



Datasheet.World

**PRIMARE**



**SPA22 Surround Processing Amplifier  
Service Manual**

1. Schematics and Pcb.
2. Technical Specifications.

**Confidential !**

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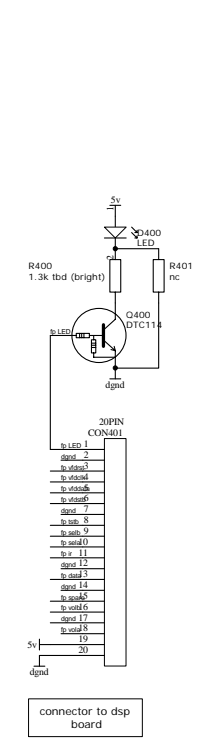
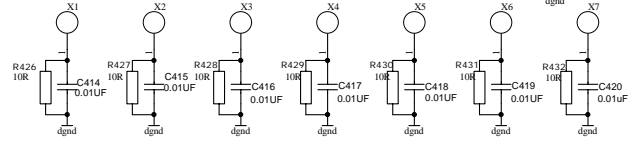
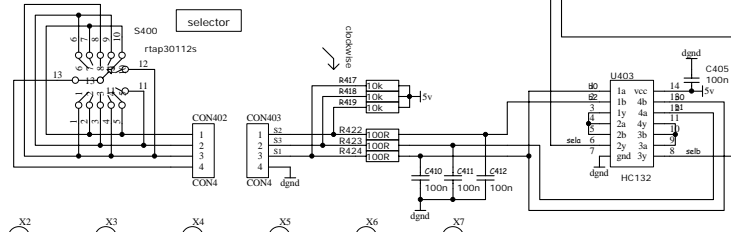
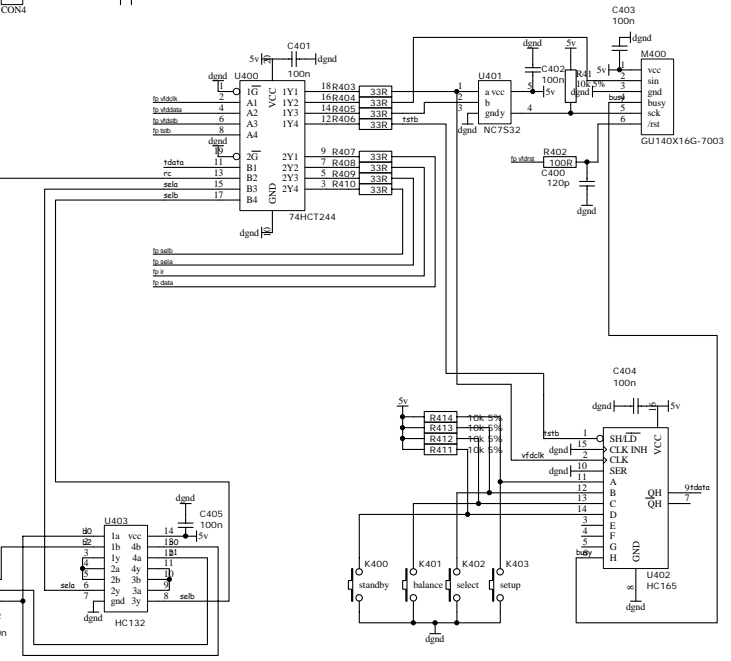
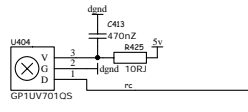
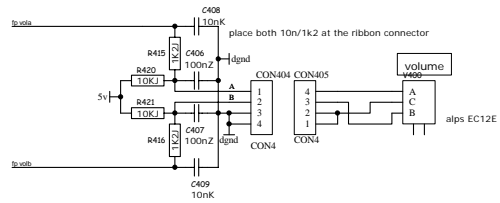
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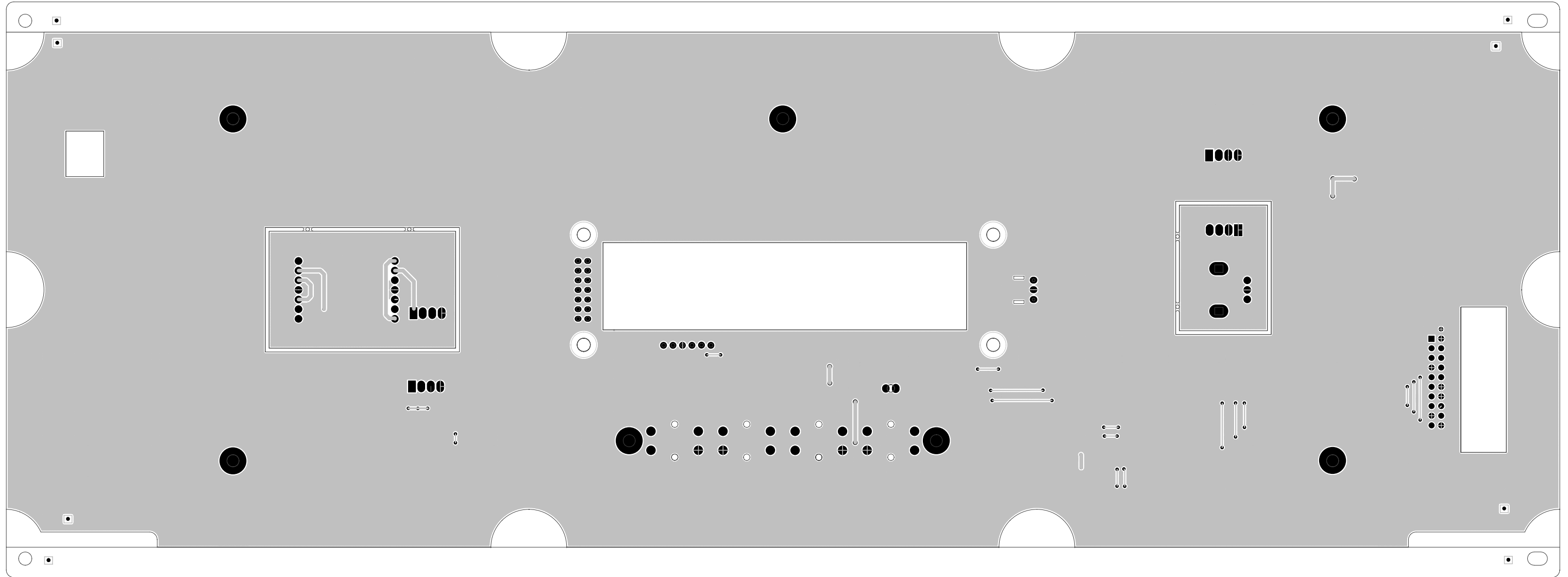
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Bjorn Holmqvist

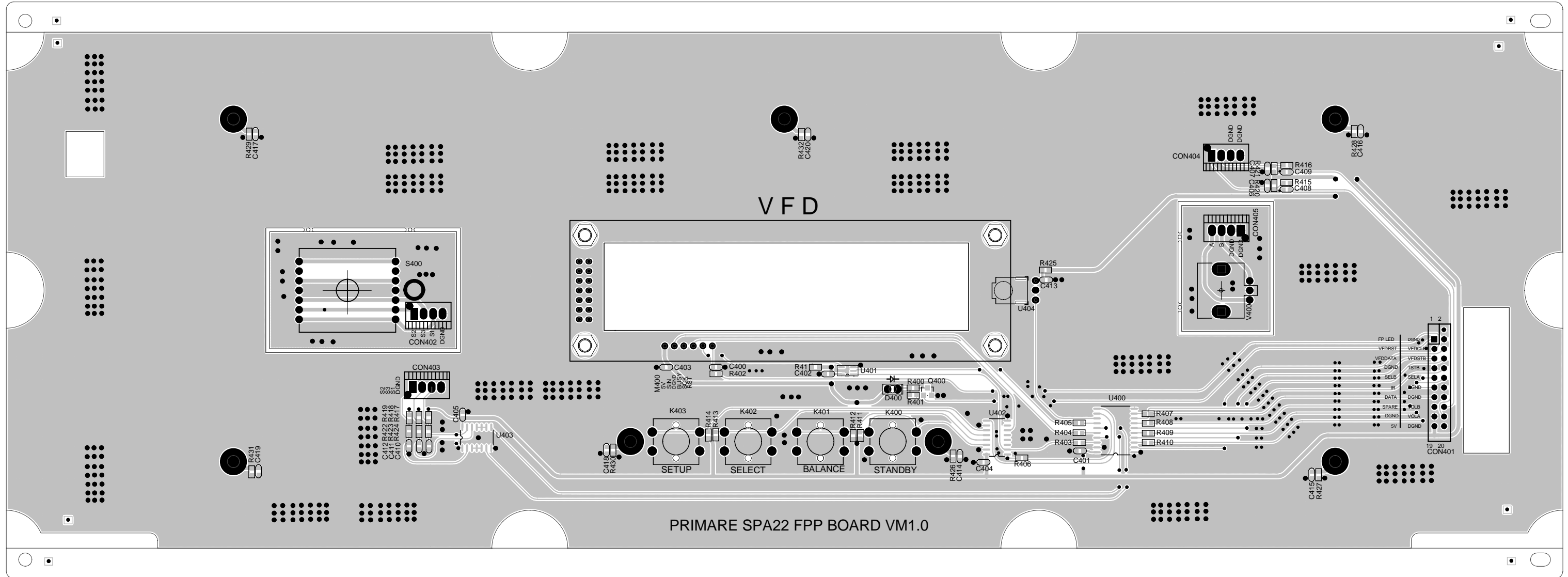
Primare AB

[bjorn@primare.net](mailto:bjorn@primare.net)

