



SERVICE MANUAL

IDAS TRUNKING CONTROLLER
IC-FC5000E

S-15217XZ-C1
February 2016

INTRODUCTION

This service manual describes the latest technical information for the **IC-FC5000E** IDAS TRUNKING CONTROLLER, at the time of publication.

MODEL	VERSION	VERSION NUMBER
IC-FC5000E	EXP-01	#01

SERVICE CAUTION

NEVER connect the Controller to an AC outlet or to a DC power supply that uses more than the specified voltage. This will ruin the Controller.

DO NOT expose the Controller to rain, snow or liquids.

DO NOT reverse the polarities of the power supply when connecting the Controller.

To upgrade quality, any electrical or mechanical parts and internal circuits are subject to change without notice or obligation.



ORDERING PARTS

Be sure to include the following four points when ordering replacement parts:

1. 10-digit Icom part number
2. Component name
3. Equipment model name and unit name
4. Quantity required

<ORDER EXAMPLE>

1120003070 S.IC MAX3232E IC-FC5000E MAIN UNIT 1 piece
1130006891 S.IC TC7S04FU IC-FC5000E MAIN UNIT 5 pieces

Addresses are provided on the inside back cover for your convenience.

REPAIR NOTES

1. Make sure that the problem is internal before disassembling the Controller.
2. **DO NOT** open the Controller until the Controller is disconnected from its power source.
3. **DO NOT** short any circuits or electronic parts.
4. **DO NOT** keep power ON for a long time when the Controller is defective.

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■ General

- Power supply voltage: 12 V DC nominal (negative ground)
- Current drain (approximately): 600 mA
- Operating temperature range: 0°C to +40°C, 32°F to +104°F
- Dimensions (projections not included): 483 (W) × 44 (H) × 219 (D) mm: 19(W) × 1.7(H) × 8.6(D) inches
- Weight (approximately): 2.25 kg, 5 lb

[MAIN UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Lists components for the main unit.

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Eqv.= This component is equivalent to the REF No. component listed above, and may be substituted on parts orders and repairs.

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side) S.=Surface mount

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C3212	4030019990	S.CER C1005 JB 1C 104K-T	T	111.7/68.4
C3213	4030019990	S.CER C1005 JB 1C 104K-T	T	111.7/67.5
C3251	4030019990	S.CER C1005 JB 1C 104K-T	B	105.7/62.7
C3252	4030019320	S.CER C1608 X7R 1C 105K-T	B	175.2/45.6
C3253	4030011600	S.CER C1608 JB 1E 104K-T ATEX	B	174.0/45.6
C3254	4030011600	S.CER C1608 JB 1E 104K-T ATEX	B	181.0/46.3
C3255	4030011600	S.CER C1608 JB 1E 104K-T ATEX	B	177.8/51.7
C3256	4030020190	S.CER GRM32EB31C476KE15L	T	181.2/47.6
C3257	4030006860	S.CER C1608 JB 1H 102K-T ATEX	B	182.7/48.8
C3258	4030011600	S.CER C1608 JB 1E 104K-T ATEX	B	184.0/48.8
C3261	4030018980	S.CER C1608 JB 1H 104K-T ATEX	B	189.3/86.8
C3262	4030019990	S.CER C1005 JB 1C 104K-T	T	111.7/66.0
C3263	4030019990	S.CER C1005 JB 1C 104K-T	T	111.7/65.0
C3301	4030017620	S.CER C1005 CH 1H 100C-T	B	102.7/42.2
C3302	4030017620	S.CER C1005 CH 1H 100C-T	B	108.0/39.0
C3303	4030017590	S.CER C1005 CH 1H 070C-T	T	101.4/41.5
C3304	4030017590	S.CER C1005 CH 1H 070C-T	T	102.3/42.4
C3305	4030019990	S.CER C1005 JB 1C 104K-T	T	121.2/40.1
C3306	4030019990	S.CER C1005 JB 1C 104K-T	B	131.3/37.9
C3307	4030019990	S.CER C1005 JB 1C 104K-T	B	127.6/36.4
C3308	4030019990	S.CER C1005 JB 1C 104K-T	B	124.8/36.3
C3310	4030019990	S.CER C1005 JB 1C 104K-T	T	124.9/29.3
C3311	4030019990	S.CER C1005 JB 1C 104K-T	T	120.0/32.5
C3312	4030019990	S.CER C1005 JB 1C 104K-T	T	184.0/38.8
C3313	4030019990	S.CER C1005 JB 1C 104K-T	T	106.3/46.1
C3315	4030019990	S.CER C1005 JB 1C 104K-T	T	121.1/44.2
C3316	4030017780	S.CER C1005 JB 1H 472K-T	T	127.3/30.8
C3317	4030017780	S.CER C1005 JB 1H 472K-T	T	137.6/33.6
C3318	4030017780	S.CER C1005 JB 1H 472K-T	T	32.1/155.4
J6	6510011441	CON B4P-VH(LF)(SN)		
J2101	6510029760	CON 9742-8823-403D-L1-A(50U)		
J2201	6510030980	CON 9658-8823-100D-H (50U) <SJC>		
J3002	6510015541	S.CON B4B-ZR-SM4-TF(LF)(SN)	T	157.2/14.5
J3101	6510028980	S.CON SCDABA0500	T	158.7/147.2
J3102	6510024522	S.CON 12FLT-SM2-TB(LF)(SN)(M)	T	115.5/8.3
J3201	6510024033	CON UBA-4R-D14T-4D(LF)(SN)		
J3251	6510024033	CON UBA-4R-D14T-4D(LF)(SN)		
S1	2260003520	S.SWI FSMD250-2920-R <FUZ>	T	14.2/127.6
S3304	2260000980	SWI SKHHLPA014A(SKHHLPA010)		
T2121	5920000940	S.TRA ATPL-168R <ATE>	T	116.5/137.3
T2151	5920000940	S.TRA ATPL-168R <ATE>	T	80.6/137.3
T2221	5910001180	S.TRA ATPL-361R <ATE>	T	55.8/137.7
EP501	6910019100	S.BEA MPZ1608S101AT	B	43.5/40.8
EP502	6910019100	S.BEA MPZ1608S101AT	T	39.0/52.0
EP503	6910019100	S.BEA MPZ1608S101AT	B	48.5/55.2
EP504	6910019100	S.BEA MPZ1608S101AT	T	53.2/61.1
EP505	6910019100	S.BEA MPZ1608S101AT	B	53.5/61.2
EP1001	6910025990	E.O ES(77)H0464-112952-6		
EP1601	6910019100	S.BEA MPZ1608S101AT	B	79.9/43.9
EP1602	6910019100	S.BEA MPZ1608S101AT	B	115.2/51.8
EP1603	6910019100	S.BEA MPZ1608S101AT	T	84.7/42.9
EP1604	6910019100	S.BEA MPZ1608S101AT	T	113.3/78.8
EP1605	6910019100	S.BEA MPZ1608S101AT	B	99.0/46.7
EP1606	6910019100	S.BEA MPZ1608S101AT	B	115.8/49.0
EP1607	6910019100	S.BEA MPZ1608S101AT	B	113.9/49.0
EP1608	6910019100	S.BEA MPZ1608S101AT	B	112.0/49.0
EP1609	6910019100	S.BEA MPZ1608S101AT	B	97.1/46.7
EP1610	6910019100	S.BEA MPZ1608S101AT	T	100.9/46.7
EP1611	6910019100	S.BEA MPZ1608S101AT	B	102.8/46.7
EP1612	6910019100	S.BEA MPZ1608S101AT	B	100.9/46.7
EP1613	6910019100	S.BEA MPZ1608S101AT	B	104.7/46.7
EP1614	6910019100	S.BEA MPZ1608S101AT	T	79.3/43.9
EP1615	6910019100	S.BEA MPZ1608S101AT	B	117.7/49.0
EP1616	6910019100	S.BEA MPZ1608S101AT	B	106.7/46.7
EP1617	6910019100	S.BEA MPZ1608S101AT	T	79.3/45.8
EP1618	6910019100	S.BEA MPZ1608S101AT	T	114.2/45.1
EP1619	6910019100	S.BEA MPZ1608S101AT	T	112.6/49.3
EP1620	6910019100	S.BEA MPZ1608S101AT	T	119.0/49.3
EP1621	6910019100	S.BEA MPZ1608S101AT	B	113.6/73.4
EP2002	6910020910	S.BEA MPZ1608S300AT	B	98.0/99.3
EP2003	6910021140	S.BEA MMZ1005S800CT	T	99.7/110.8
EP2004	6910020910	S.BEA MPZ1608S300AT	B	104.9/108.1
EP2005	6910021140	S.BEA MMZ1005S800CT	T	110.6/101.7
EP3101	0800015050	E.O PTA01053A		
EP3201	6910014690	S.BEA MPZ1608S221A-T	B	183.2/67.3
EP3251	6910014690	S.BEA MPZ1608S221A-T	B	183.1/46.1

