

## LCD Color Television

**26EL834G      Ver. 1.00**

### Updating history

Currently there are no updates available.  
Please check back at a later time for any future  
updates.

## IMPORTANT NOTICE

**WARNING:**

You are requested that you shall not modify or alter the information or data provided herein without prior written consent by Toshiba. Toshiba shall not be liable to anybody for any damages, losses, expenses or costs, if any, incurred in connection with or as a result of such modification or alteration.

**THE INFORMATION OR DATA HEREIN SHALL BE PROVIDED "AS IS" WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**Toshiba shall not be liable for any damages, losses, expenses or costs, if any, incurred in connection with or as a result of use of any information or data provided herein.**

## GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing the restricted substances.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

## LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

**WARNING:** This product is manufactured using lead free solder.  
**DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT!**

The melting temperature of lead-free solder is higher than that of leaded solder by 86°F to 104°F (30°C to 40°C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product especially when soldering large components, through-hole pins, and on PCBs as the level of heat required to melt lead-free solder is high.

## SAFETY INSTRUCTION

**WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.**

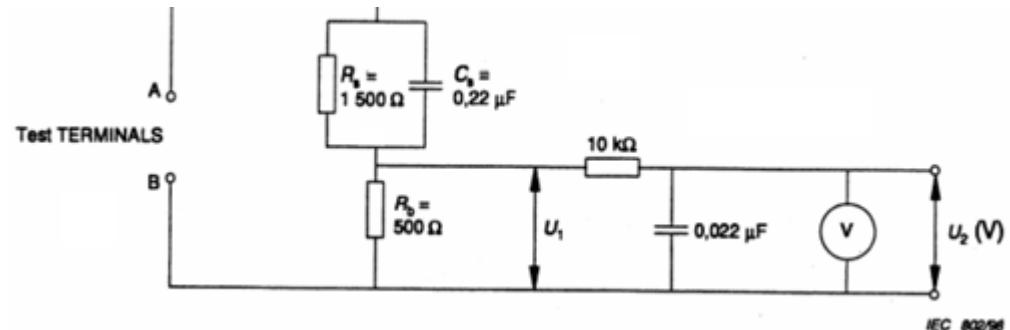
### Safety Precaution

**WARNING: SERVICING SHOULD NOT BE ATTEMPTED BY ANYONE UNFAMILIAR WITH THE NECESSARY PRECAUTIONS ON THIS RECEIVER. THE FOLLOWING ARE THE NECESSARY PRECAUTIONS TO BE OBSERVED BEFORE SERVICING THIS CHASSIS.**

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always disconnect the power plug before any disassembling of the product. It may result in electrical shock.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc.
4. Always keep tools, components of the product, etc away from the children, These items may cause injury to children.
5. Depending on the model, use an isolation transformer or wear suitable gloves when servicing with the power on, and disconnect the power plug to avoid electrical shock when replacing parts. In some cases, alternating current is also impressed in the chassis, so electrical shock is possible if the chassis is contacted with the power on.
6. Always use the replacement parts specified for the particular model when making repairs. The parts used in products require special safety characteristics such as inflammability, voltage resistance, etc. therefore, use only replacement parts that have these same characteristics. Use only the specified parts when the  mark is indicated in the circuit diagram or parts list.
7. Parts mounting and routing dressing of wirings should be the same as that used originally. For safety purposes, insulating materials such as isolation tube or tape are sometimes used and printed circuit boards are sometimes mounted floating. Also make sure that wirings is routed and clamped to avoid parts that generate heat and which use high voltage. Always follow the manufactured wiring routes / dressings.
8. Always ensure that all internal wirings are in accordance before re-assembling the external casing after a repairing completed. Do not allow internal wiring to be pinched by cabinets, panels, etc. Any error in reassembly or wiring can result in electrical leakage, flame, etc., and may be hazardous.
9. NEVER remodel the product in any way. Remodeling can result in improper operation, malfunction, or electrical leakage and flame, which may be hazardous.
10. Touch current check. (After completing the work, measure touch current to prevent an electric shock.)
  - Plug the AC cord directly into the AC outlet. Do NOT use an isolation transformer for this check.
  - Connect a measuring network for touch currents between each exposed metallic part on the set and a good earth ground such as a water pipe.

Annex D  
(normative)

Measuring network for TOUCH CURRENTS



Resistance values in ohms ( $\Omega$ ).

V: Voltmeter or oscilloscope  
(r.m.s. or peak reading)

Input resistance :  $\geq 1 \text{ M}\Omega$

Input capacitance :  $\leq 200 \text{ pF}$

Frequency range : 15 Hz to 1 MHz and d.c. respectively

**Note:** Appropriate measures should be taken to obtain the correct value in case of non sinusoidal waveforms.

The measuring instrument is calibrated by comparing the frequency factor of  $U_2$  with the solid line in figure F.2 of IEC 60990 at various frequencies. A calibration curve is constructed showing the deviation of  $U_2$  from the ideal curve as a function of frequency.

TOUCH CURRENT =  $U_2 / 500$  (peak value).

- The potential at any point (TOUCH CURRENT) expressed as voltage  $U_1$  and  $U_2$  does not exceed the following value:

The part or contact of a TERMINAL is not HAZARDOUS LIVE if:

- a) The open-circuit voltage should not exceed 35 V (peak) a.c. or 60 V d.c. or, if a) is not met.
- b) The measurement of the TOUCH CURRENT shall be carried out in accordance with IEC 60990, with the measuring network described in **Annex D** of this standard.

The TOUCH CURRENT expressed as voltages  $U_1$  and  $U_2$ , does not exceed the following values:

- for a.c. :  $U_1 = 35 \text{ V (peak)}$  and  $U_2 = 0.35 \text{ V (peak)}$ ;
- for d.c. :  $U_1 = 1.0 \text{ V}$

**Note:** The limit values of  $U_2 = 0.35 \text{ V (peak)}$  for a.c. and  $U_1 = 1.0 \text{ V}$  for d.c. correspond to the values 0.7 mA (peak) a.c. and 2.0 mA d.c.

## SAFETY INSTRUCTION

### Product Safety Notice

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create electrical shock, fire, or other hazards.

## SAFETY INSTRUCTION

### Handling the LCD Module

#### Safety Precaution

In the event that the screen is damaged or the liquid crystal (fluid) leaks, do not breathe in or drink this fluid.

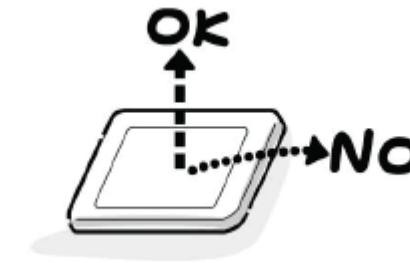
Also, never touch this fluid. Such actions could cause toxicity or skin irritation. If this fluid should enter the mouth, rinse the mouth thoroughly with water. If the fluid should contact the skin or clothing, wipe off with alcohol, etc., and rinse thoroughly with water. If the fluid should enter the eyes, immediately rinse the eyes thoroughly with running water.

#### Precautions for Handling the LCD Module

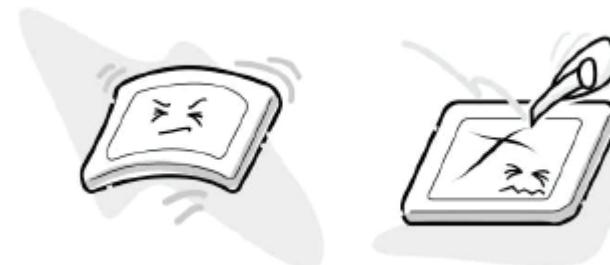
**CAUTION: The metal edges of the LCD module are sharp, handle it with care.**

The LCD module can easily be damaged during disassembly or reassembly; therefore, always observe the following precautions when handling the module.

1. When attaching the LCD module to the LCD cover, position it appropriately and fasten at the position where the display can be viewed most conveniently.



2. Carefully align the holes at all four corners of the LCD module with the corresponding holes in the LCD cover and fasten with screws. Do not strongly push on the module because any impact can adversely affect the performance. Also use caution when handling the polarized screen because it can easily be damaged.



3. If the panel surface becomes soiled, wipe with cotton or a soft cloth. If this does not remove the soiling, breathe on the surface and then wipe again.

If the panel surface is extremely soiled, use a CRT cleaner as a cleaner. Wipe off the panel surface by drop the cleaner on the cloth. Do not drop the cleaner on the panel. Pay attention not to scratch the panel surface.



- Leaving water or other fluids on the panel screen for an extended period of time can result in discoloration or stripes. Immediately remove any type of fluid from the screen.



- Glass is used in the panel, so do not drop or strike with hard objects. Such actions can damage the panel.



- CMOS-LSI circuitry is used in the LCD module, so avoid damage due to static electricity. When handling the module, use a wrist ground or anchor ground.



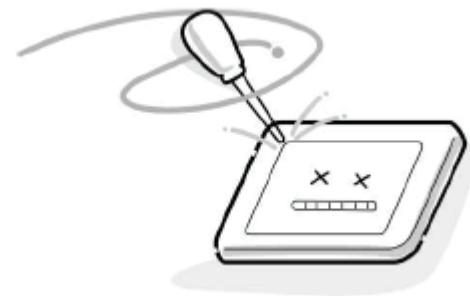
- Do not expose the LCD module to direct sunlight or strong ultraviolet rays for an extended period of time.



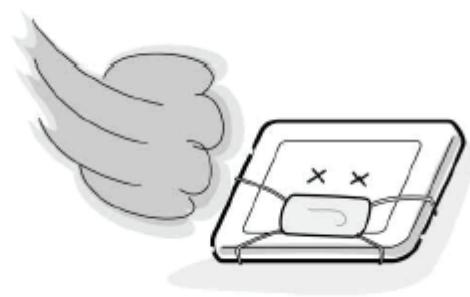
- Do not store the LCD module below the temperature conditions described in the specifications. Failure to do so could result in freezing of the liquid crystal due to cold air or loss of resilience or other damage.



9. Do not disassemble the LCD module. Such actions could result in improper operation.



10. When transporting the LCD module, do not use packing containing epoxy resin (amine) or silicon resin (alcohol or oxim). The gas generated by these materials can cause loss of polarity.



## PANEL (T-CON)

### PANEL\_INVERTER

P201
1 24V
2 24V
3 24V
4 24V
5 24V
6 GND
7 GND
8 GND
9 GND
10 GND
11 BRIGHT ADJ
12 INV ON OFF
13 INV ON OFF
14 PS ON

P202
1 +12V NORMAL
2 +12V NORMAL
3 +12V NORMAL
4 GND
5 GND
6 GND
7 5VSB
8 5VSB
9 +5V Standby
10 ACD
11 BD PS ON
12 OCP OUTPUT PWM
13 INVERTER ON OFF
14 STANDBY

CN1
1 PANEL_VCC
2 PANEL_VCC
3 PANEL_VCC
4 PANEL_VCC
5 OI_OCP_SEL
6 PANEL_VCC
7 RXE4+
8 GND
9 RXE3+
10 RXE4-
11 RXEC+
12 RXE3-
13 GND
14 RXEC-
15 RXE2+
16 GND
17 RXE1+
18 RXE2-
19 RXE0+
20 RXE1-
21 GND
22 RXE0-
23 RXO4+
24 GND
25 RXO3+
26 RXO4-
27 RXO2+
28 RXO3-
29 GND
30 RXOC-
31 RXO2+
32 GND
33 RXO1+
34 RXO2-
35 RXO0+
36 RXO1-
37 GND
38 RXO0-
39 BRIGHT ADJ
40 OCP_OUTPUT_PWM

CN12
1 PANEL_VCC
2 PANEL_VCC
3 PANEL_VCC
4 PANEL_VCC

### PSU Unit

### MAIN BOARD



### IR\_LED BORAD

CN202

1 +5V STBY
2 GND
3 RC IR
4 GND
5 LED ON OFF
6 LED TIMER

### KEY BORAD

CON1

CN2
1 +5V Standby
2 KEY0
3 KEY1
4 GND

CN11
1 SPK R-
2 SPK R+
3 SPK L-
4 SPK L+

40 OCP_OUTPUT_PWM
39 BRIGHT ADJ
38 RXO0-
37 GND
36 RXO1-
35 RXO0+
34 RXO2-
33 RXO1+
32 GND
31 RXO2+
30 RXOC-
29 GND
28 RXO3-
27 RXO2+
26 RXO4-
25 RXO3+
24 GND
23 RXO4+
22 RXE0-
21 GND
20 RXE1-
19 RXE0+
18 RXE2-
17 RXE1+
16 GND
15 RXE2+
14 RXEC-
13 GND
12 RXE3-
11 RXEC+
10 RXE4-
9 RXE3+
8 GND
7 +5V Standby
6 KEY1
5 KEY0
4 GND
3 RC IR
2 GND
1 +5V STBY

Speaker

Speaker

## TROUBLESHOOTING GUIDE

UNDER CONSTRUCTION

**Note:** Please check back in the future.

TOSHIBA WEB-ZEUS

>> [terms and conditions](#)

>> [privacy policy](#)

Copyright © 1995-2011 TOSHIBA Corporation, All Rights Reserved.

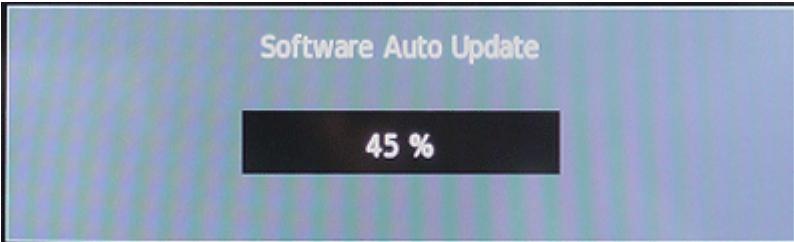
## FIRMWARE UPDATING PROCEDURE

### Firmware Upgrade - USB

1. Copy a firmware BIN file to USB disk. (Root directory)
2. Plug USB disk into TV USB port.



3. Reboot (AC Off/On) TV to upgrade firmware automatically. During firmware upgrade, OSD will be displayed on LCD screen, and power status LED will be blinking.



