

Service  
Service  
**Service**



# Service Manual

## TABLE OF CONTENTS

	Chapter
Technical Specification, PCBs Location.....	1
Safety Instruction .....	2
Instruction for Use.....	3
Mechanical and Dismantling Instructions.....	4
Service Modes, Troubleshooting.....	5
Overall Block Diagram, Wiring Diagram.....	6
Electrical Diagram.....	7
Exploded View Diagram & Service Part List.....	8
Revision List.....	9

© Copyright 2012 Philips Consumer Electronics B.V. Eindhoven, The Netherlands  
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.

Published BG AVM Printed in The Netherlands Subject to modification

3141 785 37980

**Version 1.0**



# PHILIPS

## 11 Specifications

---

Specifications are subject to change without notice

### Playable media

- BD-Video, BD 3D
- DVD-Video, DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer)
- VCD/SVCD
- Audio CD, CD-R/CD-RW, MP3 media, WMA media, JPEG files
- DivX (Ultra)/DivX Plus HD media, MKV media
- USB storage device

### File format

- Video: .avi, .divx, .mp4, .mkv
- Audio: .mp3, .wma, .wav
- Picture: .jpg, .gif, .png

### Video

- Signal system: PAL / NTSC
- HDMI output 480i/576i, 480p/576p, 720p, 1080i, 1080p, 1080p/24Hz

### Audio

- Digital output: 0.5 Vp-p (75 ohm)
  - Coaxial
- HDMI output
- Sampling frequency:
  - MP3: 32 kHz 44.1 kHz 48 kHz
  - WMA: 44.1 kHz 48 kHz
- Constant bit rate:
  - MP3: 112 kbps - 320 kbps
  - WMA: 48 kbps - 192 kbps

### USB

- Compatibility: Hi-Speed USB (2.0)
- Class support: USB Mass Storage Class
- File system: FAT16, FAT32
- Support HDD (a portable hard drive disc): an external power source may be needed.

### Main unit

- Power supply rating: AC 220-240V~, 50Hz 60Hz BDP2980/12 BDP2982/12
- Power supply rating: AC 110-127V~, 50Hz - 60Hz BDP2980/98
- Power consumption: 11 W
- Power consumption in standby mode: < 1 W
- Dimensions (w x h x d): 310 X 40 X 203 (mm)
- Net Weight: 1.1 kg

### Accessories supplied

- Remote control and 2 AAA batteries
- User manual

### Optional accessory

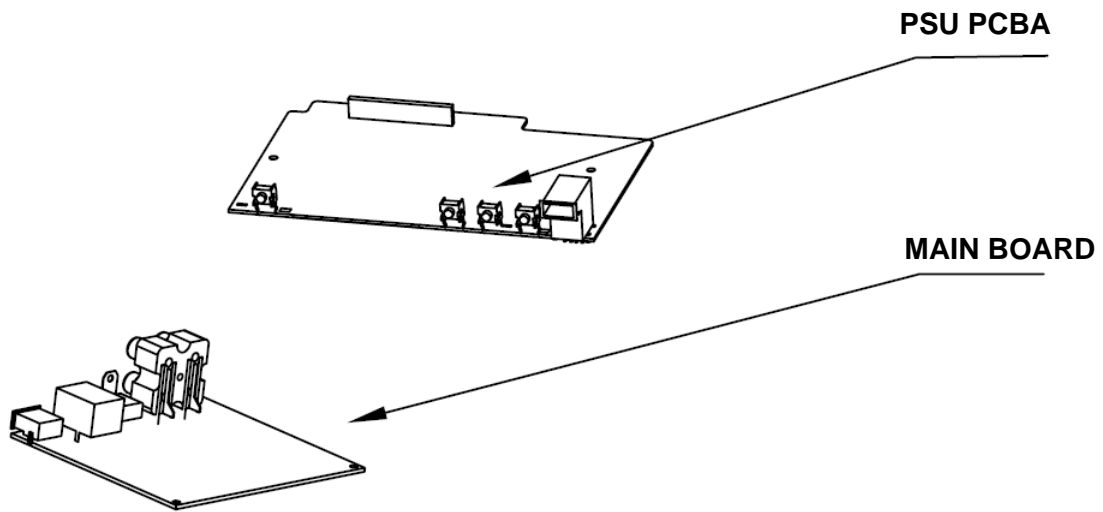
- A wireless Philips USB adaptor (named WUB1110, sold separately)
- Multimedia connections: Wi-Fi 802.11b/g/n
- Connectivity: USB
- Ambient temperature: 5 degC to 40 degC
- Dongle dimensions (W X H X D): 28.4 X 82 X 13.4mm

### Laser Specification

- Laser Type (Diode): AlGaInN (BD), AlGaInP (DVD/CD)
- Wave length: 405+7nm/-7nm (BD), 660+4nm/-10nm (DVD), 790+6/-6nm (CD)
- Output power: 1mW (BD), 0.3mW (DVD), 0.28mW (CD)

1.1 PCBs Location

---



VERSION VARIATIONS

Type/Versions:	BDP2982/BDP2980						
	12	98	05				
Service policy							
Board in used:							
MAIN BOARD	M	C/ M	M				
PSU PCBA	M	M	M				

\*TIPS: C -- Component Lever Repair.  
 M -- Module Lever Repair  
 X -- OCX

## Software check and upgrade

### Preparation to upgrade software

- 1) Start the CD burning software & create a folder named "UPGAL",
- 2) Then copy the Bin file (BDP3XXXXX-XXX-XXXXXX.bin) into it,
- 3) Burn the data onto the blank CD.

#### A. Procedure for software upgrade

##### A) Upgrade software via Disc

- 1) Power on the set and insert the prepared Upgrade CDR.
- 2) The set will start reading disc & response with the following display TV screen:  
Now searching for upgrade software!  
Please wait...!
- 3) Then screen will display :  
software upgrades for this player has been found! Do you want to upgrade?  
  

Cancel	Start
--------	-------
- 4) Press Right cursor button to choose "Start", then press <OK>;
- 5) The software will upgrade and screen will display as below:  
Upgrade is ongoing, Please wait...  
Please do not unplug or switch off the device.
- 6) Restart the set.

##### B) Update software via USB Flash Drive:

- 1) Go to [www.philips.com/support](http://www.philips.com/support) to check if the latest software version is available for this player.
- 2) Download the software onto a USB flash drive's root DIR named "UPGAL".
- 3) Insert the power plug and HDMI cable, power on and then insert the USB flash drive to the USB jack.  
Remark: pls. make sure the software can be match with the loader
- 4) In the Home menu, select <Setup>-<Advanced>-<Software update>-<USB>.
- 5) Then press OK
- 6) you'll see now searching for new software, please wait.....
- 7) Waiting, you'll see "software for this player has been found ....."
- 8) Then select "Start" and press "OK"
- 9) then you'll see "upgrade is ongoing .....", wait until it ends.
- 10) Player will restart automatically or press "Restart now" to restart, after restarting the upgrade ends.

#### B. Read out the software versions to confirm upgrading

- 4) In homemenu, enter "setup"->"advanced"->"version info", press "OK"

and other information will display on the TV screen as below:

Model:XXX.XXX  
 Versions  
 subinfo:xxxx  
 system SW:xxxx  
 ethernet MAC:xxxxxxxx  
<http://www.philips.com/support>

Caution: The set must not be power off during upgrading, otherwise the Main board will be damaged entirely.

## 2.0 Safety instruction

---

### 1. General safety

Safety regulations require that during a repair:

- . Connect the unit to the mains via an isolation transformer.
- . Replace safety components indicated by the symbol  
Only by components identical to the original ones.
- Any  
Other component substitution (other than original type)  
May increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, you must

Return the unit in its original condition. Pay, in particular,

Attention to the following points:

- . Route the wires/cables correctly, and fix them with the  
mounted cable clamps
- . Check the insulation of the mains lead for external  
Damage
- . Check the electrical DC resistance between the  
mains

Plug and the secondary side:

- 1) Unplug the mains cord, and connect a wire between  
The two pins of the mains plug.
- 2) Set the mains switch the "on" position (keep the  
Mains cord unplug).
- 3) Measure the resistance value between the  
mains  
plug and the front panel, controls, and chassis  
bottom.
- 4) Repair or correct unit when the resistance  
measurement is less than 1M  $\Omega$
- 5) Verify this, before you return the unit to the  
customer/user (ref. UL-standard no. 1492).
- 6) Switch the unit "off", and remove the wire  
between  
the two pins of the mains plug.

### 2. Laser safety

This unit employs a laser. Only qualified service personnel

May remove the cover, or attempt to service this device

(due to possible eye injury).

Laser device unit

Type :Semiconductor laser GaAlAs

Wavelength :650nm (DVD)

:780nm (VCD/CD)

Output power :7mW(DVD)

:10mW(DVD/CD)

Beam divergence:60 degree

Note: Use of controls or adjustments or performance of procedure other than those specified herein, may result in hazardous radiation exposure. Avoid direct exposure to beam.

### 3.0 Instruction for Use

---

You can download this information from the following websites:

<http://www.philips.com/support>

<http://www.p4c.philips.com>

## 4.0 MECHANICAL AND DISMANTLING INSTRUCTIONS

The following guidelines show how to dismantle the player.

