


Regarding the usage of our schematics and alike documentation for Trenz module TE0817.

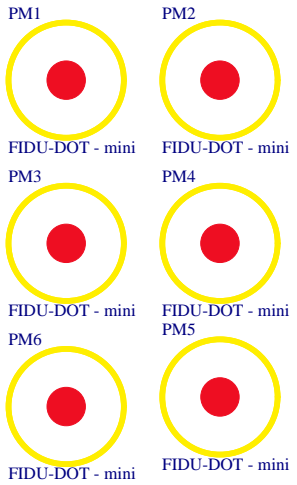
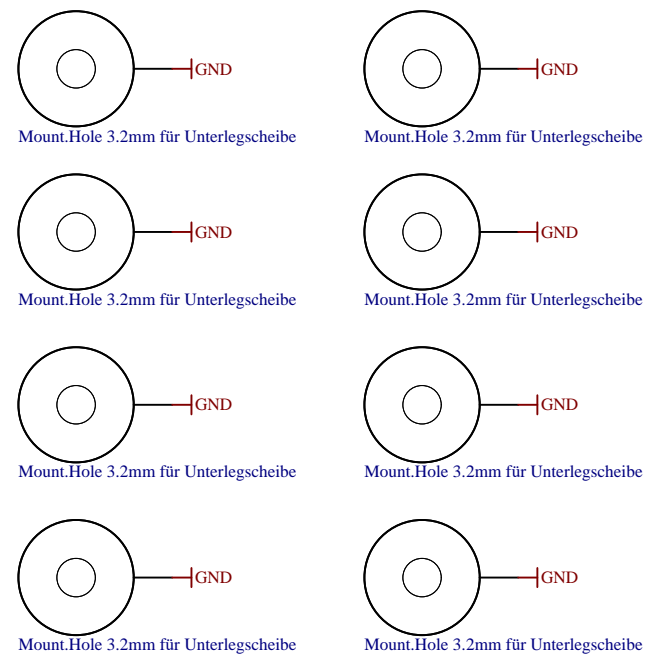
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Schematics and other handouts serve for informational purposes only!

	Title: <b>TE0817</b>		
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	Date: <b>2021-08-25</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>1</b> of <b>31</b>
	Filename: <b>Legal Notices Modules.SchDoc</b>		

U_J1 J1.SchDoc	U_B_PS_GT B_PS_GT.SchDoc	U_DDR4-TERM DDR4-TERM.SchDoc
U_J2 J2.SchDoc	U_PS_DDR PS_DDR.SchDoc	U_ZU_POWER ZU_POWER.SchDoc
U_J3 J3.SchDoc	U_B_MIO B_MIO.SchDoc	U_ZU_PS_POWER ZU_PS_POWER.SchDoc
U_J4 J4.SchDoc	U_B_HD B_HD.SchDoc	U_POWER POWER.SchDoc
U_DDR4-TERM DDR4-TERM.SchDoc	U_Clock Clock.SchDoc	U_POWER_2 POWER_2.SchDoc
U_B64 B64.SchDoc	U_CONFIG CONFIG.SchDoc	U_POWER_3 POWER_3.SchDoc
U_B65 B65.SchDoc	U_DDR4-RAM DDR4-RAM.SchDoc	U_POWER_4 POWER_4.SchDoc
U_B66 B66.SchDoc	U_DDR4-RAM_2 DDR4-RAM_2.SchDoc	U_TE0817-Overview TE0817-Overview.SchDoc
U_B_GT B_GT.SchDoc	U_DDR4-RAM_3 DDR4-RAM_3.SchDoc	U_Power_Diagram Power_Diagram.SchDoc
U_B_GT_2 B_GT_2.SchDoc	U_DDR4-RAM_4 DDR4-RAM_4.SchDoc	

Special notes:



LOGO1  
TE Logo PRINT Layer  
LOGO PRINT

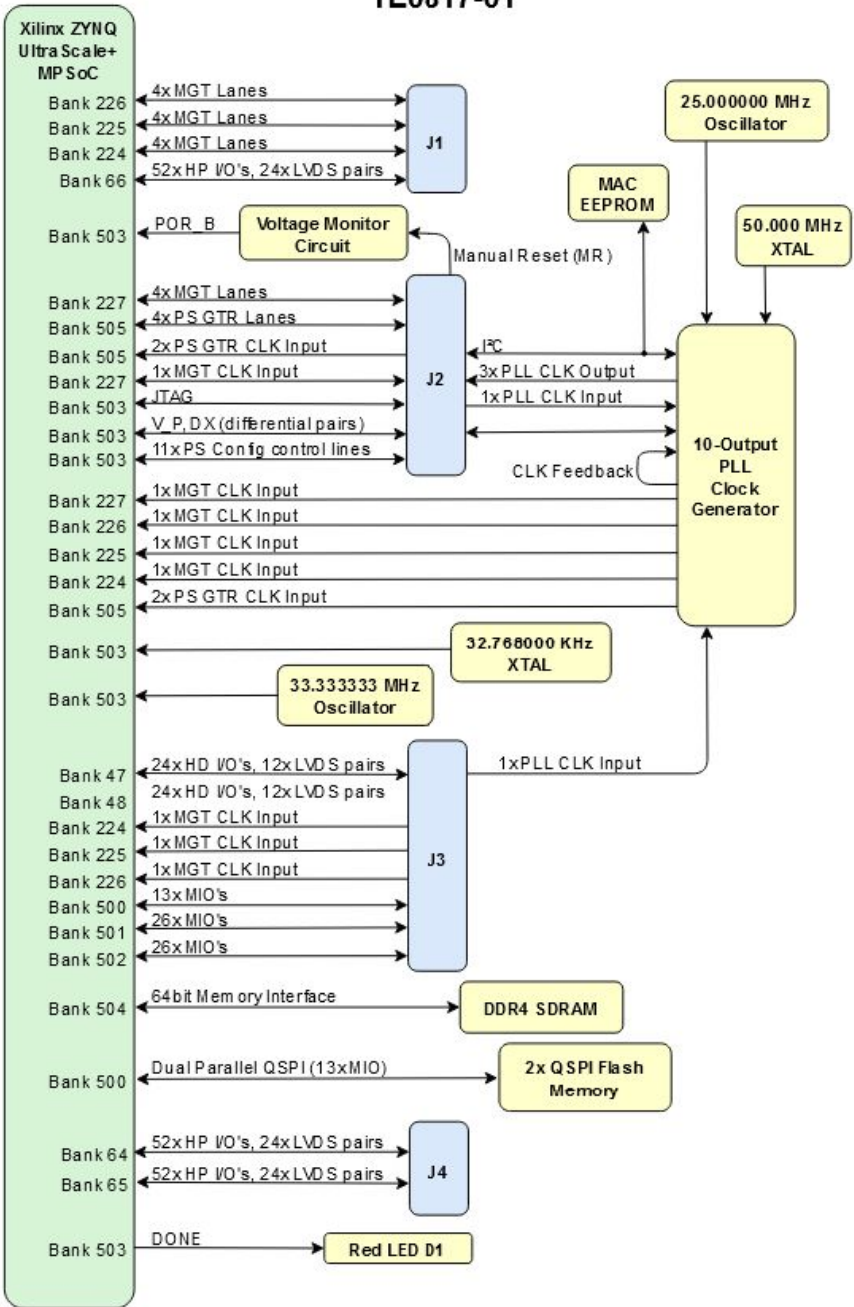
Serial  
Serialnumber 6,3 x 6.3mm

MECH1  
TE Address Overlay  
LOGO ADDRESS

Assembly variant	7AI21-A
Created by	ED
Modified by	VT
Modified at	2022-05-12
SVN Revision	12508

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### TE0817-01



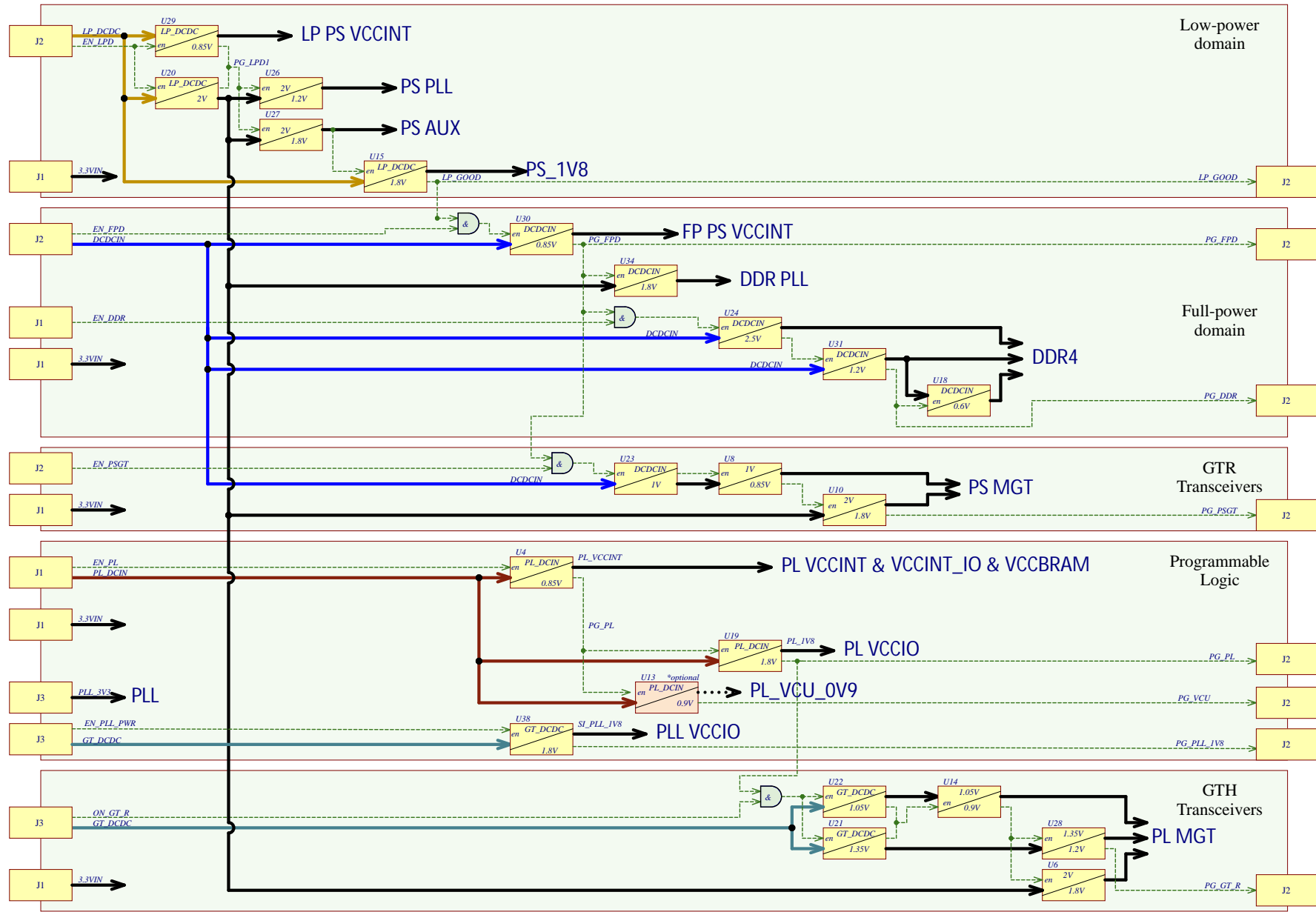
### Supported Voltage Ranges:

Power Rail	Direction	Range	Tolerance	Description	Note
3.3VIN	IN	3.3V	+/-5%	Micromodule Power	-
PL_DCIN	IN	3.3 - 5.0V *	+/-5%	Micromodule Power	Programmable Logic, supplied by power rail
LP_DCDC	IN	3.3 - 5.0V	+/-5%	Micromodule Power	Low-Power Domain, supplied by power rail
GT_DCDC	IN	3.3 - 5.0V	+/-5%	Micromodule Power	GTH/GTY Transceiver, supplied by power rail
DCDCIN	IN	3.3 - 5.0V	+/-5%	Micromodule Power	Full-Power Domain and GTR, supplied by power rail
VCCO_64	IN	1.0 - 1.8V	+/-3%	HP IO Bank64	-
VCCO_65	IN	1.0 - 1.8V	+/-3%	HP IO Bank65	-
VCCO_66	IN	1.0 - 1.8V	+/-3%	HP IO Bank66	-
VCCO_47	IN	1.2 - 3.3V	+/-3%	HD IO Bank47	-
VCCO_48	IN	1.2 - 3.3V	+/-3%	HD IO Bank48	-
PSBATT	IN	1.2 - 1.5V	-	RTC / BBRAM	-
PLL_3V3	IN	3.3V	+/-5%	PLL Analog Power	-
PL_1V8	OUT	1.8V	+/-5%	Power for Carrier	Micromodule: Programmable Logic
PS_1V8	OUT	1.8V	+/-5%	Power for Carrier	Micromodule: Processing System
DDR_1V2	OUT	1.2V	+/-5%	Power for Carrier	Micromodule: PS DDR I/O Supply

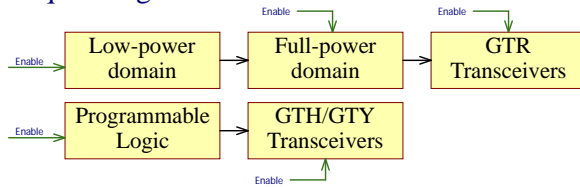
\* for Micromodules, where U4 is TPS548A28RWR or MPQ8633BGL-Z maximum Vin range will be 3.3V



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Filename: <b>TE0817-Overview.SchDoc</b>		



