

TELEFUNKEN

TF42K192A

SERVICE MANUAL



Caution

Be sure to read this manual before servicing. To assure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this Hitachi liquid crystal television/monitor. Be sure to read the cautionary items described in the manual to maintain safety before servicing.

Service Warning

1. The LCD Panel Module is made of glass. When handling broken LCD Panel Module, take special care not to be injured.
2. Replacement work should only start after the LCD Panel Module and the AC/DC Power Supply has become sufficiently cool.
3. Take special care of the LCD display panel and do not damage its surface.
4. Do not touch the LCD Panel Module with your bare hands and protect its surface from stains.
5. It is recommended to use clean soft gloves during servicing in order to protect the LCD display panel and the service personnel himself.

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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

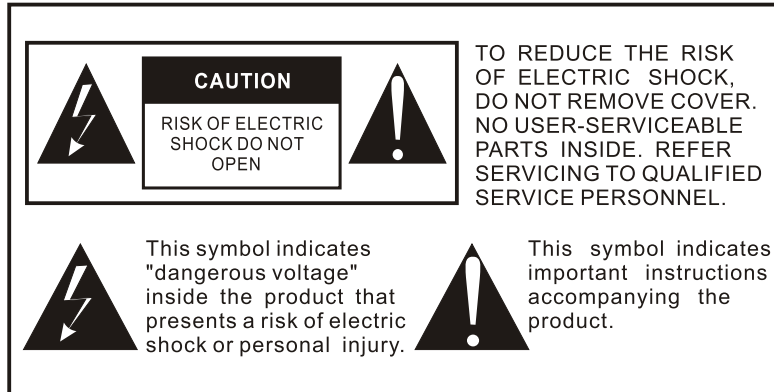
Liquid Crystal Display Television/Monitor

Safety Notice

Maintenance and repair of this LCD TV/monitor should be done by qualified service personnel only.

Critical parts that have special safety characteristics are identified by a  in the replacement parts list. Use of any substitute replacement part that does not have the same safety characteristics as the recommended replacement part in the parts list might create shock, fire and / or other hazards.

Read and comply with all caution and safety related notes on or inside the LCD/monitor cabinet, the printed circuit boards or the LCD Panel Module. Please note the following safety symbols indicated below.



PC Display Modes

COMPONENT VIDEO (YPbPr) INPUT

| Mode | Resolution | Horizontal Frequency (KHz) | Vertical Frequency (Hz) |
|----------|------------|----------------------------|-------------------------|
| 576i/50 | 720X576 | 15.63 | 50.00 |
| 480i/60 | 640X480 | 15.73 | 60.00 |
| 576p/50 | 720X576 | 31.25 | 50.00 |
| 480p/60 | 640X480 | 31.47 | 60.00 |
| 720p/60 | 1280X720 | 45.00 | 60.00 |
| 1080i/50 | 1920X1080 | 28.13 | 50.00 |
| 1080i/60 | 1920X1080 | 33.75 | 60.00 |
| 1080p/50 | 1920X1080 | 56.25 | 50.00 |
| 1080p/60 | 1920X1080 | 67.50 | 60.00 |

Display Modes

RGB INPUT

| Resolution | Horizontal Frequency (KHz) | Vertical Frequency (Hz) | Comment |
|------------|----------------------------|-------------------------|---------|
| 640x480 | 31.5 | 60 | DOS |
| 640x480 | 37.5 | 75 | VESA |
| 800x600 | 37.9 | 60 | VESA |
| 1024x768 | 48.4 | 60 | VESA |
| 1024X768 | 56.5 | 70 | VESA |
| 1280X768 | 64.0 | 60 | VESA |
| 1360X768 | 47.7 | 60 | VESA |

HDMI INPUT

| Mode | Resolution | Horizontal Frequency (KHz) | Vertical Frequency (Hz) |
|----------|------------|----------------------------|-------------------------|
| 480i | 640X480 | 31.47 | 60.00 |
| 576p | 720X576 | 31.25 | 50.00 |
| 720p/60 | 1280X720 | 45.00 | 60.00 |
| 1080i/50 | 1920X1080 | 28.13 | 50.00 |
| 1080i/60 | 1920X1080 | 33.75 | 60.00 |
| 1080p/50 | 1920X1080 | 56.25 | 50.00 |
| 1080p/60 | 1920X1080 | 67.50 | 60.00 |

- Modes, which are not listed in the above table, may not be supported. For an optimal picture is recommended to choose a mode listed in the table.
- The incoming display modes compatible with WINDOWS as shown in the table above.
- Sometimes, the image may be disrupted due to the frequency standard from the VGA card. However, this is not an error. You may improve this situation by activating the automatic adjustment or by manually changing the phase and the clock settings in the menu.
- To extend the service life of the product, we recommend that you use your computer's power management function.

Specifications

| | |
|-------------------------------------|---------------------------------|
| LCD Panel | |
| Size | 42" Diagonal |
| Display size | 930.24(H) X 523.26 (V) mm |
| Pixel Pitch | 0.4845(H) X 0.4845 (V) mm |
| View Angle | 176 °/176°(H/V) |
| Frequency | |
| Horizontal | 30~75KHz |
| Vertical | 56~75Hz |
| Display color | 16.7M colors |
| Display Resolution | |
| Maximum Mode | 1360 X 768 @ 60Hz |
| Optimum Mode | 1024 X 768 @ 60Hz |
| Input Source | |
| Sync. | H/V separate, TTL, P. or N. |
| Video Signal | 1Vp-p @ 75 ohm |
| RGB Signal | 0.7 Vp-p @ 75 ohm |
| TV | |
| Color System | PAL/SECAM |
| Sound System | BG, DK, I, L |
| Video | |
| Color System | PAL/SECAM/NTSC |
| Video Format | CVBS, S-VHS, RGB |
| Power Supply | |
| Input | AC 100~240V, 50/60Hz |
| Power Consumption | |
| Working | 230W |
| Standby | < 3W |
| Environmental Considerations | |
| Operating Temperature | 10°C ~ 40 °C(50°F ~ 104°F) |
| Operating Humidity | 10% ~ 80% |
| Audio Characteristics | |
| Audio Input | RCA Jack (L, R), 0.5Vrms (-9dB) |
| Audio Input (PC) | RCA Jack (L, R), 0.5Vrms (-9dB) |
| Frequency | RF: 100Hz~12KHz (at ± 3dB) |
| Response | A/V: 100Hz~13KHz (at ± 3dB) |
| Dimension (WXDXH) mm | |
| Without Stand | 1068X122X753 |
| With Stand | 1068X310X806 |
| Weight (Kg) | |
| Net Weight | 25 |
| Gross Weight | 28.5 |

Note:

- Design and specifications are subject to change without notice.
- Weight and dimensions shown are approximate values only.

Location and Function of Controls

REMOTE CONTROLLER

STANDBY

Switch on the LCD TV when at standby mode or vice versa.

DISPLAY

Display the source and channel information.

INPUT SOURCE SELECT

TV button

Select the TV mode.

VIDEO button

Select a mode among AV, S-Video and SCART.

PC button

Select the VGA and HDMI mode.

COMP button

Select the YPbPr mode.

PROGRAM SELECT

Press these buttons to select a TV program directly.

MENU SELECT

Enter or exit from the OSD menu.

CH+/CH-

Select channel in ascending or descending order.

▲▼◀▶ and ENTER

select menu items and adjust menu values.

VOL+/VOL-

Press to increase or decrease volume.

PICTURE MODE

You may recall the picture mode by pressing this button. Each time pressed, picture mode is changed in following sequence:

Sport→Vivid→Hi-Bright
↑ User ↓

RETURN

Return to previously selected program number.

MUTE

Switch the sound on or off.

NICAM

Switch between NICAM Stereo, NICAM DUAL1, NICAM DUAL2, NICAM Mono or Mono.

EQ MODE

You may recall the equalizer mode by pressing this button. Each time pressed, EQ mode is changed in following sequence.

Off→Rock→Pop→Live→Dance
↑ Soft ← Classic ← Techno ↓

DISPLAY MODE

You may recall the display mode by pressing this button. Each time pressed, display mode is changed in following sequence.

Full→4:3→16:9→Auto
↑ Normal ↓

TELETEXT

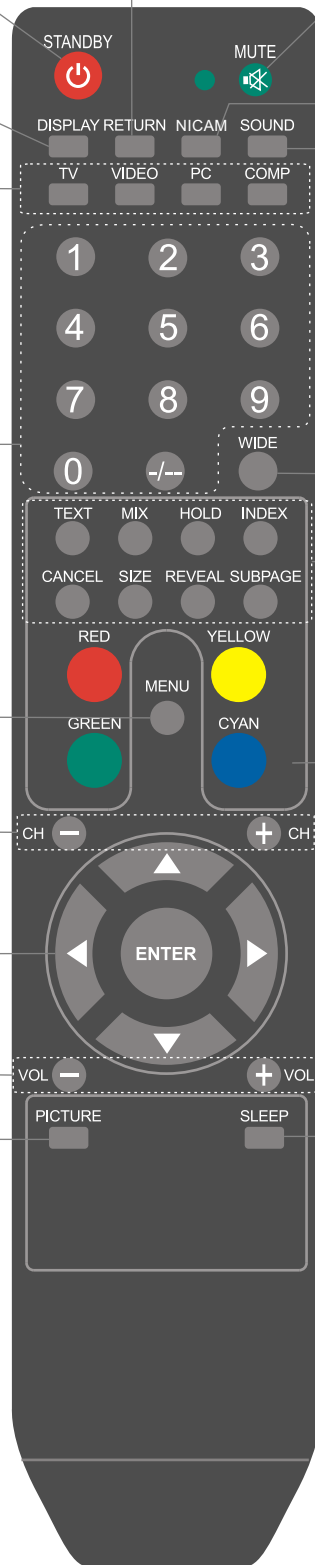
These buttons are used for certain models with Teletext functions. For further details, refer to "TELETEXT FUNCTION" section.

COLOR BUTTONS

These buttons are used for program editing function. For further details, refer to "Program Edit".

SLEEP

To select the sleep time.