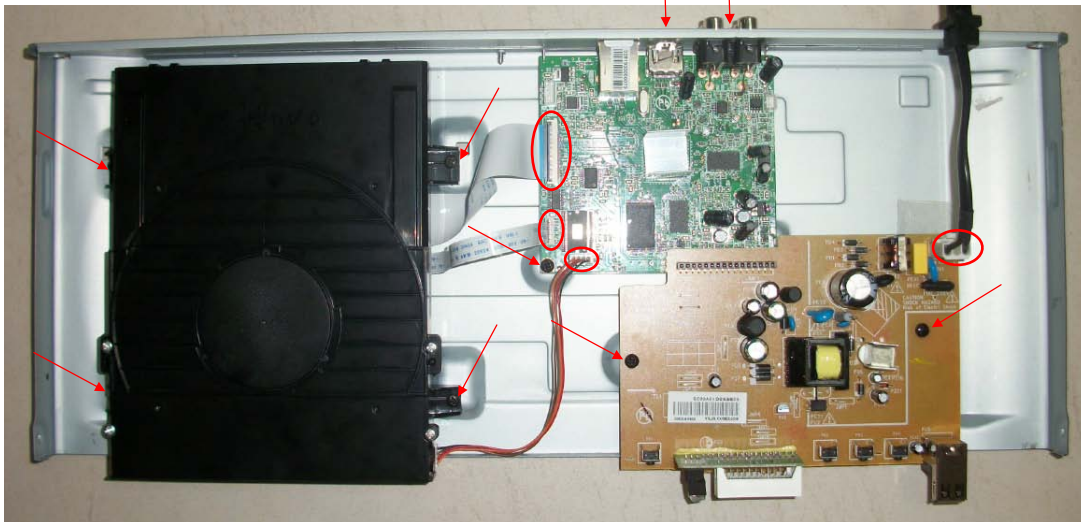
Step1: Remove 3 screws around the Top Cover, and then remove the Top Cover



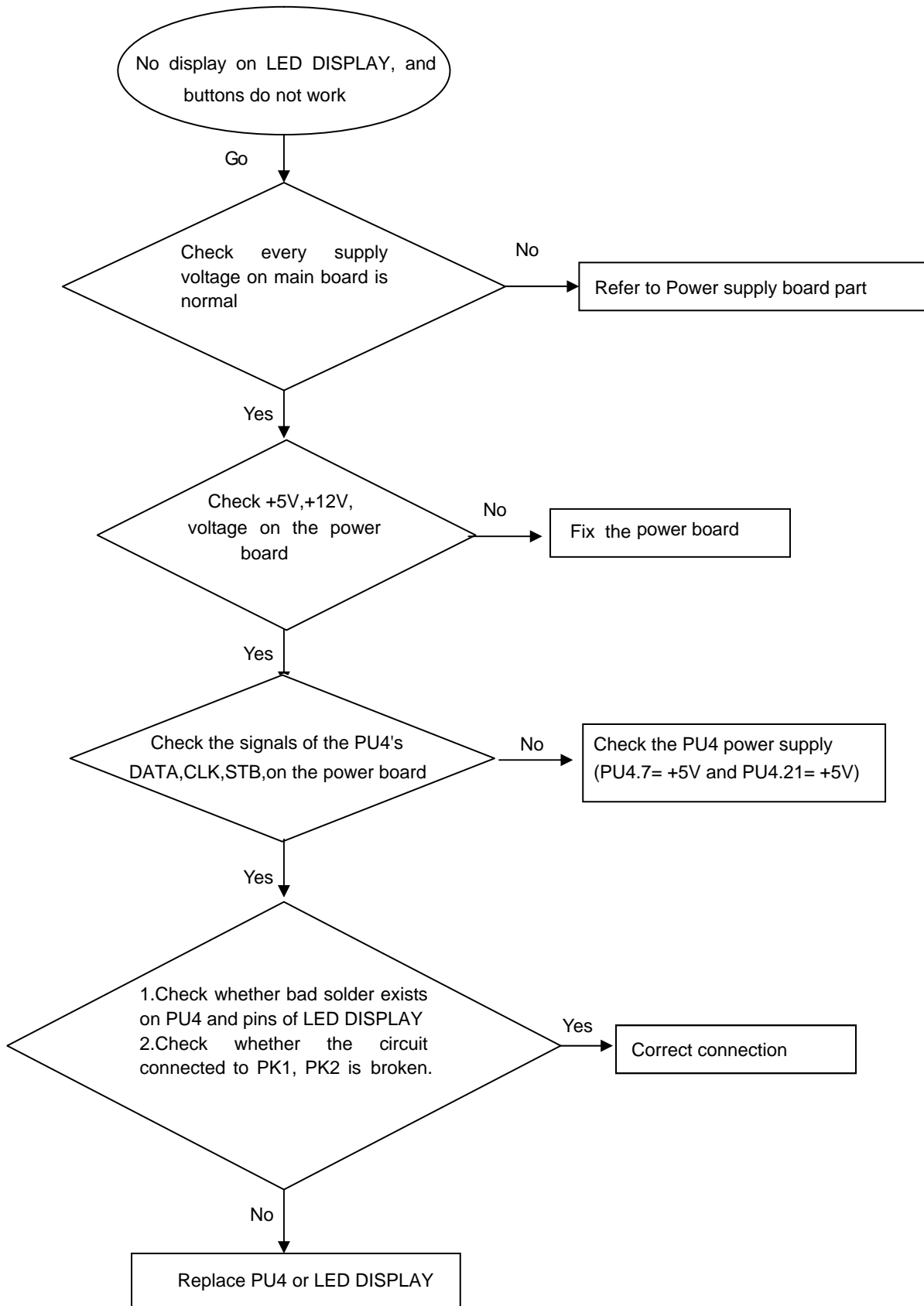
Step2: Dismantling Front Panel, the CD door should be removed first, then gently pull the Panel out from the set.  
use an acuate press the reset hole to release the disc tray;  
remove the door from the tray;  
PS: insert reset hole once the disc tray jammed



Step3: Remove the 9 screws on board to dismantle the DVD BOARD & PSU BOARD & DECK