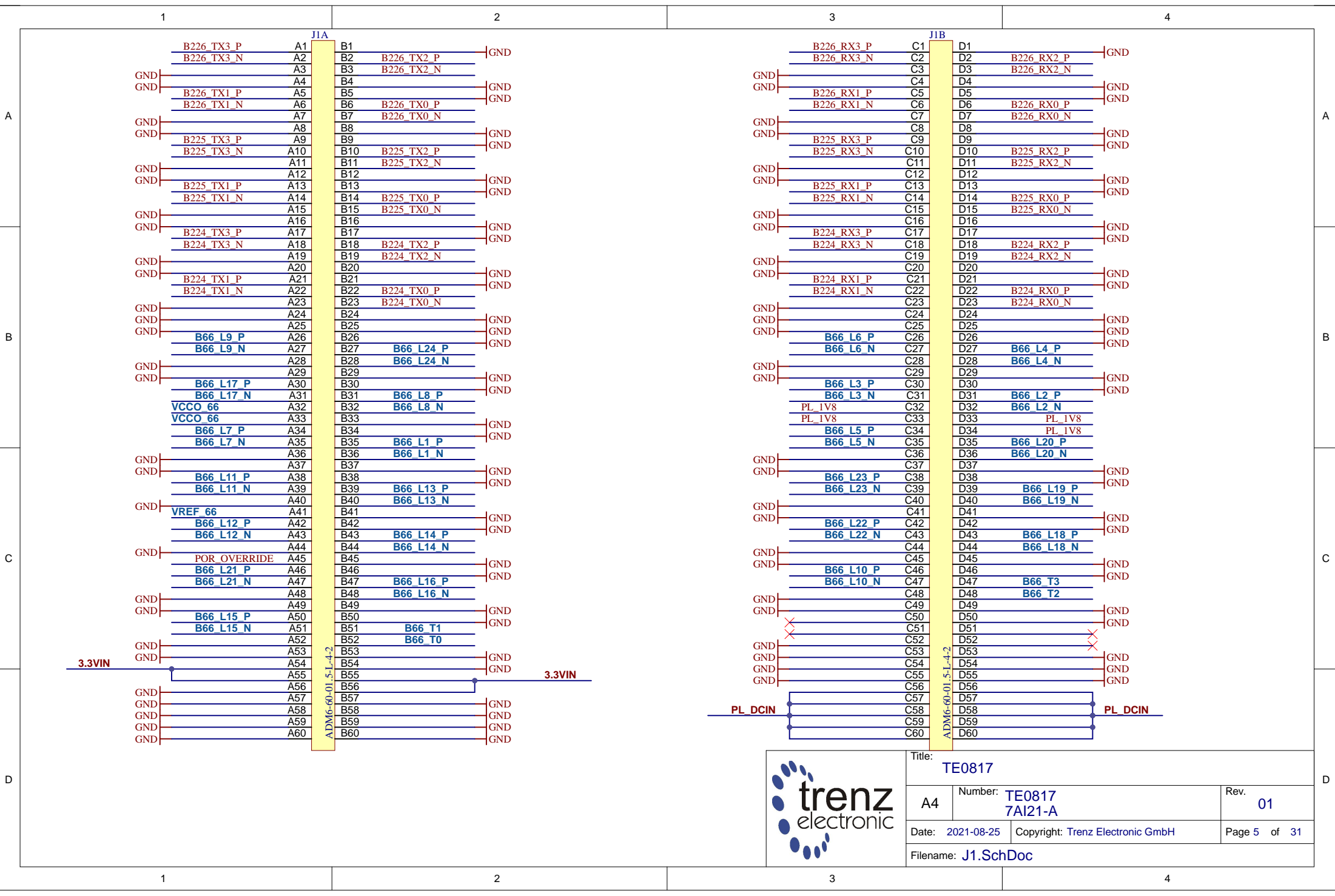
**Power-on sequencing:**



- Net name
- Power bus
- Control signal
- Power bus in FPGA speedgrade -1/2/-3 assembly variants
- Power bus in FPGA speedgrade -1L/-2L assembly variants (low power)
- Optional power converter
- Logic AND gate



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1

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3

4

A

A

B

B

C

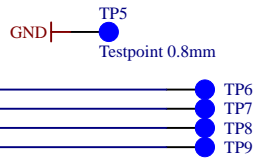
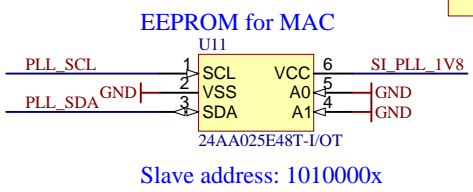
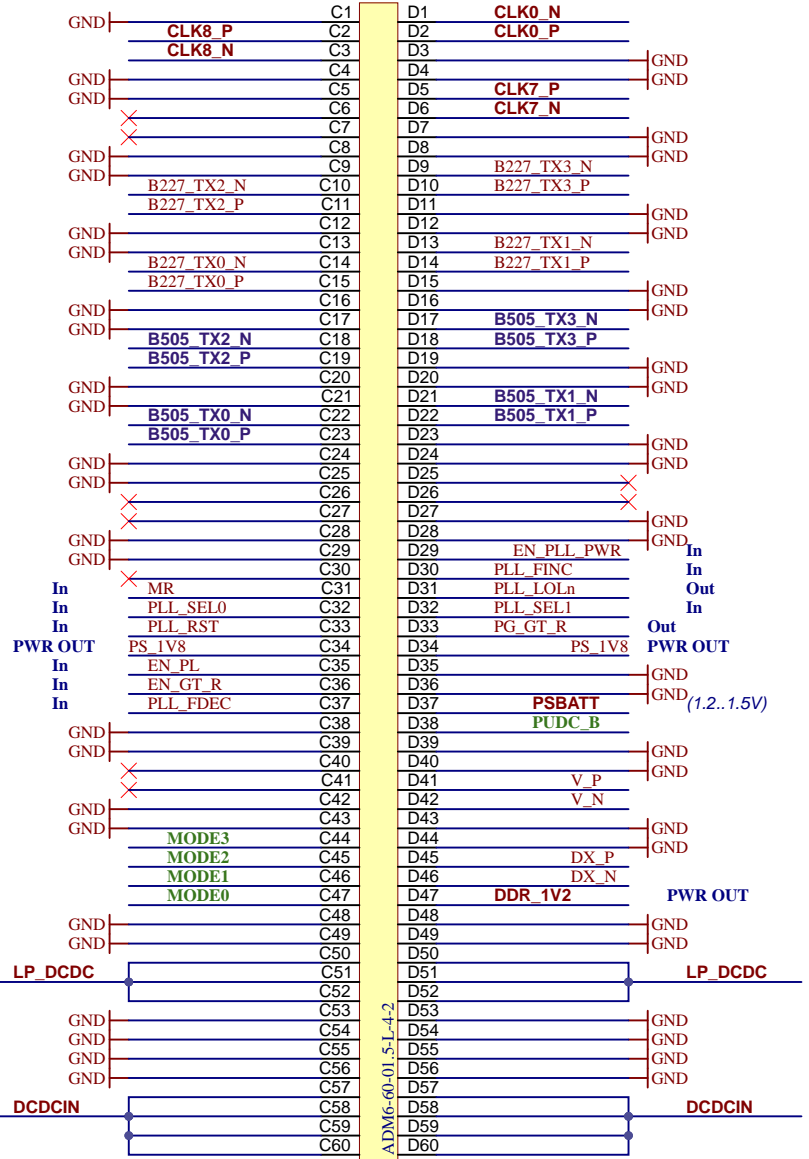
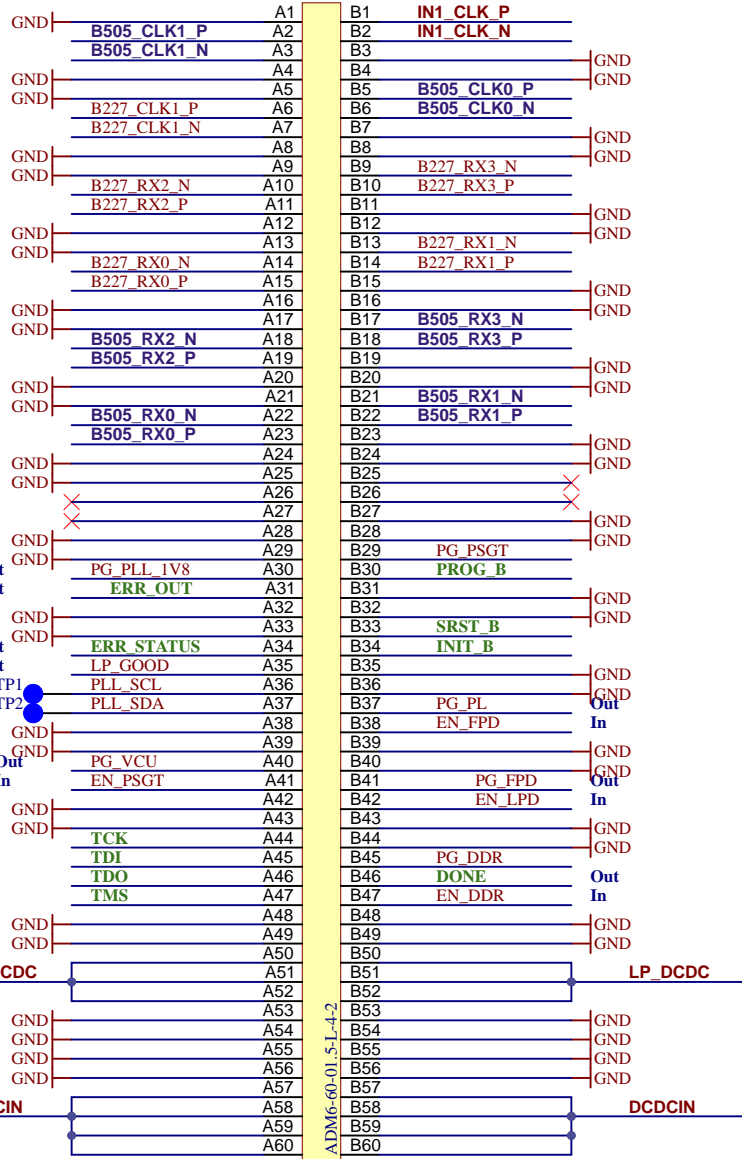
C

D

D

J2A  
ADM6-60-01\_5-L-4-2

J2B  
ADM6-60-01\_5-L-4-2



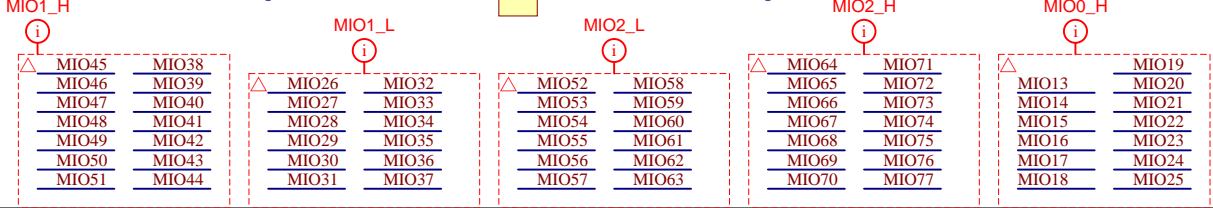
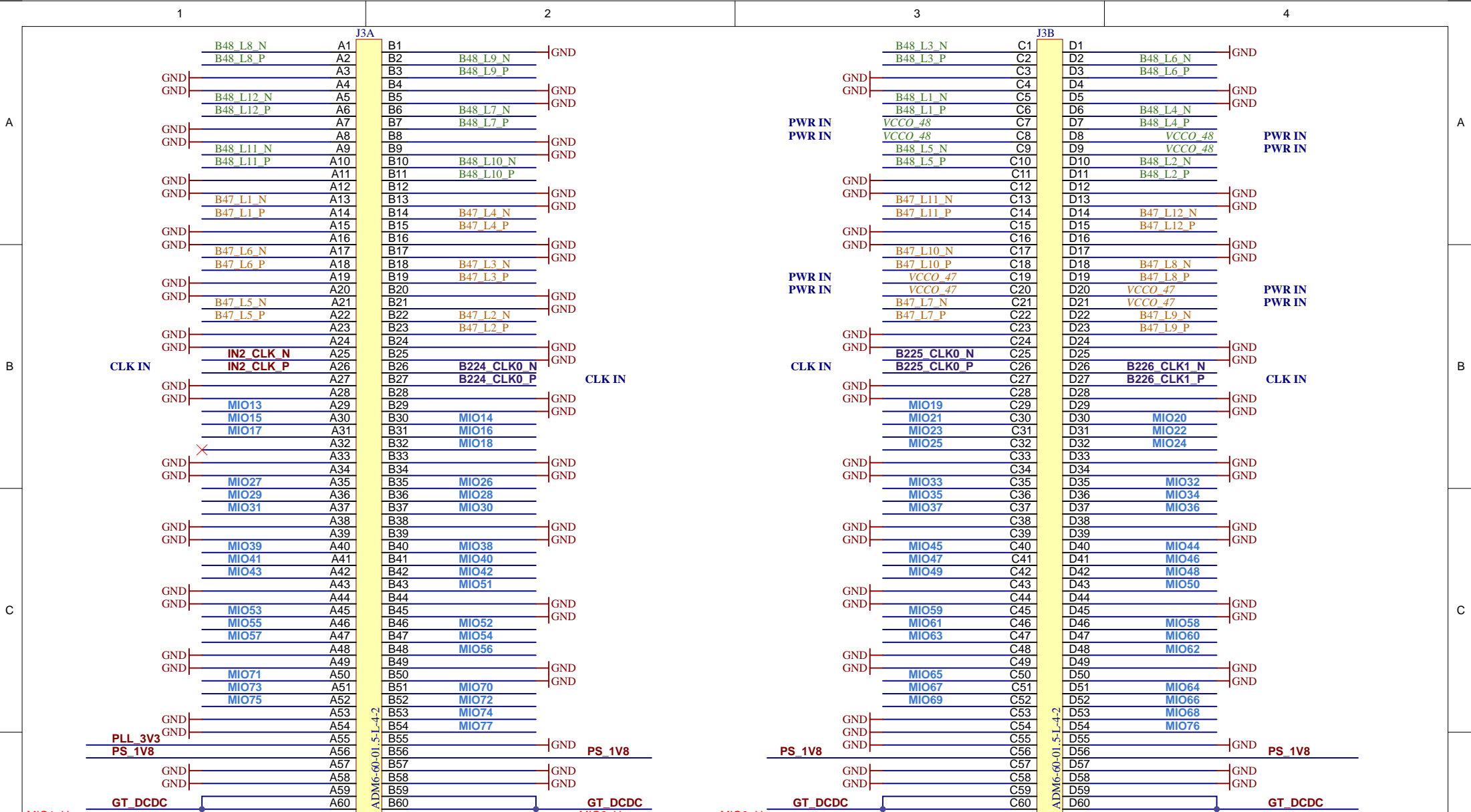
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1

