

# Service Manual

## LCD TV

**TX-23LX60M**

**TX-23LX60X**

**TX-23LX60A**

LH59 Chassis



## Specifications

<b>Power Source</b>	AC 110-240 V, 50 / 60 Hz
<b>Power Consumption</b>	Average use :109W Standby condition: 0.9W
<b>LCD</b>	58.3cmV Wide XGA (1366 × 768 pixels) 16:9 aspect ratio LCD panel.
<b>Screen Size</b>	508mm(W) × 286mm(H)
<b>Sound</b>	
<b>Speaker</b>	12cm × 6cm × 2 pcs,8Ω
<b>Audio Output</b>	6W (3W+3W) ,10%THD
<b>Headphones</b>	M3 (3.5 mm) Jack × 1
<b>Receiving System/Band name</b>	

17 Systems		Function
1	PAL B, G, H	Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders
2	PAL I	
3	PAL D, K	
4	SECAM B, G	
5	SECAM D, K	
6	SECAM K1	
7	NTSC M (NTSC 3.58/ 4.5 MHz)	
8	NTSC 4.43/ 5.5 MHz	Playback from Special VCR's
9	NTSC 4.43/ 6.0 MHz	
10	NTSC 4.43/ 6.5 MHz	
11	NTSC 3.58/ 5.5 MHz	
12	NTSC 3.58/ 6.0 MHz	
13	NTSC 3.58/ 6.5 MHz	
14	SECAM I	
15	PAL 60 Hz/ 5.5 MHz	Playback from Special Disc Players and Special VCR's
16	PAL 60 Hz/ 6.0 MHz	
17	PAL 60 Hz/ 6.5 MHz	

**Receiving Channels**

Regular TV

**VHF BAND**

2-12 (PAL /SECAM B, K1)

0-12 (PAL B AUST.)

1-9 (PAL B N.Z)

1-12 (PAL/SECAM D)

1-12 (NTSC M Japan)

2-13 (NTSC M U.S.A)

**UHF BAND**

21-69 (PAL G, H, I/SECAM G, K, K1)

28-69 (PAL AUST.)

13-57 (PAL D, K)

13-62 (NTSC M Japan)

14-69 (NTSC M U.S.A)

**CATV**

S1-S20 (OSCAR)

1-125 (U.S.A CATV)

C13-C49 (JAPAN)

S21-S41 (HYPER)

Z1-Z37 (CHINA)

5A, 9A (AUST.)

**Aerial-Rear**

UHF/ VHF

**Operating Conditions**

Temperature : 5°C - 40°C

Humidity : 5 % - 90 % RH (non-condensing)

**Connection Terminals****AV1**

VIDEO (RCA Pin Type)

1.0 Vp-p (75 Ω)

S-VIDEO (MINI DIN 4-pin)

Y: 1.0 Vp-p (75 Ω), C: 0.286 Vp-p (75 Ω)

AUDIO L-R (RCA Pin Type × 2)

0.5 Vrms

**AV2**

VIDEO (RCA Pin Type)

1.0 Vp-p (75 Ω)

AUDIO L-R (RCA Pin Type × 2)

0.5 Vrms

Y

1.0 Vp-p (including synchronization)

P<sub>B</sub>C<sub>B</sub>/P<sub>R</sub>C<sub>R</sub>

±0.35 Vp-p

**HDMI 1/2**

TYPE A Connectors

**Audio Input for HDMI1**

RCA PIN Type × 2

0.5 Vrms

**MONITOR OUT**

VIDEO (RCA Pin Type)

1.0 Vp-p (75 Ω)

AUDIO L-R (RCA Pin Type × 2)

0.5 Vrms

**Dimensions ( W × H × D )****Including TV Stand**

565mm × 453mm × 260mm

**TV Set Only**

565mm × 411mm × 119mm

**Weight**

10.0 kg Net

**Note:**

Design and specifications are subject to change without notice. Weight 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.

## CONTENTS

	Page		Page
<b>1 Safety Precautions</b> .....	4	10.4. Option Code Setting .....	21
1.1. General Guidelines .....	4	<b>11 Adjustment</b> .....	22
<b>2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices</b> .....	4	11.1. Voltage chart of A-Board .....	22
<b>3 About lead free solder (PbF)</b> .....	5	11.2. Voltage chart of AP-Board .....	22
<b>4 Input signal that can be displayed</b> .....	7	11.3. DVCO adjustment .....	22
<b>5 Self-check function</b> .....	8	<b>12 Conductor Views</b> .....	23
5.1. How to access .....	8	12.1. A-Board .....	23
5.2. Screen display .....	8	12.2. AP-Board .....	29
<b>6 Chassis Board Layout</b> .....	9	12.3. K-Board .....	30
<b>7 Disassembly for Service</b> .....	10	12.4. V-Board .....	31
7.1. Pedestal ass 馳 .....	10	<b>13 Schematic Diagram</b> .....	33
7.2. Rear cover .....	10	13.1. Schematic Diagram Notes .....	33
7.3. Tuner Cover Ass 馳 .....	10	13.2. MAIN BLOCK Diagram .....	34
7.4. Shield cover .....	10	13.3. P.C.B. BLOCK Diagram .....	35
7.5. Power Button Bracket Ass 馳 .....	11	13.4. SIGNAL BLOCK Diagram .....	36
7.6. Control Panel Ass 馳 .....	11	13.5. A-Board (1 of 5) Schematic Diagram .....	37
7.7. Power Supply unit .....	11	13.6. A-Board (2 of 5) Schematic Diagram .....	38
7.8. A-Board .....	11	13.7. A-Board (3 of 5) Schematic Diagram .....	39
7.9. AP-Board .....	12	13.8. A-Board (4 of 5) Schematic Diagram .....	40
7.10. K-Board .....	12	13.9. A-Board (5 of 5) Schematic Diagram .....	41
7.11. V-Board and Led Panel .....	12	13.10. AP-Board Schematic Diagram .....	42
7.12. Speaker .....	12	13.11. K and V-Board Schematic Diagram .....	43
7.13. Main Chassis .....	13	<b>14 Parts Location &amp; Mechanical Replacement Parts List</b> .....	45
7.14. LCD Panel .....	13	14.1. Parts Location .....	45
<b>8 Location of Wiring</b> .....	15	14.2. Packing Exploded Views .....	46
<b>9 EMI Processing</b> .....	16	<b>15 Mechanical Replacement Parts List</b> .....	47
<b>10 Service Mode Function</b> .....	17	<b>16 Electrical Replacement Parts List</b> .....	48
10.1. How to enter SERVICE 1 .....	17	16.1. Replacement Parts List Notes .....	48
10.2. How to enter SERVICE 2 .....	17	16.2. Electrical Replacement Parts List .....	49
10.3. Option Description .....	19		

# 1 Safety Precautions

## 1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

### 1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between  $1\text{M}\Omega$  and  $5.2\text{M}\Omega$ .

When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

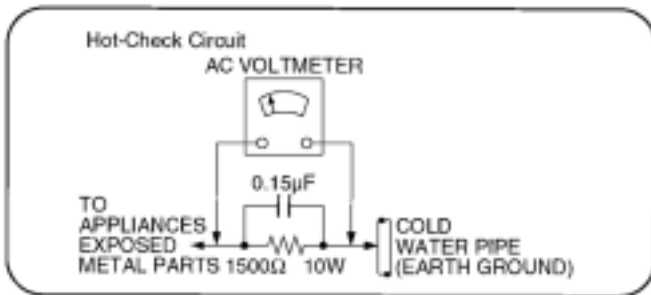


Figure 1

### 1.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1 .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5\text{k}\Omega$ , 10 watts resistor, in parallel with a  $0.15\mu\text{F}$  capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

## 2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).


1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

### Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

### IMPORTANT SAFETY NOTICE

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

## 3 About lead free solder (PbF)


**Note:** Lead is listed as (Pb) in the periodic table of elements.

In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.

The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).

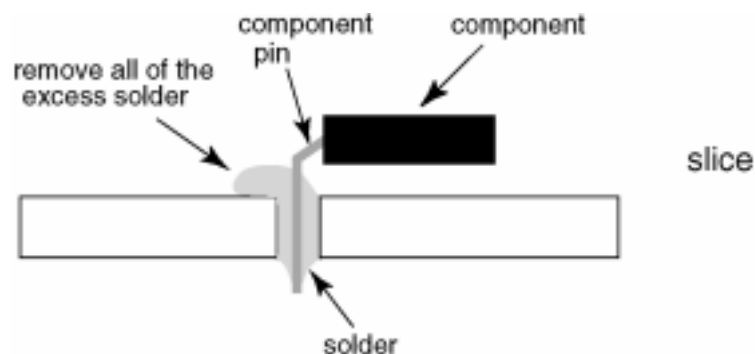
That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

This model uses Pb Free solder in its manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

PCBs manufactured using lead free solder will have the PbF within a leaf Symbol  stamped on the back of PCB.

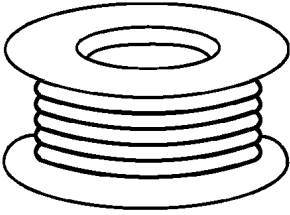
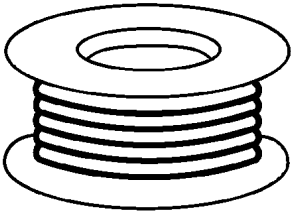
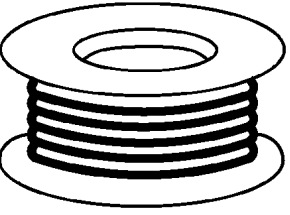
### Caution

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70°F (30~40°C) higher. Please use a high temperature soldering iron and set it to 700 ± 20°F (370 ± 10°C).
  - free solder will tend to splash when heated too high (about 1100°F or 600°C).
- If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.
- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



### Suggested Pb free solder

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

0.3mm X 100g	0.6mm X 100g	1.0mm X 100g
		

## 4 Input signal that can be displayed

\*Mark: Applicable input signal for Component (Y,P<sub>B</sub>/C<sub>B</sub>,P<sub>R</sub>/C<sub>R</sub>) and HDMI

Signal name	Horizontal frequency(kHz)	Vertical frequency(Hz)	Component	HDMI
480i(525)/60Hz	15.73	59.94	*	*
480p(525)/60Hz	31.47	59.94	*	*
576i(625)/50Hz	15.63	50.00	*	*
576p(625)/50Hz	31.25	50.00	*	*
720p(750)/60Hz	45.00	60.00	*	*
720p(750)/50Hz	37.50	50.00	*	*
1080i(1125)/60Hz	33.75	60.00	*	*
1080i(1125)/50Hz	28.13	50.00	*	*

### Note

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.

## 5 Self-check function

When phenomena like "the power fails from time to time" or "the video/audio fails from time to time" can not be confirmed at the time of servicing, the self-check function can be used to confirm the occurrence and to limit the scope for the defective circuits. Also, when "the power fails from time to time", display on the screen can be used to confirm the occurrence and to limit the scope for the defective circuits.

Any programmed channels, channels caption data and some other user defined settings will be erased and return to factory setting.

### 5.1. How to access

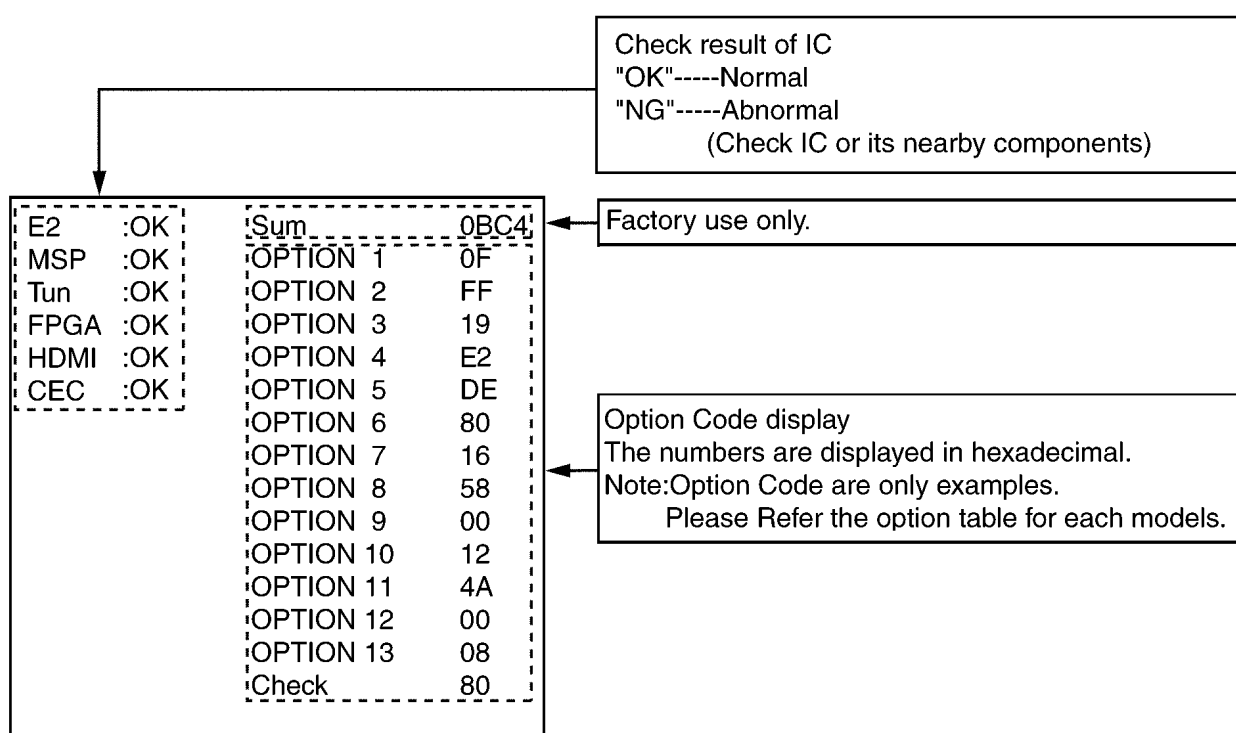
#### 5.1.1. Access

Produce TV reception screen and, while pressing [VOLUME-] button on the main unit, press [OFF TIMER] button on the remote controller unit simultaneously.

#### 5.1.2. Exit

To exit, turn off the TV.

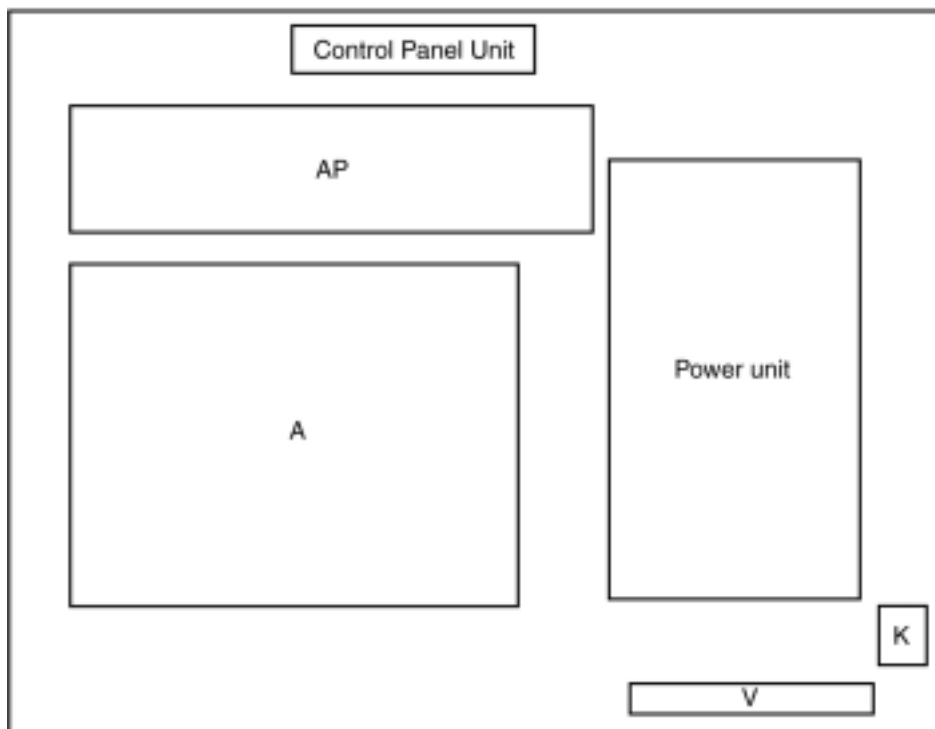
### 5.2. Screen display



Display	Ref No.	Description	P.C.B.
E2	IC1102	EEPROM	A-Board
MSP	IC2001	TV Sound Power Amplifier	A-Board
Tun	TU101	Tuner	A-Board
FPGA	IC4004	LCD Driver and Display Control	A-Board
HDMI	IC5004	HDMI Processor	A-Board
CEC	IC5001/IC5002	CEC Control	A-Board



## 6 Chassis Board Layout

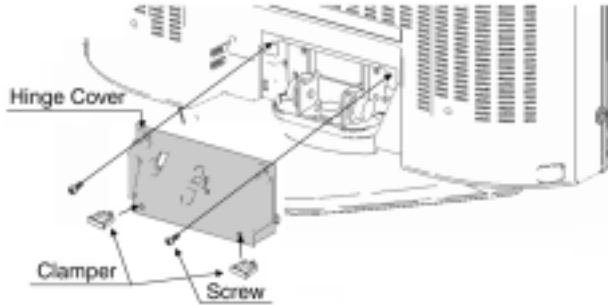


Board Name	Function
A-Board	Main (AV connector, AV Switch, Tuner, Audio & Video Processor, MCU, LCD Driver, LVDS)
V-Board	Remote Receiver, LED, B.A.T.S.
K-Board	Headphone jack
AP-Board	Power Supply, Power Regulator
Power Unit	Power (AC/DC) None serviceable. Power Unit should be exchanged for service.
Control Panel Unit	None serviceable. Control Panel Unit should be exchanged for service.

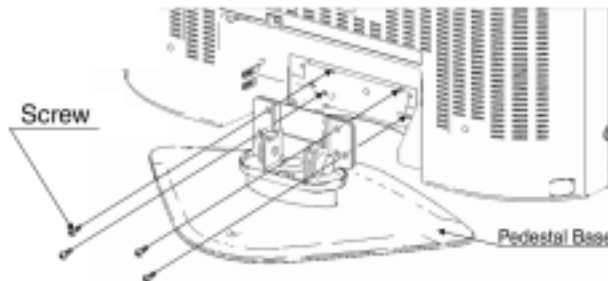
## 7 Disassembly for Service

### 7.1. Pedestal ass'y

1. Lay down the main unit so that the rear cover faces upward.
2. Remove the fixing screw (2 pcs).
3. Remove the hinge cover.

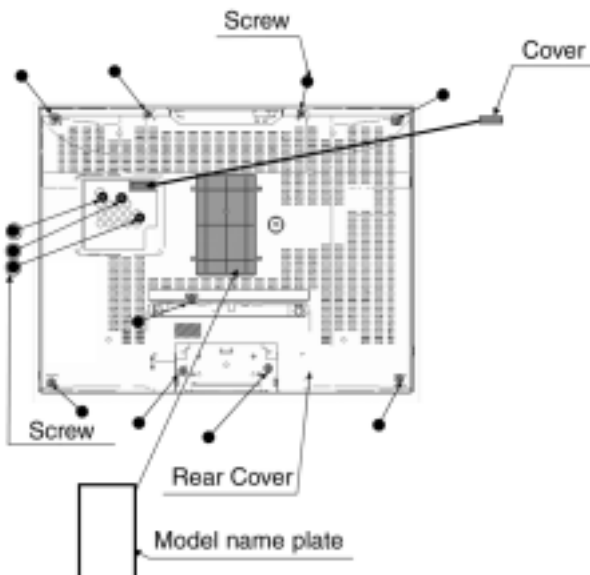


4. Remove the fixing screws (4 pcs).
5. Remove the pedestal ass'y.



### 7.2. Rear cover

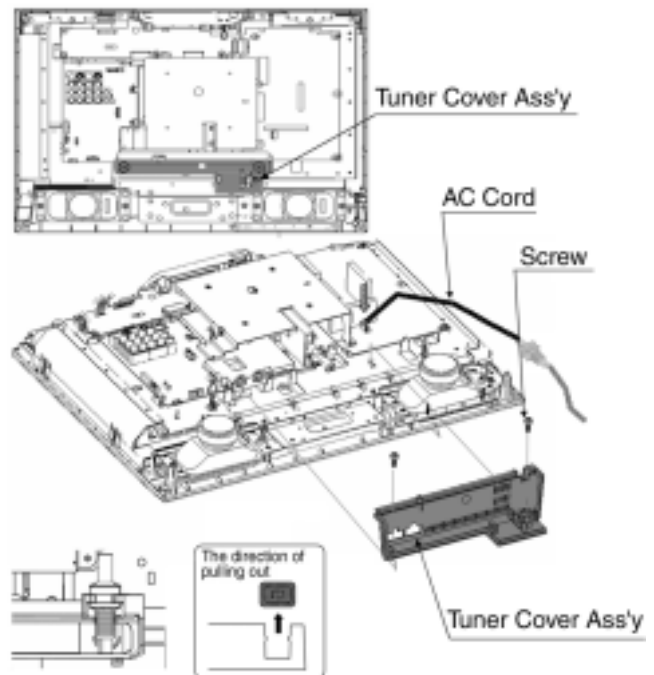
1. Remove the fixing screws (9 pcs and 3 pcs).
2. Remove the rear cover.



### 7.3. Tuner Cover Ass'y

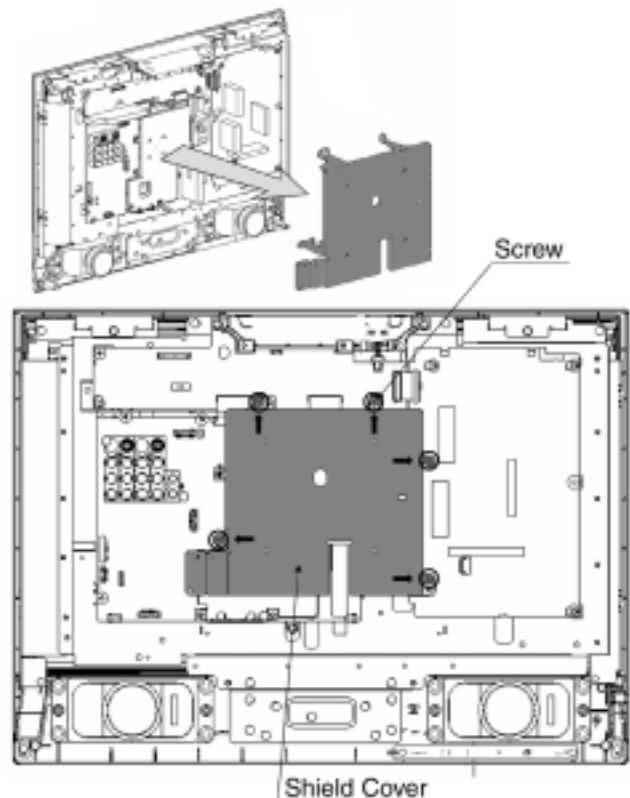
1. Remove the Rear Cover. (See 7.2)
2. Take out the groove of the AC cord from the slot of the Tuner cover Ass'y.

