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J2.SchDoc

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J3.SchDoc

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J4.SchDoc

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ZU_POWER.SchDoc

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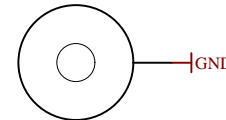
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POWER.SchDoc

U_POWER_2
POWER_2.SchDoc

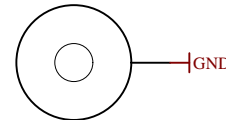
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POWER_4.SchDoc

U_REV_CH
Revision_Changes.SchDoc

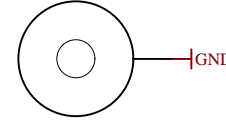
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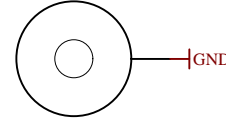
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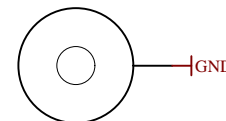
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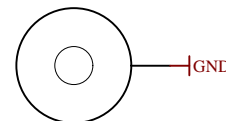
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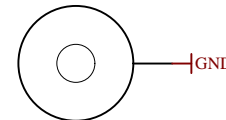
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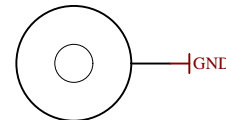
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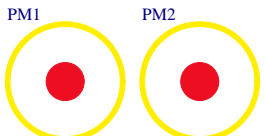
Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



FIDU-DOT - mini FIDU-DOT - mini
PM3 PM4



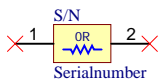
FIDU-DOT - mini FIDU-DOT - mini
PM5 PM6



FIDU-DOT - mini FIDU-DOT - mini

LOGO1
TE Logo PRINT Layer
LOGO PRINT

Serial
Serialnummer 6,3 x 6.3mm



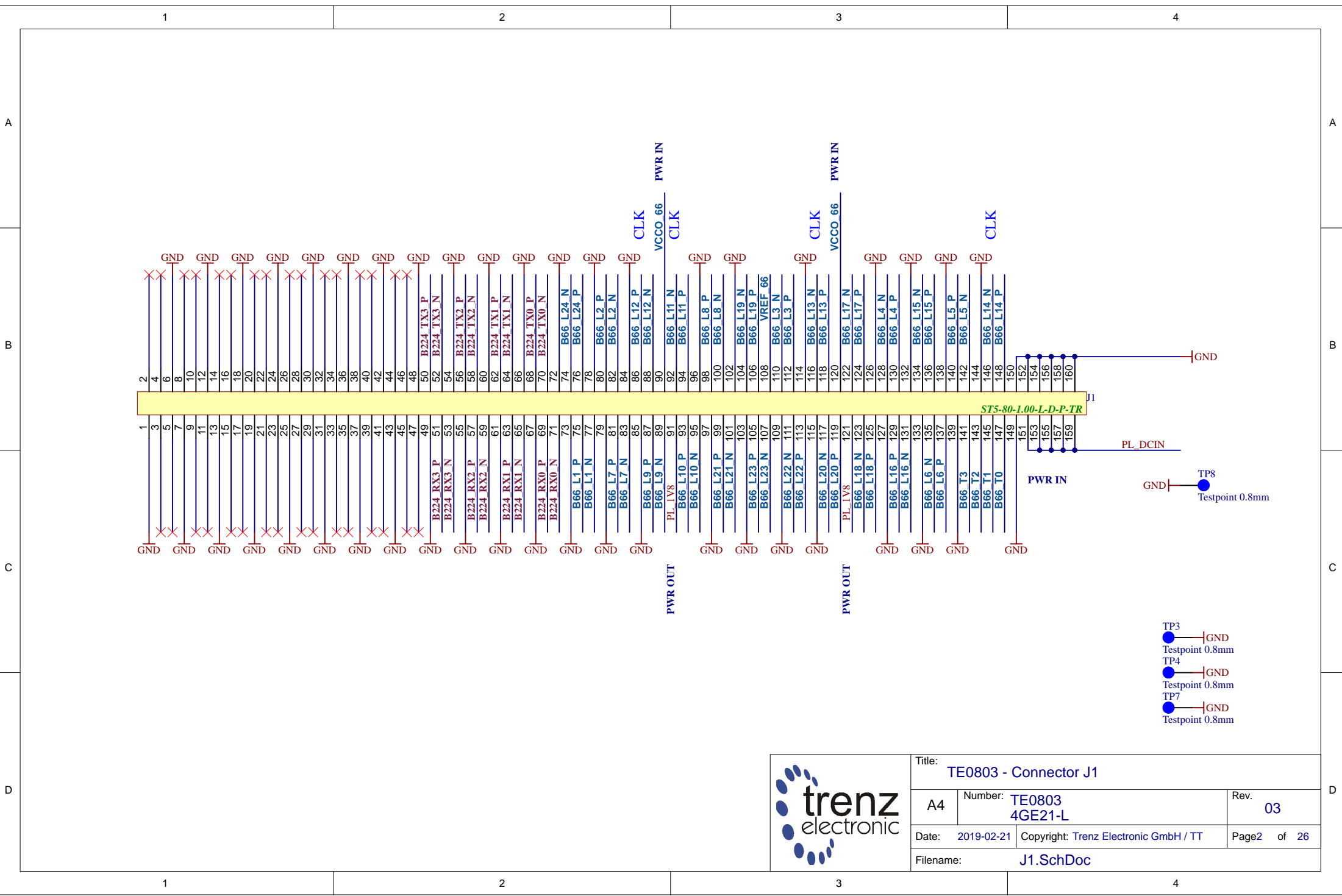
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page1 of 26
Filename: TE0803.SchDoc		

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Title: TE0803 - Connector J1		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page2 of 26
Filename: J1.SchDoc		