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3

4



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1

2

3

4

A

A

B

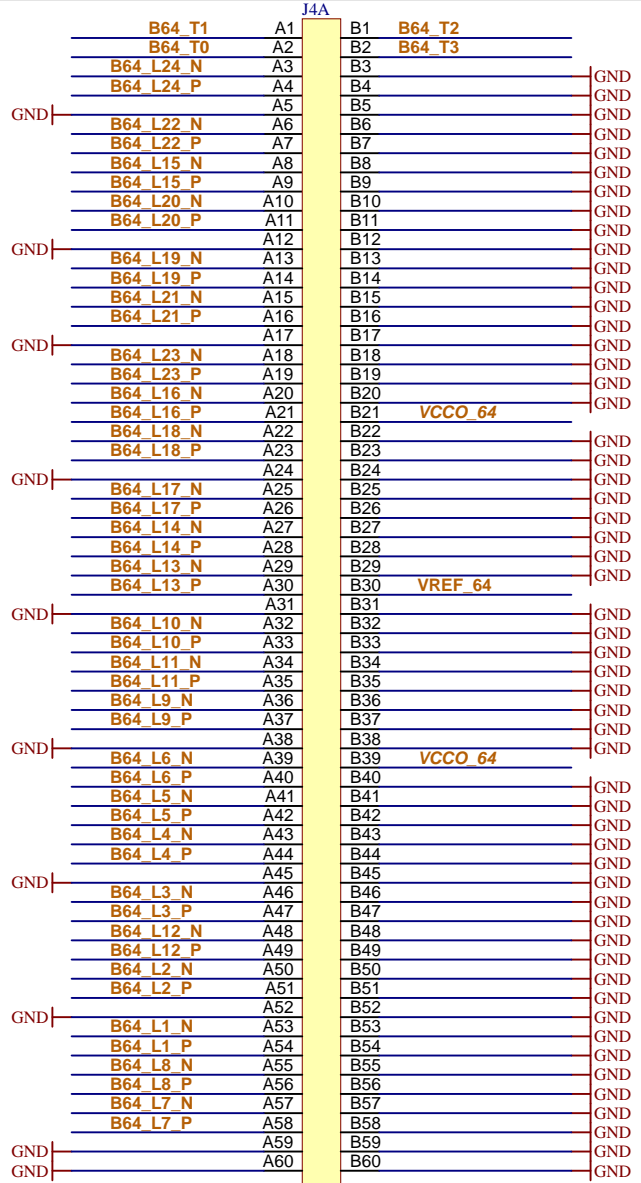
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C

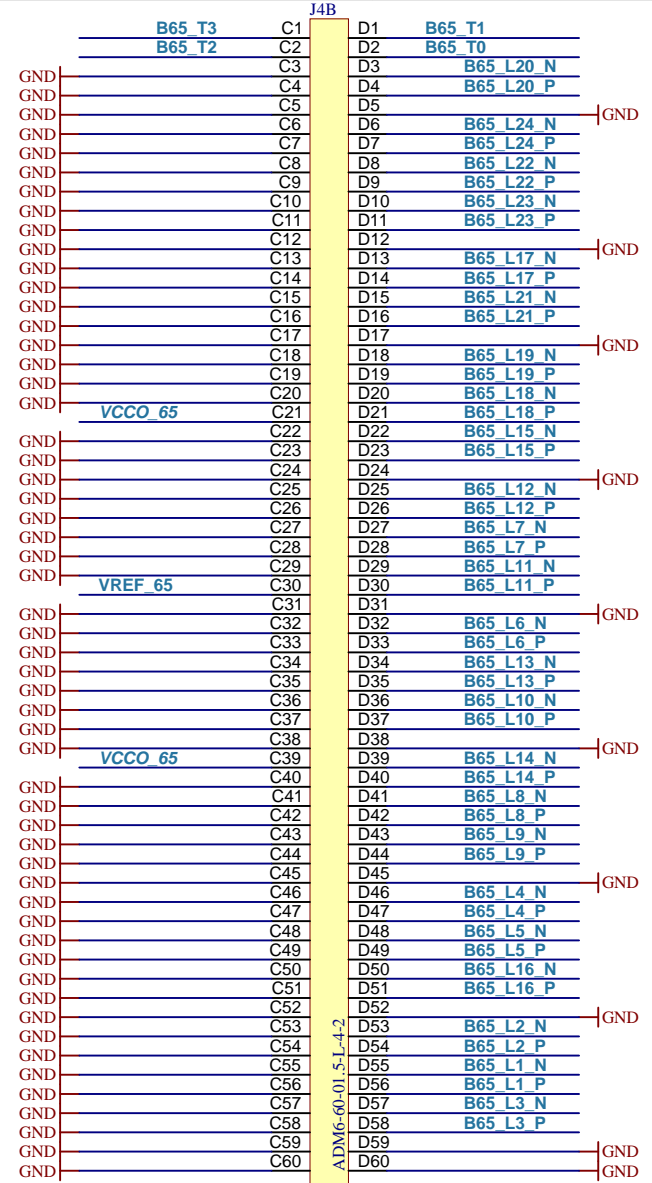
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D

D



ADM6-60-01.5-L-4-2



ADM6-60-01.5-L-4-2



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Filename: <b>J4.SchDoc</b>		

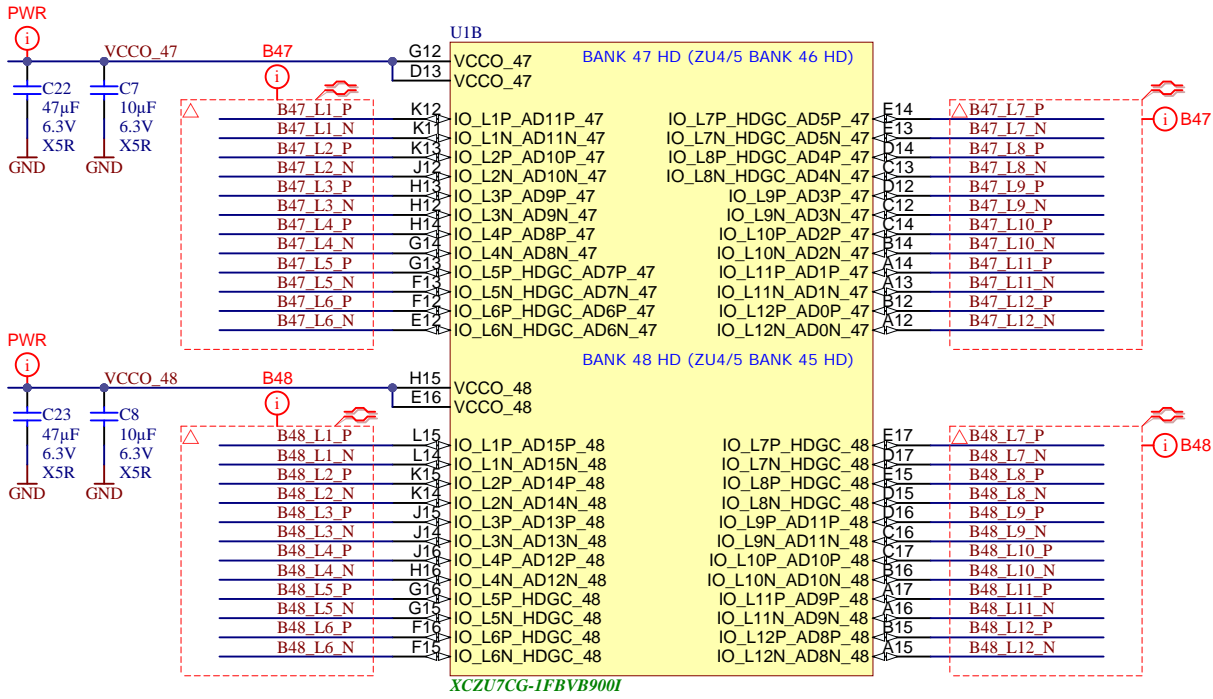

1

2

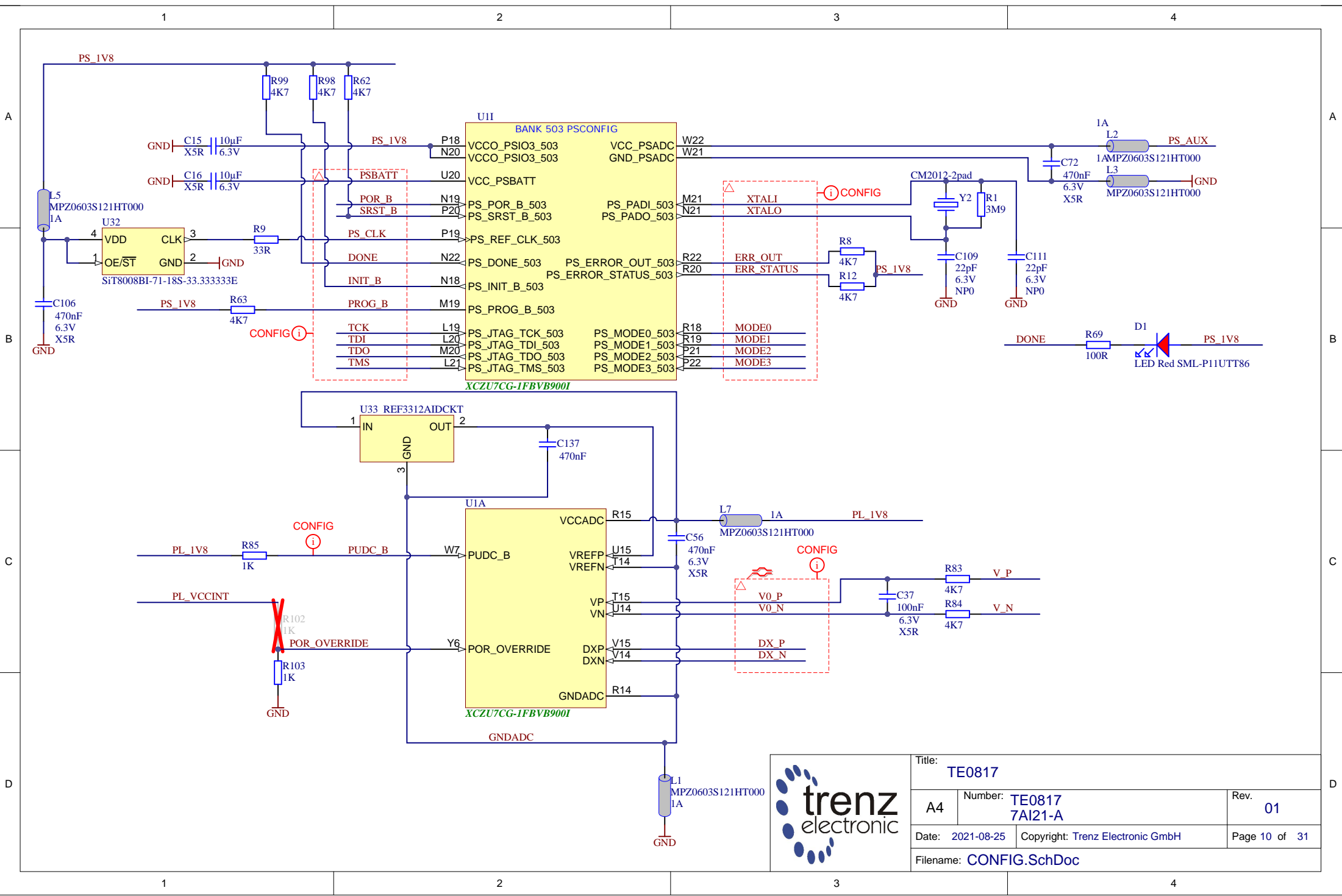
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4