3. Remove the fixing screws (2 pcs).
4. Remove the Tuner Cover Ass'y.



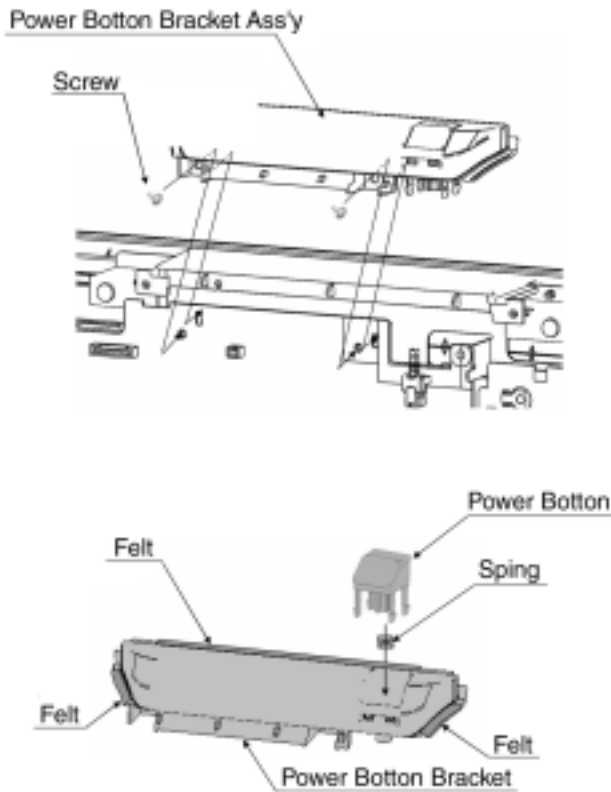
### 7.4. Shield cover

1. Remove the AC cord and Tuner Cover. (See 7.3)
2. Remove the fixing screws (5 pcs ➡).
3. Remove the Shield cover.



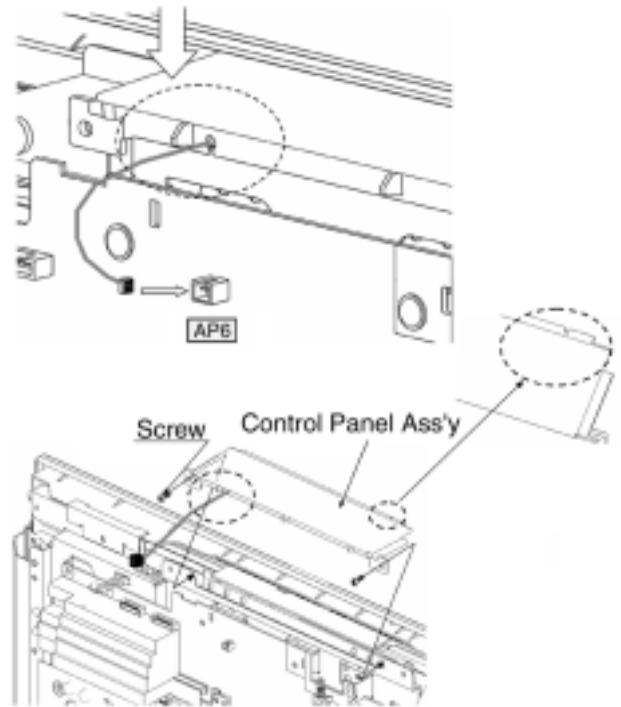
## 7.5. Power Button Bracket Ass'y

1. Remove the rear cover. (See 7.2)
2. Remove the fixing screws (2 pcs).
3. Remove the Power Button Bracket Ass'y.



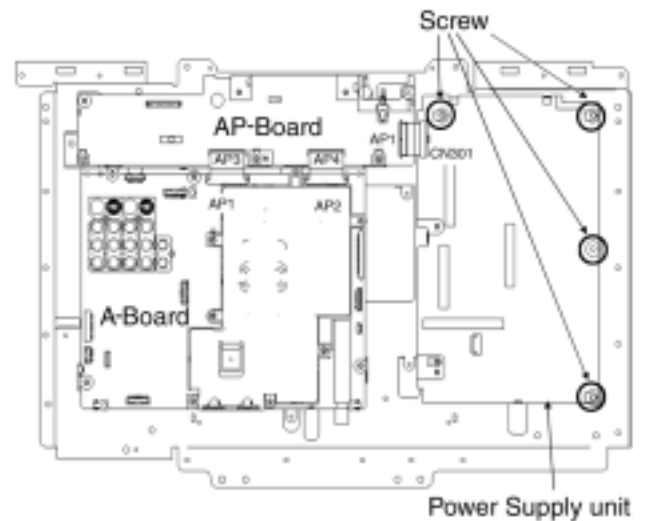
## 7.6. Control Panel Ass'y

1. Remove Power Button Bracket Ass'y. (See 7.5)
2. Remove the fixing screws (2 pcs).
3. Disconnect the coupler (AP6).
4. Remove Control Panel Ass'y.



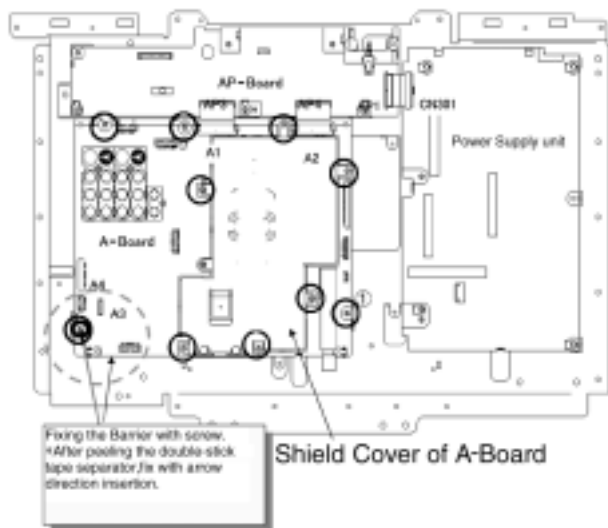
## 7.7. Power Supply unit

1. Disconnect the coupler (AP1~CN301).
2. Remove the fixing screws (4 pcs).
3. Remove the Power Supply unit.



## 7.8. A-Board

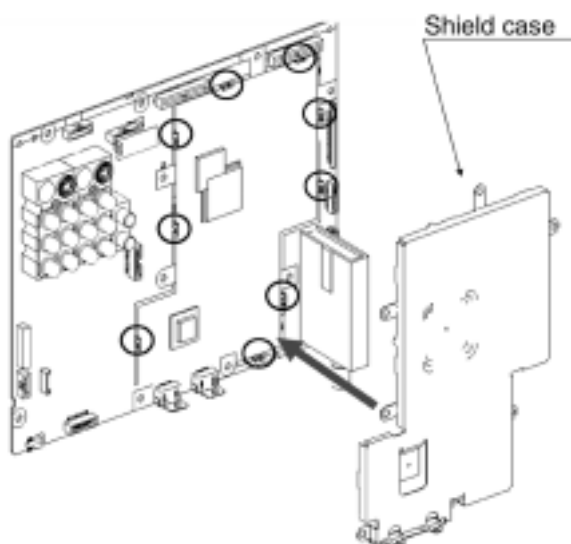
1. Disconnect the couplers (A1~AP3, A2~AP4, A3, A4, A7, LVDS).
2. Remove the fixing screw (10pcs).
3. Remove A-Board.



4. Fix the Rubber to IC4001 and the Shield case (top) to A-Board.

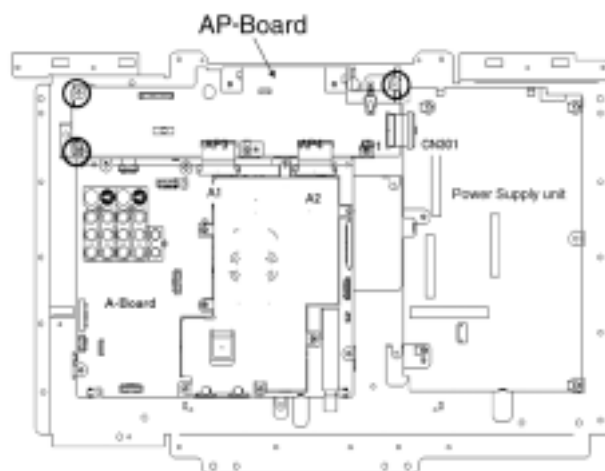
**Caution:**

- a. Fix carefully Shield case to shield clip (9 pcs).
- b. Confirm a hole of shield case to fit with rubber.



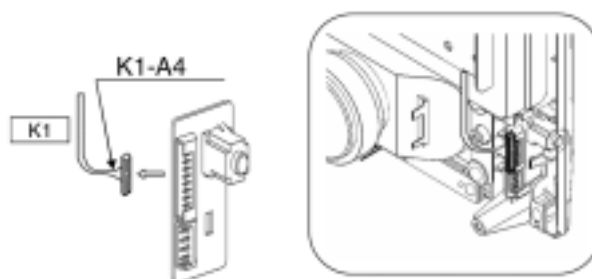
## 7.9. AP-Board

1. Disconnect the couplers (AP3~A1, AP4~A2, AP1~CN301, AP5, AP6).
2. Remove the fixing screw (3pcs).
3. Remove AP-Board.



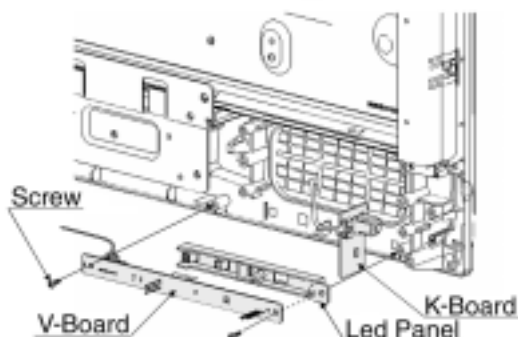
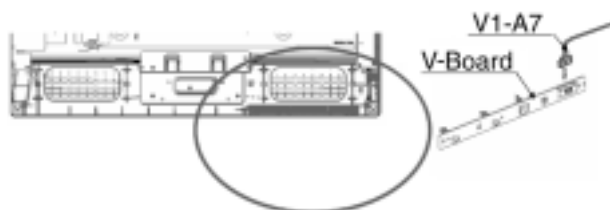
## 7.10. K-Board

1. Remove K-Board.
2. Disconnect the coupler (K1~A4).



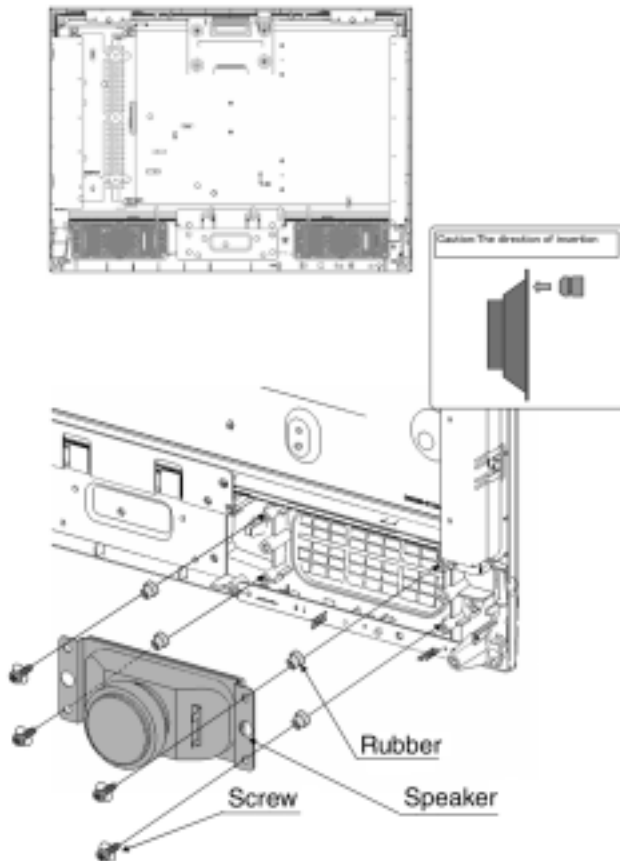
## 7.11. V-Board and Led Panel

1. Remove the fixing screws (2 pcs).
2. Disconnect the coupler (V1~A7).
3. Remove V-Board.



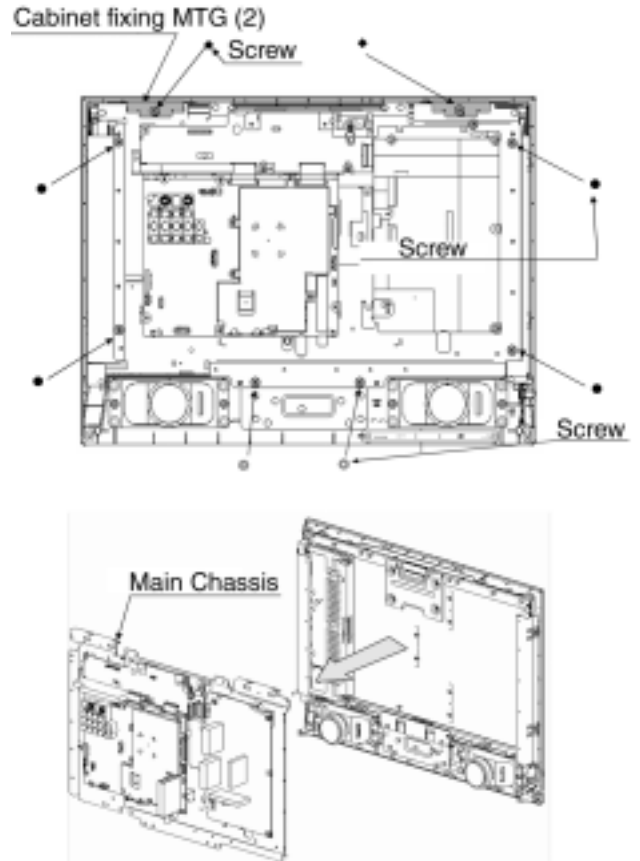
## 7.12. Speaker

1. Remove the fixing screws (8pcs).
2. Remove Speakers (left and right).



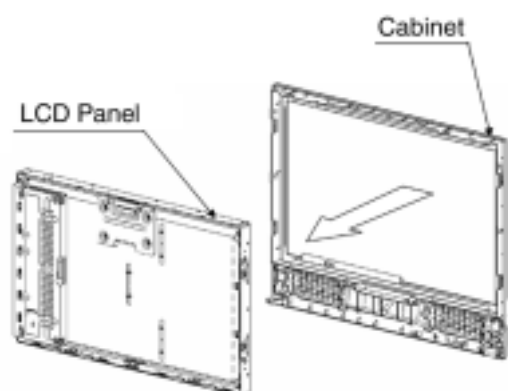
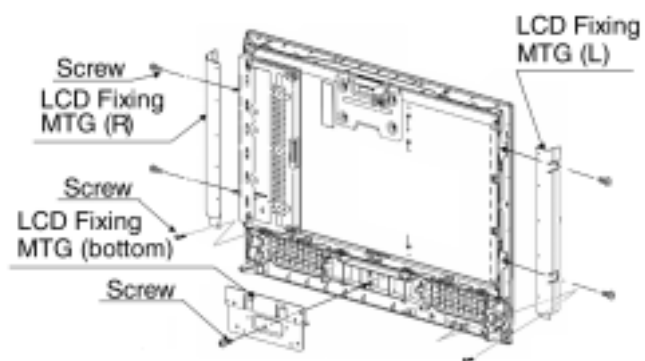
### 7.13. Main Chassis

1. Remove the fixing screws (8 pcs) and Cabinet fixing MTG (2 pcs).
2. Disconnect the couplers (AP5, A3, A4, A7, LVDS coupler).
3. Remove the Main Chassis.



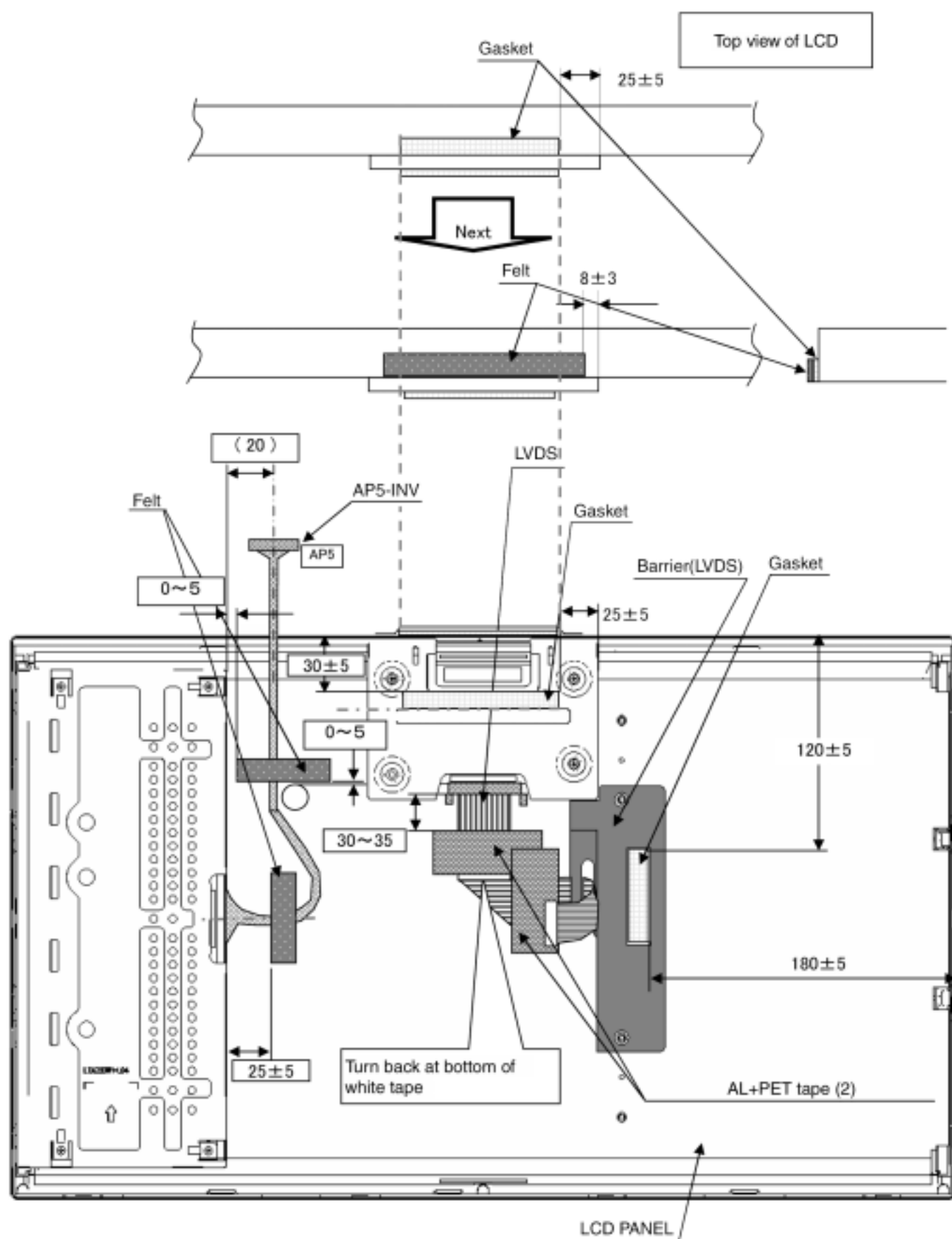
### 7.14. LCD Panel

1. Remove the fixing screw (1 pcs) and the LCD fixing MTG (bottom).
2. Remove the fixing screws (6 pcs) and the LCD fixing MTG (R and L).
3. Remove LCD Panel.





## 9 EMI Processing





## 10 Service Mode Function

MPU controls the functions switching for each IC through IIC bus in this chassis. The following setting and adjustment can be adjusted by remote control in Service Mode.

### 10.1. How to enter SERVICE 1

1. Set OFF TIMER to 15,30.....
2. Set VOLUME to MINIMUM. Press the F button on the TV set to select VOLUME, simultaneously press RECALL button on remote control and DOWN button [ -/v ] on the TV set.

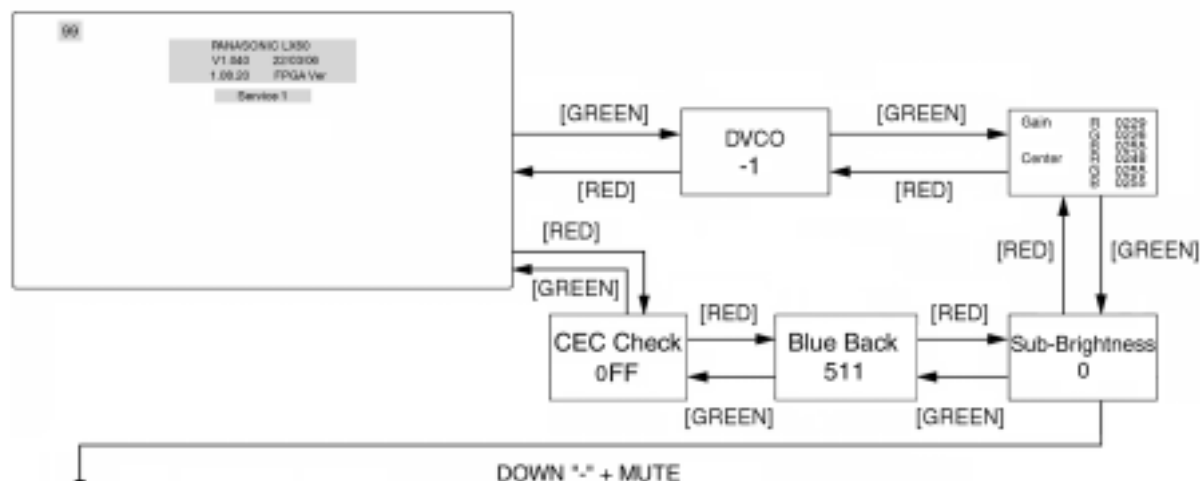
### 10.2. How to enter SERVICE 2

1. Select the "Sub-Brightness" under Service 1.
2. Simultaneously press MUTE button on remote control and DOWN button on the TV set.