4. When firmware upgrade is finished, a message will be displayed on screen.



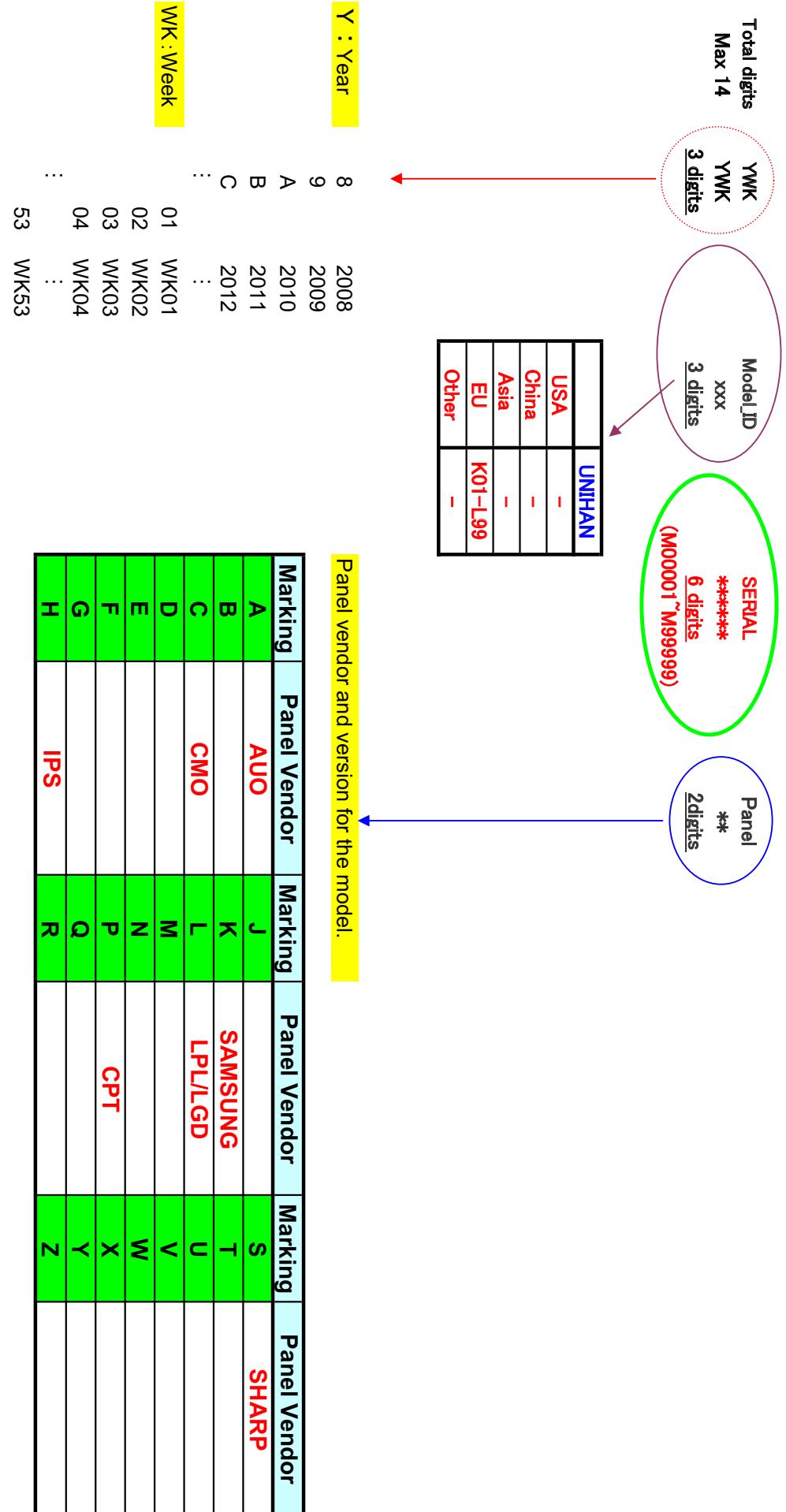
5. Unplug USB disk, and turn AC Off/On to reboot TV.

**Note:**

This upgrade method is available only when boot code exists in flash memory (Main Board).



Global Serial No.



## Model Information

Model	Model ID	Panel ID	Panel
26EL834G	K73	L1	LC260EXN-SDA3
26EL834RB	K80	L1	LC260EXN-SDA3
32EL834B	K82	L1	LC260EXN-SDA3
32EL834G	K81	L1	LC260EXN-SDA3
32EL834R	K78	L1	LC260EXN-SDA3
32HL834G	K83	L1	LC320EUN-SDV1
32HL834R	K77	L1	LC320EUN-SDV1
42HL834G	K84	L1	LC420EUN-SDV1
42HL834R	K79	L1	LC420EUN-SDV1

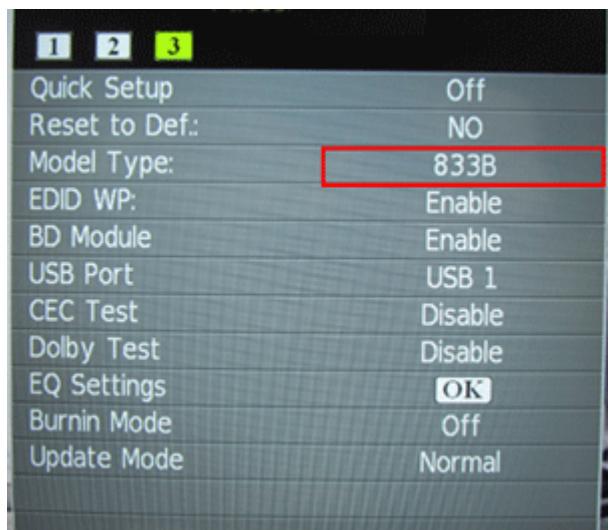
## DESTINATION SETTING CHANGE

Whenever replacing the Main PCB with new one, perform this procedure.

1. Press "Mute" key twice on the Remote.
2. Press "Menu" button on the TV set. Then the OSD is displayed.



3. Move to Tag "3" by Right/Left Arrow key on the Remote.
4. Select "Model Type" cell.



5. Select the appropriate model type by Right/Left Arrow key on the Remote. Model type is written on the rating label.





6. Select "Reset to Def".
7. Select "Yes" and press "OK" button on the Remote.



## PARTS LIST

### Precaution

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE".

**CAUTION:** The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

The mounting position of replacements is to be identical with originals.

Before replacing any of these components, read carefully the "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE".

Do not degrade the safety of the receiver through improper servicing.

### Note:

- The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.
- The PC board assembly with \* mark is no longer available after the end of the production.

### Abbreviations

Capacitors CD : Ceramic Disk

Resistors CF : Carbon film  
OMF : Oxide Metal Film  
PF : Plastic Film  
CC : Carbon Composition  
VR : Variable Resistor  
EL : Electrolytic  
MF : Metal Film  
FR : Fusible Resistor

All CD and PF capacitors are ±5 %, 50 V and all resistor, ±5 %, 1/6 W unless otherwise noted.

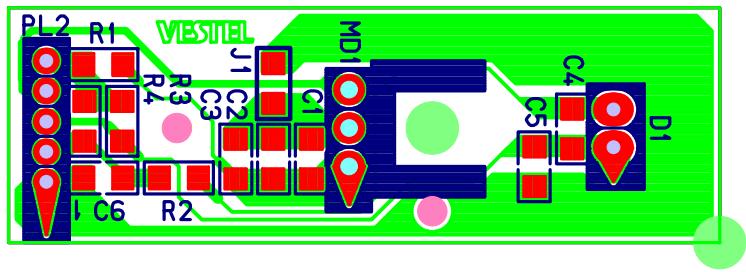


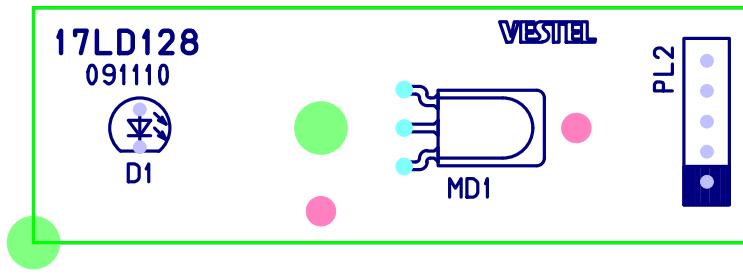
## PARTS LIST

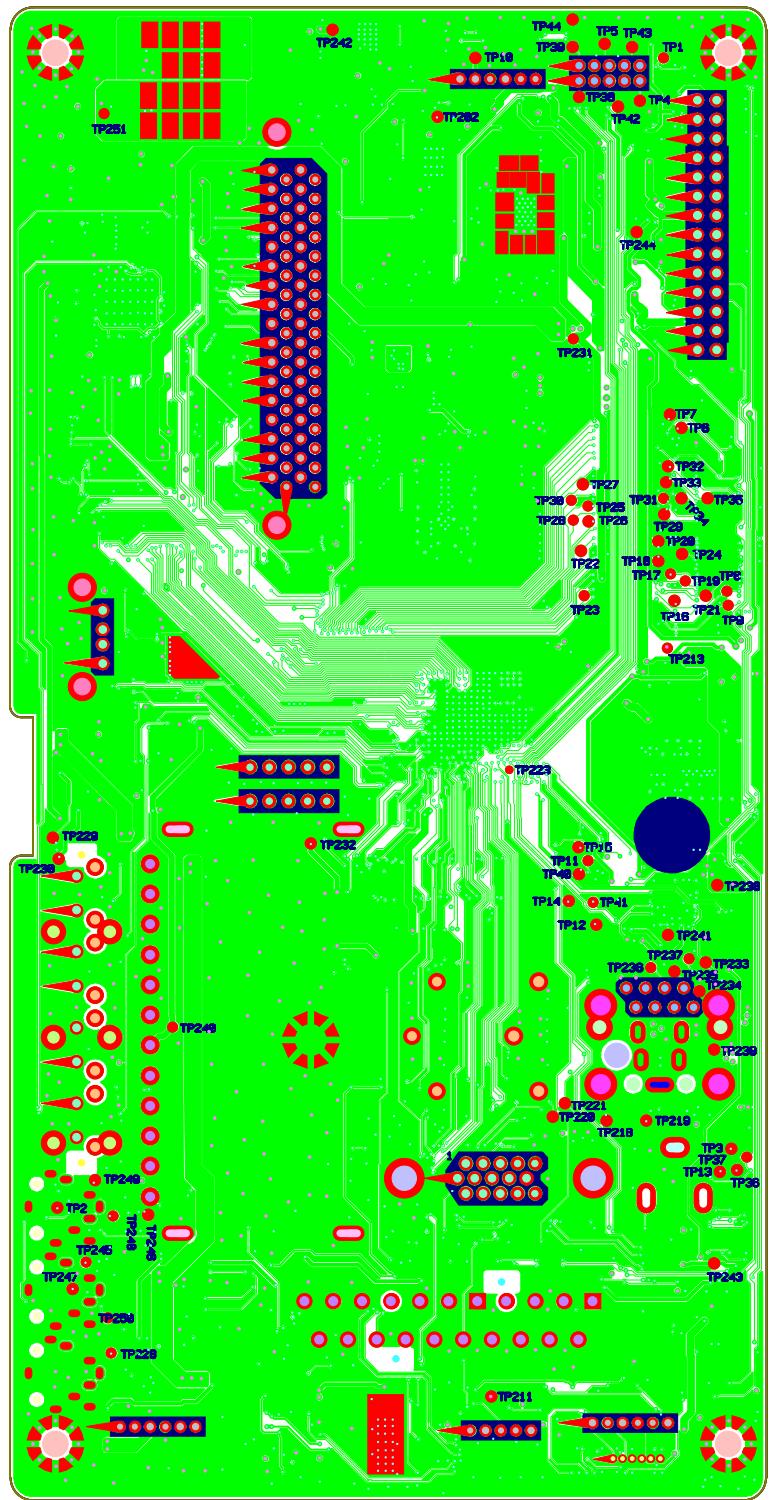
### Updating history

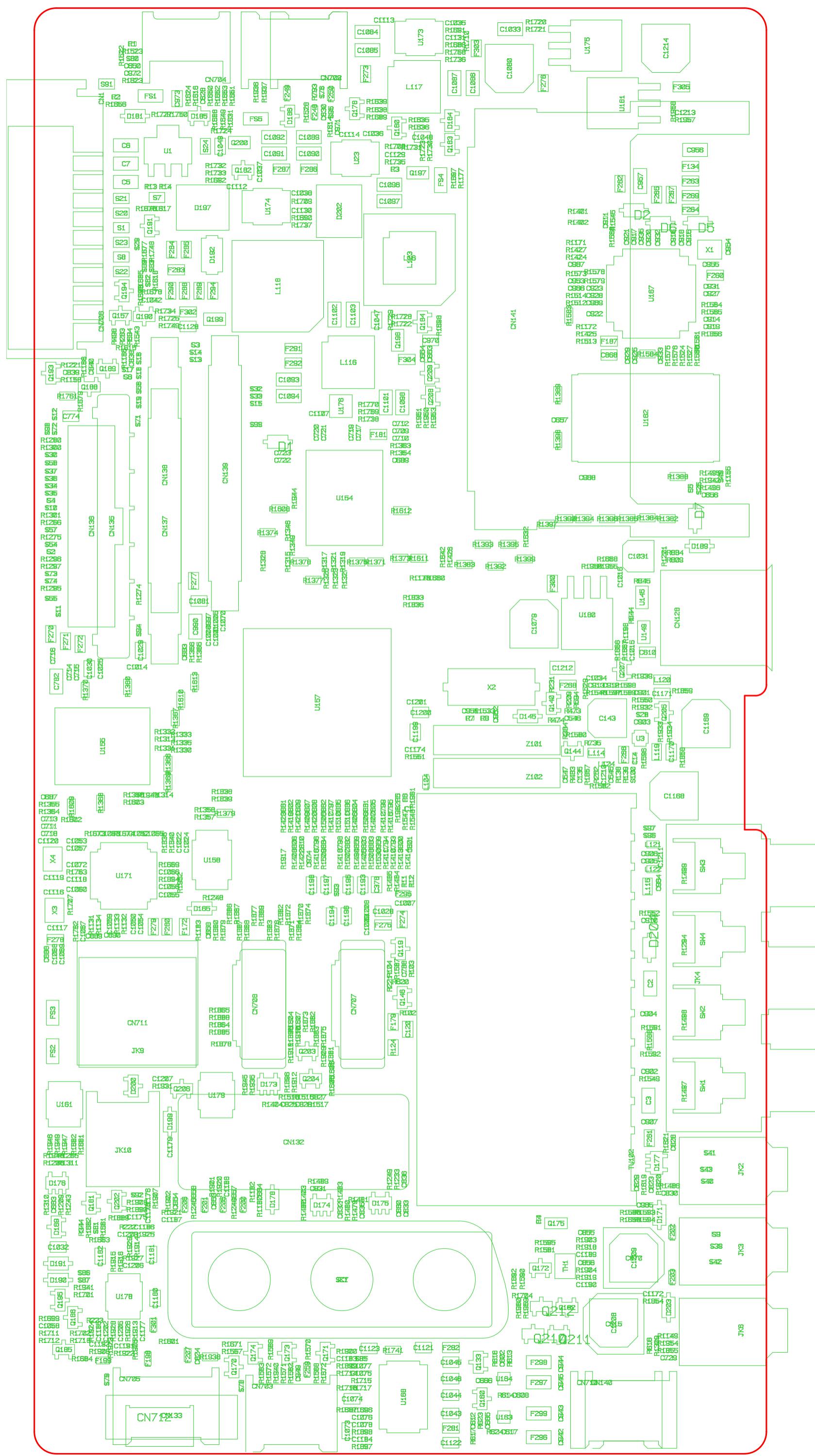
Currently there are no updates available.  
Please check back at a later time for any future updates.