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A

A

B

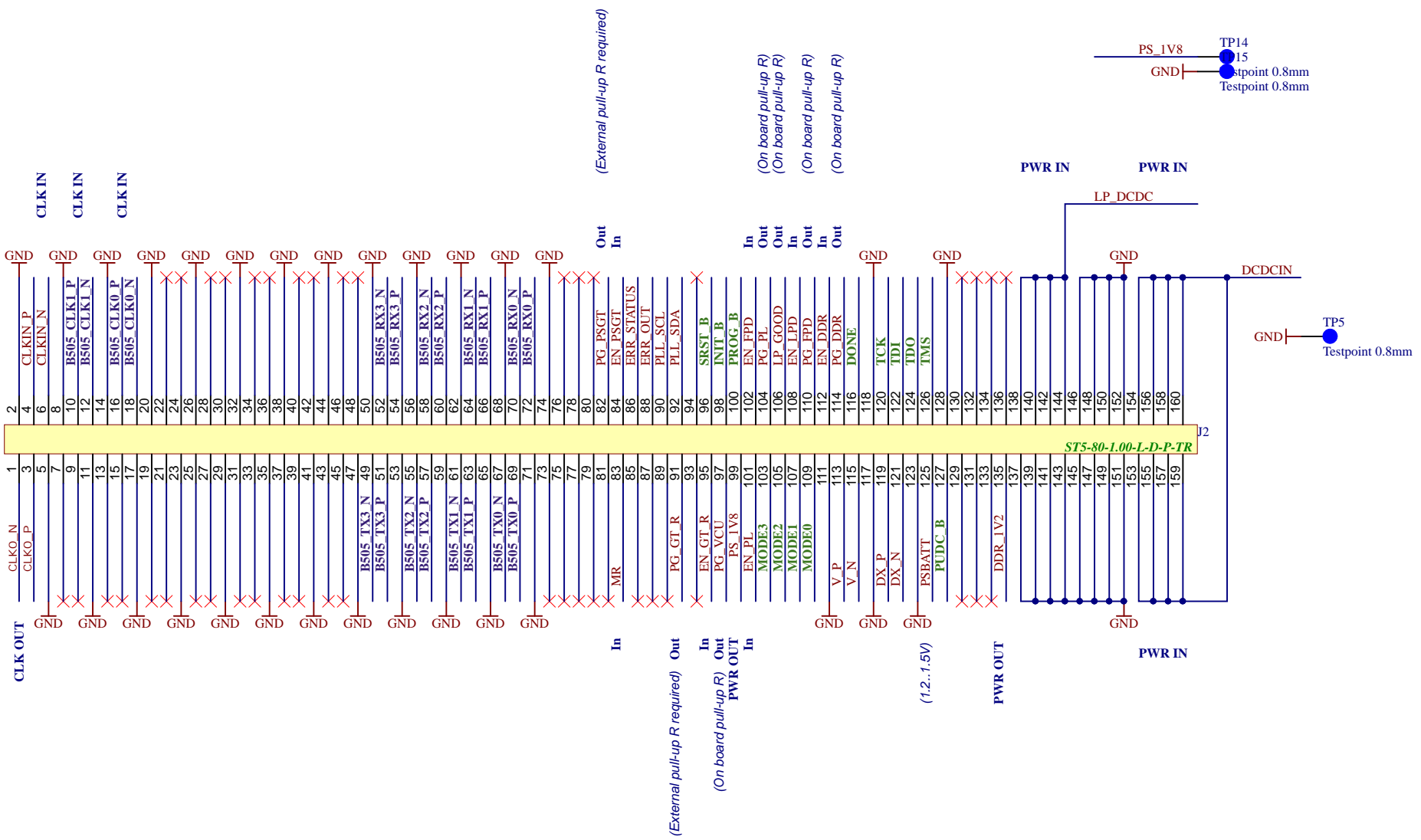
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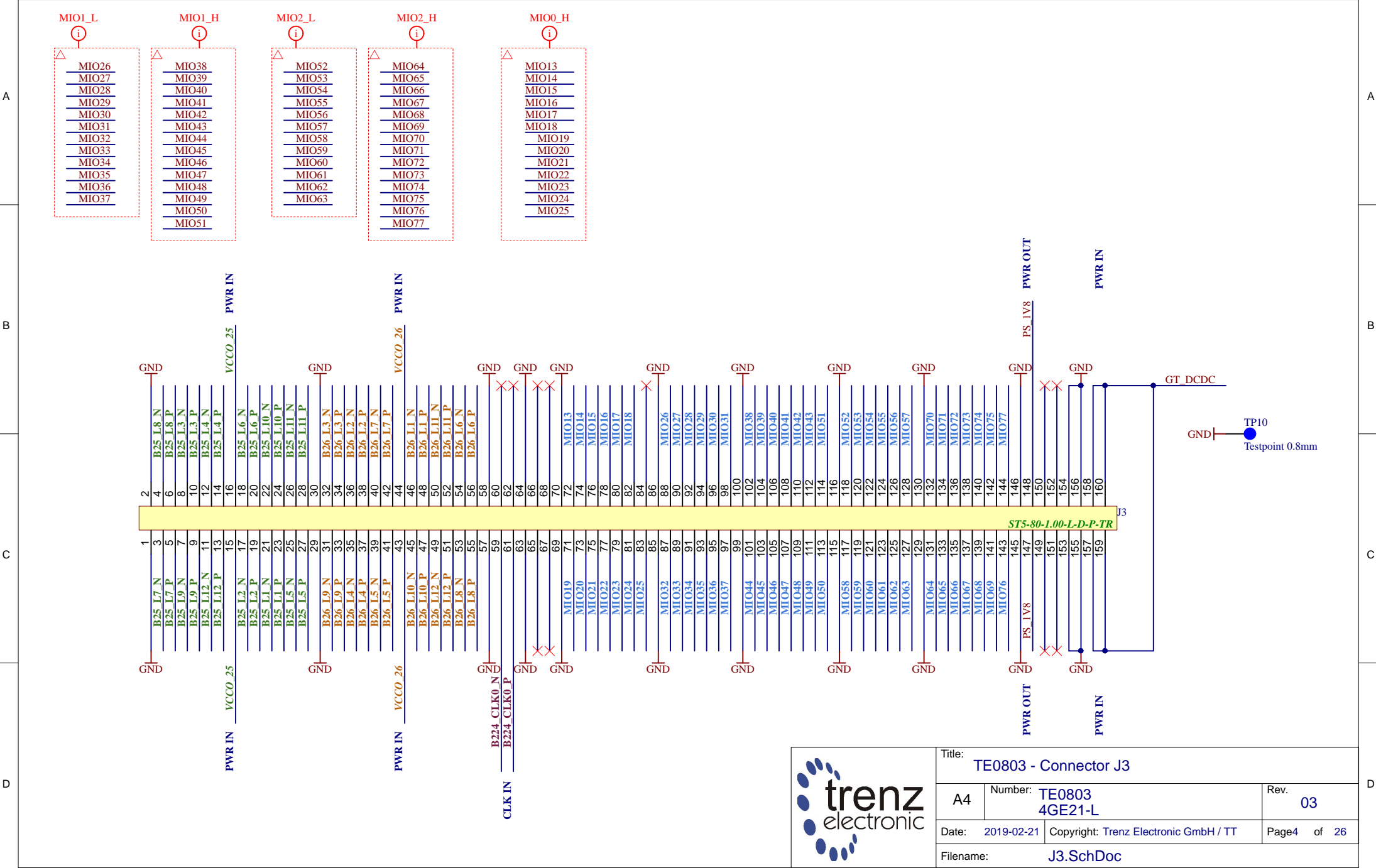

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Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT		Page3 of 26
Filename: J2.SchDoc				

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Title: TE0803 - Connector J3		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page4 of 26
Filename: J3.SchDoc		

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A

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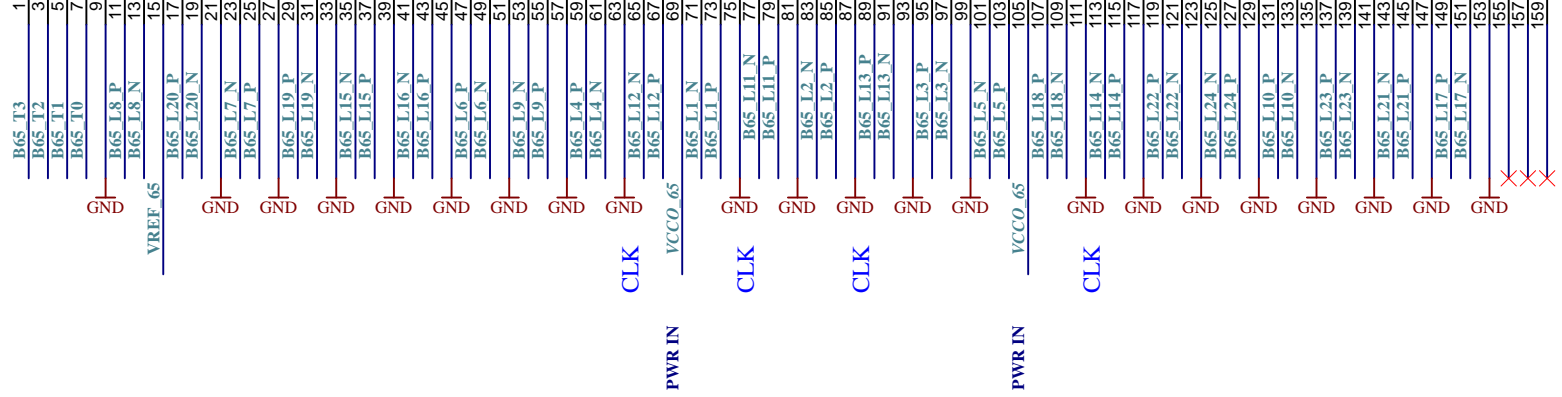
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C

