# Colour Television

# Chassis

Service
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# Q543.1E

## LA


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# Service Manual

## Contents






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Subject to modification

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# 1. Revision List

**Manual xxxx xxx xxxx.0**
- First release.

**Manual xxxx xxx xxxx.1**
- **All Chapters:** added 37PFL5604H/60, 47PFL5604/60, 52PFL5604H/12 and 52PFL5604H/60 to the manual
- **Chapter 2:** added AV output characteristics to section 2.3.2 Rear Connections
- **Chapter 6:** changed option codes of all sets, see Table 6-4
- **Chapter 7:** extended flash memory (PNX5100) to 1 GB, see Figure 7-1.

**Manual xxxx xxx xxxx.2**
- **All Chapters:** added 32PFL3904H/12 to the manual
- **Chapter 5:** changed SSB replacement flowchart diagram, see section 5.8.12
- **Chapter 6:** changed option code of 32PFL5404H/xx, see Table 6-4
- **Chapter 10:** added SSB version 3 (v3) to version 1 (v1) schematics. Version is indicated on SSB with ".3" respectively ".1".
  Delta's with .1:
  Provision for temperature sensor connectivity:
  - connectors 1M71, 1FA1 and 1FA2 (not stuffed)
  - ICs 7FA1 and 7FA3 (not stuffed)
  Provision for additional USB connectivity:
  - connector 1M10 (not stuffed)
  Provision for additional ethernet connectivity:
  - IC 7N04 (McPhyter) (not stuffed).

# 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 Table 2-1. Here is product information available, as well as getting started, user manuals, frequently asked questions and software & drivers.

**Table 2-1 Described Model numbers**

| CTN | Styling | Published in: |
|---|---|---|
| 32PFL3904H/12 | P & S | 3122 785 18542 |
| 32PFL5404H/12 | | 3122 785 18540 |
| 37PFL5604H/12 | | 3122 785 18540 |
| 37PFL5604H/60 | | 3122 785 18541 |
| 47PFL5604H/12 | | 3122 785 18540 |
| 47PFL5604H/60 | | 3122 785 18541 |
| 52PFL5604H/12 | | 3122 785 18541 |
| 52PFL5604H/60 | | 3122 785 18541 |

## 2.2 Directions for Use

You can download this information from the following websites:
http://www.philips.com/support
http://www.p4c.philips.com

## 2.3 Connections

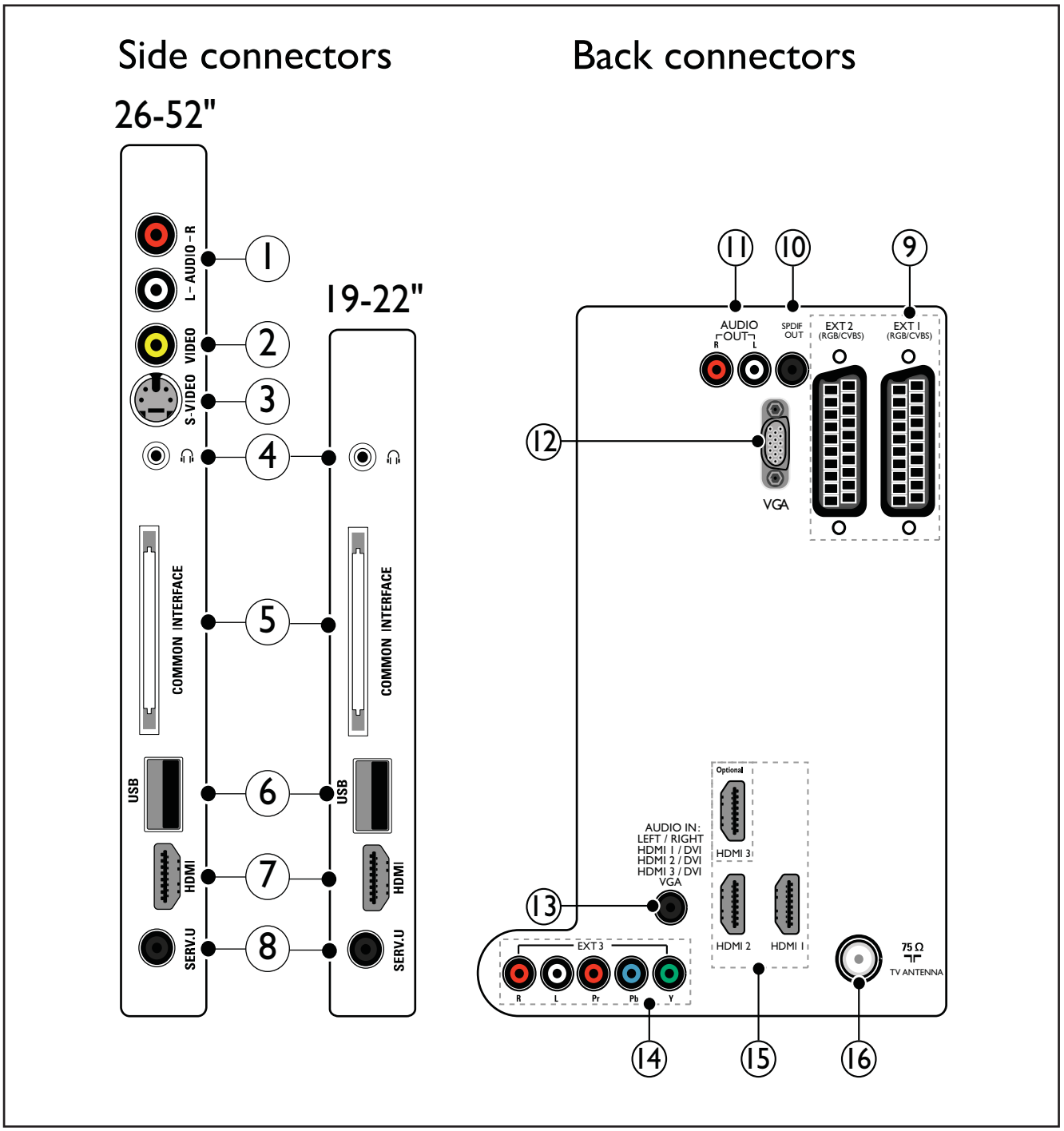


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**Figure 2-1 Connection overview**

**Note:** The following connector colour abbreviations are used (according 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 kΩ | |
| Wh - Audio L | 0.5 $V_{RMS}$ / 10 kΩ | |

***2 - Cinch: Video CVBS - In***

| | | |
|---|---|---|
| Ye - Video CVBS | 1 $V_{PP}$ / 75 Ω | |

***3 - S-Video (Hosiden): Video Y/C - In***

| | | |
|---|---|---|
| 1 - Ground Y | Gnd | |
| 2 - Ground C | Gnd | |
| 3 - Video Y | 1 $V_{PP}$ / 75 Ω | |
| 4 - Video C | 0.3 $V_{PP}$ / 75 Ω | |

***4 - Head phone (Output)***

| | | |
|---|---|---|
| Bk - Head phone | 32 - 600 Ω / 10 mW | |

***5 - Common Interface***

| | | |
|---|---|---|
| 68p - See diagram B05C SSB v1: PCMCIA | | |

***6 - USB2.0***

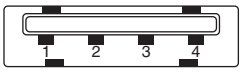


**Figure 2-2 USB (type A)**

| | | | |
|---|---|---|---|
| 1 | - +5V | | ⊖→ |
| 2 | - Data (-) | | ⊖→ |
| 3 | - Data (+) | | ⊖→ |
| 4 | - Ground | Gnd | ⏚ |

***7 - HDMI: Digital Video, Digital Audio - In (see connector 15)***

***8 - Service Connector (UART)***

| | | | |
|---|---|---|---|
| 1 | - Ground | Gnd | ⏚ |
| 2 | - UART_TX | Transmit | ⊖→ |
| 3 | - UART_RX | Receive | →⊕ |

### 2.3.2 Rear Connections

***9 - EXT1/2: Video RGB - In, CVBS - In/Out, Audio - In/Out (*)***

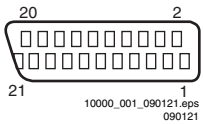


**Figure 2-3 SCART connector**

| | | | |
|---|---|---|---|
| 1 | - Audio R | 0.5 $V_{RMS}$ / 1 kΩ | ⊖→ |
| 2 | - Audio R | 0.5 $V_{RMS}$ / 10 kΩ | →⊕ |
| 3 | - Audio L | 0.5 $V_{RMS}$ / 1 kΩ | ⊖→ |
| 4 | - Ground Audio | Gnd | ⏚ |
| 5 | - Ground Blue | Gnd | ⏚ |
| 6 | - Audio L | 0.5 $V_{RMS}$ / 10 kΩ | →⊕ |
| 7 | - Video Blue | 0.7 $V_{PP}$ / 75 Ω | ⊖→ |
| 8 | - Function Select | 0 - 2 V: INT<br>4.5 - 7 V: EXT 16:9<br>9.5 - 12 V: EXT 4:3 | →⊕ |
| 9 | - Ground Green | Gnd | ⏚ |
| 10 | - n.c. | | |
| 11 | - Video Green | 0.7 $V_{PP}$ / 75 Ω | →⊕ |
| 12 | - n.c. | | |
| 13 | - Ground Red | Gnd | ⏚ |
| 14 | - Ground P50 | Gnd | ⏚ |
| 15 | - Video Red | 0.7 $V_{PP}$ / 75 Ω | →⊕ |
| 16 | - Status/FBL | 0 - 0.4 V: INT<br>1 - 3 V: EXT / 75 Ω | →⊕ |
| 17 | - Ground Video | Gnd | ⏚ |
| 18 | - Ground FBL | Gnd | ⏚ |
| 19 | - Video CVBS/Y | 1 $V_{PP}$ / 75 Ω | ⊖→ |
| 20 | - Video CVBS | 1 $V_{PP}$ / 75 Ω | →⊕ |
| 21 | - Shield | Gnd | ⏚ |

(*) **Note:** The AV output on SCART 1 or 2 will be enabled (SW controlled) for analogue RF channels only, if the decoder is turned “on” in the Menu: select Setup -> Installation -> Decoder -> Status: select SCART 1 or 2 -> Channel: select any analogue channel.

***10 - Cinch: S/PDIF - Out***

| | | | |
|---|---|---|---|
| Bk | - Coaxial | 0.4 - 0.6$V_{PP}$ / 75 Ω | ⊖→◎ |

***11 - Cinch: Audio - Out***

| | | | |
|---|---|---|---|
| Rd | - Audio - R | 0.5 $V_{RMS}$ / 10 kΩ | ⊖→◎ |
| Wh | - Audio - L | 0.5 $V_{RMS}$ / 10 kΩ | ⊖→◎ |

***12 - VGA: Video RGB - In***

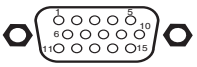


**Figure 2-4 VGA Connector**

| | | | |
|---|---|---|---|
| 1 | - Video Red | 0.7 $V_{PP}$ / 75 Ω | →⊕ |
| 2 | - Video Green | 0.7 $V_{PP}$ / 75 Ω | →⊕ |
| 3 | - Video Blue | 0.7 $V_{PP}$ / 75 Ω | →⊕ |
| 4 | - n.c. | | |
| 5 | - Ground | Gnd | ⏚ |
| 6 | - Ground Red | Gnd | ⏚ |
| 7 | - Ground Green | Gnd | ⏚ |
| 8 | - Ground Blue | Gnd | ⏚ |
| 9 | - +5$V_{DC}$ | +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 | →⊕ |

***13 - Mini Jack: Audio - In***

| | | | |
|---|---|---|---|
| Wh | - Audio L | 0.5 $V_{RMS}$ / 10 kΩ | →⊕ 3.5mm |
| Rd | - Audio R | 0.5 $V_{RMS}$ / 10 kΩ | →⊕ 3.5mm |

***14 - EXT3: Cinch: Video YPbPr - In, Audio - In***

| | | | |
|---|---|---|---|
| Gn | - Video Y | 1 $V_{PP}$ / 75 Ω | →⊕◎ |
| Bu | - Video Pb | 0.7 $V_{PP}$ / 75 Ω | →⊕◎ |
| Rd | - Video Pr | 0.7 $V_{PP}$ / 75 Ω | →⊕◎ |
| Rd | - Audio - R | 0.5 $V_{RMS}$ / 10 kΩ | →⊕◎ |
| Wh | - Audio - L | 0.5 $V_{RMS}$ / 10 kΩ | →⊕◎ |

***15 - HDMI 1, 2 & 3: Digital Video, Digital Audio - In***


**Figure 2-5 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 | ⏚ |

***16 - Aerial - In***

| | | | |
|---|---|---|---|
| - | - IEC-type (EU) | Coax, 75 Ω | ⊤ |

## 2.4 Chassis Overview

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

# 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.

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 |
| PSDL | Power Supply for Direct view LED backlight with 2D-dimming |
| PSL | Power Supply with integrated LED drivers |
| PSLS | Power Supply with integrated LED drivers with added Scanning functionality |
| 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 |
| SSC | Spread Spectrum Clocking, used to reduce the effects of EMI |
| 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

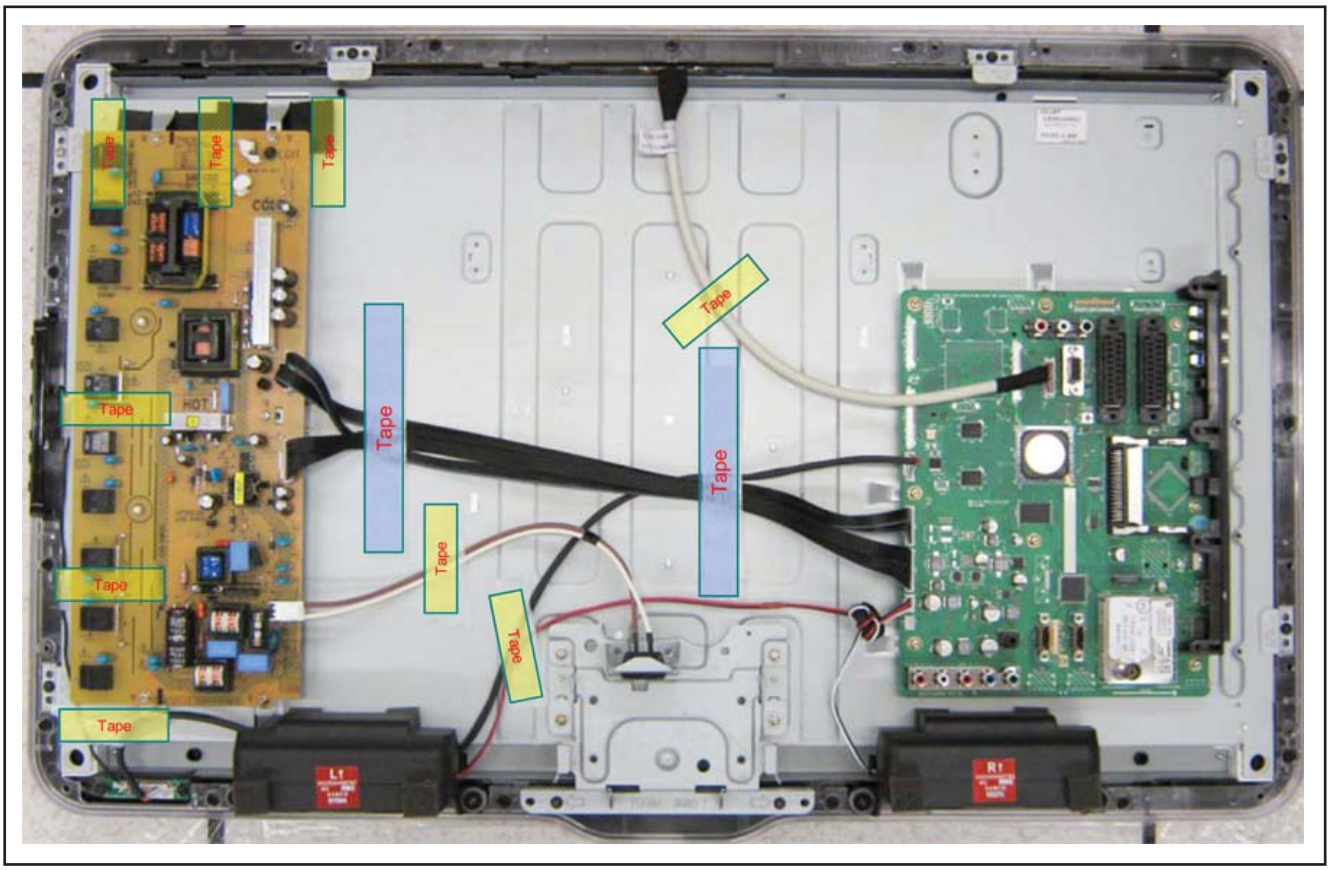


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**Figure 4-1 Cable dressing 32PFL5404H/xx**

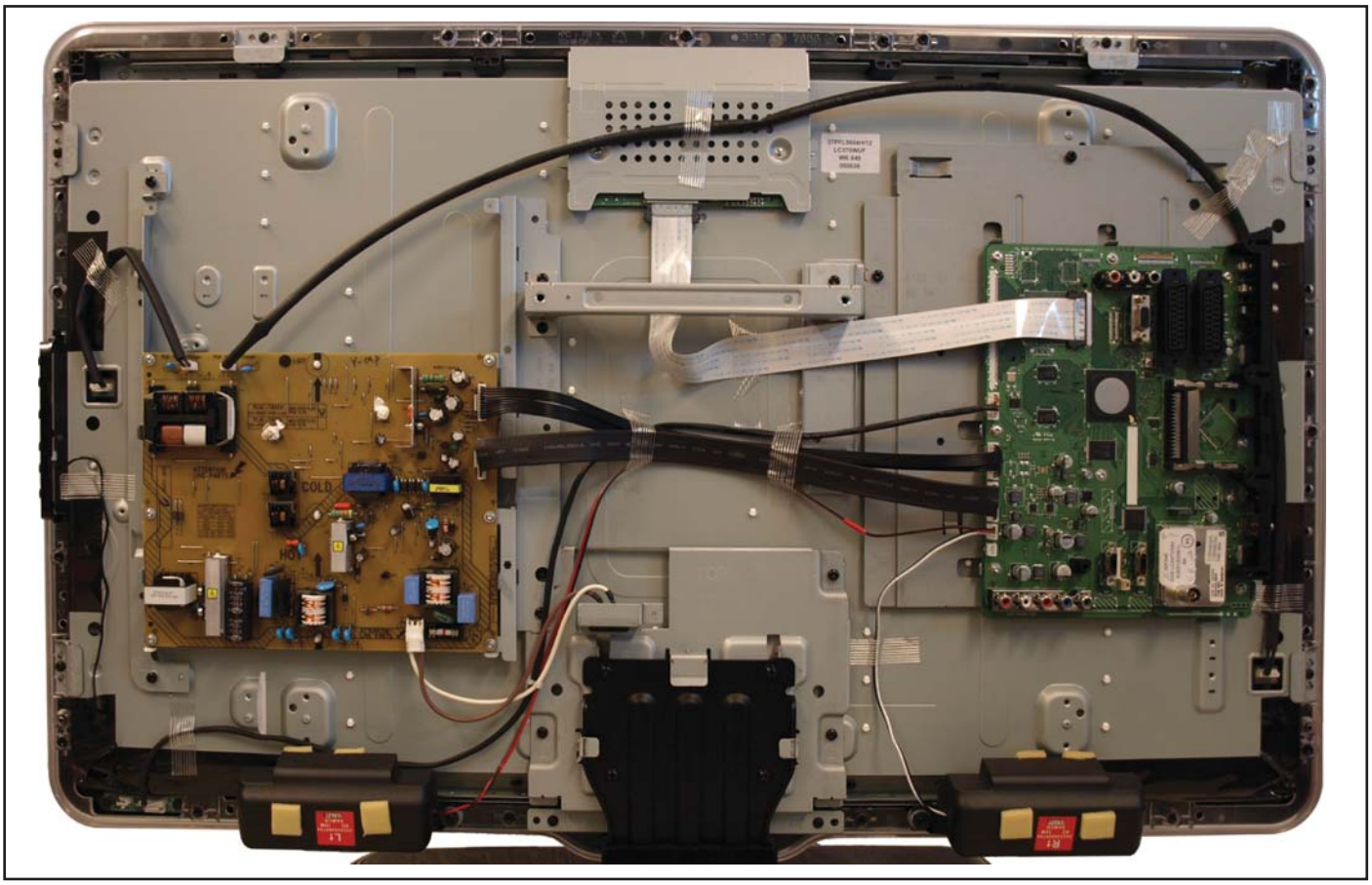

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**Figure 4-2 Cable dressing 37PFL5604H/xx**

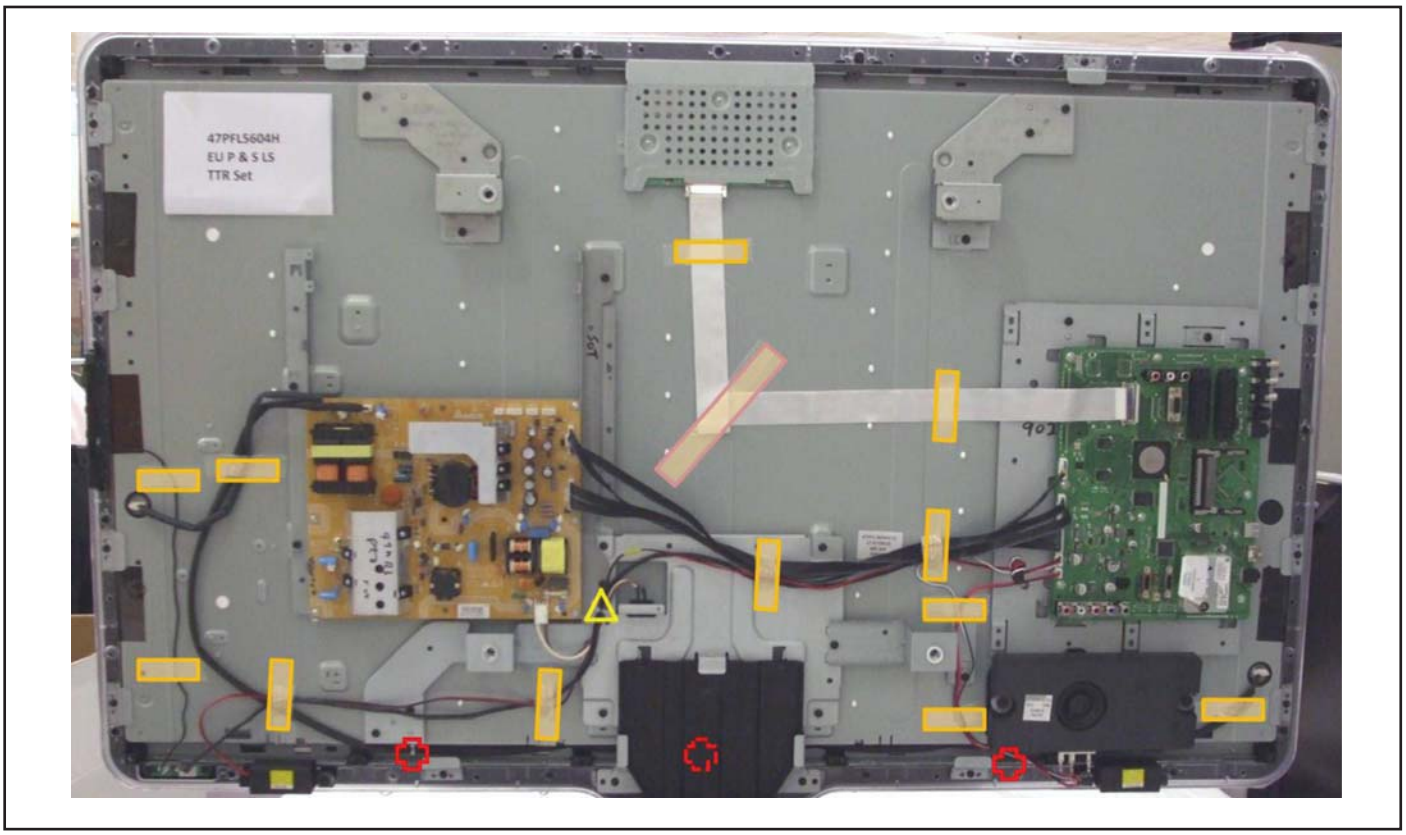


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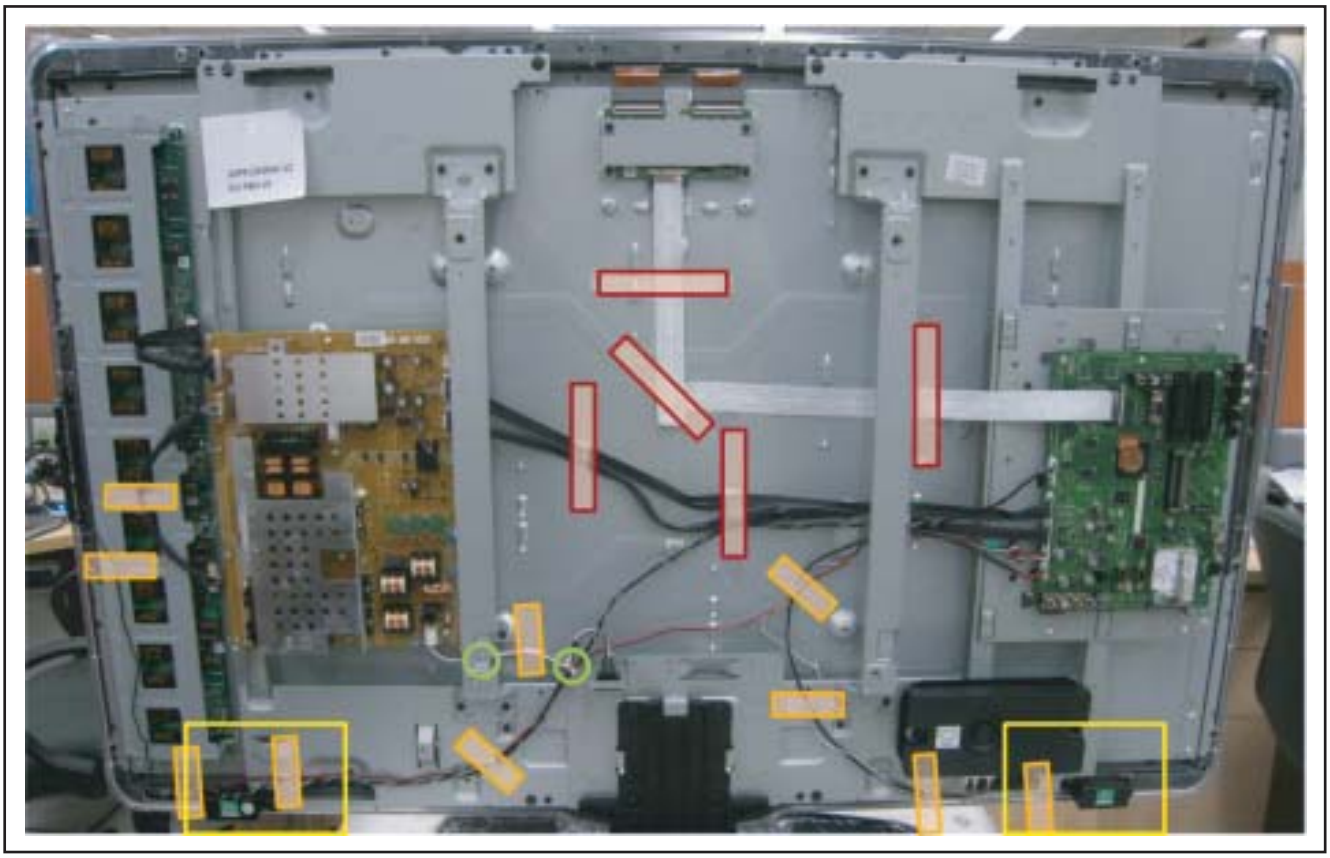
**Figure 4-3 Cable dressing 47PFL5604H/xx**



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090707

**Figure 4-4 Cable dressing 52PFL5604H/xx**

## 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

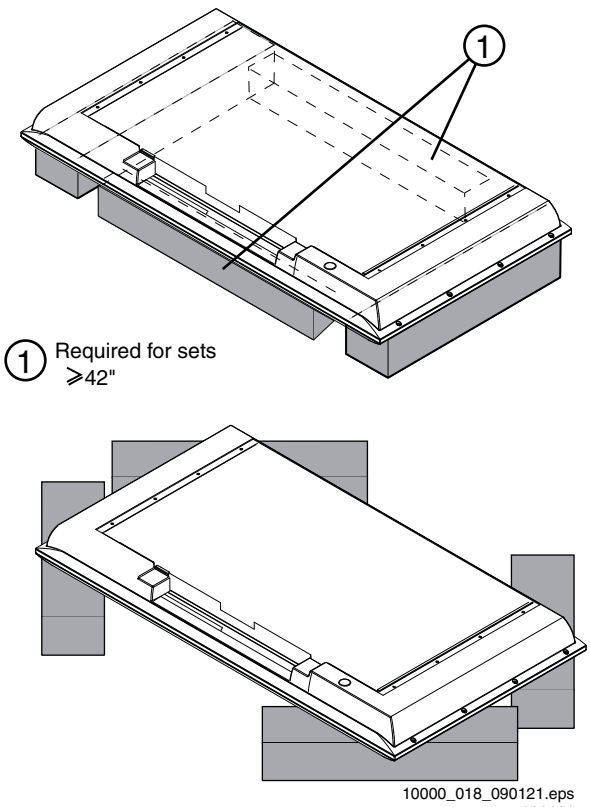


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**Figure 4-5 Foam bars**

The foam bars (order code 3122 785 90580 for two pieces) can be used for all types and sizes of Flat TVs.
See figure Figure 4-5 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, you can monitor the screen.

## 4.3 Assembly/Panel Removal

### 4.3.1 Rear Cover

**Warning:** Disconnect the mains power cord before you remove the rear cover.
**Note:** it is **not** necessary to remove the stand while removing the rear cover.
1. Remove all screws of the rear cover.
2. Lift the rear cover from the TV. Make sure that wires and flat coils are not damaged while lifting the rear cover from the set.

### 4.3.2 Speakers

Each speaker unit is mounted with two screws. A sticker on the the unit indicates if it is the right (“R”) or left (“L”) box, seen from the backside of the set, and a arrow points to the bottom of the set.
When defective, replace the whole unit.

### 4.3.3 IR & LED Board

1. Unplug the connectors leading to the SSB and IR & LED Board.
2. Lift the board and take it out.

When defective, replace the whole unit.

### 4.3.4 Key Board Control Panel

1. Unplug the key board connector from the IR & LED board.
2. Release the clamp on the topside using a screwdriver.
3. Lift the unit and take it out of the set.

When defective, replace the whole unit.

### 4.3.5 Main Supply Panel

1. Unplug all connectors.
2. Remove the fixation screws.
3. Take the board out.

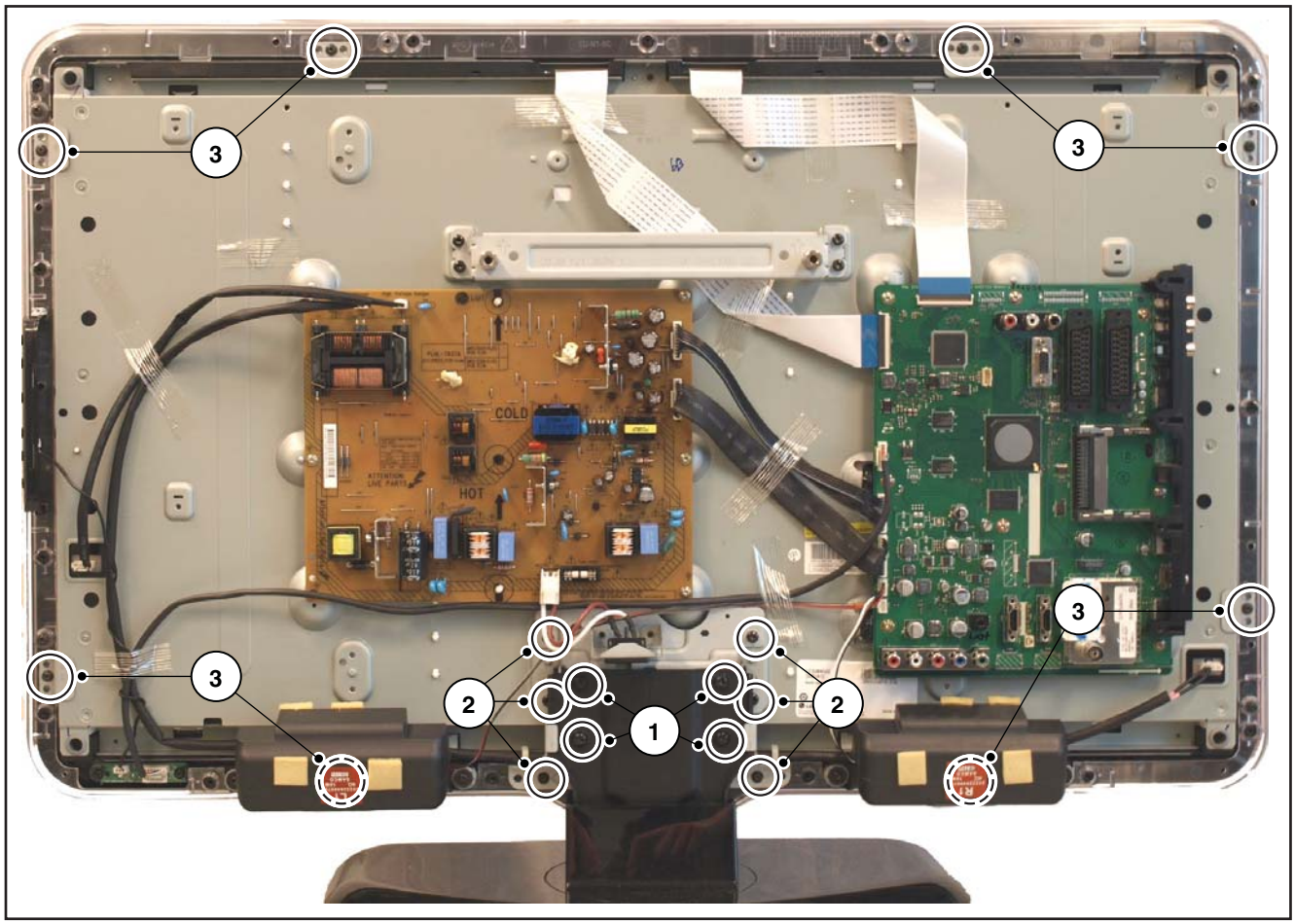
When defective, replace the whole unit.

### 4.3.6 Small Signal Board (SSB)

**Caution:** It is mandatory to remount 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 screws that secure the board.
3. The SSB can now be taken out of the set, together with the side cover.
4. To remove the side cover, push the clamp with a screwdriver in the middle of the cover and pull the cover sidewards from the SSB.

### 4.3.7 LCD Panel

Refer to Figure 4-6 for details. As every screen size has a (slightly) different mechanical construction (some have the boards directly mounted on the LCD display, others use brackets), we only describe one model. Disassembly method of other LCD panels is similar to the one described below. This particular photo is taken from a set with the timing controller (TCON) located on the SSB.
1. Remove the Main Supply Panel and Small Signal Board as earlier described.
2. Unplug the connectors to and from the Speakers, IR & LED Board and Key Board Control Panel.
3. Remove the stand [1].
4. Release the subframe from the stand [2].
5. Remove the brackets [3] that secure the LCD Panel.
6. The LCD panel can now be lifted from the front cabinet.

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090709

**Figure 4-6 LCD Panel removal**

## 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, Figure 4-2 and Figure 4-3.
- Pay special attention not to damage the EMC foams in the set. Ensure that EMC foams are mounted correctly.

# 5. Service Modes, Error Codes, and Fault Finding

**Index of this chapter:**



## 5.1 Test Points

As most signals are digital, it will be difficult to measure waveforms with a standard oscilloscope. However, several key ICs are capable of generating test patterns, which can be controlled via ComPair. In this way it is possible to determine which part is defective.

Perform measurements under the following conditions:
- Service Default Mode.
- Video: Colour bar signal.
- Audio: 3 kHz left, 1 kHz right.

## 5.2 Service Modes

Service Default mode (SDM) and Service Alignment Mode (SAM) offers several features for the service technician, while the Customer Service Mode (CSM) is used for communication between the call centre and the customer.

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. (see also section 5.4.1 ComPair).

**Note:** For the new model range, a new remote control (RC) is used with some renamed buttons. This has an impact on the activation of the Service modes. For instance the old “MENU” button is now called “HOME” (or is indicated by a “house” icon).

### 5.2.1 Service Default Mode (SDM)

***Purpose***
- To create a pre-defined setting, to get the same measurement results as given in this manual.
- To override SW protections detected by stand-by processor and make the TV start up to the step just before protection (a sort of automatic step by step start up). See section 5.3 Step by step Start-up.
- To start the blinking LED procedure where only layer 2 errors are displayed (see also section 5.5 Error Codes).

***Specifications***

**Table 5-1 SDM default settings**

| Region | Freq. (MHz) | Default system |
|---|---|---|
| Europe, AP(PAL/Multi) | 475.25 | PAL B/G |
| Europe, AP DVB-T | 546.00 PID<br>Video: 0B 06 PID<br>PCR: 0B 06 PID<br>Audio: 0B 07 | DVB-T |

- All picture settings at 50% (brightness, colour, contrast).
- All sound settings at 50%, except volume at 25%.
- All service-unfriendly modes (if present) are disabled, like:
  - (Sleep) timer.
  - Child/parental lock.
  - Picture mute (blue mute or black mute).
  - Automatic volume levelling (AVL).
  - Skip/blank of non-favourite pre-sets.

***How to Activate SDM***

For this chassis there are two kinds of SDM: an **analog SDM** and a **digital SDM**. Tuning will happen according Table 5-1.
- **Analog SDM**: use the standard RC-transmitter and key in the code “062596”, directly followed by the “MENU” (or HOME) button.
  **Note:** It is possible that, together with the SDM, the main menu will appear. To switch it “off”, push the “MENU” (or HOME) button again.
- **Digital SDM**: use the standard RC-transmitter and key in the code “062593”, directly followed by the “MENU” (or HOME) button.
  **Note:** It is possible that, together with the SDM, the main menu will appear. To switch it “off”, push the “MENU” (or HOME) button again.
- **Analog SDM** can also be activated by, on the SSB, shorting for a moment the solder pads SDM [1] (see Figure 5-1).

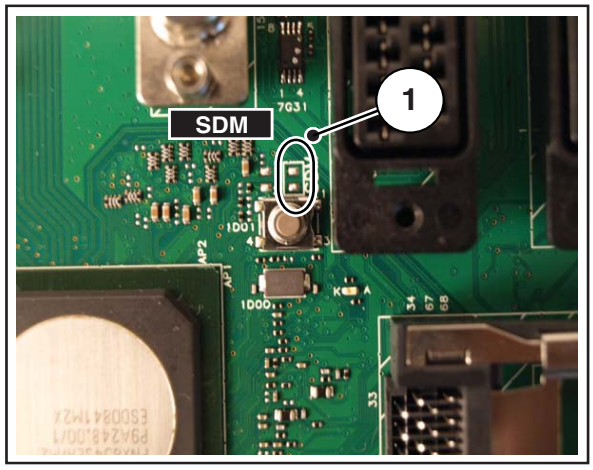


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**Figure 5-1 Service mode pads**

After activating this mode, “SDM” will appear in the upper right corner of the screen (when a picture is available).

***How to Navigate***

When the “MENU” (or HOME) button is pressed on the RC transmitter, the set will toggle between the SDM and the normal user menu (with the SDM mode still active in the background).

***How to Exit SDM***

Use one of the following methods:
- Switch the set to STAND-BY via the RC-transmitter.
- Via a standard customer RC-transmitter: key in “00”-sequence.

### 5.2.2 Service Alignment Mode (SAM)

***Purpose***

- To perform (software) alignments.
- To change option settings.
- To easily identify the used software version.
- To view operation hours.
- To display (or clear) the error code buffer.

***How to Activate SAM***

Via a standard RC transmitter: key in the code “062596” directly followed by the “INFO” or “I+” button. After activating SAM with this method a service warning will appear on the screen, continue by pressing the red button on the RC.

***Contents of SAM (see also Table 6-5):***

- **Hardware Information**
  - **A. SW Version.** Displays the software version of the main software (**example:** Q5431-0.26.2.0= AAAaB_X.Y.W.Z).
    - **AAAA**= the chassis name, where “a” indicates the chip version: e.g. TV543/**3**2= Q54**3**, TV543/**8**2= Q54**8, Q543/92= Q549**.
    - **B**= the SW branch version. This is a sequential number (this is no longer the region indication, as the software is now multi-region).
    - **X.Y.W.Z**= the software version, where X is the main version number (different numbers are not compatible with one another) and Y.W.Z is the sub version number (a higher number is always compatible with a lower number).
  - **B. SBY PROC Version.** Displays the software version of the stand-by processor.
  - **C. Production Code**. Displays the production code of the TV, this is the serial number as printed on the back of the TV set. Note that if an NVM is replaced or is initialized after corruption, this production code has to be re-written to NVM. ComPair will foresee in a possibility to do this.
- **Operation Hours.** Displays the accumulated total of operation hours (not the stand-by hours). Every time the TV is switched “on/off”, 0.5 hours is added to this number.
- **Errors** (followed by maximum 10 errors). The most recent error is displayed at the upper left (for an error explanation see section 5.5 Error Codes).
- **Reset Error Buffer.** When “cursor right” (or the “OK button) is pressed and then the “OK” button is pressed, the error buffer is reset.
- **Alignments.** This will activate the “ALIGNMENTS” sub-menu. See chapter 6. Alignments.
- **Dealer Options.** Extra features for the dealers. See Table 6-5.
- **Options.** Extra features for Service. For more information regarding option codes, see chapter 6. Alignments. Note that if the option code numbers are changed, these have to be confirmed with pressing the “OK” button before the options are stored. Otherwise changes will be lost.
- **Initialize NVM.** The moment the processor recognizes a corrupted NVM, the “initialize NVM” line will be highlighted. Now, two things can be done (dependent of the service instructions at that moment):
  - Save the content of the NVM via ComPair for development analysis, **before** initializing. This will give the Service department an extra possibility for diagnosis (e.g. when Development asks for this).
  - Initialize the NVM.

- **Note**: When the NVM is corrupted, or replaced, there is a high possibility that no picture appears because the display code is not correct. So, before initializing the NVM via the SAM, a picture is necessary and therefore the correct display option has to be entered. Refer to chapter 6. Alignments for details. To adapt this option, it’s advised to use ComPair (the correct HEX values for the options can be found in chapter 8 “Alignments”) or a method via a standard RC (described below).

**Changing the display option via a standard RC**: Key in the code “062598” directly followed by the “MENU” (or HOME) button and “XXX” (where XXX is the 3 digit decimal display code as mentioned in Table 6-4). Make sure to key in all three digits, also the leading zero’s. If the above action is successful, the front LED will go out as an indication that the RC sequence was correct. After the display option is changed in the NVM, the TV will go to the Stand-by mode. If the NVM was corrupted or empty before this action, it will be initialized first (loaded with default values). This initializing can take up to 20 seconds.

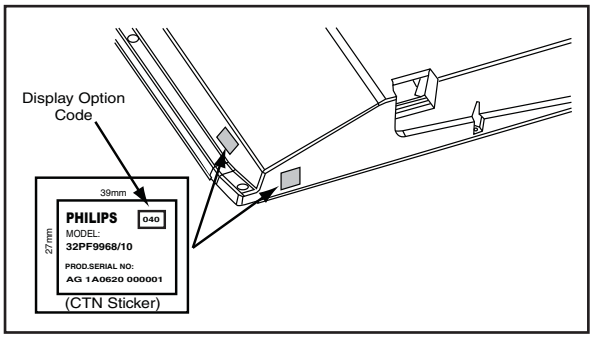


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**Figure 5-2 Location of Display Option Code sticker**

- **Store - go right.** All options and alignments are stored when pressing “cursor right” (or the “OK” button) and then the “OK”-button.
- **SW Maintenance.**
  - **SW Events.** Not useful for Service purposes. In case of specific software problems, the development department can ask for this information.
  - **HW Events.** Not useful for Service purposes. In case of specific software problems, the development department can ask for this information.
- **Test settings.** For development purposes only.
- **Development file versions.** Not useful for Service purposes, this information is only used by the development department.
- **Upload to USB.** To upload several settings from the TV to an USB stick, which is connected to the SSB. The items are “Channel list”, “Personal settings”, “Option codes”, “Display-related alignments” and “History list”. **First a directory “repair\” has to be created in the root of the USB stick.** To upload the settings select each item separately, press “cursor right” (or the “OK button), confirm with “OK” and wait until “Done” appears. In case the download to the USB stick was not successful “Failure” will appear. In this case, check if the USB stick is connected properly and if the directory “repair” is present in the root of the USB stick. Now the settings are stored onto the USB stick and can be used to download onto another TV or other SSB. Uploading is of course only possible if the software is running and if a picture is available. This method is created to be able to save the customer’s TV settings and to store them into another SSB.
- **Download from USB.** To download several settings from the USB stick to the TV. Same way of working as with uploading. To make sure that the download of the channel list from USB to the TV is executed properly, it is necessary to restart the TV and tune to a valid preset if necessary. **Note**: The “History list item” can not be downloaded from USB to the TV. This is a “read-only” item. In case of specific problems, the development department can ask for this information.

***How to Navigate***

- In SAM, the menu items can be selected with the “CURSOR UP/DOWN” key (or the scroll wheel) on the RC-

transmitter. The selected item will be highlighted. When not all menu items fit on the screen, move the "CURSOR UP/DOWN" key to display the next/previous menu items.
- With the "CURSOR LEFT/RIGHT" keys (or the scroll wheel), it is possible to:
  - (De) activate the selected menu item.
  - (De) activate the selected sub menu.
- With the "OK" key, it is possible to activate the selected action.

***How to Exit SAM***

Use one of the following methods:
- Switch the set to STAND-BY via the RC-transmitter.
- Via a standard RC-transmitter, key in "00" sequence, or select the "BACK" key.

### 5.2.3 Customer Service Mode (CSM)

***Purpose***

When a customer is having problems with his TV-set, he can call his dealer or the Customer Helpdesk. The service technician can then ask the customer to activate the CSM, in order to identify the status of the set. Now, the service technician can judge the severity of the complaint. In many cases, he can advise the customer how to solve the problem, or he can decide if it is necessary to visit the customer.
The CSM is a read only mode; therefore, modifications in this mode are not possible.
When CSM is activated, the layer 1 error is displayed via blinking LED. Only the latest error is displayed. (see also section 5.5 Error Codes).

When CSM is activated and there is a USB stick connected to the TV, the software will dump the complete CSM content to the USB stick. The file (Csm.txt) will be saved in the root of the USB stick. This information can be handy if no information is displayed.

*Only for Q548.1:*

When in the Q548.1 chassis CSM is activated, a test pattern will be displayed during 5 s.: 1 s. blue, 1 s. green, and 1 s. red, then again 1 s. blue and 1 s. green. This test pattern is generated by the PNX5120.
So if this test pattern is shown, it could be determined that the back end video chain (PNX5120, LVDS, and display) of the SSB is working.
For LED backlight TV sets, the test pattern is build as follows: 1 s. blue, 1 s. green, 1 s. red (generated by the PNX5120) and further on with 3 seconds RGB pattern from the LED Dimming Panel.

***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!

***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***

The contents are displayed on three pages: General, Software versions, and Quality items. However, these group names itself are not shown anywhere in the CSM menu.

*General*
- **Set Type.** This information is very helpful for a helpdesk/workshop as reference for further diagnosis. In this way, it is not necessary for the customer to look at the rear of the TV-set. Note that if an NVM is replaced or is initialized after corruption, this set type has to be re-written to NVM. ComPair will foresee in a possibility to do this.
- **Production Code.** Displays the production code (the serial number) of the TV. Note that if an NVM is replaced or is initialized after corruption, this production code has to be re-written to NVM. ComPair will foresee a in possibility to do this.
- **Installed date.** Indicates the date of the first installation of the TV. This date is acquired via time extraction.
- **Options 1.** Gives the option codes of option group 1 as set in SAM (Service Alignment Mode).
- **Options 2.** Gives the option codes of option group 2 as set in SAM (Service Alignment Mode).
- **12NC SSB.** Gives an identification of the SSB as stored in NVM. Note that if an NVM is replaced or is initialized after corruption, this identification number has to be re-written to NVM. ComPair will foresee in a possibility to do this. This identification number is the 12nc number of the SSB. Remark: the content here can also be a part of the 12NC of the SSB in combination with the serial number.
- **12NC display.** Shows the 12NC of the display
- **12NC supply.** Shows the 12NC of the supply.
- **12NC "fan board".** Shows the 12NC of the "fan board"-module (for sets with LED backlight).
- **12NC "LED Dimming Panel".** Shows the 12NC of the LED dimming Panel (for sets with LED backlight).

*Software versions*
- **Current main SW.** Displays the built-in main software version. In case of field problems related to software, software can be upgraded. As this software is consumer upgradeable, it will also be published on the Internet. Example: Q5431E_1.2.3.4.
- **Stand-by SW.** Displays the built-in stand-by processor software version. Upgrading this software will be possible via ComPair or via USB (see section Software Upgrading). Example: STDBY_1.2.3.4.
- **MOP ambient light SW.** Displays the MOP ambient light EPLD SW.
- **MPEG4 software.** Displays the MPEG4 software (for sets with MPEG4).
- **PNX5120 boot NVM.** Displays the SW-version that is used in the PNX5120 boot NVM (for sets with PNX5120).
- **LED Dimming SW.** Displays the LED dimming EPLD SW (for sets with LED backlight).

*Quality items*
- **Signal quality.** Poor/average/good
- **Child lock.** Not active/active. This is a combined item for locks. If any lock (Preset lock, child lock, lock after or parental lock) is active, the item shall show "active".
- **HDMI HDCP key.** Indicates of the HDMI keys (or HDCP keys) are valid or not. In case these keys are not valid and the consumer wants to make use of the HDMI functionality, the SSB has to be replaced.
- **Ethernet MAC address.** Not applicable.
- **Wireless MAC address.** Not applicable.
- **BDS key.** Indicates if the "BDS level 1" key is valid or not.
- **CI slot present.** If the common interface module is detected the result will be "YES", else "NO".
- **HDMI input format.** The detected input format of the HDMI.
- **HDMI audio input stream.** The HDMI audio input stream is displayed: present / not present.
- **HDMI video input stream.** The HDMI video input stream is displayed: present / not present.

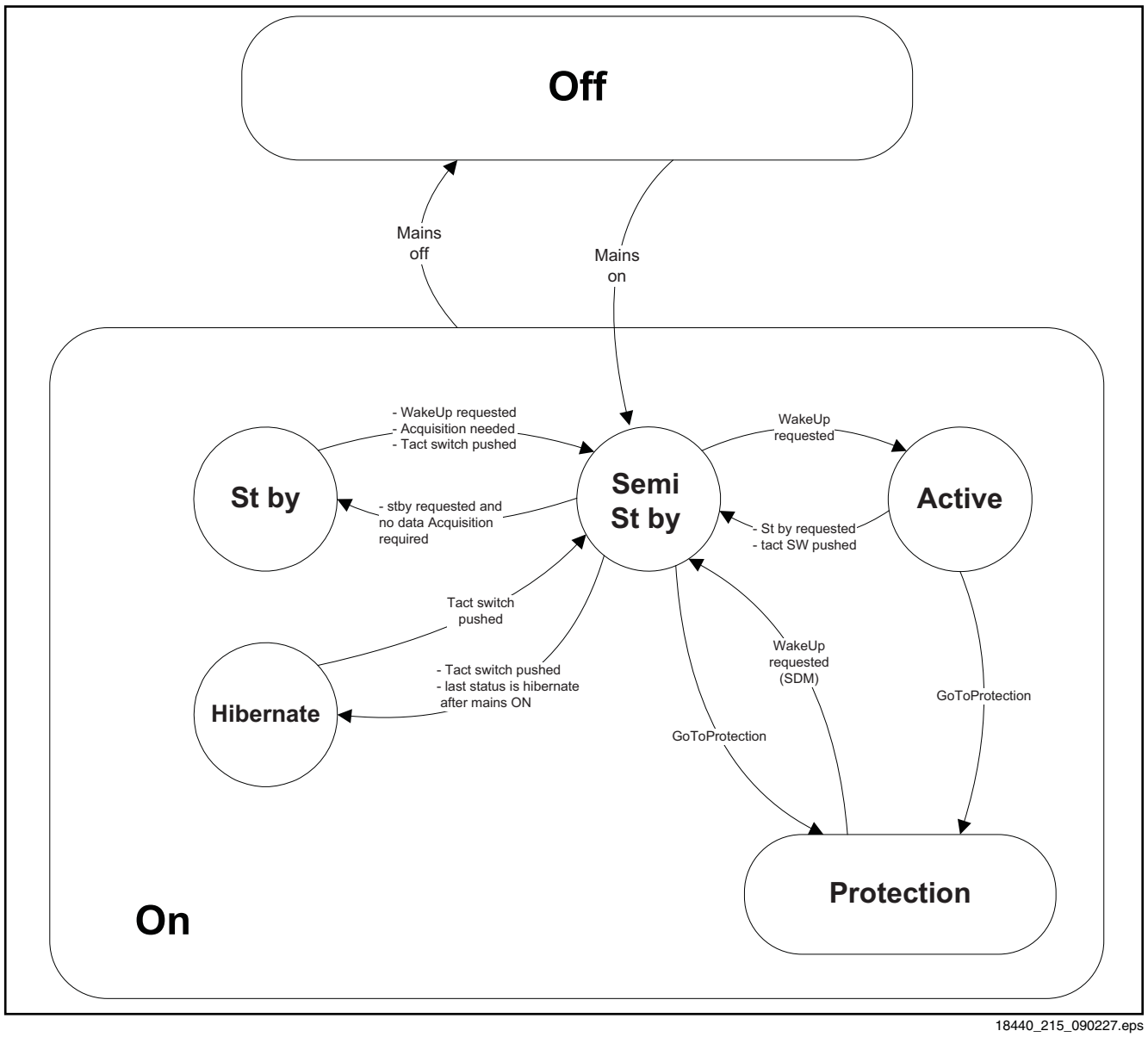
***How to Exit CSM***

Press the "MENU" (or HOME) button twice on the RC-transmitter.

## 5.3 Step by step Start-up

When the TV is in a protection state due to an error detected by stand-by software (error blinking is displayed) **and** SDM is activated via short cutting the pins on the SSB, the TV starts up until it reaches the situation just before protection. So, this is a kind of automatic step by step start-up. In combination with the start-up diagrams below, it is shown which supplies are present at a certain moment. Important to know is, that if e.g. the 3V3 detection fails and thus layer 2 error = 18 is blinking while the TV is restarted via SDM, the Stand-by Processor will enable the 3V3, but the TV set will not go to protection now. The TV will stay in this situation until it is reset (Mains/AC Power supply interrupted).
**Caution:** in case the start-up in this mode with a faulty FET 7101-1 is done, all ICs supplied by the +3V3 could be destroyed, due to over voltage (12V on 3V3-line). It is recommended to measure first the FET 7101-1 or others FETs on short-circuit before activating SDM via the service pads.

The abbreviations “SP” and “MP” in the figures stand for:
- SP: protection or error detected by the **S**tand-by **P**rocessor.
- MP: protection or error detected by the MIPS **M**ain **P**rocessor.

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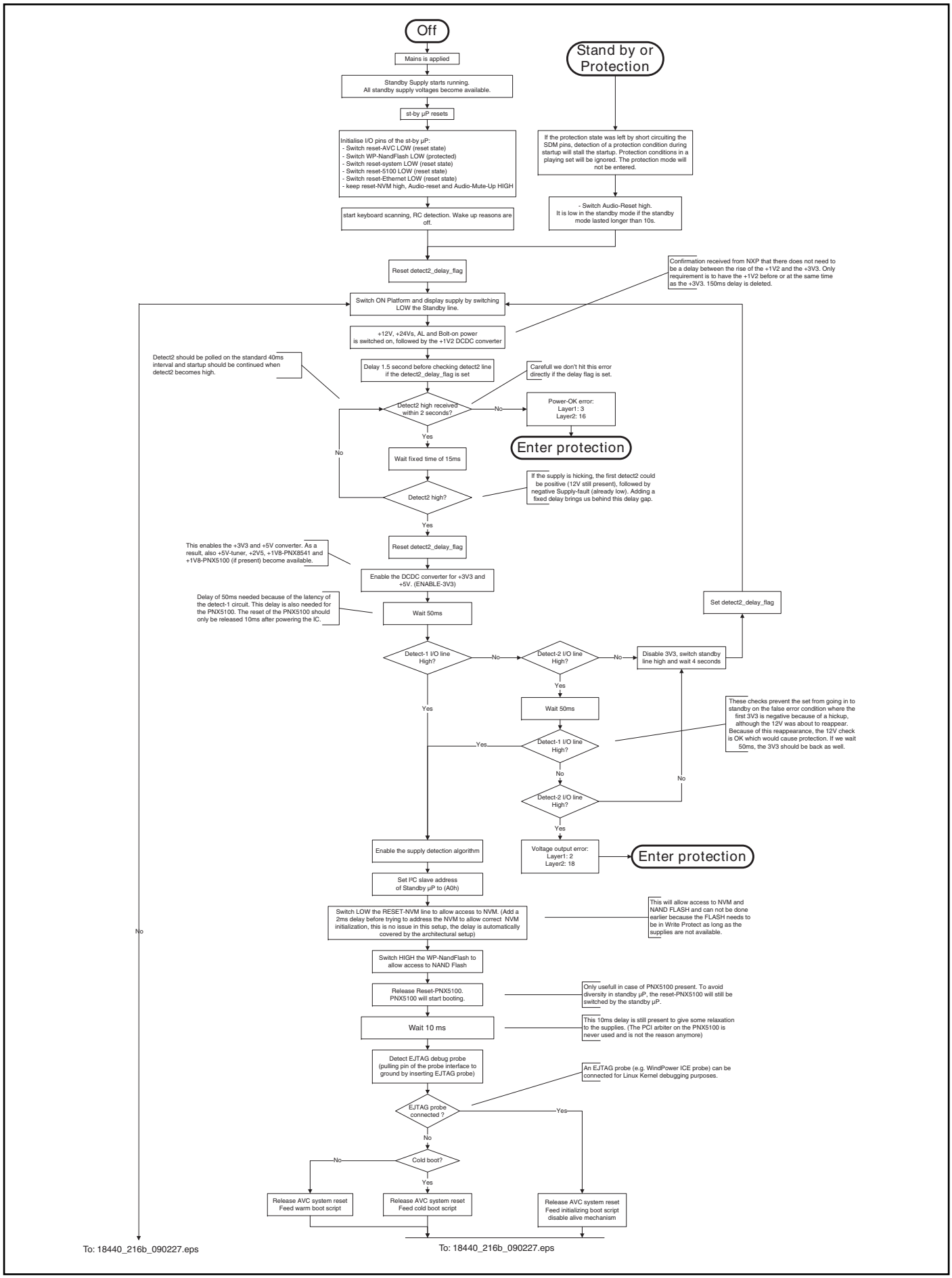
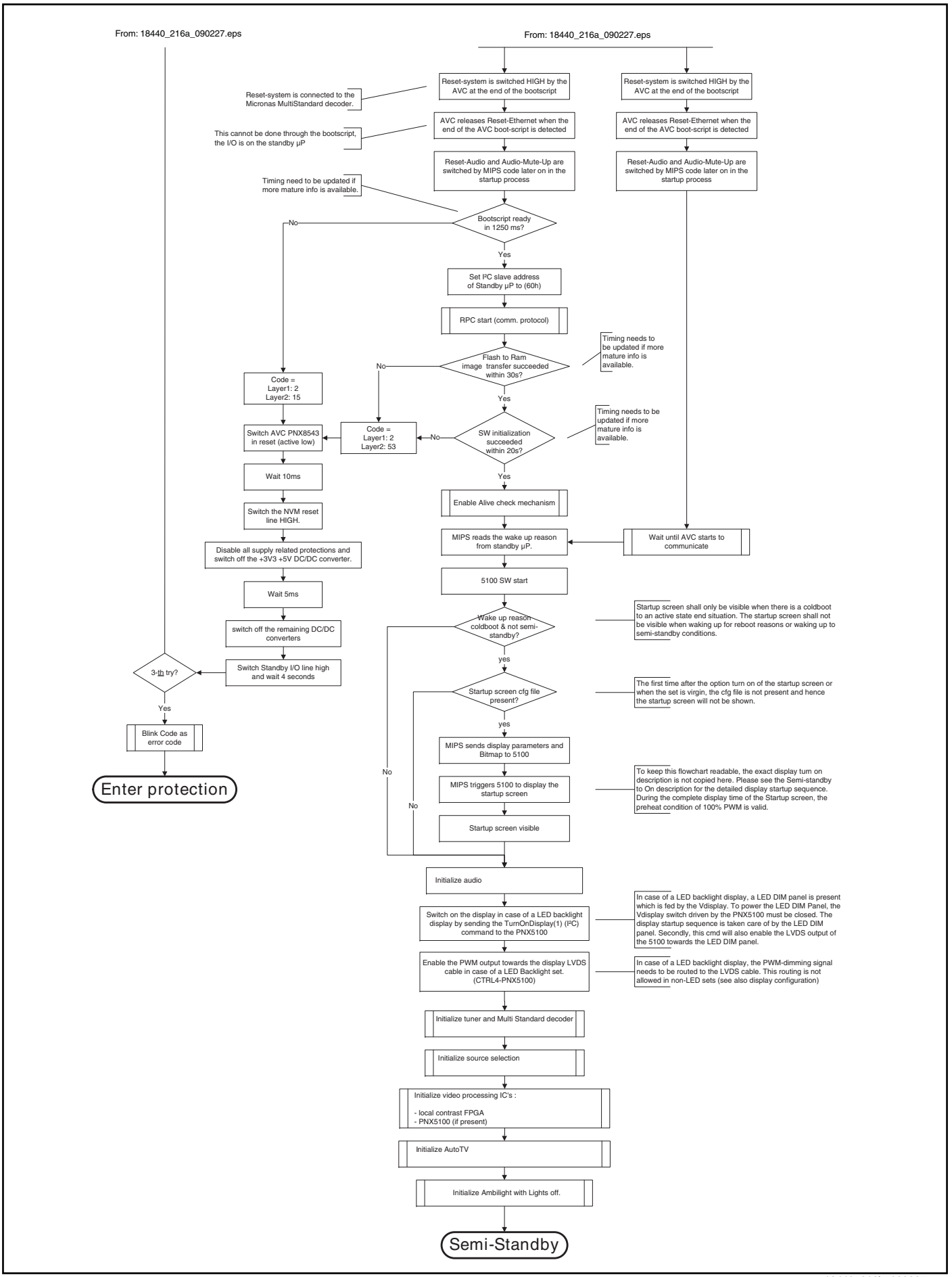
091118

**Figure 5-3 Transition diagram**



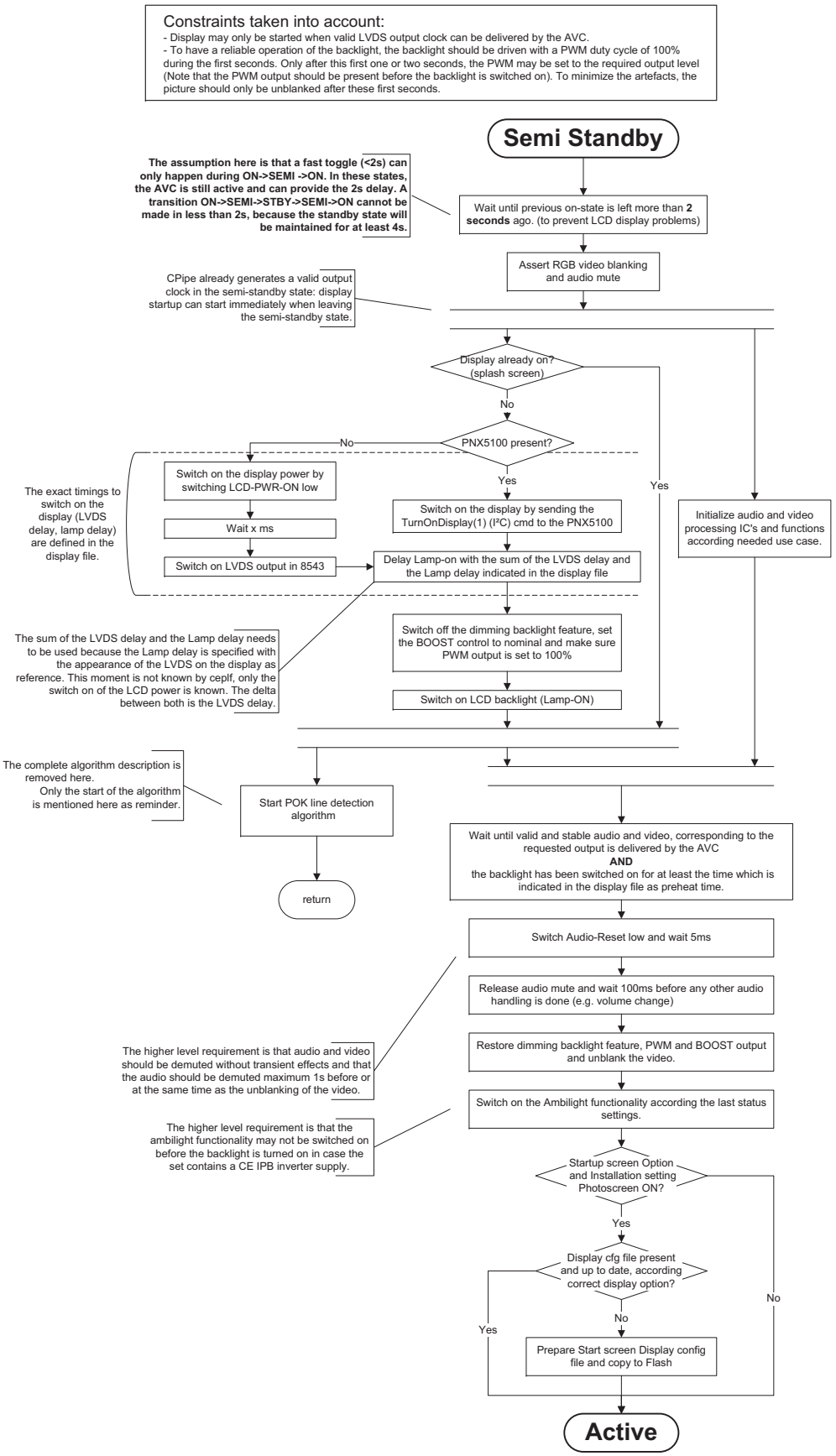

18440_216a_090227.eps
091118

**Figure 5-4 "Off/Stand-by" to "Semi Stand-by" flowchart (part 1)**



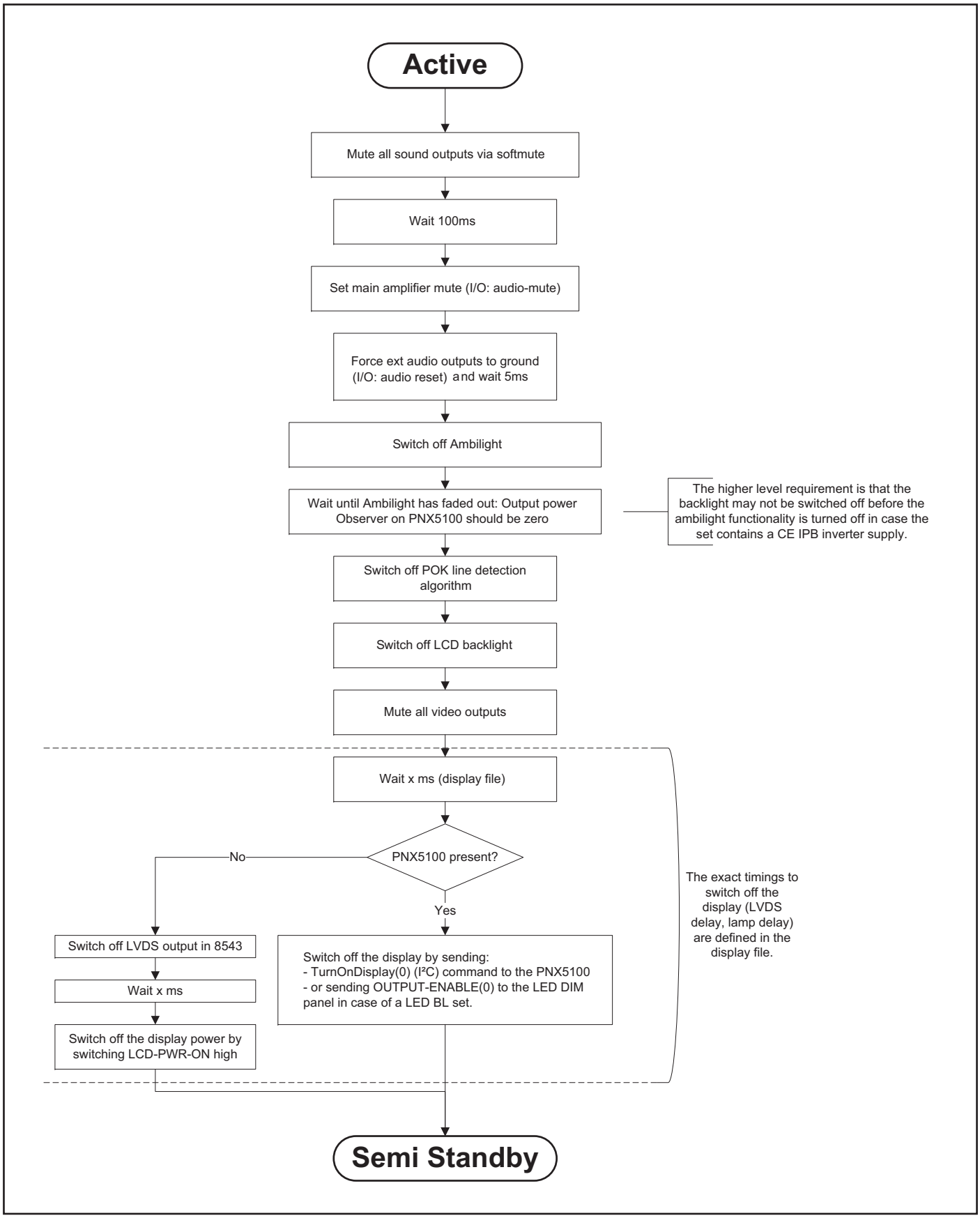

18440_216b_090227.eps
090702

**Figure 5-5 "Off/Stand-by" to "Semi Stand-by" flowchart (part 2)**



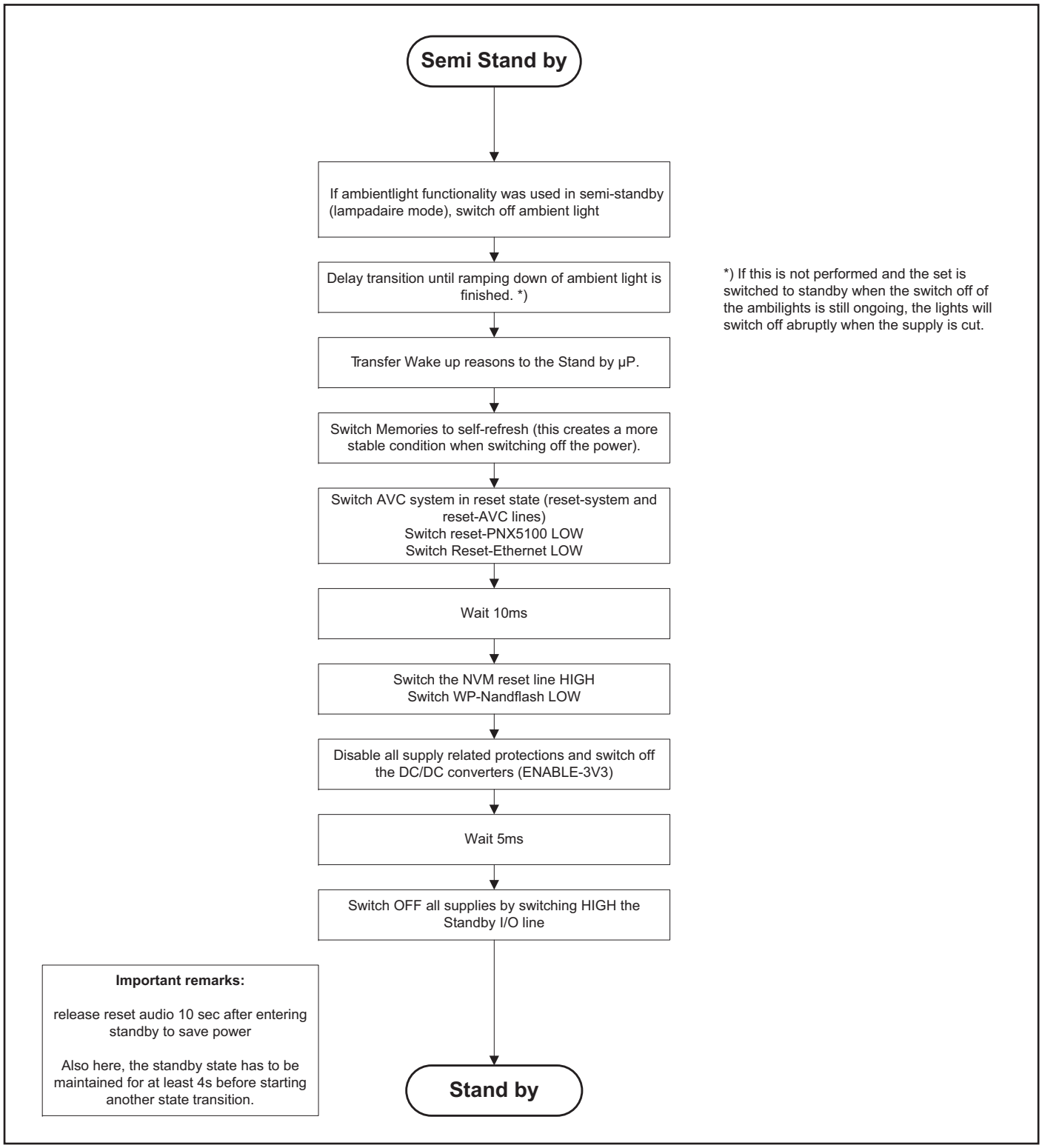

18440_217_090227.eps
091112

**Figure 5-6 “Semi Stand-by” to “Active” flowchart**




18440_219_090227.eps
091112

**Figure 5-7 "Active" to "Semi Stand-by" flowchart**




18440_220_090227.eps
091112

**Figure 5-8 “Semi Stand-by” to “Stand-by” flowchart**

## 5.4 Service Tools

### 5.4.1 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 up possibilities.

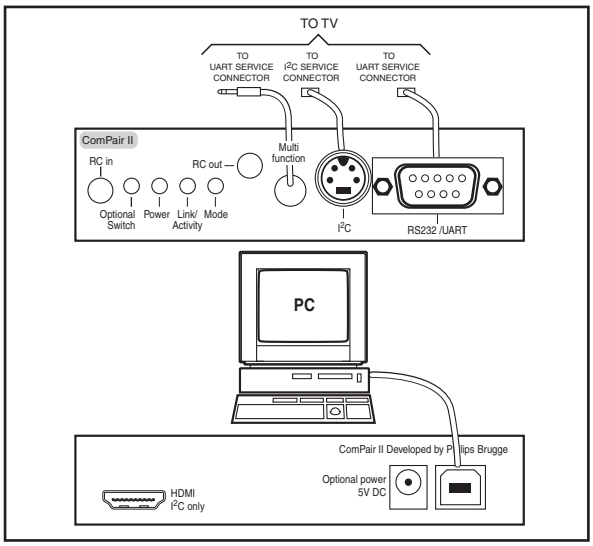
***Specifications***

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.




