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Service Manual SDI plasma panels: 3122 785 14990

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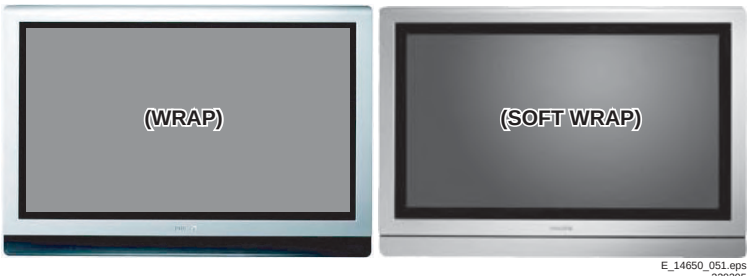

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ServiceManual

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PHILIPS

1. Technical Specifications, Connections, and Chassis Overview

Index of this chapter:

1.1 Technical Specifications
1.2 Connections
1.3 Chassis Overview

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

1.1 Technical Specifications

1.1.1 Vision

Display type	:	Plasma
	:	16:9
Screen size	:	42” (106 cm), 16:9
	:	50” (127 cm), 16:9
Resolution (HxV pixels)	:	42"(low res)852x480p
	:	42" - 1024x1024i
	:	50" - 1366x768p
Contrast ratio	:	42” (low res) - 3000:1
	:	42” / 50” - 1000:1
Light output (cd/m^2)	:	42" - 1000
	:	50" - 900
Viewing angle (HxV degrees)	:	160 x 160
Tuning system	:	PLL
Colour systems	:	PAL B/G, D/K, I
	:	SECAM B/G, D/K, L/L’
Video playback	:	NTSC 3.58, 4.43
	:	PAL
	:	SECAM
	:	VGA (640 x 480)
	:	SVGA (800 x 600)
	:	XVGA (1024 x 768)
	:	WXGA (1280 x 768)
Channel selections	:	100 presets
	:	UVSH
Aerial input	:	75 ohm, IEC-type

1.1.2 Sound

Sound systems	:	AV stereo,
	:	FM/FM B/G(5.5-5.74),
	:	NICAM B/G(5.5-5.85)
	:	NICAM D/K(5.5-5.85),
	:	NICAM I (6.0-6.52)
Maximum power	:	2 x 15 W_RMS (int.)

1.1.3 Miscellaneous

Power supply:		
- Mains voltage (V_{AC})	:	220 - 240
- Mains frequency (Hz)	:	50 / 60
Ambient conditions:		
- Temperature range (°C)	:	+5 to +40
- Maximum humidity	:	90% R.H.
Power consumption		
- Normal operation (W)	:	42" - ca. 450
	:	50" - ca. 600
- Stand-by (W)	:	< 2
Dimensions (WxHxD cm)	:	42" - 109x75x10
	:	50" - 128x88x10
Weight (kg)	:	42" - 42
	:	50" - 58

1.2 Connections

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

1.2.1 Side I/O

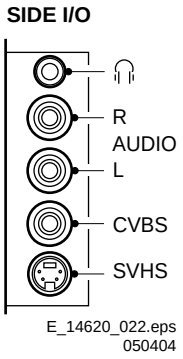

Figure 1-1 Side I/O connections

Mini Jack: Audio Head phone - Out

Bk	- Head phone	32 - 600 ohm / 10 mW	

Cinch: Video CVBS - In, Audio - In

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

SVHS (Hosiden): Video Y/C - In

1	- Ground Y	Gnd	
2	- Ground C	Gnd	
3	- Video Y	1 V_{PP} / 75 ohm	
4	- Video C	0.3 V_{PP}P / 75 ohm	

1.2.2 Rear Connections

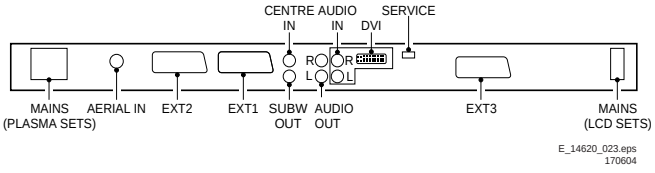

Figure 1-2 Rear connections

Aerial - In

-	- IEC-type (EU)	Coax, 75 ohm	

EXT2: Video RGB/YC - In, CVBS - In/Out, Audio - In/Out

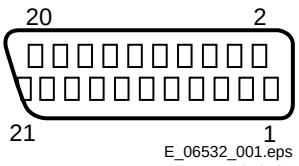

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Figure 1-3 SCART connector

1	- Audio R	0.5 V_{RMS} / 1 kohm	
2	- Audio R	0.5 V_{RMS} / 10 kohm	
3	- Audio L	0.5 V_{RMS} / 1 kohm	
4	- Ground Audio	Gnd	
5	- Ground Blue	Gnd	
6	- Audio L	0.5 V_{RMS} / 10 kohm	
7	- Video Blue/C-out	0.7 V_{PP} / 75 ohm	
8	- Function Select	0 - 2 V: INT 4.5 - 7 V: EXT 16:9 9.5 - 12 V: EXT 4:3	
9	- Ground Green	Gnd	
10	- Easylink P50	0 - 5 V / 4.7 kohm	
11	- Video Green	0.7 V_{PP} / 75 ohm	
12	- n.c.		
13	- Ground Red	Gnd	
14	- Ground P50	Gnd	
15	- Video Red/C	0.7 V_{PP} / 75 ohm	
16	- FBL	0 - 0.4 V: INT 1 - 3 V: EXT / 75 ohm	
17	- Ground Video	Gnd	
18	- Ground FBL	Gnd	
19	- Video CVBS	1 V_{PP} / 75 ohm	
20	- Video CVBS/Y	1 V_{PP} / 75 ohm	
21	- Shield	Gnd	

EXT1: Video RGB/CVBS - In, Audio - In

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

Cinch: Sub woofer - Out, Centre - In

Bu	- Centre	0.5 V_{RMS} / 10 kohm	
Bk	- Sub woofer	0.5 V_{RMS} / 10 kohm	

Cinch: Audio - Out

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

Cinch: DVI Audio - In

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

DVI-I: Digital/Analogue Video - In

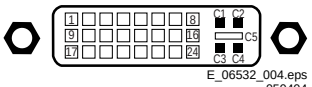

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Figure 1-4 DVI-I connector

1	- D2-		
2	- D2+		
3	- Shield	Gnd	
4	- D4-		
5	- D4+		
6	- DDC_SCL	DDC clock	
7	- DDC_SDA	DDC data	
8	- V-sync	0 - 5 V	
9	- D1-		
10	- D1+		
11	- Shield	Gnd	
12	- D3-		
13	- D3+		
14	- +5V		
15	- Ground	Gnd	
16	- HPD	Hot Plug Detect	
17	- D0-		
18	- D0+		
19	- Shield	Gnd	
20	- D5-		
21	- D5+		
22	- Shield	Gnd	
23	- CLK+		
24	- CLK-		
C1	- Video Red	0.7 V_{PP} / 75 ohm	
C2	- Video Green	0.7 V_{PP} / 75 ohm	
C3	- Video Blue	0.7 V_{PP} / 75 ohm	
C4	- H-sync	0 - 5 V	
C5	- Ground	Gnd	

Service connector (ComPair)

1	- SDA-S	I^2C Data (0 - 5 V)	
2	- SCL-S	I^2C Clock (0 - 5 V)	
3	- Ground	Gnd	

EXT3: Video RGB/CVBS - In, Audio - In

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

1.3 Chassis Overview

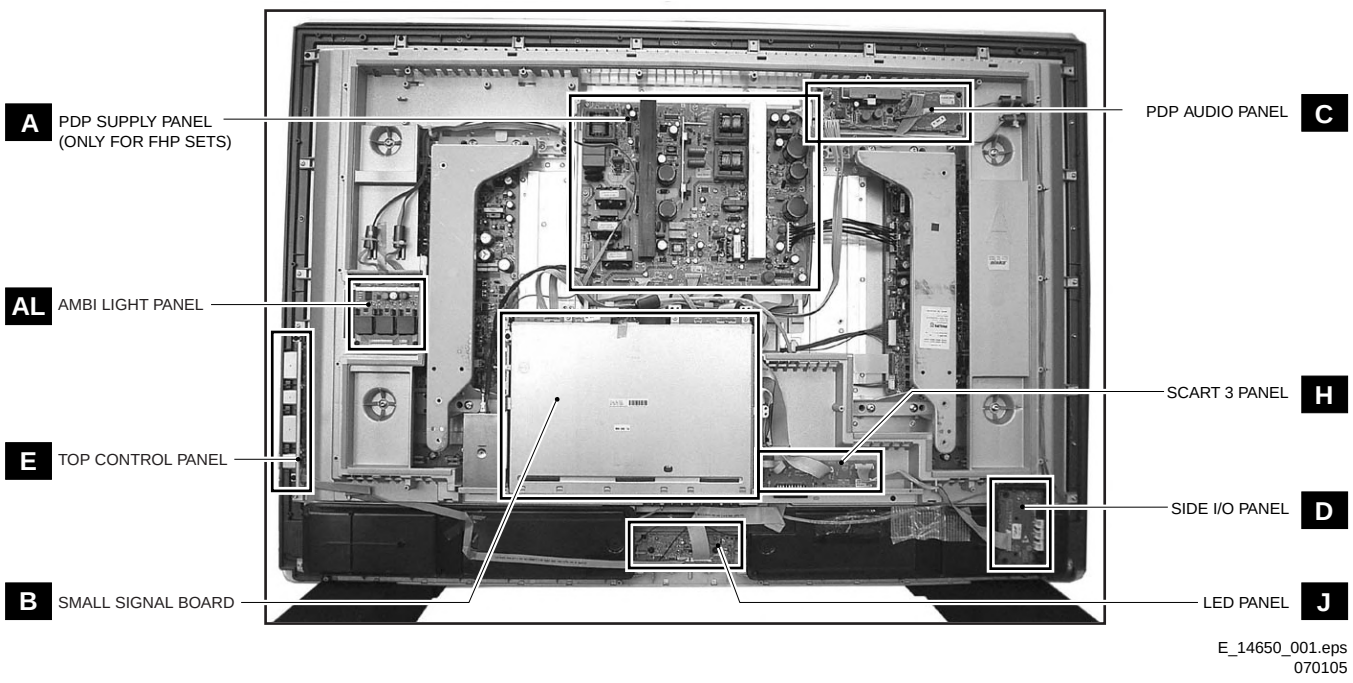

Figure 1-5 PWB location

2. Safety Instructions, Warnings, and Notes

Index of this chapter:

2.1 Safety Instructions
2.2 Warnings
2.3 Notes

2.1 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 Mohm and 12 Mohm.
  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.

2.2 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. Available ESD protection equipment:
  – Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
  – Wristband tester 4822 344 13999.
- 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.

2.3 Notes

2.3.1 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 (see chapter 5) 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.
- The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
- Manufactured under license from Dolby Laboratories. “Dolby”, “Pro Logic” and the “double-D symbol”, are trademarks of Dolby Laboratories.

2.3.2 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 kohm).
- Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).
- All capacitor values are given in micro-farads (μ= x10^{-6}), nano-farads (n= x10^{-9}), or pico-farads (p= x10^{-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 in the Spare Parts List. Therefore, always check this list when there is any doubt.

2.3.3 Rework on BGA (Ball Grid Array) ICs

General

Although (LF)BGA assembly yields are very high, there may still be a requirement for component rework. By rework, we mean the process of removing the component from the PWB and replacing it with a new component. If an (LF)BGA is removed from a PWB, the solder balls of the component are deformed drastically so the removed (LF)BGA has to be discarded.

Device Removal

As is the case with any component that, is being removed, it is essential when removing an (LF)BGA, that the board, tracks, solder lands, or surrounding components are not damaged. To remove an (LF)BGA, the board must be uniformly heated to a temperature close to the reflow soldering temperature. A uniform temperature reduces the risk of warping the PWB. To do this, we recommend that the board is heated until it is certain that all the joints are molten. Then carefully pull the component off the board with a vacuum nozzle. For the appropriate temperature profiles, see the IC data sheet.

Area Preparation

When the component has been removed, the vacant IC area must be cleaned before replacing the (LF)BGA.
Removing an IC often leaves varying amounts of solder on the mounting lands. This excessive solder can be removed with either a solder sucker or solder wick. The remaining flux can be removed with a brush and cleaning agent.
After the board is properly cleaned and inspected, apply flux on the solder lands and on the connection balls of the (LF)BGA.
Note: Do not apply solder paste, as this has been shown to result in problems during re-soldering.

Device Replacement
The last step in the repair process is to solder the new component on the board. Ideally, the (LF)BGA should be aligned under a microscope or magnifying glass. If this is not possible, try to align the (LF)BGA with any board markers. So as not to damage neighbouring components, it may be necessary to reduce some temperatures and times.

More Information
For more information on how to handle BGA devices, visit this URL: *www.atyourservice.ce.philips.com* (needs subscription, not available for all regions). After login, select “Magazine”, then go to “Workshop Information”. Here you will find Information on how to deal with BGA-ICs.

2.3.4 Lead-free Solder

Philips CE is producing lead-free sets (PBF) from 1.1.2005 onwards.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 5 and 6 refer to the production year, digits 7 and 8 refer to production week (in example below it is 1991 week 18).

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Figure 2-1 Serial number example

Regardless of the special lead-free logo (which is not always indicated), one must treat all sets from this date onwards according to the rules as described below.

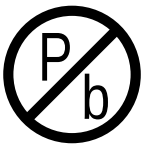

Figure 2-2 Lead-free logo

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

- Use only lead-free soldering tin Philips SAC305 with order code 0622 149 00106. 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 stabilise 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 stabilised 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.
- Use only original spare-parts listed in the Service-Manuals. Not listed standard material (commodities) has to be purchased at external companies.
- Special information for lead-free BGA ICs: these ICs will be delivered in so-called "dry-packaging" to protect the IC against moisture. This packaging may only be opened shortly before it is used (soldered). Otherwise the body of the IC gets "wet" inside and during the heating time the structure of the IC will be destroyed due to high (steam-) pressure inside the body. If the packaging was opened before usage, the IC has to be heated up for some hours (around 90°C) for drying (think of ESD-protection!).
  Do not re-use BGAs at all!
- For sets produced before 1.1.2005, containing leaded soldering tin and components, all needed spare parts will be available till the end of the service period. For the repair of such sets nothing changes.

In case of doubt whether the board is lead-free or not (or with mixed technologies), you can use the following method:

- Always use the highest temperature to solder, when using SAC305 (see also instructions below).
- De-solder thoroughly (clean solder joints to avoid the mixing of two alloys).

Caution: For BGA-ICs, you **must** use the correct temperature profile, which is coupled to the 12NC. For an overview of these profiles, visit the website *www.atyourservice.ce.philips.com* (needs subscription, but is not available for all regions).
You will find this and more technical information within the "Magazine", chapter "Workshop information".
For additional questions please contact your local repair help desk.

2.3.5 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. Directions for Use

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

4. Mechanical Instructions

Index of this chapter:

4.1 Cable Dressing
4.2 Service Position
4.3 Assy/PWB Removal
4.4 Plasma Panel / Glass Plate (Dis)Assembly
4.5 Set Re-assembly

Notes:

- Figures below can deviate slightly from the actual situation, due to the different set executions.
- Follow the disassemble instructions in described order.
- Be aware that the internal (gold coloured) frame is made of conducting material. So, be cautious during electrical measurements!

4.1 Cable Dressing

4.1.1 Chassis

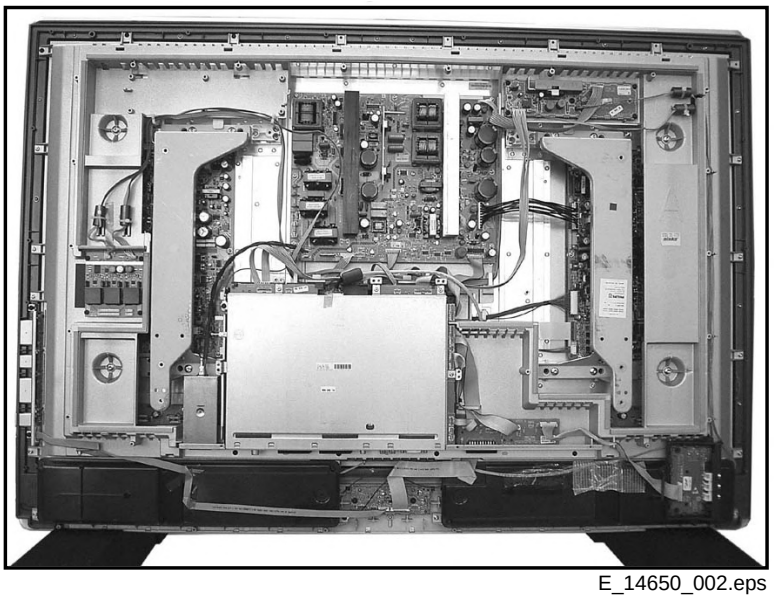

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Figure 4-1 Chassis cable dressing

4.2 Service Position

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

- The buffers from the packaging (see figure "Rear cover").
- Foam bars (created for service).
- Aluminium service stands (created for service).

4.2.1 Foam Bars

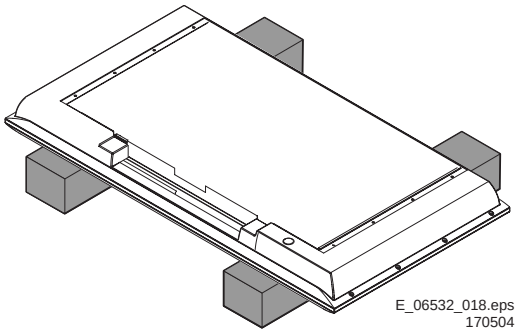

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Figure 4-2 Foam bars

The foam bars (order code 3122 785 90580 for two pieces) can be used for all types and sizes of Flat TVs. 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.

4.2.2 Aluminium Stands

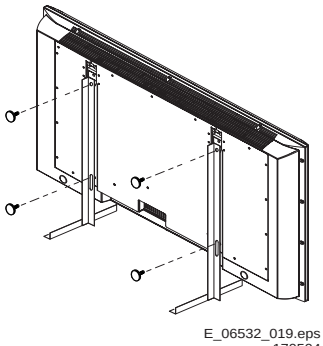

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Figure 4-3 Aluminium stands (MkI)

The new (MkII) aluminium stands (order code 3122 785 90690) can also be used to do measurements, alignments, and duration tests. The stands can be (dis)mounted quick and easy by means of sliding them in/out the "mushrooms".
Important: For (older) FTV sets without these "mushrooms", it is obligatory to use the provided screws, otherwise it is possible to damage the monitor inside!.

4.3 Assy/PWB Removal

4.3.1 Metal Back Plate

Caution: Disconnect the mains power cord before you remove the metal back plate.

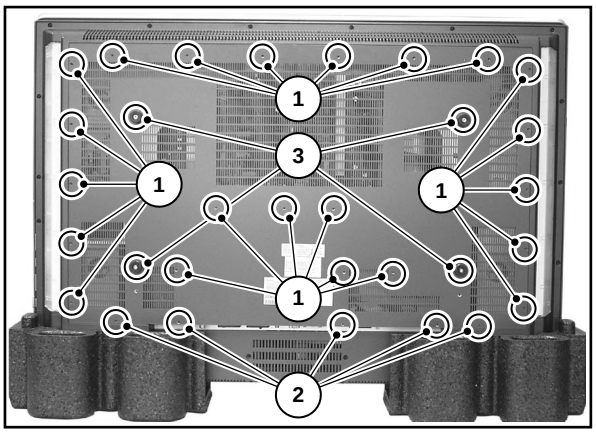

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Figure 4-4 Metal back plate

1. Place the TV set upside down on a table top, using the foam bars (see part "Foam Bars").
   Caution: do **not** put pressure on the display, but let the monitor lean on the speakers or the Front cover.
2. Remove all T10 parker screws (1) from the top, centre, and left and right sides of the back plate.
3. Remove all T10 tapping screws (2) from the bottom of the back plate.
4. Remove the four "mushrooms" (3) from the back plate.
5. Lift the back plate from the set. Make sure that wires and flat foils are not damaged during the back plate removal.

4.3.2 Rear Cover

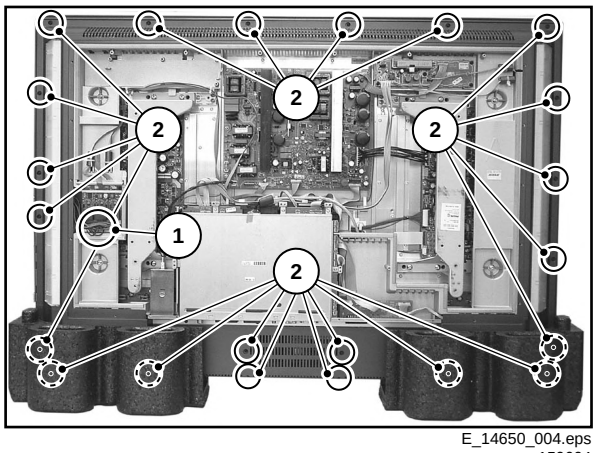

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Figure 4-5 Rear cover

1. Disconnect all four connectors (1) at the Ambient Light Inverter that go to the Ambient Lights in the rear cover.
2. Remove all T10 tapping screws (2) around the edges of the rear cover.
3. Lift the rear cover from the set.

4.3.3 Ambient Light Panel

1. Disconnect all cables from the Ambient Light Inverter panel.
2. Remove all mounting screws from the Ambient Light Inverter panel.
3. Take out the Ambient Light Inverter panel.

4.3.4 Power Supply Panel

1. Disconnect all cables from the Power Supply panel.
2. Remove all mounting screws from the Power Supply panel.
3. Take out the Power Supply panel.

4.3.5 SCART3 Panel

1. Disconnect all cables from the SCART3 panel.
2. Remove the two mounting screws (7) near the SCART3 at the connector plate (see figure "Connector plate").
3. Take out the SCART3 panel.

4.3.6 Audio Panel

1. Disconnect all cables from the Audio panel.
2. Remove all mounting screws from the Audio panel.
3. Take out the Audio panel.

4.3.7 Side I/O Panel

1. Disconnect the cable from the Side I/O panel.
2. Release the clamps and take out the Side I/O panel from its bracket.

4.3.8 Top / Side Control

1. Remove the mounting screws from the Top / Side Control panel bracket.
2. Disconnect the cable.
3. Release the clamps and take out the Top / Side Control panel.

4.3.9 LED Panel

1. Disconnect all cables from the LED panel.
2. Remove the mounting screws from the LED panel.
3. Take out the LED panel.

4.3.10 Speakers

1. Remove all mounting screws.
2. After removing the cover plate, you can access the speakers.
3. Be sure that the foam that makes the unit airtight is not damaged.

4.3.11 SSB

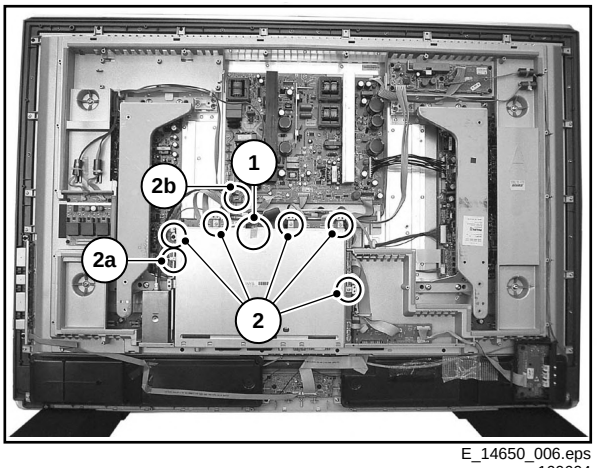

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Figure 4-6 SSB top shielding

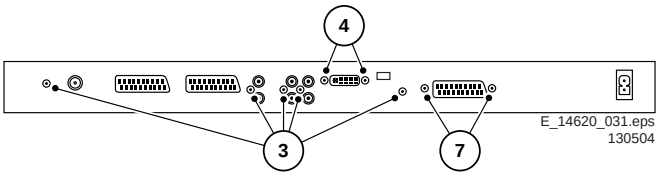

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Figure 4-7 Connector plate

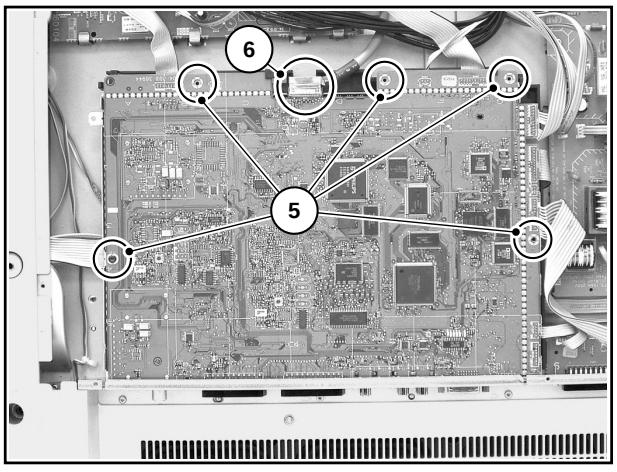

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Figure 4-8 SSB (photo from FTL2.x)

1. Remove the LVDS fixing tape (1).
2. Remove all fixing screws (2).
3. Disconnect the grounding wire from the mains filter (2a).
4. Shift, and lift the shielding at the top. The panel hinges at the SCART side.
   Caution: do **not** damage the EMC shielding foam while you remove the shielding.
5. Remove mounting screws (3) from the connector plate. Use a 5 mm socket screwdriver to remove both DVI connector distance bolts (4).
6. Remove the mounting screws from the SSB (5).
7. Disconnect the LVDS cable (6).
8. Lift the SSB, disconnect all cables, and take out the SSB.

4.3.12 Ambient Lights

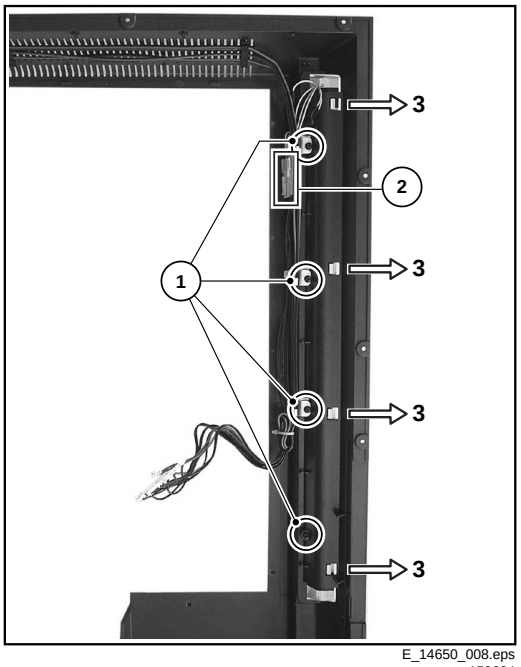

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Figure 4-9 Ambient light

Ambient lights are located in the rear cover of the set.

1. Remove all mounting Ambient Light screws (1).
2. Unplug the connectors (mounted with double-sided tape) (2).
3. Shift the Ambient light unit to the side (3) and take out the unit.

4.4 Plasma Panel / Glass Plate (Dis)Assembly

Important: Be sure to work in a dust free environment during the following activities. In addition, the use of (fabric) hand gloves is advised.

4.4.1 Plasma Display Panel

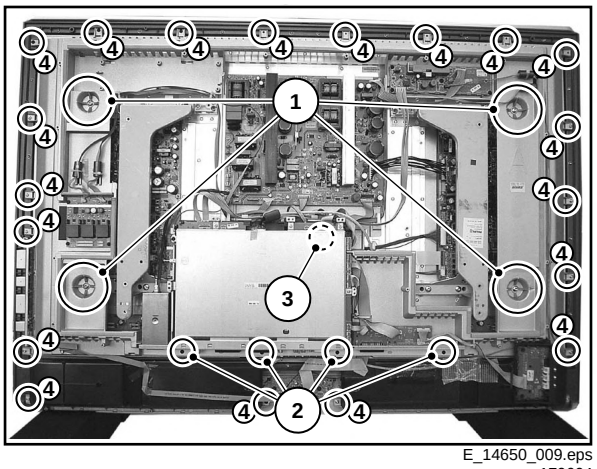

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Figure 4-10 Plasma panel removal (photo from 42" FHP)

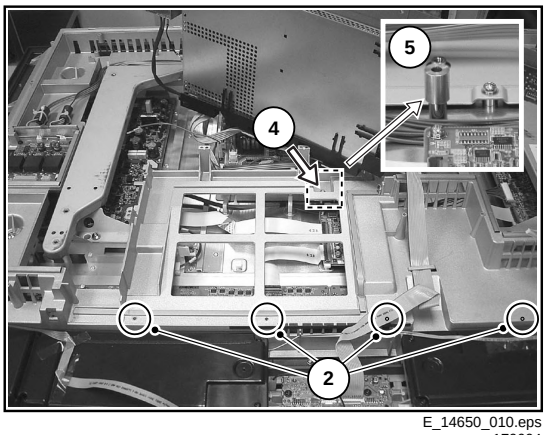

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Figure 4-11 Hidden screw

Disassembly

1. Place the TV set face down on the foam bars. Place the bars at the edges of the set so they will support the front frame, and not only the glass plate!
2. Remove the four T25 screws (1) that hold the plasma panel.
   Note: In some models, the upper left T25 screw is hidden under the Ambient Light Inverter panel. Remove this panel to get access to it.
3. Remove the fifth T25 screw that is located near the SSB.
   Note: In some models, this fifth screw is hidden under the SSB. To get access, you have to remove the four T10 screws (2) that mount the "SSB connector plate" to the frame. Then, lift the complete SSB unit away, so you can remove the hidden screw (4).
4. Remove all T10 tapping screws around the frame (4).
5. Next step is to unplug the following connectors (see also Wiring Diagram in chapter 6):
   – Mains plug on PSU.
   – Audio panel supply plug on PSU.
   – LVDS plug on SSB.
   – Ambilight supply plug on PSU.
   – SSB supply plugs on PSU.
   – Side/Top Control plug on LED panel.
   – Side I/O plug on LED panel.
   – SSB grounding wire.
6. Lift the plastic frame together with all PWBs from the PDP panel.
7. Now the PDP (incl. the PSU panel) can be removed. Lift the panel at the two metal bars from the glass plate.
8. Before sending the plasma panel to the NSO for repair or exchange, remove the PSU panel and the spacer (5) that is placed upon the centre mounting stud.

Assembly

In order to centre the (new) plasma panel correctly w.r.t. the glass plate, do the following:

1. Place the (new) plasma panel face down on foam bars.
2. Also, place the front assy (front panel with glass plate) on two other foam bars.
3. Mount the plastic frame on the plasma panel.
   Important: Be sure that the spacer (order code 3104 301 62781) is placed upon the centre mounting stud (5).
4. Lift this module (frame and PDP) and place it into the front assy.
5. Now follow the above described disassembly process in reverse order.

4.4.2 Glass Plate

1. Follow the above-described PDP disassembly instructions.
2. After removing the PDP, the glass plate is now accessible.

4.5 Set Re-assembly

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

Note: While re-assembling the set, make sure that:

- All cables are placed and connected in their original position (see figure “Cable dressing”).
- EMC Shielding foam is intact.
- LVDS connector (SSB) is secured with tape.
- Metal shielding strip at the Ambilight Inverters is in place.
- All "grounding" wires are re-connected:
  – Between metal speaker grid and frame (near the LED panel).
  – Between the Mains Filter and the SSB Top Shielding (see figure SSB Top shielding item 2a).
  – Between the SSB Top Shielding and the PSU (see figure SSB Top shielding item 2b).

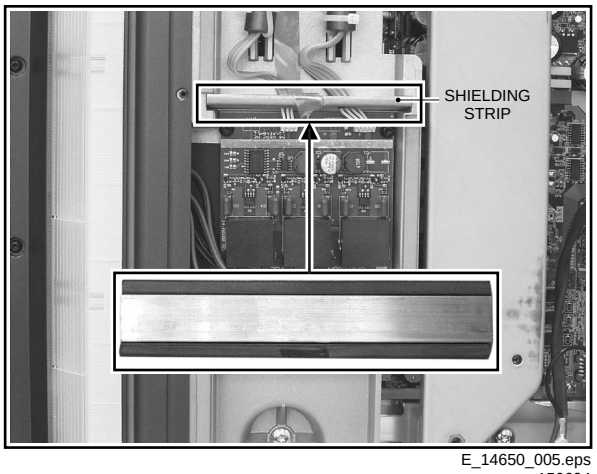

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Figure 4-12 Metal shielding strip at the Ambilight Inverter

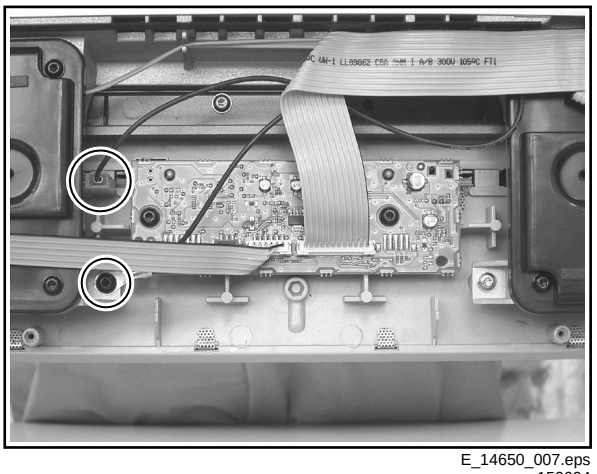

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Figure 4-13 Grounding wire of metal speaker grid

5. Service Modes, Error Codes, and Fault Finding

Index of this chapter:

5.1 Test Points
5.2 Service Modes
5.3 Problems and Solving Tips (related to CSM)
5.4 ComPair
5.5 Error Codes
5.6 The Blinking LED Procedure
5.7 Protections
5.8 Repair tips
5.9 Software Downloading

5.1 Test Points

The chassis is equipped with test points printed on the circuit board assemblies.

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) offer several features for the service technician, while the Customer Service Mode (CSM) is used for communication between a Philips Customer Care Centre (P3C) and a customer.

There is also the option of using ComPair, a hardware interface between a computer (see requirements below) and the TV chassis. It offers the ability of structured troubleshooting, test pattern generation, error code reading, software version read-out, and software upgrading.
Minimum requirements: a Pentium processor, Windows 95/ 98, and a CD-ROM drive (see also paragraph “ComPair”).

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.
- To start the blinking LED procedure.

Specifications
- Tuning frequency: 475.25 MHz for PAL/SECAM.
- Colour system: SECAM L for France or PAL B/G for the rest of Europe.
- 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.
  - Blue mute.
  - Automatic volume limiter (AVL).
  - Auto switch-off (when no video signal was received for 10 minutes).
  - Skip/blank of non-favourite pre-sets.
  - Smart modes.
  - Auto store of personal presets.
  - Auto user menu time-out.

How to activate SDM
Use one of the following methods:
- Use the standard RC-transmitter and key in the code **“062596”**, directly followed by the “MENU” button.

Note: It is possible that, together with the SDM, the main menu will appear. To switch it off, push the “MENU” button again.

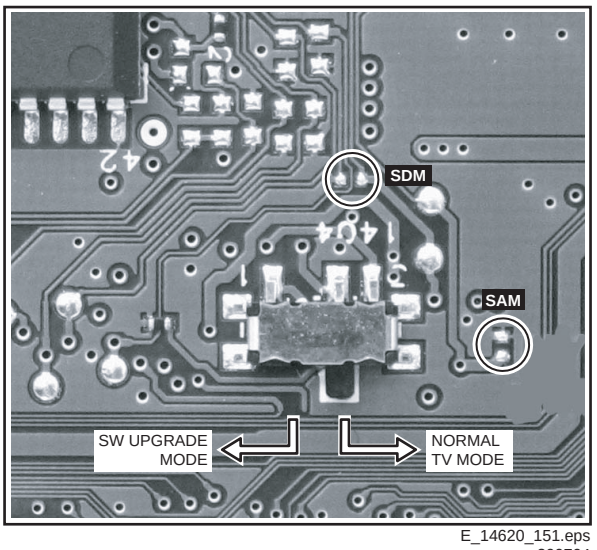

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Figure 5-1 Service pads

- Short for a moment the two solder pads on the SSB, with the indication “SDM”. Activation can be performed in all modes, except when the set has a problem with the main microprocessor.
  Caution: If the SDM is activated via the pins, all the software-controlled protections are de-activated.
- Use the DST-emulation feature of ComPair.
- Use the “DEFAULT” button on the Dealer Service Tool (RC7150).

How to navigate
When you press the “MENU” button 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 STANDBY via the RC-transmitter.
- Press the “EXIT” button on the DST.
- 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.

Specifications
- Operation hours counter.
- Software version.
- Option settings.
- Error buffer reading and erasing.
- Software alignments.

How to activate SAM
Use one of the following methods:
- Via a standard RC transmitter: key in the code **“062596”** directly followed by the “OSD [i+]” button. After activating

SAM with this method a service warning will appear on the screen, you can continue by pressing any digit key on the RC.
- Short for a moment the two solder pads on the SSB with the indication "SAM". Depending on the software version, it is possible that a service warning will appear. You can continue by pressing any digit key on the RC.
- Use the DST-emulation feature of ComPair.
- Press the ALIGN button on the DST while the set is in the normal operation

After activating this mode, “SAM” will appear in the upper right corner of the screen.

Contents of SAM:
- **OPERATION HOURS.** Displays the accumulated total of operation hours (not the stand-by hours).
- **HARDWARE INFO.**
  - **ROM VERSION.** Displays the date of the software and the software version of the ROM
    Example: TX21EU_1.0_01234 = AAAABB_X.Y_NNNNN.
    - **AAAA**= the chassis name.
    - **BB**= the region: EU= Europe, AP= Asia Pacific PAL/Multi, AN= Asia Pacific NTSC, US= USA, LT= LATAM.
    - **X.Y**= the software version, where X is the main version number (different numbers are not compatible with one another) and Y is the sub version number (a higher number is always compatible with a lower number).
    - **NNNNN**= last five digits of 12nc code software.
  - **FBX Version.** Displays the software version of the FBX
  - **SW VERSION EPLD**. Displays the software version of the EPLD.
- **ERRORS.** (followed by maximal 10 errors). The most recent error is displayed at the upper left (for an error explanation see paragraph “Error Codes”).
- **DEFECTIVE MODULE.** Here the module that generates the error is displayed. If there are multiple errors in the buffer, which are not all generated by a single module, there is probably another defect. It will then display the message “UNKNOWN” here.
- **RESET ERROR BUFFER.** When you press the “OK” button, the error buffer is reset.
- **ALIGNMENTS.** This will activate the “ALIGNMENTS” sub-menu.
- **DEALER OPTIONS.** Extra features for the dealers.
- **SERVICE OPTIONS.** Extra features for Service.
- **INITIALISE NVM.** When an NVM was corrupted (or replaced) in the former EM3 chassis, the microprocessor replaces the content with default data (to assure that the set can operate). However, all pre-sets and alignment values are gone now, and option numbers are not correct. Therefore, this was a very drastic way. In this chassis, the procedure is implemented in another way: The moment the processor recognises a corrupted NVM, the “initialise NVM” line will be highlighted. Now, you can do two things (dependent of the service instructions at that moment):
  - Save the content of the NVM via ComPair for development analysis, **before** initialising. This will give the Philips Service department an extra possibility for diagnosis (e.g. when Development asks for this).
  - Initialise the NVM (same as in the past, however now it happens conscious).
- **STORE.** All options and alignments are stored when pressing the “OK”-button
- **FUNCTIONAL TEST.** All devices are tested via the “OK” button. Eventual errors are displayed in the error buffer. The error buffer is not erased, the content returns when this test is terminated.
- **DAILY MENUS.** With the “OK” button, you can go to the normal user menu. SAM is still active in the background. With the “MENU” button, you return from the user menu to SAM menu. This feature can be helpful to quickly change some settings in the user menu.
- **SW MAINTENANCE.**
  - **UPGRADE.** More info see paragraph Software downloading.
  - **EVENTS.** Not useful for service purposes. In case of specific software problems, the development department can ask for this info.
  - **BDM INFO.** Broadcast Debug Menu info. The purpose of this menu is to debug the broadcast, **not** the TV. The menu gives an overview of what is received on the current preset.

Following items are displayed:

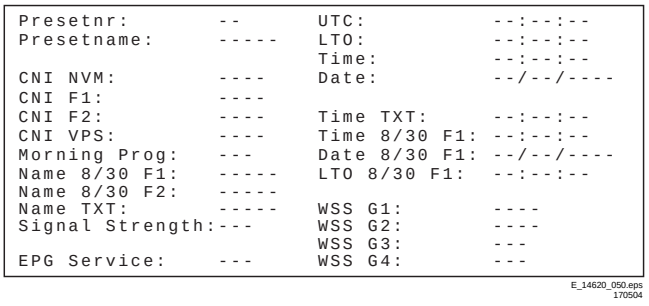

Figure 5-2 Broadcast debug menu overview

Table 5-1 Broadcast debug menu explanation

Item	Source	Description
Presetnr	Set	Preset number of the current selected preset.
Presetname	Set	Preset name of the current selected preset.
CNI NVM	Broadcaster	CNI number stored in NVM for the current preset.
CNI F1	Broadcaster	CNI number from transmitted Packet 8/30 Format 1.
CNI F2	Broadcaster	CNI number from transmitted Packet 8/30 Format 2.
CNI VPS	Broadcaster	CNI number from transmitted VPS line.
Morning Prog	Broadcaster	"ARD" or "ZDF" according to dedicated bit in 8/30 Format 1.
Name 8/30 F1	Broadcaster	Name extracted from status message of 8/30 Format 1.
Name 8/30 F2	Broadcaster	Name extracted from status message of 8/30 Format 2.
Name TXT	Broadcaster	Name extracted from TXT header.
Signal Strength	FBX	Noise figure measured for selected preset.
EPG Service	Set	EPG Service stored in NVM for current preset displayed as "TXT", "MCP", "SCP", "OCP".
UTC	Set	UTC (Universal Time Code formerly known as Greenwich Mean Time) used in the set.
LTO	Set	LTO (Local Time Offset) used in the set. Used by EPG for all NextView displays. (= Time TXT header - Time 8/30 F1)
Time	Set	Current time running in the set. Was extracted at start-up, then maintained by software.
Date	Set	Current date running in the set. Was extracted at start-up, then maintained by software.
Time TXT	Broadcaster	TXT header time from the selected preset.
Time 8/30 F1	Broadcaster	UTC time from 8/30 Format 1.
Date 8/30 F1	Broadcaster	Date from 8/30 Format 1.
LTO 8/30 F1	Broadcaster	LTO from 8/30 Format 1.
WSS G1	Broadcaster	WSS Group 1 (Aspect Ratio) bits 0 1 2 3
WSS G2	Broadcaster	WSS Group 2 (Enhanced Services) bits 4 5 6 7
WSS G3	Broadcaster	WSS Group 3 (Subtitles) bits 8 9 10
WSS G4	Broadcaster	WSS Group 4 (Reserved) bits 11 12 13

How to navigate
- In SAM, you can select the menu items with the “CURSOR UP/DOWN” key 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, it is possible to:
  – (De) activate the selected menu item.
  – Change the value of the selected menu item.
  – Activate the selected sub-menu.

How to exit SAM
Use one of the following methods:
- Press the “MENU” button on the RC-transmitter, or
- Switch the set to STANDBY via the RC-transmitter, or
- Press the “EXIT” button on the DST.

5.2.3 Customer Service Mode (CSM)

Purpose
When a customer is having problems with his TV-set, he can call his dealer. The service technician can than 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.

How to activate CSM
Use one of the following methods:
- Press the “MUTE” button on the RC-transmitter **simultaneously** with the “MENU” button on the TV (top control) for at least 4 seconds.
- 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 on the RC-transmitter, you can navigate through the menus.

Contents of CSM

CUSTOMER SERVICE MENU 1
- **SOFTWARE VERSION (example: TX21EU_1.0_01234).** Displays the built-in software version. In case of field problems related to software, software can be upgraded (for more details, see paragraph Software downloading). You will find details of the software versions in the chapter “Software Survey” of the “Product Survey - Colour Television” publication. This publication is generated four times a year.
- **FEATURE BOX**. The 12NC-number of the built-in Feature Box software.
- **SET TYPE.** This information is very helpful for a help desk/ 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.
- **CODE 1.** Gives the latest five errors of the error buffer. As soon as the built-in diagnose software has detected an error the buffer is adapted. The last occurred error is displayed on the left most position. Each error code is displayed as a 3-digit number. When less than 10 errors occur, the rest of the buffer is empty (000). See also paragraph Error Codes for a description.
- **CODE 2.** Gives the first five errors of the error buffer. See also paragraph Error Codes for a description.
- **VOLUME.** Gives the last status of the volume as set by the customer. The value can vary from 0 (volume is minimum) to 100 (volume is maximum). Volume values can be changed via the volume key on the RC-transmitter.
- **BRIGHTNESS.** Gives the last status of the brightness as set by the customer. The value can vary from 0 (brightness is minimum) to 100 (brightness is maximum). Brightness values can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “BRIGHTNESS”.
- **CONTRAST.** Gives the last status of the contrast as set by the customer. The value can vary from 0 (contrast is minimum) to 100 (contrast is maximum). Contrast values can be changed via “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “CONTRAST”.
- **COLOUR.** Gives the last status of the colour saturation, as set by the customer. The value can vary from 0 (colour is minimum) to 100 (colour is maximum). Colour values can be changed via “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “COLOUR”.
- **HUE.** Only relevant for NTSC-signals (e.g. some NTSC-DVD-discs).

CUSTOMER SERVICE MENU 2
- **SHARPNESS.** Gives the sharpness value. The value can vary from 0 (sharpness is minimum) to 7 (sharpness is maximum). In case of bad antenna signals, a too high value of the sharpness can result in a noisy picture. Sharpness values can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “PICTURE” and “SHARPNESS”.
- **HEADPHONE VOLUME.** Gives the last status of the head phone volume, as set by the customer. The value can vary from 0 (volume is minimum) to 100 (volume is maximum). Head phone volume values can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys on the RC-transmitter after pressing the “MENU” button and selecting “SOUND” and “HEADPHONE VOLUME”.
- **DOLBY.** Indicates whether the received transmitter transmits Dolby sound (“ON”) or not (“OFF”). Attention: The presence of Dolby can only be tested by the software on the Dolby Signalling bit. If a Dolby transmission is received without a Dolby Signalling bit, this indicator will show “OFF” even though a Dolby transmission is received.
- **SURROUND MODE.** Indicates the by the customer selected surround mode (or automatically chosen mode). Possible values are “OFF”, “INCREDIBLE SURROUND” OR “DOLBY VIRTUAL”. These settings can be influenced after pressing the “MENU” button and selecting “SOUND” and SURROUND MODE”. It can also have been selected automatically by signalling bits (internal software).
- **TUNER FREQUENCY.** Indicates the frequency the selected transmitter is tuned to. The tuner frequency can be changed via the “CURSOR LEFT” and “CURSOR RIGHT” keys for fine tune after opening the installation menu and selecting “INSTALL” and “MANUAL INSTALL”.
- **DIGITAL OPTION.** Gives the selected digital mode, “PROGRESSIVE SCAN”, “MOVIE PLUS” or “PIXEL PLUS”. Change via “MENU”, “PICTURE”, “DIGITAL OPTIONS”.
- **CENTRE TRIM.** Not applicable for this set.
- **TV SYSTEM.** Gives information about the video system of the selected transmitter.
  – BG: PAL BG signal received.
  – DK: PAL DK signal received.
  – I: PAL I signal received.
  – L/La: SECAM L/La signals received.
  – M: NTSC M signal received with video carrier on 38.9 MHz.

CUSTOMER SERVICE MENU 3
- **BALANCE.** Indicates the balance settings, between “-50” and “+50”. Change via “MENU”, “SOUND”, and “BALANCE”. Not applicable for Dolby Pro Logic sets.
- **CENTRE MODE.** Indicates if centre mode is set “ON” or “OFF”. When centre mode is on, all TV speakers are used

as one centre speaker. Change Centre mode via “MENU”, “SETUP”, “SPEAKERS”, and “CENTRE MODE”.
- **DNR.** Gives the selected DNR setting (Dynamic Noise Reduction), “OFF”, “MINIMUM”, “MEDIUM”, or “MAXIMUM”. Change via “MENU”, “PICTURE”, “DNR”
- **NOISE FIGURE.** Gives the noise ratio for the selected transmitter. This value can vary from 0 (good signal) to 127 (average signal) and to 255 (bad signal). For some software versions, the noise figure will only be valid when “Active Control” is set to “medium” or “maximum”.
- **SOURCE.** Indicates which source is used and the video/ audio signal quality of the selected source.
  Example: Tuner, Video/NICAM) Source: “TUNER”, “EXT1”, “EXT2”, “EXT3”, “EXT4”, “SIDE”, “AV1”, “AV2”, “AV3” or “AV4”. Video signal quality: “VIDEO”, “S-VIDEO”, “RGB 1FH”, “YPBPR 1FH 480P”, “YPBPR 1FH 576P”, “YPBPR 1FH 1080I”, “YPBPR 2FH 480P”, “YPBPR 2FH 576P”, “YPBPR 2FH 1080I”, “RGB 2FH 480P”, “RGB 2FH 576P” or “RGB 2FH 1080I”. Audio signal quality: “STEREO”, “SPDIF 1”, “SPDIF 2”, or “SPDIF”.
- **AUDIO SYSTEM.** Gives information about the audio system of the selected transmitter: “ANALOGUE MONO”, “ANALOGUE STEREO”, “PCM 2/0”, “DD 1/0”, “DD 2/0 LtRt”, “DD 2/0 L0R0”, “DD 2/1”, “DD 2/2”, “DD 3/0”, “DD 3/ 1”, “DD 3/2”, “DD 1+1”, “MPEG 1/0”, “MPEG 2/0”, “MPEG 2/0 LtRt”, “MPEG 2/1”, “MPEG 2/2”, “MPEG 3/0”, “MPEG 3/1”, “MPEG 3/2”, “MPEG 1+1” or “MPEG 2+2”.
- **TUNED BIT.** Gives information about the tuning method of the stored pre-set. If a channel is found via “automatic installation”, you will see the value “YES”. When you change this (automatically found) frequency via “fine tune” adjustment (installation menu - manual installation), the displayed value will change to “NO”. Therefore, when you see the value “NO” in this line, it is an indication that the received channel is a non-standard signal (e.g. of a VCR).
- **SURROUND SPEAKERS.** Not applicable in this set.
- **ON TIMER.** Indicates if the “On Timer” is set “ON” or “OFF” and if the timer is “ON” also displays start time, start day and program number. Change via “MENU”, “TV”, “FEATURES”, and “ON TIMER”.
- **PRESET LOCK.** Indicates if the selected preset has a child lock: “LOCKED” or “UNLOCKED”. Change via “MENU”, “TV”, “FEATURES”, “CHILD LOCK”, and “CUSTOM LOCK”.

CUSTOMER SERVICE MENU 4
- **CHILD LOCK.** Indicates the last status of the general child lock: “UNLOCK”, “LOCK”, or “CUSTOM LOCK”. Change via “MENU”, “TV”, “FEATURES”, “CHILD LOCK”, and “LOCK”.
- **AGE LOCK.** Indicates the last status of the EPG rating for child lock: “OFF”, “4 YEARS”, “6 YEARS”, “8 YEARS”, “10 YEARS”, “12 YEARS”, “14 YEARS” or “16 YEARS”. This is only displayed if child lock is set to “CUSTOM LOCK”
- **LOCK AFTER.** Indicates at what time the child lock is set: “OFF” or e.g. “18:45” (lock time). This is only displayed if child lock is set to “CUSTOM LOCK”
- **CATEGORY LOCK.** Indicates the last status of the EPG theme child lock: “MOVIES”, “NEWS”, “SHOWS”, “SPORTS”, “CHILDREN”, “MUSIC”, “CULTURE”, or “SERIES”. This is only displayed if child lock is set to “CUSTOM LOCK”. It is possible that more than one value is shown.
- **PROGRAM CATEGORY.** Indicates the theme of the selected transmitter: “MOVIES”, “NEWS”, “SHOWS”, “SPORTS”, “CHILDREN”, “MUSIC”, “CULTURE”, or “SERIES”.
- **TV RATINGS LOCK.** Only applicable for US.
- **MOVIE RATINGS LOCK.** Only applicable for US.
- **V-CHIP TV STATUS.** Only applicable for US.

CUSTOMER SERVICE MENU 5
- **V-CHIP MOVIE STATUS.** Only applicable for US.
- **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).
- **AVL.** Indicates the last status of AVL (Automatic Volume Level): “ON” or “OFF”. Change via “MENU”, “TV”, “SOUND”, “AVL”
- **DELTA VOLUME.** Indicates the last status of the delta volume for the selected preset as set by the customer: from “-12” to “+12”. Change via “MENU”, “TV”, “SOUND”, “DELTA VOLUME”.
- **FRONT SPKR DIST.** Not applicable for this set.
- **FRONT SPKR DIST.** Not applicable for this set.

How to exit CSM

Use one of the following methods:
- After you press a key on the RC-transmitter (with exception of the “CHANNEL”, “VOLUME” and digit (0-9) keys), or
- After you switch the TV-set “OFF” with the mains switch.

5.3 Problems and Solving Tips (related to CSM)

Note: Below described problems are all related to the TV settings (visible in the CSM menu). The procedures to change the value (or status) of the different settings are described above. New value(s) are automatically stored.

5.3.1 Picture Problems

Snowy/noisy picture
1. Check in CSM line NOISE FIGURE. In case the value is "127" or higher, and the value is also high on other programs, check the aerial cable/aerial system. For some software versions, the noise figure will only be valid when “Active Control” is set to “medium” or “maximum”.
2. Check in CSM lines SHARPNESS and NOISE FIGURE. In case the value of line SHARPNESS is "3" or "4" and the value of line NOISE FIGURE is high ("127" or higher), decrease the "Sharpness” value.

Picture too dark
1. Press “Menu”, “TV”, “Picture”, “Smart Picture”. In case the picture improves, increase the “Brightness” or the “Contrast” value. The new value(s) are automatically stored (in “personal” pre-set) for all TV channels.
2. Check in CSM line BRIGHTNESS and CONTRAST. If the value of these lines is low (< "10"), increase the “Brightness” or the “Contrast” value via the user menu.

Picture too bright
1. Press “Menu”, “TV”, “Picture”, “Smart Picture”. In case the picture improves, decrease the “Brightness” or the “Contrast” value. The new value(s) are automatically stored (in “personal” pre-set) for all TV channels.
2. Check in CSM lines BRIGHTNESS and CONTRAST. If the value of these line is high (> 50), decrease the “Brightness” value or increase the “Contrast” value via the user menu.

White line around picture elements and text
1. Press “Menu”, “TV”, “Picture”, “Smart Picture”. In case the picture improves, decrease the “Sharpness” value. The new value is automatically stored (in “personal” pre-set) for all TV channels.
2. Check in CSM line “Sharpness”. If the value is high, decrease it. The new value is automatically stored for all TV channels.

No picture

Check in CSM line TUNED BIT. In case the value is “No”, install the required program again. Open the installation menu and perform manual installation.

No picture
No proper signal is received. Check the aerial cable/aerial system.

No picture or unstable picture
A scrambled or decoded signal is received.

Black and white picture
Check in CSM line COLOUR. In case the value is low (< "10"), increase the "Colour" value via the user menu. The new value is automatically stored for all TV channels.

No colours/colour lines around picture elements or colours not correct or unstable picture
1. Check in CSM line TV SYSTEM. If a "strange" system pops up, something has gone wrong during installation. Re-install the channel.
2. If in CSM line TV SYSTEM is "L", the installed system for this pre-set is "France", while "West Europe" is required. Install the required program again: open the installation menu and perform manual installation. Select system "West Europe".

Menu text not sharp enough
1. Press "MENU", "TV", "PICTURE", "SMART PICTURE". In case picture improves, decrease the contrast value. The new value(s) are automatically stored for all TV channels.
2. Check line "Contrast". If the value is high, decrease the contrast value.

5.3.2 Sound Problems

No sound from left and right speaker
Check line 6 "Volume". The value is low. Increase the value of "Volume". The new value(s) are automatically stored (in "personal" pre-set) for all TV channels.

5.4 ComPair

5.4.1 Introduction

ComPair (Computer Aided Repair) is a service tool for Philips Consumer Electronics products. ComPair is a further development on the European DST (service remote control), which allows faster and more accurate diagnostics. ComPair has three big advantages:
- ComPair helps you to quickly get an understanding on how to repair the chassis in a short time by guiding you systematically through the repair procedures.
- ComPair allows very detailed diagnostics (on I^2C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I^2C commands yourself because ComPair takes care of this.
- ComPair speeds up the repair time since it can automatically communicate with the chassis (when the microprocessor is working) and all repair information is directly available. When ComPair is installed together with the SearchMan electronic manual of the defective chassis, schematics and PWBs are only a mouse click away.

5.4.2 Specifications

ComPair consists of a Windows based fault finding program and an interface box between PC and the (defective) product. The ComPair interface box is connected to the PC via a serial or RS232 cable.
For this chassis, the ComPair interface box and the TV communicate via a bi-directional service cable via the service connector.

The ComPair fault finding program is able to determine the problem of the defective television. ComPair can gather diagnostic information in two ways:
- Automatic (by communication with the television): ComPair can automatically read out the contents of the entire error buffer. Diagnosis is done on I^2C level. ComPair can access the I^2C bus of the television. ComPair can send and receive I^2C commands to the micro controller of the television. In this way, it is possible for ComPair to communicate (read and write) to devices on the I^2C buses of the TV-set.
- Manually (by asking questions to you): Automatic diagnosis is only possible if the micro controller of the television is working correctly and only to a certain extends. When this is not the case, ComPair will guide you through the fault finding tree by asking you questions (e.g. *Does the screen give a picture? Click on the correct answer: YES / NO*) and showing you examples (e.g. *Measure test-point I7 and click on the correct oscillogram you see on the oscilloscope*). You can answer by clicking on a link (e.g. text or a waveform picture) that will bring you to the next step in the fault finding process.

By a combination of automatic diagnostics and an interactive question / answer procedure, ComPair will enable you to find most problems in a fast and effective way.

Beside fault finding, ComPair provides some **additional features** like:
- Up- or downloading of pre-sets.
- Managing of pre-set lists.
- Emulation of the Dealer Service Tool (DST).
- If both ComPair and SearchMan (Electronic Service Manual) are installed, all the schematics and the PWBs of the set are available by clicking on the appropriate hyperlink.
  Example: *Measure the DC-voltage on capacitor C2568 (Schematic/Panel) at the Mono-carrier*.
  – Click on the "Panel" hyperlink to automatically show the PWB with a highlighted capacitor C2568.
  – Click on the "Schematic" hyperlink to automatically show the position of the highlighted capacitor.

5.4.3 Stepwise Start-up

Under normal circumstances, a fault in the power supply, or an error during start-up, will switch the television to protection mode. ComPair can take over the initialisation of the television. In this way, it is possible to distinguish which part of the start-up routine (hence which circuitry) is causing the problem. Take notice that the transition between two steps can take some time, so give the set some time to reach a stable state. During the transition time, the LED can blink strangely.

Stepwise start-up explanation
This is realised via ComPair and is very helpful when a **protection** is activated (see also chapter "Protections"). The following diagram shows the start-up procedure of the set. Every step of the stepwise start-up (also called trapped start-up) in the diagram corresponds with the number of times the LED blinks.

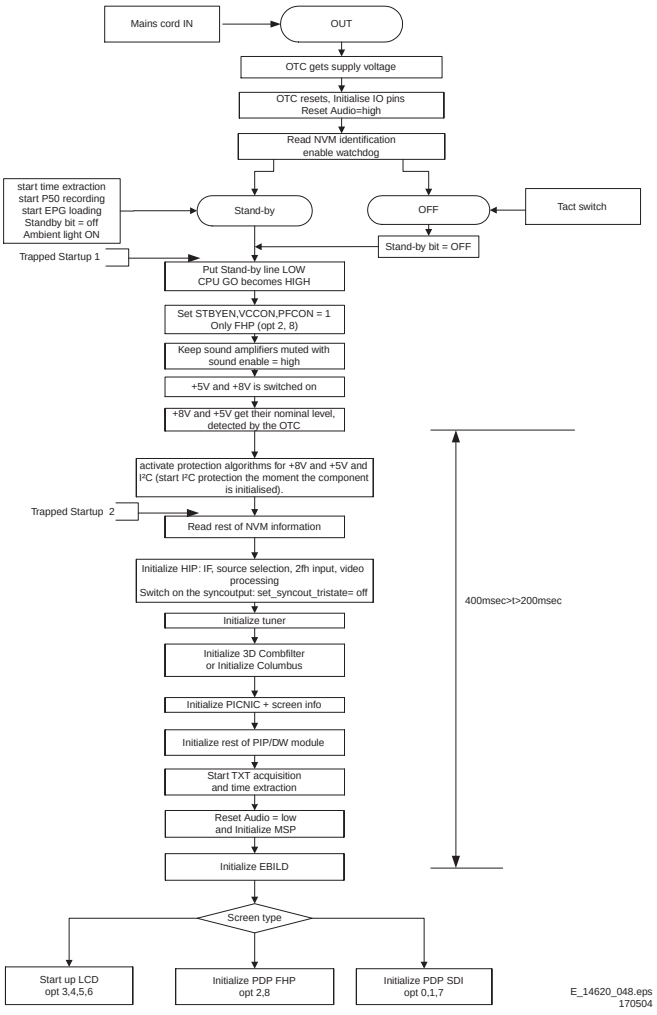

Figure 5-3 Stepwise start-up

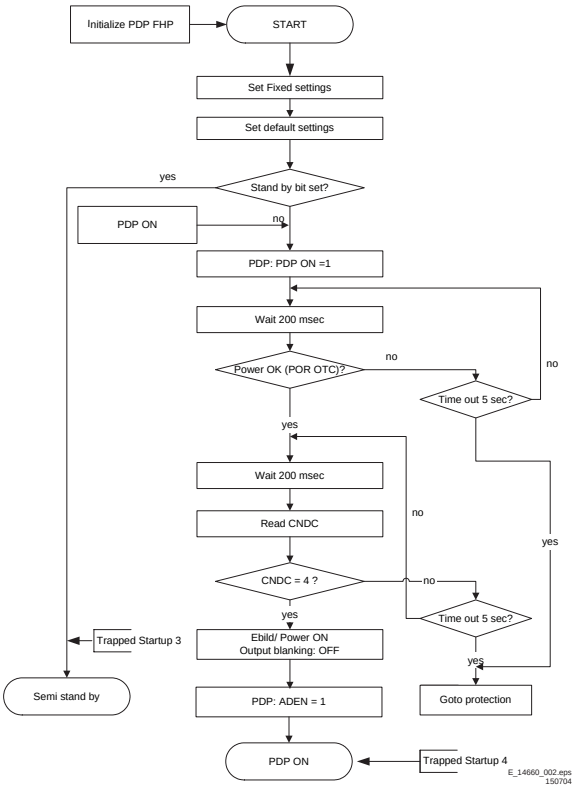

Figure 5-4 Stepwise start-up part 2: Initialise FHP

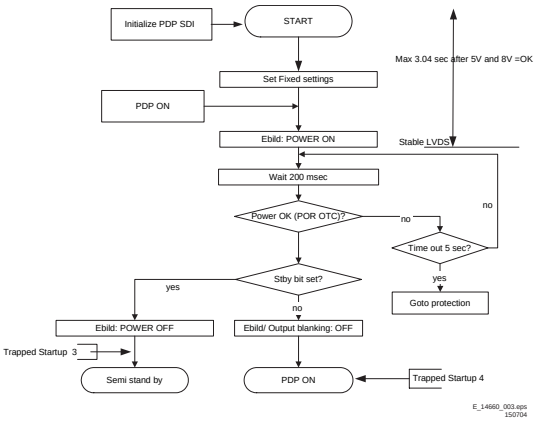

Figure 5-5 Stepwise start-up part 2: Initialise SDI

Note (*):

- When the set is in stepwise mode and, due to stepping-up, a protection is activated, the set will really go into protection (blinking LED). The set will not leave the stepwise mode however. If state X is the state where the set went to protection, stepwise start-up will return to state X-1. At state (X-1) diagnostic measurements can be performed. Also, in the short time the set is in state X but not yet in protection, you can also do some measurements.

5.4.4 How To Connect

This is described in the chassis fault finding database in ComPair.

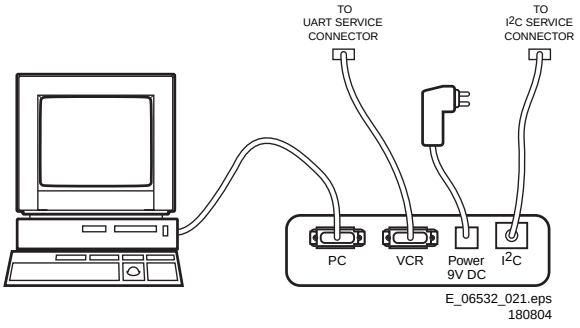

Figure 5-6 ComPair interface connection

5.4.5 How To Order

ComPair order codes (EU/AP/LATAM):

- Starter kit ComPair32/SearchMan32 software and ComPair interface (excl. transformer): 3122 785 90450.
- ComPair interface (excl. transformer): 4822 727 21631.
- Starter kit ComPair32 software (registration version): 3122 785 60040.
- Starter kit SearchMan32 software: 3122 785 60050.
- ComPair32 CD (update): 3122 785 60070 (year 2002), 3122 785 60110 (year 2003 onwards).
- SearchMan32 CD (update): 3122 785 60080 (year 2002), 3122 785 60120 (year 2003), 3122 785 60130 (year 2004).
- ComPair firmware upgrade IC: 3122 785 90510.
- Transformer (non-UK): 4822 727 21632.
- Transformer UK: 4822 727 21633.
- ComPair interface cable: 3122 785 90004.
- ComPair interface extension cable: 3139 131 03791.
- ComPair UART interface cable: 3122 785 90630

Note: If you encounter any problems, 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 has occurred, the error is added to the list of errors, provided the list is not full or the error is a protection error.
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), except when the error is a protection error.
To prevent that an occasional error stays in the list forever, the error is removed from the list after 50+ operation hours.
When multiple errors occur (errors occurred within a short time span), there is a high probability that there is some relation between them.

5.5.2 How to read the Error Buffer

Use one of the following methods:
- On screen via the SAM (only if you have a picture). Examples:
  - **0 0 0 0 0**: No errors detected
  - **6 0 0 0 0**: Error code 6 is the last and only detected error
  - **9 6 0 0 0**: Error code 6 was first detected and error code 9 is the last detected error
- Via the blinking LED procedure (when you have no picture). See next paragraph.
- 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”.
- When you transmit the commands “DIAGNOSE” - “99” - “OK” with ComPair (or with a DST).
- If the content of the error buffer has not changed for 50+ hours, it resets automatically.

5.5.4 Error Codes

In case of non-intermittent faults, clear the error buffer before you begin the repair. This to ensure that old error codes are no longer present. Before clearing the buffer, write down the content, as this history can give you significant information.
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 various errors:
- I^2C device errors.
- I^2C bus errors.
- Protection errors.
- Errors not related to an I^2C device, but of importance:
  - **FEM (Falconic with Embedded Memory) (Error 26):** at start-up, after initialisation of the PICNIC, the presence of the FEM can be checked.

Table 5-2 Error Table

Error	Device	Description	Def. item	Def. Module indication	Diagram
1	M24C64	NVM, spontaneous blinking error 1	7011	Control	B5a
3	SAA4978	PICNIC	7713	Feature Box	B3a
4	Supply 5 V	5V protection	/	+5V Supply	B5a
5	Supply 8 V	8V protection	/	+8V Supply	B5a
6	Slow I^2C bus blocked	Spontaneous blinking error 6	/	Slow I^2C Blocked	/
8	TDA932x	HIP High-end Input Processor	7323	Chroma IF IO	B2
13	UV1318/...	Tuner protection	1T01	Tuner	B13a
14	MSPxxxx	ITT sound processor	7A02	Audio module	B6a
18	Fast I^2C bus blocked	Spontaneous blinking error 18	/	Fast I^2C Blocked	/
21	M62320P	I/O Expander	7P56	Video Dual Screen	B15b
23	UV1318/...	Sub tuner	1T02	Video Dual Screen	B13b
24	SAB9083H	PIP Muppet	7PA6	Video Dual Screen	B15c
25	Z86130	V-CHIP (US only)	7P51	Video Dual Screen	B15b
26	SAA4998	FEM (Falconic with Embedded Memory)	7760	+3V (FBX) Supply	B3b
27	T6TX5	Eagle 1C	7720	+3V (FBX) Supply	B3c
32	M29W400DT	Flash Ram (EPG)	7012	EPG Memory	B5a
34	TDA932x	Second HIP	7P09	Video Dual Screen	B15a
35	T6TU5	Columbus	7752	+3V (FBX) Supply	B3d
53	AD9883A	AD converter	7E23 / 7L01	HD	B19c / B19a
55	DC/DC converter	One of the voltages is not ok + protection error	/	Supply	/
56	EPLD	EPLD error	7V01	Video control	B19d
76	Audio supply	Audio supply protection	/	/	/
82	TDA7309	Headphone processor	7A06	Video Dual Screen	B6a
83	TEA6422	Source select matrix audio	7I17	Audio Source Select	B14d

Note:
- Error codes 1, 6, or 18 are protection codes and in this case, supplies of some circuits will be switched “OFF”. Also, in protection, the LED will blink the number of times equivalent to the most recent error code.

5.6 The Blinking LED Procedure

5.6.1 Introduction

Via this procedure, you can make the contents of the error buffer visible via the front LED. This is especially useful for fault finding, when there is no picture.

When the SDM is activated, the front LED will show (blink) the contents of the error-buffer. Error-codes > 10 are shown as follows:
– A long blink of 750 ms (which is an indication of the decimal digit),
– A pause of 1.5 s,
– "n" short blinks (where "n" = 1 - 9),
– When all the error-codes are displayed, the sequence finishes with a LED blink of 3 s,
– The sequence starts again.

Example: Error 12 9 6 0 0.
After activation of the SDM, the front LED will show:
– 1 long blink of 750 ms (which is an indication of the decimal digit) followed by a pause of 1.5 s,
– 2 short blinks followed by a pause of 3 s,
– 9 short blinks followed by a pause of 3 s,
– 6 short blinks followed by a pause of 3 s,
– 1 long blink of 3 s to finish the sequence,
– The sequence starts again.

Note: If errors 1, 6, or 18 occur, the LED always gives the last occurred error even if the set is NOT in service mode.

5.6.2 How to Activate

Use one of the following methods:
- Activate the SDM (only via soldering pads marked "SDM" on SSB). The blinking front LED will show the entire contents of the error buffer (this works in "normal operation" mode and in "protection" mode).
- 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.
- "DIAGNOSE X" with the DST (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.... When x = 0 all errors are shown.

5.7 Protections

5.7.1 Introduction

This chassis has only one microprocessor (OTC), which remains active during Stand-by. This because power of the microprocessor and the attached memory chip set is coming from the 3V3 supply, which is derived from the 5V Stand-by-circuitry. Therefore, in both Power-on as in Stand-by mode, the microprocessor is connected to this power supply.

If a fault situation is detected, an error code will be generated and if necessary, the set is put in protection mode. The protection mode is indicated by the blinking of the front LED at a frequency of 3 Hz (or by a coded blinking in special cases).

The content of the error buffer can be read via the service menu (SAM), the blinking LED procedure or via DST/ComPair.

To get a quick diagnosis, this chassis has three service-modes implemented:
- The **Customer Service Mode** (CSM).
- The **Service Default Mode** (SDM). Start-up of the set in a predefined way.
- The **Service Alignment Mode** (SAM). In this mode, items of the set can be adjusted via a menu.

You can activate both SDM and SAM modes via the "service pads" on the SSB, via an RC-transmitter (DST or standard RC), or via ComPair. It is not possible to activate the SAM in "stand-by"; the TV has to be in "normal operation" mode.

The "Protection Diagram" shows the structure of the protection system. See diagram below.

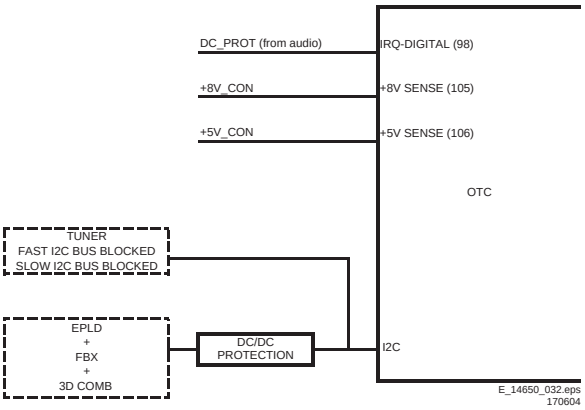

Figure 5-7 Protection diagram

There are several types of protections:
- I^2C related protections.
- OTC related protections (via polling on I/O pins or via algorithms).
- Hardware protection

All protections are explained below.

5.7.2 I^2C Related Protections

In normal operation, some registers of the I^2C controlled ICs are refreshed every 200 ms. During this sequence, the I^2C buses and the I^2C ICs are checked.
An I^2C protection will take place if the SDA and SCL lines are short-circuited to ground, or to each other. An I^2C error will also occur, if the power supply of the IC is missing.

DC/DC protection: When a 3V3 supply is short-circuited, the DC/DC converter switches "off" and goes in protection. The FBX, EPLD IC, and 3D comb IC have no supply voltage and give no acknowledge. In this case, the set should go into protection. An error code is written in the NVM: DC/DC error.

FBX protection: the FBX protection is not available any more. It is replaced by the DC/DC protection.

5.7.3 OTC Related Protections

If a protection is detected at an OTC input, the OTC will start to scan all protection inputs every 200 ms for 5 times. If the protection on one of the inputs is still active after 1 s, the microprocessor will put the set in the protection mode. Before the scanning is started, a so-called "ESD refresh" is carried out. This is done, because the interrupt on one of the inputs is possibly caused either by a flash or by ESD. As a flash or ESD can influence IC settings, the HIP, MSP, 3D Comb and wireless module (not used in this set) are initialised again, to ensure the normal picture and sound conditions of the set.

8 V and 5 V protections: The microprocessor senses the presence of the 8 V and 5 V (via the "+5V_CON" and "+8V_CON" lines). If one (or both) of these voltages is (are) not present, an error code is stored in the error buffer of the NVM, and the set is put in the protection mode.

Audio DC protection: The OTC senses if the audio module is in protection via IRQ-DIGITAL (pin 98 of OTC). If this is the case, the OTC puts the set in protection.

5.7.4 Hardware Protection

Short-circuiting the 3V3 supply from the DC/DC converter will shut down the DC/DC converter. The absence of the 3V3 supply line is also sensed via I^2C (see description DC/DC protection above), this is useful if there is something wrong in the detection circuit of the DC/DC converter. There are no hardware protections in this chassis, which switch off the main supply.

5.8 Repair tips

5.8.1 Power Supply Unit (for Fujitsu 42" plasma displays)

Below a troubleshoot sequence for the **FHP** power supply is given (so this is **not** valid for the **SDI** power supply, this is explained further on).

Stand-by Supply
1. 400V present?
2. +9V_STDBY, +5V_STDBY, and 25V_HOT present?

Preconditioner
1. Relay 1450 and 1440 "on" = switch "on" and supply "on" (LATCH= "H" and STANDBY= "L").
2. 400V or rectified mains present on item 2616?
3. 40V present on item 2664?
4. 15V present on item 2662?

LLC Supply
1. 25V_HOT (from Stand-by supply) present?
2. 25V_HOT_SW (from Preconditioner) present?
3. 17V on pin 15 of item 7001 present?
4. Vcego= "H" and LATCH= "H"?
5. Vrs present? (Vrs=Vs/67).
6. Remark: Vs_unswitched = 65V when switch 7050 is open.

Va Supply
1. Vs_unswitched present?
2. 30V on item 3133 present?
3. Vsa_control= "L" (Vsago= "H" and Vs_lowlim= "H")
4. Vra present? (Vra=Va/48).

Vcc Supply
1. Vs_switched present?
2. Vccgo= "H"? (Vcego= "H").

Vs (switched)
1. 95V present on cathode of item 6054?
2. POK= "H" and Vsa_control= "L"? (POK= "H" when Vs, Va, Vcc, 12V, and 8V6 are above their lower limit)

5.8.2 Power Supply Unit (for Samsung 42" plasma displays)

Below, a troubleshoot method for the **SDI 42"** power supply is given. First, a description is given for single board testing (so **without** the surrounding electronics).

This PSU is for service a "black box". When defective (this can be traced via error-codes in the error buffer, or by strange phenomena), a new panel must be ordered and after receipt, the defective panel must be send for repair.

Main Power Supply ("single board" testing)

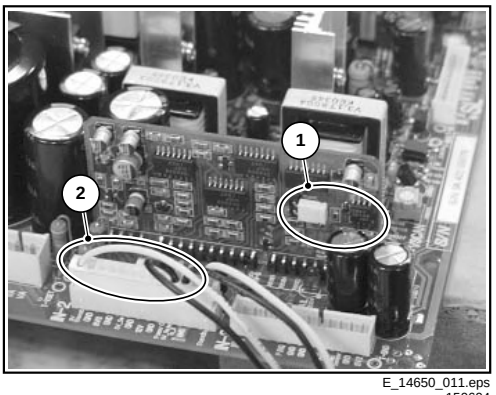

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Figure 5-8 Diagnose of SDI 42" main supply [1]

1. Remove the Main Supply panel from the TV set.
2. Remove jumper BJ8301 (1).
3. Plug the PSU to the mains: the +9V_STDBY should be present.
4. Connect pin 1 and 10 on connector CN8004 (2).
   – This simulates the ON/OFF switch.
   – LED L8003 must light up and the PSU is in STANDBY mode.
   – +5V2 should be present

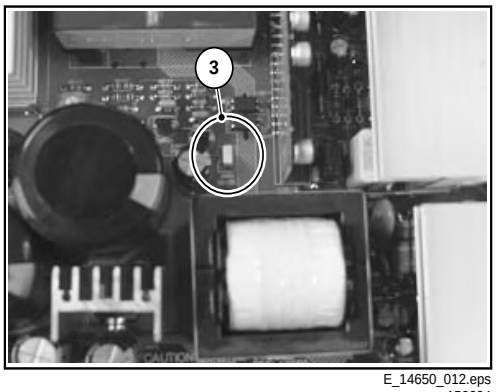

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Figure 5-9 Diagnose of SDI 42" main supply [2]

1. Place jumper BJ8002 (3). This simulates the Vs_on signal (no LVDS, prevents protection).
2. Connect pin 11 with pin 13 on connector CN8004:
   – This simulates the STANDBY signal.
   – LEDs L8001 and L8002 should light up.
   – All voltages should be present.

Sub Power Supply ("single board" testing)
There are two methods:
1. First check the Main Supply. If it is ok, connect the two supplies, and check the Sub Supply (**attention:** remove jumper BJ8302 first). All Sub Supply voltages should be present now.
2. Remove the Sub Supply from the TV:
   – Connect 380 VDC between pin 1 and 3 of connector CN9700 (+380 V on pin 1).
   – Connect 17 VDC between pin 4 and 5 of connector CN9700 (+17 V on pin 5).
   – All Sub Supply voltages should be present now.

Power Supply ("in set" testing)
Both PSUs can also be tested "in the set":
1. First, disconnect all boards that are not feeding the plasma panel (SSB, Audio Amplifier, Ambi Light Inverter). Do **not** unplug the Sub Supply from the Main Supply.
2. Plug the PSU to the mains: the +9V_STDBY should be present.
3. Connect pin 9 and 10 on connector CN9005 on the Sub Supply:
   – This simulates the ON/OFF switch.
   – LED L8003 must light up and the PSU is in STANDBY mode.
   – +5V2 should be present
4. Connect pin 4 with pin 7 on connector CN9005:
   – This simulates the STANDBY signal.
   – LEDs L8001 and L8002 should light up.
   – All voltages should be present.

Important: After testing, replace all items in their original status!

5.8.3 3V3 Supply (DC/DC converter on the SSB)

As mentioned above, the DC/DC converter is switched "off" when something goes wrong (detection of a missing 3V3 supply at one of the devices supplied by the 3V3). Because of this, the set goes to protection (I^2C protection). Error code "55" is logged.
For further diagnoses, you need to overrule the I^2C protection: put the set in Service Default Mode by means of the solder pads on the SSB.
The DC/DC converter is still not working because it is switched "off" by the 3V3_FAULT line (schematic B12). Now you have some possibilities:
1. First, measure the impedance over diode 6U06. In normal conditions, you should measure approximately 120 ohm (if possible, verify this with another set). If the impedance is much too low, do not try to start up the converter as mentioned below. Remind that if FET 7U03 is short-circuited, this will also influence your measurement.
2. Desolder coils 5U05 and 5U06, connect an external 3V3 supply at capacitor 2U23 (current limitation to 500 mA) and a second external 3V3 supply at capacitor 2U31 (current limitation to 800 mA). The normal working current of the 3V3_SIM line is approximately 400 mA and the normal working current for the 3V3_DCDCFBX line is approximately 700 mA. Therefore, if one of the currents exceeds their nominal value you can determine in which circuit the overload is situated. If the set would start up and you have normal picture, there is probably no overload but a problem in the detection circuits.
3. If you do not have two external power supplies, you can do the following: Desolder coils 5U02, 5U03, and 5U04 (you must desolder all three, otherwise the circuit could be damaged), connect an external power supply of 3V3 at the cathode of diode 6U06. Make sure to limit the current of this external supply to approximately 1200 mA. If the supplied current exceeds 1100 mA (approximately normal working current) you can conclude that one of the devices supplied by 3V3 is short-circuited.
4. Another possibility is to force the converter to start up by short-circuiting (and keep short-circuited) resistor 3U25 (B12).
   Caution: Be aware that this can damage the set. Even if you measure approximately 120 ohm over diode 6U06, there can still be something wrong in the converter itself. By short-circuiting resistor 3U25, the internal protection of the converter is disabled.

5.8.4 ComPair

A "Service" (ComPair) connector is implemented at the rear side of the set, which is directly accessible. In addition to this, there is also a blinking LED procedure to show the contents of the error buffer.

When you use ComPair, you have the possibility to activate a "stepwise start-up" mode. With this mode, you can initiate the start-up sequence step by step. This also means that in certain steps, some protections are not activated. This is sometimes very convenient during repair.

5.8.5 Protections

Activating SDM via the "service pads" will overrule the processor-controlled protections, but not the hardware protections. This means, that the A/D-input protections (5 and 8 V) and the I^2C "not-acknowledging" info of FBX + EPLD + 3D Comb and of the tuner are overruled.
Caution: When doing this, the service technician must know what he is doing, as it could lead to damaging the set.

5.8.6 Repair tip table

Table 5-3 Repair tips

Phenomenon	Possible Cause	Repair tip
"F" in right corner of the screen and set is not reacting on remote control. The local keyboard is functioning.	TV is in factory mode.	Press menu button on local keyboard for at least 3 seconds. Set will leave factory mode and function normally again.
No picture, LED blinking at 3 Hz.	Set is in protection due to various causes. For error codes see error-code list.	You have no picture, so: - Read the error buffer via ComPair (error buffer is accessible when set is in protection, ComPair-file will guide you to this). - Read the blinking LED information via standard remote command <mute>**06250x**<ok>. - Or you read the error code sequence via standard remote command <mute>**062500**<ok>. When you have found the error, check the circuitry related to the supply voltage and I^2C-communication or the circuitry that triggers the protection.
No picture, LED blinking with code 6-6-6 or 18-18-18.	No communication on slow I^2C- or fast I^2C-bus.	As processor cannot communicate with one of the 2 buses it the stand-by-LED spontaneously starts blinking 6-6-6-etc. or 18-18-18-etc... If in the error buffer somewhere is an error 6 or 18, these will have the highest priority starting the mentioned blinking. Measure dependent of the error on the I^2C-bus which device is loading the bus. (Use I^2C-overview)
No picture, LED blinking with code 1-1-1.	No communication on NVM-I^2C bus to the uP.	As the uP cannot communicate with the NVM I^2C bus, it spontaneously starts blinking 1-1-1. **Note:** when there is no access to the NVM, a lot of picture setting can go wrong.
No RC-reception. Blue LED does not echo RC-commands.	uP circuitry or RC-receiver is defective.	In case the set does react on a local keyboard operation, you must check the RC-receiver circuitry (diagram J).
Picture is not synchronised.	The sync is derived in the HIP.	Check crystals in the HIP circuit on bad contacts.
Picture is distorted.	Check video-path in Service Default Mode.	Investigate whether there is an error code present in the error buffer. In case there is one, check the I^2C-bus and/or supply lines (see overview supply lines). Measure and check signal path Tuner-HIP-FBX-EPLD.
Picture with horizontal stripes.	Pixel Plus processing is malfunctioning	Check functionality on circuitry (B3a, B3b, B3c and B3d) of PICNIC, FEM, EAGLE, COLUMBUS and/or field memories. **Tip:** the whole Pixel Plus chipset (4 ICs + Field Memories) can be diagnosed via ComPair.
No NextView (EPG).	IC7012 defective or not powered.	Check circuitry around IC7012 on diagram B5A.
No Teletext.	IC7007 defective or not powered.	Check circuitry around IC7007 on diagram B5A.
Problems caused by EPG (Electronic Program Guide). The TV set "hangs".	Problems with NexTView EPG broadcasts.	To switch from EPG 2C3 to Teletext guide. Press for 4 seconds, simultaneously the Menu button on the TV and digit 0 on the remote. The option settings for NexTView type and FlashRAM will not change.
NexTView EPG is not functioning only Teletext guide.	EPG version 2C3 is switched "off" during production.	To switch from Teletext guide to EPG 2C3. Press for 4 seconds, simultaneously the Menu button on the TV and digit 1 on the remote. The option settings for NexTView type and Flashram will not change.
Various symptoms, due to missing local supply voltage.	An interrupted fuse, NFR-resistor or connection.	When no symptom or error code leads you to a specific circuitry, use the supply lines overview (see supply lines overview), for a quick scan of all supply lines.
No sound at the speakers but sound at monitor out.	Possible problem with the class D amplifier	Check circuitry around IC7700 on diagram SA3 (LCD) or C (PDP).
No sound at the speakers but sound at monitor out.	Sound enable from OTC is HIGH, speakers are muted	Check pin 95 of OTC on diagram B5a.
No sound at the speakers not at monitor out, but sound at SCART 1 output.	POR line is low, anti plop circuit mutes the sound	Check pin 8 on connector 1739 on audio panel. Diagram C for PDP sets and diagram SA3 for LCD sets
No sound from any output (except headphone)	Reset audio is high or MSP is not properly reset	Check pin 16 of MSP (diagram B6a) and circuitry around MSP.
No sound from the tuner but sound from any other input.	Problem with the delay line (PDP sets only)	Check circuitry on diagram B6d.

5.9 Software Downloading

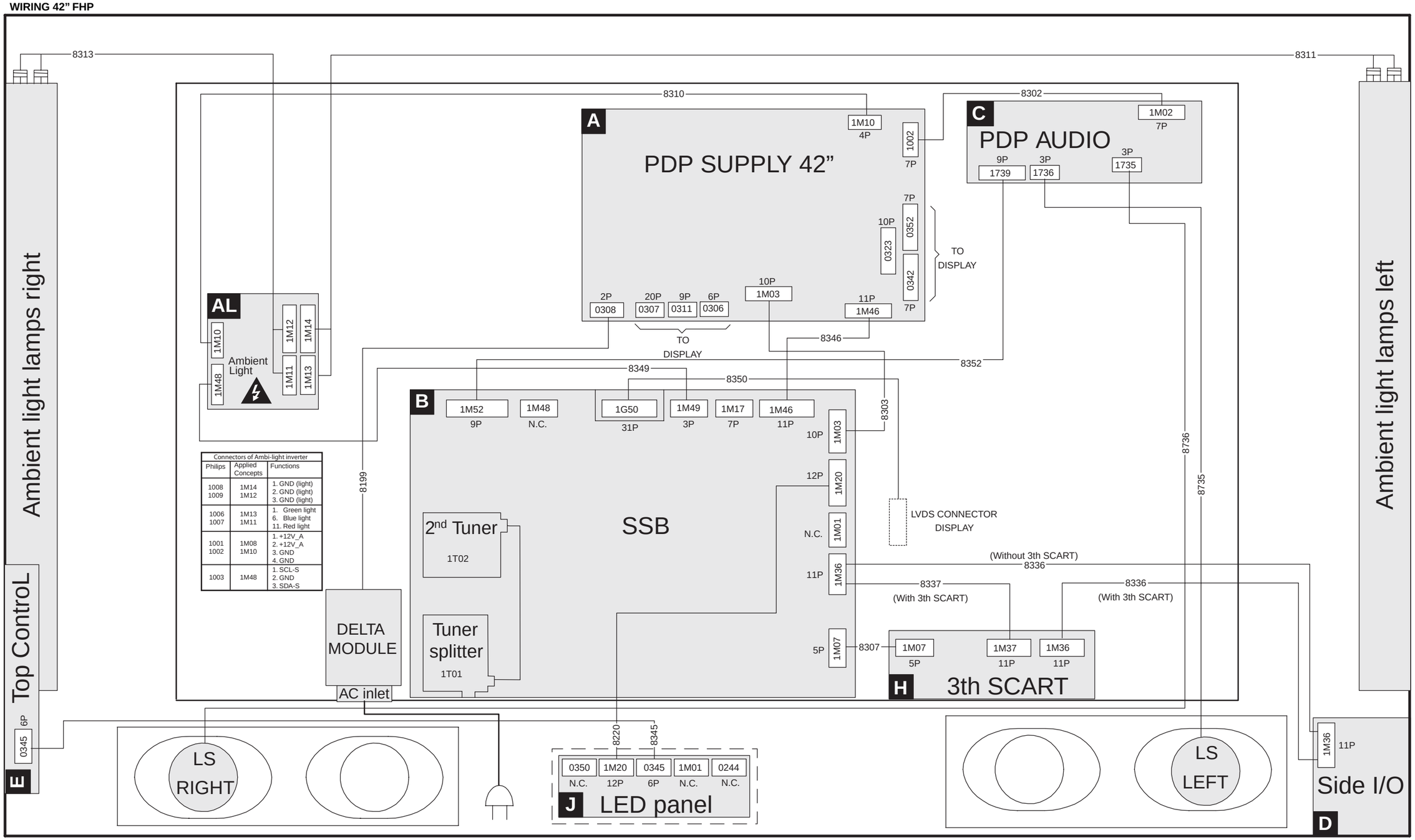
In this chassis, you can **upgrade** the main software via ComPair without removing the back cover of the set (it is possible that early production sets don't have a hole in the back plate, in this case you have to remove the back plate). The switch, which is needed for the software downloading procedure, can be reached through a gap in the back cover or the SSB shielding. The switch can be operated with a toothpick or something like that. Make sure that you do not damage the PWB with sharp objects. You can find more information on how this procedure works in the ComPair file. It is possible that not all sets are equipped with the hardware, needed to make software upgrading possible. To speed up the programming process the firmware of the ComPair interface can be upgraded. See paragraph "How To Order" for the order number.