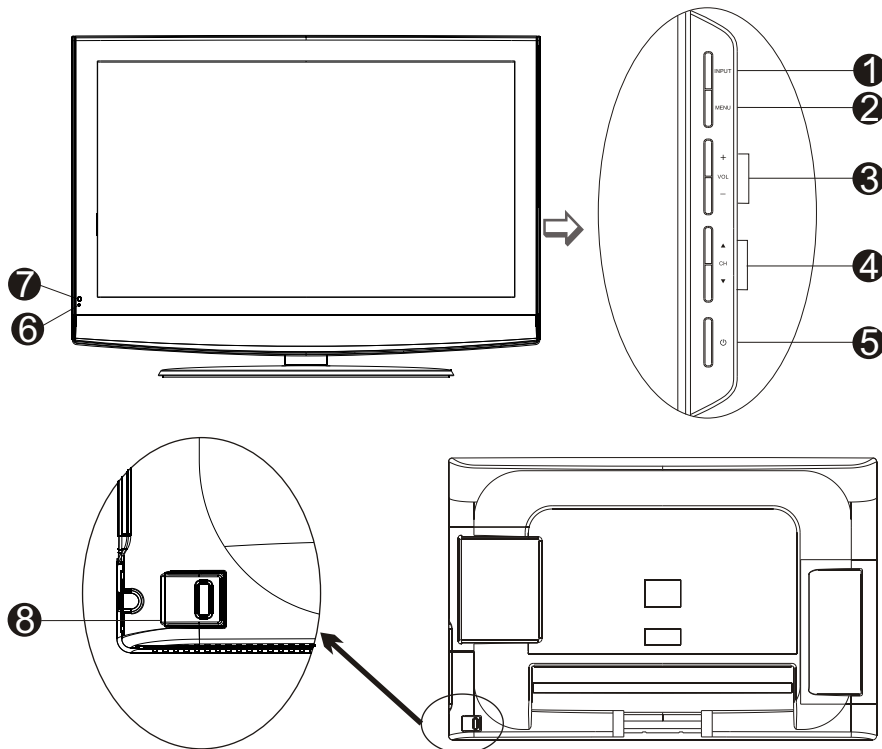


Note:

the prompt message "Invalid Key" will appear if you press a button for a function that is not available.

Location and Function of Controls

FRONT PANEL



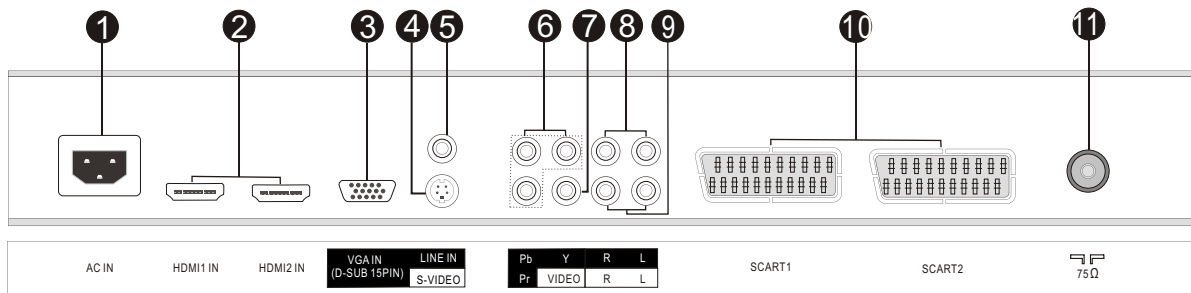
| Item | Button Name | Description |
|------|--------------------------|---|
| ① | INPUT | Press to display MP Input menu, then use ▲ / ▼ button to select a input signal among TV, AV, SCART1, SCART2AV, SCART2YC, S-Video, YPbPr, VGA, HDMI1 or HDMI2. |
| ② | MENU | Enter or exit from the On-screen menu |
| ③ | VOL +/- | Increase or decrease the volume. Adjust the values of the selected menu item in the OSD menu. |
| ④ | CH ^/V | When you are watching the TV program, press these buttons to select channel in ascending or descending order. Select the upper or lower menu item in the OSD menu. |
| ⑤ | ⏻ | Switch on the LCD TV when at standby mode or vice versa. |
| ⑥ | Power Indicator | Illuminates red in standby mode. Illuminates green when the LCD TV is switched on. |
| ⑦ | Remote Sensor | Infrared sensor for the remote control. |
| ⑧ | Main Power Switch | Switch on/off the LCD TV |

Note :

If there is no signal input from VGA/HDMI mode for 5 minutes or other video modes for 15 minutes, it will switch to standby mode automatically.

Installation and Connecting

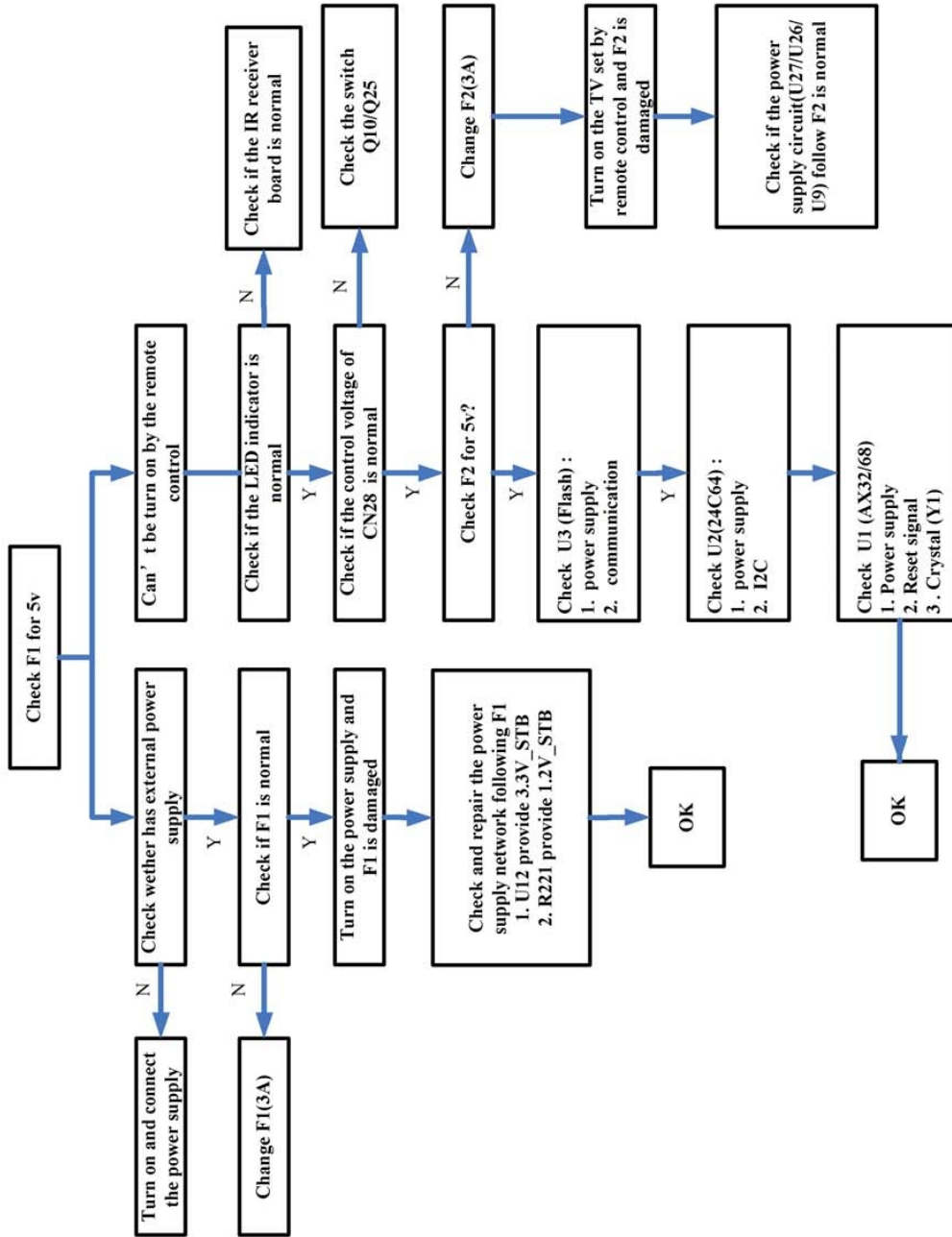
REAR PANEL



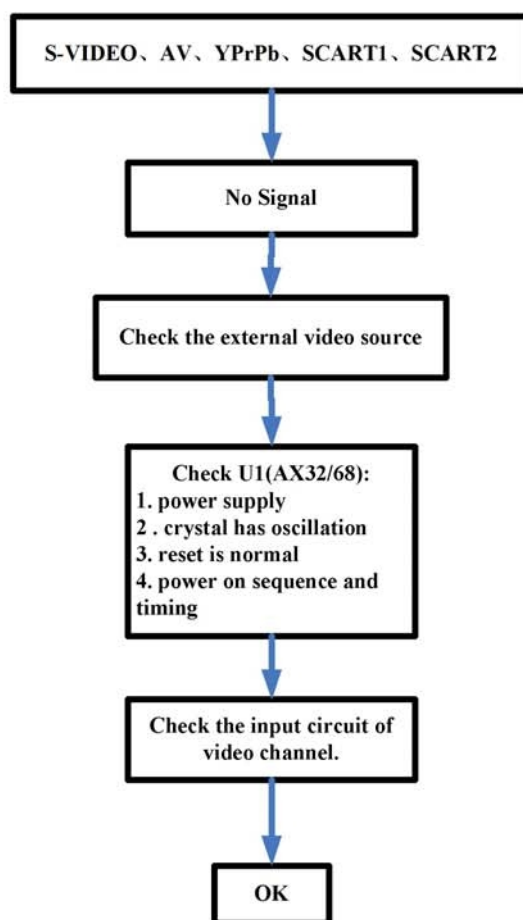
- 1 AC Input Socket: Connect to an earth 100-240V, 50/60Hz AC outlet with the power cable.
- 2 HDMI1/2 Input Connectors: Connect it to the HDMI of DVD or other equipment.
- 3 VGA Input Terminal: For PC display. Connect it to the D-Sub 15 pins analog output connector of the PC.
- 4 S-VIDEO Terminal: Connect it to S-Video output terminal of DVD.
- 5 LINE IN (VGA Audio) Terminal: Connect it to the audio output terminal of PC.
- 6 YPbPr Component Video Input Terminals: Connect them to the video output terminal of DVD.
- 7 VIDEO IN Terminal: Connect it to video output terminal of DVD.
- 8 YPbPr Audio In Terminals: Connect them to the audio output terminal of DVD with YPbPr mode.
- 9 AV Audio In Terminals: Connect them to the audio output terminal of DVD with VIDEO/S-VIDEO mode.
- 10 SCART1/2 Connectors: Connect them to the composite terminal of DVD.
- 11 RF Input Socket: Connect antenna or cable 75 Ohm coaxial to receive TV signal.

