

LC4.9E
AB

Service
Service
Service

For manual LGE plasma panels see: 3122 785 15590
For manual FHP plasma panels see: 3122 785 14580
For manual SDI plasma panels see: 3122 785 14990



Service Manual

Contents	Page
1. Technical Specifications, Connections, and Chassis Overview	2
2. Safety Instructions, Warnings, and Notes	5
3. Directions for Use	7
4. Mechanical Instructions	8
5. Service Modes, Error Codes, and Fault Finding	11
6. <i>Block Diagrams, Test Point Overviews, and Waveforms</i>	
Wiring Diagram	21
Block Diagram Supply	22
Block Diagram Video	23
Block Diagram Audio	24
Testpoint Overview Small Signal Board 6093.1	25
Testpoint Overview Small Signal Board 6141.1	26
Block Diagram IBO Zapper	27
Testpoint Overview IBO Zapper (Bottom Side)	28
I2C Overview	29
Supply Voltage Overview	30
7. <i>Circuit Diagrams and PWB Layouts</i>	<i>Diagram PWB</i>
PDP FHP Supply: Filter Standby	(A2) 31 36-41
PDP FHP Supply: Protection	(A3) 32 36-41
PDP FHP Supply: Pre Conditioner	(A5) 33 36-41
PDP FHP Supply: LLC Supply	(A6) 34 36-41
PDP FHP Supply: AUX Supply	(A7) 35 36-41
SSB: Tuner and IF	(B1) 42 65-74
SSB: Hercules	(B2) 43 65-74
SSB: Sync Interface	(B3) 44 65-74
SSB: Audio Delay line (Reserved)	(B4) 45 65-74
SSB: Audio Processing	(B5) 46 65-74
SSB: DC-DC Converter	(B6) 47 65-74
SSB: Diversity Tables B1-B6	(B1-6) 48
SSB: Scaler	(B7) 49 65-74
SSB: Scaler Supply	(B8) 50 65-74
SSB: Scaler Interface	(B9) 51 65-74

Contents	Page
SSB: SDRAM	(B10) 52 65-74
SSB: Flash / Control	(B11) 53 65-74
SSB: HDMI (N.A.)	(B12) 54 65-74
SSB: MUX Sync Interface	(B13) 55 65-74
SSB: Digital I/O	(B14) 56 65-74
SSB: Analog I/O	(B15) 57 65-74
SSB: Top Connectors	(B16) 58 65-74
SSB: Side Connectors	(B17) 59 65-74
SSB: ADC	(B18) 60 65-74
SSB: Columbus	(B19) 61 65-74
SSB: EPLD	(B20) 62 65-74
SSB: EPLD	(B21) 63 65-74
SSB: Diversity Tables B9-B21	(B9-21) 64
SSB: 61411	(B1-B21) 75-95 96-105
PDP Audio Amplifier Panel	(C) 106 107
Side I/O Panel	(D) 108 107
Control Board	(E) 110 111
LED Panel	(J) 112 113
IBO Zapper: Mojo	(K1) 114 121-122
IBO Zapper: Flash Memory	(K2) 115 121-122
IBO Zapper: Power Supply	(K3) 116 121-122
IBO Zapper: Interface	(K4) 117 121-122
IBO Zapper: Analog Back End	(K5) 118 121-122
IBO Zapper: Front End	(K6) 119 121-122
IBO Zapper: Common Interface	(K7) 120 121-122
8. Alignments	123
9. Circuit Descriptions, Abbreviation List, and IC Data Sheets	127
Abbreviation List	129
IC Data Sheets	132
10. Spare Parts List	134
11. Revision List	154

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1. Technical Specifications, Connections, and Chassis Overview

Index of this chapter:

- 1.1 Technical Specifications
- 1.2 Connection Overview
- 1.3 Chassis Overview

Notes:

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

Power consumption	
- Normal operation (W)	: ≈ 450
- Stand-by (W)	: < 2
Dimensions (WxHxD cm)	: 124x68x10.4
Weight (kg)	: 42

1.1 Technical Specifications

1.1.1 Vision

Display type	: Plasma
Screen size	: 42" (107 cm), 16:9
Resolution (HxV pixels)	: 852 x 480
Contrast ratio	:
- 42PF5520D/10	: 10,000:1
- 42PF7520D/10	: 13,000:1
Light output (cd/m ²)	: 1500
Viewing angle (HxV degrees)	: 160x160
Tuning system	: PLL
Reception standards	: Analogue & : digital terrestrial TV : (DVB-T)
TV Colour systems	: PAL B/G, D/K, I : SECAM B/G, D/K, L/L'
Video playback	: PAL B/G; SECAM L/L' : NTSC M/N 3.58, 4.43
Supported computer formats	: VGA (640x480) : VGA (720x400) : VGA (720x480) : MAC (640x480) : MAC (832x624) : SVGA (800x600) : XVGA (1024x768) : WXGA (1280x768) : WXGA (1280x960) : WXGA (1280x1024)
Supported video formats	: 640x480i - 1fH : 720x576i - 1fH : 640x480p - 2fH : 720x576p - 2fH : 852x480p - 2fH : 1920x1080i - 2fH
Presets/channels	: 100 presets
Tuner bands	: VHF : UHF : S-band : Hyper-band

1.1.2 Sound

Sound systems	: FM-mono : FM-stereo B/G : NICAM B/G, D/K, I, L : AV Stereo
Maximum power (W _{RMS})	: 2 x 15

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.

1.2 Connection Overview

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

1.2.1 Side I/O connections

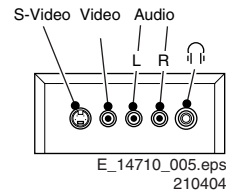


Figure 1-1 Side I/O connections

S-Video (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} / 75 ohm	

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	

Mini Jack: Audio Head phone - Out

Bk - Head phone	32 - 600 ohm / 10 mW	
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1.2.2 Rear Connections

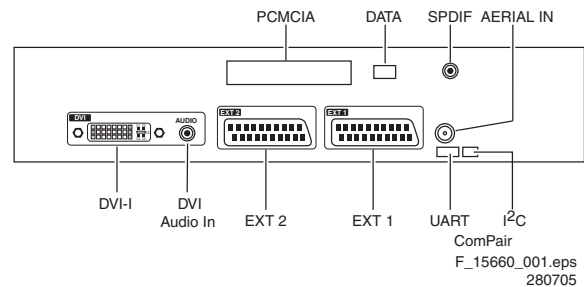


Figure 1-2 Rear I/O

Aerial - In

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

Mini Jack: Audio - In

1 - Ground	Gnd	
2 - Audio L	0.5 V _{RMS} / 10 kohm	
3 - Audio R	0.5 V _{RMS} / 10 kohm	

PCMCIA

1. Ground
2. Data 3
3. Data 4
4. Data 5
5. Data 6
6. Data 7
7. Card Enable 1
8. Address 10
9. Output Enable
10. Address 11
11. Address 9
12. Address 8
13. Address 13
14. Address 14
15. Program / Write Enable
16. Ready or Busy / Interrupt Request
17. Power (V_{CC})
18. Programming and Periferal Supply 1
19. Address 16
20. Address 15
21. Address 12
22. Address 7
23. Address 6
24. Address 5
25. Address 4
26. Address 3
27. Address 2
28. Address 1
29. Address 0
30. Data 0
31. Data 1
32. Data 2
33. Write Protect / IO Port is 16-Bit
34. Ground
35. Ground
36. Card Detect 1
37. Data 11
38. Data 12
39. Data 13
40. Data 14
41. Data 15
42. Card Enable 2
43. Refresh
44. IO Read
45. IO Write
46. Address 17
47. Address 18
48. Address 19
49. Address 20
50. Address 21
51. Power (V_{CC})
52. Programming and Periferal Supply 2
53. Address 22
54. Address 23
55. Address 24
56. Address 25
57. Reserved
58. Card Reset
59. Extend Bus Cycle
60. Input Port Acknowledge
61. Register Select and IO Enable
62. Battery Voltage Detect 2 / Audio Digital Waveform
63. Battery Voltage Detect 1 / Card Status Changed
64. Data 8
65. Data 9
66. Data 10
67. Card Detect 2
68. Ground

Data

- | | | |
|------------|----------------------------------|-----|
| 1 - SDA-S | I ² C Data (0 - 5 V) | ⊕ ⊖ |
| 2 - SCL-S | I ² C Clock (0 - 5 V) | ⊕ ⊖ |
| 3 - Ground | Gnd | ⊥ |

SPDIF

- | | | |
|----------------------|--------------|-----|
| 1 - RCA (Electrical) | Coax, 75 ohm | ⊕ ⊖ |
|----------------------|--------------|-----|

Service Connector (ComPair)

- | | | |
|------------|----------------------------------|-----|
| 1 - SDA-S | I ² C Data (0 - 5 V) | ⊕ ⊖ |
| 2 - SCL-S | I ² C Clock (0 - 5 V) | ⊕ ⊖ |
| 3 - Ground | Gnd | ⊥ |

Service Connector (UART)

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

DVI-I: Digital/Analogue Video - In

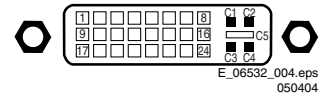


Figure 1-3 DVI-I connector

- | | | |
|------------------|------------------------------|-----|
| 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 | ⊥ |

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

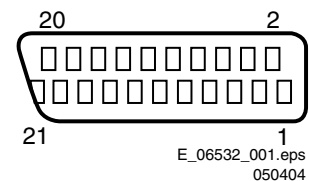


Figure 1-4 SCART connector

- | | | |
|---------------------|--------------------------------|-----|
| 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 | 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	Gnd	⏏
15 - Video Red	0.7 V _{PP} / 75 ohm	⊕
16 - Status/FBL	0 - 0.4 V: INT 1 - 3 V: EXT / 75 ohm	⊕
17 - Ground Video	Gnd	⏏
18 - Ground FBL	Gnd	⏏
19 - Video Terr. CVBS	1 V _{PP} / 75 ohm	⊕
20 - Video CVBS/Y	1 V _{PP} / 75 ohm	⊕
21 - Shield	Gnd	⏏

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 - n.c.		
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 - n.c.		
12 - n.c.		
13 - Ground Red	Gnd	⏏
14 - Ground	Gnd	⏏
15 - YC/C - in	0.7 V _{PP} / 75 ohm	⊕
16 - n.c.		
17 - Ground Video	Gnd	⏏
18 - Ground	Gnd	⏏
19 - Video Mon. CVBS	1 V _{PP} / 75 ohm	⊕
20 - YC/Y - in	0.7 V _{PP} / 75 ohm	⊕
21 - Shield	Gnd	⏏

EXT2: Video Y/C - in, CVBS - In/Out, Audio - In/Out

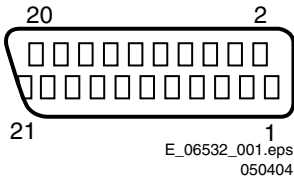


Figure 1-5 SCART connector

1.3 Chassis Overview

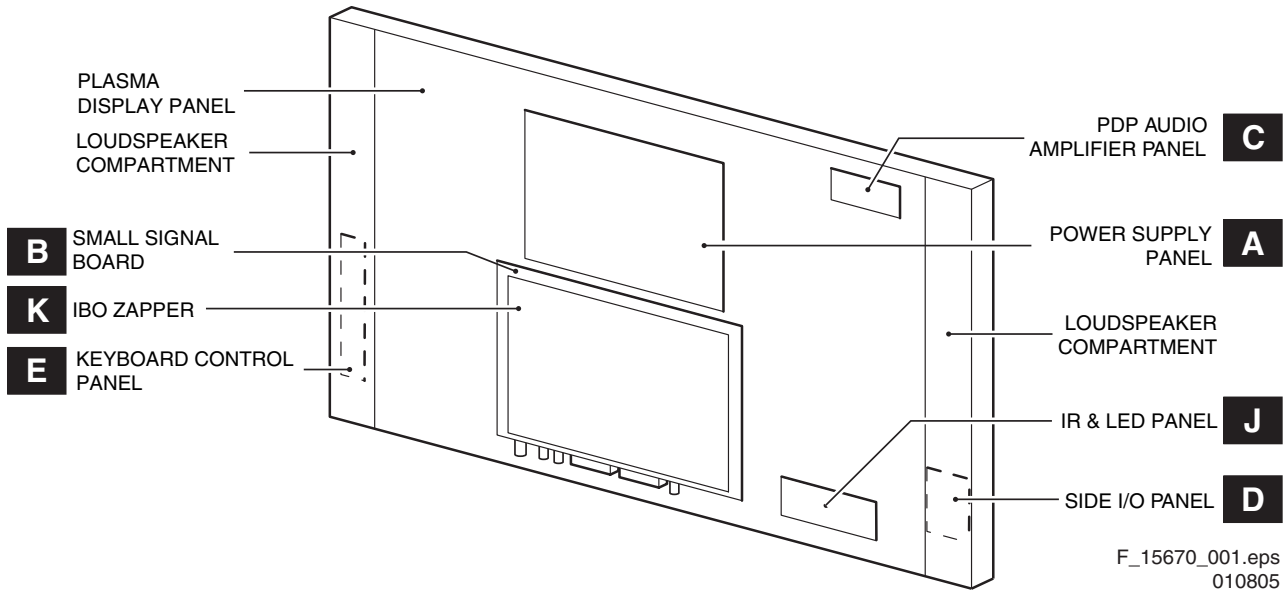


Figure 1-6 PWB locations

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 ($\mu = \times 10^{-6}$), nano-farads ($n = \times 10^{-9}$), or pico-farads ($p = \times 10^{-12}$).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed 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 "Repair downloads". 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).



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.

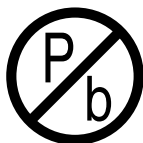


Figure 2-2 Lead-free logo

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 mix 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 "Repair downloads". For additional questions please contact your local repair help desk.

2.3.5 Alternative BOM identification

In September 2003, Philips CE introduced a change in the way the serial number (or production number, see Figure 2-1) is composed. From this date on, the **third digit** in the serial number (example: AG2B0335000001) indicates the number of the alternative BOM (Bill of Materials used for producing the specific model of TV set). It is possible that the same TV model on the market is produced with e.g. two different types of displays, coming from two different O.E.M.s. By looking at the third digit of the serial number, the service technician can see if there is more than one type of B.O.M. used in the production of the TV set he is working with. He can then consult the At Your Service Web site, where he can type in the Commercial Type Version Number of the TV set (e.g. 28PW9515/12), after which a screen will appear that gives information about the number of alternative B.O.M.s used. If the third digit of the serial number contains the number 1 (example: AG1B0335000001), then there is only one B.O.M. version of the TV set on the market. If the third digit is a 2 (example: AG2B0335000001), then there are two different B.O.M.s. **Information about this is important for ordering the correct spare parts!** For the third digit, the numbers 1...9 and the characters A...Z can be used, so in total: 9 plus 26 = 35 different B.O.M.s can be indicated by the third digit of the serial number.

2.3.6 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

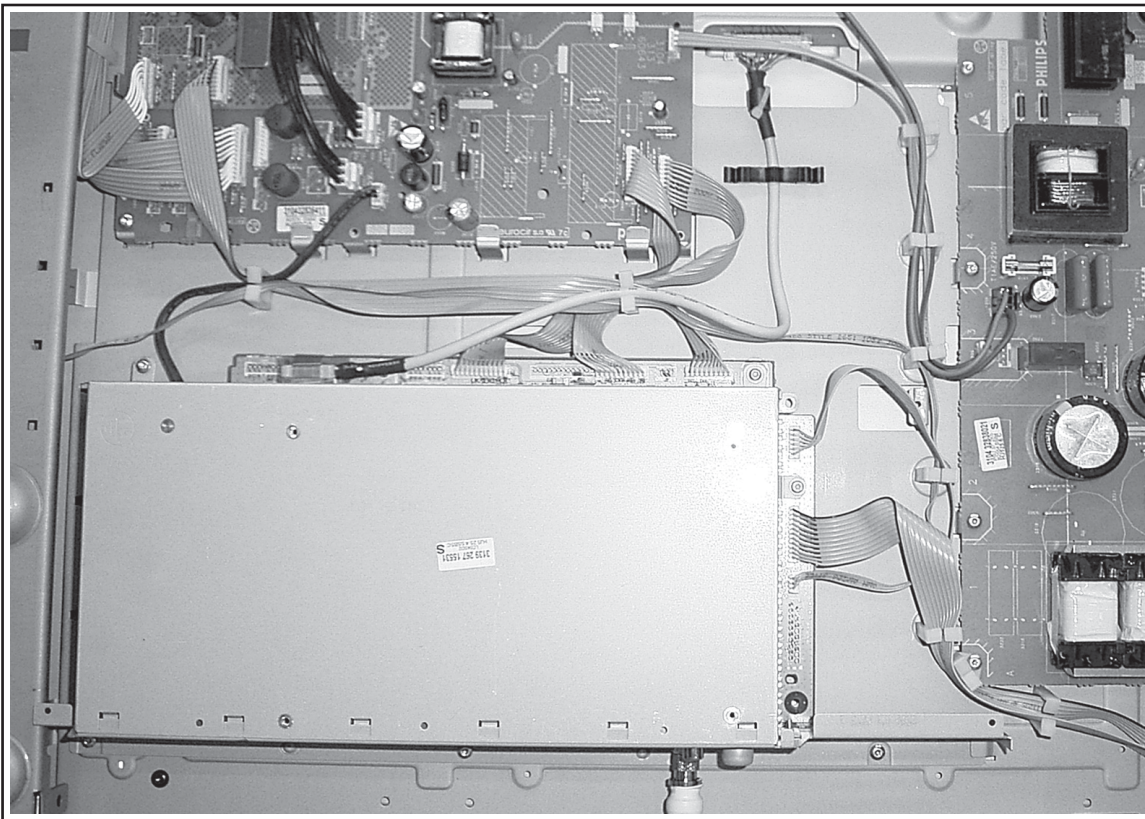
Index of this chapter:

- 4.1 Cable Dressing
- 4.2 Service Positions
- 4.3 Assy/Panel Removal
- 4.4 Set Re-assembly

Notes:

- Figures below can deviate slightly from the actual situation, due to the different set executions.
- Follow the disassembling instructions in described order.

4.1 Cable Dressing



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280705

Figure 4-1 Cable dressing

4.2 Service Positions

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).

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

4.2.1 Foam Bars

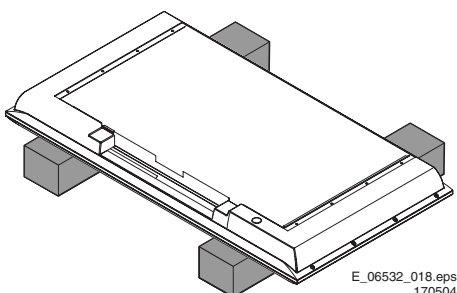


Figure 4-2 Foam bars

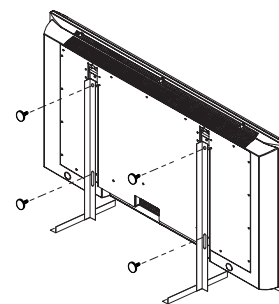


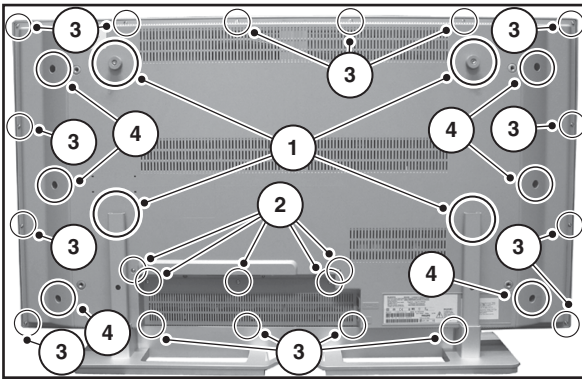
Figure 4-3 Aluminium stands (drawing of Mkl)

The aluminium stands (order code 3122 785 90480) can be mounted with the back cover removed or still left on. So, the stand can be used to store products or to do measurements. It is also very suitable to perform duration tests without taking much space, without having the risk of overheating, or the risk of products falling. The stands can be mounted and removed quick and easy with use of the delivered screws that can be tightened and loosened manually without the use of tools. See figure above.

Note: Only use the delivered screws to mount the monitor to the stands.

4.3 Assy/Panel Removal

4.3.1 Rear Cover



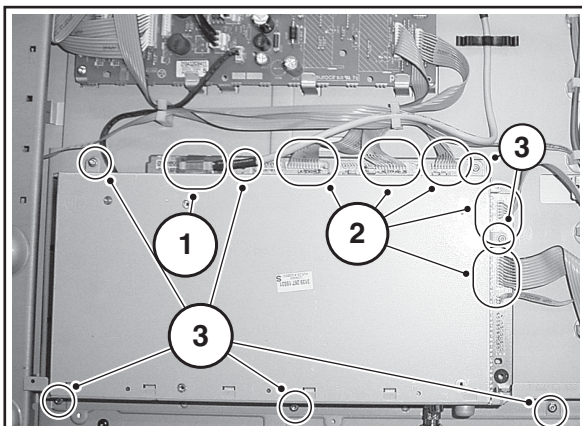
F_15420_034.eps
070605

Figure 4-4 Rear cover

Warning: Disconnect the mains power cord before you remove the rear cover.

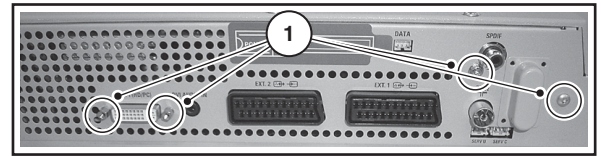
- Remove the screws that secure the rear cover (see Figure "Rear cover screws"); these are:
 - 4 x big torx screws (1) for securing the stand/wall mount;
 - 5 x small torx screws (2) near the rear I/O panel;
 - 22 x small torx screws (3) that secure the loudspeaker compartments [6 of these screws are in sunken holes (4)] and along the edges of the rear cover.
- Lift the rear cover from the cabinet cautiously. Make sure that wires and other internal components are not damaged during cover removal.

4.3.2 Cover Shield for IBO-zapper & SSB



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280705

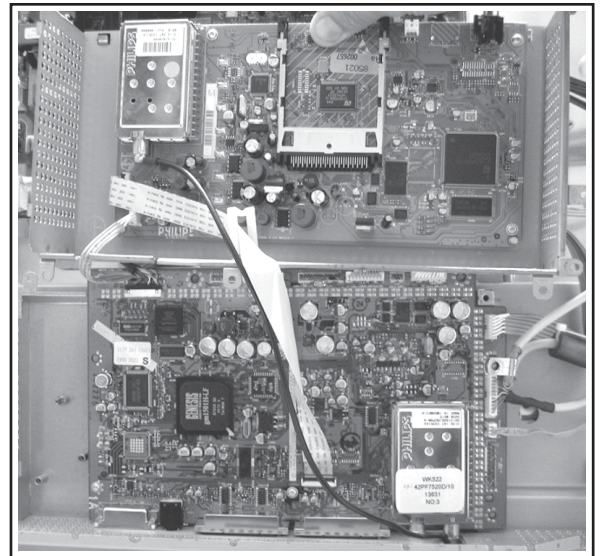
Figure 4-5 Cover shield



F_15660_010.eps
280705

Figure 4-6 DVI-I & SPDIF connector screws

- Very **cautiously** disconnect the LVDS cable (1) from the SSB panel (see Figure "Cover shield"). Notice that this cable is very fragile.
- Unplug the black cable coming from the IBO zapper/SSB board from the Audio/STBY board (see Figure "Cover shield").
- Remove all other cables (2) from the IBO zapper/SSB board (see Figure "Cover shield").
- Remove the 5 fixation screws that connect the top shielding with the bottom shielding, and also the 2 fixation screws that connect it with the rear connector plate, see Figure "Cover shield".
- Remove the fixation screws from the DVI-I connector and from the SPDIF connector, see Figure "DVI-I & SPDIF connector screws (1)".
- Remove the upper part of the shield (with the IBO zapper attached to it) from the lower part of the shield (on which the SSB board is located), by unhooking it from its brackets. Be careful not to damage the LVDS connector on the SSB board, see Figure "Cover shield".
- Finally, remove the IBO zapper (attached to the top shielding with 4 screws), and the SSB board (attached to the lower shielding with 2 screws), see Figure "IBO zapper & SSB".



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280705

Figure 4-7 IBO-zapper & SSB

4.4 Set Re-assembly

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

Notes:

- While re-assembling, make sure that all cables are placed and connected in their original positions. See Figure "Cable dressing". Be careful with the fragile LVDS cable.
- For a complete description of the Plasma panel, see the LGE plasma panel Service Manual (12nc is listed on the frontpage).

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 Service Tools
- 5.5 Error Codes
- 5.6 The Blinking LED Procedure
- 5.7 Fault Finding and Repair Tips

5.1 Test Points

This chassis is equipped with test points in the service printing. In the schematics test points are identified with a rectangle box around Fxxx or Ixxx.

Perform measurements under the following conditions:

- Television set in Service Default Alignment Mode.
- Video input: Colour bar signal.
- Audio input: 3 kHz left channel, 1 kHz right channel.

5.2 Service Modes

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

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

Minimum requirements for ComPair: a Pentium processor, a Windows OS, and a CD-ROM drive (see also paragraph "ComPair").

5.2.1 Service Default Mode (SDM)

Purpose

- To create a predefined setting for measurements to be made.
- To override software protections.
- To start the blinking LED procedure.
- To inspect the error buffer.
- To check the life timer.

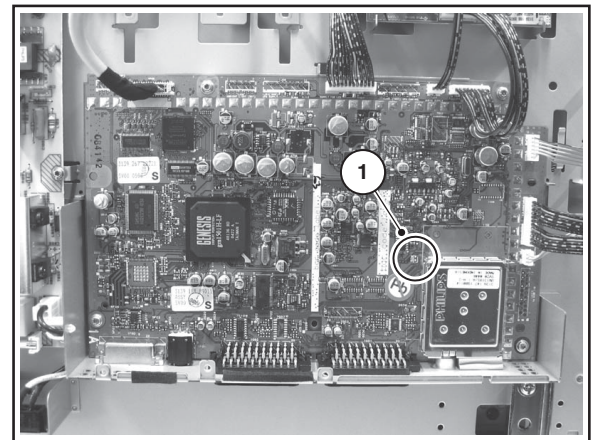
Specifications

- Tuning frequency: 475.25 MHz.
- Colour system: PAL-BG.
- All picture settings at 50% (brightness, colour contrast, hue).
- Bass, treble, and balance at 50 %; volume at 25 %.
- All service-unfriendly modes (if present) are disabled. The service unfriendly modes are:
 - Timer / Sleep timer.
 - Child / parental lock.
 - Blue mute.
 - Hotel / hospital mode.
 - Auto shut off (when no "IDENT" video signal is received for 15 minutes).
 - Skipping of non-favourite presets / channels.
 - Auto-storage of personal presets.
 - Auto user menu time-out.
 - Auto Volume Levelling (AVL).

How to Enter

To enter SDM, use one of the following methods:

- Press the following key sequence on the remote control transmitter: "062596" directly followed by the MENU button (do not allow the display to time out between entries while keying the sequence).
- Short "Service" jumpers on the TV board during cold start and apply mains (see Figure "Service jumpers"). Then press the mains button (remove the short after start-up).
Caution: Entering SDM by shorting "Service" jumpers will override the +8V-protection. Do this only for a short period. When doing this, the service-technician must know exactly what he is doing, as it could damage the television set.
- Or via ComPair.



F_15270_053.eps
180505

Figure 5-1 Service jumpers

After entering SDM, the following screen is visible, with SDM in the upper right corner of the screen to indicate that the television is in Service Default Mode.

```
00035 LC4XEP1 1.14/S4XGNV 1.17  SDM
ERR 0 0 0 0 0
OP 000 057 140 032 120 128 000
```

F_15430_039.eps
080605

Figure 5-2 SDM menu

How to Navigate

Use one of the following methods:

- When you press the MENU button on the remote control, the set will switch on the normal user menu in the SDM mode.
- On the TV, press and hold the VOLUME DOWN and press the CHANNEL DOWN for a few seconds, to switch from SDM to SAM and reverse.

How to Exit

Switch the set to STANDBY by pressing the mains button on the remote control transmitter or the television set. If you turn the television set off by removing the mains (i.e., unplugging the television) without using the mains button, the television set will remain in SDM when mains is re-applied, and the error buffer is not cleared.

5.2.2 Service Alignment Mode (SAM)**Purpose**

- To change option settings.
- To display / clear the error code buffer.
- To perform alignments.

Specifications

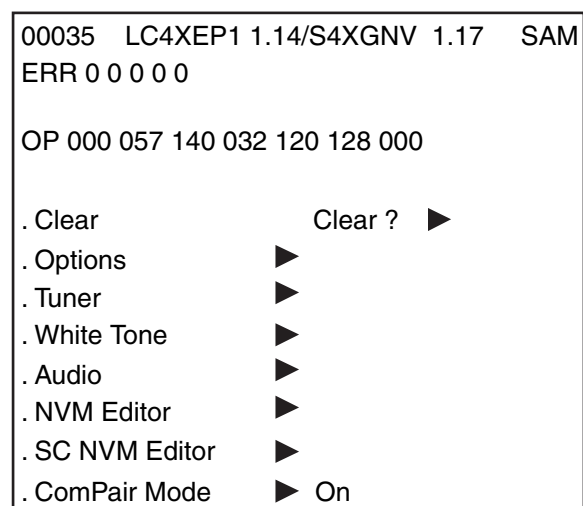
- Operation hours counter (maximum five digits displayed).
- Software version, Error codes, and Option settings display.
- Error buffer clearing.
- Option settings.
- AKB switching.
- Software alignments (Tuner, White Tone, Geometry & Audio).
- NVM Editor.
- ComPair Mode switching.

How to Enter

To enter SAM, use one of the following methods:

- Press the following key sequence on the remote control transmitter: "062596" directly followed by the OSD/STATUS/INFO(I+) button (do not allow the display to time out between entries while keying the sequence).
- Or via ComPair.

After entering SAM, the following screen is visible, with SAM in the upper right corner of the screen to indicate that the television is in Service Alignment Mode.



F_15430_040.eps
080605

Figure 5-3 SAM menu

How to Store SAM Settings

To store the settings changed in SAM mode, leave the top level

Menu Explanation

1. **LLLLL**. This represents the run timer. The run timer counts normal operation hours, but does not count standby hours.
2. **AAABCD-X.Y**. This is the software identification of the main microprocessor:
 - **A**= the project name (LC04.x).
 - **B**= the region: E= Europe, A= Asia Pacific, U= NAFTA, L= LATAM.
 - **C**= the software diversity:
 - **Europe**: T= 1 page TXT, F= Full TXT, V= Voice control.
 - **LATAM and NAFTA**: N= Stereo non-dBx, S= Stereo dBx.
 - **Asian Pacific**: T= TXT, N= non-TXT, C= NTSC.
 - **ALL regions**: M= mono, D= DVD, Q= Mk2.
 - **D**= the language cluster number.
 - **X**= the main software version number (updated with a major change that is incompatible with previous versions).
 - **Y**= the sub software version number (updated with a minor change that is compatible with previous versions).
3. **EEEE-F.GG**. This is the software identification of the Scaler:
 - **EEEE**= the scaler sw cluster
 - **F**= the main sw version no.
 - **GG**= the sub-version no.
4. **SAM**. Indication of the Service Alignment Mode.
5. **Error Buffer**. Shows all errors detected since the last time the buffer was erased. Five errors possible.
6. **Option Bytes**. Used to set the option bytes. See "Options" in the Alignments section for a detailed description. Seven codes are possible.
7. **Clear**. Erases the contents of the error buffer. Select the CLEAR menu item and press the MENU RIGHT key. The content of the error buffer is cleared.
8. **Options**. Used to set the option bits. See "Options" in the Alignments section for a detailed description.
9. **Tuner**. Used to align the tuner. See "Tuner" in the Alignments section for a detailed description.
10. **White Tone**. Used to align the white tone. See "White Tone" in the Alignments section for a detailed description.
11. **Audio**. No audio alignment is necessary for this television set.
12. **NVM Editor**. Can be used to change the NVM data in the television set. See table "NVM data" further on.
13. **SC NVM Editor**. Can be used to edit Scaler NVM.
14. **ComPair**. Can be used to switch on the television to In System Programming (ISP) mode, for software uploading via ComPair.

Caution: When this mode is selected without ComPair connected, the TV will be blocked. Remove the AC power to reset the TV.

How to Navigate

- In SAM, select menu items with the MENU UP/DOWN keys on the remote control transmitter. The selected item will be highlighted. When not all menu items fit on the screen, use the MENU UP/DOWN keys to display the next / previous menu items.
- With the MENU LEFT/RIGHT keys, it is possible to:
 - Activate the selected menu item.
 - Change the value of the selected menu item.
 - Activate the selected submenu.
- In SAM, when you press the MENU button twice, the set will switch to the normal user menus (with the SAM mode still active in the background). To return to the SAM menu press the MENU or STATUS/EXIT button.
- When you press the MENU key in while in a submenu, you will return to the previous menu.

SAM menu by using the POWER button on the remote control transmitter or the television set.

How to Exit

Switch the set to STANDBY by pressing the mains button on the remote control transmitter or the television set.

If you turn the television set "off" by removing the mains (i.e., unplugging the television) without using the mains button, the television set will remain in SAM when mains is re-applied, and the error buffer is not cleared.

5.2.3 Customer Service Mode (CSM)

Purpose

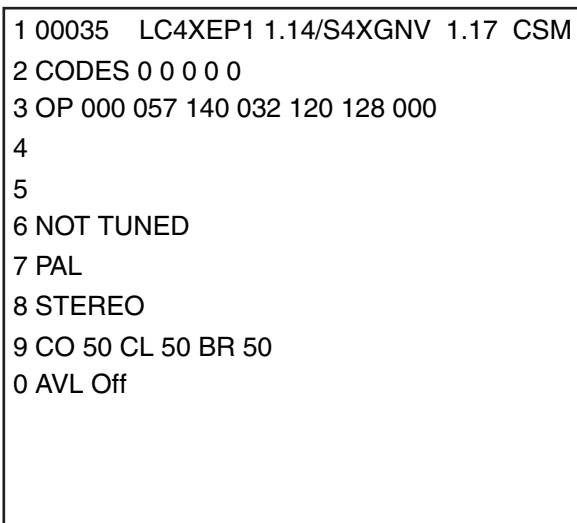
The Customer Service Mode shows error codes and information on the TV's operation settings. The call centre can instruct the customer (by telephone) to enter CSM in order to identify the status of the set. This helps the call centre to diagnose problems and failures in the TV set before making a service call.

The CSM is a read-only mode; therefore, modifications are not possible in this mode.

How to Enter

To enter CSM, press the following key sequence on the remote control transmitter: "123654" (do not allow the display to time out between entries while keying the sequence).

Upon entering the Customer Service Mode, the following screen will appear:



F_15430_040.eps
080605

Figure 5-4 CSM menu

Menu Explanation

1. Indication of the decimal value of the operation hours counter, Software identification of the main microprocessor (see "Service Default or Alignment Mode" for an explanation), and the service mode (CSM = Customer Service Mode).
2. Displays the last five errors detected in the error code buffer.
3. Displays the option bytes.
4. Displays the type number version of the set.
5. Reserved item for P3C call centres (AKBS stands for Advanced Knowledge Base System).
6. Indicates the television is receiving an "IDENT" signal on the selected source. If no "IDENT" signal is detected, the display will read "NOT TUNED"
7. Displays the detected Colour system (e.g. PAL/NTSC).
8. Displays the detected Audio (e.g. stereo/mono).
9. Displays the picture setting information.
10. Displays the sound setting information.

How to Exit

To exit CSM, use one of the following methods:

- Press the MENU, STATUS/EXIT, or POWER button on the remote control transmitter.
- Press the POWER button on the television set.

5.2.4 Digital Customer Service Mode (DCSM)

Purpose

The Digital Customer Service Mode shows error codes and information on the IBO Zapper module operation settings. The call centre can instruct the customer to activate DCSM by telephone and read off the information displayed. This helps the call centre to diagnose problems and failures in the IBO Zapper module before making a service call.

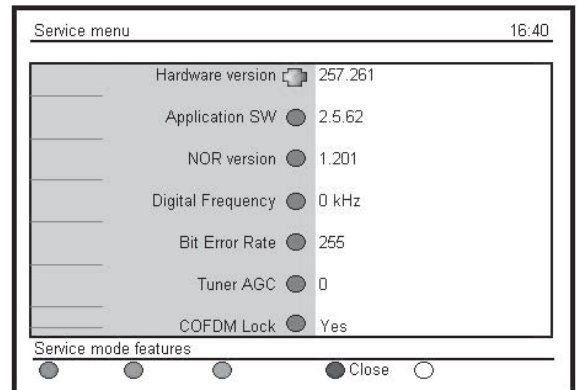
The DCSM is a read-only mode; therefore, modifications are not possible in this mode.

How to Activate

To activate the DCSM, put the television in its digital mode (via the A/D button on the remote control).

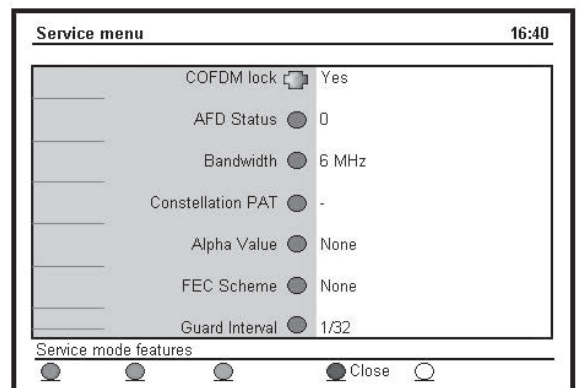
1. Press the "Digital" Menu button on the remote control to activate the digital user menu ("Setup").
2. Activate the "Information" sub menu (via the "down" and "right" cursor buttons).
3. In the "Information" sub menu, press the following buttons on the remote control to activate the DCSM: "GREEN RED YELLOW 9 7 5 9". Then, the "Service menu" will appear (see figures below).

Menu explanation



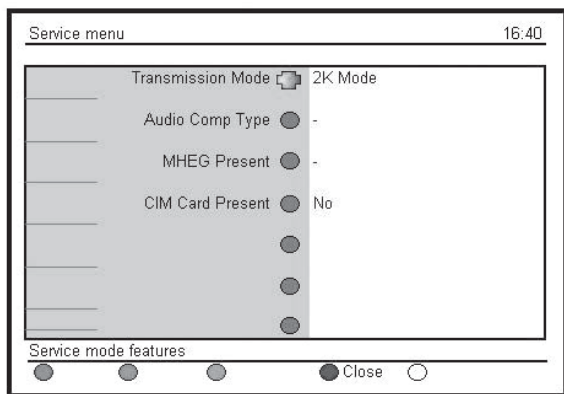
E_14970_040.eps
090904

Figure 5-5 DCSM menu - 1



E_14970_041.eps
100904

Figure 5-6 DCSM menu - 2



E_14970_042.eps
090904

Figure 5-7 DCSM menu - 3

1. **Hardware version:** This indicates the version of the IBO Zapper module hardware.
2. **Application SW:** The application software version.
3. **NOR Version:** The NOR Flash image software version
4. **Digital Frequency:** The digital frequency that the set is tuned to.
5. **Bit Error Rate:** The error rate measured before the error correction algorithm circuitry. (this value gives an impression of the received signal)
6. **Tuner AGC:** Tuner AGC value.
7. **COFDM Lock:** Indication if COFDM decoder is locked.
8. **AFD Status:** Status of the Active Picture Format Descriptor.
9. **Terrestrial Delivery System Parameters:**
 - **Bandwidth:** Bandwidth of the received signal.
 - **Constellation Pattern:** Displays the signal constellation.
 - **Alpha Value:** Displays the Alpha Value.
 - **FEC Scheme:** Displays the Forward Error Correcting Scheme
 - **Guard Interval:** Displays the value for the Guard Interval.
 - **Transmission Mode:** Displays the Transmission Mode.
10. **Audio Comp Type:** Type of detected audio stream.
11. **MHEG Present:** Indicates if MHEG is present or not.
12. **CIM Card Present:** Indicates if CIM card is present or not.

How to exit

Press the **BLUE** button on the Remote Control to exit DCSM.

5.3 Problems and Solving Tips Related to CSM

5.3.1 Picture Problems

Note: The problems described below are all related to the TV settings. The procedures used to change the value (or status) of the different settings are described.

Picture too Dark or too Bright

If:

- The picture improves when you press the AUTO PICTURE button on the remote control transmitter, or
- The picture improves when you enter the Customer Service Mode,

Then:

1. Press the AUTO PICTURE button on the remote control transmitter repeatedly (if necessary) to choose PERSONAL picture mode.

2. Press the MENU button on the remote control transmitter. This brings up the normal user menu.
3. In the normal user menu, use the MENU UP/DOWN keys to highlight the PICTURE sub menu.
4. Press the MENU LEFT/RIGHT keys to enter the PICTURE sub menu.
5. Use the MENU UP/DOWN keys (if necessary) to select BRIGHTNESS.
6. Press the MENU LEFT/RIGHT keys to increase or decrease the BRIGHTNESS value.
7. Use the MENU UP/DOWN keys to select PICTURE.
8. Press the MENU LEFT/RIGHT keys to increase or decrease the PICTURE value.
9. Press the MENU button on the remote control transmitter twice to exit the user menu.
10. The new PERSONAL preference values are automatically stored.

White Line around Picture Elements and Text

If:

The picture improves after you have pressed the AUTO PICTURE button on the remote control transmitter,

Then:

1. Press the AUTO PICTURE button on the remote control transmitter repeatedly (if necessary) to choose PERSONAL picture mode.
2. Press the MENU button on the remote control transmitter. This brings up the normal user menu.
3. In the normal user menu, use the MENU UP/DOWN keys to highlight the PICTURE sub menu.
4. Press the MENU LEFT/RIGHT keys to enter the PICTURE sub menu.
5. Use the MENU UP/DOWN keys to select SHARPNESS.
6. Press the MENU LEFT key to decrease the SHARPNESS value.
7. Press the MENU button on the remote control transmitter twice to exit the user menu.
8. The new PERSONAL preference value is automatically stored.

Snowy Picture

Check CSM line 6. If this line reads "Not Tuned", check the following:

- Antenna not connected. Connect the antenna.
- No antenna signal or bad antenna signal. Connect a proper antenna signal.
- The tuner is faulty (in this case line 2, the Error Buffer line, will contain error number 10). Check the tuner and replace/repair the tuner if necessary.

Black and White Picture

If:

- The picture improves after you have pressed the AUTO PICTURE button on the remote control transmitter,

Then:

1. Press the AUTO PICTURE button on the remote control transmitter repeatedly (if necessary) to choose PERSONAL picture mode.
2. Press the MENU button on the remote control transmitter. This brings up the normal user menu.
3. In the normal user menu, use the MENU UP/DOWN keys to highlight the PICTURE sub menu.
4. Press the MENU LEFT/RIGHT keys to enter the PICTURE sub menu.
5. Use the MENU UP/DOWN keys to select COLOR.
6. Press the MENU RIGHT key to increase the COLOR value.
7. Press the MENU button on the remote control transmitter twice to exit the user menu.

- The new PERSONAL preference value is automatically stored.

Menu Text not Sharp Enough

If:

- The picture improves after you have pressed the AUTO PICTURE button on the remote control transmitter,

Then:

- Press the AUTO PICTURE button on the remote control transmitter repeatedly (if necessary) to choose PERSONAL picture mode.
- Press the MENU button on the remote control transmitter. This brings up the normal user menu.
- In the normal user menu, use the MENU UP/DOWN keys to highlight the PICTURE sub menu.
- Press the MENU LEFT/RIGHT keys to enter the PICTURE sub menu.
- Use the MENU UP/DOWN keys to select PICTURE.
- Press the MENU LEFT key to decrease the PICTURE value.
- Press the MENU button on the remote control transmitter twice to exit the user menu.
- The new PERSONAL preference value is automatically stored.

5.4 Service Tools

5.4.1 ComPair

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 I²C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I²C 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 Force/SearchMan electronic manual of the defective chassis, schematics and PWBs are only a mouse click away.

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 RS-232) cable.

For this chassis, the ComPair interface box and the TV communicate via a bi-directional service cable via the service connector(s).

The ComPair faultfinding program is able to determine the problem of the defective television. ComPair can gather diagnostic information in two ways:

- Automatically (by communicating with the television): ComPair can automatically read out the contents of the entire error buffer. Diagnosis is done on I²C/UART level. ComPair can access the I²C/UART bus of the television. ComPair can send and receive I²C/UART commands to the microcontroller of the television. In this way, it is possible for ComPair to communicate (read and write) to devices on the I²C/UART buses of the TV-set.

- Manually (by asking questions to you): Automatic diagnosis is only possible if the microcontroller of the television is working correctly and only to a certain extent. When this is not the case, ComPair will guide you through the faultfinding 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 faultfinding 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.

How to Connect

This is described in the chassis faultfinding database in ComPair.

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

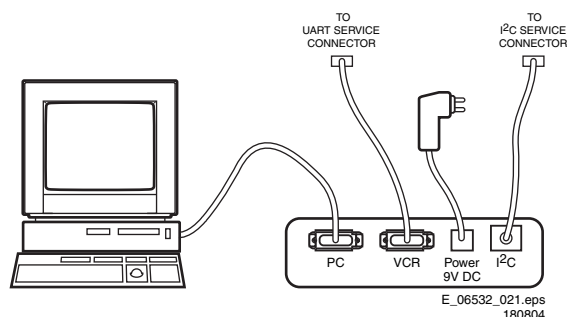


Figure 5-8 ComPair interface connection

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.

5.4.2 LVDS Tool

Introduction

This service tool (also called "ComPair Assistant 1") may help you to identify, in case the TV does not show any picture, whether the Small Signal Board (SSB) or the display of a Flat TV is defective.

Furthermore it is possible to program EPLDs with this tool (Byteblaster). Read the user manual for an explanation of this feature.

Since 2004, the LVDS output connectors in our Flat TV models are standardised (with some exceptions). With the two delivered LVDS interface cables (31p and 20p) you can cover most chassis (in special cases, an extra cable will be offered).

When operating, the tool will show a small (scaled) picture on a VGA monitor. Due to a limited memory capacity, it is not possible to increase the size when processing high-resolution LVDS signals ($\geq 1280 \times 768$). Generally this tool is intended to determine if the SSB is working or not. Thus to determine if LVDS, RGB, and sync signals are okay.

How to Connect

Connections are explained in the user manual, which is delivered with the tool.

Note: To use the LVDS tool, you must have ComPair release 2004-1 (or later) on your PC (engine version $\geq 2.2.05$). For every TV type number and screen size, one must choose the proper settings via ComPair. The ComPair file will be updated regularly with new introduced chassis information.

How to Order

- LVDS tool (incl. two LVDS cables: 31p and 20p): 3122 785 90671.
- Service Manual LVDS tool: 3122 785 00810.
- LVDS cable 20p (for Telra 14-inch): 3122 785 90810.
- LVDS cable 30p (for LC4.3): 3122 785 90820.
- LVDS cable 41p-to-31p for CA1 (dual -> single LVDS): 3122 785 90830.

5.5 Error Codes

The error code buffer contains all errors detected since the last time the buffer was erased. The buffer is written from left to right. When an error occurs that is not yet in the error code buffer, it is displayed at the left side and all other errors shift one position to the right.

5.5.1 How to Read the Error Buffer

You can read the error buffer in 3 ways:

- On screen via the SAM (if you have a picture).
Examples:
 - ERROR: 0 0 0 0 0 : No errors detected
 - ERROR: 6 0 0 0 0 : Error code 6 is the last and only detected error
 - ERROR: 9 6 0 0 0 : Error code 6 was detected first and error code 9 is the last detected (newest) error
- Via the blinking LED procedure (when you have no picture). See "The Blinking LED Procedure".
- Via ComPair.

5.5.2 How to Clear the Error Buffer

The error code buffer is cleared in the following cases:

- By using the CLEAR command in the SAM menu:
 - To enter SAM, press the following key sequence on the remote control transmitter: "062596" directly followed by the OSD/STATUS button (do not allow the display to time out between entries while keying the sequence).
 - Make sure the menu item CLEAR is highlighted. Use the MENU UP/DOWN buttons, if necessary.
 - Press the MENU RIGHT button to clear the error buffer. The text on the right side of the "CLEAR" line will change from "CLEAR?" to "CLEARED"
- If the contents of the error buffer have not changed for 50 hours, the error buffer resets automatically.

Note: If you exit SAM by disconnecting the mains from the television set, the error buffer is not reset.

5.5.3 Error Codes

In case of non-intermittent faults, write down the errors present in the error buffer and clear the error buffer before you begin the repair. This ensures that old error codes are no longer present.

If possible, check the entire contents of the error buffer. In some situations, an error code is only the result of another error and not the actual cause of the problem (for example, a fault in the protection detection circuitry can also lead to a protection).

Table 5-1 Error code overview

Error	Device	Error Description	Check Item	Diagram
0	Not applicable	No Error		
1	Not applicable	Mis-match of TV Hercules SW and Scaler SW	-	-
2	Not applicable	-	-	-
3	Not applicable	-	-	-
4	Genesis Scaler Flash-ROM	I ² C error while communicating with the Genesis Scaler and/or Flash-ROM is faulty/empty	7801 7B01	B7 + B8 B10
5	Scaler supply 7752	+5V protection	7752	B6
6	Not applicable	General I ² C error	1102, 7L04, 7M00	B1 + B18 + B19
7	ADC	I ² C error	7L04	B18
8	Scaler EEPROM	I ² C error while communicating with the Scaler EEPROM	7C01	B11
9	Hercules EEPROM	I ² C error while communicating with the Hercules EEPROM (NVM for TV). Remark: when the Hercules EEPROM is defective, the Hercules should operate with its default values.	7207	B2
10	Tuner	I ² C error while communicating with the PLL tuner	1102, F102, F104, F107	B1
11	Columbus	I ² C error while communicating with the 2D/3D combfilter Columbus	7M00	B19
12	Not applicable	-	-	-
13	HDMI Panellink Receiver/ Decoder	I ² C error while communicating with the iBoard HDMI Panellink Receiver/ Decoder (only in NAFTA and AP sets)	7D03	B12 (only in NAFTA and AP sets)
14	Scaler SDRAM	Read-write error with the Scaler SDRAM	7B01	B10
15	Not applicable	-	-	-
16	EPLD	I ² C error while communicating with EPLD	7N02	B20 + B21
17	Digital Module (only on Digital sets)	I ² C error while communicating with the Digital Module (only on Digital sets)	Digital Module (only on Digital sets)	
18	Not applicable	-	-	-

5.6 The Blinking LED Procedure

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

When the SDM is entered, the front LED will blink the contents of the error-buffer:

- The LED blinks with as many pulses as the error code number, followed by a time period of 1.5 seconds, in which the LED is off.
- Then this sequence is repeated.

Any RC5 command terminates this sequence.

Example of error buffer: **12 9 6 0 0**

After entering SDM, the following occurs:

- 1 long blink of 5 seconds to start the sequence,
- 12 short blinks followed by a pause of 1.5 seconds,
- 9 short blinks followed by a pause of 1.5 seconds,
- 6 short blinks followed by a pause of 1.5 seconds,
- 1 long blink of 1.5 seconds to finish the sequence,
- The sequence starts again with 12 short blinks.

5.7 Fault Finding and Repair Tips

Notes:

- It is assumed that the components are mounted correctly with correct values and no bad solder joints.
- Before any fault finding actions, check if the correct options are set.

5.7.1 NVM Editor

In some cases, it can be handy if one directly can change the NVM contents. This can be done with the "NVM Editor" in SAM mode. With this option, single bytes can be changed.

Caution:

- **Do not change the NVM settings without understanding the function of each setting, because incorrect NVM settings may seriously hamper the correct functioning of the TV set!**
- **Do not change the Scaler NVM settings, as this will hamper the DVI functionality of the TV set!**
- Always note down the existing NVM settings, before changing the settings. This will enable you to return to the original settings, if the new settings turn out to be incorrect.

Table 5-2 NVM editor overview

	Hex	Dec	Description
.ADR	0x000A	10	Existing value
.VAL	0x0000	0	New value
.Store	Store?		

Table 5-3 NVM Default values (option bit settings through NVM Editor in SAM Mode)

Byte Nr.	Bit	Feature/Mode	Description	42PF7520D/10	42PF5520D/10
Byte 0 174(dec)	0	QSS (LSB)	Mode of quasi split sound amplifier	1	1
	1	FMI	Connection of output of QSS amplifier	1	1
	2	HCO	EHT tracking mode	0	0
	3	HP2	Synchronization of OSD/Text display	1	1
	4	FSL	Forced slicing level for vertical sync	1	1
	5	TFR	DC transfer ratio of luminance signal	1	1
	6	OSVE	Black current measuring in overscan	0	0
	7	MVK (MSB)	(For Future Usage, as defined by software)	0	0
			Total Dec Values		59
		Total Hex Values		3B	3B
Byte 1 175(dec)	0	PSE	PSE	0	0
	1	OPC	OPC	0	0
	2	PRIS	PRIS	0	0
	3	CONTINUOUS FACTORY	Continuous factory mode	0	0
	4	WHITE PATTERN ON	Last color pattern status in factory mode	0	0
	5	SDM MODE	Service default mode on/off	0	0
	6	SAM MODE	Service Align mode on/off	0	0
	7	SVMA	Scavm On / Off	0	0
			Total Dec Values		0
		Total Hex Values		00	00
Byte 2 176(dec)	0	MUTE STATUS	Mute status	0	0
	1	TUNER AUTO MODE	Auto mode	1	1
	2	CABLE MODE	Cable/Antenna mode	0	0
	3	LAST POWER MODE	Last power status of the set	1	1
	4	CHILD LOCK MODE	Child lock enabled	0	0
	5	SURF MODE	Surf mode on/off	0	0
	6	FACTORY MODE	Factory mode on	0	0
	7	PSNS	For PAL color enhancement in ES4	1	1
			Total Dec Values		138
		Total Hex Values		8A	8A
Byte 3 177(dec)	0	RADIO/TV MODE	Radio mode or TV mode	0	0
	1	WAKE-UP MODE	WAKE-UP MODE	0	0
	2	HOTEL MODE	TV in Hotel mode	0	0
	3	HOTEL KBD LOCK	Keyboard locked	0	0
	4	HBL	HBL	0	0
	5	BLS	Blue stretch mode	1	1
	6	SL	SL	0	0
	7	CFA0	Comb filter On/Off	1	1
			Total Dec Values		160
		Total Hex Values		A0	A0
Byte 4 178(dec)	0	Signal Strength	Signal Strength Switch in MK2	0	0
	1	LPG	LPG	0	0
	2	DVD TRAY LOCK	Lock/Unlock DVD tray	0	0
	3	SCRSAVER MODE	Screen saver mode	1	1
	4	BKS	Black Stretch Mode	1	1
	5	BSD	Black Stretch Depth	1	1
	6	CRA0	Coring on SVM	1	1
	7	PIP QSS	PIP QSS	0	0
			Total Dec Values		120
		Total Hex Values		78	78

Byte Nr.	Bit	Feature/Mode	Description	42PF7520D/10	42PF5520D/10
Byte 5 179(dec)	0	FFI	Fast Filter	0	0
	1	NNR	No red reduction during blue stretch	1	1
	2	MUS	NTSC matrix	1	1
	3	GAM	Gamma control	1	1
	4	CBS	Control sequence of beam current limiting	0	0
	5	LLB	Low level of beam current limiter	0	0
	6	DSA	Dynamic skin tone angle area	1	1
	7	DSK	Dynamic skin tone angle on/ off	0	0
			Total Dec Values	78	78
		Total Hex Values	4E	4E	
Byte 6 180(dec)	0	LTI status	LTI last status	1	1
	1	Inc_Life_Time	Inc_Life_Time	0	0
	2	PC_Mode	PC_Mode	0	0
	3	HD_Mode	HD_Mode	0	0
	4	Tact_Switch	Tact_Switch	0	0
	5	Set_In_Special_Stby	Set_In_Special_Stby	0	0
	6	Hotel_OSDDisplay	Hotel_OSDDisplay	0	0
	7	Hotel_MonitorOut	Hotel_MonitorOut	0	0
			Total Dec Values	1	1
		Total Hex Values	01	01	
Byte 7 181(dec)	0	Hotel_IconMode	Hotel_IconMode	0	0
	1	DBE	DBE	1	1
	2	SD	SD	0	0
	3	Set_in_PC_Sleep_Mode	Set_in_PC_Sleep_Mode	0	0
	4	Reserved	Reserved	0	0
	5	Reserved	Reserved	0	0
	6	Reserved	Reserved	0	0
	7	Reserved	Reserved	0	0
			Total Dec Values	2	2
		Total Hex Values	02	02	

5.7.2 Load Default NVM Values

In case a blank NVM is placed or when the NVM content is corrupted, default values can be downloaded into the NVM. (For empty NVM replacement, short the SDM with a jumper and apply the mains voltage. Remember to remove the jumper after the reload is completed). After the default values are downloaded, it will be possible to start up and to start aligning the TV set. This is no longer initiated automatically; to initiate the download the following action has to be performed:

1. Switch "off" the TV set by disconnecting the AC Power plug.
2. Short circuit the SDM jumpers (keep short-circuited).
3. Press P+ or Ch+ on the local keyboard (and keep it pressed).
4. Switch on the TV set via the AC Power plug.
5. Keep pressing the P+/Ch+ button until the set has started up and the SDM is shown.

Alternative method:

1. Go to SAM.
2. Select NVM Editor (not SC NVM Editor).
3. Select ADR (address) to 1 (dec).
4. Change the VAL (value) to 170 (dec).
5. Store the value.
6. Disconnect the mains plug and wait for a few seconds.
7. Reconnect the mains plug and wait until the set goes into its standby mode (red LED lights up).
8. Restart the set.

5.7.3 Tuner and IF

No Picture in RF Mode, but there is a Noise Raster

1. Check whether picture is present in AV. If not, go to Video processing troubleshooting section.
2. If present, check if the Option settings are correct.
3. Check if all the supply voltages are present (3.3/5/8/12/33 V).
4. Check if the I²C lines are working correctly (3.3 V).
5. Manually store a known channel and check if there is IF output at Tuner pin 11.
6. Check the tuning DC voltage at pin 2 of the Tuner. The DC voltage should vary according to the frequency/channel being chosen.
7. If the tuning voltage is OK, check the tuner output, pin 11.
8. If it has no output, the Tuner may have a defect. Change the Tuner.

Sound in Picture Problem for L' System (rolling horizontal lines)

1. Check whether AGC L' in SAM mode is set to 0.
2. If yes, align the set to correct value.

Required System is not Selected Correctly

Check whether a Service jumper (#4204 & 4205, 0805 size) is present. If yes, remove it.

5.7.4 Video Processing

No Power

1. Check +12 V and 3V3 at position 1J02.
2. If no supply, check the connector 1J02.
3. If it is correct, check the power supply board.

Power Supply is Correct, but no Green LED

1. Check if the connectors 1K00 are properly inserted.
2. If they are inserted correctly, check if the 3V3 is present.

No Picture Display (blank screen with correct sound output)

1. Check whether the user menu is visible.
2. If the user menu is OK, activate teletext mode.
3. If teletext is OK, the problem is in the ADC (B18) & Columbus 3D combfilter (B19), if present (depending on model, see also paragraph "Teletext Path" in chapter 9).
4. If the user menu is not visible, check if the LCD panel backlight is ON.
5. If the backlight is OFF, the problem is in the power supply board or LCD panel. Also check pin 12 (LAMP_ON_OFF) of 1J02. It should be HIGH during normal operation.

Note: For faultfinding purposes, it is important to know the following: in Pixel Plus and Digital Crystal Clear models, which have an ADC (B18) and Columbus 3D combfilter (B19), the digital input of the scaler is used for the digital video path (Hercules output), whereas the analogue RGB input (analogue input of the scaler) is only used for teletext. This means that no mixed mode (video plus teletext simultaneously) is possible. If there is sound and teletext, but no video and user menu (blank screen), the digital path (Hercules - ADC - Columbus - Scaler) is faulty. If there is sound but no teletext, the back-end part (Scaler - LCD panel) is faulty. In Crystal Clear models, which do not have an ADC and Columbus, the RGB path (analogue input of scaler) is used for both video and teletext.

No TV, but PC is Present

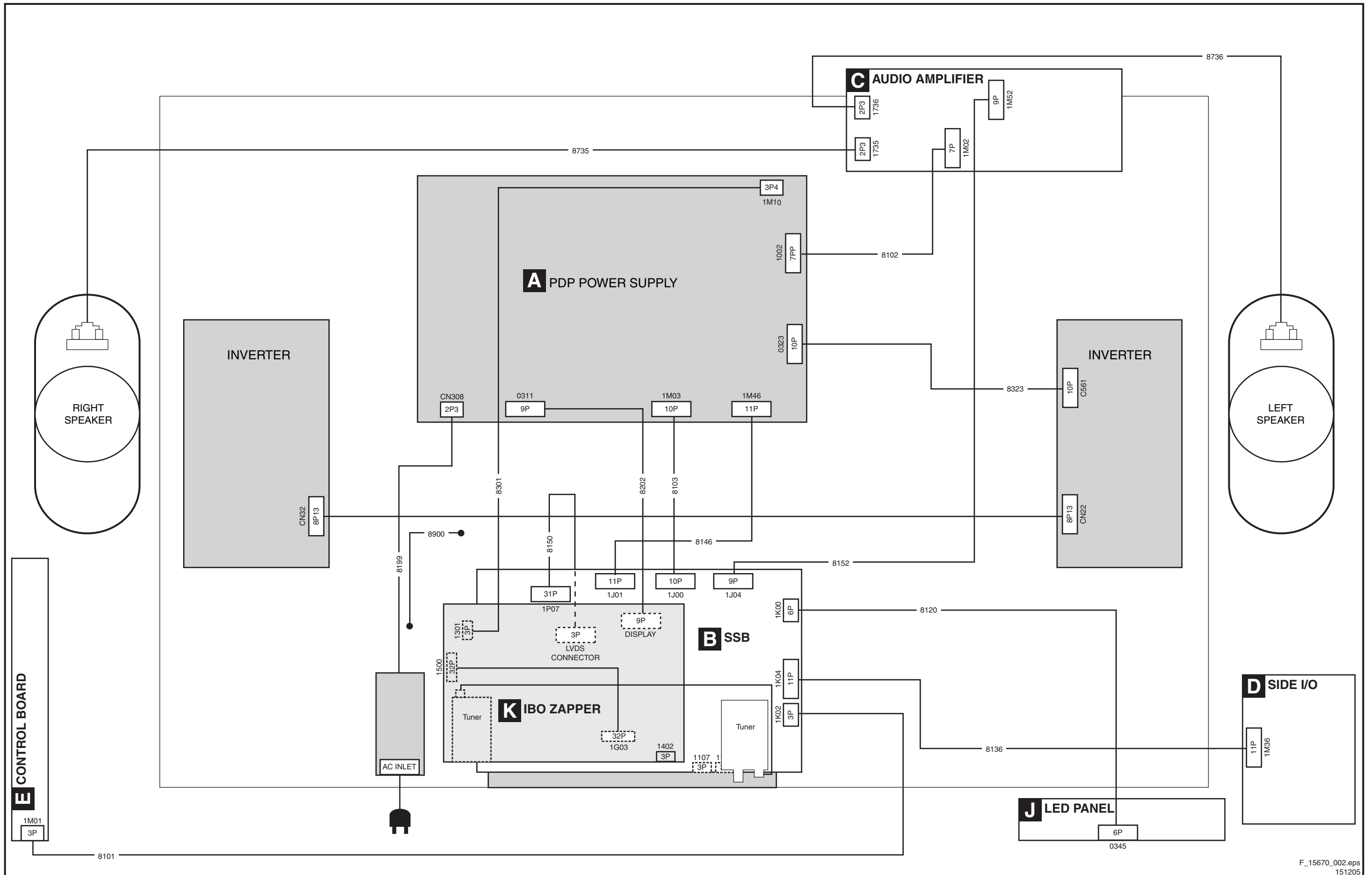
1. Check if Hsync_SDTV and Vsync_SDTV are present at pin 1 & pin13 of 7E03.
2. If they are present, check teletext output.
3. If there is no teletext output, the IC TDA150xx may be defect.

5.7.5 Power Supply

In case the power supply does not work, check (apart from the obvious fuse-check) if the oscillators in IC7001 and IC7U01 are working. If not, replace the ICs.

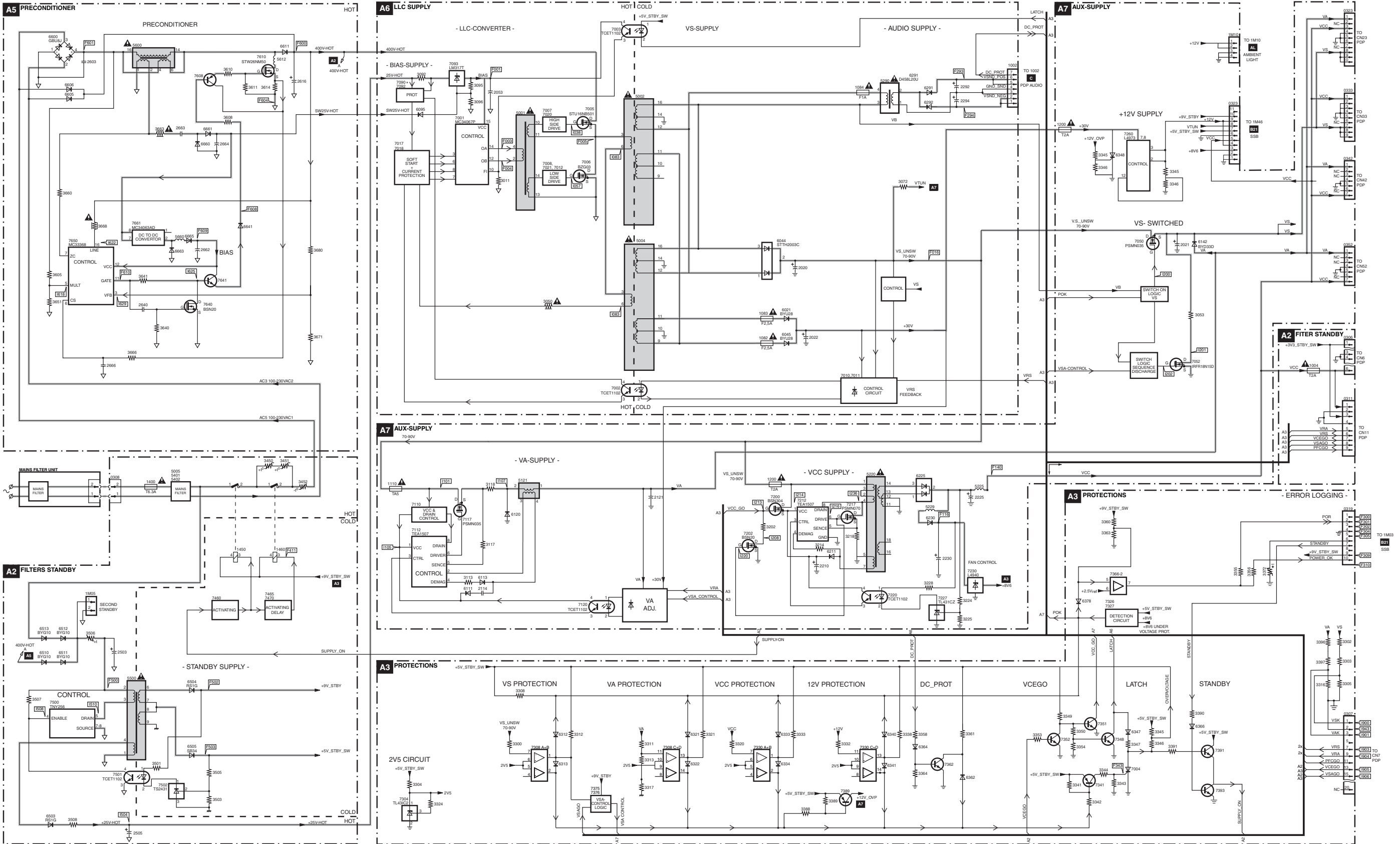
6. Block Diagrams, Test Point Overviews, and Waveforms

Wiring Diagram

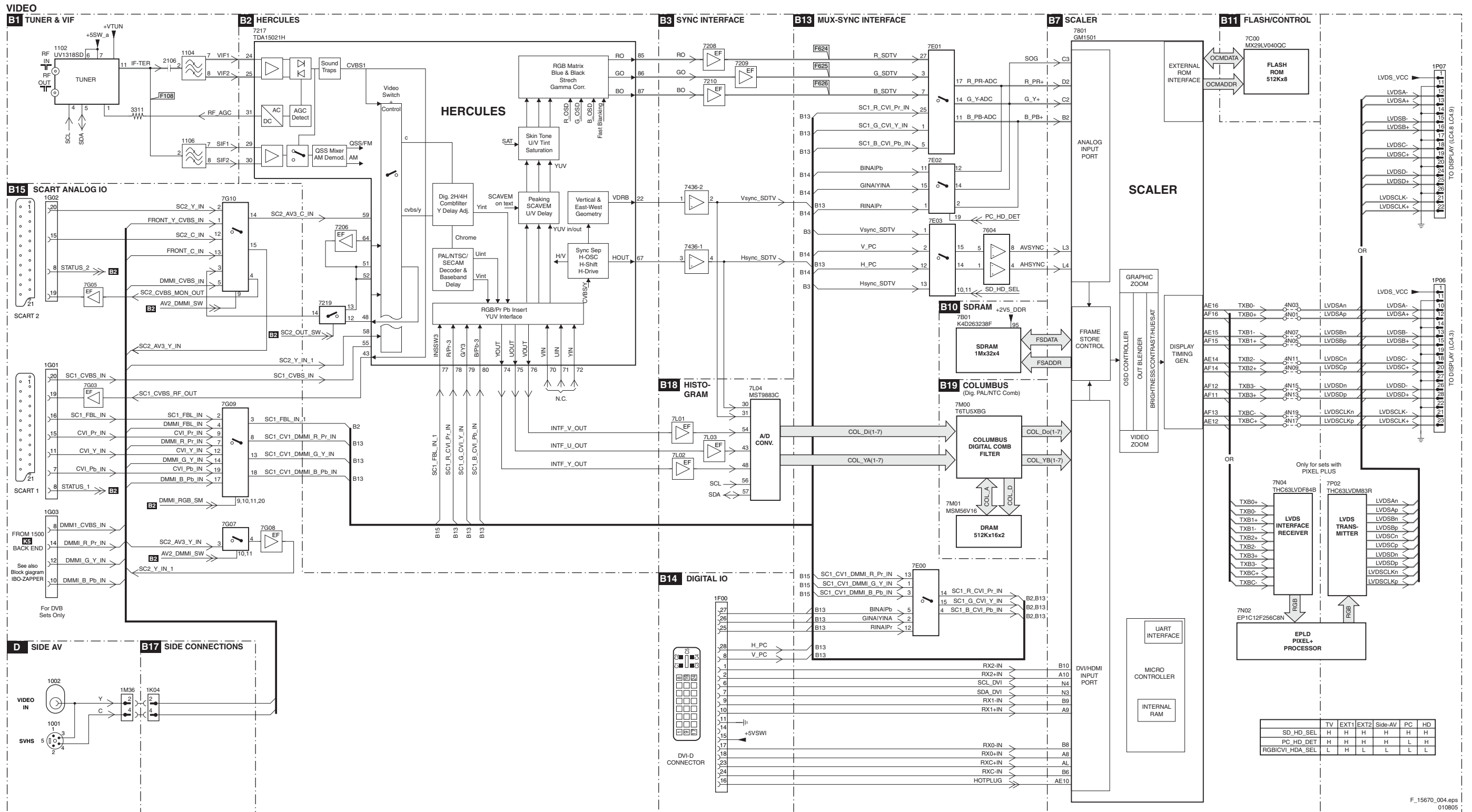


Block Diagram Supply

SUPPLY 42" FHP

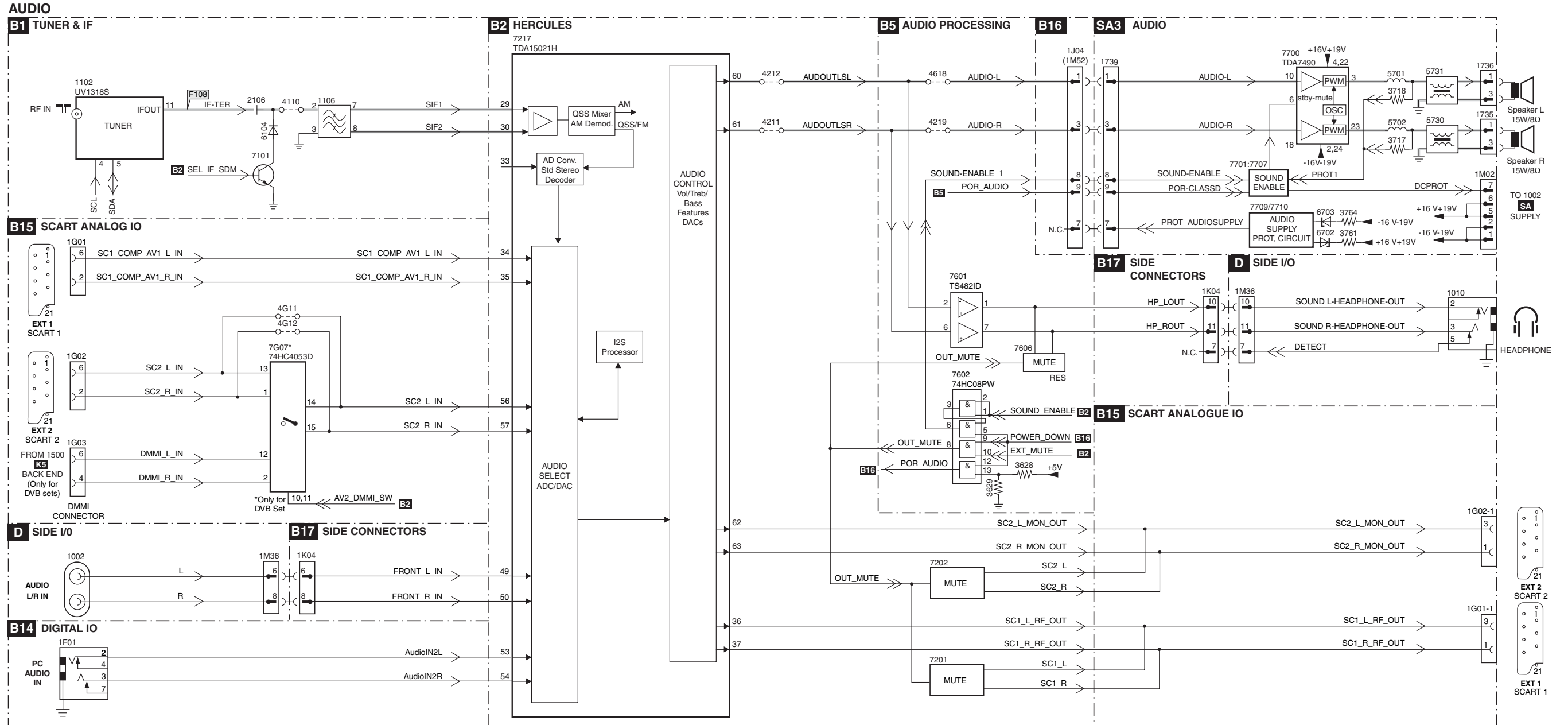


Block Diagram Video

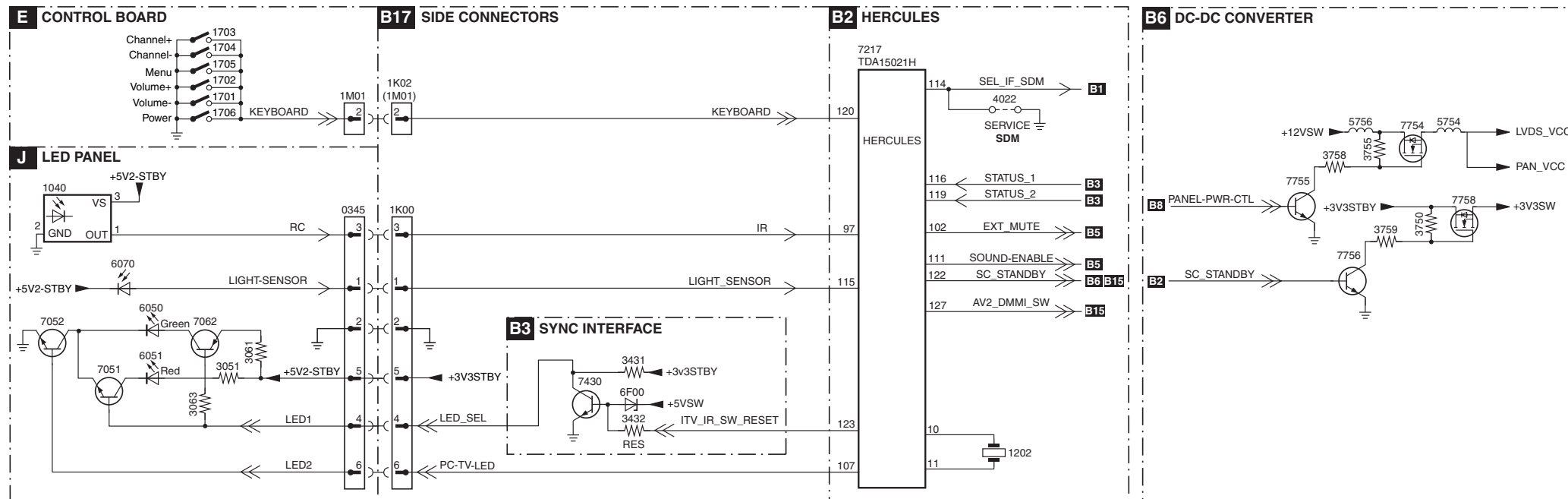


	TV	EXT1	EXT2	Side-AV	PC	HD
SD_HD_SEL	H	H	H	H	H	H
PC_HD_DET	H	H	H	H	L	H
RGB/CVI_HDA_SEL	L	H	L	L	L	L

Block Diagram Audio

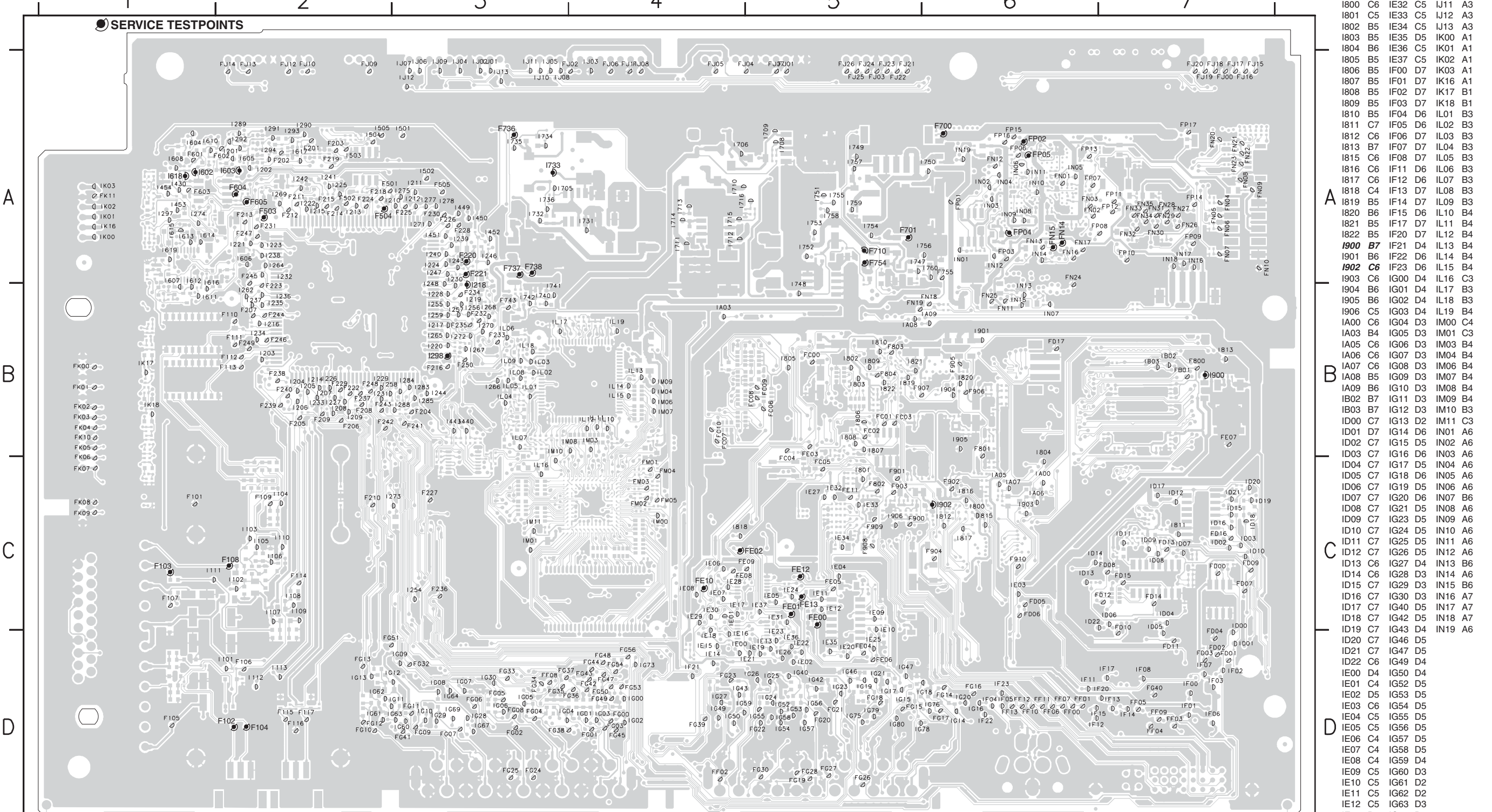


CONTROL



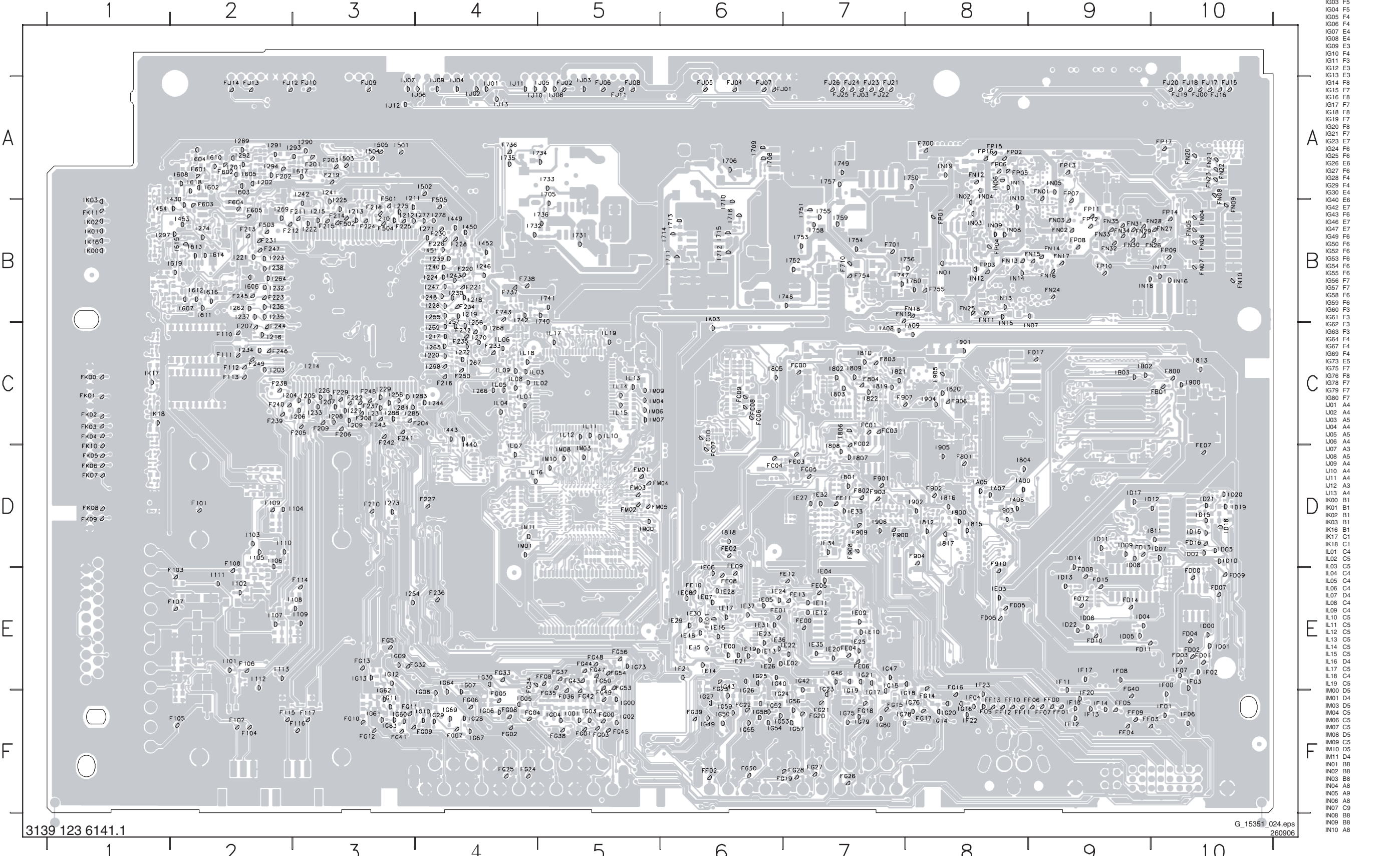
Testpoint Overview Small Signal Board 6093.1

F101 C1	F117 D2	F216 B3	F233 B3	F249 B2	F737 A3	F906 B6	FC10 B4	FD15 C7	FE13 C5	FG01 D4	FG17 D6	FG35 D3	FG53 D4	FJ13 A2	FK02 B1	FN02 A6	FN18 B6	FN34 A7	FP15 A6	I201 A2	I217 B3	I233 B2	I255 B3	I274 A1	I430 A1	I604 A1	I706 A4	I740 B3	IE15 D4	IG69 D3
F102 D2	F201 A2	F218 A2	F234 B3	F250 B3	F738 A3	F907 B5	FD00 C7	FD16 C7	FF00 D6	FG02 D3	FG18 D5	FG36 D4	FG54 D4	FJ14 A2	FK03 B1	FN03 A6	FN19 B5	FN35 A7	FP16 A6	I202 A2	I218 A3	I234 B2	I256 B3	I275 A3	I440 B3	I605 A2	I707 A5	I741 B3	IE16 C4	IG73 D4
F103 C1	F202 A2	F219 A2	F235 B3	F501 A2	F743 B3	F908 C5	FD01 D7	FD17 B6	FF01 D6	FG03 D4	FG19 D5	FG37 D3	FG56 D4	FJ15 A7	FK04 B1	FN04 A7	FN20 A7	FN36 A7	FP17 A7	I203 B2	I219 B3	I235 B2	I257 B3	I277 A3	I443 B3	I606 A2	I709 A5	I742 B3	IE17 C4	IG75 D5
F104 D2	F203 A2	F220 A3	F236 C3	F502 A2	F754 A5	F909 C5	FD02 D7	FE00 C5	FF02 D4	FG04 D3	FG20 D5	FG38 D3	FJ00 A7	FJ16 A7	FK05 B1	FN05 A7	FN21 A7	FP02 A6	I101 D2	I204 B2	I220 B3	I236 B2	I258 B2	I278 A3	I449 A3	I607 A1	I710 A4	I743 B3	IE18 C4	IG76 D6
F105 D1	F204 B3	F221 A3	F237 B2	F503 A2	F755 A6	F910 C6	FD03 D7	FE01 C5	FF03 D7	FG05 D3	FG21 D5	FG39 D4	FJ01 A5	FJ17 A7	FK06 B1	FN06 A7	FN22 A7	FP03 A6	I102 C2	I205 B2	I221 A2	I237 B2	I259 B3	I283 B3	I450 A3	I608 A1	I711 A4	I744 A5	IE19 D5	IG78 D5
F106 D2	F205 B2	F222 B2	F238 B2	F504 A2	F800 B7	FD04 C7	FE02 C4	FF04 D7	FG06 D3	FG22 D5	FG40 D7	FJ02 A4	FJ18 A7	FK07 C1	FN07 A7	FN23 A7	FP04 A6	I103 C2	I206 B2	I222 A2	I238 A2	I262 B2	I284 B3	I451 A3	I610 A1	I712 A4	I745 A5	IE20 D5	IG79 D5	
F107 C1	F206 B2	F223 B2	F239 B2	F505 A3	F801 B6	FC00 B5	FD05 C6	FE03 B5	FF05 D7	FG07 D3	FG23 D4	FG41 D3	FJ03 A5	FJ19 A7	FK08 C1	FN08 A7	FN24 A6	FP05 A6	I104 C2	I207 B2	I223 A2	I239 A3	I264 A2	I285 B3	I452 A3	I611 B1	I713 A4	I750 A6	IE21 D5	IG80 D5
F108 C2	F207 B2	F224 A2	F240 B2	F601 A1	F802 C5	FC01 B5	FD06 C6	FE04 D5	FF06 D6	FG08 D3	FG24 D3	FG42 D4	FJ04 A5	FJ20 A7	FK09 C1	FN09 A7	FN25 B6	FP06 A6	I105 C2	I208 B2	I224 A3	I240 A3	I265 B3	I288 B3	I453 A1	I612 A1	I714 A4	I751 A5	IE22 D5	IJ01 A3
F109 C2	F208 B2	F225 A3	F241 B3	F602 A2	F803 B5	FC02 B5	FD07 C7	FE05 C5	FF07 D6	FG09 D3	FG25 D3	FG43 D4	FJ05 A4	FJ21 A5	FK10 B1	FN10 A7	FN26 A7	FP07 A6	I106 C2	I209 B2	I225 A2	I241 A2	I266 B3	I289 A2	I454 A1	I613 A1	I715 A4	I752 A5	IE23 C5	IJ02 A3
F110 B2	F209 B2	F226 A3	F242 B2	F603 A1	F804 B5	FC03 B5	FD08 C7	FE06 D5	FF08 D3	FG10 D2	FG26 D5	FG44 D4	FJ06 A4	FJ22 A5	FK11 A1	FN11 B6	FN27 A7	FP08 A7	I107 C2	I210 A3	I226 B2	I242 A2	I267 B3	I290 A2	I501 A3	I614 A1	I716 A4	I753 A5	IE24 C5	IJ03 A4
F111 B2	F210 C2	F227 C3	F243 B2	F604 A2	F900 C5	FC04 B5	FD09 C7	FE07 B7	FF09 D7	FG11 D3	FG27 D5	FG45 D4	FJ07 A5	FJ23 A5	FK12 A5	FN12 A6	FN28 A7	FP09 A7	I108 C2	I211 A3	I227 B2	I243 A3	I268 B3	I291 A2	I502 A3	I615 A1	I717 A4	I754 A5	IE25 D5	IJ04 A3
F112 B2	F211 A2	F228 A3	F244 B2	F605 A2	F901 C5	FC05 C5	FD10 C7	FE08 C4	FF10 D6	FG12 D2	FG28 D5	FG47 D4	FJ08 A4	FJ24 A5	FM02 C4	FN13 A6	FN29 A7	FP10 A7	I109 C2	I212 A3	I228 B3	I244 B3	I269 A2	I292 A2	I503 A2	I616 A1	I732 A3	I755 A5	IE26 D5	IJ05 A3
F113 B2	F212 A2	F229 B2	F245 A2	F700 A6	F902 C6	FC06 B5	FD11 D7	FE09 C5	FF11 D6	FG13 D2	FG30 D5	FG48 D4	FJ09 A2	FJ25 A5	FM03 C4	FN14 A6	FN30 A7	FP11 A7	I110 C2	I213 A2	I229 B2	I246 A3	I270 B3	I293 A2	I504 A2	I617 A2	I733 A3	I756 A6	IE27 C5	IJ06 A3
F114 C2	F213 A2	F230 A3	F246 B2	F701 A5	F903 C5	FC07 B4	FD12 C7	FE10 C4	FF12 D6	FG14 D6	FG32 D3	FG49 D4	FJ10 A2	FJ26 A5	FM04 C4	FN15 A6	FN31 A7	FP12 A7	I111 C1	I214 B2	I230 A3	I247 A3	I271 A3	I294 A2	I505 A2	I618 A1	I734 A3	I757 A5	IE28 C4	IJ07 A3
F115 D2	F214 A2	F231 A2	F247 A2	F710 A5	F904 C6	FC08 B5	FD13 C7	FE11 C5	FF13 D6	FG15 D5	FG33 D3	FG50 D4	FJ11 A4	FK00 B1	FM05 C4	FN16 A6	FN32 A7	FP13 A6	I112 D2	I215 A2	I231 B2	I248 A3	I272 B3	I297 A1	I602 A1	I619 A1	I735 A3	I758 A5	IE29 C4	IJ08 A3
F116 D2	F215 A2	F232 B3	F248 B2	F736 A3	F905 B6	FC09 B5	FD14 C7	FE12 C5	FG00 D4	FG16 D6	FG34 D3	FG51 C2	FJ12 A2	FK01 B1	FN01 A6	FN17 A6	FN33 A7	FP14 A7	I113 D2	I216 B2	I232 A2	I254 C3	I273 C3	I298 B3	I603 A2	I705 A3	I736 A3	I759 A5	IE30 C4	IJ09 A3



