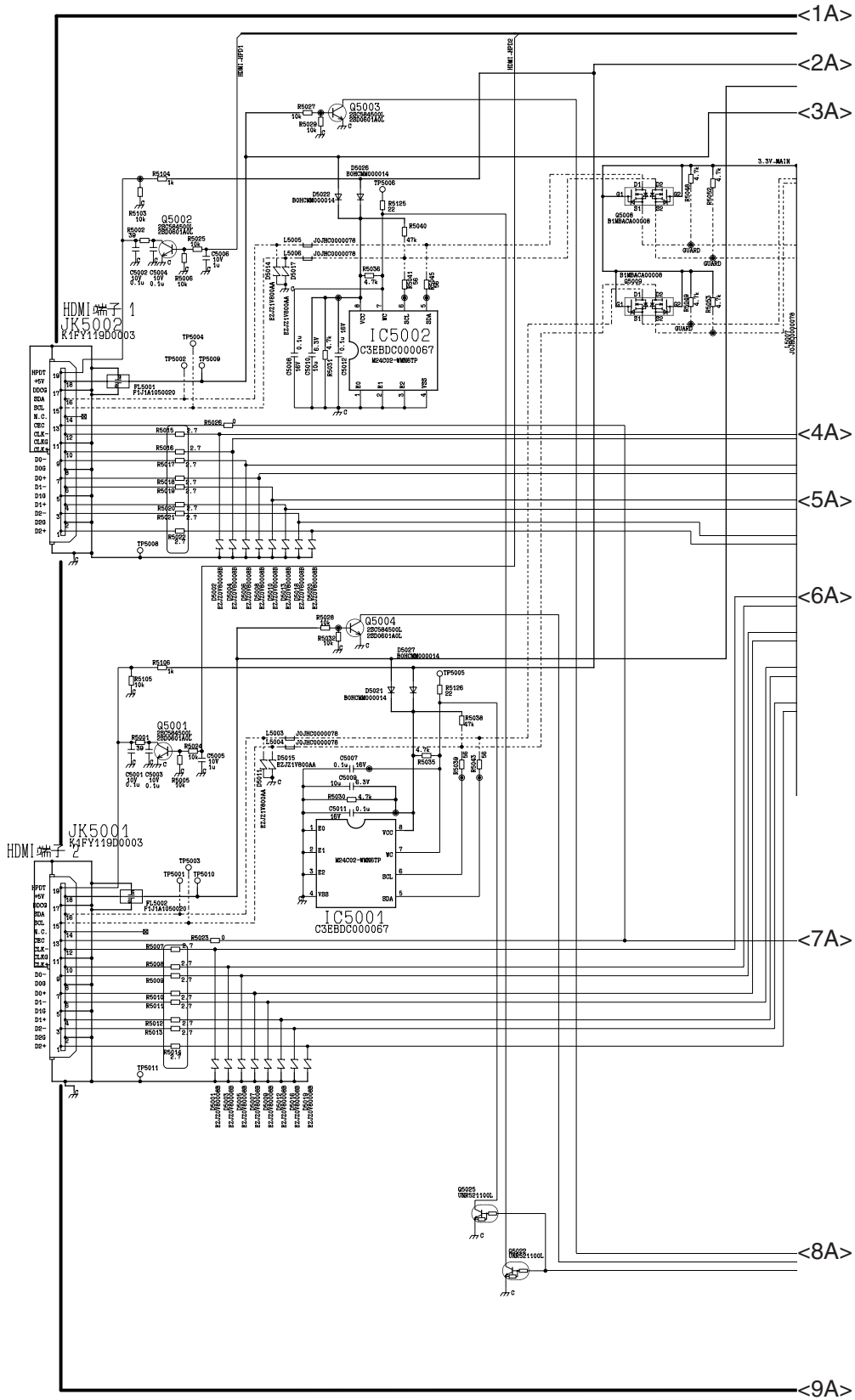
All circuits, except the Power Circuit are cold.

Precautions:

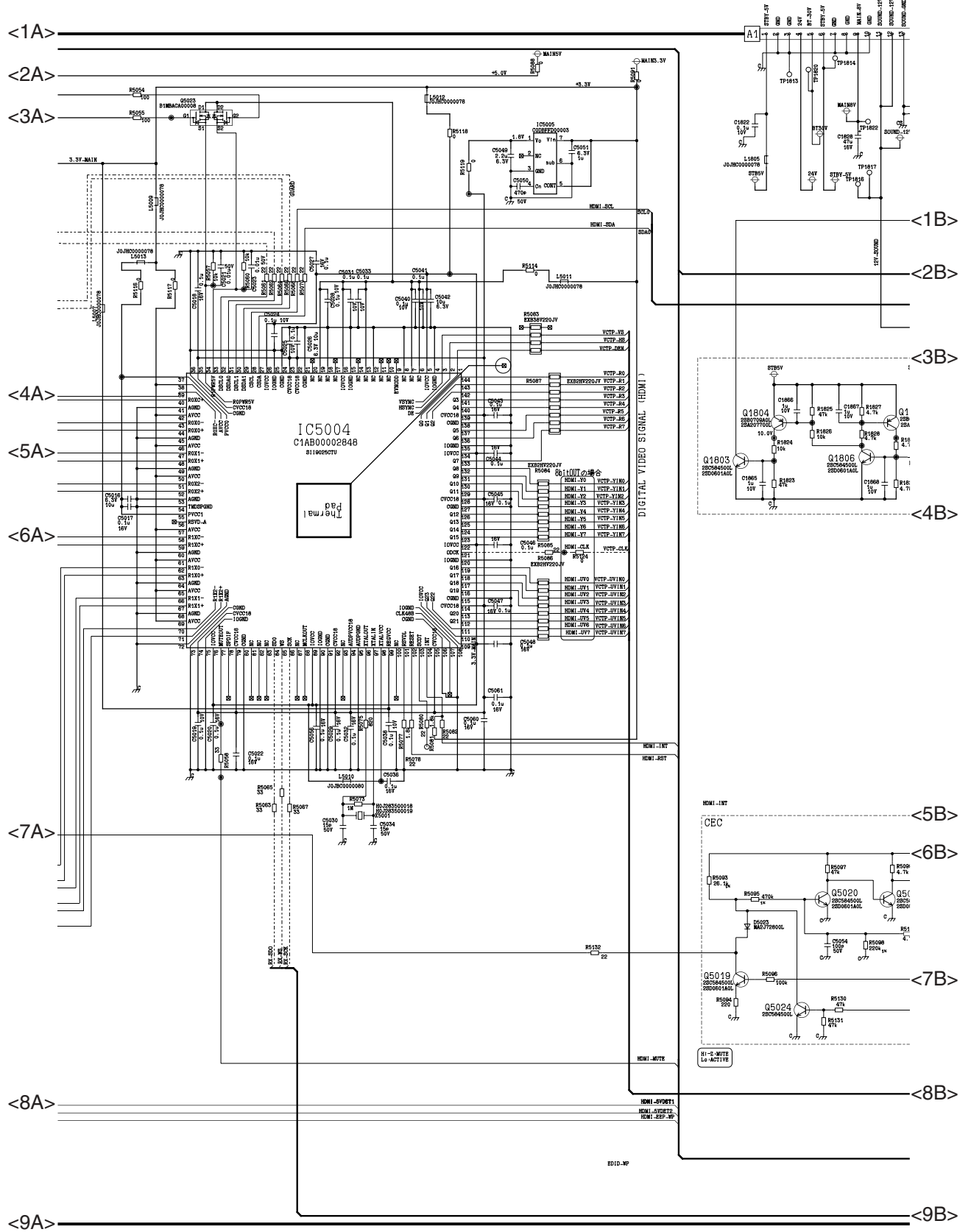
- Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
- Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.
- Do not connect an instrument such as an oscilloscope to the hot and cold circuits simultaneously or a fuse may blow.  
Connect the earth of instruments to the earth connection of the circuit being measured.
- Make sure to disconnect the power plug before removing the chassis.