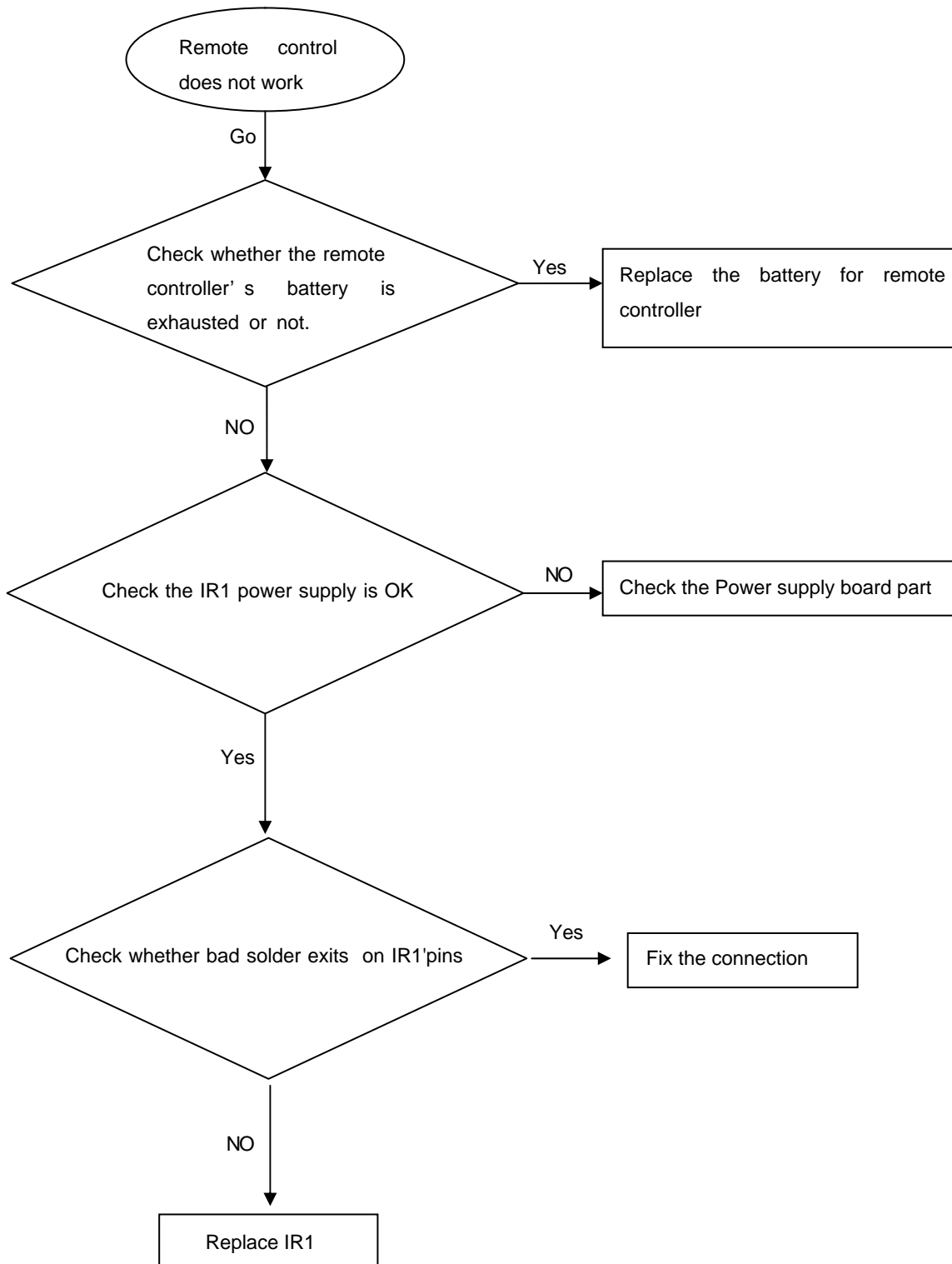


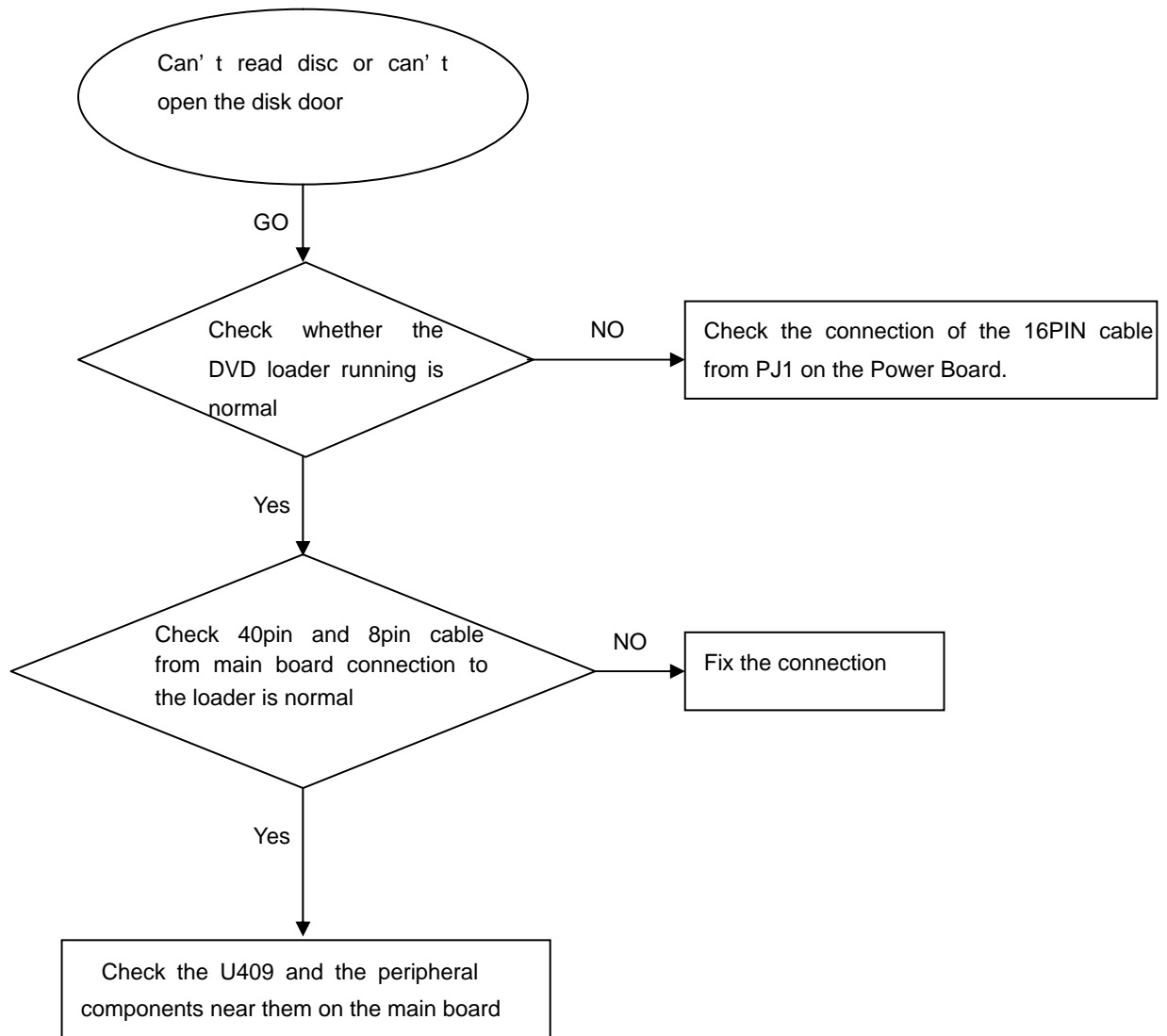
No display , and buttons do not work

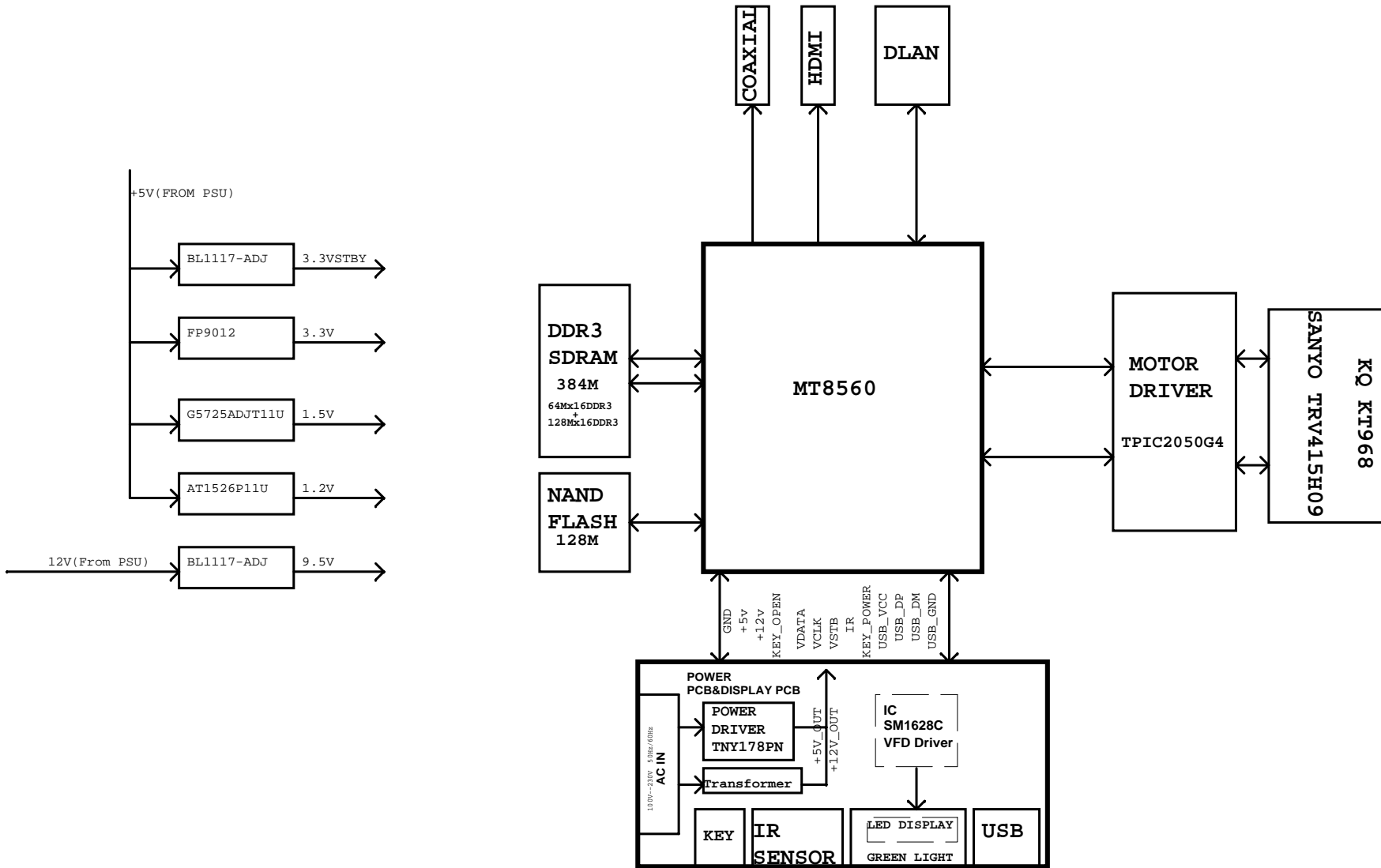


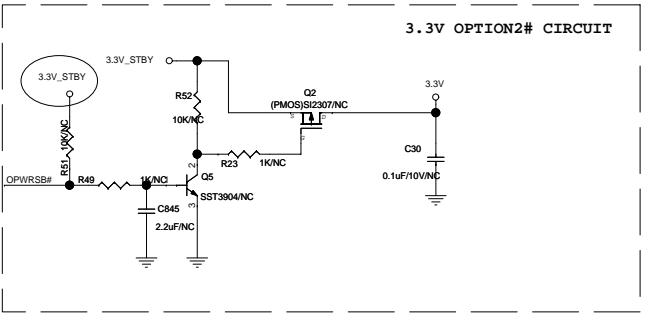
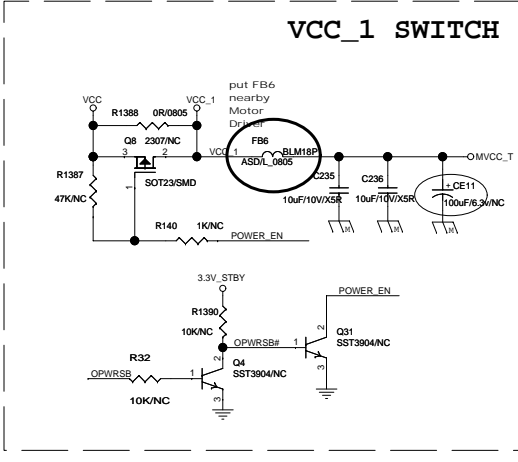
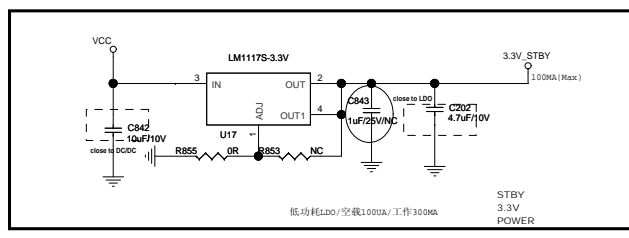
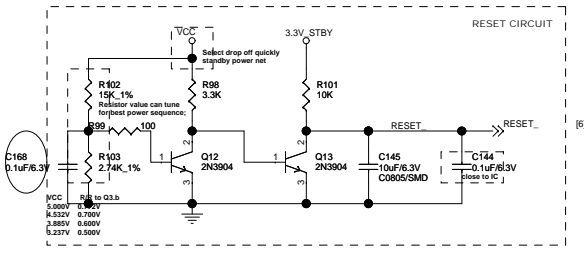
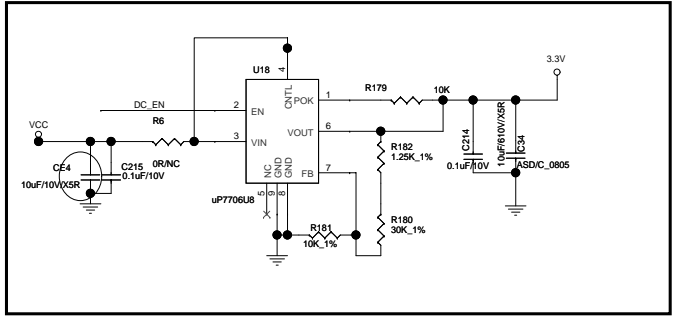
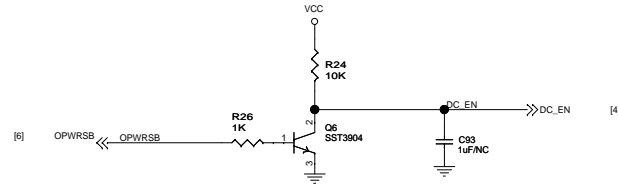
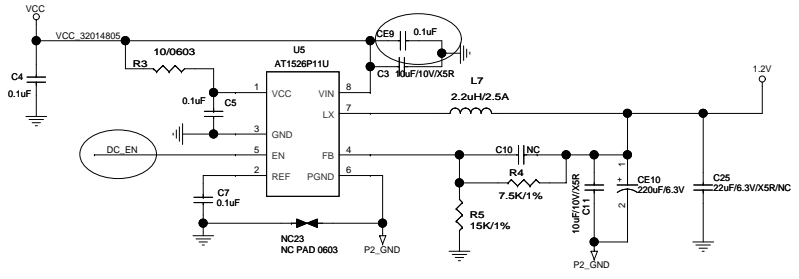
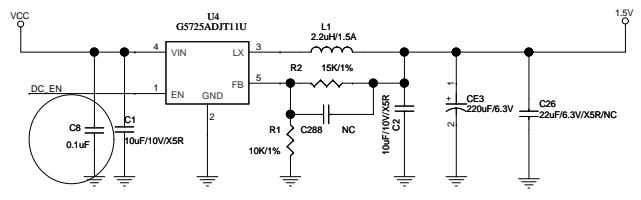


