Colour Television

Chassis

TPS2.1E

LA

Service
Service
Service

Service Manual

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2009-Oct-09

PHILIPS

1. Revision List

Manual xxxx xxx xxxx.0
- First release.

Manual xxxx xxx xxxx.1
- Added 19PFL3404/60 set to the manual.
- Added 22PFL3404/60 set to the manual.
- Added 26PFL3404/60 set to the manual.
- Added 32PFL3404/60 set to the manual.
- Added 32PFL3614/60 set to the manual.
- **Chapter 2:** Updated connection overview diagram.
- **Chapter 5:** Updated the contents of this chapter.
- **Chapter 6:** Updated the contents of this chapter.
- **Chapter 8:** Deleted TU101 SPEC.
- **Chapter 9:** Updated the Power Board Circuit Diagrams.
- **Chapter 10:** Updated the Power Board and SSB Circuit Diagrams.

2. Technical Specifications and Connections

Index of this chapter:

Notes:
- Figures can deviate due to the different set executions.
- Specifications are indicative (subject to change).

2.1 Technical Specifications

For on-line product support please use the links in. Here is product information available, as well as getting started, user manuals, frequently asked questions and software & drivers.

Table 2-1 Described Model Numbers:

Model Number	Styling	Published in:
19PFL3404/12	Click	3122 785 18250
22PFL3404/12		
26PFL3404/12		
32PFL3404/12		
19PFL3404/60		3122 785 18251
22PFL3404/60		
26PFL3404/60		
32PFL3404/60		
32PFL3614/12		

Note: The given Model Numbers are subject to change.

2.2 Directions for Use

Directions for use can be downloaded from the following websites:
http://www.philips.com/support
http://www.p4c.philips.com

2.3 Connections

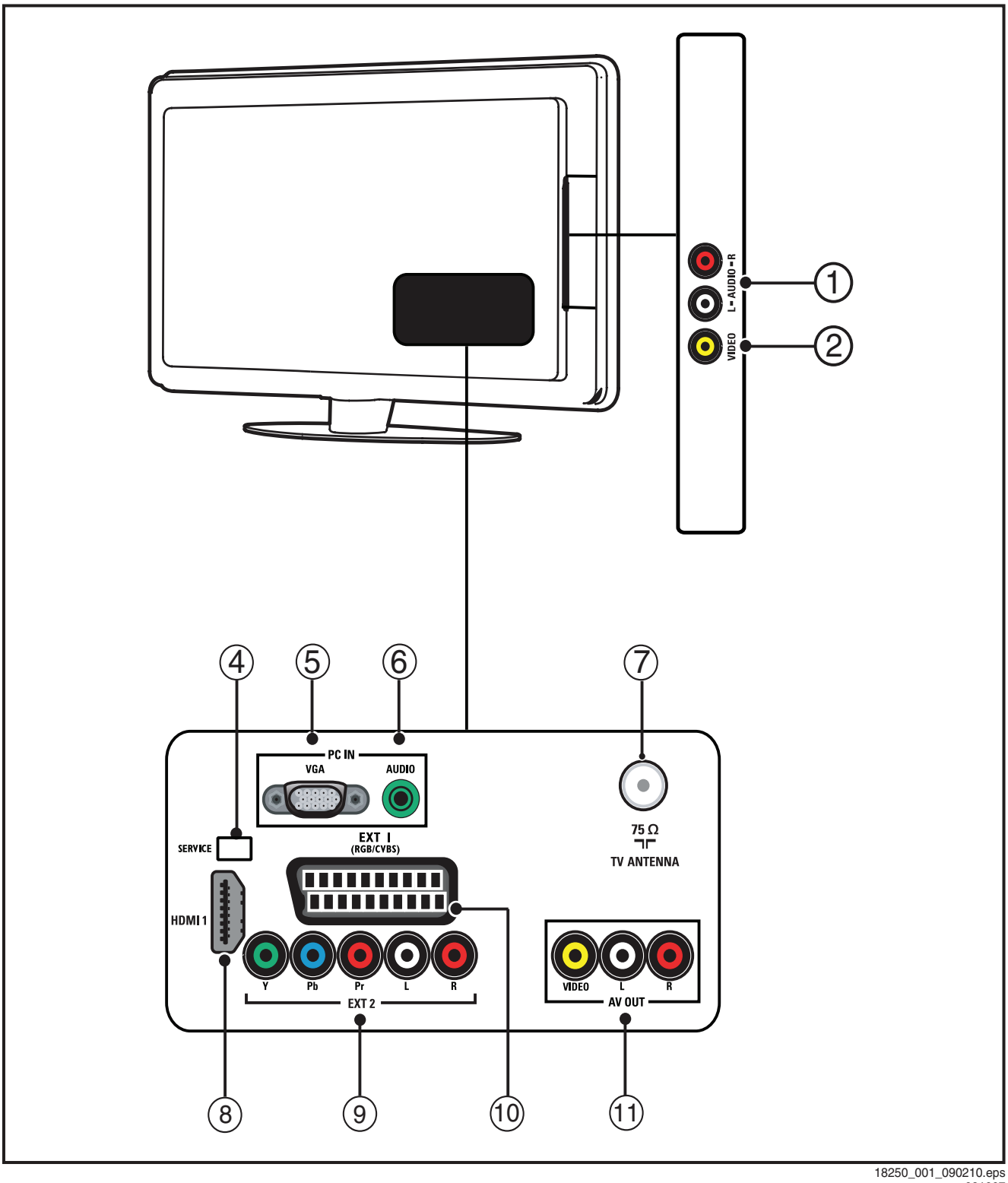

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Figure 2-1 19" & 22" Connection overview

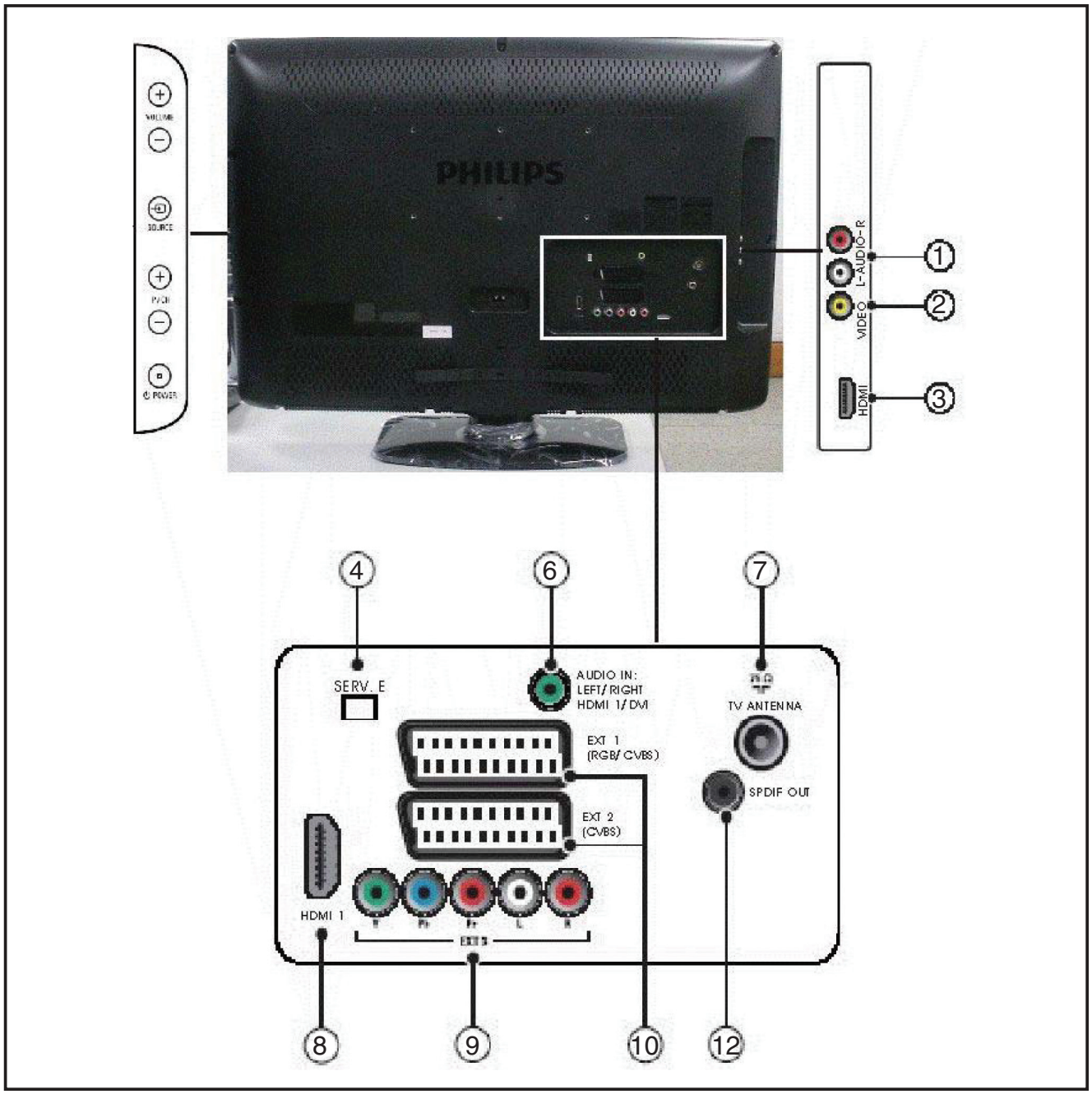

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Figure 2-2 26" & 32" Connection overview

Note: The following connector colour abbreviations are used (acc. to DIN/IEC 757): Bk= Black, Bu= Blue, Gn= Green, Gy= Grey, Rd= Red, Wh= White, Ye= Yellow.

2.3.1 Side Connections

1 - Cinch: Audio - In

Rd - Audio R	0.5 V_{RMS} / 10 kohm	⊙
Wh - Audio L	0.5 V_{RMS} / 10 kohm	⊙

2 - Cinch: Video CVBS - In, Audio - In

Ye - Video CVBS	1 V_{PP} / 75 ohm	⊙

3 - HDMI: Digital Video, Digital Audio - In

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Figure 2-3 HDMI (type A) connector

1	- D2+	Data channel	⊙
2	- Shield	Gnd	⏚
3	- D2-	Data channel	⊙
4	- D1+	Data channel	⊙
5	- Shield	Gnd	⏚
6	- D1-	Data channel	⊙
7	- D0+	Data channel	⊙
8	- Shield	Gnd	⏚
9	- D0-	Data channel	⊙
10	- CLK+	Data channel	⊙

11	- Shield	Gnd	
12	- CLK-	Data channel	
13	- Easylink	Control channel	
14	- n.c.		
15	- DDC_SCL	DDC clock	
16	- DDC_SDA	DDC data	
17	- Ground	Gnd	
18	- +5V		
19	- HPD	Hot Plug Detect	
20	- Ground	Gnd	

2.3.2 Rear Connections

4 - SERV.C

1	- Ground	Gnd	
2	- UART_TX	Transmit	
3	- UART_RX	Receive	

5 - PC IN: VGA

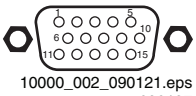

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Figure 2-4 VGA connector

1	- Video Red	0.7 V_{PP} / 75 ohm	
2	- Video Green	0.7 V_{PP} / 75 ohm	
3	- Video Blue	0.7 V_{PP} / 75 ohm	
4	- n.c.		
5	- Ground	Gnd	
6	- Ground Red	Gnd	
7	- Ground Green	Gnd	
8	- Ground Blue	Gnd	
9	- +5V_{DC}	+5 V	
10	- Ground Sync	Gnd	
11	- n.c.		
12	- DDC_SDA	DDC data	
13	- H-sync	0 - 5 V	
14	- V-sync	0 - 5 V	
15	- DDC_SCL	DDC clock	

6 - PC IN: Audio - In

Gn	- Video - Y	1 V_{PP} / 75 ohm	

7 - TV ANTENNA - In

Signal input from an antenna, cable or satellite.

8 - HDMI 1: Digital Video, Digital Audio - In

See 3 - HDMI: Digital Video, Digital Audio - In

2.4 Chassis Overview

Refer to 9. Block Diagrams for PWB/CBA locations.

9 - EXT2: YPbPc - In, Audio - In

Gn	- Video - Y	1 V_{PP} / 75 ohm	
Bu	- Video - Pb	0.7 V_{PP} / 75 ohm	
Rd	- Video - Pr	0.7 V_{PP} / 75 ohm	
Wh	- Audio - L	0.5 V_{RMS} / 10 kohm	
Rd	- Audio - R	0.5 V_{RMS} / 10 kohm	

10 - EXT1 (& EXT 2): Video RGB/CVBS - In

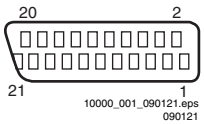

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Figure 2-5 SCART connector

1	- n.c.		
2	- Audio R	0.5 V_{RMS} / 10 kohm	
3	- n.c.		
4	- Ground Audio	GND	
5	- Ground Blue	Gnd	
6	- Audio L	0.5 V_{RMS} / 10 kohm	
7	- Video Blue	0.7 Vpp / 75 ohm	
8	- Function Select	0 - 2 V: INT 4.5 - 7V: EXT 16:9 9.5 - 12V: EXT 4:3	
9	- Ground Green	Gnd	
10	- n.c.		
11	- Video Green	0.7 Vpp / 75 ohm	
12	- n.c.		
13	- Ground Red	Gnd	
14	- Ground Data	Gnd	
15	- Video Red	0.7 Vpp / 75 ohm	
16	- Status/FBI	0 - 0.4V:INT 1 - 3V:EXT/75 ohm	
17	- Ground Video	Gnd	
18	- Ground FBL		
19	- n.c.		
20	- Video CVBS	1 V_{PP} / 75 ohm	
21	- Shield	Gnd	

11 - AV Out: Video - out, Audio - out

Ye	- Video	1 V_{PP} / 75 ohm	
Wh	- Audio - L	0.5 V_{RMS} / 10 kohm	
Rd	- Audio - R	0.5 V_{RMS} / 10 kohm	

12 - Cinch: S/PDIF - Out

Bk	- Coaxial	0.4 - 0.6V_{PP} / 75 ohm	

3. Precautions, Notes, and Abbreviation List

Index of this chapter:

3.1 Safety Instructions

Safety regulations require the following **during** a repair:

- Connect the set to the Mains/AC Power via an isolation transformer (> 800 VA).
- 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. Of de set ontploft!

Safety regulations require that **after** a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the Mains/AC Power lead for external damage.
- Check the strain relief of the Mains/AC Power cord for proper function.
- Check the electrical DC resistance between the Mains/AC Power plug and the secondary side (only for sets that have a Mains/AC Power isolated power supply):
  1. Unplug the Mains/AC Power cord and connect a wire between the two pins of the Mains/AC Power plug.
  2. Set the Mains/AC Power switch to the “on” position (keep the Mains/AC Power cord unplugged!).
  3. Measure the resistance value between the pins of the Mains/AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 MΩ and 12 MΩ.
  4. Switch “off” the set, and remove the wire between the two pins of the Mains/AC Power plug.
- Check the cabinet for defects, to prevent touching of any inner parts by the customer.

3.2 Warnings

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.
- Be careful during measurements in the high voltage section.
- Never replace modules or other components while the unit is switched “on”.
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

3.3 Notes

3.3.1 General

- Measure the voltages and waveforms with regard to the chassis (= tuner) ground (⏚), or hot ground (⏚), depending on the tested area of circuitry. The voltages and waveforms shown in the diagrams are indicative. Measure them in the Service Default Mode with a colour bar signal and stereo sound (L: 3 kHz, R: 1 kHz unless stated otherwise) and picture carrier at 475.25 MHz for PAL, or 61.25 MHz for NTSC (channel 3).
- Where necessary, measure the waveforms and voltages with (⊓) and without (⊼) aerial signal. Measure the voltages in the power supply section both in normal operation (⏻) and in stand-by (⏻). These values are indicated by means of the appropriate symbols.

3.3.2 Schematic Notes

- All resistor values are in ohms, and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 kΩ).
- Resistor values with no multiplier may be indicated with either an “E” or an “R” (e.g. 220E or 220R indicates 220 Ω).
- All capacitor values are given in micro-farads ($\mu = \times 10^{-6}$), nano-farads ($n = \times 10^{-9}$), or pico-farads ($p = \times 10^{-12}$).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An “asterisk” (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed on the Philips Spare Parts Web Portal.

3.3.3 Spare Parts

For the latest spare part overview, consult your Philips Spare Part web portal.

3.3.4 BGA (Ball Grid Array) ICs

Introduction

For more information on how to handle BGA devices, visit this URL: http://www.atyourservice-magazine.com. Select “Magazine”, then go to “Repair downloads”. Here you will find Information on how to deal with BGA-ICs.

BGA Temperature Profiles

For BGA-ICs, you **must** use the correct temperature-profile. Where applicable and available, this profile is added to the IC Data Sheet information section in this manual.

3.3.5 Lead-free Soldering

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free soldering tin. If lead-free solder paste is required, please contact the manufacturer of your soldering equipment. In general, use of solder paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free soldering tin. The solder tool must be able:
  - To reach a solder-tip temperature of at least 400°C.
  - To stabilize the adjusted temperature at the solder-tip.
  - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature of around 360°C - 380°C is reached and stabilized at the solder joint. Heating time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C, otherwise wear-out of tips will increase drastically and flux-fluid will be destroyed. To avoid wear-out of tips, switch “off” unused equipment or reduce heat.
- Mix of lead-free soldering tin/parts with leaded soldering tin/parts is possible but PHILIPS recommends strongly **to avoid** mixed regimes. If this cannot be avoided, carefully clear the solder-joint from old tin and re-solder with new tin.

3.3.6 Alternative BOM identification

It should be noted that on the European Service website, “Alternative BOM” is referred to as “Design variant”.

The **third digit** in the serial number (example: AG**2**B0335000001) indicates the number of the alternative B.O.M. (Bill Of Materials) that has been used for producing the specific TV set. In general, it is possible that the same TV model on the market is produced with e.g. two different types of displays, coming from two different suppliers. This will then result in sets which have the same CTN (Commercial Type Number; e.g. 28PW9515/12) but which have a different B.O.M. number.
By looking at the third digit of the serial number, one can identify which B.O.M. is used for the TV set he is working with. If the third digit of the serial number contains the number “1” (example: AG**1**B033500001), then the TV set has been manufactured according to B.O.M. number 1. If the third digit is a “2” (example: AG**2**B0335000001), then the set has been produced according to B.O.M. no. 2. This is important for ordering the correct spare parts!
For the third digit, the numbers 1...9 and the characters A...Z can be used, so in total: 9 plus 26= 35 different B.O.M.s can be indicated by the third digit of the serial number.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 1 and 2 refer to the production centre (e.g. AG is Bruges), digit 3 refers to the B.O.M. code, digit 4 refers to the Service version change code, digits 5 and 6 refer to the production year, and digits 7 and 8 refer to production week (in example below it is 2006 week 17). The 6 last digits contain the serial number.

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Figure 3-1 Serial number (example)

3.3.7 Board Level Repair (BLR) or Component Level Repair (CLR)

If a board is defective, consult your repair procedure to decide if the board has to be exchanged or if it should be repaired on component level.
If your repair procedure says the board should be exchanged completely, do not solder on the defective board. Otherwise, it cannot be returned to the O.E.M. supplier for back charging!

3.3.8 Practical Service Precautions

- **It makes sense to avoid exposure to electrical shock.** While some sources are expected to have a possible dangerous impact, others of quite high potential are of limited current and are sometimes held in less regard.
- **Always respect voltages**. While some may not be dangerous in themselves, they can cause unexpected reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

3.4 Abbreviation List

0/6/12	SCART switch control signal on A/V board. 0 = loop through (AUX to TV), 6 = play 16 : 9 format, 12 = play 4 : 3 format
AARA	Automatic Aspect Ratio Adaptation: algorithm that adapts aspect ratio to remove horizontal black bars; keeps the original aspect ratio
ACI	Automatic Channel Installation: algorithm that installs TV channels directly from a cable network by means of a predefined TXT page
ADC	Analogue to Digital Converter
AFC	Automatic Frequency Control: control signal used to tune to the correct frequency
AGC	Automatic Gain Control: algorithm that controls the video input of the feature box
AM	Amplitude Modulation
AP	Asia Pacific
AR	Aspect Ratio: 4 by 3 or 16 by 9
ASF	Auto Screen Fit: algorithm that adapts aspect ratio to remove horizontal black bars without discarding video information
ATSC	Advanced Television Systems Committee, the digital TV standard in the USA
ATV	See Auto TV
Auto TV	A hardware and software control system that measures picture content, and adapts image parameters in a dynamic way
AV	External Audio Video
AVC	Audio Video Controller
AVIP	Audio Video Input Processor
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz
BDS	Business Display Solutions (iTV)
BLR	Board-Level Repair
BTSC	Broadcast Television Standard Committee. Multiplex FM stereo sound system, originating from the USA and used e.g. in LATAM and AP-NTSC countries
B-TXT	Blue TeleteXT
C	Centre channel (audio)
CEC	Consumer Electronics Control bus: remote control bus on HDMI connections
CL	Constant Level: audio output to connect with an external amplifier
CLR	Component Level Repair
ComPair	Computer aided rePair
CP	Connected Planet / Copy Protection
CSM	Customer Service Mode
CTI	Color Transient Improvement: manipulates steepness of chroma transients
CVBS	Composite Video Blanking and Synchronization
DAC	Digital to Analogue Converter
DBE	Dynamic Bass Enhancement: extra low frequency amplification
DCM	Data Communication Module. Also referred to as System Card or Smartcard (for iTV).
DDC	See “E-DDC”
D/K	Monochrome TV system. Sound carrier distance is 6.5 MHz
DFI	Dynamic Frame Insertion

DFU	Directions For Use: owner's manual
DMR	Digital Media Reader: card reader
DMSD	Digital Multi Standard Decoding
DNM	Digital Natural Motion
DNR	Digital Noise Reduction: noise reduction feature of the set
DRAM	Dynamic RAM
DRM	Digital Rights Management
DSP	Digital Signal Processing
DST	Dealer Service Tool: special remote control designed for service technicians
DTCP	Digital Transmission Content Protection; A protocol for protecting digital audio/video content that is traversing a high speed serial bus, such as IEEE-1394
DVB-C	Digital Video Broadcast - Cable
DVB-T	Digital Video Broadcast - Terrestrial
DVD	Digital Versatile Disc
DVI(-d)	Digital Visual Interface (d= digital only)
E-DDC	Enhanced Display Data Channel (VESA standard for communication channel and display). Using E-DDC, the video source can read the EDID information form the display.
EDID	Extended Display Identification Data (VESA standard)
EEPROM	Electrically Erasable and Programmable Read Only Memory
EMI	Electro Magnetic Interference
EPG	Electronic Program Guide
EPLD	Erasable Programmable Logic Device
EU	Europe
EXT	EXTernal (source), entering the set by SCART or by cinches (jacks)
FDS	Full Dual Screen (same as FDW)
FDW	Full Dual Window (same as FDS)
FLASH	FLASH memory
FM	Field Memory or Frequency Modulation
FPGA	Field-Programmable Gate Array
FTV	Flat TeleVision
Gb/s	Giga bits per second
G-TXT	Green TeleteXT
H	H_sync to the module
HD	High Definition
HDD	Hard Disk Drive
HDCP	High-bandwidth Digital Content Protection: A “key” encoded into the HDMI/DVI signal that prevents video data piracy. If a source is HDCP coded and connected via HDMI/DVI without the proper HDCP decoding, the picture is put into a “snow vision” mode or changed to a low resolution. For normal content distribution the source and the display device must be enabled for HDCP “software key” decoding.
HDMI	High Definition Multimedia Interface
HP	HeadPhone
I	Monochrome TV system. Sound carrier distance is 6.0 MHz
I^2C	Inter IC bus
I^2D	Inter IC Data bus
I^2S	Inter IC Sound bus
IF	Intermediate Frequency
IR	Infra Red
IRQ	Interrupt Request
ITU-656	The ITU Radio communication Sector (ITU-R) is a standards body subcommittee of the International Telecommunication Union relating to radio communication. ITU-656 (a.k.a. SDI), is a digitized video format used for broadcast grade video. Uncompressed digital component or digital composite signals can be used. The SDI signal is self-synchronizing, uses 8 bit or 10 bit data words, and has a maximum data rate of 270 Mbit/s, with a minimum bandwidth of 135 MHz.
ITV	Institutional TeleVision; TV sets for hotels, hospitals etc.
LS	Last Status; The settings last chosen by the customer and read and stored in RAM or in the NVM. They are called at start-up of the set to configure it according to the customer's preferences
LATAM	Latin America
LCD	Liquid Crystal Display
LED	Light Emitting Diode
L/L'	Monochrome TV system. Sound carrier distance is 6.5 MHz. L' is Band I, L is all bands except for Band I
LPL	LG.Philips LCD (supplier)
LS	Loudspeaker
LVDS	Low Voltage Differential Signalling
Mbps	Mega bits per second
M/N	Monochrome TV system. Sound carrier distance is 4.5 MHz
MHEG	Part of a set of international standards related to the presentation of multimedia information, standardised by the Multimedia and Hypermedia Experts Group. It is commonly used as a language to describe interactive television services
MIPS	Microprocessor without Interlocked Pipeline-Stages; A RISC-based microprocessor
MOP	Matrix Output Processor
MOSFET	Metal Oxide Silicon Field Effect Transistor, switching device
MPEG	Motion Pictures Experts Group
MPIF	Multi Platform InterFace
MUTE	MUTE Line
MTV	Mainstream TV: TV-mode with Consumer TV features enabled (iTV)
NC	Not Connected
NICAM	Near Instantaneous Compounded Audio Multiplexing. This is a digital sound system, mainly used in Europe.
NTC	Negative Temperature Coefficient, non-linear resistor
NTSC	National Television Standard Committee. Color system mainly used in North America and Japan. Color carrier NTSC M/N= 3.579545 MHz, NTSC 4.43= 4.433619 MHz (this is a VCR norm, it is not transmitted off-air)
NVM	Non-Volatile Memory: IC containing TV related data such as alignments
O/C	Open Circuit
OSD	On Screen Display
OAD	Over the Air Download. Method of software upgrade via RF transmission. Upgrade software is broadcasted in TS with TV channels.
OTC	On screen display Teletext and Control; also called Artistic (SAA5800)
P50	Project 50: communication protocol between TV and peripherals
PAL	Phase Alternating Line. Color system mainly used in West Europe (color carrier= 4.433619 MHz) and South America (color carrier PAL M=

	3.575612 MHz and PAL N= 3.582056 MHz)
PCB	Printed Circuit Board (same as “PWB”)
PCM	Pulse Code Modulation
PDP	Plasma Display Panel
PFC	Power Factor Corrector (or Pre-conditioner)
PIP	Picture In Picture
PLL	Phase Locked Loop. Used for e.g. FST tuning systems. The customer can give directly the desired frequency
POD	Point Of Deployment: a removable CAM module, implementing the CA system for a host (e.g. a TV-set)
POR	Power On Reset, signal to reset the uP
PTC	Positive Temperature Coefficient, non-linear resistor
PWB	Printed Wiring Board (same as “PCB”)
PWM	Pulse Width Modulation
QRC	Quasi Resonant Converter
QTNR	Quality Temporal Noise Reduction
QVCP	Quality Video Composition Processor
RAM	Random Access Memory
RGB	Red, Green, and Blue. The primary color signals for TV. By mixing levels of R, G, and B, all colors (Y/C) are reproduced.
RC	Remote Control
RC5 / RC6	Signal protocol from the remote control receiver
RESET	RESET signal
ROM	Read Only Memory
RSDS	Reduced Swing Differential Signalling data interface
R-TXT	Red TeleteXT
SAM	Service Alignment Mode
S/C	Short Circuit
SCART	Syndicat des Constructeurs d'Appareils Radiorécepteurs et Téléviseurs
SCL	Serial Clock I^2C
SCL-F	CLock Signal on Fast I^2C bus
SD	Standard Definition
SDA	Serial Data I^2C
SDA-F	DAta Signal on Fast I^2C bus
SDI	Serial Digital Interface, see “ITU-656”
SDRAM	Synchronous DRAM
SECAM	SEequence Couleur Avec Mémoire. Color system mainly used in France and East Europe. Color carriers= 4.406250 MHz and 4.250000 MHz
SIF	Sound Intermediate Frequency
SMPS	Switched Mode Power Supply
SoC	System on Chip
SOG	Sync On Green
SOPS	Self Oscillating Power Supply
SPI	Serial Peripheral Interface bus; a 4-wire synchronous serial data link standard
S/PDIF	Sony Philips Digital InterFace
SRAM	Static RAM
SRP	Service Reference Protocol
SSB	Small Signal Board
STB	Set Top Box
STBY	STand-BY
SVGA	800 × 600 (4:3)
SVHS	Super Video Home System
SW	Software
SWAN	Spatial temporal Weighted Averaging Noise reduction
SXGA	1280 × 1024
TFT	Thin Film Transistor
THD	Total Harmonic Distortion
TMDS	Transmission Minimized Differential Signalling
TS	Transport Stream
TXT	TeleteXT
TXT-DW	Dual Window with TeleteXT
UI	User Interface
uP	Microprocessor
UXGA	1600 × 1200 (4:3)
V	V-sync to the module
VESA	Video Electronics Standards Association
VGA	640 × 480 (4:3)
VL	Variable Level out: processed audio output toward external amplifier
VSB	Vestigial Side Band; modulation method
WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
WXGA	1280 × 768 (15:9)
XTAL	Quartz crystal
XGA	1024 × 768 (4:3)
Y	Luminance signal
Y/C	Luminance (Y) and Chrominance (C) signal
YPbPr	Component video. Luminance and scaled color difference signals (B-Y and R-Y)
YUV	Component video

4. Mechanical Instructions

Index of this chapter:

Notes:

- Figures below can deviate slightly from the actual situation, due to the different set executions.

4.1 Cable Dressing

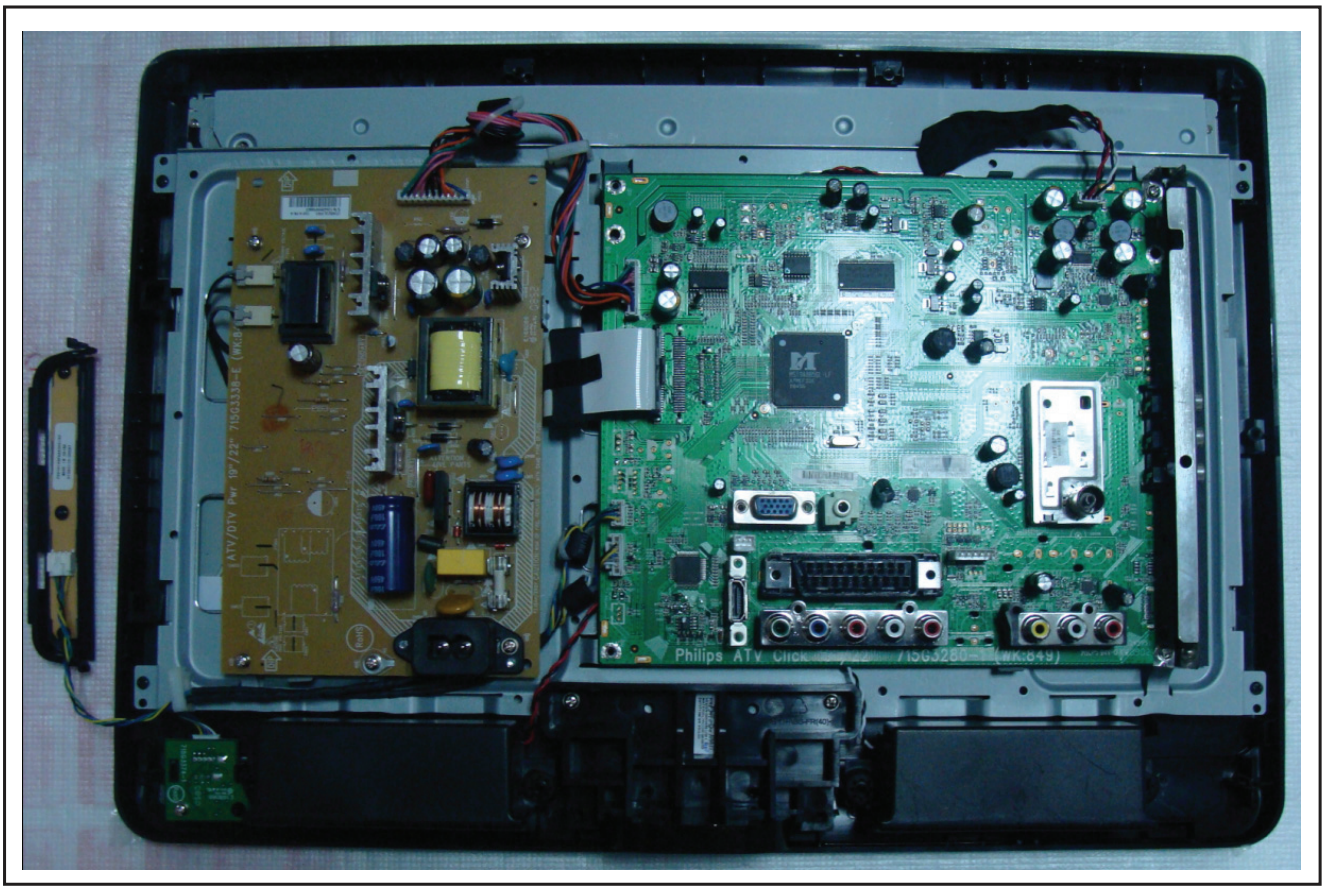

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Figure 4-1 Cable dressing 19"

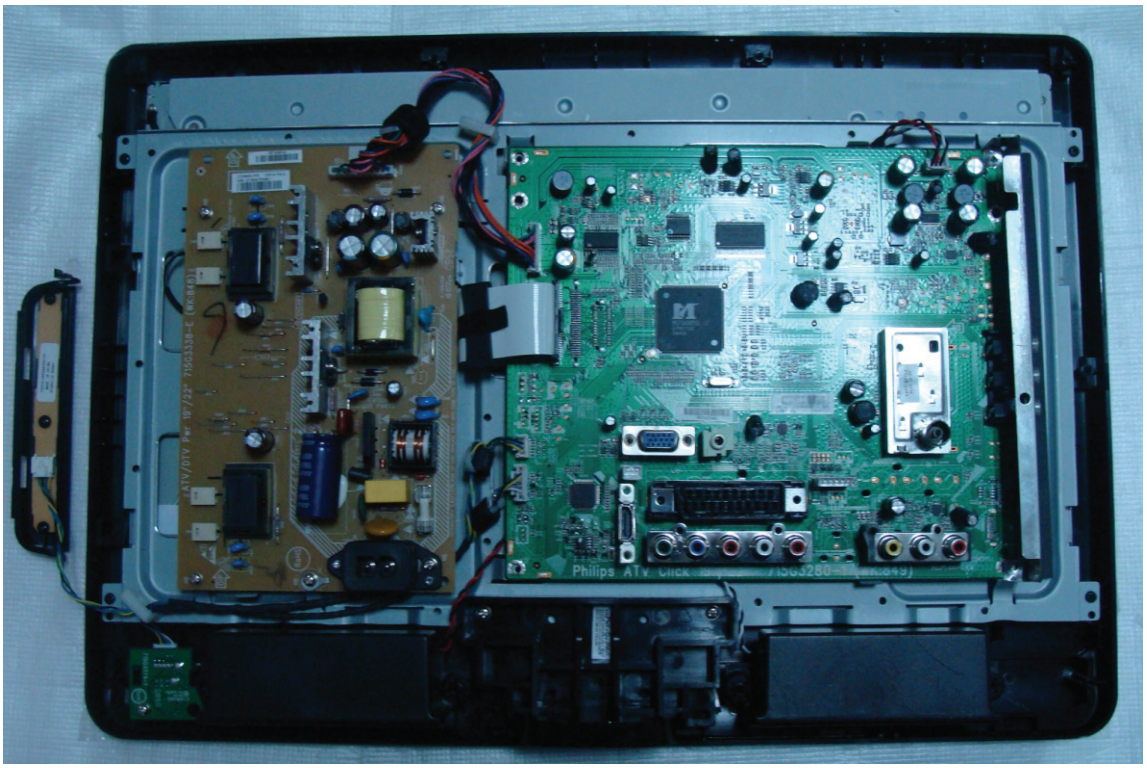

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Figure 4-2 Cable dressing 22"

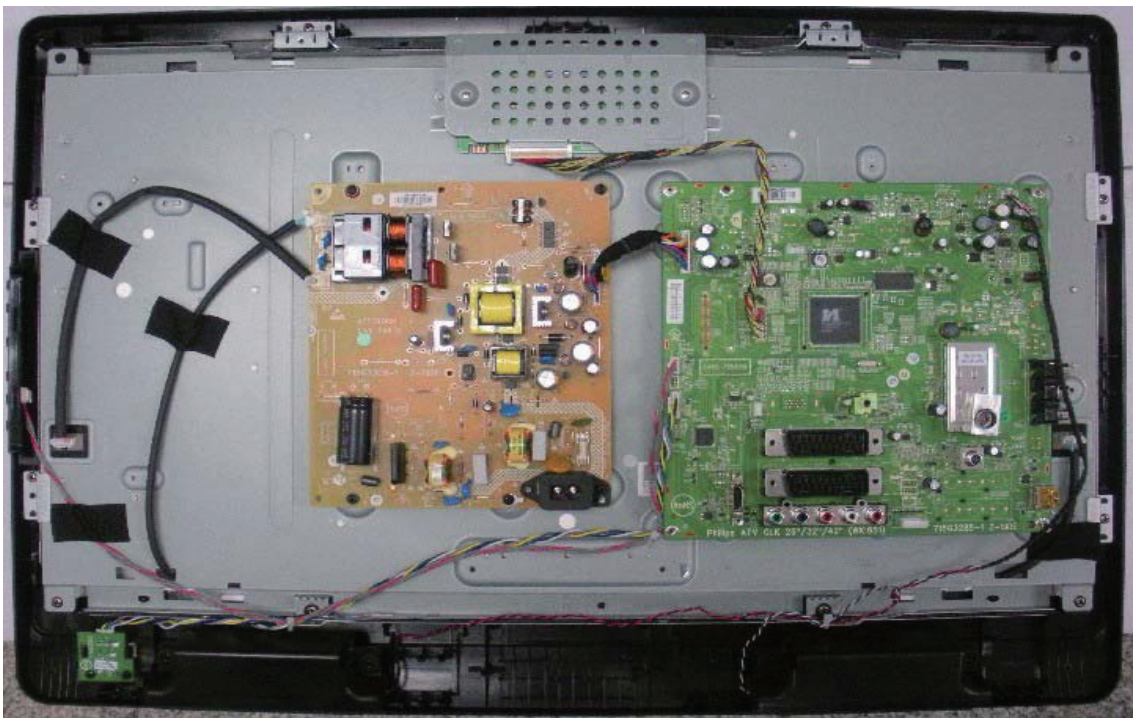

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Figure 4-3 Cable dressing 26" & 32"

4.2 Service Positions

For easy servicing of this set, there are a few possibilities created:

- The buffers from the packaging.
- Foam bars (created for Service).

4.2.1 Foam Bars

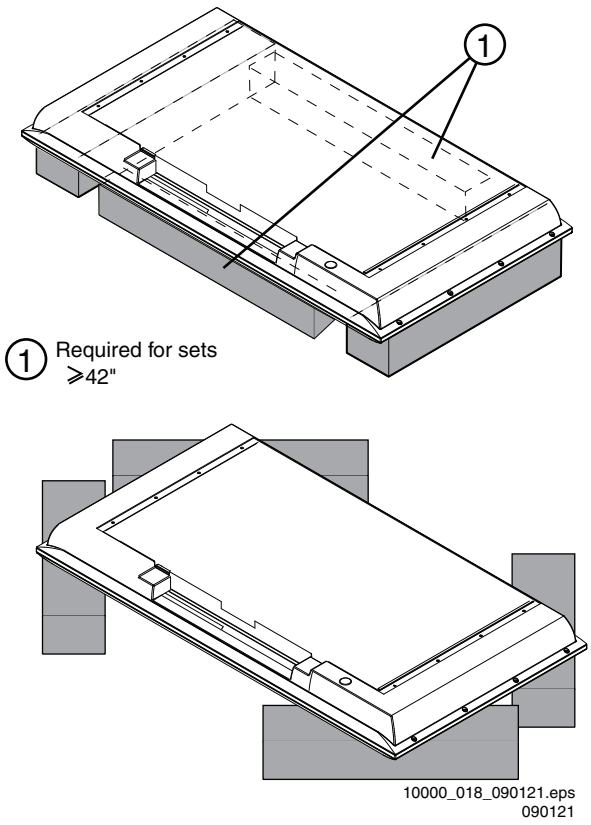

Figure 4-4 Foam bars

The foam bars (order code 3122 785 90580 for two pieces) can be used for all types and sizes of Flat TVs. See Figure 4-4 for details. Sets with a display of 42" and larger, require **four** foam bars [1]. Ensure that the foam bars are always supporting the cabinet and **never** only the display.
Caution: Failure to follow these guidelines can seriously damage the display!
By laying the TV face down on the (ESD protective) foam bars, a stable situation is created to perform measurements and alignments. By placing a mirror under the TV, the screen can be monitored.

4.3 Assy/Panel Removal Styling

4.3.1 Rear Cover

Warning: Disconnect the mains power cord before removing the rear cover.

1. Remove the fixation screws that secure the rear cover.
2. Lift the rear cover from the TV. Make sure that wires and flat foils are not damaged while lifting the rear cover from the set.

4.3.2 Power Supply Unit (PSU)

Caution: it is mandatory to remount all different screws at their original position during re-assembly. Failure to do so may result in damaging the SSB.

1. Unplug all connectors.
2. Remove all fixation screws.
3. The PSU can now be taken out of the set.

When defective, replace the whole unit.

4.3.3 Small Signal Board (SSB)

Caution: it is mandatory to remount all different screws at their original position during re-assembly. Failure to do so may result in damaging the SSB.

1. Unplug the LVDS connector.
   Caution: be careful, as these are very fragile connectors!
2. Unplug all other connectors.
3. Remove the screw near the L- AUDIO- R at the side I/O cover.
4. Remove the rest of the fixation screws.
5. The SSB can now be taken out of the set.

4.3.4 Speakers

1. Release the speaker connector from the unit.
2. Take the speakers out together with their casing.

When defective, replace the whole unit.

4.3.5 Keyboard Control Panel

Refer to Figure 4-5 for details.

1. Unplug the connector [1].
2. Remove the cover screws [2] and take out the whole unit.

When defective, replace the whole unit.

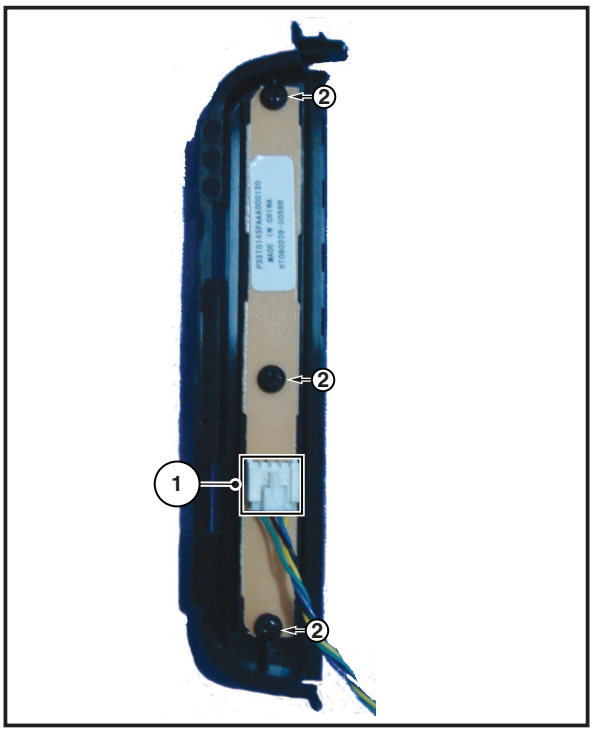

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Figure 4-5 Keyboard Control Panel

4.3.6 IR Board

1. Remove screw and lift the IR Board from the front cover.
2. Unplug the connectors.

When defective, replace the whole unit.

4.3.7 LCD Panel

1. Remove the PSU and SSB as described earlier.
2. Unplug all the connectors.
3. Remove the fixation screws from the clips that secure the panel to the front.
4. The LCD panel can now be lifted from the front cabinet.

When defective, replace the whole unit.

4.4 Set Re-assembly

To re-assemble the whole set, execute all processes in reverse order.

Notes:

- While re-assembling, make sure that all cables are placed and connected in their original position. See Figure 4-1 and Figure 4-2 and Figure 4-3
- Pay special attention not to damage the EMC foams on the SSB shields. Ensure that EMC foams are mounted correctly.

5. Service Modes, Error Codes, and Fault Finding

Index of this chapter:

5.1 Service Modes

The Customer Service Mode (CSM) is used for communication between the call centre and the customer, while the Factory Mode offers several features for the service technician.

This chassis also offers the option of using ComPair, a hardware interface between a computer and the TV chassis. It offers the abilities of structured troubleshooting, error code reading, and software version read-out for all chassis.

5.1.1 Customer Service Mode (CSM)

Purpose

The Customer Service Mode shows error codes and information on the TV's operation settings.The call centre can instruct the customer (by telephone) to enter CSM in order to identify the status of the set.This helps the call centre to diagnose problems and failures in the TV set before making a service call.
The CSM is a read-only mode; therefore, modifications are not possible in this mode.

How to Activate CSM

Key in the code "123654" via the standard RC transmitter.

Note: Activation of the CSM is only possible if there is no (user) menu on the screen!

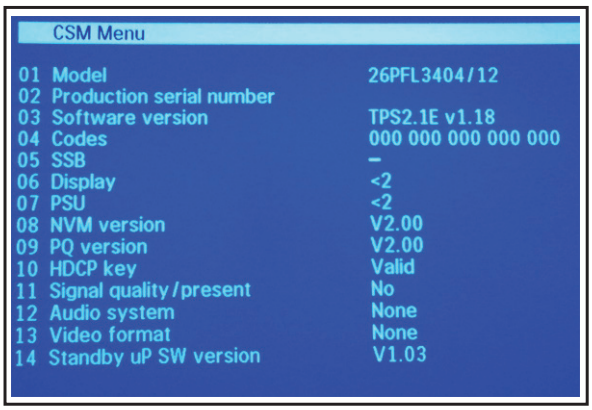

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Figure 5-1 CSM Menu

How to Navigate

By means of the "CURSOR-DOWN/UP" knob (or the scroll wheel) on the RC-transmitter, can be navigated through the menus.

Contents of CSM

General

- **Model.**
  Philips model type(12characters max)
- **Product serial number.**
  Displays the production serial number of the TV.
- **Software version.**
  Format:TPAA.AA V2.XX Y Z
  TPAA.AA is the chassis name
  V2.XX is the revision(4 letter)
  Y is the vendor code(1 digit)
  Z is the panel revision code(1 digit)
- Codes.
  Show the latest 5 error code (layer 2)status:
  000=No problem,011=I1C bus error,012=tuner error
- **SSB.**
  Philips 12NC of SSB (small signal board)
- **Display.**
  Philips 12NC of display (LCD panel)
- **PSU.**
  Philips 12NC of PSU (Power Supply Unit)
- **NVM version.**
  Revision(4letter)
- **PQ Version.**
  Revision(4 letter)
- HDCP key.
  HDCP status (Valid, Invalid)
- Signal quality/present.
  DTV shows (Digital percentage)
  ATV shows (analog Yes/No)
- Audio system.
  Mono, Stereo, Dual
- Video format.
  PAL,SECAM,NTSC
- Standby uP SW version.
  Revision(4 letter)

How to Exit CSM

Press "MENU" on the RC-transmitter.

5.1.2 Factory mode

How to enter

To enter the factory mode,use the following method:

- Press the following key sequence on the remote control transmotter:"062596"directly followed by the "INFO" button

After entering the factory mode, the following screen is visible on the top and right of the panel.

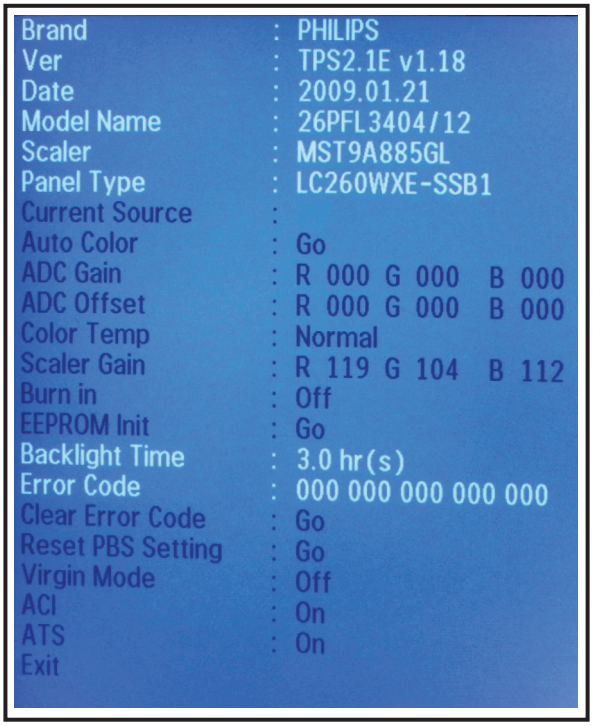

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Figure 5-2 Factory Mode Menu

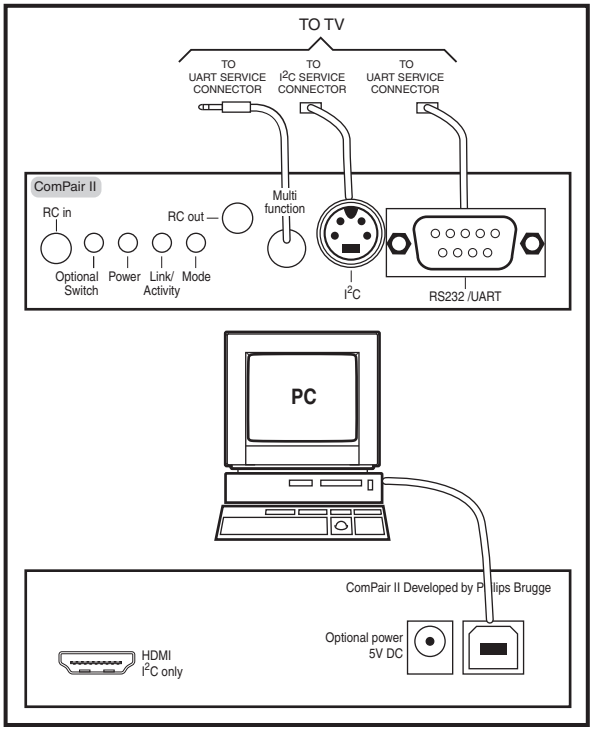

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Figure 5-3 ComPair II interface connection

How to Navigate
With the up/down cursor keys can be navigated arround the itesm, with the left/right cursor the values can be changed.

How to EXIT
Choose "EXIT", then press"OK"button.

5.2 Service Tools

5.2.1 ComPair

Introduction
ComPair (Computer Aided Repair) is a Service tool for Philips Consumer Electronics products. and offers the following:

1. ComPair helps to quickly get an understanding on how to repair the chassis in a short and effective way.
2. ComPair allows very detailed diagnostics and is therefore capable of accurately indicating problem areas. No knowledge on I²C or UART commands is necessary, because ComPair takes care of this.
3. ComPair speeds up the repair time since it can automatically communicate with the chassis (when the uP is working) and all repair information is directly available.
4. ComPair features TV software upgrade possibilities.

Specifications
ComPair consists of a Windows based fault finding program and an interface box between PC and the (defective) product. The ComPair II interface box is connected **to the PC** via an USB cable. For the TV chassis, the ComPair interface box and the TV communicate via a bi-directional cable via the service connector(s).
The ComPair fault finding program is able to determine the problem of the defective television, by a combination of automatic diagnostics and an interactive question/answer procedure.

How to Connect
This is described in the chassis fault finding database in ComPair.

Caution: It is compulsory to connect the TV to the PC as shown in the picture above (with the ComPair interface in between), as the ComPair interface acts as a level shifter. If one connects the TV directly to the PC (via UART), ICs will be blown!

How to Order
ComPair II order codes:

- ComPair II interface: 3122 785 91020.
- Programming software can be downloaded from the Philips service portal.
- ComPair UART interface cable for TPS2.1E. 3122 785 90630.

Note: While having problems, contact the local support desk.

5.2.2 LVDS Tool

Support of this LVDS Tool has been discontinued.

5.3 Error Codes

5.3.1 Introduction

The error code buffer contains all detected errors since the last time the buffer was erased. The buffer is written from left to right, new errors are logged at the left side, and all other errors shift one position to the right.

Table 5-1 Error Code Overview

Error Code	Description
000	No problem
011	I²C bus error
012	Tuner error

5.4 Fault Finding and Repair Tips

5.4.1 Exit “Factory Mode”

Choose “EXIT”, then press “OK” button.

5.4.2 Speakers

Make sure that the volume is set to minimum during disconnecting the speakers in the ON-state of the TV. The audio amplifier can be damaged by disconnecting the speakers during ON-state of the set!

5.4.3 Tuner

Attention: In case the tuner is replaced, always check the tuner options!

6. Alignments

Index of this chapter:

Note: The Service Mode are described in chapter 5. Menu navigation is done with the CURSOR UP, DOWN, LEFT or RIGHT keys of the remote control transmitter.

6.1 General Alignment Conditions

Perform all electrical adjustments under the following conditions:

- Power supply voltage: 195 V to 264 V_{AC}, 50/60 ±3 Hz.
- Connect the set to the mains via an isolation transformer with low internal resistance.
- Allow the set to warm up for approximately 15 minutes.
- Measure voltage and waveforms in relation to correct ground (e.g. measure audio signals in relation to AUDIO_GND).
  Caution: It is not allowed to use heatsinks as ground.
- Test probe: R_i > 10 MΩ, C_i < 20 pF.
- Use an isolated trimmer/screwdriver to perform alignments.

6.2 YPbPr mode Display adjustment

6.2.1 Equipment Requirements

Minolta CA-210 or equivalent colour analyser. Quantum Data Pattern Generator 802G, 802BT or equivalent instrument.

6.2.2 Input requirements

- Input Signal Type: YPbPr signal
  1. 1080i mode, with an YPbPr source, use a 100% colour bar pattern, see Figure 6-1, with a PC source, use a 16-scale grey pattern.
  2. Select Picture mode to User mode and check the x, y data.
- Input Signal Strength: 1 V_{pp} for Y signal; 0.7 V_{pp} for Pb and Pr signal.
- Input Injection Point: YPbPr (RAC jack).

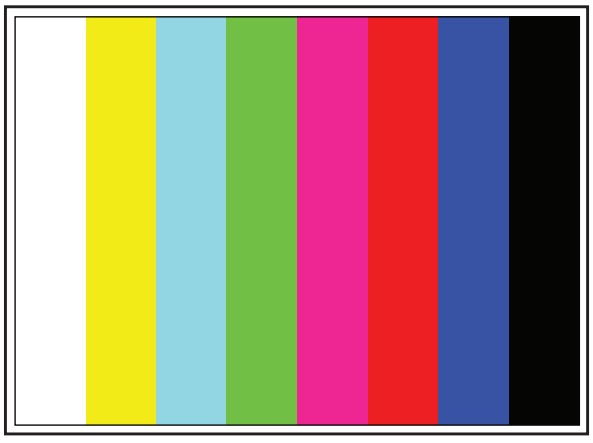

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Figure 6-1 Colour bar pattern

6.2.3 Alignment method

1. Select source as “YPbPr”.
2. Set Smart picture as “Vivid” and Contrast = 50, Brightness = 50, colour = 50.
3. Apply a 100% colour bar pattern by a signal generator or PC.
4. Enter factory mode menu: press numeric keys “062596” + “INFO” key (SAM mode menu).