Trouble shooting charts

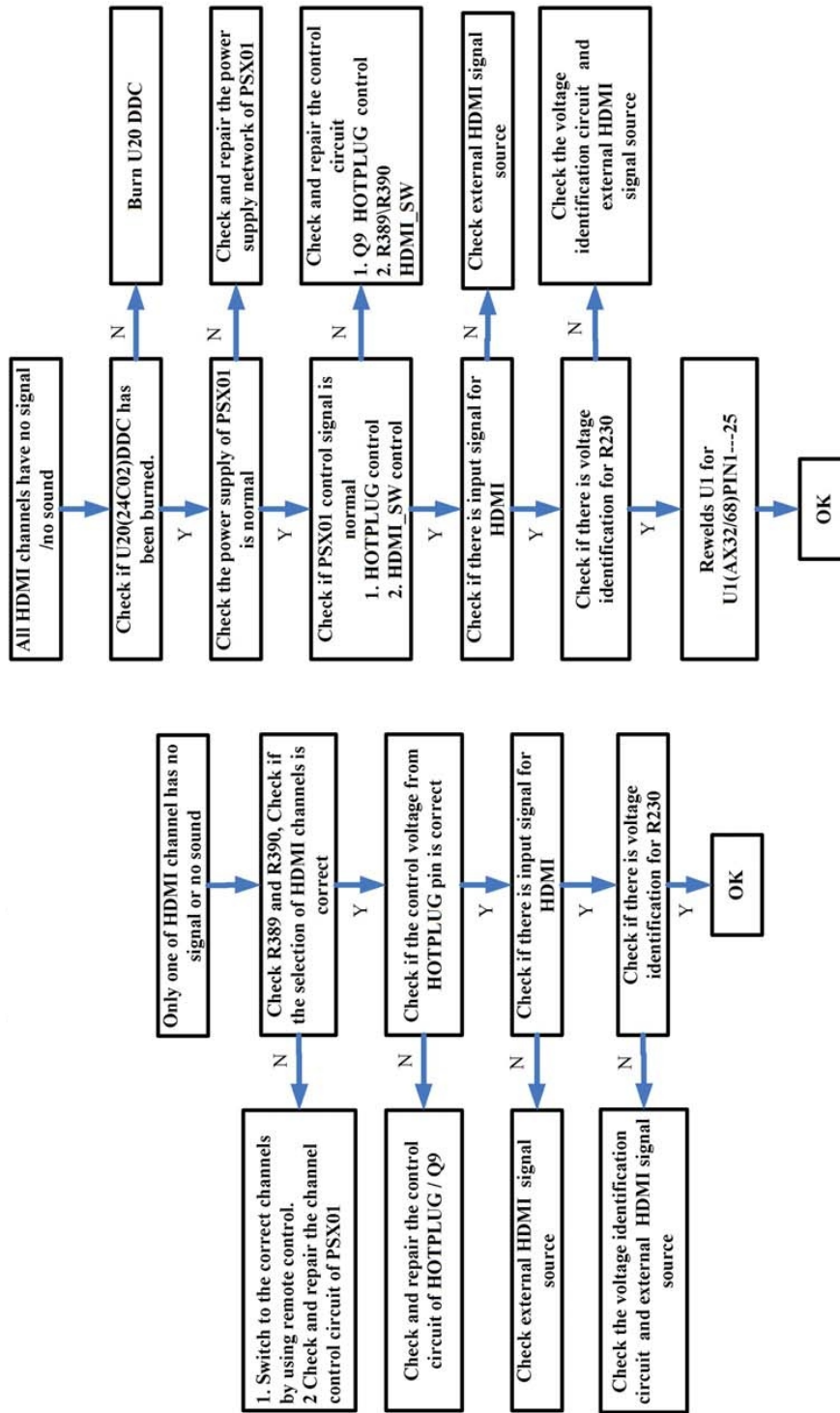
1. Power Supply Trouble



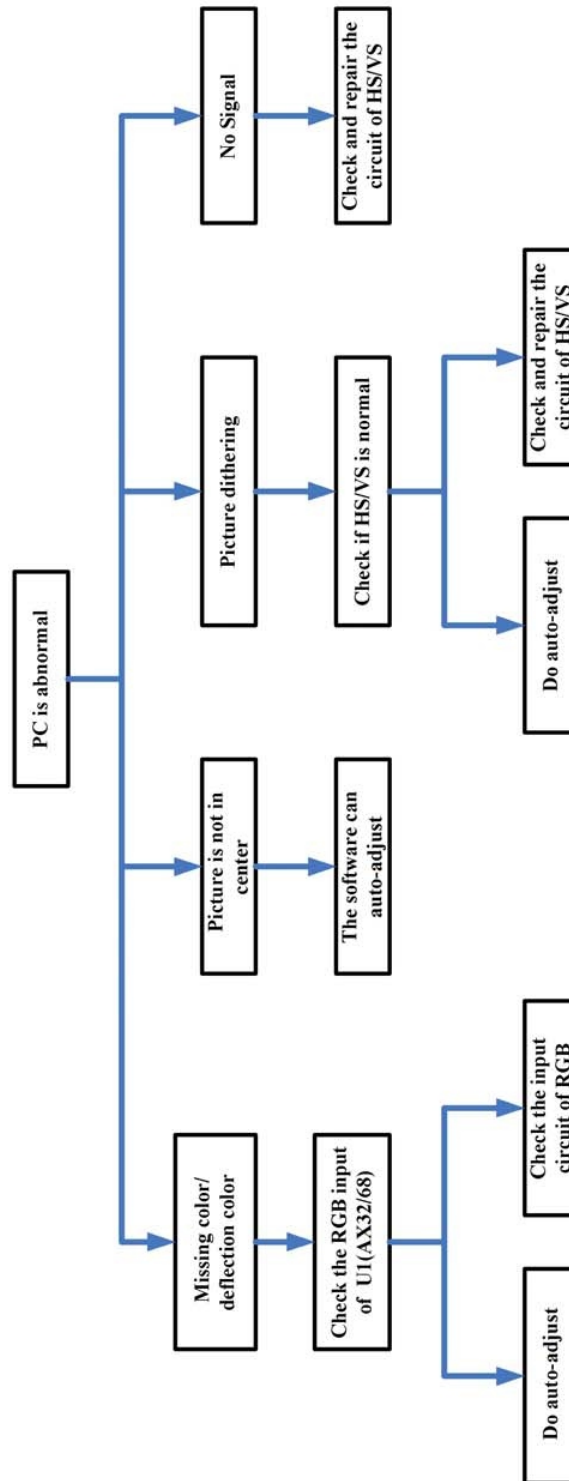
2. Function Trouble



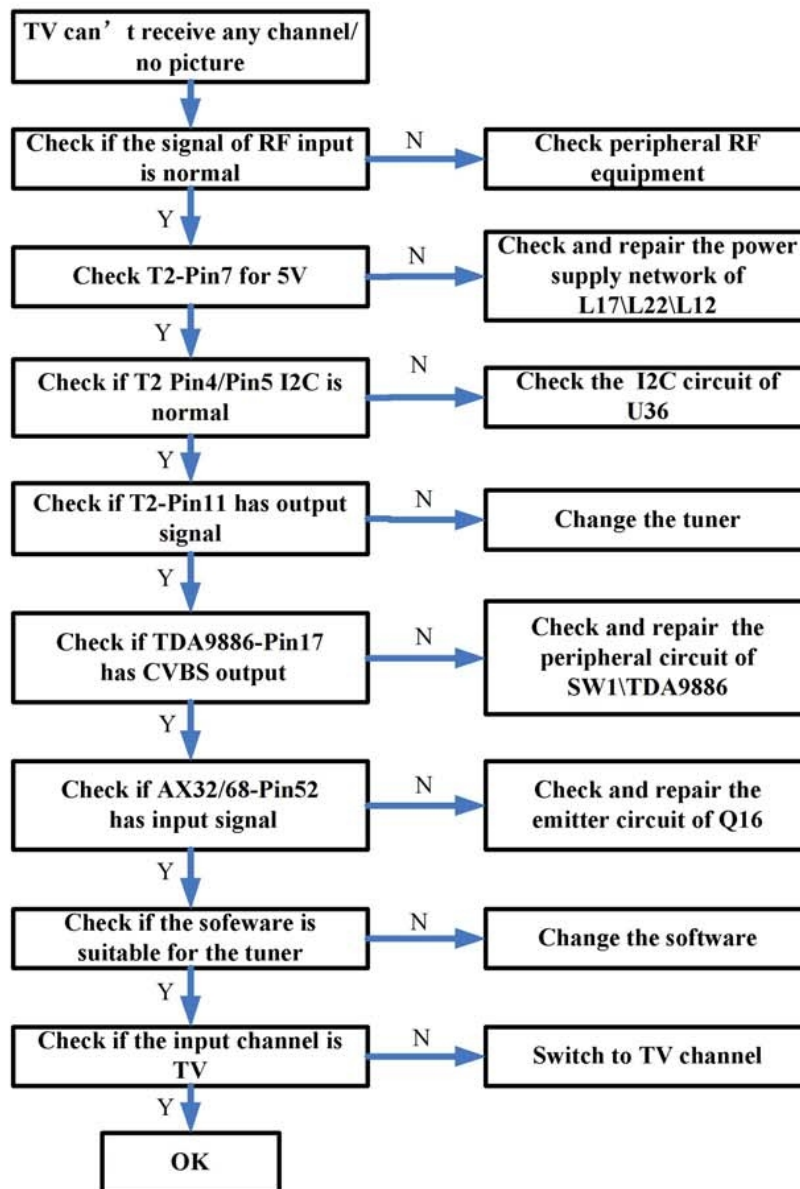
3. Function Trouble (HDMI)