## Remote control does not work

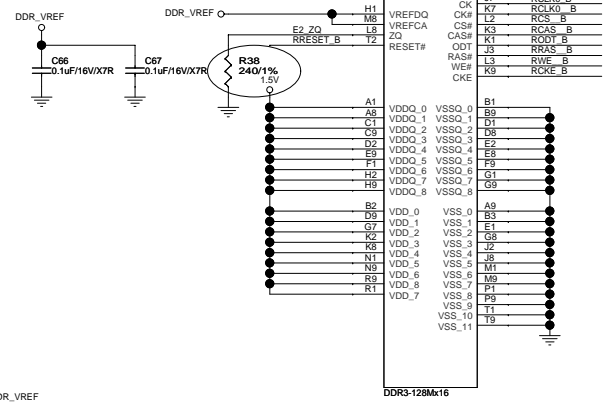
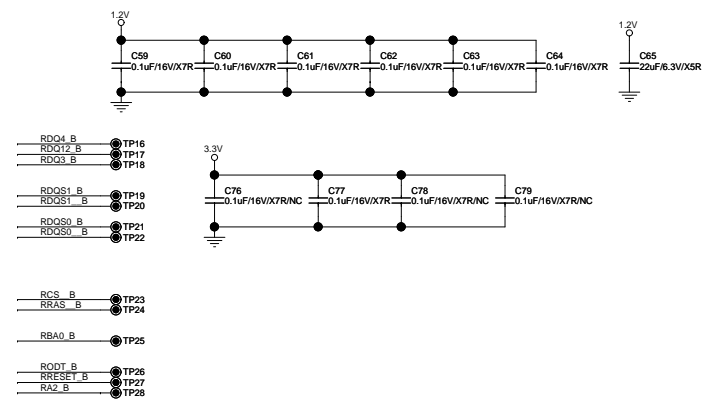
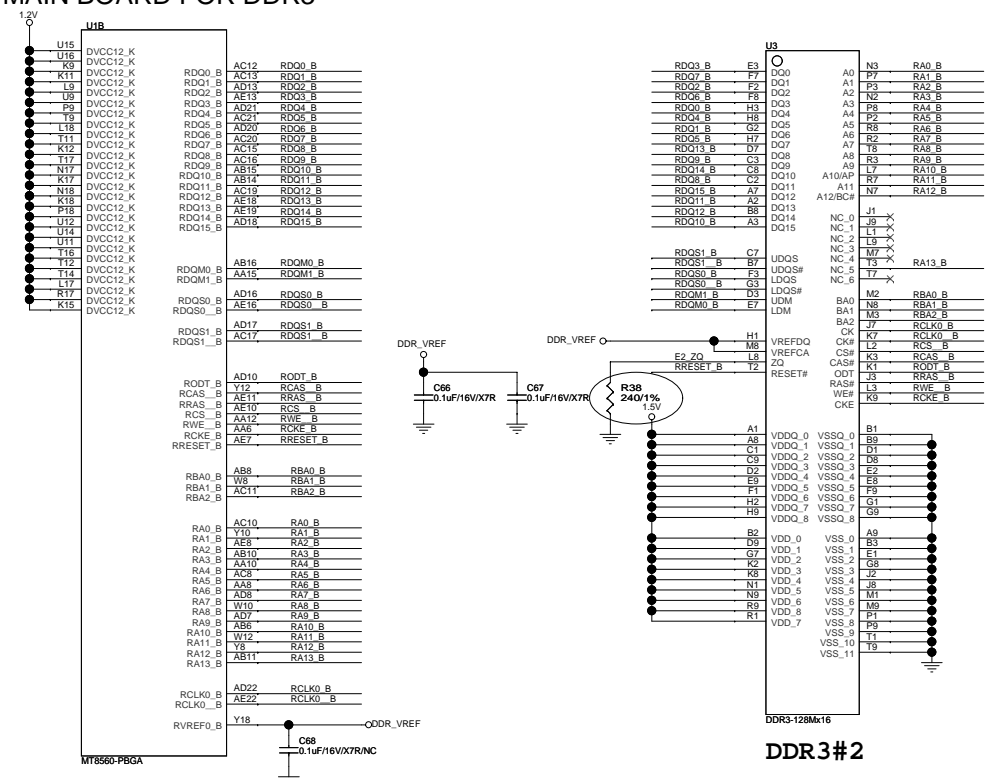


**Can't read disc or can't open the disk door**

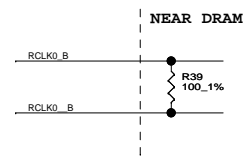
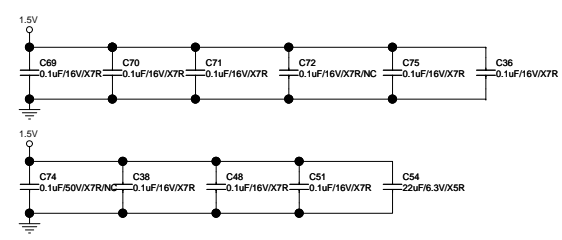




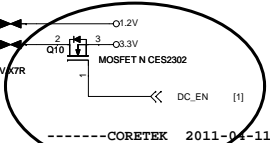
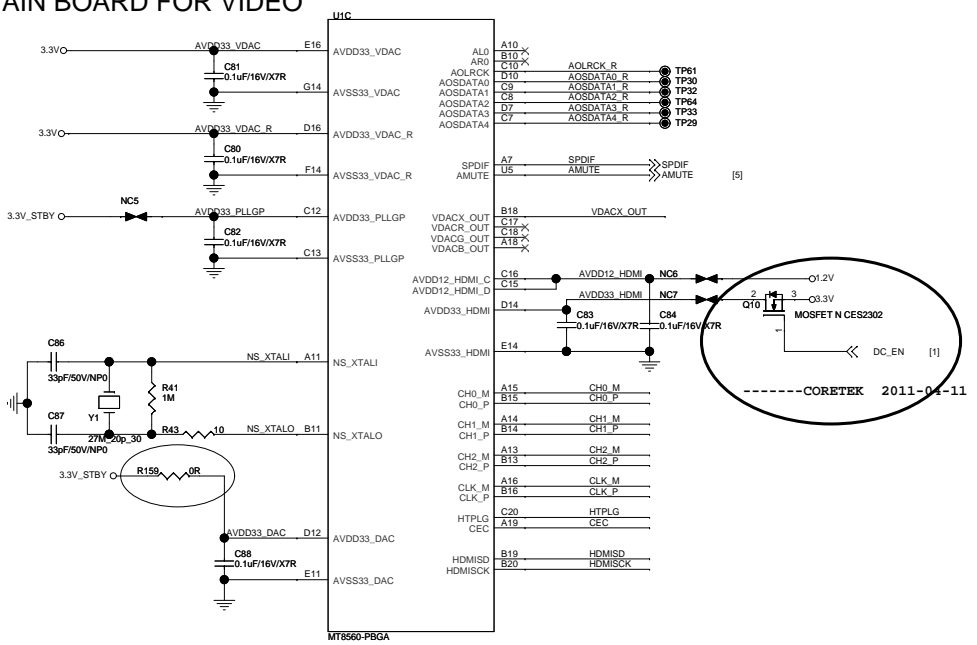




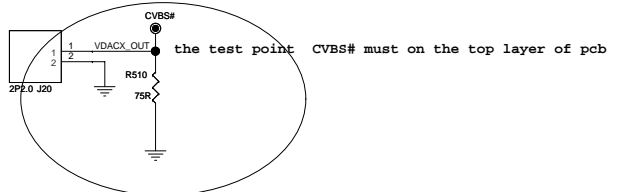
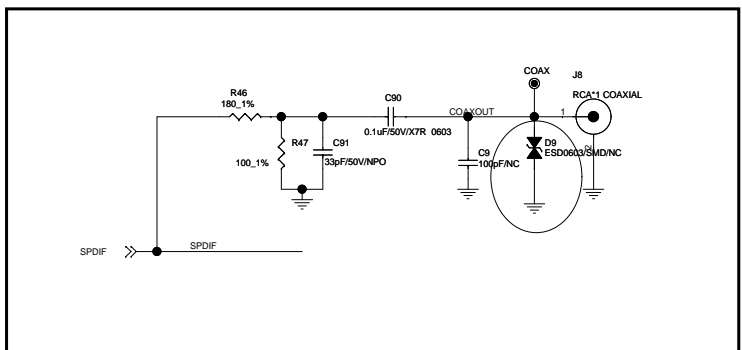
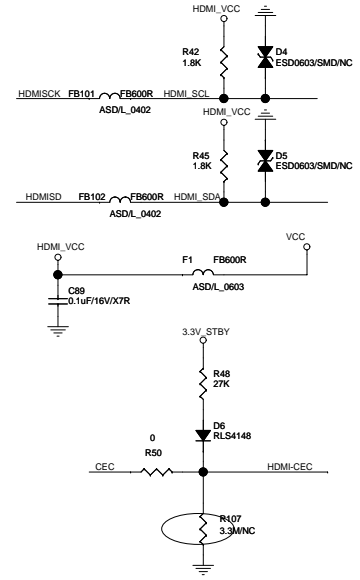
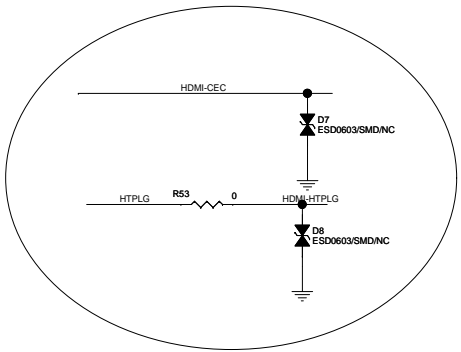
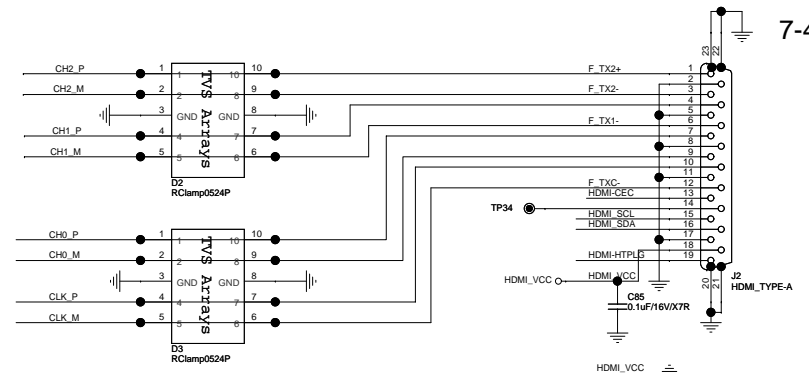
DDR3#2