6.2.4 Alignment

1. At FAC mode menu, select AUTO_COLOR item. Then press “OK” key to auto adjust ADC_GAIN_R, ADC_GAIN_G, ADC_GAIN_B and ADC_OFFSET_R, ADC_OFFSET_G, ADC_OFFSET_B. Then store those values to NVM.
2. Set contrast = 80, Brightness = 50 at NORMAL menu mode.
3. Check the 16 grayscale pattern should be distinguished and colour bar is correct.
4. Reset AV setting, picture mode shall be recalled to be “Standard” and Contrast = 80, Brightness = 50.

Table 6-1 White D alignment values

	Cool (11000K)	Normal (9000K)	Warm (6500K)
x (center)	0.278 ±0.003	0.289 ±0.003	0.314 ±0.003
y (center)	0.278 ±0.003	0.291 ±0.003	0.319 ±0.003

Notes:

- Minimum luminance > 250 cd/m2 at the centre of the screen at Custom colour (Brightness and Contrast control set at 100%).
- Picture mode should be “Vivid” for outgoing.

6.3 PC Mode Adjustment

6.3.1 Equipment Requirements

Minolta CA-210 or Equivalent colour analyser. Chroma 2250 or equivalent PC signal generator.

6.3.2 Input requirements

- Input Signal Type: PC VGA signal
  1. 1366 * 768@ 60 Hz PC mode with “Five white blocks” pattern, see Figure 6-2.
- Input Signal Strength: 0.7 V_{pp} linear voltage
- Input Injection Point: PC D-SUB input

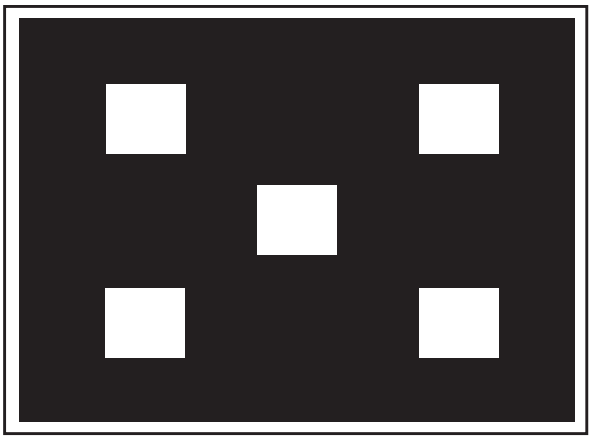

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Figure 6-2 Five white blocks pattern

6.3.3 Alignment method

1. Select source as “PC”.
2. Set contrast =80, Brightness=50 at NORMAL menu mode.
3. Apply “5 white block” pattern by VGA pattern generator.
4. Enter factory mode menu: press numeric keys “062596” + “INFO” key (SAM mode menu).

6.3.4 Alignment

1. At FAC mode menu, select AUTO_COLOR item. Then press “OK” key to auto adjust ADC_GAIN_R, ADC_GAIN_G, ADC_GAIN_B and ADC_OFFSET_R, ADC_OFFSET_G, ADC_OFFSET_B. Then store those values to NVM.
2. Apply flat pattern.
3. Set colour temperature to “NORMAL”.
4. At FAC mode menu, adjust the CLR_TEMP_R, CLR_TEMP_G, CLR_TEMP_B value to meet “NORMAL” colour coordinates according to Table 6-1. Then those values to NVM.
5. Repeat step 4 for “COOL” and “WARM”.

6.4 Serial Number Definition

Table 6-2 BOM Code

Panel Supplier	Code
AU	1
CPT	2
LPL(LG)	3
QDI	4
CMO	5
HSD	6
SVA	7

7. Circuit Descriptions

Index of this chapter:

Notes:

- Only **new** circuits (circuits that are not published recently) are described.
- Figures can deviate slightly from the actual situation, due to different set executions.
- For a good understanding of the following circuit descriptions, please use the wiring, block (chapter 6) and circuit diagrams (chapter 7). Where necessary, you will find a separate drawing for clarification.

7.1 Introduction

This chassis is a derivative from theTPS1.2E LA chassis.It comes with styling called “Click”.
It’s built around the MST9A885GL-LF “System on Chip” (SoC).

7.1.1 Features

The main features for this chassis are:

- High performance back-end processing Perfect Pixel HD engine capable of 300 Mpixels/sec. With this technology, each pixel of the incoming picture is enhanced to better match the surrounding pixels, resulting in a more natural picture. Artifacts and noise in all sources from multimedia to standard TV to highly-compressed high-definition (HD) are detected and reduced. This results in a clean and razor sharp image.

7.1.2 Click Architecture Overview

For details about the chassis block diagrams refer to chapter “Block diagrams, Test Point Overview, and Waveforms”. An overview of the xxPFL3404 architecture can be found in next figure “Architecture of xxPFL3404 platform”. Sets with all resolutions @ 60 Hz use the MST9A885GL SoC. With the same configuration, a resolution of 1360x768p @ 59.79 Hz, or even 1920 × 1080p@60 Hz can be achieved.

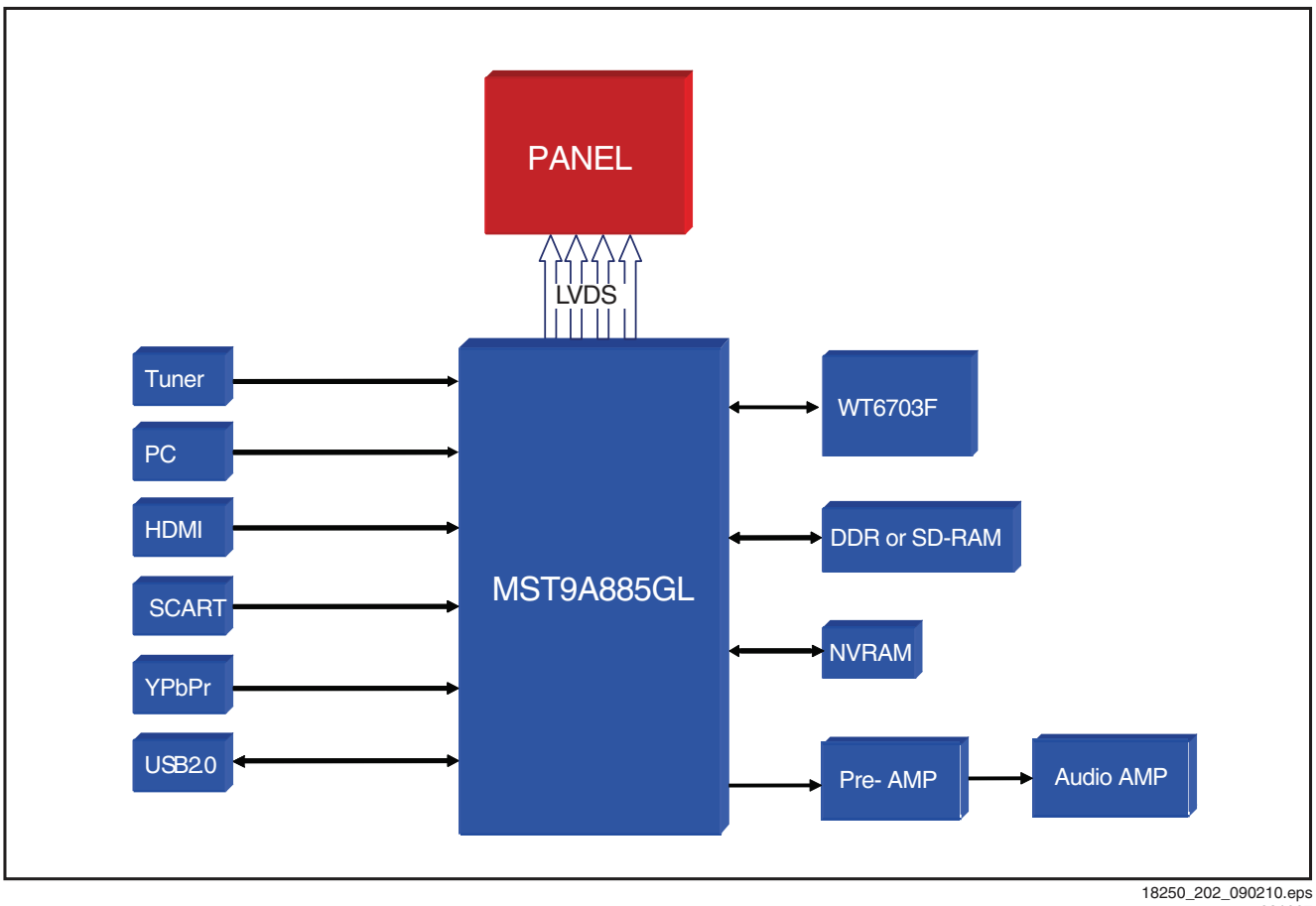

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Figure 7-1 System architecture.

7.1.3 SSB Cell Layout

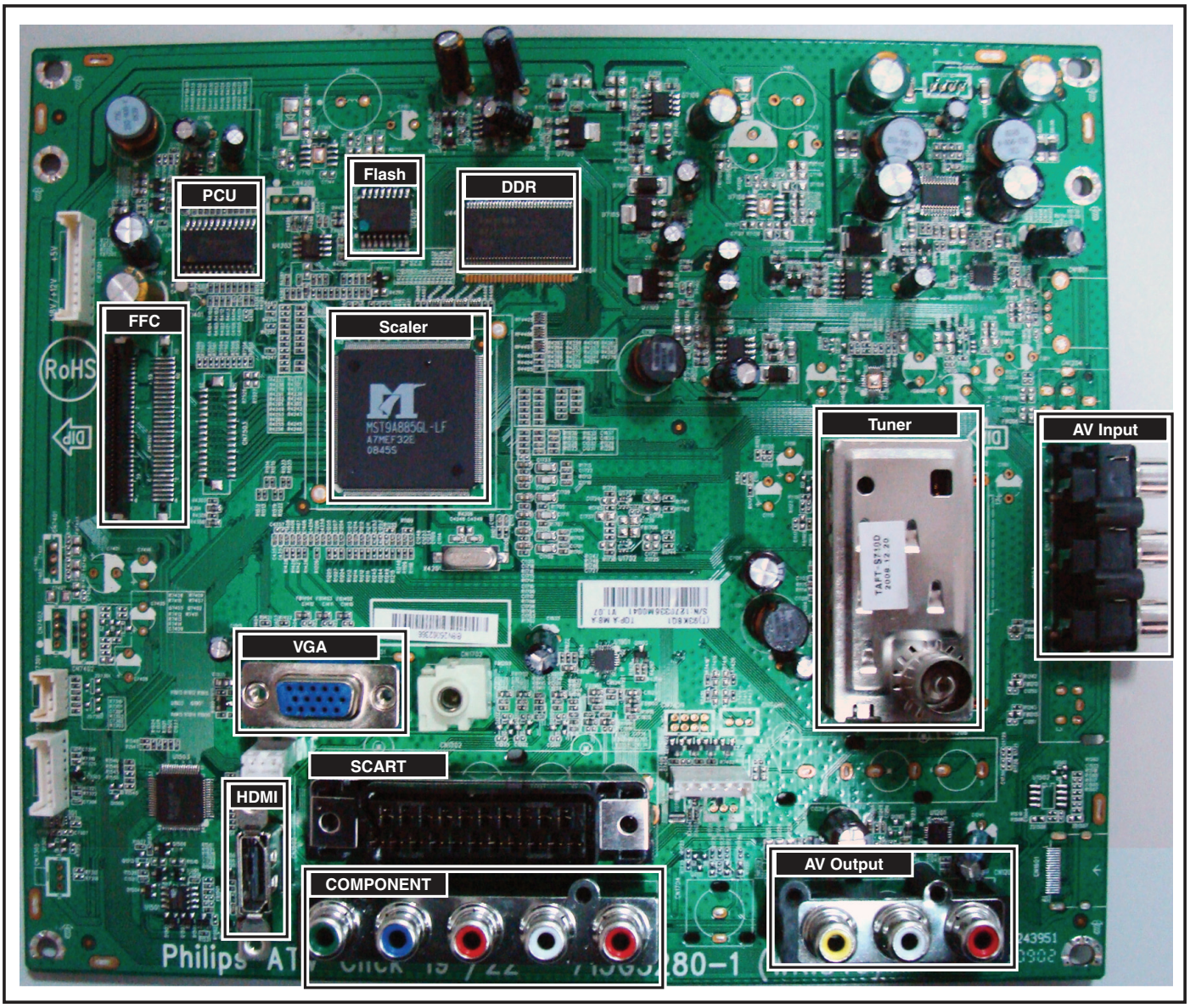

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Figure 7-2 SSB top view 19" & 22"

7.2 Main Supply

All Power Supply Units deliver the following voltage to the chassis:

- +12V for the audio amplifier
- + 5V for USB, STBY, TUNER, and Panel_PWR
- +3.3 V for SD-RAM, Scaler, HDMI SWITCH, USB2, AVDD, and VDDP
- +2.6 V for VDDM and DDR

7.2.1 Power Supply

The sets in this chassis comes with a buy-in LG supply units:

- LC190WH1
- LC220WXE

This supply unit delivers the power for the display. Refer to chapter “Circuit Diagrams and PWB Layouts”. The power supply for the SSB is located on the SSB itself.
The connector to the SSB-platform is CN902, which has all the basic requirements for the SSB-power.
When defective, a new panel must be ordered and the defective panel must be sent for repair, unless the main fuse of the panel is broken. Always replace a defective fuse with one with the correct specifications! This part is available in the regular market.

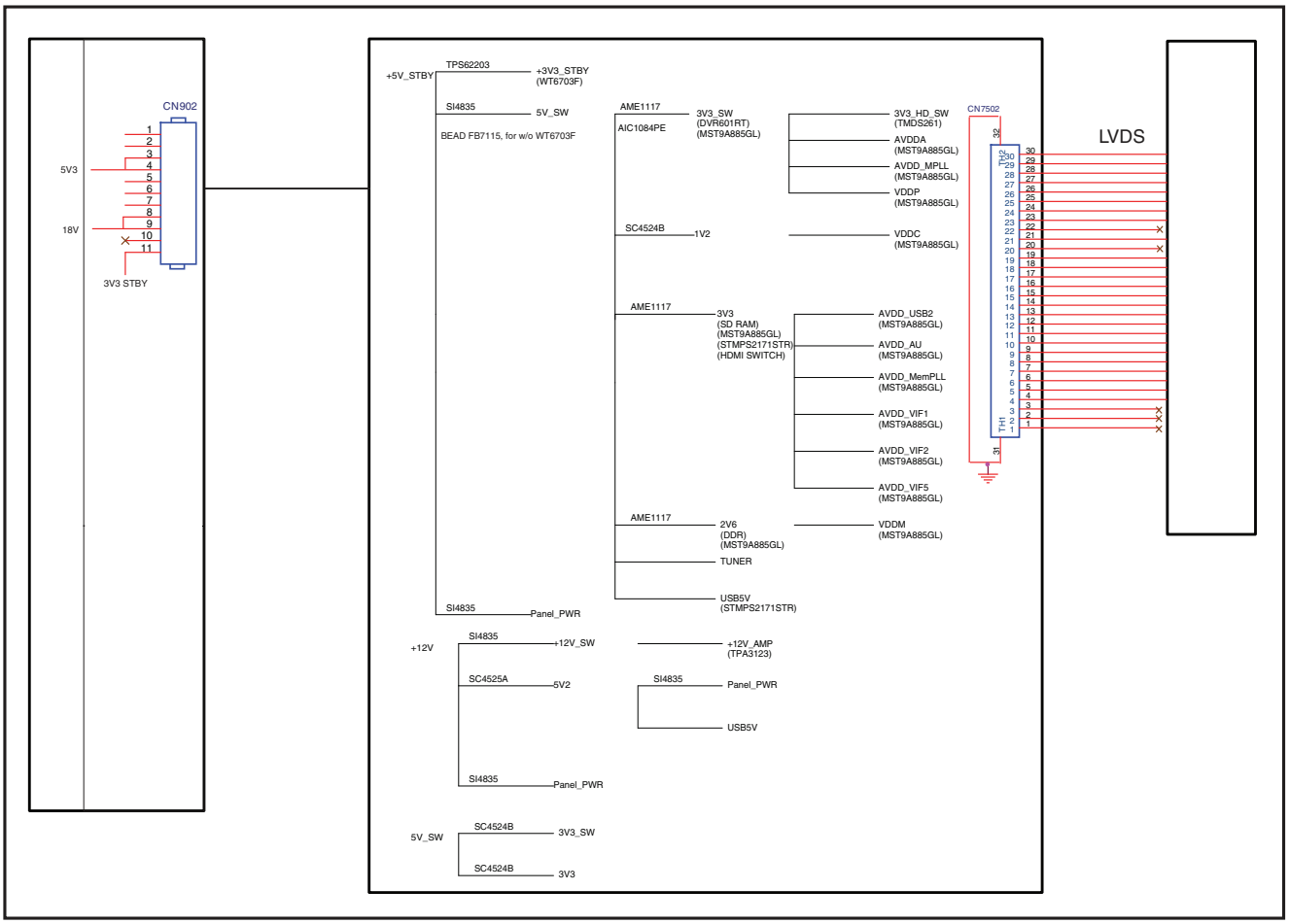

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Figure 7-3 High level Power Architecture

Table 7-1 IPB Power connectors

Pin	CN831 CN833 CN851 CN853	CN902
1	HVR	INV-ON/OFF
2	HVR	BRIGHTNESS
3	-	+5V3
4	-	+5V3
5	-	GND
6	-	GND
7	-	GND
8	-	+18V
9	-	+18V
10	-	NC
11	-	Standby

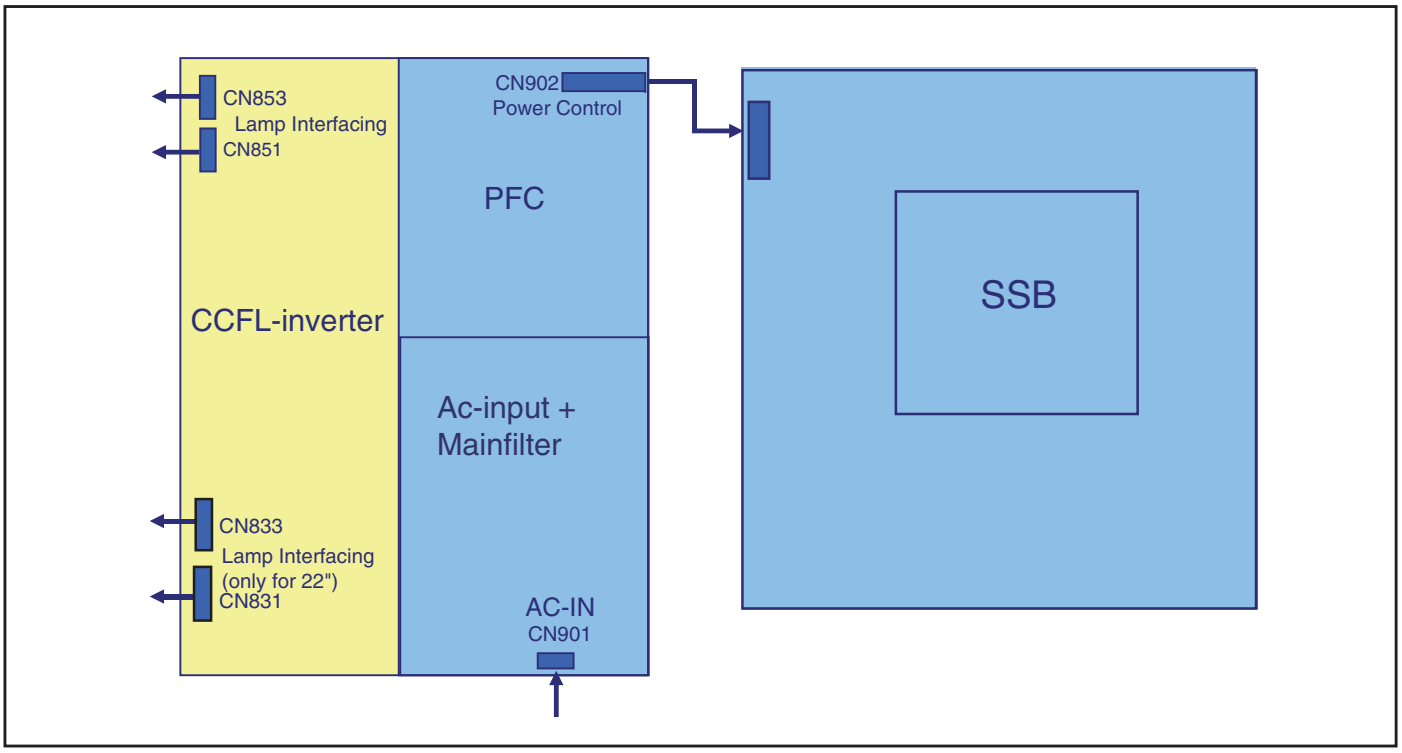

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Figure 7-4 High level Power Architecture IPB.

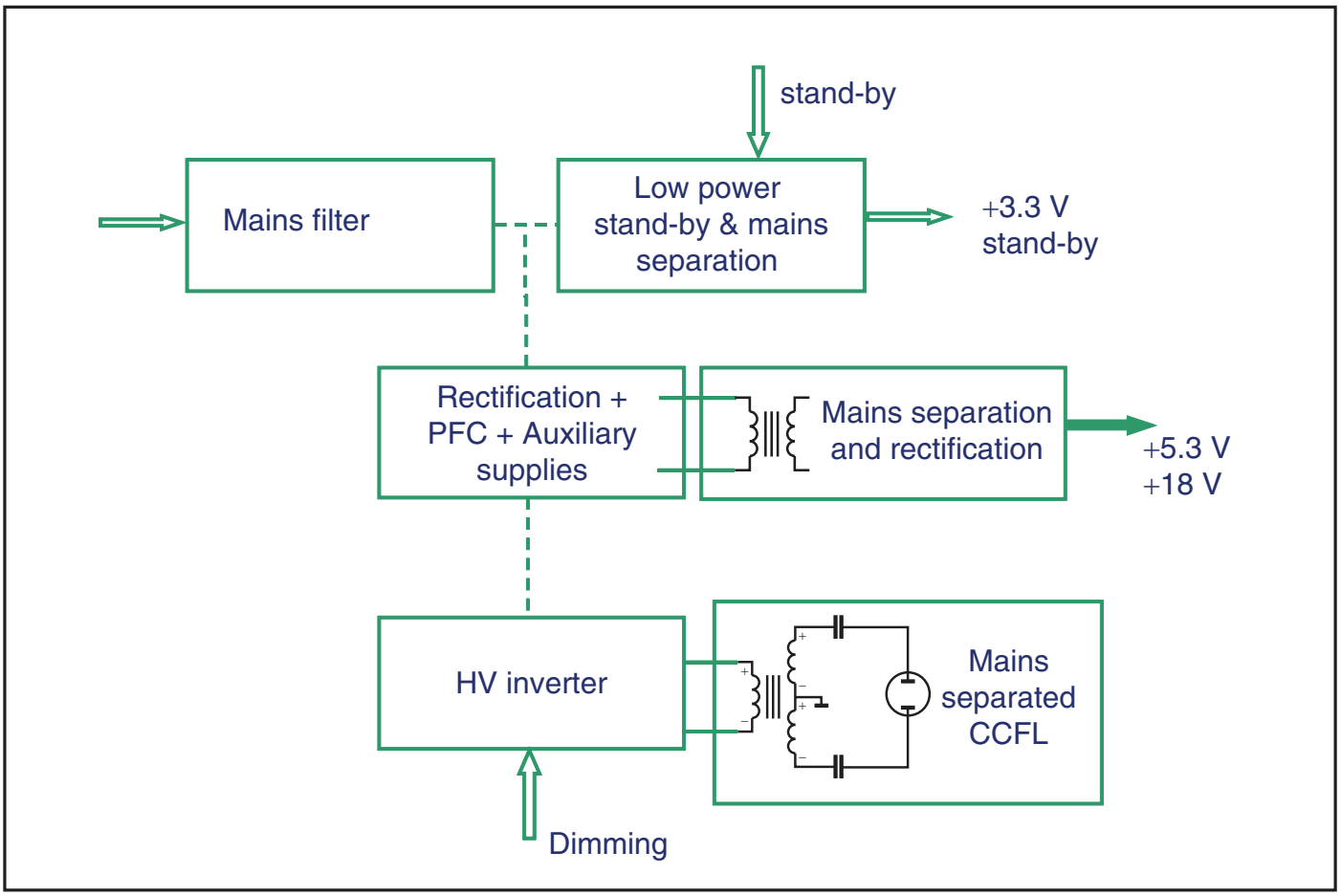

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Figure 7-5 Block diagram IPB.

7.3 On-Board Platform Supply

In this platform, an on-board platform supply has been foreseen. This means that the mains voltage, after filtering, is fed to the SSB.

The supply is a Self Oscillating Power Supply (SOPS) and working according to the Quasi Resonant Conversion (QRC) principle.

7.4 On-board DC/DC Converters

In this platform, on-board DC/DC converters have been foreseen.

7.5 Tuner (TAFT-S710D)

The tuner has the following specifications:

- 2 in1 tuner for Analog.
- Covers all bands in VHF and UHF including hyper channels for CCIR system.
- I2C- bus control of tuning, address selection, Broadcasting system.
- Built-in DC/DC Converter (5v to 33V) & PAL(B/G, I, D/K) / SECAM L/L' Demodulator/NTSC(B/G)

Repair tip: After replacement of the tuner, the option code should be checked, even when the set appears to function correctly! Refer also to chapter 5 "Service Modes, Error Codes, and Fault Finding".

7.6 MST9A885GL

In this chassis, the MST9A885GL is a high performance and fully integrated IC with resolutions up to SXGA (1280 × 1024) / WXGA+ (1440 × 900). It is configured with an integrated triple-ADC/PLL, an integrated DVI/HDCP/HDMI receiver, a multi-standard TV video and audio decoder, a video de-interlacer, a scaling engine, the MStar ACE-3 colour engine, an on-screen display controller, an 8-bit MCU and a built-in output panel interface. By use of external frame buffer, 3-D video decoding and processing are fulfilled for high-quality TV applications. To further reduce system costs, the MST9A885GL also integrates intelligent power management control capability for green-mode requirements and spread-spectrum support for EMI management.

8. IC Data Sheets

This section shows the internal block diagrams and pin configurations of ICs that are drawn as “black boxes” in the electrical diagrams (with the exception of “memory” and “logic” ICs).

8.1 Diagram B07, MST9A885GL-LF (IC U4201)

Pin Configuration

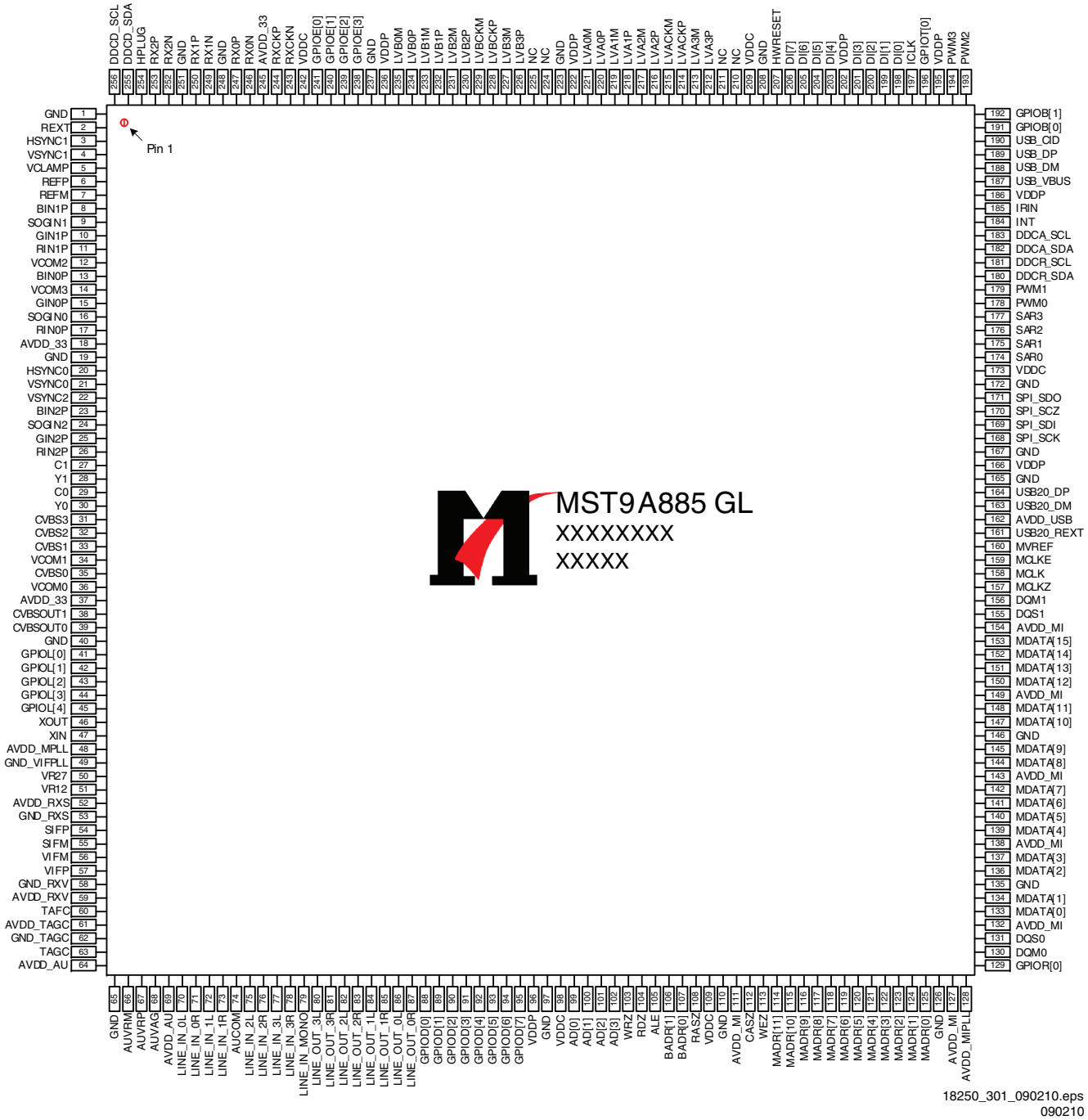
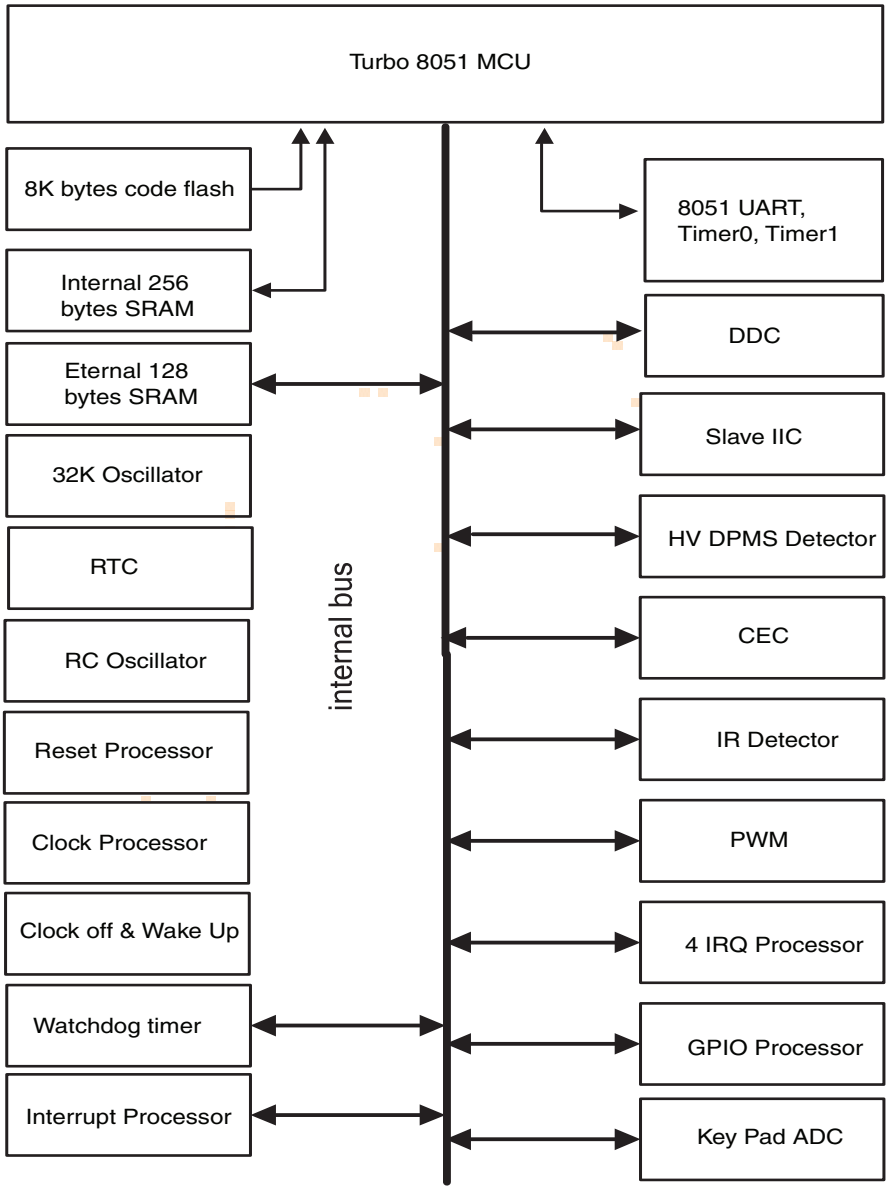


Figure 8-1 Pin configuration.

8.2 Diagram B08, WT6703F-SG240WT (IC U4101)

Block Diagram



Pin Configuration

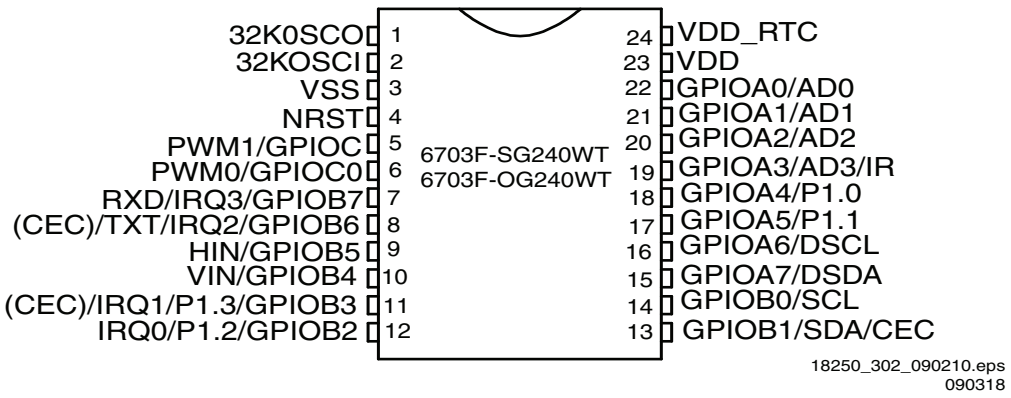
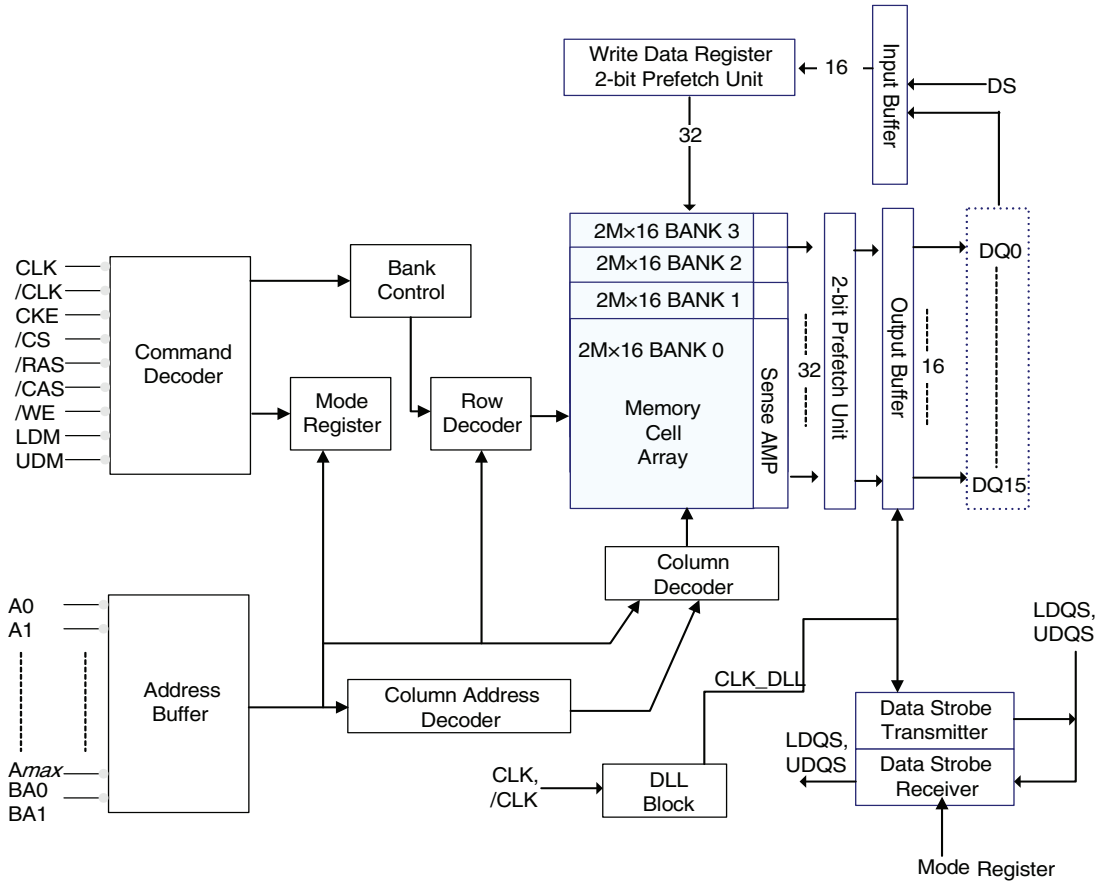


Figure 8-2 Internal block diagram and Pin configuration

8.3 Diagram B09, HY5DU281622FTP-5-C (IC U4401)

Block Diagram



Pin Configuration

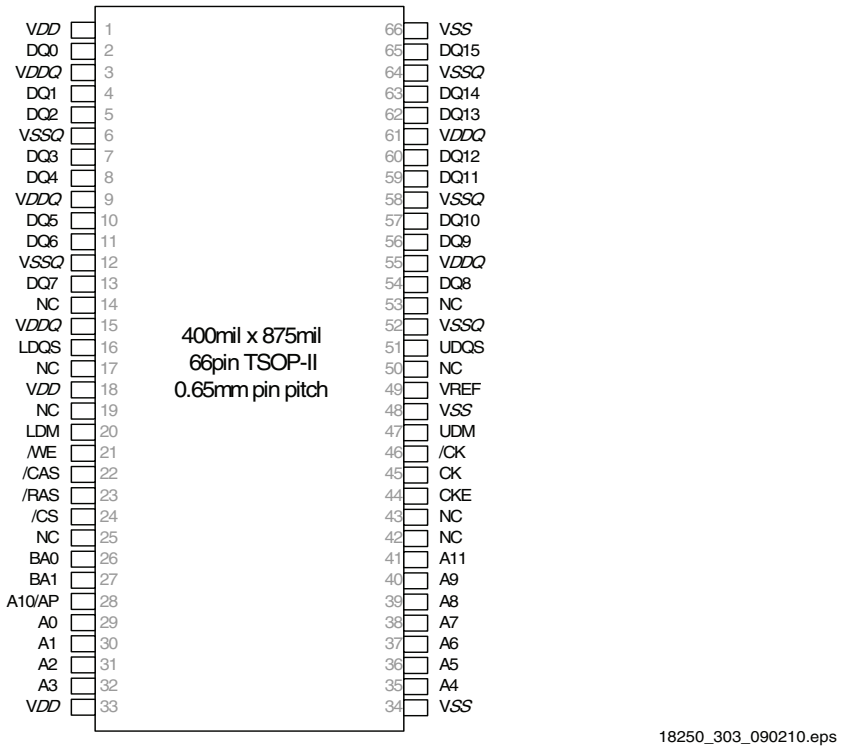


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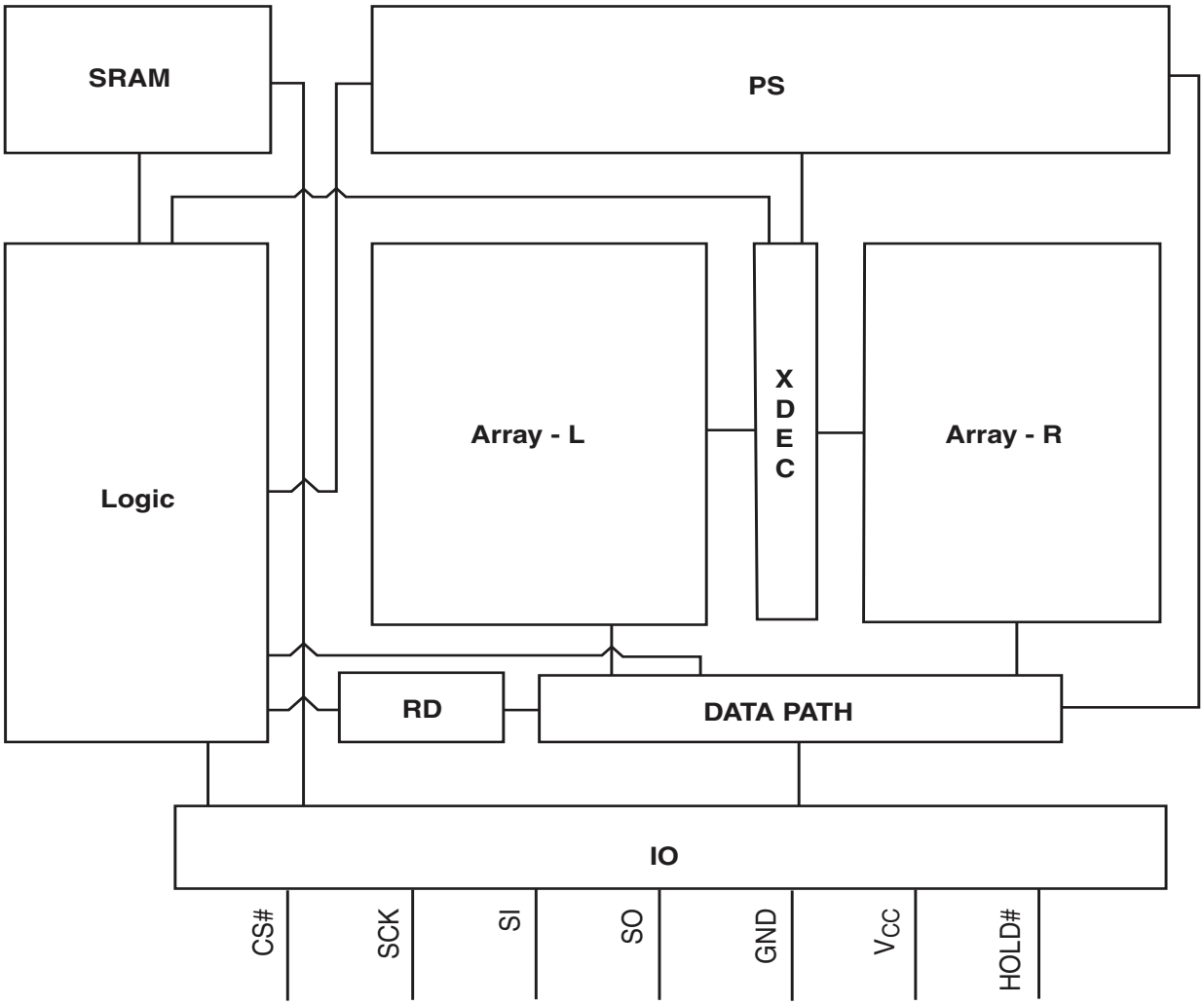
Figure 8-3 Internal block diagram and Pin configuration.

8.4 Diagram B09, S25FL032A0LMF1001 (IC U4403)

Block Diagram



Pin Configuration

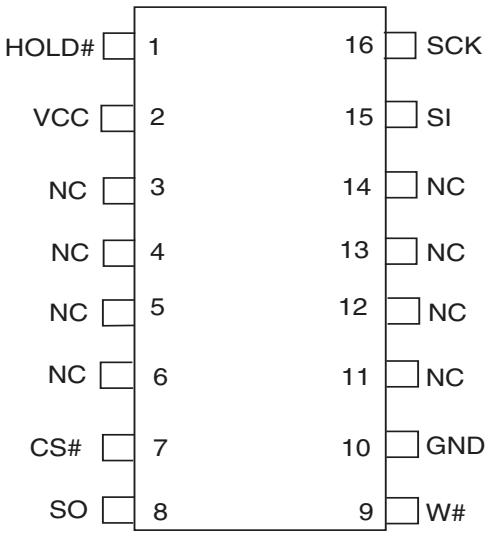


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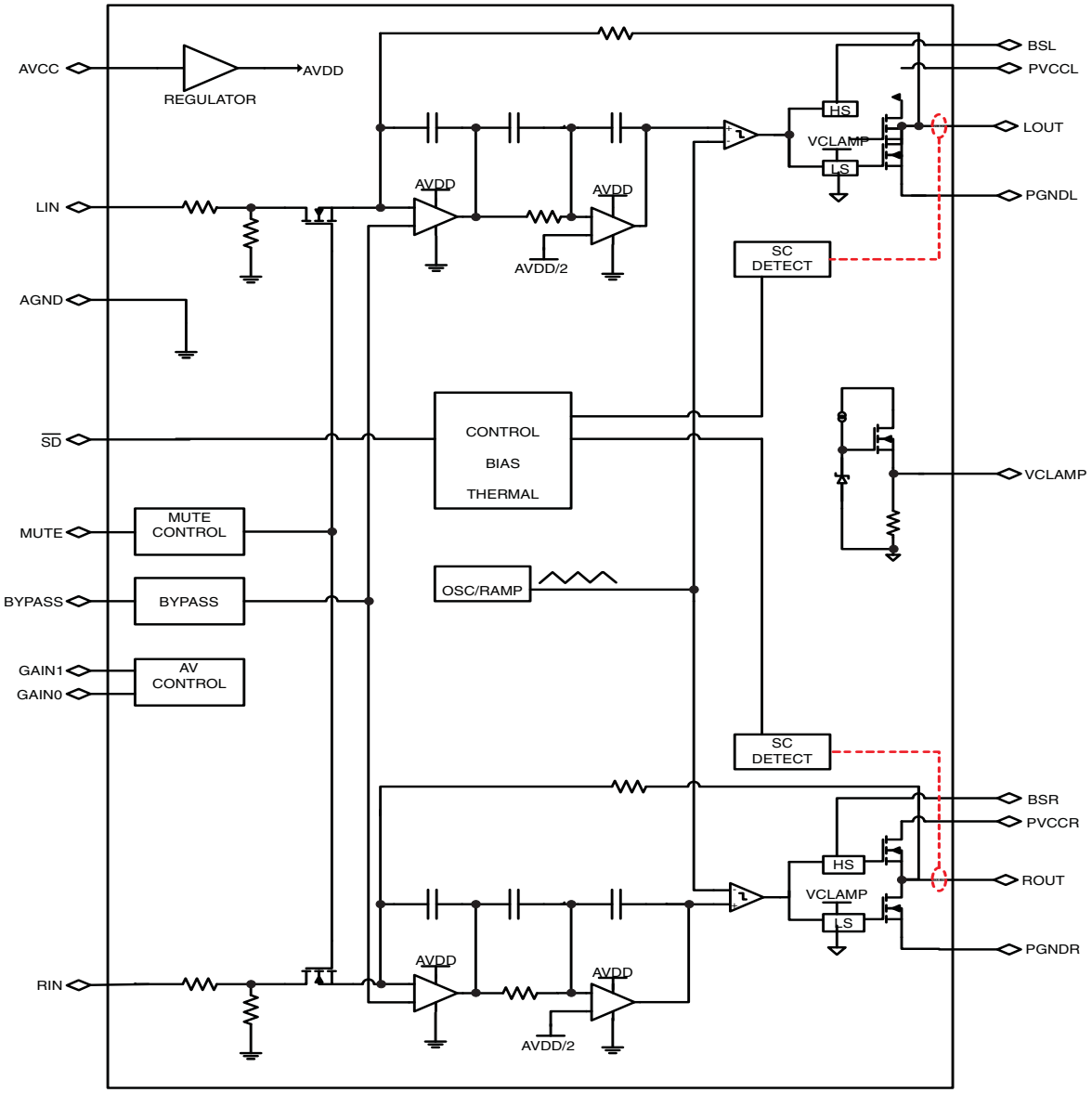
Figure 8-4 Internal block diagram and Pin configuration

8.5 Diagram B14, TPA3123D2PWPR (IC U6102)

Block Diagram



Pin Configuration

PWP (TSSOP) PACKAGE
(TOP VIEW)

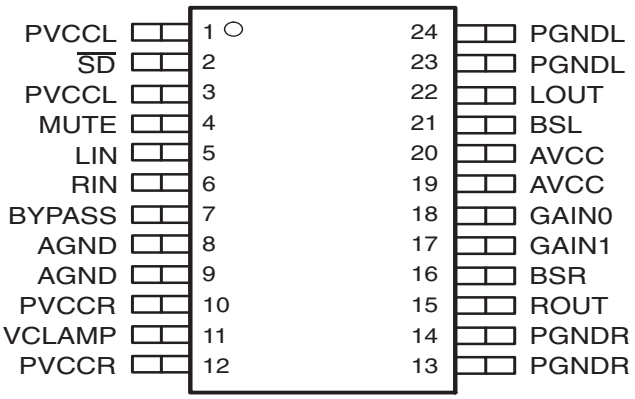


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Figure 8-5 Internal block diagram and Pin configuration

8.6 Diagram B16, TPS62203DBVRG4 (IC U7101)

Block Diagram

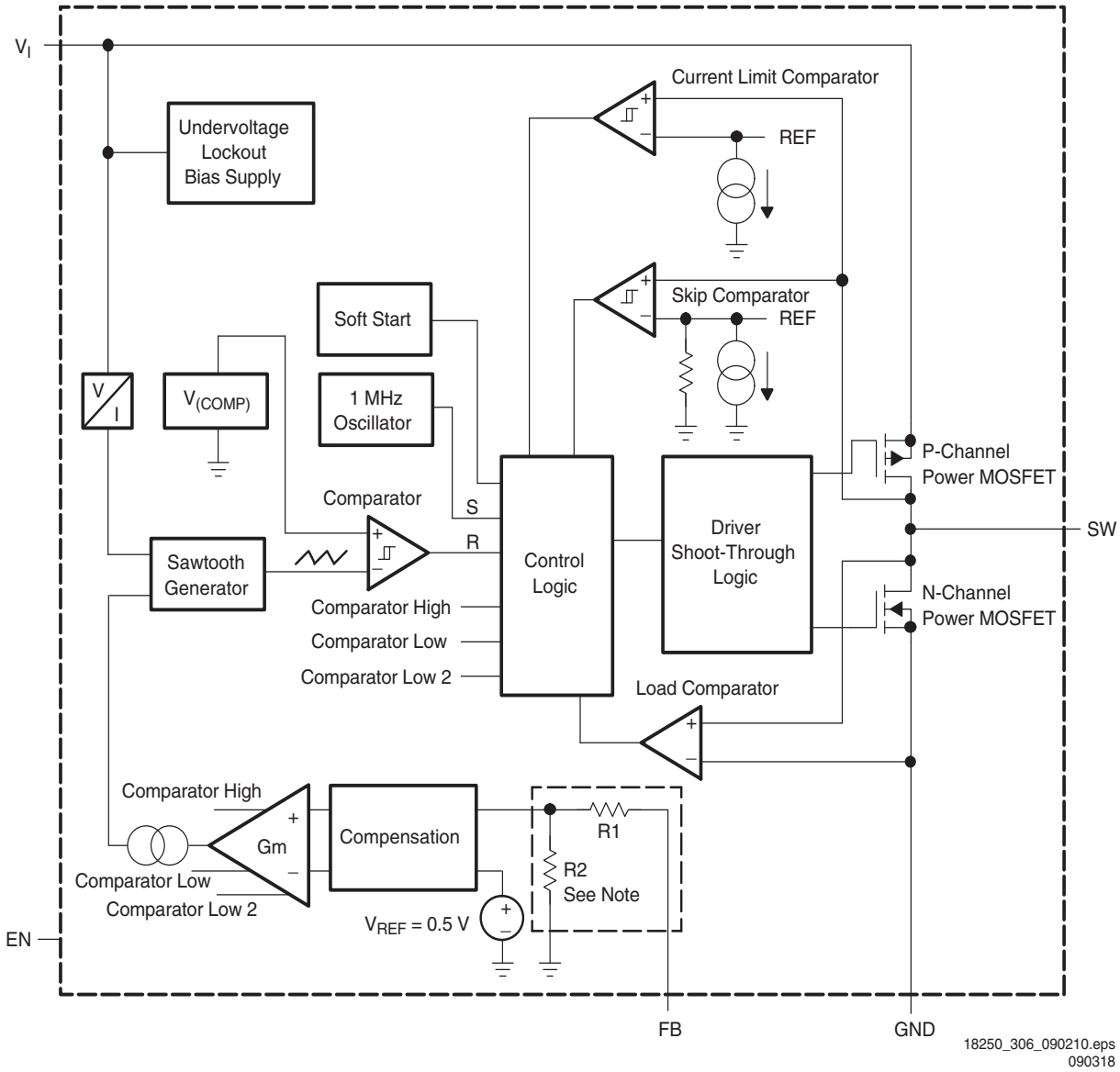


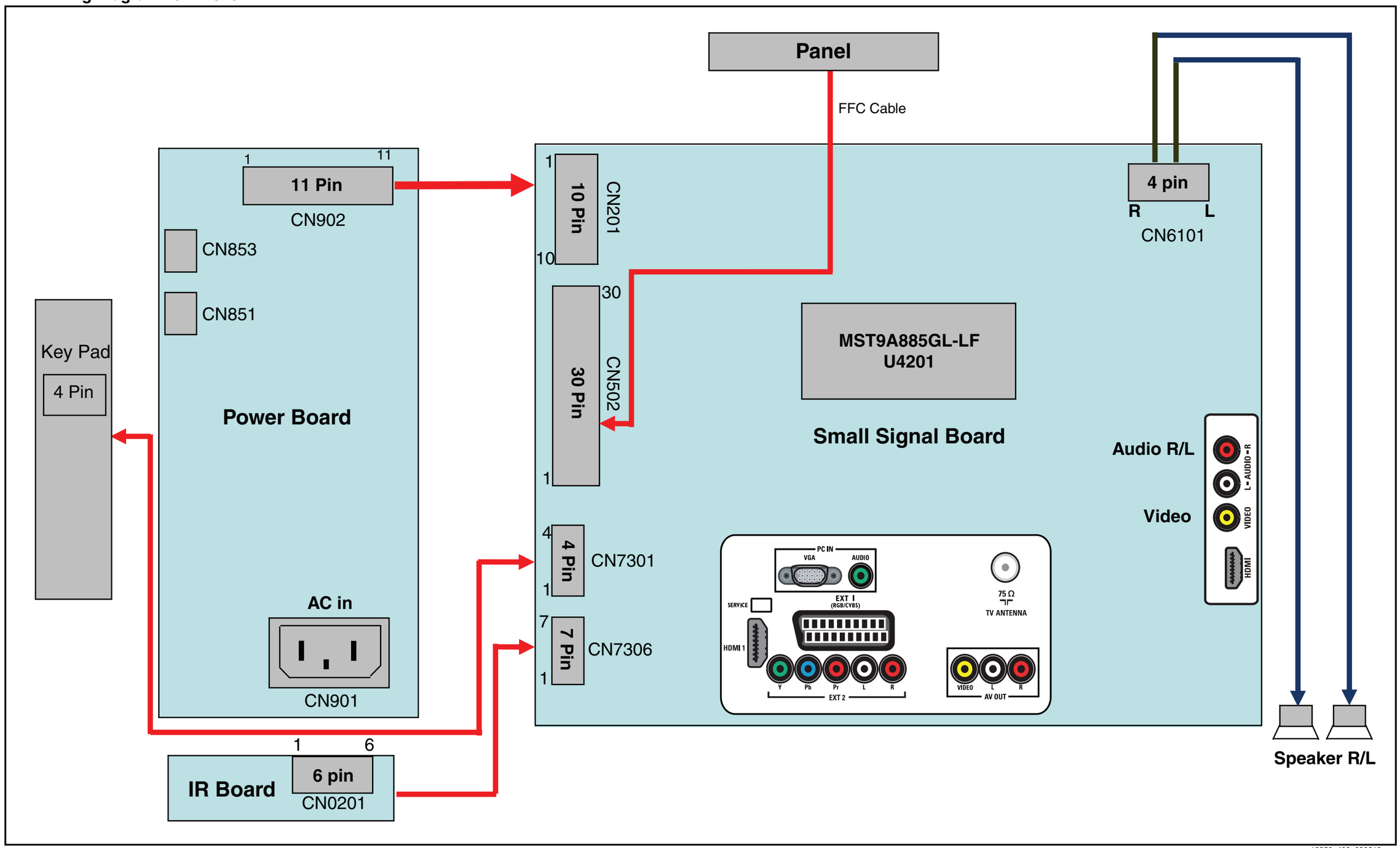
Figure 8-6 Internal block diagram

Personal Notes:

10000_012_090121.eps
090121

9. Block Diagrams

Wiring Diagram 19PFL3404



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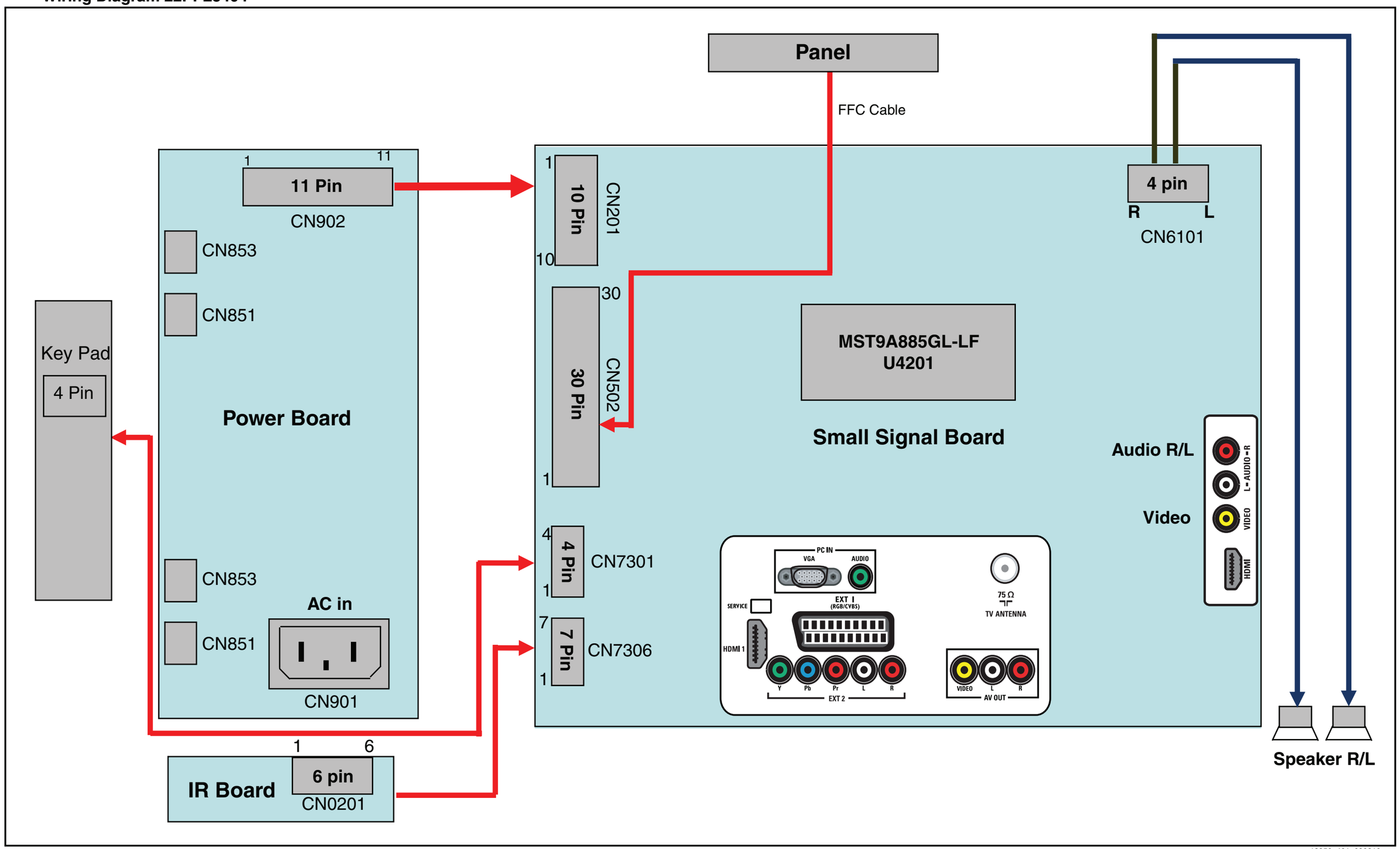
Wiring Diagram 22PFL3404



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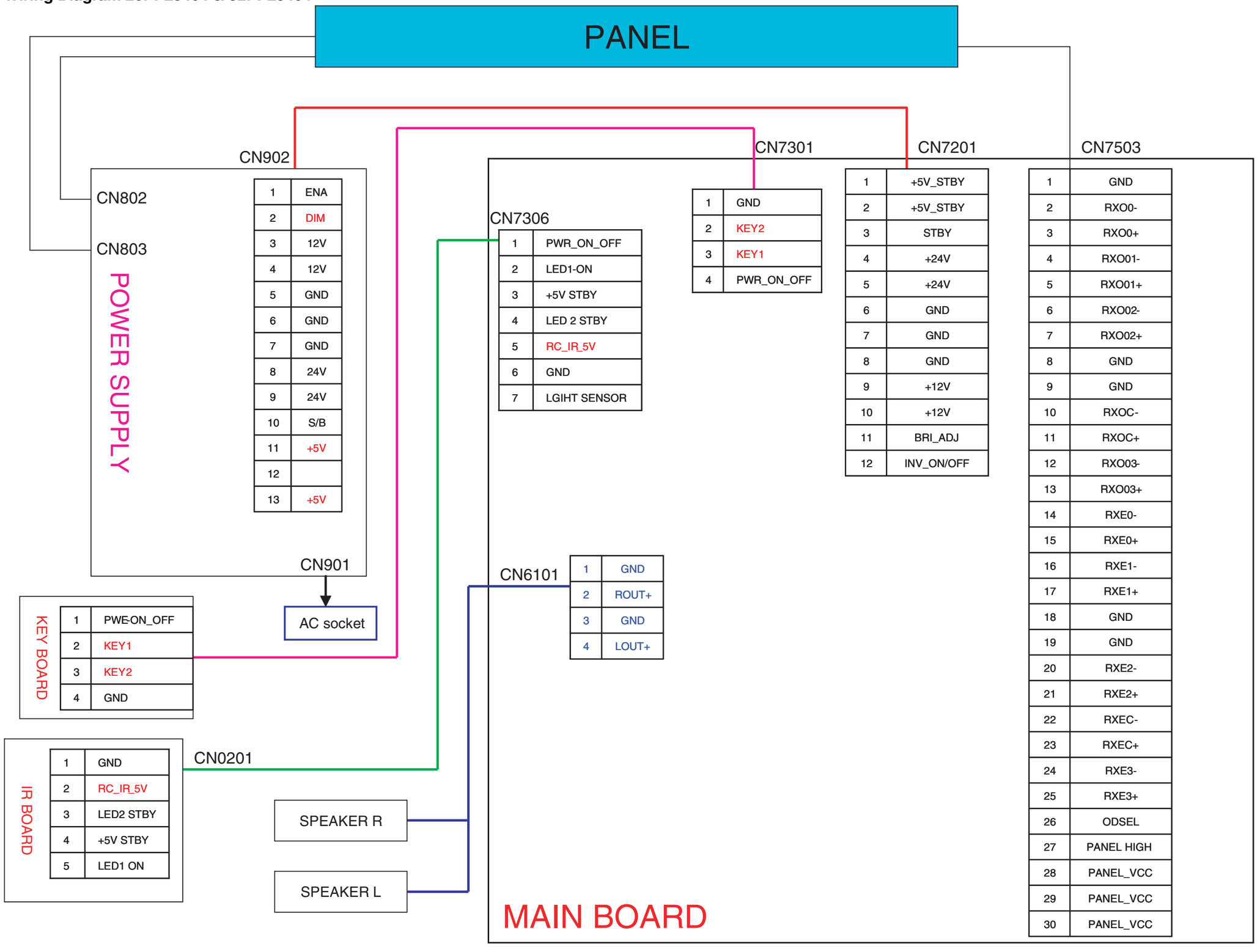
Wiring Diagram 26PFL3404 & 32PFL3404



18250_404_090210.eps
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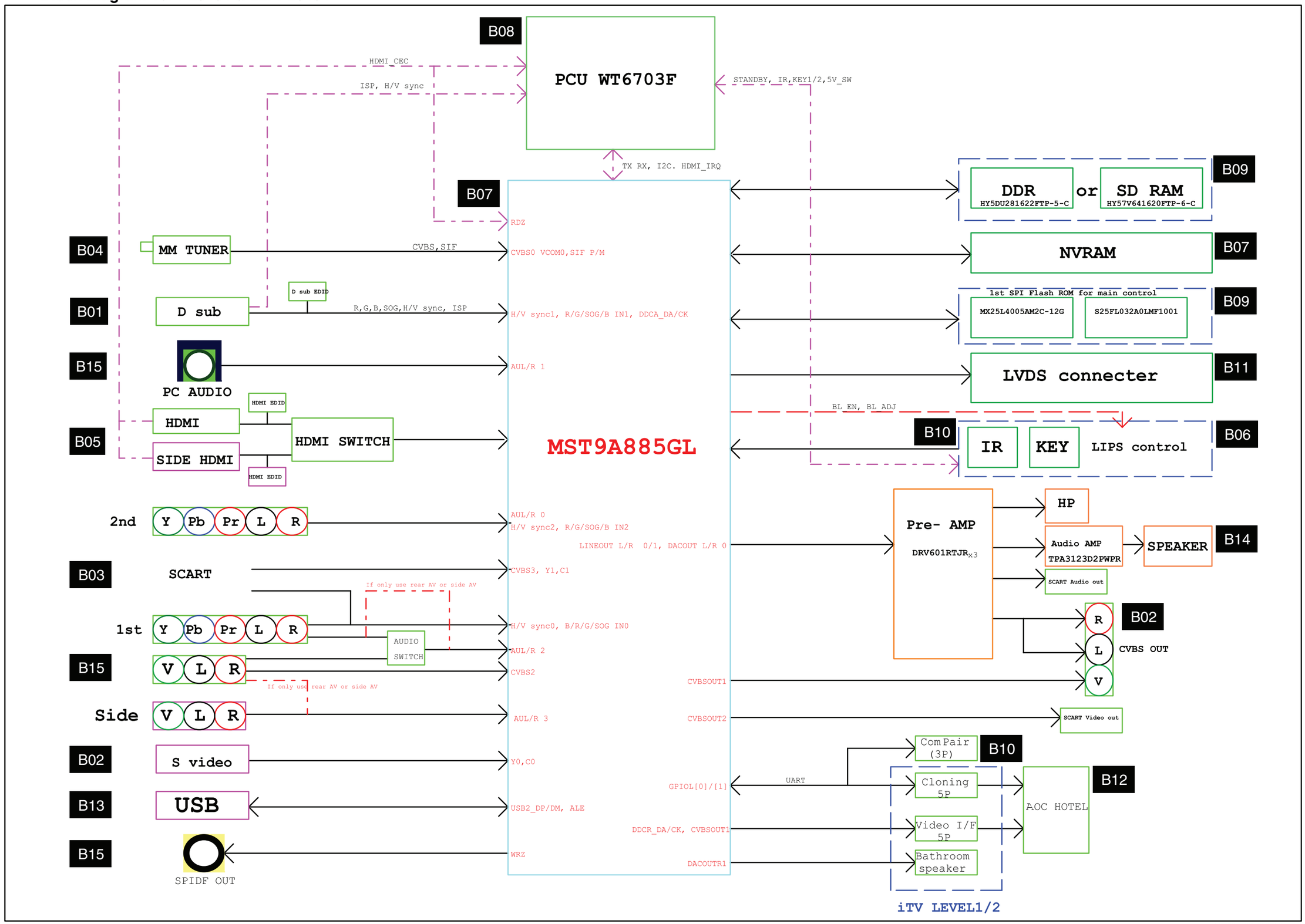
Block Diagram 19PFL3404 & 22PFL3404



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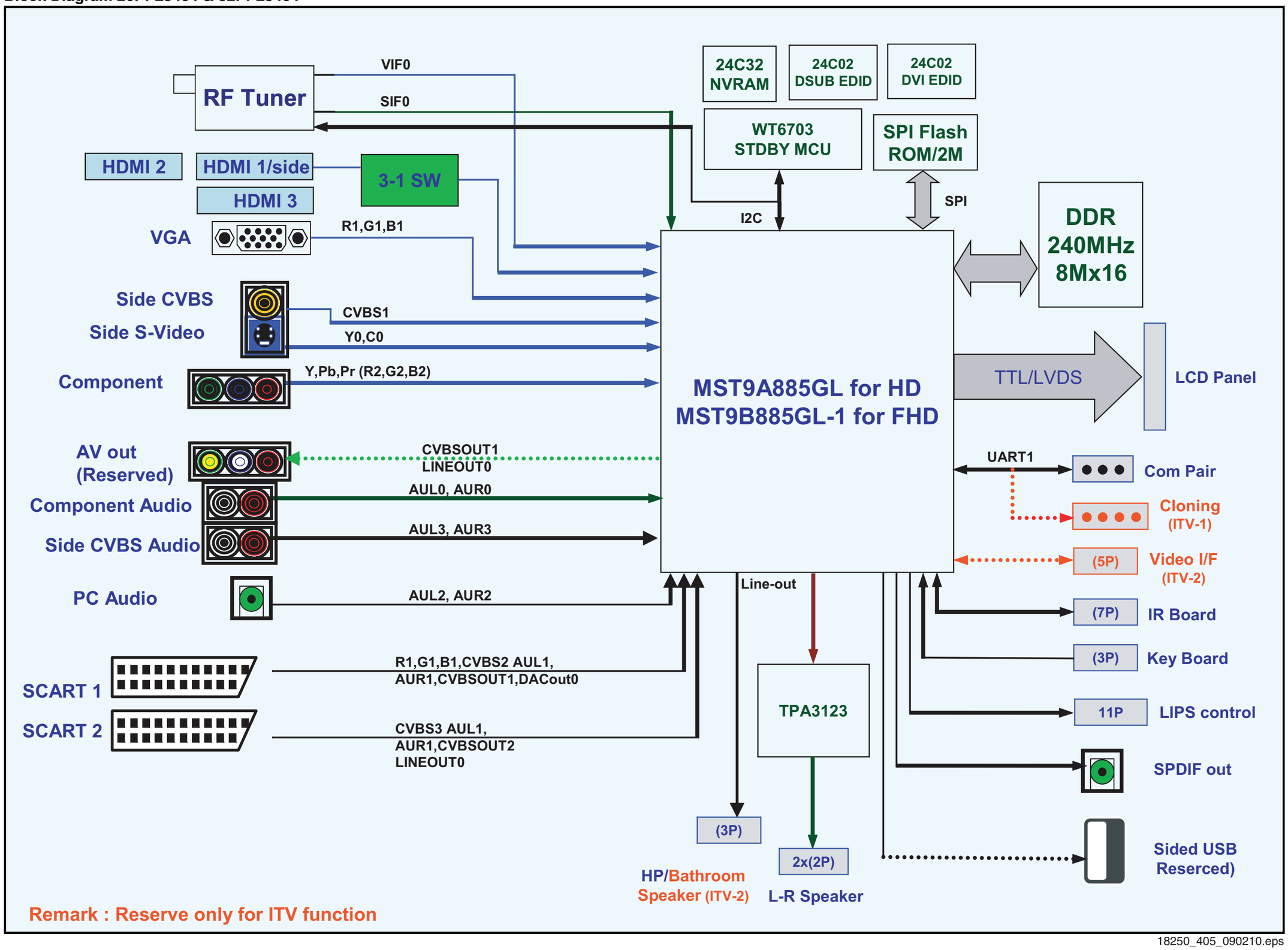
090417

Block Diagram 26PFL3404 & 32PFL3404



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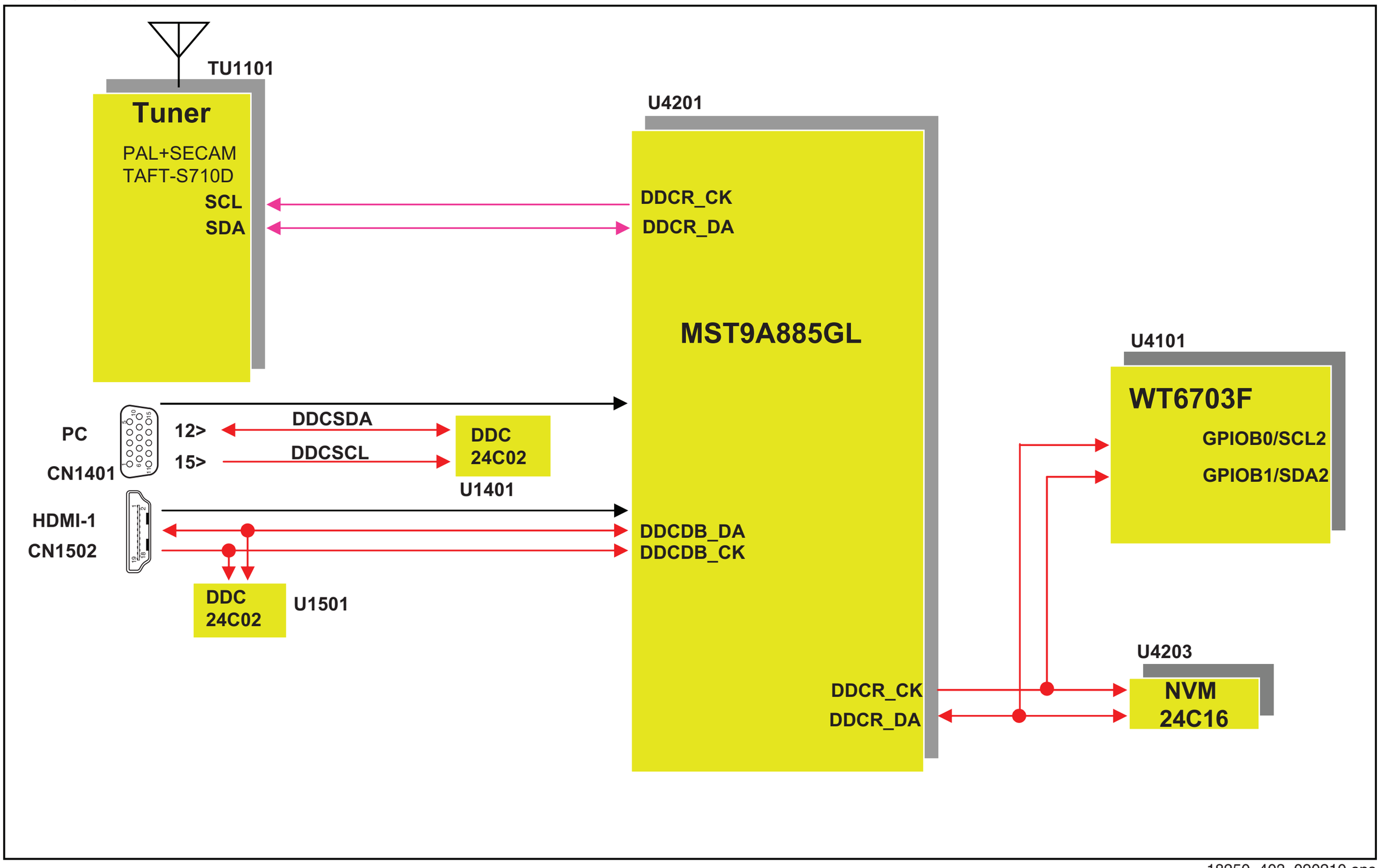
I2C Overview



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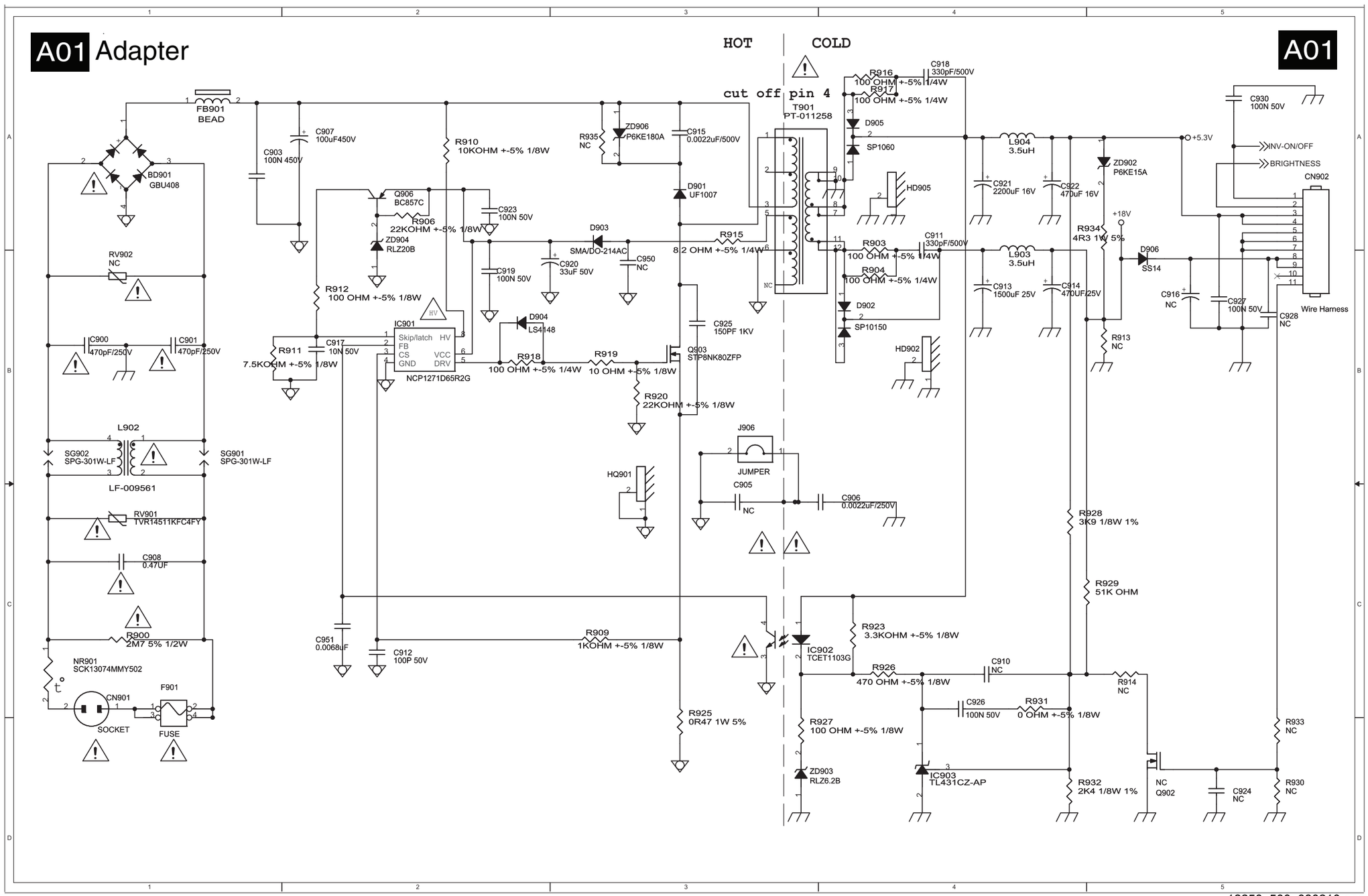
10. Circuit Diagrams and PWB Layouts

Power Board: Adapter, 19PFL3404

BD901	A1	CN901	C1	CN902	A5	C900	B1	C901	B1	C903	A1	C905	C3	C906	C3	C907	A2	C908	C1
C910	C4	C911	A4	C912	C2	C913	B4	C914	B4	C915	A3	C916	B5	C917	B2	C918	A4	C919	B2
C920	A2	C921	A4	C922	A4	C923	A2	C924	D5	C925	B3	C926	C4	C927	B5	C928	B5	C930	A5
C950	B3	C951	C2	D901	A3	D902	B4	D903	A3	D904	B2	D905	A4	D906	A5	FB901	A1	F901	C1
HD902	B4	HD905	A4	HQ901	B3	IC901	B2	IC902	C3	IC903	D4	J906	B3	L902	B1	L903	A4	L904	A4
NR901	C1	Q902	D5	Q903	B3	Q906	A2	RV901	C1	RV902	B1	R900	C1	R903	A4	R904	B4	R906	A2
R909	C3	R910	A2	R911	B1	R912	B2	R913	B4	R914	C5	R915	A3	R916	A4	R917	A4	R918	B2
R919	B3	R920	B3	R923	C4	R925	C3	R926	C4	R927	C3	R928	C4	R929	C4	R931	C4	R932	D4
R933	C5	R934	A4	R935	A3														



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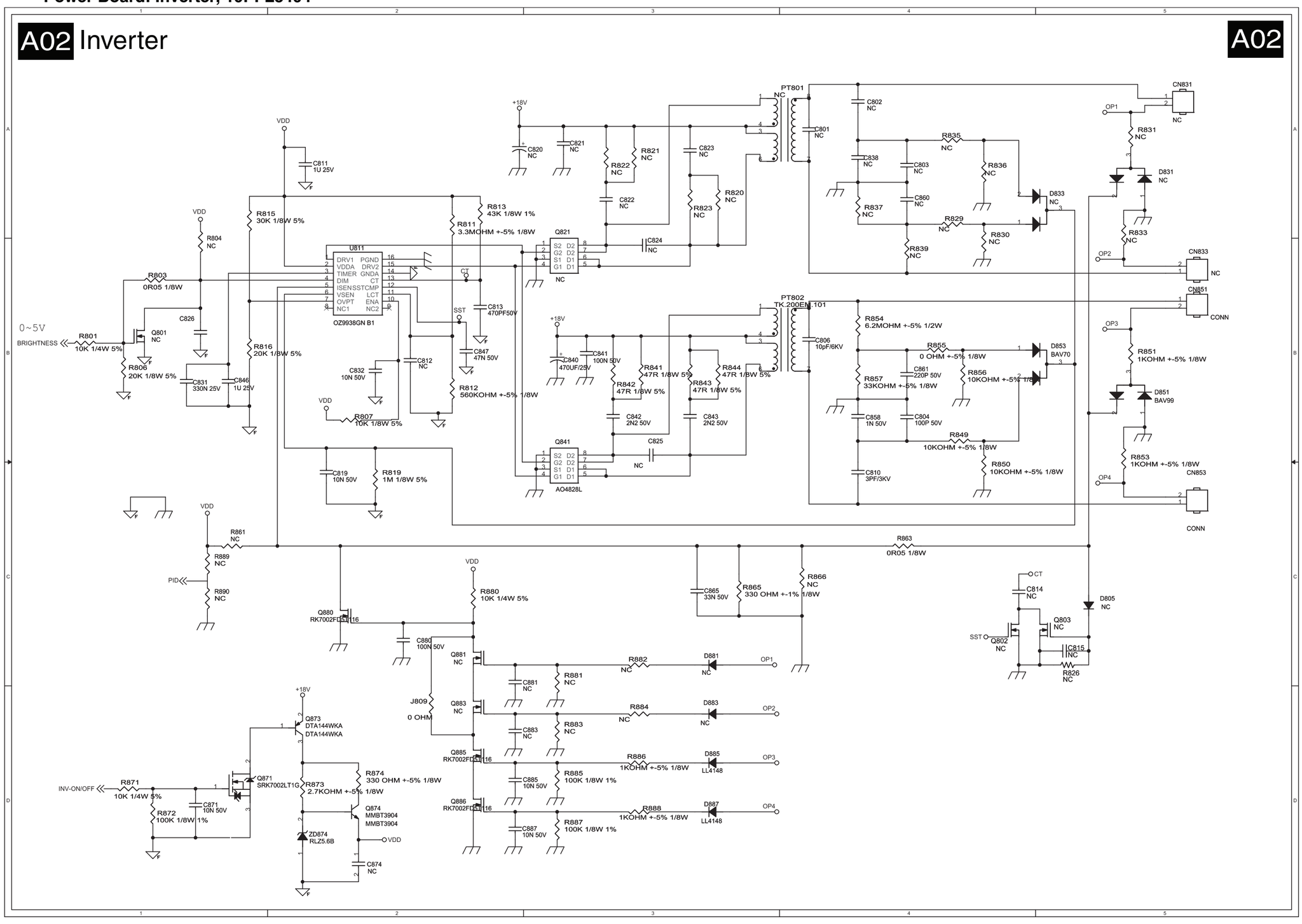
Power Board: Inverter, 19PFL3404



CN831	A5	CN833	B5
CN851	B5	CN853	C5
C801	A4	C802	A4
C803	A4	C804	B4
C806	B4	C810	C4
C811	A2	C812	B2
C813	B2	C814	C4
C815	C5	C819	C2
C820	A2	C821	A3
C822	A3	C823	A3
C824	A3	C825	B3
C826	B1	C831	B1
C832	B2	C838	A4
C840	B3	C841	B3
C842	B3	C843	B3
C846	B1	C847	B2
C858	B4	C860	A4
C861	B4	C865	C3
C871	D1	C874	D2
C880	C2	C881	C2
C883	D2	C885	D2
C887	D2	D805	C5
D831	A5	D833	A4
D851	B5	D853	B4
D881	C3	D883	D3
D885	D3	D887	D3
J809	C2	PT801	A3
PT802	B3	Q801	B1
Q802	C4	Q803	C4
Q821	A3	Q841	B3
Q871	D1	Q873	D2
Q874	D2	Q880	C2
Q881	C2	Q883	D2
Q885	D2	Q886	D2
R801	B1	R803	B1
R804	A1	R806	B1
R807	B2	R811	A2
R812	B2	R813	A2
R815	A1	R816	B1
R819	C2	R820	A3
R821	A3	R822	A3
R823	A3	R826	C5
R829	A4	R830	A4
R831	A5	R833	A5
R835	A4	R836	A4
R837	A4	R839	A4
R841	B3	R842	B3
R843	B3	R844	B3
R849	B4	R850	B4
R851	B5	R853	B5
R854	B4	R855	B4
R856	B4	R857	B4
R861	C1	R863	C4
R865	C3	R866	C4
R871	D1	R872	D1
R873	D2	R874	D2
R880	C2	R881	C3
R882	C3	R883	D3
R884	D3	R885	D3
R886	D3	R887	D3
R888	D3	R889	C1
R890	C1	U811	B2

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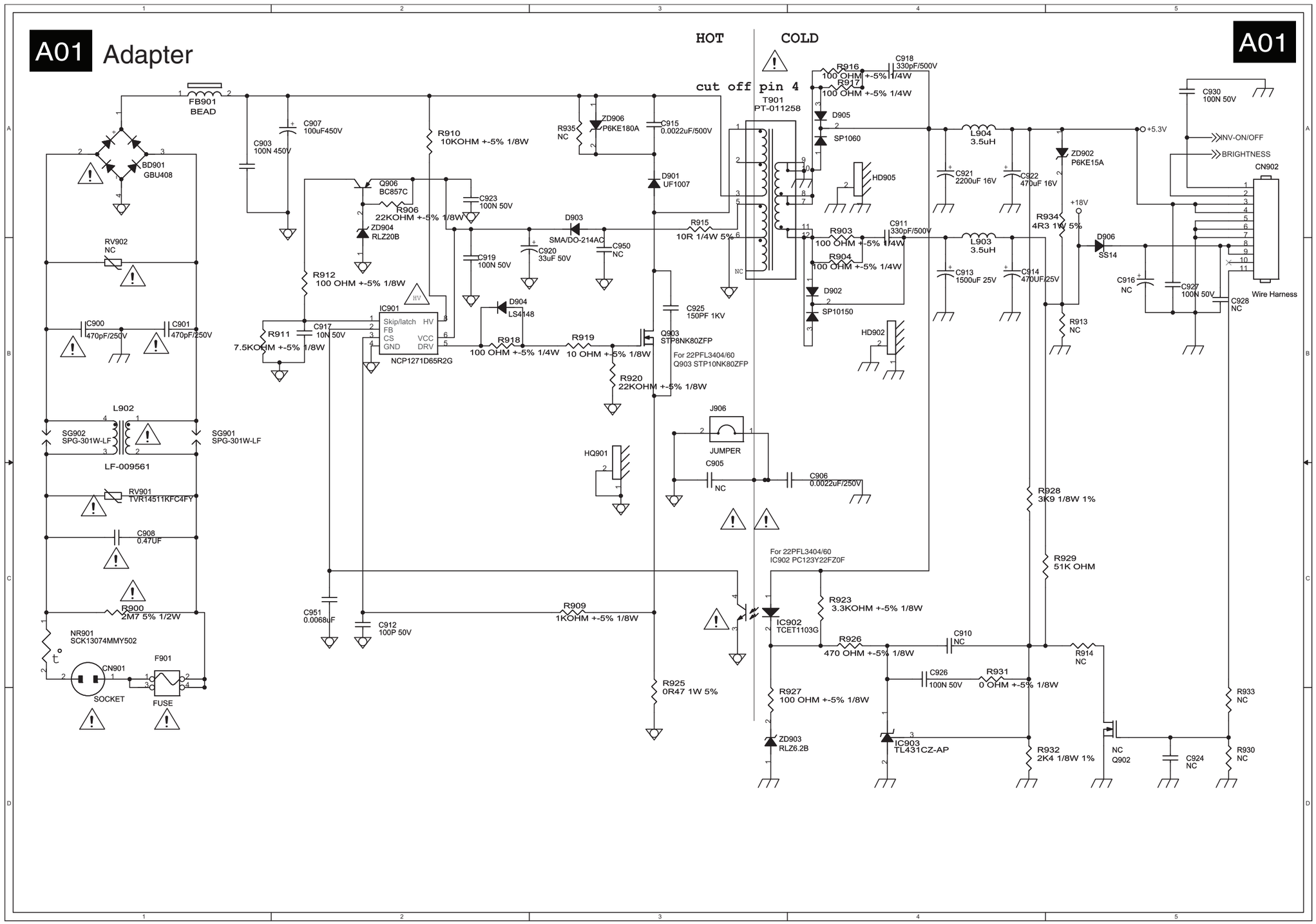
Power Board: Adapter, 22PFL3404

BD901 A1	CN901 C1	CN902 A5	C900 B1	C901 B1	C903 A1	C905 C3	C906 C3	C907 A2	C908 C1	C910 C4	C911 A4	C912 C2	C913 B4	C914 B4	C915 A3
C916 B5	C917 B2	C918 A4	C919 B2	C920 A2	C921 A4	C922 A4	C923 A2	C924 D5	C925 B3	C926 C4	C927 B5	C928 B5	C930 A5	C950 B3	C951 C2
D901 A3	D902 B4	D903 A3	D904 B2	D905 A4	D906 A5	FB901 A1	F901 C1	HD902 B4	HD905 A4	HQ901 B3	IC901 B2	IC902 C3	IC903 D4	J906 B3	L902 B1
L903 A4	L904 A4	NR901 C1	Q902 D5	Q903 B3	Q906 A2	RV901 C1	RV902 B1	R900 C1	R903 A4	R904 B4	R906 A2	R909 C3	R910 A2	R911 B1	R912 B2
R913 B4	R914 C5	R915 A3	R916 A4	R917 A4	R918 B2	R919 B3	R920 B3	R923 C4	R925 C3	R926 C4	R927 C3	R928 C4	R929 C4	R930 D5	R931 C4



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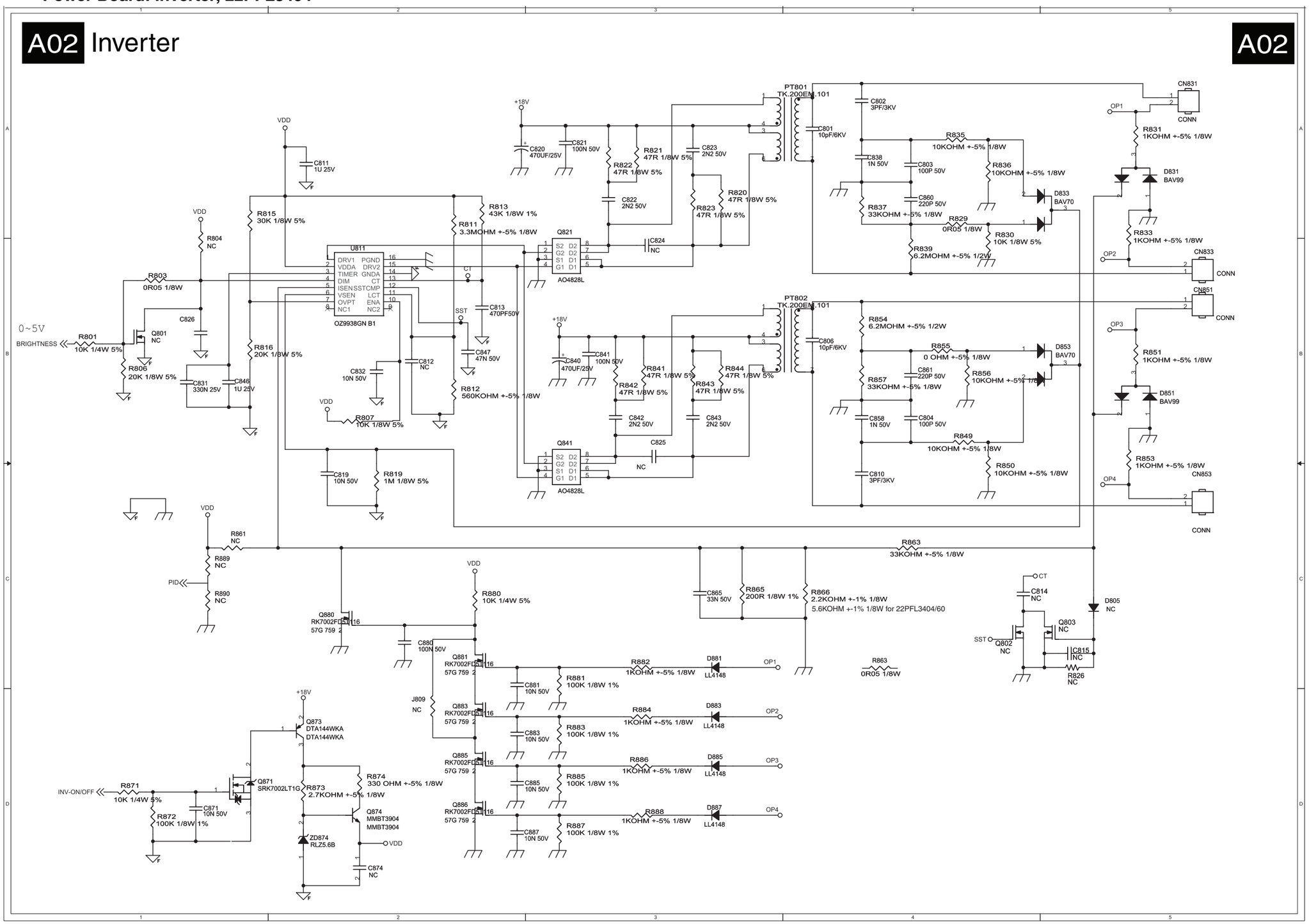
Power Board: Inverter, 22PFL3404



CN831	A5	CN833	B5
CN851	B5	CN853	C5
C801	A4	C802	A4
C803	A4	C804	B4
C806	B4	C810	C4
C811	A2	C812	B2
C813	B2	C814	C4
C815	C5	C819	C2
C820	A2	C821	A3
C822	A3	C823	A3
C824	A3	C825	B3
C826	B1	C831	B1
C832	B2	C838	A4
C840	B3	C841	B3
C842	B3	C843	B3
C846	B1	C847	B2
C858	B4	C860	A4
C861	B4	C865	C3
C871	D1	C874	D2
C880	C2	C881	C2
C883	D2	C885	D2
C887	D2	D805	C5
D831	A5	D833	A4
D851	B5	D853	B4
D881	C3	D883	D3
D885	D3	D887	D3
J809	C2	PT801	A3
PT802	B3	Q801	B1
Q802	C4	Q803	C4
Q821	A3	Q841	B3
Q871	D1	Q873	D2
Q874	D2	Q880	C2
Q881	C2	Q883	D2
Q885	D2	Q886	D2
R801	B1	R803	B1
R804	A1	R806	B1
R807	B2	R811	A2
R812	B2	R813	A2
R815	A1	R816	B1
R819	C2	R820	A3
R821	A3	R822	A3
R823	A3	R826	C5
R829	A4	R830	A4
R831	A5	R833	A5
R835	A4	R836	A4
R837	A4	R839	A4
R841	B3	R842	B3
R843	B3	R844	B3
R849	B4	R850	B4
R851	B5	R853	B5
R854	B4	R855	B4
R856	B4	R857	B4
R861	C1	R863	C4
R865	C3	R866	C4
R871	D1	R872	D1
R873	D2	R874	D2
R880	C2	R881	C3
R882	C3	R883	D3
R884	D3	R885	D3
R886	D3	R887	D3
R888	D3	R889	C1
R890	C1	U811	B2

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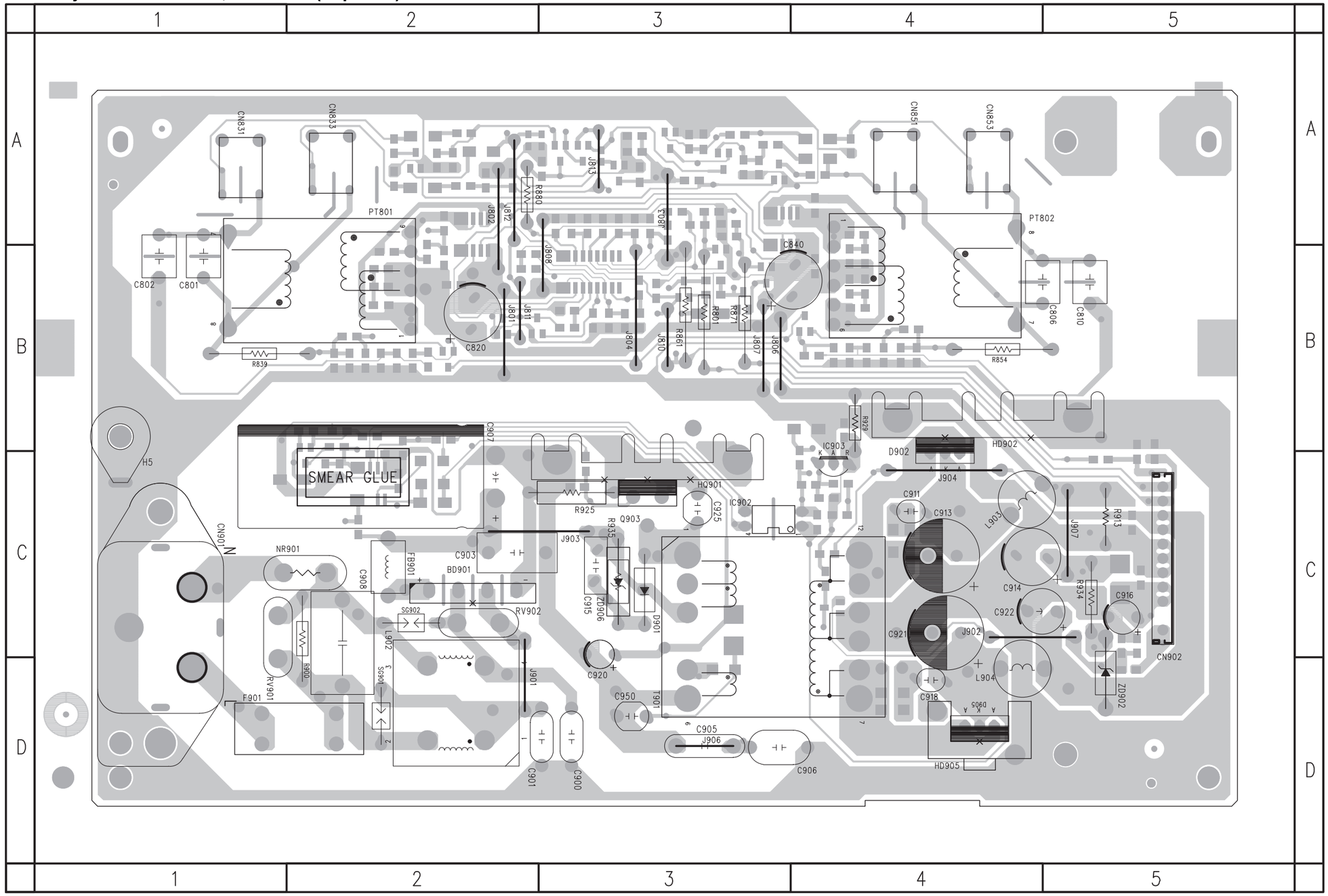
Layout Power Board, 19" & 22" (Top Side)



BD901	C2	J808	B2
C801	B1	J810	B3
C802	B1	J811	B2
C806	B4	J812	A2
C810	B5	J813	A3
C820	B2	J901	D2
C840	B3	J902	C4
C900	D3	J903	C2
C901	D2	J904	C4
C903	C2	J906	D3
C905	D3	J907	C5
C906	D3	L902	D2
C907	C2	L903	C4
C908	C2	L904	D4
C911	C4	NR901	C2
C913	C4	PT801	B2
C914	C4	PT802	B4
C915	C3	Q903	C3
C916	C5	R801	B3
C918	D4	R839	B1
C920	D3	R854	B4
C921	C4	R861	B3
C922	C4	R871	B3
C925	C3	R880	A2
C950	D3	R900	C2
CN831	A1	R913	C5
CN833	A2	R925	C3
CN851	A4	R929	B4
CN853	A4	R934	C5
CN901	C1	R935	C3
CN902	C5	RV901	C1
D901	C3	RV902	C2
D902	C4	SG901	D2
D905	D4	SG902	C2
F901	D2	SL11	A4
FB901	C2	SL12	A4
HD902	C4	SL13	C2
HD905	D4	SL14	C2
HQ901	C3	SL15	C2
IC902	C3	SL17	B4
IC903	C4	SL30	A1
J801	B2	SL31	A2
J802	A2	SL32	B5
J803	A3	T901	C3
J804	B3	ZD902	D5
J806	B3	ZD906	C3
J807	B3		

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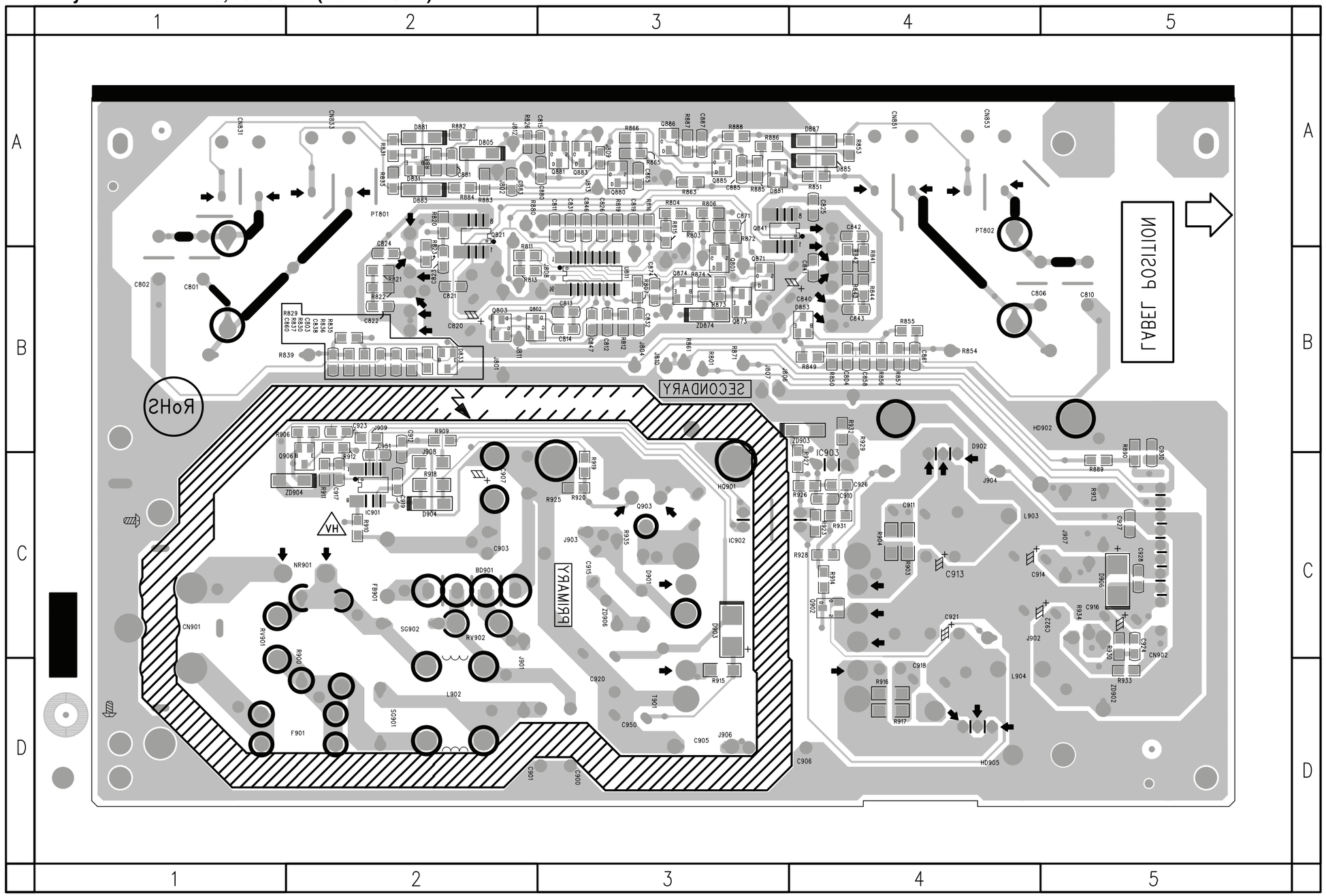
Layout Power Board, 19" & 22" (Bottom Side)



C803	B2	D883	A2	R844	B4
C804	B4	D885	A4	R849	B4
C811	B3	D887	A4	R850	B4
C812	B3	D903	C3	R851	A4
C813	B3	D904	C2	R853	A4
C814	B3	D906	C5	R855	B4
C815	A2	IC901	C2	R856	B4
C819	B3	J809	A3	R857	B4
C821	B2	J908	C2	R863	A3
C822	B2	J909	C2	R865	A3
C823	B2	Q801	B3	R866	A3
C824	B2	Q802	B2	R872	B3
C825	A4	Q803	B2	R873	B3
C826	B3	Q821	B2	R874	B3
C831	B3	Q841	B3	R881	A2
C832	B3	Q871	B3	R882	A2
C838	B2	Q873	B3	R883	A2
C841	B4	Q874	B3	R884	A2
C842	B4	Q880	A3	R885	A3
C843	B4	Q881	A3	R886	A3
C846	B3	Q883	A3	R887	A3
C847	B3	Q885	A3	R888	A3
C858	B4	Q886	A3	R889	C5
C860	B2	Q902	C4	R890	C5
C861	B4	Q906	C2	R903	C4
C865	A3	R803	B3	R904	C4
C871	B3	R804	A3	R906	B2
C874	B3	R806	A3	R909	C2
C880	A2	R807	B3	R910	C2
C881	A2	R811	B2	R911	C2
C883	A2	R812	B3	R912	C2
C885	A3	R813	B2	R914	C4
C887	A3	R815	B3	R915	D3
C910	C4	R816	B3	R916	D4
C912	C2	R819	B3	R917	D4
C917	C2	R820	B2	R918	C2
C919	C2	R821	B2	R919	C3
C923	B2	R822	B2	R920	C3
C924	C5	R823	B2	R923	C4
C926	C4	R826	A2	R926	C4
C927	C5	R829	B2	R927	C3
C928	C5	R830	B2	R928	C4
C930	C5	R831	A2	R930	C5
C951	C2	R833	A2	R931	C4
D805	A2	R835	B2	R932	B4
D831	A2	R836	B2	R933	D5
D833	B2	R837	B2	U811	B3
D851	A3	R841	B4	ZD874	B3
D853	B3	R842	B4	ZD903	B3
D881	A2	R843	B4	ZD904	C2

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Power Board: Adapter, 26 & 32 PFL3404

A01

A01

HDB901
FB901 BEAD
J901
NC
BD901
KBJ608G
RV905
R904 NC
R905 NC
R906 NC
R907 NC
C909 NC
C907 120uF/450V
RV903 NC
RV902 NC
J905 Jump wire
D903 1N4007_NC
D901 1N4007_NC
SG904 GS41-201MA
SG903 GS41-201MA
L902 6mH 2.0A
C901 470PF
C902 470PF
C903 Jumper
C908 0.22uF/275V
R901 3MOHM +-5% 1/2W
SG901 GS41-201MA
SG902 GS41-201MA
L901 14mH 2.0A
C906 0.22uF/275V
FB903 BEAD
RV901 TVR14561KFC4FY
CN904 CONN(NC)
TH901 SCK132R56MGY015
F901 FUSE 5A 250V
CN901 SOCKET

C921 22uF/50V
C922 1uF/25V
R920 10K
C917 10N 50V
IC902
SKIP HV
FB NC
CS VCC
GND DRV
NCP1271
C919 100pF
Q904 BC857C
ZD905 RLZ16B
R921 22K
Vdd-S
R930 4.7R
Q903 MMBT2907AK
ZD909 RLZ20B
R931 22K
R932 10K 1/8W
C916 0.01uF
D906 JUMP WIRE
C915 1500PF 1KV
R903 10KOHM +-5% 1/4W
C937 22N 50V_NC
D902 BAV21
ZD902 BZX79-C9V1
R919 430K
C923 330N 50V
BC857C Q902
R912 1K OHM 1/4W_NC
R910 15K OHM 2W_NC
Q918 PZTA44_NC
R911 0 OHM +-5% 1/8W

B+
ZD911 P6KE200A
C924 2200PF/500V
D909 UF1007
D908
C920 0.1uF
BAV103
C938 220PF 100V
D907
LL4148
R925 100 OHM +-5% 1/8W
R926 10R
R927 22K
R924 1K
R928 1K
Q901 STP8NK80ZFP
HD901
T901 270PF 1KV
C925
R935 100 OHM
R936 100 OHM
D910 EGP30D
R938 100 OHM
L903 0.8uH
C926 1000uF 35V
R939 47R
C927 220uF 35V
24V
R937 100 OHM
C928 270PF 1KV
L904 0.8uH
C929 2200uF 16V
D911 SP10100
ZD906 P6KE13A
12V
C930 220uF 16V
POWER ER-28
C904 2200PF/250V
C905 2200PF/250V JUMPER
HD911
HOT COLD
C918 1N 50V
IC903 TCET1103G
R940 4.7K OHM 1/8W
R941 1K OHM 1/8W
R945 100 OHM
C931 0.022uF/25V
ZD907 RLZ13B
IC904 KIA431A-AT/P
R942 1.5K
R943 10K 1/8W
R944 2.61K
R929 0R68 5% 1W
C905 TCET1103G
C932 2200F/500V
C911 2200PF/500V
ZD904 P6KE180A
T902 PPH7019AL
FB902
D905 UF1007
D912 SP1060
L905 0.8uH
+5VSB
C933 2200uF 10V
C934 470uF 10V
Q907 RK7002
R946 2.2K OHM 1/8W
R948 1K
S/B
R947 330K
C936 0.01uF
D904 RGP10D
C912 22uF/50V
R915 47 R
ZD903 RLZ15B
R914 12K
BZX79-C9V1_NC ZD901
TNY274PN-TL
S D
S S
S BP/M
S EN/UV
IC901
R913 2M2_NC
C913 100pF
C914 0.1uF
ZD910 BZX79-C9V1
R918 390K
R917 0R
R949 100 OHM
R950 3.3K
R951 0 OHM
C935 0.1uF
IC906 TCET1103G
ZD908 RLZ5.6B
IC907 KIA431A-AT/P
R954 0 R
R952 11K 1/8W 1%
R953 18K 1%
R956 22K 1%
Q908 RK7002
R955 1K
R967 330K 1/8W 5%
CN902 64843 13P 2.5MM
ENA
DIM
12V
C940 0.1uF
C939 0.1uF
24V S/B
+5VSB
C941 0.1uF