Personal Notes:

6. Block Diagrams, Testpoint Overview, and Waveforms

Wiring Diagram 42 Inch FHP Step

WIRING 42" FHP



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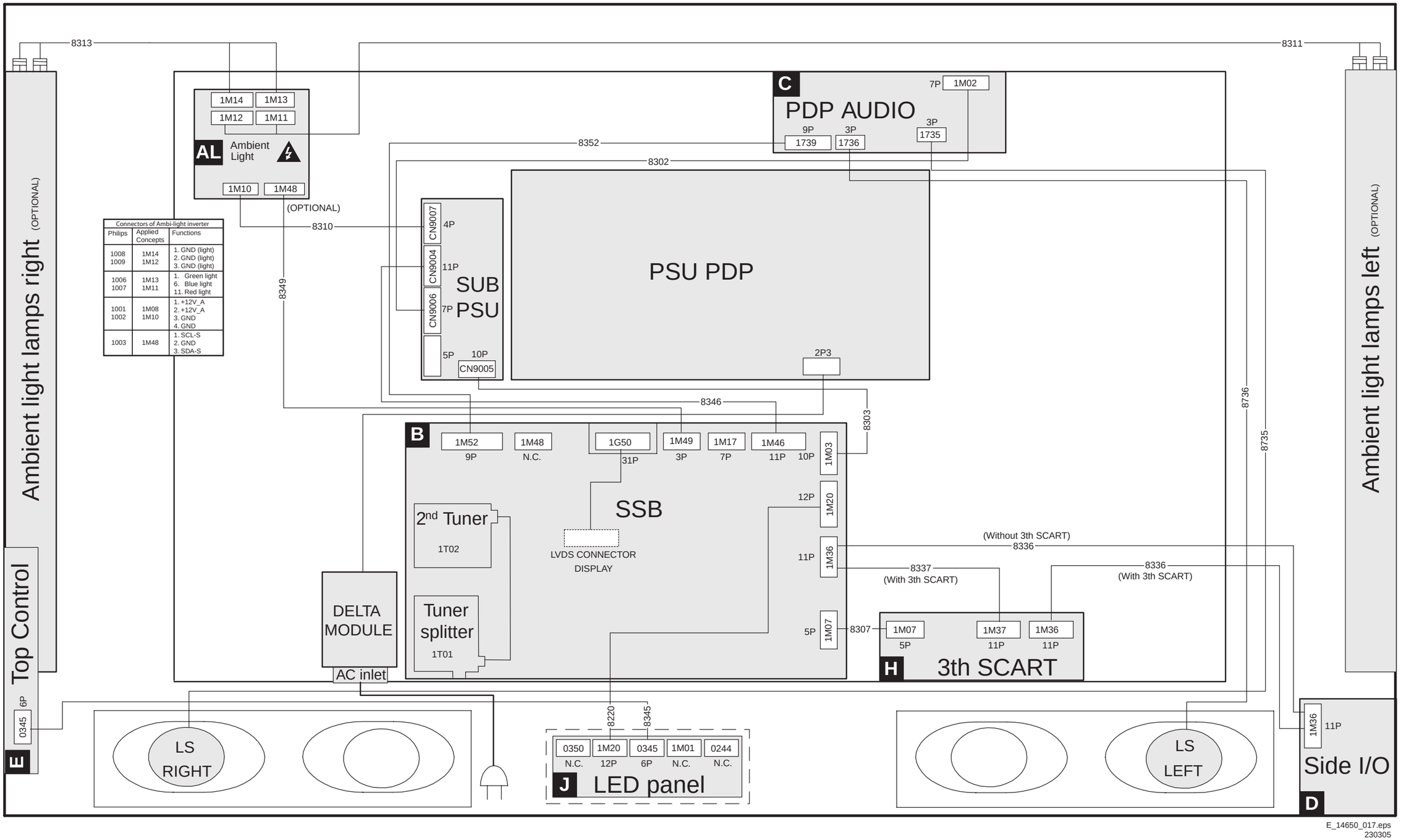
Wiring Diagram 42-50 Inch SDI Step

WIRING 42", 50" SDI



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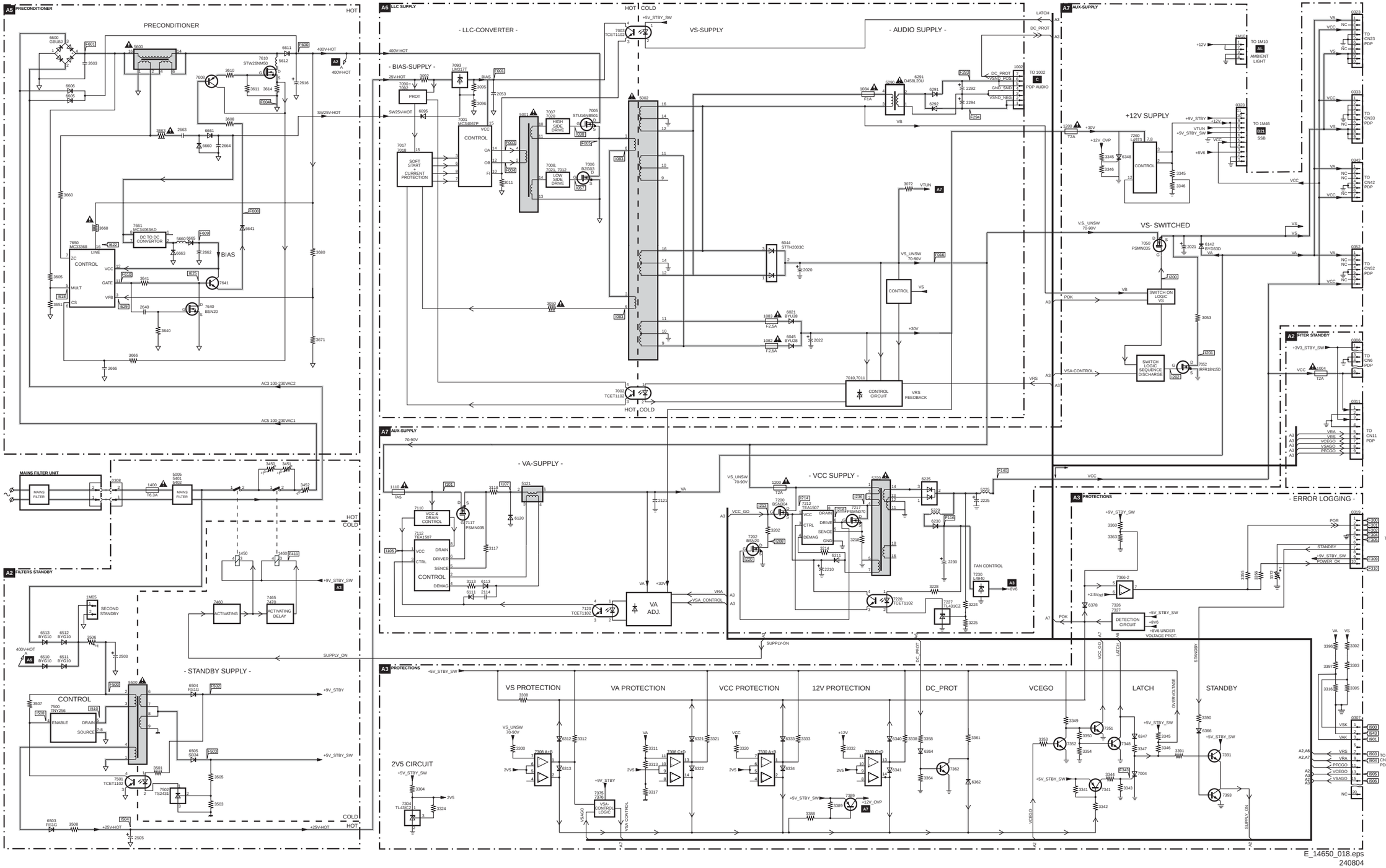
Block Diagram Supply 42 Inch FHP

SUPPLY 42" FHP



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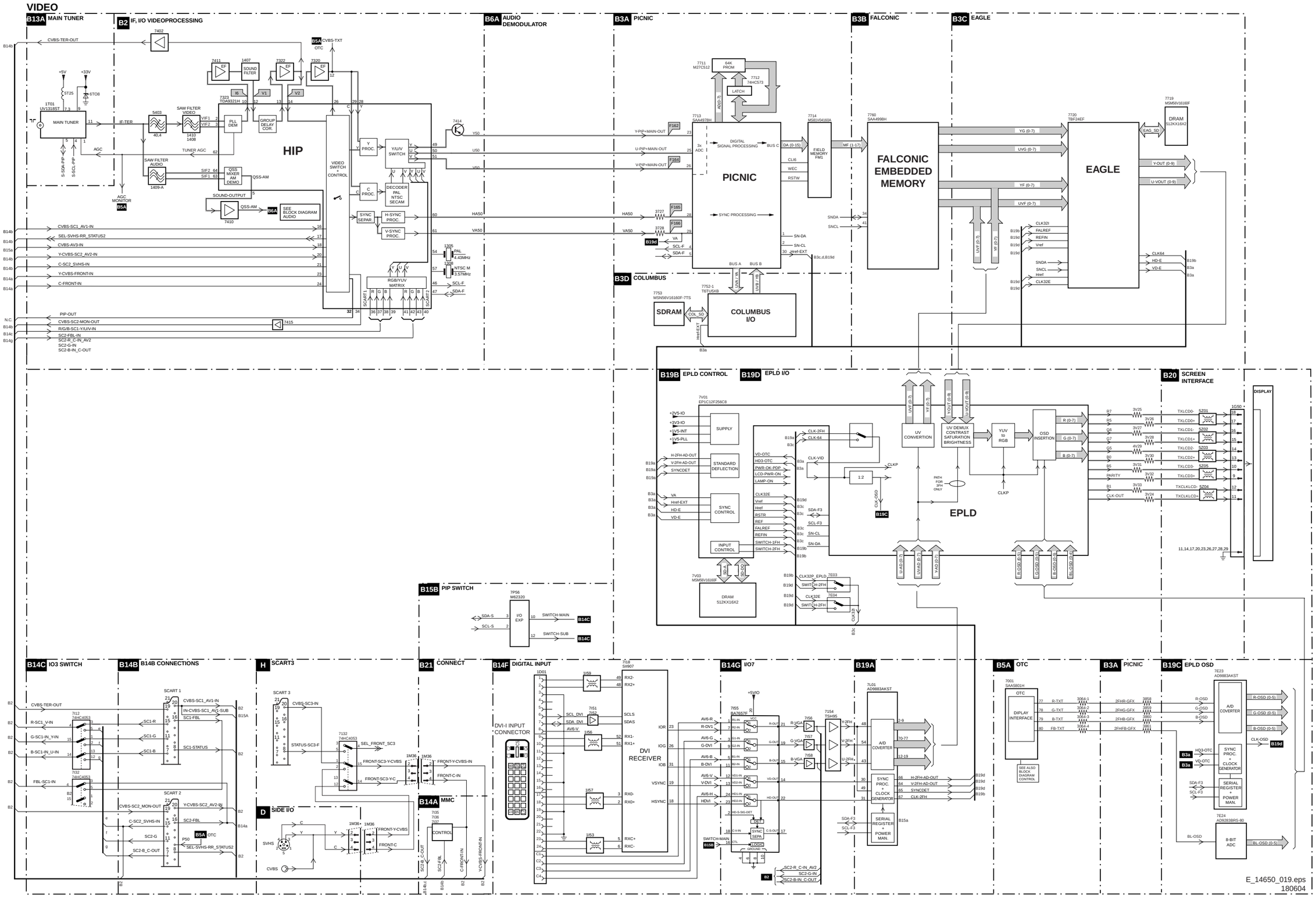
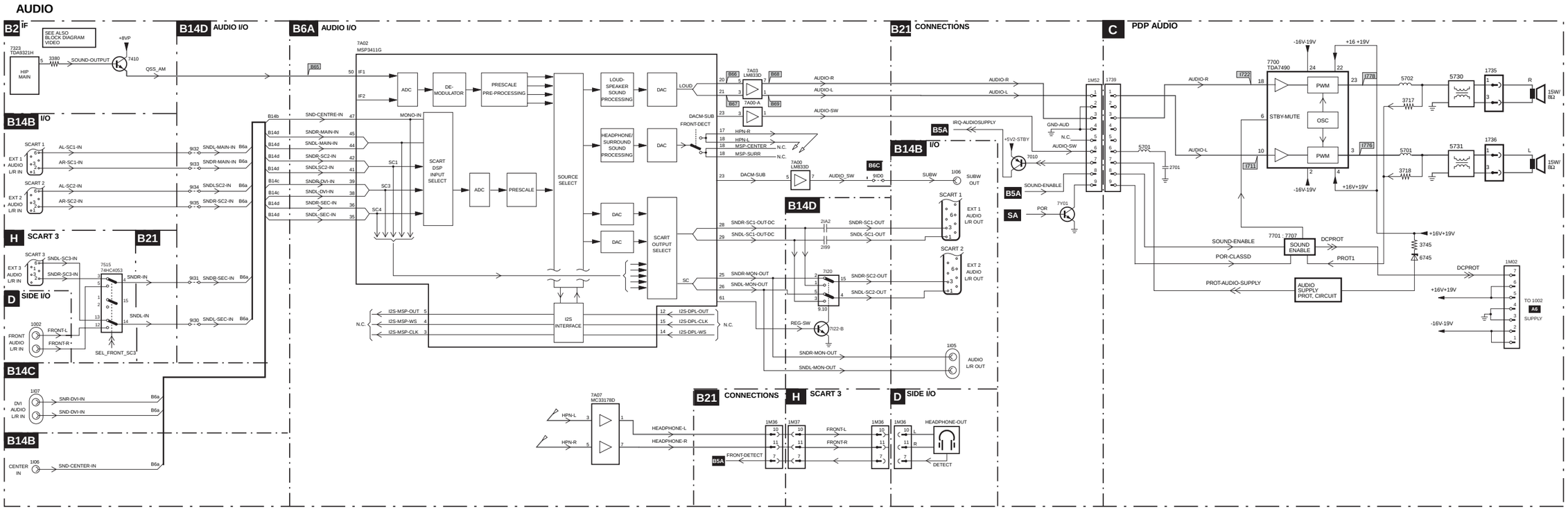
Block Diagram Video



Block Diagram Audio



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I²C IC's overview

IIC

B5 OTC
7001 SAA5801H SET PROCESSOR
+5V2_CON
3069 3079
88 3064-4 SDA-F
87 3064-3 SCL-F
ERR 18
+3V3-INTOTC
3001 3002
91 SDA
92 SCL
7011 M24C64 (NVM) EEPROM ERR 1
+5V2_CON
3088 3092
86 3064-2 SDA-S
85 3064-1 SCL-S
ERR 6
ADDRESS
DATA
CONTROL
7006 M29W320DT PROGRAM FLASH-RAM
7007 MSM51V18165F DRAM (TXT)
7012 M29W400DT ERR 32

B6A AUDIO DEMODULATOR
3A17 3A19
SDA-F-AUD
SCL-F-AUD
7A02 MSP3411G AUDIO DEMODUL ERR 14
7A06 TDA7309 AUDIO DECODER ERR 82

B2 I/O, VIDEO PROCESSING
3377 3376
7323 TDA9321H HIP ERR 8

B15B PIP SWITCH
3P66 3P65
7P56 M62320FP I/O EXPANDER ERR 21

SDA-F SCL-F
SDA-S SCL-S

B3A PICNIC
3826 3827
SDA-EPLD SCL-EPLD
3710 3709
7713 SAA4978H PICNIC ERR 3
+5V2Pr 3758
SDA-D SCL-D SN-DA SN-CL

B3D COLUMBUS
9817 9818 9815 9816
A15 B15 C14 D14
7752-2 T6TU5XB COLUMBUS CTRL ERR 35

B3C EAGLE
9757 9755
33 24
7720 T6TX5AF EAGLE1C ERR 27

B3B FALCONIC
SN-DA SN-CL
34 41
7760 SAA4998H/V1 FEM ERR 26

B14F I/O6 DIGITAL INPUT
DVI INPUT CONNECTOR
7 SDA-DVI
6 SCL-DVI
3IQ7 3IQ6
3I49 3I46
7I19 M24C02 EEPROM
7I52 7I51
3V3-Si-IO
7I18 SII907BCQ DVI RECEIVER

B19B EPLD CONTROL
7E10 PCA9515DP
+3V3-EPLD
3E69 3E70
I2C BUFFER
9E57 RES
9E58 RES

B19A HDI A/D CONVERTER
3L06 3L03
7L01 AD9883AKST A/D CONVERTER ERR 53

B19C EPLD OSD
3E18 3E19
7E23 AD9883AKST A/D CONVERTER ERR 53

B19D EPLD I/0
3V38 3V37
7V01-4 EP1C12F256C8 BANK3 ERR 56
AL-CL-IN AL-DA-IN
+3V3-IO +5V
3V50 3V51 3V52 3V55 3V54 3V53
7V04-1 7V04-2
AL-CL AL-DA
1M49 TO CON2 AL AMBI LIGHT

B21 CONNECTIONS

B14E I/05
1M20 LED SWITCH PANEL (ITV)
3Y09 3Y40
1M15 COMPAIR SERVICE CONNECTOR
SDA-SF SCL-SF
+3V3_SIM
7I10 PCA9515DP
3IB3 3IB1
9I06 9I05
RES

B20 SCREEN INTERFACE
SDA-DISP SCL-DISP
3Z51 3Z50
1G50 TO DISPLAY

B14E I/O2 CONNECTIONS
1I11
RES FOR MMC

B13A MAIN TUNER
+5V
7T50 P82B96TD
3T05 3T06
9T50 9T12
RES
1T01 UV1318ST MAIN TUNER ERR 13
9T08 9T07

B13B SUB TUNER
S-SDA-PIP S-SCL-PIP
9T10 9T09
1T02 UV1318S SUB TUNER ERR 23

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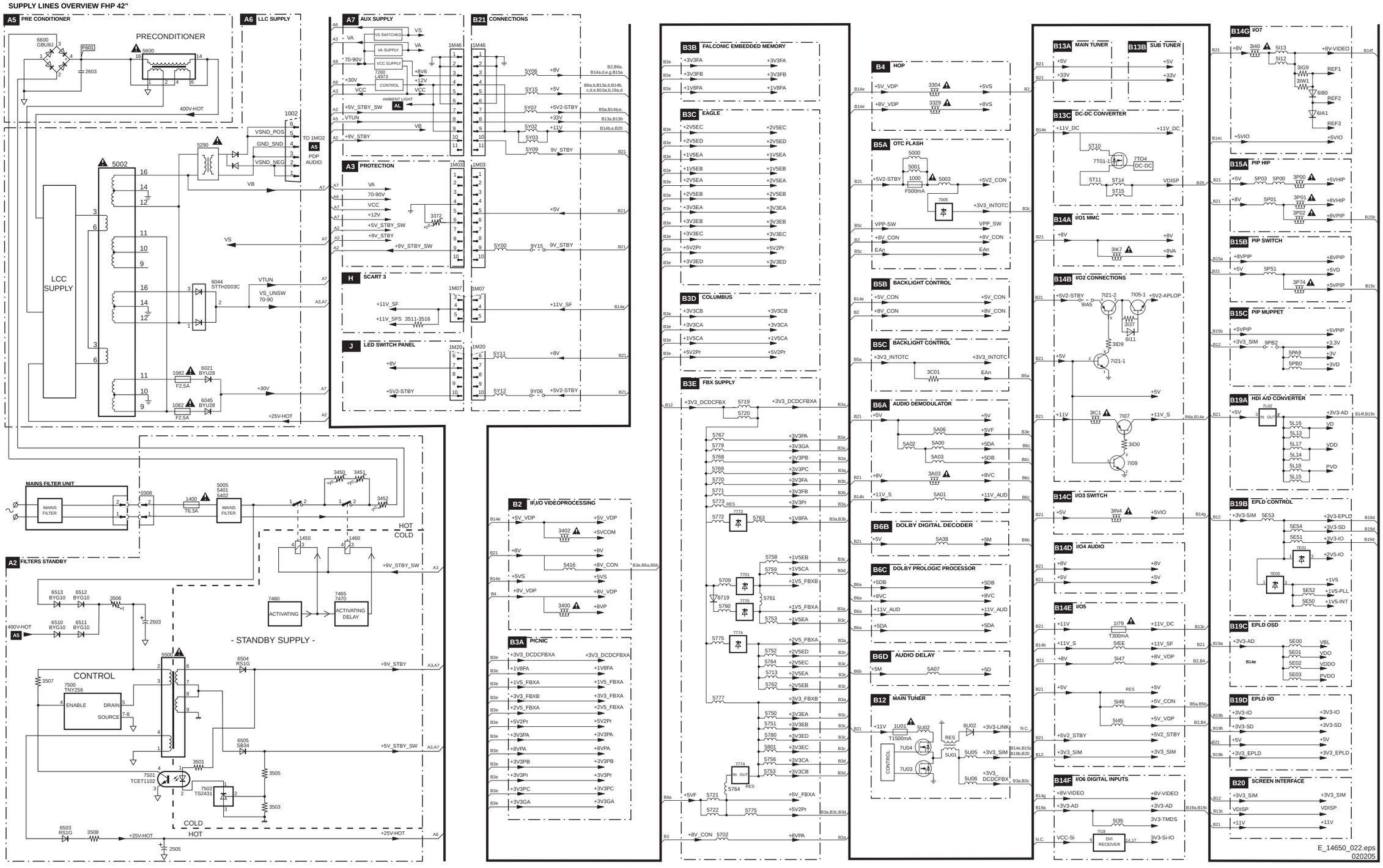
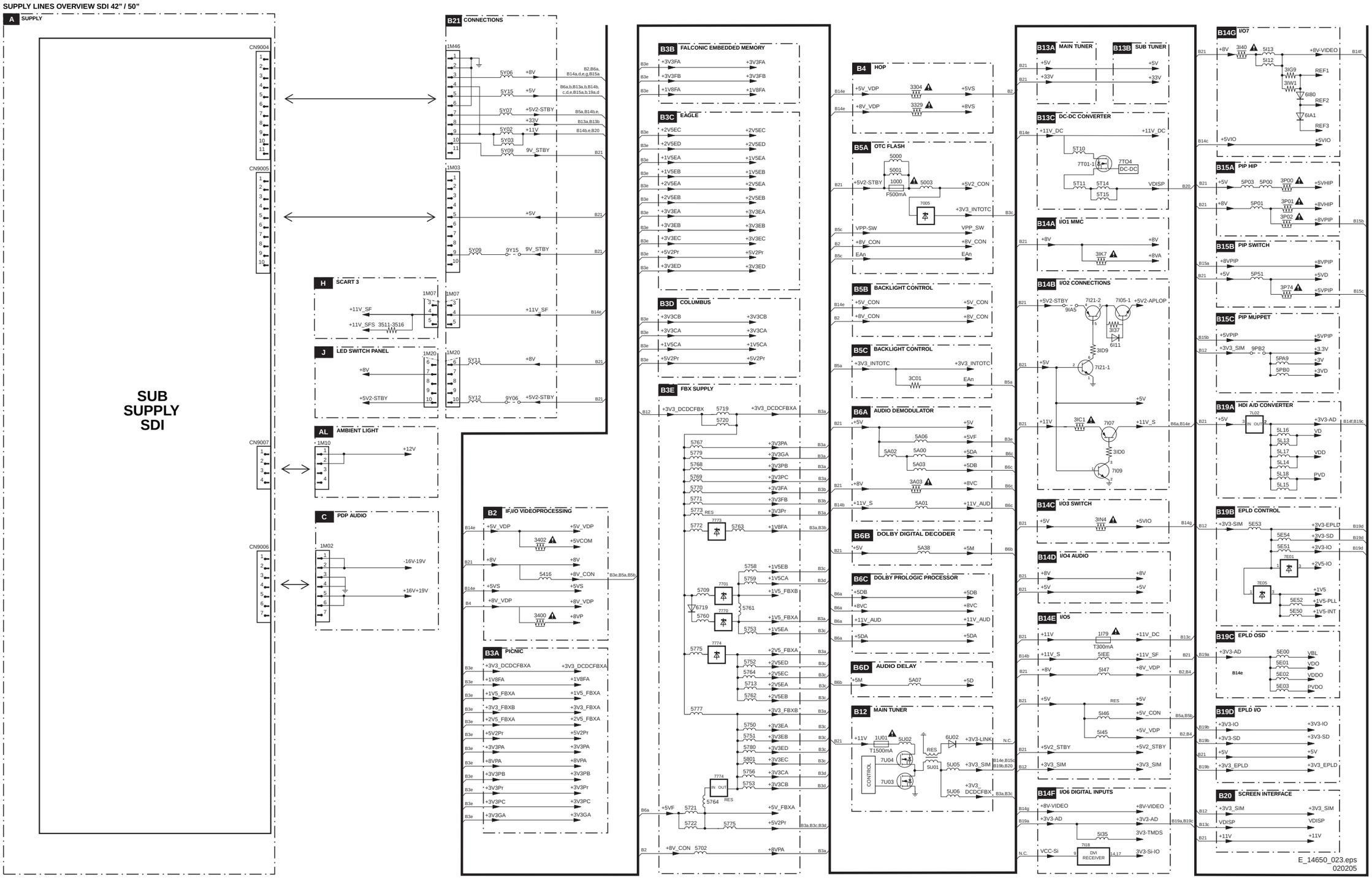
Supply Lines Overview FHP

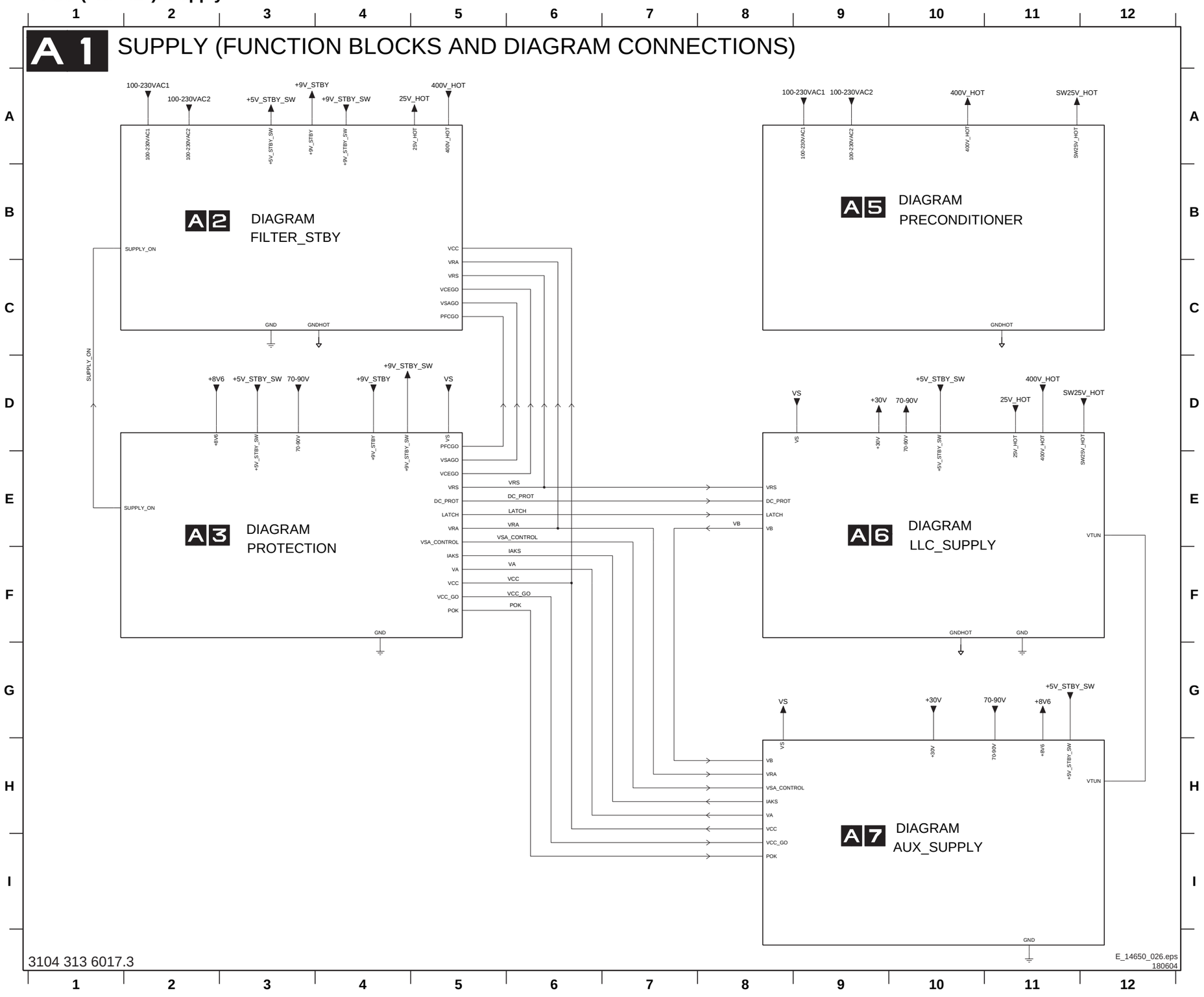


Supply Lines Overview SDI



7. Circuit Diagrams and PWB Layouts

PSU (FHP 42"): Supply



PSU (FHP 42”): Filter Standby

A2 FILTER STANDBY

A2

MAINS INPUT 95-264Vac

MAINS FILTER

B2P3-VH

T6,3AH/250V

DMF28

GROUND

COLD GROUND

HOT GROUND

100-230VAC1

100-230VAC2

SDT-SS-109DM

RELAY CONTROL

SUPPLY_ON

A3

STANDBY SUPPLY

400V_HOT

387V(OV)

BYG10

SECOND STBY

25V_HOT

8V7(9V7)

+9V_STBY

+9V_STBY_SW

CONTROL

TNY256

BS16322-01

TCET1102

TO CN6 PDP (DISPLAY)

TO CN11

+3V3_STBY_SW

3V4(3V4)

5V4(5V4)

+5V_STBY_SW

SWITCH

LD1117DT33C

SI4936ADY

BZX384-C18

SHIELDING 3.3

0-106451-1

MEASURED DC-VOLTAGES

NORMAL . .

STANDBY (. . .)

HEATSINK

MECHPART

3104 313 6017.3

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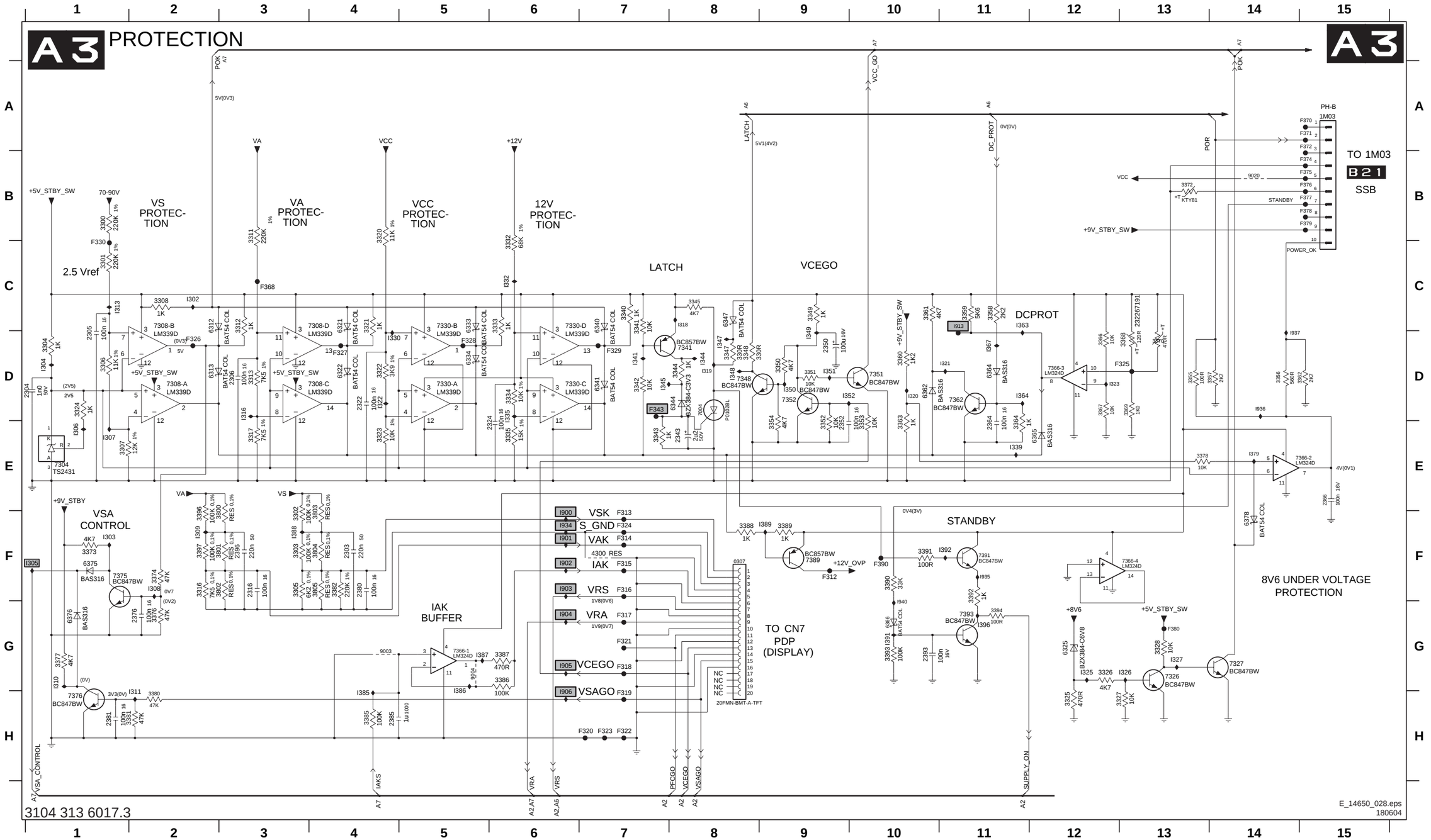
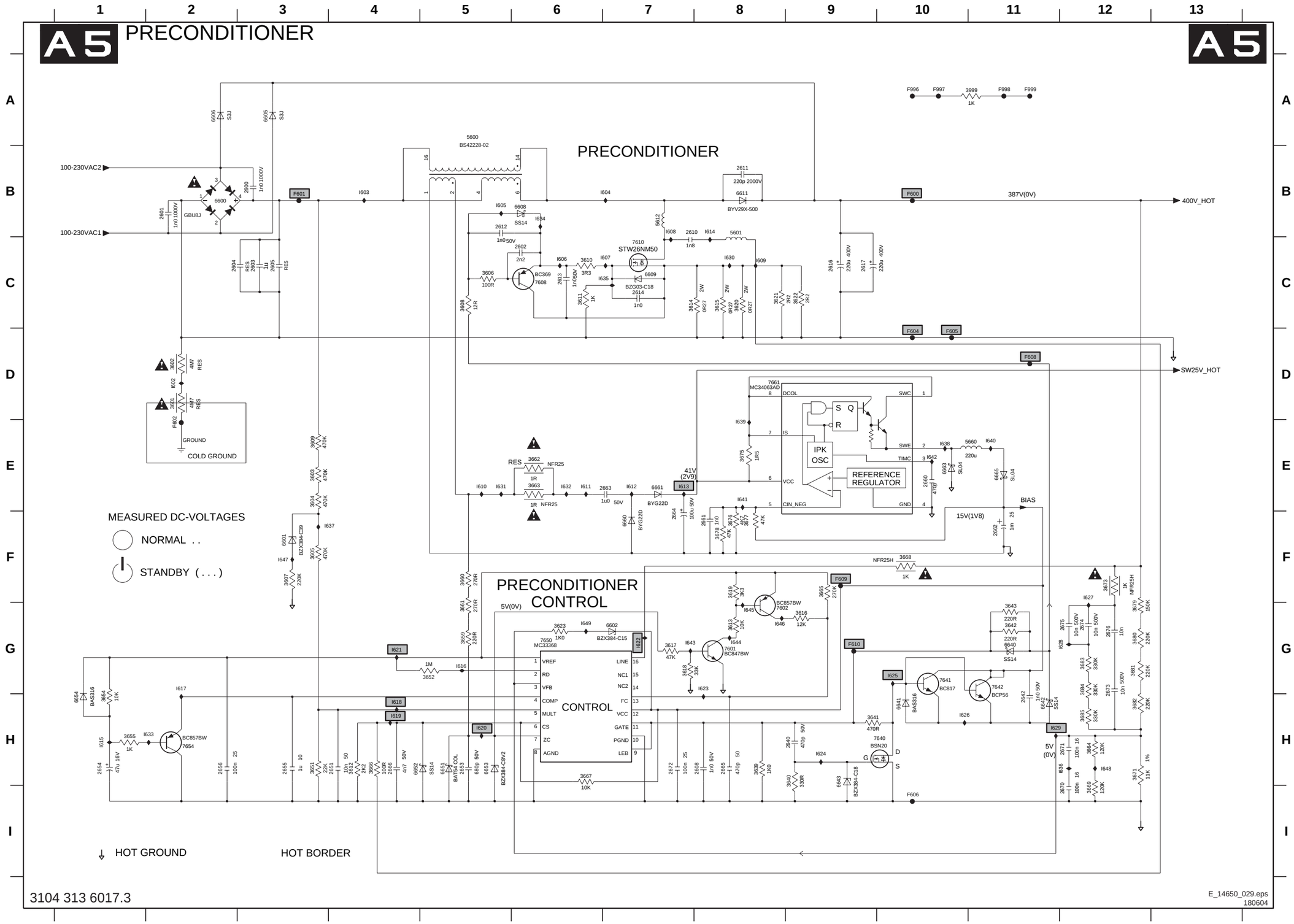
0201 I5	F412 E12
0203 I4	F500 F5
0306 G9	F501 F5
0308 A1	F502 E8
0309 I11	F503 F8
0311 G11	F504 F7
1004 H9	F505 F8
1400 A2	F506 H9
1402 A3	F507 G10
1404 I9	F508 G10
1405 I10	F509 G10
1450 B9	F510 G10
1460 B10	F511 G10
1M05 D5	F512 H10
2001 B4	F513 G9
2002 B3	I400 A4
2003 B4	I401 A3
2004 B5	I402 A4
2019 B4	I403 B4
2400 B2	I404 B6
2401 B6	I405 B7
2402 B2	I406 A9
2403 B5	I407 C8
2404 B4	I408 A10
2405 B4	I409 A10
2406 B5	I410 A12
2407 B5	I411 C11
2408 B4	I412 D10
2465 C11	I413 C12
2502 E8	I414 D12
2503 F6	I415 D12
2504 G4	I416 D12
2505 F5	I417 C13
2507 E7	I501 D4
2508 F7	I502 D5
2509 F7	I503 D5
2510 F7	I504 E5
2511 I7	I505 E6
2512 I7	I506 E7
2513 G4	I507 F7
2530 G11	I508 G4
2531 G11	I509 G4
2532 G13	I510 G6
2533 I13	I511 G6
2540 I11	I512 H7
2541 I12	I513 H7
3026 F4	I514 I8
3035 F4	I515 G11
3036 A11	I516 G12
3400 B3	I517 H12
3401 B1	I518 E6
3404 A4	I519 F9
3450 A10	I520 A7
3451 A10	I521 A6
3452 A11	I522 E7
3460 D10	I523 H6
3461 D10	
3463 D11	
3465 D12	
3467 C12	
3469 D12	
3470 D12	
3501 H7	
3502 H7	
3503 I8	
3504 I8	
3505 H8	
3506 E4	
3507 F4	
3508 E6	
3520 G12	
3530 G12	
5005 B5	
5401 B4	
5402 B6	
5500 F7	
5503 F9	
6460 D11	
6461 C11	
6470 D13	
6471 C13	
6501 G6	
6502 H6	
6503 E6	
6504 E7	
6505 F7	
6506 G6	
6510 E3	
6511 E4	
6512 E5	
6513 E6	
6520 F12	
6530 G12	
6531 I12	
7460 D11	
7465 C12	
7470 D13	
7500 F5	
7501 H6	
7502 H7	
7530-A G12	
7530-B I12	
7540 I12	
9021 G13	
9022 I13	
9023 G6	
F401 B1	
F402 B1	
F403 A1	
F404 A1	
F405 A2	
F406 B1	
F407 B1	
F408 B2	
F409 B2	
F410 B2	
F411 D13	

PSU (FHP 42"): Protection

0307 F8	2343 E8	2393 G10	3307 E1	3322 D4	3334 D6	3348 D8	3357 D14	3367 D12	3378 E13	3390 F10	3802 F3	6325 G12	6365 E12	7308-C D3	7348 D8	7376 H1	F314 F7	F323 H7	F368 C3	F379 B15	I308 F2	I321 D11	I339 E11	I352 D9	I389 F9	I905 G6
1M03 A15	2350 D9	2396 F3	3308 C2	3323 E4	3335 E6	3349 C9	3358 C11	3368 D13	3380 H2	3391 F10	3803 F4	6333 C5	6366 G10	7308-D C3	7351 D10	7389 F9	F315 F7	F324 F7	F370 A15	F380 G13	I309 F2	I322 D4	I341 D7	I363 C11	I391 G10	I906 H6
2303 F4	2352 E9	3300 B1	3311 B3	3324 D1	3340 C7	3350 D9	3359 C11	3369 D13	3381 H2	3392 F11	3804 F4	6334 D5	6375 F1	7326 G13	7352 D9	7391 F11	F316 F7	F325 D13	F371 A15	F390 F10	I310 G1	I323 D12	I344 D8	I364 D11	I392 F11	I913 C11
2304 D1	2364 E11	3301 C1	3312 C3	3325 H12	3341 C7	3351 D9	3360 D10	3370 D13	3382 F4	3393 G10	3805 F4	6340 C7	6376 G1	7327 G14	7362 D11	7393 G11	F317 G7	F326 D2	F372 A15	I302 C2	I311 H2	I325 G12	I345 D7	I367 D11	I396 G11	I934 F6
2305 D1	2366 E15	3302 F3	3313 D3	3326 G12	3342 D7	3352 E9	3361 C10	3372 B13	3385 H4	3394 G11	4300 F7	6341 D7	6378 F14	7330-A D5	7366-1 G5	9003 G4	F318 G7	F327 D4	F374 B15	I303 F1	I313 C1	I326 G13	I347 D8	I379 E14	I900 F6	I935 F11
2306 D3	2376 G2	3303 F3	3316 F2	3327 H13	3343 E7	3353 E10	3362 D15	3373 F1	3386 G6	3396 F2	6312 C2	6344 D8	7004 D8	7330-B C5	7366-2 E14	9004 G5	F319 H7	F328 D5	F375 B15	I304 D1	I316 D3	I327 G13	I348 D8	I385 H4	I901 F6	I936 D14
2316 F3	2380 F4	3304 D1	3317 E3	3328 G13	3344 D8	3354 E9	3363 E10	3374 F2	3387 G6	3397 F2	6313 C2	6347 C8	7304 E1	7330-C D6	7366-3 D12	9020 B14	F320 H7	F329 D7	F376 B15	I305 F1	I318 C8	I330 D4	I349 D9	I386 G5	I902 F6	I937 D14
2322 D4	2381 H1	3305 F3	3320 B4	3332 C6	3345 C8	3355 D13	3364 E11	3376 G2	3388 F8	3800 F3	6321 C4	6362 D10	7308-A D2	7330-D C6	7366-4 F13	F312 F9	F321 G7	F330 C1	F377 B15	I306 E1	I319 D8	I332 C6	I350 D9	I387 G5	I903 F6	I940 G10
2324 E6	2385 H4	3306 D1	3321 C4	3333 C6	3347 D8	3356 D14	3366 D12	3377 G1	3389 F9	3801 F3	6322 D4	6364 D11	7308-B C2	7341 D8	7375 F1	F313 F7	F322 H7	F343 D7	F378 B15	I307 E1	I320 D10	I335 D6	I351 D9	I388 F3	I904 G6	



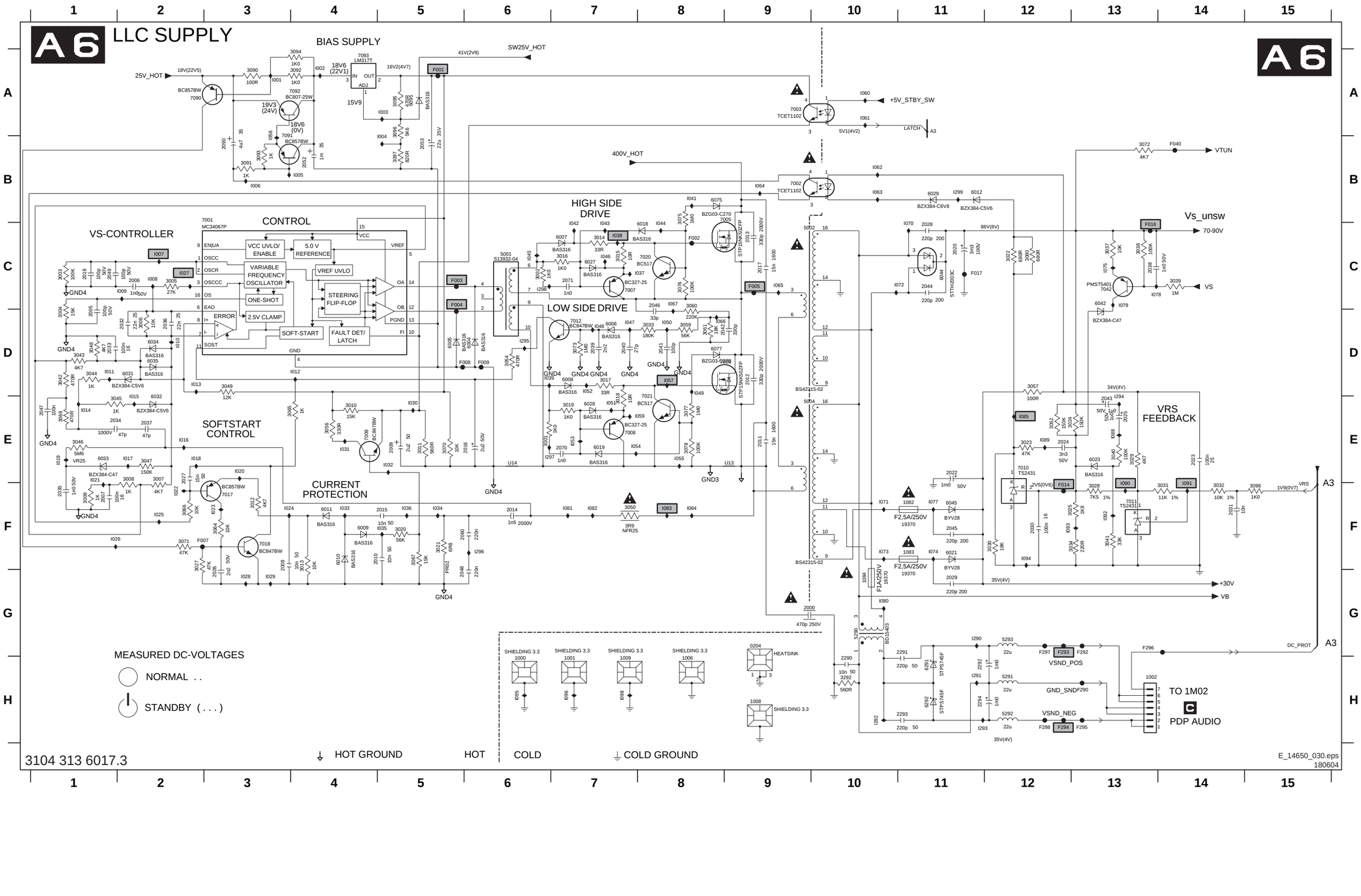
PSU (FHP 42”): Preconditioner



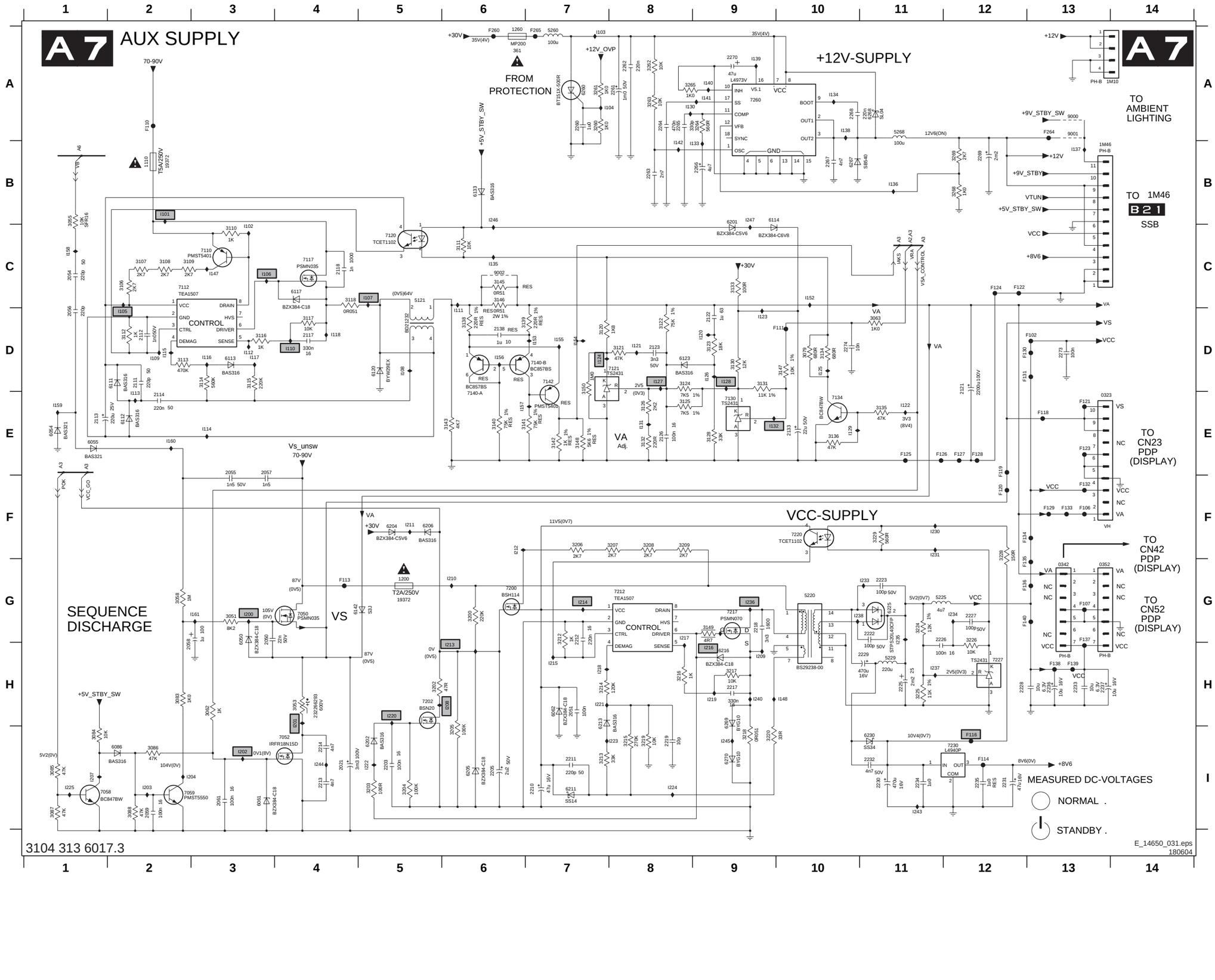
2600 B3	6665 E11
2601 B2	7601 G8
2602 C6	7602 G8
2603 C3	7608 C6
2604 C2	7610 C7
2605 C3	7640 H10
2608 H8	7641 G10
2610 B7	7642 G11
2611 B8	7650 G6
2612 B5	7654 H2
2613 C6	7661 D8
2614 C7	F600 B10
2616 C9	F601 B3
2617 C9	F602 E2
2640 H9	F604 D10
2642 H11	F605 D10
2651 H4	F606 I10
2653 H5	F608 D11
2654 H1	F609 F9
2655 H3	F610 G9
2656 H2	F996 A10
2660 E10	F997 A10
2661 F8	F998 A11
2662 F11	F999 A11
2663 E7	I602 D2
2664 F7	I603 B4
2665 H8	I604 B7
2666 H4	I605 B5
2670 I12	I606 C6
2671 H12	I607 C7
2672 H7	I608 B7
2673 G12	I609 C8
2674 G12	I610 E5
2675 G12	I611 E6
2676 G12	I612 E7
3601 D2	I613 E7
3602 D2	I614 B8
3603 E3	I615 H1
3604 E3	I616 G5
3605 F3	I617 G2
3606 C5	I618 H4
3607 F3	I619 H4
3608 C5	I620 H5
3609 E3	I621 G4
3610 C6	I622 G7
3611 C6	I623 G8
3612 H4	I624 H9
3613 G8	I625 G10
3614 C7	I626 H10
3615 C8	I627 F12
3616 G9	I628 G12
3617 G7	I629 H11
3618 G7	I630 C8
3619 F8	I631 E5
3620 C8	I632 E6
3621 C8	I633 H2
3622 C9	I634 B6
3623 G6	I635 C7
3639 H8	I636 H12
3640 H9	I637 F4
3641 H9	I638 E10
3642 G11	I639 E8
3643 G11	I640 E11
3651 H3	I641 E8
3652 G5	I642 E10
3654 H1	I643 G7
3655 H1	I644 G8
3659 G5	I645 G8
3660 F5	I646 G8
3661 G5	I647 F3
3662 E6	I648 H12
3663 E6	I649 G6
3664 H12	
3665 F9	
3666 H4	
3667 H6	
3668 F10	
3669 I12	
3671 H12	
3673 F12	
3675 E8	
3676 F8	
3677 F8	
3678 F8	
3679 G12	
3680 G12	
3681 G12	
3682 H12	
3683 G12	
3684 G12	
3685 H12	
3999 A11	
5600 A5	
5601 B8	
5612 B7	
5660 E11	
6600 B2	
6601 F3	
6602 G7	
6605 A3	
6606 A2	
6608 B6	
6609 C7	
6611 B8	
6640 G11	
6641 H10	
6642 H11	
6643 H9	
6651 H5	
6652 H4	
6653 H5	
6654 H1	
6660 F7	
6661 E7	
6663 E10	

PSU (FHP 42"): LLC Supply

U13 E9	1082 F11	2010 F4	2020 C11	2030 F12	2039 D7	2048 G5	2291 G11	3006 D2	3015 C7	3024 E13	3034 F13	3045 E1	3057 D12	3070 E5	3090 A3	3292 H10	6005 D5	6019 E7	6034 D2	6292 H11	7010 E12	7091 B4	F008 D6	F294 H12	I005 B4	I014 E1	I023 F3	I032 E5	I042 C7	I051 E7	I061 A10	I072 C11	I082 F7	I093 F12	I294 E13
U14 E6	1083 F11	2011 E9	2022 E11	2031 F14	2040 D7	2049 C1	2292 H11	3007 E2	3016 C7	3025 F13	3037 C13	3046 E1	3059 D8	3071 F2	3091 B3	5001 C6	6006 D7	6021 F11	6035 D2	7001 B2	7011 F13	7092 A4	F009 D6	F295 H13	I006 B3	I015 E2	I024 F3	I033 F4	I043 C7	I052 D7	I062 B10	I073 F10	I083 F8	I094 F12	I295 D6
0204 G9	1084 G10	2012 D9	2023 E14	2032 D2	2041 D8	2052 B4	2293 H11	3008 E2	3017 D7	3027 F2	3038 C13	3047 E2	3060 C8	3072 B13	3092 A4	5002 C9	6007 C7	6023 E13	6042 C13	7002 B9	7012 D7	7093 A4	F014 F12	F296 G13	I007 C2	I016 E2	I025 F2	I034 F5	I044 C8	I053 E7	I063 B10	I074 F11	I084 F8	I095 H6	I296 F6
1000 H6	2000 G9	2013 C9	2024 E12	2033 D1	2042 D9	2053 B5	2294 H11	3009 F1	3018 E7	3028 F13	3039 C14	3048 D1	3061 D8	3073 D7	3093 B3	5004 E9	6008 D7	6027 C7	6044 C11	7003 A9	7017 F3	F001 A5	F016 C13	F297 G12	I008 C2	I017 E2	I026 F1	I035 F5	I045 C6	I054 E7	I064 B9	I075 C13	I085 E12	I096 H7	I297 E6
1001 H7	2005 D1	2014 F6	2025 E13	2034 E1	2043 E13	2060 F5	3001 E6	3010 E4	3019 E7	3029 E13	3040 E13	3049 D3	3064 F3	3075 B8	3094 A4	5290 G10	6009 F4	6028 E7	6045 F11	7005 B8	7018 F3	F002 C8	F017 C11	F298 H12	I009 C2	I018 E2	I027 C2	I036 F5	I046 C5	I055 E8	I065 C9	I077 F11	I088 E13	I098 H7	I298 C6
1002 H13	2006 C2	2015 F5	2026 G3	2035 F1	2044 C11	2070 E7	3002 C6	3011 E5	3020 F5	3030 F12	3041 F13	3050 F7	3065 E4	3076 C8	3095 A5	5291 H12	6010 F4	6029 B11	6075 B8	7006 D8	7020 C8	F003 C5	F040 B14	I001 A3	I010 D2	I019 E1	I028 G3	I037 C8	I047 D7	I056 A3	I066 D8	I078 C13	I089 E12	I290 G11	I299 B11
1006 H8	2007 F1	2016 E6	2027 E2	2036 D2	2045 F11	2071 C7	3003 C1	3012 F3	3021 F5	3031 F14	3042 D1	3052 E12	3066 F2	3077 E8	3096 A5	5292 H12	6011 F4	6031 D2	6077 D8	7007 C7	7021 E8	F004 C5	F290 H13	I002 A4	I011 D1	I020 E3	I029 G3	I038 C7	I048 D7	I057 D8	I067 C8	I079 C13	I090 F13	I291 H11	
1008 H9	2008 F3	2017 C9	2028 C11	2037 E2	2046 C8	2090 B3	3004 D1	3013 F4	3022 C12	3032 F14	3043 D1	3054 D6	3067 F5	3078 E8	3097 B5	5293 G12	6012 B11	6032 E2	6095 A5	7008 E7	7042 C13	F005 C9	F292 G13	I003 A5	I012 D4	I021 E1	I030 E5	I039 D6	I049 D8	I059 E8	I070 C11	I080 G10	I091 F14	I292 H10	
1009 H7	2009 E5	2018 C1	2029 G11	2038 C13	2047 E1	2290 H10	3005 C2	3014 C7	3023 E12	3033 D8	3044 D1	3056 E4	3069 E1	3080 C12	3098 F15	6004 D6	6018 C8	6033 E1	6291 H11	7009 E4	7090 A2	F007 F2	F293 G12	I004 B5	I013 D2	I022 F2	I031 E4	I041 B8	I050 D8	I060 A10	I071 F10	I081 F7	I092 F13	I293 H11	



PSU (FHP 42"): Aux Supply



0323 E13	3147 D10	F131 D12
0342 G13	3148 E7	F132 F13
0352 G13	3149 G9	F133 F13
1110 B2	3150 D7	F134 F12
1200 G5	3200 G6	F135 G12
1260 A6	3202 H5	F136 G12
1M10 A14	3203 I5	F137 G13
1M46 B13	3204 I5	F138 H13
2021 I4	3205 I6	F139 H13
2050 G3	3206 F7	F140 G12
2051 H7	3207 F8	F260 A6
2054 C1	3208 F8	F264 A13
2055 E3	3209 F8	F265 A7
2056 D1	3212 G7	I101 B2
2057 E3	3213 I7	I102 C3
2058 H2	3214 H7	I103 A7
2059 I2	3215 I8	I104 A8
2061 I3	3216 H8	I105 D2
2111 D2	3217 H9	I106 C3
2112 D2	3218 I9	I107 C5
2113 E1	3219 I8	I108 D5
2114 E2	3220 I9	I109 D2
2117 D4	3224 G11	I110 D4
2118 C4	3225 H11	I111 D6
2121 D12	3226 G12	I112 D3
2122 D9	3228 F12	I113 E2
2123 D8	3229 F11	I114 E3
2126 E8	3260 A7	I115 D2
2133 E10	3261 A7	I116 D3
2138 D6	3262 A8	I117 D3
2203 I5	3263 A8	I118 D4
2205 I6	3264 A9	I120 D9
2210 I7	3265 A8	I121 D8
2211 I7	3268 B12	I122 E11
2212 G7	3269 B12	I123 D9
2213 I4	5121 C5	I124 D7
2214 I4	5220 G10	I125 D10
2217 H9	5225 G11	I126 D9
2218 G9	5229 H11	I127 D8
2219 I8	5260 A7	I128 D9
2222 G11	5268 A11	I129 E10
2223 G11	6050 G3	I130 A8
2225 H11	6054 E1	I131 E8
2226 G11	6055 E1	I132 E9
2227 G12	6061 I3	I133 B9
2228 H12	6062 H7	I134 A10
2229 H11	6086 I2	I135 C6
2230 I11	6111 D2	I136 B11
2231 I12	6112 E2	I137 B13
2232 I11	6113 D3	I138 A10
2233 H13	6114 B9	I139 A9
2234 I11	6117 C4	I140 A9
2235 I12	6120 D5	I141 A9
2236 H13	6123 D8	I142 B8
2237 H13	6133 B6	I147 C3
2260 A7	6142 G4	I148 H10
2261 A8	6201 B9	I152 C10
2262 A8	6202 I5	I153 D7
2263 B8	6204 F5	I154 D7
2264 A8	6205 I6	I155 D7
2265 A8	6206 F5	I156 D6
2266 B9	6211 I7	I157 E6
2267 B10	6213 H7	I158 C1
2268 A10	6216 H9	I159 E1
2269 B12	6225 G11	I160 E2
2270 A9	6230 I11	I161 G3
2273 D13	6260 A7	I200 G3
2274 D10	6267 B10	I201 H4
3051 G3	6268 A11	I202 I3
3053 H4	6269 H9	I203 I2
3055 B1	6270 I9	I204 I3
3058 G2	7050 G4	I207 I1
3062 H3	7052 I4	I208 H6
3063 D11	7058 I1	I209 H9
3079 D10	7059 I2	I210 G6
3083 H2	7110 C3	I211 F5
3084 I1	7112 C2	I212 F6
3085 I1	7117 C4	I213 H6
3086 I2	7120 C5	I214 G7
3087 I1	7121 D8	I215 H7
3088 I2	7130 E9	I216 H9
3106 C2	7134 E10	I217 G8
3107 C2	7140-A D6	I218 H7
3108 C2	7140-B D7	I219 H9
3109 C2	7142 D7	I220 H5
3110 C3	7200 G6	I221 H7
3111 C6	7202 H5	I222 I5
3112 D2	7212 G8	I223 I8
3113 D2	7217 G9	I224 I8
3114 D3	7220 F10	I225 I1
3115 D3	7227 H12	I230 F11
3116 D3	7230 I12	I231 F11
3117 D4	7260 A9	I233 G11
3118 C4	9000 A13	I234 G12
3120 D7	9001 A13	I235 G11
3121 D8	9002 C6	I236 G9
3122 D8	F102 D13	I237 H11
3123 D9	F106 F13	I238 G10
3124 D8	F107 G13	I240 H9
3125 E8	F110 A2	I243 I11
3126 E8	F111 D10	I244 I4
3128 E9	F113 G4	I245 I9
3130 D9	F114 I12	I246 B6
3131 D9	F116 I12	I247 B9
3132 E8	F118 E13	
3133 C9	F119 E12	
3134 D10	F120 F12	
3135 E11	F121 E13	
3136 E10	F122 C12	
3138 D6	F123 E13	
3139 D6	F124 C12	
3140 E6	F125 E11	
3141 E6	F126 E11	
3142 E7	F127 E12	
3143 E6	F128 E12	
3145 C6	F129 F13	
3146 C6	F130 D12	

Layout PSU (FHP 42") (Overview Top Side)

0201	B4	1082	C8	1M46	G8	2012	A5	2025	E8	2038	D8	2051	F6	2090	B3	2203	F5	2226	E8	2261	G8	2291	B8	2352	G6	2404	F2	2510	F5	2603	B1
0203	D3	1083	B8	2000	A5	2013	C5	2026	A4	2039	B3	2052	A4	2111	D5	2205	F5	2227	E8	2262	G8	2292	A8	2364	G5	2405	E1	2511	G4	2604	C1
0204	D7	1084	A8	2001	E2	2014	B5	2027	A4	2040	B3	2053	A4	2112	D5	2210	F6	2228	E8	2263	G8	2293	C8	2366	G6	2406	E2	2512	G4	2605	C1
0306	G3	1110	D7	2002	F1	2015	A4	2028	C8	2041	B3	2054	D8	2113	D5	2211	F6	2229	E6	2264	G8	2294	A8	2376	G6	2407	D1	2513	G3	2608	A2
0307	G2	1200	E6	2003	E2	2016	A4	2029	C8	2042	B4	2055	D8	2114	D5	2212	F6	2230	E6	2265	G8	2303	G7	2380	G7	2408	E2	2530	G4	2610	C2
0308	G1	1260	F8	2004	E2	2017	C5	2030	E5	2043	E8	2056	D8	2117	D6	2213	D8	2231	E7	2266	G8	2304	G7	2381	G6	2465	E5	2531	G4	2611	C2
0309	G1	1400	F1	2005	A4	2018	A4	2031	E5	2044	C8	2057	D8	2118	C6	2214	D8	2232	E6	2267	G8	2305	G7	2385	G6	2502	F5	2532	G3	2612	B2
0311	G3	1402	F1	2006	A4	2019	E1	2032	A4	2045	C8	2058	D8	2121	C8	2217	F6	2233	E8	2268	G8	2306	G7	2393	G6	2503	F4	2533	G4	2613	B2
0323	F8	1450	F4	2007	A5	2020	B8	2033	A4	2046	B3	2059	D8	2122	E6	2218	E6	2234	E8	2269	F8	2316	G7	2396	G8	2504	G4	2540	G5	2614	B2
0342	F8	1460	E4	2008	A4	2021	D8	2034	B5	2047	A4	2060	A5	2123	D5	2219	F5	2235	E8	2270	G8	2322	G7	2400	F1	2505	B3	2541	G5	2616	D4
0352	E8	1M03	G5	2009	A4	2022	B8	2035	A5	2048	A5	2061	D8	2126	D6	2222	F8	2236	E8	2273	G8	2324	G7	2401	E1	2507	F5	2600	E2	2617	C4
1002	A8	1M05	G3	2010	A3	2023	E5	2036	A4	2049	A4	2070	B4	2133	E5	2223	F8	2237	E8	2274	D6	2343	G6	2402	F1	2508	F5	2601	D2	2640	A2
1004	F8	1M10	A8	2011	B5	2024	E5	2037	B5	2050	E8	2071	B4	2138	E6	2225	F8	2260	F8	2290	B8	2350	G7	2403	E1	2509	F5	2602	B2	2642	A2

2651	A3	2671	A3	3008	A5	3021	B5	3034	E5	3209	F5	3461	E5	6010	A4	7001	A4														
2653	A3	2672	A2	3009	A5	3022	E5	3035	F4	3212	F6	3463	F5	6011	A3	7002	D5														
2654	B2	2673	B2	3010	A3	3023	E5	3036	D1	3213	F6	3465	E5	6012	E5	7003	E5														
2655	A3	2674	B2	3011	A4	3024	D8	3037	D8	3214	F6	3467	E5	6018	C4	7004	G6														
2656	B3	2675	B2	3012	A4	3025	E5	3038	D8	3215	F6	3469	E5	6019	B4	7005	D5														
2660	A2	2676	B2	3013	A4	3026	G4	3039	D8	3216	F6	3470	E5	6021	C8	7006	B5														
2661	A1	3001	B4	3014	B4	3027	A4	3040	E5	3217	F6	3501	G4	6023	E5	7007	C4														
2662	A2	3002	B4	3015	C4	3028	E5	3041	E5	3218	F6	3502	F4	6027	C4	7008	B4														
2663	A2	3003	A4	3016	C4	3029	E5	3042	A4	3219	F5	3503	F4	6028	B4	7009	A4														
2664	A2	3004	A4	3017	B3	3030	E5	3043	A4	3220	G6	3504	G4	6029	E5	7010	E5														
2666	A2	3006	A4	3019	B4	3032	E5	3044	A4	3224	E8	3505	F5	6031	A4	7011	E5														
2670	A3	3007	A4	3020	A3	3033	B3	3045	A4	3225	E8	3506	E4	6032	A4	7012	B3														
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								3047	A4	3228	E8	3508	D4	6034	A4	7018	A4														
								3048	A4	3229	E8	3520	G3	6035	A4	7020	C4														
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								3054	B3	3265	G8	3605	A2	6055	D8	7059	D8														
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								3111	E5	3355	G5	3679	B2	6364	G6	7540	F5														
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								3115	D5	3359	G6	3683	B2	6376	G6	7610	B2														
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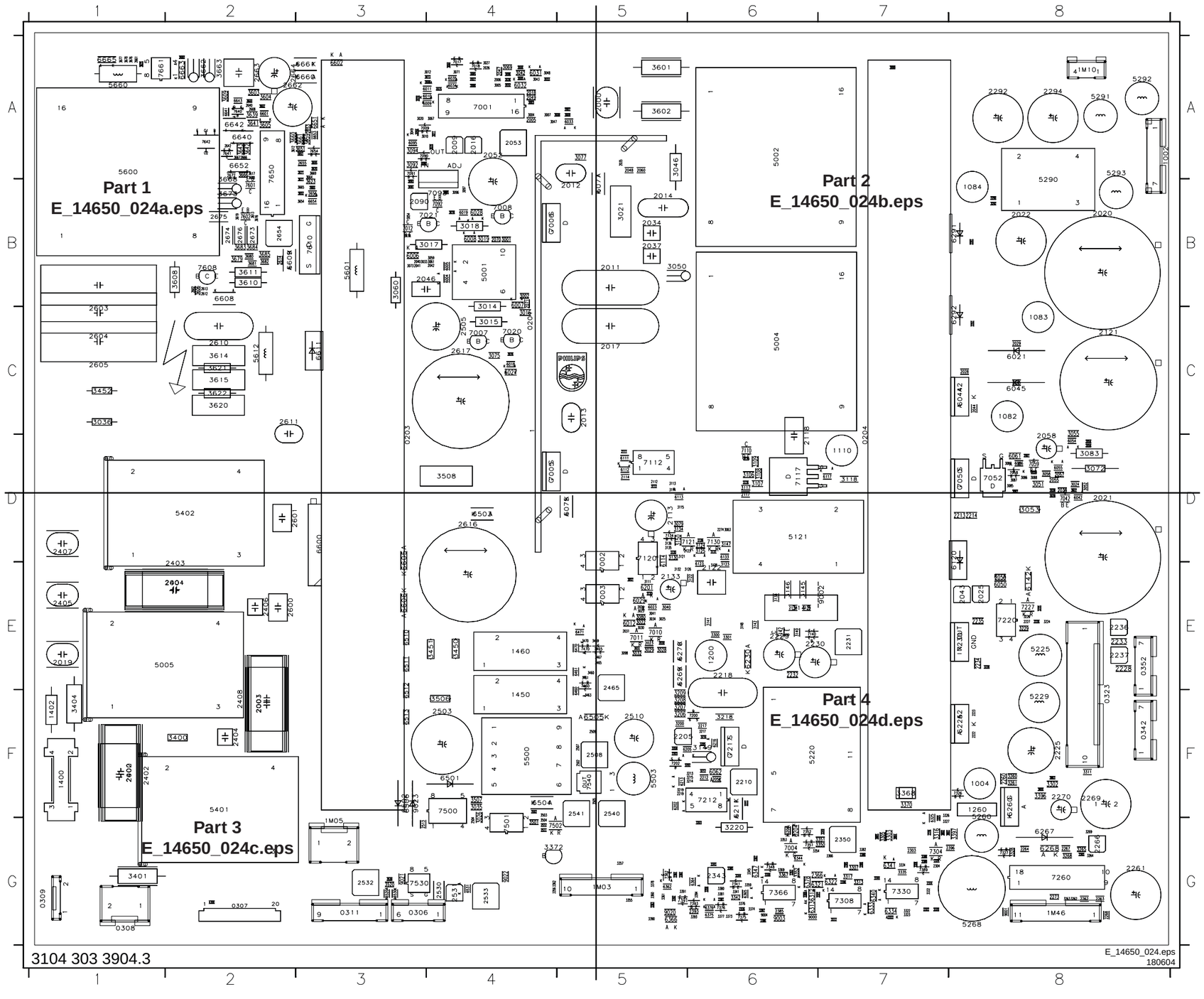
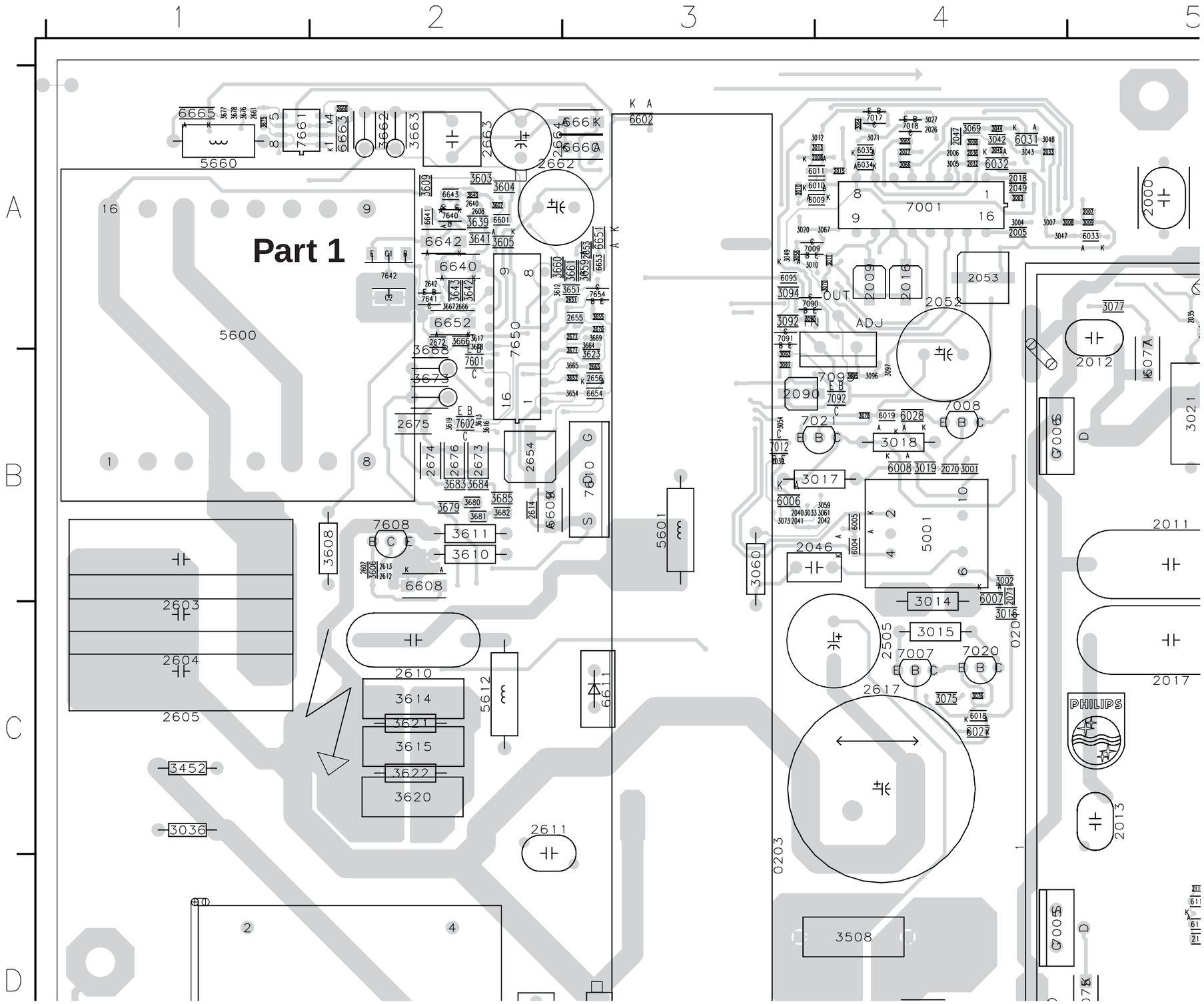


Layout PSU (FHP 42") (Part 1 Top Side)



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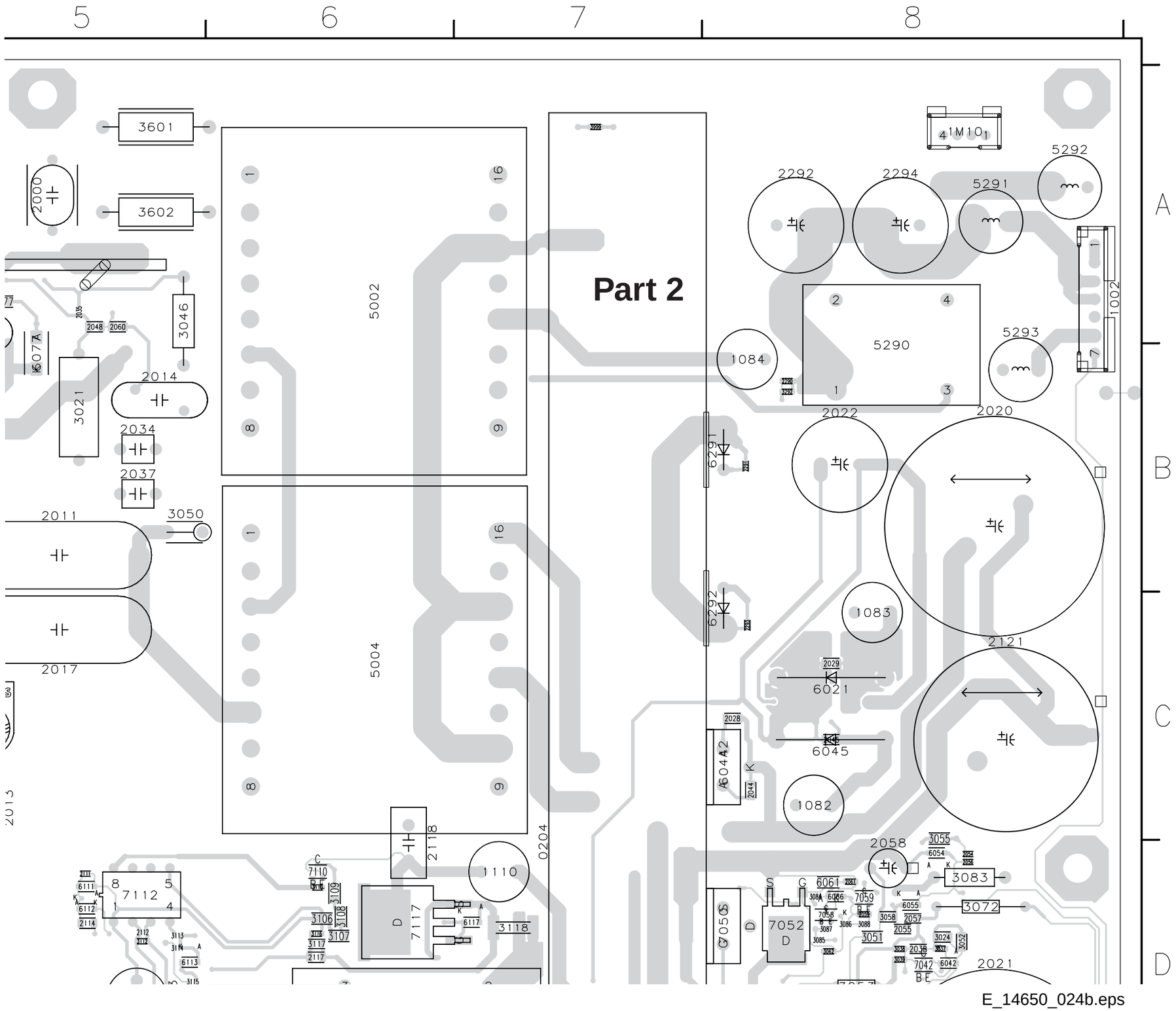
Layout PSU (FHP 42") (Part 2 Top Side)



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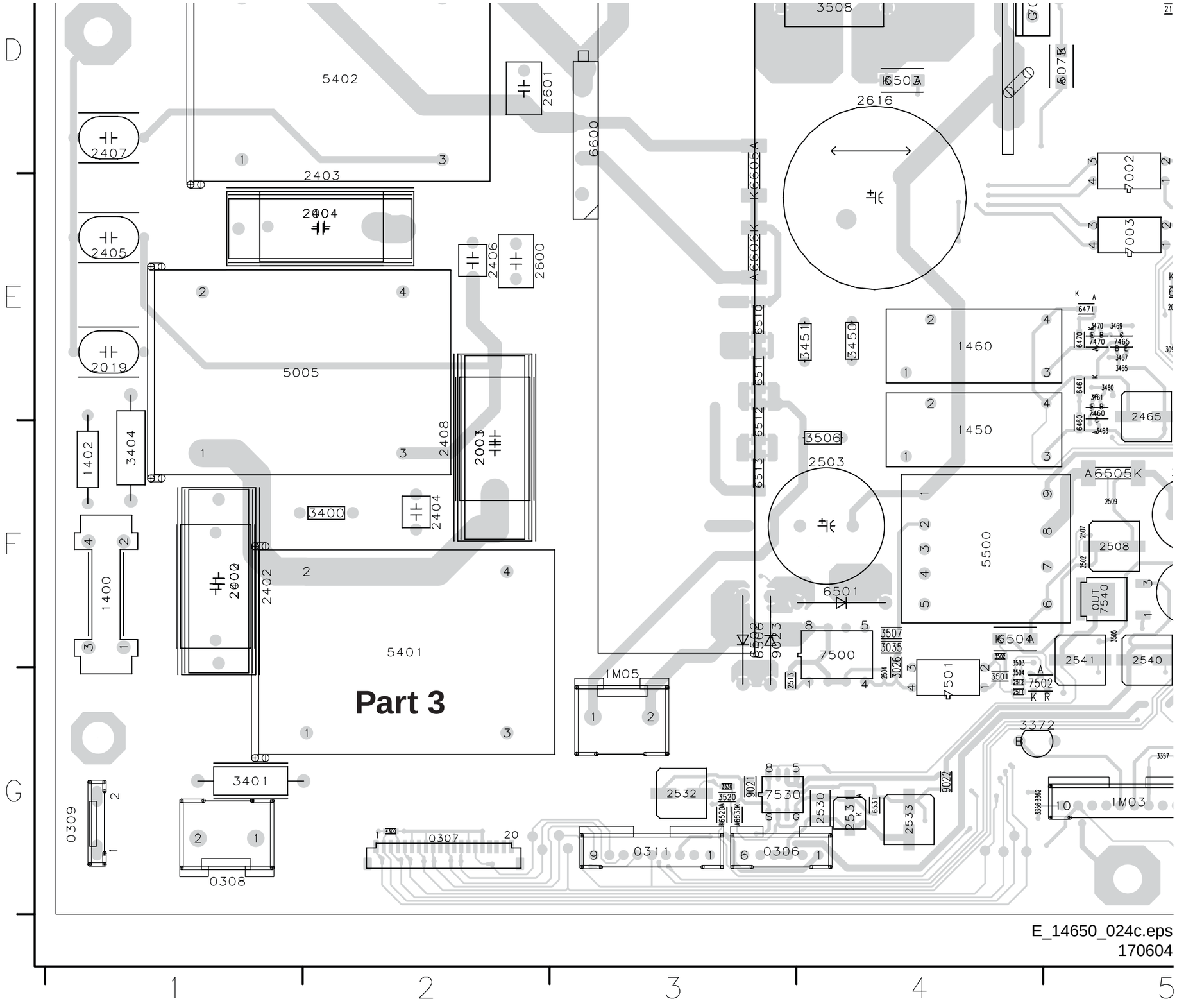
Layout PSU (FHP 42") (Part 3 Top Side)



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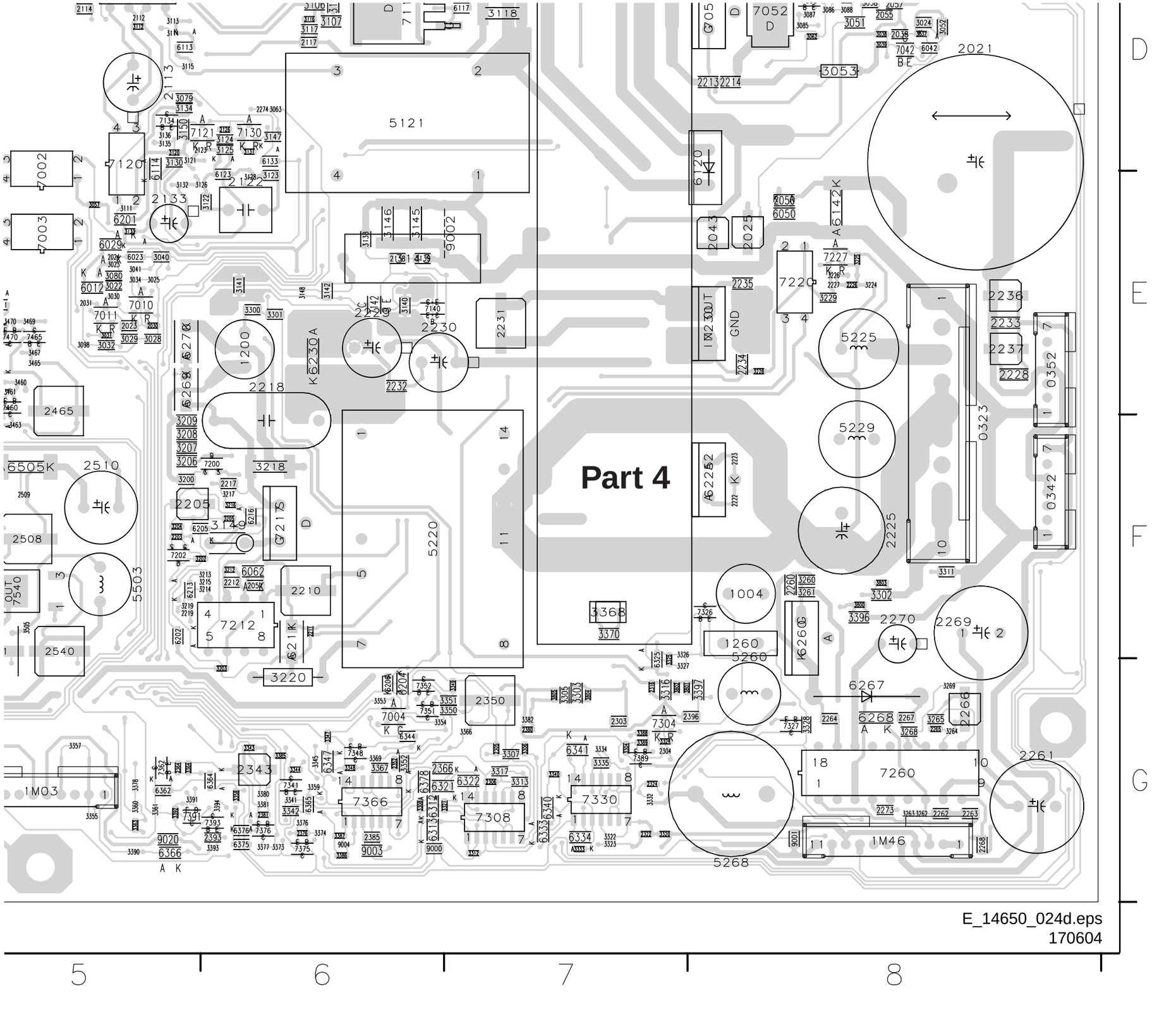
Layout PSU (FHP 42") (Part 4 Top Side)



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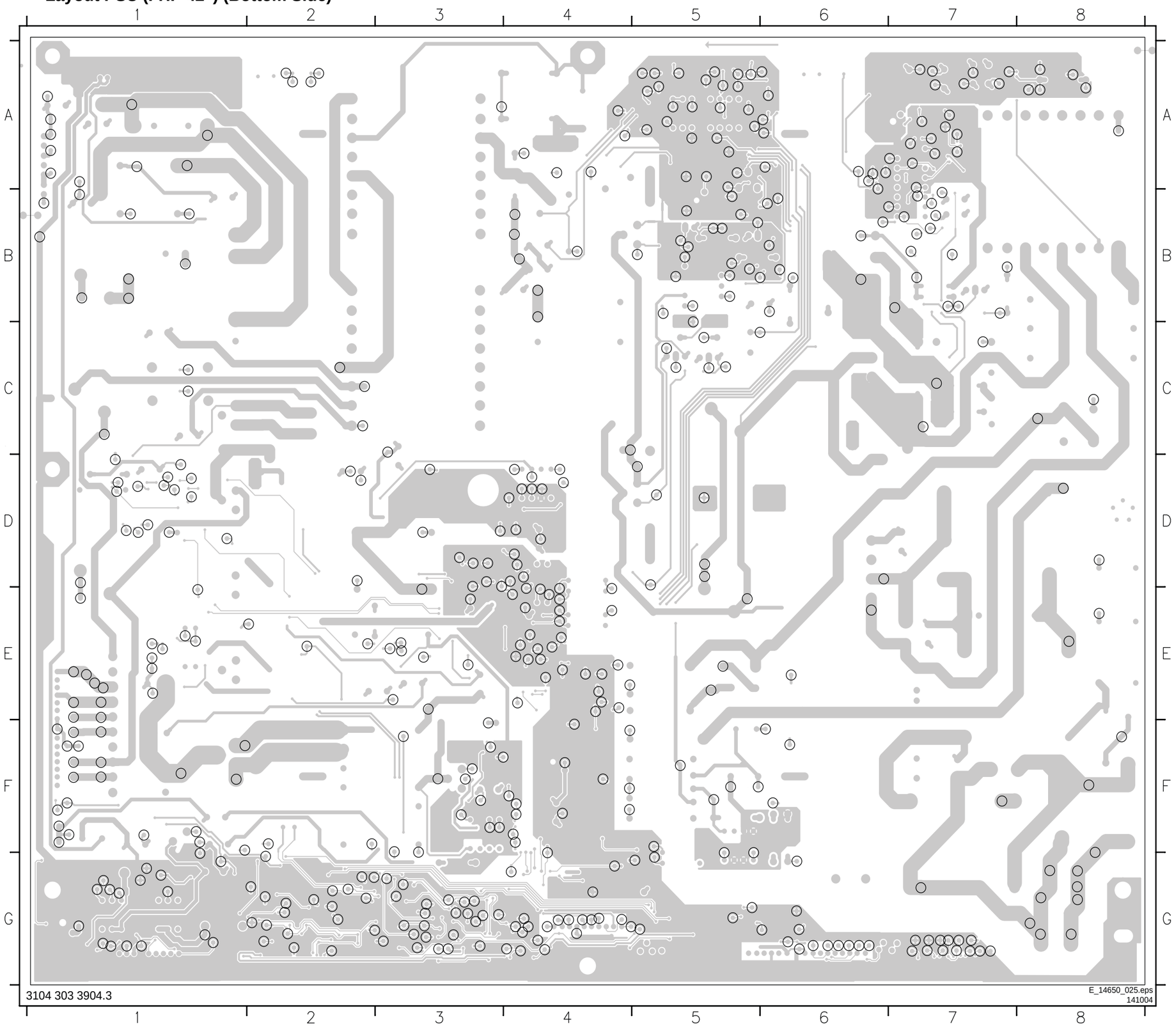
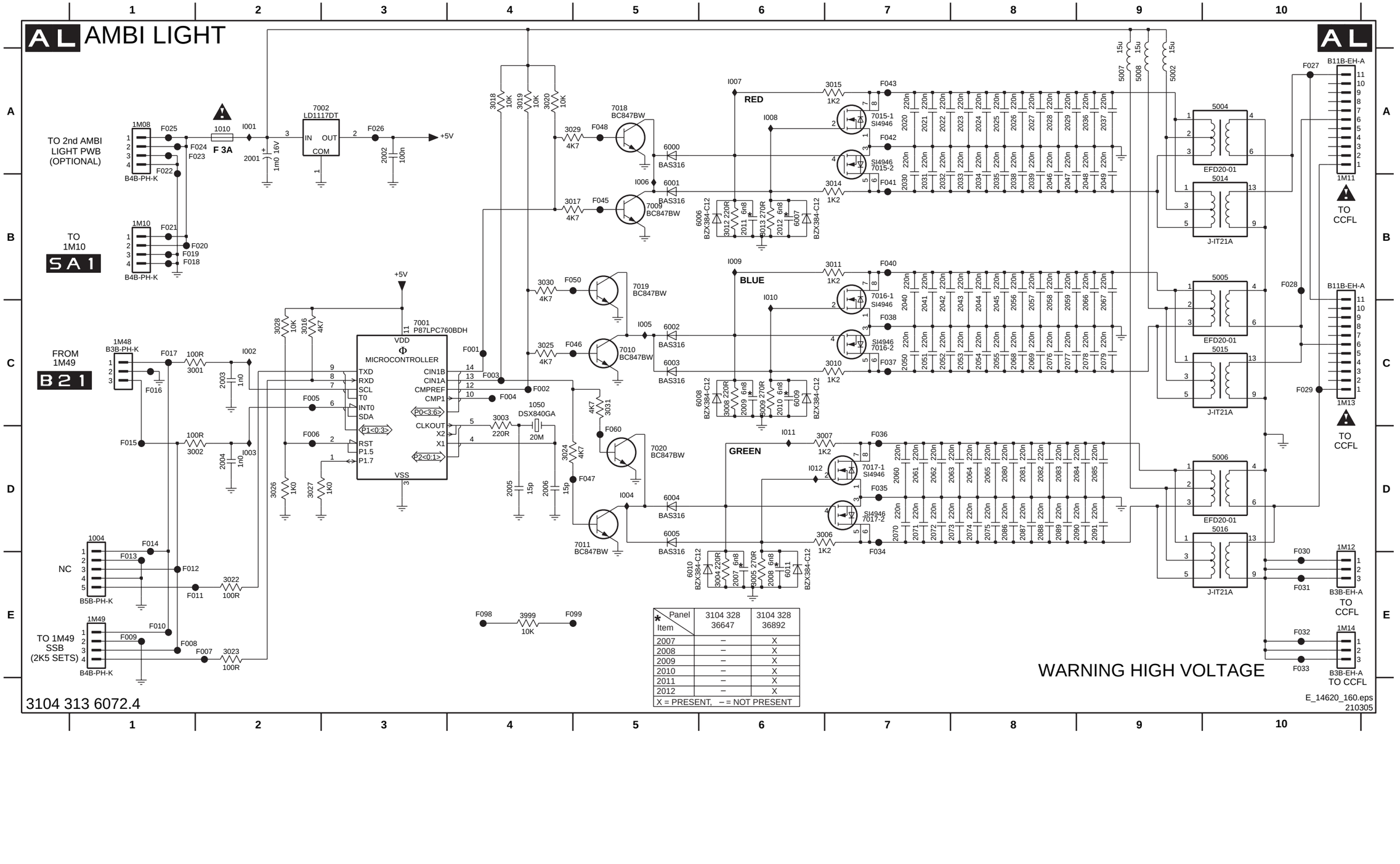


Ambi Light

1004 D1	2002 A3	2021 A7	2033 B8	2045 C8	2057 C8	2069 C8	2081 D8	3002 D1	3014 B7	3027 D2	5014 B10	6009 C6	7017-1 D7	F008 E1	F020 B2	F032 E10	F046 C5	I006 B5
1010 A2	2003 C2	2022 A7	2034 B8	2046 B8	2058 C8	2070 D7	2082 D8	3003 C4	3015 A7	3028 C2	5015 C10	6010 E5	7017-2 D7	F009 E1	F021 B1	F033 E10	F047 D5	I007 A6
1050 C4	2004 D2	2023 A8	2035 B8	2047 B8	2059 C8	2071 D7	2083 D8	3004 E6	3016 C2	3029 A4	5016 D10	6011 E6	7018 A5	F010 E1	F022 A1	F034 E7	F048 A5	I008 A6
1M08 A1	2005 D4	2024 A8	2036 A9	2048 B9	2060 D7	2072 D7	2084 D9	3005 E6	3017 B4	3030 B4	6000 A5	7001 C3	7019 B5	F011 E1	F023 A2	F035 D7	F050 B4	I009 B6
1M10 B1	2006 D4	2025 A8	2037 A9	2049 B9	2061 D7	2073 D8	3001 C5	3006 D6	3018 A4	3031 C5	6001 B5	7002 A2	7020 D5	F012 E1	F024 A2	F036 D7	F060 D5	I010 B6
1M11 B10	2007 E6	2026 A8	2038 B8	2050 C7	2062 D7	2074 D8	3999 E4	3007 D6	3019 A4	3999 C5	6002 C5	7009 B5	F001 C4	F013 E1	F025 A1	F037 C7	F098 E4	I011 D6
1M12 D10	2008 E6	2027 A8	2039 B8	2051 C7	2063 D8	2075 D8	5002 A9	3008 C6	3020 A4	5002 A9	6003 C5	7010 C5	F002 C4	F014 D1	F026 A3	F038 C7	F099 E5	I012 D6
1M13 C10	2009 C6	2028 A8	2040 C7	2052 C7	2064 D8	2076 C8	5004 A10	3009 C6	3022 E2	5003 A10	6004 D5	7011 D5	F003 C4	F015 D1	F027 A10	F040 B7	I001 A2	
1M14 E10	2010 C6	2029 A8	2041 C7	2053 C8	2065 D8	2077 C8	5005 B10	3010 C7	3023 E2	5004 B10	6005 D5	7015-1 A7	F004 C4	F016 C1	F028 B10	F041 B7	I002 C2	
1M48 C1	2011 B6	2030 B7	2042 C7	2054 C8	2066 C9	2078 C9	5006 D10	3011 B7	3024 D4	5006 D10	6006 B6	7015-2 A7	F005 C2	F017 C1	F029 C10	F042 A7	I003 D2	
1M49 E1	2012 B6	2031 B7	2043 C8	2055 C8	2067 C9	2079 C9	5007 A9	3012 B6	3025 C4	5007 A9	6007 B6	7016-1 B7	F006 D2	F018 B1	F030 E10	F043 A7	I004 D5	
2001 A2	2020 A7	2032 B7	2044 C8	2056 C8	2068 C8	2080 D8	3001 C1	3013 B6	3026 D2	5008 A9	6008 C6	7016-2 C7	F007 E2	F019 B1	F031 E10	F045 B5	I005 C5	

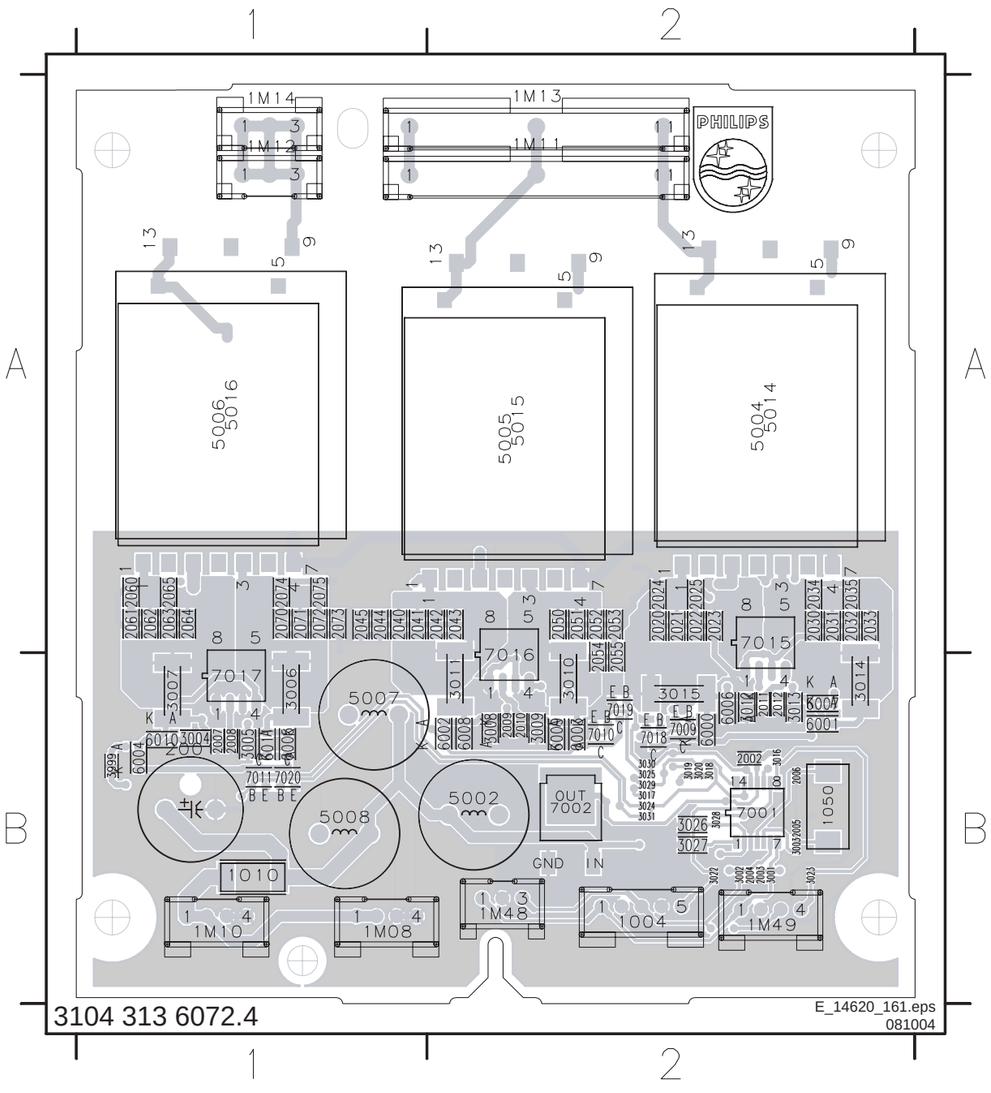


Panel / Item	3104 328 36647	3104 328 36892
2007	–	X
2008	–	X
2009	–	X
2010	–	X
2011	–	X
2012	–	X

X = PRESENT, – = NOT PRESENT

Layout Ambi Light (Top Side)

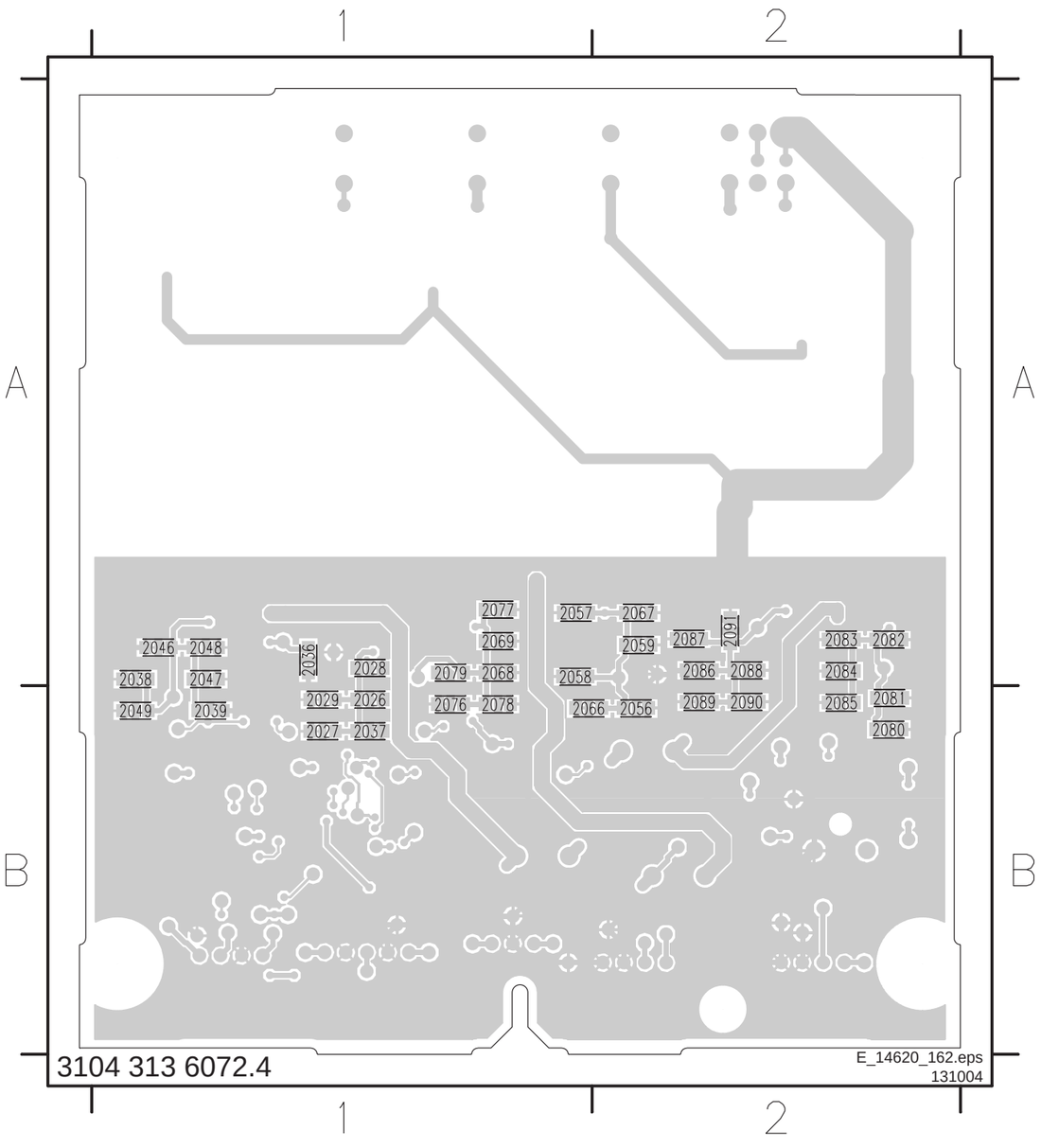
1004 B2	2011 B2	2051 A2	3005 B1	3027 B2	6006 B2
1010 B1	2012 B2	2052 A2	3006 B1	3028 B2	6007 B2
1050 B2	2020 A2	2053 A2	3007 B1	3029 B2	6008 B2
1M08 B1	2021 A2	2054 B2	3008 B2	3030 B2	6009 B2
1M10 B1	2022 A2	2055 B2	3009 B2	3031 B2	6010 B1
1M11 A2	2023 A2	2060 A1	3010 B2	3999 B1	6011 B1
1M12 A1	2024 A2	2061 A1	3011 B2	5002 B2	7001 B2
1M13 A2	2025 A2	2062 A1	3012 B2	5004 A2	7002 B2
1M14 A1	2030 A2	2063 A1	3013 B2	5005 A1	7009 B2
1M48 B2	2031 A2	2064 A1	3014 B2	5006 A1	7010 B2
1M49 B2	2032 A2	2065 A1	3015 B2	5007 B1	7011 B1
2001 B1	2033 A2	2070 A1	3016 B2	5008 B1	7015 B2
2002 B2	2034 A2	2071 A1	3017 B2	5014 A2	7016 B2
2003 B2	2035 A2	2072 A1	3018 B2	5015 A1	7017 B1
2004 B2	2040 A1	2073 A1	3019 B2	5016 A1	7018 B2
2005 B2	2041 A1	2074 A1	3020 B2	6000 B2	7019 B2
2006 B2	2042 A2	2075 A1	3022 B2	6001 B2	7020 B1
2007 B1	2043 A2	3001 B2	3023 B2	6002 B2	
2008 B1	2044 A1	3002 B2	3024 B2	6003 B2	
2009 B2	2045 A1	3003 B2	3025 B2	6004 B1	
2010 B2	2050 A2	3004 B1	3026 B2	6005 B1	



3104 313 6072.4

Layout Ambi Light (Bottom Side)

2026 B1	2037 B1	2048 A1	2059 A2	2076 B1	2081 B2	2086 A2	2091 A2
2027 B1	2038 A1	2049 B1	2066 B1	2077 A1	2082 A2	2087 A2	
2028 A1	2039 B1	2056 B2	2067 A2	2078 B1	2083 A2	2088 A2	
2029 B1	2046 A1	2057 A1	2068 A1	2079 A1	2084 A2	2089 B2	
2036 A1	2047 A1	2058 A1	2069 A1	2080 B2	2085 B2	2090 B2	



3104 313 6072.4

SSB: IF, I/O Video Processing

B2 IF, I/O VIDEO PROCESSING

B2

HIP

IF DEM

SUPPLY

CTRL

SYNC

I/O SWITCH

LUMA & CHROMA PROC.