10000_036_090121.eps
091118

**Figure 5-9 ComPair II interface connection**

**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.
- Software is available via the Philips Service web portal.
- ComPair serial interface cable for Q54x.x. (using 3.5 mm Mini Jack connectors): 3138 188 75051.

**Note:** When having problems, please contact your local support desk.

## 5.5 Error Codes

### 5.5.1 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.

When an error occurs, it is added to the list of errors, provided the list is not full. When an error occurs and the error buffer is full, then the new error is not added, and the error buffer stays intact (history is maintained).

To prevent that an occasional error stays in the list forever, the error is removed from the list after more than 50 hrs. of operation.

When multiple errors occur (errors occurred within a short time span), there is a high probability that there is some relation between them.

New in this chassis is the way errors can be displayed:

There is a simple blinking LED procedure for board level repair (home repair) so called LAYER 1 errors next to the existing errors which are LAYER 2 errors (see Table 5-3).

- LAYER 1 errors are one digit errors
- LAYER 2 errors are two digit errors.

- In protection mode.
  - From consumer mode: **LAYER 1.**
  - From SDM mode: **LAYER 2**.
- Fatal errors, if I²C bus is blocked and the set re-boots, CSM and SAM are not selectable.
  - From consumer mode: **LAYER 1.**
  - From SDM mode: **LAYER 2**.
    Important remark:
    For all errors detected by MIPS which are fatal => rebooting of the TV set (reboot starts after LAYER 1 error blinking), one should short the solder paths at start-up from the power OFF state by mains interruption and not via the power button to trigger the SDM via the hardware pins.
- In CSM mode
  - When entering CSM: error **LAYER 1** will be displayed by blinking LED. Only the latest error is shown.
- In SDM mode
  - When SDM is entered via Remote Control code or the hardware pins, **LAYER 2** is displayed via blinking LED.
- In the ON state
  - In “Display error mode”, set with the RC commands “mute_06250X _OK” **LAYER 2** errors are displayed via blinking LED.
- Error display on screen.
  - In CSM no error codes are displayed on screen.
  - In SAM the complete error list is shown.

Basically there are three kinds of errors:

- **Errors detected by the Stand-by software which lead to protection.** These errors will always lead to protection and an automatic start of the blinking LED LAYER 1 error. (see section 5.6 The Blinking LED Procedure).
- **Errors detected by the Stand-by software which not lead to protection**. In this case the front LED should blink the involved error. See also section Extra Information. Note that it can take up several minutes before the TV starts blinking the error (e.g. LAYER 1 error = 2, LAYER 2 error = 15 or 53).
- **Errors detected by main software (MIPS).** In this case the error will be logged into the error buffer and can be read out via ComPair, via blinking LED method LAYER 1-2 error, or in case picture is visible, via SAM.

### 5.5.2 How to Read the Error Buffer

Use one of the following methods:
- On screen via the SAM (only when a picture is visible). E.g.:
  - **00 00 00 00 00**: No errors detected
  - **23 00 00 00 00**: Error code 23 is the last and only detected error.
  - **37 23 00 00 00**: Error code 23 was first detected and error code 37 is the last detected error.
  - Note that no protection errors can be logged in the error buffer.
- Via the blinking LED procedure. See section 5.5.3 How to Clear the Error Buffer.
- Via ComPair.

### 5.5.3 How to Clear the Error Buffer

Use one of the following methods:
- By activation of the “RESET ERROR BUFFER” command in the SAM menu.
- With a normal RC, key in sequence “MUTE” followed by “062599” and “OK”.
- If the content of the error buffer has not changed for 50+ hours, it resets automatically.

### 5.5.4 Error Buffer

In case of non-intermittent faults, clear the error buffer before starting to repair (**before** clearing the buffer, write down the content, as this history can give significant information). This to ensure that old error codes are no longer present.
If possible, check the entire contents of the error buffer. In some situations, an error code is only the result of another error code and not the actual cause (e.g. a fault in the protection detection circuitry can also lead to a protection).

There are several mechanisms of error detection:
- Via error bits in the status registers of ICs.
- Via polling on I/O pins going to the stand-by processor.
- Via sensing of analogue values on the stand-by processor or the PNX8543.
- Via a “not acknowledge” of an I²C communication.

Take notice that some errors need several minutes before they start blinking or before they will be logged. So in case of problems wait 2 minutes from start-up onwards, and then check if the front LED is blinking or if an error is logged.

**Table 5-2 Layer 1 code overview (multi chassis overview)**

| LAYER 1 codes | | |
|---|---|---|
| SSB | 2 | |
| Display supply | 3 | |
| Platform supply | 4 | Only for display option 196 and 197 |
| Fan | 7 | |
| AmbiLight or DC/DC or 3D LED dim panel | 8 | |

**Table 5-3 Error code overview (multi chassis overview)**

| Description | LAYER 1 error | LAYER 2 error | Monitored | Medium | Error/Prot. | EB: in Error Buffer BL: Blinking LED | Device | Defective board | Special Remarks |
|---|---|---|---|---|---|---|---|---|---|
| Main NVM | 2 | 0 | MIPS | I²C1 | E | x | STM24C128 | SSB | TV shut down with red LED blinking 2. |
| Temp. protection | 3 | 12 | MIPS | I²C4 | P | BL/EB | | Supply | |
| I²C3 | 2 | 13 | MIPS | I²C3 | E | BL/EB | SSB | SSB | TV is rebooting endlessly with red LED blinking “2”. |
| I²C2 | 2 | 14 | MIPS | I²C2 | E | BL/EB | SSB | SSB | |
| PNX does not boot (HW cause)<br>PNX 5100 does not boot | 2 | 15 | St-by µP | I²C1 | P | BL | SSB | SSB | TV is rebooting endlessly with red LED blinking “2” |
| 12V | 3 | 16 | St-by µP | I/O | P | BL | | Supply | TV shut down with red LED blinking “3”. |
| 12V | 3 | 16 | St-by µP | I/O | P | BL | | Platform Supply | |
| Inverter or display supply | 3 | 17 | Mips | I/O | E | EB | | Supply | TV still in normal operation mode, but without backlights. Enter CSM Layer 1 red LED blinking “3”. |
| Only for display option 196 and 197 | 4 | 17 | Mips | I/O | E | EB | | Display Supply | |
| 1V2, 1V2, 3V3, 5V to low | 2 | 18 | St-by µP | I/O | P | BL | | SSB | TV shut down with red LED blinking “2”. |
| PNX 5100 | 2 | 21 | MIPS | I²C3 | E | EB | PNX 5100 | SSB | TV is rebooting endlessly, with red LED blinking “2” (shown every 20 second). |
| HDMI MUX | 2 | 23 | MIPS | I²C3 | E | EB | TDA9996 | SSB | Activate CSM red LED blinking “2”. |
| I²C switch | 2 | 24 | Mips | I²C2 | E | EB | PCA9540 | SSB | |
| Boot-NVM PNX5120 | 2 | 25 | MIPS | I²C3 | E | EB | STM24C08 | SSB | TV is rebooting endlessly, with red LED blinking “2” (shown every minute). |
| Multi Standard demodulator (Micronas IF) | 2 | 27 | MIPS | I²C3 | E | EB | DRX3616K<br>DRX3626K | SSB | TV is in normal operation but without video displayed (RF). |
| ARM (AL) | 8 | 28 | MIPS | I²C3 | E | EB | NXP LPC2103 | AL mod. or DC/DC | TV is in normal operation but without AMBILIGHT “on”. |
| FPGA (Local contrast) | 2 | 29 | MIPS | I²C3 | E | EB | Altera | SSB | |
| Tuner1 | 2 | 34 | MIPS | I²C3 | E | EB | UV1783S<br>HD1816 | SSB | TV is in normal operation but without video displayed (RF). |
| FAN I²C expander | 7 | 41 | MIPS | I²C2 | E | EB | PCA 9533 | FAN mod. | |
| Tx sensor | 7 | 42 | MIPS | I²C2 | E | EB | LM 75 | Txsensor | |
| FAN 1 | 7 | 43 | MIPS | I²C2 | E | EB | | FAN | |
| FAN 2 | 7 | 44 | MIPS | I²C2 | E | EB | | FAN | |
| MIPS does not boot (SW cause) | 2 | 53 | St-by µP | I²C1 | P | BL | PNX8543 | SSB | TV is rebooting endlessly with white LED blinking. |
| Display | 5 | 64 | MIPS | I²C2 | E | BL/EB | Altera | Display | |
| FPGA LED dim 2D | 2 | 65 | MIPS | I²C3 | E | EB | Xilinx | SSB | |
| FPGA LED dim 3D | 8 | 65 | MIPS | I²C2 | E | EB | Altera | SSB | |

***Extra Information***

- **Rebooting.** When a TV is constantly rebooting due to internal problems, most of the time no errors will be logged or blinked. This rebooting can be recognized via a ComPair interface and Hyperterminal (for Hyperterminal settings, see section 5.8.6 UART Logging). It's shown that the loggings which are generated by the main software keep continuing. In this case diagnose has to be done via ComPair.
- **Main NVM**. When there is no I²C communication towards the main NVM, LAYER 1 error = "2" will be displayed via the blinking LED procedure. In SDM, LAYER 2 error can be "19". Check the logging for keywords like "I²C bus blocked".
- **Error 13 (I²C bus 3 blocked)**. When this error occurs, the TV will constantly reboot due to the blocked bus. The best way for further diagnosis here, is to use ComPair.
- **Error 15 (PNX8543 doesn't boot)**. Indicates that the main processor was not able to read his bootscript. This error will point to a hardware problem around the PNX8543 (supplies not OK, PNX 8541 completely dead, I²C link between PNX and Stand-by Processor broken, etc...). When error 15 occurs it is also possible that I²C2 bus is blocked (NVM). I²C2 can be indicated in the schematics as follows: SCL-UP-MIPS, SDA-UP-MIPS, SCL-2 or SDA-2. Other root causes for this error can be due to hardware problems with: NVM PNX5120, PNX5120 itself, or DDRs.
- **Error 16 (12V)**. This voltage is made in the power supply and results in protection (LAYER 1 error = "3"). When SDM is activated we see blinking LED LAYER 2 error = "16".
- **Error 17 (POK)**. The display is switched "on" with the signal "Lamp On". If the inverter starts (or 24V display is OK) the POK line becomes "high". If the POK line is not "high", the set backlight will be switched "off" and "on" again for 3 times (start-up). If the set POK line becomes "high" after the retries, no error is logged; if the POK stays "low", error is logged: LAYER 1 error = "3", LAYER 2 error = "17". No protection is required, the start-up goes on.
- **Error 18 (1V2-3V3-5V too low)**. All these supplies are generated by the DC/DC supply on the SSB. If one of these supplies is too low, protection occurs and blinking LED LAYER 1 error = "2" will be displayed automatically. In SDM this gives LAYER 2 error = "18".
- **Error 21 (PNX5120)**. When there is no I²C communication towards the PNX5120 after start-up (power "off" by disconnection of the mains cord), LAYER 2 error will blink continuously via the blinking LED procedure in SDM. (start-up the TV with the solder paths short to activate SDM).
- **Error 23 (HDMI)**. When there is no I²C communication towards the HDMI multiplexer after start up, LAYER 2 error = "23" will be logged and displayed via the blinking LED procedure if SDM is switched "on".
- **Error 25 (Boot-NVM PNX5120)**. When there is no I²C communication towards the PNX5120 NVM after start-up, TV is rebooting endlessly with blinking LAYER 1 error = 2 (shown every minute). When SDM is activated we see blinking LED LAYER 2 error = "25".
- **Error 27 (Multi Standard demodulator)**. When there is no I²C communication towards the Multi Standard demodulator after start up, LAYER 2 error = "27" will be logged and displayed via the blinking LED procedure when SDM is switched "on".
- **Error 28 (FPGA ambilight)**. When there is no I²C communication towards the FPGA ambilight after start up, LAYER 2 error = "28" will be logged and displayed via the blinking LED procedure if SDM is switched "on". Note that it can take up several minutes before the TV starts blinking LAYER 1 error = "2" in CSM or in SDM, LAYER 2 error = "28".
- **Error 34 (Tuner)**. When there is no I²C communication towards the tuner after start up, LAYER 2 error = "34" will be logged and displayed via the blinking LED procedure when SDM is switched on.
- **Error 53**. This error will indicate that the PNX8543 has read his bootscript (when this would have failed, error 15 would blink) but initialization was never completed because of hardware problems (NAND flash,...) or software initialization problems. Possible cause could be that there is no valid software loaded (try to upgrade to the latest main software version). Note that it can take up to 2 minutes before the TV starts blinking LAYER 1 error = "2" or in SDM, LAYER 2 error = "53".

## 5.6 The Blinking LED Procedure

### 5.6.1 Introduction

The blinking LED procedure can be split up into two situations:

- Blinking LED procedure LAYER 1 error. In this case the error is automatically blinked when the TV is put in CSM. This will be only one digit error, namely the one that is referring to the defective board (see table 5-3 Error code overview (multi chassis overview)) which causes the failure of the TV. This approach will especially be used for home repair and call centres. The aim here is to have service diagnosis from a distance.
- Blinking LED procedure LAYER 2 error. Via this procedure, the contents of the error buffer can be made visible via the front LED. In this case the error contains 2 digits (see table 5-3 Error code overview (multi chassis overview)) and will be displayed when SDM (hardware pins) is activated. This is especially useful for fault finding and gives more details regarding the failure of the defective board.

**Important remark:**
For all errors detected by MIPS which are fatal (rebooting of the TV set, with reboot starts after LAYER 1 error blinking), one should short the SDM solder paths at start-up from the power OFF state by mains interruption and not via the power button, to trigger the SDM via the hardware pins.

When one of the blinking LED procedures is activated, the front LED will show (blink) the contents of the error-buffer. Error codes greater then 10 are shown as follows:

1. "n" long blinks (where "n" = 1 to 9) indicating decimal digit
2. A pause of 1.5 s
3. "n" short blinks (where "n"= 1 to 9)
4. A pause of approximately 3 s,
5. When all the error codes are displayed, the sequence finishes with a LED blink of 3 s
6. The sequence starts again.

**Example:** Error 12 8 6 0 0.
After activation of the SDM, the front LED will show:

1. One long blink of 750 ms (which is an indication of the decimal digit) followed by a pause of 1.5 s
2. Two short blinks of 250 ms followed by a pause of 3 s
3. Eight short blinks followed by a pause of 3 s
4. Six short blinks followed by a pause of 3 s
5. One long blink of 3 s to finish the sequence
6. The sequence starts again.

### 5.6.2 How to Activate

Use one of the following methods:

- **Activate the CSM**. The blinking front LED will show only the latest layer 1 error, this works in "normal operation" mode or automatically when the error/protection is monitored by the stand-by processor. At the time of this release, this layer 1 error blinking was not working as expected.
  In case no picture is shown and there is no LED blinking, read the logging to detect whether "error devices" are mentioned. (see section 5.8.6 UART Logging).
- **Activate the SDM**. The blinking front LED will show the entire contents of the layer 2 error buffer, this works in "normal operation" mode or when SDM (via hardware pins) is activated when the tv set is in protection.

**Important remark:**
For all errors detected by MIPS which are fatal => rebooting of the TV set (reboot starts after LAYER 1 error blinking), one should short the solder paths at start-up from the power OFF state by mains interruption and not via the power button to trigger the SDM via the hardware pins.

- **Transmit the commands "MUTE" - "062500" - "OK" with a normal RC**. The complete error buffer is shown. Take notice that it takes some seconds before the blinking LED starts.
- **Transmit the commands "MUTE" - "06250x" - "OK" with a normal RC** (where "x" is a number between 1 and 5). When x = 1 the last detected error is shown, x = 2 the second last error, etc.... Take notice that it takes some seconds before the blinking LED starts.

## 5.7 Protections

### 5.7.1 Software Protections

Most of the protections and errors use either the stand-by microprocessor or the MIPS controller as detection device. Since in these cases, checking of observers, polling of ADCs, and filtering of input values are all heavily software based, these protections are referred to as software protections. There are several types of software related protections, solving a variety of fault conditions:

- **Protections related to supplies:** check of the 12V, +5V, +3V3 and 1V2.
- **Protections related to breakdown of the safety check mechanism.** E.g. since the protection detections are done by means of software, failing of the software will have to initiate a protection mode since safety cannot be guaranteed any more.

***Remark on the Supply Errors***
The detection of a supply dip or supply loss during the normal playing of the set does not lead to a protection, but to a cold reboot of the set. If the supply is still missing after the reboot, the TV will go to protection.

***Protections during Start-up***
During TV start-up, some voltages and IC observers are actively monitored to be able to optimise the start-up speed, and to assure good operation of all components. If these monitors do not respond in a defined way, this indicates a malfunction of the system and leads to a protection. As the observers are only used during start-up, they are described in the start-up flow in detail (see section 5.3 Step by step Start-up).

### 5.7.2 Hardware Protections

The only real hardware protection in this chassis appears in case of an audio problem e.g. DC voltage on the speakers. The audio protection circuit pulls the "supply-fault" low and the tv set will blink LAYER 1 error = 2 or in SDM, LAYER 2 error = 19. **Be very careful** to overrule this protection via SDM (not to cause damage to the Class D audio amplifier). Check audio part first before activating via SDM. **In case one of the speakers is not connected, the protection can also be triggered.**

***Repair Tips***

- It is also possible that the set has an audio DC protection because of an interruption in one or both speakers (the DC voltage that is still on the circuit cannot disappear through the speakers).
  **Caution:** (Dis)connecting the speakers during the ON state of the TV can damage the audio amplifier.

### 5.7.3 Important remark regarding the blinking LED indication

As for the blinking LED indication, the blinking LED of layer 1 error displaying can be switched "off" by pushing the power button on the keyboard.
This condition is not valid after the set was unpowered (via mains interruption). The blinking LED starts again and can only be switched "off" by unplugging the mains connection.
This can be explained by the fact that the MIPS can not load the keyboard functionality from software during the start-up and does not recognise the keyboard commands at this time.

## 5.8 Fault Finding and Repair Tips

Read also section "5.5 Error Codes, 5.5.4 Error Buffer, Extra Information".

### 5.8.1 Ambilight

Due to degeneration process of the AmbiLights, there can be a difference in the colour and/or light output of the spare ambilight module in comparison with the originals ones contained in the TV set. Via ComPair, the light output can be adjusted.

### 5.8.2 CSM

When CSM is activated and there is a USB stick connected to the TV, the software will dump the complete CSM content to the USB stick. The file (Csm.txt) will be saved in the root of the USB stick. If this mechanism works it can be concluded that a large part of the operating system is already working (MIPS, USB...)

### 5.8.3 Exit "Factory Mode"

When an "F" is displayed in the screen's right corner, this means the set is in "Factory" mode, and it normally happens after a new SSB is mounted. To exit this mode, push the "VOLUME minus" button on the TV's local keyboard for 10 seconds (this disables the continuous mode).
Then push the "SOURCE" button on the TV's local keyboard for 10 seconds until the "F" disappears from the screen.

### 5.8.4 DC/DC Converter

***Introduction***

- The best way to find a failure in the DC-DC converters is to check their starting-up sequence at "power-on via the mains cord", presuming that the stand-by microprocessor is operational.
- If the input voltage of DC-DC converters is around 12.7 V (measured on decoupling capacitors 2107 and 2123 and the enable signals are "low" (active), then the output voltages should have their normal values. The +12V and +5VPOD supplies start-up first (enabled by PODMODE signal from the stand-by microprocessor). There is a supplementary condition for 12V to start-up: if the +5V-POD does not start up due to a local defect, then +12V will not be available as well. The +5V-ON supply is enabled by the ONMODE signal (coming also from the stand-by microprocessor). The +1V2 supply starts up when the +12V appears, then at least 100 ms later, the +3V3 will be activated via the ENABLE-3V3 signal from the stand-by microprocessor. If the +12V value is less than 10 V, the last enumerated voltages will not show up due to the under-voltage detection circuit 7105-1 + 6101 and surrounding components. Furthermore, if the +12V is less than 8 V, then also the +1V2 will not be available. The +5V5-TUN generator 7202 (present only for the analogue version of China platforms) will start to operate as soon as the 12V (PSU) is present.

- The consumption of controller IC 7103 is around 19 mA (that means almost 200 mV drop voltage across resistor 3108).
- The current capability of DC-DC converters is quite high (short-circuit current is 7 to 10 A).
- The DETECT1 signal (active “low”) is an internal protection (error 18) of the DC-DC convertor and will occur if the output voltage of any DC-DC convertor is out of limits (10% of the normal value).

***Fault Finding***

- **Symptom:** +1V2 not present (even for a short while ~10 ms)
  - Check 12 V availability (resistor 3108, MOS-FETs 7101 and 7102), value of +12 V, and surrounding components)
  - Check the voltage on pin 9 (1.5 V),
  - Check for +1V2 output voltage short-circuit to GND that can generate pulsed over-currents 7...10 A through coil 5103.
  - Check the over-current detection circuit (2106 or 3131 interrupted).
- **Symptom:** +1V2 present for about 100ms, +3V3 not rising.
  - Check the ENABLE-3V3 signal (active “low”),
  - Check the voltage on pin 8 (1.5 V),
  - Check the under-voltage detection circuit (the voltage on collector of transistor 7105-1 should be less than 0.8 V),
  - Check for output voltages short-circuits to GND (+3V3) that can generate pulsed over currents 7...10 A through coil 5101,
  - Check the over-current detection circuit (2105 or 3127 interrupted).
- **Symptom:** +1V2 OK, +3V3 present for about 100 ms. **Possible cause:** SUPPLY-FAULT line stays “low” even though the +3V3 and +1V2 is available - the stand-by microprocessor is detecting that and switching “off” all supply voltages.
  - Check the drop voltage across resistor 3108 (they could be too high, meaning a defective controller IC or MOS-FETs),
  - Check if the boost voltage on pin 4 of controller IC 7103 is less than 14 V (should be 19 V),
  - Check if +1V2 or +3V3 are higher than their normal values - that can be due to defective DC feedback of the respective DC-DC convertor (ex. 3152, 3144).
- **Symptom:** +1V2 and +3V3 show a high level of ripple voltage (audible noise can come from the filtering coils 5101, 5103). **Possible cause:** instability of the frequency and/or duty cycle of a DC-DC converter or stabiliser.
  - Check the resistor 3164, capacitors 2102 and 2103, input and output decoupling capacitors.
  - Check AC feedback circuits (2120, 2129, 3141, 3153, 2110, 2114 and 3135).
- **Symptom:** +1V2, +3V3 ok, no +5V5-TUN (analogue sets only). **Possible cause:** the “+5V5-TUN GENERATOR” circuit (7202 and surroundings components) is defective: check transistor 7202 (it has to have gate voltage pulses of about 10 V amplitude and drain voltage pulses of about 35 V amplitude) and surrounding components. A high consumption (more than 6 mA) from +5V5-TUN voltage can cause also +5V5-TUN voltage to be too low or zero.

**Note:** when a pair of power MOSFETs (7101 or 7102) becomes defective, the controller IC 7103 should be replaced as well.

### 5.8.5 Fan self test (only for sets with LED backlight)

In case fans are present, a softest can be done by pushing the red coloured button on the remote control while the TV set is in CSM. Exit CSM and check the status of the fans in the error buffer by entering SAM (“062596” + “info” button on the RC). In case of failure (fully red screen) more detailed information is available in the error buffer (error 41, 42, 43, 44).

### 5.8.6 UART Logging

When something is wrong with the TV set (f.i.the set is rebooting) checking the UART logging using hyperterminal can be done to find more information. Hyperterminal is a standard Windows application. It can be found via Programs, Accessories, Communications, Hyperterminal. Connect a “ComPair UART”-cable (3138 188 75051) from the Service connector in the TV set, **via the ComPair interface (this is compulsory, otherwise ICs are blown in the PC)**, to the “COMx”-port of the PC. After start-up of Hyperterminal, fill in a name (f.i. “logging”) in the “Connection Description” box, then apply the following settings:

1. COMx
2. Bits per second = 115200
3. Data bits = 8
4. Parity = none
5. Stop bits = 1
6. Flow control = none

During the start-up of the TV set, the logging will be displayed. This is also the case during rebooting of the TV set (the same logging appears time after time). Also available in the logging is the “Display Option Code” (useful when there is no picture), look for item “DisplayRawNumber” in the beginning of the logging.
**Tip:** When there is no picture available during reboot, it is possible to check for “error devices” in the logging (LAYER 2 error). This can be very helpful to determine the failure cause of the reboot. For protection state, there is no logging.

### 5.8.7 Loudspeakers

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! Sometimes the set can go into protection, but that is not always the case.

### 5.8.8 Tuner

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

### 5.8.9 Display option code

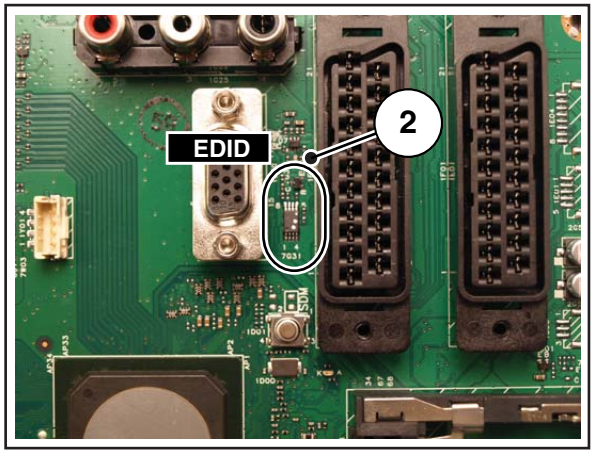
Attention: In case the SSB is replaced, always check the display option code in SAM, even when picture is available. Performance with the incorrect display option code can lead to unwanted side-effects for certain conditions.
See also Table 6-4 for the code.

### 5.8.10 Upgrade HDMI EDID NVM

To upgrade the HDMI EDID, see ComPair for further instructions.

### 5.8.11 Upgrade VGA EDID NVM

To upgrade the VGA EDID NVM, pin 7 of the EDID NVM [2] has to be short circuited to ground. See ComPair for further instructions.



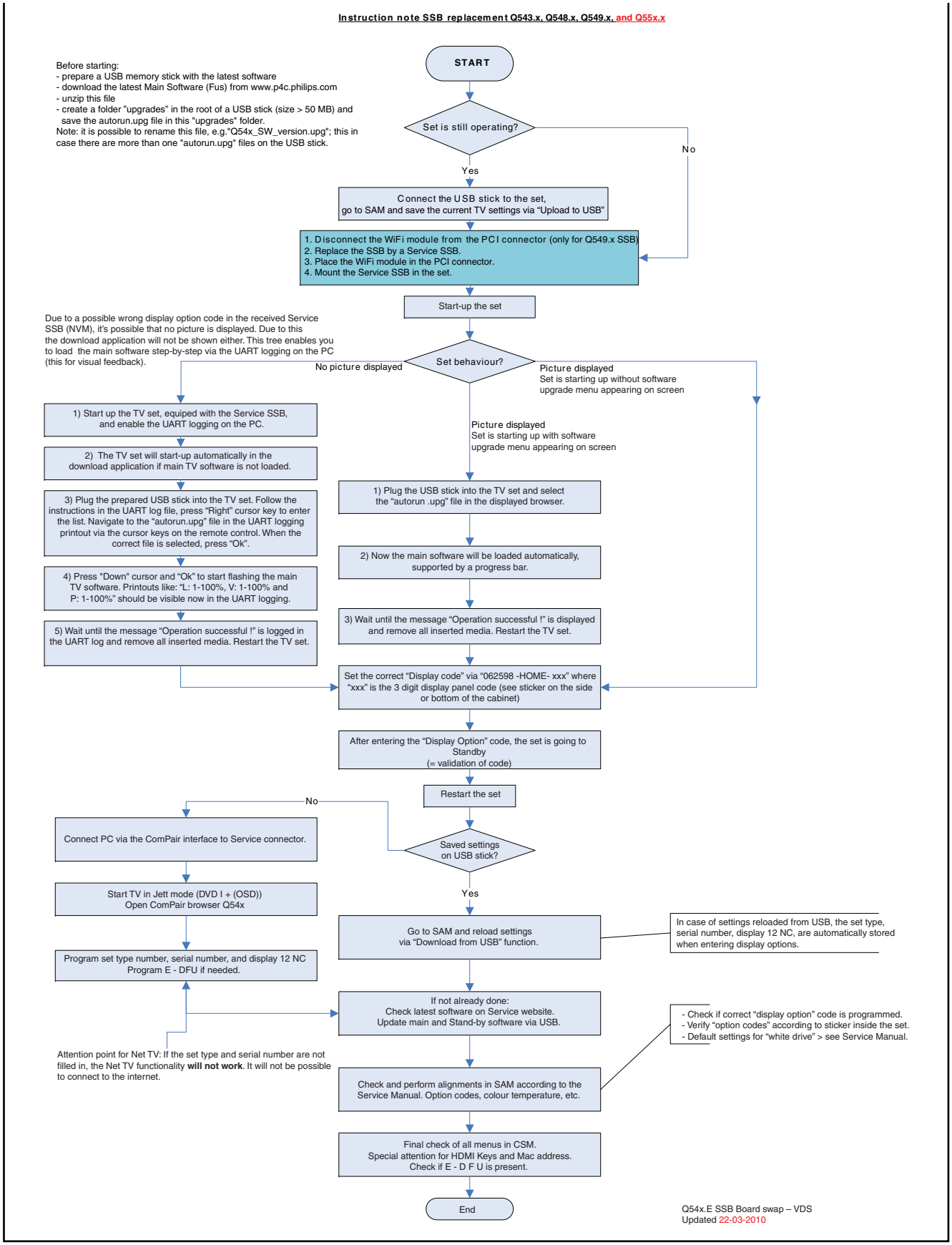

18440_201_090225.eps
090306

**Figure 5-10 VGA EDID NVM**

### 5.8.12 SSB Replacement

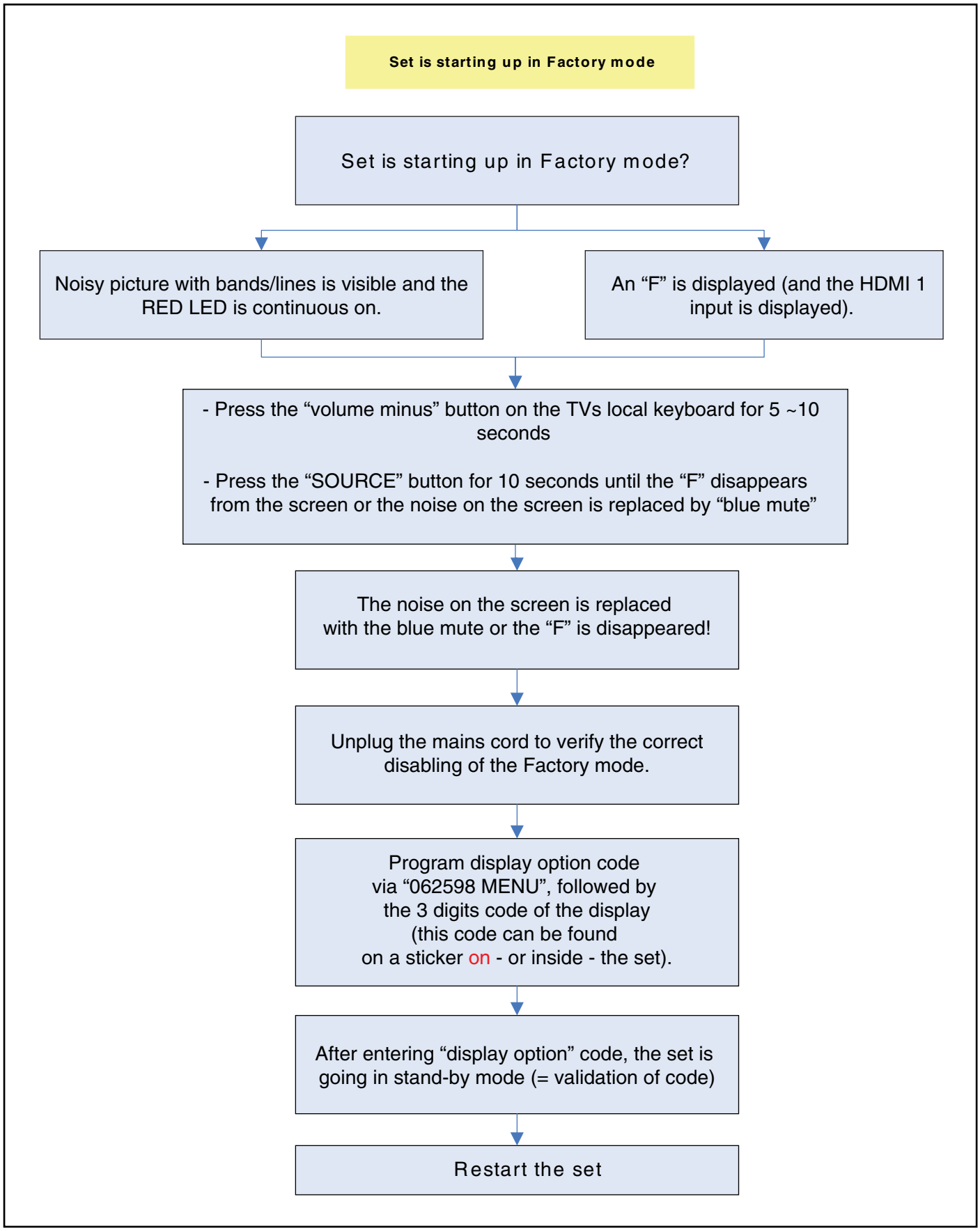
In the unlikely event the set starts up in Factory mode, **first** refer to Figure 5-12 and **then** to Figure 5-11.

Follow the instructions in the flowchart in case a SSB has to be exchanged. See Figure 5-11.




H_16771_007a.eps
100402

**Figure 5-11 SSB replacement flowchart**




H_16771_007b.eps
100322

**Figure 5-12 SSB replacement flowchart - set starting up in Factory Mode**

## 5.9 Software Upgrading

### 5.9.1 Introduction

The set software and security keys are stored in a NAND-Flash, which is connected to the PNX8543 via the PCI bus.

It is possible **for the user** to upgrade the **main** software via the USB port. This allows replacement of a software image in a stand alone set, without the need of an E-JTAG debugger. A description on how to upgrade the main software can be found in the DFU.

**Important:** When the NAND-Flash must be replaced, a new SSB must be ordered, due to the presence of the security keys! (copy protection keys, MAC address, ...). It is **not** possible to replace the NAND-Flash with another one from a scrap-board.
Perform the following actions after SSB replacement:
1. Set the correct option codes (see sticker inside the TV).
2. Update the TV software (see the DFU for instructions).
3. Perform the alignments as described in section Reset of Repaired SSB.
4. Check in CSM if the HDMI keys are valid.

For the correct order number of a new SSB, always refer to the Spare Parts list, available on the Philips Spare Part web portal.

### 5.9.2 Main Software Upgrade

- The “UpgradeAll.upg” file is only used in the factory.
- The “FlashUtils.upg” file is only used by Service centres that are allowed to do component level repair on the SSB.

***Automatic Software Upgrade***
In “normal” conditions, so when there is no major problem with the TV, the main software and the default software upgrade application can be upgraded with the “AUTORUN.UPG” (FUS part of the one-zip file: e.g. FUS _Q5431E_ 1.25.5.0_commercial.zip). This can also be done by the consumers themselves, but they will have to get their software from the commercial Philips website or via the Software Update Assistant in the user menu (see DFU). The “autorun.upg” file must be placed in the root of the USB stick.
How to upgrade:
1. Copy “AUTORUN.UPG” to the root of the USB stick.
2. Insert USB stick in the set while the set is in ON MODE. The set will restart and the upgrading will start automatically. As soon as the programming is finished, a message is shown to remove the USB stick and restart the set.

***Manual Software Upgrade***
In case that the software upgrade application does not start automatically, it can also be started manually.
How to start the software upgrade application manually:
1. Disconnect the TV from the Mains/AC Power.
2. Press the “OK” button on a Philips TV remote control or a Philips DVD RC-6 remote control (it is also possible to use a TV remote in “DVD” mode). Keep the “OK” button pressed while reconnecting the TV to the Mains/AC Power.
3. The software upgrade application will start.

***Attention!***
In case the download application has been started **manually**, the “autorun.upg” will maybe not be recognized.
What to do in this case:
1. Create a directory “UPGRADES” on the USB stick.
2. Rename the “autorun.upg” to something else, e.g. to “software.upg”. Do not use long or complicated names, keep it simple. Make sure that “AUTORUN.UPG” is no longer present in the root of the USB stick.
3. Copy the renamed “upg” file into this directory.
4. Insert USB stick into the TV.
5. The renamed “upg” file will be visible and selectable in the upgrade application.

***Back-up Software Upgrade Application***
If the default software upgrade application does not start (could be due to a corrupted boot 2 sector) via the above described method, try activating the “back-up software upgrade application”.
How to start the “back-up software upgrade application” manually:
1. Disconnect the TV from the Mains/AC Power.
2. Press the “INFO”-button on a Philips remote control or “CURSOR DOWN” button on a Philips DVD RC-6 remote control (it is also possible to use a TV remote in “DVD” mode). Keep the “INFO”-button (or “cursor down” button) pressed while reconnecting the TV to the Mains/AC Power.
3. The software upgrade application will start.

### 5.9.3 Stand-by Software Upgrade via USB

In this chassis it is possible to upgrade the Stand-by software via a USB stick. The method is similar to upgrading the main software via USB.
Use the following steps:
1. Create a directory “UPGRADES” on the USB stick.
2. Copy the Stand-by software (part of the one-zip file, e.g. StandbySW_CFT69_84.0.0.0.upg) into this directory.
3. Insert the USB stick into the TV.
4. Start the download application manually (see section Manual Software Upgrade.
5. Select the appropriate file and press the “red” button to upgrade.

### 5.9.4 Content and Usage of the One-Zip Software File

Below the content of the One-Zip file is explained, and instructions on how and when to use it.

| File name | Description |
|---|---|
| 907.5_PnSEsticker.zip | Contains the E-sticker data. Not to be used by Service technicians. |
| cabinet_TV543_x.x.x.x.zip | Contains acoustic parameters per cabinet. Not to be used by Service technicians. |
| ceisp2padll_P2PAD_x.x.x.x.zip | Not to be used by Service technicians. For ComPair development only. |
| display_TV543_x.x.x.x.zip | Not to be used by Service technicians. |
| EJTAGDownload_Q5431_x.x.x.x.zip | Only used by service centra which are allowed to do Component Level Repair. |
| Factory_Q5431_x.x.x.x.zip | Only for production purposes, not to be used by Service technicians. |
| FlashUtils_Q5431_x.x.x.x.zip | Not to be used by Service technicians. |
| FUS_Q5431_x.x.x.x.zip | Contains the “autorun.upg” which is needed to upgrade the TV main software and the software download application. |
| HDMI_FHD_EDID_Q5431_x.x.x.x.zip | Contains the EDID content of the different (FHD) HDMI NVM’s. See ComPair for further instructions. |
| HDMI_HD_EDID_Q5431_x.x.x.x.zip | Contains the EDID content of the different (HD) HDMI NVM’s. See ComPair for further instructions. |
| lightGuide_TV543_x.x.x.x.zip | Not to be used by Service technicians. |
| OAD_Q5431_x.x.x.x.zip | Not to be used by Service technicians. |
| Pgamma_xxxxxxxx_Q5431_x.x.x.x.zip | Contains NVM data for the specific display control board. Not to be used by Service technicians. |
| PQ_Q5431_x.x.x.x.zip | Not to be used by Service technicians. |
| processNVM_Q5431_x.x.x.x.zip | Default NVM content. Must be programmed via ComPair. |

| File name | Description |
|---|---|
| StandbySW_CFT69_x.x.x.x.zip | Contains the Stand-by software in “upg” and “hex” format. |
| | - The “StandbySW_xxxxx_prod.upg” file can be used to upgrade the Stand-by software via USB. |
| | - The “StandbySW_xxxxx.hex” file can be used to upgrade the Stand-by software via ComPair. |
| | - The files “StandbySW_xxxxx_exhex.hex” and “StandbySW_xxxxx_dev.upg” may not be used by Service technicians (only for development purposes). |
| Tcon_xxxxxxxx_Q5431_x.x.x.x.zip | Contains NVM data for the specific display control board. Not to be used by Service technicians. |
| UpgradeAll_Q5431_x.x.x.x.zip | Only for production purposes, not to be used by Service technicians. Caution: **Never try to use this file, because it will overwrite the HDCP keys!** |
| UpgradeExe_Q5431_x.x.x.x.zip | Only for production purposes, not to be used by Service technicians. |
| VGA_FHD_EDID_TV543_x.x.x.x.zip | Contains the EDID content of the different (FHD) VGA NVM. See ComPair for further instructions. |
| VGA_HD_EDID_TV543_x.x.x.x.zip | Contains the EDID content of the different (HD) VGA NVM. See ComPair for further instructions. |

# 6. Alignments

**Index of this chapter:**



## 6.1 General Alignment Conditions

Perform all electrical adjustments under the following conditions:

- Power supply voltage (depends on region):
  - **AP-NTSC:** 120 VAC or 230 $V_{AC}$ / 50 Hz (± 10%).
  - **AP-PAL-multi:** 120 - 230 $V_{AC}$ / 50 Hz (± 10%).
  - **EU:** 230 $V_{AC}$ / 50 Hz (± 10%).
  - **LATAM-NTSC:** 120 - 230 $V_{AC}$ / 50 Hz (± 10%).
  - **US:** 120 $V_{AC}$ / 60 Hz (± 10%).
- 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 voltages and waveforms in relation to correct ground (e.g. measure audio signals in relation to AUDIO_GND).
  **Caution:** It is not allowed to use heat sinks as ground.
- Test probe: $R_i$ > 10 MΩ, $C_i$ < 20 pF.
- Use an isolated trimmer/screwdriver to perform alignments.

### 6.1.1 Alignment Sequence

- First, set the correct options:
  - In SAM, select “Options”, and then “Option numbers”.
  - Fill in the option settings for “Group 1” and “Group 2” according to the set sticker (see also section Option Settings).
  - Press OK on the remote control before the cursor is moved to the left.
  - In submenu “Option numbers” select “Store” and press OK on the RC.
- OR:
  - In main menu, select “Store” again and press OK on the RC.
  - Switch the set to Stand-by.
- Warming up (>15 minutes).

## 6.2 Hardware Alignments

Not applicable.

## 6.3 Software Alignments

Put the set in SAM mode (see chapter 5. Service Modes, Error Codes, and Fault Finding). The SAM menu will now appear on the screen. Select ALIGNMENTS and go to one of the sub menus. The alignments are explained below.
The following items can be aligned:

- Tuner AGC.
- White point.

To store the data:

- Press OK on the RC **before the cursor is moved to the left**.
- In main menu select “Store” and press OK on the RC.
- Press MENU on the RC to switch back to the main menu.
- Switch the set to stand-by mode.

For the next alignments, supply the following test signals via a video generator to the RF input:

- **EU/AP-PAL models:** a PAL B/G TV-signal with a signal strength of at least 1 mV and a frequency of 475.25 MHz
- **US/AP-NTSC models:** an NTSC M/N TV-signal with a signal strength of at least 1 mV and a frequency of 61.25 MHz (channel 3).
- **LATAM models:** an NTSC M TV-signal with a signal strength of at least 1 mV and a frequency of 61.25 MHz (channel 3).

### 6.3.1 Tuner AGC (RF AGC Take Over Point Adjustment)

Purpose: To keep the tuner output signal constant as the input signal amplitude varies.
No alignment is necessary, as the AGC alignment is done automatically (standard value: “64”).
Store settings and exit SAM.

### 6.3.2 White Point

- Set “Active control” to “Off”.
- Choose “TV menu”, “TV Settings” and then “Picture” and set picture settings as follows:

| Picture Setting | |
|---|---|
| Dynamic backlight | Off |
| Dynamic Contrast | Off |
| Colour Enhancement | Off |
| Picture Format | Un scaled |
| Light Sensor | Off |
| Brightness | 50 |
| Colour | 0 |
| Contrast | 100 |

- Go to the SAM and select “Alignments”-> “White point”.

***White point alignment LCD screens:***

- Use a 100% white screen as input signal and set the following values:
  - “Colour temperature”: “Normal”.
  - All “White point” values to: “127”.
  - “Red BL offset” values to “7”.
  - “Green BL offset” values to “7”.

**In case you have a colour analyser:**

- Measure with a calibrated contactless colour analyser in the centre of the screen. Consequently, the measurement needs to be done in a dark environment.
- Adjust the correct x, y coordinates (while holding one of the White point registers R, G or B on 127) by means of decreasing the value of one or two other white points to the correct x, y coordinates (see Table 6-1). Tolerance: dx: ± 0.004, dy: ± 0.004.
- Repeat this step for the other colour temperatures that need to be aligned.
- When finished press OK on the RC and then press STORE (in the SAM root menu) to store the aligned values to the NVM.
- Restore the initial picture settings after the alignments.

**Table 6-1 White D alignment values**

| Value | Cool (11000K) | Normal (9000K) | Warm (6500K) |
|---|---|---|---|
| x | 0.278 | 0.289 | 0.314 |
| y | 0.278 | 0.291 | 0.319 |

**If you do not have a colour analyser**, you can use the default values. This is the next best solution. The default values are average values coming from production.

- Select a COLOUR TEMPERATURE (e.g. COOL, NORMAL, or WARM).

- Set the RED, GREEN and BLUE default values according to the values in Table 6-2and Table 6-3.
- When finished press OK on the RC, then press STORE (in the SAM root menu) to store the aligned values to the NVM.
- Restore the initial picture settings after the alignments.

**Table 6-2 White tone default settings 32" and 37" sets**

| White Tone | 32" | | | 37" | | | Black level offset | |
|---|---|---|---|---|---|---|---|---|
| Colour Temp | R | G | B | R | G | B | R | G |
| Normal | 125 | 127 | 106 | 127 | 101 | 88 | 7 | 7 |
| Cool | 121 | 127 | 119 | 127 | 106 | 105 | 7 | 7 |
| Warm | 127 | 121 | 74 | 127 | 92 | 51 | 7 | 7 |

**Table 6-3 White tone default settings 47" and 52" sets**

| White Tone | 47" | | | 52" | | | Black level offset | |
|---|---|---|---|---|---|---|---|---|
| Colour Temp | R | G | B | R | G | B | R | G |
| Normal | 127 | 116 | 100 | 127 | 123 | 106 | 7 | 7 |
| Cool | 127 | 121 | 118 | 126 | 127 | 124 | 7 | 7 |
| Warm | 127 | 107 | 62 | 127 | 116 | 69 | 7 | 7 |

### 6.3.3 LCD Panel Flicker Alignment

**Note:** This is only necessary for Forward Integration models (sets that have the LCD Timing Controller (TCON) located on the SSB) - not applicable to sets in this chassis.

See ComPair for further instructions.

## 6.4 Option Settings

### 6.4.1 Introduction

The microprocessor communicates with a large number of $I^2C$ ICs in the set. To ensure good communication and to make digital diagnosis possible, the microprocessor has to know which ICs to address. The presence / absence of these PNX5120 ICs (back-end advanced video picture improvement IC which offers motion estimation and compensation features (commercially called HDNM) plus integrated Ambilight control) is made known by the option codes.

**Notes:**
- After changing the option(s), save them by pressing the OK button on the RC before the cursor is moved to the left, select STORE in the SAM root menu and press OK on the RC.
- The new option setting is only active after the TV is switched “off” / “stand-by” and “on” again with the mains switch (the NVM is then read again).

### 6.4.2 Dealer Options

For dealer options, in SAM select “Dealer options”.
See Table 6-5.

### 6.4.3 (Service) Options

Select the sub menu's to set the initialisation codes (options) of the model number via text menus. See Table 6-5.

### 6.4.4 Opt. No. (Option numbers)

Select this sub menu to set all options at once (expressed in two long strings of numbers).
An option number (or “option byte”) represents a number of different options. When you change these numbers directly, you can set all options very quickly. All options are controlled via eight option numbers.
When the NVM is replaced, all options will require resetting. To be certain that the factory settings are reproduced exactly, you must set both option number lines. You can find the correct option numbers on a sticker inside the TV set and in Table 6-4.
**Example:** The options sticker gives the following option numbers:
- 08192 00133 01387 45160
- 12232 04256 00164 00000

The first line (group 1) indicates hardware options 1 to 4, the second line (group 2) indicate software options 5 to 8.
Every 5-digit number represents 16 bits (so the maximum value will be 65536 if all options are set).
When all the correct options are set, the sum of the decimal values of each Option Byte (OB) will give the option number.
See Table 6-4 for the options.

***Diversity***
Not all sets with the same Commercial Type Number (CTN) necessarily have the same option code!
Use of Alternative BOM An alternative BOM number usually indicates the use of an alternative display or power supply. This results in another display code thus in another Option code. For the power supply there is no difference.
Refer to Chapter 3. Precautions, Notes, and Abbreviation List.

### 6.4.5 Option Code Overview

**Table 6-4 Option and display code overview**

| CTN (Alt. BOM#) | Options Group 1 | Options Group 2 | Disp. code |
|---|---|---|---|
| 32PFL3904H/xx | 12288 00133 01387 45160 | 14290 12320 00140 00000 | 210 |
| 32PFL5404H/xx | 12288 00133 01387 45160 | 14290 12448 00172 00000 | 210 |
| 37PFL5604H/xx (_1) | 12288 00133 01387 45160 | 14281 12448 00172 00000 | 201 |
| 37PFL5604H/xx (_2) | 12288 00133 01387 45160 | 14295 12448 00172 00000 | 215 |
| 47PFL5604H/xx | 08192 00135 01387 45160 | 14283 12448 00180 00000 | 203 |
| 52PFL5604H/xx | 12288 00135 01387 45160 | 14289 12448 00172 00000 | 209 |

**Important:** after having edited the option numbers as described above, you **must press OK** on the remote control **before the cursor is moved to the left**!

## 6.5 Reset of Repaired SSB

A very important issue towards a repaired SSB from a service repair shop implies the reset of the NVM on the SSB.
A repaired SSB in service should get the service Set type “00PF0000000000” and Production code “00000000000000”. Also the virgin bit is to be set. To set all this, you can use the ComPair tool.
In case of a display replacement, reset the “Operation hours” to “0”, or to the operation hours of the replacement display.

### 6.5.1 SSB identification

Whenever ordering a new SSB, it should ne noted that the correct ordering number (12nc) of a SSB is located on a sticker on the SSB. The format is <12nc SSB><serial number>. The ordering number of a “Service” SSB is the same as the ordering number of an initial “factory” SSB.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090319

**Figure 6-1 SSB identification**

## 6.6 Total Overview SAM modes

**Table 6-5 SAM mode overview**

| Main Menu | Sub-menu 1 | Sub-menu 2 | Sub-menu 3 | Description |
|---|---|---|---|---|
| Hardware Information | A. SW VERSION | e.g. “Q5431_0.26.10.0” | | Display TV & Stand-by SW version and CTN serial number. |
| | B. Stand-by processor version | e.g. “STDBY_84.69.0.0” | | |
| | C. Production code | e.g. “See type plate” | | |
| Operation hours | | | | Displays the accumulated total of operation hours.TV switched “on/off” & every 0.5 hours is increase one |
| Error | | | | Displayed the most recent error. |
| Reset error buffer | | | | Clears all content in the error buffer. |
| Alignment | Tuner AGC | | | RF-AGC Take over point adjustment (AGC default value is 64) |
| | White point | Colour temperature | Normal | 3 difference modes of colour temperature can be selected |
| | | | Warn | |
| | | | Cool | |
| | | White point red | | LCD White Point Alignment. For values, see Table 6-1. |
| | | White point green | | |
| | | White point blue | | |
| | | Red black level offset | | |
| | | Green black level offset | | |
| Dealer options | Picture mute | Off/On | | Select Picture mute On/Off. Picture is muted / not muted in case no input signal is detected at input connectors. |
| | Virgin mode | Off/On | | Select Virgin mode On/Off. TV starts up / does not start up (once) with a language selection menu after the mains switch is turned “on” for the first time (virgin mode) |
| | E-sticker | Off/On | | Select E-sticker On/Off (USP’s on-screen) |
| | Auto store mode | None | | Autostore mode disabled (not in installation menu) |
| | | PDC/VPS | | Autostore mode via ATS (PDC/VPS) enabled |
| | | TXT page | | Autostore mode via ACI enabled |
| | | PDC/VPS/TXT | | Autostore mode via ACI or ATS enabled |

| Main Menu | Sub-menu 1 | Sub-menu 2 | Sub-menu 3 | Description |
|---|---|---|---|---|
| Options | Digital broadcast | DVB | Off/On | Select DVB On/Off |
| | | DVB - T installation | Off/On or Country dependent | Select DVB T installation On/Off or by country |
| | | DVB - T light | Off/On | Select DVB T light On/Off |
| | | DVB - C | Off/On | Select DVB C On/Off |
| | | DVB - C installation | Off/On or Country dependent | Select DVB C installation On/Off or by country |
| | | Over the air download | Off/On or Country dependent | Select Over the air download On/Off or by country |
| | | 8 days EPG | Off/On | Select 8 day EPG On/Off |
| | Digital features | USB | Off/On | Select USB On/Off |
| | | Ethernet | Off/On | Select Ethernet On/Off |
| | | Wi-Fi | Off/On | Select Wi-Fi On/Off |
| | | DLNA | Off/On | Select DLNA On/Off |
| | | On-line service | Off | On-line service is Off |
| | | PTP (Picture Transfer Protocol) | Off/On | Select PTP On/Off |
| | | Update assistant | Off/On | Select Update assistant On/Off |
| | | Internet software update | Off | Internet software update is Off |
| | Display | Screen | 201 / LCD LGD WUE SBA1 37" | Displayed the panel code & type model. |
| | | LightGuide | Off/On | Select LightGuide On/Off |
| | | Display fans | Not present/Present | Select Display fans Present/Not present. |
| | | Temperature sensor | No sensor | N.A |
| | | Temperature LUT | 0 | N.A |
| | | E-box & monitor | Off/On | Select E-box & monitor On/Off |
| | Video reproduction | Picture processing | None/PNX5120 | Select Picture processing None/PNX5120 (Q543.xE chassis). |
| | | MOP local contrast | Off/On | Select MOP local contrast On/Off |
| | | Light sensor | Off/On | Select Light sensor On/Off |
| | | Light sensor type | 0/1/2/3 | Select Light sensor type form 0 to 3 (for difference styling). |
| | | Pixel Plus type | Pixel Plus HD | Select type of picture improvement. |
| | | | Perfect Pixel HD | |
| | | | Pixel Precise HD | |
| | | | Pixel Plus HD (used in Q543.xE) | |
| | | | Pixel Precise HD (used in Q548.1E) | |
| | | Ambilight | None, | Select type of Ambilight modules use. |
| | | | 2 sided 2/2 | For 8400 series only |
| | | | 2 sided 4/4 | |
| | | | 3 sided 2/3/2 | |
| | | | 3 sided 4/3/4 | |
| | | | 3 sided 4/5/4 | |
| | | | 4 sided 4/3/4/3 | |
| | | Ambilight technology | LED/Future use | Ambilight technology LED is in use. |
| | | MOP ambilight | Off/On | Select MOP ambilight On/Off |
| | Audio reproduction | Acoustic system | | Cabinet design used for setting dynamic audio parameters. |
| | Source selection | EXT1/AV1 type | SCART CBVS RGB LR | Select input source when connected with external equipment. |
| | | | CVBS Y/C YPbPr LR | |
| | | | CVBS Y/C YPbPr HV LR | |
| | | | (CVBS) YPbPr LR | |
| | | EXT2/AV2 type | SCART CBVS RGB LR | Select input source when connected with external equipment. |
| | | | CVBS Y/C LR | |
| | | | (CVBS) YPbPr LR | |
| | | | CVBS Y/C LR | |
| | | EXT3/AV3 type | None | Select input source when connected with external equipment. |
| | | | CVBS | |
| | | | CVBS LR | |
| | | | YPbPr | |
| | | | YPbPr LR | |
| | | | YPbPr HV LR | |
| | | VGA | Off/On | Select VGA On/Off |
| | | SIDE I/O | Off/On | Select SIDE I/O On/Off |
| | | HDMI 1 | Off/On | Select HDMI 1 On/Off |
| | | HDMI 2 | Off/On | Select HDMI 2 On/Off |
| | | HDMI 3 | Off/On | Select HDMI 3 On/Off |
| | | HDMI 4 | Off/On | Select HDMI 4 On/Off |
| | | HDMI side | Off/On | Select HDMI side On/Off |
| | | HDMI CEC | Off/On | Select HDMI CEC On/Off |
| | | HDMI CEC RC pass through | Off/On | Select HDMI CEC RC pass through On/Off |
| | | HDMI CEC Pixel Plus link | Off/On | Select Pixel Plus link On/Off |

| Main Menu | Sub-menu 1 | Sub-menu 2 | Sub-menu 3 | Description |
|---|---|---|---|---|
| | Miscellaneous | Region | Europe/AP-PAL-MULTI/Australia | Select Region/country. |
| | | Tuner type | HD1816-MK1/TD1716-MK4/ TD1716-MK3/HD1816-MK2 | Select type of Tuner used. |
| | | System RC support | Off/On | Select System RC support On/Off. |
| | | Embedded user manual | Off/On | Select Embedded user manual On/Off. |
| | | Start-up screen | Off/On | Select Start-up screen On/Off. |
| | | Wallpaper | Off/On | Select Wallpaper On/Off. |
| | | Hotel mode | Off | Hotel mode is Off. |
| Option number | Group 1 | e.g. “08192.02181.01387.45160” | | The first line (group 1) indicates hardware options 1 to 4. |
| | Group 2 | e.g. “10185.12448.00164.00000” | | The second line (group 2) indicates software options 5 to 8. |
| | Store | | | Store after changing. |
| Initialise NVM | | | | N.A |
| Store | | | | Select Store in the SAM root menu after making **any** changes. |
| Software maintenance | Software events | Display | | Display information is for development purposes. |
| | | Clear | | |
| | | Test reboot | | |
| | | Test reboot is to restart the TV. | | |
| | Hardware events | Display | | Display information is for development purposes. |
| | | Clear | | |
| Operation hours display | | 0003 | | In case the display must be swapped for repair, you can reset the “Display operation hours” to “0”. So, this one does keeps up the lifetime of the display itself (mainly to compensate the degeneration behaviour). |
| Test setting | Digital information | QAM modulation: 64-QAM | | Display information is for development purposes. |
| | | Symbol rate: 23:29 | | |
| | | Original network ID: 12817 | | |
| | | Network ID:12817 | | |
| | | Transport stream ID: 2 | | |
| | | Service ID: 3 | | |
| | | Hierarchical modulation: 0 | | |
| | | Selected video PID: 35 | | |
| | | Selected main audio PID: 99 | | |
| | | Selected 2nd audio PID: -1 | | |
| | Install start frequency | 000 | | Install start frequency from 0 MHz |
| | Install end frequency | 999 | | Install end frequency as 999 MHz |
| | Default install frequency | | | |
| | Installation | Digital only | | Select Digital only or Digital + Analogue before installation. |
| | | Digital + Analogue | | |
| Development file versions | Development 1 file version | Display parameters DISPT 4.0.8.11 | | Display information is for development purposes. |
| | | Acoustics parameters ACSTS 3.0.6.1 | | |
| | | PQF - Fixed settings 1 “4.54.34.32.34” | | |
| | | PQS - Profile set 1 “4.57.34.32.34” | | |
| | | PQU - User styles 1 “4.56.34.32.34” | | |
| | Development 2 file version | 12NC one zip software | | Display information is for development purposes. |
| | | Initial main software | | |
| | | NVM version Q5431_0.4.3.0 | | |
| | | Flash units SW Q5431_0.16.48.24 | | |
| Upload to USB | Channel list | | | To upload several settings from the TV to an USB stick |
| | Personal settings | | | |
| | Option codes | | | |
| | Display-related alignment | | | |
| | History list | | | |
| Download from USB | Channel list | | | To download several settings from the USB stick to the TV. |
| | Personal settings | | | |
| | Option codes | | | |
| | Display-related alignment | | | |

# 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 (see chapter 9. Block Diagrams) and circuit diagrams (see chapter 10. Circuit Diagrams and PWB Layouts).Where necessary, you will find a separate drawing for clarification.

## 7.1 Introduction

The Q543.1E LA chassis (platform name TV543/32) is a derivative from the Q543.3E LA chassis.

Main difference with the previous chassis is the absence of the Timing Controller (TCON) on the SSB; it comes together with the LCD Panel instead.

### 7.1.1 Implementation

Key components of this chassis are:

- PNX8543 Digital Colour Decoder
- HD1816AF Hybrid Tuner
- DRX3926K Demodulator
- TDA9996 HDMI Switch
- TPA3123D2PWP Class D Power Amplifier.

### 7.1.2 TV543 Architecture Overview

- For details about the chassis block diagrams refer to chapter 9. Block Diagrams. An overview of the TV543 architecture can be found in Figure 7-1.

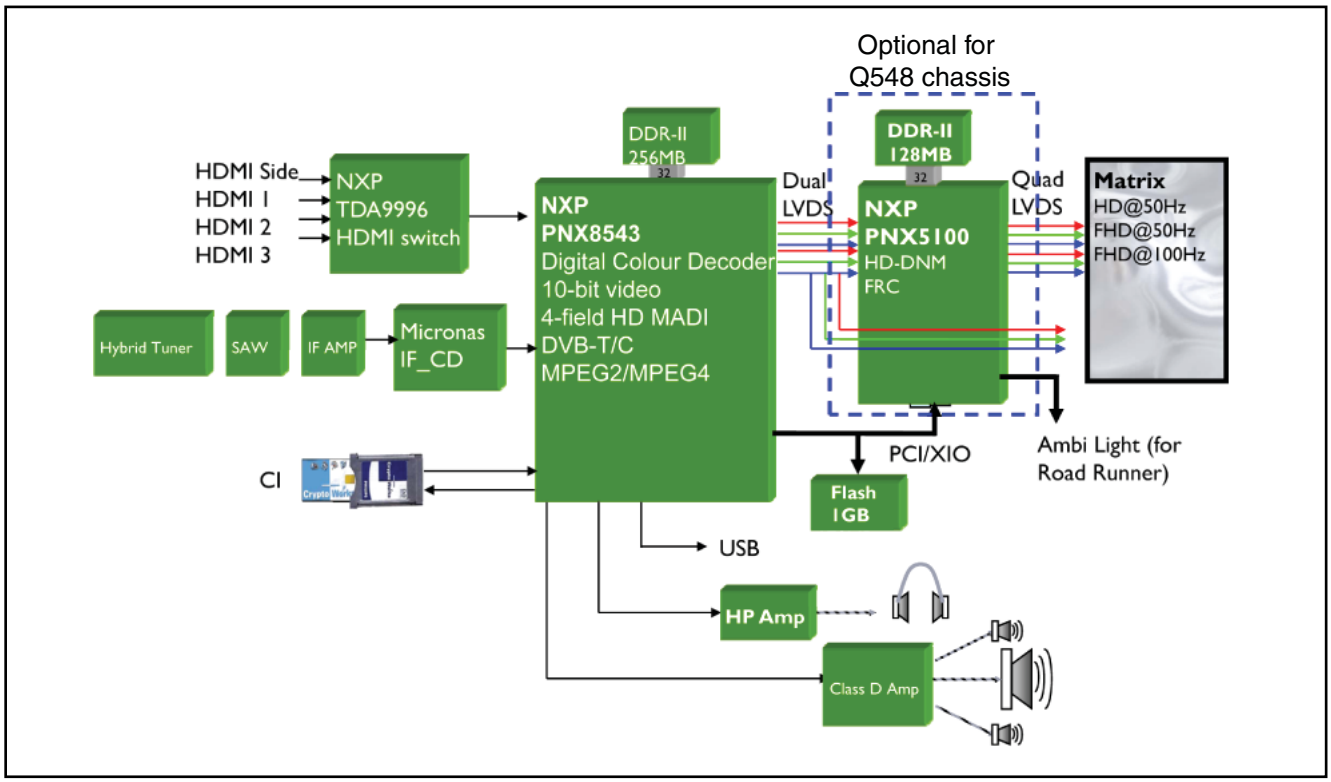


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**Figure 7-1 Architecture of TV543/32 platform**

### 7.1.3 SSB Cell Layout

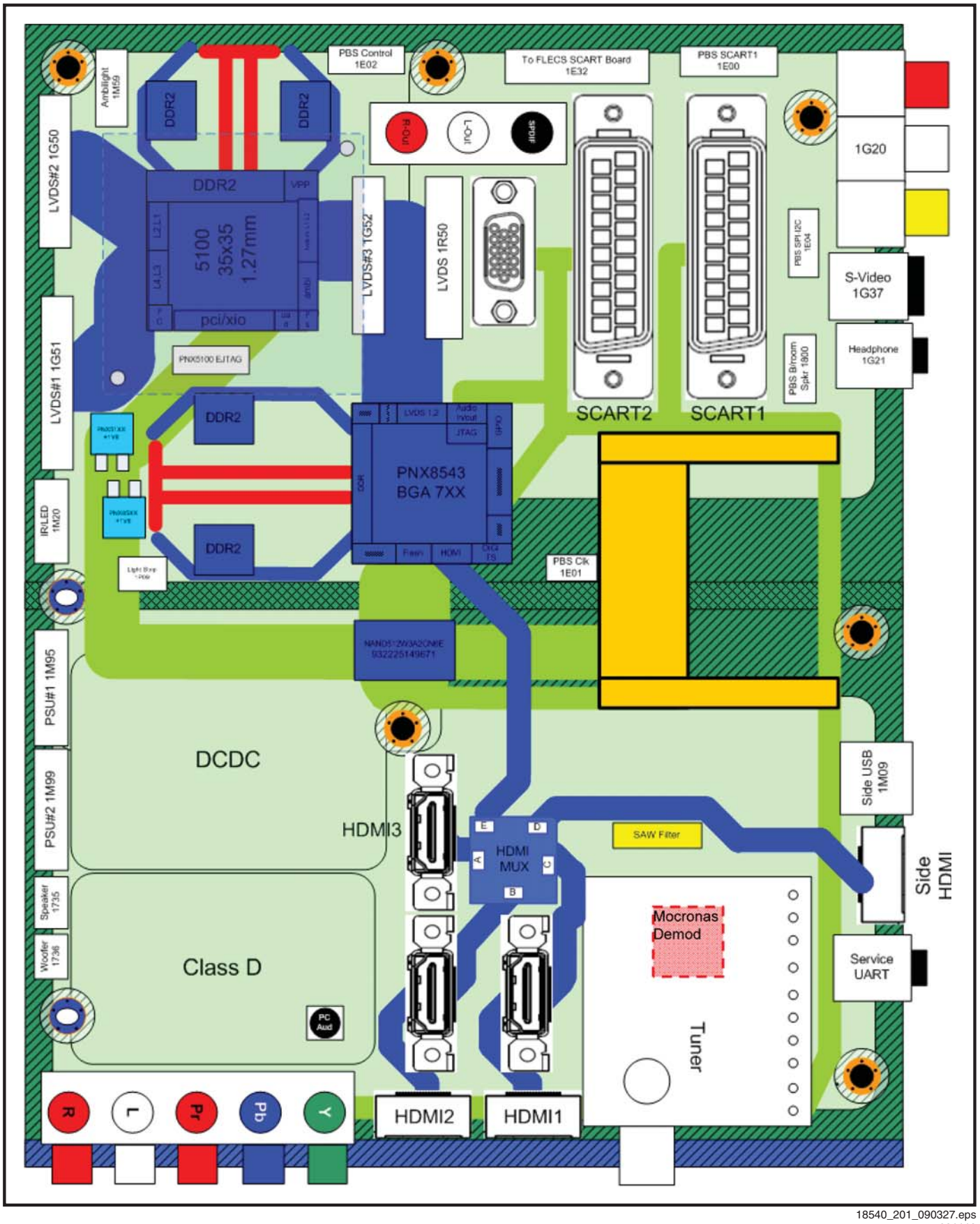


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**Figure 7-2 SSB layout cells (top view)**

## 7.2 Power Supply

All power supplies described below are a black box for Service. When defective, a new board must be ordered and the defective one must be returned, unless the main fuse of the board is broken. Always replace a defective fuse with one with the correct specifications! This part is available in the regular market.
Consult the Service Spare Parts website for the order codes of the boards.