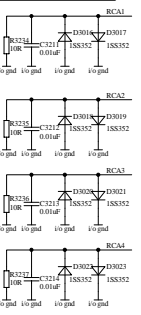
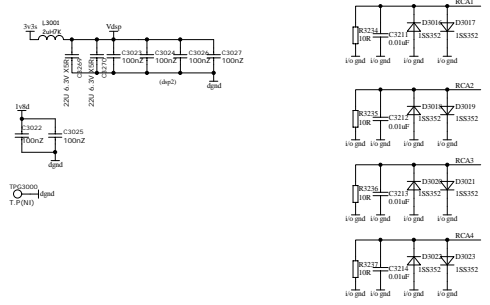
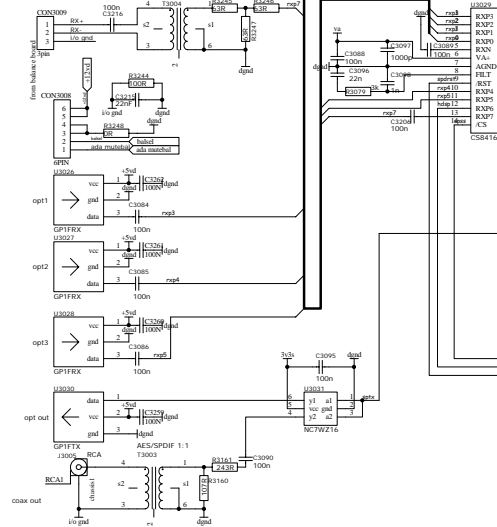
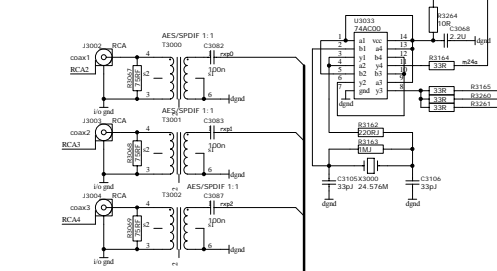
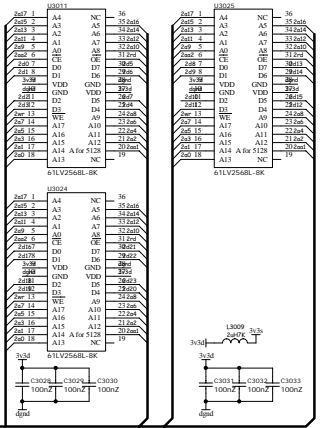
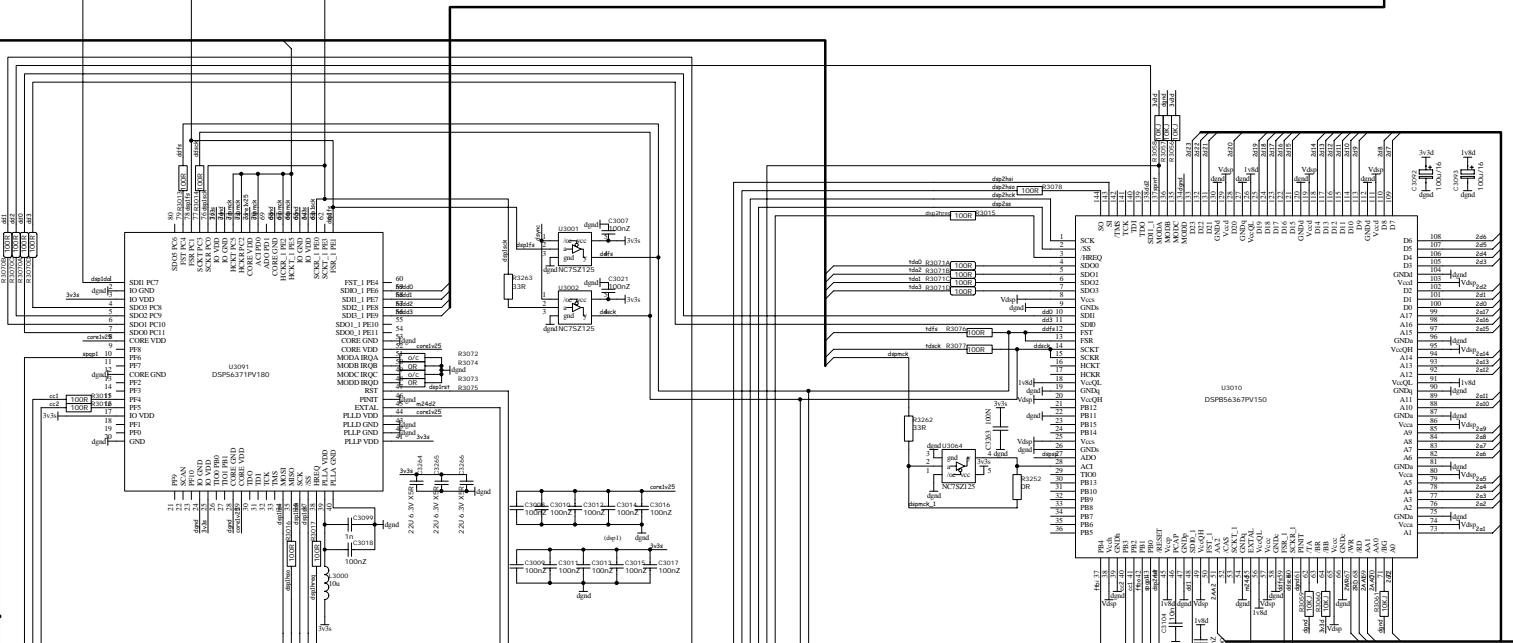
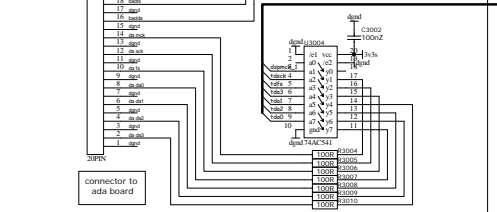
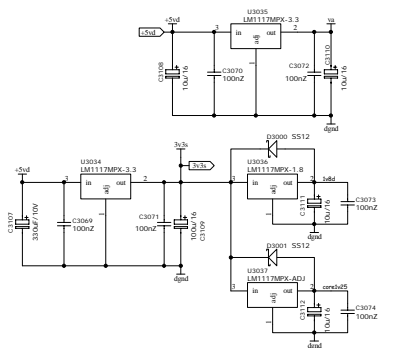
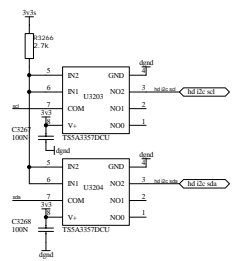
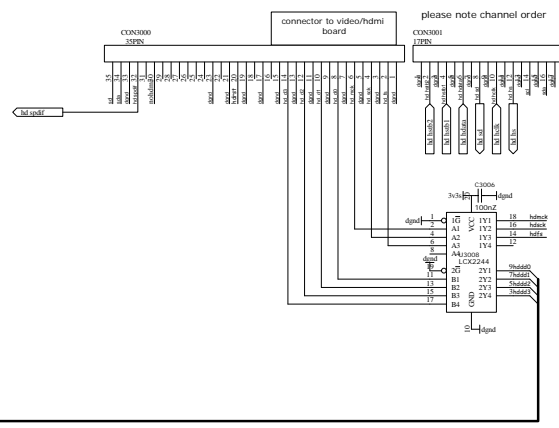
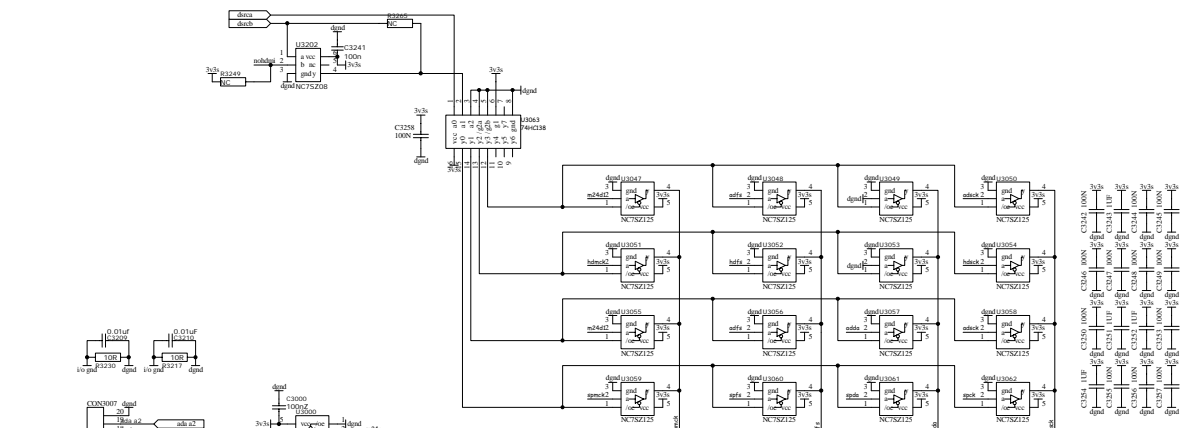