BD901 B1 CN901 F1 CN902 G8 CN904 F1 C901 D1
C902 D1 C903 D1 C904 B8 C905 B8 C906 E1
C907 B2 C908 D1 C909 A2 C911 E6 C912 E6
C913 F5 C914 F5 C915 G3 C916 D5 C917 B5
C918 C7 C919 C5 C920 B6 C921 B4 C922 B4
C923 G5 C924 A7 C925 A8 C926 B8 C927 B9
C928 B9 C929 B8 C930 B9 C931 C8 C932 E8
C933 E8 C934 E8 C935 F8 C936 E9 C937 G4
C938 B7 C939 G9 C940 G9 C941 G9 D901 C2
D902 G5 D903 C2 D904 E6 D905 E6 D906 D6
D907 B6 D908 B7 D909 B7 D910 B8 D911 B8
D912 E7 FB901 A1 FB902 E7 FB903 E1 F901 F1
HDB901 A1 HD911 B8 HQ901 B7 IC901 F5 IC902 B5
IC903 C8 IC904 D8 IC905 D8 IC906 F7 IC907 F7
J901 B1 J905 A3 L901 E1 L902 C1 L903 B9
L904 B9 L905 E8 Q901 B7 Q902 G6 Q903 D5
Q904 B6 Q907 E9 Q908 F8 Q918 G6 RV901 F1
RV902 B2 RV903 A2 RV905 C1 R901 D1 R903 G4
R904 A2 R905 B2 R906 B2 R907 B2 R910 G6
R911 G6 R912 G6 R913 F5 R914 E5 R915 E6
R917 F6 R918 F6 R919 G5 R920 B5 R921 B6
R924 B7 R925 B6 R926 B7 R927 B7 R928 C7
R929 C7 R930 C4 R931 D5 R932 D5 R935 A8
R936 A9 R937 B8 R938 B8 R939 B9 R940 C8
R941 C8 R942 C9 R943 C9 R944 D9 R945 C8
R946 E9 R947 E9 R948 E9 R949 F7 R950 F7
R951 F7 R952 F8 R953 F8 R954 E8 R955 F9
R956 F8 R967 F8 SG901 E1 SG902 E2 SG903 C1
SG904 C1 TH901 F1 T901 A8 T902 E7 ZD901 E5
ZD902 G5 ZD903 F6 ZD904 E6 ZD905 B6 ZD906 B9
ZD907 C8 ZD908 F7 ZD909 D5 ZD910 F6 ZD911 A7

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Power Board: Inverter, 26 & 32 PFL3404

A02

A02

IFB
FB801
B+
Jump wire
C803 1UF 450V
IC801
UBA2071
IFB
CIFB
VFB
CVFB
CSWP
CT
CF
IREF
CPWM
SGND
COMM
N,FAULT
GH
FS
SH
NC
NC
NC
GL
PGND
VDD
EN
PWMa
PWMd
C811 15N 50V
C812 150N 50V
C813 2N7
C814 150N 50V
C815 47P 50V
R806 33K
R810 0 OHM
C816 68P 50V
C823 NF 470P
R801 4R7
Q801 STP14NK50ZFP
C801 100N 50V
R802 4R7
Q802 STP14NK50ZFP
C802 470NF 450V
Vdd
C804 2U2 25V
R827 0 OHM
C819 10N 50V
R809 39KOHM +-5% 1/8W
R807 100K 1/8W 1%
R808 68K
Q806 BC848CLG
R804 470R 1/8W 1%
Vdd-S
ZD801 RLZ13B
R811 100K
ENA
R812 470R 1/6W 5%
IC803 TCET1103
DIM
R813 470R 1/6W 5%
IC804 TCET1103
R814 2K7 1/8W 1%
12V
IC805 TCET1103
Q807 PMBS3904
Vshort
ZD802 RLZ 3.6B
R826 10K +-5% 1/8W
C822 100N 50V
R820 390K 1/8W 1%
C821 100N 50V
R824 10K 1/6W 5%
R816 47K
12V
R817 2K7 1/8W 1%
IC806 TCET1103
R819 390KOHM +-5% 1/4W
R815 2K7 1/8W 1%
Q808 TL431
C824 1UF25V
R818 15K4 1/8W 1%
HOT
COLD
T803 TRF-UU28
C807 15pF/6KV
CN803 CONN
C805 470P 50V
C806 1N2 50V
C826 220P 50V
D801 BAV99
C827 4N7 50V
T801
R825 33R
R823 27R
R822 10K 1/8W 1%
TRF-UU9.8
D802 BAV99
C808 1N2 50V
C828 220P 50V
D803 BAV99
C810 470P 50V
R821 68K
C825 2N7
C809 15pF/6KV
CN802 CONN

CN802	D8	CN803	A8
C801	B4	C802	C5
C803	B4	C804	C5
C805	B8	C806	B7
C807	B7	C808	D7
C809	D7	C810	D8
C811	B2	C812	B2
C813	B2	C814	C2
C815	C2	C816	C2
C819	D4	C821	E6
C822	E5	C823	C2
C824	F5	C825	D9
C826	B8	C827	B8
C828	D7	D801	B8
D802	D8	D803	D9
FB801	A4	IC801	B3
IC803	D5	IC804	D5
IC805	E5	IC806	F5
Q801	B5	Q802	B5
Q806	C5	Q807	E5
Q808	F5	R801	B5
R802	C5	R804	C5
R806	C2	R807	D4
R808	D5	R809	D4
R810	C2	R811	D5
R812	D5	R813	D5
R814	E5	R815	F4
R816	F4	R817	F5
R818	F6	R819	F6
R820	E6	R821	D9
R822	C7	R823	C6
R824	E4	R825	C6
R826	E6	R827	D4
T801	C7	T803	B6
ZD801	D5	ZD802	E6

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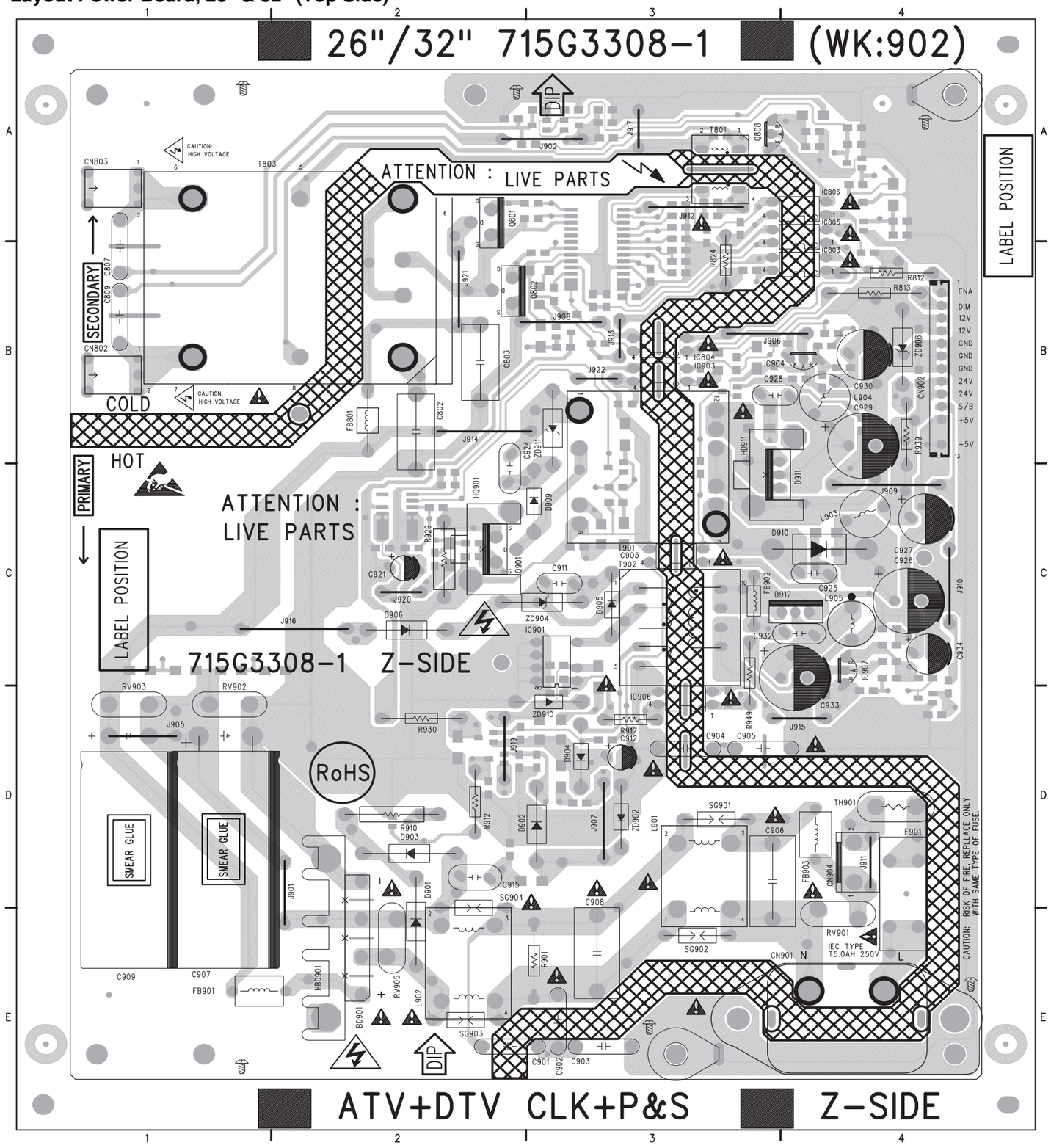
Layout Power Board, 26" & 32" (Top Side)



BD901 E2
C802 B2
C803 B3
C807 A1
C809 A1
C901 E3
C902 E3
C903 E3
C904 D3
C905 D4
C906 D4
C907 D1
C908 E3
C909 D1
C911 C3
C912 D3
C915 D3
C921 C2
C924 B3
C925 C4
C926 C4
C927 B4
C928 B4
C929 B4
C930 B4
C932 C4
C933 C4
C934 C4
CN802 B1
CN803 A1
CN901 E4
CN902 B4
CN904 D4
D901 D2
D902 D3
D903 D2
D904 D3
D905 C3
D906 C2
D909 B3
D910 C4
D911 B4
D912 C4
F901 D4
FB801 B2
FB901 E2
FB902 C4
FB903 D4
HBD901 E2
T801 A4
T803 A2
T901 B3
T902 C3
TH901 D4
ZD902 D3
ZD904 C3
ZD906 B4
ZD910 C3
ZD911 B3

HD911 B4
HQ901 C3
IC803 A4
IC804 B3
IC805 A4
IC806 A4
IC901 C3
IC903 B3
IC904 B4
IC905 C4
IC906 C4
IC907 C4
J901 D2
J902 A3
J905 D1
J906 B4
J907 D3
J908 A3
J909 B4
J910 C4
J911 D4
J912 A3
J913 B3
J914 B3
J915 C4
J916 C2
J917 A3
J919 D3
J920 C2
J921 A2
J922 B3
L901 D4
L902 E2
L903 B4
L904 B4
L905 C4
Q801 A3
Q802 A3
Q808 A4
Q901 C3
R812 A4
R813 A4
R824 A4
R901 E3
R910 D2
R912 D3
R917 C3
R929 C2
R930 C2
R939 B4
R949 C4
RV901 D4
RV902 C1
RV903 C1
RV905 E2
SG901 D4
SG902 E3
SG903 E2
SG904 D3

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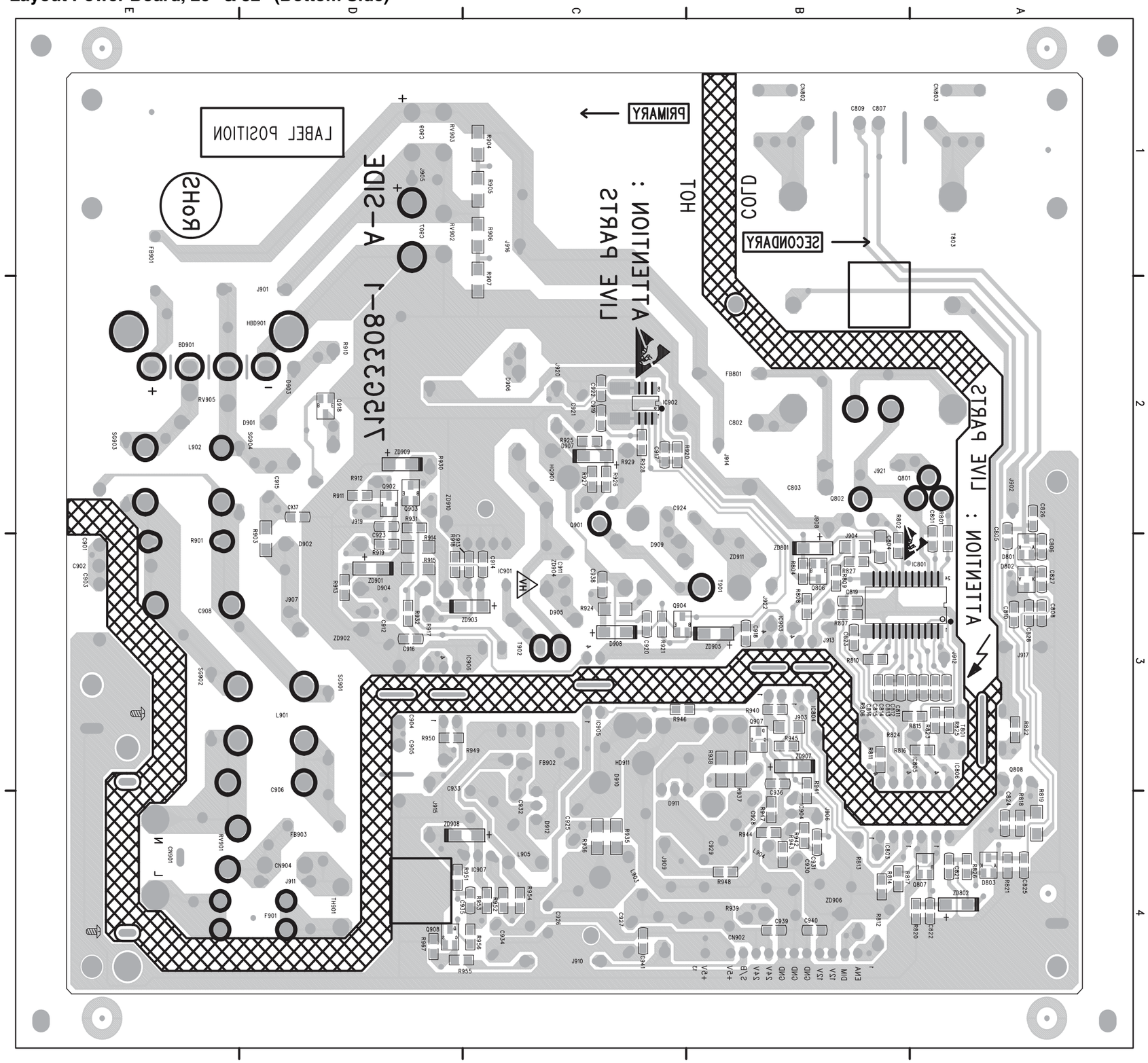
Layout Power Board, 26" & 32" (Bottom Side)



C801 A3
C804 A3
C805 A3
C806 A3
C808 A3
C810 A3
C811 A3
C812 A3
C813 A3
C814 A3
C815 A3
C816 A3
C819 A3
C821 A4
C822 A4
C823 A3
C824 A4
C825 A4
C826 A3
C827 A3
C828 A3
C913 C3
C914 C3
C916 D3
C917 B2
C918 B3
C919 C2
C920 B3
C922 C2
C923 D3
C931 B4
C935 C4
C936 B4
C937 D3
C938 C3
C939 B4
C940 B4
C941 B4
D801 A3
D802 A3
D803 A4
D907 C2
D908 C3
IC801 A3
IC902 B2
J903 B4
J904 A3
Q806 B3
Q807 A4
Q902 D3
Q903 D3
Q904 B3
Q907 B4
Q908 C4
Q918 D2
R801 A3
R802 A3
ZD901 D3
ZD903 C3
ZD905 B3
ZD907 B4
ZD908 C4
ZD909 D2

R804 B3
R806 A3
R807 A3
R808 B3
R809 A3
R810 A3
R811 A4
R814 A4
R815 A4
R816 A4
R817 A4
R818 A4
R819 A4
R820 A4
R821 A4
R822 A4
R823 A4
R825 A4
R826 A4
R827 A3
R903 D3
R904 C1
R905 C1
R906 C1
R907 C2
R911 D3
R913 D3
R914 D3
R915 D3
R918 C3
R919 D3
R920 B2
R921 B3
R924 C3
R925 C2
R926 C3
R927 C3
R928 B2
R931 D3
R932 D3
R935 C4
R936 C4
R937 B4
R938 B4
R940 B4
R941 B4
R942 B4
R943 B4
R944 B4
R945 B4
R946 B4
R947 B4
R948 B4
R950 C4
R951 C4
R952 C4
R953 C4
R954 C4
R955 C4
R956 C4
R967 C5
ZD801 B3
ZD802 A4

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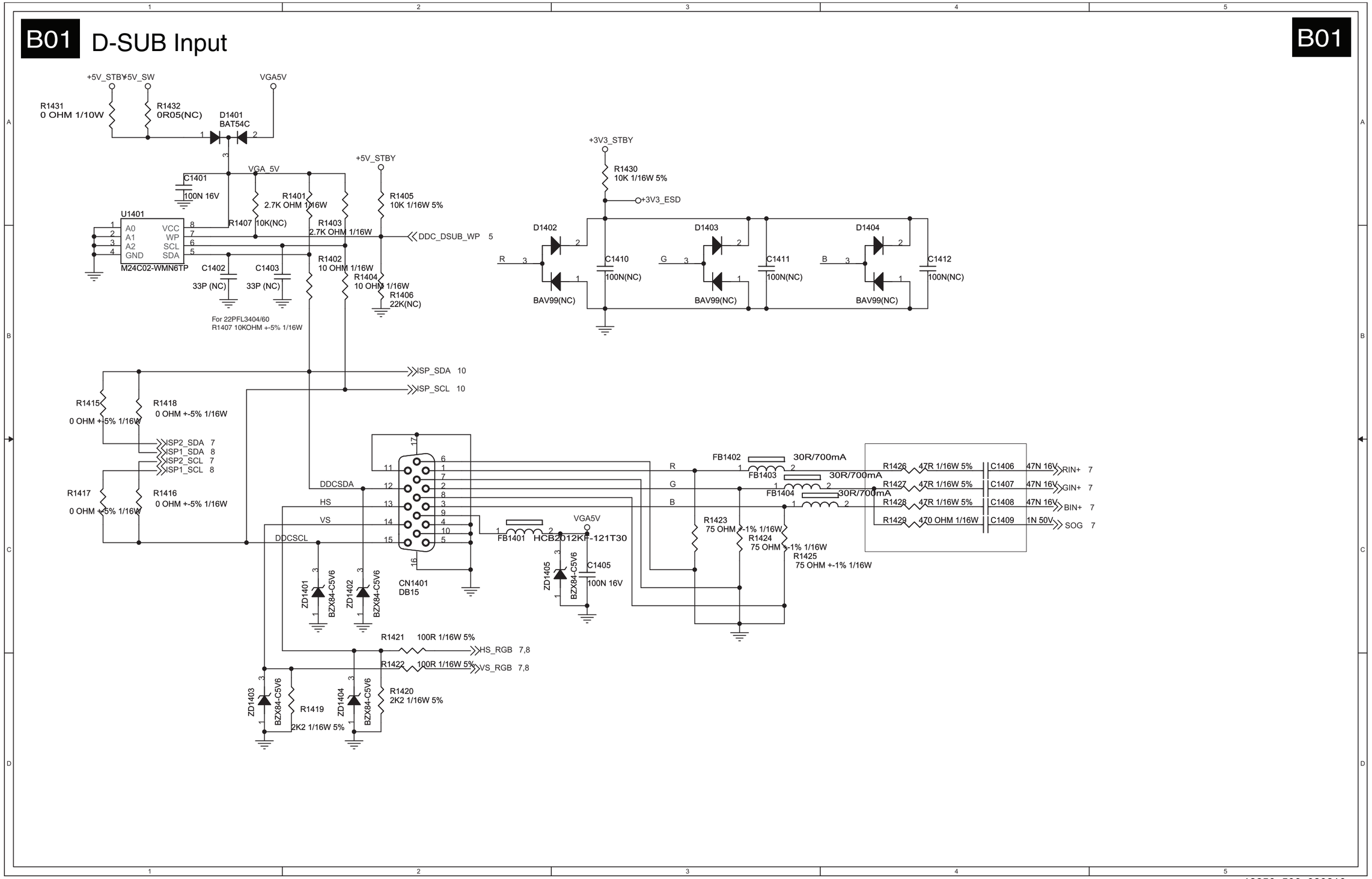
SSB: D-SUB Input, 19" & 22"

CN1401 C2	C1401 A1	C1402 B1	C1403 B1	C1405 C3	C1406 C4	C1407 C4	C1408 C4	C1409 C4	C1410 B3	C1411 B3	C1412 B4	D1401 A1	D1402 B2	D1403 B3	D1404 B4	FB1401 C2		
FB1402 C3	FB1403 C3	FB1404 C3	R1401 A2	R1402 B2	R1403 A2	R1404 B2	R1405 A2	R1406 B2	R1407 A1	R1415 B1	R1416 C1	R1417 C1	R1418 B1	R1419 D1	R1420 D2	R1421 C2		
R1422 C2	R1423 C3	R1424 C3	R1425 C3	R1426 C4	R1427 C4	R1428 C4	R1429 C4	R1430 A3	R1431 A1	R1432 A1	U1401 A1	ZD1401 C2	ZD1402 C2	ZD1403 D1	ZD1404 D2	ZD1405 C2		



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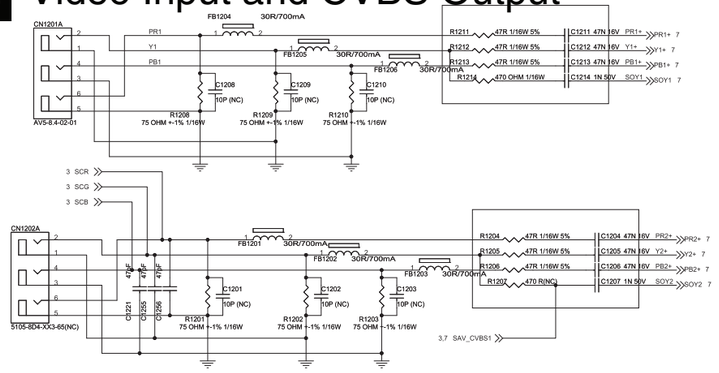
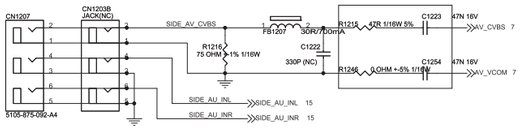
SSB: Video In & CVBS Output, 19" & 22"

B02

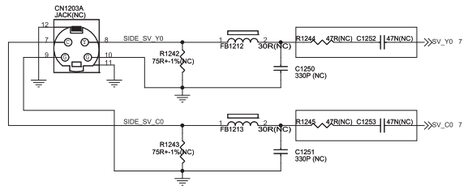
Video Input and CVBS Output

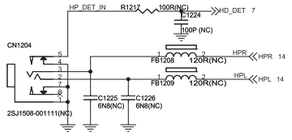


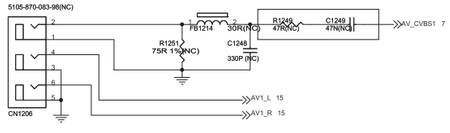
AP/China : C1221 C1255 C1256 NC
EU : R1207 NC



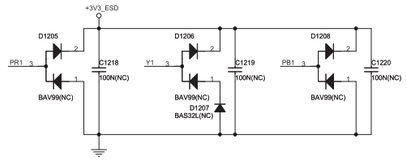
Without S-video: CN1203 NC
With S-video: CN1207 NC

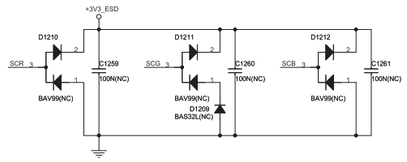


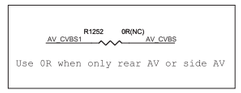


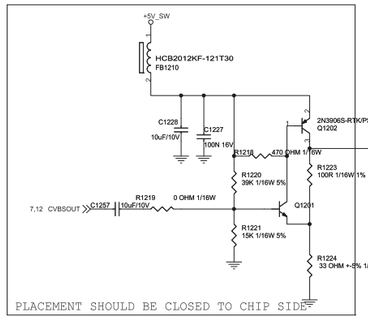


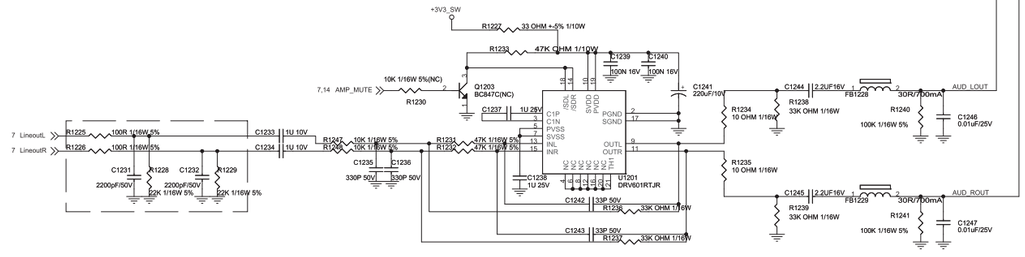
PHILIPS AP/China : CN1203 CN1207 NC
PHILIPS EU : CN1203 CN1206 NC











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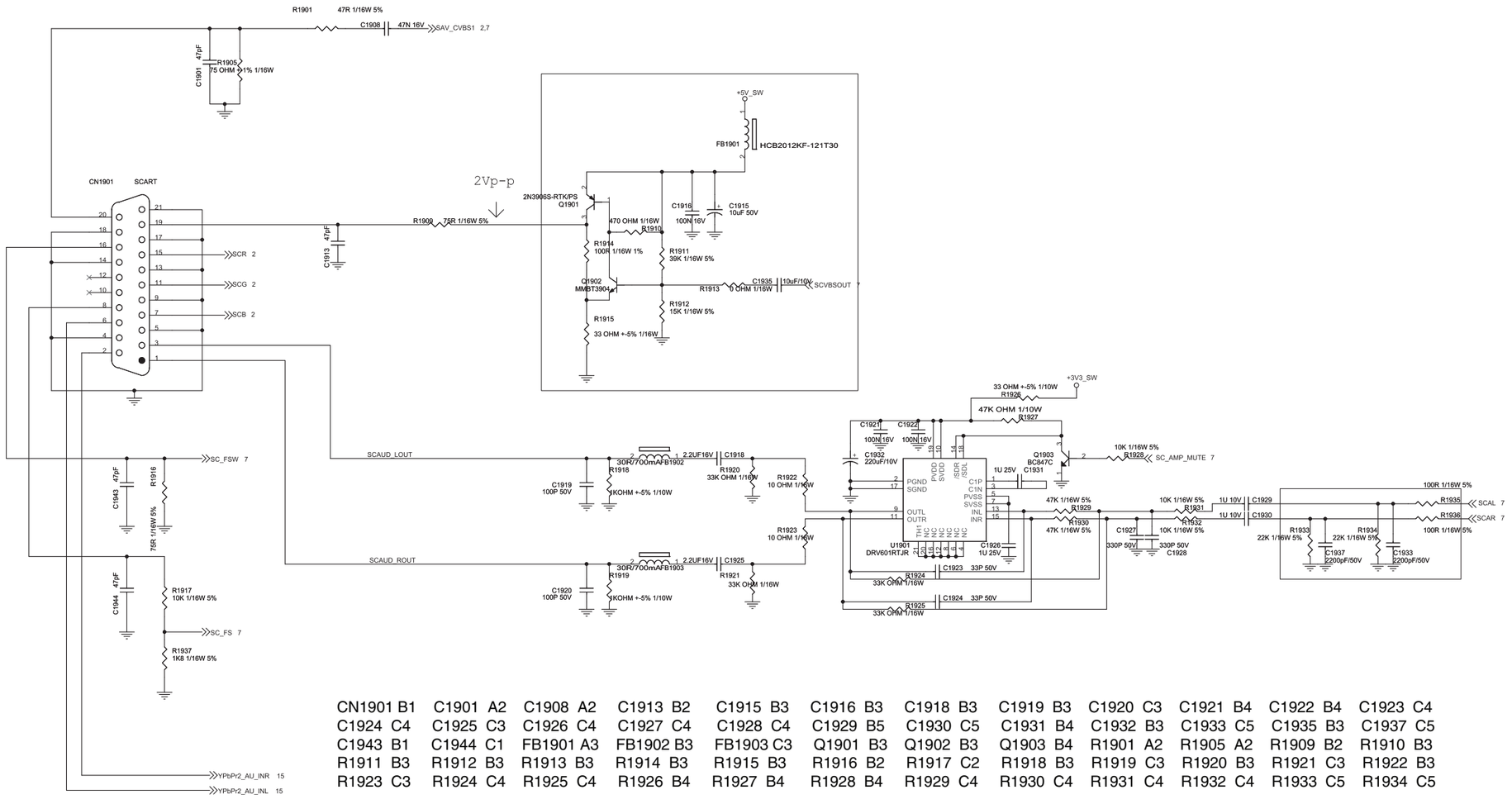
SSB: Scart, 19" & 22"

B03 Scart

B03



CN1901 B1	C1901 A2	C1908 A2	C1913 B2	C1915 B3	C1916 B3	C1918 B3	C1919 B3	C1920 C3	C1921 B4	C1922 B4	C1923 C4		
C1924 C4	C1925 C3	C1926 C4	C1927 C4	C1928 C4	C1929 B5	C1930 C5	C1931 B4	C1932 B3	C1933 C5	C1935 B3	C1937 C5		
C1943 B1	C1944 C1	FB1901 A3	FB1902 B3	FB1903 C3	Q1901 B3	Q1902 B3	Q1903 B4	R1901 A2	R1905 A2	R1909 B2	R1910 B3		
R1911 B3	R1912 B3	R1913 B3	R1914 B3	R1915 B3	R1916 B2	R1917 C2	R1918 B3	R1919 C3	R1920 B3	R1921 C3	R1922 B3		
R1923 C3	R1924 C4	R1925 C4	R1926 B4	R1927 B4	R1928 B4	R1929 C4	R1930 C4	R1931 C4	R1932 C4	R1933 C5	R1934 C5		

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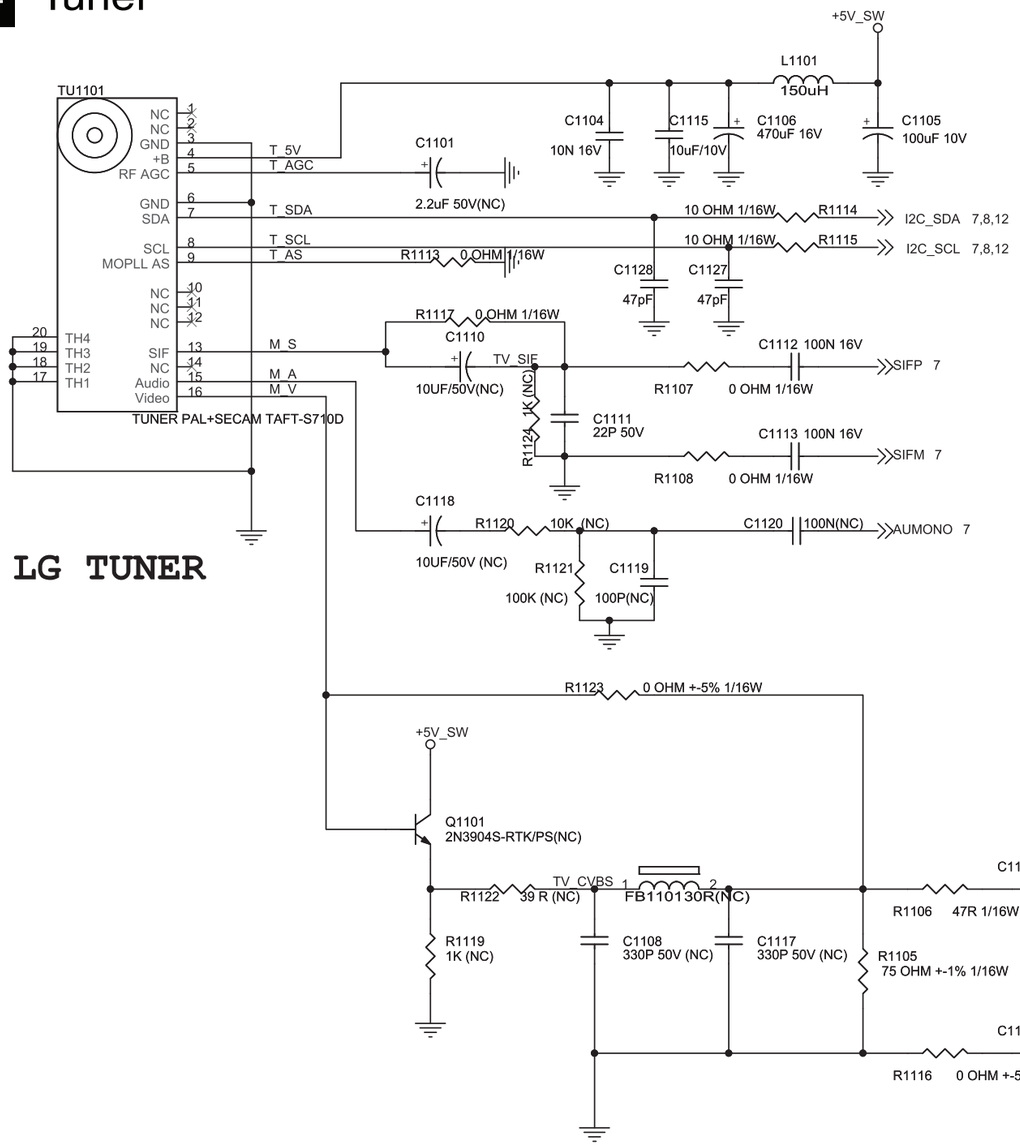
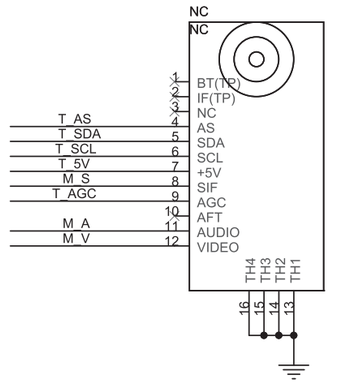
SSB: Tuner, 19" & 22"

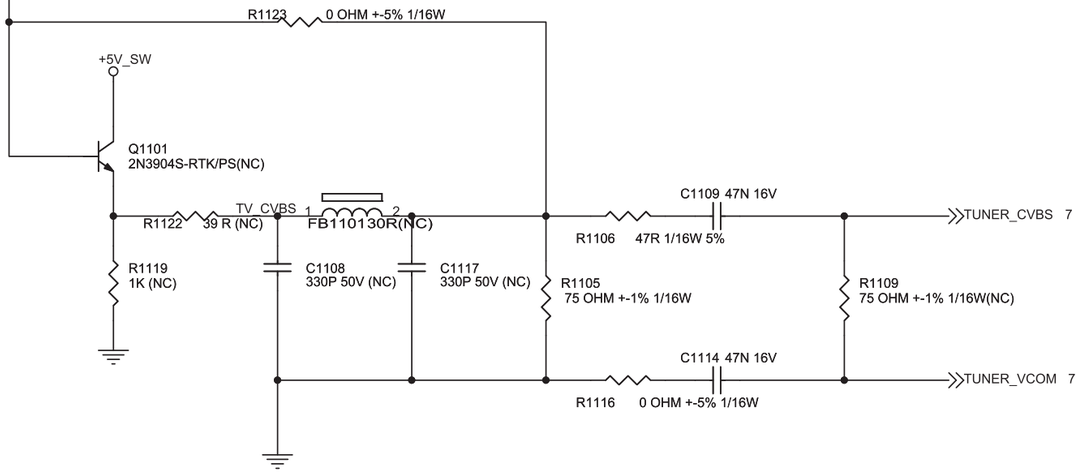
C1101 A2 C1104 A2 C1105 A3 C1106 A2 C1108 C2 C1109 C3 C1110 B2 C1111 B2 C1112 B2 C1113 B2 C1114 D3 C1115 A2 C1117 C2 C1118 B2 C1119 B2 C1120 B2
C1127 A2 C1128 A2 FB1101 C2 L1101 A2 NC A4 Q1101 C2 R1105 C3 R1106 C3 R1107 B2 R1108 B2 R1109 C3 R1113 A2 R1114 A2 R1115 A2 R1116 D3 R1117 A2

B04 Tuner

B04







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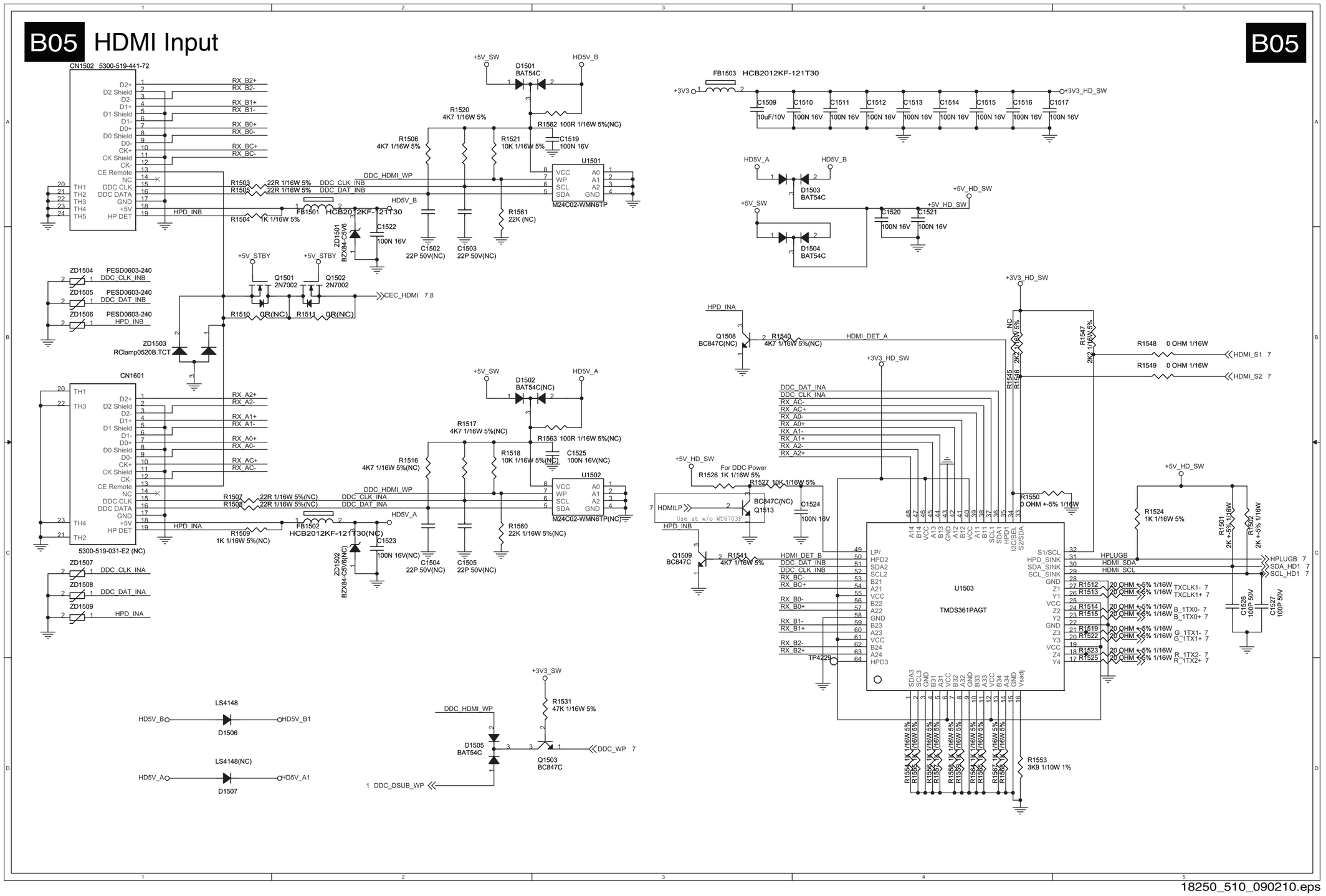
SSB: HDMI Output, 19" & 22"

CN1502 A1	CN1601 B1	C1502 A2	C1503 A2	C1504 C2	C1505 C2	C1509 A3	C1510 A3	C1511 A4	C1512 A4	C1513 A4	C1514 A4	C1515 A4	C1516 A4	C1517 A4	C1519 A3	C1520 A4	C1521 A4
C1522 B2	C1523 C2	C1524 C3	C1525 C3	C1526 C5	C1527 C5	D1501 A2	D1502 B2	D1503 A3	D1504 B3	D1505 D2	D1506 D1	D1507 D1	FB1501 A2	FB1502 C2	FB1503 A3	Q1501 B1	Q1502 B2
Q1503 D3	Q1508 B3	Q1509 C3	Q1513 C3	R1501 C5	R1502 C5	R1503 A1	R1504 A1	R1505 A1	R1506 A2	R1507 C1	R1508 C1	R1509 C1	R1510 B1	R1511 B2	R1512 C5	R1513 C5	R1514 C5
R1515 C5	R1516 C2	R1517 C2	R1518 C2	R1519 C5	R1520 A2	R1521 A2	R1522 C5	R1523 C5	R1524 C5	R1525 C5	R1526 C3	R1527 C3	R1531 D3	R1540 B3	R1541 C3	R1545 B4	R1546 B4
R1547 B5	R1548 B5	R1549 B5	R1550 C4	R1553 D4	R1554 D4	R1555 D4	R1556 D4	R1557 D4	R1558 D4	R1559 D4	R1560 C2	R1561 A2	R1562 A3	R1563 B3	R1564 D4	R1565 D4	R1567 D4
R1568 D4	TP4229 C4	U1501 A3	U1502 C3	U1503 C4	ZD1501 A2	ZD1502 C2	ZD1503 B1	ZD1504 B1	ZD1505 B1	ZD1506 B1	ZD1507 C1	ZD1508 C1	ZD1509 C1				



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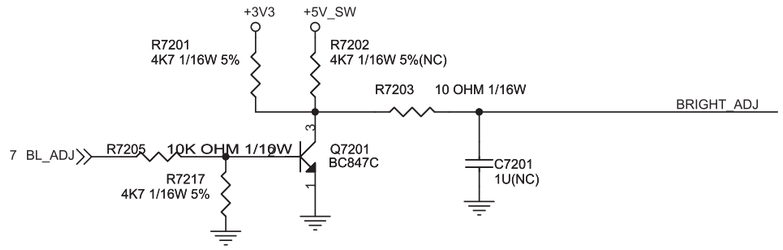
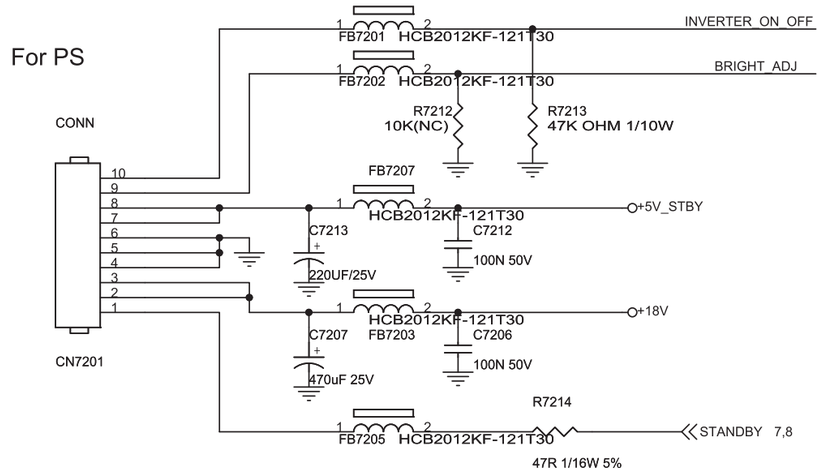
SSB: Lips & Inverter I/F, 19" & 22"

CN7201 C2 C7201 A3 C7204 B3 C7206 C3 C7207 C2 C7212 C3 C7213 C2 FB7201 B3 FB7202 C3 FB7203 C3 FB7205 D3 FB7207 C3 Q7201 A2 Q7202 B2 R7201 A2 R7202 A2 R7203 A3 R7205 A2
R7206 B2 R7208 B3 R7209 B2 R7212 C3 R7213 C3 R7214 D3 R7217 A2

B06 Lips & Inverter I/F

B06





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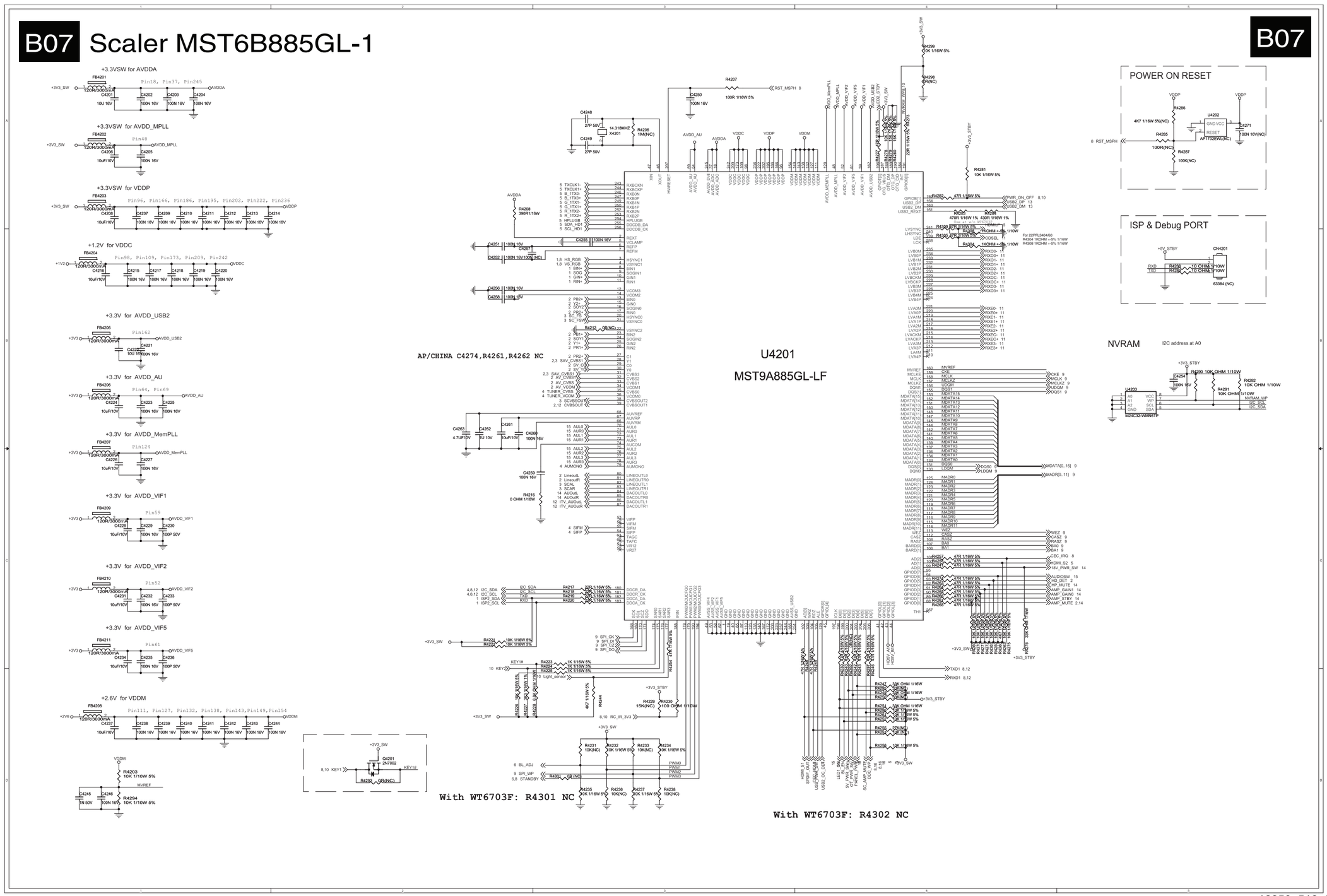
SSB: Scaler MST6B885GL-1, 19" & 22"



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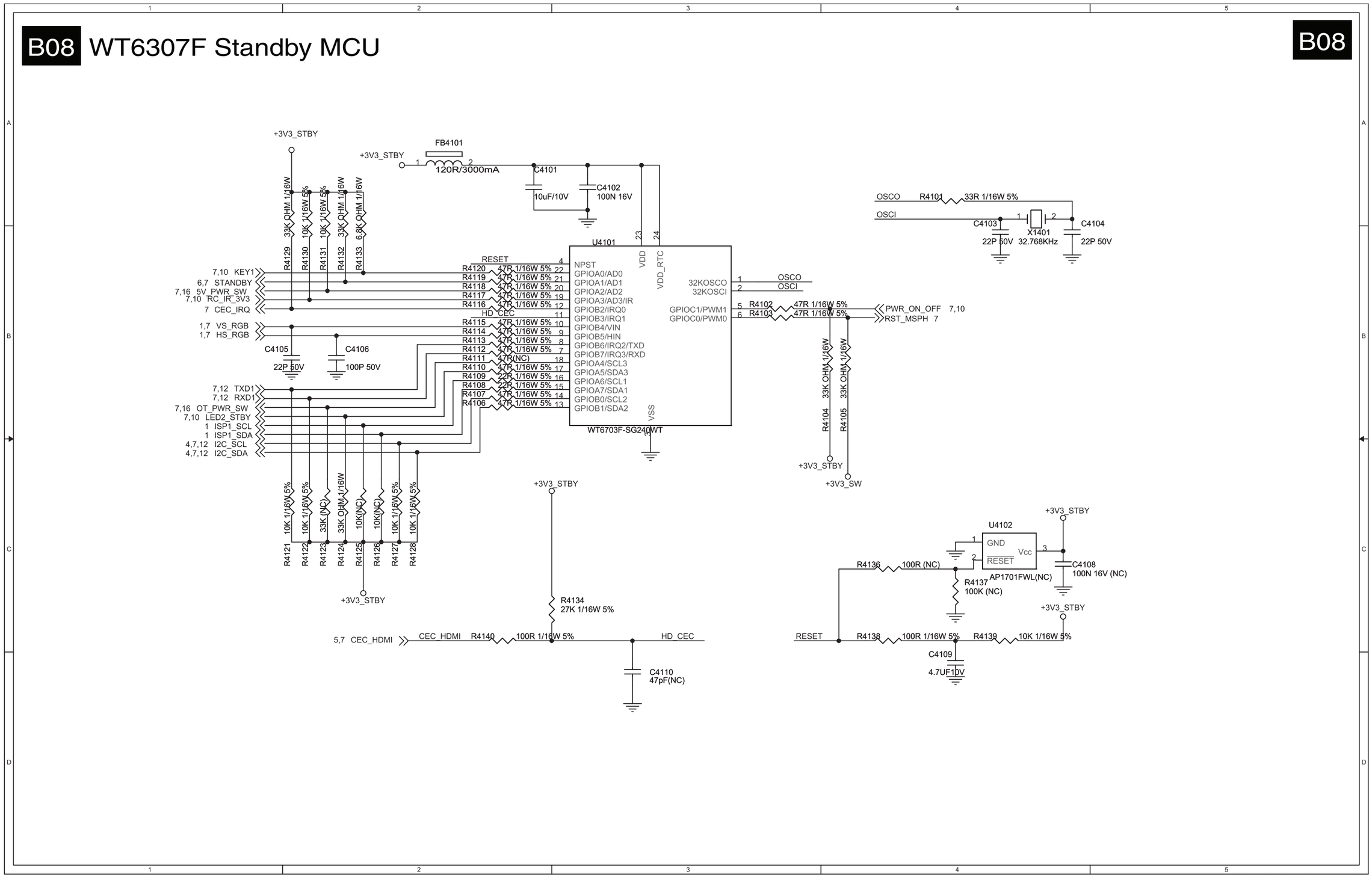
SSB: WT6307F Standby MCU, 19" & 22"

C4101 A2 C4102 A3 C4103 A4 C4104 A4 C4105 B1 C4106 B2 C4108 C4 C4109 C4 C4110 D3 FB4101 A2 R4101 A4 R4102 B3 R4103 B3 R4104 B3 R4105 B4 R4106 B2 R4107 B2 R4108 B2
R4109 B2 R4110 B2 R4111 B2 R4112 B2 R4113 B2 R4114 B2 R4115 B2 R4116 B2 R4117 B2 R4118 B2 R4119 B2 R4120 B2 R4121 C1 R4122 C2 R4123 C2 R4124 C2 R4125 C2 R4126 C2