[LED UNIT]

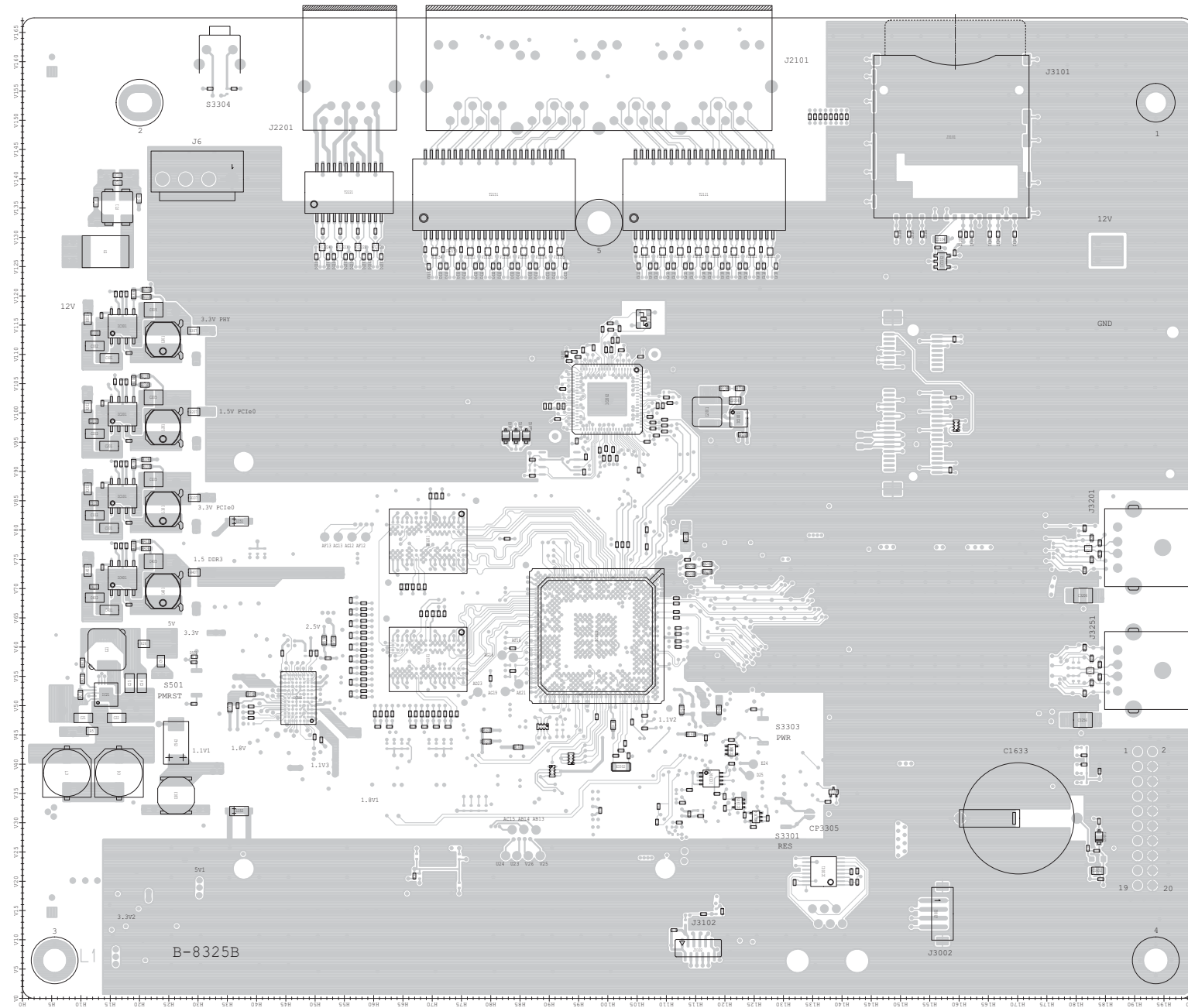
REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
Q1	1590004150	S.TRA DRC9114T0L	T	55.7/3.0
Q2	1590004150	S.TRA DRC9114T0L	T	75.7/3.0
Q3	1590004150	S.TRA DRC9114T0L	T	95.7/3.0
Q4	1590004150	S.TRA DRC9114T0L	T	35.7/3.0
Q5	1590004150	S.TRA DRC9114T0L	T	115.7/3.0
Q6	1590004150	S.TRA DRC9114T0L	T	15.7/3.0
Q7	1590004150	S.TRA DRC9114T0L	T	135.7/3.0
Q8	1590004150	S.TRA DRC9114T0L	T	145.7/3.1
R1	7030005000	S.RES ERJ2GEJ 471 X (470)	T	44.6/2.1
R2	7030005000	S.RES ERJ2GEJ 471 X (470)	T	64.6/2.1
R3	7030005000	S.RES ERJ2GEJ 471 X (470)	T	84.6/2.1
R4	7030005000	S.RES ERJ2GEJ 471 X (470)	T	24.6/2.1
R5	7030005000	S.RES ERJ2GEJ 471 X (470)	T	104.6/2.1
R6	7030005000	S.RES ERJ2GEJ 471 X (470)	T	4.6/2.1
R7	7030005000	S.RES ERJ2GEJ 471 X (470)	T	124.6/2.1
R3112	7030005000	S.RES ERJ2GEJ 471 X (470)	T	144.1/2.1
C1	4030017460	S.CER C1005 JB 1H 102K-T	T	24.2/7.0
C2	4030017460	S.CER C1005 JB 1H 102K-T	T	25.2/7.0
C3	4030017460	S.CER C1005 JB 1H 102K-T	T	24.7/14.0
C4	4030017460	S.CER C1005 JB 1H 102K-T	T	26.2/7.0
C5	4030017460	S.CER C1005 JB 1H 102K-T	T	25.7/14.0
C6	4030017460	S.CER C1005 JB 1H 102K-T	T	27.2/7.0
C7	4030017460	S.CER C1005 JB 1H 102K-T	T	26.7/14.0
C8	4030017460	S.CER C1005 JB 1H 102K-T	T	28.2/7.0
C9	4030017460	S.CER C1005 JB 1H 102K-T	T	27.7/14.0
J1	6510024522	S.CON 12FLT-SM2-TB(LF)(SN)(M)	T	26.5/10.5
DS1	5040002961	S.LED SML-A12MT T86J	T	55.0/1.0
DS2	5040003001	S.LED SML-A12WT T86J	T	75.0/1.0
DS3	5040003011	S.LED SML-A12WT T86J	T	95.0/1.0
DS4	5040003011	S.LED SML-A12WT T86J	T	35.0/1.0
DS5	5040003011	S.LED SML-A12WT T86J	T	115.0/1.0
DS6	5040003011	S.LED SML-A12WT T86J	T	15.0/1.0
DS7	5040003011	S.LED SML-A12WT T86J	T	135.0/1.0
DS8	5040003011	S.LED SML-A12WT T86J	T	145.0/1.0
W1	8900016100	CAB OPC-1678 (P0.5N12L80) <TJM>		

Eqv.= This component is equivalent to the REF No. component listed above, and may be substituted on parts orders and repairs.