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D




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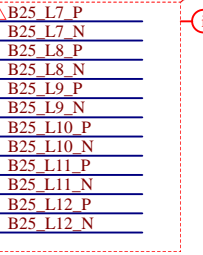
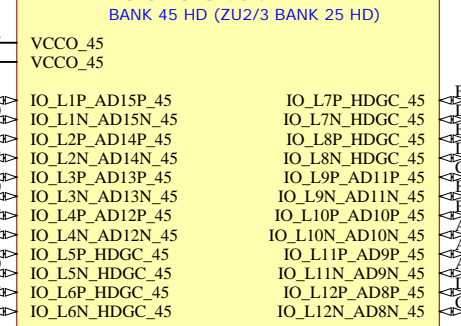
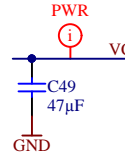
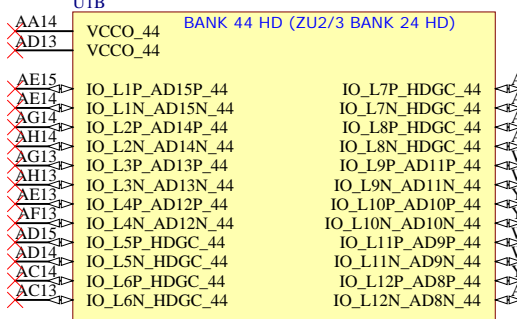
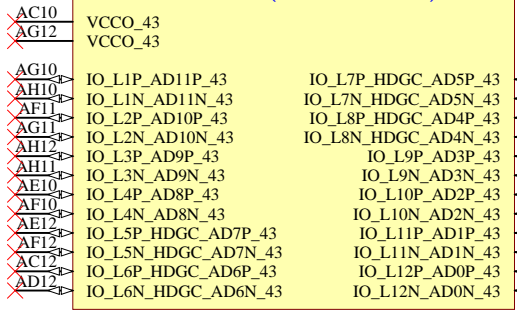
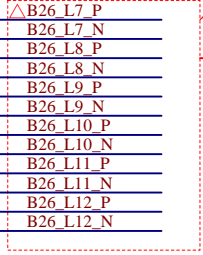
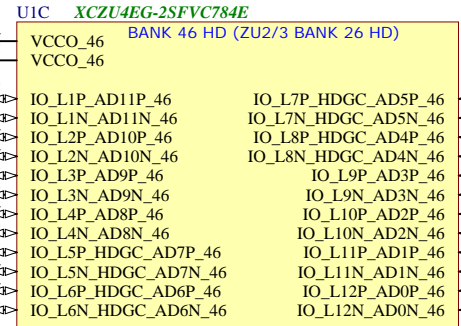
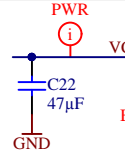
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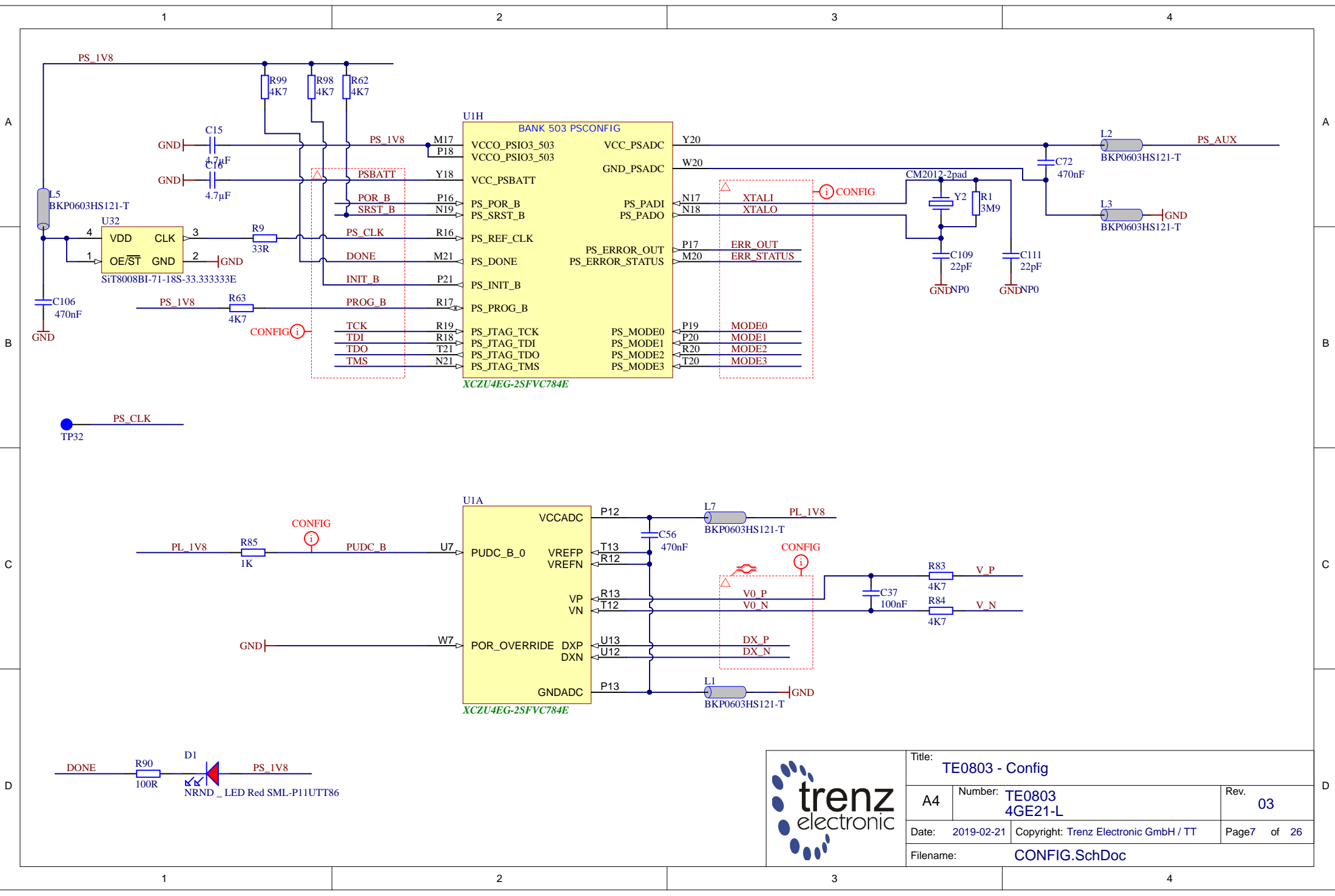
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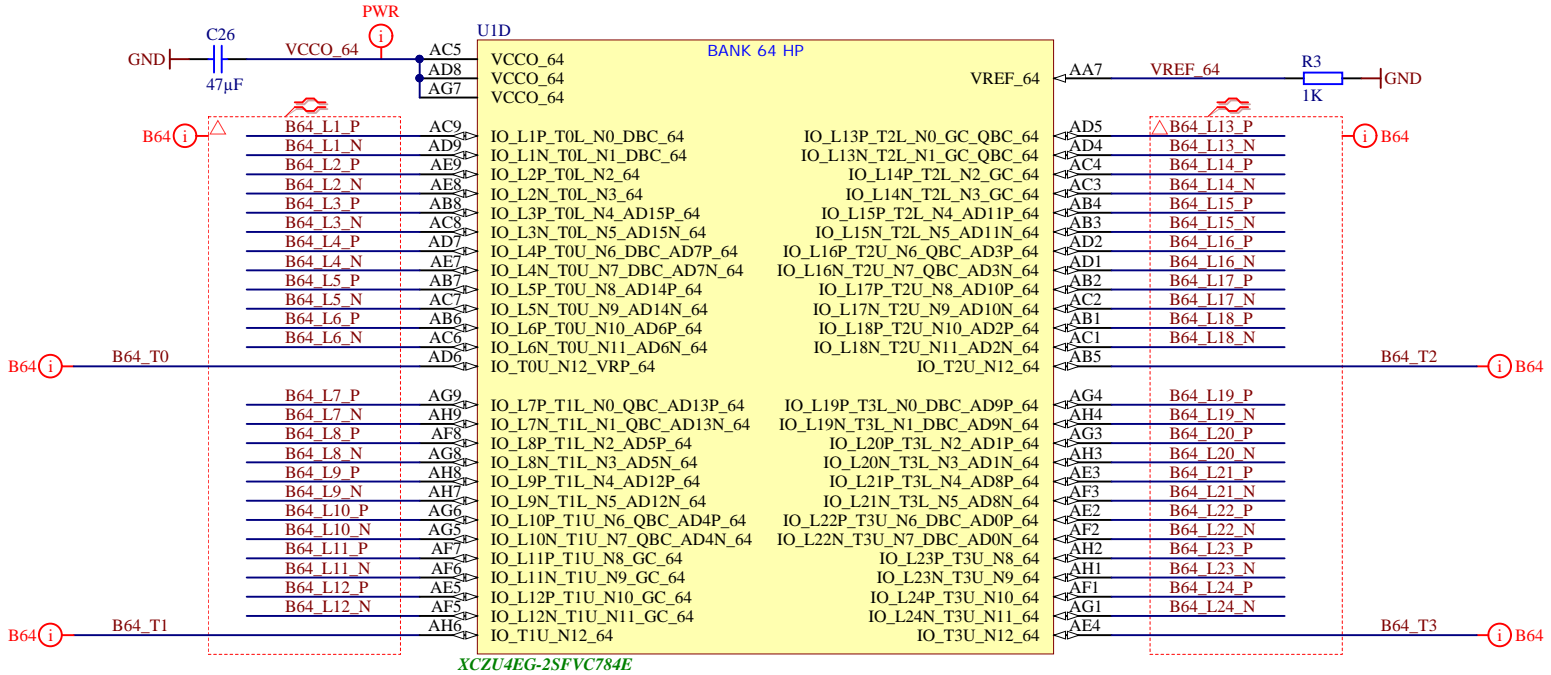
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page5 of 26
Filename: J4.SchDoc		



