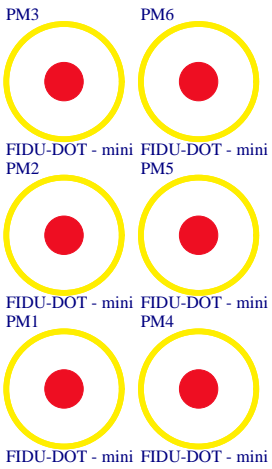
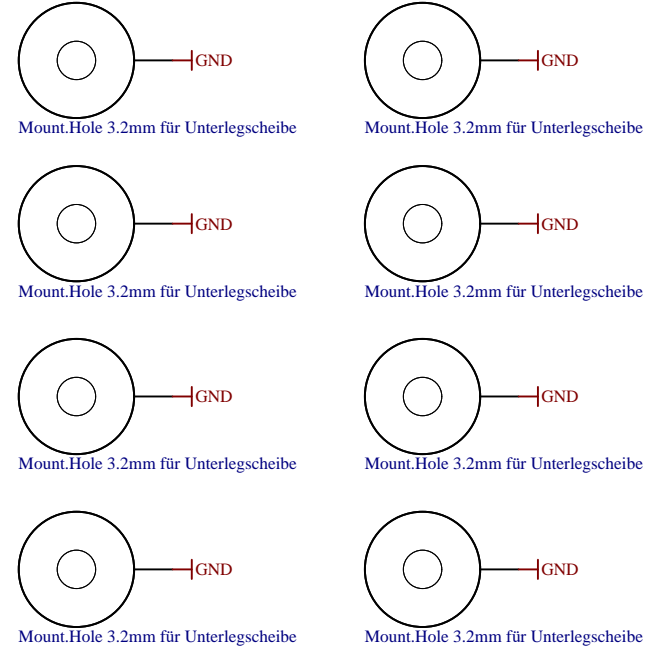


U_J1
J1.SchDoc
U_J2
J2.SchDoc
U_J3
J3.SchDoc
U_J4
J4.SchDoc
U_DDR4-TERM
DDR4-TERM.SchDoc
U_B64
B64.SchDoc
U_B65
B65.SchDoc
U_B66
B66.SchDoc
U_B_GT
B_GT.SchDoc
U_B_GT_2
B_GT_2.SchDoc
U_Legal Notices Modules
Legal Notices Modules.SchDoc

U_B_PS_GT
B_PS_GT.SchDoc
U_PS_DDR
PS_DDR.SchDoc
U_B_MIO
B_MIO.SchDoc
U_B_HD
B_HD.SchDoc
U_Clock
Clock.SchDoc
U_CONFIG
CONFIG.SchDoc
U_DDR4-RAM
DDR4-RAM.SchDoc
U_DDR4-RAM_2
DDR4-RAM_2.SchDoc
U_DDR4-RAM_3
DDR4-RAM_3.SchDoc
U_DDR4-RAM_4
DDR4-RAM_4.SchDoc
U_Power_Diagram.SchDoc
Power_Diagram.SchDoc

U_DDR4-TERM
DDR4-TERM.SchDoc
U_ZU_POWER
ZU_POWER.SchDoc
U_ZU_PS_POWER
ZU_PS_POWER.SchDoc
U_POWER
POWER.SchDoc
U_POWER_2
POWER_2.SchDoc
U_POWER_3
POWER_3.SchDoc
U_POWER_4
POWER_4.SchDoc
U_RC
Revision_Changes.SchDoc
U_TE0818-Overview
TE0818-Overview.SchDoc

Special notes:



Serial
Serial
Serialnummer 6,3 x 6.3mm

MECHI
TE Address Overlay

LOGO ADDRESS

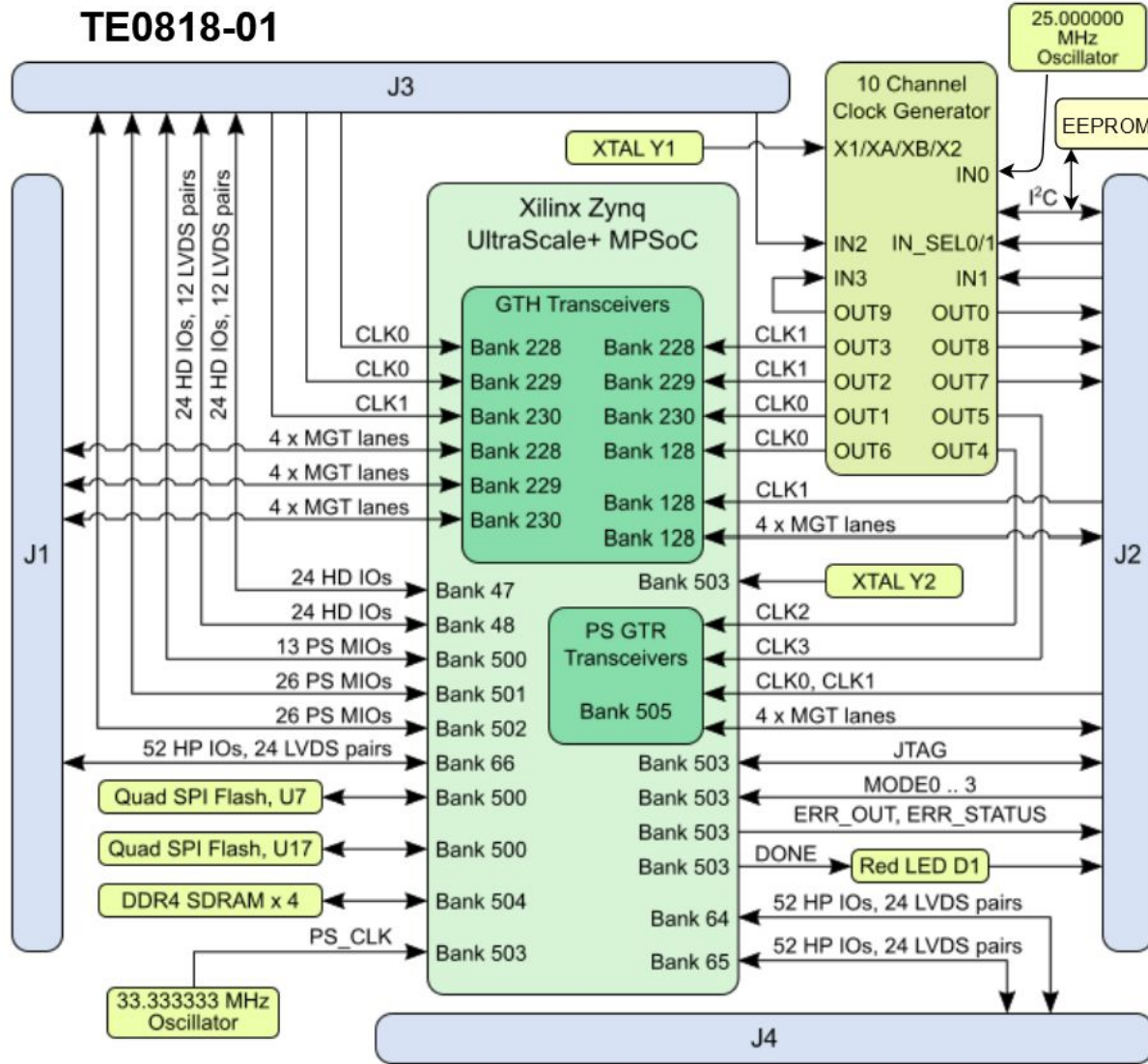
LOGO1
TE Logo PRINT Layer
LOGO PRINT


Design drawn by: VT
Checked by: IG
Assembly variant: BBE21-A
Created by: ED
Modified by: ED
Modified at: 2021-07-08

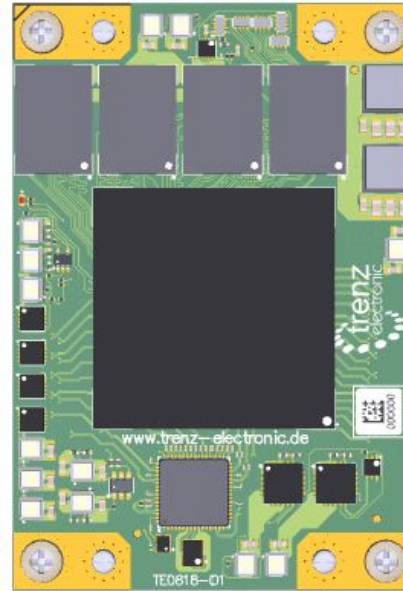
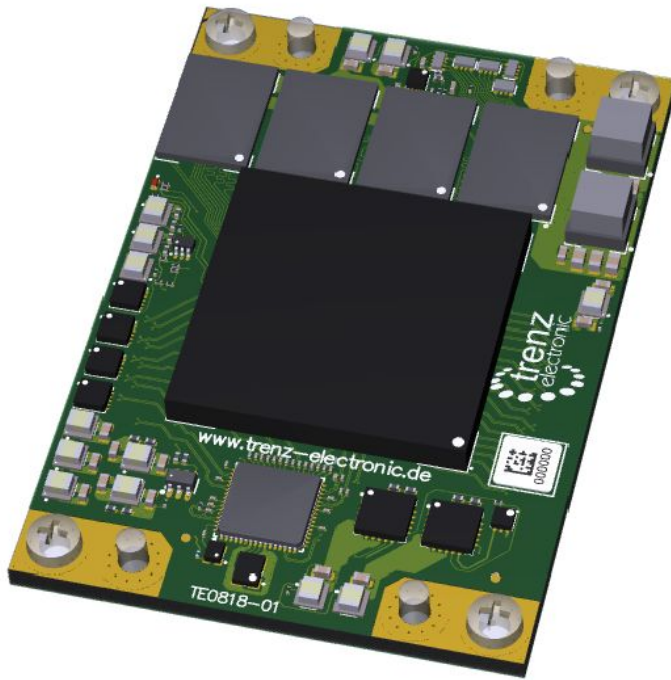


Title: TE0818		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 1 of 31
Filename: TE0818.SchDoc		

TE0818-01




			Title: Module TE0818 - System Overview	
			A4	Number: TE0818 BBE21-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH		Page 2 of 31
Filename: TE0818-Overview.SchDoc				

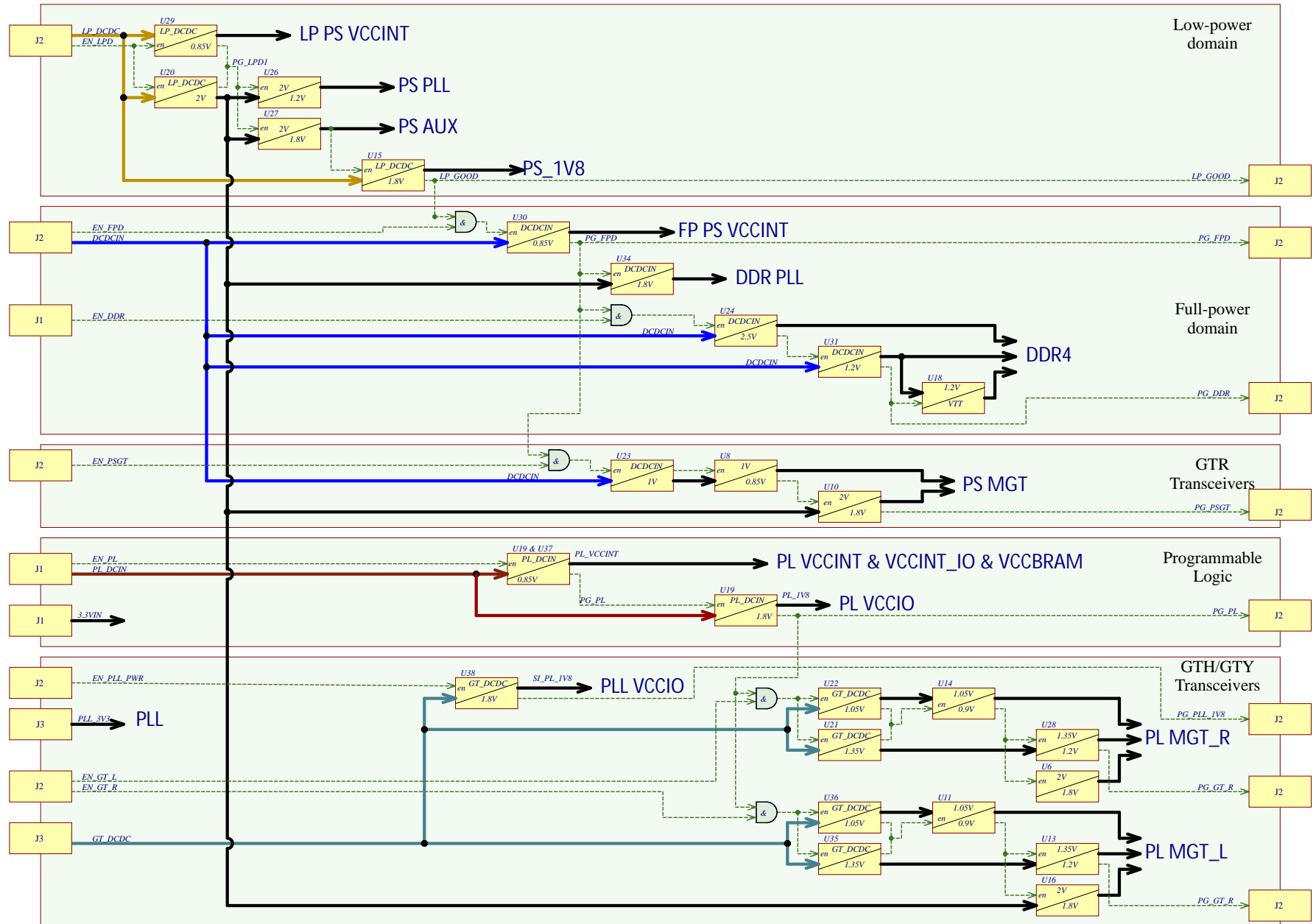


Regarding the usage of our schematics and alike documentation for Trenz module TE0818.