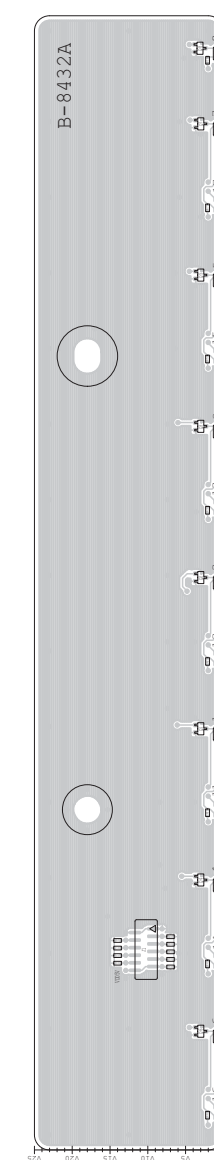
M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side) S.=Surface mount

The actual configuration of the PC board can be seen by viewing the top and bottom BOARD LAYOUT pages together.

• MAIN UNIT B-8325B
(TOP VIEW)

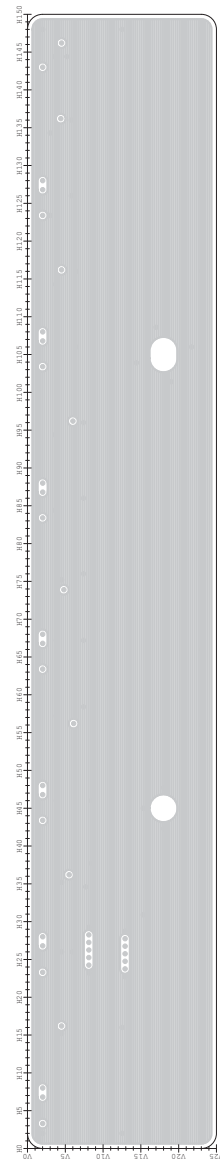


• LED UNIT B-8432A
(TOP VIEW)

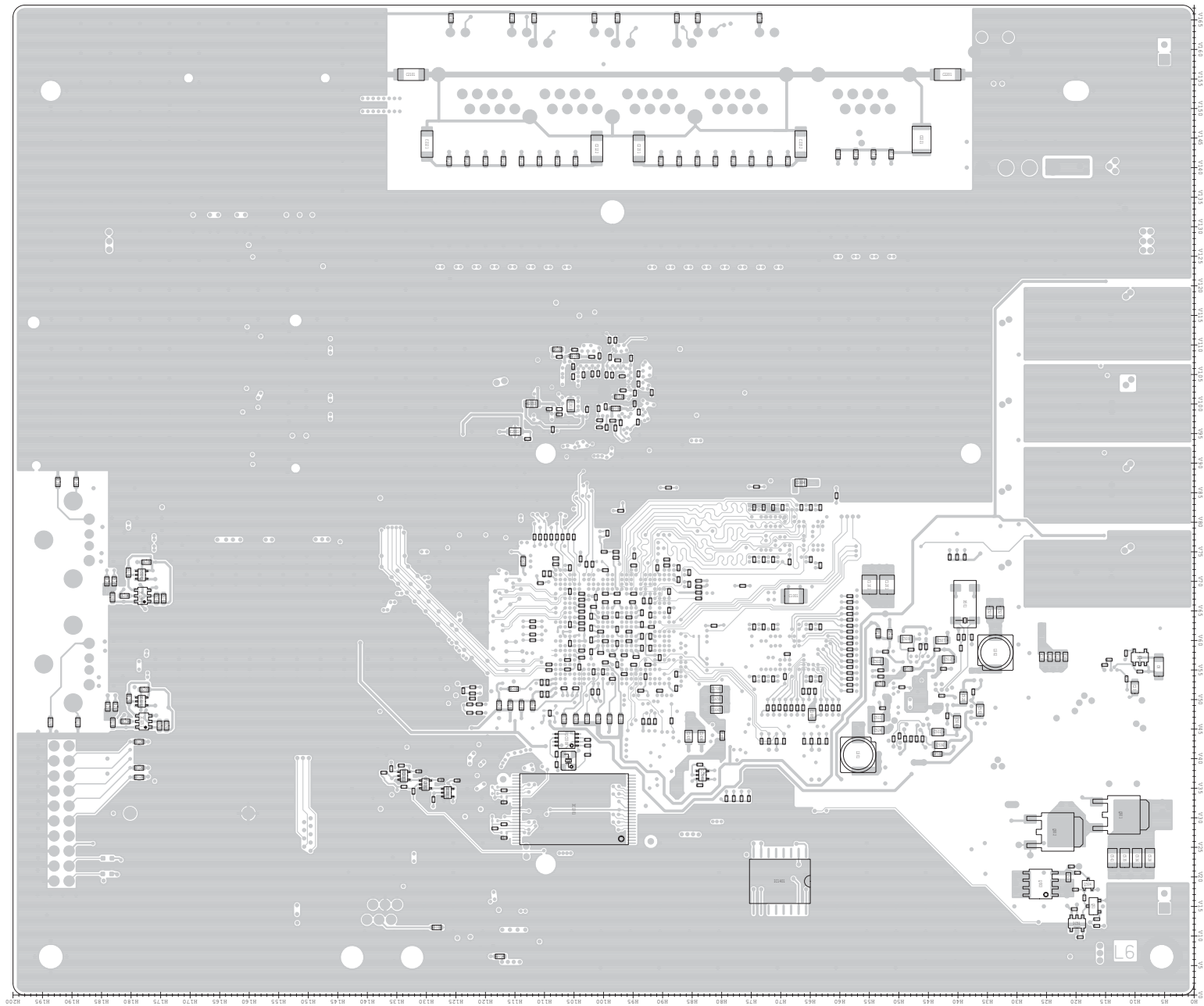


The actual configuration of the PC board can be seen by viewing the top and bottom BOARD LAYOUT pages together.

• LED UNIT B-8432A
(BOTTOM VIEW)