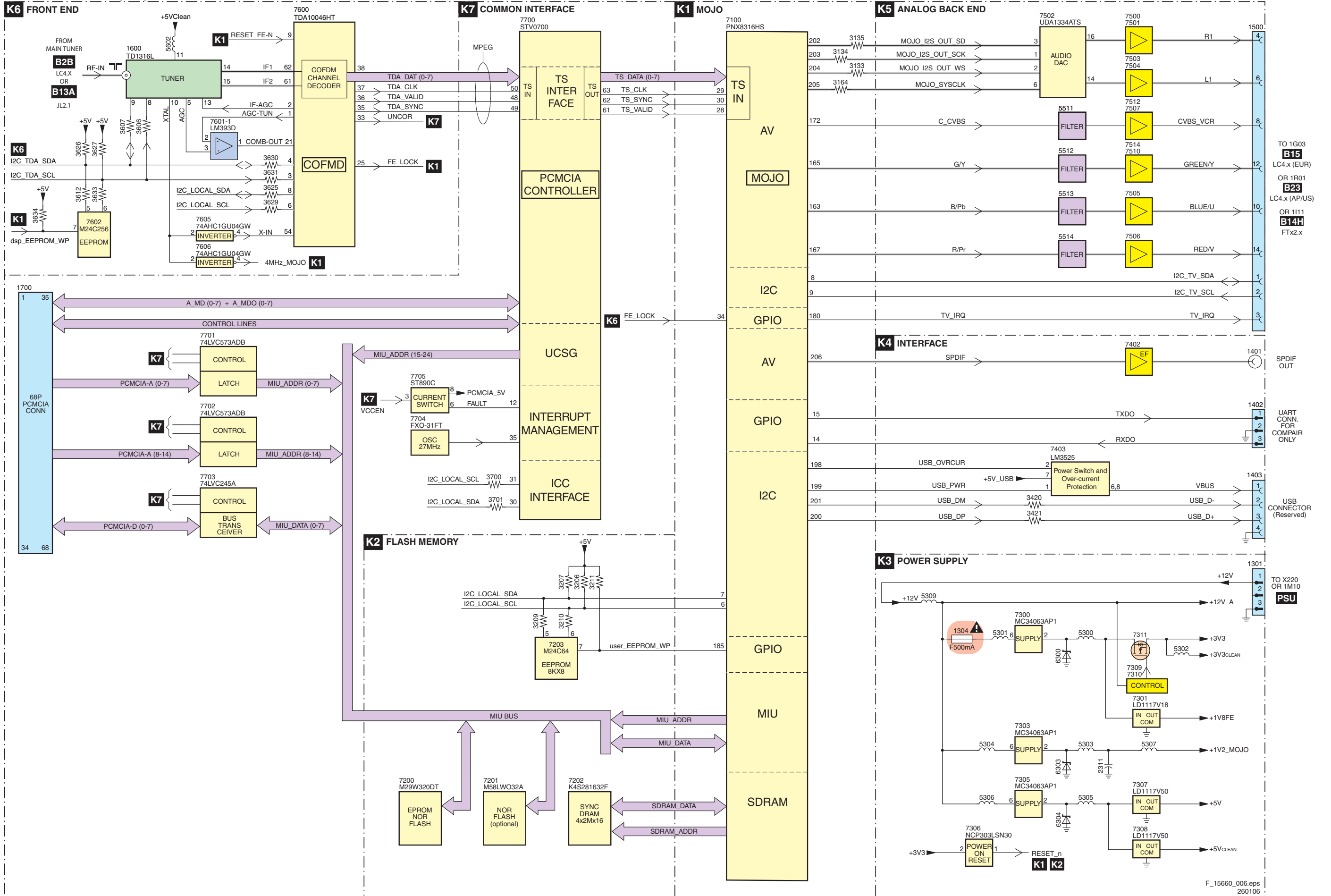
Testpoint Overview Small Signal Board 6141.1

F101 D2	F116 F3	F214 B3	F230 B4	F245 B2	F605 B2	F900 D7	FC03 C7	FD07 E10	FE04 E7	FF05 F9	FG06 F4	FG21 F7	FG38 F5	FG56 E5	FJ14 A2	FK02 C1	FN01 B9	FN16 B9	FN31 B9	FN11 B9	I109 E3	I211 A3	I226 C3	I241 A3	I265 C4	I285 C4	I451 B4	I608 A2	I710 B6	I742 B4	I800 D8	I816 D8	IA03 B6	ID07 D10	ID22 E9	IE14 E6	IE29 E6	IF06 F10	IN11 A8
F102 F2	F117 F3	F215 B3	F231 B2	F246 C2	F700 A8	F901 D7	FC04 D6	FD08 E9	FE05 E7	FF06 F9	FG07 F4	FG22 F6	FG39 F6	FG57 E5	FJ15 A10	FK03 C1	FN02 B9	FN17 B9	FN32 B9	FN12 B9	I110 D2	I212 B3	I227 C3	I242 A3	I266 C4	I288 C3	I452 B4	I610 A2	I711 B6	I743 B7	I801 D7	I817 D8	IA05 D8	ID09 D9	ID23 E9	IE15 E6	IE30 E6	IF07 E10	IN12 B8
F103 E2	F201 A3	F216 C4	F232 C4	F247 B2	F701 B7	F902 D8	FC05 D7	FD09 E9	FE06 E7	FF07 F9	FG08 F4	FG23 E6	FG40 E9	FG58 E5	FJ16 A10	FK04 C1	FN03 B9	FN18 B8	FN33 B9	FN13 A9	I111 E2	I213 B3	I228 B4	I243 B4	I267 C4	I289 A2	I453 B2	I611 B2	I712 B6	I744 B7	I802 C7	I818 D6	IA06 D8	ID09 D9	ID24 E9	IE16 E6	IE31 E6	IF08 E9	IN13 B8
F104 F2	F202 A2	F218 B3	F233 C4	F248 C3	F710 B7	F903 D7	FC06 C6	FD10 E9	FE07 D10	FF08 E5	FG09 F4	FG24 F4	FG41 F3	FG59 E5	FJ17 A10	FK05 D1	FN04 B10	FN19 B7	FN34 B9	FN14 B10	I112 E2	I214 C3	I229 B4	I244 C4	I268 B4	I290 A3	I454 B1	I612 B2	I713 B6	I745 A7	I803 C7	I819 C7	IA07 D8	ID10 D10	ID25 E7	IE17 E6	IE32 D7	IF09 E9	IN14 B8
F105 F2	F203 A3	F219 A3	F234 B4	F249 C2	F736 A4	F904 D8	FC07 D6	FD11 E9	FE08 E6	FF09 F9	FG10 F3	FG25 F4	FG42 F5	FG60 E5	FJ18 A10	FK06 D1	FN05 B10	FN20 A10	FN35 B9	FN15 A9	I113 E2	I215 B3	I230 B4	I245 B4	I269 B2	I455 A3	I613 B2	I714 B6	I746 A8	I804 D8	I820 C8	IA08 C7	ID11 D9	ID26 E8	IE18 E6	IE33 D7	IF10 E9	IN15 C8	
F106 E2	F204 C4	F220 B4	F235 C4	F250 C4	F737 B4	F905 C8	FC08 C6	FD12 E9	FE09 D6	FF10 F8	FG11 F3	FG26 F7	FG43 E5	FG61 E5	FJ19 A10	FK07 D1	FN06 B10	FN21 A10	FN36 B9	FN16 A8	I201 A2	I216 C2	I231 C3	I247 B4	I270 C4	I292 A2	I456 A4	I614 B2	I715 B6	I747 B7	I805 C6	I821 C7	IA09 C8	ID12 D10	ID27 E7	IE19 E6	IE34 D7	IF11 F9	IN16 B10
F107 E2	F205 C3	F221 B4	F236 E4	F501 A3	F738 B4	F906 C8	FC09 C6	FD13 D9	FE10 E6	FF11 F8	FG12 F3	FG27 F7	FG44 E5	FG62 E5	FJ20 A10	FK08 D1	FN07 B10	FN22 A10	FN37 B9	FN17 A10	I202 A2	I217 C4	I232 B2	I248 B4	I271 B4	I293 A3	I457 A3	I615 B2	I716 B6	I748 B7	I806 C7	I822 C7	IB02 C9	ID13 E9	ID28 E7	IE20 E7	IE35 E7	IF12 F9	IN17 B10
F108 D2	F206 C3	F222 C3	F237 C3	F502 B3	F743 B4	F907 C7	FC10 C6	FD14 E9	FE11 D7	FF12 F8	FG13 E3	FG28 F7	FG45 F5	FG63 E5	FJ21 A7	FK09 D1	FN08 A10	FN23 A10	FN38 B9	FN18 B8	I203 C2	I218 B4	I233 C3	I254 E3	I272 C4	I294 A2	I458 A3	I616 B2	I731 B5	I753 B7	I807 D7	I823 C7	IB03 C9	ID14 D9	ID29 E6	IE21 E6	IE36 E6	IF13 F9	IN18 B9
F109 D2	F207 C2	F223 B2	F238 C2	F503 B2	F754 B7	F908 D7	FC11 C6	FD15 E9	FE12 E7	FF13 F8	FG14 F8	FG29 F6	FG46 E5	FG64 E5	FJ22 A7	FK10 D1	FN09 B10	FN24 B9	FN39 B9	FN19 B8	I204 E2	I219 B4	I234 C2	I255 B4	I273 D3	I297 B2	I459 A3	I617 A3	I732 B4	I754 B7	I808 C7	I824 C7	IB04 C9	ID15 D10	ID30 E6	IE22 E7	IE37 E6	IF14 F9	IN19 A8
F110 C2	F208 C3	F224 B3	F239 C2	F504 B3	F755 B8	F909 D7	FC12 C6	FD16 D10	FE13 E7	FF14 F8	FG15 F7	FG30 F6	FG47 E5	FG65 E5	FJ23 A7	FK11 B1	FN10 B10	FN25 B8	FN40 B9	FN20 B9	I205 C2	I220 C4	I235 B2	I256 C4	I274 B2	I298 C4	I460 A2	I618 A2	I733 A5	I755 B7	I809 C7	I825 C7	IB05 C9	ID16 D10	ID31 E6	IE23 E6	IE38 E6	IF15 F9	IN19 A8
F111 C2	F209 C3	F225 B3	F240 C2	F505 B4	F800 C10	F910 D8	FC13 C6	FD17 C9	FE14 E7	FF15 F8	FG16 E8	FG31 E4	FG48 E5	FG66 E5	FJ24 A7	FK12 B1	FN11 B8	FN26 B10	FN41 B9	FN21 B9	I206 C3	I221 B2	I236 B2	I257 B4	I275 B3	I430 A2	I619 B2	I734 A5	I756 B8	I810 C7	I826 C7	IB06 D8	ID17 D9	ID32 E6	IE24 E6	IE39 E6	IF16 F10	IN19 A8	
F112 C2	F210 D3	F226 B4	F241 C3	F501 A2	F801 D8	F911 D8	FC14 C6	FD18 C9	FE15 E7	FF16 F8	FG17 F8	FG32 E4	FG49 F5	FG67 E5	FJ25 A7	FK13 B1	FN12 B8	FN27 B10	FN42 B9	FN22 B9	I207 C3	I222 B3	I237 B2	I258 C3	I277 B4	I440 C4	I604 A2	I735 A4	I757 A7	I811 D10	I827 C7	IB07 D8	ID18 D10	ID33 E6	IE25 E7	IE40 E6	IF17 F10	IN19 A8	
F113 C2	F211 B3	F227 D4	F242 C3	F502 A2	F802 D7	F912 D8	FC15 C6	FD19 C9	FE16 E6	FF17 F8	FG18 F7	FG33 E4	FG50 E5	FG68 E5	FJ26 A7	FK14 B1	FN13 B8	FN28 B10	FN43 B9	FN23 B9	I208 C3	I223 B2	I238 B2	I259 C4	I278 B4	I443 C4	I605 A2	I736 B5	I758 B7	I812 D8	I828 C7	IB08 D8	ID19 D10	ID34 E6	IE26 E6	IE41 E6	IF18 F10	IN19 A8	
F114 E3	F212 B2	F228 B4	F243 C3	F503 B2	F803 C7	F913 D8	FC16 C6	FD20 C9	FE17 E6	FF18 F8	FG19 F7	FG34 E4	FG51 E3	FG69 E5	FJ27 A7	FK15 B1	FN14 B9	FN29 B9	FN44 B9	FN24 B9	I209 C3	I224 B4	I239 B4	I262 B2	I283 C3	I449 B4	I606 B2	I737 A5	I759 B7	I813 C10	I829 C7	IB09 D8	ID20 D10	ID35 E6	IE27 D7	IE42 E6	IF19 F10	IN19 A8	
F115 F2	F213 B2	F229 C3	F244 C2	F504 B2	F804 C7	F914 D8	FC17 C6	FD21 C9	FE18 E6	FF19 F8	FG20 F7	FG35 E5	FG52 E5	FG70 E5	FJ28 A7	FK16 C1	FN15 B9	FN30 B9	FN45 B9	FN25 B9	I210 B3	I225 B3	I240 B4	I264 B2	I284 C3	I450 B4	I607 B2	I738 A5	I760 B8	I815 D8	I830 C7	IB10 D8	ID21 D10	ID36 E6	IE28 E6	IE43 E6	IF20 F10	IN19 A8	



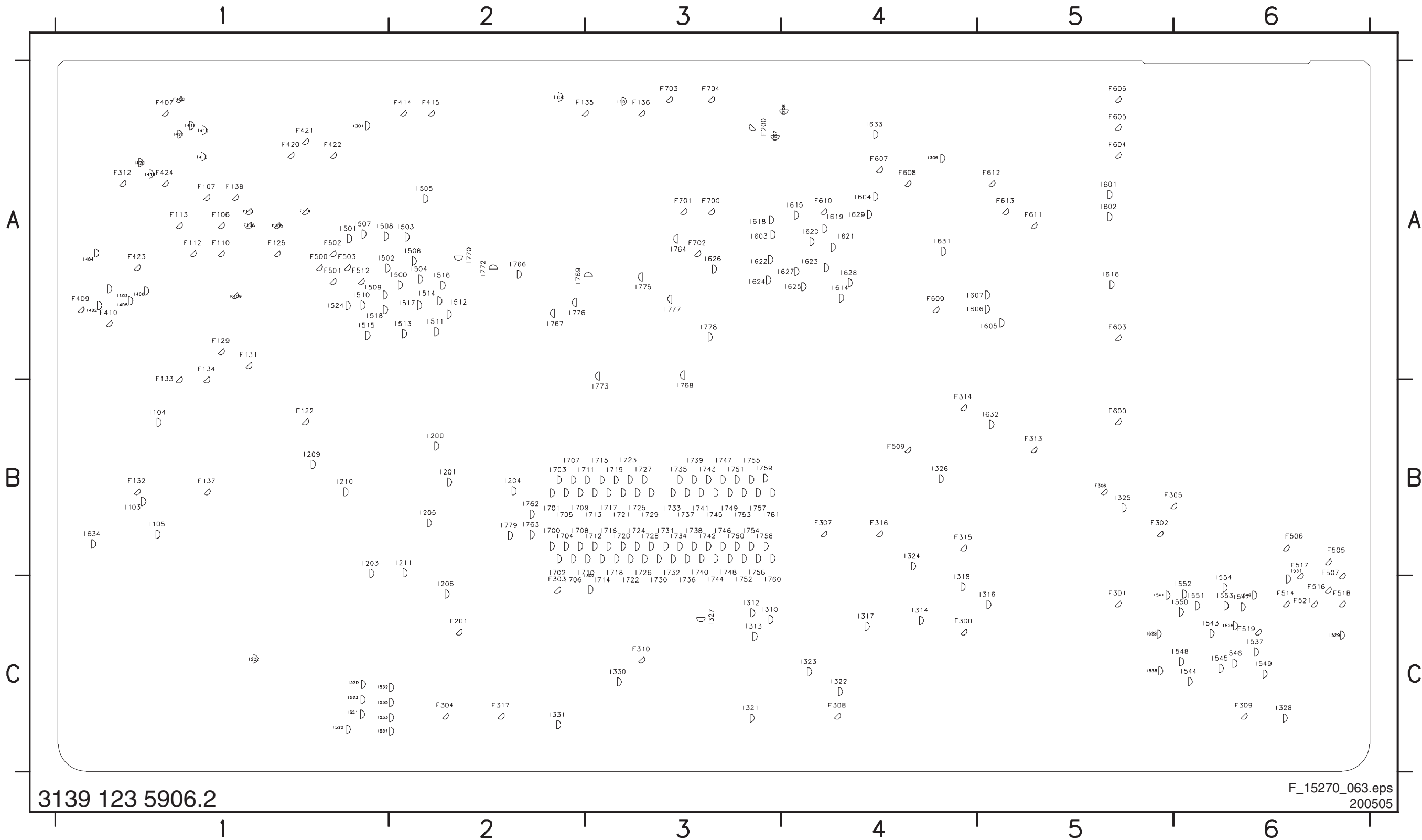
Block Diagram IBO Zapper

IBO - ZAPPER PANEL (DVB)

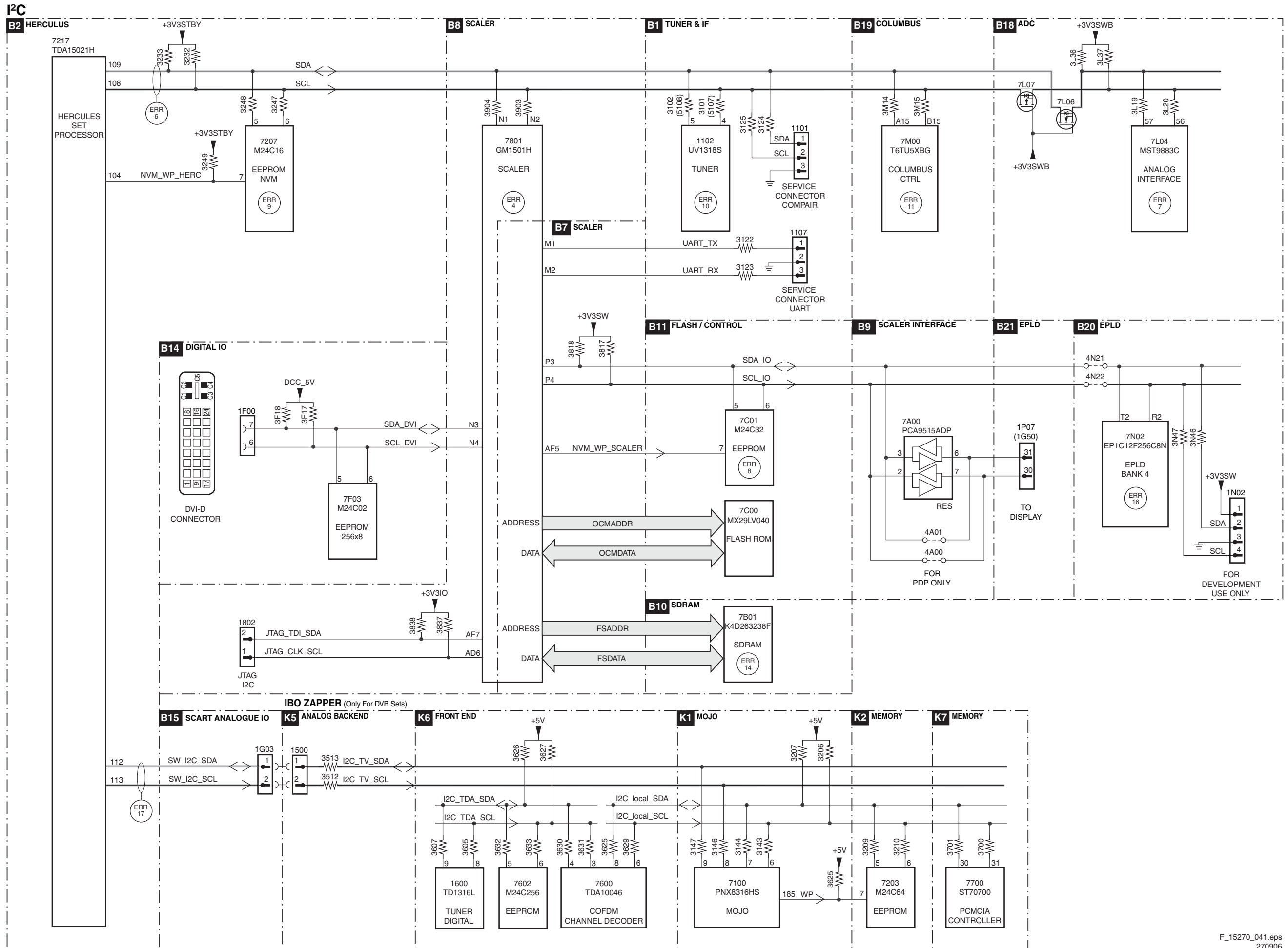


Testpoint Overview IBO Zapper (Bottom Side)

F105	A1	F134	A1	F309	C6	F422	A1	F702	A3	1208	A4	323	C4	419	A1	555	C1	655	C6	703	A4	719	B3	735	B3	751	B3	768	B3
106	A1	133	A3	310	C3	423	A1	703	A3	209	B4	324	B4	420	A1	556	C1	656	C6	704	A4	720	B2	736	B3	752	B3	769	B3
107	A1	134	A3	311	C3	424	A1	704	A3	210	B4	325	B4	421	A1	557	C1	657	C6	705	A4	721	B2	737	B3	753	B3	770	B3
108	A1	135	A3	312	C3	425	A1	100	A3	211	B4	326	B4	422	A1	558	C1	658	C6	706	A4	722	B2	738	B3	754	B3	771	B3
109	A1	136	A3	313	C3	500	A1	101	A3	301	B4	327	B4	500	A1	559	C1	659	C6	707	A4	723	B2	739	B3	755	B3	772	B3
110	A1	137	A3	314	C3	501	A1	103	A3	302	B4	328	B4	501	A1	560	C1	660	C6	708	A4	724	B2	740	B3	756	B3	773	B3
111	A1	138	A3	315	C3	502	A1	104	A3	303	B4	329	B4	502	A1	561	C1	661	C6	709	A4	725	B2	741	B3	757	B3	774	B3
112	A1	139	A3	316	C3	503	A1	105	A3	304	B4	330	B4	503	A1	562	C1	662	C6	710	A4	726	B2	742	B3	758	B3	775	B3
113	A1	140	A3	317	C3	504	A1	200	B2	305	B4	331	B4	504	A1	563	C1	663	C6	711	A4	727	B2	743	B3	759	B3	776	B3
114	A1	141	A3	318	C3	505	A1	201	B2	306	B4	332	B4	505	A1	564	C1	664	C6	712	A4	728	B2	744	B3	760	B3	777	B3
122	B1	142	A2	408	A1	507	A1	202	B2	307	B4	333	B4	506	A1	565	C1	665	C6	713	A4	729	B2	745	B3	761	B3	778	B3
125	A1	143	A2	409	A1	508	A1	203	B2	308	B4	334	B4	507	A1	566	C1	666	C6	714	A4	730	B2	746	B3	762	B3	779	B3
131	A1	144	A2	410	A1	509	A1	204	B2	309	B4	335	B4	508	A1	567	C1	667	C6	715	A4	731	B2	747	B3	763	B3		
132	B1	145	A2	411	A1	510	A1	205	B2	310	B4	336	B4	509	A1	568	C1	668	C6	716	A4	732	B2	748	B3	764	B3		
133	A1	146	A2	412	A1	511	A1	206	B2	311	B4	337	B4	510	A1	569	C1	669	C6	717	A4	733	B2	749	B3	765	B3		
135	A1	147	A2	413	A1	512	A1	207	B2	312	B4	338	B4	511	A1	570	C1	670	C6	718	A4	734	B2	750	B3	766	B3		

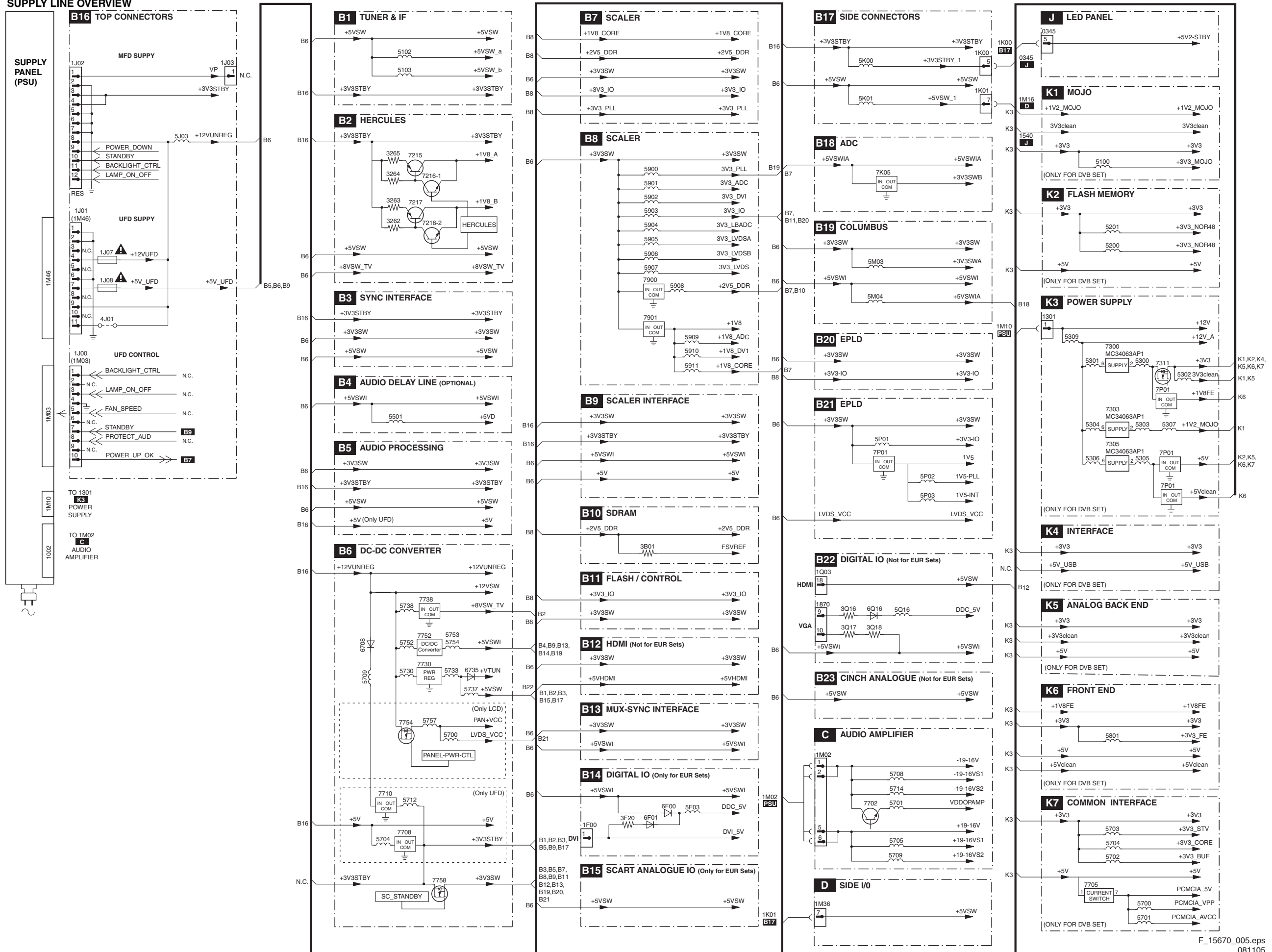


I2C Overview



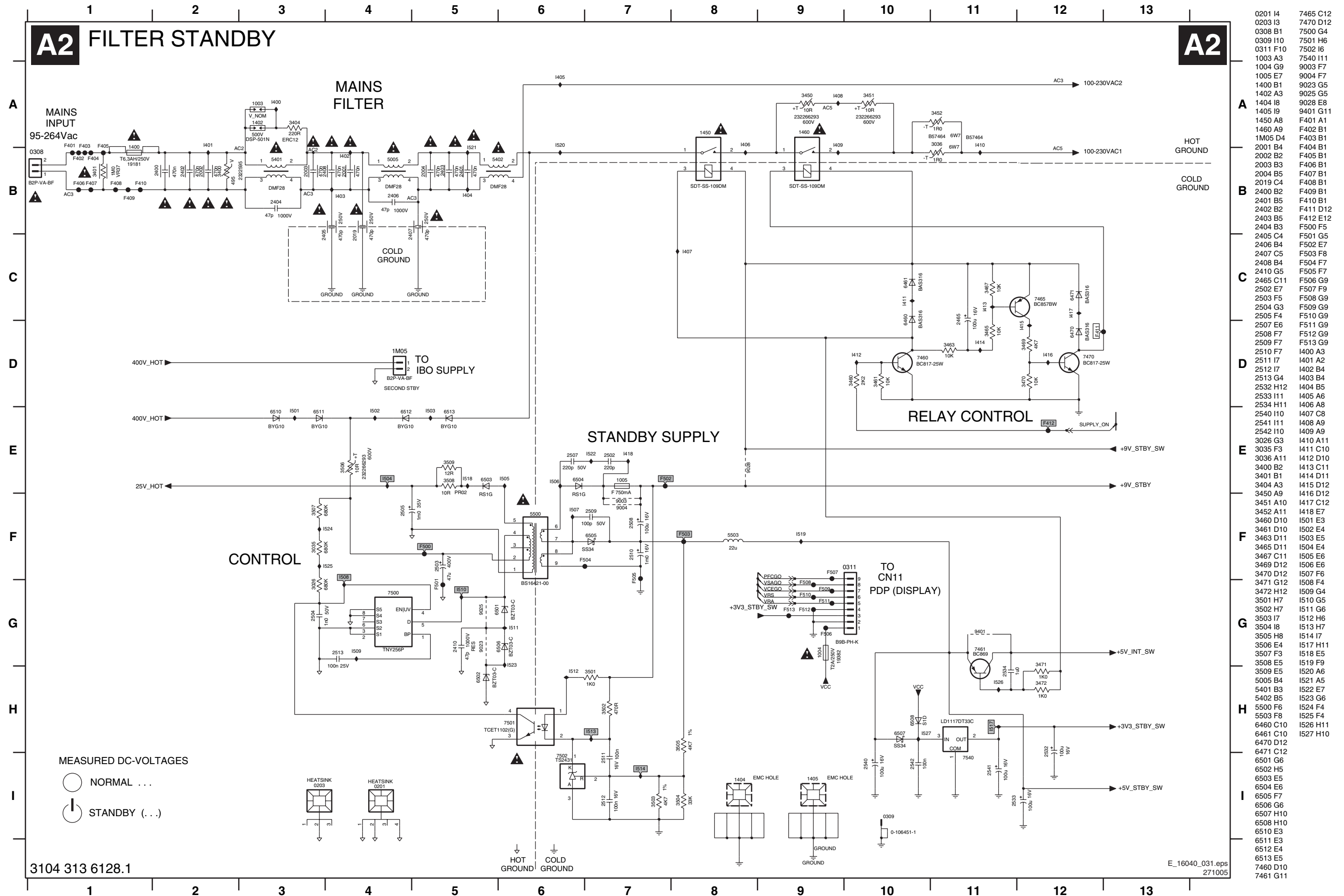
Supply Voltage Overview

SUPPLY LINE OVERVIEW



7. Circuit Diagrams and PWB Layouts

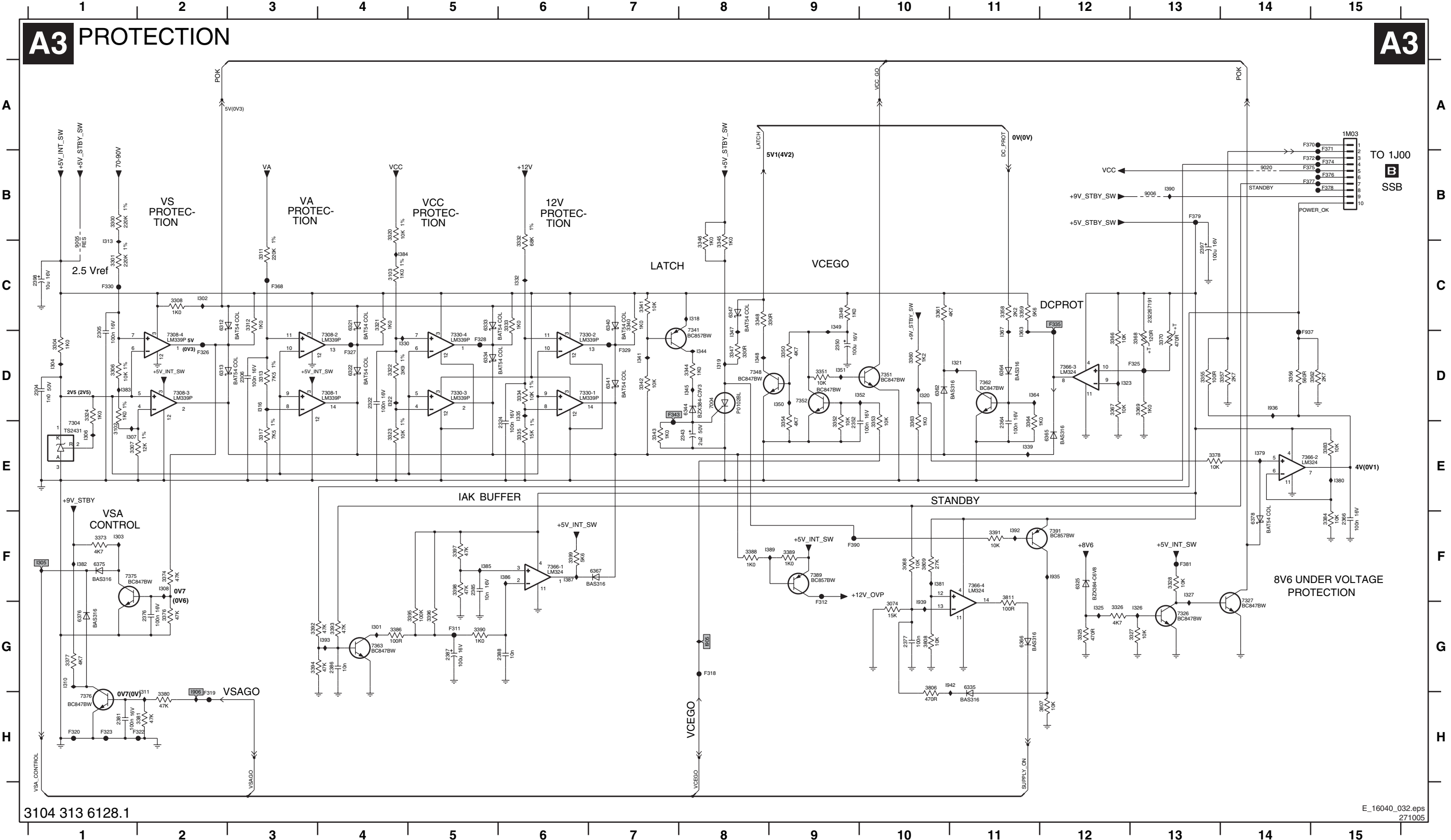
PDP FHP Supply: Filter Standby



0201 I4	7465 C12
0203 I3	7470 D12
0308 B1	7500 G4
0309 I10	7501 H6
0311 F10	7502 I6
1003 A3	7540 I11
1004 G9	9003 F7
1005 E7	9004 F7
1400 B1	9023 G5
1402 A3	9025 G5
1404 I8	9028 E8
1405 I9	9401 G11
1450 A8	F401 A1
1460 A9	F402 B1
1M05 D4	F403 B1
2001 B4	F404 B1
2002 B2	F405 B1
2003 B3	F406 B1
2004 B5	F407 B1
2019 C4	F408 B1
2400 B2	F409 B1
2401 B5	F410 B1
2402 B2	F411 D12
2403 B5	F412 E12
2404 B3	F500 F5
2405 C4	F501 G5
2406 B4	F502 E7
2407 C5	F503 F8
2408 B4	F504 F7
2410 G5	F505 F7
2465 C11	F506 G9
2502 E7	F507 F9
2503 F5	F508 G9
2504 G3	F509 G9
2505 F4	F510 G9
2507 E6	F511 G9
2508 F7	F512 G9
2509 F7	F513 G9
2510 F7	I400 A3
2511 I7	I401 A2
2512 I7	I402 B4
2513 G4	I403 B4
2532 H12	I404 B5
2533 I11	I405 A6
2534 H11	I406 A8
2540 I10	I407 C8
2541 I11	I408 A9
2542 I10	I409 A9
3026 G3	I410 A11
3035 F3	I411 C10
3036 A11	I412 D10
3400 B2	I413 C11
3401 B1	I414 D11
3404 A3	I415 D12
3450 A9	I416 D12
3451 A10	I417 C12
3452 A11	I418 E7
3460 D10	I501 E3
3461 D10	I502 E4
3463 D11	I503 E5
3465 D11	I504 E4
3467 C11	I505 E6
3469 D12	I506 E6
3470 D12	I507 F6
3471 G12	I508 F4
3472 H12	I509 G4
3501 H7	I510 G5
3502 H7	I511 G6
3503 I7	I512 H6
3504 I8	I513 H7
3505 H8	I514 I7
3506 E4	I517 H11
3507 F3	I518 E5
3508 E5	I519 F9
3509 E5	I520 A6
5005 B4	I521 A5
5401 B3	I522 E7
5402 B5	I523 G6
5500 F8	I524 F4
5503 F6	I525 F4
6460 C10	I526 H11
6461 C10	I527 H10
6470 D12	
6471 C12	
6501 G6	
6502 H5	
6503 E5	
6504 E6	
6505 F7	
6506 G6	
6507 H10	
6508 H10	
6510 E3	
6511 E3	
6512 E4	
6513 E5	
7460 D10	
7461 G11	

PDP FHP Supply: Protection

1M03 A15	2364 E11	2397 C13	3306 D1	3322 D4	3334 D6	3347 D8	3356 D14	3366 D12	3378 E13	3391 F11	3806 G10	6325 F12	6364 D11	7308-1 D4	7330-4 D5	7366-3 D12	F311 G5	F327 D4	F372 B14	F937 D14	I310 G1	I323 D12	I344 D8	I364 D11	I386 F6	I936 D14
2304 D1	2376 G2	2398 C1	3307 E1	3323 E4	3335 E6	3348 C8	3357 D14	3367 D12	3380 H2	3392 G3	3807 H12	6333 C5	6365 E12	7308-2 D4	7341 C8	7366-4 F11	F312 G9	F328 D5	F374 B15	I301 G4	I311 G2	I325 G12	I345 D8	I367 D11	I387 F6	I939 G10
2305 D1	2377 G10	3068 F10	3308 C2	3324 D1	3340 C7	3349 C9	3358 C11	3368 D13	3381 H2	3393 G4	3808 G10	6334 D5	6366 G11	7308-3 D2	7348 D8	7375 F1	F318 G8	F329 D7	F375 B14	I302 C2	I313 C1	I327 F13	I347 D8	I369 F9	I942 G11	
2306 D3	2381 H1	3074 G10	3311 C3	3325 G12	3341 C7	3350 D9	3359 C11	3369 D13	3383 E15	3394 G3	3809 F10	6335 G11	6367 F7	7308-4 D2	7351 D10	7376 H1	F319 H2	F330 C1	F376 B15	I303 F1	I316 D3	I327 F13	I348 D8	I390 E15		
2322 D4	2385 F5	3102 E1	3312 C3	3326 G12	3342 D7	3351 D9	3360 D10	3370 D13	3384 F15	3395 G5	3811 F11	6340 C7	6375 F1	7332 D9	7352 D9	7389 F9	F320 H1	F335 C12	F377 B14	I304 D1	I318 C8	I330 D4	I349 C9	I391 F10		
2324 E6	2385 F5	3103 C4	3313 D3	3327 G13	3343 E7	3352 E9	3361 C10	3373 F1	3386 G4	3396 G5	6312 C2	6341 D7	6376 G1	7327 G14	7362 D11	7391 F12	F322 H2	F343 D7	F378 B15	I305 F1	I319 D8	I332 C6	I350 D9	I382 F1	I933 G4	
2343 E8	2386 G4	3300 B1	3317 E3	3328 F13	3344 D8	3353 E10	3362 D15	3374 F2	3388 F8	3397 F5	6313 D2	6344 D8	6378 F14	7330-1 D6	7363 G4	9005 C1	F323 H1	F368 C3	F379 B13	I306 E1	I320 D10	I335 D6	I351 D9	I383 D1	I905 G8	
2350 D9	2387 G5	3301 C1	3320 B4	3332 C6	3345 C8	3354 E9	3363 E10	3376 G2	3389 F9	3398 F5	6321 C4	6347 C8	7004 D8	7330-2 D6	7366-1 F6	9006 B13	F325 D13	F370 A14	F381 F13	I307 E1	I321 D11	I339 E11	I352 D10	I384 C4	I906 G2	
2352 E9	2388 G6	3304 D1	3321 C4	3333 C6	3346 C8	3355 D13	3364 E11	3377 G1	3390 G5	3399 F6	6322 D4	6362 D10	7304 E1	7330-3 D5	7366-2 E14	9020 B14	F326 D2	F371 B15	F390 F9	I308 F2	I322 D4	I341 D7	I363 D11	I385 F5	I935 F12	



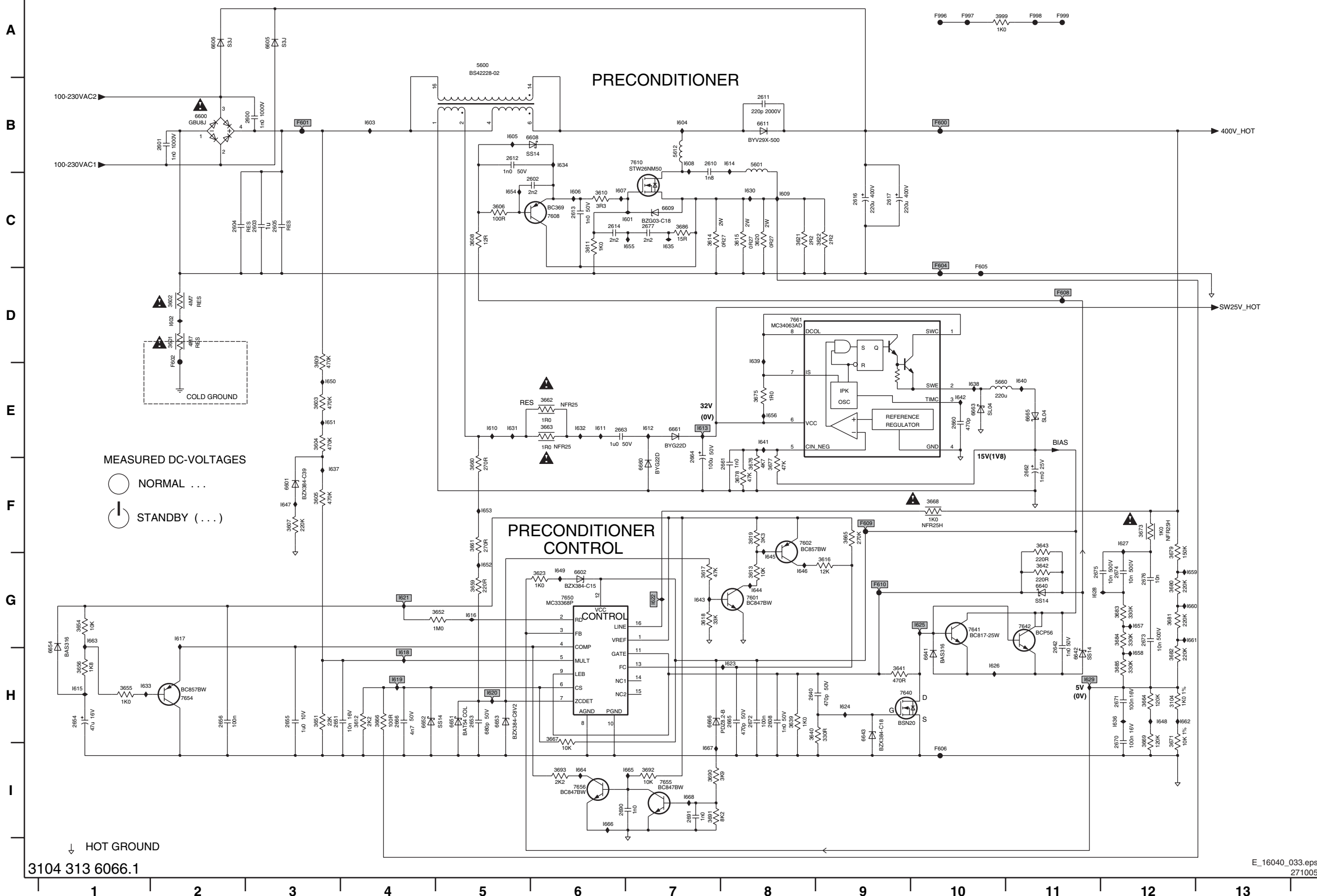
3104 313 6128.1

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271005

PDP FHP Supply: Pre Conditioner

A5 PRECONDITIONER

A5



MEASURED DC-VOLTAGES

○ NORMAL ...

⊏ STANDBY (...)

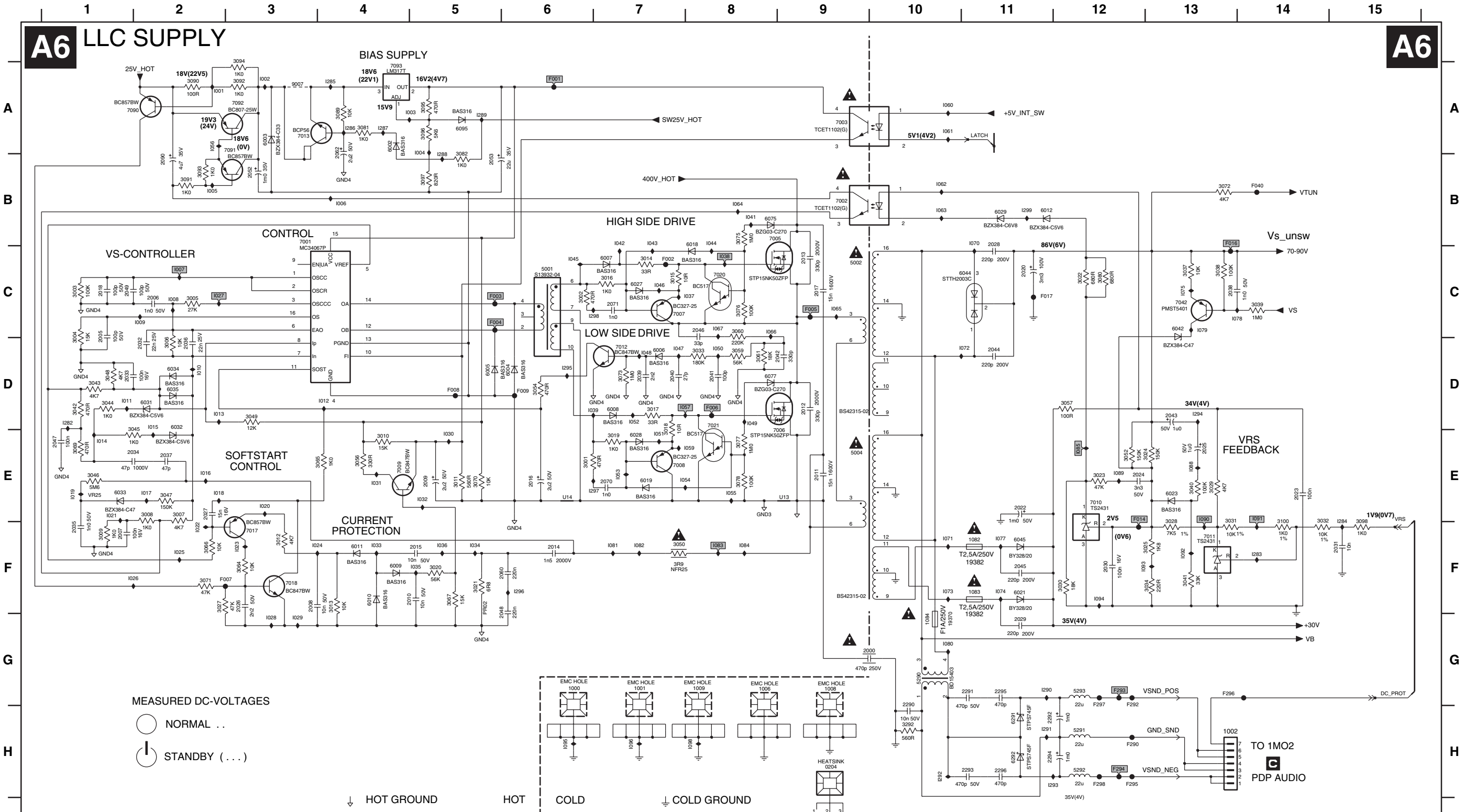
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2600 B3	3690 I7	I643 G7
2601 B2	3691 I7	I644 G8
2602 C6	3692 I7	I645 G8
2603 C3	3693 I6	I646 G8
2604 C2	3999 A10	I647 F3
2605 C3	5600 A5	I648 H12
2608 H8	5601 B8	I649 G6
2610 B7	5612 B7	I650 E3
2611 B8	5660 E10	I651 E3
2612 B5	6600 B2	I652 G5
2613 C6	6601 F3	I653 F5
2614 C6	6602 G6	I654 C5
2616 C9	6605 A3	I655 C7
2617 C9	6606 A2	I656 E8
2640 H8	6608 B6	I657 G12
2642 G11	6609 C7	I658 H12
2651 H3	6611 B8	I659 G12
2653 H5	6640 G11	I660 G12
2654 H1	6641 H10	I661 G12
2655 H3	6642 H11	I662 H12
2656 H2	6643 H9	I663 G1
2660 E10	6651 H5	I664 I6
2661 F8	6652 H4	I665 I7
2662 F11	6653 H5	I666 I6
2663 E6	6654 G1	I667 I7
2664 E7	6660 F7	I668 I7
2665 H8	6661 E7	
2666 H4	6663 E10	
2670 H12	6665 E11	
2671 H12	6666 H7	
2672 H8	7601 G8	
2673 G12	7602 F8	
2674 G12	7608 C6	
2675 G11	7610 B7	
2676 G12	7640 H9	
2677 C7	7641 G10	
2690 I6	7642 G11	
2691 I7	7650 G6	
3104 H12	7654 H2	
3601 D2	7655 I7	
3602 D2	7656 I6	
3603 E3	7661 D8	
3604 E3	F600 B10	
3605 F3	F601 B3	
3606 C5	F602 D2	
3607 F3	F604 C10	
3608 C5	F605 D10	
3609 D3	F606 I10	
3610 C6	F608 D11	
3611 C6	F609 F9	
3612 H4	F610 G9	
3613 G8	F996 A10	
3614 C7	F997 A10	
3615 C8	F998 A11	
3616 G9	F999 A11	
3617 G7	I601 C7	
3618 G7	I602 D2	
3619 F8	I603 B4	
3620 C8	I604 B7	
3621 C9	I605 B5	
3622 C9	I606 C6	
3623 G6	I607 C6	
3639 H8	I608 B7	
3640 H8	I609 C8	
3641 H9	I610 E5	
3642 G11	I611 E6	
3643 F11	I612 E7	
3651 H3	I613 E7	
3652 G5	I614 B8	
3654 G1	I615 H1	
3655 H1	I616 G5	
3656 H1	I617 G2	
3659 G5	I618 H4	
3660 F5	I619 H4	
3661 F5	I620 H5	
3662 E6	I621 G4	
3663 E6	I622 G7	
3664 H12	I623 H8	
3665 F9	I624 H9	
3666 H4	I625 G10	
3667 H6	I626 H10	
3668 F10	I627 F12	
3669 H12	I628 G11	
3671 H12	I629 H11	
3673 F12	I630 C8	
3675 E8	I631 E5	
3676 F8	I632 E6	
3677 F8	I633 H1	
3678 F8	I634 B6	
3679 F12	I635 C7	
3680 G12	I636 H12	
3681 G12	I637 F3	
3682 H12	I638 E10	
3683 G12	I639 D8	
3684 G12	I640 E11	
3685 H12	I641 E8	
3686 C7	I642 E10	

PDP FHP Supply: LLC Supply

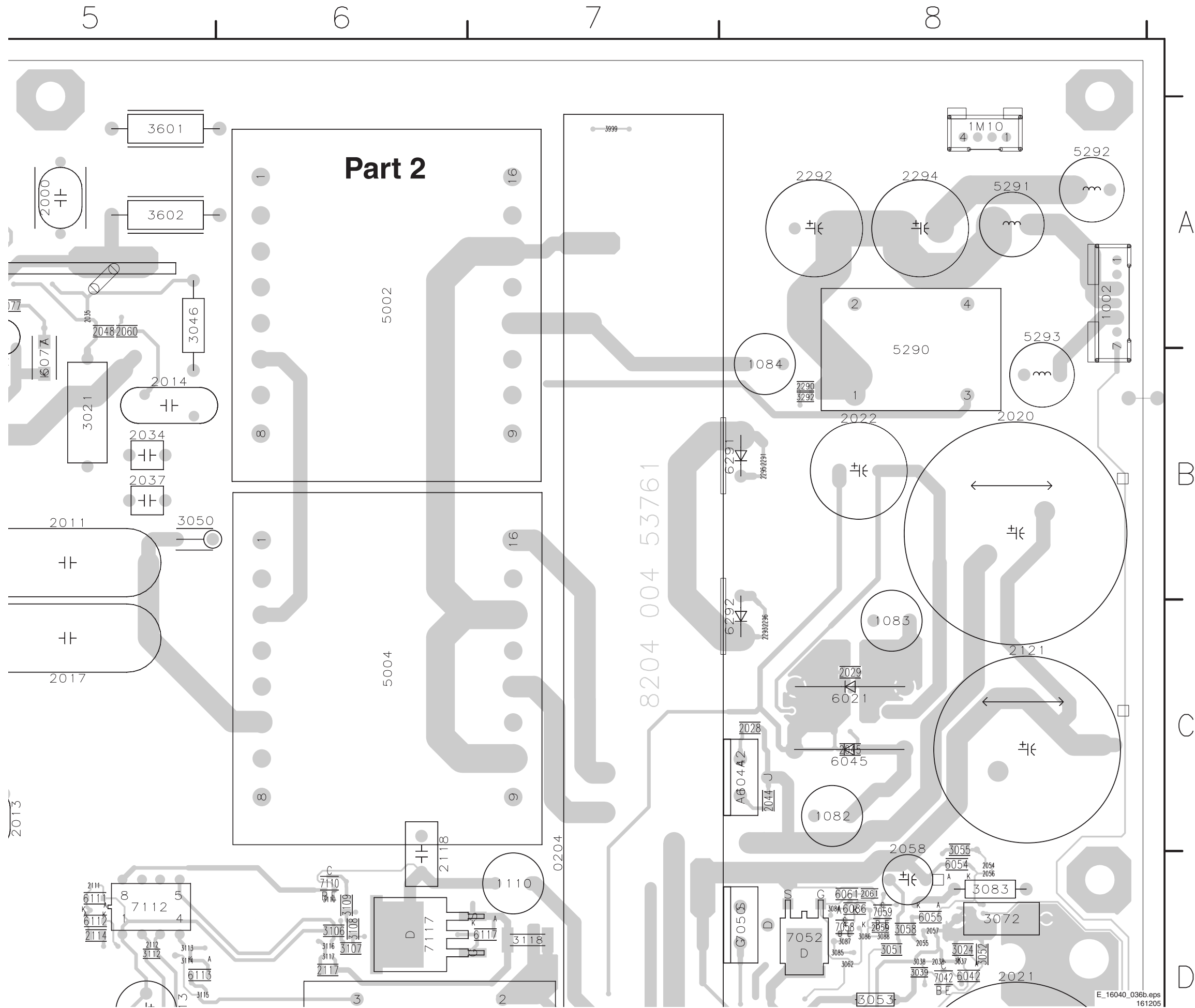
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U14 E6	1084 G10	2013 C9	2025 E13	2035 F1	2045 F11	2071 C7	3002 C6	3012 F3	3022 C12	3033 D8	3045 E2	3059 D8	3072 B13	3090 A2	3292 H10	6004 D6	6019 E7	6035 D2	7002 B9	7013 A3	7013 A3	9007 A3	F014 E12	I009 C2	I019 E1	I029 G3	I039 D6	I050 D8	I061 A10	I073 F10	I084 F8	I096 H7	I290 G11	I291 H11
U204 H9	2000 G9	2014 F6	2026 F3	2036 D2	2046 C8	2090 B2	3003 C1	3013 F4	3023 E12	3034 F13	3046 E1	3060 C8	3073 D7	3091 B2	5001 C6	6005 D5	6021 F11	6042 C13	7003 A9	7017 F3	7017 F3	F001 A6	F016 B13	I010 D2	I020 E3	I030 E5	I041 B8	I051 E7	I062 B10	I074 F11	I085 E12	I098 H8	I292 H10	I293 H11
1000 G6	2005 C1	2015 F5	2027 E2	2037 E2	2047 E1	2290 H10	3004 C1	3014 C7	3024 E13	3037 C13	3047 E2	3061 D8	3075 B8	3092 A3	5002 C9	6006 D7	6023 E13	6044 C11	7005 B8	7018 F3	F002 C7	F017 C11	I001 A2	I011 D1	I021 E1	I031 E4	I042 B7	I052 D7	I063 B10	I075 C13	I088 E13	I282 D1	I292 H10	
1001 G7	2008 C2	2016 E6	2028 C11	2038 C13	2048 F8	2291 G11	3005 C2	3015 C7	3025 F13	3038 C16	3048 F3	3078 C8	3093 B2	5004 E9	6007 C7	6027 C7	6045 F11	7006 E8	7020 C8	F003 C5	F040 B14	I002 A3	I012 D4	I022 F2	I032 E5	I043 B7	I053 E7	I064 B8	I077 F11	I089 E12	I283 F14	I293 H11	I294 D13	
1002 H14	2007 F1	2017 C9	2029 G11	2039 D7	2049 C1	2292 H11	3006 D2	3016 C7	3027 F2	3039 C14	3049 D3	3065 E4	3077 E8	3094 A3	5290 G10	6008 D7	6028 E7	6075 B8	7007 C7	7021 D8	F004 C5	F290 H12	I003 A5	I013 D2	I023 F3	I033 F4	I044 B8	I054 E7	I065 C9	I078 C13	I090 E13	I284 E15	I294 D13	
1006 G8	2008 F3	2018 C1	2030 F12	2040 D7	2052 B3	2293 H11	3007 E2	3017 D7	3028 F13	3040 E13	3050 F7	3066 F2	3078 E8	3095 A5	5291 H12	6009 F4	6029 B11	6077 D8	7008 E7	7042 C13	F005 C9	F292 H12	I004 A5	I014 E1	I024 F3	I034 F5	I045 C6	I055 E8	I066 C8	I079 C13	I091 E14	I285 A4	I295 D6	
1008 G9	2009 E5	2020 C11	2031 F15	2041 D8	2053 B5	2294 H11	3008 E2	3018 D7	3029 H13	3041 F13	3052 E12	3067 F5	3080 C12	3096 A5	5292 H12	6010 F4	6031 D2	6095 A5	7009 E4	7090 A2	F006 D8	F293 G12	I005 B2	I015 D2	I025 F2	I035 F5	I046 C7	I056 A2	I067 C8	I080 G10	I092 F13	I286 A4	I296 F6	
1009 G8	2010 F5	2022 E11	2032 D2	2042 D9	2060 F6	2295 G11	3009 F1	3019 E7	3030 F12	3042 D1	3054 D6	3069 E1	3081 A4	3097 B5	5293 G12	6011 F4	6032 D2	6291 H11	7010 E12	7091 A3	F007 F3	F294 H12	I006 B4	I016 E2	I026 F1	I036 F5	I047 D7	I057 D7	I070 B11	I081 F7	I093 F12	I287 A4	I297 E7	
1082 F11	2011 E9	2023 E14	2033 D1	2043 D13	2062 A4	2296 H11	3010 E4	3020 F5	3031 F13	3043 D1	3056 E4	3070 E5	3082 B5	3098 F15	6002 A4	6012 B11	6033 E1	6292 H11	7011 F13	7092 A3	F008 D5	F295 H12	I007 C2	I017 E2	I027 C2	I037 C8	I048 D7	I059 E8	I071 F10	I082 F7	I094 F12	I288 B5	I298 C7	



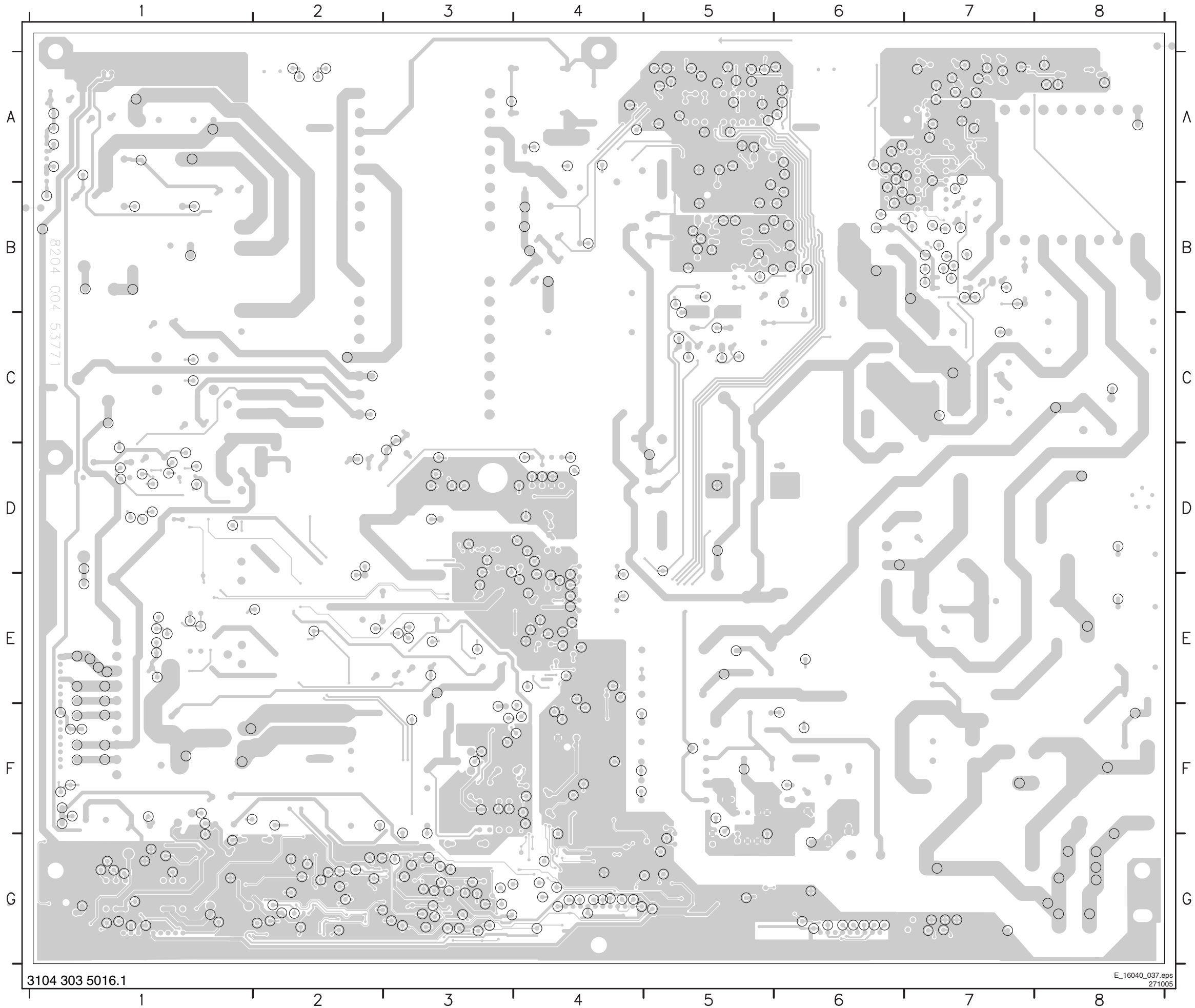
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Layout PDP FHP Supply (Part 3 Top Side)



Layout PDP FHP Supply (Bottom View)



SSB: Tuner and IF

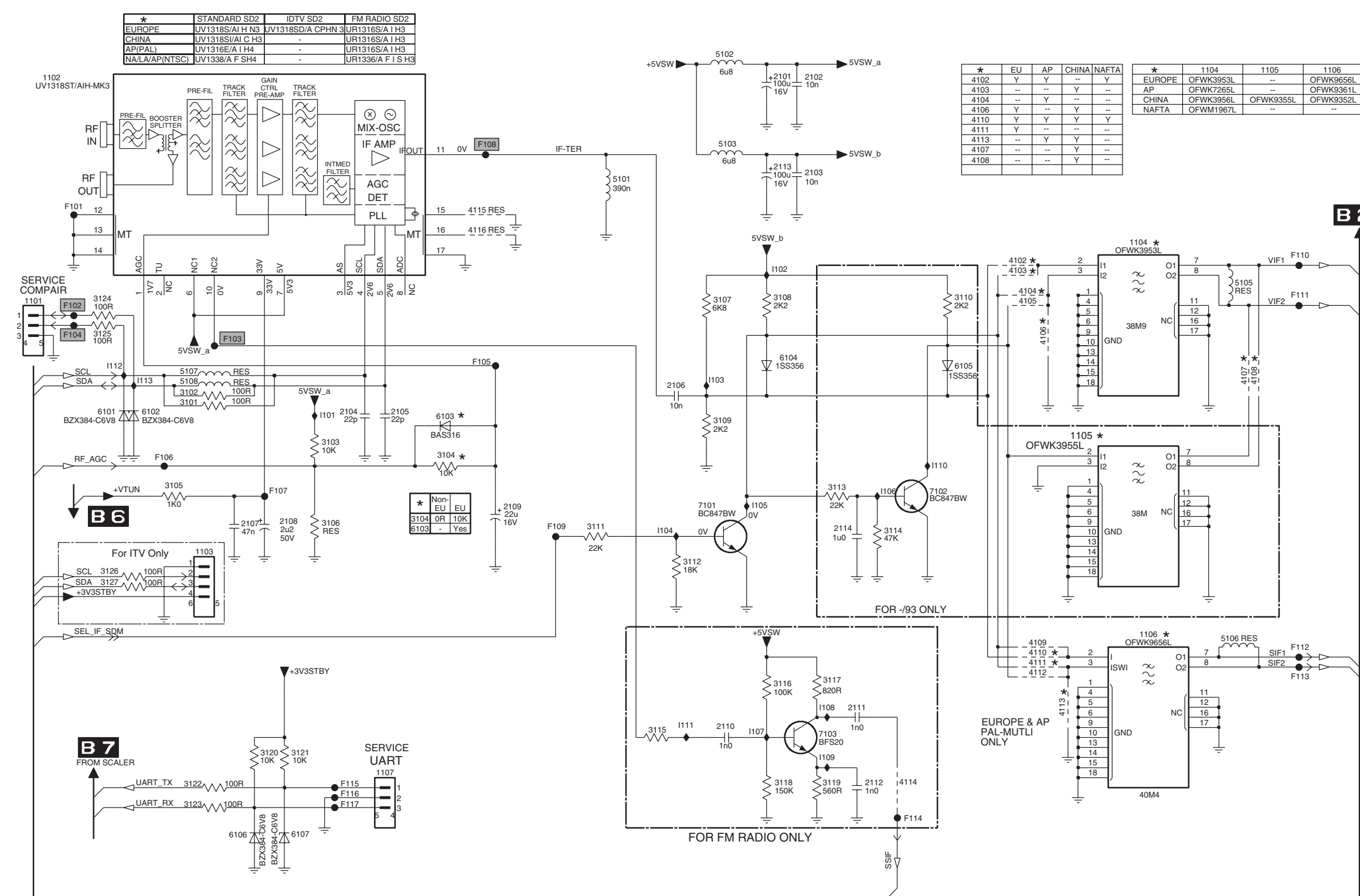
B1 TUNER & IF

B1

*	STANDARD SD2	IDTV SD2	FM RADIO SD2
EUROPE	UV1318S/AI H N3	UV1318SD/A CPHN 3	UR1316S/A I H3
CHINA	UV1318S/AI C H3	-	UR1316S/A I H3
AP(PAL)	UV1316E/A I H4	-	UR1316S/A I H3
NA/LA/AP(NTSC)	UV1338/A F SH4	-	UR1336/A F I S H3

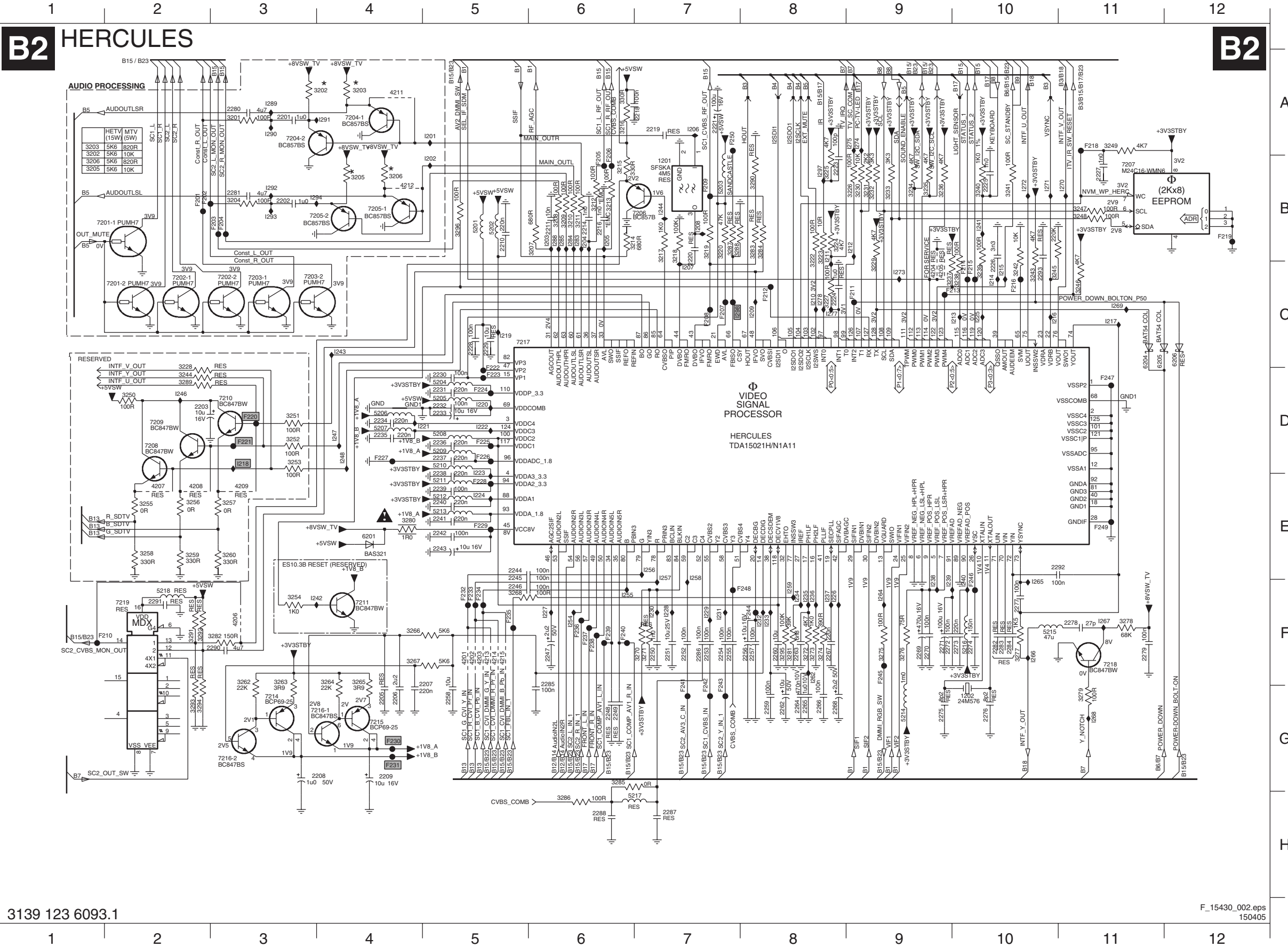
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4102	Y	Y	Y	Y
4103	-	-	Y	-
4104	-	Y	-	-
4106	Y	-	Y	-
4110	Y	Y	Y	Y
4111	Y	-	-	-
4113	-	Y	Y	-
4107	-	-	Y	-
4108	-	-	Y	-

*	1104	1105	1106
EUROPE	OFWK3953L	-	OFWK9656L
AP	OFWK7265L	-	OFWK9361L
CHINA	OFWK3956L	OFWK9355L	OFWK9352L
NAFTA	OFWM1967L	-	-



- 1101 C1
- 1102 A1
- 1103 E2
- 1104 C9
- 1105 D8
- 1106 E9
- 1107 F3
- 2101 A6
- 2102 A6
- 2103 B6
- 2104 D3
- 2105 D3
- 2106 D5
- 2107 E2
- 2108 E3
- 2109 D4
- 2110 F6
- 2111 F7
- 2112 F7
- 2113 B6
- 2114 E7
- 3101 D2
- 3102 D2
- 3103 D3
- 3104 D4
- 3105 D2
- 3106 E3
- 3107 C6
- 3108 C6
- 3109 D6
- 3110 C7
- 3111 E5
- 3112 E5
- 3113 D7
- 3114 E7
- 3115 F5
- 3116 F6
- 3117 F7
- 3118 F6
- 3119 F6
- 3120 F3
- 3121 F3
- 3122 F2
- 3123 G2
- 3124 C1
- 3125 C1
- 3126 E1
- 3127 E1
- 4102 C8
- 4103 C8
- 4104 C8
- 4105 C8
- 4106 C8
- 4107 D9
- 4108 D10
- 4109 E8
- 4110 F8
- 4111 F8
- 4112 F8
- 4113 F8
- 4114 F7
- 4115 B4
- 4116 C4
- 5101 B5
- 5102 A6
- 5103 B6
- 5105 C9
- 5106 E9
- 5107 D2
- 5108 D2
- 6101 D1
- 6102 D2
- 6103 D4
- 6104 C6
- 6105 C7
- 6106 G2
- 6107 G3
- 7101 D6
- 7102 D7
- 7103 F6
- F101 B1
- F102 C1
- F103 C2
- F104 C1
- F105 C4
- F106 D2
- F107 D3
- F108 B4
- F109 E5
- F110 C10
- F111 E10
- F112 F10
- F113 G7
- F114 G7
- F115 F3
- F116 G3
- F117 G3
- F118 D3
- F119 C6
- F120 D6
- F121 E5
- F122 D6
- F123 E5
- F124 E5
- F125 D7
- F126 E7
- F127 F5
- F128 F6
- F129 F6
- F130 F3
- F131 F3
- F132 G2
- F133 C1
- F134 C1
- F135 E1
- F136 E1
- F137 E1
- F138 C8
- F139 C8
- F140 D9
- F141 F8
- F142 F8
- F143 F8
- F144 F7
- F145 B4
- F146 C4
- F147 B5
- F148 A6
- F149 B6
- F150 C9
- F151 E9
- F152 D2
- F153 D2
- F154 D1
- F155 D2
- F156 D4
- F157 C6
- F158 C7
- F159 G2
- F160 G3
- F161 D6
- F162 D7
- F163 F6
- F164 B1
- F165 C1
- F166 C2
- F167 C1
- F168 C4

SSB: Hercules

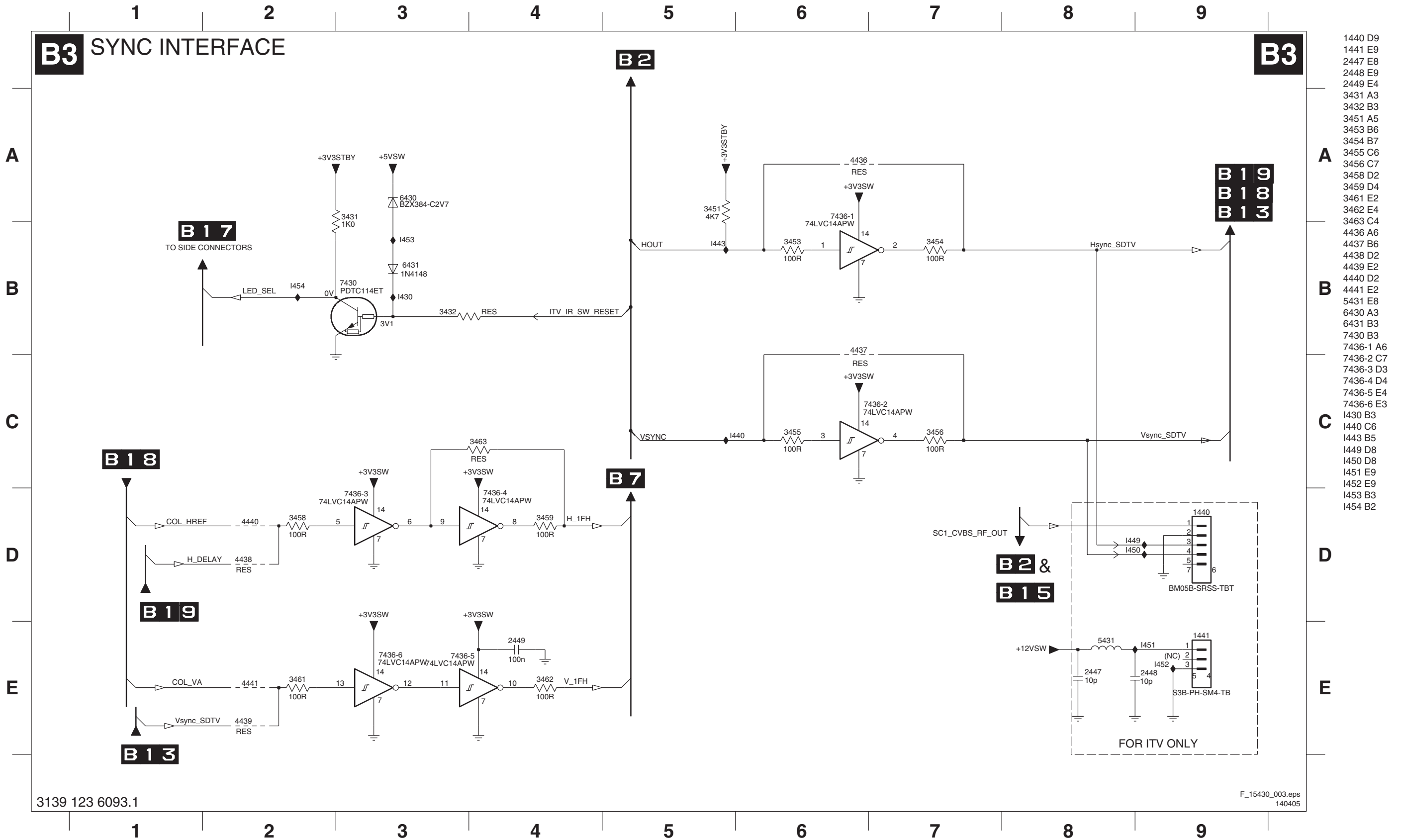


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2203 D2	3219 B7	5213 E5	I220 D5
2205 G4	3220 B7	5214 F9	I221 D5
2206 G4	3222 B8	5215 F10	I222 D5
2207 F5	3223 B8	5216 F10	I223 D5
2208 G4	3224 B8	5217 H7	I224 E5
2209 G4	3225 B8	5218 F2	I225 C10
2210 B5	3226 B9	5219 E4	I226 F8
2211 B6	3227 C8	5220 C11	I227 F6
2214 B6	3228 D2	5221 C11	I228 F7
2216 B6	3229 C9	5222 C12	I229 F7
2218 A7	3232 B9	5223 C2	I230 F8
2219 A7	3231 B9	5224 C2	I231 F7
2220 B7	3232 B9	5225 C2	I232 F8
2221 A7	3233 B9	5226 C3	I233 F8
2223 B8	3234 B9	5227 C3	I234 F8
2224 C8	3235 B9	5228 C3	I235 F8
2225 B10	3236 B9	5229 C4	I236 F8
2226 C10	3237 C9	5230 A3	I237 F8
2227 B11	3238 C10	5231 B4	I238 F9
2228 C5	3239 C10	5232 B4	I239 F9
2229 C5	3240 B10	5233 B6	I240 F10
2230 D5	3241 B10	5234 B11	I241 B10
2231 D5	3242 C10	5235 D2	I242 F4
2232 D5	3243 C10	5236 D2	I243 C4
2233 D5	3244 D2	5237 D3	I244 B7
2234 D4	3245 C10	5238 F4	I245 D2
2235 D4	3246 B11	5239 G3	I246 D4
2236 D5	3247 B11	5240 G4	I247 D4
2237 D5	3248 B11	5241 G3	I248 D4
2238 E5	3249 A11	5242 G3	I249 F6
2239 E5	3250 D2	5243 F6	I250 E7
2240 E5	3251 D3	5244 F11	I251 F7
2241 E5	3252 D3	5245 F7	I252 E7
2242 E5	3253 D3	5246 B2	I253 F8
2243 E5	3254 F3	5247 B2	I254 F8
2244 E5	3255 E2	5248 B3	I255 F10
2245 E5	3256 E2	5249 B3	I256 F10
2246 F5	3257 E3	5250 B6	I257 F11
2247 F6	3258 E2	5251 F7	I258 G11
2248 G6	3259 E2	5252 F7	I259 G11
2249 G6	3260 E3	5253 G7	I260 C11
2250 F7	3262 F3	5254 F9	I261 B11
2251 F7	3263 F3	5255 F11	I262 B10
2252 F7	3264 F4	5256 F4	I263 C9
2253 F7	3265 F4	5257 C10	I264 A9
2254 F7	3266 F4	5258 F4	I265 A9
2255 F7	3267 F4	5259 C10	I266 A9
2256 F8	3268 F5	5260 C10	I267 C8
2257 F8	3270 F7	5261 D10	I268 C8
2258 G5	3271 F7	5262 A11	I269 B6
2259 G8	3272 F8	5263 D3	I270 B6
2260 F8	3273 F8	5264 D3	I271 B6
2262 G8	3274 F8	5265 D5	I272 B6
2263 F8	3275 F9	5266 D5	I273 B6
2264 G8	3276 F9	5267 D5	I274 A3
2265 G8	3277 F10	5268 D5	I275 A4
2266 G8	3278 F11	5269 D5	I276 B3
2267 F8	3279 G11	5270 D5	I277 B3
2268 G8	3280 E4	5271 D4	I278 B3
2269 F9	3281 F8	5272 E5	I279 B8
2270 F9	3282 F3	5273 E5	I280 B8
2271 F9	3283 B8	5274 G4	I281 G4
2272 F9	3284 B8	5275 G6	I282 G4
2273 F10	3285 G6	5276 F5	I283 F5
2274 F10	3286 H6	5277 F5	I284 F5
2275 G10	3287 B7	5278 F6	I285 F6
2276 G10	3288 B7	5279 D2	I286 F6
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2278 F11	3290 B2	5281 F2	I288 F6
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2284 F10	3296 B5	5287 F5	I294 G7
2285 F6	4201 F5	5288 F5	I295 F8
2286 F7	4202 F5	5289 F5	I296 F9
2287 H7	4203 F5	5290 F5	I297 F10
2288 H6	4204 C9	5291 D11	I298 D11
2290 F3	4205 C9	5292 F8	I299 F8
2291 F2	4206 F3	5293 F9	I300 E11
2292 E11	4207 E2	5294 F7	I301 A7
2293 C10	4208 E2	5295 A5	I302 A5
3201 A3	4209 E3	5296 B5	I303 B5
3202 A4	4211 A4	5297 B6	I304 B6
3203 A4	4212 B4	5298 B6	I305 B6
3204 B3	4213 F5	5299 B6	I306 B6
3205 B4	4214 F5	5300 B7	I307 C7
3206 B4	4215 F5	5301 B8	I308 C7
3207 B6	5201 B5	5302 B8	I309 C8
3208 B6	5202 B5	5303 B7	I310 C8
3209 B6	5203 B7	5304 D5	I311 B8
3210 B6	5204 D5	5305 D5	I312 B8
3211 B6	5205 D5	5306 D4	I313 C10
3212 B6	5206 D4	5307 D4	I314 C10
3213 B6	5207 D4	5308 D5	I315 C10
3214 B7	5208 D5	5309 D5	I316 C10

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SSB: Sync Interface

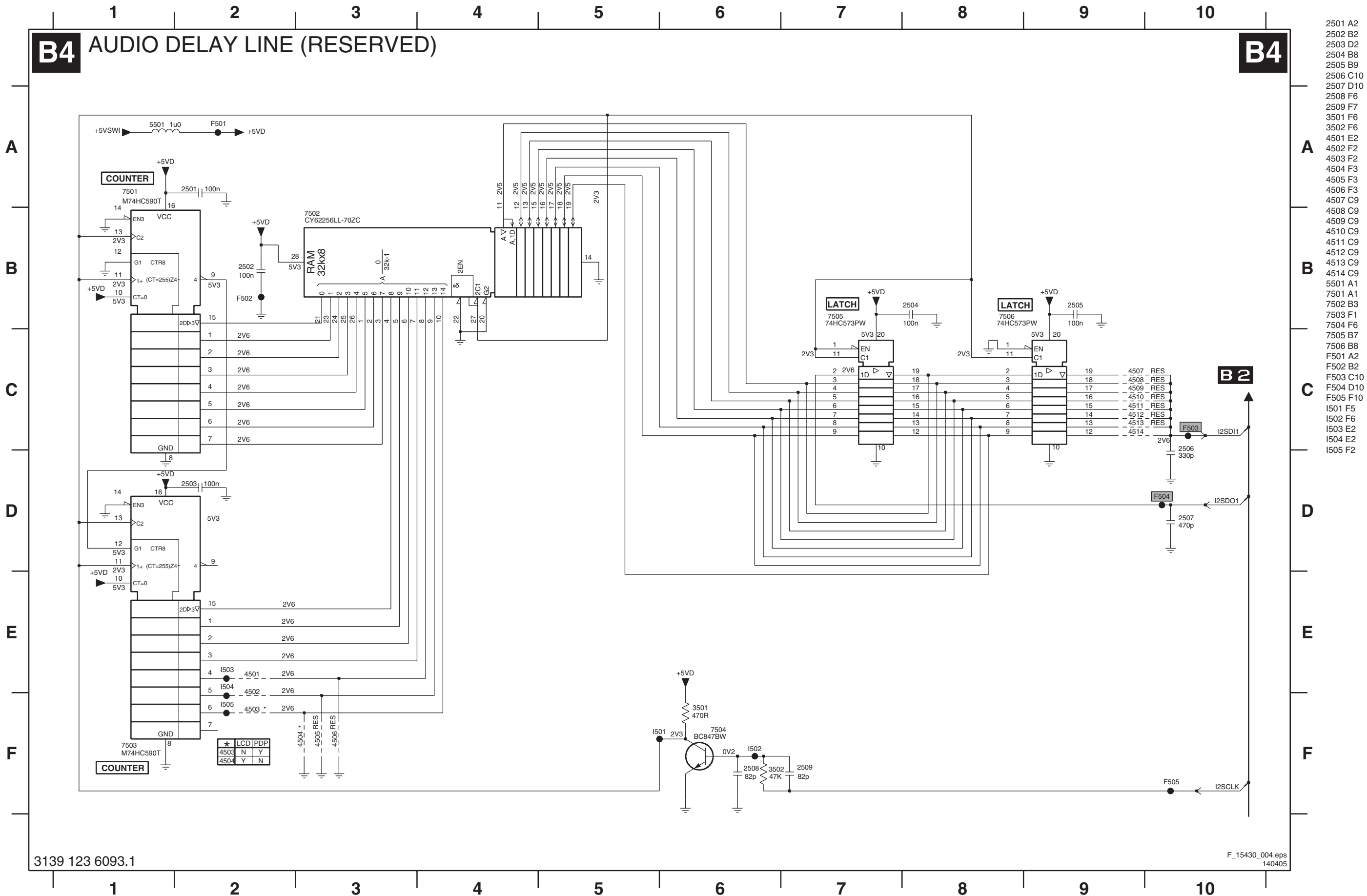


- 1440 D9
- 1441 E9
- 2447 E8
- 2448 E9
- 2449 E4
- 3431 A3
- 3432 B3
- 3451 A5
- 3453 B6
- 3454 B7
- 3455 C6
- 3456 C7
- 3458 D2
- 3459 D4
- 3461 E2
- 3462 E4
- 3463 C4
- 4436 A6
- 4437 B6
- 4438 D2
- 4439 E2
- 4440 D2
- 4441 E2
- 5431 E8
- 6430 A3
- 6431 B3
- 7430 B3
- 7436-1 A6
- 7436-2 C7
- 7436-3 D3
- 7436-4 D4
- 7436-5 E4
- 7436-6 E3
- I430 B3
- I440 C6
- I443 B5
- I449 D8
- I450 D8
- I451 E9
- I452 E9
- I453 B3
- I454 B2