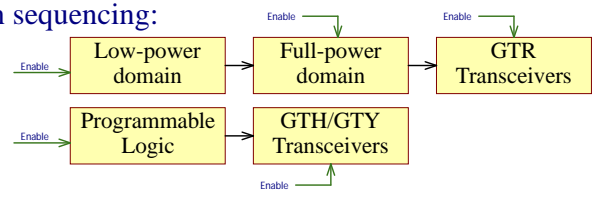
Project is protected under copyright and we strongly and strictly prohibit the reverse engineering or recreation, even if the design is just adapted or modified. TE0818 is protected under such right and in case of plagiarism we will have to do anything necessary in order to protect our assets.

Schematics and other handouts serve for informational purposes only!

	Title: TE0818		
	A4	Number: TE0818 BBE21-A	Rev. 01
	Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 3 of 31
	Filename: Legal Notices Modules.SchDoc		



Power-on sequencing:

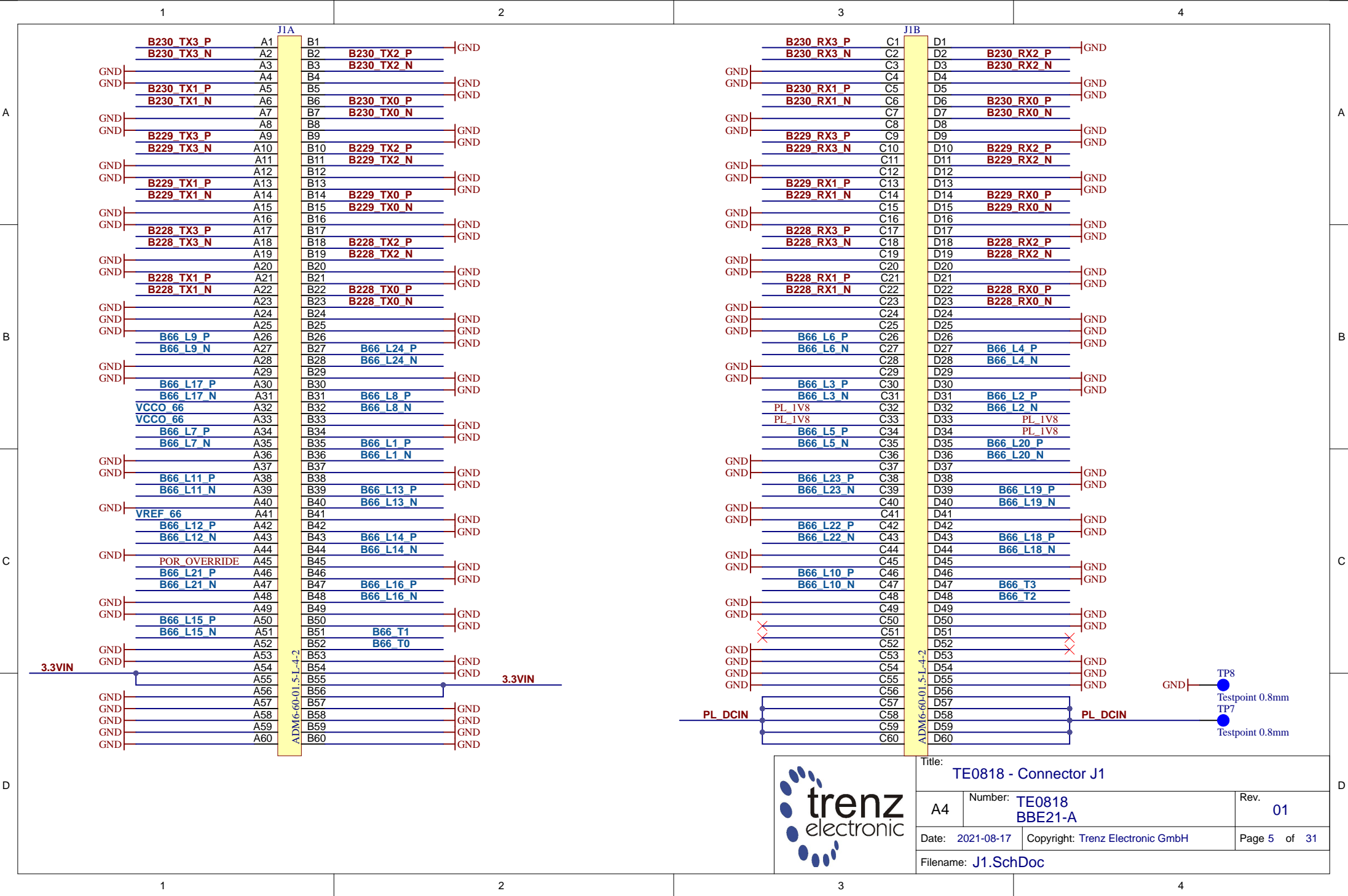


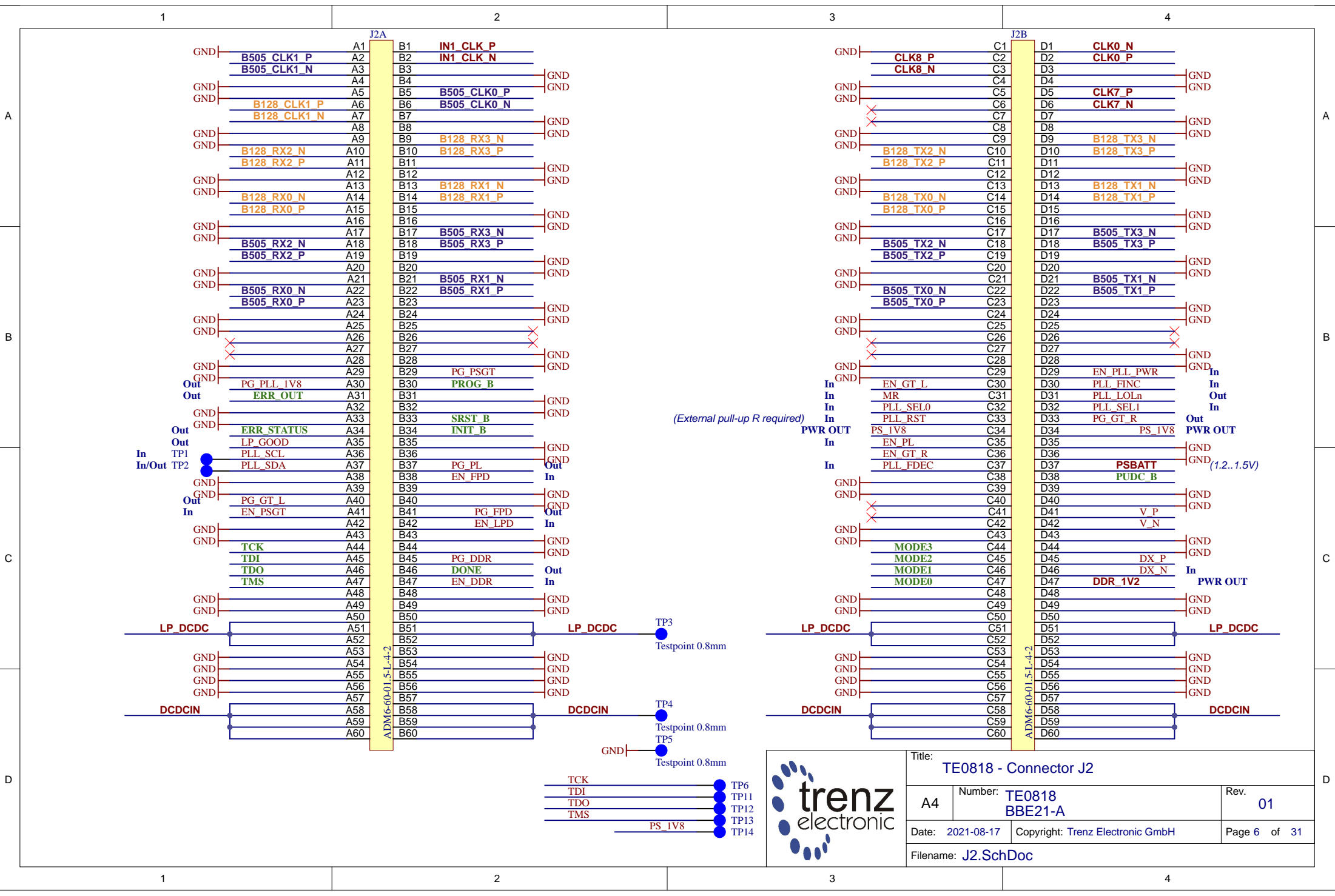
Legend:

- Net name: EN_GT_R
- Power bus: \rightarrow
- Control signal: \dashrightarrow
- Power bus in FPGA speedgrade -1/-2/-3 assembly variants: \dashrightarrow (dotted)
- Power bus in FPGA speedgrade -1L/-2L assembly variants (low power): \dashrightarrow (dashed)
- Optional power converter: PL_DCIN 0.9V
- Logic AND gate: $\&$



Title: TE0813 - Power Diagram		
A3	Number: TE0818 BBE21-A	Rev. 01
Datum: 2021-01-19	Copyright: Trenz Electronic GmbH	Page 4 of 31
Filename: Power_Diagram.SchDoc		





(External pull-up R required)



Title: TE0818 - Connector J2		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 6 of 31
Filename: J2.SchDoc		

1

2

3

4

A

A

B

B

C

C

D

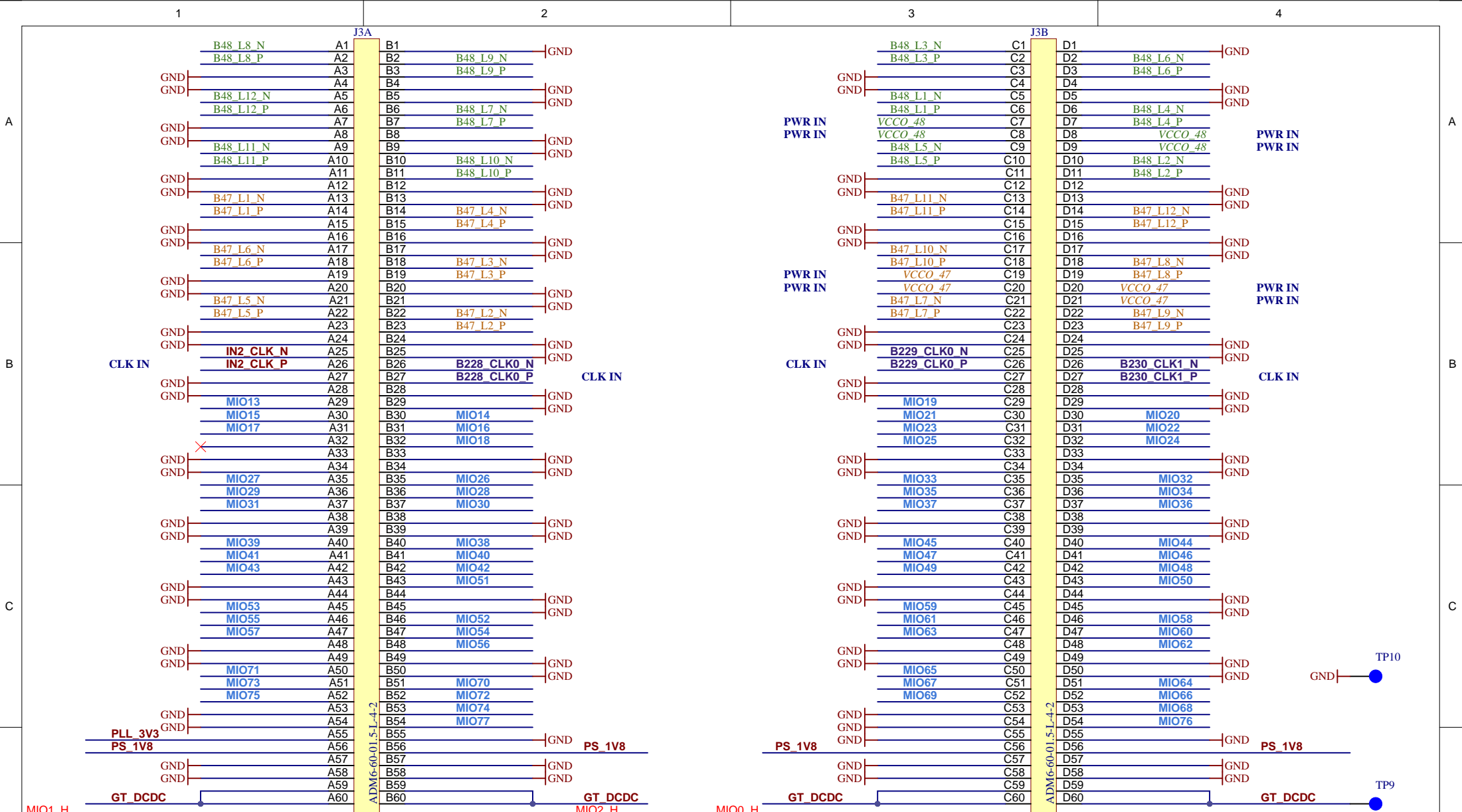
D

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MIO45	MIO38	MIO26	MIO32	MIO52	MIO58	MIO64	MIO71	MIO13	MIO19
MIO46	MIO39	MIO27	MIO33	MIO53	MIO59	MIO65	MIO72	MIO14	MIO20
MIO47	MIO40	MIO28	MIO34	MIO54	MIO60	MIO66	MIO73	MIO15	MIO21
MIO48	MIO41	MIO29	MIO35	MIO55	MIO61	MIO67	MIO74	MIO16	MIO22
MIO49	MIO42	MIO30	MIO36	MIO56	MIO62	MIO68	MIO75	MIO17	MIO23
MIO50	MIO43	MIO31	MIO37	MIO57	MIO63	MIO69	MIO76	MIO18	MIO24
MIO51	MIO44					MIO70	MIO77		MIO25



Title: TE0818 - Connector J3		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 7 of 31
Filename: J3.SchDoc		