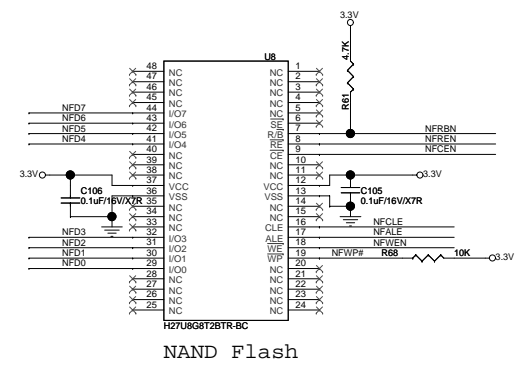
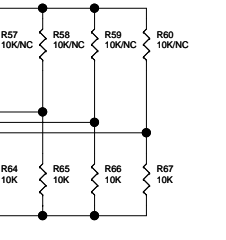
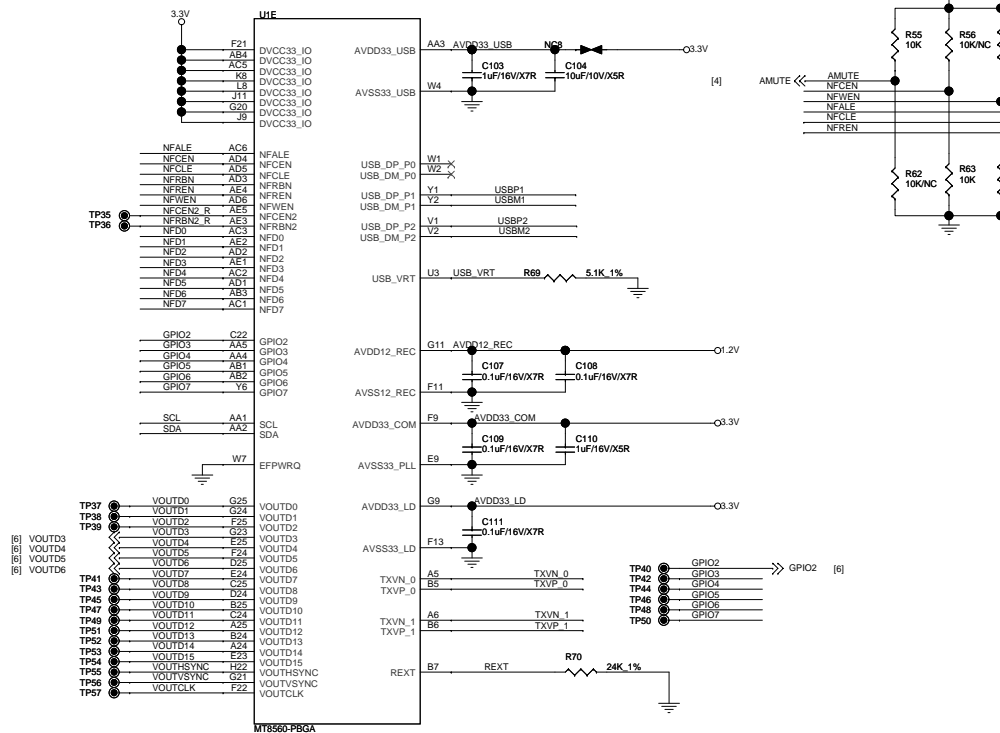


# MAIN BOARD FOR VIDEO

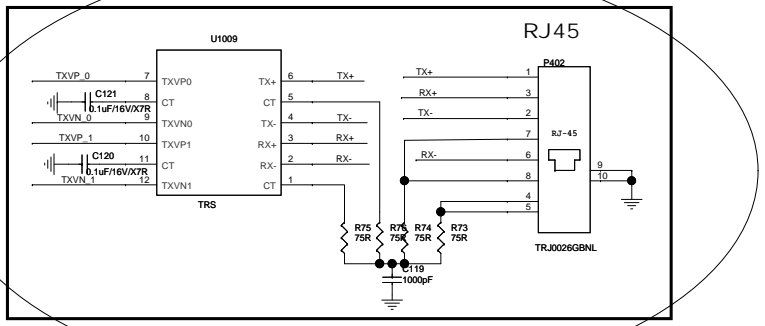
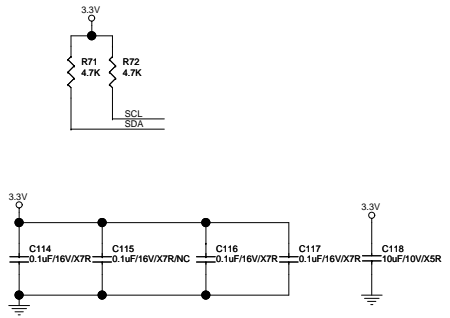
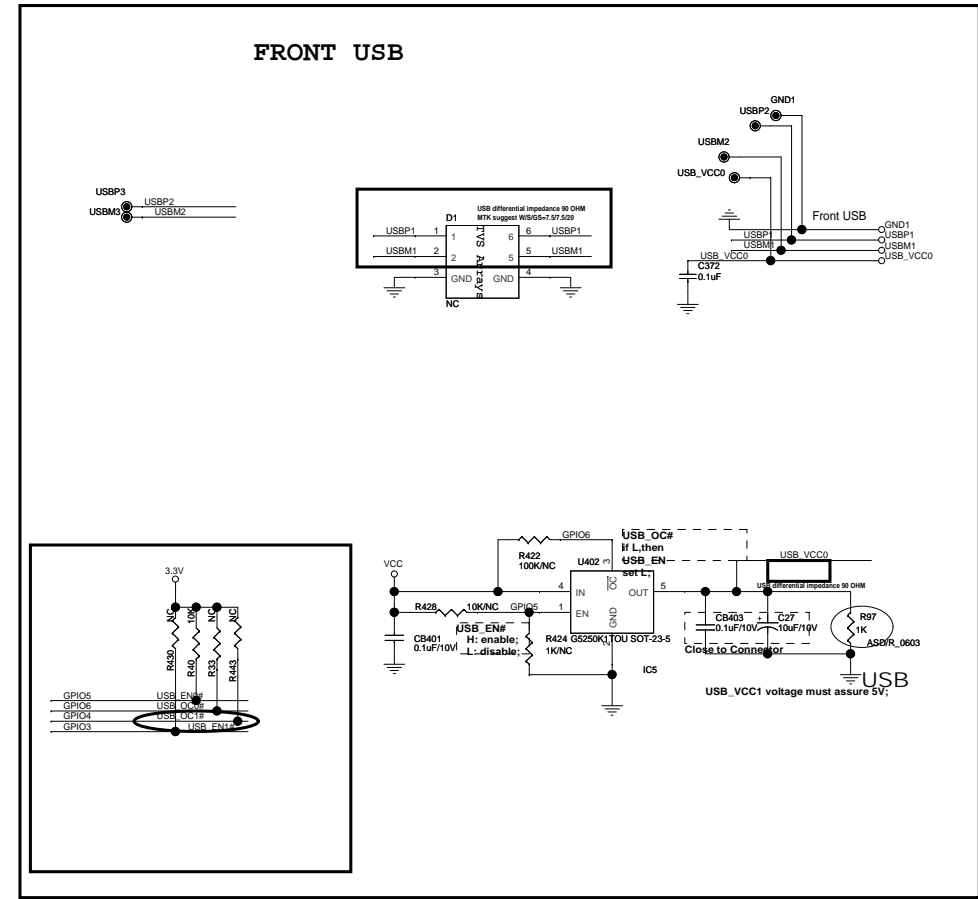