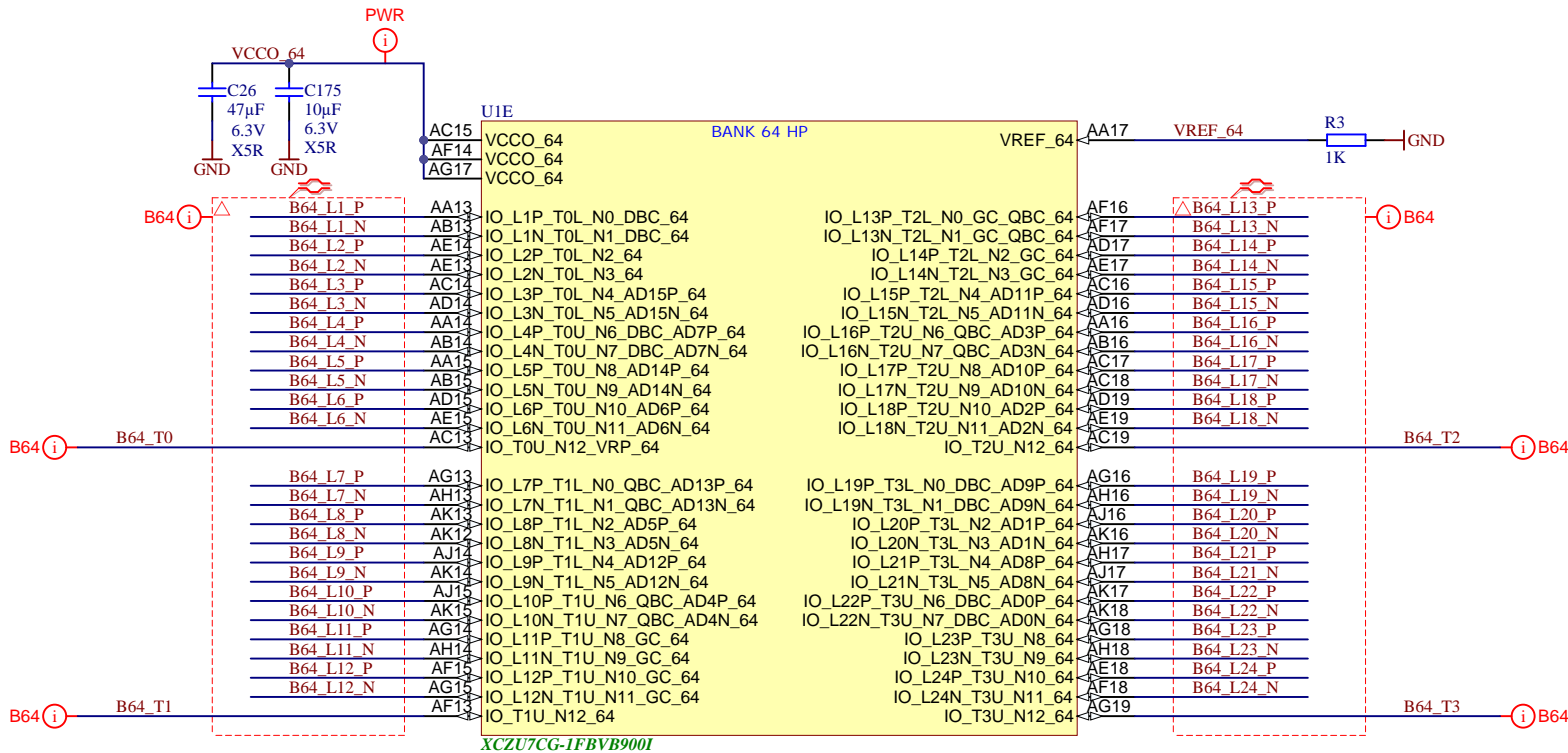


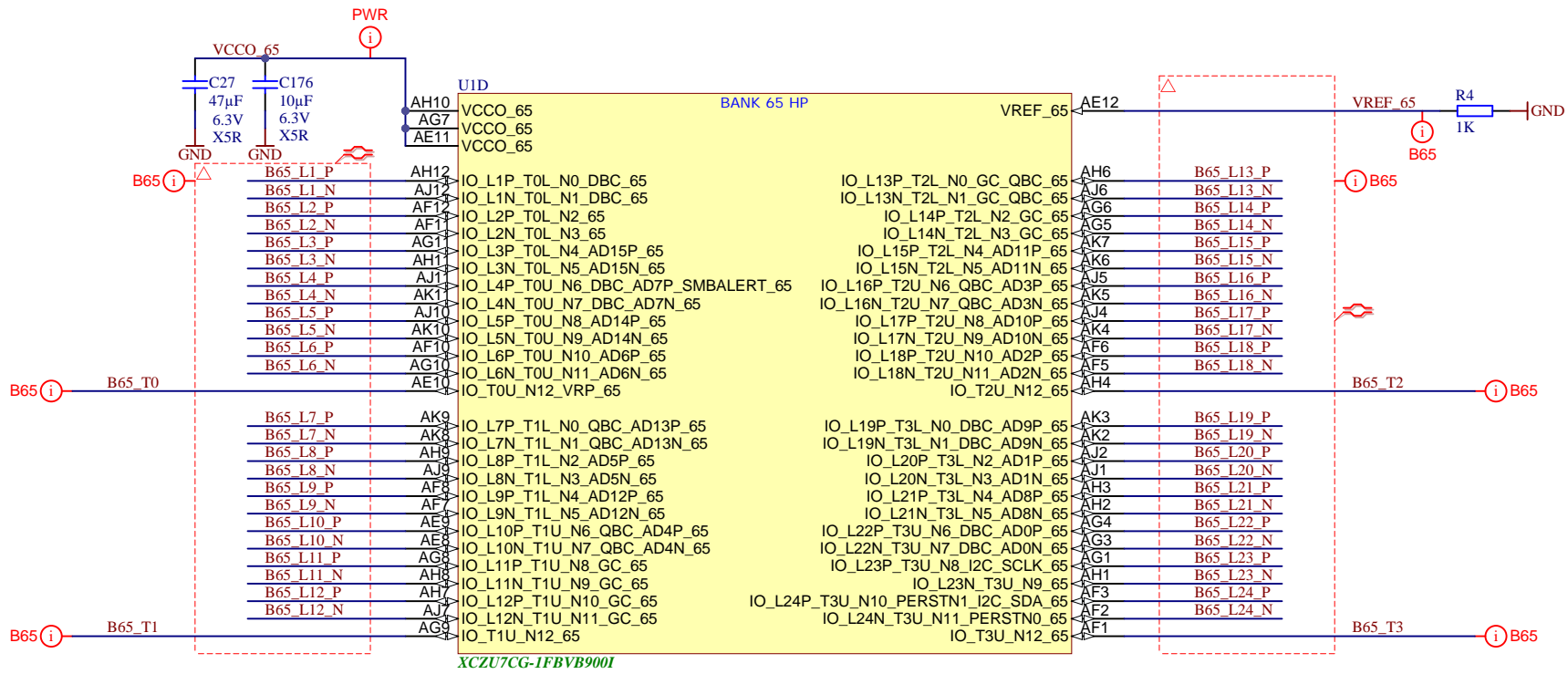
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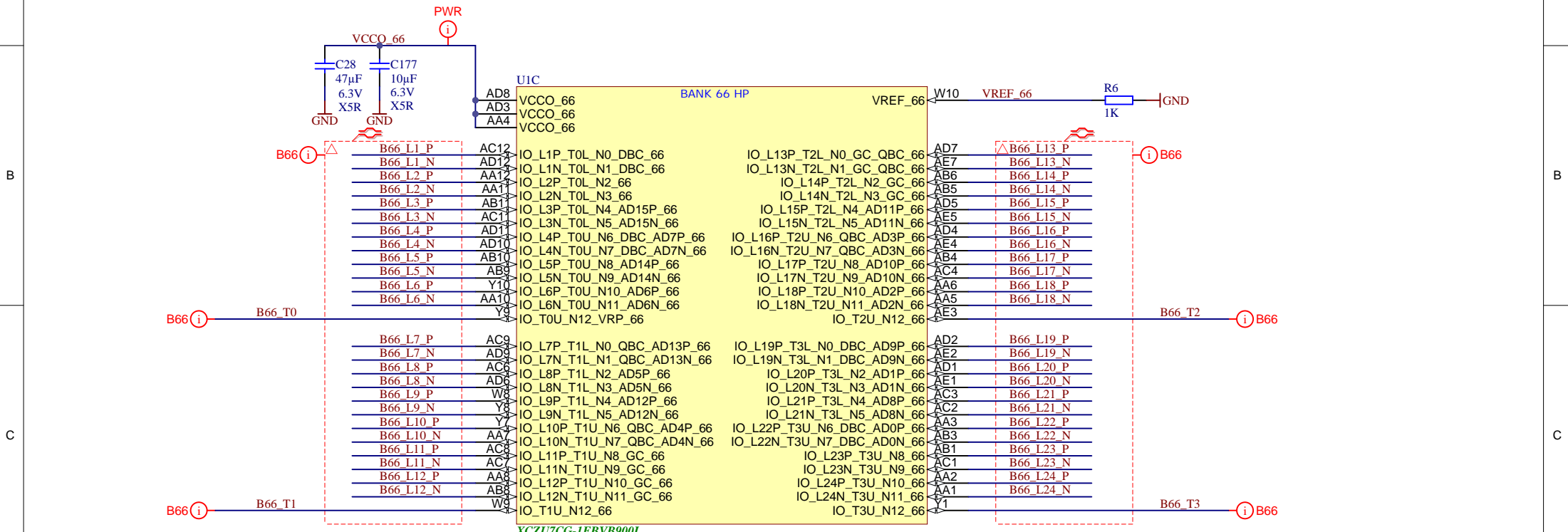
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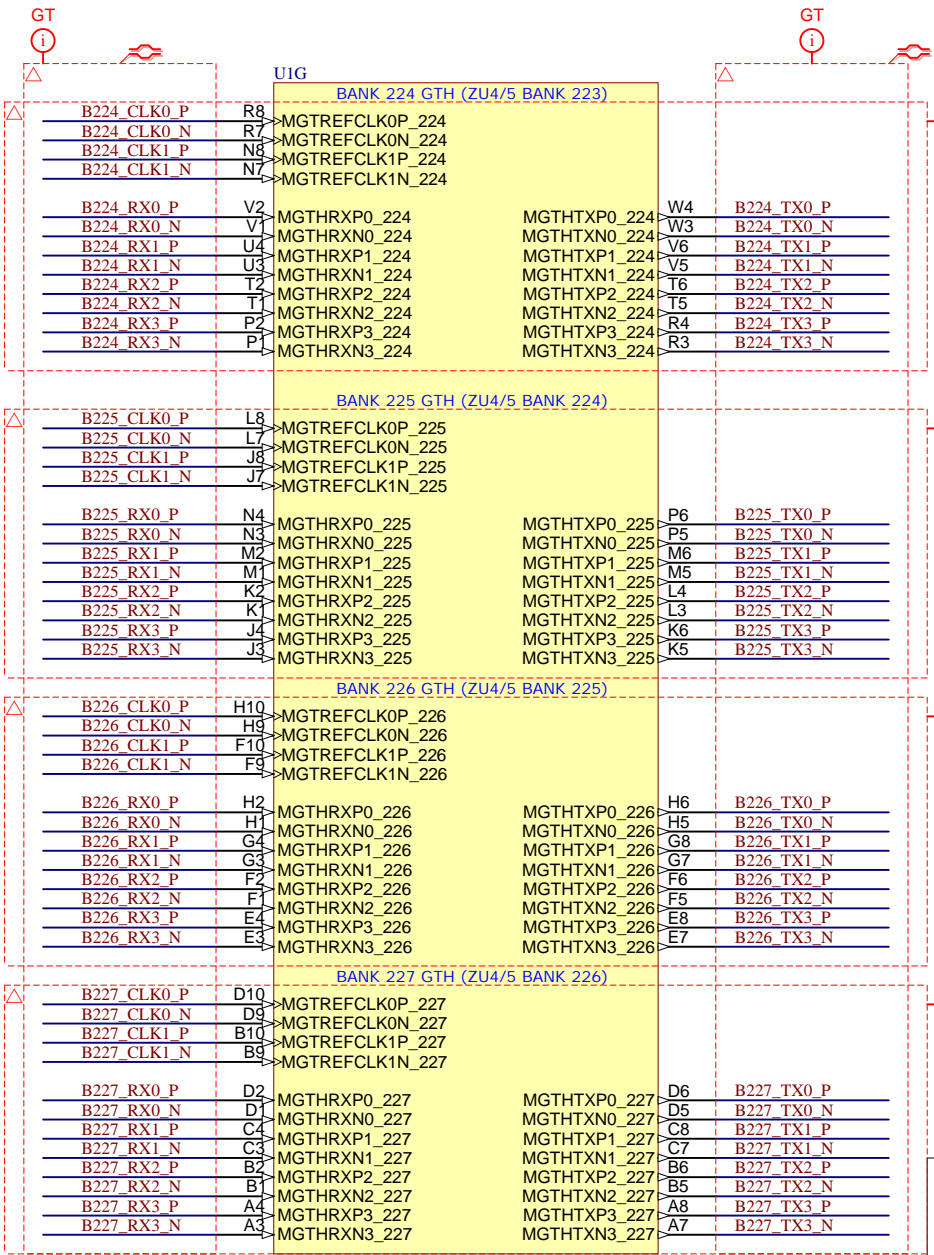
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Filename: <b>B64.SchDoc</b>		



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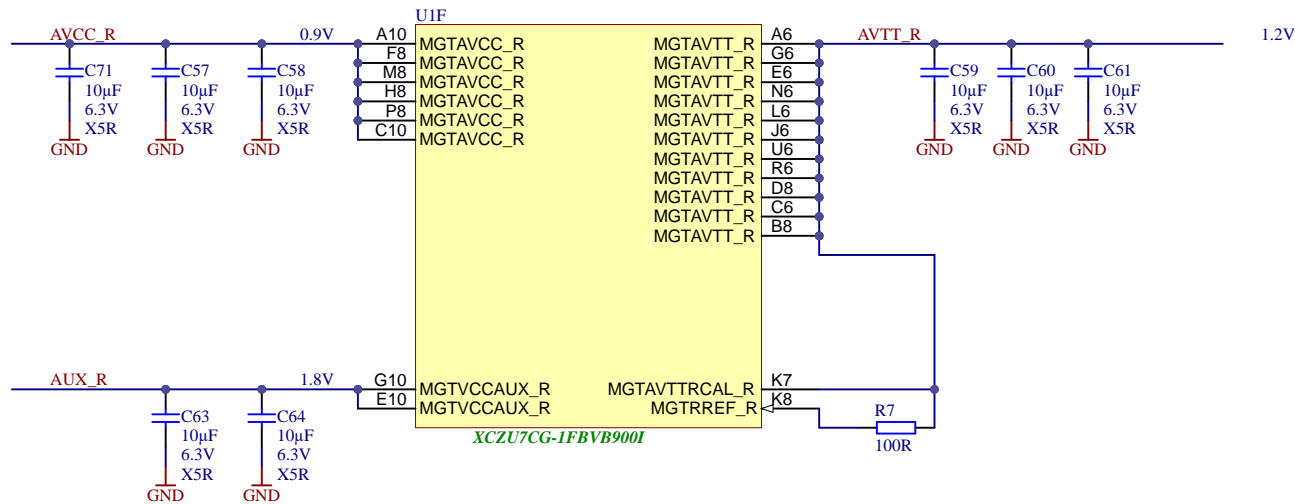
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Filename: B66.SchDoc		Page 13 of 31	