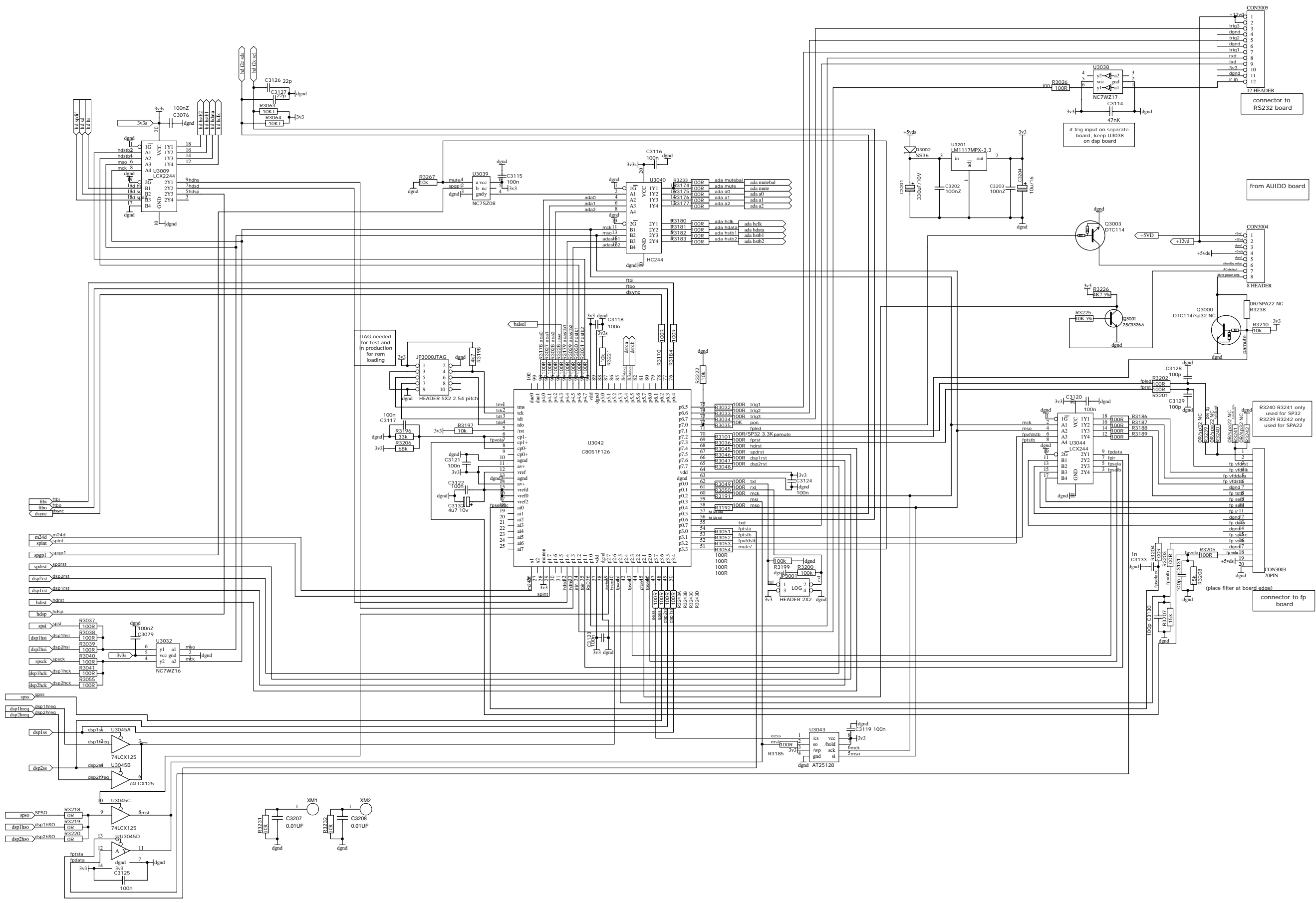






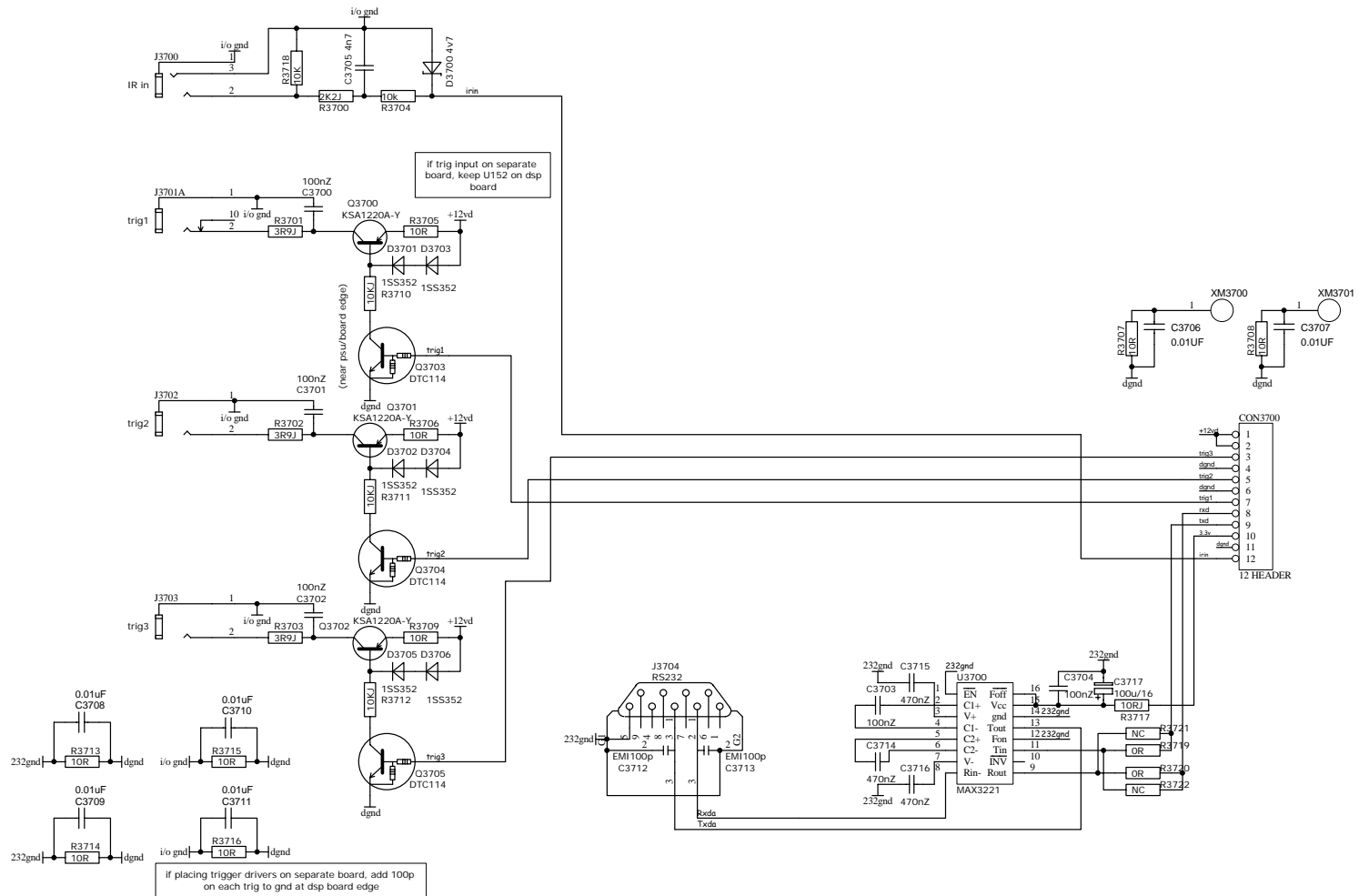
PRIMARE SPA22 FPP BOARD VM1.0

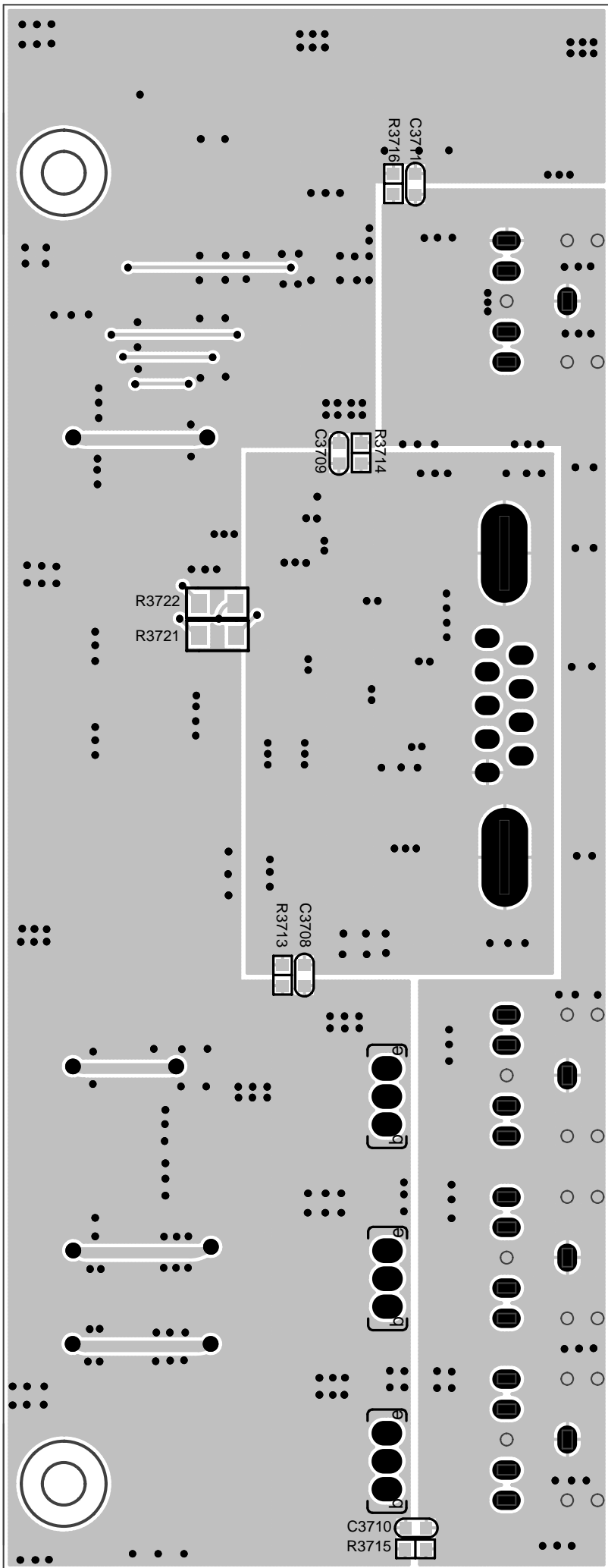


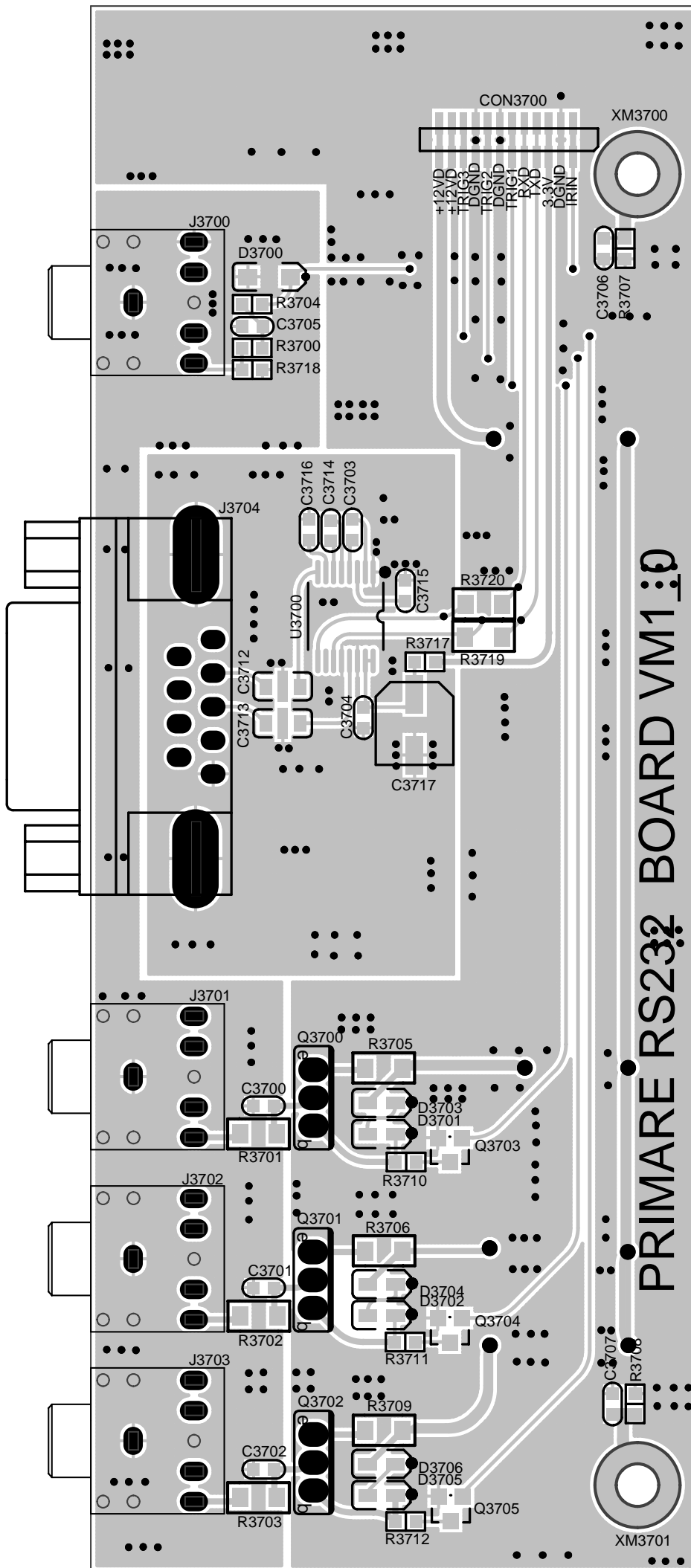






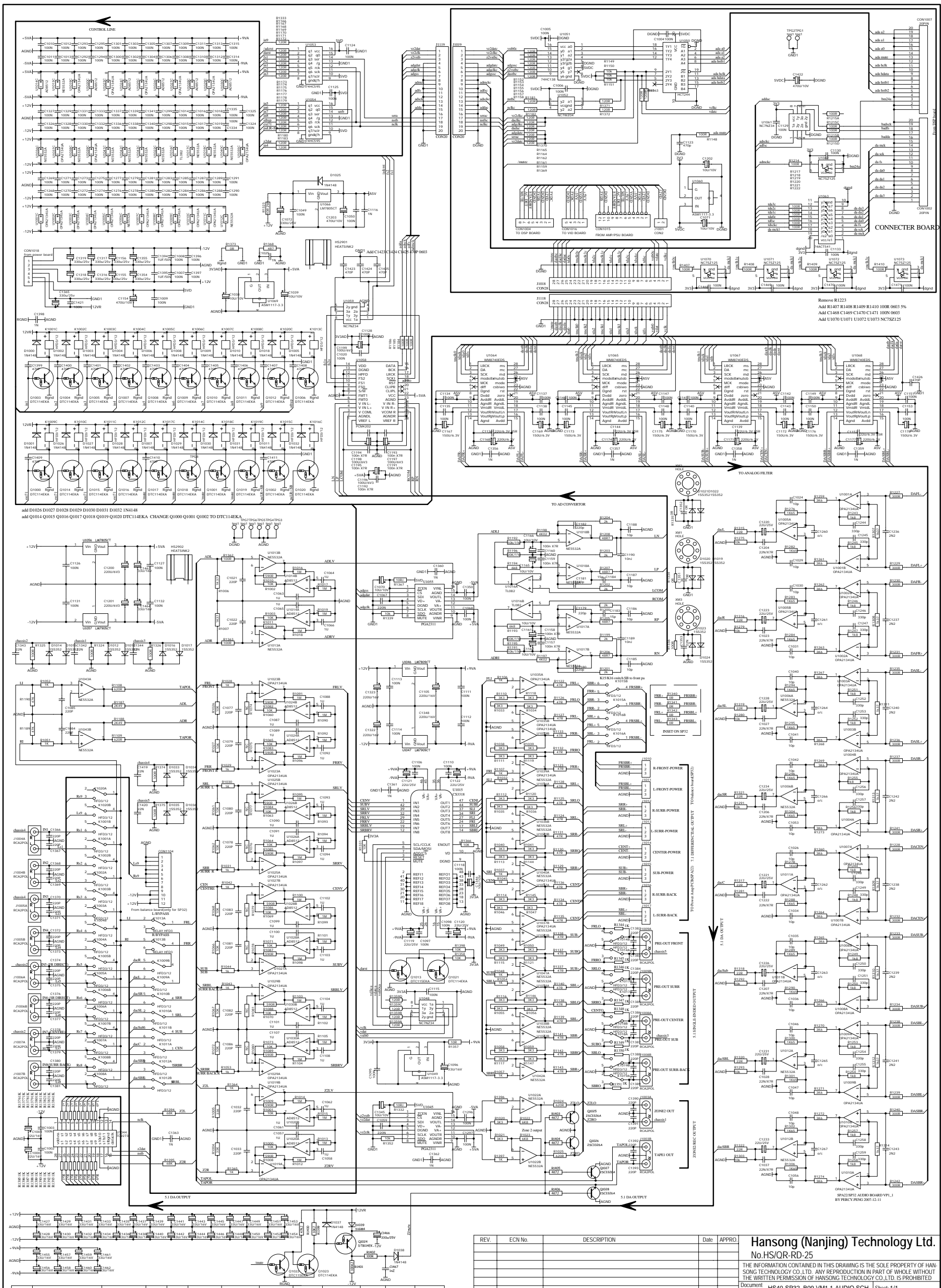






**PRIMARE RS232 BOARD VM1**

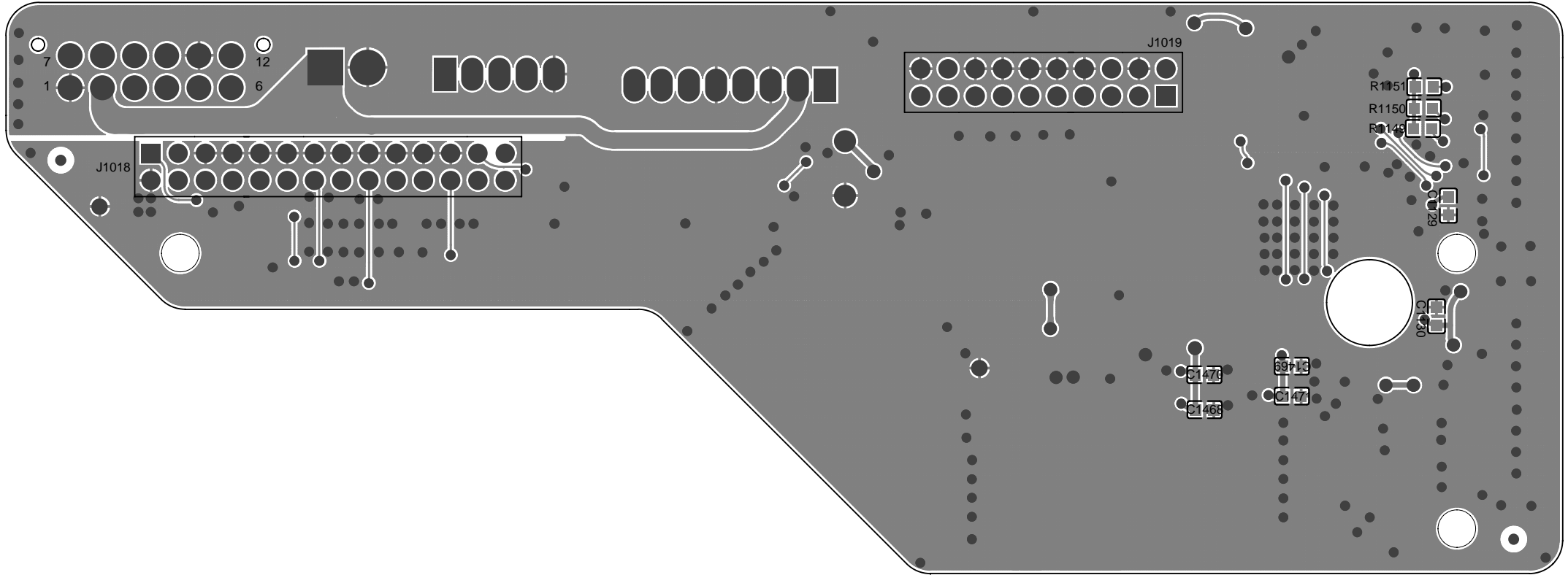




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39K	39K	39K	39K	NC	NC	NC	NC	NC	NC	10K	10K	10K	10K	10K	10K	NC	2P2N 3.96	100K	100K	22N X7R	22N X7R
SP32	NC	NC	NC	NC	NC	NC	NC	NC	NC	HF03/12	LL4148	DTC148KA	NC	NC	12PN 1MM PFC	NC	OR	OR	OR	OR	OR
SP32	OR 0603 5%	SP3N 2.54	HF03/12	LL4148	DTC148KA	NC	NC	12PN 1MM PFC	NC	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR

REV.	ECN No.	DESCRIPTION	Date	APPRO.