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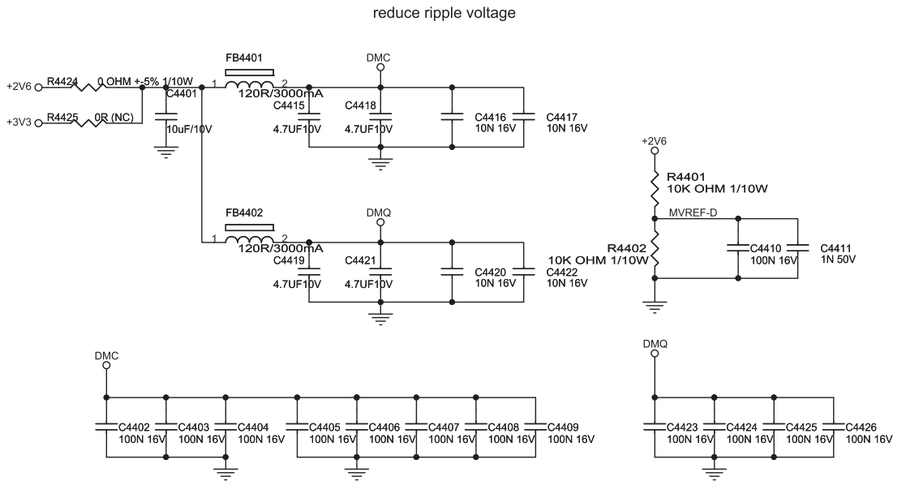
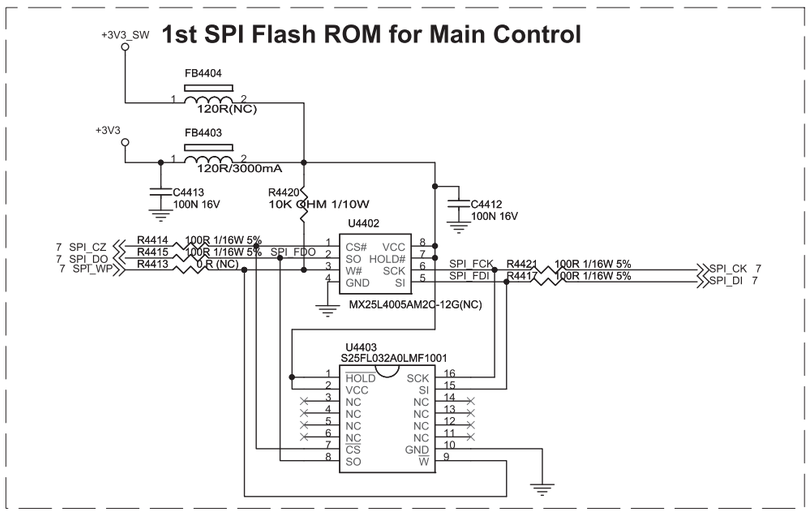
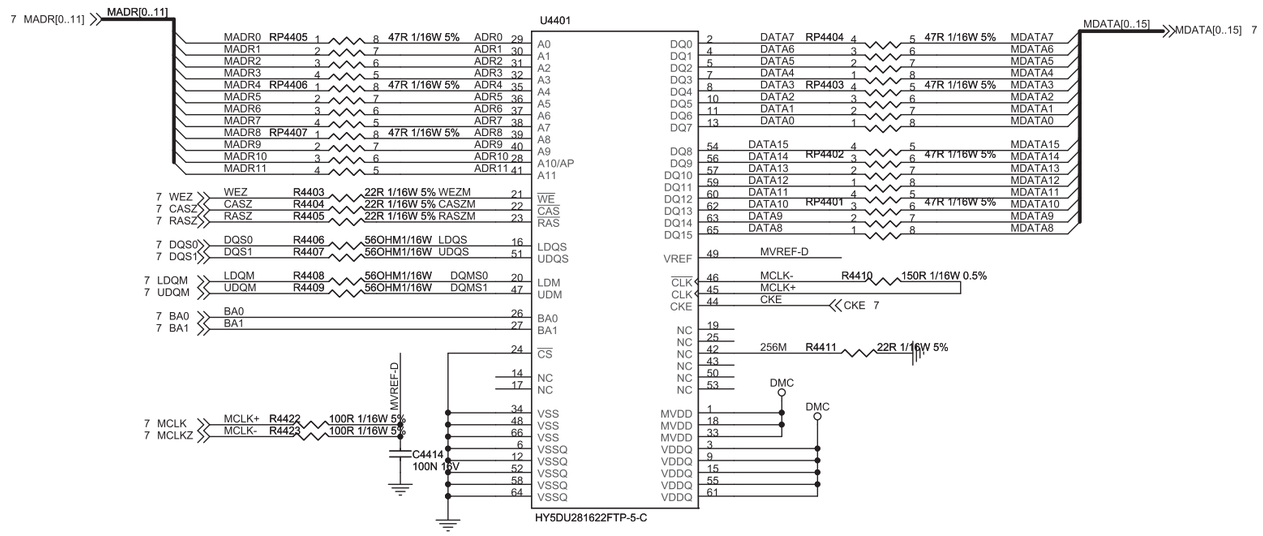
SSB: Flash ROM and Memory, 19" & 22"

C4401 A1	C4402 B1	C4403 B1	C4404 B1	C4405 B1	C4406 B2	C4407 B2	C4408 B2	C4409 B2	C4410 A2	C4411 A3	C4412 A4	C4413 A4	C4414 D1	C4415 A2	C4416 A2	C4417 A2	C4418 A2
C4419 A2	C4420 A2	C4421 A2	C4422 A2	C4423 B2	C4424 B2	C4425 B3	C4426 B3	FB4401 A1	FB4402 A1	FB4403 A4	FB4404 A4	RP4401 C3	RP4402 C3	RP4403 C3	RP4404 B3	RP4405 B1	RP4406 C1
RP4407 C1	R4401 A2	R4402 A2	R4403 C1	R4404 C1	R4405 C1	R4406 C1	R4407 C1	R4408 C1	R4409 C1	R4410 C3	R4411 C2	R4413 A4	R4414 A4	R4415 A4	R4417 A4	R4418 C4	R4419 C4
R4420 A4	R4421 A4	R4422 C1	R4423 D1	R4424 A1	R4425 A1	U4401 B2	U4402 A4	U4403 B4	U4404 B4								

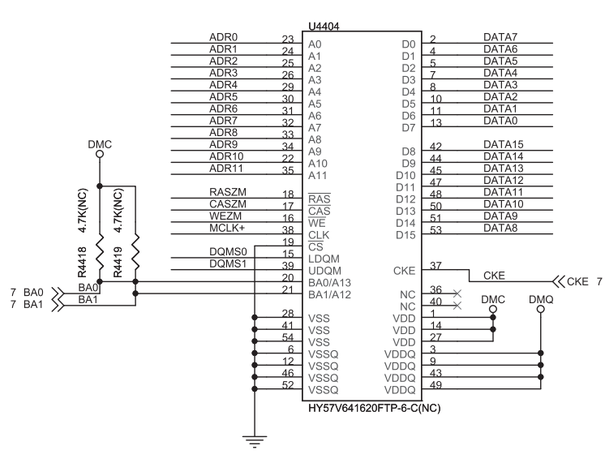
B09 Flash ROM and Memory







DDR 2M x 16bit x 4BK



SDRAM 4X16

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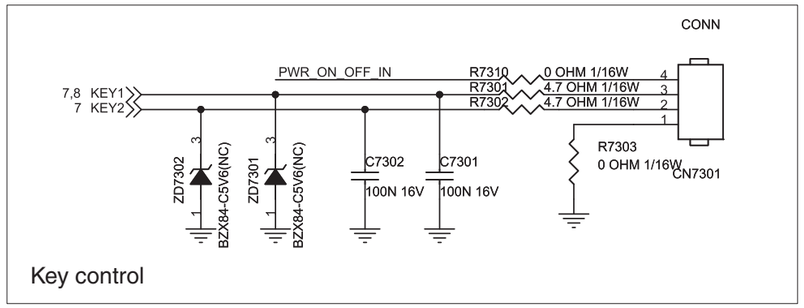
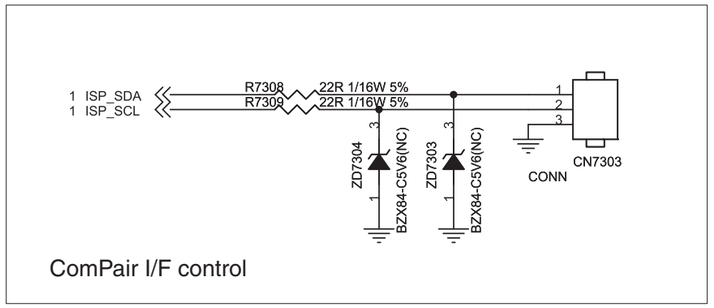
SSB: Key, IR BD & Compair I/F, 19" & 22"

CN7301 A2 CN7303 A4 CN7305 C3 CN7306 C3 C7301 A2 C7302 A1 C7304 C1 C7306 C3 C7307 B2 Q7302 B2 Q7303 C1 R7301 A2 R7302 A2 R7303 A2 R7308 A3 R7309 A3 R7310 A2 R7313 C2
R7314 C2 R7315 B3 R7316 B2 R7317 C3 R7318 C2 R7319 C2 R7320 C2 R7321 C2 R7322 C2 U7301 B2 ZD7301 A1 ZD7302 A1 ZD7303 A4 ZD7304 A3

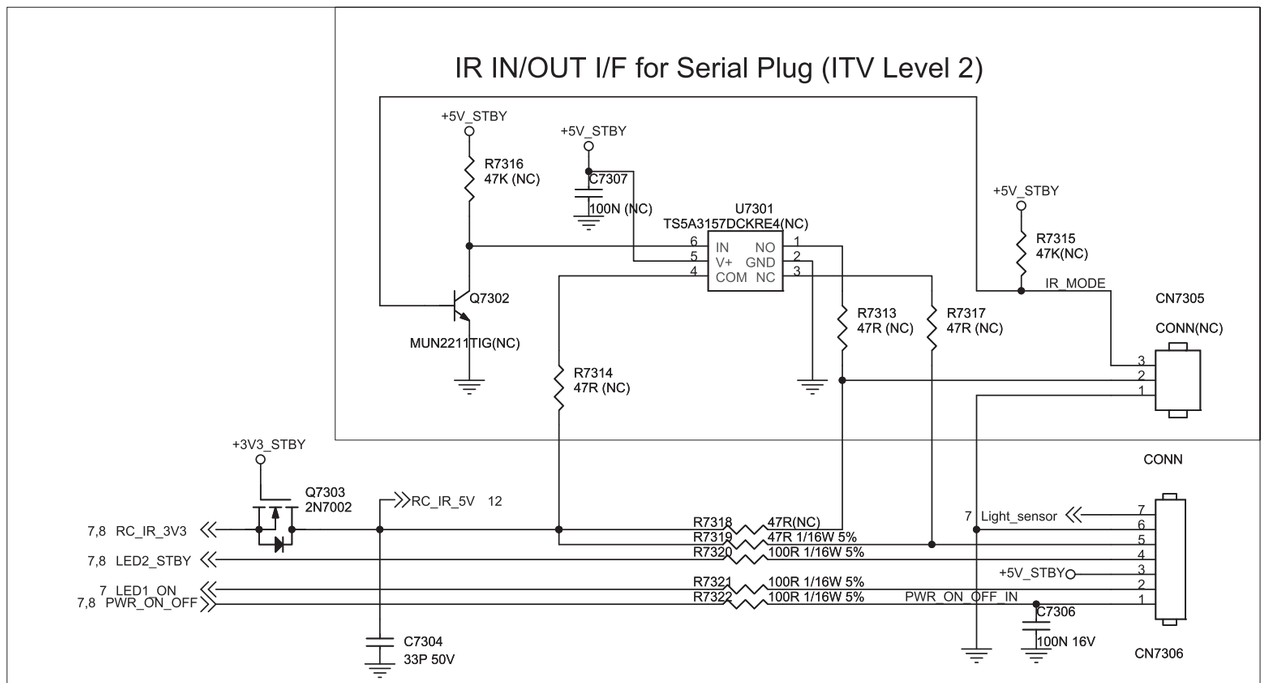
B10 Key, IR/LED & ComPair I/F control



Key control



ComPair I/F control



IR/LED control

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SSB: Panel I/F, 19" & 22"

CN7501 B2 CN7502 B4 CN7503 B1 R7501 B3 R7502 B3 R7503 B3 R7504 B3 R7505 B3 R7506 B3 R7507 B5 R7508 B5 R7513 A1 R7514 A1 R7526 B2 R7527 B1

B11 Panel I/F

B11

PANEL_VCC
R7514
10K(NC)
PANEL_HIGH
R7513
2.7K OHM 1/16W

PANEL_VCC
PANEL_HIGH
RXE3+
RXEC+
RXE2+
RXE1+
RXE0+
RXO3+
RXOC+
RXO2+
RXO1+
RXO0+
RXE3-
RXEC-
RXE2-
RXE1-
RXE0-
RXO3-
RXOC-
RXO2-
RXO1-
RXO0-
R7526
0R(NC)
R7527
0R(NC)
ODSEL
ODSEL 7
CN7503
60948 30P 1.25MM(NC)

PANEL_VCC
R7503 0R (NC)
R7504 0R (NC)
R7506 0R (NC)
PANEL_HIGH
R7501 0R (NC)
R7502 0R (NC)
R7505 0R (NC)
RXE3+ RXE3+ 7
RXE3- RXE3- 7
RXEC+ RXEC+ 7
RXEC- RXEC- 7
RXE2+ RXE2+ 7
RXE2- RXE2- 7
RXE1+ RXE1+ 7
RXE1- RXE1- 7
RXE0+ RXE0+ 7
RXE0- RXE0- 7
RXO3+ RXO3+ 7
RXO3- RXO3- 7
RXOC+ RXOC+ 7
RXOC- RXOC- 7
RXO2+ RXO2+ 7
RXO2- RXO2- 7
RXO1+ RXO1+ 7
RXO1- RXO1- 7
RXO0+ RXO0+ 7
RXO0- RXO0- 7
CON30-2TH(NC)
CN7501

PANEL_VCC
R7508 0R (NC)
R7507 0R (NC)
PANEL_HIGH
RXO3+ 7
RXO3- 7
RXOC+ 7
RXOC- 7
RXO2+ 7
RXO2- 7
RXO1+ 7
RXO1- 7
RXO0+ 7
RXO0- 7
CONN
CN7502

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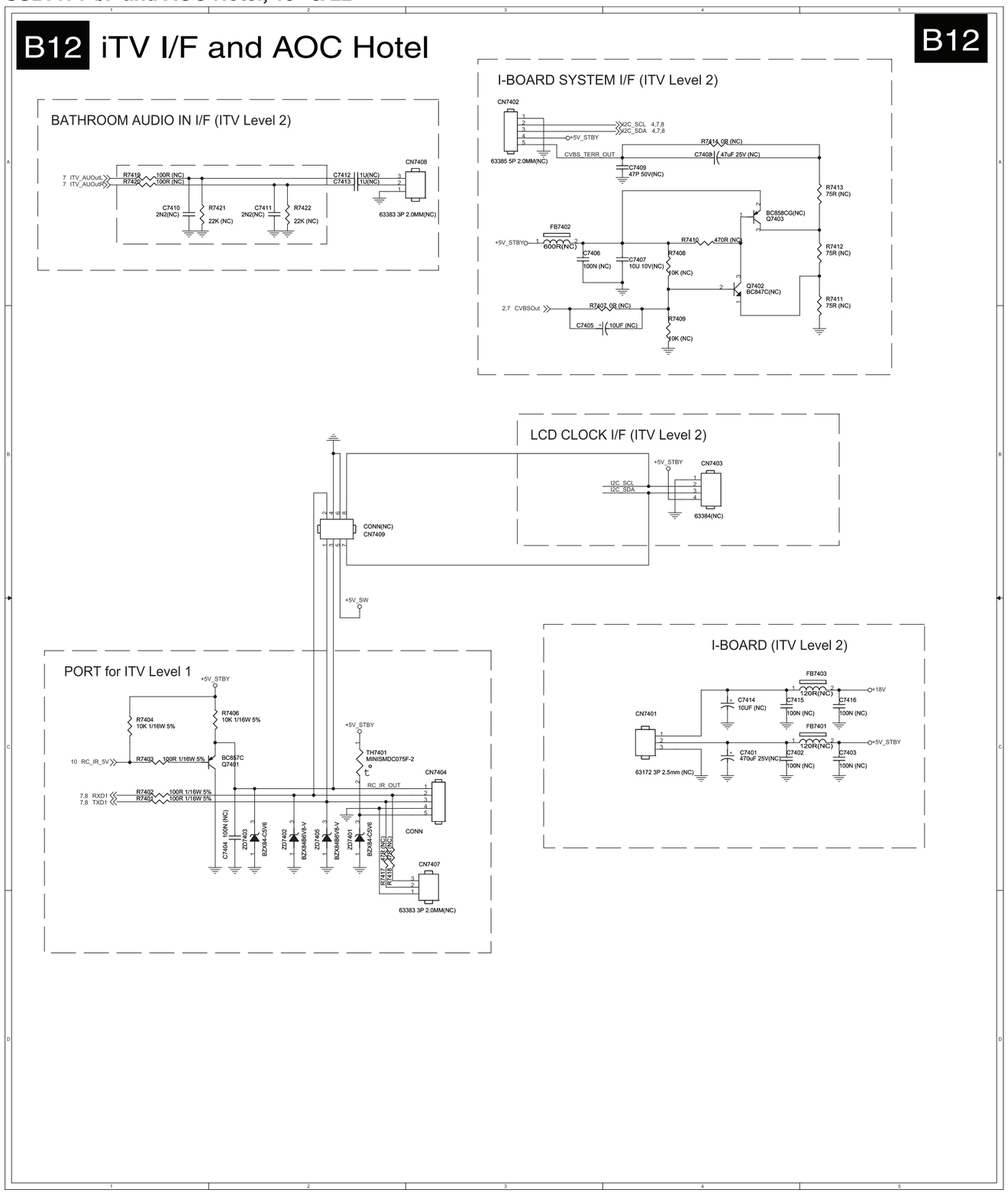
SSB: iTV I/F and AOC Hotel, 19" & 22"



CN7401	C4
CN7402	A3
CN7403	B4
CN7404	C3
CN7407	C3
CN7408	A2
CN7409	B2
C7401	C4
C7402	C4
C7403	C5
C7404	C2
C7405	B3
C7406	A3
C7407	A4
C7408	A4
C7409	A4
C7410	A1
C7411	A2
C7412	A2
C7413	A2
C7414	C4
C7415	C4
C7416	C5
FB7401	C4
FB7402	A3
FB7403	C4
Q7401	C1
Q7402	A4
Q7403	A4
R7401	C1
R7402	C1
R7403	C1
R7404	C1
R7406	C1
R7407	A3
R7408	A4
R7409	B4
R7410	A4
R7411	A5
R7412	A5
R7413	A5
R7414	A4
R7417	C2
R7418	C2
R7419	A1
R7420	A1
R7421	A1
R7422	A2
TH7401	C2
ZD7401	C2
ZD7402	C2
ZD7403	C2
ZD7405	C2

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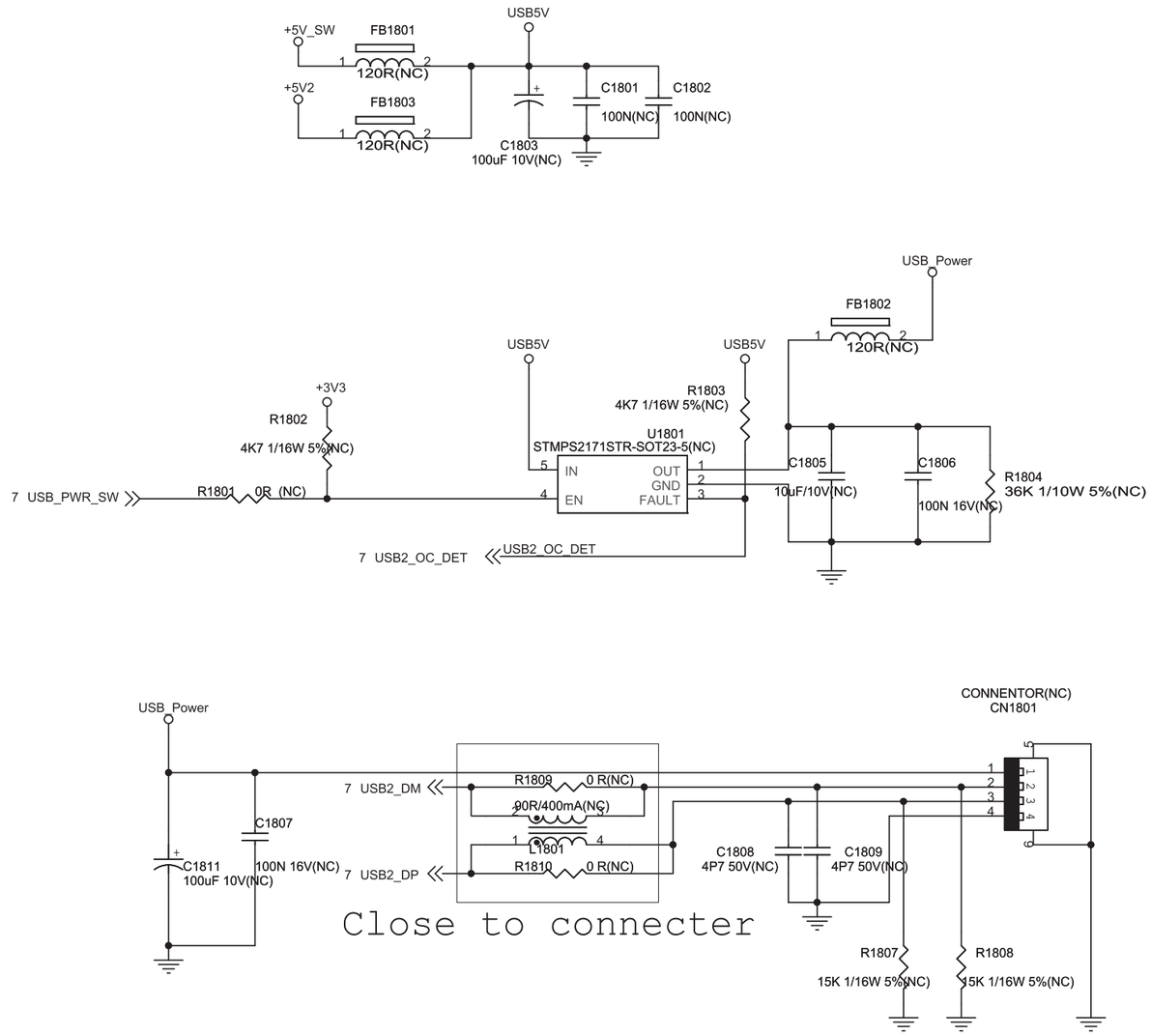
SSB: USB, 19" & 22"

CN1801 C3 C1801 A3 C1802 A3 C1803 A2 C1805 B3 C1806 B3 C1807 C2 C1808 C3 C1809 C3 C1811 C2 FB1801 A2 FB1802 B3 FB1803 A2 L1801 C2 R1801 B2 R1802 B2 R1803 B3 R1804 B3
R1807 C3 R1808 C3 R1809 C2 R1810 C2 U1801 B2

B13 USB

B13



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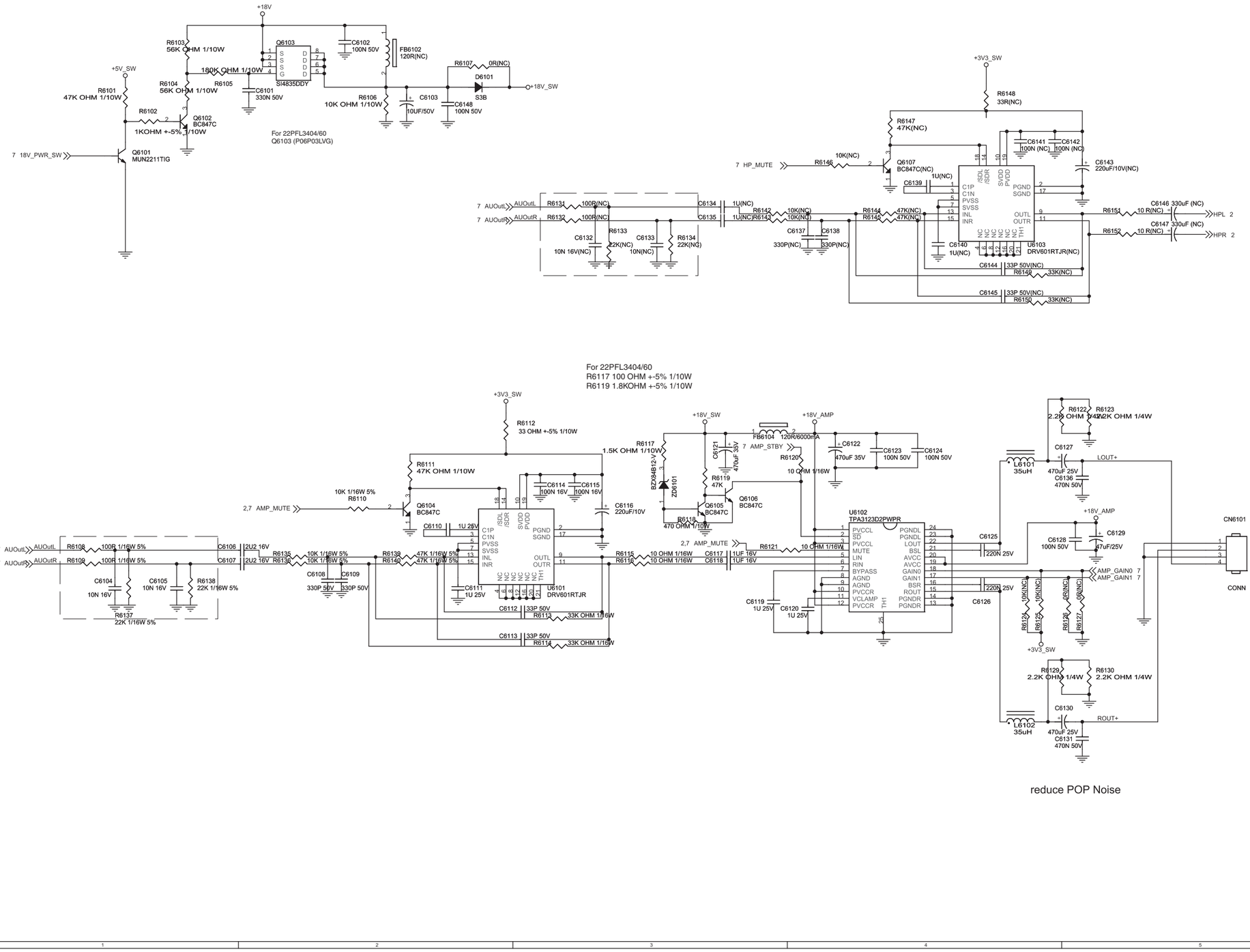
SSB: Audio Amplifier, 19" & 22"

B14 Audio Amplifier

B14



CN6101	C5	R6104	A1
C6101	A1	R6105	A1
C6102	A2	R6106	A2
C6103	A2	R6107	A2
C6104	C1	R6108	C1
C6105	C1	R6109	C1
C6106	C1	R6110	C2
C6107	C1	R6111	C2
C6108	C2	R6112	B2
C6109	C2	R6113	C3
C6110	C2	R6114	C3
C6111	C2	R6115	C3
C6112	C3	R6116	C3
C6113	C3	R6117	C3
C6114	C3	R6118	C3
C6115	C3	R6119	C3
C6116	C3	R6120	C3
C6117	C3	R6121	C3
C6118	C3	R6122	B4
C6119	C3	R6123	B5
C6120	C4	R6124	C4
C6121	C3	R6125	C4
C6122	C4	R6126	C4
C6123	C4	R6127	C5
C6124	C4	R6129	C4
C6125	C4	R6130	C5
C6126	C4	R6131	B3
C6127	C4	R6132	B3
C6128	C4	R6133	B3
C6129	C5	R6134	B3
C6130	D4	R6135	C2
C6131	D5	R6136	C2
C6132	B3	R6137	C1
C6133	B3	R6138	C1
C6134	B3	R6139	C2
C6135	B3	R6140	C2
C6136	C5	R6142	B3
C6137	B4	R6143	B3
C6138	B4	R6144	B4
C6139	B4	R6145	B4
C6140	B4	R6146	A4
C6141	A4	R6147	A4
C6142	A4	R6148	A4
C6143	A5	R6149	B4
C6144	B4	R6150	B4
C6145	B4	R6151	B5
C6146	B5	R6152	B5
C6147	B5	U6101	C2
C6148	A2	U6102	C4
D6101	A2	U6103	A4
FB6102	A2	ZD6101	C3
FB6104	B3		
L6101	C4		
L6102	D4		
Q6101	A1		
Q6102	A1		
Q6103	A1		
Q6104	C2		
Q6105	C3		
Q6106	C3		
Q6107	A4		
R6101	A1		
R6102	A1		
R6103	A1		

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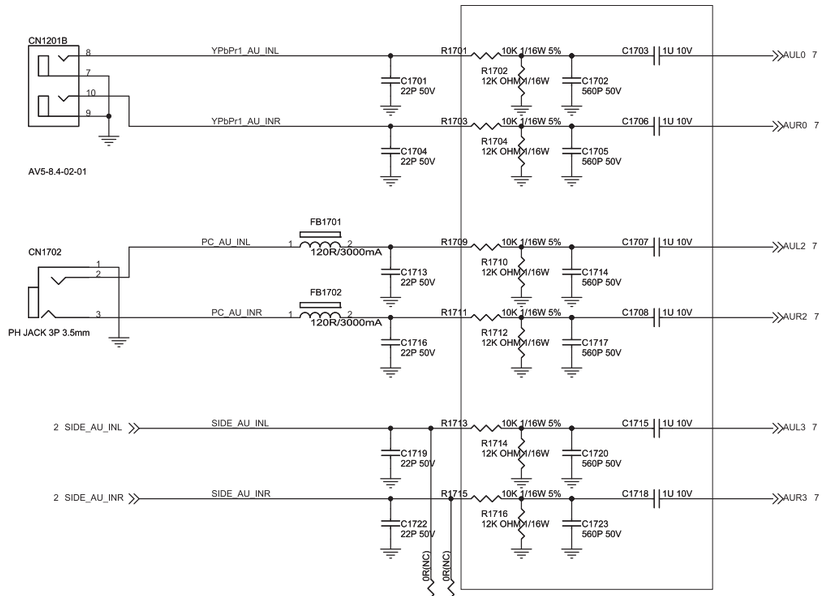
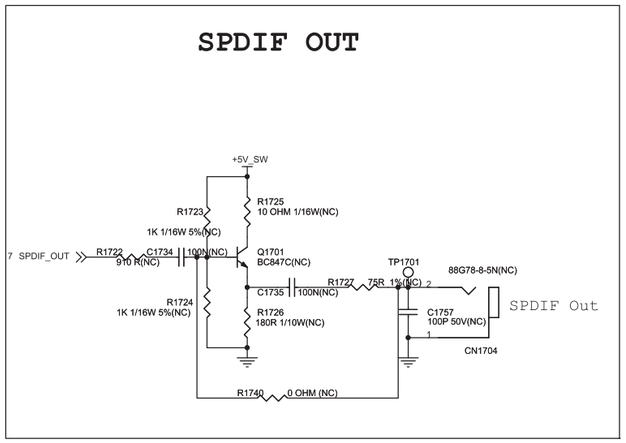
SSB: Audio I/F and SPIDF out, 19" & 22"

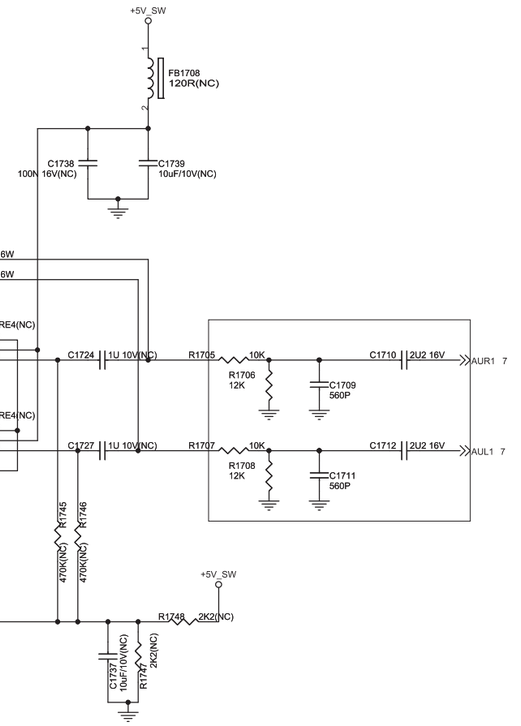
B15 Audio I/F and SPDIF out

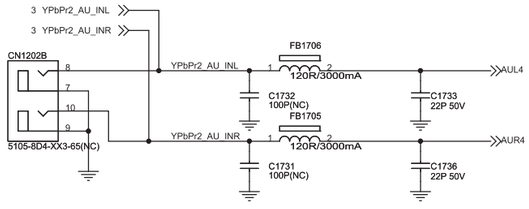
B15





Use 0R when only rear AV or side AV





AP/China: C1732 NC ,C1731 NC

EU: C1732 100p ,C1731 100p

For PHILIPS CLICK EU :

R1729 R1730 0R

C1721 C1725 C1726 C1728 C1724 C1727 C1737 U1701 C1738 C1739
FB1708 U1702 R1741 R1742 R1743 R1744 R1745 R1746 R1747 R1748 NC

N1201B A1
N1202B C1
CN1702 B1
CN1704 B5
C1701 A2
C1702 A2
C1703 A2
C1704 A2
C1705 A2
C1706 A2
C1707 A2
C1708 B2
C1709 C5
C1710 C5
C1711 C5
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R1742 C4
R1743 C4
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R1745 C4
R1746 C4
R1747 D4
R1748 D5
TP1701 B4
U1701 C4
U1702 C4

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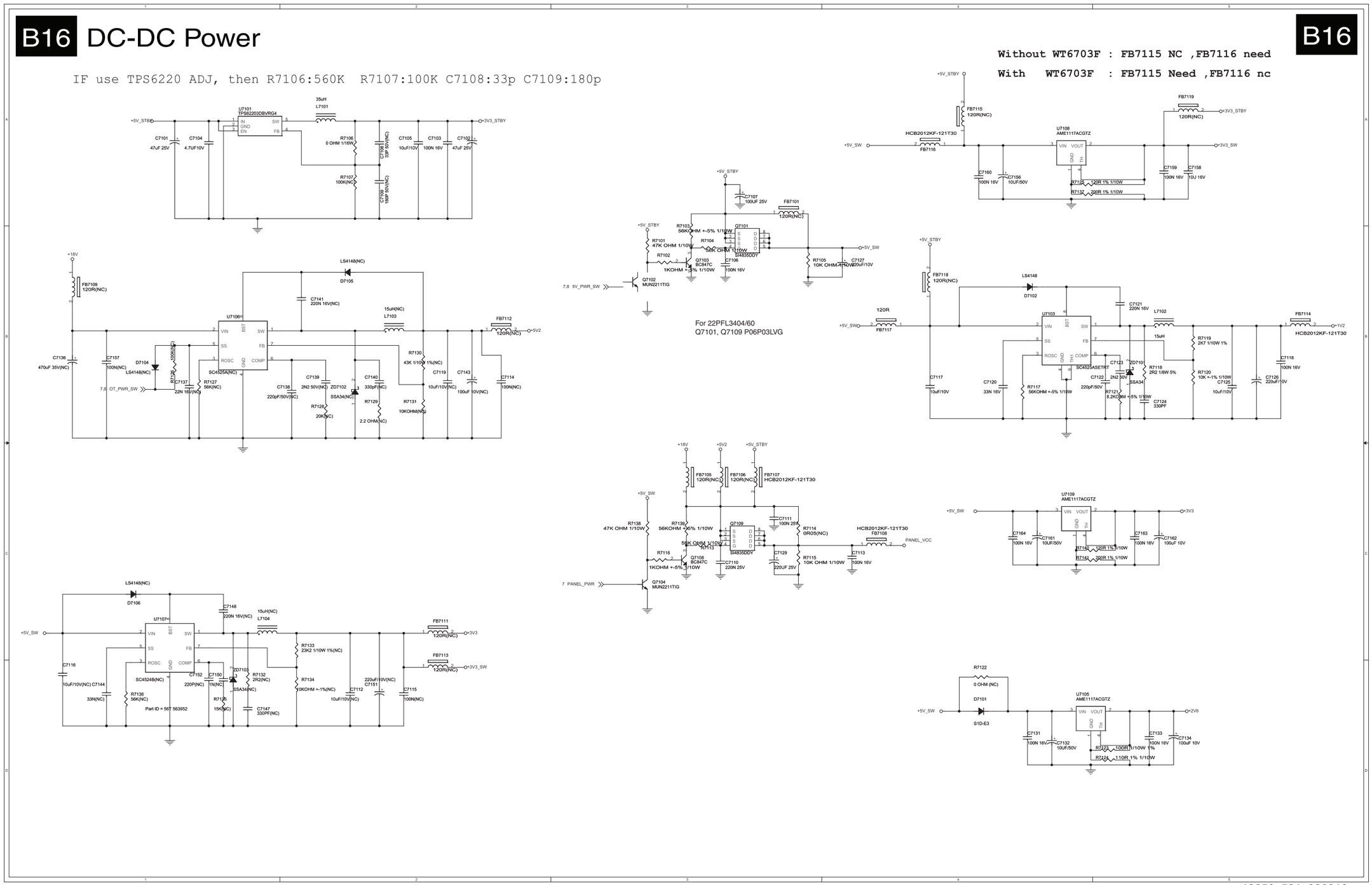
SSB: DC-DC Power, 19" & 22"

C7101 A1	C7102 A2	C7103 A2	C7104 A1	C7105 A2	C7106 B3	C7107 A3	C7108 A2	C7109 A2	C7110 C3	C7111 C3	C7112 D2	C7113 C4	C7114 B2	C7115 D2	C7116 D1	C7117 B4	C7118 B5
C7119 B2	C7120 B4	C7121 B5	C7122 B5	C7123 B5	C7124 B5	C7125 B5	C7126 B5	C7127 B4	C7129 C3	C7131 D4	C7132 D4	C7133 D5	C7134 D5	C7136 B1	C7137 B1	C7138 B2	C7139 B2
C7140 B2	C7141 B2	C7143 B2	C7144 D1	C7147 D1	C7148 C1	C7150 D1	C7151 D2	C7152 D1	C7156 A4	C7157 B1	C7158 A5	C7159 A5	C7160 A4	C7161 C4	C7162 C5	C7163 C5	C7164 C4
D7101 D4	D7102 B4	D7104 B1	D7105 B2	D7106 C1	FB7101 A3	FB7105 C3	FB7106 C3	FB7107 C3	FB7108 C4	FB7109 B1	FB7111 C2	FB7112 B2	FB7113 C2	FB7114 B5	FB7115 A4	FB7116 A4	FB7117 B4
FB7118 B4	FB7119 A5	L7101 A2	L7102 B5	L7103 B2	L7104 C1	Q7101 B3	Q7102 B3	Q7103 B3	Q7104 C3	Q7108 C3	Q7109 C3	R7101 B3	R7102 B3	R7103 A3	R7104 B3	R7105 B3	R7106 A2
R7107 A2	R7113 C3	R7114 C3	R7115 C3	R7116 C3	R7117 B4	R7118 B5	R7119 B5	R7120 B5	R7121 B5	R7122 D4	R7123 D5	R7124 D5	R7125 A4	R7126 B1	R7127 B1	R7128 B2	R7129 B2
R7130 B2	R7131 B2	R7132 D1	R7133 C2	R7134 D2	R7135 D1	R7136 D1	R7137 A4	R7138 C3	R7139 C3	R7140 C4	R7141 C4	U7101 A1	U7103 B4	U7105 D4	U7106 B1	U7107 C1	U7108 A4



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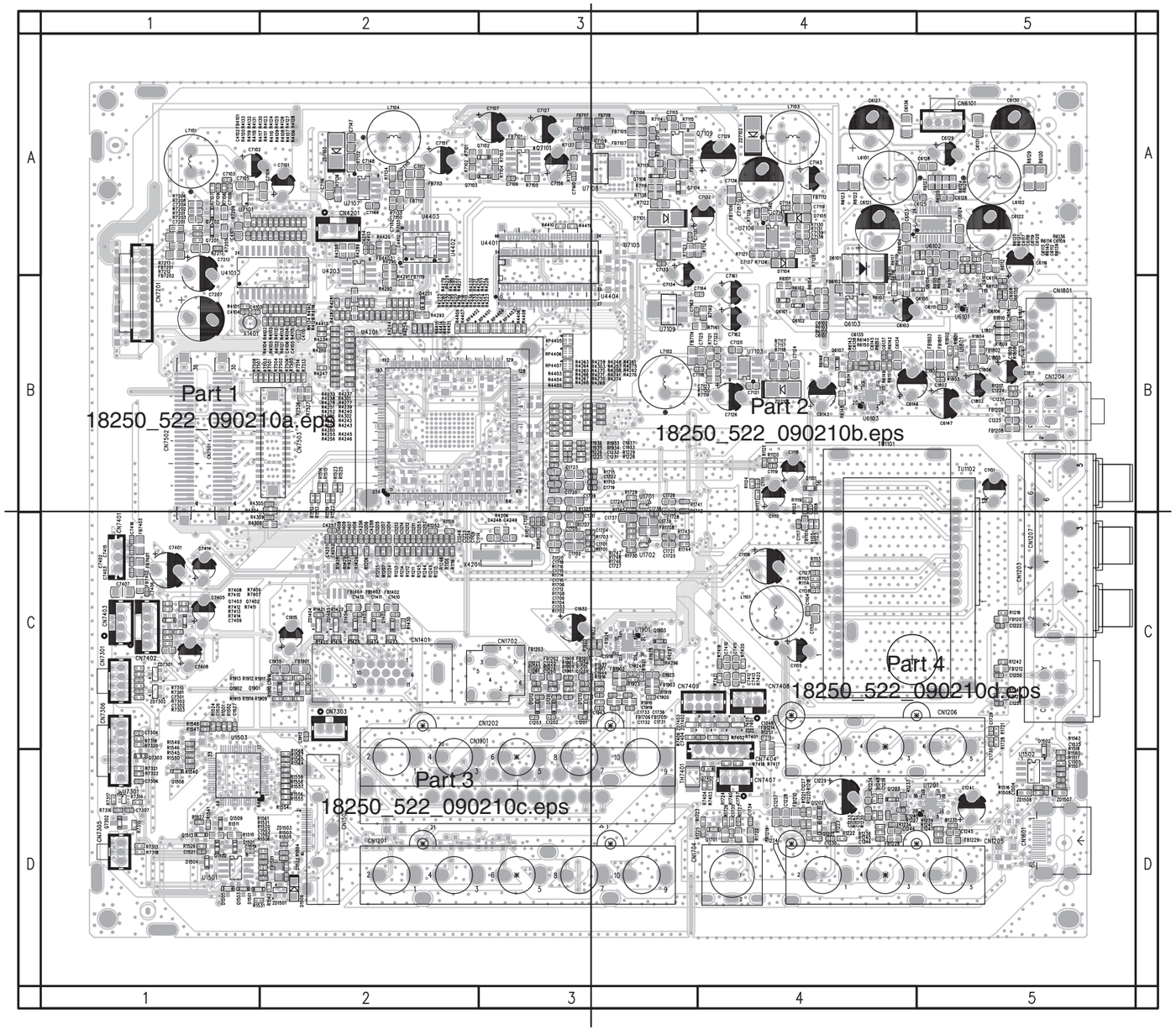
Layout SSB, 19" & 22" (Overview Top Side)

C1101 B5 C1119 B4 C1214 C2 C1234 D4 C1253 C2 C1412 C2 C1704 C3 C1724 C3 C1738 C3 C1913 C2 C4101 A1 C4258 C2 C6116 B5 C6130 A5 C7104 A1 C7118 B3
C1104 C4 C1120 B3 C1221 C3 C1235 D4 C1254 C2 C1502 D1 C1705 C3 C1725 C3 C1739 C3 C1915 C2 C4102 A1 C4412 A2 C6117 B4 C6131 A5 C7105 A1 C7119 A4
C1105 C4 C1127 C4 C1222 C5 C1236 D4 C1255 C3 C1503 D1 C1706 C3 C1726 C3 C1757 D4 C1916 C2 C4103 B1 C4413 A2 C6118 B5 C6134 B4 C7106 A3 C7120 B4
C1106 C4 C1128 C4 C1223 C2 C1240 D4 C1256 C3 C1504 D5 C1709 C3 C1727 C3 C1801 B5 C1918 C3 C4104 B1 C6101 B4 C6119 B5 C6135 B4 C7107 A3 C7121 B4
C1108 C4 C1201 C3 C1224 B5 C1241 D5 C1257 D4 C1505 D5 C1710 C3 C1728 C3 C1802 B5 C1919 C3 C4105 B2 C6102 B4 C6120 B5 C6136 A4 C7108 A1 C7122 B4
C1109 C2 C1202 C3 C1225 B5 C1244 D4 C1259 C3 C1519 D1 C1711 C3 C1729 C5 C1803 B5 C1920 C3 C4106 B2 C6103 B4 C6121 A4 C6137 B4 C7109 A1 C7123 B4
C1110 B4 C1203 C3 C1226 B5 C1245 D5 C1260 C3 C1521 D1 C1712 C3 C1730 C5 C1805 B5 C1924 C3 C4110 B2 C6106 B5 C6122 A5 C6138 B4 C7110 A3 C7124 B4
C1111 B4 C1204 C2 C1227 D4 C1246 D4 C1261 C3 C1522 D2 C1715 B3 C1731 C3 C1806 B5 C1925 C3 C4248 C3 C6107 B5 C6123 A4 C6143 B4 C7111 A3 C7125 B3
C1112 C3 C1205 C2 C1228 D4 C1247 D5 C1406 C2 C1525 D5 C1718 B3 C1732 C3 C1807 B5 C1932 C3 C4249 C3 C6108 B5 C6124 A5 C6145 B4 C7112 A2 C7126 B4
C1113 C3 C1206 C2 C1229 D4 C1248 C4 C1407 C2 C1526 C1 C1719 B3 C1733 C3 C1808 B5 C1933 B3 C4251 C2 C6109 B5 C6125 A4 C6146 B4 C7113 A3 C7127 A3
C1114 C2 C1207 C2 C1230 D4 C1249 C2 C1408 C2 C1527 C1 C1720 B3 C1734 D4 C1809 B5 C1935 C2 C4252 C2 C6112 B5 C6126 A5 C6147 B5 C7114 A4 C7129 A4
C1115 C4 C1211 C2 C1231 B3 C1250 C5 C1409 C2 C1701 C3 C1721 C3 C1735 D4 C1811 B5 C1937 B3 C4254 A2 C6113 B5 C6127 A4 C7101 A2 C7115 A2 C7131 A3
C1117 C4 C1212 C2 C1232 B3 C1251 C5 C1410 C2 C1702 C3 C1722 B3 C1736 C3 C1901 C3 C1943 C3 C4256 C2 C6114 B5 C6128 A4 C7102 A1 C7116 A2 C7132 A3
C1118 B4 C1213 C2 C1233 D4 C1252 C2 C1411 C2 C1703 C3 C1723 B3 C1737 C3 C1908 C3 C1944 C3 C4257 C2 C6115 B5 C6129 A5 C7103 A1 C7117 B4 C7133 B3



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C7137 A4 D1505 D1 Q7104 A3 R1505 D2 R1909 C2 R4245 B2 R6120 B4 R7403 D3
C7138 A4 D1506 D2 Q7108 A3 R1506 D1 R1910 C2 R4246 B2 R6121 B4 R7404 D3
C7139 A4 D6101 B4 Q7109 A3 R1507 D5 R1911 C2 R4247 B2 R6122 A4 R7406 C3
C7140 A4 D7101 A3 Q7201 A1 R1508 D5 R1912 C2 R4248 B3 R6123 A4 R7407 C1
C7141 A4 D7104 B4 Q7202 A1 R1510 D1 R1913 C2 R4249 B2 R6124 A5 R7408 C1
C7143 A4 D7105 A4 Q7302 D1 R1511 D1 R1914 C2 R4250 B2 R6125 A5 R7409 C1
C7144 A2 FB1101 C4 Q7303 D1 R1512 B2 R1915 C2 R4251 B2 R6126 A5 R7410 C1
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D1403 C2 Q6106 B4 R1430 C2 R1808 B5 R4240 B2 R6115 B4 R7320 D1 ZD7403 C3
D1404 C2 Q6107 B4 R1501 C1 R1809 B5 R4241 B3 R6116 B5 R7321 D1 ZD7405 C4
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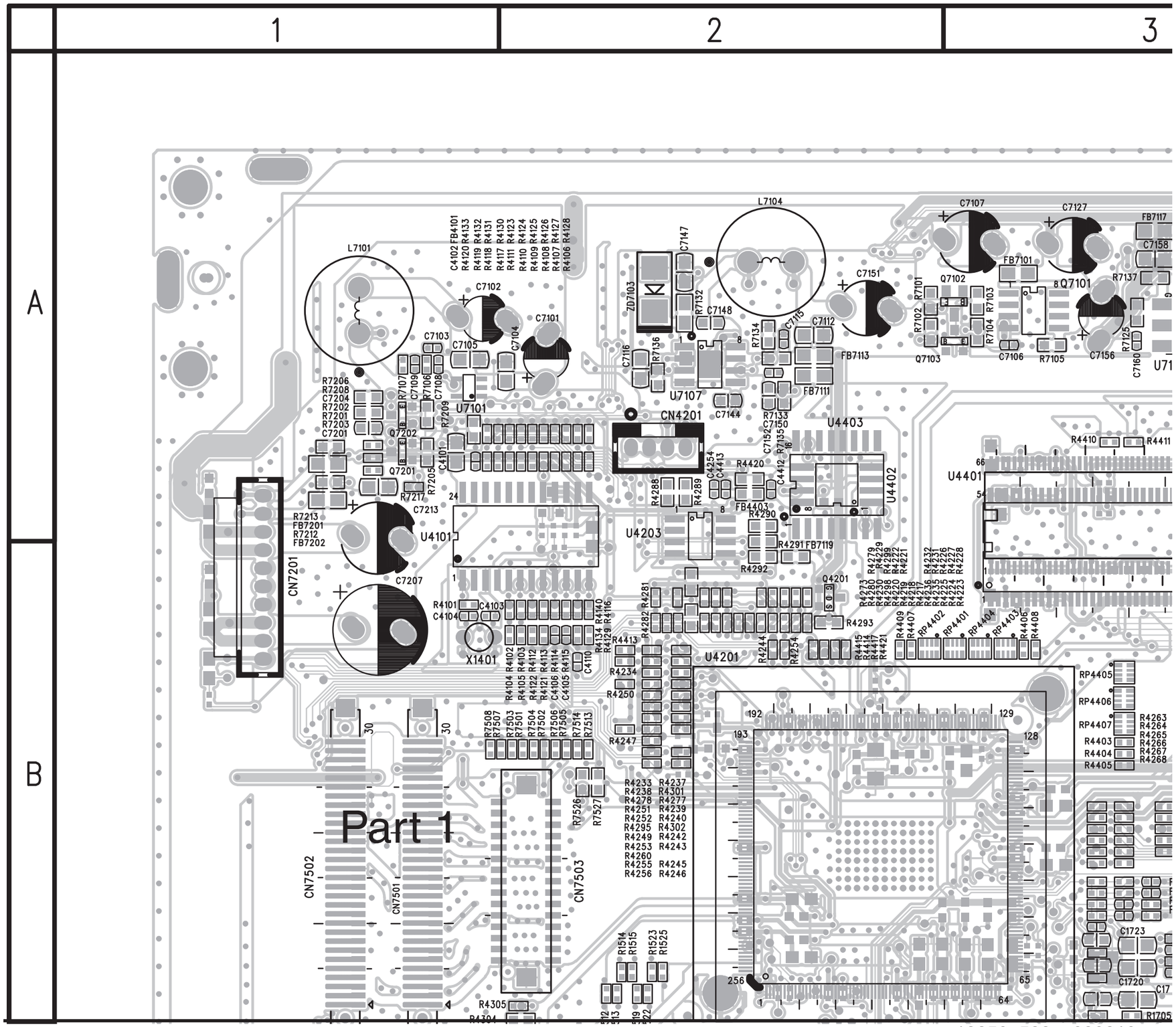
Layout SSB, 19" & 22" (Part1 Top Side)



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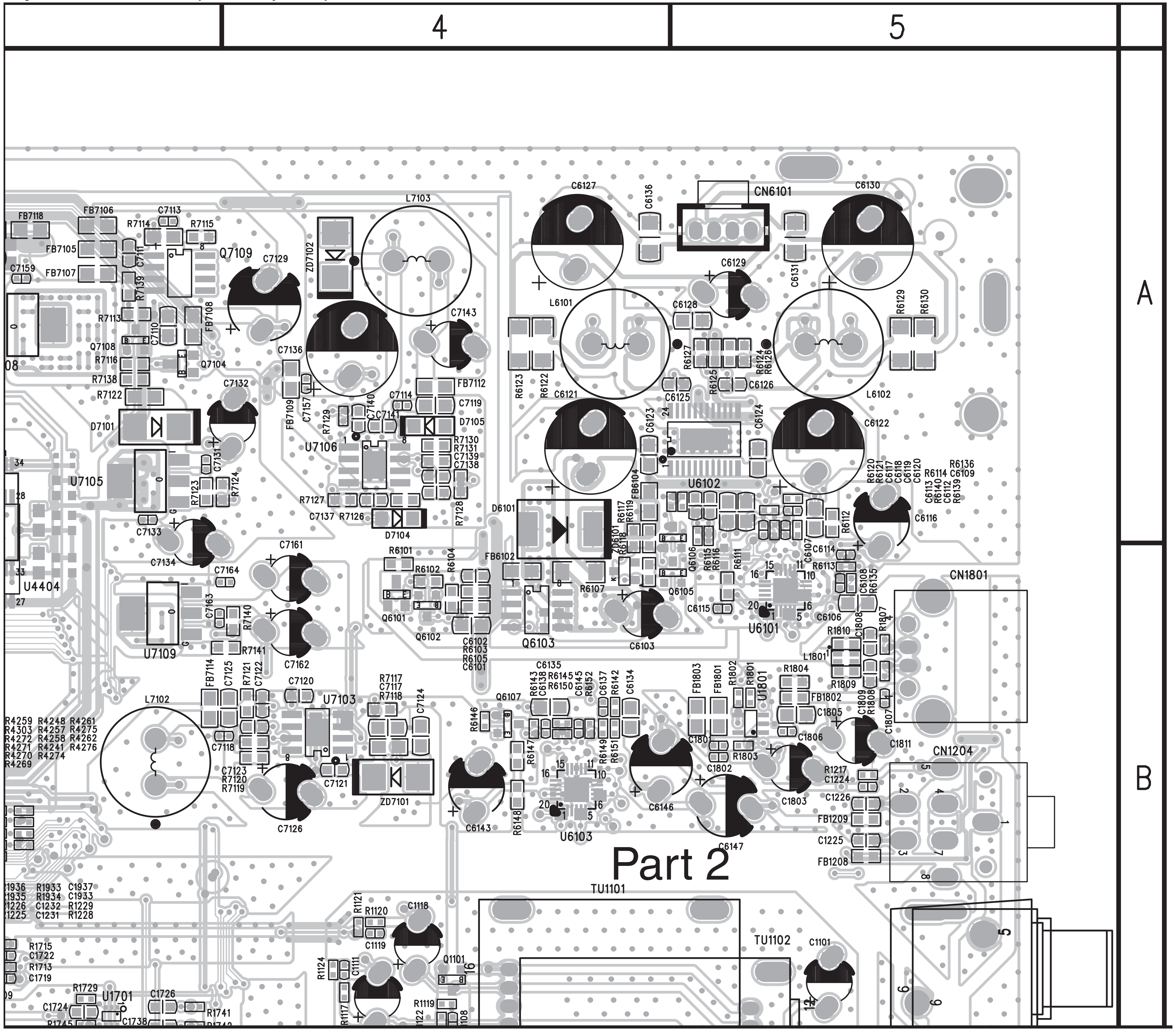
Layout SSB, 19" & 22" (Part2 Top Side)