OUTP SWITCH

GROUP DELAY COR.

SAW-FILTER AUDIO

SAW-FILTER-VIDEO

COIL 40.4 SUPPRESSION

8204 000 8345.4

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1307 E12	3461 D13
1308 E12	3462 D13
1406 E4	3463 B4
1407 E5	3468 H11
1408-A G3	3473 D11
1408-B G3	3474 F8
1409-A C3	3475 G9
1409-B D3	3476 H9
1410-A E3	5309 H14
1410-B F3	5310 H14
1411 G6	5311 I14
2300 F7	5312 F14
2302 H14	5318 F7
2305 C11	5401 D2
2316 C11	5402 E5
2322 C11	5403 H2
2327 D12	5404 B6
2339 H7	5405 B6
2350 A11	5406 E5
2351 A11	5408 D6
2352 A11	5411 C1
2353 I12	5416 B3
2354 G12	6402 E2
2355 C12	6403 D2
2356 F10	6404 G2
2357 F11	6405 E2
2358 F11	7307 G11
2359 F11	7320 F9
2360 F11	7322 E7
2361 F13	7323 D9
2362 F13	7401 F2
2364 C12	7402 H7
2365 F7	7403 D2
2366 F8	7405 H1
2367 F8	7406 F5
2368 F8	7407 G5
2369 F8	7408 A11
2370 F8	7409 A12
2371 B10	7410 H5
2372 B10	7411 D6
2373 B8	7412 F14
2374 B8	7413 D13
2375 B8	7414 D11
2376 B7	7415 H9
2377 B6	9318 G11
2378 B7	9319 G11
2379 F12	9322 G8
2380 F12	9401 F3
2381 F12	9402 E2
2382 F12	9403 E2
2383 D12	9404 F6
2384 F7	9405 E2
2385 G13	9406 F13
2387 B7	9407 B4
2388 A11	9408 H7
2389 B12	9409 E5
2391 B3	9410 B4
2392 B8	9412 G6
2394 B6	9413 F6
2401 C6	9414 E7
2402 G6	9415 C3
2403 F9	9416 D5
2404 D6	9417 D6
2405 D1	9418 E5
2406 G2	9419 E7
2407 G3	9420 F5
2408 H3	9422 H6
2409 C6	9423 C11
2410 G9	9424 C11
2411 D6	9425 C11
2412 C1	9426 D11
2413 D5	9427 G7
2414 H6	9428 H7
2415 H6	A400 G2
2416 C6	A409 C5
2417 E6	A410 C5
2418 D6	A411 C4
2419 D7	A412 C4
2421 G14	F403 C7
2422 E13	F404 E12
2423 G14	F405 E12
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2425 B1	F407 B10
2426 H13	F408 B10
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2435 G9	I402 C7
2436 C6	I411 B4
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3301 I12	I417 F8
3303 H10	I421 B8
3370 F9	I422 B8
3371 H9	I424 E13
3372 H9	I425 F14
3376 B9	I426 F14
3377 B10	I427 F14
3378 B10	I428 F13
3380 B7	I430 H13
3382 F7	I431 H14
3385 G7	I432 I12
3393 F11	I433 I11
3400 B5	I434 H11
3401 B6	I435 H11
3402 B1	I440 B4
3404 I6	I441 B7
3405 H5	I442 B7
3406 G2	I443 B6
3407 F2	I444 B5
3408 B5	I445 B5
3409 G2	I446 D5
3410 E3	I447 D5
3411 D2	I448 E6
3412 G6	I449 F7
3413 F9	I450 H6
3414 D2	I451 H5
3415 B4	I452 B1
3416 D5	I453 D11
3417 G5	I454 D11
3418 D7	I455 B12
3419 E5	I456 D13
3420 G6	I457 D14
3421 F4	I458 E4
3422 G9	I460 F2
3423 H1	I461 F5
3433 G1	I462 G5
3434 E2	I463 H5
3435 G5	I464 F9
3436 E6	I465 G9
3437 D7	I467 E7
3439 E6	c002 A8
3441 B4	
3444 B11	
3445 F6	
3447 B11	
3448 B12	
3449 B12	
3450 E14	
3451 F13	
3452 F14	
3456 G5	

SSB: PICNIC

B3A PICNIC

B3A

FBX SOFTWARE

PROM

FM1

DUAL FIFO
(262,214 x 8) x 2

MICRO-PROCESSOR PSP

PICNIC

SAA4978H

BACK END
PEAKING
MUX

3 X DAC

MID END
HISTOGRAM
NOISE REDUCTION
TBC/SRC
MUX

ANALOG PROCESSING

3 X ADC

FRONT END

PLL

OSC

BST

FREQ. MULTI. & ZDB

BUS A

BUS B

BUS C

BUS D

B3

B3D

B

N.C.

* SEE MAPPING I1 ON B3c

** SEE MAPPING G1 ON B3c

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070704

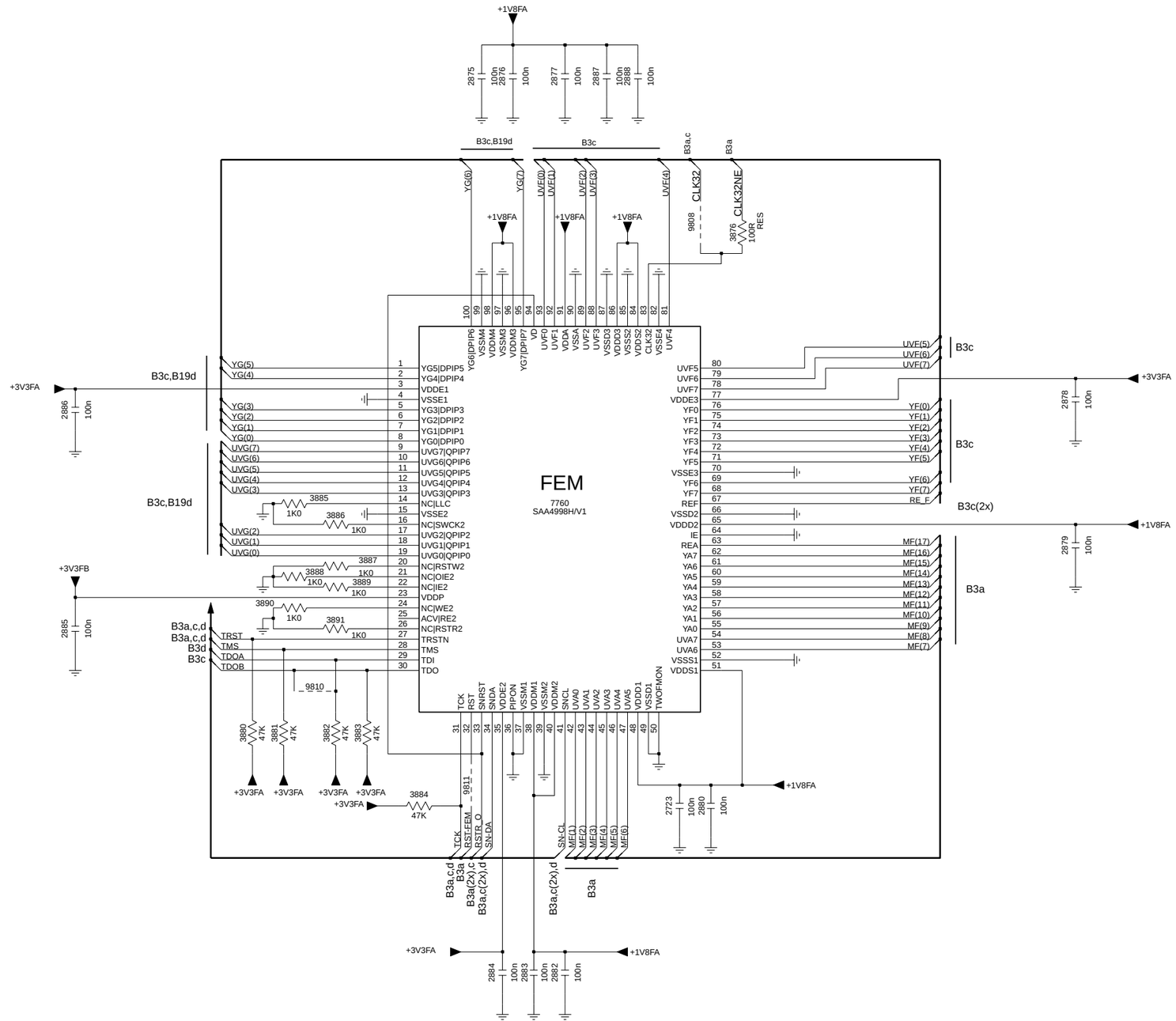
1702 K6 3928 I3
1703 K6 3929 I3
1710 L5 3930 J3
2707 C2 3931 J4
2708 I16 3932 J4
2709 A8 3933 J4
2710 C17 5703 A8
2711 C17 5705 J6
2712 C15 5706 H5
2713 G2 5707 I4
2714 G3 5708 J4
2716 C16 5714 H6
2717 C15 5723 E5
2718 H3 5724 F5
2719 J3 5725 C8
2720 J3 5726 C7
2721 K3 5727 D7
2722 K3 5728 D7
2724 F6 6701 A8
2725 C16 6703 J7
2726 F13 6710 H6
2727 E11 7702 H17
2731 F9 7703 C4
2732 C7 7705 A6
2733 I14 7706 A7
2734 K14 7707 D5
2735 L9 7708 B6
2736 M10 7709 C5
2737 G6 7710 D6
2738 C18 7711 C8
2740 I5 7712 E7
2741 I5 7713 I9
2742 I5 7714 D16
2743 C6 7715 G5
2744 C6 7775 H4
2745 C8 7776 I3
2746 D8 7777 J4
2747 H5 9700 B7
2748 F6 9701 F5
2749 H6 9702 E6
2754 D8 9703 H7
2757 I7 9706 L6
2800 I6 9707 I5
2804 J6 9708 I4
2806 H6 9709 J5
2807 K7 9710 F4
2837 J18 9720 L3
2838 K17 9726 G4
2839 K18 9727 E18
2840 L3 9728 D15
2841 M3 9729 A4
2881 J6 9767 I18
2900 I4 9768 H17
2901 I4 9769 I16
2902 J4 9770 H16
2915 I5 9771 H16
2916 J5 9772 H16
2917 A7 9809 B5
2918 A7 9820 B14
2920 J7 9825 I4
2926 L17 9826 J3
2927 M17 9827 J3
2928 L18 A139 K14
2929 L6 F107 A8
2931 I5 F108 H2
2935 L5 F109 I2
3700 K14 F110 J2
3701 L6 F112 K3
3702 E11 F114 F3
3703 H16 F115 F3
3704 G17 F118 I7
3705 H18 F119 K3
3706 I6 F122 L6
3709 F3 F123 L6
3710 F3 F124 L6
3711 E11 F125 L6
3712 L7 F126 M6
3713 H3 F127 M6
3714 I3 F128 F6
3715 J3 F129 G6
3716 H3 F140 K14
3717 J3 F145 C6
3718 J3 F148 G14
3719 G5 F149 G14
3720 H5 F151 F10
3721 H6 F152 L7
3722 C3 F155 G6
3723 K6 F156 G6
3724 H18 F157 H7
3725 K4 F158 H7
3726 K3 F159 H7
3727 K4 F160 I7
3728 K3 F161 I6
3730 K3 F162 I5
3732 A6 F163 I5
3733 C3 F164 J5
3734 C4 F165 J5
3736 C5 F166 J5
3737 C6 F706 C6
3738 D5 F707 C6
3739 D5 F708 C6
3740 A6 F709 D5
3741 D5 F710 K6
3742 D6 F784 E7
3743 D6 F785 F7
3746 D6 F786 E8
3747 C5 F787 F8
3748 B5 F788 H7
3749 D4 I720 B4
3750 D6 I727 H6
3751 B6 I802 A8
3752 B7 I803 I6
3753 C6 I804 H6
3754 C6 I805 D6
3755 D5 I810 H5
3756 D5 I813 A6
3758 F7 I814 C3
3759 I6 I815 C5
3760 D15 I820 D5
3761 B14
3826 L3
3827 L3
3856 J18
3857 J17
3858 K18
3859 K17
3860 L18
3861 L18
3903 C5
3905 E6
3909 A9
3922 H3
3923 H4
3924 H4
3925 I4
3926 I4
3927 I3

SSB: (FEM) Falconic Embedded Memory

B3B

FEM
FALCONIC EMBEDDED MEMORY

B3B



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2723 G7
2875 B5
2876 B6
2877 B6
2878 D9
2879 E9
2880 G7
2882 H6
2883 H6
2884 H6
2885 E3
2886 D3
2887 B6
2888 B6
3876 C7
3880 F4
3881 F4
3882 F4
3883 F5
3884 G5
3885 E4
3886 E4
3887 E5
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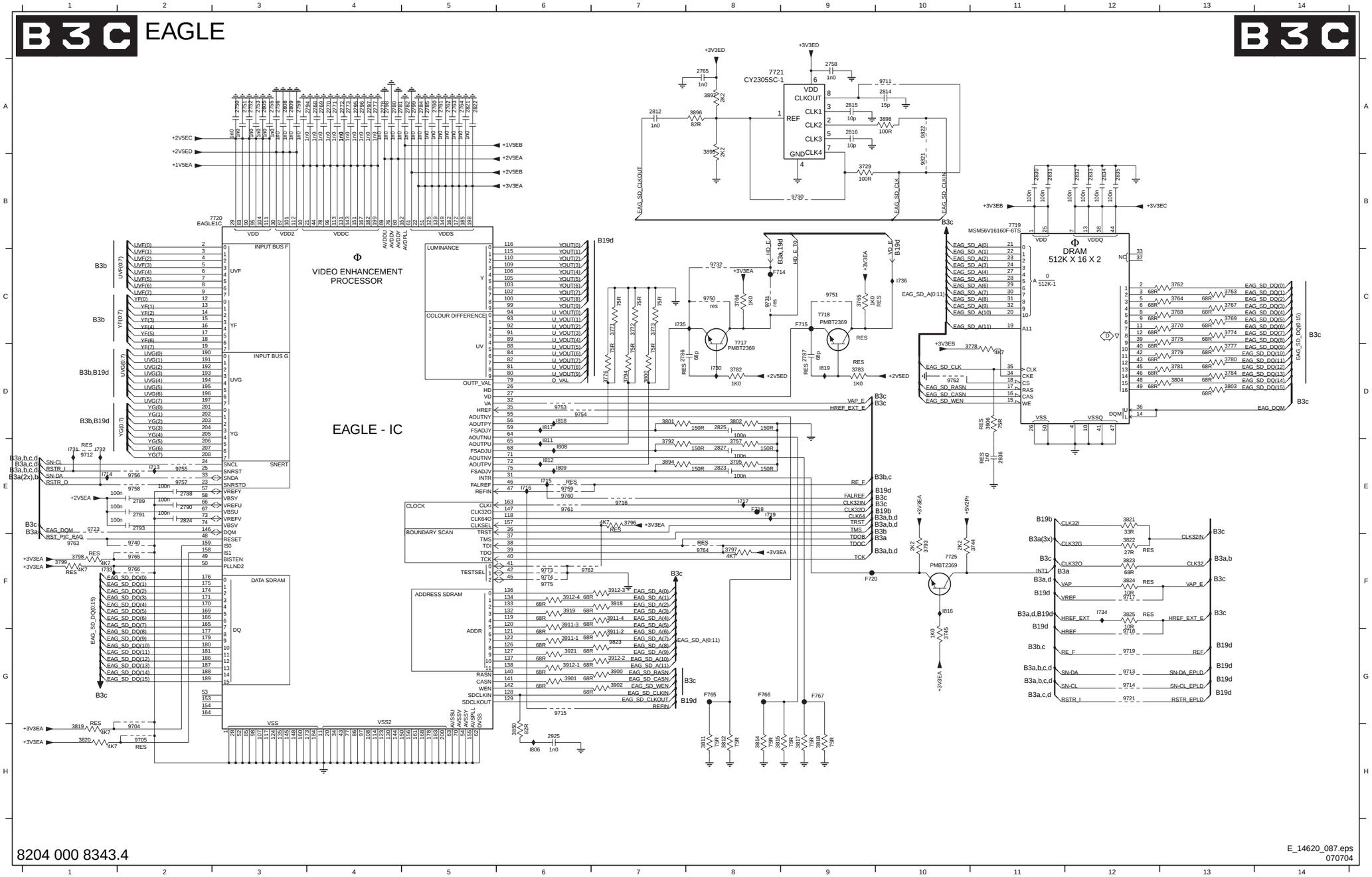
3891 E4
7760 E6
9808 C7
9810 F4
9811 G5

SSB: Eagle



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2751 A3	3803 D13	I733 F1	
2752 A3	3804 D13	I734 F12	
2753 A3	3811 H8	I735 C7	
2755 A3	3812 H8	I736 C10	
2756 A3	3814 H8	I806 H6	
2758 A9	3815 H8	I808 E6	
2759 A3	3817 H9	I809 E6	
2760 A5	3818 H9	I811 E6	
2761 A5	3819 H1	I812 E6	
2762 A5	3820 H1	I816 F10	
2763 A5	3821 E12	I817 D6	
2764 A5	3822 F12	I818 D6	
2765 A8	3823 F12	I819 D9	
2768 A4	3824 F12		
2769 A4	3825 F12		
2770 A4	3850 H6		
2771 A4	3894 E7		
2772 A4	3895 A8		
2773 A4	3896 A8		
2777 A4	3897 A8		
2778 A4	3898 A10		
2780 A4	3900 G7		
2781 A4	3901 G6		
2782 A5	3902 G7		
2784 A5	3906 D11		
2785 A5	3911-1 G6		
2786 D7	3911-2 G7		
2787 D9	3911-3 F6		
2788 E2	3911-4 F7		
2789 E2	3912-1 G6		
2790 E2	3912-2 G7		
2791 E2	3912-3 F7		
2793 E2	3912-4 F6		
2794 A4	3918 F7		
2795 A4	3919 F6		
2796 A4	3921 G6		
2797 A4	7717 D8		
2798 A4	7718 C9		
2799 A5	7719 B11		
2805 A3	7720 B3		
2808 A3	7721 A9		
2809 A3	7725 F10		
2812 A7	9704 H2		
2814 A10	9705 H2		
2815 A9	9711 A10		
2816 A9	9712 E1		
2821 A5	9713 G12		
2822 A5	9714 G12		
2823 E8	9715 G6		
2824 E2	9716 E7		
2825 D8	9717 F12		
2827 E8	9718 G12		
2830 B11	9719 G12		
2831 B11	9721 G12		
2832 B12	9723 E1		
2833 B12	9730 B9		
2834 B12	9731 C8		
2835 B12	9732 C8		
2925 H6	9740 F2		
2936 E11	9750 C8		
3729 B9	9751 C9		
3744 F11	9752 D10		
3745 G10	9753 D6		
3757 E8	9754 D6		
3762 C13	9755 E2		
3763 C13	9756 E2		
3764 C13	9757 E2		
3765 C9	9758 E2		
3766 C8	9759 E6		
3767 C13	9760 E6		
3768 C13	9761 E6		
3769 C13	9762 F6		
3770 C13	9763 F1		
3771 C7	9764 F8		
3772 C7	9765 F2		
3773 C7	9766 F2		
3774 C13	9773 F6		
3775 C13	9774 F6		
3776 D7	9775 F6		
3777 D13	9821 B10		
3778 D11	9822 A10		
3779 D13	9823 G7		
3780 D13	F714 C8		
3781 D13	F715 C9		
3782 D8	F718 E8		
3783 D9	F720 F9		
3784 D13	F765 G8		
3792 E7	F766 G8		
3793 F10	F767 G9		
3794 D7	I713 E2		
3795 E8	I714 E1		
3796 E7	I715 E6		
3797 F8	I716 E6		
3798 F1	I717 E8		
3799 F1	I719 E8		
3800 D7	I730 D8		
3801 D7	I731 E1		

SSB: Columbus

COLUMBUS

(ONLY FOR 3D COMB)

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2792 G10
2819 H3
2836 H3
2850 A1
2851 A1
2852 A1
2853 A2
2854 A2
2855 A2
2856 G2
2857 G2
2858 G2
2859 G2
2860 G3
2861 G3
2862 G3
2863 G3
2864 G4
2865 H2
2866 H2
2867 H2
2868 H2
2869 H3
2870 H3
3830 B11
3831 B10
3832 B11
3833 B11
3834 B10
3835 B11
3836 B11
3837 B10
3838 B11
3839 B10
3840 B11
3841 C11
3842 C10
3843 C11
3844 C11
3845 C10
3846 D1
3847 G5
3848 G6
3849 H10
3851 H10
3853 H5
3854 H6
3855 I6
3913-1 D10
3913-2 C10
3913-3 C10
3913-4 C10
3914-1 C10
3914-2 D10
3914-3 D10
3914-4 D10
3915-1 C10
3915-2 C10
3915-3 E10
3915-4 E10
3916-1 E10
3916-2 D10
3916-3 D10
3916-4 C10
3917-1 D10
3917-2 D10
3917-3 D10
3917-4 D10
5800 F10
7752-1 A7
7752-2 G6
7753 C3
9722 H11
9800 D2
9801 D2
9802 D2
9803 D2
9804 G6
9805 G6
9806 H5
9807 H5
9812 B6
9815 G11
9816 G11
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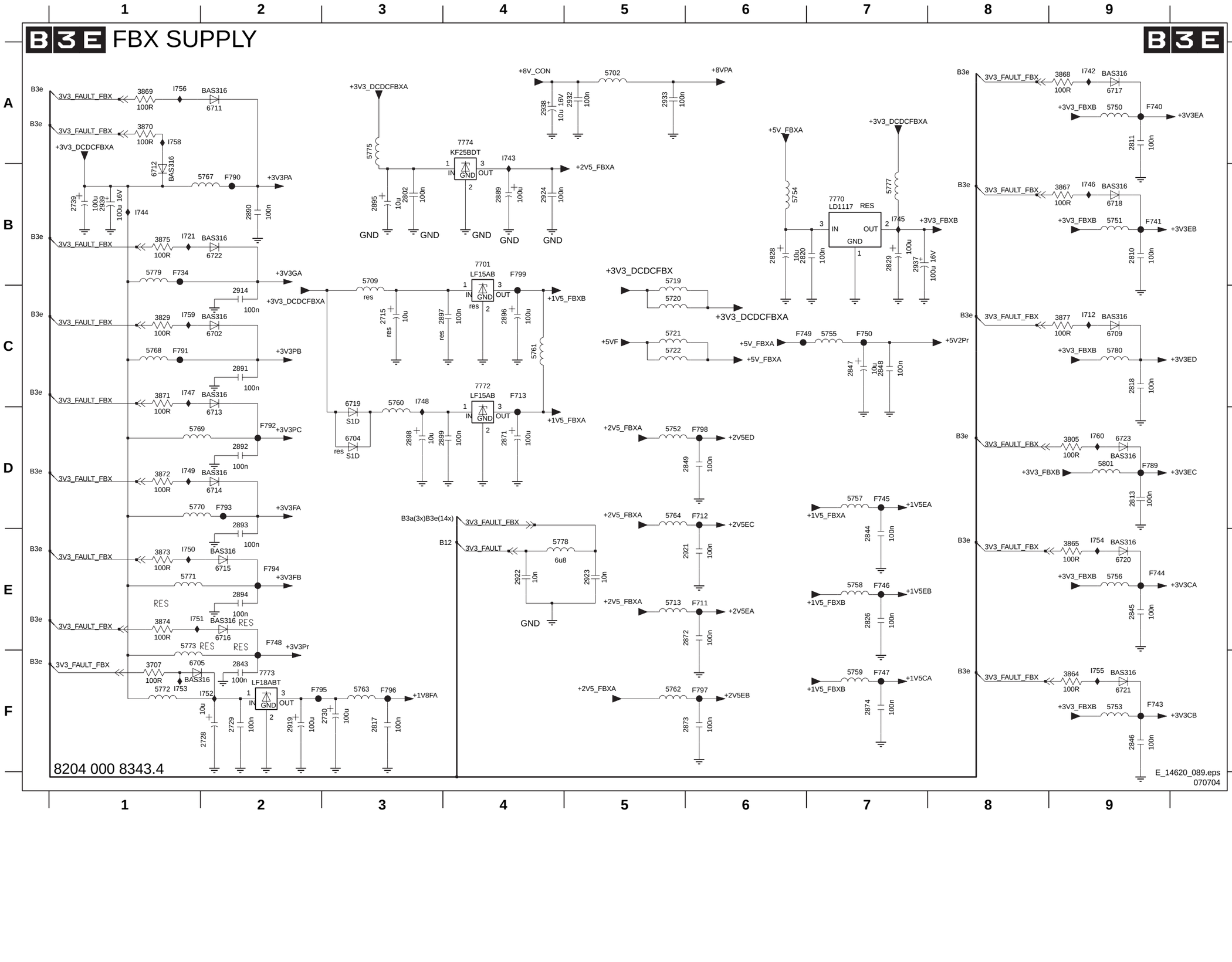
F735 H10
F736 H10
I718 F10
I801 G6
I807 I6

SSB: FBX Supply



2715 C3 5778 E4
2728 F2 5779 B1
2729 F2 5780 C9
2730 F3 5801 D9
2739 B1 6702 C2
2802 B3 6704 D3
2810 B9 6705 F1
2811 A9 6709 C9
2813 D9 6711 A2
2817 F3 6712 B1
2818 C9 6713 D2
2820 B6 6714 D2
2826 E7 6715 E2
2828 B6 6716 E2
2829 B7 6717 A9
2843 F2 6718 B9
2844 E7 6719 C3
2845 E9 6720 E9
2846 F9 6721 F9
2847 C7 6722 B2
2848 C7 6723 D9
2849 D6 7701 B4
2871 D4 7770 B7
2872 E6 7772 C4
2873 F6 7773 F2
2874 F7 7774 A4
2889 B4 F711 E6
2890 B2 F712 D6
2891 C2 F713 C4
2892 D2 F734 B1
2893 D2 F740 A9
2894 E2 F741 B9
2895 B3 F743 F9
2896 C4 F744 E9
2897 C4 F745 D7
2898 D3 F746 E7
2899 D4 F747 F7
2914 C2 F748 E2
2919 F2 F749 C6
2921 E6 F750 C7
2922 E4 F789 D9
2923 E5 F790 B2
2924 B4 F791 C1
2932 A5 F792 D2
2933 A5 F793 D2
2937 B7 F794 E2
2938 A4 F795 F2
2939 B1 F796 F3
3707 F1 F797 F6
3805 D9 F798 D6
3829 C1 F799 B4
3864 F9 I712 C9
3865 E9 I721 B1
3867 B9 I742 A9
3868 A9 I743 A4
3869 A1 I744 B1
3870 A1 I745 B7
3871 C1 I746 B9
3872 D1 I747 C1
3873 E1 I748 C3
3874 E1 I749 D1
3875 B1 I750 E1
3877 C9 I751 E1
5702 A5 I752 F2
5709 B3 I753 F1
5713 E5 I754 E9
5719 B5 I755 F9
5720 C5 I756 A1
5721 C5 I758 A1
5722 C5 I759 C1
5750 A9 I760 D9
5751 B9
5752 D5
5753 F9
5754 B6
5755 C7
5756 E9
5757 D7
5758 E7
5759 F7
5760 C3
5761 C4
5762 F5
5763 F3
5764 D5
5767 B2
5768 C1
5769 D1
5770 D1
5771 E1
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5773 E1
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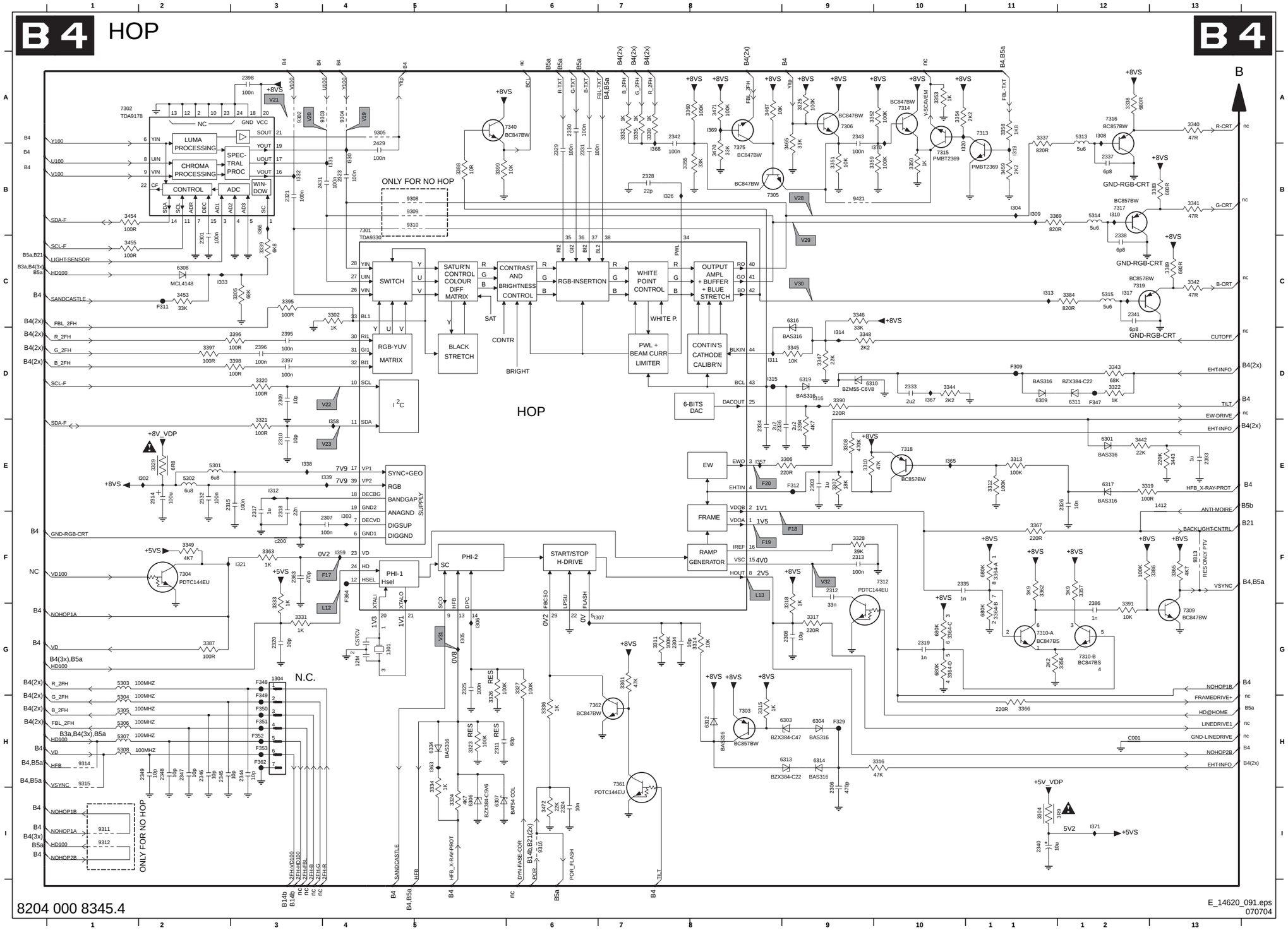
SSB: HOP



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1412 E13	3344 D10	7316 A12
2301 C2	3345 D9	7317 B12
2303 E9	3346 C9	7318 E10
2304 G7	3347 D9	7319 C12
2306 I9	3348 D9	7340 A5
2307 F4	3349 F2	7361 H7
2308 G9	3350 B10	7362 H7
2309 D3	3351 B9	7375 B8
2310 E3	3352 A9	9302 A3
2311 H5	3353 A10	9303 A4
2312 F9	3354 A10	9304 A4
2313 F9	3355 B7	9305 A4
2314 E2	3356 G12	9308 B4
2315 E2	3357 F12	9309 B4
2317 F3	3358 A11	9310 B4
2318 F3	3359 B9	9311 I1
2319 G10	3360 A7	9312 I1
2320 G3	3361 G7	9313 F13
2321 B3	3362 F11	9314 H1
2323 B4	3363 F3	9315 H1
2324 I6	3364-A F11	9316 I6
2325 G5	3364-B G11	9421 B9
2326 E12	3364-C G10	C001 H12
2328 B7	3364-D G10	F309 D11
2329 B6	3365 F13	F311 C2
2330 A6	3366 H11	F312 E9
2331 B6	3367 F11	F329 H9
2332 E2	3369 B11	F347 D12
2333 D10	3383 B13	F348 G3
2334 E8	3384 C12	F349 H3
2335 F10	3386 F13	F350 H3
2336 E8	3387 G2	F351 H3
2337 B12	3388 B5	F352 H3
2338 C12	3389 C13	F353 H3
2340 I11	3390 D9	F362 H3
2341 C12	3391 G12	F364 F4
2342 A7	3394 E9	I302 E2
2343 A9	3395 C3	I303 F4
2344 H3	3396 D3	I304 B11
2345 H2	3397 D2	I305 G5
2346 H2	3398 D3	I306 G5
2347 H2	3399 B5	I307 G7
2348 H2	3442 E12	I308 A12
2349 H2	3443 E13	I309 B11
2363 F3	3453 C2	I310 B12
2386 G12	3454 B1	I311 D8
2393 E13	3455 C1	I312 E3
2395 D3	3459 B11	I313 C11
2396 D3	3465 B9	I314 D9
2397 D3	3467 A8	I315 D8
2398 A3	3470 B8	I316 D9
2429 B4	3471 A8	I317 C12
2431 B3	3472 I6	I319 B11
3302 C4	5301 E2	I320 B10
3304 I11	5302 E2	I321 F3
3305 C3	5303 G1	I326 B7
3306 E9	5304 H1	I330 B4
3307 E9	5305 H1	I331 B4
3308 E9	5306 H1	I332 B3
3310 E9	5307 H1	I333 C2
3311 G7	5308 H1	I338 E3
3312 E11	5313 A12	I339 E4
3313 E11	5314 B12	I357 E8
3314 G8	5315 C12	I358 E4
3315 H8	6301 E12	I359 F4
3316 H10	6303 H9	I363 H5
3317 G9	6304 H9	I365 E10
3318 F9	6306 I5	I366 B3
3319 E12	6307 I5	I367 D10
3320 D3	6308 C2	I368 B7
3321 E3	6309 D11	I369 A8
3322 D12	6310 D9	I370 B10
3323 H5	6311 D12	I371 I12
3324 I5	6312 H8	c200 F3
3325 A9	6313 H9	
3326 H5	6314 H9	
3327 G6	6316 C9	
3328 F9	6317 E12	
3329 E2	6319 D9	
3330 A7	6334 H5	
3331 G3	7301 B4	
3332 A7	7302 A1	
3333 F3	7303 H8	
3334 H5	7304 F2	
3335 A7	7305 B8	
3336 H6	7306 A9	
3337 A11	7309 G13	
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3340 A13	7312 F10	
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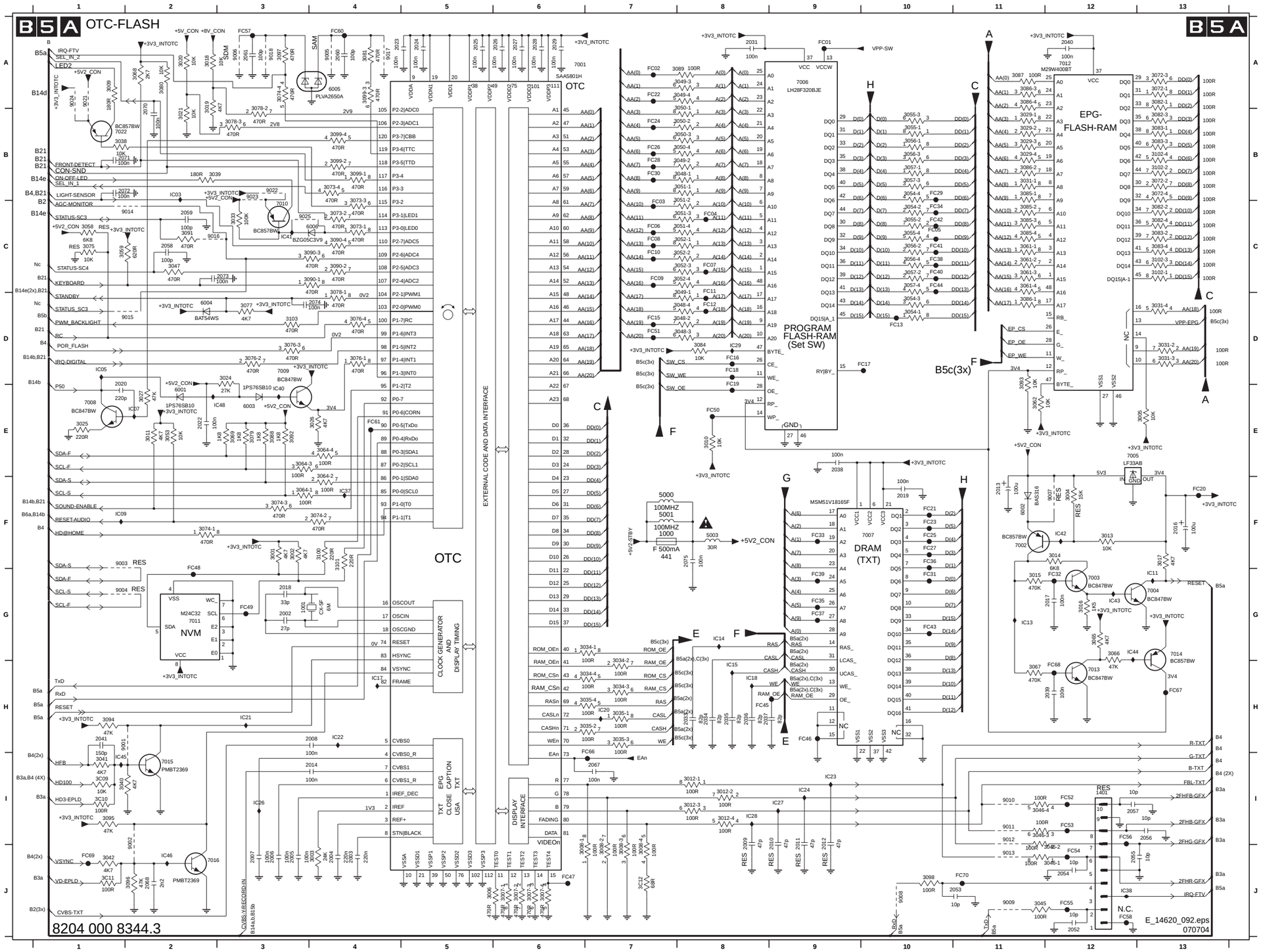

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2002 G3	3031-4 D13	3079 E3	9022 B3	IC46 J2
2003 J4	3033 C3	3080 A2	9023 B3	IC48 E3
2004 J4	3034-1 G7	3081 A4	9024 A1	
2005 J3	3034-2 H7	3082-1 A13	9025 C3	
2006 J3	3034-3 H7	3082-2 C13	FC01 A9	
2007 J3	3034-4 H7	3082-3 B13	FC02 A7	
2008 H4	3035-1 H7	3082-4 C13	FC03 C7	
2009 I8	3035-2 H7	3083-1 B13	FC04 C8	
2010 I9	3035-3 H7	3083-2 C13	FC05 C10	
2011 I9	3035-4 H7	3083-3 B13	FC06 C7	
2012 I9	3038 B1	3083-4 C13	FC07 C8	
2013 F11	3039 B2	3084 D8	FC08 C7	
2014 I4	3040 I1	3085-1 B11	FC09 C7	
2016 F13	3041 I1	3085-2 C11	FC10 C7	
2017 G12	3042 J1	3085-3 C11	FC11 D8	
2018 G3	3045 J11	3085-4 C11	FC12 D8	
2019 F10	3046-1 J12	3086-1 D11	FC13 D10	
2020 E1	3046-2 J12	3086-2 B11	FC15 D7	
2022 E2	3046-3 I11	3086-3 A11	FC16 D8	
2023 A4	3046-4 I11	3086-4 A11	FC17 D10	
2024 A5	3047 C2	3087 A11	FC18 D8	
2025 A5	3048-1 B8	3088 E3	FC19 E8	
2026 A6	3048-2 D8	3089 A8	FC20 F13	
2027 A6	3048-3 D8	3090-1 C4	FC21 F10	
2028 A6	3048-4 D8	3090-2 C4	FC22 A7	
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2031 A8	3049-2 B8	3090-4 C4	FC24 B7	
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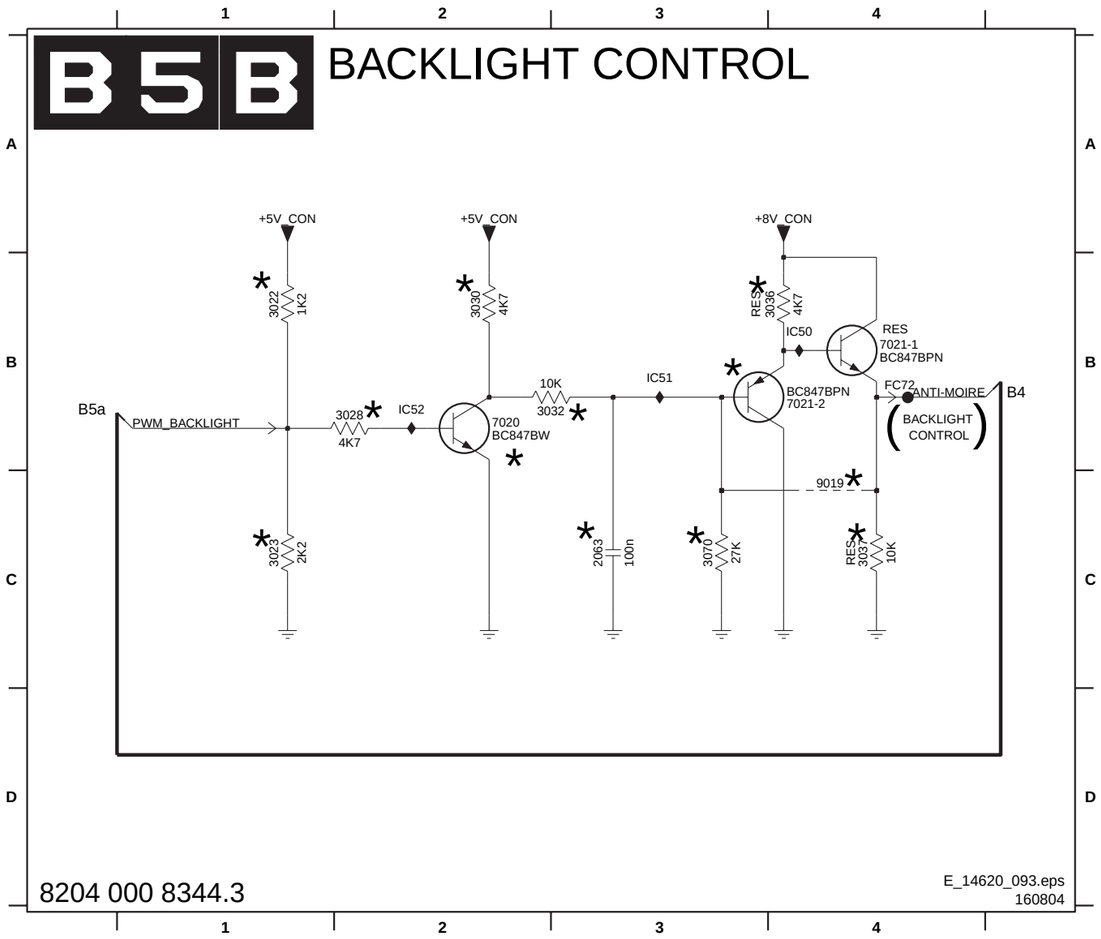
2034 H8	3049-4 A8	3092 E3	FC26 B7	
2035 H8	3050-1 B8	3093 D11	FC27 F10	
2036 H8	3050-2 B8	3094 H1	FC28 B7	
2037 H8	3050-3 B8	3095 I1	FC29 B10	
2038 E9	3050-4 B8	3096 J2	FC30 B7	
2039 H12	3051-1 B8	3097 A3	FC31 G10	
2040 A12	3051-2 C8	3098 J10	FC32 G12	
2041 H1	3051-3 C8	3099-1 B4	FC33 F9	
2052 J12	3051-4 C8	3099-2 B4	FC34 C10	
2053 J11	3052-1 C8	3099-3 A4	FC35 G9	
2054 J12	3052-2 C8	3099-4 B4	FC36 F10	
2055 J12	3052-3 C8	3100 F4	FC37 G9	
2056 I13	3052-4 C8	3101 F4	FC38 C10	
2057 I12	3053 E2	3102-1 C13	FC39 G9	
2058 C2	3054-1 D10	3102-2 B13	FC40 C10	
2059 C2	3054-2 C10	3102-3 C13	FC41 C10	
2060 A4	3054-3 D10	3102-4 B13	FC42 C10	
2061 A3	3054-4 B10	3103 D3	FC43 G10	
2067 I7	3055-1 B10	3C09 I1	FC44 C10	
2068 J2	3055-2 C10	3C10 I1	FC45 H8	
2070 B2	3055-3 B10	3C11 J1	FC46 H9	
2071 B1	3055-4 C10	3C12 J7	FC47 J6	
2072 B1	3056-1 B10	5000 F7	FC48 G2	
2073 C3	3056-2 C10	5001 F7	FC49 G3	
2074 D4	3056-3 B10	5003 F8	FC50 E8	
2075 F8	3056-4 C10	6001 E2	FC51 D7	
3001 F3	3057-1 B10	6002 F11	FC52 I12	
3002 F3	3057-2 C10	6003 E3	FC53 I12	
3003 J4	3057-3 B10	6004 D2	FC54 J12	
3004 F12	3057-4 C10	6005 A4	FC55 J12	
3005 E13	3058 C1	6006 C4	FC56 I12	
3006 J5	3059 C1	7001 A6	FC57 A3	
3007-1 J6	3061-1 C11	7002 F11	FC58 B12	
3007-2 J6	3061-2 C11	7003 G12	FC60 A4	
3007-3 J6	3061-3 C11	7004 G13	FC61 E4	
3007-4 J6	3061-4 C11	7005 E12	FC66 I7	
3008-1 J6	3062 E11	7006 A9	FC67 H13	
3008-2 J7	3064-1 F3	7007 F10	FC68 H12	
3008-3 J7	3064-2 F4	7008 E1	FC69 J1	
3008-4 J7	3064-3 E3	7009 D3	FC70 J11	
3009 A1	3064-4 E4	7010 C3	IC03 B2	
3010 E8	3065 G12	7011 G2	IC05 D1	
3011 E2	3066 G12	7012 A12	IC07 E2	
3012-1 I8	3067 H11	7013 H12	IC09 F1	
3012-2 I8	3068 A2	7014 G13	IC11 G13	
3012-3 I8	3069 E3	7015 I2	IC13 G11	
3012-4 I8	3072-1 A13	7016 J2	IC14 G8	
3013 F12	3072-2 B13	7022 B1	IC15 H8	
3014 F12	3072-3 A13	9001 H2	IC17 H4	
3015 G11	3072-4 B13	9002 I2	IC18 H8	
3016 G12	3073-1 C4	9003 F1	IC20 H7	
3017 F13	3073-2 C4	9004 G1	IC21 H3	
3018 A2	3073-3 C4	9005 A4	IC22 H4	
3019 A2	3073-4 B4	9006 A3	IC23 I9	
3020 A2	3074-1 F2	9007 F12	IC24 I9	
3021 B2	3074-2 F4	9008 J10	IC26 I3	
3024 D3	3074-3 F3	9009 J11	IC27 I9	
3025 E1	3074-4 A3	9010 I11	IC28 I8	
3026 E4	3075 C1	9011 I11	IC29 D8	
3027 E2	3076-1 D4	9012 I11	IC37 F4	
3029-1 B11	3076-2 D3	9013 J11	IC38 J12	
3029-2 B11	3076-3 D3	9014 C2	IC40 E3	
3029-3 B11	3076-4 D4	9015 D2	IC41 C3	
3029-4 B11	3077 D3	9016 C2	IC42 F12	

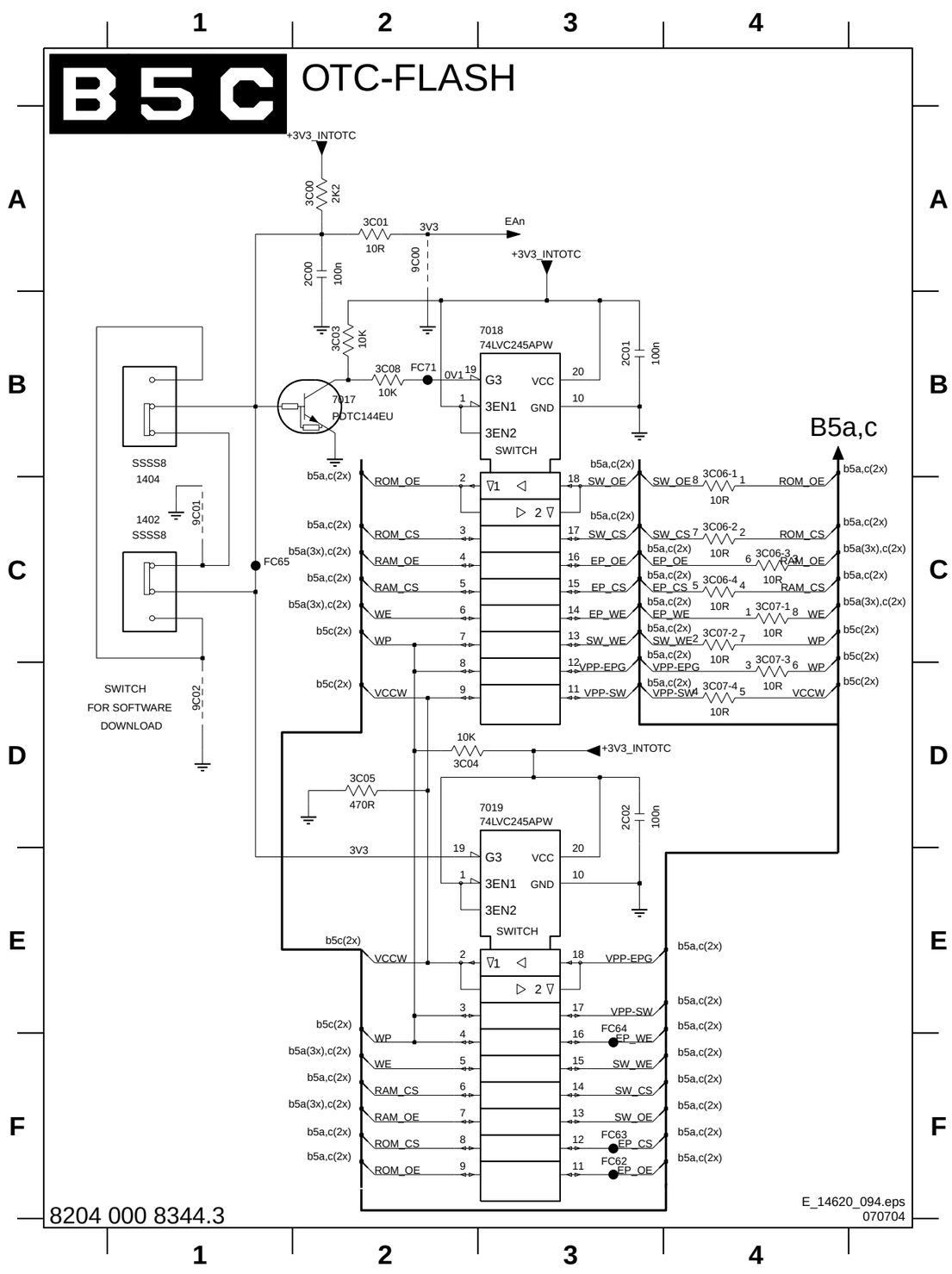
SSB: Backlight Control

2063 C3 3023 C1 3030 B2 3036 B4 3070 C3 7021-1 B4 9019 C4 IC50 B4 IC52 B2
3022 B1 3028 B2 3032 B2 3037 C4 7020 B2 7021-2 B4 FC72 B4 IC51 B3

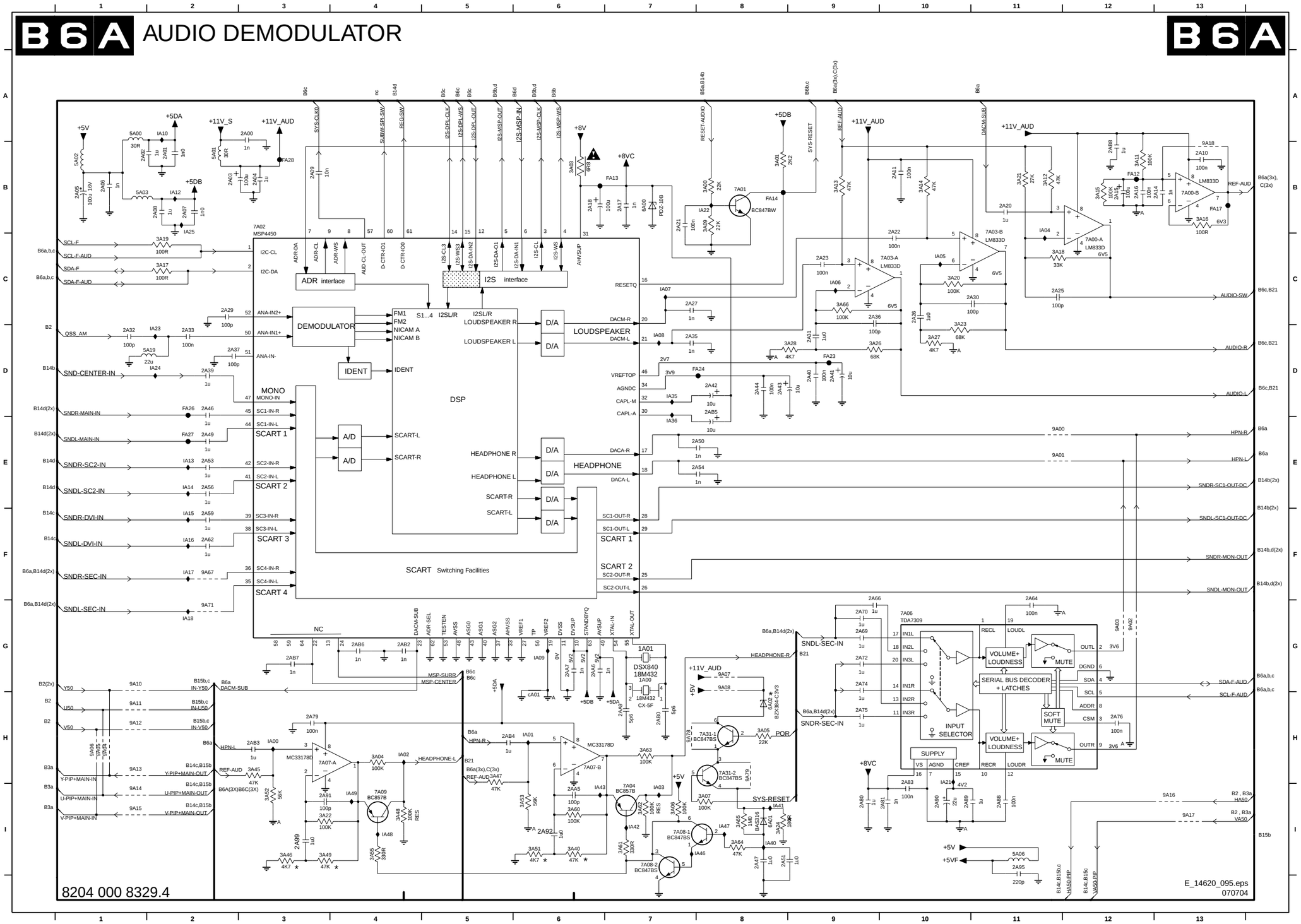


SSB: OTC-Flash

1402 C1 2C01 B3 3C01 A2 3C05 D2 3C06-3 C4 3C07-2 C4 3C08 B2 7019 D3 9C02 D1 FC64 E3
1404 B1 2C02 D3 3C03 B2 3C06-1 C4 3C06-4 C4 3C07-3 D4 7017 B2 9C00 A2 FC62 F3 FC65 C1
2C00 A2 3C00 A2 3C04 D2 3C06-2 C4 3C07-1 C4 3C07-4 D4 7018 B3 9C01 C1 FC63 F3 FC71 B2



SSB: Audio Demodulator



1A00 G7	3A14 B10	IA06 C9
1A01 G7	3A15 B12	IA07 C7
2A00 A3	3A16 B13	IA08 D7
2A01 B2	3A17 C2	IA09 G6
2A02 B1	3A18 C11	IA10 A2
2A03 B2	3A19 C2	IA12 B2
2A04 B3	3A20 C10	IA13 E2
2A05 B1	3A21 B11	IA14 E2
2A06 B1	3A22 I3	IA15 F2
A 2A07 B2	3A23 D10	IA16 F2
2A08 B2	3A24 I8	IA17 F2
2A09 B3	3A26 D9	IA18 G2
2A10 B13	3A27 D10	IA21 I10
2A11 B10	3A28 D9	IA22 B8
2A14 B13	3A40 I6	IA23 D2
2A15 B12	3A45 H3	IA24 D2
2A16 B12	3A46 I3	IA25 C2
2A17 B7	3A47 H5	IA35 D7
B 2A18 B6	3A48 I4	IA36 E7
2A20 B11	3A49 I3	IA40 I8
2A21 B7	3A51 I6	IA41 I8
2A22 C10	3A52 I3	IA42 I7
2A23 C9	3A53 I6	IA43 I6
2A25 C11	3A55 I4	IA46 I8
2A26 C10	3A60 I6	IA47 I8
2A27 C7	3A61 I7	IA48 I4
2A29 C2	3A62 I7	IA49 I4
C 2A30 C11	3A63 H7	cA01 H6
2A31 D9	3A64 I8	
2A32 D1	3A65 I8	
2A33 D2	3A66 C9	
2A35 D7	5A00 A1	
2A36 C9	5A01 B2	
2A37 D2	5A02 B1	
2A39 D2	5A03 B1	
2A40 D9	5A06 I11	
D 2A41 D9	5A19 D2	
2A42 D8	6A00 B7	
2A43 D8	6A01 I8	
2A44 D8	6A02 H8	
2A46 D2	7A00-A C12	
2A47 I8	7A00-B B13	
E 2A49 E2	7A01 B8	
2A50 E8	7A02 B3	
2A51 I8	7A03-A C10	
2A53 E2	7A03-B C11	
E 2A54 E8	7A04 I7	
2A56 E2	7A06 G10	
2A59 F2	7A07-A H3	
2A62 F2	7A07-B H6	
2A64 G11	7A08-1 I7	
2A66 G9	7A08-2 I7	
2A69 G9	7A09 I4	
2A70 G9	7A31-1 H8	
2A72 G9	7A31-2 H8	
2A74 G9	9A00 E11	
2A75 H9	9A01 E11	
F 2A76 H12	9A02 G12	
2A79 H3	9A03 G12	
2A80 I9	9A04 H1	
2A81 I10	9A05 H1	
2A83 I10	9A06 H1	
2A88 I11	9A07 G8	
2A89 I10	9A08 G8	
2A90 I10	9A10 G1	
G 2A91 I3	9A11 H1	
2A92 I6	9A12 H1	
2A95 I11	9A13 H1	
2A99 I3	9A14 I1	
2AA5 I6	9A15 I1	
2AA6 G6	9A16 I13	
2AA7 G6	9A17 I13	
2AA9 H7	9A18 B13	
2AB0 H7	9A67 F2	
H 2AB2 G4	9A71 G2	
2AB3 H3	9A78 H7	
2AB4 H5	9A79 H8	
2AB5 D8	FA12 B12	
2AB6 G4	FA13 B7	
2AB7 G3	FA14 B8	
2AB8 B12	FA17 B13	
3A00 B8	FA23 D9	
3A01 B8	FA24 D8	
3A03 B6	FA26 D2	
3A04 H4	FA27 E2	
3A05 H8	FA28 B3	
3A06 I7	IA00 H3	
3A07 I8	IA01 H6	
3A09 B8	IA02 H4	
3A11 B12	IA03 I7	
3A12 B11	IA04 B11	
3A13 B9	IA05 C10	

SSB: Dolby Digital Decoder

DOLBY DIGITAL DECODER

DOLBY DIGITAL
AND
MPEG-1 LAYER-2
AUDIO DECODER

7A30
MAS3528E

2AC1 B4
2AD0 B6
2AD1 B6
2AD3 B4
2AD4 B6
2AD5 B5
2AD6 B6
2AE2 D8
2AE3 D7
2AE5 D7
2AF0 E6
2AF3 C8
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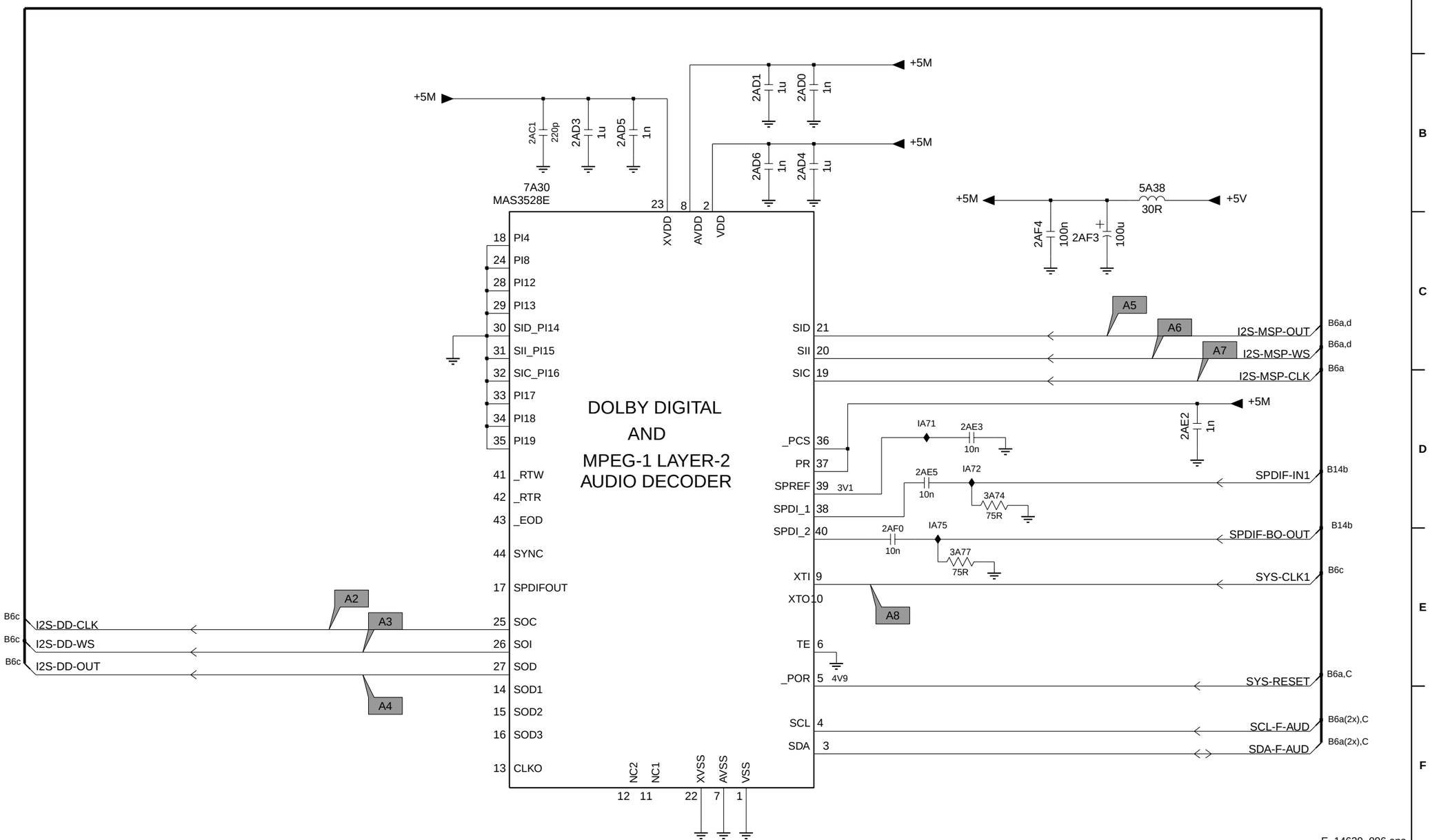
3A74 D7
3A77 E7
5A38 B8
7A30 B4
IA71 D7
IA72 D7
IA75 D7



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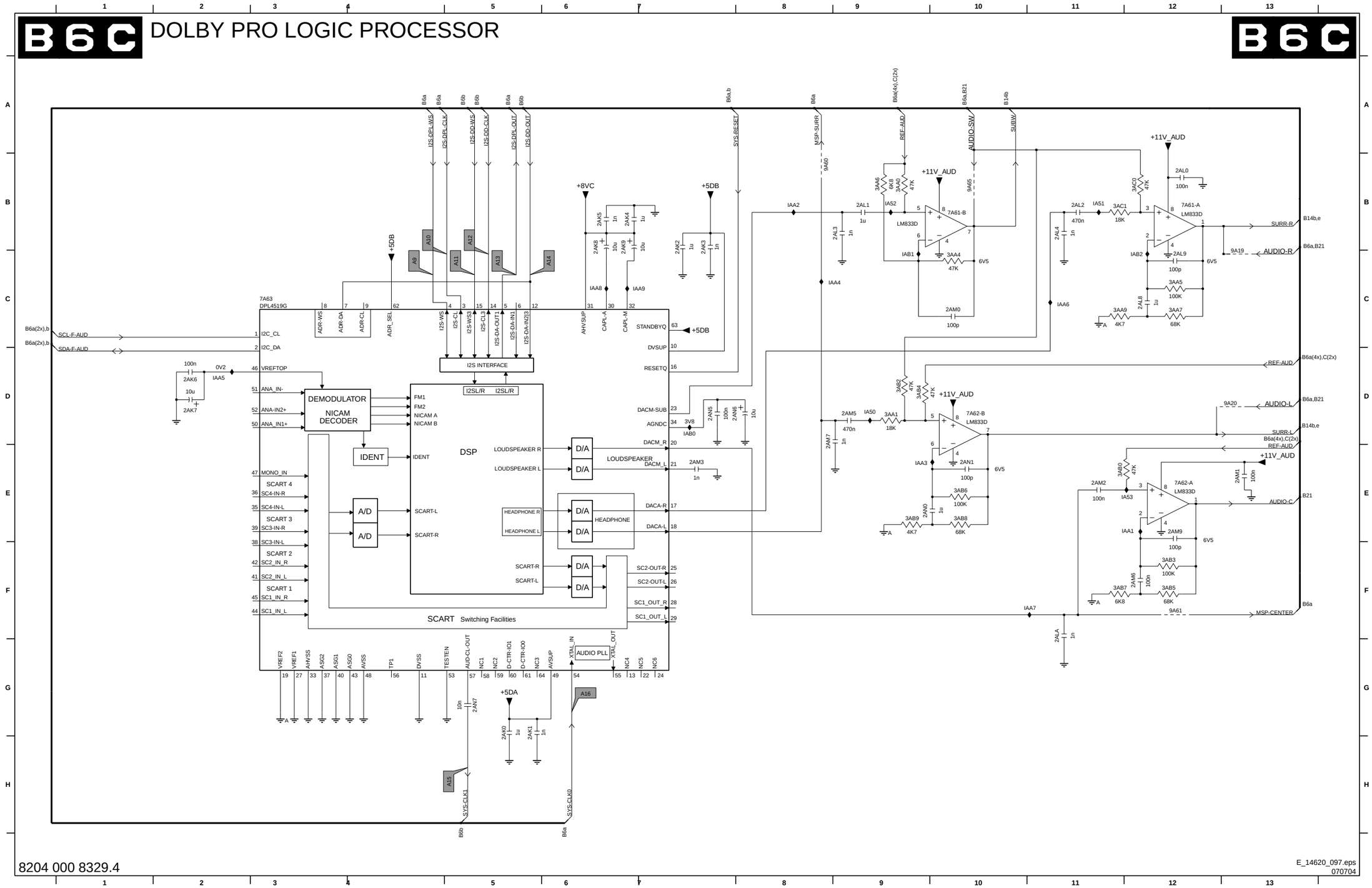
SSB: Dolby Pro Logic Processor

B6C DOLBY PRO LOGIC PROCESSOR B6C



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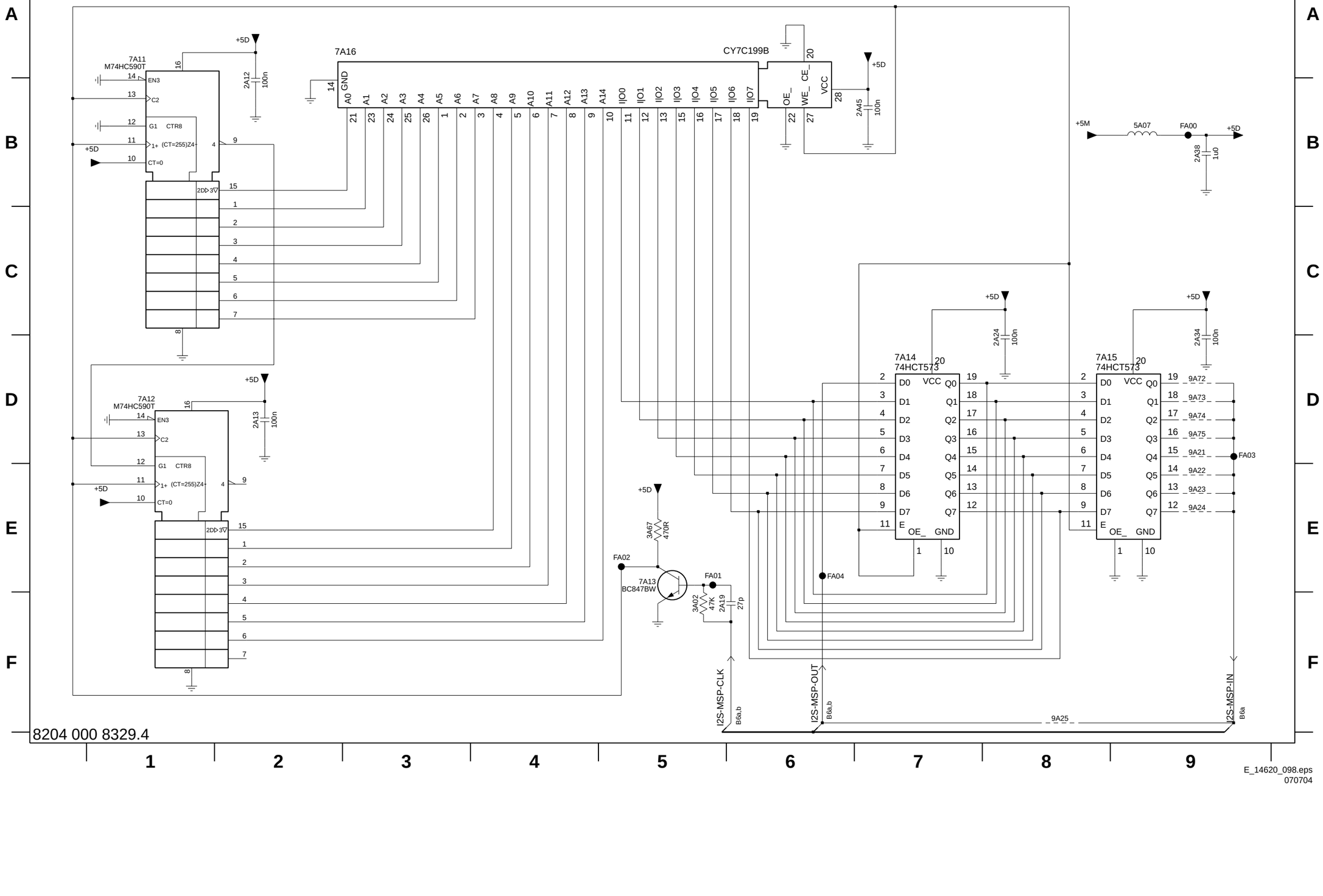
2AK0 G5
2AK1 G5
2AK2 B7
2AK3 B7
2AK4 B6
2AK5 B6
2AK6 D2
2AK7 D2
2AK8 B6
2AK9 B6
2AL0 B12
2AL1 B9
2AL2 B11
2AL3 B9
2AL4 B11
2AL8 C12
2AL9 C12
2ALA F11
2AM0 C10
2AM1 E13
2AM2 E11
2AM3 E7
2AM5 D9
2AM6 F12
2AM7 D8
2AM9 E12
2AN0 E9
2AN1 E10
2AN5 D7
2AN6 D8
2AN7 G5
3AA0 B9
3AA1 D9
3AA4 C10
3AA5 C12
3AA6 B9
3AA7 C12
3AA9 C11
3AB0 E11
3AB2 D9
3AB3 F12
3AB4 D9
3AB5 F12
3AB6 E10
3AB7 F11
3AB8 E10
3AB9 E9
3AC0 B12
3AC1 B11
7A61-A B12
7A61-B B10
7A62-A E12
7A62-B D10
7A63 C3
9A19 C13
9A20 D13
9A60 B8
9A61 F12
9A65 B10
IA50 D9
IA51 B11
IA52 B9
IA53 E12
IAA1 E12
IAA2 B8
IAA3 E9
IAA4 C9
IAA5 D2
IAA6 C11
IAA7 F11
IAA8 C6
IAA9 C7
IAB0 D7
IAB1 C9
IAB2 C12

SSB: Audio Delay

B6D AUDIO DELAY

B6D



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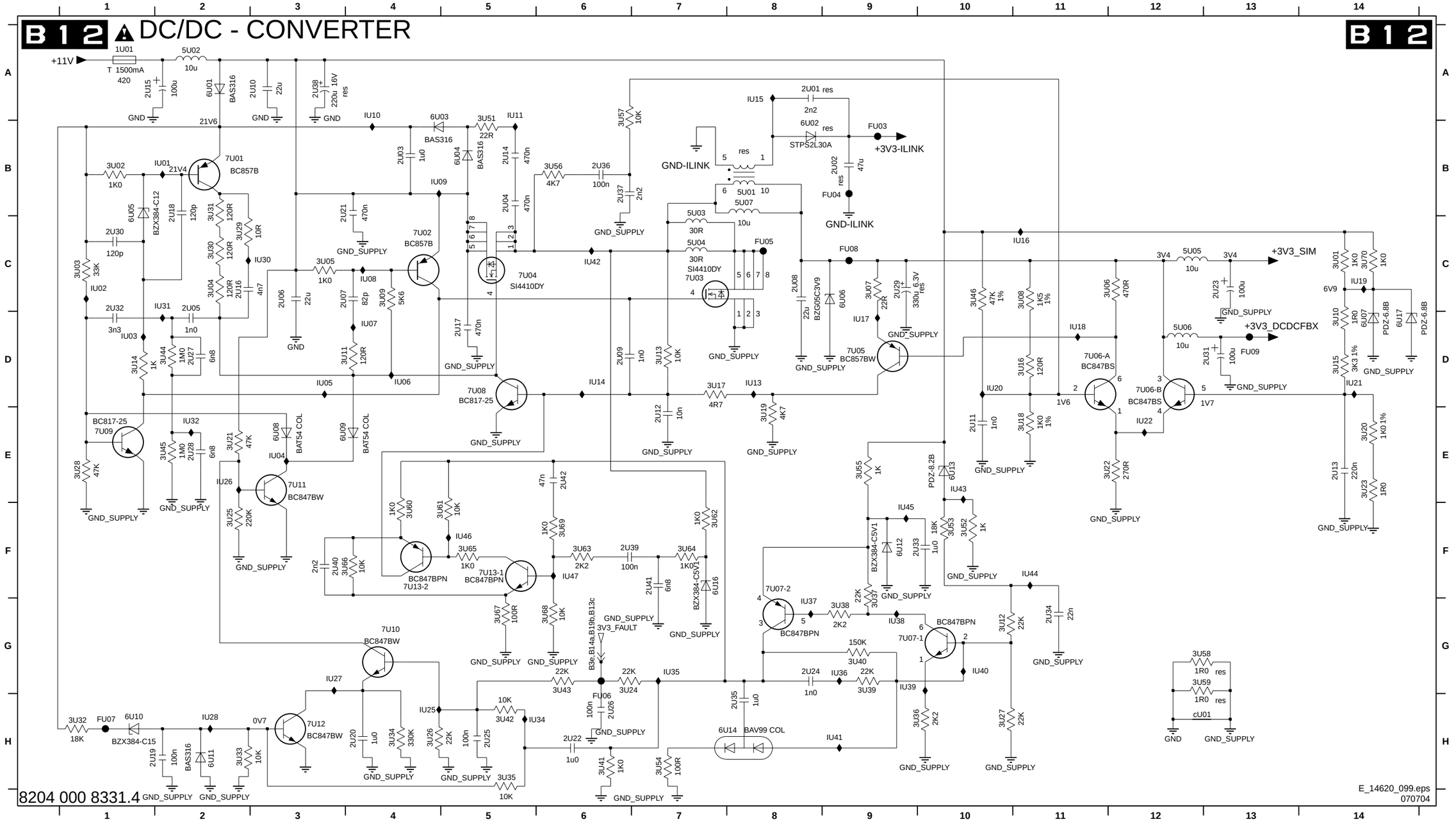
2A12 B2
2A13 D2
2A19 F5
2A24 D8
2A34 D9
2A38 B9
2A45 B7
3A02 F5
3A67 E5
5A07 B9
7A11 A1
7A12 D1
7A13 E5
7A14 D7
7A15 D8
7A16 A3
9A21 D9
9A22 E9
9A23 E9
9A24 E9
9A25 F8
9A72 D9
9A73 D9
9A74 D9
9A75 D9
FA00 B9
FA01 E5
FA02 E5
FA03 D9
FA04 E6

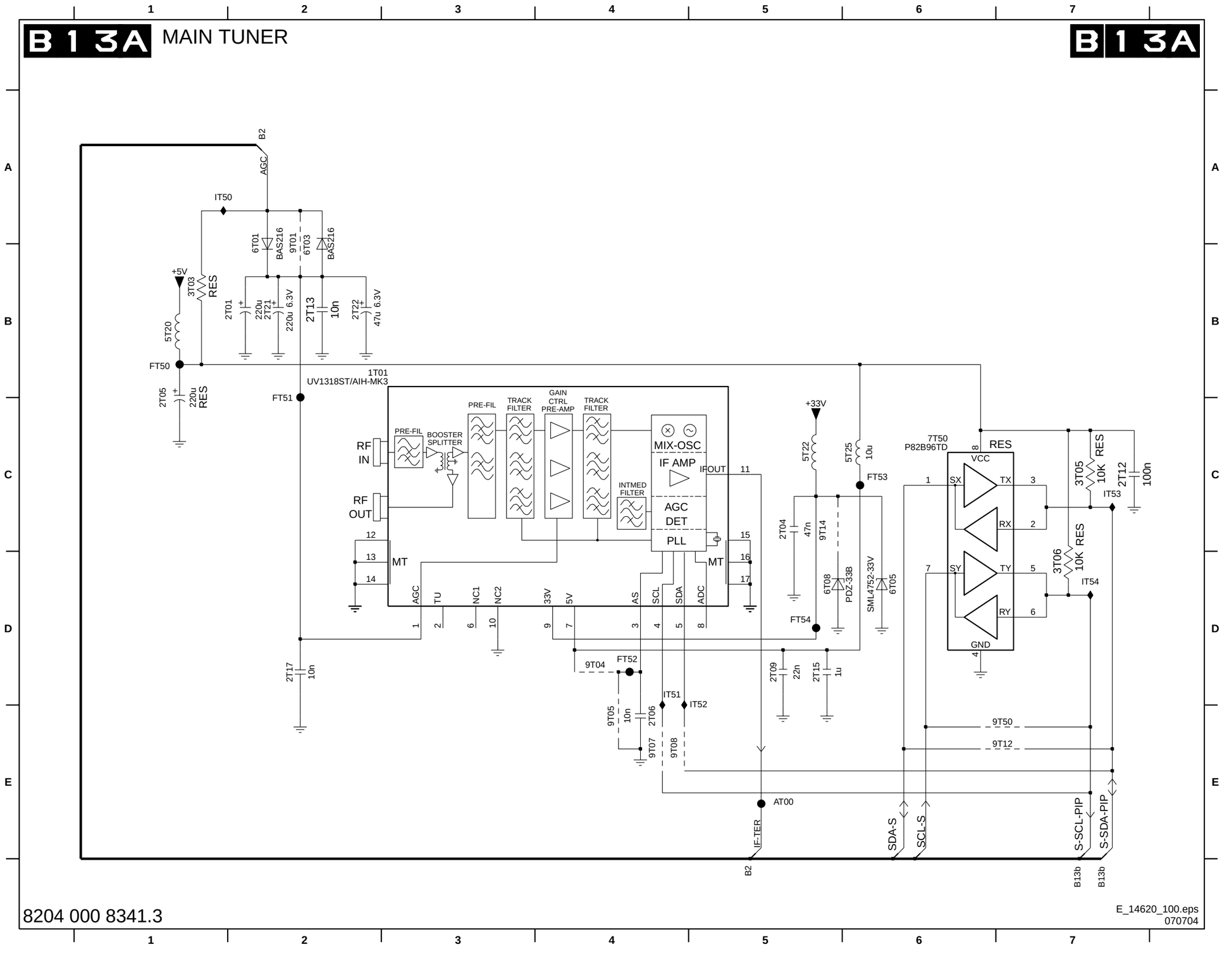
SSB: DC/DC Converter

1U01 A1	2U08 C8	2U16 C2	2U24 G8	2U32 C1	2U40 F3	3U06 C12	3U14 D1	3U22 E12	3U30 C2	3U38 G9	3U46 C10	3U58 G12	3U66 F4	5U04 C7	6U05 B1	6U13 E10	7U05 D9	7U11 E3	FU07 H1	IU06 D4	IU15 A8	IU25 H4	IU35 G7	IU43 E10
2U01 A8	2U09 D6	2U17 D5	2U25 H5	2U33 F10	2U41 F7	3U07 C9	3U15 D14	3U23 E14	3U31 B2	3U39 G9	3U51 B5	3U59 G12	3U67 G5	5U05 C12	6U06 C9	6U14 H8	7U06-A D12	7U12 H3	FU08 C9	IU07 D4	IU16 C11	IU26 E2	IU36 G9	IU44 F11
2U02 B9	2U10 A3	2U18 B2	2U26 H6	2U34 G11	2U42 E6	3U08 C11	3U16 D11	3U24 G6	3U32 H1	3U40 G9	3U52 F10	3U60 F4	3U68 G6	5U06 D12	6U07 D14	6U16 F7	7U06-B D12	7U13-1 F5	FU09 D13	IU08 C4	IU17 D9	IU27 G3	IU37 G8	IU45 F9
2U03 B4	2U11 E10	2U19 H2	2U27 D2	2U35 H8	3U01 C14	3U09 C4	3U17 D7	3U25 F2	3U33 H2	3U41 H6	3U53 F10	3U61 F5	3U69 F6	5U07 B8	6U08 E3	6U17 D14	7U07-1 G10	7U13-2 F4	IU01 B2	IU09 B4	IU18 D11	IU28 H2	IU38 G9	IU46 F5
2U04 B5	2U12 E7	2U20 H4	2U28 E2	2U36 B6	3U02 B1	3U10 D14	3U18 E11	3U26 H4	3U34 H4	3U42 H5	3U54 H7	3U62 F7	3U70 C14	6U01 A2	6U09 E3	7U01 B2	7U07-2 F8	FU03 B9	IU02 C1	IU10 A4	IU19 C14	IU30 C3	IU39 G9	IU47 F6
2U05 C2	2U13 E14	2U21 B4	2U29 C9	2U37 B6	3U03 C1	3U11 D4	3U19 E8	3U27 H10	3U35 H5	3U43 G6	3U55 E9	3U63 F6	5U01 B8	6U02 A8	6U10 H1	7U02 C4	7U08 D5	FU04 B9	IU03 D1	IU11 A5	IU20 D10	IU31 C2	IU40 G10	cU01 H12
2U06 C3	2U14 B5	2U22 H6	2U30 C1	2U38 A3	3U04 C2	3U12 G10	3U20 E14	3U28 E1	3U36 H10	3U44 D2	3U56 B6	3U64 F7	5U02 A2	6U03 A4	6U11 H2	7U03 C7	7U09 E1	FU05 C8	IU04 E3	IU13 D8	IU21 D14	IU32 E2	IU41 H9	
2U07 C4	2U15 A1	2U23 C13	2U31 D13	2U39 F6	3U05 C3	3U13 D7	3U21 E2	3U29 C2	3U37 G9	3U45 E2	3U57 A6	3U65 F5	5U03 B7	6U04 B5	6U12 F9	7U04 C5	7U10 G4	FU06 H6	IU05 D3	IU14 D6	IU22 E12	IU34 H6	IU42 C6	



SSB: Main Tuner

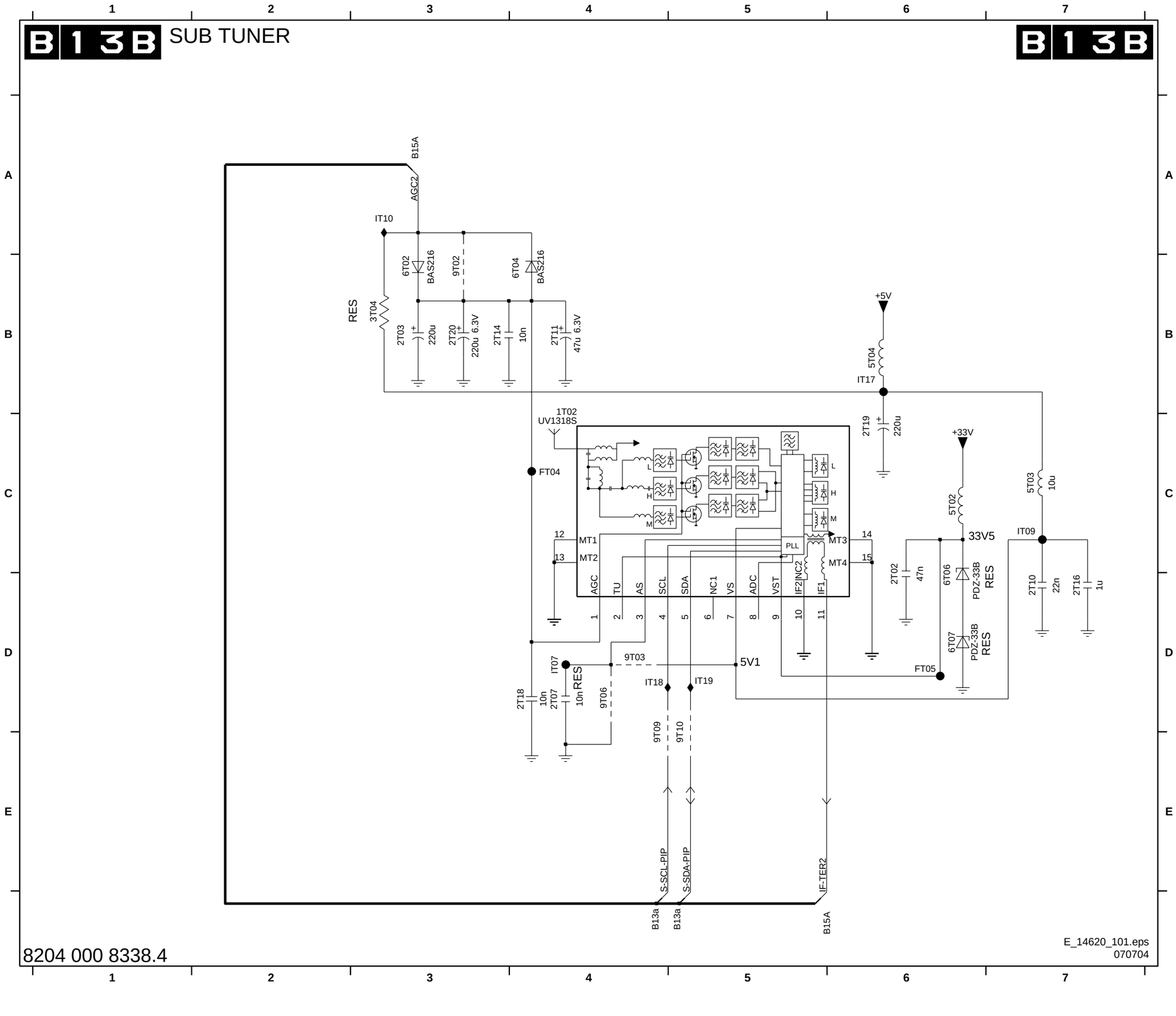
1T01 B3	2T05 B1	2T12 C7	2T17 D2	3T03 B1	5T20 B1	6T01 A2	6T08 D5	9T04 D4	9T08 E4	9T50 E7	FT51 C2	FT54 D5	IT52 D5
2T01 B2	2T06 E4	2T13 B2	2T21 B2	3T05 C7	5T22 C5	6T03 B2	7T50 C6	9T05 E4	9T12 E7	AT00 E5	FT52 D4	IT50 A1	IT53 C7
2T04 C5	2T09 D5	2T15 D5	2T22 B2	3T06 D7	5T25 C6	6T05 D6	9T01 A2	9T07 E4	9T14 C5	FT50 B1	FT53 C6	IT51 D4	IT54 D7



SSB: Sub Tuner

B13B SUB TUNER

B13B



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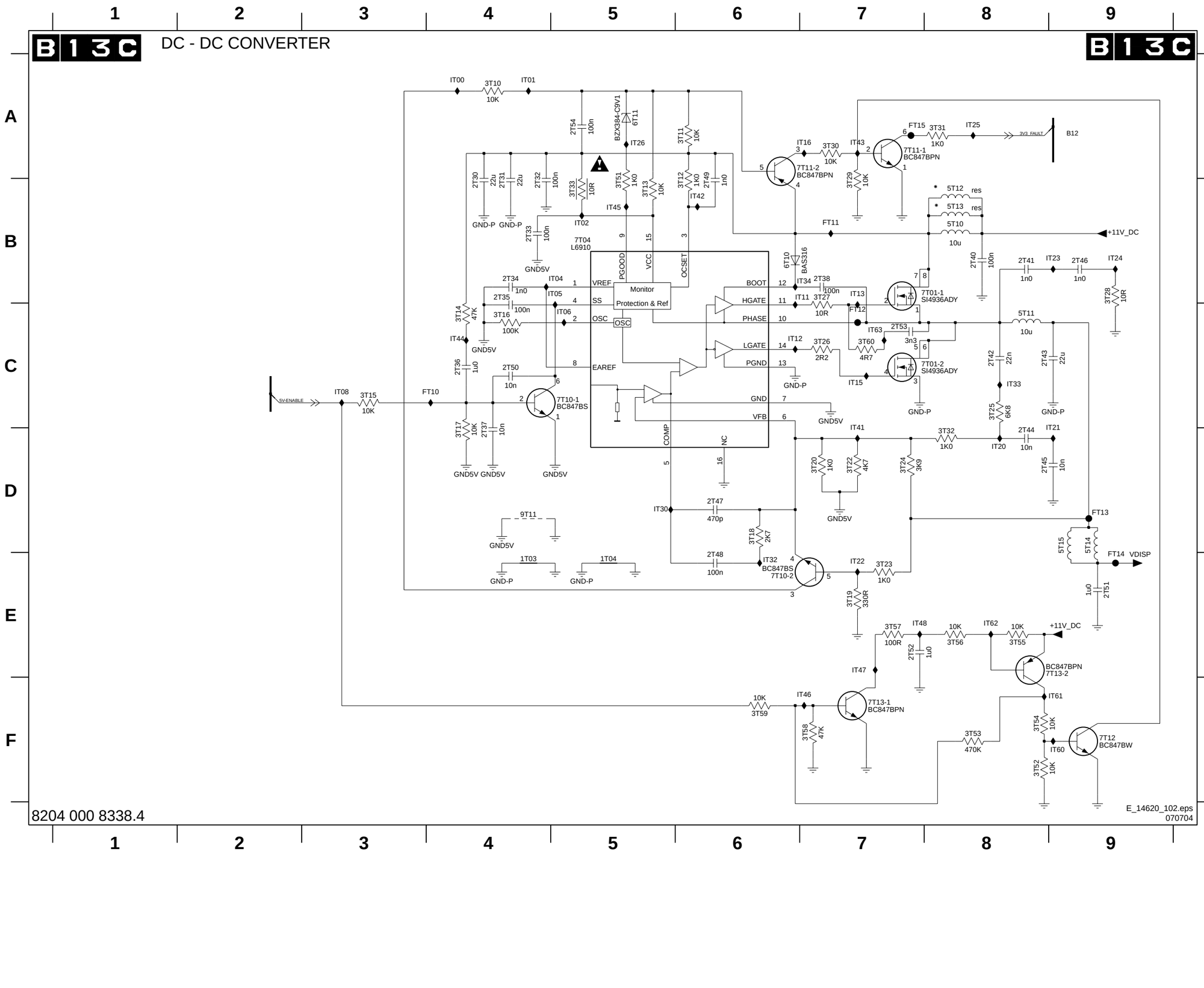
1T02 C4
2T02 D6
2T03 B3
2T07 D4
2T10 D7
2T11 B4
2T14 B3
2T16 D7
2T18 D4
2T19 C6
2T20 B3
3T04 B3
5T02 C6
5T03 C7
5T04 B6
6T02 B3
6T04 B4
6T06 D6
6T07 D6
9T02 B3
9T03 D4
9T06 D4
9T09 E4
9T10 E5
FT04 C4
FT05 D6
IT07 D4
IT09 C7
IT10 A3
IT17 B6
IT18 D4
IT19 D5