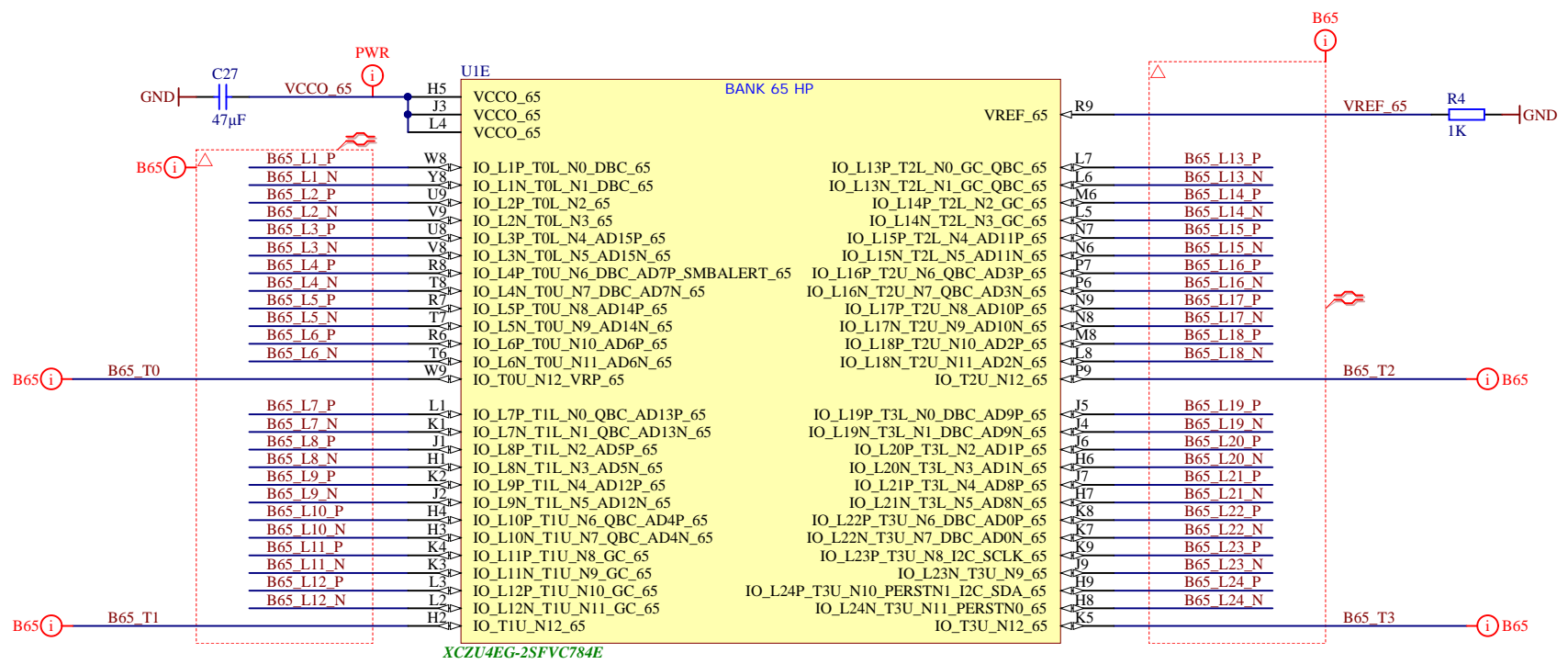
Title: TE0803 - HD Banks		
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page6 of 26
Filename: B_HD.SchDoc		