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 Checked: [ ]  
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 R&D Director Approved: [ ]  
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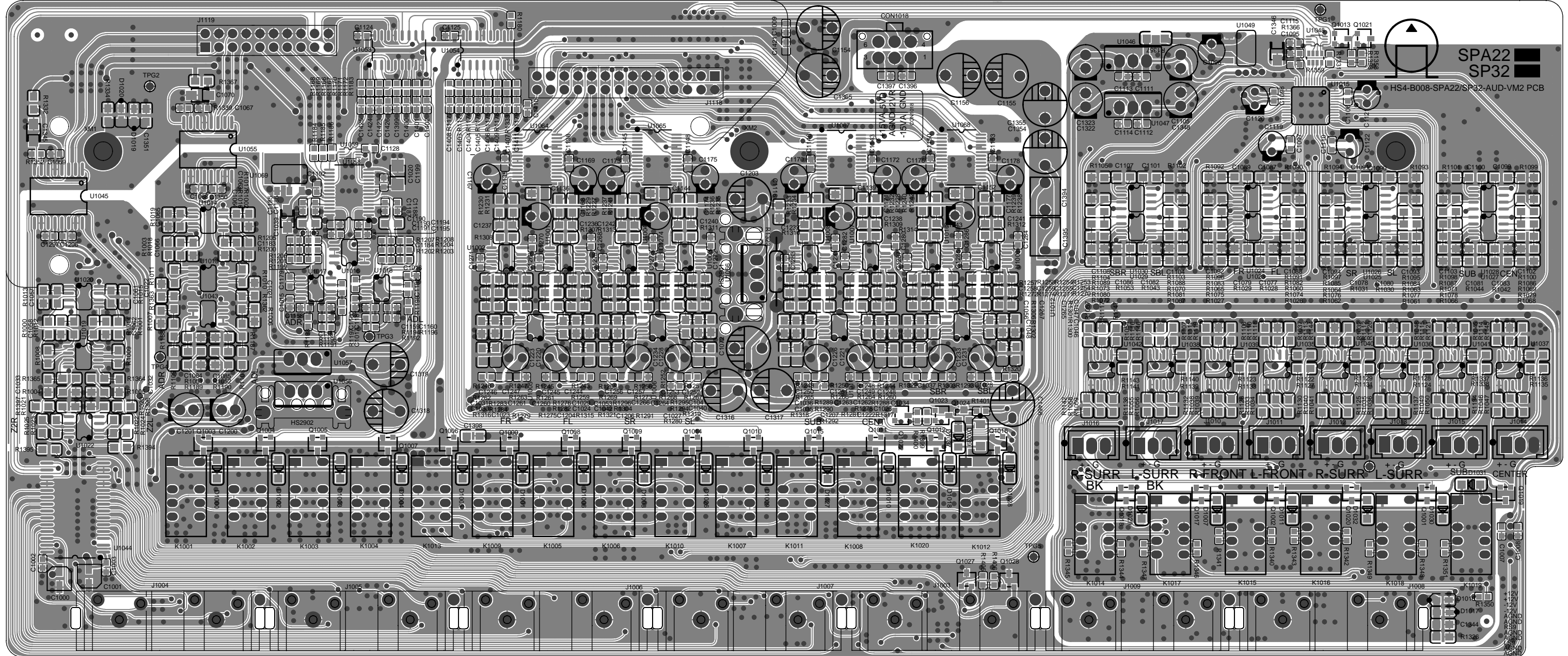
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SPA22  
SP32

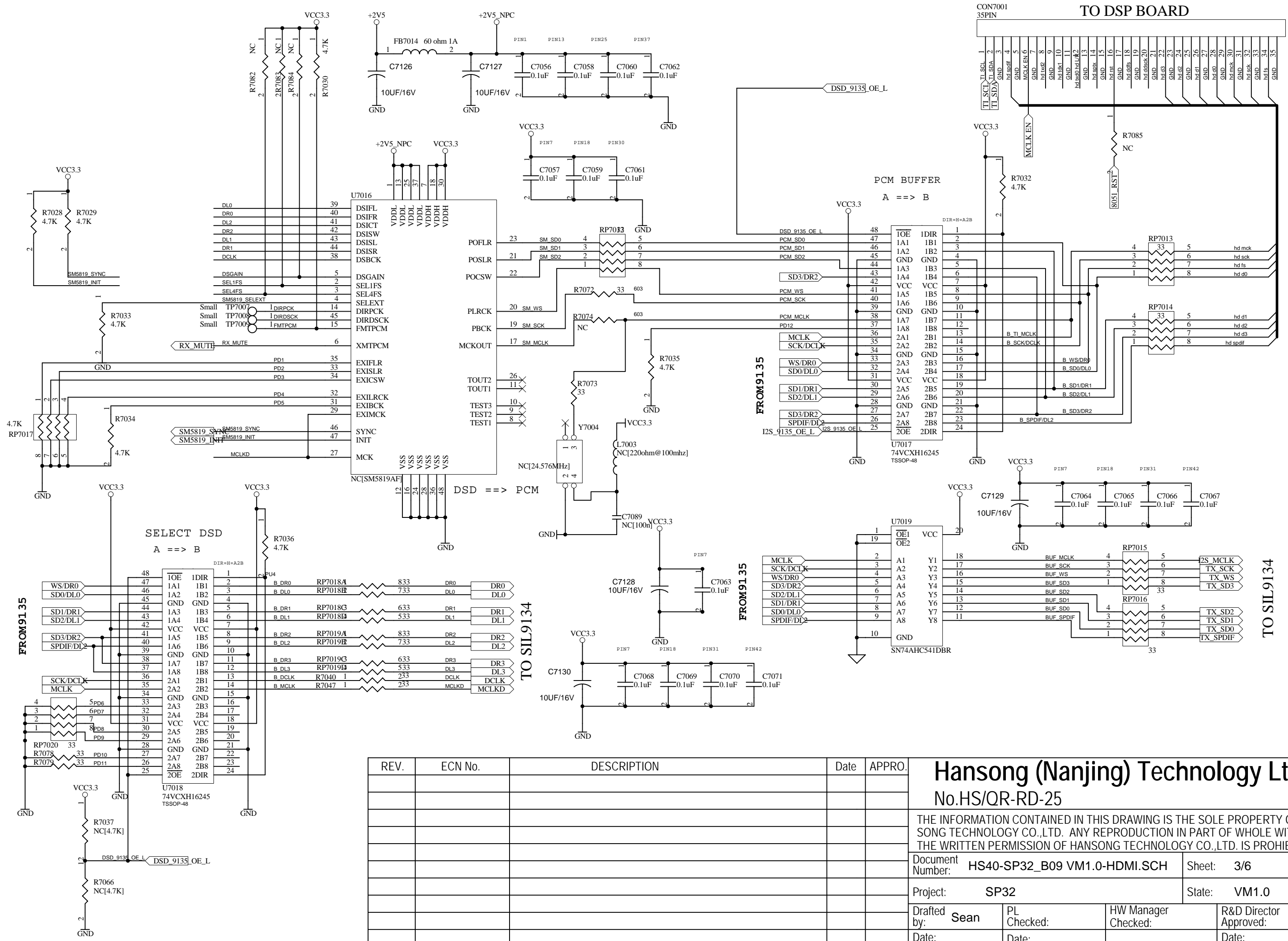
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SURRE L-SURRE R-FRONT L-FRONT R-SURRE L-SURRE  
BK BK