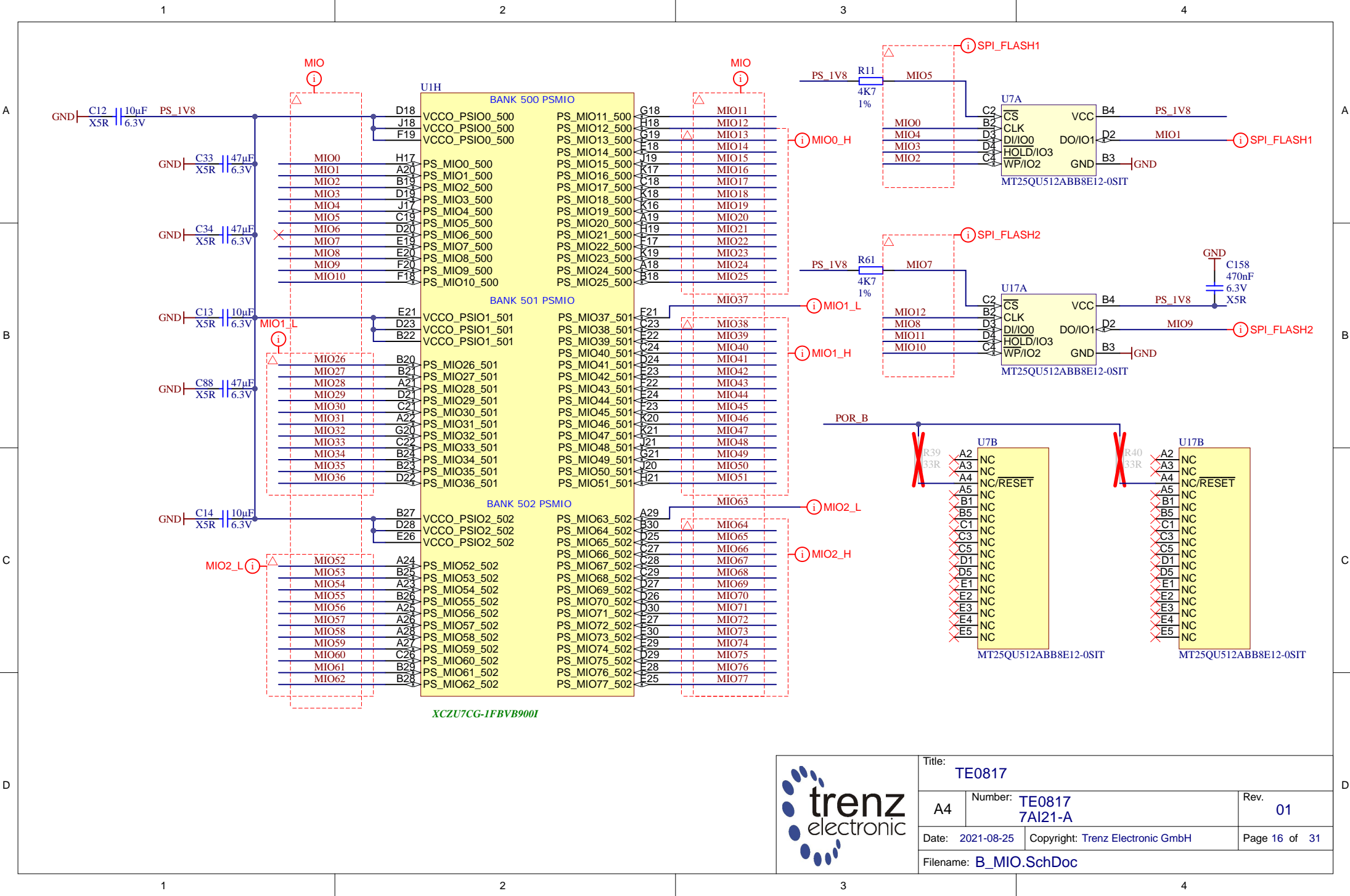
XZU7CG-1FBVB9001



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Filename: <b>B_MIO.SchDoc</b>	Rev. <b>01</b>
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A

A

B

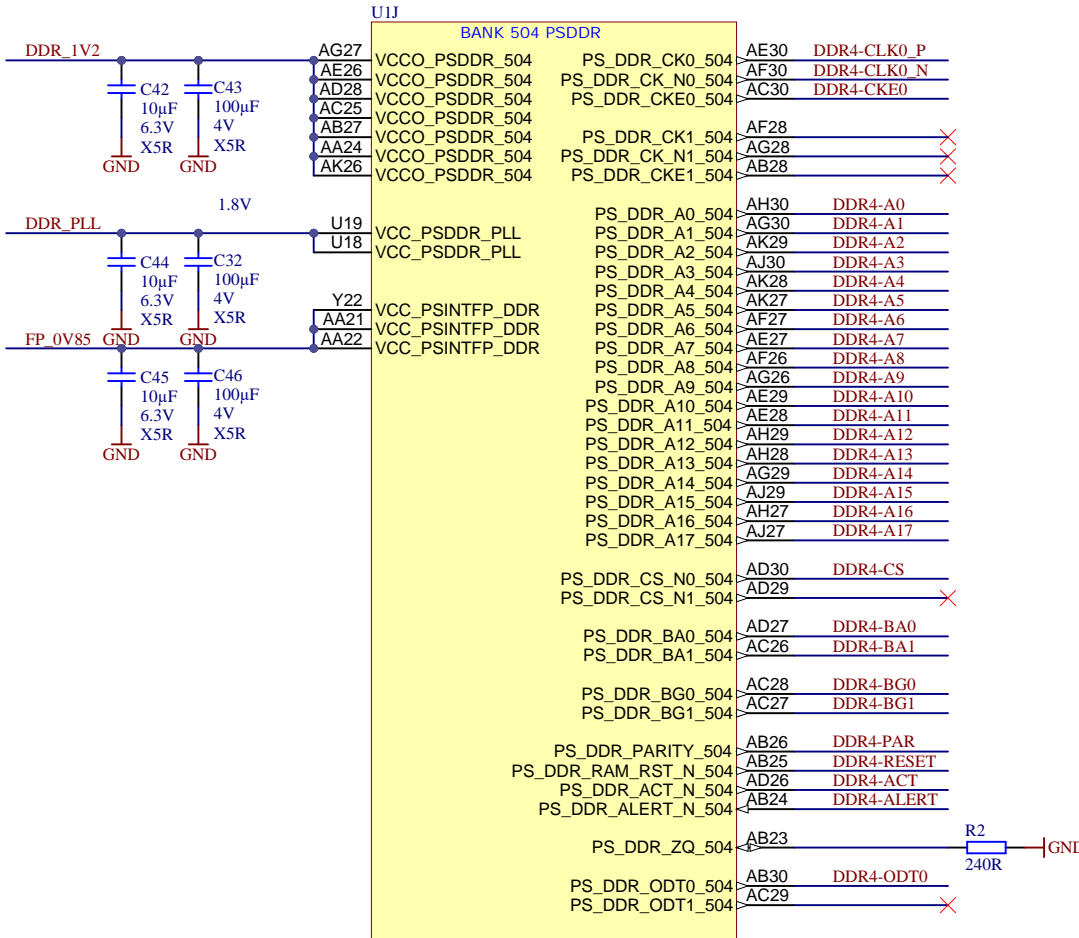
B

C

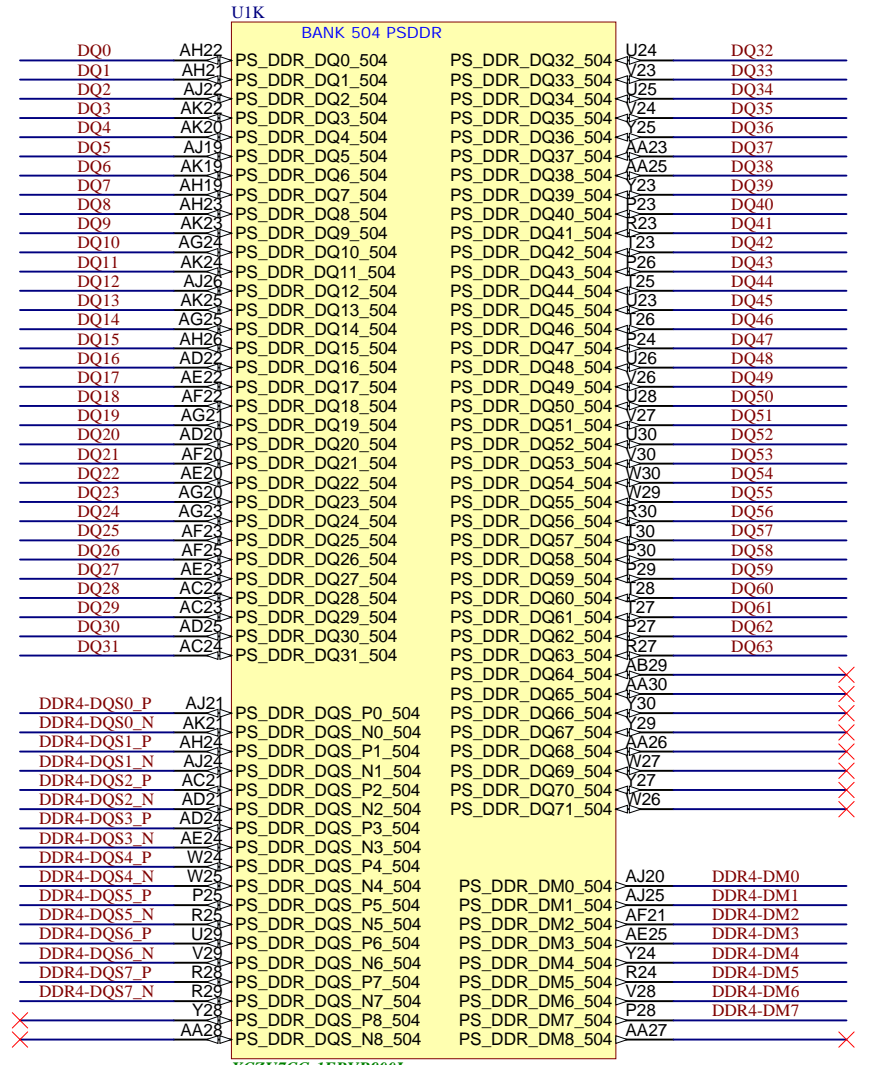
C

D

D



XCZU7CG-1FBVB9001



XCZU7CG-1FBVB9001



Title: TE0817		
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1

2

3

4

A

A

B

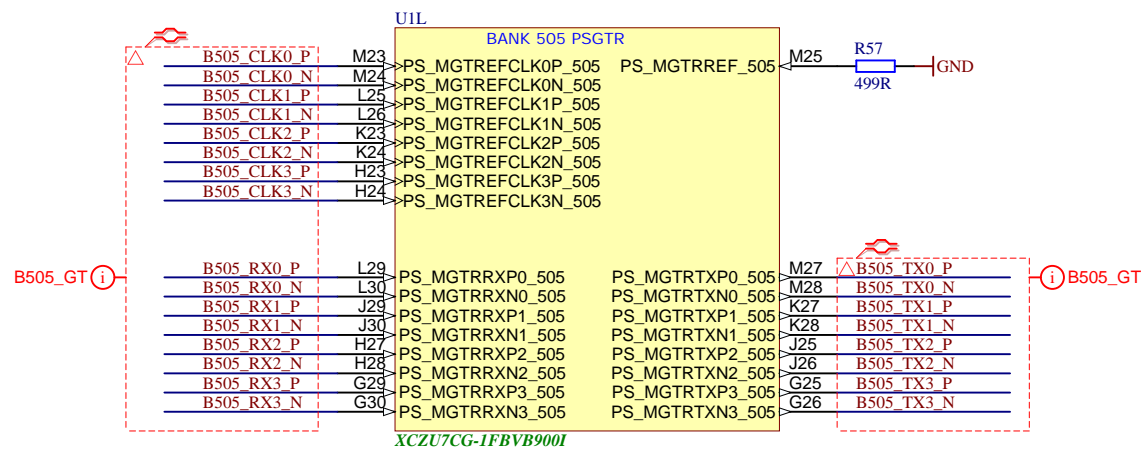
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C

C

D

D



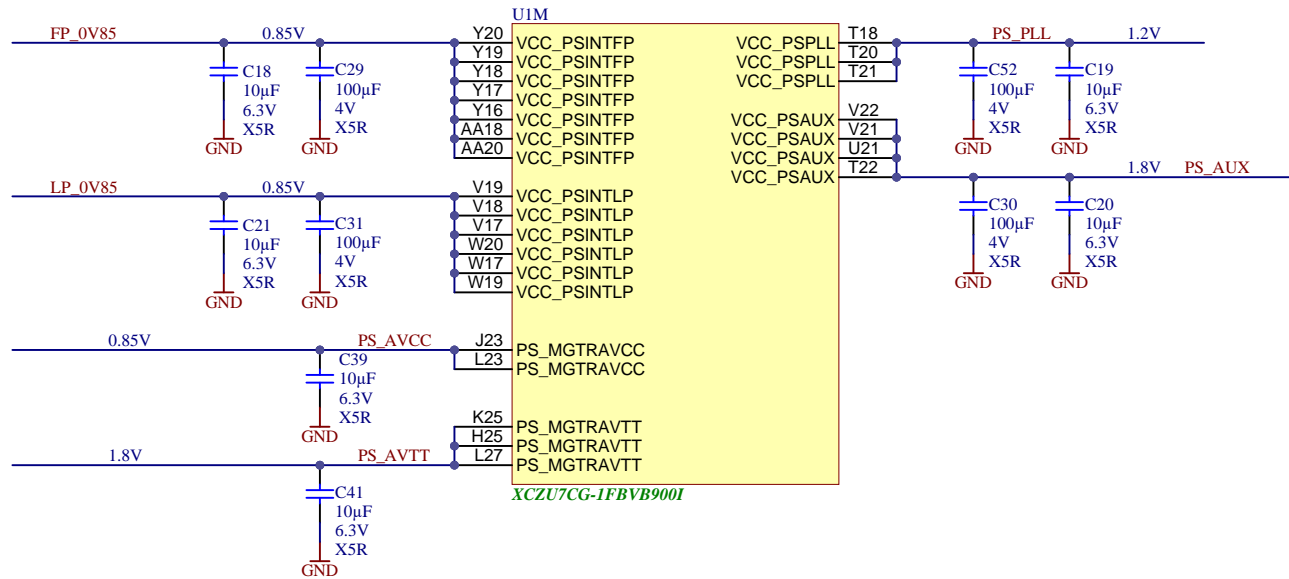
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Filename: <b>B_PS_GT.SchDoc</b>		