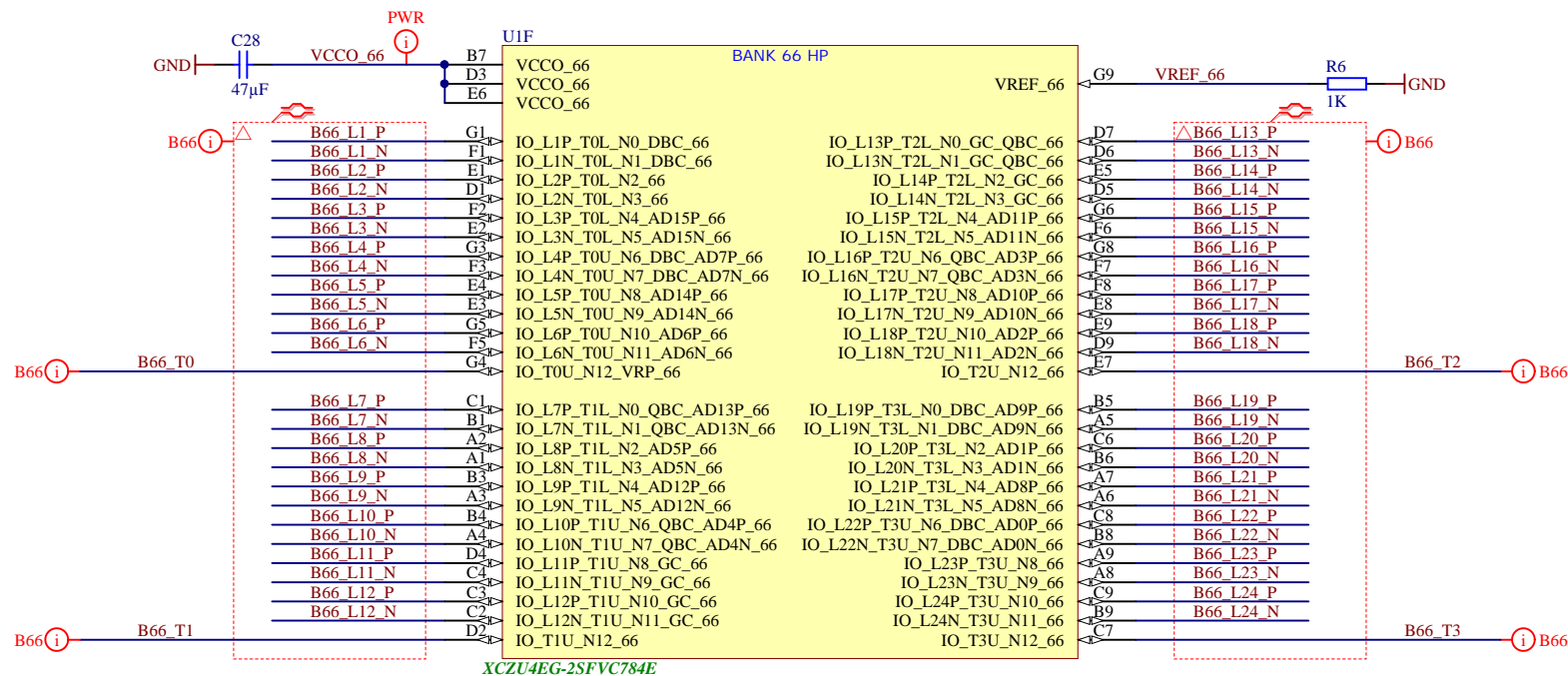
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 7 of 26
Filename: CONFIG.SchDoc		



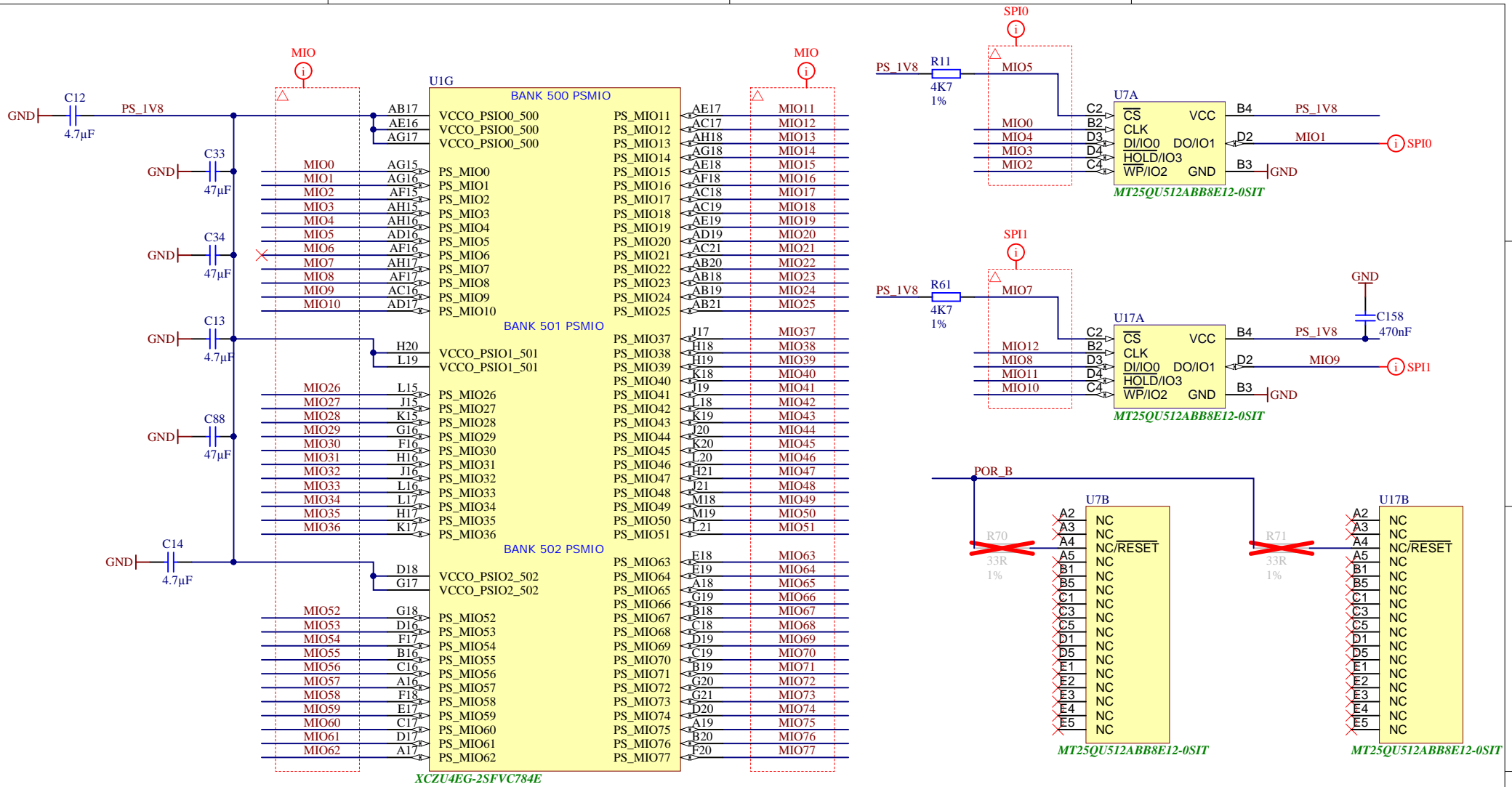
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 8 of 26
Filename: B64.SchDoc		



Title: TE0803 - B65		
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 9 of 26
Filename: B65.SchDoc		