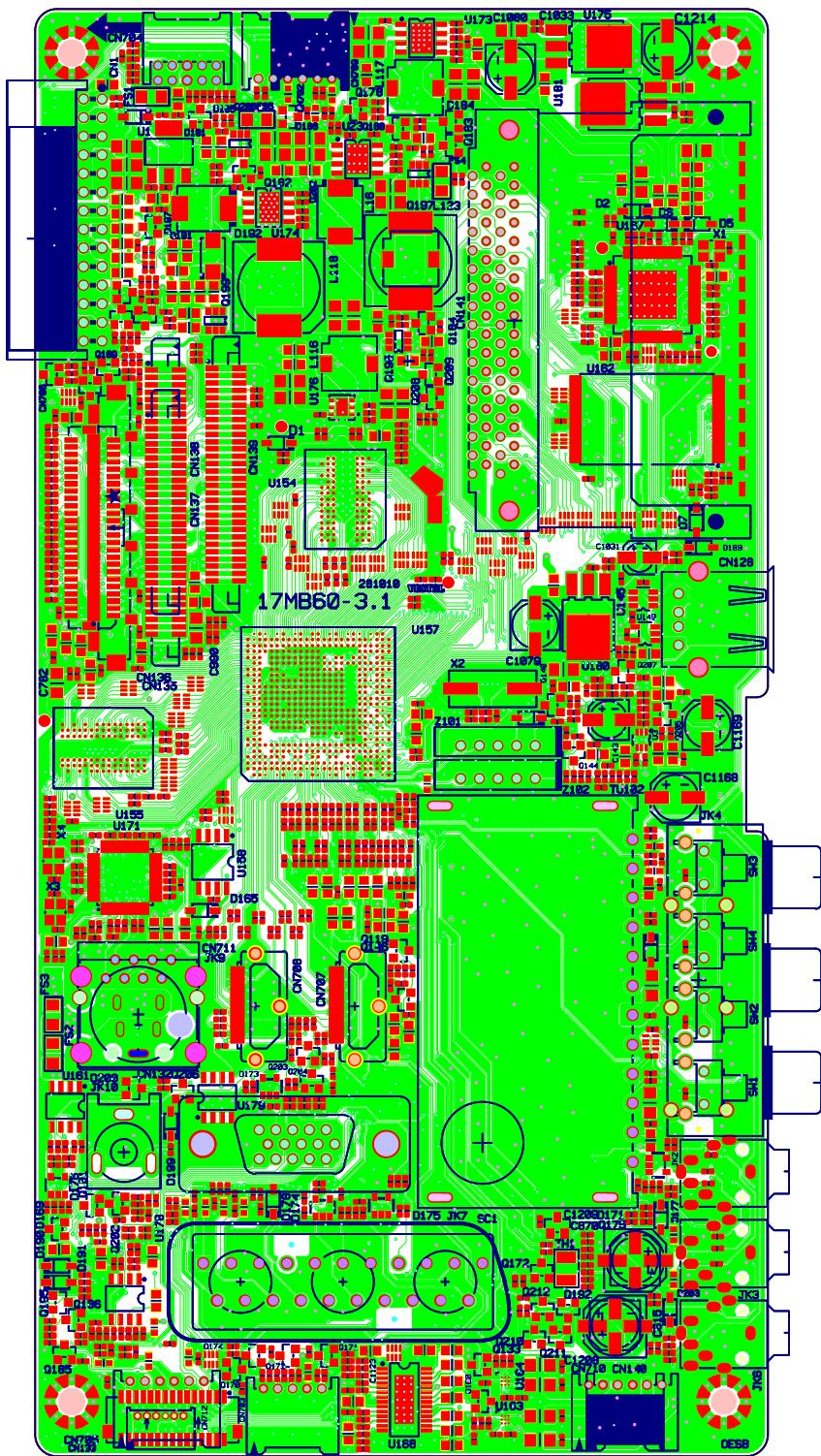
	Location	Parts No.	Description
	E200	75025242	PC BOARD ASSY, MAIN, 26EL833, 9C-EB40M0010
⚠	E250	75025229	POWER OPENFRAME, 88W/+5 12 24V, 0433-005E000
	E260	75025210	PC BOARD ASSY, KEY, 90-EB40S01D0
	E270	75025211	PC BOARD ASSY, IR, 90-EB40S01A0
⚠	E300	75023140	LCD PANEL, LC260EXN-SDA3
	E310	75025243	LVDS CABLE, 30P TO 40P L:300MM, 1414-05B0000
⚠	E320	75025213	POWER CORD, EU/2P BLACK L:1.8M, 1411-00WA000, F/G/N/R/RB
	E330	75025192	SPEAKER, 10W 8 OHM L+R, 04A4-00SK000
	E340	75025246	CABLE, SPEAKER, 2P TO 2P L:70MM, 1419-001N000
	E342	75025248	CABLE, INVERTER, 14P TO 12P L:210MM, 1410-0082000
	E344	75025250	CABLE, POWER, HSG 14P TO 14P, 1414-05BD000
	E346	75025252	CABLE, POWER, 2P INLET-HSG 4P, 1414-05BG000
	E348	75025255	CABLE, Y, 8P TO HSG 3+5P, 1414-05BF000
	E400	75014827	REMOCON HAND UNIT, CT-90326
⚠	E410	75025271	MANUAL, 1506-0GKK000, G
	E100	75026728	FRONT BEZEL ASSY, 26EL834, 13EB-2WB1401
	E110	75026730	BACK COVER ASSY, 26EL834, 13EB-2WB0Z01
	E125	75025238	SCREW, FOR STAND ASSY, 26EL833, 13EB-2WB0B01
	E140	75026732	PLATE, SIDE IO, 26EL834, 13EB-2WQ1601
	E155	75025209	SCREW, BRACKET ASSY, 9C-EB40S00D0
	E190	75025228	MYLAR, 13EB-2VL0311
	E500	75026734	CARTON BOX, 26EL834, 1503-03HA000
	E510	75025257	EPS CUSHION, TOP RIGHT, 26EL833, 1505-01WD000
	E511	75025258	EPS CUSHION, TOP LEFT, 26EL833, 1505-01WC000
	E512	75025259	EPS CUSHION, BOTTOM RIGHT, 26EL833, 1505-01WE000
	E513	75025260	EPS CUSHION, BOTTOM LEFT, 26EL833, 1505-01WF000
	E520	75025261	EPE BAG, 26EL833, 1516-0103000
	E530	75025262	PE BAG, STAND, 26EL833, 1516-01AL000