SSB: Audio Delay line (Reserved)

B4 AUDIO DELAY LINE (RESERVED)

B4

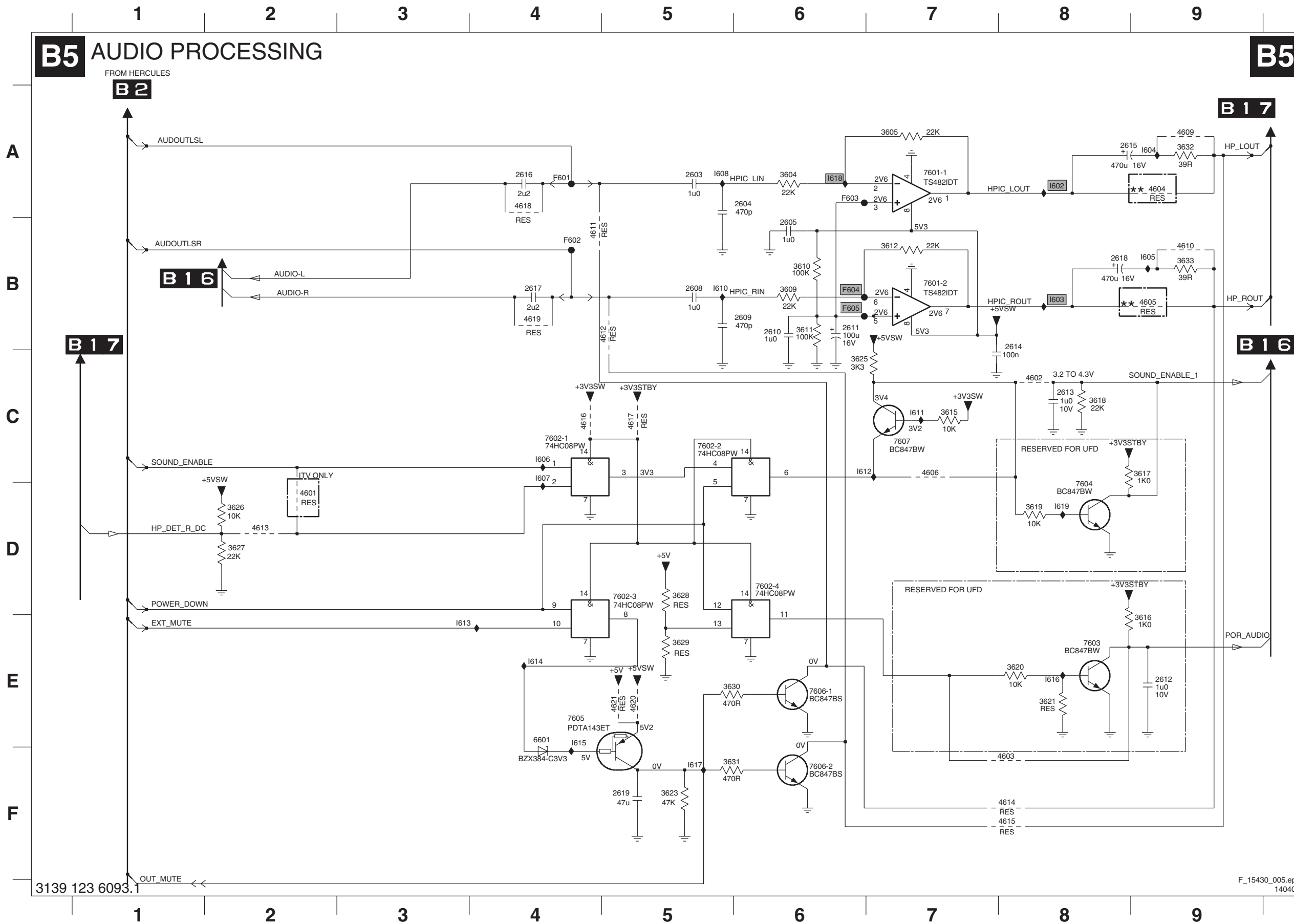


- 2501 A2
- 2502 B2
- 2503 D2
- 2504 B8
- 2505 B9
- 2506 C10
- 2507 D10
- 2508 F6
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- 3501 F6
- 3502 F6
- 4501 E2
- 4502 F2
- 4503 F2
- 4504 F3
- 4505 F3
- 4506 F3
- 4507 C9
- 4508 C9
- 4509 C9
- 4510 C9
- 4511 C9
- 4512 C9
- 4513 C9
- 4514 C9
- 5501 A1
- 7501 A1
- 7502 B3
- 7503 F1
- 7504 F6
- 7505 B7
- 7506 B8
- F501 A2
- F502 B2
- F503 C10
- F504 D10
- F505 F10
- I501 F5
- I502 F6
- I503 E2
- I504 E2
- I505 F2

SSB: Audio Processing

B5 AUDIO PROCESSING

B5



- 2603 A5
- 2604 A6
- 2605 B6
- 2608 B5
- 2609 B6
- 2610 B6
- 2611 B6
- 2612 E9
- 2613 C8
- 2614 B8
- 2615 A8
- 2616 A4
- 2617 B4
- 2618 B8
- 2619 F5
- 3604 A6
- 3605 A7
- 3609 B6
- 3610 B6
- 3611 B6
- 3612 B7
- 3615 C7
- 3616 E9
- 3617 C9
- 3618 C8
- 3619 D8
- 3620 E8
- 3621 E8
- 3623 F5
- 3625 C6
- 3626 D2
- 3627 D2
- 3628 D5
- 3629 E5
- 3630 E5
- 3631 F5
- 3632 A9
- 3633 B9
- 4601 D2
- 4602 C8
- 4603 F8
- 4604 A9
- 4605 B9
- 4606 C7
- 4609 A9
- 4610 B9
- 4611 B4
- 4612 B4
- 4613 D2
- 4614 F8
- 4615 F8
- 4616 C4
- 4617 C5
- 4618 A4
- 4619 B4
- 4620 E5
- 4621 E5
- 6601 E4
- 7601-1 A7
- 7601-2 B7
- 7602-1 C4
- 7602-2 C5
- 7602-3 D5
- 7602-4 D6
- 7603 E8
- 7604 D8
- 7605 E4
- 7606-1 E6
- 7606-2 F6
- 7607 C7
- F601 A4
- F602 B4
- F603 A6
- F604 B6
- F605 B6
- 1602 A8
- 1603 B8
- 1604 A9
- 1605 B9
- 1606 C4
- 1607 C4
- 1608 A5
- 1609 B5
- 1611 C7
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- 1614 E4
- 1615 E4
- 1616 E8
- 1617 F5
- 1618 A6
- 1619 D8

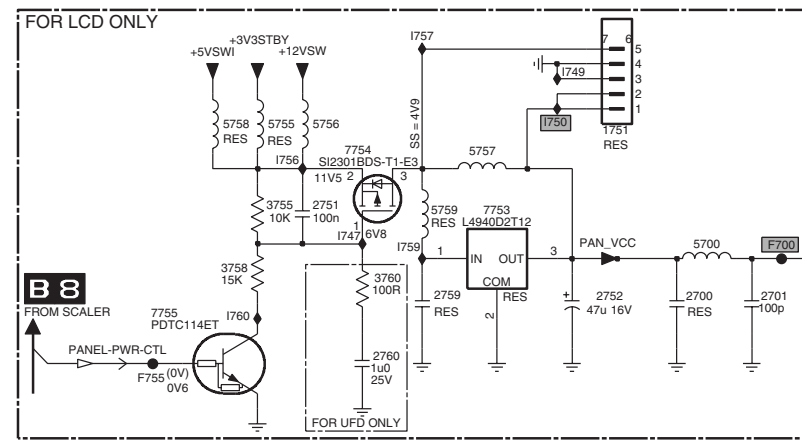
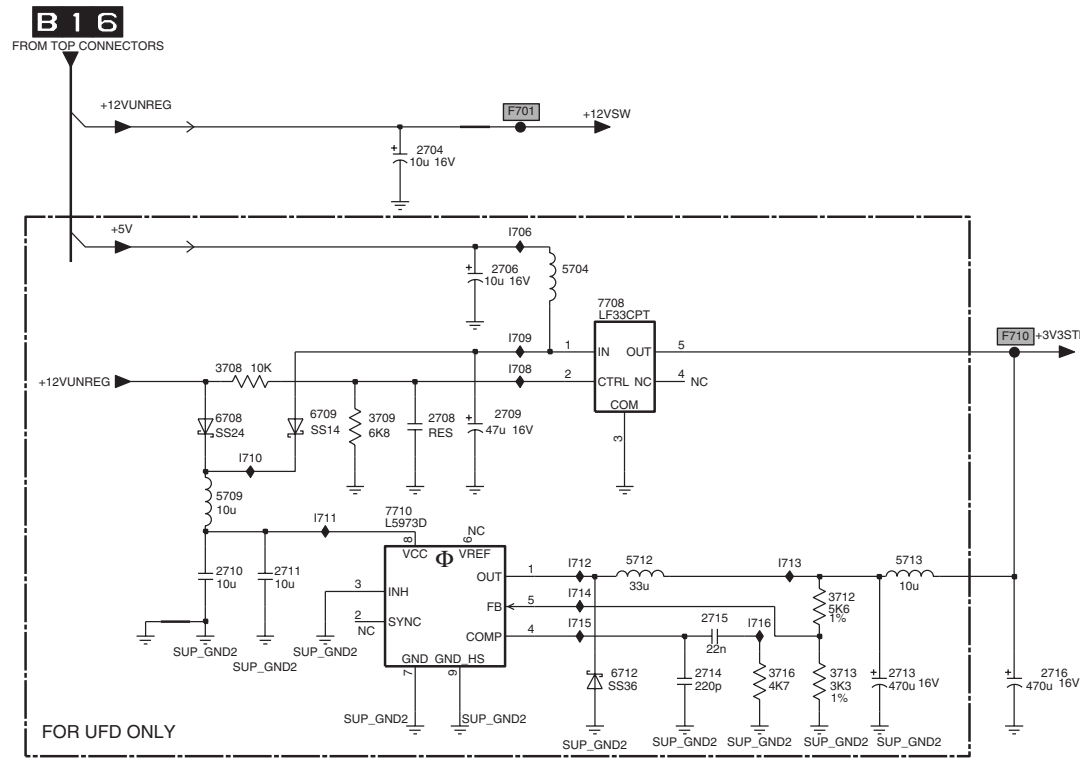
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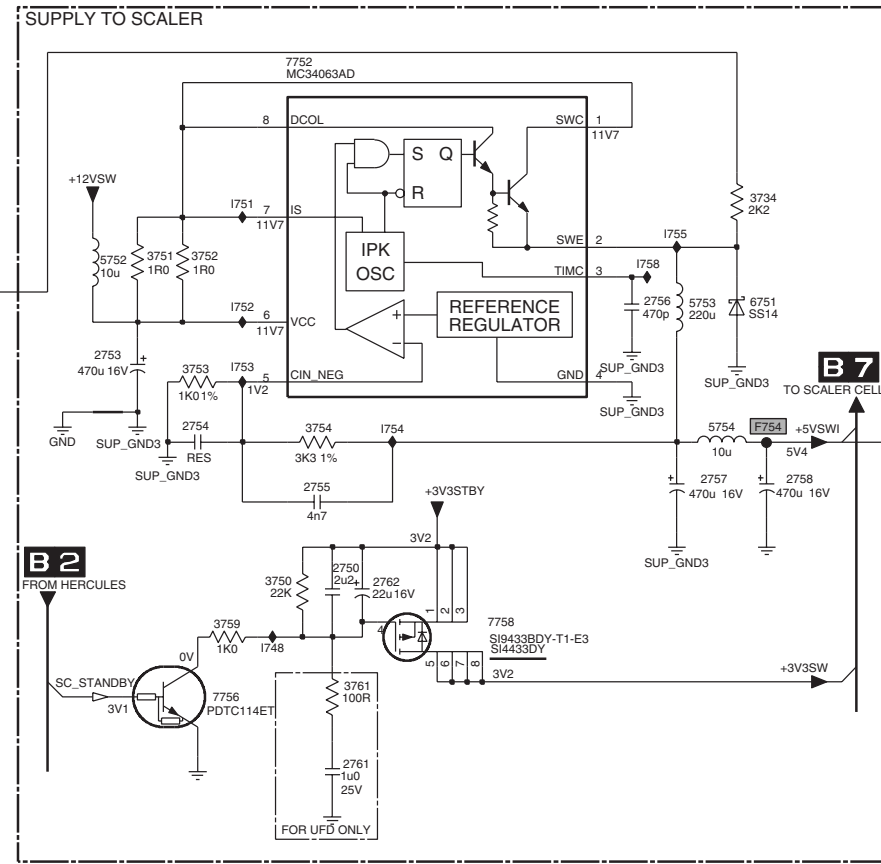
SSB: DC-DC Converter

B6 DC-DC CONVERTER

B6

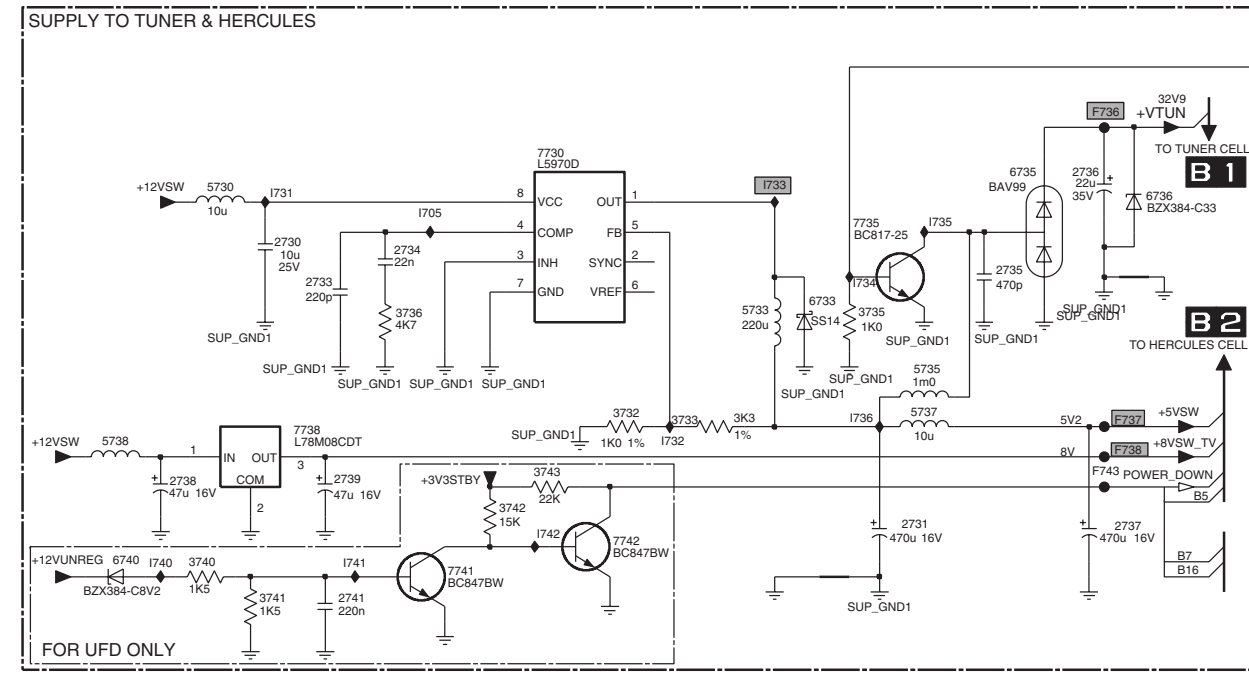


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B7

B4

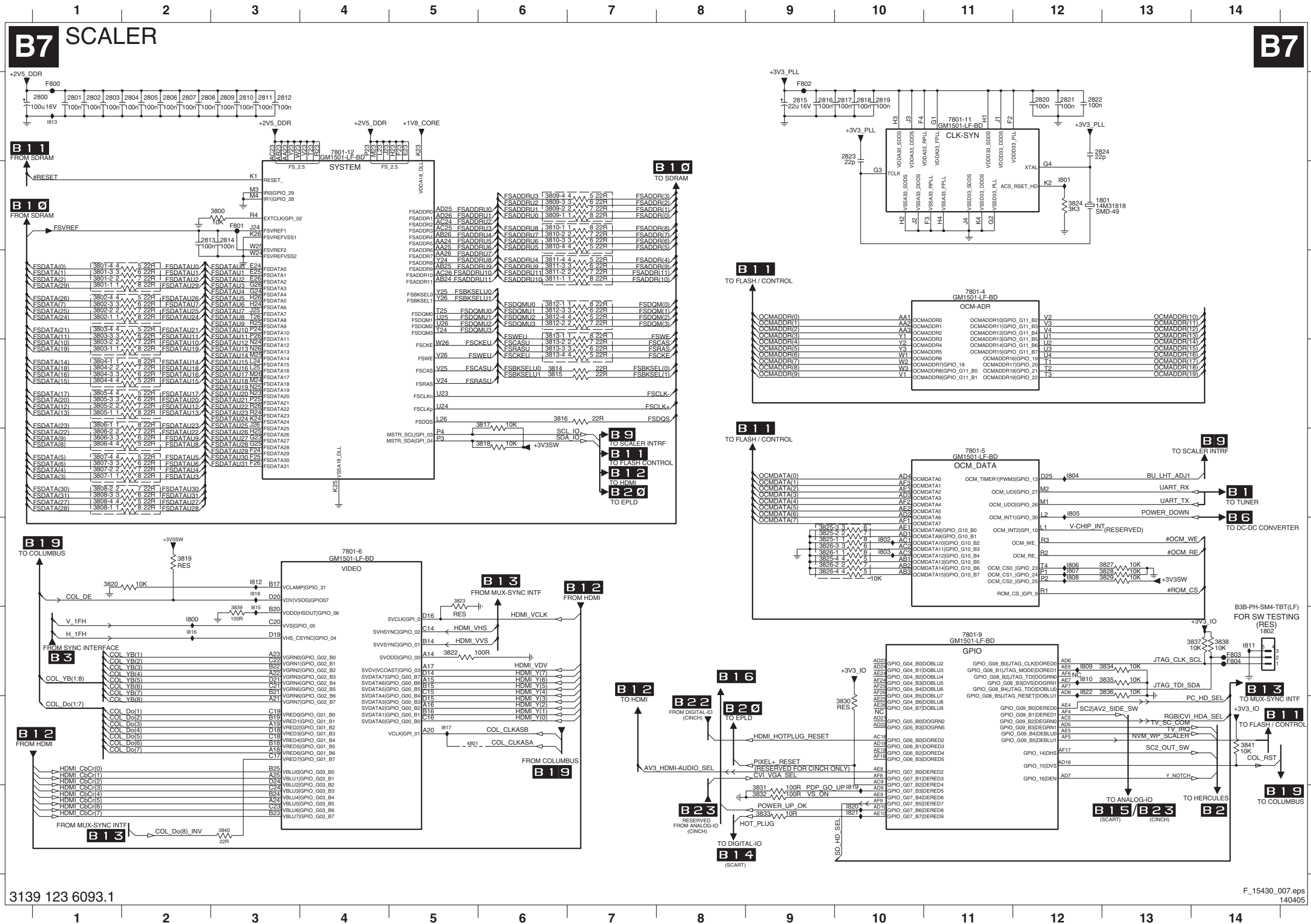


B1

B2

- 1751 A10
- 2700 B11
- 2701 B11
- 2704 A3
- 2706 B3
- 2708 C3
- 2709 C3
- 2710 C2
- 2711 C2
- 2713 D5
- 2714 D4
- 2715 D4
- 2716 D6
- 2730 E2
- 2731 G5
- 2733 F2
- 2734 E3
- 2735 F6
- 2736 E6
- 2737 G6
- 2738 G2
- 2739 G3
- 2741 G3
- 2750 F9
- 2751 B9
- 2752 B10
- 2753 E8
- 2754 E8
- 2755 F9
- 2756 E10
- 2757 E11
- 2758 E11
- 2759 B9
- 2760 B9
- 2761 G9
- 2762 F9
- 3708 B2
- 3709 C3
- 3712 D5
- 3713 D5
- 3716 D5
- 3732 F4
- 3733 F4
- 3734 D11
- 3735 F5
- 3736 F3
- 3740 G2
- 3741 G2
- 3742 G3
- 3743 G4
- 3750 F9
- 3751 D8
- 3752 D8
- 3753 E8
- 3754 E9
- 3755 B9
- 3758 B8
- 3759 F8
- 3760 B9
- 3761 F9
- 5700 B11
- 5704 B4
- 5709 C2
- 5712 C4
- 5713 C5
- 5730 E2
- 5733 F5
- 5737 F5
- 5738 F1
- 5752 D8
- 5753 E11
- 5754 E11
- 5755 A9
- 5756 A9
- 5757 A9
- 5758 A8
- 5759 B9
- 6708 C2
- 6709 C2
- 6712 D4
- 6733 F5
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- 6736 E6
- 6740 G2
- 6751 E11
- 7708 B4
- 7710 C3
- 7730 E3
- 7735 E5
- 7738 F2
- 7741 G3
- 7742 G4
- 7752 D9
- 7753 B10
- 7754 A9
- 7755 B8
- 7756 G8
- 7758 F10
- 7700 B11
- 7701 A3
- 7710 B6
- 7736 E6
- 7737 F6
- 7738 F6
- 7743 G6
- 7754 E11
- 7755 C8
- 7705 E3
- 7706 B3
- 7708 B3
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- 7710 C2
- 7711 C2
- 7712 C4
- 7713 C5
- 7714 C4
- 7715 D4
- 7716 D5
- 7731 E2
- 7732 F4
- 7733 E5
- 7734 F5
- 7735 E5
- 7736 F5
- 7740 G2
- 7741 G3
- 7742 G4
- 7747 B9
- 7748 F8
- 7749 A10
- 7750 A10
- 7751 D8
- 7752 E8
- 7753 E8
- 7754 E9
- 7755 B9
- 7756 B9
- 7757 A9
- 7758 D10
- 7759 B9
- 7760 B9
- 7761 F9
- 7762 F9
- 7763 F9
- 7764 G2
- 7765 B9
- 7766 B9
- 7767 B9
- 7768 B9
- 7769 B9
- 7770 B9
- 7771 B9
- 7772 B9
- 7773 B9
- 7774 B9
- 7775 B9
- 7776 B9
- 7777 B9
- 7778 B9
- 7779 B9
- 7780 B9
- 7781 B9
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- 7790 B9

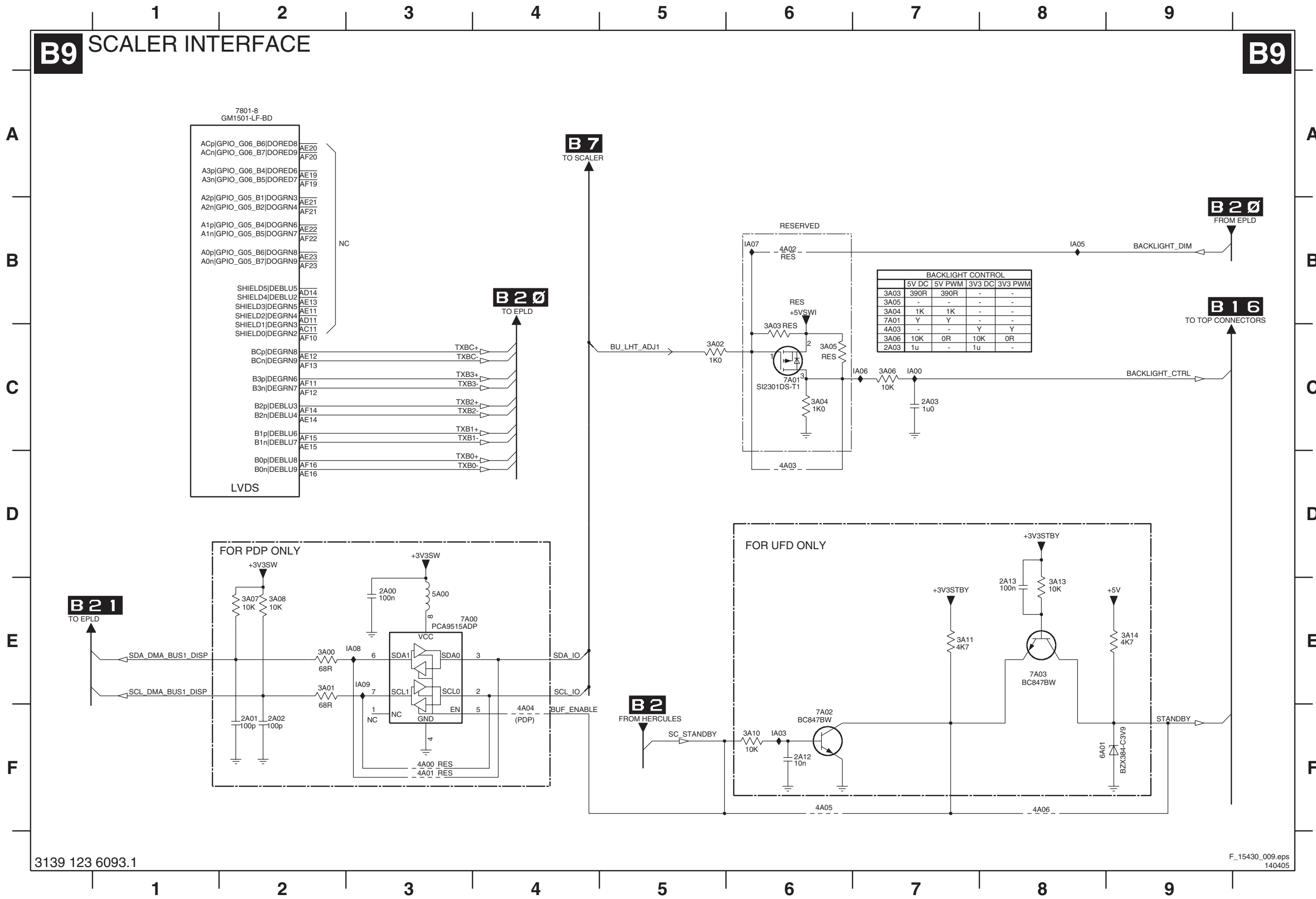
SSB: Scaler



- 1801 B12
- 1802 G14
- 2800 A1
- 2801 A1
- 2802 A1
- 2803 A1
- 2804 A2
- 2805 A2
- 2806 A2
- 2807 A2
- 2808 A2
- 2809 A3
- 2810 A3
- 2811 A3
- 2812 A3
- 2813 B2
- 2814 B3
- 2815 A9
- 2816 A9
- 2817 A10
- 2818 A10
- 2819 A10
- 2820 A12
- 2821 A12
- 2822 A12
- 2823 A10
- 2824 A12
- 3800 B3
- 3801-1 C1
- 3801-2 C1
- 3801-3 C1
- 3801-4 C1
- 3802-1 C1
- 3802-2 C1
- 3802-3 C1
- 3802-4 C1
- 3803-1 D1
- 3803-2 D1
- 3803-3 C1
- 3803-4 C1
- 3804-1 D1
- 3804-2 D1
- 3804-3 D1
- 3804-4 D1
- 3805-1 D1
- 3805-2 D1
- 3805-3 D1
- 3805-4 D1
- 3806-1 D1
- 3806-2 E1
- 3806-3 E1
- 3806-4 E1
- 3807-1 E1
- 3807-2 E1
- 3807-3 E1
- 3807-4 E1
- 3808-1 E1
- 3808-2 E1
- 3808-3 E1
- 3808-4 E1
- 3809-1 B6
- 3809-2 B6
- 3809-3 B6
- 3809-4 B6
- 3810-1 B6
- 3810-2 B6
- 3810-3 B6
- 3810-4 B6
- 3811-1 C6
- 3811-2 C6
- 3811-3 C6
- 3811-4 C6
- 3812-1 C6
- 3812-2 C6
- 3812-3 C6
- 3812-4 C6
- 3813-1 C6
- 3813-2 D6
- 3813-3 D6
- 3813-4 D6
- 3814 D6
- 3815 D6
- 3816 D6
- 3817 D6
- 3818 E6
- 3819 F2
- 3820 F1
- 3822 G5
- 3823 F5
- 3824 B12
- 3825-1 F9
- 3825-2 F9
- 3825-3 F9
- 3825-4 F9
- 3826-1 F9
- 3826-2 F9
- 3826-3 F9
- 3826-4 F9
- 3827 F13
- 3828 F13
- 3829 F13
- 3830 H10
- 3831 I9
- 3832 I9
- 3833 I9
- 3834 G13
- 3835 G13
- 3836 G13
- 3837 G14
- 3838 G14
- 3839 G3
- 3840 I3
- 3841 H4
- 4801 H5
- 7801-12 A4
- 7801-4 C11
- 7801-5 E11
- 7801-6 F4
- 7801-9 G11
- F800 A1
- F801 B3
- F802 A9
- F803 G14
- F804 G14
- I800 G2
- I801 B12
- I802 F10
- I803 F10
- I804 E12
- I805 E12
- I806 F12
- I807 F12
- I808 F12
- I809 G12
- I810 G12
- I811 G14
- I812 F3
- I813 A1
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- I819 I10
- I820 I10
- I821 I10
- I822 G12

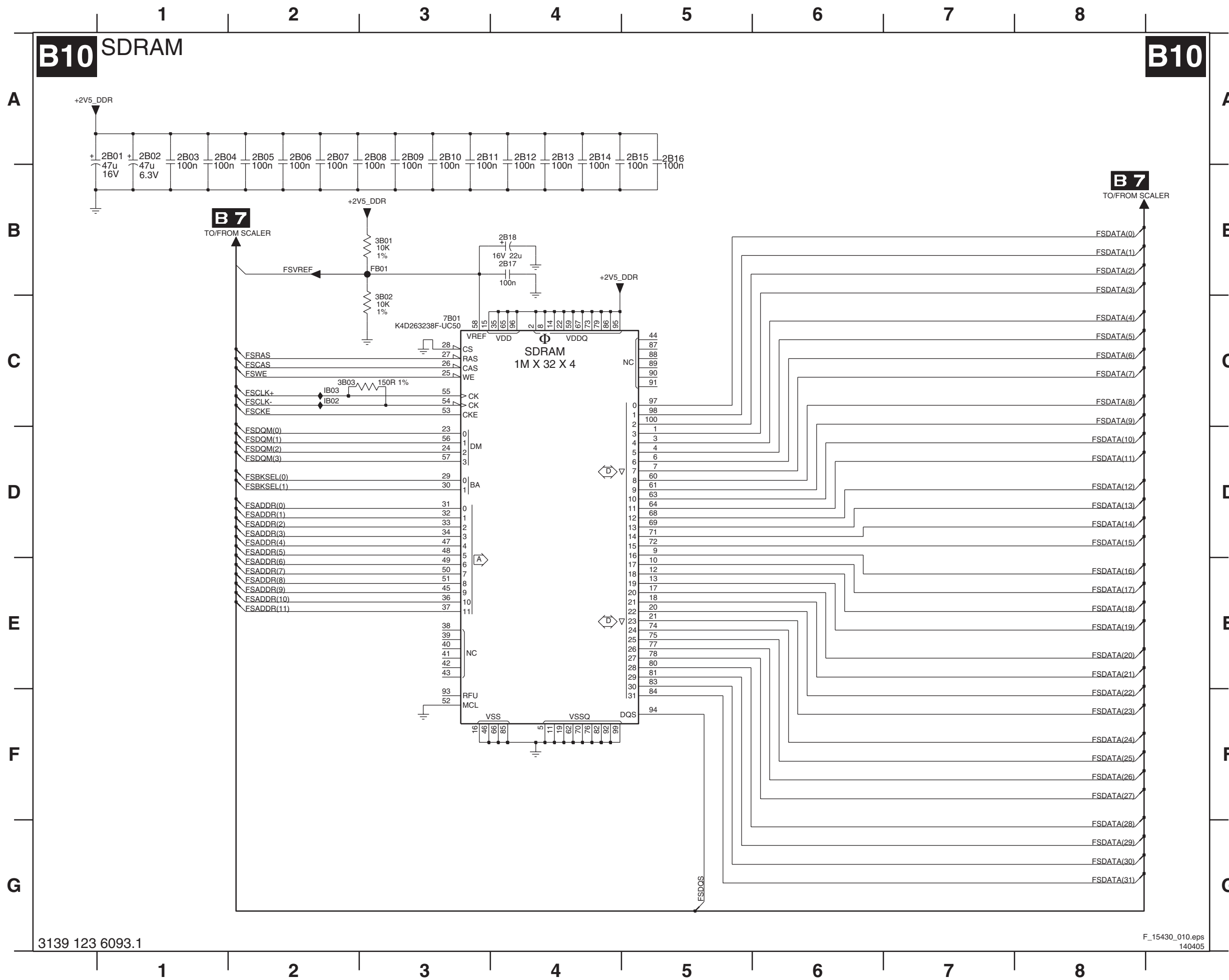
SSB: Scaler Interface

B9 SCALER INTERFACE



- 2A00 E3
- 2A01 F2
- 2A02 F2
- 2A03 C7
- 2A12 F6
- 2A13 E8
- 3A00 E2
- 3A01 E2
- 3A02 C5
- 3A03 C6
- 3A04 C6
- 3A05 C6
- 3A06 C7
- 3A07 E2
- 3A08 E2
- 3A10 F6
- 3A11 E7
- 3A13 E8
- 3A14 E9
- 4A00 F3
- 4A01 F3
- 4A02 B6
- 4A03 D6
- 4A04 F4
- 4A05 F6
- 4A06 F8
- 5A00 E3
- 6A01 F8
- 7801-8 A2
- 7A00 E4
- 7A01 C6
- 7A02 F6
- 7A03 E8
- IA00 C7
- IA03 F6
- IA05 B8
- IA06 C7
- IA07 B6
- IA08 E3
- IA09 E3

SSB: SDRAM



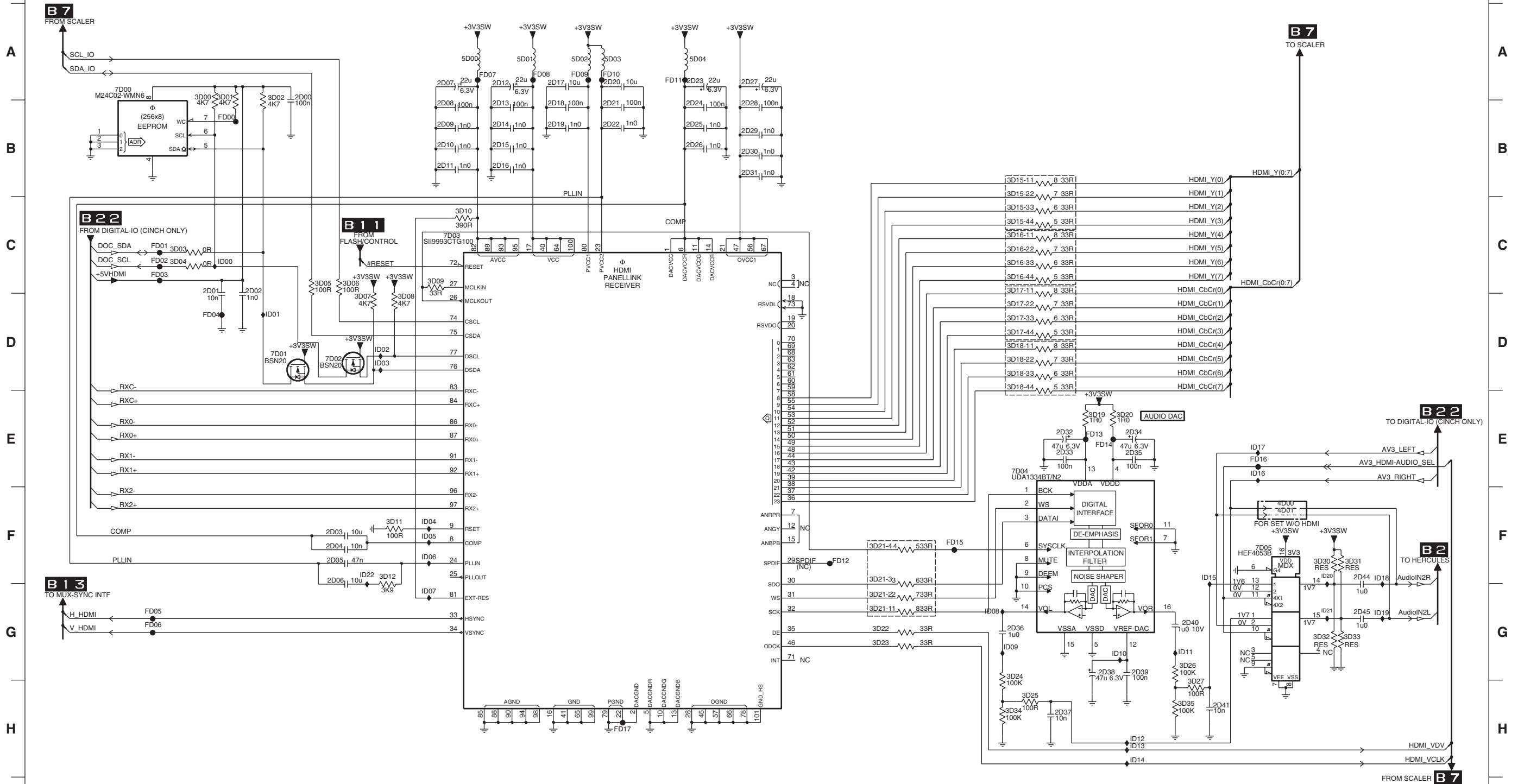
- 2B01 A1
- 2B02 A1
- 2B03 A1
- 2B04 A1
- 2B05 A2
- 2B06 A2
- 2B07 A2
- 2B08 A3
- 2B09 A3
- 2B10 A3
- 2B11 A3
- 2B12 A4
- 2B13 A4
- 2B14 A4
- 2B15 A5
- 2B16 A5
- 2B17 B4
- 2B18 B4
- 3B01 B3
- 3B02 B3
- 3B03 C2
- 7B01 C3
- FB01 B3
- IB02 C2
- IB03 C2

SSB: HDMI (N.A.)

2D00 A3	2D06 F4	2D12 A5	2D18 B6	2D24 B7	2D30 B8	2D36 G11	2D44 F14	3D04 C2	3D10 C5	3D15-4 C11	3D17-2 D11	3D18-4 D11	3D21-4 F9	3D27 H13	3D35 H12	5D03 A7	7D04 E11	FD04 D2	FD10 A6	FD16 E13	ID04 F5	ID10 G12	ID16 E13	ID22 F4
2D01 C2	2D07 A5	2D13 B5	2D19 B6	2D25 B7	2D31 B8	2D37 H11	2D45 G14	3D05 C4	3D11 F4	3D16-1 C11	3D17-3 D11	3D19 E12	3D22 G9	3D30 F14	4D00 F13	5D04 A7	7D05 F13	FD05 G2	FD11 A7	FD17 H7	ID05 F5	ID11 G12	ID17 E13	
2D02 C3	2D08 B5	2D14 B5	2D20 A7	2D26 B7	2D32 E11	2D38 G12	3D00 A2	3D06 C4	3D12 F4	3D16-2 C11	3D17-4 D11	3D20 E12	3D23 G9	3D31 F14	4D01 F13	7D00 A2	FD06 B3	FD06 G2	FD12 F9	ID00 C3	ID06 F5	ID12 H12	ID18 F14	
2D03 F4	2D09 B5	2D15 B5	2D21 B6	2D27 A8	2D33 E11	2D39 G12	3D01 A3	3D07 D4	3D15-1 B11	3D16-3 C11	3D18-1 D11	3D21-1 G9	3D24 G11	3D32 G14	5D00 A5	7D01 D3	FD01 C2	FD07 A5	FD13 E11	ID01 D3	ID07 G5	ID13 H12	ID19 G14	
2D04 F4	2D10 B5	2D16 B5	2D22 B6	2D28 B8	2D34 E12	2D40 G12	3D02 A3	3D08 D4	3D15-2 B11	3D16-4 C11	3D18-2 D11	3D21-2 G9	3D25 H11	3D33 G14	5D01 A6	7D02 D4	FD02 C2	FD08 A6	FD14 E12	ID02 D4	ID08 G10	ID14 H12	ID20 F14	
2D05 F4	2D11 B5	2D17 A6	2D23 A7	2D29 B8	2D35 E12	2D41 H13	3D03 C2	3D09 C5	3D15-3 C11	3D17-1 C11	3D18-3 D11	3D21-3 F9	3D26 G12	3D34 H11	5D02 A6	7D03 C5	FD03 C2	FD09 A6	FD15 F10	ID03 D4	ID09 G11	ID15 F13	ID21 G14	

B12 HDMI (NOT APPLICABLE IN EUROPE SET)

B12

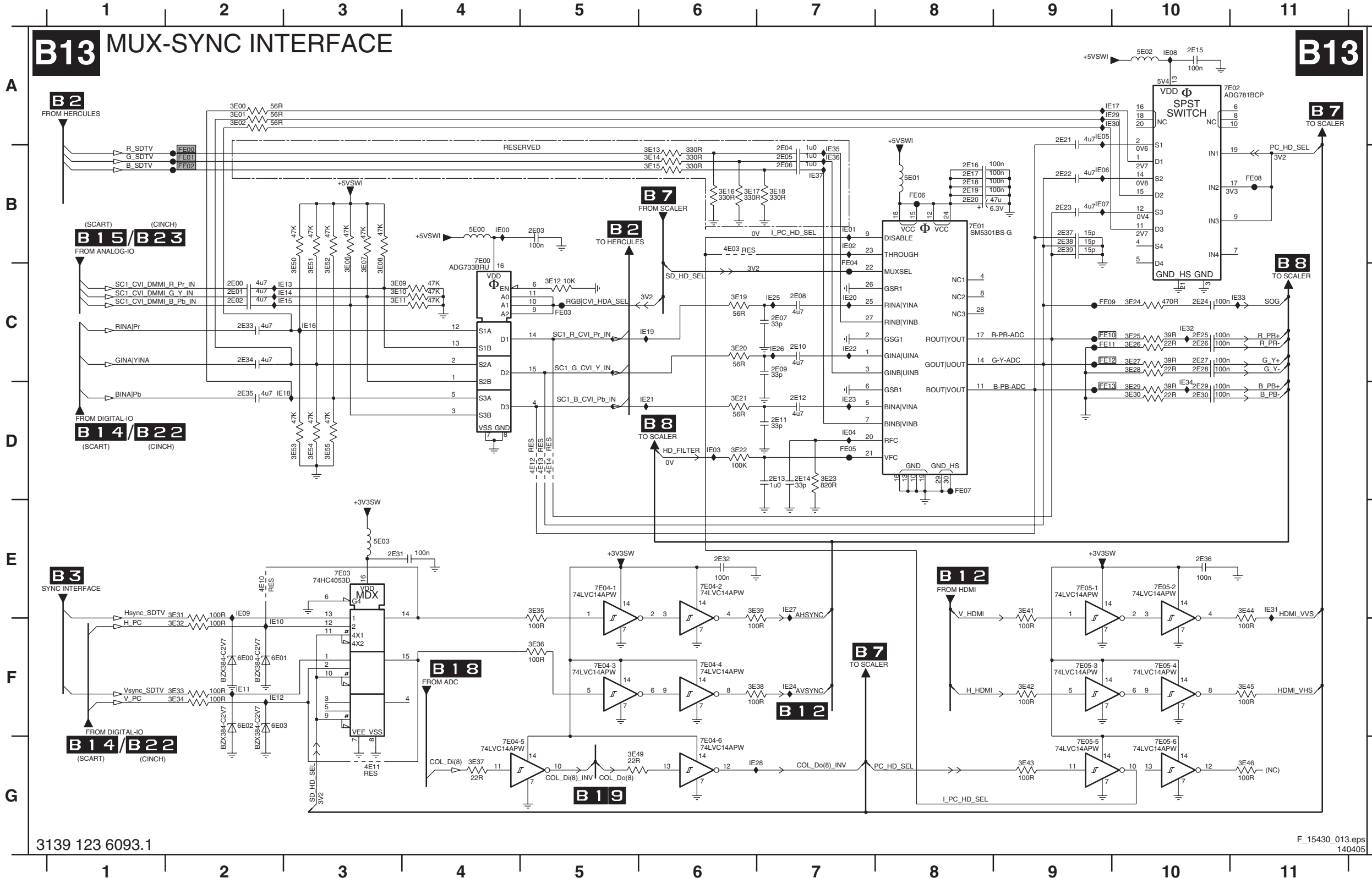


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140405

SSB: MUX Sync Interface

B13 MUX-SYNC INTERFACE



2E00 C2	3E50 C3	IE34 D10
2E01 C2	3E51 C3	IE35 B7
2E02 C2	3E52 C3	IE36 B7
2E03 B5	3E53 D3	IE37 B7
2E04 B7	3E54 D3	
2E05 B7	3E55 D3	
2E06 B7	4E03 B6	
2E07 C7	4E10 E2	
2E08 C7	4E11 G3	
2E09 C7	4E12 D5	
2E10 C7	4E13 D5	
2E11 D7	4E14 D5	
2E12 D7	5E00 B4	
2E13 D7	5E01 B8	
2E14 D7	5E02 A10	
2E15 A10	5E03 E3	
2E16 B8	6E00 F2	
2E17 B8	6E01 F2	
2E18 B8	6E02 F2	
2E19 B8	6E03 F2	
2E20 B8	7E00 B4	
2E21 A9	7E01 B8	
2E22 B9	7E02 A10	
2E23 B9	7E03 E3	
2E24 C10	7E04-1 E5	
2E25 C10	7E04-2 E6	
2E26 C10	7E04-3 F5	
2E27 C10	7E04-4 F6	
2E28 C10	7E04-5 G5	
2E29 D10	7E04-6 G6	
2E30 D10	7E05-1 E9	
2E31 E3	7E05-2 E10	
2E32 E6	7E05-3 F9	
2E33 C2	7E05-4 F10	
2E34 C2	7E05-5 G9	
2E35 D2	7E05-6 G10	
2E36 E10	FE00 B2	
2E37 B9	FE01 B2	
2E38 B9	FE02 B2	
2E39 B9	FE03 C5	
3E00 A2	FE04 C7	
3E01 A2	FE05 D7	
3E02 A2	FE06 B8	
3E03 C3	FE07 D8	
3E07 C3	FE08 B11	
3E08 C3	FE09 C9	
3E09 C3	FE10 C9	
3E10 C3	FE11 C9	
3E11 C3	FE12 C9	
3E12 C5	FE13 D9	
3E13 B6	IE00 B4	
3E14 B6	IE01 B7	
3E15 B6	IE02 B7	
3E16 B6	IE03 D6	
3E17 B6	IE04 D7	
3E18 B7	IE05 A9	
3E19 C6	IE06 B9	
3E20 C6	IE07 B9	
3E21 D6	IE08 A10	
3E22 D6	IE09 E2	
3E23 D7	IE10 F2	
3E24 C10	IE11 F2	
3E25 C10	IE12 F2	
3E26 C10	IE13 C3	
3E27 C10	IE14 C3	
3E28 C10	IE15 C3	
3E29 D10	IE16 C3	
3E30 D10	IE17 A10	
3E31 E2	IE18 D2	
3E32 F2	IE19 C6	
3E33 F2	IE20 C7	
3E34 F2	IE21 D6	
3E35 E5	IE22 C7	
3E36 F5	IE23 D7	
3E37 G4	IE24 F7	
3E38 F6	IE25 C7	
3E39 E6	IE26 C7	
3E41 E9	IE27 E7	
3E42 F9	IE28 G6	
3E43 G9	IE29 A10	
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3E45 F11	IE31 E11	
3E46 G11	IE32 C10	
3E49 G5	IE33 C11	

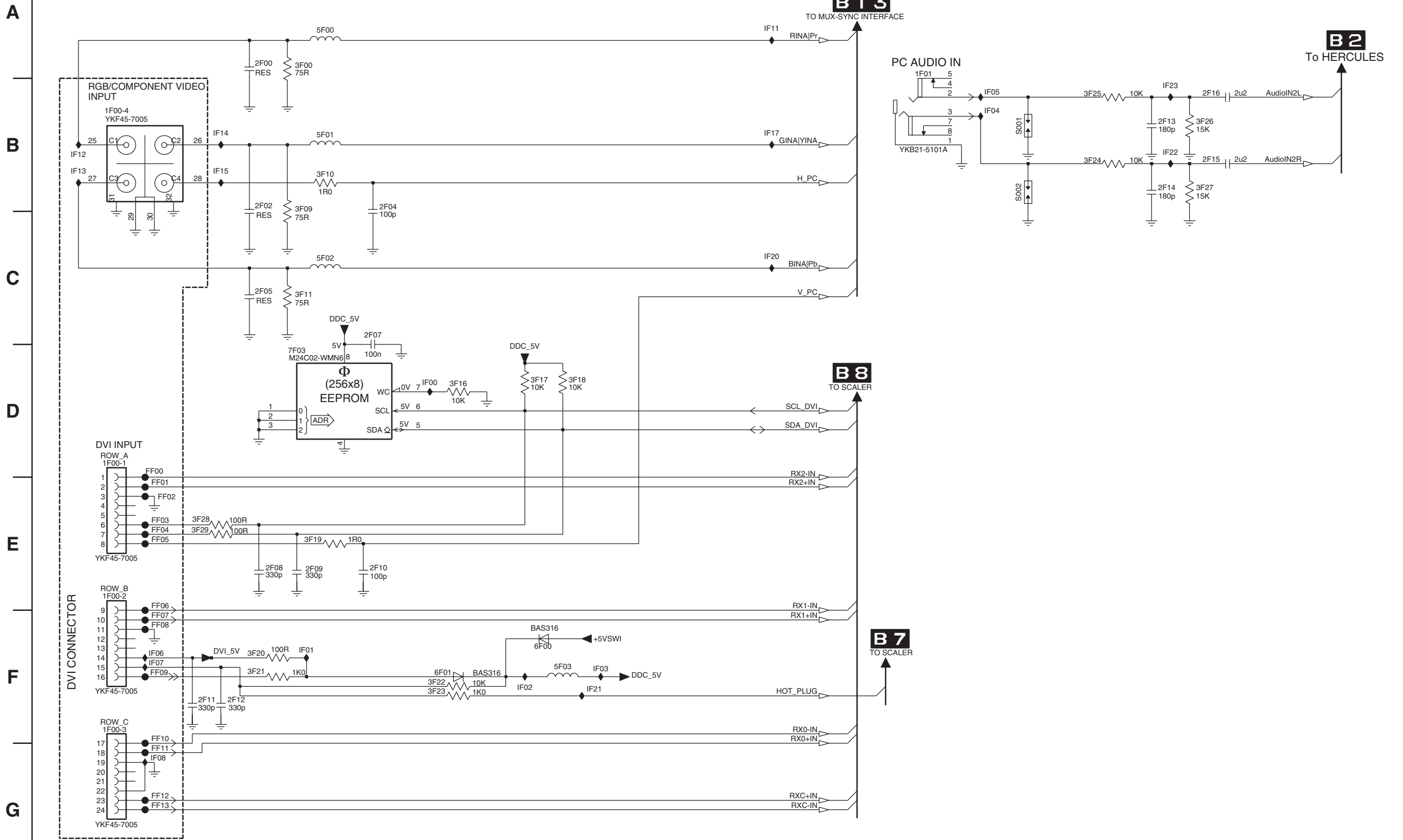
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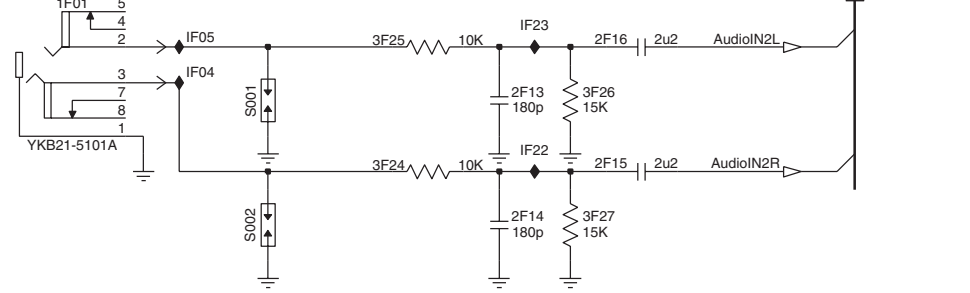
SSB: Digital I/O

B14 DIGITAL IO

B14



PC AUDIO IN



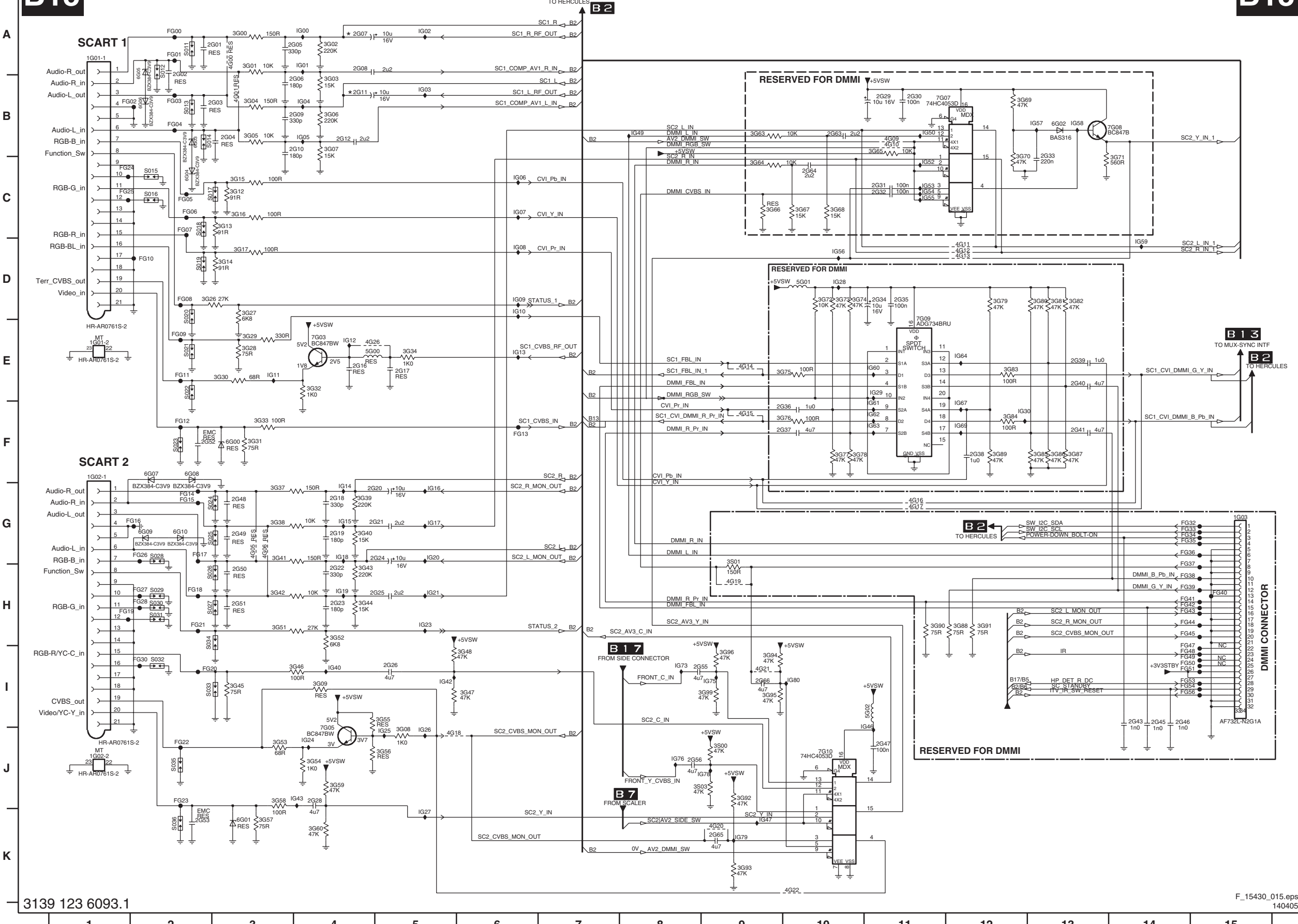
- 1F00-1 D1
- 1F00-2 E1
- 1F00-3 F1
- 1F00-4 B1
- 1F01 A7
- 2F00 A2
- 2F02 B2
- 2F04 B3
- 2F05 C2
- 2F07 C3
- 2F08 E2
- 2F09 E2
- 2F10 E3
- 2F11 F2
- 2F12 F2
- 2F13 B9
- 2F14 B9
- 2F15 B9
- 2F16 B9
- 3F00 A2
- 3F09 B2
- 3F10 B3
- 3F11 C2
- 3F16 D4
- 3F17 D4
- 3F18 D4
- 3F19 E2
- 3F20 F2
- 3F21 F2
- 3F22 F3
- 3F23 F3
- 3F24 B8
- 3F25 B8
- 3F26 B9
- 3F27 B9
- 3F28 E2
- 3F29 E2
- 5F00 A3
- 5F01 B3
- 5F02 C3
- 5F03 F4
- 6F00 F4
- 6F01 F3
- 7F03 D2
- FF00 D1
- FF01 E1
- FF02 E1
- FF03 E1
- FF04 E1
- FF05 E1
- FF06 E1
- FF07 F1
- FF08 F1
- FF09 F1
- FF10 F1
- FF11 G1
- FF12 G1
- FF13 G1
- IF00 D3
- IF01 F2
- IF02 F4
- IF03 F5
- IF04 B8
- IF05 B8
- IF06 F1
- IF07 F1
- IF08 G1
- IF11 A6
- IF12 B1
- IF13 B1
- IF14 B2
- IF15 B2
- IF17 B6
- IF20 C6
- IF21 F5
- IF22 B9
- IF23 B9
- S001 B8
- S002 B8

SSB: Analog I/O

B15

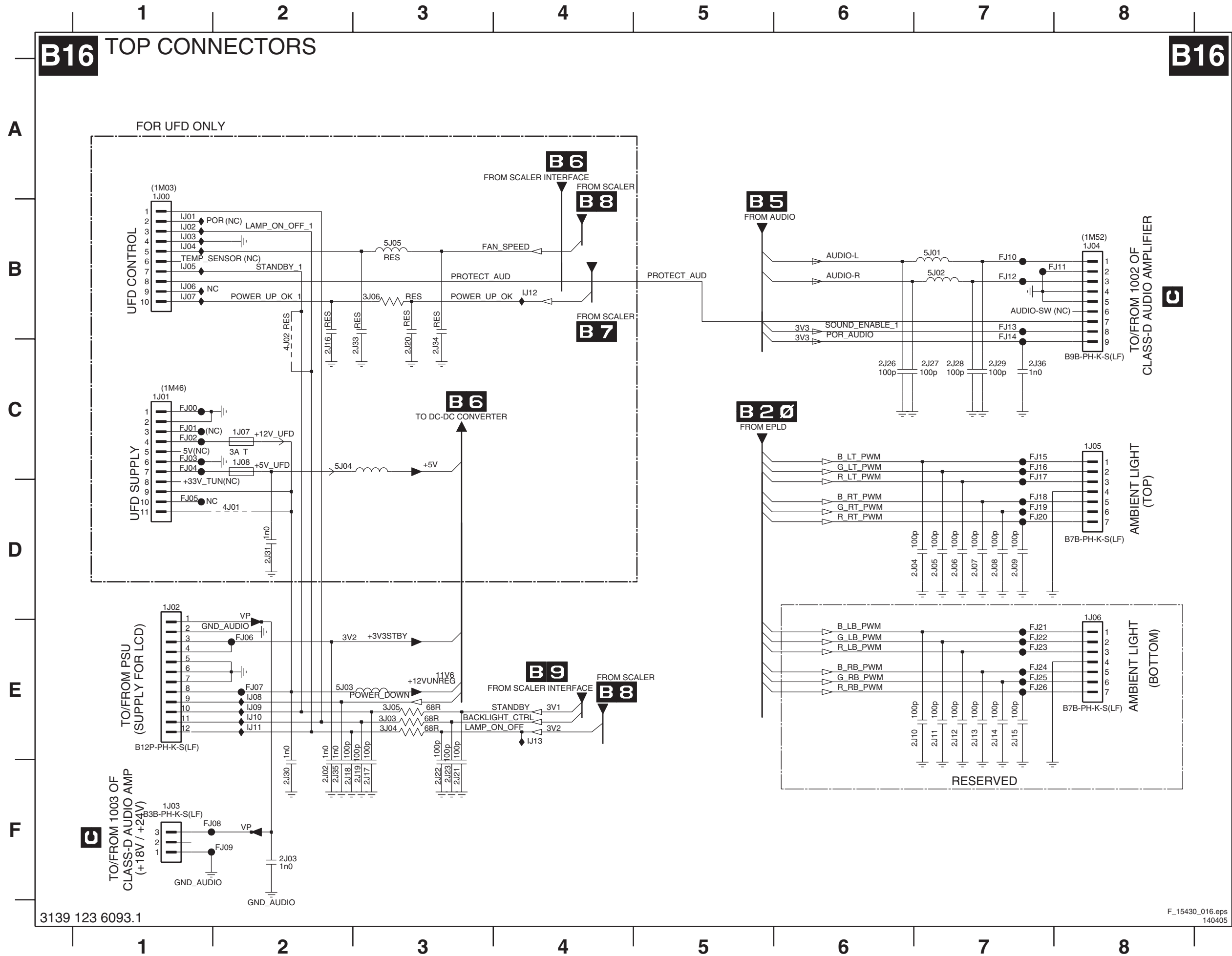
SCART ANALOGUE IO

B15



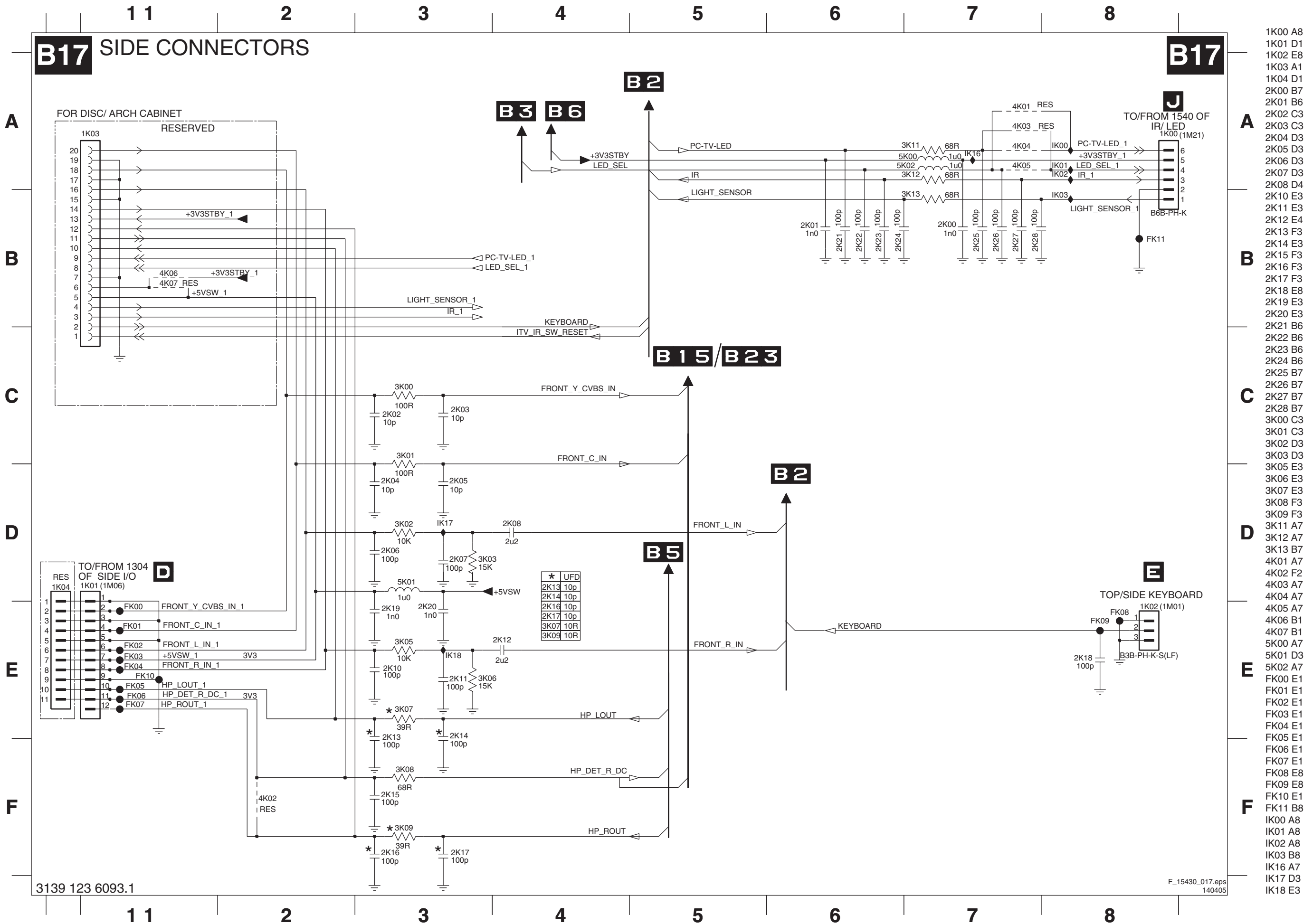
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- IG01-2 E1
- IG02-1 F1
- IG02-2 J1
- IG03 G15
- IG01 A3
- IG00 A3
- IG03 B3
- IG04 B3
- IG05 A3
- IG06 B3
- IG07 A3
- IG08 B3
- IG09 A3
- IG10 B3
- IG11 A3
- IG12 B3
- IG13 A3
- IG14 B3
- IG15 A3
- IG16 B3
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- IG32 B3
- IG33 A3
- IG34 B3
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- IG36 B3
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- IG38 B3
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- IG93 A3
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- IG99 A3
- IG00 B3

SSB: Top Connectors



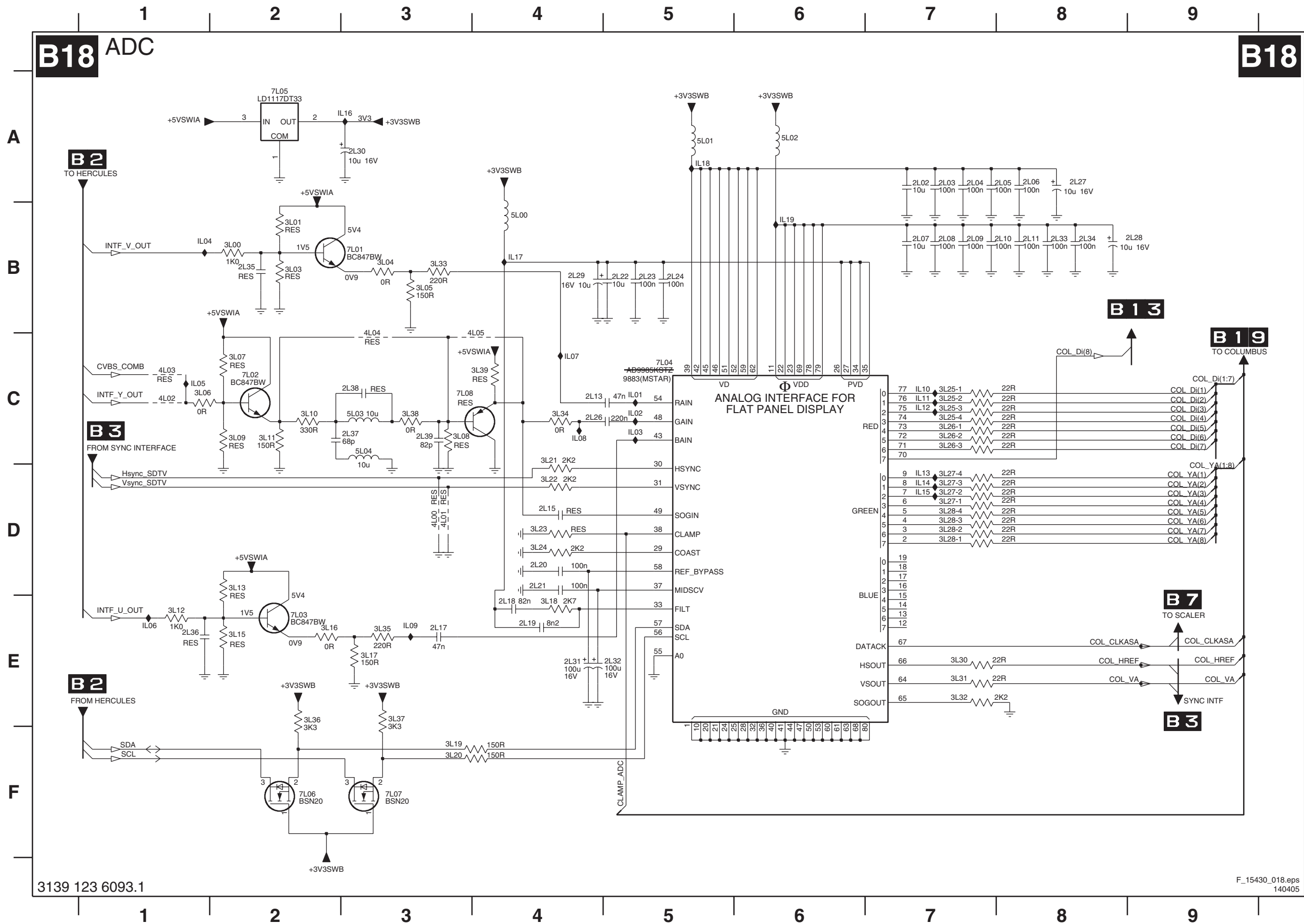
- 1J00 B1
- 1J01 C1
- 1J02 D1
- 1J03 F1
- 1J04 B8
- 1J05 C8
- 1J06 E8
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- 1J08 C2
- 2J02 F2
- 2J03 F2
- 2J04 D6
- 2J05 D7
- 2J06 D7
- 2J07 D7
- 2J08 D7
- 2J09 D7
- 2J10 E6
- 2J11 E7
- 2J12 E7
- 2J13 E7
- 2J14 E7
- 2J15 E7
- 2J16 C2
- 2J17 F3
- 2J18 F2
- 2J19 F3
- 2J20 C3
- 2J21 F3
- 2J22 F3
- 2J23 F3
- 2J26 C6
- 2J27 C7
- 2J28 C7
- 2J29 C7
- 2J30 F2
- 2J31 D2
- 2J33 C2
- 2J34 C3
- 2J35 F2
- 2J36 C7
- 3J03 E3
- 3J04 E3
- 3J05 E3
- 3J06 B3
- 4J01 D2
- 4J02 C2
- 5J01 B7
- 5J02 B7
- 5J03 E2
- 5J04 C2
- 5J05 B3
- FJ00 C1
- FJ01 C1
- FJ02 C1
- FJ03 C1
- FJ04 C1
- FJ05 D1
- FJ06 E2
- FJ07 E2
- FJ08 F1
- FJ09 F2
- FJ10 B7
- FJ11 B8
- FJ12 B7
- FJ13 B7
- FJ14 C7
- FJ15 C7
- FJ16 C7
- FJ17 D7
- FJ18 D7
- FJ19 D7
- FJ20 D7
- FJ21 E7
- FJ22 E7
- FJ23 E7
- FJ24 E7
- FJ25 E7
- FJ26 E7
- IJ01 B1
- IJ02 B1
- IJ03 B1
- IJ04 B1
- IJ05 B1
- IJ06 B1
- IJ07 B1
- IJ08 E2
- IJ09 E2
- IJ10 E2
- IJ11 E2
- IJ12 B4
- IJ13 E4

SSB: Side Connectors



- 1K00 A8
- 1K01 D1
- 1K02 E8
- 1K03 A1
- 1K04 D1
- 2K00 B7
- 2K01 B6
- 2K02 C3
- 2K03 C3
- 2K04 D3
- 2K05 D3
- 2K06 D3
- 2K07 D3
- 2K08 D4
- 2K10 E3
- 2K11 E3
- 2K12 E4
- 2K13 F3
- 2K14 E3
- 2K15 F3
- 2K16 F3
- 2K17 F3
- 2K18 E8
- 2K19 E3
- 2K20 E3
- 2K21 B6
- 2K22 B6
- 2K23 B6
- 2K24 B6
- 2K25 B7
- 2K26 B7
- 2K27 B7
- 2K28 B7
- 3K00 C3
- 3K01 C3
- 3K02 D3
- 3K03 D3
- 3K05 E3
- 3K06 E3
- 3K07 E3
- 3K08 F3
- 3K09 F3
- 3K11 A7
- 3K12 A7
- 3K13 B7
- 4K01 A7
- 4K02 F2
- 4K03 A7
- 4K04 A7
- 4K05 A7
- 4K06 B1
- 4K07 B1
- 5K00 A7
- 5K01 D3
- 5K02 A7
- FK00 E1
- FK01 E1
- FK02 E1
- FK03 E1
- FK04 E1
- FK05 E1
- FK06 E1
- FK07 E1
- FK08 E8
- FK09 E8
- FK10 E1
- FK11 B8
- IK00 A8
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- IK03 B8
- IK16 A7
- IK17 D3
- IK18 E3

SSB: ADC

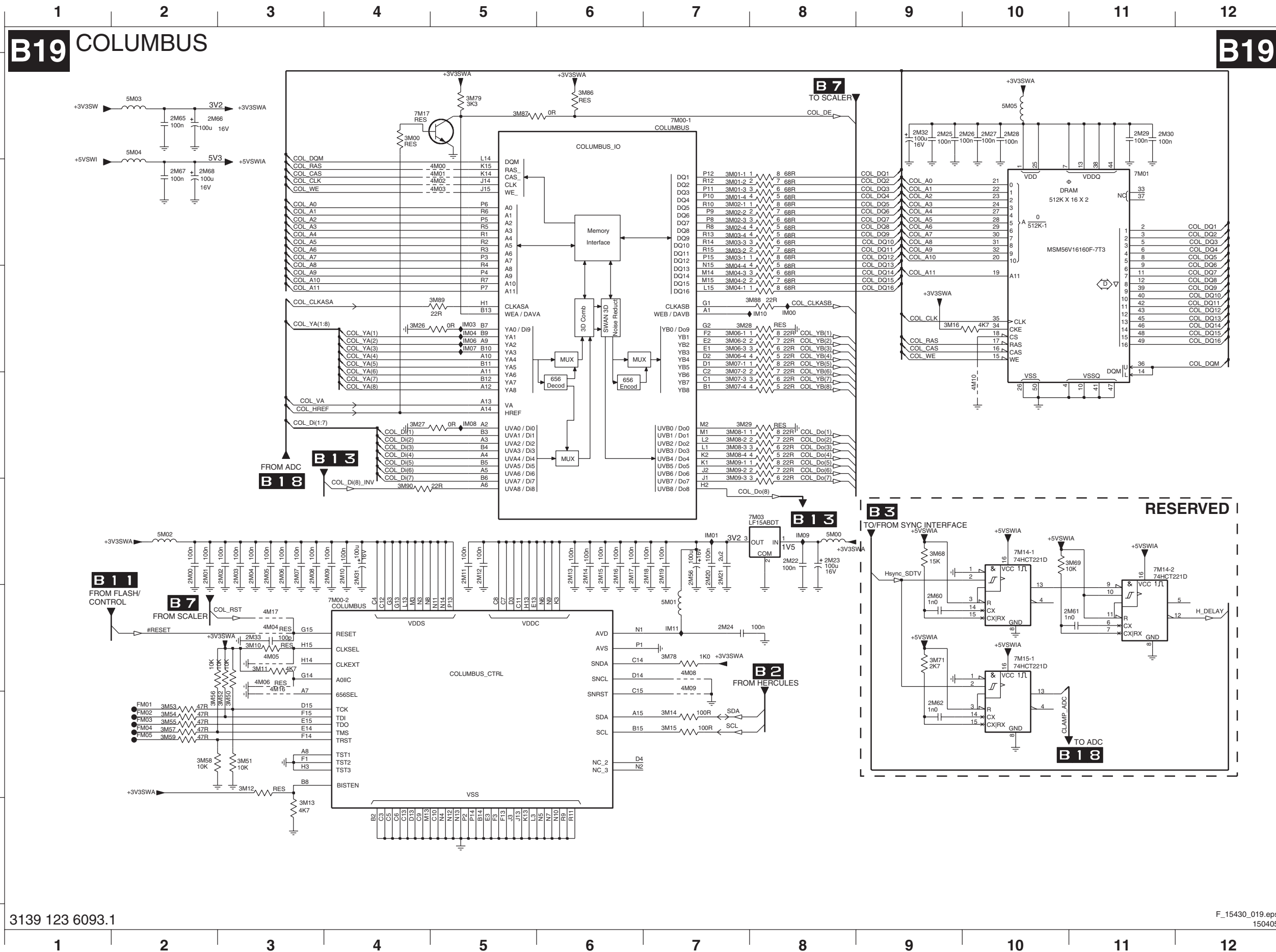


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- 2L10 B8
- 2L11 B8
- 2L13 C4
- 2L15 D4
- 2L17 E3
- 2L18 E4
- 2L19 E4
- 2L20 D4
- 2L21 D4
- 2L22 B5
- 2L23 B5
- 2L24 B5
- 2L26 C4
- 2L27 A8
- 2L28 B9
- 2L29 B4
- 2L30 A3
- 2L31 E4
- 2L32 E5
- 2L33 B8
- 2L34 B8
- 2L35 B2
- 2L36 E1
- 2L37 C3
- 2L38 C3
- 2L39 C3
- 3L00 B2
- 3L01 B2
- 3L03 B2
- 3L04 B3
- 3L05 B3
- 3L06 C1
- 3L07 C2
- 3L08 C3
- 3L09 C2
- 3L10 C2
- 3L11 C1
- 3L12 E1
- 3L13 D2
- 3L15 E2
- 3L16 E2
- 3L17 E3
- 3L18 E4
- 3L19 F3
- 3L20 F3
- 3L21 C4
- 3L22 D4
- 3L23 D4
- 3L24 D4
- 3L25-1 C7
- 3L25-2 C7
- 3L25-3 C7
- 3L25-4 C7
- 3L26-1 C7
- 3L26-2 C7
- 3L26-3 C7
- 3L27-1 D7
- 3L27-2 D7
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- 3L28-4 D7
- 3L30 E7
- 3L31 E7
- 3L32 E7
- 3L33 B3
- 3L34 C4
- 3L35 E3
- 3L36 E2
- 3L37 E3
- 3L38 C3
- 3L39 C4
- 4L00 D3
- 4L01 D3
- 4L02 C1
- 4L03 C1
- 4L04 C3
- 4L05 C4
- 5L00 B4
- 5L01 A5
- 5L02 A6
- 5L03 C3
- 5L04 C3
- 7L01 B3
- 7L02 C2
- 7L03 E2
- 7L04 C5
- 7L05 A2
- 7L06 F2
- 7L07 F3
- 7L08 C3
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- IL02 C5
- IL03 C5
- IL04 B1
- IL05 C1
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- IL08 C4
- IL09 E3
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- IL12 C7
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- IL14 D7
- IL15 D7
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- IL18 A5
- IL19 B6

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SSB: Columbus



- 2M00 E2
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- 2M03 E3
- 2M04 E3
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- 2M27 A10
- 2M28 A10
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- 2M30 A11
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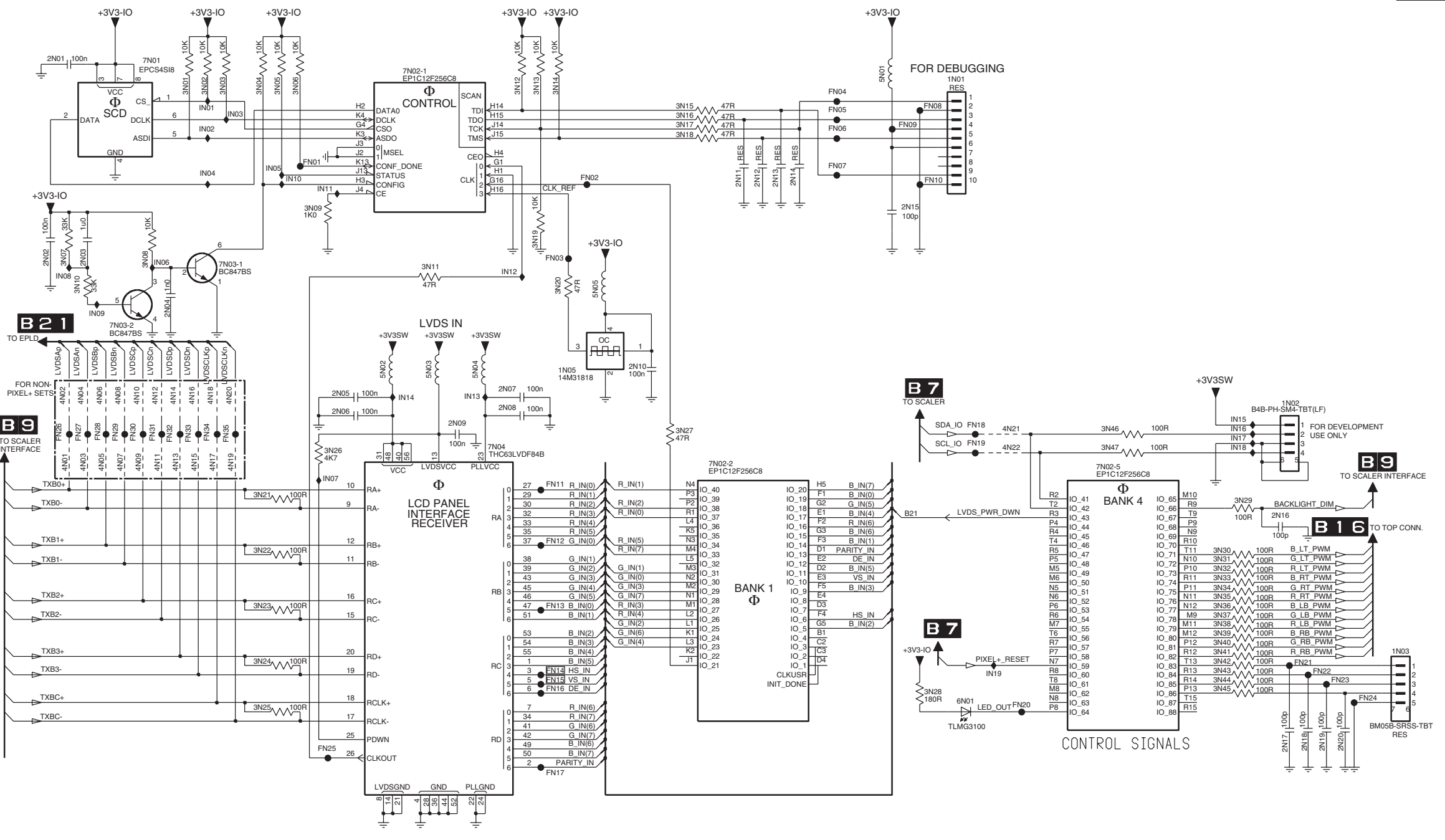
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B20 EPLD B20

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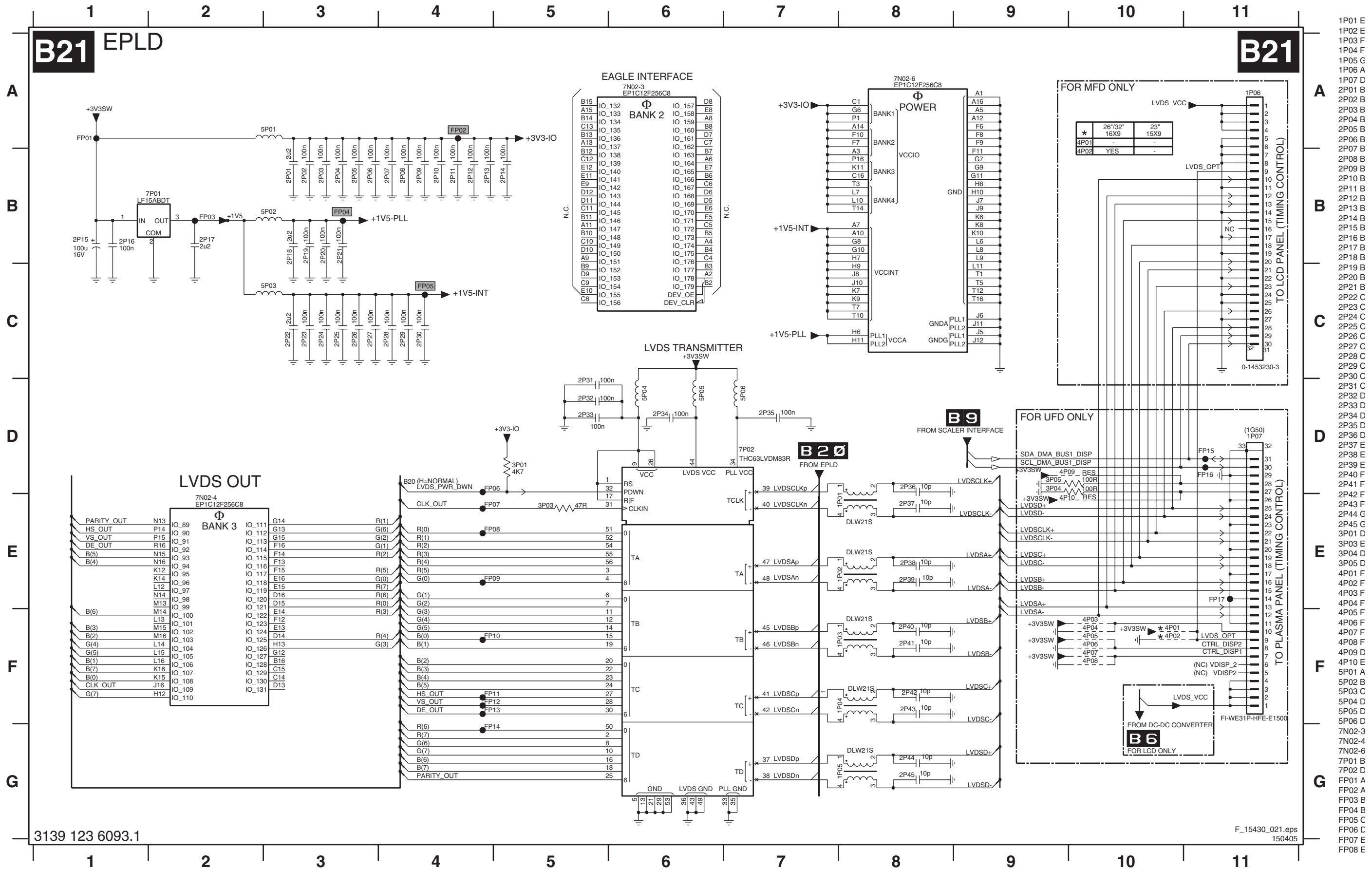
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- 1N05 D5
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- 2N04 C2
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- 2N07 D5
- 2N08 D5
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- 2N12 B7
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- 2N14 B7
- 2N15 B8
- 2N16 E11
- 2N17 F11
- 2N18 F11
- 2N19 F11
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- 3N02 A3
- 3N03 A3
- 3N04 A3
- 3N05 A3
- 3N06 A3
- 3N07 C2
- 3N08 C2
- 3N09 B4
- 3N10 C2
- 3N11 C4
- 3N12 A5
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- 3N14 A5
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- 3N17 B6
- 3N18 B6
- 3N19 C5
- 3N20 C5
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- 3N23 E3
- 3N24 F3
- 3N25 F3
- 3N26 D4
- 3N27 D6
- 3N28 F8
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- 4N18 D3
- 4N19 D3
- 4N20 D3
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- 4N22 D9
- 5N01 A8
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- 5N03 D4
- 5N04 D5
- 5N05 C6
- 6N01 F9
- 7N01 A2
- 7N02-1 A4
- 7N02-2 D7
- 7N02-5 D10
- 7N03-1 C3
- 7N03-2 C2
- 7N04 D5
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- FN02 B6
- FN03 C5
- FN04 A8
- FN05 B8
- FN06 B8
- FN07 B8
- FN08 B8
- FN09 B8
- FN10 B8
- FN11 D5
- FN12 E5
- FN13 E5
- FN14 F5
- FN15 F5
- FN16 F5
- FN17 G5
- FN18 D9
- FN19 D9
- FN20 F9
- FN21 F11
- FN22 F11
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- FN29 D2
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- FN31 D2
- FN32 D2
- FN33 D3
- FN34 D3
- FN35 D3
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- IN08 C2
- IN09 C2
- IN10 B3
- IN11 B4
- IN12 C5
- IN13 D5
- IN14 D4
- IN15 D11
- IN16 D11
- IN17 D11
- IN18 D11
- IN19 F9



1 2 3 4 5 6 7 8 9 10 11 12

SSB: EPLD



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- 1P01 E
- 1P02 E
- 1P03 F
- 1P04 F
- 1P05 C
- 1P06 A
- 1P07 D
- 2P01 B
- 2P02 B
- 2P03 B
- 2P04 B
- 2P05 B
- 2P06 B
- 2P07 B
- 2P08 B
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- 2P17 B
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- 2P20 B
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- 2P26 C
- 2P27 C
- 2P28 C
- 2P29 C
- 2P30 C
- 2P31 C
- 2P32 D
- 2P33 D
- 2P34 D
- 2P35 D
- 2P36 D
- 2P37 E
- 2P38 E
- 2P39 E
- 2P40 F
- 2P41 F
- 2P42 F
- 2P43 F
- 2P44 G
- 2P45 G
- 3P01 D
- 3P03 E
- 3P04 D
- 3P05 D
- 4P01 F
- 4P02 F
- 4P03 F
- 4P04 F
- 4P05 F
- 4P06 F
- 4P07 F
- 4P08 F
- 4P09 D
- 4P10 E
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- 5P04 D
- 5P05 D
- 5P06 D
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- 7N02-6
- 7P01 B
- 7P02 D
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Layout Small Signal Board (Top Side Part 1)