### 7.2.1 Specifications

The only type of power supply used in the TV543 platform is the Integrated Power Board (IPB) - incl. inverter.

In this Service Manual, no detailed information is available because of design protection issues.

### 7.2.2 Diversity

Below find an overview of the different PSUs that are used:

**Table 7-1 Supply diversity**

| Supplier | PSU | Model | Input Voltage Range |
|---|---|---|---|
| LGIT | PLHL-T807A | 32" | High Mains (198 to 265 $V_{AC}$) |
| LGIT | PLHL-T845A | 37" | High Mains (198 to 265 $V_{AC}$) |
| Delta | DPS-298-2ACP | 47" | High Mains (198 to 265 $V_{AC}$) |
| Delta | DPS-411-AP3A B | 52" | High Mains (198 to 265 $V_{AC}$) |

### 7.2.3 Application

An application diagram can be found below:

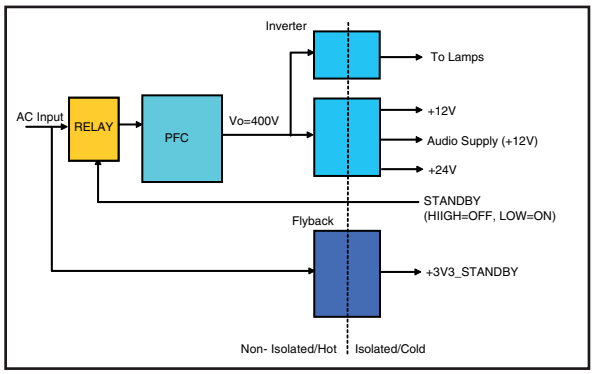


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**Figure 7-3 Application Integrated Power Board**

### 7.2.4 Power Supply Timing

The STANDBY signal controls the on-mode voltages +12V, $+V_{snd}$ and +24V. During chassis cold start from AC mains, +12V can be expected to be stable within 1.0 seconds, while for a warm start, i.e. wake up from stand-by power state, this timing becomes 0.5 seconds maximum. During AC switch off, stand-by power +3V3-STANDBY decay is at least 20 ms but not more than 5.0 seconds compared to +12V. Refer to Figure 7-4:

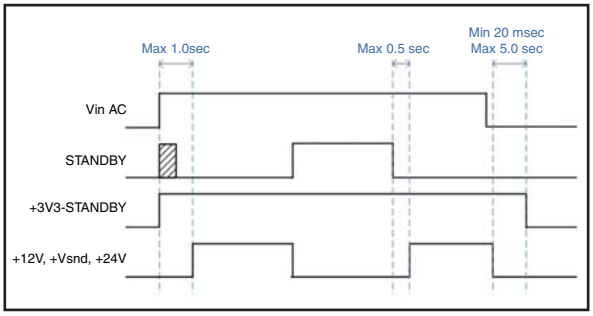


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**Figure 7-4 PSU Timing Diagram**

### 7.2.5 Power Supply Protection

Power supply protection is implemented via the stand-by controller of the PNX8543 via the following signals:

- POWER-OK: signal from PSU to indicate if the supply output from the IPB is normal
- DETECT1: signal to indicate if the +5V, +3V3 and +1V2 voltages on the chassis are present
- DETECT2: signal to indicate if the +12V voltage on the chassis is present.

## 7.3 DC-DC Converter

Input power is obtained from the IPB module via the following voltages:

- +3V3-STANDBY (stand-by-mode only)
- +12V (on-mode)
- $+V_{snd}$ (audio power) (on-mode)
- +24V (bolt-on power) (on-mode).

Control is achieved by the PNX8543 controller via the STANDBY signal.

Audio power is specifically for audio supply usage only and does not go through any DC conversion.

Below find a block diagram of the on-board DC-DC converters.

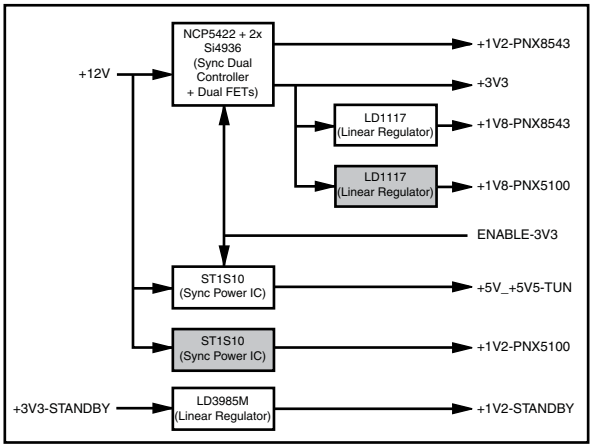


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**Figure 7-5 DC-DC converters**

## 7.4 Front-End

The Front-End consist of the following key components:

- Tuner HD1816AF
- IF demodulator DRX3926K
- AGC amplifier UPC3221GV
- SAW filter 36M125.

Below find a block diagram of the front-end application.

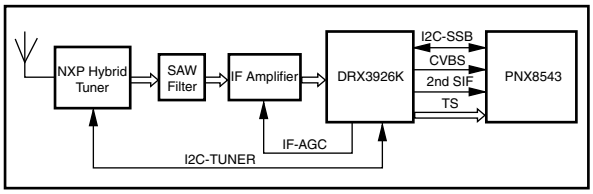


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**Figure 7-6 Front-End block diagram**

The DRX3926K is a multi-standard demodulator supporting DVB-C, DVB-T and analogue standards. The demodulated digital stream is fed into the parallel transport stream data ports of the PNX8543. The demodulated analogue signal in the form of CVBS is connected to the analogue video CVBS/Y input channel, while the SIF is connected via the SSIF2 positive input port.

## 7.5 HDMI

In this platform, the TDA9996 HDMI multiplexer is implemented. The EDID contents are no longer stored in a separate EEPROM, but directly in the multiplexer. Each input has its own physical sub address: the first 253 bytes are common, where the last 3 bytes define the specific input. The EDID contents are, at +5V power-up, downloaded to RAM. The following figures show the HDMI input configuration and EDID control.

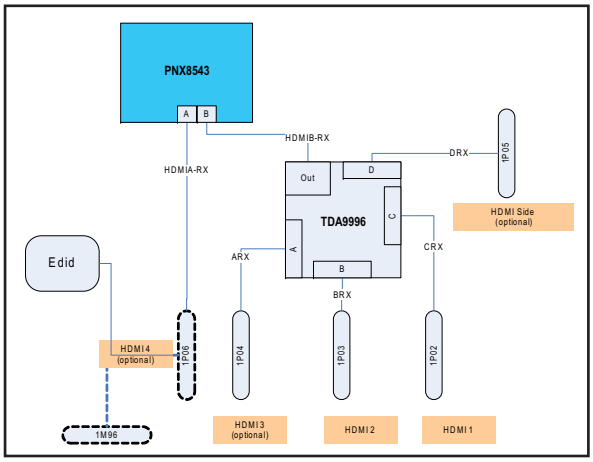


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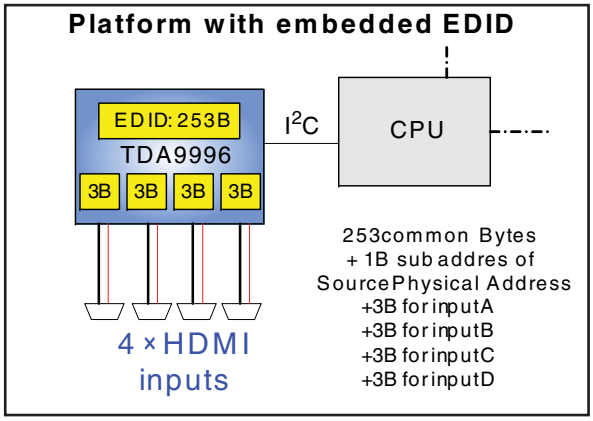
**Figure 7-7 HDMI input configuration**

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090720

**Figure 7-8 EDID control (embedded EDID)**

Some delta's w.r.t. TDA9996 compared to earlier chassis/ platforms are:

- +5V detection mechanism
- stable clock detection mechanism
- integrated EDID
- RT control
- HPD control
- TMDS output control
- CEC control
- new hot-plug control for PNX8543 for 5th HDMI input
- new EDID structure: EDID stored in TDA9996, therefore there are no EDID pins on the SSB. Only in the event of a 5th HDMI input, an additional EEPROM is foreseen, as was implemented in previous platforms.

Some delta's with respect to PNX8543 compared to earlier chassis/platforms are:

- 2 HDMI inputs (A & B)
- HDMI deep colour RGB/YCbCr 4:4:1 10/12 bit detection.

After replacement of the TDA9996 HDMI multiplexer, the default $I^2C$ address should be reprogrammed from C0 to CE, and the HDMI EDIDs should be reprogrammed as well. Both actions should be executed via ComPair.

## 7.6 Video and Audio Processing - PNX8543

The PNX8543 is the main audio and video processor (or System-on-Chip) for this platform. It is a member of the PNX85xx SoC family (described in earlier chassis) with the addition of the MPEG4 functionality; the separate STi710x MPEG4 decoder is no longer implemented in this platform.

The PNX8543 handles the digital and analogue audio- and video decoding and processing. The processor is a MIPS32 general purpose CPU and a 8051-based TV controller for power management and user event handling.

- For a functional diagram of the PNX8543, refer to Figure 7-9.

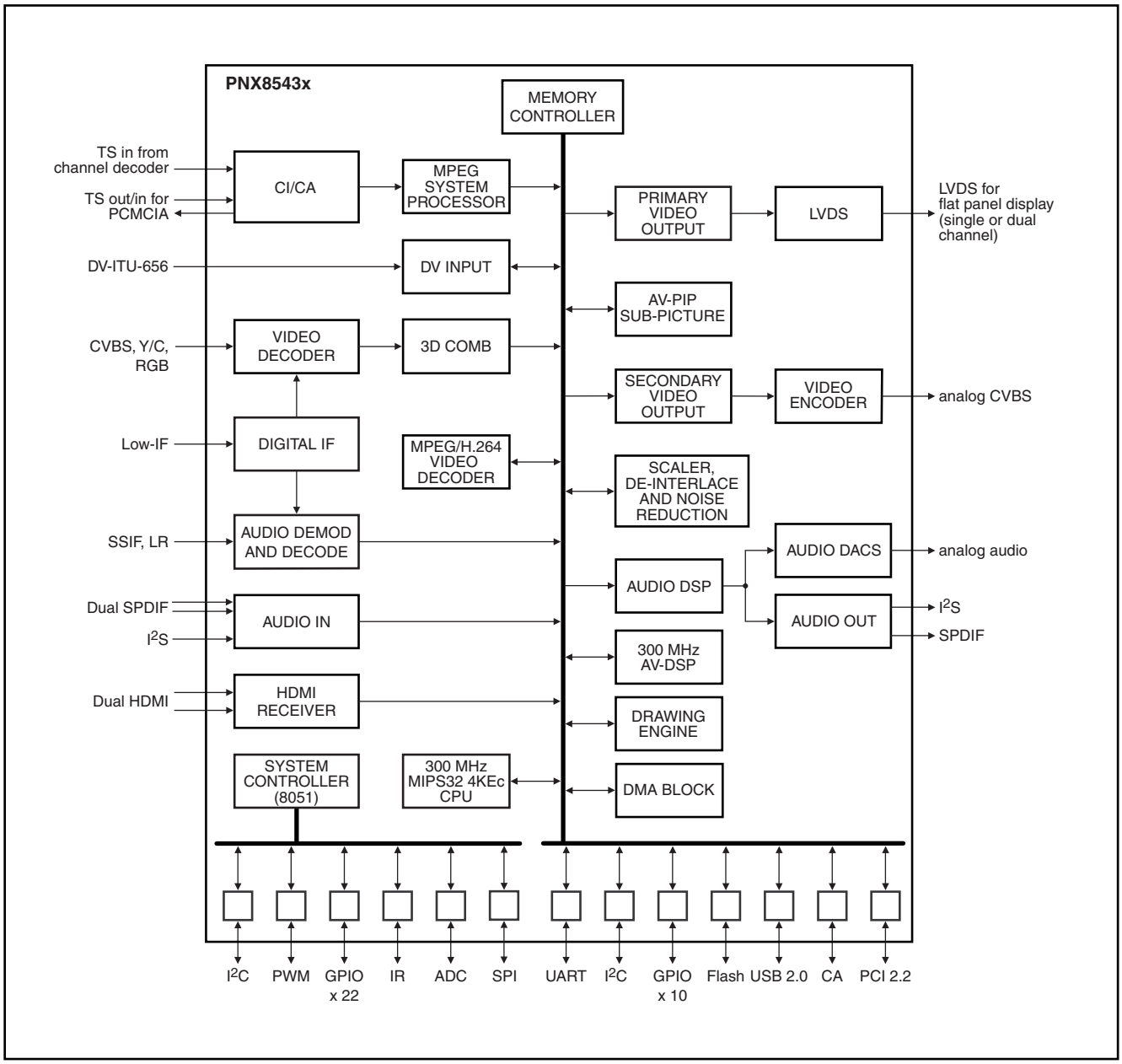


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**Figure 7-9 PNX8543 functional diagram**

### 7.6.1 Video Subsystem

Refer to Figure 7-10 for the main video interfaces for the PNX8543 and the video signal flow between blocks and memory.

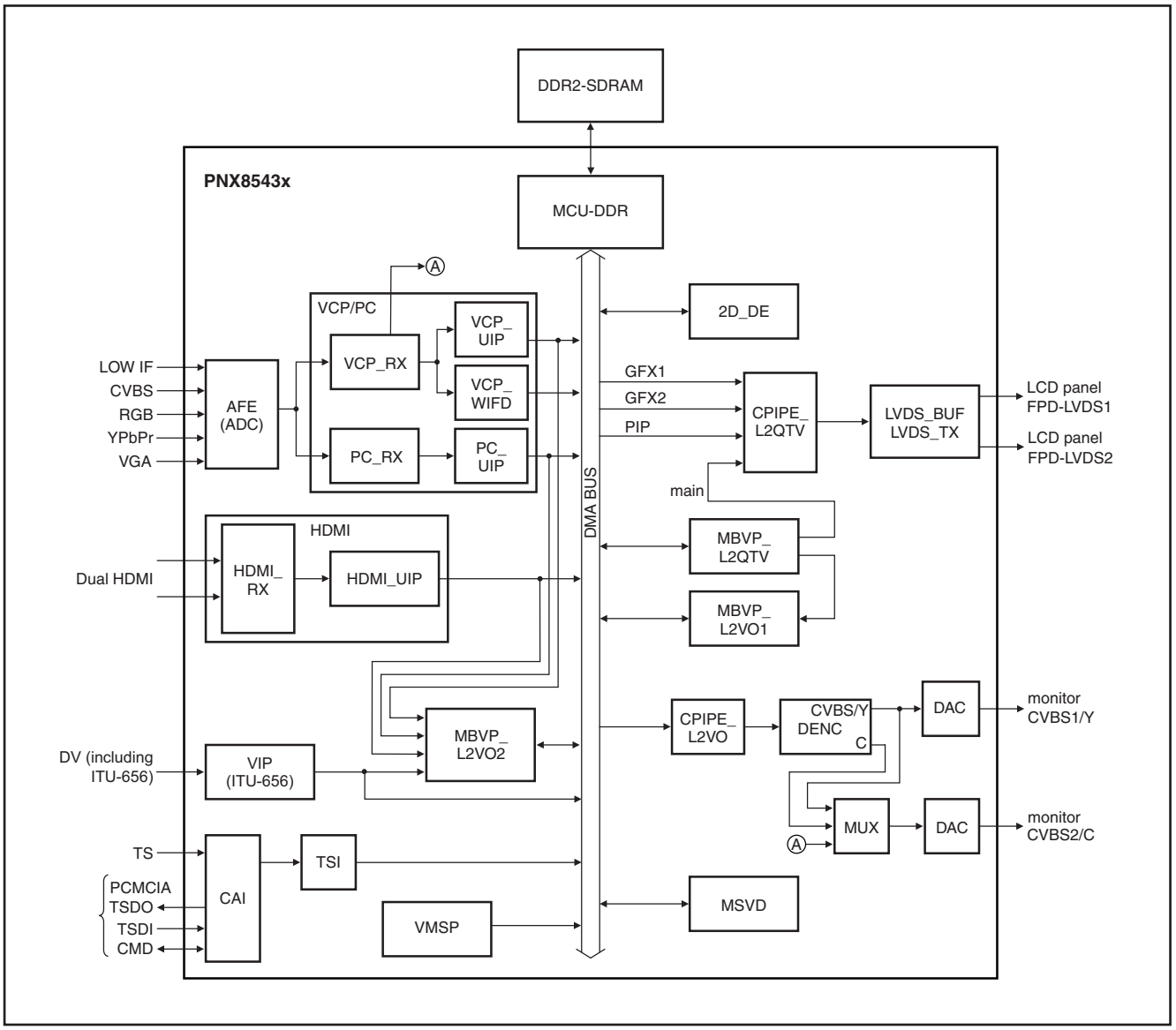


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**Figure 7-10 PNX8543 video flow diagram**

The Video Subsystem consist of the following blocks:

- Analogue Front-End (AFE) block
- Video and PC Capture (VPC/PC) pipe
- HDMI Receiver interface
- Memory-Based Video Processor MBVP)
- Video Composition Pipe (CPIPE)
- Memory Based Video Processor (MBVP) VO-1
- Memory Based Video Processor (MBVP) VO-2
- Video Composition Pipe (CPIPE)
- Dual Flat Panel Display-LVDS (FPD-LVDS)
- Digital Encoder (DENC)
- Digital Video VIP
- 2D graphics block.

### 7.6.2 Audio Subsystem

Refer to Figure 7-11 for the main audio interfaces for the PNX8543 and the audio signal flow between blocks and memory.

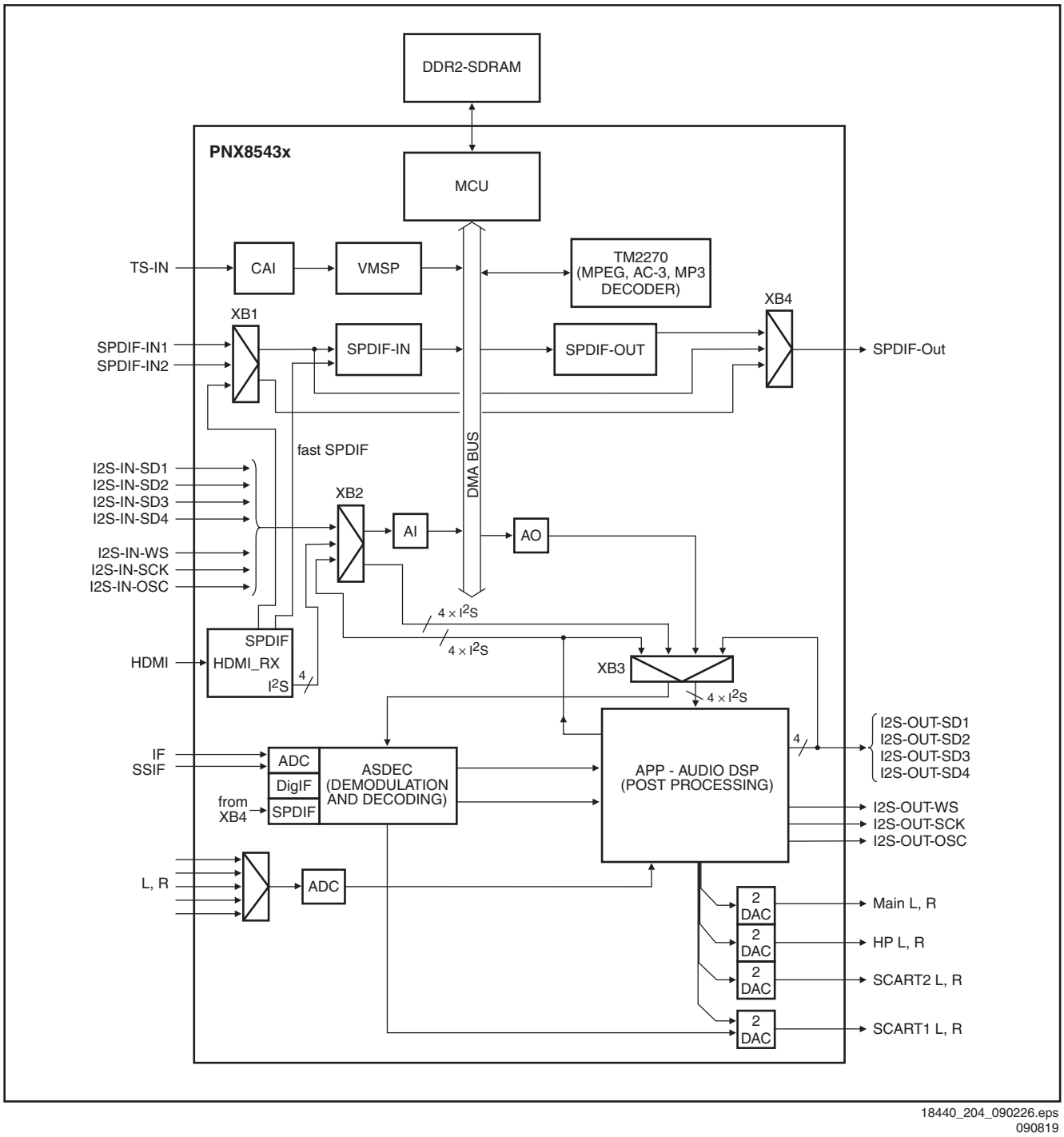


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**Figure 7-11 PNX8543 audio flow diagram**

The Audio Subsystem consist of the following blocks:

- Analogue Audio Front End (AAFE) used to capture Baseband Audio Inputs and to sample Secondary Sound IF (SSIF) directly or via Low-IF input
- HDMI Receiver interface block
- SPDIF input block
- Audio Input (AI) block
- Audio Output (AO) block
- Demodulation & Decoding (ASDEC) DSP for decoding all analogue terrestrial TV sound standards
- Audio Post-Processing (APP) block
- Digital Audio decoder.

### 7.6.3 Connectivity and Compute Subsystem

Refer to Figure 7-12 for the connectivity and compute subsystem.

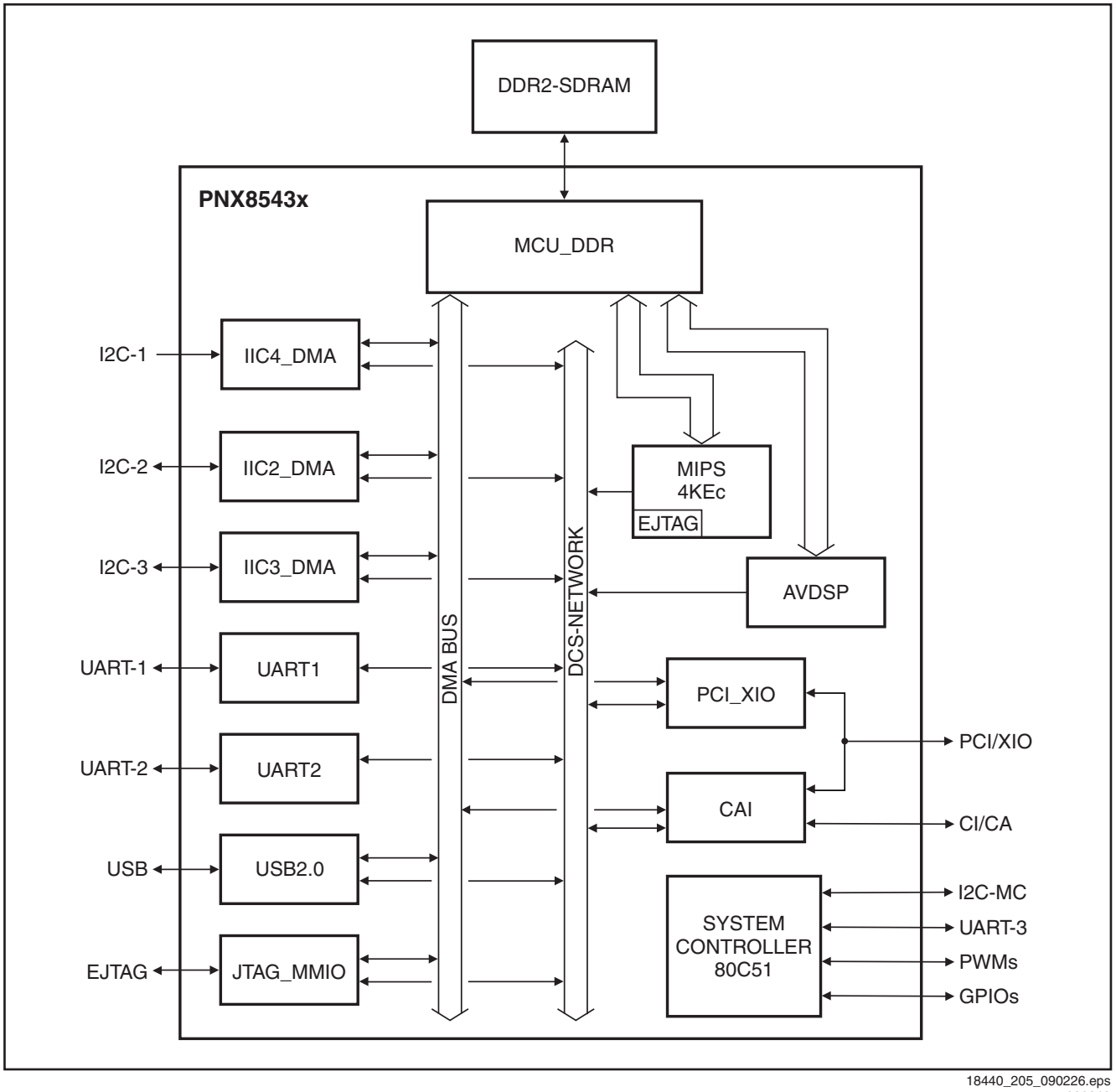


**Figure 7-12 PNX8543 connectivity and compute subsystem**

The Connectivity Subsystem consists of:
- PCI/XIO interface
- USB2.0 interface
- Three 2-wire UARTs
- Four Master/Slave $I^2C$ interfaces
- Common Interface/Conditional Access Interface.

The Computing Subsystem consists of:
- 32-bit MIPS RISC core
- Enhanced JTAG (EJTAG) block inside the MIPS
- JTAG_MMIO blocks
- TV controller
- Audio/Video DSP (AV_DSP)
- Memory Control Unit (MCU).

### 7.6.4 Service Notice - FLASH RAM / PNX8543 exchange

The FLASH RAM (item 7M00) and/or PNX8543 (item 7600) can only be exchanged by an authorised central workshop with dedicated programming tools. Due to the presence of (CI+) keys in the components, **unauthorised exchange of these components will always result in a defective board**.

## 7.7 Common Interface CI+

Together with this platform, an extension to the Common Interface (CI) Conditional Access system is added, called CI+.

CI+ or Common Interface Plus is a specification that extends the Common Interface (DVB-CI) as described in the digital broadcasting standard DVB.

The weakness of the conventional CI module used in a Conditional Access system was the absence of a Copy Protection mechanism, as decrypted content could be sent over the PCMCIA interface unscrambled. With the CI+ extension, a form of copy protection is established between the Conditional Access Module (CAM) and the Integrated Digital Television (IDTV). The security mechanisms in CI+ are derived/copied from POD (with the exception of Out Of Band (OOB) used in US CA systems). For more information about conventional CA systems using a CI module, refer to the BJ3.0E L/PA or BL2.xU Service Manual.

The CI+ standard is downwards compatible with the existing CI standard.

The following figure shows the implementation of the CI+ Conditional Access system in the TV543 platform.

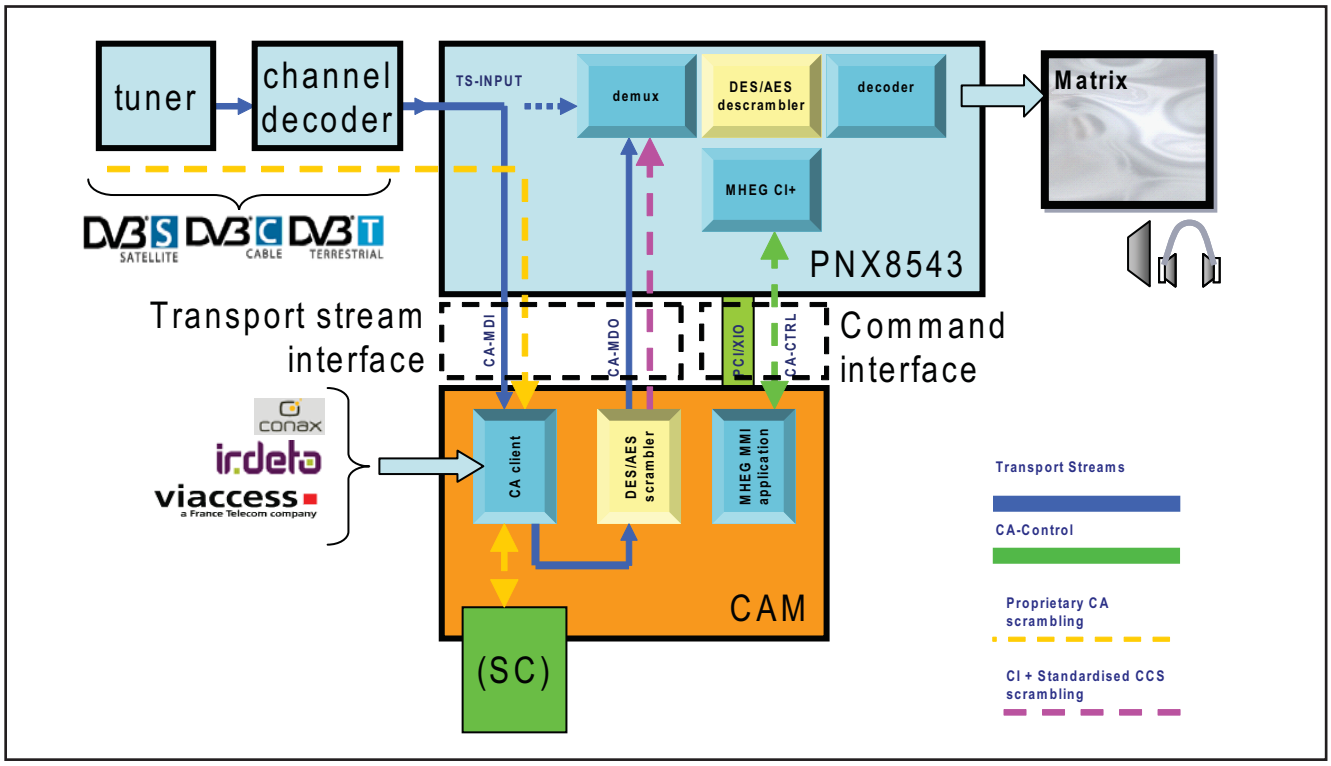


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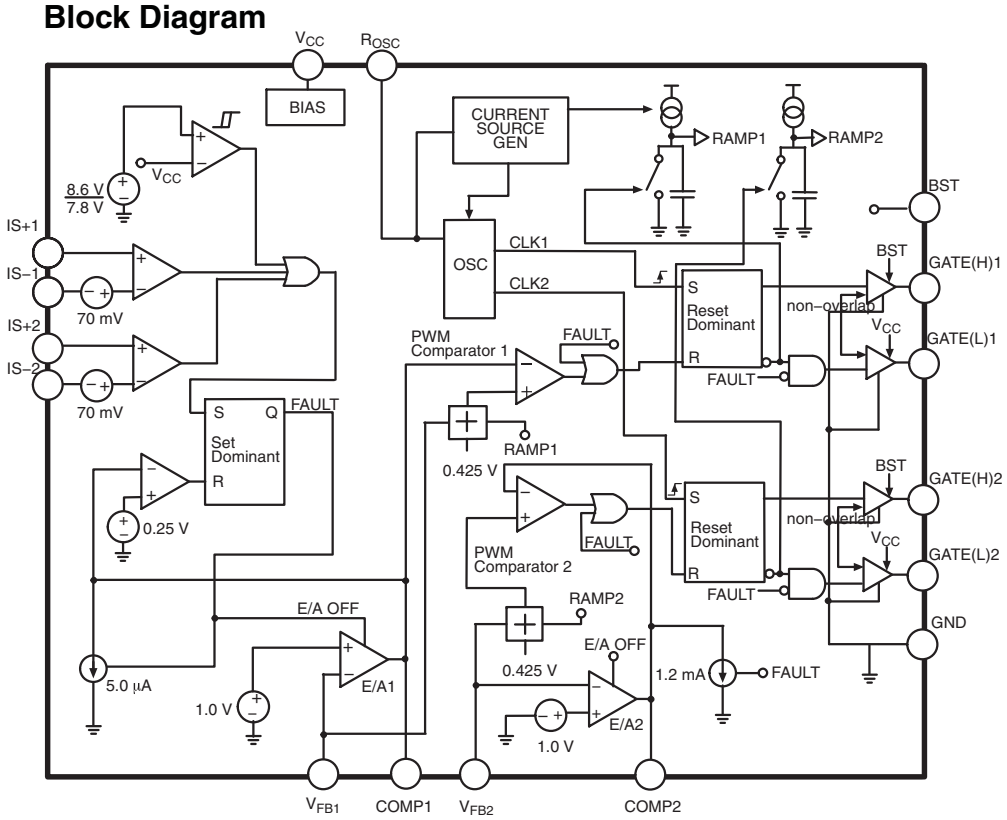
**Figure 7-13 CI+ Conditional Access implementation**

# 8. IC Data Sheets

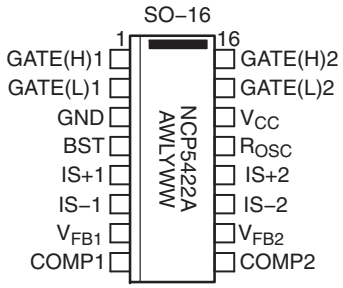
This chapter shows the internal block diagrams and pin configurations of ICs that are drawn as “black boxes” in the electrical diagrams (with the exception of “memory” and “logic” ICs).

## 8.1 Diagram SSB v1: DC/DC +3V3 +1V2 B01A, NCP5422AD (IC 7103)

### Block Diagram




### Pin Configuration




A = Assembly Location
WL = Wafer Lot
Y = Year
WW = Work Week

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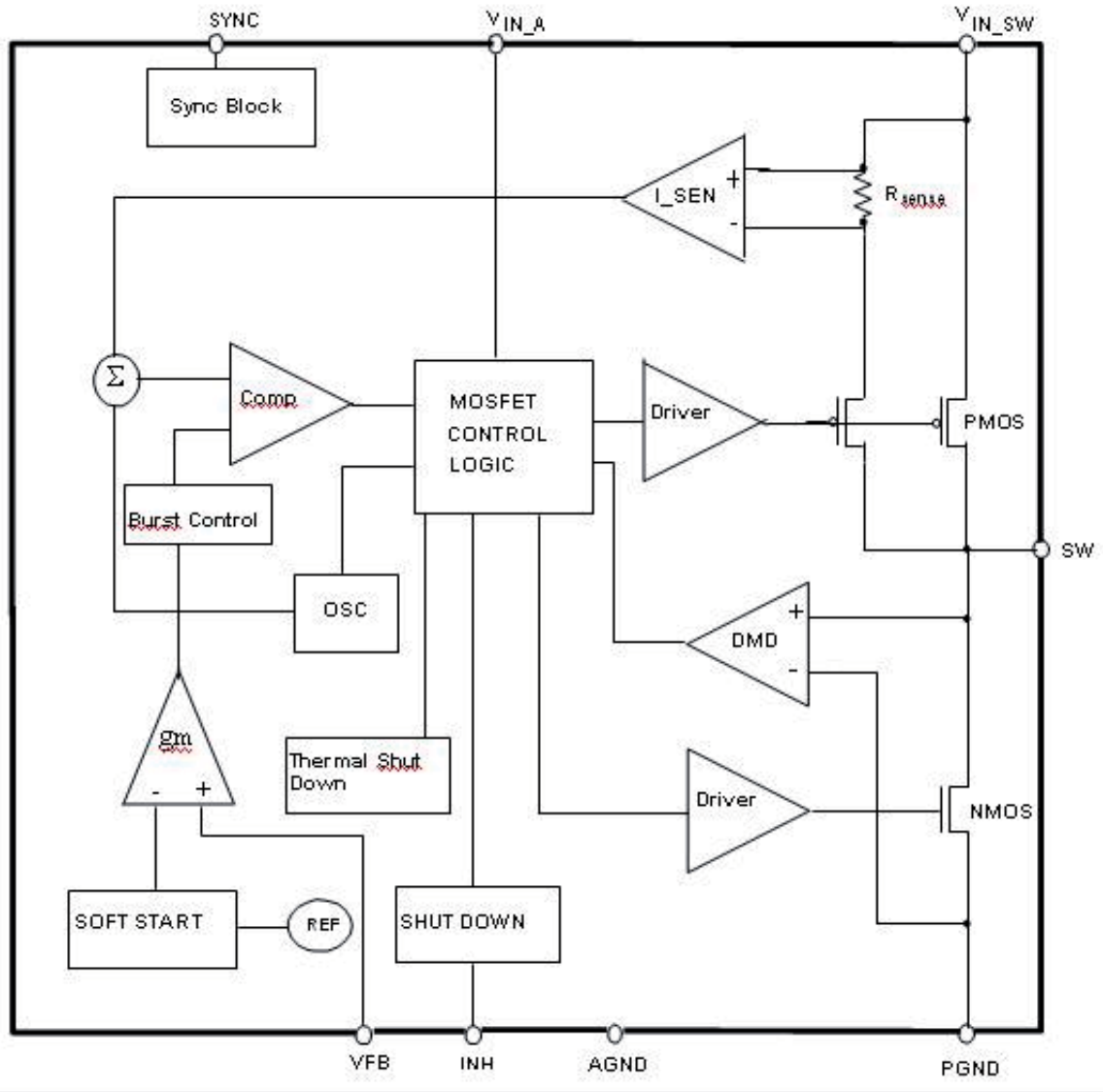
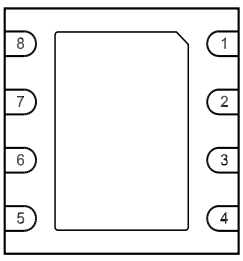
**Figure 8-1 Internal block diagram and pin configuration**

## 8.2 Diagram SSB v1: DC/DC +3V3 +1V2 Stand-by B01B, ST1S10PH (IC 7202/7222)

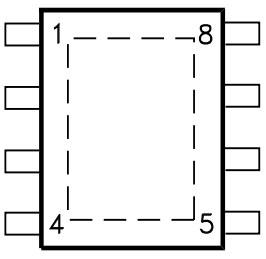
### Block diagram




### Pinning information




DFN8 (4 × 4)




PowerSO-8

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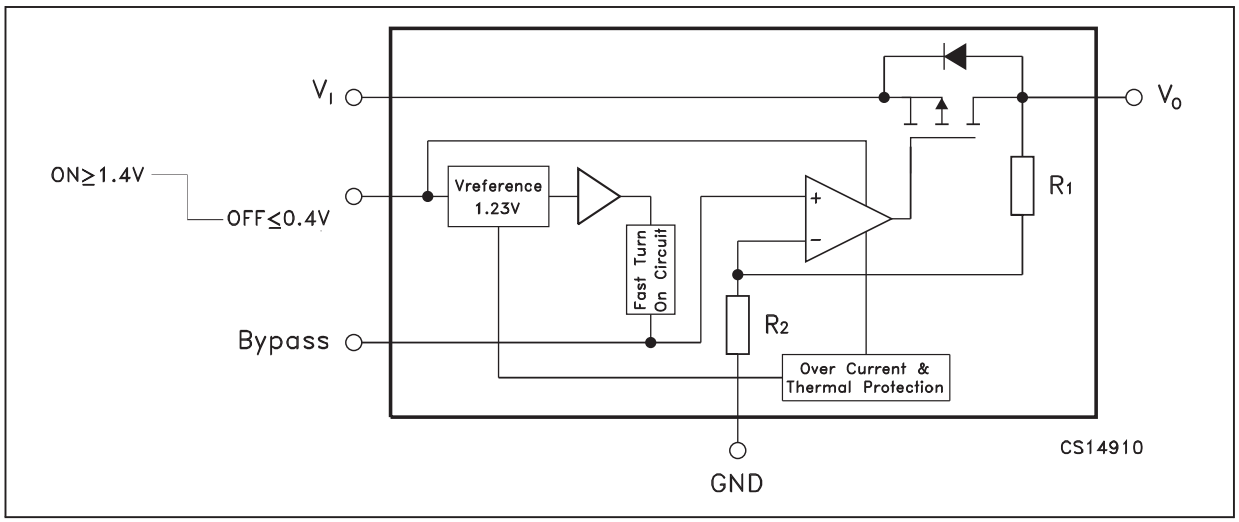
100402

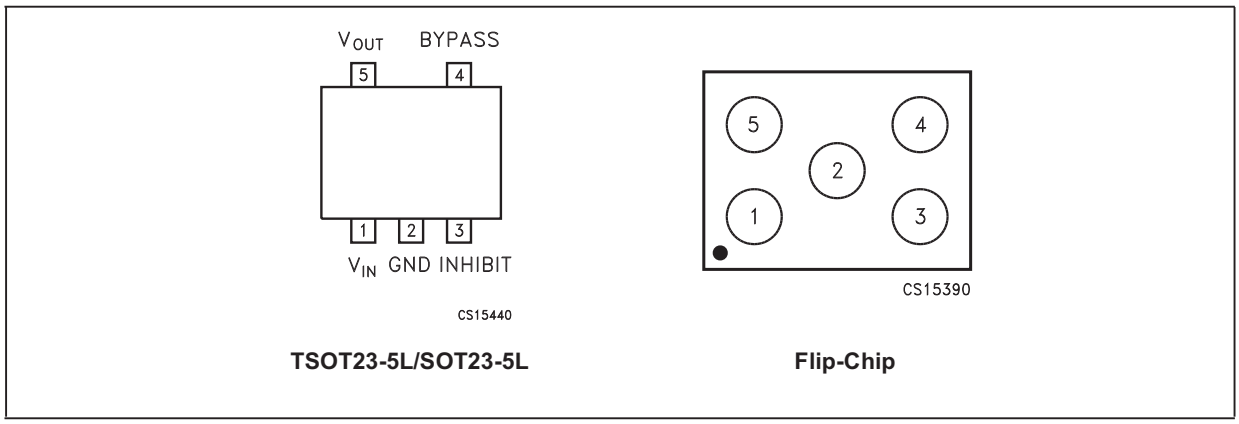
**Figure 8-2 Internal block diagram and pin configuration**

## 8.3 Diagram SSB v1: DC/DC +3V3 +1V2 Stand-by B01B, LD3985M (IC 7201)

### Block Diagram




### Pin Configuration

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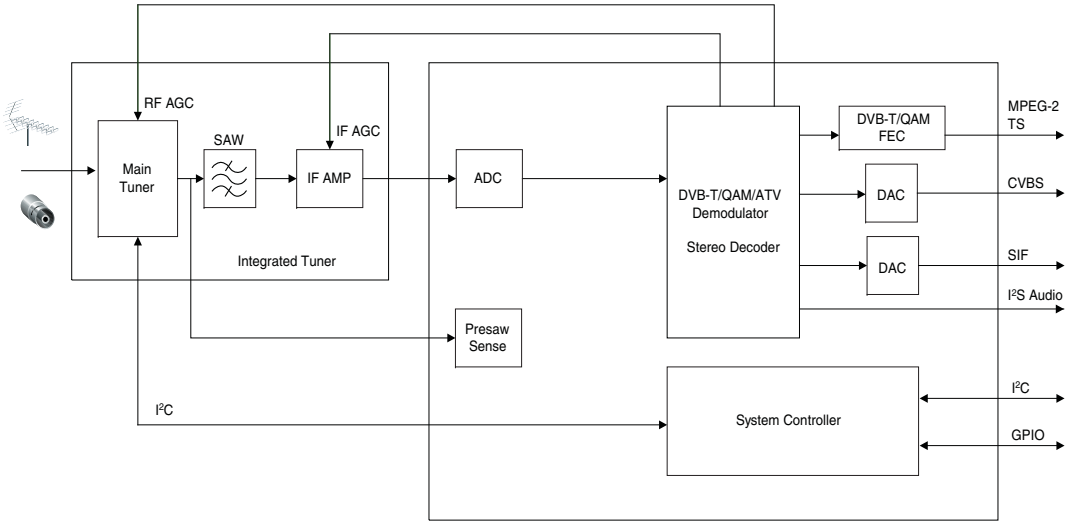
020206

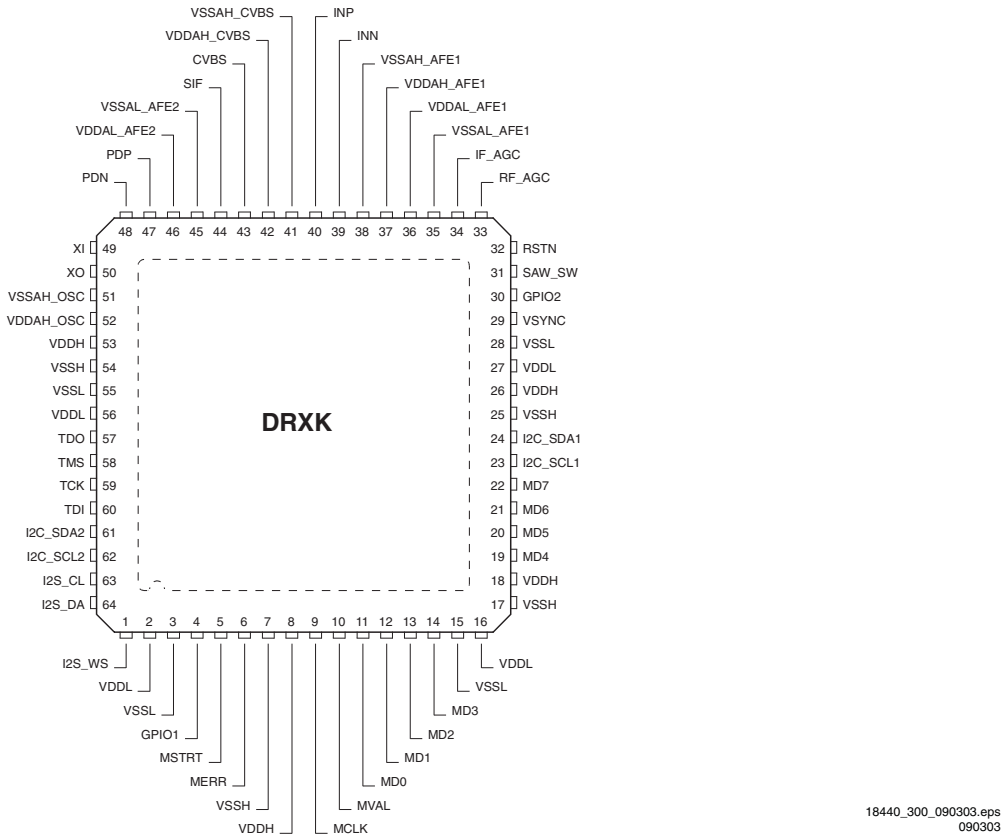
**Figure 8-3 Internal block diagram and pin configuration**

## 8.4 Diagram SSB v1: Front End B02A, DRX3926K (IC 7303)

### Block Diagram




### Pin Configuration

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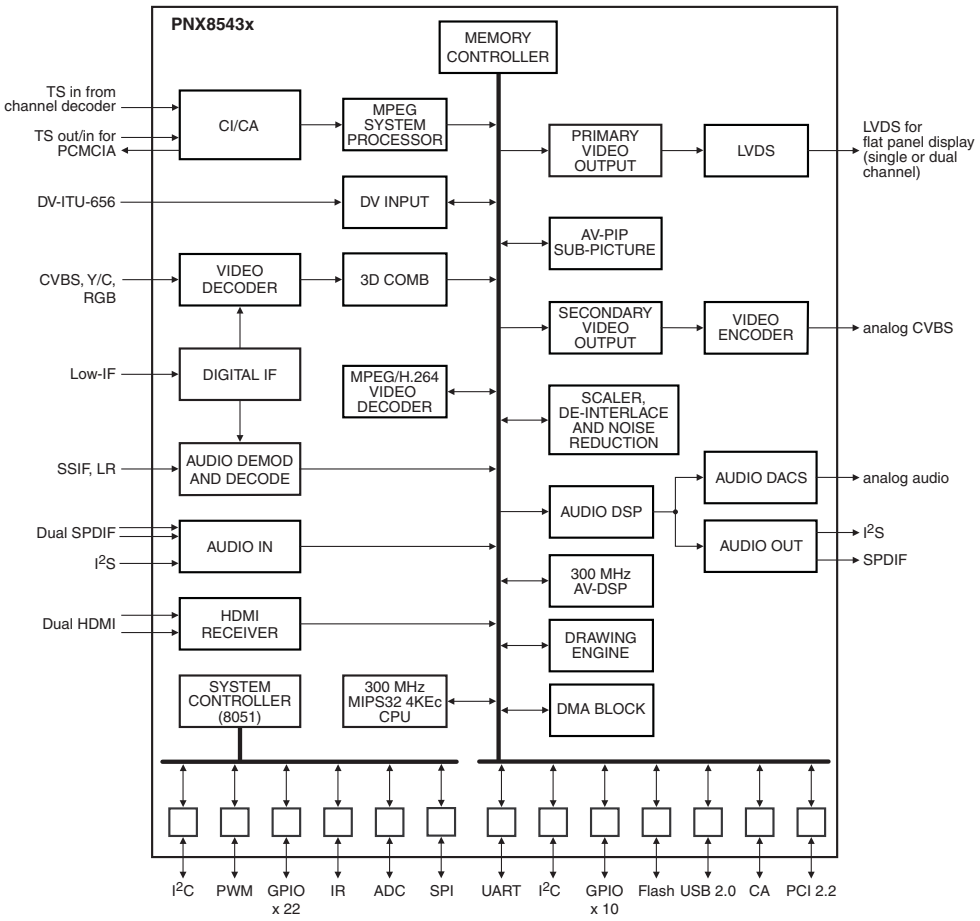
090303

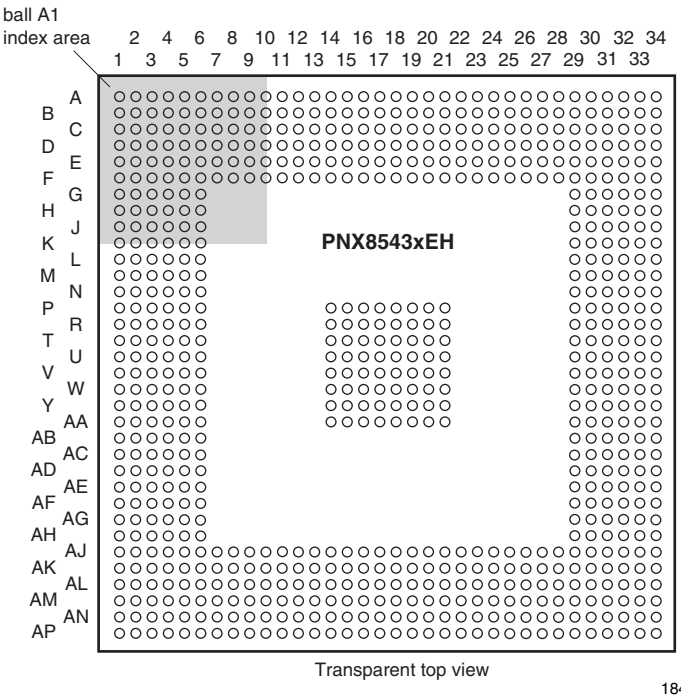
**Figure 8-4 Pin configuration**

## 8.5 Diagram SSB v1: PNX8543 - Power B03A, PNX8543 (IC7600)

### Block Diagram




### Pin Configuration




Transparent top view

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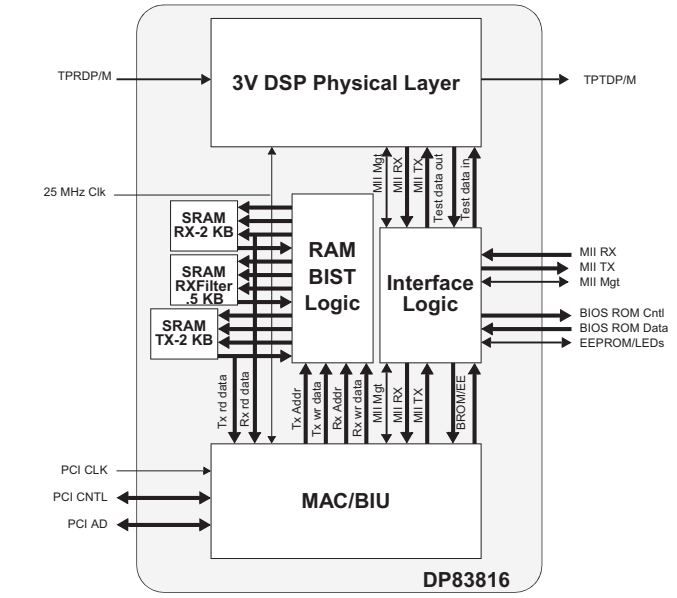
090303

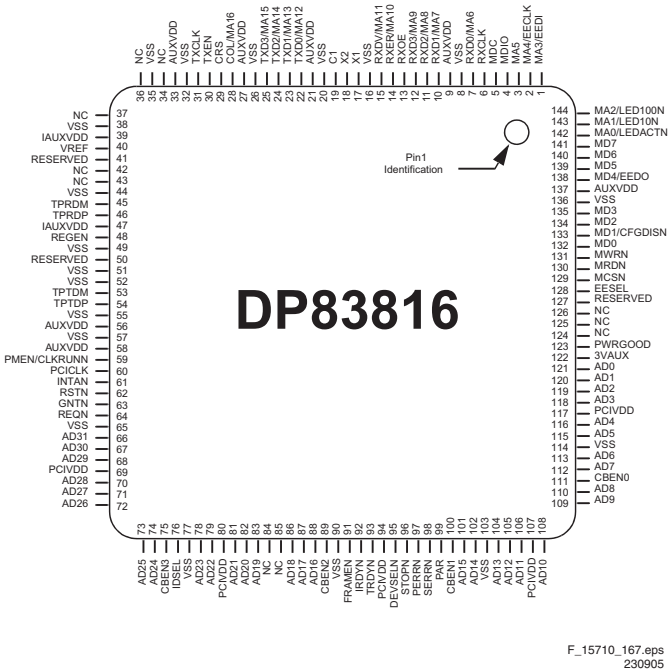
**Figure 8-5 Internal block diagram and pin configuration**

## 8.6 Diagram SSB v1: Ethernet B05B, DP83816 (IC7N04)

### Block Diagram




### Pin Configuration

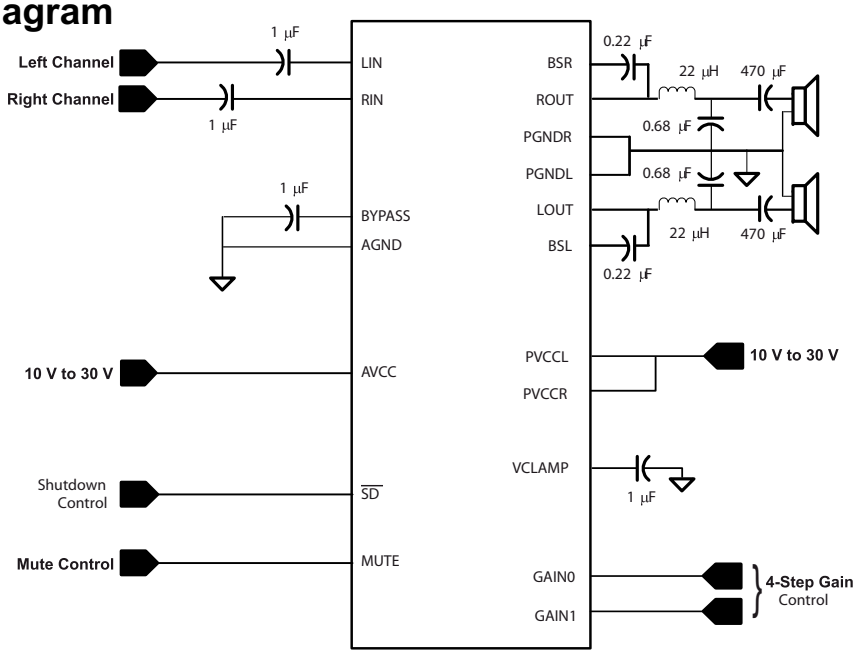



F_15710_167.eps
230905

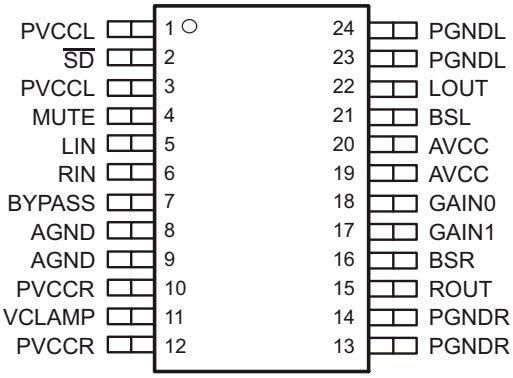
**Figure 8-6 Internal block diagram and pin configuration**

## 8.7 Diagram SSB v1: Class-D B06A, TPA3123D (IC 7L10)

# Block diagram




# Pinning information




| TERMINAL | | I/O/P | DESCRIPTION |
|---|---|---|---|
| NAME | 24-PIN (PWP) | | |
| $\overline{SD}$ | 2 | I | Shutdown signal for IC (low = disabled, high = operational). TTL logic levels with compliance to AVCC |
| RIN | 6 | I | Audio input for right channel |
| LIN | 5 | I | Audio input for left channel |
| GAIN0 | 18 | I | Gain select least-significant bit. TTL logic levels with compliance to AVCC |
| GAIN1 | 17 | I | Gain select most-significant bit. TTL logic levels with compliance to AVCC |
| MUTE | 4 | I | Mute signal for quick disable/enable of outputs (high = outputs switch at 50% duty cycle, low = outputs enabled). TTL logic levels with compliance to AVCC |
| BSL | 21 | I/O | Bootstrap I/O for left channel |
| PVCCL | 1, 3 | P | Power supply for left-channel H-bridge, not internally connected to PVCCR or AVCC |
| LOUT | 22 | O | Class-D 1/2-H-bridge positive output for left channel |
| PGNDL | 23, 24 | P | Power ground for left-channel H-bridge |
| VCLAMP | 11 | P | Internally generated voltage supply for bootstrap capacitors |
| BSR | 16 | I/O | Bootstrap I/O for right channel |
| ROUT | 15 | O | Class-D 1/2-H-bridge negative output for right channel |
| PGNDR | 13, 14 | P | Power ground for right-channel H-bridge. |
| PVCCR | 10, 12 | P | Power supply for right-channel H-bridge, not connected to PVCCL or AVCC |
| AGND | 9 | P | Analog ground for digital/analog cells in core |
| AGND | 8 | P | Analog ground for analog cells in core |
| BYPASS | 7 | O | Reference for preamplifier inputs. Nominally equal to AVCC/8. Also controls start-up time via external capacitor sizing. |
| AVCC | 19, 20 | P | High-voltage analog power supply. Not internally connected to PVCCR or PVCCL |
| Thermal pad | Die pad | P | Connect to ground. Thermal pad should be soldered down on all applications to properly secure device to printed wiring board. |

18440_302_090303.eps
090318

**Figure 8-7 Internal block diagram and pin configuration**

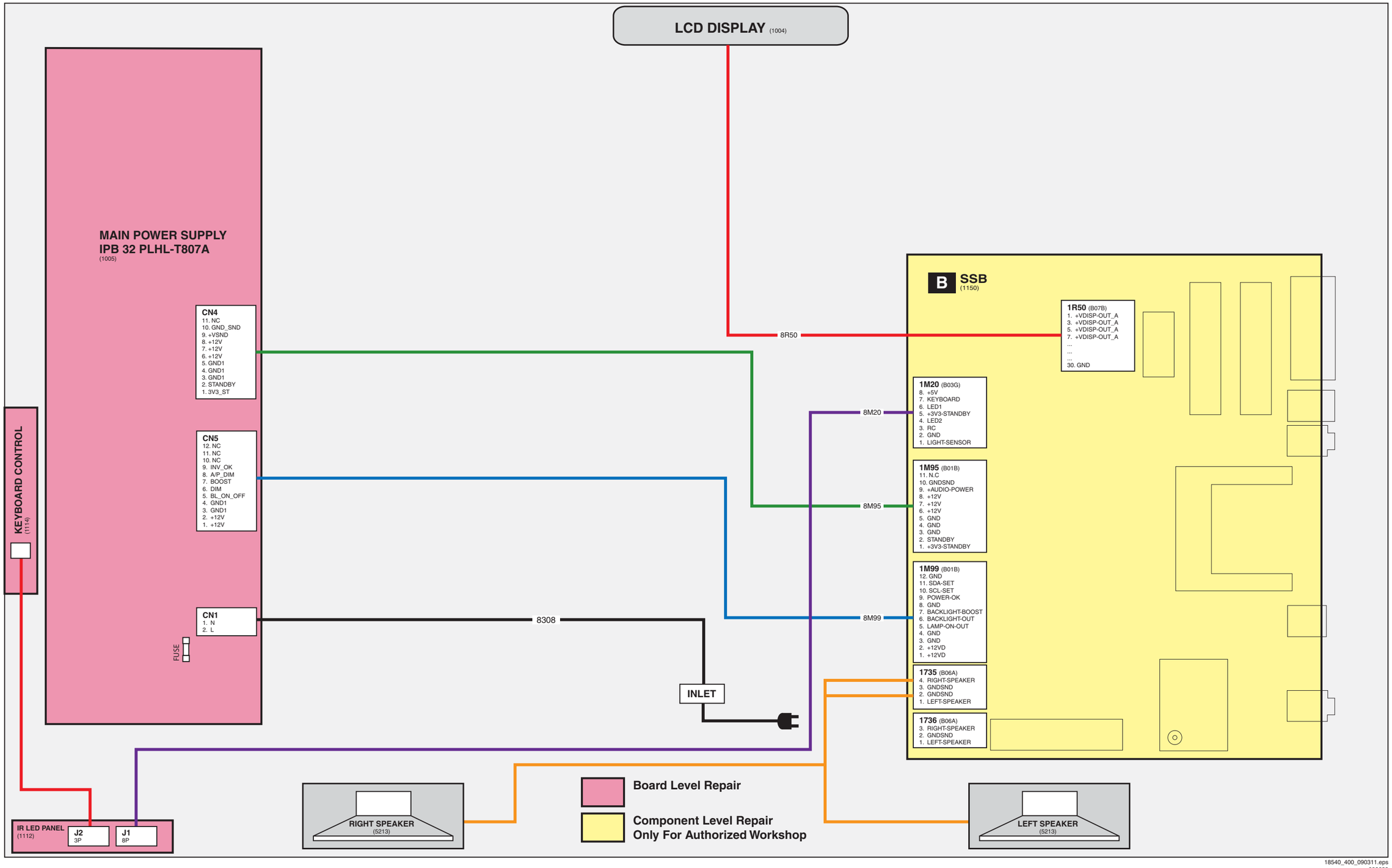
***Personal Notes:***

10000_012_090121.eps
090121

# 9. Block Diagrams

## Wiring Diagram 32" (P&S)

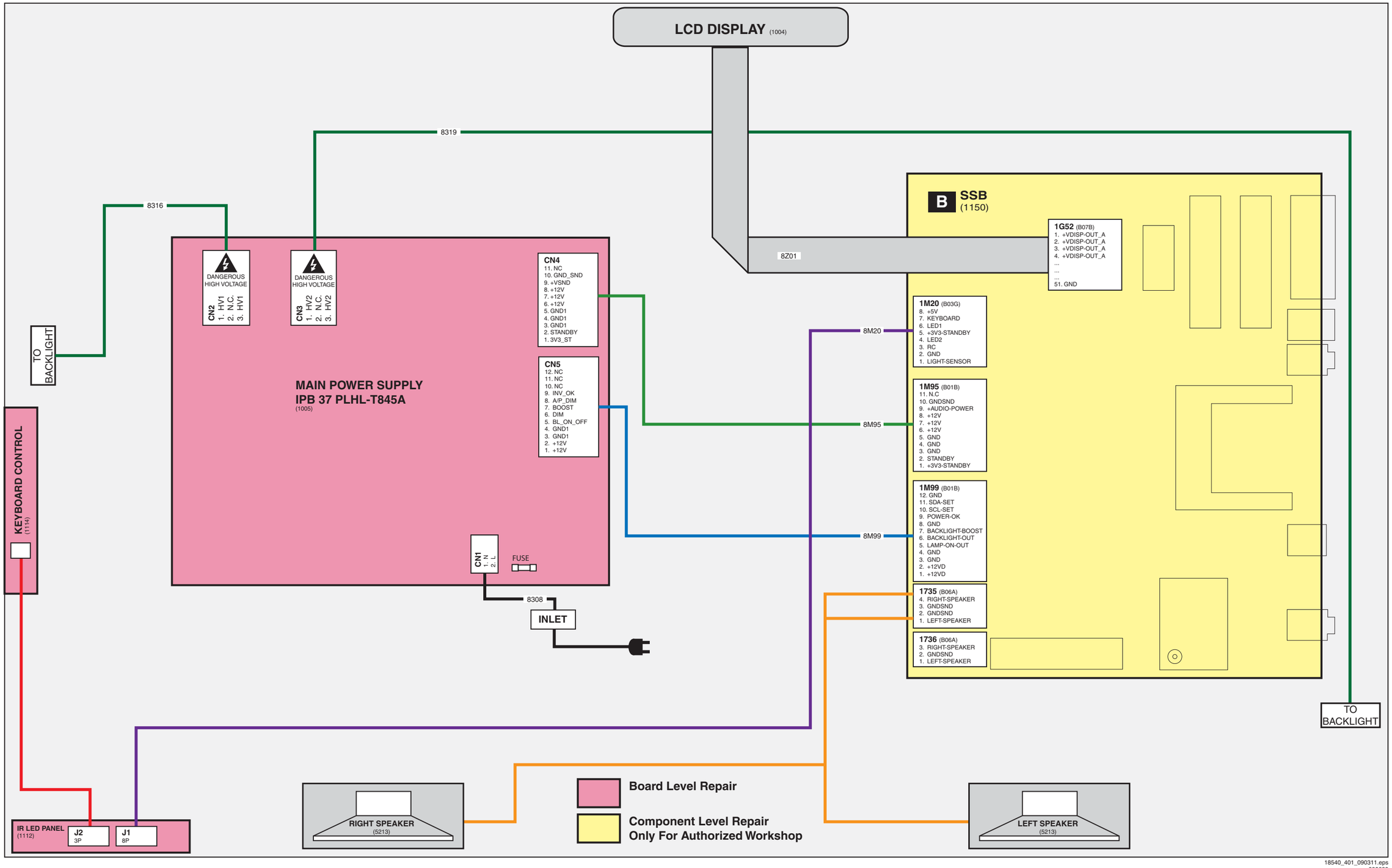
**WIRING DIAGRAM 32"** (P&S)




18540_400_090311.eps
090629

# Wiring Diagram 37" (P&S)

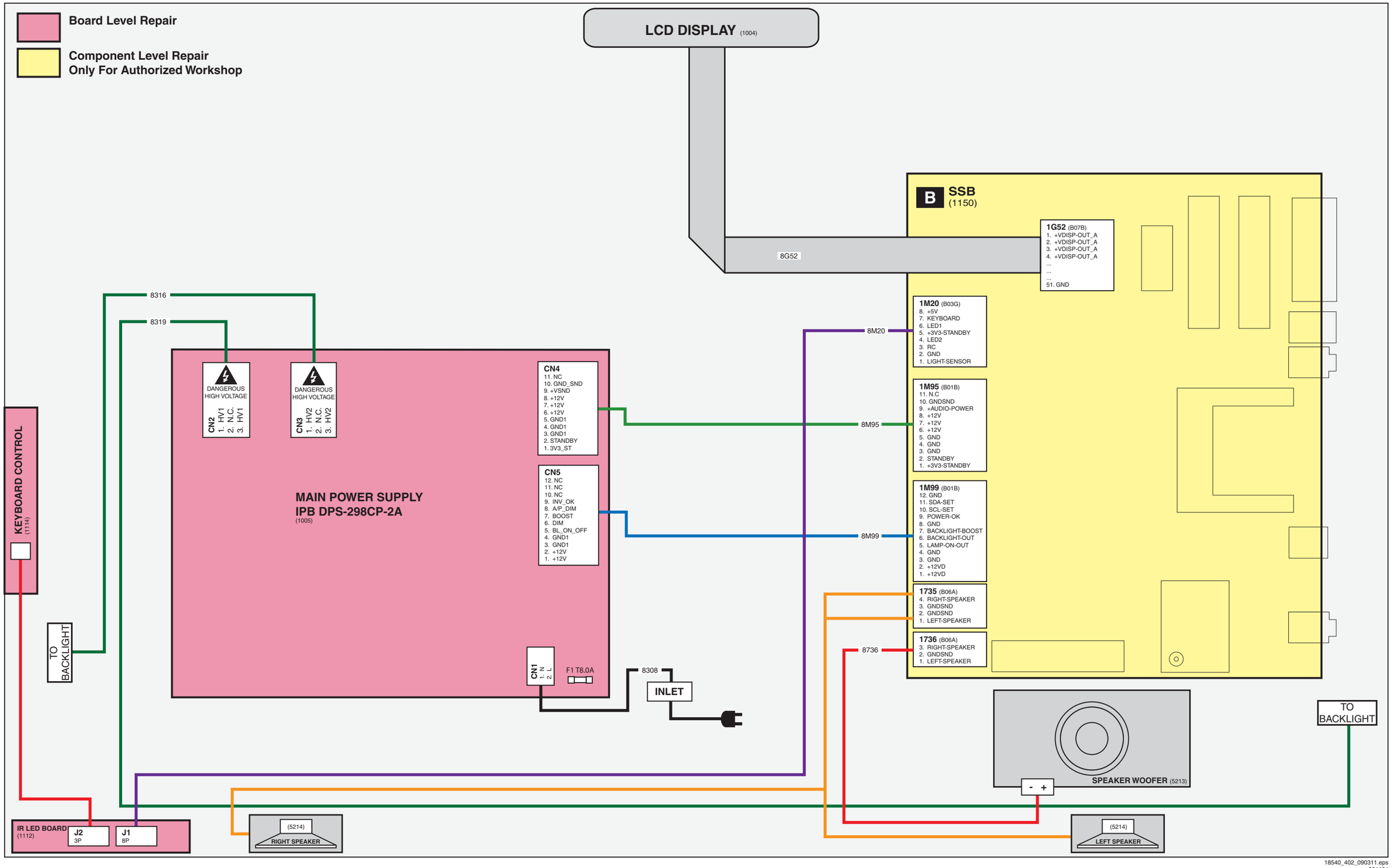
## WIRING DIAGRAM 37" (P&S)