1

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A

A

B

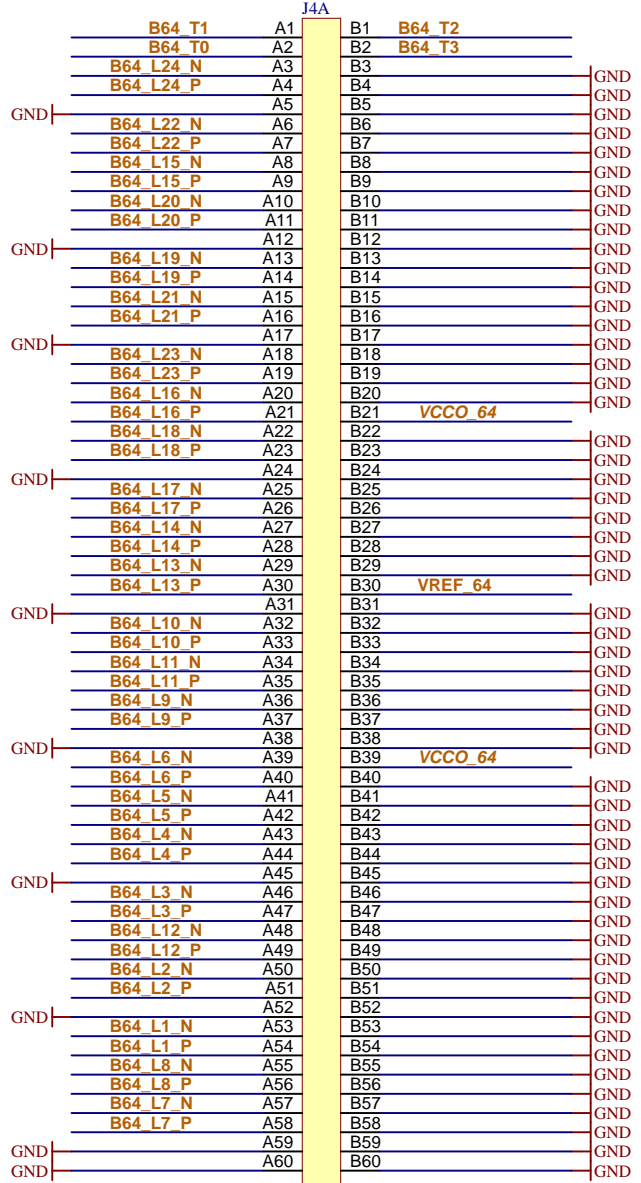
B

C

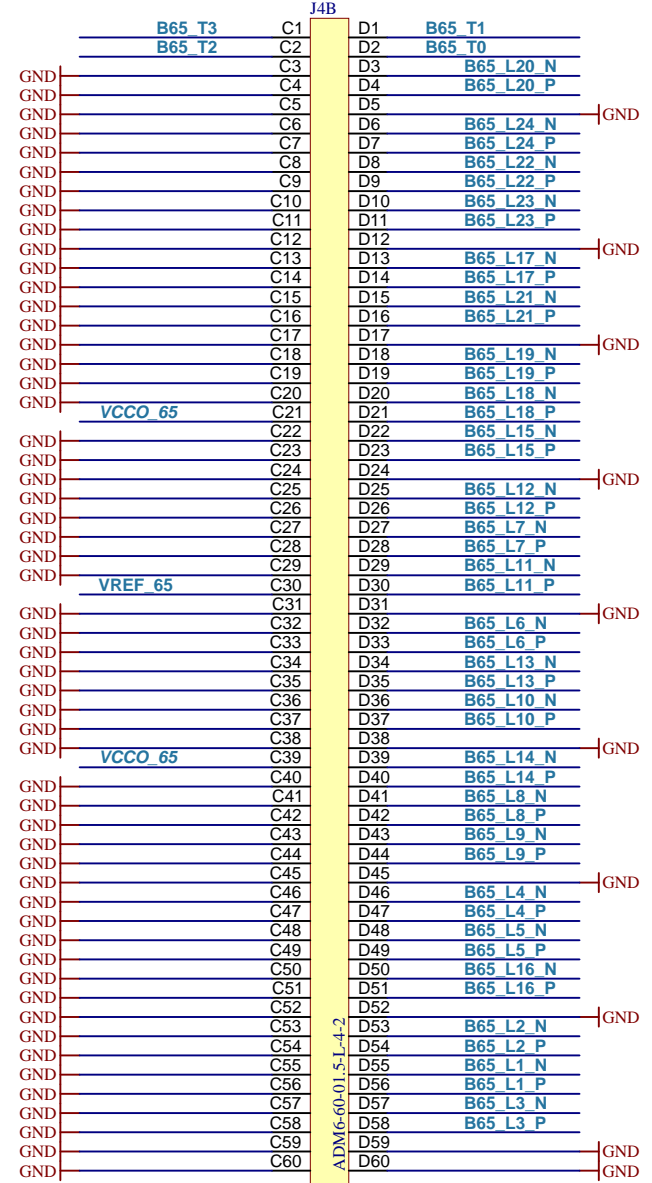
C

D

D



ADM6-60-01.5-L-4-2



ADM6-60-01.5-L-4-2



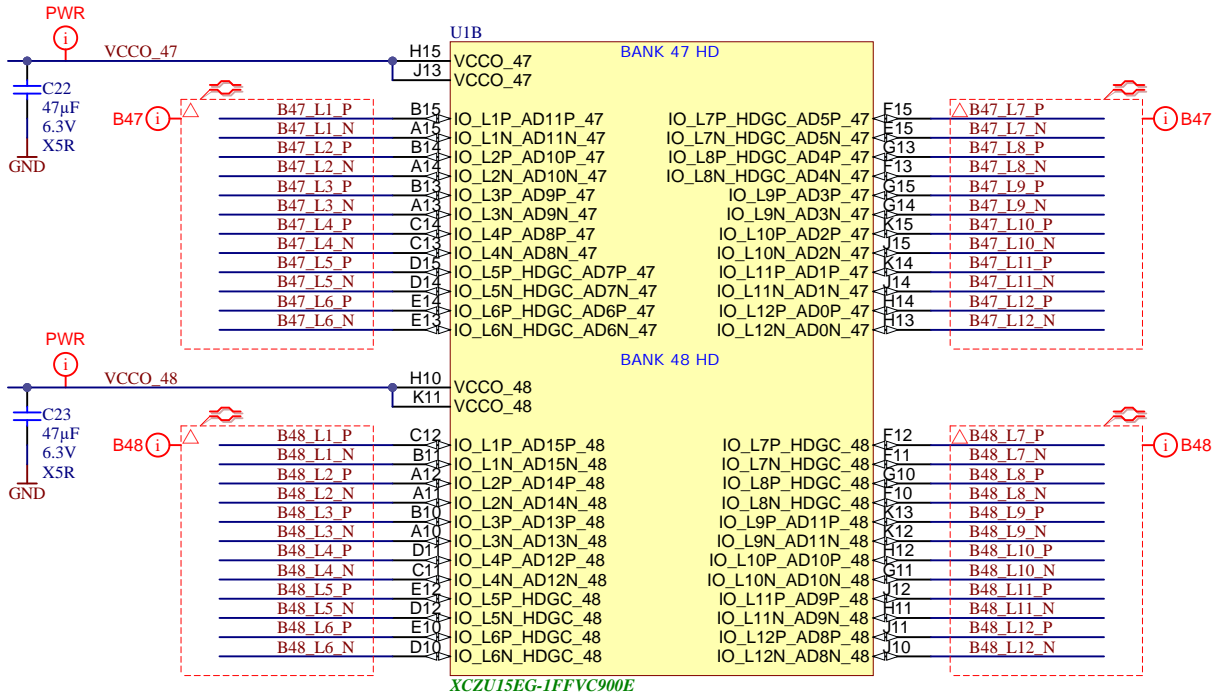
Title: TE0818 - Connector J4		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 8 of 31
Filename: J4.SchDoc		