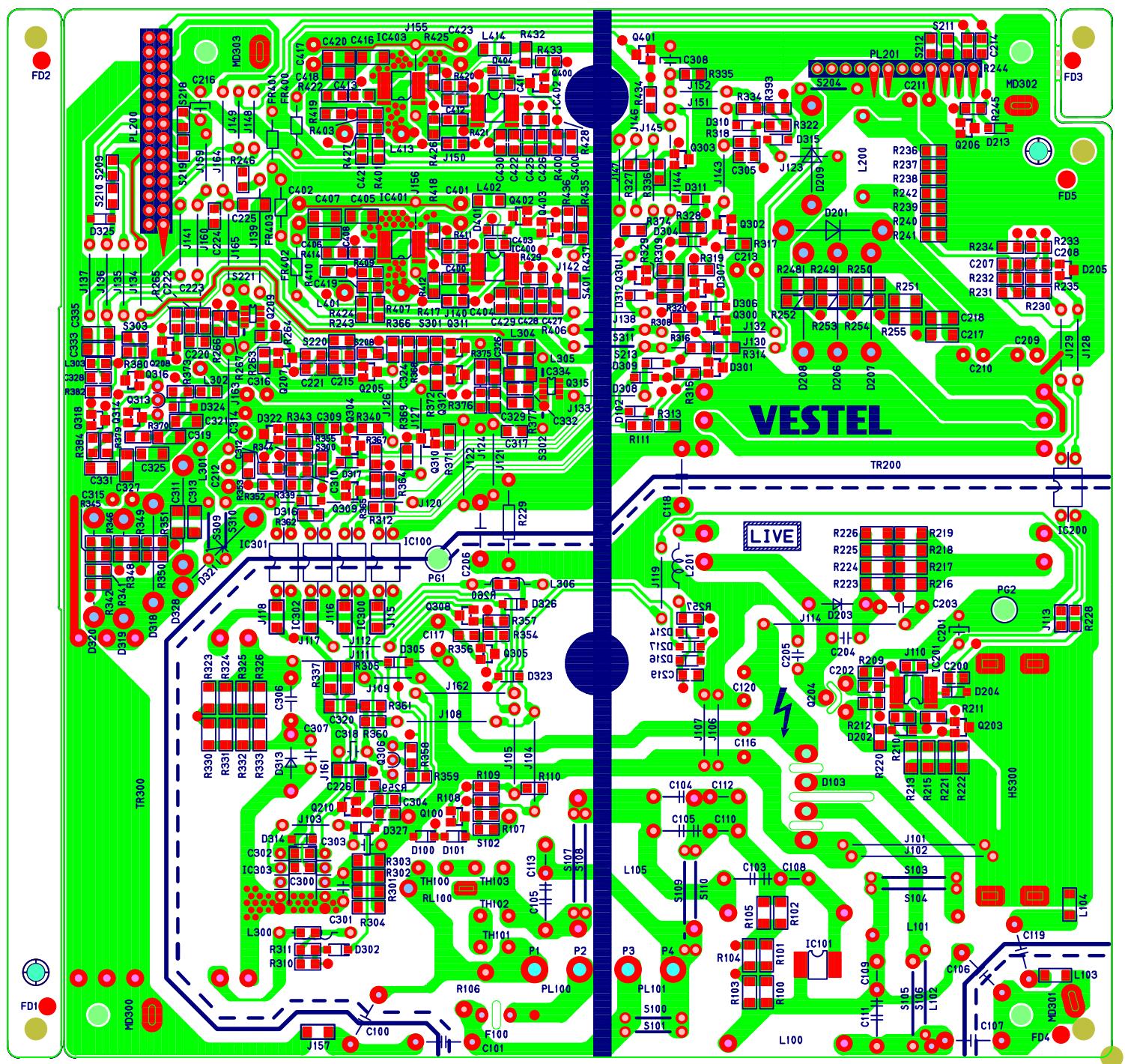


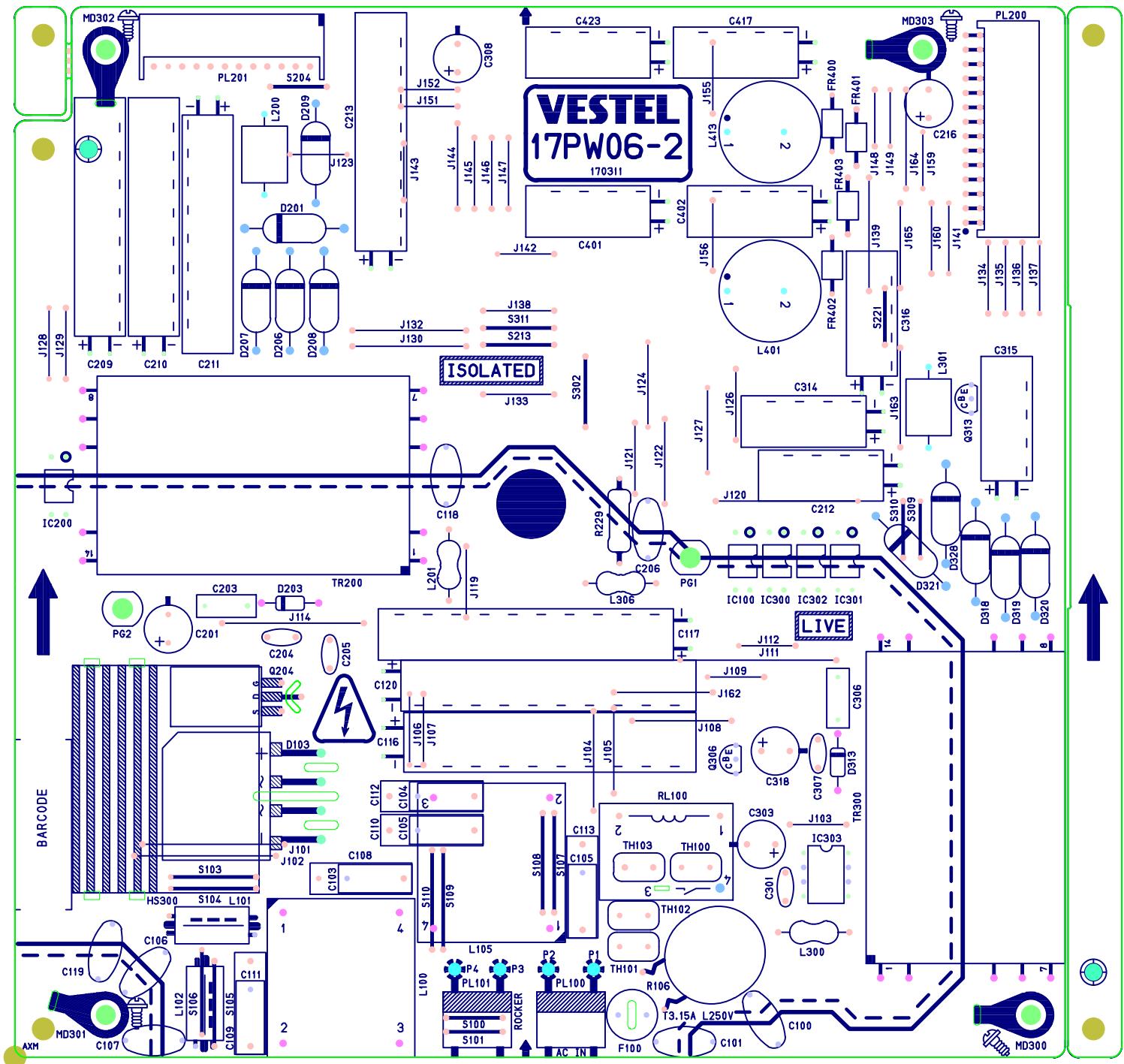


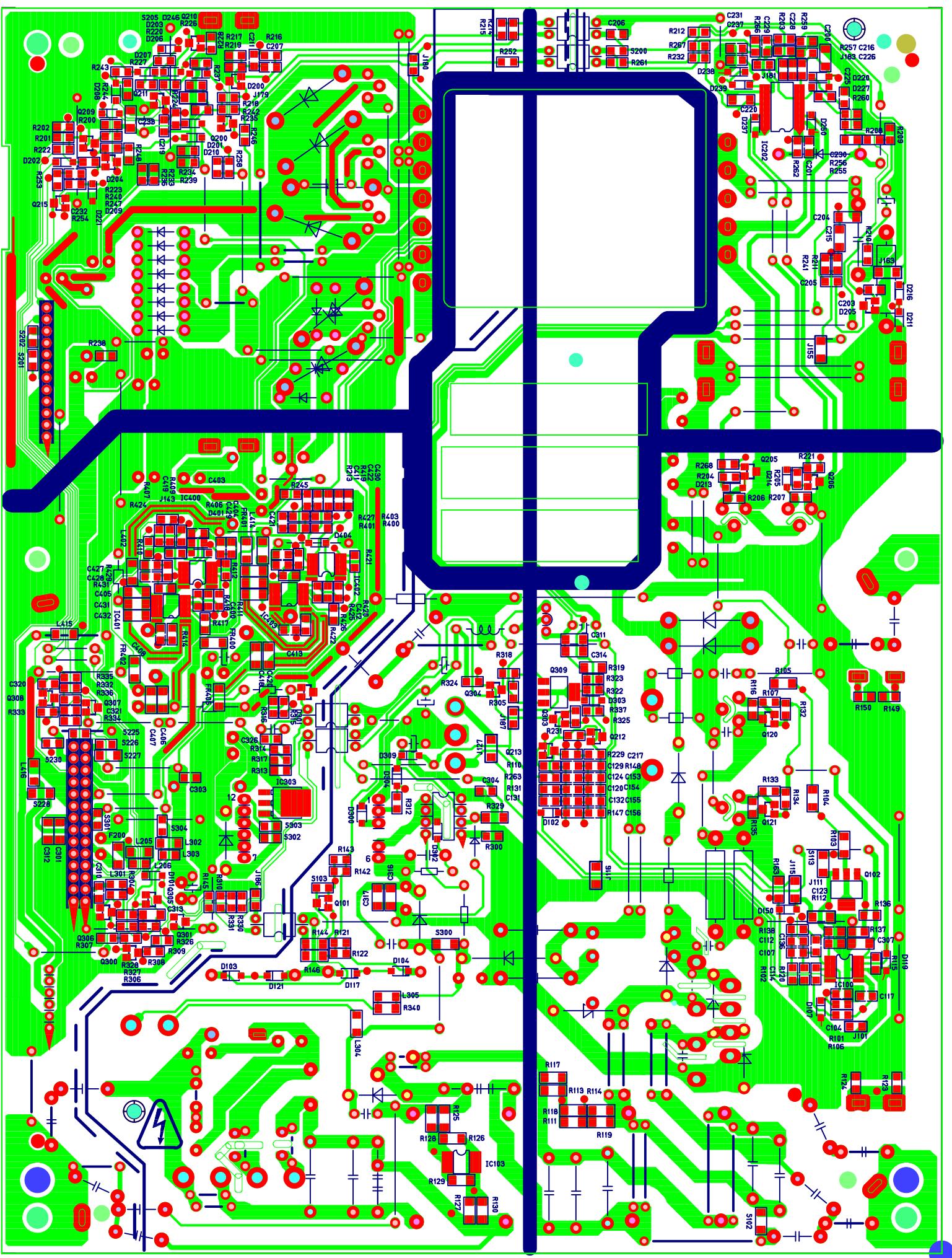


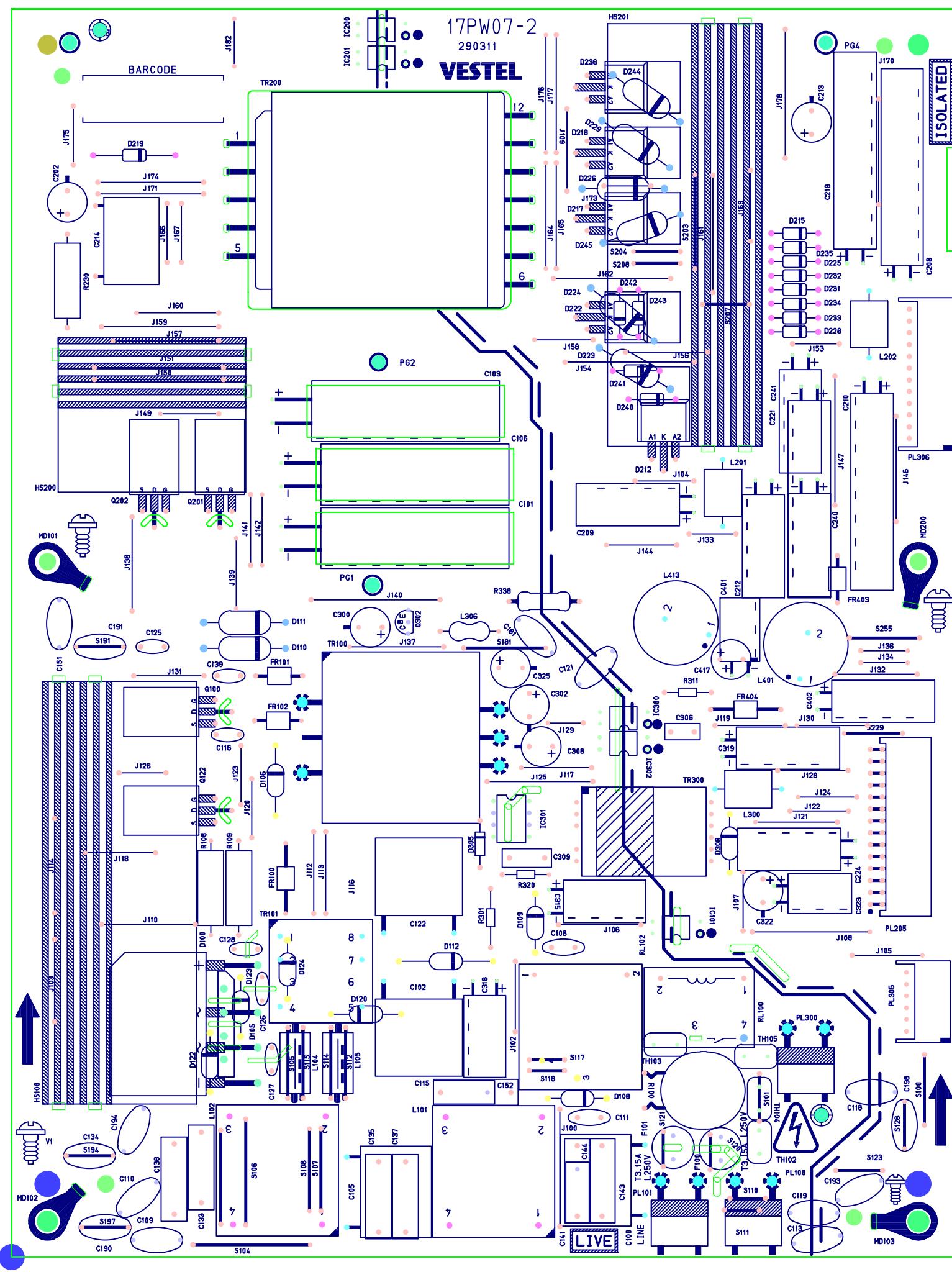


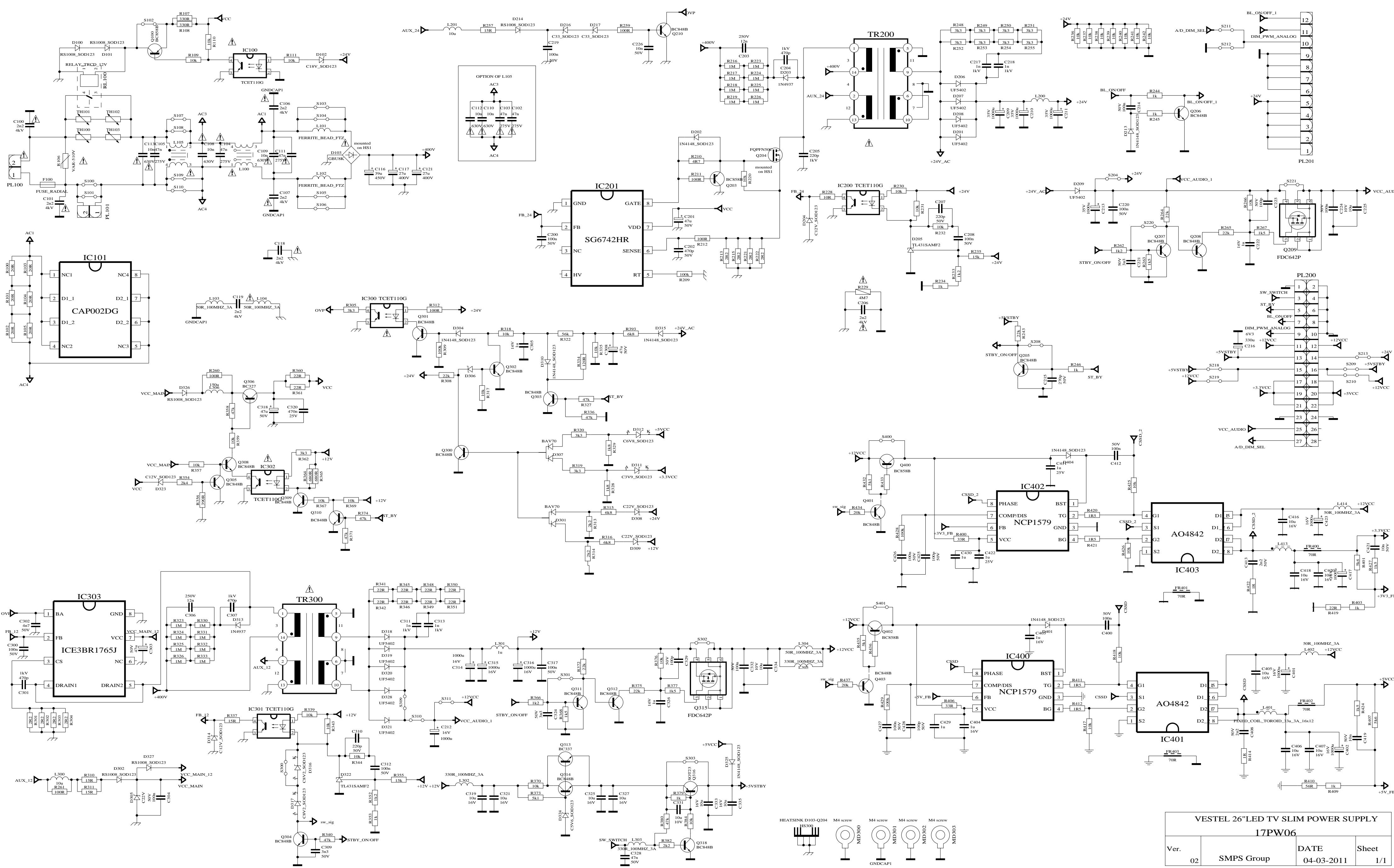


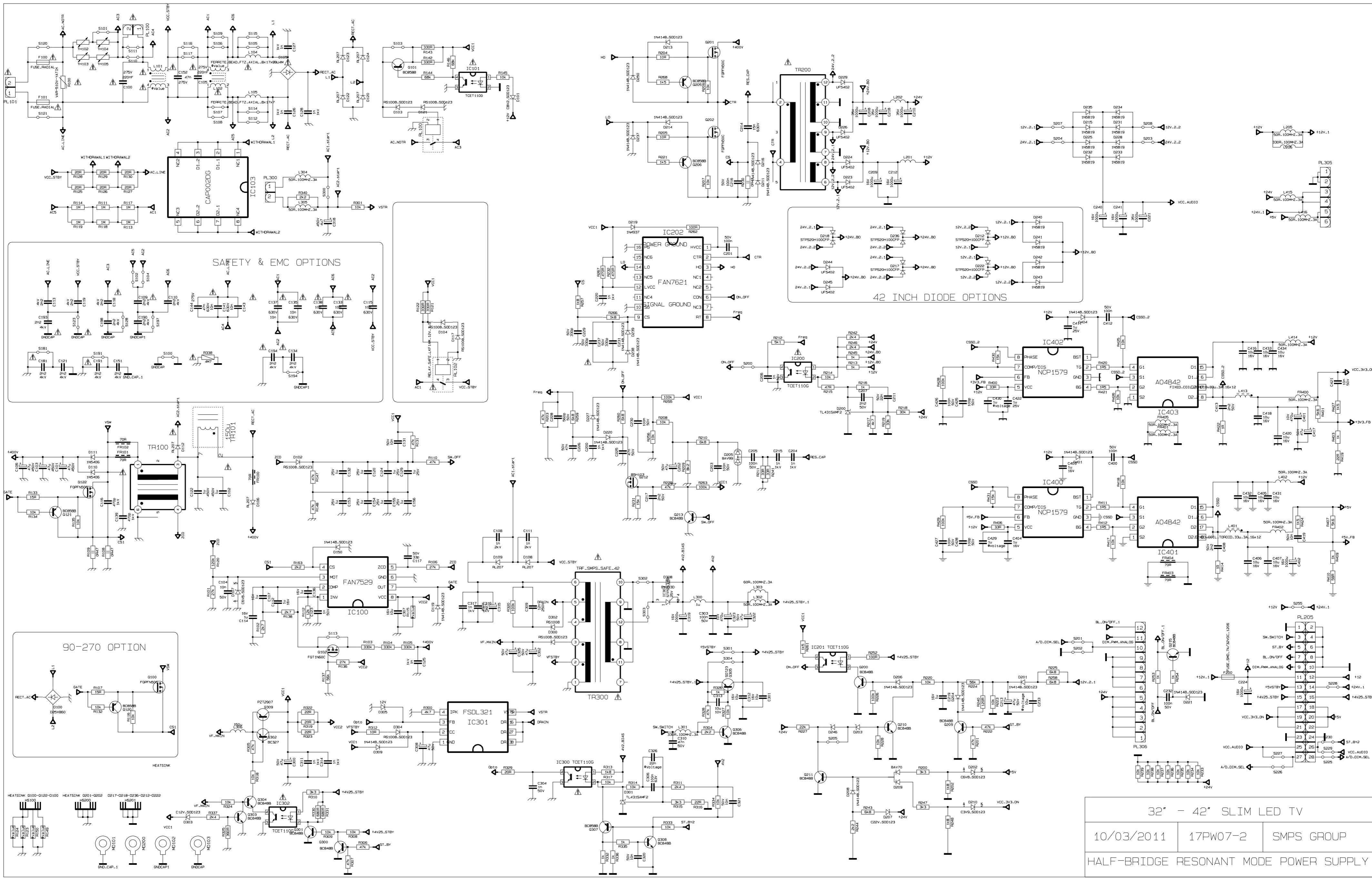




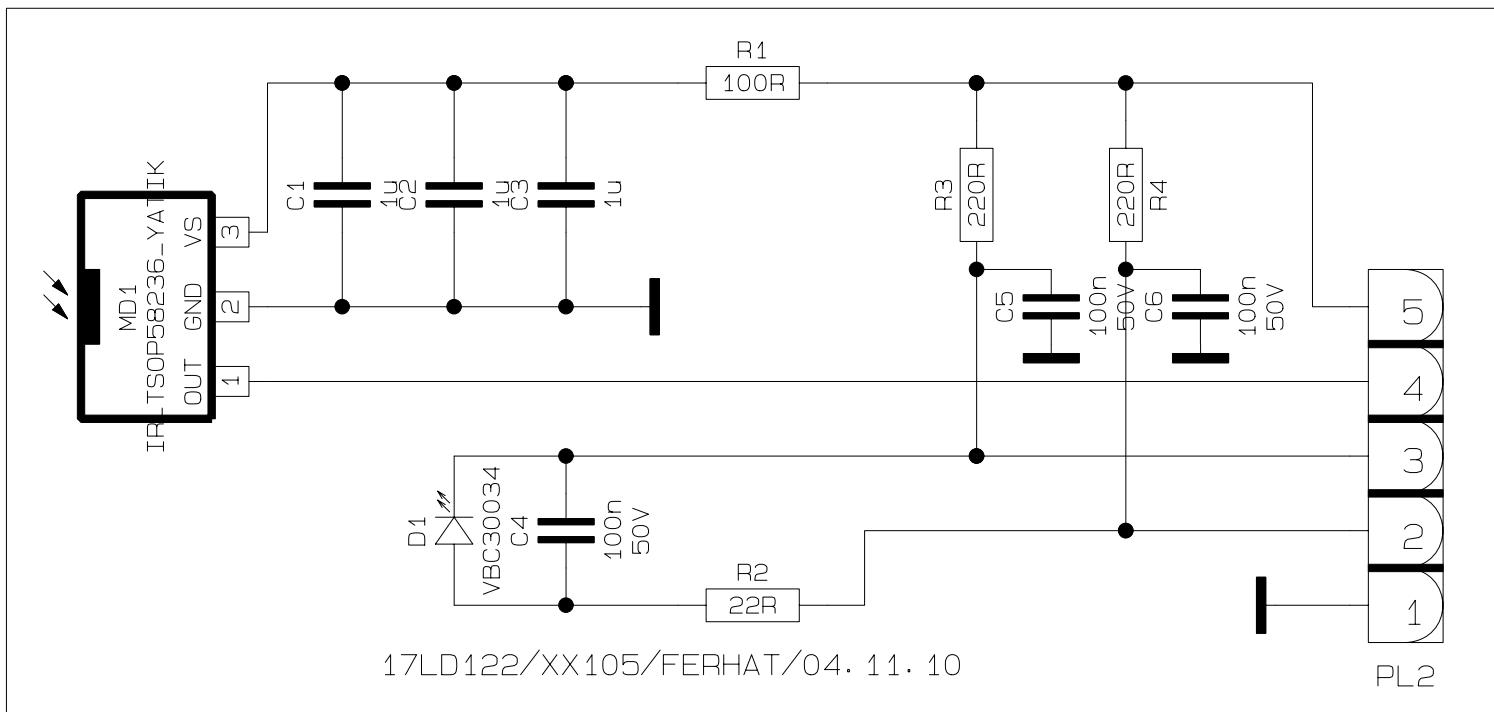