SSB: DC/DC Converter



1T03 E4	7T13-2 E8
1T04 E5	9T11 D4
2T30 B4	FT10 C4
2T31 B4	FT11 B7
2T32 B4	FT12 C7
2T33 B4	FT13 D9
2T34 B4	FT14 E9
2T35 B4	FT15 A7
2T36 C4	IT00 A4
2T37 D4	IT01 A4
2T38 B7	IT02 B5
2T40 B8	IT04 B5
2T41 B8	IT05 B5
2T42 C8	IT06 C5
2T43 C8	IT08 C3
2T44 D8	IT11 B7
2T45 D8	IT12 C6
2T46 B9	IT13 B7
2T47 D6	IT15 C7
2T48 E6	IT16 A7
2T49 B6	IT20 D8
2T50 C4	IT21 C9
2T51 E9	IT22 E7
2T52 E7	IT23 B9
2T53 C7	IT24 B9
2T54 A5	IT25 A8
3T10 A4	IT26 A5
3T11 A6	IT30 D5
3T12 B6	IT32 E6
3T13 B5	IT33 C8
3T14 C4	IT34 B7
3T15 C3	IT41 C7
3T16 C4	IT42 B6
3T17 D4	IT43 A7
3T18 D6	IT44 C4
3T19 E7	IT45 B5
3T20 D7	IT46 F7
3T22 D7	IT47 E7
3T23 E7	IT48 E7
3T24 D7	IT60 F9
3T25 C8	IT61 F9
3T26 C7	IT62 E8
3T27 B7	IT63 C7
3T28 B9	
3T29 B7	
3T30 A7	
3T31 A8	
3T32 D8	
3T33 B5	
3T51 B5	
3T52 F8	
3T53 F8	
3T54 F8	
3T55 E8	
3T56 E8	
3T57 E7	
3T58 F7	
3T59 F6	
3T60 C7	
5T10 B8	
5T11 C8	
5T12 B8	
5T13 B8	
5T14 D9	
5T15 D9	
6T10 B6	
6T11 A5	
7T01-1 B7	
7T01-2 C7	
7T04 B5	
7T10-1 C5	
7T10-2 E6	
7T11-1 A7	
7T11-2 A6	
7T12 F9	
7T13-1 F7	

SSB: I/O1: MMC

B 1 4 A I/O1 :MMC

RESERVED FOR MMC

RES FOR MMC

+8VA

B2,B14a,B15a AV3-CVBS-IN

B14b Y-CVBS-MMC-OUT

B14b C-MMC-OUT

SDA-S

B2 From HIP MAIN PIP-OUT

SCL-S

B21 From Front FRONT-Y-CVBS-IN

B2,B14b From Scart 4 (USA AV3) Y-CVBS-SC2_AV2-IN

B15a From PIP/DW PIP-OUT1

B2,B14b,c (2x) For US (AV3) C-SC2_SVHS-IN

B21 FRONT-C-IN

7I24 TEA6415CD-TR

C-PIPDW-OUT

Y-CVBS-PIPDW-OUT

C-FRONT-IN

Y-CVBS-FRONT-IN

TO PIP/DW (HIP SUB)

B14b,c(2x)

SC2-B_C-OUT

B14b,c SC2-FBL

3IT9 330R

7I62 BC847BW

C-RECORD-IN

CVBS-Y-RECORD-IN B5a,B14b,B15b

B12 3V3_FAULT

5I01 6u8

IIC0 3V3_FAULT_PIP B15c

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E_14620_103.eps 070704

2I01 F4	II00 C4	3I24 E5	3IK4 D3
2I02 B3	II01 B4	3I25 E6	3IK5 F3
2I03 C3	II02 E4	3I26 H7	3IK7 I4
2I04 D3	II03 D4	3I27 F8	3IK8 E7
2I05 D3	II04 D4	3IHG C12	3IN1 B11
2I06 E3	II05 E4	3IJ8 D12	3IP0 C9
2I07 F4	II06 E5		3IP1 D9
2I08 F5	II07 C7		3IP2 D10
2I55 I10	II08 B6		3IP3 C12
2I56 I10	II09 C7		3IP4 C10
2IA5 I4	II10 D7		3IP5 B10
2IA6 F7	II11 D6		3IP6 B10
2IE0 B5	II12 F6		3IP7 C9
2IG1 C9	II14 C10		3IP8 B11
2IJ0 F3	II15 C11		3IQ0 C11
2IJ1 D3	II16 C9		3IQ1 C11
2IJ2 F7	IIC0 I10		3IQ2 F8
2IJ3 E8	IIC1 G7		3IQ3 G7
2IJ4 C11	IIC2 F7		3IQ4 C11
2IL0 B11	IIC3 F7		3IT9 E10
3I01 B4	IIC4 D12		5I01 I10
3I02 C4	IIC5 B7		7I06 F8
3I03 B3	IIC6 B5		7I24 C5
3I04 C3	IIC7 B3		7I35 D10
3I05 C3	IIC8 H4		7I36 C10
3I06 B5	IIC9 C10		7I37 C10
3I08 E9	IIG1 C11		7I38 C11
3I09 E4	IIG2 D9		7I60 G7
3I10 B6			7I62 E11
3I11 B6			9I00 A5
3I12 B7			9I01 B5
3I13 C6			9I02 F5
3I14 C7			9I03 F5
3I15 C6			9I15 F4
3I16 C7			9I20 F7
3I17 D6			9I21 G7
3I18 D7			9I78 B5
3I19 D6			9I95 B3
3I20 D6			9I96 B3
3I21 F6			
3I22 F6			
3I23 E5			

SSB: I/O2: Connections

B 1 4 B I/O 2 : CONNECTIONS

B 1 4 B

SCART1

SCART2

RES

Multi Media Connector (MMC)

1I01-1 A3	3I70 A6	6I48 B8	FI49 B7
1I01-2 E3	3I71 B5	6I49 C8	FI50 E9
1I02 C6	3I72 B6	6I50 D8	FI51 C7
1I03 D3	3I73 B6	6I51 D8	FI52 D6
1I04-1 A7	3I74 C6	6I52 D8	FI53 D7
1I04-2 E7	3I75 C6	6I53 F3	FI54 D8
1I05 F4	3I76 D6	6I54 F3	FI55 C8
1I06 I4	3I77 D6	6I55 F3	FI56 D8
1I08 D4	3I78 D6	6I56 G3	FI57 B8
1I09 H4	3I79 A8	6I57 G3	FI58 B8
1I11 E9	3I80 B8	6I58 H3	FI59 A8
1I34 A2	3I81 C8	6I59 H3	FI60 F4
1I35 B2	3I82 B8	6I60 H3	FI61 F3
1I36 C3	3I83 C8	6I61 I3	FI62 G3
1I37 B3	3I84 C8	6I62 I3	FI63 H3
1I38 A3	3I86 D8	6I68 E4	FI64 I3
1I39 A7	3I87 D8	6I69 J3	FI68 J3
1I40 B7	3I88 D8	6I70 J3	FI69 F9
1I41 C6	3I89 F2	6I75 D9	FI91 G1
1I42 D6	3I90 F3	6I77 E8	FI92 H1
1I43 D8	3I91 F2	6IA0 C3	FI93 H1
1I44 C8	3I92 F3	6IA7 I12	FI94 I8
1I45 C8	3I94 G2	7I01-A D11	FI96 F9
1I46 B8	3I95 G3	7I01-B D11	FIA9 F9
1I47 A8	3I96 H2	7I02-A E11	FIC1 H8
1I48 F4	3I97 H3	7I02-B E11	II25 A1
1I49 G4	3I98 J13	7I03-A G11	II26 B1
1I50 G4	3I99 H2	7I03-B G11	II27 C1
1I52 H4	3IA0 H3	7I04 F11	II29 B4
1I54 I4	3IA1 J13	7I05-1 H11	II32 A6
1I58 J3	3IA2 I2	7I05-2 I11	II33 B6
1I71 C2	3IA3 J2	7I07 B11	II34 D8
1I72 C2	3IA4 C11	7I09 B11	II35 B8
1I73 D2	3IA5 D11	7I21-1 F13	II36 B9
1I74 D2	3IA6 E11	7I21-2 F13	II37 A9
1I75 D7	3IA7 E11	7I44-A J12	II38 E2
1I76 D8	3IA8 F11	7I44-B I13	II41 H2
2I11 H11	3IA9 G11	7I49 H13	II42 H2
2I12 J12	3IB0 G11	7I50-1 J11	II43 I2
2I15 G13	3IB2 A4	7I50-2 I11	II44 I11
2I16 A1	3IB4 B12	9I04 I7	II45 I12
2I17 B1	3IB5 B12	9I08 I7	II46 B12
2I18 B4	3IC1 C11	9I09 H7	II47 B11
2I19 B4	3IC2 I13	9I10 I8	II48 B11
2I20 C4	3IC3 I13	9I11 H7	II49 A12
2I21 B6	3IC4 B4	9I12 J8	IIA0 C1
2I22 A6	3IC6 A9	9I13 I1	IIA1 A4
2I23 B9	3IC9 F12	9I16 C9	IIA2 B4
2I24 B9	3ID0 B11	9I17 D1	IIA3 C7
2I25 C9	3ID1 F13	9I18 D4	IIA4 G2
2I26 F2	3ID7 I12	9I19 D9	IIA5 F2
2I27 G2	3ID8 J10	9I22 I7	IIA9 I12
2I28 G2	3IH1 H13	9I39 B6	IIB0 I11
2I29 H2	3IK2 A9	9I50 H11	IID0 B10
2I30 I2	3IK3 B9	9I51 F12	IID1 B10
2I31 H2	3IN5 A4	9I60 I7	IID2 B10
2I32 H2	3IN6 B4	9I92 H9	IID3 I12
2I36 J2	3IS2 B9	9I93 H7	IID4 J11
2I39 H11	3IT0 F2	9I94 G9	IID5 J13
2I46 B12	3IT1 G2	9I97 I7	IID6 I13
2I47 J13	3IT2 G2	9IA4 E12	IID7 H11
2IA4 I12	3IT3 H2	9IA5 E12	IIG3 C11
2IC0 F2	3IT4 I2	9IA6 G13	IIG4 D11
2IC1 F2	3IW4 H13	9IA7 G13	IIG5 E11
2IC2 G1	3IW5 H13	9IB1 H6	IIG6 E11
2IC9 D6	6I10 F13	9IB2 H6	IIG7 F11
2IH3 I13	6I11 H12	FI10 J9	IIG8 G11
3I07 I11	6I12 I12	FI11 I8	IIG9 G11
3I28 I1	6I13 J12	FI12 I8	IIH0 B11
3I34 I12	6I22 A2	FI13 I8	IIH1 H13
3I35 D9	6I23 A2	FI14 H8	IIH2 I11
3I36 J11	6I24 B2	FI16 G8	
3I37 H12	6I25 B2	FI18 G8	
3I38 J11	6I26 C2	FI19 G8	
3I50 A1	6I27 C2	FI20 G9	
3I51 A2	6I28 D2	FI21 H8	
3I52 B1	6I29 D2	FI22 H8	
3I53 B2	6I30 A3	FI32 A2	
3I54 B1	6I31 B3	FI33 B2	
3I55 C2	6I32 B3	FI34 B2	
3I56 C1	6I33 B3	FI35 C2	
3I57 C2	6I35 D3	FI36 C2	
3I58 C1	6I36 D4	FI37 C2	
3I59 D2	6I37 A6	FI38 C2	
3I60 D2	6I38 A6	FI39 D2	
3I61 A4	6I39 B6	FI40 D2	
3I62 B4	6I40 B6	FI41 A3	
3I63 B4	6I41 C6	FI42 B3	
3I64 C4	6I42 C6	FI43 B3	
3I65 D4	6I43 D6	FI44 D3	
3I66 D3	6I44 D6	FI45 D3	
3I67 D3	6I45 A8	FI46 A6	
3I68 D4	6I46 B8	FI47 B7	
3I69 A6	6I47 B8	FI48 B7	

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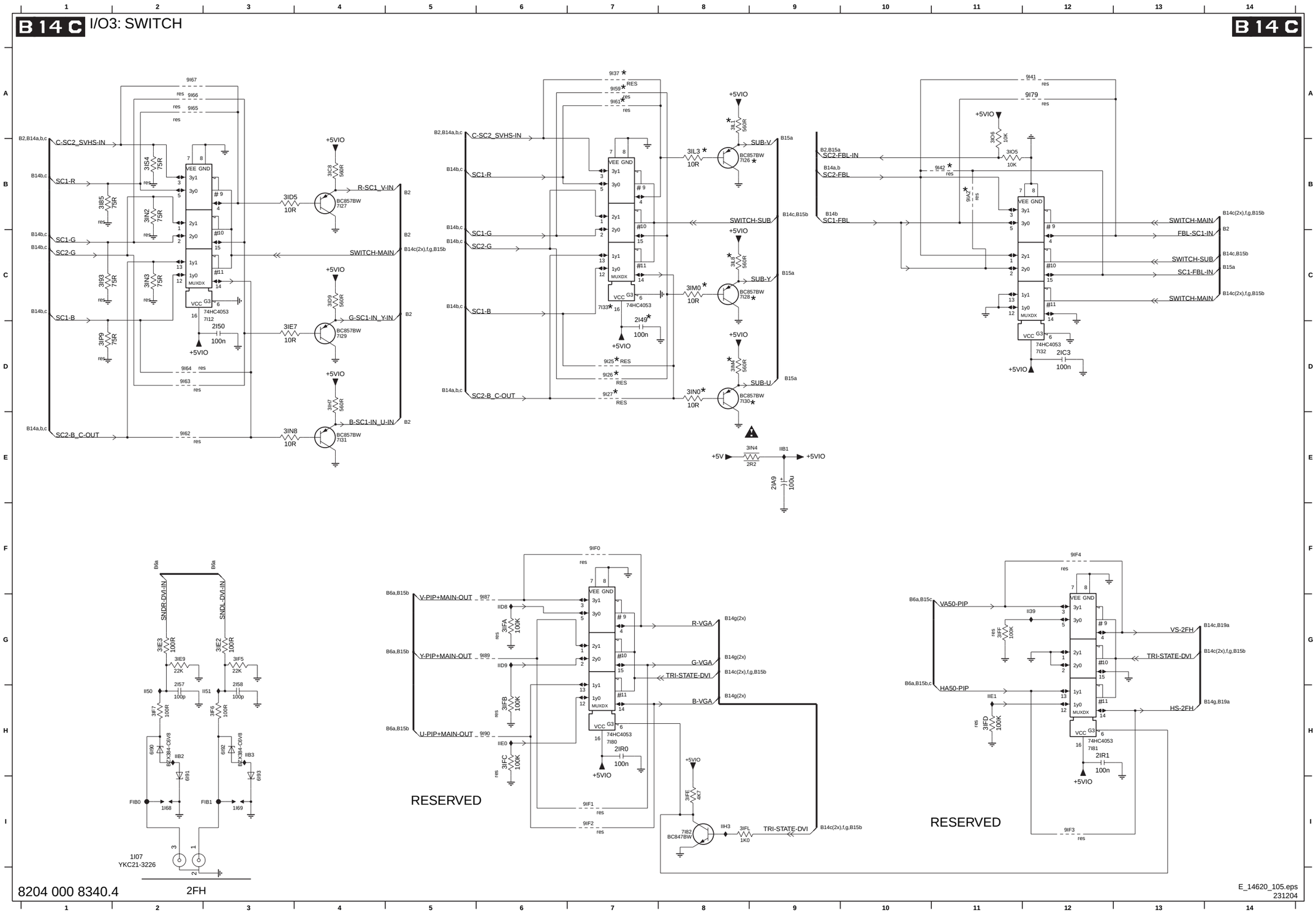
SSB: I/O3: Switch

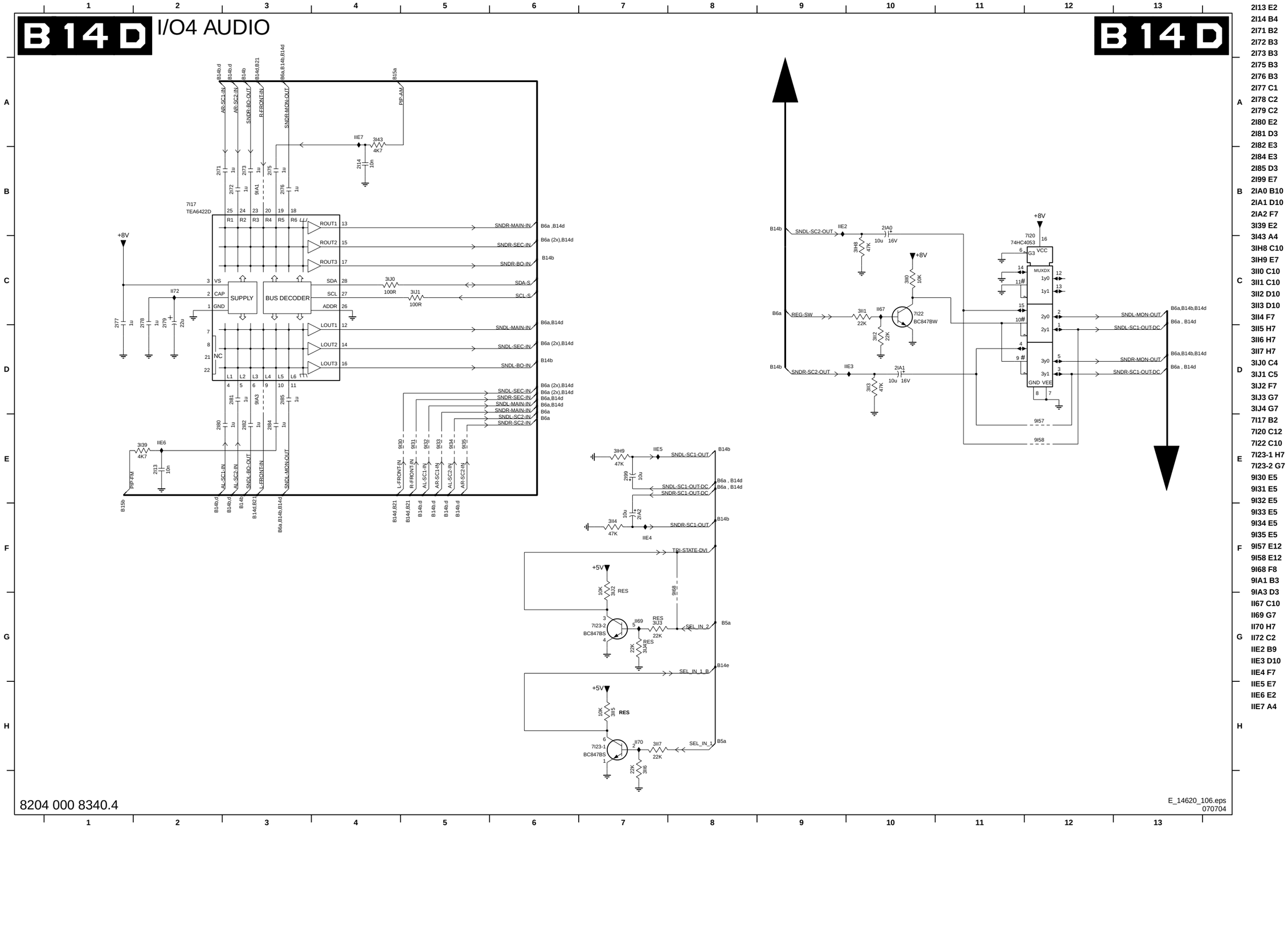
B 14 C I/O3: SWITCH



1I07 I2 IIB3 H3
1I68 I2 IID8 G6
1I69 I3 IID9 G6
2I49 D7 IIE0 H6
2I50 D3 IIE1 H11
2I57 H2 IIH3 I8
2I58 H3
2IA9 E9
2IC3 D12
2IR0 H7
2IR1 H12
3I85 B1
3I93 C1
3IC8 B4
3ID5 B3
3ID9 C4
3IE2 G3
3IE3 G2
3IE7 D3
3IE9 G2
3IF5 G3
3IF6 H3
3IF7 H2
3IFA G6
3IFB H6
3IFC H6
3IFD H11
3IFE I8
3IFF G11
3IFL I8
3IH7 D4
3IL1 A8
3IL3 B8
3IL8 C8
3IM0 C8
3IM4 D8
3IN0 D8
3IN2 B2
3IN3 C2
3IN4 E9
3IN8 E3
3IO5 B11
3IO6 A11
3IP9 D1
3IS4 B2
6I90 H2
6I91 H2
6I92 H3
6I93 H3
7I12 C3
7I26 B8
7I27 B4
7I28 C8
7I29 D4
7I30 D8
7I31 E4
7I32 D12
7I33 C7
7I80 H7
7I81 H12
7I82 I8
9I25 D7
9I26 D7
9I27 D7
9I37 A7
9I41 A12
9I42 B11
9I59 A7
9I61 A7
9I62 E2
9I63 D2
9I64 D2
9I65 A2
9I66 A2
9I67 A2
9I79 A12
9I87 G6
9I89 G6
9I90 H6
9IA2 B11
9IF0 F7
9IF1 I7
9IF2 I7
9IF3 I12
9IF4 F12
FIB0 I2
FIB1 I3
II39 G12
II50 H2
II51 H3
IIB1 E9
IIB2 H2

SSB: I/O4: Audio

B 14 D I/O4 AUDIO

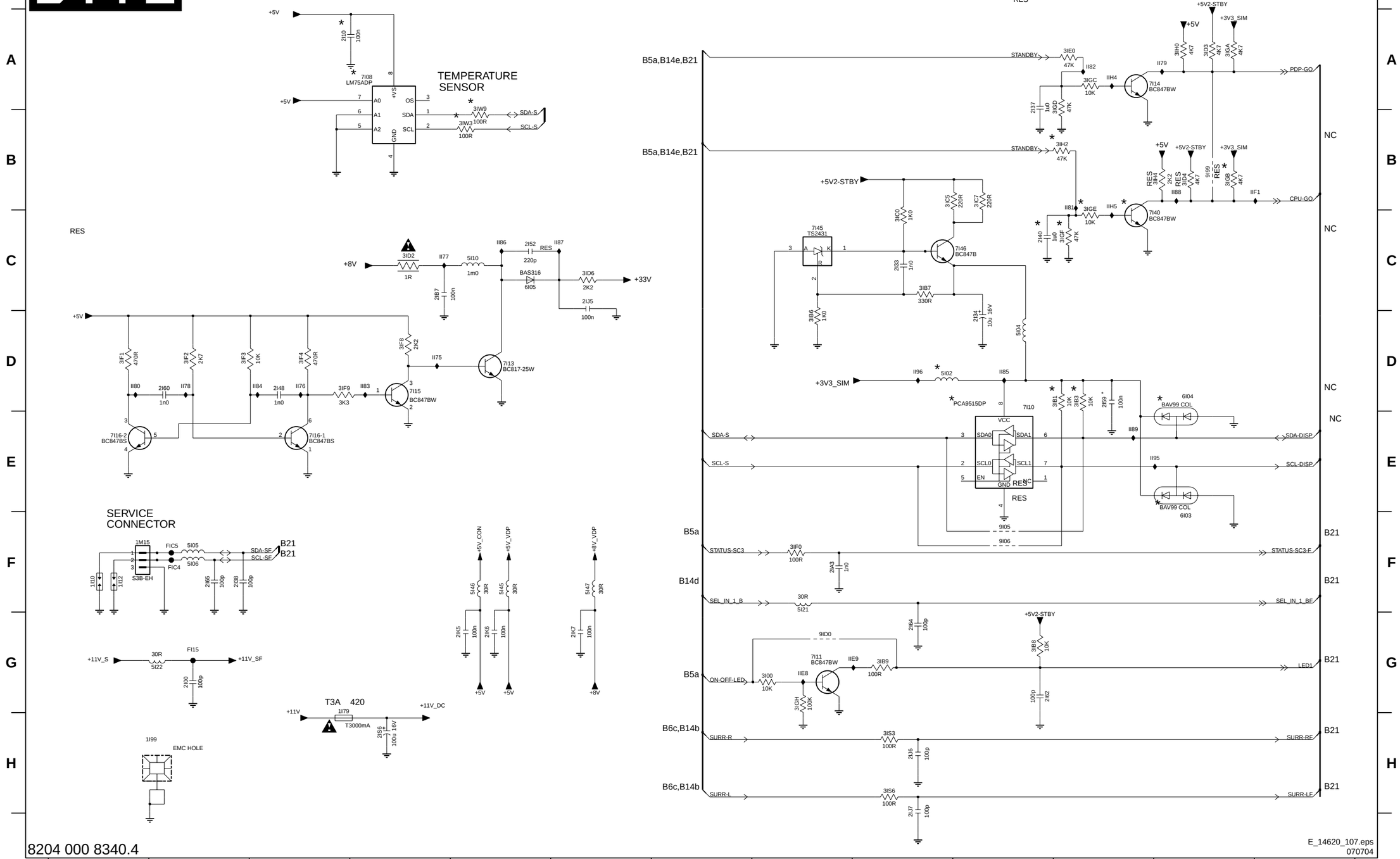


2I13 E2
2I14 B4
2I71 B2
2I72 B3
2I73 B3
2I75 B3
2I76 B3
2I77 C1
2I78 C2
2I79 C2
2I80 E2
2I81 D3
2I82 E3
2I84 E3
2I85 D3
2I99 E7
2IA0 B10
2IA1 D10
2IA2 F7
3I39 E2
3I43 A4
3IH8 C10
3IH9 E7
3II0 C10
3II1 C10
3II2 D10
3II3 D10
3II4 F7
3II5 H7
3II6 H7
3II7 H7
3IJ0 C4
3IJ1 C5
3IJ2 F7
3IJ3 G7
3IJ4 G7
7I17 B2
7I20 C12
7I22 C10
7I23-1 H7
7I23-2 G7
9I30 E5
9I31 E5
9I32 E5
9I33 E5
9I34 E5
9I35 E5
9I57 E12
9I58 E12
9I68 F8
9IA1 B3
9IA3 D3
II67 C10
II69 G7
II70 H7
II72 C2
IIE2 B9
IIE3 D10
IIE4 F7
IIE5 E7
IIE6 E2
IIE7 A4

SSB: I/O5

1I10 F1	2I00 G2	2I38 F2	2I60 D2	2IB7 C4	2IK6 G5	3IB3 D11	3IC0 C9	3ID4 B12	3IF2 D2	3IGA A12	3IGF C11	3IS3 H9	5I04 D10	5I22 G2	6I04 D12	7I13 D5	7I40 C11	9I99 B12	II75 D4	II80 D1	II85 D10	II95 E12	IIH4 A11
1I12 F1	2I10 A3	2I40 C10	2I62 G10	2IJ5 C6	2IK7 G6	3IB6 D8	3IC5 B9	3ID6 C6	3IF3 D2	3IGB B12	3IGH G8	3IS6 H9	5I05 F2	5I45 F5	6I05 C5	7I14 A11	7I45 C8	9ID0 G8	II76 D3	II81 B11	II86 C5	II96 D9	IIH5 B11
1I79 H3	2I33 C9	2I48 D3	2I64 G9	2IJ6 H9	2IS6 H4	3IB7 C9	3IC7 B10	3IE0 A11	3IF4 D3	3IGC A11	3IH0 A12	3IW3 B5	5I06 F2	5I46 F5	7I08 A4	7I15 D4	7I46 C10	FI15 G2	II77 C4	II82 A11	II87 C6	II99 E12	
1I99 H1	2I34 D10	2I52 C5	2I65 F2	2IJ7 H9	3I00 G8	3IB8 G10	3ID2 C4	3IF0 F8	3IF8 D4	3IGD A11	3IH2 B11	3IW9 B5	5I10 C5	5I47 F6	7I10 D10	7I16-1 E3	9I05 F10	FIC4 F2	II78 D2	II83 D4	II88 B12	IIE9 G9	
1M15 F1	2I37 A10	2I59 D11	2IA3 F8	2IK5 G5	3IB1 D11	3IB9 G9	3ID3 A12	3IF1 D1	3IF9 D3	3IGE C11	3IH4 B12	5I02 D9	5I21 F8	6I03 F12	7I11 G8	7I16-2 E1	9I06 F10	FIC5 F2	II79 A12	II84 D3	II89 E11	IIF1 B13	

B 14 E I/O5



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SSB: I/O6: Digital Input

B14F I/O6 : DIGITAL INPUT

B14F

DVI INPUT CONNECTOR

DVI INPUT CONNECTOR

PANELLINK RECEIVER

DVI RECEIVER

HDCP CIPHER

FORMATTER

TRIPPLE 8-BIT DAC

EEPROM (256x8) M24C02-WDW6

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1D01-1 D1
1D01-4 A6
1I14 D2
1I15 G2
1I16 G2
1I17 C8
1I18 C5
1I19 B5
1I20 B4
1I21 B3
1I53 G4
1I55 F2
1I56 D3
1I57 F4
1I59 F4
1I60 C2
1I61 C2
1I62 D2
1I64 D2
1I65 D2
1I66 E2
1I67 F2
2I66 I12
2I67 I13
2I68 I13
2I69 I13
2I70 I14
2I86 I14
2I87 G13
2I88 G13
2I89 G13
2I90 G12
2I91 G12
2I92 F13
2I93 F13
2I94 F12
2I95 E12
2I96 E13
2I97 E9
2I98 E9
2IB3 E9
2IB5 E8
2IB8 H5
2IB9 H4
2IC5 H6
2IC6 C7
2IC7 C6
2IC8 E10
2IE1 E10
2IE2 E11
2IE3 D11
2IE4 D11
2IE5 D12
2IE6 E12
2IE7 E12
2IE8 D12
2IE9 C9
2IG2 C9
2IG3 C10
2IG4 C10
2IG5 C11
2IG6 C12
2IG7 C13
2IG8 C12
2IG9 C13
2IH1 H5
2IH2 C13
2IH4 C12
2IH5 C11
2IJ8 H8
2IJ9 H9
3I29 C4
3I30 C4
3I31 D5
3I32 C6
3I33 C7
3I40 C7
3I41 C8
3I42 E2
3I44 I4
3I45 I4
3I46 I5
3I47 I5
3I48 H5
3I49 I7
3IB3 A12
3II9 A11
3IK9 A9
3IQ5 H6
3IQ6 H7
3IQ7 H8
3IQ8 H9
3IQ9 I9
3IR0 I9
3IR1 I10
3IR2 G8
3IR3 G8
3IR4 G9
3IR5 G13
3IR6 G13
3IR7 F13
3IR8 F13
3IR9 I13
3IS0 I13
3IS1 I13
3IS5 I12
3IT5 I14
3IT6 I14
3IV0 H9
3IV1 I7
3IV2 I7
3IV3 I7
5I30 C11
5I31 C12
5I32 D13
5I33 D10
5I34 D10
5I35 E13
5I36 H13
5I37 H13
5I38 H13
5I39 H5
5I40 C12
5I41 E13
6I01 C3
6I06 C4
6I07 C5
6I08 C6
6I09 C8
6I14 E5
6I15 E5
6I16 E6
6I17 E6
6I18 E7
6I19 E7
6I20 E4
6I21 E4
6I63 H7
6I64 I7
6I65 I4
6I66 I4
7I18 E10
7I26 I12
7I51 H8
7I52 H8
7I53-1 I8
7I53-2 I9
7I61 B10
7I64 B11
9I07 F14
9I14 F14
9I85 G14
9IB3 A7
9ID1 B4
9ID2 A4
9ID3 B4
9ID4 A5
9ID5 B5
9ID6 A5
9ID7 A7
9ID8 B7
9ID9 B7
FI00 C2
FI01 C2
FI02 D2
FI03 D2
FI04 F2
FI05 F2
FI06 F2
FI07 G2
FI08 E2
FI09 E2
FI29 G14
FI30 G14
FI70 C2
FI71 C2
FI72 I5
FI73 H10
FI74 I8
FI75 G10
FI76 B10
FI77 H14
FI78 H14
FI79 H14
FI80 B4
FI81 B4
FI82 B5
FI83 C6
FI84 C8
FIC3 E2
II60 A10
II61 C11
II62 D11
II63 D11
II64 D11
II65 D10
II66 D10
II68 A11
II92 E13
II93 F13
II94 F14
II97 E14
IIG0 I7
IIH6 H9

SSB: I/O7

B 14 G I/O7

B 14 G

HDI : RGB-YPbPr

RGB-OUTPUT SELECTION

RESERVED

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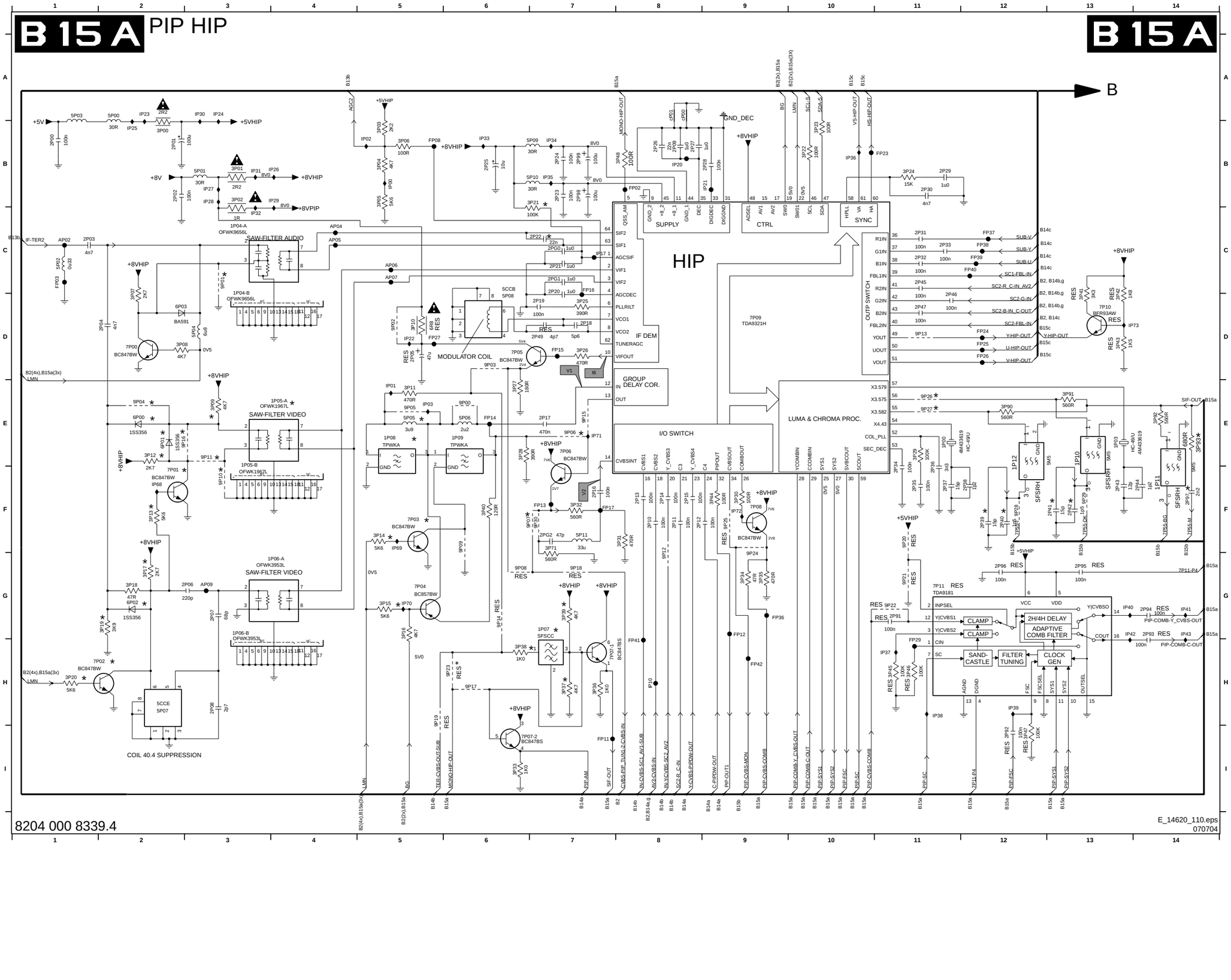
2I09 I10
2IF0 I9
2IF1 F9
2IF2 D9
2IF3 B9
2IF4 H6
2IF5 H7
2IF6 A13
2IF8 D2
2IF9 D2
2IH6 D2
2IH7 D2
2IH8 C2
2IH9 C2
2IK1 C5
2IK2 H10
2IK3 H10
2IK4 I10
2IN8 E3
2IN9 E3
3IG0 F9
3IG1 F8
3IG3 D9
3IG4 D8
3IG6 B9
3IG7 C8
3IG9 H10
3IHA G9
3IHB E9
3IHC C9
3IJ6 C11
3IJ7 D11
3IK0 G3
3IT7 G3
3IT8 G3
3IU0 H5
3IU1 G13
3IU2 B13
3IU3 H13
3IU5 D11
3IU6 E11
3IU7 E12
3IU8 E13
3IU9 F11
3IV4 C6
3IV5 D6
3IV6 D6
3IV7 E13
3IV8 F11
3IV9 F13
3IW1 H10
3IW2 E11
3IW7 B11
3IW8 B11
3IZ0 F11
3IZ1 F12
3IZ2 F13
3IZ3 B11
3IZ4 B11
3IZ5 B11
3IZ6 C13
3IZ7 B12
3IZ8 B13
3IZ9 A12
5I12 H6
5I13 H6
5I42 E2
6I80 H10
6I81 I10
6IA1 H10
7I41 C12
7I54-A A13
7I54-B C13
7I54-C D13
7I54-D F13
7I55 C4
7I56 C8
7I57 E8
7I58 F8
9I23 B13
9I28 C12
9I29 B4
9I45 D11
9I49 F11
9I81 F4
9I84 E7
9I88 F4
9I91 B4
9I98 B4
FIB2 G2
FIB3 I10
FIB5 H6
FIB6 G13
FIB7 G13
FIB8 H10
FIB9 H10
FIC2 E2
II30 E3
II31 E3
IIB4 B11
IIB5 B12
IIB6 D11
IIB7 E12
IIB8 F11
IIB9 F12
IIF2 C6
IIF3 C6
IIF4 D6
IIF5 C8
IIF6 D8
IIF7 F8
IIH7 C12
IIH8 C11

SSB: PIP HIP

B 15 A PIP HIP

B 15 A



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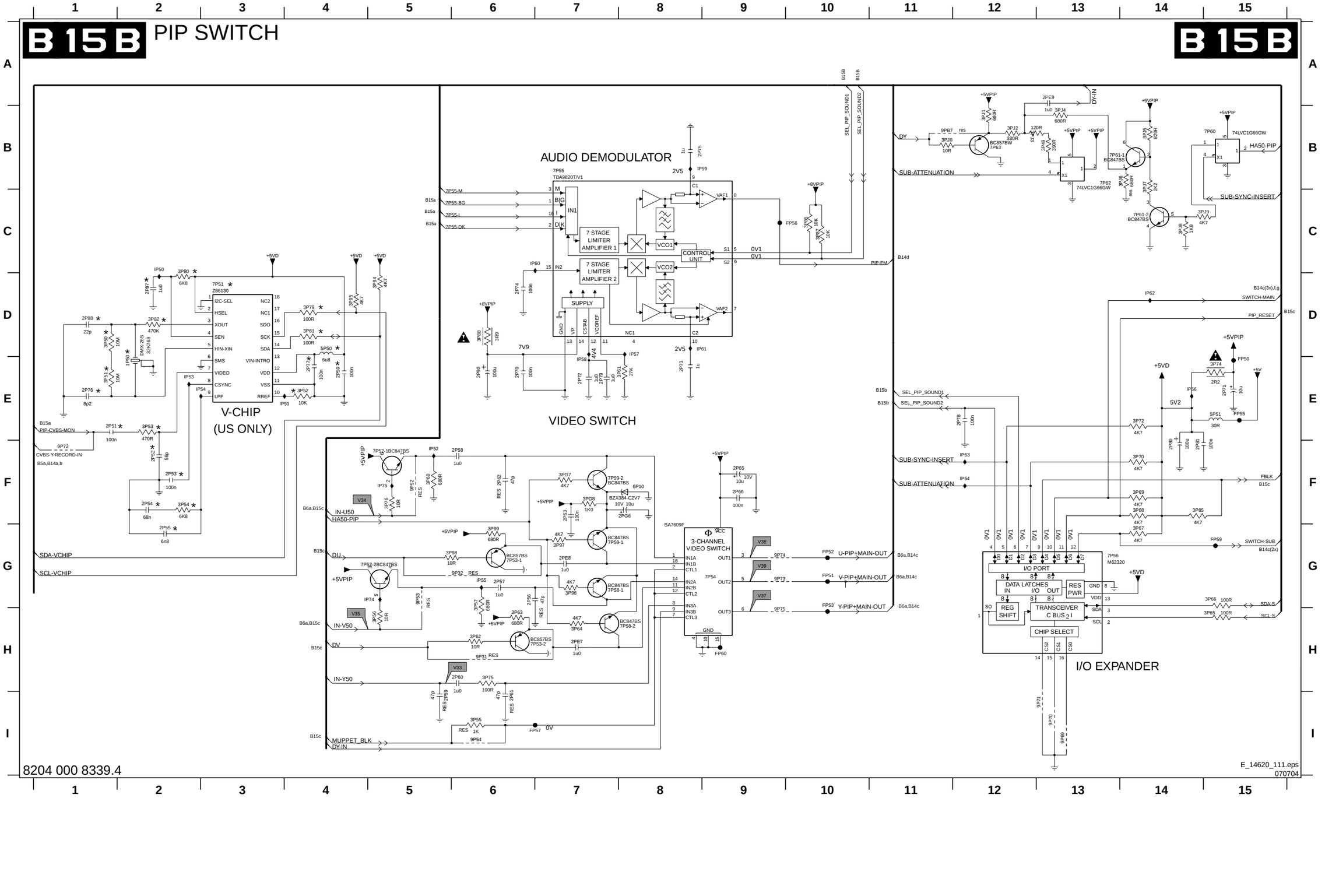
1P03 E13	3P15 G5	9P21 G11	
1P04-A C3	3P16 G5	9P22 G11	
1P04-B D3	3P17 G2	9P23 H6	
1P05-A E4	3P18 G2	9P24 G9	
1P05-B F3	3P19 G2	9P25 F9	
1P06-A G4	3P20 H1	9P26 E11	
1P06-B G3	3P21 B7	9P27 E11	
1P07 G7	3P22 B10	9P28 F12	
1P08 E5	3P23 B10	9P29 F13	
1P09 E6	3P24 B11	9P30 F7	
1P10 E13	3P25 D7	AP02 C1	
1P11 F14	3P26 D7	AP04 C4	
1P12 E12	3P27 E6	AP05 C4	
2P00 B1	3P28 E6	AP06 C5	
2P01 B2	3P29 E11	AP07 C5	
2P02 B2	3P30 F9	AP09 G3	
2P03 C1	3P31 F8	FP02 B8	
2P04 D2	3P32 F7	FP03 C1	
2P05 D5	3P33 I6	FP08 B5	
2P06 G3	3P34 G9	FP11 I7	
2P07 G3	3P35 G9	FP12 G9	
2P08 H3	3P36 H7	FP13 F7	
2P09 B8	3P37 H7	FP14 E6	
2P10 F8	3P38 H6	FP15 D7	
2P11 F8	3P39 G7	FP16 C7	
2P12 F8	3P40 F6	FP17 F7	
2P13 F8	3P41 D13	FP23 B11	
2P14 F8	3P42 D13	FP24 D12	
2P15 F8	3P43 D13	FP25 D12	
2P16 F7	3P44 F9	FP26 D12	
2P17 E7	3P45 H11	FP27 D5	
2P18 D7	3P46 H11	FP29 H11	
2P19 D7	3P47 I12	FP36 G9	
2P20 C7	3P48 B8	FP37 C12	
2P21 C7	3P71 F7	FP38 C12	
2P22 C7	3P90 E12	FP39 C12	
2P23 B7	3P91 E13	FP40 C12	
2P24 B7	3P92 E14	FP41 H8	
2P25 B6	3P93 E14	FP42 H9	
2P26 B8	5P00 A2	IP00 B5	
2P27 B8	5P01 B3	IP01 E5	
2P28 B9	5P02 C1	IP02 B5	
2P29 B11	5P03 A1	IP03 E5	
2P30 B11	5P04 D3	IP10 H8	
2P31 C11	5P05 E5	IP17 C7	
2P32 C11	5P06 E6	IP20 B8	
2P33 C11	5P07 H2	IP21 B9	
2P34 F11	5P08 D6	IP22 D5	
2P35 F11	5P09 B7	IP23 A2	
2P36 F11	5P10 B7	IP24 A3	
2P37 F11	5P11 F7	IP25 B2	
2P38 F12	6P00 E2	IP26 B4	
2P39 F12	6P01 E2	IP27 B3	
2P40 F12	6P02 G2	IP28 B3	
2P41 F13	6P03 D2	IP29 B4	
2P42 F13	7P00 D2	IP30 A3	
2P43 F13	7P01 F2	IP31 B3	
2P44 F14	7P02 H1	IP32 C3	
2P45 C11	7P03 F5	IP33 B6	
2P46 D11	7P04 G5	IP34 B7	
2P47 D11	7P05 D6	IP35 B7	
2P49 D7	7P06 E7	IP36 B10	
2P91 G11	7P07-1 H7	IP37 H11	
2P92 I12	7P07-2 I6	IP38 H11	
2P93 G14	7P08 F9	IP39 H12	
2P94 G14	7P09 D9	IP40 G13	
2P95 G13	7P10 D13	IP41 G14	
2P96 G12	7P11 G11	IP42 G13	
2P97 F14	9P00 E6	IP43 G14	
2P98 B7	9P01 C3	IP68 F2	
2P99 B7	9P02 D5	IP69 F5	
2PG0 C7	9P03 D6	IP70 G5	
2PG1 C7	9P04 E2	IP71 E7	
2PG2 F7	9P05 E5	IP72 F9	
3P00 B2	9P06 E7	IP73 D14	
3P01 B3	9P07 F7	cP00 A8	
3P02 B3	9P08 G6	cP01 A8	
3P03 B5	9P09 F6		
3P04 B5	9P10 F3		
3P05 B5	9P11 E3		
3P06 B5	9P12 G8		
3P07 D2	9P13 D11		
3P08 D2	9P14 G6		
3P09 E3	9P15 E7		
3P10 D5	9P16 E3		
3P11 E5	9P17 H6		
3P12 E2	9P18 G7		
3P13 F2	9P19 H5		

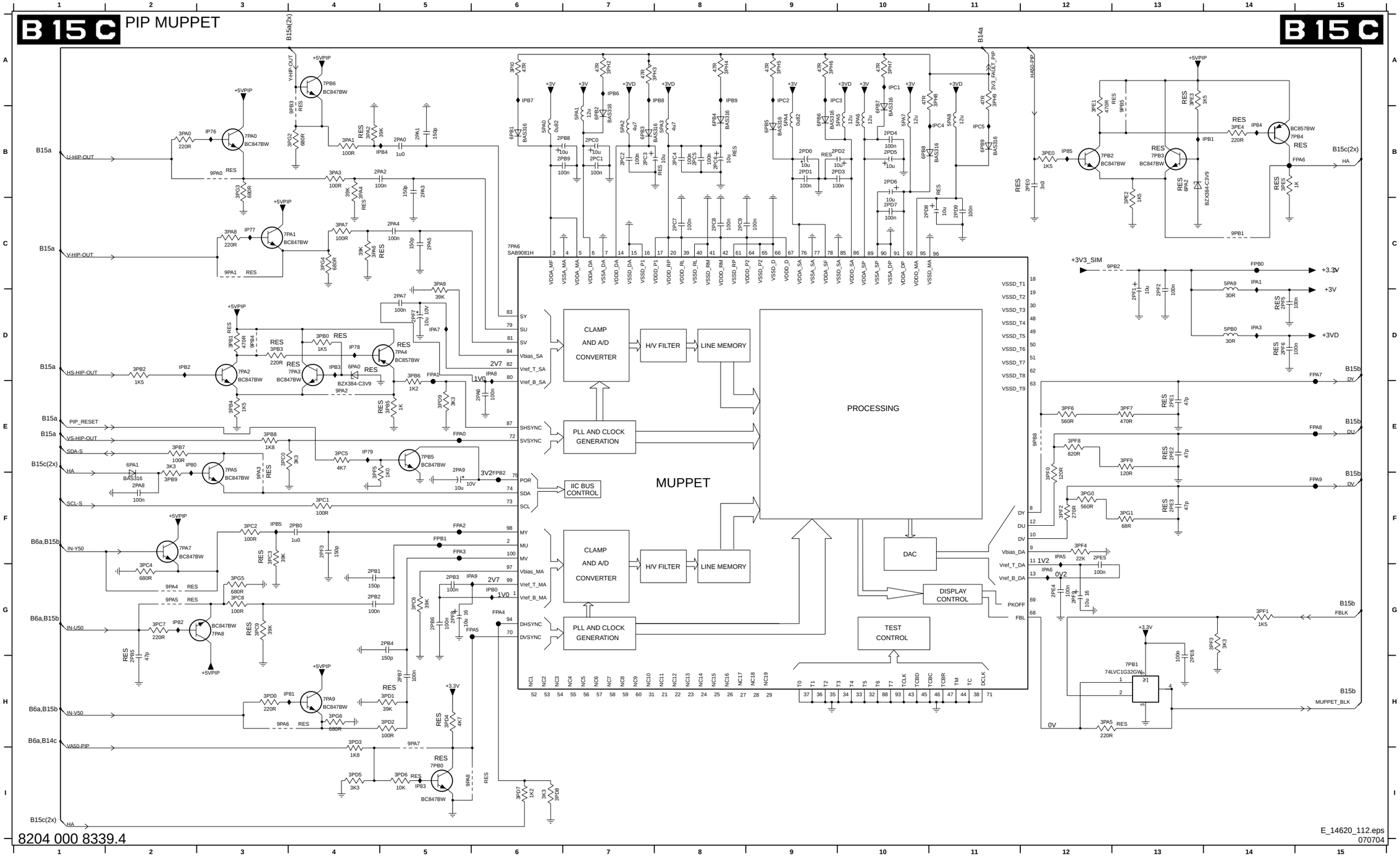
SSB: PIP Switch

1P50 E2	2P54 F2	2P59 I5	2P65 F9	2P73 E8	2P78 E12	2P88 D1	2PG6 F8	3P53 E2	3P60 F5	3P65 H15	3P70 F14	3P79 D4	3P86 C10	3P96 G7	3PG8 F7	3PJ4 B13	3PJ9 C15	7P52 G4	7P55 B7	7P59-2 G7	7P63 B12	9P54 I6	9P73 G9	FP51 G10	FP57 I7	IP52 F5	IP57 D8	IP62 D14
2P50 E4	2P55 G2	2P60 H6	2P66 F9	2P74 D6	2P79 E7	2P90 E6	3P49 B13	3P54 F2	3P61 E8	3P66 G15	3P72 E14	3P80 C2	3P87 C10	3P97 G7	3PJ0 B11	3PJ5 B14	5P50 D4	7P52-1 F5	7P56 G13	7P60 B15	9P31 H6	9P74 G9	FP52 G10	FP59 G15	IP53 E2	IP58 E7	IP63 F12
2P51 E1	2P56 G6	2P61 I6	2P70 E6	2P75 B8	2P80 F14	2PE7 H7	3P50 D1	3P55 I6	3P62 H6	3P67 G14	3P74 E15	3P81 D4	3P88 D6	3P98 G6	3PJ1 B12	3PJ6 B14	5P51 E15	7P53-1 G6	7P58-1 G7	7P61-1 B14	9P32 G6	9P75 H9	FP53 G10	FP60 H9	IP54 E3	IP59 B9	IP64 F12
2P52 F2	2P57 G6	2P62 F6	2P71 E15	2P76 E1	2P81 F14	2PE8 G7	3P51 E1	3P56 H5	3P63 H6	3P68 F14	3P75 H6	3P82 D2	3P94 D5	3P99 G6	3PJ2 B12	3PJ7 B14	6P10 F8	7P53-2 H6	7P58-2 H8	7P61-2 C14	9P52 F5	9P77 I13	FP55 E15	IP50 C2	IP55 G6	IP60 C7	IP74 G5
2P53 F2	2P58 F6	2P63 F7	2P72 E7	2P77 E4	2P87 D2	2PE9 A13	3P52 E4	3P57 G6	3P64 H7	3P69 F14	3P76 F5	3P85 F14	3P95 D4	3PG7 F7	3PJ3 B12	3PJ8 C14	7P51 D3	7P54 G9	7P59-1 F7	7P62 B13	9P53 G5	9P72 F1	FP56 E15	IP51 E4	IP56 E14	IP61 D8	IP75 F5



SSB: PIP Muppet

2PA0 B5	2PA7 D5	2PB4 G5	2PC1 B7	2PC8 C8	2PD5 B10	2PE2 E13	2PF3 F4	3PA1 B4	3PA8 C3	3PB5 E5	3PC2 F3	3PC9 G3	3PD6 I5	3PE3 A13	3PF4 F12	3PG1 F13	3PH3 A7	3PI0 A6	5PA6 B10	6PA2 B13	6PB7 B10	7PA4 D5	7PB1 H13	9PA1 C3	9PA8 I5	FPA0 E5	FPA7 D15	IP77 C3	IP84 B14	IPA8 D6	IPB5 F3	IPC3 A9
2PA1 B5	2PA8 F2	2PB5 H2	2PC2 B7	2PC9 C8	2PD6 B10	2PE3 F13	2PF5 D14	3PA2 B4	3PA9 C5	3PB6 D5	3PC3 F3	3PD0 H3	3PD7 I6	3PE4 B14	3PF5 F4	3PG2 B4	3PH4 A8	5PA0 B6	5PA7 B10	6PB1 B6	6PB8 B10	7PA5 E3	7PB2 B12	9PA2 E4	9PB1 C14	FPA1 D5	FPA8 E15	IP78 D4	IP85 B12	IPA9 G6	IPB6 A7	IPC4 B11
2PA2 B5	2PA9 E5	2PB6 G5	2PC3 B7	2PD0 B9	2PD7 C10	2PE4 G12	2PF6 D14	3PA3 B4	3PB0 D4	3PB7 E2	3PC4 G2	3PD1 H5	3PD8 I6	3PE5 B14	3PF6 E12	3PG3 B3	3PH5 A9	5PA1 B7	5PA8 B11	6PB2 B7	6PB9 B11	7PA6 C6	7PB3 B13	9PA3 F3	9PB2 C13	FPA2 F5	FPA9 F15	IP79 E4	IPA1 C14	IPB0 G6	IPB7 A6	IPC5 B11
2PA3 B5	2PB0 F4	2PB7 H5	2PC4 B8	2PD1 B9	2PD8 C10	2PE5 F12	2PF7 D5	3PA4 B4	3PB1 D3	3PB8 E3	3PC5 E4	3PD2 H5	3PD9 E5	3PF0 F12	3PF7 E13	3PG4 C4	3PH6 A9	5PA2 B7	5PA9 C14	6PB3 B7	7PA0 B3	7PA7 F2	7PB4 B14	9PA4 G2	9PB3 B4	FPA3 F5	FPB0 C14	IP80 E2	IPA3 D14	IPB1 B14	IPB8 A8	
2PA4 C5	2PB1 G4	2PB8 B7	2PC5 B8	2PD2 B10	2PD9 C11	2PE6 H13	2PF8 G5	3PA5 H12	3PB2 D2	3PB9 F2	3PC6 G5	3PD3 H4	3PE0 B12	3PF1 G14	3PF8 E12	3PG5 G3	3PH7 A10	5PA3 B8	5PB0 D14	6PB4 B8	7PA1 C3	7PA8 G3	7PB5 E5	9PA5 G2	9PB4 D3	FPA4 G6	FPB1 F5	IP81 H4	IPA5 F12	IPB2 D2	IPB9 A8	
2PA5 C5	2PB2 G4	2PB9 B7	2PC6 B8	2PD3 B10	2PE0 B12	2PF1 D13	2PF9 G12	3PA6 C4	3PB3 D3	3PC0 E3	3PC7 G2	3PD4 H5	3PE1 B12	3PF2 F12	3PF9 E13	3PG6 H4	3PH8 A11	5PA4 B9	6PA0 D4	6PB5 B9	7PA2 D3	7PA9 H4	7PB6 A4	9PA6 H3	9PB5 B13	FPA5 G6	FPB2 F6	IP82 G2	IPA6 G12	IPB3 D4	IPC1 A10	
2PA6 E6	2PB3 G5	2PC0 B7	2PC7 C8	2PD4 B10	2PE1 E13	2PF2 D13	3PA0 B2	3PA7 C4	3PB4 E3	3PC1 F4	3PC8 G3	3PD5 I4	3PE2 C13	3PF3 G14	3PG0 F12	3PH2 A7	3PH9 A11	5PA5 B10	6PA1 E2	6PB6 B9	7PA3 D4	7PB0 I5	9PA0 B3	9PA7 H5	9PB8 E12	FPA6 B15	IP76 B3	IP83 I5	IPA7 D5	IPB4 B5	IPC2 A9	


B 15 C
PIP MUPPET
B 15 C
B15a(2x)
B14a
+5VPIP
Y-HIP-OUT
7PB6
BC847BW
9PB3
RES
3PC2
680R
3PA1
100R
3PA2
39K
RES
2PA0
1u0
2PA1
150p
IP76
7PA0
BC847BW
3PA0
220R
B15a
U-HIP-OUT
9PA0
RES
3PA3
100R
2PA2
100n
3PA4
39K
RES
150p
2PA3
3PC3
680R
V-HIP-OUT
IP77
7PA1
BC847BW
3PA8
220R
3PA7
100R
2PA4
100n
3PA6
39K
RES
150p
2PA5
3PC4
680R
9PA1
RES
HS-HIP-OUT
3PB2
1K5
IPB2
IP78
7PA4
BC857BW
7PA2
BC847BW
7PA3
BC847BW
IPB3
6PA0
BZX384-C3V9
9PA2
3PB0
1K5
3PB3
220R
3PB4
1K5
3PB5
1K
3PB6
1K2
FPA1
3PD9
3K3
2PA6
100n
3PA9
39K
2PA7
100n
2PF7
10u
10V
IPA7
3PB1
470R
9PB4
PIP_RESET
VS-HIP-OUT
3PB8
1K8
FPA0
SDA-S
3PB7
100R
IP79
7PB5
BC847BW
3PC5
4K7
3PF5
1K0
2PA9
10u
10V
3V2
FPB2
3PC0
3K3
9PA3
HA
6PA1
BAS316
3K3
3PB9
IP80
2PA8
100n
SCL-S
3PC1
100R
B6a,B15b
IN-Y50
+5VPIP
7PA7
BC847BW
3PC2
100R
IPB5
2PB0
1u0
FPA2
FPB1
FPA3
3PC3
39K
2PF3
150p
3PC4
680R
9PA4
RES
3PG5
680R
3PC8
100R
2PB1
150p
2PB2
100n
B6a,B15b
IN-U50
3PC7
220R
IP82
BC847BW
7PA8
3PC9
39K
RES
2PB5
47p
+5VPIP
2PB3
100n
IPA9
2V7
IPB0
1V0
FPA4
FPA5
2PB4
150p
2PB7
100n
2PB6
100n
2PF8
10u
16
3PC6
39K
B6a,B15b
IN-V50
+5VPIP
7PA9
BC847BW
IP81
3PD0
220R
9PA6
RES
3PG6
680R
3PD1
39K
3PD2
100R
+3.3V
3PD4
4K7
B6a,B14c
VA50-PIP
3PD3
1K8
9PA7
3PD5
3K3
3PD6
10K
IP83
7PB0
BC847BW
9PA8
3PD7
1K2
3PD8
3K3
B15c(2x)
HA
7PA6
SAB9081H
VDDA_MF
VSSA_MA
VDDA_DA
VSSA_DA
VDDD_DA
VSSD_DA
VSSD_P1
VDDD_P1
VDDD_RP
VDDD_RL
VSSD_RL
VSSD_RM
VDDD_RM
VSSD_RP
VDDD_P2
VSSD_P2
VSSD_D
VDDD_D
VDDA_SA
VSSA_SA
VDDA_SP
VSSA_SP
VSSA_DP
VDDA_DP
VDDD_MA
VSSD_MA
SY
SU
SV
Vbias_SA
Vref_T_SA
Vref_B_SA
SHSYNC
SVSYNC
POR
SDA
SCL
MY
MU
MV
Vbias_MA
Vref_T_MA
Vref_B_MA
DHSYNC
DVSYNC
NC1
NC2
NC3
NC4
NC5
NC6
NC7
NC8
NC9
NC10
NC11
NC12
NC13
NC14
NC15
NC16
NC17
NC18
NC19
CLAMP AND A/D CONVERTER
H/V FILTER
LINE MEMORY
PLL AND CLOCK GENERATION
IIC BUS CONTROL
MUPPET
PROCESSING
DAC
DISPLAY CONTROL
TEST CONTROL
T0
T1
T2
T3
T4
T5
T6
T7
TCLK
TCBD
TCBC
TCBR
TM
TC
DCLK
VSSD_T1
VSSD_T2
VSSD_T3
VSSD_T4
VSSD_T5
VSSD_T6
VSSD_T7
VSSD_T8
VSSD_T9
DY
DU
DV
Vbias_DA
Vref_T_DA
Vref_B_DA
PKOFF
FBL
1V2
0V2
0V
3PA5
220R
3PF1
1K5
FBLK
B15b
MUPPET_BLK
7PB1
74LVC1G32GW
+3.3V
3PF3
3K3
2PE6
100n
3PA3
3PA4
3PA8
3PB1
3PB7
3PC0
3PC1
3PD9
3PE0
3PE1
3PE2
3PE3
3PE4
3PF0
3PF2
3PG0
3PG1
3PH1
3PH2
3PH3
3PH4
3PH5
3PH6
3PH7
3PH8
5PA0
5PA1
5PA2
5PA3
5PA4
5PA5
5PA6
5PA7
5PA8
6PB1
6PB2
6PB3
6PB4
6PB5
6PB6
6PB7
6PB8
6PB9
2PB8
2PC0
2PC1
2PC2
2PC3
2PC4
2PC5
2PC6
2PC7
2PC8
2PC9
2PD0
2PD1
2PD2
2PD3
2PD4
2PD5
2PD6
2PD7
2PD8
2PD9
HA
HA
HA

SSB: HDI A/D Converter

B 19A HDI A/D CONVERTER B 19A

A/D CONVERTER

+3V3-AD
7L02 LD1117DT33C
FL17
+5V
IN OUT COM
FE02
5L16 5L13 5L17 5L14 5L18 5L15
IL10 VD
IL11 VDD
IL12 PVD
7L01 AD9883AKST
VDD PVD VD PVD
CLAMP A/D
RAIN GAIN BAIN
B14g V-2FH AL06
B14g(2x)B19a Y-2FH AL07
B14g U-2FH AL08
B14c,g HS-2FH
B14c(2x) VS-2FH
B14g(2x),B19a Y-2FH
COAST
MIDSCV
SYNC PROCESSING AND CLOCK GENERATION
SERIAL REGISTER AND PWR MANAGMENT
REF REF-BYPASS
SDA SCL A0
GND
to EPLD
ROUTA0..ROUTA7 UV-AD-0..UV-AD-7
GOUTA0..GOUTA7 Y-AD-0..Y-AD-7
BOUTA0..BOUTA7 U-AD-0..U-AD-7
HSOUT H-2FH-AD-OUT
VSOUT V-2FH-AD-OUT
SOGOUT SYNCDET
DATACK CLK-2FH
SDA-F3
SCL-F3
B19d
B14g,B19d
B19b
B19b,d

8204 000 8346.5

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070704

2L00 B3 IL11 B5
2L01 A4 IL12 C5
2L02 A4
2L03 A4
2L04 A4
2L05 A4
2L06 A5
2L07 A5
2L08 C4
2L09 C4
2L10 A5
2L11 F6
2L12 B4
2L13 B4
2L14 B4
2L15 B4
2L16 B4
2L17 B5
2L18 E5
2L19 A1
2L20 C4
2L21 C4
2L25 H10
2L26 H2
2L27 H2
2L28 D3
2L29 E3
2L30 F3
2L31 H2
2L32 H2
2L33 A2
2L34 A3
2L48 D2
2L49 E2
2L50 F2
2L51 C3
2L52 C6
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2L60 G4
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3L03 H5
3L04 C2
3L05 E2
3L06 H5
3L08 H3
3L11 F2
3L12 G3
3L19 D4
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3L28 G6
3L29 C4
3L30 E4
3L31 F4
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3L33 G5
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5L06 F2
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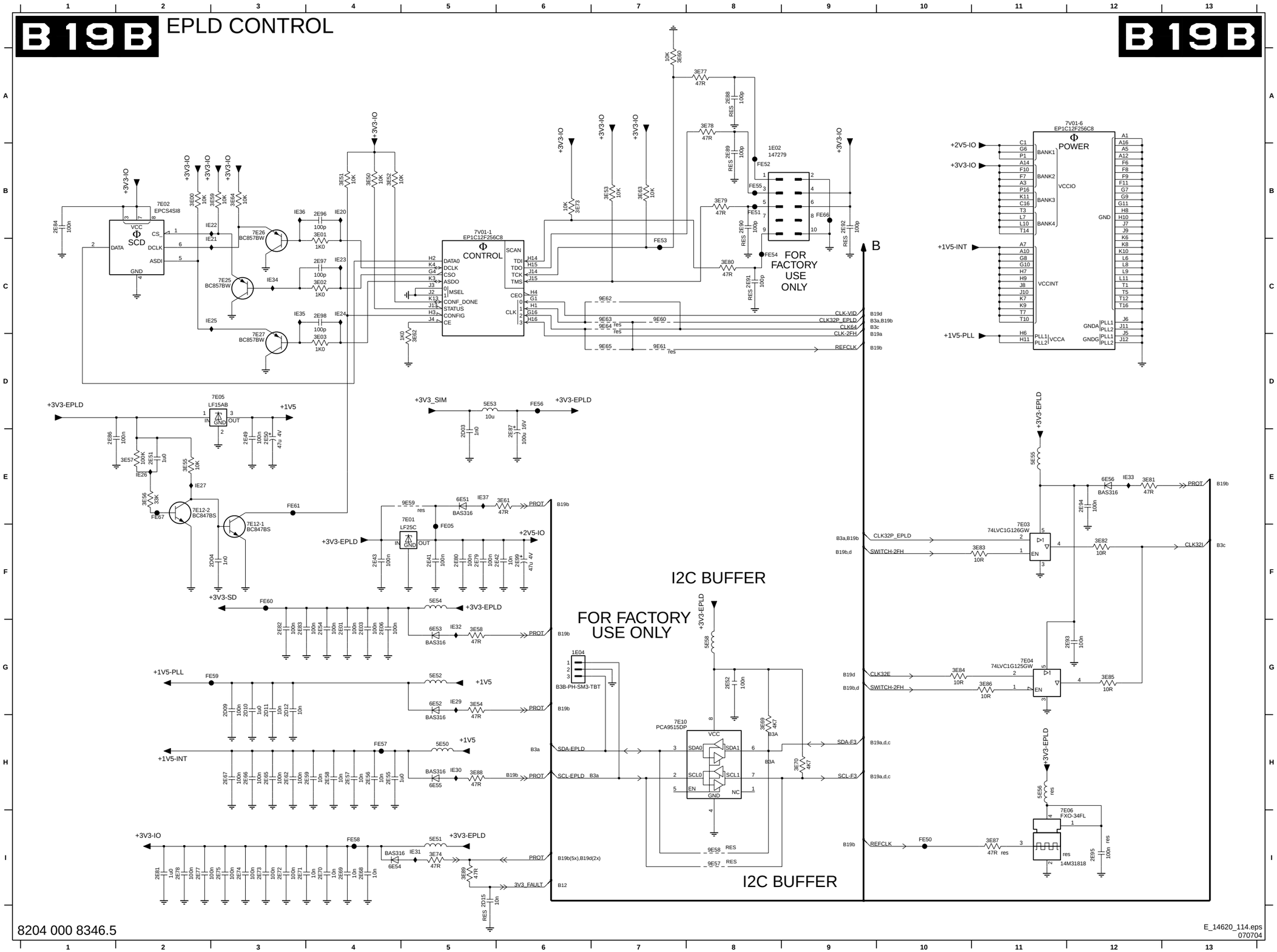
7L01 C6
7L02 A2
AL02 G10
AL06 C1
AL07 E1
AL08 F1
FE02 A3
FL03 G10
FL04 G10
FL05 H10
FL09 C3
FL10 E3
FL11 G4
FL12 F3
FL13 G4
FL15 G10
FL17 A1
IL06 F6
IL07 H3
IL08 H3
IL09 H6
IL10 A5

SSB: EPLD Control



1E02 B8	3E86 G11
1E04 G6	3E87 I11
2D03 E5	3E88 H5
2D04 F3	3E89 I5
2D09 G3	5E50 H5
2D10 G3	5E51 I5
2D11 G3	5E52 G5
2D12 G3	5E53 D5
2D15 I5	5E54 F5
2E01 G4	5E55 E11
2E03 G4	5E56 H11
2E06 G4	5E58 G8
2E41 F5	6E51 E5
2E42 F6	6E52 G5
2E43 F4	6E53 G5
2E49 E3	6E54 I4
2E50 E3	6E55 H5
2E51 E2	6E56 E12
2E52 G8	7E01 E5
2E54 G4	7E02 B2
2E55 H4	7E03 F11
2E56 H4	7E04 G11
2E57 H4	7E05 D3
2E58 H4	7E06 I11
2E59 H4	7E10 H8
2E62 H3	7E12-1 F3
2E65 H3	7E12-2 E2
2E66 H3	7E25 C3
2E67 H3	7E26 B3
2E68 I4	7E27 C3
2E69 I4	7V01-1 B5
2E70 I4	7V01-6 A12
2E71 I3	9E57 I8
2E72 I3	9E58 I8
2E73 I3	9E59 E5
2E74 I3	9E60 C7
2E75 I3	9E61 D7
2E77 I2	9E62 C7
2E78 I2	9E63 C7
2E79 F5	9E64 C7
2E80 F5	9E65 D7
2E81 I2	FE05 F5
2E82 G3	FE50 I10
2E83 G3	FE51 B8
2E84 B1	FE52 B8
2E86 E1	FE53 C7
2E87 E6	FE54 C8
2E88 A8	FE55 B8
2E89 B8	FE56 D6
2E90 B8	FE57 H4
2E91 C8	FE58 I4
2E92 B9	FE59 G3
2E93 G12	FE60 F3
2E94 E12	FE61 E3
2E95 I12	FE66 B9
2E96 B4	FE67 E2
2E97 C4	IE20 B4
2E98 C4	IE21 C3
2E99 F6	IE22 B3
3E00 B2	IE23 C4
3E01 B4	IE24 C4
3E02 C4	IE25 C3
3E03 D4	IE26 E2
3E50 B4	IE27 E2
3E51 B4	IE29 G5
3E52 B4	IE30 H5
3E53 B7	IE31 I5
3E54 G5	IE32 G5
3E55 E2	IE33 E12
3E56 E2	IE34 C3
3E57 E2	IE35 C3
3E58 G5	IE36 B3
3E59 B3	IE37 E5
3E60 A7	
3E61 E6	
3E62 D5	
3E63 B7	
3E64 B3	
3E69 H8	
3E70 H9	
3E73 B6	
3E74 I5	
3E77 A8	
3E78 A8	
3E79 B8	
3E80 C8	
3E81 E12	
3E82 F12	
3E83 F11	
3E84 G10	
3E85 G12	

SSB: EPLD OSD

B 19 C EPLD OSD

B 19 C

A/D CONVERTER

7E24 AD9283BRS-80

7E23 AD9883AKST

8-BIT ADC

CLAMP

A/D

SYNC PROCESSING AND CLOCK GENERATION

SERIAL REGISTER AND PWR MANAGMENT

REF

7E22 BC847BW

2E02 D1
2E04 D2
2E05 B4
2E07 A5
2E08 C5
2E09 A6
2E10 B5
2E11 B6
2E12 B6
2E13 B6
2E14 B6
2E15 B6
2E16 B5
2E17 B6
2E18 B6
2E19 B6
2E20 C6
2E21 D7
2E22 D7
2E23 E7
2E24 E7
2E25 F7
2E26 G7
2E27 G7
2E28 H4
2E29 H4
2E30 H4
2E32 F1
2E34 H4
2E35 I12
2E39 B1
2E48 H6
2E53 G6
3E04 D1
3E05 C1
3E06 D6
3E07 E6
3E08 F6
3E09 E1
3E10 E2
3E11 G6
3E12 G6
3E13 E1
3E14 G7
3E15 F1
3E16 H5
3E18 H7
3E19 I7
3E37 B1
3E90 D1
3E91 H12
5E00 A5
5E01 B5
5E02 B5
5E03 C5
7E22 E1
7E23 C8
7E24 B2
9E74 E2
AL10 H12
FE01 G6
FE03 G6
FE04 H12
FL01 B4
IE00 H4
IE01 H5
IE03 E1
IE04 E2
IE05 F2
IL01 A7
IL02 B7
IL03 C7
IL05 G8

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SSB: EPLD I/O

B19D EPLD I/O

B19D

7V01-2 EP1C12F256C8 — BANK 1

INIT_DONE, CLKUSR, IO_1 … IO_20

B-OSD-3, BL-OSD-7, B-OSD-2, BL-OSD-5, R-OSD-4, G-OSD-6, B-OSD-4, B-OSD-7, G-OSD-5, G-OSD-2, B-OSD-5, G-OSD-3, B-OSD-6, G-OSD-7, R-OSD-5, R-OSD-2, G-OSD-4, R-OSD-6, R-OSD-3, R-OSD-7 ← B19c

IO_21 … IO_40 → CLK-OUT, B1, HS-OUT, VS-OUT, LVDS-PWR-DOWN, PARITY, B5, B6, B7, B0, G5, B3, G7, G6, DE-OUT, B4, R5, R2, G2, G4 → B19d

7V01-5 EP1C12F256C8 — BANK 4

B19d: R6, R0, P1, G1, R2, R3, G0, B2 → B3b,c

B3b,c B19d B3b,c B3b,c B20,B21 B3b,c: UVG(0), UVG(1), UVG(2), LAMP, UVG(3), LCD-PWR-ON (3V36 100R), UVG(6), UVG(5), UVG(4), YG(2), YG(3), UVG(7), YG(0), YG(1) → B3b,c

B3b,c: R6, R0, P1, G1, R2, R3, G0, B2, UVG(0), M5, M6, N5, N6, M2, N2, M7, T6, R7, P7, N7, R8, T8, M8, N8, P8

IO_41 … IO_64 → M10 HREF_EXT, R9 YG(7), T9 VD-OTC, P9 YG(6), N9 YG(5), R10 HD3-OTC, T11 VREF, N10 VA, P10 RSTR_EPLD, R11 HREF, P11 SN-CL_EPLD, N11 SN-DA_EPLD, N12 FALREF, M9 YG(4), M11 VD_E, M12 REFIN, P12 REF, R12 HD_E (IV05), T13 U_VOUT(9), R13 U_VOUT(8), R14 U_VOUT(5), P13 U_VOUT(7), T15 U_VOUT(4), R15 U_VOUT(3) → B3a,c,d B3b,c B3a B3b,c B3b,c B3a,B19c B3a B3a B3c B3c B3c B3c B3c B3a B3a,c B3c B3c B3c B3c B3c

7V01-3 EP1C12F256C8 — BANK 2

B19a: UV-AD-2, UV-AD-4, UV-AD-3, Y-AD-7, UV-AD-5, UV-AD-8, UV-AD-7, UV-AD-0, U-AD-6, Y-AD-4, SD-DQM, Y-AD-3, SD-DQ1, SD-DQ2, SD-DQ16, SD-DQ15, SD-DQ13, SD-DQ14, SD-DQ3, SD-DQ12, SD-DQ11, SD-DQ8, SD-DQ5, SD-DQ4, SD-DQ7 → B19d, B19a

B19d: SD-DQ8, SD-WE, SD-DQ10, SD-DQ9, SD-RAS, SD-CAS, SD-A9, SD-A8, SD-A11, SD-A7, SD-A10, SD-A0, SD-A3, SD-A1, CLK-OSD, SD-A2, SD-A6, SD-A5, SD-A4, BL-OSD-6, BL-OSD-2, BL-OSD-3, BL-OSD-4 → B19c(2x), B19d, B19c(4x)

9E75, IV01, 9E76, RSTEBIX

+3V3-IO

AL-CL-IN: 2V12 47P, 3V50 10K, 3V51 10K, 3V52 47K, BC847BW 7V04-1 → AL-CL

AL-DA-IN: 2V11 47P, 3V54 10K, 3V55 10K, 3V53 47K, BC847BW 7V04-2 → AL-DA

R4 3V56 100R → ODC

3V57 10K, BC847BW 7V06 → LAMP-ON

7V01-4 EP1C12F256C8 — BANK 3

B3c: U_VOUT(6), U_VOUT(2), U_VOUT(0), U_VOUT(1), U_VOUT(1), U_VOUT(2), SDA-F3 (3V38 100R), SCL-F3 (3V37 100R), YOUT(7), YOUT(0), YOUT(3), YOUT(4), YOUT(6), YOUT(5), YOUT(6), YOUT(9), O_VAL, CLK32E, FRAME (3V40 100R), SWITCH-2FH, SD-CLK, SYNCDET → B19b, B21,B19b(2x), B19d, B19a

IO_89 … IO_110 → G14 V-2FH-AD-OUT, G13 H-2FH-AD-OUT, G15 CLK-VID, F16 COAST, F14 AL-CL-IN, F13 U-AD-0, F15 AL-DA-IN, E16 U-AD-2, E15 U-AD-3, D16 U-AD-7, D15 Y-AD-0, E14 U-AD-4, F12 U-AD-1, E13 U-AD-5, D14 Y-AD-1, H13 H-2FH-DIV-2, G12 HS-DET, B16 UV-AD-1, C15 Y-AD-5, C14 Y-AD-6, D13 Y-AD-2 → B14g,B19a B19a B19d, B19a, B19a, B14g B14f,g, B19a

6V05 TLMG3100, 3V18 390R → +3V3-IO

+3V3-SD

7V03 MSM56V16160F-7TS — DRAM 512K X 16 X 2

VDD, VDDQ, NC, A 0 512K-1, D, U, L, VSS, VSSQ, DQM

SD-A0 … SD-A11 → B19d

SD-CLK, +3V3-SD, 3V39 4K7, SD-RAS, SD-CAS, SD-WE → CLK, CKE, CS, RAS, CAS, WE

3V21-4 … 3V24-4 (68R) → SD-DQ1, SD-DQ2, SD-DQ3, SD-DQ4, SD-DQ5, SD-DQ6, SD-DQ7, SD-DQ8, SD-DQ9, SD-DQ10, SD-DQ11, SD-DQ12, SD-DQ13, SD-DQ14, SD-DQ15, SD-DQ16, SD-DQM

B19b PROT → B19d PROT

+3V3-EPLD: 5V06, 5V07, 5V08

3V14 47R, IV04, BAS316 6V01

BAS316 6V02 IV03 3V15 47R

BAS316 6V03 IV02 3V16 47R

100n: 2V07, 2V10, 2V09, 2V08, 2V06

VCC, PLLVCC, LVDSVCC, R-FB 3V08 1K0

7V02 DS90C385MTD — TTL PARALLEL-TO-LVDS

B19d: R0, R1, R2, R3, R4, R7, R5, G0, G1, G2, G6, G7, G3, G4, G5, B0, B6, B7, B1, B2, B3, B4, B5, PARITY, R1, R6, G3, R6, AV01, 3V07 4K7

B19c,d: BL-OSD-2 9E77, BL-OSD-1 9E70, BL-OSD-0 9E66, G-OSD-1 9E67, G-OSD-0 9E68, R-OSD-1 9E69, B-OSD-0 9E71, R-OSD-1 9E72, R-OSD-0 9E73 → B19c

TXIN0 … TXIN27, TXCLKIN, PWRDWN, CLK-OUT, VS-OUT, DE-OUT, HS-OUT, PARITY

PLL

TXOUT0- 48, TXOUT0+ 47 → TXLCD0- TXLCD0+ B20

TXOUT1- 46, TXOUT1+ 45 → TXLCD1- TXLCD1+ B20

TXOUT2- 42, TXOUT2+ 41 → TXLCD2- TXLCD2+ B20

TXOUT3- 38, TXOUT3+ 37 → TXLCD3- TXLCD3+ B20

TXCLKOUT- 40, TXCLKOUT+ 39 → TXLCLKCD- TXLCLKCD+ B20

2V16 10p, 2V17 10p; 2V18 10p, 2V19 10p; 2V20 10p, 2V21 10p; 2V22 10p, 2V23 10p, 2V24 10p, 2V25 10p, 2V26 10p

GND, PLL GND, LSVD GND

LVDS TRANSMITTER

3V25 120R, 3V26 120R, 3V27 120R, 3V28 120R, 3V29 120R, 3V30 120R, 3V31 120R, 3V32 120R, 3V33 120R, 3V34 120R

3V01 180R, 3V02 180R, 3V17 180R, 3V19 180R, 3V20 180R

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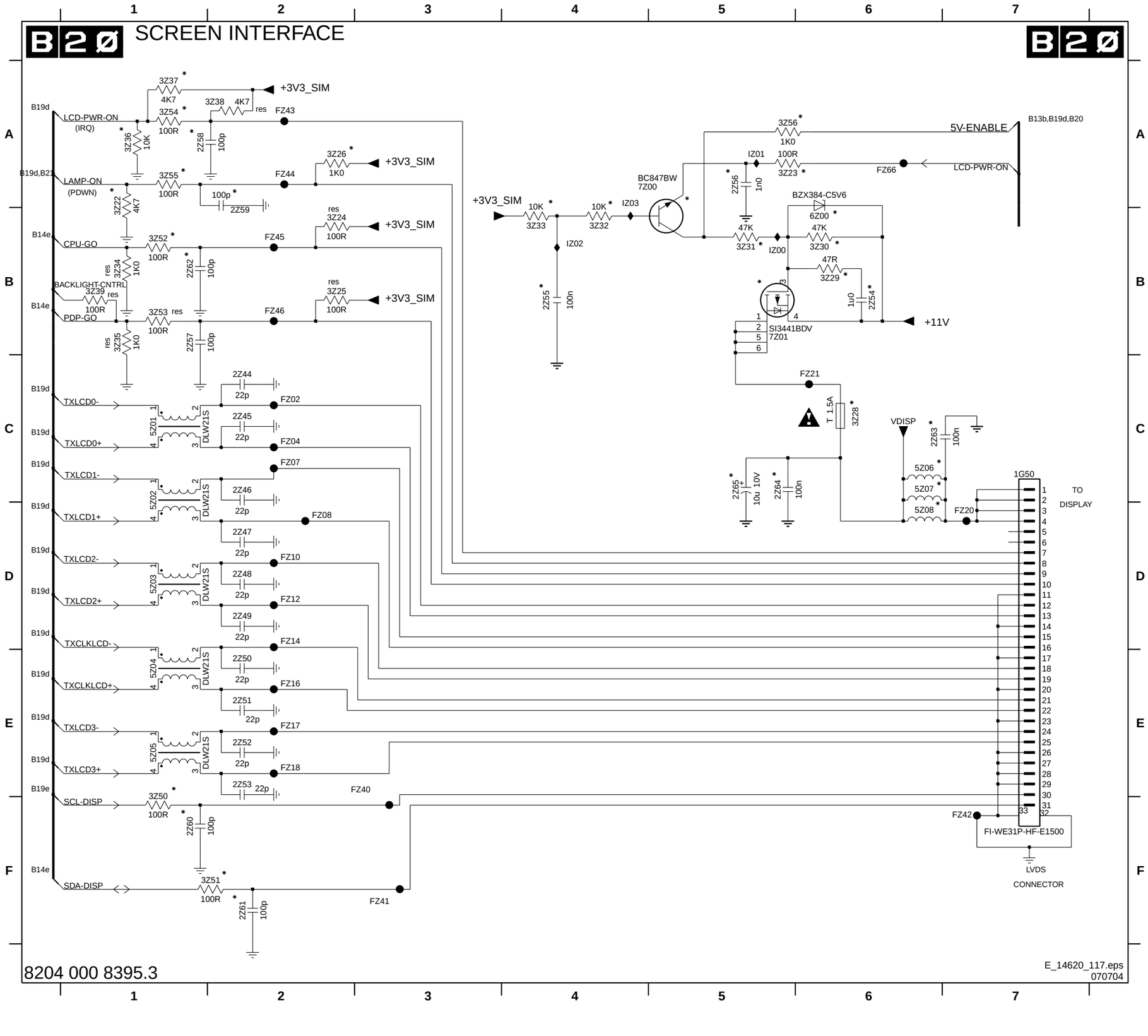
2V06 B13
2V07 A11
2V08 A12
2V09 A12
2V10 A12
2V11 E6
2V12 D6
2V16 C13
2V17 C14
2V18 D13
2V19 D14
2V20 E13
2V21 E14
2V22 G14
2V23 G14
2V24 G14
2V25 G14
3V01 H12
3V02 H12
3V07 G10
3V08 B13
3V14 A11
3V15 A14
3V16 A14
3V17 H12
3V18 I2
3V19 I12
3V20 I12
3V21-1 H8
3V21-2 H7
3V21-3 H8
3V21-4 G7
3V22-1 H8
3V22-2 H7
3V22-3 H8
3V22-4 H7
3V23-1 H7
3V23-2 H8
3V23-3 H7
3V23-4 H8
3V24-1 H7
3V24-2 H8
3V24-3 H7
3V24-4 I8
3V25 G12
3V26 H12
3V27 H12
3V28 H12
3V29 H12
3V30 H12
3V31 I12
3V32 I12
3V33 I12
3V34 I12
3V35 F6
3V36 B6
3V37 G2
3V38 G1
3V39 H5
3V40 H1
3V50 D5
3V51 D6
3V52 D6
3V53 E6
3V54 E6
3V55 E5
3V56 F6
3V57 F6
5V06 A12
5V07 A12
5V08 A13
6V01 A11
6V02 A13
6V03 A13
6V05 I2
7V01-2 A2
7V01-3 D2
7V01-4 G3
7V01-5 A7
7V02 B11
7V03 G6
7V04-1 D6
7V04-2 F6
7V06 F6
9E66 D8
9E67 E8
9E68 E8
9E69 E8
9E70 D8
9E71 E8
9E72 F8
9E73 F8
9E75 E3
9E76 F3
9E77 D8
AV01 F9
IV01 E3
IV02 A14
IV03 A14
IV04 A11
IV05 B7

SSB: Screen Interface

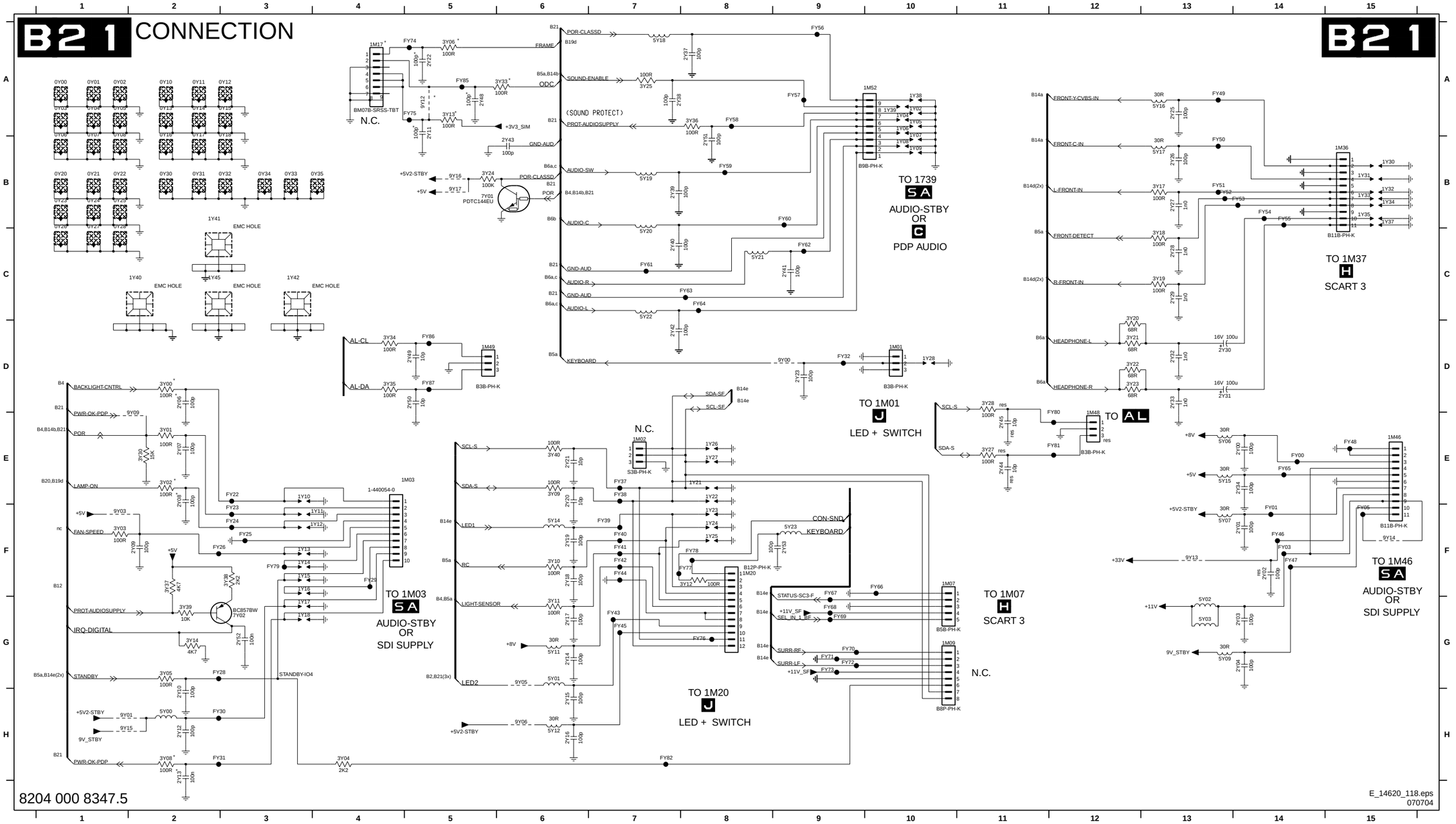
B20 SCREEN INTERFACE B20



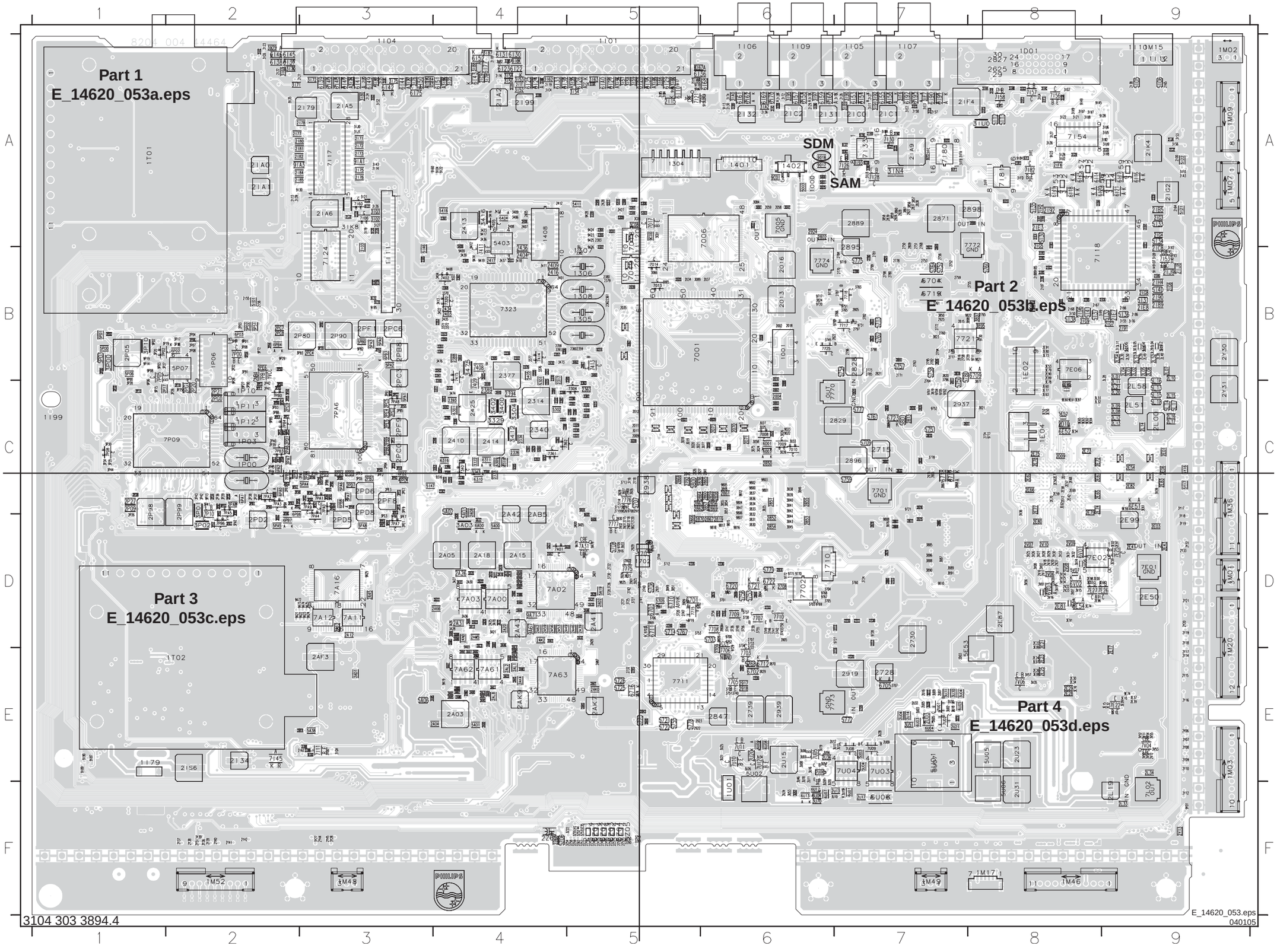
1G50 C7	5Z05 E1	
2Z44 C2	5Z06 C6	
2Z45 C2	5Z07 C6	
2Z46 C2	5Z08 D6	
2Z47 D2	6Z00 B6	
2Z48 D2	7Z00 A4	
2Z49 D2	7Z01 B5	
2Z50 E2	FZ02 C2	
2Z51 E2	FZ04 C2	
2Z52 E2	FZ07 C2	
2Z53 E2	FZ08 D2	
2Z54 B6	FZ10 D2	
2Z55 B4	FZ12 D2	
2Z56 A5	FZ14 D2	
2Z57 B1	FZ16 E2	
2Z58 A1	FZ17 E2	
2Z59 A2	FZ18 E2	
2Z60 F1	FZ20 D7	
2Z61 F2	FZ21 C6	
2Z62 B1	FZ40 E3	
2Z63 C6	FZ41 F3	
2Z64 C5	FZ42 F7	
2Z65 C5	FZ43 A2	
3Z22 A1	FZ44 A2	
3Z23 A5	FZ45 B2	
3Z24 B2	FZ46 B2	
3Z25 B2	FZ66 A6	
3Z26 A2	IZ00 B5	
3Z28 C6	IZ01 A5	
3Z29 B6	IZ02 B4	
3Z30 B6	IZ03 A4	
3Z31 B5		
3Z32 B4		
3Z33 B4		
3Z34 B1		
3Z35 B1		
3Z36 A1		
3Z37 A1		
3Z38 A2		
3Z39 B1		
3Z50 F1		
3Z51 F2		
3Z52 B1		
3Z53 B1		
3Z54 A1		
3Z55 A1		
3Z56 A5		
5Z01 C1		
5Z02 C1		
5Z03 D1		
5Z04 E1		

SSB: Connection

0Y00 A1	0Y10 A2	0Y20 B1	0Y30 B2	1M07 F10	1Y02 A10	1Y12 F4	1Y23 F8	1Y33 B15	1Y45 C2	2Y09 F2	2Y18 F6	2Y28 C13	2Y39 B7	2Y50 D5	3Y05 G2	3Y17 B13	3Y27 E11	3Y39 G2	5Y11 G6	5Y21 C8	9Y06 H6	FY01 F14	FY29 F4	FY42 F7	FY51 B13	FY60 B9	FY69 G9	FY78 F8
0Y01 A1	0Y11 A2	0Y21 B1	0Y31 B2	1M09 G10	1Y04 A10	1Y13 F3	1Y24 F8	1Y34 B15	2Y00 E14	2Y10 H2	2Y19 F6	2Y29 C13	2Y40 C7	2Y51 B8	3Y06 A5	3Y18 C13	3Y28 D11	3Y40 E6	5Y12 H6	5Y22 C7	9Y09 E2	FY03 F14	FY30 H2	FY43 G7	FY52 B13	FY61 C7	FY70 G9	FY79 F3
0Y02 A1	0Y12 A3	0Y22 B1	0Y32 B3	1M17 A4	1Y05 A10	1Y14 F3	1Y25 F8	1Y35 B15	2Y01 F14	2Y11 A5	2Y20 E6	2Y30 D13	2Y41 C9	2Y52 G3	3Y08 H2	3Y19 C13	3Y30 E2	5Y00 H2	5Y14 F6	5Y23 F9	9Y12 A5	FY05 F15	FY31 H2	FY44 F7	FY53 B14	FY62 C9	FY71 G9	FY80 E12
0Y03 A1	0Y13 A2	0Y23 B1	0Y33 B3	1M20 F8	1Y06 A10	1Y15 F3	1Y26 E8	1Y37 B15	2Y02 F14	2Y12 H2	2Y21 E6	2Y31 D13	2Y42 D7	2Y53 F9	3Y09 E6	3Y20 C12	3Y33 A6	5Y01 G6	5Y15 E13	7Y01 B5	9Y13 F13	FY22 E3	FY32 D9	FY45 G7	FY54 B14	FY63 C8	FY72 G9	FY81 E12
0Y04 A1	0Y14 A2	0Y24 B1	0Y34 B3	1M36 B15	1Y07 A10	1Y16 F3	1Y27 E8	1Y38 A10	2Y03 G14	2Y13 H2	2Y22 A5	2Y32 D13	2Y43 B6	3Y00 D2	3Y10 F6	3Y21 D12	3Y34 D4	5Y02 G13	5Y16 A13	7Y02 G3	9Y14 F15	FY23 F3	FY37 E7	FY46 F14	FY55 B14	FY64 C8	FY73 G9	FY82 H7
0Y05 A1	0Y15 A3	0Y25 B1	0Y35 B4	1M46 E15	1Y08 B10	1Y17 G3	1Y28 D10	1Y39 A10	2Y04 G14	2Y14 G6	2Y23 D9	2Y33 D13	2Y44 E11	3Y01 E2	3Y11 G6	3Y22 D12	3Y35 D4	5Y03 G13	5Y17 B13	9Y00 D9	9Y15 H1	FY24 F3	FY38 E7	FY47 F14	FY56 A9	FY65 E14	FY74 A5	FY85 A5
0Y06 A1	0Y16 A2	0Y26 B1	1M01 D10	1M48 E12	1Y09 B10	1Y18 G3	1Y30 B15	1Y40 C2	2Y06 D2	2Y15 H6	2Y25 A13	2Y34 E14	2Y45 E11	3Y02 E2	3Y12 F8	3Y23 D12	3Y36 A8	5Y06 E13	5Y18 A7	9Y01 H1	9Y16 B5	FY25 F3	FY39 F7	FY48 E15	FY57 A9	FY66 F10	FY75 A5	FY86 D5
0Y07 A1	0Y17 A2	0Y27 B1	1M02 E7	1M49 D5	1Y10 E3	1Y21 E8	1Y31 B15	1Y41 B2	2Y07 E2	2Y16 H6	2Y26 B13	2Y37 A8	2Y48 A5	3Y03 F1	3Y13 A5	3Y24 B5	3Y37 F2	5Y07 F13	5Y19 B7	9Y03 F1	9Y17 B5	FY26 F2	FY40 F7	FY49 A13	FY58 A8	FY67 F9	FY76 G8	FY87 D5
0Y08 A1	0Y18 A3	0Y28 B1	1M03 E5	1M52 A10	1Y11 F4	1Y22 E8	1Y32 B15	1Y42 C3	2Y08 E2	2Y17 G6	2Y27 B13	2Y38 A7	2Y49 D5	3Y04 H4	3Y14 G2	3Y25 A7	3Y38 F3	5Y09 G13	5Y20 C7	9Y05 G6	FY00 E14	FY28 G2	FY41 F7	FY50 B13	FY59 B8	FY68 G9	FY77 F8	