1

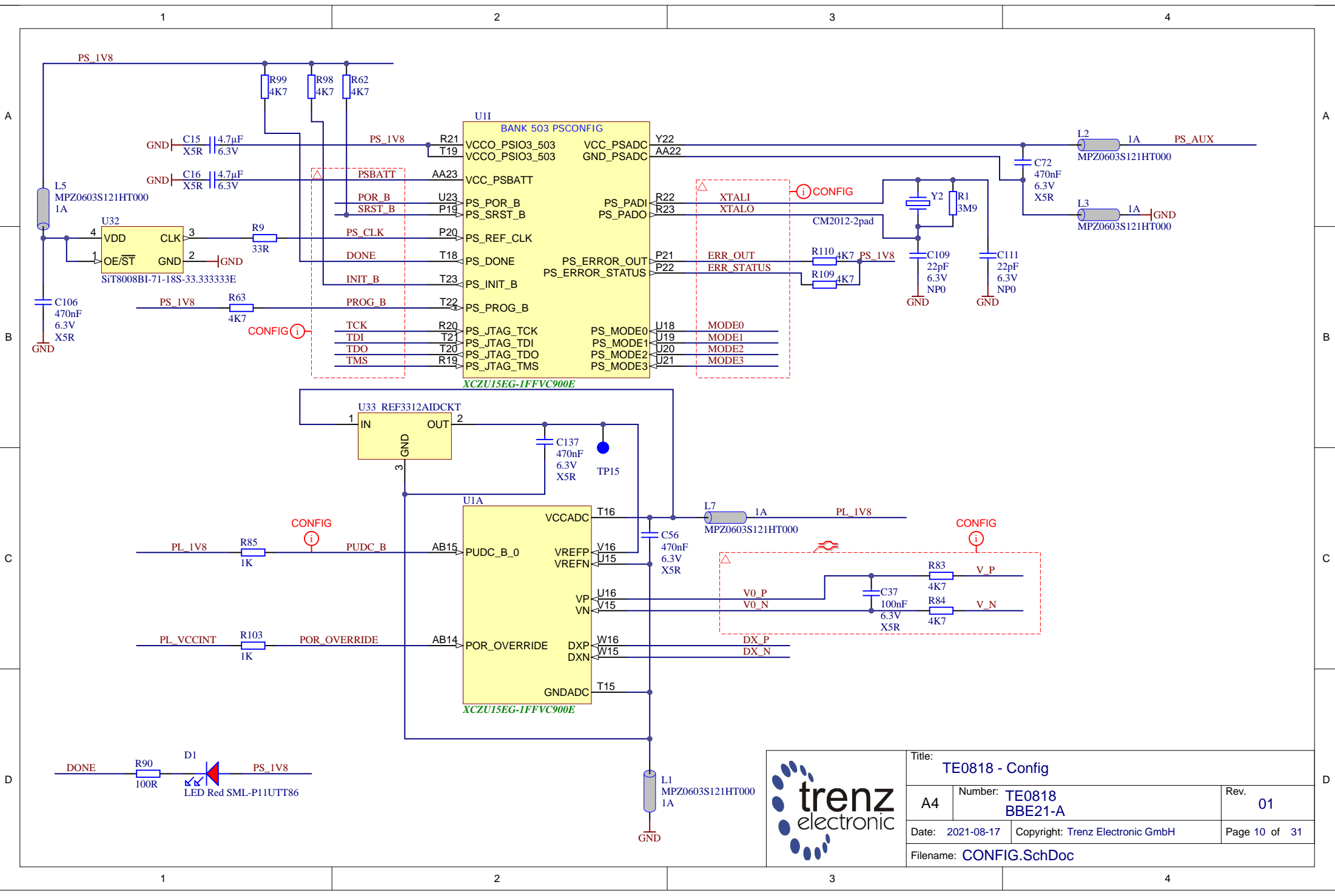
2

3

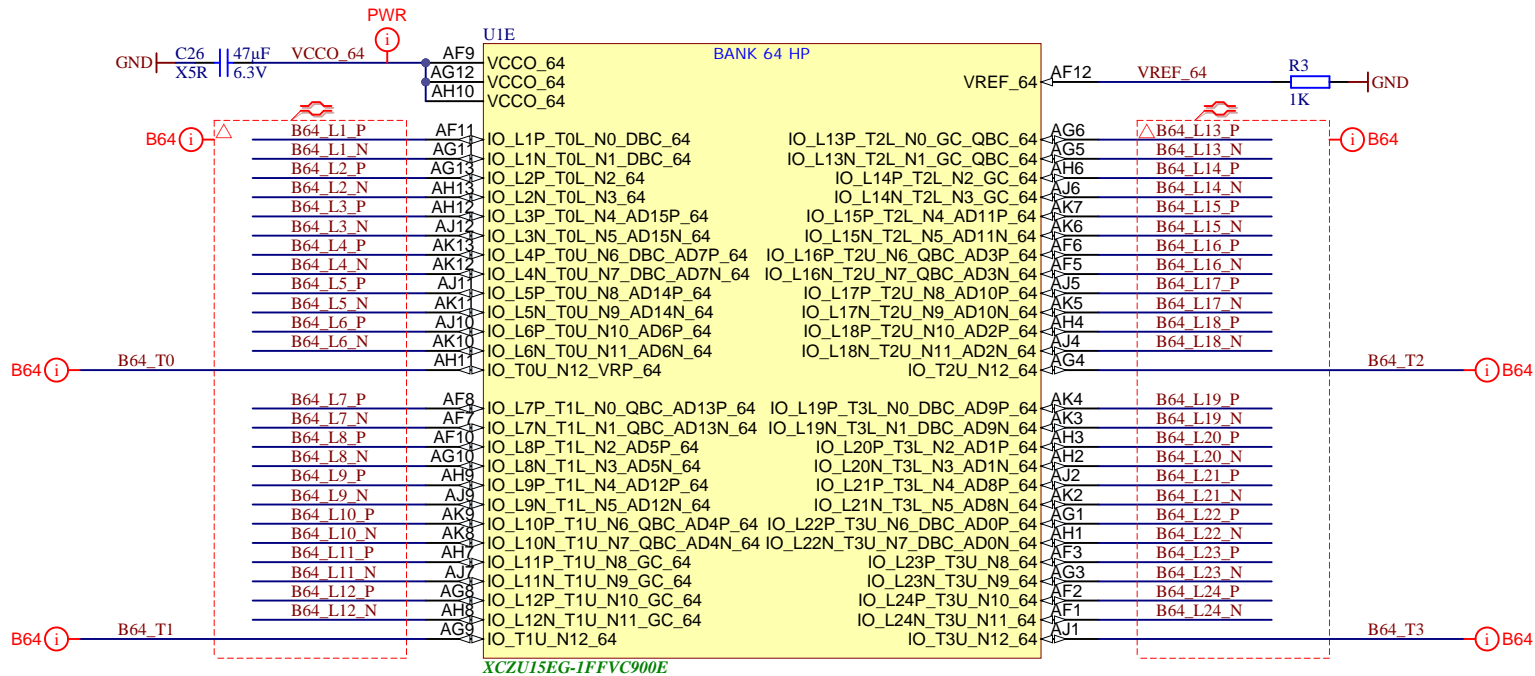
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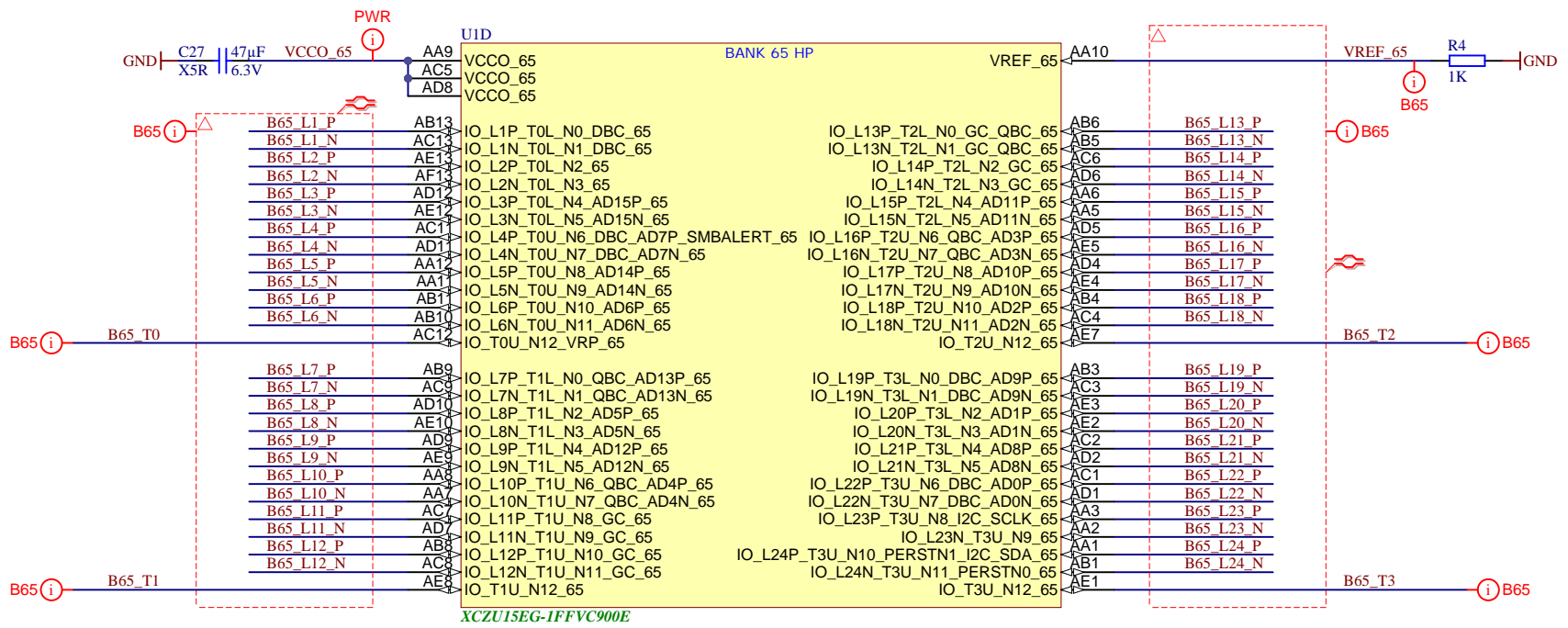
	Title: TE0818 - B47HD and B48HD		
	A4	Number: TE0818 BBE21-A	Rev. 01
	Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 9 of 31
	Filename: B_HD.SchDoc		



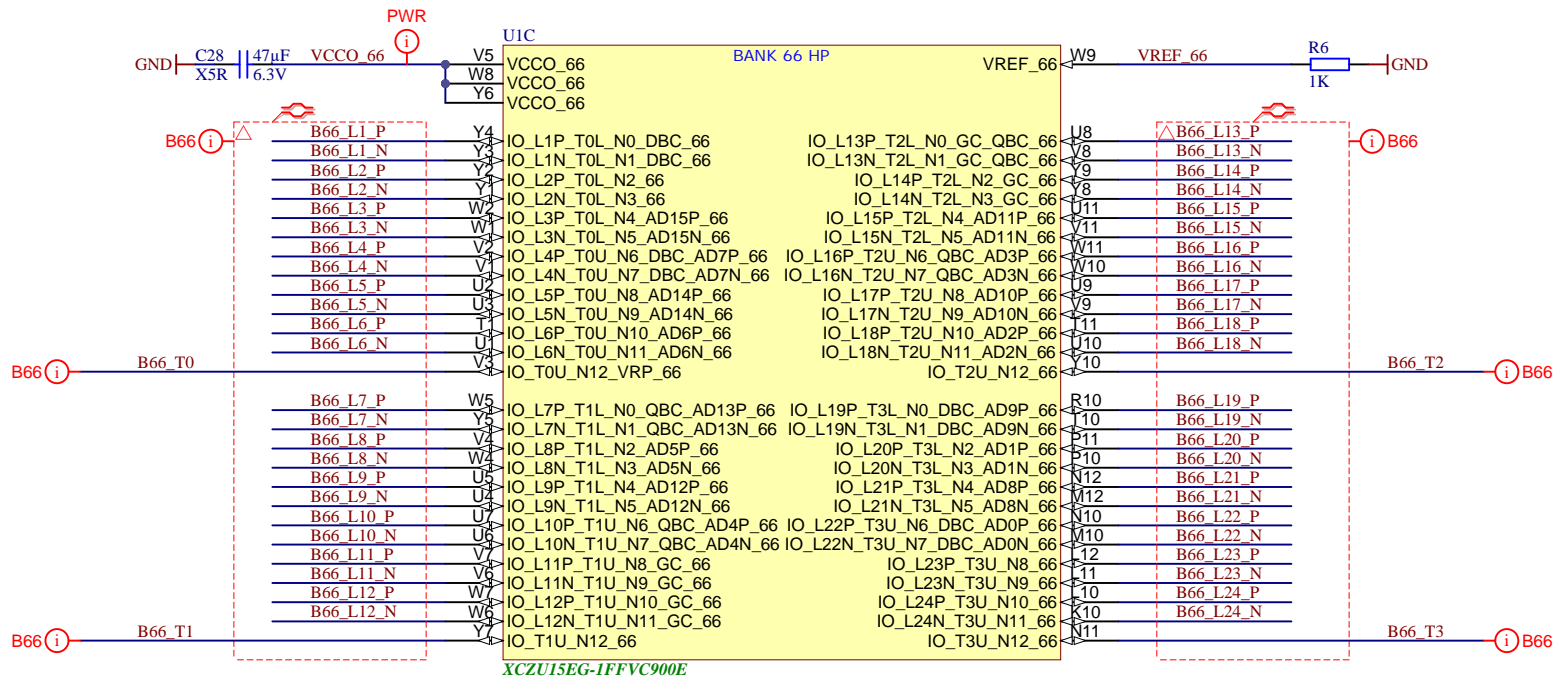
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A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 10 of 31
Filename: CONFIG.SchDoc		




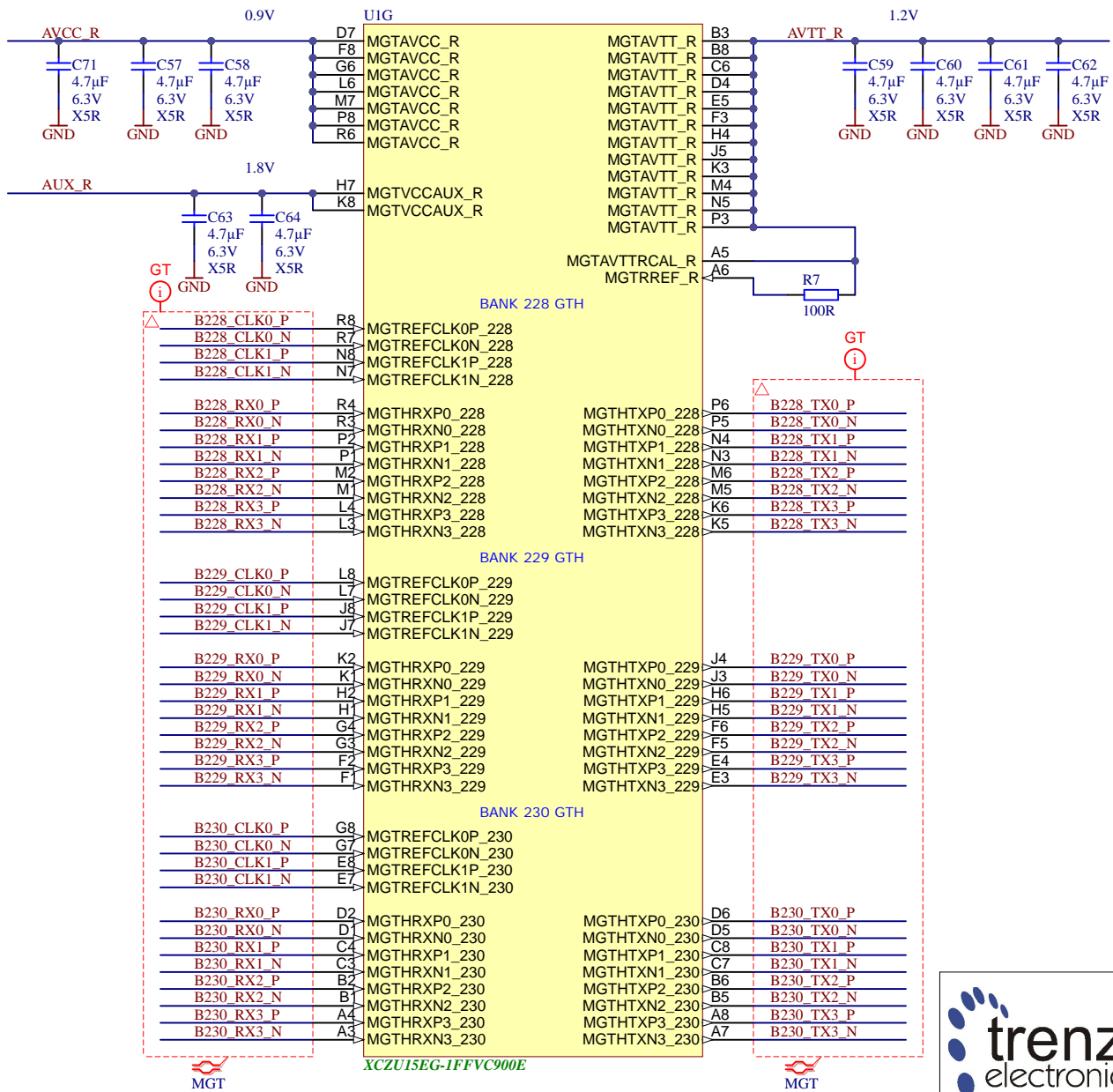
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 11 of 31
Filename: B64.SchDoc		



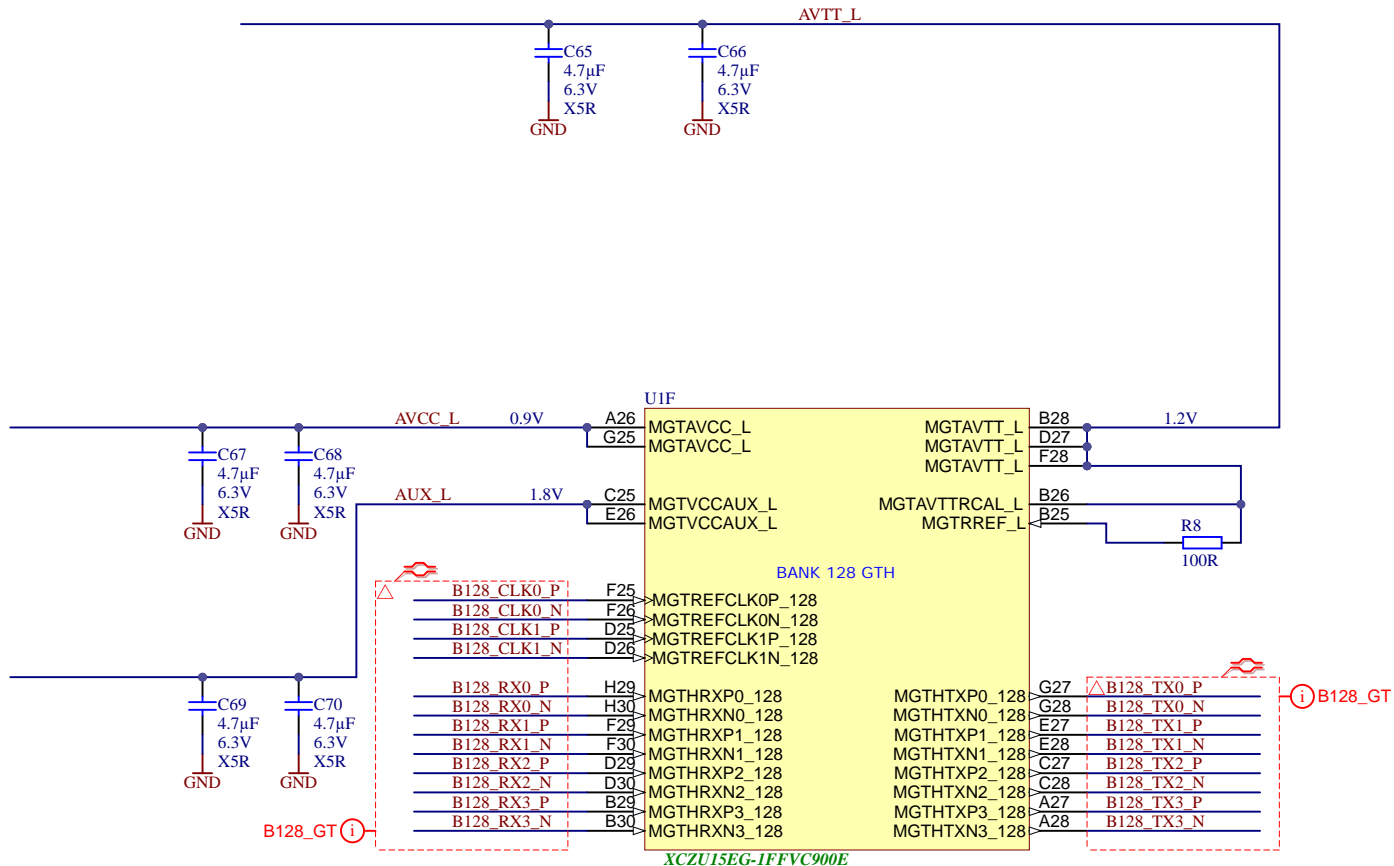
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 12 of 31
Filename: B65.SchDoc		