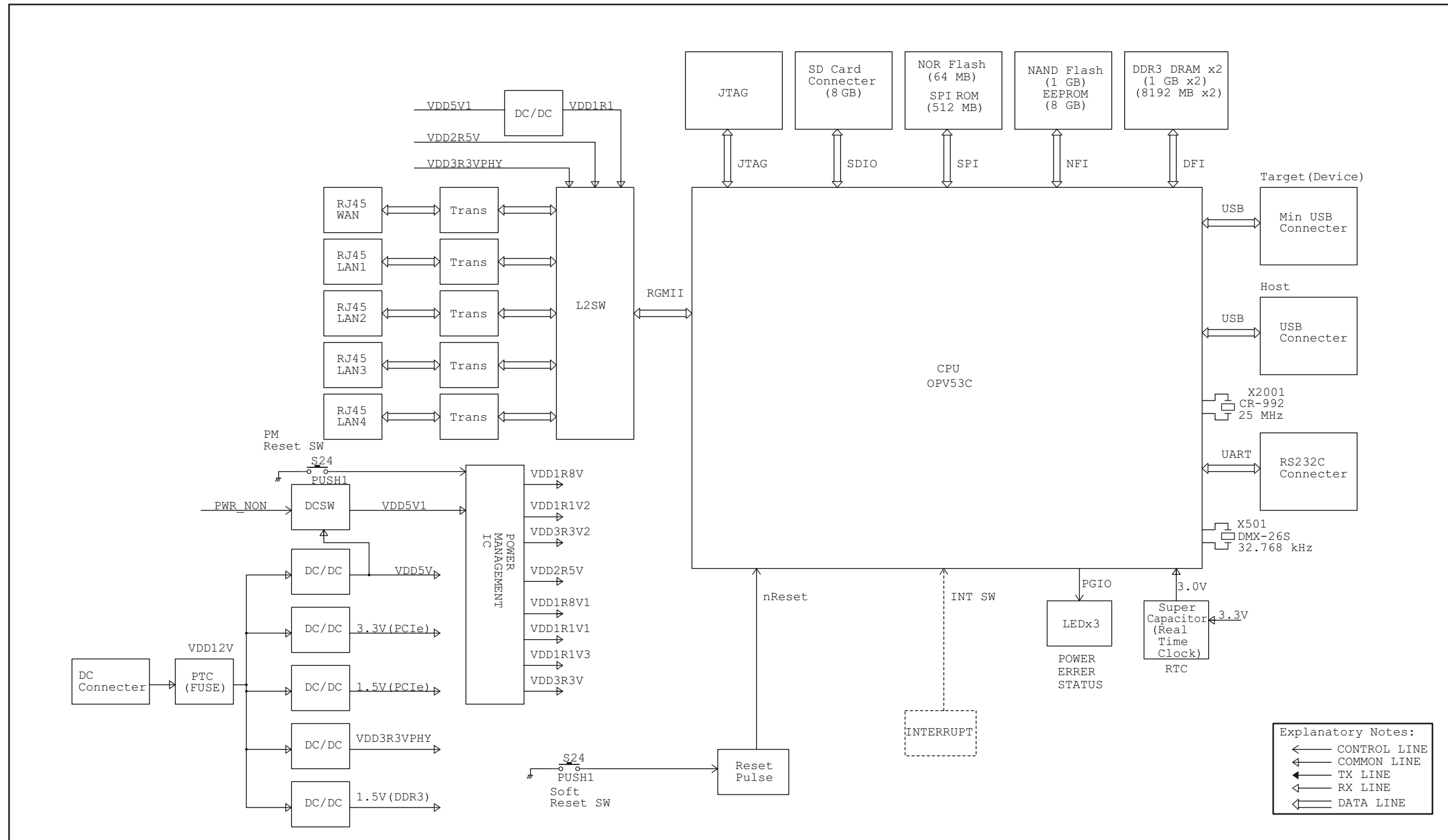


• MAIN UNIT B-8325B
(BOTTOM VIEW)