# 11.2. A Board

## 11.2.1. A Board (1 / 10)

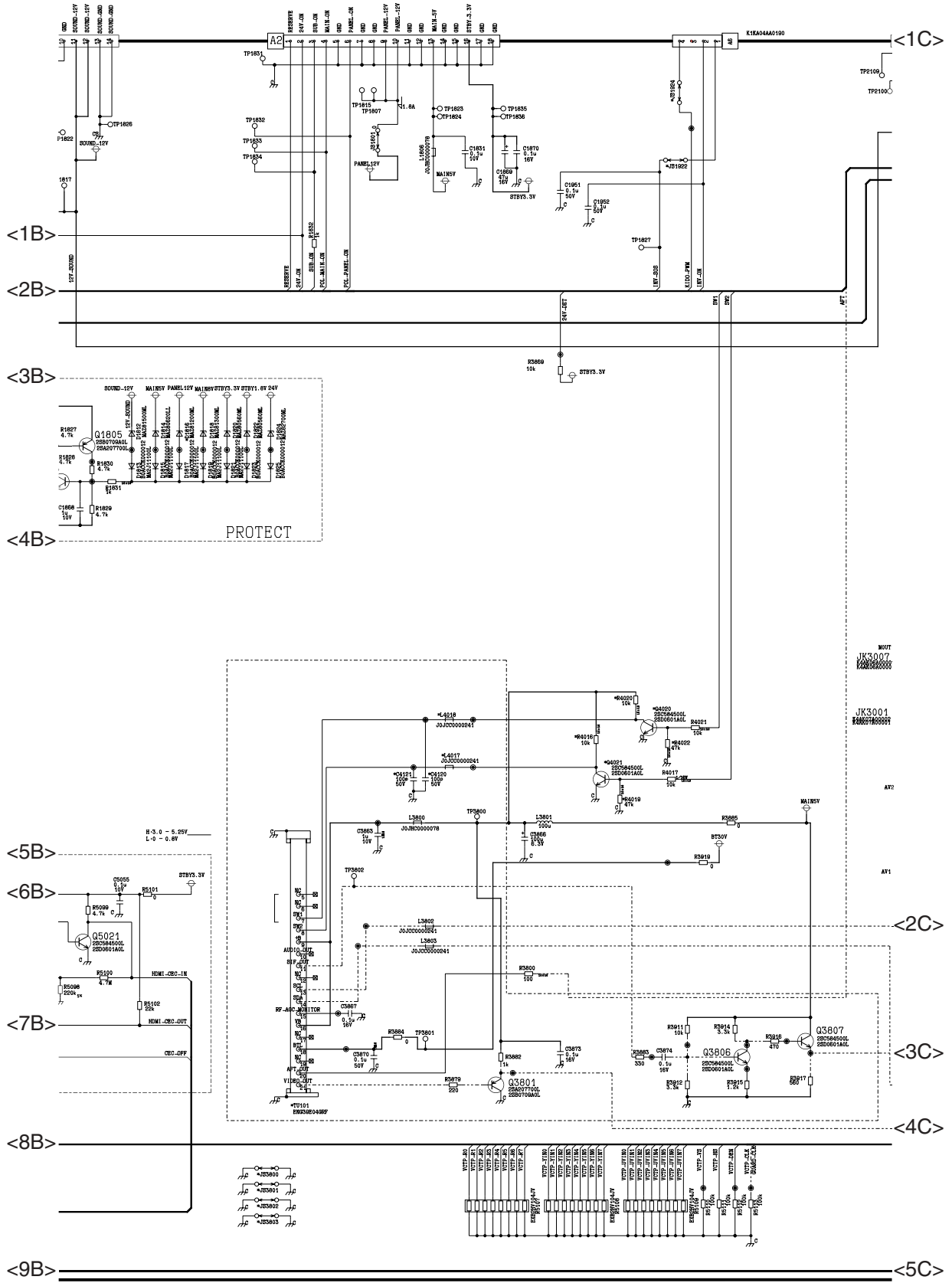


### 11.2.2. A Board (2 / 10)

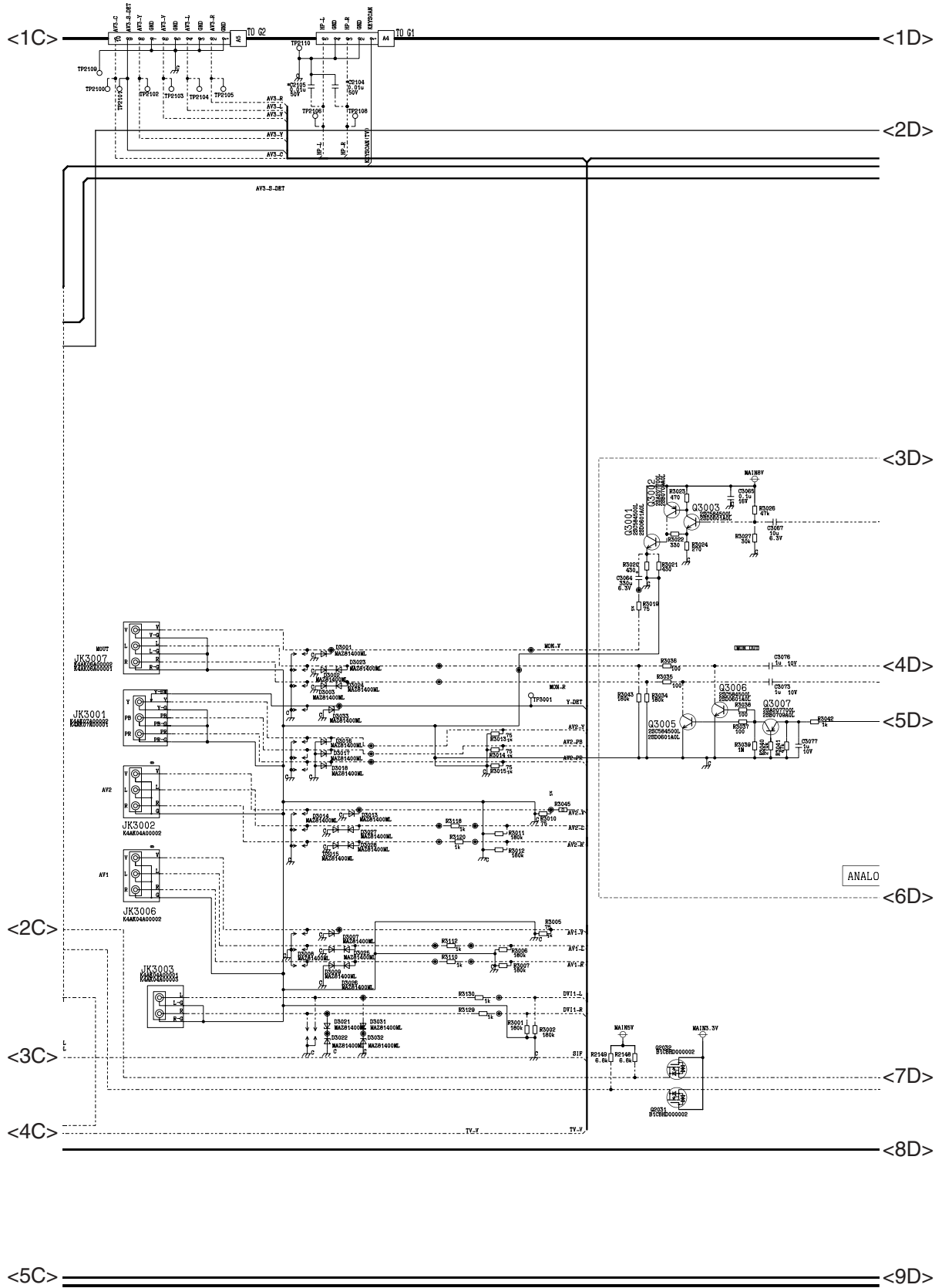




### 11.2.3. A Board (3 / 10)

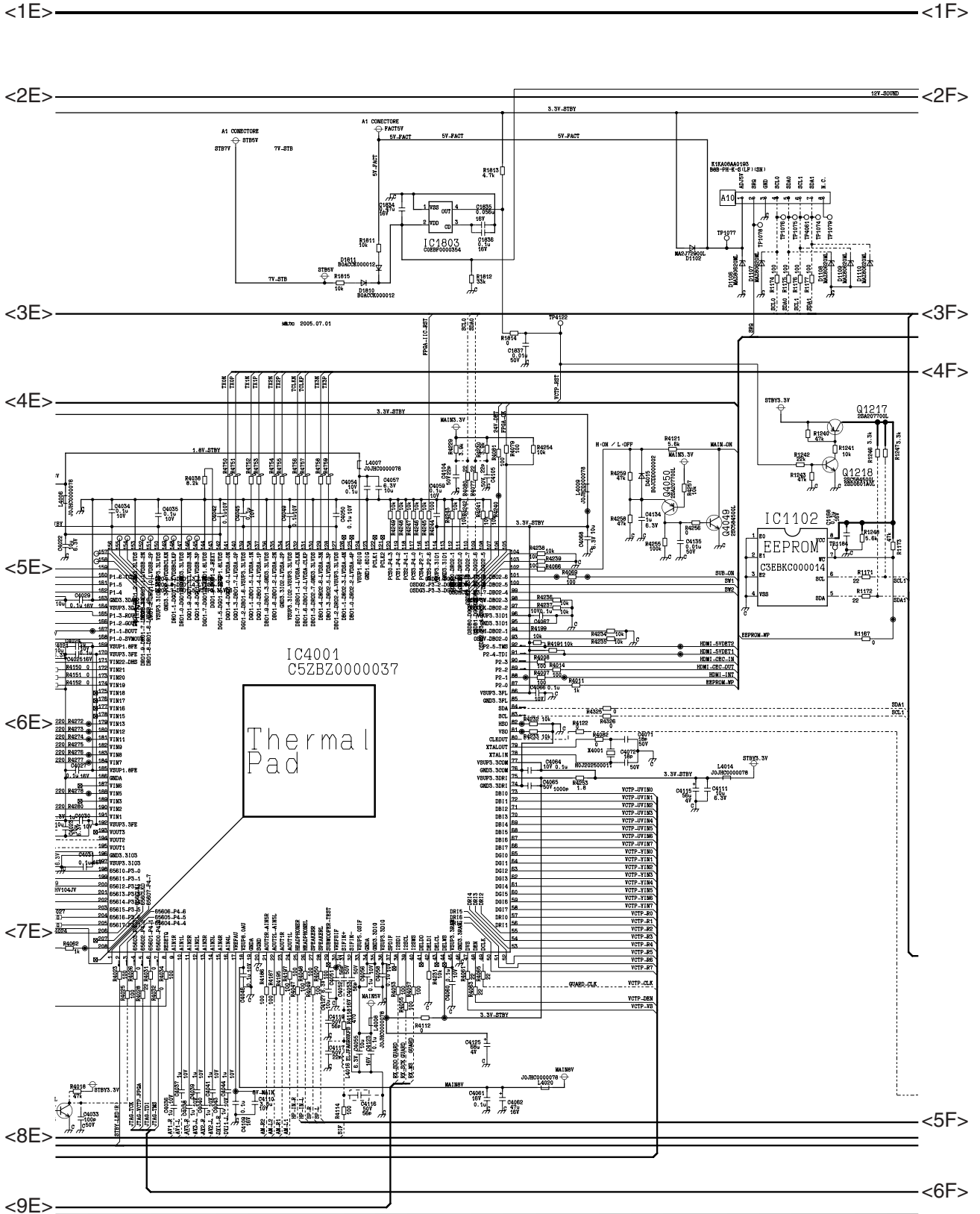


11.2.4. A Board (4 / 10)