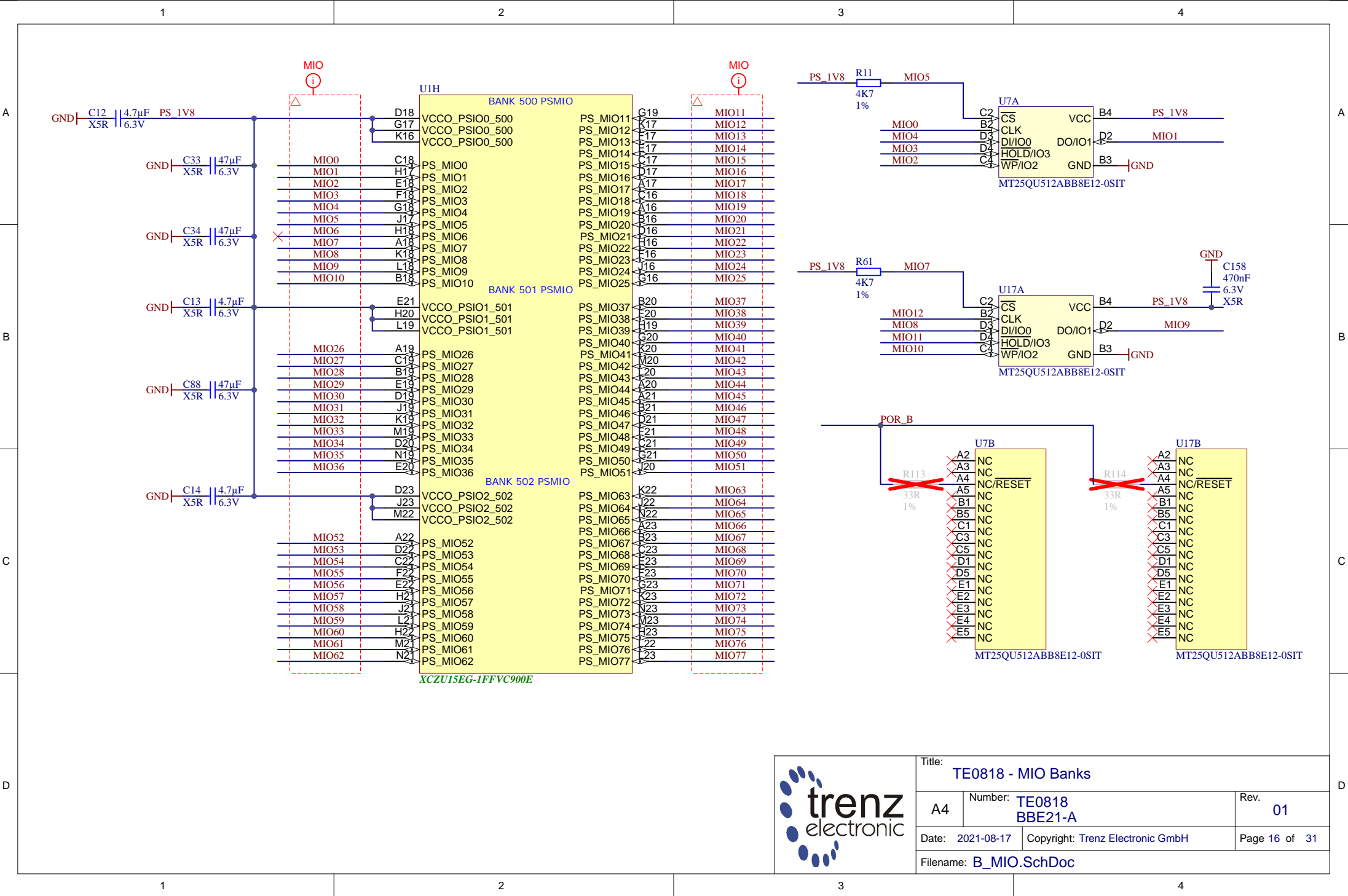
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		A4	Number: TE0818 BBE21-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Filename: B66.SchDoc		Page 13 of 31	




Title: TE0818 - B228GTH_B229GTH_B230GTH		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 14 of 31
Filename: B_GT.SchDoc		



Title: TE0818 - B128GTH		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 15 of 31
Filename: B_GT_2.SchDoc		



		Title: TE0818 - MIO Banks	
		A4	Number: TE0818 BBE21-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Date: 2021-08-17		Page 16 of 31	
Filename: B_MIO.SchDoc			

A

A

B

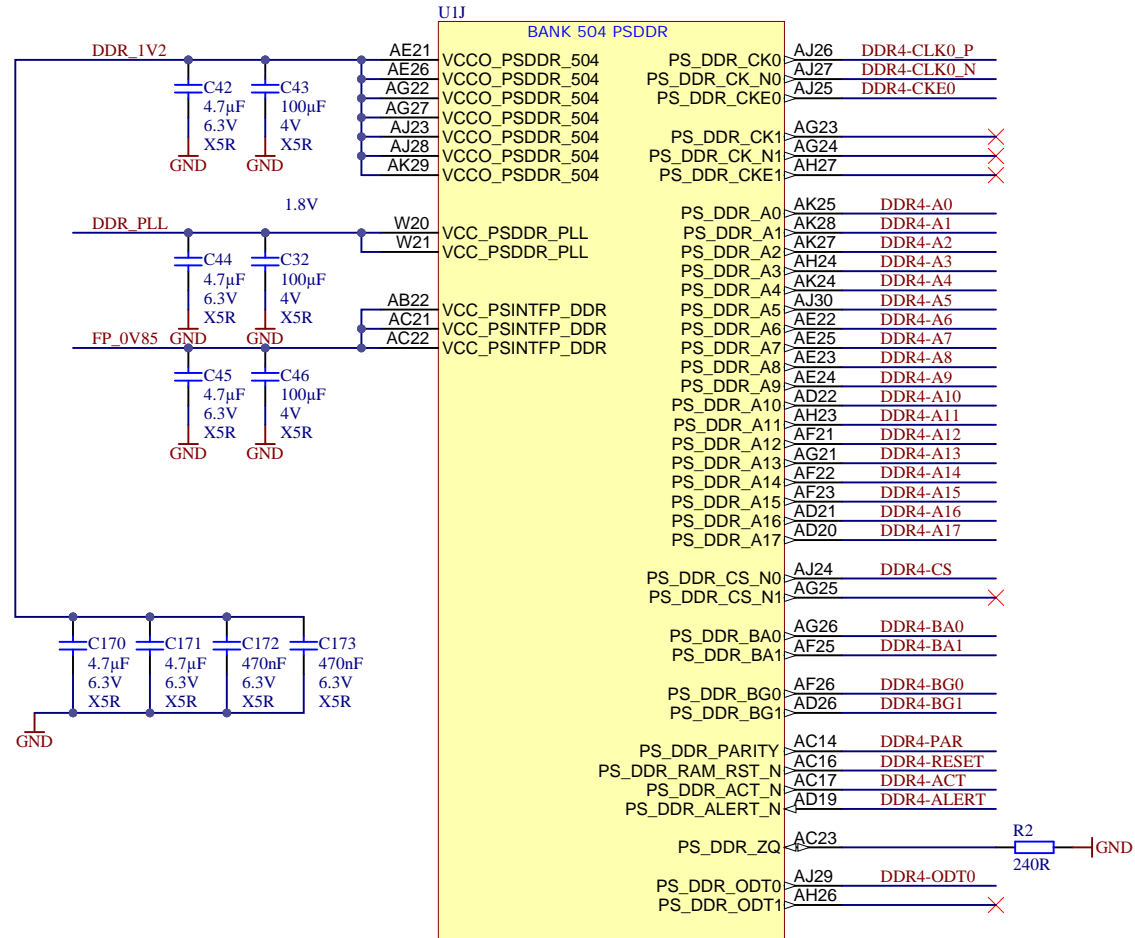
B

C

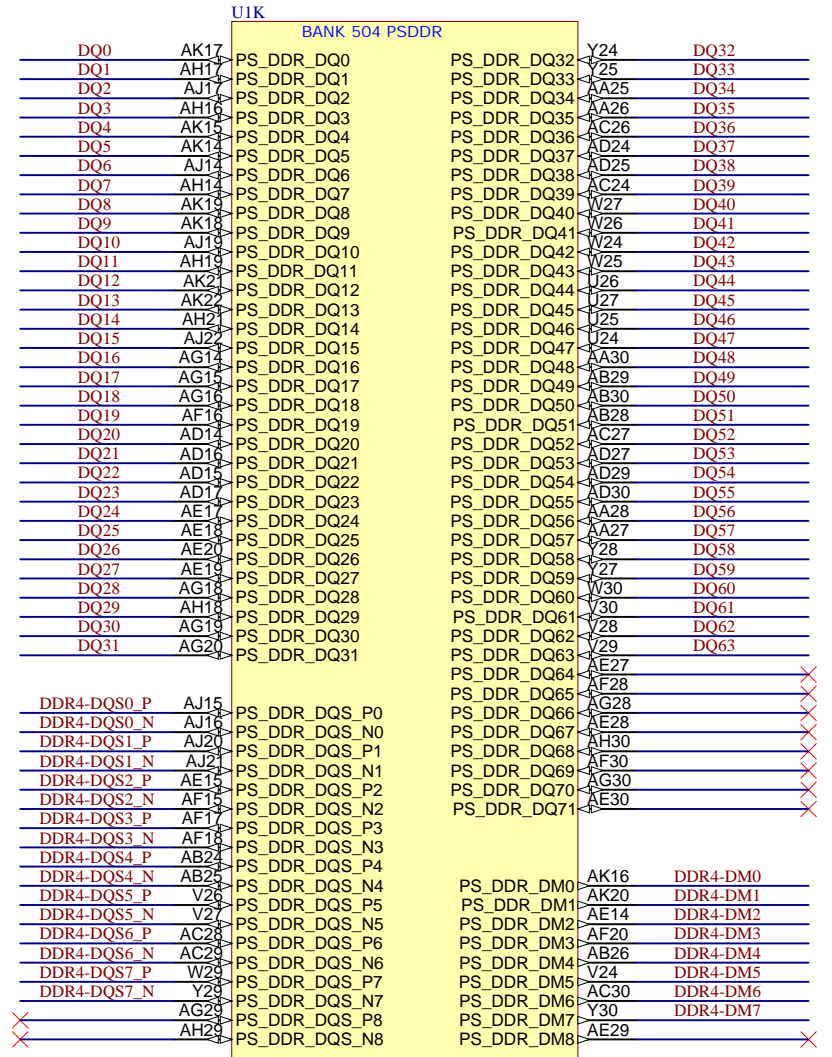
C

D

D



XCZU15EG-1FFVC900E



XCZU15EG-1FFVC900E



Title: TE0818 - PS_DDR		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 17 of 31
Filename: PS_DDR.SchDoc		