18540_401_090311.eps
090629

# Wiring Diagram 47" (P&S)

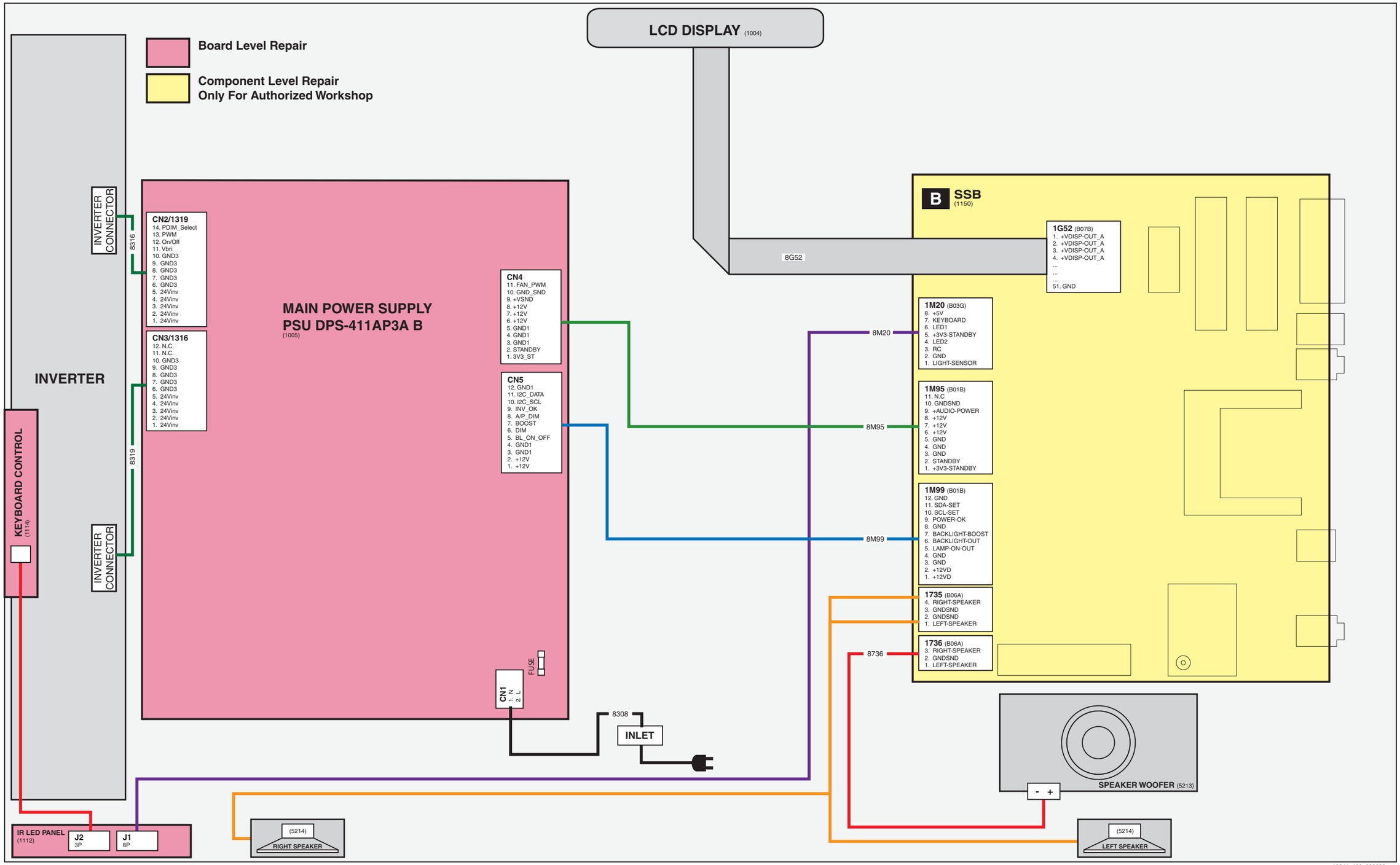
## WIRING DIAGRAM 47" (P&S)




18540_402_090311.eps
091104

# Wiring Diagram 52" (P&S)

## WIRING DIAGRAM 52" (P&S)




18541_400_090629.eps
090629

# Block Diagram Video

VIDEO

B02A FRONT END

B05C PCMCIA

B03 PNX8543

B07B DISPLAY INTERFACE

B05A HDMI

B04B ANALOG IO - SCART 1&2

B04C YPBR / SIDE IO / S-VIDEO

PNX8543

H264
USB 2.0

B03G PNX8543 - CONTROL MIPS/FLASH/PCI

B03F PNX8543 - SDRAM

# Block Diagram Audio

AUDIO

B02A FRONT END

B05C PCMCIA

B03 PNX8543

B06A CLASS-D

B05A HDMI

B04B ANALOG - SCART 1&2

B03C PNX8543 - AUDIO AMPLIFIER

B04C YPBR / SIDE IO / S-VIDEO

B03C PNX8543 - AUDIO AMPLIFIER

B04C YPBR / SIDE IO / S-VIDEO

B03G PNX8543 - CONTROL MIPS/FLASH/PCI

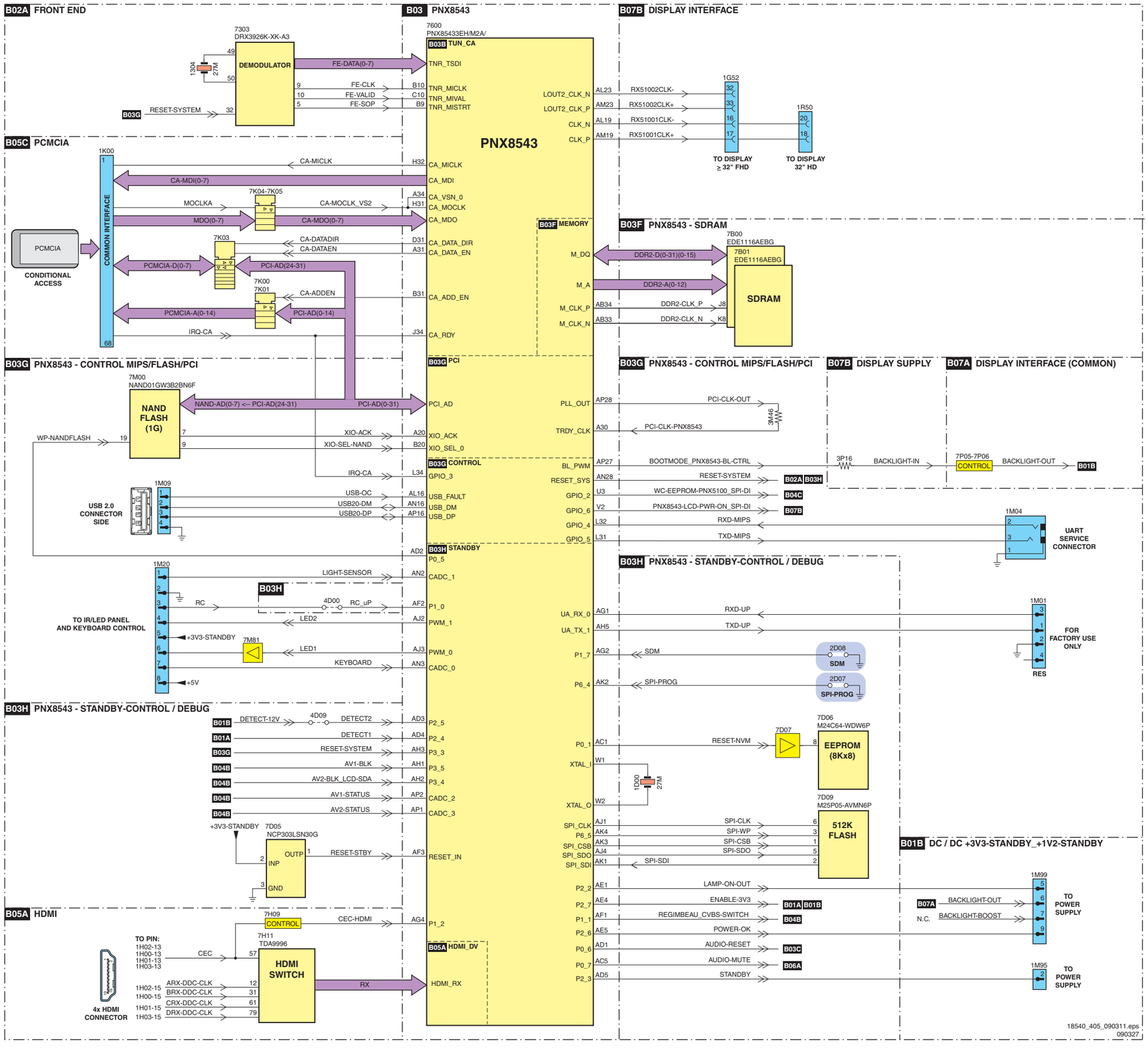
B03F PNX8543 - SDRAM

PNX8543

H264
USB 2.0

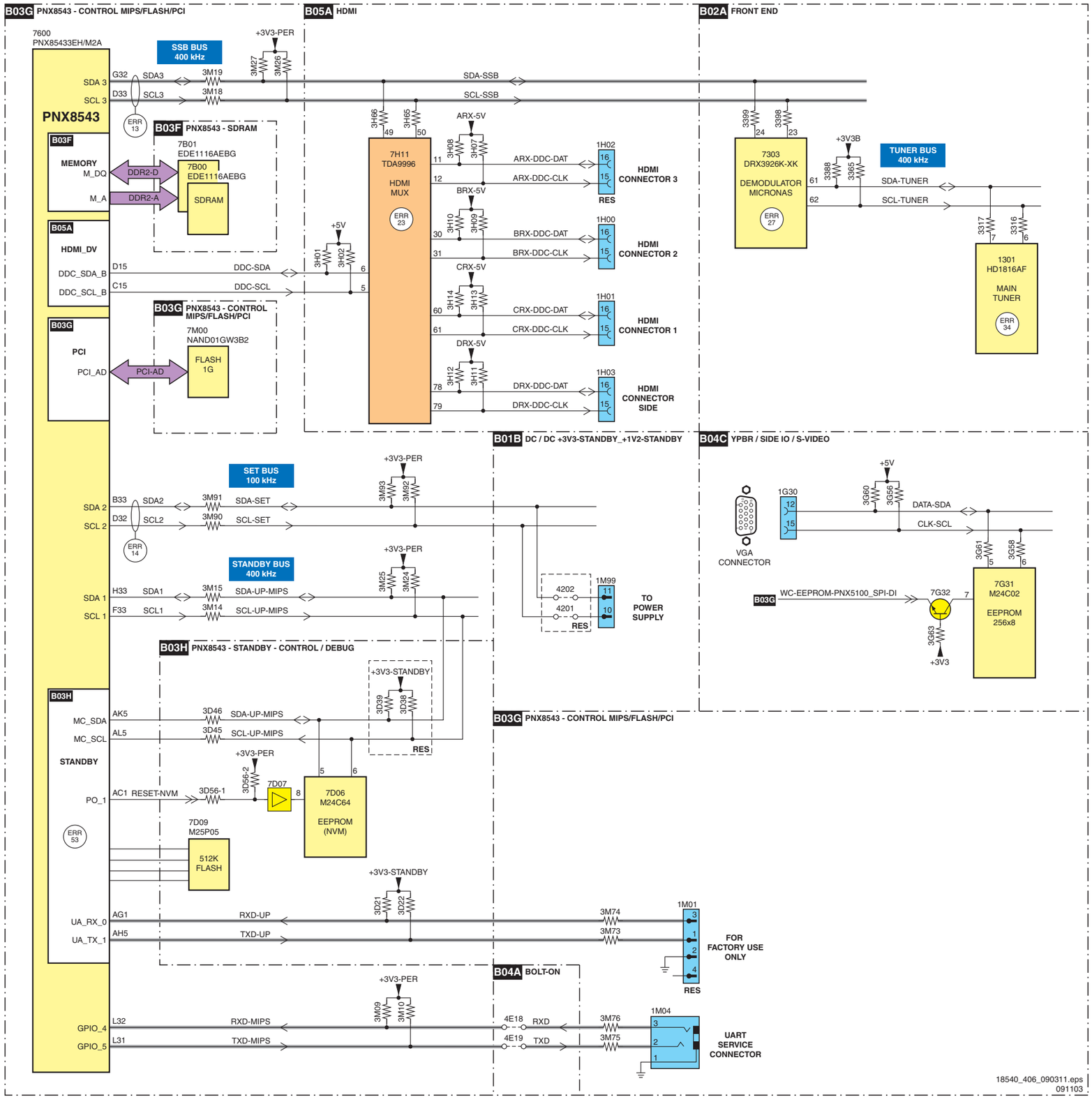
# Block Diagram Control & Clock Signals

## CONTROL + CLOCK SIGNALS



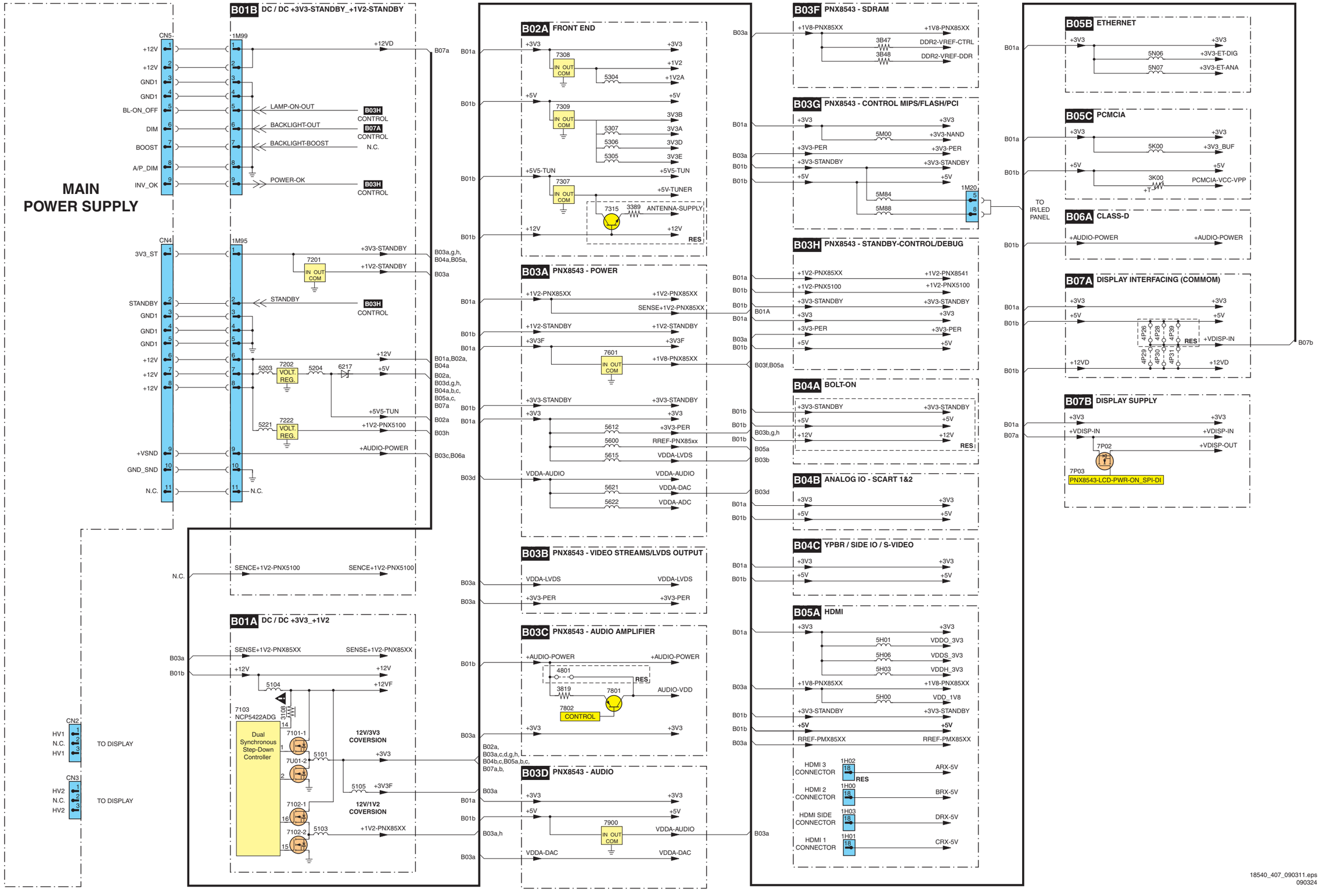
# Block Diagram I²C

## I²C



# Supply Lines Overview

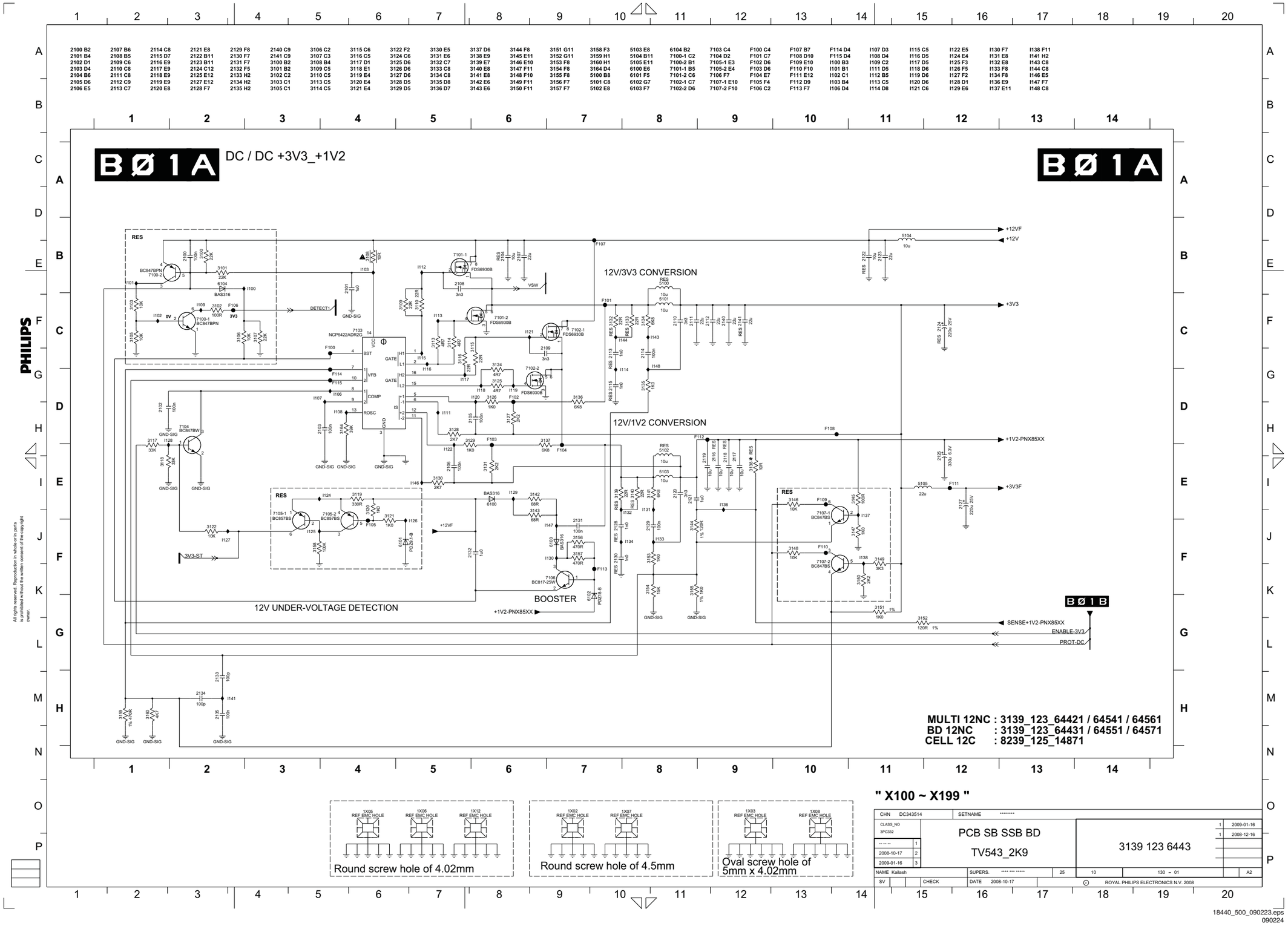
## SUPPLY LINES OVERVIEW




18540_407_090311.eps
090324

# 10. Circuit Diagrams and PWB Layouts

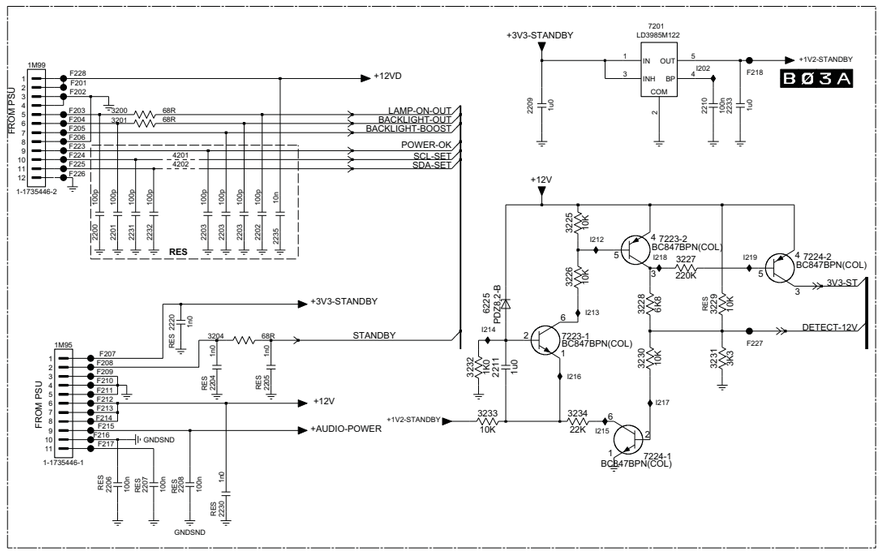
## SSB v1: DC/DC +3V3 +1V2



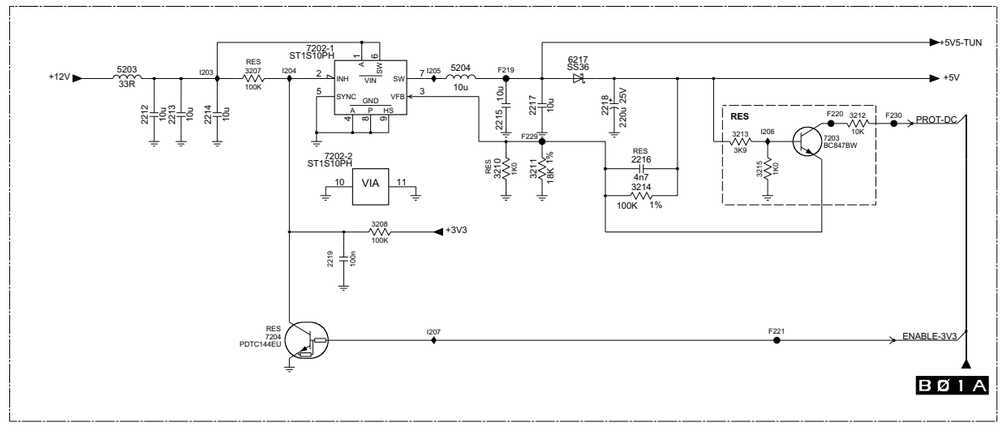
## SSB v1: DC/DC +3V3 +1V2 Stand-by

**1M95** D1 **1M99** B1 **2200** C1 **2201** C1 **2202** C2 **2203** C2 **2204** D2 **2205** D3 **2206** E1 **2207** E2 **2208** E2 **2209** B5 **2210** B6 **2211** D4 **2212** B9 **2213** B9 **2214** B9 **2215** B12 **2216** C13 **2217** B12 **2218** B12 **2219** C10 **2220** D2 **2221** F9 **2222** F9 **2223** F9 **2224** F12 **2225** F12 **2226** F13 **2227** F13 **2228** F13 **2229** F13 **2230** E2 **2231** C1 **2232** C2 **2233** B6 **2235** C3 **2236** C2 **2237** C2 **3200** B1 **3201** B1 **3204** D2 **3207** B10 **3208** C11 **3210** C12 **3211** C12 **3212** B14 **3213** B13 **3214** C13 **3215** C14 **3221** G12 **3222** G12 **3223** F13 **3224** F12 **3225** C5 **3226** C5 **3227** C6 **3228** D6 **3229** D6 **3230** D6 **3231** D6 **3232** D4 **3233** E4 **3234** E5 **4201** B2 **4202** C2 **5203** B9 **5204** B11 **5221** F9 **5222** F11 **6217** B12 **6225** D4 **7201** A6 **7202-1** B10 **7202-2** C10 **7203** B14 **7204** D10 **7222-1** E10 **7222-2** F10 **7223-1** D5 **7223-2** C6 **7224-1** E6 **7224-2** C7 **F201** B1 **F202** B1 **F203** B1 **F204** B1 **F205** B1 **F206** B1 **F207** D1 **F208** D1 **F209** D1 **F210** D1 **F211** D1 **F212** D1 **F213** D1 **F214** E1 **F215** E1 **F216** E1 **F217** E1 **F218** B6 **F219** B12 **F220** B14 **F221** D14 **F222** F12 **F223** B1 **F224** B1 **F225** C1 **F226** C1 **F227** D6 **F228** B1 **F229** B12 **F230** B15 **F231** F12 **I202** B6 **I203** B9 **I204** B10 **I205** B11 **I206** B14 **I207** D11 **I209** F9 **I210** F9 **I212** C5 **I213** D5 **I214** D4 **I215** E5 **I216** D5 **I217** D6 **I218** C6 **I219** C6

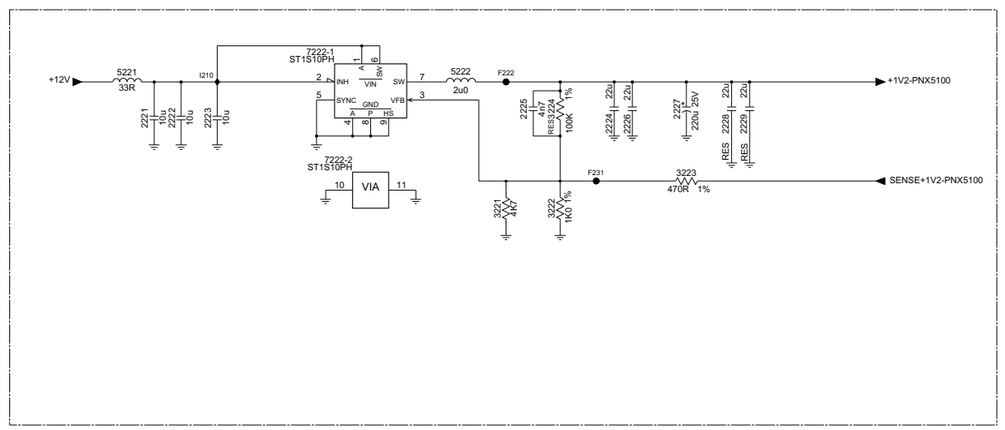
**B Ø 1 B** DC / DC +3V3-STANDBY_+1V2-STANDBY




DC / DC




DC / DC




**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

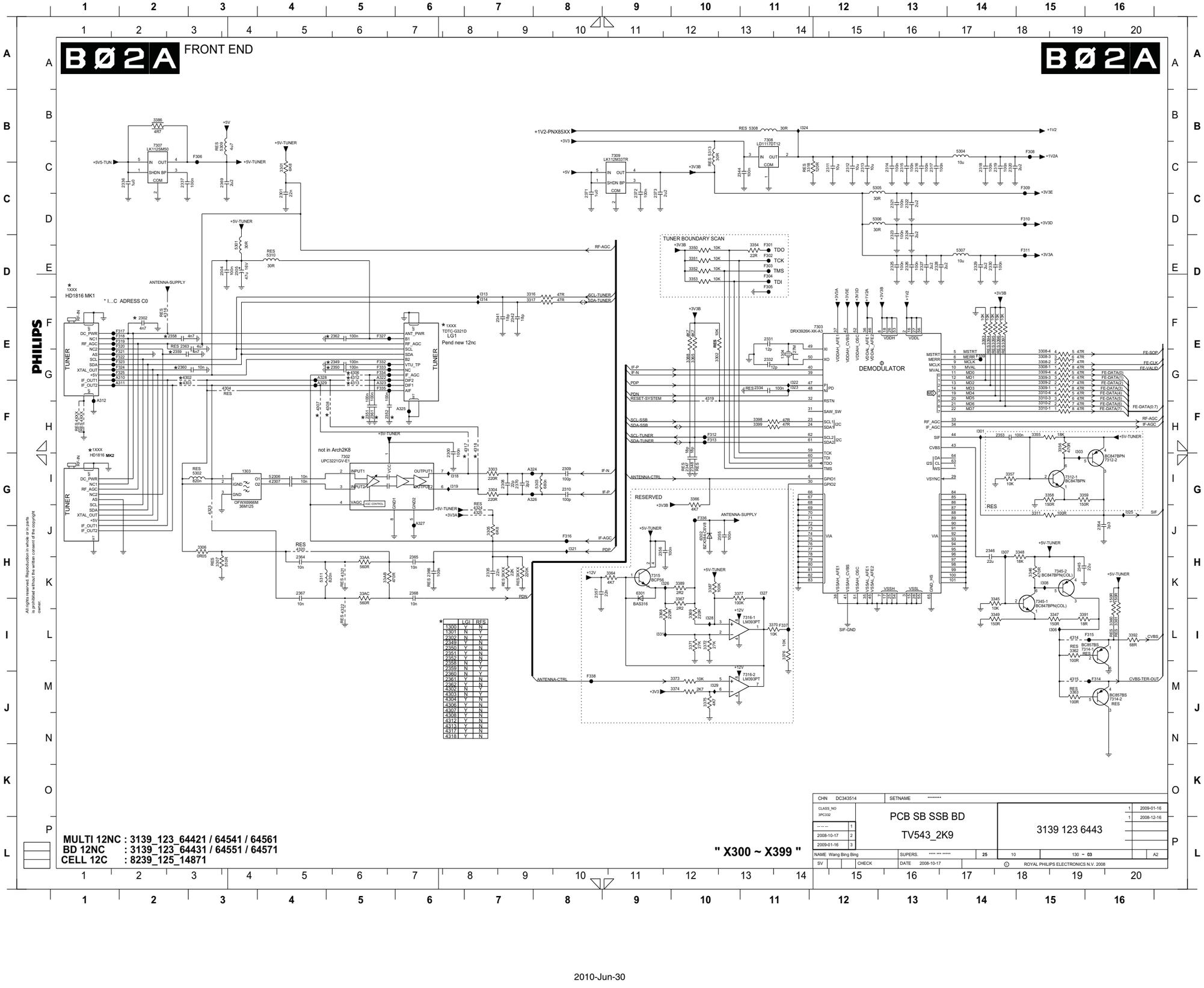
**" X200 ~ X299 "**

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD | 3139 123 6443 | 1 2009-01-16 |
| -- -- -- 1 | TV543_2K9 | | 1 2008-12-16 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Kailash | SUPERS. **** *** ***** | 25 10 130 ~ 02 | A2 |
| SV CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |



18440_501_090223.eps
090224

## SSB v1: Front End




| * | LGI | RES |
|---|---|---|
| 1300 | Y | N |
| 1301 | N | Y |
| 2302 | N | Y |
| 2349 | Y | N |
| 2350 | Y | N |
| 2351 | Y | N |
| 2352 | Y | N |
| 2358 | N | Y |
| 2359 | N | Y |
| 2360 | N | Y |
| 2361 | Y | N |
| 2362 | Y | N |
| 4302 | N | Y |
| 4303 | N | Y |
| 4304 | Y | N |
| 4306 | Y | N |
| 4307 | Y | N |
| 4308 | Y | N |
| 4312 | Y | N |
| 4313 | Y | N |
| 4317 | Y | N |
| 4318 | Y | N |



18440_502_090223.eps
090224

## SSB v1: PNX8543 - Power

B Ø 3 A — PNX8543 - POWER



**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" X600 ~ X699 "**

| | |
|---|---|
| CHN DC343514 | SETNAME ******** |
| CLASS_NO 3PC332 | PCB SB SSB BD |
| -- -- -- 1 | TV543_2K9 |
| 2008-10-17 2 | 3139 123 6443 |
| 2009-01-16 3 | 1 2009-01-16 / 1 2008-12-16 |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** 25 10 130 ÷ 04 A2 |
| SV CHECK | DATE 2008-10-17 © ROYAL PHILIPS ELECTRONICS N.V. 2008 |

2600 C4, 2601 C2, 2602 C4, 2603 C2, 2604 D2, 2605 D3, 2606 D2, 2607 E2, 2608 A6, 2609 A6, 2610 A6, 2611 A6, 2612 A7, 2613 A7, 2614 A7, 2615 A7, 2616 A7, 2617 A8, 2618 A8, 2619 A8, 2620 A8, 2621 B6, 2622 B6, 2623 C7, 2624 C7, 2625 C7, 2626 E7, 2627 C7, 2628 D7, 2629 D7, 2630 E7, 2631 D7, 2632 E5, 2633 E5, 2634 F5, 2635 F5, 2636 F7, 2637 F7, 2638 F8, 2639 F8, 2640 G7, 2641 G7, 2642 G8, 2643 G8, 2644 B12, 2645 B13, 2646 B13, 2647 B13, 2648 B13, 2649 B13, 2650 B14, 2651 B14, 2652 B14, 2654 B15, 2655 B15, 2656 B15, 2657 C13, 2658 C14, 2659 C15, 2660 B16, 2661 B16, 2662 C16, 2663 C15, 2664 D14, 2665 D14, 2666 D14, 2667 D14, 2668 D14, 2669 D14, 2670 D16, 2671 D16, 2672 F15, 2673 F14, 2674 F14, 2675 F14, 2676 F14, 2677 F15, 2678 G14, 2679 G15, 2680 H14, 2681 H15, 2682 H12, 2683 H12, 2684 H13, 2685 H13, 2686 H14, 2687 H14, 2688 H14, 2689 H14, 2690 H15, 2691 B6, 2692 B6, 2693 B7, 2694 H13, 2695 H13, 2696 H13, 2697 D5, 2699 C7, 26A1 E7, 26A2 D7, 26A3 C7, 26A4 C7, 3601 D6, 5600 C2, 5601 D7, 5602 C7, 5603 D4, 5604 D7, 5605 E5, 5607 F5, 5608 E6, 5609 F6, 5610 F8, 5611 G7, 5612 A15, 5613 B16, 5614 C16, 5615 D16, 5616 C15, 5617 B15, 5618 B14, 5619 D16, 5620 D15, 5621 E15, 5622 E15, 5623 F15, 5624 G15, 5625 G15, 5626 E5, 5627 C7, 7600-16 G2, 7600-9 B9, 7601 B3, 7602 D5, C600 E3, F600 C4, F601 E2, F602 C8, F603 D8, F604 E8, F605 E6, F606 F6, F607 E7, F608 F8, F609 F7, F610 G8, F611 A15, F612 B15, F615 C16, F616 C14, F617 D15, F618 D15, F619 D14, F620 E14, F621 E15, F622 F15, F623 G15, F624 G15, F625 D8, F626 H15, I600 C3, I613 B14, I614 B13, I615 G4, I616 C8

18440_503_090223.eps
090224

## SSB v1: PNX8543 - Video Streams/LVDS Output

B Ø 3 B PNX8543 - VIDEO STREAMS / LVDS OUTPUT

3700 B6
3707-1 F6
3707-2 F6
3707-3 F6
3707-4 F6
3708-1 F6
3708-2 F6
3708-3 F6
3708-4 F6
3709-1 F8
3709-2 G8
3709-3 F6
3709-4 G6
3710 G7
3711 H1
3714 H2
4700 H6
4701 H2
4702 G4
7600-11 B2
7600-12 F5
7600-5 B5
F700 B6
F701 H2
F702 C7
F703 C7
F704 D7
F705 D7
F706 D7
F707 D7
F708 D7
F709 D7
F710 D7
F711 D7
F712 D7
F713 E7

7600-11 PNX85439E

7600-5 PNX85439E

LVDS
IREF_LVDS AK19 F700

RX51001A- RX51001A+
RX51001B- RX51001B+
RX51001C- RX51001C+
RX51001D- RX51001D+
RX51001E- RX51001E+
RX51001CLK- RX51001CLK+
RX51002A- RX51002A+
RX51002B- RX51002B+
RX51002C- RX51002C+
RX51002D- RX51002D+
RX51002E- RX51002E+
RX51002CLK- RX51002CLK+

B Ø 5 C

7600-12 PNX85439E

TUN_CA

CA-MDO(0:7)
CA-MOSTRT
CA-MOVAL
CA-MOCLK_VS2

B Ø 2 C

FE-DATA(0:7)
FE-ERR
FE-CLK
FE-SOP
FE-VALID

+3V3-PER 3711 4K7 F701 4701 3714 10K RES

CA-MDI0 CA-MDI1 CA-MDI2 CA-MDI3 CA-MDI4 CA-MDI5 CA-MDI6 CA-MDI7
CA-MISTRT
CA-MIVAL
CA-MICLK
CA-ADDEN
CA-CD1 CA-CD2
CA-DATADIR
CA-DATAEN
IRQ-CA
CA-RST
CA-VS1

3709-1 3709-2 NC 47R NC

**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" X700 ~ X799 "**

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 1 2009-01-16 1 2008-12-16 |
| – – – 1 | | | |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 | 10 130 ~ 05 A2 |
| SV CHECK | DATE 2008-10-17 | | |





18440_504_090223.eps
090224

## SSB v1: PNX8543 Audio Amplifier

B Ø 3 C

PNX8543 - AUDIO AMPLIFIER

B Ø 1 B

+AUDIO-POWER

AUDIO-VDD

RESERVED FOR ITV

BATHROOM SPEAKER

ADAC(7) ADAC(8) ADAC(5) ADAC(6) ADAC(3) ADAC(4) AUDIO-RESET

AUDIO-CL-L AUDIO-CL-R AUDIO-OUT-L AUDIO-OUT-R

HP_LOUT HP_ROUT

A-PLOP A-STBY

**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" X800 ~ X899 "**

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD | 3139 123 6443 | 1 2009-01-16 |
| | TV543_2K9 | | 1 2008-12-16 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Hor Siew Lee | SUPERS. ***** *** ****** 25 | 10 130 ~ 06 | A2 |
| SV CHECK | DATE 2008-10-17 | ROYAL PHILIPS ELECTRONICS N.V. 2008 | |



1800 G1 I850 H9
2800 B2 I851 H9
2806 A8
2808 C8
2809 E8
2810 F8
2811 D7
2812 E7
2822 C12
2823 B8
2824 G2
2825 G2
2826 A7
2827 B7
2830 D7
2831 E7
2832 H6
2833 H6
2834 G8
2835 G7
2836 G7
2837 H6
3810 F2
3811 F3
3812 F3
3813 F4
3814 G2
3815 G3
3816-1 B8
3816-2 B7
3816-3 C7
3816-4 C8
3817-1 D7
3817-2 D8
3817-3 F7
3817-4 F8
3818 B2
3819-1 B3
3819-2 B3
3819-3 C3
3819-4 C3
3820 C2
3821 G1
3822 G1
3830-1 B13
3830-2 C13
3830-3 C11
3830-4 C11
3831 A9
3832 C9
3833 B12
3834 E9
3835-1 H6
3835-2 G7
3835-3 F7
3835-4 H6
3839 H7
3840 D9
3841 C11
4801 A3
6801 B2
7801 B4
7802 C3
7803-1 A8
7803-2 B8
7803-3 D8
7803-4 E8
7807-1 C12
7807-2 C14
7808 F2
7809 F3
7830 G7
F800 G1
F801 G2
F802 G2
F803 B9
F804 D9
F805 E9
F808 C11
F809 A9
F811 C14
F812 B4
I810 F2
I811 F3
I812 F4
I813 F3
I814 A7
I815 B7
I816 D7
I817 E7
I818 B2
I819 B3
I821 C2
I822 C3
I823 C3
I833 A7
I835 B7
I836 D7
I837 E7
I839 C12
I840 C13
I845 H6
I846 H6
I847 H7
I848 H7
I849 H7

## SSB v1: PNX8543 Audio

B Ø 3 D — PNX8543 - AUDIO

B Ø 3 D

| | FLAVORS 22" | FLAVORS 32"/42" | PnS SS | OTHERS |
|---|---|---|---|---|
| 4901 & 4902 | YES | X | X | X |
| 4903 & 4904 | X | X | YES | X |
| 4905 & 4906 | YES | YES | X | X |
| 3904 | X | 33K | 33K | 33K |
| 3905 | X | 33K | 33K | 33K |
| 3903 | 15K | 22K | 33K | 33K |
| 3923 | 220K | 100K | 33K | 33K |
| 3924 | X | X | 22K | 33K |
| 3925 | X | X | 100K | 33K |
| 3926 | X | 33K | X | 33K |
| 3927 | X | 33K | X | 33K |

**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" X900 ~ X999"**



| | | | |
|---|---|---|---|
| CHN DC343514 | | SETNAME ******** | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 1 2009-01-16 |
| – – – – 1 | | | 1 2008-12-16 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Hor Siew Lee | SUPERS. **** *** ***** 25 | 10 130 ~ 07 | A2 |
| SV CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

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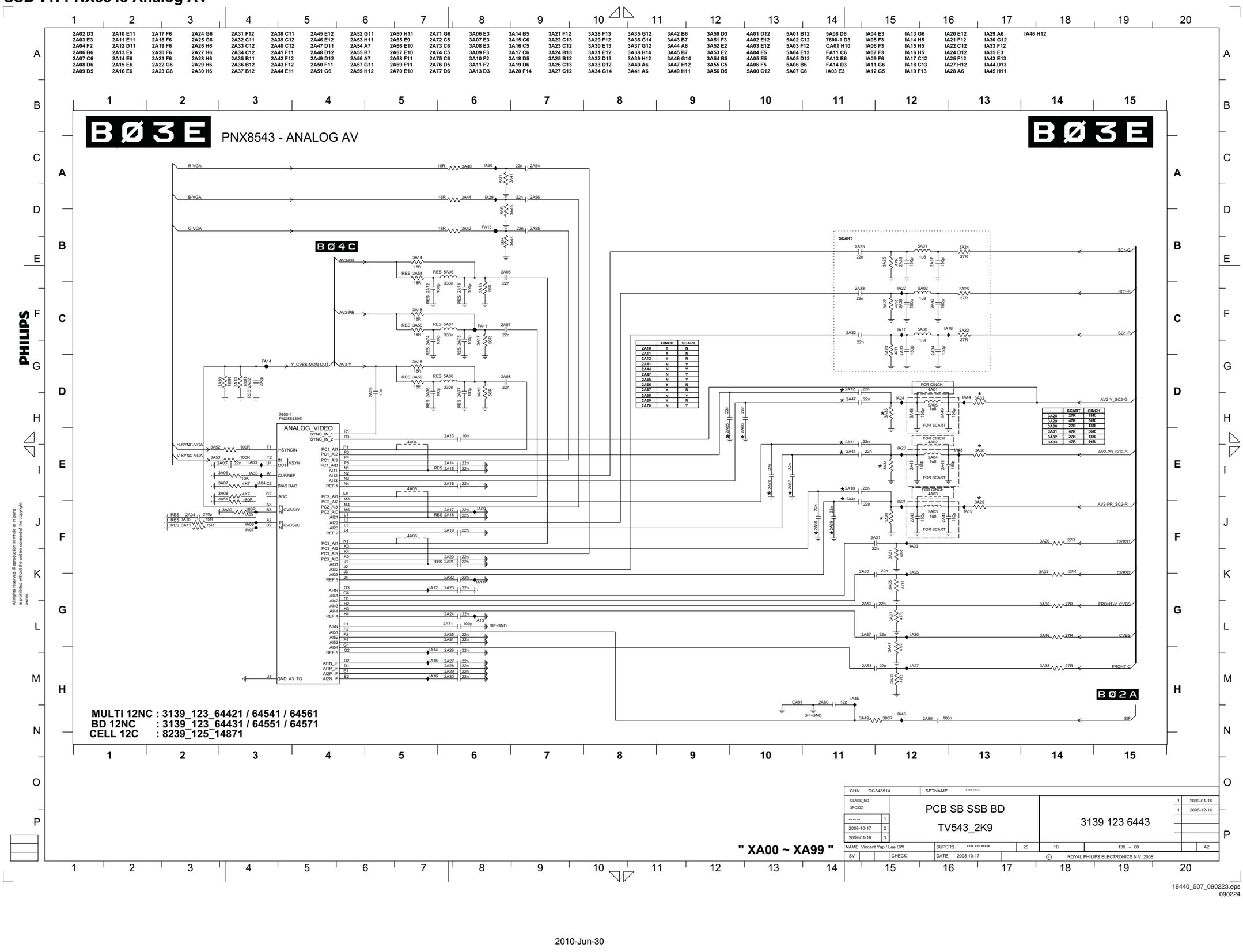
**2900** B5 **2901** B5 **2902** B5 **2903** C5 **2904** C5 **2905** D5 **2906** D5 **2907** E5 **2908** E5 **2909** E5 **2910-1** B7 **2910-2** B7 **2910-3** C7 **2910-4** C7 **2912** C7 **2915-1** C9 **2915-2** C9 **2915-3** C9 **2915-4** C9 **2919** C10 **2920** C10 **2921** C11 **2922** E11 **2923** E11 **2924** G5 **2925** G6 **2926** A4 **2927** B4 **2928** B4 **2929** C4 **2930** C4 **2931** C4 **2932** D4 **2933** D4 **2934** E4 **2935** E4 **2936** E11 **2937** E11 **2938** E11 **2939** E12 **3900-1** B2 **3900-2** B3 **3900-3** A3 **3900-4** A2 **3903-2** C2 **3903-4** C2 **3904-3** C2 **3904-4** B2 **3905-3** C3 **3905-4** B3 **3906** G6 **3907** G6 **3908** G6 **3909** C11 **3910** C11 **3911-1** F9 **3911-2** F9 **3911-3** D9 **3911-4** D9 **3912-1** E9 **3912-2** E9 **3912-3** E9 **3912-4** D9 **3913** F9 **3914** F9 **3915** F9 **3923-1** D3 **3923-4** C3 **3924-1** D2 **3924-2** D2 **3925-1** D3 **3925-2** E3 **3926-1** E2 **3926-2** E2 **3927-1** E3 **3927-2** E3 **3932** F6 **3933** F6 **4901** B4 **4902** C4 **4903** D3 **4904** E4 **4905** C4 **4906** D4 **5900** B7 **5901** C10 **5902** B7 **6900** E2 **6901** D2 **7600-7** C7 **7900** B11 **F901** C10 **F902** F10 **I901** A4 **I902** B4 **I903** B4 **I904** C4 **I905** C4 **I906** C4 **I907** D4 **I908** D4 **I909** E4 **I910** E4 **I911** C9 **I913** C11 **I914** C7 **I916** B7 **I917** F7 **I918** F7 **I919** G7 **I920** F9 **I921** B7 **I922** C10

## SSB v1: PNX8543 Analog AV

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2A02 D3 | 2A10 E11 | 2A17 F6 | 2A24 G6 | 2A31 F12 | 2A38 C11 | 2A45 E12 | 2A52 G11 | 2A60 H11 | 2A71 G6 | 3A06 E3 | 3A14 B5 | 3A21 F12 | 3A28 F13 | 3A35 G12 | 3A42 B6 | 3A50 D3 | 4A01 D12 | 5A01 B12 | 5A08 D6 | IA04 E3 | IA13 G6 | IA20 E12 | IA29 A6 | IA46 H12 |
| 2A03 E3 | 2A11 E11 | 2A18 F6 | 2A25 G6 | 2A32 C11 | 2A39 C12 | 2A46 E12 | 2A53 H11 | 2A65 E9 | 2A72 C5 | 3A07 E3 | 3A15 C6 | 3A22 C13 | 3A29 F12 | 3A36 G14 | 3A43 B7 | 3A51 F3 | 4A02 E12 | 5A02 C12 | 7600-1 D3 | IA05 F3 | IA14 H5 | IA21 F12 | IA30 G12 | |
| 2A04 F2 | 2A12 D11 | 2A19 F6 | 2A26 H6 | 2A33 C12 | 2A40 C12 | 2A47 D11 | 2A54 A7 | 2A66 E10 | 2A73 C6 | 3A08 E3 | 3A16 C5 | 3A23 C12 | 3A30 E13 | 3A37 G12 | 3A44 A6 | 3A52 E2 | 4A03 E12 | 5A03 F12 | CA01 H10 | IA06 F3 | IA15 H5 | IA22 C12 | IA33 F12 | |
| 2A06 B6 | 2A13 E6 | 2A20 F6 | 2A27 H6 | 2A34 C12 | 2A41 F11 | 2A48 D12 | 2A55 B7 | 2A67 E10 | 2A74 C5 | 3A09 F3 | 3A17 C6 | 3A24 B13 | 3A31 E12 | 3A38 H14 | 3A45 B7 | 3A53 E2 | 4A04 E5 | 5A04 E12 | FA11 C6 | IA07 F3 | IA16 H5 | IA24 D12 | IA35 E3 | |
| 2A07 C6 | 2A14 E6 | 2A21 F6 | 2A28 H6 | 2A35 B11 | 2A42 F12 | 2A49 D12 | 2A56 A7 | 2A68 F11 | 2A75 C6 | 3A10 F2 | 3A18 D5 | 3A25 B12 | 3A32 D13 | 3A39 H12 | 3A46 G14 | 3A54 B5 | 4A05 E5 | 5A05 D12 | FA13 B6 | IA09 F6 | IA17 C12 | IA25 F12 | IA43 E13 | |
| 2A08 D6 | 2A15 E6 | 2A22 G6 | 2A29 H6 | 2A36 B12 | 2A43 F12 | 2A50 F11 | 2A57 G11 | 2A69 F11 | 2A76 D5 | 3A11 F2 | 3A19 D6 | 3A26 C13 | 3A33 D12 | 3A40 A6 | 3A47 H12 | 3A55 C5 | 4A06 F5 | 5A06 B6 | FA14 D3 | IA11 G6 | IA18 C13 | IA27 H12 | IA44 D13 | |
| 2A09 D5 | 2A16 E6 | 2A23 G6 | 2A30 H6 | 2A37 B12 | 2A44 E11 | 2A51 G6 | 2A59 H12 | 2A70 E10 | 2A77 D6 | 3A13 D3 | 3A20 F14 | 3A27 C12 | 3A34 G14 | 3A41 A6 | 3A49 H11 | 3A56 D5 | 5A00 C12 | 5A07 C6 | IA03 E3 | IA12 G5 | IA19 F13 | IA28 A6 | IA45 H11 | |



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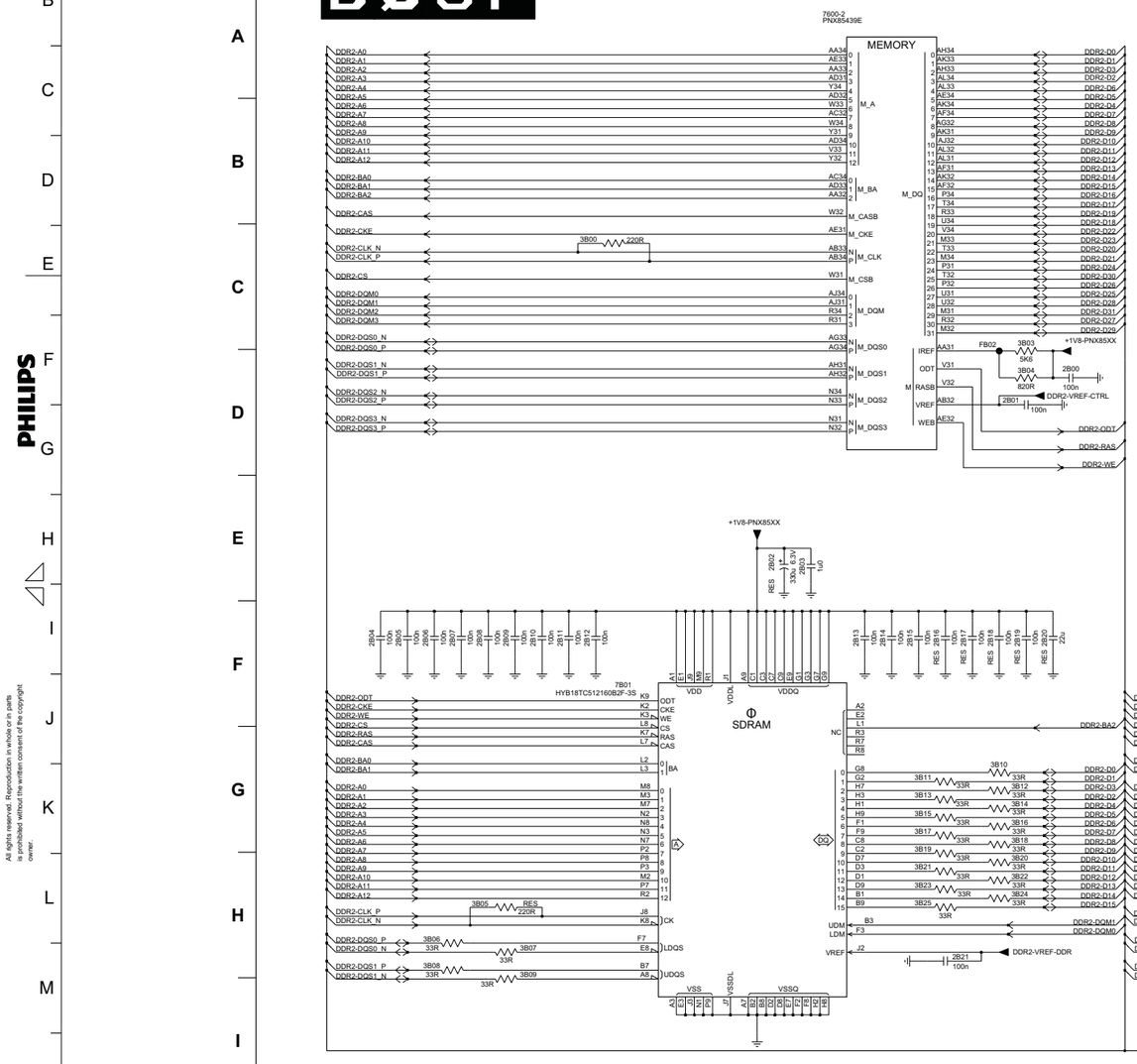
090224

## SSB v1: PNX8543 SDRAM

B Ø 3 F — PNX8543 - SDRAM




**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" XB00 ~ XB99 "**

2B00 D7
2B01 D6
2B02 E5
2B03 E5
2B04 F1
2B05 F2
2B06 F2
2B07 F2
2B08 F2
2B09 F2
2B10 F3
2B11 F3
2B12 F3
2B13 F5
2B14 F5
2B15 F6
2B16 F6
2B17 F6
2B18 F6
2B19 F6
2B20 F7
2B21 H6
2B22 B10
2B23 E10
2B24 E10
2B25 F8
2B26 F8
2B27 F8
2B28 F8
2B29 F8
2B30 F9
2B31 F9
2B32 F9
2B33 F9
2B34 F11
2B35 F11
2B36 F12
2B37 F12
2B38 F12
2B39 F12
2B40 F12
2B41 F13
2B42 H12
3B00 C3
3B03 C7
3B04 D7
3B05 H2
3B06 H2
3B07 H3
3B08 H2
3B09 H3
3B10 G6
3B11 G6
3B12 G6
3B13 G6
3B14 G6
3B15 G6
3B16 G6
3B17 G6
3B18 G6
3B19 G6
3B20 H6
3B21 H6
3B22 H6
3B23 H6
3B24 H6
3B25 H6
3B26 H8
3B27 H8
3B28 H9
3B29 H8
3B30 H9
3B31 G12
3B32 G12
3B33 G12
3B34 G12
3B35 G12
3B36 G12
3B37 G12
3B38 G12
3B39 G12
3B40 G12
3B41 H12
3B42 H12
3B43 H12
3B44 H12
3B45 H12
3B46 H12
3B47 B10
3B48 B12
3B49 B10
3B50 B12
7600-2 A5
7B00 F10
7B01 F3
FB00 B11
FB01 B10
FB02 C6



| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 1 2009-01-16 / 1 2008-12-16 |
| – – – 1 / 2008-10-17 2 / 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 | 10 / 130 – 09 / A2 |
| SV / CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

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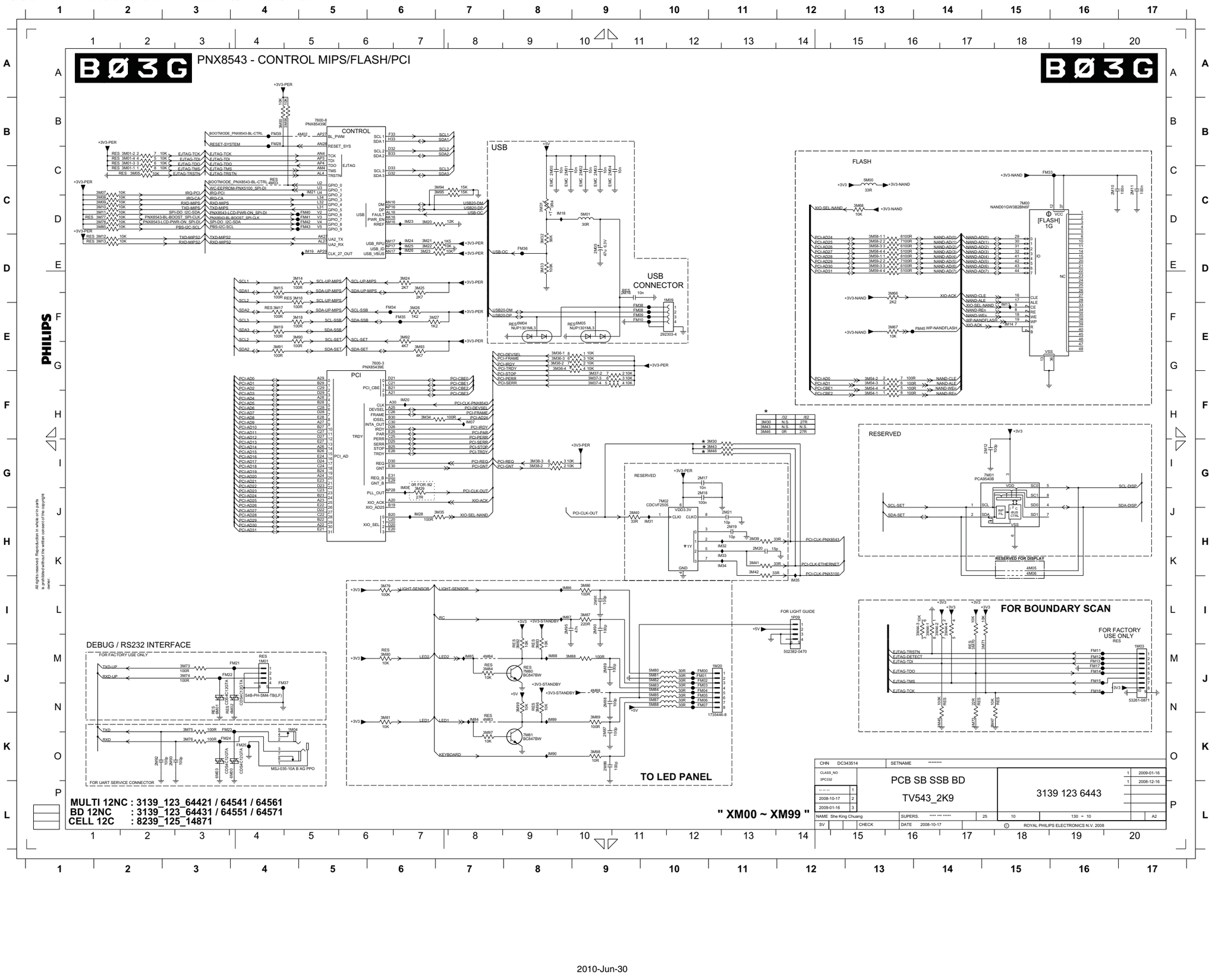
# SSB v1: PNX8543 Control MIPS/Flash/PCI




1M01 J4 5M85 J10
1M03 J17 5M87 J10
1M04 K4 5M88 J10
1M09 D10 6M00 K4
1M20 J11 6M01 J3
1P09 I12 6M02 J4
2M00 C8 6M03 K3
2M01 C8 6M04 E8
2M02 C9 6M05 E9
2M03 C9 7600-3 E6
2M04 C9 7600-8 B5
2M05 D9 7M00 C15
2M10 C16 7M01 G15
2M11 C17 7M02 G10
2M12 G15 7M80 J8
2M16 D9 7M81 K8
2M17 G10 FM00 J10
2M18 G10 FM01 J10
2M19 H11 FM02 J10
2M20 H11 FM03 J10
2M21 H11 FM04 J10
2M86 K9 FM05 J10
2M87 K9 FM06 J10
2M88 J9 FM07 J10
2M89 J9 FM08 E9
2M90 I9 FM09 E9
2M91 I9 FM10 E9
2M92 K2 FM11 J16
2M93 K3 FM12 J16
2M95 I8 FM13 J16
3M00 B4 FM14 J16
3M01-1 C2 FM15 J16
3M01-2 B2 FM16 J16
3M01-3 B2 FM17 J16
3M01-4 B2 FM21 J4
3M05 C2 FM22 J3
3M06 B4 FM23 K3
3M07 C2 FM24 K3
3M08 C2 FM25 K4
3M09 C2 FM28 B4
3M10 C2 FM33 C15
3M11 C2 FM34 E6
3M12 D2 FM35 E6
3M13 D2 FM36 D8
3M14 D4 FM37 J4
3M15 D4 FM38 E9
3M16 D4 FM39 B4
3M17 E4 FM40 C5
3M18 E4 FM41 C5
3M19 E4 FM42 C5
3M20 C6 FM43 C5
3M21 D6 FM45 E14
3M22 D6 IM07 F7
3M23 D6 IM08 G6
3M24 D6 IM13 E15
3M25 D6 IM14 E15
3M26 E6 IM18 C8
3M27 E6 IM19 D5
3M29 G6 IM20 F6
3M30 G11 IM21 C5
3M31 C8 IM23 C6
3M32 D8 IM24 D6
3M33 D8 IM25 D6
3M34 F6 IM26 D6
3M35 H7 IM28 H6
3M36-1 E8 IM31 H10
3M36-2 E8 IM32 H11
3M36-3 E8 IM33 H11
3M36-4 E8 IM34 H11
3M37-2 F9 IM35 I12
3M37-3 F9 IM84 K7
3M37-4 F9 IM85 J7
3M38-2 G8 IM86 I8
3M38-3 G8 IM87 I8
3M39 H11 IM88 J8
3M40 H9 IM89 K8
3M41 H11 IM90 K8
3M42 H11
3M43 G11
3M44-1 I14
3M44-2 I14
3M44-3 I14
3M44-4 I14
3M45 K14
3M46 G11
3M47 K15
3M54-1 F13
3M54-2 F13
3M54-3 F13
3M54-4 F13
3M58-1 D13
3M58-2 D13
3M58-3 D13
3M58-4 D13
3M59-1 D13
3M59-2 D13
3M59-3 D13
3M59-4 D13
3M66 D13
3M67 E13
3M68 C13
3M70 J14
3M71 J15
3M72 K14
3M73 J3
3M74 J3
3M75 K3
3M76 K3
3M77 C2
3M78 C2
3M79 I6
3M80 J6
3M81 K6
3M82 I8
3M83 I8
3M84 J7
3M85 C2
3M86 I9
3M87 I9
3M88 J8
3M89 K9
3M90 E4
3M91 E4
3M92 E6
3M93 E6
3M94 C7
3M95 C7
3M96 J8
3M97 K7
3M98 K9
3M99 J8
4M02 B5
4M03 C4
4M05 H15
4M06 H15
4M83 K7
4M84 J7
4M88 J9
5M00 C13
5M01 C9
5M80 J10
5M81 J10
5M82 J10
5M83 J10
5M84 J10

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## SSB v1: PNX8543 Stand-by Control/Debug

B Ø 3 H — PNX8543 - STANDBY-CONTROL / DEBUG — B Ø 3 H

PHILIPS



**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" XD00 ~ XD99 "**

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD | | 1 2009-01-16 |
| – – – 1 | TV543_2K9 | 3139 123 6443 | 1 2008-12-16 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME She King Chuang | SUPERS. **** *** ***** | 25 | 10 130 – 11 A2 |
| SV CHECK | DATE 2008-10-17 |  | |

18440_510_090223.eps
090224

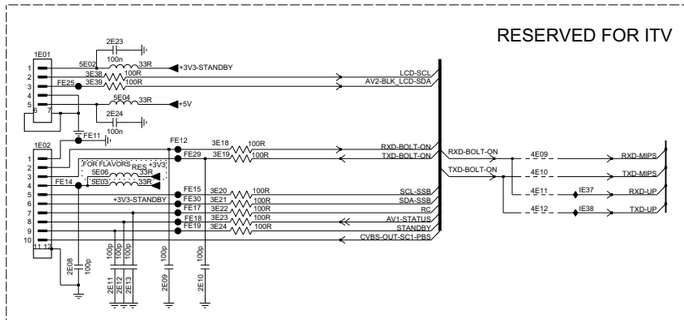
1D00 A3 FD14 B11
1D01 H13 FD15 B9
2D00 A3 FD16 B9
2D01 A3 FD17 B9
2D02 D2 FD18 H14
2D03 G5 FD19 B4
2D04 A10 FD20 B4
2D05 C12 FD21 C4
2D06 E13 FD22 D2
2D07 H14 ID17 F4
2D08 I14 ID18 F3
2D09 B3 ID19 F4
2D14 B7 ID20 G3
2D15 F8 ID22 H4
2D16 F9 ID23 H3
2D17 B7 ID31 F12
3D00 B2 ID40 A1
3D01 B2 ID44 F8
3D02 B2 ID45 F8
3D03 B2 ID46 F9
3D04 B2 ID47 F2
3D05 B2 ID49 G2
3D06 B2 ID50 H2
3D07 B2 ID51 H4
3D08 B2 ID52 B4
3D09 C2
3D10 C2
3D11 C2
3D12 C2
3D13 C2
3D14 C2
3D15 C2
3D16 C2
3D17 C2
3D18 C2
3D19 C2
3D20 C2
3D21 D2
3D22 D2
3D23 D2
3D24 D2
3D25 D2
3D26 E2
3D27 E2
3D28-1 F4
3D28-2 F5
3D29 F3
3D30 F3
3D33 G3
3D34 G3
3D35 H3
3D36 H2
3D37 A7
3D38 A7
3D39 A7
3D40 A7
3D41 A7
3D42 A8
3D43 A8
3D44 A8
3D45 B7
3D46 B7
3D47 B7
3D48 B7
3D49 B7
3D50 C7
3D51 C7
3D52 C4
3D56-1 E12
3D56-2 E12
3D56-3 E12
3D56-4 E13
3D57 H11
3D58 C13
3D62 H2
3D63 F7
3D64 F9
3D65 F8
3D66 F8
3D67 I3
4D00 A2
4D01 A2
4D02 A2
4D06 C11
4D07 C11
4D08 H4
4D09 E7
6D00 H11
6D01 G3
6D02 F9
7600-6 A5
7D00-1 F4
7D00-2 G4
7D01 F5
7D02-1 H4
7D02-2 H4
7D05 C12
7D06 E12
7D07 E13
7D08 I11
7D09 A10
7D10 F7
FD00 A4
FD02 C14
FD03 C11
FD04 E12
FD05 E11
FD06 F13
FD07 F14
FD08 F13
FD09 H13
FD10 I13
FD11 E13
FD12 E7
FD13 B9

## SSB v1: Bolt-on

**B Ø 4 A** BOLT-ON

**B Ø 4 A**

RESERVED FOR ITV

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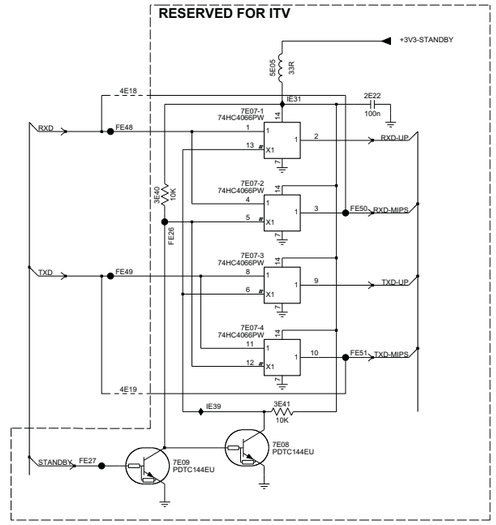
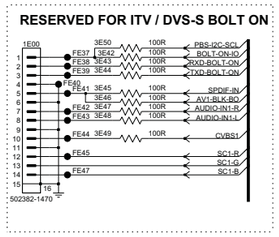



RESERVED FOR ITV / DVS-S BOLT ON

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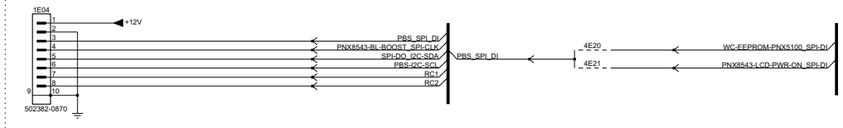


**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

1E00 B11
1E01 A1
1E02 B1
1E04 G1
2E08 C1
2E09 C2
2E10 C2
2E11 C1
2E12 C2
2E13 C2
2E22 B9
2E23 A2
2E24 B2
3E18 B2
3E19 B2
3E20 C2
3E21 C2
3E22 C2
3E23 C2
3E24 C2
3E38 B1
3E39 B1
3E40 C8
3E41 D9
3E42 B12
3E43 B12
3E44 B12
3E45 B12
3E46 B12
3E47 B12
3E48 B12
3E49 B12
3E50 B12
4E09 B5
4E10 B5
4E11 C5
4E12 C5
4E18 B7
4E19 D7
4E20 G5
4E21 G5
5E02 B1
5E03 B1
5E04 B2
5E05 B9
5E06 B1
7E07-1 B8
7E07-2 C8
7E07-3 C8
7E07-4 D8
7E08 E9
7E09 E8
FE11 B1
FE12 B2
FE14 B1
FE15 C2
FE17 C2
FE18 C2
FE19 C2
FE25 B1
FE26 C8
FE27 E7
FE29 B2
FE30 C2
FE37 B11
FE38 B11
FE39 B11
FE40 B11
FE41 B11
FE42 B11
FE43 B11
FE44 B11
FE45 B11
FE47 C11
FE48 B7
FE49 C7
FE50 C9
FE51 D9
IE31 B9
IE37 C5
IE38 C5
IE39 D8



**" XE00 ~ XE99 "**

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 1 2009-01-16 / 1 2008-12-16 |
| -- -- -- 1 / 2008-10-17 2 / 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 | 10 — 130 – 12 — A2 |
| SV — CHECK ******** | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

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# SSB v1: Analog IO - Scart 1 & 2