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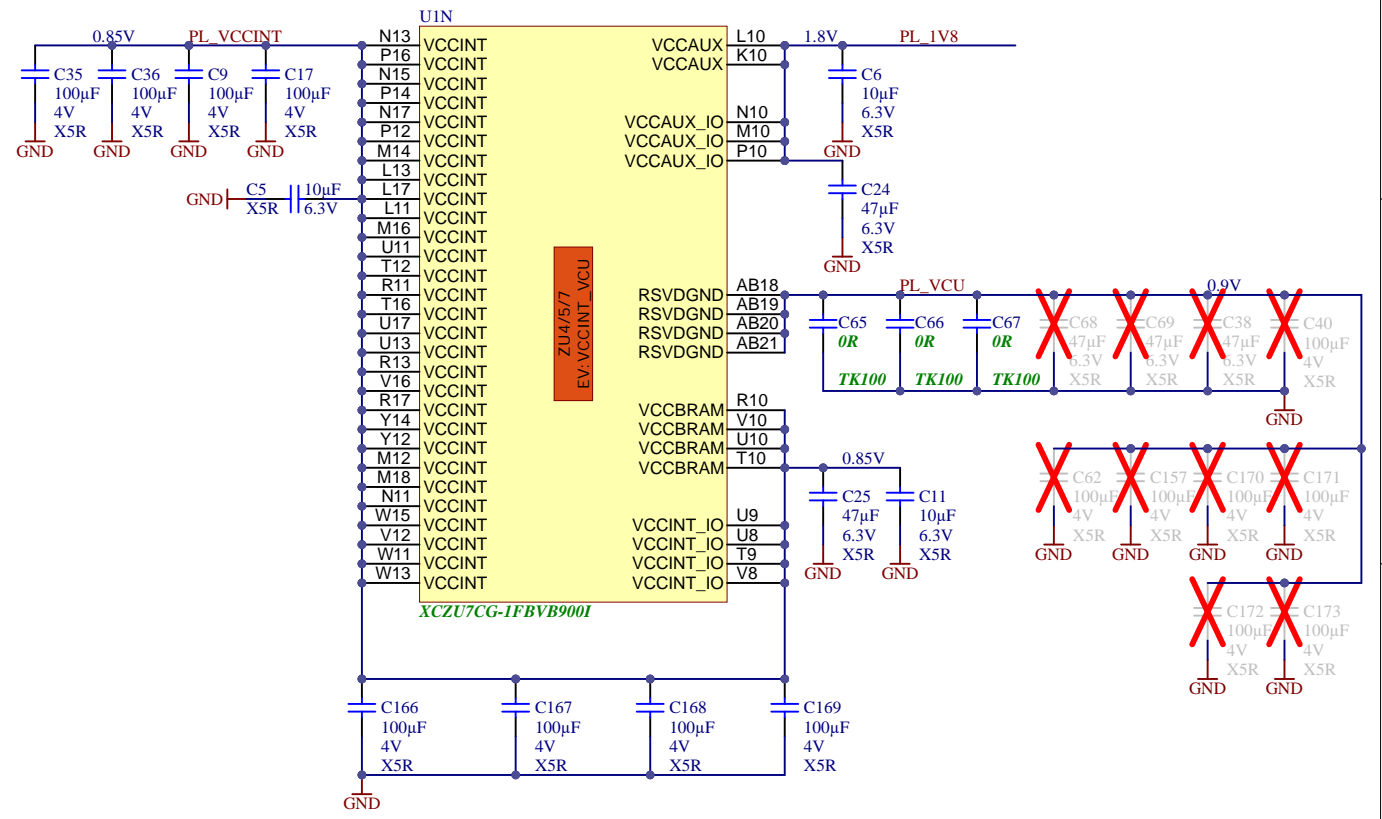
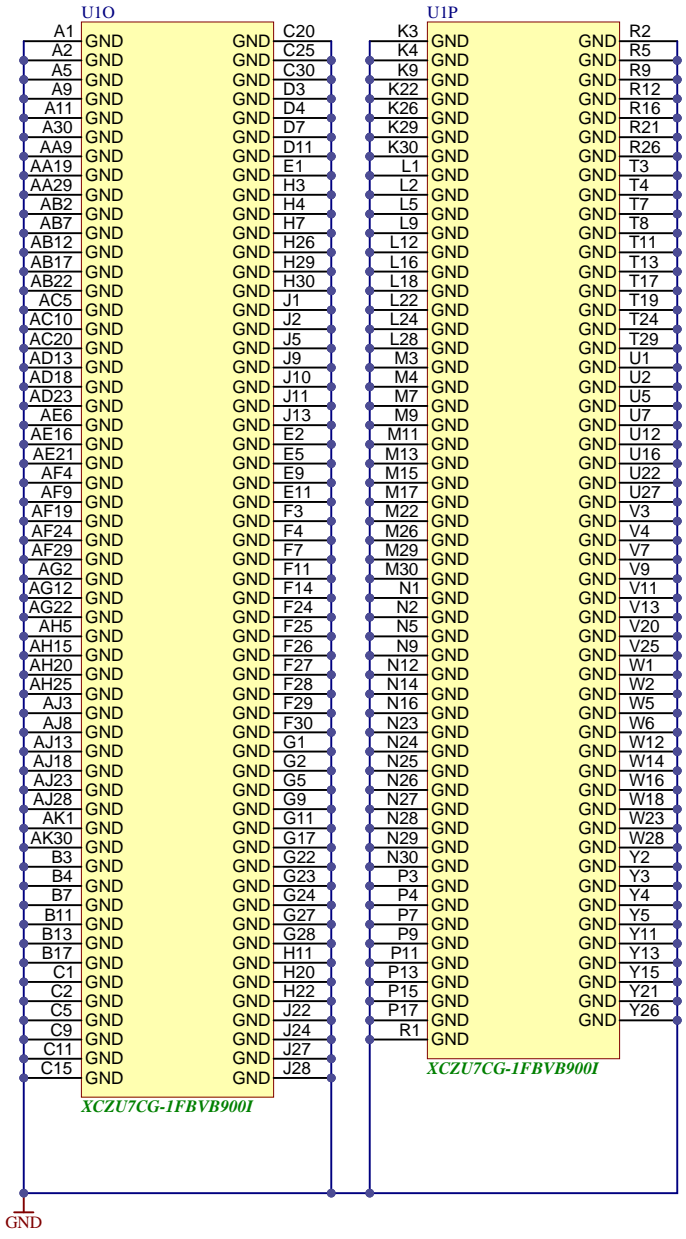
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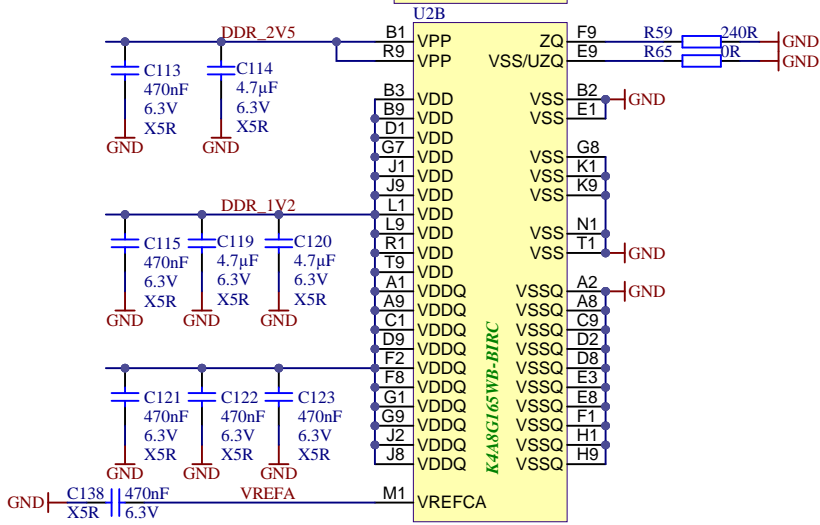
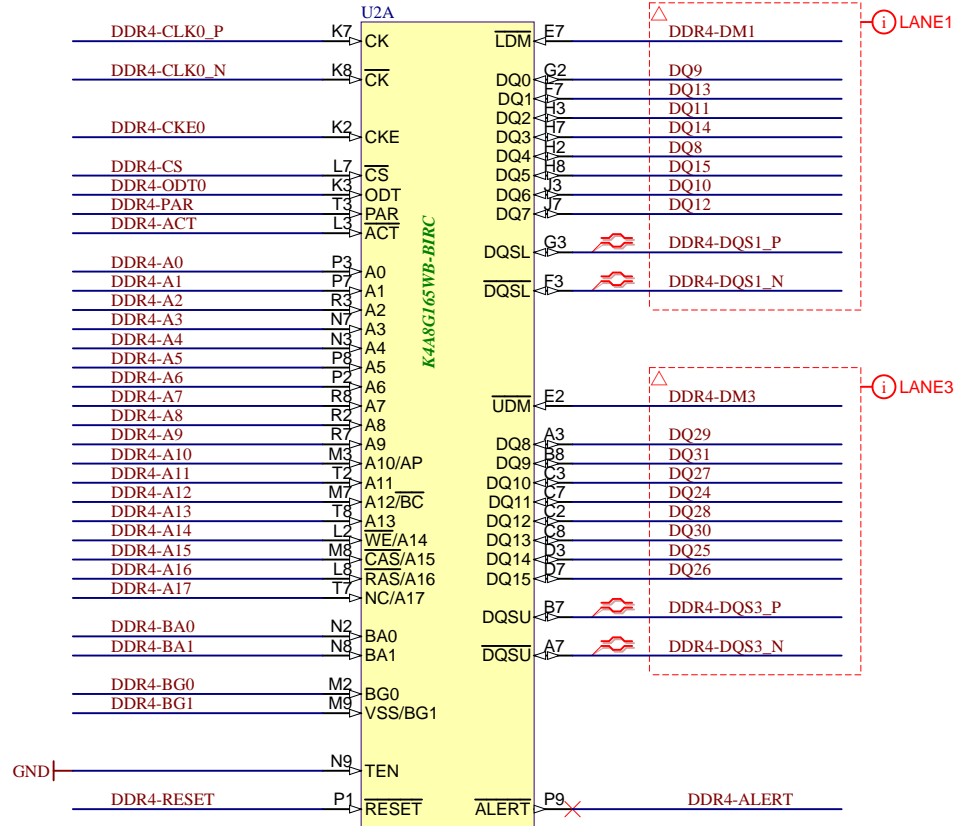
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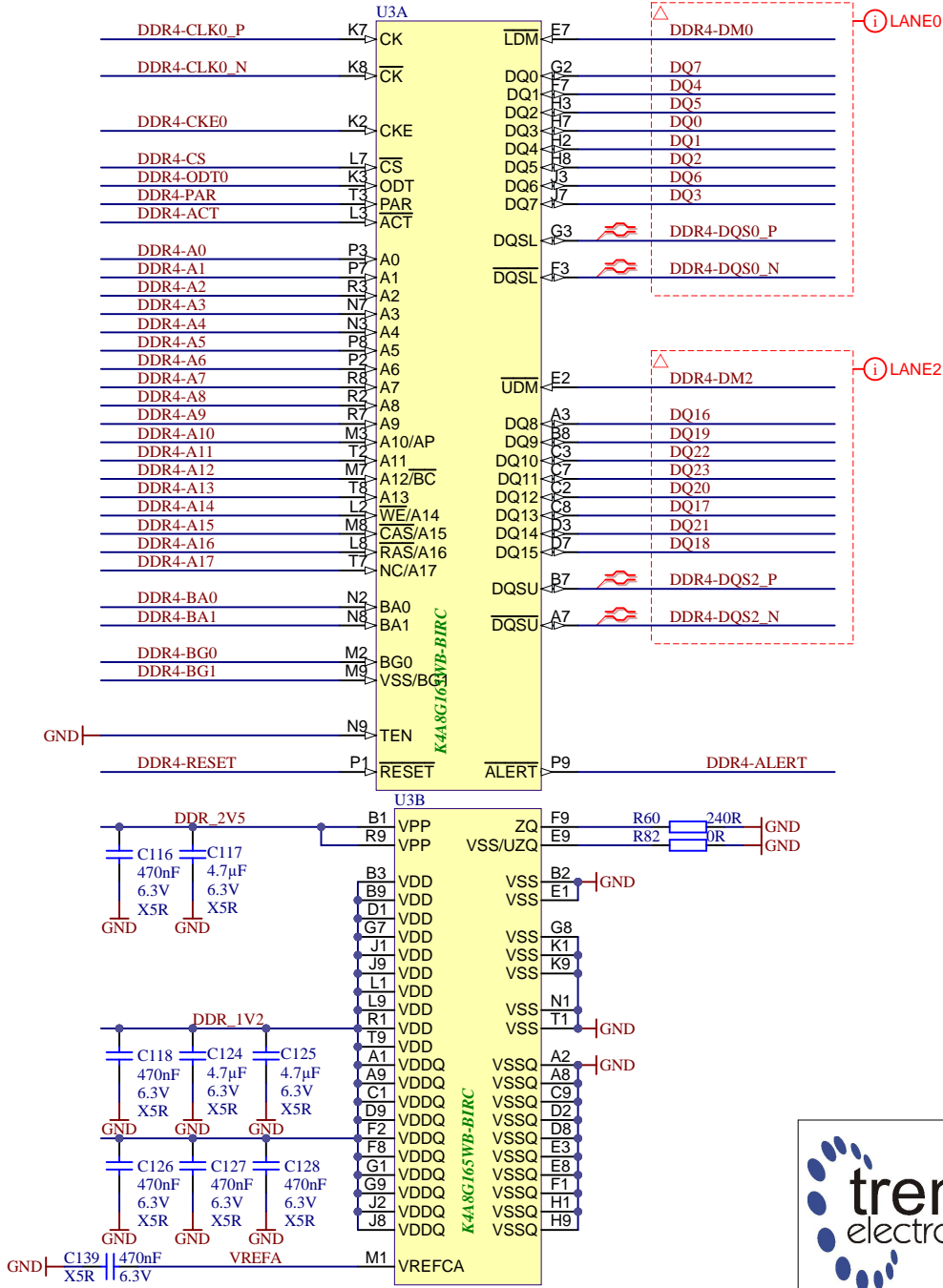
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	Filename: ZU_PS_POWER.SchDoc	
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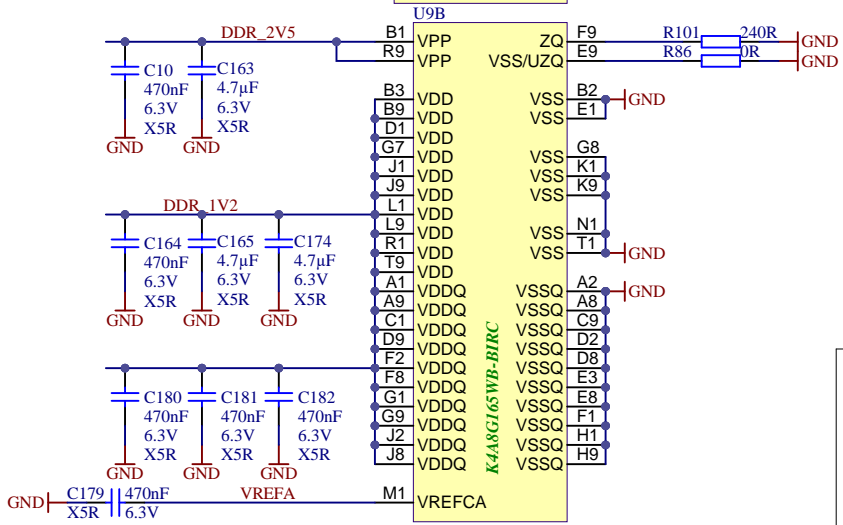
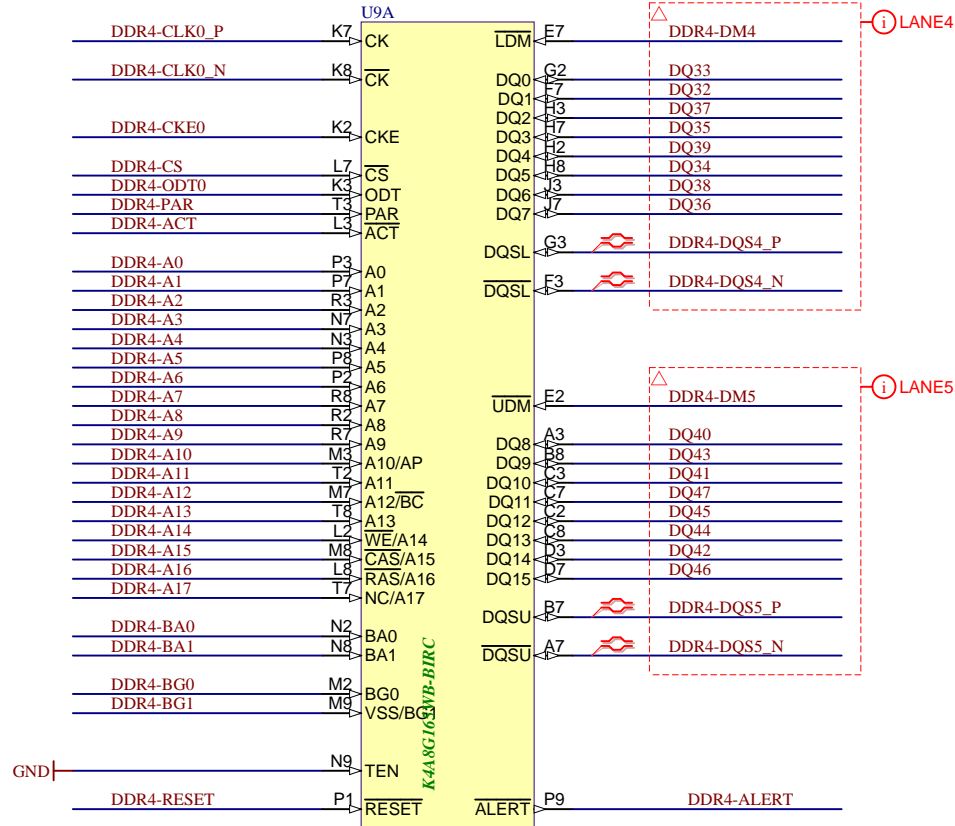
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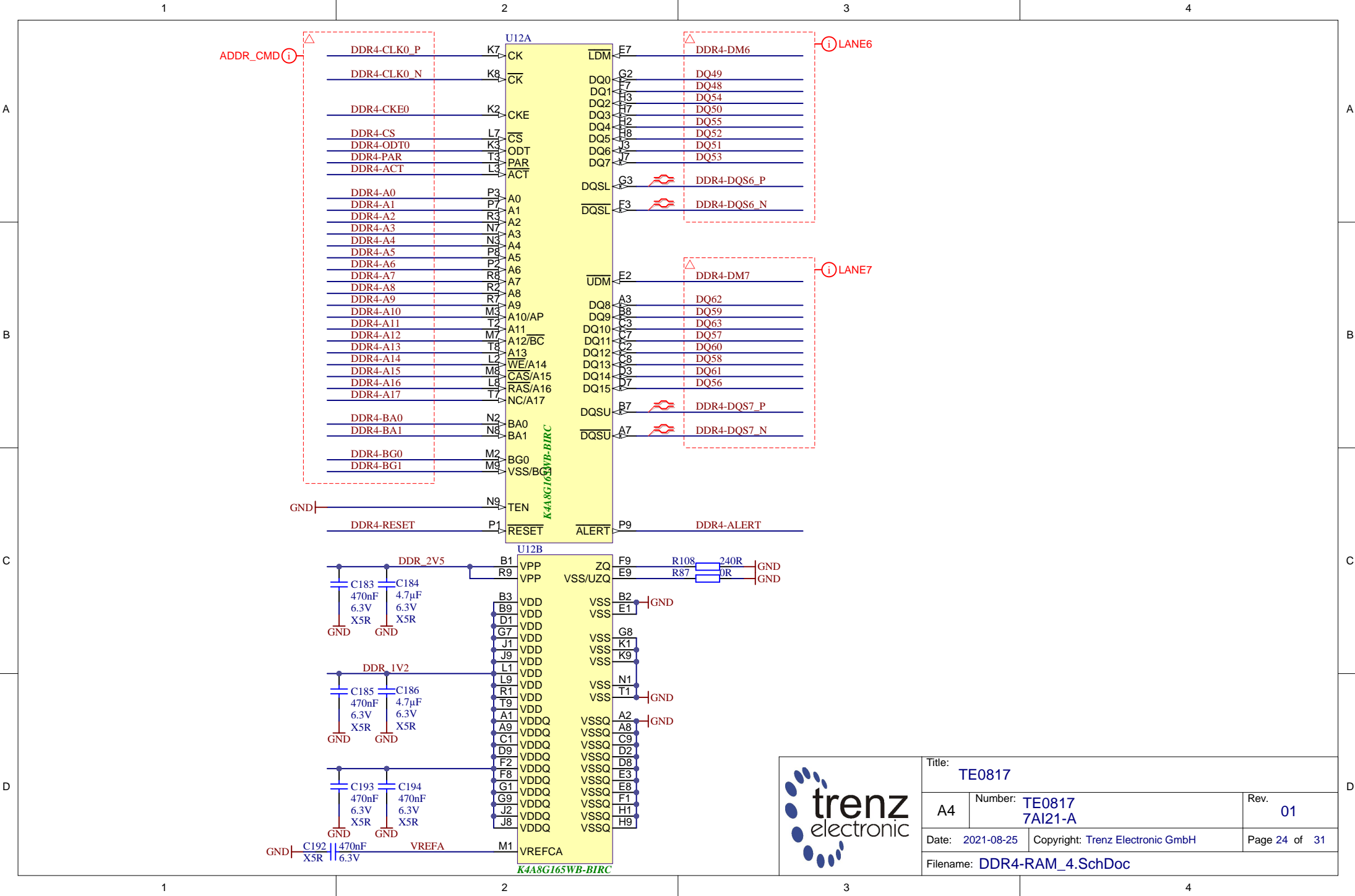
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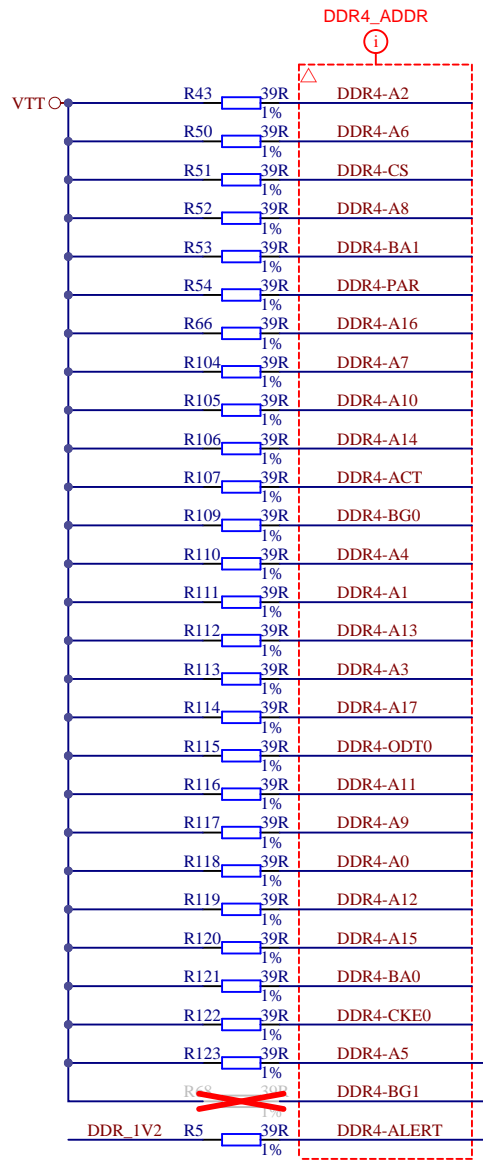