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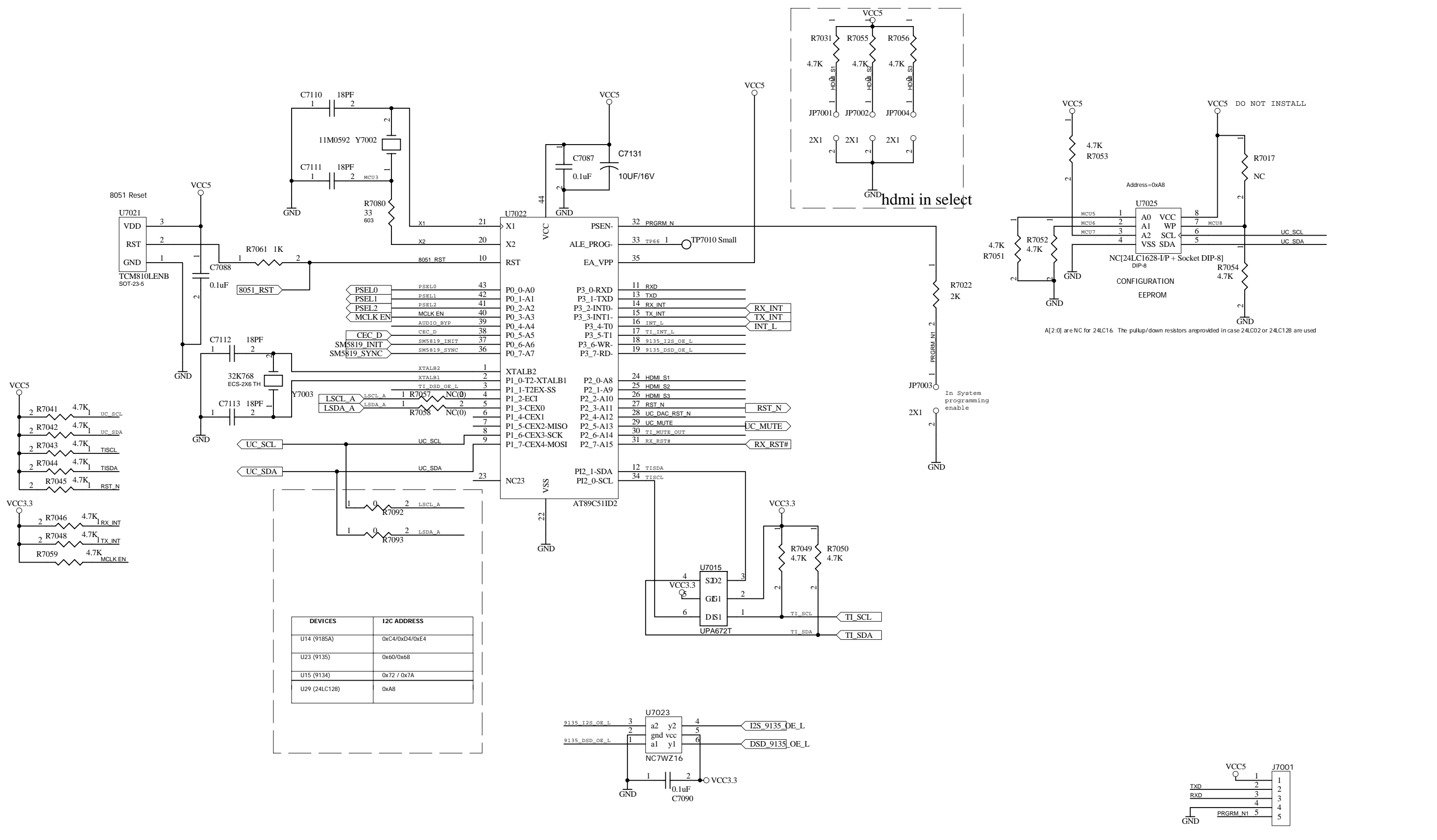
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Drafted by: Sean	PL Checked:
Date:	HW Manager Checked:
	R&D Director Approved:
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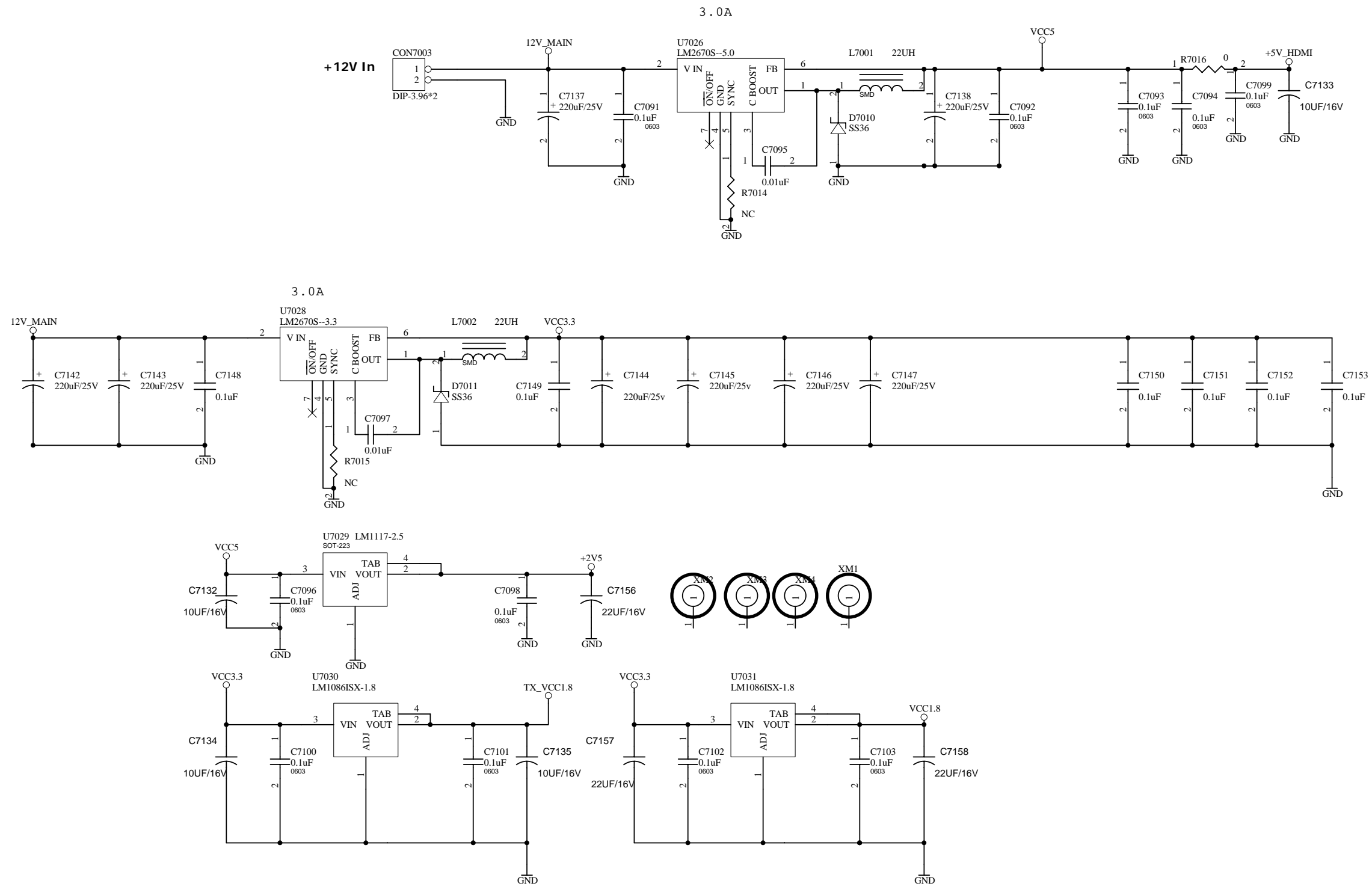
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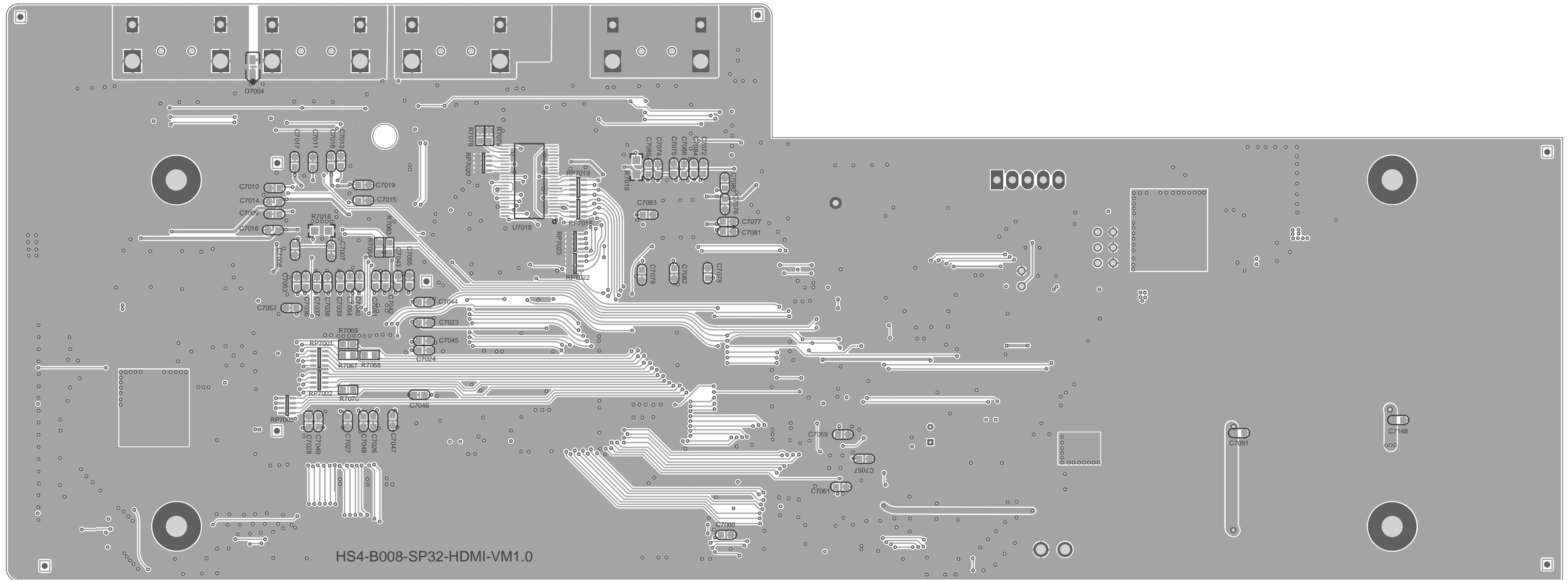
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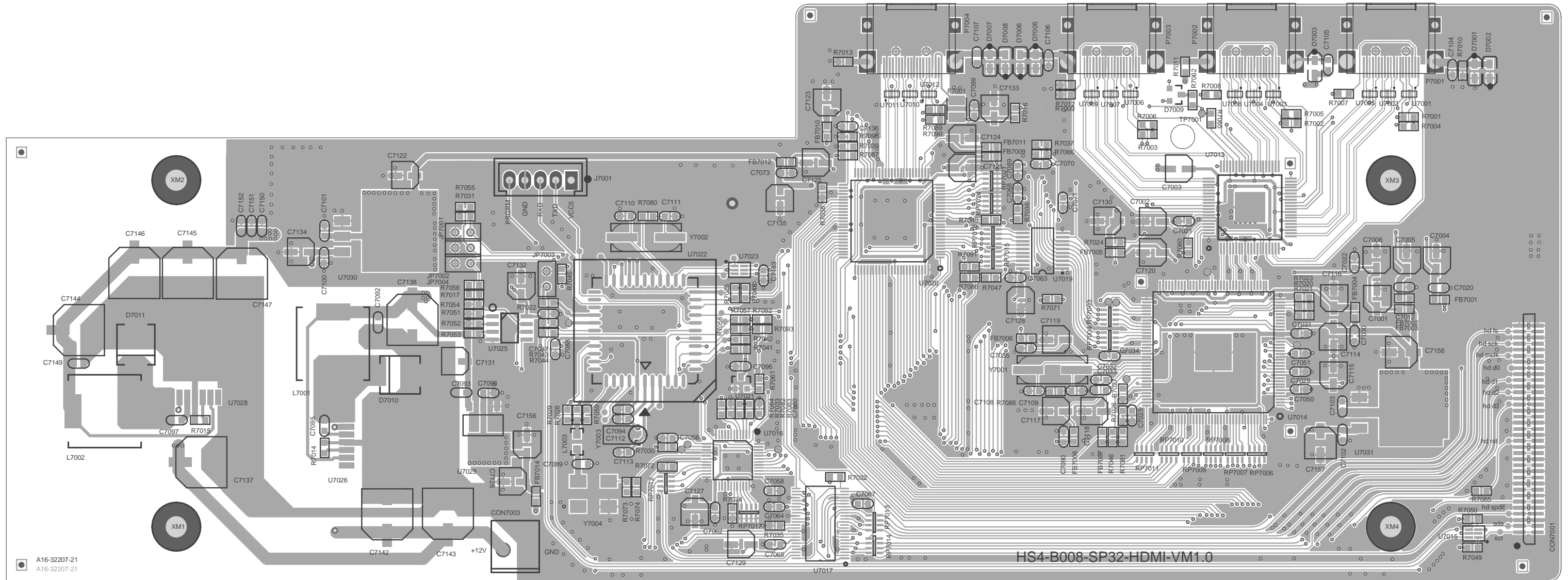
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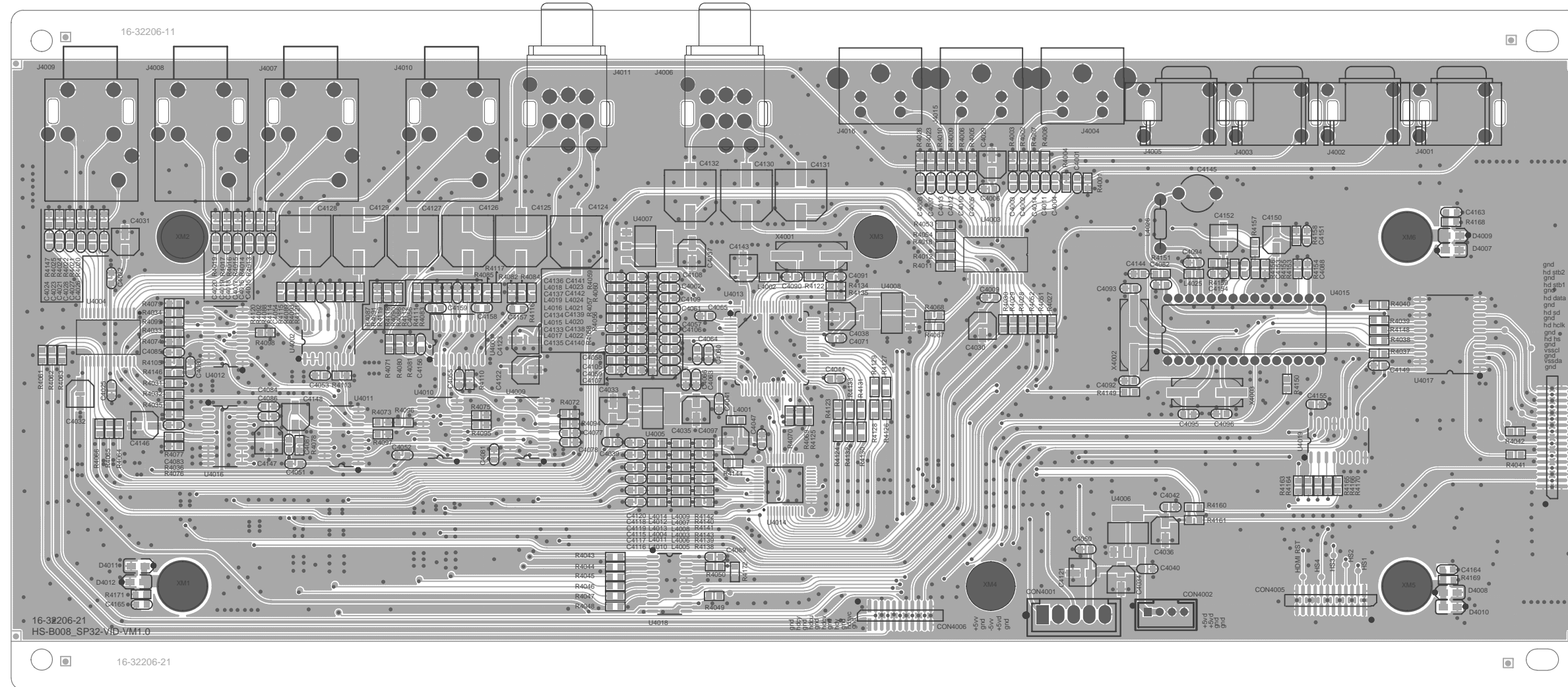
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CON7001