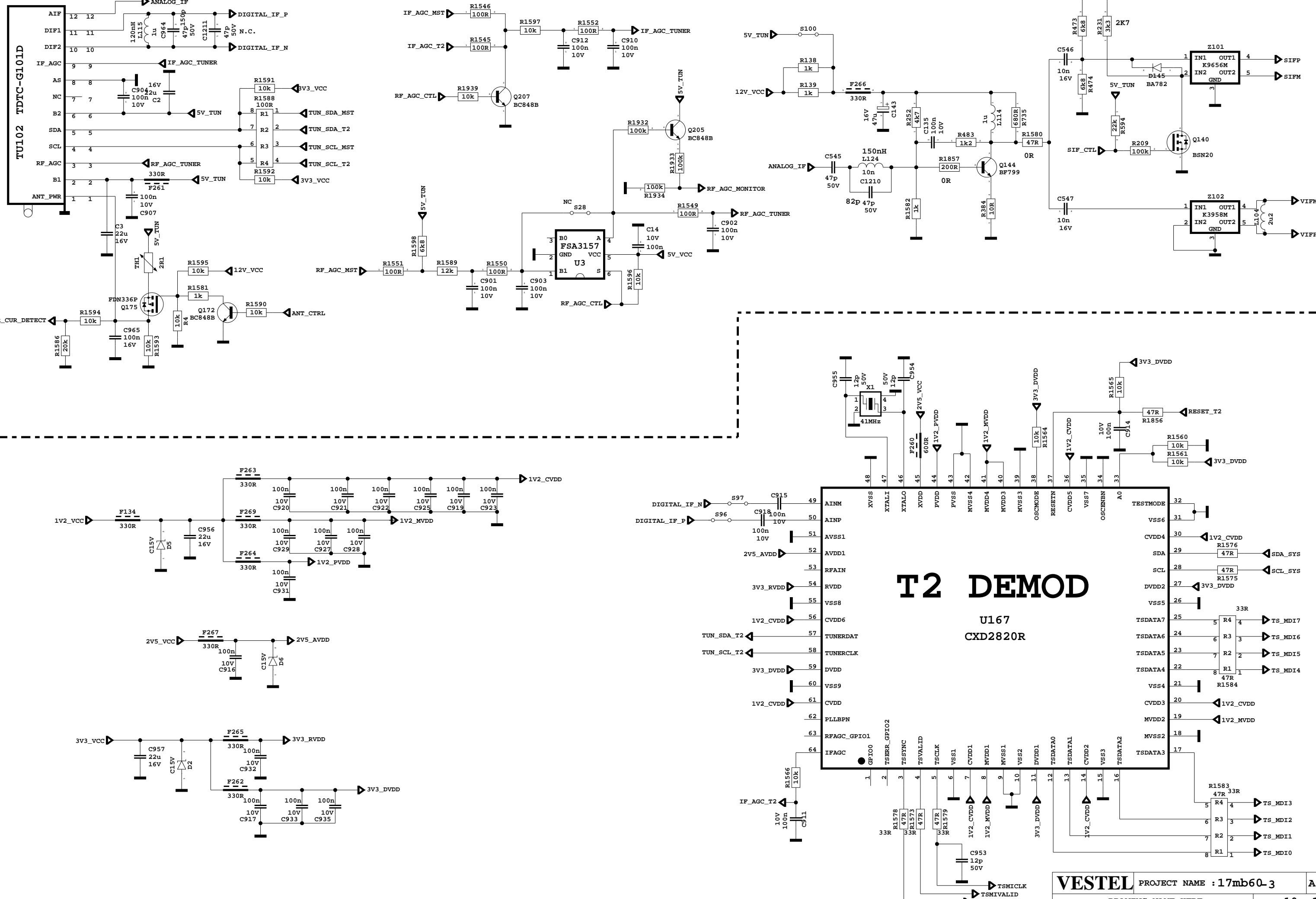






32" - 42" SLIM LED TV  
10/03/2011 17PW07-2 SMPS GROUP  
HALF-BRIDGE RESONANT MODE POWER SUPPLY

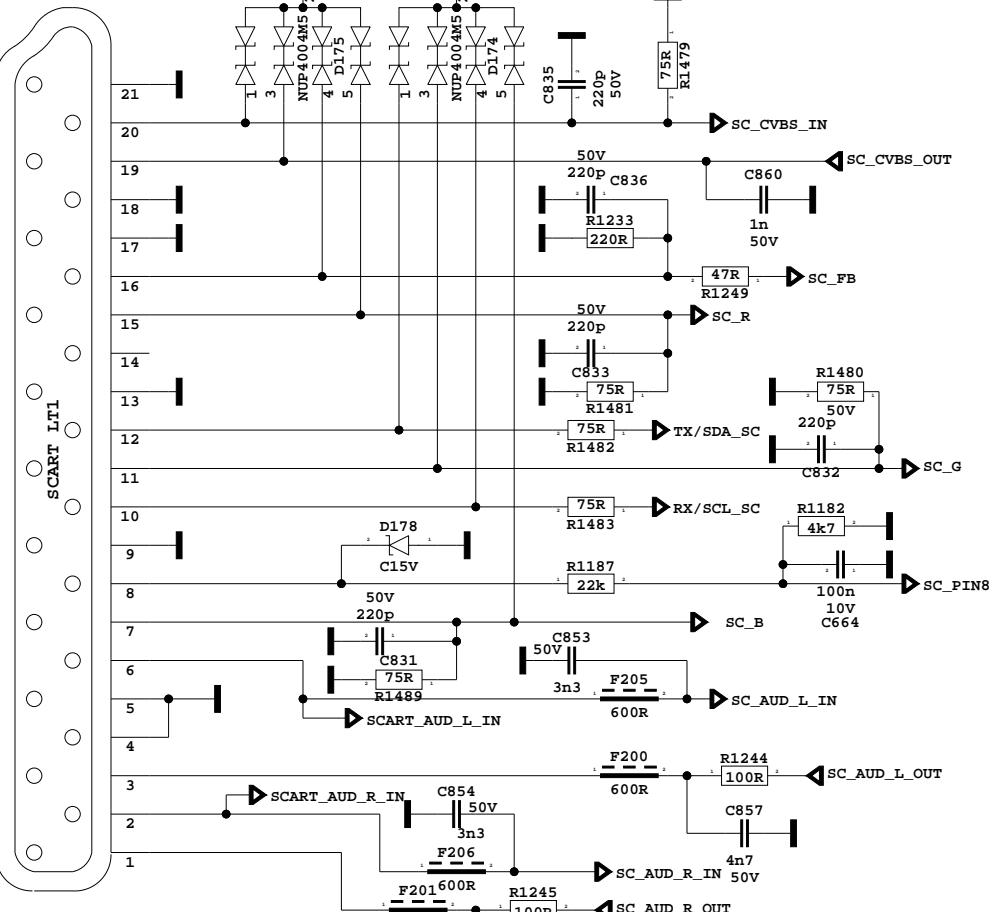
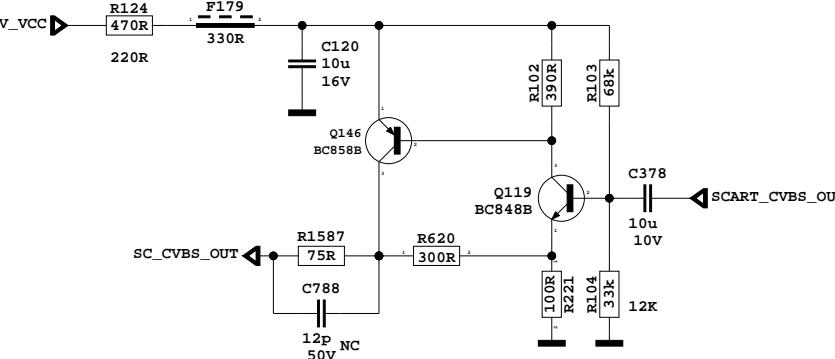
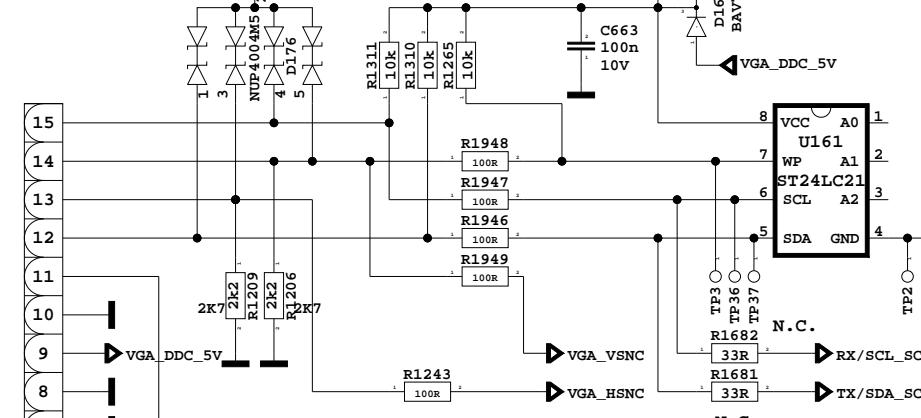