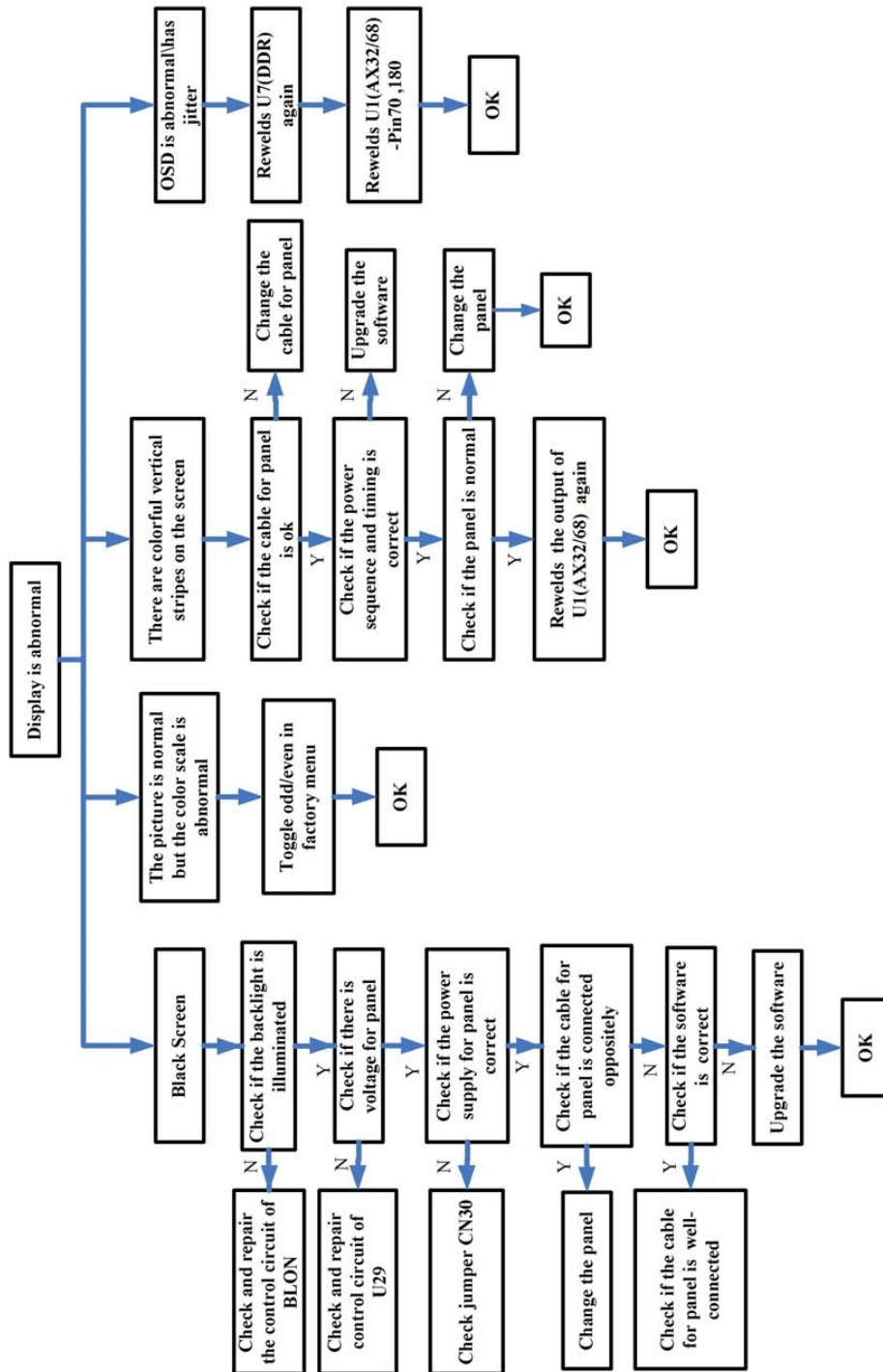
4. Function Trouble (PC)