## HDMI Port

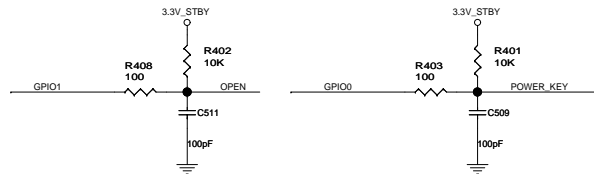
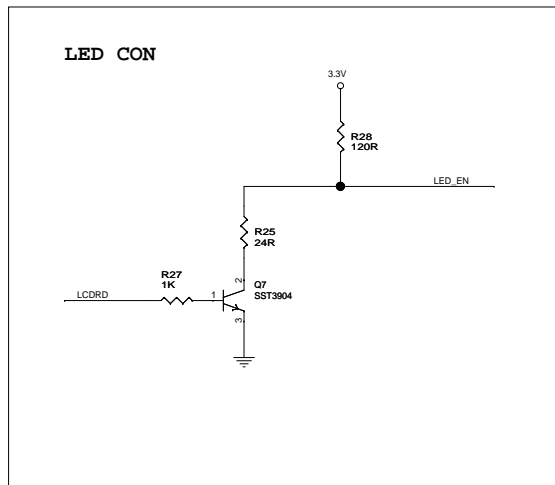
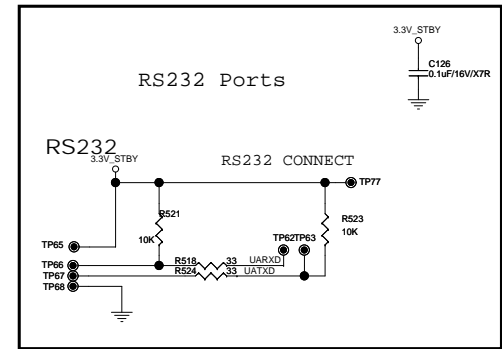
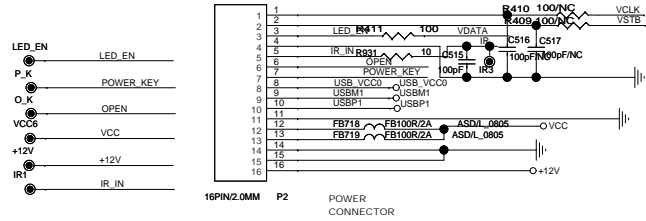
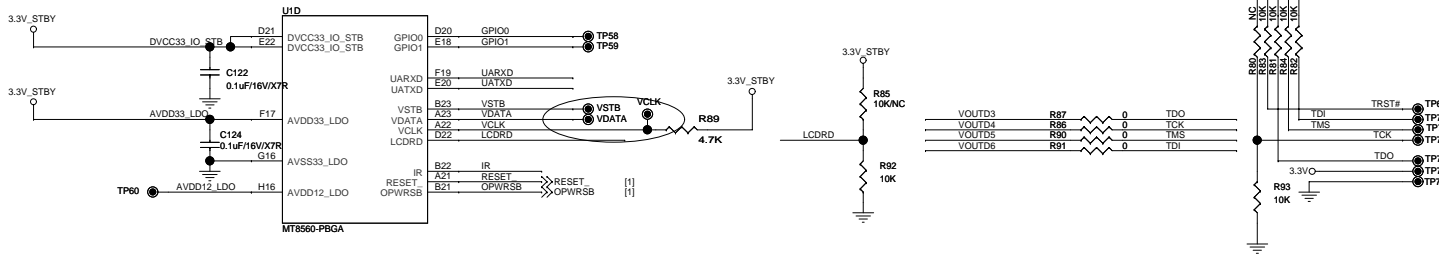


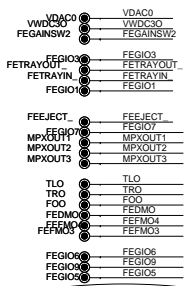
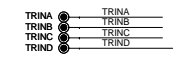
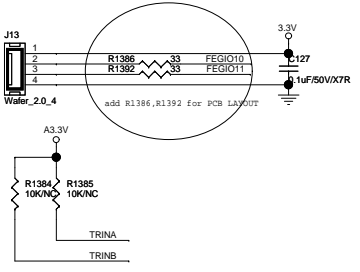
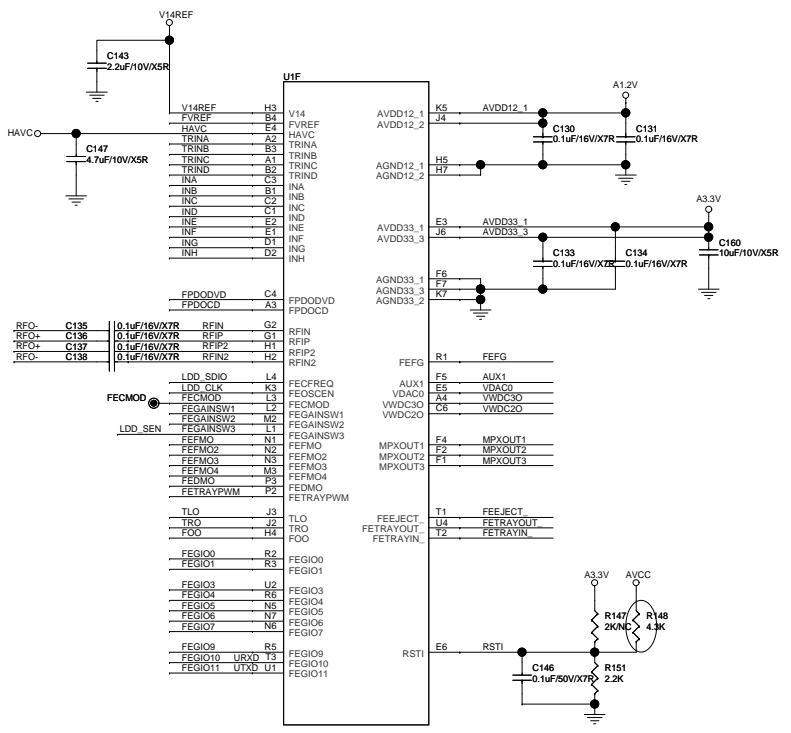
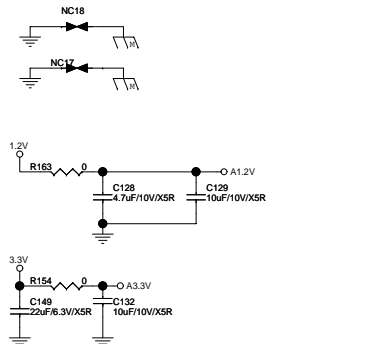


NAND Flash



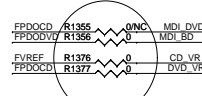
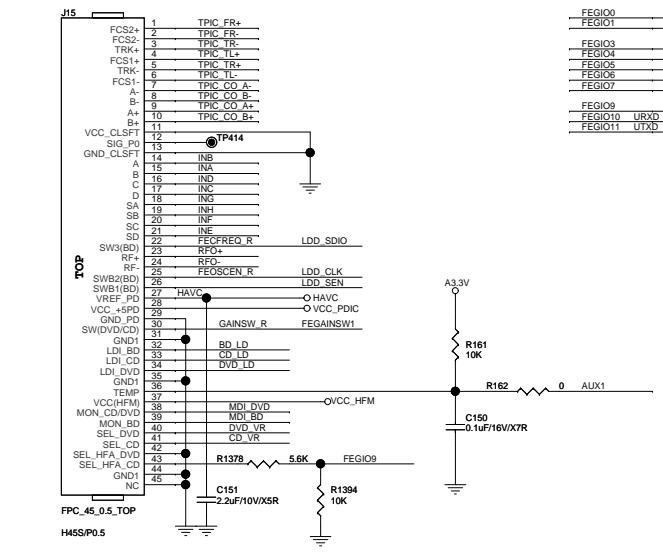




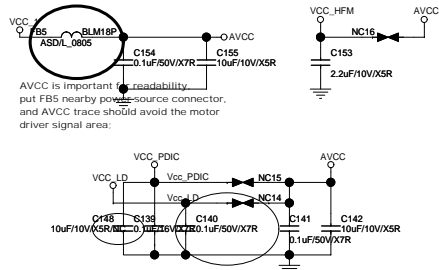
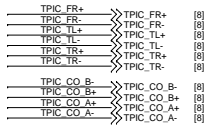
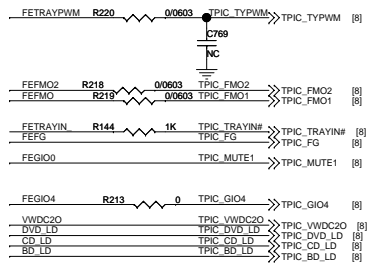


Must add these test points on the top layer of PCB: TRINA, TRINB, TRINC, TRO, MPXOUT1, MPXOUT2, MPXOUT3, TYPWM, FEFMO, FEFM0, FEFM1, FEFM2, FEFM3, FEFM4, TLO, TRO, FOO. For other test points, you can add them according to the PCB layout to delete or reserve.

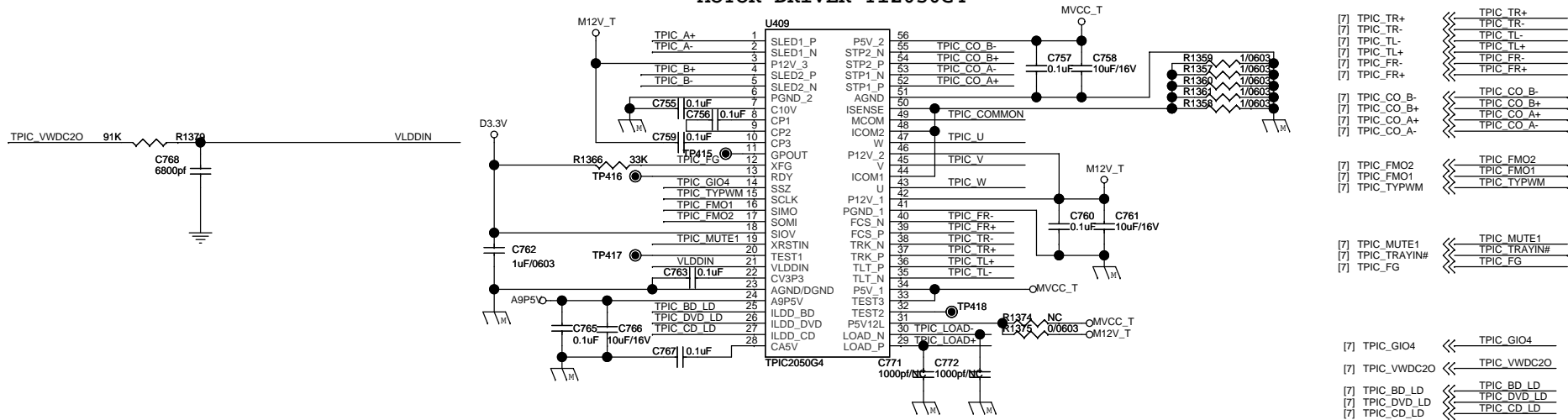
For SANYO 414 OPU



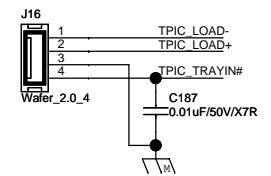
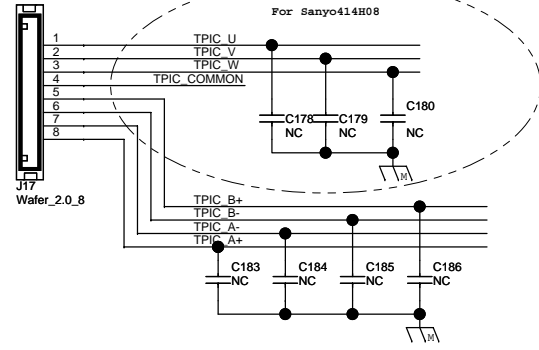
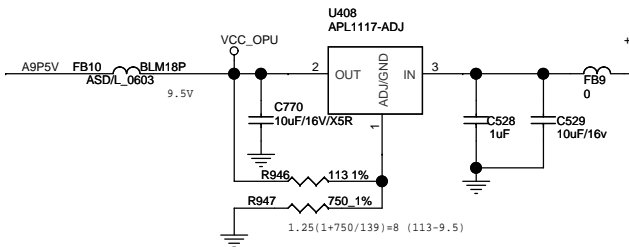
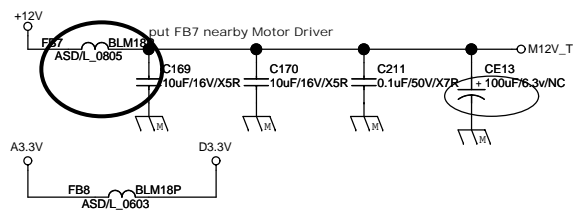
For TI2050