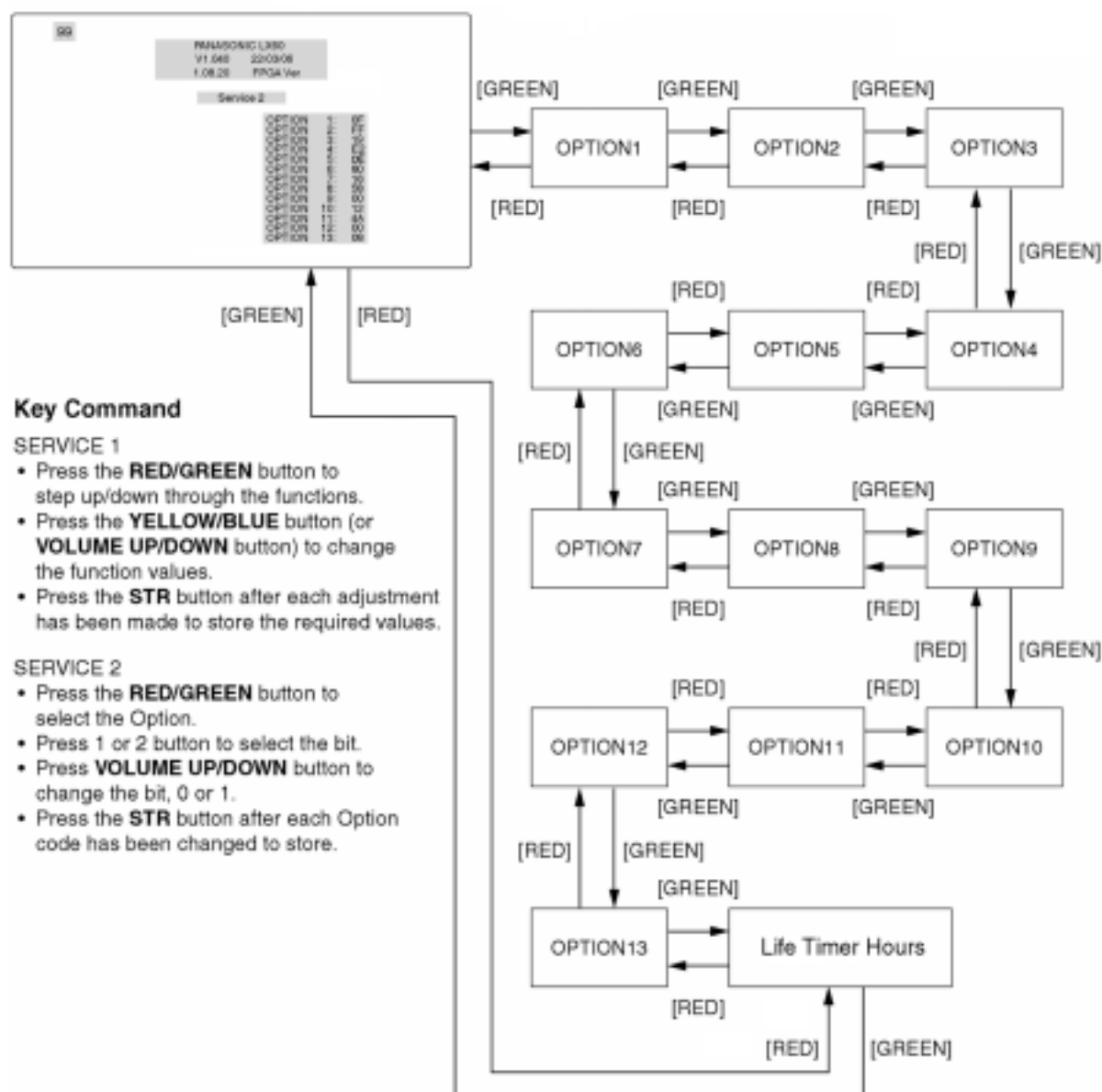
**Note:**

To exit to Service mode, press N button or POWER button on remote control.

## 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.

### 10.3. Option Description

<b>option1</b>		
b0	Colour system	Auto(1)
b1		SECAM(1)
b2		NTSC(1)
b3		M.NTSC(1)
b4	free	
b5	free	
b6	free	
b7	free	
<b>option2</b>		
b0	CH Plan	ASIA / M.E. / HK/UK / CHINA(1)
b1		NZ/INDONES(1)
b2		AUSTRALIA(1)
b3		E.EUROPE(1)
b4		SPECIAL(1)
b5		AMERICA(1)
b6		CATV(1)
b7		JAPAN(1)
<b>option3</b>		
b0	sub picture	not use
b1	2tuner	not use
b2	VGA	not use
b3	YUV	not use
b4	Wide (16:9)	not use
b5	HYPER	UHF only (0), UHF/VHF (1)
b6	SIF	4.5 / 5.5 / 6.0 / 6.5 (0), 5.5 / 6.0 / 6.5 (1)
b7		5.5 / 6.5 (2), 6.0 / 6.5 (3)
<b>option4</b>		
b0	A2 enable	4.5(1)
b1		5.5(1)
b2		6.0(1)
b3		6.5(1)
b4	NICAM enable	4.5(1)
b5		5.5(1)
b6		6.0(1)
b7		6.5(1)
<b>option5</b>		
b0	A2 select 6.5MHz	5.742MHz(0) 6.742MHz(1)
b1	NICAM priority	ASIA/M.E.(1)
b2		HK/UK(1)
b3		CHINA(1)
b4		NZ/INDON(1)
b5		AUSTRA(1)
b6		E EURO(1)
b7		SPECIAL(1)
<b>option6</b>		
b0	IF 38.9MHz	
b1	SASO enable	SASO enable(1)
b2	IF I2C	I2C controlled Tuner IF module (1)
b3	Monitor out AV1 mute	Monitor out AV1 mute(1)
b4	Tuner Slave	C2(1), C0(0)
b5	Tuner	ALPS(1), ECOM (0)
b6	free	
b7	Noise mute	Noise mute enable(0)
<b>option7</b>		
b0	Power up EC-Mode	Power on EC enable (1)
b1	CH Blanking	Blanking enable (1)
b2	AV Blanking	Blanking enable (1)
b3	Auto WIDE	WSS enable only in aspect Auto (0), WSS always enable (1)
b4	Volume correction	TV Volume coorrection enable (1)
b5	AVLink	Q-Link off selectable in menu (1)
b6	MPX/NICAM display	Display NICAM (0), Display MPX (1)
b7	free	

<b>option8</b>		
b0	ACI auto MP	not use
b1	free	
b2	Geomagnetic Sensor	Geomagnetic polarity +(0), -(1)
b3	free	
b4	Fine tuning	Enable(1)
b5	Search speed	Slow(1) Fast(0)
b6	TEXT FLOF	FLOF enable (1)
b7	TEXT TOP	TCP enable (1)
<b>option9</b>		
b0	free	
b1	free	
b2	free	
b3	free	
b4	free	
b5	free	
b6	free	
b7	free	
<b>option10</b>		
b0	OSD language	English/Chinese(0),English/Russian(1)
b1		English/Chinese/Arabic(2),English/Persian/French/Arabic(3)
b2	free	
b3	User aspect	JUST enable (1)
b4	Blue Back	BLUE BACK on/off selection in menu(0)
b5	Auto Aspect	AspectAuto disable(1)
b6	User aspect	ZOOM3 enable (2)
b7	free	
<b>option11</b>		
b0	Shop mode	enable(1)
b1	shipping Sound menu	MUSIC(0) / CINEMA(1)
b2	Sub HP	enable(1)
b3	Scan Blank	enable(1)
b4	User aspect 14:9	enable(1)
b5	NICAM C4 bit	enable(1)
b6	free	enable(1)
b7	free	enable(1)
<b>option12</b>		
b0	free	
b1	Australia	Australia(1)
b2	Ireland/India	not use
b3	UK/Korea	not use
b4	MELCOA	MELCOA(1)
b5	free	
b6	free	
b7	free	
<b>option13</b>		
<b>Temporary</b>		
b0	ACI all country	not use
b1	ACI offset	not use
b2	free	
b3	Text	enable(1)
b4	free	
b5	free	
b6	free	
b7	Viewing ModeMain Menu	not use

## 10.4. Option Code Setting

If the memory IC (IC1102) or A-Board is replaced, option code should be re-memorized. Spare part of IC1102 is already memorized all Data.

If you use for other model, you should re-memorized the different option code in SERVICE 2 mode.

Option No.	TX-23LX60M	TX-23LX60A	TX-23LX60X
OPTION 1	0F	0F	0F
OPTION 2	FF	FF	FF
OPTION 3	19	19	19
OPTION 4	E2	E2	E2
OPTION 5	DE	DE	DE
OPTION 6	80	80	C0
OPTION 7	16	16	16
OPTION 8	58	98	58
OPTION 9	00	00	00
OPTION 10	12	11	13
OPTION 11	4A	4A	4A
OPTION 12	00	02	00
OPTION 13	08	08	08

# 11 Adjustment

## 11.1. Voltage chart of A-Board

1. Turn on the main power SW and check that each output voltage of test point is within the specificationa below.( At this time the LED turns green.)
2. Turn off the power supply by the remote controller and set to standby and check that each output voltage of test point within the specificationa below.( At this time the LED turns red..)

Power name	Test point	Specification	
		ON	STANDBY
MAIN_5V	TP1823	5.10±0.25V	—
PANEL_5V	TP1815	5.10±0.25V	—
BT_30V	TP1820	30.0V±1.5V	—
24V	TP1818	24.0±1.2V	—
SUB_8V	TP1821	8.1V±0.4V	—
STB_7V	TP1805	6.6±0.30V	6.6±0.30V
STB_3.3V	TP1835	3.30±0.17V	3.30±0.17V
STB_1.8V	TP1837	1.89±0.09V	1.89±0.09V
SOUND_18.5V	TP1816	13.7±0.69V	—

## 11.2. Voltage chart of AP-Board

1. Turn on the main power SW and check that each output voltage of test point is within the specificationa below.
2. Turn off the power supply by the remote controller and set to standby and check that each output voltage of test point within the specificationa below.

Power name	Test point	Specification	
		ON	STANDBY
MAIN_5V	TP921	5.10±0.25V	—
PANEL_5V	TP981	5.10±0.25V	—
BT_30V	TP915	30.0V±1.5V	—
24V	TP916	24.0±1.2V	—
SUB_8V	TP920	8.1V±0.4V	—
STB_7V	TP914	6.6V±0.30V	6.6V±0.30V
STB_3.3V	TP922	3.30±0.17V	3.30±0.17V
STB_1.8V	TP923	1.89±0.09V	1.89±0.09V
SOUND_13.5V	TP918	13.7±0.69V	—

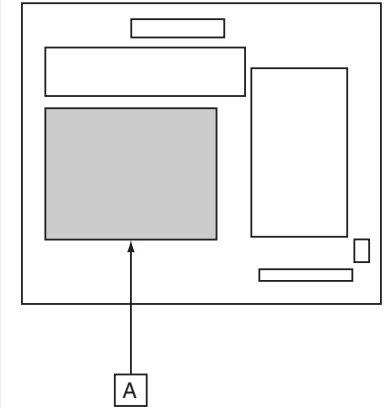
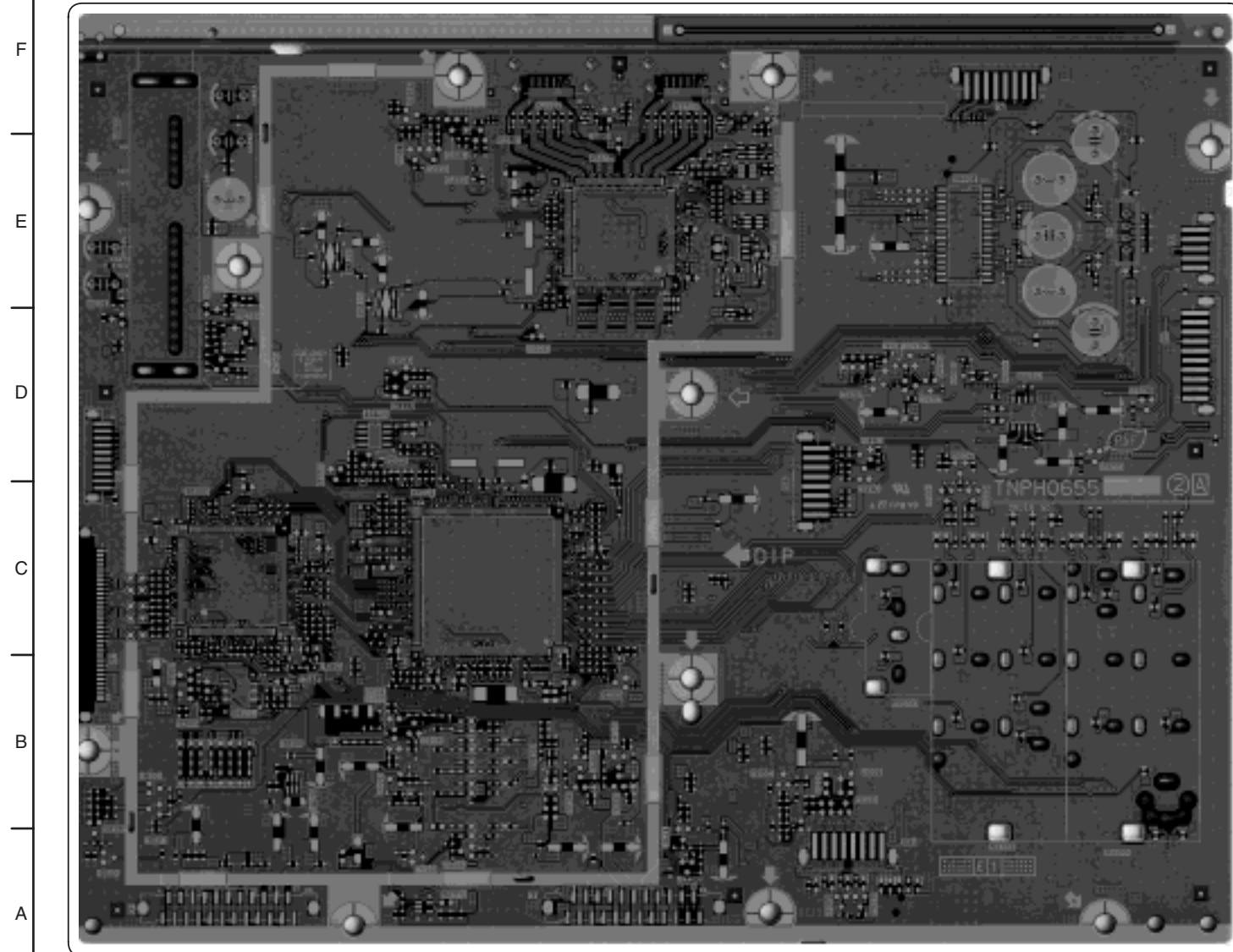
## 11.3. DVCO adjustment

Instrument Name	Connection	Remarks
Remote controller	RF input	
Internal signal (studio color bar)		
Procedure		
DVCO Adjustment		
1. Receive the color bar pattern at AV1 composite video. Signal generator : PAL/ fp =4.43361875MHz (ref.)		
2. Go to "DVCO" under Service 1.		
3. Make automatic adjustment of DVCO by the blue key. (About 3sec.) The display color of DVCO serves as black (START) - red (under adjustment) - black (completion).		

## 12 Conductor Views

## 12.1. A-Board

A-BOARD (A SIDE)  
TNPH0655

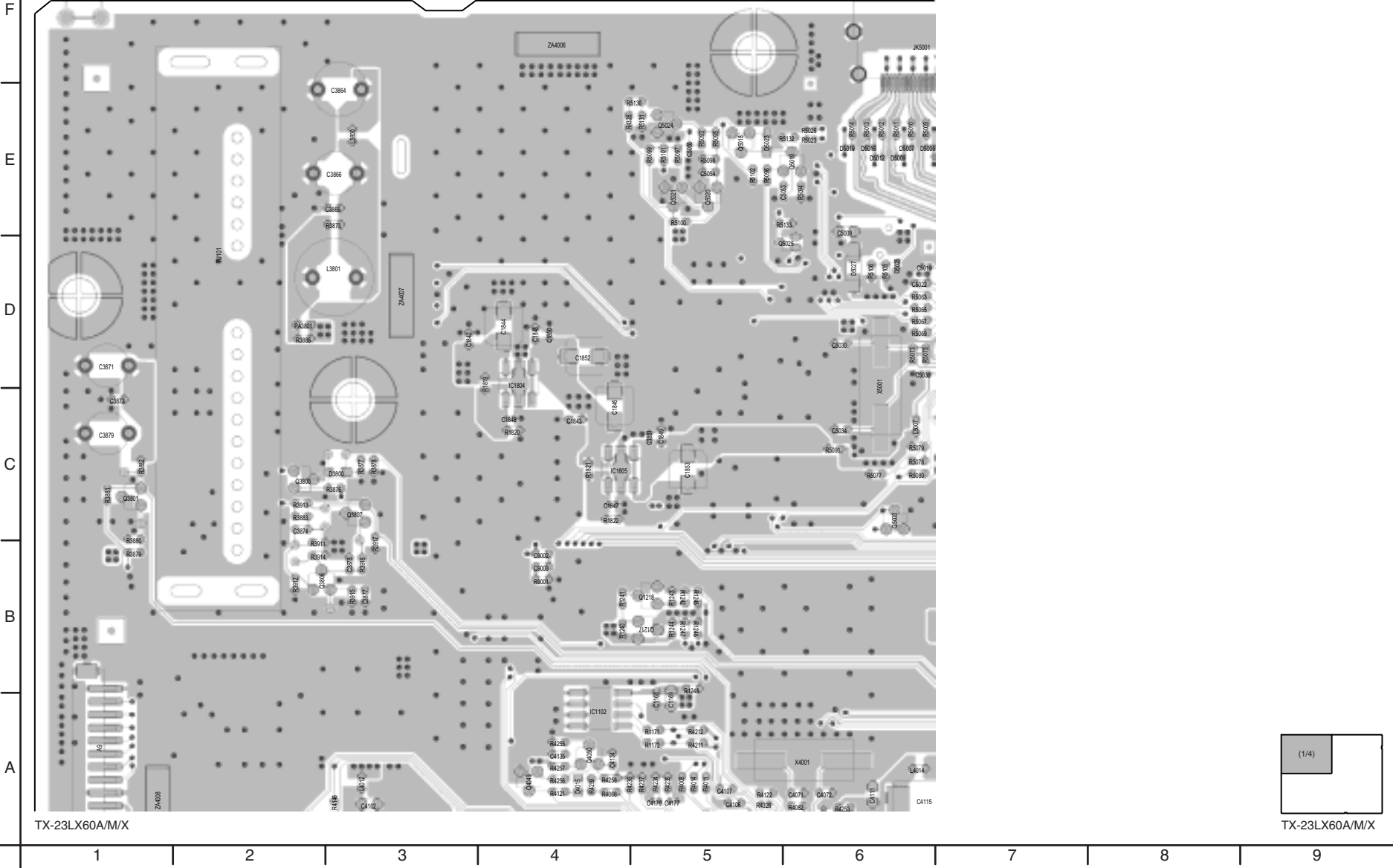


## Parts Location

A-BOARD (A SIDE)			
<b>IC</b>		Q3003	B-5
IC1102	D-2	Q3004	B-4
IC1803	B-3	Q3005	C-5
IC1804	E-2	Q3006	C-5
IC1805	D-2	Q3007	C-5
IC2001	E-5	Q3200	B-2
IC2005	D-6	Q3201	B-2
IC4001	C-3	Q3202	B-3
IC4004	C-2	Q3203	A-3
IC4005	B-2	Q3204	B-2
IC5004	E-4	Q3205	A-3
IC5005	E-5	Q3600	B-4
		Q3601	B-4
<b>TRANSISTOR</b>		Q3602	B-3
		Q3603	B-3
		Q3800	D-1
Q1215	C-5	Q3801	E-1
Q1216	D-5	Q3806	D-1
Q1217	D-2		
Q1218	D-2	Q3807	D-2
Q1801	B-2	B-4001	B-1
Q1802	B-2	Q4002	B-1
Q1803	A-1	Q4003	B-1
Q1804	B-1	Q4049	C-2
Q1805	B-1	Q4050	D-2
Q1806	B-1	Q4120	C-2
Q2019	D-5	B-4121	B-2
Q2020	D-6	Q4501	B-4
Q2031	A-5	Q4502	A-4
Q2032	A-5	Q5001	E-3
Q2303	D-5	Q5002	E-3
Q2305	D-5	Q5003	D-4
Q2306	D-5	Q5008	E-4
Q2307	D-6	Q5009	E-4
Q2308	D-6	Q5019	E-3
Q2312	D-5	Q5020	E-2
Q2313	D-5	Q5021	E-4
Q3001	B-5	Q5023	E-4
Q3002	B-5	Q5024	E-2
		Q5025	E-3

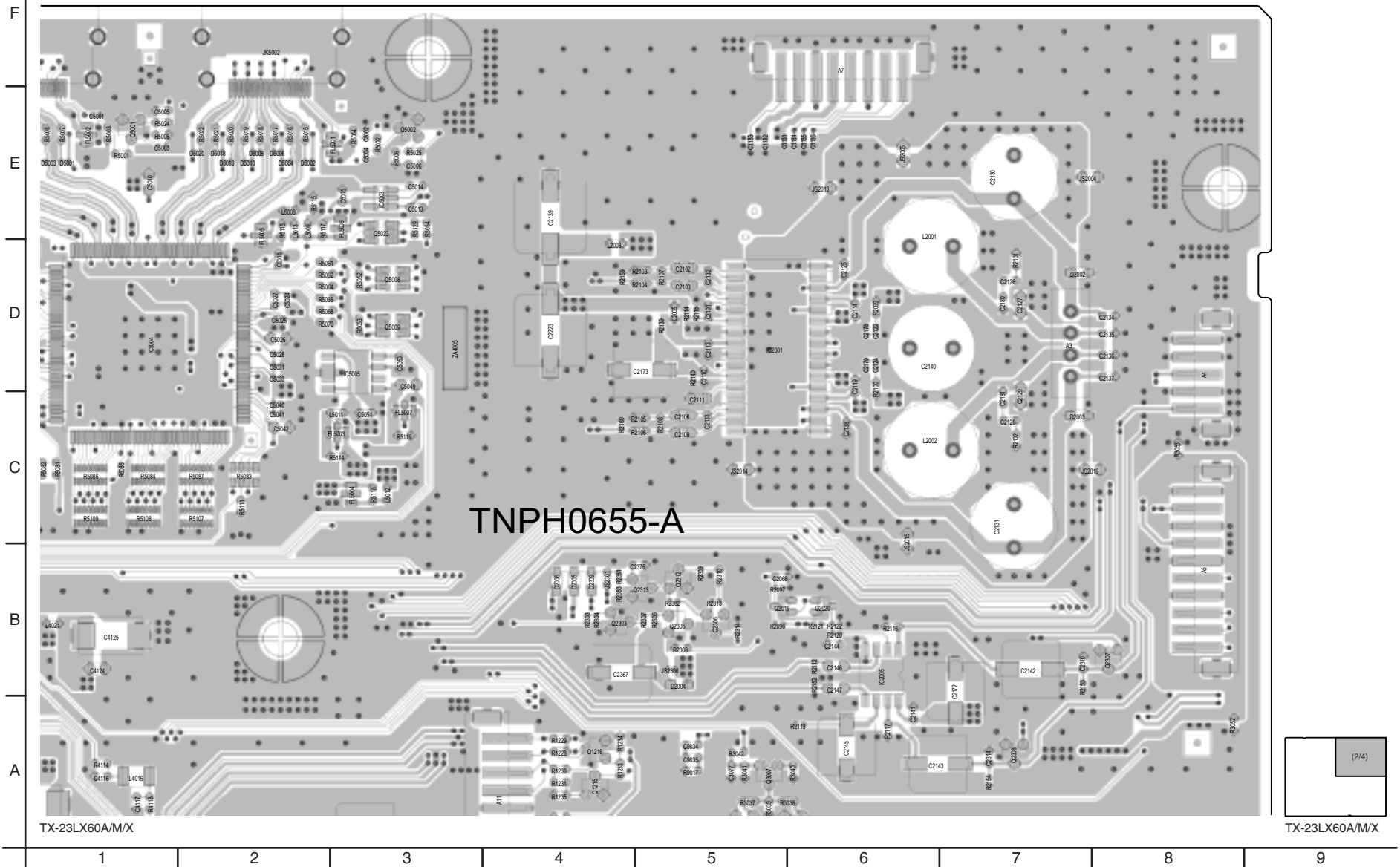
TX-23LX60A/M/X  
A-BOARD TNPH0655TX-23LX60A/M/X  
A-BOARD TNPH0655