5. Function Trouble (TV)

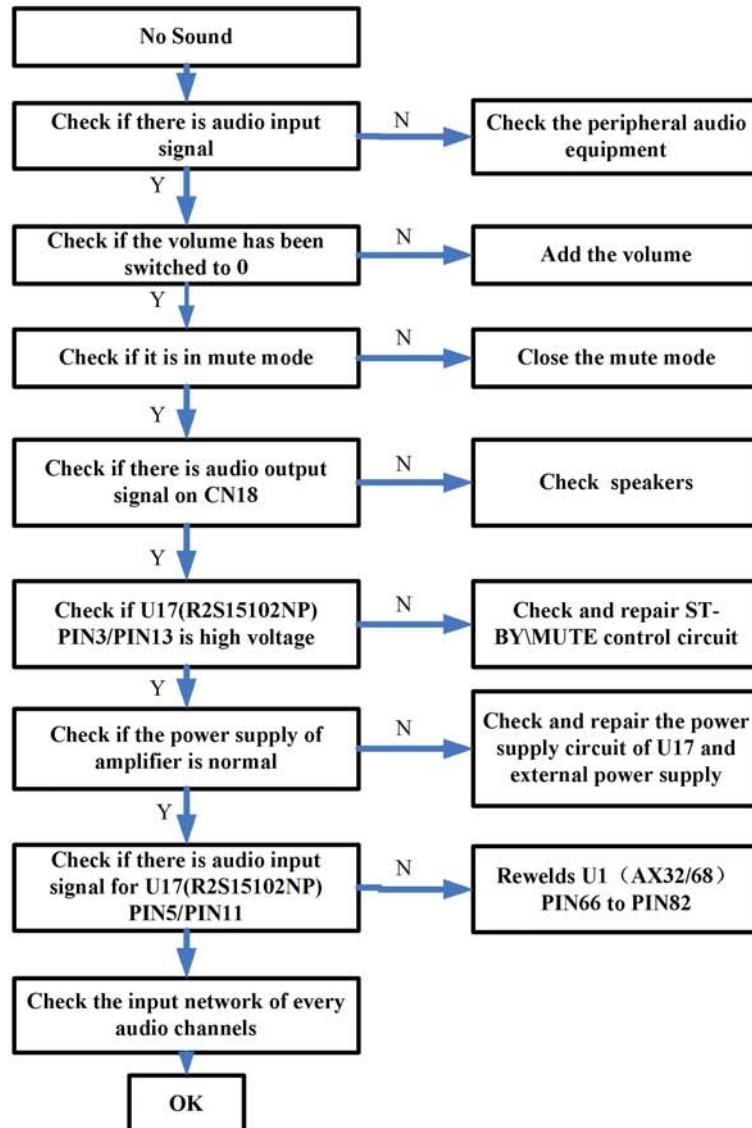


6. Display Trouble

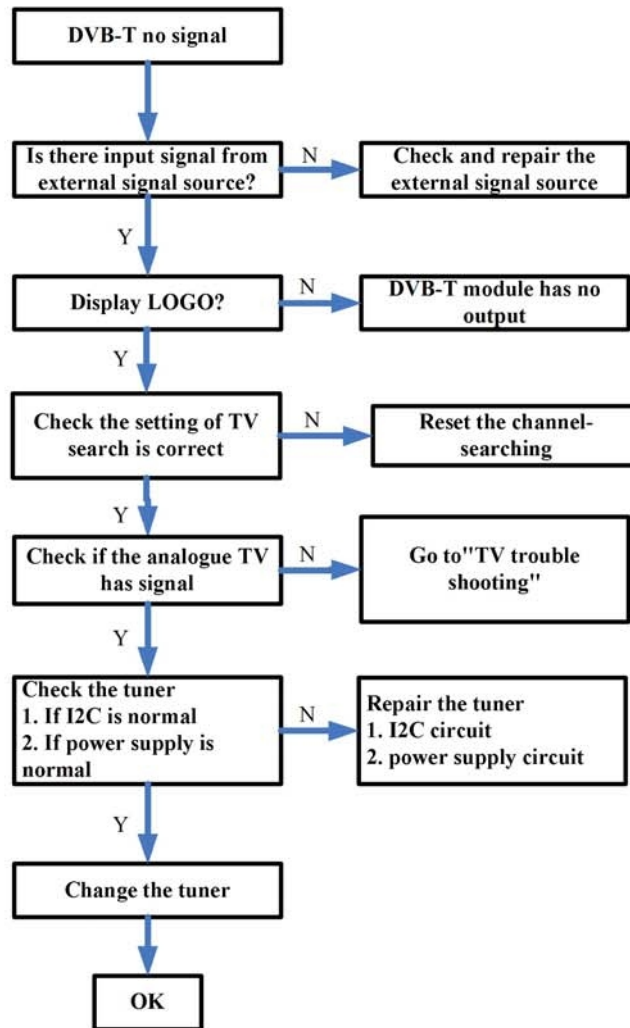


Trouble shooting charts

7. Audio Trouble



8. Function Trouble (DVB-T)



Schematic Diagram

04_SVP-AX-4

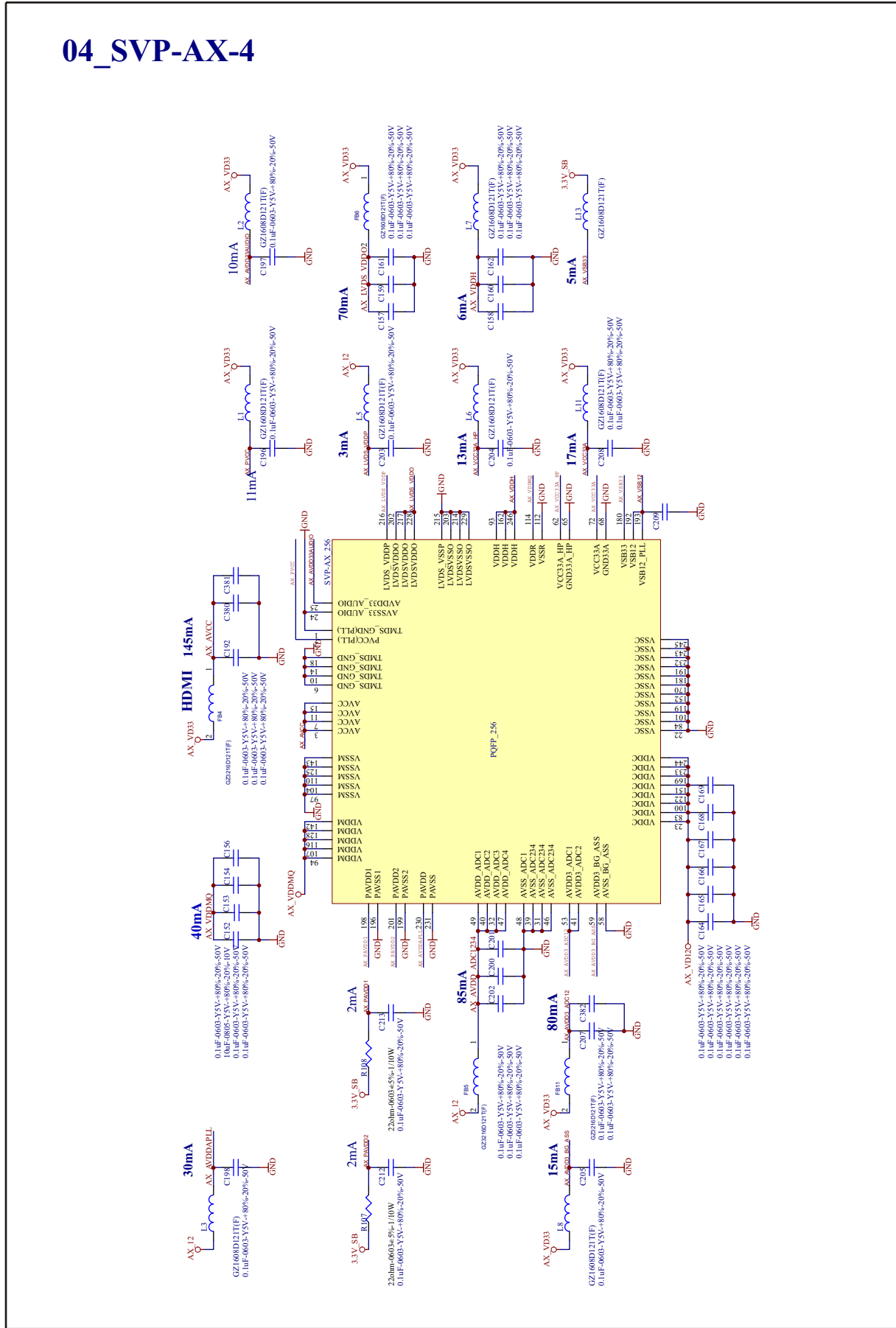


Figure 1-1.4 DRIVE Schematic Circuit

Schematic Diagram

09_AUDIO

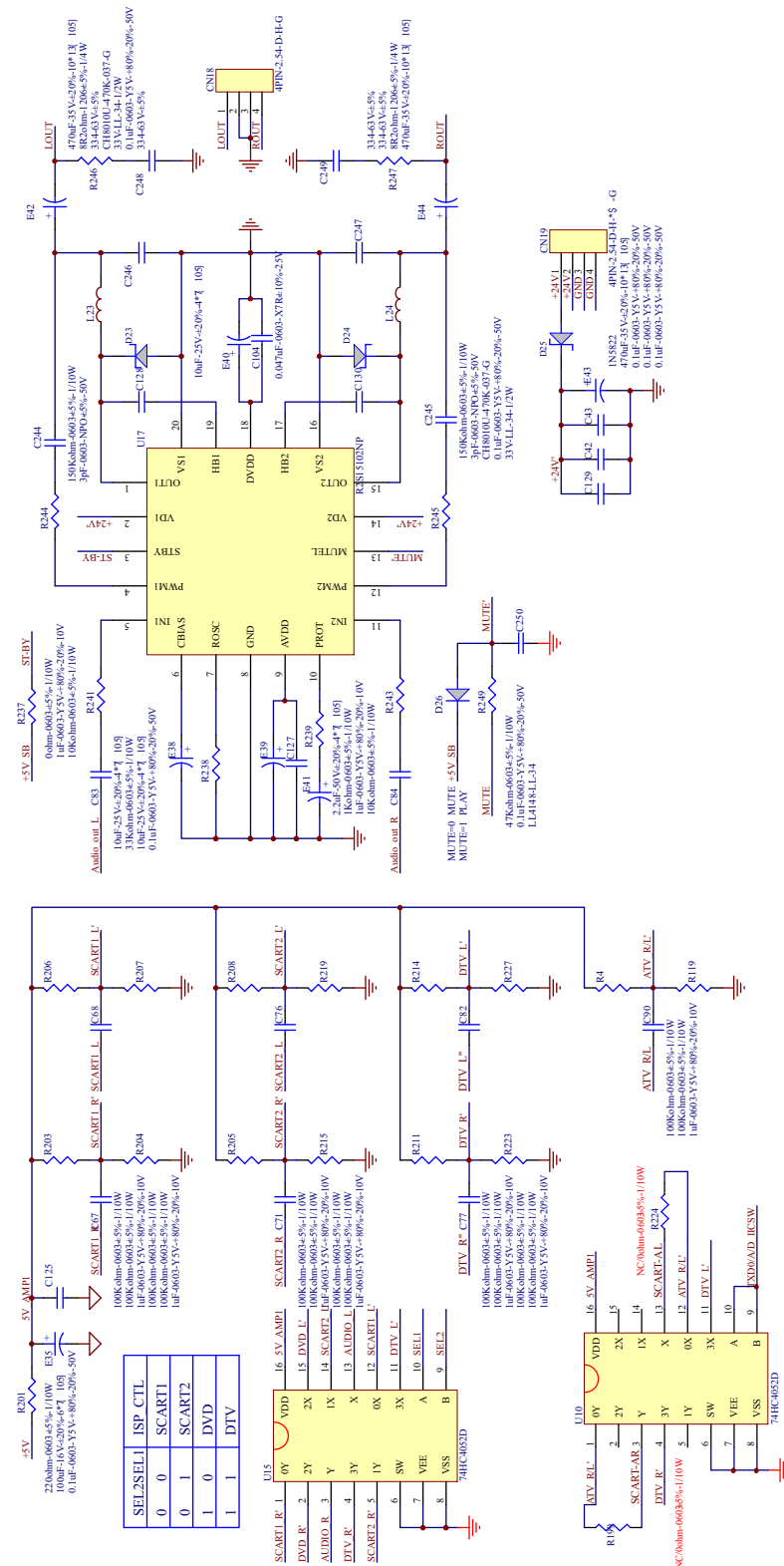


Figure 1-9 DRIVE Schematic Circuit