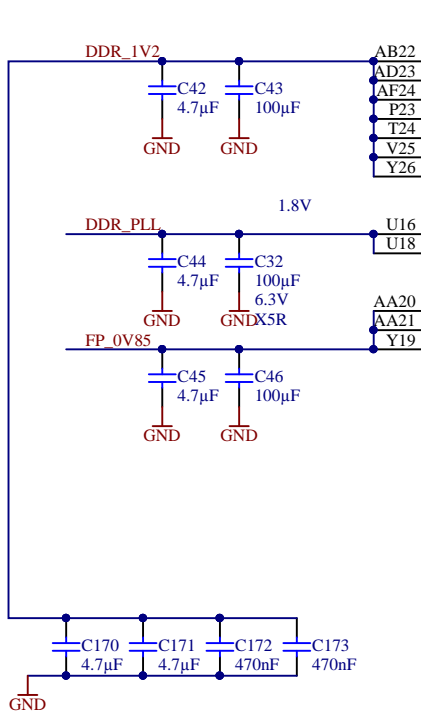


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	A4	Number: TE0803 4GE21-L	Rev. 03
	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 10 of 26
	Filename: B66.SchDoc		



Title: TE0803 - MIO Banks		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 11 of 26
Filename: B_MIO.SchDoc		





U11		BANK 504 PSDDR		W25 DDR4-CLK0 P		D80
VCCO_PSDDR_504	PS_DDR_CK0	W26	DDR4-CLK0 N <td>W28</td> <td>DDR4-CKE0 <td>D80</td> </td>	W28	DDR4-CKE0 <td>D80</td>	D80
VCCO_PSDDR_504	PS_DDR_CK_N0	V28	DDR4-CKE0			
VCCO_PSDDR_504	PS_DDR_CKE0					
VCCO_PSDDR_504	PS_DDR_CK1	Y24				
VCCO_PSDDR_504	PS_DDR_CK_N1	Y25				
VCCO_PSDDR_504	PS_DDR_CKE1	V27				
VCC_PSDDR_PLL	PS_DDR_A0	W28	DDR4-A0			
VCC_PSDDR_PLL	PS_DDR_A1	Y28	DDR4-A1			
VCC_PSDDR_PLL	PS_DDR_A2	AB28	DDR4-A2			
	PS_DDR_A3	AA28	DDR4-A3			
	PS_DDR_A4	Y27	DDR4-A4			
	PS_DDR_A5	AA27	DDR4-A5			
	PS_DDR_A6	Y22	DDR4-A6			
	PS_DDR_A7	AA23	DDR4-A7			
	PS_DDR_A8	AA22	DDR4-A8			
	PS_DDR_A9	AB23	DDR4-A9			
	PS_DDR_A10	AA25	DDR4-A10			
	PS_DDR_A11	AA26	DDR4-A11			
	PS_DDR_A12	AB25	DDR4-A12			
	PS_DDR_A13	AB26	DDR4-A13			
	PS_DDR_A14	AB24	DDR4-A14			
	PS_DDR_A15	AC24	DDR4-A15			
	PS_DDR_A16	AC23	DDR4-A16			
	PS_DDR_A17	AC22	DDR4-A17			
	PS_DDR_CS_N0	W27	DDR4-CS			
	PS_DDR_CS_N1	V26				
	PS_DDR_BA0	V23	DDR4-BA0			
	PS_DDR_BA1	W22	DDR4-BA1			
	PS_DDR_BG0	W24	DDR4-BG0			
	PS_DDR_BG1	V22	DDR4-BG1			
	PS_DDR_PARITY	V24	DDR4-PAR			
	PS_DDR_RAM_RST_N	U23	DDR4-RESET			
	PS_DDR_ACT_N	Y23	DDR4-ACT			
	PS_DDR_ALERT_N	U25	DDR4-ALERT			
	PS_DDR_ZQ	U24				
	PS_DDR_ODT0	U28	DDR4-ODT0			
	PS_DDR_ODT1	U26				

XCZU4EG-2SFVC784E

U1J		BANK 504 PSDDR		T22		DQ32	
DQ0	AD21	PS_DDR_DQ0	PS_DDR_DQ32	R22	DQ33		
DQ1	AE20	PS_DDR_DQ1	PS_DDR_DQ33	P22	DQ34		
DQ2	AD20	PS_DDR_DQ2	PS_DDR_DQ34	N22	DQ35		
DQ3	AF20	PS_DDR_DQ3	PS_DDR_DQ35	T23	DQ36		
DQ4	AH21	PS_DDR_DQ4	PS_DDR_DQ36	P24	DQ37		
DQ5	AH20	PS_DDR_DQ5	PS_DDR_DQ37	R24	DQ38		
DQ6	AH19	PS_DDR_DQ6	PS_DDR_DQ38	N24	DQ39		
DQ7	AG19	PS_DDR_DQ7	PS_DDR_DQ39	H24	DQ40		
DQ8	AF22	PS_DDR_DQ8	PS_DDR_DQ40	J24	DQ41		
DQ9	AH22	PS_DDR_DQ9	PS_DDR_DQ41	M24	DQ42		
DQ10	AE22	PS_DDR_DQ10	PS_DDR_DQ42	K24	DQ43		
DQ11	AD22	PS_DDR_DQ11	PS_DDR_DQ43	J22	DQ44		
DQ12	AH23	PS_DDR_DQ12	PS_DDR_DQ44	H22	DQ45		
DQ13	AH24	PS_DDR_DQ13	PS_DDR_DQ45	K22	DQ46		
DQ14	AE24	PS_DDR_DQ14	PS_DDR_DQ46	J22	DQ47		
DQ15	AG24	PS_DDR_DQ15	PS_DDR_DQ47	M22	DQ48		
DQ16	AC26	PS_DDR_DQ16	PS_DDR_DQ48	M26	DQ49		
DQ17	AD26	PS_DDR_DQ17	PS_DDR_DQ49	L25	DQ50		
DQ18	AD25	PS_DDR_DQ18	PS_DDR_DQ50	L26	DQ51		
DQ19	AD24	PS_DDR_DQ19	PS_DDR_DQ51	K28	DQ52		
DQ20	AG26	PS_DDR_DQ20	PS_DDR_DQ52	L28	DQ53		
DQ21	AH25	PS_DDR_DQ21	PS_DDR_DQ53	M28	DQ54		
DQ22	AH26	PS_DDR_DQ22	PS_DDR_DQ54	N28	DQ55		
DQ23	AG25	PS_DDR_DQ23	PS_DDR_DQ55	J28	DQ56		
DQ24	AH27	PS_DDR_DQ24	PS_DDR_DQ56	K27	DQ57		
DQ25	AH28	PS_DDR_DQ25	PS_DDR_DQ57	H28	DQ58		
DQ26	AF28	PS_DDR_DQ26	PS_DDR_DQ58	H27	DQ59		
DQ27	AG28	PS_DDR_DQ27	PS_DDR_DQ59	G26	DQ60		
DQ28	AC27	PS_DDR_DQ28	PS_DDR_DQ60	G25	DQ61		
DQ29	AD27	PS_DDR_DQ29	PS_DDR_DQ61	K25	DQ62		
DQ30	AD28	PS_DDR_DQ30	PS_DDR_DQ62	J25	DQ63		
DQ31	AC28	PS_DDR_DQ31	PS_DDR_DQ63	T28			
			PS_DDR_DQ64	R28			
DDR4-DQS0 P	AF21	PS_DDR_DQS_P0	PS_DDR_DQ65	P28			
DDR4-DQS0 N	AG21	PS_DDR_DQS_N0	PS_DDR_DQ66	P27			
DDR4-DQS1 P	AF23	PS_DDR_DQS_P1	PS_DDR_DQ67	R25			
DDR4-DQS1 N	AG23	PS_DDR_DQS_N1	PS_DDR_DQ68	P26			
DDR4-DQS2 P	AF25	PS_DDR_DQS_P2	PS_DDR_DQ69	R25			
DDR4-DQS2 N	AF26	PS_DDR_DQS_N2	PS_DDR_DQ70	P25			
DDR4-DQS3 P	AE27	PS_DDR_DQS_P3	PS_DDR_DQ71	T25			
DDR4-DQS3 N	AF27	PS_DDR_DQS_N3					
DDR4-DQS4 P	N23	PS_DDR_DQS_P4					
DDR4-DQS4 N	M23	PS_DDR_DQS_N4					
DDR4-DQS5 P	L23	PS_DDR_DQS_P5	PS_DDR_DM0	AG20	DDR4-DM0		
DDR4-DQS5 N	K23	PS_DDR_DQS_N5	PS_DDR_DM1	AE23	DDR4-DM1		
DDR4-DQS6 P	N26	PS_DDR_DQS_P6	PS_DDR_DM2	AE25	DDR4-DM2		
DDR4-DQS6 N	N27	PS_DDR_DQS_N6	PS_DDR_DM3	AE28	DDR4-DM3		
DDR4-DQS7 P	J26	PS_DDR_DQS_P7	PS_DDR_DM4	R23	DDR4-DM4		
DDR4-DQS7 N	J27	PS_DDR_DQS_N7	PS_DDR_DM5	H23	DDR4-DM5		
	R27	PS_DDR_DQS_P8	PS_DDR_DM6	L27	DDR4-DM6		
	T27	PS_DDR_DQS_N8	PS_DDR_DM7	H26	DDR4-DM7		
			PS_DDR_DM8	T26			