Layout SSB (Top Side Overview)



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Layout SSB Mapping (Top Side)

1000	A6	2359	B5	2787	B7	2936	C7	2E34	E8	2IC0	A7	2P99	C2	2Z44	F5	3449	C4	3870	E6	3I00	E3	3IQ8	B9	3PC8	C3	3Y18	D9	5P03	B1	6I62	A6	7I53	B9	9809	D6	9PB3	C2
1001	B6	2360	B5	2788	B7	2937	C7	2E39	E9	2IC1	A7	2PA4	C3	2Z45	F5	3460	B5	3874	E5	3I19	A3	3IQ9	B9	3PC9	C3	3Y19	D9	5P04	B2	6I68	A6	7I54	A8	9810	D7	9PB4	C2
1304	A5	2361	B5	2790	B7	2938	C5	2E41	D9	2IC2	A6	2PA5	C3	2Z46	F5	3461	B5	3875	D6	3I20	A3	3IR2	B8	3PD0	C3	3Y27	F3	5P06	B1	6I69	A6	7I56	A8	9812	C6	9PB5	C2
1305	B5	2362	B5	2792	C5	2939	E6	2E42	C8	2IC8	B9	2PA6	C2	2Z47	F5	3462	B5	3876	D7	3I21	A3	3IR3	B8	3PD1	C2	3Y28	F3	5P07	B2	6I70	A6	7I57	A8	9815	D6	9PB8	D3
1306	B4	2363	C5	2794	B7	2A00	E4	2E43	D9	2IC9	A4	2PA7	C2	2Z48	F5	3472	C4	3877	C8	3I22	A3	3IR4	B8	3PD2	C3	3Y36	F2	5P51	B2	6I75	A3	7I58	A8	9816	D6	9Y01	F9
1307	B5	2364	A5	2795	B7	2A02	D5	2E50	D9	2IE1	A9	2PA8	C2	2Z49	F5	3473	B4	3885	D7	3I26	A3	3IR5	B8	3PD3	C2	3Y39	F2	5PA0	B3	6I77	A4	7I60	A3	9817	D6		
1308	B4	2365	B4	2796	B7	2A03	E4	2E54	C9	2IE2	B8	2PB3	C3	2Z50	F5	3474	C4	3886	D7	3I27	A3	3IR6	B8	3PD4	C2	3Z22	F5	5PA1	C3	6I90	A7	7I80	A7	9818	D6		
1401	A6	2367	B4	2797	B7	2A04	E4	2E56	C8	2IE3	A8	2PB4	C3	2Z51	F5	3475	B4	3887	D7	3I35	A4	3IR7	A8	3PD5	C2	3Z34	F5	5PA2	B3	6I91	A7	7I81	A8	9821	B8		
1402	A6	2368	B4	2798	B7	2A05	D4	2E57	C8	2IE4	A8	2PB5	C3	2Z52	F5	3476	B4	3888	D7	3I39	A2	3IR8	A8	3PD6	C2	3Z35	F5	5PA3	B3	6I92	A7	7I82	A8	9822	B8		
1408	A4	2373	B4	2799	B7	2A06	D4	2E58	C8	2IE5	B9	2PB6	C3	2Z53	F5	3701	D6	3889	D7	3I43	A3	3IR9	B8	3PD8	C2	3Z50	F5	5PA4	C3	6I93	A7	7L02	F9	9825	D5		
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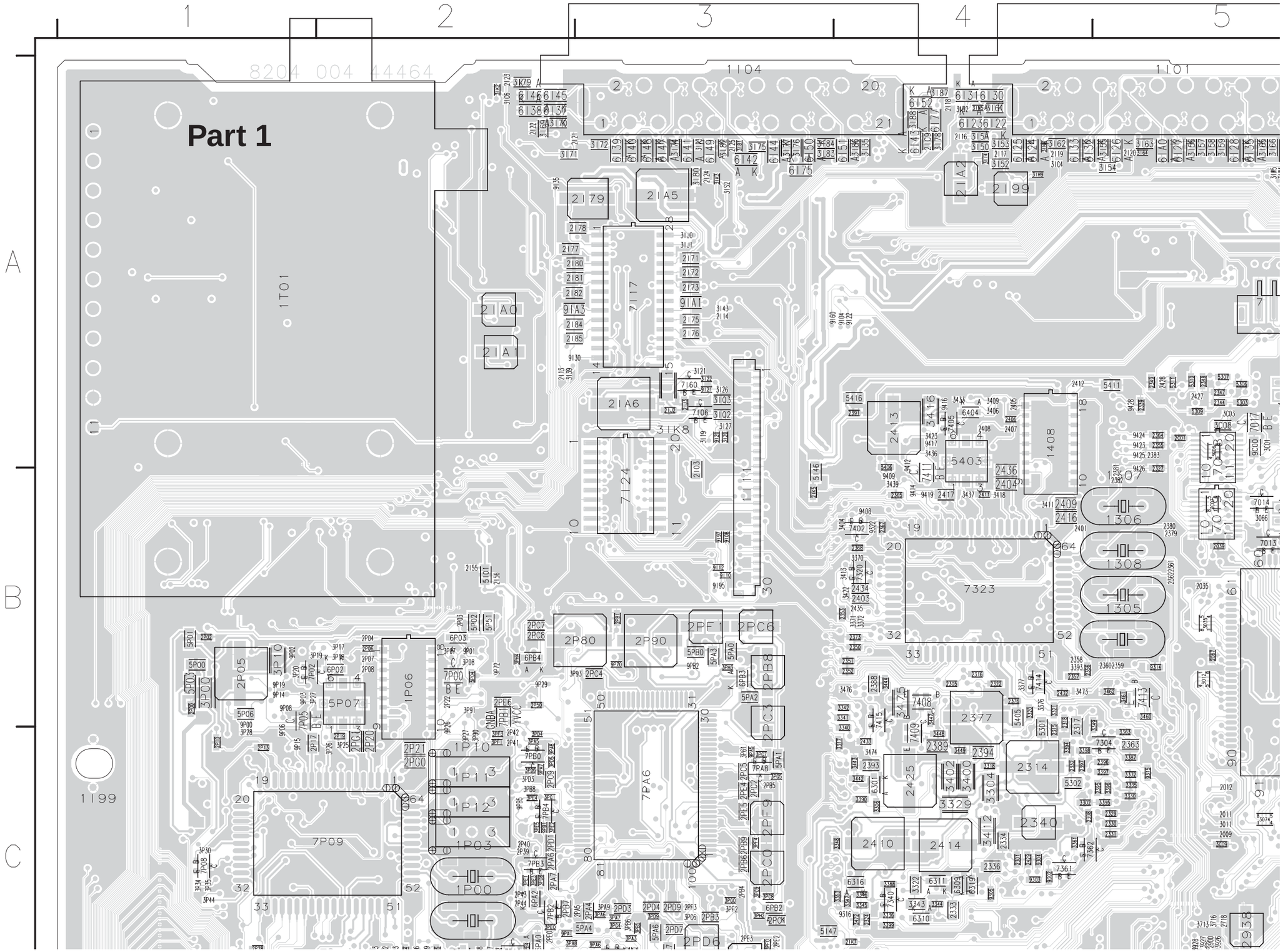
2067	B5	2738	D7	2877	D7	2AL3	E4	2I71	A3	2L58	B9	2V18	D8	3370	B4	3830	D6	3C03	A5	3IFA	A7	3P34	C1	3V02	D8	5E51	D8	6I25	A4	7770	C6	9708	C5	9IA1	A3		
2070	C6	2739	E6	2878	D7	2AL4	D4	2I72	A3	2P00	B1	2V19	D8	3371	B4	3831	D6	3C06	A5	3IFB	A7	3P35	C1	3V07	D8	5E52	C8	6I26	A5	7772	B8	9709	D5	9IA3	A2		
2071	C6	2740	D5	2879	D7	2AL8	E4	2I73	A3	2P02	B1	2V20	D8	3372	B4	3832	D6	3C07	B5	3IFC	A7	3P41	C2	3V08	D8	5E53	E7	6I27	A5	7773	E6	9711	B8	9IA6	A5		
2073	C6	2741	D5	2880	D7	2AL9	E4	2I75	A3	2P03	B2	2V21	D8	3376	B4	3833	C6	3C08	A5	3IFD	A8	3P42	C2	3V14	D8	5E56	C8	6I28	A5	7774	B6	9713	C8	9IA7	A5		
2075	A6	2742	D5	2881	D5	2ALA	E4	2I76	A3	2P04	B2	2V22	D8	3377	B4	3834	C6	3C09	C5	3IFE	A8	3P43	C2	3V15	D8	5I01	B2	6I29	A5	7775	D5	9717	B6	9ID0	E3		
2301	C4	2743	D6	2886	D7	2AM0	D4	2I77	A2	2P05	B1	2V23	D8	3387	C5	3835	C6	3E00	D8	3IFF	A8	3P44	C1	3V16	D8	5I05	A9	6I30	A4	7776	C5	9718	B6	9IF0	A7		
2305	B4	2744	D6	2887	D7	2AM1	D4	2I78	A3	2P06	B2	2V24	D8	3388	C4	3836	C6	3E01	D8	3IFL	A8	3P61	C3	3V17	D8	5I06	A9	6I31	A4	7777	D5	9719	B7	9IF1	A7		
2314	C4	2745	E5	2888	D7	2AM2	E4	2I79	A3	2P07	B2	2V25	D8	3390	C4	3837	C6	3E02	D9	3IG0	A8	3P90	C2	3V19	D8	5I12	A8	6I32	A4	7A00	D4	9720	B6	9IF2	A7		
2315	C4	2747	D5	2889	A7	2AM3	E4	2I80	A2	2P08	B2	2Y06	E9	3393	B4	3838	C6	3E03	D8	3IG1	A8	3P91	B2	3V20	D8	5I13	A8	6I33	A4	7A01	D4	9721	C7	9IF3	A8		
2316	B4	2749	D5	2890	D5	2AM5	D4	2I81	A2	2P09	C1	2Y07	E9	3394	C4	3839	C6	3E06	D8	3IG3	A8	3P93	B3	3V21	C9	5I21	A9	6I35	A5	7A02	D4	9722	D5	9IF4	A8		
2317	B4	2750	A7	2891	E6	2AM6	E4	2I82	A2	2P10	C1	2Y08	E9	3395	C5	3840	C6	3E07	E8	3IG4	A8	3PA0	C3	3V22	C9	5I22	A9	6I36	A5	7A03	D4	9727	D7	9P00	B1		
2318	B4	2751	A7	2895	A7	2AM7	E4	2I84	A2	2P13	C1	2Y09	E9	3396	C5	3841	C6	3E08	E8	3IG6	A8	3PA1	D2	3V23	C9	5I30	A8	6I37	A2	7A11	D3	9728	D7	9P01	B2		
2322	B4	2752	B7	2

Layout SSB (Top Side Part 1)



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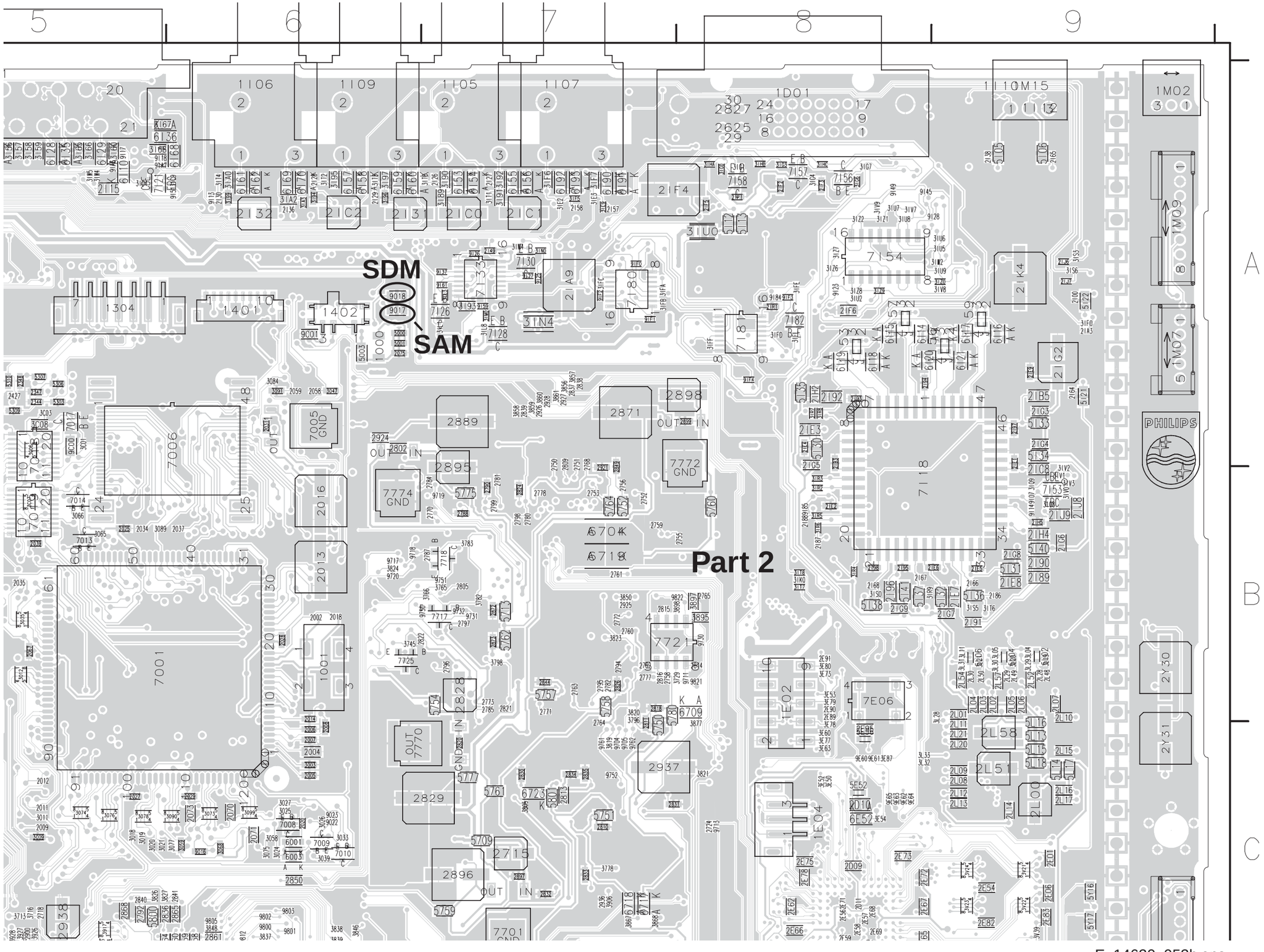
Layout SSB (Top Side Part 2)



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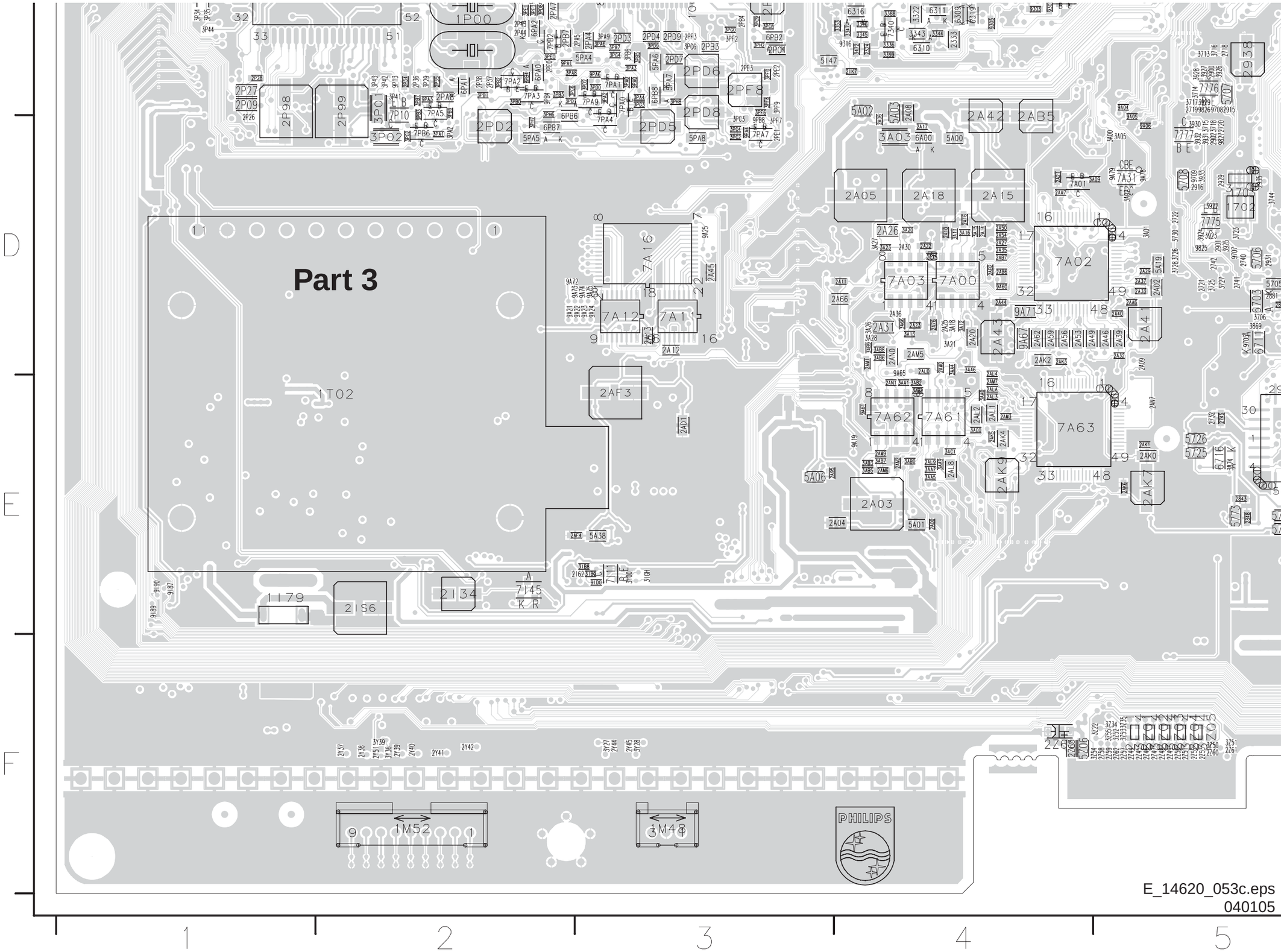
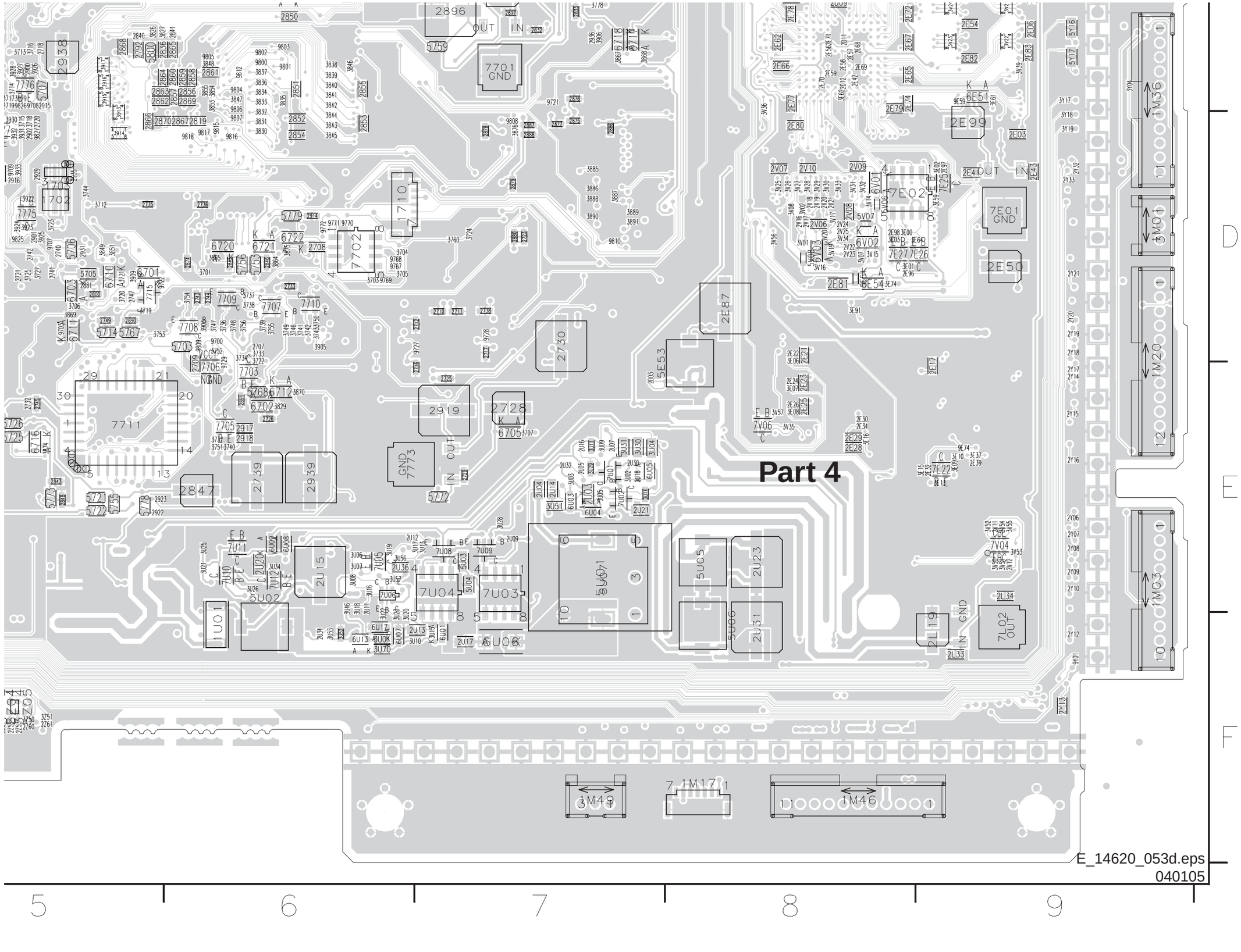
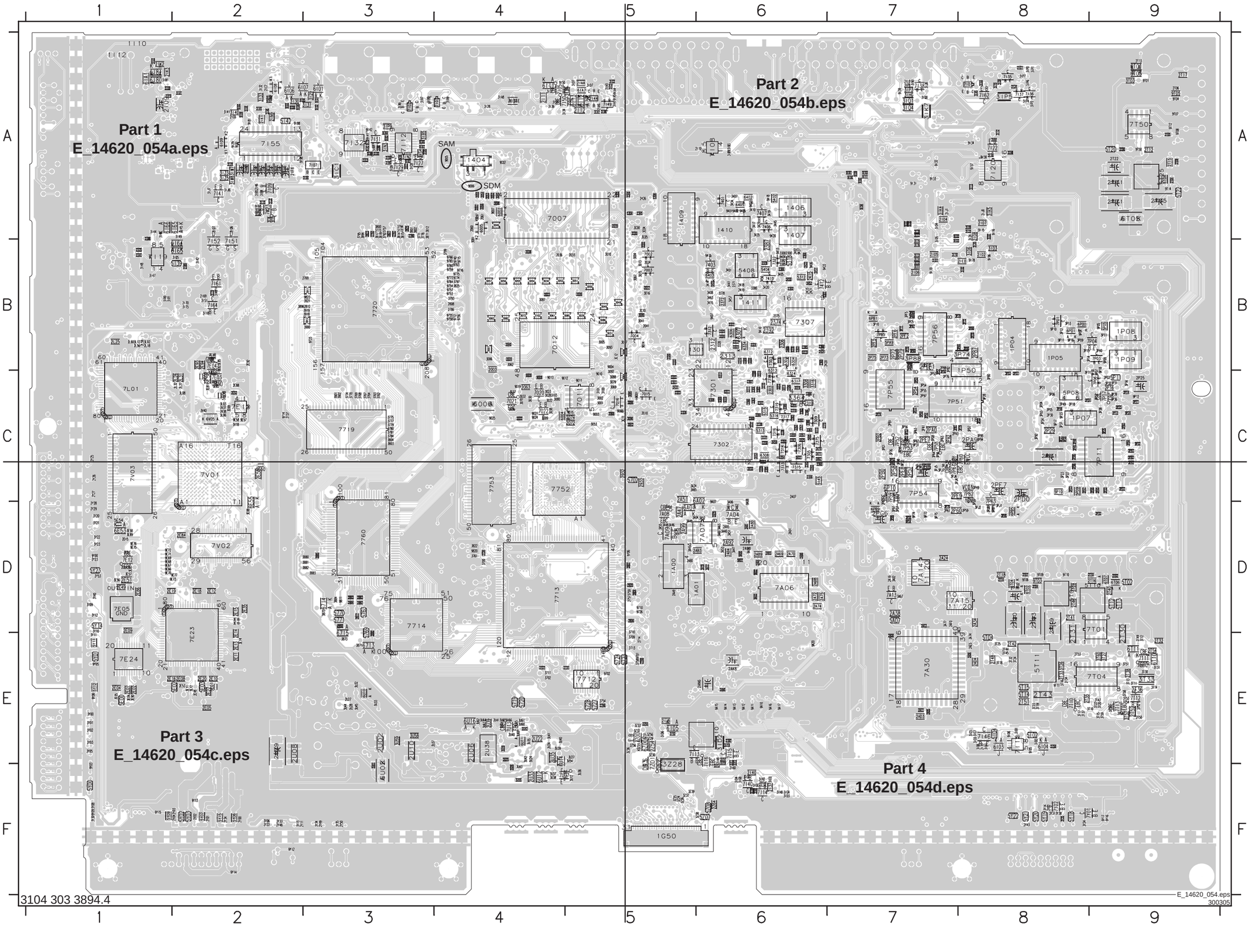
Layout SSB (Top Side Part 3)



Layout SSB (Top Side Part 4)



Layout SSB (Bottom Side Overview)



3104 303 3894.4

Layout SSB Mapping (Bottom Side)

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1404	A4	2817	D3	2I60	F6	2PG2	C9	3032	C4	3445	A6	3E04	E1	3IH2	F6	3P67	B7	3V37	C2	5Y18	F8	7713	D4	9019	C4	9I66	A3
1406	A6	2823	A3	2I69	B2	2PG6	D7	3034	B4	3450	B6	3E05	E1	3IH4	F6	3P68	B7	3V38	C2	5Y19	F8	7714	D3	9021	C4	9I67	A3
1407	A6	2825	A3	2I70	B2	2T01	A9	3036	C4	3451	B6	3E11	E2	3IH7	A3	3P69	B7	3V40	C2	5Y20	F8	7719	C3	9024	C4	9I68	A2
1409	A5	2827	A3	2IA4	A5	2T02	D9	3037	C4	3452	B6	3E12	E2	3IH8	A8	3P70	B7	3Y00	E1	5Y21	F8	7720	B3	9025	C4	9I78	B8
1410	B6	2882	D3	2IB7	E6	2T03	D8	3038	C4	3453	C6	3E14	E2	3IHG	A7	3P71	C8	3Y01	E1	5Y22	F8	7752	C5	9308	C6	9I79	A3
1411	B6	2883	D3	2IB8	A1	2T04	A9	3040	B5	3454	C6	3E18	D2	3II0	A8	3P72	B8	3Y02	E1	5Y23	D1	7753	C4	9309	C6	9I81	A2
1A00	D5	2884	D3	2IB9	B2	2T05	A9	3041	B5	3455	C6	3E19	D2	3II1	A8	3P74	B7	3Y03	E1	5Z07	F6	7760	D3	9310	C6	9I88	A2
1A01	D5	2885	D3	2IC3	A3	2T06	A9	3042	C5	3456	B6	3E51	D1	3II2	A8	3P75	D7	3Y05	E1	5Z08	F6	7A04	D6	9311	C6	9I91	A2
1G50	F5	2892	E3	2IC5	B1	2T07	D8	3045	A4	3457	B6	3E55	D1	3II3	A8	3P76	C7	3Y06	F2	6002	A4	7A06	D6	9312	C6	9I92	A7
1P04	B8	2893	D3	2IC6	A2	2T09	A9	3046	A4	3459	C6	3E56	D1	3II5	A2	3P79	C8	3Y08	F1	6004	C4	7A07	D6	9313	C6	9I93	A7
1P05	C8	2894	D3	2IC7	A2	2T10	D9	3048	B5	3463	B6	3E57	D1	3II6	A2	3P80	C8	3Y09	D1	6005	A4	7A08	D5	9318	B6	9I94	A7
1P07	C8	2920	D5	2IE0	B8	2T11	D8	3049	B5	3465	C6	3E58	D1	3II7	A2	3P81	C7	3Y10	D1	6006	C4	7A09	D5	9319	B6	9I96	B8
1P08	B9	2932	C5	2IF0	A1	2T12	A9	3050	B5	3467	C6	3E69	C2	3II8	B2	3P82	B7	3Y11	E1	6303	B6	7A13	D7	9401	A6	9I98	A2
1P09	C9	2933	C5	2IF8	A2	2T13	A9	3051	B5	3468	B6	3E70	C2	3II9	B2	3P85	B8	3Y12	D1	6304	B6	7A14	D7	9402	A6	9I99	F6
1P50	C8	2A01	D6	2IF9	A2	2T14	D8	3052	B4	3470	C6	3E81	C2	3IJ2	A2	3P86	B7	3Y13	F2	6306	B6	7A15	D8	9403	A6	9IA2	A3
2003	B4	2A07	C6	2IG1	A8	2T15	A9	3053	C5	3471	C6	3E82	B2	3IJ3	A2	3P87	B7	3Y14	F8	6307	B6	7A30	E7	9404	B6	9IA4	A5
2010	C5	2A19	D7	2IH1	B1	2T16	D9	3054	B4	3700	D4	3E83	C2	3IJ4	A2	3P88	B7	3Y20	D1	6308	C6	7E03	B2	9405	A6	9IA5	A5
2017	B5	2A24	D7	2IH3	A5	2T17	A9	3055	B4	3702	E4	3E84	B2	3IJ6	A2	3P92	C8	3Y21	D1	6312	B6	7E04	C2	9406	B6	9IB1	A7
2019	A5	2A34	D8	2IH6	A2	2T18	D8	3056	B4	3709	E5	3E85	B2	3IJ7	A2	3P94	C8	3Y22	D1	6313	B6	7E05	D1	9407	B6	9IB2	A7
2022	C4	2A38	D7	2IH7	A2	2T19	D8	3057	B4	3710	D5	3E86	B2	3IJ8	A7	3P95	C8	3Y23	D1	6314	C6	7E10	C2	9410	B6	9IB3	A2
2023	B4	2A47	D5	2IH8	A2	2T20	D8	3061	B4	3711	E4	3E88	D2	3IK4	A7	3P96	C7	3Y24	F8	6317	C6	7E12	D1	9413	B6	9ID1	A3
2024	B4	2A51	C5	2IH9	A2	2T21	A9	3062	B4	3757	A3	3E89	D1	3IK5	A8	3P97	D7	3Y25	F8	6334	B6	7E23	E2	9415	B6	9ID2	A3
2026	B5	2A64	D6	2IJ0	A8	2T22	A9	3064	C5	3758	E5	3E90	E1	3IK7	A7	3P98	C7	3Y30	F1	6402	A6	7E24	E1	9418	A6	9ID3	A2
2033	B5	2A69	D6	2IJ1	A7	2T30	E9	3067	B5	3759	D5	3I01	A8	3IK9	B2	3P99	C7	3Y33	F2	6403	B6	7I01	A8	9420	A6	9ID4	A2
2036	B4	2A70	D6	2IJ4	A8	2T31	E8	3069	C5	3761	D4	3I02	B8	3IN1	A7	3PC0	C8	3Y34	F3	6405	A6	7I02	A3	9421	C6	9ID5	A2
2038	B4	2A72	D6	2IJ5	E5	2T32	E9	3070	C4	3762	C3	3I03	B8	3IN2	A3	3PC5	B7	3Y35	F3	6713	E3	7I03	A4	9422	B6	9ID6	A2
2040	B4	2A74	D6	2IK1	A2	2T33	E8	3072	B4	3763	C3	3I04	A7	3IN3	A3	3PD7	C8	3Y37	F8	6714	D3	7I04	A4	9427	B6	9ID7	A2
2041	B5	2A75	D6	2IK2	A1	2T34	E8	3079	C5	3764	C3	3I05	B7	3IN8	A3	3PF5	B7	3Y38	F8	6715	E3	7I05	A5	9701	E5	9ID8	A2
2052	A4	2A79	D6	2IK3	A1	2T35	E8	3080	C4	3767	C3	3I06	B8	3IO5	A3	3PG1	C7	3Y40	D1	6A01	C5	7I07	A3	9702	E5	9ID9	A2
2053	A4	2A80	D6	2IK6	C6	2T36	E9	3081	B4	3768	C3	3I07	A5	3IO6	A3	3PG7	D7	3Z23	E5	6A02	C6	7I08	A6	9706	D5	9P04	B8
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2055	A4	2A83	D6	2IN8	A2	2T38	E9	3083	B4	3770	C3	3I09	A8	3IP1	A8	3PH5	D8	3Z25	F5	6E55	D2	7I10	E8	9712	B4	9P07	C9
2056	A4	2A88	D6	2IN9	A2	2T40	D9	3085	B5	3771	A3	3I10	B7	3IP2	A8	3PH9	D7	3Z26	F5	6E56	C2	7I12	A3	9714	C2	9P09	B9
2057	A4	2A89	D6	2IR0	A3	2T41	D8	3086	B5	3772	A3	3I11	B7	3IP3	A7	3PI0	B7	3Z28	E5	6I01	A3	7I13	E5	9715	B4	9P10	B8
2060	A4	2A90	D6	2L18	B1	2T42	E8	3087	B4	3773	A3	3I12	B7	3IP4	A8	3PJ0	D8	3Z29	E5	6I03	E8	7I14	F6	9716	B4	9P11	B8
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2074	C5	2AA9	D5	2L32	C2	2T47	E9	3095	C5	3779	C3	3I17	A7	3IP9	A3	3PJ5	C7	3Z36	E5	6I08	A2	7I22	A8	9754	B4	9P20	C8
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2323	C5	2AN5	E6	2P31	C9	2U25	E4	3312	C6	3812	A3	3I41	A2	3IV5	A2	3T17	E8	5408	B6	6PB1	B7	7I51	B2	9823	B3	9P74	D7
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2786	B4	2I37	F6	2PB2	C7	3015	B5	3414	B6	3A67	D7	3IG9	A1	3P55	D7	3U62	E4	5Y02	F2	7322	B6	9007	A4	9I41	A3		
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2791	A3	2I40	F6	2PE7	C7	3017	B5	3417	A6	3A77	D7	3IGB	F6	3P57	C7	3U64	E4	5Y06	F2	7401	A6	9009	C4	9I50	A4		
2793	A3	2I46	A2	2PE8	C7	3022	C4	3419	A6	3C00	A5	3IGC	F6	3P60	C7	3U65	E4	5Y07	F2	7403	B6	9010	C5	9I57	A8		
2804	D5	2I47	A5	2PE9	C7	3023	C4	3420	B6	3C04	A5	3IGD	F6	3P62	C7	3U66	E4	5Y09	F1	7406	A6	9011	C5	9I58	A8		
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2807	D5	2I50	A3	2PF5	B7	3029	B5	3434	A6	3C10	B5	3IGF	F6	3P64	C7	3U68	E4	5Y12	E1	7410	B6	9013	C4	9I63	A3		
2808	B4	2I52	E5	2PF6	B7	3030	C4	3435	A6	3C11	C5	3IH0	F6	3P65	B8	3U69	E4	5Y14	D1	7412	B7	9014	B5	9I64	A3		

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Personal Notes:

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131004

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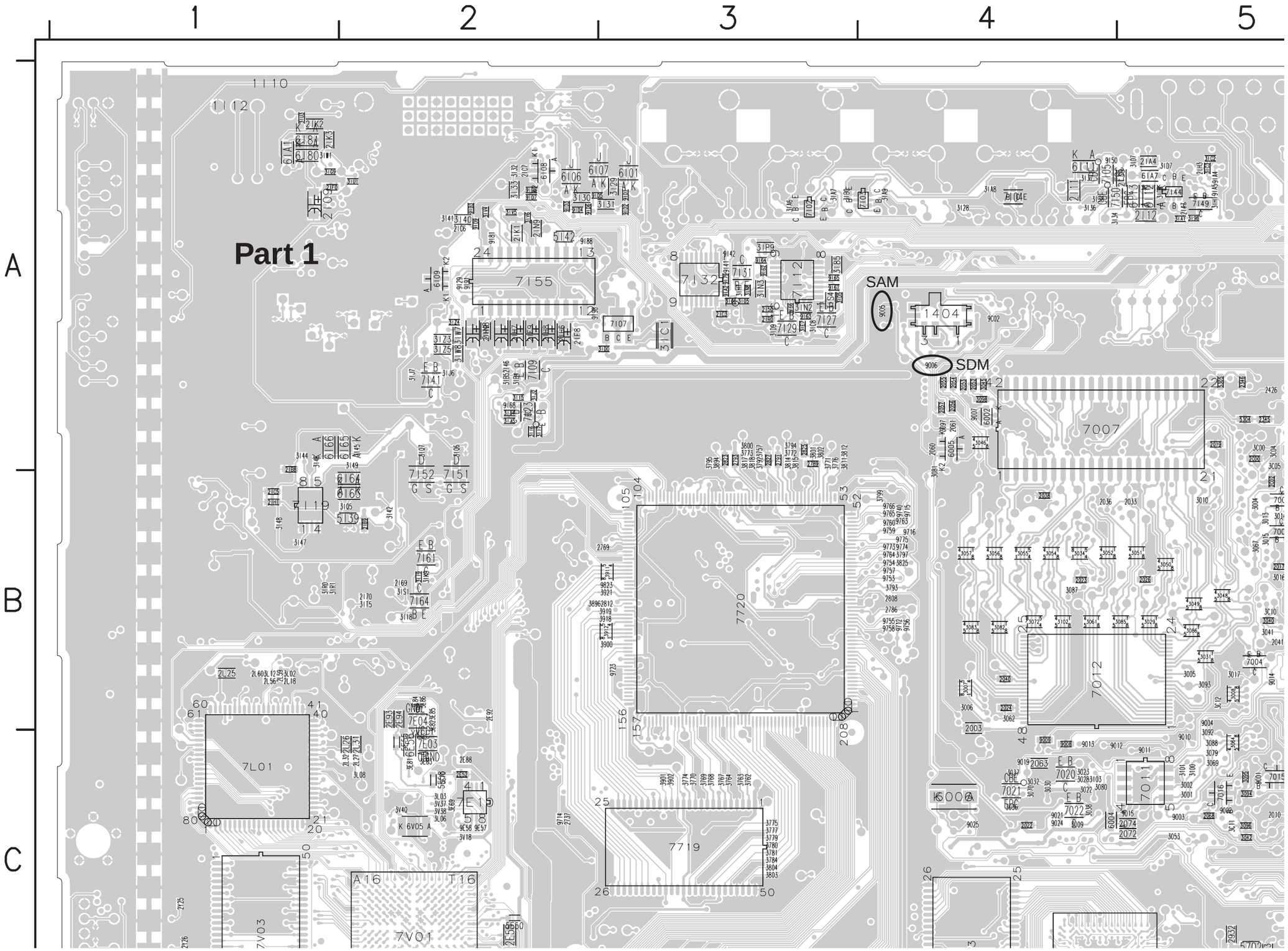

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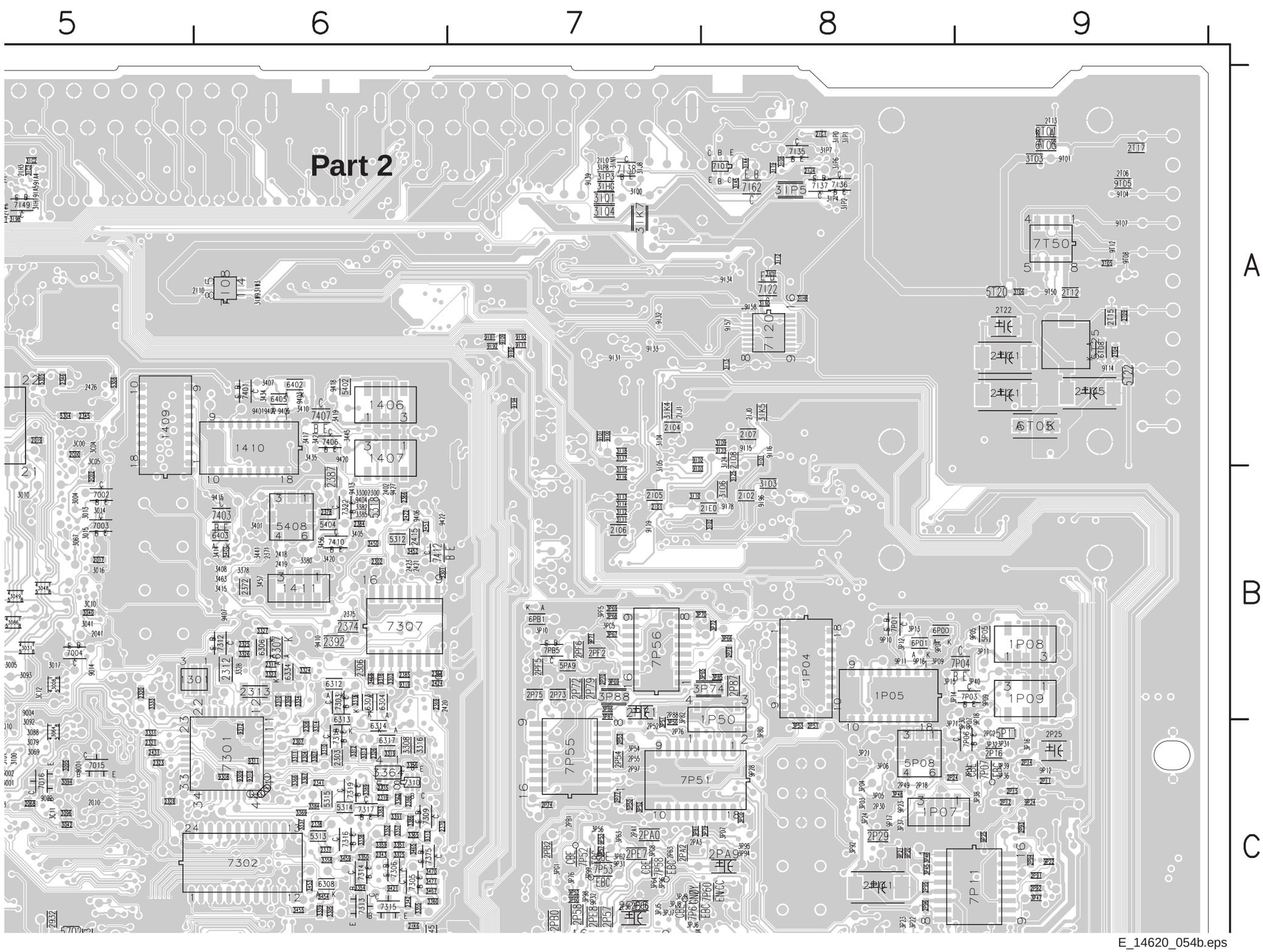

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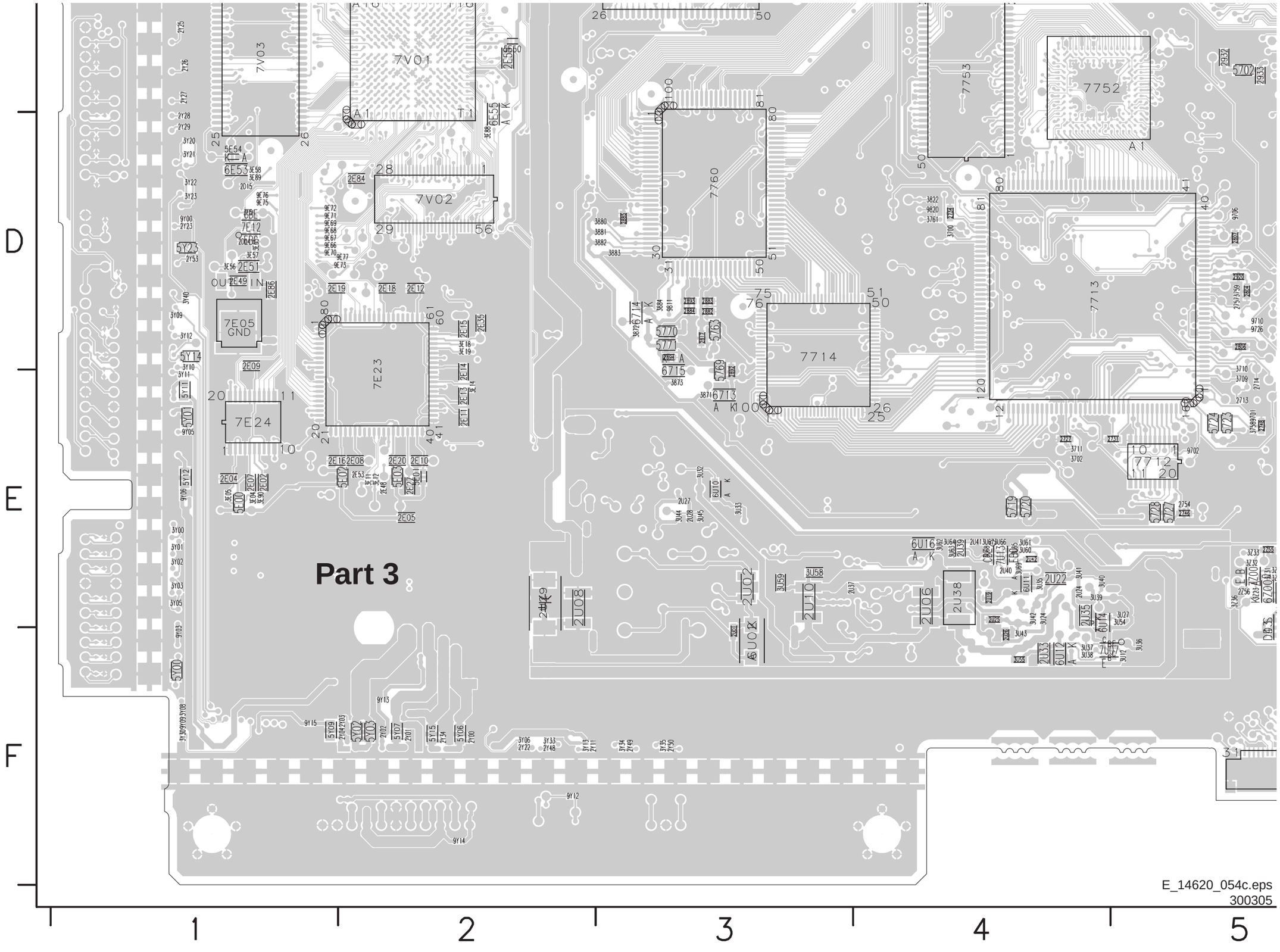

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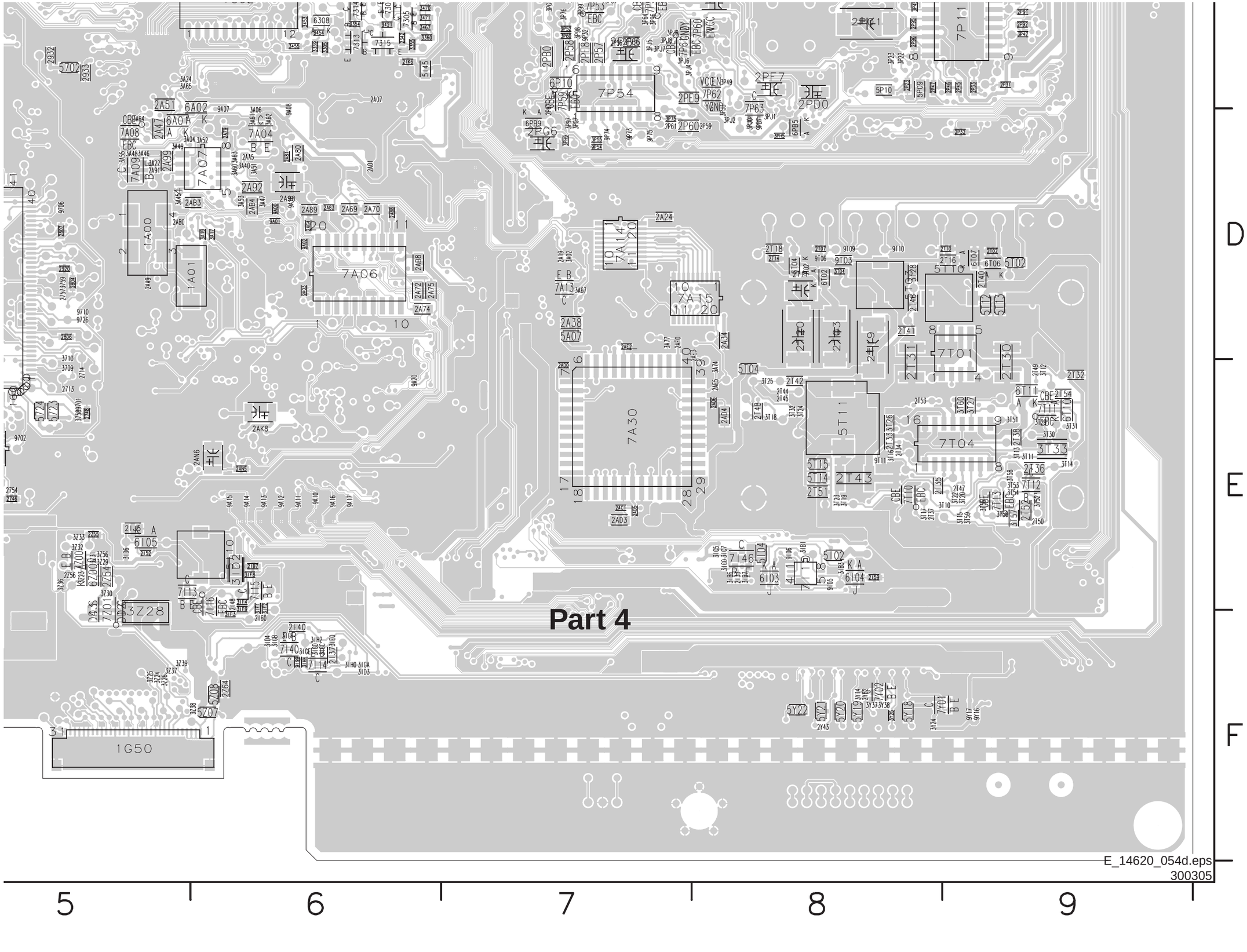
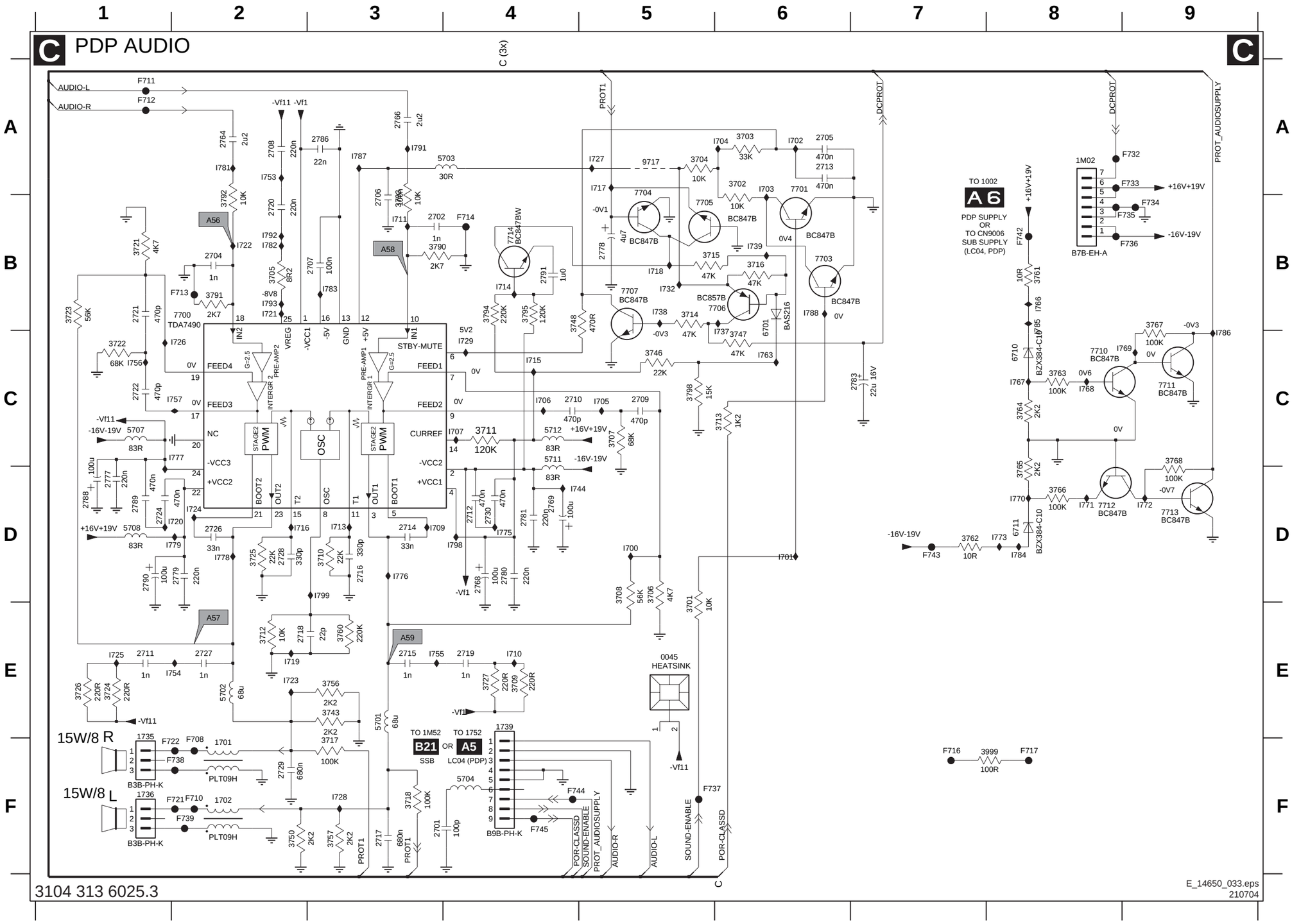


PDP Audio



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1736 F1	3767 B9	I729 C4
1739 E4	3768 C9	I732 B5
1M02 A8	3790 B3	I737 C6
2701 F3	3791 B2	I738 B5
2702 B3	3792 B2	I739 B6
2704 B2	3793 B3	I744 D4
2705 A6	3794 B4	I753 A2
2706 B3	3795 B4	I754 E2
2707 B3	3798 C5	I755 E3
2708 A2	3999 F8	I756 C1
2709 C5	5701 E3	I757 C2
2710 C4	5702 E2	I763 C6
2711 E1	5703 A4	I766 B8
2712 D4	5704 F4	I767 C8
2713 A6	5707 C1	I768 C8
2714 D3	5708 D1	I769 C9
2715 E3	5711 C4	I770 D8
2716 D3	5712 C4	I771 D8
2717 F3	6701 B6	I772 D9
2718 E2	6710 C8	I773 D8
2719 E4	6711 D8	I775 D4
2720 B2	7700 B2	I776 D3
2721 B1	7701 A6	I777 C2
2722 C1	7703 B6	I778 D2
2724 D1	7704 A5	I779 D2
2726 D2	7705 B5	I781 A2
2727 E2	7706 B6	I782 B2
2728 D2	7707 B5	I783 B3
2729 F2	7710 C8	I784 D8
2730 D4	7711 C9	I785 B8
2764 A2	7712 D8	I786 C9
2766 A3	7713 D9	I787 A3
2768 D4	7714 B4	I788 B6
2769 D4	9717 A5	I791 A3
2777 D1	F708 E2	I792 B2
2778 B5	F710 F2	I793 B2
2779 D2	F711 A1	I798 D4
2780 D4	F712 A1	I799 D3
2781 D4	F713 B2	
2783 C7	F714 B4	
2786 A3	F716 F7	
2788 D1	F717 F8	
2789 D1	F721 F2	
2790 D1	F722 F1	
2791 B4	F732 A9	
3701 E5	F733 A9	
3702 A6	F734 B9	
3703 A6	F735 B9	
3704 A5	F736 B9	
3705 B2	F737 F5	
3706 D5	F738 F2	
3707 C5	F739 F2	
3708 D5	F742 B8	
3709 E4	F743 D7	
3710 D3	F744 F4	
3711 C4	F745 F4	
3712 E2	I700 D5	
3713 C6	I701 D6	
3714 B5	I702 A6	
3715 B5	I703 A6	
3716 B6	I704 A6	
3717 E3	I705 C5	
3718 F3	I706 C4	
3721 B1	I707 C4	
3722 C1	I709 D3	
3723 B1	I710 E4	
3724 E1	I711 B3	
3725 D2	I712 B4	
3726 E1	I713 D3	
3727 E4	I714 B4	
3743 E3	I715 C4	
3746 C5	I716 D2	
3747 C6	I717 A5	
3748 B4	I718 B5	
3750 F2	I719 E2	
3756 E3	I720 D2	
3757 F3	I721 B2	
3760 E3	I722 B2	
3761 B8	I723 E2	
3762 D7	I724 D2	

Layout PDP Audio (Top Side)

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1702 A1
1735 A4
1736 A2
1739 A1
1M02 A4
2717 A2
2729 A4
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2769 A2
2778 A1
2783 A1
2788 A3
2790 A3
3711 A3
3717 A2
3748 A2
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5707 A3
5708 A4
5711 A2
5712 A4
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9702 A3
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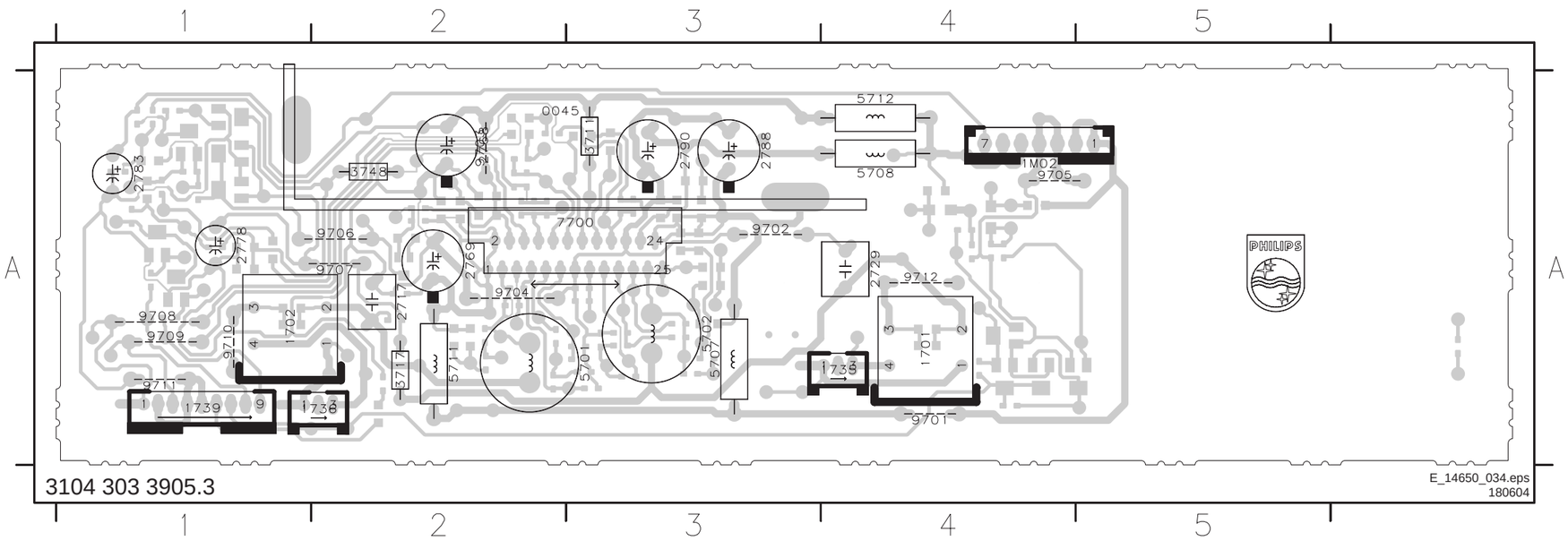

Layout PDP Audio (Bottom Side)

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3794 A4
3795 A5
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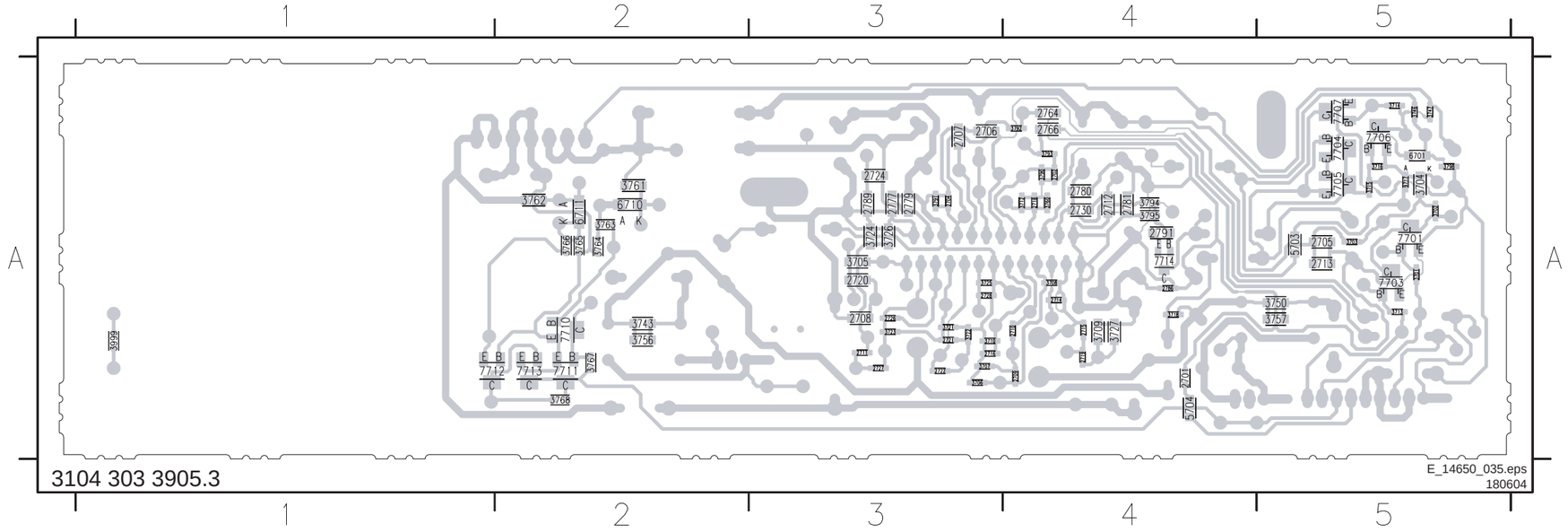
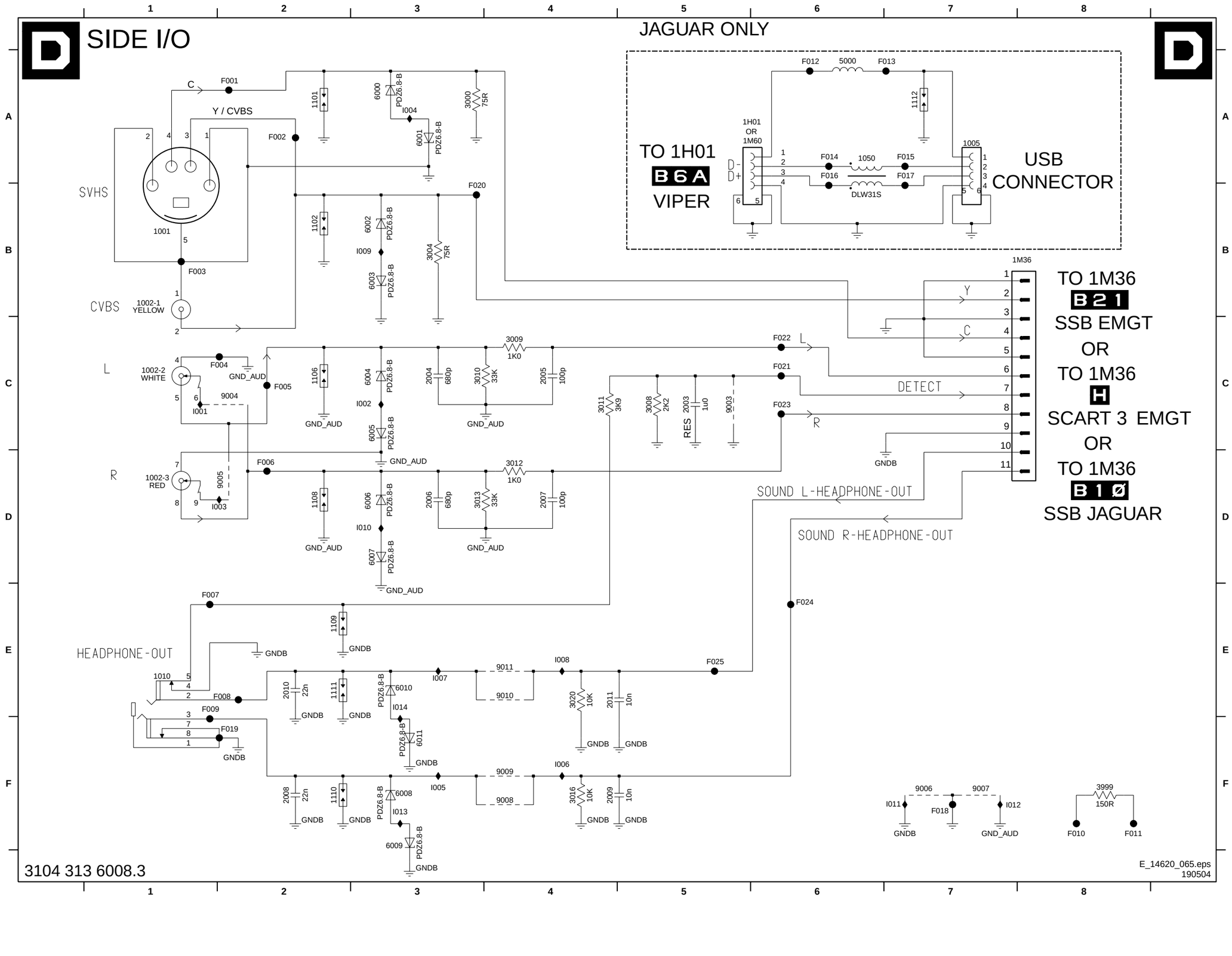
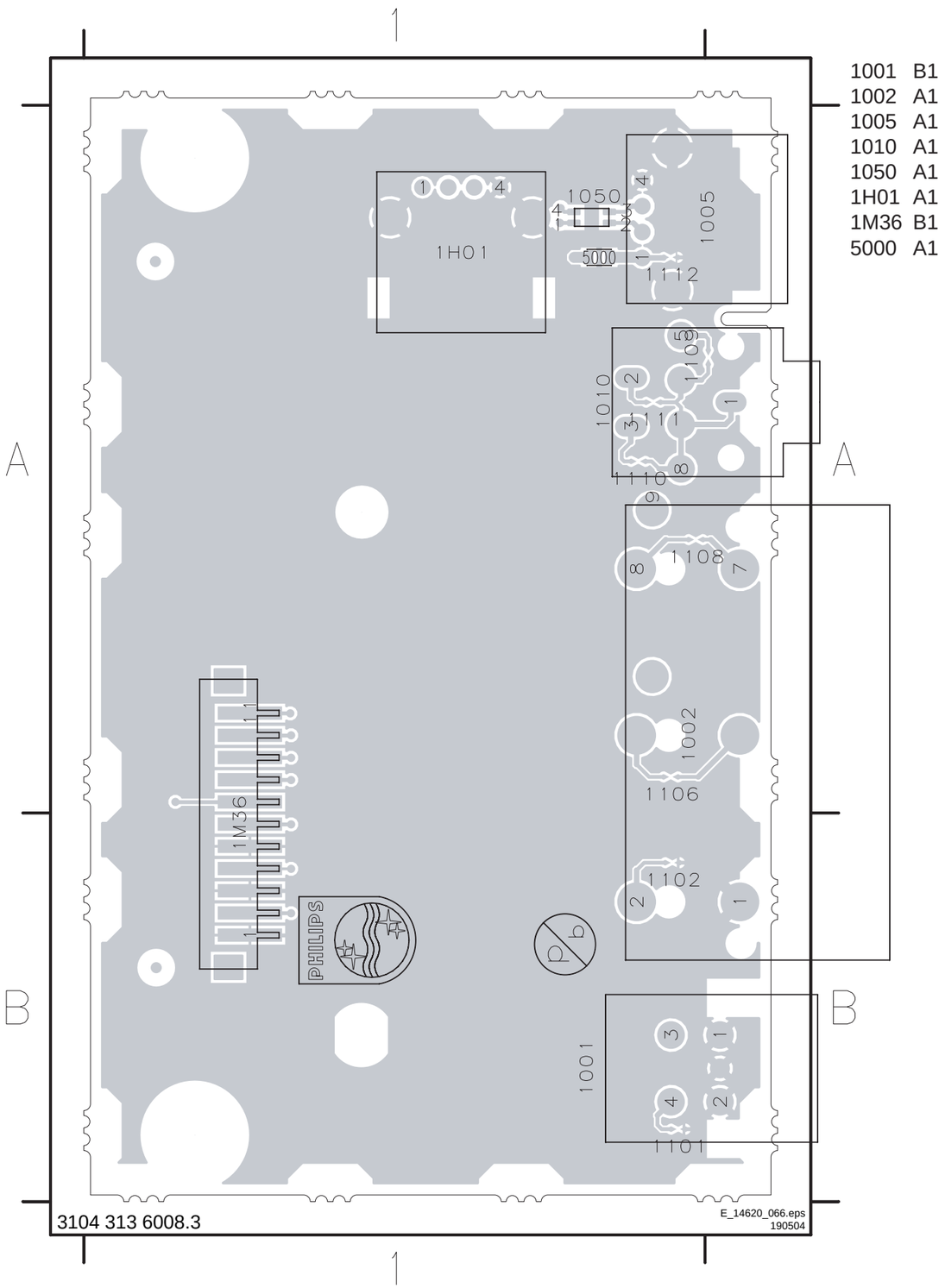


Side I/O Panel

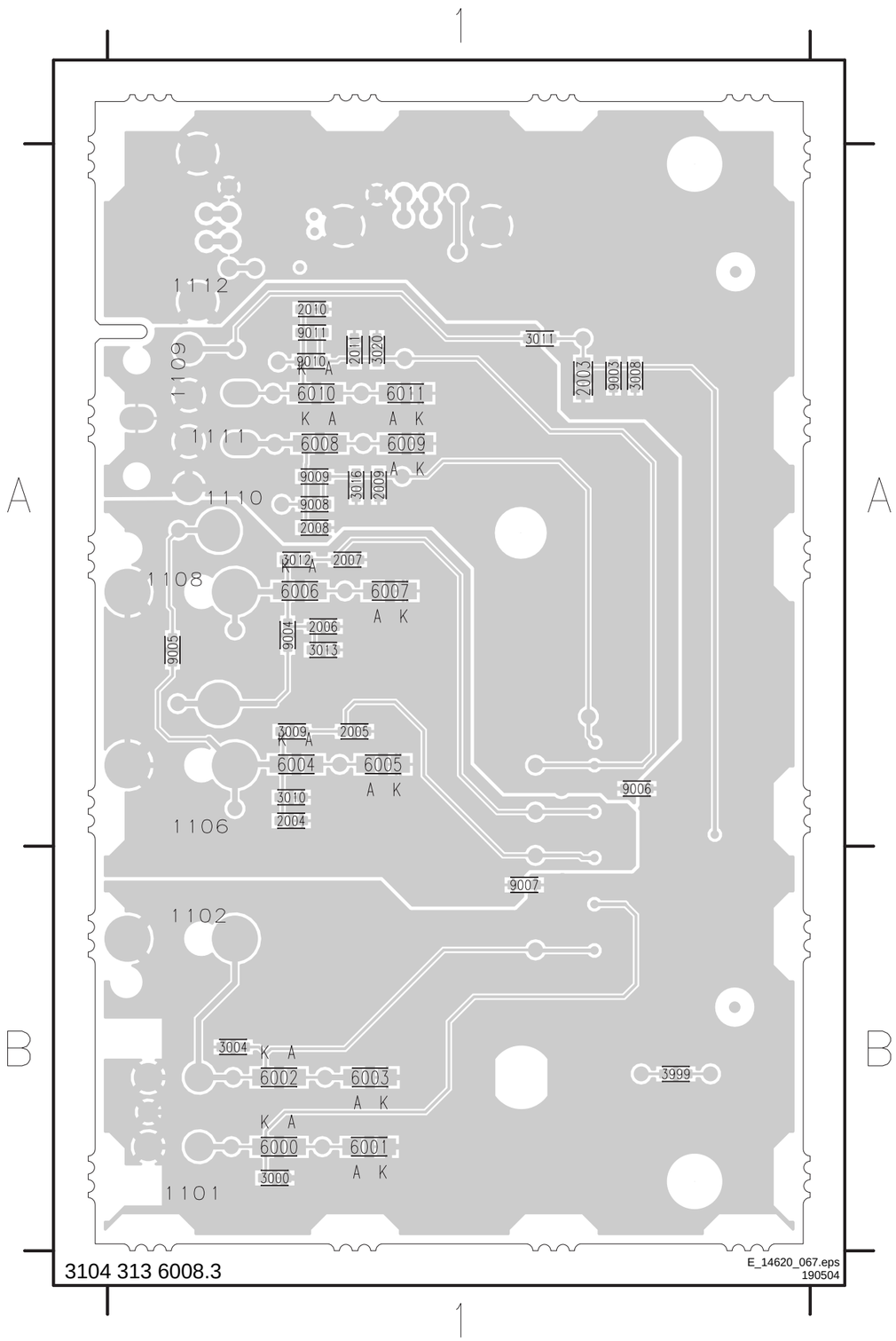


1001 B1	F003 B1	3999 F8
1002-1 B1	F004 C2	5000 A6
1002-2 C1	F005 C2	6000 A3
1002-3 D1	F006 D2	6001 A3
1005 A7	F007 E1	6002 B3
1010 E1	F008 E2	6003 B3
1050 A6	F009 E1	6004 C3
1101 A2	F010 F8	6005 C3
1102 B2	F011 F8	6006 D3
1106 C2	F012 A6	6007 D3
1108 D2	F013 A7	6008 F3
1109 E2	F014 A6	6009 F3
1110 F2	F015 A7	6010 E3
1111 E2	F016 A6	6011 F3
1112 A7	F017 A7	9003 C5
1H01 A6	F018 F7	9004 C2
1M36 B8	F019 F2	9005 D1
2003 C5	F020 B3	9006 F7
2004 C3	F021 C6	9007 F7
2005 C4	F022 C6	9008 F4
2006 D3	F023 C6	9009 F4
2007 D4	F024 E6	9010 E4
2008 F2	F025 E5	9011 E4
2009 F4	I001 C1	F001 A2
2010 E2	I002 C3	F002 A2
2011 E4	I003 D2	
3000 A3	I004 A3	
3004 B3	I005 F3	
3008 C5	I006 F4	
3009 C4	I007 E3	
3010 C3	I008 E4	
3011 C4	I009 B3	
3012 D4	I010 D3	
3013 D3	I011 F7	
3016 F4	I012 F7	
3020 E4	I013 F3	
3999 F8	I014 E3	

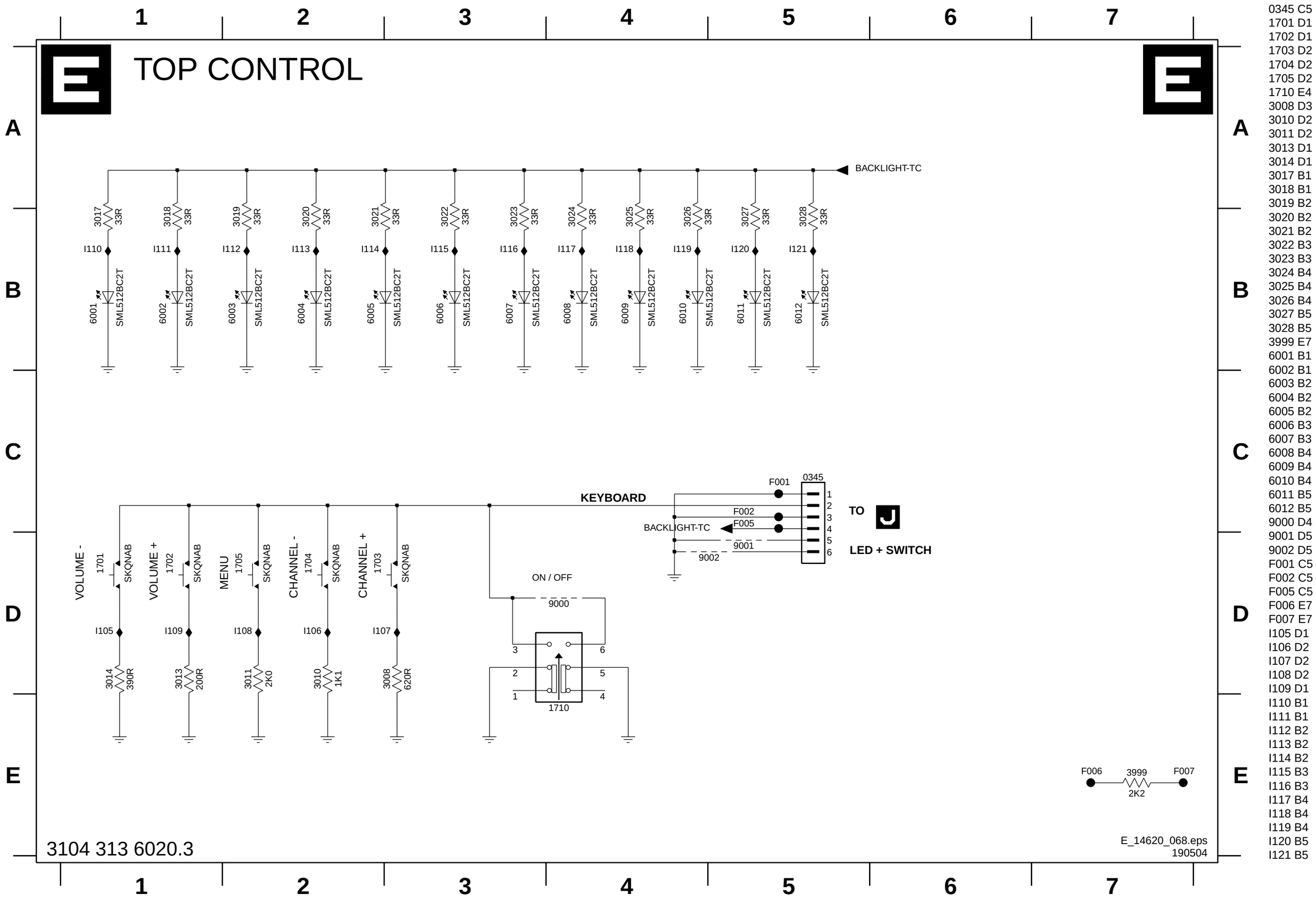
Layout Side I/O Panel (Top Side)



Layout Side I/O Panel (Bottom Side)



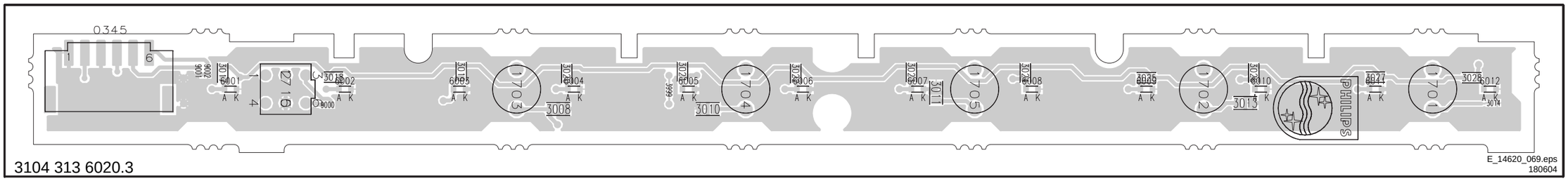
Top Control Panel



0345 C5
1701 D1
1702 D1
1703 D2
1704 D2
1705 D2
1710 E4
3008 D3
3010 D2
3011 D2
3013 D1
3014 D1
3017 B1
3018 B1
3019 B2
3020 B2
3021 B2
3022 B3
3023 B3
3024 B4
3025 B4
3026 B4
3027 B5
3028 B5
3999 E7
6001 B1
6002 B1
6003 B2
6004 B2
6005 B2
6006 B3
6007 B3
6008 B4
6009 B4
6010 B4
6011 B5
6012 B5
9000 D4
9001 D5
9002 D5
F001 C5
F002 C5
F005 C5
F006 E7
F007 E7
I105 D1
I106 D2
I107 D2
I108 D2
I109 D1
I110 B1
I111 B1
I112 B2
I113 B2
I114 B2
I115 B3
I116 B3
I117 B4
I118 B4
I119 B4
I120 B5
I121 B5

Layout Top Control Panel (Top Side)

0345 1702 1704 1710 3010 3013 3017 3019 3021 3023 3025 3027 3999 6002 6004 6006 6008 6010 6012 9001
1701 1703 1705 3008 3011 3014 3018 3020 3022 3024 3026 3028 6001 6003 6005 6007 6009 6011 9000 9002



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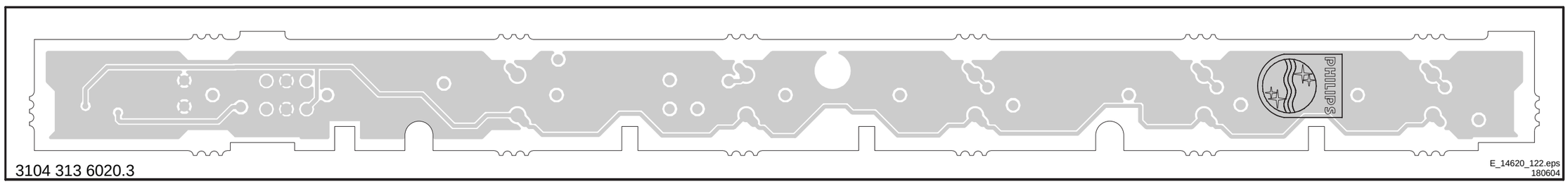
180604

Layout Top Control Panel (Bottom Side)



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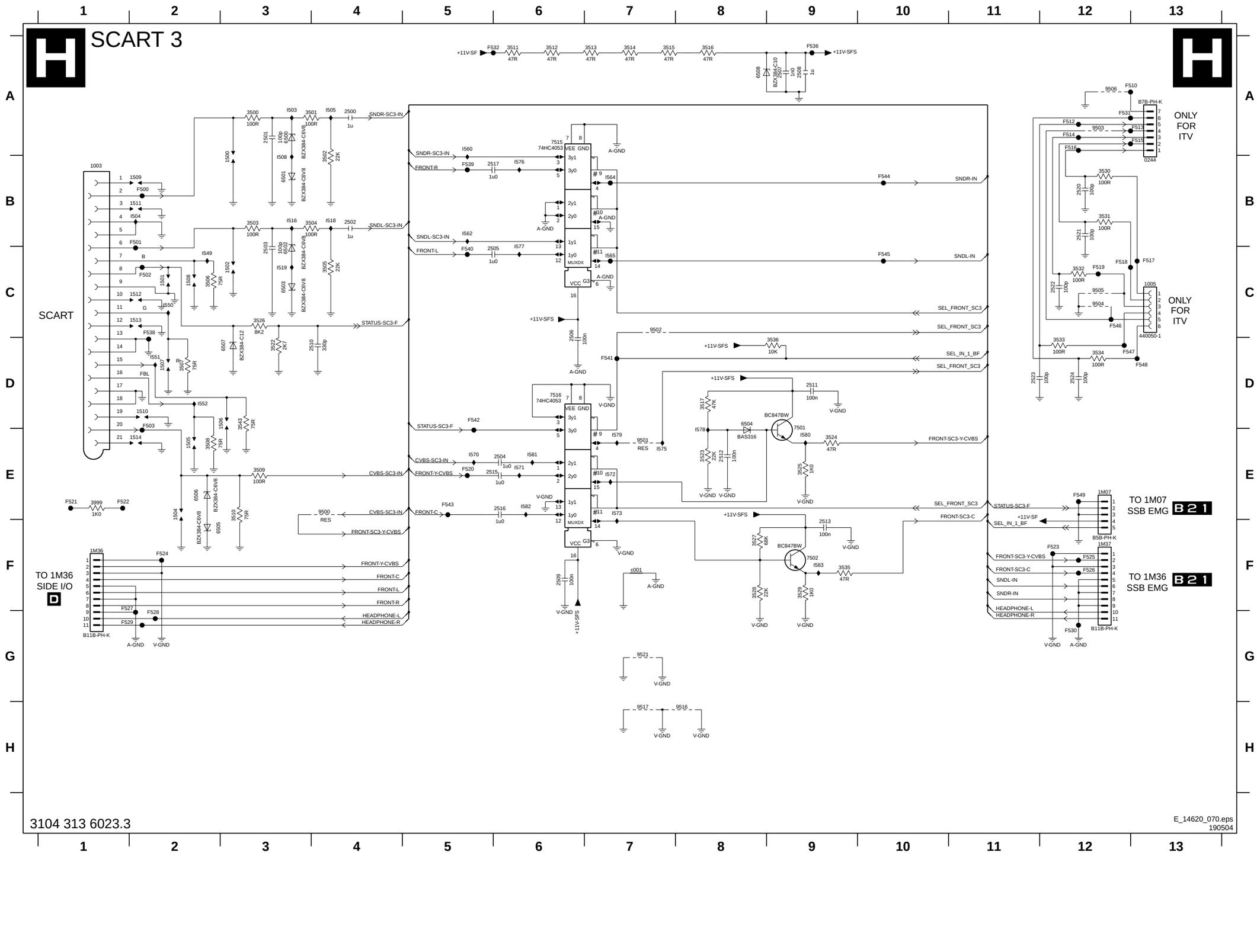
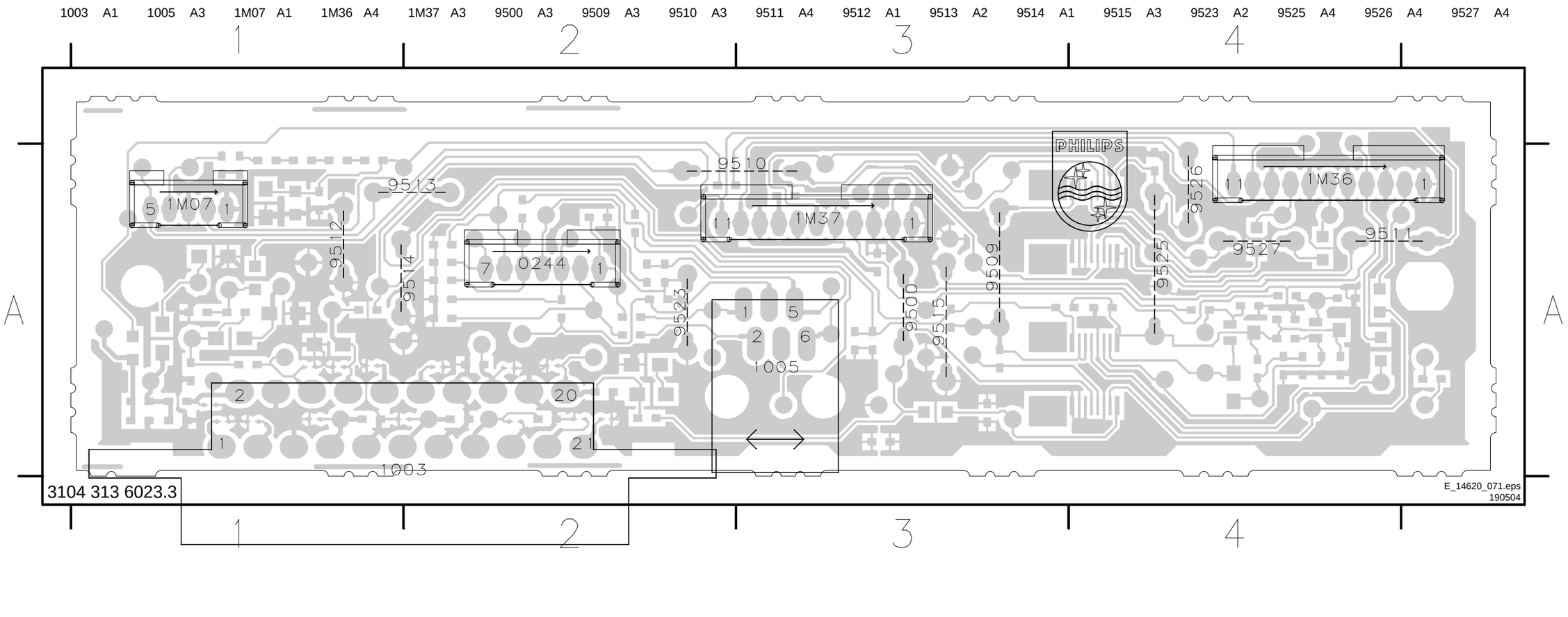
180604

SCART 3 Panel



0244 B13 F513 A13
1003 B1 F514 A12
1005 C13 F515 A13
1500 B3 F516 A12
1501 C2 F517 C13
1502 C3 F518 C12
1504 E2 F519 C12
1505 E2 F520 E5
1506 D3 F521 E1
1507 D2 F522 E1
1508 C2 F523 F12
1509 B2 F524 F2
1510 D2 F525 F12
1511 B2 F526 F12
1512 C2 F527 F1
1513 C2 F528 G2
1514 E2 F529 G1
1M07 E12 F530 G12
1M36 F1 F531 A12
1M37 F12 F532 A5
2500 A4 F536 A9
2501 A3 F538 C2
2502 B4 F539 B5
2503 C3 F540 C5
2504 E6 F541 D7
2505 C5 F542 D5
2506 C6 F543 E5
2507 A9 F544 B10
2508 A9 F545 C10
2509 F6 F546 C12
2510 D4 F547 D12
2511 D9 F548 D13
2512 E8 F549 E12
2513 F9 I503 A3
2515 E5 I504 B2
2516 E6 I505 A4
2517 B5 I508 B3
2520 B12 I516 B3
2521 B12 I518 B4
2522 C12 I519 C3
2523 D11 I549 C2
2524 D12 I550 C2
3500 A3 I551 D2
3501 A3 I552 D2
3502 B4 I560 A5
3503 B3 I562 B5
3504 B3 I564 B7
3505 C4 I565 C7
3506 C2 I570 E5
3507 D2 I571 E6
3508 E2 I572 E7
3509 E3 I573 E7
3510 E3 I575 E7
3511 A6 I576 B6
3512 A6 I577 B6
3513 A7 I578 E8
3514 A7 I579 E7
3515 A7 I580 E9
3516 A8 I581 E6
3517 D8 I582 E6
3522 D3 I583 F9
3523 E8 c001 F7
3524 E9
3525 E9
3526 C3
3527 F8
3528 F8
3529 F9
3530 B12
3531 B12
3532 C12
3533 D12
3534 D12
3535 F9
3536 D9
3543 D3
3999 E1
6500 A3
6501 B3
6502 C3
6503 C3
6504 D8
6505 F2
6506 E2
6507 D3
6508 A8
7501 E9
7502 F9
7515 A6
7516 D6
9500 E4
9501 E7
9502 C7
9503 A12
9504 C12
9505 C12
9506 A12
9516 H8
9517 H7
9521 G7
F500 B2
F501 B2
F502 C2
F503 D2
F510 A13
F512 A12

Layout SCART 3 Panel (Top Side)



Layout SCART 3 Panel (Bottom Side)

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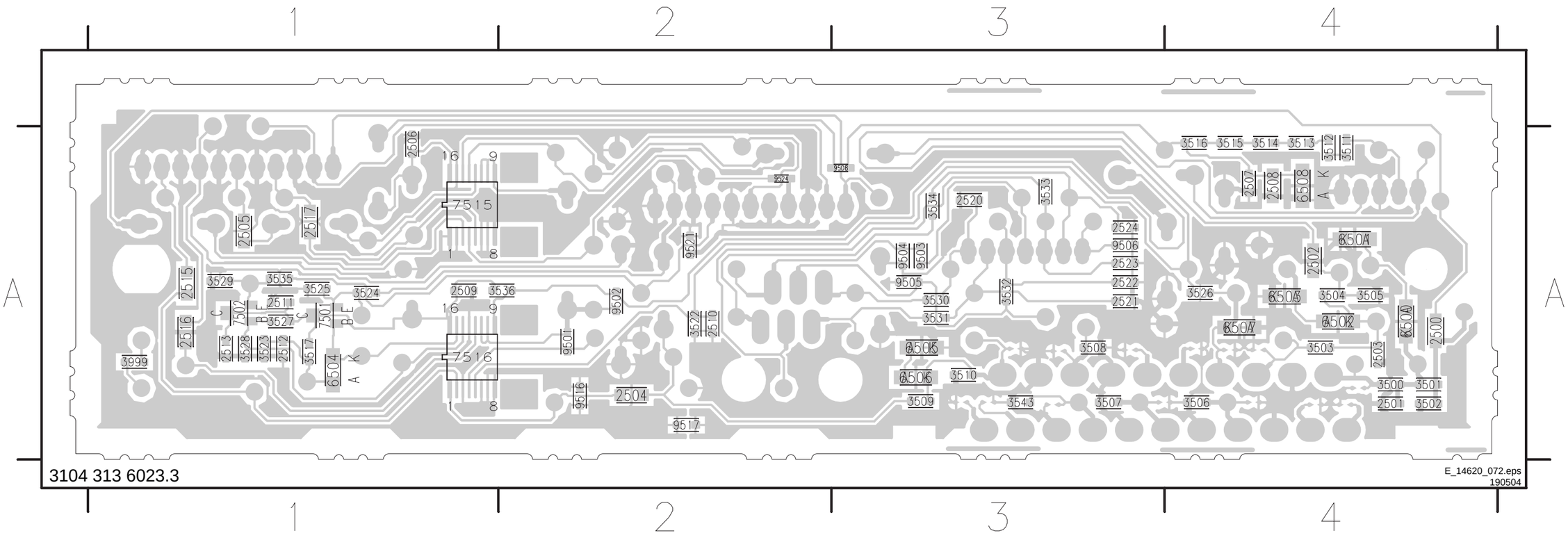
2501	A4	2506	A1	2511	A1	2517	A1	2524	A3	3504	A4	3509	A3	3514	A4	3523	A1	3528	A1	3533	A3	3999	A1
2502	A4	2507	A4	2512	A1	2520	A3	3500	A4	3505	A4	3510	A3	3515	A4	3524	A1	3529	A1	3534	A3	6500	A4
2503	A4	2508	A4	2513	A1	2521	A3	3501	A4	3506	A4	3511	A4	3516	A4	3525	A1	3530	A3	3535	A1	6501	A4
2504	A2	2509	A1	2515	A1	2522	A3	3502	A4	3507	A3	3512	A4	3517	A1	3526	A4	3531	A3	3536	A2	6502	A4

6503	A4	6508	A4	9501	A2	9506	A3	9524	A2														
6504	A1	7501	A1	9502	A2	9508	A3																
6505	A3	7502	A1	9503	A3	9516	A2																
6506	A3	7515	A2	9504	A3	9517	A2																
6507	A4	7516	A2	9505	A3	9521	A2																



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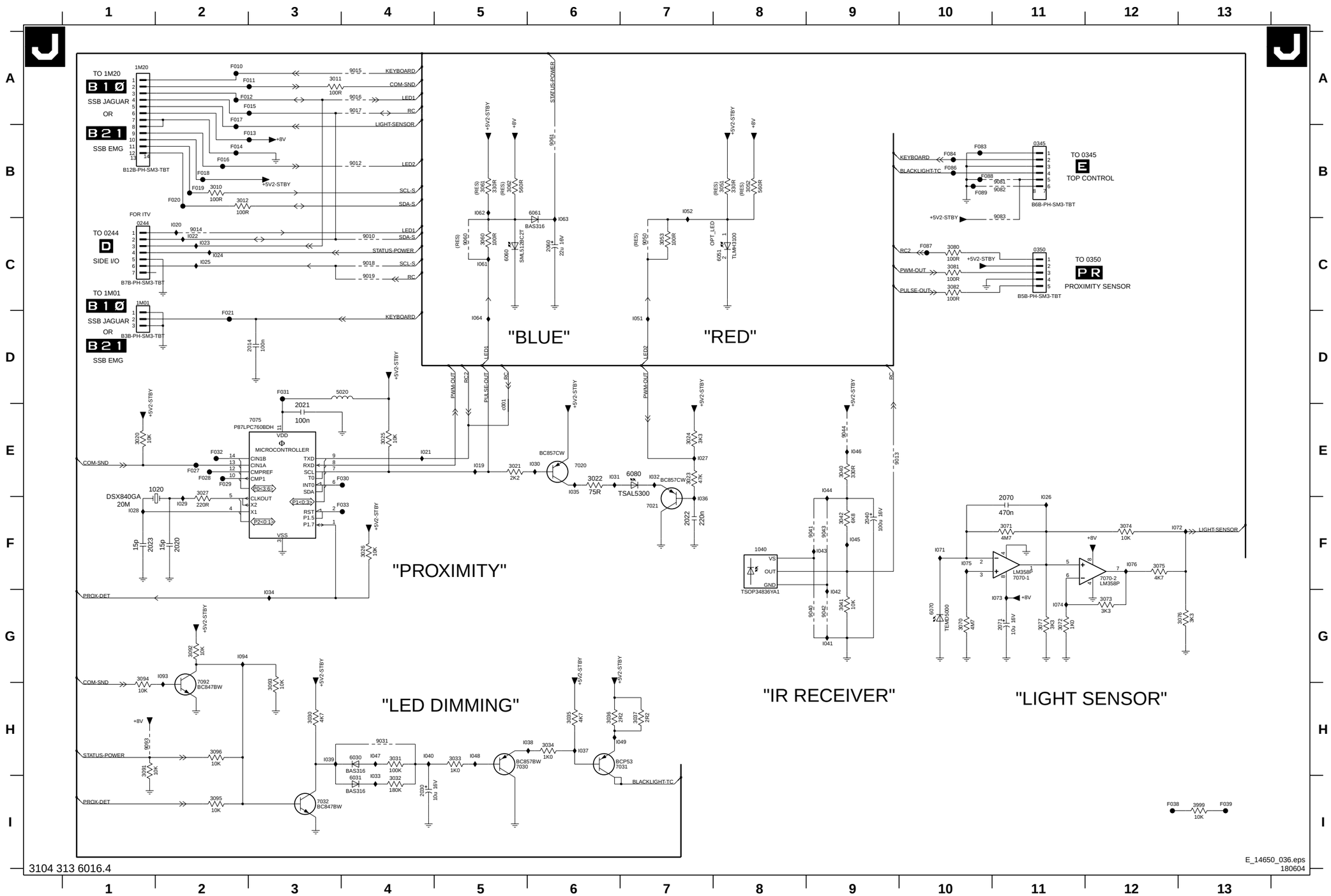
LED and Switch Panel



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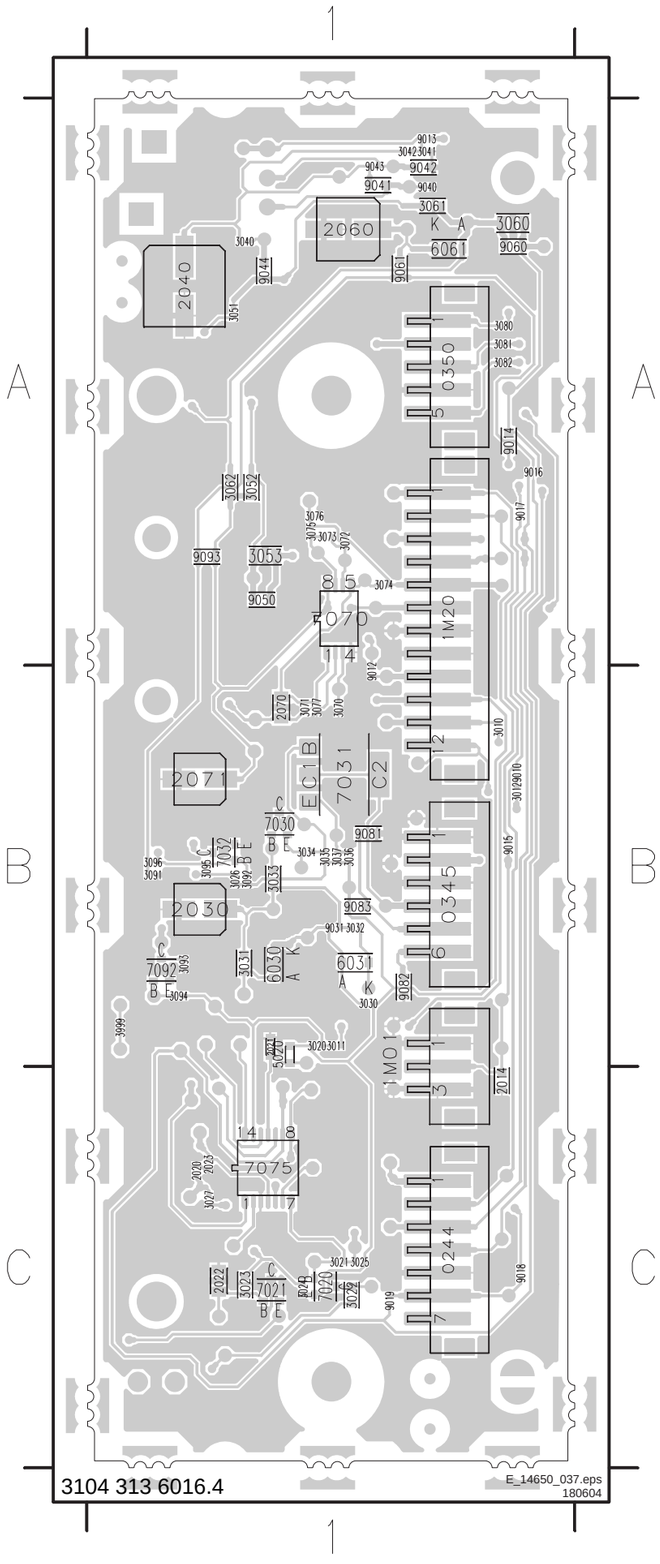
0244 C1
0345 B11
0350 C11
1020 E2
1040 F8
1M01 C1
1M20 A1
2014 D3
2020 F2
2021 E3
2022 F7
2023 F1
2030 I4
2040 F9
2060 C6
2070 F11
2071 G11
3010 B2
3011 A3
3012 B2
3020 E1
3021 E5
3022 E6
3023 E7
3024 E7
3025 E4
3026 F4
3027 E2
3030 H3
3031 H4
3032 I4
3033 H5
3034 H6
3035 H6
3036 H6
3037 H7
3040 E9
3041 G9
3042 F9
3051 B8
3052 B8
3053 C7
3060 C5
3061 B5
3062 B5
3070 G10
3071 F11
3072 G11
3073 G12
3074 F12
3075 F12
3076 G13
3077 G11
3080 C10
3081 C10
3082 C10
3091 H1
3092 G2
3093 H3
3094 G1
3095 I2
3096 H2
3999 I13
5020 D4
6030 H4
6031 I4
6051 C8
6060 C5
6061 B6
6070 G10
6080 E7
7020 E6
7021 F7
7030 H5
7031 H6
7032 I3
7070-1 F11
7070-2 F12
7075 E3
7092 H2
9010 C4
9012 B4
9013 E9
9014 C2
9015 A4
9016 A4
9017 A4
9018 C4
9019 C4
9031 H4
9040 G9
9041 F9
9042 G9
9043 F9
9044 E9
9050 C7
9060 C5
9061 B6
9081 B11
9082 B11
9083 C11
9093 H1
F010 A2
F011 A3
F012 A2
F013 B3
F014 B2
F015 A3
F016 B2
F017 A2
F018 B2
F019 B2
F020 B2
F021 D2
F027 E2
F028 E2
F029 E2
F030 E4
F031 D3
F032 E2
F033 F4
F038 I12
F039 I13
I019 E5
I020 C2
I021 E4
I022 C2
I023 C2
I024 C2
I025 C2
I026 F11
I027 E7
I028 F1
I029 F2
I030 E6
I031 E6
I032 E7
I033 I4
I034 G3
I035 E6
I036 F7
I037 H6
I038 H6
I039 H3
I040 H4
I041 G9
I042 G9
I043 F9
I044 E9
I045 F9
I046 E9
I047 H4
I048 H5
I049 H7
I051 D7
I052 B7
I061 C5
I062 B5
I063 C6
I064 D5
I071 F10
I072 F12
I073 G11
I074 G11
I075 F10
I076 F12
I093 G2
I094 G2
c001 E5

Layout LED and Switch Panel (Top Side)



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0244 C1
0345 B1
0350 A1
1040 A1
1M01 B1
1M20 A1
2014 C1
2020 C1
2021 B1
2022 C1
2023 C1
2030 B1
2040 A1
2060 A1
2070 B1
2071 B1
3010 B1
3011 B1
3012 B1
3020 B1
3021 C1
3022 C1
3023 C1
3024 C1
3025 C1
3026 B1
3027 C1
3030 B1
3031 B1
3032 B1
3033 B1
3034 B1
3035 B1
3036 B1
3037 B1
3040 A1
3041 A1
3042 A1
3051 A1
3052 A1
3053 A1
3060 A1
3061 A1
3062 A1
3070 B1
3071 B1
3072 A1
3073 A1
3074 A1
3075 A1
3076 A1
3077 B1
3080 A1
3081 A1
3082 A1
3091 B1
3092 B1
3093 B1
3094 B1
3095 B1
3096 B1
3999 B1
5020 B1
6030 B1
6031 B1
6061 A1
6080 C1
7020 C1
7021 C1
7030 B1
7031 B1
7032 B1
7070 A1
7075 C1
7092 B1
9010 B1
9012 B1
9013 A1
9014 A1
9015 B1
9016 A1
9017 A1
9018 C1
9019 C1
9031 B1
9040 A1
9041 A1
9042 A1
9043 A1
9044 A1
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9060 A1
9061 A1
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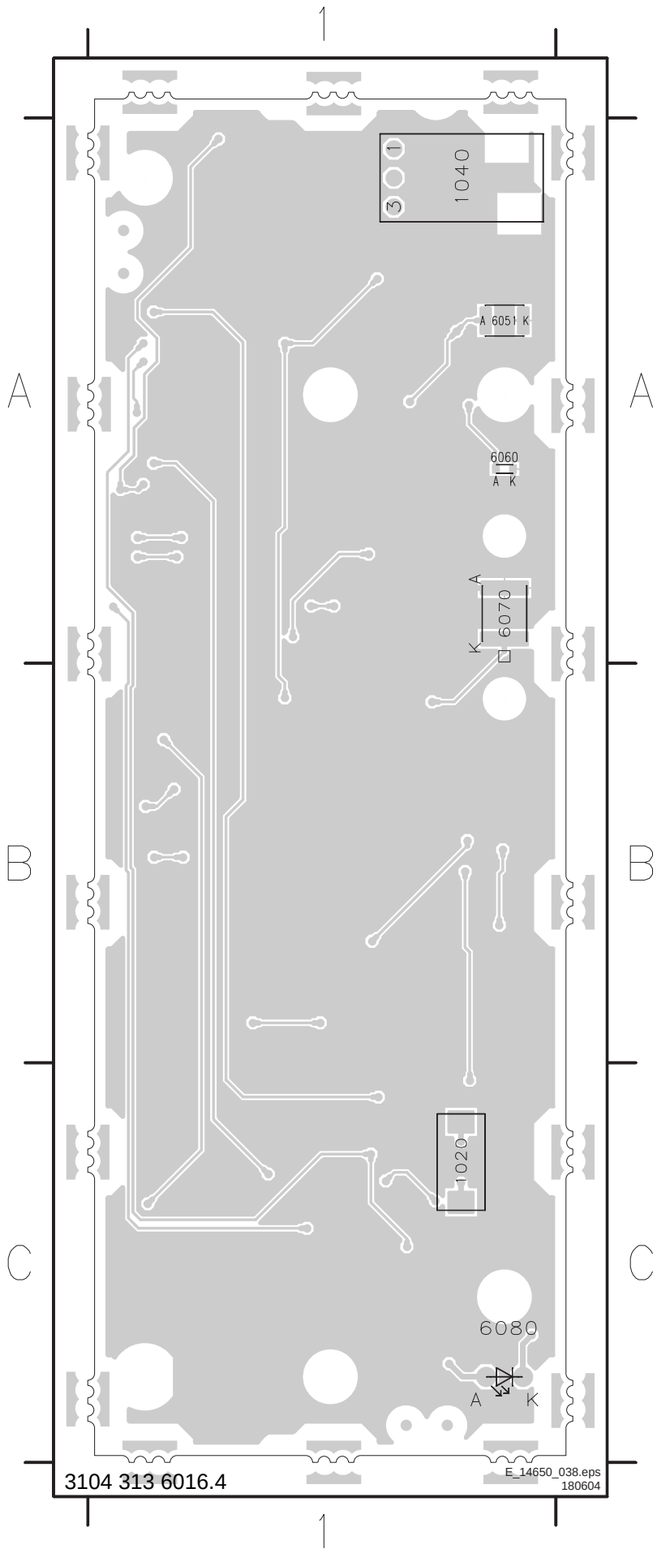
9082 B1
9083 B1
9093 A1

Layout LED and Switch Panel (Bottom Side)



3104 313 6016.4

1020 C1
1040 A1
6051 A1
6060 A1
6070 A1
6080 C1

8. Alignments

Index of this chapter:
8.1 General Alignment Conditions
8.2 Hardware Alignments
8.3 Software Alignments
8.4 Option Settings

8.1 General Alignment Conditions

8.1.1 Start Conditions

Perform all electrical adjustments under the following conditions:
- Power supply voltage (depends on region):
  - **AP-NTSC:** 120 V_{AC} 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 10 to 15 minutes.
- Measure voltages and waveforms in relation to chassis ground (with the exception of the voltages on the primary side of the power supply).
  Caution: never use heatsinks as ground.
- Test probe: Ri > 10 Mohm, Ci < 20 pF.
- Use an isolated trimmer/screwdriver to perform alignments.