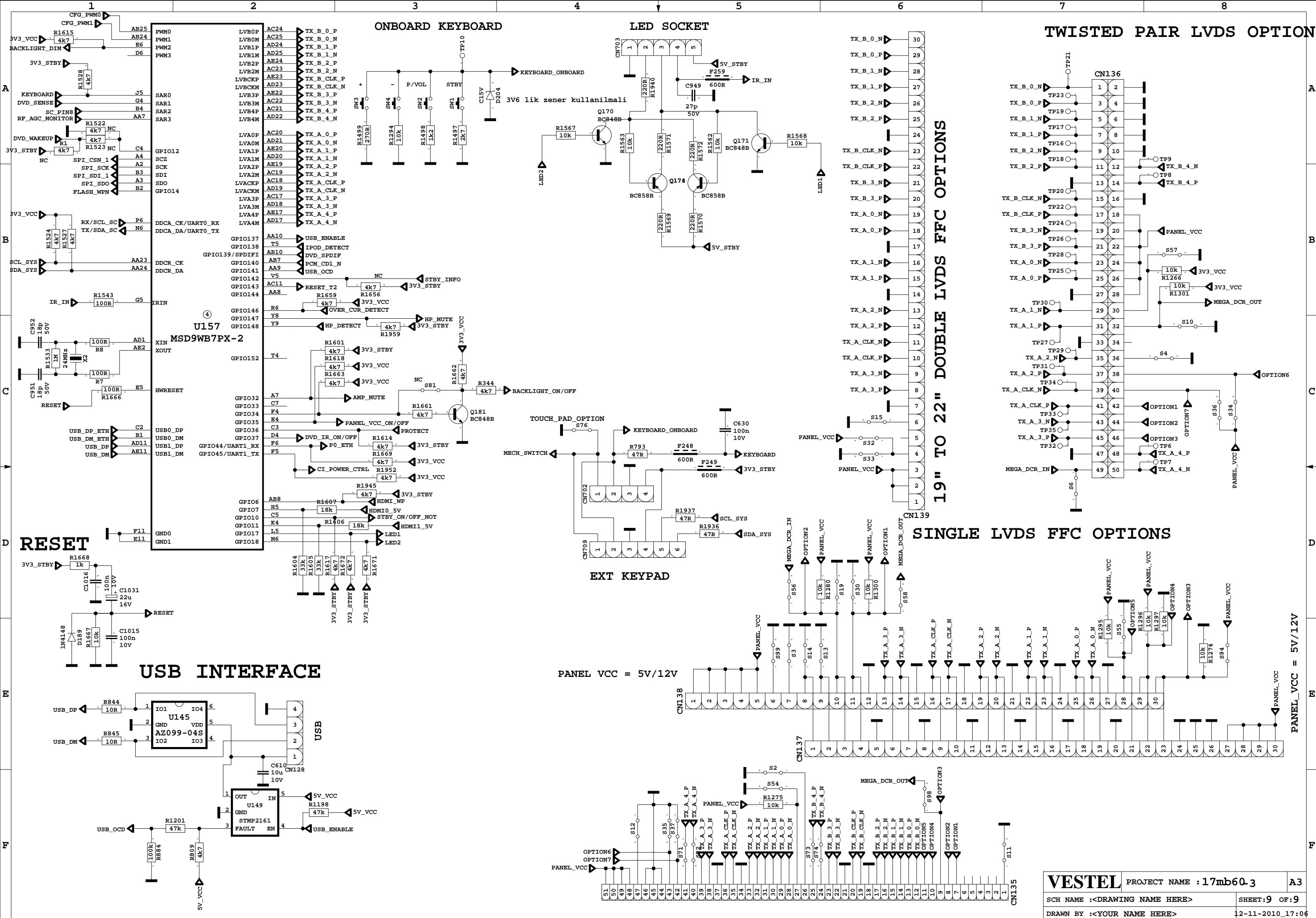


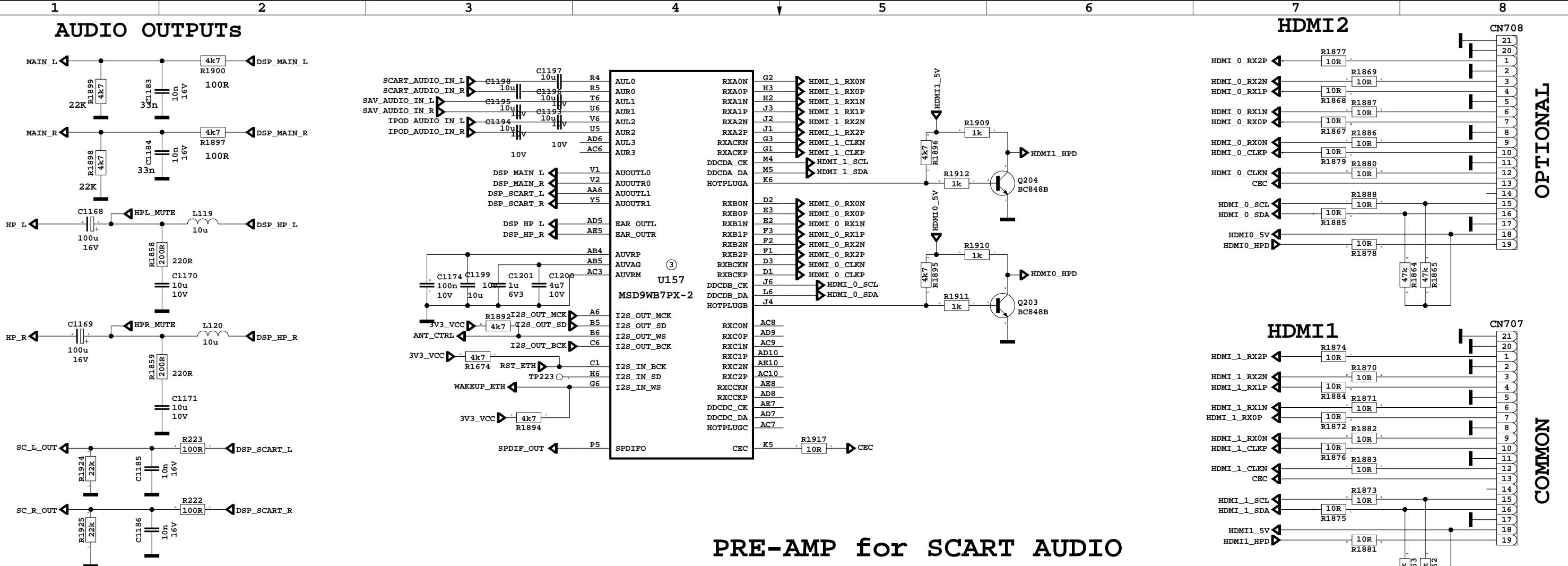
# T2 DEMOD

U167

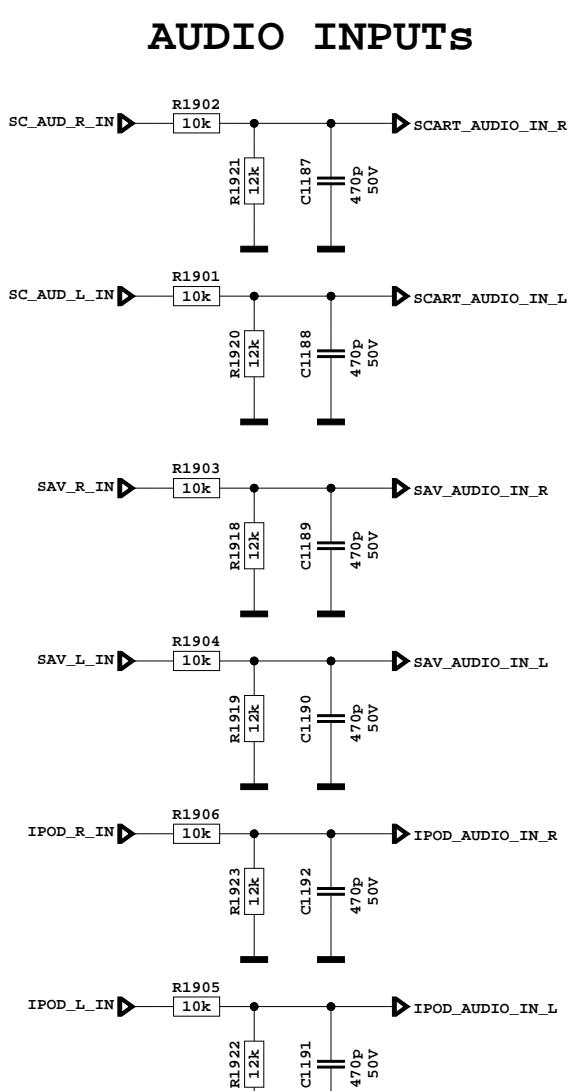
CXD2820R

**SCART****SCART VIDEO OUTPUT AMPLIFIER****PC INPUT**

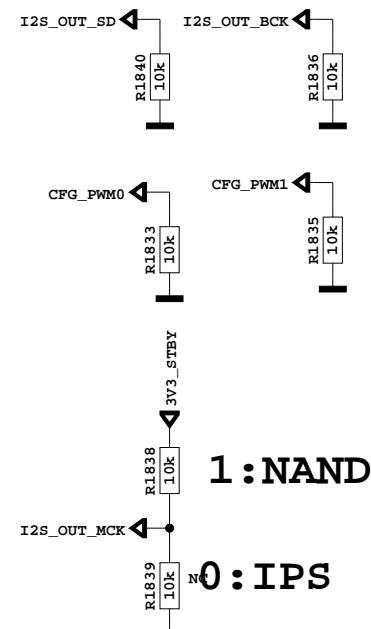




# **PRE-AMP for SCART AUDIO**

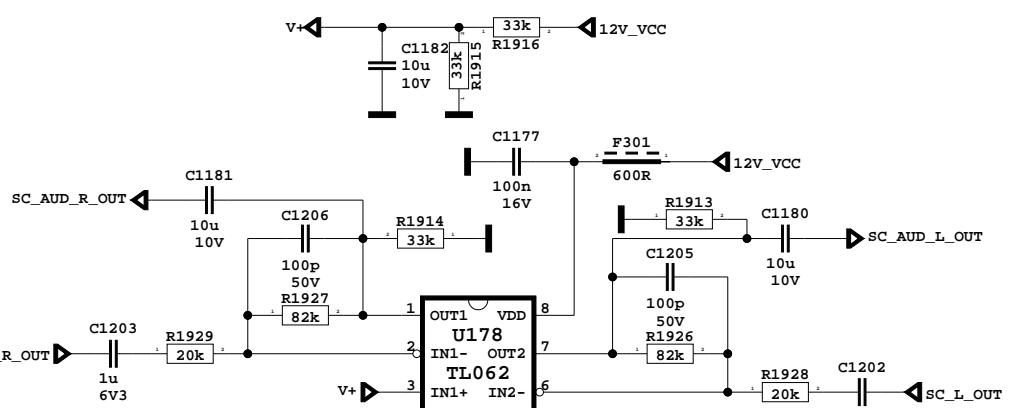


## **MODE SELECTION**

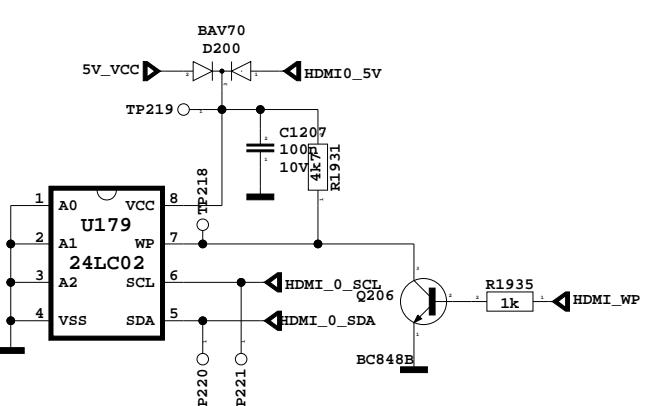
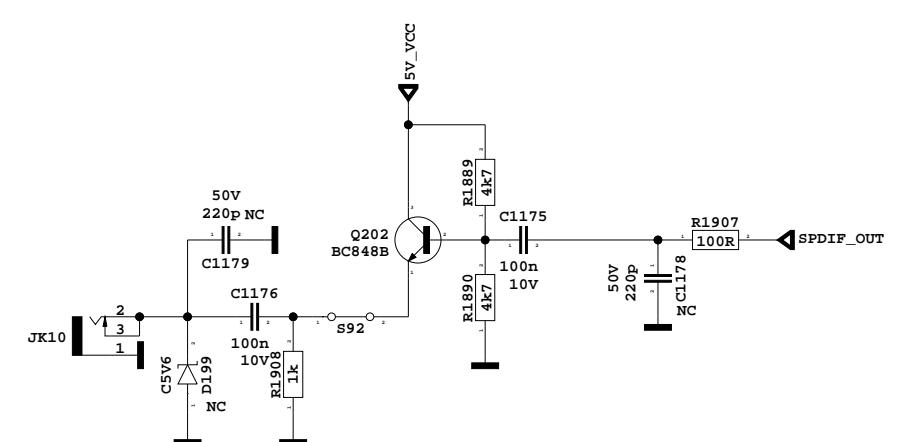