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Title: TE0803 - PS_DDR			
A4	Number: TE0803 4GE21-L	Rev. 03	
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 12 of 26	
Filename: PS_DDR.SchDoc			

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A

A

B

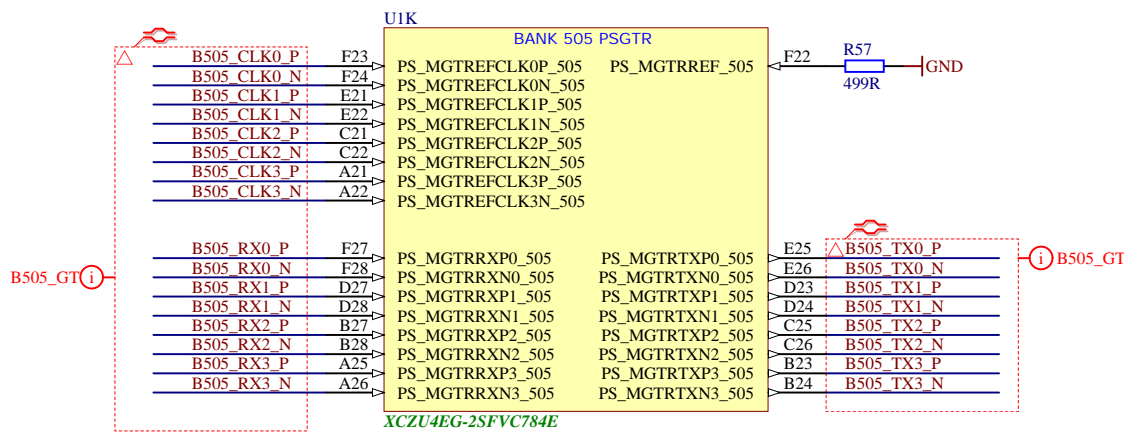
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C

C

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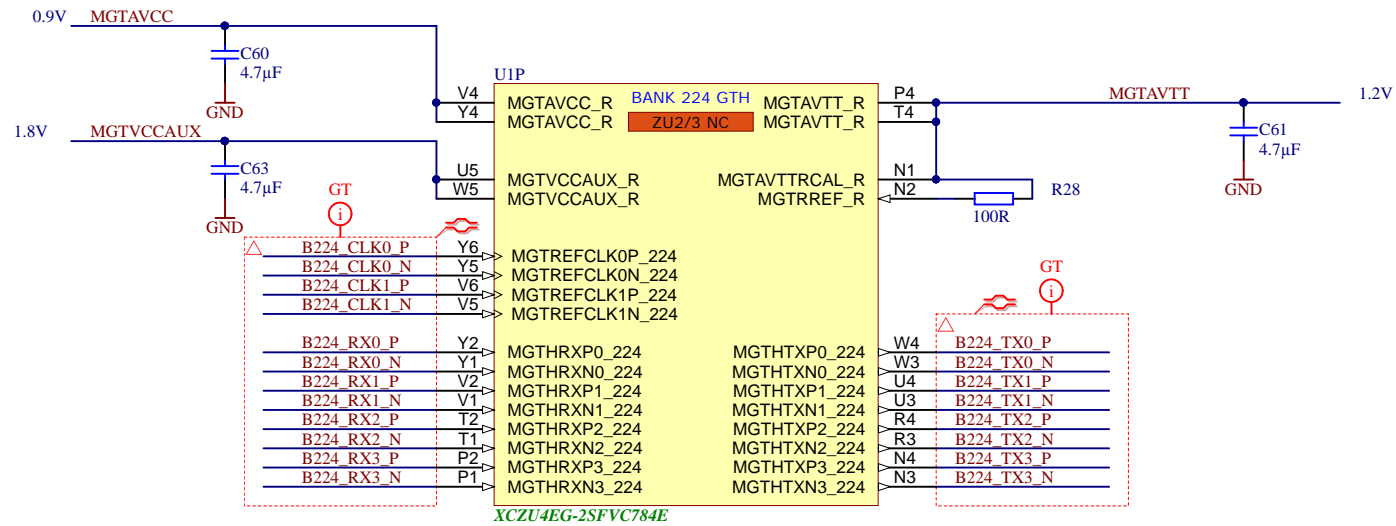
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 13 of 26
Filename: B_PS_GT.SchDoc		


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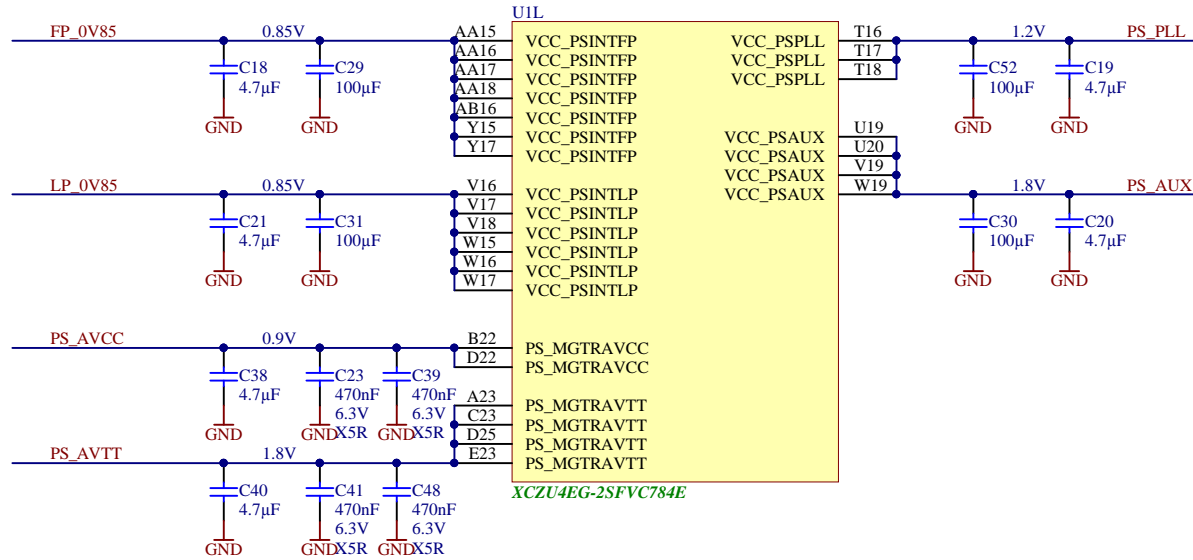
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	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 14 of 26
	Filename: B_GT.SchDoc		