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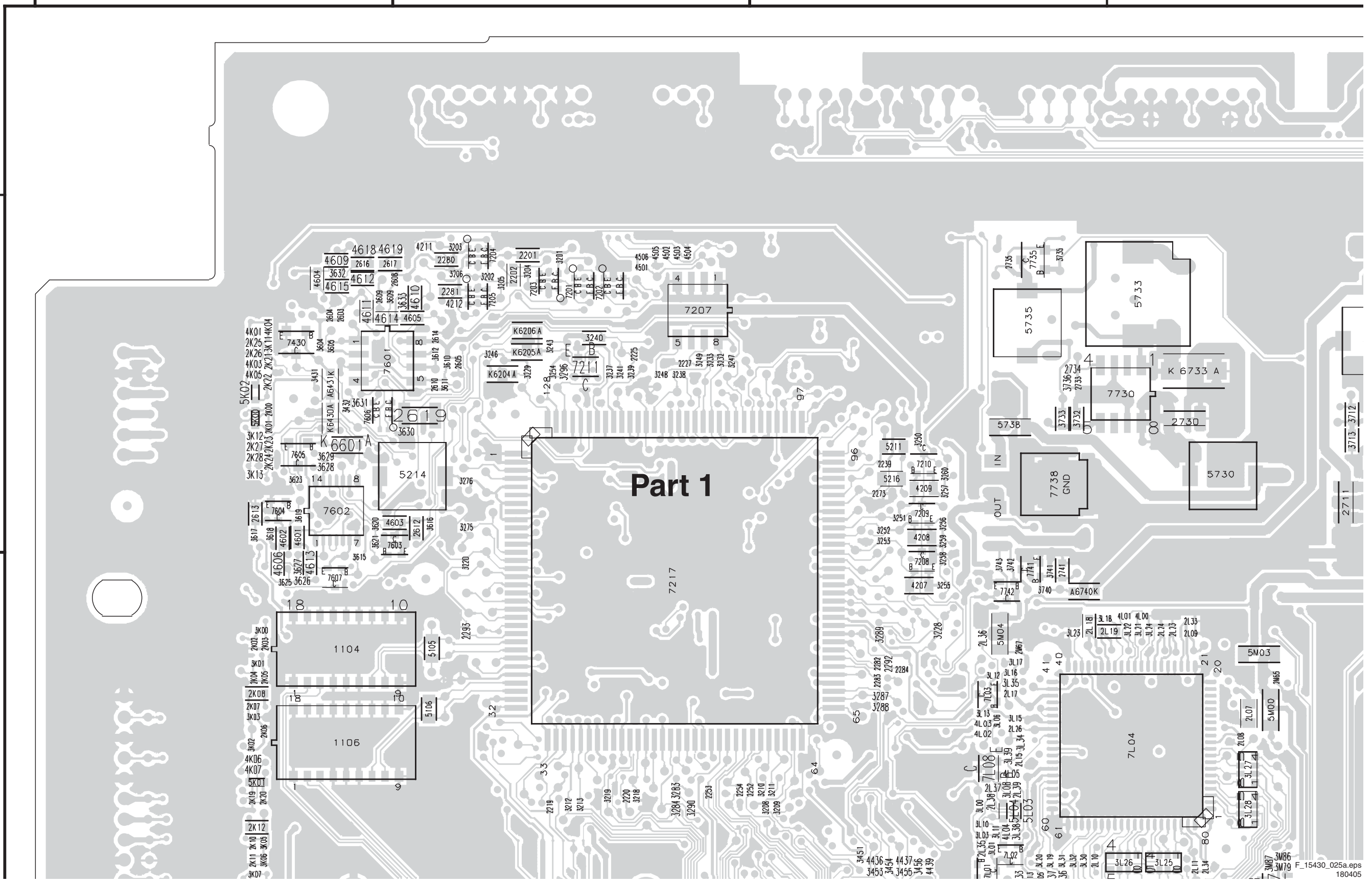
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3

4

A

B



Layout Small Signal Board (Top Side Part 2)

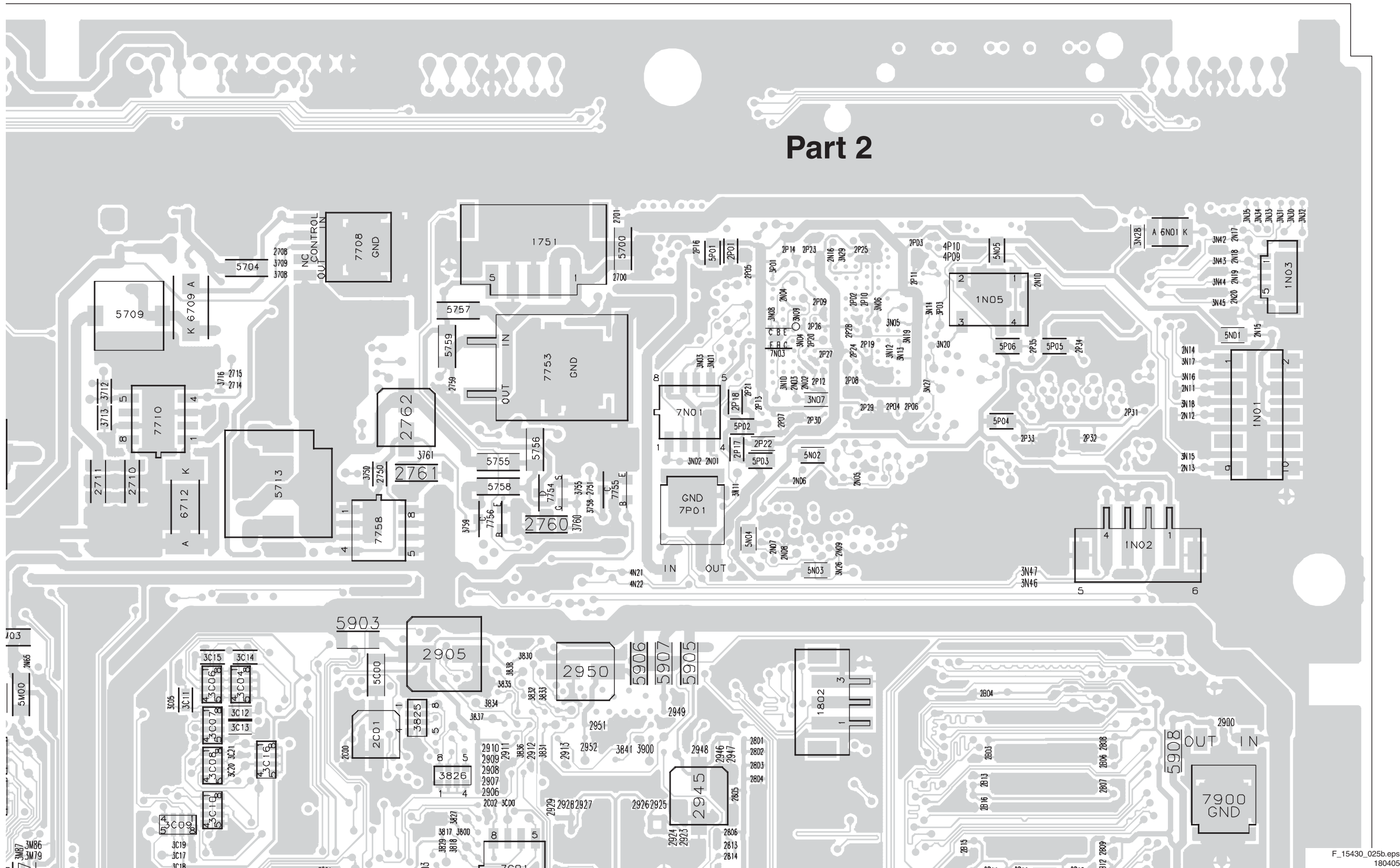
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6

7

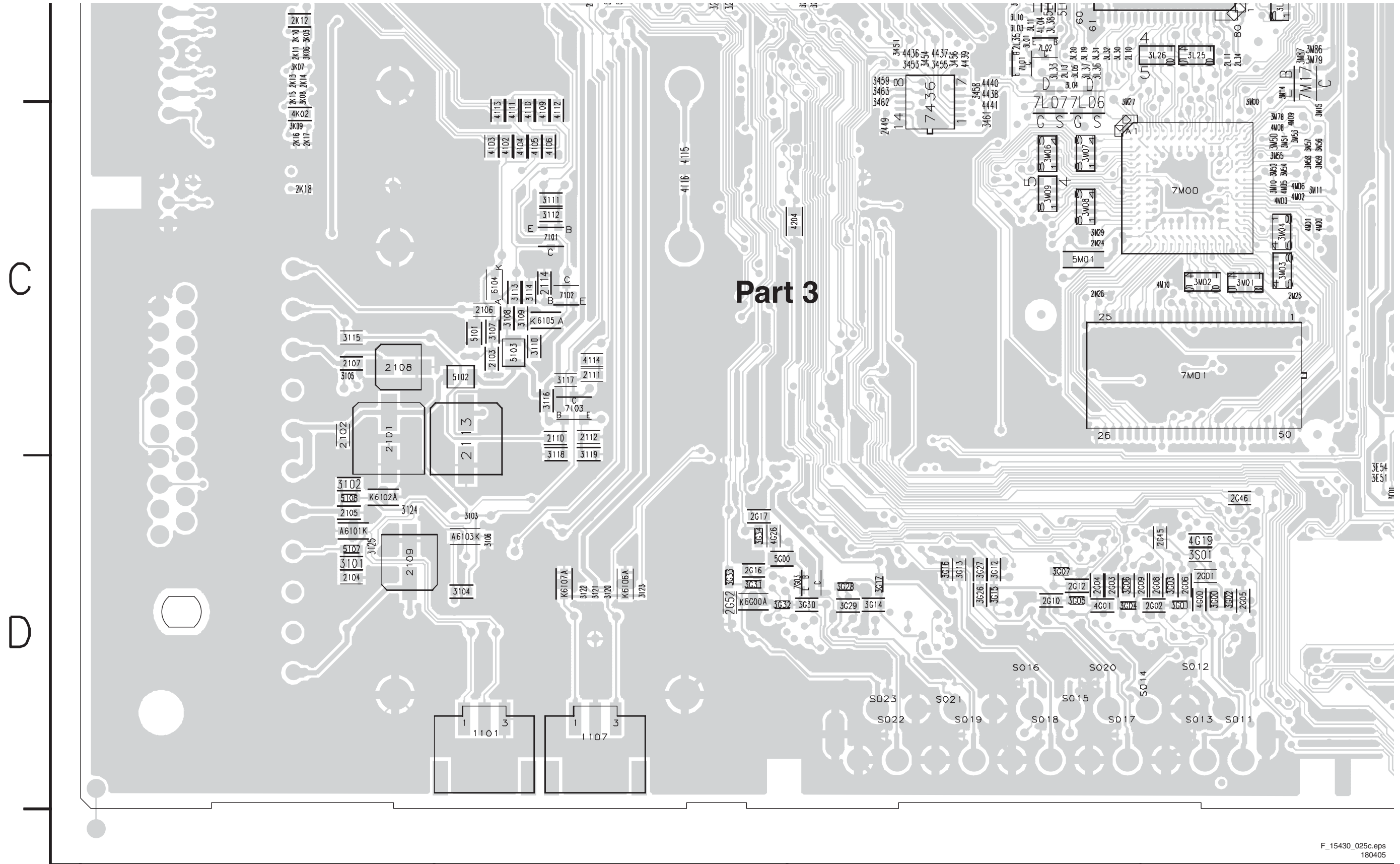
Part 2



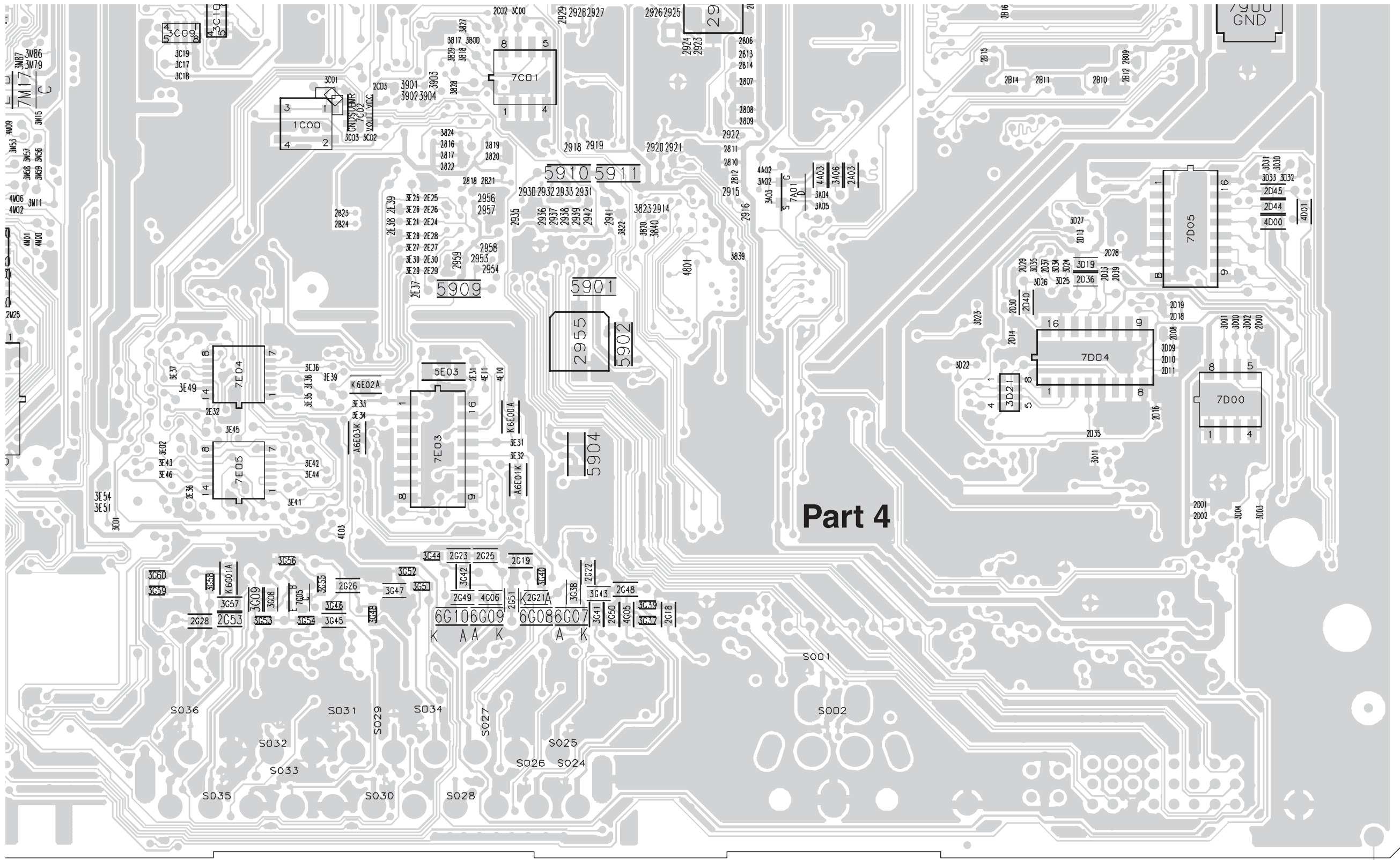
A

B

Layout Small Signal Board (Top Side Part 3)



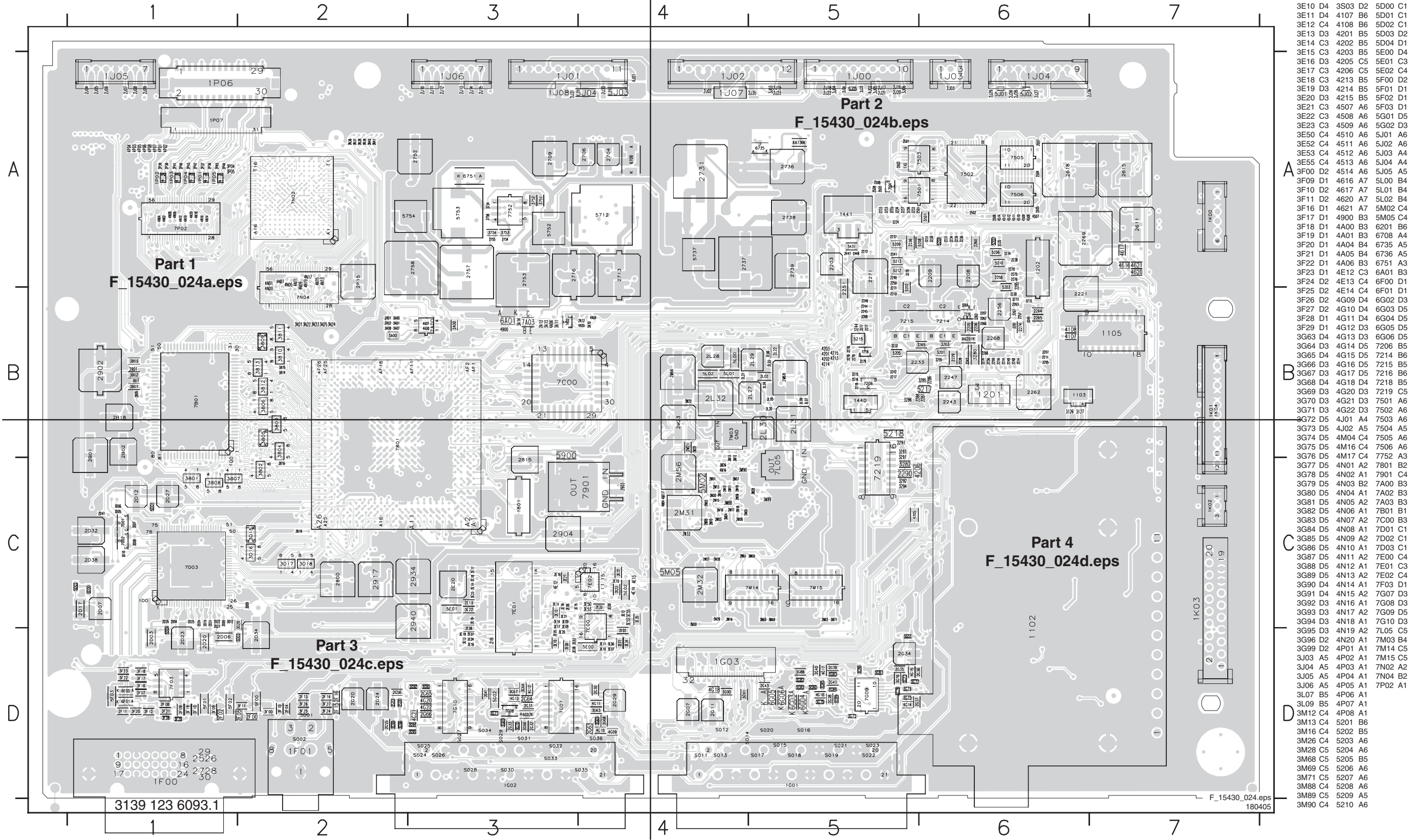
Layout Small Signal Board (Top Side Part 4)



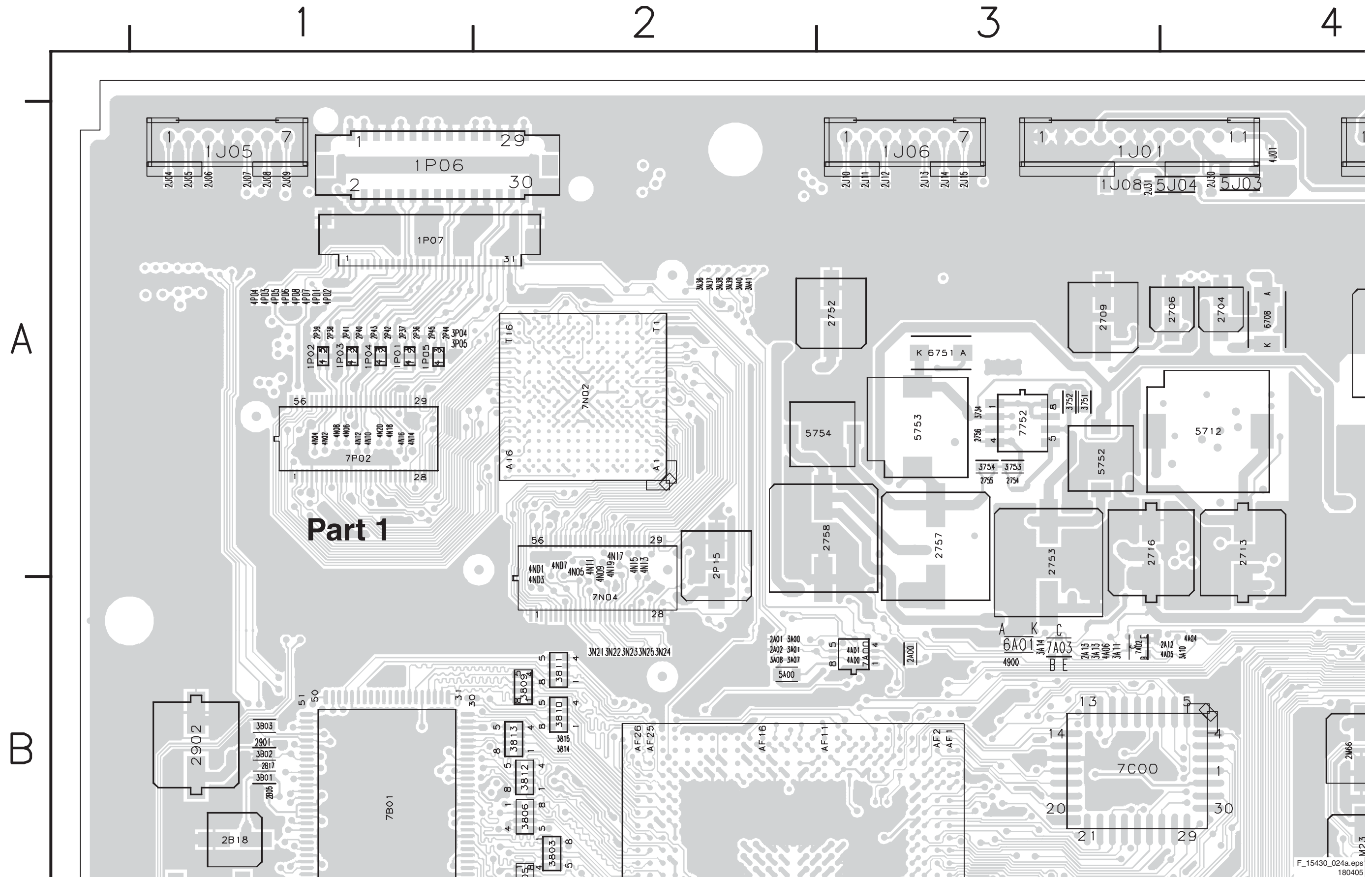
4 5 6 7 C D

Layout Small Signal Board (Bottom Side Overview)

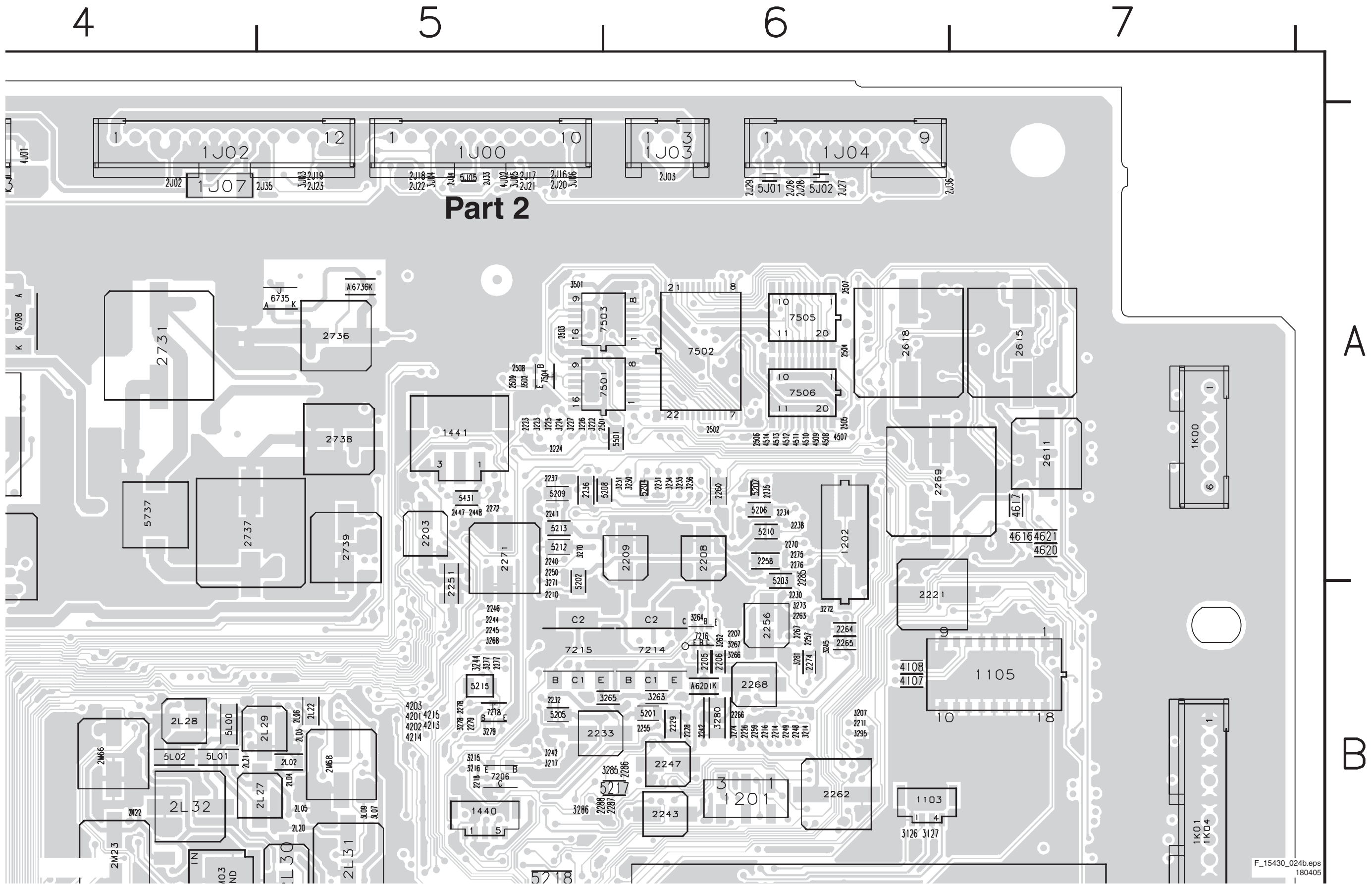
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1F01	D2	1K00	A7	2205	B6	2226	B6	2241	A5	2257	B6	2271	A5	2291	B5	2615	A7	2753	A3	2934	C3	2D04	C1	2D26	C1	2E06	C3	2E19	C3	2F08	D1	2G29	D4	2G43	D5	2J07	A1	2J20	A5	2J36	A6	2L31	B5	2M11	C4	2M24	C4	2P15	A2	3207	B6	3234	A6	3270	A5	3291	B5	3802	C2	3815	B2	3B03	B1	3E00	C4	3N40	A2	5752	A3
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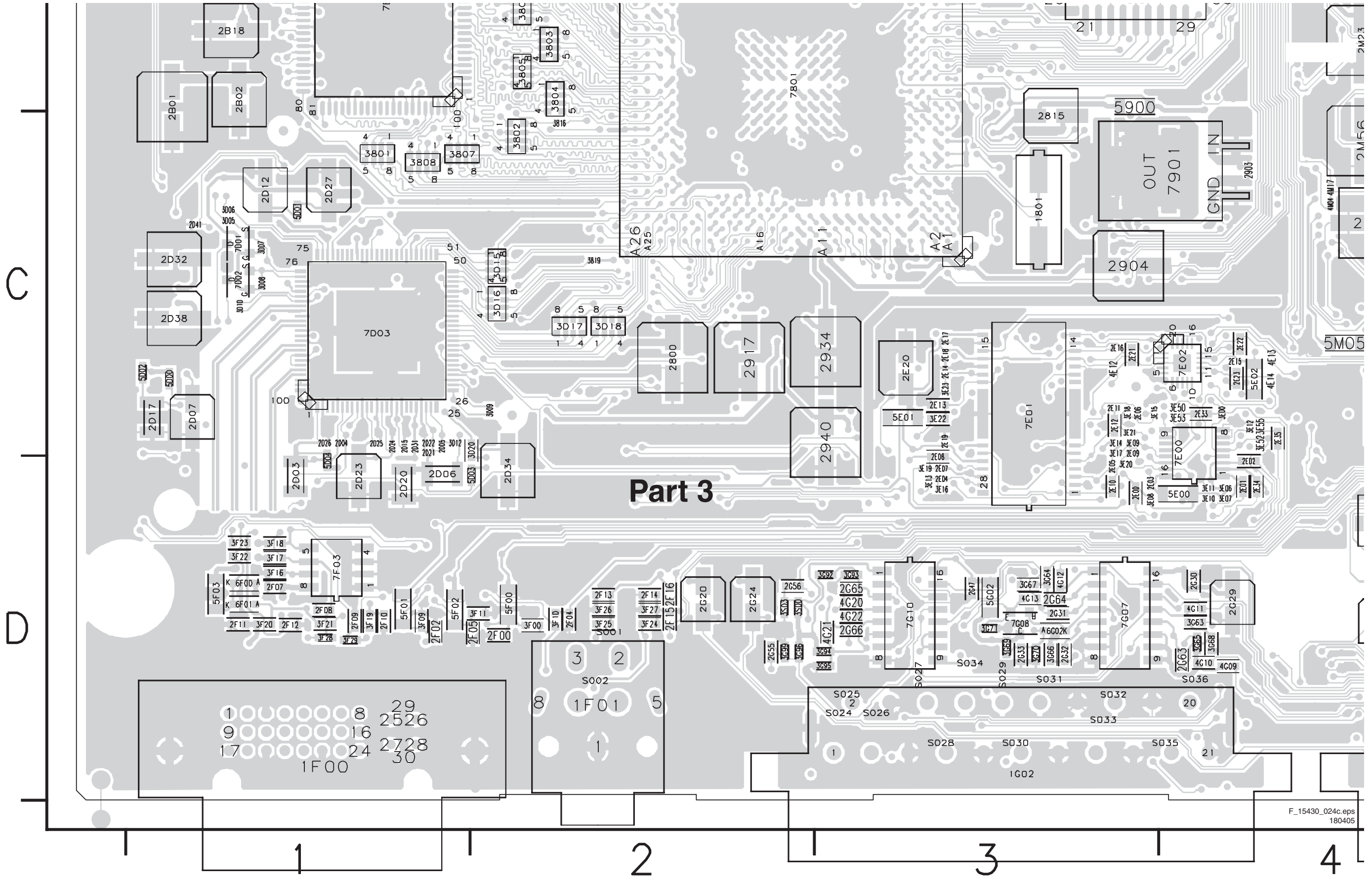
Layout Small Signal Board (Bottom Side Part 1)



Layout Small Signal Board (Bottom Side Part 2)

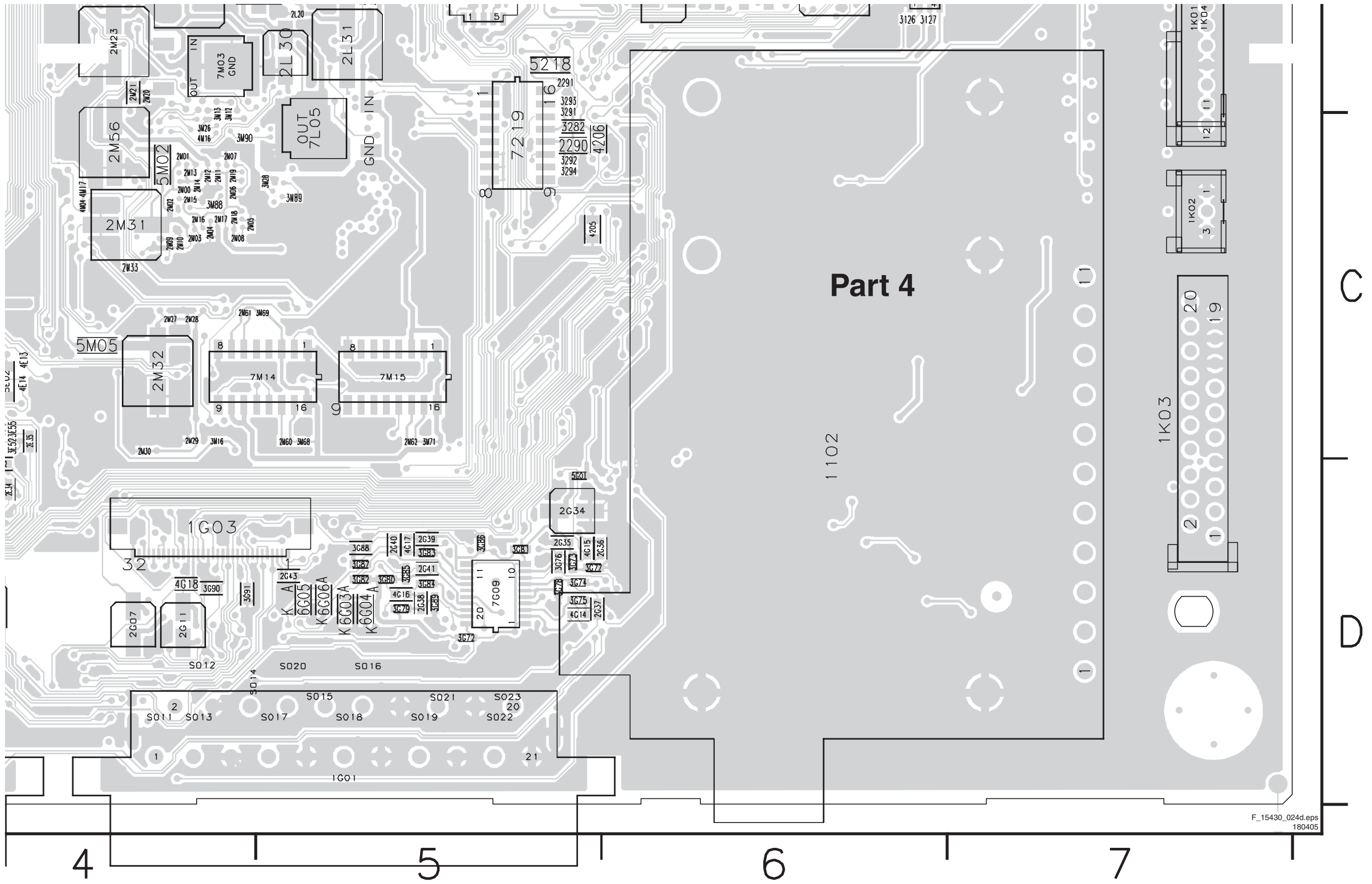


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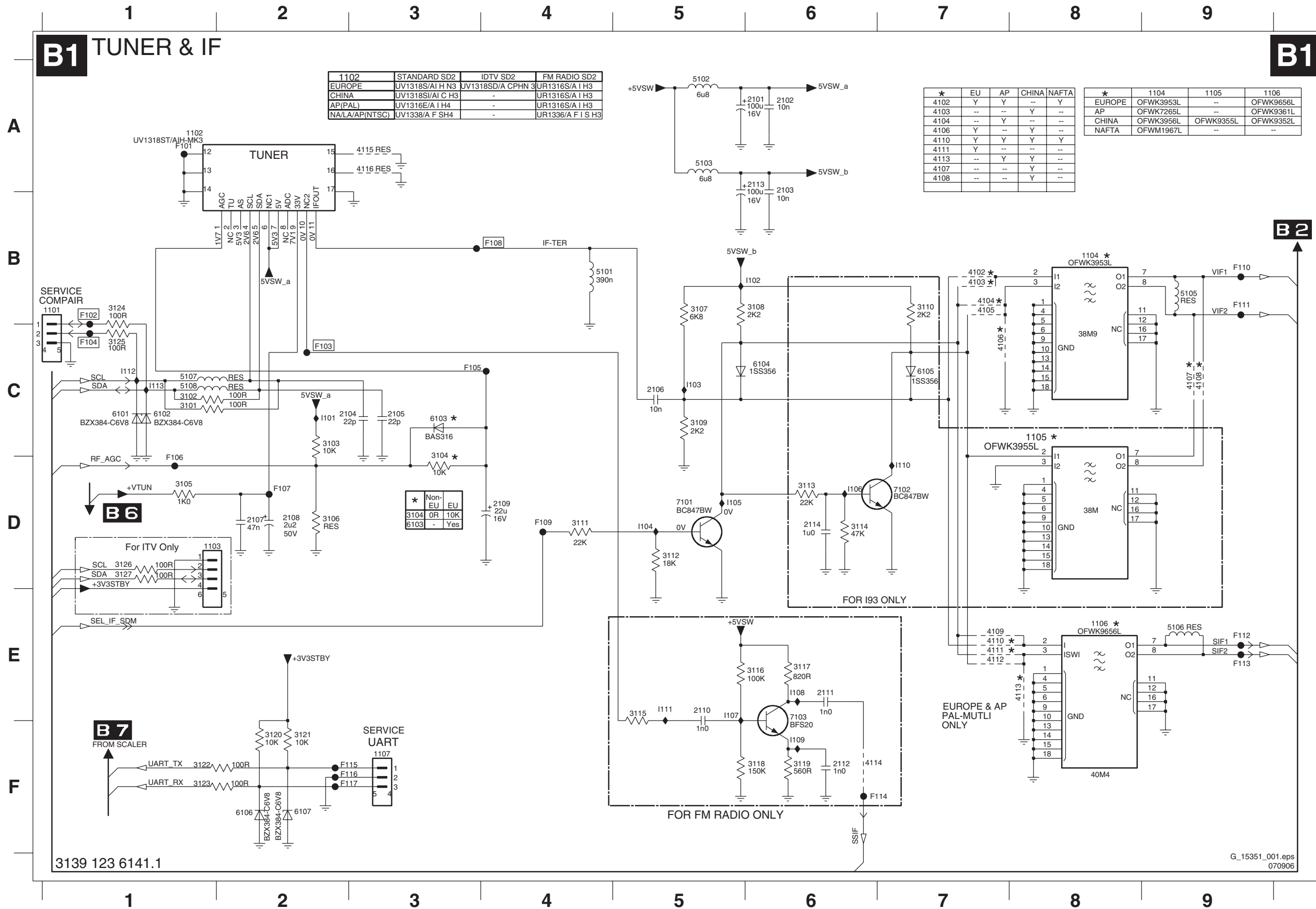


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Layout Small Signal Board (Bottom Side Part 4)



SSB: Tuner and VIF



1102	STANDARD SD2	IDTV SD2	FM RADIO SD2
EUROPE	UV1318S/AI H N3	UV1318SD/A CPHN 3	UR1316S/A I H3
CHINA	UV1318S/AI C H3	-	UR1316S/A I H3
AP(PAL)	UV1316E/A I H4	-	UR1316S/A I H3
NA/LA/AP(NTSC)	UV1338/A F SH4	-	UR1336/A F I S H3

*	EU	AP	CHINA	NAFTA
4102	Y	Y	-	Y
4103	-	-	Y	-
4104	-	Y	-	-
4106	Y	-	Y	-
4110	Y	Y	Y	Y
4111	Y	-	-	-
4113	-	Y	Y	-
4107	-	-	Y	-
4108	-	-	Y	-

*	1104	1105	1106
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AP	OFWK2865L	-	OFWK9361L
CHINA	OFWK3956L	OFWK9355L	OFWK9352L
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- 2102 A6
- 2103 A6
- 2104 C2
- 2105 C3
- 2106 C5
- 2107 D2
- 2108 D2
- 2109 D4
- 2110 E5
- 2111 E6
- 2112 F6
- 2113 A6
- 2114 D6
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- 3102 C1
- 3103 C2
- 3104 C3
- 3105 D1
- 3106 D2
- 3107 B5
- 3108 B6
- 3109 C5
- 3110 B7
- 3111 D4
- 3112 D5
- 3113 D6
- 3114 D6
- 3115 E5
- 3116 E6
- 3117 E6
- 3118 F6
- 3119 F6
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- 3122 F1
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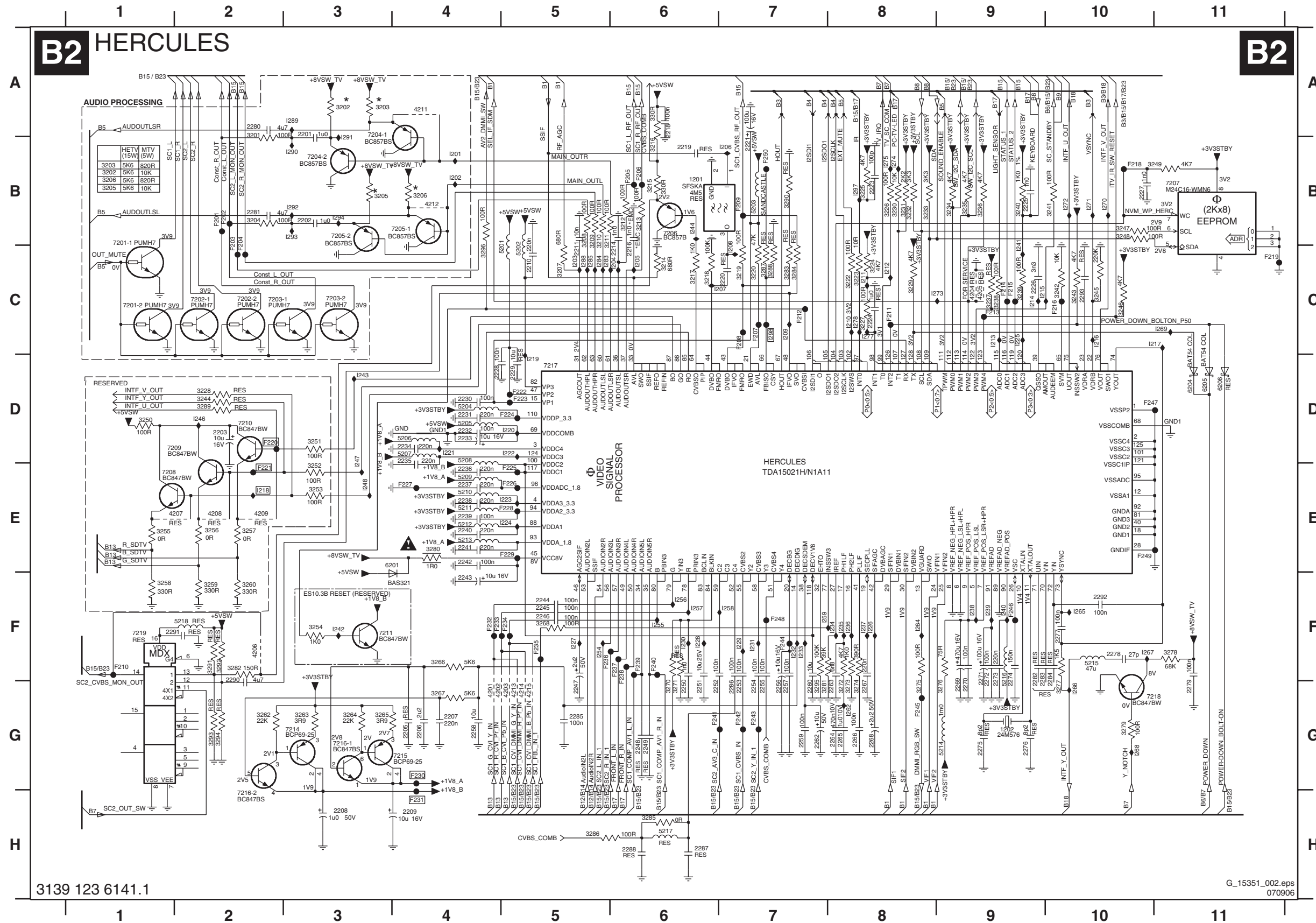
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SSB: Hercules

B2 HERCULES

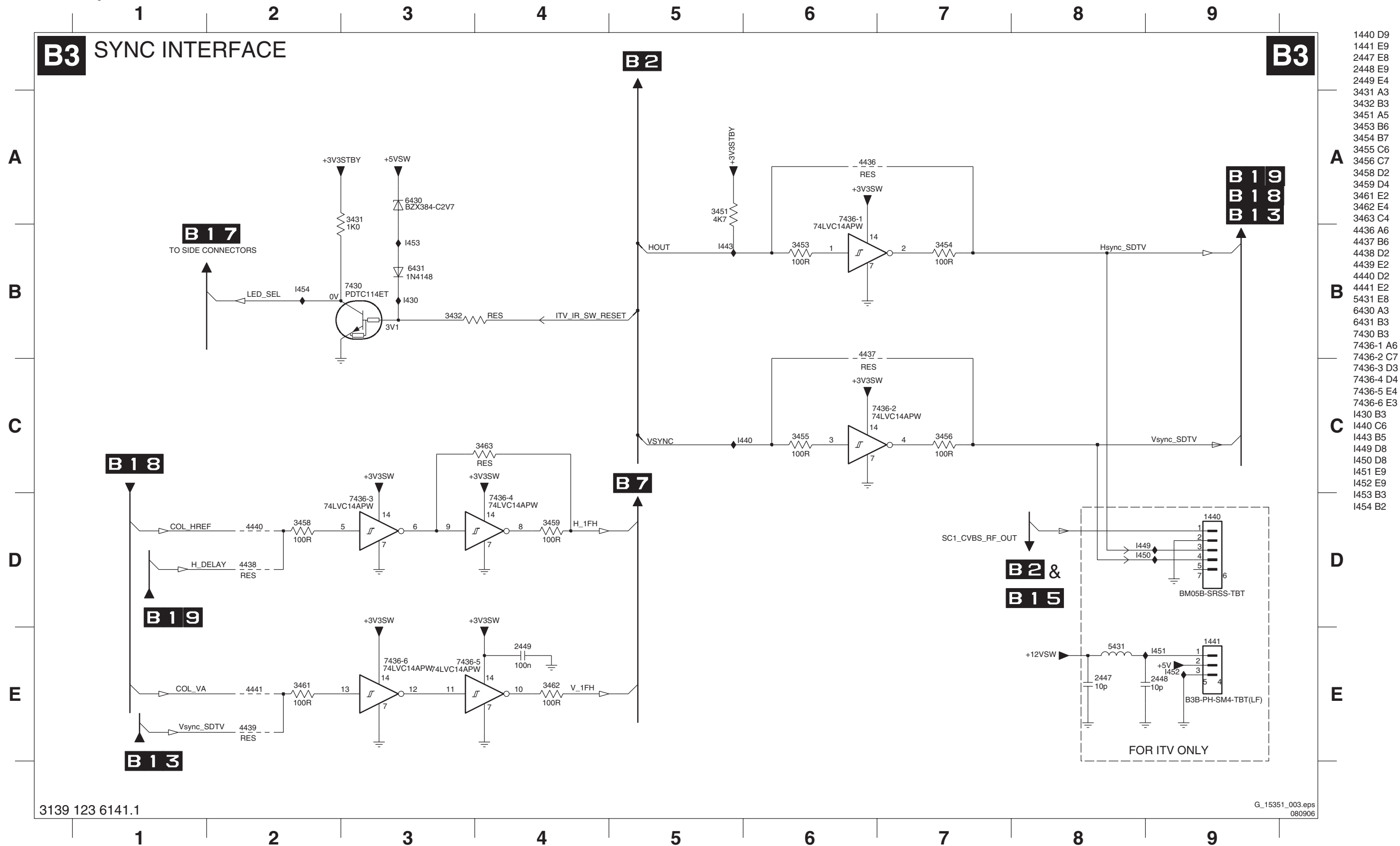
B2



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SSB: Sync Interface

B3 SYNC INTERFACE

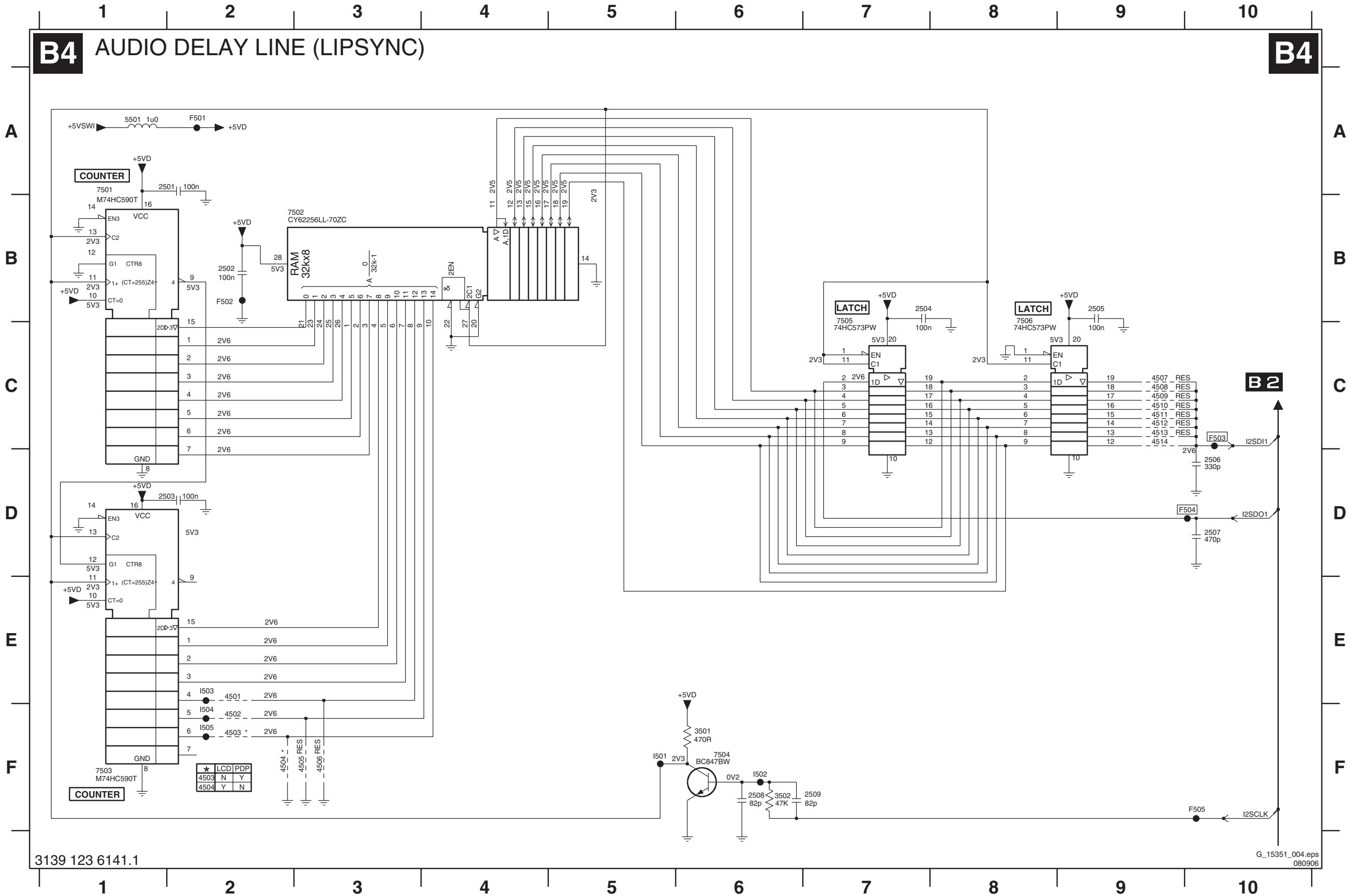


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- I443 B5
- I449 D8
- I450 D8
- I451 E9
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SSB: Audio Delay Line (Lipsync)

B4 AUDIO DELAY LINE (LIPSYNC)

B4



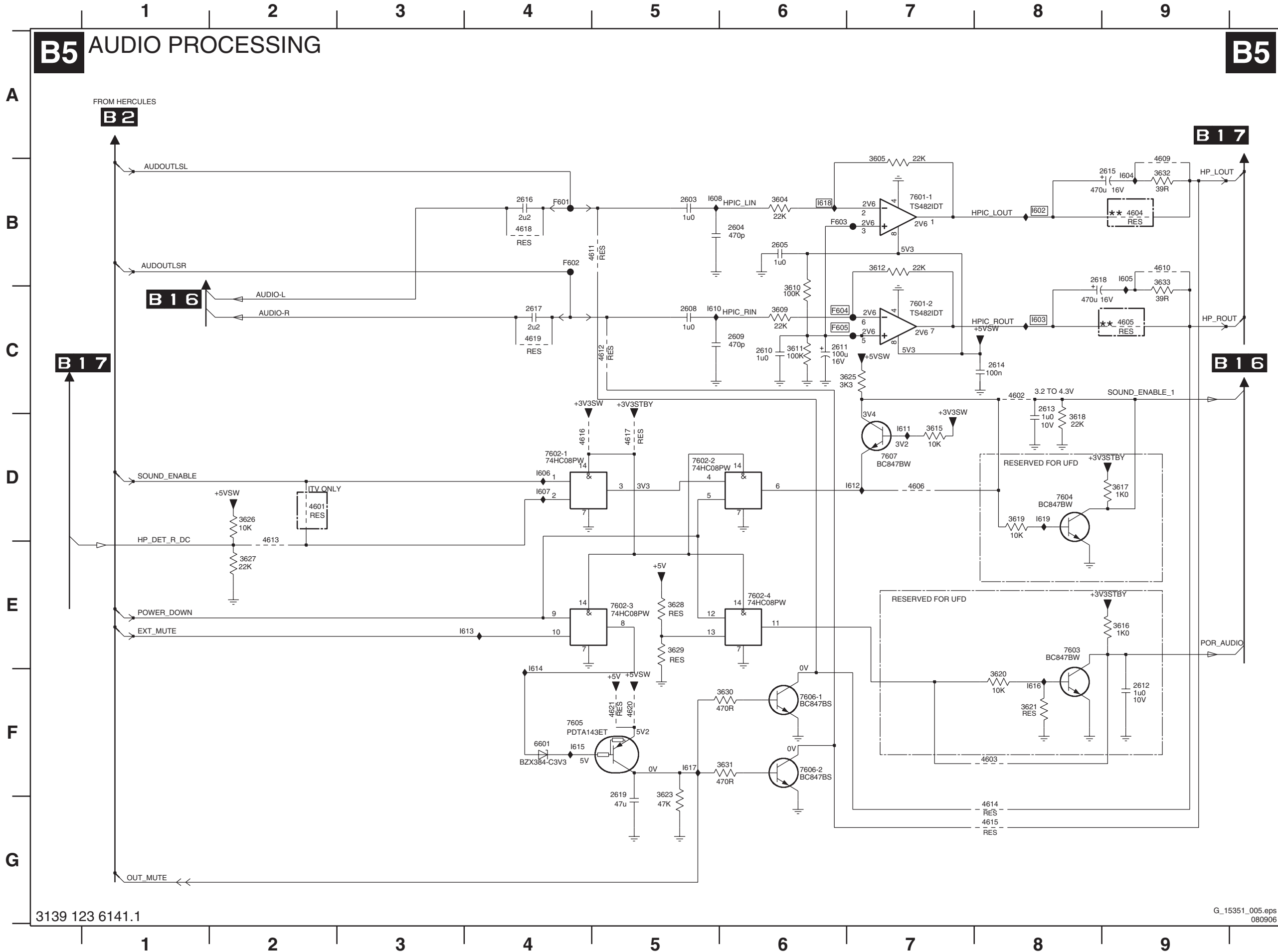
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SSB: Audio Processing

B5 AUDIO PROCESSING

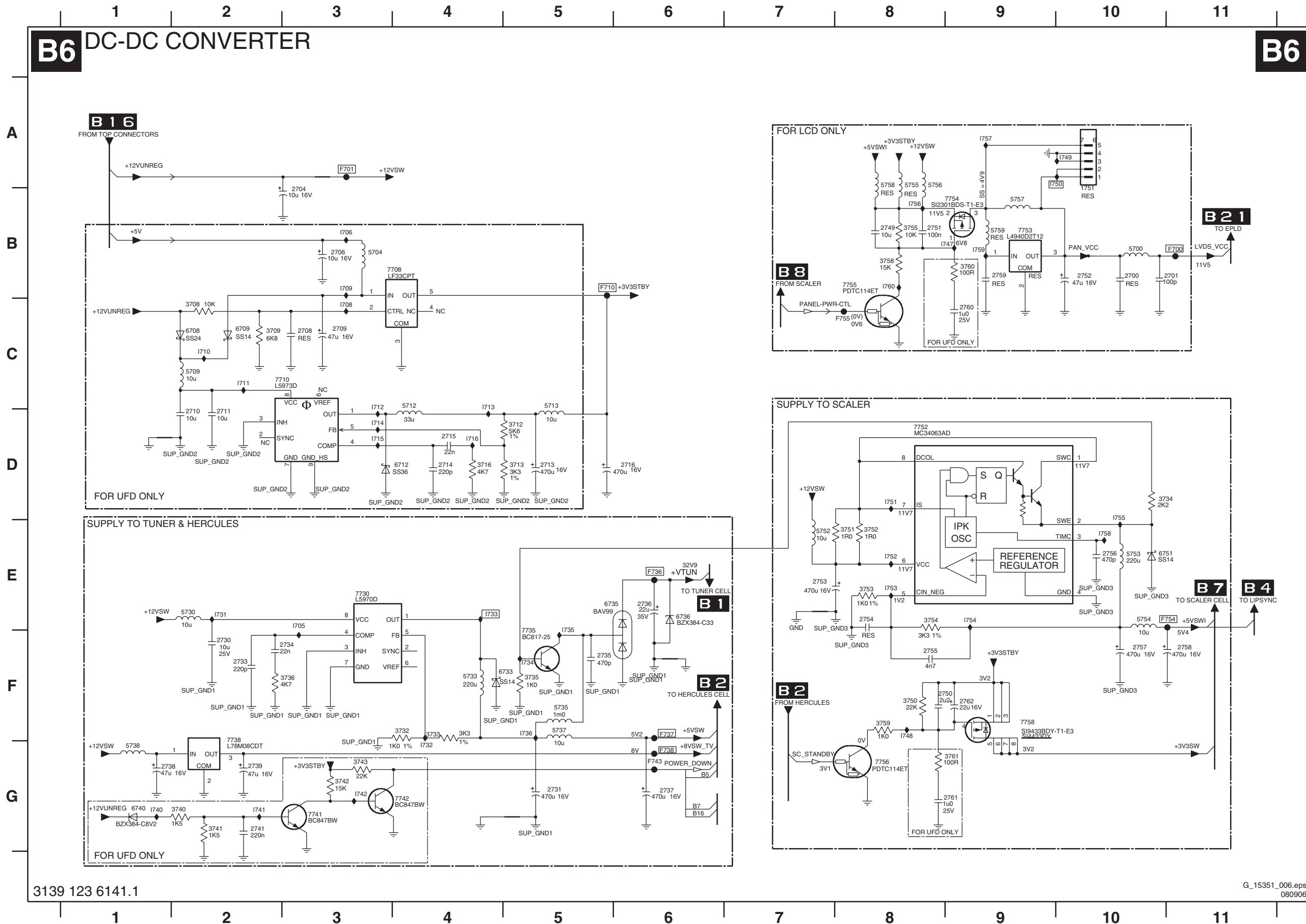


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- 4606 D7
- 4609 B9
- 4610 B9
- 4611 B4
- 4612 C5
- 4613 D2
- 4614 G8
- 4615 G8
- 4616 D4
- 4617 D5
- 4618 B4
- 4619 C4
- 4620 F5
- 4621 F5
- 6601 F4
- 7601-1 B7
- 7601-2 C7
- 7602-1 D4
- 7602-2 D5
- 7602-3 E5
- 7602-4 E6
- 7603 E8
- 7604 D8
- 7605 F4
- 7606-1 F6
- 7606-2 F6
- 7607 D7
- F601 B4
- F602 B4
- F603 B6
- F604 C6
- F605 C6
- I602 B8
- I603 C8
- I604 B9
- I605 B9
- I606 D4
- I607 D4
- I608 B5
- I609 C5
- I610 D7
- I611 D8
- I612 D7
- I613 E4
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- I617 F4
- I618 F8
- I619 F5
- I620 F5

SSB: DC-DC Converter

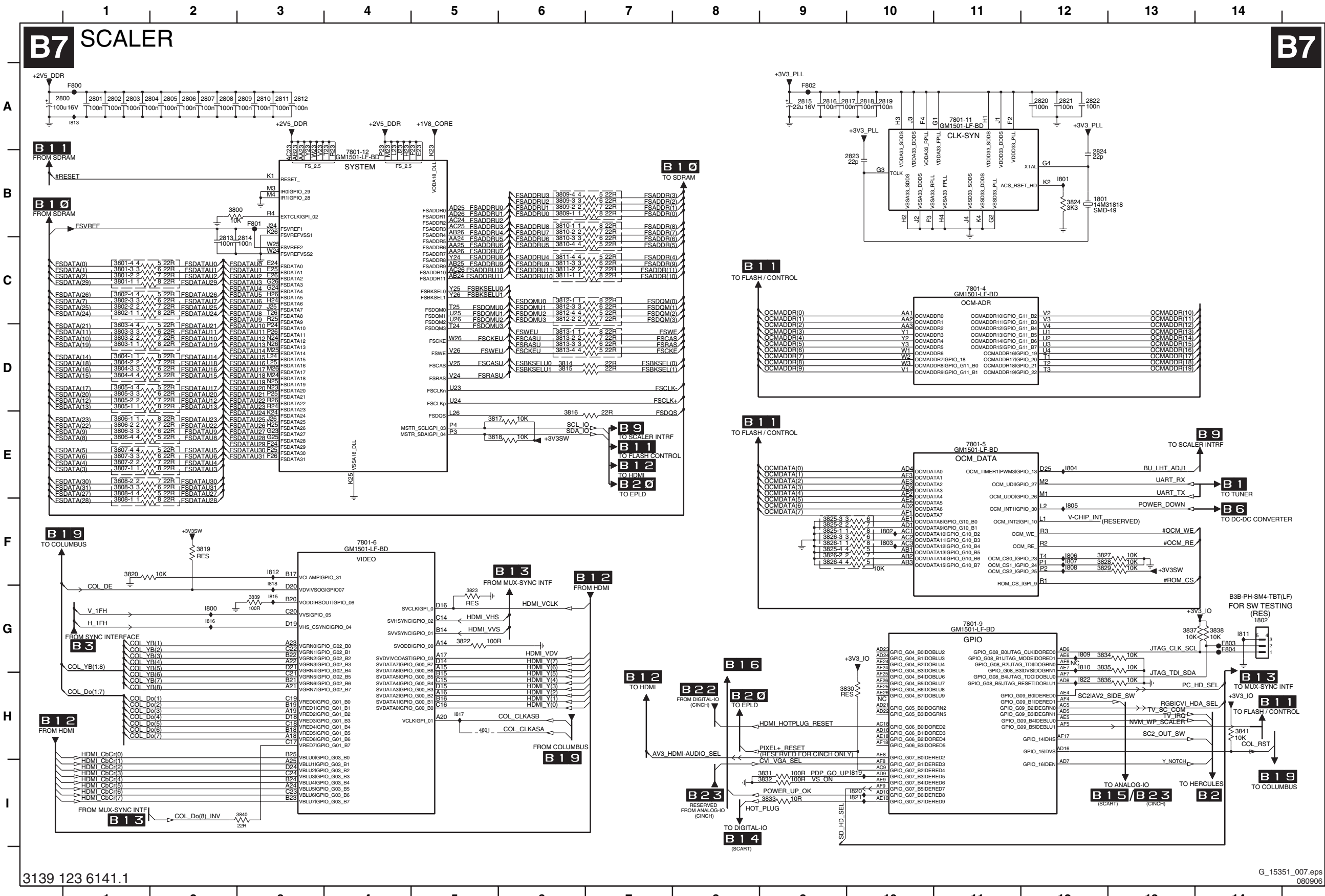
B6 DC-DC CONVERTER

B6



- 1751 A10
- 2700 B10
- 2701 B11
- 2704 A3
- 2706 B3
- 2708 C3
- 2709 C3
- 2710 C2
- 2711 C2
- 2713 D5
- 2714 D4
- 2715 D4
- 2716 D6
- 2730 F2
- 2731 G5
- 2733 F2
- 2734 F3
- 2735 F5
- 2736 E6
- 2737 G6
- 2738 G1
- 2739 G2
- 2741 G2
- 2749 B8
- 2750 F9
- 2751 B8
- 2752 B10
- 2753 E7
- 2754 E8
- 2755 F8
- 2756 E10
- 2757 F10
- 2758 F11
- 2759 B9
- 2760 C9
- 2761 G9
- 2762 F9
- 3708 C2
- 3709 C2
- 3712 D5
- 3713 D5
- 3716 D4
- 3732 F4
- 3733 F4
- 3734 D10
- 3735 F5
- 3736 F3
- 3740 G2
- 3741 G2
- 3742 G3
- 3743 G3
- 3750 F8
- 3751 E8
- 3752 E8
- 3753 E8
- 3754 E8
- 3755 B8
- 3758 B8
- 3759 F8
- 3760 B9
- 3761 G9
- 5700 B10
- 5704 B3
- 5709 C2
- 5712 C4
- 5713 C5
- 5730 E2
- 5733 F4
- 5735 F5
- 5737 F5
- 5738 G1
- 5752 E7
- 5753 E10
- 5754 E10
- 5755 A8
- 5756 A8
- 5757 B9
- 5758 A8
- 5759 B9
- 6708 C2
- 6709 C2
- 6712 D4
- 6733 F5
- 6735 E5
- 6736 E6
- 6740 G1
- 6751 E10
- 7708 B4
- 7710 C3
- 7730 E3
- 7735 E5
- 7738 F2
- 7741 G3
- 7742 G4
- 7751 A10
- 7753 B9
- 7754 B9
- 7755 B8
- 7756 B8
- 7758 G6
- 7759 F9
- 7760 B11
- 7761 A3
- 7762 B5
- 7763 E6
- 7764 F6
- 7765 G6
- 7766 G6
- 7767 E11
- 7768 C8
- 7769 E3
- 7770 B3
- 7771 C3
- 7772 C4
- 7773 D3
- 7774 D3
- 7775 E2
- 7776 E2
- 7777 G4
- 7778 E4
- 7779 F5
- 7780 E5
- 7781 F5
- 7782 G5
- 7783 G2
- 7784 F8
- 7785 A10
- 7786 A10
- 7787 D8
- 7788 E8
- 7789 E8
- 7790 E9
- 7791 D10
- 7792 A9
- 7793 B8
- 7794 B8
- 7795 B9
- 7796 B8

SSB: Scaler



- 1801 B12
- 1802 G14
- 2800 A1
- 2801 A1
- 2802 A1
- 2803 A1
- 2804 A2
- 2805 A2
- 2806 A2
- 2807 A2
- 2808 A2
- 2809 A3
- 2810 A3
- 2811 A3
- 2812 A3
- 2813 B2
- 2814 B3
- 2815 A9
- 2816 A9
- 2817 A10
- 2818 A10
- 2819 A10
- 2820 A12
- 2821 A12
- 2822 A12
- 2823 A10
- 2824 B12
- 3800 B2
- 3801-1 C1
- 3801-2 C1
- 3801-3 C1
- 3801-4 C1
- 3802-2 C1
- 3802-3 C1
- 3802-4 C1
- 3803-1 D1
- 3803-2 D1
- 3803-3 D1
- 3803-4 D1
- 3804-1 D1
- 3804-2 D1
- 3804-3 D1
- 3804-4 D1
- 3805-1 D1
- 3805-2 D1
- 3805-3 D1
- 3805-4 D1
- 3806-1 E1
- 3806-2 E1
- 3806-3 E1
- 3806-4 E1
- 3807-1 E1
- 3807-2 E1
- 3807-3 E1
- 3807-4 E1
- 3808-1 F1
- 3808-2 E1
- 3808-3 E1
- 3808-4 E1
- 3809-1 B6
- 3809-2 B6
- 3809-3 B6
- 3809-4 B6
- 3810-1 B6
- 3810-2 B6
- 3810-3 C6
- 3810-4 C6
- 3811-1 C6
- 3811-2 C6
- 3811-3 C6
- 3811-4 C6
- 3812-1 C6
- 3812-2 C6
- 3812-3 C6
- 3812-4 C6
- 3813-1 D6
- 3813-2 D6
- 3813-3 D6
- 3813-4 D6
- 3814 D6
- 3815 D6
- 3816 E6
- 3817 E6
- 3818 E5
- 3819 F2
- 3820 F1
- 3822 G5
- 3823 G5
- 3824 B12
- 3825-1 F9
- 3825-2 F9
- 3825-3 F9
- 3825-4 F9
- 3826-1 F9
- 3826-2 F9
- 3826-3 F9
- 3826-4 F9
- 3827 F12
- 3828 F12
- 3829 F12
- 3830 H10
- 3831 I9
- 3832 I9
- 3833 I9
- 3834 G12
- 3835 G12
- 3836 H12
- 3837 G14
- 3838 G14
- 3839 G3
- 3840 I3
- 3841 H14
- 4801 H5
- 7801-11 A11
- 7801-12 B4
- 7801-4 C11
- 7801-5 E11

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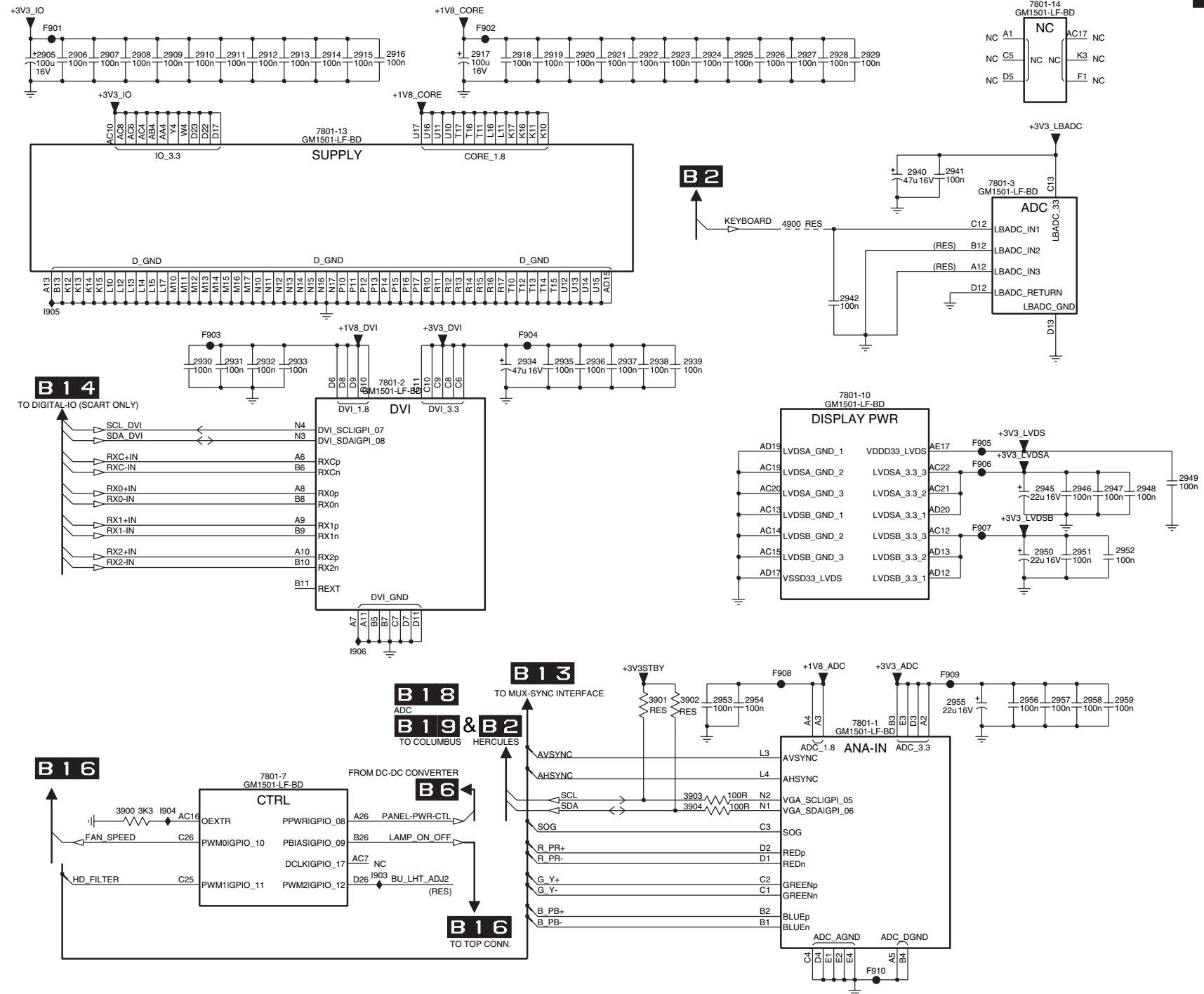
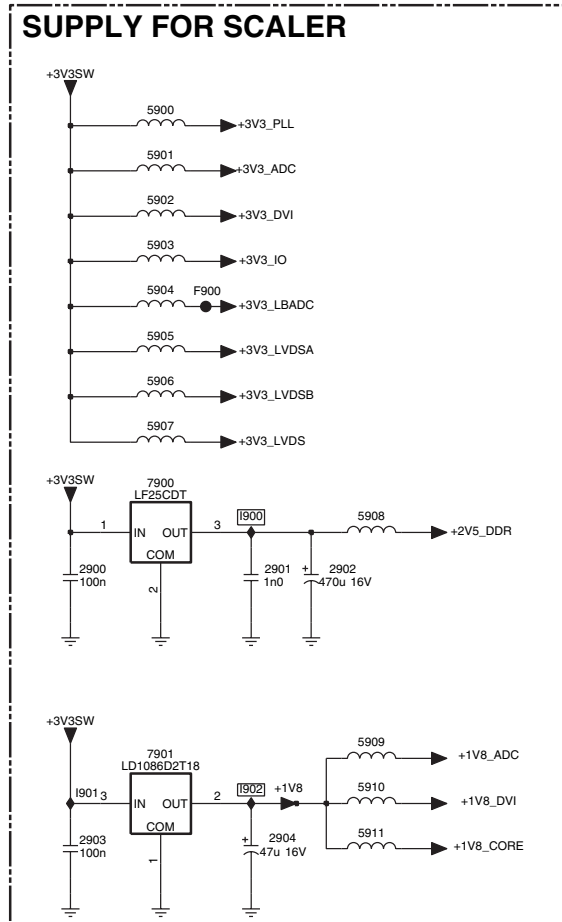
G_15351_007.eps 080906

SSB: Scaler

B8 SCALER

B8

A
B
C
D
E
F
G
H



- 2900 C2
- 2901 C2
- 2902 C3
- 2903 E2
- 2904 E3
- 2905 A4
- 2906 A4
- 2907 A5
- 2908 A5
- 2909 A5
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- 2914 A6
- 2915 A6
- 2916 A7
- 2917 A7
- 2918 A7
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- 2923 A9
- 2924 A9
- 2925 A9
- 2926 A9
- 2927 A9
- 2928 A10
- 2929 A10
- 2930 C5
- 2931 C6
- 2932 C6
- 2933 C6
- 2934 C8
- 2935 C8
- 2936 C8
- 2937 C8
- 2938 C8
- 2939 C9
- 2940 B10
- 2941 B10
- 2942 C10
- 2945 D11
- 2946 D11
- 2947 D11
- 2948 D12
- 2949 D12
- 2950 D11
- 2951 D11
- 2952 D12
- 2953 E9
- 2954 E9
- 2955 E10
- 2956 E11
- 2957 E11
- 2958 E11
- 2959 E12
- 3900 F5
- 3901 E8
- 3902 E9
- 3903 F9
- 3904 F9
- 4900 B9
- 5900 A2
- 5901 B2
- 5902 B2
- 5903 B2
- 5904 B2
- 5905 B2
- 5906 C2
- 5907 C2
- 5908 C3
- 5909 D3
- 5910 E3
- 5911 E3
- 7801-1 F10
- 7801-10 C10
- 7801-13 B6
- 7801-14 A11
- 7801-2 C7
- 7801-3 B11
- 7801-7 F6
- 7900 C2
- 7901 D2
- F900 B2
- F901 A4
- F902 A7
- F903 C5
- F904 C8
- F905 D11
- F906 D11
- F907 D11
- F908 E9
- F909 E10
- F910 G10
- I900 C2
- I901 E2
- I902 E2
- I903 G7
- I904 F5
- I905 C4
- I906 E6

1 2 3 4 5 6 7 8 9 10 11 12

SSB: Scaler Interface

B9 SCALER INTERFACE

B9

A

B

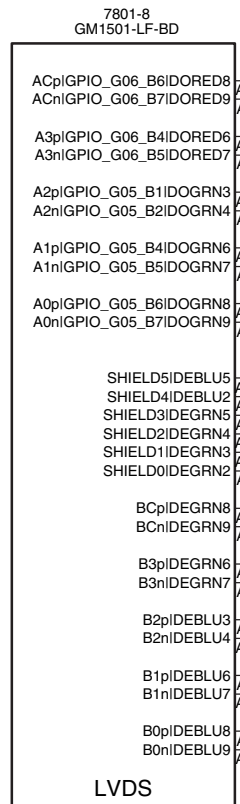
C

D

E

F

- 2A00 D3
- 2A01 E2
- 2A02 E2
- 2A03 C7
- 2A12 F6
- 2A13 D8
- 3A00 E2
- 3A01 E2
- 3A02 C5
- 3A03 B6
- 3A04 C6
- 3A05 C6
- 3A06 C7
- 3A07 E2
- 3A08 E2
- 3A10 F6
- 3A11 E7
- 3A13 D8
- 3A14 E9
- 4A00 F3
- 4A01 F3
- 4A02 B6
- 4A03 D6
- 4A04 E4
- 4A05 F6
- 4A06 F8
- 5A00 E3
- 6A01 F8
- 7801-8 A2
- 7A00 E3
- 7A01 C6
- 7A02 E6
- 7A03 E8
- IA00 C7
- IA03 F6
- IA05 B8
- IA06 C6
- IA07 B6
- IA08 E2
- IA09 E2

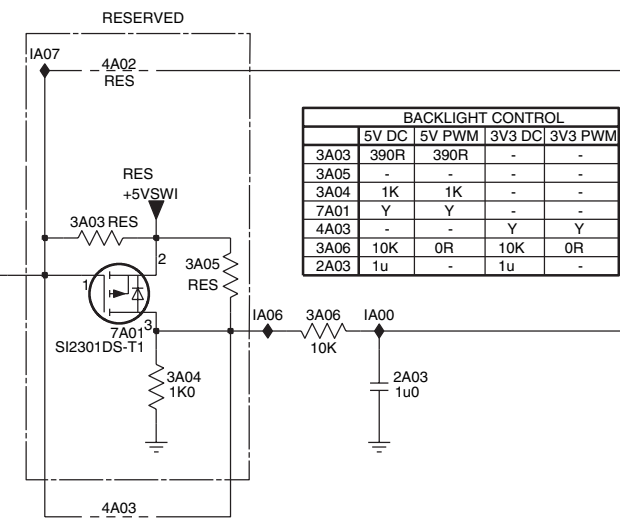


B20 TO EPLD

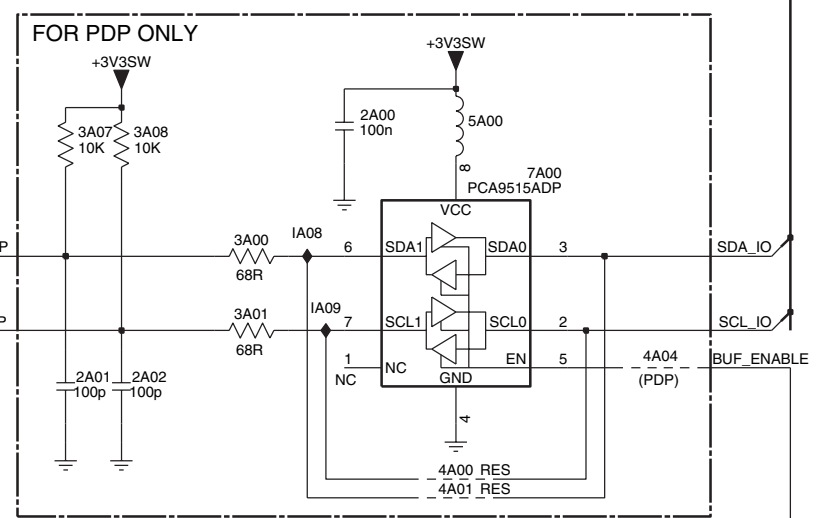
B7 TO SCALER

B20 FROM EPLD

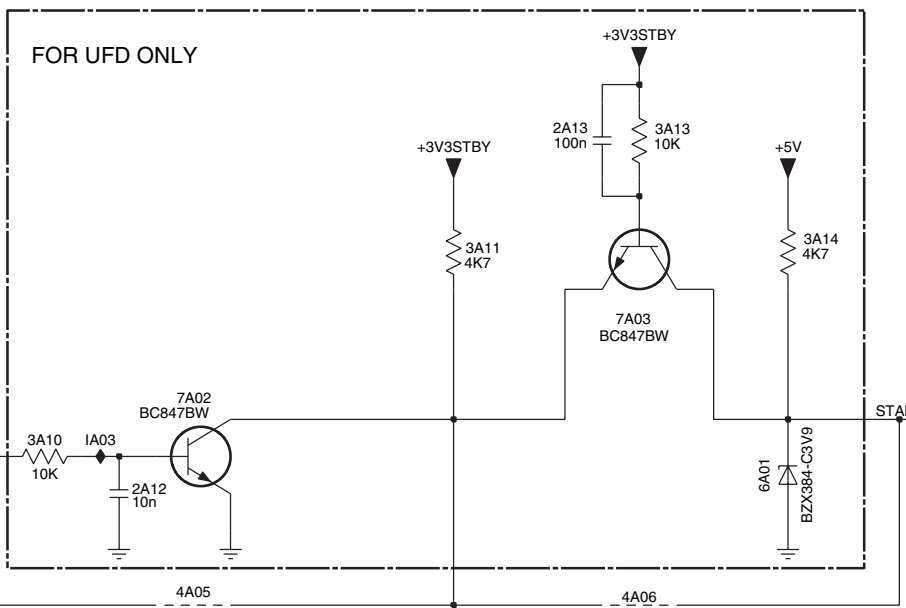
B16 TO TOP CONNECTORS



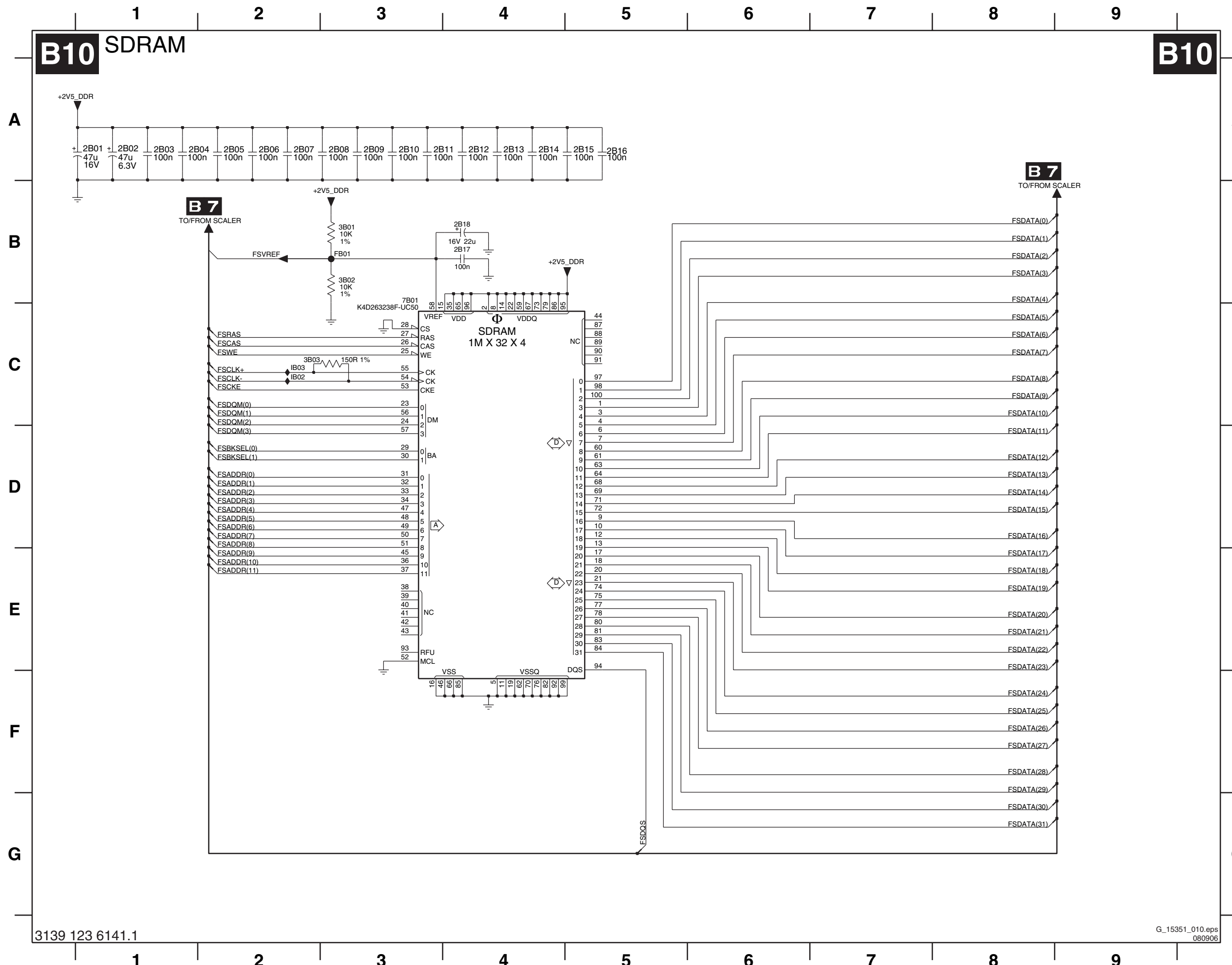
B21 TO EPLD



B2 FROM HERCULES

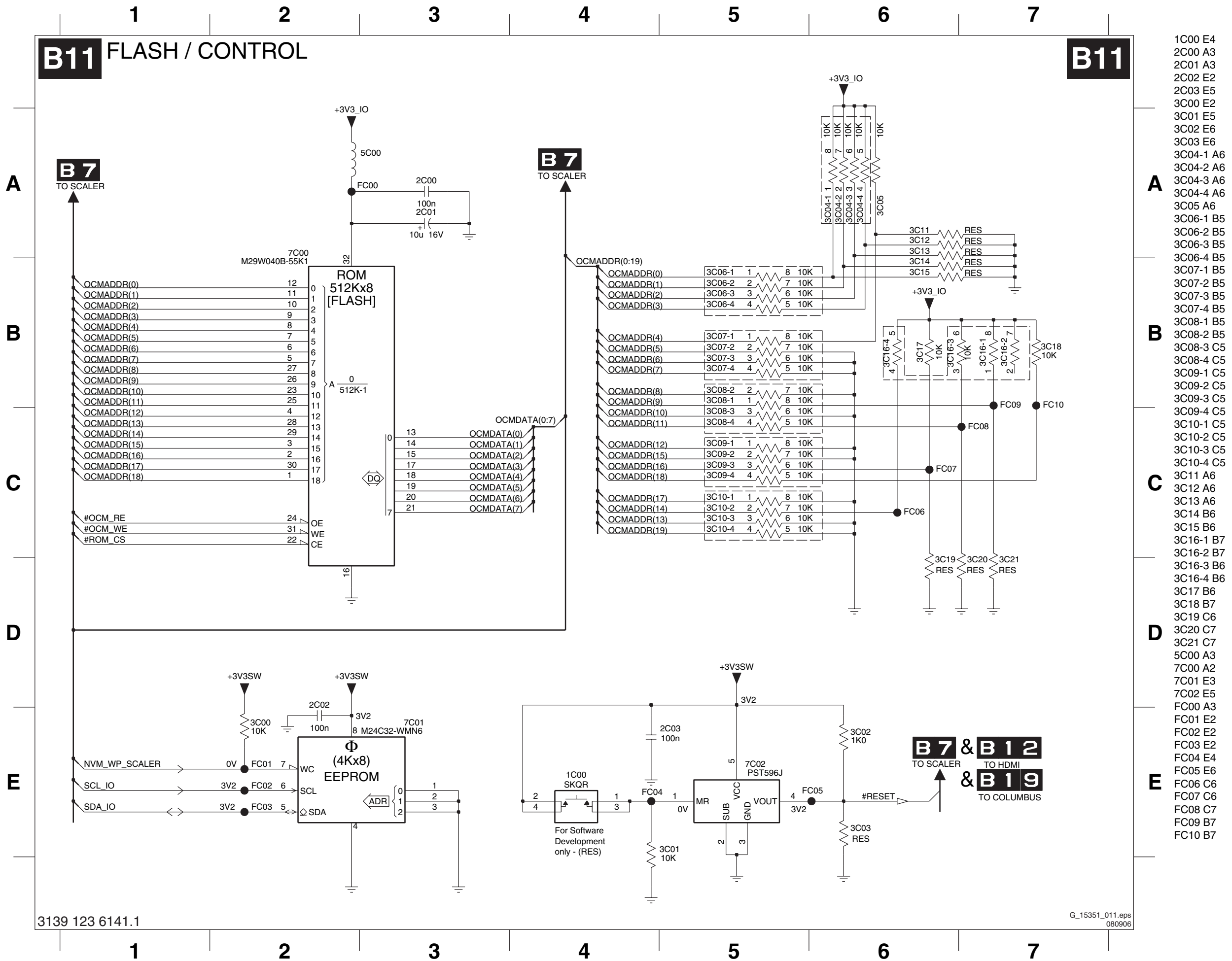


SSB: SDRAM



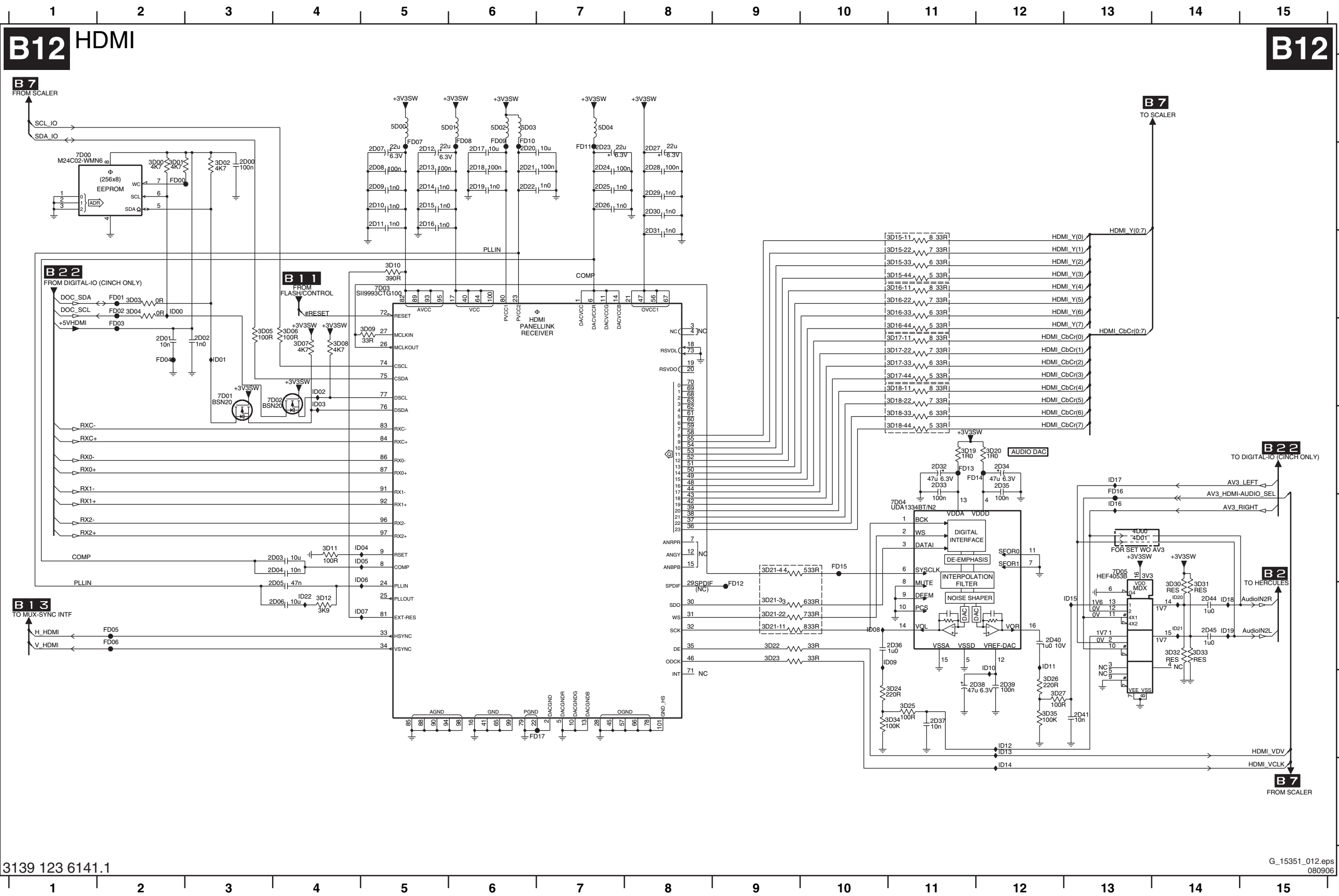
- 2B01 A1
- 2B02 A1
- 2B03 A1
- 2B04 A2
- 2B05 A2
- 2B06 A2
- 2B07 A2
- 2B08 A3
- 2B09 A3
- 2B10 A3
- 2B11 A4
- 2B12 A4
- 2B13 A4
- 2B14 A4
- 2B15 A5
- 2B16 A5
- 2B17 B4
- 2B18 B4
- 3B01 B3
- 3B02 B3
- 3B03 C2
- 7B01 B3
- IB01 B3
- IB02 C2
- IB03 C2