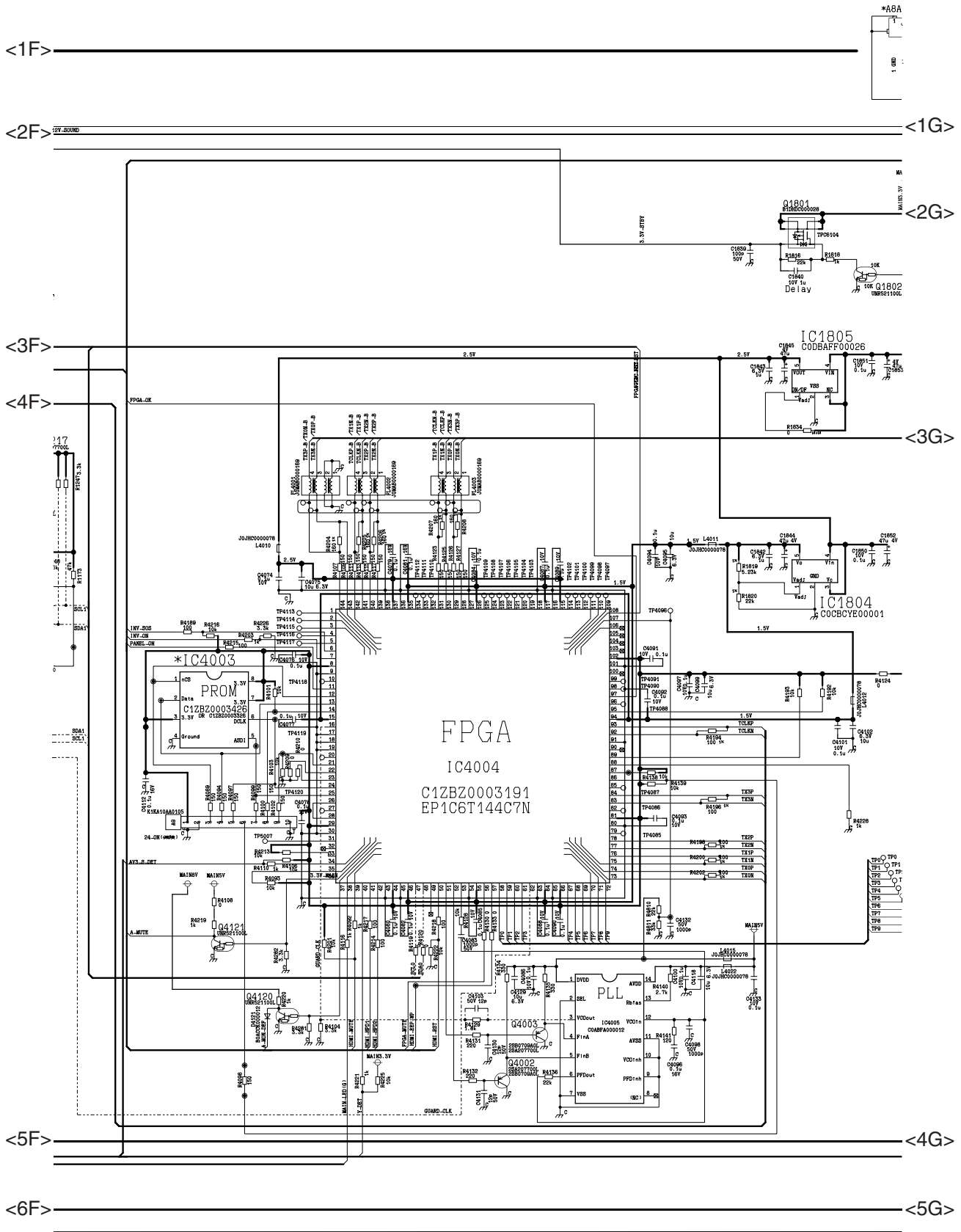




# 11.2.6. A Board (6 / 10)

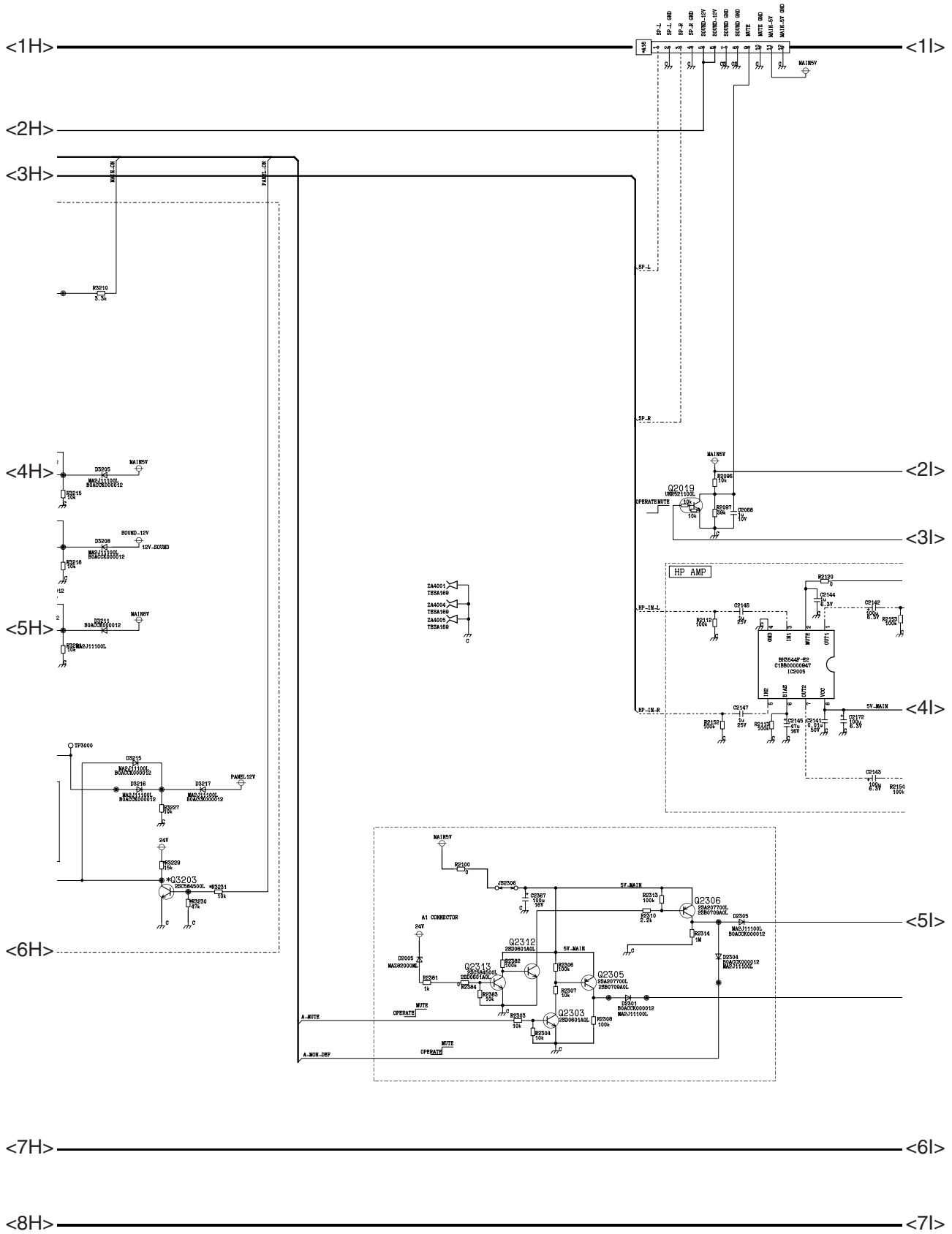


### 11.2.7. A Board (7 / 10)

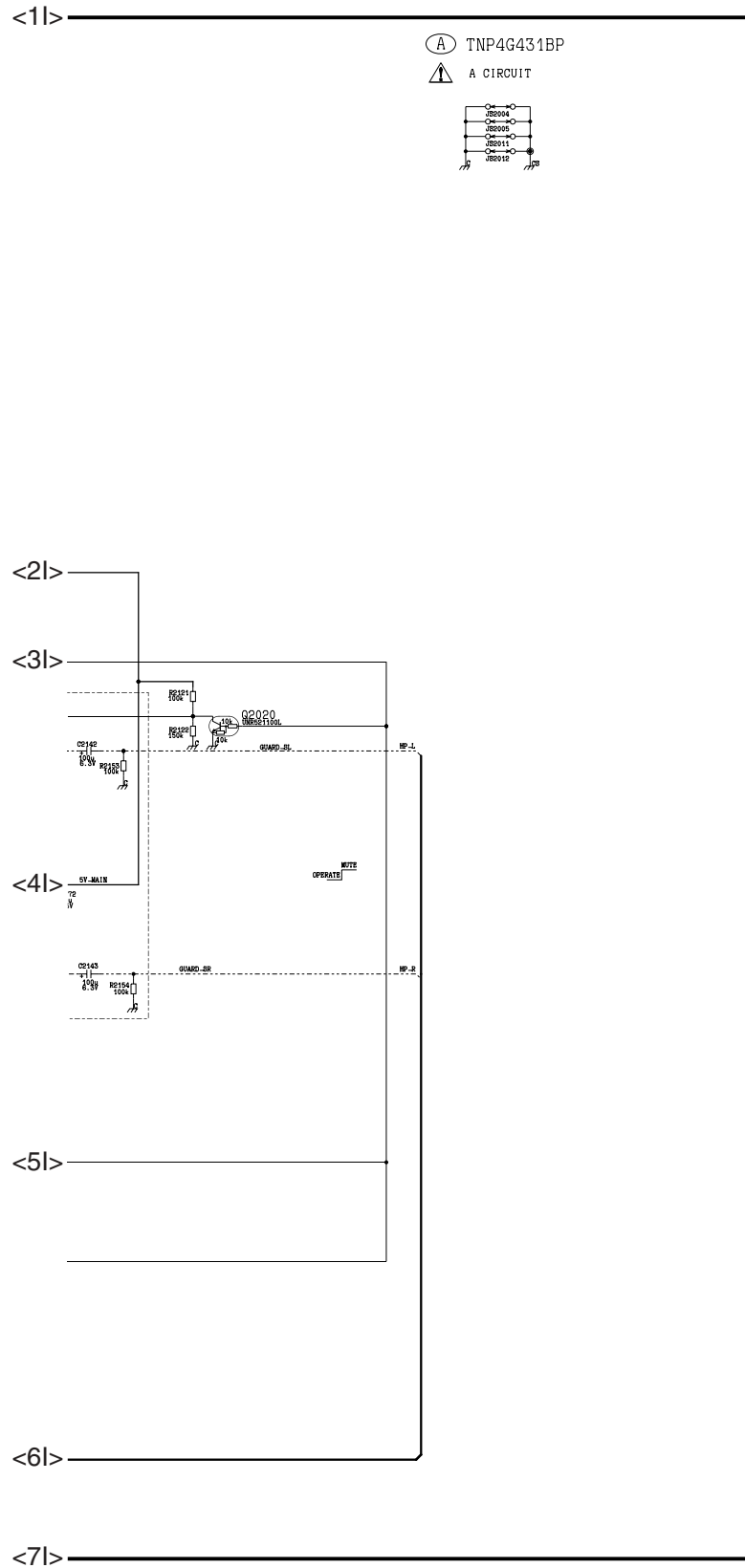




### 11.2.9. A Board (9 / 10)



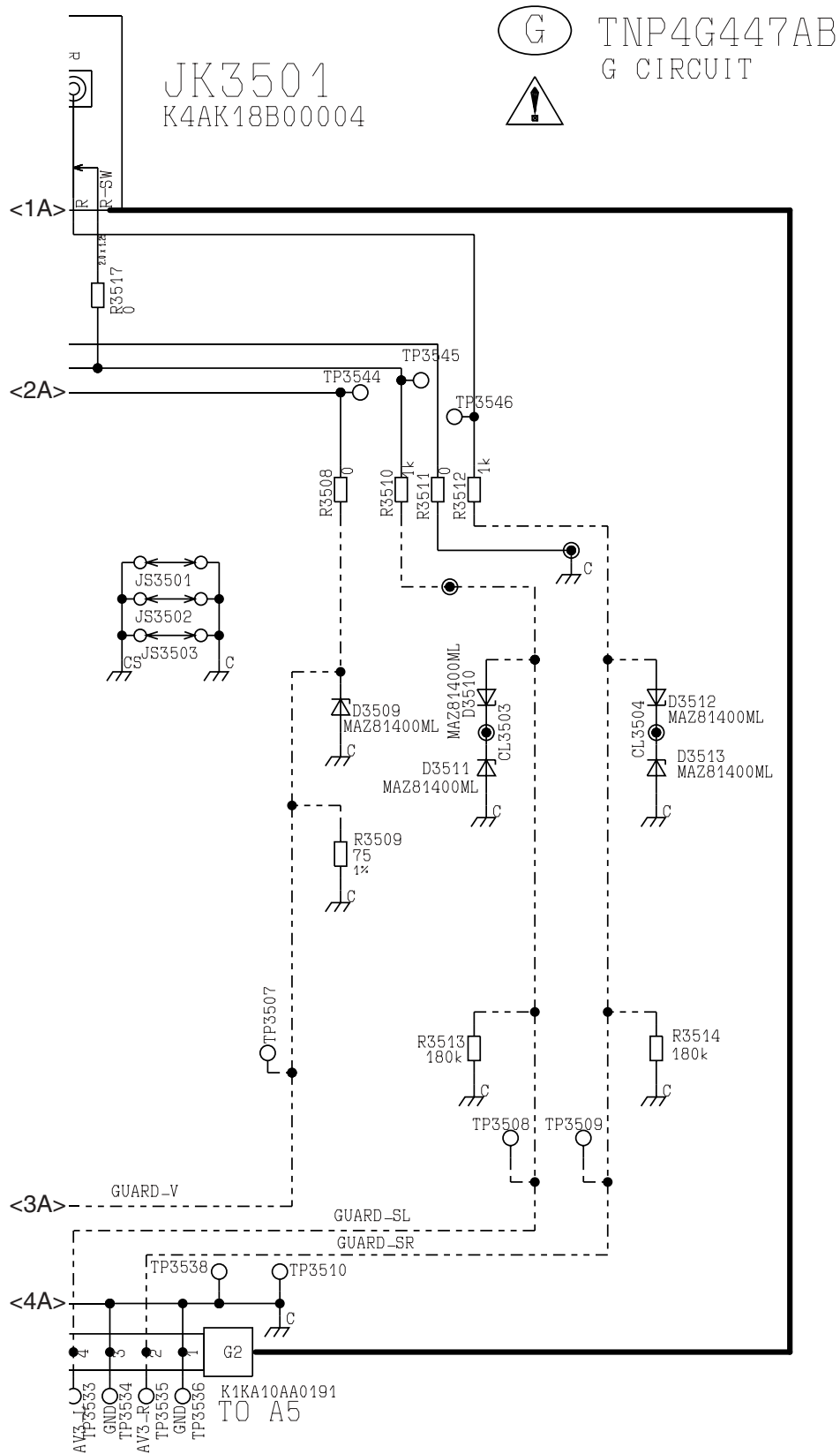
### 11.2.10. A Board (10 / 10)