1

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A

A

B

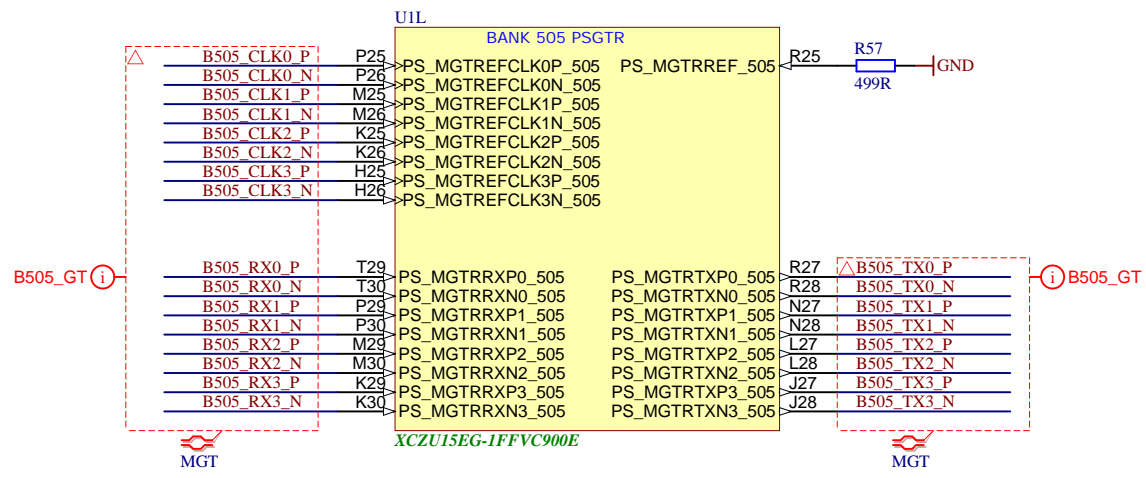

B

C

C

D

D

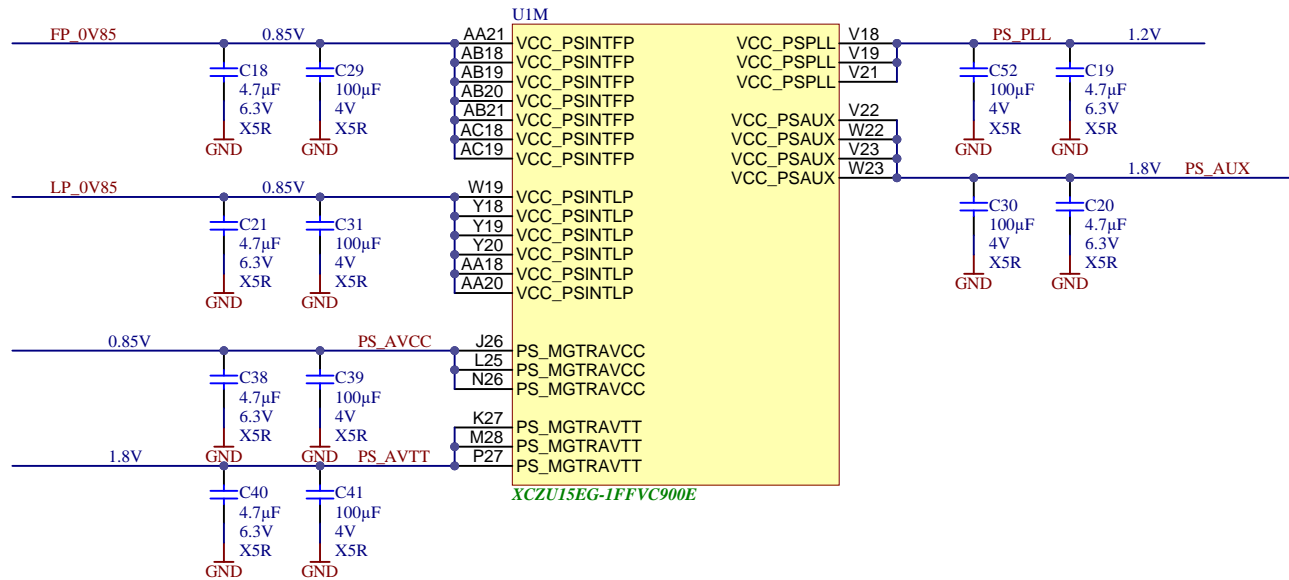
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A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 18 of 31
Filename: B_PS_GT.SchDoc		


1

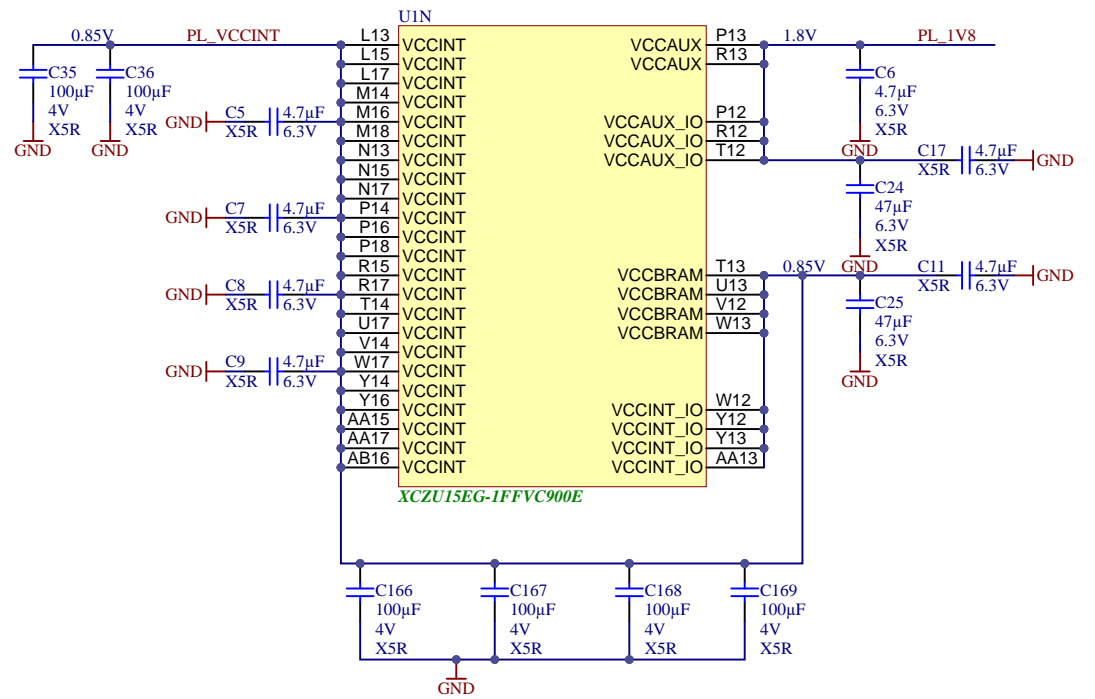
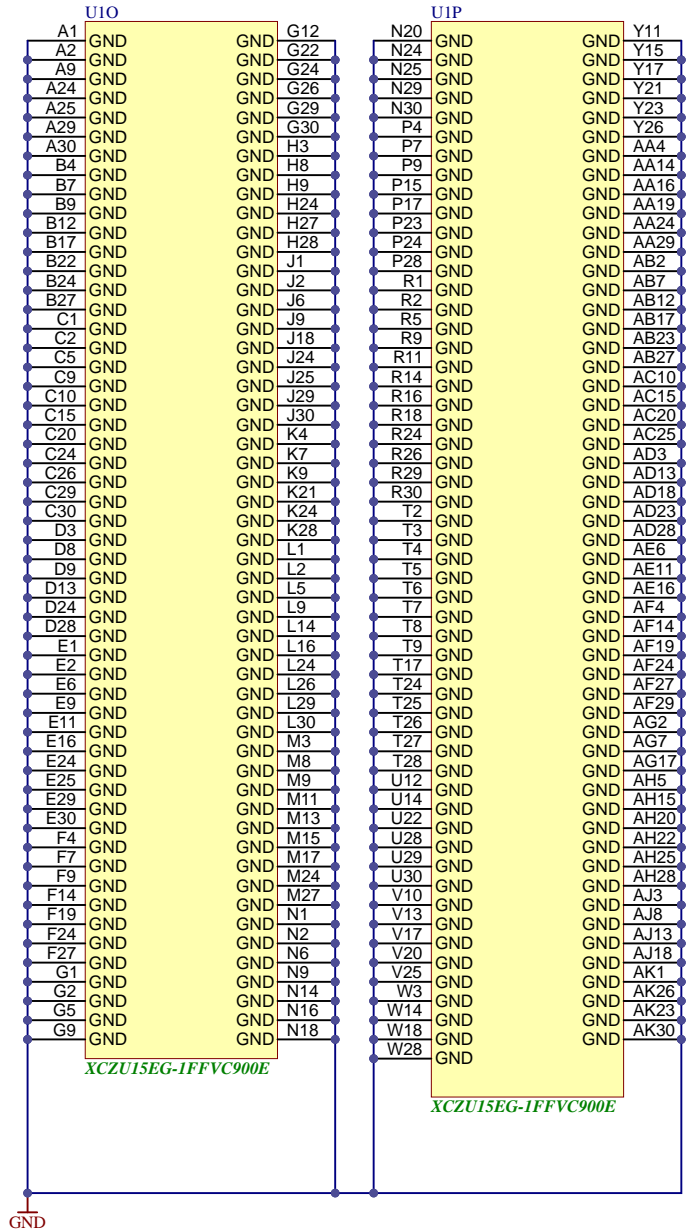
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3

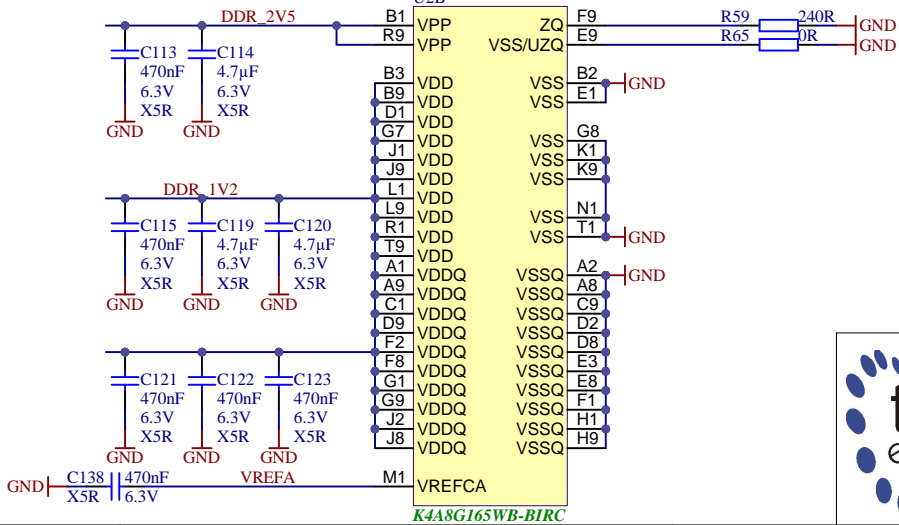
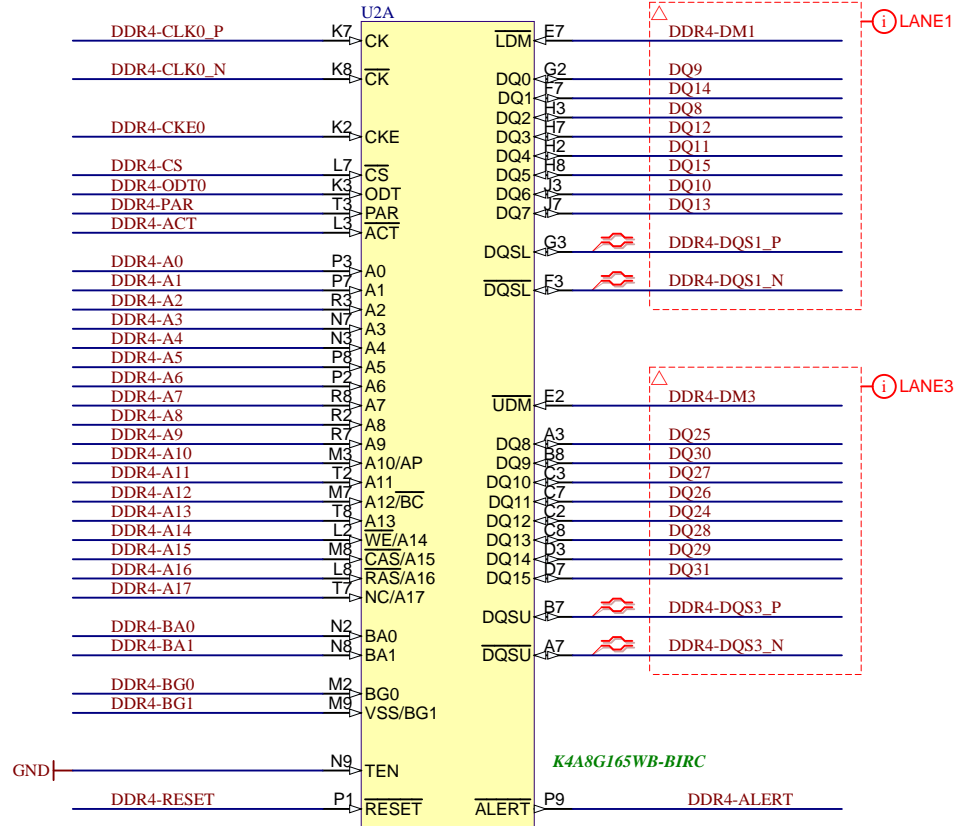
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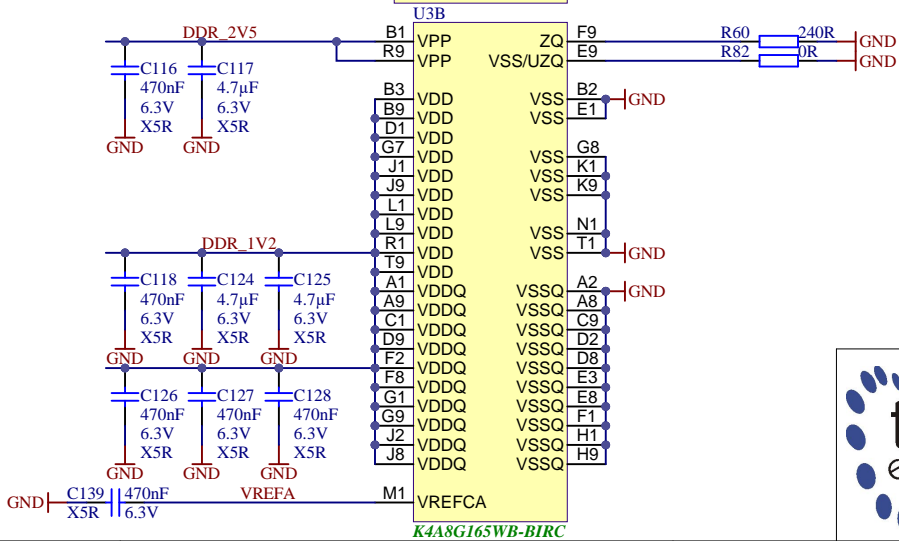
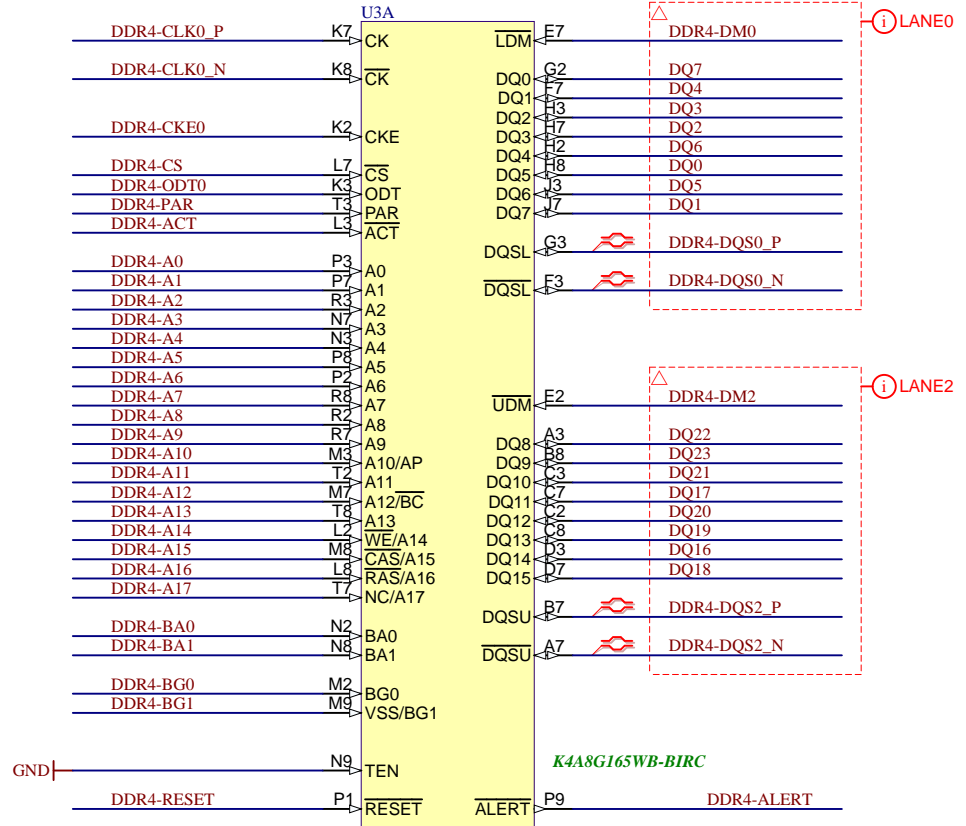
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Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Date: 2021-08-17		Page 19 of 31	
Filename: ZU_PS_POWER.SchDoc			