8.1.2 Initial Settings

Perform all electrical adjustments with the following initial settings (via the "Active Control" button on the RC):
1. To avoid the working of the light sensor, set "Active Control" to "Off".
2. Set "Smart Picture" to "Natural".
3. Set "Active Display" to "Off"

8.1.3 Alignment Sequence

- First, set the correct options:
  - In SAM, select SERVICE OPTIONS -> OPT. NO,
  - Fill in the option settings according to the set sticker (see also paragraph "Option Settings"),
  - Select STORE OPTIONS and push "OK" on the remote control,
  - After storing, the set must be restarted!
- Warming up (> 10 minutes).
- White point alignment.

8.2 Hardware Alignments

No hardware alignments are necessary.

8.3 Software Alignments

Put the set in SAM mode (see the "Service Modes, Error Codes and Fault Finding" section). The SAM menu will now appear on the screen. Select ALIGNMENTS and go to one of the sub menus. The alignments are explained below.

Notes:
- All changes must be stored manually.
- If an empty EAROM (permanent memory) is detected, all settings are set to pre-programmed default values.

8.3.1 GENERAL

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 or PAL M TV-signal with a signal strength of at least 1 mV and a frequency of 61.25 MHz (channel 3).

LUMA GAIN
Fixed setting of "1".

DELTA LUMA GAIN FOR AUX (only when a 2nd Tuner is present)
Fixed setting of "0 dB".

IF AFC
Alignment procedure:
1. During the IF AFC-parameter adjustment, one can see OSD feedback on the screen.
2. The OSD feedback can give four kinds of messages:
3. The first item ("IN/OUT") informs you whether you are in or out of the AFC-window.
4. The second item ("HIGH/LOW") informs you whether the AFC-frequency is too high or too low.

Table 8-1 AFC

AFC-window	AFC-frequency vs. reference
Out	High
In	High
[In]	[Low]
Out	Low

1. Adjust the IF AFC parameter until the **first** value is within the AFC window (= IN).
2. Next, adjust the IF AFC parameter until the **second** value is LOW.

IF LPRIME AFC (only for EU sets)
Same procedure as described above, but with SECAM L/L' signal source.

TUNER AGC
Measure the DC voltage on pin 1 of the (main) Tuner. You can adjust this voltage by adjusting the TUNER AGC item in the SAM menu. Alignment is correct when the DC voltage is just below 3.5 V.

IF AFC TUNER 2 (only when a 2nd Tuner is present)
Use the same procedure as described above (under IF AFC) with the set switched to the DW source.

IF LPRIME AFC TUNER 2 (only when a 2nd Tuner is present)
Use the same procedure as described above (under IF LPRIME AFC) with the set switched to the DW source.

TUNER AGC TUNER 2 (only when a 2nd Tuner is present)
Use the same procedure as described above (under TUNER AGC) with the set switched to the DW source. Measure on pin 1 of the DW Tuner.

BLEND INTENSITY
Use this alignment when you replace the microcontroller, NVM, or the EBILD. It aligns the level of transparency of the menu-picture blended into the main-picture. Fixed setting of "16".

8.3.2 2FH ADC ALIGNMENT

Only necessary to align, when the A/D converter or NVM is replaced. Use the default values as mentioned in the table.

Table 8-2 "2fH ADC alignment"

Menu item	Value
Red Gain RGB	106
Blue Gain RGB	112
Green Gain RGB	133
Red Offset RGB	40
Blue Offset RGB	41
Green Offset RGB	43
Red Gain YPbPr *	115
Blue Gain YPbPr *	118
Green Gain YPbPr *	102
Red Offset YPbPr *	59
Blue Offset YPbPr *	56
Green Offset YPbPr *	35
* = only for sets with YPbPr input	

8.3.3 WHITE POINT

- Set ACTIVE CONTROL to "Off".
- In the TV -> PICTURE user menu set:
  - DYNAMIC CONTRAST to "Off".
  - COLOUR ENHANCEMENT to "Off".
  - COLOUR to "0".
  - CONTRAST to "100".
  - BRIGHTNESS to "43".
- Go to the SAM and select ALIGNMENTS -> WHITE POINT.

Method 1 (with colour analyser):
- Use a 100% white screen as input signal and set the following values:
  - COLOR TEMPERATURE: "Tint to be aligned".
  - WHITEPOINTRED: "127".
  - WHITEPOINTGREEN: "127".
  - WHITEPOINTBLUE: "127".
  - RED BL OFFSET: "7"
  - GREEN BL OFFSET: "7".
- Measure with a calibrated (phosphor- independent) colour analyser (e.g. Minolta CA-210) in the centre of the screen. This measurement needs to be done in a dark environment.
- **Cut off alignment:** Adjust, by means of changing the value of one or both OFFSET's, to the correct x,y coordinates for the tint "NORMAL" (see table "White D alignment values"). Tolerance: dx,dy: $\pm$ 0.004.
- **White point alignment:** Adjust by means of decreasing the value of one or two white points, the correct x,y coordinates (see table "White D alignment values"). Tolerance: dx,dy: $\pm$ 0.004.
- Repeat this step for the other Colour Temperatures that need to be aligned.
- When finished press "Store" to store the aligned values to the NVM.

Table 8-3 White D alignment values

Colour Temp.	Cool	Normal	Warm
X	0.275	0.286	0.315
Y	0.291	0.301	0.335

Method 2 (without colour analyser):
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 (statistics).
1. Select a COLOUR TEMPERATURE (e.g. COOL, NORMAL, or WARM).
2. Set the RED, GREEN and BLUE default values according to the values in the "Tint settings" table.
3. When finished press "Store" to store the aligned values to the NVM.

Table 8-4 Tint settings

	Cool		Normal		Warm	
	42"	50"	42"	50"	42"	50"
R	127	127	127	127	127	127
G	122	125	119	121	113	114
B	118	118	111	109	94	87

8.3.4 LUM. DEL.

With this Luminance Delay alignment, you place the luminance information exactly on the chrominance information (brightness is pushed onto the colour). Use a colour bar / grey scale pattern as test signal.
- **LUM. DELAY PAL BG:** Apply a PAL BG colour bar / grey scale pattern as a test signal. Adjust this parameter until the transients of the colour part and black and white part of the test pattern are at the same position. Default value is "**7**".
- **LUM. DELAY PAL I:** Apply a PAL I colour bar/grey scale pattern as a test signal. Adjust this parameter until the transients of the colour part and black and white part of the test pattern are at the same position. Default value is "**9**".
- **LUM. DELAY SECAM:** Apply a SECAM colour bar/grey scale pattern as a test signal. Adjust this parameter until the transients of the colour part and black and white part of the test pattern are at the same position. Default value is "**9**".
- **LUM. DELAY BYPASS:** apply a NTSC colour bar/grey scale pattern as a test signal. Adjust this value until the transients of the colour and black and white part of the test area are at the same position. Default value is "**6**".

8.4 Option Settings

8.4.1 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 specific ICs (or functions) is made known by the option codes.

Notes:
- After changing the option(s), save them with the STORE command.
- The new option setting is only active after the TV is switched "off" and "on" again with the Mains switch (the EAROM is then read again).

8.4.2 DEALER OPTIONS

Table 8-5 Dealer options

Menu name	Subjects	Options	Description
Personal Options	Picture Mute	Yes	Picture (blue) mute active in case no picture detected
		No	Noise in case of no picture detected
	Virgin Mode	Yes	TV starts up (once) with language selection menu after mains switch "on" for the first time (virgin mode)
		No	TV does not starts up (once) with language selection menu after mains switch "on" for the first time (virgin mode)
	Auto Store Mode (only for EU and AP-PAL sets)	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
	TXT Preference (only for EU and AP-PAL sets)	TOP	Preference to TOP Teletext
		FLOF	Preference to FLOF Teletext
	DVD door lock (only for sets with integrated DVD)	Yes	To disable the DVD tray opening function
		No	To enable the DVD tray opening function
	AmbiLight Demo	Yes	AmbiLight demo via "MENU" button enabled
		No	AmbiLight demo via "MENU" button disabled

8.4.3 SERVICE OPTIONS

Select the sub menu's to set the initialisation codes (options) of the set via text menus.

Table 8-6 Service options

Menu-item	Subjects	Options	Description
Dual Screen	PIP/Dual Screen	Yes / No	Feature present / not present
	Text/EPG	Yes / No	Feature present / not present
	DS/PIP Tuner	Yes / No	Feature present / not present (only selectable if Dual Screen option is "on")
Teletext	Flash RAM	Yes / No	Flash RAM present / not present
	NexTView type	None	Feature not present
		Textguide only	Feature present, but only as text guide
		Nextview 2c3	Feature present, for countries that support NexTView
Display	Screen	Value "000"	42 inch PDP SDI
		Value "001"	50 inch PDP SDI
		Value "002"	42 inch PDP FHP
		Value "003"	30 inch LCD LPL
		Value "004"	37 inch LCD LPL
		Value "005"	42 inch LCD LPL
		Value "006"	32 inch LCD Sharp
		Value "007"	42 inch PDP SDI VGA
		Value "008"	37 inch PDP FHP
Video Repro	Feature box type	1050i/1250i	HD input
		Eagle 1B	"Eagle version 1B" present (Pixel Plus 1)
		Eagle 1C	"Eagle version 1C" present (Pixel Plus 2)
	Lightsensor	Yes / No	Feature present / not present
	3D Comb filter	Yes / No	Only selectable when Columbus is present
	Impr. Noise Red.	Yes / No	Only selectable when Columbus is present
	Pixel Plus Version	1	Standard PP: only selectable with Eagle 1C
		2	Improved PP: only selectable with Eagle 1C
	720p	Yes / No	Enable for high resolution displays
Source Selection	EXT3 1Fh (2003)	Yes / No	Not selectable
Audio Repro	Acoustic System	FTV Top	Cabinet design (xxPF9986 and xxPF9996 with NXT)
		Soft Wrap	Cabinet design (xxPF9956 and xxPF9966 stdrd)
		Wrap	Cabinet design (xxPF9956 and xxPF9966 stdrd)
		FTV2.3	Cabinet design (for future)
	AVL	On / Off	Enable / disable Automatic Volume Limiter

Menu-item	Subjects	Options	Description
Miscellaneous	Home Cinema	Yes / No	Model with / without Home Cinema Link (EU only)
	AmbiLight	Yes / No	Rear lighting feature present / not present
	Integrated RC	Yes / No	Control pheripheral equipment via TV IR receiver (EU only)
	Tuner type	UV1316 / TEDE9	Model with Philips tuner / Alps tuner
	P50 DVD menu line	Yes / No	Enable / disable DVD control via user menu with TV RC (EU only)
	Intelligent Lights	Yes / No	Proximity sensor present / not present
Option no.	Group 1		Group 1 option code overview (see set sticker)
	Group 2		Group 2 option code overview (see set sticker)

8.4.4 OPT. NO. (Option numbers)

Select this sub menu to set all options at once (expressed in two long strings of numbers).

Table 8-7 Option number overview

Model Number	12 NC	Options Group 1	Options Group 2
32PF9966/37	8670 000 20641	62692 08224 33040 04107	00016 01585 16512 49602
32PF9966/61	8670 000 20645	62948 08224 33104 04107	00024 01569 16512 49601
32PF9966/69	8670 000 20643	62948 08224 33104 04107	00016 01553 16512 49601
32PF9966/93	8670 000 20644	62948 08224 33104 04111	00016 01553 16512 49601
32PF9986/12	8670 000 20663	62948 40992 49488 04097	04118 01537 16480 49632
32PF9996/37	8670 000 20666	62948 08224 33040 04107	00016 01585 16512 49632
37PF9986/12	8670 000 20667	62948 40992 49488 04097	04118 01025 16480 03040
37PF9996/37	8670 000 20668	62948 08224 33040 04107	00016 01073 16512 03040
42PF9956/12	8670 000 20661	13668 40992 49472 04096	04118 01793 08288 11458
42PF9966/12	8670 000 20646	30180 40992 49472 04096	04118 00513 24672 11457
42PF9966/37	8670 000 20647	62692 08224 33040 04107	00016 00049 32896 11458
42PF9966/79	8670 000 20649	62948 08224 33104 04107	04112 00017 32896 11457
42PF9966/93	8670 000 20652	62948 08224 33104 04111	04112 00017 32896 11457
42PF9966/98	8670 000 20651	62948 08224 33104 04107	04112 00017 32896 11457
42PF9986/12	8670 000 20669	62948 40992 49488 04097	04118 01281 16480 03296
42PF9986/69	8670 000 20672	62948 08224 33104 04107	00016 01297 16512 03296
42PF9986/93	8670 000 20674	62948 08224 33104 04111	00016 01297 16512 03296
42PF9996/37	8670 000 20675	62948 08224 33040 04107	00016 01329 16512 03296
50PF9956/37	8670 000 20659	46436 08224 33024 04096	00016 00305 16512 11713
50PF9966/12	8670 000 20653	62948 40992 49472 04096	04118 00257 16480 11713
50PF9966/37	8670 000 20654	62692 08224 33040 04107	00016 00305 16512 11714
50PF9966/69	8670 000 20656	62948 08224 33104 04107	04112 00273 16512 11713
50PF9966/93	8670 000 20657	62948 08224 33104 04111	04112 00273 16512 11713
50PF9986/37	8670 000 20658	62948 08224 33040 04107	00016 00305 16512 11714

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 EAROM 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.

Example: The options sticker gives the following option numbers:

- 62948 40992 49488 04097
- 04118 01537 16480 49632

The first line (group 1) indicates options 1 to 4, the second line (group 2) 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 next table for the option overview.

Table 8-8 Option overview

Byte	Bit (dec. value)	Subject	Options	Settings (in decimal values)	Remarks
1	0 (1)	Video Repro	Feauture Box Type	3= Eagle 1B, 4= Eagle 1C, 5= 1050i/1250i	
	1 (2)				
	2 (4)				
	3 (8)	Personal	Ambi Light Demo	0= Off, 8= On	
	4 (16)	Video Repro	Auto Scavem	0= No, 16= Yes	Only selectable for CRT sets.
	5 (32)		Improv. Noise Reduction	0= No, 32= Yes	Fixed to "Yes" in case Columbus is present
	6 (64)		Light Sensor	0= No, 64= Yes	
	7 (128)	Miscellaneous	Ambi Light	0= No, 128= Yes	
	8 (256)	Video Repro	Digital Option	0 (No)= Dig. Natural Motion (for PP1) or PixelPlus (for PP2), 256 (Yes)= PixelPlus (for PP1) or PixelPlus2 (for PP2)	This depends on the "Pixel Plus Version" option (see also Byte 1 - bit 14), and gives the info that is visible in the user menu.
	9 (512)		n.a.		
	10 (1024)	Source Selection	1152i	0= Off, 1024= On	
	11 (2048)	Video Repro	n.a.		
	12 (4096)		Signalling Bits	0= No, 4096= Yes	Fixed to: "Yes" in EU and AP-P, "No" for other versions.
	13 (8192)		3D Comb Filter	0= No (2D Comb), 8192= Yes (3D Comb)	
	14 (16384)		PP (Pixel Plus) Version	0= “1”, 16384= “2”	Only selectable when "Feature Box" option is "Eagle 1C". See also Byte 1- bit 8 "Digital Option".
	15 (32768)		720p	0= No, 32768= Yes	
2	0 (1)	Audio Repro	n.a.		
	1 (2)		Dolby Pro Logic	0= No, 2= Yes	
	2 (4)		Virtual Rear Speakers	0= No, 4= Yes	Fixed to: "Yes" for sets with Dolby Pro Logic.
	3 (8)		Cordless Rear Speakers	0= No, 8= Yes	Fixed to: "No" for all versions, except for EU.
	4 (16)		Dolby Digital	0= No, 16= Yes	When Dolby Digital is "Yes", the AVL (Byte 8 - bit 6) option must be "No".
	5 (32)		Virtual Dolby	0= No, 32= Yes	Fixed to: "No" in case the "Dolby Pro Logic" option (Byte 2 - Bit 1) unequals "none".
	6 (64)		Subwoofer	0= No Subwoofer present, 64= Subwoofer present.	
	7 (128)				
	8 (256)	Chassis/Region	Chassis	0= EM6, 256= EM5, 512 = EM3	FTx2.x= EM6
	9 (512)				
	10 (1024)				
	11 (2048)				
	12 (4096)	Teletext	n.a.		
	13 (8192)		Flash RAM	0= No, 8192= Yes	NexTView type 2C3 and 2 need a Flash RAM.
	14 (16384)		NexTView type	0= None, 16384= Textguide only, 32768= NexTView 2C3, 49152= NexTView 2	Only available for EU.
	15 (32768)				
3	0 (1)	n.a.	n.a.		
	1 (2)	n.a.	n.a.		
	2 (4)	n.a.	n.a.		
	3 (8)	n.a.	n.a.		
	4 (16)	Dual Screen	PIP/Dual Screen	0= No, 16= Yes	
	5 (32)		n.a.		
	6 (64)		TXT/EPG Dual Screen	0= No, 64= Yes.	Fixed to: "Off" for AP-N, US, and LA versions.
	7 (128)		n.a.		
	8 (256)	Display	CRT type (Aspect Ratio)	0= 4:3, 256= 16:9	
	9 (512)		Picture Rotation	0= No, 512= Yes	Only selectable for CRT sets.
	10 (1024)		Monitor	0= No, 1024= Yes	Reserved for Flat TV monitor.
	11 (2048)	Miscellaneous	Integrated Radio	0= No, 2048= Yes	
	12 (4096)		Stand Alone	0= No, 4096= Yes	Reserved for Flat TV monitor.
	13 (8192)		Integrated DVD	0= No, 8192= Yes	
	14 (16384)		Home Cinema	0= No, 16384= Yes	Fixed to: "No" in all versions except for EU.
	15 (32768)		Integraded RC	0= No, 32768= Yes	Fixed to: "No" in all versions except for EU.
4	0 (1)	Dual Screen	DS/PIP (Aux) Tuner	0= Aux Tuner not present, 1= Aux Tuner present	Only selectable in the EU version, provided the "PIP/Dual Screen" option is "Yes".
	1 (2)		DS/PIP (Aux) Tuner Type	0= UV1316, 2= TEDE9	
	2 (4)	Miscellaneous	38.0 (or China) IF	0= No, 4= Yes	Fixed to: "No" in all versions except for AP-P.
	3 (8)		Tuner Type	0= UV1316, 8= TEDE9	
	4 (16)	Teletext	n.a.		
	5 (32)		n.a.		
	6 (64)		n.a.		
	7 (128)		n.a.		
	8 (256)	Miscellaneous	Integrated Dig. Module	0= No, 256= Yes	
	9 (512)		Integrated HDD	0= No, 512= Yes	
	10 (1024)		n.a.		
	11 (2048)		n.a.		
	12 (4096)		Anti Aging	0= No, 4096= Yes	Fixed to: "Yes" for FTV.
	13 (8192)	Personal	DVD Door Lock	0= No, 8192= Yes	
	14 (16384)		n.a.		
	15 (32768)		n.a.		

Byte	Bit (dec. value)	Subject	Options	Settings (in decimal values)	Remarks
5	0 (1)	Personal	n.a.		
	1 (2)		Auto Store Mode	0= None, 2= PDC/VPS, 4= TXT Page, 6= PDC/VPS/TXT Page	Fixed to: "None" in the AP-N and US versions.
	2 (4)				
	3 (8)		2CS Korea	0= BTSC, 8= Korean Stereo	As the MSP can not automatically detect if Korean stereo (2CS) or BTSC is transmitted, this option is needed to tell the MSP what detection should be done.
	4 (16)		Blue (or Picture) Mute	0= No, 16 = Yes	
	5 (32)		n.a.		
	6 (64)		Virgin Mode	0= No, 64= Yes	
	7 (128)	Miscellaneous	Hotel Mode	0= No, 128= Yes	
	8 (256)	Personal	Flex TV Demo	0= No, 256= Yes	
	9 (512)		n.a.		
	10 (1024)		n.a.		
	11 (2048)		n.a.		
	12 (4096)		TXT Preference	0= Top, 4096= FLOF	Only available in the EU version.
	13 (8192)		n.a.		
	14 (16384)		n.a.		
	15 (32768)		n.a.		
6	0 (1)	Miscellaneous	P50 DVD Menu Line	0= No, 1= Yes	Fixed to: "No" in all versions except for EU.
	1 (2)		n.a.		
	2 (4)		n.a.		
	3 (8)		n.a.		
	4 (16)	Chassis/Region	Region	0= EU, 16= AP-P, 32= AP-N, 48= US, 64= Latam, 80= Australia	
	5 (32)				
	6 (64)				
	7 (128)				
	8 (256)	Display	Screen	"000" (0)= 42-inch PDP (SDI), "001" (256)= 50-inch PDP (SDI), "002" (512)= 42-inch PDP (FHP), "003" (768)= 30-inch LCD (LPL), , "004" (1024)= 37-inch LCD (LPL), "005" (1280)= 42-inch LCD (LPL), "006" (1536)= 32-inch LCD (Sharp), "007" (1792)= 42-inch PDP (SDI) VGA, "008" (2048)= 37-inch PDP (FHP).	Fixed to "0" in case of CRT.
	9 (512)				
	10 (1024)				
	11 (2048)				
	12 (4096)				
	13 (8192)				
	14 (16384)				
	15 (32768)				
7	0 (1)	Source Selection	EXT4 1fH	0= No, 1= Yes	
	1 (2)		EXT1 2fH	0= No, 2= Yes	
	2 (4)		n.a.		
	3 (8)		n.a.		
	4 (16)		n.a.		
	5 (32)		EXT3 1fH	0= No, 32= Yes	
	6 (64)		DVI/VGA	0= No, 64= Yes	
	7 (128)		HDMI (Europe)	0= No, 128= Yes	
	8 (256)		AV3 1fH	0= No, 256= Yes	
	9 (512)		AV1 2fH	0= No, 512= Yes	
	10 (1024)		AV2 2fH	0= No, 1024= Yes	
	11 (2048)		n.a.		
	12 (4096)		n.a.		
	13 (8192)		n.a.		
	14 (16384)		n.a.		
	15 (32768)		HDMI (Non- Europe)	0= No, 32768= Yes	
8	0 (1)	Audio Repro	Acoustic System	0= FTV-Top (499), 1= Soft Wrap (496, 498), 2= Wrap (496, 498), 3= FTV2.3 (505), 4= FL9 Monitor (n.a.), 5= FL10 (n.a.), 6= FL11 or FL11-upgr. (380, 382, 406, 425, 426, 534), 7= FL12 (296, 305, 395, 408, 428, 444), 8= FL14 (n.a.), 9= PV02 (462), 10= FL13A (456), 11= Soft Design Line (336, 383), 12= Tech Design Line (419), 14= FL13B (456), 15= Others	Used for setting dynamic audio parameters. Between brackets the styling numbers are mentioned as listed in the quarterly Product Survey.
	1 (2)				
	2 (4)				
	3 (8)				
	4 (16)	Miscellaneous	n.a.		
	5 (32)		Intelligent Lights	0= No, 32= Yes	
	6 (64)	Audio Repro	AVL	0= No, 64= Yes	Switch to "No" when Dolby Digital is present.
	7 (128)	???	1080i Screen	0= 2fH path, 128= 3fH path	
	8 (256)	Display	CRT Size	0= 28", 256= 32", 512= 36" MEC, 768= 29", 1024= 34", 1280= 38", 1536= 28" Mk2, 1792= 36" PH, 2048= 32" MEC, 2304= 32" PH, 2560= 30", 2816= 37", 3072= 42", 3328= 50", 3840= Others	
	9 (512)				
	10 (1024)				
	11 (2048)				
	12 (4096)		Anti Moire Filter	0= No, 4096= Yes	Only for CRT
	13 (8192)		Display Type	0= LCD (LPL), 8192= PDP, 16384= CRT, 24576= LCoS, 32768= PTV, 40960= LCD (AUO), 49152= LCD (Sharp)	
	14 (16384)				
	15 (32768)				

9. Circuit Descriptions, Abbreviation List, and IC Data Sheets

Index of this chapter:

9.1 Introduction
9.2 Power Supply Unit
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9.4 Synchronisation
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9.9 Software Upgrading
9.10 Abbreviation list
9.11 IC Data Sheets

Note:

- Only **new** (not recently published) circuits are described here. For the other circuit descriptions, see a.o. the FMxx, FTP1.x, and/or FTL2.x manuals.
- In the following text, the model year 2003 refers to the FTP1.x chassis, while the model year 2004 refers to the new FTP2.x chassis.
- 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 and circuit diagrams. Where necessary, you will find a separate drawing for clarification.

9.1 Introduction

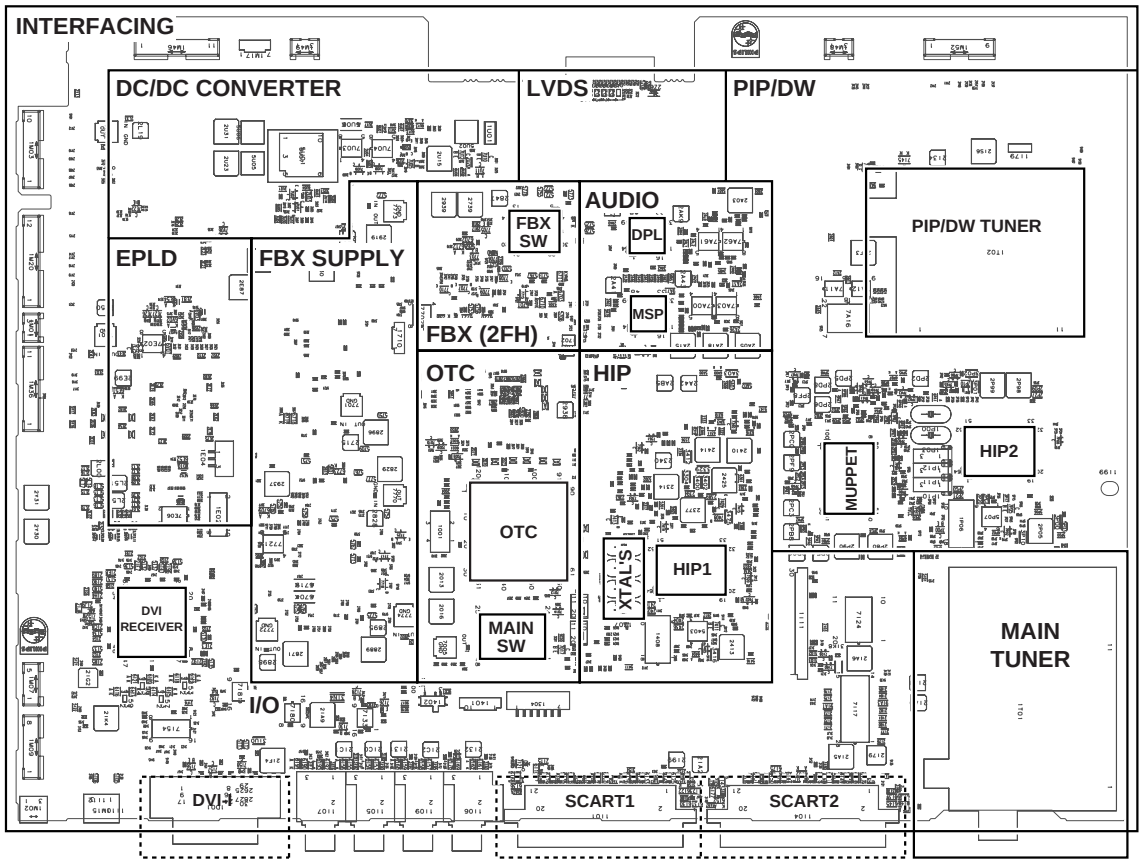
This chassis contains, compared to its predecessor, the following **new** features/components:

- **New Small Signal Board** (SSB) with lower height due to a.o. flat mounted tuners. This board is completely shielded (i.s.o. only the FBX).
- **FEM** (Falconic Embedded Memories): this is a new Falconic IC with internal Field memories and jagged line removal feature.
- **Improved 2D/3D Comb filter**: The new key components are Columbus and SDRAM. When SDRAM is used, a 3D comb filter (or temporal comb filtering) is possible. Without SDRAM, only 2D comb filtering (or spatial comb filtering) is possible. This is improved with respect to the previous 2D comb filter.
- **Improved noise reduction**: This is a second function of the Columbus and SDRAM. Noise reduction is possible without SDRAM (2D) and with SDRAM (3D).
- **Pixel Plus 2**: Eagle 1B is replaced by Eagle 1C.
  - Algorithms for Horizontal LTI and Vertical LTI are improved.
  - "Thin Line Control" as part of the sharpness control.
  - "Face Depending Peaking" should allow less sharpness in faces different from the rest of the picture. This could be used to anti age faces versus the rest of the picture.
  - "Vivid Colours 1" will result in more saturated colours.
  - The range/amount of "Blue Stretch" is extended.
  - More steps of "Green Enhancement".
  - Improved "Colour Dependent Sharpness".
  - Increased range of skin gain and skin tone.
- **Proximity sensor**: to detect motion when the customer is approaching the set, and then to light up the LEDs on the set for 6 s (detection area is 1.5 - 2 m).
- **Improved/new AutoTV functions**: AutoTV 2004 has some new hardware configurations. Applying an LCD panel requires to have contrast reserve and backlight regulation. Applying a PDP panel requires having contrast reserve as well (no backlight regulation). The Eagle 1C is detected automatically. “Columbus improved noise reduction” is used when the Columbus is present.
- **Ambient Light**: To control lamps at the rear of the TV with respect to the measured ambient light level from the light sensor or the picture content, a control output from AutoTV has been foreseen.
- **DVI input** for Europe, **HDMI input** for NAFTA and AP.

The chassis consists of a full sized SSB, a Power Supply, and some smaller PWBs for Audio, I/O, and Control functions. The main functionalities are:

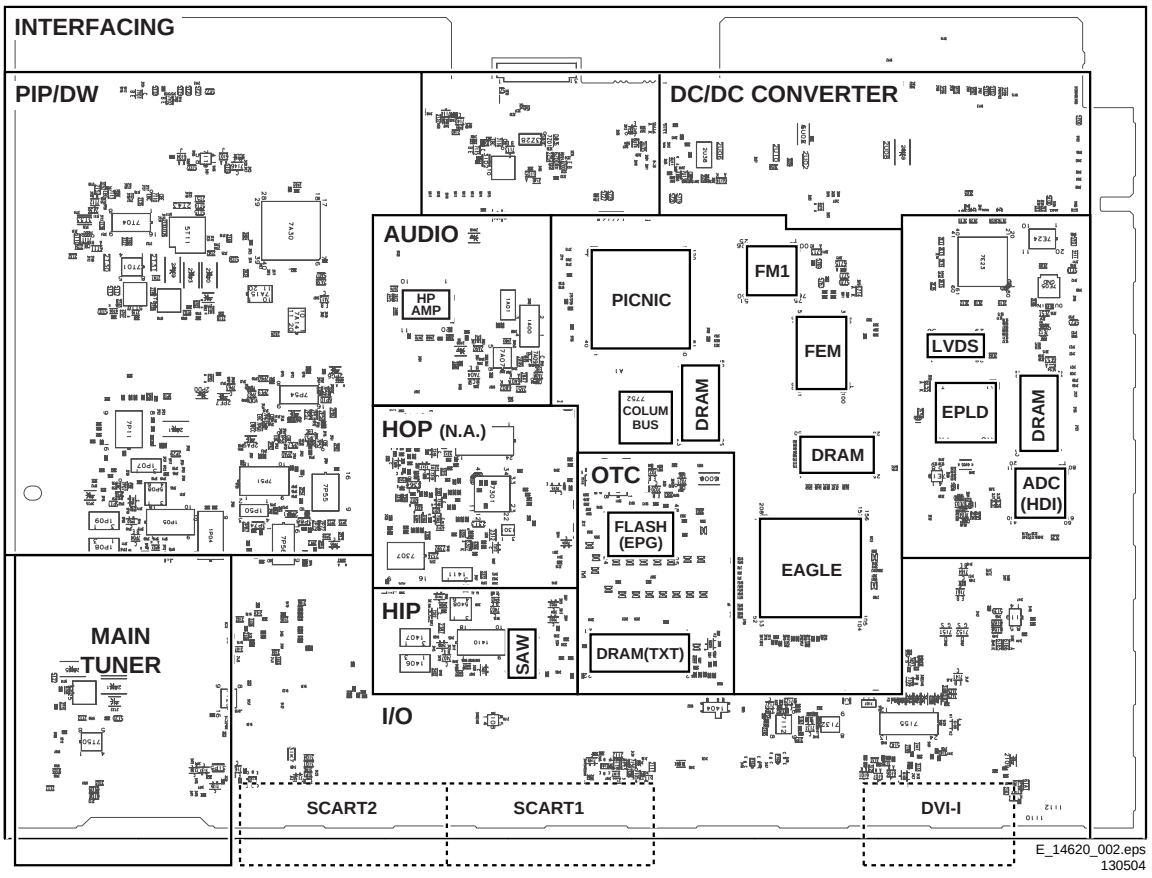
- **Power Supply**:
  - For **FHP** displays, this is an LLC power supply, based on the one used in the earlier plasma monitors (FMxx chassis). This supply (single sided) is built up very conventional, with hardly any surface mounted components on the copper side.
  - For **SDI** displays, this is a "black box" for Service (board/module swap).
- **SSB**: Core TV functionalities, being TXT/control, video and audio decoding, feature box, video featuring, and sync/ geometry control. The SSB is a high tech module (four layer, 2 sides reflow technology, full SMC) with very high component density and full shielding for EMC-reasons. Despite this, it is designed in such a way, that repair on component level is possible. To achieve this, attention was paid to:
  - Clearance around surface mounted ICs (for replacing).
  - Detailed diagnostics and fault finding is possible via ComPair.
  - Software upgrading (only for main software) is possible via ComPair.

On the drawings (next page), it is indicated where all the functional cells are located on the SSB (mind you that this is just an indication):



E_14620_012.eps
130504

Figure 9-1 SSB top view



E_14620_002.eps
130504

Figure 9-2 SSB bottom view

9.2 Power Supply Unit

9.2.1 Power Supply Samsung PDP (SDI)

General

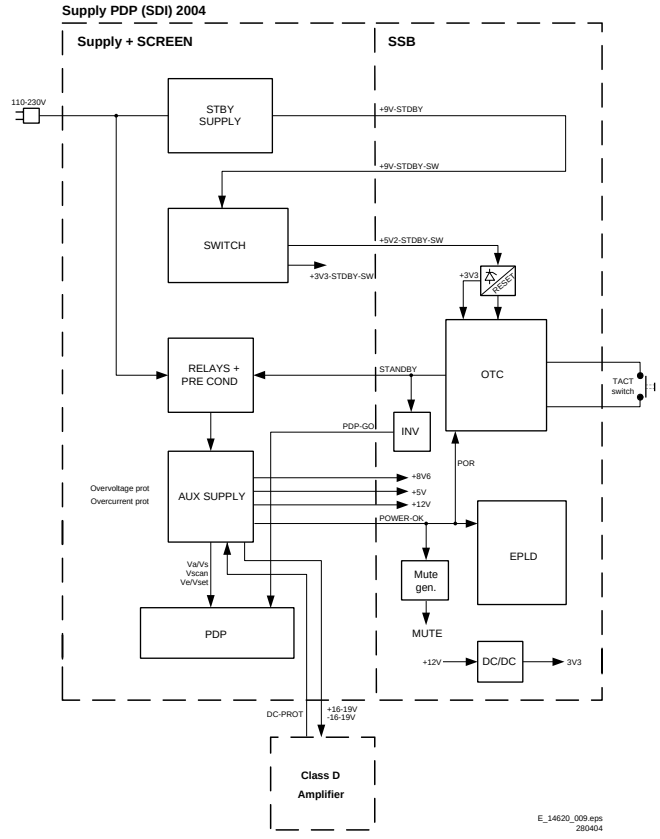


Figure 9-3 Block diagram PDP (SDI) power supply

The Power Supply of SDI PDPs is a buy-in PSU. This Power Supply is divided in 2 parts:

- One PSU for the PDP itself (incl. the Stand-by Supply).
- One "sub" PSU for the SSB.

For Service the Power Supply is a black box. When defective (this can be traced via error-codes in the error buffer, or by strange phenomena), a new panel must be ordered and after receipt, the defective panel must be send for repair.

Stand-by Supply

The Stand-by Supply is directly connected to the mains, there is no mains switch.

- US: the mains input has a polarisation that is requested for the USA together with a polarised mains cord. The neutral is connected to the mains neutral.
- EU/AP: A non-polarised cord is used for these regions.

Changes in 2004:

There is no ON/OFF switch, the +9V_STDBY is always connected to the switching part.

Switch

The +9V_STBDBY_SW is routed to the “switch” part in the supply. This part generates the 5V2_STDBY_SW to the OTC supply (which generates its own reset).

The +3V3_STDBY_SW is not used on the SSB, it is only used for the CPU of the plasma panel.

Relays and Pre-conditioner

If the STANDBY bit in the OTC is zero, the STANDBY line is “low”, and the relay in the supply connects the mains voltage to the AUX supply.

For the US region, the mains voltage is doubled.

The OTC delivers a PDP-GO signal to the PDP when the set is not in stand-by.

Aux Supply

This is an LLC supply that delivers the Va, Vs, Vscan, Ve, and Vset directly to the PDP.

Changes in 2004:

- The voltages +12V, +8V6, +5V, and the tuner supply are derived from the PDP supply. The +3V3 is generated by the DC/DC converter on the SSB.
- The AUX supply delivers a POWER_OK signal to the EPLD (is not used by the EPLD). This signal is used as POR signal to prevent audible plops, and by the OTC to guarantee a proper “switch off” (via the mains plug).
- The +V and -Vsound are routed to the class D audio amplifier. The DC_PROT signal from this amplifier goes directly to the supply and causes a hardware protection.
- The AUX supply has its own over-voltage and over-current protection.

9.2.2 Power Supply Fujitsu PDP (FHP)

Note: In the following text, the model year 2003 refers to the FTP1.x chassis, while the model year 2004 refers to the new FTP2.x chassis.

General

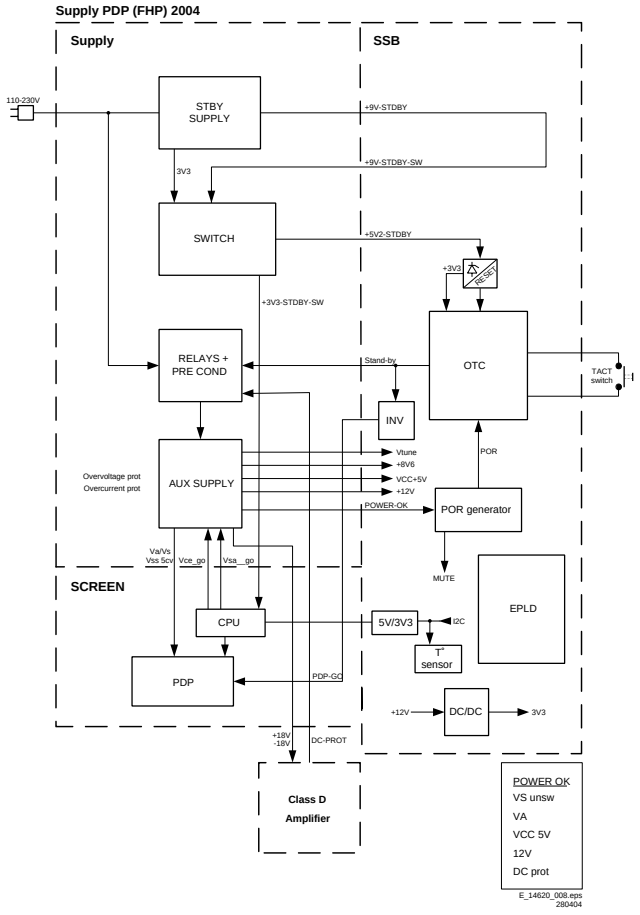


Figure 9-4 Block diagram PDP (FHP) power supply

Changes in 2004:

- Switched 3V3 and 5 V on Stand-by Supply not necessary any more: a tact switch replaces the ON/OFF switch.
- No I^2C I/O expander any more for fault reading.
- No fan control any more.
- Over-voltage protection omitted on the 12 V supply.
- 3V3 protection becomes 12V protection.

- LLC resonant supply: 9 V becomes 30 V for the 12 V down converter. Extra filter added for detecting low frequency.
- Pre-conditioner: extra protection for mains dips.
- 3V3 down converter becomes 12V down converter for Ambilight and DC/DC converter on the SSB.
- Sound supply slightly different: more power, higher voltage.
- Minor modifications on the Vcc control IC TEA1507.
- Va converter: no current detection any more towards the PDP panel.
- The OTC is always powered.
- A special STANDBY situation is created called the OFF state.

Differences with the SDI PSU:

- Combined MAIN and STANDBY supply, with preconditioner.
- The sound supply is +18V and -18V.
- The display CPU gives a Vce_go and Vsa_go to start-up the Aux supply.The Power_OK line monitors the Vs_unswitched, Va, Vcc_5V, 12V, and DC_PROT. This Power_OK is combined via an AND port with the 9V_STDBY_SW and this generates the POR to the OTC.
- A temperature sensor measures the temperature of the SSB. The maximum power is decreased when the temperature becomes too high.
- In SEMI-STANDBY and ON, the Ambient Light is powered.

Table 9-1 PSU output voltage overview (for FHP plasma panel)

Name of outp. voltages	Destination of outp. voltages	Usage of output voltages	Nominal Value	Nominal output current
Vs (or sustain voltage)	Plasma display	For the actual light generation of the display, consumption is correlated to light output level. (With a dark screen there is still consumption)	75 V to 90 V (adjusted per display)	3.0 A typical, 20 A peak
Va (or address voltage)	Plasma display	For the addressing of the pixels of the display, consumption is correlated to variation in light output between adjacent pixels.	50 V to 65 V (adjusted per display)	3.5 A max, 8 A peak
Vcc	Plasma display and SSB	Powers the logic electronics on the PDP and digital circuits on the SSB	5.1 V	3.0 A typical, 5.0 A peak
Vpr or 3V3*	Plasma display	For the logic control board (micro processor)	3.3 V	50 mA nominal
5V2 *	Small Signal Board	For the micro processor and related circuits	5.2 V	500 mA nominal, 80 mA in stand-by
9V *	Only used inside the PSU	For the two relays	9 V	100 mA nominal
25V_HOT	Only used inside the PSU	For the controller of the LLC converter	25 V	
12V	Small Signal Board and ambient light inverter board	Used by DC-DC converters on the SSB to generate lower voltages, the consumption by the inverter board is correlated to the ambient light levels.	12 V	2.8 A with ambient lighting on maximum (800mA for SSB, 2 A max for ambient light)
8V6	Small Signal Board	Used by analog chips on the SSB	8.5 V	0.55 A

Table 9-2 PSU control signal overview (for FHP plasma panel)

Name of signal	Destination or origin	Type of signal	Function
Vcego	From Display to PSU	Two states H or L, H is active (3V3 levels)	Enables the LLC and Vcc converter to start up, only the Vcc (5 V) is applied to the display
Vsago	From Display to PSU	Two states H or L, H is active (3V3 levels)	Enables the Va converter to start up, the Vs voltage and Va voltages are applied to the display
Stand-by	From SSB to PSU	Two states H or L, “high” is active (H is stand-by) (3V3 levels)	When “high” the mains relays are opened so only the stand-by converter remains active. In a playing tv set this signal is low.
Vrs	From Display to PSU	Analogue signal, increasing Vrs means increasing Vs (0..2 V)	Adjusts the value of the Vs output voltage, the display measures the Vs value and adjusts it to the optimal value which is different for every individual display.
Vra	From Display to PSU	Analog signal, increasing Vra means increasing Va (0.2 V)	Adjusts the value of the Va output voltage, the display measures the Va value and adjusts it to the optimal value which is different for every individual display.
Power_OK	From PSU to SSB	Two states H or L, “high” is active (3V3 levels)	Becomes high if Va, Vs, Vcc, 12 V, 8V6 are within their limits so if these outputs are working normal
DC_prot	From audio power amplifier board to PSU	Two states H or L, “high” is active	In case the DC level on the loudspeakers exceed the limit, the sound amplifier panel puts this signal line high.

Power States

There are four different power states. Their characteristics are summarised in the "Power states" table.

Note:

- All regions use a red LED for STANDBY and a blue LED for ON. Otherwise, there is no visible difference between OFF and STANDBY.
- In SEMI-STANDBY coming from STANDBY, the blue LED is "on",
- In SEMI-STANDBY coming from ON, the red LED is "on".

Table 9-3 Power states

Power States	Switch	PDP
OUT (Mains cord disconnected)	X	No power.
OFF	OFF	Stand-by supply is working. Main supply not working. 2003: OTC is not powered. 2004: OTC is powered and is in low power stand-by. No LED is "on". No P50 or EPG (Europe). Proximity sensor is "off". No time extraction started. No ambient light.RC6 ignored.
STAND BY (1)	ON	Stand-by supply is working. Red LED is "on".
SEMI STAND BY (Going to ON)	ON	Stand-by supply is working. Main supply is working. PDP is "on" and blanked. EPG loading and P50 recording are possible (Europe). Time extraction. 2003: Red and Green LEDs are "on". 2004: Blue LED is "on".
ON	ON	The set is working. 2003: Green LED is "on". 2004: Blue LED is "on".
SEMI STAND BY (Coming from ON)	ON	Stand-by supply is working. Main supply is working. PDP is "on" and blanked. EPG loading and P50 recording are possible (Europe). 2003: Red and Green LEDs are "on". 2004: Red LED is "on".
SEMI STAND BY AMBIENT LIGHT ON	ON	Stand-by supply is working. Main supply is working. PDP is "on" and blanked. Red LED is "on".

(1) Stand-by, entered via the remote or via a protection. A special case of STANDBY state is the SERVICE STANDBY STATE. A service engineer with a "ComPair/Dealer Service Tool" can enter it. In this state, an IR LED can be used for Diagnostics (for reading error codes). It is the starting condition for the “stepwise start-up".

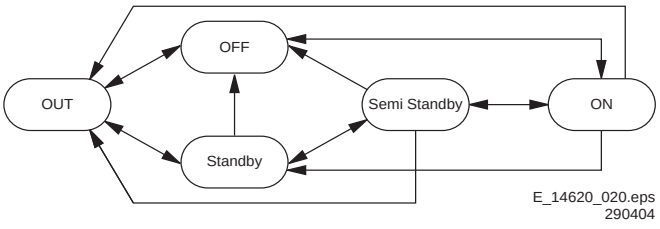


Figure 9-5 Power state diagram

- **OUT:** The set is OUT when the mains cord is disconnected. When the mains cord is connected, the set goes to OFF or to STANDBY state, depending on the last status in the NVM. From all states, the set can be set to the OUT state by disconnecting the mains cord or by a mains interruption.
- **OFF:** In the OFF state, the OTC is powered but is in low power STANDBY state. No LEDs are "on", RC6 is ignored, no EPG or P50 is possible, Proximity is set to "off", time extraction is not started (if it was done before this state, the clock stays running). The tact switch can only change this state; the set goes via SEMI-STANDBY to ON. From all states, we can go to the OFF state by the tact switch.
- **STANDBY:** The set is in STANDBY if the STANDBY bit is set. This state can change with the RC6 "on" command, for EPG loading, P50 recording, for time extraction, or for ambient light. The next state is SEMI-STANDBY and to ON if the STANDBY bit is not set.
- **SEMI-STANDBY:** State between STANDBY or OFF and ON state. All supply voltages are present, but the screen is blanked.
- **ON:** set is ON.

POR detection

Situation in 2003:

- After all the supply lines are available, the supply generates a POWER_OK signal (active "low"). This signal is used as POR to mute the sound as long as this line is not "low". The POR is inverted (called ROP) and is used to mute the sound as long as the POWER_OK is "low".

Changes in 2004:

- A POK (Power OK) signal is generated by the supply when all the voltages are within specs. This line is used as POR_FLASH for the OTC.
- For "anti-plop", a transistor generates a signal. The collector is via a resistor connected to the +5V2, the base is connected to the POK signal. The collector signal follows the 5V2 until the POK is high. The transistor conducts, the collector becomes "low", and the sound will be de-muted.

Start-up sequence

1. When the mains is connected, the stand-by supply delivers 5V2 to the Small Signal Board, 3V3 to the display control electronics, 20 V for the Vs converter (25VHOT), and 9 V for the relays.
2. When the TV set goes from STANDBY/OFF to ON mode, the STANDBY signal line is made "low" by the SSB. Relay 1450 closes, sending the mains to the pre-conditioner. The pre-conditioner starts up and delivers 390 V_{DC}.
3. The SSB has also a signal line running towards the display electronics called CPUGO, it is part of the LVDS cable. This signal is driven by the STANDBY line via a simple inverter. So CPUGO is made "high", which retrieves the display out of its low power mode.
4. The OTC on the SSB sends an I^2C command to the display in order to start up. The display in turn makes the VCEGO signal line towards the power supply "high" after it has verified that the Vcc supply voltage is indeed still "low".
5. The Vs converter, which was already supplied with 400 V by the pre-conditioner and with around 20 V by the stand-by supply (25VHOT), is enabled by optocoupler 7003. It generates 65 V at the Vs_unsw output and around 24 V at the 30 V auxiliary output. Further the Vcc converter is started up delivering 5.1 V typical to the display. Also the 12 V converter starts up.
6. The display monitors the Vcc voltage. On condition Vcc becomes "high" and Vs and Va are still "low", it applies the analogue control voltages Vrs and Vra to the supply and makes VSAGO high.
7. The display monitors Va and Vs, it waits 5 seconds for Va to rise above 29 V and Vs to rise above 69 V. If successful, the power supply is fully started up. If the 5 seconds run out, the display shuts down and retries the procedure from the beginning.

9.3 Video

For a detailed description of the Feature Box (PICNIC, Columbus, FEM, and Eagle 1C), see the EM5.3 Service Manual.

9.4 Synchronisation

See the FTL13 manual for a (more) detailed description.

9.5 Audio

See the FTL13 manual for a (more) detailed description.

9.6 Control

See the FTL13 manual for a (more) detailed description.

9.7 Proximity Sensor (if present)

See the FTL2.1 manual for a (more) detailed description.

9.8 Ambient Light (if present)

See the FTL2.1 manual for a (more) detailed description.

9.9 Software Upgrading

In this chassis, you can **upgrade** the main software via ComPair. This offers the possibility, to replace the entire SW image without having to remove the flash-memory from its socket. You can find more information on how this procedure works in the ComPair file. It is possible that not all sets are equipped with the hardware, needed to make software upgrading possible.
To speed up the programming process, the firmware of the ComPair interface can be upgraded. See Chapter "Service Modes ..."; paragraph "ComPair" - "How To Order" for the order number.

See the FTL13 manual for a (more) detailed description.

9.10 Abbreviation list

1080i	1080 visible lines, interlaced
1080p	1080 visible lines, progressive scan
2DNR	Spatial (2D) Noise Reduction
3DNR	Temporal (3D) Noise Reduction
AARA	Automatic Aspect Ratio Adaptation: algorithm that adapts aspect ratio to remove horizontal black bars; keeping up the original aspect ratio
ACI	Automatic Channel Installation: algorithm that installs TV sets directly from 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
ANR	Automatic Noise Reduction: one of the algorithms of Auto TV
AR	Aspect Ratio: 4 by 3 or 16 by 9
Artistic	See OTC 2.5: main processor
ASF	Auto Screen Fit: algorithm that adapts aspect ratio to remove horizontal black bars but without throwing away video information
ATV	See Auto TV
AUDIO_C	Audio Centre
AUDIO_L	Audio Left
AUDIO_R	Audio Right
AUDIO_SL	Audio Surround Left
AUDIO-SR	Audio surround right
AUDIO_SW	Audio Sub woofer
Auto TV	A hardware and software control system that measures picture content, and adapts image parameters in a dynamic way
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz. B= VHF-band, G= UHF-band
B-SC1-IN	Blue SCART1 in
B-SC2-IN	Blue SCART2 in
B-TXT	Blue teletext
CL	Constant Level: audio output to connect with an external amplifier
ComPair	Computer aided rePair
CRT	Cathode Ray Tube or picture tube
CSM	Customer Service Mode
CTI	Colour Transient Improvement: manipulates steepness of chroma transients
CVBS	Composite Video Blanking and Synchronisation
CVBS-TER	CVBS terrestrial
COLUMBUS	COLour LUMinance Baseband Universal Subsystem. IC performing noise reduction and 2D/3D comb filtering
DAC	Digital to Analogue Converter
DBE	Dynamic Bass Enhancement: extra low frequency amplification
DDC	Display Data Channel; is a part of the "Plug and Play" feature
DFU	Direction For Use: description for the end user
D/K	Monochrome TV system. Sound carrier distance is 6.5 MHz. D= VHF-band, K= UHF-band
DNR	Digital Noise Reduction: noise reduction feature of the box

DPL	Dolby ProLogic
DSP	Digital Signal Processing
DST	Dealer Service Tool: special remote control designed for dealers to enter e.g. service mode
DVD	Digital Versatile Disc
DVI(-d)(-i)	Digital Visual Interface (d= digital only) (i= integrated); a digital video interface to a display, designed to replace the analogue YPbPr or RGB interface
Eagle	Feature box IC performing peaking, zooming and sub pixel LTI in both horizontal and vertical direction, CTI and other colour features
EDID	Extended Display Identification Data (VESA standard)
EEPROM	Electrically Erasable and Programmable Read Only Memory
EHT	Extra High Tension
EPG	Electronic Program Guide: system used by broadcasters to transmit TV guide information (= NexTView)
EPLD	Erasable Programmable Logic Device
EU	EUrope
EXT	External (source), entering the set via SCART or via cinches
FALCONIC	SAA4992H, Feature Box IC performing Digital Natural Motion, 3DNR, and vertical zoom and vertical peaking
FBL	Fast Blanking: DC signal accompanying RGB signals
FBL-PIP	The fast blanking signal for PIP
FBL-TXT	The fast blanking signal for TXT. It has a higher priority than FBL-PIP
FBX	Feature Box: part of small signal / separate module which contains 100 Hz processing, extra featuring and AutoTV algorithms (FBX6= based on PICNIC, FBX7= based on PICNIC and Eagle)
FDS	Full Dual Screen
FEM	Falconic Embedded Memory; IC (SAA4998H) that is the successor of the SAA4993H with jagged line removal and embedded memory
FHP	Fujitsu Hitachi Plasma display Ltd.
FLOF	Full Level One Features, TXT standard
FLASH	Flash memory
FM	Field Memory or Frequency Modulation
G-TXT	Green teletext
GND-DRIVE	A separate ground for the line drive towards the line driver
HA	Horizontal Acquisition: horizontal sync pulse coming out of the HIP
HD at HOME	A signal from the OTC, to switch the HOP to the Pixel Plus standard (75 Hz frame)
HIP	High-end video Input Processor (TDA9320): video and chroma decoder of EM5E
HOP	High-end video Output Processor (TDA9330): video, sync, and geometry controller of EM5E
HP	Head phone
I	Monochrome TV system. Sound carrier distance is 6.0 MHz. VHF- and UHF-band
Interlaced	Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in 'pairs', causing line flicker
I/O	Input/Output
I^2C	Inter IC bus (also called IIC)
IF	Intermediate Frequency
Interlaced	Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in "pairs", causing line flicker
Last Status	The settings last chosen by the customer, read, and stored in RAM or in the NVM. They are called at start-up of the set to configure it according the customers wishes
LCD	Liquid Crystal Display
LPL	LG-Philips LCD
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
LNA	Low Noise Adapter
LORE	LOcal REgression based noise reduction
LSP	Large signal panel
LVDS	Low Voltage Differential Signalling; Data transmission system for high speed and low EMI communication
M/N	Monochrome TV system. Sound carrier distance is 4.5 MHz. M= 525 lines @ 60 Hz, N= 625 lines @ 50 Hz
MSP	Multi-standard Sound Processor: ITT sound decoder of EM5E
MUTE	Mute-Line
NC	Not Connected
NICAM	Near Instantaneously Companded Audio Multiplexing; This is a digital sound system, mainly used in Europe
NTSC	National Television Standard Committee; Colour system mainly used in North America and Japan. Colour 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 e.g. alignments
O/C	Open Circuit
ON/OFF LED	On/Off control signal for the LED
OSD	On Screen Display
OTC	On screen display Teletext and Control; also named Artistic (SAA5800)
P50	Project 50 communication: protocol between TV and peripherals
PAL	Phase Alternating Line; Colour system mainly used in West Europe (colour carrier= 4.433619 MHz) and South America (colour carrier PAL M= 3.575612 MHz and PAL N= 3.582056 MHz)
PCB	Printed Circuit Board
PDP	Plasma Display Panel
PFC	Power Factor Corrector (or Pre-conditioner)
PICNIC	Peripheral Integrated Combined Network IC (SAA4978): main IC for 100 Hz featuring and feature processing
PIP	Picture In Picture
PLL	Phase Locked Loop; Used for e.g. FST tuning systems. The customer can directly provide the desired frequency
POR	Power On Reset; Signal to reset the µP

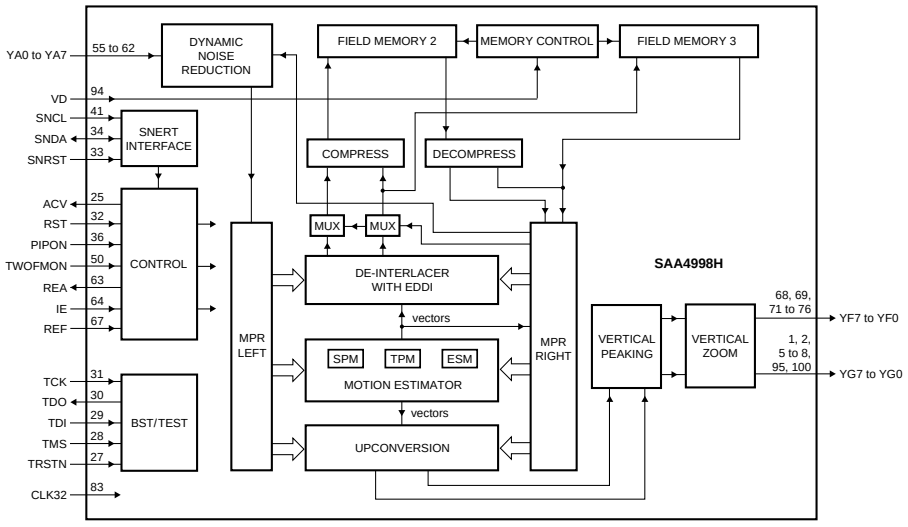
Progressive Scan	Scan mode where all scan lines are displayed in one frame at the same time, creating a double vertical resolution.
PSU	Power Supply Unit
PWB	Printed Wiring Board
RAM	Random Access Memory
R-TXT	Red teletext
RC	Remote Control
RC5 / RC6	Signal protocol from the remote control receiver
RESET	Reset signal
RGB	Red, Green, and Blue colour space; The primary colour signals for TV. By mixing levels of R, G, and B, all colours (Y/C) are reproduced
RGBHV	Red, Green, Blue, Horizontal sync, and Vertical sync
ROM	Read Only Memory
SAM	Service Alignment Mode
S/C	Short Circuit
SCL-F	Clock signal on fast I^2C bus
SD	Standard Definition
SDA-F	Data signal on fast I^2C bus
SDI	Samsung Display Industry
SECAM	SÉquence Couleur Avec Mémoire; Colour system mainly used in France and East Europe. The chroma is FM modulated and the R-Y and B-Y signals are transmitted line sequentially. Colour carriers= 4.406250 MHz and 4.250000 MHz
SIF	Sound Intermediate Frequency
SMD	Surface Mounted Device
SMPS	Switched Mode Power Supply
SNERT	Synchronous No parity Eight bit Reception and Transmit
SSB	Small Signal Board
STBY	Stand-by
SW	Sub woofer
SVGA	800x600 (4:3)
SVHS	Super Video Home System
TMDS	Transition Minimised Differential Signalling
TOP	Table Of Pages; TXT standard
TXT	Teletext
uP	Microprocessor
UV	Colour difference signals
UVSH	UHF, VHF, S-, and Hyper-band
VA	Vertical Acquisition
V-a	Addressing voltage for the plasma display
VDS	Virtual Dolby Surround
VESA	Video Electronics Standards Association
VFB	Vertical Flyback Pulse: vertical sync pulse coming from the Feature Box
VGA	Video Graphics Array; 640x480 (4:3)
VL	Variable Level out: processed audio output towards external amplifier
V-ra	Setting voltage for V_a
V-rs	Setting voltage for V_s
V-s	Sustain voltage for the plasma display
WSS	Wide Screen Signalling; used by broadcasters to transmit e.g. PALPLUS and 16:9 Aspect Ratio
WXGA	Wide eXtended Graphics Array; 1280x768 (15:9) or 1366x768 (16:9)
WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
XGA	Extended Graphics Array; 1024x768 (4:3)
XTAL	Quartz crystal
Y	Luminance signal
Y100	Y from Feature Box
YPbPr	This is a scaled version of the YUV colour space. Y= Luminance, Pb/Pr= Colour difference signals B-Y and R-Y, other amplitudes w.r.t. to YUV
Y-OUT	Luminance-signal to HOP IC
YUV	Colour space used by the NTSC and PAL video systems. Y is the luminance and U/V are the colour difference signals

9.11 IC Data Sheets

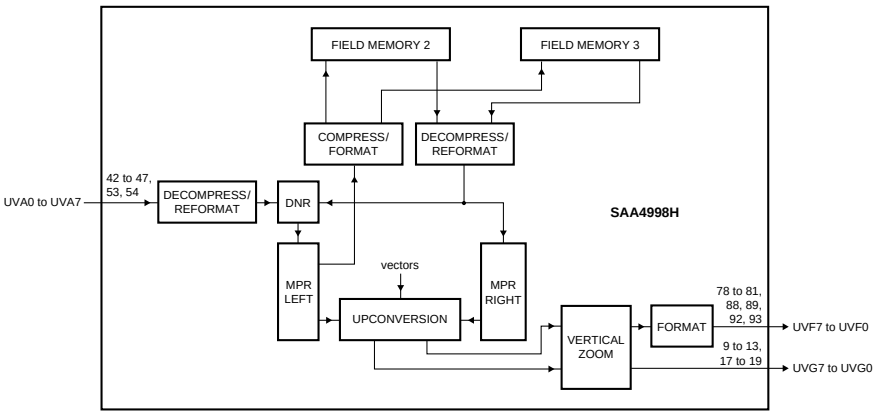
In this paragraph, the internal block diagrams and pinning are given of ICs that are drawn as a 'black box' in the electrical diagrams (with the exception of 'memory' and 'logic' ICs).

9.11.1 Diagram B3B, SAA4998 (IC7760)

Block diagram of the luminance part in full FALCONIC mode.



Block diagram of the chrominance part in full FALCONIC mode.



Pin configuration

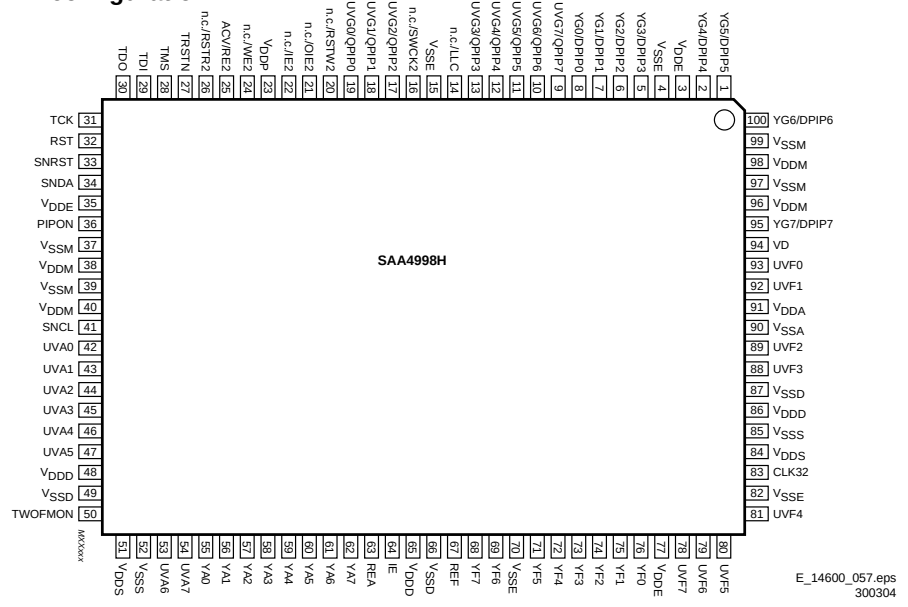
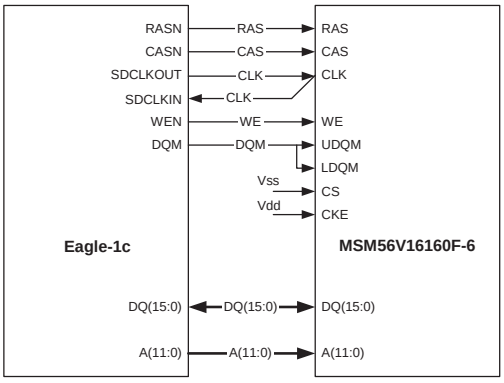


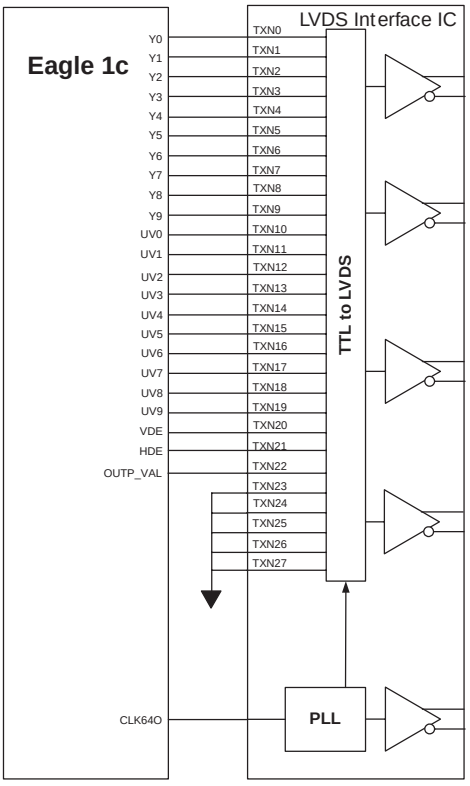
Figure 9-6 Internal block diagram and pin configuration.

9.11.2 Diagram B3C, T6TX5EF (IC7720)

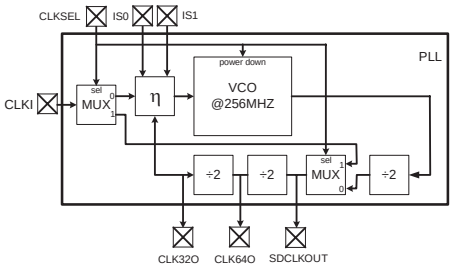
Interface between Eagle and External SDRAM

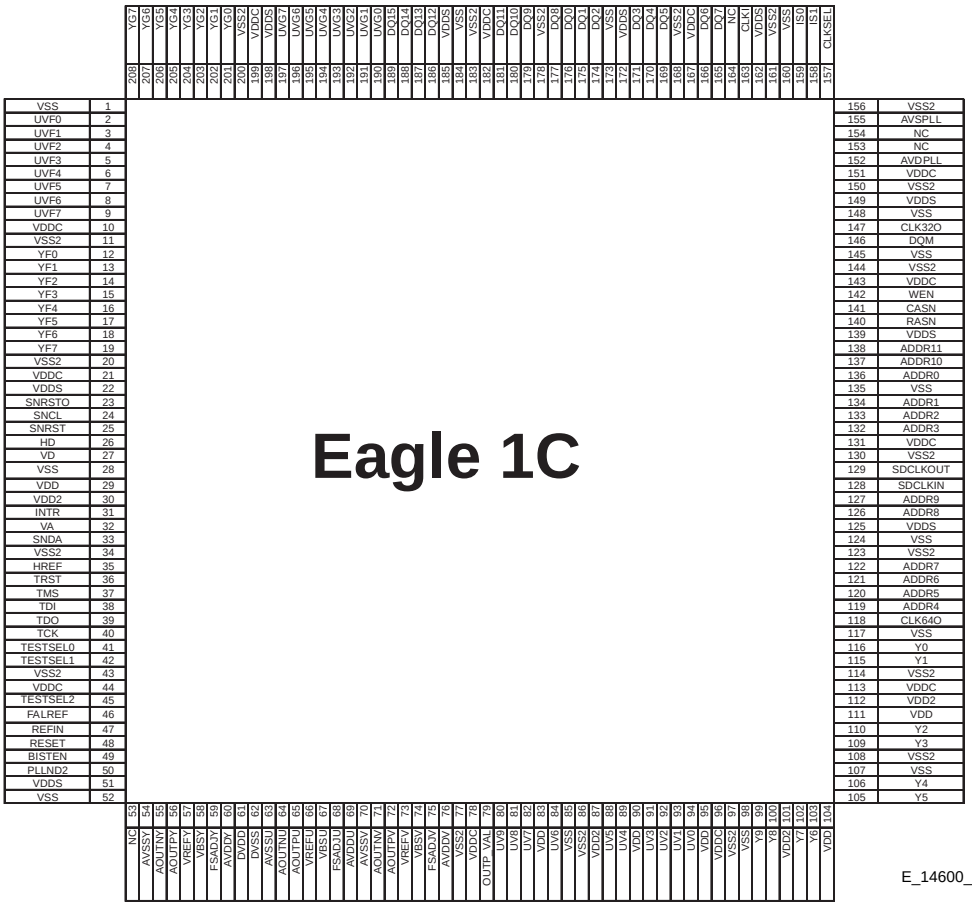


EAGLE IC digital output interface to LVDS device



Internal Clock generation





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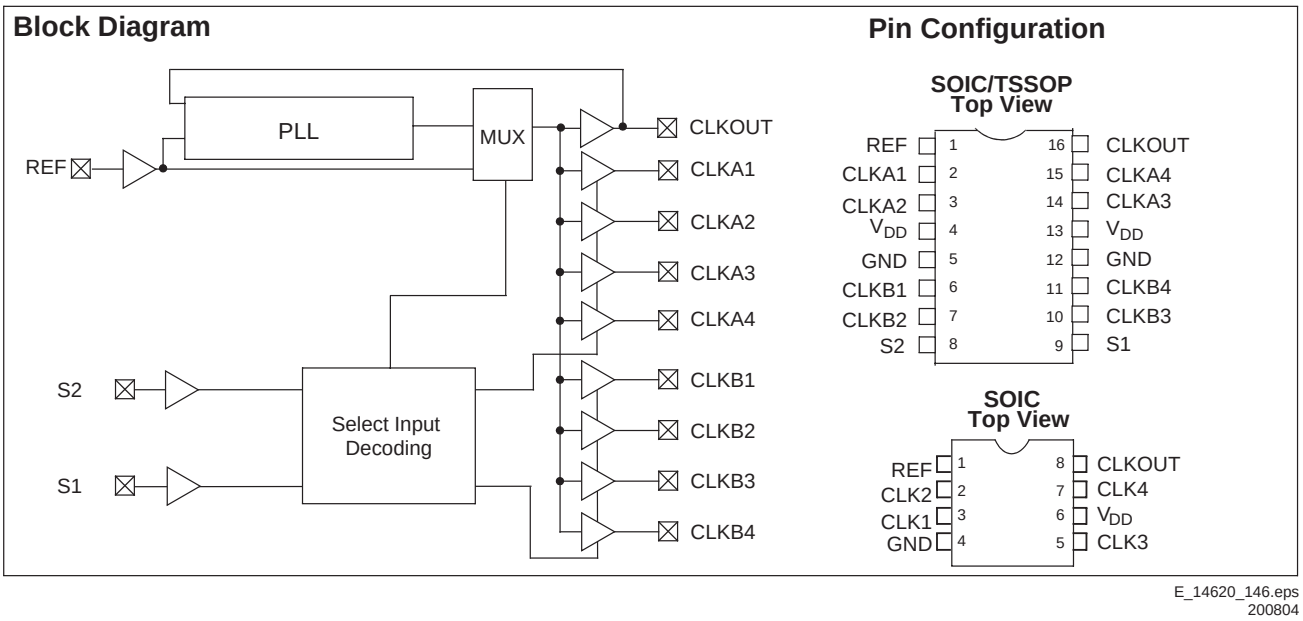
131004

Figure 9-7 Internal block diagram and pin configuration.

9.11.3 Diagram B3C, CY2305SC-1 (IC7721)



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200804

Figure 9-8 Internal block diagram and pin configuration.

9.11.4 Diagram B3D, T6TU5XB (IC7752)

Figure 1 Package outline (top view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
A	WEB/ DAVB	UVA0 /Di0	UVA2 /Di2	UVA4 /Di4	UVA6 /Di6	UVA8 /Di8	SEL656	TST1	YA2	YA4	YA6	YA8	VA	HREF	SDA	A
B	YB8	VSS	UVA1 /Di1	UVA3 /Di3	UVA5 /Di5	UVA7 /Di7	YA0 /Di9	BISTEN	YA1	YA3	YA5	YA7	WEA/ DAVA	VSS	SCL	B
C	YB7	YB6	VSS	VDDS	VSS	VSS	VDDC	VDDC	VSS	VSS	VDDC	VDDS	VSS	SNDA	SNRST	C
D	YB5	YB4	VDDC	N.C.									VSS	SNCL	TCK	D
E	YB3	YB2	VSS										VDDC	TMS	TDO	E
F	TST2	YB1	VSS										VSS	TRST	TDI	F
G	CLKASB	YB0 /Do9	VDDS				COLUMBUS TOP-VIEW						VDDS	A0ICC	RESET	G
H	CLKASA	UVB8/ Do8	TST3										VDDC	CLK EXT	CLKSEL	H
J	UVB7 /Do7	UVB6/ Do6	VSS										VSS	CLK	WEN	J
K	UVB5 /Do5	UVB4/ Do4	VDDC				PPA Version 2.7						VSS	CASN	RASN	K
L	UVB3 /Do3	UVB2 /Do2	VSS										VDDS	DQM	DQ16	L
M	UVB1 /Do1	UVB0 /Do0	VDDS										VSS	DQ14	DQ15	M
N	AVD	N.C.	VDDS	VSS	VSS	VDDC	VSS	VDDS	VDDC	VSS	VDDS	VSS	VSS	VDDS	DQ13	N
P	AVS	VSS	A7	A9	A2	A0	A11	DQ7	DQ6	DQ4	DQ3	DQ1	VDDS	VSS	DQ12	P
R	A4	A5	A6	A8	A3	A1	A10	DQ8	VSS	DQ5	VSS	DQ2	DQ9	DQ10	DQ11	R
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

E_14600_059.eps
200804

Figure 9-9 Pin configuration

9.11.5 Diagram B6B, MAS3528E (IC7A30)

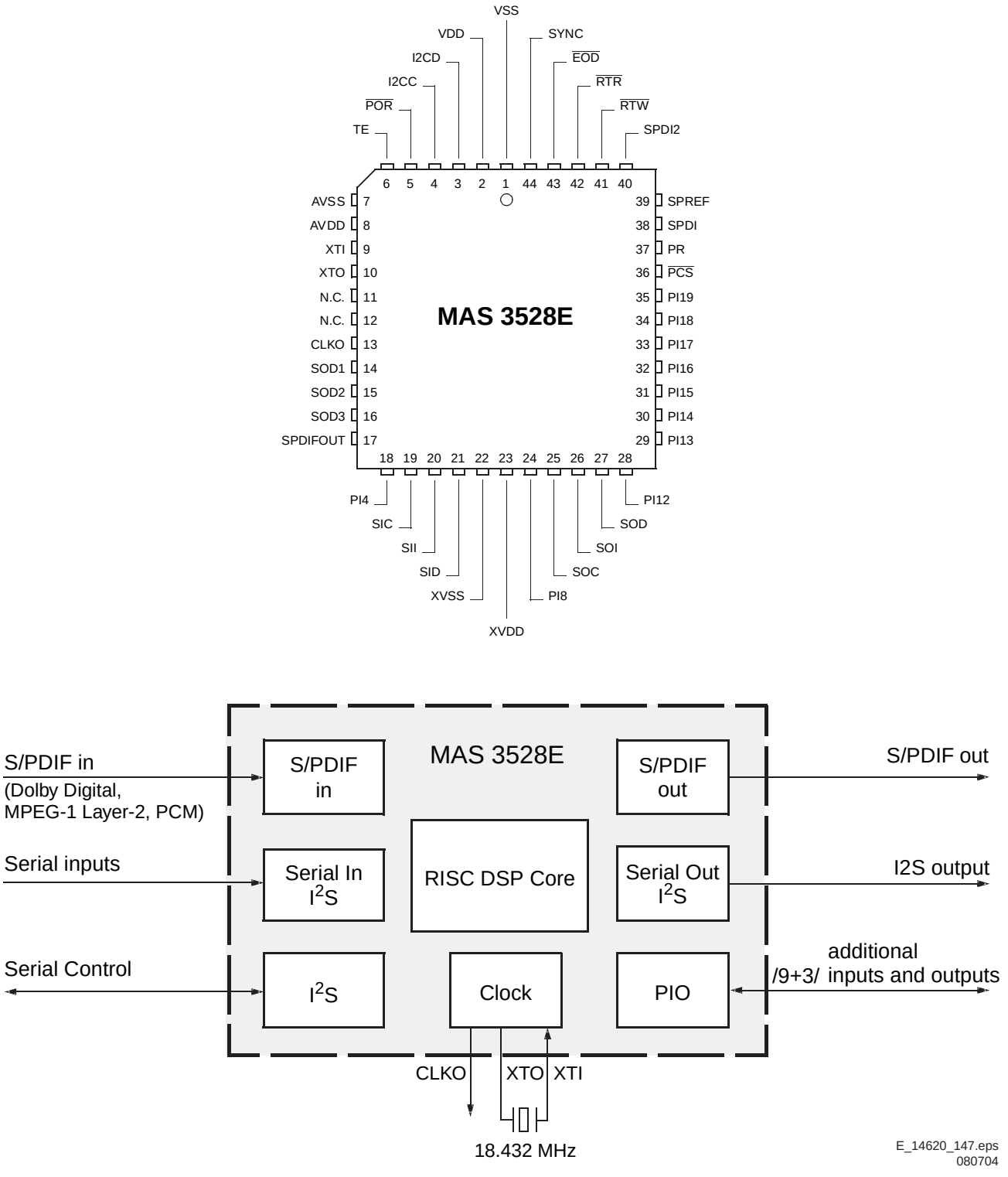
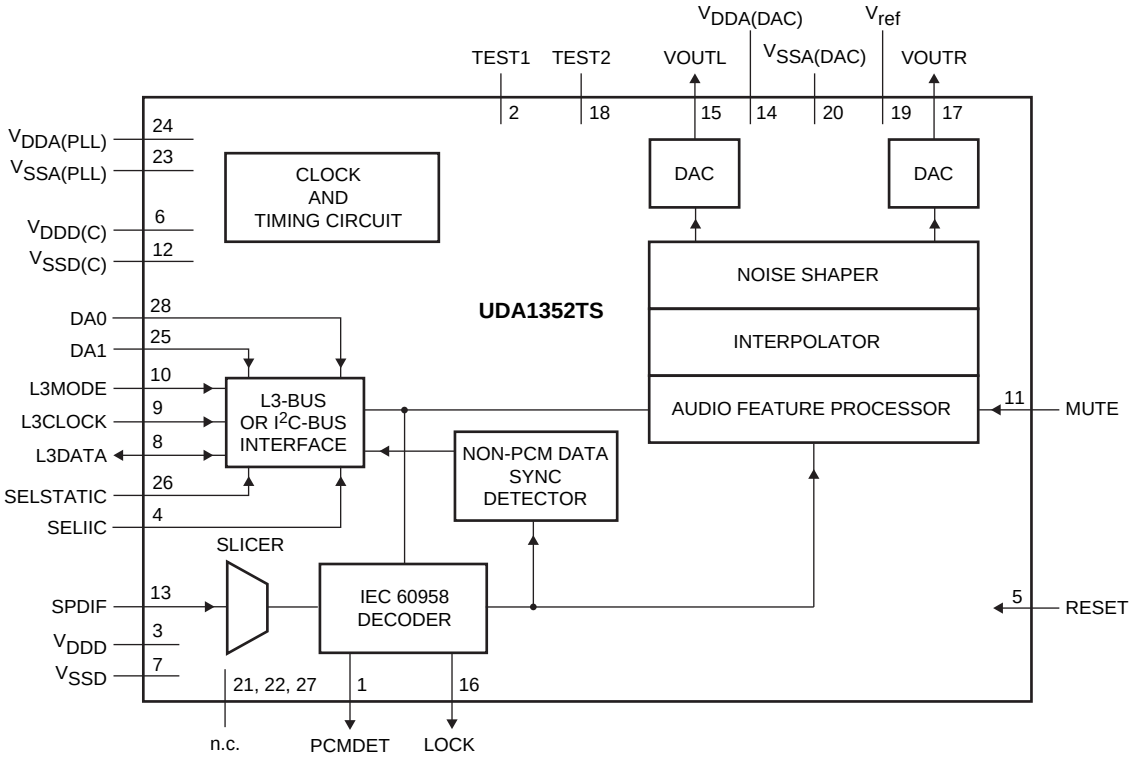


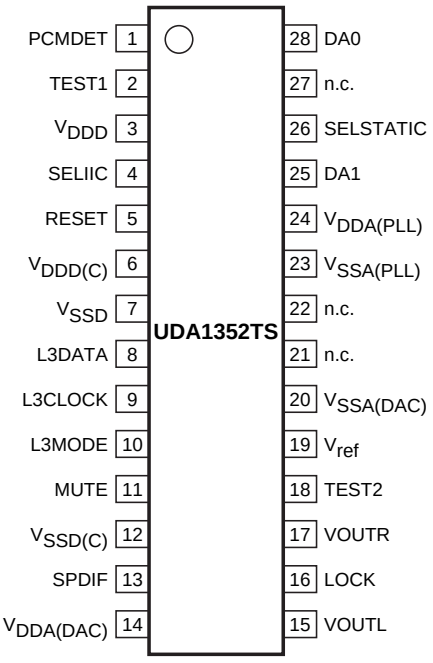
Figure 9-10 Internal block diagram and pin configuration.