Schematic Diagram

11_HDMI

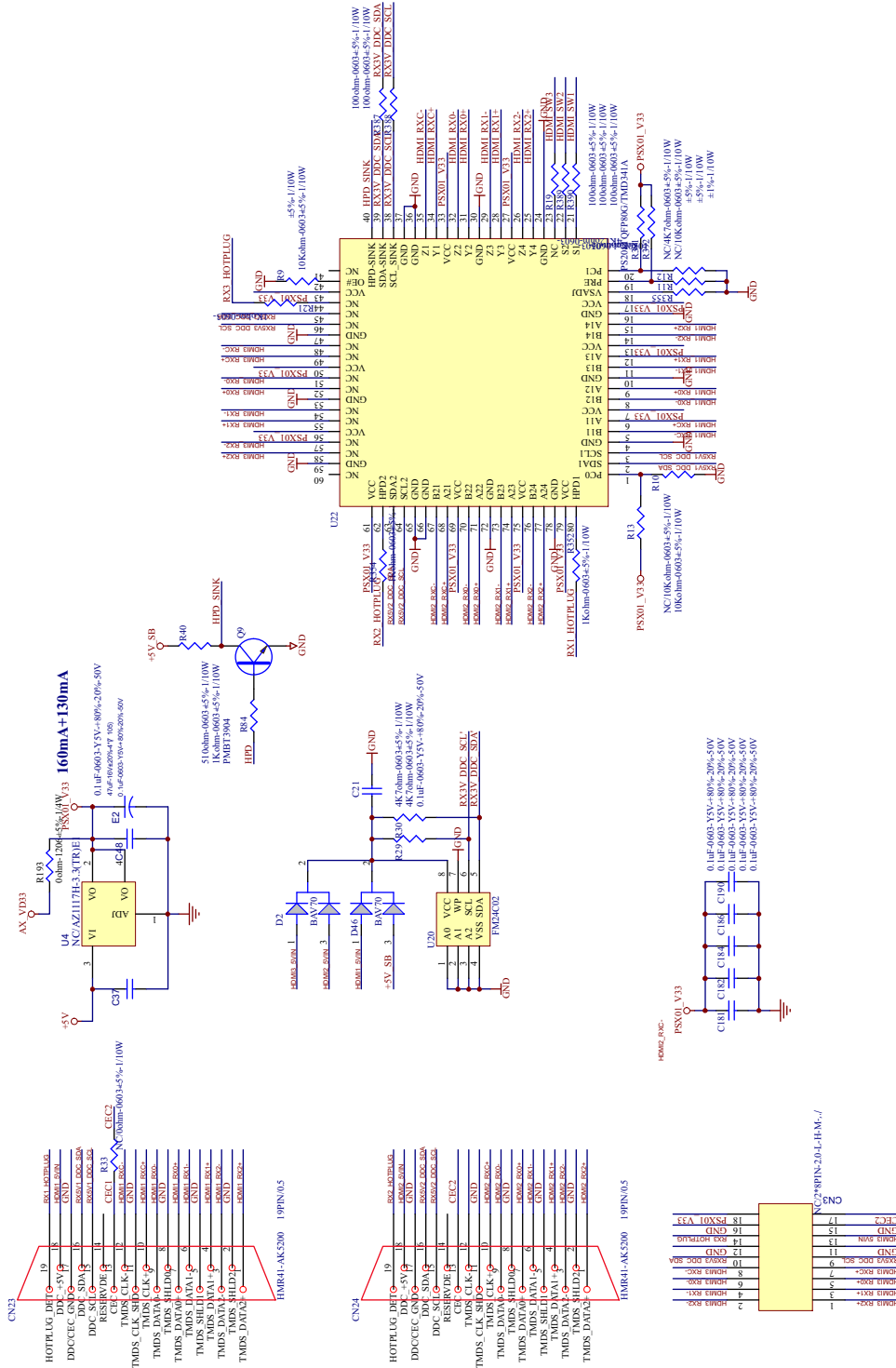


Figure1-1.11DRIVE Schematic Circuit

Schematic Diagram

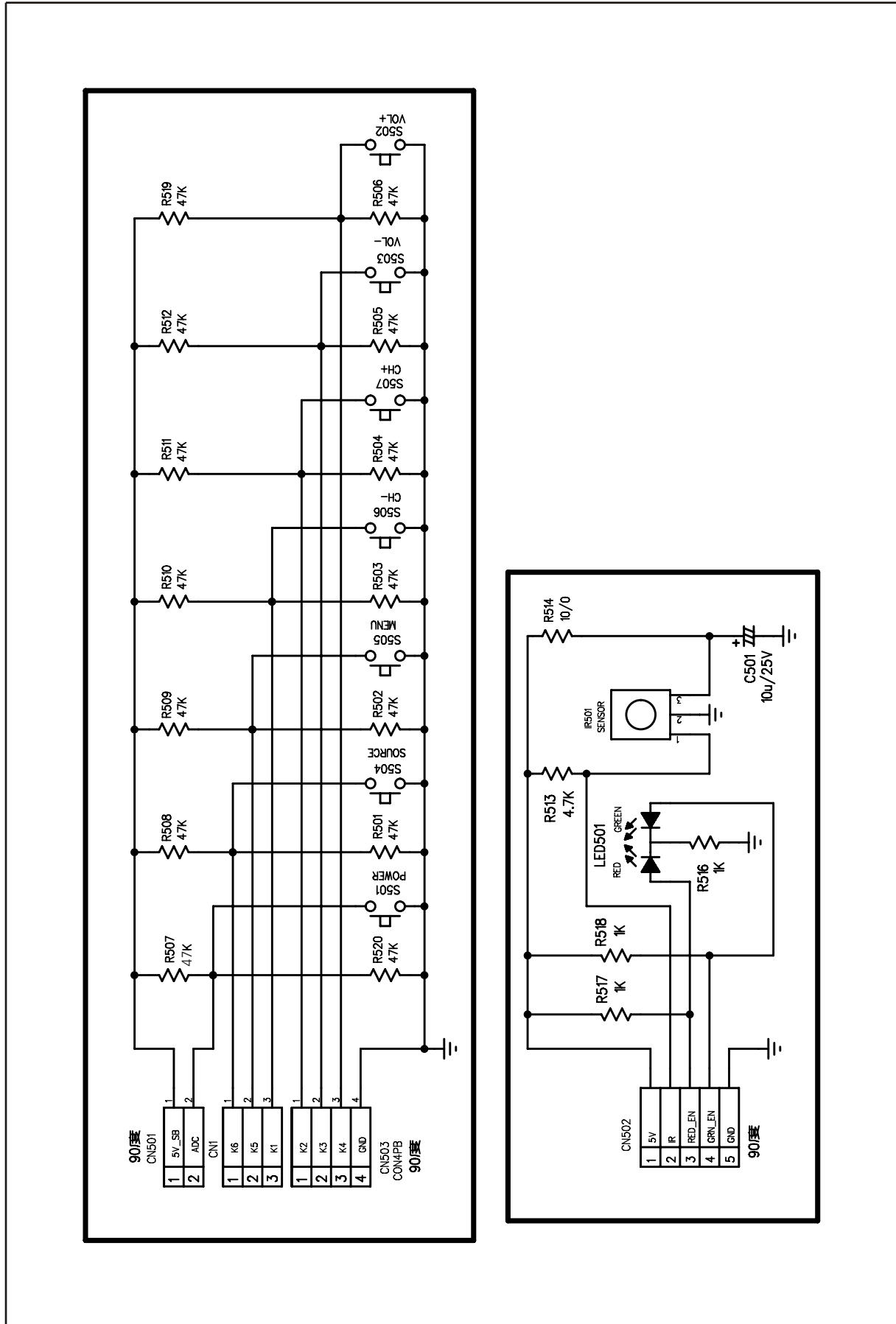


Figure1-3 CONTROL KEYS Schematic Circuit

Printed Circuit Board

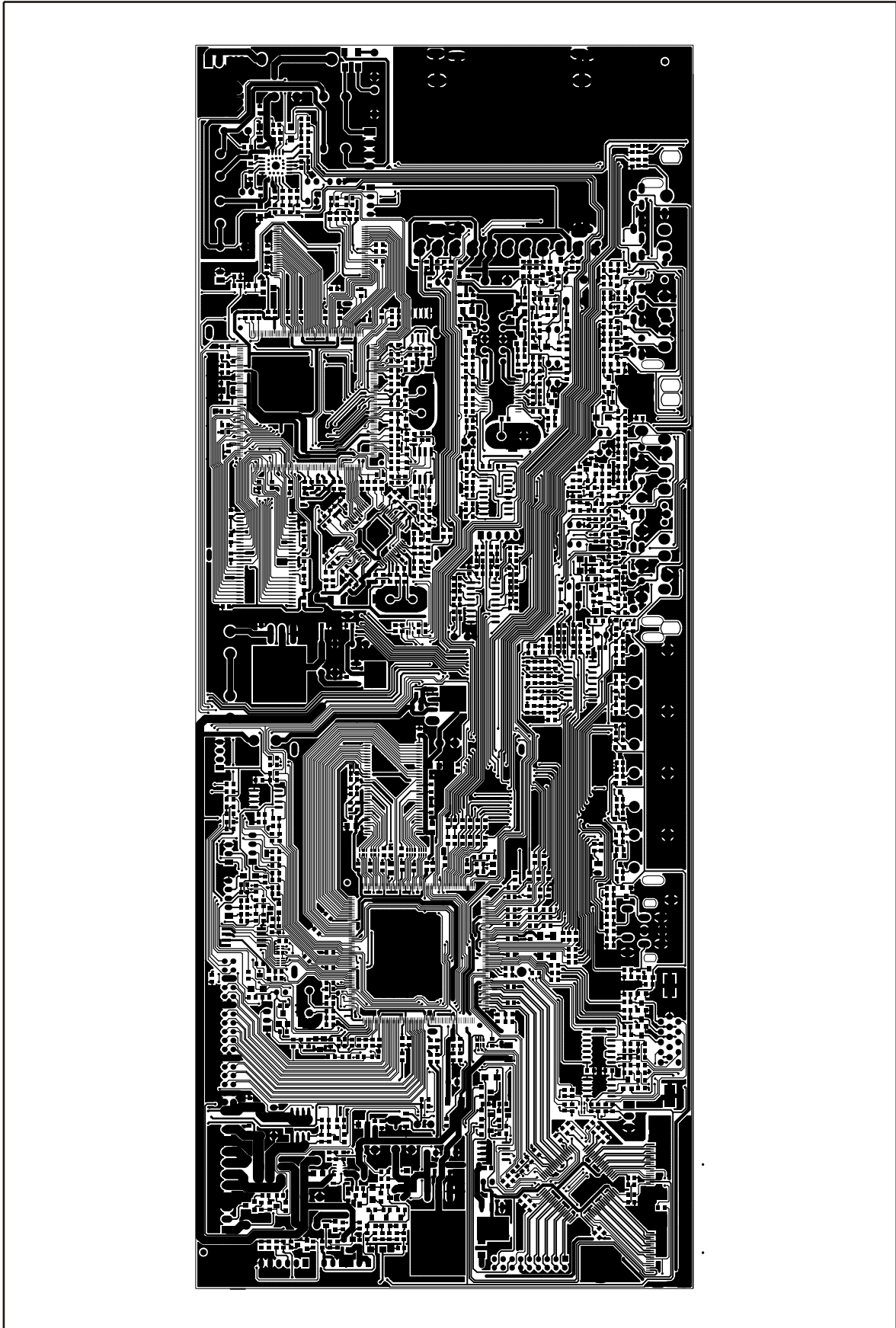


Figure2-1.1 .DRIVE Board(Top Side)

Printed Circuit Board

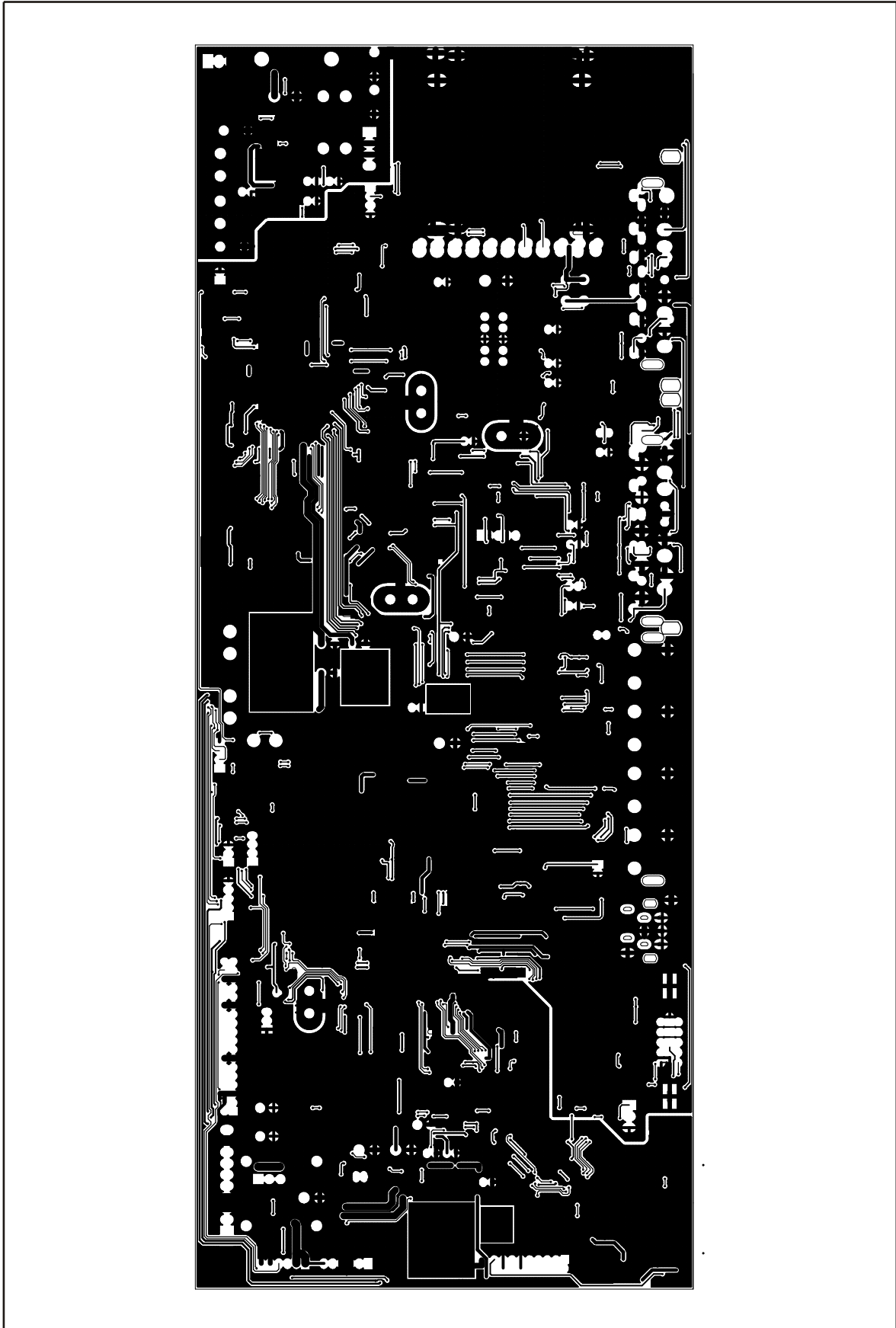


Figure2-1.2 .DRIVE Board(Bottom Side)