SSB: Flash / Control



- 1C00 E4
- 2C00 A3
- 2C01 A3
- 2C02 E2
- 2C03 E5
- 3C00 E2
- 3C01 E5
- 3C02 E6
- 3C03 E6
- 3C04-1 A6
- 3C04-2 A6
- 3C04-3 A6
- 3C04-4 A6
- 3C05 A6
- 3C06-1 B5
- 3C06-2 B5
- 3C06-3 B5
- 3C06-4 B5
- 3C07-1 B5
- 3C07-2 B5
- 3C07-3 B5
- 3C07-4 B5
- 3C08-1 B5
- 3C08-2 B5
- 3C08-3 C5
- 3C08-4 C5
- 3C09-1 C5
- 3C09-2 C5
- 3C09-3 C5
- 3C09-4 C5
- 3C10-1 C5
- 3C10-2 C5
- 3C10-3 C5
- 3C10-4 C5
- 3C11 A6
- 3C12 A6
- 3C13 A6
- 3C14 B6
- 3C15 B6
- 3C16-1 B7
- 3C16-2 B7
- 3C16-3 B6
- 3C16-4 B6
- 3C17 B6
- 3C18 B7
- 3C19 C6
- 3C20 C7
- 3C21 C7
- 5C00 A3
- 7C00 A2
- 7C01 E3
- 7C02 E5
- FC00 A3
- FC01 E2
- FC02 E2
- FC03 E2
- FC04 E4
- FC05 E6
- FC06 C6
- FC07 C6
- FC08 C7
- FC09 B7
- FC10 B7

SSB: HDMI

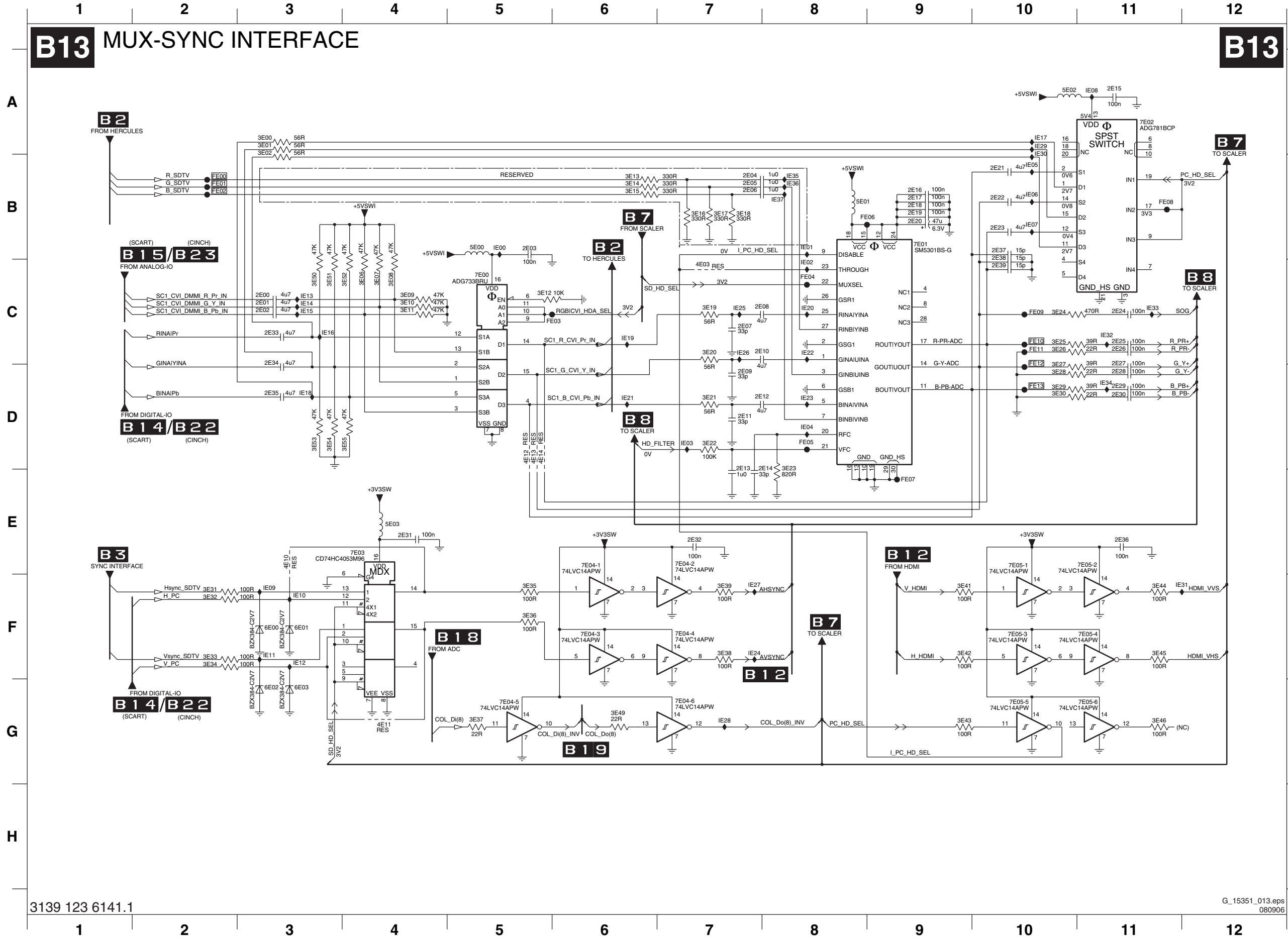


- 2D00 B3
- 2D01 D2
- 2D02 D3
- 2D03 F4
- 2D04 F4
- 2D05 G4
- 2D06 G4
- 2D07 B5
- 2D08 B5
- 2D09 B5
- 2D10 B5
- 2D11 B5
- 2D12 B5
- 2D13 B5
- 2D14 B5
- 2D15 B5
- 2D16 B5
- 2D17 B6
- 2D18 B6
- 2D19 B6
- 2D20 B6
- 2D21 B6
- 2D22 B6
- 2D23 B7
- 2D24 B7
- 2D25 B7
- 2D26 B7
- 2D27 B8
- 2D28 B8
- 2D29 B8
- 2D30 B8
- 2D31 C8
- 2D32 E11
- 2D33 E11
- 2D34 E12
- 2D35 E12
- 2D36 G11
- 2D37 H11
- 2D38 H12
- 2D39 H12
- 2D40 G12
- 2D41 H13
- 2D44 G14
- 2D45 G14
- 3D00 B2
- 3D01 B2
- 3D02 B3
- 3D03 C2
- 3D04 C2
- 3D05 D3
- 3D06 D4
- 3D07 D4
- 3D08 D4
- 3D09 D5
- 3D10 C5
- 3D11 F4
- 3D12 G4
- 3D15-1 C11
- 3D15-2 C11
- 3D15-3 C11
- 3D15-4 C11
- 3D16-1 C11
- 3D16-2 C11
- 3D16-3 C11
- 3D16-4 D11
- 3D17-1 D11
- 3D17-2 D11
- 3D17-3 D11
- 3D17-4 D11
- 3D18-1 D11
- 3D18-2 D11
- 3D18-3 E11
- 3D18-4 E11
- 3D19 E11
- 3D20 E12
- 3D21-1 G9
- 3D21-2 G9
- 3D21-3 G9
- 3D21-4 F9
- 3D22 G9
- 3D23 G9
- 3D24 H11
- 3D25 H11
- 3D26 H12
- 3D27 H12
- 3D30 G14
- 3D31 G14
- 3D32 G14
- 3D33 G14
- 3D34 H11
- 3D35 H12
- 4D00 F13
- 4D01 F13
- 5D00 A5
- 5D01 A6
- 5D02 A6
- 5D03 A6
- 5D04 A7
- 7D00 B1
- 7D01 D3
- 7D02 D4
- 7D03 C5
- 7D04 F11
- 7D05 F13
- FD00 B2
- FD01 C2
- FD02 C2
- FD03 D2
- FD04 D2
- FD05 G2
- FD06 G2
- FD07 B5
- FD08 B6
- FD09 B6
- FD10 B6
- FD11 B7
- FD12 G9
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- FD14 E11
- FD15 F10
- FD16 E13
- FD17 H7
- ID00 C2
- ID01 D3
- ID02 D4
- ID03 D4
- ID04 F5
- ID05 F5
- ID06 F5
- ID07 G5
- ID08 G10
- ID09 G11
- ID10 G12
- ID11 G12
- ID12 H12
- ID13 H12
- ID14 H2
- ID15 G13
- ID16 F13
- ID17 E13
- ID18 G14
- ID19 G14
- ID20 G14
- ID21 G14
- ID22 G4

SSB: MUX-Sync Interface

B13 MUX-SYNC INTERFACE

B13

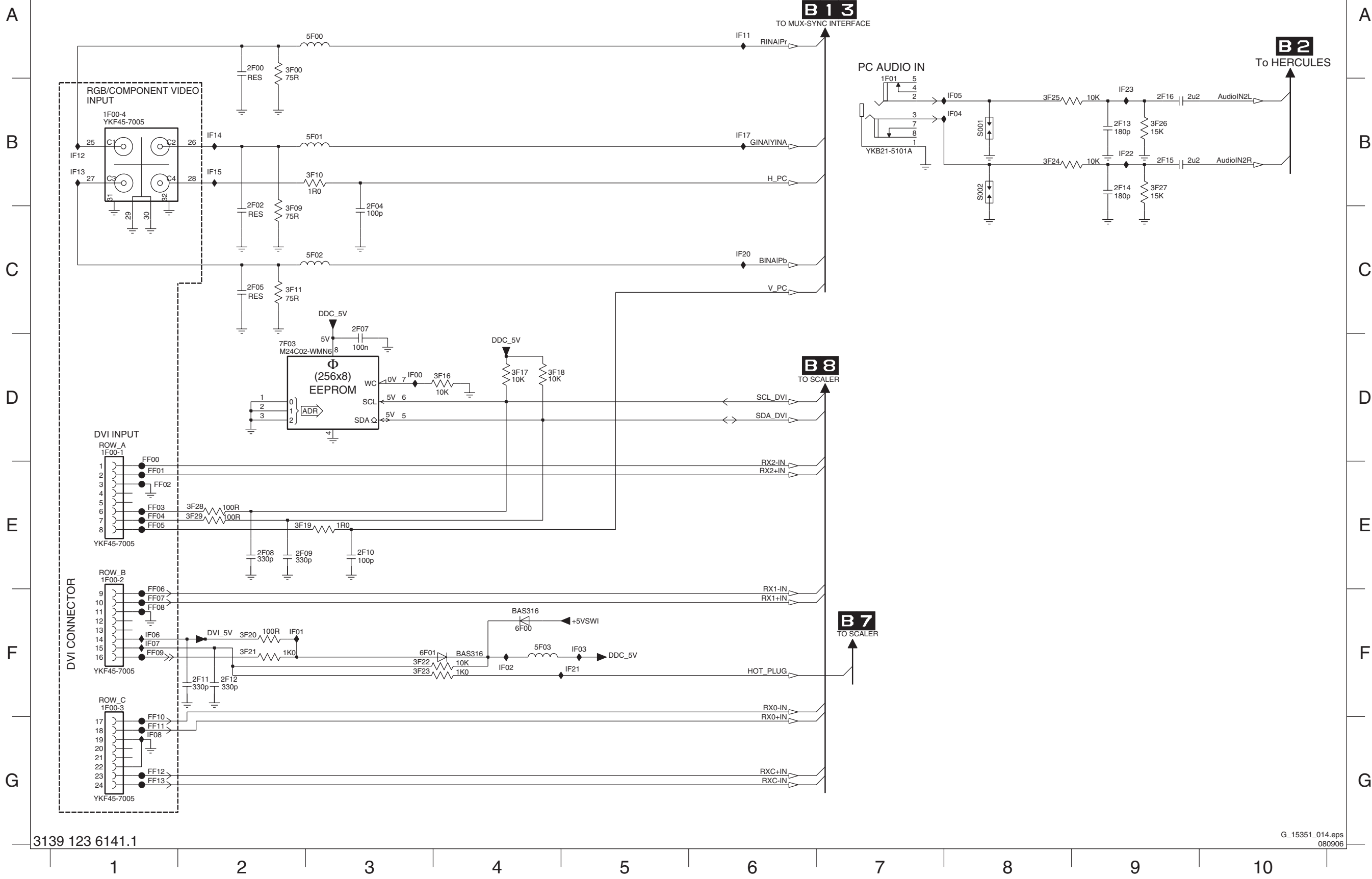


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- 2E02 C3
- 2E03 B5
- 2E04 B7
- 2E05 B7
- 2E06 B7
- 2E07 C7
- 2E08 C8
- 2E09 D7
- 2E10 C8
- 2E11 D7
- 2E12 D8
- 2E13 D7
- 2E14 D8
- 2E15 A11
- 2E16 B9
- 2E17 B9
- 2E18 B9
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- 2E20 B9
- 2E21 B10
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- 2E24 C11
- 2E25 C11
- 2E26 C11
- 2E27 D11
- 2E28 D11
- 2E29 D11
- 2E30 D11
- 2E31 E4
- 2E32 E7
- 2E33 C3
- 2E34 C3
- 2E35 D3
- 2E36 E11
- 2E37 B10
- 2E38 C10
- 2E39 C10
- 3E00 A3
- 3E01 A3
- 3E02 A3
- 3E06 C4
- 3E07 C4
- 3E08 C4
- 3E09 C4
- 3E10 C4
- 3E11 C4
- 3E12 C5
- 3E13 B6
- 3E14 B6
- 3E15 B6
- 3E16 B7
- 3E17 B7
- 3E18 B7
- 3E19 C7
- 3E20 C7
- 3E21 D7
- 3E22 D7
- 3E23 D8
- 3E24 C10
- 3E25 C10
- 3E26 C10
- 3E27 D10
- 3E28 D10
- 3E29 D10
- 3E30 D10
- 3E31 F2
- 3E32 F2
- 3E33 F2
- 3E34 F2
- 3E35 F5
- 3E36 F5
- 3E37 G5
- 3E38 F7
- 3E39 F7
- 3E41 F9
- 3E42 F9
- 3E43 G9
- 3E44 F11
- 3E45 F11
- 3E46 G11
- 3E49 G6
- 3E50 C3
- 3E51 C3
- 3E52 C4
- 3E53 D3
- 3E54 D3
- 3E55 D4
- 4E03 C7
- 4E10 E3
- 4E11 G4
- 4E12 D5
- 4E13 D5
- 4E14 D5
- 5E00 B5
- 5E01 B8
- 5E02 A10
- 5E03 E4
- 6E00 F3
- 6E01 F3
- 6E02 G3
- 6E03 G3
- 7E00 C5
- 7E01 B9
- 7E02 A11
- 7E03 E4
- 7E04-1 E6
- 7E04-2 E7
- 7E04-3 F6
- 7E04-4 F7
- 7E04-5 G5
- 7E04-6 G7
- 7E05-1 E10
- 7E05-2 E11
- 7E05-3 F10
- 7E05-4 F11
- 7E05-5 G10
- 7E05-6 G11
- FE00 B2
- FE01 B2
- FE02 B2
- FE03 C6
- FE04 C8
- FE05 D8
- FE06 B9
- FE07 E9
- FE08 B11
- FE09 C10
- FE10 C10
- FE11 C10
- FE12 D10
- FE13 D10
- IE00 B5
- IE01 B8
- IE02 C8
- IE03 D7
- IE04 D8
- IE05 B10
- IE06 B10
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- IE08 A11
- IE09 F3
- IE10 F3
- IE11 F3
- IE12 F3
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- IE14 C3
- IE15 C3
- IE16 C3
- IE17 A10
- IE18 D3
- IE19 C6
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- IE21 D6
- IE22 C8
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- IE24 F7
- IE25 C7
- IE26 C7
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- IE28 G7
- IE29 A10
- IE30 A10
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- IE37 B8

SSB: Digital I/O

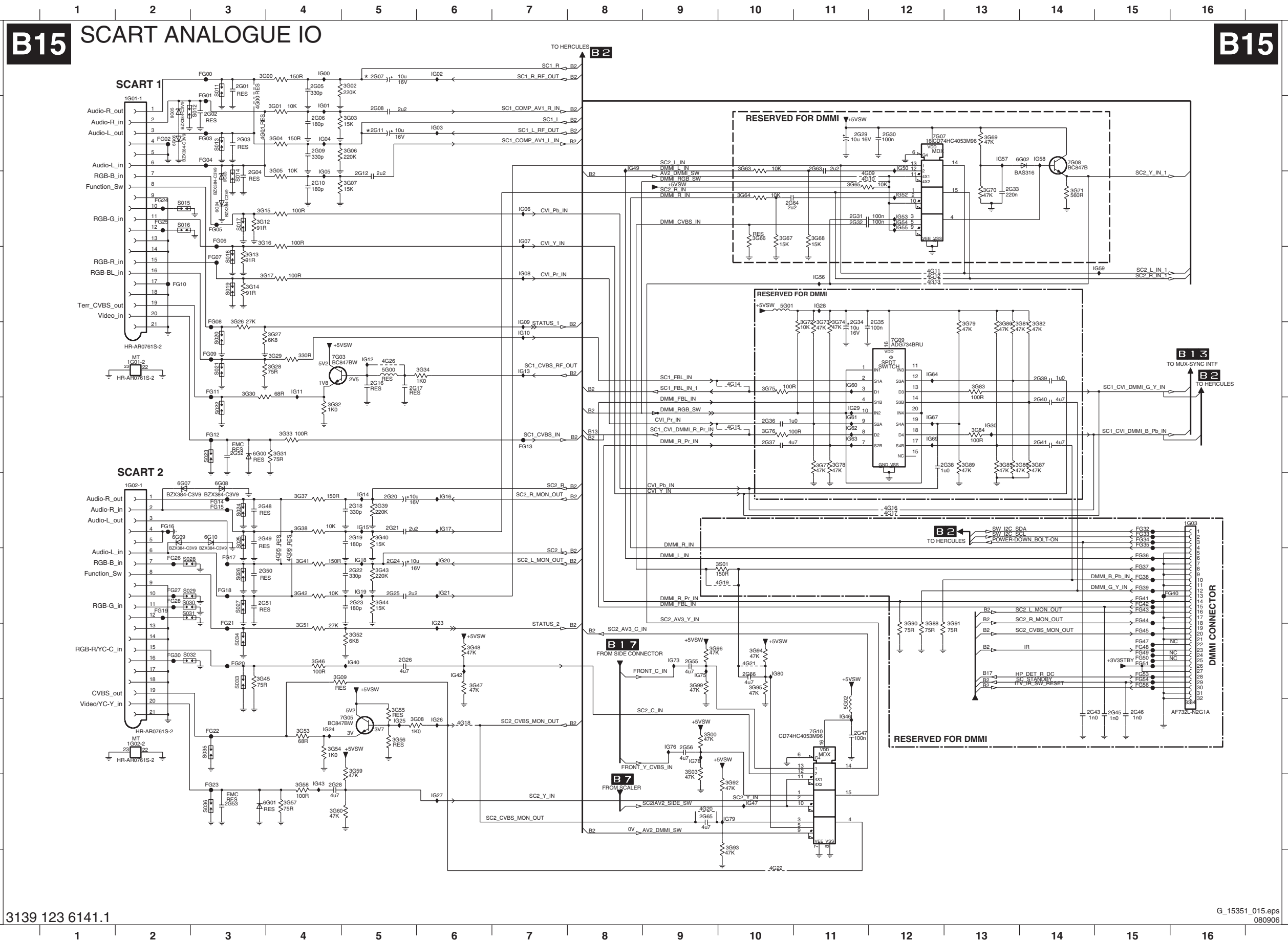
B14 DIGITAL IO

B14



- 1F00-1 D1
- 1F00-2 E1
- 1F00-3 F1
- 1F00-4 B1
- 1F01 B7
- 2F00 A2
- 2F02 B2
- 2F04 C3
- 2F05 C2
- 2F07 C3
- 2F08 E2
- 2F09 E2
- 2F10 E3
- 2F11 F2
- 2F12 F2
- 2F13 B9
- 2F14 B9
- 2F15 B9
- 2F16 B9
- 3F00 A2
- 3F09 C2
- 3F10 B3
- 3F11 C2
- 3F16 D4
- 3F17 D4
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- 3F29 E2
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- 5F02 C3
- 5F03 F4
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- 6F01 F3
- 7F03 D2
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- IF20 C6
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SSB: SCART Analogue I/O



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B15

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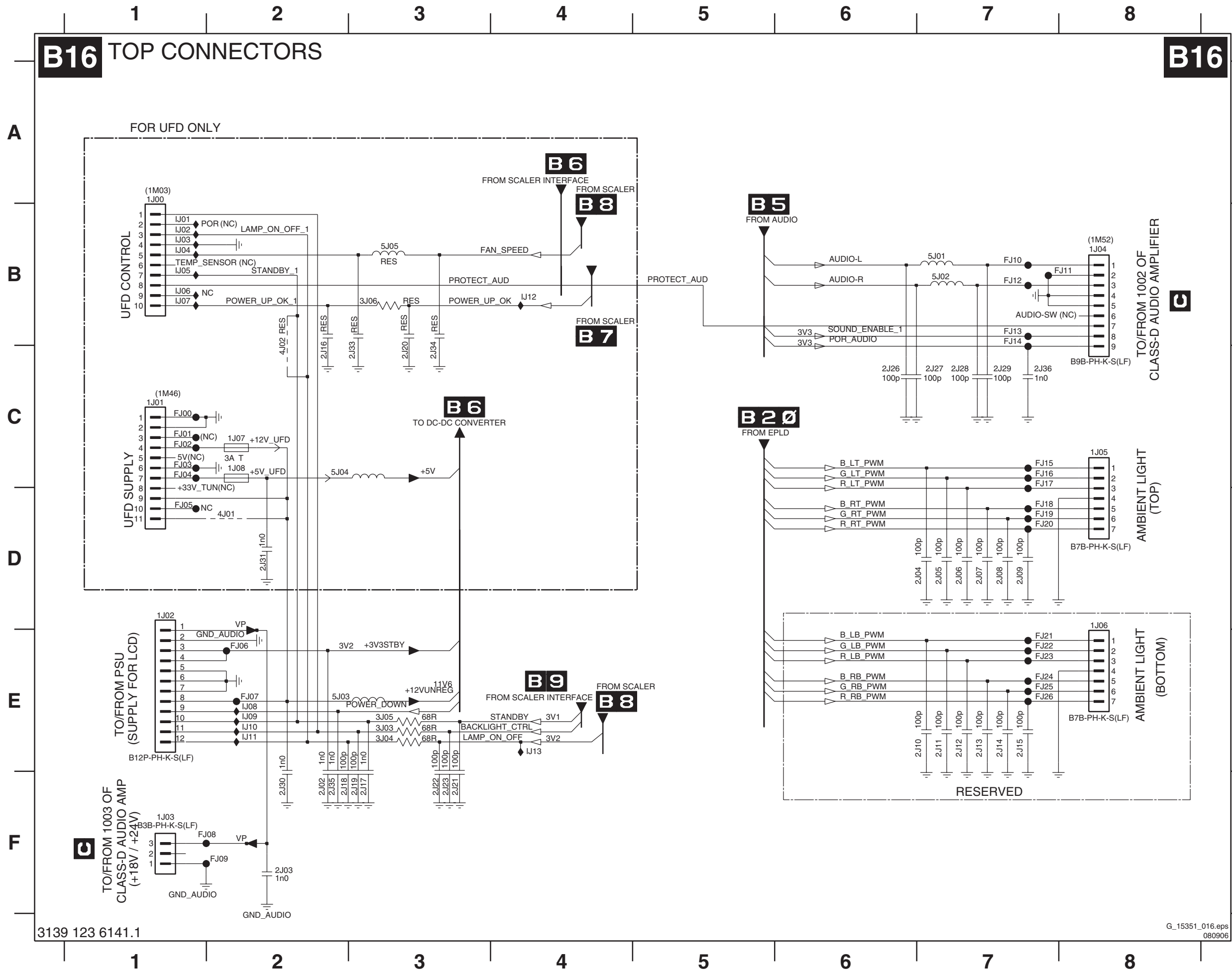
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3G04 B4	FG22 J3	
3G05 C4	FG23 K3	
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3G07 C5	FG25 C2	
3G08 J5	FG26 H2	
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3G57 K4	IG09 E7	
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3G59 J5	IG11 E4	
3G60 K5	IG12 E5	
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SSB: Top Connectors

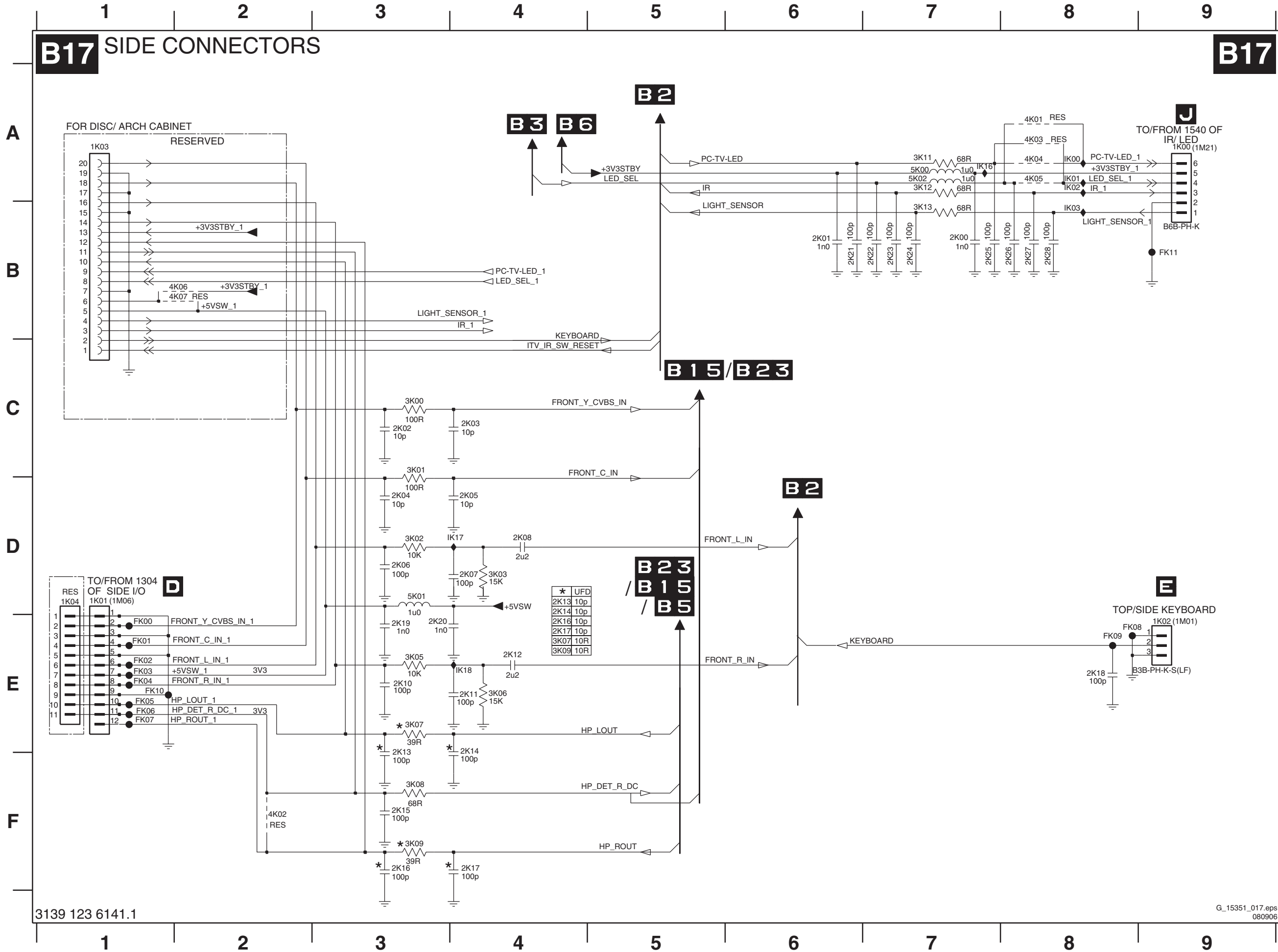


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- 1J05 C8
- 1J06 D8
- 1J07 C2
- 1J08 C2
- 2J02 F2
- 2J03 F2
- 2J04 D6
- 2J05 D7
- 2J06 D7
- 2J07 D7
- 2J08 D7
- 2J09 D7
- 2J10 E6
- 2J11 E7
- 2J12 E7
- 2J13 E7
- 2J14 E7
- 2J15 E7
- 2J16 C2
- 2J17 F3
- 2J18 F2
- 2J19 F3
- 2J20 C3
- 2J21 F3
- 2J22 F3
- 2J23 F3
- 2J26 C6
- 2J27 C7
- 2J28 C7
- 2J29 C7
- 2J30 F2
- 2J31 D2
- 2J33 C3
- 2J34 C3
- 2J35 F2
- 2J36 C7
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- 3J05 E3
- 3J06 B3
- 4J01 D2
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- 5J01 B7
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- 5J03 E2
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- FJ00 C1
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- FJ02 C1
- FJ03 C1
- FJ04 C1
- FJ05 D1
- FJ06 E2
- FJ07 E2
- FJ08 F2
- FJ09 F2
- FJ10 B7
- FJ11 B8
- FJ12 B7
- FJ13 B7
- FJ14 B7
- FJ15 C7
- FJ16 C7
- FJ17 C7
- FJ18 D7
- FJ19 D7
- FJ20 D7
- FJ21 E7
- FJ22 E7
- FJ23 E7
- FJ24 E7
- FJ25 E7
- FJ26 E7
- IJ01 B1
- IJ02 B1
- IJ03 B1
- IJ04 B1
- IJ05 B1
- IJ06 B1
- IJ07 B1
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- IJ13 E4

SSB: Side Connectors

B17 SIDE CONNECTORS

B17

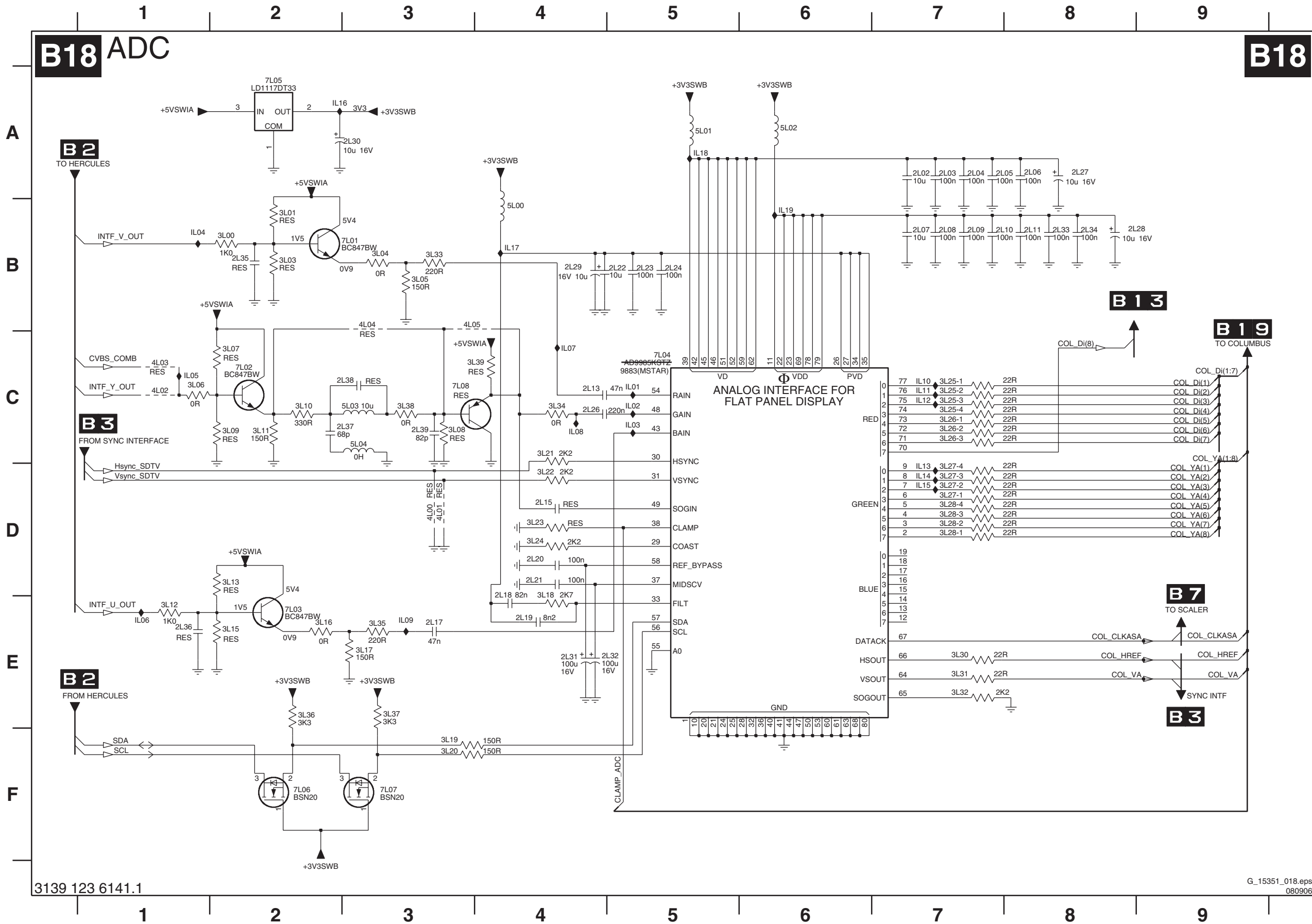


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- 2K01 B6
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- 2K03 C4
- 2K04 D3
- 2K05 D4
- 2K06 D3
- 2K07 D4
- 2K08 D4
- 2K10 E3
- 2K11 E4
- 2K12 E4
- 2K13 F3
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- 2K24 B7
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- 2K26 B8
- 2K27 B8
- 2K28 B8
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- 3K02 D3
- 3K03 D4
- 3K05 E3
- 3K06 E4
- 3K07 E3
- 3K08 F3
- 3K09 F3
- 3K11 A7
- 3K12 A7
- 3K13 B7
- 4K01 A8
- 4K02 F2
- 4K03 A8
- 4K04 A8
- 4K05 A8
- 4K06 B2
- 4K07 B2
- 5K00 A7
- 5K01 D3
- 5K02 A7
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- FK06 E1
- FK07 E1
- FK08 E8
- FK09 E8
- FK10 E1
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- IK00 A8
- IK01 A8
- IK02 A8
- IK03 B8
- IK16 A7
- IK17 D4
- IK18 E4

SSB: ADC

B18 ADC

B18



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- 2L04 A7
- 2L05 A8
- 2L06 A8
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- 2L08 B7
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- 2L13 C4
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- 2L17 E3
- 2L18 E4
- 2L19 E4
- 2L20 D4
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- 2L22 B5
- 2L23 B5
- 2L24 B5
- 2L26 C4
- 2L27 A8
- 2L28 B9
- 2L29 B4
- 2L30 A3
- 2L31 E4
- 2L32 E5
- 2L33 B8
- 2L34 B8
- 2L35 B2
- 2L36 E1
- 2L37 C3
- 2L38 C3
- 2L39 C3
- 3L00 B2
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- 3L03 B2
- 3L04 B3
- 3L05 B3
- 3L06 C1
- 3L07 C2
- 3L08 C3
- 3L09 C2
- 3L10 C2
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- 3L12 E1
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- IL19 B6

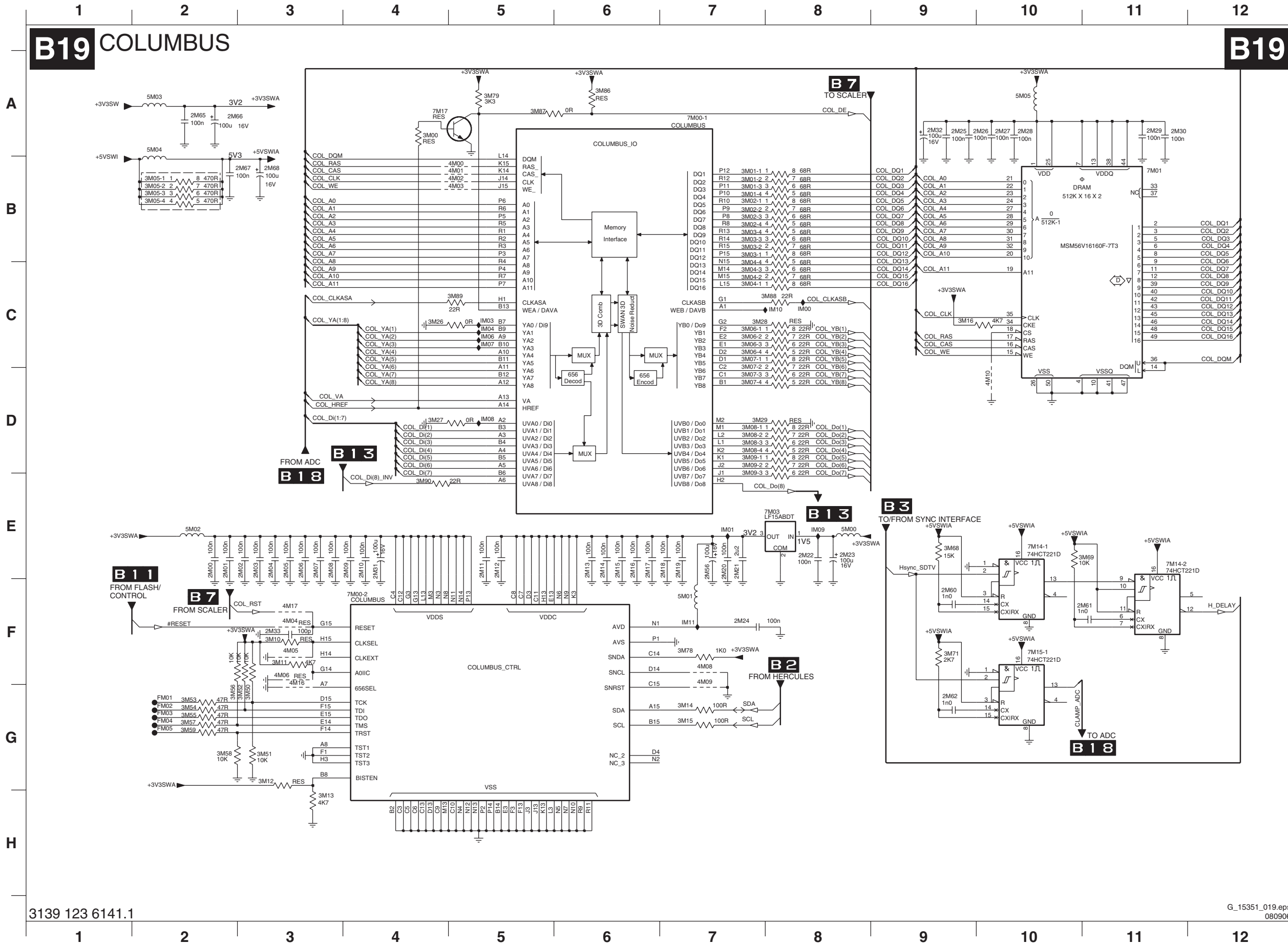
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SSB: Columbus

B19 COLUMBUS

B19



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- 2M20 E7
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- 2M24 F7
- 2M25 A9
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- 2M27 A10
- 2M28 A10
- 2M29 A11
- 2M30 A11
- 2M31 E4
- 2M32 A9
- 2M33 F3
- 2M56 E7
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- 2M61 F11
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- 2M66 A2
- 2M67 B3
- 2M68 B3
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- 3M01-4 B7
- 3M02-1 B7
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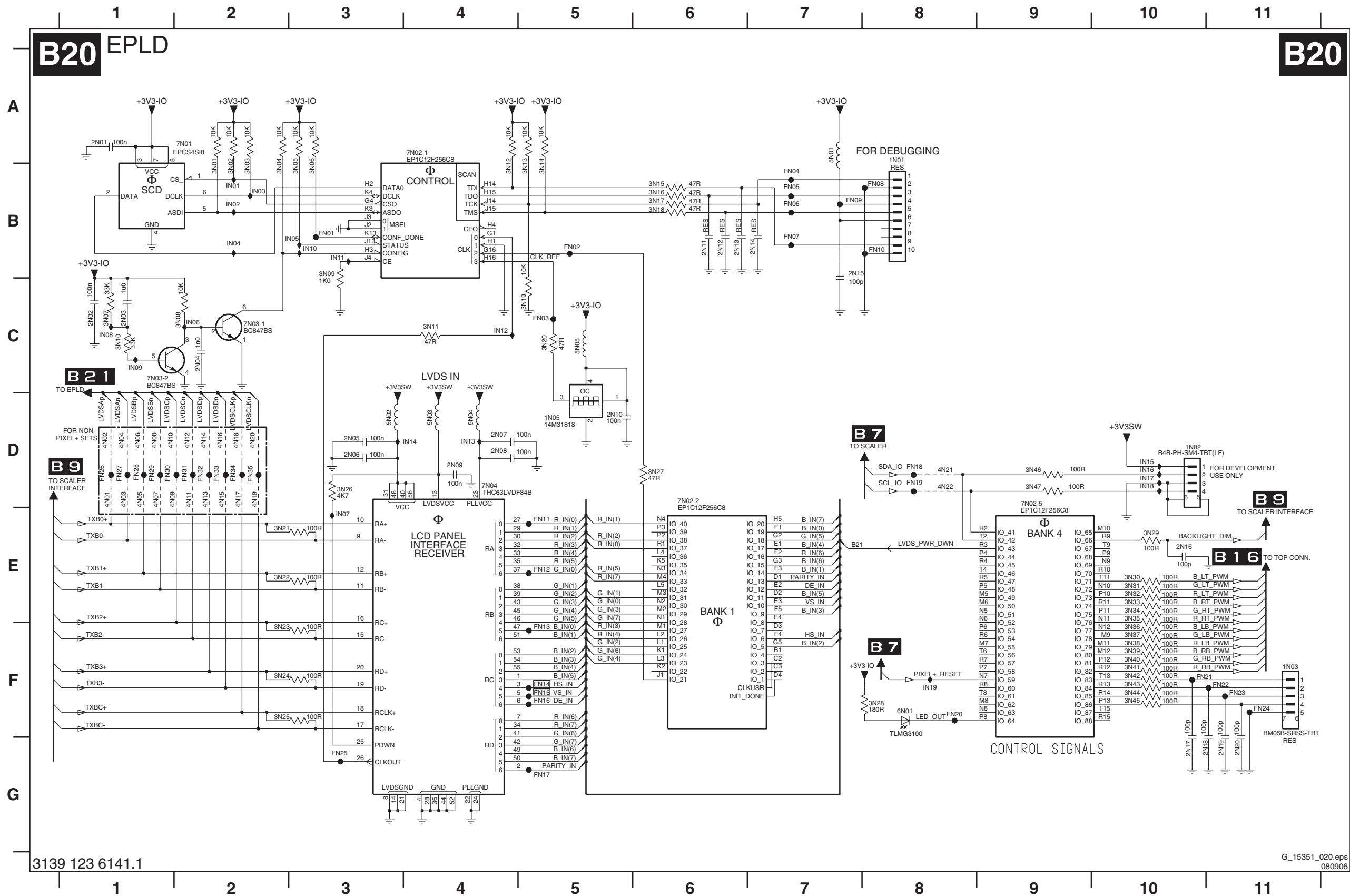
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B20 EPLD

B20

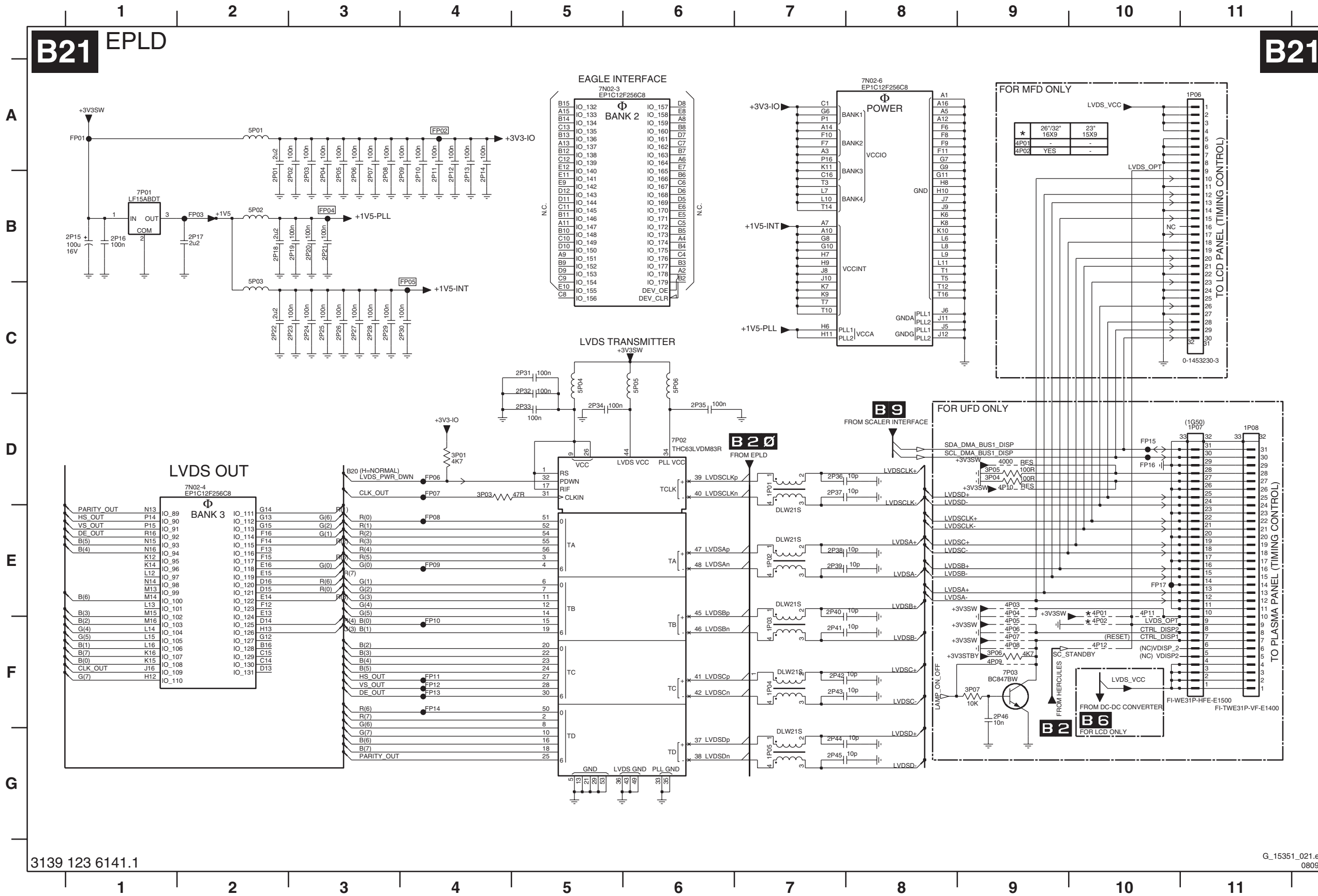


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- 7N92 B2
- 7N93 B2
- 7N94 B2
- 7N95 B2
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- 7N97 B2
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- 7N99 B2
- 7N100 B2

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B21 EPLD

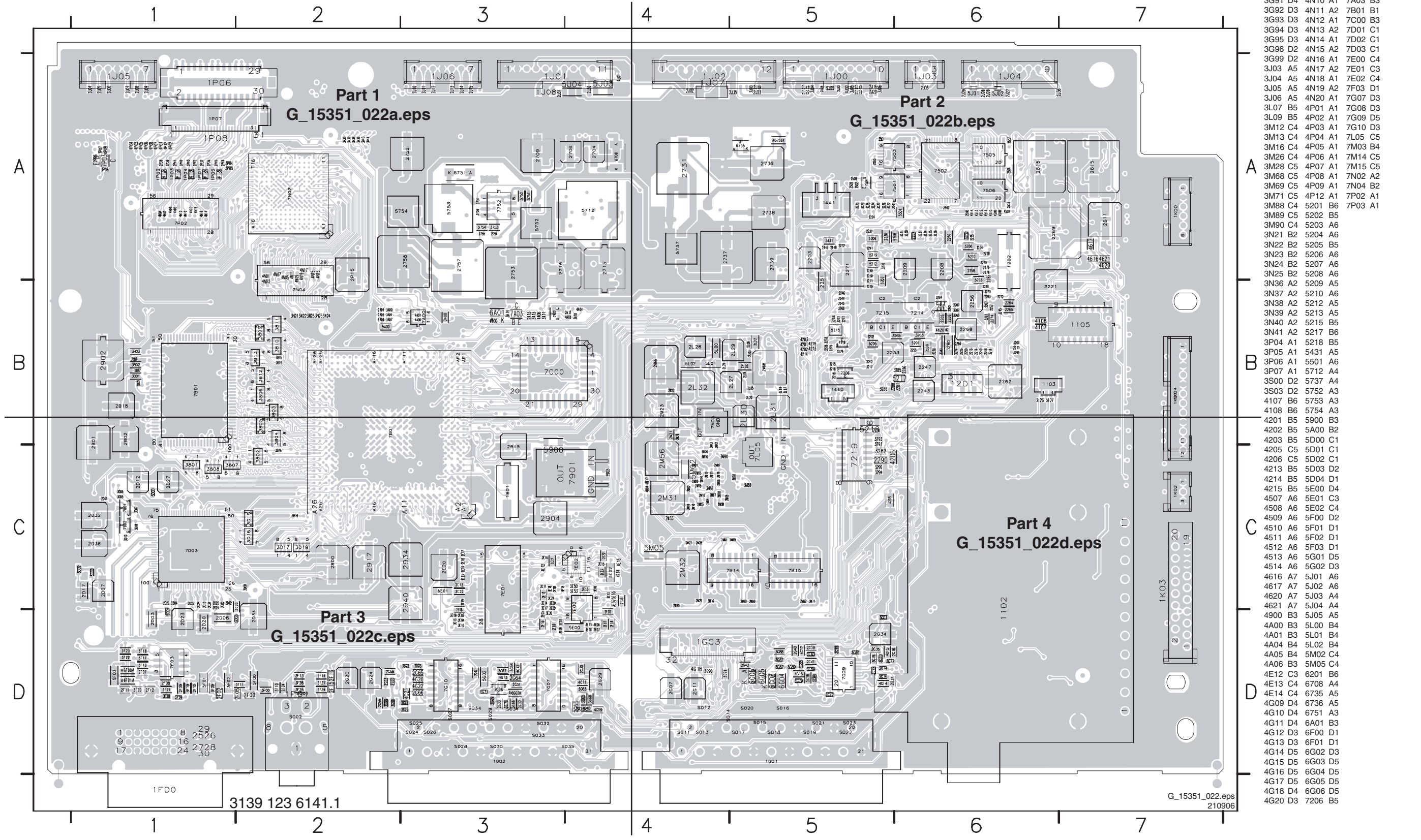
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- 1P01 D7
- 1P02 E7
- 1P03 F7
- 1P04 F7
- 1P05 G7
- 1P06 A11
- 1P07 D11
- 1P08 D11
- 2P01 B2
- 2P02 B2
- 2P03 B3
- 2P04 B3
- 2P05 B3
- 2P06 B3
- 2P07 B3
- 2P08 B3
- 2P09 B3
- 2P10 B4
- 2P11 B4
- 2P12 B4
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- 2P14 B4
- 2P15 B1
- 2P16 B1
- 2P17 B2
- 2P18 B2
- 2P19 B3
- 2P20 B3
- 2P21 B3
- 2P22 C2
- 2P23 C2
- 2P24 C3
- 2P25 C3
- 2P26 C3
- 2P27 C3
- 2P28 C3
- 2P29 C3
- 2P30 C3
- 2P31 C5
- 2P32 C5
- 2P33 D5
- 2P34 D5
- 2P35 D6
- 2P36 D7
- 2P37 D7
- 2P38 E7
- 2P39 E7
- 2P40 E7
- 2P41 F7
- 2P42 F7
- 2P43 F7
- 2P44 G7
- 2P45 G7
- 2P46 F9
- 3P01 D4
- 3P03 D4
- 3P04 D9
- 3P05 D9
- 3P06 F9
- 3P07 F9
- 4000 D9
- 4P01 E10
- 4P02 F10
- 4P03 E9
- 4P04 E9
- 4P05 F9
- 4P06 F9
- 4P07 F9
- 4P08 F9
- 4P09 F9
- 4P10 D9
- 4P11 E10
- 4P12 F10
- 5P01 A2
- 5P02 B2
- 5P03 C2
- 5P04 C5
- 5P05 C6
- 5P06 C6
- 7N02-3 A5
- 7N02-4 D2
- 7N02-6 A8
- 7P01 B1
- 7P02 D6
- 7P03 F9
- FP01 A1
- FP02 A4
- FP03 B2
- FP04 B3
- FP05 C4
- FP06 D4
- FP07 D4
- FP08 E4
- FP09 E4
- FP10 F4
- FP11 F4
- FP12 F4
- FP13 F4
- FP14 F4
- FP15 D10
- FP16 D10
- FP17 E10

Layout Small Signal Board (Top Side Overview)

1102 C6	1J03 A6	1P06 A1	2224 A5	2243 B6	2263 B6	2285 A6	2509 A5	2754 A3	2A02 B2	2D20 D1	2E03 D3	2E19 C3	2F11 D1	2G35 D5	2J03 A6	2J19 A5	2L03 B5	2M03 C4	2M19 C4	2M66 B4	3207 B6	3242 B5	3278 B5	3752 A3	3814 B2	3D06 C1	3E10 D4	3E53 C4	3F26 D2	3G75 D5	4G21 D3	7214 B6
1103 B6	1J04 A6	1P07 A1	2226 B6	2244 B5	2264 B6	2286 B6	2611 A7	2755 A3	2A12 B4	2D21 C1	2E04 D3	2E20 C3	2F12 D1	2G36 D5	2J04 A1	2J20 A5	2L04 B5	2M04 C4	2M20 B4	2M68 B5	3214 B6	3244 B5	3279 B5	3753 A3	3815 B2	3D07 C1	3E11 D4	3E55 C4	3F27 D2	3G76 D5	4G22 D3	7215 B5
1105 B7	1J05 A1	1P08 A1	2228 B6	2245 B5	2265 B6	2287 B6	2615 A7	2756 A3	2A13 B3	2D22 C1	2E05 D3	2E21 C3	2F13 D2	2G37 D5	2J05 A1	2J21 A5	2L05 B5	2M05 C4	2M21 B4	2P15 A2	3215 B5	3245 B6	3280 B6	3754 A3	3816 C2	3D08 C1	3E12 C4	3F00 D2	3F28 D1	3G77 D5	4J01 A4	7216 B6
1201 B6	1J06 A3	2203 A5	2229 B6	2246 B5	2266 B6	2288 B5	2618 A6	2757 A3	2B01 B1	2D23 D1	2E06 C3	2E22 C4	2F14 D2	2G38 D5	2J06 A1	2J22 A5	2L06 B5	2M06 C4	2M22 B4	2P36 A1	3216 B5	3262 B6	3281 B6	3801 C1	3819 C2	3D09 C2	3E13 D3	3F09 D1	3F29 D1	3G78 D5	4J02 A5	7218 B5
1202 A6	1J07 A4	2205 B6	2230 B6	2247 B6	2267 B6	2290 C5	2704 A4	2758 A3	2B02 B1	2D24 C1	2E07 D3	2E23 C4	2F15 D2	2G39 D5	2J07 A1	2J23 A5	2L20 B5	2M07 C4	2M23 B4	2P37 A1	3217 B5	3263 B6	3282 C5	3802 C2	3A00 B2	3D10 C1	3E14 C3	3F10 D2	3G63 D4	3G79 D5	4M04 C4	7219 C5
1440 B5	1J08 A3	2206 B6	2231 A6	2248 B6	2268 B6	2291 B5	2706 A4	2800 C2	2B05 B1	2D25 C1	2E08 D3	2E33 C4	2F16 D2	2G40 D5	2J08 A1	2J26 A6	2L21 B4	2M08 C4	2M27 C4	2P38 A1	3222 A5	3264 B6	3285 B6	3803 B2	3A01 B2	3D12 C1	3E15 C3	3F11 D2	3G64 D3	3G80 D5	4M16 C4	7501 A6
1441 A5	1K00 A7	2207 B6	2232 B5	2249 B6	2269 A6	2447 A5	2709 A3	2815 C3	2B17 B1	2D26 C1	2E09 C3	2E34 D4	2G07 D4	2G41 D5	2J09 A1	2J27 A6	2L22 B5	2M09 C4	2M28 C4	2P39 A1	3223 A5	3265 B6	3286 B5	3804 B2	3A07 B2	3D15 C2	3E16 D3	3F16 D1	3G65 D4	3G81 D5	4M17 C4	7502 A6
1801 C3	1K01 B7	2208 A6	2233 B5	2250 A5	2270 A6	2448 A5	2713 A4	2901 B1	2B18 B1	2D27 C1	2E10 D3	2E35 C4	2G11 D4	2G43 D5	2J10 A3	2J28 A6	2L27 B5	2M10 C4	2M29 C4	2P40 A1	3224 A5	3266 B6	3291 B5	3805 B2	3A08 B2	3D16 C2	3E17 C3	3F17 D1	3G66 D3	3G82 D5	4N01 A2	7503 A6
1F00 D1	1K02 C7	2209 A6	2234 A6	2251 B5	2271 A5	2501 A5	2716 A3	2902 B1	2D03 D1	2D31 C1	2E11 C3	2F00 D2	2G20 D2	2G47 D3	2J11 A3	2J29 A6	2L28 B4	2M11 C4	2M30 C4	2P41 A1	3225 A5	3267 B6	3292 C5	3806 B2	3A10 B4	3D17 C2	3E18 C3	3F18 D1	3G67 D3	3G83 D5	4N02 A1	7504 A5
1F01 D2	1K03 C7	2210 B5	2235 A6	2255 B6	2272 A5	2502 A6	2731 A4	2903 C4	2D04 C1	2D32 C1	2E12 C3	2F02 D1	2G24 D2	2G55 D2	2J12 A3	2J30 A4	2L29 B5	2M12 C4	2M31 C4	2P42 A1	3226 A5	3268 B5	3293 B5	3807 C1	3A11 B3	3D18 C2	3E19 D3	3F19 D1	3G68 D4	3G84 D5	4N03 B2	7505 A6
1G01 D5	1K04 B7	2211 B6	2236 A5	2256 B6	2274 B6	2503 A5	2736 A5	2904 C3	2D05 C1	2D34 D2	2E13 C3	2F04 D2	2G29 D4	2G56 D2	2J13 A3	2J31 A3	2L30 B5	2M13 C4	2M32 C4	2P43 A1	3227 A5	3270 A5	3294 C5	3808 C1	3A13 B3	3D20 C2	3E20 D3	3F20 D1	3G69 D3	3G85 D5	4N04 A1	7506 A6
1G02 D3	1P01 A1	2214 B6	2237 A5	2257 B6	2275 A6	2504 A6	2737 A4	2917 C2	2D06 D1	2D38 C1	2E14 C3	2F05 D2	2G30 D4	2G63 D4	2J14 A3	2J33 A5	2L31 B5	2M14 C4	2M33 C4	2P44 A1	3230 A6	3271 B5	3295 B6	3809 B2	3A14 B3	3E00 C4	3E21 C3	3F21 D1	3G70 D3	3G86 D5	4N05 A2	7752 A3
1G03 D4	1P02 A1	2216 B6	2238 A6	2258 A6	2276 A6	2505 A6	2738 A5	2934 C3	2D07 C1	2D41 C1	2E15 C4	2F07 D1	2G31 D3	2G64 D3	2J15 A3	2J34 A5	2L32 B4	2M15 C4	2M36 C4	2P45 A1	3231 A6	3272 B6	3501 A5	3810 B2	3B01 B1	3E06 D4	3E22 C3	3F22 D1	3G71 D3	3G87 D5	4N06 A1	7801 B2
1J00 A5	1P03 A1	2218 B5	2240 A5	2259 B6	2277 B5	2506 A6	2739 A5	2940 C3	2D12 C1	2E00 D3	2E16 C3	2F08 D1	2G32 D3	2G65 D3	2J16 A5	2J35 A5	2M00 C4	2M16 C4	2M60 C5	2P46 A1	3234 A6	3273 B6	3502 A5	3811 B2	3B02 B1	3E07 D4	3E23 C3	3F23 D1	3G72 D5	3G88 D5	4N07 A2	7901 C4
1J01 A3	1P04 A1	2221 B6	2241 A5	2260 A6	2278 B5	2507 A6	2752 A3	2A00 B3	2D15 C1	2E01 D4	2E17 C3	2F09 D1	2G33 D3	2G66 D3	2J17 A5	2J36 A6	2M01 C4	2M17 C4	2M61 C4	3126 B6	3235 A6	3274 B6	3734 A3	3812 B2	3B03 B1	3E08 D3	3E50 C4	3F24 D2	3G73 D5	3G89 D5	4N08 A1	7A00 B3
1J02 A4	1P05 A1	2223 A5	2242 B6	2262 B6	2279 B5	2508 A5	2753 A3	2A01 B2	2D17 C1	2E02 D4	2E18 C3	2F10 D1	2G34 D5	2J02 A4	2J18 A5	2L02 B5	2M02 C4	2M18 C4	2M62 C5	3127 B6	3236 A6	3277 B5	3751 A3	3813 B2	3D05 C1	3E09 C3	3E52 C4	3F25 D2	3G74 D5	3G90 D4	4N09 A2	7A02 B3



7214 B6	7215 B5	7216 B6	7218 B5	7219 C5	7501 A6	7502 A6	7503 A6	7504 A5	7505 A6	7506 A6	7752 A3	7801 B2	7901 C4	7A00 B3	7A02 B3	7A03 B3	7B01 B1	7C00 B3	7D01 C1	7D02 C1	7D03 C1	7E00 C4	7E01 C3	7E02 C4	7F03 D1	7G07 D3	7G08 D3	7G09 D5	7G10 D3	7L05 C5	7M03 B4	7M14 C5	7M15 C5	7N02 A2	7N04 B2	7P02 A1	7P03 A1	7Q03 A1	7R03 A1	7S03 A1	7T03 A1	7U03 A1	7V03 A1	7W03 A1	7X03 A1	7Y03 A1	7Z03 A1
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Layout Small Signal Board (Top Side Part 1)

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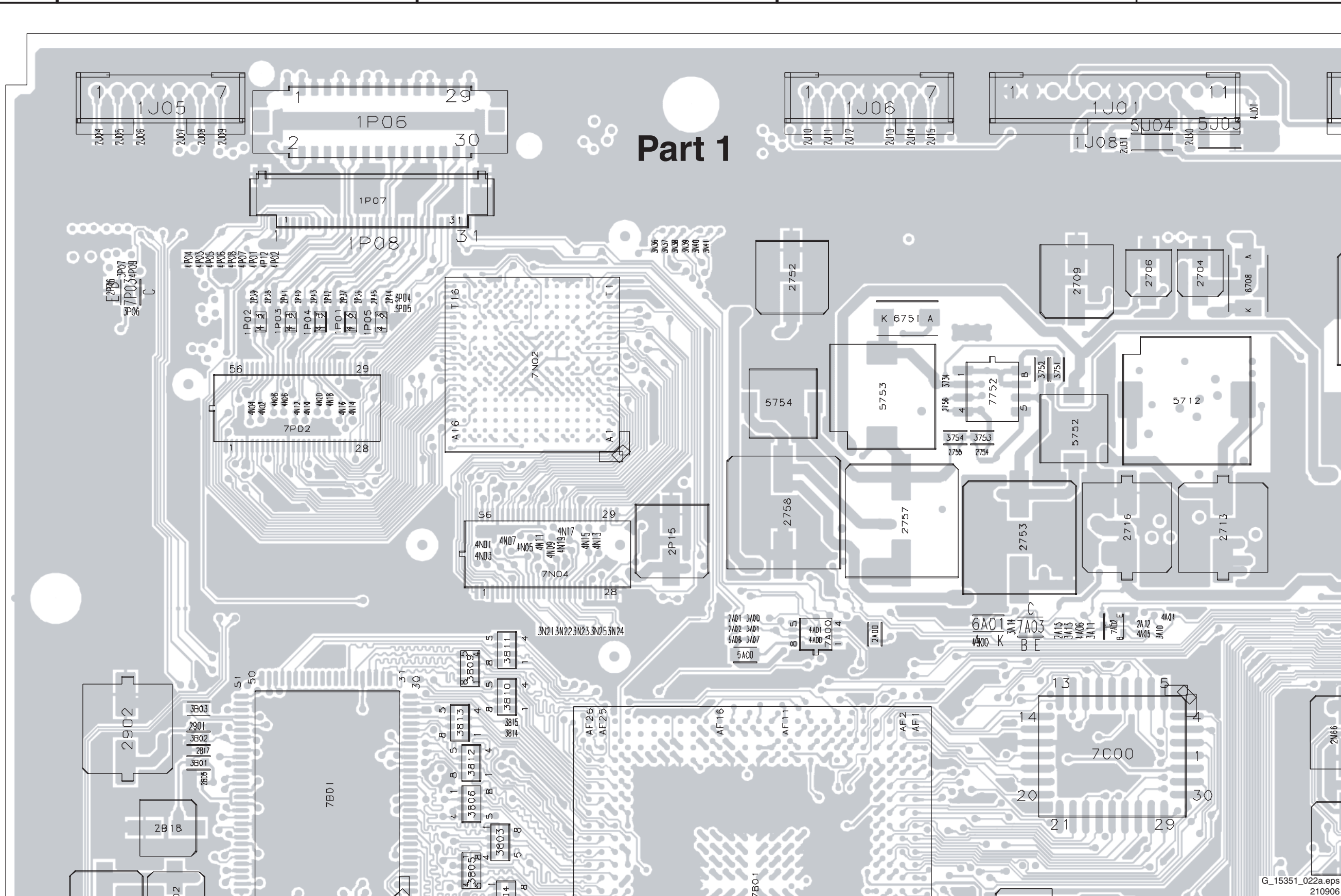
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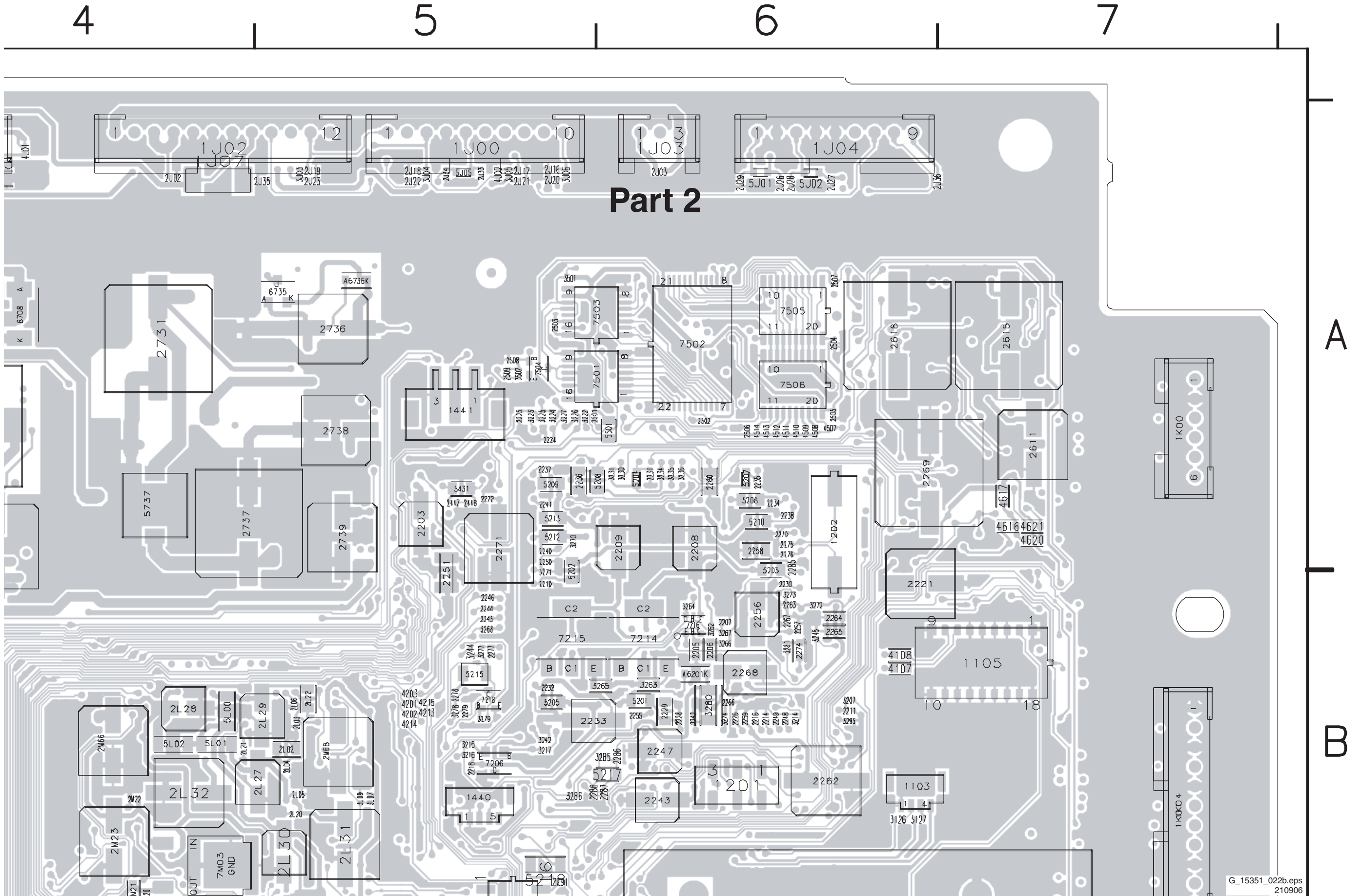
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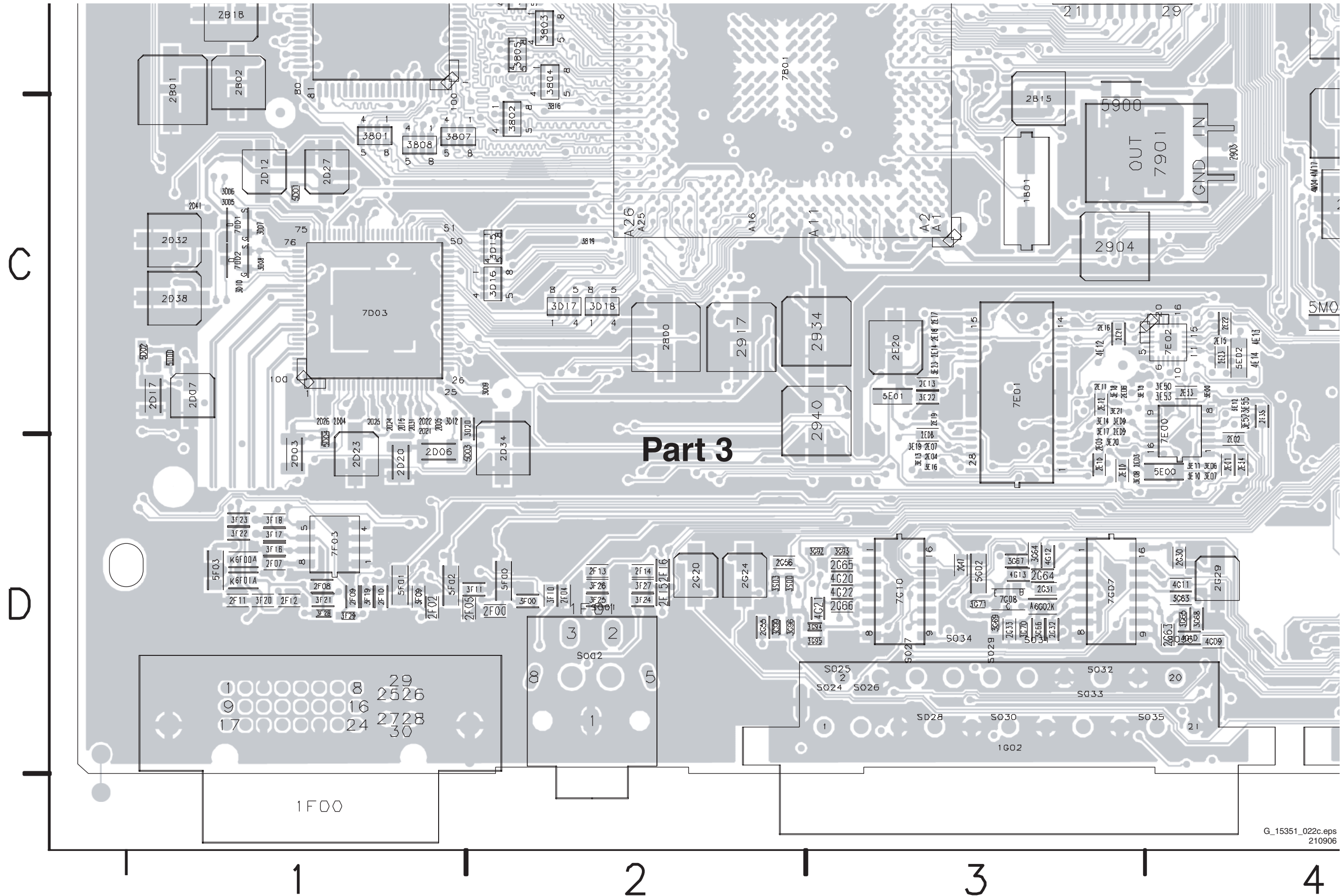
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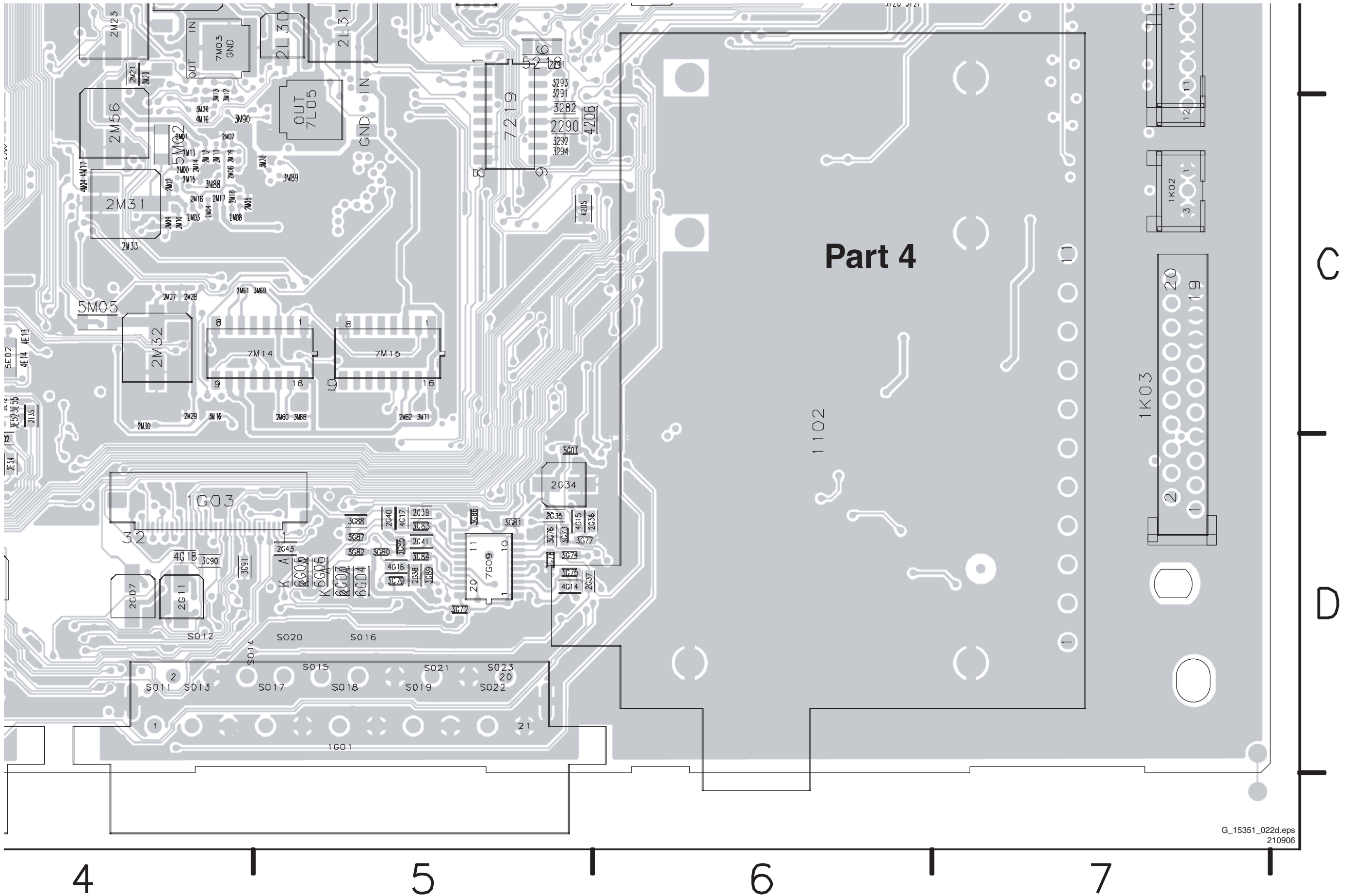
Layout Small Signal Board (Top Side Part 2)



Layout Small Signal Board (Top Side Part 3)

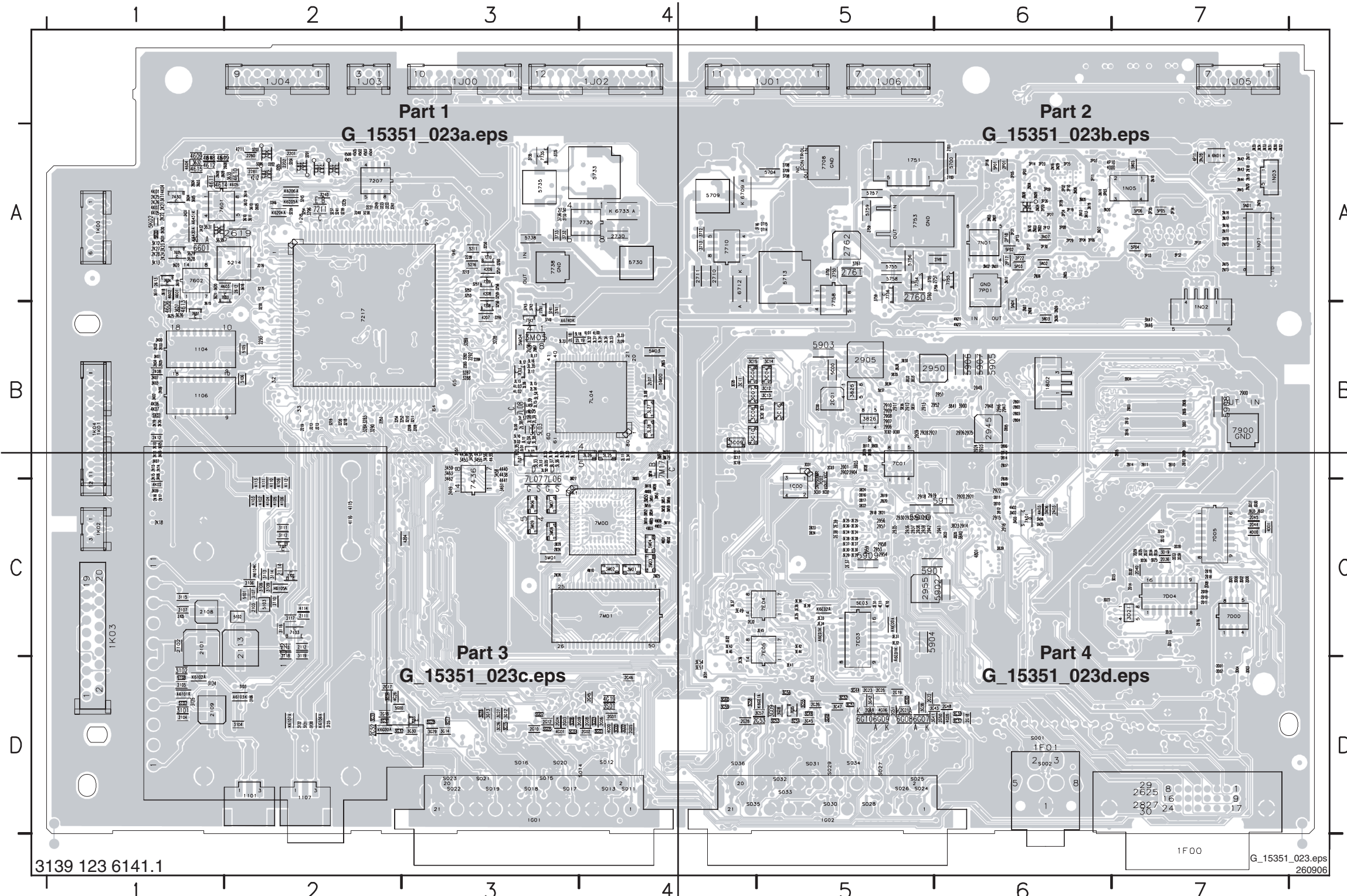


Layout Small Signal Board (Top Side Part 4)



Layout Small Signal Board (Bottom Side Overview)

1101 D2	2111 C2	2293 B2	2730 A4	2810 C6	2911 B5	2933 C5	2958 C5	2D01 D7	2D45 C7	2G09 D4	2K00 A1	2K22 A1	2L34 B4	2N11 A7	2P12 A6	2P34 A7	3120 D2	3228 B3	3257 A3	3459 B3	3628 A1	3758 A6	3835 B5	3C04 B5	3D03 D7	3E26 C5	3E51 D4	3G29 D3	3G54 D5	3N15 A7	4L05 B3	6N01 A7	
1104 B1	2112 C2	2449 C3	2733 A3	2811 C6	2912 B5	2935 C5	2959 C5	2D02 D7	2E24 C5	2G10 D3	2K01 A1	2K23 A1	2L35 B3	2N12 A7	2P13 A6	2P35 A7	3121 D2	3229 A2	3258 B3	3461 C3	3629 A1	3759 A5	3836 B5	3C05 B4	3D04 D7	3E27 C5	3E54 D4	3G30 D3	3G55 D5	3N16 A7	4M00 C4	7101 C2	
1106 B1	2113 C2	2603 A1	2734 A3	2812 C6	2913 B5	2936 C5	2A03 C6	2D08 C7	2E25 C5	2G12 D3	2K02 B1	2K24 A1	2L36 B3	2N13 A7	2P14 A6	3101 D1	3122 D2	3232 A2	3259 A3	3462 C3	3630 A1	3760 A5	3837 B5	3C06 B4	3D11 C7	3E28 C5	3G00 D4	3G31 D2	3G56 D5	3N17 A7	4M01 C4	7102 C2	
1107 D2	2114 C2	2604 A1	2735 A3	2813 B6	2914 C6	2937 C5	2B03 B7	2D09 C7	2E26 C5	2G16 D2	2K03 B1	2K25 A1	2L37 B3	2N14 A7	2P16 A6	3102 D1	3123 D2	3233 A2	3260 A3	3463 B3	3631 A1	3761 A5	3838 B5	3C07 B4	3D19 C7	3E29 C5	3G01 D4	3G32 D2	3G57 D5	3N18 A7	4M02 C4	7103 C2	
1751 A5	2201 A2	2605 A2	2741 B3	2814 B6	2915 C6	2938 C5	2B04 B7	2D10 C7	2E27 C5	2G17 D2	2K04 B1	2K26 A1	2L38 B3	2N15 A7	2P17 A6	3103 D2	3124 D1	3237 A2	3275 A2	3604 A1	3632 A1	3800 B5	3839 C6	3C08 B4	3D21 C7	3E30 C5	3G02 D4	3G33 D2	3G58 D4	3N19 A6	4M03 C4	7201 A2	
1802 B6	2202 A2	2608 A2	2749 A6	2816 C5	2916 C6	2939 C5	2B06 B7	2D11 C7	2E28 C5	2G18 D6	2K05 B1	2K27 A1	2L39 B3	2N16 A6	2P18 A6	3104 D2	3125 D1	3238 A2	3276 A2	3605 A1	3633 A1	3817 B5	3840 C6	3C09 B4	3D22 C6	3E31 C5	3G03 D4	3G34 D2	3G59 D4	3N20 A6	4M04 C4	7202 A2	
1C00 C5	2219 B2	2609 A1	2750 A5	2817 C5	2918 C5	2941 C6	2B07 B7	2D13 C7	2E29 C5	2G19 D5	2K06 B1	2K28 A1	2M24 C3	2N17 A7	2P19 A6	3105 C1	3201 A2	3239 A2	3283 B2	3609 A1	3708 A5	3818 B5	3841 B6	3C10 B4	3D23 C7	3E32 C5	3G04 D3	3G37 D6	3G60 D4	3N26 B6	4M06 C4	7203 A2	
1N01 A7	2220 B2	2610 A2	2751 A6	2818 C5	2919 C5	2942 C5	2B08 B7	2D14 C7	2E30 C5	2G21 D5	2K07 B1	2K29 A1	2L27 B4	2M25 C4	2N18 A7	2P20 A6	3106 D2	3202 A2	3240 A2	3284 B2	3610 A2	3709 A5	3820 C6	3900 B6	3C11 B4	3D24 C7	3E33 C5	3G05 D3	3G38 D5	3K00 B1	3N27 A6	4M08 C4	7204 A2
1N02 B7	2225 A2	2612 A2	2759 A5	2819 C5	2920 C6	2945 B6	2B09 B7	2D16 C7	2E31 C5	2G22 D5	2K08 B1	2L08 B4	2M26 C3	2N19 A7	2P21 A6	3107 C2	3203 A2	3241 A2	3287 B3	3611 A2	3712 A4	3822 C6	3901 B5	3C12 B5	3D25 C7	3E34 C5	3G06 D3	3G39 D6	3K01 B1	3N28 A7	4M09 C4	7205 A2	
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1N05 A7	2239 A3	2614 A2	2761 A5	2821 C5	2922 C6	2947 B6	2B11 B7	2D19 C7	2E36 D4	2G25 D5	2K11 B1	2L10 B3	2M67 B3	2P01 A6	2P23 A6	3109 C2	3205 A2	3246 A2	3289 B3	3615 B1	3716 A5	3824 C5	3903 B5	3C14 B5	3D27 C7	3E36 C5	3G08 D5	3G41 D5	3K03 B1	3N30 A7	4N21 B6	7208 B3	
2101 C1	2252 B3	2616 A1	2762 A5	2822 C5	2923 B6	2948 B6	2B12 B7	2D28 C7	2E37 C5	2G26 D5	2K12 B1	2L11 B4	2N01 A6	2P02 A6	2P24 A6	3110 C2	3206 A2	3247 A2	3290 B2	3616 A2	3732 A3	3825 B5	3904 B5	3C15 B4	3D30 C7	3E37 C4	3G09 D5	3G42 D5	3K05 B1	3N31 A7	4N22 B6	7209 A3	
2102 C1	2253 B2	2617 A1	2801 B6	2823 C5	2924 B6	2949 B6	2B13 B7	2D29 C7	2E38 C5	2G28 D4	2K13 B1	2L13 B3	2N02 A6	2P03 A6	2P25 A6	3111 C2	3208 B3	3248 A2	3296 A2	3617 A1	3733 A3	3826 B5	3A02 C6	3C16 B5	3D31 C7	3E38 C5	3G12 D3	3G43 D6	3K06 B1	3N32 A7	4P10 A6	7210 A3	
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2104 D1	2273 A3	2700 A6	2803 B6	2900 B7	2926 B6	2951 B6	2B15 B7	2D33 C7	2G01 D4	2G46 D4	2K15 B1	2L17 B3	2N04 A6	2P05 A6	2P27 A6	3113 C2	3210 B3	3250 A3	3432 A1	3619 A1	3736 A3	3828 B5	3A04 C6	3C18 B4	3D33 C7	3E41 D5	3G14 D3	3G45 D5	3K08 B1	3N34 A7	5101 C2	7217 B2	
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Layout Small Signal Board (Bottom Side Part 1)