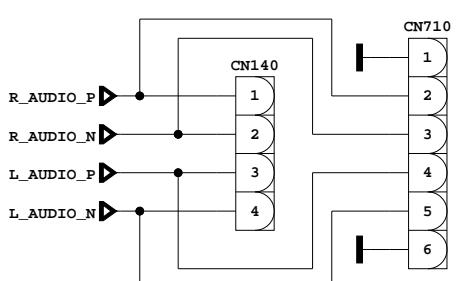
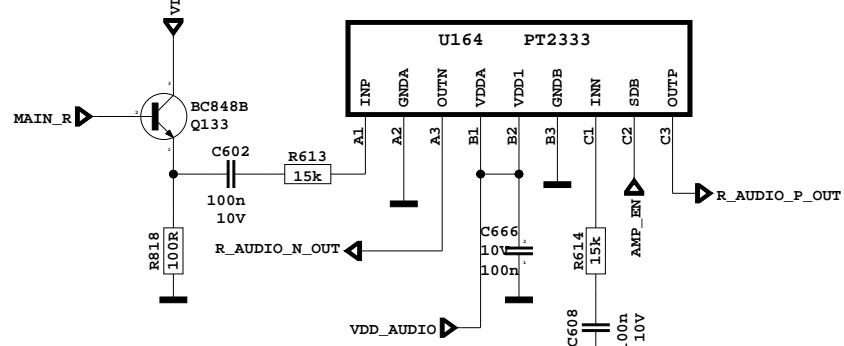
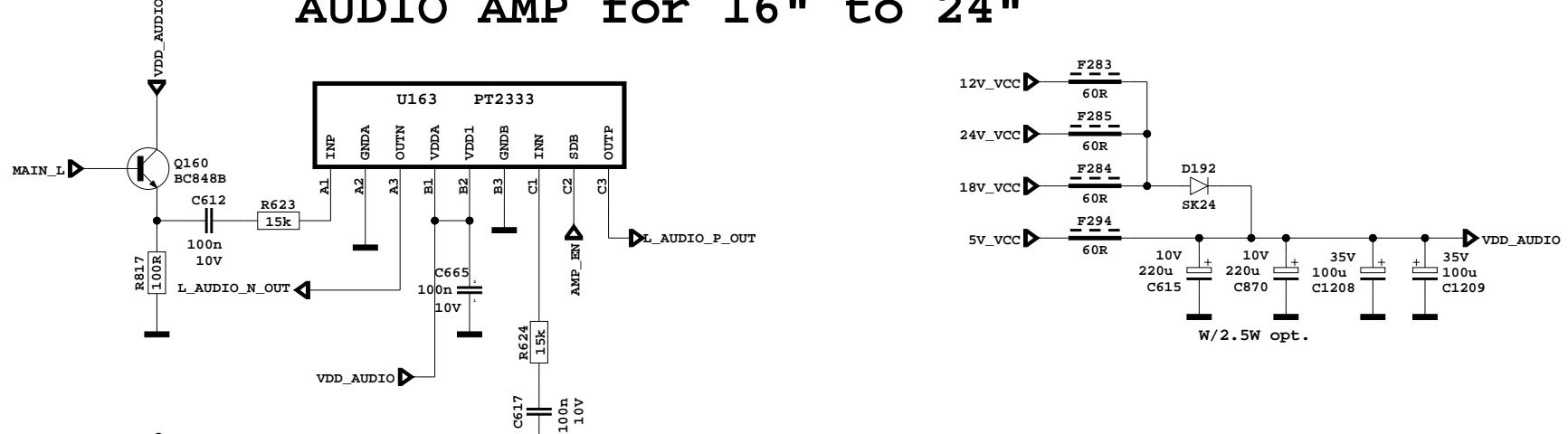
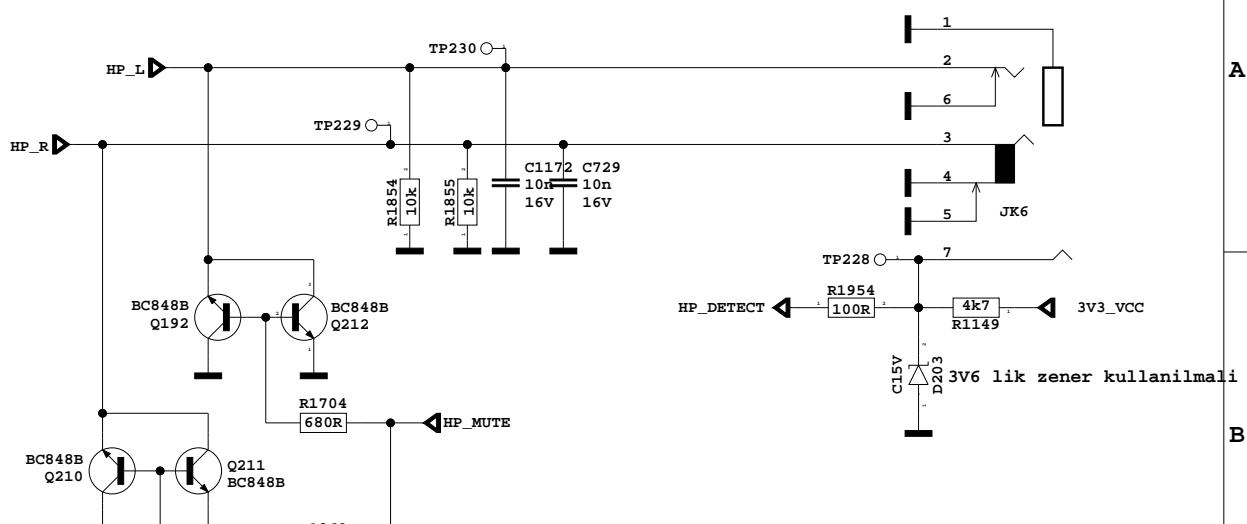
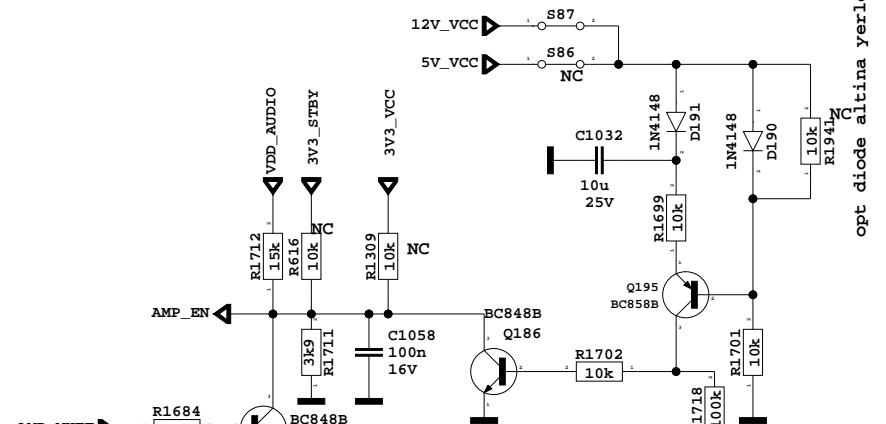
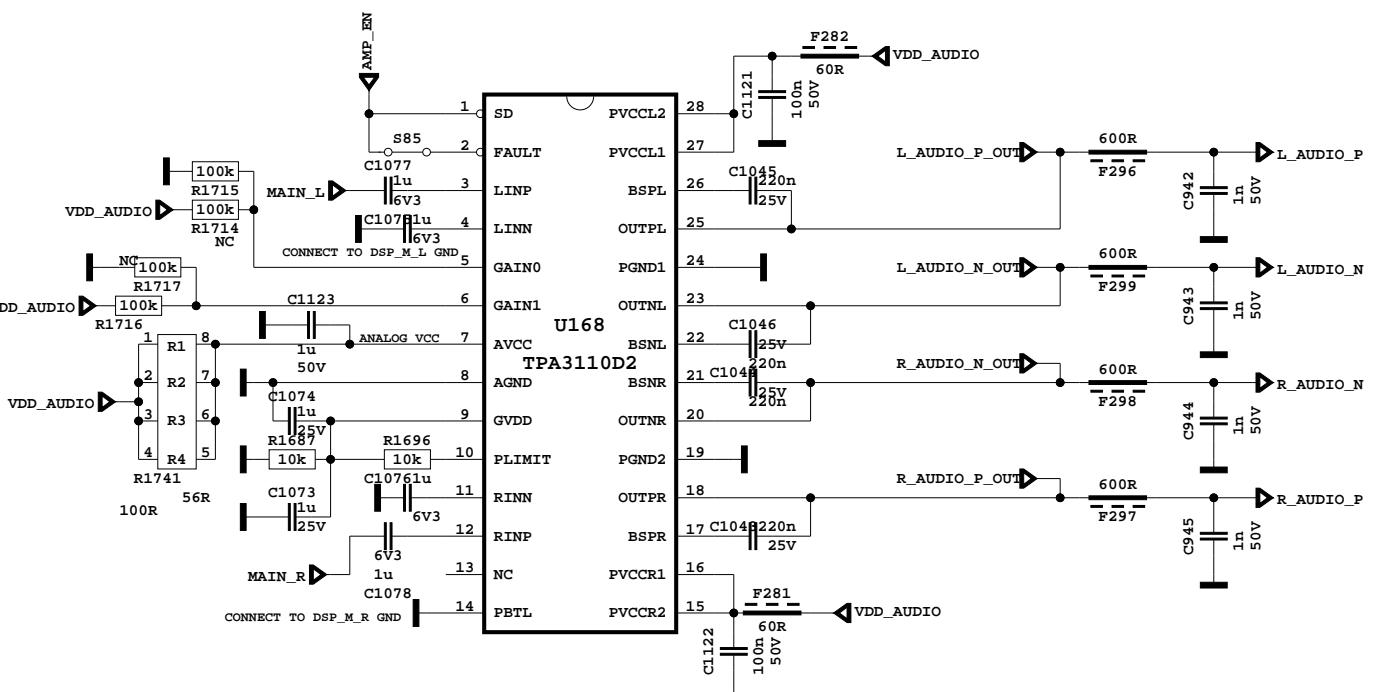
1:NAND