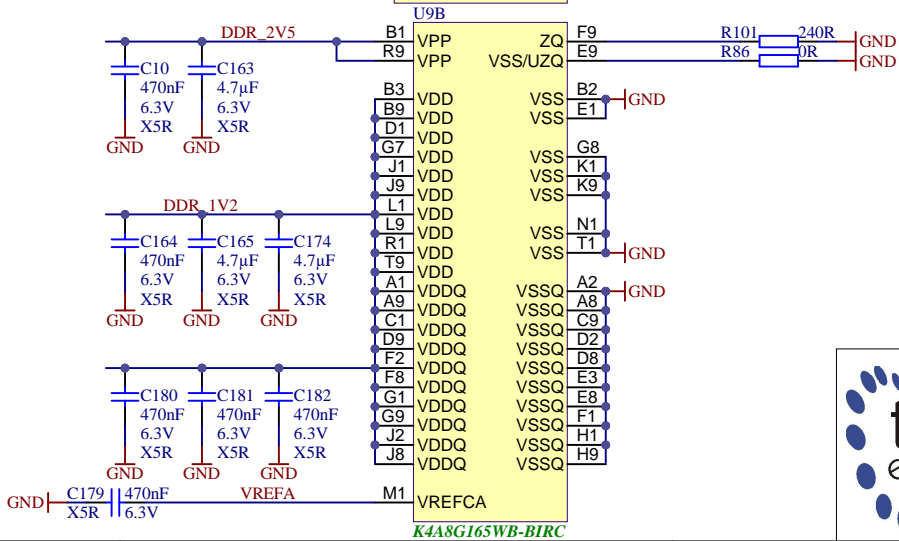
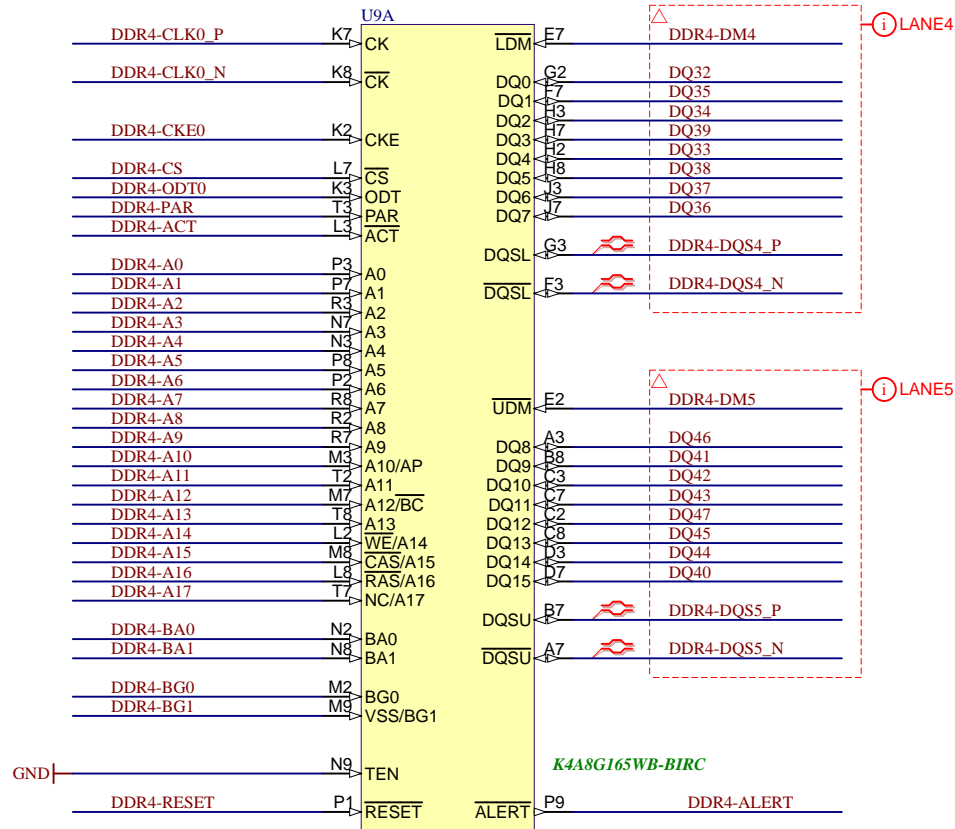
Title: TE0818 - ZU_POWER		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 20 of 31
Filename: ZU_POWER.SchDoc		



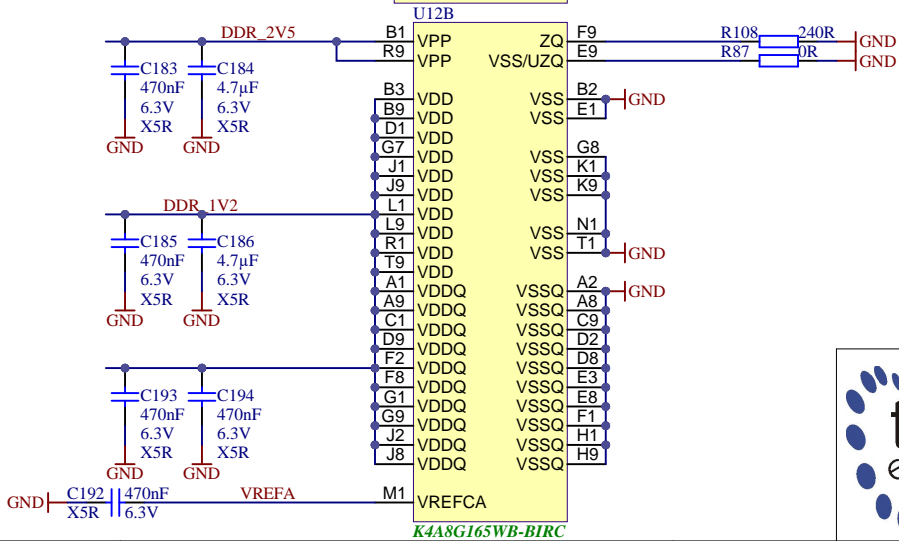
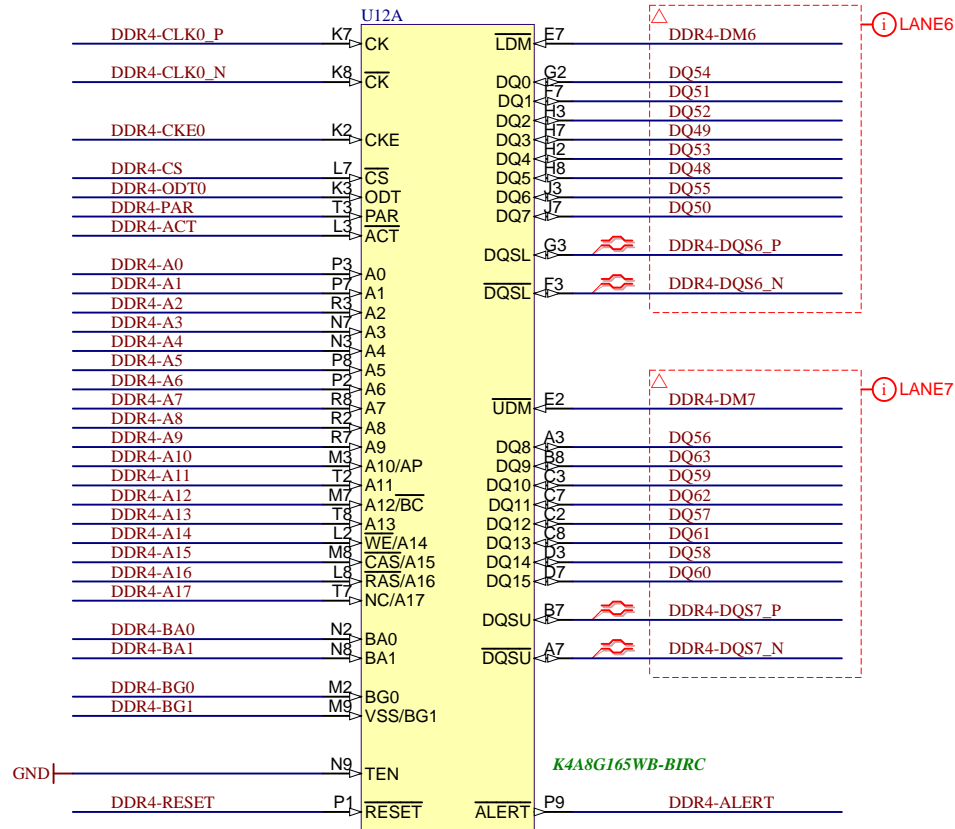
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A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 21 of 31
Filename: DDR4-RAM.SchDoc		



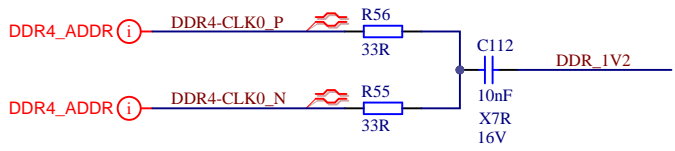
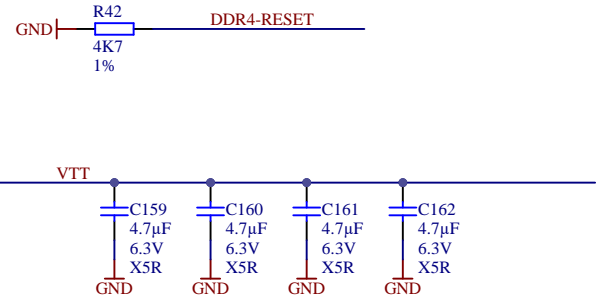
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 22 of 31
Filename: DDR4-RAM_2.SchDoc		



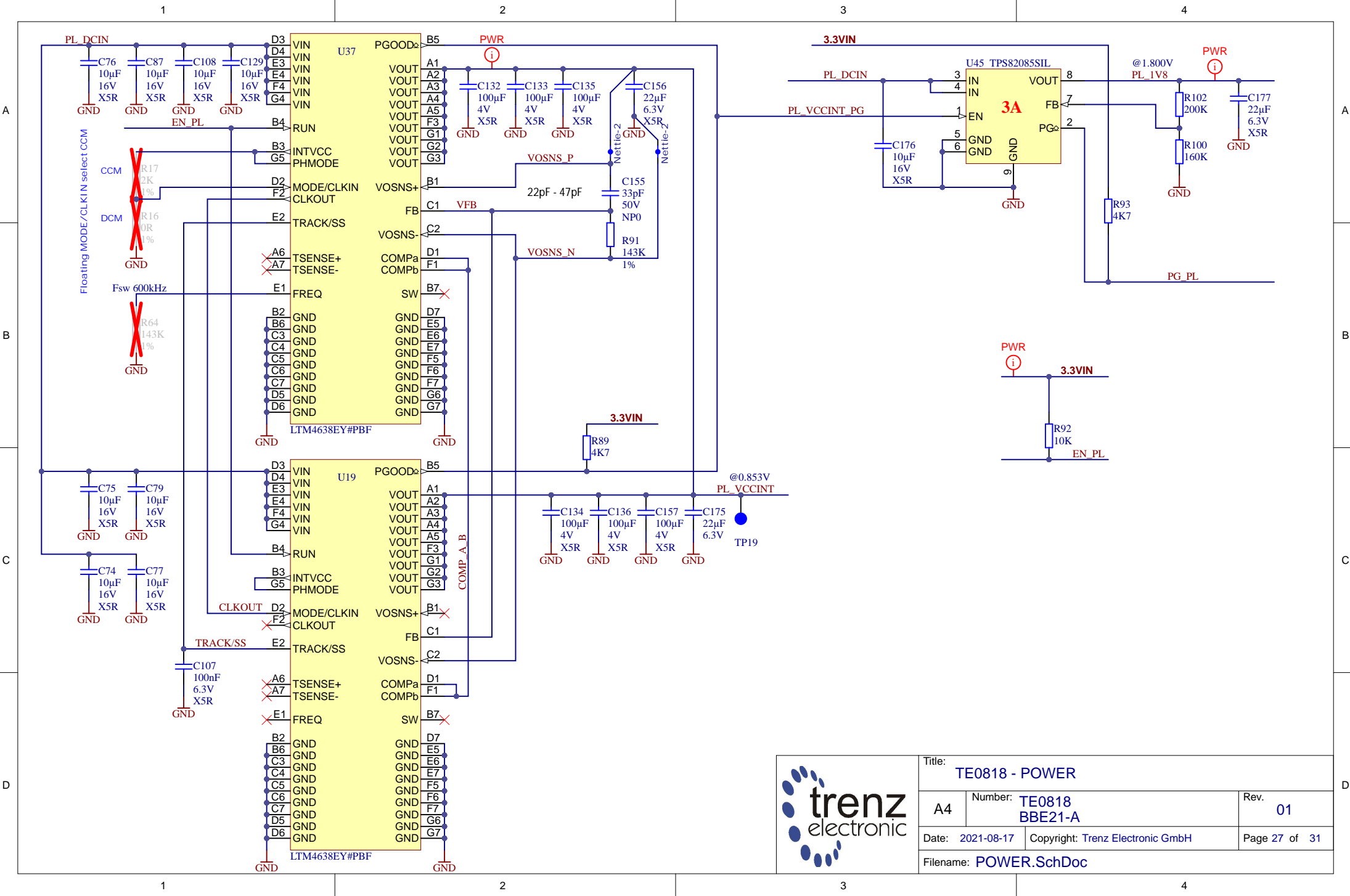
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 23 of 31
Filename: DDR4-RAM_3.SchDoc		