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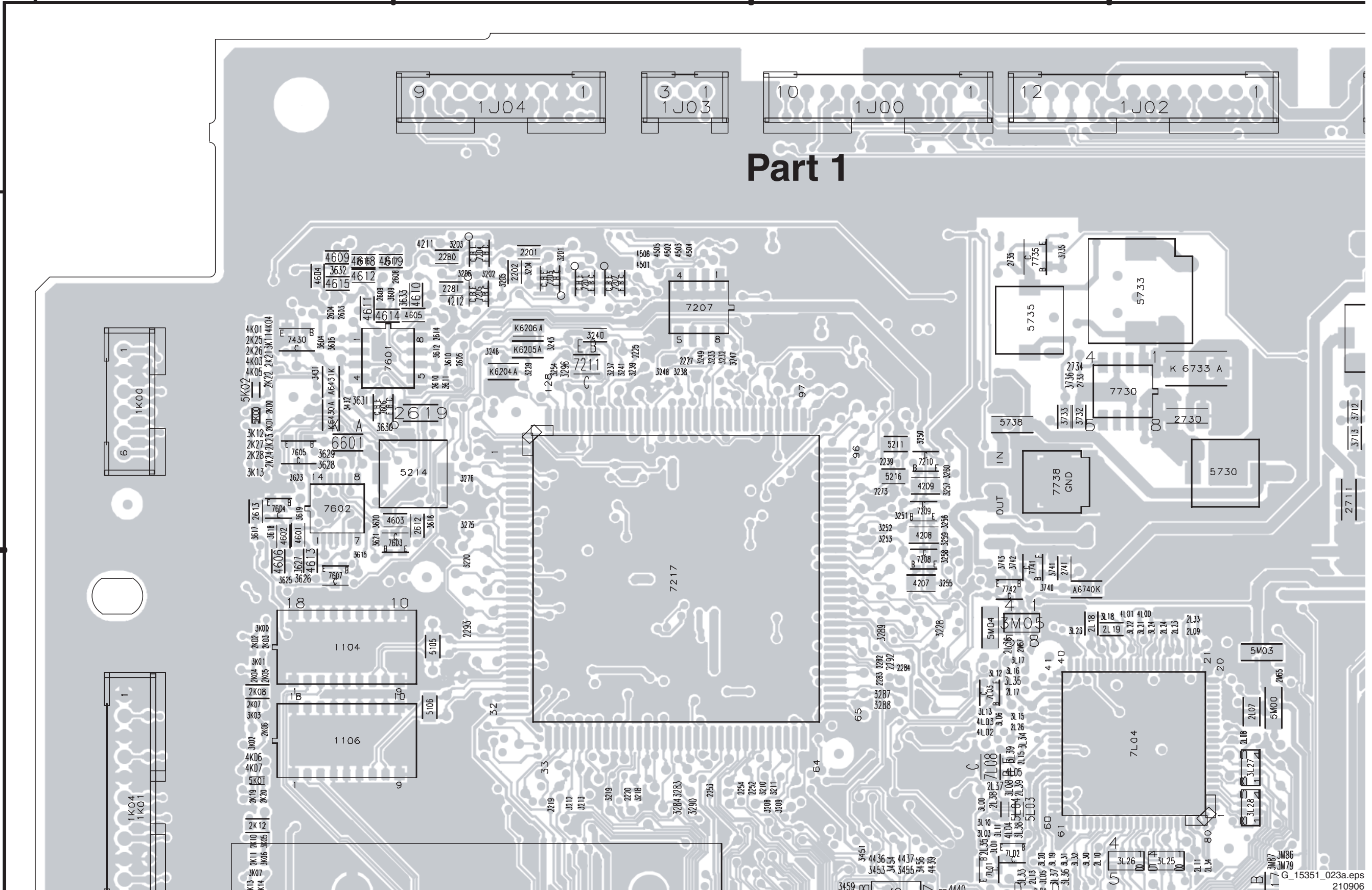
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3

4

A

B



Part 1

Layout Small Signal Board (Bottom Side Part 2)

4

5

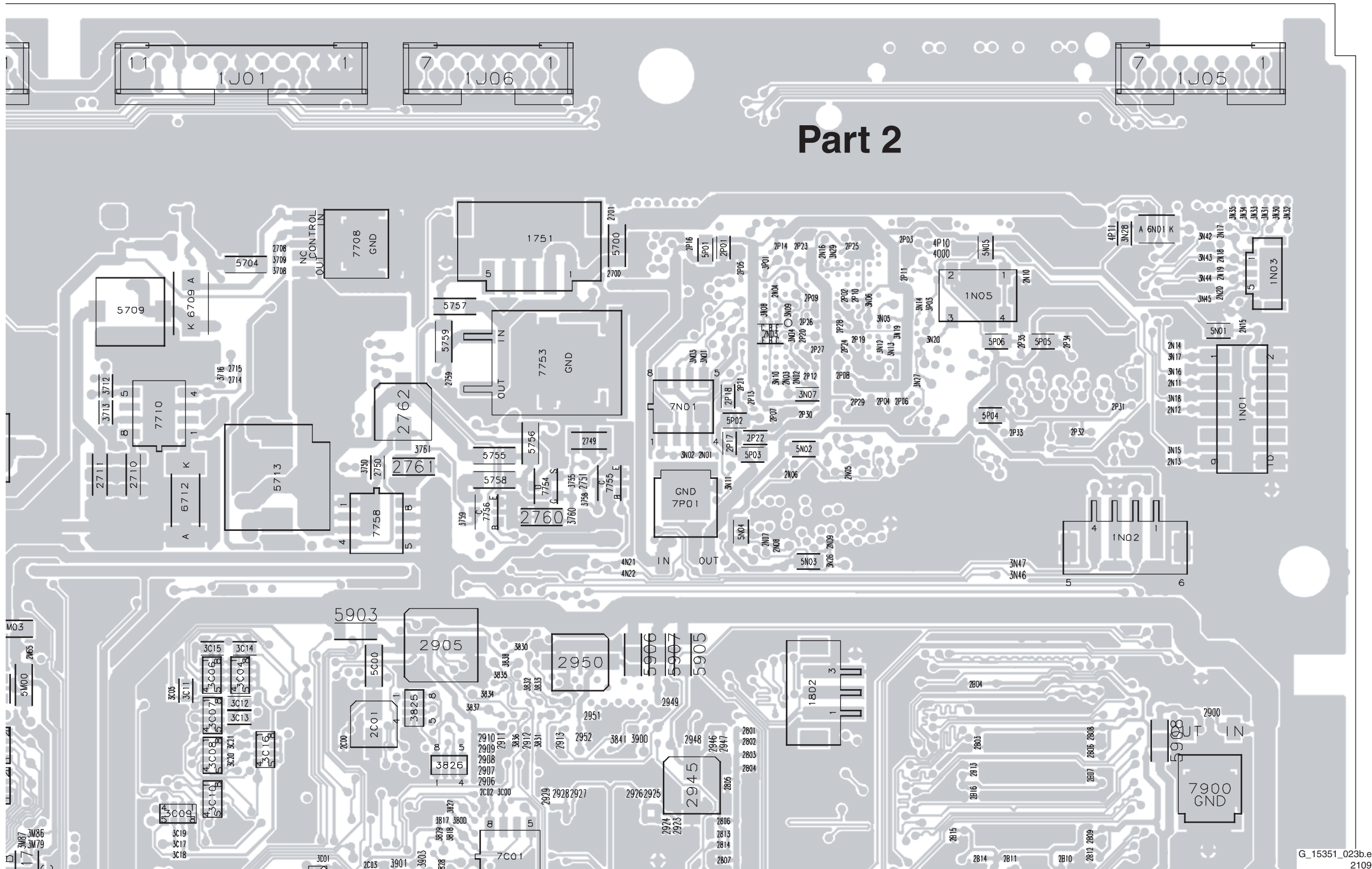
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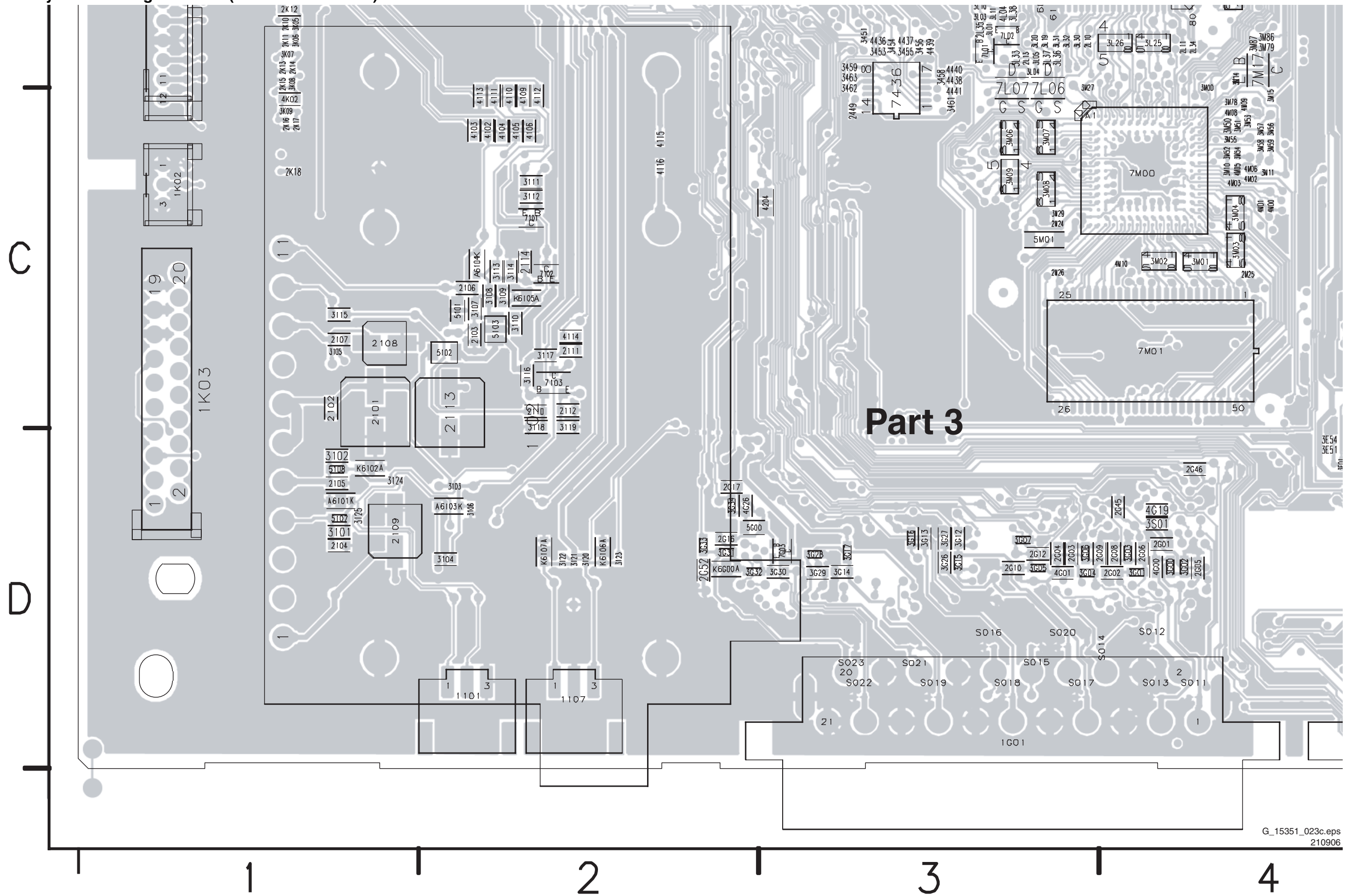
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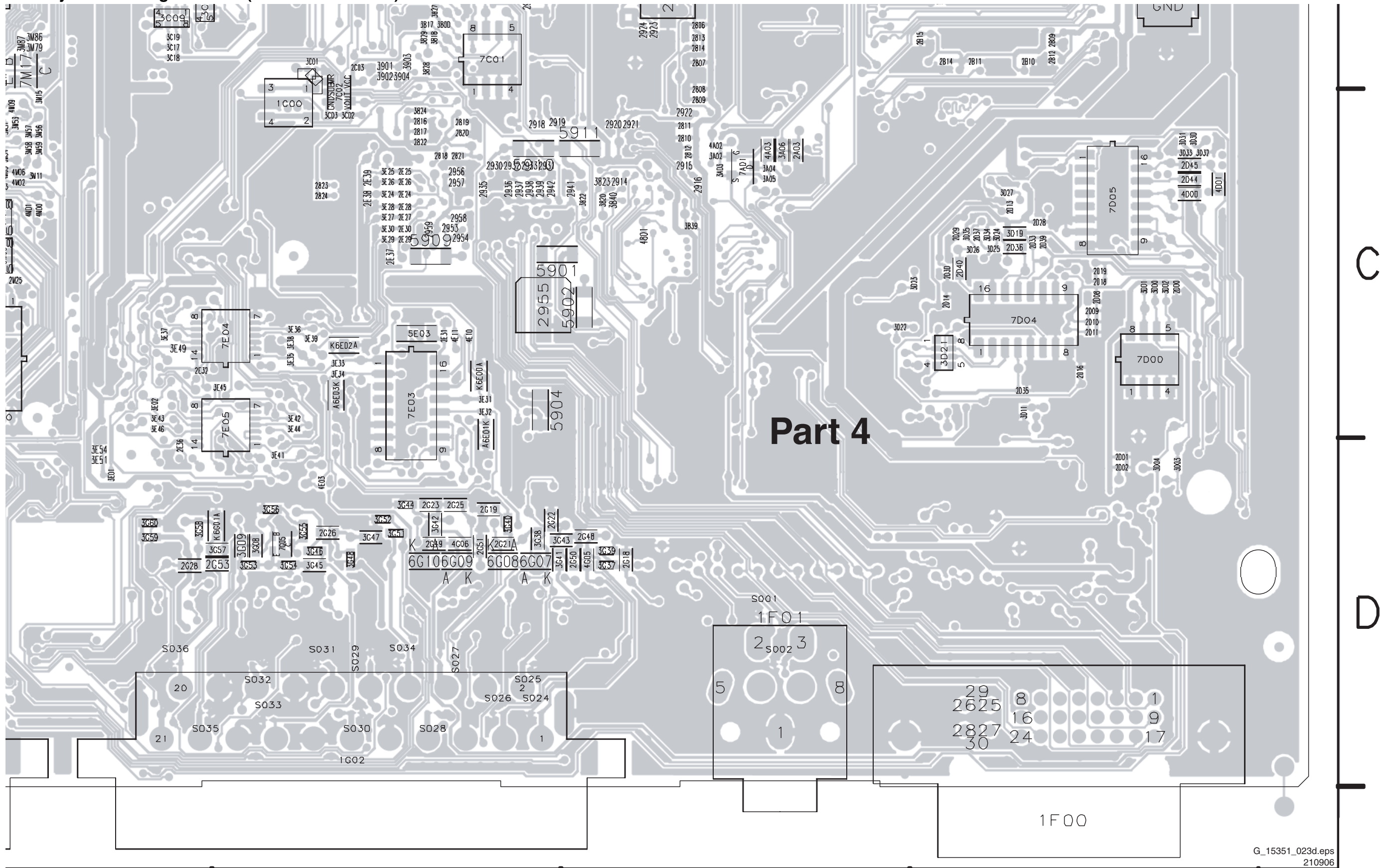
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Layout Small Signal Board (Bottom Side Part 3)



Layout Small Signal Board (Bottom Side Part 4)



Part 4

4

5

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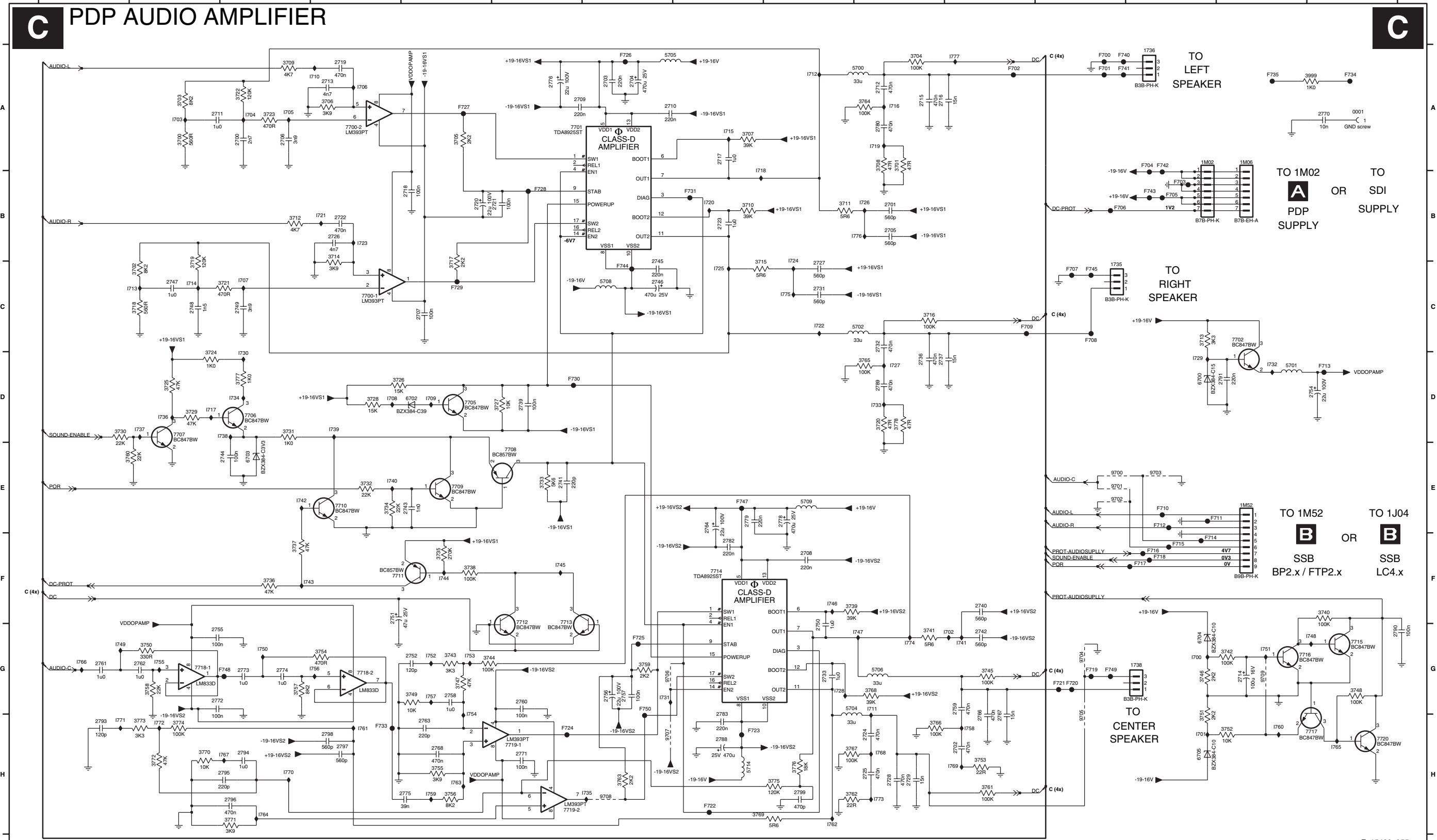
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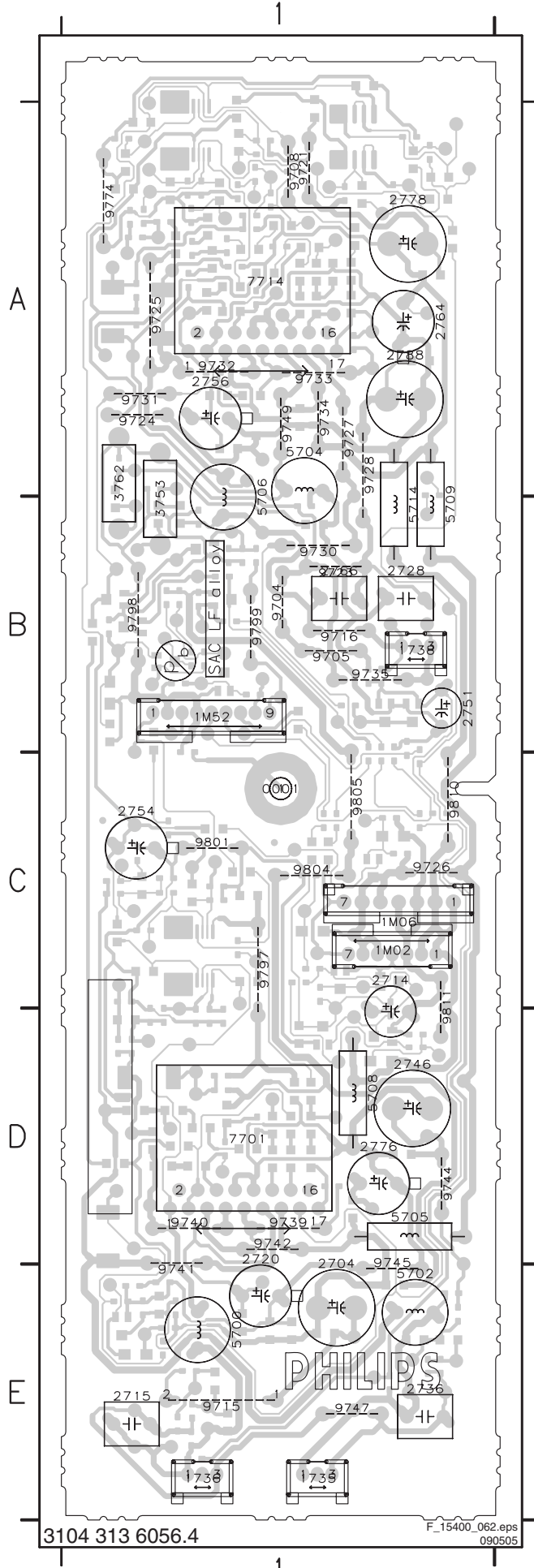
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PDP Audio Amplifier Panel

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1735 C12	2706 A3	2718 B5	2731 C9	2746 C7	2759 G11	2773 G3	2791 D14	3704 A10	3716 C10	3728 D4	3740 F15	3752 H14	3764 A10	3776 H8	5714 H8	7707 D2	7718-2 G4	9708 H7	F710 E13	F722 H8	F735 A14	I701 H13	I713 C2	I725 C8	I737 D2	I749 G1	I761 H4	I773 H10
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2704 A7	2716 A10	2728 H10	2744 E3	2757 G7	2771 H6	2789 D10	3702 C2	3714 B4	3726 D4	3738 F5	3750 G2	3762 H9	3774 H2	5708 C7	7705 D5	7717 H14	9706 G7	F708 C12	F720 G12	F733 H4	F750 G7	I711 G10	I723 B4	I735 H7	I747 G10	I759 H5	I771 H1	I783 H3

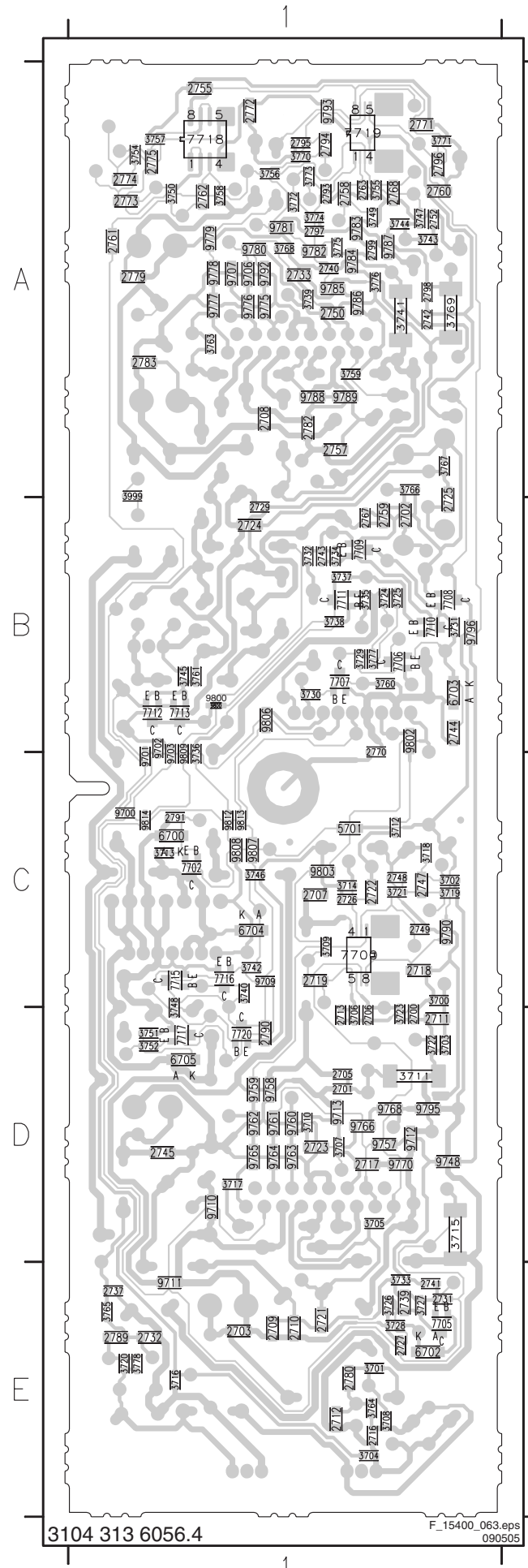


Layout PDP Audio Amplifier Panel (Top Side)



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- 1M02 C1
- 1M06 C1
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- 2704 D1
- 2714 C1
- 2715 E1
- 2720 D1
- 2728 B1
- 2736 E1
- 2746 D1
- 2751 B1
- 2754 C1
- 2756 A1
- 2764 A1
- 2766 B1
- 2776 D1
- 2778 A1
- 2788 A1
- 3753 B1
- 3762 A1
- 5700 E1
- 5702 E1
- 5704 A1
- 5705 D1
- 5706 A1
- 5708 D1
- 5709 B1
- 5714 A1
- 7701 D1
- 7714 A1
- 9704 B1
- 9705 B1
- 9708 A1
- 9715 E1
- 9716 B1
- 9721 A1
- 9723 B1
- 9724 A1
- 9725 A1
- 9726 C1
- 9727 A1
- 9728 B1
- 9730 B1
- 9731 A1
- 9732 A1
- 9733 A1
- 9734 A1
- 9735 B1
- 9739 D1
- 9740 D1
- 9741 E1
- 9742 D1
- 9744 D1
- 9745 D1
- 9747 E1
- 9749 A1
- 9774 A1
- 9797 C1
- 9798 B1
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- 9801 C1
- 9804 C1
- 9805 C1
- 9810 C1
- 9811 C1

Layout PDP Audio Amplifier Panel (Bottom Side)



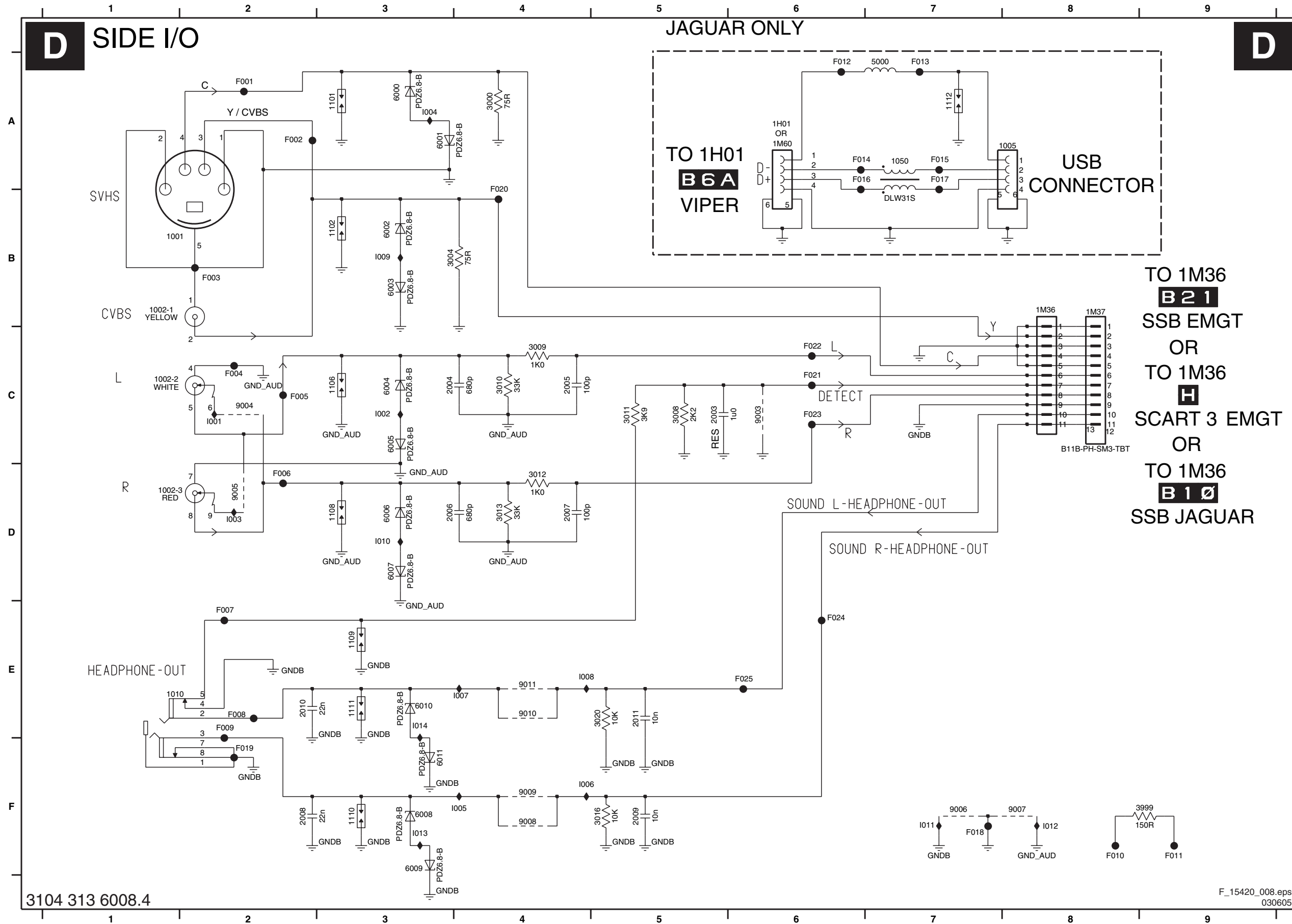
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- 2705 D1
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- 2708 A1
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- 2710 E1
- 2711 D1
- 2712 E1
- 2713 D1
- 2716 E1
- 2717 D1
- 2718 C1
- 2719 C1
- 2721 E1
- 2722 C1
- 2723 D1
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- 3802 B1
- 3803 C1
- 3806 B1
- 3807 C1
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- 9814 C1

Side I/O Panel

D SIDE I/O

JAGUAR ONLY

D

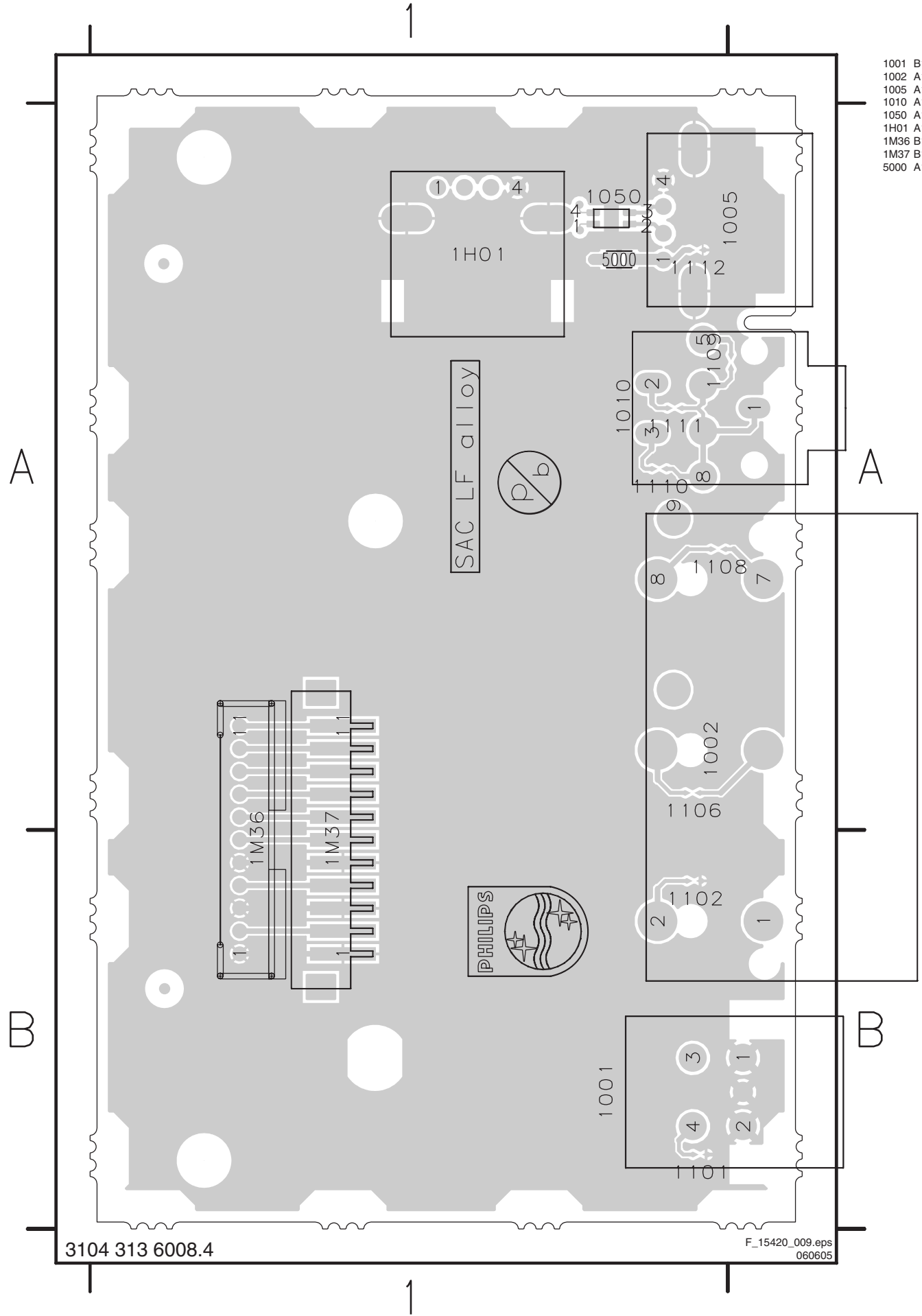


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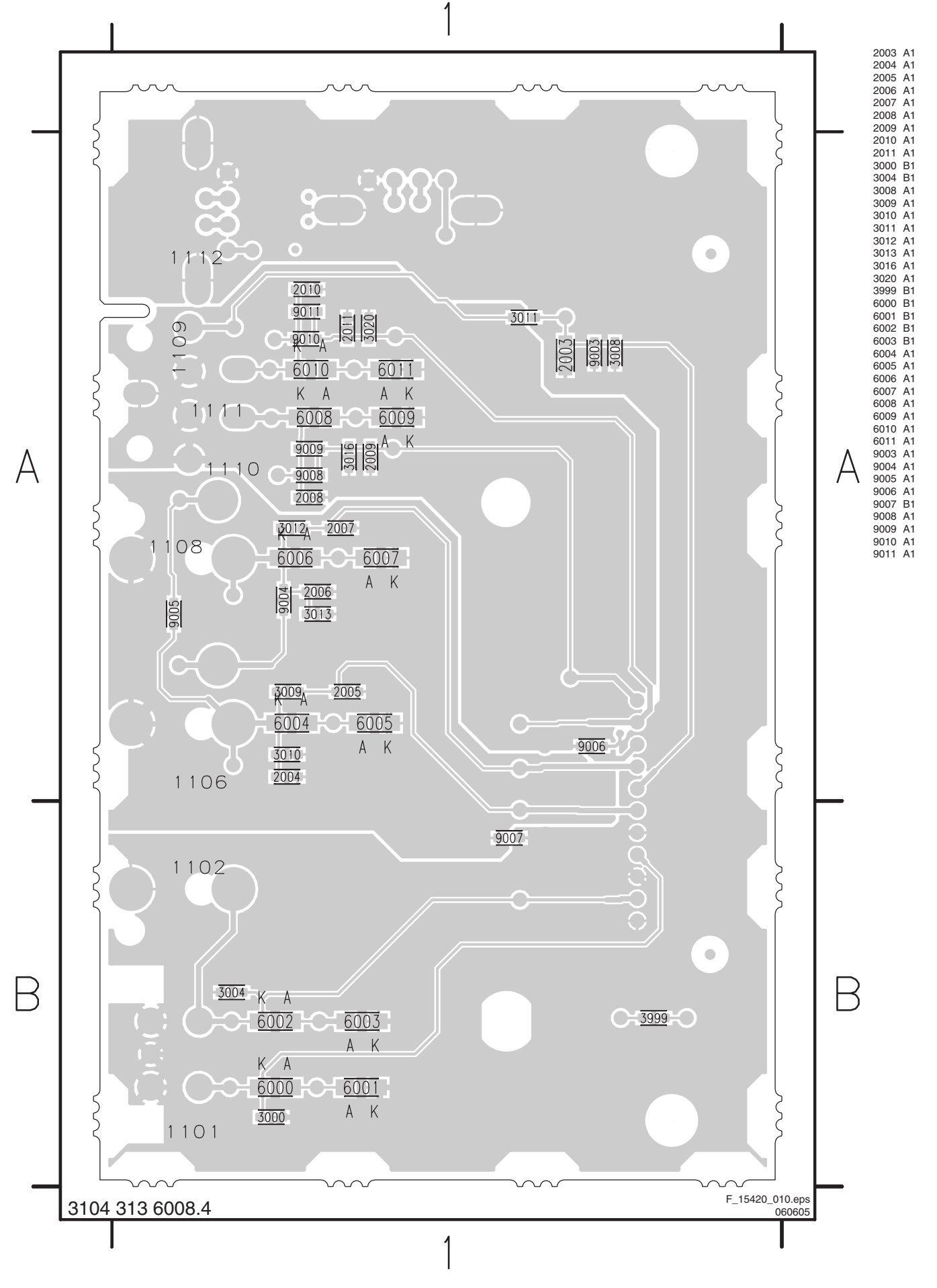
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1112 A7	F016 A6
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2008 F2	F025 E6
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2011 E5	I003 D2
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3004 B3	I005 F4
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Layout Side I/O Panel (Top Side)

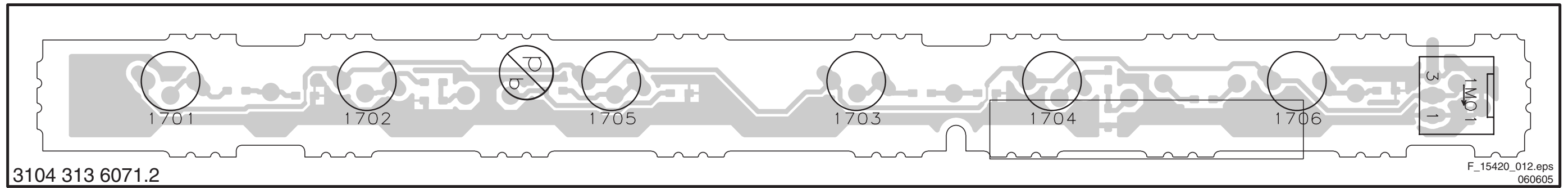


Layout Side I/O Panel (Bottom Side)



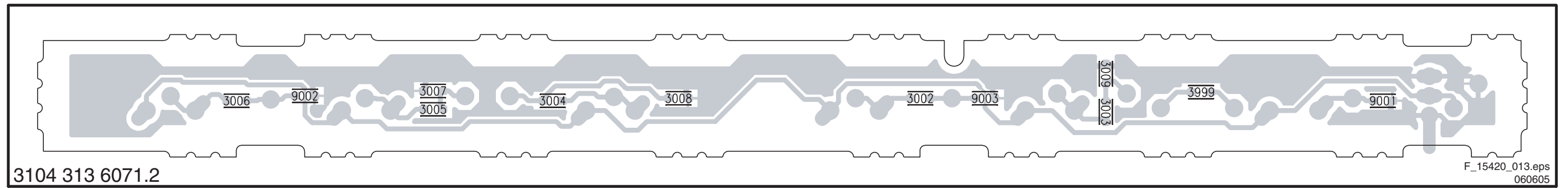
Layout Control Board (Top Side)

1701 -- 1702 -- 1703 -- 1704 -- 1705 -- 1706 -- 1M01 --

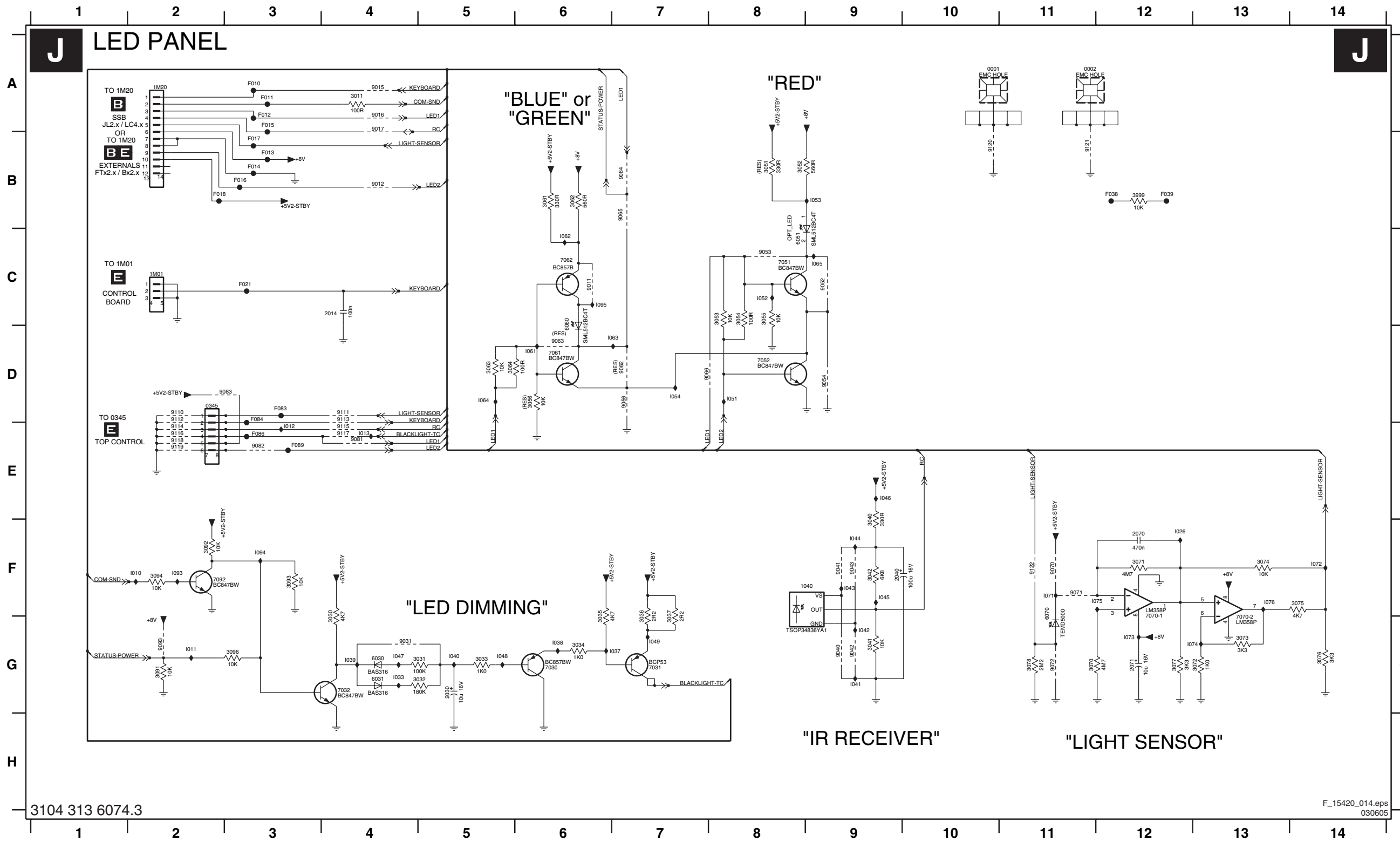


Layout Control Board (Bottom Side)

3002 -- 3003 -- 3004 -- 3005 -- 3006 -- 3007 -- 3008 -- 3009 -- 3999 -- 9001 -- 9002 -- 9003 --



LED Panel

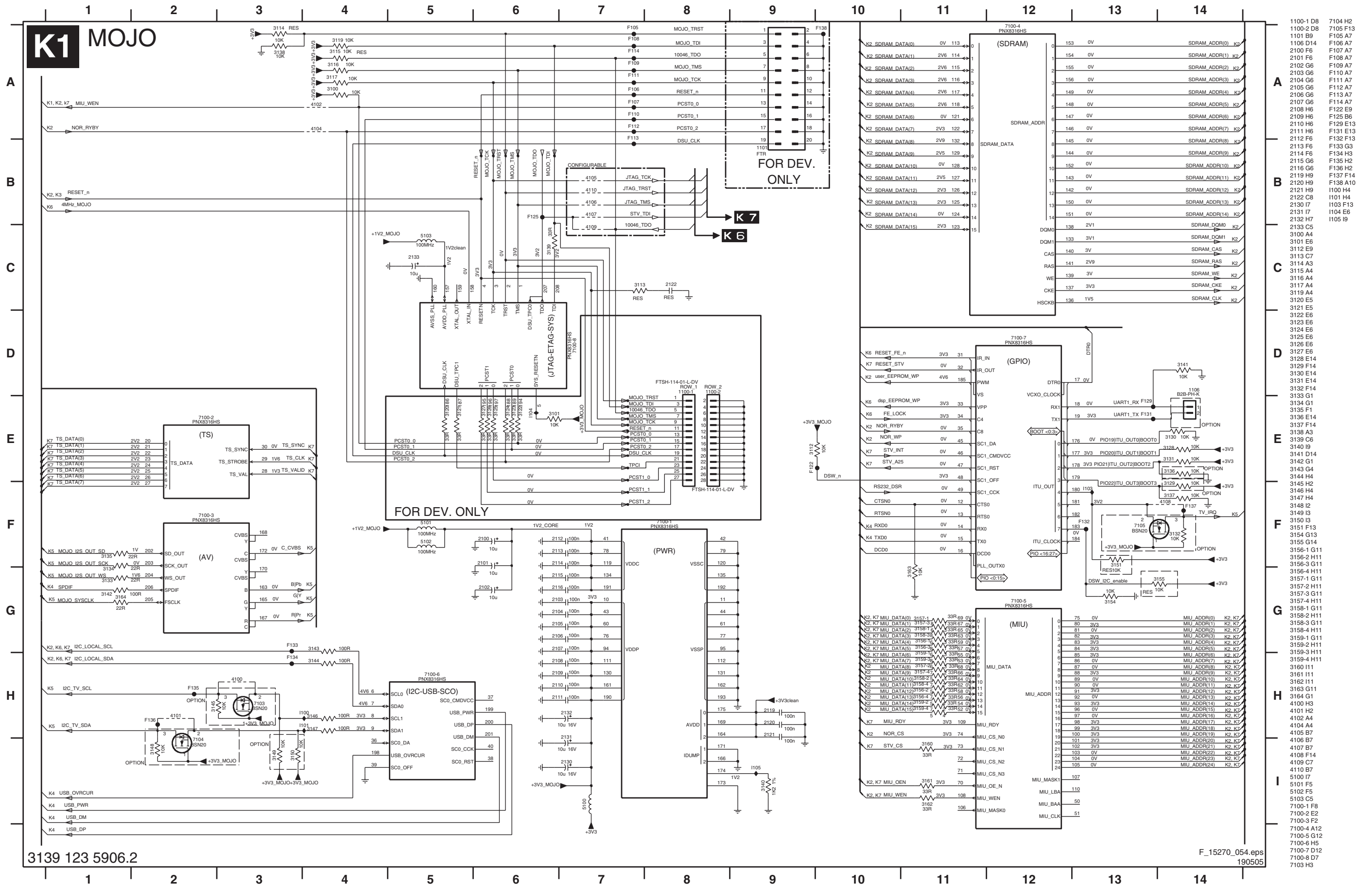


- 0001 A10
- 0002 A11
- 0345 D2
- 1040 F9
- 1M01 C2
- 1M20 A2
- 2014 C4
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- I075 F12
- I076 F13
- I093 F2
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- I095 C6

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IBO Zapper: Mojo



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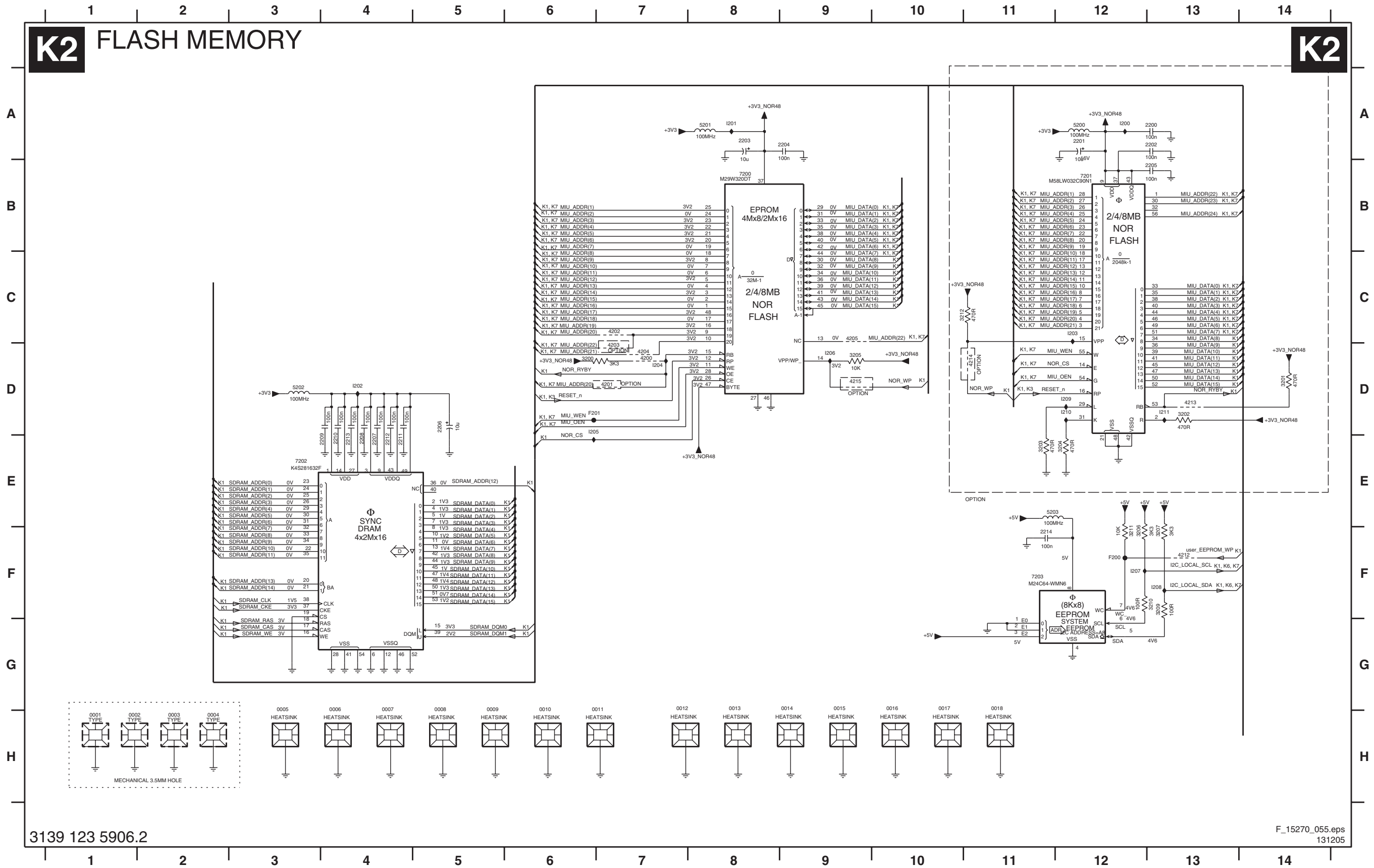
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- 2133 C5
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- 3133 G1
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- 3135 F1
- 3136 E1
- 3137 F14
- 3138 A3
- 3139 C6
- 3140 B9
- 3141 D14
- 3142 G1
- 3143 G4
- 3144 H4
- 3145 H2
- 3146 H4
- 3147 H4
- 3148 I2
- 3149 I3
- 3150 I3
- 3151 F13
- 3154 G13
- 3155 G14
- 3156-2 H11
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- 3161 I11
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- 3164 G1
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- 4101 H2
- 4102 A4
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- 5103 C5
- 7100-1 F8
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- 7100-3 F2
- 7100-4 A12
- 7100-5 G12
- 7100-6 H5
- 7100-7 D12
- 7100-8 D7
- 7103 H3
- 7104 H2
- 7105 F13
- F105 A7
- F106 A7
- F107 A7
- F108 A7
- F109 A7
- F110 A7
- F111 A7
- F112 A7
- F113 A7
- F114 A7
- F122 E9
- F125 B6
- F129 E13
- F131 E13
- F132 F13
- F133 G3
- F134 H3
- F135 H2
- F136 H2
- F137 F14
- F138 A10
- I101 H4
- I103 F13
- I104 E6
- I105 I9

IBO Zapper: Flash Memory

K2 FLASH MEMORY

K2



0001 H1
0002 H1
0003 H2
0004 H2
0005 H3
0006 H4
0007 H4
0008 H5
0009 H5
0010 H6
0011 H6
0012 G7
0013 G8
0014 G9
0015 G9
0016 G10
0017 G10
0018 G11
2200 A13
2201 A12
2202 A13
2203 A8
2204 A9
2205 B13
2206 D5
2207 E4
2208 E4
2209 E4
2210 E4
2211 E4
2212 E4
2213 E4
2214 F11
3200 D6
3201 D14
3202 D13
3203 E11
3204 E12
3205 D9
3206 F12
3207 F13
3209 F13
3210 F13
3211 F12
3212 C11
4200 D7
4201 D7
4202 C7
4203 D7
4204 D7
4205 C9
4212 F13
4213 D13
4214 D11
4215 D9
5200 A12
5201 A8
5202 D3
5203 E11
7200 B8
7201 B12
7202 E3
7203 F11
F200 F12
F201 D6
I200 A12
I201 A8
I202 D4
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I211 D13

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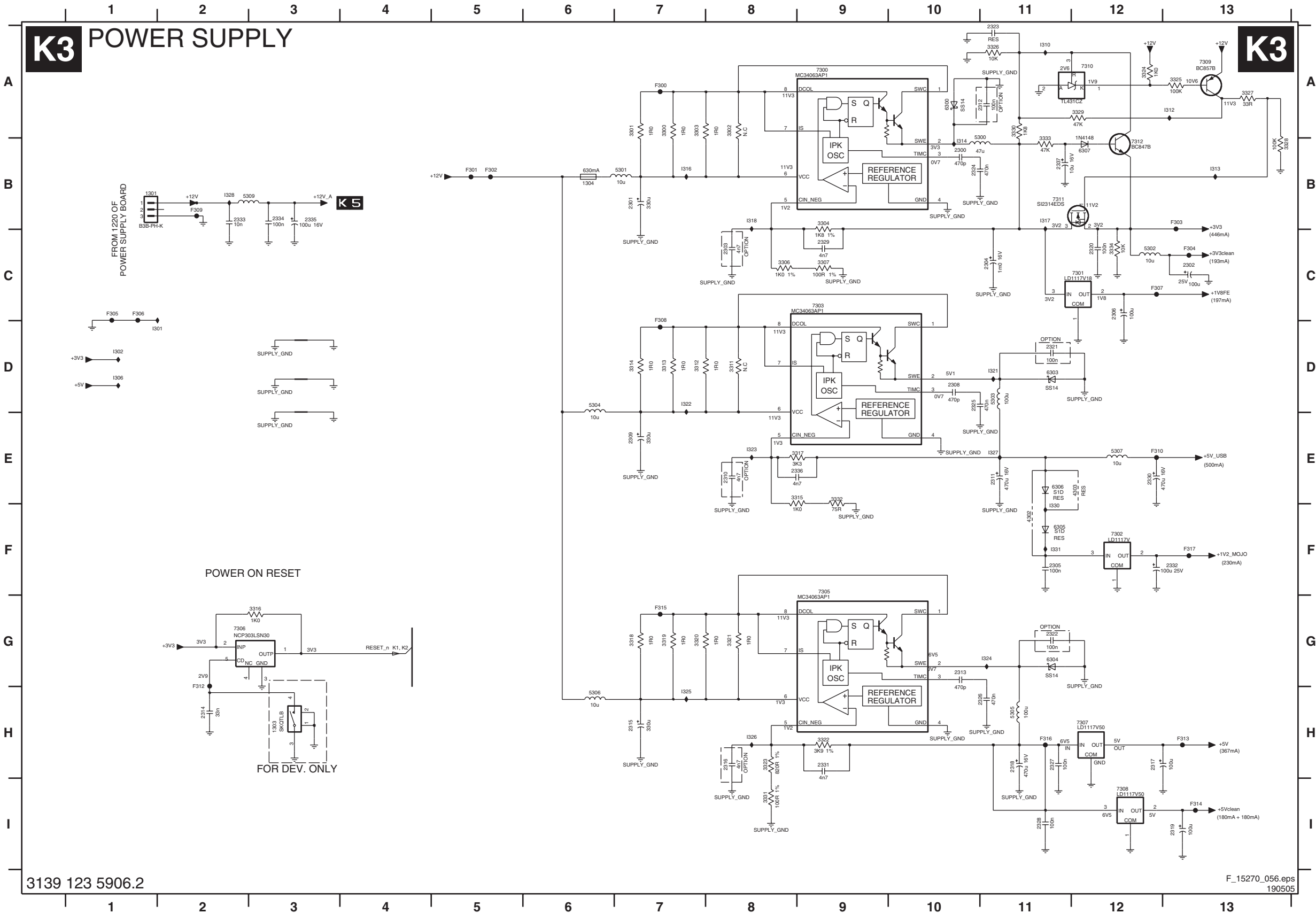
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IBO Zapper: Power Supply

K3 POWER SUPPLY

3139 123 5906.2

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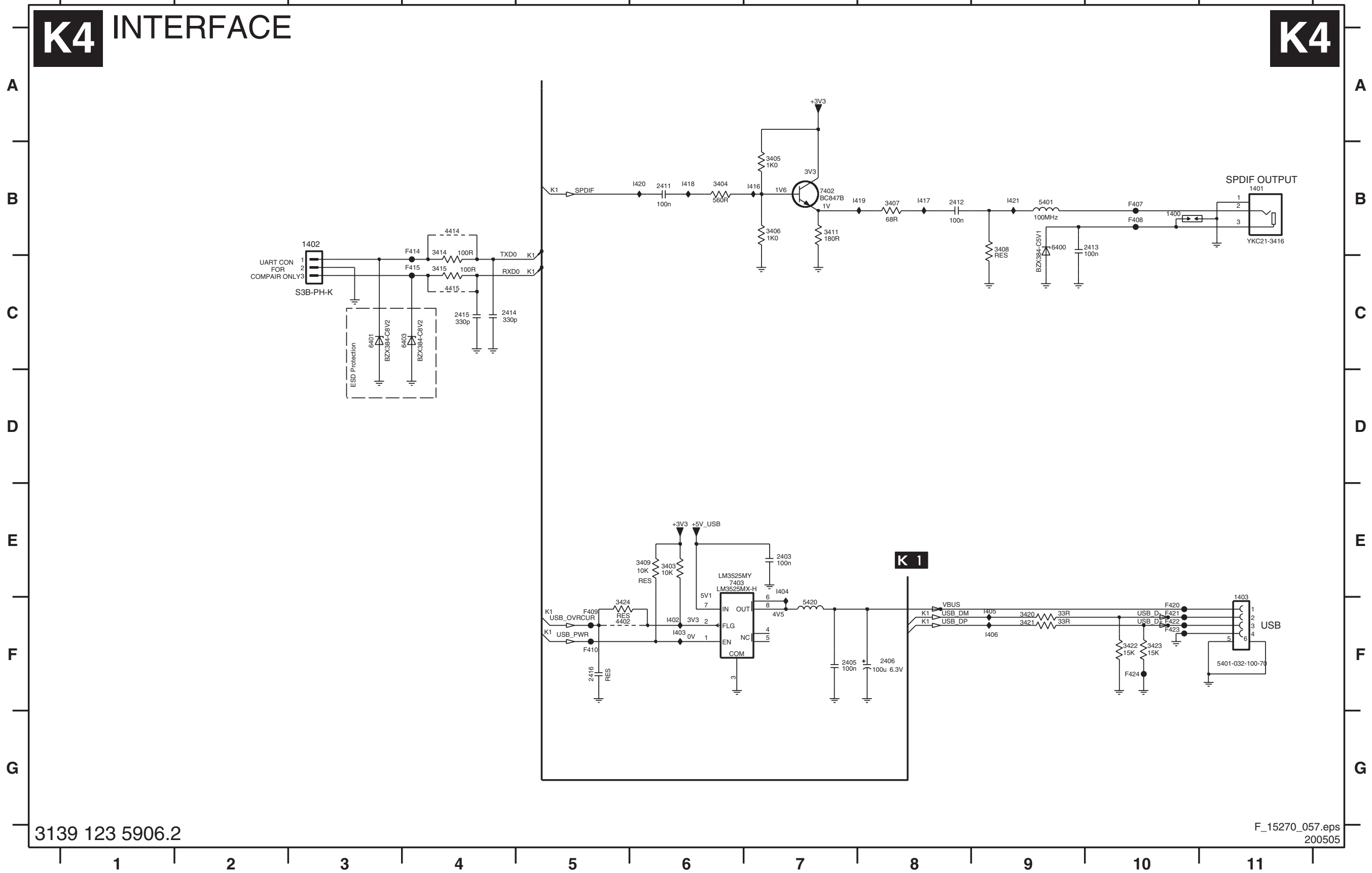


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- 2300 B10
- 2301 B7
- 2302 C13
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- 2304 C11
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- 2306 C12
- 2308 D10
- 2309 E7
- 2310 E8
- 2311 E11
- 2312 A11
- 2313 G10
- 2314 H2
- 2315 H7
- 2316 H8
- 2317 H12
- 2318 H11
- 2319 I13
- 2320 C12
- 2321 D11
- 2322 G11
- 2323 A11
- 2324 B10
- 2325 D10
- 2326 H11
- 2327 H11
- 2328 I11
- 2329 C9
- 2330 E12
- 2331 H9
- 2332 F13
- 2333 B2
- 2334 B3
- 2335 B3
- 2336 E9
- 2337 B11
- 3300 A7
- 3301 A7
- 3302 A8
- 3303 A7
- 3304 B9
- 3306 C8
- 3307 C9
- 3311 D8
- 3312 D7
- 3313 D7
- 3314 D7
- 3315 E9
- 3316 G3
- 3317 E9
- 3318 G7
- 3319 G7
- 3320 G7
- 3321 G8
- 3322 H9
- 3323 H8
- 3324 A12
- 3325 A13
- 3326 A11
- 3327 A13
- 3328 B13
- 3329 A12
- 3330 A11
- 3331 I8
- 3332 E9
- 3333 B11
- 3334 C12
- 4302 F11
- 4303 E12
- 5300 B11
- 5301 B7
- 5302 C12
- 5303 D11
- 5304 D6
- 5305 H11
- 5306 H6
- 5307 E12
- 5309 B3
- 6300 A10
- 6303 D11
- 6304 G11
- 6305 F11
- 6306 E11
- 6307 B12
- 7300 A9
- 7301 C12
- 7302 F12
- 7303 C9
- 7305 F9
- 7306 G2
- 7307 H12
- 7308 I12
- 7309 A13
- 7310 A12
- 7311 B11
- 7312 B12
- F300 A7
- F301 B5
- F302 B5
- F303 B13
- F304 C13
- F305 C1
- F307 C12
- F308 D7
- F309 B2
- F310 E12
- F312 H2
- F313 H13
- 8301 B1
- 8302 D1
- 8303 D1
- 8304 B1
- 8305 D1
- 8306 D1
- 8307 D1
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IBO Zapper: Interface

K4 INTERFACE

K4

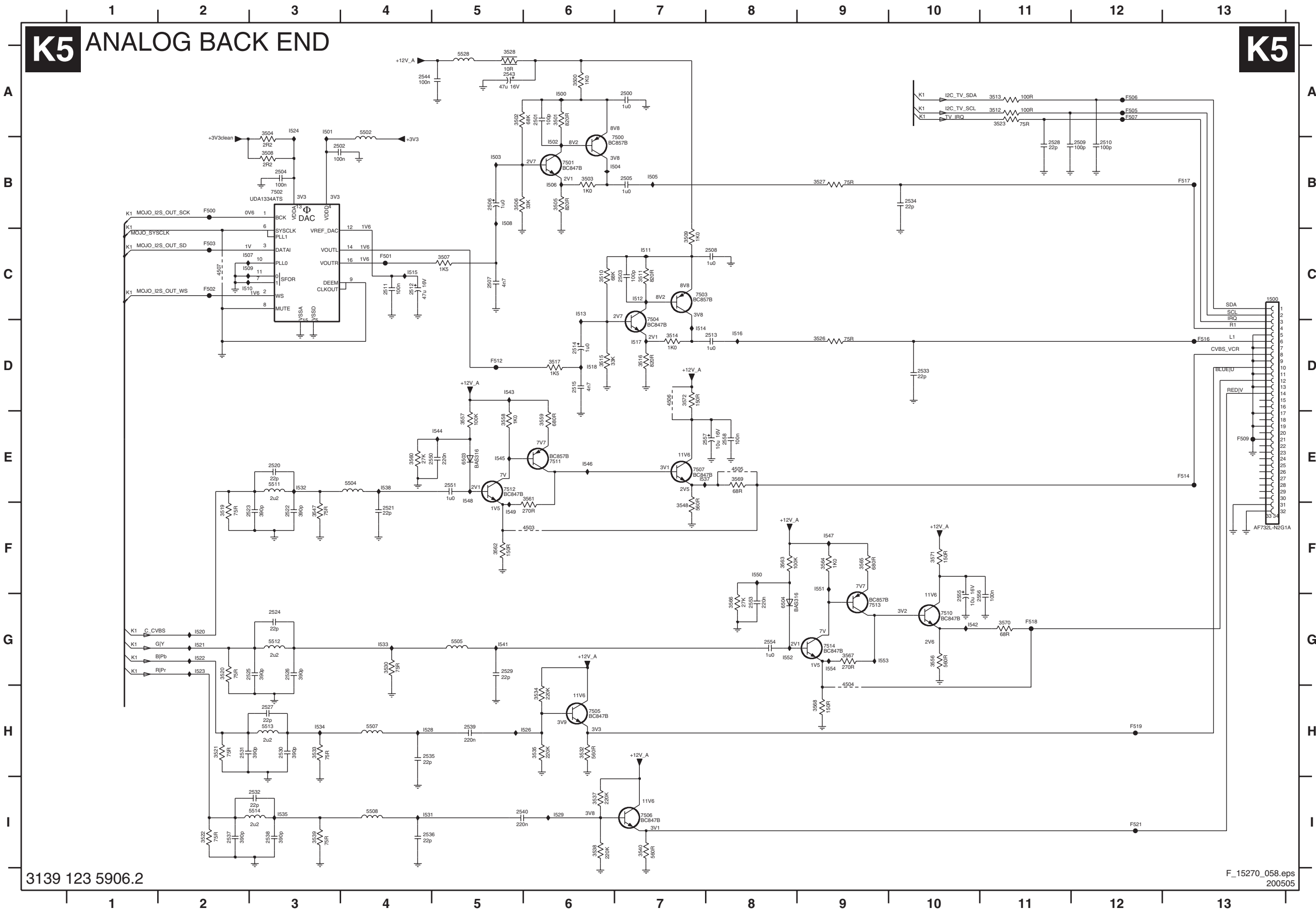


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- 1402 B3
- 1403 F11
- 2403 E7
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- 2413 B9
- 2414 C4
- 2415 C4
- 2416 F5
- 3403 E6
- 3404 B6
- 3405 B7
- 3406 B7
- 3407 B8
- 3408 B9
- 3409 E6
- 3411 B7
- 3414 B4
- 3415 C4
- 3420 F9
- 3421 F9
- 3422 F10
- 3423 F10
- 3424 F5
- 4402 F5
- 4414 B4
- 4415 C4
- 5401 B9
- 5420 F7
- 6400 B9
- 6401 C3
- 6403 C4
- 7402 B7
- 7403 E6
- F407 B10
- F408 B10
- F409 F5
- F410 F5
- F414 B4
- F415 C4
- F420 F10
- F421 F10
- F422 F10
- F423 F10
- F424 F10
- I402 F6
- I403 F6
- I404 E7
- I405 F9
- I406 F9
- I416 B7
- I417 B8
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- I419 B8
- I420 B6
- I421 B9

IBO Zapper: Analog Back End

K5 ANALOG BACK END

K5

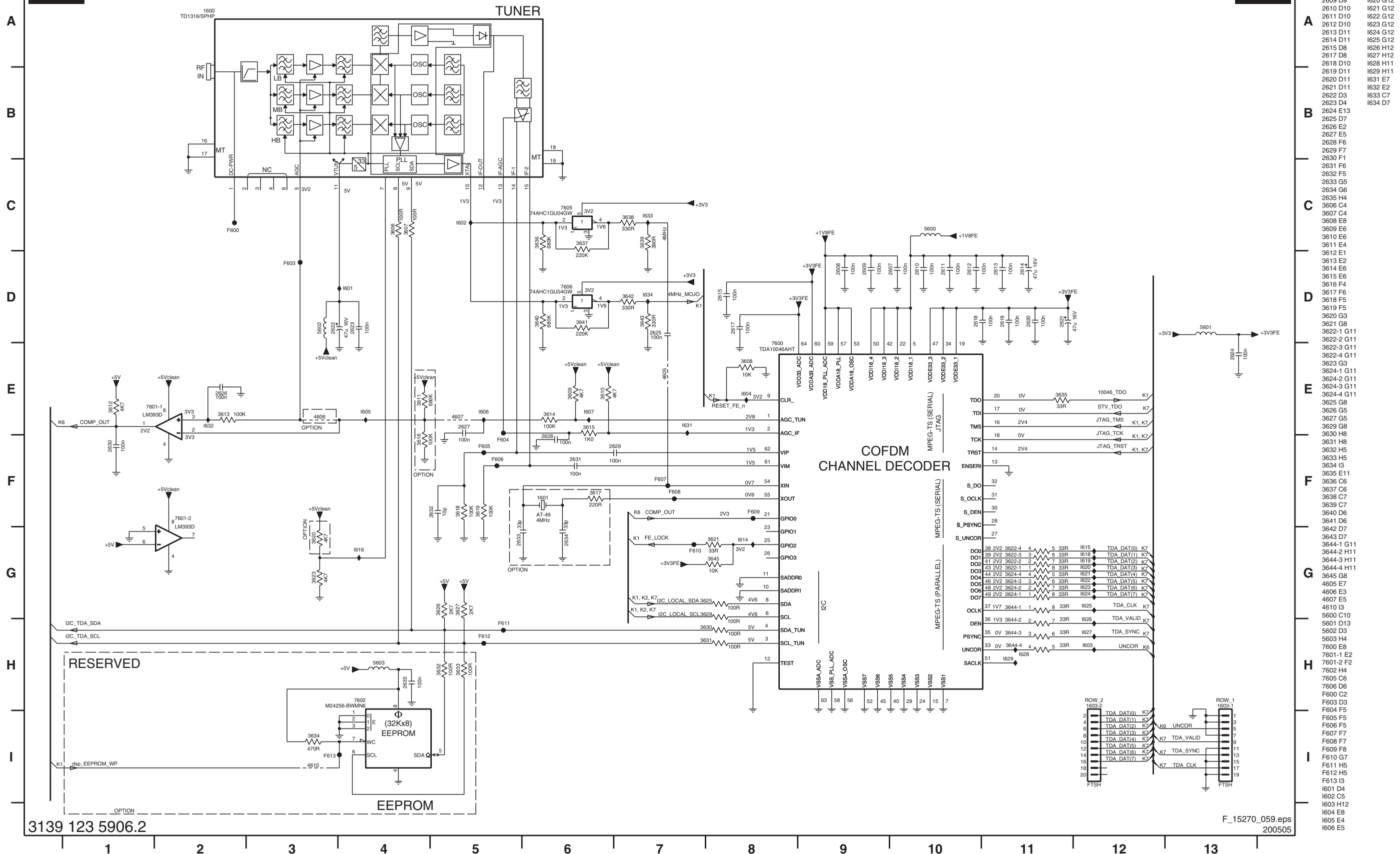


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- 2506 B5
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- 2508 C8
- 2509 B12
- 2510 B12
- 2511 C4
- 2512 C4
- 2513 D8
- 2514 D6
- 2515 D6
- 2520 E3
- 2521 F4
- 2522 F3
- 2523 F3
- 2524 G3
- 2525 G3
- 2526 G3
- 2527 H3
- 2528 B11
- 2529 G5
- 2530 H3
- 2531 H2
- 2532 I3
- 2533 D10
- 2534 B10
- 2535 H4
- 2536 I4
- 2537 I2
- 2538 I3
- 2539 H5
- 2540 I5
- 2543 A5
- 2544 A4
- 2550 E5
- 2551 E5
- 2553 G8
- 2554 G8
- 2555 G10
- 2556 G11
- 2557 E8
- 2558 E8
- 3500 A6
- 3501 A6
- 3502 A5
- 3503 B6
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- 3507 C5
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- 3514 D7
- 3515 D6
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- 3521 H2
- 3522 I2
- 3523 A11
- 3526 D9
- 3527 B9
- 3528 A5
- 3530 G4
- 3532 H6
- 3533 H3
- 3534 H6
- 3535 H6
- 3537 I6
- 3538 I6
- 3539 I3
- 3540 I7
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- 3556 G10
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- 3562 F5
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- 3568 H9
- 3569 E8
- 3570 G11
- 3571 F10
- 3572 D7
- 4503 F6
- 4504 H9
- 4505 E8
- 4506 D7
- 4507 C2
- 5502 A4
- 5504 E4
- 5505 G5
- 5507 H4
- 5508 I4
- 5511 E3
- 5512 G3
- 5513 H3
- 5514 I3
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- 7511 E6
- 7512 E5
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- 7514 G9
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- F502 C2
- F503 C2
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- I547 F9
- I548 E5
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- I553 G9
- I554 G9

IBO Zapper: Front End

K6 FRONT END

K6

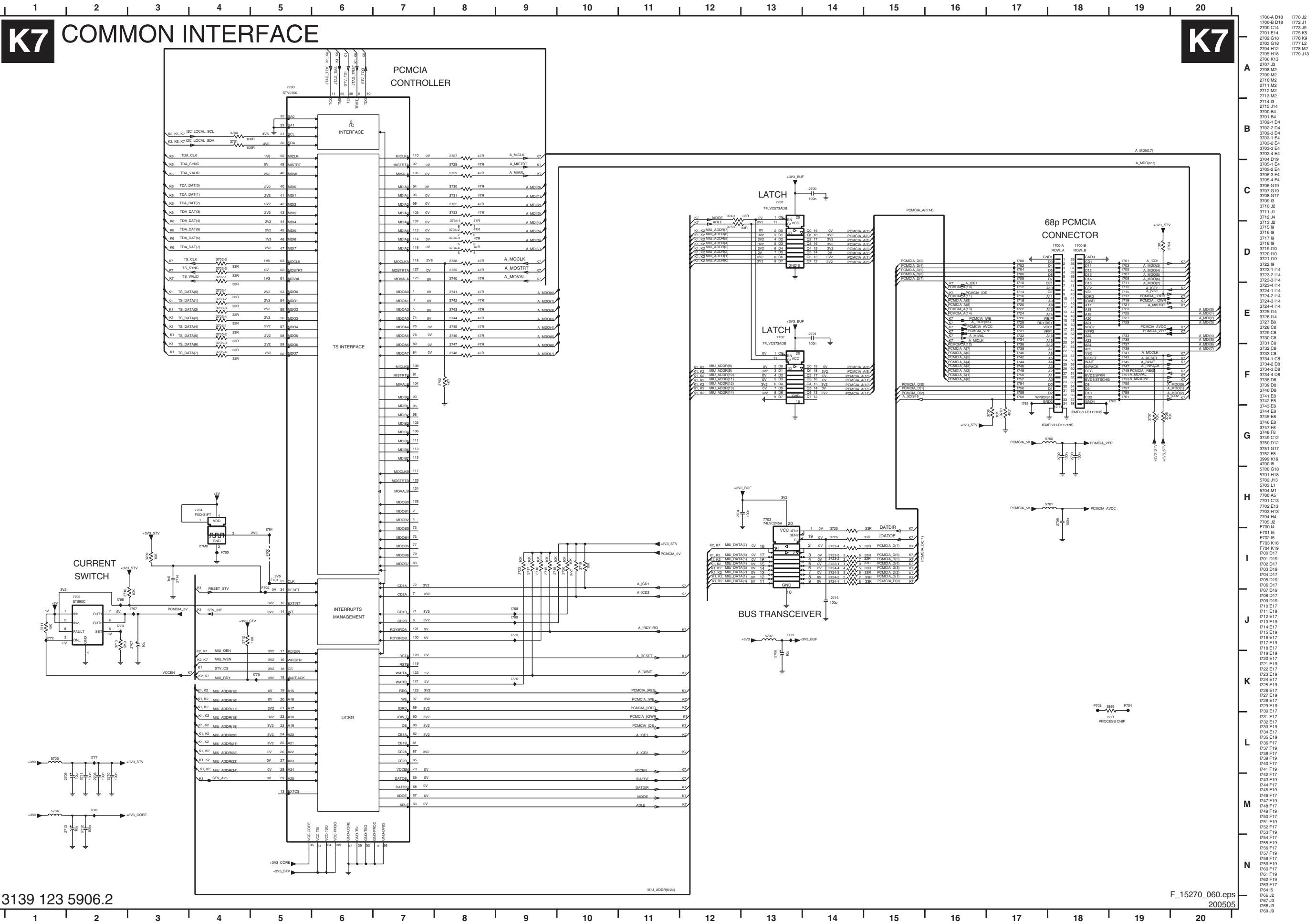


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- 2624 E13
- 2625 D7
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- 2628 F6
- 2629 F7
- 2630 F1
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- 2632 F5
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- 2634 G6
- 2635 H4
- 3606 C4
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- 3632 H5
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- 3634 I3
- 3635 E11
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- 5600 C10
- 5601 D13
- 5602 D3
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- 7601-2 F2
- 7602 H4
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- I628 H11
- I629 H11
- I631 E7
- I632 E2
- I633 C7
- I634 D7

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IBO Zapper: Common Interface



3139 123 5906.2

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- 2700 C14
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- 2703 G18
- 2704 H12
- 2705 H18
- 2706 K13
- 2707 J3
- 2708 M2
- 2709 M2
- 2710 M2
- 2711 M2
- 2712 M2
- 2713 M2
- 2714 I3
- 2715 J4
- 3700 B4
- 3701 B4
- 3702-1 D4
- 3702-2 D4
- 3702-3 D4
- 3703-1 E4
- 3703-2 E4
- 3703-3 E4
- 3703-4 E4
- 3704 D19
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- 3705-2 E4
- 3705-3 F4
- 3705-4 F4
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- 3708 G17
- 3709 I3
- 3710 J2
- 3711 J1
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- 3713 J2
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- 5701 H18
- 5702 J1
- 5703 M1
- 5704 M1
- 7700 A5
- 7701 C13
- 7702 E13
- 7703 H3
- 7705 J2
- 7707 H4
- 7708 K19
- 7709 D17
- 7710 D17
- 7711 D17
- 7712 D17
- 7713 D17
- 7714 E17
- 7715 E18
- 7716 E17
- 7717 E19
- 7718 E19
- 7719 E19
- 7720 E17
- 7721 E18
- 7722 E17
- 7723 E19
- 7724 E17
- 7725 E19
- 7726 E17
- 7727 E18
- 7728 E19
- 7729 E19
- 7730 E17
- 7731 E17
- 7732 E17
- 7733 E19
- 7734 E17
- 7735 E19
- 7736 F17
- 7737 F19
- 7738 F17
- 7739 F19
- 7740 F19
- 7741 F18
- 7742 F17
- 7743 F19
- 7744 F17
- 7745 F19
- 7746 F17
- 7747 F18
- 7748 F17
- 7749 F19
- 7750 F17
- 7751 F19
- 7752 F17
- 7753 F19
- 7754 F17
- 7755 F19
- 7756 F17
- 7757 F19
- 7758 F17
- 7759 F19
- 7760 F17
- 7761 F19
- 7762 F19
- 7763 F17
- 7764 I5
- 7765 J2
- 7767 J3
- 7768 J9
- 7769 J9

8. Alignments

Index of this chapter:

- 8.1 General Alignment Conditions
- 8.2 Hardware Alignments
- 8.3 Software Alignments

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

General: The Service Default Mode (SDM) and Service Alignment Mode (SAM) are described in chapter 5. Menu navigation is done with the Cursor Up, Down, Left or Right keys of the remote control transmitter.

8.1 General Alignment Conditions

Perform all electrical adjustments under the following conditions:

Mains voltage and frequency: 100-240 V / 50/60 Hz.

Allow the set to warm up for approximately 10 minutes.

Test probe: $R_i > 10 \text{ M}\Omega$; $C_i < 2.5 \text{ pF}$.

8.2 Hardware Alignments

There are no hardware alignments foreseen for the plasma-TV.

8.3 Software Alignments

With the software alignments of the Service Alignment Mode (SAM) the geometry, white tone and tuner (IF) can be aligned. To store the data: Use the RC button Menu to switch to the main menu and next, switch to 'Stand-by' mode.

8.3.1 SAM Menu

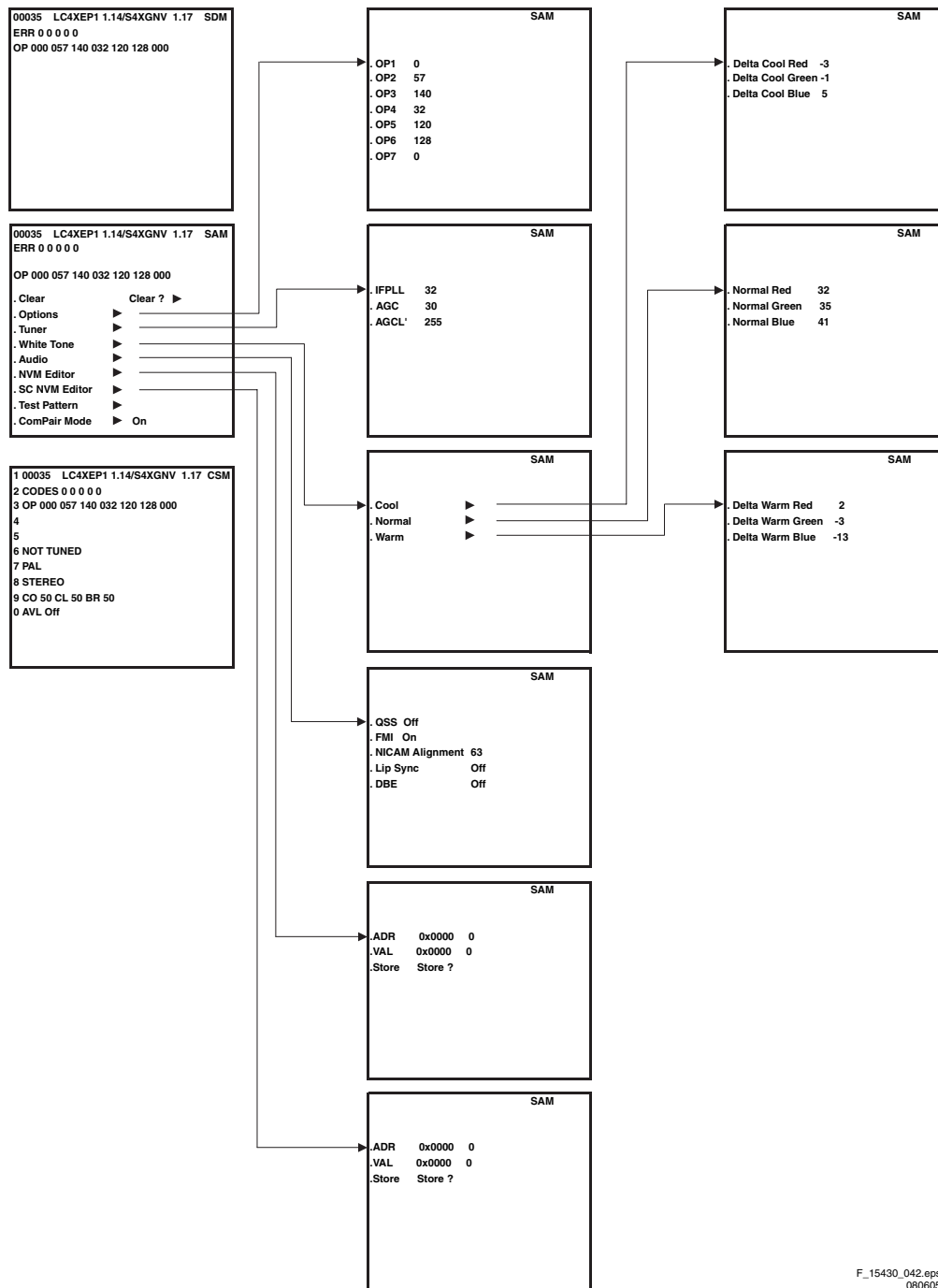
F_15430_042.eps
080605

Figure 8-1 Overview SAM menu.

8.3.2 Tuner Adjustment

AGC (RF AGC Take Over Point)

- Activate the SAM menu.
- Go to the sub-menu Tuner.
- Select the AGC sub-menu.
- Adjust the AGC value to AGC = 27.
- Adjust the AGC L' value to AGC L' = 27 (Europe only).
- Adjust the IFPLL value to IFPLL = 32 (Europe only).
- Switch the set to standby to store the data.

8.3.3 DCXO (Digital Xtal Oscillator) Alignment (for NICAM sets only)

- Input a Colour bar signal with a colour subcarrier frequency of 4.43 MHz on SCART1 or SCART2.
- Select as a signal source EXT1 or AV1.
- Go to the SAM menu and select Audio.
- Activate DCXO Alignment and wait until this process has finished (DONE).
- Check if the NICAM audio reception is OK, if not: repeat the procedure.
- Switch the set to standby to store the data.

8.3.4 ADC Gain and Grey Scale Alignment

The table below shows a number of NVM settings used for each model of TV set. Be sure to use the correct editor in the SAM menu (NVM Editor or SC NVM Editor), because the first one is used for the Hercules NVM, and the second one for the SCALER (SC) part of the TV set. For further important NVM settings, see also the other NVM tables elsewhere in this manual.

Caution:

- **Do not change the NVM settings without understanding the function of each setting, because incorrect NVM settings may seriously hamper the correct functioning of the TV set!**
- **Do not change the Scaler NVM settings, as this will hamper the DVI functionality of the TV set!**
- Always note down the existing NVM settings, before changing the settings. This will enable you to return to the original settings, if the new settings turn out to be incorrect.

Table 8-1 ADC gain and grey scale alignment

SDTV ADC Gain settings: Use the NVM Editor in SAM to set these values in the Hercules NVM				
		These models are with ADC & Columbus 3D Combfilter		
Setting	Hercules NVM Address (decimal value)	42PF7520D/10	42PF5520D/10	Settings Range (decimal value)
NVM_ADC_GAIN_R	006	143	143	075 - 155
NVM_ADC_GAIN_G	007	191	191	200 - 250
NVM_ADC_GAIN_B	008	143	143	075 - 155

SDTV Greyscale settings: Use the SC NVM Editor in SAM to set these values in the Scaler NVM				
		These models are with ADC & Columbus 3D Combfilter		
Setting	Scaler NVM Address (decimal value)	42PF7520D/10	42PF5520D/10	Settings Range (decimal value)
ADC_RED_OFFSET2	338	080	080	050 - 110
ADC_GRN_OFFSET2	339	080	080	050 - 110
ADC_BLU_OFFSET2	340	080	080	050 - 110
ADC_RED_GAIN	341	154	154	045 - 095
ADC_GRN_GAIN	343	154	154	045 - 095
ADC_BLU_GAIN	345	154	154	045 - 095
PC Greyscale settings				
		These models are with ADC & Columbus 3D Combfilter		
Setting	Scaler NVM Address (decimal value)	42PF7520D/10	42PF5520D/10	Settings Range (decimal value)
ADC_RED_OFFSET2	325	080	080	040 - 090
ADC_GRN_OFFSET2	326	080	080	040 - 090
ADC_BLU_OFFSET2	327	080	080	040 - 090
ADC_RED_GAIN	328	154	154	180 - 270
ADC_GRN_GAIN	330	154	154	180 - 270
ADC_BLU_GAIN	332	154	154	180 - 270
HD Greyscale settings				
		These models are with ADC & Columbus 3D Combfilter		
Setting	Scaler NVM Address (decimal value)	42PF7520D/10	42PF5520D/10	Settings Range (decimal value)
ADC_RED_OFFSET2	351	064	064	050 - 090
ADC_GRN_OFFSET2	352	082	082	050 - 090
ADC_BLU_OFFSET2	353	064	064	050 - 090
ADC_RED_GAIN	354	159	159	120 - 200
ADC_GRN_GAIN	356	144	144	120 - 200
ADC_BLU_GAIN	358	147	147	120 - 200

8.3.5 Sound

- For NICAM sets: see paragraph 8.3.3.
- For other sets: No adjustments needed for sound.