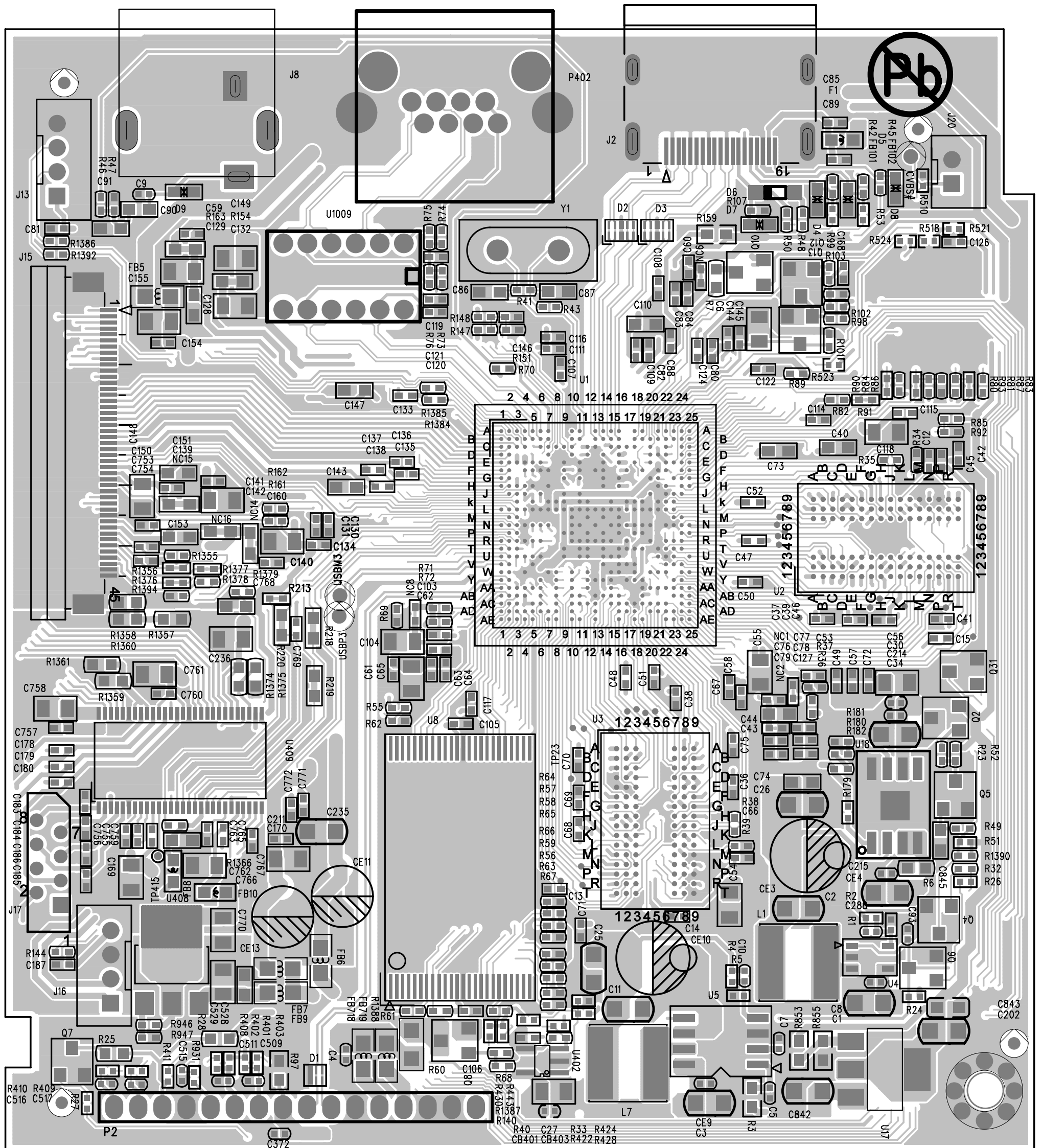
MOTOR DRIVER TI2050G4

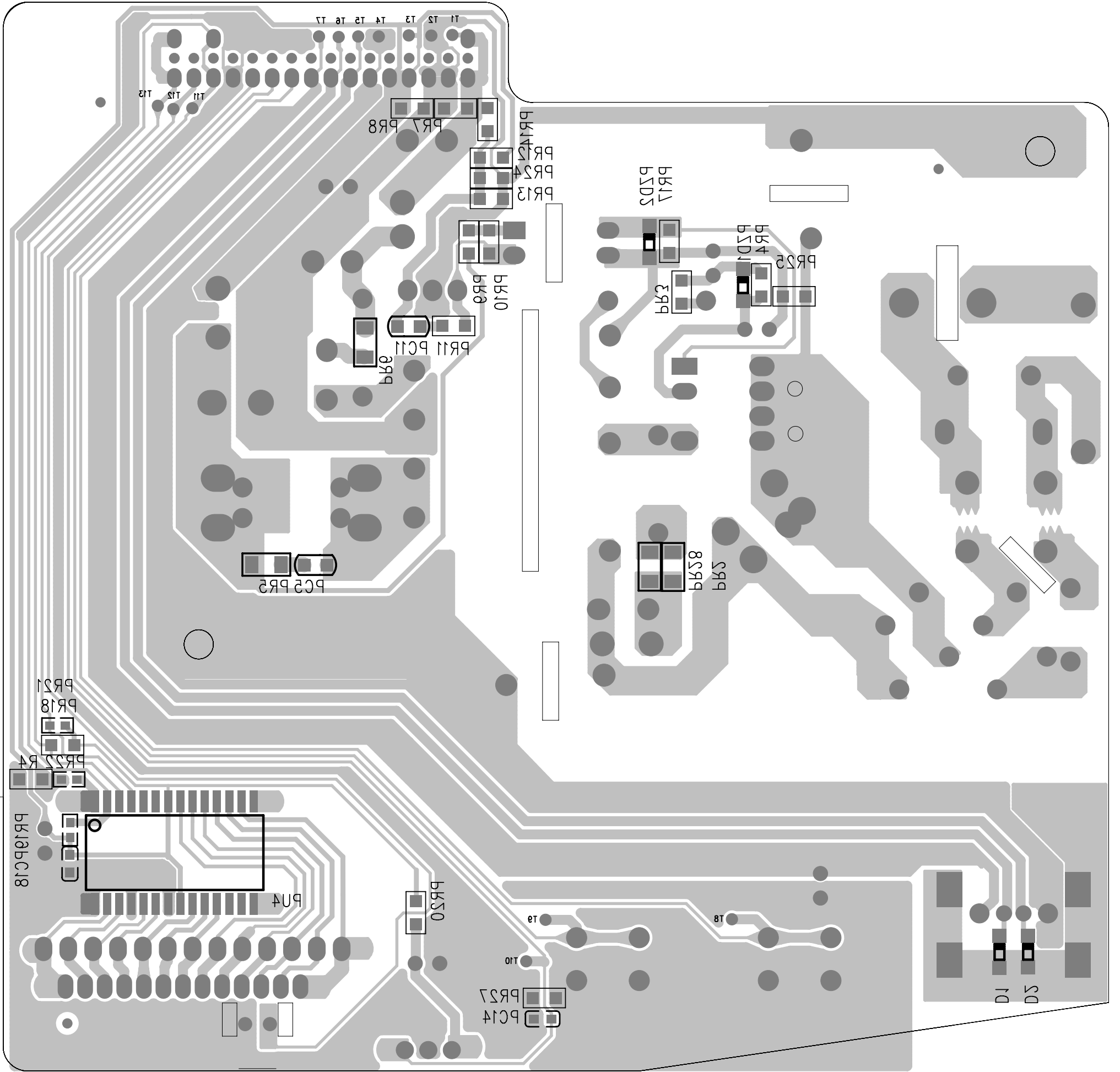


- [7] TPIC\_TR+ <<< TPIC TR+
- [7] TPIC\_TR- <<< TPIC TR-
- [7] TPIC\_TL- <<< TPIC TL-
- [7] TPIC\_TL+ <<< TPIC TL+
- [7] TPIC\_FR- <<< TPIC FR-
- [7] TPIC\_FR+ <<< TPIC FR+
- [7] TPIC\_CO\_B- <<< TPIC CO B-
- [7] TPIC\_CO\_B+ <<< TPIC CO B+
- [7] TPIC\_CO\_A+ <<< TPIC CO A+
- [7] TPIC\_CO\_A- <<< TPIC CO A-
- [7] TPIC\_FMO2 <<< TPIC FMO2
- [7] TPIC\_FMO1 <<< TPIC FMO1
- [7] TPIC\_TYPWM <<< TPIC TYPWM
- [7] TPIC\_MUTE1 <<< TPIC MUTE1
- [7] TPIC\_TRAYIN# <<< TPIC TRAYIN#
- [7] TPIC\_FG <<< TPIC FG
- [7] TPIC\_GIO4 <<< TPIC GIO4
- [7] TPIC\_VWDC20 <<< TPIC VWDC20
- [7] TPIC\_BD\_LD <<< TPIC BD LD
- [7] TPIC\_DVD\_LD <<< TPIC DVD LD
- [7] TPIC\_CD\_LD <<< TPIC CD LD
- TPIC\_U <<< TPIC U
- TPIC\_V <<< TPIC V
- TPIC\_W <<< TPIC W
- TPIC\_COMMON <<< TPIC COMMON
- TPIC\_B+ <<< TPIC B+
- TPIC\_B- <<< TPIC B-
- TPIC\_A- <<< TPIC A-
- TPIC\_A+ <<< TPIC A+
- TPIC\_LOAD- <<< TPIC\_LOAD-
- TPIC\_LOAD+ <<< TPIC\_LOAD+
- TPIC\_TRAYIN# <<< TPIC TRAYIN#