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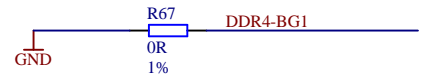
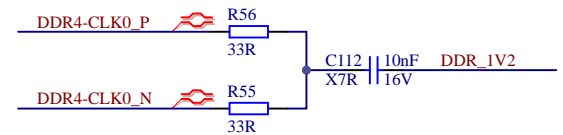
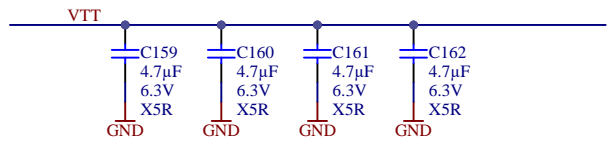
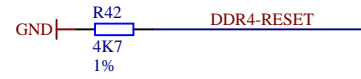


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Filename: DDR4-RAM_4.SchDoc		

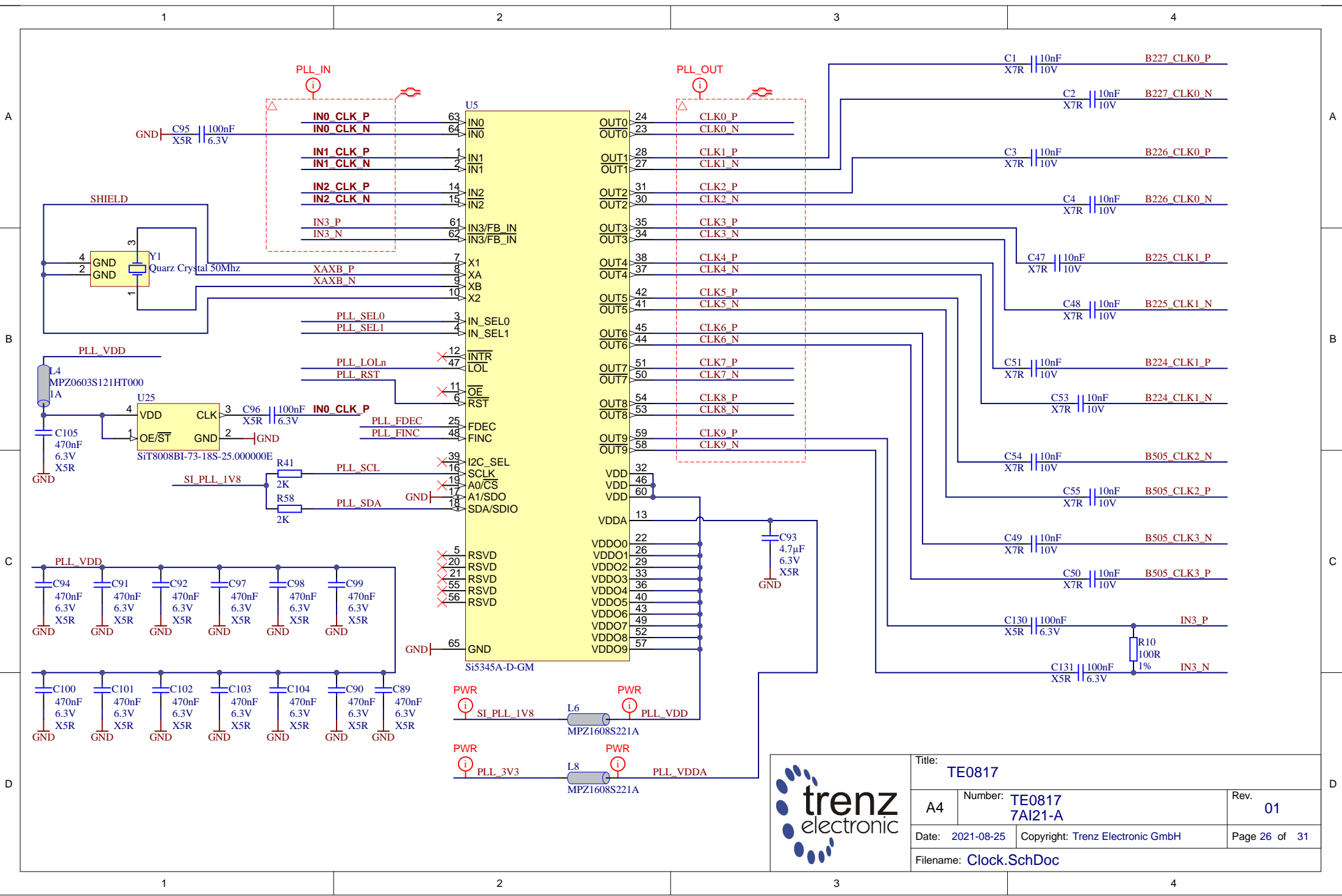




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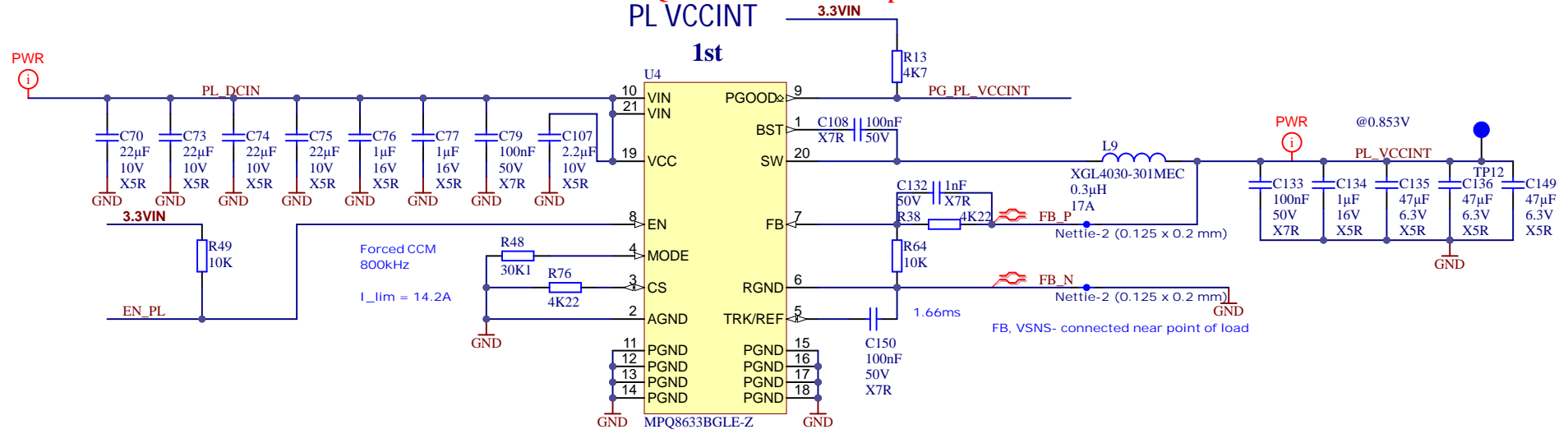