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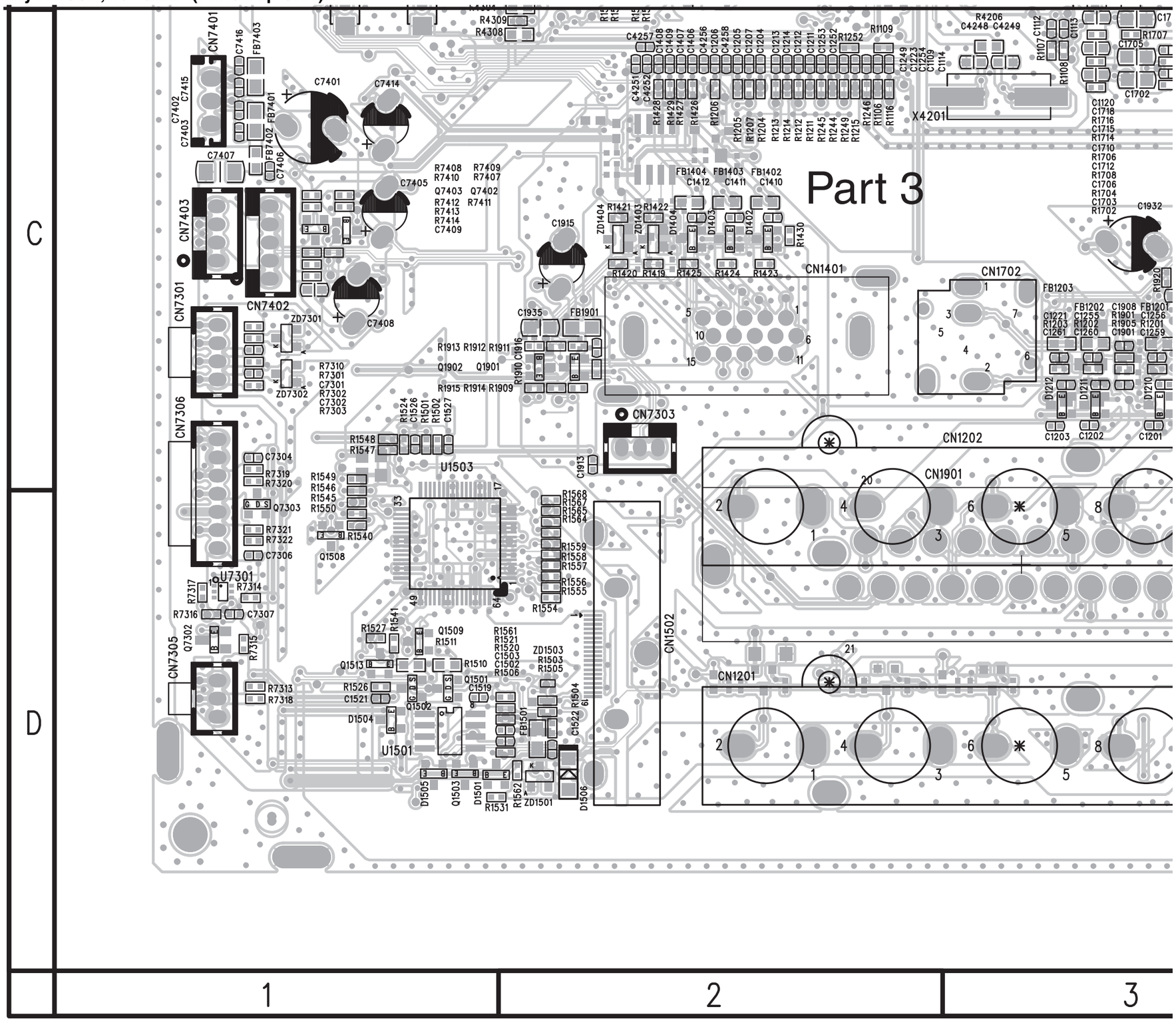
Layout SSB, 19" & 22" (Part3 Top Side)



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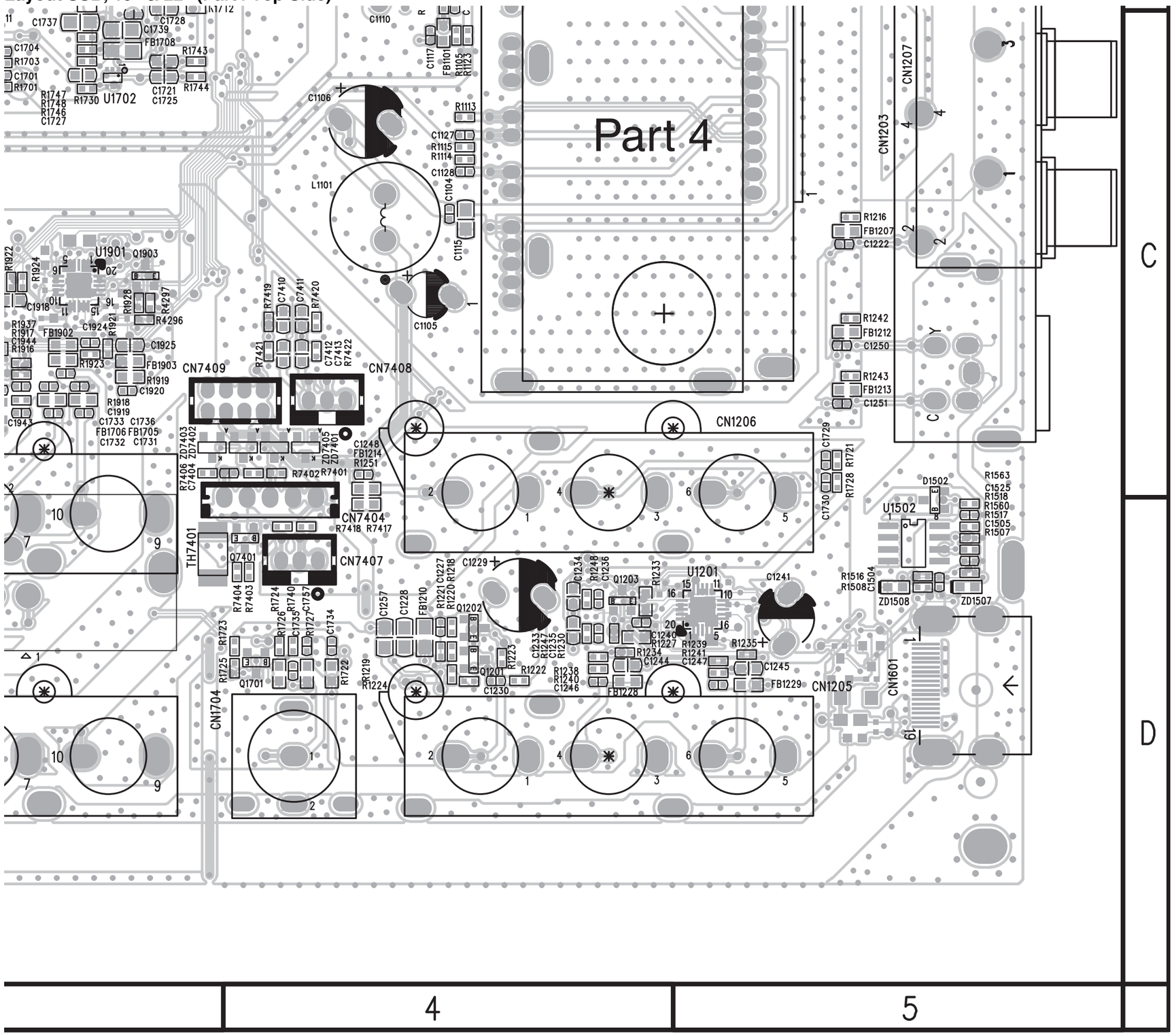
Layout SSB, 19" & 22" (Part4 Top Side)



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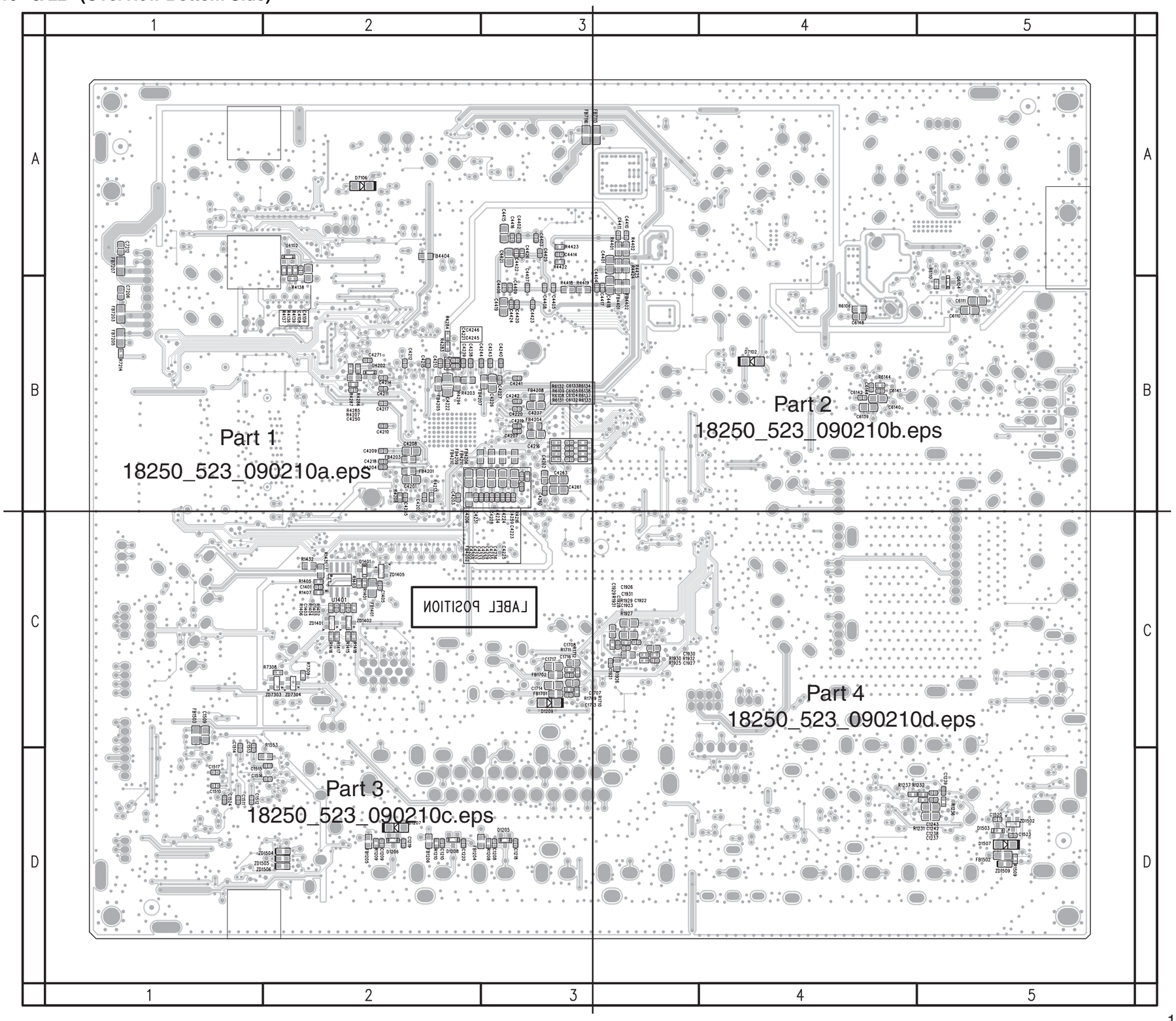
090319

Layout SSB, 19" & 22" (Overview Bottom Side)

C1208 D3 C4222 B2
C1209 D2 C4223 B3
C1210 D2 C4224 B3
C1218 D3 C4225 B3
C1219 D2 C4226 B3
C1220 D2 C4227 B3
C1237 D4 C4228 B3
C1238 D4 C4229 B3
C1239 D5 C4230 B3
C1242 D4 C4231 B2
C1243 D4 C4232 B2
C1401 C2 C4233 B2
C1402 C2 C4234 B3
C1403 C2 C4235 B3
C1405 C2 C4236 B3
C1509 C1 C4237 B3
C1510 D1 C4238 B2
C1511 D1 C4239 B2
C1512 D1 C4240 B3
C1513 D1 C4241 B3
C1514 D1 C4242 B3
C1515 D2 C4243 B3
C1516 D2 C4244 B2
C1517 D1 C4245 B2
C1520 D5 C4246 B2
C1523 D5 C4250 B2
C1524 D1 C4255 B2
C1707 C3 C4259 B3
C1708 C3 C4260 B3
C1713 C3 C4261 B3
C1714 C3 C4262 B3
C1716 C3 C4263 B3
C1717 C3 C4271 B2
C1921 C3 C4401 B3
C1922 C3 C4402 A3
C1923 C3 C4403 A3
C1926 C3 C4404 B3
C1927 C3 C4405 B3
C1928 C3 C4406 B3
C1929 C3 C4407 B3
C1930 C3 C4408 B3
C1931 C3 C4409 B3
C4108 B2 C4410 A3
C4109 B2 C4411 A3
C4201 B2 C4414 A3
C4202 B2 C4415 A3
C4203 B2 C4416 A3
C4204 B2 C4417 B3
C4205 B2 C4418 B3
C4206 B2 C4419 B3
C4207 B3 C4420 B3
C4208 B2 C4421 B3
C4209 B2 C4422 A3
C4210 B2 C4423 B3
C4211 B2 C4424 B3
C4212 B2 C4425 A3
C4213 B2 C4426 A3
C4214 B2 C6104 B3
C4215 B2 C6105 B3
C4216 B3 C6110 B5
C4217 B2 C6111 B5
C4218 B2 C6132 B3
C4219 B3 C6133 B3
C4220 B3 C6139 B4
C4221 B2 C6140 B4



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C6142 B4 R1709 C3
C6144 B4 R1710 C3
C6148 B4 R1711 C3
C7206 B1 R1712 C3
C7212 A1 R1925 C3
D1205 D3 R1926 C3
D1206 D2 R1927 C3
D1207 D2 R1929 C3
D1208 D2 R1930 C3
D1209 C3 R1931 C3
D1401 C2 R1932 C3
D1503 D5 R4136 B2
D1507 D5 R4137 B2
D7102 B4 R4138 B2
D7106 A2 R4139 B2
FB1204 D2 R4203 B2
FB1205 D2 R4207 B2
FB1206 D2 R4208 B2
FB1401 C2 R4213 B2
FB1502 D5 R4216 B3
FB1503 C1 R4283 B2
FB1701 C3 R4284 B2
FB1702 C3 R4285 B2
FB4201 B2 R4286 B2
FB4202 C2 R4287 B2
FB4203 B2 R4294 B2
FB4204 B3 R4401 A3
FB4205 B2 R4402 A3
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FB4210 B2 R4424 B3
FB4211 B3 R4425 B3
FB4401 B3 R6106 B4
FB4402 B3 R6108 B3
FB4404 B2 R6109 B3
FB7115 A3 R6110 B5
FB7116 A3 R6131 B3
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FB7205 B1 R6133 B3
FB7207 B1 R6134 B3
Q6104 B5 R6137 B3
R1208 D2 R6138 B3
R1209 D2 R6144 B4
R1210 D2 R7214 B1
R1231 D4 R7308 C2
R1232 D4 R7309 C2
R1236 D5 TP1701 D4
R1237 D4 TP4229 D2
R1401 C2 U1401 C2
R1402 C2 U4102 B2
R1403 C2 U4202 B2
R1404 C2 ZD1401 C2
R1405 C2 ZD1402 C2
R1406 C2 ZD1405 C2
R1407 C2 ZD1502 D5
R1415 C2 ZD1504 D2
R1416 C2 ZD1505 D2
R1417 C2 ZD1506 D2
R1418 C2 ZD1509 D5
R1431 C2 ZD7303 C2
R1432 C2 ZD7304 C2
R1509 D5

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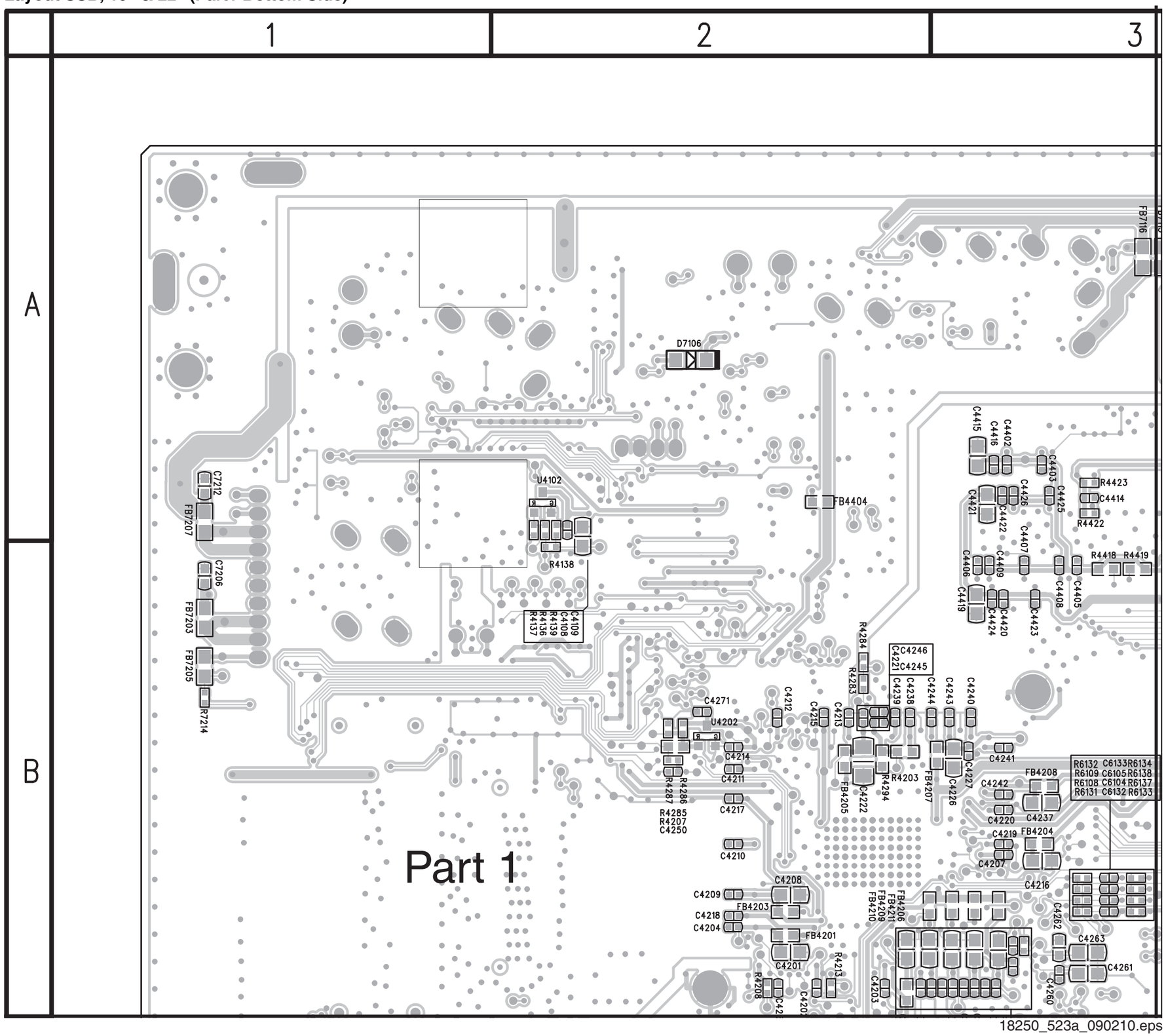
Layout SSB, 19" & 22" (Part1 Bottom Side)



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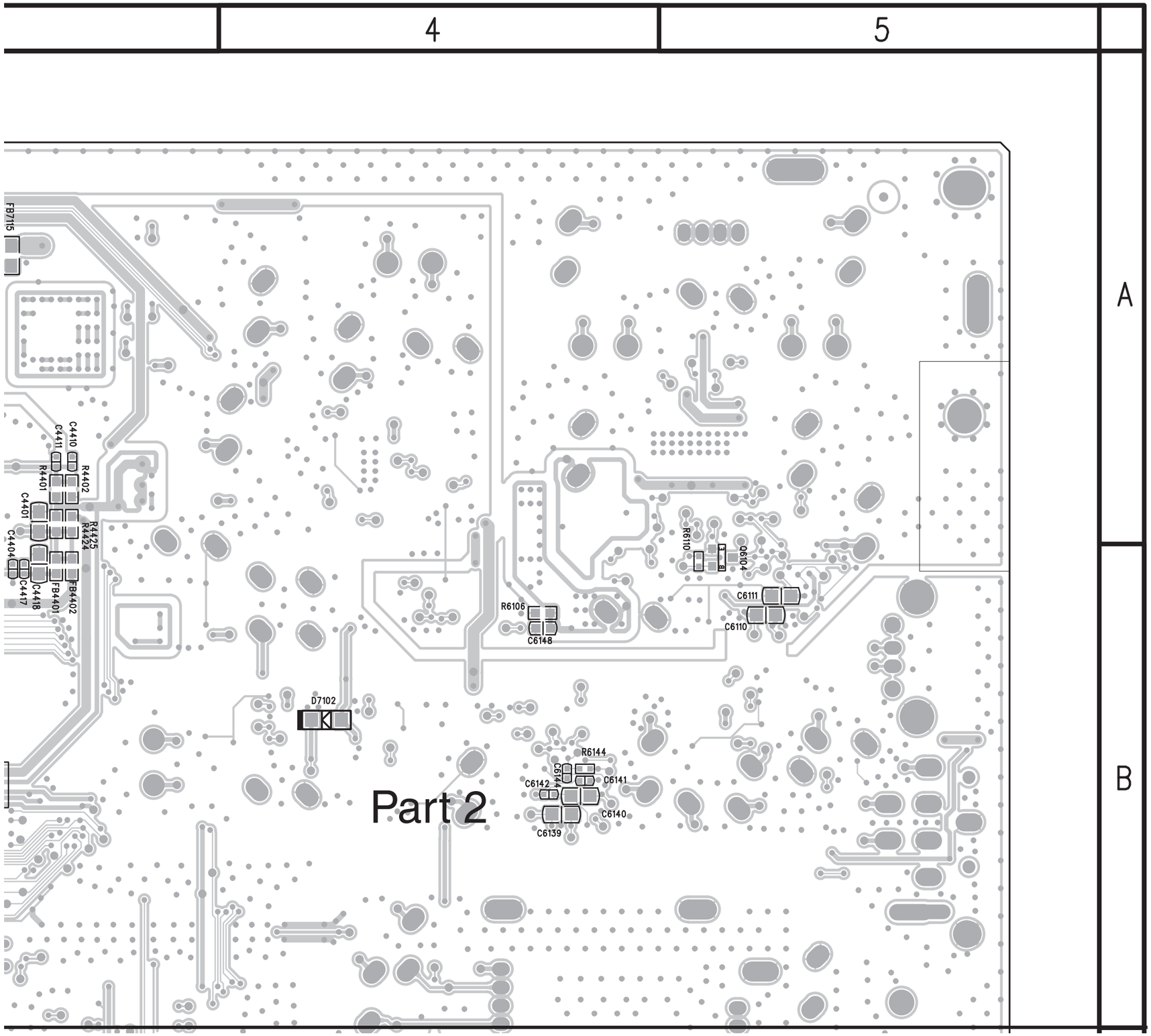
Layout SSB, 19" & 22" (Part2 Bottom Side)



18250_523b_090210.eps
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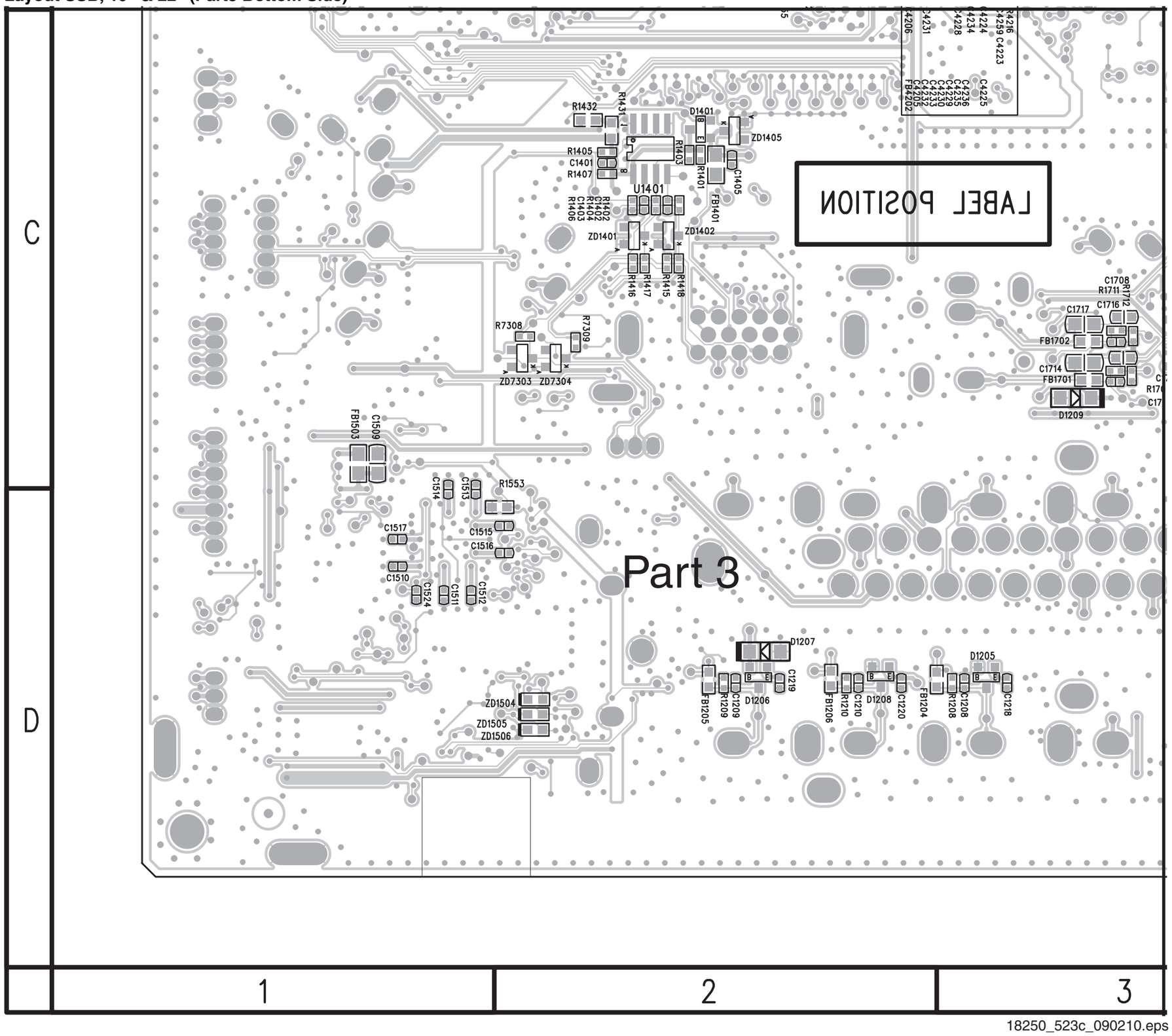
Layout SSB, 19" & 22" (Part3 Bottom Side)



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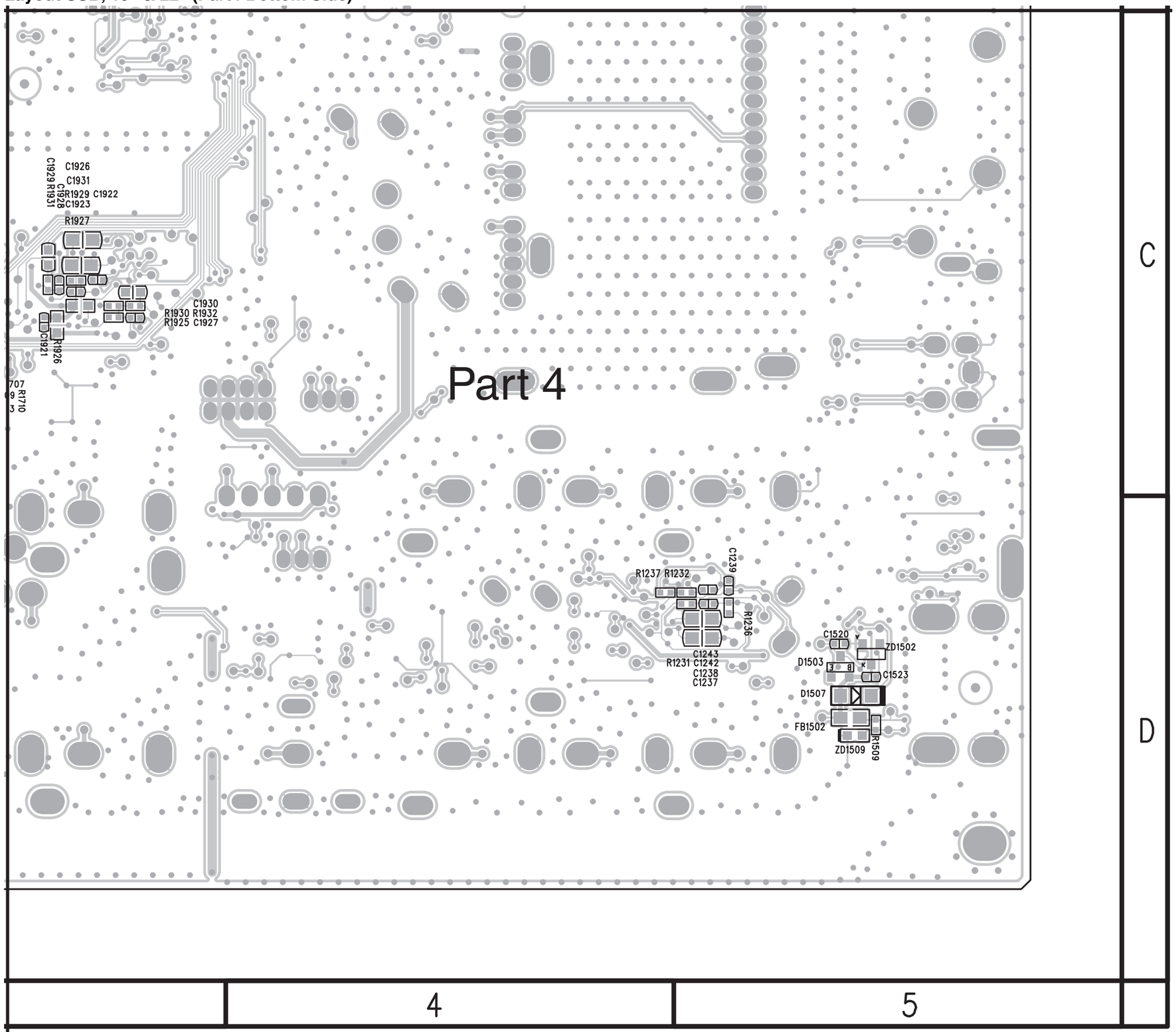
090319

Layout SSB, 19" & 22" (Part4 Bottom Side)



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090319

SSB: D-SUB INPUT, 26" & 32"

B01

B01

+5V_STBY +5V_SW VGA5V

R1431 0 OHM +-5% 1/10W

R1432 0R05(NC)

D1401 BAT54C

VGA_5V

C1401 100N 16V

U1401 M24C02-WMN6TP(NC)

A0 A1 A2 GND VCC WP SCL SDA

R1407 10K(NC)

R1401 2.7K OHM 1/16W

R1403 2.7K OHM 1/16W

+5V_STBY

R1405 TUNER PAL+SECAM TAFT-S710D

DDC_DSUB_WP 5

C1402 33P (NC)

C1403 33P (NC)

R1402 10 OHM 1/16W

R1404 10 OHM 1/16W

R1406 22K(NC)

ISP_SDA 11

ISP_SCL 11

R1415 0 OHM +-5% 1/16W

R1418 0 OHM +-5% 1/16W

ISP2_SDA 8

ISP1_SDA 9

ISP2_SCL 8

ISP1_SCL 9

R1417 0 OHM +-5% 1/16W

R1416 0 OHM +-5% 1/16W

DDCSDA

HS

VS

DDCSCL

CN1401 VP61-HR-PH2

FB1401 94GPASEALL10G

VGA5V

ZD1401 BZX84-C5V6(NC)

ZD1402 BZX84-C5V6(NC)

ZD1405 BZX84-C5V6(NC)

C1405 100N 16V(NC)

R1421 100R 1/16W 5%(NC) HS_RGB 8,9

R1422 100R 1/16W 5%(NC) VS_RGB 8,9

ZD1403 BZX84-C5V6(NC)

R1419 2K2 1/16W 5%(NC)

ZD1404 BZX84-C5V6(NC)

R1420 2K2 1/16W 5%(NC)

+3V3_STBY

R1430 TUNER PAL+SECAM TAFT-S710D

+3V3_ESD

D1402 BAV99(NC)

D1403 BAV99(NC)

D1404 BAV99(NC)

R C1410 100N(NC)

G C1411 100N(NC)

B C1412 100N(NC)

R1423 94GPASEALL10G

R1424 94GPASEALL10G

R1425 94GPASEALL10G

FB1402 INS19890753

FB1403 INS19890753

FB1404 INS19890753

R1426 47R 1/16W 5% C1406 TUNER RIN+ 8

R1427 47R 1/16W 5% C1407 TUNER GIN+ 8

R1428 47R 1/16W 5% C1408 TUNER BIN+ 8

R1429 470 OHM 1/16W C1409 94ADVB-T-10G SOG 8

CN1401 C3
C1401 A1
C1402 B2
C1403 B2
C1405 D4
C1406 C7
C1407 C7
C1408 C7
C1409 C7
C1410 B5
C1411 B6
C1412 B7
D1401 A2
D1402 B5
D1403 B6
D1404 B7
FB1401 C3
FB1402 C5
FB1403 C5
FB1404 C5
R1401 B2
R1402 B2
R1403 B2
R1404 B2
R1405 B3
R1406 B3
R1407 B2
R1415 C1
R1416 C1
R1417 C1
R1418 C1
R1419 D2
R1420 D3
R1421 D3
R1422 D3
R1423 C4
R1424 C5
R1425 C5
R1426 C6
R1427 C6
R1428 C6
R1429 C6
R1430 A5
R1431 A1
R1432 A1
U1401 B1
ZD1401 D2
ZD1402 D3
ZD1403 D2
ZD1404 D2
ZD1405 D4

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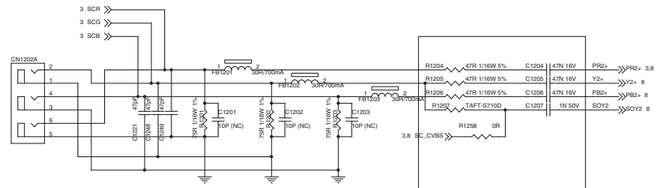
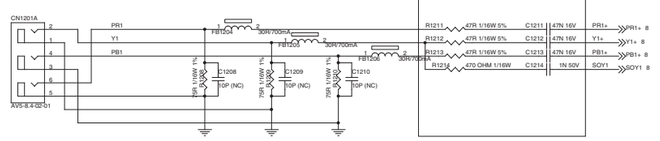
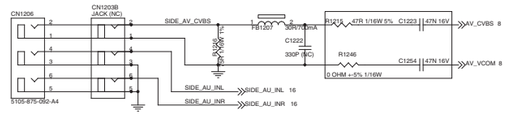
SSB: Video In & CVBS Output, 26" & 32"

B02

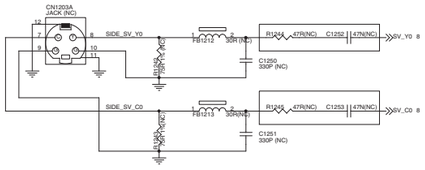


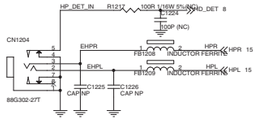
AP/China : C1221 C1248 C1249 n.c.
EU : R1207 n.c.

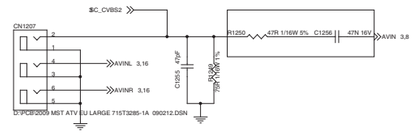


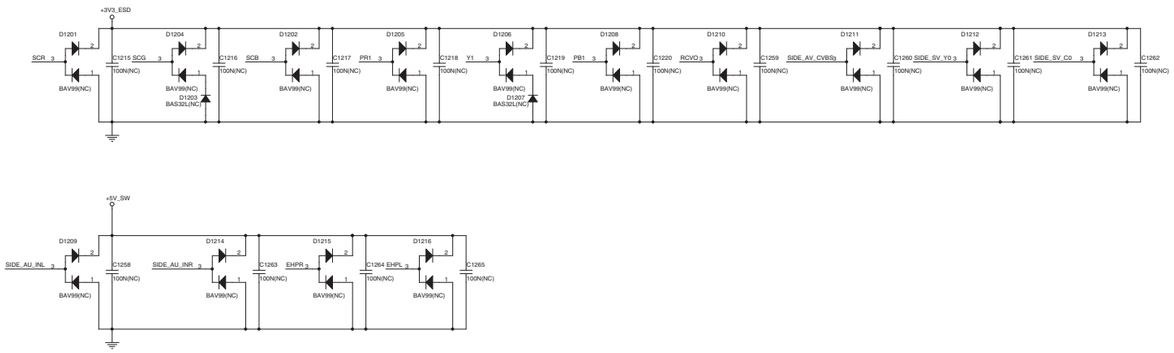


With S-Video: CN1203
Without S-Video: CN1206

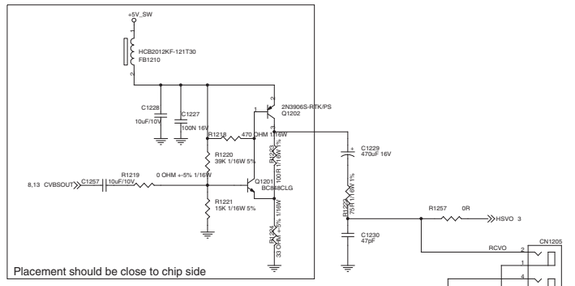


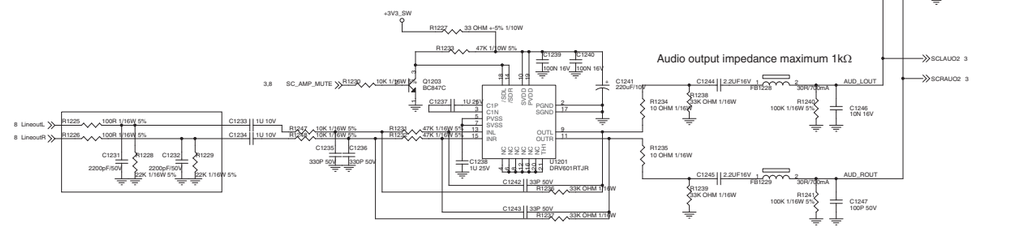






CVBS Out





18250_532_090210.eps
090408

SSB: Scart, 26" & 32"

B03

B03

FULL SCART

HALF SCART

CN1901 B1 CN1902 A5 C1744 B9 C1745 B8 C1901 A2 C1902 B6 C1908 A2 C1909 B7 C1912 C7 C1913 B2
C1915 B4 C1916 B4 C1917 B4 C1918 D4 C1919 E4 C1920 D4 C1921 D4 C1922 D3 C1923 E3 C1924 E3
C1925 E3 C1926 E3 C1927 E2 C1928 E2 C1929 E2 C1930 E2 C1931 E2 C1932 E1 C1948 C2 C1949 C2
C1951 C7 C1952 C8 C1953 C8 C1954 D7 C1955 E5 C1956 D7 C1957 D8 C1958 D9 C1959 C9 C1960 D9
C1961 D10 C1962 E5 C1963 C5 C1964 D10 C1965 D11 C1966 C10 D1905 C6 D1906 C7 D1907 C8 D1908 C8
D1909 D7 D1910 D7 D1911 D8 D1912 D8 D1913 C9 D1914 D9 D1915 D9 D1916 D10 D1917 D11 D1918 C9
FB1709 A9 FB1901 A4 FB1902 D5 FB1903 E5 Q1901 B3 Q1902 B3 Q1903 D3 R1901 A2 R1902 B6 R1905 A2
R1906 B6 R1909 B3 R1910 B4 R1911 B4 R1912 B4 R1913 B4 R1914 B3 R1915 B3 R1916 C2 R1917 C2
R1918 E5 R1919 E5 R1920 E4 R1921 E4 R1922 E4 R1923 E4 R1924 E4 R1925 E4 R1926 D3 R1927 D3
R1928 D3 R1929 E3 R1930 E3 R1931 E2 R1932 E2 R1933 E2 R1934 E1 R1935 E1 R1936 E1 R1937 C5
R1952 D2 R1953 C5 R1967 B6 R1968 B6 U1901 E3 U1902 B8 U1903 B8

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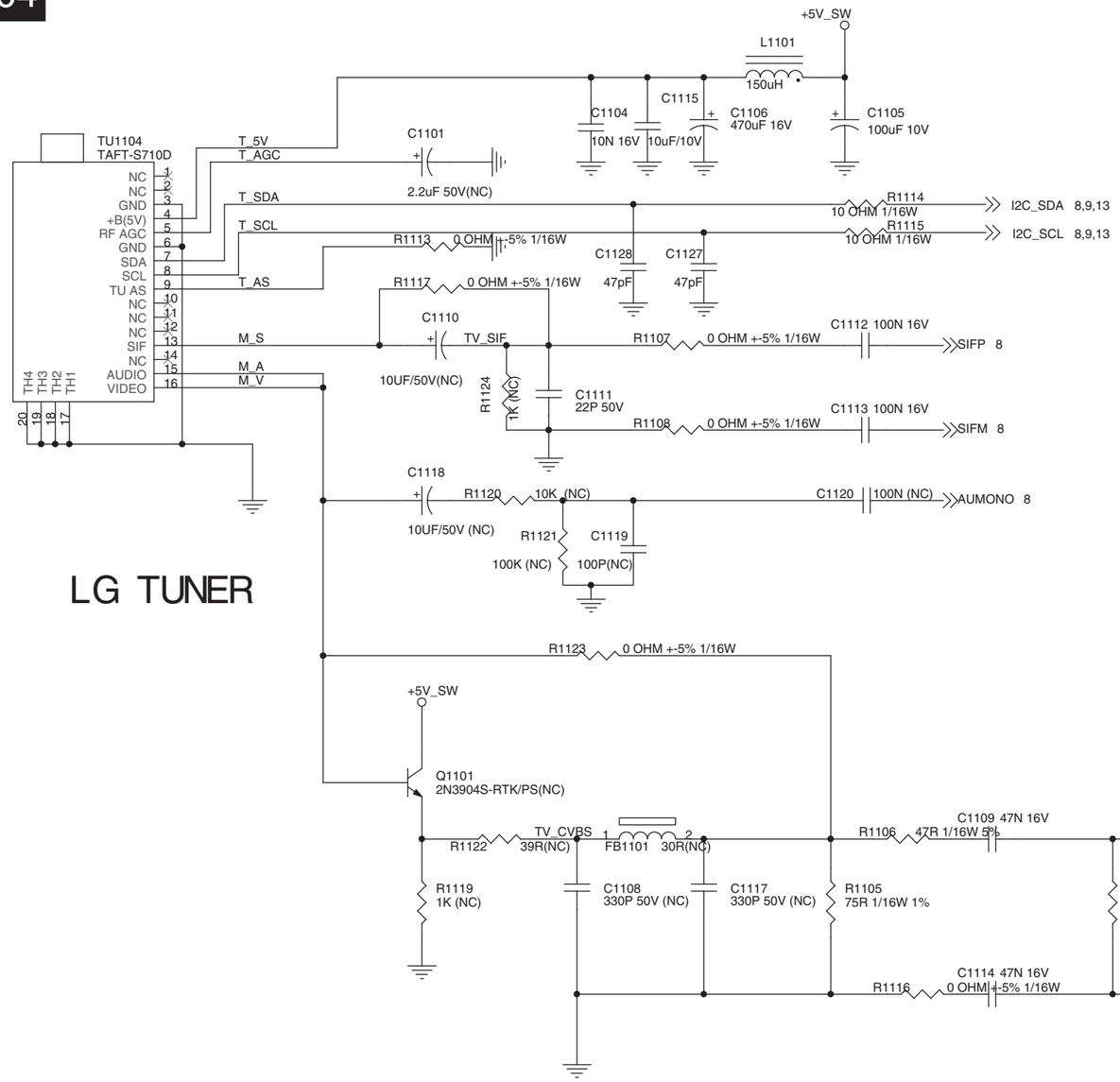
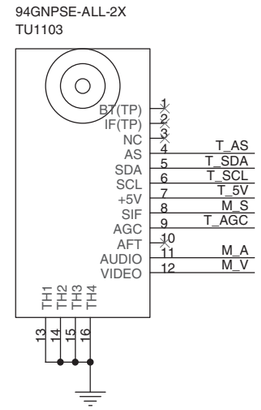
SSB: Tuner, 26" & 32"

B04





XG TUNER

C1101 A2
C1104 A3
C1105 A4
C1106 A3
C1108 D3
C1109 D4
C1110 B2
C1111 B3
C1112 B4
C1113 B4
C1114 D4
C1115 A3
C1117 D3
C1118 B2
C1119 C3
C1120 B4
C1127 B3
C1128 B3
FB1101 D3
L1101 A4
Q1101 C2
R1105 D4
R1106 D4
R1107 B3
R1108 B3
R1109 D5
R1113 B2
R1114 A4
R1115 A4
R1116 D4
R1117 B2
R1119 D2
R1120 B3
R1121 C3
R1122 D3
R1123 C3
R1124 B3
TU1103 A6
TU1104 A1

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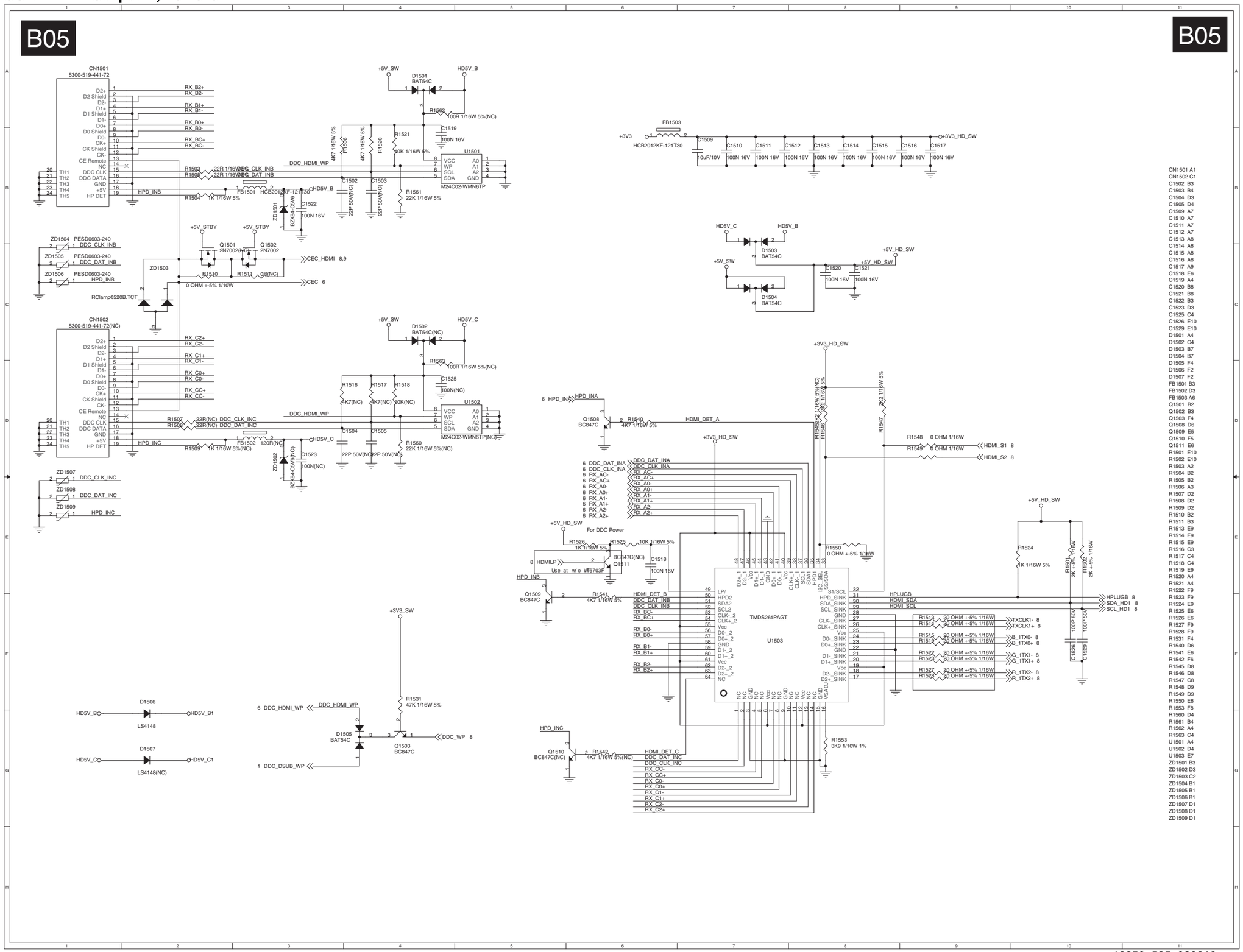
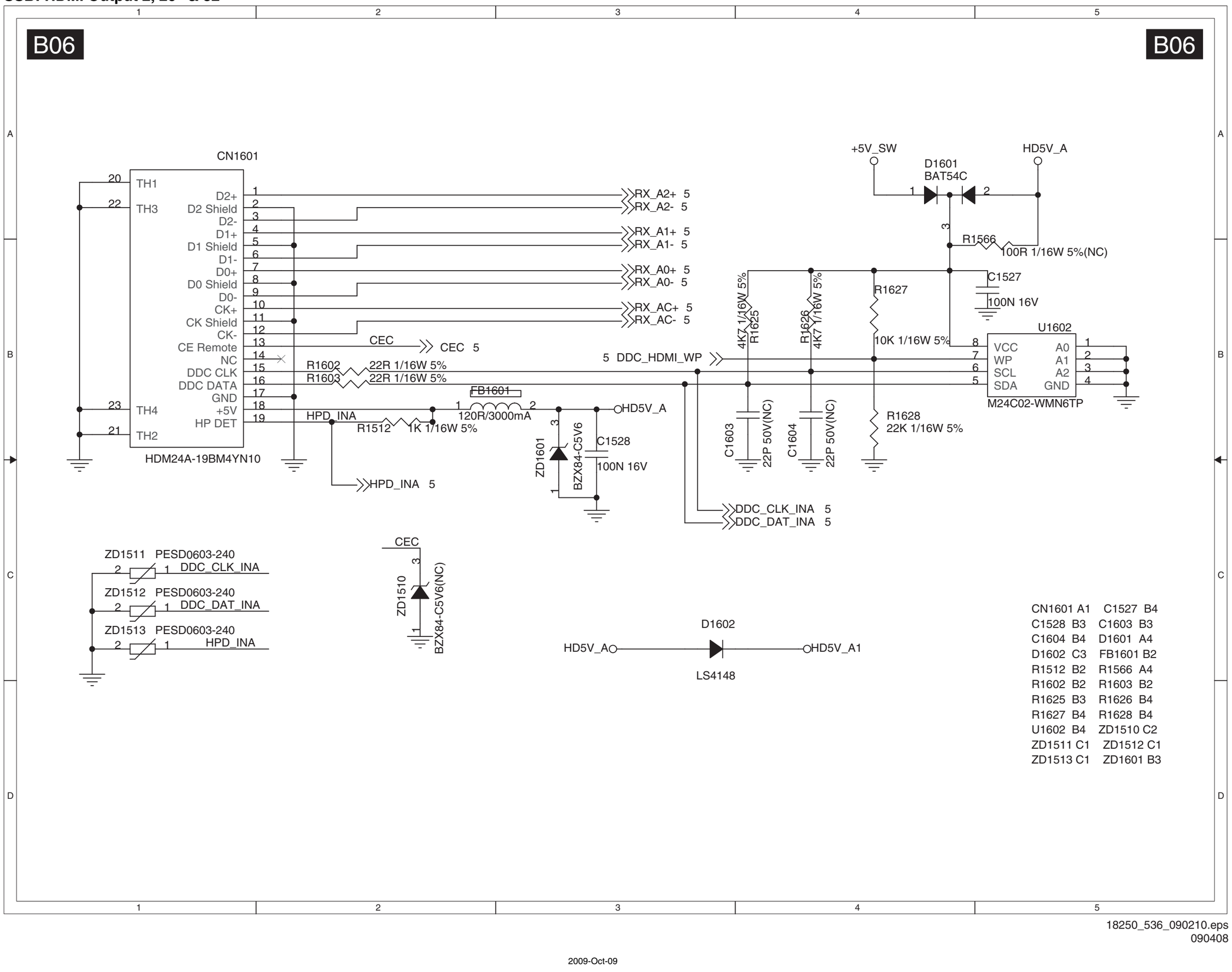
SSB: HDMI Output 1, 26" & 32"

B05



18250_535_090210.eps
090408

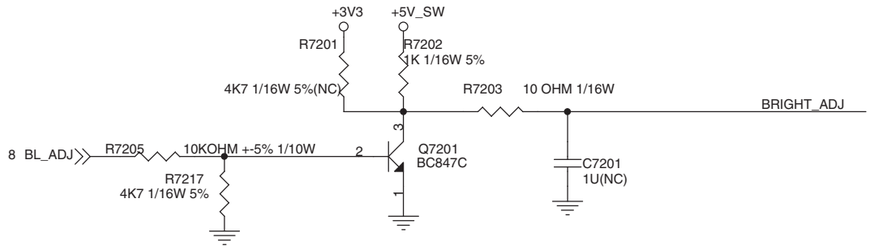
SSB: HDMI Output 2, 26" & 32"

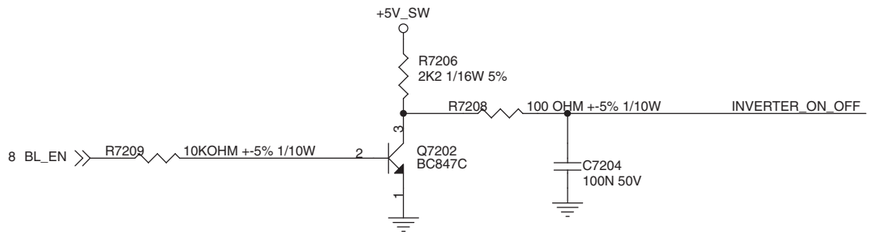


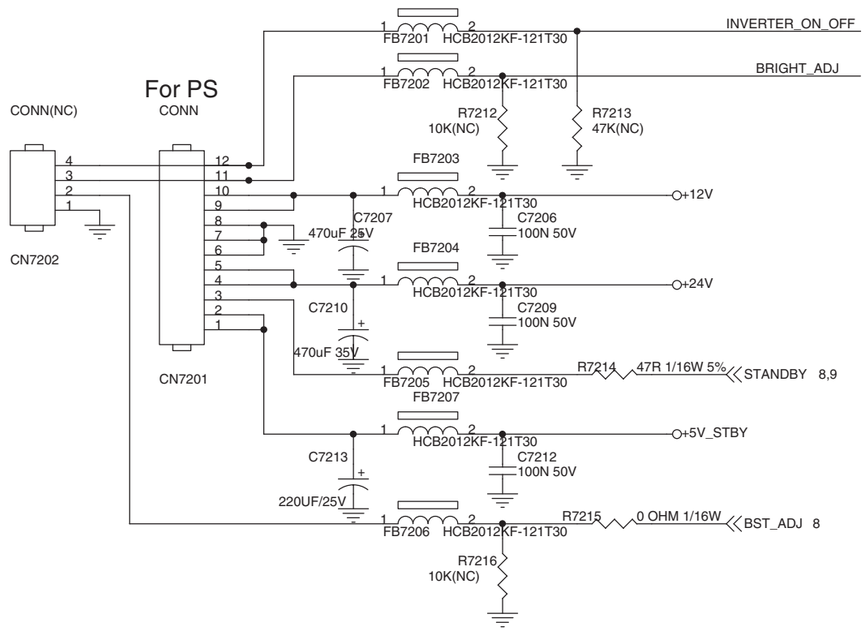
18250_536_090210.eps
090408

SSB: Lips & Inverter I/F, 26" & 32"

B07







CN7201 C3
CN7202 C2
C7201 A4
C7204 B4
C7206 C4
C7207 C4
C7209 D4
C7210 D4
C7212 D4
C7213 D4
FB7201 C4
FB7202 C4
FB7203 C4
FB7204 D4
FB7205 D4
FB7206 D4
FB7207 D4
Q7201 A3
Q7202 B3
R7201 A3
R7202 A3
R7203 A4
R7205 A3
R7206 B3
R7208 B4
R7209 B3
R7212 C4
R7213 C4
R7214 D4
R7215 D4
R7216 E4
R7217 A3

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SSB: Scaler MST6B885GL-1, 26" & 32"