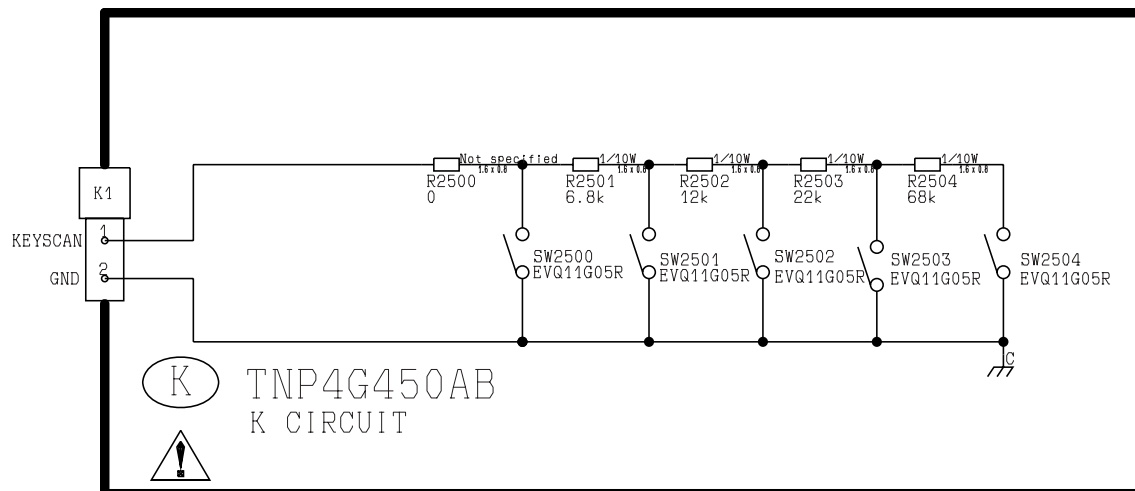


11.3.2. G Board (2 / 2)



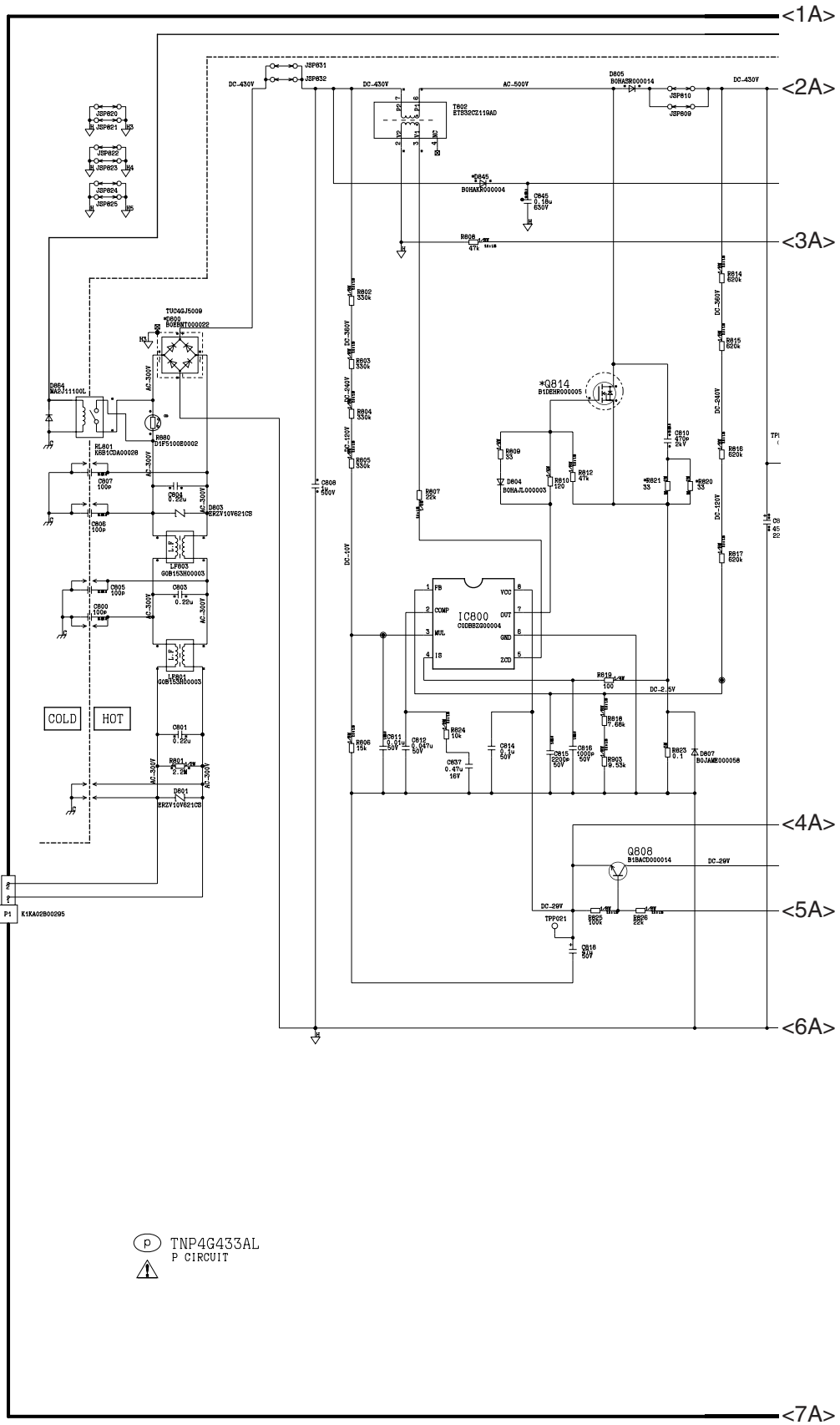
# 11.4. K Board

## 11.4.1. K Board (1 / 1)

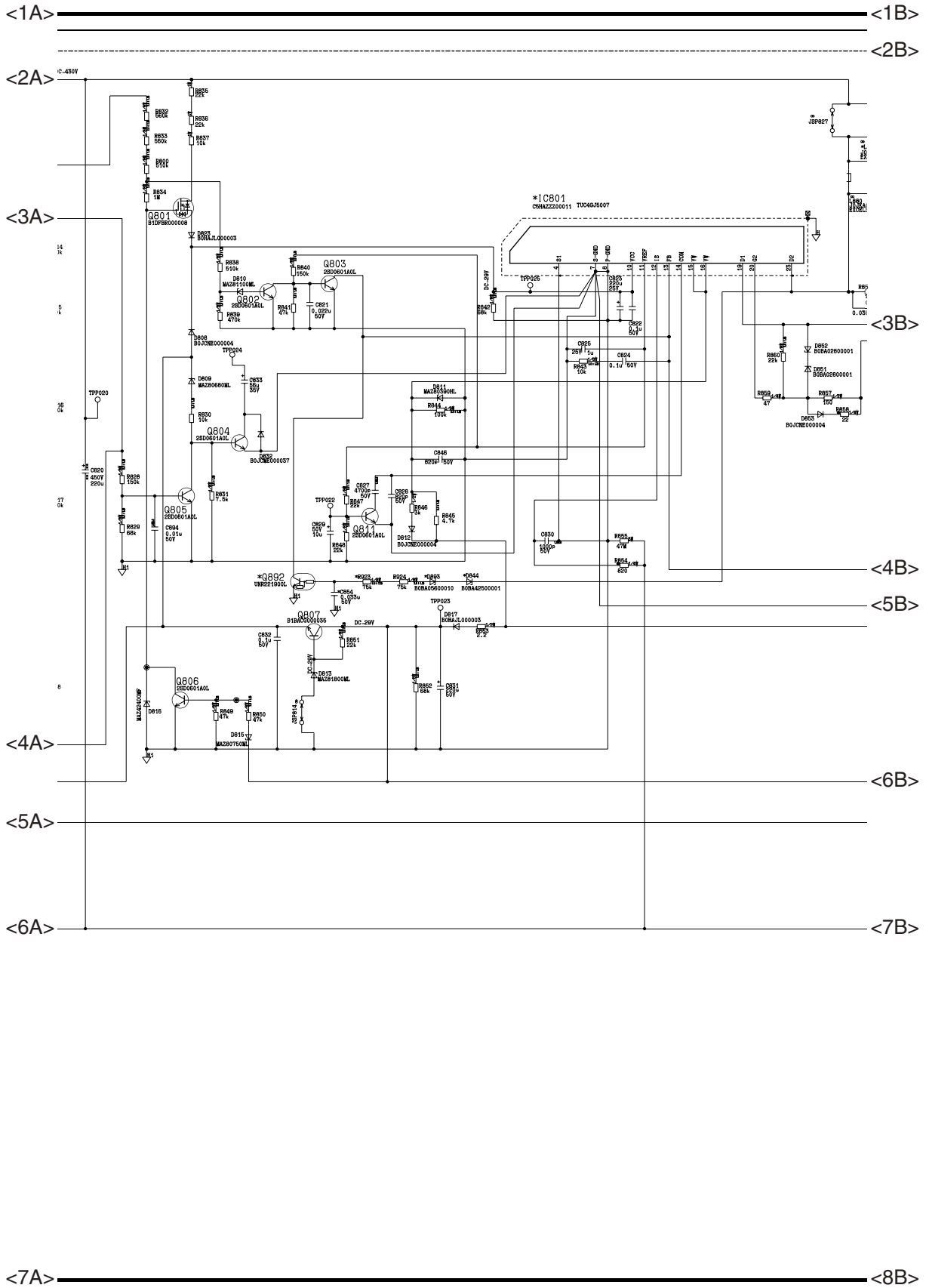