B Ø 4 B — ANALOG IO - SCART 1 & 2

B Ø 4 B

B Ø 3 D

SCART2 (AV2) 1F02

SCART1 (AV1) 1F01

FLAVORS 1E32 CON_STND_MAL_N40_M2

SCART

SCART

SCART

SCART

SCART

SCART

SCART

MRC-021H-09 PC

MRC-021H-09 PC

PHILIPS



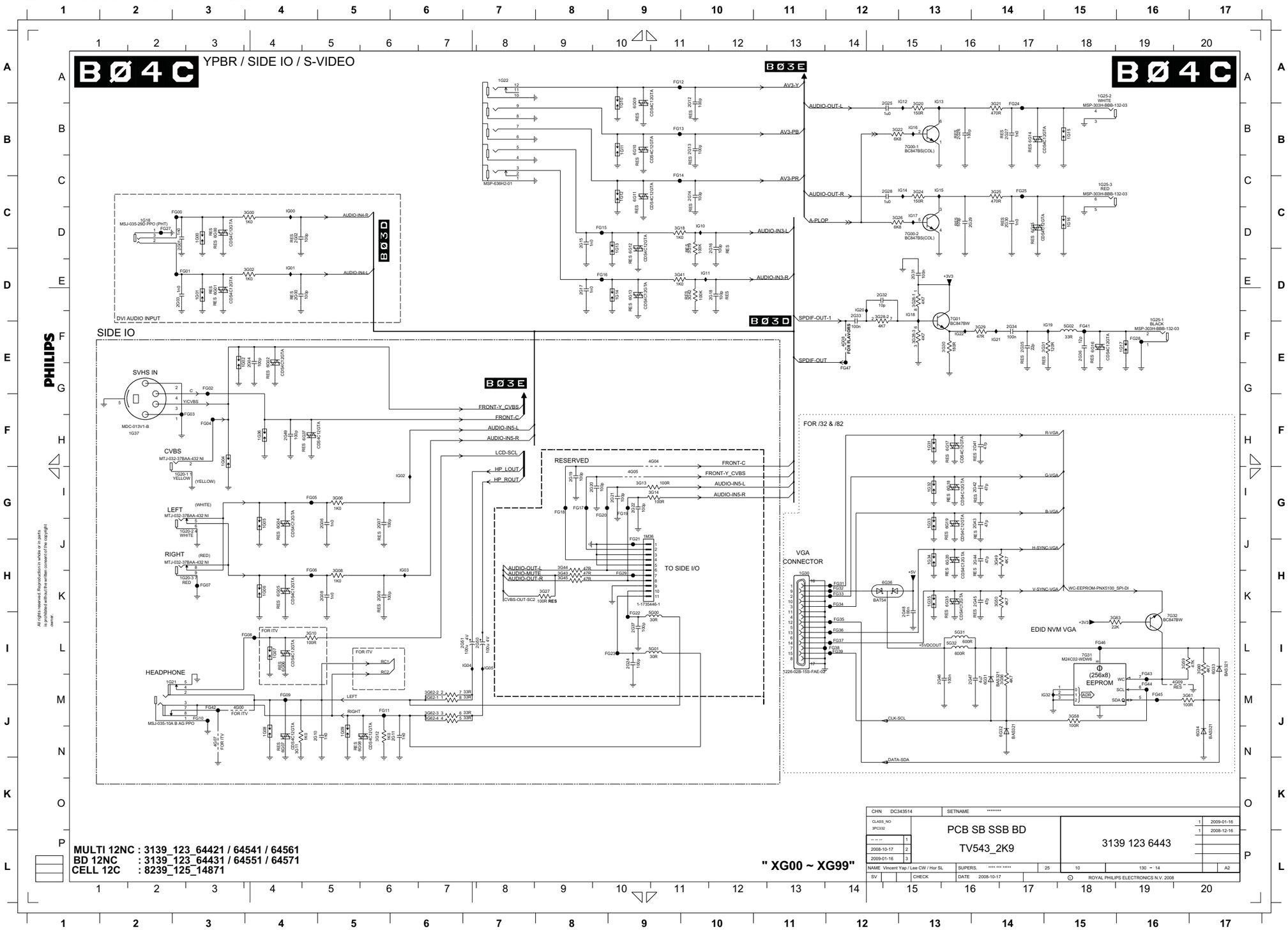
MULTI 12NC : 3139_123_64421 / 64541 / 64561
BD 12NC : 3139_123_64431 / 64551 / 64571
CELL 12C : 8239_125_14871

" XF00 ~ XF99 "

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD | 3139 123 6443 | 1 2009-01-16 |
| -- -- -- 1 | TV543_2K9 | | 1 2008-10-17 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 10 130 ~ 13 | A2 |
| SV CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

1E32 C11
1F00 B7
1F01 D17
1F02 D9
1F03 D7
1F04 E7
1F05 F7
1F06 G7
1F07 H7
1F08 I8
1F09 J7
1F10 K7
1F11 B15
1F12 C15
1F13 C15
1F14 D15
1F15 E14
1F16 F14
1F17 G14
1F18 H14
1F19 I15
1F20 J16
1F21 K16
1F22 C7
1F23 D7
2F00 D3
2F01 B4
2F02 C4
2F03 E2
2F04 I3
2F05 J3
2F06 B8
2F07 B6
2F08 C8
2F09 C6
2F10 C7
2F11 D6
2F12 D7
2F13 D6
2F14 E6
2F15 F6
2F16 G6
2F17 H6
2F18 I7
2F19 J7
2F20 B15
2F21 B14
2F22 C15
2F23 C14
2F24 C15
2F25 D15
2F26 D14
2F27 D14
2F28 E15
2F29 F13
2F30 G15
2F31 H15
2F33 I14
2F34 J15
2F35 I9
2F36 I10
2F37 I10
2F38 J9
2F39 J12
2F42 F15
2F43 F7
2F44 K7
2F45 K16
3F00 B3
3F01 B2
3F02 C3
3F03 C2
3F04 D3
3F05 I2
3F06 I2
3F07 J2
3F08 K2
3F09 B6
3F10 B6
3F11 C6
3F13 C6
3F14 D6
3F15 D6
3F18 F6
3F19 F6
3F20 H4
3F22 I7
3F23 I7
3F24 I8
3F26 J5
3F27 B14
3F28 B13
3F29 C14
3F31 C14
3F32 C13
3F33 D14
3F36 F14
3F37 F14
3F40 I14
3F41 I15
3F42 I15
3F44 J14
3F45 I11
3F46 I11
3F47 I12
3F48 J10
3F49 J11
3F50 J11
3F51 J11
3F52 J9
3F53 J12
4F00 J3
4F01 J9
4F03 D8
4F04 E8
4F05 H13
4F06 J13
4F07 H6
5F00 I9
6F00 B7
6F01 C7
6F02 C7
6F03 D7
6F04 E7
6F05 F7
6F06 G7
6F07 H7
6F08 I7
6F09 J6
6F10 K6
6F11 B15
6F12 C15
6F13 C15
6F14 D15
6F15 E15
6F16 F15
6F17 G15
6F18 H15
6F19 I15
6F20 J15
6F21 K15
7F00-1 B3
7F00-2 C3
7F01 E4
7F02 E2
7F03 I2
7F04 K2
7F05 I7
7F06 I14
7F07-1 J11
7F07-2 J10
7F08 J9
FF00 C4
FF01 B8
FF02 C8
FF03 C8
FF04 E7
FF05 E8
FF06 F8
FF08 F8
FF09 G8
FF10 G8
FF11 G8
FF12 G8
FF13 G8
FF14 D16
FF15 D16
FF16 E16
FF17 E16
FF18 E16
FF19 E16
FF20 F16
FF21 F16
FF22 F16
FF23 G16
FF24 G16
FF25 G16
FF26 B4
FF27 I3
FF28 J3
FF29 C6
FF30 D6
FF31 F6
FF32 H6
FF33 I6
FF34 H13
FF35 F13
FF36 D13
FF37 C13
FF38 E4
FF39 I14
IF00 B3
IF01 B2
IF02 C3
IF03 C2
IF04 D3
IF05 I2
IF06 I2
IF07 J2
IF08 K2
IF09 B6
IF10 B6
IF11 C6
IF13 C6
IF14 D6
IF15 D6
IF18 F6
IF19 F6
IF20 H4
IF22 I7
IF23 I7
IF24 I8
IF26 J5
IF27 B14
IF28 B13
IF29 C14
IF31 C14
IF32 C13
IF33 D14
IF36 F14
IF37 F14
IF40 I14
IF41 I15
IF42 I15
IF44 J14
IF45 I11
IF46 I11
IF47 I12
IF48 J10
IF49 J11
IF50 J11
IF51 J11
IF52 J9
IF53 J12
7F00-1 BC847BS(COL)
7F00-2 BC847BS(COL)
7F01 3 PDTC114EU
7F02 74HC4053PW
7F03 BC847BW
7F04 BC847BW
7F05 BC847BW
7F06 BC847BW
7F07-1 BC847BPN(COL)
7F07-2 BC847BPN(COL)
7F08 BC847BW

## SSB v1: YPbPr / Side I/O / S-video






1G00 C3 1G01 D3 1G02 E3 1G04 F3 1G05 G4 1G06 H4 1G07 I4 1G08 J4 1G09 J5 1G10 A9 1G11 B9 1G12 C9 1G13 C9 1G14 D9 1G15 B15 1G16 C15 1G17 E16 1G18 C2 1G20-1 G3 1G20-2 G3 1G20-3 H3 1G21 I2 1G22 A7 1G25-1 D16 1G25-2 A15 1G25-3 C15 1G30 H11 1G31 F13 1G32 G13 1G33 G13 1G34 H13 1G35 H13 1G36 F4 1G37 F2 1M36 G9 2G00 D4 2G01 C3 2G02 C4 2G03 D3 2G04 E4 2G06 G5 2G07 G5 2G08 H5 2G09 H5 2G10 J4 2G11 J6 2G12 A10 2G13 B10 2G14 C10 2G15 C8 2G16 C10 2G17 D8 2G18 D10 2G19 G8 2G20 G8 2G21 G9 2G22 G9 2G24 I9 2G25 B12 2G26 B13 2G27 B14 2G28 C12 2G29 C13 2G30 C14 2G31 D13 2G32 D12 2G33 D12 2G34 E14 2G35 E14 2G36 E15 2G37 I9 2G41 F14 2G42 G14 2G43 G14 2G44 H14 2G45 H14 2G46 I13 2G47 I14 2G48 H13 2G49 F4 2G50 I7 2G51 I7 3G00 C4 3G02 D4 3G06 G5 3G08 H5 3G10 I4 3G11 J4 3G12 J5 3G13 G9 3G14 G9 3G18 C9 3G19 C10 3G20 B13 3G21 B14 3G22 B12 3G24 C13 3G25 C14 3G26 C12 3G27 H8 3G28-1 D13 3G28-3 E13 3G28-4 D12 3G29 E14 3G30 E13 3G31 E15 3G41 D9 3G42 D10 3G43 H8 3G44 H8 3G45 H8 3G49 H14 3G50 H14 3G56 I14 3G58 J15 3G59 I16 3G60 I17 3G61 J16 3G62-1 J6 3G62-2 J6 3G62-3 J6 3G62-4 J6 3G63 I15 4G00 J3 4G04 F9 4G05 G9 4G07 J3 4G08 E12 4G09 I16 5G00 I9 5G01 I9 5G02 E15 5G31 I13 5G32 I13 6G00 C3 6G01 D3 6G02 E4 6G04 G4 6G05 H4 6G06 I4 6G07 J4 6G08 J5 6G09 A9 6G10 B9 6G11 C9 6G12 C9 6G13 D9 6G14 B14 6G15 C14 6G16 E15 6G17 F13 6G18 G13 6G19 G13 6G20 H13 6G31 I14 6G32 J14 6G33 I17 6G34 J17 6G35 H13 6G36 H12 6G37 F4 7G00-1 B13 7G00-2 C13 7G01 D13 7G31 I15 7G32 I16 FG00 C3 FG01 D3 FG02 E3 FG03 F3 FG04 F3 FG05 G4 FG06 H4 FG07 H3 FG08 I4 FG09 J4 FG10 J3 FG11 J5 FG12 A9 FG13 B9 FG14 C9 FG15 C8 FG16 D8 FG17 G8 FG18 G8 FG19 G9 FG20 G8 FG21 H9 FG22 I9 FG23 I9 FG24 B14 FG25 C14 FG27 C2 FG28 E16 FG29 H9 FG31 H12 FG32 H12 FG33 H12 FG34 H12 FG35 I12 FG36 I12 FG37 I12 FG38 I12 FG39 I12 FG41 E15 FG42 J3 FG43 I16 FG44 J16 FG45 I16 FG47 E12 IG00 C4 IG01 D4 IG02 G6 IG03 H6 IG04 I7 IG05 I7 IG10 C10 IG11 D10 IG12 A13 IG13 A13 IG14 C13 IG15 C13 IG16 B13 IG17 C13 IG18 D13 IG19 E15 IG20 D12 IG21 E14 IG22 E13 IG32 J15

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# SSB v1: HDMI

B05A HDMI

B05A

HDMI CONNECTOR 3

HDMI CONNECTOR 2

HDMI-ITV

HDMI CONNECTOR SIDE

HDMI CONNECTOR 1

For FLAVORS

RESERVED

Remark for service:
I2C Address = 0xCE
Replacing the TDA 9996
Requires reprogramming
of its I2C address from
0xC0 to 0xCE

| | CONNECTOR | ITEM NO | HDMI PNS 1+1 | HDMI PNS 2+1 | HDMI FRAME 3+1 | FLAVORS 2+1 32" 42" | FLAVORS 2+0 22" |
|---|---|---|---|---|---|---|---|
| HDMI SIDE | HORIZONTAL | 1H03 | Y | Y | Y | N | N |
| HDMI 1 | HORIZONTAL | 1H05 | N | N | N | Y | Y |
| HDMI 2 | HORIZONTAL | 1H04 | N | N | N | Y | Y |
| | | | | | | | |
| HDMI 1 | VERTICAL | 1H01 | Y | Y | Y | N | N |
| HDMI 2 | VERTICAL | 1H00 | N | Y | Y | N | N |
| HDMI 3 | VERTICAL | 1H02 | N | N | Y | N | N |

**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" XH00 ~ XH99 "**

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD | 3139 123 6443 | 1 2009-01-16 |
| -- -- -- 1 | TV543_2K9 | | 1 2008-12-16 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Dave Tan YH | SUPERS. ***** *** ***** | 25 10 130 ~ 15 | A2 |
| SV CHECK | DATE 2008-10-17 | ROYAL PHILIPS ELECTRONICS N.V. 2008 | |



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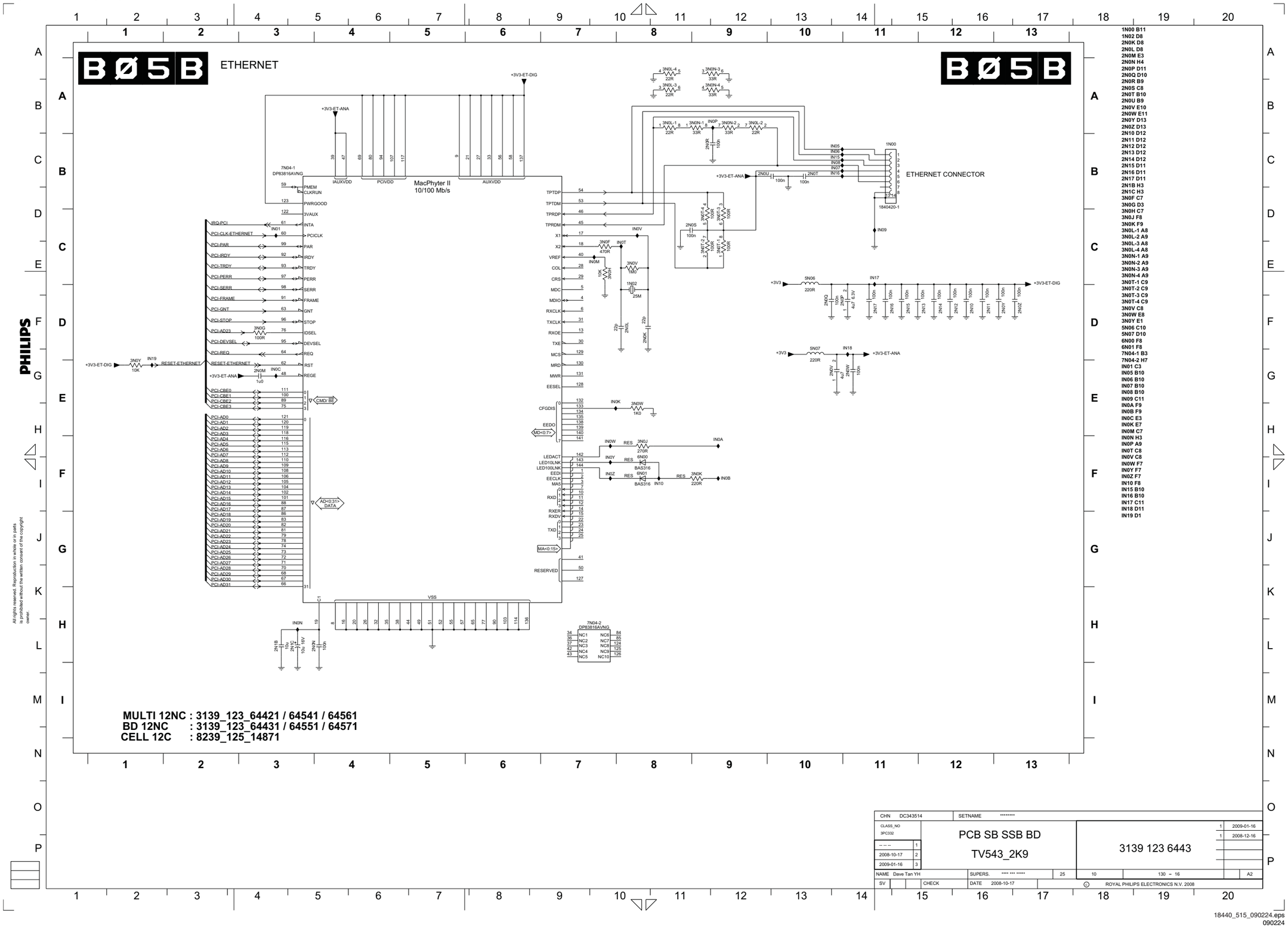
090303

## SSB v1: Ethernet



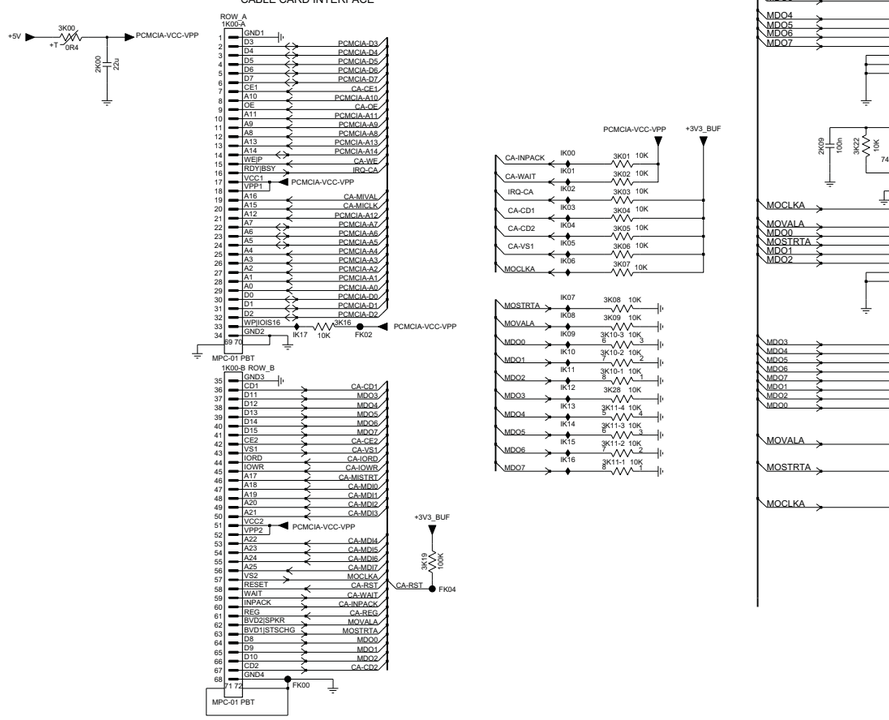
## SSB v1: PCMCIA

B05C PCMCIA

POD : SUPPLY / CONTROL

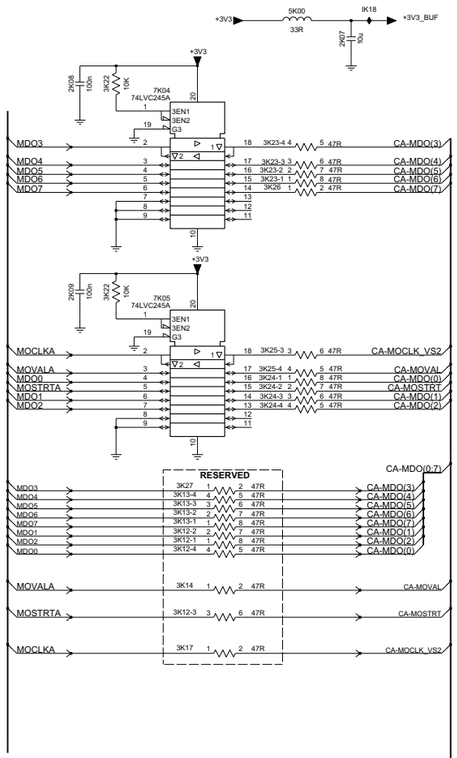
(POD IS THE EQUIVALENT OF COMMON INTERFACE)

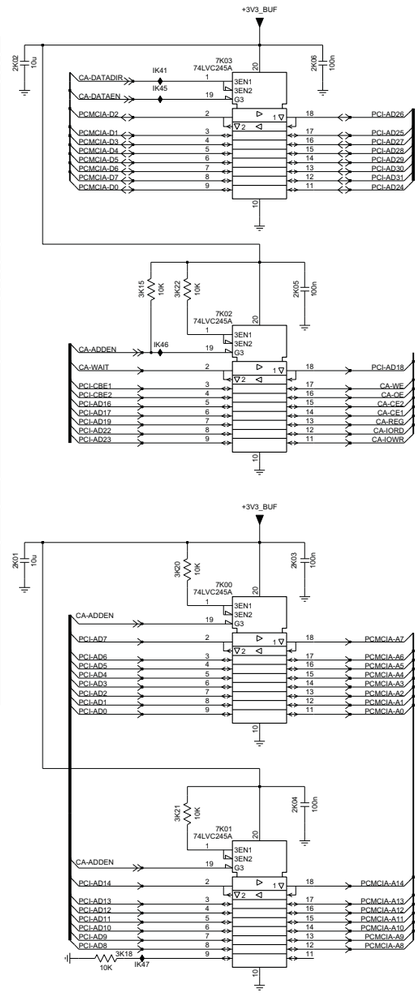
CABLE CARD INTERFACE










**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" XK00 ~ XK99 "**

| | | | |
|---|---|---|---|
| CHN DC343514 | | SETNAME ******** | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 1 2009-01-16 / 1 2008-12-16 |
| -- -- -- 1 / 2008-10-17 2 / 2009-01-16 3 | | | |
| NAME Li LingHuan | SUPERS. **** *** ***** | 25 | 10 / 130 ~ 17 / A2 |
| SV / CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

1K00-A B2
1K00-B D2
2K00 B1
2K01 E10
2K02 A10
2K03 E12
2K04 G12
2K05 C12
2K06 A13
2K07 A9
2K08 A7
2K09 B7
3K00 B1
3K01 C5
3K02 C5
3K03 C5
3K04 C5
3K05 C5
3K06 C5
3K07 C5
3K08 D5
3K09 D5
3K10-1 D5
3K10-2 D5
3K10-3 D5
3K11-1 E5
3K11-2 E5
3K11-3 E5
3K11-4 E5
3K12-1 D8
3K12-2 D8
3K12-3 E8
3K12-4 E8
3K13-1 D8
3K13-2 D8
3K13-3 D8
3K13-4 D8
3K14 E8
3K15 C11
3K16 D3
3K17 E8
3K18 H11
3K19 F4
3K20 E11
3K21 G11
3K22 C11
3K23-1 B9
3K23-2 B9
3K23-3 A9
3K23-4 A9
3K24-1 C9
3K24-2 C9
3K24-3 C9
3K24-4 C9
3K25-3 C9
3K25-4 C9
3K26 B9
3K27 D8
3K28 D5
3K29 A7
3K30 B7
5K00 A9
7K00 F12
7K01 H12
7K02 C12
7K03 A12
7K04 A8
7K05 C8
FK00 G3
FK02 D3
FK04 F4
IK00 C5
IK01 C5
IK02 C5
IK03 C5
IK04 C5
IK05 C5
IK06 C5
IK07 D5
IK08 D5
IK09 D5
IK10 D5
IK11 D5
IK12 D5
IK13 E5
IK14 E5
IK15 E5
IK16 E5
IK17 D3
IK18 A9
IK41 B11
IK45 B11
IK46 D11
IK47 H11



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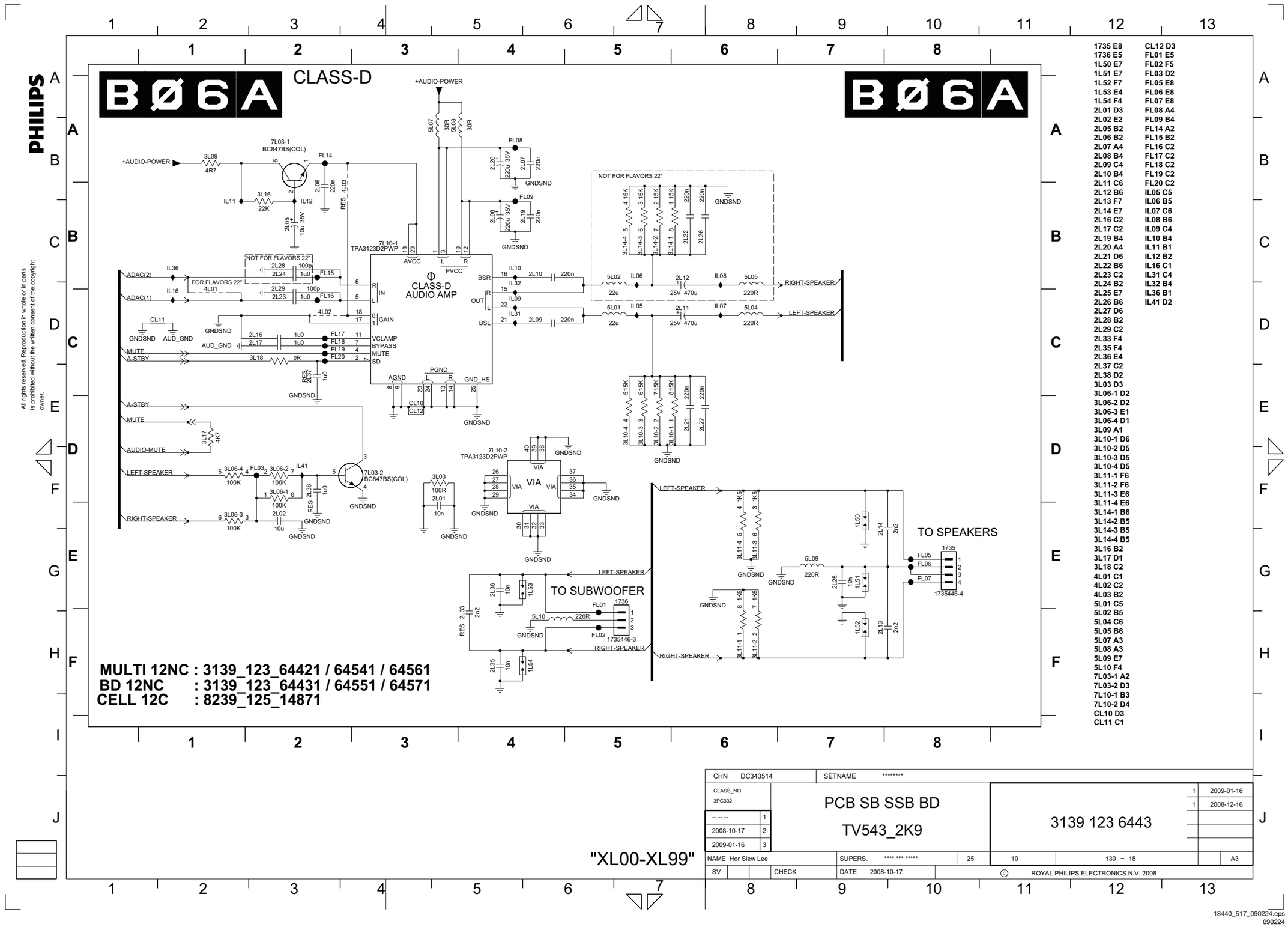
## SSB v1: Class-D






1735 E8
1736 E5
1L50 E7
1L51 E7
1L52 F7
1L53 E4
1L54 F4
2L01 D3
2L02 E2
2L05 B2
2L06 B2
2L07 A4
2L08 B4
2L09 C4
2L10 B4
2L11 C6
2L12 B6
2L13 F7
2L14 E7
2L16 C2
2L17 C2
2L19 B4
2L20 A4
2L21 D6
2L22 B6
2L23 C2
2L24 B2
2L25 E7
2L26 B6
2L27 D6
2L28 B2
2L29 C2
2L33 F4
2L35 F4
2L36 E4
2L37 C2
2L38 D2
3L03 D3
3L06-1 D2
3L06-2 D2
3L06-3 E1
3L06-4 D1
3L09 A1
3L10-1 D6
3L10-2 D5
3L10-3 D5
3L10-4 D5
3L11-1 F6
3L11-2 F6
3L11-3 E6
3L11-4 E6
3L14-1 B6
3L14-2 B5
3L14-3 B5
3L14-4 B5
3L16 B2
3L17 D1
3L18 C2
4L01 C1
4L02 C2
4L03 B2
5L01 C5
5L02 B5
5L04 C6
5L05 B6
5L07 A3
5L08 A3
5L09 E7
5L10 F4
7L03-1 A2
7L03-2 D3
7L10-1 B3
7L10-2 D4
CL10 D3
CL11 C1
CL12 D3
FL01 E5
FL02 F5
FL03 D2
FL05 E8
FL06 E8
FL07 E8
FL08 A4
FL09 B4
FL14 A2
FL15 B2
FL16 C2
FL17 C2
FL18 C2
FL19 C2
FL20 C2
IL05 C5
IL06 B5
IL07 C6
IL08 B6
IL09 C4
IL10 B4
IL11 B1
IL12 B2
IL16 C1
IL31 C4
IL32 B4
IL36 B1
IL41 D2

| | | | |
|---|---|---|---|
| CHN DC343514 | | SETNAME ******** | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 1 2009-01-16 |
| -- -- -- 1 | | | 1 2008-12-16 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Hor Siew Lee | SUPERS. **** *** ***** | 25 | 10 130 – 18 A3 |
| SV CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

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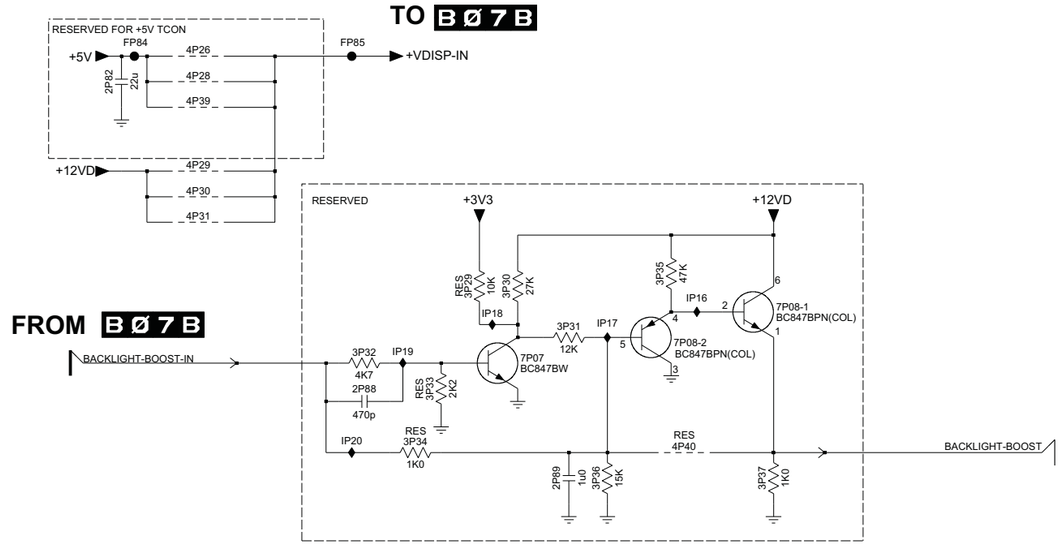
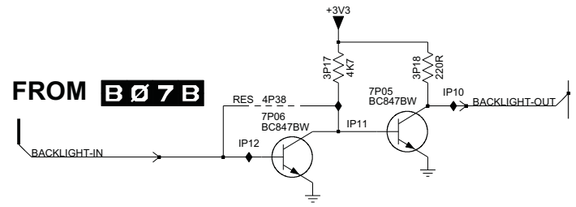
090224

## SSB v1: Display Interface (Common)



**B Ø 7 A** DISPLAY INTERFACE (COMMON) **B Ø 7 A**




**MULTI 12NC : 3139_123_64421 / 64541 / 64561**
**BD 12NC : 3139_123_64431 / 64551 / 64571**
**CELL 12C : 8239_125_14871**

**" XP00 ~ XP99 "**

2P82 B1
2P88 C2
2P89 D3
3P17 C8
3P18 C9
3P29 C3
3P30 C3
3P31 C4
3P32 C2
3P33 C3
3P34 D3
3P35 C4
3P36 D4
3P37 D5
4P26 A1
4P28 B1
4P29 B1
4P30 B1
4P31 B1
4P38 D8
4P39 B1
4P40 D4
7P05 C9
7P06 D8
7P07 C3
7P08-1 C5
7P08-2 C4
FP84 A1
FP99 A2
IP10 C9
IP11 D9
IP12 D8
IP16 C4
IP17 C4
IP18 C3
IP19 C3
IP20 D2

| | | | |
|---|---|---|---|
| CHN DC343514 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 1 2009-01-16 / 1 2008-12-16 |
| -- - -- 1 / 2008-10-17 2 / 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 | 10 / 130 – 19 / A2 |
| SV / CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

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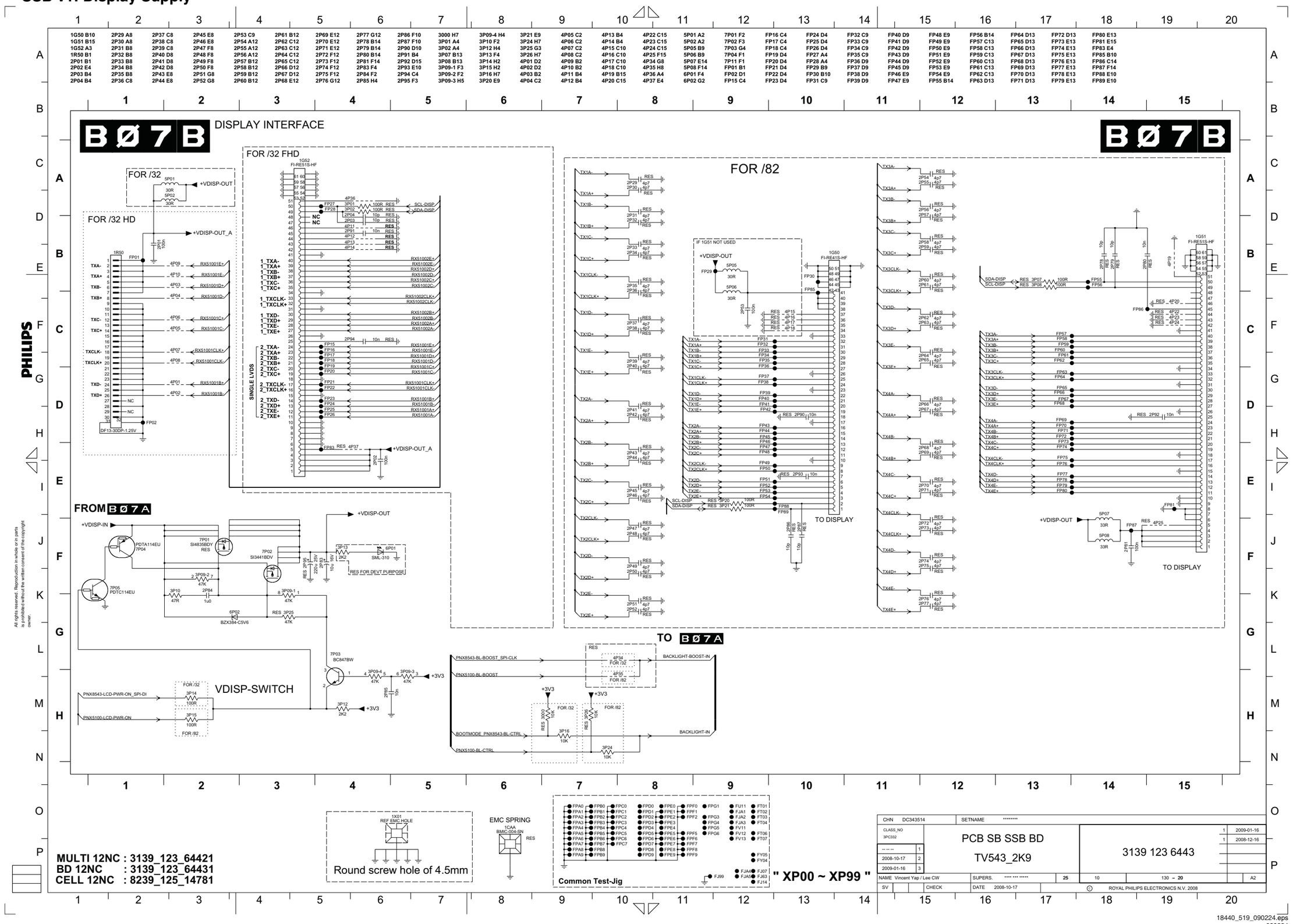
## SSB v1: Display Supply

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# SSB: SRP List Explanation

**Example**

| Net Name | Diagram |
|---|---|
| +12-15V | AP1 (4x) |
| +12-15V | AP4 (4x) |
| +12-15V | AP5 (12x) |
| +12-15V | AP6 (4x) |
| +12-15V | AP7 (8x) |
| +12V | AP1 (4x) |
| +12V_NF | AP1 (2x) |
| +12VAL | AP1 (2x) |
| +25VLP | AP1 (4x) |
| +25VLP | AP2 (1x) |
| +3V3-STANDBY | AP5 (3x) |
| +400V-F | AP1 (2x) |
| +400V-F | AP2 (2x) |
| +400V-F | AP3 (2x) |
| +5V2 | AP1 (6x) |
| +5V2 | AP2 (1x) |
| +5V2-NF | AP1 (1x) |
| +5V2-NF | AP2 (1x) |
| +5V-SW | AP1 (6x) |
| +5V-SW | AP2 (1x) |
| +8V6 | AP1 (3x) |
| +AUX | AP1 (2x) |
| +AUX | AP2 (1x) |
| +DC-F | AP1 (2x) |
| +DC-F | AP3 (2x) |
| +SUB-SPEAKER | AP5 (1x) |
| +SUB-SPEAKER | AP6 (2x) |
| -12-15V | AP1 (4x) |
| -12-15V | AP4 (6x) |
| -12-15V | AP5 (14x) |
| -12-15V | AP6 (6x) |
| -12-15V | AP7 (8x) |
| AL-OFF | AP1 (2x) |
| AUDIO-L | AP4 (1x) |
| AUDIO-L | AP5 (1x) |
| AUDIO-PROT | AP5 (3x) |
| AUDIO-R | AP4 (1x) |
| AUDIO-R | AP5 (1x) |
| AUDIO-SW | AP5 (1x) |
| AUDIO-SW | AP7 (1x) |
| BOOST | AP1 (2x) |
| CPROT | AP4 (2x) |
| CPROT | AP5 (1x) |
| CPROT-SW | AP5 (1x) |
| CPROT-SW | AP6 (2x) |
| -DC-F | AP1 (2x) |
| -DC-F | AP3 (2x) |
| DC-PROT | AP1 (1x) |
| DC-PROT | AP5 (2x) |
| DIM-CONTROL | AP1 (2x) |
| FEEDBACK+SW | AP6 (2x) |
| FEEDBACK-L | AP4 (2x) |
| FEEDBACK-R | AP4 (2x) |
| FEEDBACK-SW | AP6 (2x) |
| GND-AL | AP1 (2x) |
| GNDHA | AP1 (40x) |
| GNDHA | AP2 (20x) |
| GNDHA | AP3 (2x) |
| GNDHOT | AP3 (2x) |
| GND-L | AP1 (2x) |
| GND-L | AP4 (4x) |
| GND-L | AP5 (34x) |
| GND-LL | AP4 (7x) |
| GND-LL | AP5 (1x) |
| GND-LR | AP4 (7x) |
| GND-LR | AP5 (1x) |
| GND-LSW | AP5 (1x) |
| GND-LSW | AP6 (15x) |
| GND-S | AP1 (11x) |
| GND-SA | AP4 (8x) |
| GND-SA | AP5 (2x) |
| GND-SA | AP6 (8x) |
| GND-SA | AP7 (6x) |
| GNDscrew | AP3 (2x) |
| GNDscrew | AP5 (2x) |
| GND-SSB | AP5 (3x) |
| GND-SSP | AP1 (51x) |
| GND-SSP | AP2 (15x) |
| IN+SW | AP6 (2x) |
| IN-L | AP4 (2x) |
| IN-R | AP4 (2x) |
| IN-SW | AP6 (2x) |
| INV-MUTE | AP4 (1x) |
| INV-MUTE | AP5 (1x) |
| INV-MUTE | AP6 (1x) |
| LEFT-SPEAKER | AP4 (1x) |
| LEFT-SPEAKER | AP5 (1x) |
| MUTE | AP4 (2x) |
| MUTE | AP5 (1x) |
| MUTE | AP6 (2x) |
| ON-OFF | AP1 (3x) |
| OUT | AP6 (1x) |
| OUT | AP7 (2x) |
| OUTN | AP6 (1x) |
| OUTN | AP7 (1x) |
| POWER-GOOD | AP1 (2x) |
| POWER-OK-PLATFORM | AP1 (2x) |
| RIGHT-SPEAKER | AP4 (1x) |
| RIGHT-SPEAKER | AP5 (1x) |
| SOUND-ENABLE | AP5 (3x) |
| STANDBY | AP1 (5x) |
| STANDBY | AP2 (1x) |
| -SUB-SPEAKER | AP5 (1x) |
| -SUB-SPEAKER | AP6 (2x) |
| V-CLAMP | AP1 (1x) |
| V-CLAMP | AP3 (2x) |

## 1.1. Introduction

SRP (Service Reference Protocol) is a software tool that creates a list with all references to signal lines. The list contains references to the signals within all schematics of a PWB. It replaces the text references currently printed next to the signal names in the schematics. These printed references are created manually and are therefore not guaranteed to be 100% correct. In addition, in the current crowded schematics there is often none or very little place for these references.
Either there will be an SRP reference list for a schematic, or there will be printed references in the schematic.

## 1.2. Non-SRP Schematics

There are several different signals available in a schematic:

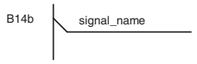
### 1.2.1. Power Supply Lines

All power supply lines are available in the supply line overview (see chapter 9). In the schematics (see chapter 10) is not indicated where supplies are coming from or going to.
It is however indicated if a supply is incoming (created elsewhere), or outgoing (created or adapted in the current schematic).


Outgoing Incoming

### 1.2.2. Normal Signals

For normal signals, a schematic reference (e.g. B14b) is placed next to the signals.

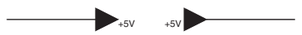



### 1.2.3. Grounds

For normal and special grounds (e.g. GNDHOT or GND3V3 etc.), nothing is indicated.

## 1.3. SRP Schematics

SRP is a tool, which automatically creates a list with signal references, indicating on which schematic the signals are used.
A reference is created for all signals indicated with an SRP symbol, these symbols are:

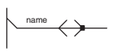



Power supply line.

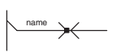

Stand alone signal or switching line (used as less as possible).


Signal line into a wire tree.


Switching line into a wire tree.




Bi-directional line (e.g. SDA) into a wire tree.




Signal line into a wire tree, its direction depends on the circuit (e.g. ingoing for PDP, outgoing for LCD sets).

**Remarks:**

- When there is a black dot on the “signal direction arrow” it is an SRP symbol, so there will be a reference to the signal name in the SRP list.
- All references to normal grounds (Ground symbols without additional text) are not listed in the reference list, this to keep it concise.
- Signals that are not used in multiple schematics, but only once or several times in the same schematic, are included in the SRP reference list, but only with one reference.

**Additional Tip:**

When using the PDF service manual file, you can very easily search for signal names and follow the signal over all the schematics. In Adobe PDF reader:

- Select the signal name you want to search for, with the “Select text” tool.
- Copy and paste the signal name in the “Search PDF” tool.
- Search for all occurrences of the signal name.
- Now you can quickly jump between the different occurrences and follow the signal over all schematics. It is advised to “zoom in” to e.g. 150% to see clearly, which text is selected. Then you can zoom out, to get an overview of the complete schematic.

**PS.** It is recommended to use at least Adobe PDF (reader) version 6.x, due to better search possibilities in this version.

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100323

***Personal Notes:***

## SSB v1: SRP List Part 1

| Netname | Diagram |
|---|---|
| +12V | B01A (1x) |
| +12V | B01B (4x) |
| +12V | B02A (3x) |
| +12V | B04A (1x) |
| +12VD | B01B (1x) |
| +12VD | B07A (2x) |
| +12VF | B01A (2x) |
| +1V2 | B02A (2x) |
| +1V2A | B02A (2x) |
| +1V2-PNX5100 | B01B (1x) |
| +1V2-PNX5100 | B03H (1x) |
| +1V2-PNX5100 | B08A (15x) |
| +1V2-PNX5100-CLOCK | B08A (3x) |
| +1V2-PNX5100-DDR-PLL1 | B08A (2x) |
| +1V2-PNX5100-DLL | B08A (3x) |
| +1V2-PNX5100-LVDS-PLL | B08A (2x) |
| +1V2-PNX5100-TRI-PLL1 | B08A (2x) |
| +1V2-PNX5100-TRI-PLL2 | B08A (2x) |
| +1V2-PNX5100-TRI-PLL3 | B08A (2x) |
| +1V2-PNX85XX | B01A (2x) |
| +1V2-PNX85XX | B02A (1x) |
| +1V2-PNX85XX | B03A (14x) |
| +1V2-PNX85XX | B03H (1x) |
| +1V2-STANDBY | B01B (2x) |
| +1V2-STANDBY | B03A (1x) |
| +1V8-PNX5100 | B08A (2x) |
| +1V8-PNX5100 | B08B (5x) |
| +1V8-PNX85XX | B03A (3x) |
| +1V8-PNX85XX | B03F (5x) |
| +1V8-PNX85XX | B05A (1x) |
| +3V3 | B01A (1x) |
| +3V3 | B01B (1x) |
| +3V3 | B02A (2x) |
| +3V3 | B03A (14x) |
| +3V3 | B03C (1x) |
| +3V3 | B03D (1x) |
| +3V3 | B03G (11x) |
| +3V3 | B03H (1x) |
| +3V3 | B04A (1x) |
| +3V3 | B04B (3x) |
| +3V3 | B04C (2x) |
| +3V3 | B05A (3x) |
| +3V3 | B05B (2x) |
| +3V3 | B05C (3x) |
| +3V3 | B07A (2x) |
| +3V3 | B07B (4x) |
| +3V3 | B08A (7x) |
| +3V3 | B08C (13x) |
| +3V3 | B08D (2x) |
| +3V3 | B08E (3x) |
| +3V3_BUF | B05C (5x) |
| +3V3A | B02A (3x) |
| +3V3B | B02A (6x) |
| +3V3D | B02A (2x) |
| +3V3E | B02A (2x) |
| +3V3-ET-ANA | B05B (4x) |
| +3V3-ET-DIG | B05B (3x) |
| +3V3F | B01A (2x) |
| +3V3F | B03A (1x) |
| +3V3F | B08A (1x) |
| +3V3-NAND | B03G (5x) |
| +3V3-PER | B03A (2x) |
| +3V3-PER | B03G (12x) |
| +3V3-PER | B03H (3x) |
| +3V3-PNX5100-CLOCK | B08A (2x) |
| +3V3-PNX5100-DDR-PLL0 | B08A (2x) |
| +3V3-PNX5100-LVDS-IN | B08A (2x) |
| +3V3-PNX5100-LVDS-PLL | B08A (2x) |
| +3V3-STANDBY | B01B (2x) |
| +3V3-STANDBY | B03A (1x) |
| +3V3-STANDBY | B03G (3x) |
| +3V3-STANDBY | B03H (12x) |
| +3V3-STANDBY | B04A (3x) |
| +3V3-STANDBY | B05A (1x) |
| +5V | B01B (1x) |
| +5V | B02A (2x) |
| +5V | B03D (1x) |
| +5V | B03G (4x) |
| +5V | B03H (1x) |
| +5V | B04A (1x) |
| +5V | B04B (6x) |
| +5V | B04C (1x) |
| +5V | B05A (2x) |
| +5V | B05C (1x) |
| +5V | B07A (1x) |
| +5V | B04C (1x) |
| +5V5-TUN | B01B (1x) |
| +5V5-TUN | B02A (1x) |
| +5V-TUNER | B02A (10x) |
| +AUDIO-POWER | B01B (1x) |
| +AUDIO-POWER | B03C (2x) |
| +AUDIO-POWER | B06A (2x) |
| +VDISP-IN | B07A (1x) |
| +VDISP-IN | B07B (1x) |
| +VDISP-OUT | B07B (4x) |
| +VDISP-OUT_A | B07B (4x) |
| 3V3-ST | B01A (1x) |
| 3V3-ST | B01B (1x) |
| ADAC(1) | B03D (2x) |
| ADAC(1) | B06A (1x) |
| ADAC(2) | B03D (2x) |
| ADAC(2) | B06A (1x) |
| ADAC(3) | B03C (2x) |
| ADAC(3) | B03D (2x) |
| ADAC(4) | B03C (2x) |
| ADAC(4) | B03D (2x) |
| ADAC(5) | B03C (1x) |
| ADAC(5) | B03D (1x) |
| ADAC(6) | B03C (1x) |
| ADAC(6) | B03D (1x) |
| ADAC(7) | B03C (1x) |
| ADAC(7) | B03D (3x) |
| ADAC(8) | B03C (1x) |
| ADAC(8) | B03D (3x) |
| ALE | B03H (1x) |
| ANTENNA-CTRL | B02A (2x) |
| ANTENNA-SUPPLY | B02A (2x) |
| A-PLOP | B03C (1x) |
| A-PLOP | B04B (1x) |
| A-PLOP | B04C (2x) |
| AP-SCART-OUT-L | B04B (5x) |
| AP-SCART-OUT-R | B04B (5x) |
| ARX0- | B05A (2x) |
| ARX0+ | B05A (2x) |
| ARX1- | B05A (2x) |
| ARX1+ | B05A (2x) |
| ARX2- | B05A (2x) |
| ARX2+ | B05A (2x) |
| ARX-5V | B05A (3x) |
| ARXC- | B05A (2x) |
| ARXC+ | B05A (2x) |
| ARX-DDC-CLK | B05A (2x) |
| ARX-DDC-DAT | B05A (2x) |
| ARX-HPD | B05A (2x) |
| A-STBY | B03C (1x) |
| A-STBY | B06A (2x) |
| AUD_GND | B03D (4x) |
| AUD_GND | B06A (2x) |
| AUDIO-CL-L | B03C (1x) |
| AUDIO-CL-L | B04B (1x) |
| AUDIO-CL-R | B03C (1x) |
| AUDIO-CL-R | B04B (1x) |
| AUDIO-IN1-L | B03D (1x) |
| AUDIO-IN1-L | B04A (1x) |
| AUDIO-IN1-L | B04B (2x) |
| AUDIO-IN1-R | B03D (1x) |
| AUDIO-IN1-R | B04A (1x) |
| AUDIO-IN1-R | B04B (2x) |
| AUDIO-IN2-L | B03D (1x) |
| AUDIO-IN2-L | B04B (2x) |
| AUDIO-IN2-R | B03D (1x) |
| AUDIO-IN2-R | B04B (2x) |
| AUDIO-IN3-L | B03D (1x) |
| AUDIO-IN3-L | B04C (1x) |
| AUDIO-IN3-R | B03D (1x) |
| AUDIO-IN3-R | B04C (1x) |
| AUDIO-IN4-L | B03D (1x) |
| AUDIO-IN4-L | B04C (1x) |
| AUDIO-IN4-R | B03D (1x) |
| AUDIO-IN4-R | B04C (1x) |
| AUDIO-IN5-L | B03D (1x) |
| AUDIO-IN5-L | B04C (2x) |
| AUDIO-IN5-R | B03D (1x) |
| AUDIO-IN5-R | B04C (2x) |
| AUDIO-MUTE | B03H (2x) |
| AUDIO-MUTE | B04C (1x) |
| AUDIO-MUTE | B06A (1x) |
| AUDIO-OUT-L | B03C (1x) |
| AUDIO-OUT-L | B04C (1x) |
| AUDIO-OUT-R | B03C (1x) |
| AUDIO-OUT-R | B04C (1x) |
| AUDIO-RESET | B03C (2x) |
| AUDIO-RESET | B03H (2x) |
| AUDIO-VDD | B03C (7x) |
| AV1-BLK | B03H (1x) |
| AV1-BLK | B04B (1x) |
| AV1-BLK-BO | B04A (1x) |
| AV1-BLK-BO | B04B (2x) |
| AV1-STATUS | B03H (1x) |
| AV1-STATUS | B04A (1x) |
| AV1-STATUS | B04B (2x) |
| AV2-BLK_LCD-SDA | B03H (1x) |
| AV2-BLK_LCD-SDA | B04A (1x) |
| AV2-BLK_LCD-SDA | B04B (2x) |
| AV2-PB_SC2-B | B03E (1x) |
| AV2-PB_SC2-B | B04B (2x) |
| AV2-PR_SC2-R | B03E (1x) |
| AV2-PR_SC2-R | B04B (2x) |
| AV2-STATUS | B03H (1x) |
| AV2-STATUS | B04B (2x) |
| AV2-Y_SC2-G | B03E (1x) |
| AV2-Y_SC2-G | B04B (2x) |
| AV3-PB | B03E (1x) |
| AV3-PB | B04C (1x) |
| AV3-PR | B03E (1x) |
| AV3-PR | B04C (1x) |
| AV3-Y | B03E (1x) |
| AV3-Y | B04C (1x) |
| BACKLIGHT-BOOST | B01B (1x) |
| BACKLIGHT-BOOST | B07A (1x) |
| BACKLIGHT-BOOST-IN | B07A (1x) |
| BACKLIGHT-BOOST-IN | B07B (1x) |
| BACKLIGHT-IN | B07A (1x) |
| BACKLIGHT-IN | B07B (1x) |
| BACKLIGHT-OUT | B01B (1x) |
| BACKLIGHT-OUT | B07A (1x) |
| BOLT-ON-IO | B03H (2x) |
| BOLT-ON-IO | B04A (1x) |
| BOLT-ON-TS-ENn | B03H (2x) |
| BOOTMODE_PNX8543-BL-CTRL | B03G (1x) |
| BOOTMODE_PNX8543-BL-CTRL | B07B (1x) |
| BRX0- | B05A (2x) |
| BRX0+ | B05A (2x) |
| BRX1- | B05A (2x) |
| BRX1+ | B05A (2x) |
| BRX2- | B05A (2x) |
| BRX2+ | B05A (2x) |
| BRX-5V | B05A (3x) |
| BRXC- | B05A (2x) |
| BRXC+ | B05A (2x) |
| BRX-DDC-CLK | B05A (2x) |
| BRX-DDC-DAT | B05A (2x) |
| BRX-HPD | B05A (2x) |
| B-VGA | B03E (1x) |
| B-VGA | B04C (1x) |
| CA-ADDEN | B03B (1x) |
| CA-ADDEN | B05C (3x) |
| CA-CD1 | B03B (1x) |
| CA-CD1 | B05C (2x) |
| CA-CD2 | B03B (1x) |
| CA-CD2 | B05C (2x) |
| CA-CE1 | B05C (2x) |
| CA-CE2 | B05C (2x) |
| CA-DATADIR | B03B (1x) |
| CA-DATADIR | B05C (1x) |
| CA-DATAEN | B03B (1x) |
| CA-DATAEN | B05C (1x) |
| CA-INPACK | B05C (2x) |
| CA-IORD | B05C (2x) |
| CA-IOWR | B05C (2x) |
| CA-MDI0 | B03B (1x) |
| CA-MDI0 | B05C (1x) |
| CA-MDI1 | B03B (1x) |
| CA-MDI1 | B05C (1x) |
| CA-MDI2 | B03B (1x) |
| CA-MDI2 | B05C (1x) |
| CA-MDI3 | B03B (1x) |
| CA-MDI3 | B05C (1x) |
| CA-MDI4 | B03B (1x) |
| CA-MDI4 | B05C (1x) |
| CA-MDI5 | B03B (1x) |
| CA-MDI5 | B05C (1x) |
| CA-MDI6 | B03B (1x) |
| CA-MDI6 | B05C (1x) |
| CA-MDI7 | B03B (1x) |
| CA-MDI7 | B05C (1x) |
| CA-MDO(0) | B03B (1x) |
| CA-MDO(0) | B05C (1x) |
| CA-MDO(1) | B03B (1x) |
| CA-MDO(1) | B05C (1x) |
| CA-MDO(2) | B03B (1x) |
| CA-MDO(2) | B05C (1x) |
| CA-MDO(3) | B03B (1x) |
| CA-MDO(3) | B05C (1x) |
| CA-MDO(4) | B03B (1x) |
| CA-MDO(4) | B05C (1x) |
| CA-MDO(5) | B03B (1x) |
| CA-MDO(5) | B05C (1x) |
| CA-MDO(6) | B03B (1x) |
| CA-MDO(6) | B05C (1x) |
| CA-MDO(7) | B03B (1x) |
| CA-MDO(7) | B05C (1x) |
| CA-MICLK | B03B (1x) |
| CA-MICLK | B05C (1x) |
| CA-MISTRT | B03B (1x) |
| CA-MISTRT | B05C (1x) |
| CA-MIVAL | B03B (1x) |
| CA-MIVAL | B05C (1x) |
| CA-MOCLK_VS2 | B03B (2x) |
| CA-MOCLK_VS2 | B05C (1x) |
| CA-MOSTRT | B03B (1x) |
| CA-MOSTRT | B05C (1x) |
| CA-MOVAL | B03B (1x) |
| CA-MOVAL | B05C (1x) |
| CA-OE | B05C (2x) |
| CA-REG | B05C (2x) |
| CA-RST | B03B (1x) |
| CA-RST | B05C (1x) |
| CA-VS1 | B03B (1x) |
| CA-VS1 | B05C (2x) |
| CA-WAIT | B05C (3x) |
| CA-WE | B05C (2x) |
| CEC | B05A (6x) |
| CEC-HDMI | B03H (2x) |
| CEC-HDMI | B05A (1x) |
| CLK-SCL | B04C (1x) |
| CRX0- | B05A (2x) |
| CRX0+ | B05A (2x) |
| CRX1- | B05A (2x) |
| CRX1+ | B05A (2x) |
| CRX2- | B05A (2x) |
| CRX2+ | B05A (2x) |
| CRX-5V | B05A (3x) |
| CRXC- | B05A (2x) |
| CRXC+ | B05A (2x) |
| CRX-DDC-CLK | B05A (2x) |
| CRX-DDC-DAT | B05A (2x) |
| CRX-HPD | B05A (2x) |
| CVBS | B02A (1x) |
| CVBS | B03E (1x) |
| CVBS | B04C (1x) |
| CVBS1 | B03E (1x) |
| CVBS1 | B04A (1x) |
| CVBS1 | B04B (2x) |
| CVBS2 | B03E (1x) |
| CVBS2 | B04B (2x) |
| CVBS-OUT-SC1 | B04B (3x) |
| CVBS-OUT-SC1-PBS | B04A (1x) |
| CVBS-OUT-SC1-PBS | B04B (1x) |
| CVBS-OUT-SC2 | B04B (2x) |
| CVBS-OUT-SC2 | B04C (1x) |
| CVBS-TER-OUT | B02A (1x) |
| CVBS-TER-OUT | B04B (1x) |
| DATA-SDA | B04C (1x) |
| DDC-SCL | B05A (3x) |
| DDC-SDA | B05A (3x) |
| DDR2-A0 | B03F (3x) |
| DDR2-A1 | B03F (3x) |
| DDR2-A10 | B03F (3x) |
| DDR2-A11 | B03F (3x) |
| DDR2-A12 | B03F (3x) |
| DDR2-A2 | B03F (3x) |
| DDR2-A3 | B03F (3x) |
| DDR2-A4 | B03F (3x) |
| DDR2-A5 | B03F (3x) |
| DDR2-A6 | B03F (3x) |
| DDR2-A7 | B03F (3x) |
| DDR2-A8 | B03F (3x) |
| DDR2-A9 | B03F (3x) |
| DDR2-BA0 | B03F (3x) |
| DDR2-BA1 | B03F (3x) |
| DDR2-BA2 | B03F (3x) |
| DDR2-CAS | B03F (3x) |
| DDR2-CKE | B03F (3x) |
| DDR2-CLK_N | B03F (3x) |
| DDR2-CLK_P | B03F (3x) |
| DDR2-CS | B03F (3x) |
| DDR2-D0 | B03F (2x) |
| DDR2-D1 | B03F (2x) |
| DDR2-D10 | B03F (2x) |
| DDR2-D11 | B03F (2x) |
| DDR2-D12 | B03F (2x) |
| DDR2-D13 | B03F (2x) |
| DDR2-D14 | B03F (2x) |
| DDR2-D15 | B03F (2x) |
| DDR2-D16 | B03F (2x) |
| DDR2-D17 | B03F (2x) |
| DDR2-D18 | B03F (2x) |
| DDR2-D19 | B03F (2x) |
| DDR2-D2 | B03F (2x) |
| DDR2-D20 | B03F (2x) |
| DDR2-D21 | B03F (2x) |
| DDR2-D22 | B03F (2x) |
| DDR2-D23 | B03F (2x) |
| DDR2-D24 | B03F (2x) |
| DDR2-D25 | B03F (2x) |
| DDR2-D26 | B03F (2x) |
| DDR2-D27 | B03F (2x) |
| DDR2-D28 | B03F (2x) |
| DDR2-D29 | B03F (2x) |
| DDR2-D3 | B03F (2x) |
| DDR2-D30 | B03F (2x) |
| DDR2-D31 | B03F (2x) |
| DDR2-D4 | B03F (2x) |
| DDR2-D5 | B03F (2x) |
| DDR2-D6 | B03F (2x) |
| DDR2-D7 | B03F (2x) |
| DDR2-D8 | B03F (2x) |
| DDR2-D9 | B03F (2x) |
| DDR2-DQM0 | B03F (2x) |
| DDR2-DQM1 | B03F (2x) |
| DDR2-DQM2 | B03F (2x) |
| DDR2-DQM3 | B03F (2x) |
| DDR2-DQS0_N | B03F (2x) |
| DDR2-DQS0_P | B03F (2x) |
| DDR2-DQS1_N | B03F (2x) |
| DDR2-DQS1_P | B03F (2x) |
| DDR2-DQS2_N | B03F (2x) |
| DDR2-DQS2_P | B03F (2x) |
| DDR2-DQS3_N | B03F (2x) |
| DDR2-DQS3_P | B03F (2x) |
| DDR2-ODT | B03F (3x) |
| DDR2-RAS | B03F (3x) |
| DDR2-VREF-CTRL | B03F (2x) |
| DDR2-VREF-DDR | B03F (3x) |
| DDR2-WE | B03F (3x) |
| DETECT1 | B01A (1x) |
| DETECT1 | B03H (3x) |
| DETECT-12V | B01B (1x) |
| DETECT-12V | B03H (1x) |
| DETECT2 | B03H (3x) |
| DRX0- | B05A (2x) |
| DRX0+ | B05A (2x) |
| DRX1- | B05A (2x) |
| DRX1+ | B05A (2x) |
| DRX2- | B05A (2x) |
| DRX2+ | B05A (2x) |
| DRX-5V | B05A (3x) |
| DRXC- | B05A (2x) |
| DRXC+ | B05A (2x) |
| DRX-DDC-CLK | B05A (2x) |
| DRX-DDC-DAT | B05A (2x) |
| DRX-HPD | B05A (2x) |
| EA | B03H (1x) |
| EJTAG-DETECT | B03G (1x) |
| EJTAG-DETECT | B03H (2x) |
| EJTAG-PNX5100-TCK | B08C (2x) |
| EJTAG-PNX5100-TDI | B08C (2x) |
| EJTAG-PNX5100-TDO | B08C (2x) |
| EJTAG-PNX5100-TMS | B08C (2x) |
| EJTAG-PNX5100-TRSTn | B08C (2x) |
| EJTAG-TCK | B03G (3x) |
| EJTAG-TDI | B03G (3x) |
| EJTAG-TDO | B03G (3x) |
| EJTAG-TMS | B03G (3x) |
| EJTAG-TRSTN | B03G (3x) |
| ENABLE-3V3 | B01A (1x) |
| ENABLE-3V3 | B01B (1x) |
| ENABLE-3V3 | B03H (2x) |
| FE-CLK | B02A (1x) |
| FE-CLK | B03B (1x) |
| FE-DATA(0) | B02A (1x) |
| FE-DATA(0) | B03B (1x) |
| FE-DATA(1) | B02A (1x) |
| FE-DATA(1) | B03B (1x) |
| FE-DATA(2) | B02A (1x) |
| FE-DATA(2) | B03B (1x) |
| FE-DATA(3) | B02A (1x) |
| FE-DATA(3) | B03B (1x) |
| FE-DATA(4) | B02A (1x) |
| FE-DATA(4) | B03B (1x) |
| FE-DATA(5) | B02A (1x) |
| FE-DATA(5) | B03B (1x) |
| FE-DATA(6) | B02A (1x) |
| FE-DATA(6) | B03B (1x) |
| FE-DATA(7) | B02A (1x) |
| FE-DATA(7) | B03B (1x) |
| FE-ERR | B03B (2x) |
| FE-SOP | B02A (1x) |
| FE-SOP | B03B (1x) |
| FE-VALID | B02A (1x) |
| FE-VALID | B03B (1x) |
| FRONT-C | B03E (1x) |
| FRONT-C | B04C (2x) |
| FRONT-Y_CVBS | B03E (1x) |
| FRONT-Y_CVBS | B04C (2x) |
| GND-SIG | B01A (12x) |
| GNDSND | B01B (2x) |
| GNDSND | B06A (20x) |
| G-VGA | B03E (1x) |
| G-VGA | B04C (1x) |
| HP_LOUT | B03C (1x) |
| HP_LOUT | B04C (1x) |
| HP_ROUT | B03C (1x) |
| HP_ROUT | B04C (1x) |
| H-SYNC-VGA | B03E (1x) |
| H-SYNC-VGA | B04C (1x) |
| IF-AGC | B02A (2x) |
| IF-N | B02A (2x) |
| IF-P | B02A (2x) |
| IRQ-CA | B03B (1x) |
| IRQ-CA | B03G (2x) |
| IRQ-CA | B05C (2x) |
| IRQ-PCI | B03G (1x) |
| IRQ-PCI | B05B (1x) |
| KEYBOARD | B03G (1x) |
| KEYBOARD | B03H (2x) |
| LAMP-ON-OUT | B01B (1x) |
| LAMP-ON-OUT | B03H (2x) |
| LCD-SCL | B03H (2x) |
| LCD-SCL | B04A (1x) |
| LCD-SCL | B04C (1x) |
| LED1 | B03G (2x) |
| LED1 | B03H (1x) |
| LED2 | B03G (2x) |
| LED2 | B03H (1x) |
| LEFT-SPEAKER | B06A (4x) |
| LIGHT-SENSOR | B03G (2x) |
| LIGHT-SENSOR | B03H (1x) |
| MDO0 | B05C (4x) |
| MDO1 | B05C (4x) |
| MDO2 | B05C (4x) |
| MDO3 | B05C (4x) |
| MDO4 | B05C (4x) |
| MDO5 | B05C (4x) |
| MDO6 | B05C (4x) |
| MDO7 | B05C (4x) |
| MOCLKA | B05C (4x) |
| MOSTRTA | B05C (4x) |
| MOVALA | B05C (4x) |
| MUTE | B06A (2x) |
| NAND-AD(0) | B03G (2x) |
| NAND-AD(1) | B03G (2x) |
| NAND-AD(2) | B03G (2x) |
| NAND-AD(3) | B03G (2x) |
| NAND-AD(4) | B03G (2x) |
| NAND-AD(5) | B03G (2x) |
| NAND-AD(6) | B03G (2x) |
| NAND-AD(7) | B03G (2x) |
| NAND-ALE | B03G (2x) |
| NAND-CLE | B03G (2x) |
| NAND-REn | B03G (2x) |
| NAND-WEn | B03G (2x) |
| PBS_SPI_DI | B04A (2x) |
| PBS-I2C-SCL | B03G (2x) |
| PBS-I2C-SCL | B04A (2x) |
| PCI-AD0 | B03G (2x) |
| PCI-AD0 | B05B (1x) |
| PCI-AD0 | B05C (1x) |
| PCI-AD0 | B08C (1x) |
| PCI-AD1 | B03G (2x) |
| PCI-AD1 | B05B (1x) |
| PCI-AD1 | B05C (1x) |
| PCI-AD1 | B08C (1x) |
| PCI-AD10 | B03G (1x) |
| PCI-AD10 | B05B (1x) |
| PCI-AD10 | B05C (1x) |
| PCI-AD10 | B08C (1x) |
| PCI-AD11 | B03G (1x) |
| PCI-AD11 | B05B (1x) |
| PCI-AD11 | B05C (1x) |
| PCI-AD11 | B08C (1x) |
| PCI-AD12 | B03G (1x) |
| PCI-AD12 | B05B (1x) |
| PCI-AD12 | B05C (1x) |
| PCI-AD12 | B08C (1x) |
| PCI-AD13 | B03G (1x) |
| PCI-AD13 | B05B (1x) |
| PCI-AD13 | B05C (1x) |
| PCI-AD13 | B08C (1x) |
| PCI-AD14 | B03G (1x) |
| PCI-AD14 | B05B (1x) |
| PCI-AD14 | B05C (1x) |
| PCI-AD14 | B08C (1x) |
| PCI-AD15 | B03G (1x) |
| PCI-AD15 | B05B (1x) |
| PCI-AD15 | B08C (1x) |
| PCI-AD16 | B03G (1x) |
| PCI-AD16 | B05B (1x) |
| PCI-AD16 | B05C (1x) |
| PCI-AD16 | B08C (1x) |
| PCI-AD17 | B03G (1x) |
| PCI-AD17 | B05B (1x) |
| PCI-AD17 | B05C (1x) |
| PCI-AD17 | B08C (1x) |
| PCI-AD18 | B03G (1x) |
| PCI-AD18 | B05B (1x) |
| PCI-AD18 | B05C (1x) |
| PCI-AD18 | B08C (1x) |
| PCI-AD19 | B03G (1x) |
| PCI-AD19 | B05B (1x) |
| PCI-AD19 | B05C (1x) |