9.11.6 Diagram B14D, UDA1352TS (IC7I25)

BLOCK DIAGRAM



PIN CONFIGURATION

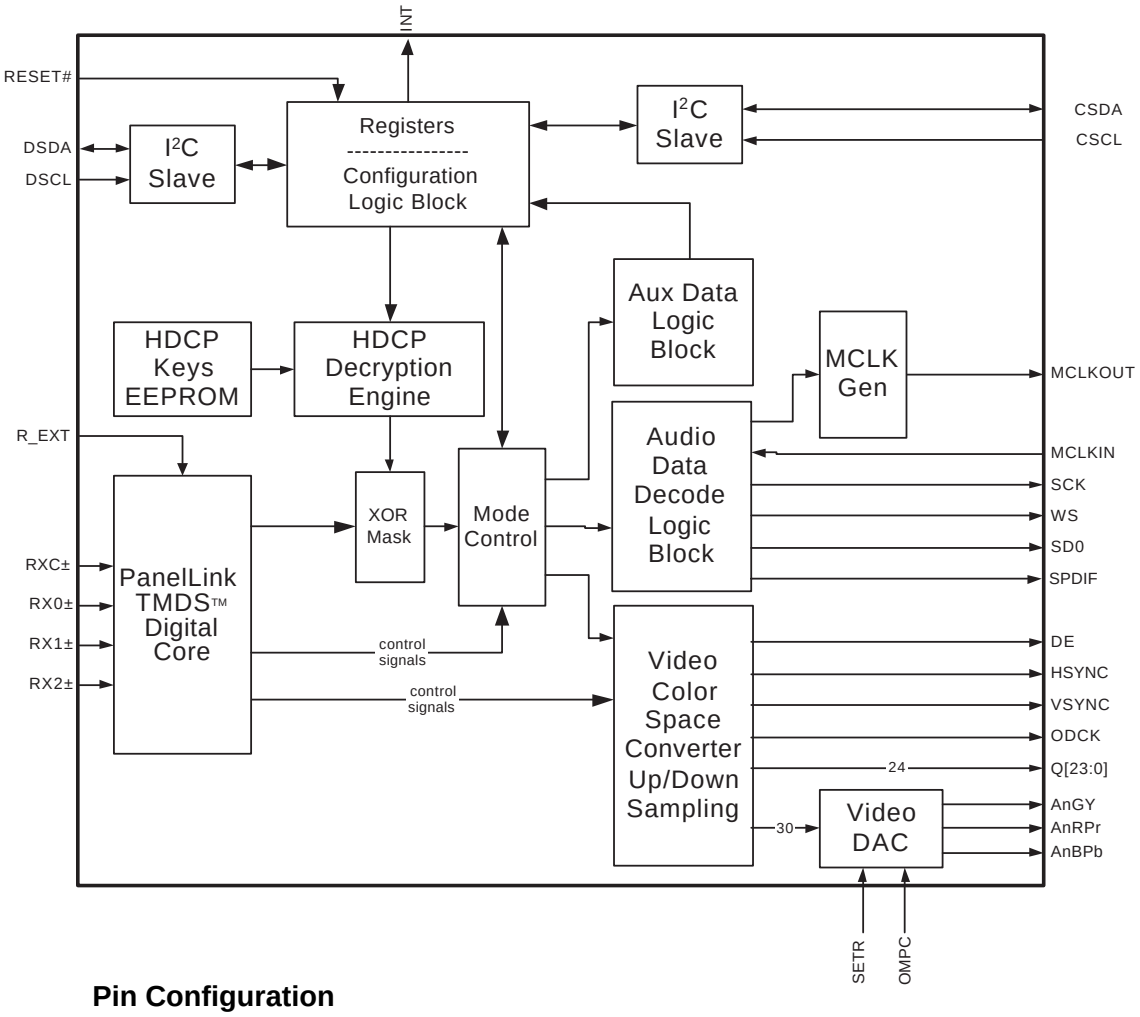


E_14620_148.eps
080704

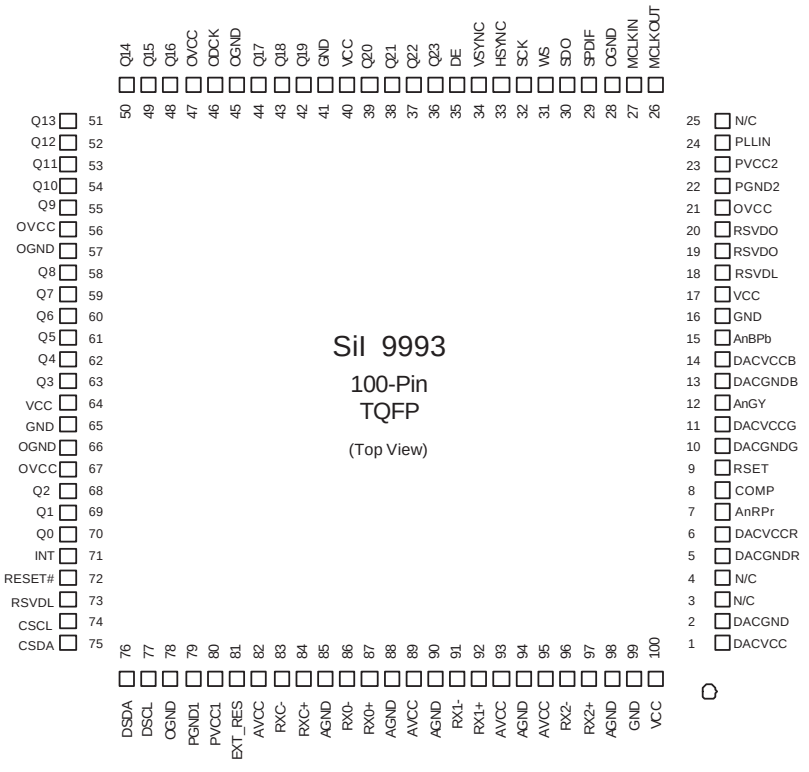
Figure 9-11 Internal block diagram and pin configuration.

9.11.7 Diagram B14F, Sil9993CT100 (IC7I18)

Block Diagram



Pin Configuration

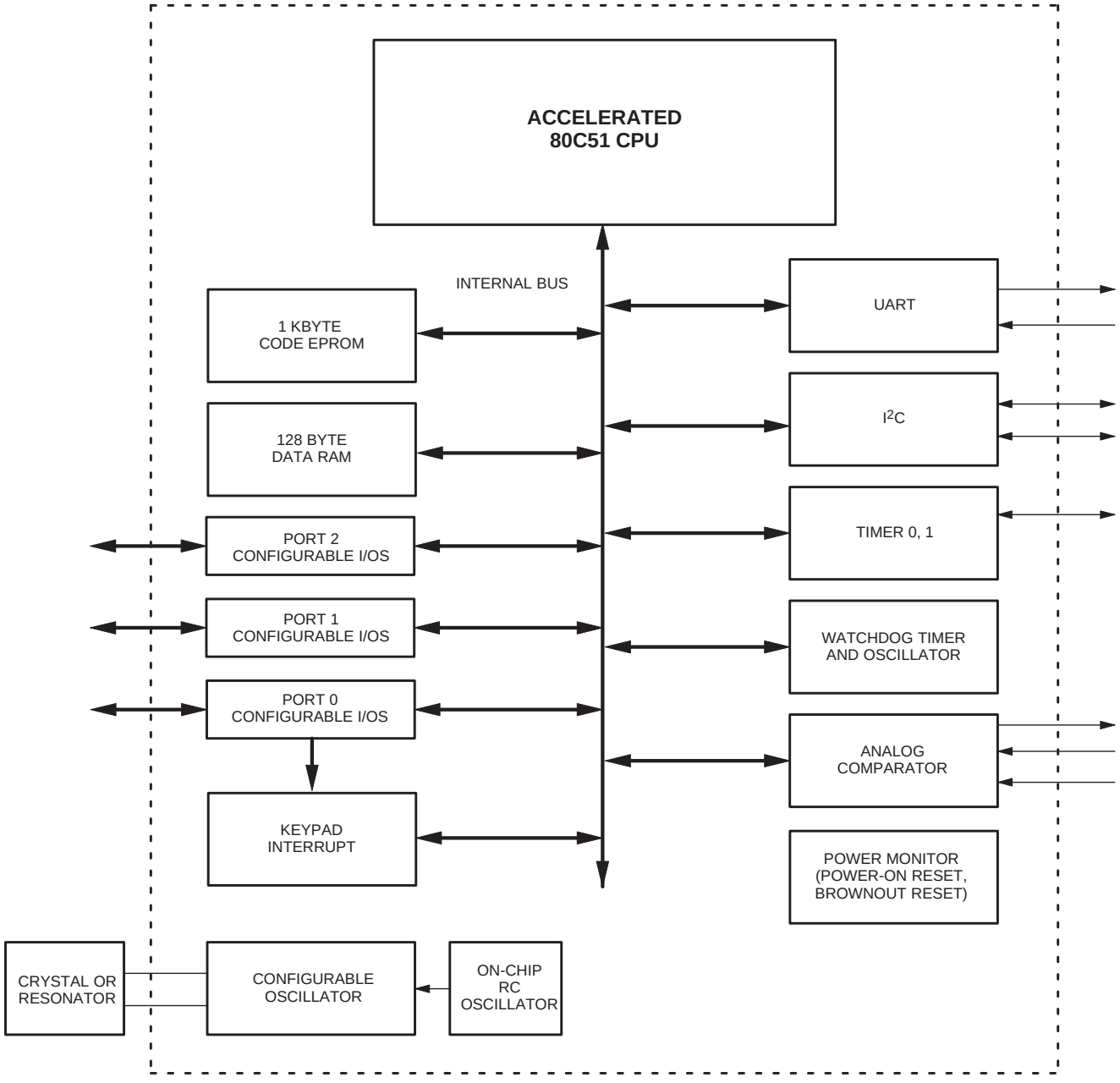


E_14620_149.eps
170305

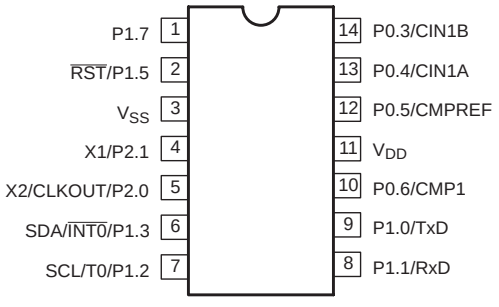
Figure 9-12 Internal block diagram and pin configuration.

9.11.8 Diagram J, P87LPC760BDH (IC7075)

BLOCK DIAGRAM



PIN CONFIGURATION



E_14620_150.eps
200804

Figure 9-13 Internal block diagram and pin configuration.

10. Spare Parts List

Set level

Various

0102	3104 303 12091	Thermal foam block AL
1004▲	9322 215 27682	S42SD-YDO5 (SDI)
1004▲	9322 215 26682	S50HW-XDO3 (SDI)
1004▲	9322 212 78682	FPF42C12812UC (FHP)
1089	3104 328 36892	CCFL inverter panel (42")
1089	3104 328 36647	CCFL inverter panel (50")
1116	3104 328 32461	Side I/O assy
8202	3104 311 06811	Cable 9p/340/9p
8302	3104 301 09771	Cable 7p/140/7p
8302	3104 311 02341	Cable 7p/680/7p
8302	3104 311 07591	Cable 7p/820/7p
8303	3104 311 08941	Cable 10p/480/10p
8306	3104 311 03801	Cable 6p/280/6p
8310	3104 311 06631	Cable 4p/480/4p
8310	3104 311 07221	Cable 4p/680/4p
8323	3104 311 04221	Cable 10p/220/10p Wh
8350	8204 000 76832	Cable 31p/400/30p
8350	8204 000 76852	Cable 31p/330/31p
8911	3104 311 07911	Cable Ring/180/Ring

PDP Supply for FHP 42" [A]

Various

0008▲	4822 265 11253	Fuse holder
0010	3122 421 60171	Spring
0011	3122 421 60171	Spring
0015	4822 695 00005	Insulating plate
0306	2422 025 08149	Connector 6p m
0307	2422 025 17759	Connector 20p f
0308▲	4822 265 20723	Connector 2p
0311	2422 025 10769	Connector 9p m
0323	2422 025 15085	Connector 10p m
0342	4822 267 10618	Connector 7p
0352	4822 267 10618	Connector 7p
1002	2422 025 11244	Connector 7p m
1004▲	9965 000 07788	Fuse T2A 250V
1082▲	4822 071 52502	Fuse 2.5A
1083▲	4822 071 52502	Fuse 2.5A
1084▲	2422 086 10849	Fuse 1A F 250V
1110▲	4822 071 55002	Fuse T5A 250V
1200▲	9965 000 07788	Fuse T2A 250V
1260	4822 252 51186	Fuse 2A
1400▲	4822 253 30467	Fuse 6.3A
1402▲	4822 252 60151	DSP-501N-A21F
1450▲	4822 280 10382	SDT-SS-109DM
1460▲	4822 280 10382	SDT-SS-109DM
1M10	2422 025 09406	Connector 4p m

⊣⊢

2000▲	2252 811 95017	470pF 10% 250V
2001	2222 338 22474	470nF 20% 275V
2002	3198 030 72290	22µF 20% 35V
2003	4822 124 12056	1000µF 20% 35V
2004	2238 867 18101	100pF 1% 50V 0603
2005	2238 867 18101	100pF 1% 50V 0603
2006	2020 552 96618	1nF 10% 50V 0402
2007	2238 586 59812	100nF 20% 50V 0603
2008	5322 126 11583	10nF 10% 50V 0603
2009	3198 030 82280	2.2µF 20% 50V
2010	5322 126 11583	10nF 10% 50V 0603
2011	2022 333 00124	15nF 5% 1.6kV
2012	4822 126 11254	330pF 10% 2kV
2013	4822 126 11254	330pF 10% 2kV
2014	4822 126 13862	1.5nF 10% 2kV
2015	5322 126 11583	10nF 10% 50V 0603
2016	3198 030 82280	2.2µF 20% 50V
2017	2022 333 00124	15nF 5% 1.6kV
2018	2238 867 18101	100pF 1% 50V 0603
2019▲	2020 554 90169	470pF 10% 250V
2020	2020 024 90737	3300µF 20% 100V
2021	2020 024 90737	3300µF 20% 100V
2022	2020 021 91354	1000µF 20% 50V
2022	4822 124 41184	470µF 20% 50V
2023	2222 580 15649	100nF 10% 50V 0805
2024	3198 035 03320	3.3nF 5% 50V 0402
2025	2222 365 85224	220nF 10% 100V
2025	4822 124 12084	1µF 20% 50V
2026	2020 552 96623	2.2nF 10% 50V 0402
2027	3198 017 31530	15nF 20% 50V 0603
2028	2238 930 11541	220pF 5% 200V
2029	2238 930 11541	220pF 5% 200V
2030	2238 586 59812	100nF 20% 50V 0603
2031	4822 124 12084	1µF 20% 50V
2032	2020 552 96831	22nF 10% 50V
2033	2238 586 59812	100nF 20% 50V 0603
2034	4822 126 14525	47pF 5% 1kV
2035	2020 552 96618	1nF 10% 50V 0402
2036	2020 552 96831	22nF 10% 50V
2037	4822 126 14525	47pF 5% 1kV
2038	3198 016 31020	1nF 25V 0603
2040	2238 586 59812	100nF 20% 50V 0603
2044	2238 930 11541	220pF 5% 200V
2045	2238 930 11541	220pF 5% 200V
2050	2222 580 15649	100nF 10% 50V 0805
2050	5322 122 32654	22nF 10% 63V 0805
2054	2238 869 15221	220pF 1% 50V 0402
2055	4822 126 14247	1.5nF 50V 0603
2056	2238 869 15221	220pF 1% 50V 0402
2057	4822 126 14247	1.5nF 50V 0603
2058	4822 124 40756	1µF20% 100V
2059	2238 586 59812	100nF 20% 50V 0603
2061	2238 586 59812	100nF 20% 50V 0603
2090	2020 021 91729	4.7µF 20% 35V
2111	2238 869 15221	220pF 1% 50V 0402
2112	2020 552 96618	1nF 10% 50V 0402
2113	4822 124 12379	220µF 25V
2114	2020 552 96683	220nF 10% 50V
2115	2020 552 96628	10nF 10% 16V 0402
2117	2222 780 15656	330nF 10% 16V
2118	4822 126 13449	1nF 10% 2kV
2121	2020 024 90736	2200µF 20% 100V
2122	4822 121 51319	1µF 10% 63V
2123	3198 035 03320	3.3nF 5% 50V 0402
2126	2238 586 59812	100nF 20% 50V 0603
2133	4822 124 81151	22µF 50V
2138	2022 552 05679	1µF 10% 16V 0805
2203	2238 586 59812	100nF 20% 50V 0603
2205	3198 030 82280	2.2µF 20% 50V
2210	4822 124 80151	47µF 16V
2211	2238 869 15221	220pF 1% 50V 0402
2212	2020 552 96326	220nF 10% 16V
2213	4822 126 10206	2.2nF 10% 500V
2213	5322 126 10223	4.7nF 10% 63V
2214	5322 126 10223	4.7nF 10% 63V
2217	2222 780 15656	330nF 10% 16V
2218	2022 333 00106	3.3nF 5% 1.6kV
2222	2238 869 15101	100pF 5% 50V 0402
2223	2238 869 15101	100pF 5% 50V 0402
2225	2020 021 91551	2200µF 20% 25V
2226	2238 586 59812	100nF 20% 50V 0603
2227	2238 869 15101	100pF 5% 50V 0402
2229	4822 124 80791	470µF 20% 16V
2230	4822 124 80791	470µF 20% 16V
2231	4822 124 80151	47µF 16V
2232	2238 869 15101	100pF 5% 50V 0402
2234	2022 552 05679	1µF 10% 16V 0805
2236	4822 124 23002	10µF 16V
2237	4822 124 23002	10µF 16V
2260	2022 552 05679	1µF 10% 16V 0805
2261	3198 026 51020	1000µF 50V
2261	4822 124 41184	470µF 20% 50V
2262	2020 552 96683	220nF 10% 50V
2263	2222 861 15272	2.7nF 5% 50V 0805
2264	4822 126 14583	470nF 10% 16V 0805
2265	4822 126 14241	330pF 0603 50V
2266	2238 916 15641	22nF 10% 25V 0603
2266	3198 030 74780	4u7 20% 35V
2267	5322 122 32531	100pF 5% 50V
2268	2020 552 96683	220nF 10% 50V
2269	2020 021 91524	220µF 20% 25V
2269	4822 123 14025	2200µF 20% 16V
2270	4822 124 40433	47µF 20% 25V
2273	2238 586 59812	100nF 20% 50V 0603
2290	5322 126 11583	10nF 10% 50V 0603
2291	2238 869 15221	220pF 1% 50V 0402
2292	3198 026 51020	1000µF 50V
2293	2238 869 15221	220pF 1% 50V 0402
2294	3198 026 51020	1000µF 50V
2303	2020 552 96683	220nF 10% 50V
2304	2020 552 96618	1nF 10% 50V 0402
2305	2238 586 59812	100nF 20% 50V 0603
2306	2238 586 59812	100nF 20% 50V 0603
2316	2238 586 59812	100nF 20% 50V 0603
2322	2238 586 59812	100nF 20% 50V 0603
2324	2238 586 59812	100nF 20% 50V 0603
2343	3198 030 82280	2.2µF 20% 50V
2350	4822 124 12095	100µF 20% 16V
2352	2238 586 59812	100nF 20% 50V 0603
2364	2238 586 59812	100nF 20% 50V 0603
2366	4822 126 14585	100nF 10% 0805 50V
2376	2238 586 59812	100nF 20% 50V 0603
2380	2238 586 59812	100nF 20% 50V 0603
2381	2238 586 59812	100nF 20% 50V 0603
2385	2022 552 05679	1µF 10% 16V 0805
2393	2238 586 59812	100nF 20% 50V 0603
2396	2020 552 96683	220nF 10% 50V
2400▲	2222 338 22474	470nF 20% 275V
2401▲	2222 338 22474	470nF 20% 275V
2404	4822 126 14525	47pF 5% 1kV
2405▲	2252 811 95017	470pF 10% 250V
2406	4822 126 14525	47pF 5% 1kV
2407▲	2252 811 95017	470pF 10% 250V
2465	4822 124 12095	100µF 20% 16V
2502	2238 869 15101	100pF 5% 50V 0402
2503	2020 024 90708	47µF 400V 20%
2504	2020 552 96618	1nF 10% 50V 0402
2505	4822 124 12056	1000µF 20% 35V
2507	2238 869 15101	100pF 5% 50V 0402
2508	4822 124 12095	100µF 20% 16V
2509	2238 869 15101	100pF 5% 50V 0402
2510	2020 021 91506	1000µF 20% 16V
2511	2238 586 59812	100nF 20% 50V 0603
2512	2238 586 59812	100nF 20% 50V 0603
2513	2222 580 15649	100nF 10% 50V 0805
2531	4822 124 23002	10µF 16V
2532	4822 124 12095	100µF 20% 16V
2533	4822 124 12095	100µF 20% 16V
2540	4822 124 12095	100µF 20% 16V
2541	4822 124 12095	100µF 20% 16V
2600	4822 122 33799	1nF 10% 1kV
2601	4822 122 33799	1nF 10% 1kV
2602	2020 552 96618	1nF 10% 50V 0402
2605	2222 479 90086	1µF 400V 5%
2608	2020 552 96618	1nF 10% 50V 0402
2610	2022 333 00298	1.8nF 5% 2kV
2611	2022 333 00296	220pF 5% 2kV
2612	2020 552 96618	1nF 10% 50V 0402
2614	5322 126 11578	1nF 10% 50V 0603
2616	4822 124 12415	220µF 20% 400V
2617	4822 124 12415	220µF 20% 400V
2640	3198 035 04710	470pF 50V 0402
2642	2020 552 96618	1nF 10% 50V 0402
2651	5322 126 11583	10nF 10% 50V 0603
2653	4822 126 14241	330pF 0603 50V
2654	4822 124 80151	47µF 16V
2655	2022 552 05679	1µF 10% 16V 0805
2656	2222 580 15649	100nF 10% 50V 0805
2660	4822 126 13881	470pF 5% 50V
2661	2020 552 96618	1nF 10% 50V 0402
2662	4822 124 80061	1000µF 20% 25V
2663	4822 124 40255	100µF 20% 63V
2664	4822 124 40255	100µF 20% 63V
2665	4822 126 13881	470pF 5% 50V
2666	2020 552 96793	4.7nF 10% 50V 0402
2670	2238 586 59812	100nF 20% 50V 0603
2671	2238 586 59812	100nF 20% 50V 0603
2672	2222 580 15649	100nF 10% 50V 0805
2673	2020 558 00002	4.7nF 10% 630V
2674	2020 558 90621	10nF 630V
2675	2020 558 90621	10nF 630V

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3003	4822 117 13632	100kΩ 1% 0603 0.62W
3004	3198 031 01530	15kΩ 5% 0.01W 0402
3005	4822 117 13603	33kΩ 5% 0402
3006	4822 051 30103	10kΩ 5% 0.062W
3007	3198 031 04720	4.7kΩ 5% 0402
3008	4822 051 30102	1kΩ 5% 0.062W
3009	4822 051 30102	1kΩ 5% 0.062W
3010	3198 031 01530	15kΩ 5% 0.01W 0402
3011	4822 051 30561	560Ω 5% 0.062W
3012	3198 031 04720	4.7kΩ 5% 0402
3013	4822 051 30103	10kΩ 5% 0.062W
3014	4822 050 23309	33Ω 1% 0,6W
3015	4822 050 21009	10Ω 1% 0.6W
3016	4822 051 10102	1kΩ 2% 0.25W
3017	4822 050 23309	33Ω 1% 0,6W
3018	4822 050 21009	10Ω 1% 0.6W
3019	4822 051 10102	1kΩ 2% 0.25W
3020	3198 031 05630	56kΩ 5% 0402
3021	4822 053 11688	6.8Ω 5% 2W
3022	4822 051 30331	330Ω 5% 0.062W
3023	3198 031 04730	47Ω 5% 0402
3024	4822 117 12306	150kΩ 1% 0.1W
3025	2322 706 71802	1.8kΩ 5% 0402
3026	4822 051 20684	680kΩ 5% 0.1W
3027	3198 031 04730	47Ω 5% 0402

3028	2322 704 67502	7.5kΩ 1% 0.5W
3029	4822 051 30472	4.7Ω 5% 0.062W
3030	3198 031 01830	18kΩ 5% 0.01W 0402
3031	2322 704 61103	11kΩ 1% 0603
3032	2322 704 61103	11kΩ 1% 0603
3033	4822 051 30222	2.2kΩ 5% 0.062W
3034	4822 117 13596	220Ω 5% 0.01W 0402
3035	4822 051 20684	680kΩ 5% 0.1W
3036	2122 612 00051	NTC 1Ω 20%
3037	4822 051 30103	10kΩ 5% 0.062W
3038	4822 117 13632	100kΩ 1% 0603 0.62W
3039	4822 051 30105	1MΩ 5% 0.062W
3040	4822 117 10837	100kΩ 1% 0.1W
3041	4822 117 13603	33kΩ 5% 0402
3042	4822 051 30471	47Ω 5% 0.062W
3043	3198 031 04720	4.7kΩ 5% 0402
3044	4822 051 30102	1kΩ 5% 0.062W
3045	4822 051 30102	1kΩ 5% 0.062W
3046	4822 053 20565	5.6MΩ 5% 0.25W
3047	3198 031 01540	150kΩ 5% 0402
3048	3198 031 04720	4.7kΩ 5% 0402
3049	3198 031 01230	12kΩ 5% 0402
3050⚠	4822 052 10398	3.9Ω 5% 0,33W
3051	4822 051 20562	5.6kΩ 5% 0.1W 0805
3051	4822 051 20822	8.2kΩ 5% 0.1W
3052	4822 117 12306	150kΩ 1% 0.1W
3053	2322 662 93131	PTC 10Ω
3054	4822 117 10833	10kΩ 1% 0.1W
3056	4822 051 30331	330Ω 5% 0.062W
3057	4822 051 30101	100Ω 5% 0.062W
3058	4822 051 20105	1MΩ 5% 0.1W
3062	4822 051 30102	1kΩ 5% 0.062W
3064	4822 051 30103	10kΩ 5% 0.062W
3065	4822 051 30102	1kΩ 5% 0.062W
3066	4822 051 30103	10kΩ 5% 0.062W
3067	3198 031 01530	15kΩ 5% 0.01W 0402
3070	4822 051 30103	10kΩ 5% 0.062W
3071	3198 031 04730	47Ω 5% 0402
3072	4822 053 10472	4.7kΩ 5% 1W
3075	4822 051 20105	1MΩ 5% 0.1W
3076	4822 117 13632	100kΩ 1% 0603 0.62W
3077	4822 051 20105	1MΩ 5% 0.1W
3078	4822 117 13632	100kΩ 1% 0603 0.62W
3080	4822 051 30101	100Ω 5% 0.062W
3081	4822 051 30222	2.2kΩ 5% 0.062W
3083	2312 915 11002	1kΩ 1% 0.5W
3084	4822 117 13606	10kΩ 5% 0.01W 0402
3085	3198 031 04730	47Ω 5% 0402
3086	3198 031 04730	47Ω 5% 0402
3087	3198 031 04730	47Ω 5% 0402
3088	3198 031 04730	47Ω 5% 0402
3090	4822 051 30101	100Ω 5% 0.062W
3091	4822 051 30102	1kΩ 5% 0.062W
3092	4822 051 10102	1kΩ 2% 0.25W
3093	4822 051 30102	1kΩ 5% 0.062W
3094	4822 051 10102	1kΩ 2% 0.25W
3095	4822 051 30471	47Ω 5% 0.062W
3096	3198 031 05620	5.6kΩ 5% 0.01W 0402
3097	3198 031 08210	820Ω 5% 0,5W
3098	3198 031 01090	10Ω 5% 0.01W 0402
3106	4822 117 12955	2.7kΩ 1% 0.1W 0805
3107	4822 117 12955	2.7kΩ 1% 0.1W 0805
3108	4822 117 12955	2.7kΩ 1% 0.1W 0805
3109	4822 117 12955	2.7kΩ 1% 0.1W 0805
3110	4822 051 30102	1kΩ 5% 0.062W
3112	4822 051 30102	1kΩ 5% 0.062W
3113	3198 031 04740	470 kΩ 5% 0402
3114	2322 705 70564	560kΩ 5% 0402
3115	3198 031 02240	220kΩ 5% 0.1W 0402
3116	4822 051 30102	1kΩ 5% 0.062W
3117	4822 051 30103	10kΩ 5% 0.062W
3118	2122 118 06084	0.051Ω 5% 1W 2512
3120	4822 117 12903	1.8kΩ 1% 0.063W 0603
3121	3198 031 04730	47Ω 5% 0402
3122	2322 734 67503	75kΩ 1% 0.062W 0805
3123	4822 117 10965	18kΩ 1% 0.1W
3124	2322 704 67502	7.5kΩ 1% 0.5W
3125	2322 704 67502	7.5kΩ 1% 0.5W
3126	2322 706 72202	2.2kΩ 5% 0402
3128	4822 117 13603	33kΩ 5% 0402
3130	4822 051 30123	12kΩ 5% 0.1W
3130	4822 051 30472	4.7Ω 5% 0.062W
3131	2322 704 61103	11kΩ 1% 0603
3132	4822 117 13596	220Ω 5% 0.01W 0402
3133	4822 051 30101	100Ω 5% 0.062W
3134	4822 051 30331	330Ω 5% 0.062W
3135	3198 031 04730	47Ω 5% 0402
3136	3198 031 04730	47Ω 5% 0402
3138	4822 117 11503	220Ω 1% 0.1W
3139	4822 117 11503	220Ω 1% 0.1W
3140	2322 734 67503	75kΩ 1% 0.062W 0805
3141	2322 734 67503	75kΩ 1% 0.062W 0805
3142	5322 117 12487	1kΩ 1% 0.125W
3143	4822 053 12472	4.7kΩ 5% 3W
3145	2322 763 65107	0.51Ω 1% 1W 2512
3146	2322 763 65107	0.51Ω 1% 1W 2512
3147	2322 704 61103	11kΩ 1% 0603
3148	2322 706 75602	5.6kΩ 5% 0402
3149	3198 031 01090	10Ω 5% 0.01W 0402
3149	4822 052 10478	4.7Ω 5% 0.33W
3200	2322 730 61224	220kΩ 5% 0.062W 0805
3202	4822 051 30479	47Ω 5% 0.062W
3203	4822 051 30101	100Ω 5% 0.062W
3204	4822 117 13632	100kΩ 1% 0603 0.62W
3205	4822 117 13632	100kΩ 1% 0603 0.62W
3206	4822 117 12955	2.7kΩ 1% 0.1W 0805
3207	4822 117 12955	2.7kΩ 1% 0.1W 0805
3208	4822 117 12955	2.7kΩ 1% 0.1W 0805
3209	4822 117 12955	2.7kΩ 1% 0.1W 0805
3212	4822 051 30102	1kΩ 5% 0.062W
3213	4822 117 13603	33kΩ 5% 0402
3214	2322 705 70124	120kΩ 5% 0402
3215	2322 705 70274	270kΩ 5% 0402
3216	4822 051 30102	1kΩ 5% 0.062W
3217	4822 117 13606	10kΩ 5% 0.01W 0402
3218	2122 118 06084	0.051Ω 5% 1W 2512
3219	4822 117 13606	10kΩ 5% 0.01W 0402
3220	4822 050 23309	33Ω 1% 0,6W
3224	2322 706 71203	12kΩ 5% 0402
3225	2322 704 61103	11kΩ 1% 0603
3226	4822 117 13606	10kΩ 5% 0.01W 0402
3228	4822 051 30151	150Ω 5% 0.062W
3229	4822 051 30561	560Ω 5% 0.062W
3230	4822 117 13606	10kΩ 5% 0.01W 0402
3231	3198 031 04730	47Ω 5% 0402
3232	3198 031 03320	3.3kΩ 5% 0402
3233	4822 117 11148	56kΩ 1% 0.1W
3234	3198 031 01510	150Ω 5% 0.01W 0402
3235	4822 117 13606	10kΩ 5% 0.01W 0402
3236	4822 117 11503	220Ω 1% 0.1W
3237	4822 117 11503	220Ω 1% 0.1W
3260	4822 051 30109	10Ω 5% 0.062W
3261	4822 051 30102	1kΩ 5% 0.062W
3262	2322 706 71003	10kΩ 5% 0402
3263	2322 706 71003	10kΩ 5% 0402
3264	3198 031 05610	560Ω 5% 0.01W 0402
3264	3198 031 06820	6.8kΩ 5% 0.01W 0402
3265	4822 051 30102	1kΩ 5% 0.062W
3268	4822 051 30102	1kΩ 5% 0.062W
3269	3198 031 02720	2.7kΩ 5% 0.01W 0402
3292	4822 051 30561	560Ω 5% 0.062W
3300	4822 117 13579	220kΩ 1% 0.1W 0805
3301	4822 117 13579	220kΩ 1% 0.1W 0805
3302	2390 401 41004	100kΩ 1% 0805
3303	2390 401 41004	100kΩ 1% 0805
3304	4822 051 30102	1kΩ 5% 0.062W
3305	2390 401 46202	6.6kΩ 1% 0805
3306	2322 704 61103	11kΩ 1% 0603
3307	5322 117 13028	12kΩ 1% 0.063W 0603
3308	4822 051 30102	1kΩ 5% 0.062W
3311	4822 117 13579	220kΩ 1% 0.1W 0805
3312	4822 051 30102	1kΩ 5% 0.062W
3313	2322 704 67502	7.5kΩ 1% 0.5W
3316	2390 401 47502	7.5kΩ 1% 0805
3317	2322 704 67502	7.5kΩ 1% 0.5W
3320	2322 704 61103	11kΩ 1% 0603
3321	4822 051 30102	1kΩ 5% 0.062W
3322	2322 706 73902	3.9kΩ 1% 0402
3323	2322 706 71003	10kΩ 5% 0402
3324	4822 051 30102	1kΩ 5% 0.062W
3325	4822 051 30471	47Ω 5% 0.062W
3326	3198 031 04720	4.7kΩ 5% 0402
3327	4822 117 13606	10kΩ 5% 0.01W 0402
3328	4822 051 30103	10kΩ 5% 0.062W
3332	2322 706 76803	68kΩ 5% 0402
3333	4822 051 30102	1kΩ 5% 0.062W
3334	2322 706 71003	10kΩ 5% 0402
3335	4822 116 83933	15kΩ 1% 0.1W
3340	4822 051 30102	1kΩ 5% 0.062W
3341	4822 117 13606	10kΩ 5% 0.01W 0402
3342	4822 051 30103	10kΩ 5% 0.062W
3343	4822 051 30102	1kΩ 5% 0.062W
3344	4822 051 30102	1kΩ 5% 0.062W
3345	3198 031 04720	4.7kΩ 5% 0402
3347	4822 051 30331	330Ω 5% 0.062W
3348	4822 051 30331	330Ω 5% 0.062W
3349	4822 051 30102	1kΩ 5% 0.062W
3350	4822 051 30472	4.7Ω 5% 0.062W
3351	4822 051 30103	10kΩ 5% 0.062W
3352	4822 051 30103	10kΩ 5% 0.062W
3353	4822 117 13606	10kΩ 5% 0.01W 0402
3354	3198 031 04720	4.7kΩ 5% 0402
3356	3198 031 05610	560Ω 5% 0.01W 0402
3358	4822 051 30222	2.2kΩ 5% 0.062W
3359	3198 031 05620	5.6kΩ 5% 0.01W 0402
3360	3198 031 01220	1.2kΩ 5% 0.01W 0402
3361	3198 031 04720	4.7kΩ 5% 0402
3362	3198 031 02720	2.7kΩ 5% 0.01W 0402
3363	4822 051 30102	1kΩ 5% 0.062W
3364	4822 051 30102	1kΩ 5% 0.062W
3366	4822 117 13606	10kΩ 5% 0.01W 0402
3367	4822 051 30103	10kΩ 5% 0.062W
3368	2322 671 91104	PTC 120Ω 30V
3369	4822 117 13548	1kΩ 5% 0402
3373	3198 031 04720	4.7kΩ 5% 0402
3374	3198 031 04730	47Ω 5% 0402
3376	3198 031 04730	47Ω 5% 0402
3377	3198 031 04720	4.7kΩ 5% 0402
3378	4822 117 13606	10kΩ 5% 0.01W 0402
3380	3198 031 04730	47Ω 5% 0402
3381	3198 031 04730	47Ω 5% 0402
3382	2322 706 72204	220kΩ 5% 0402
3385	4822 117 13632	100kΩ 1% 0603 0.62W
3386	4822 117 13632	100kΩ 1% 0603 0.62W
3387	4822 051 30471	47Ω 5% 0.062W
3388	4822 051 30102	1kΩ 5% 0.062W
3389	4822 051 30102	1kΩ 5% 0.062W
3390	4822 117 13603	33kΩ 5% 0402
3391	4822 117 13545	100Ω 1% 0402
3392	4822 051 30102	1kΩ 5% 0.062W
3393	4822 117 11297	100kΩ 5% 0.1W
3394	4822 117 13545	100Ω 1% 0402
3396	2390 401 41004	100kΩ 1% 0805
3397	2390 401 41004	100kΩ 1% 0805
3400⚠	2122 550 00158	VDR 1mA 612V
3401⚠	4822 117 10118	1MΩ 5% 0.5W
3404	4822 116 83872	220Ω 5% 0.5W
3450⚠	2322 662 93131	PTC 10Ω
3451⚠	2322 662 93131	PTC 10Ω
3452	2122 612 00051	NTC 1Ω 20%
3460	3198 031 04720	4.7kΩ 5% 0402
3461	4822 117 13606	10kΩ 5% 0.01W 0402
3463	4822 117 13606	10kΩ 5% 0.01W 0402
3465	4822 117 13606	10kΩ 5% 0.01W 0402
3467	4822 117 13606	10kΩ 5% 0.01W 0402
3469	3198 031 04720	4.7kΩ 5% 0402
3470	4822 117 13606	10kΩ 5% 0.01W 0402
3501	4822 051 30102	1kΩ 5% 0.062W
3502	4822 051 30471	47Ω 5% 0.062W
3503	2322 706 74702	4.7kΩ 5% 0402
3504	2322 706 73303	33kΩ 5% 0402
3505	2322 706 74702	4.7kΩ 5% 0402
3506⚠	2322 662 93131	PTC 10Ω
3507	4822 051 20684	680kΩ 5% 0.1W
3508	2322 194 63109	10Ω 5% 2W
3520	4822 051 30109	10Ω 5% 0.062W
3530	4822 117 13632	100kΩ 1% 0603 0.62W
3603	4822 051 20474	470kΩ 5% 0.1W
3604	4822 051 20474	470kΩ 5% 0.1W
3605	4822 051 20474	470kΩ 5% 0.1W
3606	4822 051 30101	100Ω 5% 0.062W
3607	4822 117 12891	220kΩ 1%
3608	2312 915 11209	12Ω 1% 0.5W
3609	4822 051 20474	470kΩ 5% 0.1W
3610	4822 050 23308	3.3Ω 1% 0.6W
3611	2312 915 11002	1kΩ 1% 0.5W
3612	3198 031 01220	1.2kΩ 5% 0.01W 0402
3614	2120 105 00001	0.18Ω 5% 2W
3615	2120 105 00001	0.18Ω 5% 2W
3639	4822 051 10102	1kΩ 2% 0.25W
3640	4822 051 30331	330Ω 5% 0.062W
3641	4822 051 20471	470Ω 5% 0.1W
3642	4822 117 11503	220Ω 1% 0.1W
3643	4822 117 11503	220Ω 1% 0.1W
3651	4822 117 13601	22kΩ 5% 0402
3652	4822 051 30105	1MΩ 5% 0.062W
3654	4822 117 13606	10kΩ 5% 0.01W 0402
3655	4822 051 30102	1kΩ 5% 0.062W
3659	4822 117 11503	220Ω 1% 0.1W
3660	4822 117 11504	270Ω 1% 0.1W
3661	4822 117 11504	270Ω 1% 0.1W
3663⚠	4822 052 10108	1Ω 5% 0.33W
3664	2322 706 71204	120kΩ 5% 0402
3665	4822 117 13606	10kΩ 5% 0.01W 0402
3666	4822 051 30101	100Ω 5% 0.062W
3668⚠	4822 052 11102	1kΩ 5% 0,5W
3669	2322 706 71204	120kΩ 5% 0402
3671	2322 704 61103	11kΩ 1% 0603
3673⚠	4822 052 11102	1kΩ 5% 0,5W
3675	2322 702 60158	1.5Ω
3676	2322 706 74702	4.7kΩ 5% 0402
3677	2322 706 74703	47kΩ 1% 0402
3678	3198 031 04730	47Ω 5% 0402
3679	4822 117 12306	150kΩ 1% 0.1W
3680	4822 117 13579	220kΩ 1% 0.1W 0805
3681	4822 117 13579	220kΩ 1% 0.1W 0805
3682	4822 117 13579	220kΩ 1% 0.1W 0805
3683	4822 051 20334	330kΩ 5% 0.1W
3684	4822 051 20334	330kΩ 5% 0.1W
3685	4822 051 20334	330kΩ 5% 0.1W
3999	4822 051 30102	1kΩ 5% 0.062W
9000	4822 051 20008	Jumper 0805

9002	3198 036 90010	Wire 0.58mm
9021	4822 051 20008	Jumper 0805
9022	4822 051 20008	Jumper 0805

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5001	2422 531 02444	Transformer S13932-04Y
5002⚠	8204 000 77111	Transformer BS42315-01
5004⚠	8204 000 77111	Transformer BS42315-01
5005	3122 138 38901	Mains filter CU28D3
5121	3104 308 20771	Bridge coil BD21232-00
5220	3104 308 20911	Transf. BS29238-00
5225	2422 536 00672	4.7µH 20%
5229	2422 536 00826	220µH 10%
5260	3198 018 71010	100µF 10%
5268	2422 536 00288	100µH 10%
5291	4822 157 11737	22µH 10%
5292	4822 157 11737	22µH 10%
5293	4822 157 11737	22µH 10%
5401	3122 138 38901	Mains filter CU28D3
5402	3122 138 38901	Mains filter CU28D3
5503	4822 157 11737	22µH 10%
5600	3104 308 20821	Coil BS42228-00 B
5601	4822 157 11411	Bead 100MHz
5612	4822 157 11411	Bead 100MHz
5660	4822 157 51192	220µH 10%

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6004	4822 130 11397	BAS316
6005	4822 130 11397	BAS316
6007	4822 130 11397	BAS316
6008	4822 130 11397	BAS316
6009	4822 130 11397	BAS316
6010	4822 130 11397	BAS316
6011	4822 130 11397	BAS316
6012	9340 548 61115	PDZ12B
6018	4822 130 11397	BAS316
6019	4822 130 11397	BAS316
6021	9340 550 66112	BYV28-200/24
6022	4822 130 11397	BAS316
6023	4822 130 11397	BAS316
6027	4822 130 11397	BAS316
6028	4822 130 11397	BAS316
6031	3198 020 55680	BZX384-C5V6
6032	3198 020 55680	BZX384-C5V6
6033	9322 150 18685	BZX384-C47
6034	4822 130 11397	BAS316
6035	4822 130 11397	BAS316
6042	9322 150 18685	BZX384-C47
6044	9322 202 88687	STTH2003CFP
6045	9340 550 66112	BYV28-200/24
6050	4822 130 11152	UDZ18B
6054	9340 553 52115	BAS321
6055	9340 553 52115	BAS321
6061	4822 130 11152	UDZ18B
6062	4822 130 11152	UDZ18B
6075	9340 292 80135	BZG03-C270
6077	9340 292 80135	BZG03-C270
6086	4822 130 11397	BAS316
6095	4822 130 11397	BAS316
6111	4822 130 11397	BAS316
6112	4822 130 11397	BAS316
6113	4822 130 11397	BAS316
6114	9340 548 61115	PDZ12B
6117	4822 130 11152	UDZ18B
6120	9322 202 75687	BYW29FP-200
6123	4822 130 11397	BAS316
6133	4822 130 11397	BAS316
6142	9322 192 15668	SM S3J
6202	4822 130 11397	BAS316
6204	3198 020 55680	BZX384-C5V6
6205	4822 130 11152	UDZ18B
6206	4822 130 11397	BAS316
6211	9322 128 70685	SMSS14
6213	4822 130 11397	BAS316
6216	4822 130 11152	UDZ18B
6225	9322 173 47687	STPS20L40CFP
6230	9322 155 79685	EC31QS04
6260	4822 130 11421	BT151X-500R
6267	4822 130 82627	SB540
6268	9322 198 81685	SL04
6269	9322 099 61685	BYG10J
6270	9322 099 61685	BYG10J
6291	4822 130 11572	STPS8H100F
6292	4822 130 11572	STPS8H100F
6312	4822 130 80622	BAT54
6313	4822 130 80622	BAT54
6321	4822 130 80622	BAT54
6322	4822 130 80622	BAT54
6325	4822 130 11416	PDZ6.8B
6333	4822 130 80622	BAT54
6334	4822 130 80622	BAT54
6340	4822 130 80622	BAT54
6341	4822 130 80622	BAT54
6344	4822 130 10838	UDZ3.3B
6347	4822 130 80622	BAT54
6362	4822 130 11397	BAS316
6364	4822 130 11397	BAS316
6365	4822 130 11397	BAS316
6366	4822 130 80622	BAT54
6375	4822 130 11397	BAS316
6376	4822 130 11397	BAS316
6378	4822 130 80622	BAT54
6460	4822 130 11397	BAS316
6461	4822 130 11397	BAS316
6470	4822 130 11397	BAS316
6471	4822 130 11397	BAS316
6501	9336 018 60133	BZT03-C300
6502	9336 018 60133	BZT03-C300
6503	9322 176 76668	RS1J
6504	9322 176 76668	RS1J
6505	9322 155 79685	EC31QS04
6510	9322 099 61685	BYG10J
6511	9322 099 61685	BYG10J
6512	9322 099 61685	BYG10J
6513	9322 099 61685	BYG10J
6520	4822 130 11397	BAS316
6530	4822 130 11152	UDZ18B
6531	4822 130 11152	UDZ18B
6600	9322 177 84667	GBU8JL-7014
6601	9322 150 17685	BZX384-C39
6605	9322 192 15668	SM S3J
6606	9322 192 15668	SM S3J
6608	9322 128 69685	S1D
6609	9340 289 90135	BZG03-C18
6611	3139 120 52021	BYV29X-500
6640	9322 128 70685	SMSS14
6641	4822 130 11397	BAS316
6642	9322 128 70685	SMSS14
6643	4822 130 11152	UDZ18B
6651	4822 130 80622	BAT54
6652	9322 128 70685	SMSS14
6653	4822 130 10837	UDZS8.2B
6654	4822 130 11397	BAS316
6660	9322 176 76668	RS1J
6661	9322 176 76668	RS1J
6663	9322 198 81685	SL04
6665	9322 198 81685	SL04

7001	9322 108 21682	MC34067P
7002⚠	9322 149 04682	TCET1102
7003⚠	9322 149 04682	TCET1102
7004	9322 192 17685	P0102BL
7005	9322 192 18687	STP15NK50ZFP
7006	9322 192 18687	STP15NK50ZFP
7007	4822 130 41246	BC327-25
7008	4822 130 41246	BC327-25
7009	3198 010 42310	BC847BW
7010	9322 192 16685	TS2431AI
7011	9322 192 16685	TS2431AI
7017	3198 010 42320	BC857BW
7018	3198 010 42310	BC847BW
7020	9335 671 30126	BC517
7021	9335 671 30126	BC517
7022	3198 010 42310	BC847BW
7042	9340 308 50135	PMST5401
7050	9340 557 16127	PSMN035-150P
7052	9340 557 58118	PSMN063-150D
7058	3198 010 42310	BC847BW
7059	9340 308 60135	PMST5550
7090	3198 010 42320	BC857BW
7091	3198 010 42320	BC857BW
7092	3198 010 44350	BC807-25W
7093	4822 209 80591	LM317T
7101	3198 010 42310	BC847BW
7102	9340 308 60135	PMST5550
7103	3198 010 42320	BC857BW
7110	9340 308 50135	PMST5401
7112	9352 673 56112	TEA1507P/N1
7117	9340 557 17118	PSMN035-150B
7120⚠	9322 149 04682	TCET1102
7121	9322 192 16685	TS2431AI
7130	9322 192 16685	TS2431AI
7134	3198 010 42310	BC847BW
7140	9340 425 10115	BC857BS
7142	9340 308 50135	PMST5401
7200	9340 565 06215	BSH114
7202	9965 000 04199	Connector 2p
7212	9352 673 56112	TEA1507P/N1
7217	9340 557 18127	PSMN070-200P
7220⚠	9322 149 04682	TCET1102
7227	9322 192 16685	TS2431AI
7230	9322 205 64687	L4940P85
7260	9322 166 31682	L4973V3.3
7304	9322 192 16685	TS2431AI
7308	4822 209 60177	LM339D
7326	3198 010 42310	BC847BW
7327	3198 010 42310	BC847BW
7330	4822 209 60177	LM339D
7341	3198 010 42320	BC857BW
7348	3198 010 42310	BC847BW
7351	3198 010 42310	BC847BW
7352	3198 010 42310	BC847BW
7362	3198 010 42310	BC847BW
7366	4822 209 63709	LM324D
7375	3198 010 42310	BC847BW
7376	3198 010 42310	BC847BW
7389	3198 010 42320	BC857BW
7391	3198 010 42310	BC847BW
7393	3198 010 42310	BC847BW
7460	9340 219 30115	BC817-25W
7465	3198 010 42320	BC857BW
7470	9340 219 30115	BC817-25W
7500	9322 037 99682	TNY256P
7501⚠	9322 149 04682	TCET1102
7502	9322 192 16685	TS2431AI
7530	9322 160 70668	SI4936ADY
7540	4822 209 17398	LD1117DT33
7608	5322 130 44593	BC369
7610	9322 192 95687	STW26NM50
7640	9965 000 04199	Connector 2p
7641	9340 219 30115	BC817-25W
7650	9322 130 69682	MC33368P
7654	3198 010 42320	BC857BW
7661	5322 209 90529	MC34063AD

Ambi Light Inverter Panel [AL]

Various

0615	3104 317 09401	SW (check Prod. Survey)
1010⚠	2422 086 00657	Fuse 3A 125V F SMD
1050	2422 543 01431	Xtal 20MHz 16pF
1M10	2422 025 09406	Connector 4p m
1M11	2422 025 12485	Connector 11p m
1M12	4822 267 10735	Connector 3p m
1M13	2422 025 12485	Connector 11p m
1M14	4822 267 10735	Connector 3p m
1M48	2422 025 10768	Connector 3p m

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2001	2020 012 00018	1000µF 20% 16V
2002	2238 586 59812	100nF 20% 50V 0603
2003	2020 552 96618	1nF 10% 50V 0402
2004	2020 552 96618	1nF 10% 50V 0402
2005	3198 034 01590	15pF 1% 50V 0402
2006	3198 034 01590	15pF 1% 50V 0402
2007	4822 126 14238	2.2nF 50V 0603
2008	4822 126 14238	2.2nF 50V 0603
2009	4822 126 14238	2.2nF 50V 0603
2010	4822 126 14238	2.2nF 50V 0603
2011	4822 126 14238	2.2nF 50V 0603
2012	4822 126 14238	2.2nF 50V 0603
2021	2020 552 96683	220nF 10% 50V
2023	2020 552 96683	220nF 10% 50V
2024	2020 552 96683	220nF 10% 50V
2030	2020 552 96683	220nF 10% 50V
2032	2020 552 96683	220nF 10% 50V
2033	2020 552 96683	220nF 10% 50V
2040	2020 552 96683	220nF 10% 50V
2043	2020 552 96683	220nF 10% 50V
2045	2020 552 96683	220nF 10% 50V
2050	2020 552 96683	220nF 10% 50V
2052	2020 552 96683	220nF 10% 50V
2055	2020 552 96683	220nF 10% 50V
2060	2020 552 96683	220nF 10% 50V
2062	2020 552 96683	220nF 10% 50V
2064	2020 552 96683	220nF 10% 50V
2071	2020 552 96683	220nF 10% 50V
2074	2020 552 96683	220nF 10% 50V
2075	2020 552 96683	220nF 10% 50V

⊣WW⊢

3001	4822 117 13545	100Ω 1% 0402
3002	4822 117 13545	100Ω 1% 0402
3003	4822 117 13596	220Ω 5% 0.01W 0402
3004	4822 051 20471	470Ω 5% 0.1W
3005	4822 051 20561	560Ω 5% 0.1W
3006	2322 762 60102	1kΩ 5% 2512
3007	2322 762 60102	1kΩ 5% 2512
3008	4822 051 20471	470Ω 5% 0.1W

3009	4822 051 20561	560Ω 5% 0.1W
3010	2322 762 60102	1kΩ 5% 2512
3011	2322 762 60102	1kΩ 5% 2512
3012	4822 051 20471	470Ω 5% 0.1W
3013	4822 051 20561	560Ω 5% 0.1W
3014	2322 762 60102	1kΩ 5% 2512
3015	2322 762 60102	1kΩ 5% 2512
3016	3198 031 04720	4.7kΩ 5% 0402
3017	3198 031 04720	4.7kΩ 5% 0402
3018	3198 031 04720	4.7kΩ 5% 0402
3019	3198 031 04720	4.7kΩ 5% 0402
3020	3198 031 04720	4.7kΩ 5% 0402
3022	4822 117 13545	100Ω 1% 0402
3023	4822 117 13545	100Ω 1% 0402
3024	3198 031 04720	4.7kΩ 5% 0402
3025	3198 031 04720	4.7kΩ 5% 0402
3028	4822 117 13606	10kΩ 5% 0.01W 0402
3029	3198 031 04720	4.7kΩ 5% 0402
3030	3198 031 04720	4.7kΩ 5% 0402
3031	3198 031 04720	4.7kΩ 5% 0402
3999	3198 021 31820	1.8kΩ 5% 0.062W 0603
3999	4822 051 30102	1kΩ 5% 0.062W

5002	2422 536 00923	22µH 10% LHL10
5004⚠	3104 308 21271	Transf. BD21416-00
5005⚠	3104 308 21271	Transf. BD21416-00
5006⚠	3104 308 21271	Transf. BD21416-00
5007	2422 536 00923	22µH 10% LHL10
5008	2422 536 00923	22µH 10% LHL10

6000	4822 130 11397	BAS316
6001	4822 130 11397	BAS316
6002	4822 130 11397	BAS316
6003	4822 130 11397	BAS316
6004	4822 130 11397	BAS316
6005	4822 130 11397	BAS316
6006	4822 130 11152	UDZ18B
6007	4822 130 11152	UDZ18B
6008	4822 130 11152	UDZ18B
6009	4822 130 11152	UDZ18B
6010	4822 130 11152	UDZ18B
6011	4822 130 11152	UDZ18B

7001		For SW see item 0615
7002	9322 202 58668	LD1117DT50
7009	3198 010 42310	BC847BW
7010	3198 010 42310	BC847BW
7011	3198 010 42310	BC847BW
7015	9322 214 20668	SI4946EY
7016	9322 214 20668	SI4946EY
7017	9322 214 20668	SI4946EY
7018	3198 010 42310	BC847BW
7019	3198 010 42310	BC847BW
7020	3198 010 42310	BC847BW

Small Signal Board [B]

Various

0601	3104 317 07021	SW (check Prod.Surv.)
0602	3104 317 07041	SW (check Prod.Surv.)
0603	3104 317 06601	SW (check Prod.Surv.)
0605	3104 317 46651	SW (check Prod.Surv.)
1000	2422 086 11092	Fuse 500mA 50V F SMD
1001	2422 543 89022	Xtal 6MHz 20p
1062	2422 549 00148	Socket 3P m
1062	3122 358 76371	Mains inlet delta
1305	2422 543 01184	Xtal 4.433619MHz 20p
1308	2422 543 01183	Xtal 3.579545MHz 16p
1403⚠	2422 086 11092	Fuse 500mA 50V F SMD
1404	2422 127 00543	Switch 1p 2pos
1407	2422 549 44324	Filt. 5.5/5.74MHz
1408	2422 549 44372	SAW 38.9MHz K3953L
1409	2422 549 44369	SAW 38.9MHz K9656L
1702	2422 540 98456	Resonator 12MHz
1A00	2422 543 89019	Xtal 18.432MHz 12p
1D01	2422 033 00515	Socket DVI-I 29p f
1E02	2422 025 17274	Connector 10p m
1E04	2422 025 17103	Connector 3p m SMD
1G50	2422 025 18427	Connector 31p f
1I01	2422 025 18133	Socket 21p f
1I04	2422 025 18133	Socket 21p f
1I05	2422 026 05054	Soc CINCH 2p f WhRd
1I06	2422 026 05527	Socket CINCH 2p f
1I07	2422 026 05054	Soc CINCH 2p f WhRd
1I53	2422 549 45325	Bead 67Ω at 100MHz
1I56	2422 549 45325	Bead 67Ω at 100MHz
1I57	2422 549 45325	Bead 67Ω at 100MHz
1I59	2422 549 45325	Bead 67Ω at 100MHz
1I79⚠	2422 086 00623	Fuse 3A T 125V
1M01	2422 025 10768	Connector 3p m
1M07	4822 267 10637	Connector 5p
1M15	4822 267 10748	Connector 3p
1M20	2422 025 10772	Connector 12p m
1M48	2422 025 10768	Connector 3p m
1M49	2422 025 10768	Connector 3p m
1M52	2422 025 10769	Connector 9p m
1T01⚠	3139 147 19801	UV1318S/A IH -3
1U01⚠	2422 086 11112	Fuse 1A T 125V
8220	3104 311 08631	Cable12P/480/12P
8301	3104 311 06831	Cable 3P/680/3P
8303	3104 311 06511	Cable 10p/280/10p
8307	3104 311 05691	Cable 5p/100/5p
8320	3104 311 02280	Cable 10P/680/10P
8321	3104 311 08731	Cable POSI/100/POSI
8321	3122 358 76331	Tree assy M91-CP91
8336	3104 311 03891	Cable 11P/340/11P
8336	3104 311 06991	Cable 11P/280/11P
8337	3104 311 06991	Cable 11P/280/11P
8337	3104 311 07451	Cable 11P/220/11P
8346	3104 311 06981	Cable 11P/180/11P
8346	3104 311 08161	Cable 11P/480/11P
8348	3104 311 00351	Cable 3P400/3P
8352	3104 311 05171	Cable 9p/860/9p
8352	3104 311 08661	Cable 9P/720/9P

2002	3198 034 02790	47pF 1% 50V 0402
2003	2238 780 15654	220nF 10% 16V 0805
2004	2238 780 15654	220nF 10% 16V 0805
2005	2238 586 59812	100nF 20% 50V 0603
2006	2238 586 59812	100nF 20% 50V 0603
2007	2238 586 59812	100nF 20% 50V 0603
2008	2238 586 59812	100nF 20% 50V 0603
2010	3198 034 04790	27pF 1% 50V 0402
2011	3198 034 04790	27pF 1% 50V 0402
2012	3198 034 04790	27pF 1% 50V 0402
2013	2020 021 91557	100µF 20% 16V
2016	4822 124 12095	100µF 20% 16V
2017	2238 586 59812	100nF 20% 50V 0603
2018	4822 126 14324	33pF 5% 50V 0402
2019	2238 586 59812	100nF 20% 50V 0603
2020	2238 869 15221	220pF 1% 50V 0402
2022	2238 586 59812	100nF 20% 50V 0603
2023	2238 586 59812	100nF 20% 50V 0603
2024	2238 586 59812	100nF 20% 50V 0603
2025	2238 586 59812	100nF 20% 50V 0603
2026	2238 586 59812	100nF 20% 50V 0603
2027	2238 586 59812	100nF 20% 50V 0603
2028	2238 586 59812	100nF 20% 50V 0603
2029	2238 586 59812	100nF 20% 50V 0603
2031	2238 586 59812	100nF 20% 50V 0603
2033	2238 869 75829	82pF 5% 50V 0402
2034	2238 869 75829	82pF 5% 50V 0402
2035	2238 869 75829	82pF 5% 50V 0402
2036	2238 869 75829	82pF 5% 50V 0402
2037	2238 869 75829	82pF 5% 50V 0402
2038	2238 586 59812	100nF 20% 50V 0603
2039	2238 586 59812	100nF 20% 50V 0603
2040	2238 586 59812	100nF 20% 50V 0603
2067	2238 586 59812	100nF 20% 50V 0603
2074	2238 586 59812	100nF 20% 50V 0603
2075	2238 586 59812	100nF 20% 50V 0603
2305	2238 586 59812	100nF 20% 50V 0603
2316	2238 586 59812	100nF 20% 50V 0603
2322	2238 586 59812	100nF 20% 50V 0603
2350	2238 586 59812	100nF 20% 50V 0603
2351	2238 586 59812	100nF 20% 50V 0603
2352	2238 586 59812	100nF 20% 50V 0603
2356	2238 586 59812	100nF 20% 50V 0603
2357	2238 586 59812	100nF 20% 50V 0603
2358	3198 035 03320	3.3nF 5% 50V 0402
2359	3198 034 01590	15pF 1% 50V 0402
2360	3198 034 01280	1.2pF 1% 50V 0402
2361	3198 034 01280	1.2pF 1% 50V 0402
2362	3198 034 01290	12pF 1% 50V 0402
2365	2238 586 59812	100nF 20% 50V 0603
2366	2238 586 59812	100nF 20% 50V 0603
2367	2238 586 59812	100nF 20% 50V 0603
2368	2238 586 59812	100nF 20% 50V 0603
2369	2238 586 59812	100nF 20% 50V 0603
2370	2238 586 59812	100nF 20% 50V 0603
2371	3198 035 14720	4.7nF 5% 25V 0402
2372	2022 552 05679	1µF 10% 16V 0805
2373	2238 586 59812	100nF 20% 50V 0603
2374	2022 552 05679	1µF 10% 16V 0805
2375	2238 787 15641	22nF 5% 16V 0402
2376	2238 586 59812	100nF 20% 50V 0603
2377	2020 021 91557	100µF 20% 16V
2378	2238 586 59812	100nF 20% 50V 0603
2384	2238 586 59812	100nF 20% 50V 0603
2387	2022 552 05679	1µF 10% 16V 0805
2390	2238 586 59812	100nF 20% 50V 0603
2391	2238 586 59812	100nF 20% 50V 0603
2392	2022 552 05679	1µF 10% 16V 0805
2394	2022 552 05679	1µF 10% 16V 0805
2403	2238 586 59812	100nF 20% 50V 0603
2404	2022 552 05679	1µF 10% 16V 0805
2405	3198 035 14720	4.7nF 5% 25V 0402
2406	2238 869 15221	220pF 1% 50V 0402
2407	4822 126 14524	68pF 5% 50V 0402
2408	3198 034 03380	3.3pF 1% 50V 0402
2409	2022 552 05679	1µF 10% 16V 0805
2410	2020 021 91557	100µF 20% 16V
2411	2238 586 59812	100nF 20% 50V 0603
2412	3198 035 14720	4.7nF 5% 25V 0402
2414	2020 021 91557	100µF 20% 16V
2415	2238 586 59812	100nF 20% 50V 0603
2416	2022 552 05679	1µF 10% 16V 0805
2417	4822 126 14583	470nF 10% 16V 0805
2418	3198 034 05680	5.6pF 1% 50V 0402
2425	2020 021 91557	100µF 20% 16V
2432	2238 586 59812	100nF 20% 50V 0603
2433	2238 586 59812	100nF 20% 50V 0603
2434	2238 586 59812	100nF 20% 50V 0603
2435	2020 552 96618	1nF 10% 50V 0402
2436	2022 552 05679	1µF 10% 16V 0805
2707	3198 034 02790	47pF 1% 50V 0402
2707	4822 126 14519	22pF 5% 50V 0402
2708	2238 586 59812	100nF 20% 50V 0603
2709	2238 586 59812	100nF 20% 50V 0603
2710	2238 586 59812	100nF 20% 50V 0603
2711	2238 586 59812	100nF 20% 50V 0603
2712	2238 586 59812	100nF 20% 50V 0603
2713	4822 126 14519	22pF 5% 50V 0402
2714	4822 126 14519	22pF 5% 50V 0402
2715	2020 021 91854	10µF 20% 16V
2716	2238 586 59812	100nF 20% 50V 0603
2717	2238 586 59812	100nF 20% 50V 0603
2718	3198 034 01590	15pF 1% 50V 0402
2719	3198 034 01590	15pF 1% 50V 0402
2720	3198 034 01590	15pF 1% 50V 0402
2721	2238 869 15101	100pF 5% 50V 0402
2722	2238 869 15101	100pF 5% 50V 0402
2723	2238 586 59812	100nF 20% 50V 0603
2725	2238 586 59812	100nF 20% 50V 0603
2726	2238 586 59812	100nF 20% 50V 0603
2727	2238 586 59812	100nF 20% 50V 0603
2728	2020 021 91854	10µF 20% 16V
2729	2238 586 59812	100nF 20% 50V 0603
2730	2020 021 91557	100µF 20% 16V
2731	2238 586 59812	100nF 20% 50V 0603
2732	2020 552 96618	1nF 10% 50V 0402
2733	2238 586 59812	100nF 20% 50V 0603
2734	2238 586 59812	100nF 20% 50V 0603
2735	2238 586 59812	100nF 20% 50V 0603
2736	2238 586 59812	100nF 20% 50V 0603
2738	2238 586 59812	100nF 20% 50V 0603
2739	2020 021 91557	100µF 20% 16V
2740	2238 787 15641	22nF 5% 16V 0402
2741	2238 787 15641	22nF 5% 16V 0402
2742	2238 787 15641	22nF 5% 16V 0402
2743	2238 586 59812	100nF 20% 50V 0603
2744	2238 586 59812	100nF 20% 50V 0603
2745	2238 586 59812	100nF 20% 50V 0603
2746	2238 586 59812	100nF 20% 50V 0603
2747	4822 126 14524	68pF 5% 50V 0402
2748	2238 586 59812	100nF 20% 50V 0603
2749	2238 586 59812	100nF 20% 50V 0603
2750	2020 552 96618	1nF 10% 50V 0402
2750	2238 586 59812	100nF 20% 50V 0603
2751	2020 552 96618	1nF 10% 50V 0402
2751	2238 586 59812	100nF 20% 50V 0603
2752	2020 552 96618	1nF 10% 50V 0402
2752	2238 586 59812	100nF 20% 50V 0603
2753	2020 552 96618	1nF 10% 50V 0402
2753	2238 586 59812	100nF 20% 50V 0603
2754	2020 552 96618	1nF 10% 50V 0402
2755	2020 552 96618	1nF 10% 50V 0402
2755	2238 586 59812	100nF 20% 50V 0603
2756	2020 552 96618	1nF 10% 50V 0402
2756	2238 586 59812	100nF 20% 50V 0603
2757	2238 787 15641	22nF 5% 16V 0402
2759	2020 552 96618	1nF 10% 50V 0402
2759	2238 586 59812	100nF 20% 50V 0603
2760	2238 586 59812	100nF 20% 50V 0603
2760	2238 787 15641	22nF 5% 16V 0402
2761	2238 586 59812	100nF 20% 50V 0603
2761	2238 787 15641	22nF 5% 16V 0402
2762	2238 586 59812	100nF 20% 50V 0603

2762	2238 787 15641	22nF 5% 16V 0402
2763	2238 586 59812	100nF 20% 50V 0603
2763	2238 787 15641	22nF 5% 16V 0402
2764	2238 586 59812	100nF 20% 50V 0603
2764	2238 787 15641	22nF 5% 16V 0402
2768	2238 586 59812	100nF 20% 50V 0603
2768	2238 787 15641	22nF 5% 16V 0402
2769	2020 552 96618	1nF 10% 50V 0402
2769	2238 586 59812	100nF 20% 50V 0603
2770	2020 552 96618	1nF 10% 50V 0402
2770	2238 586 59812	100nF 20% 50V 0603
2771	2020 552 96618	1nF 10% 50V 0402
2771	2238 586 59812	100nF 20% 50V 0603
2772	2238 586 59812	100nF 20% 50V 0603
2772	2238 787 15641	22nF 5% 16V 0402
2773	2020 552 96618	1nF 10% 50V 0402
2773	2238 586 59812	100nF 20% 50V 0603
2777	2020 552 96618	1nF 10% 50V 0402
2777	2238 586 59812	100nF 20% 50V 0603
2778	2020 552 96618	1nF 10% 50V 0402
2778	2238 586 59812	100nF 20% 50V 0603
2780	2020 552 96618	1nF 10% 50V 0402
2780	2238 586 59812	100nF 20% 50V 0603
2781	2020 552 96618	1nF 10% 50V 0402
2781	2238 586 59812	100nF 20% 50V 0603
2782	2020 552 96618	1nF 10% 50V 0402
2782	2238 586 59812	100nF 20% 50V 0603
2784	2238 586 59812	100nF 20% 50V 0603
2784	2238 787 15641	22nF 5% 16V 0402
2785	2238 586 59812	100nF 20% 50V 0603
2785	2238 787 15641	22nF 5% 16V 0402
2788	2238 586 59812	100nF 20% 50V 0603
2789	2238 586 59812	100nF 20% 50V 0603
2790	2238 586 59812	100nF 20% 50V 0603
2791	2238 586 59812	100nF 20% 50V 0603
2792	2238 586 59812	100nF 20% 50V 0603
2793	2238 586 59812	100nF 20% 50V 0603
2794	2020 552 96618	1nF 10% 50V 0402
2794	2238 586 59812	100nF 20% 50V 0603
2795	2020 552 96618	1nF 10% 50V 0402
2795	2238 586 59812	100nF 20% 50V 0603
2796	2020 552 96618	1nF 10% 50V 0402
2796	2238 586 59812	100nF 20% 50V 0603
2797	2020 552 96618	1nF 10% 50V 0402
2797	2238 586 59812	100nF 20% 50V 0603
2798	2020 552 96618	1nF 10% 50V 0402
2798	2238 586 59812	100nF 20% 50V 0603
2799	2020 552 96618	1nF 10% 50V 0402
2799	2238 586 59812	100nF 20% 50V 0603
2800	2238 586 59812	100nF 20% 50V 0603
2802	2238 586 59812	100nF 20% 50V 0603
2804	2238 586 59812	100nF 20% 50V 0603
2805	2020 552 96618	1nF 10% 50V 0402
2805	2238 586 59812	100nF 20% 50V 0603
2806	2238 586 59812	100nF 20% 50V 0603
2807	2238 586 59812	100nF 20% 50V 0603
2808	2020 552 96618	1nF 10% 50V 0402
2808	2238 586 59812	100nF 20% 50V 0603
2809	2020 552 96618	1nF 10% 50V 0402
2809	2238 586 59812	100nF 20% 50V 0603
2810	2238 586 59812	100nF 20% 50V 0603
2811	2238 586 59812	100nF 20% 50V 0603
2812	3198 031 02290	22Ω 5% 0.1W 0402
2813	2238 586 59812	100nF 20% 50V 0603
2817	2238 586 59812	100nF 20% 50V 0603
2819	2238 586 59812	100nF 20% 50V 0603
2821	2238 586 59812	100nF 20% 50V 0603
2821	2238 787 15641	22nF 5% 16V 0402
2822	2238 586 59812	100nF 20% 50V 0603
2822	2238 787 15641	22nF 5% 16V 0402
2823	2238 586 59812	100nF 20% 50V 0603
2824	2238 586 59812	100nF 20% 50V 0603
2825	2238 586 59812	100nF 20% 50V 0603
2826	2238 586 59812	100nF 20% 50V 0603
2827	2238 586 59812	100nF 20% 50V 0603
2829	2020 021 91557	100µF 20% 16V
2830	2238 586 59812	100nF 20% 50V 0603
2831	2238 586 59812	100nF 20% 50V 0603
2832	2238 586 59812	100nF 20% 50V 0603
2833	2238 586 59812	100nF 20% 50V 0603
2834	2238 586 59812	100nF 20% 50V 0603
2835	2238 586 59812	100nF 20% 50V 0603
2836	2238 586 59812	100nF 20% 50V 0603
2837	2238 869 15101	100pF 5% 50V 0402
2838	2238 869 15101	100pF 5% 50V 0402
2839	2238 869 15101	100pF 5% 50V 0402
2840	4822 126 14519	22pF 5% 50V 0402
2841	4822 126 14519	22pF 5% 50V 0402
2844	2238 586 59812	100nF 20% 50V 0603
2845	2238 586 59812	100nF 20% 50V 0603
2846	2238 586 59812	100nF 20% 50V 0603
2847	2020 021 91854	10µF 20% 16V
2848	2238 586 59812	100nF 20% 50V 0603
2849	2238 586 59812	100nF 20% 50V 0603
2850	2238 586 59812	100nF 20% 50V 0603
2851	2238 586 59812	100nF 20% 50V 0603
2852	2238 586 59812	100nF 20% 50V 0603
2853	2238 586 59812	100nF 20% 50V 0603
2854	2238 586 59812	100nF 20% 50V 0603
2855	2238 586 59812	100nF 20% 50V 0603
2856	2238 586 59812	100nF 20% 50V 0603
2857	2238 586 59812	100nF 20% 50V 0603
2858	2238 586 59812	100nF 20% 50V 0603
2859	2238 586 59812	100nF 20% 50V 0603
2860	2238 586 59812	100nF 20% 50V 0603
2861	2238 586 59812	100nF 20% 50V 0603
2862	2238 586 59812	100nF 20% 50V 0603
2863	2238 586 59812	100nF 20% 50V 0603
2864	2238 586 59812	100nF 20% 50V 0603
2865	2238 586 59812	100nF 20% 50V 0603
2866	2238 586 59812	100nF 20% 50V 0603
2867	2238 586 59812	100nF 20% 50V 0603
2868	2238 586 59812	100nF 20% 50V 0603
2869	2238 586 59812	100nF 20% 50V 0603
2870	2238 586 59812	100nF 20% 50V 0603
2871	2020 021 91557	100µF 20% 16V
2872	2238 586 59812	100nF 20% 50V 0603
2873	2238 586 59812	100nF 20% 50V 0603
2874	2238 586 59812	100nF 20% 50V 0603
2875	2238 586 59812	100nF 20% 50V 0603
2876	2238 586 59812	100nF 20% 50V 0603
2877	2238 586 59812	100nF 20% 50V 0603
2878	2238 586 59812	100nF 20% 50V 0603
2879	2238 586 59812	100nF 20% 50V 0603
2880	2238 586 59812	100nF 20% 50V 0603
2881	3198 034 02790	47pF 1% 50V 0402
2882	2238 586 59812	100nF 20% 50V 0603
2883	2238 586 59812	100nF 20% 50V 0603
2884	2238 586 59812	100nF 20% 50V 0603
2885	2238 586 59812	100nF 20% 50V 0603
2886	2238 586 59812	100nF 20% 50V 0603
2887	2238 586 59812	100nF 20% 50V 0603
2888	2238 586 59812	100nF 20% 50V 0603
2889	2020 021 91557	100µF 20% 16V
2890	2238 586 59812	100nF 20% 50V 0603
2891	2238 586 59812	100nF 20% 50V 0603
2892	2238 586 59812	100nF 20% 50V 0603
2893	2238 586 59812	100nF 20% 50V 0603
2894	2238 586 59812	100nF 20% 50V 0603
2895	2020 021 91854	10µF 20% 16V
2896	2020 021 91557	100µF 20% 16V
2897	2238 586 59812	100nF 20% 50V 0603
2898	2020 021 91854	10µF 20% 16V
2899	2238 586 59812	100nF 20% 50V 0603
2914	2238 586 59812	100nF 20% 50V 0603
2917	2238 586 59812	100nF 20% 50V 0603
2919	2020 021 91557	100µF 20% 16V
2920	2238 586 59812	100nF 20% 50V 0603
2921	2238 586 59812	100nF 20% 50V 0603
2922	2020 552 96628	10nF 10% 16V 0402
2923	2020 552 96628	10nF 10% 16V 0402
2924	2238 586 59812	100nF 20% 50V 0603
2925	2020 552 96618	1nF 10% 50V 0402
2926	2238 869 15101	100pF 5% 50V 0402
2927	2238 869 15101	100pF 5% 50V 0402
2928	2238 869 15101	100pF 5% 50V 0402
2937	2020 021 91557	100µF 20% 16V
2939	2020 021 91557	100µF 20% 16V
2A00	2020 552 96618	1nF 10% 50V 0402
2A01	2020 552 96618	1nF 10% 50V 0402
2A02	2022 552 05679	1µF 10% 16V 0805
2A03	2020 021 91557	100µF 20% 16V
2A04	2022 552 05679	1µF 10% 16V 0805
2A05	2020 021 91557	100µF 20% 16V
2A06	2020 552 96618	1nF 10% 50V 0402
2A07	2020 552 96618	1nF 10% 50V 0402
2A08	2022 552 05679	1µF 10% 16V 0805
2A10	2238 586 59812	100nF 20% 50V 0603
2A11	2238 586 59812	100nF 20% 50V 0603
2A12	2238 586 59812	100nF 20% 50V 0603
2A13	2238 586 59812	100nF 20% 50V 0603
2A14	2020 552 96618	1nF 10% 50V 0402
2A15	2020 021 91557	100µF 20% 16V
2A16	2238 586 59812	100nF 20% 50V 0603
2A17	2020 552 96618	1nF 10% 50V 0402
2A18	2020 021 91557	100µF 20% 16V
2A19	3198 034 02790	47pF 1% 50V 0402
2A20	2022 552 05679	1µF 10% 16V 0805
2A21	2238 586 59812	100nF 20% 50V 0603
2A22	2238 586 59812	100nF 20% 50V 0603
2A23	2238 586 59812	100nF 20% 50V 0603
2A24	2238 586 59812	100nF 20% 50V 0603
2A25	2238 869 15101	100pF 5% 50V 0402
2A26	2022 552 05679	1µF 10% 16V 0805
2A26	2238 586 59812	100nF 20% 50V 0603
2A27	2020 552 96618	1nF 10% 50V 0402
2A29	2238 869 15101	100pF 5% 50V 0402
2A30	2238 869 15101	100pF 5% 50V 0402
2A31	2022 552 05679	1µF 10% 16V 0805
2A31	2238 586 59812	100nF 20% 50V 0603
2A32	2238 869 15101	100pF 5% 50V 0402
2A33	2238 586 59812	100nF 20% 50V 0603
2A34	2238 586 59812	100nF 20% 50V 0603
2A35	2020 552 96618	1nF 10% 50V 0402
2A36	2238 869 15101	100pF 5% 50V 0402
2A37	2238 869 15101	100pF 5% 50V 0402
2A38	2022 552 05679	1µF 10% 16V 0805
2A39	2022 552 05679	1µF 10% 16V 0805
2A40	2238 586 59812	100nF 20% 50V 0603
2A41	2020 021 91854	10µF 20% 16V
2A42	2020 021 91854	10µF 20% 16V
2A43	2020 021 91854	10µF 20% 16V
2A44	2238 586 59812	100nF 20% 50V 0603
2A45	2238 586 59812	100nF 20% 50V 0603
2A46	2022 552 05679	1µF 10% 16V 0805
2A47	2020 552 96618	1nF 10% 50V 0402
2A47	2022 552 05679	1µF 10% 16V 0805
2A49	2022 552 05679	1µF 10% 16V 0805
2A50	2020 552 96618	1nF 10% 50V 0402
2A53	2022 552 05679	1µF 10% 16V 0805
2A54	2020 552 96618	1nF 10% 50V 0402
2A56	2022 552 05679	1µF 10% 16V 0805
2A59	2022 552 05679	1µF 10% 16V 0805
2A62	2022 552 05679	1µF 10% 16V 0805
2A67	4822 051 20008	Jumper 0805
2A71	4822 051 20008	Jumper 0805
2A79	2238 586 59812	100nF 20% 50V 0603
2A91	2238 869 15101	100pF 5% 50V 0402
2A92	2022 552 05679	1µF 10% 16V 0805
2A95	2238 869 15221	220pF 1% 50V 0402
2A99	2022 552 05679	1µF 10% 16V 0805
2AA5	2238 869 15101	100pF 5% 50V 0402
2AA6	2020 552 96618	1nF 10% 50V 0402
2AA7	2020 552 96618	1nF 10% 50V 0402
2AA9	3198 034 05680	5.6pF 1% 50V 0402
2AB0	3198 034 05680	5.6pF 1% 50V 0402
2AB2	2020 552 96618	1nF 10% 50V 0402
2AB3	2022 552 05679	1µF 10% 16V 0805
2AB4	2022 552 05679	1µF 10% 16V 0805
2AB5	2020 021 91854	10µF 20% 16V
2AB6	2020 552 96618	1nF 10% 50V 0402
2AB7	2020 552 96618	1nF 10% 50V 0402
2AB8	2022 552 05679	1µF 10% 16V 0805
2AF3	4822 124 12095	100µF 20% 16V
2AF4	2238 586 59812	100nF 20% 50V 0603
2C00	2238 586 59812	100nF 20% 50V 0603
2C01	2238 586 59812	100nF 20% 50V 0603
2C02	2238 586 59812	100nF 20% 50V 0603
2D04	2020 552 96618	1nF 10% 50V 0402
2D09	2238 586 59812	100nF 20% 50V 0603
2D10	2022 552 05679	1µF 10% 16V 0805
2D11	2020 552 96628	10nF 10% 16V 0402
2D12	2020 552 96628	10nF 10% 16V 0402
2E01	2238 586 59812	100nF 20% 50V 0603
2E02	2238 586 59812	100nF 20% 50V 0603
2E02	3198 035 71040	100nF 10% 16V 0402
2E03	2238 586 59812	100nF 20% 50V 0603
2E04	2238 586 59812	100nF 20% 50V 0603
2E06	2238 586 59812	100nF 20% 50V 0603
2E07	2238 586 59812	100nF 20% 50V 0603
2E08	2238 586 59812	100nF 20% 50V 0603
2E09	2238 586 59812	100nF 20% 50V 0603
2E10	2238 586 59812	100nF 20% 50V 0603
2E11	2238 586 59812	100nF 20% 50V 0603
2E12	2238 586 59812	100nF 20% 50V 0603
2E13	2238 586 59812	100nF 20% 50V 0603
2E14	2238 586 59812	100nF 20% 50V 0603
2E15	2238 586 59812	100nF 20% 50V 0603
2E16	2238 586 59812	100nF 20% 50V 0603
2E17	2238 586 59812	100nF 20% 50V 0603
2E18	2238 586 59812	100nF 20% 50V 0603
2E19	2238 586 59812	100nF 20% 50V 0603
2E20	2238 586 59812	100nF 20% 50V 0603
2E21	3198 017 34730	47nF 16V 0603
2E22	4822 126 14519	22pF 5% 50V 0402
2E23	3198 017 34730	47nF 16V 0603
2E24	4822 126 14519	22pF 5% 50V 0402
2E25	3198 017 34730	47nF 16V 0603
2E26	4822 126 14519	22pF 5% 50V 0402
2E27	2238 586 59812	100nF 20% 50V 0603
2E28	3198 017 34730	47nF 16V 0603
2E29	3198 017 33330	33nF 20% 16V 0603
2E29	4822 126 14549	33nF 16V 0603
2E30	3198 035 14720	4.7nF 5% 25V 0402
2E34	3198 035 03320	3.3nF 5% 50V 0402
2E35	2238 586 59812	100nF 20% 50V 0603
2E39	2238 869 15109	10pF 5% 50V 0402
2E41	2022 552 05679	1µF 10% 16V 0805
2E41	2238 586 59812	100nF 20% 50V 0603
2E42	2020 552 96628	10nF 10% 16V 0402
2E43	2238 586 59812	100nF 20% 50V 0603
2E49	2238 586 59812	100nF 20% 50V 0603

2E50	4822 124 23237	22µF 6.3V
2E50	4822 124 81058	47µF 20% 4V
2E51	2022 552 05679	1µF 10% 16V 0805
2E52	2238 586 59812	100nF 20% 50V 0603
2E54	2238 586 59812	100nF 20% 50V 0603
2E55	2022 552 05679	1µF 10% 16V 0805
2E56	2020 552 96628	10nF 10% 16V 0402
2E57	2020 552 96628	10nF 10% 16V 0402
2E58	2020 552 96628	10nF 10% 16V 0402
2E59	2020 552 96628	10nF 10% 16V 0402
2E62	2238 586 59812	100nF 20% 50V 0603
2E65	2238 586 59812	100nF 20% 50V 0603
2E66	2238 586 59812	100nF 20% 50V 0603
2E67	2238 586 59812	100nF 20% 50V 0603
2E68	2020 552 96628	10nF 10% 16V 0402
2E69	2020 552 96628	10nF 10% 16V 0402
2E70	2020 552 96628	10nF 10% 16V 0402
2E71	2020 552 96628	10nF 10% 16V 0402
2E72	2238 586 59812	100nF 20% 50V 0603
2E73	2238 586 59812	100nF 20% 50V 0603
2E74	2238 586 59812	100nF 20% 50V 0603
2E75	2238 586 59812	100nF 20% 50V 0603
2E77	2238 586 59812	100nF 20% 50V 0603
2E78	2238 586 59812	100nF 20% 50V 0603
2E79	2238 586 59812	100nF 20% 50V 0603
2E80	2238 586 59812	100nF 20% 50V 0603
2E81	2022 552 05679	1µF 10% 16V 0805
2E82	2238 586 59812	100nF 20% 50V 0603
2E83	2238 586 59812	100nF 20% 50V 0603
2E84	2238 586 59812	100nF 20% 50V 0603
2E86	2238 586 59812	100nF 20% 50V 0603
2E87	4822 124 12095	100µF 20% 16V
2E88	2238 869 15101	100pF 5% 50V 0402
2E89	2238 869 15101	100pF 5% 50V 0402
2E90	2238 869 15101	100pF 5% 50V 0402
2E91	2238 869 15101	100pF 5% 50V 0402
2E92	2238 869 15101	100pF 5% 50V 0402
2E93	2238 586 59812	100nF 20% 50V 0603
2E94	2238 586 59812	100nF 20% 50V 0603
2E96	2238 869 15101	100pF 5% 50V 0402
2E97	2238 869 15101	100pF 5% 50V 0402
2E98	2238 869 15101	100pF 5% 50V 0402
2E99	4822 124 81058	47µF 20% 4V
2I00	2238 869 15101	100pF 5% 50V 0402
2I10	2020 552 96628	10nF 10% 16V 0402
2I11	2022 552 05679	1µF 10% 16V 0805
2I12	2022 552 05679	1µF 10% 16V 0805
2I12	4822 126 14585	100nF 10% 0805 50V
2I15	2022 552 05679	1µF 10% 16V 0805
2I16	2238 869 15101	100pF 5% 50V 0402
2I17	2238 869 15101	100pF 5% 50V 0402
2I18	2238 869 15101	100pF 5% 50V 0402
2I19	2238 869 15101	100pF 5% 50V 0402
2I20	3198 035 03310	330pF 5% 50V 0402
2I21	2238 869 15101	100pF 5% 50V 0402
2I22	2238 869 15101	100pF 5% 50V 0402
2I23	2238 869 15101	100pF 5% 50V 0402
2I24	2238 869 15101	100pF 5% 50V 0402
2I25	3198 035 03310	330pF 5% 50V 0402
2I26	2238 869 15101	100pF 5% 50V 0402
2I27	2238 869 15101	100pF 5% 50V 0402
2I30	2238 869 15101	100pF 5% 50V 0402
2I32	4822 124 23002	10µF 16V
2I36	2238 869 15101	100pF 5% 50V 0402
2I38	2238 869 15101	100pF 5% 50V 0402
2I40	2238 586 59812	100nF 20% 50V 0603
2I46	2020 552 96618	1nF 10% 50V 0402
2I47	2020 552 96618	1nF 10% 50V 0402
2I50	2238 586 59812	100nF 20% 50V 0603
2I57	2238 869 15101	100pF 5% 50V 0402
2I58	2238 869 15101	100pF 5% 50V 0402
2I59	2238 586 59812	100nF 20% 50V 0603
2I64	2238 869 15101	100pF 5% 50V 0402
2I65	2238 869 15101	100pF 5% 50V 0402
2I69	2238 869 75829	82pF 5% 50V 0402
2I69	4822 126 14324	33pF 5% 50V 0402
2I70	2238 869 75829	82pF 5% 50V 0402
2I70	4822 126 14324	33pF 5% 50V 0402
2I86	2238 869 75829	82pF 5% 50V 0402
2I86	4822 126 14324	33pF 5% 50V 0402
2I87	2238 869 15101	100pF 5% 50V 0402
2I88	2238 869 15101	100pF 5% 50V 0402
2I89	2022 552 05679	1µF 10% 16V 0805
2I90	2022 552 05679	1µF 10% 16V 0805
2I91	2238 586 59812	100nF 20% 50V 0603
2I92	2022 552 05679	1µF 10% 16V 0805
2I93	2238 586 59812	100nF 20% 50V 0603
2I94	2238 586 59812	100nF 20% 50V 0603
2I95	2238 586 59812	100nF 20% 50V 0603
2I96	2022 552 05679	1µF 10% 16V 0805
2I97	2238 586 59812	100nF 20% 50V 0603
2I98	2238 586 59812	100nF 20% 50V 0603
2I99	2022 552 05679	1µF 10% 16V 0805
2I99	4822 124 23002	10µF 16V
2IA0	2022 552 05679	1µF 10% 16V 0805
2IA0	4822 124 23002	10µF 16V
2IA1	2022 552 05679	1µF 10% 16V 0805
2IA1	4822 124 23002	10µF 16V
2IA2	2022 552 05679	1µF 10% 16V 0805
2IA2	4822 124 23002	10µF 16V
2IA3	2020 552 96618	1nF 10% 50V 0402
2IA4	2022 552 05679	1µF 10% 16V 0805
2IA4	4822 126 14585	100nF 10% 0805 50V
2IA5	2020 021 91557	100µF 20% 16V
2IA9	2020 021 91557	100µF 20% 16V
2IB3	2238 586 59812	100nF 20% 50V 0603
2IB5	2022 552 05679	1µF 10% 16V 0805
2IB8	2238 586 59812	100nF 20% 50V 0603
2IB9	2238 586 59812	100nF 20% 50V 0603
2IC0	4822 124 23002	10µF 16V
2IC1	4822 124 23002	10µF 16V
2IC3	2238 586 59812	100nF 20% 50V 0603
2IC5	2238 586 59812	100nF 20% 50V 0603
2IC6	3198 034 04790	27pF 1% 50V 0402
2IC7	3198 034 04790	27pF 1% 50V 0402
2IC8	2022 552 05679	1µF 10% 16V 0805
2IC9	4822 126 13883	220pF 5% 50V
2IE1	2238 586 59812	100nF 20% 50V 0603
2IE2	2238 586 59812	100nF 20% 50V 0603
2IE3	2022 552 05679	1µF 10% 16V 0805
2IE4	2238 586 59812	100nF 20% 50V 0603
2IE5	2238 586 59812	100nF 20% 50V 0603
2IE6	2238 586 59812	100nF 20% 50V 0603
2IE7	2022 552 05679	1µF 10% 16V 0805
2IE8	2022 552 05679	1µF 10% 16V 0805
2IE9	2238 586 59812	100nF 20% 50V 0603
2IF1	2238 586 59812	100nF 20% 50V 0603
2IF2	2238 586 59812	100nF 20% 50V 0603
2IF3	2238 586 59812	100nF 20% 50V 0603
2IF4	4822 124 80151	47µF 16V
2IF5	2238 586 59812	100nF 20% 50V 0603
2IF8	2022 552 05679	1µF 10% 16V 0805
2IF8	4822 124 11946	22µF 20% 16V
2IF9	2022 552 05679	1µF 10% 16V 0805
2IF9	4822 124 11946	22µF 20% 16V
2IG1	2238 586 59812	100nF 20% 50V 0603
2IG2	5322 124 41945	22µF 20% 35V
2IG3	2238 586 59812	100nF 20% 50V 0603
2IG4	2238 586 59812	100nF 20% 50V 0603
2IG5	2238 586 59812	100nF 20% 50V 0603
2IG6	2238 586 59812	100nF 20% 50V 0603
2IG7	2238 586 59812	100nF 20% 50V 0603
2IG8	2238 586 59812	100nF 20% 50V 0603
2IG9	2238 586 59812	100nF 20% 50V 0603
2IH1	2238 586 59812	100nF 20% 50V 0603
2IH2	2238 586 59812	100nF 20% 50V 0603
2IH3	2020 552 96618	1nF 10% 50V 0402
2IH4	2022 552 05679	1µF 10% 16V 0805
2IH5	2238 586 59812	100nF 20% 50V 0603
2IH6	2022 552 05679	1µF 10% 16V 0805
2IH6	4822 124 11946	22µF 20% 16V
2IH7	2022 552 05679	1µF 10% 16V 0805
2IH7	4822 124 11946	22µF 20% 16V
2IH8	2022 552 05679	1µF 10% 16V 0805
2IH8	4822 124 11946	22µF 20% 16V
2IH9	2022 552 05679	1µF 10% 16V 0805
2IH9	4822 124 11946	22µF 20% 16V
2IJ4	2238 586 59812	100nF 20% 50V 0603
2IJ8	2022 552 05679	1µF 10% 16V 0805
2IJ9	2022 552 05679	1µF 10% 16V 0805
2IK1	2238 780 15654	220nF 10% 16V 0805
2IK5	2238 586 59812	100nF 20% 50V 0603
2IK6	2238 586 59812	100nF 20% 50V 0603
2IK7	2238 586 59812	100nF 20% 50V 0603
2IL0	2238 869 15109	10pF 5% 50V 0402
2IN8	2238 586 59812	100nF 20% 50V 0603
2IN9	2238 586 59812	100nF 20% 50V 0603
2IS6	4822 124 12095	100µF 20% 16V
2L00	4822 124 23237	22µF 6.3V
2L01	2238 586 59812	100nF 20% 50V 0603
2L02	2238 586 59812	100nF 20% 50V 0603
2L03	2238 586 59812	100nF 20% 50V 0603
2L04	2238 586 59812	100nF 20% 50V 0603
2L05	2238 586 59812	100nF 20% 50V 0603
2L06	2238 586 59812	100nF 20% 50V 0603
2L07	2238 586 59812	100nF 20% 50V 0603
2L08	2238 586 59812	100nF 20% 50V 0603
2L09	2238 586 59812	100nF 20% 50V 0603
2L10	2238 586 59812	100nF 20% 50V 0603
2L11	2238 586 59812	100nF 20% 50V 0603
2L12	2238 586 59812	100nF 20% 50V 0603
2L13	2238 586 59812	100nF 20% 50V 0603
2L14	2238 586 59812	100nF 20% 50V 0603
2L15	2238 586 59812	100nF 20% 50V 0603
2L16	2238 586 59812	100nF 20% 50V 0603
2L17	2238 586 59812	100nF 20% 50V 0603
2L19	4822 124 23237	22µF 6.3V
2L20	2238 586 59812	100nF 20% 50V 0603
2L21	2238 586 59812	100nF 20% 50V 0603
2L25	2238 586 59812	100nF 20% 50V 0603
2L26	3198 017 33330	33nF 20% 16V 0603
2L26	4822 126 14549	33nF 16V 0603
2L27	3198 035 14720	4.7nF 5% 25V 0402
2L28	3198 034 03990	39pF 1% 50V 0402
2L28	4822 126 14519	22pF 5% 50V 0402
2L29	3198 034 03990	39pF 1% 50V 0402
2L29	4822 126 14519	22pF 5% 50V 0402
2L30	3198 034 03990	39pF 1% 50V 0402
2L30	4822 126 14519	22pF 5% 50V 0402
2L31	3198 017 34730	47nF 16V 0603
2L32	3198 035 03320	3.3nF 5% 50V 0402
2L33	2238 586 59812	100nF 20% 50V 0603
2L34	2238 586 59812	100nF 20% 50V 0603
2L51	4822 124 23237	22µF 6.3V
2L52	3198 017 34730	47nF 16V 0603
2L54	3198 017 34730	47nF 16V 0603
2L56	2020 552 96618	1nF 10% 50V 0402
2L57	3198 017 34730	47nF 16V 0603
2L58	4822 124 23237	22µF 6.3V
2L60	3198 034 04790	27pF 1% 50V 0402
2P80	4822 124 12095	100µF 20% 16V
2P81	2238 586 59812	100nF 20% 50V 0603
2T01	3198 032 28210	220µF 20% 6.3V
2T04	2238 586 15641	22nF 10% 50V 0603
2T05	3198 032 28210	220µF 20% 6.3V
2T06	2020 552 96628	10nF 10% 16V 0402
2T09	3198 017 34730	47nF 16V 0603
2T12	2238 586 59812	100nF 20% 50V 0603
2T13	2020 552 96628	10nF 10% 16V 0402
2T13	5322 126 11583	10nF 10% 50V 0603
2T15	2022 552 05679	1µF 10% 16V 0805
2T21	3198 032 28210	220µF 20% 6.3V
2U03	2022 552 05679	1µF 10% 16V 0805
2U04	4822 126 14583	470nF 10% 16V 0805
2U05	2020 552 96618	1nF 10% 50V 0402
2U06	2022 552 05635	22µF 10% 16V
2U07	2238 869 75829	82pF 5% 50V 0402
2U08	2022 552 05635	22µF 10% 16V
2U09	2020 552 96618	1nF 10% 50V 0402
2U10	2022 552 05635	22µF 10% 16V
2U11	2020 552 96618	1nF 10% 50V 0402
2U12	2020 552 96628	10nF 10% 16V 0402
2U13	2238 780 15654	220nF 10% 16V 0805
2U14	4822 126 14583	470nF 10% 16V 0805
2U15	4822 124 12095	100µF 20% 16V
2U16	3198 035 14720	4.7nF 5% 25V 0402
2U17	4822 126 14583	470nF 10% 16V 0805
2U18	3198 034 01210	120pF 1% 50V 0402
2U19	2238 586 59812	100nF 20% 50V 0603
2U20	2022 552 05679	1µF 10% 16V 0805
2U21	4822 126 14583	470nF 10% 16V 0805
2U22	2022 552 05679	1µF 10% 16V 0805
2U23	4822 124 12095	100µF 20% 16V
2U24	2020 552 96618	1nF 10% 50V 0402
2U25	2238 586 59812	100nF 20% 50V 0603
2U26	2238 586 59812	100nF 20% 50V 0603
2U27	3198 035 26820	6.8nF 10% 16V 0402
2U28	3198 035 26820	6.8nF 10% 16V 0402
2U30	3198 034 01210	120pF 1% 50V 0402
2U31	4822 124 12095	100µF 20% 16V
2U32	3198 035 03320	3.3nF 5% 50V 0402
2U33	2022 552 05679	1µF 10% 16V 0805
2U34	2238 787 15641	22nF 5% 16V 0402
2U35	2022 552 05679	1µF 10% 16V 0805
2U36	2238 586 59812	100nF 20% 50V 0603
2U37	2020 552 96623	2.2nF 10% 50V 0402
2U39	2238 586 59812	100nF 20% 50V 0603
2U40	2020 552 96623	2.2nF 10% 50V 0402
2U40	4822 126 14238	2.2nF 50V 0603
2U41	3198 035 26820	6.8nF 10% 16V 0402
2U42	3198 017 34730	47nF 16V 0603
2V11	3198 035 04710	470pF 50V 0402
2V12	3198 035 04710	470pF 50V 0402
2Y00	2238 869 15101	100pF 5% 50V 0402
2Y01	2238 869 15101	100pF 5% 50V 0402
2Y02	2238 869 15101	100pF 5% 50V 0402
2Y03	2238 869 15101	100pF 5% 50V 0402
2Y04	2238 869 15101	100pF 5% 50V 0402
2Y05	2238 869 15101	100pF 5% 50V 0402
2Y07	2238 869 15101	100pF 5% 50V 0402
2Y09	2238 869 15101	100pF 5% 50V 0402
2Y10	2238 869 15101	100pF 5% 50V 0402
2Y12	2238 869 15101	100pF 5% 50V 0402
2Y13	2238 586 59812	100nF 20% 50V 0603
2Y14	2238 869 15101	100pF 5% 50V 0402
2Y15	2238 869 15101	100pF 5% 50V 0402
2Y16	2238 869 15101	100pF 5% 50V 0402
2Y17	2238 869 15101	100pF 5% 50V 0402
2Y18	2238 869 15101	100pF 5% 50V 0402
2Y19	2238 869 15101	100pF 5% 50V 0402
2Y23	2238 869 15101	100pF 5% 50V 0402
2Y25	2238 869 15101	100pF 5% 50V 0402