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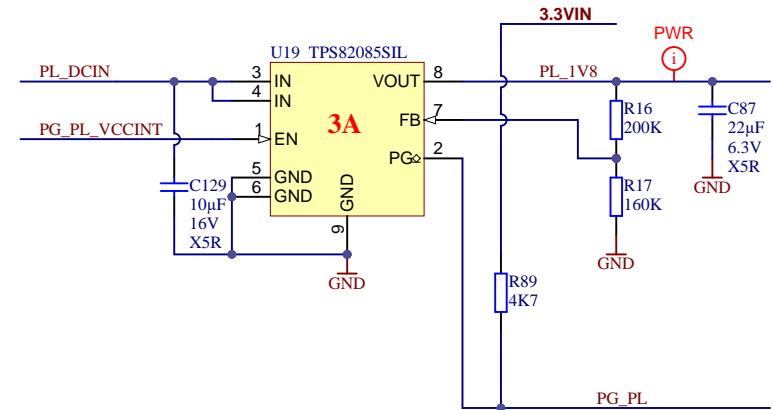
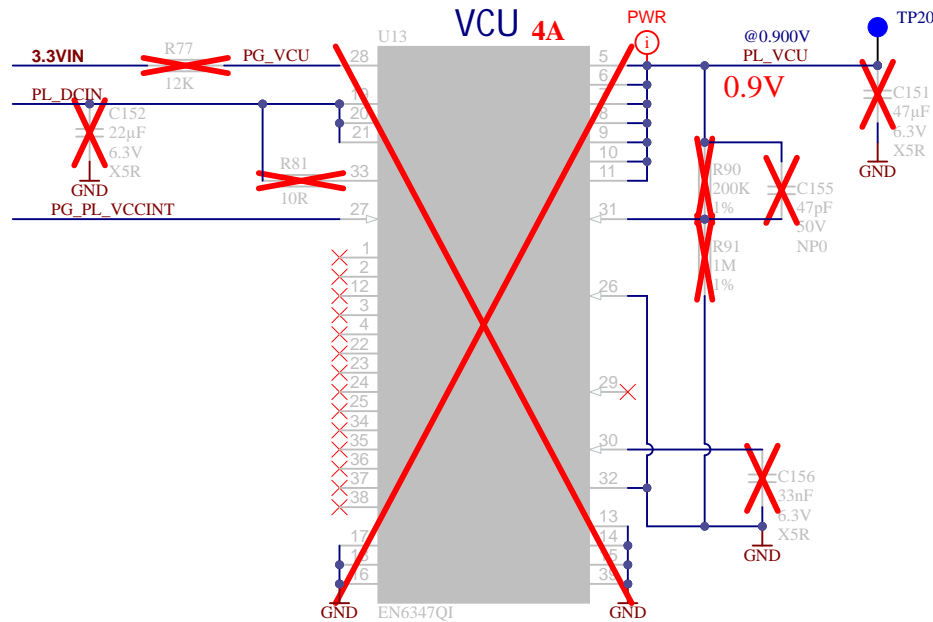


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Filename: Clock.SchDoc		

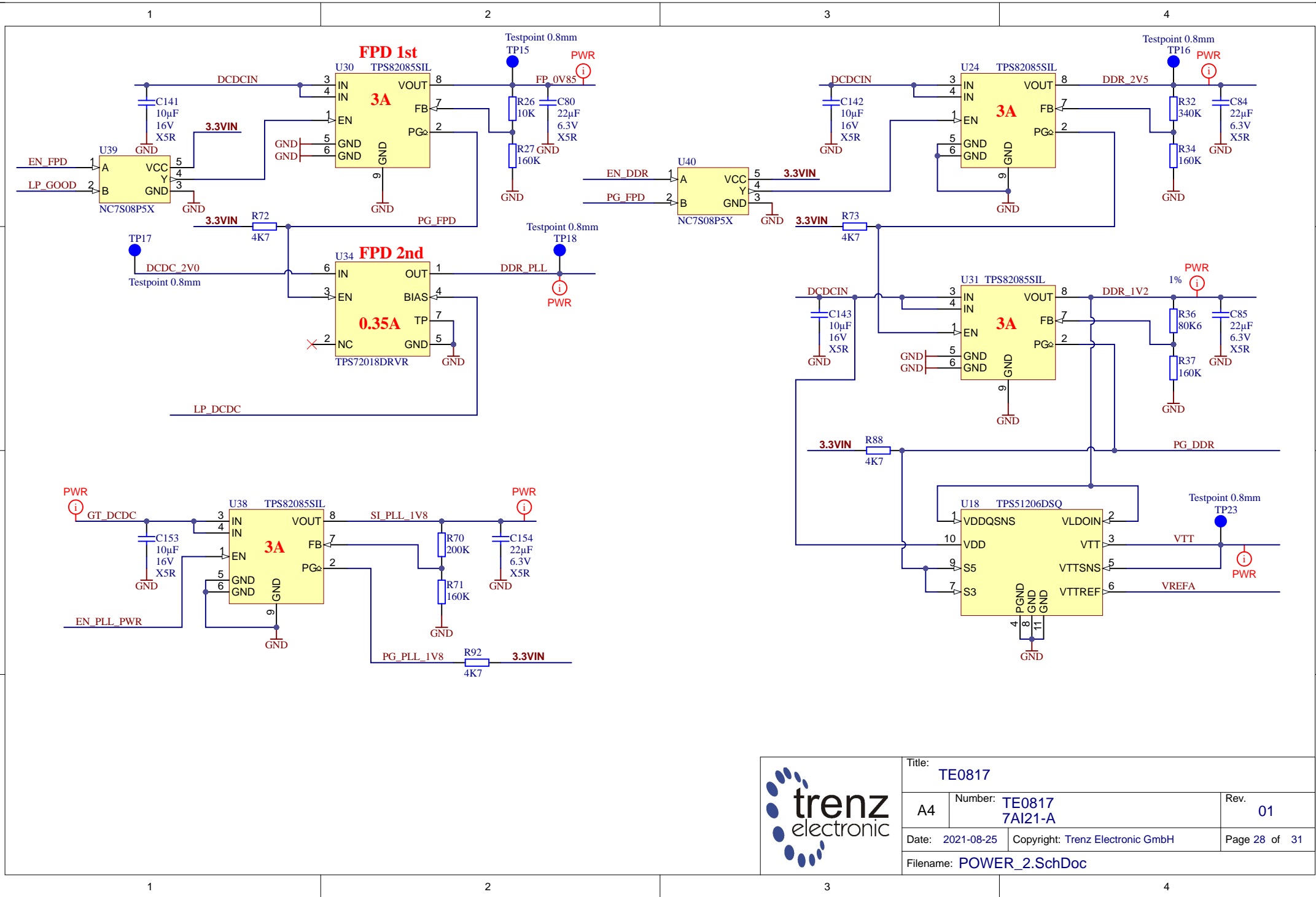
U4 can be TPS548A28RWWR or MPQ8633BGLE-Z which is up to Trenz Electronic GmbH.




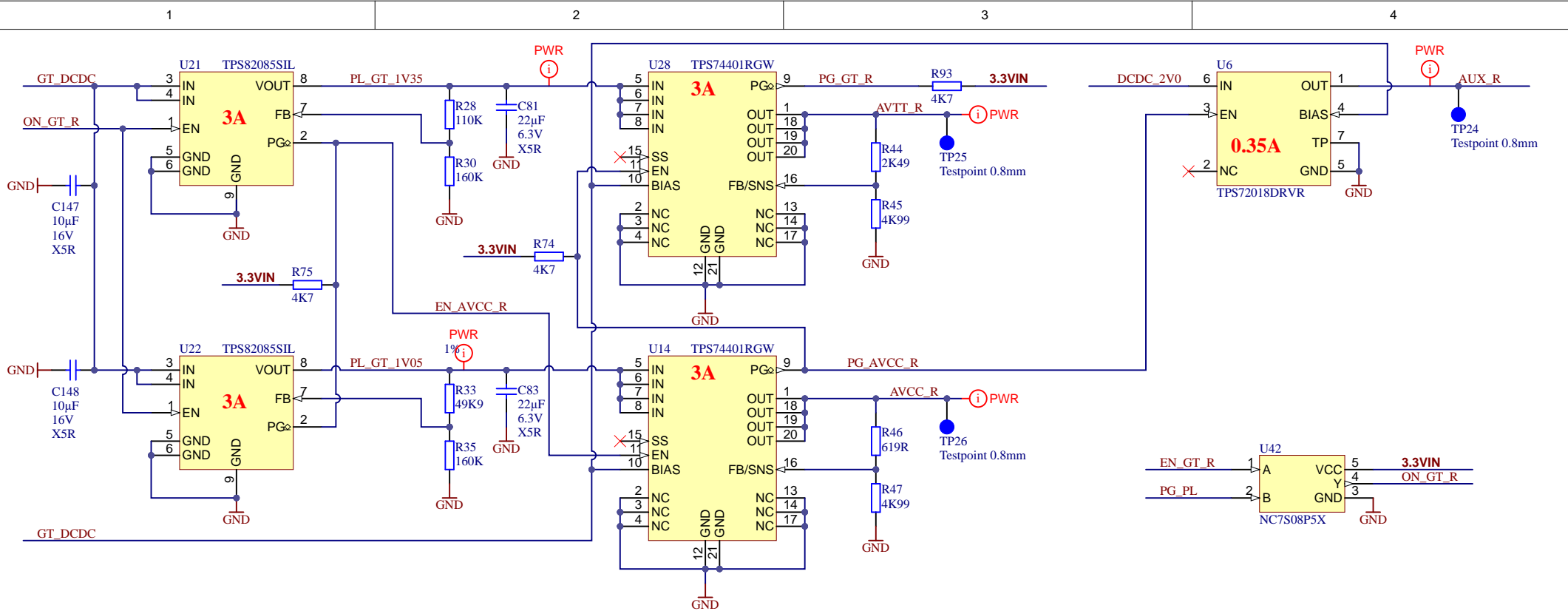
U4 pin compatible with  
 -- TPS54JA20 (12A)  
 -- TPS548A28 (15A)  
 -- TPS548B28 (20A)



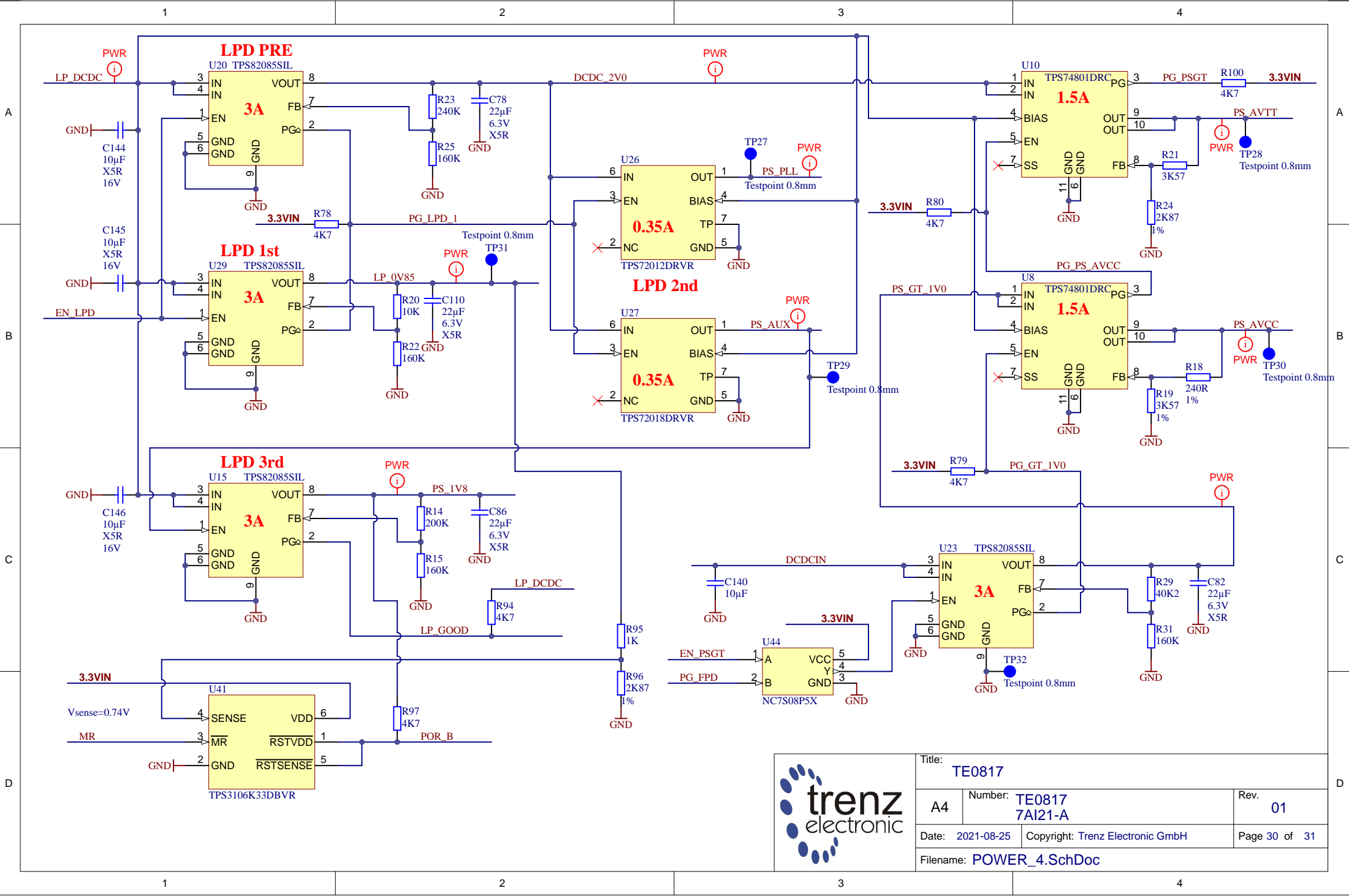
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Filename: <b>POWER_4.SchDoc</b>		

REV	DATE	Description	
-01	2021-05	Initial revision	VT
	2022-05	Changed DCDC U4 TPS548A28 to MPQ8633BGLE-Z Changed C132 100nF to 1nF	
	2022-11	Added Table with Supported Voltage Ranges	

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Filename: <b>Revision_Changes.SchDoc</b>					