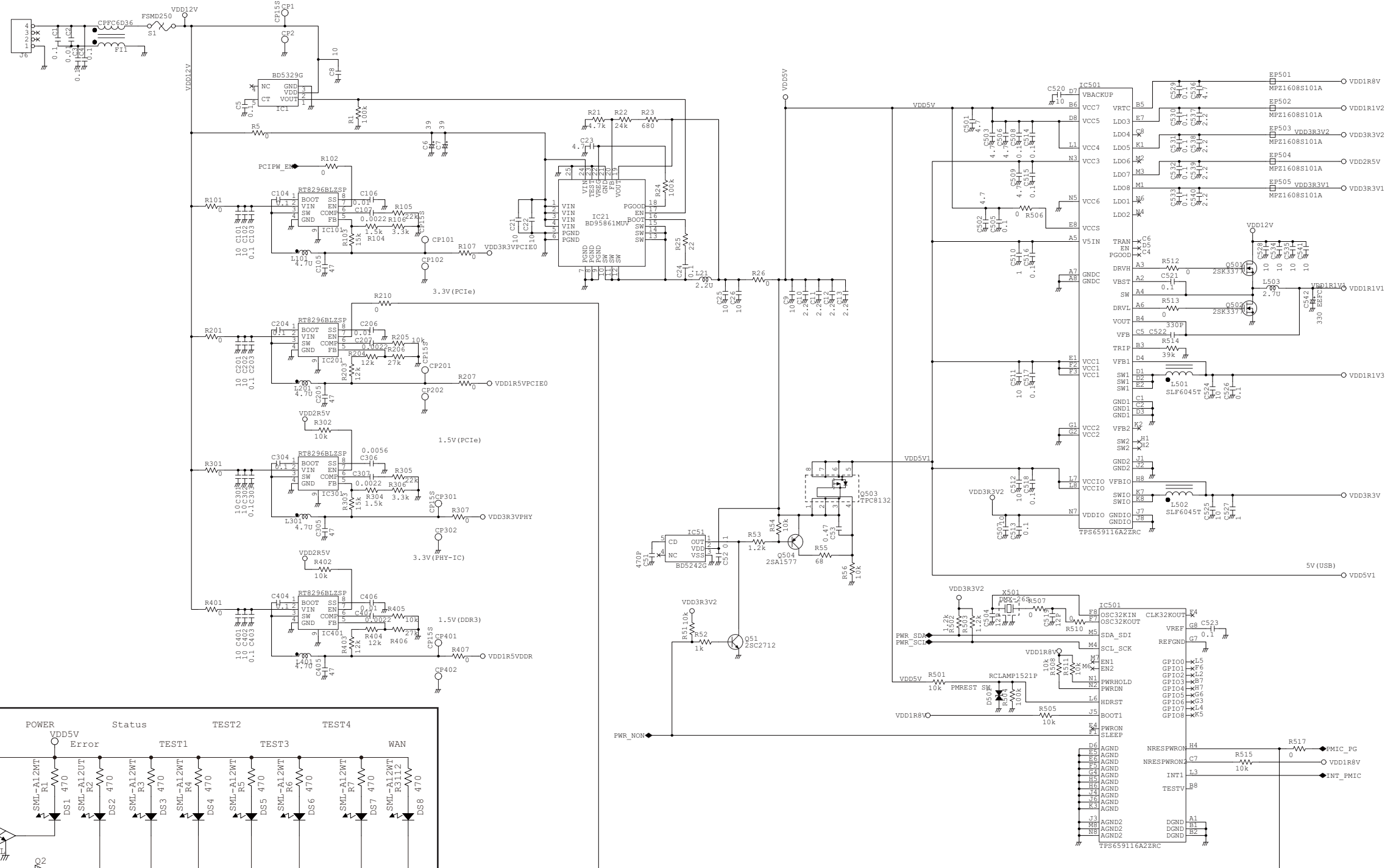


SECTION 4

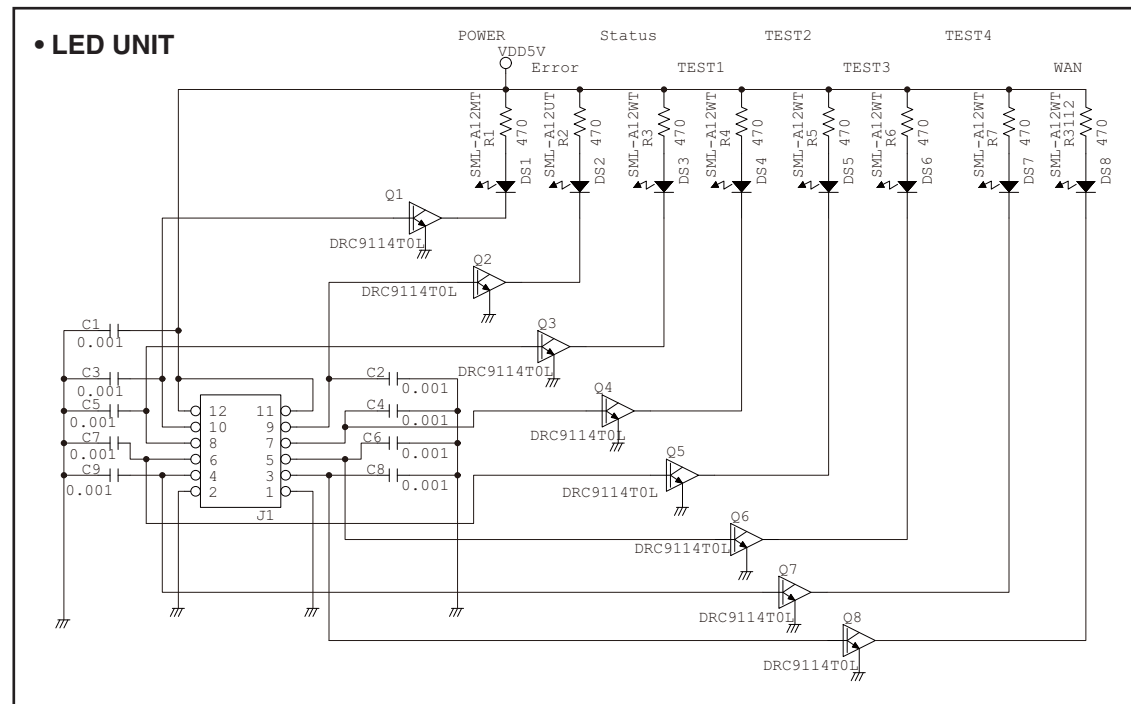
BLOCK DIAGRAM



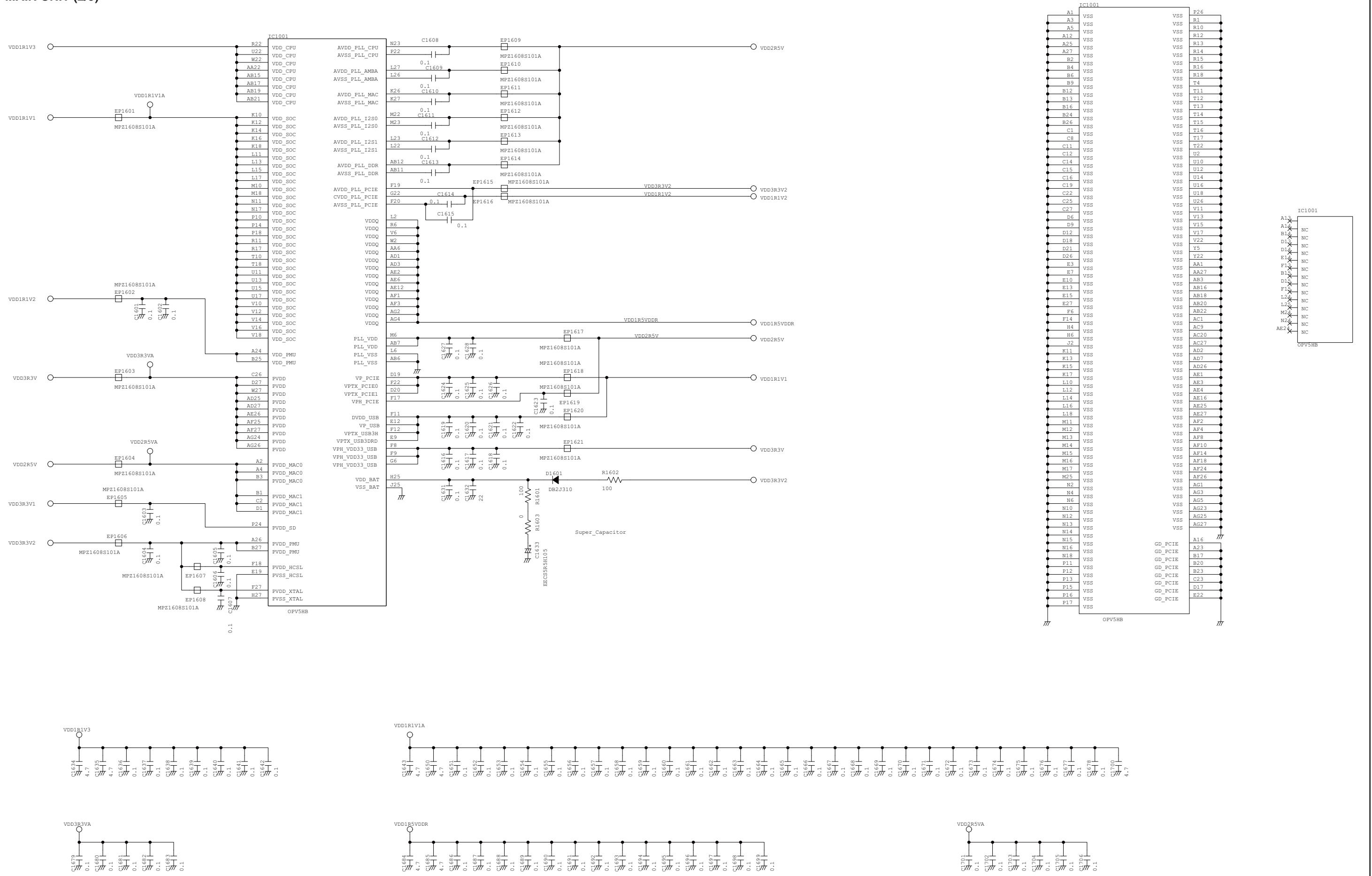
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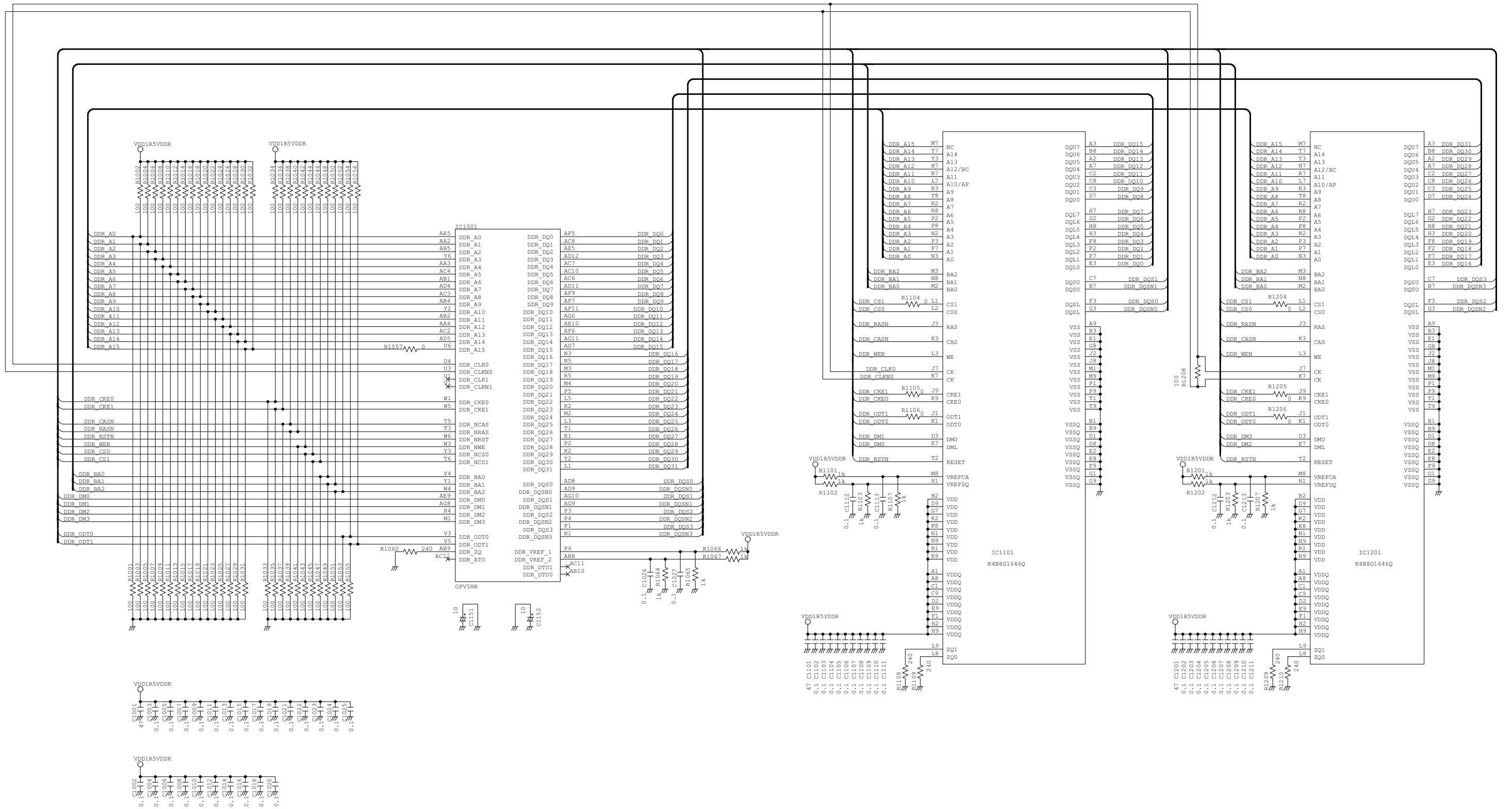