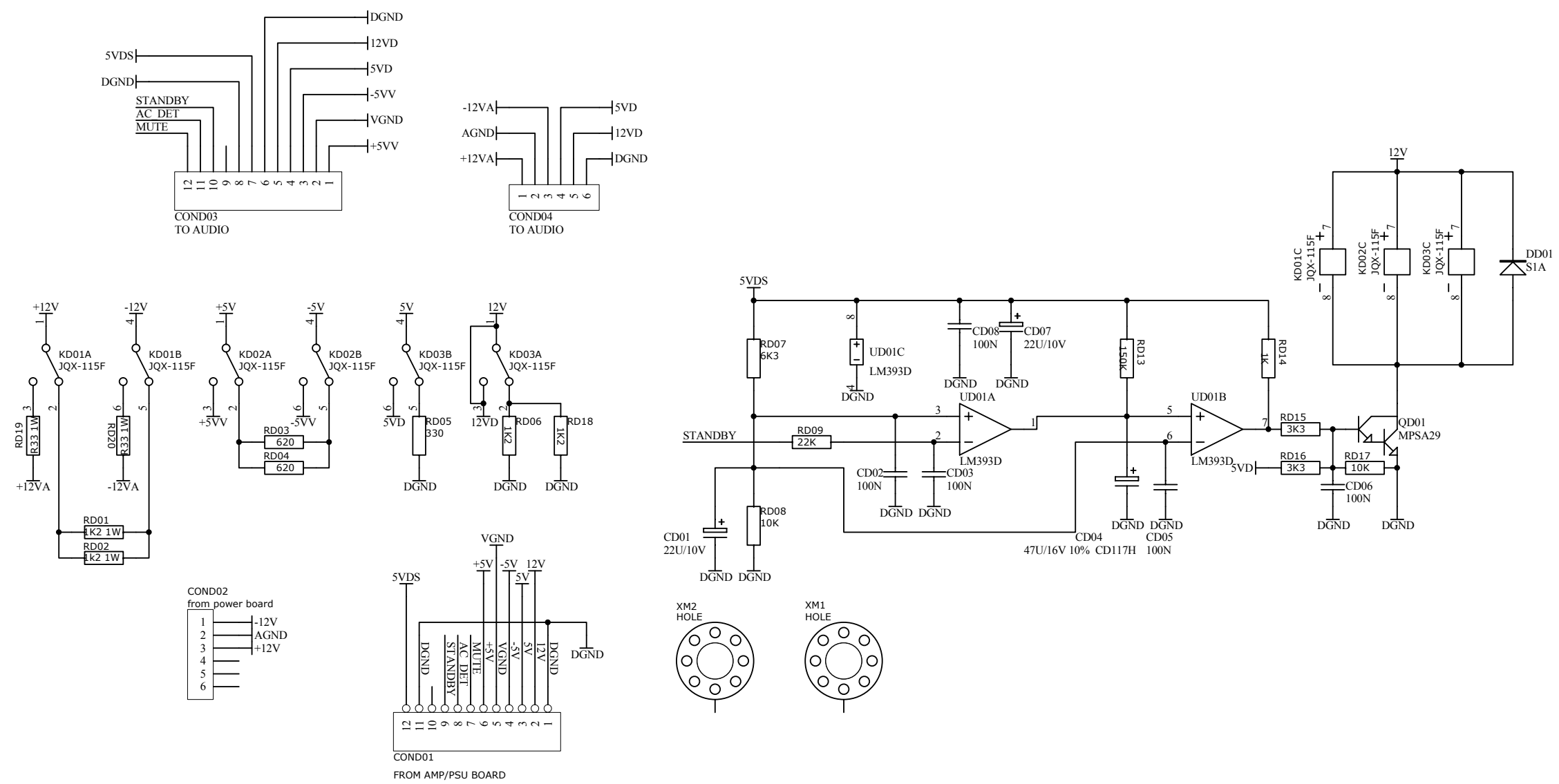
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Add RD19 RD20 0.33R 1W

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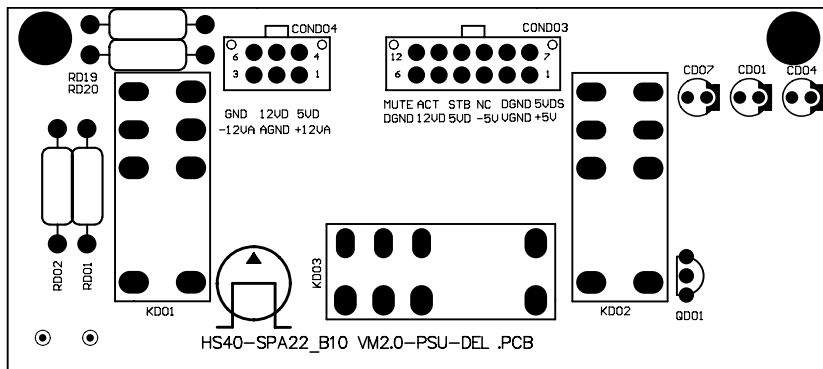
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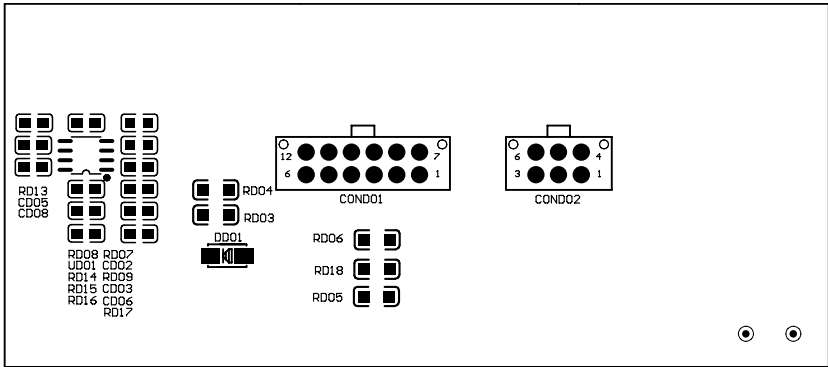
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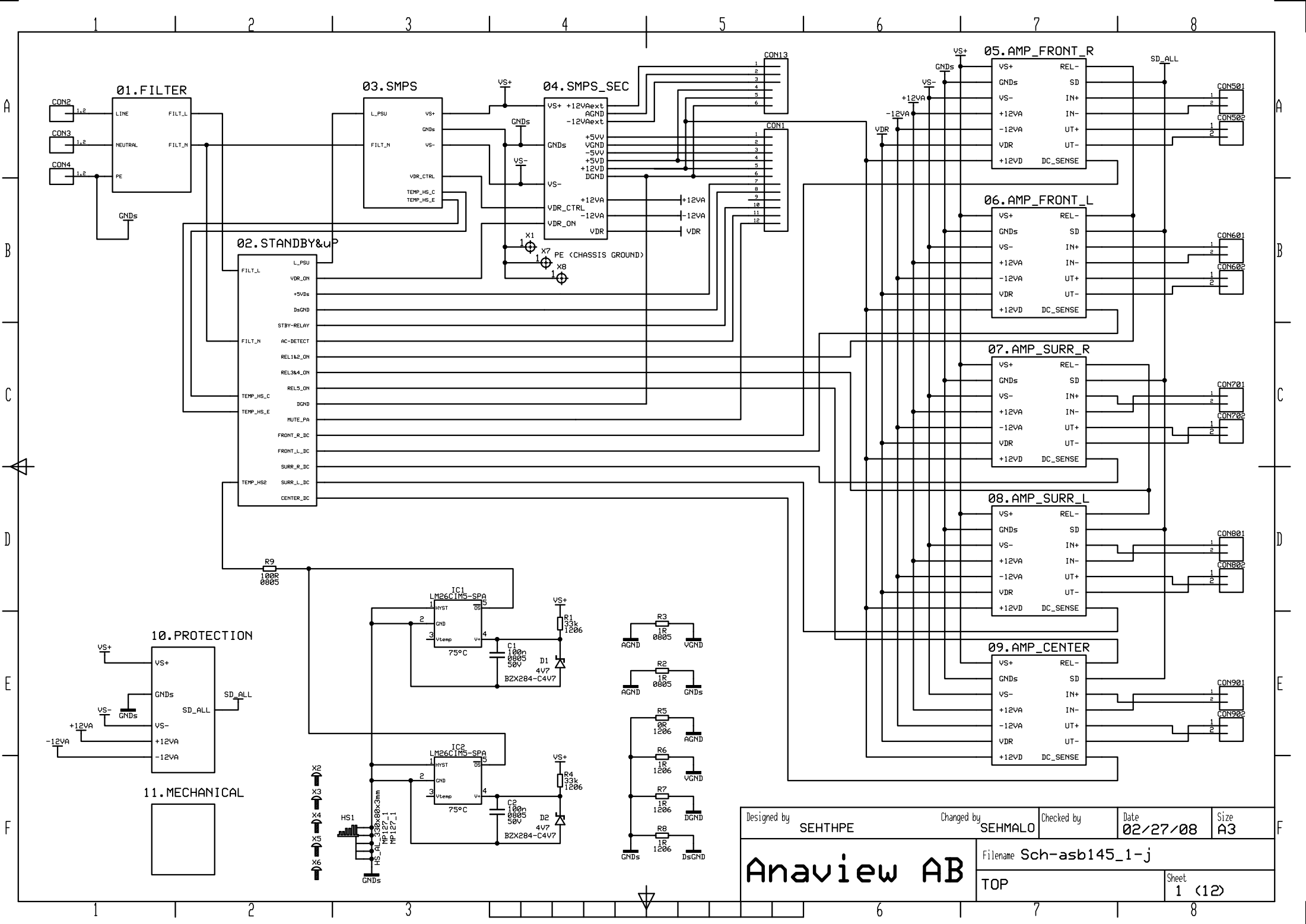
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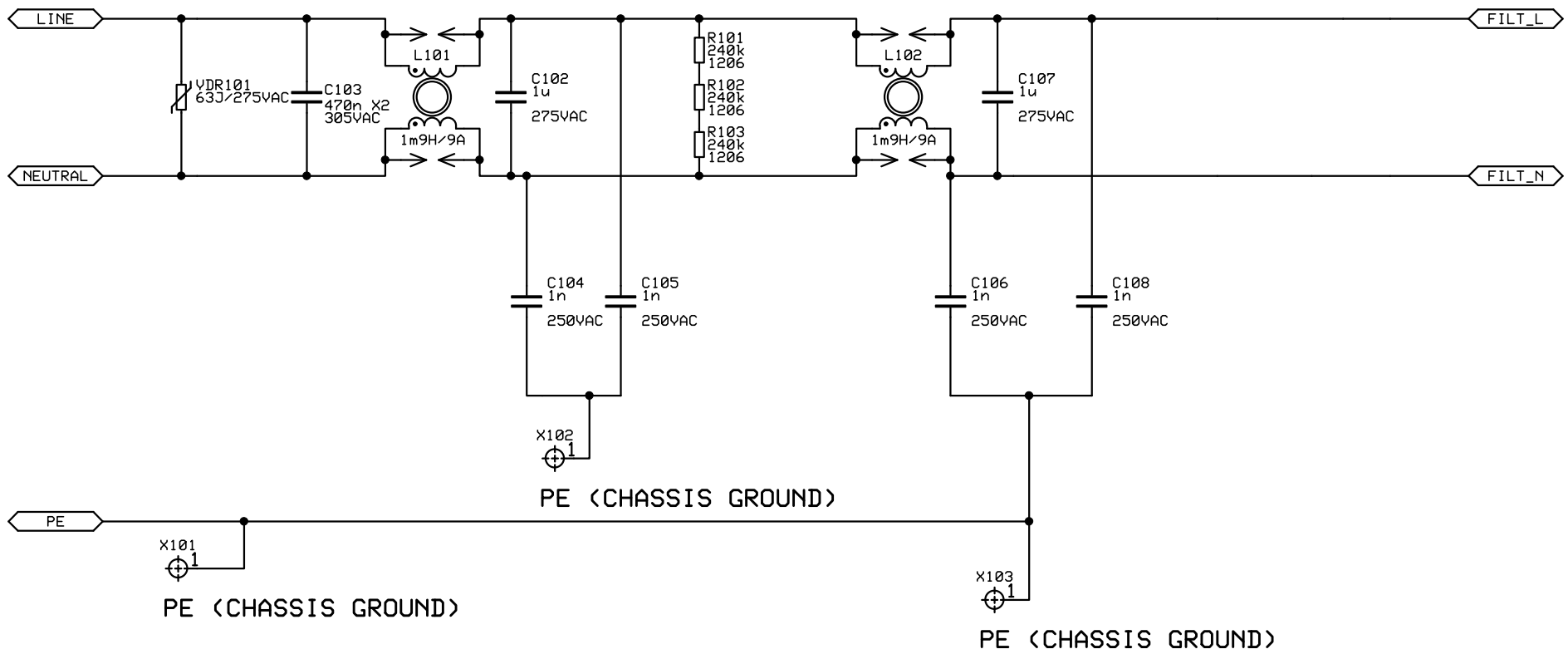
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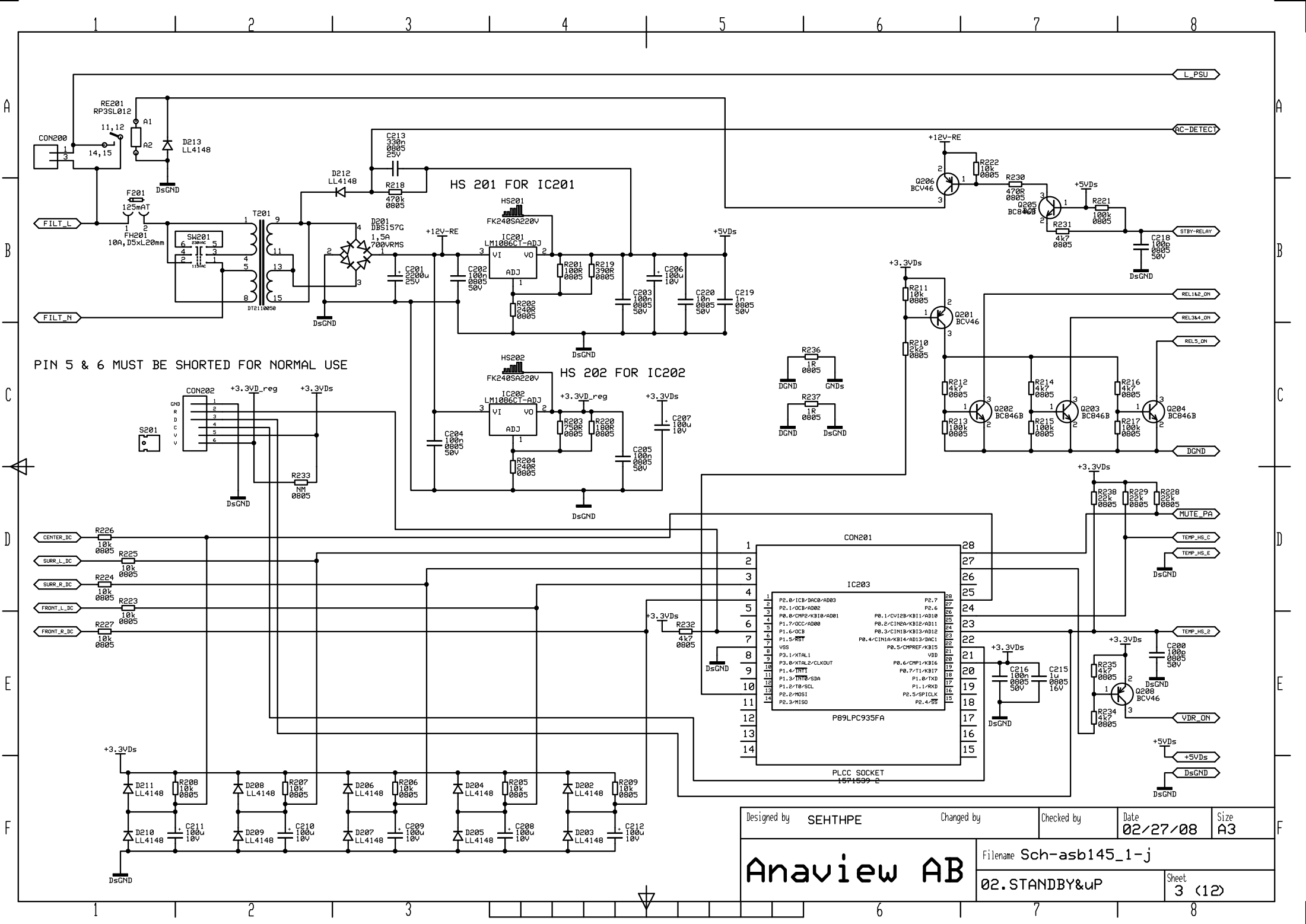