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## SSB v1: SRP List Part 2

| Netname | Diagram |
|---|---|
| PCI-AD19 | B08C (1×) |
| PCI-AD2 | B03G (1×) |
| PCI-AD2 | B05B (1×) |
| PCI-AD2 | B05C (1×) |
| PCI-AD2 | B08C (1×) |
| PCI-AD20 | B03G (1×) |
| PCI-AD20 | B05B (1×) |
| PCI-AD20 | B08C (1×) |
| PCI-AD21 | B03G (1×) |
| PCI-AD21 | B05B (1×) |
| PCI-AD21 | B08C (1×) |
| PCI-AD22 | B03G (1×) |
| PCI-AD22 | B05B (1×) |
| PCI-AD22 | B05C (1×) |
| PCI-AD22 | B08C (1×) |
| PCI-AD23 | B03G (1×) |
| PCI-AD23 | B05B (2×) |
| PCI-AD23 | B05C (1×) |
| PCI-AD23 | B08C (1×) |
| PCI-AD24 | B03G (3×) |
| PCI-AD24 | B05B (1×) |
| PCI-AD24 | B05C (1×) |
| PCI-AD24 | B08C (1×) |
| PCI-AD25 | B03G (2×) |
| PCI-AD25 | B05B (1×) |
| PCI-AD25 | B05C (1×) |
| PCI-AD25 | B08C (2×) |
| PCI-AD26 | B03G (2×) |
| PCI-AD26 | B05B (1×) |
| PCI-AD26 | B05C (1×) |
| PCI-AD26 | B08C (1×) |
| PCI-AD27 | B03G (2×) |
| PCI-AD27 | B05B (1×) |
| PCI-AD27 | B05C (1×) |
| PCI-AD27 | B08C (1×) |
| PCI-AD28 | B03G (2×) |
| PCI-AD28 | B05B (1×) |
| PCI-AD28 | B05C (1×) |
| PCI-AD28 | B08C (1×) |
| PCI-AD29 | B03G (2×) |
| PCI-AD29 | B05B (1×) |
| PCI-AD29 | B05C (1×) |
| PCI-AD29 | B08C (1×) |
| PCI-AD3 | B03G (1×) |
| PCI-AD3 | B05B (1×) |
| PCI-AD3 | B05C (1×) |
| PCI-AD3 | B08C (1×) |
| PCI-AD30 | B03G (2×) |
| PCI-AD30 | B05B (1×) |
| PCI-AD30 | B05C (1×) |
| PCI-AD30 | B08C (1×) |
| PCI-AD31 | B03G (2×) |
| PCI-AD31 | B05B (1×) |
| PCI-AD31 | B05C (1×) |
| PCI-AD31 | B08C (1×) |
| PCI-AD4 | B03G (1×) |
| PCI-AD4 | B05B (1×) |
| PCI-AD4 | B05C (1×) |
| PCI-AD4 | B08C (1×) |
| PCI-AD5 | B03G (1×) |
| PCI-AD5 | B05B (1×) |
| PCI-AD5 | B05C (1×) |
| PCI-AD5 | B08C (1×) |
| PCI-AD6 | B03G (1×) |
| PCI-AD6 | B05B (1×) |
| PCI-AD6 | B05C (1×) |
| PCI-AD6 | B08C (1×) |
| PCI-AD7 | B03G (1×) |
| PCI-AD7 | B05B (1×) |
| PCI-AD7 | B05C (1×) |
| PCI-AD7 | B08C (1×) |
| PCI-AD8 | B03G (1×) |
| PCI-AD8 | B05B (1×) |
| PCI-AD8 | B05C (1×) |
| PCI-AD8 | B08C (1×) |
| PCI-AD9 | B03G (1×) |
| PCI-AD9 | B05B (1×) |
| PCI-AD9 | B05C (1×) |
| PCI-AD9 | B08C (1×) |
| PCI-CBE0 | B03G (1×) |
| PCI-CBE0 | B05B (1×) |
| PCI-CBE0 | B08C (1×) |
| PCI-CBE1 | B03G (2×) |
| PCI-CBE1 | B05B (1×) |
| PCI-CBE1 | B05C (1×) |
| PCI-CBE1 | B08C (1×) |
| PCI-CBE2 | B03G (2×) |
| PCI-CBE2 | B05B (1×) |
| PCI-CBE2 | B05C (1×) |
| PCI-CBE2 | B08C (1×) |
| PCI-CBE3 | B03G (1×) |
| PCI-CBE3 | B05B (1×) |
| PCI-CBE3 | B08C (1×) |
| PCI-CLK-ETHERNET | B03G (1×) |
| PCI-CLK-ETHERNET | B05B (1×) |
| PCI-CLK-OUT | B03G (2×) |
| PCI-CLK-PNX5100 | B03G (1×) |
| PCI-CLK-PNX5100 | B08C (1×) |
| PCI-CLK-PNX8543 | B03G (2×) |
| PCI-DEVSEL | B03G (2×) |
| PCI-DEVSEL | B05B (1×) |
| PCI-DEVSEL | B08C (1×) |
| PCI-FRAME | B03G (2×) |
| PCI-FRAME | B05B (1×) |
| PCI-FRAME | B08C (1×) |
| PCI-GNT | B03G (2×) |
| PCI-GNT | B05B (1×) |
| PCI-IRDY | B03G (2×) |
| PCI-IRDY | B05B (1×) |
| PCI-IRDY | B08C (1×) |
| PCI-PAR | B03G (1×) |
| PCI-PAR | B05B (1×) |
| PCI-PAR | B08C (1×) |
| PCI-PERR | B03G (2×) |
| PCI-PERR | B05B (1×) |
| PCI-PERR | B08C (1×) |
| PCI-REQ | B03G (2×) |
| PCI-REQ | B05B (1×) |
| PCI-SERR | B03G (2×) |
| PCI-SERR | B05B (1×) |
| PCI-SERR | B08C (1×) |
| PCI-STOP | B03G (2×) |
| PCI-STOP | B05B (1×) |
| PCI-STOP | B08C (1×) |
| PCI-TRDY | B03G (2×) |
| PCI-TRDY | B05B (1×) |
| PCI-TRDY | B08C (1×) |
| PCMCIA-A0 | B05C (2×) |
| PCMCIA-A1 | B05C (2×) |
| PCMCIA-A10 | B05C (2×) |
| PCMCIA-A11 | B05C (2×) |
| PCMCIA-A12 | B05C (2×) |
| PCMCIA-A13 | B05C (2×) |
| PCMCIA-A14 | B05C (2×) |
| PCMCIA-A2 | B05C (2×) |
| PCMCIA-A3 | B05C (2×) |
| PCMCIA-A4 | B05C (2×) |
| PCMCIA-A5 | B05C (2×) |
| PCMCIA-A6 | B05C (2×) |
| PCMCIA-A7 | B05C (2×) |
| PCMCIA-A8 | B05C (2×) |
| PCMCIA-A9 | B05C (2×) |
| PCMCIA-D0 | B05C (2×) |
| PCMCIA-D1 | B05C (2×) |
| PCMCIA-D2 | B05C (2×) |
| PCMCIA-D3 | B05C (2×) |
| PCMCIA-D4 | B05C (2×) |
| PCMCIA-D5 | B05C (2×) |
| PCMCIA-D6 | B05C (2×) |
| PCMCIA-D7 | B05C (2×) |
| PCMCIA-VCC-VPP | B05C (5×) |
| PDN | B02A (2×) |
| PDP | B02A (2×) |
| PI_3 | B03H (2×) |
| PNX5100-BL-BOOST | B07B (1×) |
| PNX5100-BL-BOOST | B08C (1×) |
| PNX5100-BL-CTRL | B07B (1×) |
| PNX5100-BL-CTRL | B08C (1×) |
| PNX5100-DDR2-A0 | B08B (3×) |
| PNX5100-DDR2-A1 | B08B (3×) |
| PNX5100-DDR2-A10 | B08B (3×) |
| PNX5100-DDR2-A11 | B08B (3×) |
| PNX5100-DDR2-A12 | B08B (3×) |
| PNX5100-DDR2-A2 | B08B (3×) |
| PNX5100-DDR2-A3 | B08B (3×) |
| PNX5100-DDR2-A4 | B08B (3×) |
| PNX5100-DDR2-A5 | B08B (3×) |
| PNX5100-DDR2-A6 | B08B (3×) |
| PNX5100-DDR2-A7 | B08B (3×) |
| PNX5100-DDR2-A8 | B08B (3×) |
| PNX5100-DDR2-A9 | B08B (3×) |
| PNX5100-DDR2-BA0 | B08B (3×) |
| PNX5100-DDR2-BA1 | B08B (3×) |
| PNX5100-DDR2-CAS | B08B (3×) |
| PNX5100-DDR2-CKE | B08B (3×) |
| PNX5100-DDR2-CLK_N | B08B (3×) |
| PNX5100-DDR2-CLK_P | B08B (3×) |
| PNX5100-DDR2-CS | B08B (3×) |
| PNX5100-DDR2-D0 | B08B (2×) |
| PNX5100-DDR2-D1 | B08B (2×) |
| PNX5100-DDR2-D10 | B08B (2×) |
| PNX5100-DDR2-D11 | B08B (2×) |
| PNX5100-DDR2-D12 | B08B (2×) |
| PNX5100-DDR2-D13 | B08B (2×) |
| PNX5100-DDR2-D14 | B08B (2×) |
| PNX5100-DDR2-D15 | B08B (2×) |
| PNX5100-DDR2-D16 | B08B (2×) |
| PNX5100-DDR2-D17 | B08B (2×) |
| PNX5100-DDR2-D18 | B08B (2×) |
| PNX5100-DDR2-D19 | B08B (2×) |
| PNX5100-DDR2-D2 | B08B (2×) |
| PNX5100-DDR2-D20 | B08B (2×) |
| PNX5100-DDR2-D21 | B08B (2×) |
| PNX5100-DDR2-D22 | B08B (2×) |
| PNX5100-DDR2-D23 | B08B (2×) |
| PNX5100-DDR2-D24 | B08B (2×) |
| PNX5100-DDR2-D25 | B08B (2×) |
| PNX5100-DDR2-D26 | B08B (2×) |
| PNX5100-DDR2-D27 | B08B (2×) |
| PNX5100-DDR2-D28 | B08B (2×) |
| PNX5100-DDR2-D29 | B08B (2×) |
| PNX5100-DDR2-D3 | B08B (2×) |
| PNX5100-DDR2-D30 | B08B (2×) |
| PNX5100-DDR2-D31 | B08B (2×) |
| PNX5100-DDR2-D4 | B08B (2×) |
| PNX5100-DDR2-D5 | B08B (2×) |
| PNX5100-DDR2-D6 | B08B (2×) |
| PNX5100-DDR2-D7 | B08B (2×) |
| PNX5100-DDR2-D8 | B08B (2×) |
| PNX5100-DDR2-D9 | B08B (2×) |
| PNX5100-DDR2-DQM0 | B08B (2×) |
| PNX5100-DDR2-DQM1 | B08B (2×) |
| PNX5100-DDR2-DQM2 | B08B (2×) |
| PNX5100-DDR2-DQM3 | B08B (2×) |
| PNX5100-DDR2-DQS0_N | B08B (2×) |
| PNX5100-DDR2-DQS0_P | B08B (2×) |
| PNX5100-DDR2-DQS1_N | B08B (2×) |
| PNX5100-DDR2-DQS1_P | B08B (2×) |
| PNX5100-DDR2-DQS2_N | B08B (2×) |
| PNX5100-DDR2-DQS2_P | B08B (2×) |
| PNX5100-DDR2-DQS3_N | B08B (2×) |
| PNX5100-DDR2-DQS3_P | B08B (2×) |
| PNX5100-DDR2-ODT | B08B (3×) |
| PNX5100-DDR2-RAS | B08B (3×) |
| PNX5100-DDR2-VREF-CTRL | B08B (2×) |
| PNX5100-DDR2-VREF-DDR | B08B (3×) |
| PNX5100-DDR2-WE | B08B (3×) |
| PNX5100-LCD-PWR-ON | B07B (1×) |
| PNX5100-LCD-PWR-ON | B08C (1×) |
| PNX5100-RST-OUT | B08C (2×) |
| PNX8543-BL-BOOST_SPI-CLK | B03G (2×) |
| PNX8543-BL-BOOST_SPI-CLK | B04A (1×) |
| PNX8543-BL-BOOST_SPI-CLK | B07B (1×) |
| PNX8543-LCD-PWR-ON_SPI-DI | B03G (2×) |
| PNX8543-LCD-PWR-ON_SPI-DI | B04A (1×) |
| PNX8543-LCD-PWR-ON_SPI-DI | B07B (1×) |
| POWER-OK | B01B (1×) |
| POWER-OK | B03H (2×) |
| PROT-DC | B01A (1×) |
| PROT-DC | B01B (1×) |
| PSEN | B03H (1×) |
| RC | B03G (1×) |
| RC | B03H (1×) |
| RC | B04A (1×) |
| RC_uP | B03H (2×) |
| RC1 | B03H (1×) |
| RC1 | B04A (1×) |
| RC1 | B04C (1×) |
| RC2 | B03H (1×) |
| RC2 | B04A (1×) |
| RC2 | B04C (1×) |
| REGIMBEAU_CVBS-SWITCH | B03H (2×) |
| REGIMBEAU_CVBS-SWITCH | B04B (1×) |
| RESET-ETHERNET | B03H (2×) |
| RESET-ETHERNET | B05B (2×) |
| RESET-NVM | B03H (3×) |
| RESET-PNX5100 | B03H (2×) |
| RESET-PNX5100 | B08C (1×) |
| RESET-STBY | B03H (2×) |
| RESET-SYSTEM | B02A (1×) |
| RESET-SYSTEM | B03G (1×) |
| RESET-SYSTEM | B03H (3×) |
| RF-AGC | B02A (2×) |
| RIGHT-SPEAKER | B06A (4×) |
| RREF-PNX85XX | B03A (2×) |
| RREF-PNX85XX | B05A (1×) |
| R-VGA | B03E (1×) |
| R-VGA | B04C (1×) |
| RX0- | B05A (2×) |
| RX0+ | B05A (2×) |
| RX1- | B05A (2×) |
| RX1+ | B05A (2×) |
| RX2- | B05A (2×) |
| RX2+ | B05A (2×) |
| RX51001A- | B03B (1×) |
| RX51001A- | B07B (1×) |
| RX51001A- | B08D (1×) |
| RX51001A+ | B03B (1×) |
| RX51001A+ | B07B (1×) |
| RX51001A+ | B08D (1×) |
| RX51001B- | B03B (1×) |
| RX51001B- | B07B (2×) |
| RX51001B- | B08D (1×) |
| RX51001B+ | B03B (1×) |
| RX51001B+ | B07B (2×) |
| RX51001B+ | B08D (1×) |
| RX51001C- | B03B (1×) |
| RX51001C- | B07B (2×) |
| RX51001C- | B08D (1×) |
| RX51001C+ | B03B (1×) |
| RX51001C+ | B07B (2×) |
| RX51001C+ | B08D (1×) |
| RX51001CLK- | B03B (1×) |
| RX51001CLK- | B07B (2×) |
| RX51001CLK- | B08D (1×) |
| RX51001CLK+ | B03B (1×) |
| RX51001CLK+ | B07B (2×) |
| RX51001CLK+ | B08D (1×) |
| RX51001D- | B03B (1×) |
| RX51001D- | B07B (2×) |
| RX51001D- | B08D (1×) |
| RX51001D+ | B03B (1×) |
| RX51001D+ | B07B (2×) |
| RX51001D+ | B08D (1×) |
| RX51001E- | B03B (1×) |
| RX51001E- | B07B (2×) |
| RX51001E- | B08D (1×) |
| RX51001E+ | B03B (1×) |
| RX51001E+ | B07B (2×) |
| RX51001E+ | B08D (1×) |
| RX51002A- | B03B (1×) |
| RX51002A- | B07B (1×) |
| RX51002A- | B08D (1×) |
| RX51002A+ | B03B (1×) |
| RX51002A+ | B07B (1×) |
| RX51002A+ | B08D (1×) |
| RX51002B- | B03B (1×) |
| RX51002B- | B07B (1×) |
| RX51002B- | B08D (1×) |
| RX51002B+ | B03B (1×) |
| RX51002B+ | B07B (1×) |
| RX51002B+ | B08D (1×) |
| RX51002C- | B03B (1×) |
| RX51002C- | B07B (1×) |
| RX51002C- | B08D (1×) |
| RX51002C+ | B03B (1×) |
| RX51002C+ | B07B (1×) |
| RX51002C+ | B08D (1×) |
| RX51002CLK- | B03B (1×) |
| RX51002CLK- | B07B (1×) |
| RX51002CLK- | B08D (1×) |
| RX51002CLK+ | B03B (1×) |
| RX51002CLK+ | B07B (1×) |
| RX51002CLK+ | B08D (1×) |
| RX51002D- | B03B (1×) |
| RX51002D- | B07B (1×) |
| RX51002D- | B08D (1×) |
| RX51002D+ | B03B (1×) |
| RX51002D+ | B07B (1×) |
| RX51002D+ | B08D (1×) |
| RX51002E- | B03B (1×) |
| RX51002E- | B07B (1×) |
| RX51002E- | B08D (1×) |
| RX51002E+ | B03B (1×) |
| RX51002E+ | B07B (1×) |
| RX51002E+ | B08D (1×) |
| RXC- | B05A (2×) |
| RXC+ | B05A (2×) |
| RXD | B03G (1×) |
| RXD | B04A (1×) |
| RXD-BOLT-ON | B04A (3×) |
| RXD-MIPS | B03G (2×) |
| RXD-MIPS | B04A (2×) |
| RXD-MIPS2 | B03G (2×) |
| RXD-UP | B03G (1×) |
| RXD-UP | B03H (2×) |
| RXD-UP | B04A (2×) |
| SC1-B | B03E (1×) |
| SC1-B | B04A (1×) |
| SC1-B | B04B (2×) |
| SC1-G | B03E (1×) |
| SC1-G | B04A (1×) |
| SC1-G | B04B (2×) |
| SC1-R | B03E (1×) |
| SC1-R | B04A (1×) |
| SC1-R | B04B (1×) |
| SCL1 | B03G (2×) |
| SCL2 | B03G (3×) |
| SCL3 | B03G (2×) |
| SCL-AMBI-3V3 | B08C (1×) |
| SCL-AMBI-3V3 | B08E (1×) |
| SCL-DISP | B03G (1×) |
| SCL-DISP | B07B (3×) |
| SCL-SET | B01B (1×) |
| SCL-SET | B03G (3×) |
| SCL-SSB | B02A (1×) |
| SCL-SSB | B03G (2×) |
| SCL-SSB | B04A (1×) |
| SCL-SSB | B05A (1×) |
| SCL-SSB | B08C (2×) |
| SCL-TUNER | B02A (2×) |
| SCL-UP-MIPS | B03G (3×) |
| SCL-UP-MIPS | B03H (2×) |
| SDA1 | B03G (2×) |
| SDA2 | B03G (3×) |
| SDA3 | B03G (2×) |
| SDA-AMBI-3V3 | B08C (1×) |
| SDA-AMBI-3V3 | B08E (1×) |
| SDA-DISP | B03G (1×) |
| SDA-DISP | B07B (3×) |
| SDA-SET | B01B (1×) |
| SDA-SET | B03G (3×) |
| SDA-SSB | B02A (1×) |
| SDA-SSB | B03G (2×) |
| SDA-SSB | B04A (1×) |
| SDA-SSB | B05A (1×) |
| SDA-SSB | B08C (2×) |
| SDA-TUNER | B02A (2×) |
| SDA-UP-MIPS | B03G (3×) |
| SDA-UP-MIPS | B03H (2×) |
| SDM | B03H (3×) |
| SENSE+1V2-PNX5100 | B01B (2×) |
| SENSE+1V2-PNX5100 | B08A (4×) |
| SENSE+1V2-PNX85XX | B01A (1×) |
| SENSE+1V2-PNX85XX | B03A (1×) |
| SIF | B02A (1×) |
| SIF | B03E (1×) |
| SIF-GND | B02A (1×) |
| SIF-GND | B03E (2×) |
| SPDIF-IN | B03D (1×) |
| SPDIF-IN | B04A (1×) |
| SPDIF-OUT | B04B (1×) |
| SPDIF-OUT | B04C (1×) |
| SPDIF-OUT-1 | B03D (1×) |
| SPDIF-OUT-1 | B04C (1×) |
| SPI-CLK | B03H (2×) |
| SPI-CSB | B03H (2×) |
| SPI-DO_I2C-SDA | B03G (2×) |
| SPI-DO_I2C-SDA | B04A (1×) |
| SPI-PROG | B03H (3×) |
| SPI-SDI | B03H (2×) |
| SPI-SDO | B03H (2×) |
| SPI-WP | B03H (3×) |
| STANDBY | B01B (1×) |
| STANDBY | B03H (2×) |
| STANDBY | B04A (1×) |
| TX1A- | B07B (2×) |
| TX1A- | B08D (1×) |
| TX1A+ | B07B (2×) |
| TX1A+ | B08D (1×) |
| TX1B- | B07B (2×) |
| TX1B- | B08D (1×) |
| TX1B+ | B07B (2×) |
| TX1B+ | B08D (1×) |
| TX1C- | B07B (2×) |
| TX1C- | B08D (1×) |
| TX1C+ | B07B (2×) |
| TX1C+ | B08D (1×) |
| TX1CLK- | B07B (2×) |
| TX1CLK- | B08D (1×) |
| TX1CLK+ | B07B (2×) |
| TX1CLK+ | B08D (1×) |
| TX1D- | B07B (2×) |
| TX1D- | B08D (1×) |
| TX1D+ | B07B (2×) |
| TX1D+ | B08D (1×) |
| TX1E- | B07B (2×) |
| TX1E- | B08D (1×) |
| TX1E+ | B07B (2×) |
| TX1E+ | B08D (1×) |
| TX2A- | B07B (2×) |
| TX2A- | B08D (1×) |
| TX2A+ | B07B (2×) |
| TX2A+ | B08D (1×) |
| TX2B- | B07B (2×) |
| TX2B- | B08D (1×) |
| TX2B+ | B07B (2×) |
| TX2B+ | B08D (1×) |
| TX2C- | B07B (2×) |
| TX2C- | B08D (1×) |
| TX2C+ | B07B (2×) |
| TX2C+ | B08D (1×) |
| TX2CLK- | B07B (2×) |
| TX2CLK- | B08D (1×) |
| TX2CLK+ | B07B (2×) |
| TX2CLK+ | B08D (1×) |
| TX2D- | B07B (2×) |
| TX2D- | B08D (1×) |
| TX2D+ | B07B (2×) |
| TX2D+ | B08D (1×) |
| TX2E- | B07B (2×) |
| TX2E- | B08D (1×) |
| TX2E+ | B07B (2×) |
| TX2E+ | B08D (1×) |
| TX3A- | B07B (2×) |
| TX3A- | B08D (1×) |
| TX3A+ | B07B (2×) |
| TX3A+ | B08D (1×) |
| TX3B- | B07B (2×) |
| TX3B- | B08D (1×) |
| TX3B+ | B07B (2×) |
| TX3B+ | B08D (1×) |
| TX3C- | B07B (2×) |
| TX3C- | B08D (1×) |
| TX3C+ | B07B (2×) |
| TX3C+ | B08D (1×) |
| TX3CLK- | B07B (2×) |
| TX3CLK- | B08D (1×) |
| TX3CLK+ | B07B (2×) |
| TX3CLK+ | B08D (1×) |
| TX3D- | B07B (2×) |
| TX3D- | B08D (1×) |
| TX3D+ | B07B (2×) |
| TX3D+ | B08D (1×) |
| TX3E- | B07B (2×) |
| TX3E- | B08D (1×) |
| TX3E+ | B07B (2×) |
| TX3E+ | B08D (1×) |
| TX4A- | B07B (2×) |
| TX4A- | B08D (1×) |
| TX4A+ | B07B (2×) |
| TX4A+ | B08D (1×) |
| TX4B- | B07B (2×) |
| TX4B- | B08D (1×) |
| TX4B+ | B07B (2×) |
| TX4B+ | B08D (1×) |
| TX4C- | B07B (2×) |
| TX4C- | B08D (1×) |
| TX4C+ | B07B (2×) |
| TX4C+ | B08D (1×) |
| TX4CLK- | B07B (2×) |
| TX4CLK- | B08D (1×) |
| TX4CLK+ | B07B (2×) |
| TX4CLK+ | B08D (1×) |
| TX4D- | B07B (2×) |
| TX4D- | B08D (1×) |
| TX4D+ | B07B (2×) |
| TX4D+ | B08D (1×) |
| TX4E- | B07B (2×) |
| TX4E- | B08D (1×) |
| TX4E+ | B07B (2×) |
| TX4E+ | B08D (1×) |
| TXD | B03G (1×) |
| TXD | B04A (1×) |
| TXD-BOLT-ON | B04A (3×) |
| TXD-MIPS | B03G (2×) |
| TXD-MIPS | B04A (2×) |
| TXD-MIPS2 | B03G (2×) |
| TXD-UP | B03G (1×) |
| TXD-UP | B03H (2×) |
| TXD-UP | B04A (2×) |
| UART-SWITCH | B03H (2×) |
| USB20-DM | B03G (2×) |
| USB20-DP | B03G (2×) |
| USB-OC | B03G (2×) |
| VDD_1V8 | B05A (2×) |
| VDDA-ADC | B03A (1×) |
| VDDA-AUDIO | B03A (2×) |
| VDDA-AUDIO | B03D (4×) |
| VDDA-DAC | B03A (1×) |
| VDDA-DAC | B03D (1×) |
| VDDA-LVDS | B03A (1×) |
| VDDA-LVDS | B03B (1×) |
| VDDH_3V3 | B05A (3×) |
| VDDO_3V3 | B05A (2×) |
| VDDS_3V3 | B05A (2×) |
| VSW | B01A (1×) |
| V-SYNC-VGA | B03E (1×) |
| V-SYNC-VGA | B04C (1×) |
| WC-EEPROM-PNX5100_SPI-DI | B03G (1×) |
| WC-EEPROM-PNX5100_SPI-DI | B04A (1×) |
| WC-EEPROM-PNX5100_SPI-DI | B04C (1×) |
| WC-EEPROM-PNX5100_SPI-DI | B08C (2×) |
| WP-NANDFLASH | B03G (2×) |
| WP-NANDFLASH | B03H (2×) |
| XIO-ACK | B03G (3×) |
| XIO-SEL-NAND | B03G (3×) |
| Y_CVBS-MON-OUT | B03E (1×) |
| Y_CVBS-MON-OUT | B04B (1×) |
| Y_CVBS-MON-OUT-SC | B04B (2×) |

3139 123 6443.1

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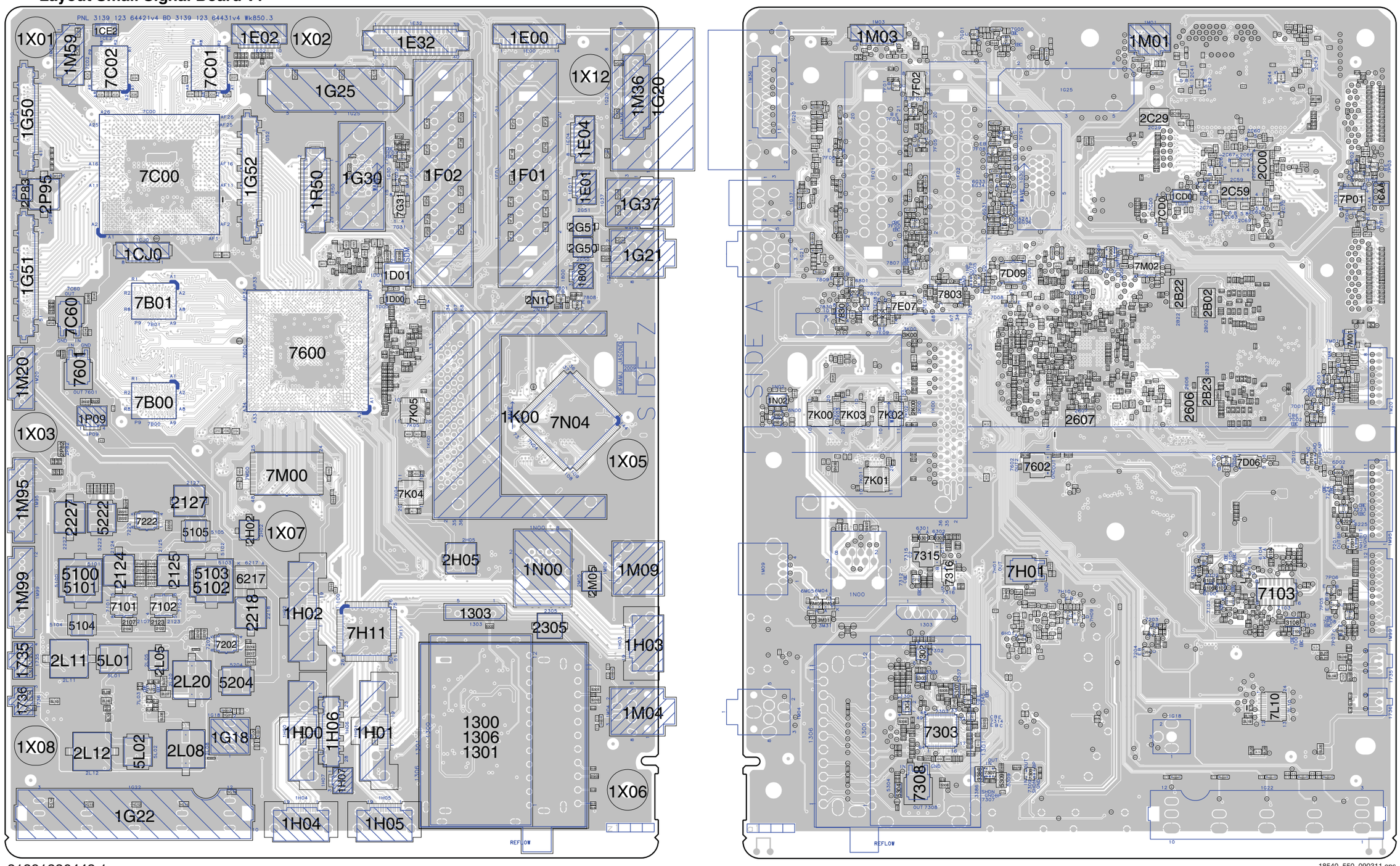
090324

## Layout Small Signal Board v1

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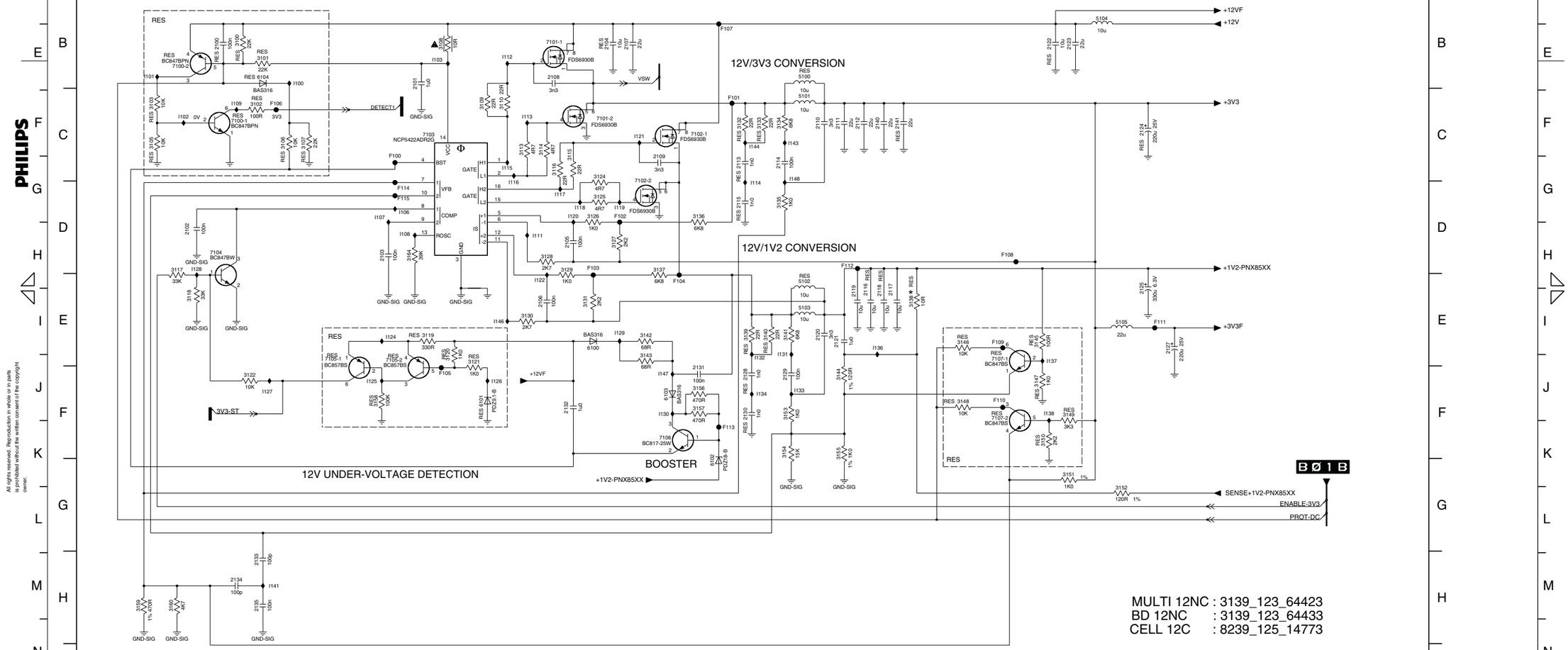
090320

## SSB v3: DC/DC +3V3 +1V2

2100 B2 2101 B4 2102 D1 2103 D4 2104 B6 2105 D6 2106 E5
2107 B6 2108 B5 2109 C6 2110 C8 2111 C8 2112 C9 2113 C7
2114 C8 2115 D7 2116 E9 2117 E9 2118 E9 2119 E9 2120 E8
2121 E8 2122 B11 2123 B11 2124 C12 2125 E12 2127 E12 2128 F7
2129 F8 2130 F7 2131 F7 2132 F5 2133 H2 2134 H2 2135 H2
2140 C9 2141 C9 3100 B2 3101 B2 3102 C2 3103 C1 3105 C1
3106 C2 3107 C3 3108 B4 3109 C5 3110 C5 3113 C5 3114 C5
3115 C6 3116 C5 3117 D1 3118 E1 3119 E4 3120 E4 3121 E4
3122 F2 3124 C6 3125 D6 3126 D6 3127 D6 3128 D5 3129 D5
3130 E5 3131 E6 3132 C7 3133 C8 3134 C8 3135 D8 3136 D7
3137 D6 3138 E9 3139 E7 3140 E8 3141 E8 3142 E6 3143 E6
3144 F8 3145 E11 3146 E10 3147 F11 3148 F10 3149 F11 3150 F11
3151 G11 3152 G11 3153 F8 3154 F8 3155 F8 3156 F7 3157 F7
3158 F3 3159 H1 3160 H1 3164 D4 5100 B8 5101 C8 5102 E8
5103 E8 5104 B11 5105 E11 6101 F5 6102 G7 6103 F7
6104 B2 7100-1 C2 7100-2 B1 7101-1 B5 7101-2 C6 7102-1 C7 7102-2 D6
7103 C4 7104 D2 7105-1 E3 7105-2 E4 7106 F7 7107-1 E10 7107-2 F10
F100 C4 F101 C7 F102 C7 F103 C7 F104 C7 F105 E4 F106 C2
F107 B7 F108 D10 F109 E10 F110 F10 F111 E12 F112 D9 F113 F7
F114 D4 F115 D4 I100 B3 I101 B1 I102 C1 I103 D4
I107 D3 I108 D4 I109 C2 I111 D5 I112 B5 I113 C5 I114 D8
I115 C5 I116 D5 I117 D5 I118 D6 I119 D6 I120 D6 I121 C6
I122 E5 I124 E4 I125 F3 I126 E8 I127 F2 I129 F2 I130 F7
I131 E8 I132 E8 I133 F8 I134 F8 I136 E9 I137 E11 I138 F11
I141 H2 I143 C8 I144 C8 I146 E5 I147 F7 I148 C8

**BØ1A** DC / DC +3V3_+1V2




| | | | |
|---|---|---|---|
| CHN DC394240 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 3 2009-06-18 |
| -- -- -- 1 | | | 2 2009-02-25 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Kailash | SUPERS. **** *** ***** | 25 10 130 – 01 | A2 |
| SV CHECK | DATE 2008-10-17 | | |



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090911

## SSB v3: DC/DC +3V3-Stdby +1V2-Stdby

1M95 D1 1M99 B1 2200 C1 2201 C1 2202 C2
2203 C2 2204 D2 2205 D3 2206 E1 2207 E2
2208 E2 2209 B5 2210 B6 2211 D4 2212 B9
2213 B9 2214 B9 2215 B12 2216 C13 2217 B12
2218 B12 2219 C10 2220 D2 2221 F9 2222 F9
2223 F9 2224 F12 2225 F12 2226 F13 2227 F13
2228 F13 2229 F13 2230 E2 2231 C1 2232 C2
2233 B6 2235 C2 2236 C2 2237 C3 3200 B2
3201 B2 3204 D2 3207 B10 3208 C11 3210 C12
3211 C12 3212 B14 3213 B13 3214 C13 3215 C14
3221 G12 3222 G12 3223 F13 3224 F12 3225 C5
3226 C5 3227 C6 3228 D6 3229 D6 3230 D6
3231 D6 3232 D4 3233 E4 3234 E5 3235 B3
4201 C2 4202 C2 5203 B9 5204 B11 5221 F9
5222 F11 6217 B12 6225 D4 7201 A6 7202-1 B10
7202-2 C10 7203 B14 7204 D10 7222-1 E10 7222-2 F10
7223-1 D5 7223-2 C6 7224-1 E6 7224-2 C7 F201 B1
F202 B1 F203 B1 F204 B1 F205 B1 F206 B1
F207 D1 F208 D1 F209 D1 F210 D1 F211 D1
F212 D1 F213 E1 F214 E1 F215 E1 F216 E1
F217 E1 F218 B6 F219 B12 F220 B14 F221 D14
F222 F12 F223 B1 F224 C1 F225 C1 F226 C1
F227 D6 F228 B1 F229 B12 F230 B15 F231 F12
I202 B6 I203 B9 I204 B10 I205 B11 I206 B14
I207 D11 I210 F9 I212 C5 I213 D5 I214 D4
I215 E5 I216 D5 I217 D6 I218 C6 I219 C6

**B Ø 1 B** DC / DC +3V3-STANDBY_+1V2-STANDBY

**B Ø 1 B**

DC / DC

DC / DC

+3V3-STANDBY
7201 LD3985M122
IN OUT INH BP COM
+1V2-STANDBY
B Ø 3 A
FROM PSU
1-1735446-2
+12VD
LAMP-ON-OUT
BACKLIGHT-OUT
BACKLIGHT-BOOST
POWER-OK
SCL-SET
SDA-SET
BACKLIGHT BOOST
+3V3-STANDBY
STANDBY
+12V
+AUDIO-POWER
GNDSND
7223-2 BC847BPN(COL)
7224-2 BC847BPN(COL)
3V3-ST
DETECT-12V
7223-1 BC847BPN(COL)
7224-1 BC847BPN(COL)
6225 PDZ8.2-B
+12V
5203 33R
7202-1 ST1S10PH
INH VIN SW SYNC GND VFB A P HS
7202-2 ST1S10PH
VIA
5204 10u
6217 SS36
+5V5-TUN
+5V
+3V3
PROT-DC
RES
7204 PDTC144EU
ENABLE-3V3
B Ø 1 A
5221 33R
7222-1 ST1S10PH
7222-2 ST1S10PH
5222 2u0
+1V2-PNX5100
SENSE+1V2-PNX5100
3223 470R 1%

MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

" X200 ~ X299 "

| | | | |
|---|---|---|---|
| CHN DC394240 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 3 2009-06-18, 2 2009-02-25 |
| -- -- -- 1, 2008-10-17 2, 2009-01-16 3 | | | |
| NAME Kailash | SUPERS. **** *** ***** | 25 | 10 130 - 02 A2 |
| SV CHECK | DATE 2008-10-17 | | |





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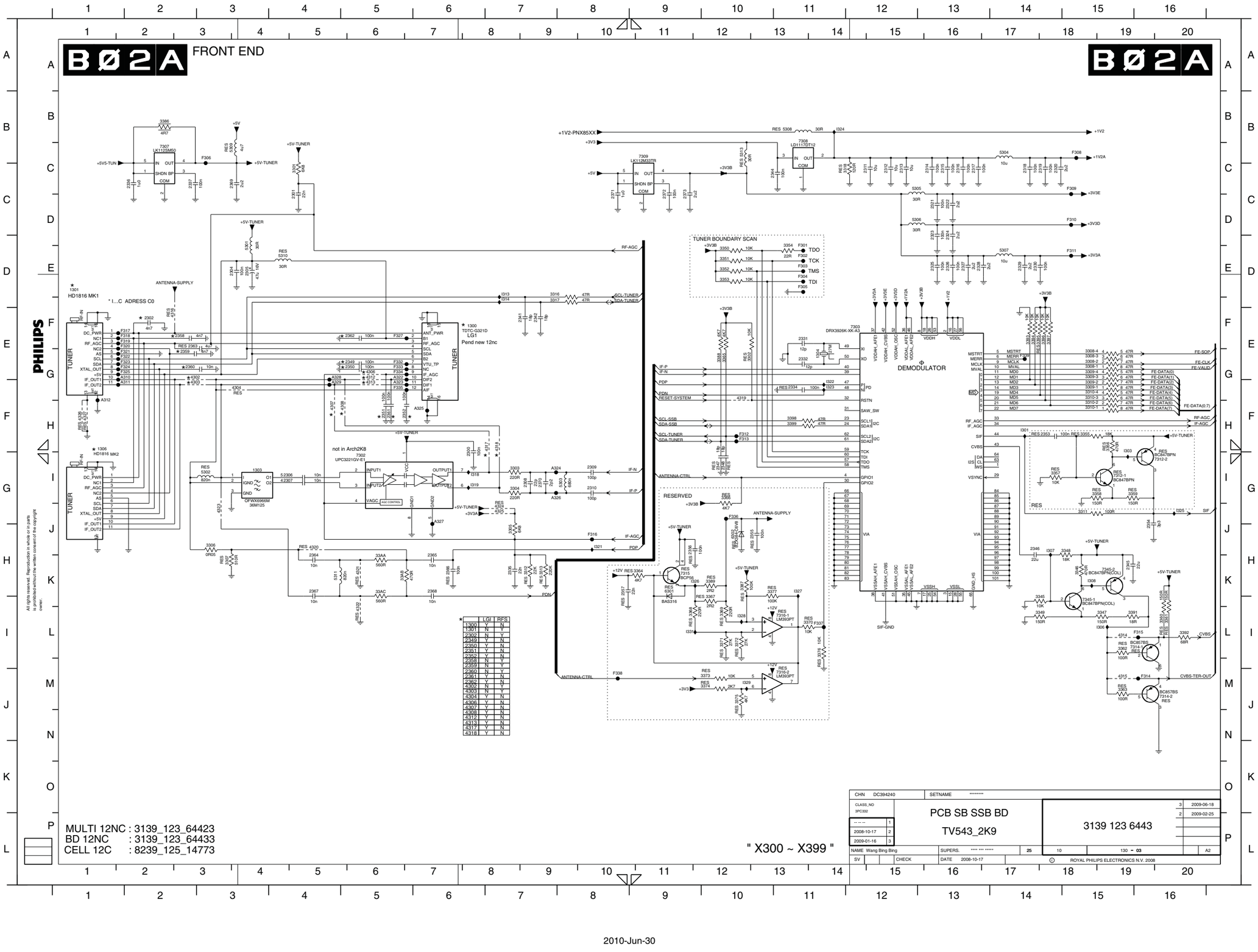
## SSB v3: Front End




| | LGI | RFS |
|---|---|---|
| 1300 | Y | N |
| 1301 | N | Y |
| 2302 | N | Y |
| 2349 | Y | N |
| 2350 | Y | N |
| 2351 | Y | N |
| 2352 | Y | N |
| 2358 | N | Y |
| 2359 | N | Y |
| 2360 | N | Y |
| 2361 | Y | N |
| 2362 | Y | N |
| 4302 | N | Y |
| 4303 | N | Y |
| 4304 | Y | N |
| 4306 | Y | N |
| 4307 | Y | N |
| 4308 | Y | N |
| 4312 | Y | N |
| 4313 | Y | N |
| 4317 | Y | N |
| 4318 | Y | N |





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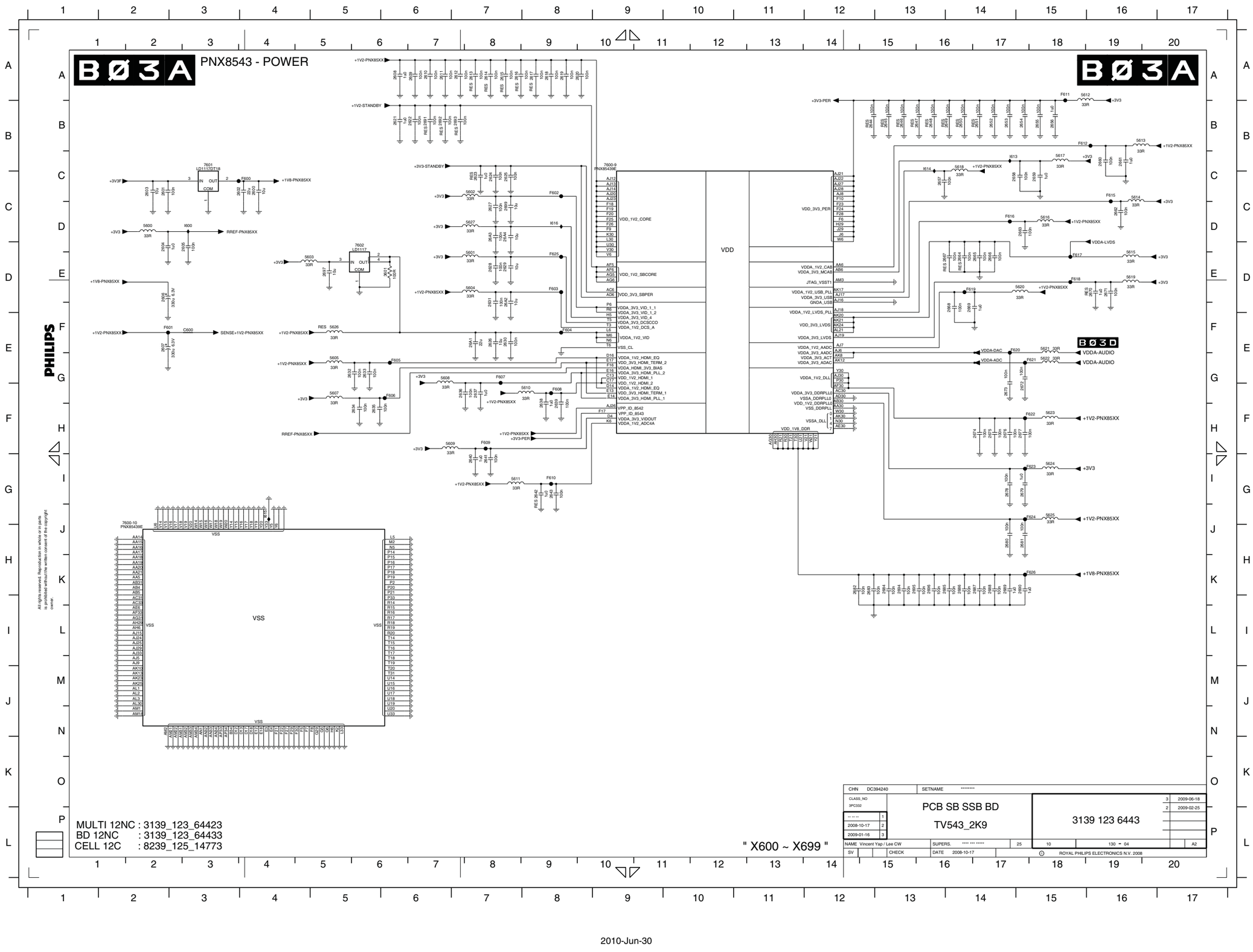
090911

## SSB v3: PNX8543 - Power






2600 C4 F609 F7
2601 C2 F610 G8
2602 C4 F611 A15
2603 C2 F612 B15
2604 D2 F615 C16
2605 D3 F616 C14
2606 D2 F617 D15
2607 E2 F618 D15
2608 A6 F619 D14
2609 A6 F620 E14
2610 A6 F621 E15
2611 A6 F622 F15
2612 A7 F623 G15
2613 A7 F624 G15
2614 A7 F625 D8
2615 A7 F626 H15
2616 A7 I600 C3
2617 A8 I613 B14
2618 A8 I614 B13
2619 A8 I615 G4
2620 A8 I616 C8
2621 B6
2622 B6
2623 C7
2624 C7
2625 C7
2626 E7
2627 C7
2628 D7
2629 D7
2630 E7
2631 D7
2632 E5
2633 E5
2634 F5
2635 F5
2636 F7
2637 F7
2638 F8
2639 F8
2640 G7
2641 G7
2642 G8
2643 G8
2644 B12
2645 B13
2646 B13
2647 B13
2648 B13
2649 B13
2650 B14
2651 B14
2652 B14
2653 B14
2654 B15
2655 B15
2656 B15
2657 C13
2658 C14
2659 C15
2660 B16
2661 B16
2662 C16
2663 C15
2664 D14
2665 D14
2666 D14
2667 D14
2668 D14
2669 D14
2670 D16
2671 D16
2672 F15
2673 F14
2674 F14
2675 F14
2676 F14
2677 F15
2678 G14
2679 G15
2680 H14
2681 H15
2682 H12
2683 H12
2684 H13
2685 H13
2686 H14
2687 H14
2688 H14
2689 H14
2690 H15
2691 B6
2692 B6
2693 B7
2694 H13
2695 H13
2696 H13
2697 D5
2699 C7
26A1 E7
26A2 D7
26A3 C7
26A4 C7
3601 D6
5600 C2
5601 D7
5602 C7
5603 D4
5604 D7
5605 E5
5607 F5
5608 E6
5609 F6
5610 F8
5611 G7
5612 A15
5613 B16
5614 C16
5615 D16
5616 C15
5617 B15
5618 B14
5619 D16
5620 D15
5621 E15
5622 E15
5623 F15
5624 G15
5625 G15
5626 E5
5627 C7
7600-10 G2
7600-9 B9
7601 B3
7602 D5
C600 E3
F600 C4
F601 E2
F602 C8
F603 D8
F604 E8
F605 E6
F606 F6
F607 E7
F608 F8

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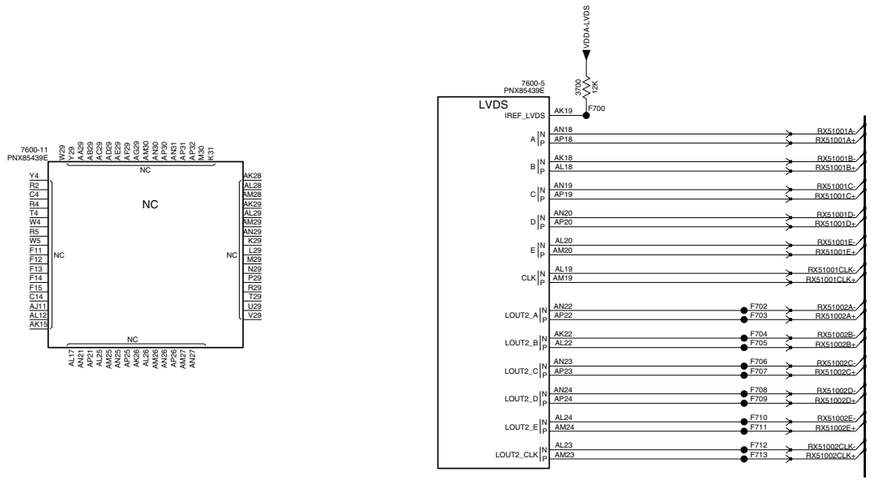
## SSB v3: PNX8543 - Video stream/LVDS out

B Ø 3 B

PNX8543 - VIDEO STREAMS / LVDS OUTPUT










3700 B6
3707-1 F6
3707-2 F6
3707-3 F6
3707-4 F6
3708-1 F6
3708-2 F6
3708-3 F6
3708-4 F6
3709-1 F8
3709-2 G8
3709-3 F6
3709-4 G6
3710 G7
3711 H1
3714 H2
4700 H6
4701 H2
4702 G4
7600-11 B2
7600-12 F5
7600-5 B5
F700 B6
F701 H2
F702 C7
F703 C7
F704 D7
F705 D7
F706 D7
F707 D7
F708 D7
F709 D7
F710 D7
F711 D7
F712 D7
F713 E7

MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

" X700 ~ X799 "

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | | PCB SB SSB BD | 3 2009-06-18 |
| -- -- -- | 1 | TV543_2K9 | 2 2009-02-25 |
| 2008-10-17 | 2 | 3139 123 6443 | |
| 2009-01-16 | 3 | | |
| NAME Vincent Yap / Lee CW | | SUPERS. **** *** ***** | 25 10 130 - 05 A2 |
| SV | | CHECK | DATE 2008-10-17 |





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## SSB v3: PNX8543 - Audio Amplifier

B Ø 3 C — PNX8543 - AUDIO AMPLIFIER

B Ø 1 B
+AUDIO-POWER
3818 4R7
2800 1u0
I818
BZX384-C6V8 6801
4801_RES
F812
AUDIO-VDD
2810-2 2K2
7801 BC807-25W
I819
3819-1 22K
3819-3 22K
I821
I822
7802 BC847BW
I823
3820 10K
3819-4 22K

RESERVED FOR ITV
AUDIO-VDD
RES 3808 10K
I810
RES 7808 BC847BW
I811
RES 3812 5K6
RES 3809 10K
I813
RES 7809 BC847BW
I812
RES 3813 5K6
RES 3814 470R
RES 3815 470R
BATHROOM SPEAKER
RES 1800
F800
RES 3821 100R
RES 3822 100R
F801
F802
502382-0370
1u0
EMC RES 2824
EMC RES 2825
ADAC(3)
ADAC(4)

ADAC(7)
I814
2826 220p
I833
7803-1 LM324
F809
AUDIO-CL-L
3816-2 10K
3816-1 10K
2823 33p
3831 1K0
ADAC(8)
I815
2827 220p
I835
7803-2 LM324
F803
AUDIO-CL-R
3816-3 10K
3816-4 10K
2808 33p
3832 1K0
ADAC(5)
I816
2611 3k3
2830 220p
I836
7803-3 LM324
F804
AUDIO-OUT-L
3817-1 10K
3817-2 10K
2809 33p
3840 1K0
ADAC(6)
I817
2612 3k3
2831 220p
I837
7803-4 LM324
F805
AUDIO-OUT-R
3817-3 10K
3817-4 10K
2810 33p
3834 1K0

3835-3 22K
2835 33p
3835-2 22K
2836 33p
+3V3
2834 1u0
7830 TPA6111A2DGN
AMPLIFIER
VDD
IN-
VO
SHUTDOWN
BYPASS
VIA
GND_GND_HS
ADAC(3) 2832 1u0
ADAC(4) 2833 1u0
AUDIO-RESET
I845
I846
3835-1 8 22K
3835-4 5 22K
3839 10K
2837 1u0
I847
I848
I849
I850
I851
HP_LOUT
HP_ROUT

B Ø 3 C

+AUDIO-POWER
3823 10K
3830-1 22K
AUDIO-RESET
F808
3830-4 22K
3841 0R
7807-1 BC847BPN(COL)
I839
3830-3 22K
2832 1N0
3830-2 22K
I840
7807-2 BC847BPN(COL)
F811
A-PLOP
A-STBY

MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

" X800 ~ X899 "

1800 G1 I850 H9
2800 B2 I851 H9
2806 A8
2808 C8
2809 E8
2810 F8
2811 D7
2812 E7
2822 C12
2823 B8
2824 G2
2825 G2
2826 A7
2827 B7
2830 D7
2831 E7
2832 H6
2833 H6
2834 G8
2835 G7
2836 G7
2837 H6
3810 F2
3811 F3
3812 F3
3813 F4
3814 G2
3815 G3
3816-1 B8
3816-2 B7
3816-3 C7
3816-4 C8
3817-1 D7
3817-2 D8
3817-3 F7
3817-4 F8
3818 B2
3819-1 B3
3819-2 B3
3819-3 C3
3819-4 C3
3820 C2
3821 G1
3822 G1
3830-1 B13
3830-2 C13
3830-3 C11
3830-4 C11
3831 A9
3832 C9
3833 B12
3834 E9
3835-1 H6
3835-2 G7
3835-3 F7
3835-4 H6
3839 H7
3840 D9
3841 C11
4801 A3
6801 B2
7801 B4
7802 C3
7803-1 A8
7803-2 B8
7803-3 D8
7803-4 E8
7807-1 C12
7807-2 C14
7808 F2
7809 F3
7830 G7
F800 G1
F801 G2
F802 G2
F803 B9
F804 D9
F805 E9
F808 C11
F809 A9
F811 C14
F812 B4
I810 F2
I811 F3
I812 F4
I813 F3
I814 A7
I815 B7
I816 D7
I817 E7
I818 B2
I819 B3
I821 C2
I822 C3
I823 C3
I833 A7
I835 B7
I836 D7
I837 E7
I839 C12
I840 C13
I845 H6
I846 H6
I847 H7
I848 H7
I849 H7

| | | | |
|---|---|---|---|
| CHN DC394240 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD | 3 | 2009-06-18 |
| -- -- -- 1 | TV543_2K9 | 2 | 2009-02-25 |
| 2008-10-17 2 | 3139 123 6443 | | |
| 2009-01-16 3 | | | |
| NAME Hor Siew Lee | SUPERS. **** *** ***** | 25 | 10 130 - 06 A2 |
| SV CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |



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## SSB v3: PNX8543 - Audio

B Ø 3 D

PNX8543 - AUDIO

B Ø 3 D

B Ø 3 A

B Ø 3 C

B Ø 4 C

| ★ | FLAVORS 22" | FLAVORS 32"/42" | PnS SS | OTHERS |
|---|---|---|---|---|
| 4901 & 4902 | YES | X | X | X |
| 4903 & 4904 | X | X | YES | X |
| 4905 & 4906 | YES | YES | X | X |
| 3904 | X | 33K | 33K | 33K |
| 3905 | X | 33K | 33K | 33K |
| 3903 | 15K | 22K | 33K | 33K |
| 3923 | 220K | 100K | 33K | 33K |
| 3924 | X | X | 22K | 33K |
| 3925 | X | X | 100K | 33K |
| 3926 | X | 33K | X | 33K |
| 3927 | X | 33K | X | 33K |

MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

" X900 ~ X999"

2900 B5
2901 B5
2902 B5
2903 C5
2904 C5
2905 D5
2906 D5
2907 E5
2908 E5
2909 E5
2910-1 B7
2910-2 B7
2910-3 C7
2910-4 C7
2912 C7
2915-1 C9
2915-2 C9
2915-3 C9
2915-4 C9
2919 C10
2920 C10
2921 C11
2922 E11
2923 E11
2924 G5
2925 G6
2926 A4
2927 B4
2928 B4
2929 C4
2930 C4
2931 C4
2932 D4
2933 D4
2934 E4
2935 E4
2936 E11
2937 E11
2938 E11
2939 E12
3900-1 B2
3900-2 B3
3900-3 A3
3900-4 A2
3903-2 C2
3903-4 C2
3904-3 C2
3904-4 B2
3905-3 C3
3905-4 B3
3906 G6
3907 G6
3908 G6
3909 C11
3910 C11
3911-1 F9
3911-2 F9
3911-3 D9
3911-4 D9
3912-1 E9
3912-2 E9
3912-3 E9
3912-4 D9
3913 F9
3914 F9
3915 F9
3923-1 D3
3923-4 C3
3924-1 D2
3924-2 D2
3925-1 D3
3925-2 E3
3926-1 E2
3926-2 E2
3927-1 E3
3927-2 E3
3932 F6
3933 F6
4901 B4
4902 C4
4903 D3
4904 E4
4905 C4
4906 D4
5900 B7
5901 C10
5902 B7
6900 E2
6901 D2
7600-7 C7
7900 B11
F901 C10
F902 F10
I901 A4
I902 B4
I903 B4
I904 C4
I905 C4
I906 C4
I907 D4
I908 D4
I909 E4
I910 E4
I911 C9
I913 C11
I914 C7
I916 B7
I917 F7
I918 F7
I919 G7
I920 F9
I921 B7
I922 C10

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | | PCB SB SSB BD TV543_2K9 | 3139 123 6443 |
| -- -- -- | 1 | | 3 2009-06-18 |
| 2008-10-17 | 2 | | 2 2009-02-25 |
| 2009-01-16 | 3 | | |
| NAME Hor Siew Lee | | SUPERS. **** *** ***** | 25 10 130 - 07 A2 |
| SV CHECK | | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 |



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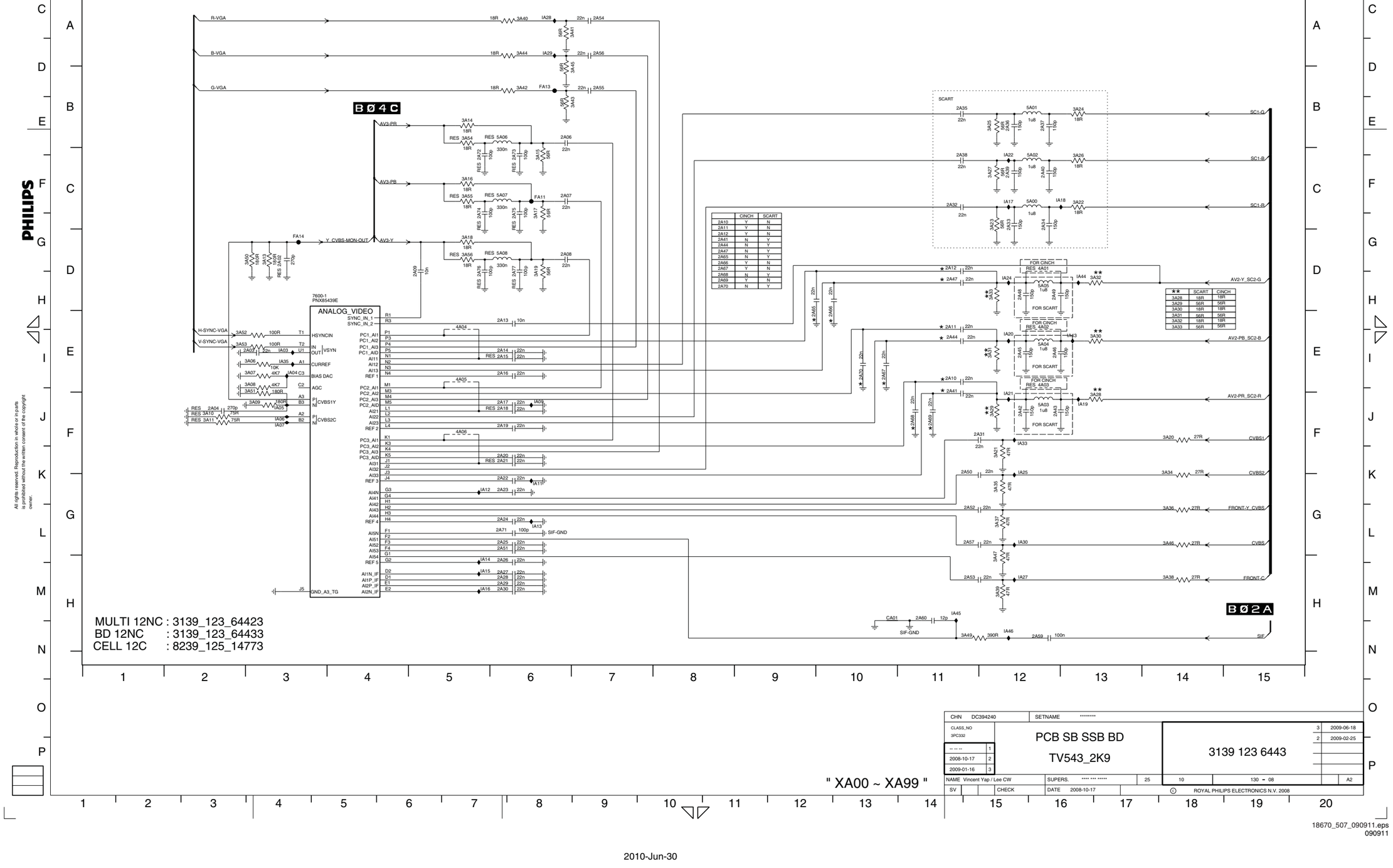
## SSB v3: PNX8543 - Analogue AV

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2A02 D3 | 2A10 E11 | 2A17 F6 | 2A24 G6 | 2A31 F12 | 2A38 C11 | 2A45 E12 | 2A52 G11 | 2A60 H11 | 2A71 G6 | 3A06 E3 | 3A14 B5 | 3A21 F12 | 3A28 F13 | 3A35 G12 | 3A42 B6 | 3A50 D3 | 4A01 D12 | 5A01 B12 | 5A08 D6 | IA04 E3 | IA13 G6 | IA20 E12 | IA29 A6 | IA46 H12 |
| 2A03 E3 | 2A11 E11 | 2A18 F6 | 2A25 G6 | 2A32 C11 | 2A39 C12 | 2A46 E12 | 2A53 H11 | 2A65 E9 | 2A72 C5 | 3A07 E3 | 3A15 C6 | 3A22 C13 | 3A29 F12 | 3A36 G14 | 3A43 B7 | 3A51 F3 | 4A02 E12 | 5A02 C12 | 7600-1 D3 | IA05 F3 | IA14 H5 | IA21 F12 | IA30 G12 | |
| 2A04 F2 | 2A12 D11 | 2A19 F6 | 2A26 H6 | 2A33 C12 | 2A40 C12 | 2A47 D11 | 2A54 A7 | 2A66 E10 | 2A73 C6 | 3A08 E3 | 3A16 C5 | 3A23 C12 | 3A30 E13 | 3A37 G12 | 3A44 A6 | 3A52 E2 | 4A03 E12 | 5A03 F12 | CA01 H10 | IA06 F3 | IA15 H5 | IA22 C12 | IA33 F12 | |
| 2A06 B6 | 2A13 E6 | 2A20 F6 | 2A27 H6 | 2A34 C12 | 2A41 F11 | 2A48 D12 | 2A55 B7 | 2A67 E10 | 2A74 C5 | 3A09 F3 | 3A17 C6 | 3A24 B13 | 3A31 E12 | 3A38 H14 | 3A45 B7 | 3A53 E2 | 4A04 E5 | 5A04 E12 | FA11 C6 | IA07 F3 | IA16 H5 | IA24 D12 | IA35 E3 | |
| 2A07 C6 | 2A14 E6 | 2A21 F6 | 2A28 H6 | 2A35 B11 | 2A42 F12 | 2A49 D12 | 2A56 A7 | 2A68 F11 | 2A75 C6 | 3A10 F2 | 3A18 D5 | 3A25 B12 | 3A32 D13 | 3A39 H12 | 3A46 G14 | 3A54 B5 | 4A05 E5 | 5A05 D12 | FA13 B6 | IA09 F6 | IA17 C12 | IA25 F12 | IA43 E13 | |
| 2A08 D6 | 2A15 E6 | 2A22 G6 | 2A29 H6 | 2A36 B12 | 2A43 F12 | 2A50 F11 | 2A57 G11 | 2A69 F11 | 2A76 D5 | 3A11 F2 | 3A19 D6 | 3A26 C13 | 3A33 D12 | 3A40 A6 | 3A47 H12 | 3A55 C5 | 4A06 F5 | 5A06 B6 | FA14 D3 | IA11 G6 | IA18 C13 | IA27 H12 | IA44 D13 | |
| 2A09 D5 | 2A16 E6 | 2A23 G6 | 2A30 H6 | 2A37 B12 | 2A44 E11 | 2A51 G6 | 2A59 H12 | 2A70 E10 | 2A77 D6 | 3A13 D3 | 3A20 F14 | 3A27 C12 | 3A34 G14 | 3A41 A6 | 3A49 H11 | 3A56 D5 | 5A00 C12 | 5A07 C6 | IA03 E3 | IA12 G5 | IA19 F13 | IA28 A6 | IA45 H11 | |



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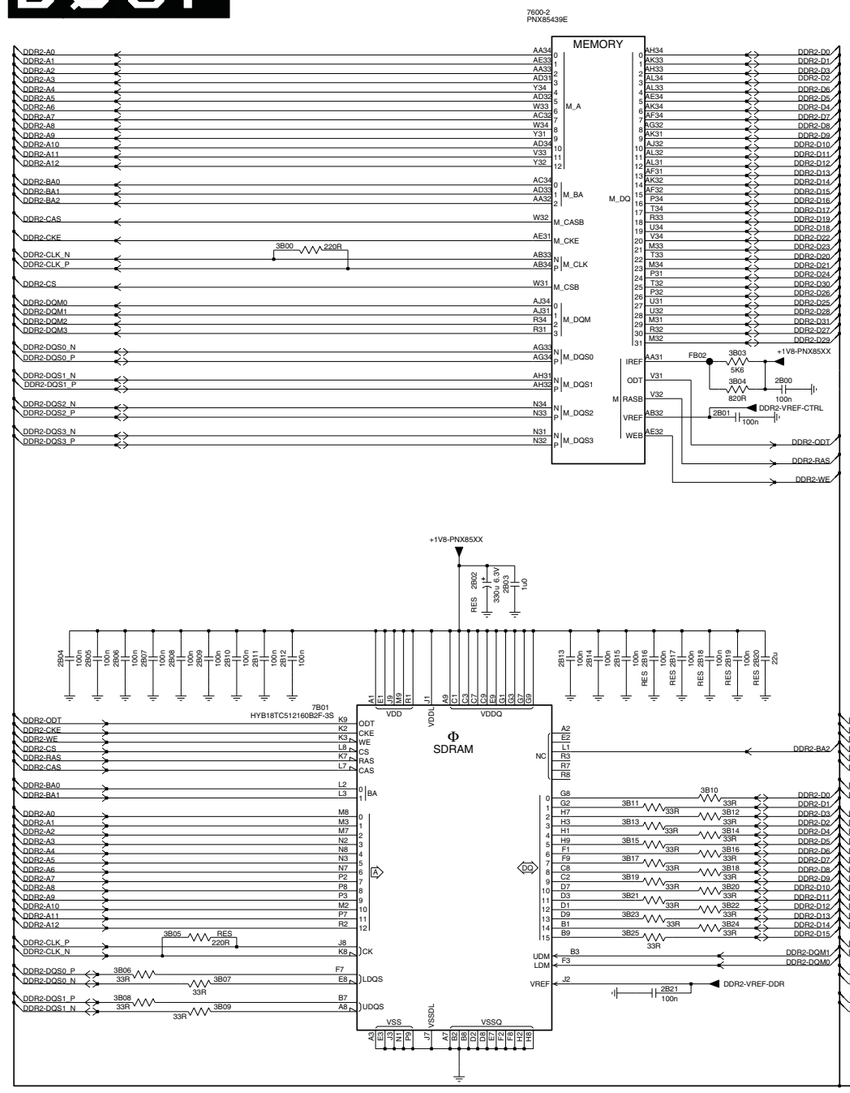
## SSB v3: PNX8543 - SDRAM

B Ø 3 F

PNX8543 - SDRAM




MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

" XB00 ~ XB99 "