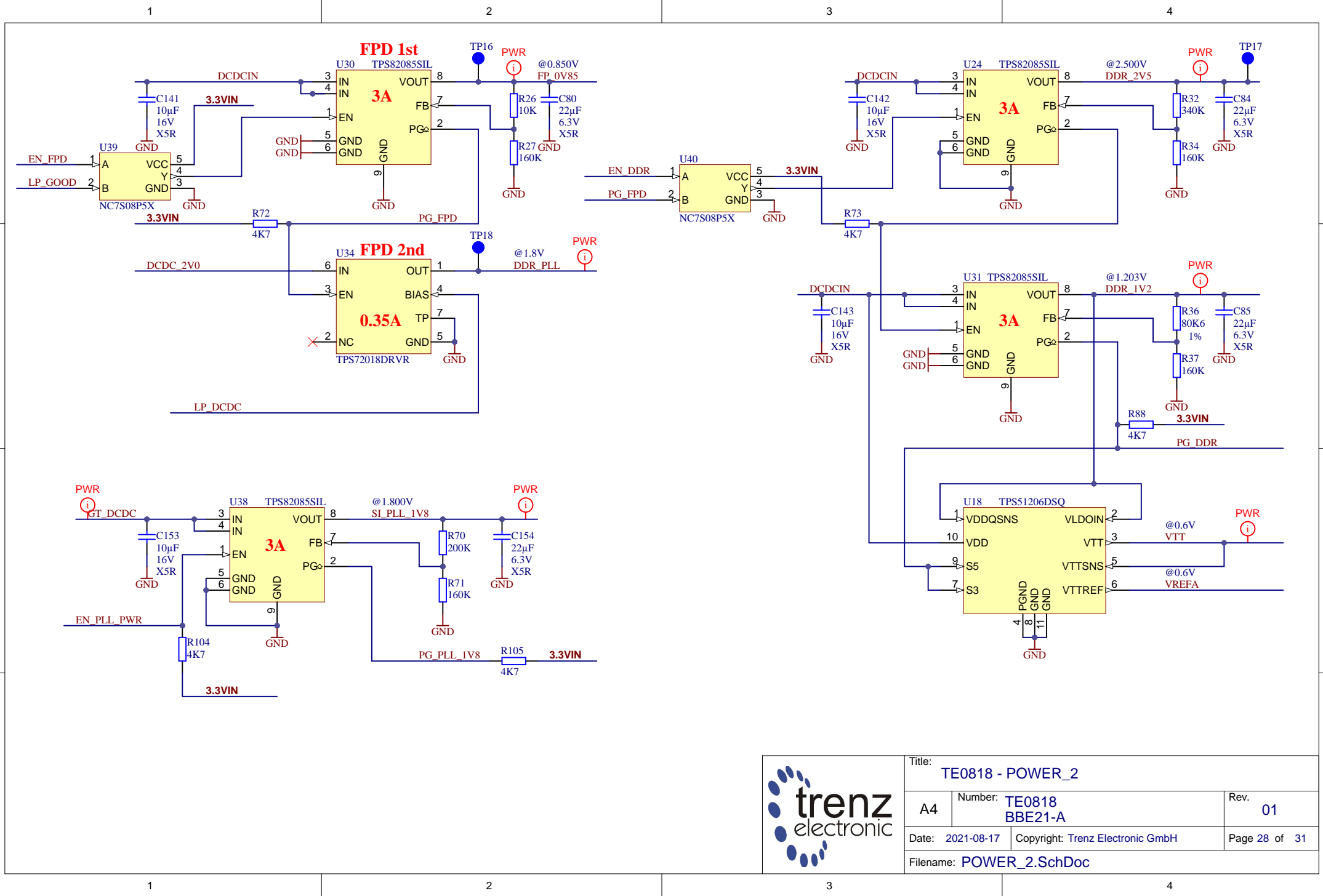
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 24 of 31
Filename: DDR4-RAM_4.SchDoc		




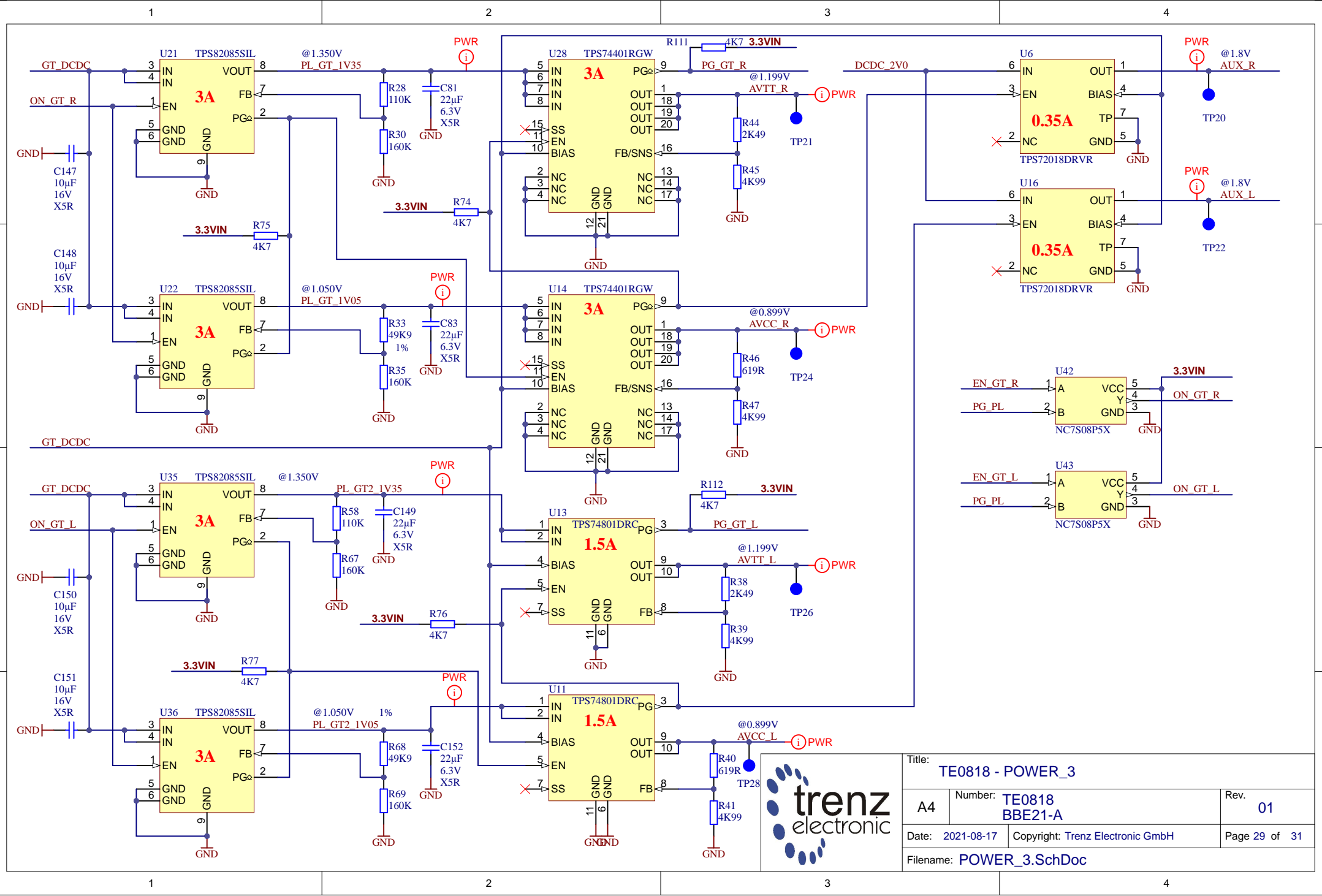
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 25 of 31
Filename: DDR4-TERM.SchDoc		



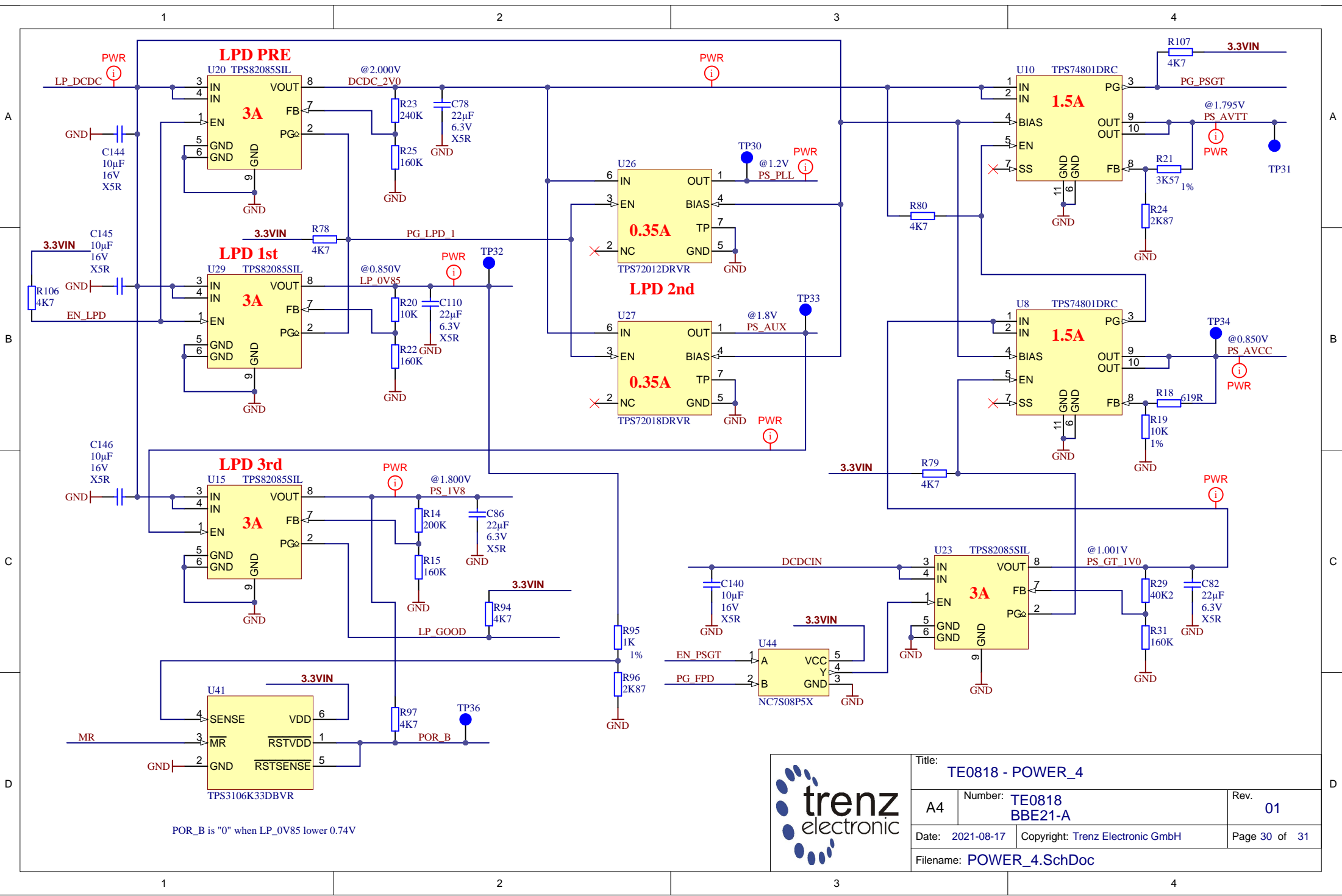
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			A4	Number: TE0818 BBE21-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH		Page 27 of 31
Filename: POWER.SchDoc				



		Title: TE0818 - POWER_2	
		A4	Number: TE0818 BBE21-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Filename: POWER_2.SchDoc		Page 28 of 31	



Title: TE0818 - POWER_3		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 29 of 31
Filename: POWER_3.SchDoc		



POR_B is "0" when LP_OV85 lower 0.74V



Title: TE0818 - POWER_4		
A4	Number: TE0818 BBE21-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 30 of 31
Filename: POWER_4.SchDoc		

1

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3

4

A

A

B

B


C

C

D

D

REV	DATE	Description	
-01	2021-05	Initial revision	VT

	Title: TE0818 - Changes list		
	A4	Number: TE0818 BBE21-A	Rev. 01
	Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 31 of 31
	Filename: Revision_Changes.SchDoc		

1

2

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4