B08

+3.3VSW for AVDDA

+3.3VSW for AVDD_MPLL

+3.3VSW for VDDP

+1.2V for VDDC

+3.3V for AVDD_USB2

+3.3V for AVDD_AU

+3.3V for AVDD_MemPLL

+3.3V for AVDD_VIF1

+3.3V for AVDD_VIF2

+3.3V for AVDD_VIF5

+2.6V for VDDM

MST9A885GL-LF

Without WT6703F: R4262 = 0Ω

POWER ON RESET

ISP & Debug PORT

NVRAM

AP/China: R4226 = 10 kΩ
EU : R4226 = 3.3 kΩ, without WT6703F, R4261 = 0 Ω

AP/China: R4301, R4302 n.c.
EU : R4301 = 47 Ω, R4302 = 10 kΩ

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SSB: WT6703F Standby MCU, 26" & 32"

B09

B09

FB4101
+3V3_STBY
120R/3000mA
C4101
10uF/10V
C4102
100N 16V

+3V3_STBY
R4129 33K OHM 1/16W
R4130 10K 1/16W 5%
R4131 10K 1/16W 5%
R4132 33K OHM 1/16W
R4133 6.8K OHM 1/16W

8,11 KEY1
7,8 STANDBY
8,17 5V_PWR_SW
8,11 RC_IR_3V3
8 CEC_IRQ
1,8 VS_RGB
1,8 HS_RGB
C4105 22P 50V
C4106 100P 50V
8,13 TXD1
8,13 RXD1
8,17 OT_PWR_SW
8,11 LED2_STBY
1 ISP1_SCL
1 ISP1_SDA
4,8,13 I2C_SCL
4,8,13 I2C_SDA

R4121 10K 1/16W 5%
R4122 10K 1/16W 5%
R4123 33K (NC)
R4124 33K OHM 1/16W
R4125 10K(NC)
R4126 10K(NC)
R4127 10K 1/16W 5%
R4128 10K 1/16W 5%
+3V3_STBY

U4101

RESET R4120 47R 1/16W 5% 4
R4119 47R 1/16W 5% 22
R4118 47R 1/16W 5% 21
R4117 47R 1/16W 5% 20
R4116 47R 1/16W 5% 19
HD_CEC R4115 47R 1/16W 5% 12
R4114 47R 1/16W 5% 11
R4113 47R 1/16W 5% 10
R4112 47R 1/16W 5% 9
R4111 47R(NC) 8
R4110 47R 1/16W 5% 7
R4109 22R 1/16W 5% 18
R4108 22R 1/16W 5% 17
R4107 47R 1/16W 5% 16
R4106 47R 1/16W 5% 15
14
13

	NPST	
	GPIOA0/AD0	
	GPIOA1/AD1	
	GPIOA2/AD2	
	GPIOA3/AD3/IR	
	GPIOB2/IRQ0	
	GPIOB3/IRQ1	
	GPIOB4/VIN	
	GPIOB5/HIN	
	GPIOB6/IRQ2/TXD	
	GPIOB7/IRQ3/RXD	
	GPIOA4/SCL3	
	GPIOA5/SDA3	
	GPIOA6/SCL1	
	GPIOA7/SDA1	
	GPIOB0/SCL2	
	GPIOB1/SDA2	
23	VDD	
24	VDD_RTC	
1	32KOSCO	OSCO
2	32KOSCI	OSCI
5	GPIOC1/PWM1	R4102 47R 1/16W 5% PWR_ON_OFF 8,11
6	GPIOC0/PWM0	R4103 47R 1/16W 5% RST_MSPH 8
3	VSS	

WT6703F-SG240WT

OSCO R4101 33R 1/16W 5%
OSCI
C4103 22P 50V
X1401 32.768KHz
C4104 22P 50V

R4104 33K OHM 1/16W
R4105 33K OHM 1/16W
+3V3_STBY +3V3_SW

+3V3_STBY
R4134 27K 1/16W 5%
5,8 CEC_HDMI CEC_HDMI R4140 100R 1/16W 5% HD_CEC
C4110 47pF(NC)

U4102
GND 1
RESET 2
Vcc 3
AP1701FWL(NC)
+3V3_STBY
R4136 100R (NC)
R4137 100K (NC)
C4108 100N 16V (NC)
+3V3_STBY
RESET R4138 100R 1/16W 5% R4139 10K 1/16W 5%
C4109 4.7UF10V

C4101 A4
C4102 A4
C4103 A7
C4104 A7
C4105 B2
C4106 B2
C4108 D7
C4109 D6
C4110 E4
FB4101 A3
R4101 A6
R4102 B5
R4103 B5
R4104 C5
R4105 C6
R4106 C3
R4107 C3
R4108 C3
R4109 C3
R4110 C3
R4111 B3
R4112 B3
R4113 B3
R4114 B3
R4115 B3
R4116 B3
R4117 B3
R4118 B3
R4119 B3
R4120 B3
R4121 C2
R4122 C2
R4123 C2
R4124 C2
R4125 C2
R4126 C2
R4127 C2
R4128 C2
R4129 A2
R4130 A2
R4131 A2
R4132 A2
R4133 A2
R4134 D4
R4136 D6
R4137 D6
R4138 D6
R4139 D7
R4140 D3
U4101 B4
U4102 D7
X1401 A7

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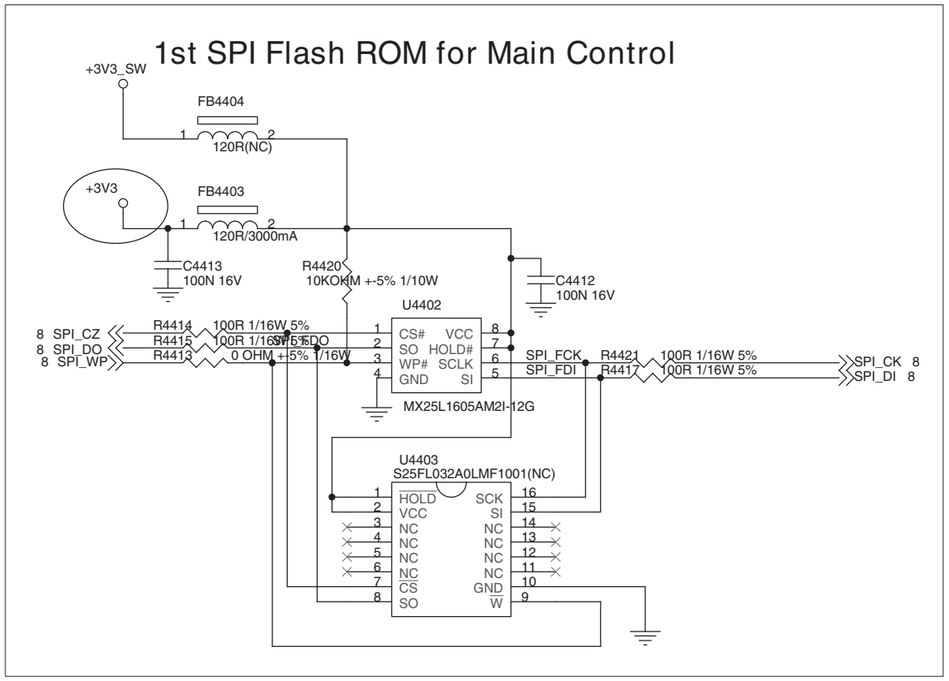
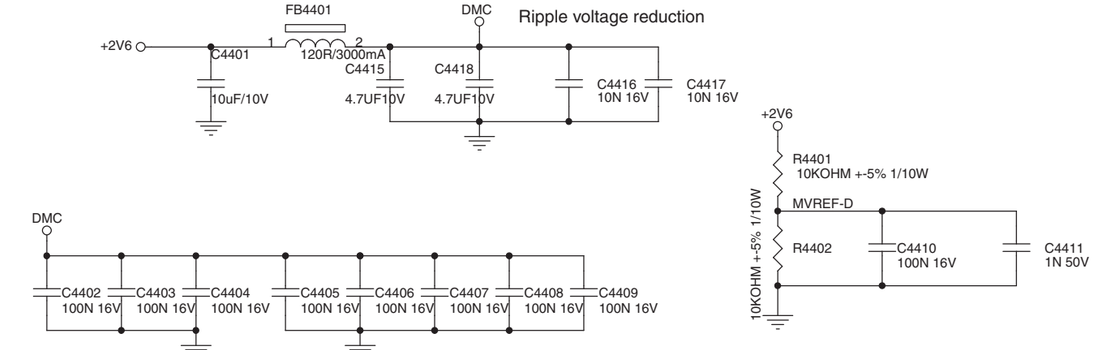
SSB: Flash ROM & Memory, 26" & 32"

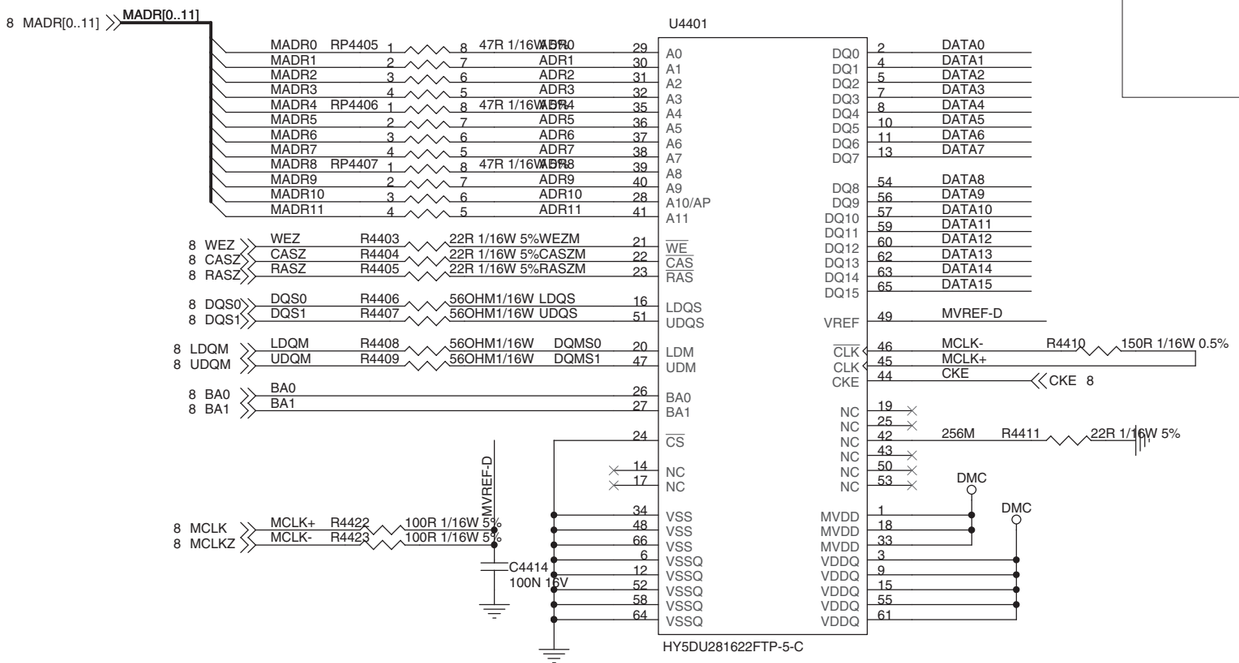
B10

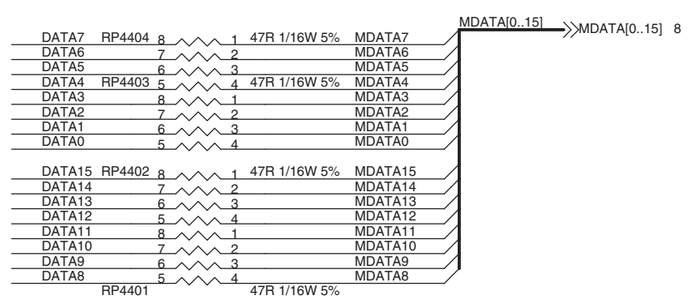
B10

1st SPI Flash ROM for Main Control









C4401 A1 C4402 B1 C4403 B1 C4404 B1 C4405 B2 C4406 B2 C4407 B2 C4408 B2 C4409 B3 C4410 B4
C4411 B4 C4412 B6 C4413 B5 C4414 E2 C4415 A2 C4416 A3 C4417 A3 C4418 A2 FB4401 A2 FB4403 A5
FB4404 A5 RP4401 D6 RP4402 D6 RP4403 D6 RP4404 C6 RP4405 C2 RP4406 C2 RP4407 C2 R4401 B3 R4402 B3
R4403 C2 R4404 C2 R4405 D2 R4406 D2 R4407 D2 R4408 D2 R4409 D2 R4410 D4 R4411 D4 R4413 B5
R4414 B5 R4415 B5 R4417 B7 R4420 B6 R4421 B7 R4422 D2 R4423 D2 U4401 C3 U4402 B6 U4403 B6

DDR 2M × 16 bit × 4 Banks

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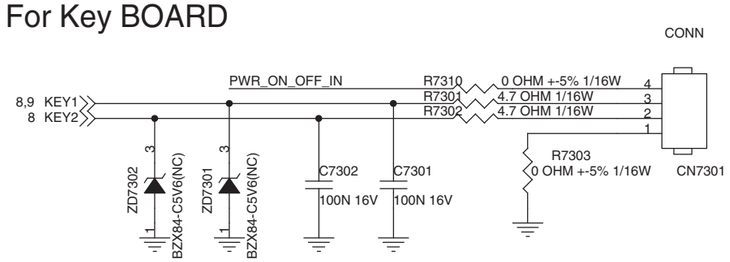
SSB: Key, IR, & Compair I/F, 26" & 32"

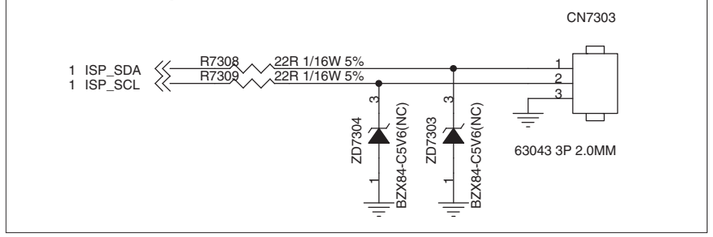
B11

B11

For Key BOARD

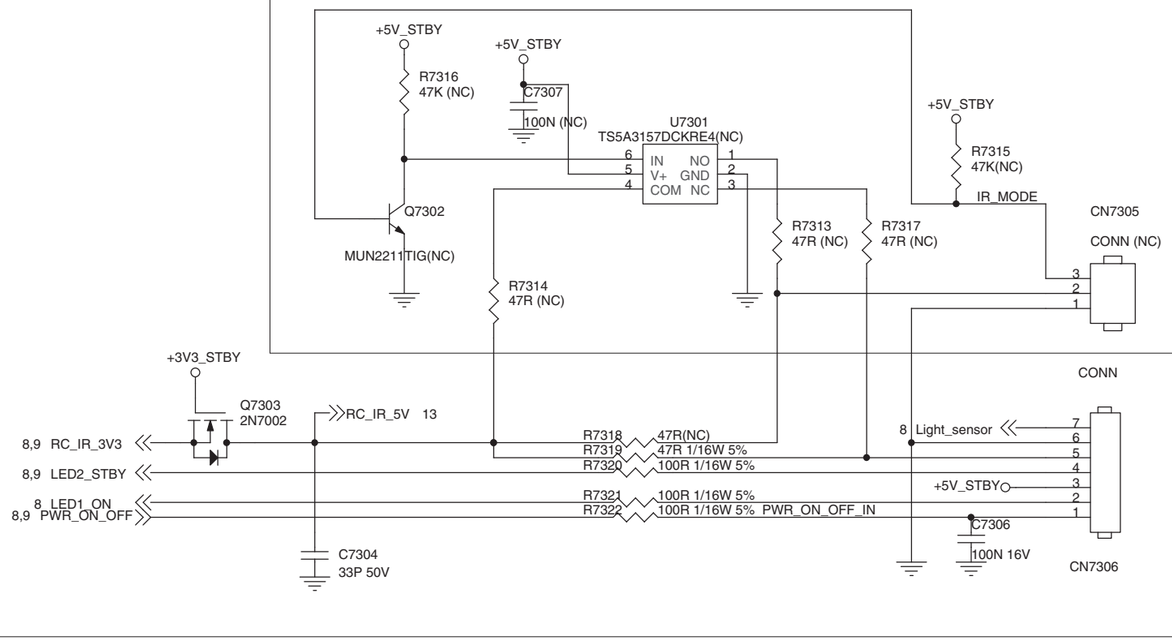


For Compair I/F



For IR BOARD

IR IN/OUT I/F for Serial Plug (ITV Level 2)



CN7301 A3
CN7303 A6
CN7305 C5
CN7306 D5
C7301 A2
C7302 A2
C7304 D2
C7306 D4
C7307 C3
Q7302 C2
Q7303 D2
R7301 A2
R7302 A2
R7303 A3
R7308 A5
R7309 A5
R7310 A2
R7313 C4
R7314 C3
R7315 C4
R7316 B2
R7317 C4
R7318 D3
R7319 D3
R7320 D3
R7321 D3
R7322 D3
U7301 C3
ZD7301 A2
ZD7302 A1
ZD7303 A5
ZD7304 A5

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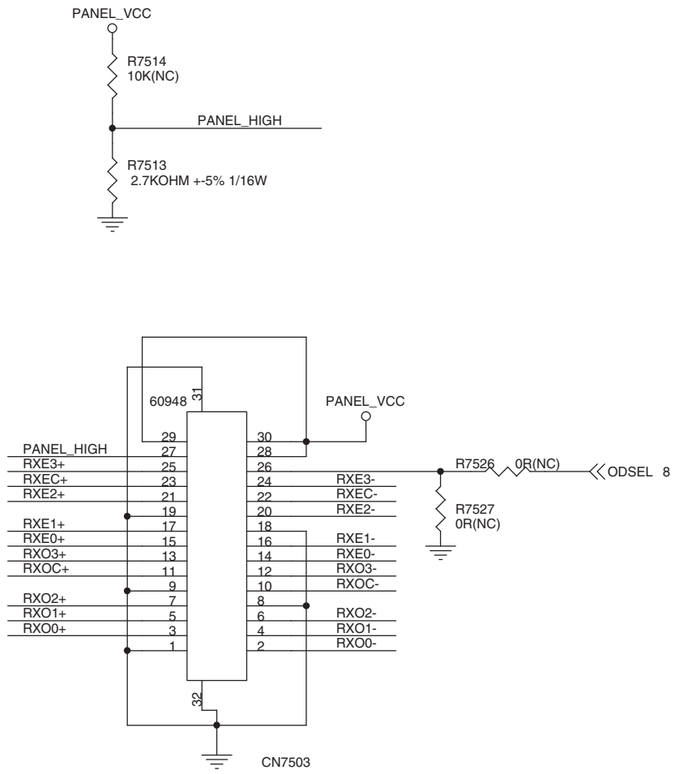
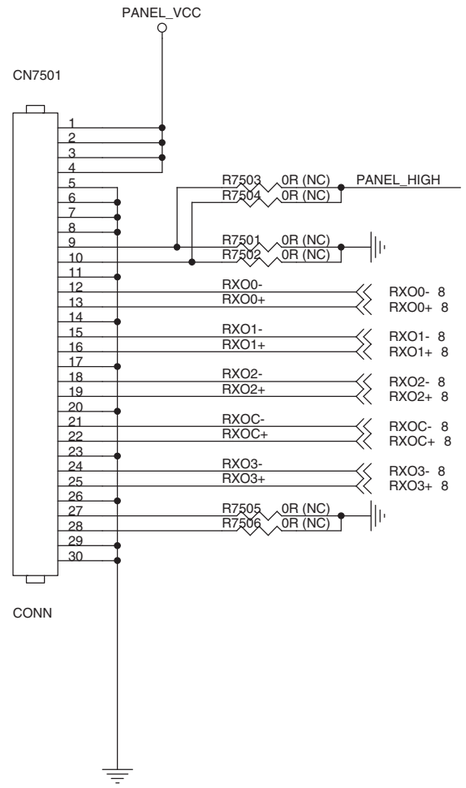
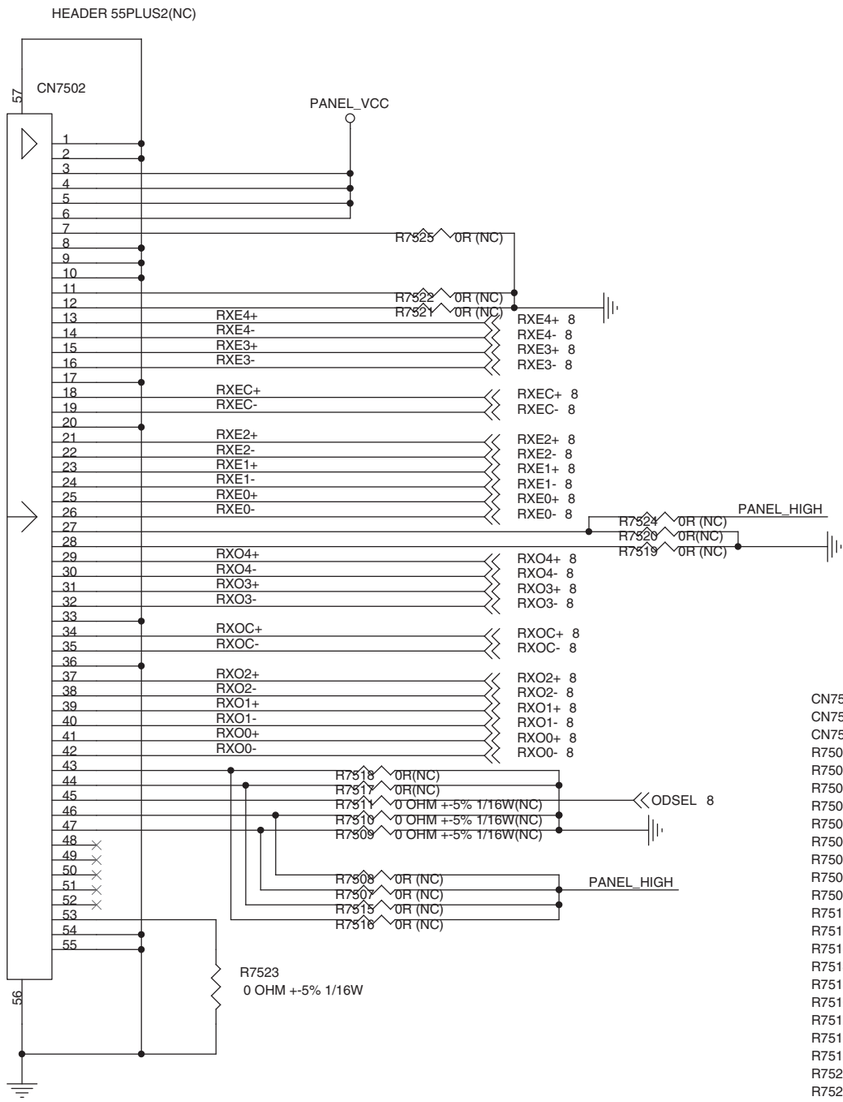
SSB: Panel I/F, 26" & 32"

B12





LVDS/ FFC Connect or Sel ect		
	32"	26"
CN7503	X	V
CN7501	V	X



CN7501 B3
CN7502 A5
CN7503 B1
R7501 B4
R7502 B4
R7503 B4
R7504 B4
R7505 C4
R7506 C4
R7507 D6
R7508 D6
R7509 C6
R7510 C6
R7511 C6
R7513 B1
R7514 A1
R7515 D6
R7516 D6
R7517 C6
R7518 C6
R7519 C7
R7520 B7
R7521 B6
R7522 B6
R7523 D6
R7524 B7
R7525 A6
R7526 C2
R7527 C2

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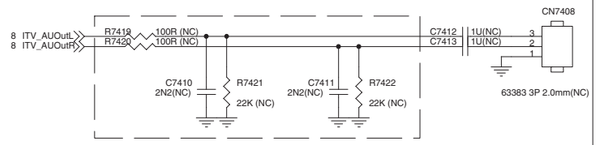
SSB: iTV I/F and AOC Hotel, 26" & 32"

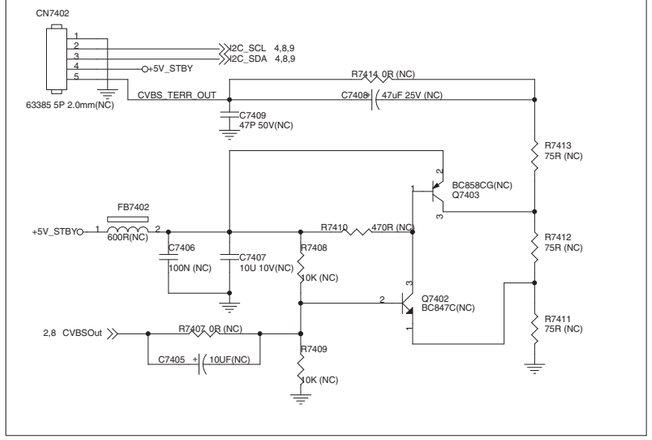
B13

B13

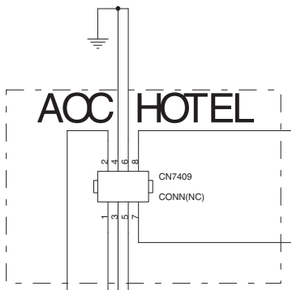
BATHROOM AUDIO IN I/F (ITV Level 2)



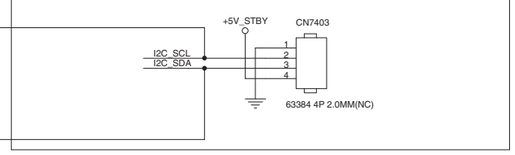
I-BOARD SYSTEM I/F (ITV Level 2)



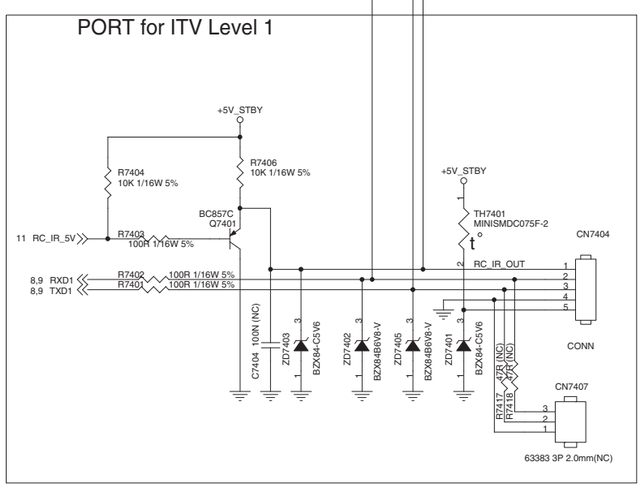
AOC HOTEL



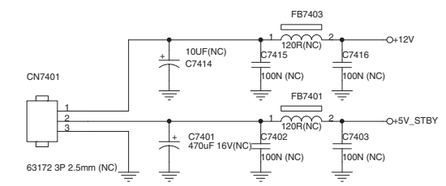
LCD CLOCK I/F (ITV Level 2)



PORT for ITV Level 1



I-BOARD (ITV Level 2)



CN7401 F6
CN7402 A5
CN7403 D6
CN7404 G4
CN7407 H4
CN7408 B4
CN7409 E3
C7401 F6
C7402 F7
C7403 F7
C7404 G2
C7405 C5
C7406 B5
C7407 B6
C7408 B6
C7409 B6
C7410 C2
C7411 C3
C7412 B3
C7413 B3
C7414 F6
C7415 F7
C7416 F7
FB7401 F7
FB7402 B5
FB7403 F7
Q7401 G2
Q7402 C6
Q7403 B7
R7401 G2
R7402 G2
R7403 G2
R7404 F1
R7406 F2
R7407 C5
R7408 B6
R7409 C6
R7410 B6
R7411 C7
R7412 B7
R7413 B7
R7414 B6
R7417 G4
R7418 G4
R7419 B2
R7420 B2
R7421 C2
R7422 C3
TH7401 G3
ZD7401 G3
ZD7402 G3
ZD7403 G2
ZD7405 G3

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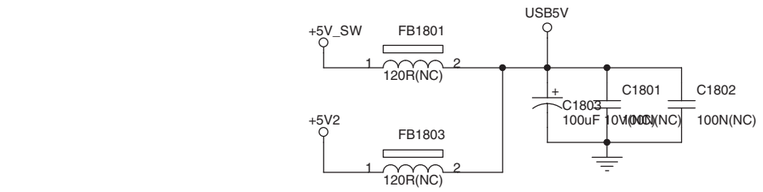
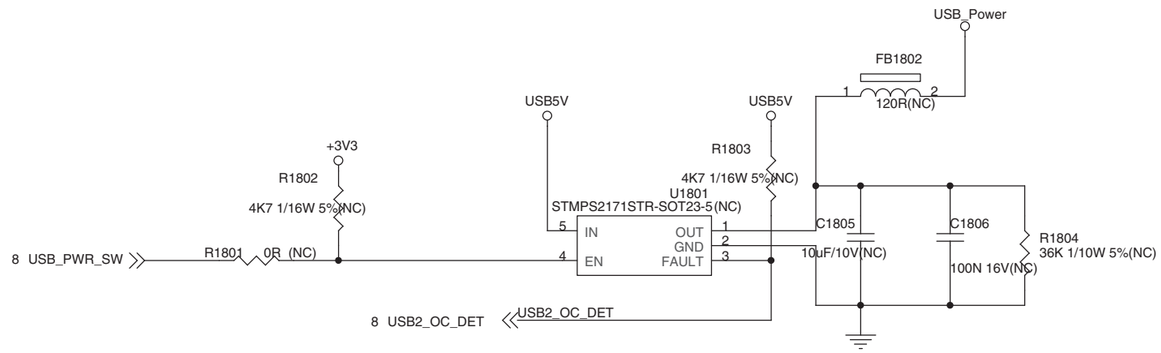
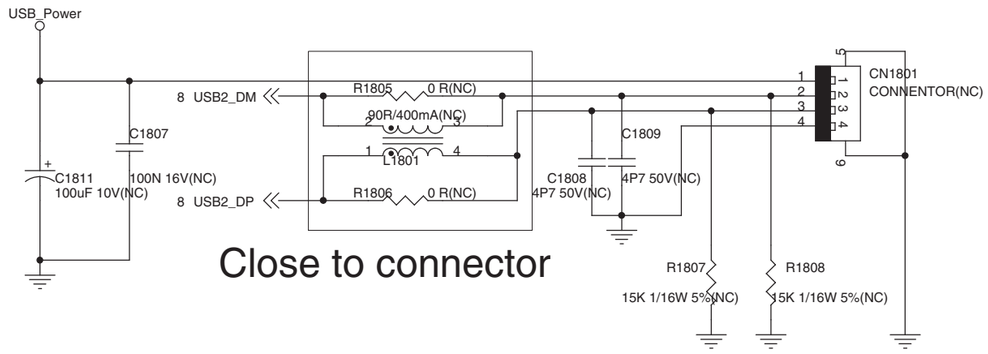
090408

SSB: USB, 26" & 32"

B14







CN1801 D5
C1801 A4
C1802 A4
C1803 A4
C1805 C5
C1806 C5
C1807 D3
C1808 D4
C1809 D5
C1811 D3
FB1801 A3
FB1802 B5
FB1803 A3
L1801 D4
R1801 C2
R1802 B3
R1803 B4
R1804 C5
R1805 D4
R1806 D4
R1807 D5
R1808 D5
U1801 B4

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090408

SSB: Audio amplifier, 26" & 32"

B15

B15

+24V
+5V_SW
+24V_SW
+3V3_SW
+3V3_SW
8 24V_PWR_SW
8 AUOutL
8 AUOutR
8 HP_MUTE
8 AMP_STBY
2,8 AMP_MUTE
2,8 AMP_MUTE
R6103 56KOHM +-5% 1/10W
R6105 470KOHM +-5% 1/10W
R6104 18KOHM +-5% 1/10W
R6101 47K 1/10W 5%
R6102 1KOHM +-5% 1/10W
Q6101 MUN2211T1G
Q6102 BC847C
Q6103 SI4835DDY
C6101 470N 50V
C6102 100N 50V
FB6102 120R(NC)
R6106 10KOHM +-5% 1/10W
C6103 10UF/50V
C6148 100N 50V
D6101 S3B
R6148 33 OHM +-5% 1/10W
R6147 47K 1/10W 5%
R6146 10K 1/16W 5%
Q6107 BC847C
C6139 1U 25V
C6141 100N 16V
C6142 100N 16V
C6143 220uF/10V
U6103 DRV601RTJR
C6140 1U 25V
C6144 33P 50V
R6149 33K OHM 1/16W
C6145 33P 50V
R6150 33K OHM 1/16W
R6151 10 OHM 1/16W
R6152 10 OHM 1/16W
HPL 2
HPR 2
R6131 100R 1/16W 5%
R6132 100R 1/16W 5%
C6134 1U 25V
C6135 1U 25V
R6142 10K 1/16W 5%
R6143 10K 1/16W 5%
R6144 47K 1/16W 5%
R6145 47K 1/16W 5%
C6132 10N 16V
R6133 C6133 22K 1/16W 5% 10N 16V
R6134 22K 1/16W 5%
C6137 330P 50V
C6138 330P 50V

U6102 : /SD select		
	+24V_SW	+5V_SW
FB6104	X	V
FB6105	V	X
R6117	1K5	100R
R6119	47K	1K8
ZD6101	BZX84- B16	BZX84C3V6

FB6104 120R/600mA
FB6105 120R/6000mA
R6112 33 OHM +-5% 1/10W
R6111 47K 1/10W 5%
R6117 100OHM +-5% 1/10W
R6119 47K +-5% 1/10W
ZD6101 BZX84C3V6
Q6104 BC847C
Q6105 BC847C
Q6106 BC847C
R6118 470 OHM +-5% 1/10W
R6120 10 OHM 1/16W
C6121 470uF 35V
C6122 470uF 35V
C6123 100N 50V
C6124 100N 50V
C6110 1U 25V
C6111 1U 25V
C6112 33P 50V
R6113 33K OHM 1/16W
C6113 33P 50V
R6114 33K OHM 1/16W
C6114 100N 16V
C6115 100N 16V
C6116 220uF/10V
R6108 10K 1/16W 5%
R6109 100R 1/16W 5%
C6106 2U2 16V
C6107 2U2 16V
R6136 10K 1/16W 5%
R6137 47K 1/16W 5%
R6138 10K 1/16W 5%
R6140 47K 1/16W 5%
C6104 10N 16V
R6137 C6105 22K 1/16W 5% 10N 16V
R6138 22K 1/16W 5%
C6108 330P 50V
C6109 330P 50V
U6101 DRV601RTJR
R6115 10 OHM 1/16W
R6116 10 OHM 1/16W
C6117 1UF 16V
C6118 1UF 16V
R6121 10 OHM 1/16W
C6119 1U 25V
C6120 1U 25V
U6102 TPA3124D2PHPR
C6125 220N 25V
C6126 220N 25V
C6127
C6128 100N 50V
C6129 47UF 50V
C6130
C6131 470N(NC)
C6136 470N(NC)
C6149 470N 50V
C6150 470N 50V
L6101 35uH
L6102 35uH
LOUT+
ROUT+
R6122 2.2KOHM +-5% 1/4W
R6123 2.2KOHM +-5% 1/4W
R6129 2.2KOHM +-5% 1/4W
R6130 2.2KOHM +-5% 1/4W
R6124 10K(NC)
R6125 10K(NC)
R6126 0R(NC)
R6127 0R(NC)
AMP_GAIN0 8
AMP_GAIN1 8
CN6101
CONN
CN6102
CONN(NC)
R

reduce POP Noise

CN6101 E10
CN6102 G6
C6101 B2
C6102 B3
C6103 B4
C6104 F2
C6105 F2
C6106 F3
C6107 F3
C6108 F3
C6109 F3
C6110 E4
C6111 F4
C6112 F5
C6113 F5
C6114 E5
C6115 E5
C6116 E5
C6117 F6
C6118 F6
C6119 F7
C6120 F7
C6121 E6
C6122 E7
C6123 E7
C6124 E8
C6125 F8
C6126 F8
C6127 E9
C6128 F9
C6129 E9
C6130 G9
C6131 G9
C6132 C5
C6133 C6
C6134 B6
C6135 C6
C6136 E9
C6137 C7
C6138 C7
C6139 B8
C6140 C8
C6141 B8
C6142 B9
C6143 B9
C6144 C8
C6145 C8
C6148 B4
C6149 G9
C6150 E9
C6151 E7
D6101 B4
FB6102 B4
FB6104 D6
FB6105 D6
L6101 E8
L6102 G8
Q6101 B2
Q6102 B2
Q6103 B3
Q6104 E4
Q6105 E6
Q6106 E6
Q6107 B7
R6101 B2
R6102 B2
R6103 B2
R6104 B2
R6105 B2
R6106 B3
R6108 F1
R6109 F1
R6110 E3
R6111 E4
R6112 E5
R6113 F5
R6114 F5
R6115 F6
R6116 F6
R6117 E6
R6118 E6
R6119 E6
R6120 E7
R6121 F7
R6122 E9
R6123 E9
R6124 F9
R6125 F9
R6126 F9
R6127 F9
R6129 F9
R6130 F9
R6131 B5
R6132 C5
R6133 C5
R6134 C6
R6135 F3
R6136 F3
R6137 F2
R6138 F2
R6139 F4
R6140 F4
R6142 B7
R6143 C7
R6144 B7
R6145 C7
R6146 B7
R6147 B7
R6148 B9
R6149 C9
R6150 C9
R6151 B9
R6152 C9
U6101 E4
U6102 E7
U6103 B8
ZD6101 E6

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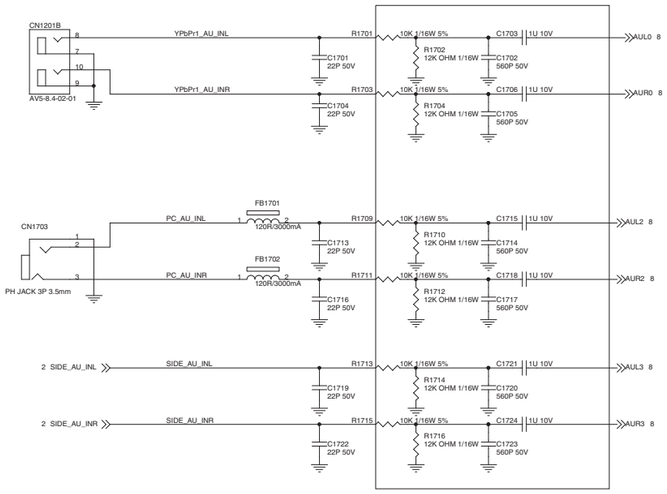
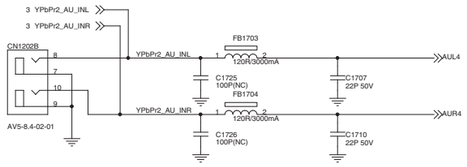
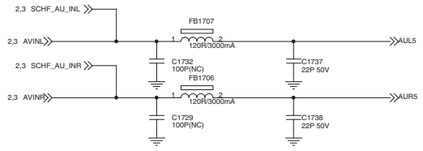
SSB: Audio I/F and S/PDIF Out, 26" & 32"

B16



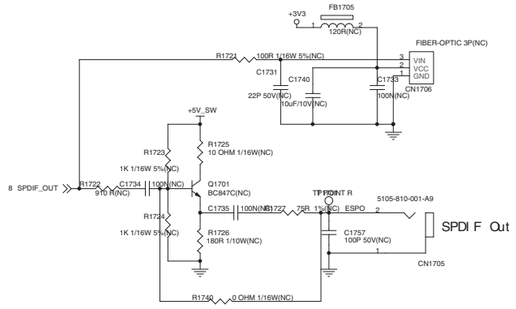
AP/China: C1725, C1726 n.c.
EU : C1725 = 100 pF, C1726 = 100 pF, CN1202 n.c.

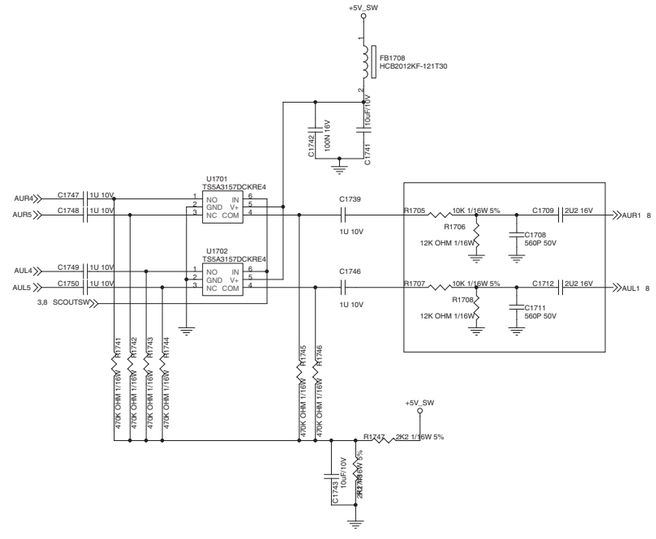


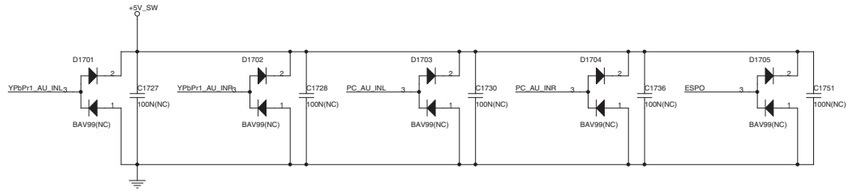


AP/China: C1732, C1729 n.c.
EU : C1732 = 100 pF, C1729 = 100 pF, CN1207 n.c.

S/PDIF Out







N1201B A1
N1202B D1
CN1703 B1
CN1705 C8
CN1706 B8
C1701 A3
C1702 A4
C1703 A4
C1704 B3
C1705 B4
C1706 A4
C1707 E3
C1708 E8
C1709 E8
C1710 E3
C1711 F8
C1712 F8
C1713 B3
C1714 B4
C1715 B4
C1716 C3
C1717 C4
C1718 B4
C1719 C3
C1720 C4
C1721 C4
C1722 C3
C1723 C4
C1724 C4
C1725 E2
C1726 E2
C1727 G3
C1728 G4
C1729 F2
C1730 G5
C1731 B7
C1732 F2
C1733 B8
C1734 C6
C1735 C7
C1736 G5
C1737 F3
C1738 F3
C1739 E7
C1740 B7
C1741 E7
C1742 E7
C1743 G7
C1746 F7
C1747 E6
C1748 E6
C1749 E6
C1750 F6
C1751 G6
C1757 C7
D1701 G2
D1702 G3
D1703 G4
D1704 G5
D1705 G6
FB1701 B2
FB1702 B2
FB1703 D2
FB1704 E2
FB1705 B7
FB1706 F2
FB1707 E2
FB1708 D7
Q1701 C7
R1701 A3
R1702 A3
R1703 A3
R1704 B3
R1705 E8
R1706 E8
R1707 F8
R1708 F8
R1709 B3
R1710 B3
R1711 B3
R1712 C3
R1713 C3
R1714 C3
R1715 C3
R1716 C3
R1721 B7
R1722 C6
R1723 B7
R1724 C7
R1725 B7
R1726 C7
R1727 C7
R1740 C7
R1741 F6
R1742 F6
R1743 F6
R1744 F6
R1745 F7
R1746 F7
R1747 F7
R1748 F7
TP1701 C7
U1701 E6
U1702 E6

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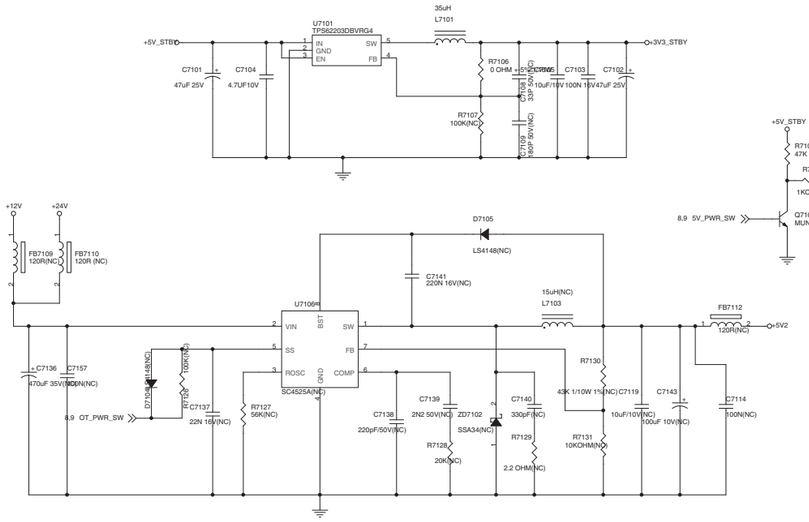
SSB: DC-DC Power, 26" & 32"

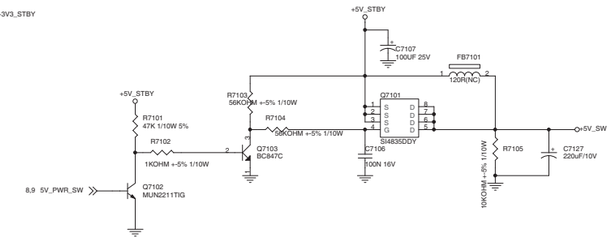
B 17

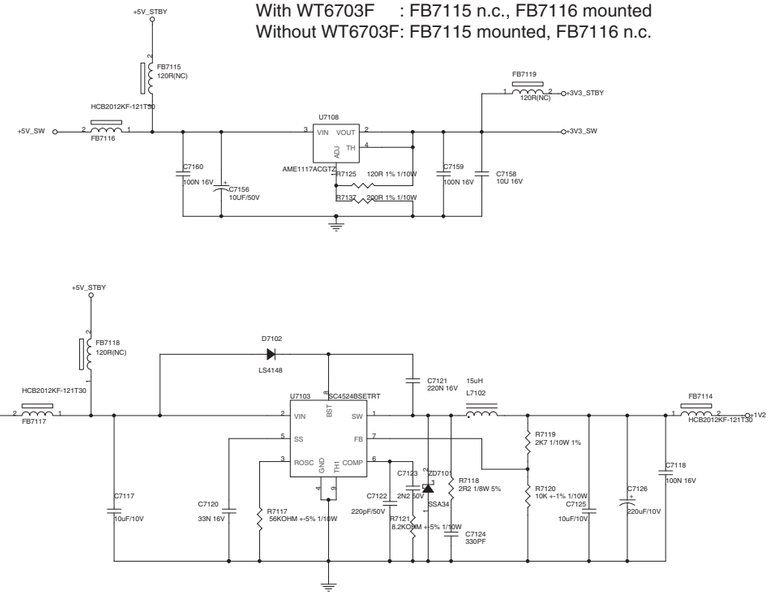
B17

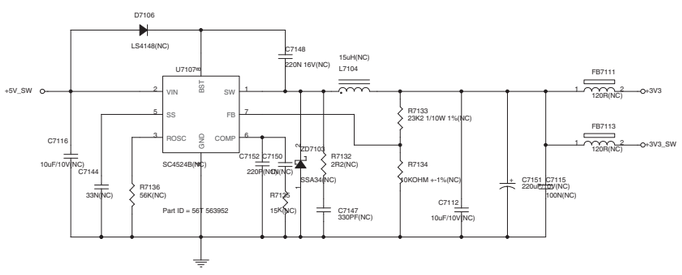
When using TPS6220 Adj, then R7106 = 560 kΩ, R7107 = 100 kΩ, C7108 = 33 pF, C7109 = 180 pF

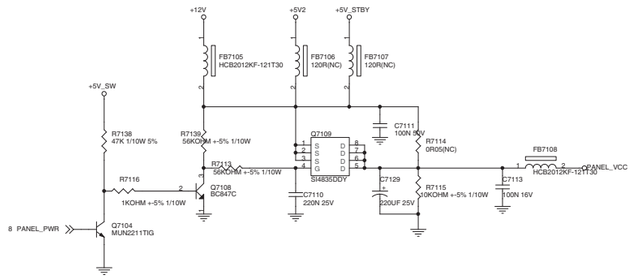
With WT6703F : FB7115 n.c., FB7116 mounted
Without WT6703F: FB7115 mounted, FB7116 n.c.