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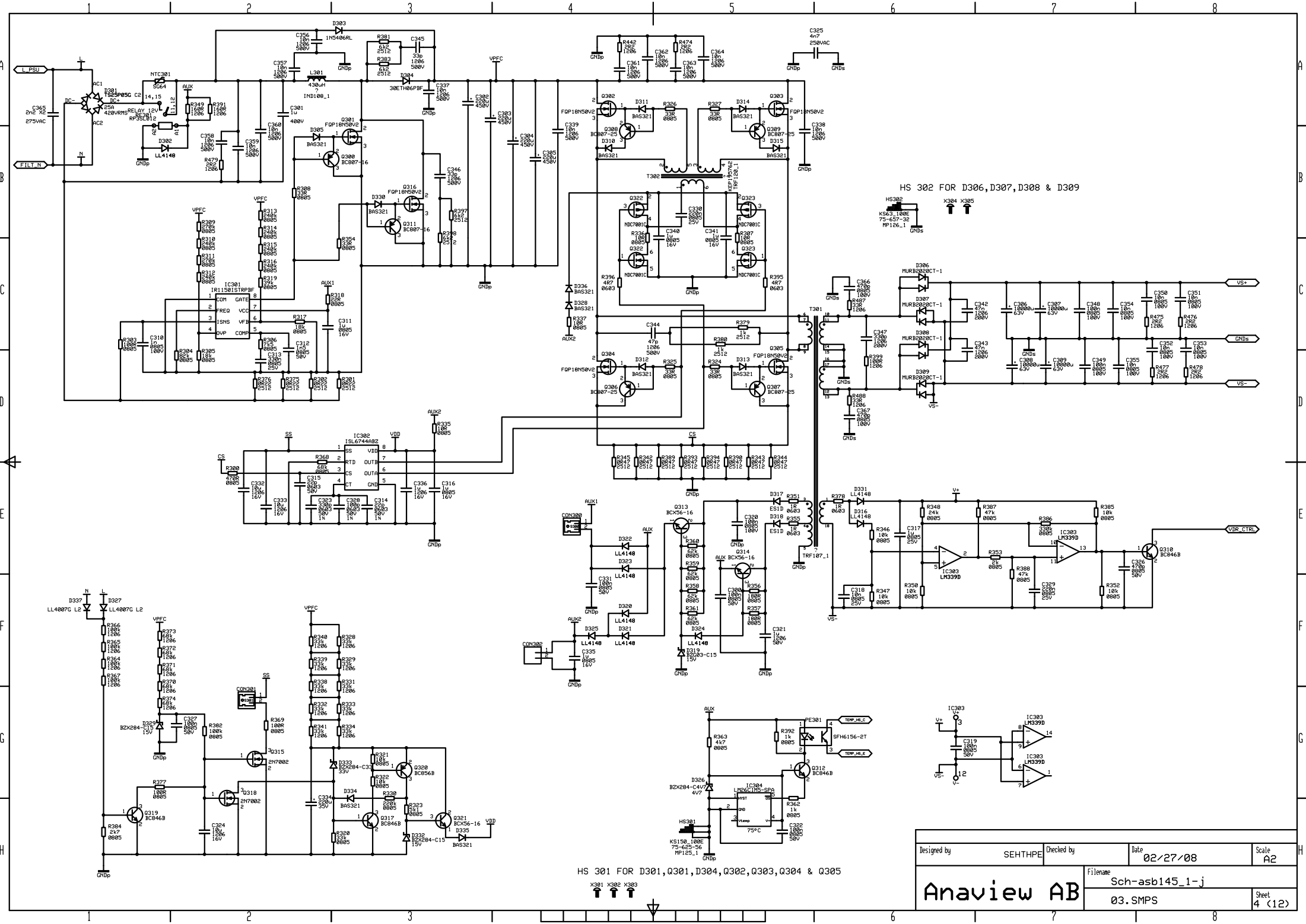


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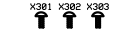


PIN 5 & 6 MUST BE SHORTED FOR NORMAL USE

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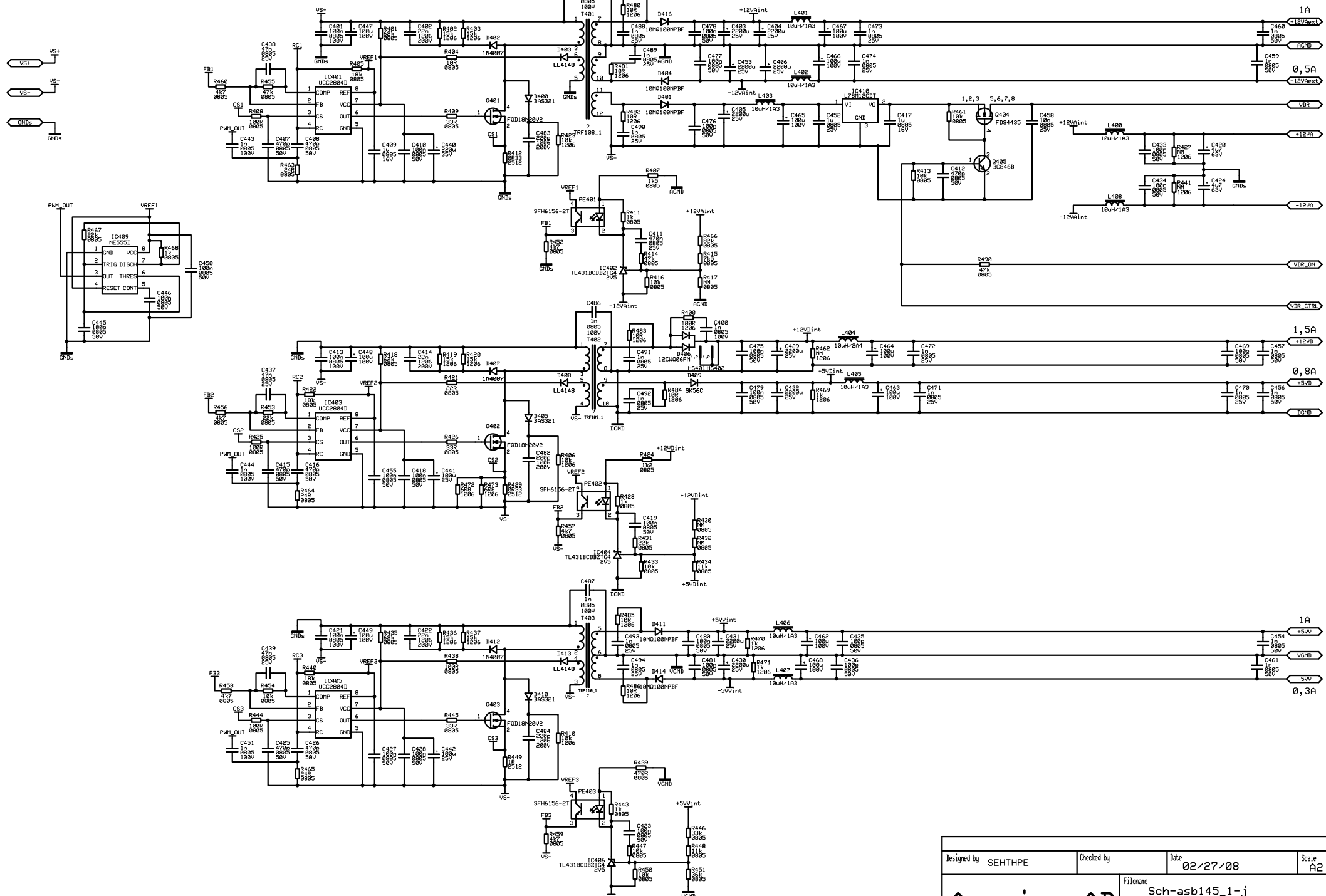
HS 301 FOR D301, Q301, D304, Q302, Q303, Q304 & Q305



HS 302 FOR D306, D307, D308 & D309



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IF +>- THEN >Mohm

IF ->+ THEN -12VA

UVP

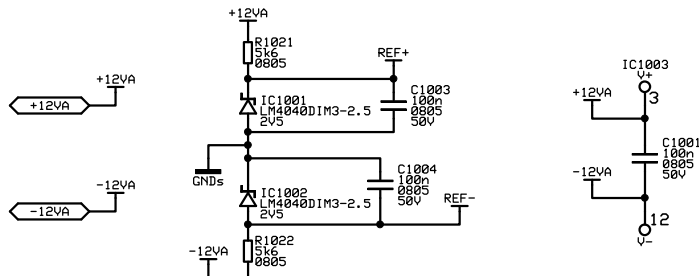
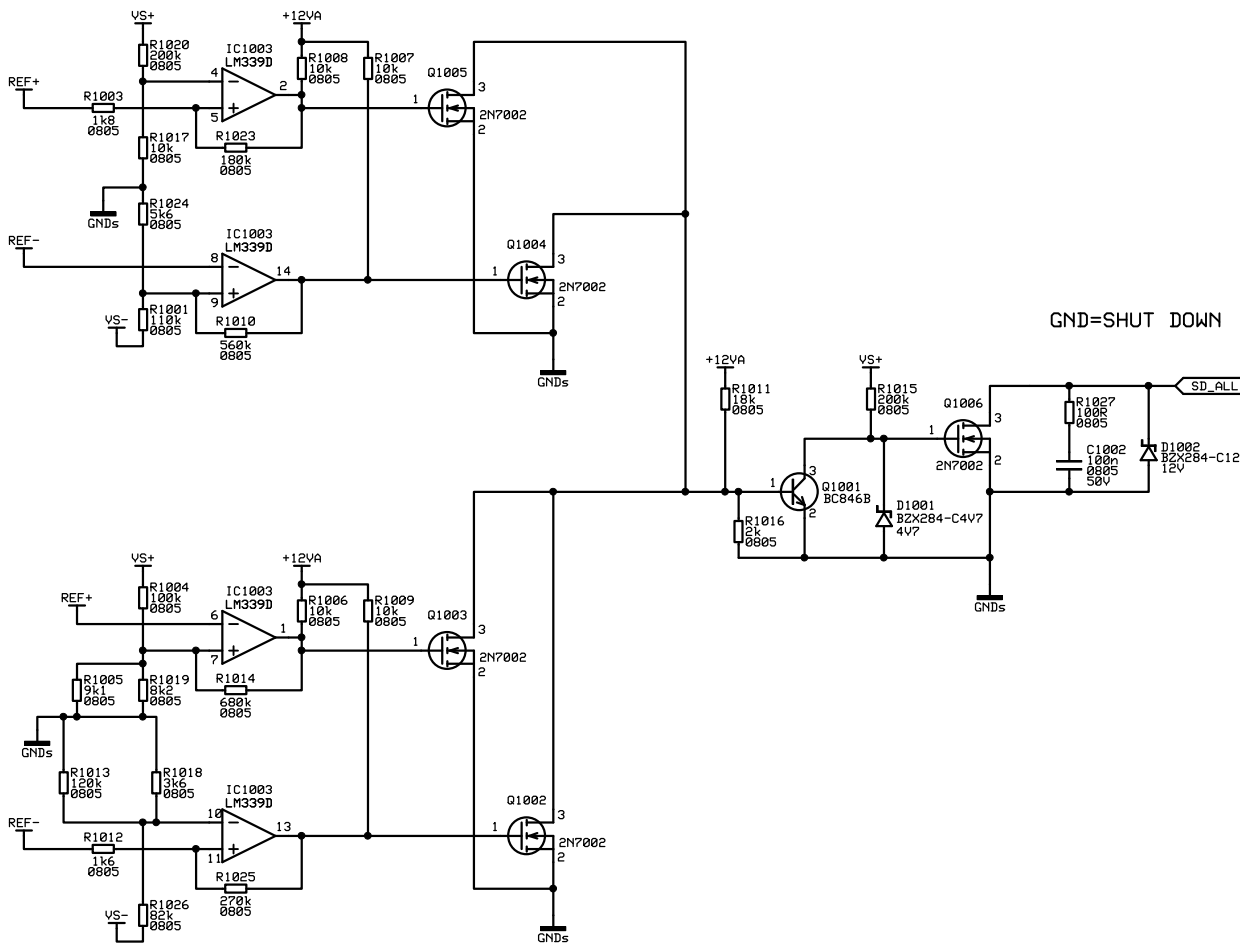
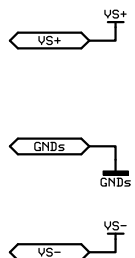
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<-54V DEACTIVATED THEN >-50V ACTIVATED