The picture is used as reference for ref. no. of A-Board (A Side (1/4))

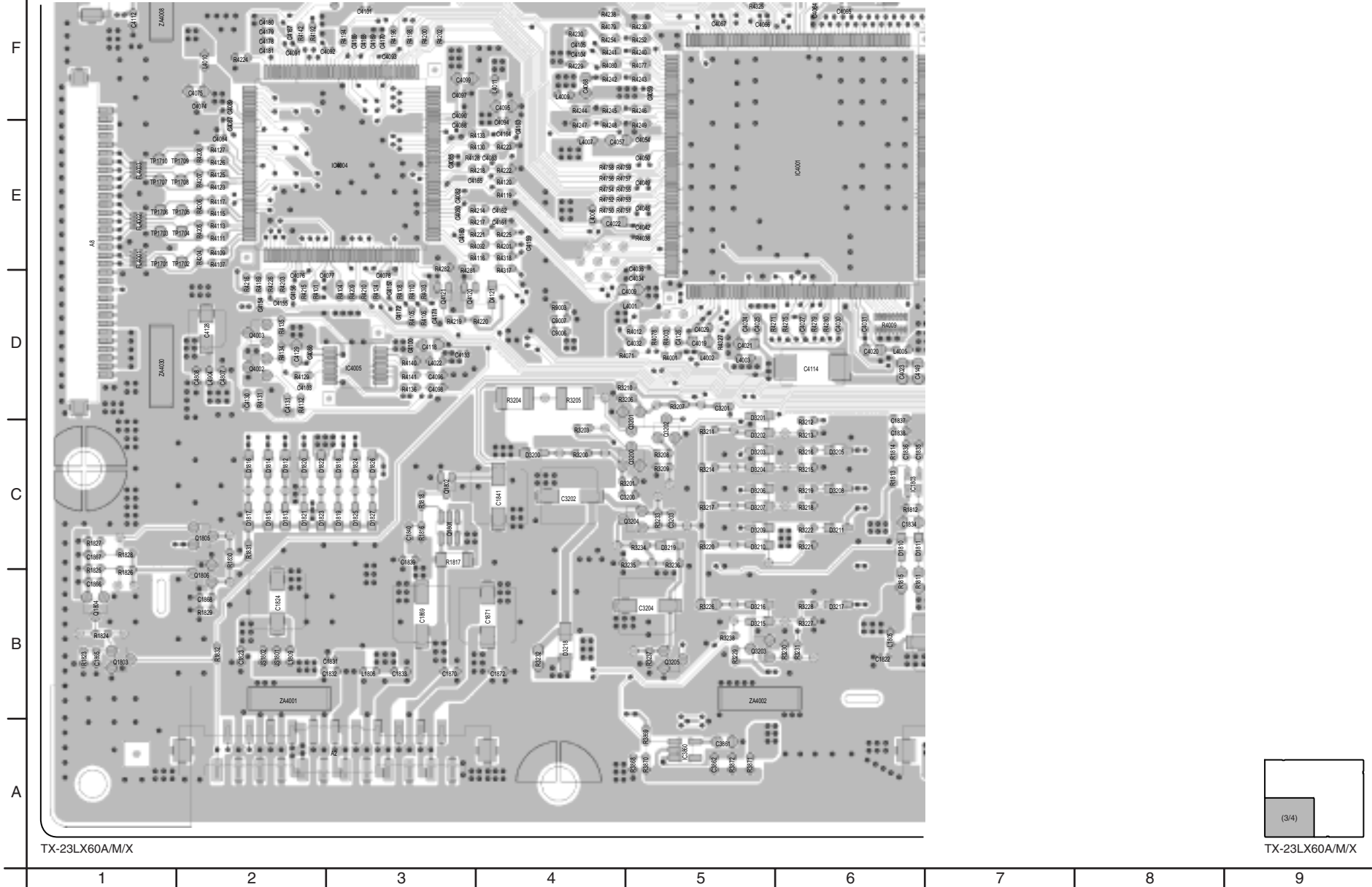




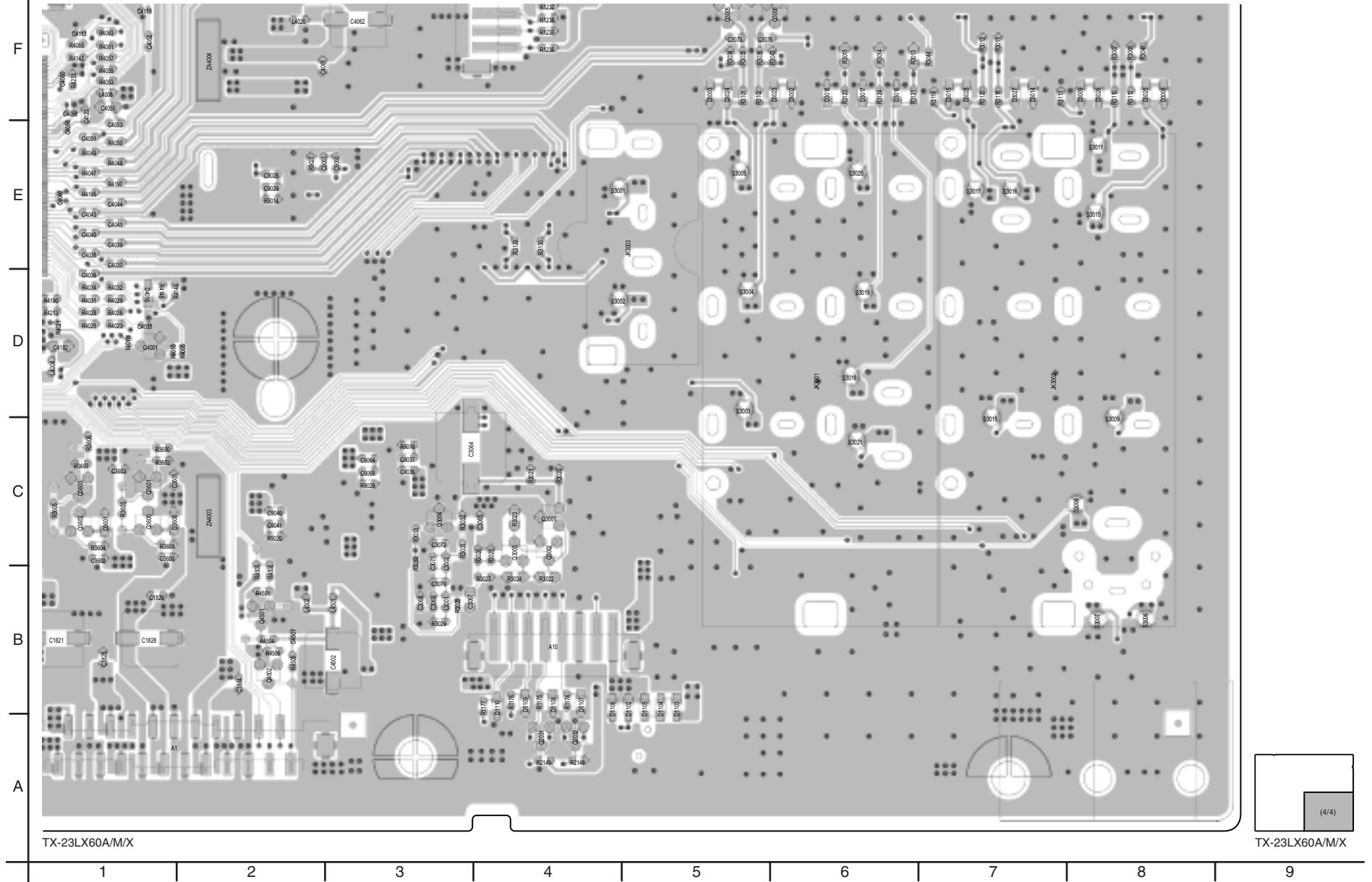
The picture is used as reference for ref. no. of A-Board (A Side (2/4))



The picture is used as reference for ref. no. of A-Board (A Side (3/4))

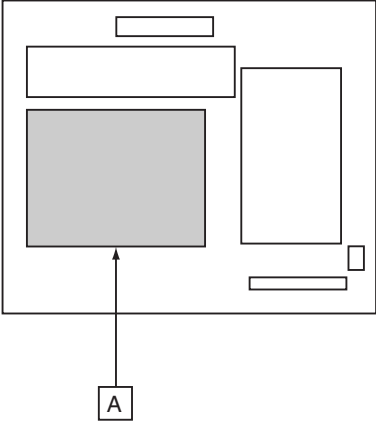
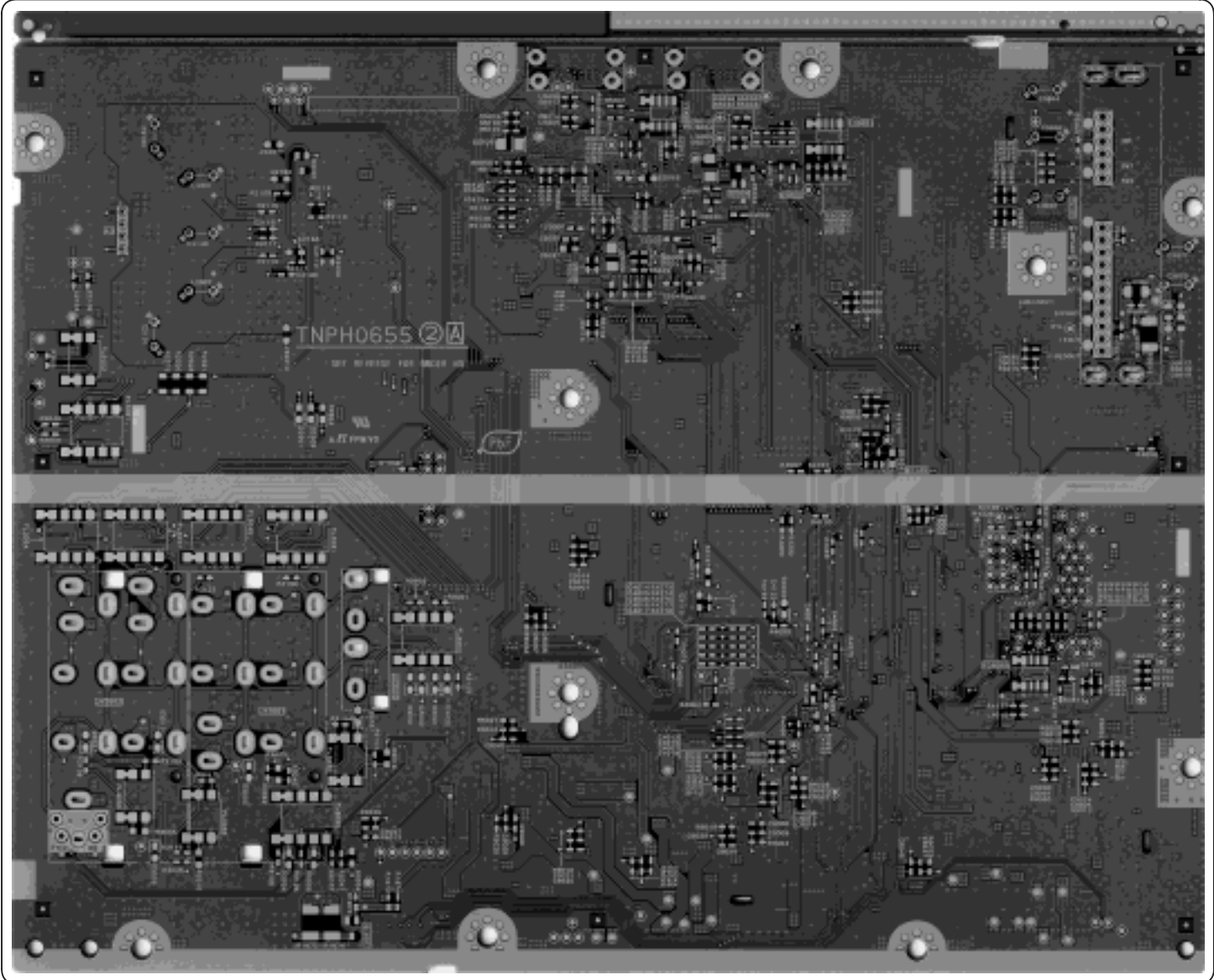


The picture is used as reference for ref. no. of A-Board (A Side (4/4))



A-BOARD (B SIDE)  
TNPH0655

F  
E  
D  
C  
B  
A



Parts Location

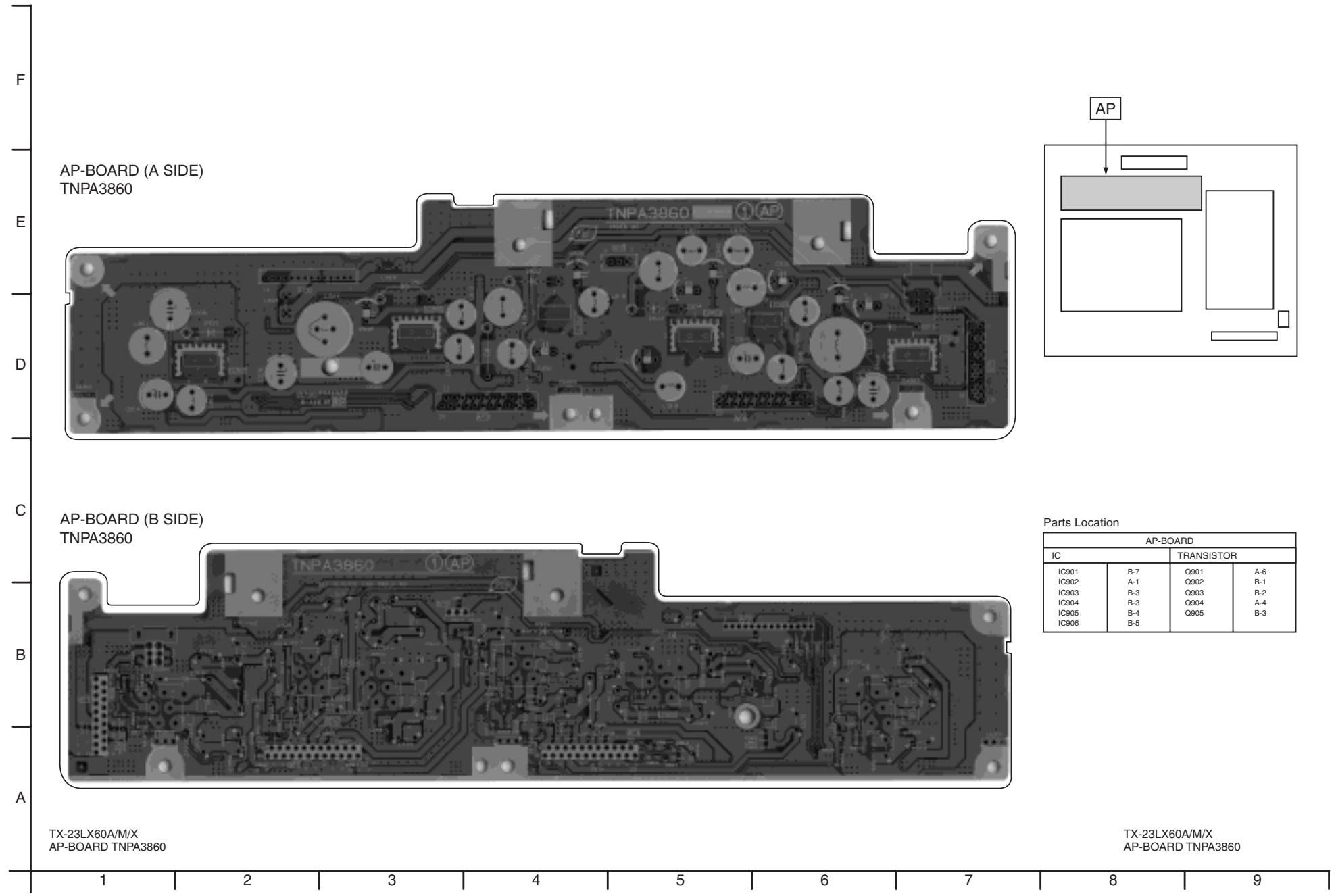
A-BOARD (B SIDE)			
IC		TRANSISTOR	
IC4003	C-6	Q1807	A-3
IC5001	E-5	Q5004	E-4
IC5002	E-4	Q5022	E-5

TX-23LX60A/M/X  
A-BOARD TNPH0655

TX-23LX60A/M/X  
A-BOARD TNPH0655

1 2 3 4 5 6 7 8 9

12.2. AP-Board

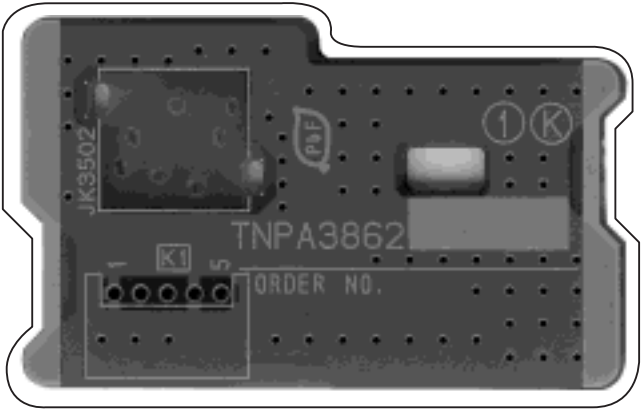




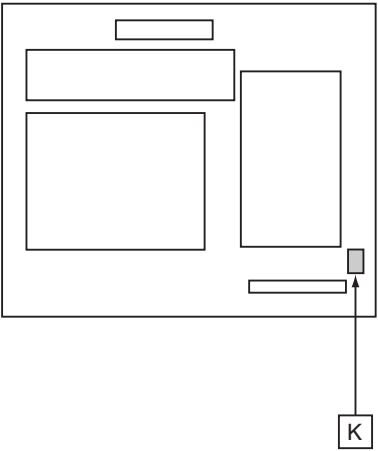
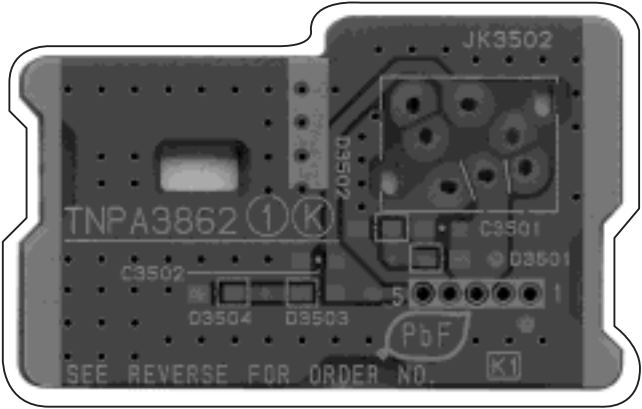
12.3. K-Board

F  
E  
D  
C  
B  
A

K-BOARD (A SIDE)  
TNPA3862



K-BOARD (B SIDE)  
TNPA3862



# 12.4. V-Board

F

E

D

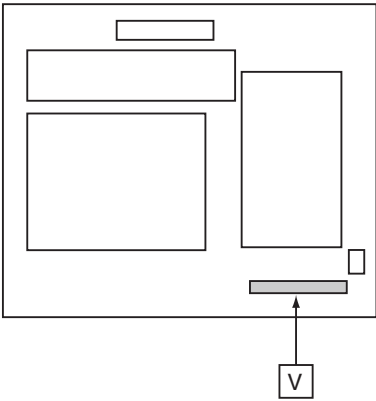
C

B

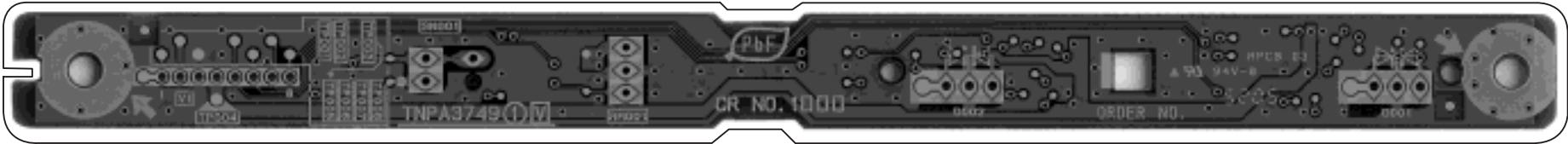
A

Parts Location

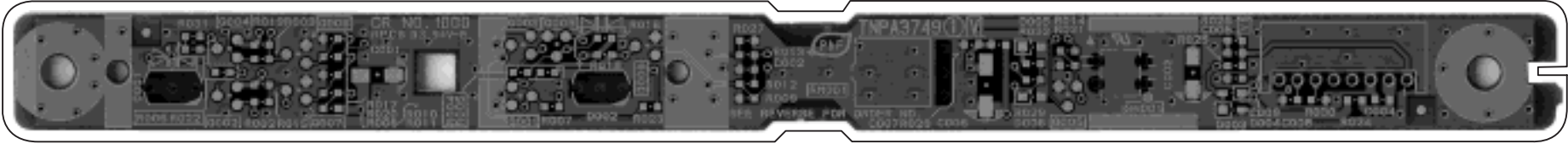
V-BOARD			
TRANSISTOR		TP	
Q001	B-4	TP001	D-2
Q002	B-2	TP002	D-2
Q003	B-4	TP003	D-2
Q004	B-2	TP004	C-2
Q005	B-7	TP005	D-2
Q006	B-2	TP006	D-2
Q007	B-2	TP007	D-2
Q008	B-4	TP008	D-2
Q009	B-4		