2Y26	2238 869 15101	100pF 5% 50V 0402
2Y27	2020 552 96618	1nF 10% 50V 0402
2Y28	2020 552 96618	1nF 10% 50V 0402
2Y29	2020 552 96618	1nF 10% 50V 0402
2Y30	4822 124 12095	100µF 20% 16V
2Y31	4822 124 12095	100µF 20% 16V
2Y32	2020 552 96618	1nF 10% 50V 0402
2Y33	2020 552 96618	1nF 10% 50V 0402
2Y34	2238 869 15101	100pF 5% 50V 0402
2Y36	2238 869 15101	100pF 5% 50V 0402
2Y37	2238 869 15101	100pF 5% 50V 0402
2Y38	2238 869 15101	100pF 5% 50V 0402
2Y39	2238 869 15101	100pF 5% 50V 0402
2Y40	2238 869 15101	100pF 5% 50V 0402
2Y41	2238 869 15101	100pF 5% 50V 0402
2Y42	2238 869 15101	100pF 5% 50V 0402
2Y43	2238 869 15101	100pF 5% 50V 0402
2Y49	2238 869 15101	100pF 5% 50V 0402
2Y50	2238 869 15101	100pF 5% 50V 0402
2Y51	2238 869 15101	100pF 5% 50V 0402
2Y52	3198 035 71040	100nF 10% 16V 0402
2Y53	2238 869 15101	100pF 5% 50V 0402
2Z44	4822 126 14519	22pF 5% 50V 0402
2Z45	4822 126 14519	22pF 5% 50V 0402
2Z46	4822 126 14519	22pF 5% 50V 0402
2Z47	4822 126 14519	22pF 5% 50V 0402
2Z48	4822 126 14519	22pF 5% 50V 0402
2Z49	4822 126 14519	22pF 5% 50V 0402
2Z50	4822 126 14519	22pF 5% 50V 0402
2Z51	4822 126 14519	22pF 5% 50V 0402
2Z52	4822 126 14519	22pF 5% 50V 0402
2Z53	4822 126 14519	22pF 5% 50V 0402
2Z57	4822 117 13605	Jumper 0402
2Z58	2238 869 15101	100pF 5% 50V 0402
2Z58	4822 117 13605	Jumper 0402
2Z59	2238 869 15101	100pF 5% 50V 0402
2Z59	4822 117 13605	Jumper 0402
2Z60	2238 869 15101	100pF 5% 50V 0402
2Z61	2238 869 15101	100pF 5% 50V 0402
2Z62	2238 869 15101	100pF 5% 50V 0402
2Z62	4822 117 13605	Jumper 0402

⊣WW⊢

3001	3198 031 04720	4.7kΩ 5% 0402
3002	3198 031 04720	4.7kΩ 5% 0402
3003	4822 117 13525	24kΩ 1% 0.62W 0603
3005	4822 117 13606	10kΩ 5% 0.01W 0402
3006	4822 117 13543	470Ω 5% 0402
3007	2350 033 10471	4 x 470Ω 5%
3008	2350 033 10101	4 x 100Ω 5%
3008	2350 033 11221	4 x 220Ω 5%
3009	3198 031 01810	180Ω 5% 0402
3009	4822 117 13606	10kΩ 5% 0.01W 0402
3010	4822 117 13606	10kΩ 5% 0.01W 0402
3011	3198 031 04720	4.7kΩ 5% 0402
3012	2350 033 10101	4 x 100Ω 5%
3013	4822 117 13606	10kΩ 5% 0.01W 0402
3014	3198 031 06820	6.8kΩ 5% 0.01W 0402
3015	3198 031 04740	470 kΩ 5% 0402
3016	2322 706 71502	1.5kΩ 1% 0402
3017	3198 031 04720	4.7kΩ 5% 0402
3018	4822 117 13606	10kΩ 5% 0.01W 0402
3019	3198 031 04720	4.7kΩ 5% 0402
3020	4822 117 13606	10kΩ 5% 0.01W 0402
3021	4822 117 13606	10kΩ 5% 0.01W 0402
3024	3198 031 02730	27kΩ 5% 0402
3025	4822 117 13596	220Ω 5% 0.01W 0402
3026	3198 031 04720	4.7kΩ 5% 0402
3027	3198 031 04730	47Ω 5% 0402
3029	2350 033 10101	4 x 100Ω 5%
3031	2350 033 10101	4 x 100Ω 5%
3033	4822 117 11297	100kΩ 5% 0.1W
3033	4822 117 13606	10kΩ 5% 0.01W 0402
3034	2350 033 10101	4 x 100Ω 5%
3035	2350 033 10101	4 x 100Ω 5%
3038	4822 117 13606	10kΩ 5% 0.01W 0402
3039	3198 031 01810	180Ω 5% 0402
3046	2350 033 10101	4 x 100Ω 5%
3047	4822 051 30008	Jumper 0603
3048	2350 033 10101	4 x 100Ω 5%
3049	2350 033 10101	4 x 100Ω 5%
3050	2350 033 10101	4 x 100Ω 5%
3051	2350 033 10101	4 x 100Ω 5%
3052	2350 033 10101	4 x 100Ω 5%
3053	4822 117 13606	10kΩ 5% 0.01W 0402
3054	2350 033 10101	4 x 100Ω 5%
3055	2350 033 10101	4 x 100Ω 5%
3056	2350 033 10101	4 x 100Ω 5%
3057	2350 033 10101	4 x 100Ω 5%
3059	2322 704 66201	620Ω 1% 0603
3061	2350 033 10101	4 x 100Ω 5%
3062	4822 117 13606	10kΩ 5% 0.01W 0402
3064	2350 033 10101	4 x 100Ω 5%
3065	3198 031 04720	4.7kΩ 5% 0402
3066	3198 031 04730	47Ω 5% 0402
3067	3198 031 04740	470 kΩ 5% 0402
3069	3198 031 01820	1.8kΩ 5% 0.01W 0402
3072	2350 033 10101	4 x 100Ω 5%
3073	2350 033 10471	4 x 470Ω 5%
3074	2350 033 10471	4 x 470Ω 5%
3076	2350 033 10471	4 x 470Ω 5%
3077	3198 031 04720	4.7kΩ 5% 0402
3078	2350 033 10471	4 x 470Ω 5%
3079	3198 031 01820	1.8kΩ 5% 0.01W 0402
3080	4822 117 13606	10kΩ 5% 0.01W 0402
3081	4822 117 13543	470Ω 5% 0402
3082	2350 033 10101	4 x 100Ω 5%
3083	2350 033 10101	4 x 100Ω 5%
3084	4822 117 13606	10kΩ 5% 0.01W 0402
3085	2350 033 10101	4 x 100Ω 5%
3086	2350 033 10101	4 x 100Ω 5%
3087	4822 117 13545	100Ω 1% 0402
3088	3198 031 01820	1.8kΩ 5% 0.01W 0402
3089	4822 117 13545	100Ω 1% 0402
3090	2350 033 10471	4 x 470Ω 5%
3091	4822 051 30008	Jumper 0603
3092	3198 031 01820	1.8kΩ 5% 0.01W 0402
3093	4822 117 13606	10kΩ 5% 0.01W 0402
3097	4822 117 13543	470Ω 5% 0402
3099	2350 033 10471	4 x 470Ω 5%
3100	4822 117 13596	220Ω 5% 0.01W 0402
3101	4822 117 13596	220Ω 5% 0.01W 0402
3102	2350 033 10101	4 x 100Ω 5%
3103	4822 117 13543	470Ω 5% 0402
3304▲	2322 750 63908	3.9Ω 5% Fuse 1206
3370	4822 117 13545	100Ω 1% 0402
3371	4822 117 13546	47Ω 5% 0402
3372	4822 117 13543	470Ω 5% 0402
3376	4822 117 13545	100Ω 1% 0402
3377	4822 117 13545	100Ω 1% 0402
3378	3198 031 01530	15kΩ 5% 0.01W 0402
3380	4822 117 13545	100Ω 1% 0402
3382	4822 117 13543	470Ω 5% 0402
3385	4822 117 13543	470Ω 5% 0402
3393	4822 117 11297	100kΩ 5% 0.1W
3400▲	4822 117 11152	4.7Ω 5%
3402▲	2322 750 63908	3.9Ω 5% Fuse 1206
3404	3198 031 05610	560Ω 5% 0.01W 0402
3405	4822 117 13548	1kΩ 5% 0402
3406	2322 705 70279	27Ω 5% 0402
3408	4822 117 13545	100Ω 1% 0402
3411	3198 031 02720	2.7kΩ 5% 0.01W 0402
3412▲	4822 117 11152	4.7Ω 5%
3413	3198 031 02710	270Ω 5% 0.1W 0402
3414	3198 031 04720	4.7kΩ 5% 0402
3415	4822 117 13602	2.2kΩ 5% 0.01W 0402
3418	3198 031 03910	390Ω 1% 0402
3419	3198 031 03390	33Ω 1% 0402
3422	4822 117 13548	1kΩ 5% 0402
3435	3198 031 04720	4.7kΩ 5% 0402
3436	3198 031 01810	180Ω 5% 0402
3437	4822 117 13543	470Ω 5% 0402
3439	4822 117 13597	330Ω 5% 0402 0.01W
3441	3198 031 05620	5.6kΩ 5% 0.01W 0402
3445	4822 117 13543	470Ω 5% 0402
3463	3198 031 04720	4.7kΩ 5% 0402
3473	4822 117 13548	1kΩ 5% 0402
3474	3198 031 01090	10Ω 5% 0.01W 0402
3475▲	5322 117 11726	10Ω 5%
3476	3198 031 05610	560Ω 5% 0.01W 0402
3700	3198 031 02290	22Ω 5% 0.1W 0402
3701	4822 117 13548	1kΩ 5% 0402
3702	3198 031 01090	10Ω 5% 0.01W 0402
3703	3198 031 04720	4.7kΩ 5% 0402
3706	4822 117 13545	100Ω 1% 0402
3707	4822 117 13545	100Ω 1% 0402
3709	4822 117 13545	100Ω 1% 0402
3710	4822 117 13545	100Ω 1% 0402
3712	3198 031 04730	47Ω 5% 0402
3713	3198 031 01810	180Ω 5% 0402
3714	3198 031 01810	180Ω 5% 0402
3715	3198 031 01810	180Ω 5% 0402
3716	4822 117 11297	100kΩ 5% 0.1W
3717	4822 117 11297	100kΩ 5% 0.1W
3718	4822 117 11297	100kΩ 5% 0.1W
3719	3198 031 03320	3.3kΩ 5% 0402
3720	4822 117 13606	10kΩ 5% 0.01W 0402
3721	4822 117 13545	100Ω 1% 0402
3722	4822 117 13548	1kΩ 5% 0402
3724	4822 117 13545	100Ω 1% 0402
3725	3198 031 03320	3.3kΩ 5% 0402
3726	3198 031 01220	1.2kΩ 5% 0.01W 0402
3727	3198 031 01510	150Ω 5% 0.01W 0402
3728	3198 031 01510	150Ω 5% 0.01W 0402
3729	4822 117 13605	Jumper 0402
3730	3198 031 05610	560Ω 5% 0.01W 0402
3730	3198 031 06810	680Ω 5% 0.01W 0402
3732	3198 031 04730	47Ω 5% 0402
3733	4822 117 13548	1kΩ 5% 0402
3734	4822 117 13545	100Ω 1% 0402
3736	4822 117 13545	100Ω 1% 0402
3737	4822 117 13548	1kΩ 5% 0402
3738	4822 117 13548	1kΩ 5% 0402
3739	3198 031 01230	12kΩ 5% 0402
3740	3198 031 04720	4.7kΩ 5% 0402
3742	4822 117 13601	22kΩ 5% 0402
3743	4822 117 13606	10kΩ 5% 0.01W 0402
3744	4822 117 13602	2.2kΩ 5% 0.01W 0402
3745	4822 117 13548	1kΩ 5% 0402
3746	3198 031 03920	3.9kΩ 5% 0402
3747	3198 031 04730	47Ω 5% 0402
3748	2322 705 70124	120kΩ 5% 0402
3749	3198 031 03920	3.9kΩ 5% 0402
3750	3198 031 03920	3.9kΩ 5% 0402
3751	3198 031 03320	3.3kΩ 5% 0402
3752	4822 117 13605	Jumper 0402
3753	4822 117 13605	Jumper 0402
3754	4822 117 13545	100Ω 1% 0402
3755	3198 031 04720	4.7kΩ 5% 0402
3756	4822 117 13606	10kΩ 5% 0.01W 0402
3757	3198 031 01510	150Ω 5% 0.01W 0402
3758	3198 031 04720	4.7kΩ 5% 0402
3759	4822 117 13596	220Ω 5% 0.01W 0402
3762	3198 031 03390	33Ω 1% 0402
3762	3198 031 06890	68Ω 5% 0402
3763	3198 031 03390	33Ω 1% 0402
3763	3198 031 06890	68Ω 5% 0402
3764	3198 031 03390	33Ω 1% 0402
3764	3198 031 06890	68Ω 5% 0402
3766	4822 117 13548	1kΩ 5% 0402
3767	3198 031 03390	33Ω 1% 0402
3767	3198 031 06890	68Ω 5% 0402
3768	3198 031 03390	33Ω 1% 0402
3768	3198 031 06890	68Ω 5% 0402
3769	3198 031 03390	33Ω 1% 0402
3769	3198 031 06890	68Ω 5% 0402
3770	3198 031 03390	33Ω 1% 0402
3770	3198 031 06890	68Ω 5% 0402
3771	3198 031 07590	75Ω 5% 0402
3772	3198 031 07590	75Ω 5% 0402
3773	3198 031 07590	75Ω 5% 0402
3774	3198 031 03390	33Ω 1% 0402
3774	3198 031 06890	68Ω 5% 0402
3775	3198 031 03390	33Ω 1% 0402
3775	3198 031 06890	68Ω 5% 0402
3776	3198 031 07590	75Ω 5% 0402
3777	3198 031 03390	33Ω 1% 0402
3777	3198 031 06890	68Ω 5% 0402
3778	3198 031 04720	4.7kΩ 5% 0402
3779	3198 031 03390	33Ω 1% 0402
3779	3198 031 06890	68Ω 5% 0402
3780	3198 031 03390	33Ω 1% 0402
3780	3198 031 06890	68Ω 5% 0402
3781	3198 031 03390	33Ω 1% 0402
3781	3198 031 06890	68Ω 5% 0402
3782	4822 117 13548	1kΩ 5% 0402
3784	3198 031 03390	33Ω 1% 0402
3784	3198 031 06890	68Ω 5% 0402
3792	3198 031 01510	150Ω 5% 0.01W 0402
3793	4822 117 13602	2.2kΩ 5% 0.01W 0402
3794	3198 031 07590	75Ω 5% 0402
3795	3198 031 01510	150Ω 5% 0.01W 0402
3797	3198 031 04720	4.7kΩ 5% 0402
3800	3198 031 07590	75Ω 5% 0402
3801	3198 031 01510	150Ω 5% 0.01W 0402
3802	3198 031 01510	150Ω 5% 0.01W 0402
3803	3198 031 03390	33Ω 1% 0402
3803	3198 031 06890	68Ω 5% 0402
3804	3198 031 03390	33Ω 1% 0402
3804	3198 031 06890	68Ω 5% 0402
3805	4822 117 13545	100Ω 1% 0402
3811	3198 031 07590	75Ω 5% 0402
3812	3198 031 07590	75Ω 5% 0402
3814	3198 031 07590	75Ω 5% 0402
3815	3198 031 07590	75Ω 5% 0402
3817	3198 031 07590	75Ω 5% 0402
3818	3198 031 07590	75Ω 5% 0402
3820	3198 031 04720	4.7kΩ 5% 0402
3821	3198 031 03390	33Ω 1% 0402
3823	3198 031 06890	68Ω 5% 0402
3826	4822 117 13545	100Ω 1% 0402
3827	4822 117 13545	100Ω 1% 0402
3828	4822 117 13605	Jumper 0402
3829	4822 117 13545	100Ω 1% 0402
3830	3198 031 06890	68Ω 5% 0402
3831	3198 031 06890	68Ω 5% 0402
3832	3198 031 06890	68Ω 5% 0402
3833	3198 031 06890	68Ω 5% 0402
3834	3198 031 06890	68Ω 5% 0402
3835	3198 031 06890	68Ω 5% 0402

3836	3198 031 06890	68Ω 5% 0402
3837	3198 031 06890	68Ω 5% 0402
3838	3198 031 06890	68Ω 5% 0402
3839	3198 031 06890	68Ω 5% 0402
3840	3198 031 06890	68Ω 5% 0402
3841	3198 031 06890	68Ω 5% 0402
3842	3198 031 06890	68Ω 5% 0402
3843	3198 031 06890	68Ω 5% 0402
3844	3198 031 06890	68Ω 5% 0402
3845	3198 031 06890	68Ω 5% 0402
3846	3198 031 04720	4.7kΩ 5% 0402
3850	2322 705 87829	82Ω 5% 0402
3853	3198 031 04730	47Ω 5% 0402
3855	3198 031 04720	4.7kΩ 5% 0402
3856	3198 031 01090	10Ω 5% 0.01W 0402
3857	3198 031 01090	10Ω 5% 0.01W 0402
3858	3198 031 01090	10Ω 5% 0.01W 0402
3859	3198 031 01090	10Ω 5% 0.01W 0402
3860	3198 031 01090	10Ω 5% 0.01W 0402
3861	3198 031 01090	10Ω 5% 0.01W 0402
3864	4822 117 13545	100Ω 1% 0402
3865	4822 117 13545	100Ω 1% 0402
3867	4822 117 13545	100Ω 1% 0402
3868	4822 117 13545	100Ω 1% 0402
3869	4822 117 13545	100Ω 1% 0402
3870	4822 117 13545	100Ω 1% 0402
3871	4822 117 13545	100Ω 1% 0402
3872	4822 117 13545	100Ω 1% 0402
3873	4822 117 13545	100Ω 1% 0402
3875	4822 117 13545	100Ω 1% 0402
3880	3198 031 04730	47Ω 5% 0402
3881	3198 031 04730	47Ω 5% 0402
3882	3198 031 04730	47Ω 5% 0402
3883	3198 031 04730	47Ω 5% 0402
3884	3198 031 04730	47Ω 5% 0402
3885	4822 117 13548	1kΩ 5% 0402
3886	4822 117 13548	1kΩ 5% 0402
3887	4822 117 13548	1kΩ 5% 0402
3888	4822 117 13548	1kΩ 5% 0402
3889	4822 117 13548	1kΩ 5% 0402
3890	4822 117 13548	1kΩ 5% 0402
3891	4822 117 13548	1kΩ 5% 0402
3894	3198 031 01510	150Ω 5% 0.01W 0402
3896	4822 117 13605	Jumper 0402
3900	3198 031 06890	68Ω 5% 0402
3901	3198 031 06890	68Ω 5% 0402
3902	3198 031 06890	68Ω 5% 0402
3903	4822 117 11297	100kΩ 5% 0.1W
3905	3198 031 04720	4.7kΩ 5% 0402
3909	4822 117 13545	100Ω 1% 0402
3911	2350 033 11689	4x 68Ω 5% Netw.
3912	2350 033 11689	4x 68Ω 5% Netw.
3913	2350 033 11229	4x 22Ω 5% Netw.
3914	2350 033 11229	4x 22Ω 5% Netw.
3915	2350 033 11229	4x 22Ω 5% Netw.
3916	2350 033 11229	4x 22Ω 5% Netw.
3917	2350 033 11229	4x 22Ω 5% Netw.
3918	3198 031 06890	68Ω 5% 0402
3919	3198 031 06890	68Ω 5% 0402
3921	3198 031 06890	68Ω 5% 0402
3A00	4822 117 13601	22kΩ 5% 0402
3A01	4822 117 13606	10kΩ 5% 0.01W 0402
3A02	3198 031 04730	47Ω 5% 0402
3A03▲	4822 117 13568	6.8Ω 5% 1206
3A04	4822 117 13601	22kΩ 5% 0402
3A05	4822 117 13601	22kΩ 5% 0402
3A06	4822 117 11297	100kΩ 5% 0.1W
3A07	4822 117 11297	100kΩ 5% 0.1W
3A09	4822 117 13601	22kΩ 5% 0402
3A11	4822 117 11297	100kΩ 5% 0.1W
3A12	3198 031 04730	47Ω 5% 0402
3A13	3198 031 04730	47Ω 5% 0402
3A14	3198 031 04730	47Ω 5% 0402
3A15	4822 117 11297	100kΩ 5% 0.1W
3A16	4822 117 13545	100Ω 1% 0402
3A17	4822 117 13545	100Ω 1% 0402
3A18	3198 031 06830	68kΩ 5% 0.01W 0402
3A19	4822 117 13545	100Ω 1% 0402
3A20	4822 117 11297	100kΩ 5% 0.1W
3A21	3198 031 02730	27kΩ 5% 0402
3A21	3198 031 06830	68kΩ 5% 0.01W 0402
3A22	4822 117 11297	100kΩ 5% 0.1W
3A23	3198 031 06830	68kΩ 5% 0.01W 0402
3A24	3198 031 06810	680Ω 5% 0.01W 0402
3A24	4822 117 13545	100Ω 1% 0402
3A26	3198 031 06830	68kΩ 5% 0.01W 0402
3A27	3198 031 06820	6.8kΩ 5% 0.01W 0402
3A28	3198 031 06820	6.8kΩ 5% 0.01W 0402
3A40	3198 031 01830	18kΩ 5% 0.01W 0402
3A45	3198 031 04730	47Ω 5% 0402
3A46	3198 031 01530	15kΩ 5% 0.01W 0402
3A47	3198 031 04730	47Ω 5% 0402
3A48	4822 117 11297	100kΩ 5% 0.1W
3A49	3198 031 01830	18kΩ 5% 0.01W 0402
3A51	3198 031 01530	15kΩ 5% 0.01W 0402
3A52	3198 031 03930	39kΩ 5% 0402
3A52	3198 031 05630	56kΩ 5% 0402
3A53	3198 031 03930	39kΩ 5% 0402
3A53	3198 031 05630	56kΩ 5% 0402
3A55	4822 117 13597	330Ω 5% 0402 0.01W
3A60	4822 117 11297	100kΩ 5% 0.1W
3A61	4822 117 13597	330Ω 5% 0402 0.01W
3A62	4822 117 11297	100kΩ 5% 0.1W
3A63	4822 117 13601	22kΩ 5% 0402
3A64	3198 031 04730	47Ω 5% 0402
3A64	4822 117 13597	330Ω 5% 0402 0.01W
3A65	3198 031 01050	1MΩ 5% 0402
3A65	4822 117 11297	100kΩ 5% 0.1W
3A66	4822 117 11297	100kΩ 5% 0.1W
3A67	4822 117 13543	470Ω 5% 0402
3C00	4822 117 13602	2.2kΩ 5% 0.01W 0402
3C01	3198 031 01090	10Ω 5% 0.01W 0402
3C03	4822 117 13606	10kΩ 5% 0.01W 0402
3C04	4822 117 13606	10kΩ 5% 0.01W 0402
3C05	4822 117 13543	470Ω 5% 0402
3C08	4822 051 30103	10kΩ 5% 0.062W
3C10	4822 117 13545	100Ω 1% 0402
3C11	4822 117 13545	100Ω 1% 0402
3C12	3198 031 06890	68Ω 5% 0402
3E00	4822 117 13606	10kΩ 5% 0.01W 0402
3E01	4822 117 13548	1kΩ 5% 0402
3E02	4822 117 13548	1kΩ 5% 0402
3E03	4822 117 13548	1kΩ 5% 0402
3E04	4822 117 13548	1kΩ 5% 0402
3E05	3198 031 01520	1.2kΩ 5% 0.01W 0402
3E06	4822 117 13545	100Ω 1% 0402
3E07	4822 117 13545	100Ω 1% 0402
3E08	4822 117 13545	100Ω 1% 0402
3E11	4822 117 13543	470Ω 5% 0402
3E12	4822 117 13543	470Ω 5% 0402
3E14	4822 117 13548	1kΩ 5% 0402
3E16	3198 031 02720	2.7kΩ 5% 0.01W 0402
3E18	4822 117 13545	100Ω 1% 0402
3E19	4822 117 13545	100Ω 1% 0402
3E37	4822 117 13545	100Ω 1% 0402
3E50	4822 117 13606	10kΩ 5% 0.01W 0402
3E51	4822 117 13606	10kΩ 5% 0.01W 0402
3E52	4822 117 13606	10kΩ 5% 0.01W 0402
3E53	4822 117 13606	10kΩ 5% 0.01W 0402
3E54	4822 117 13546	47Ω 5% 0402
3E55	4822 117 13606	10kΩ 5% 0.01W 0402
3E56	4822 117 13603	33kΩ 5% 0402
3E57	4822 117 11297	100kΩ 5% 0.1W
3E58	4822 117 13546	47Ω 5% 0402
3E59	4822 117 13606	10kΩ 5% 0.01W 0402
3E61	4822 117 13546	47Ω 5% 0402
3E62	4822 117 13548	1kΩ 5% 0402
3E63	4822 117 13606	10kΩ 5% 0.01W 0402
3E64	4822 117 13606	10kΩ 5% 0.01W 0402
3E69	3198 031 04720	4.7kΩ 5% 0402
3E70	3198 031 04720	4.7kΩ 5% 0402
3E73	4822 117 13606	10kΩ 5% 0.01W 0402
3E74	4822 117 13546	47Ω 5% 0402
3E77	4822 117 13546	47Ω 5% 0402
3E78	4822 117 13546	47Ω 5% 0402
3E79	4822 117 13546	47Ω 5% 0402
3E80	4822 117 13546	47Ω 5% 0402
3E81	4822 117 13546	47Ω 5% 0402
3E82	3198 031 01090	10Ω 5% 0.01W 0402
3E83	3198 031 01090	10Ω 5% 0.01W 0402
3E84	3198 031 01090	10Ω 5% 0.01W 0402
3E85	3198 031 01090	10Ω 5% 0.01W 0402
3E86	3198 031 01090	10Ω 5% 0.01W 0402
3E88	4822 117 13546	47Ω 5% 0402
3E89	4822 117 13546	47Ω 5% 0402
3E90	3198 031 06890	68Ω 5% 0402
3E91	3198 031 03390	33Ω 1% 0402
3I07	4822 117 13606	10kΩ 5% 0.01W 0402
3I08	4822 117 13597	330Ω 5% 0402 0.01W
3I28	4822 117 13545	100Ω 1% 0402
3I29	4822 051 30759	75Ω 5% 0.062W
3I30	4822 051 30759	75Ω 5% 0.062W
3I31	4822 051 30759	75Ω 5% 0.062W
3I32	4822 117 13548	1kΩ 5% 0402
3I33	4822 051 30101	100Ω 5% 0.062W
3I34	4822 117 13606	10kΩ 5% 0.01W 0402
3I35	4822 051 30101	100Ω 5% 0.062W
3I36	4822 117 13601	22kΩ 5% 0402
3I37	4822 117 13601	22kΩ 5% 0402
3I38	4822 117 13601	22kΩ 5% 0402
3I40	4822 051 30101	100Ω 5% 0.062W
3I41	4822 117 13548	1kΩ 5% 0402
3I42	4822 117 13548	1kΩ 5% 0402
3I42	4822 117 13602	2.2kΩ 5% 0.01W 0402
3I44	4822 117 13606	10kΩ 5% 0.01W 0402
3I45	3198 031 04730	47Ω 5% 0402
3I46	4822 117 13545	100Ω 1% 0402
3I47	4822 117 13602	2.2kΩ 5% 0.01W 0402
3I49	4822 117 13545	100Ω 1% 0402
3I50	4822 051 30271	270Ω 5% 0.062W
3I51	4822 051 30101	100Ω 5% 0.062W
3I51	4822 117 13545	100Ω 1% 0402
3I52	4822 051 30271	270Ω 5% 0.062W
3I53	4822 051 30101	100Ω 5% 0.062W
3I53	4822 117 13545	100Ω 1% 0402
3I54	4822 051 30101	100Ω 5% 0.062W
3I55	4822 051 30759	75Ω 5% 0.062W
3I56	4822 051 30101	100Ω 5% 0.062W
3I57	4822 051 30759	75Ω 5% 0.062W
3I58	4822 051 30101	100Ω 5% 0.062W
3I59	4822 051 30759	75Ω 5% 0.062W
3I60	4822 051 30759	75Ω 5% 0.062W
3I61	4822 051 30101	100Ω 5% 0.062W
3I61	4822 117 13545	100Ω 1% 0402
3I62	4822 051 30101	100Ω 5% 0.062W
3I62	4822 117 13545	100Ω 1% 0402
3I63	4822 051 30392	3.9Ω 5% 0.063W 0603
3I64	3198 031 08220	8.2kΩ 5% 0.5W
3I65	4822 051 30101	100Ω 5% 0.062W
3I66	4822 051 30759	75Ω 5% 0.062W
3I67	4822 051 30759	75Ω 5% 0.062W
3I68	4822 051 30101	100Ω 5% 0.062W
3I69	4822 051 30271	270Ω 5% 0.062W
3I70	4822 051 30101	100Ω 5% 0.062W
3I70	4822 117 13545	100Ω 1% 0402
3I71	4822 051 30271	270Ω 5% 0.062W
3I72	4822 051 30101	100Ω 5% 0.062W
3I72	4822 117 13545	100Ω 1% 0402
3I75	4822 051 30101	100Ω 5% 0.062W
3I76	4822 051 30101	100Ω 5% 0.062W
3I77	4822 051 30759	75Ω 5% 0.062W
3I78	4822 051 30759	75Ω 5% 0.062W
3I79	4822 051 30101	100Ω 5% 0.062W
3I79	4822 117 13545	100Ω 1% 0402
3I80	4822 051 30101	100Ω 5% 0.062W
3I80	4822 117 13545	100Ω 1% 0402
3I81	3198 031 08220	8.2kΩ 5% 0.5W
3I82	4822 051 30392	3.9Ω 5% 0.063W 0603
3I83	4822 051 30101	100Ω 5% 0.062W
3I84	4822 051 30759	75Ω 5% 0.062W
3I86	4822 051 30759	75Ω 5% 0.062W
3I87	4822 051 30101	100Ω 5% 0.062W
3I88	4822 051 30759	75Ω 5% 0.062W
3I89	4822 051 30271	270Ω 5% 0.062W
3I90	4822 051 30101	100Ω 5% 0.062W
3I90	4822 117 13545	100Ω 1% 0402
3I91	4822 051 30271	270Ω 5% 0.062W
3I92	4822 051 30101	100Ω 5% 0.062W
3I92	4822 117 13545	100Ω 1% 0402
3I98	4822 117 11297	100kΩ 5% 0.1W
3I98	4822 117 13605	Jumper 0402
3I99	4822 051 30271	270Ω 5% 0.062W
3IA0	4822 051 30101	100Ω 5% 0.062W
3IA0	4822 117 13545	100Ω 1% 0402
3IA1	4822 117 11297	100kΩ 5% 0.1W
3IA2	4822 051 30101	100Ω 5% 0.062W
3IA2	4822 117 13545	100Ω 1% 0402
3IA3	4822 117 13601	22kΩ 5% 0402
3IA4	4822 117 13548	1kΩ 5% 0402
3IA5	4822 117 13548	1kΩ 5% 0402
3IA6	4822 117 13548	1kΩ 5% 0402
3IA7	4822 117 13548	1kΩ 5% 0402
3IA8	4822 117 13548	1kΩ 5% 0402
3IB1	4822 117 13606	10kΩ 5% 0.01W 0402
3IB2	4822 117 13545	100Ω 1% 0402
3IB3	4822 117 13606	10kΩ 5% 0.01W 0402
3IB4	4822 117 13601	22kΩ 5% 0402
3IB5	4822 117 13601	22kΩ 5% 0402
3IC1▲	4822 117 13574	1.5Ω 5% 1206
3IC2	4822 117 13601	22kΩ 5% 0402
3IC3	4822 117 13601	22kΩ 5% 0402
3IC4	4822 117 13545	100Ω 1% 0402
3IC6	4822 117 13545	100Ω 1% 0402
3IC8	3198 031 05610	560Ω 5% 0.01W 0402
3IC9	4822 117 13601	22kΩ 5% 0402
3ID0	3198 031 04720	4.7kΩ 5% 0402
3ID1	3198 031 01540	150kΩ 5% 0402
3ID5	3198 031 01090	10Ω 5% 0.01W 0402
3ID7	4822 117 11297	100kΩ 5% 0.1W
3ID8	4822 117 11297	100kΩ 5% 0.1W
3ID9	3198 031 05610	560Ω 5% 0.01W 0402
3IE2	4822 117 13545	100Ω 1% 0402
3IE3	4822 117 13545	100Ω 1% 0402
3IE7	3198 031 01090	10Ω 5% 0.01W 0402
3IE9	4822 117 13601	22kΩ 5% 0402
3IF0	4822 117 13545	100Ω 1% 0402
3IF5	4822 117 13601	22kΩ 5% 0402
3IF6	4822 051 30101	100Ω 5% 0.062W
3IF6	4822 117 13545	100Ω 1% 0402
3IF7	4822 051 30101	100Ω 5% 0.062W
3IF7	4822 117 13545	100Ω 1% 0402
3IG0	3198 031 05610	560Ω 5% 0.01W 0402

3IG0	4822 117 13548	1kΩ 5% 0402
3IG1	3198 031 01090	10Ω 5% 0.01W 0402
3IG3	3198 031 05610	560Ω 5% 0.01W 0402
3IG3	4822 117 13548	1kΩ 5% 0402
3IG4	3198 031 01090	10Ω 5% 0.01W 0402
3IG6	3198 031 05610	560Ω 5% 0.01W 0402
3IG6	4822 117 13548	1kΩ 5% 0402
3IG7	3198 031 01090	10Ω 5% 0.01W 0402
3IGB	3198 031 04720	4.7kΩ 5% 0402
3IGE	4822 117 13606	10kΩ 5% 0.01W 0402
3IGF	3198 031 04730	47Ω 5% 0402
3IH1	3198 031 04730	47Ω 5% 0402
3IH1	4822 117 11297	100kΩ 5% 0.1W
3IH2	3198 031 04730	47Ω 5% 0402
3IH7	3198 031 05610	560Ω 5% 0.01W 0402
3IH8	3198 031 04730	47Ω 5% 0402
3IH9	3198 031 04730	47Ω 5% 0402
3IHA	4822 117 13545	100Ω 1% 0402
3IHB	4822 117 13545	100Ω 1% 0402
3IHC	4822 117 13545	100Ω 1% 0402
3IHG	4822 117 12903	1.8kΩ 1% 0.063W 0603
3II0	4822 117 13606	10kΩ 5% 0.01W 0402
3II1	4822 117 13601	22kΩ 5% 0402
3II2	4822 117 13601	22kΩ 5% 0402
3II3	3198 031 04730	47Ω 5% 0402
3II4	3198 031 04730	47Ω 5% 0402
3II6	4822 117 13601	22kΩ 5% 0402
3II7	4822 117 13601	22kΩ 5% 0402
3II8	4822 117 13548	1kΩ 5% 0402
3II9	4822 117 13548	1kΩ 5% 0402
3IJ8	4822 117 13548	1kΩ 5% 0402
3IK0	4822 117 13548	1kΩ 5% 0402
3IK2	4822 117 13601	22kΩ 5% 0402
3IK3	4822 117 13601	22kΩ 5% 0402
3IK7⚠	4822 117 11152	4.7Ω 5%
3IN1	4822 117 13548	1kΩ 5% 0402
3IN4⚠	4822 117 11748	Fuse 2.2Ω 5% 1206
3IN5	4822 117 13601	22kΩ 5% 0402
3IN6	4822 117 13601	22kΩ 5% 0402
3IN8	3198 031 01090	10Ω 5% 0.01W 0402
3IO5	4822 117 13606	10kΩ 5% 0.01W 0402
3IO6	4822 117 13606	10kΩ 5% 0.01W 0402
3IP0	3198 031 08220	8.2kΩ 5% 0.5W
3IP1	4822 117 13602	2.2kΩ 5% 0.01W 0402
3IP2	4822 117 13596	220Ω 5% 0.01W 0402
3IP3	4822 051 30689	68Ω 5% 0.063W 0603
3IP3	4822 051 30759	75Ω 5% 0.062W
3IP4	3198 031 02710	270Ω 5% 0.1W 0402
3IP5⚠	4822 117 11748	Fuse 2.2Ω 5% 1206
3IP6	4822 117 13548	1kΩ 5% 0402
3IP7	3198 031 02720	2.7kΩ 5% 0.01W 0402
3IP8	4822 117 13548	1kΩ 5% 0402
3IQ0	3198 031 01090	10Ω 5% 0.01W 0402
3IQ5	3198 031 04730	47Ω 5% 0402
3IQ6	4822 117 13545	100Ω 1% 0402
3IQ7	4822 117 13545	100Ω 1% 0402
3IQ8	3198 031 03320	3.3kΩ 5% 0402
3IQ9	4822 117 13548	1kΩ 5% 0402
3IR1	3198 031 02710	270Ω 5% 0.1W 0402
3IR2	3198 031 04720	4.7kΩ 5% 0402
3IR3	3198 031 04720	4.7kΩ 5% 0402
3IR4	4822 117 13545	100Ω 1% 0402
3IR5	4822 117 13546	47Ω 5% 0402
3IR6	4822 117 13546	47Ω 5% 0402
3IR7	4822 117 13543	470Ω 5% 0402
3IR8	3198 031 03320	3.3kΩ 5% 0402
3IR9	2322 706 71201	120Ω 1% 0402
3IS0	2322 706 71201	120Ω 1% 0402
3IS1	2322 706 71201	120Ω 1% 0402
3IS2	4822 117 13545	100Ω 1% 0402
3IS5	2322 706 71201	120Ω 1% 0402
3IT0	3198 031 04730	47Ω 5% 0402
3IT1	3198 031 04730	47Ω 5% 0402
3IT4	3198 031 04730	47Ω 5% 0402
3IT5	2322 706 71201	120Ω 1% 0402
3IT6	2322 706 71201	120Ω 1% 0402
3IT7	4822 117 13548	1kΩ 5% 0402
3IT8	4822 117 13548	1kΩ 5% 0402
3IT9	4822 117 13597	330Ω 5% 0402 0.01W
3IU0⚠	4822 117 11748	Fuse 2.2Ω 5% 1206
3IV0	3198 031 08220	8.2kΩ 5% 0.5W
3IV1	4822 117 13548	1kΩ 5% 0402
3IV2	4822 117 13543	470Ω 5% 0402
3IV3	4822 117 13548	1kΩ 5% 0402
3IV4	4822 117 13548	1kΩ 5% 0402
3IV5	4822 117 13548	1kΩ 5% 0402
3IV6	4822 117 13548	1kΩ 5% 0402
3IW3	4822 117 13545	100Ω 1% 0402
3IW9	4822 117 13545	100Ω 1% 0402
3L03	4822 117 13545	100Ω 1% 0402
3L04	4822 117 13545	100Ω 1% 0402
3L05	4822 117 13545	100Ω 1% 0402
3L06	4822 117 13545	100Ω 1% 0402
3L08	3198 031 02720	2.7kΩ 5% 0.01W 0402
3L11	4822 117 13545	100Ω 1% 0402
3L12	4822 117 13543	470Ω 5% 0402
3L19	3198 031 06810	680Ω 5% 0.01W 0402
3L20	3198 031 06810	680Ω 5% 0.01W 0402
3L21	3198 031 06810	680Ω 5% 0.01W 0402
3L28	4822 117 13543	470Ω 5% 0402
3L29	3198 031 01510	150Ω 5% 0.01W 0402
3L30	3198 031 01510	150Ω 5% 0.01W 0402
3L31	3198 031 01510	150Ω 5% 0.01W 0402
3L32	4822 117 13543	470Ω 5% 0402
3L33	4822 117 13543	470Ω 5% 0402
3P65	4822 117 13545	100Ω 1% 0402
3P66	4822 117 13545	100Ω 1% 0402
3P67	3198 031 04720	4.7kΩ 5% 0402
3P69	3198 031 04720	4.7kΩ 5% 0402
3P70	3198 031 04720	4.7kΩ 5% 0402
3P72	3198 031 04720	4.7kΩ 5% 0402
3U01	4822 051 30102	1kΩ 5% 0.062W
3U02	4822 117 13548	1kΩ 5% 0402
3U03	4822 117 13603	33kΩ 5% 0402
3U04	4822 051 20121	120Ω 5% 0.1W
3U05	4822 051 30102	1kΩ 5% 0.062W
3U05	4822 117 13548	1kΩ 5% 0402
3U06	4822 117 13543	470Ω 5% 0402
3U07	3198 031 02290	22Ω 5% 0.1W 0402
3U08	2322 706 71502	1.5kΩ 1% 0402
3U09	3198 031 05620	5.6kΩ 5% 0.01W 0402
3U10	3198 031 01210	120Ω 5% 0.01W 0402
3U10	4822 117 13596	220Ω 5% 0.01W 0402
3U11	4822 051 30121	120Ω 5% 0.062W
3U12	4822 117 13601	22kΩ 5% 0402
3U13	4822 117 13606	10kΩ 5% 0.01W 0402
3U14	4822 051 30102	1kΩ 5% 0.062W
3U15	2322 706 73302	3.3kΩ 1% 0402
3U16	3198 031 01210	120Ω 5% 0.01W 0402
3U17	3198 031 04780	4.7Ω 5% 0402
3U18	2322 704 61002	1kΩ 1%
3U18	2322 706 71002	1kΩ 1% 0402
3U19	3198 031 04720	4.7kΩ 5% 0402
3U20	2322 704 61002	1kΩ 1%
3U20	2322 706 71002	1kΩ 1% 0402
3U21	3198 031 04730	47Ω 5% 0402
3U22	3198 031 02710	270Ω 5% 0.1W 0402
3U23	3198 031 01090	10Ω 5% 0.01W 0402
3U24	4822 117 13601	22kΩ 5% 0402
3U25	3198 031 02240	220kΩ 5% 0.1W 0402
3U26	4822 117 13601	22kΩ 5% 0402
3U27	4822 117 13601	22kΩ 5% 0402
3U28	3198 031 04730	47Ω 5% 0402
3U29	4822 051 30109	10Ω 5% 0.062W
3U30	4822 051 20121	120Ω 5% 0.1W
3U31	4822 051 20121	120Ω 5% 0.1W
3U32	3198 031 01830	18kΩ 5% 0.01W 0402
3U33	4822 117 13606	10kΩ 5% 0.01W 0402
3U34	3198 031 04740	470 kΩ 5% 0402
3U35	4822 117 13606	10kΩ 5% 0.01W 0402
3U36	4822 117 13602	2.2kΩ 5% 0.01W 0402
3U37	4822 117 13601	22kΩ 5% 0402
3U38	4822 117 13602	2.2kΩ 5% 0.01W 0402
3U39	4822 117 13601	22kΩ 5% 0402
3U40	3198 031 01540	150kΩ 5% 0402
3U41	4822 117 13548	1kΩ 5% 0402
3U42	4822 117 13606	10kΩ 5% 0.01W 0402
3U43	4822 117 13601	22kΩ 5% 0402
3U44	3198 031 01050	1MΩ 5% 0402
3U45	3198 031 01050	1MΩ 5% 0402
3U46	2322 706 74703	47kΩ 1% 0402
3U46	5322 117 13029	47kΩ 1% 0.063W 0603
3U51	4822 117 12139	22Ω 5% 0.062W
3U52	4822 051 30102	1kΩ 5% 0.062W
3U53	3198 031 01830	18kΩ 5% 0.01W 0402
3U54	4822 117 13545	100Ω 1% 0402
3U55	4822 051 30102	1kΩ 5% 0.062W
3U56	3198 031 04720	4.7kΩ 5% 0402
3U57	4822 117 13606	10kΩ 5% 0.01W 0402
3U60	4822 117 13548	1kΩ 5% 0402
3U61	4822 117 13606	10kΩ 5% 0.01W 0402
3U62	4822 117 13548	1kΩ 5% 0402
3U63	4822 117 13602	2.2kΩ 5% 0.01W 0402
3U64	4822 117 13548	1kΩ 5% 0402
3U65	4822 117 13548	1kΩ 5% 0402
3U66	4822 117 13606	10kΩ 5% 0.01W 0402
3U67	4822 117 13545	100Ω 1% 0402
3U68	4822 117 13606	10kΩ 5% 0.01W 0402
3U69	4822 117 13548	1kΩ 5% 0402
3U70	4822 051 30102	1kΩ 5% 0.062W
3V01	3198 031 01810	180Ω 5% 0402
3V02	3198 031 01810	180Ω 5% 0402
3V17	3198 031 01810	180Ω 5% 0402
3V18	3198 031 03910	390Ω 1% 0402
3V19	3198 031 01810	180Ω 5% 0402
3V20	3198 031 01810	180Ω 5% 0402
3V21	2350 033 11339	4 x 33Ω 5%
3V21	2350 033 11689	4x 68Ω 5% Netw.
3V22	2350 033 11339	4 x 33Ω 5%
3V22	2350 033 11689	4x 68Ω 5% Netw.
3V23	2350 033 11339	4 x 33Ω 5%
3V23	2350 033 11689	4x 68Ω 5% Netw.
3V24	2350 033 11339	4 x 33Ω 5%
3V24	2350 033 11689	4x 68Ω 5% Netw.
3V25	3198 031 01810	180Ω 5% 0402
3V26	3198 031 01810	180Ω 5% 0402
3V27	3198 031 01810	180Ω 5% 0402
3V28	3198 031 01810	180Ω 5% 0402
3V29	3198 031 01810	180Ω 5% 0402
3V30	3198 031 01810	180Ω 5% 0402
3V31	3198 031 01810	180Ω 5% 0402
3V32	3198 031 01810	180Ω 5% 0402
3V33	3198 031 01810	180Ω 5% 0402
3V34	3198 031 01810	180Ω 5% 0402
3V35	4822 117 13545	100Ω 1% 0402
3V36	4822 117 13545	100Ω 1% 0402
3V37	4822 117 13545	100Ω 1% 0402
3V38	4822 117 13545	100Ω 1% 0402
3V39	3198 031 04720	4.7kΩ 5% 0402
3V40	4822 117 13545	100Ω 1% 0402
3V50	4822 117 13606	10kΩ 5% 0.01W 0402
3V51	4822 117 13606	10kΩ 5% 0.01W 0402
3V52	4822 117 13606	10kΩ 5% 0.01W 0402
3V53	4822 117 13606	10kΩ 5% 0.01W 0402
3V54	4822 117 13606	10kΩ 5% 0.01W 0402
3V55	4822 117 13606	10kΩ 5% 0.01W 0402
3V56	4822 117 13545	100Ω 1% 0402
3Y01	4822 117 13545	100Ω 1% 0402
3Y03	4822 117 13545	100Ω 1% 0402
3Y04	4822 117 13602	2.2kΩ 5% 0.01W 0402
3Y05	4822 117 13545	100Ω 1% 0402
3Y07	4822 117 13545	100Ω 1% 0402
3Y08	3198 031 03320	3.3kΩ 5% 0402
3Y08	4822 117 13545	100Ω 1% 0402
3Y09	4822 117 13545	100Ω 1% 0402
3Y10	4822 117 13545	100Ω 1% 0402
3Y11	4822 117 13545	100Ω 1% 0402
3Y12	4822 117 13545	100Ω 1% 0402
3Y14	3198 031 04720	4.7kΩ 5% 0402
3Y14	4822 117 13548	1kΩ 5% 0402
3Y15	4822 117 13548	1kΩ 5% 0402
3Y16	4822 117 13548	1kΩ 5% 0402
3Y17	4822 117 13545	100Ω 1% 0402
3Y18	4822 117 13545	100Ω 1% 0402
3Y19	4822 117 13545	100Ω 1% 0402
3Y20	3198 031 06890	68Ω 5% 0402
3Y20	4822 117 12521	68Ω 1% 0.1W
3Y21	3198 031 06890	68Ω 5% 0402
3Y22	3198 031 06890	68Ω 5% 0402
3Y23	3198 031 06890	68Ω 5% 0402
3Y24	4822 117 11297	100kΩ 5% 0.1W
3Y25	4822 117 13545	100Ω 1% 0402
3Y27	4822 117 13545	100Ω 1% 0402
3Y28	4822 117 13545	100Ω 1% 0402
3Y29	3198 031 05620	5.6kΩ 5% 0.01W 0402
3Y30	3198 031 01530	15kΩ 5% 0.01W 0402
3Y30	3198 031 05620	5.6kΩ 5% 0.01W 0402
3Y34	4822 117 13545	100Ω 1% 0402
3Y35	4822 117 13545	100Ω 1% 0402
3Y36	4822 117 13545	100Ω 1% 0402
3Y37	3198 031 04720	4.7kΩ 5% 0402
3Y38	4822 117 13602	2.2kΩ 5% 0.01W 0402
3Y39	4822 117 13606	10kΩ 5% 0.01W 0402
3Y40	4822 117 13545	100Ω 1% 0402
3Z26	4822 117 13548	1kΩ 5% 0402
3Z36	3198 031 06820	6.8kΩ 5% 0.01W 0402
3Z50	4822 117 13545	100Ω 1% 0402
3Z51	4822 117 13545	100Ω 1% 0402
3Z52	4822 117 13545	100Ω 1% 0402
3Z54	3198 031 04720	4.7kΩ 5% 0402
9001	4822 117 13605	Jumper 0402
9002	4822 117 13605	Jumper 0402
9007	4822 117 13605	Jumper 0402
9010	4822 117 13605	Jumper 0402
9011⚠	4822 117 13605	Jumper 0402
9012	4822 117 13605	Jumper 0402
9013	4822 117 13605	Jumper 0402
9016	4822 051 30008	Jumper 0603
9020	4822 117 13605	Jumper 0402
9023	4822 117 13605	Jumper 0402
9024	4822 117 13605	Jumper 0402
9316	4822 117 13605	Jumper 0402
9322	4822 117 13605	Jumper 0402
9410	4822 117 13605	Jumper 0402
9413	4822 117 13605	Jumper 0402
9416	4822 117 13605	Jumper 0402
9417	4822 117 13605	Jumper 0402
9418	4822 117 13605	Jumper 0402
9419	4822 117 13605	Jumper 0402
9420	4822 117 13605	Jumper 0402
9423	4822 117 13605	Jumper 0402
9424	4822 117 13605	Jumper 0402

9425	4822 117 13605	Jumper 0402
9426	4822 117 13605	Jumper 0402
9427	4822 117 13545	100Ω 1% 0402
9428	4822 117 13605	Jumper 0402
9702	4822 117 13605	Jumper 0402
9704	4822 117 13605	Jumper 0402
9706	4822 117 13605	Jumper 0402
9707	4822 117 13605	Jumper 0402
9708	4822 117 13605	Jumper 0402
9709	4822 117 13605	Jumper 0402
9710	4822 117 13605	Jumper 0402
9713	4822 117 13605	Jumper 0402
9714	4822 117 13605	Jumper 0402
9715	4822 117 13605	Jumper 0402
9716	4822 117 13605	Jumper 0402
9717	4822 117 13605	Jumper 0402
9718	4822 117 13605	Jumper 0402
9720	4822 117 13605	Jumper 0402
9721	4822 117 13605	Jumper 0402
9722	4822 117 13605	Jumper 0402
9723	4822 117 13605	Jumper 0402
9724	4822 117 13605	Jumper 0402
9727	4822 117 13605	Jumper 0402
9728	4822 117 13605	Jumper 0402
9730	4822 117 13605	Jumper 0402
9732	4822 117 13605	Jumper 0402
9750	4822 117 13605	Jumper 0402
9751	4822 117 13605	Jumper 0402
9752	4822 117 13605	Jumper 0402
9753	4822 117 13605	Jumper 0402
9754	4822 117 13605	Jumper 0402
9755	4822 117 13605	Jumper 0402
9756	4822 117 13605	Jumper 0402
9757	4822 117 13605	Jumper 0402
9758	4822 117 13605	Jumper 0402
9760	4822 117 13605	Jumper 0402
9761	4822 117 13605	Jumper 0402
9762	4822 117 13605	Jumper 0402
9763	4822 117 13605	Jumper 0402
9765	4822 117 13605	Jumper 0402
9766	4822 117 13605	Jumper 0402
9772	4822 117 13605	Jumper 0402
9773	4822 117 13605	Jumper 0402
9774	4822 117 13605	Jumper 0402
9775	4822 117 13605	Jumper 0402
9800	4822 117 13605	Jumper 0402
9801	4822 117 13605	Jumper 0402
9802	4822 117 13605	Jumper 0402
9803	4822 117 13605	Jumper 0402
9804	4822 117 13605	Jumper 0402
9805	4822 117 13605	Jumper 0402
9806	4822 117 13605	Jumper 0402
9808	4822 117 13605	Jumper 0402
9809	4822 117 13605	Jumper 0402
9811	4822 117 13605	Jumper 0402
9812	4822 117 13605	Jumper 0402
9813	2350 033 11689	4x 68Ω 5% Netw.
9814	2350 033 11689	4x 68Ω 5% Netw.
9815	2350 033 11229	4x 22Ω 5% Netw.
9815	4822 117 13605	Jumper 0402
9816	2350 033 11229	4x 22Ω 5% Netw.
9816	4822 117 13605	Jumper 0402
9817	2350 033 11229	4x 22Ω 5% Netw.
9817	4822 117 13605	Jumper 0402
9818	4822 117 13605	Jumper 0402
9819	2350 033 11229	4x 22Ω 5% Netw.
9820	2350 033 11229	4x 22Ω 5% Netw.
9820	4822 117 13605	Jumper 0402
9821	3198 031 06890	68Ω 5% 0402
9821	4822 117 13605	Jumper 0402
9822	3198 031 06890	68Ω 5% 0402
9822	4822 117 13605	Jumper 0402
9823	3198 031 06890	68Ω 5% 0402
9824	3198 031 06890	68Ω 5% 0402
9825	3198 031 06890	68Ω 5% 0402
9825	4822 117 13605	Jumper 0402
9826	3198 031 06890	68Ω 5% 0402
9826	4822 117 13605	Jumper 0402
9827	3198 031 06890	68Ω 5% 0402
9827	4822 117 13605	Jumper 0402
9A00	4822 117 13605	Jumper 0402
9A01	4822 117 13605	Jumper 0402
9A04	4822 117 13605	Jumper 0402
9A05	4822 117 13605	Jumper 0402
9A06	4822 117 13605	Jumper 0402
9A07	4822 117 13605	Jumper 0402
9A24	4822 117 13605	Jumper 0402
9A65	4822 117 13605	Jumper 0402
9A67	4822 051 20008	Jumper 0805
9A71	4822 051 20008	Jumper 0805
9A75	4822 117 13605	Jumper 0402
9C02	4822 117 13605	Jumper 0402
9E60	4822 117 13605	Jumper 0402
9E62	4822 117 13605	Jumper 0402
9E65	4822 117 13605	Jumper 0402
9E66	4822 117 13605	Jumper 0402
9E67	4822 117 13605	Jumper 0402
9E68	4822 117 13605	Jumper 0402
9E69	4822 117 13605	Jumper 0402
9E70	4822 117 13605	Jumper 0402
9E71	4822 117 13605	Jumper 0402
9E72	4822 117 13605	Jumper 0402
9E73	4822 117 13605	Jumper 0402
9E74	4822 117 13605	Jumper 0402
9E76	4822 117 13605	Jumper 0402
9E77	4822 117 13605	Jumper 0402
9I00	4822 117 13605	Jumper 0402
9I02	4822 117 13605	Jumper 0402
9I07	4822 117 13605	Jumper 0402
9I15	4822 117 13605	Jumper 0402
9I24	4822 117 13605	Jumper 0402
9I28	4822 117 13605	Jumper 0402
9I30	4822 117 13605	Jumper 0402
9I31	4822 117 13605	Jumper 0402
9I32	4822 117 13605	Jumper 0402
9I33	4822 117 13605	Jumper 0402
9I34	4822 117 13605	Jumper 0402
9I35	4822 117 13605	Jumper 0402
9I39	4822 117 13605	Jumper 0402
9I45	4822 117 13605	Jumper 0402
9I49	4822 117 13605	Jumper 0402
9I68	4822 117 13605	Jumper 0402
9I77	4822 117 13605	Jumper 0402
9I85	4822 117 13605	Jumper 0402
9IA5	4822 117 13605	Jumper 0402
9ID0	4822 117 13605	Jumper 0402
9ID1	4822 117 13605	Jumper 0402
9ID3	4822 117 13605	Jumper 0402
9ID5	4822 117 13605	Jumper 0402
9ID8	4822 117 13605	Jumper 0402
9ID9	4822 117 13605	Jumper 0402
9P69	4822 117 13605	Jumper 0402
9P70	4822 117 13605	Jumper 0402
9P71	4822 117 13605	Jumper 0402
9T01	4822 117 13601	22kΩ 5% 0402
9T04	4822 117 13605	Jumper 0402
9T07	4822 117 13605	Jumper 0402
9T08	4822 117 13605	Jumper 0402
9T12	4822 117 13605	Jumper 0402
9T14	4822 117 13605	Jumper 0402
9T50	4822 117 13605	Jumper 0402
9Y00	4822 117 13605	Jumper 0402
9Y03	4822 117 13605	Jumper 0402
9Y04	4822 117 13605	Jumper 0402
9Y05	4822 117 13605	Jumper 0402
9Y06	4822 117 13605	Jumper 0402
9Y07	4822 117 13605	Jumper 0402
9Y08	4822 117 13605	Jumper 0402
9Y09	4822 117 13605	Jumper 0402
9Y13	4822 117 13605	Jumper 0402
9Y15	4822 117 13605	Jumper 0402
9Y16	4822 117 13605	Jumper 0402
9Y99	4822 320 12423	Speaker cable

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5003	4822 157 11716	Bead 30Ω at 100MHz
5401	3198 018 56880	6.8µH 10% 0603
5403	2422 549 00195	Bead 40MHz4 R
5403	2422 549 44461	Trimmer 40MHz 5CCE
5404	4822 157 11506	Bead 120Ω100MHz
5405	4822 157 11506	Bead 120Ω100MHz
5406	3198 018 52280	2.2µF 10% 1008
5408	2422 549 44983	Trimmer 78MHz 5CCB
5411	4822 157 11892	0.22µH 10% 0805
5415	4822 157 11716	Bead 30Ω at 100MHz
5416	4822 157 11716	Bead 30Ω at 100MHz
5703	4822 157 11716	Bead 30Ω at 100MHz
5705	4822 157 11876	6.8µH 10% 0805
5713	4822 157 11716	Bead 30Ω at 100MHz
5714	4822 157 11716	Bead 30Ω at 100MHz
5719	4822 157 11716	Bead 30Ω at 100MHz
5720	4822 157 11716	Bead 30Ω at 100MHz
5722	4822 157 11716	Bead 30Ω at 100MHz
5723	4822 157 11716	Bead 30Ω at 100MHz
5726	4822 157 11716	Bead 30Ω at 100MHz
5728	4822 157 11716	Bead 30Ω at 100MHz
5750	4822 157 11716	Bead 30Ω at 100MHz
5751	4822 157 11716	Bead 30Ω at 100MHz
5752	4822 157 11716	Bead 30Ω at 100MHz
5753	4822 157 11716	Bead 30Ω at 100MHz
5755	4822 157 11716	Bead 30Ω at 100MHz
5756	4822 157 11716	Bead 30Ω at 100MHz
5757	4822 157 11716	Bead 30Ω at 100MHz
5758	4822 157 11716	Bead 30Ω at 100MHz
5759	4822 157 11716	Bead 30Ω at 100MHz
5760	4822 157 11716	Bead 30Ω at 100MHz
5761	4822 157 11716	Bead 30Ω at 100MHz
5762	4822 157 11716	Bead 30Ω at 100MHz
5763	4822 157 11716	Bead 30Ω at 100MHz
5764	4822 157 11716	Bead 30Ω at 100MHz
5767	4822 157 11716	Bead 30Ω at 100MHz
5768	4822 157 11716	Bead 30Ω at 100MHz
5769	4822 157 11716	Bead 30Ω at 100MHz
5770	4822 157 11716	Bead 30Ω at 100MHz
5771	4822 157 11716	Bead 30Ω at 100MHz
5772	4822 157 11716	Bead 30Ω at 100MHz
5775	4822 157 11716	Bead 30Ω at 100MHz
5777	4822 157 11716	Bead 30Ω at 100MHz
5778	4822 157 11876	6.8µH 10% 0805
5779	4822 157 11716	Bead 30Ω at 100MHz
5800	4822 157 11716	Bead 30Ω at 100MHz
5801	4822 157 11716	Bead 30Ω at 100MHz
5A00	4822 157 11716	Bead 30Ω at 100MHz
5A01	4822 157 11716	Bead 30Ω at 100MHz
5A02	4822 157 11716	Bead 30Ω at 100MHz
5A03	4822 157 11716	Bead 30Ω at 100MHz
5A06	4822 157 11716	Bead 30Ω at 100MHz
5A07	4822 157 11716	Bead 30Ω at 100MHz
5A19	4822 157 11828	22µH 20% 0805
5A38	4822 157 11716	Bead 30Ω at 100MHz
5E00	4822 156 21729	Bead 1kΩ 100MHz 0805
5E01	2422 549 42896	Bead 120Ω 100MHz
5E01	4822 156 21729	Bead 1kΩ 100MHz 0805
5E02	4822 156 21729	Bead 1kΩ 100MHz 0805
5E03	4822 156 21729	Bead 1kΩ 100MHz 0805
5E50	2422 549 43062	Bead 600Ω at 100MHz
5E50	4822 157 11499	Bead 60Ω 100MHz
5E51	2422 549 42896	Bead 120Ω 100MHz
5E51	2422 549 43062	Bead 600Ω at 100MHz
5E52	2422 549 43062	Bead 600Ω at 100MHz
5E53	2422 535 94134	10µH 20% 0805
5E53	2422 536 00779	10µH 20%
5E54	2422 549 43062	Bead 600Ω at 100MHz
5E54	4822 157 11499	Bead 60Ω 100MHz
5E55	2422 549 43062	Bead 600Ω at 100MHz
5E58	2422 549 43062	Bead 600Ω at 100MHz
5I02	3198 018 90050	Bead 1kΩ at 100MHz
5I05	4822 157 11716	Bead 30Ω at 100MHz
5I06	4822 157 11716	Bead 30Ω at 100MHz
5I12	4822 157 11716	Bead 30Ω at 100MHz
5I13	4822 157 11716	Bead 30Ω at 100MHz
5I21	4822 157 11716	Bead 30Ω at 100MHz
5I22	4822 157 11716	Bead 30Ω at 100MHz
5I30	4822 157 11716	Bead 30Ω at 100MHz
5I31	4822 157 11716	Bead 30Ω at 100MHz
5I32	4822 157 11716	Bead 30Ω at 100MHz
5I33	4822 157 11716	Bead 30Ω at 100MHz
5I34	4822 157 11716	Bead 30Ω at 100MHz
5I35	4822 157 11716	Bead 30Ω at 100MHz
5I36	3198 018 34770	0.47µH 10% 0805
5I36	4822 157 11892	0.22µH 10% 0805
5I37	3198 018 34770	0.47µH 10% 0805
5I37	4822 157 11892	0.22µH 10% 0805
5I38	3198 018 34770	0.47µH 10% 0805
5I38	4822 157 11892	0.22µH 10% 0805
5I39	4822 157 11716	Bead 30Ω at 100MHz
5I40	4822 157 11716	Bead 30Ω at 100MHz
5I41	4822 157 11716	Bead 30Ω at 100MHz
5I42	4822 156 21729	Bead 1kΩ 100MHz 0805
5I45	4822 157 11716	Bead 30Ω at 100MHz
5I46	4822 157 11716	Bead 30Ω at 100MHz
5I47	4822 157 11716	Bead 30Ω at 100MHz
5L02	3198 018 54770	0.47µF 10% 0603
5L04	3198 018 54770	0.47µF 10% 0603
5L06	3198 018 54770	0.47µF 10% 0603
5L13	4822 156 21729	Bead 1kΩ 100MHz 0805
5L14	4822 156 21729	Bead 1kΩ 100MHz 0805
5L15	4822 156 21729	Bead 1kΩ 100MHz 0805
5L16	4822 157 11716	Bead 30Ω at 100MHz
5L17	4822 157 11716	Bead 30Ω at 100MHz
5L18	4822 157 11716	Bead 30Ω at 100MHz
5P51	4822 157 11716	Bead 30Ω at 100MHz
5T20	4822 157 71206	Bead 600Ω 100MHz
5T22	4822 157 71206	Bead 600Ω 100MHz
5T25	2422 535 94134	10µH 20% 0805
5U01	3104 308 20661	Transformer BD13118-02
5U02	2422 535 94134	10µH 20% 0805
5U02	2422 536 00779	10µH 20%
5U03	2422 549 44197	Bead 220Ω at 100MHz
5U03	4822 157 11716	Bead 30Ω at 100MHz
5U04	2422 549 44197	Bead 220Ω at 100MHz
5U04	4822 157 11716	Bead 30Ω at 100MHz
5U05	2422 535 94134	10µH 20% 0805
5U05	2422 536 00779	10µH 20%
5U06	2422 535 94134	10µH 20% 0805
5U06	2422 536 00779	10µH 20%
5Y00	4822 157 11716	Bead 30Ω at 100MHz
5Y01	4822 157 11716	Bead 30Ω at 100MHz
5Y02	2422 549 44197	Bead 220Ω at 100MHz
5Y03	2422 549 44197	Bead 220Ω at 100MHz

5Y06	4822 157 11716	Bead 30Ω at 100MHz
5Y07	4822 157 11716	Bead 30Ω at 100MHz
5Y09	4822 157 11716	Bead 30Ω at 100MHz
5Y10	4822 157 11716	Bead 30Ω at 100MHz
5Y11	4822 157 11716	Bead 30Ω at 100MHz
5Y12	4822 157 11716	Bead 30Ω at 100MHz
5Y13	4822 157 11716	Bead 30Ω at 100MHz
5Y14	4822 157 11716	Bead 30Ω at 100MHz
5Y15	4822 157 11716	Bead 30Ω at 100MHz
5Y16	4822 157 11716	Bead 30Ω at 100MHz
5Y17	4822 157 11716	Bead 30Ω at 100MHz
5Y18	4822 157 11716	Bead 30Ω at 100MHz
5Y19	4822 157 11716	Bead 30Ω at 100MHz
5Y20	4822 157 11716	Bead 30Ω at 100MHz
5Y21	4822 117 10353	150Ω 1% 0.1W
5Y21	4822 157 11716	Bead 30Ω at 100MHz
5Y22	4822 117 10353	150Ω 1% 0.1W
5Y22	4822 157 11716	Bead 30Ω at 100MHz
5Y23	4822 157 11716	Bead 30Ω at 100MHz
5Z01	2422 549 45325	Bead 67Ω at 100MHz
5Z02	2422 549 45325	Bead 67Ω at 100MHz
5Z03	2422 549 45325	Bead 67Ω at 100MHz
5Z04	2422 549 45325	Bead 67Ω at 100MHz
5Z05	2422 549 45325	Bead 67Ω at 100MHz

6001	4822 130 80622	BAT54
6002	4822 130 11397	BAS316
6003	4822 130 80622	BAT54
6004	4822 130 80622	BAT54
6005	4822 130 11422	PLVA2650A
6006	4822 130 11564	UDZ3.9B
6403	9340 552 30115	BA591
6701	4822 130 11397	BAS316
6702	4822 130 11397	BAS316
6703	4822 130 11397	BAS316
6705	4822 130 11397	BAS316
6710	4822 130 11397	BAS316
6711	4822 130 11397	BAS316
6712	4822 130 11397	BAS316
6713	4822 130 11397	BAS316
6714	4822 130 11397	BAS316
6715	4822 130 11397	BAS316
6717	4822 130 11397	BAS316
6718	4822 130 11397	BAS316
6719	9322 128 69685	S1D
6720	4822 130 11397	BAS316
6721	4822 130 11397	BAS316
6722	4822 130 11397	BAS316
6723	4822 130 11397	BAS316
6A00	4822 130 11551	UDZS10B
6A01	4822 130 11397	BAS316
6A02	4822 130 10838	UDZ3.3B
6A02	9322 159 70685	MM3Z9V1
6E51	4822 130 11397	BAS316
6E52	4822 130 11397	BAS316
6E53	4822 130 11397	BAS316
6E54	4822 130 11397	BAS316
6E55	4822 130 11397	BAS316
6E56	4822 130 11397	BAS316
6I01	4822 130 10328	BAV99W
6I03	4822 130 10328	BAV99W
6I04	4822 130 10328	BAV99W
6I06	4822 130 10328	BAV99W
6I07	4822 130 10328	BAV99W
6I08	4822 130 11423	PLVA2656A
6I09	4822 130 11423	PLVA2656A
6I10	4822 130 11397	BAS316
6I11	4822 130 11397	BAS316
6I12	4822 130 11397	BAS316
6I13	4822 130 11397	BAS316
6I14	4822 130 10328	BAV99W
6I15	4822 130 10328	BAV99W
6I16	4822 130 10328	BAV99W
6I17	4822 130 10328	BAV99W
6I18	4822 130 10328	BAV99W
6I19	4822 130 10328	BAV99W
6I20	4822 130 10328	BAV99W
6I21	4822 130 10328	BAV99W
6I22	4822 130 11416	PDZ6.8B
6I23	4822 130 11416	PDZ6.8B
6I24	4822 130 11416	PDZ6.8B
6I25	4822 130 11416	PDZ6.8B
6I26	4822 130 11416	PDZ6.8B
6I27	4822 130 11416	PDZ6.8B
6I28	4822 130 11416	PDZ6.8B
6I29	4822 130 11416	PDZ6.8B
6I30	4822 130 11416	PDZ6.8B
6I31	4822 130 11416	PDZ6.8B
6I32	4822 130 11416	PDZ6.8B
6I33	4822 130 11416	PDZ6.8B
6I35	4822 130 11416	PDZ6.8B
6I36	4822 130 11416	PDZ6.8B
6I37	4822 130 11416	PDZ6.8B
6I38	4822 130 11416	PDZ6.8B
6I39	4822 130 11416	PDZ6.8B
6I40	4822 130 11416	PDZ6.8B
6I41	4822 130 11416	PDZ6.8B
6I42	4822 130 11416	PDZ6.8B
6I43	4822 130 11416	PDZ6.8B
6I44	4822 130 11416	PDZ6.8B
6I45	4822 130 11416	PDZ6.8B
6I46	4822 130 11416	PDZ6.8B
6I47	4822 130 11416	PDZ6.8B
6I48	4822 130 11416	PDZ6.8B
6I49	9340 548 61115	PDZ12B
6I50	4822 130 11416	PDZ6.8B
6I51	4822 130 11416	PDZ6.8B
6I52	4822 130 11416	PDZ6.8B
6I53	4822 130 11416	PDZ6.8B
6I54	4822 130 11416	PDZ6.8B
6I55	4822 130 11416	PDZ6.8B
6I56	4822 130 11416	PDZ6.8B
6I61	4822 130 11416	PDZ6.8B
6I63	4822 130 11397	BAS316
6I64	4822 130 11397	BAS316
6I65	4822 130 11397	BAS316
6I66	4822 130 11397	BAS316
6I68	4822 130 11416	PDZ6.8B
6I69	4822 130 11416	PDZ6.8B
6I70	4822 130 11416	PDZ6.8B
6I75	4822 130 11416	PDZ6.8B
6I77	4822 130 11416	PDZ6.8B
6I90	4822 130 11416	PDZ6.8B
6I91	4822 130 11416	PDZ6.8B
6I92	4822 130 11416	PDZ6.8B
6I93	4822 130 11416	PDZ6.8B
6I99	4822 130 11423	PLVA2656A
6IA0	9340 548 61115	PDZ12B
6IA7	4822 130 11397	BAS316
6T01	4822 130 11397	BAS316
6T03	4822 130 11397	BAS316
6T08	9340 548 71115	PDZ33B
6U01	4822 130 11397	BAS316
6U03	4822 130 11397	BAS316
6U04	4822 130 11397	BAS316
6U05	9340 548 61115	PDZ12B
6U06	9322 203 37685	BZG05C3V9
6U07	4822 130 11416	PDZ6.8B
6U08	4822 130 80622	BAT54
6U09	4822 130 80622	BAT54
6U10	4822 130 11522	UDZ15B
6U11	4822 130 11397	BAS316
6U12	9340 548 52115	PDZ5.1B
6U13	9340 548 58115	PDZ9.1B
6U14	4822 130 10328	BAV99W
6U14	4822 130 11397	BAS316
6U15	4822 130 11397	BAS316
6U16	9340 548 52115	PDZ5.1B
6U17	4822 130 11416	PDZ6.8B
6V05	9322 085 77685	TLMG3100

7001	9352 684 81557	SAA5801H/015
7002	3198 010 42320	BC857BW
7003	3198 010 42310	BC847BW
7004	3198 010 42310	BC847BW
7005	9322 172 45668	LF33ABDT
7006		For SW see item 0601
7007	9322 157 20668	MSM51V18165F-60J
7008	3198 010 42310	BC847BW
7009	3198 010 42310	BC847BW
7010	3198 010 42320	BC857BW
7011	9322 130 41668	M24C64-WMN6
7012	9322 199 93668	M29W400DT-55N6
7013	3198 010 42310	BC847BW
7014	3198 010 42320	BC857BW
7017	9340 310 30215	PDTC144ET
7018	9352 115 40118	74LVC245APW
7019	9352 115 40118	74LVC245APW
7022	3198 010 42320	BC857BW
7022	9340 310 30215	PDTC144ET
7320	3198 010 42310	BC847BW
7322	3198 010 42310	BC847BW
7323	9352 625 24518	TDA9321H/N2
7402	3198 010 42310	BC847BW
7403	3198 010 42310	BC847BW
7407	3198 010 42320	BC857BW
7410	3198 010 42310	BC847BW
7411	3198 010 42310	BC847BW
7414	3198 010 42310	BC847BW
7415	3198 010 42310	BC847BW
7701	9322 170 14668	LF15ABDT
7703	3198 010 42310	BC847BW
7705	3198 010 42310	BC847BW
7706	3198 010 70400	74LVC1G14GW
7707	3198 010 42310	BC847BW
7708	3198 010 42310	BC847BW
7709	3198 010 42310	BC847BW
7710	3198 010 42310	BC847BW
7711	2422 486 80938	Socket 32p f
7011		For SW see item 0605
7712	9351 870 00118	74HC573PW
7713	9352 688 09557	SAA4978H/V204
7714	9965 000 02179	MS81V04160-25TB
7715	4822 209 73852	PMBT2369
7717	4822 209 73852	PMBT2369
7719	9322 206 19672	MSM56V16160F-7T3-FG
7720	9322 207 36702	T6TX5EF-0001
7725	4822 209 73852	PMBT2369
7752	9322 202 21671	T6TU5XB-0001
7753	9322 206 19672	MSM56V16160F-7T3-FG
7760	9352 730 86557	SAA4998H/V1
7772	9322 170 14668	LF15ABDT
7773	9322 179 78668	LF18ABDT
7774	9322 142 88668	LF25CDT
7A00	4822 209 30095	LM833D
7A01	3198 010 42310	BC847BW
7A02	9322 196 03702	MSP3411G-QI-B8V3
7A03	4822 209 30095	LM833D
7A04	4822 130 60373	BC856B
7A07	9322 183 05668	TS482ID
7A08	9340 425 20115	BC847BS
7A09	4822 130 60373	BC856B
7A10	9340 425 20115	BC847BS
7A11	9322 199 16668	M74HC590T
7A12	9322 199 16668	M74HC590T
7A13	3198 010 42310	BC847BW
7A14	9351 869 90118	74HCT573PW
7A15	9351 869 90118	74HCT573PW
7A16	9322 153 66668	CY7C199-15ZC
7A16	9322 208 98668	M68AF031AM70N6
7A31	9340 425 20115	BC847BS
7E01	9322 142 88668	LF25CDT
7E02		For SW see item 0602
7E03	9352 687 21165	74LVC1G126GW
7E04	9352 687 20125	74LVC1G125GW
7E05	9322 170 14668	LF15ABDT
7E10	9352 686 35118	PCA9515DP
7E12	9340 425 20115	BC847BS
7E23	9322 181 72671	AD9883AKST-110
7E24	9322 205 36668	AD9283BRSZ-50
7E25	3198 010 42320	BC857BW
7E26	3198 010 42320	BC857BW
7E27	3198 010 42320	BC857BW
7I01	9340 425 20115	BC847BS
7I02	9340 425 20115	BC847BS
7I03	9340 425 20115	BC847BS
7I04	3198 010 42310	BC847BW
7I05	9340 425 30115	BC847BPN
7I07	4822 130 60142	BC869
7I08	9352 697 76118	LM75ADP
7I09	3198 010 42310	BC847BW
7I10	9352 686 35118	PCA9515DP
7I12	9351 869 40118	74HC4053PW
7I18	9322 183 61682	SII907BCQ52
7I19		For SW see item 0603
7I20	9351 869 40118	74HC4053PW
7I21	9340 425 30115	BC847BPN
7I22	3198 010 42310	BC847BW
7I23	9340 425 20115	BC847BS
7I27	3198 010 42320	BC857BW
7I29	3198 010 42320	BC857BW
7I31	3198 010 42320	BC857BW
7I32	9351 869 40118	74HC4053PW
7I35	3198 010 42310	BC847BW
7I36	3198 010 42310	BC847BW
7I37	3198 010 42320	BC857BW
7I38	3198 010 42310	BC847BW
7I40	3198 010 42310	BC847BW
7I44	9340 425 20115	BC847BS
7I49	9340 310 30215	PDTC144ET
7I50	9340 425 30115	BC847BPN
7I51	9340 560 35235	BSH112
7I52	9340 560 35235	BSH112
7I53	9340 425 30115	BC847BPN
7I55	4822 209 12776	TDA8601T/C1
7I55	4822 209 16095	BA7657F
7I56	3198 010 42310	BC847BW
7I57	3198 010 42310	BC847BW
7I58	3198 010 42310	BC847BW
7I62	3198 010 42310	BC847BW
7I64	3198 010 42310	BC847BW
7L01	9322 181 72671	AD9883AKST-110
7L02	4822 209 17398	LD1117DT33
7P56	4822 209 17345	M62320FP
7U01	4822 130 60373	BC856B
7U02	4822 130 60373	BC856B

7U03	9322 091 04668	SI4410DY
7U04	9322 091 04668	SI4410DY
7U05	3198 010 42320	BC857BW
7U06	9340 425 20115	BC847BS
7U07	9340 425 30115	BC847BPN
7U08	4822 130 42804	BC817-25
7U09	4822 130 42804	BC817-25
7U10	3198 010 42310	BC847BW
7U11	3198 010 42310	BC847BW
7U12	3198 010 42310	BC847BW
7U13	9340 425 30115	BC847BPN
7V01	9322 200 14671	EP1C12F256C8
7V03	9322 206 19672	MSM56V16160F-7T3-FG
7V04	9340 425 20115	BC847BS
7Y01	9340 310 30215	PDTC144ET
7Y02	3198 010 42320	BC857BW

PDP Audio panel [C]

Various

1735	2422 025 10768	Connector 3p m
1736	2422 025 10768	Connector 3p m
1739	2422 025 10769	Connector 9p m
1M02	2422 025 11244	Connector 7p m

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2702	5322 126 11578	1nF 10% 50V 0603
2704	5322 126 11578	1nF 10% 50V 0603
2705	2020 552 96684	470nF 10% 25V 0805
2706	2222 580 15649	100nF 10% 50V 0805
2707	4822 126 14585	100nF 10% 0805 50V
2708	2020 552 96326	220nF 10% 16V
2709	4822 126 13881	470pF 5% 50V
2710	4822 126 13881	470pF 5% 50V
2711	5322 126 11578	1nF 10% 50V 0603
2712	2020 552 96684	470nF 10% 25V 0805
2713	2020 552 96684	470nF 10% 25V 0805
2714	4822 126 14549	33nF 16V 0603
2715	5322 126 11578	1nF 10% 50V 0603
2716	4822 126 14241	330pF 0603 50V
2717	5322 121 42498	680nF 5% 63V
2718	4822 122 33761	22pF 5% 50V
2719	5322 126 11578	1nF 10% 50V 0603
2720	2020 552 96326	220nF 10% 16V
2721	4822 126 13881	470pF 5% 50V
2722	4822 126 13881	470pF 5% 50V
2724	2020 552 96684	470nF 10% 25V 0805
2726	4822 126 14549	33nF 16V 0603
2727	5322 126 11578	1nF 10% 50V 0603
2728	4822 126 14241	330pF 0603 50V
2729	5322 121 42498	680nF 5% 63V
2730	2020 552 96684	470nF 10% 25V 0805
2764	4822 126 14491	2.2µF 10V 0805
2766	4822 126 14491	2.2µF 10V 0805
2768	4822 124 40255	100µF 20% 63V
2769	4822 124 40255	100µF 20% 63V
2777	2020 552 96683	220nF 10% 50V
2778	4822 124 40769	4.7µF 20% 100V
2779	2020 552 96683	220nF 10% 50V
2780	2020 552 96683	220nF 10% 50V
2781	2020 552 96683	220nF 10% 50V
2783	4822 124 81151	22µF 50V
2786	2238 586 15641	22nF 10% 50V 0603
2788	4822 124 40255	100µF 20% 63V
2789	2020 552 96684	470nF 10% 25V 0805
2790	4822 124 40255	100µF 20% 63V

⊣WW⊢

3701	4822 051 30103	10kΩ 5% 0.062W
3702	4822 051 30682	6.8Ω 5% 0.062W
3703	4822 051 30333	33kΩ 5% 0.062W
3704	4822 117 10833	10kΩ 1% 0.1W
3705	4822 051 20828	8.2Ω 5% 0.1W
3706	4822 051 30472	4.7Ω 5% 0.062W
3707	4822 051 30683	68kΩ 5% 0.062W
3708	4822 051 30563	56kΩ 5% 0.062W
3709	4822 117 11503	220Ω 1% 0.1W
3710	4822 051 30223	22kΩ 5% 0.062W
3711	4822 050 21204	120kΩ 1% 0,6W
3712	4822 051 30103	10kΩ 5% 0.062W
3713	4822 116 52207	1.2kΩ 5% 0.5W
3714	4822 117 12925	47kΩ 1% 0.063W 0603
3715	4822 117 12925	47kΩ 1% 0.063W 0603
3716	4822 117 12925	47kΩ 1% 0.063W 0603
3717	4822 116 52234	100kΩ 5% 0.5W
3718	4822 117 13632	100kΩ 1% 0603 0.62W
3721	4822 051 30472	4.7Ω 5% 0.062W
3722	4822 051 30683	68kΩ 5% 0.062W
3723	4822 051 30563	56kΩ 5% 0.062W
3724	4822 117 11503	220Ω 1% 0.1W
3725	4822 051 30223	22kΩ 5% 0.062W
3726	4822 117 11503	220Ω 1% 0.1W
3727	4822 117 11503	220Ω 1% 0.1W
3743	4822 117 11449	2.2kΩ 5% 0.1W 0805
3746	4822 051 30223	22kΩ 5% 0.062W
3747	4822 117 12925	47kΩ 1% 0.063W 0603
3748	4822 116 83883	470Ω 5% 0.5W
3750	4822 117 11449	2.2kΩ 5% 0.1W 0805
3756	4822 117 11449	2.2kΩ 5% 0.1W 0805
3757	4822 117 11449	2.2kΩ 5% 0.1W 0805
3760	4822 117 12891	220kΩ 1%
3761	4822 051 20109	10Ω 5% 0.1W
3762	4822 051 20109	10Ω 5% 0.1W
3763	4822 117 13632	100kΩ 1% 0603 0.62W
3764	4822 051 30222	2.2kΩ 5% 0.062W
3765	4822 051 30222	2.2kΩ 5% 0.062W
3766	4822 117 13632	100kΩ 1% 0603 0.62W
3767	4822 117 13632	100kΩ 1% 0603 0.62W
3768	4822 117 13632	100kΩ 1% 0603 0.62W
3790	4822 051 30272	2.7kΩ 5% 0.062W
3791	4822 051 30272	2.7kΩ 5% 0.062W
3792	4822 051 30103	10kΩ 5% 0.062W
3793	4822 051 30103	10kΩ 5% 0.062W
3798	4822 051 30153	15kΩ 5% 0.062W
3999	4822 051 30101	100Ω 5% 0.062W
9701	3198 036 90010	Wire 0.58mm
9702	3198 036 90010	Wire 0.58mm
9703	3198 036 90010	Wire 0.58mm
9706	3198 036 90010	Wire 0.58mm
9707	3198 036 90010	Wire 0.58mm
9708	3198 036 90010	Wire 0.58mm
9709	3198 036 90010	Wire 0.58mm
9712	3198 036 90010	Wire 0.58mm
9717	4822 051 30008	Jumper 0603

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5701	2422 536 00385	68µH 10%
5702	2422 536 00385	68µH 10%
5703	4822 157 11716	Bead 30Ω at 100MHz
5707	4822 157 11411	Bead 100MHz
5708	4822 157 11411	Bead 100MHz
5711	4822 157 11411	Bead 100MHz
5712	4822 157 11411	Bead 100MHz

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6701	4822 130 11397	BAS316
6710	4822 130 11551	UDZS10B
6711	4822 130 11551	UDZS10B

7700	9322 163 86682	TDA7490L
7701	3198 010 42310	BC847BW
7703	3198 010 42310	BC847BW
7704	3198 010 42310	BC847BW
7705	3198 010 42310	BC847BW
7706	3198 010 42320	BC857BW
7707	3198 010 42310	BC847BW
7710	3198 010 42310	BC847BW
7711	3198 010 42310	BC847BW
7712	3198 010 42310	BC847BW
7713	3198 010 42310	BC847BW

Side I/O Panel [D]

Various

0206	3104 308 12561	Side I/O bracket
1001	2422 026 05133	Connector SVHS 4p f
1002	4822 267 10975	Connector 3p
1010	4822 267 31014	Socket head phone
1016	3104 328 28881	Side I/O assy
1M36	2422 025 17179	Connector 11p m

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2003	2022 552 05679	1µF 10% 16V 0805
2004	3198 016 36810	680pF 25V 0603
2005	2020 552 94427	100pF 5% 50V
2006	3198 016 36810	680pF 25V 0603
2007	2020 552 94427	100pF 5% 50V
2008	2238 916 15641	22nF 10% 25V 0603
2009	5322 126 11583	10nF 10% 50V 0603
2010	2238 916 15641	22nF 10% 25V 0603
2011	5322 126 11583	10nF 10% 50V 0603

⊣WW⊢

3000	4822 051 30759	75Ω 5% 0.062W
3004	4822 051 30759	75Ω 5% 0.062W
3008	4822 051 30222	2.2kΩ 5% 0.062W
3009	4822 051 30102	1kΩ 5% 0.062W
3010	4822 051 30333	33kΩ 5% 0.062W
3011	4822 051 30392	3.9Ω 5% 0.063W 0603
3012	4822 051 30102	1kΩ 5% 0.062W
3013	4822 051 30333	33kΩ 5% 0.062W
3016	4822 051 30103	10kΩ 5% 0.062W
3020	4822 051 30103	10kΩ 5% 0.062W
9004	4822 051 30008	Jumper 0603
9005	4822 051 30008	Jumper 0603
9006	4822 051 30008	Jumper 0603
9007	4822 051 30008	Jumper 0603
9008	4822 051 30008	Jumper 0603
9009	4822 051 30008	Jumper 0603
9010	4822 051 30008	Jumper 0603
9011	4822 051 30008	Jumper 0603

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6000	4822 130 11416	PDZ6.8B
6001	4822 130 11416	PDZ6.8B
6002	4822 130 11416	PDZ6.8B
6003	4822 130 11416	PDZ6.8B
6004	4822 130 11416	PDZ6.8B
6005	4822 130 11416	PDZ6.8B
6006	4822 130 11416	PDZ6.8B
6007	4822 130 11416	PDZ6.8B
6008	4822 130 11416	PDZ6.8B
6009	4822 130 11416	PDZ6.8B
6010	4822 130 11416	PDZ6.8B
6011	4822 130 11416	PDZ6.8B

Top Control Assy [E]

Various

0049	3104 308 11601	Mains knob
0054	3104 308 11591	Mains knob frame
0345	2422 025 16544	Connector 6p m
1701	4822 276 13775	Switch
1702	4822 276 13775	Switch
1703	4822 276 13775	Switch
1704	4822 276 13775	Switch
1705	4822 276 13775	Switch
1710	4822 276 14007	Switch 2P 0.1A 12V
8345	3104 311 06941	Cable 6P/680/6P

⊣WW⊢

3008	4822 117 10845	620Ω 1% 0.1W
3010	4822 117 11534	1.1kΩ 1% 0.1W
3011	4822 117 11951	2kΩ 1% 0.1W
3013	4822 117 13528	200Ω 1% 0.125W 0805
3014	3198 031 03910	390Ω 1% 0402
3017	4822 051 30339	33Ω 5% 0.062W
3018	4822 051 30339	33Ω 5% 0.062W
3019	4822 051 30339	33Ω 5% 0.062W
3020	4822 051 30339	33Ω 5% 0.062W
3021	4822 051 30339	33Ω 5% 0.062W
3022	4822 051 30339	33Ω 5% 0.062W
3023	4822 051 30339	33Ω 5% 0.062W
3024	4822 051 30339	33Ω 5% 0.062W
3025	4822 051 30339	33Ω 5% 0.062W
3026	4822 051 30339	33Ω 5% 0.062W
3027	4822 051 30339	33Ω 5% 0.062W
3028	4822 051 30339	33Ω 5% 0.062W
3999	4822 117 13602	2.2kΩ 5% 0.01W 0402
9000	4822 117 13605	Jumper 0402

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6001	9322 198 19685	SML512BC2T
6002	9322 198 19685	SML512BC2T
6003	9322 198 19685	SML512BC2T
6004	9322 198 19685	SML512BC2T
6005	9322 198 19685	SML512BC2T
6006	9322 198 19685	SML512BC2T
6007	9322 198 19685	SML512BC2T
6008	9322 198 19685	SML512BC2T
6009	9322 198 19685	SML512BC2T
6010	9322 198 19685	SML512BC2T
6011	9322 198 19685	SML512BC2T
6012	9322 198 19685	SML512BC2T

SCART 3 [H]

Various

1003	2422 025 14911	Socket Euro 21p f
1M07	4822 267 10637	Connector 5p

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2500	2022 552 05679	1µF 10% 16V 0805
2501	2020 552 94427	100pF 5% 50V
2502	2022 552 05679	1µF 10% 16V 0805
2503	2020 552 94427	100pF 5% 50V
2504	2022 552 05679	1µF 10% 16V 0805
2505	2022 552 05679	1µF 10% 16V 0805
2506	2238 586 59812	100nF 20% 50V 0603
2507	5322 126 11578	1nF 10% 50V 0603
2508	2022 552 05679	1µF 10% 16V 0805
2509	2238 586 59812	100nF 20% 50V 0603
2510	4822 126 14241	330pF 0603 50V
2511	2238 586 59812	100nF 20% 50V 0603
2512	2238 586 59812	100nF 20% 50V 0603
2513	2238 586 59812	100nF 20% 50V 0603
2515	2022 552 05679	1µF 10% 16V 0805
2516	2022 552 05679	1µF 10% 16V 0805
2517	2022 552 05679	1µF 10% 16V 0805

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3500	4822 051 30101	100Ω 5% 0.062W
3501	4822 051 30101	100Ω 5% 0.062W
3502	4822 051 30223	22kΩ 5% 0.062W
3503	4822 051 30101	100Ω 5% 0.062W
3504	4822 051 30101	100Ω 5% 0.062W
3505	4822 051 30223	22kΩ 5% 0.062W
3506	4822 051 30759	75Ω 5% 0.062W
3507	4822 051 30759	75Ω 5% 0.062W
3508	4822 051 30759	75Ω 5% 0.062W
3509	4822 051 30101	100Ω 5% 0.062W
3510	4822 051 30759	75Ω 5% 0.062W
3511	4822 051 30479	47Ω 5% 0.062W
3512	4822 051 30479	47Ω 5% 0.062W
3513	4822 051 30479	47Ω 5% 0.062W
3514	4822 051 30479	47Ω 5% 0.062W
3515	4822 051 30479	47Ω 5% 0.062W
3516	4822 051 30479	47Ω 5% 0.062W
3517	4822 117 12925	47kΩ 1% 0.063W 0603
3522	4822 051 30272	2.7kΩ 5% 0.062W
3523	4822 051 30223	22kΩ 5% 0.062W
3524	4822 051 30479	47Ω 5% 0.062W
3525	4822 051 30102	1kΩ 5% 0.062W
3526	5322 117 13056	8.2kΩ 1% 0.063W 0603
3527	4822 051 30683	68kΩ 5% 0.062W
3528	4822 051 30223	22kΩ 5% 0.062W
3529	4822 051 30102	1kΩ 5% 0.062W
3535	4822 051 30479	47Ω 5% 0.062W
3536	4822 051 30103	10kΩ 5% 0.062W
3543	4822 051 30759	75Ω 5% 0.062W
3599	4822 051 30102	1kΩ 5% 0.062W
3999	4822 051 30102	1kΩ 5% 0.062W
9502	4822 051 30008	Jumper 0603
9508	4822 051 30008	Jumper 0603
9509	3198 036 90010	Wire 0.58mm
9510	3198 036 90010	Wire 0.58mm
9511	3198 036 90010	Wire 0.58mm
9512	3198 036 90010	Wire 0.58mm
9513	3198 036 90010	Wire 0.58mm
9514	3198 036 90010	Wire 0.58mm
9515	3198 036 90010	Wire 0.58mm
9521	4822 051 30008	Jumper 0603
9523	3198 036 90010	Wire 0.58mm
9524	4822 051 30008	Jumper 0603
9525	3198 036 90010	Wire 0.58mm
9526	3198 036 90010	Wire 0.58mm

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6500	4822 130 11416	PDZ6.8B
6501	4822 130 11416	PDZ6.8B
6502	4822 130 11416	PDZ6.8B
6503	4822 130 11416	PDZ6.8B
6504	4822 130 11397	BAS316
6505	4822 130 11416	PDZ6.8B
6506	4822 130 11416	PDZ6.8B
6507	9340 548 61115	PDZ12B
6508	4822 130 11551	UDZS10B

7501	3198 010 42310	BC847BW
7502	3198 010 42310	BC847BW
7515	9351 869 40118	74HC4053PW
7516	9351 869 40118	74HC4053PW

LED + Switch Panel [J]

Various

0345	2422 025 16961	Connector 6p m SMD
1040	9322 206 81667	TSOP34836YA1
1M01	2422 025 17103	Connector 3p m SMD
1M20	2422 025 17441	Connector 12p m

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2030	4822 124 23002	10µF 16V
2040	4822 124 12095	100µF 20% 16V
2060	5322 124 41945	22µF 20% 35V
2070	4822 126 14583	470nF 10% 16V 0805
2071	4822 124 23002	10µF 16V

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3030	3198 031 04720	4.7kΩ 5% 0402
3031	4822 117 12889	270kΩ 1% 0.063W 0603
3032	2322 705 70184	180Ω 5% 0402
3033	4822 051 30102	1kΩ 5% 0.062W
3034	4822 117 13548	1kΩ 5% 0402
3035	3198 031 04720	4.7kΩ 5% 0402
3036	3198 031 02280	2.2Ω 5% 0.1W 0402
3037	3198 031 02280	2.2Ω 5% 0.1W 0402
3040	4822 117 13597	330Ω 5% 0402 0.01W
3041	4822 117 13606	10kΩ 5% 0.01W 0402
3042	3198 031 06820	6.8kΩ 5% 0.01W 0402
3051	4822 117 13597	330Ω 5% 0402 0.01W
3060	4822 117 13606	10kΩ 5% 0.01W 0402
3061	4822 051 30331	330Ω 5% 0.062W
3062	4822 117 11373	100Ω 1% 0805
3063	4822 117 13606	10kΩ 5% 0.01W 0402
3064	4822 117 11373	100Ω 1% 0805
3070	2322 705 70475	4.7MΩ 5% 0402
3071	2322 705 70475	4.7MΩ 5% 0402
3072	4822 117 13548	1kΩ 5% 0402
3073	3198 031 03320	3.3kΩ 5% 0402
3074	4822 117 13606	10kΩ 5% 0.01W 0402
3075	3198 031 04720	4.7kΩ 5% 0402
3078	3198 031 03320	3.3kΩ 5% 0402
3079	3198 031 03320	3.3kΩ 5% 0402
9010	4822 117 13605	Jumper 0402
9013	4822 117 13605	Jumper 0402
9019	4822 117 13605	Jumper 0402
9022	4822 051 30008	Jumper 0603
9024	4822 051 30008	Jumper 0603
9026	4822 117 13605	Jumper 0402
9027	4822 117 13605	Jumper 0402
9040	4822 117 13605	Jumper 0402
9043	4822 117 13605	Jumper 0402

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6030	4822 130 11397	BAS316
6031	4822 130 11397	BAS316
6051	4822 130 83915	TLMV3100
6060	9322 198 19685	SML512BC2T
6061	4822 130 11397	BAS316
6070	9322 140 63685	TEMD5000

7030	3198 010 42320	BC857BW
7031	5322 130 62804	BCP53
7032	3198 010 42310	BC847BW
7060	3198 010 42310	BC847BW
7061	3198 010 42310	BC847BW
7070	9322 192 63668	LM358P

11. Revision List

Manual xxxx xxx xxxx.0

- First release.

Manual xxxx xxx xxxx.1

General: Small textual and graphical improvements.

- Ch. 2: Lead-free text updated.
- Ch. 5: Two missing “Stepwise Start-up” flow charts added.
- Ch. 6:
  - Wiring diagrams updated with overview of AmbiLight connectors.
  - Block diagram Power Supply 42” FHP corrected.
  - Other block diagrams updated.
- Ch. 7:
  - 12nc’s of diagrams B14 corrected.
  - Copper tracks of SSB layout added.
- Ch. 8: Explanation overview of Option Bits added.
- Ch. 9: IC Data sheets added.