8.3.6 Options

Options OP1...OP7 in the SAM menu can be used for quickly restoring 64 features or settings of the HERCULES part of the TV set to their original default factory values (8 groups of 8 features/settings each). When the decimal value of one option byte OP1...OP7 is changed (see the first table below) then a group of 8 bits, representing 8 HERCULES options or features, is changed as well (see the second table below for a detailed description of the features or settings that are changed). The second table shows which option byte (OP1...OP7) represents which group of 8 option bits. Each bit (0...7) switches a particular HERCULES feature or setting ON or OFF, depending on its value (1 or 0).

It is also possible to change the features or settings mentioned in the second table directly at bit level, by means of the NVM Editor in the SAM menu. In the NVM Editor, first the correct NVM address (ADR) has to be entered, then the correct value (VAL, 1 or 0) for each bit (see second table), and finally the settings have to be stored (STORE). For quickly restoring the HERCULES part of the TV set to its original factory settings, however, it is more convenient to simply enter the default factory settings OP1...OP7 that are given in the first table below. How to do this, is described in the next paragraph.

How to Change an Option Byte

As has been explained above, an Option byte (OP) represents a number of different HERCULES options. Changing these bytes directly makes it possible to set all HERCULES options very fast. All options are controlled via seven option bytes. Select the option byte (OP1.. OP7) with the Menu Up/ Down keys, and enter the new (decimal) value. For the correct Factory Default settings, see the first table below. For more detailed information, see the second table.

Leaving the Option submenu saves the changes in the Option Byte settings. Some changes will only take effect after the set has been switched "off" and "on" with the AC power switch (cold start).

Table 8-2 Option codes OP1...OP7

Option table for quickly restoring the HERCULES to its Factory Default settings			
	Model number	42PF7520D/10	42PF5520D/10
OP1		152	152
OP2		37	101
OP3		79	15
OP4		241	241
OP5		252	252
OP6		27	27
OP7		19	19
Options (can be changed only via the SAM menu)		Total decimal value for each option per model number	

How to Change Options at Bit Level

If you wish to know which features or settings of the HERCULES are changed via OP1...OP7, or if you want to change each option or feature bit by bit, use the more detailed table below.

Note: the table below contains only part of the NVM settings that can be changed. A second range of settings and features can be found in Chapter 5 of this manual, in table **NVM Default values**. The settings mentioned there can only be changed via the NVM editor. For further settings, see also the table "ADC Gain and Grey scale alignment" elsewhere in this manual.

Table 8-3 Option codes in detail, at bit level

Option byte & bit table for restoring the TV set to its original Factory Default settings via the NVM Editor in the SAM menu		Model number	42PF7520D/10	42PF5520D/10
OP1	Description of feature/option to be switched ON or OFF			
bit 7 (msb)	OP_PHILIPS_TUNER		1	1
bit 6	OP_FM_RADIO		0	0
bit 5	OP_LNA		0	0
bit 4	OP_ATS // for EU		1	1
bit 3	OP_ACI		1	1
bit 2	OP_UK_PNP		0	0
bit 1	OP_VIRGIN_MODE		0	0
bit 0 (lsb)	OP_CHINA		0	0
	Total DEC Value		152	152
	Total HEX Value		98	98
OP2				
bit 7 (msb)	OP_SC		0	0
bit 6	OP_IBEX		1	1
bit 5	OP_CHANNEL_NAMING		1	1
bit 4	OP_LTI (Lum Transcient Improvmt)		0	0
bit 3	OP_TILT		0	0
bit 2	OP_FINE_TUNING		1	1
bit 1	OP_PIP_PHILIPS_TUNER		0	0
bit 0 (lsb)	OP_HUE		1	1
	Total DEC Value		101	101
	Total HEX Value		65	65
OP3				
bit 7 (msb)	OP_EW_FUNCTION		0	0
bit 6	OP_PIXEL_PLUS		1	0
bit 5	OP_PIP_SPLITTER // temp		0	0
bit 4	OP_SPLITTER // temp		0	0
bit 3	OP_VIRTUAL_DOLBY		1	1
bit 2	OP_WIDE_SCREEN		1	1
bit 1	OP_WSSB		1	1
bit 0 (lsb)	OP_OP_ME5 // OP_ME5 - 5/6 local buttons implementation		1	1
	Total DEC Value		79	15
	Total HEX Value		4F	0F
OP4				
bit 7 (msb)	OP_LIP_SYNC		1	1
bit 6	OP_HD		1	1
bit 5	OP_ULTRA_BASS		1	1
bit 4	OP_DELTA_VOLUME		1	1
bit 3	OP_TAIWAN_KOREA		0	0
bit 2	OP_VOLUME_LIMITER		0	0
bit 1	OP_STEREO_DBX		0	0
bit 0 (lsb)	OP_STEREO_NICAM_2CS		1	1
	Total DEC Value		241	241
	Total HEX Value		F1	F1
OP5				
bit 7 (msb)	OP_AV1		1	1
bit 6	OP_AV2		1	1
bit 5	OP_AV3		1	1
bit 4	OP_CVI		1	1
bit 3	OP_SVHS2		1	1
bit 2	OP_SVHS3		1	1
bit 1	OP_HOTEL_MODE		0	0
bit 0 (lsb)	OP_SIMPLE_FACTORY=OP_BTSC_AVSTEREO		0	0
	Total DEC Value		252	252
	Total HEX Value		FC	FC
OP6				
bit 7 (msb)	OP_PERSONAL_ZAPPING		0	0
bit 6	OP_SMART_SURF		0	0
bit 5	OP_FMTRAP		0	0
bit 4	OP_COMBFILTER		1	1
bit 3	OP_ACTIVE_CONTROL		1	1
bit 2	OP_VIDEO_TEXT		0	0
bit 1	OP_LIGHT_SENSOR		1	1
bit 0 (lsb)	OP_TWIN_TEXT		1	1
	Total DEC Value		27	27
	Total HEX Value		1B	1B
OP7				
bit 7 (msb)	OP_TIME_WIN1		0	0
bit 6	OP_DVB_USB = OP_MALAY		0	0
bit 5	OP_AMBILIGHT		0	0
bit 4	OP_COLUMBUS		1	1
bit 3	OP_DUMMY6		0	0
bit 2	OP_DUMMY7		0	0
bit 1	OP_WEST_EU		1	1
bit 0 (lsb)	OP_MULTI_STANDARD_EUR		1	1
	Total DEC Value		19	19
	Total HEX Value		03	03

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

Index of this chapter:

- 9.1 Introduction
- 9.2 IBO Zapper Module
- 9.3 Block diagram IBO Zapper Module
- 9.4 PNx83xx MOJO
- 9.5 Front End
- 9.6 Back End
- 9.7 IBOLink Interface
- 9.8 Control Interface
- 9.9 UART Interface
- 9.10 Power Supply IBO Zapper Module
- 9.11 Abbreviation List
- 9.12 IC Data Sheets

the original models of TV sets on which the IBO zapper models are based, together with the various picture qualities globally available (the Crystal Clear version is not applicable to the TV sets discussed in this manual).

Table 9-1 TV Models and Picture Quality

IBO Zapper Model	Original TV Model	Picture quality
42PF7520D/10	42PF7320/10	Pixel Plus
42PF5520D/10	42PF5320/10	Digital Crystal Clear
N.a.	N.a.	Crystal Clear

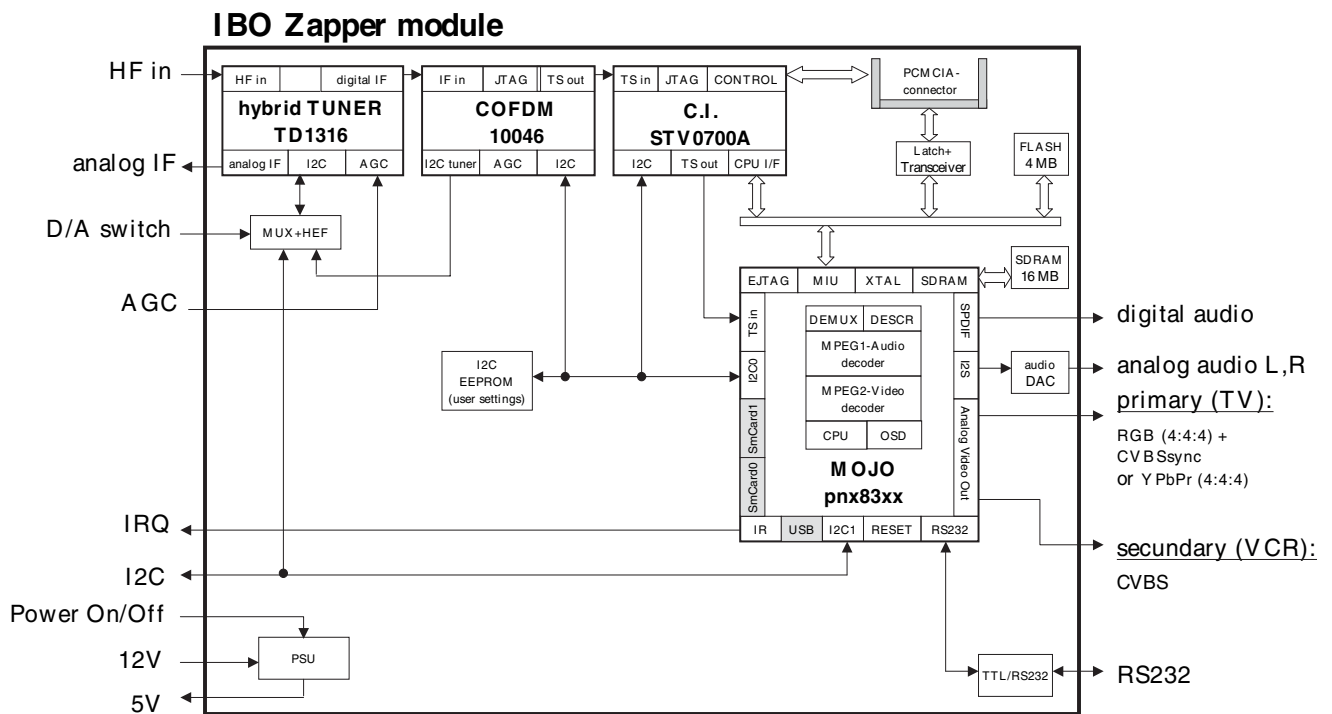
9.1 Introduction

The Digital Video Broadcasting (DVB) TV sets/models discussed in this manual are a combination of a standard TV set and an IBO zapper module. For a description of the original TV sets (without an IBO zapper module), see the LC4.9E AA manual, order code 3122 785 15432. The table below shows

9.2 IBO Zapper Module

The "IBO Zapper" module is meant to receive, process, and transfer Digital Video Broadcasting-Terrestrial (DVB-T) signals to the internal TV interface for audio, video, and control. The "IBO Zapper" is intended for use in combination with an analogue TV chassis.

9.3 Block diagram IBO Zapper Module



E_14970_036.eps
011105

Figure 9-1 Block Diagram IBO zapper module

9.4 PNx83xx MOJO

The MOJO is a source decoder chip targeted for very low cost application in integrated digital televisions. The device contains all hardware and software to be able to decode and display MPEG2 transport streams, including:

- Descrambling
- Demultiplexing
- Audio / video decompression
- Video encoding.
- Overlay graphics provisions

Some features of the MOJO are:

- 32-bit PR1910 core operating at 120 MHz.
- 16-bit memory and peripheral interface to connect ROM, NOR Flash and various peripherals.
- Sixteen external interrupt inputs shared with PIO lines.
- Several embedded peripheral units with physical interfaces to:
 - Two UART (RS-232) data ports
 - Two I²C master / slave transceivers
 - Two smart-card reader interfaces
 - One Integrated Conditional Access Module interface
- Supports parallel and serial transport stream input interfaces

9.5 Front End

The front end of the “IBO Zapper” module is almost identical to the “IBO+” module as used in the A10E with the exception that the Transport Streams that come from the COFDM demodulator are now fed through the PCMCIA controller first. The PCMCIA controller receives encrypted Transport Streams from the COFDM demodulator. Via the PCMCIA card, these encrypted Transport Streams are decrypted, and transported to the MOJO.

9.6 Back End

The MOJO is the main building block of the back-end of the “IBO Zapper” module. The IC decodes the MPEG-2 stream into analogue video and digital audio.

9.6.1 Transport Stream Input

The Transport Stream input is according to MPEG2 standard. In the “IBO Zapper”, only 8-bit parallel is supported. The used TS names are TDA_DATA.

9.6.2 Video Outputs

The MOJO has two analogue video outputs:

- Primary (TV): YUV + RGB
- Secondary (VCR): CVBS

The primary MOJO output is used as input for the TV display and is fed either to the Hercules YUV/RGB input (pins 78/79/80), for teletext insertion purposes, or directly to the analogue Scaler input D2/C2/B2. The signal path is as follows: switch 7G09 chooses between the SCART1 input signal and the YUV/RGB output of the MOJO. The signal selected by switch 7G09 is passed on to one group of the inputs of switch 7E00. The other group of inputs of this switch is connected to the three analogue input pins of the DVI-D connector. The output signal of switch 7E00 is passed on to the Hercules input, pins 78/79/80 and to the Scaler input D2/C2/B2 via switch 7E01 in the MUX-SYNC interface. This switch chooses between the MOJO output signal and the Hercules output signal, which is used for SDTV signals (analogue terrestrial TV reception via the analogue receiving part). The Hercules output is not only used for SDTV signals, but also for MOJO output signals that

were first sent to the Hercules input for e.g. teletext reinsertion purposes before they are passed on to the Scaler.

The secondary MOJO output, which delivers CVBS signals, is used for monitoring purposes or for recording via the SCART 2 output of the TV set. The signal path of the secondary MOJO output is as follows:

the CVBS/VCR signal coming from the MOJO is sent to the Hercules video switch input, pin 58, via switch 7G07. The signal then appears on one of the outputs of the Hercules video switch, pin 48, and is passed on via switches 7219 and 7G10 to pin 19 of SCART 2, which is the CVBS/monitor output.

For further details, see the manuals of the original TV sets on which the various models of IBO zappers are based.

9.6.3 Audio Outputs

The MOJO has two audio output interfaces:

- SPDIF Out: The SPDIF sound output goes directly to a connector on the back of the module.
- I²S Out: This digital sound output is fed through a DAC and the analogue L/R signals are directly fed into the Hercules.

9.7 IBOLink Interface

The IBOLink™ approach is such that the conventional TV microcontroller is re-used when digital functionality is added. In principle, the TV can still operate without the bolt-on module. The IBOLink™ software is added to the TV-set software, and is operating as a software bridge.

9.8 Control Interface

The “IBO Zapper” is connected as a slave I²C device. The I²C bus should be +5V tolerable and operating at 100kHz(MAX). The “IBO Zapper” module slave address is 0xE4 (similar to IBO+) but is configurable via IBOLink.

All communication from digital module to Television chassis has to be initiated via an active low hardware interrupt line from the digital module.

9.9 UART Interface

The UART interfaces (Universal Asynchronous Receiver And Transmitter) are serial interfaces, which are used to transfer data and commands between two devices.

The “IBO Zapper” system uses an UART interface for serial communication with a pc for:

- Diagnostic SW for Service or Production
- SW uploading for Service or Development

9.10 Power Supply IBO Zapper Module

The “IBO Zapper” module operates from a single 12V supply provided by the TV chassis. All other voltages that the module needs are derived from the +12V. The module has four different physical power states:

- “Off” State.
- “Passive Standby”.
- “Active Standby”.
- “On” State.

9.10.1 Off State

The set is powered off via the main power switch. The module is not powered.

9.10.2 Passive Standby State

The set is in standby mode. The module is in off state.

9.10.3 Active Standby State

The set is in "Semi-Standby" mode. All the circuits in the set, except the audio output and the LCD display are powered up and fully active. The set appears to be in normal standby mode for the customer.

The module is in "On" or "Logical Standby" state.

- On state. In this state the module can perform the following pre-programmed functions:
 - VCR (digital program) records
 - EPG updates
 - Over-the-air software download signaling detection and software downloads
- Logical Standby state. In this state only over-the-air software download signaling detection and software downloads can be performed.

9.10.4 On State

The set is fully functional and the module is powered up. The module is in "On" or "Logical Standby" state.

- On state. In this state all system functionality is available or the module is in software downloading process.
- Logical Standby state. In this state only over-the-air software download signaling detection and software downloads can be performed.

9.11 Abbreviation List

0/6/12	SCART switch control signal on A/V board. 0 = loop through (AUX to TV), 6 = play 16:9 format, 12 = play 4:3 format
1080i	1080 visible lines, interlaced
1080p	1080 visible lines, progressive scan
2CS	2 Carrier Sound (or 2 Channel Stereo)
480i	480 visible lines, interlaced
480p	480 visible lines, progressive scan
ACI	Automatic Channel Installation: algorithm that installs TV channels directly from a cable network by means of a predefined TXT page
ADC	Analogue to Digital Converter
AFC	Automatic Frequency Control; Control signal used to tune and lock to the correct frequency
AGC	Automatic gain control (feedback) signal to the tuner. This circuit ensures a constant output amplitude regardless of the input amplitude
AM	Amplitude Modulation; A "data encoding to a carrier" method, such that the carrier amplitude is proportional to the data value
AP or A/P	Asia Pacific
AR	Aspect Ratio: 4 by 3 or 16 by 9
ASD	Automatic Standard Detection
AV	External Audio Video
B-SC1-IN	Blue SCART1/EXT1 in
B-SC2-IN	Blue SCART2/EXT2 in
B-TXT	Blue TeleteXT
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz. B= VHF-band, G= UHF-band
BOCMA	Bimos one Chip Mid-end Architecture: video and chroma decoder
C-FRONT	Chrominance front input
CBA	Circuit Board Assembly (also called PCB or PWB)
CL	Constant Level: audio output to connect with an external amplifier
CLUT	Colour Look-Up Table
COLUMBUS	COLour LUMinance Baseband Universal Subsystem. IC performing noise reduction and 2D/3D comb filtering
ComPair	Computer aided rePair. A tool for diagnosing a TV through a PC controlled interface
CSM	Customer Service Mode
CVBS	Composite Video and Blanking Signal; A single video signal that contains luminance, colour, and timing information
CVBS-EXT	CVBS signal from external source (VCR, VCD, etc.)
CVBS-INT	CVBS signal from internal Tuner
CVBS-MON	CVBS monitor signal
CVBS-TER-OUT	CVBS TERrestrial OUTput signal
DAC	Digital to Analogue Converter
DBE	Dynamic Bass Enhancement: extra low frequency amplification
DFU	Directions For Use: Owner's manual
DNR	Dynamic Noise Reduction / Digital Noise Reduction; Noise reduction feature of the set
DRAM	Dynamic RAM; dynamically refreshed RAM
DSP	Digital Signal Processing
DST	Dealer Service Tool; Special remote control designed for dealers to enter

	e.g. service mode (a DST-emulator is available in ComPair)	LED	Light Emitting Diode; A semiconductor diode that emits light when a current is passed through it
DTS	Digital Theatre System; A multi-channel surround sound format, similar to Dolby Digital	LINE-DRIVE	Horizontal (line) deflection drive signal (for the Line transistor)
DVB	Digital Video Broadcast; A method of transmitting digital audio and video, based on MPEG2	L/L'	Monochrome TV system. Sound carrier distance is 6.5 MHz. L' is Band I, L is all bands except for Band I
DVB-T	DVB-Terrestrial; HDTV standard for the EU	LS	LoudSpeaker
DVD	Digital Versatile Disc	LVDS	Low Voltage Differential Signalling, data transmission system for high speed and low EMI communication.
EEPROM	Electrically Erasable and Programmable Read Only Memory	M/N	Monochrome TV system. Sound carrier distance is 4.5 MHz. M= 525 lines @ 60 Hz, N= 625 lines @ 50 Hz
EPG	Electronic Program Guide: system used by broadcasters to transmit TV guide information (= NexTVView)	MOSFET	Metal Oxide Semiconductor Field Effect Transistor
EU	Europe	MPEG	Motion Pictures Experts Group. An ISO/IEC body that has given its name to an image compressing scheme for moving video
EXT	EXTernal (source), entering the set by SCART or by cinches (jacks)	MSP	Multi-standard Sound Processor: ITT sound decoder
FBL	Fast BLanking; DC signal accompanying RGB signals. To blank the video signal when it is returning from the right side of the screen to the left side. The video level is brought down below the black video level	MUTE	MUTE Line
FBL-SC1-IN	Fast blanking signal for SCART1 in	NC	Not Connected
FBL-SC2-IN	Fast blanking signal for SCART2 in	NICAM	Near Instantaneously Companded Audio Multiplexing; This is a digital sound system, mainly used in Europe
FBL-TXT	Fast Blanking Teletext	NTSC	National Television Standard Committee. Colour system used mainly 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)
FM	Field Memory; A memory chip that is capable of storing one or more TV picture fields / Frequency Modulation; A technique that sends data as frequency variations of a carrier signal	NVM	Non Volatile Memory; IC containing data such as alignment values, preset stations
FMR	Radio receiver that can receive the FM Band 87.5 - 108 MHz	O/C	Open Circuit
FRC	Frame Rate Converter	ON/OFF LED	On/Off control signal for the LED
FRONT-C	Front input chrominance (SVHS)	OSD	On Screen Display
FRONT-DETECT	Control line for detection of headphone insertion, Service Mode jumper, power failure detection	PAL	Phase Alternating Line. Colour system used mainly in Western Europe (colour carrier = 4.433619 MHz) and South America (colour carrier PAL M = 3.575612 MHz and PAL N = 3.582056 MHz)
FRONT-Y_CVBS	Front input luminance or CVBS (SVHS)	PC	Personal Computer
G-SC1-IN	Green SCART1/EXT1 in	PCB	Printed Circuit Board (or PWB)
G-SC2-IN	Green SCART2/EXT2 in	PIG	Picture In Graphic
G-TXT	Green teletext	PIP	Picture In Picture
H	H_sync to the module	PLL	Phase Locked Loop. Used, for example, in FST tuning systems. The customer can directly provide the desired frequency
HA	Horizontal Acquisition; horizontal sync pulse	Progressive Scan	Scan mode where all scan lines are displayed in one frame at the same time, creating a double vertical resolution.
HD	High Definition	PWB	Printed Wiring Board (also called PCB or CBA)
HP	HeadPhone	RAM	Random Access Memory
I	Monochrome TV system. Sound carrier distance is 6.0 MHz. VHF- and UHF-band	RC	Remote Control transmitter
I ² C	Integrated IC bus	RC5 or 6	Remote Control system 5 or 6, the signal from the remote control receiver
I ² S	Integrated IC Sound bus	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
IC	Integrated Circuit	RGBHV	Red, Green, Blue, Horizontal sync, and Vertical sync
IF	Intermediate Frequency	ROM	Read Only Memory
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.	SAM	Service Alignment Mode
IR	Infra Red	SC	SandCastle: two-level pulse derived from sync signals
IRQ	Interrupt ReQuest		
Last Status	The settings last chosen by the customer and read and stored in RAM or in the NVM. They are called at start-up of the set to configure it according to the customer's preferences		
LATAM	LATin AMerica		
LC04	Philips chassis name for LCD TV 2004 project		
LCD	Liquid Crystal Display		

SC-IN	SCART in
SC-OUT	SCART out
S/C	Short Circuit
SCART	Syndicat des Constructeurs d'Appareils Radiorécepteurs et Téléviseurs; This is a 21-pin connector used in EU, that carries various audio, video, and control signals (it is also called Péritel connector)
SCL	Serial CLock Signal on I ² C bus
SD	Standard Definition
SDA	Serial DATA Signal on I ² C bus
SDRAM	Synchronous DRAM
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
SMPS	Switched Mode Power Supply
SND	SouND
SNDL-SC1-IN	Sound left SCART1 in
SNDL-SC1-OUT	Sound left SCART1 out
SNDL-SC2-IN	Sound left SCART2 in
SNDL-SC2-OUT	Sound left SCART2 out
SNDR-SC1-IN	Sound right SCART1 in
SNDR-SC1-OUT	Sound right SCART1 out
SNDR-SC2-IN	Sound right SCART2 in
SNDR-SC2-OUT	Sound right SCART2 out
SOPS	Self Oscillating Power Supply
S/PDIF	Sony Philips Digital InterFace; This is a consumer interface used to transfer digital audio
SRAM	Static RAM
STBY	STandBY
SVHS	Super Video Home System
SW	Software or Subwoofer or Switch
THD	Total Harmonic Distortion
TXT	Teletext; TXT is a digital addition to analogue TV signals that contain textual and graphical information (25 rows x 40 columns). The information is transmitted within the first 25 lines during the Vertical Blank Interval (VBI)
uP	Microprocessor
VA	Vertical Acquisition
VL	Variable Level out: processed audio output towards external amplifier
VCR	Video Cassette Recorder
VGA	Video Graphics Array; 640x480 (4:3)
WD	Watch Dog
WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
XTAL	Quartz crystal
Y	Luminance signal
Y/C	Y consists of luminance signal, blanking level and sync; C consists of chroma (colour) signal
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
YUV	Colour space used by the NTSC and PAL video systems. Y is the luminance and U/V are the colour difference signals

9.12 IC Data Sheets

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

9.12.1 Diagram K1, PNx83xx (IC7100)

Block Diagram

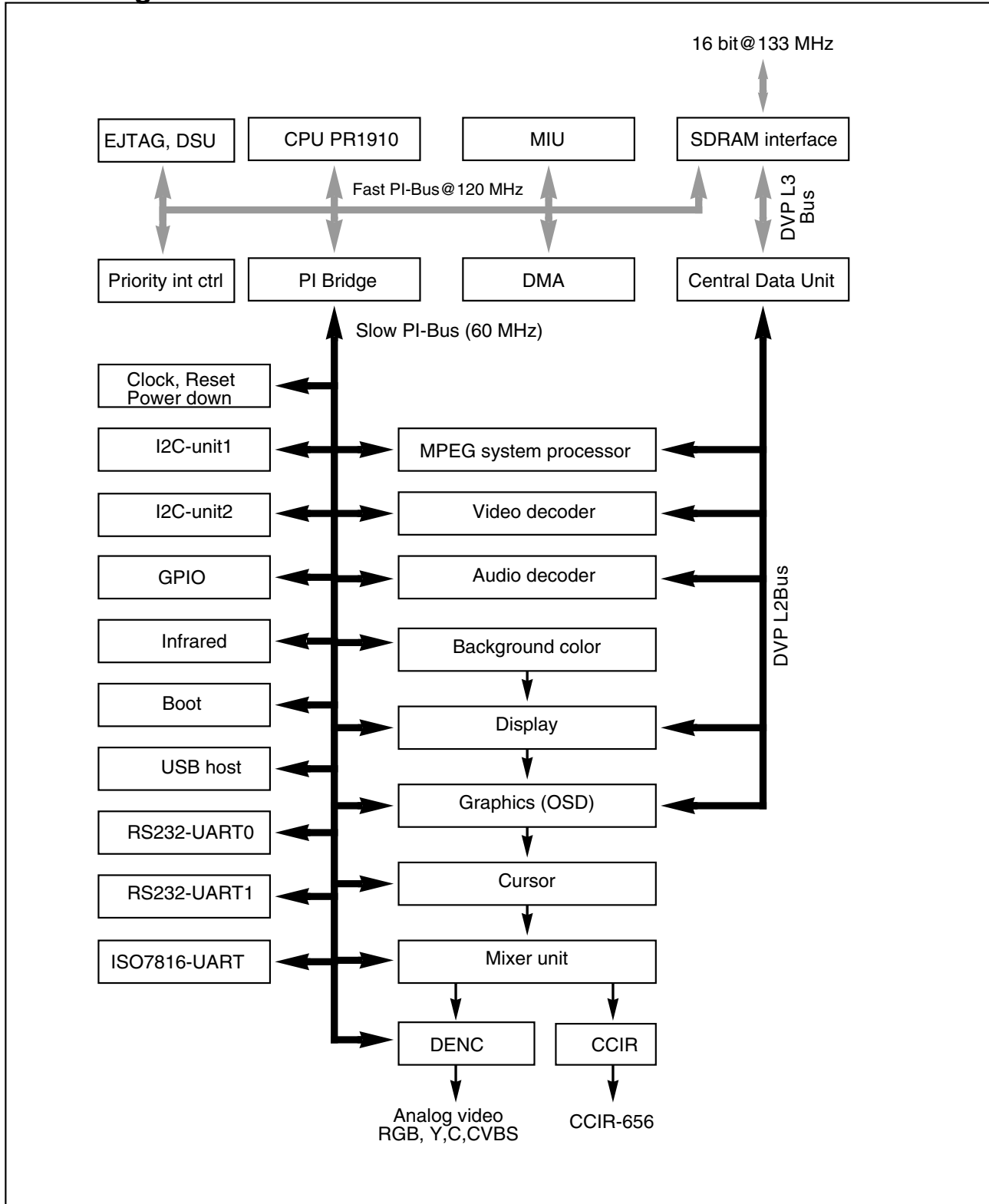
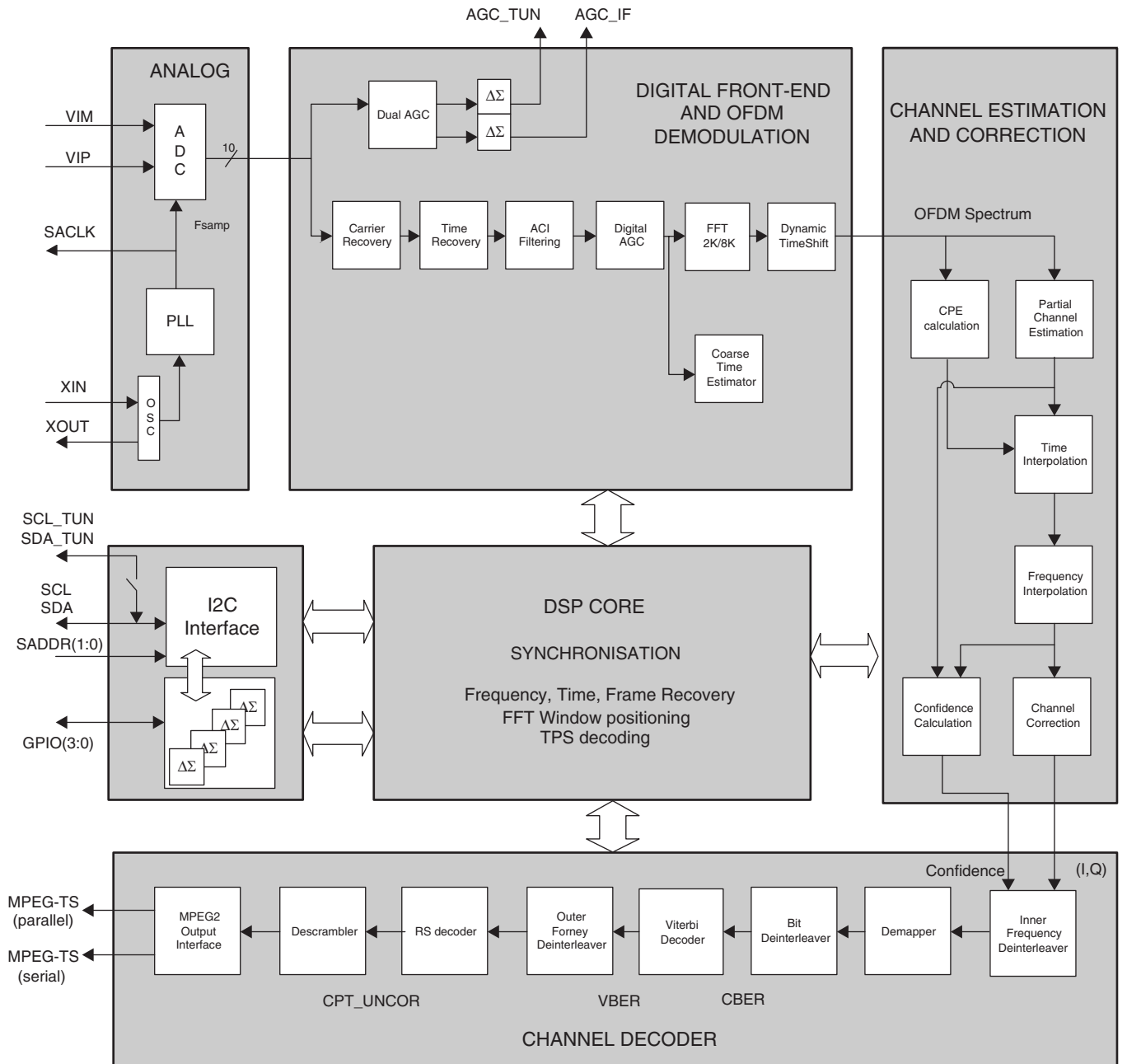


Figure 9-2 PNx831x architecture and data paths

9.12.2 Diagram K6, TDA10046 (IC7600)

Block Diagram



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020605

Figure 9-3 Internal blockdiagram TDA10046

10. Spare Parts List

Set Levels per CTN

42PF5520D/10

1004▲	9322 224 88682	PDP PDP42V7A062
1004▲	9322 226 61682	PDP PDP42V7K062
1004▲	9322 233 81682	S42SD-YD07 PP42SD015F
1012	3104 328 39571	LED Panel [J]
1014	3104 328 39561	Side Control Assy [E]
1062	2422 549 00148	Socket 3p m
1062	2422 549 00151	Socket 3p m
1081	3139 188 85021	IBO Zapper [K]
1116	3104 328 40501	Side I/O Assy [G] 42"/50"
1174	3104 328 40312	Audio-Stdby Assy [C]
8101	3104 311 10751	Cable 3p/1K7/3p
8102	3104 311 03601	Cable 7p/400/7p
8102	3104 311 07241	Cable 7p/1000/7p
8103	3104 311 07391	Cable 10p/220/10p
8103	3104 311 08821	Cable 10p/400/10p
8120	3104 311 07421	Cable 6p/680/6p
8136	3104 311 10733	Cable 11p/1000/11p
8146	3104 311 06991	Cable 11p/280/11p
8146	3104 311 08621	Cable 11p/220/11p
8150	3104 311 08831	Cable 31p/300/31p
8150	3104 311 10492	Cable 31P/220/31P
8152	3104 311 09921	Cable 9p/680/9p
8301	3139 131 06371	Cable 04P/220/03P
8301	3139 131 06501	Cable 04p/340/03p
8321	3104 311 08731	Cable Posi/100/posi
8500	3139 131 05861	Cable 32P/280/32P
8600	3139 131 03761	Cable Phono/280/Phono
8735	3104 311 10601	Cable 2p3/1400/Posi
8736	3104 311 10591	Cable 2p3/1000/Posi
8900	3104 311 07911	Cable ring/180/ring

5213	2441 257 30020	Loudsp. 8Ω 10W
5214	2441 257 30020	Loudsp. 8Ω 10W

Software (see Philips Service Website)

7050
7051
7055

42PF7520D/10

1004	9322 225 38682	PDP S42AX-YD01
1004▲	9322 227 20682	PDP FPF42C128128UE
1005	3104 328 42741	PDP FHP PSU [A]
1012	3104 328 39571	LED Panel [J]
1014	3104 328 39561	Side Control Assy [E]
1062	2422 549 00148	Socket 3p m
1062	2422 549 00151	Socket 3p m
1081	3139 188 85021	IBO Zapper [K]
1116	3104 328 40501	Side I/O Assy [G] 42"/50"
1174	3104 328 40312	Audio-Stdby Assy [C]
8101	3104 311 10751	Cable 3p/1K7/3p
8102	3104 311 03241	Cable 7p/280/7p Wh
8102	3104 311 07241	Cable 7p/1000/7p
8103	3104 311 06511	Cable 10p/280/10p
8103	3104 311 07971	Cable 10p/280/10p
8120▲	3104 311 06941	Cable 6p/680/6p
8120▲	3104 311 07421	Cable 6p/680/6p
8136	3104 311 10733	Cable 11p/1000/11p
8146	3104 311 08621	Cable 11p/220/11p
8150	3104 311 08082	Cable 31p/350/30p
8150	3104 311 08831	Cable 31p/300/31p
8152▲	3104 311 09921	Cable 9p/680/9p
8202▲	3104 311 08651	Cable 9p/340/9p
8301	3139 131 06371	Cable 04P/220/03P
8301	3139 131 06771	Cable PH 04P/820/03P
8321	3104 311 08731	Cable Posi/100/posi
8323	3104 311 10361	Cable 10p/280/10p
8500	3139 131 05861	Cable 32P/280/32P
8600	3139 131 03761	Cable Phono/280/Phono
8735	3104 311 10601	Cable 2p3/1400/Posi
8736	3104 311 10591	Cable 2p3/1000/Posi
8900▲	3104 311 07911	Cable ring/180/ring
8900▲	3104 311 08251	Wire ring/180/Posi

5213	2441 257 30020	Loudsp. 8Ω 10W
5214	2441 257 30020	Loudsp. 8Ω 10W

Software (see Philips Service Website)

7050
7051
7052
7055

PDP Power Supply Unit [A]

Various

0308	4822 265 20723	Connector 2p
0309	4822 267 10973	Connector 1p
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	4822 267 10618	Connector 7p
1004	2422 086 00676	Fuse 2A T 250V
1082	2422 086 00677	Fuse 2.5A T 250V
1083	2422 086 00677	Fuse 2.5A T 250V
1084	2422 086 10849	Fuse 1A F 250V
1110	2422 086 00678	Fuse 5A T 250V
1200	2422 086 00676	Fuse 2A T 250V
1260	4822 252 51186	Fuse 2A
1400	4822 070 36302	Fuse 6.3A
1402	4822 252 60151	Surge protect
1450	4822 280 10382	SDT-SS-109DM
1460	4822 280 10382	SDT-SS-109DM
1M03	2422 025 10771	Connector 10p m
1M05	2422 025 16374	Connector 2p m
1M10	2422 025 09406	Connector 4p m
1M46	2422 025 10655	Connector 11p m

—||—

2000	2022 554 04155	470pF 20% 250V
2001	2222 338 22474	470nF 20% 275V
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	2222 375 24153	15nF 5% 1kV
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	2222 375 24153	15nF 5% 1kV
2018	2238 867 18101	100pF 1% 50V 0603
2019	2022 554 04155	470pF 20% 250V
2020	2020 024 90737	3300μF 20% 100V
2021	2020 024 90737	3300μF 20% 100V
2022	2020 021 91354	1000μF 20% 50V
2023	2222 580 15649	100nF 10% 50V 0805
2024	3198 035 03320	3.3nF 5% 50V 0402
2025	4822 124 12084	1μF 20% 50V
2026	2020 552 96623	2.2nF 10% 50V 0402
2027	2020 552 96631	15nF 10% 16V 0402
2028	2238 930 11541	220pF 5% 200V
2029	2238 930 11541	220pF 5% 200V
2030	2238 586 59812	100nF 20% 50V 0603
2031	2020 552 96628	10nF 10% 16V 0402
2032	2238 586 15641	22nF 10% 50V 0603
2033	2238 586 59812	100nF 20% 50V 0603
2034	4822 126 14525	47pF 5% 1kV
2035	2020 552 96618	1nF 10% 50V 0402
2036	2238 586 15641	22nF 10% 50V 0603
2037	4822 126 14525	47pF 5% 1kV
2038	2020 552 96618	1nF 10% 50V 0402
2039	2020 552 96623	2.2nF 10% 50V 0402
2040	3198 034 02790	47pF 1% 50V 0402
2041	2238 869 15101	100pF 5% 50V 0402
2042	3198 035 03310	330pF 5% 50V 0402
2043	4822 124 12084	1μF 20% 50V
2044	2238 930 11541	220pF 5% 200V
2045	2238 930 11541	220pF 5% 200V
2046	2252 568 08305	33pF 5% 500V
2047	2238 586 59812	100nF 20% 50V 0603
2048	2020 552 96683	220nF 10% 50V
2049	2238 867 18101	100pF 1% 50V 0603
2050	2238 586 15641	22nF 10% 50V 0603
2051	4822 122 33177	10nF 20% 50V
2052	4822 124 12056	1000μF 20% 35V

3043	3198 031 04720	4.7kΩ 5% 0402	3203	4822 051 30101	100Ω 5% 0.062W
3044	4822 051 30102	1kΩ 5% 0.062W	3204	4822 117 11297	100kΩ 5% 0.1W
3045	4822 051 30102	1kΩ 5% 0.062W	3205	3198 031 01540	150kΩ 5% 0402
3046	4822 053 20565	5.6MΩ 5% 0.25W	3206	4822 117 12955	2.7kΩ 1% 0.1W 0805
3047	3198 031 01540	150kΩ 5% 0402	3207	4822 117 12955	2.7kΩ 1% 0.1W 0805
3048	3198 031 04720	4.7kΩ 5% 0402	3208	4822 117 12955	2.7kΩ 1% 0.1W 0805
3049	3198 031 01230	12kΩ 5% 0402	3209	4822 117 12955	2.7kΩ 1% 0.1W 0805
3050	4822 052 10398	3.9Ω 5% 0.33W	3210	2322 706 71002	1kΩ 1% 0402
3051	4822 051 20822	8.2kΩ 5% 0.1W	3212	4822 051 30102	1kΩ 5% 0.062W
3052	4822 117 12306	150kΩ 1% 0.1W	3213	4822 117 13603	33kΩ 5% 0402
3053	2322 662 93131	PTC 10Ω	3214	2322 705 70124	120kΩ 5% 0402
3054	4822 117 13543	470Ω 5% 0402	3215	2322 705 70274	270kΩ 5% 0402
3055	4822 117 10833	10kΩ 1% 0.1W	3216	4822 117 13548	1kΩ 5% 0402
3056	4822 051 30331	330Ω 5% 0.062W	3217	4822 117 13606	10kΩ 5% 0.01W 0402
3057	4822 051 30101	100Ω 5% 0.062W	3218	2122 118 06084	0.051Ω 5% 1W 2512
3058	4822 051 20105	1MΩ 5% 0.1W	3219	4822 117 13606	10kΩ 5% 0.01W 0402
3059	3198 031 05630	56kΩ 5% 0402	3220	4822 050 23309	33Ω 1% 0.6W
3060	4822 050 22204	220kΩ 1% 0.6W	3224	2322 706 71203	12kΩ 5% 0402
3061	3198 031 01830	18kΩ 5% 0.01W 0402	3225	2322 706 71003	10kΩ 5% 0402
3062	4822 117 13548	1kΩ 5% 0402	3226	4822 117 13606	10kΩ 5% 0.01W 0402
3063	4822 117 13548	1kΩ 5% 0402	3228	4822 051 30151	150Ω 5% 0.062W
3064	4822 117 13606	10kΩ 5% 0.01W 0402	3229	3198 031 05610	560Ω 5% 0.01W 0402
3065	4822 117 13548	1kΩ 5% 0402	3262	2322 706 71003	10kΩ 5% 0402
3066	4822 117 13606	10kΩ 5% 0.01W 0402	3263	2322 706 71003	10kΩ 5% 0402
3067	3198 031 01530	15kΩ 5% 0.01W 0402	3264	3198 031 05610	560Ω 5% 0.01W 0402
3068	4822 117 13606	10kΩ 5% 0.01W 0402	3265	4822 117 13548	1kΩ 5% 0402
3069	4822 051 30471	47Ω 5% 0.062W	3268	4822 117 13548	1kΩ 5% 0402
3070	4822 051 30103	10kΩ 5% 0.062W	3269	3198 031 02720	2.7kΩ 5% 0.01W 0402
3071	3198 031 04730	47Ω 5% 0402	3270	4822 050 21501	150Ω 1% 0.6W
3072	3198 012 14720	4.7kΩ +100%/ -0% 1W	3271	4822 050 21501	150Ω 1% 0.6W
3073	3198 031 01050	1MΩ 5% 0402	3292	4822 051 30561	560Ω 5% 0.062W
3074	3198 031 01530	15kΩ 5% 0.01W 0402	3300	2322 706 72204	220kΩ 5% 0402
3075	4822 051 20105	1MΩ 5% 0.1W	3301	2322 706 72204	220kΩ 5% 0402
3076	4822 117 11297	100kΩ 5% 0.1W	3304	4822 051 30102	1kΩ 5% 0.062W
3077	4822 051 20105	1MΩ 5% 0.1W	3306	2322 706 71003	10kΩ 5% 0402
3078	4822 117 11297	100kΩ 5% 0.1W	3307	5322 117 13028	12kΩ 1% 0.063W 0603
3079	4822 051 30681	680Ω 5% 0.062W	3308	4822 051 30102	1kΩ 5% 0.062W
3080	4822 051 30681	680Ω 5% 0.062W	3311	4822 117 13579	220kΩ 1% 0.1W 0805
3081	3198 031 01520	1.2kΩ 5% 0.01W 0402	3312	4822 051 30102	1kΩ 5% 0.062W
3082	3198 031 01520	1.2kΩ 5% 0.01W 0402	3313	2322 704 67502	7.5kΩ 1% 0.5W
3083	2312 915 11002	1kΩ 1% 0.5W	3317	2322 704 67502	7.5kΩ 1% 0.5W
3084	4822 117 13606	10kΩ 5% 0.01W 0402	3318	4822 117 13606	10kΩ 5% 0.01W 0402
3085	3198 031 04730	47Ω 5% 0402	3319	4822 117 13606	10kΩ 5% 0.01W 0402
3086	3198 031 04730	47Ω 5% 0402	3320	2322 706 71003	10kΩ 5% 0402
3087	3198 031 04730	47Ω 5% 0402	3321	4822 051 30102	1kΩ 5% 0.062W
3088	3198 031 04730	47Ω 5% 0402	3322	2322 706 73902	3.9kΩ 1% 0402
3089	4822 117 13606	10kΩ 5% 0.01W 0402	3323	2322 706 71003	10kΩ 5% 0402
3090	4822 117 13545	100Ω 1% 0402	3324	4822 051 30102	1kΩ 5% 0.062W
3091	4822 051 30102	1kΩ 5% 0.062W	3325	4822 051 30471	47Ω 5% 0.062W
3092	4822 051 10102	1kΩ 2% 0.25W	3326	3198 031 04720	4.7kΩ 5% 0402
3093	4822 117 13548	1kΩ 5% 0402	3327	4822 117 13606	10kΩ 5% 0.01W 0402
3094	4822 051 10102	1kΩ 2% 0.25W	3328	4822 051 30103	10kΩ 5% 0.062W
3095	4822 117 13543	470Ω 5% 0402	3329	4822 117 13606	10kΩ 5% 0.01W 0402
3096	3198 031 05620	5.6kΩ 5% 0.01W 0402	3330	3198 031 04740	470kΩ 5% 0402
3097	3198 031 08210	820Ω 5% 0.5W	3332	2322 706 76803	68kΩ 5% 0402
3098	4822 117 13548	1kΩ 5% 0402	3333	4822 051 30102	1kΩ 5% 0.062W
3100	2322 706 71002	1kΩ 1% 0402	3334	2322 706 71003	10kΩ 5% 0402
3101	2322 706 71002	1kΩ 1% 0402	3335	2322 706 71503	15kΩ 5% 1W 0402
3102	2322 706 71002	1kΩ 1% 0402	3340	4822 051 30102	1kΩ 5% 0.062W
3103	2322 706 71002	1kΩ 1% 0402	3341	4822 117 13606	10kΩ 5% 0.01W 0402
3104	2322 706 71002	1kΩ 1% 0402	3342	4822 051 30103	10kΩ 5% 0.062W
3106	4822 117 12955	2.7kΩ 1% 0.1W 0805	3343	4822 051 30102	1kΩ 5% 0.062W
3107	4822 117 12955	2.7kΩ 1% 0.1W 0805	3344	4822 051 30102	1kΩ 5% 0.062W
3108	4822 117 12955	2.7kΩ 1% 0.1W 0805	3345	4822 117 13548	1kΩ 5% 0402
3109	4822 117 12955	2.7kΩ 1% 0.1W 0805	3346	4822 117 13548	1kΩ 5% 0402
3110	4822 117 13548	1kΩ 5% 0402	3347	4822 051 30331	330Ω 5% 0.062W
3112	4822 051 30102	1kΩ 5% 0.062W	3348	4822 051 30331	330Ω 5% 0.062W
3113	3198 031 04740	470kΩ 5% 0402	3349	4822 051 30102	1kΩ 5% 0.062W
3114	2322 705 70564	560kΩ 5% 0402	3350	4822 051 30472	4.7Ω 5% 0.062W
3115	3198 031 02240	220kΩ 5% 0.1W 0402	3351	4822 051 30103	10kΩ 5% 0.062W
3116	4822 117 13548	1kΩ 5% 0402	3352	4822 051 30103	10kΩ 5% 0.062W
3117	4822 117 13606	10kΩ 5% 0.01W 0402	3353	4822 117 13606	10kΩ 5% 0.01W 0402
3118	2122 118 06084	0.051Ω 5% 1W 2512	3354	3198 031 04720	4.7kΩ 5% 0402
3120	3198 021 31820	1.8kΩ 5% 0.062W 0603	3356	3198 031 05610	560Ω 5% 0.01W 0402
3121	3198 031 04730	47Ω 5% 0402	3358	4822 051 30222	2.2kΩ 5% 0.062W
3122	2322 734 67503	75kΩ 1% 0.062W 0805	3359	3198 031 05620	5.6kΩ 5% 0.01W 0402
3123	4822 117 10965	18kΩ 1% 0.1W	3360	3198 031 01220	1.2kΩ 5% 0.01W 0402
3124	2322 704 67502	7.5kΩ 1% 0.5W	3361	3198 031 04720	4.7kΩ 5% 0402
3125	2322 704 67502	7.5kΩ 1% 0.5W	3362	3198 031 02720	2.7kΩ 5% 0.01W 0402
3126	2322 706 72202	2.2kΩ 5% 0402	3363	4822 051 30102	1kΩ 5% 0.062W
3128	4822 117 13603	33kΩ 5% 0402	3364	4822 051 30272	2.7kΩ 5% 0.062W
3130	4822 051 30123	12kΩ 5% 0.1W	3366	4822 117 13606	10kΩ 5% 0.01W 0402
3131	2322 706 71003	10kΩ 5% 0402	3367	4822 051 30103	10kΩ 5% 0.062W
3132	4822 117 13596	220Ω 5% 0.01W 0402	3369	3198 031 04720	4.7kΩ 5% 0402
3133	4822 051 30101	100Ω 5% 0.062W	3370	2322 675 20907	PTC 470Ω 50% 25V 0805
3134	4822 051 30681	680Ω 5% 0.062W	3373	3198 031 04720	4.7kΩ 5% 0402
3135	3198 031 04730	47Ω 5% 0402	3374	3198 031 04730	47Ω 5% 0402
3136	3198 031 04730	47Ω 5% 0402	3376	3198 031 04730	47Ω 5% 0402
3143	4822 053 12472	4.7kΩ 5% 3W	3377	3198 031 04720	4.7kΩ 5% 0402
3147	2322 706 71003	10kΩ 5% 0402	3378	4822 117 13606	10kΩ 5% 0.01W 0402
3149	4822 052 10478	4.7Ω 5% 0.33W	3380	3198 031 04730	47Ω 5% 0402
3150	3198 031 01050	1MΩ 5% 0402	3381	3198 031 04730	47Ω 5% 0402
3200	4822 051 20334	330kΩ 5% 0.1W	3383	4822 117 13606	10kΩ 5% 0.01W 0402
3202	4822 051 30479	47Ω 5% 0.062W	3384	4822 117 13606	10kΩ 5% 0.01W 0402

6267	4822 130 82627	SB540
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
6335	4822 130 11397	BAS316
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 11397	BAS316
6367	4822 130 11397	BAS316
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	9322 218 64673	BZT03C200
6502	9322 218 64673	BZT03C200
6503	9322 176 76668	RS1J
6504	9322 176 76668	RS1J
6505	9322 155 79685	EC31QS04
6506	9322 218 64673	BZT03C200
6507	9322 155 79685	EC31QS04
6508	9322 128 69685	S1D
6510	9322 099 61685	BYG10J
6511	9322 099 61685	BYG10J
6512	9322 099 61685	BYG10J
6513	9322 099 61685	BYG10J
6600	9322 177 84667	GBU8JL-7014
6601	9322 150 17685	BZX384-C39
6602	4822 130 11522	UDZ15B
6605	9322 192 15668	SM S3J
6606	9322 192 15668	SM S3J
6608	9322 128 70685	SMSS14
6609	9322 208 81685	BZG05C18
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 202 55685	BYG22D
6661	9322 202 55685	BYG22D
6663	9322 198 81685	SL04
6665	9322 198 81685	SL04
6666	4822 130 10837	UDZS8.2B



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
7012	3198 010 42310	BC847BW
7013	5322 130 63033	BCP56
7017	3198 010 42320	BC857BW
7018	3198 010 42310	BC847BW
7020	9335 671 30126	BC517
7021	9335 671 30126	BC517
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
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
7200	9340 565 06215	BSH114
7202	9965 000 04199	BSN20
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	9322 213 35668	LM339P
7326	3198 010 42310	BC847BW
7327	3198 010 42310	BC847BW
7330	9322 213 35668	LM339P
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
7363	3198 010 42310	BC847BW
7364	3198 010 42310	BC847BW
7365	3198 010 42310	BC847BW
7366	9322 213 19668	LM324APW
7375	3198 010 42310	BC847BW
7376	3198 010 42310	BC847BW
7391	3198 010 42320	BC857BW
7460	9340 219 30115	BC817-25W
7461	4822 130 60142	BC869
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
7540	4822 209 17398	LD1117DT33
7601	3198 010 42310	BC847BW
7602	3198 010 42320	BC857BW
7608	5322 130 44593	BC369
7610	9322 223 21687	STW29NK50Z
7640	9965 000 04199	BSN20
7641	9340 219 30115	BC817-25W
7650	9322 130 69682	MC33368P
7654	3198 010 42320	BC857BW
7655	3198 010 42310	BC847BW
7656	3198 010 42310	BC847BW
7661	5322 209 90529	MC34063AD

Small Signal Board [B]

Various

1101	2422 025 18749	Connector 3p m
1102	3139 147 23351	Tun UV1318SD/ACPHN4
1104	2422 549 44372	SAW 38.9MHz K3953L
1106	2422 549 44369	SAW 38.9MHz K9656L
1107	2422 025 18749	Connector 3p m
1202	2422 543 01414	Xtal 24.576MHz
1301	2422 025 10768	Connector 3p m
1304	4822 252 51187	19398E1(0,500A)
1401	4822 267 31729	Connector cinch 1p
1402	4822 267 10459	Connector 3p
1500	2422 025 18872	Connector 32p f
1600	3112 297 13381	Tuner TD1316/SPHP
1700	2422 033 00364	Connector smartcard
1801	2422 543 01133	Xtal 14.32MHz 20pF
1F00	2422 033 00515	Socket DVI-I 29p f
1F01	2422 026 05703	Socket Cinch 1p f
1G01	2422 025 18959	Socket 21P f shd
1G02	2422 025 18959	Socket 21P f shd
1G03	2422 025 18872	Connector 32p f
1J00	2422 025 10771	Connector 10p m
1J01	2422 025 10655	Connector 11p m
1J04	2422 025 10769	Connector 9p m
1J07▲	2422 086 11081	Fuse T3A 125V
1J08	2422 086 11105	Fuse F630mA 50V
1J08	4822 051 10008	Jumper 1206
1K00	2422 025 08149	Connector 6p m
1K02	2422 025 10768	Connector 3p m
1K04	2422 025 10655	Connector 11p m
1M01	2422 025 18744	Connector 9p m
1M02	2422 025 18742	Connector 7p m
1M03	2422 025 18738	Connector 3p m
1M04	2422 025 19515	Connector 3p m
1N01	2422 025 17274	Connector 10p m
1N02	2422 025 18779	Connector 4p m
1N05	2722 171 08825	Xtal 14.31818Mhz 15pF
1P01	2422 549 45325	Bead 67Ω at 100MHz
1P02	2422 549 45325	Bead 67Ω at 100MHz
1P03	2422 549 45325	Bead 67Ω at 100MHz

1P04	2422 549 45325	Bead 67Ω at 100MHz	2262	4822 124 12082	10μF 20% 50V
1P05	2422 549 45325	Bead 67Ω at 100MHz	2263	3198 035 26820	6.8nF 10% 16V 0402
1P07	2422 025 18427	Connector 31p f	2264	3198 017 44740	470nF 10V 0603
			2265	3198 017 41050	1μF 10V 0603
			2266	3198 035 71040	100nF 10% 16V 0402
			2267	2020 552 96718	220nF 10% 6.3V 0402
			2269	2022 031 00373	470μF 20% 16V
			2270	3198 035 71040	100nF 10% 16V 0402
			2271	4822 124 12095	100μF 20% 16V
			2272	3198 035 71040	100nF 10% 16V 0402
			2273	2020 552 96718	220nF 10% 6.3V 0402
			2274	3198 017 31540	150nF 10V 0603
			2277	3198 035 71040	100nF 10% 16V 0402
			2280	2020 552 00027	4.7μF 2% 6.3V 0603
			2281	2020 552 00027	4.7μF 2% 6.3V 0603
			2285▲	3198 035 71040	100nF 10% 16V 0402
			2286	3198 035 71040	100nF 10% 16V 0402
			2290▲	2222 240 59872	4.7μF 5% 10V 0805
			2291▲	3198 035 71040	100nF 10% 16V 0402
			2292	3198 035 71040	100nF 10% 16V 0402
			2300	4822 126 13881	470pF 5% 50V
			2301	4822 124 40849	330UF 20% 16V
			2302	4822 124 40207	100μF 20% 25V
			2304	2020 021 91506	1000μF 20% 16V
			2305	2238 586 59812	100nF 20% 50V 0603
			2306	4822 124 40207	100μF 20% 25V
			2308	4822 126 13881	470pF 5% 50V
			2309	4822 124 40849	330UF 20% 16V
			2311	2020 021 91687	470μF 20% 16V
			2313	4822 126 13881	470pF 5% 50V
			2314	3198 017 33330	33nF 20% 16V 0603
			2315	4822 124 40849	330UF 20% 16V
			2317	4822 124 40207	100μF 20% 25V
			2318	2020 021 91687	470μF 20% 16V
			2319	2020 021 91634	100μF 25V
			2320	2238 586 59812	100nF 20% 50V 0603
			2324	3198 017 44740	470nF 10V 0603
			2325	3198 017 44740	470nF 10V 0603
			2326	3198 017 44740	470nF 10V 0603
			2327	2238 586 59812	100nF 20% 50V 0603
			2328	2238 586 59812	100nF 20% 50V 0603
			2329	4822 126 13193	4.7nF 10% 63V
			2331	4822 126 13193	4.7nF 10% 63V
			2332	4822 124 40207	100μF 20% 25V
			2333	5322 126 11583	10nF 10% 50V 0603
			2334	2238 586 59812	100nF 20% 50V 0603
			2335	4822 124 12095	100μF 20% 16V
			2336	4822 126 13193	4.7nF 10% 63V
			2337	4822 124 22652	2.2μF 20% 50V
			2411	2238 586 59812	100nF 20% 50V 0603
			2412	2238 586 59812	100nF 20% 50V 0603
			2413	2238 586 59812	100nF 20% 50V 0603
			2449	3198 035 71040	100nF 10% 16V 0402
			2500	3198 017 41050	1μF 10V 0603
			2501	2020 552 94427	100pF 5% 50V
			2501	3198 035 71040	100nF 10% 16V 0402
			2502	2238 586 59812	100nF 20% 50V 0603
			2502	3198 035 71040	100nF 10% 16V 0402
			2503	2020 552 94427	100pF 5% 50V
			2503	3198 035 71040	100nF 10% 16V 0402
			2504	2238 586 59812	100nF 20% 50V 0603
			2504	3198 035 71040	100nF 10% 16V 0402
			2505	3198 017 41050	1μF 10V 0603
			2505	3198 035 71040	100nF 10% 16V 0402
			2506	3198 035 03310	330pF 5% 50V 0402
			2506	4822 124 12084	1μF 20% 50V
			2507	3198 035 04710	470pF 50V 0402
			2507	4822 126 13193	4.7nF 10% 63V
			2508	2238 869 15829	82pF 5% 50V 0402
			2508	3198 017 41050	1μF 10V 0603
			2509	2020 552 94427	100pF 5% 50V
			2509	2238 869 15829	82pF 5% 50V 0402
			2510	2020 552 94427	100pF 5% 50V
			2511	2238 586 59812	100nF 20% 50V 0603
			2512	4822 124 80151	47μF 16V
			2513	3198 017 41050	1μF 10V 0603
			2514	4822 124 12084	1μF 20% 50V
			2515	4822 126 13193	4.7nF 10% 63V
			2520	4822 122 33761	22pF 5% 50V
			2521	4822 122 33761	22pF 5% 50V
			2522	4822 126 14315	390pF 5% 50V 0603
			2523	4822 126 14315	390pF 5% 50V 0603
			2524	4822 122 33761	22pF 5% 50V
			2525	4822 126 14315	390pF 5% 50V 0603
			2526	4822 126 14315	390pF 5% 50V 0603
			2527	4822 122 33761	22pF 5% 50V
			2528	4822 122 33761	22pF 5% 50V
			2529	4822 122 33761	22pF 5% 50V
			2530	4822 126 14315	390pF 5% 50V 0603
			2531	4822 126 14315	390pF 5% 50V 0603
			2532	4822 122 33761	22pF 5% 50V
			2533	4822 122 33761	22pF 5% 50V
			2534	4822 122 33761	22pF 5% 50V
			2535	4822 122 33761	22pF 5% 50V

2536	4822 122 33761	22pF 5% 50V	2801	3198 035 71040	100nF 10% 16V 0402
2537	4822 126 14315	390pF 5% 50V 0603	2802	3198 035 71040	100nF 10% 16V 0402
2538	4822 126 14315	390pF 5% 50V 0603	2803	3198 035 71040	100nF 10% 16V 0402
2539	4822 126 13879	220nF +80-20% 16V	2804	3198 035 71040	100nF 10% 16V 0402
2540	4822 126 13879	220nF +80-20% 16V	2805	3198 035 71040	100nF 10% 16V 0402
2543	4822 124 80151	47µF 16V	2806	3198 035 71040	100nF 10% 16V 0402
2544	2238 586 59812	100nF 20% 50V 0603	2807	3198 035 71040	100nF 10% 16V 0402
2550	3198 017 42240	220nF 16V Y5V 0603	2808	3198 035 71040	100nF 10% 16V 0402
2551	3198 017 41050	1µF 10V 0603	2809	3198 035 71040	100nF 10% 16V 0402
2553	3198 017 42240	220nF 16V Y5V 0603	2810	3198 035 71040	100nF 10% 16V 0402
2554	3198 017 41050	1µF 10V 0603	2811	3198 035 71040	100nF 10% 16V 0402
2555	4822 124 23002	10µF 16V	2812	3198 035 71040	100nF 10% 16V 0402
2556	2238 586 59812	100nF 20% 50V 0603	2813	3198 035 71040	100nF 10% 16V 0402
2557	4822 124 23002	10µF 16V	2814	3198 035 71040	100nF 10% 16V 0402
2558	2238 586 59812	100nF 20% 50V 0603	2815	5322 124 41945	22µF 20% 35V
2603	2020 552 96834	1µF 20% 6.3V 0402	2816	3198 035 71040	100nF 10% 16V 0402
2604	3198 035 04710	470pF 50V 0402	2817	3198 035 71040	100nF 10% 16V 0402
2605	2020 552 96834	1µF 20% 6.3V 0402	2818	3198 035 71040	100nF 10% 16V 0402
2607	2238 586 59812	100nF 20% 50V 0603	2819	3198 035 71040	100nF 10% 16V 0402
2608	2020 552 96834	1µF 20% 6.3V 0402	2820	3198 035 71040	100nF 10% 16V 0402
2608	2238 586 59812	100nF 20% 50V 0603	2821	3198 035 71040	100nF 10% 16V 0402
2609	2238 586 59812	100nF 20% 50V 0603	2822	3198 035 71040	100nF 10% 16V 0402
2609	3198 035 04710	470pF 50V 0402	2823	4822 126 14519	22pF 5% 50V 0402
2610	2020 552 96834	1µF 20% 6.3V 0402	2824	4822 126 14519	22pF 5% 50V 0402
2610	2238 586 59812	100nF 20% 50V 0603	2900	3198 035 71040	100nF 10% 16V 0402
2611	2238 586 59812	100nF 20% 50V 0603	2901	2020 552 96618	1nF 10% 50V 0402
2611	4822 124 12095	100µF 20% 16V	2902	2020 021 00046	470µF 20% 16V
2612	2238 586 59812	100nF 20% 50V 0603	2903	3198 035 71040	100nF 10% 16V 0402
2612	3198 017 41050	1µF 10V 0603	2904	4822 124 80151	47µF 16V
2613	2238 586 59812	100nF 20% 50V 0603	2905	2020 021 91557	100µF 20% 16V
2614	3198 035 71040	100nF 10% 16V 0402	2906	3198 035 71040	100nF 10% 16V 0402
2614	4822 124 80151	47µF 16V	2907	3198 035 71040	100nF 10% 16V 0402
2615	2022 031 00373	470µF 20% 16V	2908	3198 035 71040	100nF 10% 16V 0402
2615	2238 586 59812	100nF 20% 50V 0603	2909	3198 035 71040	100nF 10% 16V 0402
2617	2238 586 59812	100nF 20% 50V 0603	2910	3198 035 71040	100nF 10% 16V 0402
2618	2022 031 00373	470µF 20% 16V	2911	3198 035 71040	100nF 10% 16V 0402
2618	2238 586 59812	100nF 20% 50V 0603	2912	3198 035 71040	100nF 10% 16V 0402
2619	2238 586 59812	100nF 20% 50V 0603	2913	3198 035 71040	100nF 10% 16V 0402
2620	2238 586 59812	100nF 20% 50V 0603	2914	3198 035 71040	100nF 10% 16V 0402
2621	4822 124 80151	47µF 16V	2915	3198 035 71040	100nF 10% 16V 0402
2622	4822 124 80151	47µF 16V	2916	3198 035 71040	100nF 10% 16V 0402
2623	2238 586 59812	100nF 20% 50V 0603	2917	2020 021 91557	100µF 20% 16V
2624	2238 586 59812	100nF 20% 50V 0603	2918	3198 035 71040	100nF 10% 16V 0402
2625	2238 586 59812	100nF 20% 50V 0603	2919	3198 035 71040	100nF 10% 16V 0402
2626	2238 586 59812	100nF 20% 50V 0603	2920	3198 035 71040	100nF 10% 16V 0402
2627	2238 586 59812	100nF 20% 50V 0603	2921	3198 035 71040	100nF 10% 16V 0402
2628	2238 586 59812	100nF 20% 50V 0603	2922	3198 035 71040	100nF 10% 16V 0402
2629	2238 586 59812	100nF 20% 50V 0603	2923	3198 035 71040	100nF 10% 16V 0402
2630	2238 586 59812	100nF 20% 50V 0603	2924	3198 035 71040	100nF 10% 16V 0402
2631	2238 586 59812	100nF 20% 50V 0603	2925	3198 035 71040	100nF 10% 16V 0402
2632	4822 122 33741	10pF 10% 50V	2926	3198 035 71040	100nF 10% 16V 0402
2700	2238 586 59812	100nF 20% 50V 0603	2927	3198 035 71040	100nF 10% 16V 0402
2701	2238 586 59812	100nF 20% 50V 0603	2928	3198 035 71040	100nF 10% 16V 0402
2702	2238 586 59812	100nF 20% 50V 0603	2929	3198 035 71040	100nF 10% 16V 0402
2703	2238 586 59812	100nF 20% 50V 0603	2930	3198 035 71040	100nF 10% 16V 0402
2704	2238 586 59812	100nF 20% 50V 0603	2931	3198 035 71040	100nF 10% 16V 0402
2704	4822 124 23002	10µF 16V	2932	3198 035 71040	100nF 10% 16V 0402
2705	2238 586 59812	100nF 20% 50V 0603	2933	3198 035 71040	100nF 10% 16V 0402
2706	4822 124 23002	10µF 16V	2934	4822 124 80151	47µF 16V
2707	4822 124 23002	10µF 16V	2935	3198 035 71040	100nF 10% 16V 0402
2708	2238 586 59812	100nF 20% 50V 0603	2936	3198 035 71040	100nF 10% 16V 0402
2709	4822 124 23002	10µF 16V	2937	3198 035 71040	100nF 10% 16V 0402
2709	4822 124 80151	47µF 16V	2938	3198 035 71040	100nF 10% 16V 0402
2710	2020 552 96656	10µF 20% 25V 1210	2939	3198 035 71040	100nF 10% 16V 0402
2710	2238 586 59812	100nF 20% 50V 0603	2940	4822 124 80151	47µF 16V
2711	2020 552 96656	10µF 20% 25V 1210	2941	3198 035 71040	100nF 10% 16V 0402
2711	2238 586 59812	100nF 20% 50V 0603	2942	3198 035 71040	100nF 10% 16V 0402
2712	2238 586 59812	100nF 20% 50V 0603	2945	5322 124 41945	22µF 20% 35V
2713	2020 012 00028	470µF 20% 16V	2946	3198 035 71040	100nF 10% 16V 0402
2713	4822 124 23002	10µF 16V	2947	3198 035 71040	100nF 10% 16V 0402
2714	3198 035 02210	220pF 5% 50V 0402	2948	3198 035 71040	100nF 10% 16V 0402
2714	5322 126 11578	1nF 10% 50V 0603	2949	3198 035 71040	100nF 10% 16V 0402
2715	2020 552 94427	100pF 5% 50V	2950	5322 124 41945	22µF 20% 35V
2715	2020 552 96455	22nF 10% 16V 0402	2951	3198 035 71040	100nF 10% 16V 0402
2716	2020 012 00028	470µF 20% 16V	2952	3198 035 71040	100nF 10% 16V 0402
2730	2020 552 96656	10µF 20% 25V 1210	2953	3198 035 71040	100nF 10% 16V 0402
2731	2022 031 00373	470µF 20% 16V	2954	3198 035 71040	100nF 10% 16V 0402
2733	3198 035 02210	220pF 5% 50V 0402	2955	5322 124 41945	22µF 20% 35V
2734	2238 787 16641	22nF 10% 16V 0402	2956	3198 035 71040	100nF 10% 16V 0402
2735	3198 035 04710	470pF 50V 0402	2957	3198 035 71040	100nF 10% 16V 0402
2736	2022 031 00308	22µF 20% 35V	2958	3198 035 71040	100nF 10% 16V 0402
2737	2022 031 00373	470µF 20% 16V	2959	3198 035 71040	100nF 10% 16V 0402
2738	4822 124 80151	47µF 16V	2A00	2238 586 59812	100nF 20% 50V 0603
2739	4822 124 80151	47µF 16V	2A01	2238 869 15101	100pF 5% 50V 0402
2741	4822 126 13879	220nF +80-20% 16V	2A02	2238 869 15101	100pF 5% 50V 0402
2750	2020 552 00183	2.2µF 10% 6.3V 0603	2A12	2020 552 96628	10nF 10% 16V 0402
2753	2022 031 00373	470µF 20% 16V	2A13	3198 035 71040	100nF 10% 16V 0402
2755	3198 035 14720	4.7nF 5% 25V 0402	2B01	4822 124 80151	47µF 16V
2756	3198 035 04710	470pF 50V 0402	2B02	4822 124 11131	47µF 6.3V
2757	2022 031 00373	470µF 20% 16V	2B03	3198 035 71040	100nF 10% 16V 0402
2758	2022 031 00373	470µF 20% 16V	2B04	3198 035 71040	100nF 10% 16V 0402
2761	2020 552 96671	1µF 10% 25V	2B05	3198 035 71040	100nF 10% 16V 0402
2762	4822 124 23237	22µF 6.3V	2B06	3198 035 71040	100nF 10% 16V 0402
2800	2020 021 91557	100µF 20% 16V	2B07	3198 035 71040	100nF 10% 16V 0402

2B08	3198 035 71040	100nF 10% 16V 0402	2E31	3198 035 71040	100nF 10% 16V 0402
2B09	3198 035 71040	100nF 10% 16V 0402	2E32	3198 035 71040	100nF 10% 16V 0402
2B10	3198 035 71040	100nF 10% 16V 0402	2E33	2020 552 00005	4.7μF 10% 6.3V 0603
2B11	3198 035 71040	100nF 10% 16V 0402	2E34	2020 552 00005	4.7μF 10% 6.3V 0603
2B12	3198 035 71040	100nF 10% 16V 0402	2E35	2020 552 00005	4.7μF 10% 6.3V 0603
2B13	3198 035 71040	100nF 10% 16V 0402	2E36	3198 035 71040	100nF 10% 16V 0402
2B14	3198 035 71040	100nF 10% 16V 0402	2F04	2020 552 94427	100pF 5% 50V
2B15	3198 035 71040	100nF 10% 16V 0402	2F07	2238 586 59812	100nF 20% 50V 0603
2B16	3198 035 71040	100nF 10% 16V 0402	2F08	4822 126 14241	330pF 0603 50V
2B17	3198 035 71040	100nF 10% 16V 0402	2F09	4822 126 14241	330pF 0603 50V
2B18	5322 124 41945	22μF 20% 35V	2F10	2020 552 94427	100pF 5% 50V
2C00	3198 035 71040	100nF 10% 16V 0402	2F11	4822 126 14241	330pF 0603 50V
2C01	4822 124 23002	10μF 16V	2F12	4822 126 14241	330pF 0603 50V
2C02	3198 035 71040	100nF 10% 16V 0402	2F13	4822 126 14508	180pF 5% 50V 0603
2C03	3198 035 71040	100nF 10% 16V 0402	2F14	4822 126 14508	180pF 5% 50V 0603
2D02	2020 552 00134	22μF 20% 6.3V 0805	2F15	2020 552 00183	2.2μF 10% 6.3V 0603
2D02	2020 552 96637	10μF 10% 6.3V 0805	2F16	2020 552 00183	2.2μF 10% 6.3V 0603
2D03	2238 869 15101	100pF 5% 50V 0402	2G05	4822 126 14241	330pF 0603 50V
2D04	2020 552 96628	10nF 10% 16V 0402	2G06	4822 126 14508	180pF 5% 50V 0603
2D11	2022 552 05615	2.2μF 10% 6.3V 0805	2G07	4822 124 23002	10μF 16V
2D11	2250 200 13667	2.2μF 10% 6.3V 0805	2G08	2020 552 00183	2.2μF 10% 6.3V 0603
2D14	2222 580 15649	100nF 10% 50V 0805	2G09	4822 126 14241	330pF 0603 50V
2D17	2222 580 15649	100nF 10% 50V 0805	2G10	4822 126 14508	180pF 5% 50V 0603
2D19	2222 580 15649	100nF 10% 50V 0805	2G11	4822 124 23002	10μF 16V
2D20	2222 580 15649	100nF 10% 50V 0805	2G12	2020 552 00183	2.2μF 10% 6.3V 0603
2D21	2222 580 15649	100nF 10% 50V 0805	2G18	4822 126 14241	330pF 0603 50V
2D22	2020 021 00215	220μF 20% 25V	2G19	4822 126 14508	180pF 5% 50V 0603
2D23	2020 021 00215	220μF 20% 25V	2G20	4822 124 23002	10μF 16V
2D26	2022 552 05679	1μF 10% 16V 0805	2G21	2020 552 00183	2.2μF 10% 6.3V 0603
2D27	2022 552 05679	1μF 10% 16V 0805	2G22	4822 126 14241	330pF 0603 50V
2D28	2020 021 00215	220μF 20% 25V	2G23	4822 126 14508	180pF 5% 50V 0603
2D30	2020 552 96628	10nF 10% 16V 0402	2G24	4822 124 23002	10μF 16V
2D31	2020 552 96628	10nF 10% 16V 0402	2G25	2020 552 00183	2.2μF 10% 6.3V 0603
2D32	2020 552 96621	1.5nF 10% 50V 0402	2G26	2020 552 00005	4.7μF 10% 6.3V 0603
2D35	2020 552 96621	1.5nF 10% 50V 0402	2G28	2020 552 00005	4.7μF 10% 6.3V 0603
2D36	2020 552 96621	1.5nF 10% 50V 0402	2G29	4822 124 23002	10μF 16V
2D37	2020 552 96621	1.5nF 10% 50V 0402	2G30	2238 586 59812	100nF 20% 50V 0603
2D38	2222 580 15649	100nF 10% 50V 0805	2G31	2238 586 59812	100nF 20% 50V 0603
2D39	2020 552 96621	1.5nF 10% 50V 0402	2G32	2238 586 59812	100nF 20% 50V 0603
2D40	2020 552 96621	1.5nF 10% 50V 0402	2G33	3198 017 42240	220nF 16V Y5V 0603
2D41	2222 580 15649	100nF 10% 50V 0805	2G34	4822 124 23002	10μF 16V
2D43	2222 580 15649	100nF 10% 50V 0805	2G35	2238 586 59812	100nF 20% 50V 0603
2D45	2222 580 15649	100nF 10% 50V 0805	2G36	2020 552 00027	4.7μF 2% 6.3V 0603
2D45	4822 126 14585	100nF 10% 0805 50V	2G36	3198 017 41050	1μF 10V 0603
2D46	2222 580 15649	100nF 10% 50V 0805	2G37	4822 051 30331	330Ω 5% 0.062W
2D46	4822 126 14585	100nF 10% 0805 50V	2G38	2020 552 00027	4.7μF 2% 6.3V 0603
2D47	2020 552 96621	1.5nF 10% 50V 0402	2G38	3198 017 41050	1μF 10V 0603
2D48	2020 552 96621	1.5nF 10% 50V 0402	2G39	2020 552 00027	4.7μF 2% 6.3V 0603
2D49	2020 552 96621	1.5nF 10% 50V 0402	2G39	3198 017 41050	1μF 10V 0603
2D50	2020 552 96621	1.5nF 10% 50V 0402	2G41	4822 051 30331	330Ω 5% 0.062W
2D51	2020 552 96618	1nF 10% 50V 0402	2G43	5322 126 11578	1nF 10% 50V 0603
2D52	2020 021 00215	220μF 20% 25V	2G45	5322 126 11578	1nF 10% 50V 0603
2D53	2020 552 96828	470nF 20% 25V	2G46	5322 126 11578	1nF 10% 50V 0603
2D54	2020 552 96828	470nF 20% 25V	2G47	2238 586 59812	100nF 20% 50V 0603
2D55	2020 552 96621	1.5nF 10% 50V 0402	2G55	2020 552 00005	4.7μF 10% 6.3V 0603
2D63	2020 552 96628	10nF 10% 16V 0402	2G56	2020 552 00005	4.7μF 10% 6.3V 0603
2D64	3198 034 02280	2.2pF 1% 50V 0402	2G63	2020 552 00183	2.2μF 10% 6.3V 0603
2D65	3198 034 02280	2.2pF 1% 50V 0402	2G64	2020 552 00183	2.2μF 10% 6.3V 0603
2D66	3198 034 02280	2.2pF 1% 50V 0402	2G65	2020 552 00005	4.7μF 10% 6.3V 0603
2D67	2238 586 59812	100nF 20% 50V 0603	2G66	2020 552 00005	4.7μF 10% 6.3V 0603
2D68	2238 586 59812	100nF 20% 50V 0603	2J02	2020 552 96618	1nF 10% 50V 0402
2D71	3198 034 01080	1pF 1% 50V 0402	2J03	2020 552 96618	1nF 10% 50V 0402
2D71	3198 034 04780	4.7pF 50V NPO 0402	2J17	2020 552 96618	1nF 10% 50V 0402
2D72	3198 034 01080	1pF 1% 50V 0402	2J18	2238 869 15101	100pF 5% 50V 0402
2D72	3198 034 04780	4.7pF 50V NPO 0402	2J19	2238 869 15101	100pF 5% 50V 0402
2D73	2020 552 96628	10nF 10% 16V 0402	2J21	2238 869 15101	100pF 5% 50V 0402
2E03	3198 035 71040	100nF 10% 16V 0402	2J22	2238 869 15101	100pF 5% 50V 0402
2E04	2020 552 96834	1μF 20% 6.3V 0402	2J23	2238 869 15101	100pF 5% 50V 0402
2E05	2020 552 96834	1μF 20% 6.3V 0402	2J26	2238 869 15101	100pF 5% 50V 0402
2E06	2020 552 96834	1μF 20% 6.3V 0402	2J27	2238 869 15101	100pF 5% 50V 0402
2E07	4822 126 14324	33pF 5% 50V 0402	2J28	2238 869 15101	100pF 5% 50V 0402
2E08	2020 552 00005	4.7μF 10% 6.3V 0603	2J29	2238 869 15101	100pF 5% 50V 0402
2E09	4822 126 14324	33pF 5% 50V 0402	2J30	2020 552 96618	1nF 10% 50V 0402
2E10	2020 552 00005	4.7μF 10% 6.3V 0603	2J31	2238 869 15101	100pF 5% 50V 0402
2E11	4822 126 14324	33pF 5% 50V 0402	2J35	2020 552 96618	1nF 10% 50V 0402
2E12	2020 552 00005	4.7μF 10% 6.3V 0603	2J36	2020 552 96618	1nF 10% 50V 0402
2E13	3198 017 41050	1μF 10V 0603	2K00	2020 552 96618	1nF 10% 50V 0402
2E14	4822 126 14324	33pF 5% 50V 0402	2K01	2020 552 96618	1nF 10% 50V 0402
2E15	3198 035 71040	100nF 10% 16V 0402	2K02	2238 869 15109	10pF 5% 50V 0402
2E16	3198 035 71040	100nF 10% 16V 0402	2K03	2238 869 15109	10pF 5% 50V 0402
2E17	3198 035 71040	100nF 10% 16V 0402	2K04	2238 869 15109	10pF 5% 50V 0402
2E18	3198 035 71040	100nF 10% 16V 0402	2K05	2238 869 15109	10pF 5% 50V 0402
2E19	3198 035 71040	100nF 10% 16V 0402	2K06	2238 869 15101	100pF 5% 50V 0402
2E20	4822 124 11131	47μF 6.3V	2K07	2238 869 15101	100pF 5% 50V 0402
2E21	2020 552 00005	4.7μF 10% 6.3V 0603	2K08	2020 552 00183	2.2μF 10% 6.3V 0603
2E22	2020 552 00005	4.7μF 10% 6.3V 0603	2K10	2238 869 15101	100pF 5% 50V 0402
2E23	2020 552 00005	4.7μF 10% 6.3V 0603	2K11	2238 869 15101	100pF 5% 50V 0402
2E24	3198 035 71040	100nF 10% 16V 0402	2K12	2020 552 00183	2.2μF 10% 6.3V 0603
2E25	3198 035 71040	100nF 10% 16V 0402	2K13	2238 869 15101	100pF 5% 50V 0402
2E26	3198 035 71040	100nF 10% 16V 0402	2K14	2238 869 15101	100pF 5% 50V 0402
2E27	3198 035 71040	100nF 10% 16V 0402	2K16	2238 869 15101	100pF 5% 50V 0402
2E28	3198 035 71040	100nF 10% 16V 0402	2K17	2238 869 15101	100pF 5% 50V 0402
2E29	3198 035 71040	100nF 10% 16V 0402	2K18	2238 869 15101	100pF 5% 50V 0402
2E30	3198 035 71040	100nF 10% 16V 0402	2K19	2020 552 96618	1nF 10% 50V 0402

3156	3198 031 13390	4 x 33Ω 5% 1206	3314	3198 021 31080	1Ω 5% 0603
3157	3198 031 13390	4 x 33Ω 5% 1206	3315	4822 051 30102	1kΩ 5% 0.062W
3158	3198 031 13390	4 x 33Ω 5% 1206	3316	4822 051 30102	1kΩ 5% 0.062W
3159	3198 031 13390	4 x 33Ω 5% 1206	3317	2322 704 63302	3.3kΩ 1% 0603
3160	4822 051 30339	33Ω 5% 0.062W	3318	3198 021 31080	1Ω 5% 0603
3161	4822 051 30339	33Ω 5% 0.062W	3319	3198 021 31080	1Ω 5% 0603
3162	4822 051 30339	33Ω 5% 0.062W	3320	3198 021 31080	1Ω 5% 0603
3163	4822 051 30103	10kΩ 5% 0.062W	3321	3198 021 31080	1Ω 5% 0603
3200	4822 051 30332	3.3Ω 5% 0.062W	3322	5322 117 13042	3.9kΩ 1% 0.063W 0603
3205	4822 051 30103	10kΩ 5% 0.062W	3323	5322 117 13057	820Ω 1% 0.063W 0603
3206	4822 051 30332	3.3Ω 5% 0.062W	3324	4822 051 30102	1kΩ 5% 0.062W
3207	3198 031 06810	680Ω 5% 0.01W 0402	3325	4822 117 13632	100kΩ 1% 0603 0.62W
3207	4822 051 30332	3.3Ω 5% 0.062W	3326	4822 051 30103	10kΩ 5% 0.062W
3208	4822 117 13545	100Ω 1% 0402	3327	4822 051 30339	33Ω 5% 0.062W
3209	4822 051 30101	100Ω 5% 0.062W	3328	4822 117 13632	100kΩ 1% 0603 0.62W
3209	4822 117 13545	100Ω 1% 0402	3330	3198 021 31820	1.8kΩ 5% 0.062W 0603
3210	4822 051 30101	100Ω 5% 0.062W	3331	2322 704 61001	100Ω 1% 0603
3210	4822 117 13545	100Ω 1% 0402	3332	5322 117 13055	75Ω 1% 0.063W 0603
3211	4822 051 30103	10kΩ 5% 0.062W	3333	4822 051 30273	27kΩ 5% 0.062W
3211	4822 117 13545	100Ω 1% 0402	3334	4822 051 30333	33kΩ 5% 0.062W
3212	4822 117 13545	100Ω 1% 0402	3404	4822 051 30561	560Ω 5% 0.062W
3213	4822 117 13545	100Ω 1% 0402	3405	4822 051 30102	1kΩ 5% 0.062W
3214	3198 031 06810	680Ω 5% 0.01W 0402	3406	4822 051 30102	1kΩ 5% 0.062W
3215	3198 031 02710	270Ω 5% 0.1W 0402	3407	4822 051 30689	68Ω 5% 0.063W 0603
3216	4822 117 13597	330Ω 5% 0.01W 0402	3411	4822 051 30181	180Ω 5% 0.062W
3217	4822 117 13548	1kΩ 5% 0402	3431	4822 117 13548	1kΩ 5% 0402
3218	4822 117 11297	100kΩ 5% 0.1W	3432	3198 031 02720	2.7kΩ 5% 0.01W 0402
3219	4822 117 13545	100Ω 1% 0402	3451	3198 031 04720	4.7kΩ 5% 0402
3220	3198 031 04730	47Ω 5% 0402	3453	4822 117 13545	100Ω 1% 0402
3222	4822 117 13545	100Ω 1% 0402	3454	4822 117 13545	100Ω 1% 0402
3223	3198 031 01090	10Ω 5% 0.01W 0402	3455	4822 117 13545	100Ω 1% 0402
3224	3198 031 04720	4.7kΩ 5% 0402	3456	4822 117 13545	100Ω 1% 0402
3225	3198 031 04720	4.7kΩ 5% 0402	3458	4822 117 13545	100Ω 1% 0402
3226	4822 117 13545	100Ω 1% 0402	3459	4822 117 13545	100Ω 1% 0402
3227	4822 117 13545	100Ω 1% 0402	3461	4822 117 13545	100Ω 1% 0402
3229	3198 031 04720	4.7kΩ 5% 0402	3462	4822 117 13545	100Ω 1% 0402
3230	4822 117 13606	10kΩ 5% 0.01W 0402	3500	4822 051 30102	1kΩ 5% 0.062W
3231	4822 117 13602	2.2kΩ 5% 0.01W 0402	3501	4822 117 12968	820Ω 5% 0.62W
3232	3198 031 03320	3.3kΩ 5% 0402	3501	4822 117 13543	470Ω 5% 0402
3233	3198 031 03320	3.3kΩ 5% 0402	3502	3198 031 04730	47Ω 5% 0402
3234	3198 031 04720	4.7kΩ 5% 0402	3502	4822 051 30683	68kΩ 5% 0.062W
3235	3198 031 04720	4.7kΩ 5% 0402	3503	4822 051 30102	1kΩ 5% 0.062W
3236	3198 031 04720	4.7kΩ 5% 0402	3504	4822 117 13613	2.2Ω 5% 0603
3238	4822 117 13545	100Ω 1% 0402	3505	4822 117 12968	820Ω 5% 0.62W
3239	4822 117 13545	100Ω 1% 0402	3506	4822 051 30333	33kΩ 5% 0.062W
3240	2322 704 61002	1kΩ 1%	3507	4822 051 30152	1.5Ω 5% 0.062W
3241	4822 117 13545	100Ω 1% 0402	3508	4822 117 13613	2.2Ω 5% 0603
3242	4822 117 13606	10kΩ 5% 0.01W 0402	3509	4822 051 30102	1kΩ 5% 0.062W
3243	3198 031 04720	4.7kΩ 5% 0402	3510	4822 051 30683	68kΩ 5% 0.062W
3245	3198 031 02240	220kΩ 5% 0.1W 0402	3511	4822 117 12968	820Ω 5% 0.62W
3246	3198 031 04720	4.7kΩ 5% 0402	3512	4822 051 30101	100Ω 5% 0.062W
3247	4822 117 13545	100Ω 1% 0402	3513	4822 051 30101	100Ω 5% 0.062W
3248	4822 117 13545	100Ω 1% 0402	3514	4822 051 30102	1kΩ 5% 0.062W
3249	3198 031 04720	4.7kΩ 5% 0402	3515	4822 051 30333	33kΩ 5% 0.062W
3250	4822 117 13545	100Ω 1% 0402	3516	4822 117 12968	820Ω 5% 0.62W
3251	4822 117 13545	100Ω 1% 0402	3517	4822 051 30152	1.5Ω 5% 0.062W
3252	4822 117 13545	100Ω 1% 0402	3519	4822 051 30759	75Ω 5% 0.062W
3253	4822 117 13545	100Ω 1% 0402	3520	4822 051 30759	75Ω 5% 0.062W
3255	4822 117 13605	Jumper 0402	3521	4822 051 30759	75Ω 5% 0.062W
3256	4822 117 13605	Jumper 0402	3522	4822 051 30759	75Ω 5% 0.062W
3257	4822 117 13605	Jumper 0402	3523	4822 051 30759	75Ω 5% 0.062W
3258	4822 117 13548	1kΩ 5% 0402	3526	4822 051 30759	75Ω 5% 0.062W
3259	4822 117 13548	1kΩ 5% 0402	3527	4822 051 30759	75Ω 5% 0.062W
3260	4822 117 13548	1kΩ 5% 0402	3528	5322 117 11726	10Ω 5%
3262	4822 117 13601	22kΩ 5% 0402	3530	4822 051 30759	75Ω 5% 0.062W
3263	2322 702 70398	3.9Ω 5% 0603	3532	4822 051 30561	560Ω 5% 0.062W
3264	4822 117 13601	22kΩ 5% 0402	3533	4822 051 30759	75Ω 5% 0.062W
3265	2322 702 70398	3.9Ω 5% 0603	3534	4822 117 12891	220kΩ 1%
3266	3198 031 05620	5.6kΩ 5% 0.01W 0402	3535	4822 117 13632	100kΩ 1% 0603 0.62W
3267	3198 031 05620	5.6kΩ 5% 0.01W 0402	3537	4822 117 12891	220kΩ 1%
3268	4822 117 13545	100Ω 1% 0402	3538	4822 117 13632	100kΩ 1% 0603 0.62W
3272	3198 031 04720	4.7kΩ 5% 0402	3539	4822 051 30759	75Ω 5% 0.062W
3273	4822 117 13548	1kΩ 5% 0402	3540	4822 051 30561	560Ω 5% 0.062W
3274	3198 031 03910	390Ω 1% 0402	3547	4822 051 30759	75Ω 5% 0.062W
3275	4822 117 13545	100Ω 1% 0402	3548	4822 051 30102	1kΩ 5% 0.062W
3276	3198 031 07590	75Ω 5% 0402	3557	4822 117 13632	100kΩ 1% 0603 0.62W
3277	3198 031 01520	1.2kΩ 5% 0.01W 0402	3558	4822 051 30102	1kΩ 5% 0.062W
3280▲	4822 117 11151	1Ω 5%	3559	4822 051 30681	680Ω 5% 0.062W
3281	3198 031 03930	39kΩ 5% 0402	3560	4822 051 30273	27kΩ 5% 0.062W
3282	4822 051 30151	150Ω 5% 0.062W	3561	4822 051 30271	270Ω 5% 0.062W
3285	4822 117 13605	Jumper 0402	3562	4822 051 30151	150Ω 5% 0.062W
3286	4822 117 13545	100Ω 1% 0402	3563	4822 117 13632	100kΩ 1% 0603 0.62W
3292▲	3198 031 01230	12kΩ 5% 0402	3564	4822 051 30102	1kΩ 5% 0.062W
3294▲	3198 031 04730	47Ω 5% 0402	3565	4822 051 30681	680Ω 5% 0.062W
3295▲	4822 117 11297	100kΩ 5% 0.1W	3566	4822 051 30273	27kΩ 5% 0.062W
3296	4822 117 13545	100Ω 1% 0402	3567	4822 051 30271	270Ω 5% 0.062W
3300	3198 021 31080	1Ω 5% 0603	3568	4822 051 30151	150Ω 5% 0.062W
3301	3198 021 31080	1Ω 5% 0603	3570	4822 051 30689	68Ω 5% 0.063W 0603
3303	3198 021 31080	1Ω 5% 0603	3571	4822 051 30151	150Ω 5% 0.062W
3304	5322 117 13046	1.8kΩ 1% 0.063W 0603	3572	4822 051 30561	560Ω 5% 0.062W
3306	2322 704 61002	1kΩ 1%	3604	4822 117 13601	22kΩ 5% 0402
3307	2322 704 61001	100Ω 1% 0603	3605	4822 117 13601	22kΩ 5% 0402
3312	3198 021 31080	1Ω 5% 0603	3606	4822 051 30101	100Ω 5% 0.062W
3313	3198 021 31080	1Ω 5% 0603	3607	4822 051 30101	100Ω 5% 0.062W