• LED UNIT

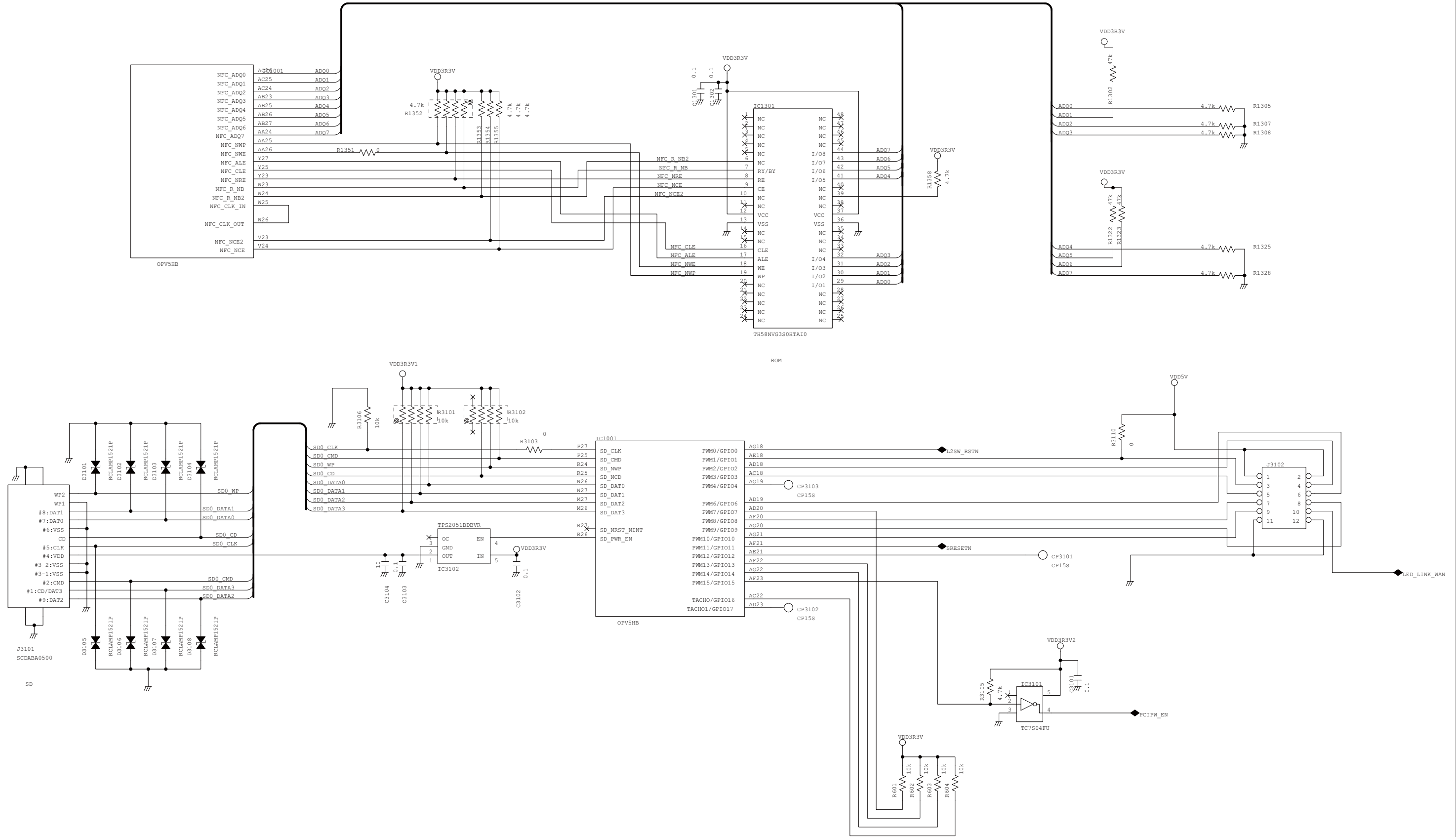


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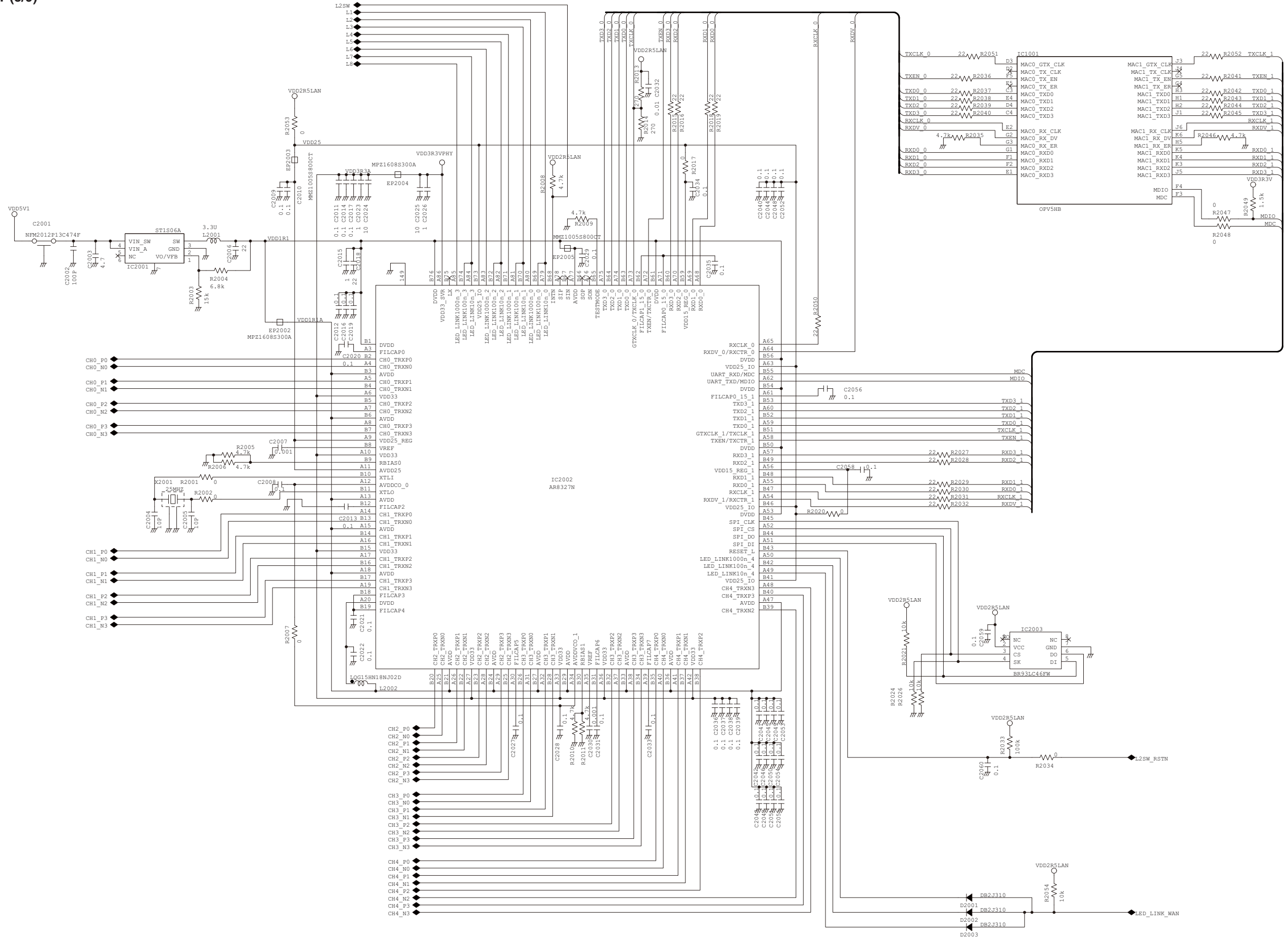