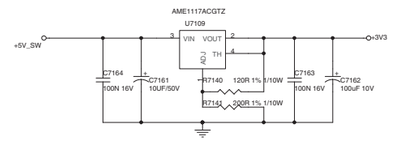


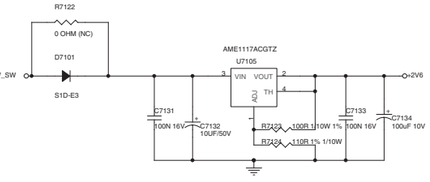












C7101 B2 C7102 B4 C7103 B4 C7104 B2 C7105 B4
C7106 B6 C7107 B6 C7108 B3 C7109 B3 C7110 F6
C7111 E7 C7112 F3 C7113 F7 C7114 D4 C7115 F4
C7116 F1 C7117 D8 C7118 C11 C7119 D4 C7120 D8
C7121 C9 C7122 D9 C7123 C9 C7124 D10 C7125 D10
C7126 C10 C7127 B7 C7129 F7 C7131 F9 C7132 F9
C7133 F10 C7134 F10 C7136 C1 C7137 D2 C7138 D3
C7139 D3 C7140 D3 C7141 C3 C7143 C4 C7144 F1
C7147 F2 C7148 E2 C7150 F2 C7151 F3 C7152 F2
C7156 B8 C7157 C1 C7158 B10 C7159 B10 C7160 B8
C7161 E9 C7162 E10 C7163 E10 C7164 E9 D7101 F8
D7102 C9 D7104 C1 D7105 C3 D7106 E1 FB7101 B6
FB7105 E6 FB7106 E6 FB7107 E6 FB7108 E7 FB7109 C1
FB7110 C1 FB7111 E4 FB7112 C4 FB7113 F4 FB7114 C11
FB7115 A8 FB7116 B8 FB7117 C7 FB7118 C8 FB7119 A10
L7101 B3 L7102 C10 L7103 C4 L7104 E2 Q7101 B6
Q7102 C5 Q7103 B5 Q7104 F5 Q7108 F6 Q7109 E6
R7101 B5 R7102 B5 R7103 B5 R7104 B5 R7105 B7
R7106 B3 R7107 B3 R7113 E6 R7114 E7 R7115 F7
R7116 F5 R7117 D9 R7118 C10 R7119 C10 R7120 C10
R7121 D9 R7122 F8 R7123 F9 R7124 G9 R7125 B9
R7126 C2 R7127 D2 R7128 D3 R7129 D3 R7130 C4
R7131 D4 R7132 F2 R7133 F3 R7134 F3 R7135 F2
R7136 F1 R7137 B9 R7138 E5 R7139 E6 R7140 E9
R7141 E9 U7101 B2 U7103 C9 U7105 F9 U7106 C2
U7107 E2 U7108 B9 U7109 E9 ZD7101 C9 ZD7102 D3
ZD7103 F2

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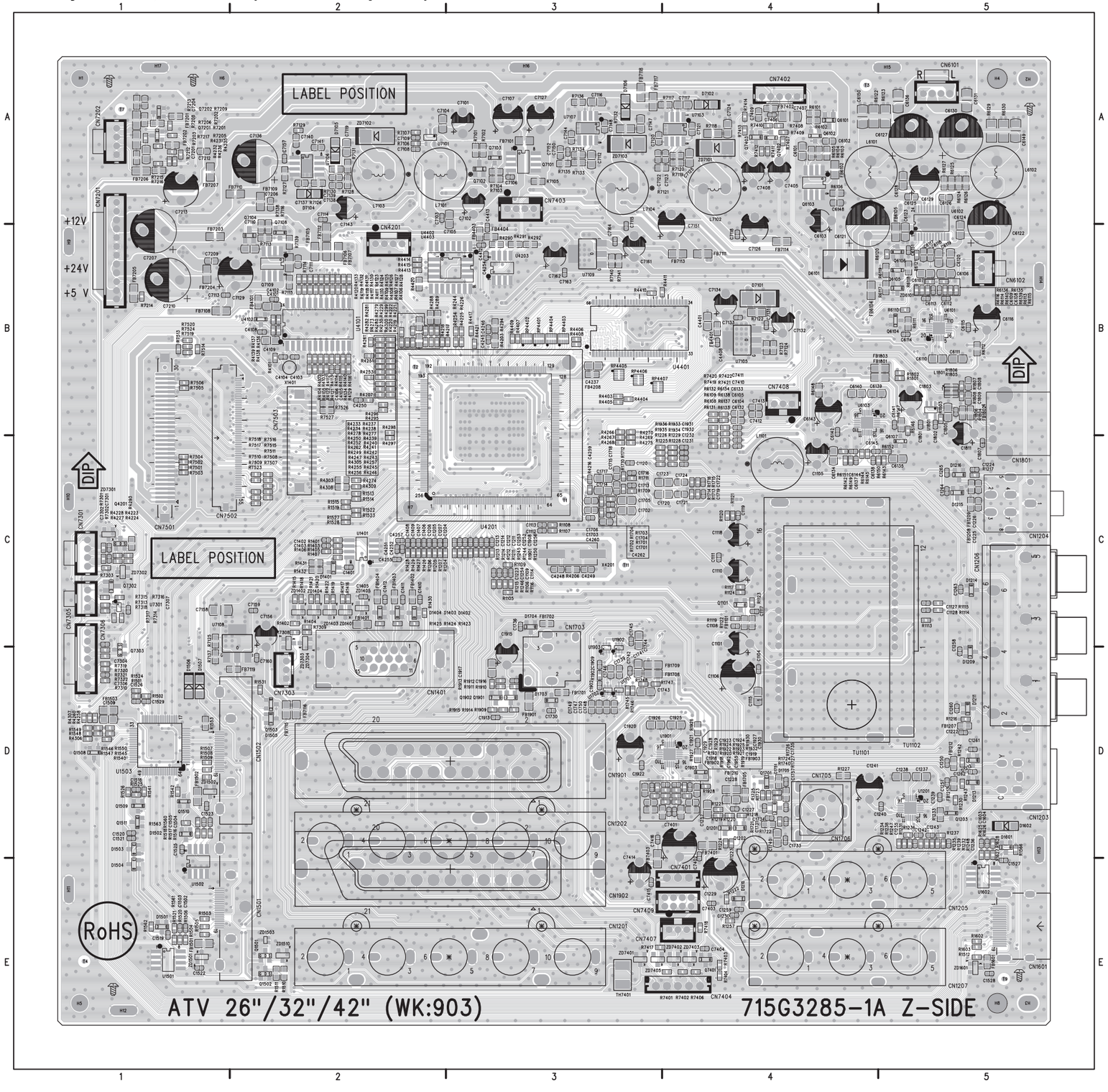
Layout SSB, 26" & 32" (Overview Top Side)



C1101 C4 C1721 C4 C6122 A5 C7410 B4 FB6102 A5 R1222 E4 R1703 C4 R4220 B3 R6117 A5 R7407 A4
C1104 C4 C1722 B4 C6123 A5 C7411 B4 FB6104 A5 R1223 D4 R1704 C3 R4221 B3 R6118 A5 R7408 A4
C1105 B5 C1723 B4 C6124 A5 C7412 B4 FB6105 A5 R1224 D4 R1709 C4 R4222 B3 R6119 A5 R7409 A4
C1106 C4 C1724 B4 C6125 A5 C7413 B4 FB7101 A3 R1225 B4 R1710 C4 R4223 C1 R6120 A5 R7410 A4
C1108 C4 C1730 D3 C6126 A5 C7414 D4 FB7105 A2 R1226 B4 R1711 B4 R4224 C1 R6121 A5 R7411 A4
C1109 C3 C1731 D4 C6127 A5 C7415 E4 FB7106 A2 R1227 D5 R1712 B4 R4225 B3 R6122 A5 R7412 A4
C1110 C4 C1733 D4 C6128 A5 C7416 D4 FB7107 A2 R1228 B4 R1713 C4 R4226 B3 R6123 A5 R7413 A4
C1111 C4 C1734 D4 C6129 A5 CN1201 E3 FB7108 B2 R1229 B4 R1714 C4 R4227 C1 R6124 A5 R7414 A4
C1112 C3 C1735 D4 C6130 A5 CN1202 D3 FB7109 A2 R1230 D5 R1715 B4 R4228 C1 R6125 A5 R7417 E4
C1113 C3 C1736 C3 C6131 A5 CN1203 C5 FB7110 A2 R1231 D5 R1716 B4 R4229 B3 R6126 A5 R7418 E4
C1114 C3 C1739 C4 C6132 B4 CN1204 C5 FB7111 A4 R1232 D5 R1721 D4 R4230 B3 R6127 A5 R7419 B4
C1115 D4 C1740 D4 C6133 B4 CN1205 E5 FB7112 A2 R1233 D5 R1722 D4 R4231 A1 R6129 A5 R7420 B4
C1117 C4 C1741 C4 C6134 B5 CN1206 C5 FB7113 A4 R1234 D5 R1723 D4 R4232 A1 R6130 A5 R7421 B4
C1118 C4 C1742 C4 C6135 B5 CN1207 E5 FB7114 A4 R1235 D5 R1724 D4 R4233 B2 R6131 B4 R7422 B4
C1119 C4 C1743 D4 C6136 A5 CN1401 C2 FB7115 D2 R1236 D5 R1725 D4 R4234 B2 R6132 B4 R7501 B1
C1120 B4 C1744 C4 C6137 B5 CN1501 E2 FB7116 D2 R1237 D5 R1726 D4 R4235 A1 R6133 B4 R7502 B1
C1127 C5 C1745 C4 C6138 B5 CN1502 D2 FB7117 A4 R1238 D5 R1727 D4 R4236 A1 R6134 B4 R7503 B1
C1128 C5 C1746 C4 C6139 B5 CN1601 E5 FB7118 A4 R1239 D5 R1740 D4 R4237 B2 R6135 A5 R7504 B1
C1204 C3 C1747 D3 C6140 B5 CN1703 C3 FB7119 C2 R1242 D5 R1745 D4 R4238 B2 R6136 A5 R7505 B1
C1205 C3 C1748 D4 C6141 B5 CN1705 D5 FB7201 A1 R1243 D5 R1746 D4 R4239 B2 R6137 B4 R7506 B1
C1206 C3 C1749 D3 C6142 B5 CN1706 D5 FB7202 A1 R1244 C3 R1747 D4 R4240 B2 R6138 B4 R7507 C2
C1207 C3 C1750 D3 C6143 B5 CN1801 B5 FB7203 A2 R1245 C3 R1748 D4 R4241 B2 R6139 A5 R7508 C2
C1211 C3 C1751 D4 C6144 B5 CN1901 D3 FB7204 A1 R1246 C3 R1801 B5 R4242 B2 R6140 A5 R7509 C2
C1212 C3 C1757 D4 C6145 B5 CN1902 D3 FB7205 A1 R1247 D5 R1802 B5 R4243 B2 R6142 B5 R7510 C2
C1213 C3 C1801 B5 C6148 A5 CN4201 A2 FB7206 A1 R1248 D5 R1803 B5 R4244 B3 R6143 B5 R7511 B2
C1214 C3 C1802 B5 C6149 A5 CN6101 A5 FB7207 A1 R1250 C3 R1804 B5 R4245 B2 R6144 B5 R7513 B1
C1222 D5 C1803 B5 C6150 A5 CN6102 A5 FB7401 D4 R1257 E4 R1805 B5 R4246 B2 R6145 B5 R7514 B1
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C1224 B5 C1806 B5 C7101 A3 CN7202 A1 FB7403 D4 R1402 C2 R1807 B5 R4249 B2 R6147 B5 R7516 B2
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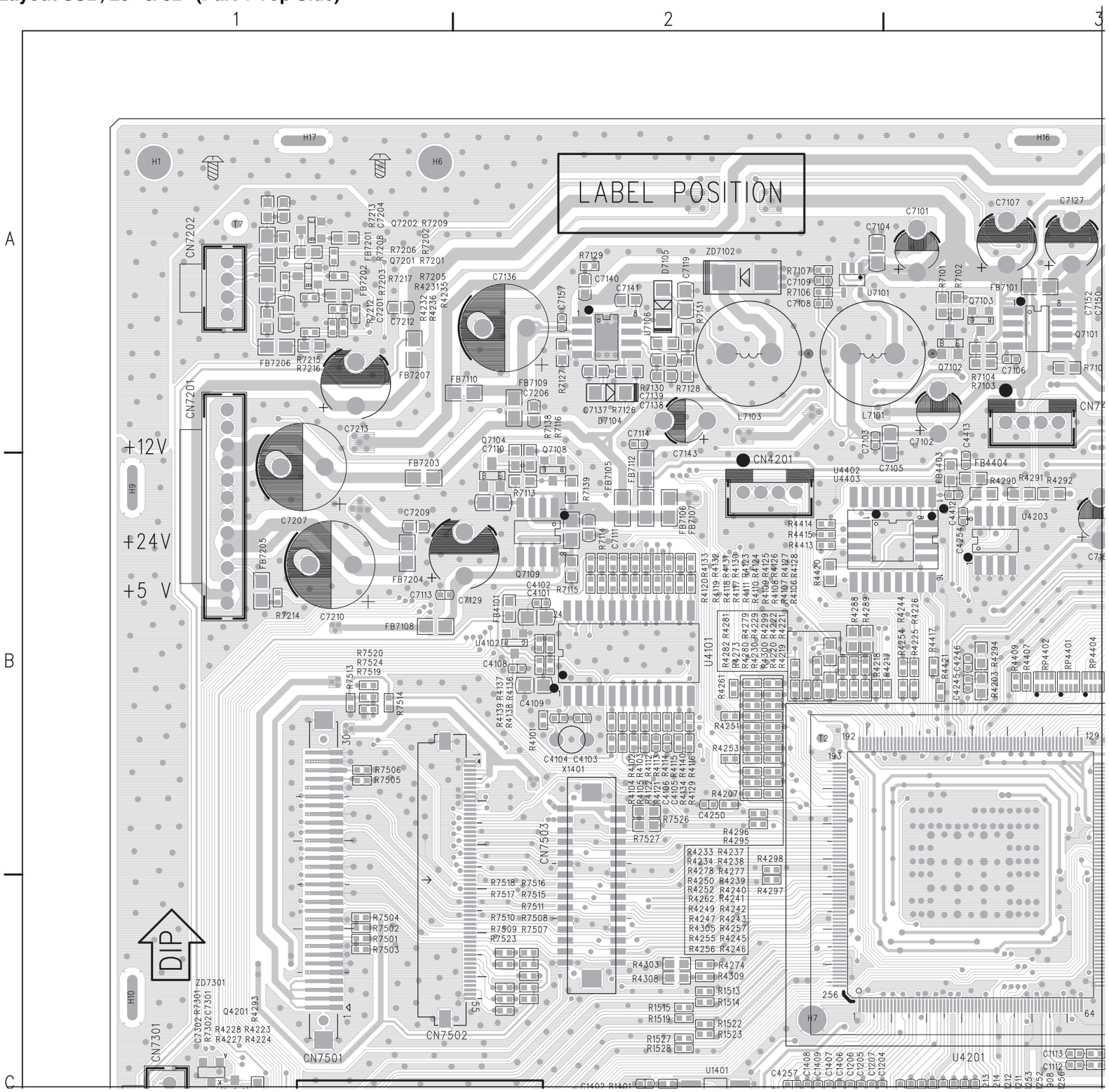
Layout SSB, 26" & 32" (Part 1 Top Side)



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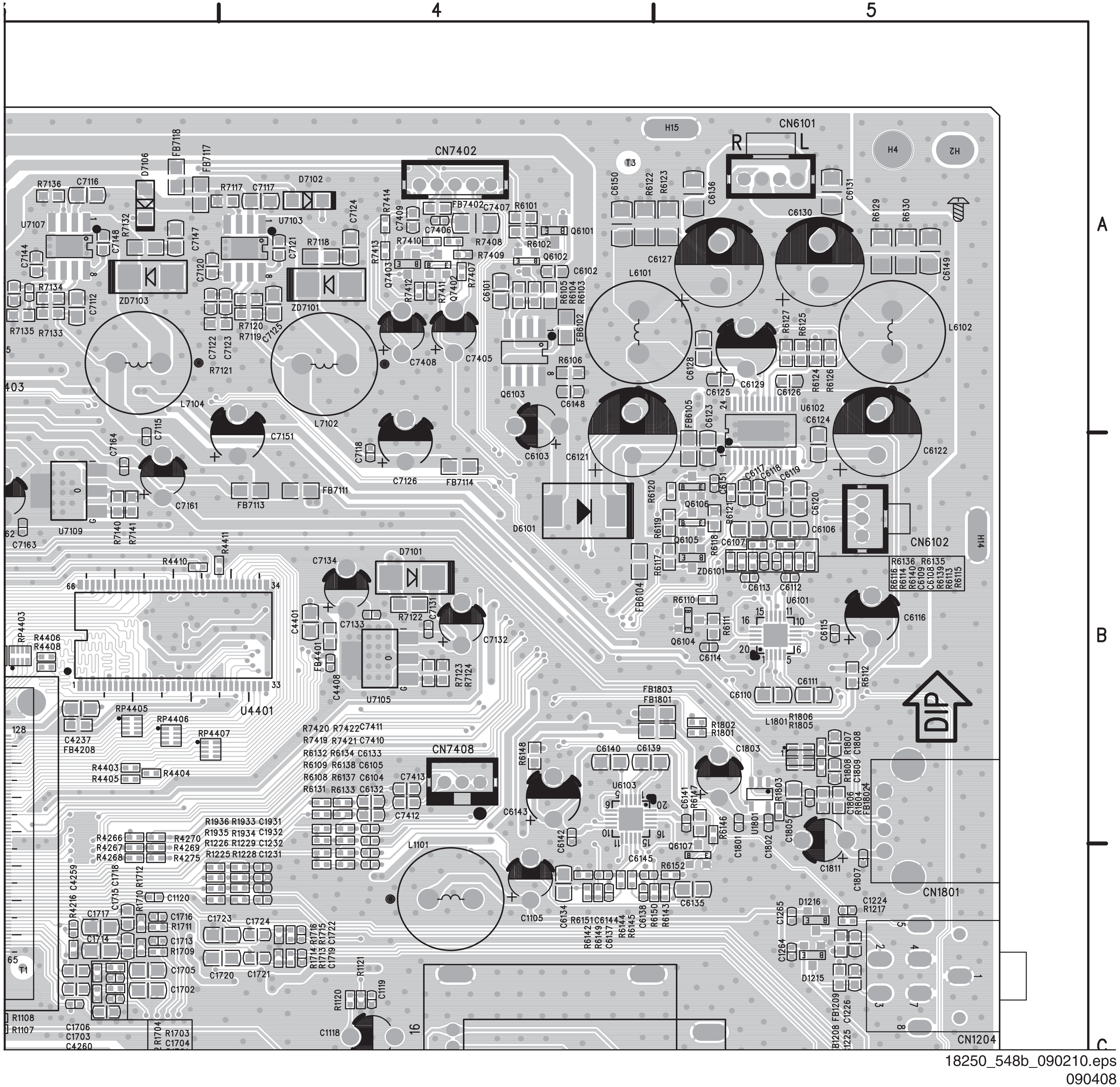
Layout SSB, 26" & 32" (Part 2 Top Side)



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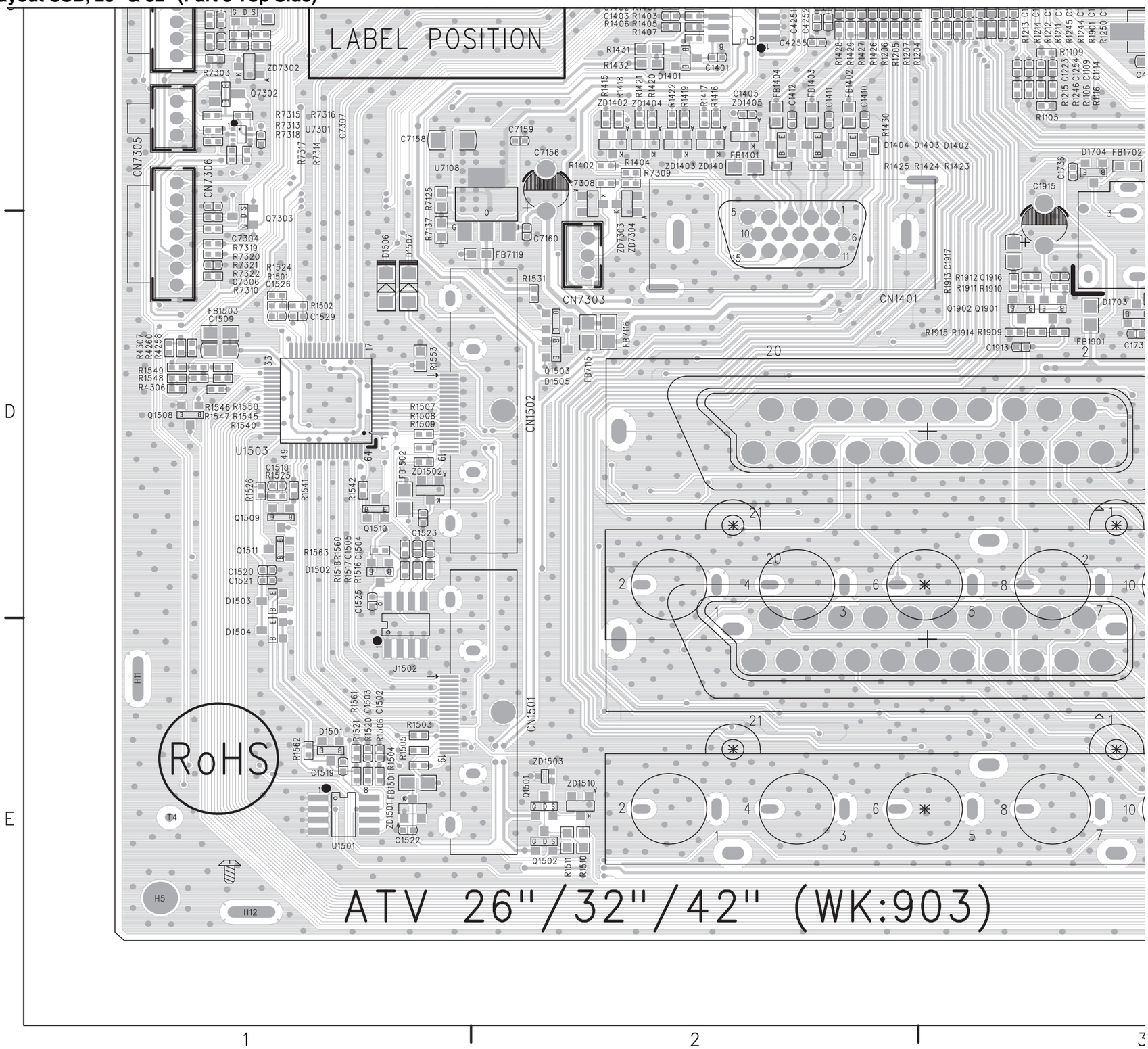

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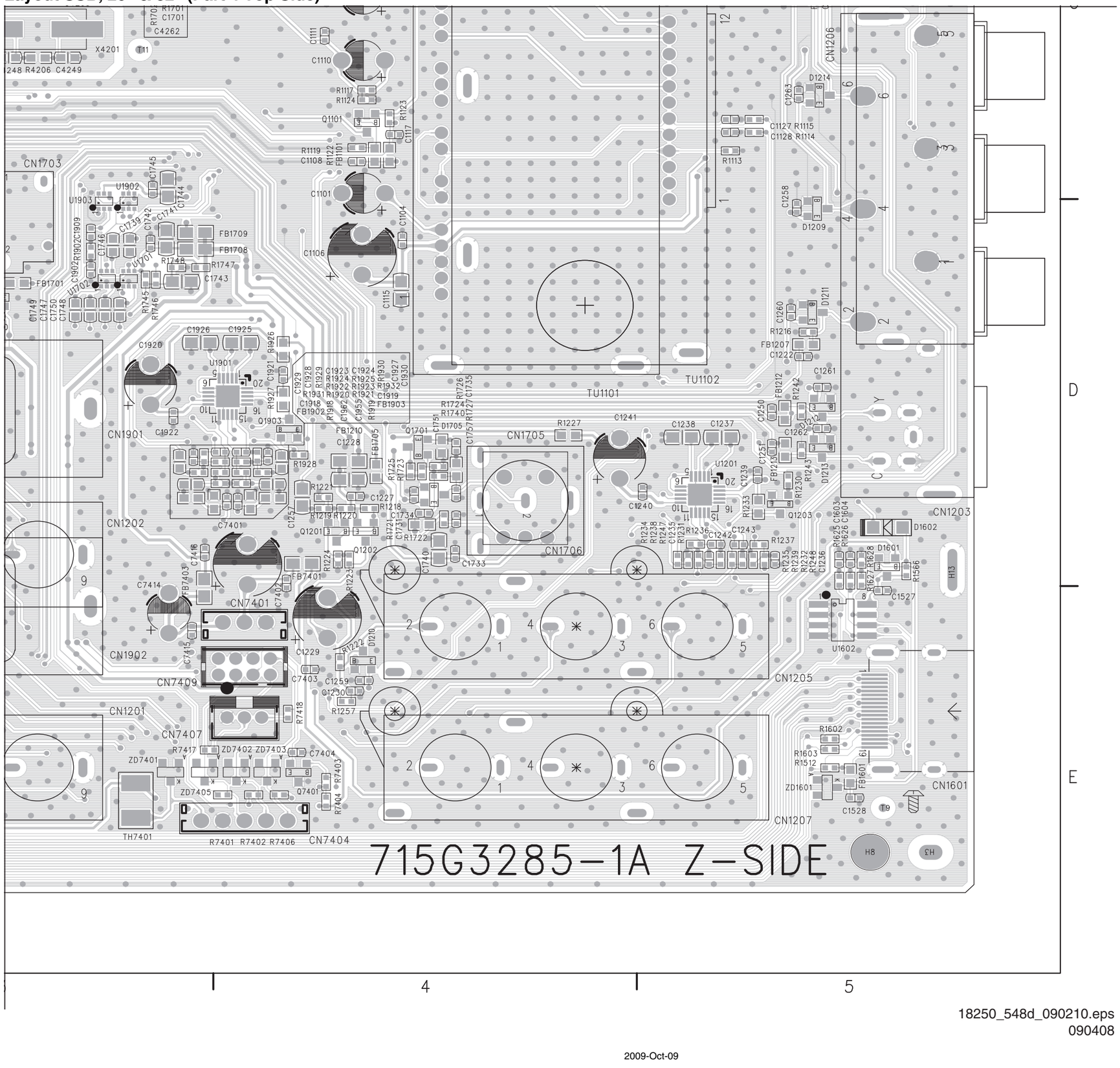

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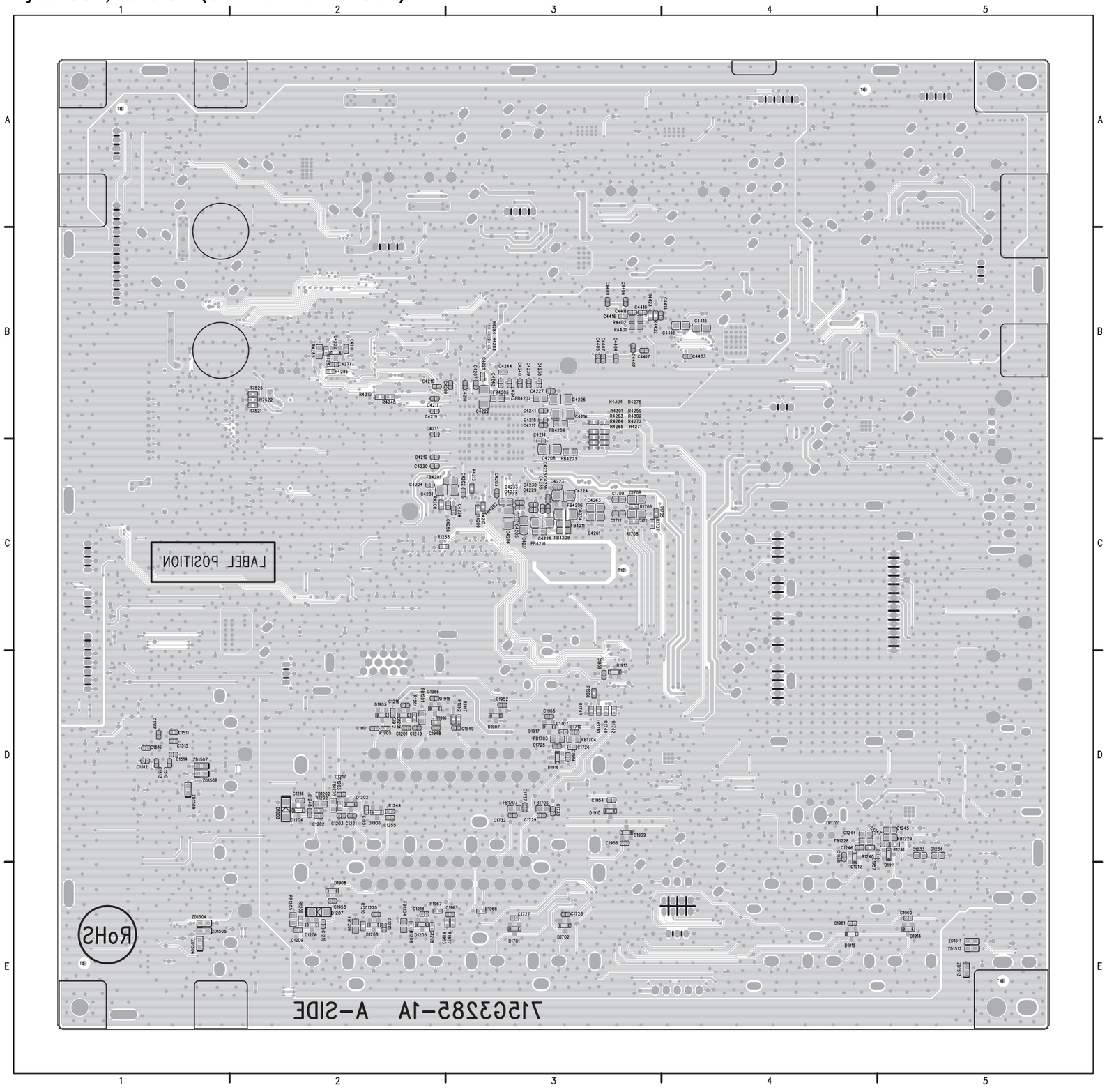
Layout SSB, 26" & 32" (Overview Bottom Side)



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C1203	D2	C4415	B4	C1966	D3	R1258	C3
C1208	E3	C4416	B4	C4110	B2	R1705	C4
C1209	E2	C4417	B4	C4201	B3	R1706	C4
C1210	E2	C4418	B4	C4202	C3	R1707	C4
C1215	D2	D1201	D2	C4203	C3	R1708	C4
C1216	D2	D1202	D2	C4204	B3	R1741	D3
C1217	D2	D1203	D2	C4205	C3	R1742	D4
C1218	E3	D1204	D2	C4206	C3	R1743	D3
C1219	E2	D1205	E3	C4207	B3	R1744	D3
C1220	E2	D1206	E2	C4208	B3	R1905	D2
C1221	D2	D1207	E2	C4209	B3	R1906	D3
C1233	D5	D1208	E2	C4210	B3	R1916	D3
C1234	D5	D1701	E3	C4211	B3	R1917	D3
C1244	D5	D1702	E3	C4212	B3	R1937	E3
C1245	D5	D1905	D2	C4213	B3	R1952	D3
C1246	D5	D1906	D2	C4214	B3	R1953	E3
C1247	D5	D1907	D3	C4215	B3	R1967	E3
C1248	D2	D1908	E2	C4216	B3	R1968	E3
C1249	D3	D1909	D4	C4217	B3	R4208	C3
C1255	D2	D1910	D4	C4218	B3	R4209	C3
C1510	D1	D1911	D5	C4219	B3	R4210	C3
C1511	D1	D1912	D5	C4220	B3	R4213	B3
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C1513	D1	D1914	E5	C4222	B3	R4259	B3
C1514	D1	D1915	E5	C4223	B3	R4263	B3
C1515	D1	D1916	D3	C4224	C3	R4264	B3
C1516	D1	D1917	D3	C4225	C3	R4265	B3
C1517	D1	D1918	D3	C4226	B3	R4271	B3
C1707	D3	FB1201	D3	C4227	B3	R4272	B3
C1708	C4	FB1202	D2	C4228	C3	R4276	B3
C1709	C4	FB1203	D2	C4229	C3	R4283	B3
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C1726	D3	FB1229	D5	C4234	C3	R4301	B3
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C1728	E3	FB1704	D3	C4236	C3	R4304	B3
C1729	D3	FB1706	D3	C4238	B3	R4310	B2
C1732	D3	FB1707	D3	C4239	B3	R4401	B4
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C1949	D3	FB4206	C3	C4256	C3	R7525	B2
C1951	D2	FB4207	B3	C4258	C3	TP1701	D5
C1952	D3	FB4209	C3	C4261	C3	U4202	B2
C1953	E2	FB4210	C3	C4263	C3	ZD1504	E1
C1954	D4	FB4211	C3	C4271	B2	ZD1505	E1
C1956	D4	R1201	D3	C4402	B4	ZD1506	E1
C1957	D5	R1202	D2	C4403	B4	ZD1507	D1
C1958	D5	R1203	D2	C4404	B4	ZD1508	D1
C1959	C3	R1208	E3	C4405	B3	ZD1509	D1
C1960	E5	R1209	E2	C4406	B4	ZD1511	E5
C1961	E5	R1210	E2	C4407	B3	ZD1512	E5
C1963	E3	R1240	D5	C4409	B3	ZD1513	E5
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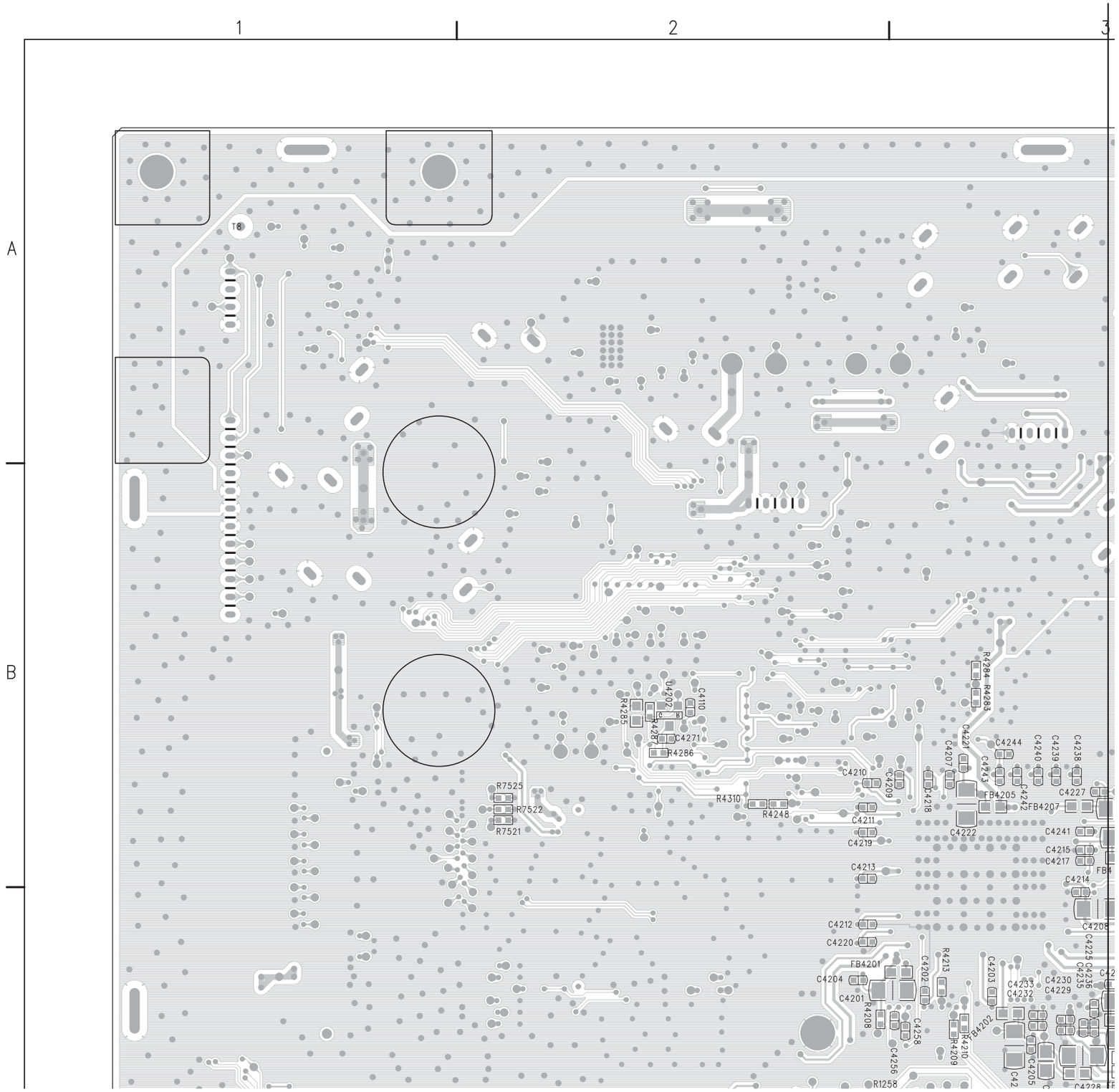
Layout SSB, 26" & 32" (Part 1 Bottom Side)



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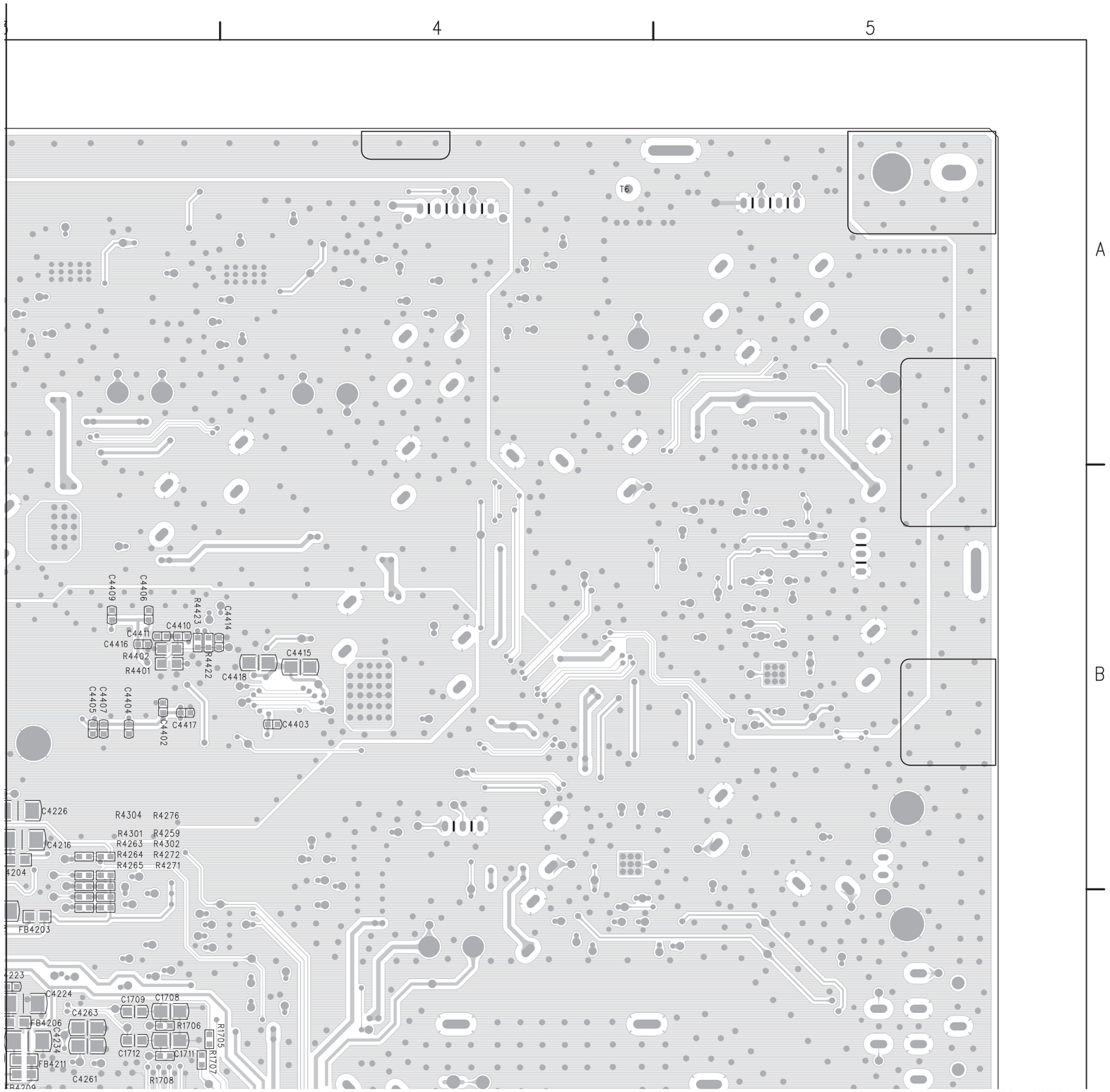
Layout SSB, 26" & 32" (Part 2 Bottom Side)



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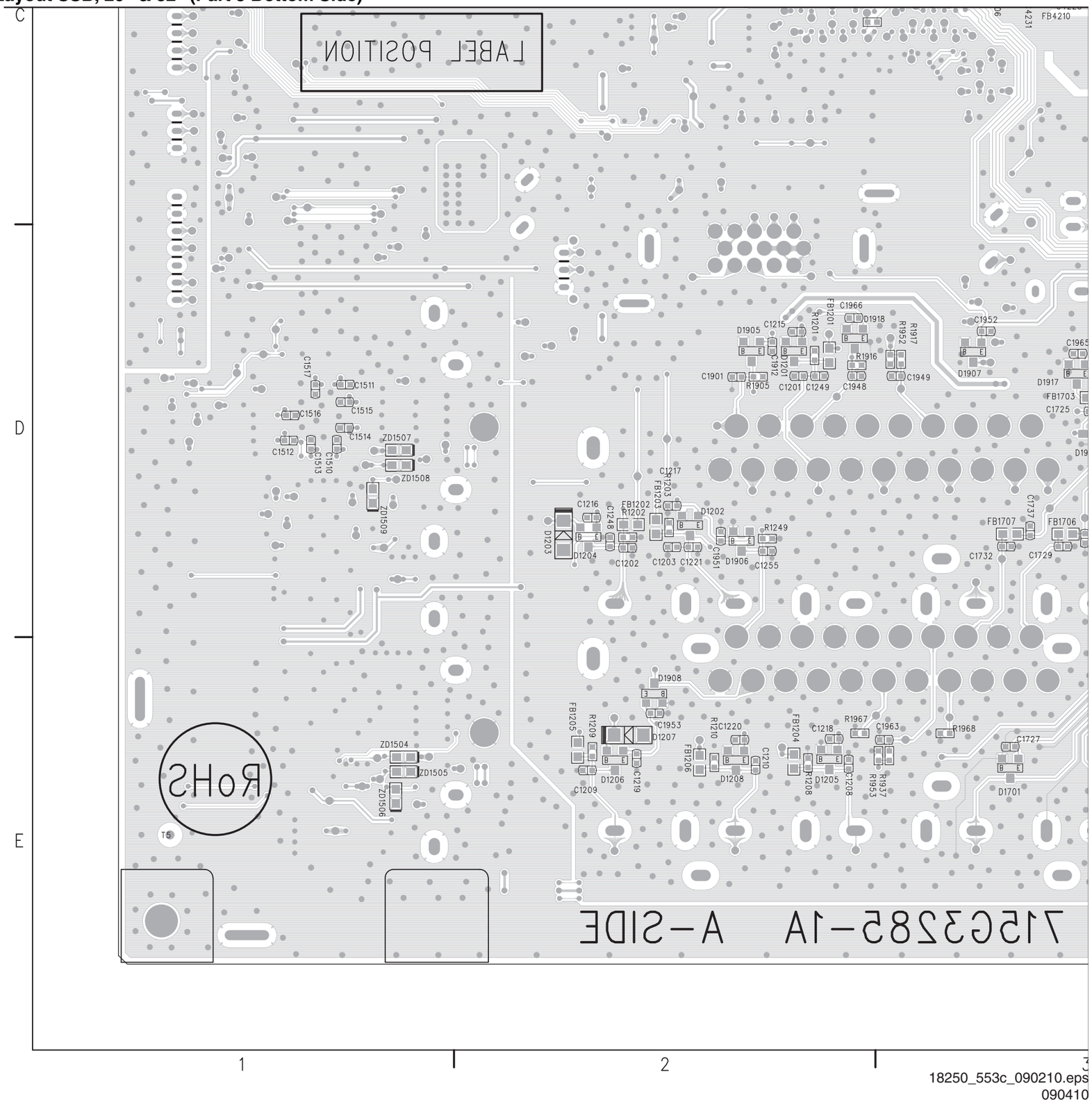
Layout SSB, 26" & 32" (Part 3 Bottom Side)



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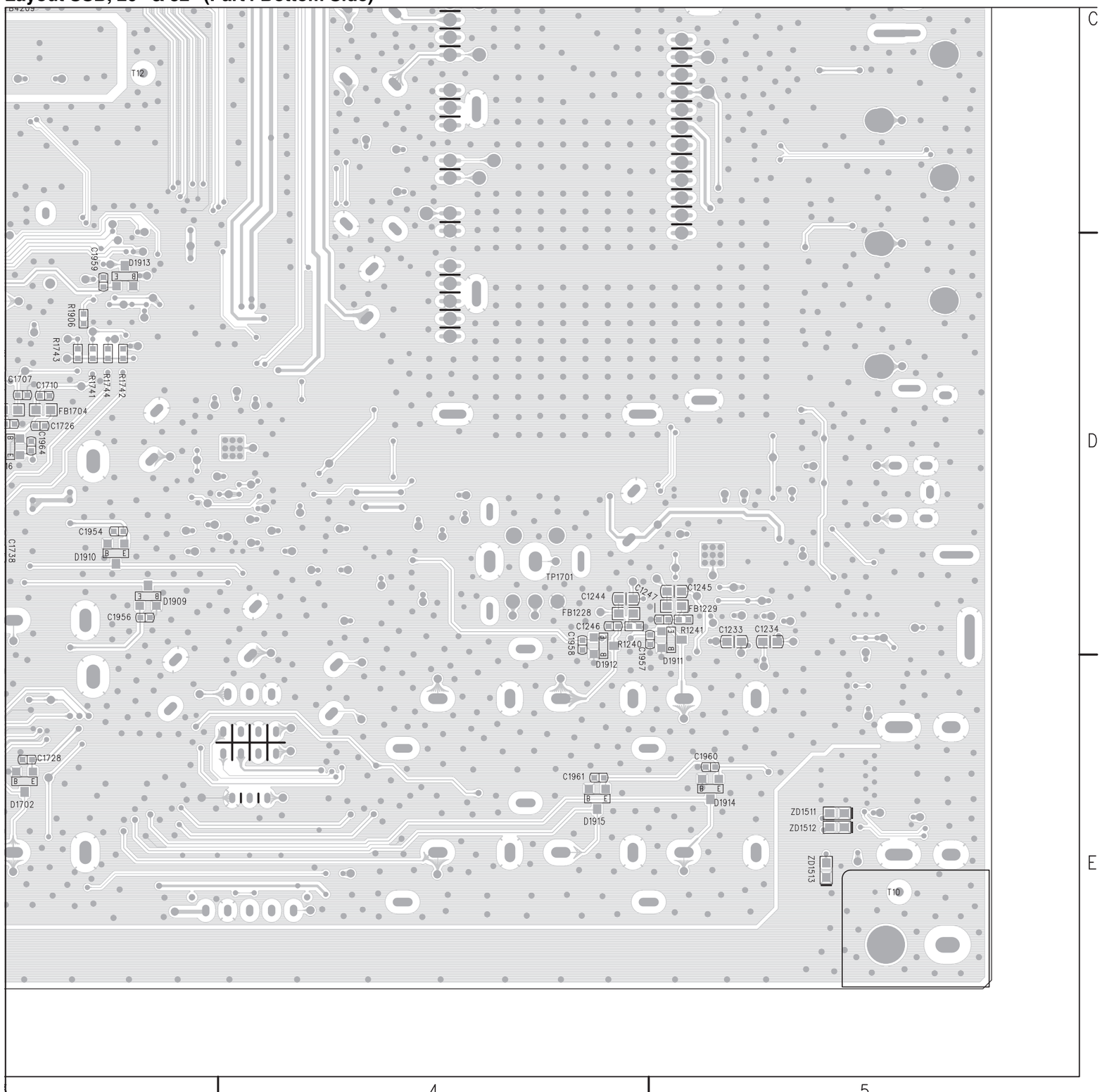
Layout SSB, 26" & 32" (Part4 Bottom Side)



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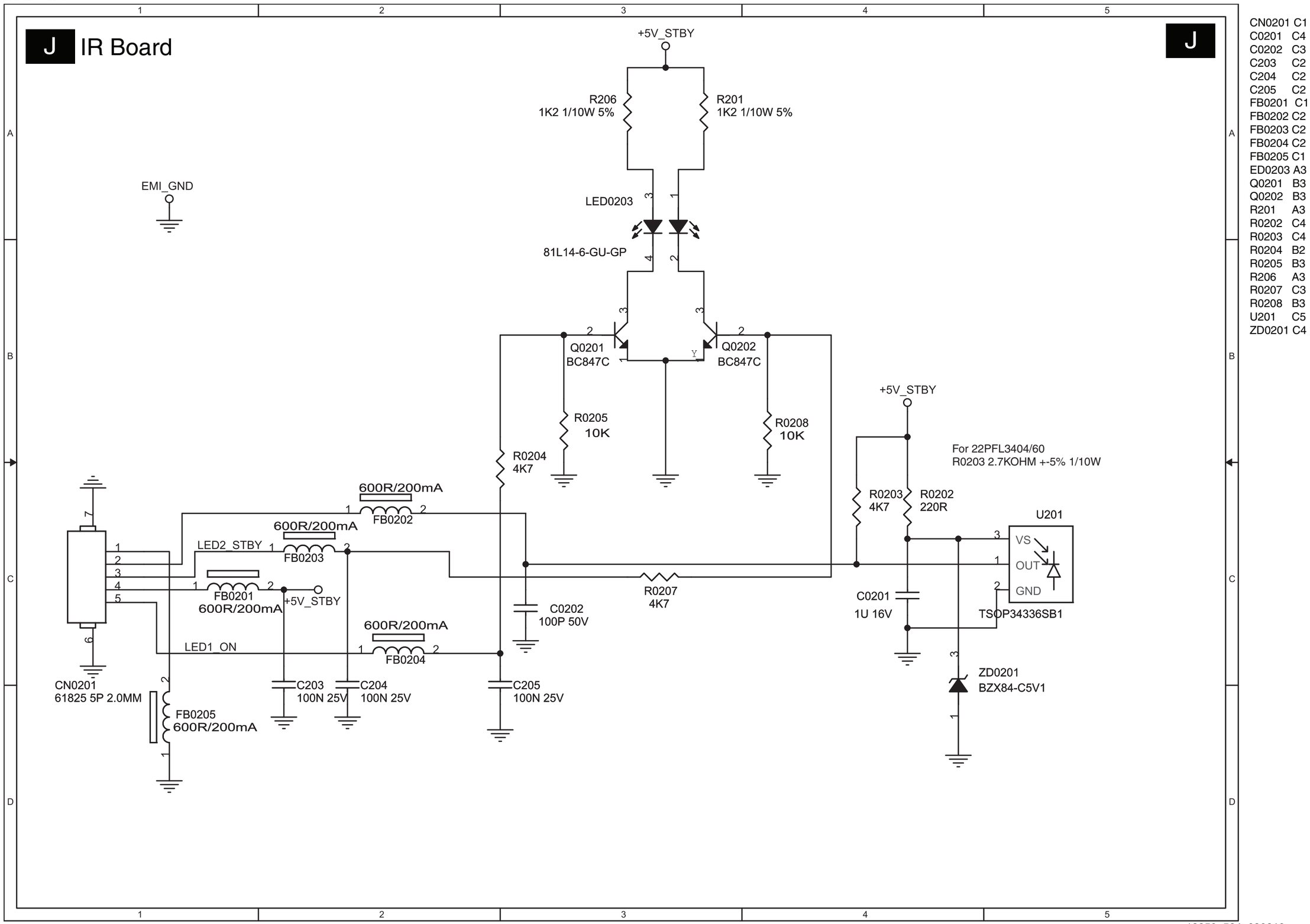
IR Board



CN0201 C1
C0201 C4
C0202 C3
C203 C2
C204 C2
C205 C2
FB0201 C1
FB0202 C2
FB0203 C2
FB0204 C2
FB0205 C1
ED0203 A3
Q0201 B3
Q0202 B3
R201 A3
R0202 C4
R0203 C4
R0204 B2
R0205 B3
R206 A3
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R0208 B3
U201 C5
ZD0201 C4

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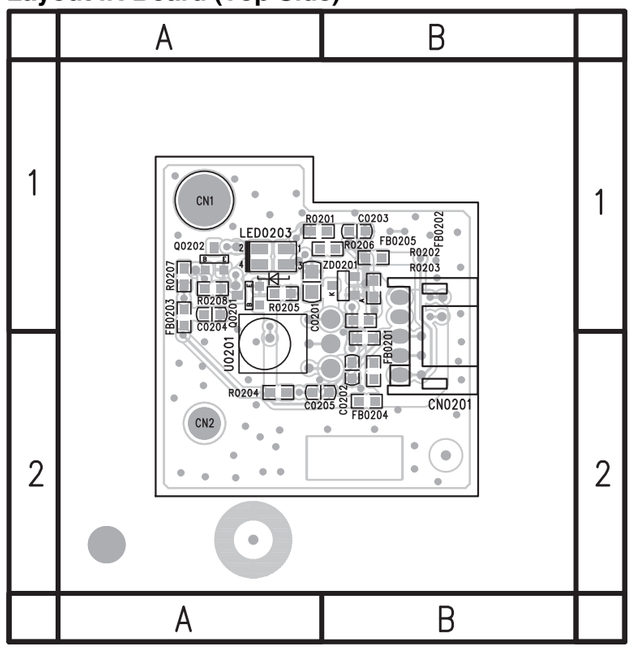
090225

Layout IR Board (Top Side)



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C0202	B2	Q0202	A1
C0203	A2	R0201	A1
C0204	B1	R0202	B2
C0205	B1	R0203	B2
CN0201	B2	R0204	B1
FB0201	B2	R0205	A1
FB0202	A2	R0206	A1
FB0203	B1	R0207	A1
FB0204	B2	R0208	A1
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ED0203	A1	ZD0201	A2

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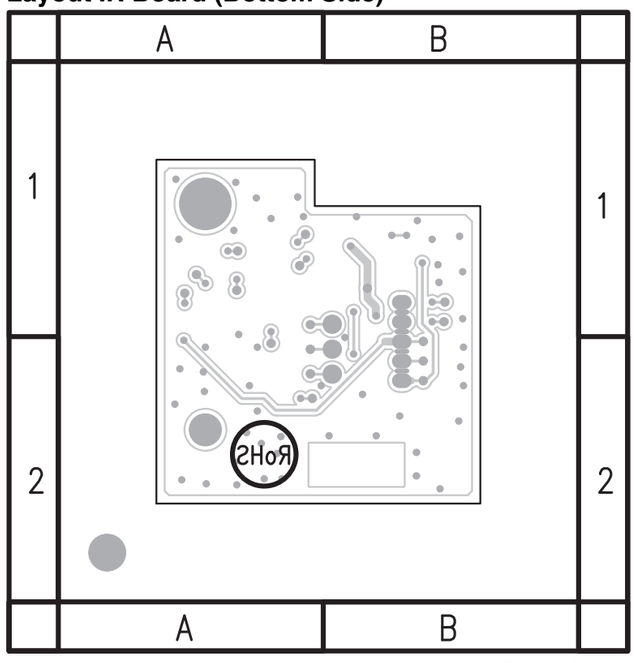
Layout IR Board (Bottom Side)



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Personal Notes:

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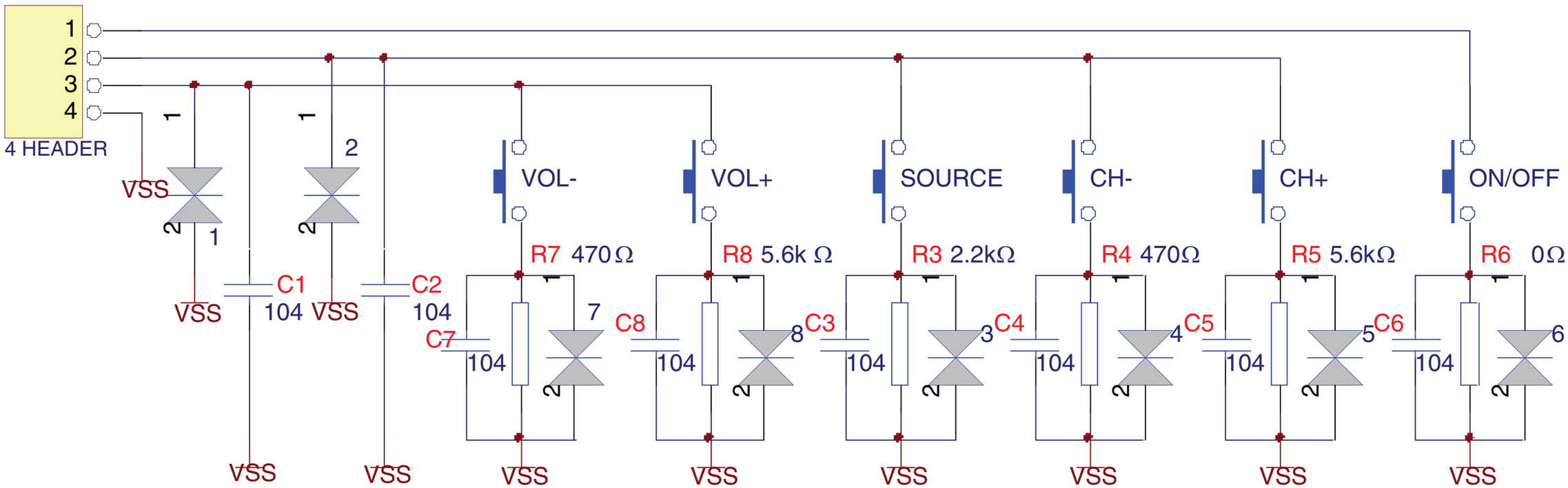
Keyboard control

E Keyboard control panel



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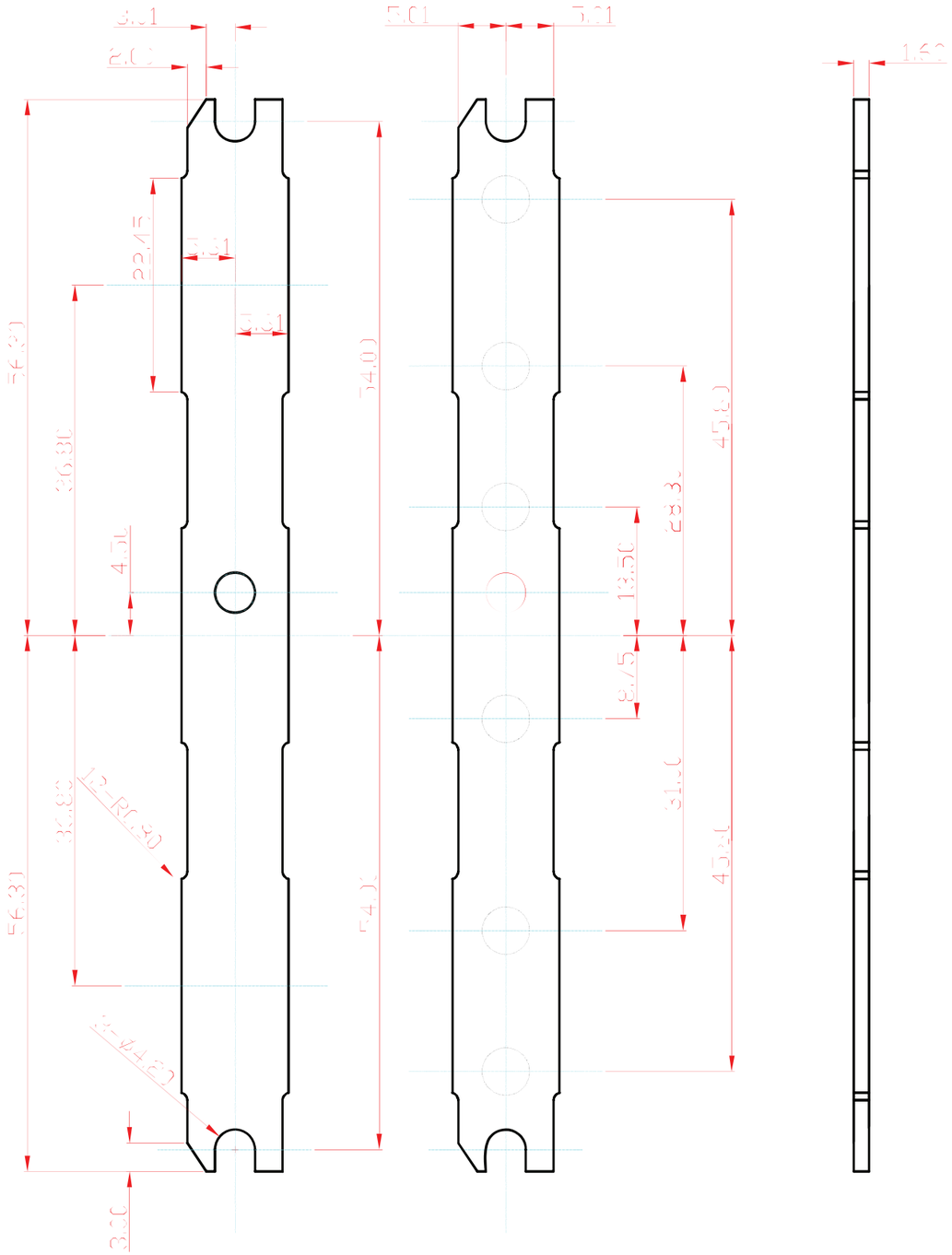
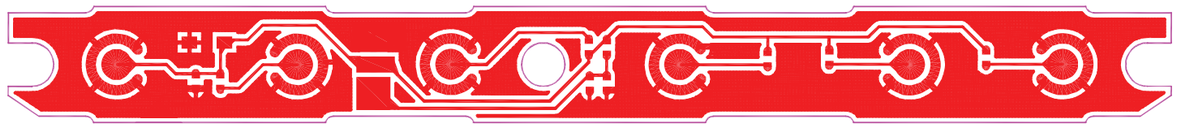
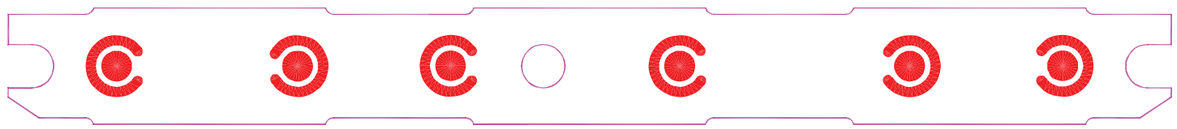
Layout Keyboard

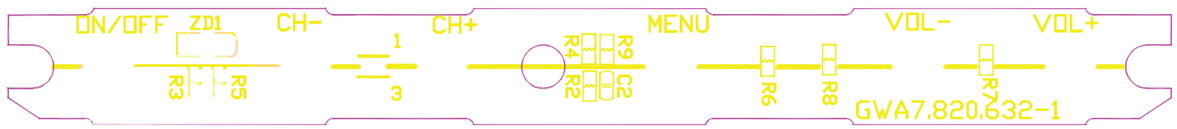




Obverse copper layer



nickel plating layer



Obverse character layer

18250_559_090210.eps
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