Printed Circuit Board

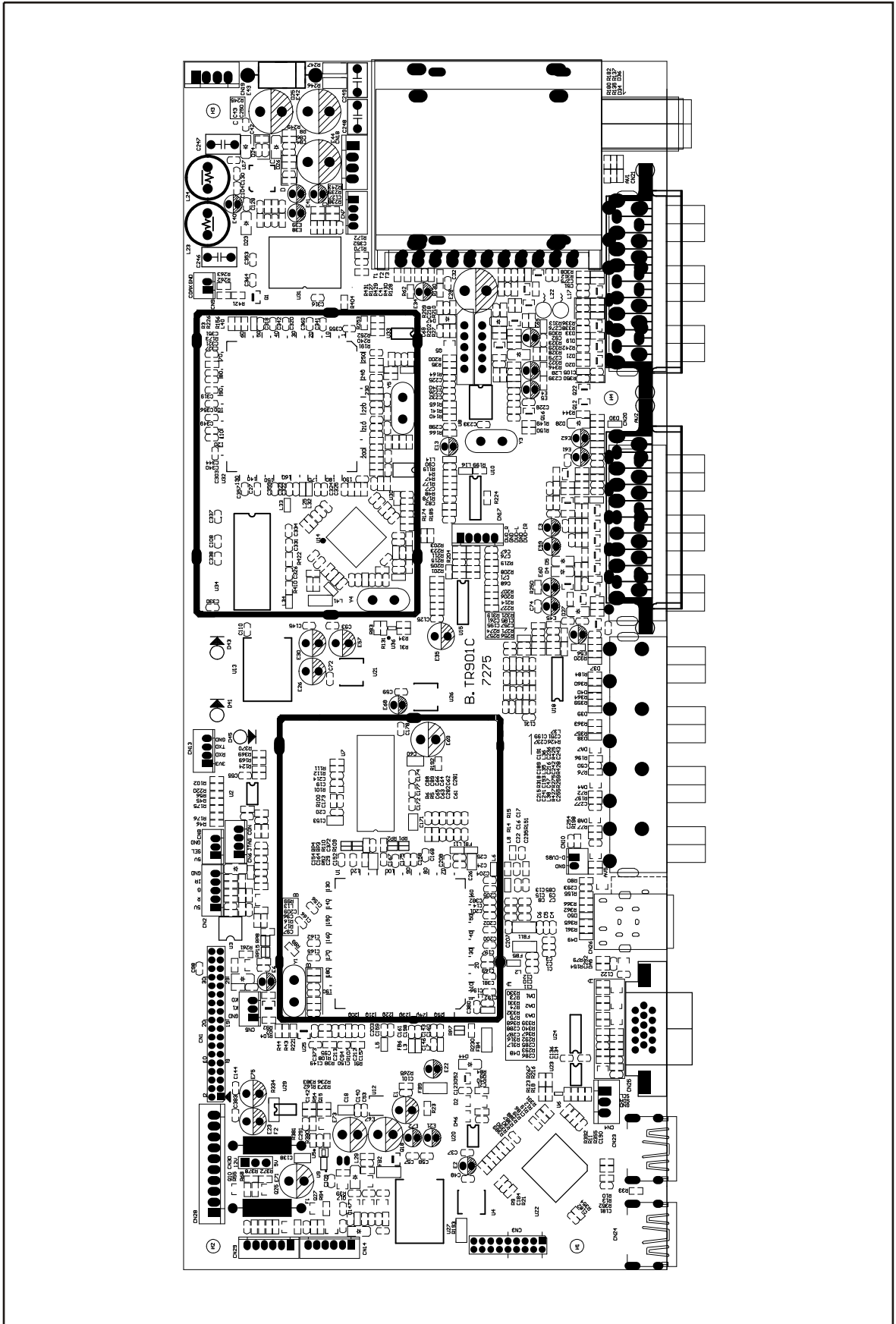


Figure2-1.3 .DRIVE Board(TOP Side)

Printed Circuit Board

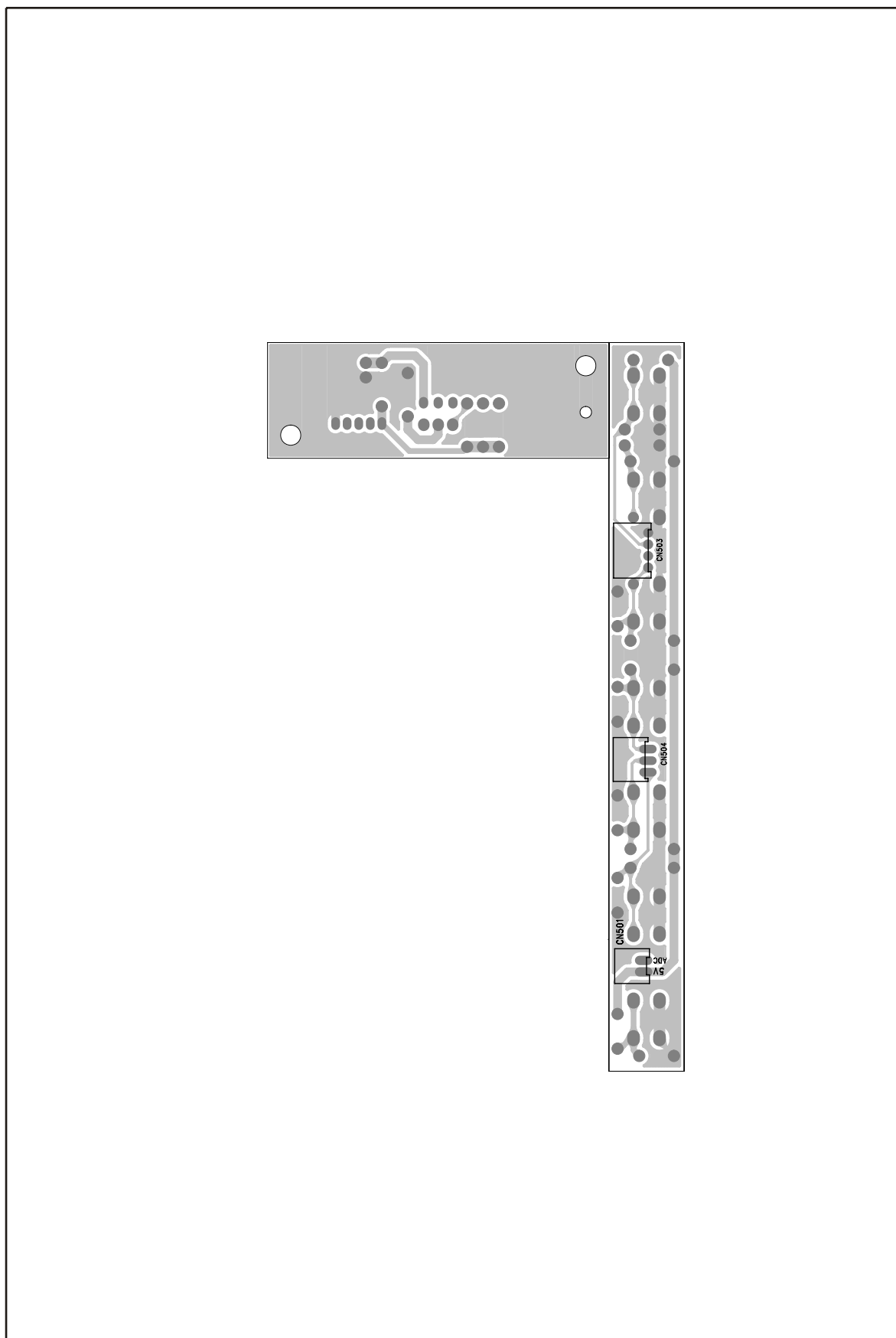


Figure2-3.1 CONTROL KEYS Board(Top Side)

Printed Circuit Board

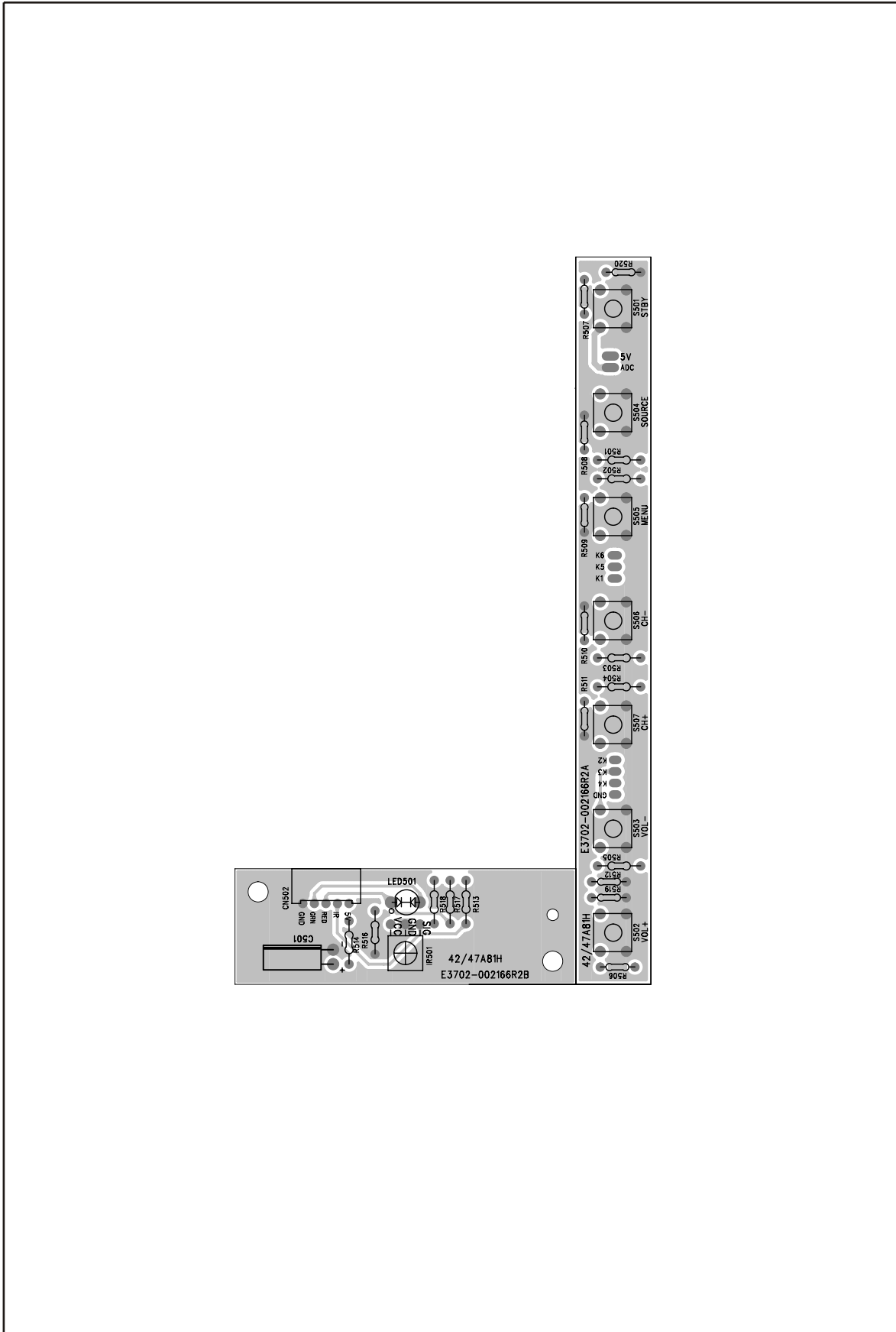
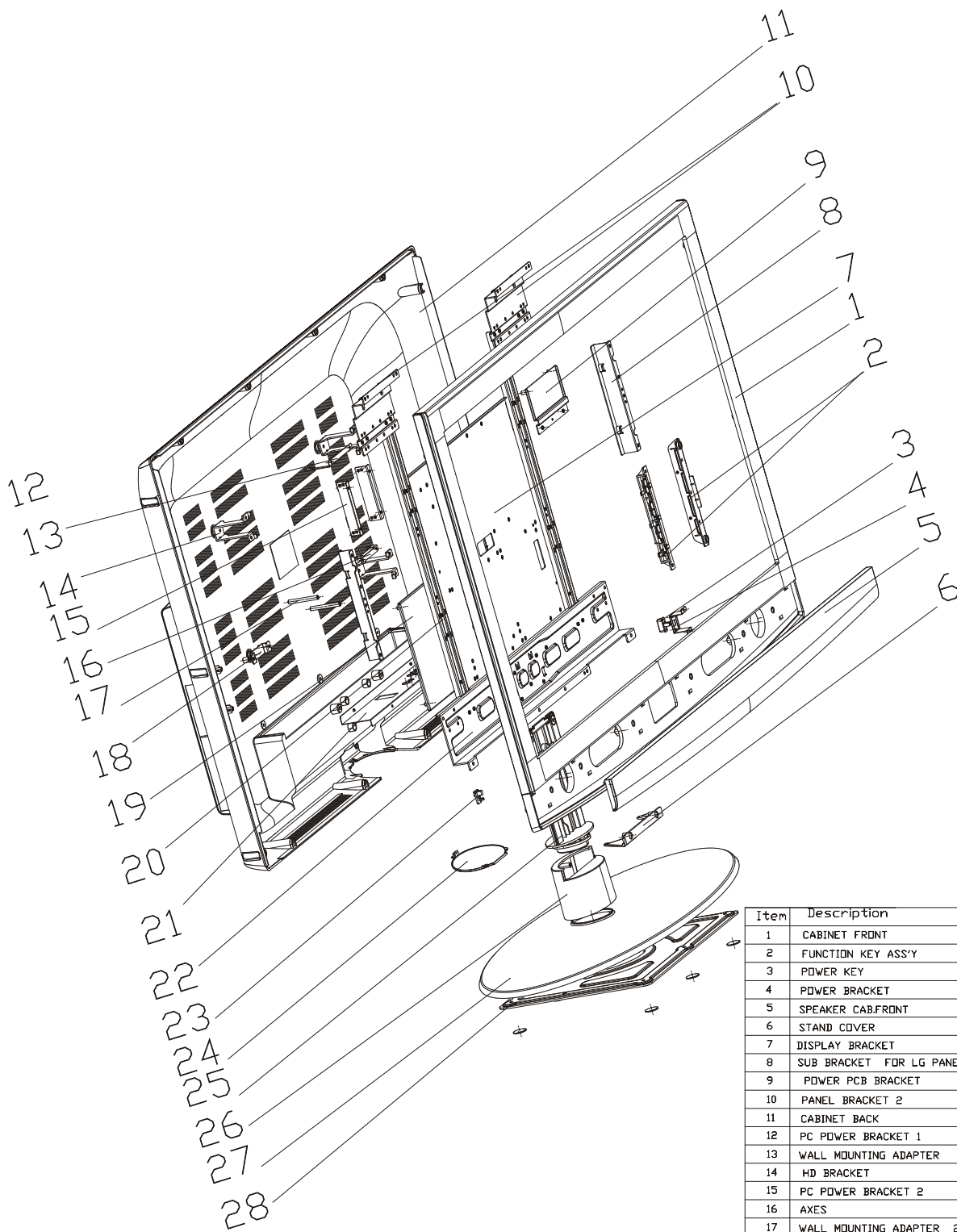