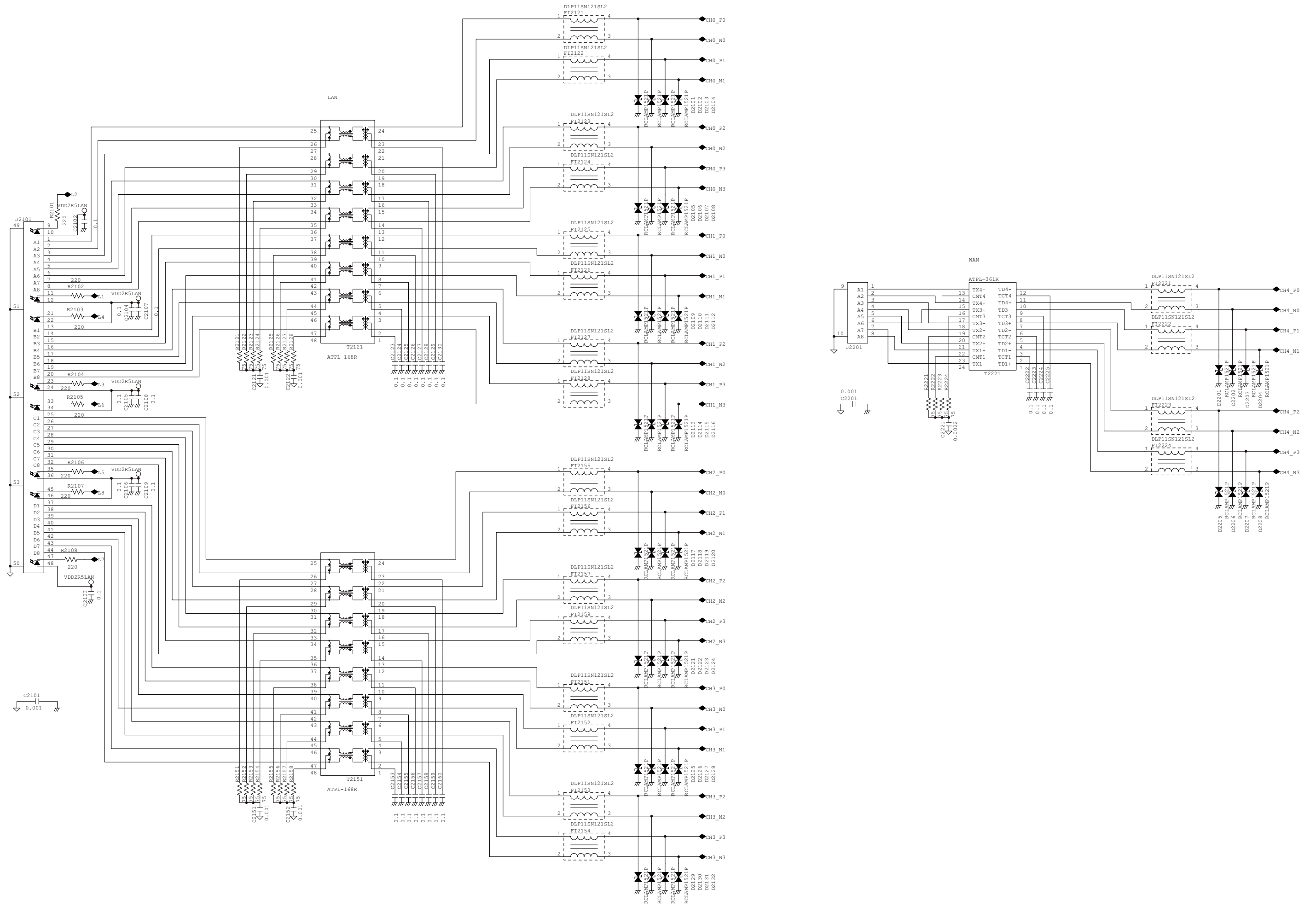
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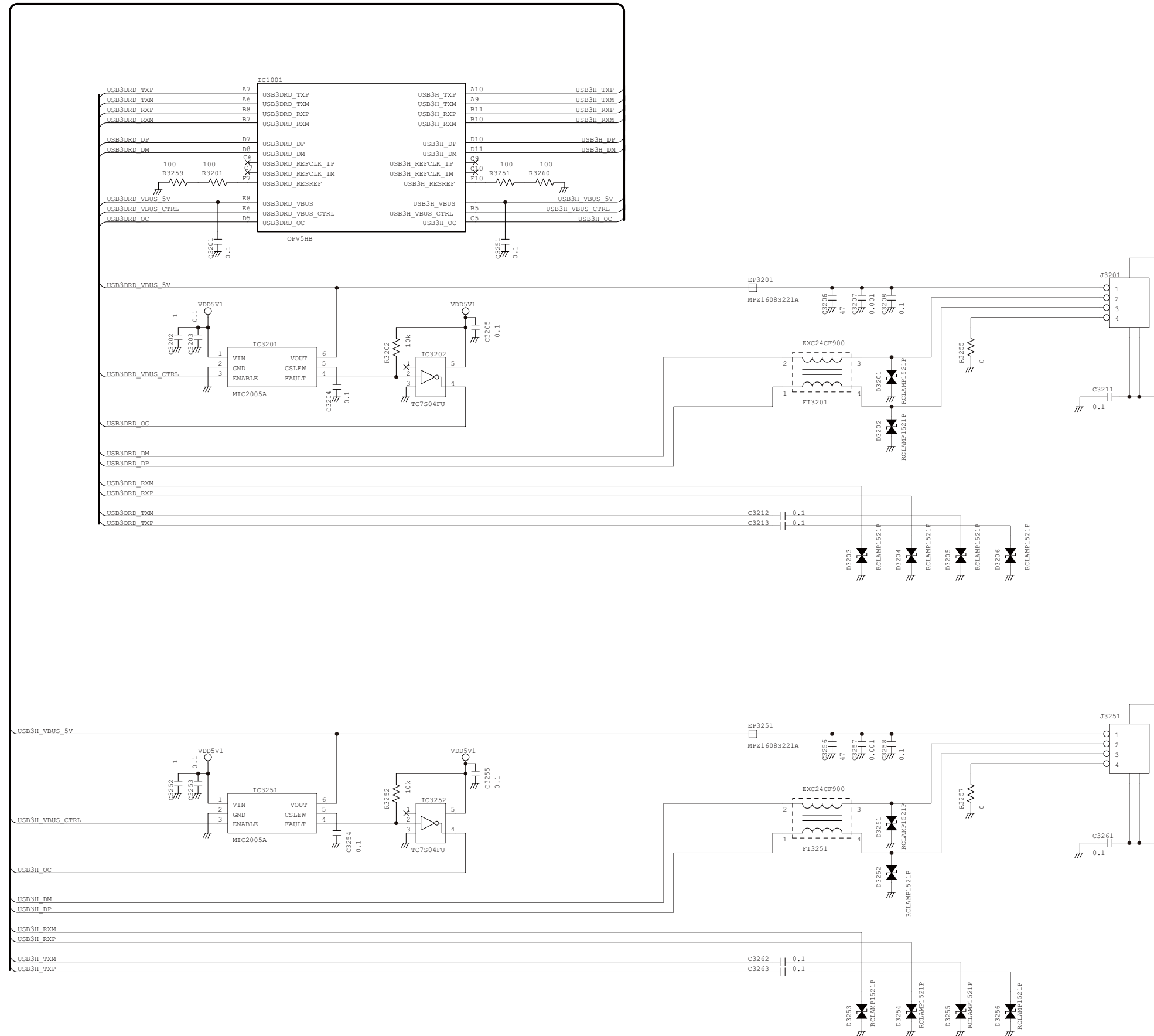
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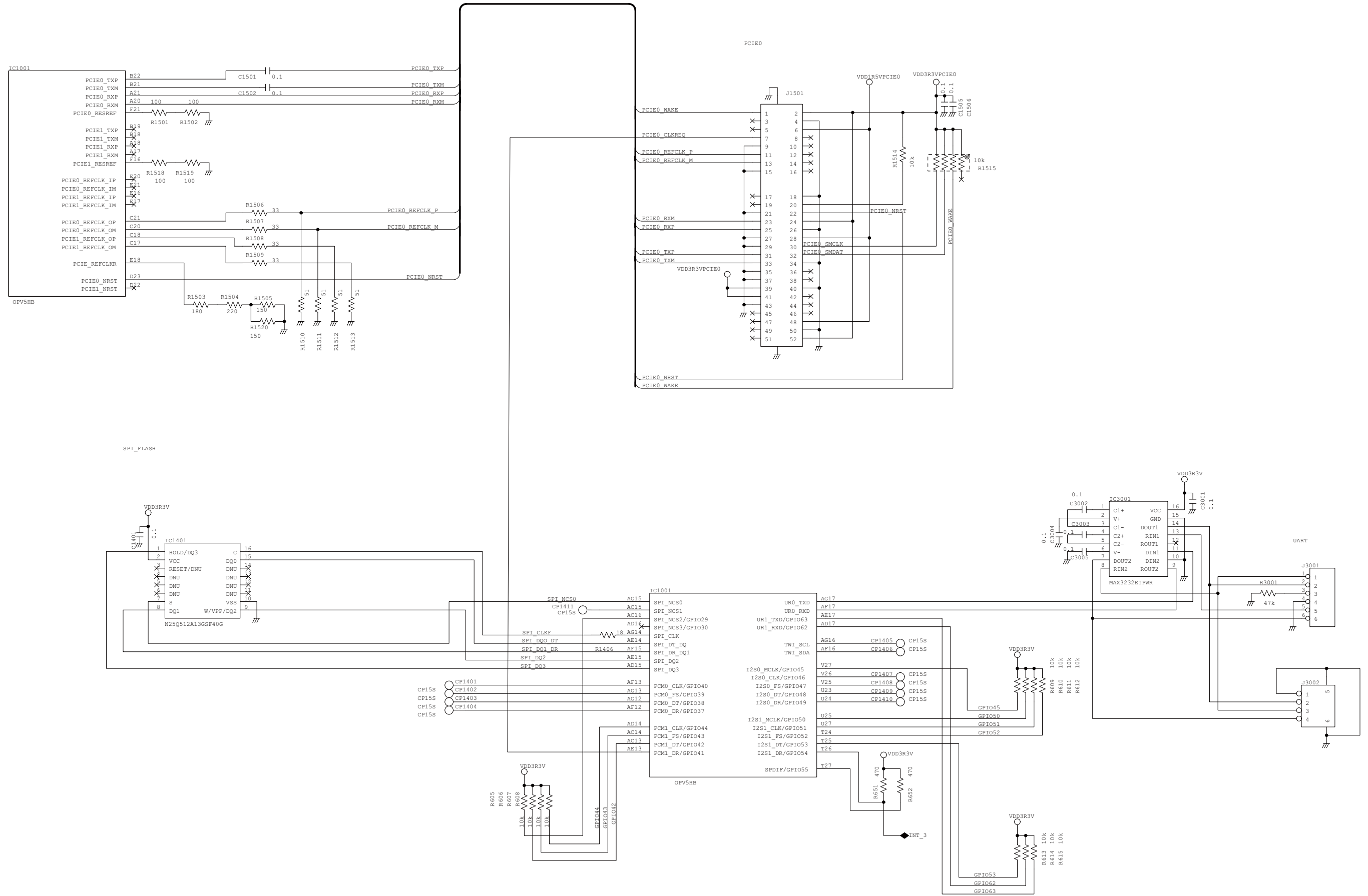