V-BOARD (A SIDE)  
TNPA3749



V-BOARD (B SIDE)  
TNPA3749



TX-23LX60A/M/X  
V-BOARD TNPA3749

TX-23LX60A/M/X  
V-BOARD TNPA3749

1

2

3

4

5

6

7

8

9





## 13 Schematic Diagram

### 13.1. Schematic Diagram Notes

#### Important Safety Notice

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

#### Notes:

##### 1. Resistor

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

Unit of resistance is OHM [ $\Omega$ ] (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  $\mu$ 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  $\mu$ H, 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 220V-240V, 50/60Hz
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. : Video $\Rightarrow$ Audio $\Rightarrow$

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

#### Remarks:

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

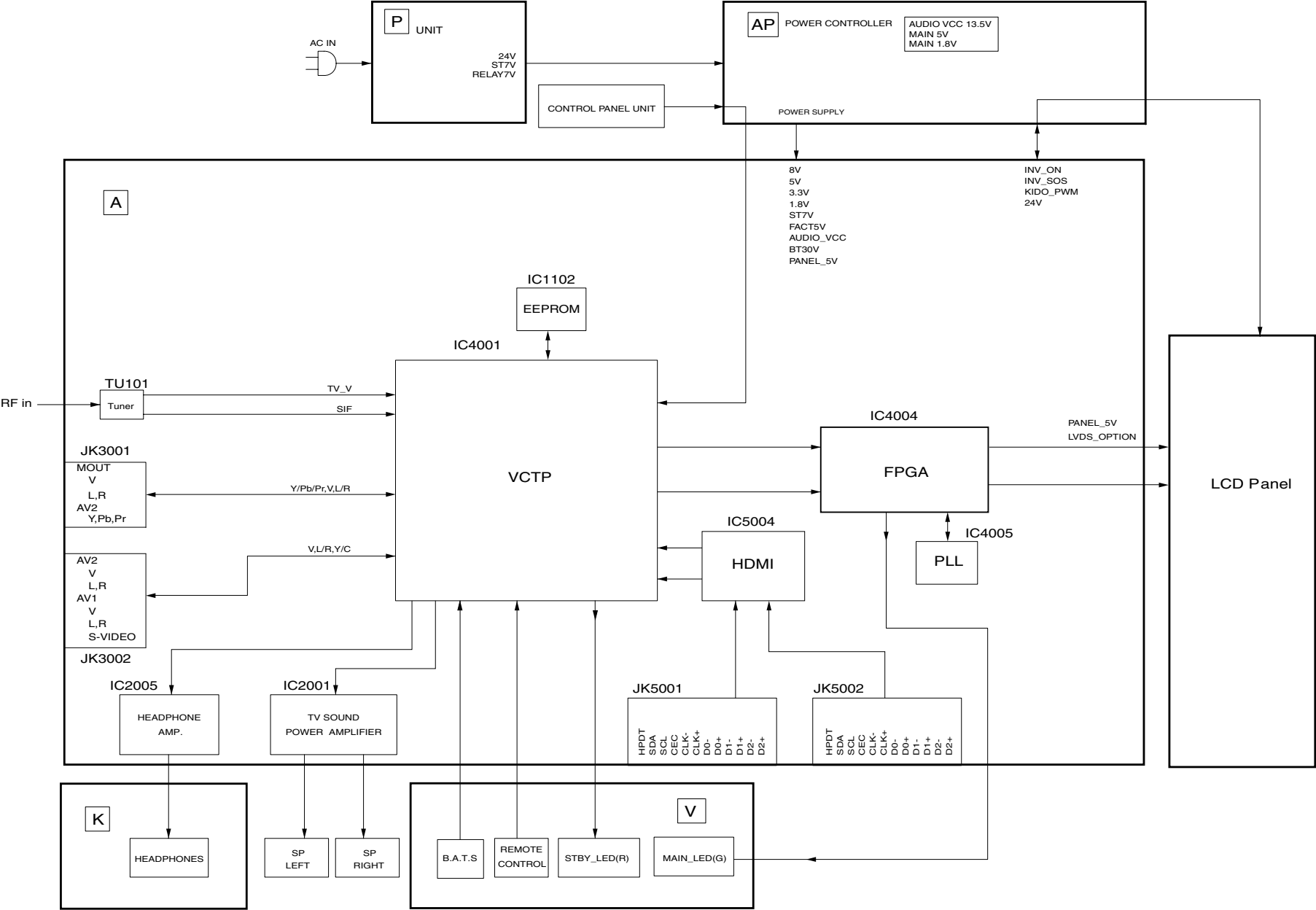
The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.

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.
- Following diodes are interchangeable.  
MA150- MA162 (Replacement part)