2B00 D7
2B01 D6
2B02 E5
2B03 E5
2B04 F1
2B05 F2
2B06 F2
2B07 F2
2B08 F2
2B09 F2
2B10 F3
2B11 F3
2B12 F3
2B13 F5
2B14 F5
2B15 F6
2B16 F6
2B17 F6
2B18 F6
2B19 F6
2B20 F7
2B21 H6
2B22 B10
2B23 E10
2B24 E10
2B25 F8
2B26 F8
2B27 F8
2B28 F8
2B29 F8
2B30 F9
2B31 F9
2B32 F9
2B33 F9
2B34 F11
2B35 F11
2B36 F12
2B37 F12
2B38 F12
2B39 F12
2B40 F12
2B41 F13
2B42 H12
3B00 C3
3B03 C7
3B04 D7
3B05 H2
3B06 H2
3B07 H3
3B08 H2
3B09 H3
3B10 G6
3B11 G6
3B12 G6
3B13 G6
3B14 G6
3B15 G6
3B16 G6
3B17 G6
3B18 G6
3B19 G6
3B20 H6
3B21 H6
3B22 H6
3B23 H6
3B24 H6
3B25 H6
3B26 H8
3B27 H8
3B28 H9
3B29 H8
3B30 H9
3B31 G12
3B32 G12
3B33 G12
3B34 G12
3B35 G12
3B36 G12
3B37 G12
3B38 G12
3B39 G12
3B40 G12
3B41 H12
3B42 H12
3B43 H12
3B44 H12
3B45 H12
3B46 H12
3B47 B10
3B48 B12
3B49 B10
3B50 B12
7600-2 A5
7B00 F10
7B01 F3
FB00 B11
FB01 B10
FB02 C6

| | | | |
|---|---|---|---|
| CHN DC394240 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 3 2009-06-18 |
| -- -- -- 1 | | | 2 2009-02-25 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 10 130 - 09 | A2 |
| SV | CHECK | DATE 2008-10-17 | |



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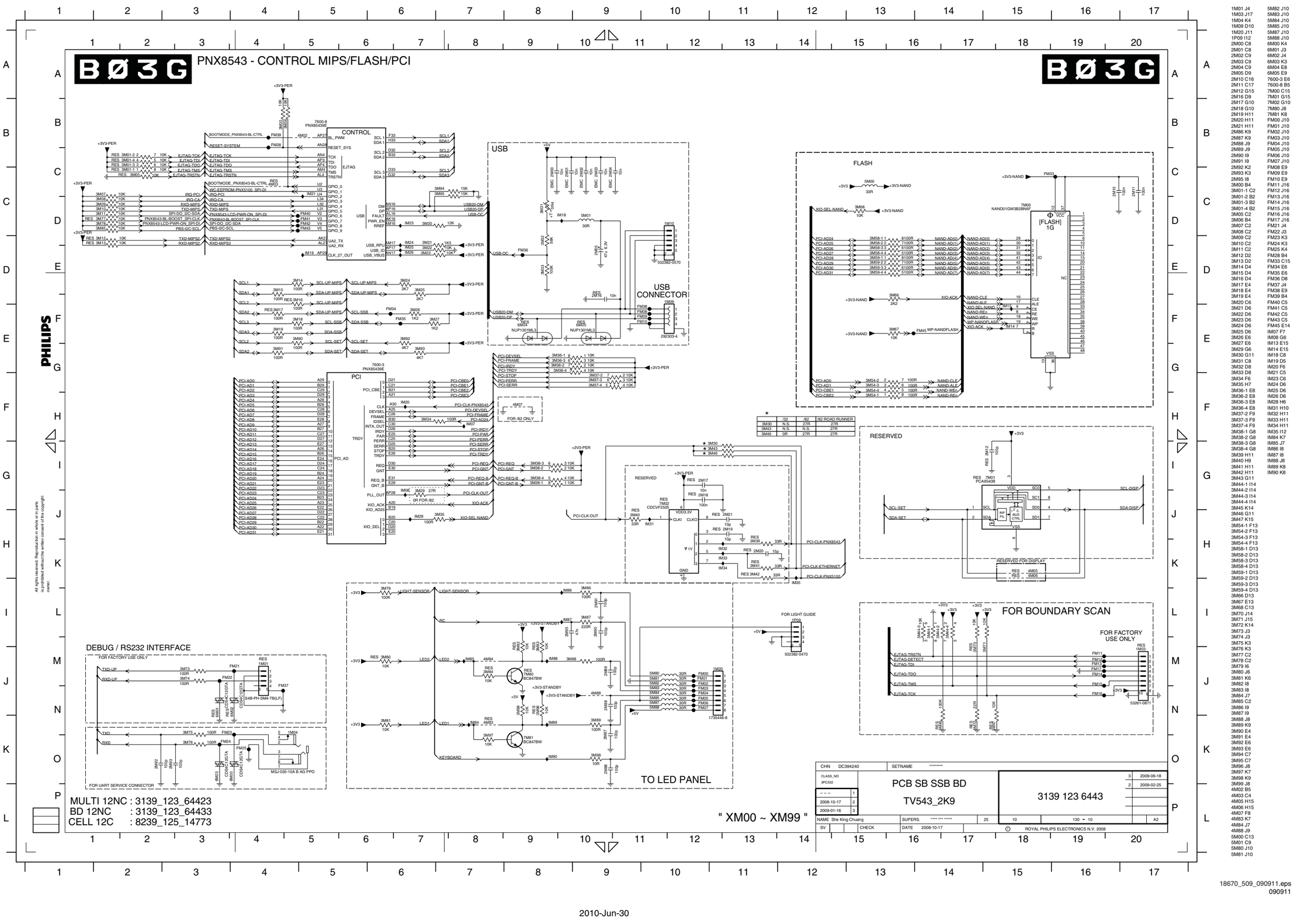
090911

## SSB v3: PNX8543 - Cntrl MIPS/Flash/PCI




| | | | |
|---|---|---|---|
| 1M01 J4 | 5M82 J10 | 3M36-1 E8 | IM25 D6 |
| 1M03 J17 | 5M83 J10 | 3M36-2 E8 | IM26 D6 |
| 1M04 K4 | 5M84 J10 | 3M36-3 E8 | IM28 H6 |
| 1M09 D10 | 5M85 J10 | 3M36-4 E8 | IM31 H10 |
| 1M20 J11 | 5M87 J10 | 3M37-2 F9 | IM32 H11 |
| 1P09 I12 | 5M88 J10 | 3M37-3 F9 | IM33 H11 |
| 2M00 C8 | 6M00 K4 | 3M37-4 F9 | IM34 H11 |
| 2M01 C8 | 6M01 J3 | 3M38-1 G8 | IM35 I12 |
| 2M02 C9 | 6M02 J4 | 3M38-2 G8 | IM84 K7 |
| 2M03 C9 | 6M03 K3 | 3M38-3 G8 | IM85 J7 |
| 2M04 C9 | 6M04 E8 | 3M38-4 G8 | IM86 I8 |
| 2M05 D9 | 6M05 E9 | 3M39 H11 | IM87 I8 |
| 2M10 C16 | 7600-3 E6 | 3M40 H9 | IM88 J8 |
| 2M11 C17 | 7600-8 B5 | 3M41 H11 | IM89 K8 |
| 2M12 G15 | 7M00 C15 | 3M42 H11 | IM90 K8 |
| 2M16 D9 | 7M01 G15 | 3M43 G11 | |
| 2M17 G10 | 7M02 G10 | 3M44-1 I14 | |
| 2M18 G10 | 7M80 J8 | 3M44-2 I14 | |
| 2M19 H11 | 7M81 K8 | 3M44-3 I14 | |
| 2M20 H11 | FM00 J10 | 3M44-4 I14 | |
| 2M21 H11 | FM01 J10 | 3M45 K14 | |
| 2M86 K9 | FM02 J10 | 3M46 G11 | |
| 2M87 K9 | FM03 J10 | 3M47 K15 | |
| 2M88 J9 | FM04 J10 | 3M54-1 F13 | |
| 2M89 J9 | FM05 J10 | 3M54-2 F13 | |
| 2M90 I9 | FM06 J10 | 3M54-3 F13 | |
| 2M91 I9 | FM07 J10 | 3M54-4 F13 | |
| 2M92 K2 | FM08 E9 | 3M58-1 D13 | |
| 2M93 K3 | FM09 E9 | 3M58-2 D13 | |
| 2M95 I8 | FM10 E9 | 3M58-3 D13 | |
| 3M00 B4 | FM11 J16 | 3M58-4 D13 | |
| 3M01-1 C2 | FM12 J16 | 3M59-1 D13 | |
| 3M01-2 B2 | FM13 J16 | 3M59-2 D13 | |
| 3M01-3 B2 | FM14 J16 | 3M59-3 D13 | |
| 3M01-4 B2 | FM15 J16 | 3M59-4 D13 | |
| 3M05 C2 | FM16 J16 | 3M66 D13 | |
| 3M06 B4 | FM17 J16 | 3M67 E13 | |
| 3M07 C2 | FM21 J4 | 3M68 C13 | |
| 3M08 C2 | FM22 J3 | 3M70 J14 | |
| 3M09 C2 | FM23 K3 | 3M71 J15 | |
| 3M10 C2 | FM24 K3 | 3M72 K14 | |
| 3M11 C2 | FM25 K4 | 3M73 J3 | |
| 3M12 D2 | FM28 B4 | 3M74 J3 | |
| 3M13 D2 | FM33 C15 | 3M75 K3 | |
| 3M14 D4 | FM34 E6 | 3M76 K3 | |
| 3M15 D4 | FM35 E6 | 3M77 C2 | |
| 3M16 D4 | FM36 D8 | 3M78 C2 | |
| 3M17 E4 | FM37 J4 | 3M79 I6 | |
| 3M18 E4 | FM38 E9 | 3M80 J6 | |
| 3M19 E4 | FM39 B4 | 3M81 K6 | |
| 3M20 C6 | FM40 C5 | 3M82 I8 | |
| 3M21 D6 | FM41 C5 | 3M83 I8 | |
| 3M22 D6 | FM42 C5 | 3M84 J7 | |
| 3M23 D6 | FM43 C5 | 3M85 C2 | |
| 3M24 D6 | FM45 E14 | 3M86 I9 | |
| 3M25 D6 | IM07 F7 | 3M87 I9 | |
| 3M26 E6 | IM08 G6 | 3M88 J8 | |
| 3M27 E6 | IM13 E15 | 3M89 K9 | |
| 3M29 G6 | IM14 E15 | 3M90 E4 | |
| 3M30 G11 | IM18 C8 | 3M91 E4 | |
| 3M31 C8 | IM19 D5 | 3M92 E6 | |
| 3M32 D8 | IM20 F6 | 3M93 E6 | |
| 3M33 D8 | IM21 C5 | 3M94 C7 | |
| 3M34 F6 | IM23 C6 | 3M95 C7 | |
| 3M35 H7 | IM24 D6 | 3M96 J8 | |
| 3M36-1 E8 | IM25 D6 | 3M97 K7 | |
| 3M36-2 E8 | IM26 D6 | 3M98 K9 | |
| 3M36-3 E8 | IM28 H6 | 3M99 J8 | |
| 3M36-4 E8 | IM31 H10 | 4M02 B5 | |
| 3M37-2 F9 | IM32 H11 | 4M03 C4 | |
| 3M37-3 F9 | IM33 H11 | 4M05 H15 | |
| 3M37-4 F9 | IM34 H11 | 4M06 H15 | |
| 3M38-1 G8 | IM35 I12 | 4M07 F8 | |
| 3M38-2 G8 | IM84 K7 | 4M83 K7 | |
| 3M38-3 G8 | IM85 J7 | 4M84 J7 | |
| 3M38-4 G8 | IM86 I8 | 4M88 J9 | |
| 3M39 H11 | IM87 I8 | 5M00 C13 | |
| 3M40 H9 | IM88 J8 | 5M01 C9 | |
| 3M41 H11 | IM89 K8 | 5M80 J10 | |
| 3M42 H11 | IM90 K8 | 5M81 J10 | |
| 3M43 G11 | | | |

| ★ | /32 | /82 | /82 ROAD RUNNER |
|---|---|---|---|
| 3M30 | N.S. | 27R | 27R |
| 3M43 | N.S. | 27R | 27R |
| 3M46 | 0R | 27R | 27R |



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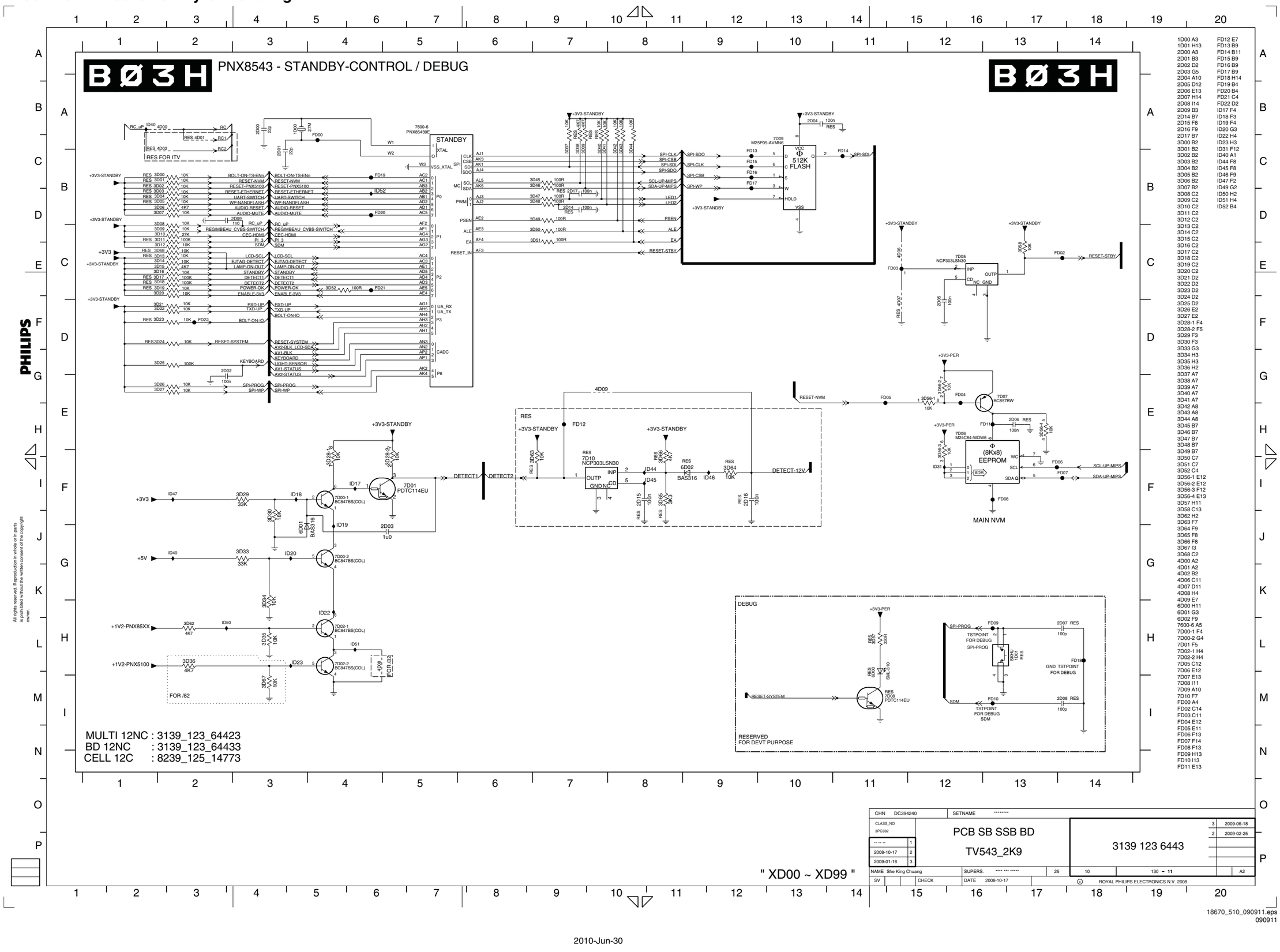
090911

## SSB v3: PNX8543 - Stdby-Cntrl/Debug



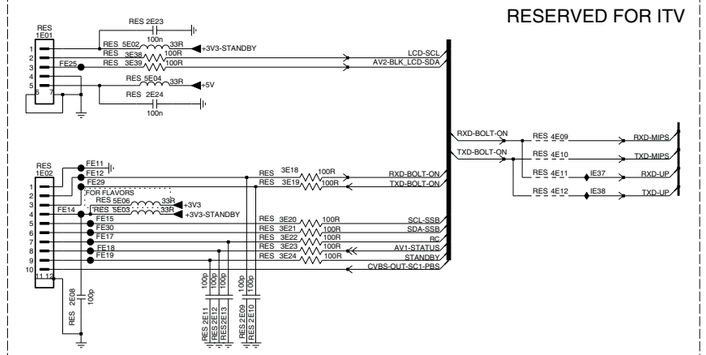

1D00 A3
1D01 H13
2D00 A3
2D01 B3
2D02 D2
2D03 G5
2D04 A10
2D05 D12
2D06 E13
2D07 H14
2D08 I14
2D09 B3
2D14 B7
2D15 F8
2D16 F9
2D17 B7
3D00 B2
3D01 B2
3D02 B2
3D03 B2
3D04 B2
3D05 B2
3D06 B2
3D07 B2
3D08 C2
3D09 C2
3D10 C2
3D11 C2
3D12 C2
3D13 C2
3D14 C2
3D15 C2
3D16 C2
3D17 C2
3D18 C2
3D19 C2
3D20 C2
3D21 D2
3D22 D2
3D23 D2
3D24 D2
3D25 D2
3D26 E2
3D27 E2
3D28-1 F4
3D28-2 F5
3D29 F3
3D30 F3
3D33 G3
3D34 H3
3D35 H3
3D36 H2
3D37 A7
3D38 A7
3D39 A7
3D40 A7
3D41 A7
3D42 A8
3D43 A8
3D44 A8
3D45 B7
3D46 B7
3D47 B7
3D48 B7
3D49 B7
3D50 C7
3D51 C7
3D52 C4
3D56-1 E12
3D56-2 E12
3D56-3 F12
3D56-4 E13
3D57 H11
3D58 C13
3D62 H2
3D63 F7
3D64 F9
3D65 F8
3D66 F8
3D67 I3
3D68 C2
4D00 A2
4D01 A2
4D02 B2
4D06 C11
4D07 D11
4D08 H4
4D09 E7
6D00 H11
6D01 G3
6D02 F9
7600-6 A5
7D00-1 F4
7D00-2 G4
7D01 F5
7D02-1 H4
7D02-2 H4
7D05 C12
7D06 E12
7D07 E13
7D08 I11
7D09 A10
7D10 F7
FD00 A4
FD02 C14
FD03 C11
FD04 E12
FD05 E11
FD06 F13
FD07 F14
FD08 F13
FD09 H13
FD10 I13
FD11 E13
FD12 E7
FD13 B9
FD14 B11
FD15 B9
FD16 B9
FD17 B9
FD18 H14
FD19 B4
FD20 B4
FD21 C4
FD22 D2
ID17 F4
ID18 F3
ID19 F4
ID20 G3
ID22 H4
ID23 H3
ID31 F12
ID40 A1
ID44 F8
ID45 F8
ID46 F9
ID47 F2
ID49 G2
ID50 H2
ID51 H4
ID52 B4

## SSB v3: Bolt-on

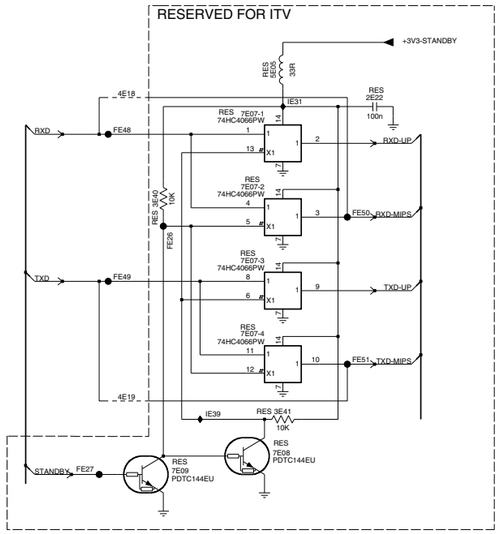
B Ø 4 A BOLT-ON

B Ø 4 A

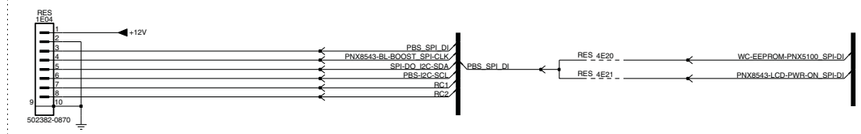
RESERVED FOR ITV




RESERVED FOR ITV




RESERVED FOR ITV




MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

1E01 A1
1E02 C1
1E04 G1
2E08 C1
2E09 D2
2E10 D3
2E11 D2
2E12 D2
2E13 D2
2E22 B9
2E23 A2
2E24 B2
3E18 C3
3E19 C3
3E20 C3
3E21 C3
3E22 C3
3E23 C3
3E24 C3
3E38 B2
3E39 B2
3E40 C8
3E41 D9
4E09 B5
4E10 B5
4E11 C5
4E12 C5
4E18 B7
4E19 D7
4E20 G5
4E21 G5
5E02 B2
5E03 C2
5E04 B2
5E05 B8
5E06 C2
7E07-1 B8
7E07-2 C8
7E07-3 C8
7E07-4 D8
7E08 E8
7E09 E8
FE11 B1
FE12 C1
FE14 C1
FE15 C1
FE17 C1
FE18 C1
FE19 C1
FE25 B1
FE26 C8
FE27 E7
FE29 C1
FE30 C1
FE48 B7
FE49 C7
FE50 C9
FE51 D9
IE31 B9
IE37 C5
IE38 C5
IE39 D8

" XE00 ~ XE99 "

| | | | |
|---|---|---|---|
| CHN DC394240 | SETNAME ******** | | |
| CLASS_NO 3PC332 | PCB SB SSB BD | 3 2009-06-18 | |
| -- -- -- 1 | TV543_2K9 | 2 2009-02-25 | |
| 2008-10-17 2 | | 3139 123 6443 | |
| 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 | 10 130 - 12 A2 |
| SV CHECK ******** | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |



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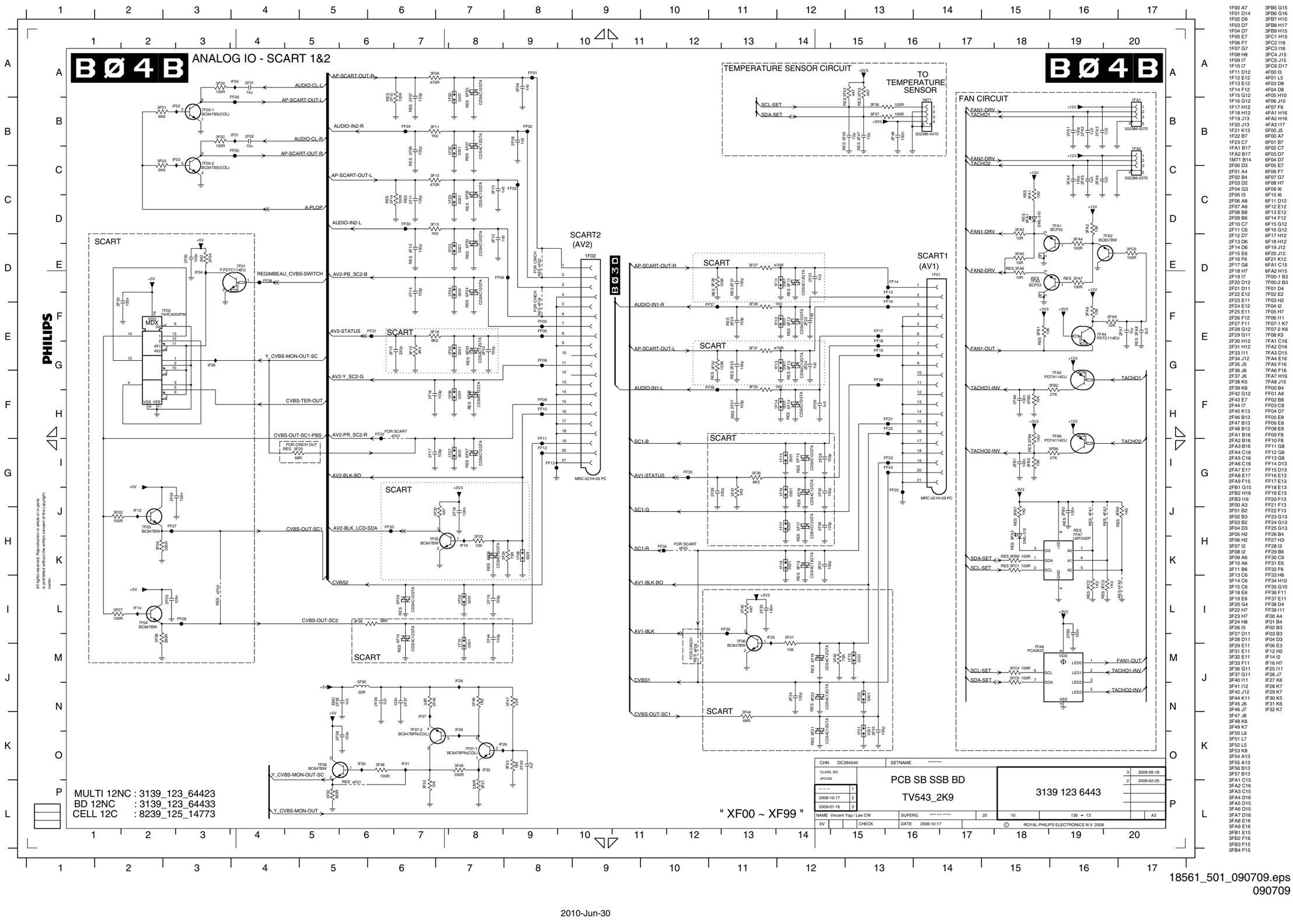
090708

## SSB v3: Analog IO - Scart 1 & 2



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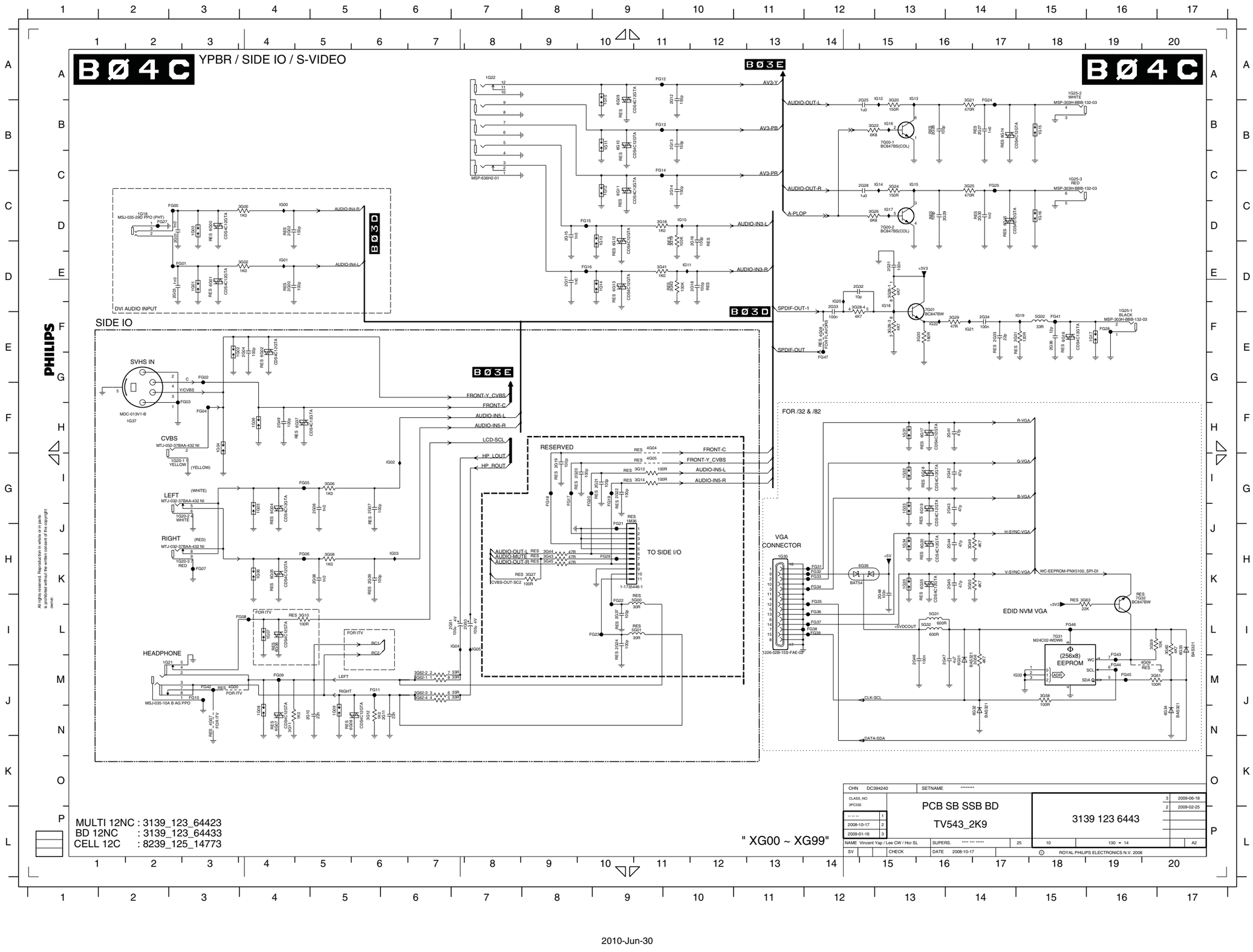
090709

## SSB v3: YPbPr / Side I/O / S-video




1G00 C3 6G12 C9
1G01 D3 6G13 D9
1G02 E3 6G14 B14
1G04 F3 6G15 C14
1G05 G4 6G16 E15
1G06 H4 6G17 F13
1G07 I4 6G18 G13
1G08 J4 6G19 G13
1G09 J5 6G20 H13
1G10 A9 6G31 I14
1G11 B9 6G32 J14
1G12 C9 6G33 I17
1G13 C9 6G34 J17
1G14 D9 6G35 H13
1G15 B15 6G36 H12
1G16 C15 6G37 F4
1G17 E16 7G00-1 B13
1G18 C2 7G00-2 C13
1G20-1 G3 7G01 D13
1G20-2 G3 7G31 I15
1G20-3 H3 7G32 I16
1G21 I2 FG00 C3
1G22 A7 FG01 D3
1G25-1 D16 FG02 E3
1G25-2 A15 FG03 F3
1G25-3 C15 FG04 F3
1G30 H11 FG05 G4
1G31 F13 FG06 H4
1G32 G13 FG07 H3
1G33 G13 FG08 I4
1G34 H13 FG09 J4
1G35 H13 FG10 J3
1G36 F4 FG11 J5
1G37 F2 FG12 A9
1M36 G9 FG13 B9
2G00 D4 FG14 C9
2G01 C3 FG15 C8
2G02 C4 FG16 D8
2G03 D3 FG17 G8
2G04 E4 FG18 G8
2G06 G5 FG19 G9
2G07 G5 FG20 G8
2G08 H5 FG21 H9
2G09 H5 FG22 I9
2G10 J4 FG23 I9
2G11 J6 FG24 B14
2G12 A10 FG25 C14
2G13 B10 FG27 C2
2G14 C10 FG28 E16
2G15 C8 FG29 H9
2G16 C10 FG31 H12
2G17 D8 FG32 H12
2G18 D10 FG33 H12
2G19 G8 FG34 H12
2G20 G8 FG35 I12
2G21 G9 FG36 I12
2G22 G9 FG37 I12
2G24 I9 FG38 I12
2G25 B12 FG39 I12
2G26 B13 FG41 E15
2G27 B14 FG42 J3
2G28 C12 FG43 I16
2G29 C13 FG44 J16
2G30 C14 FG45 J16
2G31 D13 FG46 I15
2G32 D12 FG47 E12
2G33 D12 IG00 C4
2G34 E14 IG01 D4
2G35 E14 IG02 G6
2G36 E15 IG03 H6
2G37 I9 IG04 I7
2G41 F14 IG05 I7
2G42 G14 IG10 C10
2G43 G14 IG11 D10
2G44 H14 IG12 A13
2G45 H14 IG13 A13
2G46 I13 IG14 C13
2G47 I14 IG15 C13
2G48 H13 IG16 B13
2G49 F4 IG17 C13
2G50 I7 IG18 D13
2G51 I7 IG19 E15
3G00 C4 IG20 D12
3G02 D4 IG21 E14
3G06 G5 IG22 E13
3G08 H5 IG32 J15
3G10 I4
3G11 J4
3G12 J5
3G13 G9
3G14 G9
3G18 C9
3G19 C10
3G20 B13
3G21 B14
3G22 B12
3G24 C13
3G25 C14
3G26 C12
3G27 H8
3G28-1 D13
3G28-3 E13
3G28-4 D12
3G29 E14
3G30 E13
3G31 E15
3G41 D9
3G42 D10
3G43 H8
3G44 H8
3G45 H8
3G49 H14
3G50 H14
3G56 I14
3G58 J15
3G59 I16
3G60 I17
3G61 J16
3G62-1 J6
3G62-2 J6
3G62-3 J6
3G62-4 J6
3G63 I15
4G00 J3
4G04 F9
4G05 G9
4G07 J3
4G08 E12
4G09 I16
5G00 I9
5G01 I9
5G02 E15
5G31 I13
5G32 I13
6G00 C3
6G01 D3
6G02 E4
6G04 G4
6G05 H4
6G06 I4
6G07 J4
6G08 J5
6G09 A9
6G10 B9
6G11 C9

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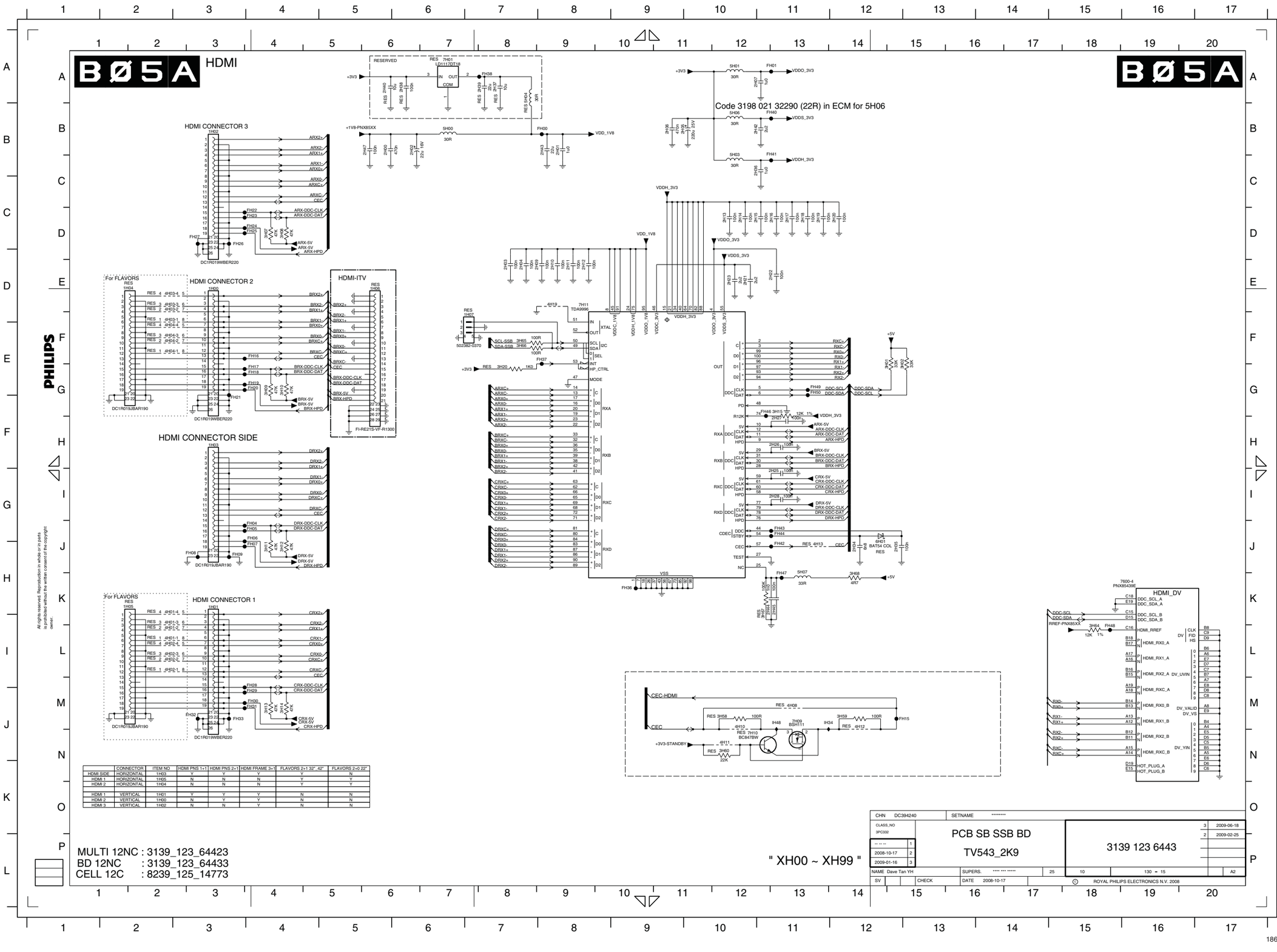
## SSB v3: HDMI




| | CONNECTOR | ITEM NO | HDMI PNS 1+1 | HDMI PNS 2+1 | HDMI FRAME 3+1 | FLAVORS 2+1 32" 42" | FLAVORS 2+0 22" |
|---|---|---|---|---|---|---|---|
| HDMI SIDE | HORIZONTAL | 1H03 | Y | Y | Y | Y | N |
| HDMI 1 | HORIZONTAL | 1H05 | N | N | N | Y | Y |
| HDMI 2 | HORIZONTAL | 1H04 | N | N | N | Y | Y |
| HDMI 1 | VERTICAL | 1H01 | Y | Y | Y | N | N |
| HDMI 2 | VERTICAL | 1H00 | N | Y | N | N | N |
| HDMI 3 | VERTICAL | 1H02 | N | N | Y | N | N |



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## SSB v3: Ethernet

B Ø 5 B

ETHERNET

B Ø 5 B

PHILIPS



MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

" XN00 ~ XNZZ "

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | | PCB SB SSB BD TV543_2K9 | 3139 123 6443 |
| -- -- -- | 1 | | 3 2009-06-18 |
| 2008-10-17 | 2 | | 2 2009-02-25 |
| 2009-01-16 | 3 | | |
| NAME Dave Tan YH | | SUPERS. **** *** ***** | 25 10 130 - 16 A2 |
| SV | | CHECK | DATE 2008-10-17 |



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090709

1N00 F13
1N02 D9
2N0A G6
2N0B G6
2N0C H4
2N0D H4
2N0E G9
2N0F G10
2N0G G11
2N0H G11
2N0K E9
2N0L E9
2N0M F12
2N0P G4
2N0Q G3
2N0V H3
2N0W H4
2N0Y G6
2N0Z G6
2N10 G5
2N11 G5
2N12 G5
2N13 G5
2N14 G5
2N15 G4
2N16 G4
2N17 G4
2N18 A7
2N1A D10
2N1B D10
2N1C D10
2N1D A6
2N1E A6
2N1F A6
2N1G A6
2N1H A7
2N1J F12
2N1K A7
2N1L F12
3N0A E9
3N0B E10
3N0C E11
3N0D E11
3N0E D8
3N0F E12
3N0G C8
3N0H D9
3N0J C10
3N0K D11
3N0L G9
3N0M G10
3N0N G11
3N0P G11
3N0V D9
3N0W E8
3N0Y E2
5N06 G3
5N07 G3
5N08 A6
5N10 F9
5N11 F10
5N12 F11
5N13 F11
6N00 D10
6N01 D10
6N02 E10
6N03 E10
6N04 E11
6N05 E11
7N04 B5
IN01 B4
IN02 C8
IN03 C8
IN04 C8
IN05 F13
IN06 F13
IN07 F13
IN08 F13
IN09 F13
IN0A D11
IN0B D11
IN0C H11
IN0K D8
IN0N H12
IN0P H12
IN0T H12
IN0V H12
IN0W C10
IN0Y D10
IN0Z D10
IN10 D11
IN11 D11
IN15 F13
IN17 G4
IN18 G4
IN19 E2
IN20 H9
IN21 H10
IN22 H11
IN23 H11

## SSB v3: PCMCIA

B05C

PCMCIA

POD : SUPPLY / CONTROL

(POD IS THE EQUIVALENT OF COMMON INTERFACE)

CABLE CARD INTERFACE

B05C

MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12C : 8239_125_14773

" XK00 ~ XK99 "

1K00-A B2
1K00-B D2
2K00 B1
2K01 E10
2K02 A10
2K03 E12
2K04 G12
2K05 C12
2K06 A13
2K07 A9
2K08 A7
2K09 B7
3K00 B1
3K01 C5
3K02 C5
3K03 C5
3K04 C5
3K05 C5
3K06 C5
3K07 C5
3K08 D5
3K09 D5
3K10-1 D5
3K10-2 D5
3K10-3 D5
3K11-1 E5
3K11-2 E5
3K11-3 E5
3K11-4 E5
3K12-1 D8
3K12-2 D8
3K12-3 E8
3K12-4 E8
3K13-1 D8
3K13-2 D8
3K13-3 D8
3K13-4 D8
3K14 E8
3K15 C11
3K16 D3
3K17 E8
3K18 H11
3K19 F4
3K20 E11
3K21 G11
3K22 C11
3K23-1 B9
3K23-2 B9
3K23-3 A9
3K23-4 A9
3K24-1 C9
3K24-2 C9
3K24-3 C9
3K24-4 C9
3K25-3 C9
3K25-4 C9
3K26 B9
3K27 D8
3K28 D5
3K29 A7
3K30 B7
5K00 A9
7K00 F12
7K01 H12
7K02 C12
7K03 A12
7K04 A8
7K05 C8
FK00 G3
FK02 D3
FK04 F4
IK00 C5
IK01 C5
IK02 C5
IK03 C5
IK04 C5
IK05 C5
IK06 C5
IK07 D5
IK08 D5
IK09 D5
IK10 D5
IK11 D5
IK12 D5
IK13 E5
IK14 E5
IK15 E5
IK16 E5
IK17 D3
IK18 A9
IK41 B11
IK45 B11
IK46 D11
IK47 H11

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | | PCB SB SSB BD TV543_2K9 | 3139 123 6443 |
| -- -- -- | 1 | | 3 2009-06-18 |
| 2008-10-17 | 2 | | 2 2009-02-25 |
| 2009-01-16 | 3 | | |
| NAME Li LingHuan | | SUPERS. **** *** ***** | 25 10 130 - 17 A2 |
| SV CHECK | | DATE 2008-10-17 | |





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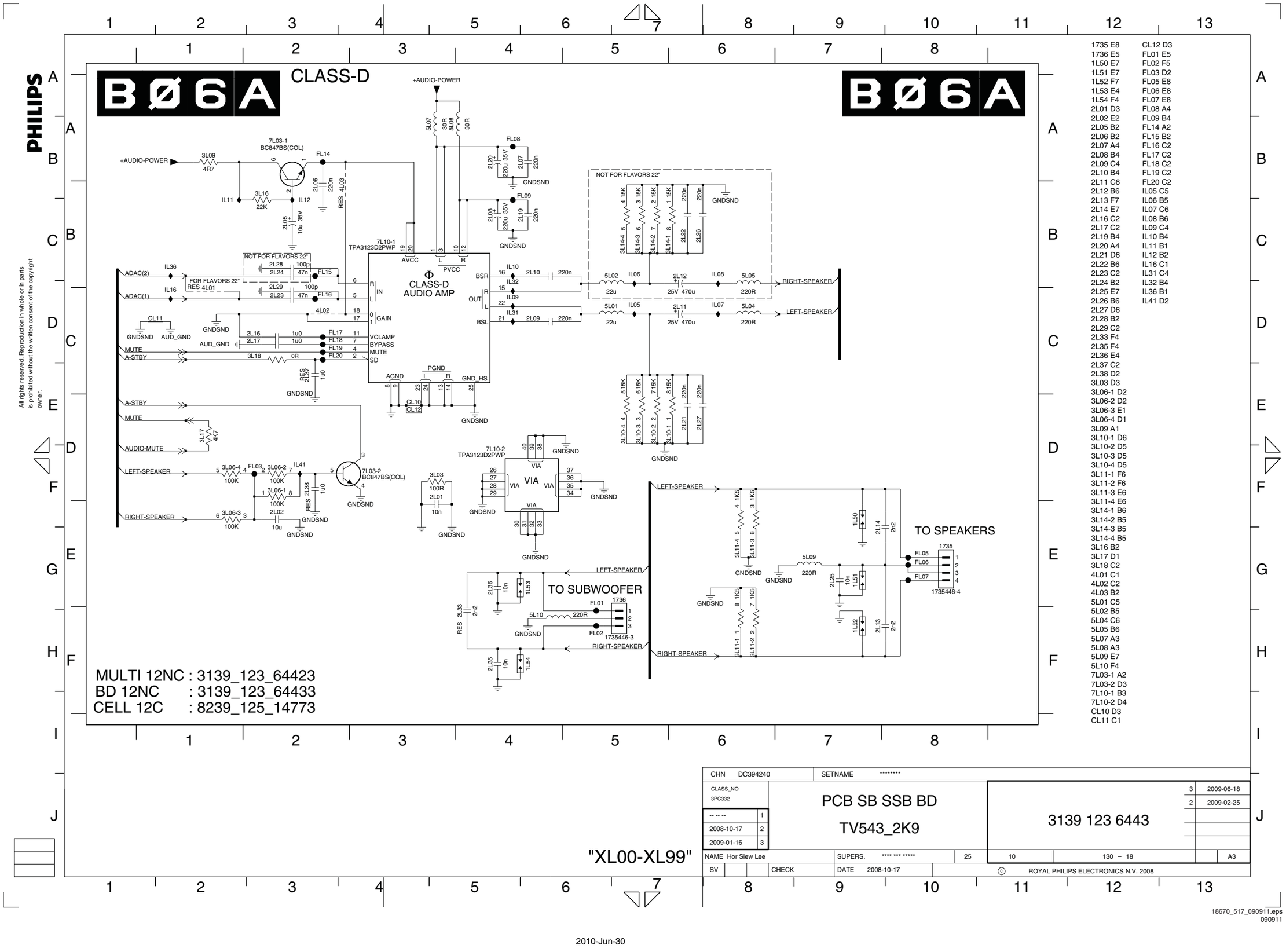
090911

## SSB v3: Class-D




1735 E8
1736 E5
1L50 E7
1L51 E7
1L52 F7
1L53 E4
1L54 F4
2L01 D3
2L02 E2
2L05 B2
2L06 B2
2L07 A4
2L08 B4
2L09 C4
2L10 B4
2L11 C6
2L12 B6
2L13 F7
2L14 E7
2L16 C2
2L17 C2
2L19 B4
2L20 A4
2L21 D6
2L22 B6
2L23 C2
2L24 B2
2L25 E7
2L26 B6
2L27 D6
2L28 B2
2L29 C2
2L33 F4
2L35 F4
2L36 E4
2L37 C2
2L38 D2
3L03 D3
3L06-1 D2
3L06-2 D2
3L06-3 E1
3L06-4 D1
3L09 A1
3L10-1 D6
3L10-2 D5
3L10-3 D5
3L10-4 D5
3L11-1 F6
3L11-2 F6
3L11-3 E6
3L11-4 E6
3L14-1 B6
3L14-2 B5
3L14-3 B5
3L14-4 B5
3L16 B2
3L17 D1
3L18 C2
4L01 C1
4L02 C2
4L03 B2
5L01 C5
5L02 B5
5L04 C6
5L05 B6
5L07 A3
5L08 A3
5L09 E7
5L10 F4
7L03-1 A2
7L03-2 D3
7L10-1 B3
7L10-2 D4
CL10 D3
CL11 C1
CL12 D3
FL01 E5
FL02 F5
FL03 D2
FL05 E8
FL06 E8
FL07 E8
FL08 A4
FL09 B4
FL14 A2
FL15 B2
FL16 C2
FL17 C2
FL18 C2
FL19 C2
FL20 C2
IL05 C5
IL06 B5
IL07 C6
IL08 B6
IL09 C4
IL10 B4
IL11 B1
IL12 B2
IL16 C1
IL31 C4
IL32 B4
IL36 B1
IL41 D2

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | | PCB SB SSB BD TV543_2K9 | 3139 123 6443 |
| -- -- -- | 1 | | 3 2009-06-18 |
| 2008-10-17 | 2 | | 2 2009-02-25 |
| 2009-01-16 | 3 | | |
| NAME Hor Siew Lee | | SUPERS. **** *** ***** | 25 10 130 – 18 A3 |
| SV CHECK | | DATE 2008-10-17 | |





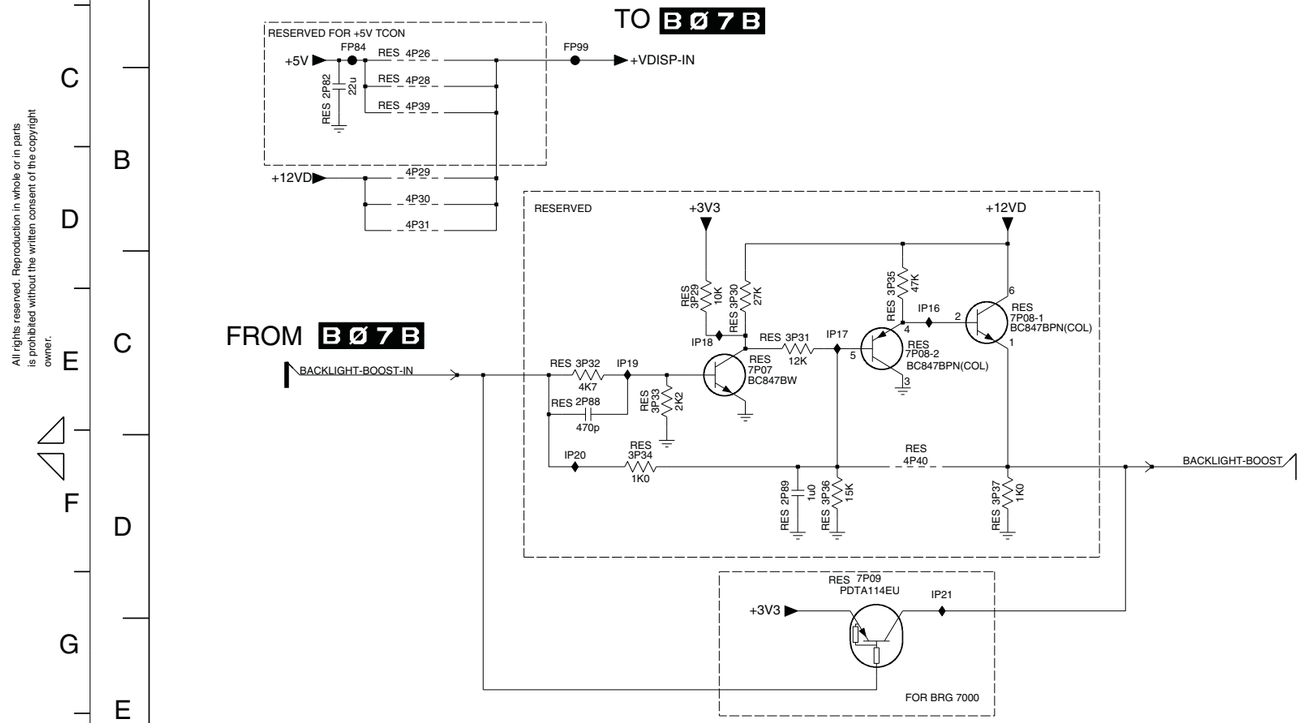
18670_517_090911.eps
090911

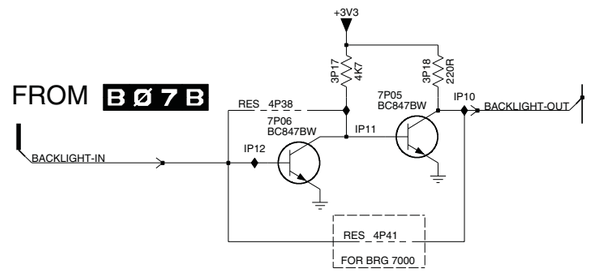
## SSB v3: Display Interface (Common)

PHILIPS

**B Ø 7 A** DISPLAY INTERFACE (COMMON)





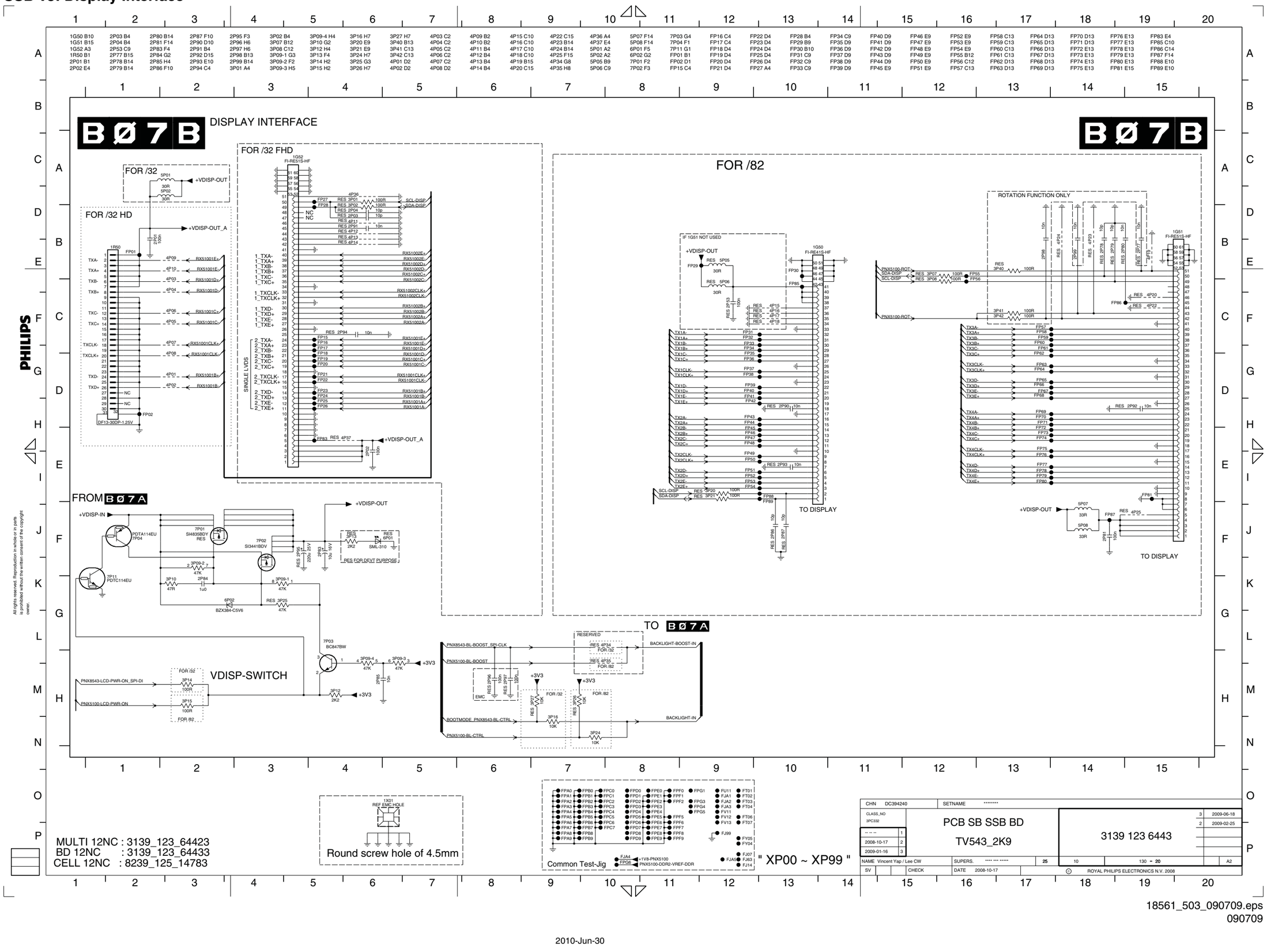




2P82 B1
2P88 C2
2P89 D3
3P17 C8
3P18 C9
3P29 C3
3P30 C3
3P31 C4
3P32 C2
3P33 C3
3P34 D3
3P35 C4
3P36 D4
3P37 D5
4P26 A1
4P28 B1
4P29 B1
4P30 B1
4P31 B1
4P38 D8
4P39 B1
4P40 D4
4P41 D9
7P05 C9
7P06 D8
7P07 C3
7P08-1 C5
7P08-2 C4
7P09 D4
FP84 A1
FP99 A2
IP10 C9
IP11 D9
IP12 D8
IP16 C4
IP17 C4
IP18 C3
IP19 C3
IP20 D2
IP21 D4

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 3 2009-06-18 |
| -- -- -- 1 | | | 2 2009-02-25 |
| 2008-10-17 2 | | | |
| 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 | 10 130 – 19 A2 |
| SV CHECK | DATE 2008-10-17 |  | |

18670_518_090911.eps
090911

## SSB v3: Display Interface



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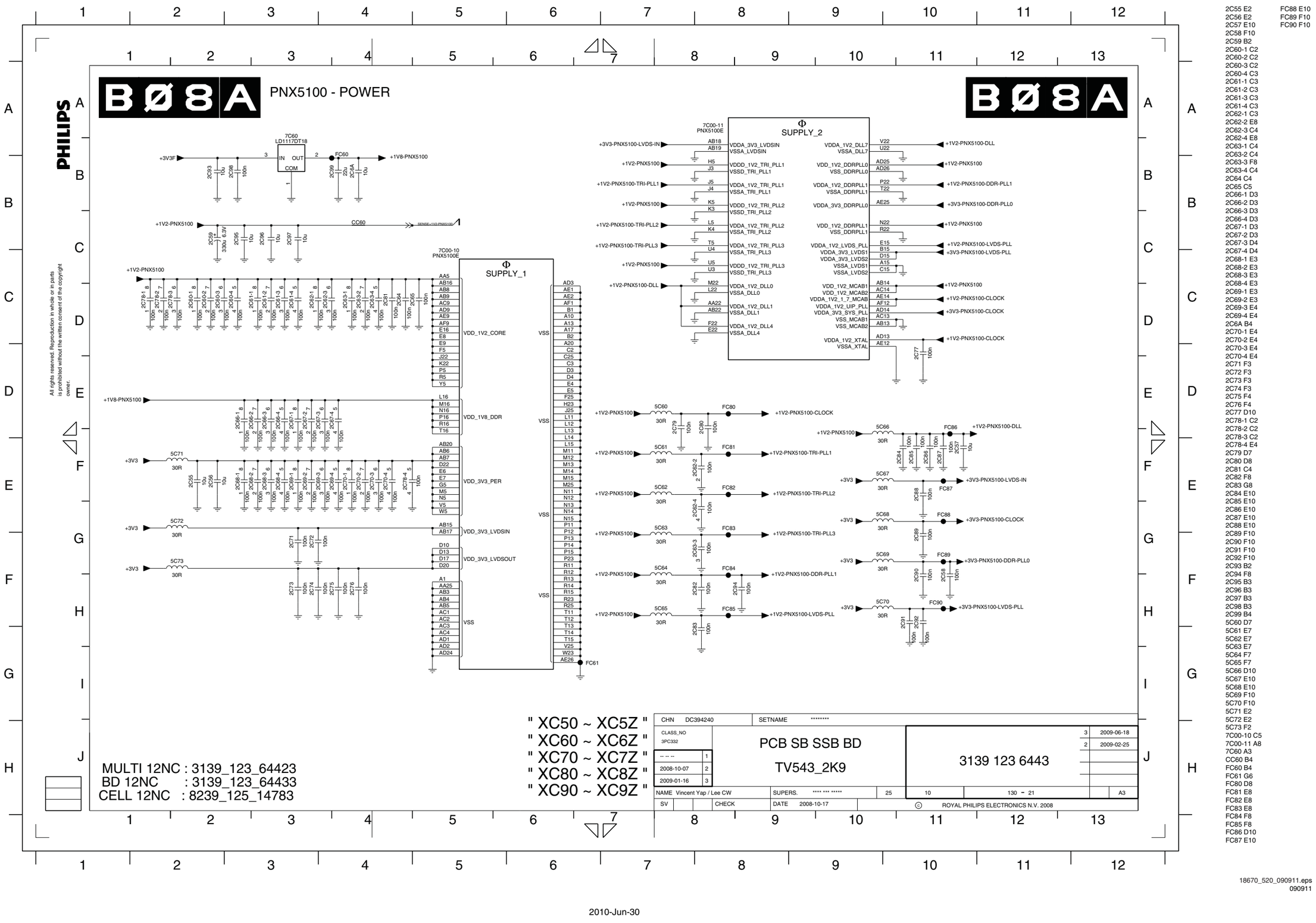
090709

## SSB v3: PNX5100 - Power



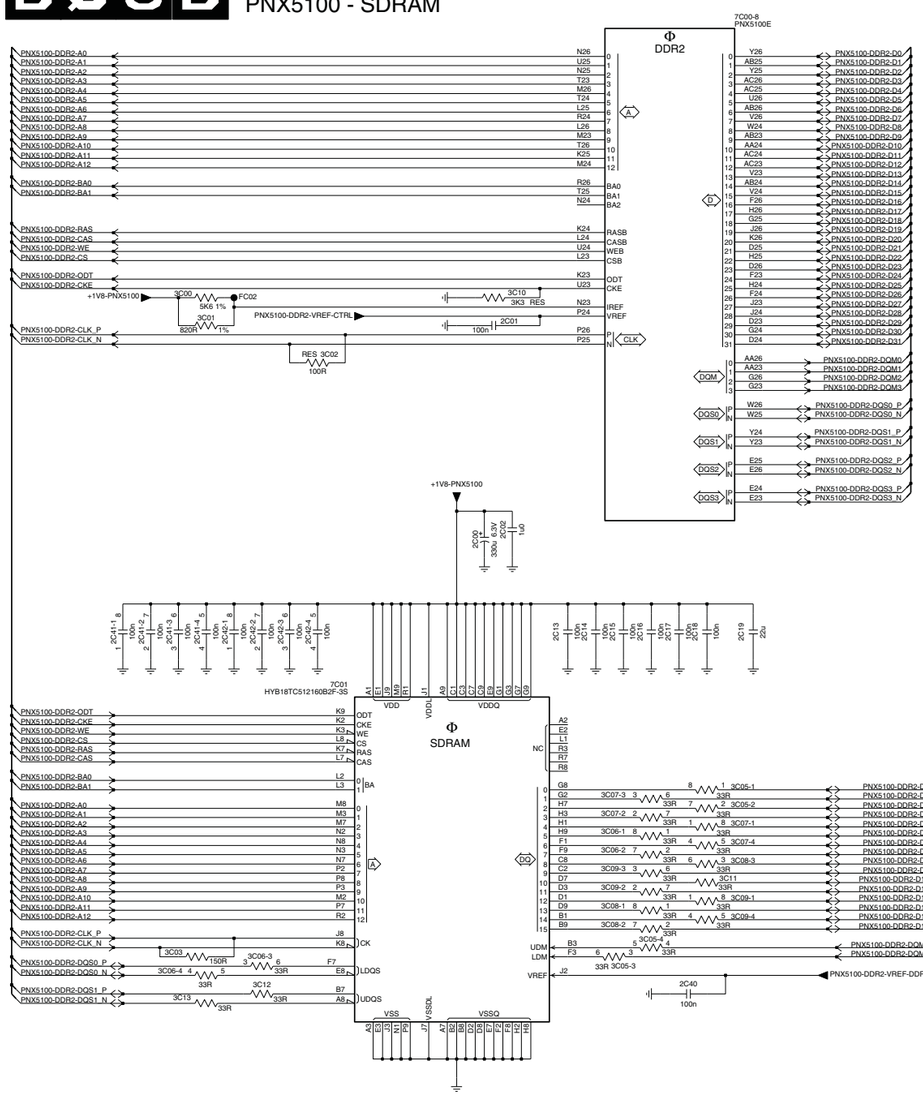

2C55 E2
2C56 E2
2C57 E10
2C58 F10
2C59 B2
2C60-1 C2
2C60-2 C2
2C60-3 C2
2C60-4 C3
2C61-1 C3
2C61-2 C3
2C61-3 C3
2C61-4 C3
2C62-1 C3
2C62-2 E8
2C62-3 C4
2C62-4 E8
2C63-1 C4
2C63-2 C4
2C63-3 F8
2C63-4 C4
2C64 C4
2C65 C5
2C66-1 D3
2C66-2 D3
2C66-3 D3
2C66-4 D3
2C67-1 D3
2C67-2 D3
2C67-3 D4
2C67-4 D4
2C68-1 E3
2C68-2 E3
2C68-3 E3
2C68-4 E3
2C69-1 E3
2C69-2 E3
2C69-3 E4
2C69-4 E4
2C6A B4
2C70-1 E4
2C70-2 E4
2C70-3 E4
2C70-4 E4
2C71 F3
2C72 F3
2C73 F3
2C74 F3
2C75 F4
2C76 F4
2C77 D10
2C78-1 C2
2C78-2 C2
2C78-3 C2
2C78-4 E4
2C79 D7
2C80 D8
2C81 C4
2C82 F8
2C83 G8
2C84 E10
2C85 E10
2C86 E10
2C87 E10
2C88 E10
2C89 F10
2C90 F10
2C91 F10
2C92 F10
2C93 B2
2C94 F8
2C95 B3
2C96 B3
2C97 B3
2C98 B3
2C99 B4
5C60 D7
5C61 E7
5C62 E7
5C63 E7
5C64 F7
5C65 F7
5C66 D10
5C67 E10
5C68 E10
5C69 F10
5C70 F10
5C71 E2
5C72 E2
5C73 F2
7C00-10 C5
7C00-11 A8
7C60 A3
CC60 B4
FC60 B4
FC61 G6
FC80 D8
FC81 E8
FC82 E8
FC83 E8
FC84 F8
FC85 F8
FC86 D10
FC87 E10
FC88 E10
FC89 F10
FC90 F10

18670_520_090911.eps
090911

## SSB v3: PNX5100 - SDRAM

B Ø 8 B

PNX5100 - SDRAM






MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12NC : 8239_125_14783

" XC00 ~ XC0Z "
" XC10 ~ XC1Z "
" XC20 ~ XC2Z "
" XC20 ~ XC2Z "
" XC30 ~ XC3Z "
" XC40 ~ XC4Z "

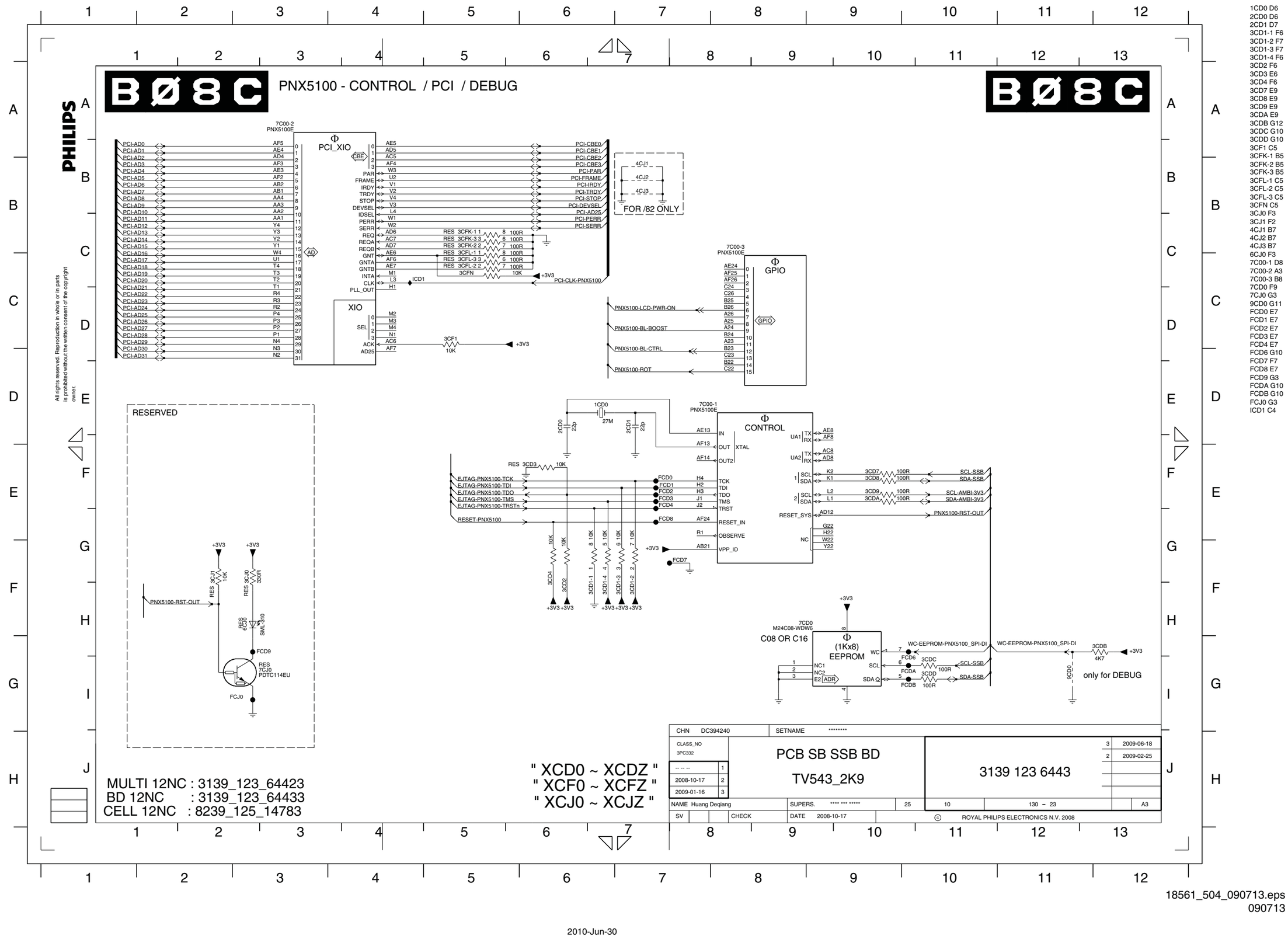
2C00 E4
2C01 C5
2C02 E5
2C13 F5
2C14 F5
2C15 F5
2C16 F6
2C17 F6
2C18 F6
2C19 F6
2C29 E11
2C30 E11
2C32 F12
2C33 F12
2C34 F12
2C35 F12
2C36 F12
2C38 F13
2C39 H13
2C40 H6
2C41-1 F2
2C41-2 F2
2C41-3 F2
2C41-4 F2
2C42-1 F3
2C42-2 F3
2C42-3 F3
2C42-4 F3
2C43-1 F8
2C43-2 F8
2C43-3 F9
2C43-4 F9
2C44-1 F9
2C44-2 F9
2C44-3 F10
2C44-4 F10
3C00 C2
3C01 C2
3C02 C3
3C03 H2
3C04 H9
3C05-1 G6
3C05-2 G6
3C05-3 H6
3C05-4 H6
3C06-1 G5
3C06-2 G5
3C06-3 H3
3C06-4 H2
3C07-1 G6
3C07-2 G5
3C07-3 G5
3C07-4 G6
3C08-1 H5
3C08-2 H5
3C08-3 G6
3C09-1 H6
3C09-2 H5
3C09-3 G5
3C09-4 H6
3C10 C5
3C11 H6
3C12 H3
3C13 H2
3C20 A10
3C21 B10
3C22 A12
3C23 B12
3C25-1 G13
3C25-2 G13
3C25-3 H12
3C25-4 H13
3C26-1 G13
3C26-2 G12
3C26-3 G12
3C26-4 G13
3C27-1 G12
3C27-2 G12
3C27-3 H9
3C27-4 H9
3C28-1 H13
3C28-2 G12
3C28-3 H12
3C28-4 H13
3C30-1 H12
3C30-2 H12
3C30-3 I9
3C30-4 H9
3C31 G13
3C32 H13
7C00-8 A6
7C01 F3
7C02 F10
FC02 C3
FC05 B12
FC06 B10