3608	4822 051 30103	10kΩ 5% 0.062W	3742	4822 051 30479	47Ω 5% 0.062W
3609	4822 051 30472	4.7Ω 5% 0.062W	3743	4822 051 30479	47Ω 5% 0.062W
3609	4822 117 13601	22kΩ 5% 0402	3743	4822 117 13601	22kΩ 5% 0402
3610	4822 051 30472	4.7Ω 5% 0.062W	3744	4822 051 30479	47Ω 5% 0.062W
3610	4822 117 11297	100kΩ 5% 0.1W	3745	4822 051 30479	47Ω 5% 0.062W
3611	4822 117 11297	100kΩ 5% 0.1W	3746	4822 051 30479	47Ω 5% 0.062W
3612	4822 051 30472	4.7Ω 5% 0.062W	3747	4822 051 30479	47Ω 5% 0.062W
3612	4822 117 13601	22kΩ 5% 0402	3748	4822 051 30479	47Ω 5% 0.062W
3613	4822 117 13632	100kΩ 1% 0603 0.62W	3749	4822 051 30339	33Ω 5% 0.062W
3614	4822 117 13632	100kΩ 1% 0603 0.62W	3750	4822 051 30339	33Ω 5% 0.062W
3615	4822 051 30102	1kΩ 5% 0.062W	3750	4822 117 13601	22kΩ 5% 0402
3616	4822 117 13548	1kΩ 5% 0402	3751	3198 021 31080	1Ω 5% 0603
3617	4822 117 13548	1kΩ 5% 0402	3751	4822 051 30472	4.7Ω 5% 0.062W
3618	4822 117 13632	100kΩ 1% 0603 0.62W	3752	3198 021 31080	1Ω 5% 0603
3619	4822 117 13606	10kΩ 5% 0.01W 0402	3752	4822 051 30472	4.7Ω 5% 0.062W
3619	4822 117 13632	100kΩ 1% 0603 0.62W	3753	2322 704 61002	1kΩ 1%
3620	4822 117 13606	10kΩ 5% 0.01W 0402	3754	2322 704 63302	3.3kΩ 1% 0603
3621	4822 051 30339	33Ω 5% 0.062W	3759	3198 031 01230	12kΩ 5% 0402
3622	3198 031 13390	4 x 33Ω 5% 1206	3761	4822 117 13545	100Ω 1% 0402
3623	4822 051 30472	4.7Ω 5% 0.062W	3800	4822 117 13606	10kΩ 5% 0.01W 0402
3624	3198 031 13390	4 x 33Ω 5% 1206	3801	2350 035 10229	4 x 22Ω 5% 1206
3625	4822 051 30101	100Ω 5% 0.062W	3802	2350 035 10229	4 x 22Ω 5% 1206
3626	4822 051 30272	2.7kΩ 5% 0.062W	3803	2350 035 10229	4 x 22Ω 5% 1206
3627	4822 051 30272	2.7kΩ 5% 0.062W	3804	2350 035 10229	4 x 22Ω 5% 1206
3628	4822 117 13606	10kΩ 5% 0.01W 0402	3805	2350 035 10229	4 x 22Ω 5% 1206
3629	4822 051 30101	100Ω 5% 0.062W	3806	2350 035 10229	4 x 22Ω 5% 1206
3629	4822 117 13601	22kΩ 5% 0402	3807	2350 035 10229	4 x 22Ω 5% 1206
3630	4822 051 30101	100Ω 5% 0.062W	3808	2350 035 10229	4 x 22Ω 5% 1206
3630	4822 117 13602	2.2kΩ 5% 0.01W 0402	3809	2350 035 10229	4 x 22Ω 5% 1206
3631	4822 051 30101	100Ω 5% 0.062W	3810	2350 035 10229	4 x 22Ω 5% 1206
3631	4822 117 13602	2.2kΩ 5% 0.01W 0402	3811	2350 035 10229	4 x 22Ω 5% 1206
3632	2322 705 70569	56Ω 5% 0402	3812	2350 035 10229	4 x 22Ω 5% 1206
3633	2322 705 70569	56Ω 5% 0402	3813	2350 035 10229	4 x 22Ω 5% 1206
3635	4822 051 30339	33Ω 5% 0.062W	3814	3198 031 02290	22Ω 5% 0.1W 0402
3636	4822 051 30684	680kΩ 5% 0.062W	3815	3198 031 02290	22Ω 5% 0.1W 0402
3637	4822 117 12891	220kΩ 1%	3816	3198 031 02290	22Ω 5% 0.1W 0402
3638	4822 051 30331	330Ω 5% 0.062W	3817	4822 117 13606	10kΩ 5% 0.01W 0402
3639	4822 051 30391	390Ω 5% 0.062W	3818	4822 117 13606	10kΩ 5% 0.01W 0402
3640	4822 051 30684	680kΩ 5% 0.062W	3820	4822 117 13606	10kΩ 5% 0.01W 0402
3641	4822 117 12891	220kΩ 1%	3822	4822 117 13545	100Ω 1% 0402
3642	4822 051 30331	330Ω 5% 0.062W	3824	3198 031 03320	3.3kΩ 5% 0402
3643	4822 051 30331	330Ω 5% 0.062W	3825	3198 031 11030	4 x 10kΩ 5% 1206
3644	3198 031 13390	4 x 33Ω 5% 1206	3826	3198 031 11030	4 x 10kΩ 5% 1206
3645	4822 051 30103	10kΩ 5% 0.062W	3827	4822 117 13606	10kΩ 5% 0.01W 0402
3700	4822 051 30101	100Ω 5% 0.062W	3828	4822 117 13606	10kΩ 5% 0.01W 0402
3701	4822 051 30101	100Ω 5% 0.062W	3829	4822 117 13606	10kΩ 5% 0.01W 0402
3702	3198 031 13390	4 x 33Ω 5% 1206	3831	4822 117 13545	100Ω 1% 0402
3703	3198 031 13390	4 x 33Ω 5% 1206	3832	4822 117 13545	100Ω 1% 0402
3704	4822 051 30103	10kΩ 5% 0.062W	3833	3198 031 01090	10Ω 5% 0.01W 0402
3705	3198 031 13390	4 x 33Ω 5% 1206	3834	4822 117 13606	10kΩ 5% 0.01W 0402
3707	4822 051 30103	10kΩ 5% 0.062W	3835	4822 117 13606	10kΩ 5% 0.01W 0402
3708	4822 051 30103	10kΩ 5% 0.062W	3836	4822 117 13606	10kΩ 5% 0.01W 0402
3708	4822 117 13606	10kΩ 5% 0.01W 0402	3837	4822 117 13606	10kΩ 5% 0.01W 0402
3709	3198 031 06820	6.8kΩ 5% 0.01W 0402	3838	4822 117 13606	10kΩ 5% 0.01W 0402
3709	4822 051 30103	10kΩ 5% 0.062W	3839	4822 117 13545	100Ω 1% 0402
3710	4822 051 30103	10kΩ 5% 0.062W	3840	3198 031 02290	22Ω 5% 0.1W 0402
3711	4822 051 30103	10kΩ 5% 0.062W	3841	4822 117 13606	10kΩ 5% 0.01W 0402
3712	4822 051 30103	10kΩ 5% 0.062W	3900	3198 031 03320	3.3kΩ 5% 0402
3712	5322 117 13031	5.6kΩ 1% 0.063W 0603	3901	4822 117 13606	10kΩ 5% 0.01W 0402
3713	2322 704 62002	2kΩ 1%	3902	4822 117 13606	10kΩ 5% 0.01W 0402
3713	2322 704 63302	3.3kΩ 1% 0603	3903	4822 117 13545	100Ω 1% 0402
3715	4822 051 30103	10kΩ 5% 0.062W	3904	4822 117 13545	100Ω 1% 0402
3716	3198 031 04720	4.7kΩ 5% 0402	3A00	3198 031 06890	68Ω 5% 0402
3716	4822 051 30103	10kΩ 5% 0.062W	3A01	3198 031 06890	68Ω 5% 0402
3717	4822 051 30103	10kΩ 5% 0.062W	3A07	4822 117 13606	10kΩ 5% 0.01W 0402
3718	4822 051 30103	10kΩ 5% 0.062W	3A08	4822 117 13606	10kΩ 5% 0.01W 0402
3719	4822 051 30103	10kΩ 5% 0.062W	3A10	4822 117 13606	10kΩ 5% 0.01W 0402
3720	4822 051 30103	10kΩ 5% 0.062W	3A11	4822 117 13606	10kΩ 5% 0.01W 0402
3721	4822 051 30103	10kΩ 5% 0.062W	3A13	4822 117 13606	10kΩ 5% 0.01W 0402
3722	4822 051 30103	10kΩ 5% 0.062W	3A14	3198 031 04720	4.7kΩ 5% 0402
3723	3198 031 13390	4 x 33Ω 5% 1206	3A14	3198 031 05610	560Ω 5% 0.01W 0402
3724	3198 031 13390	4 x 33Ω 5% 1206	3B01	4822 117 12706	10kΩ 1% 0.063W 0603
3725	4822 051 30339	33Ω 5% 0.062W	3B02	4822 117 12706	10kΩ 1% 0.063W 0603
3726	4822 051 30339	33Ω 5% 0.062W	3B03	2322 704 61501	150Ω 1% 0603
3727	4822 051 30479	47Ω 5% 0.062W	3C00	4822 117 13606	10kΩ 5% 0.01W 0402
3728	4822 051 30479	47Ω 5% 0.062W	3C01	4822 117 13606	10kΩ 5% 0.01W 0402
3729	4822 051 30479	47Ω 5% 0.062W	3C02	4822 117 13548	1kΩ 5% 0402
3730	4822 051 30479	47Ω 5% 0.062W	3C04	3198 031 11030	4 x 10kΩ 5% 1206
3731	4822 051 30479	47Ω 5% 0.062W	3C05	4822 117 13606	10kΩ 5% 0.01W 0402
3732	2322 704 61002	1kΩ 1%	3C06	3198 031 11030	4 x 10kΩ 5% 1206
3732	4822 051 30479	47Ω 5% 0.062W	3C07	3198 031 11030	4 x 10kΩ 5% 1206
3733	2322 704 63302	3.3kΩ 1% 0603	3C08	3198 031 11030	4 x 10kΩ 5% 1206
3733	4822 051 30479	47Ω 5% 0.062W	3C09	3198 031 11030	4 x 10kΩ 5% 1206
3734	4822 117 13573	4 x 47Ω 5%	3C10	3198 031 11030	4 x 10kΩ 5% 1206
3734	4822 117 13602	2.2kΩ 5% 0.01W 0402	3C16	3198 031 11030	4 x 10kΩ 5% 1206
3735	4822 117 13548	1kΩ 5% 0402	3C17	4822 117 13606	10kΩ 5% 0.01W 0402
3736	3198 031 04720	4.7kΩ 5% 0402	3C18	4822 117 13606	10kΩ 5% 0.01W 0402
3738	4822 051 30479	47Ω 5% 0.062W	3D01	3198 031 02240	220kΩ 5% 0.1W 0402
3739	4822 051 30479	47Ω 5% 0.062W	3D01	4822 117 11297	100kΩ 5% 0.1W
3740	3198 031 01520	1.2kΩ 5% 0.01W 0402	3D10	3198 031 04730	47Ω 5% 0402
3740	4822 051 30479	47Ω 5% 0.062W	3D11	4822 117 13601	22kΩ 5% 0402
3741	3198 031 01520	1.2kΩ 5% 0.01W 0402	3D12	4822 117 13601	22kΩ 5% 0402
3741	4822 051 30479	47Ω 5% 0.062W	3D13	3198 031 02720	2.7kΩ 5% 0.01W 0402
3742	3198 031 01530	15kΩ 5% 0.01W 0402	3D14	3198 031 02240	220kΩ 5% 0.1W 0402

3D15	3198 031 04740	470kΩ 5% 0402	3E50	3198 031 04730	47Ω 5% 0402
3D16	4822 117 13602	2.2kΩ 5% 0.01W 0402	3E51	3198 031 04730	47Ω 5% 0402
3D17	3198 031 02240	220kΩ 5% 0.1W 0402	3E52	3198 031 04730	47Ω 5% 0402
3D18	3198 031 04730	47Ω 5% 0402	3E53	3198 031 04730	47Ω 5% 0402
3D20	4822 117 13601	22kΩ 5% 0402	3E54	3198 031 04730	47Ω 5% 0402
3D21	3198 031 02720	2.7kΩ 5% 0.01W 0402	3E55	3198 031 04730	47Ω 5% 0402
3D22	4822 117 13606	10kΩ 5% 0.01W 0402	3F00	4822 051 30759	75Ω 5% 0.062W
3D23	4822 117 13602	2.2kΩ 5% 0.01W 0402	3F09	4822 051 30759	75Ω 5% 0.062W
3D24	4822 117 13606	10kΩ 5% 0.01W 0402	3F10	3198 021 31080	1Ω 5% 0603
3D25	4822 117 13548	1kΩ 5% 0402	3F11	4822 051 30759	75Ω 5% 0.062W
3D26	4822 117 13602	2.2kΩ 5% 0.01W 0402	3F16	4822 051 30103	10kΩ 5% 0.062W
3D34	2322 762 60332	3.3kΩ 5% 2512	3F17	4822 051 30103	10kΩ 5% 0.062W
3D35	4822 117 13548	1kΩ 5% 0402	3F18	4822 051 30103	10kΩ 5% 0.062W
3D37	2322 762 60332	3.3kΩ 5% 2512	3F19	3198 021 31080	1Ω 5% 0603
3D38	4822 117 13548	1kΩ 5% 0402	3F20	4822 051 30101	100Ω 5% 0.062W
3D39	2350 033 11223	22kΩ 5%	3F21	4822 051 30102	1kΩ 5% 0.062W
3D40	2350 033 11223	22kΩ 5%	3F22	4822 051 30103	10kΩ 5% 0.062W
3D42	3198 031 04730	47Ω 5% 0402	3F23	4822 051 30102	1kΩ 5% 0.062W
3D43	5322 117 11726	100Ω 5%	3F24	4822 051 30103	10kΩ 5% 0.062W
3D44	2322 762 60331	330Ω 5% 2512	3F25	4822 051 30103	10kΩ 5% 0.062W
3D45	2322 762 60331	330Ω 5% 2512	3F26	4822 051 30153	15kΩ 5% 0.062W
3D46	3198 031 04780	4.7Ω 5% 0402	3F27	4822 051 30153	15kΩ 5% 0.062W
3D47	3198 031 04780	4.7Ω 5% 0402	3F28	4822 051 30101	100Ω 5% 0.062W
3D49	3198 031 01530	15kΩ 5% 0.01W 0402	3F29	4822 051 30101	100Ω 5% 0.062W
3D50	3198 031 06820	6.8kΩ 5% 0.01W 0402	3G00	4822 051 30151	150Ω 5% 0.062W
3D51	3198 031 06820	6.8kΩ 5% 0.01W 0402	3G01	4822 051 30103	10kΩ 5% 0.062W
3D54	3198 031 04730	47Ω 5% 0402	3G02	4822 117 12891	220kΩ 1%
3D56	3198 031 01530	15kΩ 5% 0.01W 0402	3G03	4822 051 30153	15kΩ 5% 0.062W
3D57	3198 031 01530	15kΩ 5% 0.01W 0402	3G04	4822 051 30151	150Ω 5% 0.062W
3D58	3198 031 06810	680Ω 5% 0.01W 0402	3G05	4822 051 30103	10kΩ 5% 0.062W
3D64	4822 117 13548	1kΩ 5% 0402	3G06	4822 117 12891	220kΩ 1%
3D65	4822 117 13548	1kΩ 5% 0402	3G07	4822 051 30153	15kΩ 5% 0.062W
3D67	3198 031 03920	3.9kΩ 5% 0402	3G08	4822 051 30151	150Ω 5% 0.062W
3D68	4822 117 11297	100kΩ 5% 0.1W	3G12	2122 118 06408	91Ω 5% 0603
3D69	3198 031 03920	3.9kΩ 5% 0402	3G13	2122 118 06408	91Ω 5% 0603
3D70	4822 117 11297	100kΩ 5% 0.1W	3G14	2122 118 06408	91Ω 5% 0603
3D71	4822 117 13606	10kΩ 5% 0.01W 0402	3G15	4822 051 30101	100Ω 5% 0.062W
3D72	4822 117 13606	10kΩ 5% 0.01W 0402	3G16	4822 051 30101	100Ω 5% 0.062W
3D73	3198 031 05610	560Ω 5% 0.01W 0402	3G17	4822 051 30101	100Ω 5% 0.062W
3D74	3198 031 05610	560Ω 5% 0.01W 0402	3G26	4822 051 30273	27kΩ 5% 0.062W
3D75	3198 031 04730	47Ω 5% 0402	3G27	4822 051 30682	6.8Ω 5% 0.062W
3D76	4822 117 13601	22kΩ 5% 0402	3G28	4822 051 30759	75Ω 5% 0.062W
3D78	4822 117 13601	22kΩ 5% 0402	3G29	4822 051 30331	330Ω 5% 0.062W
3D79	4822 117 13601	22kΩ 5% 0402	3G30	4822 051 30689	68Ω 5% 0.063W 0603
3D81	3198 031 06810	680Ω 5% 0.01W 0402	3G31	4822 051 30759	75Ω 5% 0.062W
3D82	3198 031 04730	47Ω 5% 0402	3G32	4822 051 30102	1kΩ 5% 0.062W
3D83	3198 031 04730	47Ω 5% 0402	3G33	4822 051 30101	100Ω 5% 0.062W
3D84	3198 031 04730	47Ω 5% 0402	3G34	4822 051 30102	1kΩ 5% 0.062W
3D85	3198 031 04730	47Ω 5% 0402	3G37	4822 051 30151	150Ω 5% 0.062W
3D86	4822 117 11297	100kΩ 5% 0.1W	3G38	4822 051 30103	10kΩ 5% 0.062W
3D87	3198 031 04730	47Ω 5% 0402	3G39	4822 117 12891	220kΩ 1%
3D88	4822 117 13603	33kΩ 5% 0402	3G40	4822 051 30153	15kΩ 5% 0.062W
3D89	4822 117 13601	22kΩ 5% 0402	3G41	4822 051 30151	150Ω 5% 0.062W
3D91	4822 117 13603	33kΩ 5% 0402	3G42	4822 051 30103	10kΩ 5% 0.062W
3E00	2322 705 70569	56Ω 5% 0402	3G43	4822 117 12891	220kΩ 1%
3E01	2322 705 70569	56Ω 5% 0402	3G44	4822 051 30153	15kΩ 5% 0.062W
3E02	2322 705 70569	56Ω 5% 0402	3G45	4822 051 30759	75Ω 5% 0.062W
3E09	3198 031 04730	47Ω 5% 0402	3G46	4822 051 30101	100Ω 5% 0.062W
3E10	3198 031 04730	47Ω 5% 0402	3G47	4822 117 12925	47kΩ 1% 0.063W 0603
3E11	3198 031 04730	47Ω 5% 0402	3G48	4822 117 12925	47kΩ 1% 0.063W 0603
3E12	4822 117 13606	10kΩ 5% 0.01W 0402	3G51	4822 051 30273	27kΩ 5% 0.062W
3E13	4822 117 13597	330Ω 5% 0.01W 0402	3G52	4822 051 30682	6.8Ω 5% 0.062W
3E14	4822 117 13597	330Ω 5% 0.01W 0402	3G53	4822 051 30689	68Ω 5% 0.063W 0603
3E15	4822 117 13597	330Ω 5% 0.01W 0402	3G54	4822 051 30102	1kΩ 5% 0.062W
3E16	4822 117 13597	330Ω 5% 0.01W 0402	3G57	4822 051 30759	75Ω 5% 0.062W
3E17	4822 117 13597	330Ω 5% 0.01W 0402	3G58	4822 051 30101	100Ω 5% 0.062W
3E18	4822 117 13597	330Ω 5% 0.01W 0402	3G59	4822 117 12925	47kΩ 1% 0.063W 0603
3E19	2322 705 70569	56Ω 5% 0402	3G60	4822 117 12925	47kΩ 1% 0.063W 0603
3E20	2322 705 70569	56Ω 5% 0402	3G63	4822 051 30103	10kΩ 5% 0.062W
3E21	2322 705 70569	56Ω 5% 0402	3G64	4822 051 30103	10kΩ 5% 0.062W
3E22	4822 117 13632	100kΩ 1% 0603 0.62W	3G65	4822 051 30103	10kΩ 5% 0.062W
3E23	3198 031 08210	820Ω 5% 0.5W	3G66	4822 051 30151	150Ω 5% 0.062W
3E24	4822 117 13543	470Ω 5% 0402	3G67	4822 051 30153	15kΩ 5% 0.062W
3E25	2322 705 70399	39Ω 5% 0402	3G68	4822 051 30153	15kΩ 5% 0.062W
3E26	3198 031 02290	22Ω 5% 0.1W 0402	3G69	4822 117 12925	47kΩ 1% 0.063W 0603
3E27	2322 705 70399	39Ω 5% 0402	3G70	4822 117 12925	47kΩ 1% 0.063W 0603
3E28	3198 031 02290	22Ω 5% 0.1W 0402	3G71	4822 051 30561	560Ω 5% 0.062W
3E29	2322 705 70399	39Ω 5% 0402	3G72	4822 051 30103	10kΩ 5% 0.062W
3E30	3198 031 02290	22Ω 5% 0.1W 0402	3G73	4822 117 12925	47kΩ 1% 0.063W 0603
3E31	4822 117 13545	100Ω 1% 0402	3G75	4822 051 30101	100Ω 5% 0.062W
3E32	4822 117 13545	100Ω 1% 0402	3G76	4822 051 30101	100Ω 5% 0.062W
3E33	4822 117 13545	100Ω 1% 0402	3G77	4822 117 12925	47kΩ 1% 0.063W 0603
3E34	4822 117 13545	100Ω 1% 0402	3G79	4822 117 12925	47kΩ 1% 0.063W 0603
3E35	4822 117 13545	100Ω 1% 0402	3G81	4822 117 12925	47kΩ 1% 0.063W 0603
3E36	4822 117 13545	100Ω 1% 0402	3G83	4822 051 30101	100Ω 5% 0.062W
3E37	3198 031 02290	22Ω 5% 0.1W 0402	3G84	4822 051 30101	100Ω 5% 0.062W
3E38	4822 117 13545	100Ω 1% 0402	3G86	4822 117 12925	47kΩ 1% 0.063W 0603
3E39	4822 117 13545	100Ω 1% 0402	3G88	4822 051 30759	75Ω 5% 0.062W
3E41	4822 117 13545	100Ω 1% 0402	3G89	4822 117 12925	47kΩ 1% 0.063W 0603
3E42	4822 117 13545	100Ω 1% 0402	3G92	4822 051 30223	22kΩ 5% 0.062W
3E43	4822 117 13545	100Ω 1% 0402	3G92	4822 117 12925	47kΩ 1% 0.063W 0603
3E44	4822 117 13545	100Ω 1% 0402	3G93	4822 117 12925	47kΩ 1% 0.063W 0603
3E45	4822 117 13545	100Ω 1% 0402	3G94	4822 117 12925	47kΩ 1% 0.063W 0603
3E49	3198 031 02290	22Ω 5% 0.1W 0402	3G95	4822 117 12925	47kΩ 1% 0.063W 0603

3G96	4822 117 12925	47kΩ 1% 0.063W 0603	3N23	4822 117 13545	100Ω 1% 0402
3G99	4822 117 12925	47kΩ 1% 0.063W 0603	3N24	4822 117 13545	100Ω 1% 0402
3J05	3198 031 06890	68Ω 5% 0402	3N25	4822 117 13545	100Ω 1% 0402
3K00	4822 117 13545	100Ω 1% 0402	3N26	3198 031 04720	4.7kΩ 5% 0402
3K01	4822 117 13545	100Ω 1% 0402	3N27	4822 117 13546	47Ω 5% 0402
3K02	4822 117 13606	10kΩ 5% 0.01W 0402	3N28	4822 051 30181	180Ω 5% 0.062W
3K03	3198 031 01530	15kΩ 5% 0.01W 0402	3N29	4822 117 13545	100Ω 1% 0402
3K05	4822 117 13606	10kΩ 5% 0.01W 0402	3N30	4822 117 13545	100Ω 1% 0402
3K06	3198 031 01530	15kΩ 5% 0.01W 0402	3N31	4822 117 13545	100Ω 1% 0402
3K07	2322 705 70399	39Ω 5% 0402	3N32	4822 117 13545	100Ω 1% 0402
3K09	2322 705 70399	39Ω 5% 0402	3N33	4822 117 13545	100Ω 1% 0402
3K11	3198 031 06890	68Ω 5% 0402	3N34	4822 117 13545	100Ω 1% 0402
3K12	3198 031 06890	68Ω 5% 0402	3N35	4822 117 13545	100Ω 1% 0402
3K13	3198 031 06890	68Ω 5% 0402	3N46	4822 117 13545	100Ω 1% 0402
3L00	4822 117 13548	1kΩ 5% 0402	3N47	4822 117 13545	100Ω 1% 0402
3L04	4822 117 13605	Jumper 0402	3P01	3198 031 04720	4.7kΩ 5% 0402
3L05	3198 031 01510	150Ω 5% 0.01W 0402	3P03	4822 117 13546	47Ω 5% 0402
3L06	4822 117 13605	Jumper 0402	3P04	4822 117 13545	100Ω 1% 0402
3L10	4822 117 13597	330Ω 5% 0.01W 0402	3P04	4822 117 13605	Jumper 0402
3L11	3198 031 01510	150Ω 5% 0.01W 0402	3P05	4822 117 13545	100Ω 1% 0402
3L12	4822 117 13548	1kΩ 5% 0402	3P05	4822 117 13605	Jumper 0402
3L16	4822 117 13605	Jumper 0402	3S00	4822 117 12925	47kΩ 1% 0.063W 0603
3L17	3198 031 01510	150Ω 5% 0.01W 0402	3S03	4822 117 12925	47kΩ 1% 0.063W 0603
3L19	3198 031 01510	150Ω 5% 0.01W 0402	4211	4822 117 13605	Jumper 0402
3L20	3198 031 01510	150Ω 5% 0.01W 0402	4212	4822 117 13605	Jumper 0402
3L21	4822 117 13602	2.2kΩ 5% 0.01W 0402	4213	4822 117 13605	Jumper 0402
3L22	4822 117 13602	2.2kΩ 5% 0.01W 0402	4214	4822 117 13605	Jumper 0402
3L24	4822 117 13602	2.2kΩ 5% 0.01W 0402	4215	4822 117 13605	Jumper 0402
3L25	2350 035 10229	4 x 22Ω 5% 1206	4440	4822 117 13605	Jumper 0402
3L26	2350 035 10229	4 x 22Ω 5% 1206	4441	4822 117 13605	Jumper 0402
3L27	2350 035 10229	4 x 22Ω 5% 1206	4501	4822 117 13605	Jumper 0402
3L28	2350 035 10229	4 x 22Ω 5% 1206	4502	4822 117 13605	Jumper 0402
3L30	3198 031 02290	22Ω 5% 0.1W 0402	4504	4822 117 13605	Jumper 0402
3L31	3198 031 02290	22Ω 5% 0.1W 0402	4511	4822 117 13605	Jumper 0402
3L32	4822 117 13602	2.2kΩ 5% 0.01W 0402	4801	4822 117 13605	Jumper 0402
3L33	4822 117 13596	220Ω 5% 0.01W 0402	4A04	4822 117 13605	Jumper 0402
3L34	4822 117 13605	Jumper 0402	4J01	4822 117 13605	Jumper 0402
3L35	4822 117 13596	220Ω 5% 0.01W 0402	4K04	4822 117 13605	Jumper 0402
3L36	3198 031 03320	3.3kΩ 5% 0402	4K05	4822 117 13605	Jumper 0402
3L37	3198 031 03320	3.3kΩ 5% 0402	4L02	4822 117 13605	Jumper 0402
3L38	4822 117 13605	Jumper 0402	4L05	4822 117 13605	Jumper 0402
3M01	2350 035 10689	4 x 68Ω 5%	4M00	4822 117 13605	Jumper 0402
3M02	2350 035 10689	4 x 68Ω 5%	4M01	4822 117 13605	Jumper 0402
3M03	2350 035 10689	4 x 68Ω 5%	4M02	4822 117 13605	Jumper 0402
3M04	2350 035 10689	4 x 68Ω 5%	4M03	4822 117 13605	Jumper 0402
3M04	4822 117 13545	100Ω 1% 0402	4M05	4822 117 13605	Jumper 0402
3M06	2350 035 10229	4 x 22Ω 5% 1206	4M08	4822 117 13605	Jumper 0402
3M07	2350 035 10229	4 x 22Ω 5% 1206	4M09	4822 117 13605	Jumper 0402
3M08	2350 035 10229	4 x 22Ω 5% 1206	4M10	4822 117 13605	Jumper 0402
3M09	2350 035 10229	4 x 22Ω 5% 1206	4M16	4822 117 13605	Jumper 0402
3M11	3198 031 04720	4.7kΩ 5% 0402	4M17	4822 117 13605	Jumper 0402
3M13	3198 031 04720	4.7kΩ 5% 0402	4N01	4822 117 13605	Jumper 0402
3M14	4822 117 13545	100Ω 1% 0402	4N02	4822 117 13605	Jumper 0402
3M15	4822 117 13545	100Ω 1% 0402	4N03	4822 117 13605	Jumper 0402
3M16	3198 031 04720	4.7kΩ 5% 0402	4N04	4822 117 13605	Jumper 0402
3M26	4822 117 13605	Jumper 0402	4N05	4822 117 13605	Jumper 0402
3M27	4822 117 13605	Jumper 0402	4N06	4822 117 13605	Jumper 0402
3M50	4822 117 13606	10kΩ 5% 0.01W 0402	4N07	4822 117 13605	Jumper 0402
3M51	4822 117 13606	10kΩ 5% 0.01W 0402	4N08	4822 117 13605	Jumper 0402
3M52	4822 117 13606	10kΩ 5% 0.01W 0402	4N09	4822 117 13605	Jumper 0402
3M53	4822 117 13546	47Ω 5% 0402	4N10	4822 117 13605	Jumper 0402
3M54	4822 117 13546	47Ω 5% 0402	4N11	4822 117 13605	Jumper 0402
3M55	4822 117 13546	47Ω 5% 0402	4N12	4822 117 13605	Jumper 0402
3M56	4822 117 13606	10kΩ 5% 0.01W 0402	4N13	4822 117 13605	Jumper 0402
3M57	4822 117 13546	47Ω 5% 0402	4N14	4822 117 13605	Jumper 0402
3M58	4822 117 13606	10kΩ 5% 0.01W 0402	4N15	4822 117 13605	Jumper 0402
3M59	4822 117 13546	47Ω 5% 0402	4N16	4822 117 13605	Jumper 0402
3M78	4822 117 13548	1kΩ 5% 0402	4N17	4822 117 13605	Jumper 0402
3M79	3198 031 03320	3.3kΩ 5% 0402	4N18	4822 117 13605	Jumper 0402
3M87	4822 117 13605	Jumper 0402	4N19	4822 117 13605	Jumper 0402
3M89	3198 031 02290	22Ω 5% 0.1W 0402	4N20	4822 117 13605	Jumper 0402
3M90	3198 031 02290	22Ω 5% 0.1W 0402	4N21	4822 117 13605	Jumper 0402
3N01	4822 117 13606	10kΩ 5% 0.01W 0402	4N22	4822 117 13605	Jumper 0402
3N02	4822 117 13606	10kΩ 5% 0.01W 0402	4P05	4822 117 13605	Jumper 0402
3N03	4822 117 13606	10kΩ 5% 0.01W 0402	4P07	4822 117 13605	Jumper 0402
3N04	4822 117 13606	10kΩ 5% 0.01W 0402	4P11	4822 117 13605	Jumper 0402
3N05	4822 117 13606	10kΩ 5% 0.01W 0402	4P12	4822 117 13605	Jumper 0402
3N06	4822 117 13606	10kΩ 5% 0.01W 0402	9D03	2350 033 91001	4 x Jumper
3N07	4822 051 30333	33kΩ 5% 0.062W	9D04	2350 033 91001	4 x Jumper
3N08	4822 117 13606	10kΩ 5% 0.01W 0402			
3N09	4822 117 13548	1kΩ 5% 0402			
3N10	4822 117 13603	33kΩ 5% 0402			
3N11	4822 117 13546	47Ω 5% 0402			
3N12	4822 117 13606	10kΩ 5% 0.01W 0402	5100	4822 157 11499	Bead 60Ω at 100MHz
3N13	4822 117 13606	10kΩ 5% 0.01W 0402	5101	3198 018 33970	0.39μH 10% 0805
3N14	4822 117 13606	10kΩ 5% 0.01W 0402	5101	4822 157 11717	Bead 50Ω at 100MHz
3N15	4822 117 13546	47Ω 5% 0402	5102	4822 157 11717	Bead 50Ω at 100MHz
3N16	4822 117 13546	47Ω 5% 0402	5102	4822 157 71334	0.68μH 5% 1008
3N17	4822 117 13546	47Ω 5% 0402	5103	4822 157 11717	Bead 50Ω at 100MHz
3N18	4822 117 13546	47Ω 5% 0402	5103	4822 157 71334	0.68μH 5% 1008
3N19	4822 117 13606	10kΩ 5% 0.01W 0402	5107	2422 549 43062	Bead 600Ω at 100MHz
3N20	4822 117 13546	47Ω 5% 0402	5108	2422 549 43062	Bead 600Ω at 100MHz
3N21	4822 117 13545	100Ω 1% 0402	5201	4822 157 11499	Bead 60Ω at 100MHz
3N22	4822 117 13545	100Ω 1% 0402	5201	4822 157 11716	Bead 30Ω at 100MHz

5202	4822 157 11499	Bead 60 Ω at 100MHz	5J03	2422 549 45333	Bead 120 Ω at 100MHz
5202	4822 157 11716	Bead 30 Ω at 100MHz	5J04	2422 549 45333	Bead 120 Ω at 100MHz
5203	4822 157 11499	Bead 60 Ω at 100MHz	5L00	2422 549 45333	Bead 120 Ω at 100MHz
5203	4822 157 11716	Bead 30 Ω at 100MHz	5L01	2422 549 45333	Bead 120 Ω at 100MHz
5204	2422 549 42896	Bead 120 Ω 100MHz	5L02	2422 549 45333	Bead 120 Ω at 100MHz
5205	4822 157 11716	Bead 30 Ω at 100MHz	5M00	2422 549 45333	Bead 120 Ω at 100MHz
5206	4822 157 11716	Bead 30 Ω at 100MHz	5M01	2422 549 45333	Bead 120 Ω at 100MHz
5207	2422 549 42896	Bead 120 Ω 100MHz	5M02	2422 549 44197	Bead 220 Ω at 100MHz
5208	4822 157 11716	Bead 30 Ω at 100MHz	5M02	2422 549 45333	Bead 120 Ω at 100MHz
5209	4822 157 11716	Bead 30 Ω at 100MHz	5M03	2422 549 44197	Bead 220 Ω at 100MHz
5210	4822 157 11716	Bead 30 Ω at 100MHz	5M03	2422 549 45333	Bead 120 Ω at 100MHz
5211	4822 157 11716	Bead 30 Ω at 100MHz	5M04	2422 549 45333	Bead 120 Ω at 100MHz
5212	4822 157 11716	Bead 30 Ω at 100MHz	5M05	2422 549 45333	Bead 120 Ω at 100MHz
5213	4822 157 11716	Bead 30 Ω at 100MHz	5M09	2422 549 44197	Bead 220 Ω at 100MHz
5214	2422 536 00667	1000 μ H 20% 7032	5M10	2422 549 44197	Bead 220 Ω at 100MHz
5216	4822 157 11716	Bead 30 Ω at 100MHz	5M11	2422 549 44197	Bead 220 Ω at 100MHz
5218▲	2422 549 45333	Bead 120 Ω at 100MHz	5M12	2422 549 44197	Bead 220 Ω at 100MHz
5300	2422 536 00491	47 μ H	5N01	4822 157 11716	Bead 30 Ω at 100MHz
5301	4822 157 10452	10 μ H 10%	5N02	4822 157 11716	Bead 30 Ω at 100MHz
5302	2422 535 94639	10 μ H 20%	5N03	4822 157 11716	Bead 30 Ω at 100MHz
5303	2422 536 00548	100 μ	5N04	4822 157 11716	Bead 30 Ω at 100MHz
5304	4822 157 10452	10 μ H 10%	5N05	4822 157 11716	Bead 30 Ω at 100MHz
5305	2422 536 00548	100 μ	5P01	4822 157 11716	Bead 30 Ω at 100MHz
5306	4822 157 10452	10 μ H 10%	5P02	4822 157 11716	Bead 30 Ω at 100MHz
5309	3198 018 90050	Bead 1k Ω at 100MHz	5P03	4822 157 11716	Bead 30 Ω at 100MHz
5401	4822 157 11499	Bead 60 Ω at 100MHz	5P04	4822 157 11716	Bead 30 Ω at 100MHz
5501	3198 018 31080	1 μ H 10% 0805	5P05	4822 157 11716	Bead 30 Ω at 100MHz
5502	4822 157 11499	Bead 60 Ω at 100MHz	5P06	4822 157 11716	Bead 30 Ω at 100MHz
5504	4822 157 11499	Bead 60 Ω at 100MHz			
5505	4822 157 11499	Bead 60 Ω at 100MHz			
5507	4822 157 11499	Bead 60 Ω at 100MHz			
5508	4822 157 11499	Bead 60 Ω at 100MHz			
5511	3198 018 52280	2.2 μ H 10% 0603			
5512	3198 018 52280	2.2 μ H 10% 0603			
5513	3198 018 52280	2.2 μ H 10% 0603			
5514	3198 018 52280	2.2 μ H 10% 0603			
5528	4822 157 11499	Bead 60 Ω at 100MHz			
5600	4822 157 11499	Bead 60 Ω at 100MHz			
5601	4822 157 11499	Bead 60 Ω at 100MHz			
5602	4822 157 11499	Bead 60 Ω at 100MHz			
5700	4822 157 11499	Bead 60 Ω at 100MHz			
5701	4822 157 11499	Bead 60 Ω at 100MHz			
5702	4822 157 11499	Bead 60 Ω at 100MHz			
5703	4822 157 11499	Bead 60 Ω at 100MHz			
5704	2422 549 45333	Bead 120 Ω at 100MHz			
5704	4822 157 11499	Bead 60 Ω at 100MHz			
5704	4822 157 63635	10 μ H 20% 1206			
5709	2422 535 94134	10 μ H 20% 0805			
5712	2422 536 00339	33 μ H 20%			
5713	2422 535 94995	10 μ H 20%			
5730	2422 535 94134	10 μ H 20% 0805			
5733	2422 536 00689	220 μ H 20%			
5735	2422 536 00667	1000 μ H 20% 7032			
5737	2422 535 94134	10 μ H 20% 0805			
5738	2422 549 45333	Bead 120 Ω at 100MHz			
5752	2422 535 94134	10 μ H 20% 0805			
5753	2422 536 00689	220 μ H 20%			
5753	2422 536 01178	470 μ H 20% 10145			
5754	2422 535 94134	10 μ H 20% 0805			
5900	2422 549 45333	Bead 120 Ω at 100MHz			
5901	2422 549 45333	Bead 120 Ω at 100MHz			
5902	2422 549 45333	Bead 120 Ω at 100MHz			
5903	2422 549 45333	Bead 120 Ω at 100MHz			
5904	2422 549 45333	Bead 120 Ω at 100MHz			
5905	2422 549 45333	Bead 120 Ω at 100MHz			
5906	2422 549 45333	Bead 120 Ω at 100MHz			
5907	2422 549 45333	Bead 120 Ω at 100MHz			
5908	2422 549 45333	Bead 120 Ω at 100MHz			
5909	2422 549 45333	Bead 120 Ω at 100MHz			
5910	2422 549 45333	Bead 120 Ω at 100MHz			
5911	2422 549 45333	Bead 120 Ω at 100MHz			
5A00	4822 157 11716	Bead 30 Ω at 100MHz			
5C00	2422 549 45333	Bead 120 Ω at 100MHz			
5D10	2422 549 44197	Bead 220 Ω at 100MHz			
5D11	2422 549 44197	Bead 220 Ω at 100MHz			
5D12	2422 536 00137	33 μ H 10%			
5D12	2422 536 00707	33 μ H 20%			
5D13	2422 536 00137	33 μ H 10%			
5D13	2422 536 00707	33 μ H 20%			
5D14	2422 549 44197	Bead 220 Ω at 100MHz			
5D15	2422 549 44197	Bead 220 Ω at 100MHz			
5D16	2422 549 44197	Bead 220 Ω at 100MHz			
5E00	2422 549 45333	Bead 120 Ω at 100MHz			
5E01	2422 549 45333	Bead 120 Ω at 100MHz			
5E02	2422 549 45333	Bead 120 Ω at 100MHz			
5E03	2422 549 45333	Bead 120 Ω at 100MHz			
5F00	2422 549 45333	Bead 120 Ω at 100MHz			
5F01	2422 549 45333	Bead 120 Ω at 100MHz			
5F02	2422 549 45333	Bead 120 Ω at 100MHz			
5F03	2422 549 45333	Bead 120 Ω at 100MHz			
5G01	2422 549 42896	Bead 120 Ω 100MHz			
5G02	2422 549 45333	Bead 120 Ω at 100MHz			
5J01	2422 549 42896	Bead 120 Ω 100MHz			
5J02	2422 549 42896	Bead 120 Ω 100MHz			
5J03	2422 549 45333	Bead 120 Ω at 100MHz			
5J04	2422 549 45333	Bead 120 Ω at 100MHz			
5L00	2422 549 45333	Bead 120 Ω at 100MHz			
5L01	2422 549 45333	Bead 120 Ω at 100MHz			
5L02	2422 549 45333	Bead 120 Ω at 100MHz			
5M00	2422 549 45333	Bead 120 Ω at 100MHz			
5M01	2422 549 45333	Bead 120 Ω at 100MHz			
5M02	2422 549 44197	Bead 220 Ω at 100MHz			
5M02	2422 549 45333	Bead 120 Ω at 100MHz			
5M03	2422 549 44197	Bead 220 Ω at 100MHz			
5M03	2422 549 45333	Bead 120 Ω at 100MHz			
5M04	2422 549 45333	Bead 120 Ω at 100MHz			
5M05	2422 549 45333	Bead 120 Ω at 100MHz			
5M09	2422 549 44197	Bead 220 Ω at 100MHz			
5M10	2422 549 44197	Bead 220 Ω at 100MHz			
5M11	2422 549 44197	Bead 220 Ω at 100MHz			
5M12	2422 549 44197	Bead 220 Ω at 100MHz			
5N01	4822 157 11716	Bead 30 Ω at 100MHz			
5N02	4822 157 11716	Bead 30 Ω at 100MHz			
5N03	4822 157 11716	Bead 30 Ω at 100MHz			
5N04	4822 157 11716	Bead 30 Ω at 100MHz			
5N05	4822 157 11716	Bead 30 Ω at 100MHz			
5P01	4822 157 11716	Bead 30 Ω at 100MHz			
5P02	4822 157 11716	Bead 30 Ω at 100MHz			
5P03	4822 157 11716	Bead 30 Ω at 100MHz			
5P04	4822 157 11716	Bead 30 Ω at 100MHz			
5P05	4822 157 11716	Bead 30 Ω at 100MHz			
5P06	4822 157 11716	Bead 30 Ω at 100MHz			
▶					
6101	4822 130 11416	PDZ6.8B			
6102	4822 130 11416	PDZ6.8B			
6103	4822 130 11397	BAS316			
6104	4822 130 11525	1SS356			
6204	4822 130 80622	BAT54			
6205	4822 130 80622	BAT54			
6206	4822 130 80622	BAT54			
6300	9322 128 70685	SMSS14			
6303	9322 128 70685	SMSS14			
6304	9322 128 70685	SMSS14			
6307	9965 000 20150	1N4148WS SOD-323			
6400	9340 548 52115	PDZ5.1B			
6401	4822 130 10837	UDZS8.2B			
6403	4822 130 10837	UDZS8.2B			
6503	4822 130 11397	BAS316			
6504	4822 130 11397	BAS316			
6601	4822 130 10838	UDZ3.3B			
6708	3198 010 10720	SS24			
6709	9322 128 70685	SMSS14			
6712	3198 010 10730	SS36			
6733	9322 128 70685	SMSS14			
6735	5322 130 34337	BAV99			
6736	9340 548 71115	PDZ33B			
6740	4822 130 10837	UDZS8.2B			
6751	9322 128 70685	SMSS14			
6D10	4822 130 11397	BAS316			
6D11	9340 548 69115	PDZ27B			
6D12	4822 130 11397	BAS316			
6E01	9322 102 64685	UDZ2.7B			
6E03	9322 102 64685	UDZ2.7B			
6F00	4822 130 11397	BAS316			
6F01	4822 130 11397	BAS316			
6G02	4822 130 11397	BAS316			
6G03	4822 130 11416	PDZ6.8B			
6G04	4822 130 11416	PDZ6.8B			
6G05	4822 130 11416	PDZ6.8B			
6G06	4822 130 11416	PDZ6.8B			
6G07	4822 130 11416	PDZ6.8B			
6G08	4822 130 11416	PDZ6.8B			
6G09	4822 130 11416	PDZ6.8B			
6G10	4822 130 11416	PDZ6.8B			
6N01	9322 085 77685	TLMG3100			
▶					
7100	9352 744 74557	PNX8316HS/C102			
7100	9352 773 55557	PNX8314HS/C102			
7101	3198 010 42310	BC847BW			
7200	9322 206 20668	M29W320DT70N6F			
7201	9340 550 49115	PUMH7			
7202	9322 213 88668	K4S281632F-TC60			
7202	9340 550 49115	PUMH7			
7203	9322 130 41668	M24C64-WMN6			
7206	4822 130 60373	BC856B			
7207	9322 214 45668	M24C16-WMN6P			
7208	3198 010 42310				

7217	9352 780 22557	TDA15021H/N1B91 (*)
7219▲	9322 164 91668	CD74HC4053M
7300	4822 209 60059	MC34063AP1
7301	9322 184 19687	LD1117V18
7302	9322 216 98687	LD1117V
7303	4822 209 60059	MC34063AP1
7305	4822 209 60059	MC34063AP1
7306	9322 165 15685	NCP303LSN30
7307	9322 202 15687	LD1117V50
7308	9322 202 15687	LD1117V50
7309	4822 130 60373	BC856B
7310	3198 010 70510	TL431CZ
7311	9322 214 70685	SI2314EDS-E3
7312	5322 130 60159	BC846B
7402	5322 130 60159	BC846B
7430	4822 130 11155	PDTC114ET
7436	9322 221 97668	SN74LVC14APW
7500	4822 130 60373	BC856B
7501	5322 130 60159	BC846B
7501	9322 199 16668	M74HC590T
7502	9322 201 05671	CY62256LL-70ZC
7502	9322 208 98668	M68AF031AM70N6
7502	9352 668 39118	UDA1334ATS/N2
7503	4822 130 60373	BC856B
7503	9322 199 16668	M74HC590T
7504	3198 010 42310	BC847BW
7504	5322 130 60159	BC846B
7505	5322 130 60159	BC846B
7505	9351 870 00118	74HC573PW
7506	5322 130 60159	BC846B
7506	9351 870 00118	74HC573PW
7507	5322 130 60159	BC846B
7510	5322 130 60159	BC846B
7511	4822 130 60373	BC856B
7512	5322 130 60159	BC846B
7513	4822 130 60373	BC856B
7514	5322 130 60159	BC846B
7600	9352 732 45557	TDA10046AHT/C1
7601	5322 209 70225	LM393D
7601	9322 183 05668	TS482ID
7602	9351 742 70118	74HC08PW
7603	3198 010 42310	BC847BW
7604	3198 010 42310	BC847BW
7605	9340 310 50215	PDTA143ET
7605	9352 630 16165	74AHC1GU04GW
7606	9340 425 20115	BC847BS
7606	9352 630 16165	74AHC1GU04GW
7700	9322 227 91671	STV0700L
7701	9352 190 10118	74LVC573ADB
7702	9352 190 10118	74LVC573ADB
7703	9352 115 40118	74LVC245APW
7704	2722 171 08821	XTL 27MHz 50pF
7705	9322 175 13668	ST890CD
7708	9322 139 16668	LF33CPT
7710	9322 202 34668	L5973D
7730	9322 191 07668	L5970D
7735	4822 130 42804	BC817-25
7738	9322 163 24668	L78M08CDT
7741	3198 010 42310	BC847BW
7742	3198 010 42310	BC847BW
7752	5322 209 90529	MC34063AD
7756	4822 130 11155	PDTC114ET
7758	9322 212 14668	SI4423DY
7801	9322 219 57671	GM1501H-LF-BD
7900	9322 142 88668	LF25CDT
7901	9322 189 19668	LD1086D2T18
7A00	9352 759 98118	PCA9515ADP
7A02	3198 010 42310	BC847BW
7A03	3198 010 42310	BC847BW
7B01	9322 214 42671	K4D263238F-QC50
7B01	9322 235 50671	K4D263238I-UC50
7C00	9322 229 61671	MX29LV040CQC-70G (*)
7C01	9322 206 23668	M24C32-WMN6P
7C02	9322 215 39685	PST596JN
7D10	9322 213 35668	LM339P
7D11	9340 425 20115	BC847BS
7D12	9340 425 20115	BC847BS
7D14	3198 010 42310	BC847BW
7D15	3198 010 44350	BC807-25W
7D16	9340 425 30115	BC847BPN
7D17	9340 219 30115	BC817-25W
7D18	9322 224 40668	FET FDS4559_NL
7D19	3198 010 42310	BC847BW
7D20	3198 010 44350	BC807-25W
7D21	9340 425 30115	BC847BPN
7D22	9340 219 30115	BC817-25W
7D23	9322 224 40668	FET FDS4559_NL
7D24	9340 219 30115	BC817-25W
7D25	9340 425 30115	BC847BPN
7D26	9340 425 30115	BC847BPN
7E00	9322 195 23668	ADG733BRU
7E01	9322 199 80668	SM5301BS-G
7E02	9322 199 56668	ADG781BCP
7E03	9322 164 91668	CD74HC4053M

7E04	9322 221 97668	SN74LVC14APW
7E05	9322 221 97668	SN74LVC14APW
7F03	9322 206 24668	M24C02-WMN6P (*)
7G03	3198 010 42310	BC847BW
7G05	3198 010 42310	BC847BW
7G07	9322 164 91668	CD74HC4053M
7G08	5322 130 60159	BC846B
7G09	9322 198 55668	ADG734BRU
7G10	9322 164 91668	CD74HC4053M
7L01	3198 010 42310	BC847BW
7L02	3198 010 42310	BC847BW
7L03	3198 010 42310	BC847BW
7L04	9322 212 77672	MST9883C-LF-110
7L05	4822 209 17398	LD1117DT33
7L06	9965 000 04199	BSN20
7L07	9965 000 04199	BSN20
7M00	9322 204 76671	T6TU5XBG-0001
7M01	9322 206 19672	MSM56V16160F-7T3-FG
7M03	9322 170 14668	LF15ABDT
7N01	9322 210 01668	EPCS4S18N (*)
7N02	9322 217 35671	EP1C12F256C8N
7N03	9340 425 20115	BC847BS
7N04	9322 210 59668	THC63LVDF84B
7P01	9322 170 14668	LF15ABDT
7P02	9322 201 03668	THC63LVDM83R
(*)		Empty Device (no SW)

PDP Audio & Standby Panel [C]

Various

1735	4822 267 10918	Connector 3p
1736	2422 025 10768	Connector 3p m
1M02	4822 267 10618	Connector 7p
1M06	2422 025 11244	Connector 7p m
1M52	2422 025 10769	Connector 9p m

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2700	4822 126 14247	1.5nF 50V 0603
2701	5322 116 80853	560pF 5% 63V
2703	2020 552 96683	220nF 10% 50V
2704	4822 124 11767	470µF 20% 25V
2705	5322 116 80853	560pF 5% 63V
2706	5322 126 11579	3.3nF 10% 63V
2707	2222 580 15649	100nF 10% 50V 0805
2709	2020 552 96683	220nF 10% 50V
2710	2020 552 96683	220nF 10% 50V
2711	2022 552 05679	1µF 10% 16V 0805
2712	4822 126 14583	470nF 10% 16V 0805
2713	4822 126 13193	4.7nF 10% 63V
2715	4822 121 51252	470nF 5% 63V
2716	3198 017 31530	15nF 20% 50V 0603
2717	2022 552 05679	1µF 10% 16V 0805
2718	2222 580 15649	100nF 10% 50V 0805
2719	4822 126 14583	470nF 10% 16V 0805
2720	2020 021 91431	22µF 20% 100V
2721	2222 580 15649	100nF 10% 50V 0805
2722	4822 126 14583	470nF 10% 16V 0805
2723	2022 552 05679	1µF 10% 16V 0805
2726	4822 126 13193	4.7nF 10% 63V
2727	5322 116 80853	560pF 5% 63V
2731	5322 116 80853	560pF 5% 63V
2732	4822 126 14583	470nF 10% 16V 0805
2736	4822 121 51252	470nF 5% 63V
2737	3198 017 31530	15nF 20% 50V 0603
2739	2222 580 15649	100nF 10% 50V 0805
2741	4822 126 13883	220pF 5% 50V
2743	3198 016 31020	1nF 25V 0603
2744	2222 580 15649	100nF 10% 50V 0805
2745	2020 552 96683	220nF 10% 50V
2746	4822 124 11767	470µF 20% 25V
2747	2022 552 05679	1µF 10% 16V 0805
2748	4822 126 14247	1.5nF 50V 0603
2749	5322 126 11579	3.3nF 10% 63V
2751	4822 124 40433	47µF 20% 25V
2754	2020 021 91431	22µF 20% 100V
2770	3198 017 41050	1µF 10V 0603
2776	2020 021 91431	22µF 20% 100V
2780	4822 126 14583	470nF 10% 16V 0805
2784	4822 122 33761	22pF 5% 50V
2785	4822 122 33761	22pF 5% 50V
2786	4822 122 33761	22pF 5% 50V
2787	4822 122 33761	22pF 5% 50V
2789	4822 126 14583	470nF 10% 16V 0805
2791	4822 126 13879	220nF +80-20% 16V

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3700	4822 051 30561	560Ω 5% 0.062W
3701	4822 051 30479	47Ω 5% 0.062W

3702	3198 021 38220	8.2kΩ 5% 0.062W 0603
3703	3198 021 38220	8.2kΩ 5% 0.062W 0603
3704	4822 117 13632	100kΩ 1% 0603 0.62W
3705	4822 051 30222	2.2kΩ 5% 0.062W
3706	4822 051 30682	6.8Ω 5% 0.062W
3707	4822 051 30393	39kΩ 5% 0.062W
3708	4822 051 30479	47Ω 5% 0.062W
3709	4822 051 30272	2.7kΩ 5% 0.062W
3710	4822 051 30393	39kΩ 5% 0.062W
3711	2322 762 60568	5.6Ω 5% 5% 2512
3712	4822 051 30272	2.7kΩ 5% 0.062W
3713	4822 051 30332	3.3Ω 5% 0.062W
3714	4822 051 30682	6.8Ω 5% 0.062W
3715	2322 762 60568	5.6Ω 5% 5% 2512
3716	4822 117 13632	100kΩ 1% 0603 0.62W
3717	4822 051 30222	2.2kΩ 5% 0.062W
3718	4822 051 30561	560Ω 5% 0.062W
3719	4822 051 30124	120kΩ 5% 0.062W
3720	4822 051 30479	47Ω 5% 0.062W
3721	4822 051 30471	47Ω 5% 0.062W
3722	4822 051 30124	120kΩ 5% 0.062W
3723	4822 051 30471	47Ω 5% 0.062W
3724	4822 051 30102	1kΩ 5% 0.062W
3725	4822 117 12925	47kΩ 1% 0.063W 0603
3726	4822 051 30153	15kΩ 5% 0.062W
3727	4822 051 30103	10kΩ 5% 0.062W
3728	4822 051 30153	15kΩ 5% 0.062W
3729	4822 117 12925	47kΩ 1% 0.063W 0603
3730	4822 051 30223	22kΩ 5% 0.062W
3731	4822 051 30102	1kΩ 5% 0.062W
3732	4822 051 30223	22kΩ 5% 0.062W
3733	4822 051 30562	5.6kΩ 5% 0.063W 0603
3734	4822 051 30223	22kΩ 5% 0.062W
3735	4822 117 12889	270kΩ 1% 0.063W 0603
3736	4822 117 12925	47kΩ 1% 0.063W 0603
3737	4822 117 12925	47kΩ 1% 0.063W 0603
3738	4822 117 13632	100kΩ 1% 0603 0.62W
3760	4822 051 30223	22kΩ 5% 0.062W
3764	4822 117 13632	100kΩ 1% 0603 0.62W
3765	4822 117 13632	100kΩ 1% 0603 0.62W
3777	4822 051 30102	1kΩ 5% 0.062W
3778	4822 051 30479	47Ω 5% 0.062W
3999	4822 051 30472	4.7Ω 5% 0.062W
9710	4822 051 20008	Jumper 0805
9711	4822 051 20008	Jumper 0805
9712	4822 051 20008	Jumper 0805
9713	4822 051 20008	Jumper 0805
9748	4822 051 20008	Jumper 0805
9757	4822 051 20008	Jumper 0805
9758	4822 051 20008	Jumper 0805
9759	4822 051 20008	Jumper 0805
9760	4822 051 20008	Jumper 0805
9761	4822 051 20008	Jumper 0805
9762	4822 051 20008	Jumper 0805
9763	4822 051 20008	Jumper 0805
9764	4822 051 20008	Jumper 0805
9765	4822 051 20008	Jumper 0805
9766	4822 051 20008	Jumper 0805
9768	4822 051 20008	Jumper 0805
9770	4822 051 20008	Jumper 0805
9790	4822 051 20008	Jumper 0805
9795	4822 051 20008	Jumper 0805
9796	4822 051 20008	Jumper 0805
9806	4822 051 20008	Jumper 0805
9807	4822 051 20008	Jumper 0805
9808	4822 051 20008	Jumper 0805

5700	2422 536 00942	33μH 20%
5701	4822 157 11716	Bead 30Ω at 100MHz
5702	2422 536 00942	33μH 20%
5705	4822 157 11411	Bead 80Ω at 100MHz
5708	4822 157 11411	Bead 80Ω at 100MHz

6700	4822 130 11522	UDZ15B
6702	9322 150 18685	BZX384-C47
6703	4822 130 10838	UDZ3.3B



7700	9322 202 89668	LM393P
7701	9352 729 65112	TDA8925ST/N1
7702	3198 010 42310	BC847BW
7705	3198 010 42310	BC847BW
7706	3198 010 42310	BC847BW
7707	3198 010 42310	BC847BW
7708	3198 010 42320	BC857BW
7709	3198 010 42310	BC847BW
7710	3198 010 42310	BC847BW

7711	3198 010 42320	BC857BW
7712	3198 010 42310	BC847BW
7713	3198 010 42310	BC847BW

Control Panel [E]

Various

1701	4822 276 13775	Switch 1p 0.1A 12V
1702	4822 276 13775	Switch 1p 0.1A 12V
1703	4822 276 13775	Switch 1p 0.1A 12V
1704	4822 276 13775	Switch 1p 0.1A 12V
1705	4822 276 13775	Switch 1p 0.1A 12V
1706	4822 276 13775	Switch 1p 0.1A 12V
1M01	2422 025 10775	Connector 3p m

—WW—

3002	4822 051 30151	150Ω 5% 0.062W
3003	4822 051 30391	390Ω 5% 0.062W
3004	4822 051 30561	560Ω 5% 0.062W
3005	4822 117 12968	820Ω 5% 0.62W
3006	3198 021 31820	1.8kΩ 5% 0.062W 0603
3999	4822 117 11454	820Ω 1% 0.1W

Side I/O Panel [G]

Various

1001	2422 026 05133	Connector SVHS 4p f
1002	2422 026 05807	Sckt Cinch 3p f YeWhRd
1010	4822 267 31014	Sckt headphone
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

—D—

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

LED Panel [J]

Various

0345	2422 025 18741	Connector 6p m
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1040	9322 206 81667	TSOP34836YA1
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2040	4822 124 12095	100µF 20% 16V
—W—		
3040	4822 117 13597	330Ω 5% 0.01W 0402
3051	4822 051 30221	220Ω 5% 0.062W
3061	4822 051 30221	220Ω 5% 0.062W
3063	4822 117 13606	10kΩ 5% 0.01W 0402
3078	3198 031 02250	2.2MΩ 5% 0.1W 0402
9012	4822 117 13605	Jumper 0402
9041	4822 117 13605	Jumper 0402
9042	4822 117 13605	Jumper 0402
9062	4822 117 13605	Jumper 0402
9066	4822 117 13606	10kΩ 5% 0.01W 0402
9070	4822 117 13605	Jumper 0402
9081	4822 117 13605	Jumper 0402
9082	4822 117 13605	Jumper 0402
9111	4822 117 13605	Jumper 0402
9112	4822 117 13605	Jumper 0402
9115	4822 117 13605	Jumper 0402
9122	4822 117 13605	Jumper 0402

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6051	9322 218 97685	SML-310VTK
6060	9322 134 46685	SML-310MT
6070	9322 140 63685	TEMD5000



7051	3198 010 42310	BC847BW
7052	3198 010 42310	BC847BW
7062	4822 130 60373	BC856B

IBO Zapper [K]

Various

1301	2422 025 10768	Connector 3p m
1304	4822 252 51187	19398E1(0,500A)
1401	4822 267 31729	Connector cinch 1p
1402	2422 025 10775	Connector 3p m
1402	4822 267 10459	Connector 3p
1403	2422 025 18799	Socket USB 4p f
1500	2422 025 18872	Connector 32p f
1600	3112 297 13381	Tuner TD1316/SPHP
1700	2422 033 00364	Connector smartcard

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2100	4822 124 23002	10µF 16V
2101	4822 124 23002	10µF 16V
2102	4822 124 23002	10µF 16V
2103	2238 586 59812	100nF 20% 50V 0603
2104	2238 586 59812	100nF 20% 50V 0603
2105	2238 586 59812	100nF 20% 50V 0603
2106	2238 586 59812	100nF 20% 50V 0603
2107	2238 586 59812	100nF 20% 50V 0603
2108	2238 586 59812	100nF 20% 50V 0603
2109	2238 586 59812	100nF 20% 50V 0603
2110	2238 586 59812	100nF 20% 50V 0603
2111	2238 586 59812	100nF 20% 50V 0603
2112	2238 586 59812	100nF 20% 50V 0603
2113	2238 586 59812	100nF 20% 50V 0603
2114	2238 586 59812	100nF 20% 50V 0603
2115	2238 586 59812	100nF 20% 50V 0603
2116	2238 586 59812	100nF 20% 50V 0603
2119	2238 586 59812	100nF 20% 50V 0603
2120	2238 586 59812	100nF 20% 50V 0603
2121	2238 586 59812	100nF 20% 50V 0603
2130	4822 124 23002	10µF 16V
2131	4822 124 23002	10µF 16V
2132	4822 124 23002	10µF 16V
2133	4822 124 23002	10µF 16V
2203	4822 124 23002	10µF 16V
2204	2238 586 59812	100nF 20% 50V 0603
2206	4822 124 23002	10µF 16V
2207	2238 586 59812	100nF 20% 50V 0603
2208	2238 586 59812	100nF 20% 50V 0603
2209	2238 586 59812	100nF 20% 50V 0603
2210	2238 586 59812	100nF 20% 50V 0603
2211	2238 586 59812	100nF 20% 50V 0603
2212	2238 586 59812	100nF 20% 50V 0603
2213	2238 586 59812	100nF 20% 50V 0603
2214	2238 586 59812	100nF 20% 50V 0603

2300	4822 126 13881	470pF 5% 50V
2301	4822 124 40849	330UF 20% 16V
2302	4822 124 40207	100µF 20% 25V
2304	2020 021 91506	1000µF 20% 16V
2305	2238 586 59812	100nF 20% 50V 0603
2306	4822 124 40207	100µF 20% 25V
2308	4822 126 13881	470pF 5% 50V
2309	4822 124 40849	330UF 20% 16V
2311	2020 021 91687	470µF 20% 16V
2313	4822 126 13881	470pF 5% 50V
2314	3198 017 33330	33nF 20% 16V 0603
2315	4822 124 40849	330UF 20% 16V
2317	4822 124 40207	100µF 20% 25V
2318	2020 021 91687	470µF 20% 16V
2319	2020 021 91634	100µF 25V
2320	2238 586 59812	100nF 20% 50V 0603
2324	3198 017 44740	470nF 10V 0603
2325	3198 017 44740	470nF 10V 0603
2326	3198 017 44740	470nF 10V 0603
2327	2238 586 59812	100nF 20% 50V 0603
2328	2238 586 59812	100nF 20% 50V 0603
2329	4822 126 13193	4.7nF 10% 63V
2330	2020 021 91687	470µF 20% 16V
2331	4822 126 13193	4.7nF 10% 63V
2332	4822 124 40207	100µF 20% 25V
2333	5322 126 11583	10nF 10% 50V 0603
2334	2238 586 59812	100nF 20% 50V 0603
2335	4822 124 12095	100µF 20% 16V
2336	4822 126 13193	4.7nF 10% 63V
2337	4822 124 11947	10µF 20% 16V
2337	4822 124 22652	2.2µF 20% 50V
2403	2238 586 59812	100nF 20% 50V 0603
2405	2238 586 59812	100nF 20% 50V 0603
2406	3198 032 27190	100µF 6.3V
2411	2238 586 59812	100nF 20% 50V 0603
2412	2238 586 59812	100nF 20% 50V 0603
2413	2238 586 59812	100nF 20% 50V 0603
2500	3198 017 41050	1µF 10V 0603
2501	2020 552 94427	100pF 5% 50V
2502	2238 586 59812	100nF 20% 50V 0603
2503	2020 552 94427	100pF 5% 50V
2504	2238 586 59812	100nF 20% 50V 0603
2505	3198 017 41050	1µF 10V 0603
2506	4822 124 12084	1µF 20% 50V
2507	4822 126 13193	4.7nF 10% 63V
2508	3198 017 41050	1µF 10V 0603
2509	2020 552 94427	100pF 5% 50V
2510	2020 552 94427	100pF 5% 50V
2511	2238 586 59812	100nF 20% 50V 0603
2512	2020 012 93822	47µF 20% 16V
2512	4822 124 80151	47µF 16V
2513	3198 017 41050	1µF 10V 0603
2514	4822 124 12084	1µF 20% 50V
2515	4822 126 13193	4.7nF 10% 63V
2520	4822 122 33761	22pF 5% 50V
2521	4822 122 33761	22pF 5% 50V
2522	4822 126 14315	390pF 5% 50V 0603
2523	4822 126 14315	390pF 5% 50V 0603
2524	4822 122 33761	22pF 5% 50V
2525	4822 126 14315	390pF 5% 50V 0603
2526	4822 126 14315	390pF 5% 50V 0603
2527	4822 122 33761	22pF 5% 50V
2528	4822 122 33761	22pF 5% 50V
2529	4822 122 33761	22pF 5% 50V
2530	4822 126 14315	390pF 5% 50V 0603
2531	4822 126 14315	390pF 5% 50V 0603
2532	4822 122 33761	22pF 5% 50V
2533	4822 122 33761	22pF 5% 50V
2534	4822 122 33761	22pF 5% 50V
2535	4822 122 33761	22pF 5% 50V
2536	4822 122 33761	22pF 5% 50V
2537	4822 126 14315	390pF 5% 50V 0603
2538	4822 126 14315	390pF 5% 50V 0603
2539	4822 126 13879	220nF +80-20% 16V
2540	4822 126 13879	220nF +80-20% 16V
2543	2020 012 93822	47µF 20% 16V
2543	4822 124 80151	47µF 16V
2544	2238 586 59812	100nF 20% 50V 0603
2550	3198 017 42240	220nF 16V Y5V 0603
2550	4822 126 13879	220nF +80-20% 16V
2551	3198 017 41050	1µF 10V 0603
2553	3198 017 42240	220nF 16V Y5V 0603
2553	4822 126 13879	220nF +80-20% 16V
2554	3198 017 41050	1µF 10V 0603
2555	4822 124 23002	10µF 16V
2556	2238 586 59812	100nF 20% 50V 0603
2557	4822 124 23002	10µF 16V
2558	2238 586 59812	100nF 20% 50V 0603
2607	2238 586 59812	100nF 20% 50V 0603
2608	2238 586 59812	100nF 20% 50V 0603
2609	2238 586 59812	100nF 20% 50V 0603
2610	2238 586 59812	100nF 20% 50V 0603
2611	2238 586 59812	100nF 20% 50V 0603
2612	2238 586 59812	100nF 20% 50V 0603

2613	2238 586 59812	100nF 20% 50V 0603	3316	4822 051 30102	1k Ω 5% 0.062W
2614	2020 012 93822	47 μ F 20% 16V	3317	2322 704 63302	3.3k Ω 1% 0603
2614	4822 124 80151	47 μ F 16V	3318	3198 021 31080	1 Ω 5% 0603
2615	2238 586 59812	100nF 20% 50V 0603	3319	3198 021 31080	1 Ω 5% 0603
2617	2238 586 59812	100nF 20% 50V 0603	3320	3198 021 31080	1 Ω 5% 0603
2618	2238 586 59812	100nF 20% 50V 0603	3321	3198 021 31080	1 Ω 5% 0603
2619	2238 586 59812	100nF 20% 50V 0603	3322	2322 704 63902	3.9k Ω 1% 0603
2620	2238 586 59812	100nF 20% 50V 0603	3322	5322 117 13042	3.9k Ω 1% 0.063W 0603
2621	2020 012 93822	47 μ F 20% 16V	3323	5322 117 13057	820 Ω 1% 0.063W 0603
2621	4822 124 80151	47 μ F 16V	3324	4822 051 30102	1k Ω 5% 0.062W
2622	2020 012 93822	47 μ F 20% 16V	3325	4822 117 13632	100k Ω 1% 0603 0.62W
2622	4822 124 80151	47 μ F 16V	3326	4822 051 30103	10k Ω 5% 0.062W
2623	2238 586 59812	100nF 20% 50V 0603	3327	4822 051 30339	33 Ω 5% 0.062W
2624	2238 586 59812	100nF 20% 50V 0603	3328	4822 117 13632	100k Ω 1% 0603 0.62W
2625	2238 586 59812	100nF 20% 50V 0603	3330	3198 021 31820	1.8k Ω 5% 0.062W 0603
2626	2238 586 59812	100nF 20% 50V 0603	3331	2322 704 61001	100 Ω 1% 0603
2627	2238 586 59812	100nF 20% 50V 0603	3332	5322 117 13055	75 Ω 1% 0.063W 0603
2628	2238 586 59812	100nF 20% 50V 0603	3333	4822 051 30273	27k Ω 5% 0.062W
2629	2238 586 59812	100nF 20% 50V 0603	3333	4822 117 12925	47k Ω 1% 0.063W 0603
2630	2238 586 59812	100nF 20% 50V 0603	3334	4822 051 30103	10k Ω 5% 0.062W
2631	2238 586 59812	100nF 20% 50V 0603	3334	4822 051 30333	33k Ω 5% 0.062W
2632	4822 122 33741	10pF 10% 50V	3403	4822 051 30103	10k Ω 5% 0.062W
2700	2238 586 59812	100nF 20% 50V 0603	3404	4822 051 30561	560 Ω 5% 0.062W
2701	2238 586 59812	100nF 20% 50V 0603	3405	4822 051 30102	1k Ω 5% 0.062W
2702	2238 586 59812	100nF 20% 50V 0603	3406	4822 051 30102	1k Ω 5% 0.062W
2703	2238 586 59812	100nF 20% 50V 0603	3407	4822 051 30689	68 Ω 5% 0.063W 0603
2704	2238 586 59812	100nF 20% 50V 0603	3411	4822 051 30181	180 Ω 5% 0.062W
2705	2238 586 59812	100nF 20% 50V 0603	3420	4822 051 30339	33 Ω 5% 0.062W
2706	4822 124 23002	10 μ F 16V	3421	4822 051 30339	33 Ω 5% 0.062W
2707	4822 124 23002	10 μ F 16V	3422	4822 051 30153	15k Ω 5% 0.062W
2708	2238 586 59812	100nF 20% 50V 0603	3423	4822 051 30153	15k Ω 5% 0.062W
2709	4822 124 23002	10 μ F 16V	3500	4822 051 30102	1k Ω 5% 0.062W
2710	2238 586 59812	100nF 20% 50V 0603	3501	4822 117 12968	820 Ω 5% 0.62W
2711	2238 586 59812	100nF 20% 50V 0603	3502	4822 051 30683	68k Ω 5% 0.062W
2712	2238 586 59812	100nF 20% 50V 0603	3503	4822 051 30102	1k Ω 5% 0.062W
2713	4822 124 23002	10 μ F 16V	3504	4822 117 13613	2.2 Ω 5% 0603
2714	5322 126 11578	1nF 10% 50V 0603	3505	4822 117 12968	820 Ω 5% 0.62W
2715	2020 552 94427	100pF 5% 50V	3506	4822 051 30333	33k Ω 5% 0.062W
			3507	4822 051 30152	1.5 Ω 5% 0.062W
			3508	4822 117 13613	2.2 Ω 5% 0603
			3509	4822 051 30102	1k Ω 5% 0.062W
			3510	4822 051 30683	68k Ω 5% 0.062W
			3511	4822 117 12968	820 Ω 5% 0.62W
			3512	4822 051 30101	100 Ω 5% 0.062W
			3513	4822 051 30101	100 Ω 5% 0.062W
			3514	4822 051 30102	1k Ω 5% 0.062W
			3515	4822 051 30333	33k Ω 5% 0.062W
			3516	4822 117 12968	820 Ω 5% 0.62W
			3517	4822 051 30152	1.5 Ω 5% 0.062W
			3519	4822 051 30759	75 Ω 5% 0.062W
			3520	4822 051 30759	75 Ω 5% 0.062W
			3521	4822 051 30759	75 Ω 5% 0.062W
			3522	4822 051 30759	75 Ω 5% 0.062W
			3523	4822 051 30759	75 Ω 5% 0.062W
			3526	4822 051 30759	75 Ω 5% 0.062W
			3527	4822 051 30759	75 Ω 5% 0.062W
			3528	5322 117 11726	10 Ω 5%
			3530	4822 051 30759	75 Ω 5% 0.062W
			3532	4822 051 30561	560 Ω 5% 0.062W
			3533	4822 051 30759	75 Ω 5% 0.062W
			3534	4822 117 12891	220k Ω 1%
			3535	4822 117 13632	100k Ω 1% 0603 0.62W
			3537	4822 117 12891	220k Ω 1%
			3538	4822 117 13632	100k Ω 1% 0603 0.62W
			3539	4822 051 30759	75 Ω 5% 0.062W
			3540	4822 051 30561	560 Ω 5% 0.062W
			3547	4822 051 30759	75 Ω 5% 0.062W
			3548	4822 051 30102	1k Ω 5% 0.062W
			3548	4822 051 30561	560 Ω 5% 0.062W
			3557	4822 117 13632	100k Ω 1% 0603 0.62W
			3558	4822 051 30102	1k Ω 5% 0.062W
			3559	4822 051 30681	680 Ω 5% 0.062W
			3560	4822 051 30273	27k Ω 5% 0.062W
			3561	4822 051 30271	270 Ω 5% 0.062W
			3562	4822 051 30151	150 Ω 5% 0.062W
			3563	4822 117 13632	100k Ω 1% 0603 0.62W
			3564	4822 051 30102	1k Ω 5% 0.062W
			3565	4822 051 30681	680 Ω 5% 0.062W
			3566	4822 051 30273	27k Ω 5% 0.062W
			3567	4822 051 30271	270 Ω 5% 0.062W
			3568	4822 051 30151	150 Ω 5% 0.062W
			3570	4822 051 30689	68 Ω 5% 0.063W 0603
			3571	4822 051 30151	150 Ω 5% 0.062W
			3572	4822 051 30561	560 Ω 5% 0.062W
			3606	4822 051 30101	100 Ω 5% 0.062W
			3607	4822 051 30101	100 Ω 5% 0.062W
			3608	4822 051 30103	10k Ω 5% 0.062W
			3609	4822 051 30472	4.7 Ω 5% 0.062W
			3610	4822 051 30472	4.7 Ω 5% 0.062W
			3612	4822 051 30472	4.7 Ω 5% 0.062W
			3613	4822 117 13632	100k Ω 1% 0603 0.62W
			3614	4822 117 13632	100k Ω 1% 0603 0.62W
			3615	4822 051 30102	1k Ω 5% 0.062W
			3618	4822 117 13632	100k Ω 1% 0603 0.62W

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3619	4822 117 13632	100kΩ 1% 0603 0.62W
3621	4822 051 30339	33Ω 5% 0.062W
3622	3198 031 13390	4 x 33Ω 5% 1206
3623	4822 051 30472	4.7Ω 5% 0.062W
3624	3198 031 13390	4 x 33Ω 5% 1206
3625	4822 051 30101	100Ω 5% 0.062W
3626	4822 051 30272	2.7kΩ 5% 0.062W
3627	4822 051 30272	2.7kΩ 5% 0.062W
3629	4822 051 30101	100Ω 5% 0.062W
3630	4822 051 30101	100Ω 5% 0.062W
3631	4822 051 30101	100Ω 5% 0.062W
3635	4822 051 30339	33Ω 5% 0.062W
3636	4822 051 30684	680kΩ 5% 0.062W
3637	4822 117 12891	220kΩ 1%
3638	4822 051 30331	330Ω 5% 0.062W
3639	4822 051 30391	390Ω 5% 0.062W
3640	4822 051 30684	680kΩ 5% 0.062W
3641	4822 117 12891	220kΩ 1%
3642	4822 051 30331	330Ω 5% 0.062W
3643	4822 051 30331	330Ω 5% 0.062W
3644	3198 031 13390	4 x 33Ω 5% 1206
3645	4822 051 30103	10kΩ 5% 0.062W
3700	4822 051 30101	100Ω 5% 0.062W
3701	4822 051 30101	100Ω 5% 0.062W
3702	3198 031 13390	4 x 33Ω 5% 1206
3703	3198 031 13390	4 x 33Ω 5% 1206
3704	4822 051 30103	10kΩ 5% 0.062W
3705	3198 031 13390	4 x 33Ω 5% 1206
3707	4822 051 30103	10kΩ 5% 0.062W
3708	4822 051 30103	10kΩ 5% 0.062W
3709	4822 051 30103	10kΩ 5% 0.062W
3710	4822 051 30103	10kΩ 5% 0.062W
3711	4822 051 30103	10kΩ 5% 0.062W
3712	4822 051 30103	10kΩ 5% 0.062W
3713	2322 704 62002	2kΩ 1%
3715	4822 051 30103	10kΩ 5% 0.062W
3716	4822 051 30103	10kΩ 5% 0.062W
3717	4822 051 30103	10kΩ 5% 0.062W
3718	4822 051 30103	10kΩ 5% 0.062W
3719	4822 051 30103	10kΩ 5% 0.062W
3720	4822 051 30103	10kΩ 5% 0.062W
3721	4822 051 30103	10kΩ 5% 0.062W
3722	4822 051 30103	10kΩ 5% 0.062W
3723	3198 031 13390	4 x 33Ω 5% 1206
3724	3198 031 13390	4 x 33Ω 5% 1206
3725	4822 051 30339	33Ω 5% 0.062W
3726	4822 051 30339	33Ω 5% 0.062W
3727	4822 051 30479	47Ω 5% 0.062W
3728	4822 051 30479	47Ω 5% 0.062W
3729	4822 051 30479	47Ω 5% 0.062W
3730	4822 051 30479	47Ω 5% 0.062W
3731	4822 051 30479	47Ω 5% 0.062W
3732	4822 051 30479	47Ω 5% 0.062W
3733	4822 051 30479	47Ω 5% 0.062W
3734	4822 117 13573	4 x 47Ω 5%
3738	4822 051 30479	47Ω 5% 0.062W
3739	4822 051 30479	47Ω 5% 0.062W
3740	4822 051 30479	47Ω 5% 0.062W
3741	4822 051 30479	47Ω 5% 0.062W
3742	4822 051 30479	47Ω 5% 0.062W
3743	4822 051 30479	47Ω 5% 0.062W
3744	4822 051 30479	47Ω 5% 0.062W
3745	4822 051 30479	47Ω 5% 0.062W
3746	4822 051 30479	47Ω 5% 0.062W
3747	4822 051 30479	47Ω 5% 0.062W
3748	4822 051 30479	47Ω 5% 0.062W
3749	4822 051 30339	33Ω 5% 0.062W
3750	4822 051 30339	33Ω 5% 0.062W
3751	4822 051 30472	4.7Ω 5% 0.062W
3752	4822 051 30472	4.7Ω 5% 0.062W
4100	4822 051 30008	Jumper 0603
4101	4822 051 30008	Jumper 0603
4102	4822 051 30008	Jumper 0603
4104	4822 051 30008	Jumper 0603
4105	4822 051 30008	Jumper 0603
4106	4822 051 30008	Jumper 0603
4107	4822 051 30008	Jumper 0603
4108	4822 051 30008	Jumper 0603
4110	4822 051 30008	Jumper 0603
4200	4822 051 30008	Jumper 0603
4202	4822 051 30008	Jumper 0603
4204	4822 051 30008	Jumper 0603
4212	4822 051 30008	Jumper 0603
4302	4822 051 30008	Jumper 0603
4414	4822 051 30008	Jumper 0603
4415	4822 051 30008	Jumper 0603
4505	4822 051 30008	Jumper 0603
4507	4822 051 30008	Jumper 0603
4605	4822 051 30008	Jumper 0603
4607	4822 051 30008	Jumper 0603
4700	4822 051 30008	Jumper 0603



5100	4822 157 11499	Bead 60Ω at 100MHz
5101	4822 157 11717	Bead 50Ω at 100MHz
5102	4822 157 11717	Bead 50Ω at 100MHz
5103	4822 157 11717	Bead 50Ω at 100MHz
5201	4822 157 11499	Bead 60Ω at 100MHz
5202	4822 157 11499	Bead 60Ω at 100MHz
5203	4822 157 11499	Bead 60Ω at 100MHz
5300	2422 536 00491	47μH
5301	4822 157 10452	10μH 10%
5302	2422 535 94639	10μH 20%
5303	2422 536 00548	100μ
5304	4822 157 10452	10μH 10%
5305	2422 536 00548	100μ
5306	4822 157 10452	10μH 10%
5307	2422 535 94639	10μH 20%
5309	3198 018 90050	Bead 1kΩ at 100MHz
5401	4822 157 11499	Bead 60Ω at 100MHz
5420	2422 549 44197	Bead 220Ω at 100MHz
5502	4822 157 11499	Bead 60Ω at 100MHz
5504	4822 157 11499	Bead 60Ω at 100MHz
5505	4822 157 11499	Bead 60Ω at 100MHz
5507	4822 157 11499	Bead 60Ω at 100MHz
5508	4822 157 11499	Bead 60Ω at 100MHz
5511	3198 018 52280	2.2μH 10% 0603
5512	3198 018 52280	2.2μH 10% 0603
5513	3198 018 52280	2.2μH 10% 0603
5514	3198 018 52280	2.2μH 10% 0603
5528	4822 157 11499	Bead 60Ω at 100MHz
5600	4822 157 11499	Bead 60Ω at 100MHz
5601	4822 157 11499	Bead 60Ω at 100MHz
5602	4822 157 11499	Bead 60Ω at 100MHz
5700	4822 157 11499	Bead 60Ω at 100MHz
5701	4822 157 11499	Bead 60Ω at 100MHz
5702	4822 157 11499	Bead 60Ω at 100MHz
5703	4822 157 11499	Bead 60Ω at 100MHz
5704	4822 157 11499	Bead 60Ω at 100MHz



6300	9322 128 70685	SMSS14
6303	9322 128 70685	SMSS14
6304	9322 128 70685	SMSS14
6307	9965 000 20150	1N4148WS SOD-323
6400	9340 548 52115	PDZ5.1B
6401	4822 130 10837	UDZS8.2B
6403	4822 130 10837	UDZS8.2B
6503	4822 130 11397	BAS316
6504	4822 130 11397	BAS316



7100	9352 744 74557	PNX8316HS/C102
7100	9352 773 55557	PNX8314HS/C102
7200	9322 206 20668	M29W320DT70N6F
7202	9322 213 88668	K4S281632F-TC60
7202	9322 217 26668	MT48LC8M16A2P-6A
7203	9322 130 41668	M24C64-WMN6
7300	4822 209 60059	MC34063AP1
7301	9322 184 19687	LD1117V18
7302	9322 216 98687	LD1117V
7303	4822 209 60059	MC34063AP1
7305	4822 209 60059	MC34063AP1
7306	9322 165 15685	NCP303LSN30
7307	9322 202 15687	LD1117V50
7308	9322 202 15687	LD1117V50
7309	4822 130 60373	BC856B
7310	3198 010 70510	TL431CZ
7311	9322 214 70685	SI2314EDS-E3
7312	5322 130 60159	BC846B
7402	5322 130 60159	BC846B
7403	9322 150 49668	LM3525M-H
7500	4822 130 60373	BC856B
7501	5322 130 60159	BC846B
7502	9352 668 39118	UDA1334ATS/N2
7503	4822 130 60373	BC856B
7504	5322 130 60159	BC846B
7505	5322 130 60159	BC846B
7506	5322 130 60159	BC846B
7507	5322 130 60159	BC846B
7510	5322 130 60159	BC846B
7511	4822 130 60373	BC856B
7512	5322 130 60159	BC846B
7513	4822 130 60373	BC856B
7514	5322 130 60159	BC846B
7600	9352 732 45557	TDA10046AHT/C1
7601	5322 209 70225	LM393D
7605	9352 630 16165	74AHC1GU04GW
7606	9352 630 16165	74AHC1GU04GW
7700	9322 172 92671	CIMAX 2.0

7700	9322 227 91671	STV0700L
7701	9352 190 10118	74LVC573ADB
7702	9352 190 10118	74LVC573ADB
7703	9352 115 40118	74LVC245APW
7704	2722 171 00207	Xtal 27MHZ 50P
7704	2722 171 08821	XTL 27MHz 50pF
7705	9322 175 13668	ST890CD

11. Revision List

Manual xxxx xxx xxxx.0

- First release.

Manual xxxx xxx xxxx.1

- **Chapter 7:** PSU schematics and PWB's [A] added.
- **Chapter 10:** PSU parts list [A] added and software items updated.

Manual xxxx xxx xxxx.2

- **Front Page:** New photo added.
- **Chapter 1:** Digital connector descriptions added.
- **Chapter 6 & 7:** Added SSB 61411.
- **Chapter 10:** Spare Parts List updated.