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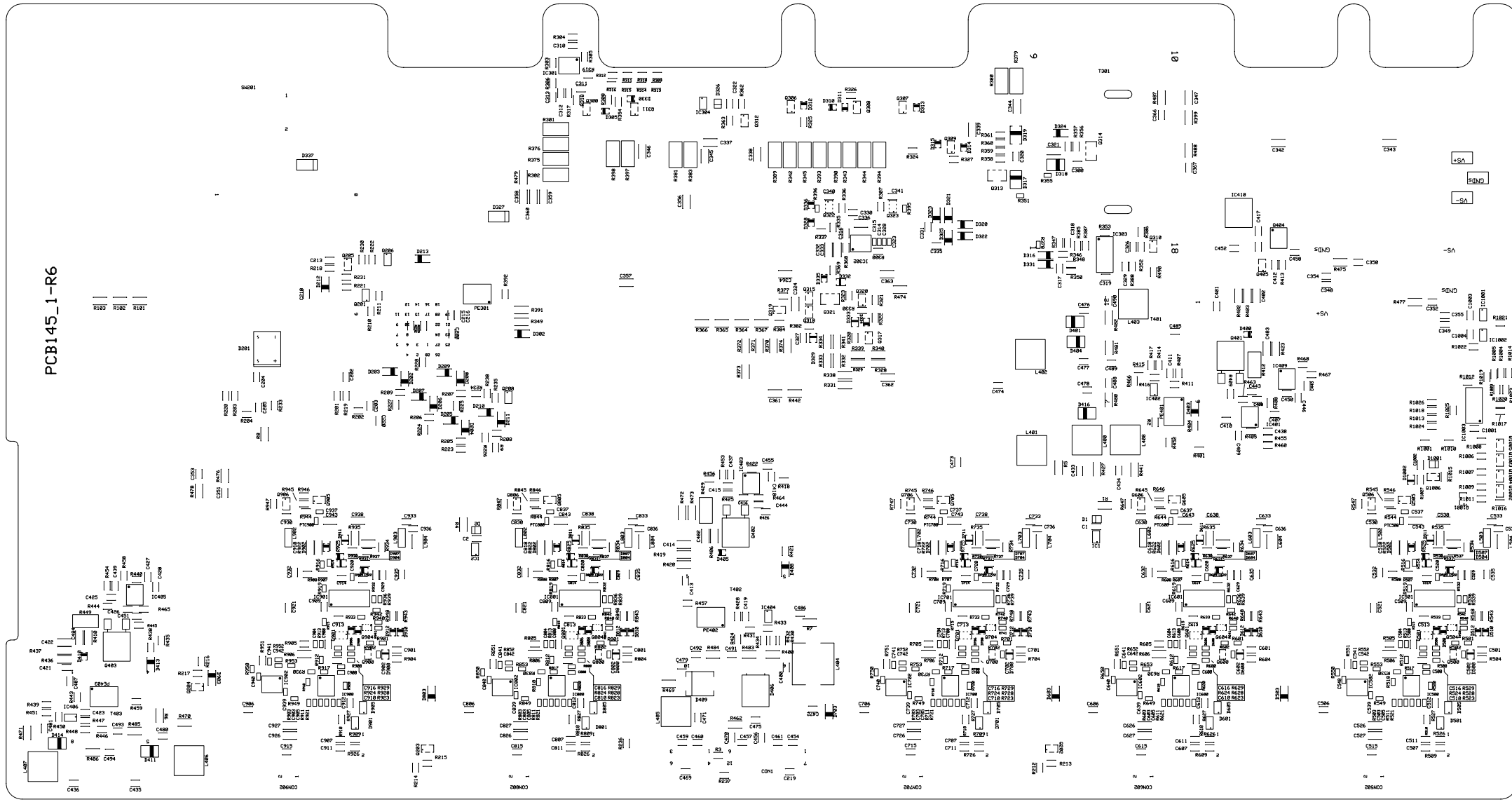
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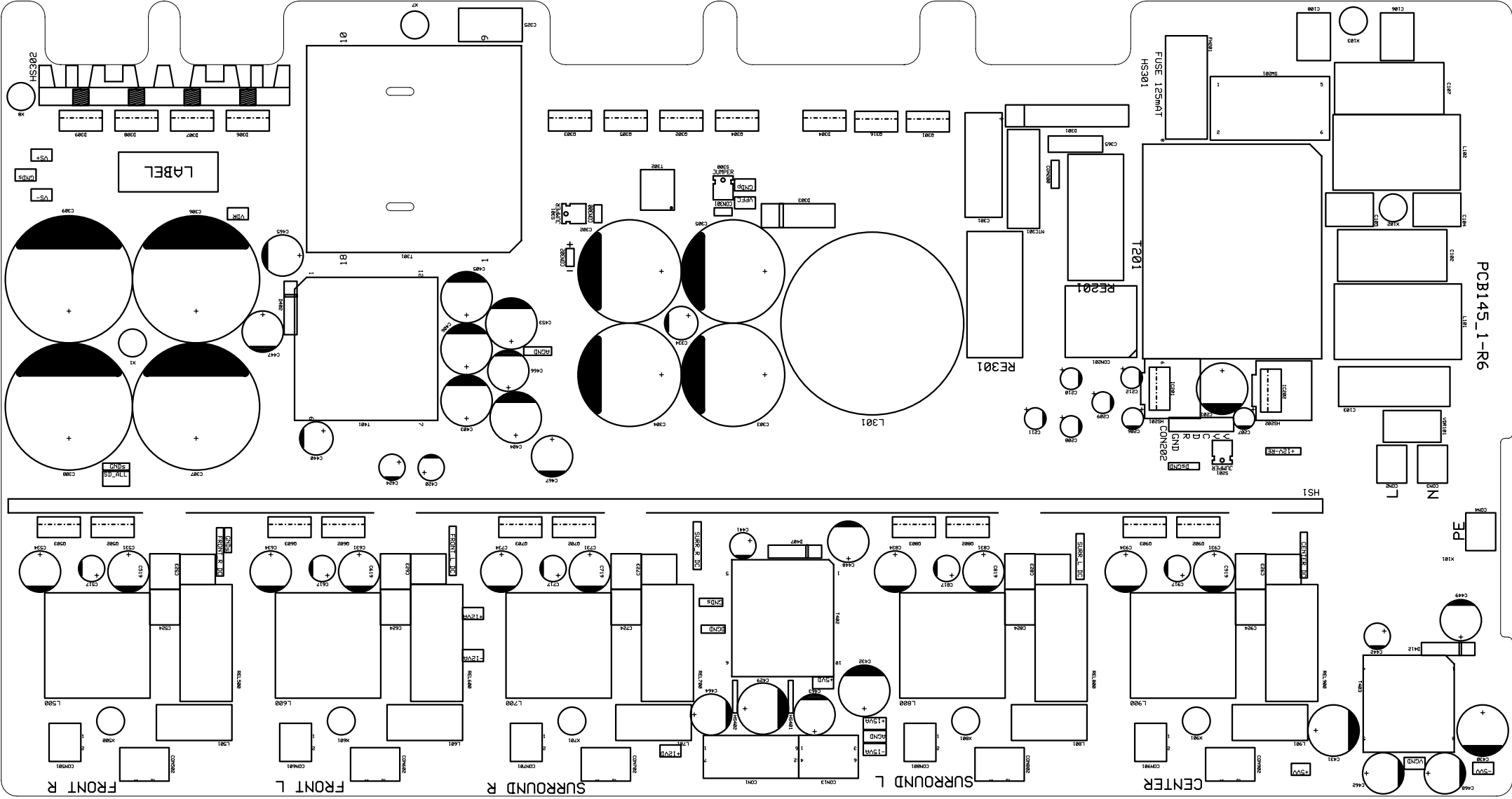


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PCB145\_1-R6



PCB145\_1-R6



SW FRONT\_R

## SPA22 surround Sound Amplifier

The SPA22 is a new 5 channel surround amplifier featuring the newly developed UFPD amplifier system from Primare Systems. Its modular electronic design will accept audio and video as switching five 120W amplifiers are onboard together with pre-outs to an external amp for 7.1 channel operation.

### Technical Specifications

<b>General</b>			<b>Video</b>	<b>10 bit digital video conversion system supporting NTSC/PAL, Component, S-video and Composite, with OSD.</b>
Output power	5 X 120W 8Ω			
Analogue Inputs	8 RCA, incl. 7.1 inputs			
Digital Inputs	3 RCA, 3 TOS-Link			
Video Inputs	3 HDMI, 3 Component, 3 S-Video, 4 Composite		<b>Other out-/inputs</b>	<b>1 IR Input 3 12v outputs (triggers) 1 RS232</b>
Analogue Outputs	Front (left and right) Center, Sub, Surr (left and right) Surr back (left and right)		<b>Fully stabilized SMPS</b>	
Analogue Record Output	1 RCA (left and right)		<b>Power Consumption operate:</b>	<b>800W at 1K, 8R ,120W all channels driven</b>
Analog Zone2 Output	1 RCA (left and right)		<b>Power consumption Standby:</b>	<b>&lt;5W</b>
Digital Output	1 RCA, 1TOS-Link		<u>Analog Preamp Data</u>	
Video Output	1 HDMI, 1 Component, 1 S-Video, 1 Composite		<b>THD</b>	<b>&lt;0.005%, 20 Hz-20kHz</b>
Video Output Zone2	1 S-Video,1 Composite		<b>Signal-to-Noise</b>	<b>-110 dB</b>
Modes	Stereo Bypass Party Dolby Prologic IIx Music Dolby Prologic IIx Moive DTS NEO:6 MUSIC DTS NEO:6 CINEMA		<b>Frequency Response</b>	<b>10 Hz-100 kHz, 1dB</b>
Decoding Formats	Dolby Digital Dolby Digital EX Dolby Prologic II Dolby Prologic IIx DTS DTS ES DTS Neo:6 DTS 96/24 MULTI/2 CH PCM/LPCM		<b>Input Impedance</b>	<b>47 KΩ, unbalanced</b>
Samping rates	32KHz,44.1KHz,48KHz, 88.2KHz,96KHz,192KHz (AES/EBU)		<b>Output Impedance</b>	<b>47 R unbalanced</b>
			<u>Power Amp Data</u>	
			<b>Output power 1Khz, one channel driven.</b>	<b>8R 150W THD+N &lt;1% 4R 300W THD+N &lt;1% AP AUX0025 Filter</b>
			<b>Output power 1Khz, all channels driven</b>	<b>120W 4/8R THD+N &lt;0.1% AP AUX0025 Filter</b>
			<b>THD</b>	<b>&lt;0.01% 20-20Khz 1W 8R AP AES17 Filter</b>
			<b>Signal-to-noise</b>	<b>80dB, AP AES17 filter, ref 2.828Vrms.</b>
			<b>Frequency Response</b>	<b>20 Hz-20 kHz -0.2dB 1W 8R</b>
			<u>Digital Data</u>	
			<b>Frequency Response</b>	<b>20 Hz-20 kHz± 0.2dB</b>
			<b>THD+Noise</b>	<b>0,005% @1 kHz(AES17 filter)</b>
			<b>Dimensions (WxDxH)</b>	<b>430 x 385 x 180 mm</b>
			<b>Weight</b>	<b>15Kg</b>

All specifications may be subject to change without further notice