# 11.5. P Board

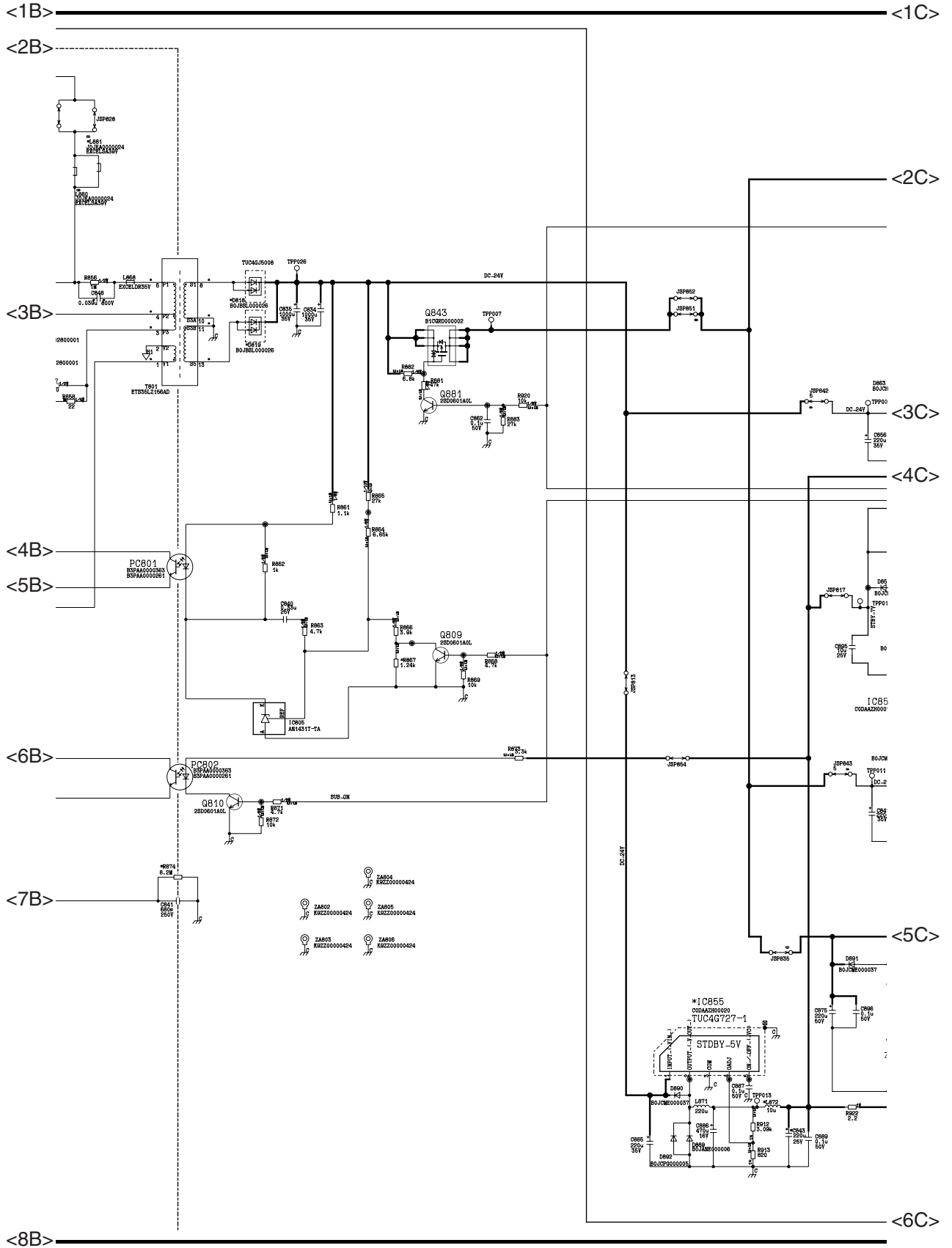
## 11.5.1. P Board (1 / 4)



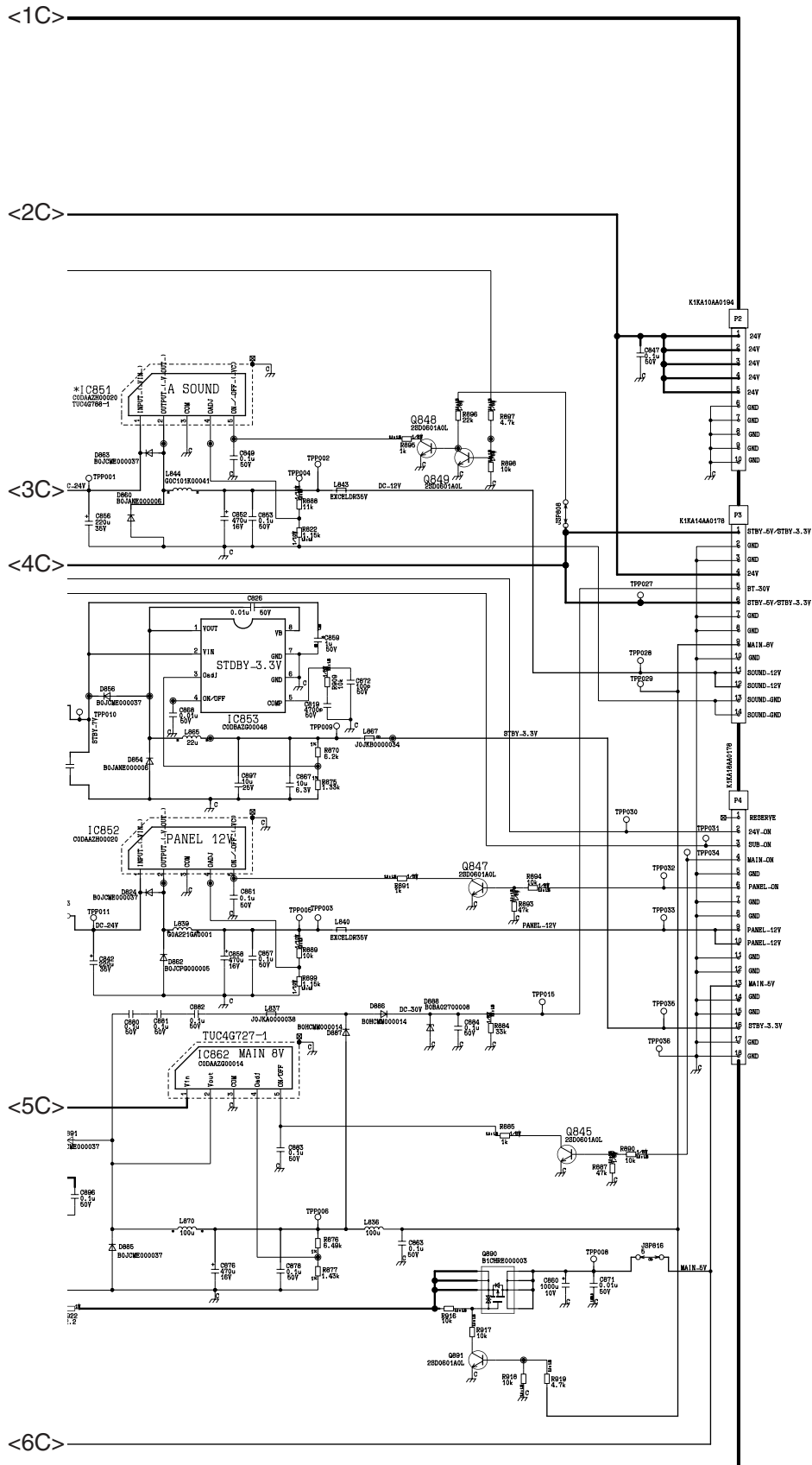
### 11.5.2. P Board (2 / 4)