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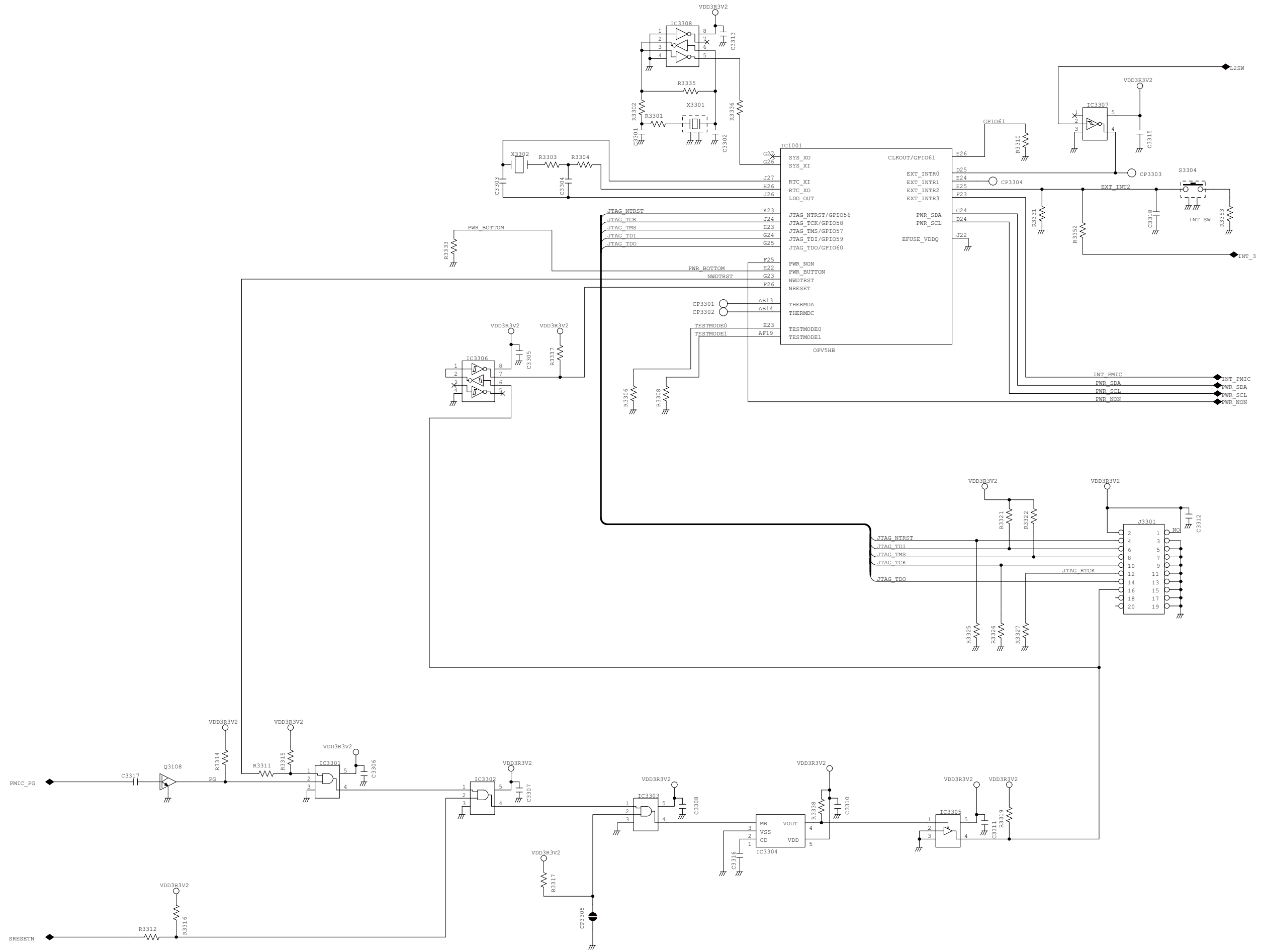
• MAIN UNIT (7/9)



• MAIN UNIT (8/9)



• MAIN UNIT (9/9)



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