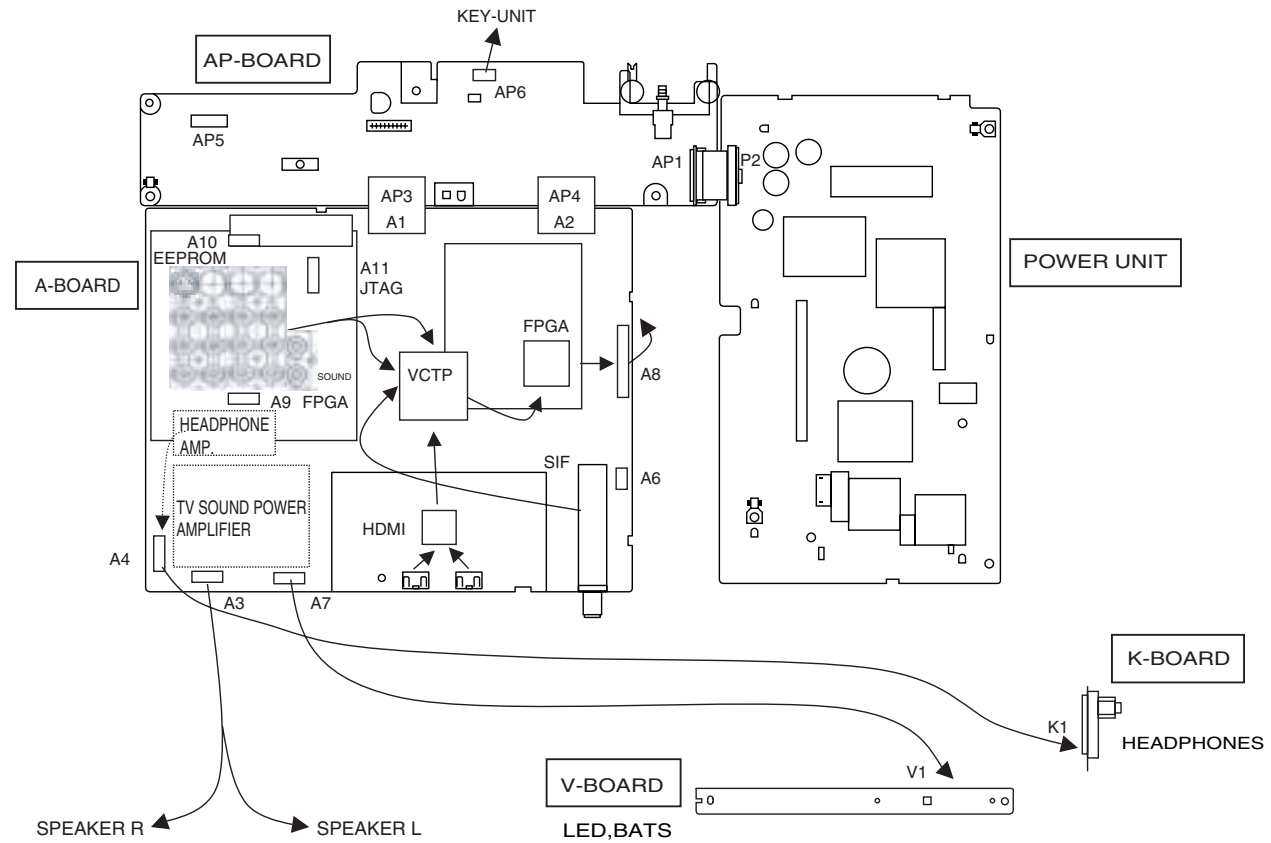
13.2. MAIN BLOCK Diagram



TX-23LX60A/M/X  
Main Block Diagram

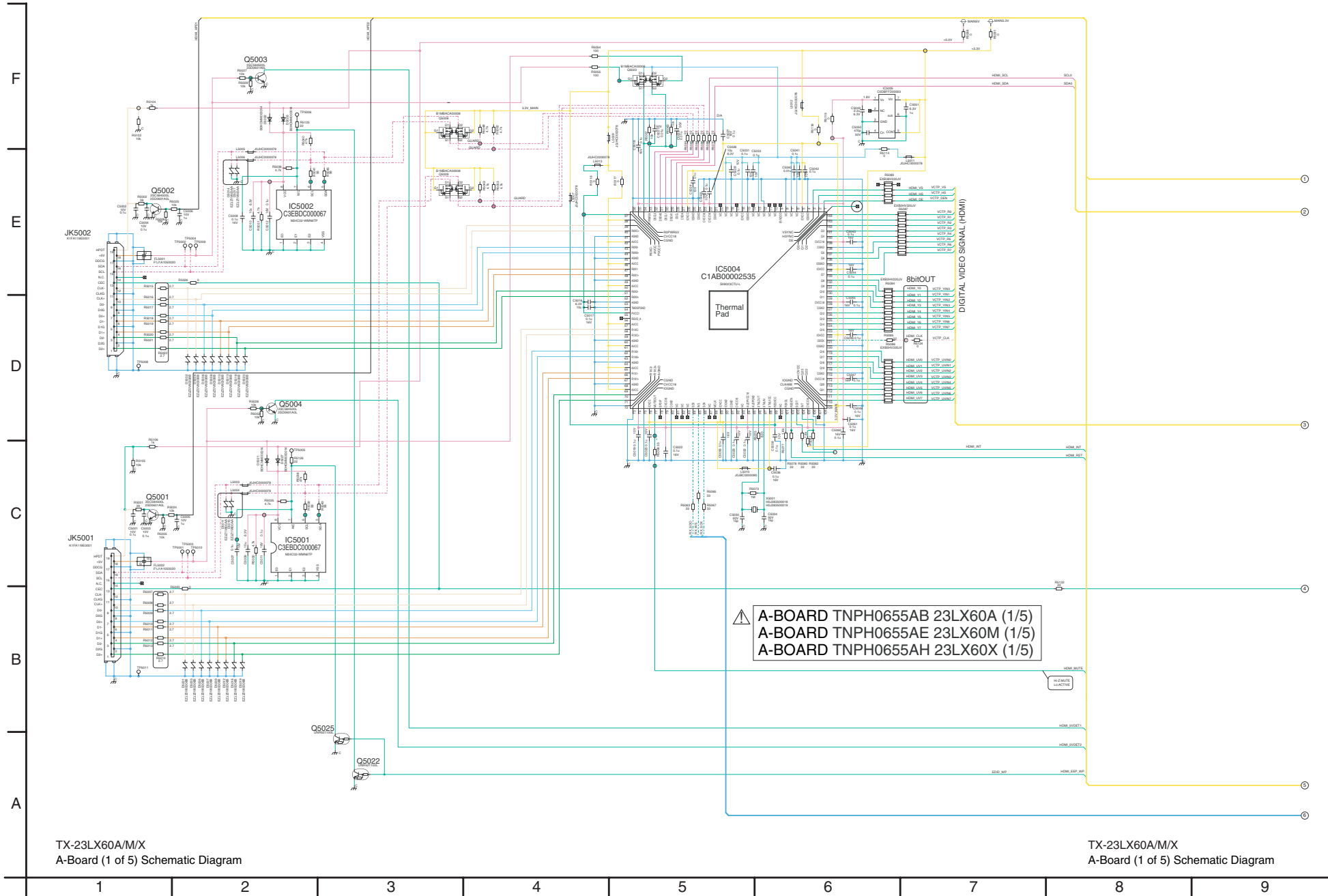
TX-23LX60A/M/X  
Main Block Diagram

### 13.3. P.C.B. BLOCK Diagram



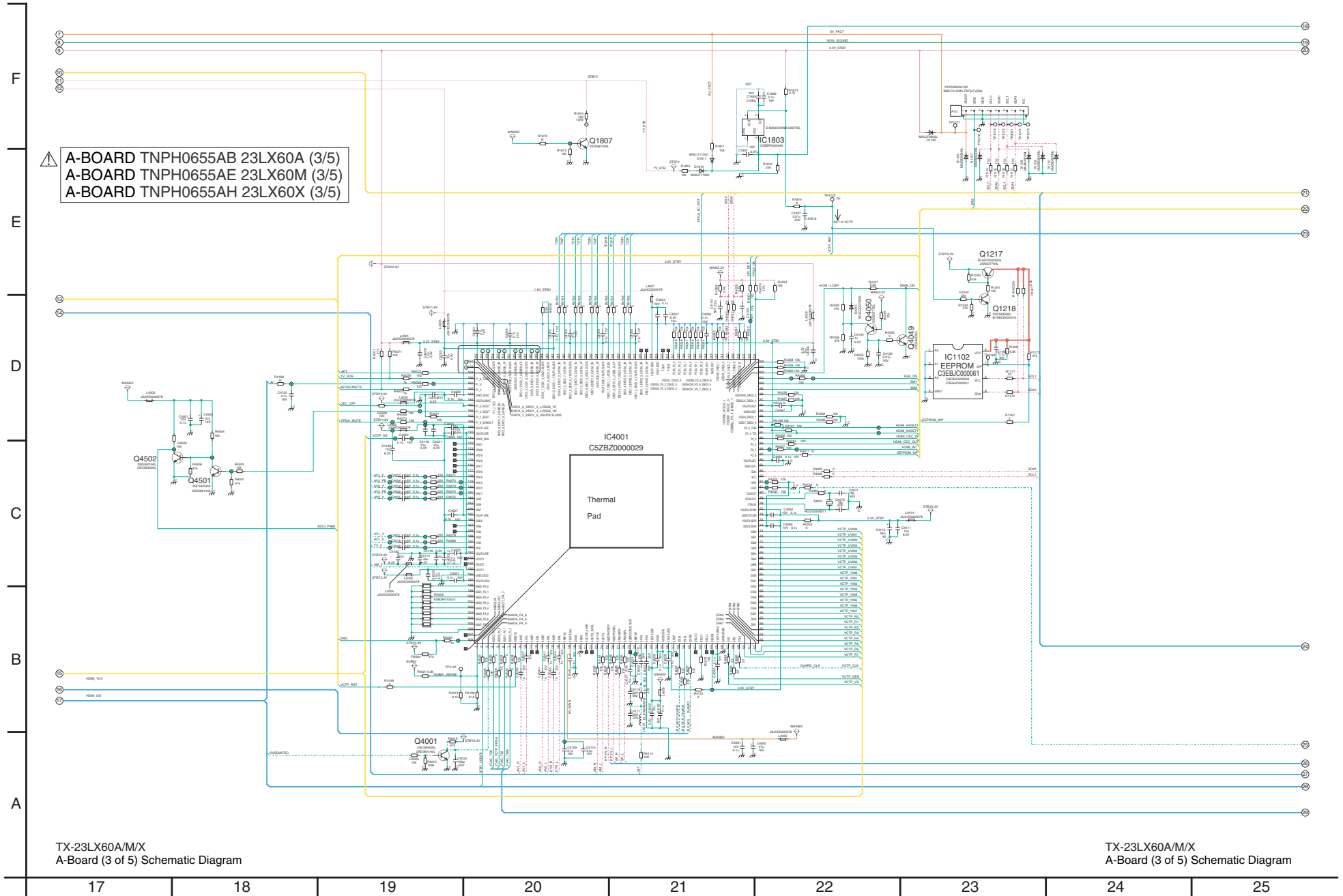


## 13.5. A-Board (1 of 5) Schematic Diagram

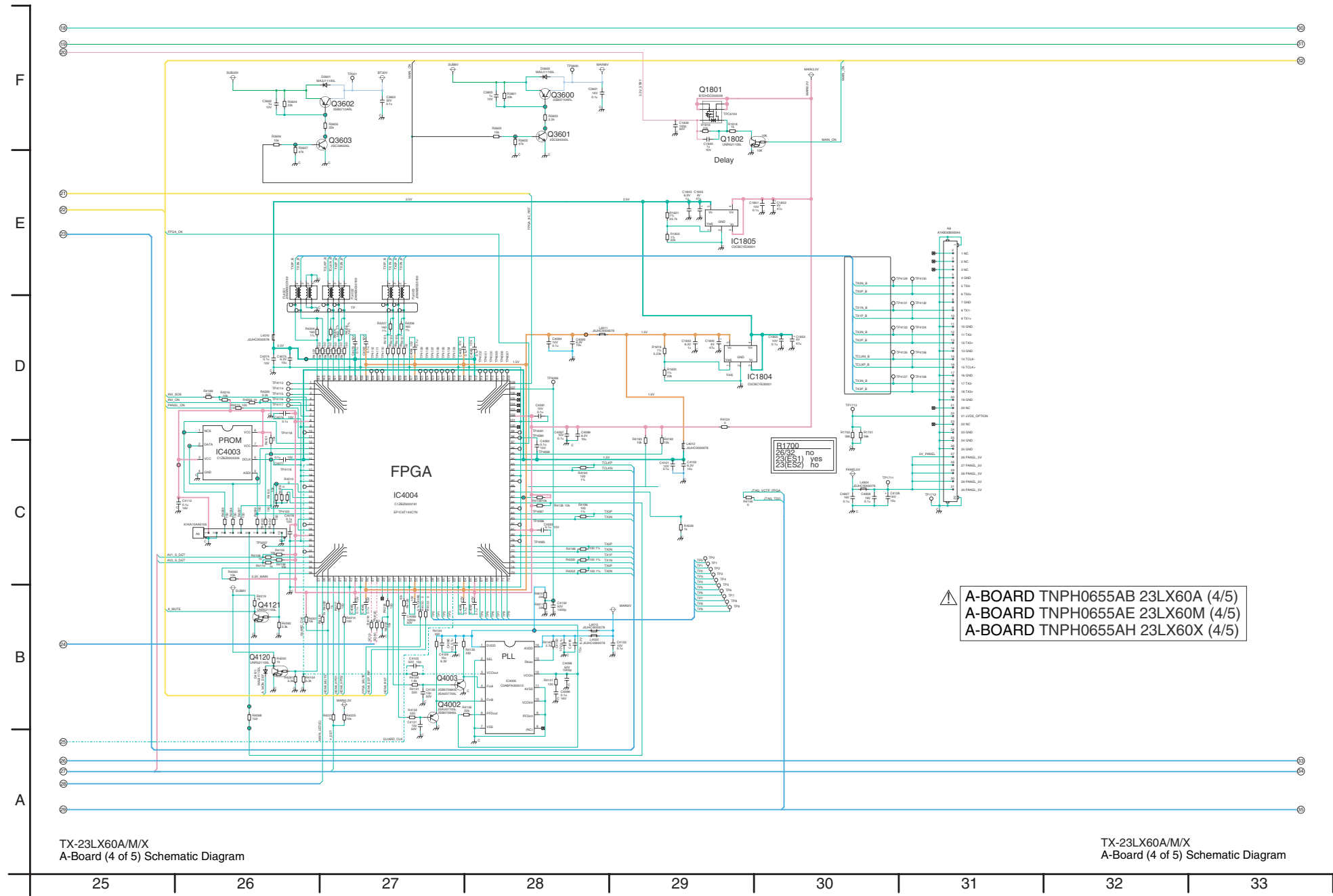




## 13.7. A-Board (3 of 5) Schematic Diagram

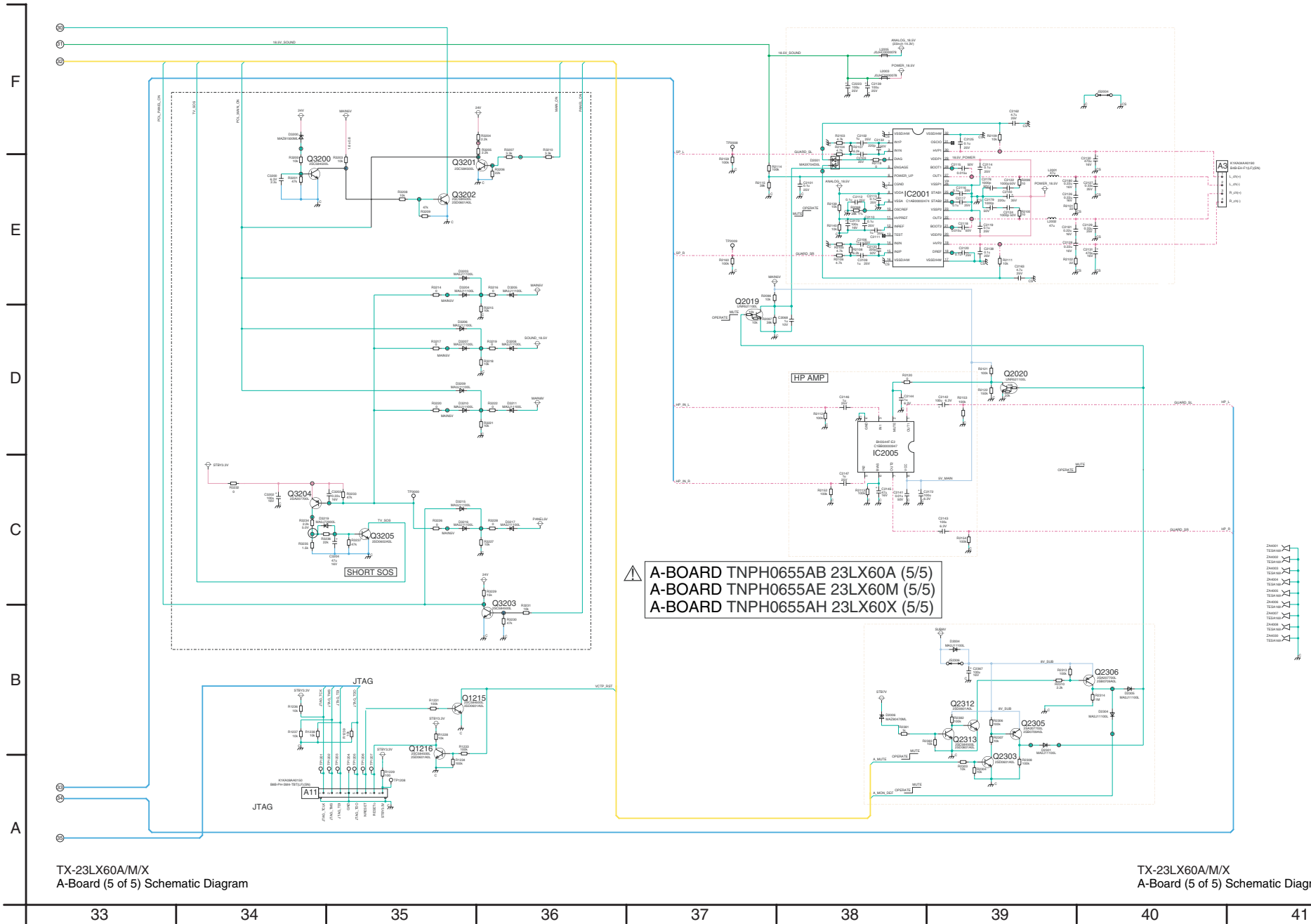


13.8. A-Board (4 of 5) Schematic Diagram



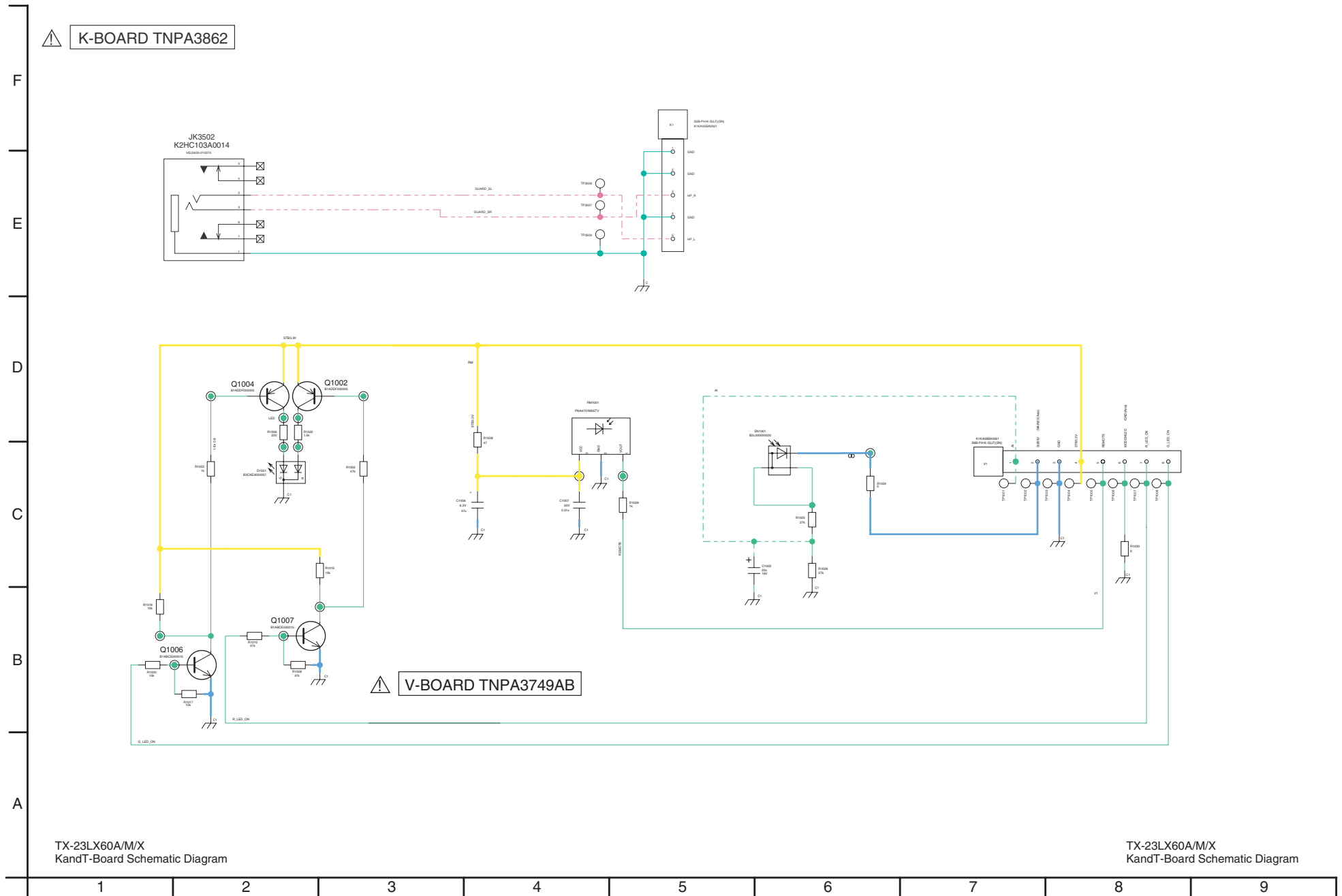


### 13.9. A-Board (5 of 5) Schematic Diagram





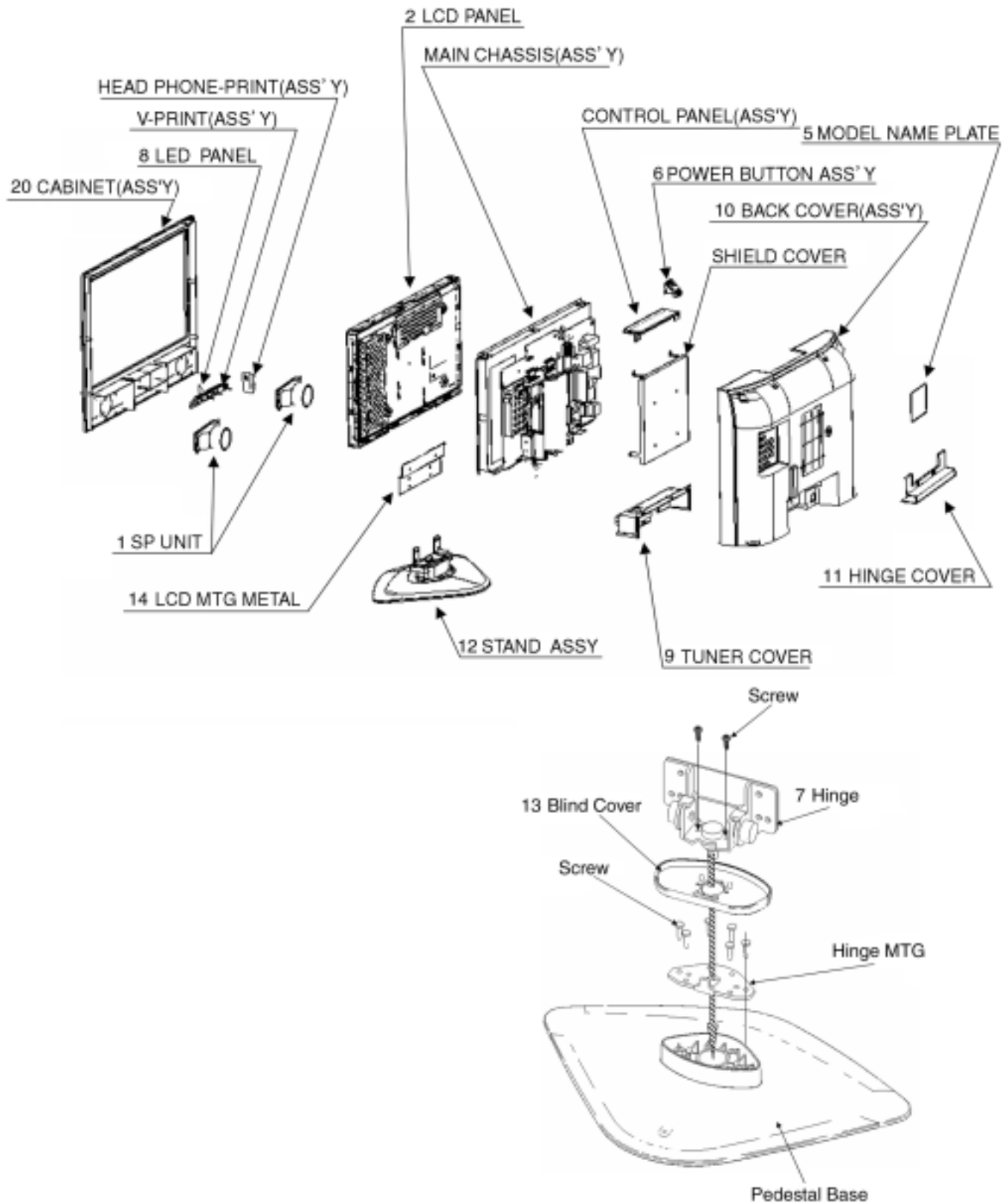
### 13.11. K and V-Board Schematic Diagram



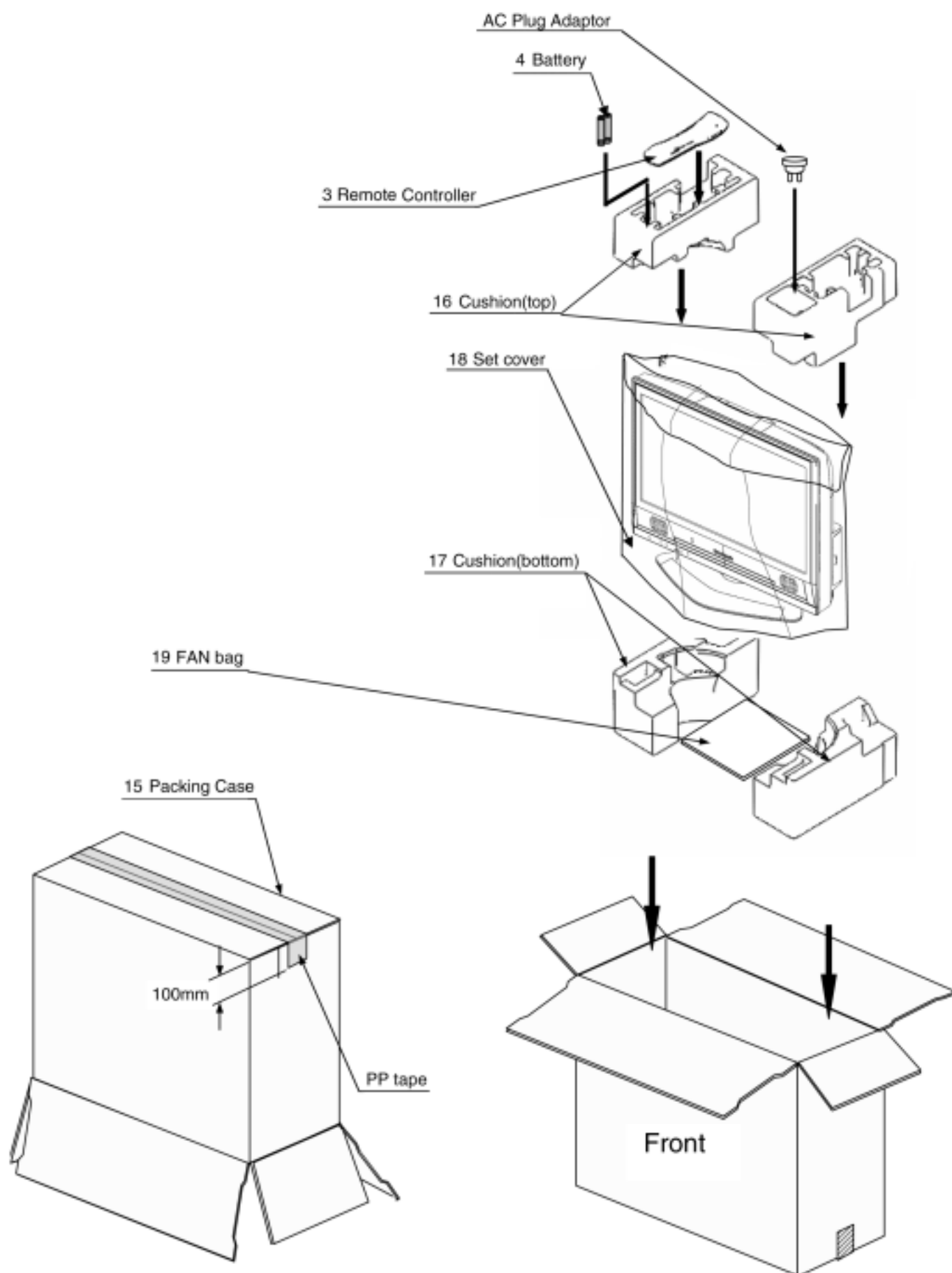


# 14 Parts Location & Mechanical Replacement Parts List

## 14.1. Parts Location



## 14.2. Packing Exploded Views



## 15 Mechanical Replacement Parts List

[illegible]

# 16 Electrical Replacement Parts List

## 16.1. Replacement Parts List Notes

### Important Safety Notice

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

#### RTL (Retention Time Limited)

**Note:** The marking (RTL) indicates that the Retention Time is Limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

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%



# 16.2. Electrical Replacement Parts List

TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C901	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1182	ECJOEB1H102K	C 1000PF, K, 50V	1	
C903	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1185	ECJOEB1H102K	C 1000PF, K, 50V	1	
C904	ECA1HM221	E 220UF, 50V	1		C1186	ECJOEB1H102K	C 1000PF, K, 50V	1	
C905	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1822	ECJOEB1A104K	C 0.1UF, K, 10V	1	
C906	MCJ2VB1H682K	C 6800F K 51V	1		C1828	EEVHB1C470P	E 47UF, 16V	1	
C907	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1831	ECJOEB1A104K	C 0.1UF, K, 10V	1	
C908	ECA1EM102	E 1000UF, 25V	1		C1834	ECJ2FB1C474K	C 0.47UF, Z, 16V	1	
C909	ECA1HM221	E 220UF, 50V	1		C1835	ECJ1VB1C563K	C 0.056UF, K, 16V	1	
C910	ECA1CM471	E 470UF, 16V	1		C1836	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C912	ECA1CM471	E 470UF, 16V	1		C1837	ECJ1VB1H103K	C 0.001UF, K, 50V	1	
C913	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1839	ECJ1XC1H101J	C 100PF, J, 50V	1	
C914	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1840	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C915	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1842	ECJ1VB0J105K	C 1UF, K, 6.3V	1	
C916	ECA1HM221	E 220UF, 50V	1		C1843	ECJ1VB0J105K	C 1UF, K, 6.3V	1	
C917	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1844	EEHBOG470R	C 47PF, J, 4V	1	
C918	MCJ2VB1H682K	C 6800F K 51V	1		C1845	EEHBOG470R	C 47PF, J, 4V	1	
C919	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1850	ECJOEB1A104K	C 0.1UF, K, 10V	1	
C920	ECA1CM471	E 470UF, 16V	1		C1851	ECJOEB1A104K	C 0.1UF, K, 10V	1	
C921	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1852	EEHBOG470R	C 47PF, J, 4V	1	
C922	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1853	EEHBOG470R	C 47PF, J, 4V	1	
C923	ECA1HM221	E 220UF, 50V	1		C1865	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C924	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1866	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C926	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1867	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C927	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1868	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C928	ECJ2FB1E105K	C 1UF, K, 25V	1		C1869	EEVHB1C470P	E 47UF, 16V	1	
C929	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C1870	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C930	ECJ2FB1E105K	C 1UF, K, 25V	1		C1871	EEVHB1C470P	E 47UF, 16V	1	
C931	ECJ2FB1E105K	C 1UF, K, 25V	1		C1872	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C932	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2068	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C933	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2101	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C934	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2102	ECJ2FB1E105K	C 1UF, K, 25V	1	
C935	EEUFC1E221	E 220UF, 25V	1		C2103	ECJ2FB1E105K	C 1UF, K, 25V	1	
C936	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2106	ECJ2FB1E105K	C 1UF, K, 25V	1	
C937	MCJ2VB1H682K	C 6800F K 51V	1		C2109	ECJ2FB1E105K	C 1UF, K, 25V	1	
C938	ECJ2XB1H103K	C 0.01UF, K, 50V	1		C2110	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C939	ECA1CM471	E 470UF, 16V	1		C2111	ECJ2FB1E105K	C 1UF, K, 25V	1	
C940	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2112	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C941	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2113	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C942	EEUFC1E221	E 220UF, 25V	1		C2114	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C943	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2115	ECJ1VB1H153K	C 0.015UF, K, 50V	1	
C944	MCJ2VB1H682K	C 6800F K 51V	1		C2116	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C945	ECJ2XB1H103K	C 0.01UF, K, 50V	1		C2117	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C946	ECA1CM471	E 470UF, 16V	1		C2118	ECJ1VB1H153K	C 0.015UF, K, 50V	1	
C947	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2119	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C948	ECA1CM471	E 470UF, 16V	1		C2120	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C950	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2122	ECJOEB1H102K	C 1000PF, K, 50V	1	
C952	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2124	ECJOEB1H102K	C 1000PF, K, 50V	1	
C953	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2125	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C954	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2126	ECJ1VB1C224K	C 0.22UF, K, 16V	1	
C955	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2127	F1J1E3340003	C 0.33UF, Z, 25V	1	
C956	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2128	ECJ1VB1C224K	C 0.22UF, K, 16V	1	
C957	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2129	F1J1E3340003	C 0.33UF, Z, 25V	1	
C958	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2130	ECA1CHG471	E 470UF, 16V	1	
C959	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2131	ECA1CHG471	E 470UF, 16V	1	
C960	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2132	ECJ1XC1H221J	C 220PF, J, 50V	1	
C961	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2133	ECJ1XC1H221J	C 220PF, J, 50V	1	
C962	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2138	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C963	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2139	EEHBI1E101P	C 100PF, J, 25V	1	
C964	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2140	ECA1VHG221	E 220UF, 35V	1	
C965	ECJ2XB1H102K	C 1000PF, K, 50V	1		C2141	ECJ1VB1H103K	C 0.001UF, K, 50V	1	
C966	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2142	EEVHB0J101P	E 100UF, 6.3V	1	
C967	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2143	EEVHB0J101P	E 100UF, 6.3V	1	
C968	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2144	ECJ1VB0J105K	C 1UF, K, 6.3V	1	
C969	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2145	EEVHB1C470P	E 47UF, 16V	1	
C970	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2146	ECJ2FB1E105K	C 1UF, K, 25V	1	
C971	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2147	ECJ2FB1E105K	C 1UF, K, 25V	1	
C972	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2162	ECJ2FB1E475M	C 4.7UF, K, 25V	1	
C973	ECJ2FB1H104K	C 0.1UF, K, 50V	1		C2163	ECJ2FB1E475M	C 4.7UF, K, 25V	1	
C976	ECA1HM221	E 220UF, 50V	1		C2172	EEVHB0J101P	E 100UF, 6.3V	1	
C1003	EEHBI1C220UR	C 22PF, J, 16V	1		C2173	EEHBI1C101UP	C 100PF, J, 16V	1	
C1006	F2G0J470A019	E 47UF, 6.3V	1		C2178	ECJOEB1H102K	C 1000PF, K, 50V	1	
C1007	ECJ1VB1H103K	C 0.001UF, K, 50V	1		C2179	ECJOEB1H102K	C 1000PF, K, 50V	1	
C1168	ECJ1XB1C104K	C 0.1UF, Z, 16V	1		C2180	ECJ1VB1C224K	C 0.22UF, K, 16V	1	
C1181	ECJOEB1H102K	C 1000PF, K, 50V	1		C2181	ECJ1VB1C224K	C 0.22UF, K, 16V	1	
					C2223	EEHBI1E101P	C 100PF, J, 25V	1	

## TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2367	EEHBC1010UP	C 100PF, J, 16V	1	
C3062	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C3064	EEHBC1A471UP	C 470PF, J, 10V	1	
C3065	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3067	F1J0J1060004	C 0.010UF, K, 16V	1	
C3068	ECJ1XC1H820J	C 82PF, J, 50V	1	
C3069	ECJ1XC1H330J	C 33PF, J, 50V	1	
C3070	ECJ1XC1H121J	C 120PF, J, 50V	1	
C3071	ECJ1VC1H100C	C 10PF, C, 50V	1	
C3072	ECJ1XC1H330J	C 33PF, J, 50V	1	
C3073	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C3076	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C3077	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C3200	ECJ1VB0J225K	C 2.2UF, K, 6.3V	1	
C3202	EEHBC1010UP	C 100PF, J, 16V	1	
C3203	ECJ1VB1C224K	C 0.22UF, K, 16V	1	
C3204	EEVHB1C470P	E 47UF, 16V	1	
C3600	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C3601	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3602	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C3603	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C3863	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C3866	F2A0J101A240	E 100UF 6.4V	1	
C3867	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3870	ECJ1VF1H104Z	C 0.1UF, Z, 50V	1	
C3873	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C3874	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4001	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4004	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4005	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4007	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4008	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4009	F1J0J1060004	C 0.010UF, K, 16V	1	
C4013	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4014	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4015	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4018	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4019	F1J0J1060004	C 0.010UF, K, 16V	1	
C4020	F1J0J1060004	C 0.010UF, K, 16V	1	
C4021	F1J0J1060004	C 0.010UF, K, 16V	1	
C4022	F1J0J1060004	C 0.010UF, K, 16V	1	
C4023	F1J0J1060004	C 0.010UF, K, 16V	1	
C4024	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4025	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4027	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4029	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4030	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C4031	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4033	ECJ0EC1H101J	C 100PF, K, 50V	1	
C4034	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4035	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4036	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C4037	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C4040	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C4041	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C4042	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4043	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C4044	ECJ1VB1A105K	C 0.01UF, Z, 50V	1	
C4045	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4046	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4049	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4050	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4051	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4052	ECJ1VC1H560J	C 56PF, J, 50V	1	
C4053	ECJ1VC1H560J	C 56PF, J, 50V	1	
C4054	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4055	F1J0J1060004	C 0.010UF, K, 16V	1	
C4056	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4057	F1J0J1060004	C 0.010UF, K, 16V	1	
C4058	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4059	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4060	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4061	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4062	EEVHB1C470P	E 47UF, 16V	1	
C4064	ECJ0EB1A104K	C 0.1UF, K, 10V	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4065	ECJ0EB1H102K	C 1000PF, K, 50V	1	
C4066	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4067	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4068	F1J0J1060004	C 0.010UF, K, 16V	1	
C4071	ECJ1XC1H180J	C 18PF, J, 50V	1	
C4072	ECJ1XC1H180J	C 18PF, J, 50V	1	
C4074	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4075	F1J0J1060004	C 0.010UF, K, 16V	1	
C4076	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4077	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4078	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4079	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4080	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4081	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4082	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4083	ECJ0EB1H102K	C 1000PF, K, 50V	1	
C4084	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4085	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4086	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4087	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4088	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4089	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4090	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4091	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4092	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4093	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4094	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4095	F1J0J1060004	C 0.010UF, K, 16V	1	
C4096	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4097	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4098	ECJ1XB1H102K	C 1000UF, Z, 50V	1	
C4099	F1J0J1060004	C 0.010UF, K, 16V	1	
C4100	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4101	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4102	F1J0J1060004	C 0.010UF, K, 16V	1	
C4103	ECJ0EC1H120J	C 120PF, K, 50V	1	
C4104	ECJ0EC1H220J	C 220PF, K, 50V	1	
C4105	ECJ0EC1H220J	C 220PF, K, 50V	1	
C4109	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4110	ECJ2FF1A335Z	C 3.3UF, Z, 10V	1	
C4111	F1J0J1060004	C 0.010UF, K, 16V	1	
C4112	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4114	EEFCDOG560ER	56UF,	1	
C4115	EEFCDOG560ER	56UF,	1	
C4117	ECJ1XC1H220J	C 22PF, J, 50V	1	
C4118	F1J0J1060004	C 0.010UF, K, 16V	1	
C4119	ECJ0EC1H560J	C 560PF, K, 50V	1	
C4120	ECJ1XC1H101J	C 100PF, J, 50V	1	
C4121	ECJ1XC1H101J	C 100PF, J, 50V	1	
C4122	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C4123	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4125	EEFCDOG560R	56UF,	1	
C4127	F1J0J1060004	C 0.010UF, K, 16V	1	
C4128	EEHBC100R	C 10PF, J, 16V	1	
C4129	F1J0J1060004	C 0.010UF, K, 16V	1	
C4130	ECJ1VC1H120J	C 12PF, J, 50V	1	
C4131	ECJ1VC1H120J	C 12PF, J, 50V	1	
C4132	ECJ1XB1H102K	C 1000UF, Z, 50V	1	
C4133	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4134	ECJ1XB0J105K	C 1UF, K, 16V	1	
C4135	ECJ1VB1H103K	C 0.001UF, K, 50V	1	
C4148	ECJ2FB0J106M	C 10UF, Z, 6.3V	1	
C4149	ECJ2FB0J106M	C 10UF, Z, 6.3V	1	
C4182	ECJ2FB0J106M	C 10UF, Z, 6.3V	1	
C4183	ECJ2FB0J106M	C 10UF, Z, 6.3V	1	
C4501	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C4502	EEVHB1C470P	E 47UF, 16V	1	
C4807	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C4808	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5001	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5002	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5003	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5004	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5005	ECJ1VF1A105Z	C 1UF, Z, 10V	1	
C5006	ECJ1VF1A105Z	C 1UF, Z, 10V	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5007	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C5008	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5009	F1J0J1060004	C 0.010UF, K, 16V	1	
C5010	F1J0J1060004	C 0.010UF, K, 16V	1	
C5011	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5012	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5016	F1J0J1060004	C 0.010UF, K, 16V	1	
C5017	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5018	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C5019	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5020	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C5021	ECJ1VF1H103Z	C 0.010UF, Z, 50V	1	
C5022	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C5023	ECJ1VF1H103Z	C 0.010UF, Z, 50V	1	
C5024	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5025	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5026	F1J0J1060004	C 0.010UF, K, 16V	1	
C5027	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C5028	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5029	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5030	ECJ1XC1H150J	C 15PF, J, 50V	1	
C5031	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5032	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5033	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5034	ECJ1XC1H150J	C 15PF, J, 50V	1	
C5036	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C5038	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5040	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5041	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5042	F1J0J1060004	C 0.010UF, K, 16V	1	
C5043	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5044	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5045	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5046	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5047	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5048	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5049	ECJ2FBOJ225K	C 2.2UF, Z, 16V	1	
C5050	ECJ1XC1H471J	C 470PF, J, 50V	1	
C5051	ECJ1VBOJ105K	C 1UF, K, 6.3V	1	
C5054	ECJ1XC1H101J	C 100PF, J, 50V	1	
C5055	ECJ0EB1A104K	C 0.1UF, K, 10V	1	
C5056	ECJ1XF1C104Z	C 0.1UF, Z, 16V	1	
C5060	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
C5061	ECJ1XB1C104K	C 0.1UF, Z, 16V	1	
D901	BOJCMEO00037	DIODE	1	
D902	BOJCPG000005	DIODE	1	
D903	BOJCPG000005	DIODE	1	
D904	BOJCMEO00037	DIODE	1	
D906	BOJCMEO00037	DIODE	1	
D907	BOJCMEO00037	DIODE	1	
D909	BOHCMMO00014	DIODE	1	
D910	BOHCMMO00014	DIODE	1	
D913	BOJCMEO00037	DIODE	1	
D916	MA22D3900L	DIODE	1	
D917	RK34	DIODE	1	
D918	MA22D3900L	DIODE	1	
D921	RK34	DIODE	1	
D922	RK34	DIODE	1	
D923	RK34	DIODE	1	
D1001	B3CKE0000007	DIODE	1	
D1102	MA729	DIODE	1	
D1106	MAZ80620ML	DIODE	1	
D1107	MAZ80620ML	DIODE	1	
D1108	MAZ80620ML	DIODE	1	
D1109	MAZ80620ML	DIODE	1	
D1110	MAZ80620ML	DIODE	1	
D1810	MA111	DIODE	1	
D1811	MA111	DIODE	1	
D1812	MA8220-M	ZENER DIODE	1	
D1813	MA111	DIODE	1	
D1814	MA8075M	ZENER DIODE	1	
D1815	MA111	DIODE	1	
D1816	MA8075M	ZENER DIODE	1	
D1817	MA111	DIODE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D1818	MA8130M	ZENER DIODE	1	
D1819	MA111	DIODE	1	
D1820	MA8056-M	ZENER DIODE	1	
D1821	MA111	DIODE	1	
D1822	MA8056-M	ZENER DIODE	1	
D1823	MA111	DIODE	1	
D1824	MAZ82700ML	ZENER DIODE	1	
D1825	MA111	DIODE	1	
D1826	MAZ83900HL	DIODE	1	
D1827	MA111	DIODE	1	
D2001	MA3X704DOL	DIODE	1	
D2004	MA111	DIODE	1	
D2006	MAZ80470ML	DIODE	1	
D2301	MA111	DIODE	1	
D2304	MA111	DIODE	1	
D2305	MA111	DIODE	1	
D3001	MA8140M	ZENER DIODE	1	
D3002	MA8140M	ZENER DIODE	1	
D3003	MA8140M	ZENER DIODE	1	
D3004	MA8140M	ZENER DIODE	1	
D3005	MA8140M	ZENER DIODE	1	
D3006	MA8140M	ZENER DIODE	1	
D3007	MA8140M	ZENER DIODE	1	
D3008	MA8140M	ZENER DIODE	1	
D3009	MA8140M	ZENER DIODE	1	
D3013	MA8140M	ZENER DIODE	1	
D3014	MA8140M	ZENER DIODE	1	
D3015	MA8140M	ZENER DIODE	1	
D3016	MA8140M	ZENER DIODE	1	
D3017	MA8140M	ZENER DIODE	1	
D3018	MA8140M	ZENER DIODE	1	
D3021	MA8140M	ZENER DIODE	1	
D3022	MA8140M	ZENER DIODE	1	
D3023	MA8140M	ZENER DIODE	1	
D3024	MA8140M	ZENER DIODE	1	
D3025	MA8140M	ZENER DIODE	1	
D3026	MA8140M	ZENER DIODE	1	
D3027	MA8140M	ZENER DIODE	1	
D3028	MA8140M	ZENER DIODE	1	
D3031	MA8140M	ZENER DIODE	1	
D3032	MA8140M	ZENER DIODE	1	
D3033	MA8140M	ZENER DIODE	1	
D3200	MAZ81500ML	ZENER DIODE	1	
D3203	MA111	DIODE	1	
D3204	MA111	DIODE	1	
D3205	MA111	DIODE	1	
D3206	MA111	DIODE	1	
D3207	MA111	DIODE	1	
D3208	MA111	DIODE	1	
D3209	MA111	DIODE	1	
D3210	MA111	DIODE	1	
D3211	MA111	DIODE	1	
D3215	MA111	DIODE	1	
D3216	MA111	DIODE	1	
D3217	MA111	DIODE	1	
D3219	MA729	DIODE	1	
D3600	MA111	DIODE	1	
D3601	MA111	DIODE	1	
D3800	MA111	DIODE	1	
D4015	BOJCDD000002	DIODE	1	
D4121	MA111	DIODE	1	
D5001	EZJZ0V80008B	VARI STOR	1	
D5002	EZJZ0V80008B	VARI STOR	1	
D5003	EZJZ0V80008B	VARI STOR	1	
D5004	EZJZ0V80008B	VARI STOR	1	
D5005	EZJZ0V80008B	VARI STOR	1	
D5006	EZJZ0V80008B	VARI STOR	1	
D5007	EZJZ0V80008B	VARI STOR	1	
D5008	EZJZ0V80008B	VARI STOR	1	
D5009	EZJZ0V80008B	VARI STOR	1	
D5010	EZJZ0V80008B	VARI STOR	1	
D5011	EZJZ1V800AA	VARI STOR	1	
D5012	EZJZ0V80008B	VARI STOR	1	
D5013	EZJZ0V80008B	VARI STOR	1	
D5014	EZJZ1V800AA	VARI STOR	1	

## TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D5015	EZJZ1V800AA	VARISTOR	1	
D5016	EZJZ0V80008B	VARISTOR	1	
D5017	EZJZ1V800AA	VARISTOR	1	
D5018	EZJZ0V80008B	VARISTOR	1	
D5019	EZJZ0V80008B	VARISTOR	1	
D5020	EZJZ0V80008B	VARISTOR	1	
D5021	BOHCM000014	DIODE	1	
D5022	BOHCM000014	DIODE	1	
D5023	MA728	DIODE	1	
D5026	BOHCM000014	DIODE	1	
D5027	BOHCM000014	DIODE	1	
FL4001	JOMAB0000169	LC FILTER	1	
FL4002	JOMAB0000169	LC FILTER	1	
FL4003	JOMAB0000169	LC FILTER	1	
FL5001	F1J1A1050020	C 1UF, Z, 50V	1	
FL5002	F1J1A1050020	C 1UF, Z, 50V	1	
IC901	CODAAZG00006	IC	1	
IC902	CODAAZH00020	IC	1	
IC903	CODAAZG00006	IC	1	
IC904	CODAAZG00006	IC	1	
IC905	CODAAZG00006	IC	1	
IC906	CODAAZG00006	IC	1	
IC1102	TVROA069	IC (23LX60A)	1	TX-23LX60A
IC1102	TVROA070	IC	1	TX-23LX60M
IC1102	TVROA071	IC	1	TX-23LX60X
IC1803	COEBF0000354	IC	1	
IC1804	COCBCYE00001	IC	1	
IC1805	COCBCYE00001	IC	1	
IC2001	C1AB00002474	IC	1	
IC2005	C1BB00000947	IC	1	
IC4001	TVRN915-2	IC (LX60 SERIES)	1	
IC4003	C1ZBZ0003426	IC	1	
IC4004	C1ZBZ0003191	IC	1	
IC4005	TLC29331PWL	INTEGRATED CIRCUIT	1	
IC5001	C3EBDC000067	IC	1	
IC5002	C3EBDC000067	IC	1	
IC5004	C1AB00002535	IC	1	
IC5005	C0DBFFD00003	IC	1	
JK3001	K2HA6YYA0001	AV TERMINAL 1	1	
JK3002	K1U720A00001	AV TERMINAL 2	1	
JK3003	K2HA2YYA0001	HDMI AUDIO INPUT TERMINAL	1	
JK3502	K2HC103A0014	EARPHONE JACK	1	
JK5001	K1FA119E0001	CONNECTOR	1	
JK5002	K1FA119E0001	CONNECTOR	1	
JS1801	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
JS1802	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
JS2004	ERJ6GEYOR00	M 0 OHM, 1/10W	1	
JS2306	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
L901	TALL08N101KA	INDUCTION COIL	1	
L904	VLQSH02R101K	PEAKING COIL	1	
L906	EXCELD35C	BEAD CHOKE	1	
L907	TALL08N101KA	INDUCTION COIL	1	
L910	EXCELD35C	BEAD CHOKE	1	
L911	TALL08N101KA	INDUCTION COIL	1	
L913	GOC101K00023	PEAKING COIL	1	
L915	TALL08N101KA	INDUCTION COIL	1	
L918	EXCELD35C	BEAD CHOKE	1	
L921	EXCELD35C	BEAD CHOKE	1	
L922	TALL08N101KA	INDUCTION COIL	1	
L923	EXCELD35C	BEAD CHOKE	1	
L924	EXCELD35C	BEAD CHOKE	1	
L1805	JOJHC0000078	CHIP INDUCTOR	1	
L1806	JOJHC0000078	CHIP INDUCTOR	1	
L1809	JOJHC0000078	CHIP INDUCTOR	1	
L2001	GOA470ZA0033	CHOKE COIL	1	
L2002	GOA470ZA0033	CHOKE COIL	1	
L2003	JOJHC0000078	CHIP INDUCTOR	1	
L2005	JOJHC0000078	CHIP INDUCTOR	1	
L3001	TALC168T5R6K	CHIP INDUCTOR COIL	1	TX-23LX60A
L3001	G1C5R6K00007	COIL	1	TX-23LX60M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L3002	TALC168T5R6K	CHIP INDUCTOR COIL	1	TX-23LX60A
L3002	G1C5R6K00007	COIL	1	TX-23LX60M/X
L3800	JOJHC0000078	CHIP INDUCTOR	1	
L3801	TALL08N101KA	INDUCTION COIL	1	TX-23LX60A
L3801	GOA101EA0008	COIL	1	TX-23LX60M/X
L3802	JOJCC0000241	CHIP INDUCTOR	1	
L3803	JOJCC0000241	CHIP INDUCTOR	1	
L4001	JOJHC0000078	CHIP INDUCTOR	1	
L4002	JOJHC0000078	CHIP INDUCTOR	1	
L4003	JOJHC0000078	CHIP INDUCTOR	1	
L4004	JOJHC0000078	CHIP INDUCTOR	1	
L4005	JOJHC0000078	CHIP INDUCTOR	1	
L4006	JOJHC0000078	CHIP INDUCTOR	1	
L4007	JOJHC0000078	CHIP INDUCTOR	1	
L4008	JOJHC0000078	CHIP INDUCTOR	1	
L4009	JOJHC0000078	CHIP INDUCTOR	1	
L4010	JOJHC0000078	CHIP INDUCTOR	1	
L4011	JOJHC0000078	CHIP INDUCTOR	1	
L4012	JOJHC0000078	CHIP INDUCTOR	1	
L4014	JOJHC0000078	CHIP INDUCTOR	1	
L4015	JOJHC0000078	CHIP INDUCTOR	1	
L4016	ELJFA6R8KFB	CHIP INDUCTOR	1	
L4017	JOJCC0000241	CHIP INDUCTOR	1	
L4018	JOJCC0000241	CHIP INDUCTOR	1	
L4020	JOJHC0000078	CHIP INDUCTOR	1	
L4022	JOJHC0000078	CHIP INDUCTOR	1	
L4502	JOJHC0000078	CHIP INDUCTOR	1	
L4904	JOJHC0000078	CHIP INDUCTOR	1	
L5003	JOJHC0000078	CHIP INDUCTOR	1	
L5004	JOJHC0000078	CHIP INDUCTOR	1	
L5005	JOJHC0000078	CHIP INDUCTOR	1	
L5006	JOJHC0000078	CHIP INDUCTOR	1	
L5007	JOJHC0000078	CHIP INDUCTOR	1	
L5009	JOJHC0000078	CHIP INDUCTOR	1	
L5010	JOJBC0000080	CHIP INDUCTOR	1	
L5011	JOJHC0000078	CHIP INDUCTOR	1	
L5012	JOJHC0000078	CHIP INDUCTOR	1	
L5013	JOJHC0000078	CHIP INDUCTOR	1	
Q901	B1ABCE000015	TRANSISTOR	1	
Q902	B1ABCE000015	TRANSISTOR	1	
Q903	B1ABCE000015	TRANSISTOR	1	
Q1002	B1ADDF000005	TRANSISTOR	1	
Q1004	B1ADDF000005	TRANSISTOR	1	
Q1006	B1ABCE000015	TRANSISTOR	1	
Q1007	B1ABCE000015	TRANSISTOR	1	
Q1215	2SC584500L	TRANSISTOR	1	
Q1216	2SC584500L	TRANSISTOR	1	
Q1217	B1ADDF000005	TRANSISTOR	1	
Q1218	B1ABCE000015	TRANSISTOR	1	
Q1801	B1DHD000028	TRANSISTOR	1	
Q1802	UN5211	TRANSISTOR	1	
Q1803	2SC584500L	TRANSISTOR	1	
Q1804	2SA207700L	TRANSISTOR	1	
Q1805	2SA207700L	TRANSISTOR	1	
Q1806	2SC584500L	TRANSISTOR	1	
Q1807	2SD601A	TRANSISTOR	1	
Q2019	UN5211	TRANSISTOR	1	
Q2020	UN5211	TRANSISTOR	1	
Q2031	B1CBHD000002	FET	1	
Q2032	B1CBHD000002	FET	1	
Q2303	2SD601A	TRANSISTOR	1	
Q2305	2SA207700L	TRANSISTOR	1	
Q2306	2SA207700L	TRANSISTOR	1	
Q2312	2SD601A	TRANSISTOR	1	
Q2313	2SC584500L	TRANSISTOR	1	
Q3001	2SC584500L	TRANSISTOR	1	
Q3002	2SA207700L	TRANSISTOR	1	
Q3003	2SC584500L	TRANSISTOR	1	
Q3004	2SA207700L	TRANSISTOR	1	
Q3005	2SC584500L	TRANSISTOR	1	
Q3006	2SC584500L	TRANSISTOR	1	
Q3007	2SA207700L	TRANSISTOR	1	
Q3200	2SC584500L	TRANSISTOR	1	
Q3201	2SC584500L	TRANSISTOR	1	

## TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q3202	2SC584500L	TRANSISTOR	1	
Q3203	2SC584500L	TRANSISTOR	1	
Q3204	2SA207700L	TRANSISTOR	1	
Q3601	2SC584500L	TRANSISTOR	1	
Q3603	2SC584500L	TRANSISTOR	1	
Q3800	2SA207700L	TRANSISTOR	1	
Q3801	2SA207700L	TRANSISTOR	1	
Q3806	2SC584500L	TRANSISTOR	1	
Q3807	2SC584500L	TRANSISTOR	1	
Q4001	2SC584500L	TRANSISTOR	1	
Q4002	2SA207700L	TRANSISTOR	1	
Q4003	2SA207700L	TRANSISTOR	1	
Q4049	2SC584500L	TRANSISTOR	1	
Q4050	2SA207700L	TRANSISTOR	1	
Q4120	UN5211	TRANSISTOR	1	
Q4121	UN5211	TRANSISTOR	1	
Q4501	2SC584500L	TRANSISTOR	1	
Q4502	2SC584500L	TRANSISTOR	1	
Q5001	2SC584500L	TRANSISTOR	1	
Q5002	2SC584500L	TRANSISTOR	1	
Q5003	2SC584500L	TRANSISTOR	1	
Q5004	2SC584500L	TRANSISTOR	1	
Q5008	B1MBACA00008	TRANSISTOR	1	
Q5009	B1MBACA00008	TRANSISTOR	1	
Q5019	2SC584500L	TRANSISTOR	1	
Q5020	2SC584500L	TRANSISTOR	1	
Q5021	2SC584500L	TRANSISTOR	1	
Q5022	UN5211	TRANSISTOR	1	
Q5023	B1MBACA00008	TRANSISTOR	1	
Q5024	B1ABCE000015	TRANSISTOR	1	
Q5025	UN5211	TRANSISTOR	1	
Q3205	2SD0602A	TRANSISTOR	1	TX-23LX60A
Q3205	2SD602	TRANSISTOR	1	TX-23LX60M/X
Q3600	2SB0710A	TRANSISTOR	1	TX-23LX60A
Q3600	2SB710A	TRANSISTOR	1	TX-23LX60M/X
Q3602	2SB0710A	TRANSISTOR	1	TX-23LX60A
Q3602	2SB710A	TRANSISTOR	1	TX-23LX60M/X
R901	ERJ6ENF1001	M 1KOHM, 1/10W	1	
R902	ERJ6ENF7681	M7.68KOHM, 1/10W	1	
R903	ERJ6GEYJ102	M 1KOHM, J, 1/10W	1	
R904	ERJ6GEYJ103	M 10KOHM, J, 1/10W	1	
R905	ERJ6GEYJ473	M 47KOHM, J, 1/10W	1	
R906	ERJ6ENF2491	M2.49KOHM, 1/10W	1	
R907	ERJ6ENF8200	M 820 OHM, 1/10W	1	
R908	ERJ6GEYJ102	M 1KOHM, J, 1/10W	1	
R909	ERJ6GEYJ103	M 10KOHM, J, 1/10W	1	
R910	ERJ6GEYJ473	M 47KOHM, J, 1/10W	1	
R911	ERJ6ENF1001	M 1KOHM, 1/10W	1	
R912	ERJ6ENF2211	M2.21KOHM, 1/10W	1	
R913	ERJ6GEYJ102	M 1KOHM, J, 1/10W	1	
R914	ERJ6GEYJ103	M 10KOHM, J, 1/10W	1	
R915	ERJ6GEYJ473	M 47KOHM, J, 1/10W	1	
R916	ERJ6ENF1001	M 1KOHM, 1/10W	1	
R917	ERJ6ENF4121	M4.12KOHM, 1/10W	1	
R918	ERJ6ENF1001	M 1KOHM, 1/10W	1	
R919	ERJ6ENF1910	M 191 OHM, 1/10W	1	
R920	ERJ6ENF1001	M 1KOHM, 1/10W	1	
R921	ERJ6ENF1101	M 1.1KOHM, 1/10W	1	
R929	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R930	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R931	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R932	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R933	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R934	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R935	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R936	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R937	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R938	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R939	ERJ8GEYOR00	M 0 OHM, 1/8W	1	
R1002	DOGB473JA041	M 47K OHM J 1/16W	1	
R1003	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R1003	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R1006	DOGB221JA041	M 220 OHM J 1/16W	1	
R1008	DOGB473JA041	M 47K OHM J 1/16W	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1010	DOGB473JA041	M 47K OHM J 1/16W	1	
R1015	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1017	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1019	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1020	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1022	ERJ3GEYJ152	M 1.5KOHM, J, 1/16W	1	TX-23LX60A
R1022	DOGB152JA041	M 1.5K OHM J 1/16W	1	TX-23LX60M/X
R1024	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R1025	ERJ3GEYJ273	M 27KOHM, J, 1/16W	1	
R1026	ERJ3GEYJ273	M 27KOHM, J, 1/16W	1	
R1028	DOGB470JA041	M 47 OHM J 1/16W	1	
R1029	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R1029	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R1030	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R1167	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R1171	DOGB220JA041	M 22 OHM J 1/16W	1	
R1172	DOGB220JA041	M 22 OHM J 1/16W	1	
R1173	DOGB473JA041	M 47K OHM J 1/16W	1	
R1174	DOGB101JA041	M 100 OHM J 1/16W	1	
R1174	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R1175	DOGB101JA041	M 100 OHM J 1/16W	1	
R1175	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R1176	DOGB101JA041	M 100 OHM J 1/16W	1	
R1176	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R1177	DOGB101JA041	M 100 OHM J 1/16W	1	
R1177	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R1228	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1229	DOGB101JA041	M 100 OHM J 1/16W	1	
R1229	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R1231	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R1233	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R1234	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R1236	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1237	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1238	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1239	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1240	DOGB473JA041	M 47K OHM J 1/16W	1	
R1241	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1242	DOGB223JA041	M 22K OHM J 1/16W	1	
R1243	DOGB473JA041	M 47K OHM J 1/16W	1	
R1246	DOGB332JA041	M 3.3K OHM J 1/16W	1	
R1247	DOGB332JA041	M 3.3K OHM J 1/16W	1	
R1248	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	1	
R1701	DOGB393JA041	M 39K OHM J 1/16W	1	
R1702	DOGB393JA041	M 39K OHM J 1/16W	1	
R1811	ERJ6GEYJ103	M 10KOHM, J, 1/10W	1	
R1812	ERJ3GEYJ333	M 33KOHM, J, 1/16W	1	
R1813	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R1814	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R1815	ERJ6GEYJ103	M 10KOHM, J, 1/10W	1	
R1816	DOGB223JA041	M 22K OHM J 1/16W	1	
R1818	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R1818	DOGB102JA041	M 1K OHM, J 1/16W	1	TX-23LX60M/X
R1819	ERJ3EKF5231	M52.3KOHM, 1/16W	1	
R1820	ERJ3EKF2202	M 22KOHM, 1/16W	1	
R1821	ERJ3EKF2372	M23.7KOHM, 1/16W	1	
R1822	ERJ3EKF2202	M 22KOHM, 1/16W	1	
R1823	DOGB473JA041	M 47K OHM J 1/16W	1	
R1824	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1825	DOGB473JA041	M 47K OHM J 1/16W	1	
R1826	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1827	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R1828	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R1829	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R1830	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R1831	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R1831	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R1832	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R1832	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R1872	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R1872	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R1873	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R1874	ERJ12YJ181U	M 180OHM, J, 1/2W	1	
R2096	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R2097	ERJ2GEJ393	M 39KOHM, J, 0.063W	1	

## TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R2098	ERJ3EKF3902	M 39KOHM, 1/16W	1	
R2099	ERJ3GEYJ100	M 10 OHM, J, 1/16W	1	TX-23LX60A
R2099	DOGB100JA041	M 10 OHM J 1/16W	1	TX-23LX60M/X
R2100	ERJ3GEYJ100	M 10 OHM, J, 1/16W	1	TX-23LX60A
R2100	DOGB100JA041	M 10 OHM J 1/16W	1	TX-23LX60M/X
R2101	DOGB220JA041	M 22 OHM J 1/16W	1	
R2102	DOGB220JA041	M 22 OHM J 1/16W	1	
R2103	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R2104	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R2105	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R2106	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R2107	ERJ3GEYJ622	M 6.2KOHM, J, 1/16W	1	TX-23LX60A
R2107	DOGB622JA041	M 6.2K OHM J 1/16W	1	TX-23LX60M/X
R2108	ERJ3GEYJ622	M 6.2KOHM, J, 1/16W	1	TX-23LX60A
R2108	DOGB622JA041	M 6.2K OHM J 1/16W	1	TX-23LX60M/X
R2109	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R2111	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R2112	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2113	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2114	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2115	ERJ2GEJ393	M 39KOHM, J, 0.063W	1	
R2118	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R2120	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R2121	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2122	ERJ2GEJ154	M 150KOHM, J, 0.063W	1	
R2139	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R2140	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R2148	DOGB682JA041	M 6.8K OHM J 1/16W	1	
R2149	DOGB682JA041	M 6.8K OHM J 1/16W	1	
R2152	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2153	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2154	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2159	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2160	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2303	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R2304	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R2306	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2307	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R2308	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R2310	DOGB222JA041	M 2.2K OHM J 1/16W	1	
R2313	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2314	ERJ2GEJ105	M 1MOHM, J, 0.063W	1	
R2381	ERJ2GEJ102	M 1KOHM, J, 0.063W	1	
R2382	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R2383	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R3001	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	
R3002	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	
R3003	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3004	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3005	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3006	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	
R3007	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	
R3010	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3011	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	
R3012	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	
R3013	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3014	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3015	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3019	ERJ6ENF75R0	M 75 OHM, 1/10W	1	
R3020	ERJ3GEYJ431	M 430 OHM, J, 1/16W	1	TX-23LX60A
R3020	DOGB431JA041	M 430 OHM J 1/16W	1	TX-23LX60M/X
R3021	ERJ3GEYJ431	M 430 OHM, J, 1/16W	1	TX-23LX60A
R3021	DOGB431JA041	M 430 OHM J 1/16W	1	TX-23LX60M/X
R3022	ERJ6GEYJ331	M 330 OHM, J, 1/10W	1	
R3023	ERJ6GEYJ471	M 470 OHM, J, 1/10W	1	
R3024	ERJ6GEYJ271	M 270 OHM, J, 1/10W	1	
R3026	DOGB473JA041	M 47K OHM J 1/16W	1	
R3027	DOGB393JA041	M 39K OHM J 1/16W	1	
R3028	ERJ2GEJ220	M 22 OHM, J, 0.063W	1	
R3029	ERJ3EKF1002	M 10KOHM, 1/16W	1	
R3031	ERJ3EKF2200	M 220 OHM, 1/16W	1	
R3032	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3032	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3033	DOGB331JA041	M 330 OHM J 1/16W	1	
R3034	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3035	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R3035	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R3036	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R3036	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R3037	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R3037	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R3038	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R3038	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R3039	ERJ3GEYJ105	M 1MOHM, J, 1/16W	1	TX-23LX60A
R3039	DOGB105JA041	M 1M OHM F 1/16W	1	TX-23LX60M/X
R3040	DOGB274JA041	M 270K OHM J 1/16W	1	
R3041	DOGB473JA041	M 47K OHM J 1/16W	1	
R3042	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3042	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3043	ERJ3GEYJ184	M 180KOHM, J, 1/16W	1	
R3044	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3045	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3046	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3047	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3048	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3049	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3050	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3051	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3052	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3053	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3100	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3101	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3102	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3103	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3104	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3105	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3106	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3107	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3108	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3109	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3110	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3110	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3111	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3112	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3112	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3116	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3117	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3118	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3118	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3119	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3120	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3120	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3121	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3122	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3123	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3124	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3128	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3129	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3129	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3130	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3130	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R3200	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3201	DOGB473JA041	M 47K OHM J 1/16W	1	
R3203	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3204	ERJ14YJ222	M 22KOHM, J, 1/4W	1	
R3205	ERJ14YJ222	M 22KOHM, J, 1/4W	1	
R3206	DOGB223JA041	M 22K OHM J 1/16W	1	
R3207	DOGB332JA041	M 3.3K OHM J 1/16W	1	
R3208	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3209	DOGB473JA041	M 47K OHM J 1/16W	1	
R3210	DOGB332JA041	M 3.3K OHM J 1/16W	1	
R3214	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3215	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3216	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3217	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3218	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3219	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3220	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3221	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3222	ERJ3GEYOR00	M 0 OHM, 1/16W	1	

## TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3226	ERJ6GEYOR00	M 0 OHM, 1/10W	1	
R3227	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3228	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3229	ERJ3GEYJ153	M 15KOHM, J, 1/16W	1	
R3230	DOGB473JA041	M 47K OHM J 1/16W	1	
R3231	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3232	ERJ6GEYOR00	M 0 OHM, 1/10W	1	
R3233	DOGB473JA041	M 47K OHM J 1/16W	1	
R3234	DOGB222JA041	M 2.2K OHM J 1/16W	1	
R3235	ERJ3GEYJ152	M 1.5KOHM, J, 1/16W	1	TX-23LX60A
R3235	DOGB152JA041	M 1.5K OHM J 1/16W	1	TX-23LX60M/X
R3236	DOGB223JA041	M 22K OHM J 1/16W	1	
R3237	DOGB473JA041	M 47K OHM J 1/16W	1	
R3600	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3601	DOGB223JA041	M 22K OHM J 1/16W	1	
R3602	DOGB473JA041	M 47K OHM J 1/16W	1	
R3603	DOGB222JA041	M 2.2K OHM J 1/16W	1	
R3604	DOGB223JA041	M 22K OHM J 1/16W	1	
R3605	DOGB223JA041	M 22K OHM J 1/16W	1	
R3606	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3607	DOGB473JA041	M 47K OHM J 1/16W	1	
R3869	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3876	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R3877	DOGB183JA041	M 18K OHM J 1/16W	1	
R3877	ERJ3GEYJ183	M 18KOHM, J, 1/16W	1	TX-23LX60A
R3878	ERJ3GEYJ333	M 33KOHM, J, 1/16W	1	
R3879	DOGB221JA041	M 220 OHM J 1/16W	1	
R3882	DOGB102JA041	M 1K OHM J 1/16W	1	
R3882	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R3883	DOGB331JA041	M 330 OHM J 1/16W	1	
R3884	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3885	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R3911	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R3912	DOGB332JA041	M 3.3K OHM J 1/16W	1	
R3914	DOGB332JA041	M 3.3K OHM J 1/16W	1	
R3915	ERJ3GEYJ122	M 1.2KOHM, J, 1/16W	1	TX-23LX60A
R3915	DOGB122JA041	N 1.2K OHM J 1/16W	1	TX-23LX60M/X
R3916	DOGB471JA041	M 470 OHM J 1/16W	1	
R3917	DOGB561JA041	M 560 OHM J 1/16W	1	
R3919	ERJ12YOR00	M 0 OHM, J, 1/2W	1	
R4001	ERJ3GEYJ273	M 27KOHM, J, 1/16W	1	
R4003	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4003	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4005	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R4007	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4007	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4008	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4008	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4009	EXB2HV104JVS	RESISTOR ARRAY	1	
R4011	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4011	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4012	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4012	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4014	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4014	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4015	ERJ2GEJ104	M 100KOHM, J, 0.063W	1	
R4018	ERJ2GEJ473	M 47KOHM, J, 0.063W	1	
R4021	ERJ2GEJ682	M 6.8KOHM, J, 0.063W	1	
R4023	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4023	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4025	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4025	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4026	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4028	DOGB220JA041	M 22 OHM J 1/16W	1	
R4031	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4032	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4034	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4034	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4038	ERJ2GEJ822	M 8.2KOHM, J, 0.063W	1	
R4047	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4047	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4048	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4048	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4049	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4049	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4050	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4050	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4053	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4053	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4055	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4055	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4057	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4057	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4058	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4058	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4059	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4059	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4061	DOGB220JA041	M 22 OHM J 1/16W	1	
R4062	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4062	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4063	DOGB220JA041	M 22 OHM J 1/16W	1	
R4064	DOGB473JA041	M 47K OHM J 1/16W	1	
R4065	DOGB220JA041	M 22 OHM J 1/16W	1	
R4066	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4066	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4069	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4069	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4071	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4072	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4072	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4077	DOGB220JA041	M 22 OHM J 1/16W	1	
R4078	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4078	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4079	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4079	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4080	DOGB220JA041	M 22 OHM J 1/16W	1	
R4081	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4081	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4082	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4089	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4089	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4092	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4092	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4093	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4094	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4094	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4097	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4097	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4098	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4098	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4099	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4099	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4100	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4100	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4101	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4102	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4102	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4103	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4104	DOGB332JA041	M 3.3K OHM J 1/16W	1	
R4105	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4106	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4107	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4107	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4108	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4108	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4109	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4109	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4110	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4110	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4111	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4111	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4112	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4113	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4113	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4114	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4114	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4115	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4115	DOGB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4116	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4116	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X

## TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4117	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4117	D0GB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4118	D0GB471JA041	M 470 OHM J 1/16W	1	
R4119	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4120	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4121	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	1	
R4122	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4123	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4123	D0GB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4124	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4125	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4125	D0GB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4126	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4126	D0GB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4127	ERJ3GEYJ151	M 150 OHM, J, 1/16W	1	TX-23LX60A
R4127	D0GB151JA041	M 150 OHM J 1/16W	1	TX-23LX60M/X
R4128	ERJ2GEJ103	M 10KOHM, J, 0.063W	1	
R4129	ERJ3GEYJ182	M 1.8KOHM, J, 1/16W	1	TX-23LX60A
R4129	D0GB182JA041	M 1.8K OHM J 1/16W	1	TX-23LX60M/X
R4130	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4131	D0GB221JA041	M 220 OHM J 1/16W	1	
R4132	D0GB221JA041	M 220 OHM J 1/16W	1	
R4133	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4134	D0GB331JA041	M 330 OHM J 1/16W	1	
R4135	D0GB331JA041	M 330 OHM J 1/16W	1	
R4136	D0GB223JA041	M 22K OHM J 1/16W	1	
R4138	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4139	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4140	D0GB272JA041	M 2.7K OHM J 1/16W	1	
R4141	ERJ3GEYJ121	M 120 OHM, J, 1/16W	1	TX-23LX60A
R4141	D0GB121JA041	M 120 OHM J 1/16W	1	TX-23LX60M/X
R4146	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4148	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4188	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4188	D0GB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4189	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4189	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4190	ERJ3GEYJ912	M9.31KOHM, J, 1/16W	1	
R4191	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4192	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4193	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4194	ERJ3EKF1000	M 100 OHM, 1/16W	1	
R4195	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4195	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4196	ERJ3EKF1000	M 100 OHM, 1/16W	1	
R4197	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4197	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4198	ERJ3EKF1000	M 100 OHM, 1/16W	1	
R4199	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4200	ERJ3EKF1000	M 100 OHM, 1/16W	1	
R4201	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4202	ERJ3EKF1000	M 100 OHM, 1/16W	1	
R4203	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4203	D0GB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4204	ERJ3EKF1600	M 160 OHM, 1/16W	1	
R4205	ERJ3EKF1600	M 160 OHM, 1/16W	1	
R4206	ERJ3EKF1600	M 160 OHM, 1/16W	1	
R4207	ERJ3EKF1600	M 160 OHM, 1/16W	1	
R4208	ERJ3EKF1600	M 160 OHM, 1/16W	1	
R4209	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4210	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4213	ERJ3GEYJ912	M9.31KOHM, J, 1/16W	1	
R4214	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4214	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4215	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4215	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4216	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4217	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4217	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4218	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4218	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4219	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4219	D0GB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4220	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4220	D0GB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4221	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4221	D0GB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4222	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4225	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4226	D0GB332JA041	M 3.3K OHM J 1/16W	1	
R4228	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R4228	D0GB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R4229	D0GB392JA041	M 3.9K OHM J 1/16W	1	
R4230	D0GB392JA041	M 3.9K OHM J 1/16W	1	
R4231	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4232	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4233	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4234	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4235	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4236	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4237	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4238	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4239	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4240	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4241	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4242	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4243	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4244	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4244	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4245	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4246	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4247	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4248	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4249	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4251	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4253	D0GB188JA040	M 1.8 OHM J 1/16W	1	
R4254	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4255	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R4256	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R4257	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4258	D0GB473JA041	M 47K OHM J 1/16W	1	
R4259	D0GB473JA041	M 47K OHM J 1/16W	1	
R4271	D0GB221JA041	M 220 OHM J 1/16W	1	
R4272	D0GB221JA041	M 220 OHM J 1/16W	1	
R4273	D0GB221JA041	M 220 OHM J 1/16W	1	
R4274	D0GB221JA041	M 220 OHM J 1/16W	1	
R4275	D0GB221JA041	M 220 OHM J 1/16W	1	
R4279	D0GB221JA041	M 220 OHM J 1/16W	1	
R4280	D0GB221JA041	M 220 OHM J 1/16W	1	
R4281	D0GB332JA041	M 3.3K OHM J 1/16W	1	
R4282	D0GB332JA041	M 3.3K OHM J 1/16W	1	
R4325	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4326	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4328	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R4328	D0GB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R4501	D0GB473JA041	M 47K OHM J 1/16W	1	
R4502	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4504	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4505	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R4506	D0GB473JA041	M 47K OHM J 1/16W	1	
R4750	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4751	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4752	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4753	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4754	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4755	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4756	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4757	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4758	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4759	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R4810	D0GB223JA041	M 22K OHM J 1/16W	1	
R4811	ERJ3GEYJ333	M 33KOHM, J, 1/16W	1	
R5001	D0GB390JA041	M 39 OHM J 1/16W	1	
R5002	D0GB390JA041	M 39 OHM J 1/16W	1	
R5005	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5006	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5007	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5007	D0GB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5008	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5008	D0GB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X



## TX-23LX60A/M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5009	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5009	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5010	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5010	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5011	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5011	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5012	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5012	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5013	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5013	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5014	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5014	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5015	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	
R5015	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5016	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	
R5016	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5017	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5017	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5018	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5018	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5019	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5019	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5020	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5020	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5021	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5021	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5022	ERJ3GEYJ2R7	M 2.7HM, J, 1/16W	1	TX-23LX60A
R5022	DOGB2R7JA040	M 2.7 OHM J 1/16W	1	TX-23LX60M/X
R5023	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R5024	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5025	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5026	ERJ2GEOR00	M 0.0 OHM, J, 0.063W	1	
R5027	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5028	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5029	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5030	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5031	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5032	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5035	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5036	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5038	DOGB473JA041	M 47K OHM J 1/16W	1	
R5039	DOGB560JA041	M 56 OHM J 1/16W	1	
R5040	DOGB473JA041	M 47K OHM J 1/16W	1	
R5041	DOGB560JA041	M 56 OHM J 1/16W	1	
R5043	DOGB560JA041	M 56 OHM J 1/16W	1	
R5045	DOGB560JA041	M 56 OHM J 1/16W	1	
R5048	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5049	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5052	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5053	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5054	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R5054	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R5055	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	TX-23LX60A
R5055	DOGB101JA041	M 100 OHM J 1/16W	1	TX-23LX60M/X
R5057	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5058	DOGB330JA041	M 33 OHM J 1/16W	1	
R5060	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5061	DOGB220JA041	M 22 OHM J 1/16W	1	
R5062	DOGB220JA041	M 22 OHM J 1/16W	1	
R5063	DOGB330JA041	M 33 OHM J 1/16W	1	
R5064	DOGB220JA041	M 22 OHM J 1/16W	1	
R5065	DOGB330JA041	M 33 OHM J 1/16W	1	
R5066	DOGB220JA041	M 22 OHM J 1/16W	1	
R5067	DOGB330JA041	M 33 OHM J 1/16W	1	
R5068	DOGB220JA041	M 22 OHM J 1/16W	1	
R5070	DOGB220JA041	M 22 OHM J 1/16W	1	
R5073	ERJ3GEYJ105	M 1MOHM, J, 1/16W	1	TX-23LX60A
R5073	DOGB105JA041	M 1M OHM F 1/16W	1	TX-23LX60M/X
R5075	DOGB821JA041	M 820 OHM J 1/16W	1	
R5077	ERJ3GEYJ182	M 1.8KOHM, J, 1/16W	1	TX-23LX60A
R5077	DOGB182JA041	M 1.8K OHM J 1/16W	1	TX-23LX60M/X
R5078	DOGB220JA041	M 22 OHM J 1/16W	1	
R5080	DOGB220JA041	M 22 OHM J 1/16W	1	
R5081	ERJ3GEYJ182	M 1.8KOHM, J, 1/16W	1	TX-23LX60A
R5081	DOGB182JA041	M 1.8K OHM J 1/16W	1	TX-23LX60M/X

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5082	DOGB220JA041	M 22 OHM J 1/16W	1	
R5083	EXB38V220J	RESISTOR ARRAY	1	
R5084	EXB2HV220JV	RESISTOR ARRAY	1	
R5085	ERJ2GEJ220	M 22 OHM, J, 0.063W	1	
R5086	EXB2HV220JV	RESISTOR ARRAY	1	
R5087	EXB2HV220JV	RESISTOR ARRAY	1	
R5088	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5091	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5093	ERJ3EKF2612	M 26.1K OHM F 1/16W	1	
R5094	DOGB221JA041	M 220 OHM J 1/16W	1	
R5095	ERJ3EKF4703V	M 470K OHM F 1/16W	1	
R5096	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R5097	DOGB473JA041	M 47K OHM J 1/16W	1	
R5098	ERJ3EKF2203V	M 220K OHM F 1/16W	1	
R5099	DOGB472JA041	M 4.7K OHM J 1/16W	1	
R5100	ERJ3GEYJ475	M 4700K OHM J 1/16W	1	
R5101	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5102	DOGB223JA041	M 22K OHM J 1/16W	1	
R5103	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5104	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R5104	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R5105	ERJ3GEYJ103	M 10KOHM, J, 1/16W	1	
R5106	ERJ3GEYJ102	M 1KOHM, J, 1/16W	1	TX-23LX60A
R5106	DOGB102JA041	M 1K OHM J 1/16W	1	TX-23LX60M/X
R5107	EXB2HV104JV	RESISTOR ARRAY	1	
R5108	EXB2HV104JV	RESISTOR ARRAY	1	
R5109	EXB2HV104JV	RESISTOR ARRAY	1	
R5110	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R5111	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R5112	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R5113	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R5114	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5116	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5117	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5118	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5119	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5124	ERJ3GEYOR00	M 0 OHM, 1/16W	1	
R5125	DOGB220JA041	M 22 OHM J 1/16W	1	
R5126	DOGB220JA041	M 22 OHM J 1/16W	1	
R5130	DOGB473JA041	M 47K OHM J 1/16W	1	
R5131	DOGB473JA041	M 47K OHM J 1/16W	1	
R5132	DOGB220JA041	M 22 OHM J 1/16W	1	
RM1001	PNA4701M05TV	REMOCO RECEIVER	1	
SN1001	B3L000000020	IC	1	
SW901	KOF162B00002	SWITCH	1	
TU101	ENG39A02GF	TUNER	1	△
X4001	HOJ202500011	CRYSTAL	1	
X5001	HOJ283500018	CRYSTAL	1	
A1	K1KB23A00003	23P CONNECTOR	1	
A2	K1KB23A00003	23P CONNECTOR	1	
A3	K1KA04AA0190	4P CONNECTOR	1	
A4	K1KA05AA0150	5P CONNECTOR	1	
A7	K1KA08AA0150	8P CONNECTOR	1	
A8	K1KB30B00044	30P CONNECTOR	1	
A9	K1KA10AA0105	10P CONNECTOR	1	
A10	K1KA08AA0150	8P CONNECTOR	1	
AP1	K1KA19A00007	19P CONNECTOR	1	
AP3	K1KA23A00003	23P CONNECTOR	1	
AP4	K1KA23A00003	23P CONNECTOR	1	
AP5	K1KA14AA0194	CONNECTOR	1	
AP6	K1KA03AA0190	3P CONNECTOR	1	
K1	K1KA05BA0061	5P CONNECTOR	1	
V1	K1KA08BA0061	8P CONNECTOR	1	
RTL	TNPA3749AB	CIRCUIT BOARD V	1	△
RTL	TNPA3860	CIRCUIT BOARD AP	1	△
RTL	TNPA3862	CIRCUIT BOARD K	1	△
RTL	TXN/A10MZJ	CIRCUIT BOARD A	1	△TX-23LX60A
RTL	TXN/A10MCM	CIRCUIT BOARD A	1	△TX-23LX60M

## TX-23LX60A/M/X

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