### 11.5.3. P Board (3 / 4)

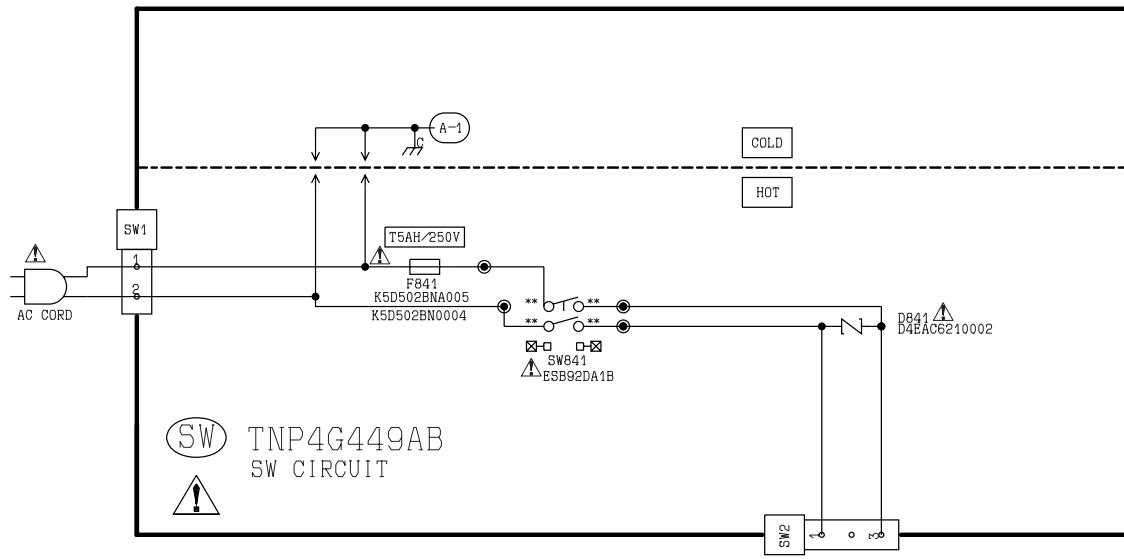


### 11.5.4. P Board (4 / 4)



## 11.6. SW Board

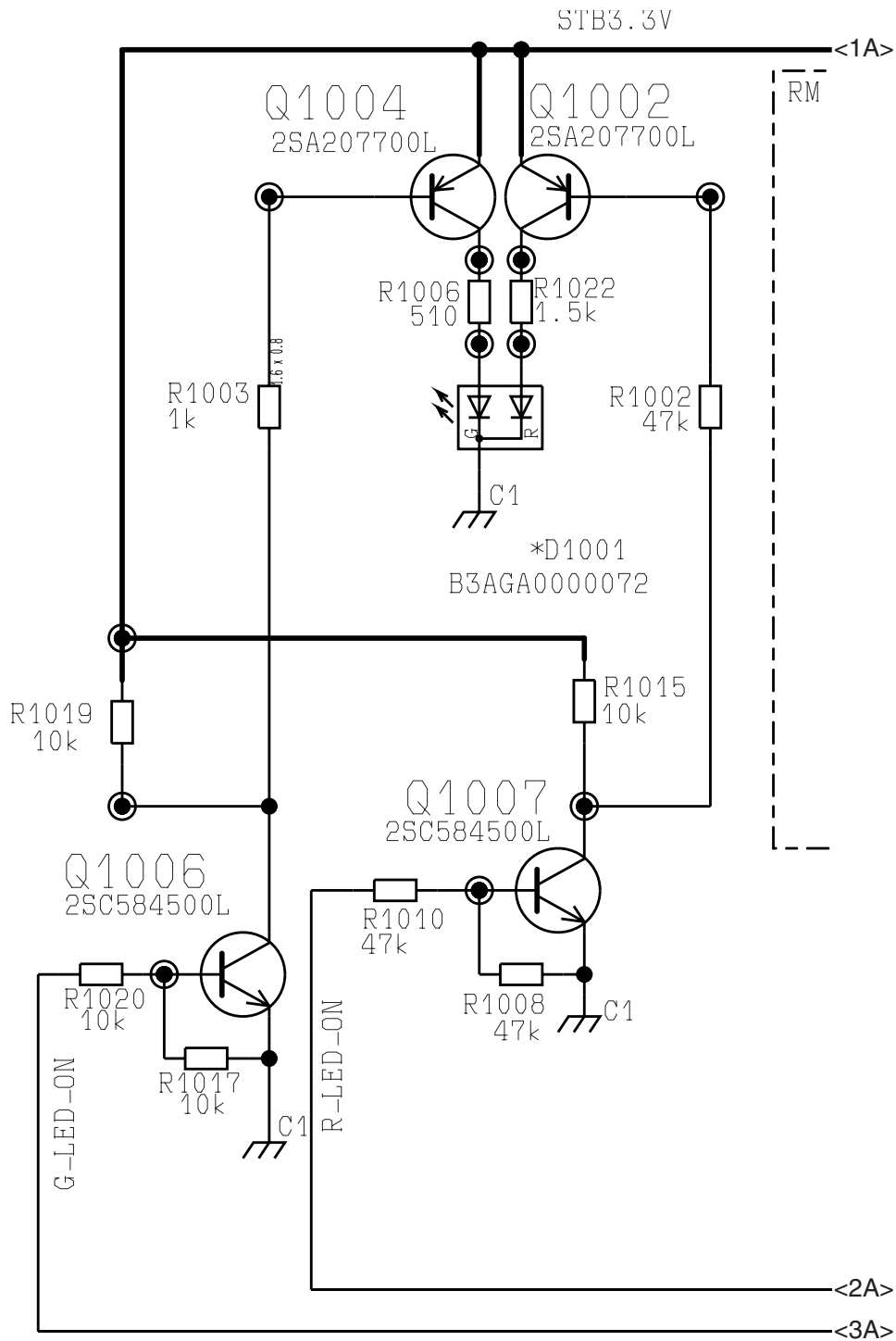
### 11.6.1. SW Board (1 / 1)