Figure2-3.1 CONTROL KEYS Board(BOTTOM Side)

Exploded View and Mechanical Parts List



| Item | Description | Qty |
|------|--------------------------|-----|
| 1 | CABINET FRONT | 1 |
| 2 | FUNCTION KEY ASS'Y | 1 |
| 3 | POWER KEY | 1 |
| 4 | POWER BRACKET | 1 |
| 5 | SPEAKER CABFRONT | 1 |
| 6 | STAND COVER | 1 |
| 7 | DISPLAY BRACKET | 1 |
| 8 | SUB BRACKET FOR LG PANEL | 2 |
| 9 | POWER PCB BRACKET | 1 |
| 10 | PANEL BRACKET 2 | 2 |
| 11 | CABINET BACK | 1 |
| 12 | PC POWER BRACKET 1 | 1 |
| 13 | WALL MOUNTING ADAPTER | 3 |
| 14 | HD BRACKET | 2 |
| 15 | PC POWER BRACKET 2 | 1 |
| 16 | AXES | 2 |
| 17 | WALL MOUNTING ADAPTER 2 | 1 |
| 18 | PC DRIVE PCB BRACKET | 1 |
| 19 | PANEL BRACKET | 2 |
| 20 | KF BOTTOM SHIELD | 1 |
| 21 | PANEL BRACKET (DOWN) | 1 |
| 22 | LAMP LENS | 1 |
| 23 | DDDR COVER | 1 |
| 24 | STAND BRACKET | 1 |
| 25 | FRONT STAND COVER | 1 |
| 26 | BASE COVER | 1 |
| 27 | STAND BASE PLATE | 1 |
| 28 | RUBBER PAD CORD | 8 |

Parts List (For Reference Only)

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ELECTRONIC COMMON PART ASSEMBLY(FOR FSP ADAPTER) (RoHS)

| Item | Part No. | Description | Location |
|------|----------------|--|----------|
| 1 | E0002-002022R0 | TOROIDAL FERRITE T22.5*10*13.8 (RoHS) | |
| 2 | E0002-103004R0 | SHRINKABLE TUBE S-901(FLAME-REDARDANT) 125°C VW-1 Φ2.0 (Φ2.5 TO Φ1.0) (RoHS) | |
| 3 | E0002-103008R0 | SHRINKABLE TUBE S-901(FLAME-REDARDANT) 125°C VW-1 Φ4.0 (Φ4.5 TO Φ2.0) | |
| 4 | E1302-003006R1 | CAP EC NP V CD71-BP T05 1R0M 50DC 5×11 (RoHS) | |
| 5 | E3202-001036R1 | JACK AC POWER SOCKET TU-301-A-A 3PIN 180° (RoHS) | |
| 6 | E3404-001043R0 | AC CORD VDE VH3.96-5Y Φ4.2 3×0.75mm ² 2.5A 640mm (RoHS) | |
| 7 | E3405-001002R0 | AC CORD UK H05VV-F 3A FUSE 2000mm (RoHS) | |
| 8 | E3421-002239R0 | WIRE ASSY PH-3Y/PH-3Y L=700mm 3P (ROHS) | |
| 9 | E3421-002286R0 | WIRE ASSY PH-5Y/PH-5Y L=750mm 5P (ROHS) | |
| 10 | E3421-002429R0 | WIRE ASSY XH-4Y UL2468 #22 L=1000/900mm 4P (RoHS) | |
| 11 | E3421-002431R0 | WIRE ASSY TJC3-12Y/10Y/9Y/4Y PH-12Y/6P UL2468#22 L=650/350/380/380/250mm 12P/12P/10P/9P/6P/4P (RoHS)(红色4Y 20080304) | |
| 12 | E3421-002432R0 | WIRE ASSY TJC3-4Y PH-12Y UL2468 #22 L=420mm 4P/12P (RoHS) | |
| 13 | E3421-004045R0 | WIRE 22# L=150mm RED/BLACK 2P (RoHS) | |
| 14 | E3421-004051R0 | WIRE 1PIN UL1015#20 L=88mm Φ4.3 (RoHS) | |
| 15 | E3421-004056R0 | WIRE UL1672#18 L=450mm 1P BLUE (RoHS) | |
| 16 | E3421-004057R0 | WIRE UL1672#18 L=450mm 1P BROWN (RoHS) | |
| 17 | E3421-006094R0 | WIRE ASSY YZS07071001 (WITH LOCK) L=350mm 2.0mm/1.0mm 51/36p (RoHS) | |
| 18 | E3422-001020R0 | WIRE AV RCA M*3/RCA M*3 S518-02-001 L=1500MM 3P (RoHS) | |
| 19 | E4101-001017R0 | PUSH BUTTON SWITCH KDC-A04-S 250VAC 10A (RoHS) | |
| 20 | E5501-001049R1 | ADAPTER VP222UG03-GP 5Vsb/0.5A 5V/3A 12V/2A 24V/7.5A (ROHS) | |
| 21 | E5601-001039R1 | SPEAKER 8OHM 15W YDT513-1A (RoHS) | |
| 22 | E5601-001042R0 | SPEAKER 80HM 3W | |
| 23 | E6101-001085R1 | TFT-LCD V420H1-L11 CHIMEI (RoHS) | |

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KEY PCB FOR JTM32K82 ASSEMBLY (RoHS)

| Item | Part No. | Description | Location |
|------|----------------|---|----------------------|
| 1 | E1505-013005R2 | RES CHIP RC-03KTP T06 1/10W 1001F 0603 (RoHS) | R2 R4 |
| 2 | E1505-013110R2 | RES CHIP RC-03KBP T06 1/10W 3301F 0603 (RoHS) | R3 R5 |
| 3 | E1505-013174R2 | RES CHIP RC-03KBP T06 1/10W 6801F 0603 (RoHS) | R7 |
| 4 | E3101-001002R2 | PLUG PH-3AW PIN HEADER (90°) 2.0mm 3P (RoHS) | CN1 |
| 5 | E1505-011202R2 | RES CHIP RC-03KTP T06 1/10W 000 0603 (RoHS) | R1 R6 |
| 6 | E3702-002184R1 | FOR JTM32K18 KEY PCB 140mmX15mm 94V0 (RoHS) | |
| 7 | E4102-001001R0 | SWITCH TACT KFC-A06-02 6×6×5 (RoHS) | S1 S2 S3 S4 S5 S6 S7 |

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REMOTE PCB FOR JTM32K82 ASSEMBLY (RoHS)

| Item | Part No. | Description | Location |
|------|----------------|--|----------|
| 1 | E1301-001004R1 | CAP EC V CD11X-BP T05 470M 10DC 4×7 (RoHS) | C1 |
| 2 | E1326-001038R2 | CAP CER CHIP CC41-CGNT NPO 561J 50DC 0603 (RoHS) | C3 |
| 3 | E1326-055029R2 | CAP CER CHIP 0603F104M500NB 104M 50VDC 0603 (RoHS) | C2 |
| 4 | E1505-011150R2 | RES CHIP RC-03KTP T06 1/10W 512J 0603 (RoHS) | R8 |
| 5 | E1505-011202R2 | RES CHIP RC-03KTP T06 1/10W 000 0603 (RoHS) | R9 |
| 6 | E2502-001009R0 | DIODE CHIP LL4148 (RoHS) | D1 |
| 7 | E2509-002001R1 | DIODE LED V 3RGPHW-A RED GREEN (RoHS) | LED1 |
| 8 | E2701-001008R1 | IR DETECTOR HS0038B10 (RoHS) | OPT1 |
| 9 | E3101-001004R1 | PLUG PH-5AW PIN HEADER (180°) 2.0mm 5P (RoHS) | CN2 |
| 10 | E3702-002185R1 | FOR JTM32K181 REMOTE PCB 50mmX12mm 94V0 (RoHS) | |