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | | PCB SB SSB BD | 3 2009-06-18 |
| -- -- -- | 1 | TV543_2K9 | 2 2009-02-25 |
| 2008-10-17 | 2 | | 3139 123 6443 |
| 2009-01-16 | 3 | | |
| NAME Vincent Yap / Lee CW | | SUPERS. **** *** ***** | 25 10 130 - 22 A2 |
| SV | | CHECK | DATE 2008-10-17 |



18670_521_090911.eps
090911

## SSB v3: PNX5100 - Ctrl/PCI/Debug






1CD0 D6
2CD0 D6
2CD1 D7
3CD1-1 F6
3CD1-2 F7
3CD1-3 F7
3CD1-4 F6
3CD2 F6
3CD3 E6
3CD4 F6
3CD7 E9
3CD8 E9
3CD9 E9
3CDA E9
3CDB G12
3CDC G10
3CDD G10
3CF1 C5
3CFK-1 B5
3CFK-2 B5
3CFK-3 B5
3CFL-1 C5
3CFL-2 C5
3CFL-3 C5
3CFN C5
3CJ0 F3
3CJ1 F2
4CJ1 B7
4CJ2 B7
4CJ3 B7
6CJ0 F3
7C00-1 D8
7C00-2 A3
7C00-3 B8
7CD0 F9
7CJ0 G3
9CD0 G11
FCD0 E7
FCD1 E7
FCD2 E7
FCD3 E7
FCD4 E7
FCD6 G10
FCD7 F7
FCD8 E7
FCD9 G3
FCDA G10
FCDB G10
FCJ0 G3
ICD1 C4

18561_504_090713.eps
090713

## SSB v3: PNX5100 - LVDS In/Out

PHILIPS



B Ø 8 D PNX5100 - LVDS IN / OUT

B Ø 8 D

3CGD B5
3CGE B6
3CGF C6
3CGG C6
7C00-4 C6
7C00-5 B3
7C00-9 A7

7C00-5 PNX5100E — LVDS_RX

RX51002A+ → AE17
RX51002A- → AF17
RX51002B+ → AC17
RX51002B- → AD17
RX51002CLK+ → AC16
RX51002CLK- → AD16
RX51002C+ → AE16
RX51002C- → AF16
RX51002D+ → AE15
RX51002D- → AF15
RX51002E+ → AC15
RX51002E- → AD15
RX51001A+ → AE20
RX51001A- → AF20
RX51001B+ → AC20
RX51001B- → AD20
RX51001CLK+ → AC19
RX51001CLK- → AD19
RX51001C+ → AE19
RX51001C- → AF19
RX51001D+ → AE18
RX51001D- → AF18
RX51001E+ → AC18
RX51001E- → AD18

AP AN BP BN CLKP CLKN CP CN DP DN EP EN — LIN1

AP AN BP BN CLKP CLKN CP CN DP DN EP EN — LIN2

7C00-9 PNX5100E — VDI

+3V3 — 3CGD 1K0 — 3CGE 1K0 — CLK

D6 A4 E2 G4 G3 G2 G1 F4 F3 F2 F1 E3 E1 D2 D1 C1 A2 A3 B3 B4

C4 A5 B5 C5 D5 A6 B6 C6 A7 B7 C7 D7 A8 B8 C8 D8

+3V3 +3V3 — 3CGF 12K — 3CGG 12K

7C00-4 PNX5100E — LVDS_TX

E17 LVDS1 E14 LVDS2 IREF — RGB_CLK A22

TX2E+ B21 TX2E- A21
TX2D+ D21 TX2D- C21
TX2CLK+ E21 TX2CLK- E20
TX2C+ C20 TX2C- B20
TX2B+ B19 TX2B- A19
TX2A+ D19 TX2A- C19
TX1E+ B18 TX1E- A18
TX1D+ D18 TX1D- C18
TX1CLK+ E19 TX1CLK- E18
TX1C+ C17 TX1C- B17
TX1B+ B16 TX1B- A16
TX1A+ D16 TX1A- C16

AP AN BP BN CLKP CLKN CP CN DP DN EP EN — LOUT1

AP AN BP BN CLKP CLKN CP CN DP DN EP EN — LOUT2

AP AN BP BN CLKP CLKN CP CN DP DN EP EN — LOUT3

B14 A14 D14 C14 E13 E12 C13 B13 B12 A12 D12 C12 — TX4E+ TX4E- TX4D+ TX4D- TX4CLK+ TX4CLK- TX4C+ TX4C- TX4B+ TX4B- TX4A+ TX4A-

AP AN BP BN CLKP CLKN CP CN DP DN EP EN — LOUT4

B11 A11 D11 C11 E11 E10 C10 B10 B9 A9 D9 C9 — TX3E+ TX3E- TX3D+ TX3D- TX3CLK+ TX3CLK- TX3C+ TX3C- TX3B+ TX3B- TX3A+ TX3A-

MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12NC : 8239_125_14783

" XCG0 ~ XCGZ "

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | PCB SB SSB BD TV543_2K9 | 3139 123 6443 | 3 2009-06-18 / 2 2009-02-25 |
| -- -- -- 1 / 2008-10-17 2 / 2009-01-16 3 | | | |
| NAME Vincent Yap / Lee CW | SUPERS. **** *** ***** | 25 | 10 / 130 - 24 / A3 |
| SV / CHECK | DATE 2008-10-17 | © ROYAL PHILIPS ELECTRONICS N.V. 2008 | |

18670_523_090911.eps
090911

## SSB v3: PNX5100 - AmbiLight

PHILIPS



B Ø 8 E

PNX5100 - AMBILIGHT

B Ø 8 E

7C00-7
PNX5100E
Φ
AMBI
AMBI 0 AF10
1 AE10
2 AD10
3 AC10
4 AB10
5 AF11
6 AE11
7 AD11
CLK AC11
DE AB11
SYNC_H AB12
SYNC_V AC12

+3V3
3CE6 2K2
3CE7 2K2
RES 5CE6 120R
RES 5CE7 120R
SCL-AMBI-3V3
SDA-AMBI-3V3
4CE1
4CE2
3CE5 100R
3CE4 100R
FCE5
FCE6
FCE7
FCE8
2CE4 150p
2CE5 150p
2CE1 10p
2CE2 10p
1CE3
1CE4
1CE2 1.0A T 125V
RES 4CE3
5CE5 30R
2CE3 100n

TO AMBILIGHT
1M59
2041061-7

1CE2 C7
1CE3 C6
1CE4 C7
1M59 B8
2CE1 C6
2CE2 C6
2CE3 C8
2CE4 C4
2CE5 C4
3CE4 B5
3CE5 B5
3CE6 B4
3CE7 B4
4CE1 B5
4CE2 B5
4CE3 C7
5CE5 C7
5CE6 B5
5CE7 B5
7C00-7 B2
FCE5 B6
FCE6 B6
FCE7 B7
FCE8 C7

MULTI 12NC : 3139_123_64423
BD 12NC : 3139_123_64433
CELL 12NC : 8239_125_14783

" XCE1~ XCEZ "

| | | | |
|---|---|---|---|
| CHN DC394240 | | SETNAME ******** | |
| CLASS_NO 3PC332 | | PCB SB SSB BD | 3 2009-06-18 |
| -- -- -- | 1 | TV543-2K9 | 2 2009-02-25 |
| 2008-10-17 | 2 | | 3139 123 6443 |
| 2009-01-16 | 3 | | |
| NAME Vincent Yap / Lee CW | | SUPERS. **** *** ***** | 25 / 10 / 130 - 25 / A3 |
| SV / CHECK | | DATE 2008-10-17 | ROYAL PHILIPS ELECTRONICS N.V. 2008 |

18670_524_090911.eps
090911

## SSB v3: SRP List Part 1

| Netname | Diagram |
|---|---|
| +12V | B01A (1 ×) |
| +12V | B01B (4 ×) |
| +12V | B02A (3 ×) |
| +12V | B04A (1 ×) |
| +12V | B04B (7 ×) |
| +12VD | B01B (1 ×) |
| +12VD | B07A (2 ×) |
| +12VF | B01A (2 ×) |
| +1V2 | B02A (2 ×) |
| +1V2A | B02A (2 ×) |
| +1V2-PNX5100 | B01B (1 ×) |
| +1V2-PNX5100 | B03H (1 ×) |
| +1V2-PNX5100 | B08A (15 × |
| +1V2-PNX5100-CLOCK | B08A (3 ×) |
| +1V2-PNX5100-DDR-PLL1 | B08A (2 ×) |
| +1V2-PNX5100-DLL | B08A (3 ×) |
| +1V2-PNX5100-LVDS-PLL | B08A (2 ×) |
| +1V2-PNX5100-TRI-PLL1 | B08A (2 ×) |
| +1V2-PNX5100-TRI-PLL2 | B08A (2 ×) |
| +1V2-PNX5100-TRI-PLL3 | B08A (2 ×) |
| +1V2-PNX85XX | B01A (2 ×) |
| +1V2-PNX85XX | B02A (1 ×) |
| +1V2-PNX85XX | B03A (14 × |
| +1V2-PNX85XX | B03H (1 ×) |
| +1V2-STANDBY | B01B (2 ×) |
| +1V2-STANDBY | B03A (1 ×) |
| +1V8-PNX5100 | B07B (1 ×) |
| +1V8-PNX5100 | B08A (2 ×) |
| +1V8-PNX5100 | B08B (5 ×) |
| +1V8-PNX85XX | B03A (3 ×) |
| +1V8-PNX85XX | B03F (5 ×) |
| +1V8-PNX85XX | B05A (1 ×) |
| +3V3 | B01A (1 ×) |
| +3V3 | B01B (1 ×) |
| +3V3 | B02A (2 ×) |
| +3V3 | B03A (14 × |
| +3V3 | B03C (1 ×) |
| +3V3 | B03D (1 ×) |
| +3V3 | B03G (11 × |
| +3V3 | B03H (2 ×) |
| +3V3 | B04A (1 ×) |
| +3V3 | B04B (9 ×) |
| +3V3 | B04C (2 ×) |
| +3V3 | B05A (3 ×) |
| +3V3 | B05B (2 ×) |
| +3V3 | B05C (3 ×) |
| +3V3 | B07A (3 ×) |
| +3V3 | B07B (4 ×) |
| +3V3 | B08A (7 ×) |
| +3V3 | B08C (12 × |
| +3V3 | B08D (2 ×) |
| +3V3 | B08E (3 ×) |
| +3V3_BUF | B05C (5 ×) |
| +3V3A | B02A (3 ×) |
| +3V3B | B02A (6 ×) |
| +3V3D | B02A (2 ×) |
| +3V3E | B02A (2 ×) |
| +3V3-ET-ANA | B05B (3 ×) |
| +3V3-ET-DIG | B05B (5 ×) |
| +3V3F | B01A (1 ×) |
| +3V3F | B03A (1 ×) |
| +3V3F | B08A (1 ×) |
| +3V3-NAND | B03G (5 ×) |
| +3V3-PER | B03A (2 ×) |
| +3V3-PER | B03G (12 × |
| +3V3-PER | B03H (3 ×) |
| +3V3-PNX5100-CLOCK | B08A (2 ×) |
| +3V3-PNX5100-DDR-PLL0 | B08A (2 ×) |
| +3V3-PNX5100-LVDS-IN | B08A (2 ×) |
| +3V3-PNX5100-LVDS-PLL | B08A (2 ×) |
| +3V3-STANDBY | B01B (2 ×) |
| +3V3-STANDBY | B03A (1 ×) |
| +3V3-STANDBY | B03G (3 ×) |
| +3V3-STANDBY | B03H (12 × |
| +3V3-STANDBY | B04A (3 ×) |
| +3V3-STANDBY | B05A (1 ×) |
| +5V | B01B (1 ×) |
| +5V | B02A (2 ×) |
| +5V | B03D (1 ×) |
| +5V | B03G (4 ×) |
| +5V | B03H (1 ×) |
| +5V | B04A (1 ×) |
| +5V | B04B (6 ×) |
| +5V | B04C (1 ×) |
| +5V | B05A (2 ×) |
| +5V | B05C (1 ×) |
| +5V | B07A (1 ×) |
| +5V5-TUN | B01B (1 ×) |
| +5V5-TUN | B02A (1 ×) |
| +5V-TUNER | B02A (10 × |
| +AUDIO-POWER | B01B (1 ×) |
| +AUDIO-POWER | B03C (2 ×) |
| +AUDIO-POWER | B06A (2 ×) |
| +VDISP-IN | B07A (1 ×) |
| +VDISP-IN | B07B (1 ×) |
| +VDISP-OUT | B07B (4 ×) |
| +VDISP-OUT_A | B07B (4 ×) |
| 3V3-ST | B01A (1 ×) |
| 3V3-ST | B01B (1 ×) |
| ADAC(1) | B03D (2 ×) |
| ADAC(1) | B06A (1 ×) |
| ADAC(2) | B03D (2 ×) |
| ADAC(2) | B06A (1 ×) |
| ADAC(3) | B03C (2 ×) |
| ADAC(3) | B03D (2 ×) |
| ADAC(4) | B03C (2 ×) |
| ADAC(4) | B03D (2 ×) |
| ADAC(5) | B03C (1 ×) |
| ADAC(5) | B03D (1 ×) |
| ADAC(6) | B03C (1 ×) |
| ADAC(6) | B03D (1 ×) |
| ADAC(7) | B03C (1 ×) |
| ADAC(7) | B03D (3 ×) |
| ADAC(8) | B03C (1 ×) |
| ADAC(8) | B03D (3 ×) |
| ALE | B03H (1 ×) |
| ANTENNA-CTRL | B02A (2 ×) |
| ANTENNA-SUPPLY | B02A (2 ×) |
| A-PLOP | B03C (1 ×) |
| A-PLOP | B04B (1 ×) |
| A-PLOP | B04C (2 ×) |
| AP-SCART-OUT-L | B04B (3 ×) |
| AP-SCART-OUT-R | B04B (3 ×) |
| ARX0- | B05A (2 ×) |
| ARX0+ | B05A (2 ×) |
| ARX1- | B05A (2 ×) |
| ARX1+ | B05A (2 ×) |
| ARX2- | B05A (2 ×) |
| ARX2+ | B05A (2 ×) |
| ARX-5V | B05A (3 ×) |
| ARXC- | B05A (2 ×) |
| ARXC+ | B05A (2 ×) |
| ARX-DDC-CLK | B05A (2 ×) |
| ARX-DDC-DAT | B05A (2 ×) |
| ARX-HPD | B05A (2 ×) |
| A-STBY | B03C (1 ×) |
| A-STBY | B06A (2 ×) |
| AUD_GND | B03D (4 ×) |
| AUD_GND | B06A (2 ×) |
| AUDIO-CL-L | B03C (1 ×) |
| AUDIO-CL-L | B04B (1 ×) |
| AUDIO-CL-R | B03C (1 ×) |
| AUDIO-CL-R | B04B (1 ×) |
| AUDIO-IN1-L | B03D (1 ×) |
| AUDIO-IN1-L | B04B (1 ×) |
| AUDIO-IN1-R | B03D (1 ×) |
| AUDIO-IN1-R | B04B (1 ×) |
| AUDIO-IN2-L | B03D (1 ×) |
| AUDIO-IN2-L | B04B (1 ×) |
| AUDIO-IN2-R | B03D (1 ×) |
| AUDIO-IN2-R | B04B (1 ×) |
| AUDIO-IN3-L | B03D (1 ×) |
| AUDIO-IN3-L | B04C (1 ×) |
| AUDIO-IN3-R | B03D (1 ×) |
| AUDIO-IN3-R | B04C (1 ×) |
| AUDIO-IN4-L | B03D (1 ×) |
| AUDIO-IN4-L | B04C (1 ×) |
| AUDIO-IN4-R | B03D (1 ×) |
| AUDIO-IN4-R | B04C (1 ×) |
| AUDIO-IN5-L | B03D (1 ×) |
| AUDIO-IN5-L | B04C (2 ×) |
| AUDIO-IN5-R | B03D (1 ×) |
| AUDIO-IN5-R | B04C (2 ×) |
| AUDIO-MUTE | B03H (2 ×) |
| AUDIO-MUTE | B04C (1 ×) |
| AUDIO-MUTE | B06A (1 ×) |
| AUDIO-OUT-L | B03C (1 ×) |
| AUDIO-OUT-L | B04C (1 ×) |
| AUDIO-OUT-R | B03C (1 ×) |
| AUDIO-OUT-R | B04C (1 ×) |
| AUDIO-RESET | B03C (2 ×) |
| AUDIO-RESET | B03H (2 ×) |
| AUDIO-VDD | B03C (7 ×) |
| AV1-BLK | B03H (1 ×) |
| AV1-BLK | B04B (1 ×) |
| AV1-BLK-BO | B04B (1 ×) |
| AV1-STATUS | B03H (1 ×) |
| AV1-STATUS | B04A (1 ×) |
| AV1-STATUS | B04B (1 ×) |
| AV2-BLK_LCD-SDA | B03H (1 ×) |
| AV2-BLK_LCD-SDA | B04A (1 ×) |
| AV2-BLK_LCD-SDA | B04B (1 ×) |
| AV2-BLK-BO | B04B (1 ×) |
| AV2-PB_SC2-B | B03E (1 ×) |
| AV2-PB_SC2-B | B04B (1 ×) |
| AV2-PR_SC2-R | B03E (1 ×) |
| AV2-PR_SC2-R | B04B (1 ×) |
| AV2-STATUS | B03H (1 ×) |
| AV2-STATUS | B04B (1 ×) |
| AV2-Y_SC2-G | B03E (1 ×) |
| AV2-Y_SC2-G | B04B (1 ×) |
| AV3-PB | B03E (1 ×) |
| AV3-PB | B04C (1 ×) |
| AV3-PR | B03E (1 ×) |
| AV3-PR | B04C (1 ×) |
| AV3-Y | B03E (1 ×) |
| AV3-Y | B04C (1 ×) |
| BACKLIGHT-BOOST | B01B (1 ×) |
| BACKLIGHT-BOOST | B07A (1 ×) |
| BACKLIGHT-BOOST-IN | B07A (1 ×) |
| BACKLIGHT-BOOST-IN | B07B (1 ×) |
| BACKLIGHT-IN | B07A (1 ×) |
| BACKLIGHT-IN | B07B (1 ×) |
| BACKLIGHT-OUT | B01B (1 ×) |
| BACKLIGHT-OUT | B07A (1 ×) |
| BOLT-ON-IO | B03H (2 ×) |
| BOLT-ON-TS-ENn | B03H (2 ×) |
| BOOTMODE_PNX8543-BL-CTRL | B03G (1 ×) |
| BOOTMODE_PNX8543-BL-CTRL | B07B (1 ×) |
| BRX0- | B05A (2 ×) |
| BRX0+ | B05A (2 ×) |
| BRX1- | B05A (2 ×) |
| BRX1+ | B05A (2 ×) |
| BRX2- | B05A (2 ×) |
| BRX2+ | B05A (2 ×) |
| BRX-5V | B05A (3 ×) |
| BRXC- | B05A (2 ×) |
| BRXC+ | B05A (2 ×) |
| BRX-DDC-CLK | B05A (2 ×) |
| BRX-DDC-DAT | B05A (2 ×) |
| BRX-HPD | B05A (2 ×) |
| B-VGA | B03E (1 ×) |
| B-VGA | B04C (1 ×) |
| CA-ADDEN | B03B (1 ×) |
| CA-ADDEN | B05C (3 ×) |
| CA-CD1 | B03B (1 ×) |
| CA-CD1 | B05C (2 ×) |
| CA-CD2 | B03B (1 ×) |
| CA-CD2 | B05C (2 ×) |
| CA-CE1 | B05C (2 ×) |
| CA-CE2 | B05C (2 ×) |
| CA-DATADIR | B03B (1 ×) |
| CA-DATADIR | B05C (1 ×) |
| CA-DATAEN | B03B (1 ×) |
| CA-DATAEN | B05C (1 ×) |
| CA-INPACK | B05C (2 ×) |
| CA-IORD | B05C (2 ×) |
| CA-IOWR | B05C (2 ×) |
| CA-MDI0 | B03B (1 ×) |
| CA-MDI0 | B05C (1 ×) |
| CA-MDI1 | B03B (1 ×) |
| CA-MDI1 | B05C (1 ×) |
| CA-MDI2 | B03B (1 ×) |
| CA-MDI2 | B05C (1 ×) |
| CA-MDI3 | B03B (1 ×) |
| CA-MDI3 | B05C (1 ×) |
| CA-MDI4 | B03B (1 ×) |
| CA-MDI4 | B05C (1 ×) |
| CA-MDI5 | B03B (1 ×) |
| CA-MDI5 | B05C (1 ×) |
| CA-MDI6 | B03B (1 ×) |
| CA-MDI6 | B05C (1 ×) |
| CA-MDI7 | B03B (1 ×) |
| CA-MDI7 | B05C (1 ×) |
| CA-MDO(0) | B03B (1 ×) |
| CA-MDO(0) | B05C (1 ×) |
| CA-MDO(1) | B03B (1 ×) |
| CA-MDO(1) | B05C (1 ×) |
| CA-MDO(2) | B03B (1 ×) |
| CA-MDO(2) | B05C (1 ×) |
| CA-MDO(3) | B03B (1 ×) |
| CA-MDO(3) | B05C (1 ×) |
| CA-MDO(4) | B03B (1 ×) |
| CA-MDO(4) | B05C (1 ×) |
| CA-MDO(5) | B03B (1 ×) |
| CA-MDO(5) | B05C (1 ×) |
| CA-MDO(6) | B03B (1 ×) |
| CA-MDO(6) | B05C (1 ×) |
| CA-MDO(7) | B03B (1 ×) |
| CA-MDO(7) | B05C (1 ×) |
| CA-MICLK | B03B (1 ×) |
| CA-MICLK | B05C (1 ×) |
| CA-MISTRT | B03B (1 ×) |
| CA-MISTRT | B05C (1 ×) |
| CA-MIVAL | B03B (1 ×) |
| CA-MIVAL | B05C (1 ×) |
| CA-MOCLK_VS2 | B03B (2 ×) |
| CA-MOCLK_VS2 | B05C (1 ×) |
| CA-MOSTRT | B03B (1 ×) |
| CA-MOSTRT | B05C (1 ×) |
| CA-MOVAL | B03B (1 ×) |
| CA-MOVAL | B05C (1 ×) |
| CA-OE | B05C (2 ×) |
| CA-REG | B05C (2 ×) |
| CA-RST | B03B (1 ×) |
| CA-RST | B05C (1 ×) |
| CA-VS1 | B03B (1 ×) |
| CA-VS1 | B05C (2 ×) |
| CA-WAIT | B05C (3 ×) |
| CA-WE | B05C (2 ×) |
| CEC | B05A (5 ×) |
| CEC-HDMI | B03H (2 ×) |
| CEC-HDMI | B05A (1 ×) |
| CLK-SCL | B04C (1 ×) |
| CRX0- | B05A (2 ×) |
| CRX0+ | B05A (2 ×) |
| CRX1- | B05A (2 ×) |
| CRX1+ | B05A (2 ×) |
| CRX2- | B05A (2 ×) |
| CRX2+ | B05A (2 ×) |
| CRX-5V | B05A (3 ×) |
| CRXC- | B05A (2 ×) |
| CRXC+ | B05A (2 ×) |
| CRX-DDC-CLK | B05A (2 ×) |
| CRX-DDC-DAT | B05A (2 ×) |
| CRX-HPD | B05A (2 ×) |
| CVBS | B02A (1 ×) |
| CVBS | B03E (1 ×) |
| CVBS1 | B03E (1 ×) |
| CVBS1 | B04B (1 ×) |
| CVBS2 | B03E (1 ×) |
| CVBS2 | B04B (1 ×) |
| CVBS-OUT-SC1 | B04B (2 ×) |
| CVBS-OUT-SC1-PBS | B04A (1 ×) |
| CVBS-OUT-SC1-PBS | B04B (1 ×) |
| CVBS-OUT-SC2 | B04B (1 ×) |
| CVBS-OUT-SC2 | B04C (1 ×) |
| CVBS-TER-OUT | B02A (1 ×) |
| CVBS-TER-OUT | B04B (1 ×) |
| DATA-SDA | B04C (1 ×) |
| DDC-SCL | B05A (3 ×) |
| DDC-SDA | B05A (3 ×) |
| DDR2-A0 | B03F (3 ×) |
| DDR2-A1 | B03F (3 ×) |
| DDR2-A10 | B03F (3 ×) |
| DDR2-A11 | B03F (3 ×) |
| DDR2-A12 | B03F (3 ×) |
| DDR2-A2 | B03F (3 ×) |
| DDR2-A3 | B03F (3 ×) |
| DDR2-A4 | B03F (3 ×) |
| DDR2-A5 | B03F (3 ×) |
| DDR2-A6 | B03F (3 ×) |
| DDR2-A7 | B03F (3 ×) |
| DDR2-A8 | B03F (3 ×) |
| DDR2-A9 | B03F (3 ×) |
| DDR2-BA0 | B03F (3 ×) |
| DDR2-BA1 | B03F (3 ×) |
| DDR2-BA2 | B03F (3 ×) |
| DDR2-CAS | B03F (3 ×) |
| DDR2-CKE | B03F (3 ×) |
| DDR2-CLK_N | B03F (3 ×) |
| DDR2-CLK_P | B03F (3 ×) |
| DDR2-CS | B03F (3 ×) |
| DDR2-D0 | B03F (2 ×) |
| DDR2-D1 | B03F (2 ×) |
| DDR2-D10 | B03F (2 ×) |
| DDR2-D11 | B03F (2 ×) |
| DDR2-D12 | B03F (2 ×) |
| DDR2-D13 | B03F (2 ×) |
| DDR2-D14 | B03F (2 ×) |
| DDR2-D15 | B03F (2 ×) |
| DDR2-D16 | B03F (2 ×) |
| DDR2-D17 | B03F (2 ×) |
| DDR2-D18 | B03F (2 ×) |
| DDR2-D19 | B03F (2 ×) |
| DDR2-D2 | B03F (2 ×) |
| DDR2-D20 | B03F (2 ×) |
| DDR2-D21 | B03F (2 ×) |
| DDR2-D22 | B03F (2 ×) |
| DDR2-D23 | B03F (2 ×) |
| DDR2-D24 | B03F (2 ×) |
| DDR2-D25 | B03F (2 ×) |
| DDR2-D26 | B03F (2 ×) |
| DDR2-D27 | B03F (2 ×) |
| DDR2-D28 | B03F (2 ×) |
| DDR2-D29 | B03F (2 ×) |
| DDR2-D3 | B03F (2 ×) |
| DDR2-D30 | B03F (2 ×) |
| DDR2-D31 | B03F (2 ×) |
| DDR2-D4 | B03F (2 ×) |
| DDR2-D5 | B03F (2 ×) |
| DDR2-D6 | B03F (2 ×) |
| DDR2-D7 | B03F (2 ×) |
| DDR2-D8 | B03F (2 ×) |
| DDR2-D9 | B03F (2 ×) |
| DDR2-DQM0 | B03F (2 ×) |
| DDR2-DQM1 | B03F (2 ×) |
| DDR2-DQM2 | B03F (2 ×) |
| DDR2-DQM3 | B03F (2 ×) |
| DDR2-DQS0_N | B03F (2 ×) |
| DDR2-DQS0_P | B03F (2 ×) |
| DDR2-DQS1_N | B03F (2 ×) |
| DDR2-DQS1_P | B03F (2 ×) |
| DDR2-DQS2_N | B03F (2 ×) |
| DDR2-DQS2_P | B03F (2 ×) |
| DDR2-DQS3_N | B03F (2 ×) |
| DDR2-DQS3_P | B03F (2 ×) |
| DDR2-ODT | B03F (3 ×) |
| DDR2-RAS | B03F (3 ×) |
| DDR2-VREF-CTRL | B03F (2 ×) |
| DDR2-VREF-DDR | B03F (3 ×) |
| DDR2-WE | B03F (3 ×) |
| DETECT1 | B01A (1 ×) |
| DETECT1 | B03H (3 ×) |
| DETECT-12V | B01B (1 ×) |
| DETECT-12V | B03H (1 ×) |
| DETECT2 | B03H (3 ×) |
| DRX0- | B05A (2 ×) |
| DRX0+ | B05A (2 ×) |
| DRX1- | B05A (2 ×) |
| DRX1+ | B05A (2 ×) |
| DRX2- | B05A (2 ×) |
| DRX2+ | B05A (2 ×) |
| DRX-5V | B05A (3 ×) |
| DRXC- | B05A (2 ×) |
| DRXC+ | B05A (2 ×) |
| DRX-DDC-CLK | B05A (2 ×) |
| DRX-DDC-DAT | B05A (2 ×) |
| DRX-HPD | B05A (2 ×) |
| EA | B03H (1 ×) |
| EJTAG-DETECT | B03G (1 ×) |
| EJTAG-DETECT | B03H (2 ×) |
| EJTAG-PNX5100-TCK | B08C (1 ×) |
| EJTAG-PNX5100-TDI | B08C (1 ×) |
| EJTAG-PNX5100-TDO | B08C (1 ×) |
| EJTAG-PNX5100-TMS | B08C (1 ×) |
| EJTAG-PNX5100-TRSTn | B08C (1 ×) |
| EJTAG-TCK | B03G (3 ×) |
| EJTAG-TDI | B03G (3 ×) |
| EJTAG-TDO | B03G (3 ×) |
| EJTAG-TMS | B03G (3 ×) |
| EJTAG-TRSTN | B03G (3 ×) |
| ENABLE-3V3 | B01A (1 ×) |
| ENABLE-3V3 | B01B (1 ×) |
| ENABLE-3V3 | B03H (2 ×) |
| FAN1-DRV | B04B (2 ×) |
| FAN1-OUT | B04B (2 ×) |
| FAN2-DRV | B04B (2 ×) |
| FE-CLK | B02A (1 ×) |
| FE-CLK | B03B (1 ×) |
| FE-DATA(0) | B02A (1 ×) |
| FE-DATA(0) | B03B (1 ×) |
| FE-DATA(1) | B02A (1 ×) |
| FE-DATA(1) | B03B (1 ×) |
| FE-DATA(2) | B02A (1 ×) |
| FE-DATA(2) | B03B (1 ×) |
| FE-DATA(3) | B02A (1 ×) |
| FE-DATA(3) | B03B (1 ×) |
| FE-DATA(4) | B02A (1 ×) |
| FE-DATA(4) | B03B (1 ×) |
| FE-DATA(5) | B02A (1 ×) |
| FE-DATA(5) | B03B (1 ×) |
| FE-DATA(6) | B02A (1 ×) |
| FE-DATA(6) | B03B (1 ×) |
| FE-DATA(7) | B02A (1 ×) |
| FE-DATA(7) | B03B (1 ×) |
| FE-ERR | B03B (2 ×) |
| FE-SOP | B02A (1 ×) |
| FE-SOP | B03B (1 ×) |
| FE-VALID | B02A (1 ×) |
| FE-VALID | B03B (1 ×) |
| FRONT-C | B03E (1 ×) |
| FRONT-C | B04C (2 ×) |
| FRONT-Y_CVBS | B03E (1 ×) |
| FRONT-Y_CVBS | B04C (2 ×) |
| GND-SIG | B01A (12 × |
| GNDSND | B01B (2 ×) |
| GNDSND | B06A (20 × |
| G-VGA | B03E (1 ×) |
| G-VGA | B04C (1 ×) |
| HP_LOUT | B03C (1 ×) |
| HP_LOUT | B04C (1 ×) |
| HP_ROUT | B03C (1 ×) |
| HP_ROUT | B04C (1 ×) |
| H-SYNC-VGA | B03E (1 ×) |
| H-SYNC-VGA | B04C (1 ×) |
| IF-AGC | B02A (2 ×) |
| IF-N | B02A (2 ×) |
| IF-P | B02A (2 ×) |
| IRQ-CA | B03B (1 ×) |
| IRQ-CA | B03G (2 ×) |
| IRQ-CA | B05C (2 ×) |
| IRQ-PCI | B03G (1 ×) |
| IRQ-PCI | B05B (1 ×) |
| KEYBOARD | B03G (1 ×) |
| KEYBOARD | B03H (2 ×) |
| LAMP-ON-OUT | B01B (1 ×) |
| LAMP-ON-OUT | B03H (3 ×) |
| LCD-SCL | B03H (2 ×) |
| LCD-SCL | B04A (1 ×) |
| LCD-SCL | B04C (1 ×) |
| LED1 | B03G (2 ×) |
| LED1 | B03H (1 ×) |
| LED2 | B03G (2 ×) |
| LED2 | B03H (1 ×) |
| LEFT-SPEAKER | B06A (4 ×) |
| LIGHT-SENSOR | B03G (2 ×) |
| LIGHT-SENSOR | B03H (1 ×) |
| MDO0 | B05C (4 ×) |
| MDO1 | B05C (4 ×) |
| MDO2 | B05C (4 ×) |
| MDO3 | B05C (4 ×) |
| MDO4 | B05C (4 ×) |
| MDO5 | B05C (4 ×) |
| MDO6 | B05C (4 ×) |
| MDO7 | B05C (4 ×) |
| MOCLKA | B05C (4 ×) |
| MOSTRTA | B05C (4 ×) |
| MOVALA | B05C (4 ×) |
| MUTE | B06A (2 ×) |
| NAND-AD(0) | B03G (2 ×) |
| NAND-AD(1) | B03G (2 ×) |
| NAND-AD(2) | B03G (2 ×) |
| NAND-AD(3) | B03G (2 ×) |
| NAND-AD(4) | B03G (2 ×) |
| NAND-AD(5) | B03G (2 ×) |
| NAND-AD(6) | B03G (2 ×) |
| NAND-AD(7) | B03G (2 ×) |
| NAND-ALE | B03G (2 ×) |
| NAND-CLE | B03G (2 ×) |
| NAND-REn | B03G (2 ×) |
| NAND-WEn | B03G (2 ×) |
| PBS_SPI_DI | B04A (2 ×) |
| PBS-I2C-SCL | B03G (2 ×) |
| PBS-I2C-SCL | B04A (1 ×) |
| PCI-AD0 | B03G (2 ×) |
| PCI-AD0 | B05B (1 ×) |
| PCI-AD0 | B05C (1 ×) |
| PCI-AD0 | B08C (1 ×) |
| PCI-AD1 | B03G (2 ×) |
| PCI-AD1 | B05B (1 ×) |
| PCI-AD1 | B05C (1 ×) |
| PCI-AD1 | B08C (1 ×) |
| PCI-AD10 | B03G (1 ×) |
| PCI-AD10 | B05B (1 ×) |
| PCI-AD10 | B05C (1 ×) |
| PCI-AD10 | B08C (1 ×) |
| PCI-AD11 | B03G (1 ×) |
| PCI-AD11 | B05B (1 ×) |
| PCI-AD11 | B05C (1 ×) |
| PCI-AD11 | B08C (1 ×) |
| PCI-AD12 | B03G (1 ×) |
| PCI-AD12 | B05B (1 ×) |
| PCI-AD12 | B05C (1 ×) |
| PCI-AD12 | B08C (1 ×) |
| PCI-AD13 | B03G (1 ×) |
| PCI-AD13 | B05B (1 ×) |
| PCI-AD13 | B05C (1 ×) |
| PCI-AD13 | B08C (1 ×) |
| PCI-AD14 | B03G (1 ×) |
| PCI-AD14 | B05B (1 ×) |
| PCI-AD14 | B05C (1 ×) |
| PCI-AD14 | B08C (1 ×) |
| PCI-AD15 | B03G (1 ×) |
| PCI-AD15 | B05B (1 ×) |
| PCI-AD15 | B08C (1 ×) |
| PCI-AD16 | B03G (1 ×) |
| PCI-AD16 | B05B (1 ×) |
| PCI-AD16 | B05C (1 ×) |
| PCI-AD16 | B08C (1 ×) |
| PCI-AD17 | B03G (1 ×) |
| PCI-AD17 | B05B (1 ×) |
| PCI-AD17 | B05C (1 ×) |
| PCI-AD17 | B08C (1 ×) |
| PCI-AD18 | B03G (1 ×) |
| PCI-AD18 | B05B (1 ×) |
| PCI-AD18 | B05C (1 ×) |
| PCI-AD18 | B08C (1 ×) |
| PCI-AD19 | B03G (1 ×) |
| PCI-AD19 | B05B (1 ×) |
| PCI-AD19 | B05C (1 ×) |
| PCI-AD19 | B08C (1 ×) |
| PCI-AD2 | B03G (1 ×) |

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## SSB v3: SRP List Part 2

| Netname | Diagram |
|---|---|
| PCI-AD2 | B05B (1 x) |
| PCI-A D2 | B05C (1 x) |
| PCI-AD2 | B08C (1 x) |
| PCI-AD20 | B03G (1 x) |
| PCI-AD20 | B05B (1 x) |
| PCI-AD20 | B08C (1 x) |
| PCI-AD21 | B03G (1 x) |
| PCI-AD21 | B05B (1 x) |
| PCI-AD21 | B08C (1 x) |
| PCI-AD22 | B03G (1 x) |
| PCI-AD22 | B05B (1 x) |
| PCI-AD22 | B05C (1 x) |
| PCI-AD22 | B08C (1 x) |
| PCI-AD23 | B03G (1 x) |
| PCI-AD23 | B05B (2 x) |
| PCI-AD23 | B05C (1 x) |
| PCI-AD23 | B08C (1 x) |
| PCI-AD24 | B03G (3 x) |
| PCI-AD24 | B05B (1 x) |
| PCI-AD24 | B05C (1 x) |
| PCI-AD24 | B08C (1 x) |
| PCI-AD25 | B03G (2 x) |
| PCI-AD25 | B05B (1 x) |
| PCI-AD25 | B05C (1 x) |
| PCI-AD25 | B08C (2 x) |
| PCI-AD26 | B03G (2 x) |
| PCI-AD26 | B05B (1 x) |
| PCI-AD26 | B05C (1 x) |
| PCI-AD26 | B08C (1 x) |
| PCI-AD27 | B03G (2 x) |
| PCI-AD27 | B05B (1 x) |
| PCI-AD27 | B05C (1 x) |
| PCI-AD27 | B08C (1 x) |
| PCI-AD28 | B03G (2 x) |
| PCI-AD28 | B05B (1 x) |
| PCI-AD28 | B05C (1 x) |
| PCI-AD28 | B08C (1 x) |
| PCI-AD29 | B03G (2 x) |
| PCI-AD29 | B05B (1 x) |
| PCI-AD29 | B05C (1 x) |
| PCI-AD29 | B08C (1 x) |
| PCI-AD3 | B03G (1 x) |
| PCI-AD3 | B05B (1 x) |
| PCI-AD3 | B05C (1 x) |
| PCI-AD3 | B08C (1 x) |
| PCI-AD30 | B03G (2 x) |
| PCI-AD30 | B05B (1 x) |
| PCI-AD30 | B05C (1 x) |
| PCI-AD30 | B08C (1 x) |
| PCI-AD31 | B03G (2 x) |
| PCI-AD31 | B05B (1 x) |
| PCI-AD31 | B05C (1 x) |
| PCI-AD31 | B08C (1 x) |
| PCI-AD4 | B03G (1 x) |
| PCI-AD4 | B05B (1 x) |
| PCI-AD4 | B05C (1 x) |
| PCI-AD4 | B08C (1 x) |
| PCI-AD5 | B03G (1 x) |
| PCI-AD5 | B05B (1 x) |
| PCI-AD5 | B05C (1 x) |
| PCI-AD5 | B08C (1 x) |
| PCI-AD6 | B03G (1 x) |
| PCI-AD6 | B05B (1 x) |
| PCI-AD6 | B05C (1 x) |
| PCI-AD6 | B08C (1 x) |
| PCI-AD7 | B03G (1 x) |
| PCI-AD7 | B05B (1 x) |
| PCI-AD7 | B05C (1 x) |
| PCI-AD7 | B08C (1 x) |
| PCI-AD8 | B03G (1 x) |
| PCI-AD8 | B05B (1 x) |
| PCI-AD8 | B05C (1 x) |
| PCI-AD8 | B08C (1 x) |
| PCI-AD9 | B03G (1 x) |
| PCI-AD9 | B05B (1 x) |
| PCI-AD9 | B05C (1 x) |
| PCI-AD9 | B08C (1 x) |
| PCI-CBE0 | B03G (1 x) |
| PCI-CBE0 | B05B (1 x) |
| PCI-CBE0 | B08C (1 x) |
| PCI-CBE1 | B03G (2 x) |
| PCI-CBE1 | B05B (1 x) |
| PCI-CBE1 | B05C (1 x) |
| PCI-CBE1 | B08C (1 x) |
| PCI-CBE2 | B03G (2 x) |
| PCI-CBE2 | B05B (1 x) |
| PCI-CBE2 | B05C (1 x) |
| PCI-CBE2 | B08C (1 x) |
| PCI-CBE3 | B03G (1 x) |
| PCI-CBE3 | B05B (1 x) |
| PCI-CBE3 | B08C (1 x) |
| PCI-CLK-ETHERNET | B03G (1 x) |
| PCI-CLK-ETHERNET | B05B (1 x) |
| PCI-CLK-OUT | B03G (2 x) |
| PCI-CLK-PNX5100 | B03G (1 x) |
| PCI-CLK-PNX5100 | B08C (1 x) |
| PCI-CLK-PNX8543 | B03G (2 x) |
| PCI-DEVSEL | B03G (2 x) |
| PCI-DEVSEL | B05B (1 x) |
| PCI-DEVSEL | B08C (1 x) |
| PCI-FRAME | B03G (2 x) |
| PCI-FRAME | B05B (1 x) |
| PCI-FRAME | B08C (1 x) |
| PCI-GNT | B03G (2 x) |
| PCI-GNT | B05B (1 x) |
| PCI-GNT-B | B03G (2 x) |
| PCI-IRDY | B03G (2 x) |
| PCI-IRDY | B05B (1 x) |
| PCI-IRDY | B08C (1 x) |
| PCI-PAR | B03G (1 x) |
| PCI-PAR | B05B (1 x) |
| PCI-PAR | B08C (1 x) |
| PCI-PERR | B03G (2 x) |
| PCI-PERR | B05B (1 x) |
| PCI-PERR | B08C (1 x) |
| PCI-REQ | B03G (2 x) |
| PCI-REQ | B05B (1 x) |
| PCI-REQ-B | B03G (2 x) |
| PCI-SERR | B03G (2 x) |
| PCI-SERR | B05B (1 x) |
| PCI-SERR | B08C (1 x) |
| PCI-STOP | B03G (2 x) |
| PCI-STOP | B05B (1 x) |
| PCI-STOP | B08C (1 x) |
| PCI-TRDY | B03G (2 x) |
| PCI-TRDY | B05B (1 x) |
| PCI-TRDY | B08C (1 x) |
| PCMCIA-A0 | B05C (2 x) |
| PCMCIA-A1 | B05C (2 x) |
| PCMCIA-A10 | B05C (2 x) |
| PCMCIA-A11 | B05C (2 x) |
| PCMCIA-A12 | B05C (2 x) |
| PCMCIA-A13 | B05C (2 x) |
| PCMCIA-A14 | B05C (2 x) |
| PCMCIA-A2 | B05C (2 x) |
| PCMCIA-A3 | B05C (2 x) |
| PCMCIA-A4 | B05C (2 x) |
| PCMCIA-A5 | B05C (2 x) |
| PCMCIA-A6 | B05C (2 x) |
| PCMCIA-A7 | B05C (2 x) |
| PCMCIA-A8 | B05C (2 x) |
| PCMCIA-A9 | B05C (2 x) |
| PCMCIA-D0 | B05C (2 x) |
| PCMCIA-D1 | B05C (2 x) |
| PCMCIA-D2 | B05C (2 x) |
| PCMCIA-D3 | B05C (2 x) |
| PCMCIA-D4 | B05C (2 x) |
| PCMCIA-D5 | B05C (2 x) |
| PCMCIA-D6 | B05C (2 x) |
| PCMCIA-D7 | B05C (2 x) |
| PCMCIA-VCC-VPP | B05C (5 x) |
| PDN | B02A (2 x) |
| PDP | B02A (2 x) |
| PI_3 | B03H (2 x) |
| PNX5100-BL-BOOST | B07B (1 x) |
| PNX5100-BL-BOOST | B08C (1 x) |
| PNX5100-BL-CTRL | B07B (1 x) |
| PNX5100-BL-CTRL | B08C (1 x) |
| PNX5100-DDR2-A0 | B08B (3 x) |
| PNX5100-DDR2-A1 | B08B (3 x) |
| PNX5100-DDR2-A10 | B08B (3 x) |
| PNX5100-DDR2-A11 | B08B (3 x) |
| PNX5100-DDR2-A12 | B08B (3 x) |
| PNX5100-DDR2-A2 | B08B (3 x) |
| PNX5100-DDR2-A3 | B08B (3 x) |
| PNX5100-DDR2-A4 | B08B (3 x) |
| PNX5100-DDR2-A5 | B08B (3 x) |
| PNX5100-DDR2-A6 | B08B (3 x) |
| PNX5100-DDR2-A7 | B08B (3 x) |
| PNX5100-DDR2-A8 | B08B (3 x) |
| PNX5100-DDR2-A9 | B08B (3 x) |
| PNX5100-DDR2-BA0 | B08B (3 x) |
| PNX5100-DDR2-BA1 | B08B (3 x) |
| PNX5100-DDR2-CAS | B08B (3 x) |
| PNX5100-DDR2-CKE | B08B (3 x) |
| PNX5100-DDR2-CLK_N | B08B (3 x) |
| PNX5100-DDR2-CLK_P | B08B (3 x) |
| PNX5100-DDR2-CS | B08B (3 x) |
| PNX5100-DDR2-D0 | B08B (2 x) |
| PNX5100-DDR2-D1 | B08B (2 x) |
| PNX5100-DDR2-D10 | B08B (2 x) |
| PNX5100-DDR2-D11 | B08B (2 x) |
| PNX5100-DDR2-D12 | B08B (2 x) |
| PNX5100-DDR2-D13 | B08B (2 x) |
| PNX5100-DDR2-D14 | B08B (2 x) |
| PNX5100-DDR2-D15 | B08B (2 x) |
| PNX5100-DDR2-D16 | B08B (2 x) |
| PNX5100-DDR2-D17 | B08B (2 x) |
| PNX5100-DDR2-D18 | B08B (2 x) |
| PNX5100-DDR2-D19 | B08B (2 x) |
| PNX5100-DDR2-D2 | B08B (2 x) |
| PNX5100-DDR2-D20 | B08B (2 x) |
| PNX5100-DDR2-D21 | B08B (2 x) |
| PNX5100-DDR2-D22 | B08B (2 x) |
| PNX5100-DDR2-D23 | B08B (2 x) |
| PNX5100-DDR2-D24 | B08B (2 x) |
| PNX5100-DDR2-D25 | B08B (2 x) |
| PNX5100-DDR2-D26 | B08B (2 x) |
| PNX5100-DDR2-D27 | B08B (2 x) |
| PNX5100-DDR2-D28 | B08B (2 x) |
| PNX5100-DDR2-D29 | B08B (2 x) |
| PNX5100-DDR2-D3 | B08B (2 x) |
| PNX5100-DDR2-D30 | B08B (2 x) |
| PNX5100-DDR2-D31 | B08B (2 x) |
| PNX5100-DDR2-D4 | B08B (2 x) |
| PNX5100-DDR2-D5 | B08B (2 x) |
| PNX5100-DDR2-D6 | B08B (2 x) |
| PNX5100-DDR2-D7 | B08B (2 x) |
| PNX5100-DDR2-D8 | B08B (2 x) |
| PNX5100-DDR2-D9 | B08B (2 x) |
| PNX5100-DDR2-DQM0 | B08B (2 x) |
| PNX5100-DDR2-DQM1 | B08B (2 x) |
| PNX5100-DDR2-DQM2 | B08B (2 x) |
| PNX5100-DDR2-DQM3 | B08B (2 x) |
| PNX5100-DDR2-DQS0_N | B08B (2 x) |
| PNX5100-DDR2-DQS0_P | B08B (2 x) |
| PNX5100-DDR2-DQS1_N | B08B (2 x) |
| PNX5100-DDR2-DQS1_P | B08B (2 x) |
| PNX5100-DDR2-DQS2_N | B08B (2 x) |
| PNX5100-DDR2-DQS2_P | B08B (2 x) |
| PNX5100-DDR2-DQS3_N | B08B (2 x) |
| PNX5100-DDR2-DQS3_P | B08B (2 x) |
| PNX5100-DDR2-ODT | B08B (3 x) |
| PNX5100-DDR2-RAS | B08B (3 x) |
| PNX5100-DDR2-VREF-CTRL | B08B (2 x) |
| PNX5100-DDR2-VREF-DDR | B07B (1 x) |
| PNX5100-DDR2-VREF-DDR | B08B (3 x) |
| PNX5100-DDR2-WE | B08B (3 x) |
| PNX5100-LCD-PWR-ON | B07B (1 x) |
| PNX5100-LCD-PWR-ON | B08C (1 x) |
| PNX5100-ROT | B07B (2 x) |
| PNX5100-ROT | B08C (1 x) |
| PNX5100-RST-OUT | B08C (2 x) |
| PNX8543-BL-BOOST_SPI-CLK | B03G (2 x) |
| PNX8543-BL-BOOST_SPI-CLK | B04A (1 x) |
| PNX8543-BL-BOOST_SPI-CLK | B07B (1 x) |
| PNX8543-LCD-PWR-ON_SPI-DI | B03G (2 x) |
| PNX8543-LCD-PWR-ON_SPI-DI | B04A (1 x) |
| PNX8543-LCD-PWR-ON_SPI-DI | B07B (1 x) |
| POWER-OK | B01B (1 x) |
| POWER-OK | B03H (2 x) |
| PROT-DC | B01A (1 x) |
| PROT-DC | B01B (1 x) |
| PSEN | B03H (1 x) |
| RC | B03G (1 x) |
| RC | B03H (1 x) |
| RC | B04A (1 x) |
| RC_uP | B03H (2 x) |
| RC1 | B03H (1 x) |
| RC1 | B04A (1 x) |
| RC1 | B04C (1 x) |
| RC2 | B03H (1 x) |
| RC2 | B04A (1 x) |
| RC2 | B04C (1 x) |
| REGIMBEAU_CVBS-SWITCH | B03H (2 x) |
| REGIMBEAU_CVBS-SWITCH | B04B (1 x) |
| RESET-ETHERNET | B03H (2 x) |
| RESET-ETHERNET | B05B (2 x) |
| RESET-NVM | B03H (3 x) |
| RESET-PNX5100 | B03H (2 x) |
| RESET-PNX5100 | B08C (1 x) |
| RESET-STBY | B03H (2 x) |
| RESET-SYSTEM | B02A (1 x) |
| RESET-SYSTEM | B03G (1 x) |
| RESET-SYSTEM | B03H (3 x) |
| RF-AGC | B02A (2 x) |
| RIGHT-SPEAKER | B06A (4 x) |
| RREF-PNX85XX | B03A (2 x) |
| RREF-PNX85XX | B05A (1 x) |
| R-VGA | B03E (1 x) |
| R-VGA | B04C (1 x) |
| RX0- | B05A (2 x) |
| RX0+ | B05A (2 x) |
| RX1- | B05A (2 x) |
| RX1+ | B05A (2 x) |
| RX2- | B05A (2 x) |
| RX2+ | B05A (2 x) |
| RX51001A- | B03B (1 x) |
| RX51001A- | B07B (1 x) |
| RX51001A- | B08D (1 x) |
| RX51001A+ | B03B (1 x) |
| RX51001A+ | B07B (1 x) |
| RX51001A+ | B08D (1 x) |
| RX51001B- | B03B (1 x) |
| RX51001B- | B07B (2 x) |
| RX51001B- | B08D (1 x) |
| RX51001B+ | B03B (1 x) |
| RX51001B+ | B07B (2 x) |
| RX51001B+ | B08D (1 x) |
| RX51001C- | B03B (1 x) |
| RX51001C- | B07B (2 x) |
| RX51001C- | B08D (1 x) |
| RX51001C+ | B03B (1 x) |
| RX51001C+ | B07B (2 x) |
| RX51001C+ | B08D (1 x) |
| RX51001CLK- | B03B (1 x) |
| RX51001CLK- | B07B (2 x) |
| RX51001CLK- | B08D (1 x) |
| RX51001CLK+ | B03B (1 x) |
| RX51001CLK+ | B07B (2 x) |
| RX51001CLK+ | B08D (1 x) |
| RX51001D- | B03B (1 x) |
| RX51001D- | B07B (2 x) |
| RX51001D- | B08D (1 x) |
| RX51001D+ | B03B (1 x) |
| RX51001D+ | B07B (2 x) |
| RX51001D+ | B08D (1 x) |
| RX51001E- | B03B (1 x) |
| RX51001E- | B07B (2 x) |
| RX51001E- | B08D (1 x) |
| RX51001E+ | B03B (1 x) |
| RX51001E+ | B07B (2 x) |
| RX51001E+ | B08D (1 x) |
| RX51002A- | B03B (1 x) |
| RX51002A- | B07B (1 x) |
| RX51002A- | B08D (1 x) |
| RX51002A+ | B03B (1 x) |
| RX51002A+ | B07B (1 x) |
| RX51002A+ | B08D (1 x) |
| RX51002B- | B03B (1 x) |
| RX51002B- | B07B (1 x) |
| RX51002B- | B08D (1 x) |
| RX51002B+ | B03B (1 x) |
| RX51002B+ | B07B (1 x) |
| RX51002B+ | B08D (1 x) |
| RX51002C- | B03B (1 x) |
| RX51002C- | B07B (1 x) |
| RX51002C- | B08D (1 x) |
| RX51002C+ | B03B (1 x) |
| RX51002C+ | B07B (1 x) |
| RX51002C+ | B08D (1 x) |
| RX51002CLK- | B03B (1 x) |
| RX51002CLK- | B07B (1 x) |
| RX51002CLK- | B08D (1 x) |
| RX51002CLK+ | B03B (1 x) |
| RX51002CLK+ | B07B (1 x) |
| RX51002CLK+ | B08D (1 x) |
| RX51002D- | B03B (1 x) |
| RX51002D- | B07B (1 x) |
| RX51002D- | B08D (1 x) |
| RX51002D+ | B03B (1 x) |
| RX51002D+ | B07B (1 x) |
| RX51002D+ | B08D (1 x) |
| RX51002E- | B03B (1 x) |
| RX51002E- | B07B (1 x) |
| RX51002E- | B08D (1 x) |
| RX51002E+ | B03B (1 x) |
| RX51002E+ | B07B (1 x) |
| RX51002E+ | B08D (1 x) |
| RXC- | B05A (2 x) |
| RXC+ | B05A (2 x) |
| RXD | B03G (1 x) |
| RXD | B04A (1 x) |
| RXD-BOLT-ON | B04A (2 x) |
| RXD-MIPS | B03G (2 x) |
| RXD-MIPS | B04A (2 x) |
| RXD-MIPS2 | B03G (2 x) |
| RXD-UP | B03G (1 x) |
| RXD-UP | B03H (2 x) |
| RXD-UP | B04A (2 x) |
| SC1-B | B03E (1 x) |
| SC1-B | B04B (1 x) |
| SC1-G | B03E (1 x) |
| SC1-G | B04B (1 x) |
| SC1-R | B03E (1 x) |
| SC1-R | B04B (1 x) |
| SCL1 | B03G (2 x) |
| SCL2 | B03G (3 x) |
| SCL3 | B03G (2 x) |
| SCL-AMBI-3V3 | B08C (1 x) |
| SCL-AMBI-3V3 | B08E (1 x) |
| SCL-DISP | B03G (1 x) |
| SCL-DISP | B07B (3 x) |
| SCL-SET | B01B (1 x) |
| SCL-SET | B03G (3 x) |
| SCL-SET | B04B (3 x) |
| SCL-SSB | B02A (1 x) |
| SCL-SSB | B03G (2 x) |
| SCL-SSB | B04A (1 x) |
| SCL-SSB | B05A (1 x) |
| SCL-SSB | B08C (2 x) |
| SCL-TUNER | B02A (2 x) |
| SCL-UP-MIPS | B03G (3 x) |
| SCL-UP-MIPS | B03H (2 x) |
| SDA1 | B03G (2 x) |
| SDA2 | B03G (3 x) |
| SDA3 | B03G (2 x) |
| SDA-AMBI-3V3 | B08C (1 x) |
| SDA-AMBI-3V3 | B08E (1 x) |
| SDA-DISP | B03G (1 x) |
| SDA-DISP | B07B (3 x) |
| SDA-SET | B01B (1 x) |
| SDA-SET | B03G (3 x) |
| SDA-SET | B04B (3 x) |
| SDA-SSB | B02A (1 x) |
| SDA-SSB | B03G (2 x) |
| SDA-SSB | B04A (1 x) |
| SDA-SSB | B05A (1 x) |
| SDA-SSB | B08C (2 x) |
| SDA-TUNER | B02A (2 x) |
| SDA-UP-MIPS | B03G (3 x) |
| SDA-UP-MIPS | B03H (2 x) |
| SDM | B03H (3 x) |
| SENSE+1V2-PNX5100 | B01B (1 x) |
| SENSE+1V2-PNX5100 | B08A (2 x) |
| SENSE+1V2-PNX85XX | B01A (1 x) |
| SENSE+1V2-PNX85XX | B03A (1 x) |
| SIF | B02A (1 x) |
| SIF | B03E (1 x) |
| SIF-GND | B02A (1 x) |
| SIF-GND | B03E (2 x) |
| SPDIF-IN | B03D (1 x) |
| SPDIF-OUT | B04C (1 x) |
| SPDIF-OUT-1 | B03D (1 x) |
| SPDIF-OUT-1 | B04C (1 x) |
| SPI-CLK | B03H (2 x) |
| SPI-CSB | B03H (2 x) |
| SPI-DO_I2C-SDA | B03G (2 x) |
| SPI-DO_I2C-SDA | B04A (1 x) |
| SPI-PROG | B03H (3 x) |
| SPI-SDI | B03H (2 x) |
| SPI-SDO | B03H (2 x) |
| SPI-WP | B03H (3 x) |
| STANDBY | B01B (1 x) |
| STANDBY | B03H (2 x) |
| STANDBY | B04A (1 x) |
| TACHO1 | B04B (2 x) |
| TACHO1-INV | B04B (2 x) |
| TACHO2 | B04B (2 x) |
| TACHO2-INV | B04B (2 x) |
| TX1A- | B07B (1 x) |
| TX1A- | B08D (1 x) |
| TX1A+ | B07B (1 x) |
| TX1A+ | B08D (1 x) |
| TX1B- | B07B (1 x) |
| TX1B- | B08D (1 x) |
| TX1B+ | B07B (1 x) |
| TX1B+ | B08D (1 x) |
| TX1C- | B07B (1 x) |
| TX1C- | B08D (1 x) |
| TX1C+ | B07B (1 x) |
| TX1C+ | B08D (1 x) |
| TX1CLK- | B07B (1 x) |
| TX1CLK- | B08D (1 x) |
| TX1CLK+ | B07B (1 x) |
| TX1CLK+ | B08D (1 x) |
| TX1D- | B07B (1 x) |
| TX1D- | B08D (1 x) |
| TX1D+ | B07B (1 x) |
| TX1D+ | B08D (1 x) |
| TX1E- | B07B (1 x) |
| TX1E- | B08D (1 x) |
| TX1E+ | B07B (1 x) |
| TX1E+ | B08D (1 x) |
| TX2A- | B07B (1 x) |
| TX2A- | B08D (1 x) |
| TX2A+ | B07B (1 x) |
| TX2A+ | B08D (1 x) |
| TX2B- | B07B (1 x) |
| TX2B- | B08D (1 x) |
| TX2B+ | B07B (1 x) |
| TX2B+ | B08D (1 x) |
| TX2C- | B07B (1 x) |
| TX2C- | B08D (1 x) |
| TX2C+ | B07B (1 x) |
| TX2C+ | B08D (1 x) |
| TX2CLK- | B07B (1 x) |
| TX2CLK- | B08D (1 x) |
| TX2CLK+ | B07B (1 x) |
| TX2CLK+ | B08D (1 x) |
| TX2D- | B07B (1 x) |
| TX2D- | B08D (1 x) |
| TX2D+ | B07B (1 x) |
| TX2D+ | B08D (1 x) |
| TX2E- | B07B (1 x) |
| TX2E- | B08D (1 x) |
| TX2E+ | B07B (1 x) |
| TX2E+ | B08D (1 x) |
| TX3A- | B07B (1 x) |
| TX3A- | B08D (1 x) |
| TX3A+ | B07B (1 x) |
| TX3A+ | B08D (1 x) |
| TX3B- | B07B (1 x) |
| TX3B- | B08D (1 x) |
| TX3B+ | B07B (1 x) |
| TX3B+ | B08D (1 x) |
| TX3C- | B07B (1 x) |
| TX3C- | B08D (1 x) |
| TX3C+ | B07B (1 x) |
| TX3C+ | B08D (1 x) |
| TX3CLK- | B07B (1 x) |
| TX3CLK- | B08D (1 x) |
| TX3CLK+ | B07B (1 x) |
| TX3CLK+ | B08D (1 x) |
| TX3D- | B07B (1 x) |
| TX3D- | B08D (1 x) |
| TX3D+ | B07B (1 x) |
| TX3D+ | B08D (1 x) |
| TX3E- | B07B (1 x) |
| TX3E- | B08D (1 x) |
| TX3E+ | B07B (1 x) |
| TX3E+ | B08D (1 x) |
| TX4A- | B07B (1 x) |
| TX4A- | B08D (1 x) |
| TX4A+ | B07B (1 x) |
| TX4A+ | B08D (1 x) |
| TX4B- | B07B (1 x) |
| TX4B- | B08D (1 x) |
| TX4B+ | B07B (1 x) |
| TX4B+ | B08D (1 x) |
| TX4C- | B07B (1 x) |
| TX4C- | B08D (1 x) |
| TX4C+ | B07B (1 x) |
| TX4C+ | B08D (1 x) |
| TX4CLK- | B07B (1 x) |
| TX4CLK- | B08D (1 x) |
| TX4CLK+ | B07B (1 x) |
| TX4CLK+ | B08D (1 x) |
| TX4D- | B07B (1 x) |
| TX4D- | B08D (1 x) |
| TX4D+ | B07B (1 x) |
| TX4D+ | B08D (1 x) |
| TX4E- | B07B (1 x) |
| TX4E- | B08D (1 x) |
| TX4E+ | B07B (1 x) |
| TX4E+ | B08D (1 x) |
| TXD | B03G (1 x) |
| TXD | B04A (1 x) |
| TXD-BOLT-ON | B04A (2 x) |
| TXD-MIPS | B03G (2 x) |
| TXD-MIPS | B04A (2 x) |
| TXD-MIPS2 | B03G (2 x) |
| TXD-UP | B03G (1 x) |
| TXD-UP | B03H (2 x) |
| TXD-UP | B04A (2 x) |
| UART-SWITCH | B03H (2 x) |
| USB20-DM | B03G (2 x) |
| USB20-DP | B03G (2 x) |
| USB-OC | B03G (2 x) |
| VDD_1V8 | B05A (2 x) |
| VDDA-ADC | B03A (1 x) |
| VDDA-AUDIO | B03A (2 x) |
| VDDA-AUDIO | B03D (4 x) |
| VDDA-DAC | B03A (1 x) |
| VDDA-DAC | B03D (1 x) |
| VDDA-LVDS | B03A (1 x) |
| VDDA-LVDS | B03B (1 x) |
| VDDH_3V3 | B05A (3 x) |
| VDDO_3V3 | B05A (2 x) |
| VDDS_3V3 | B05A (2 x) |
| VSW | B01A (1 x) |
| V-SYNC-VGA | B03E (1 x) |
| V-SYNC-VGA | B04C (1 x) |
| WC-EEPROM-PNX5100_SPI-DI | B03G (1 x) |
| WC-EEPROM-PNX5100_SPI-DI | B04A (1 x) |
| WC-EEPROM-PNX5100_SPI-DI | B04C (1 x) |
| WC-EEPROM-PNX5100_SPI-DI | B08C (2 x) |
| WP-NANDFLASH | B03G (2 x) |
| WP-NANDFLASH | B03H (2 x) |
| XIO-ACK | B03G (3 x) |
| XIO-SEL-NAND | B03G (3 x) |
| Y_CVBS-MON-OUT | B03E (1 x) |
| Y_CVBS-MON-OUT | B04B (1 x) |
| Y_CVBS-MON-OUT-SC | B04B (2 x) |

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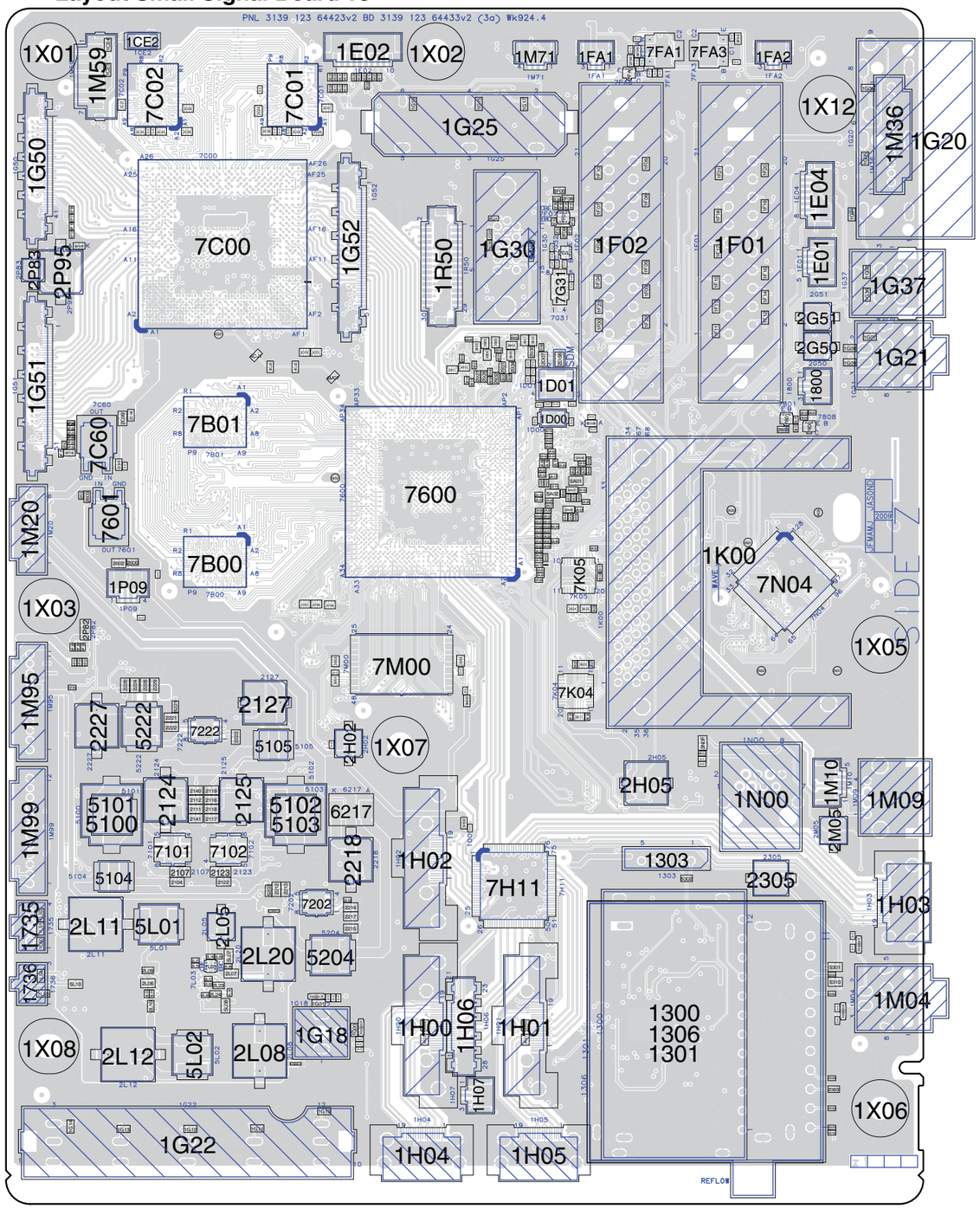
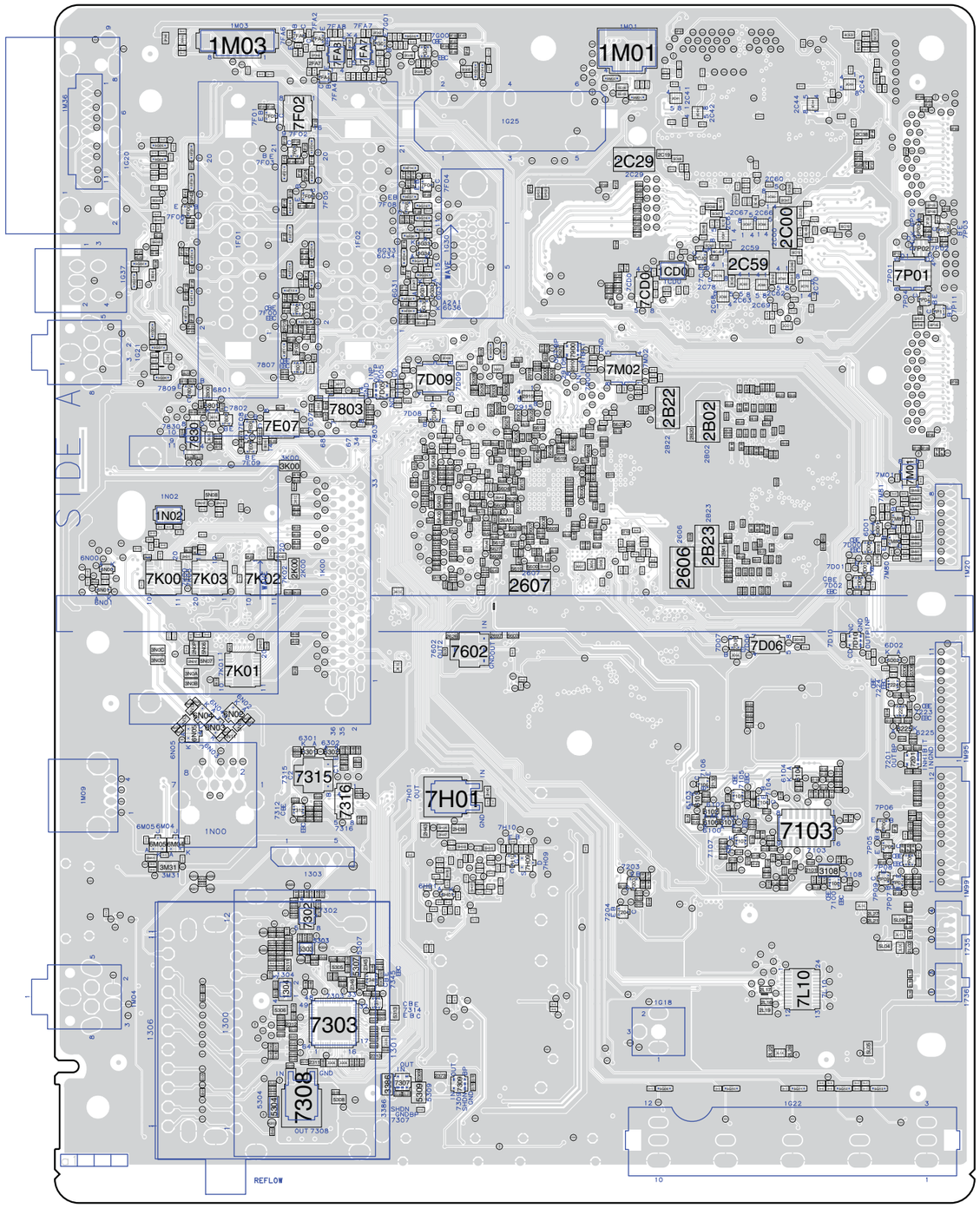
## Layout Small Signal Board v3

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