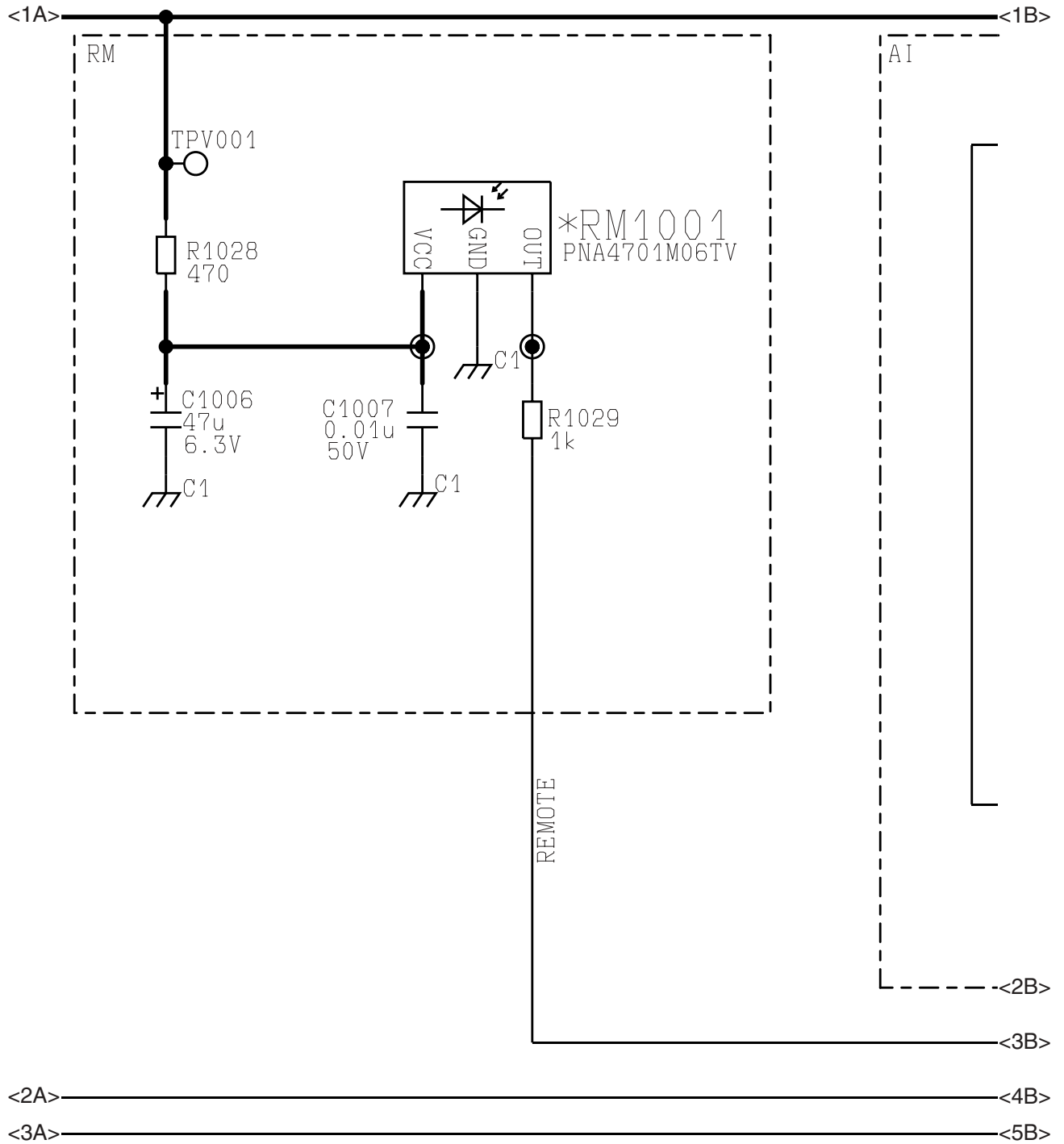


## 11.7. V Board

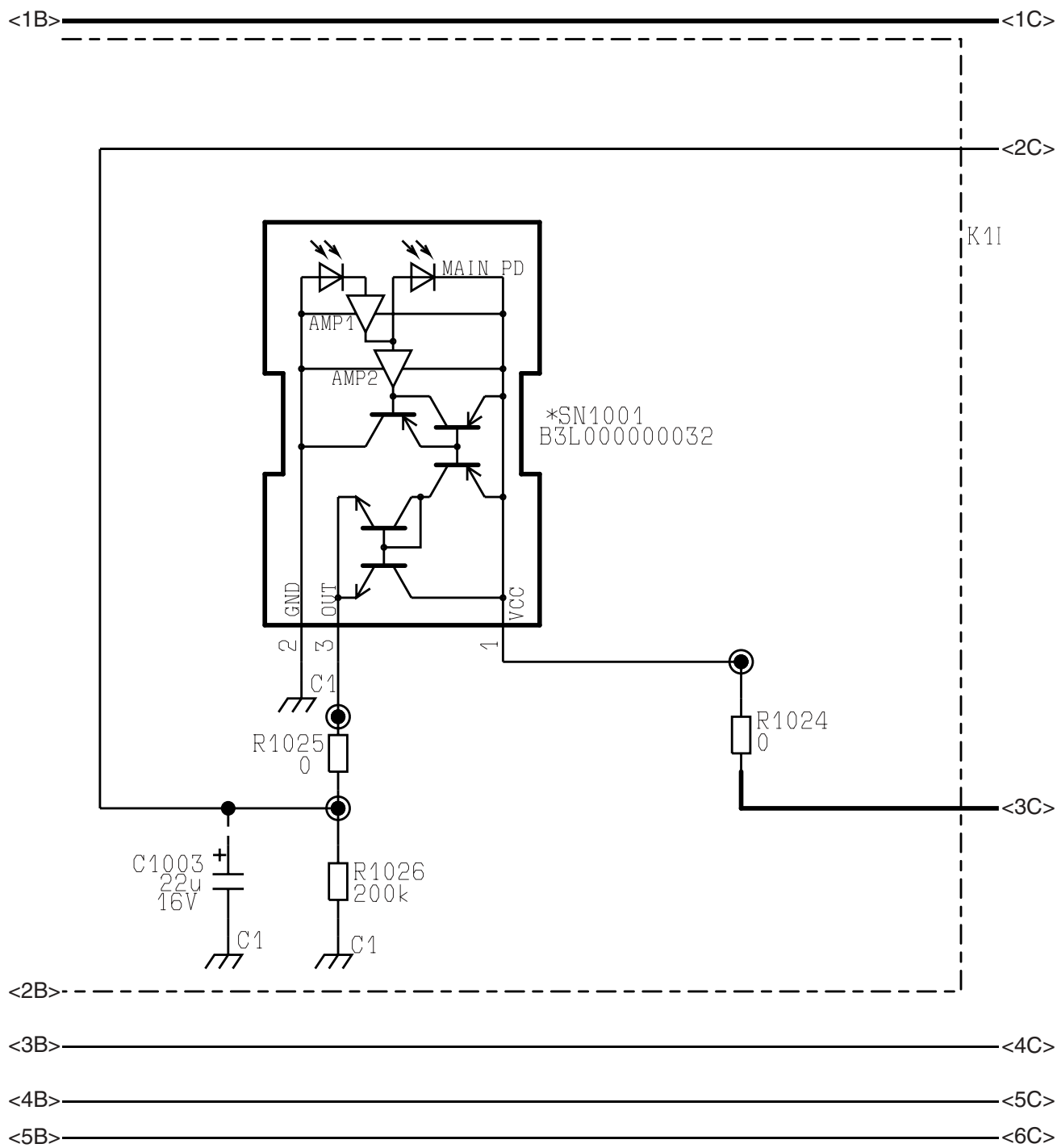
### 11.7.1. V Board (1 / 4)



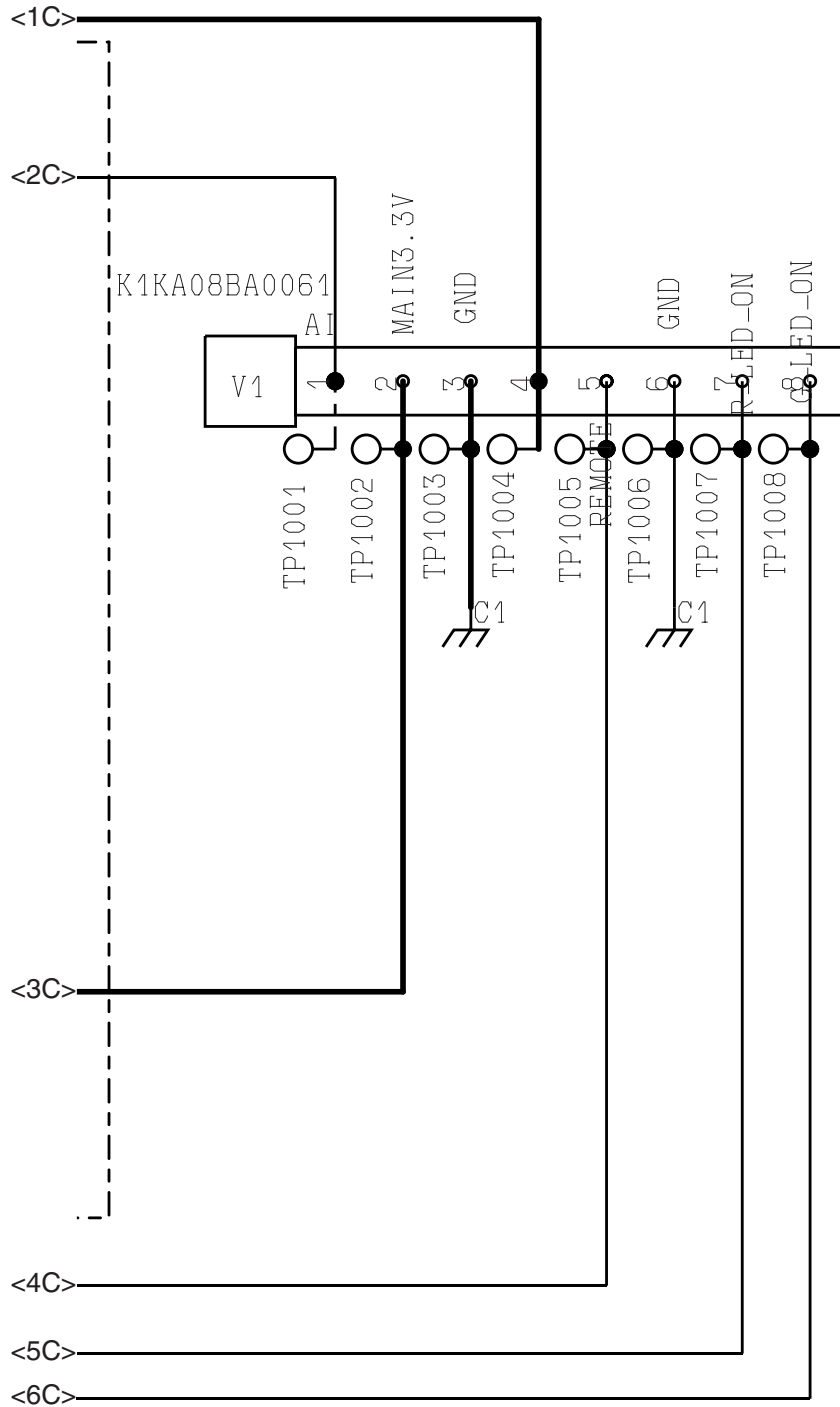
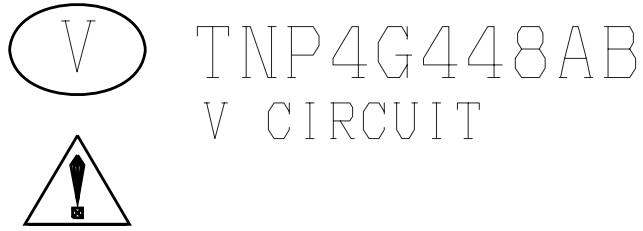
11.7.2. V Board (2 / 4)