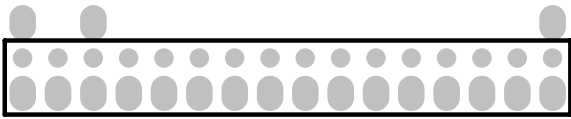




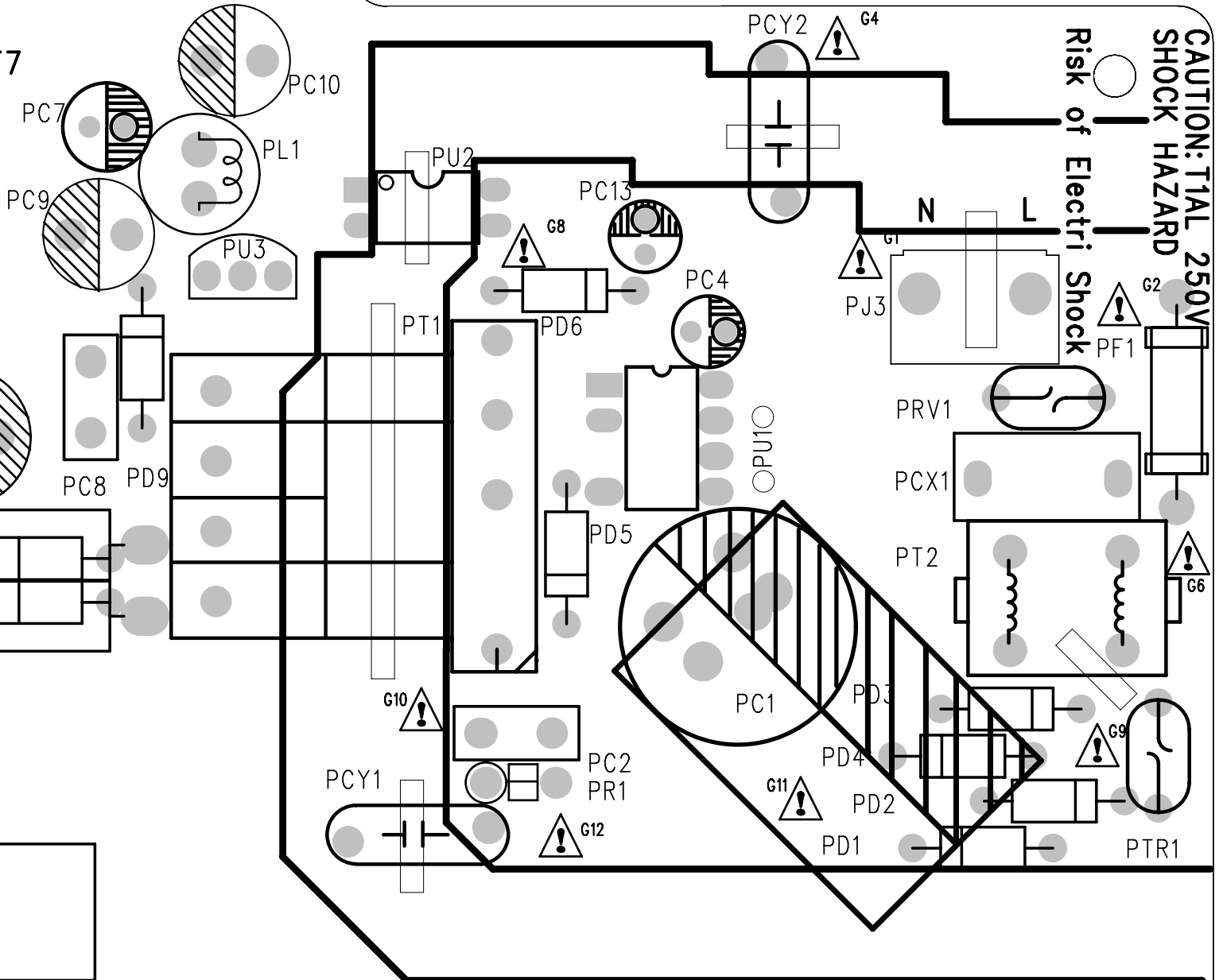




PJ1

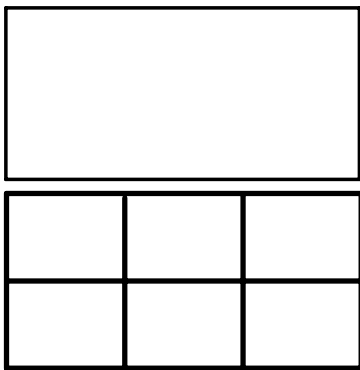


PSU BOARD BDP2900 F7  
PN: 85BE81420G  
V1.1 2012-02-06  
FR-1 94V0 T=1.6MM



A

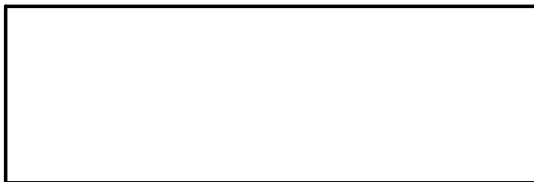
UL:



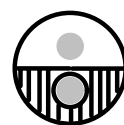
PC16



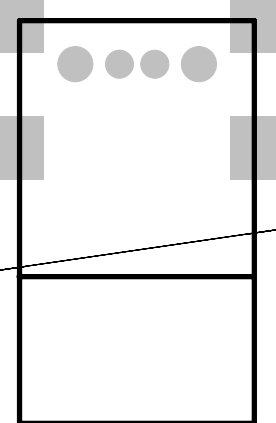
TM:



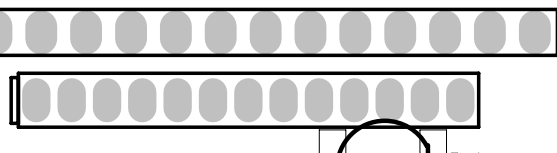
PC15



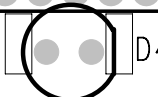
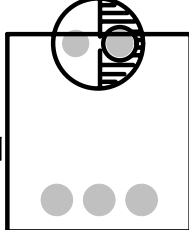
PJ6



PJ4  
PJ2

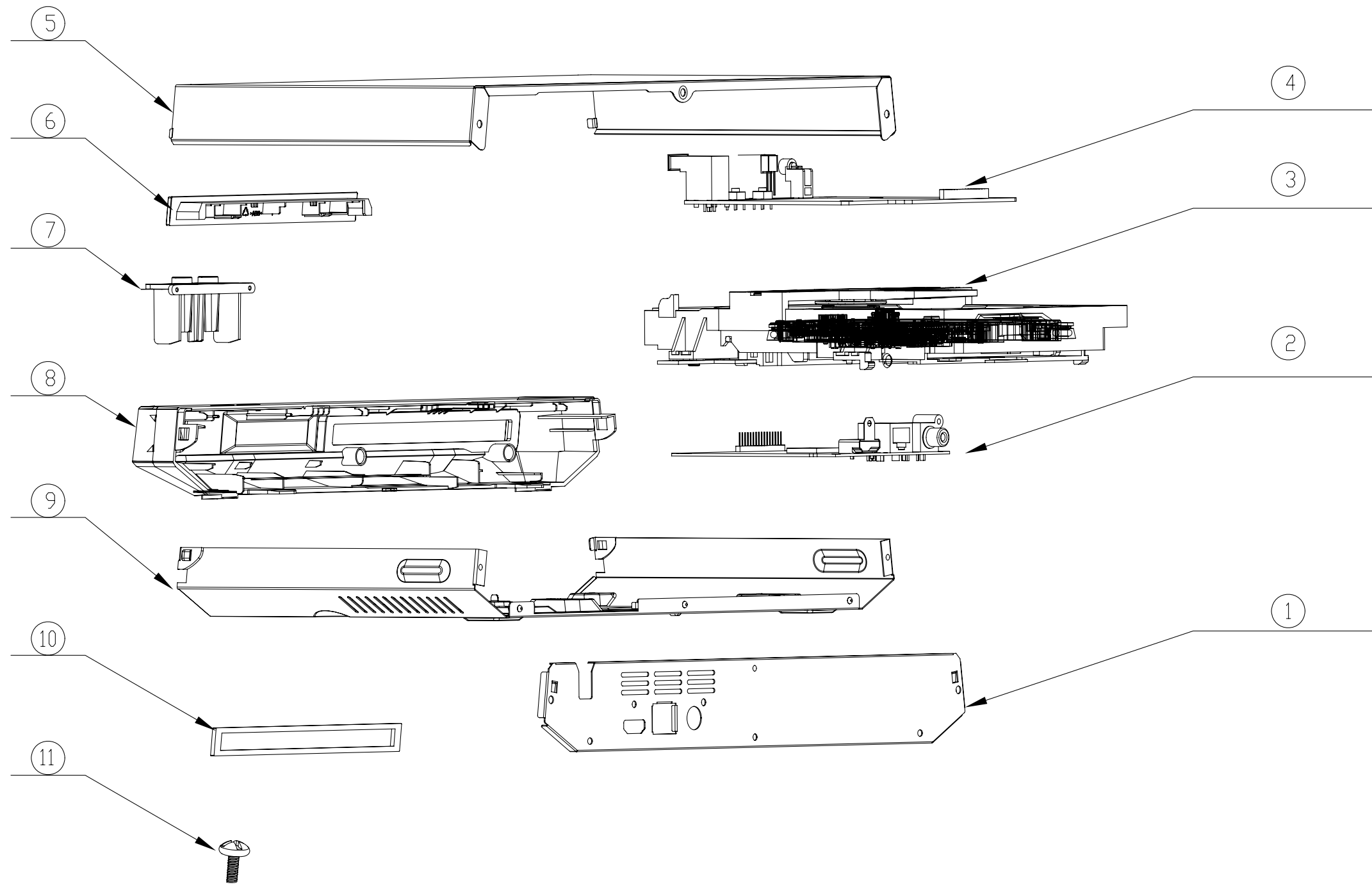


PC12



IR1







## 9.0 REVISION LIST

---

Version 1.0

- Initial release