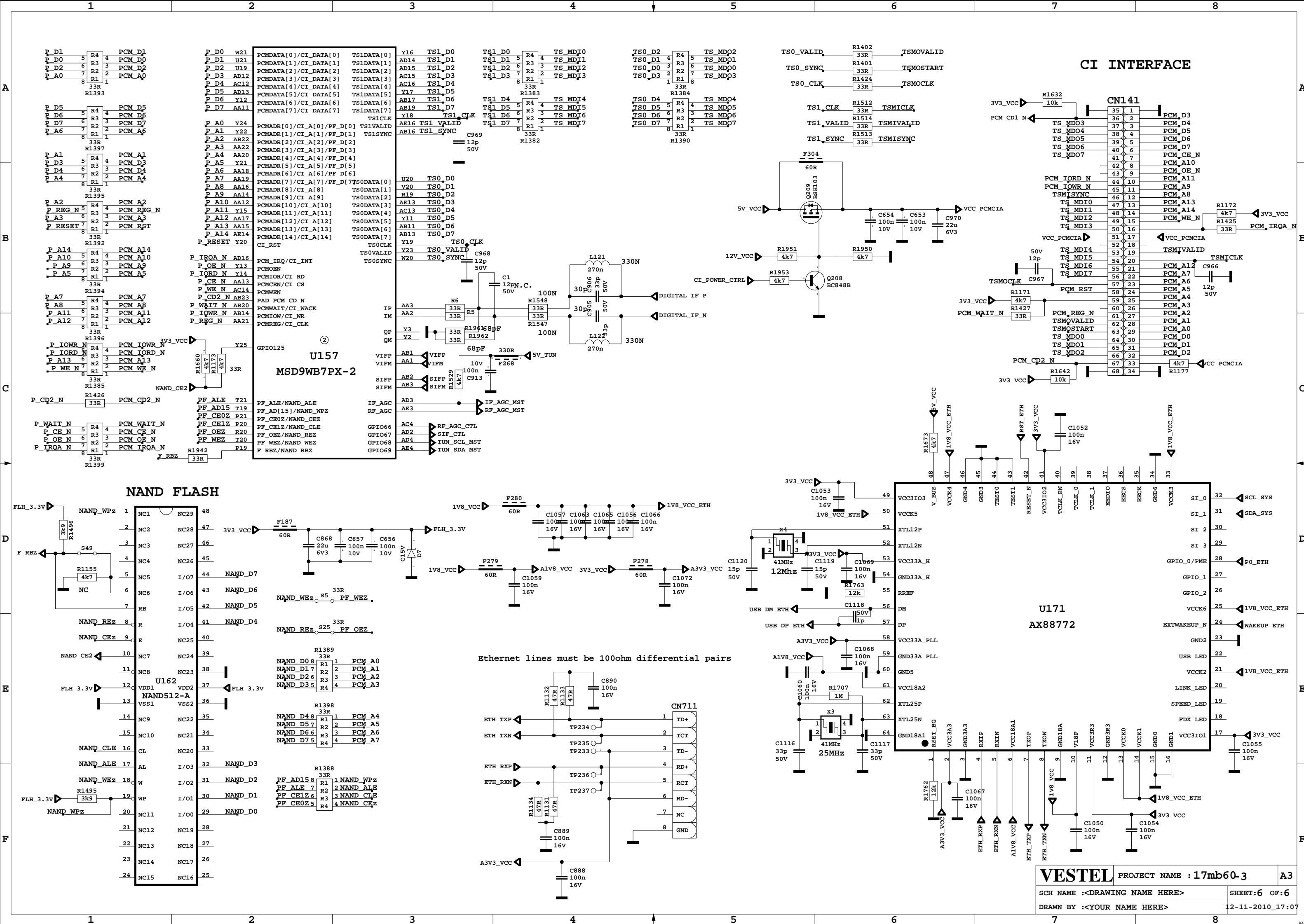
0 : IPS

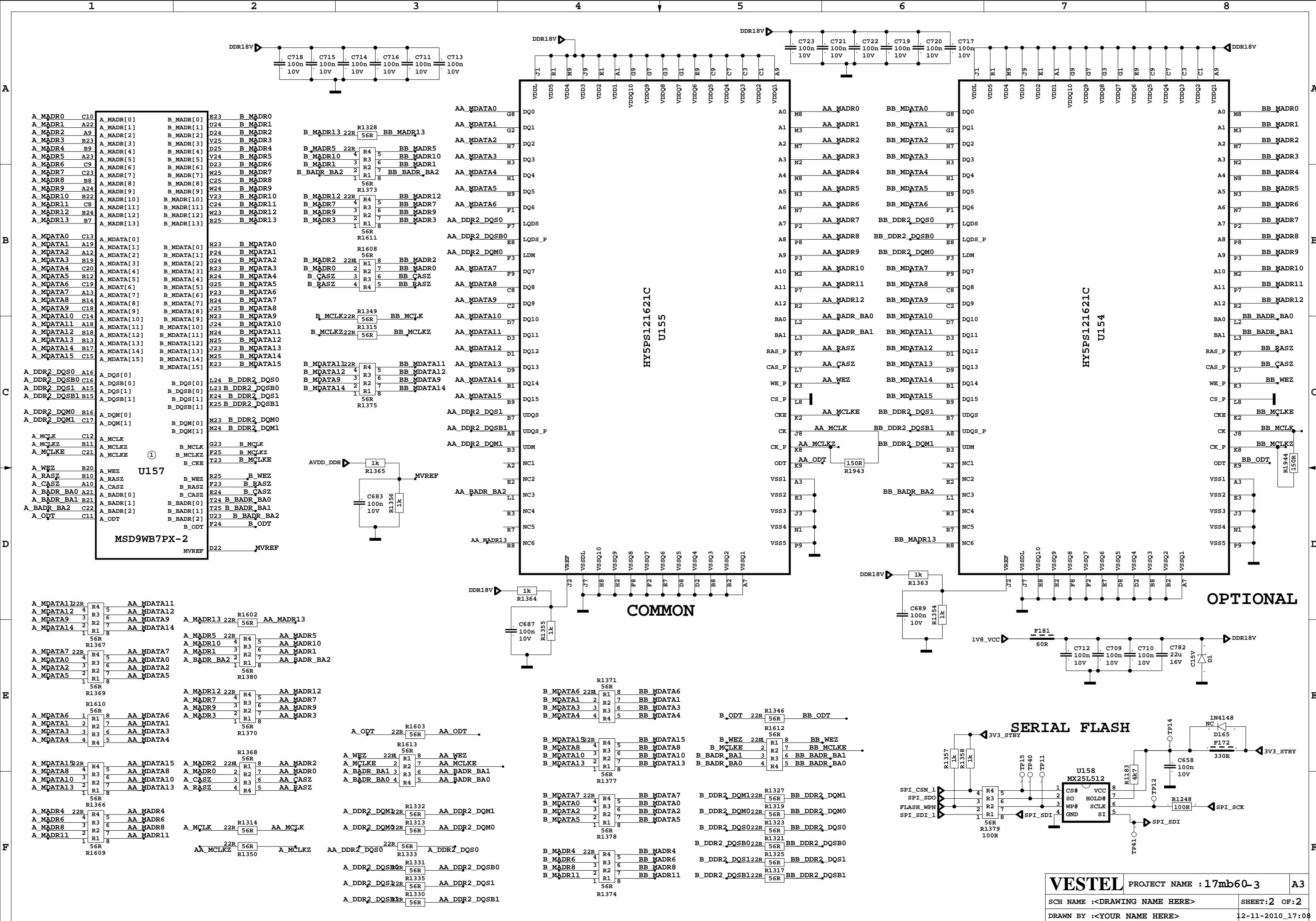


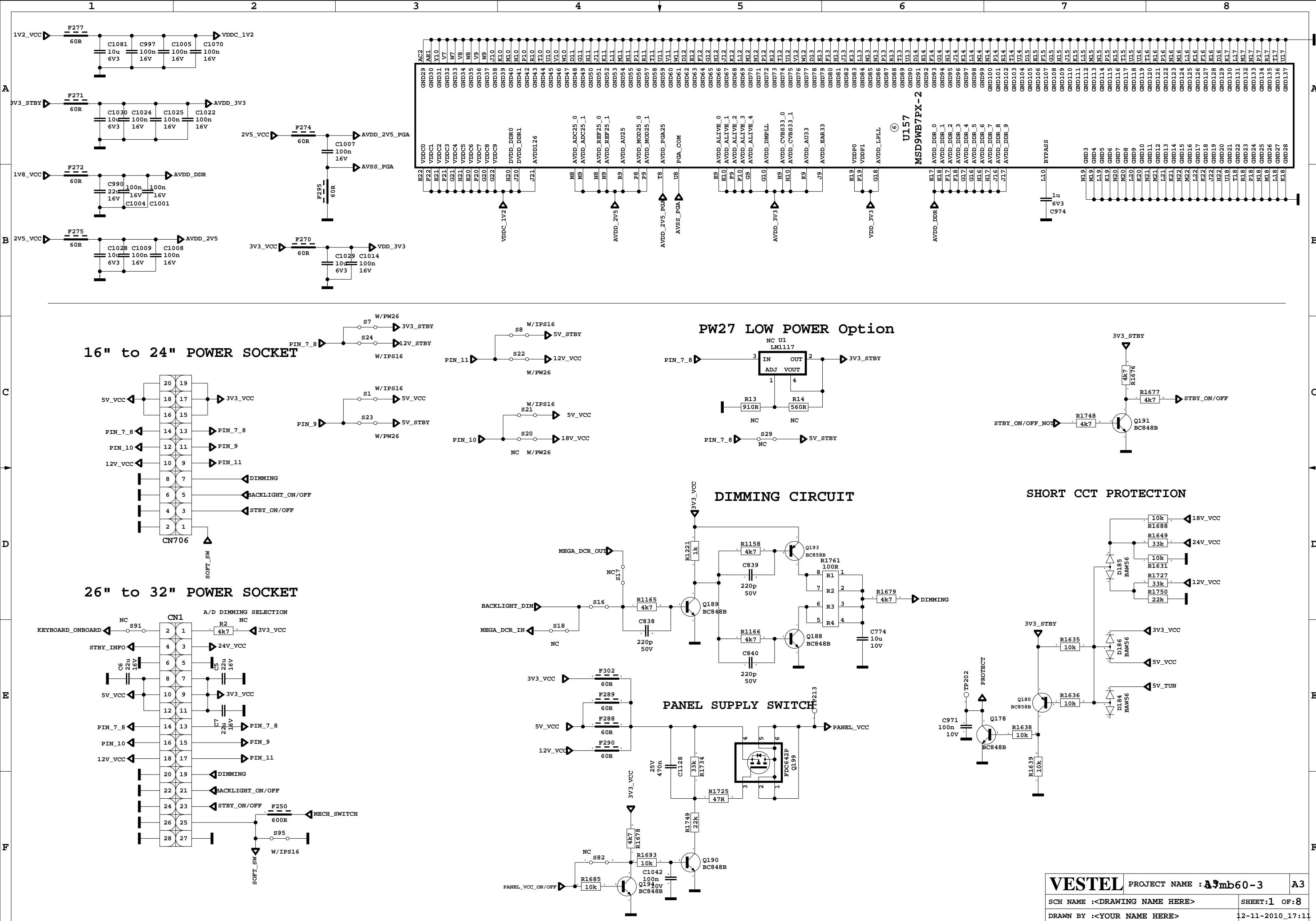
**COAX SPDIF OUT**



**AUDIO AMP for 16" to 24"****HEADPHONE OUTPUT****POP NOISE CIRCUIT****AUDIO AMP for 26" to 32"**

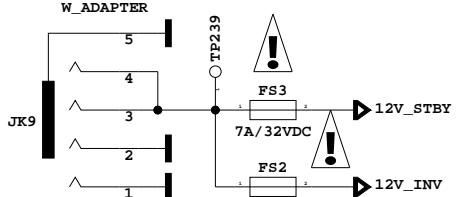




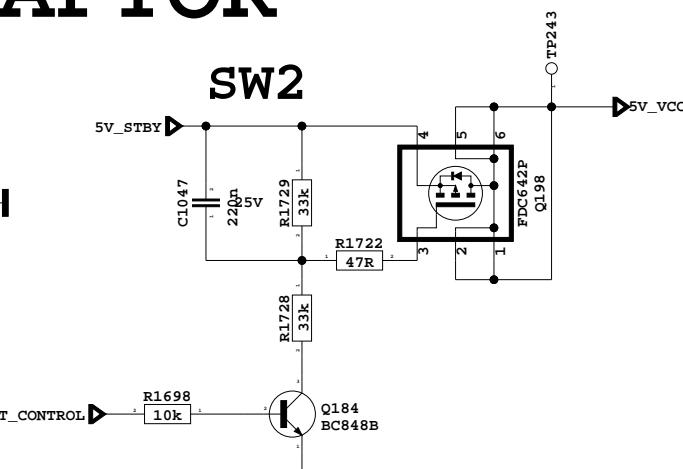
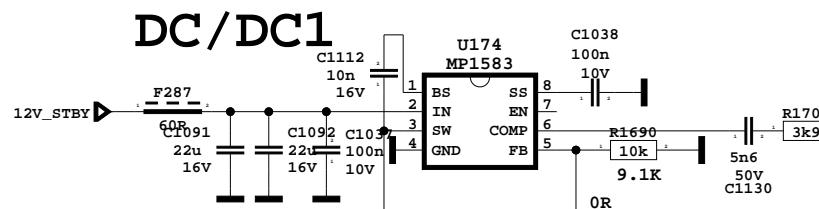
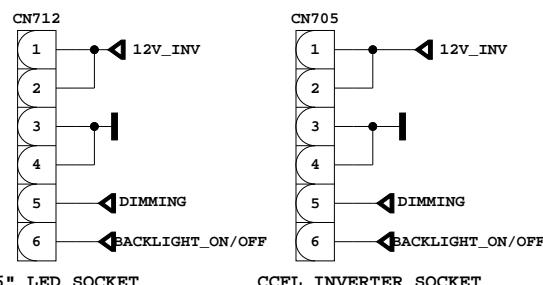


# W/ADAPTOR

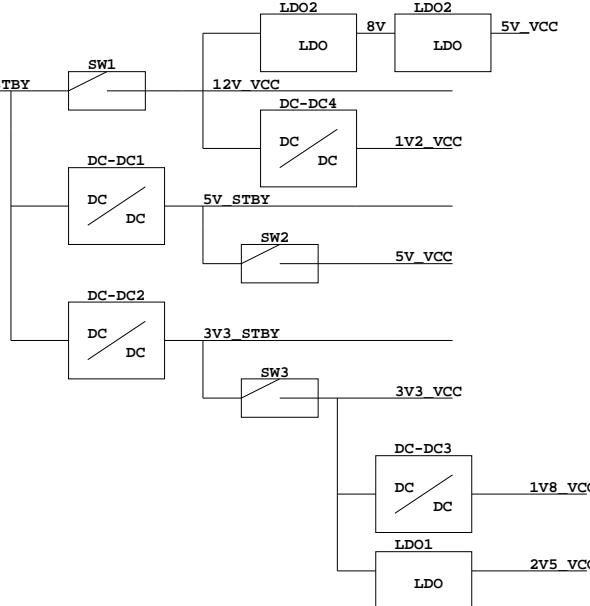
## ADAPTER SOCKET



## INVERTER SOCKET W/ADAPTER

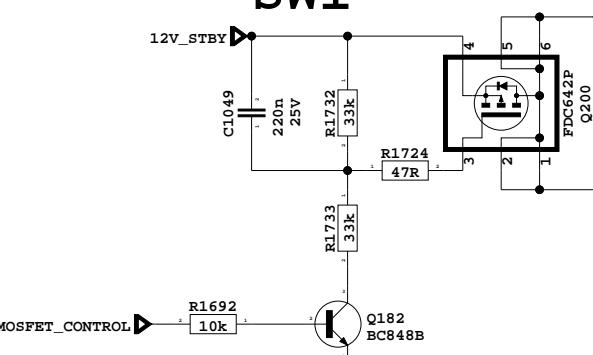


## POWER BLOCK DIAGRAM

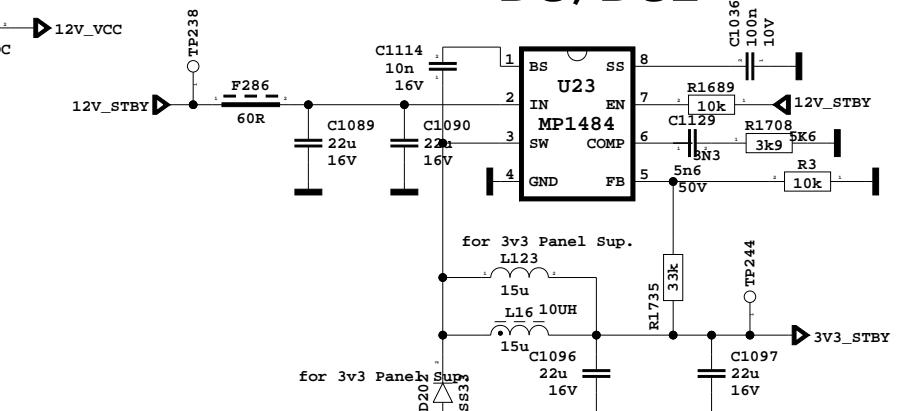


# W/ADAPTOR & W/IPS16&17&60

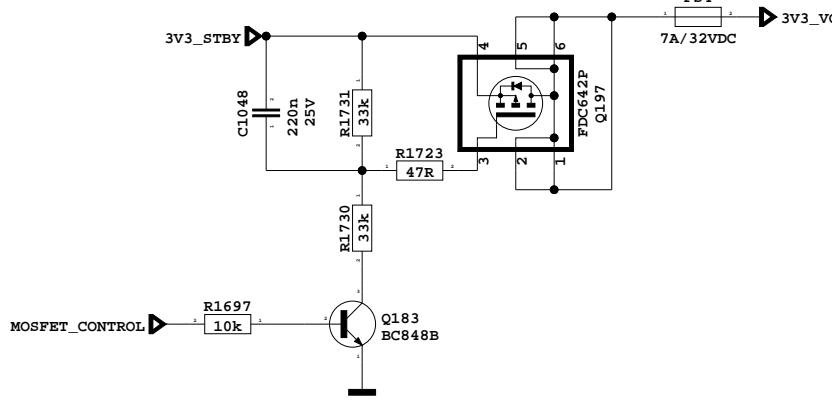
## SW1



## DC/DC2

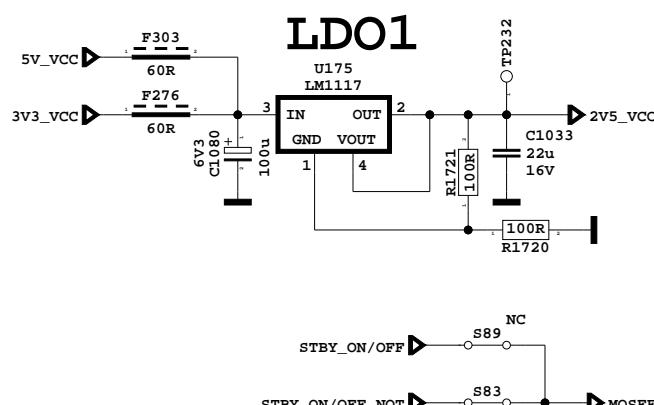


## SW3

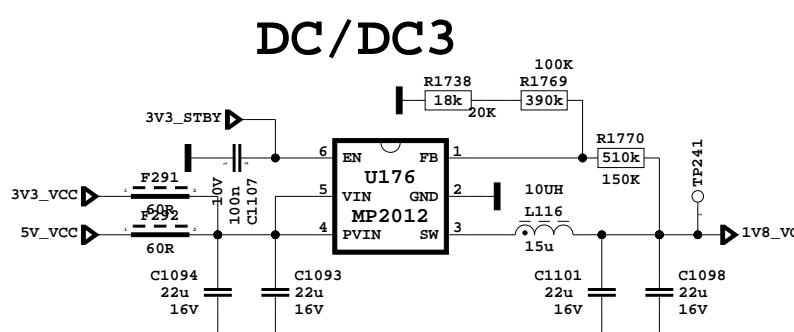


# COMMON

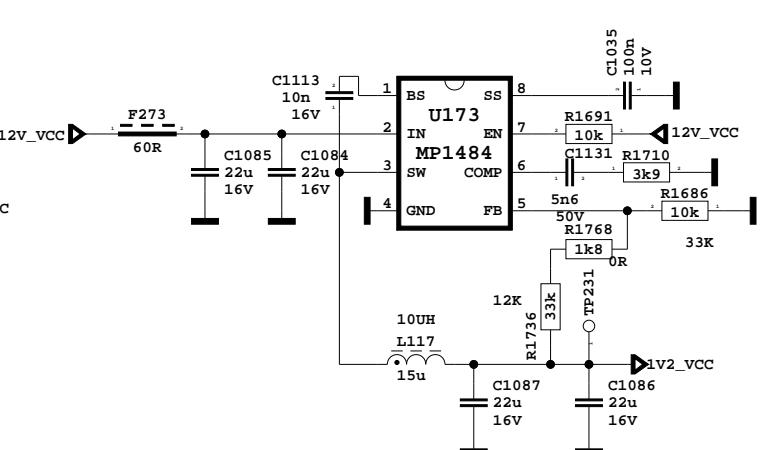
## LDO1



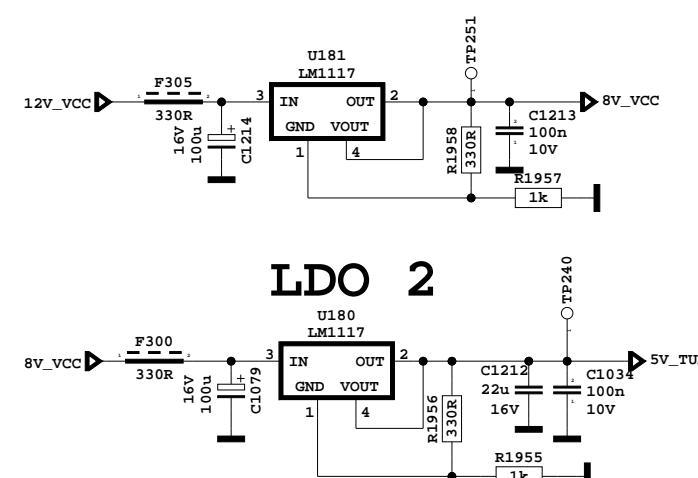
## DC/DC3



## DC/DC4



## LDO 2



VESTEL PROJECT NAME : 17mb60-3 A3

SCH NAME :<DRAWING NAME HERE>

SHEET:11 OF:9

DRAWN BY :<YOUR NAME HERE>

12-11-2010\_17:10