### 11.7.3. V Board (3 / 4)

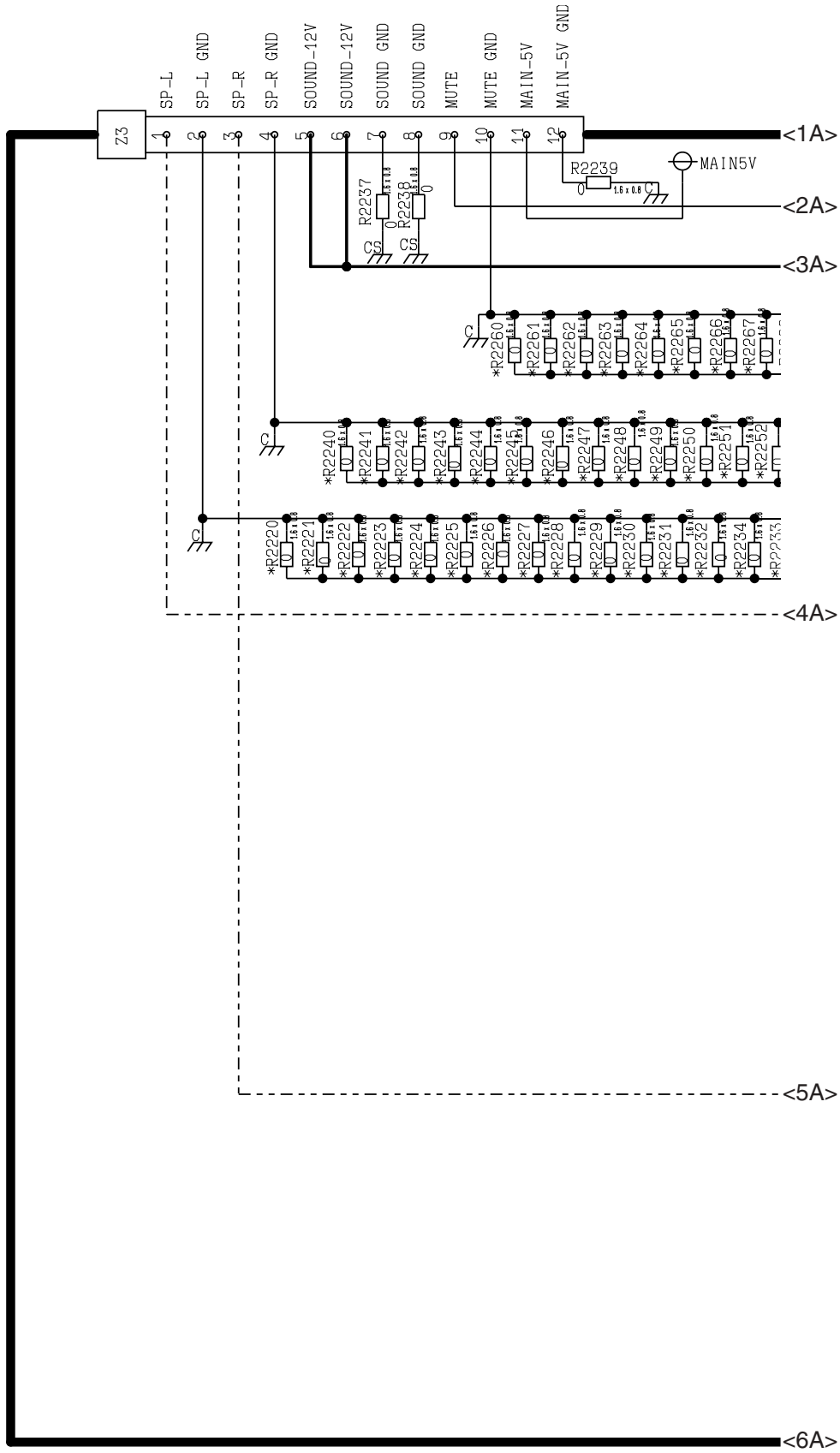


### 11.7.4. V Board (4 / 4)

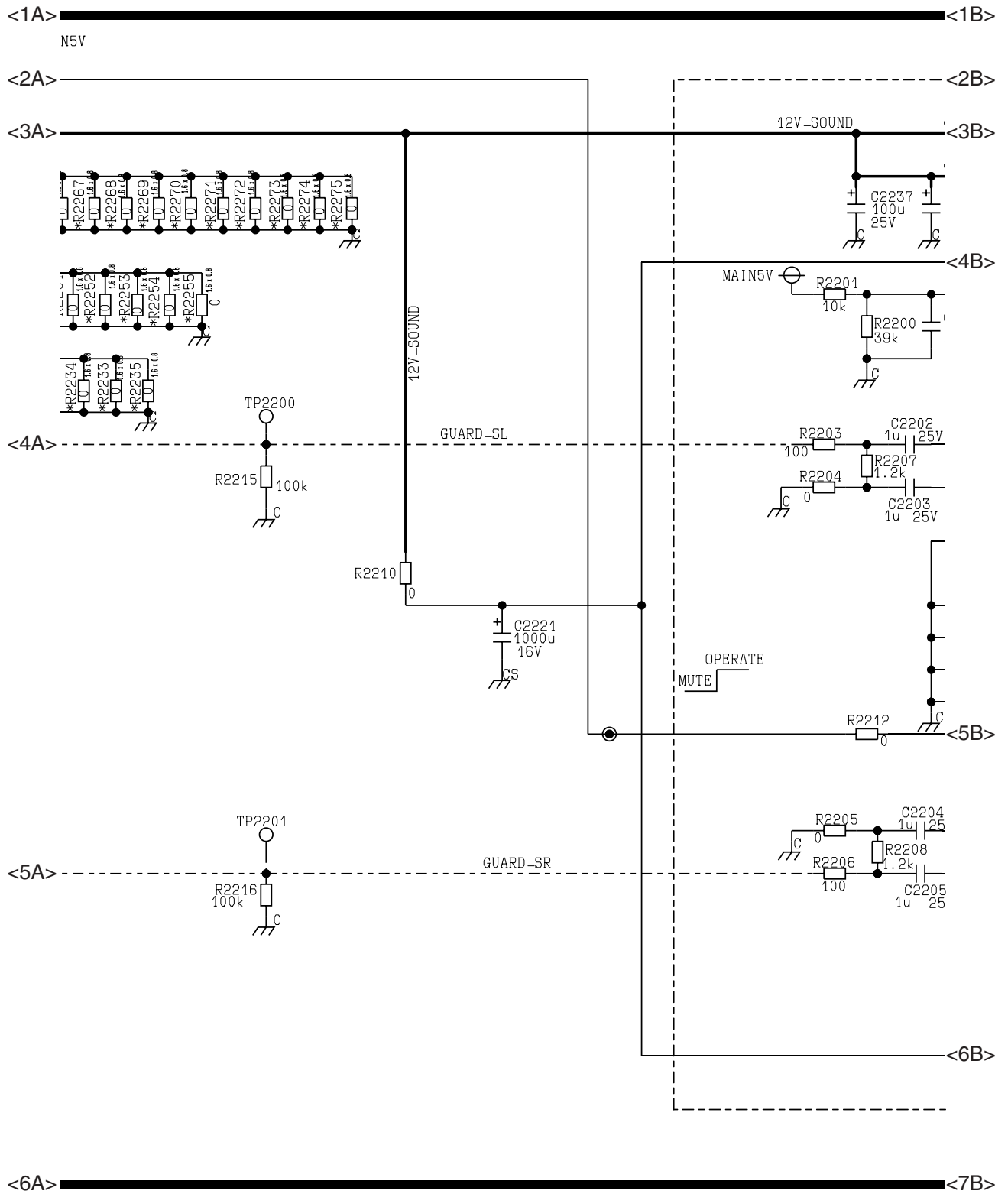


# 11.8. Z Board

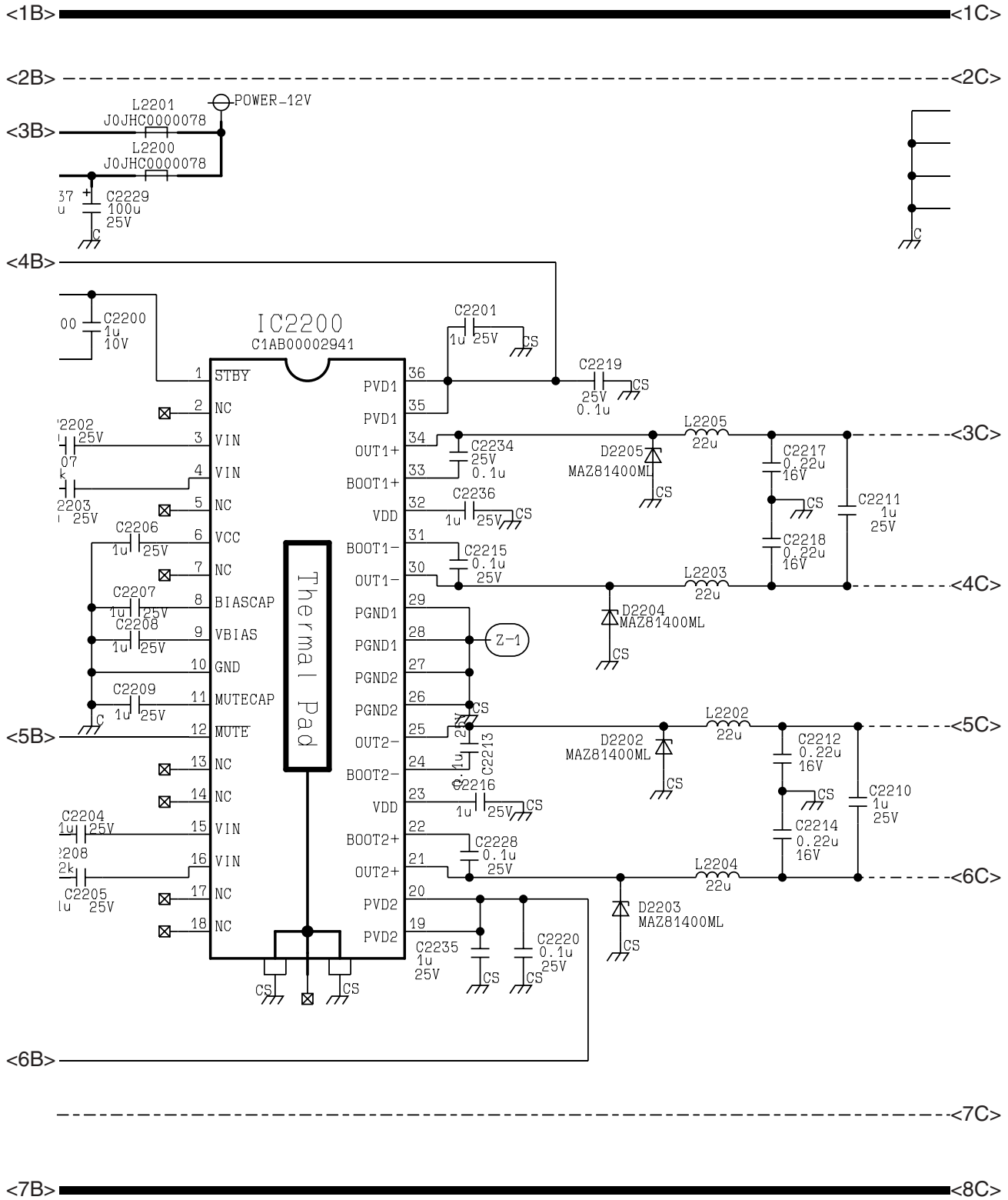
## 11.8.1. Z Board (1 / 4)



### 11.8.2. Z Board (2 / 4)



### 11.8.3. Z Board (3 / 4)



11.8.4. Z Board (4 / 4)