	Title: TE0803 - ZU_PS_POWER		
	A4	Number: TE0803 4GE21-L	Rev. 03
	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 15 of 26
	Filename: ZU_PS_POWER.SchDoc		

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A

A

B

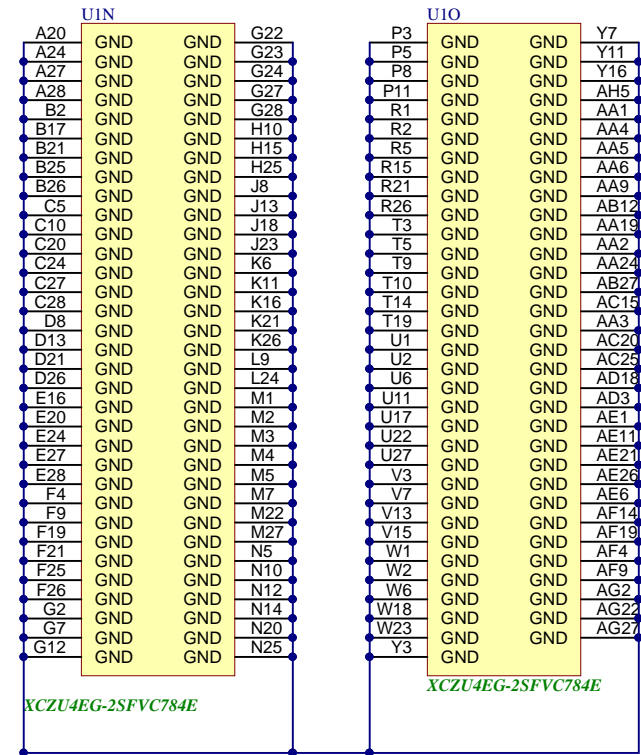
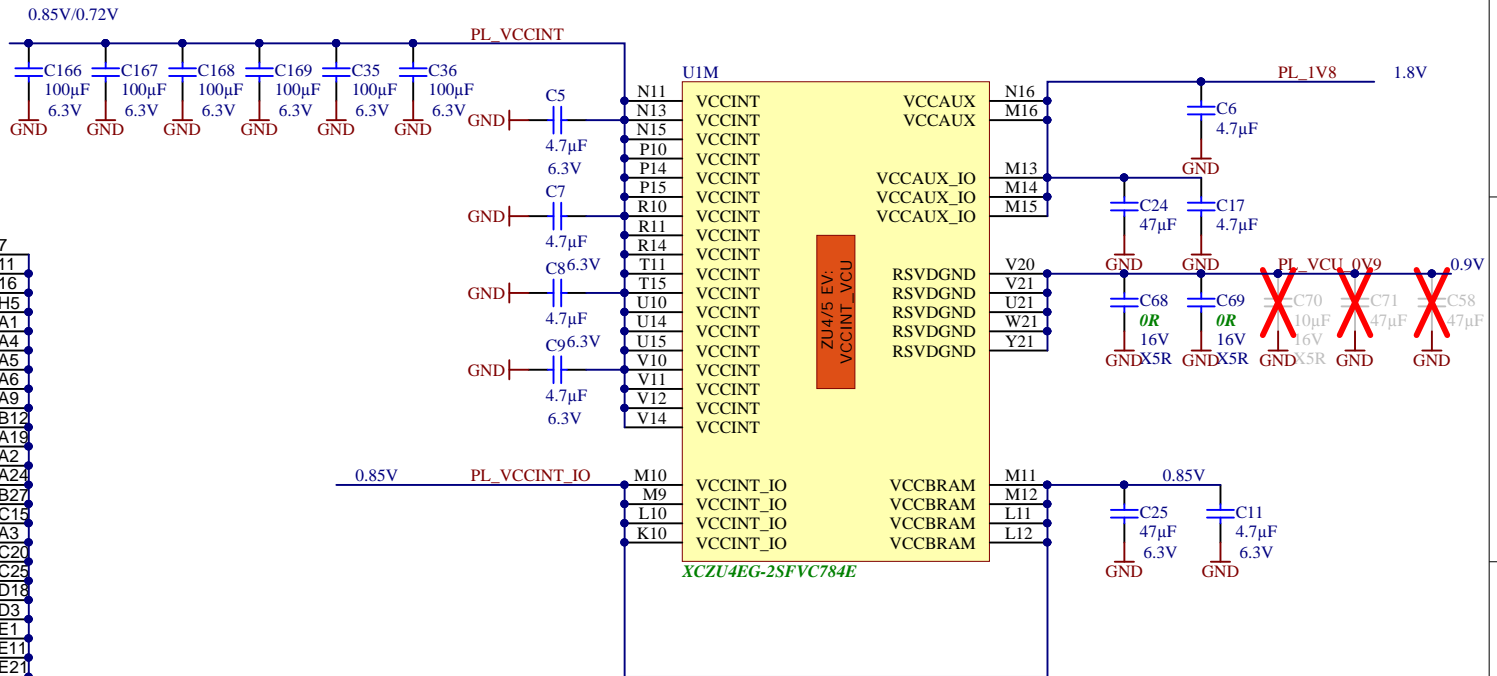
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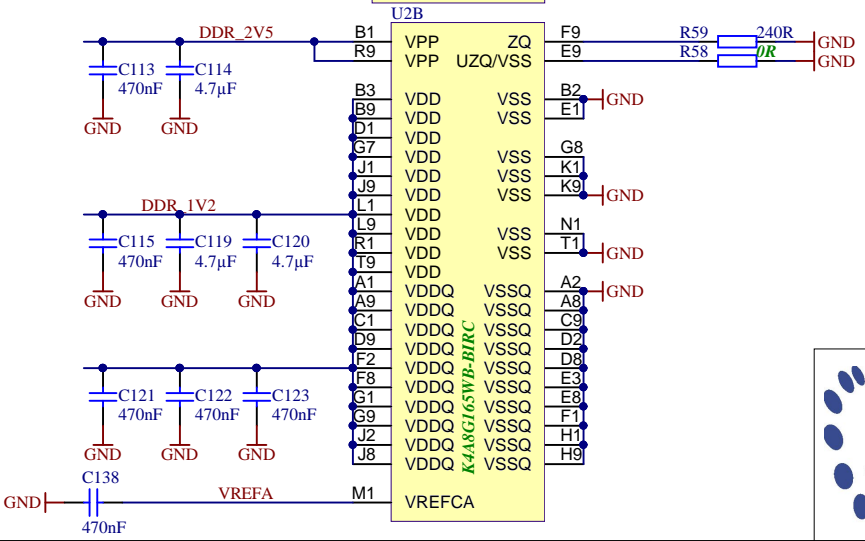
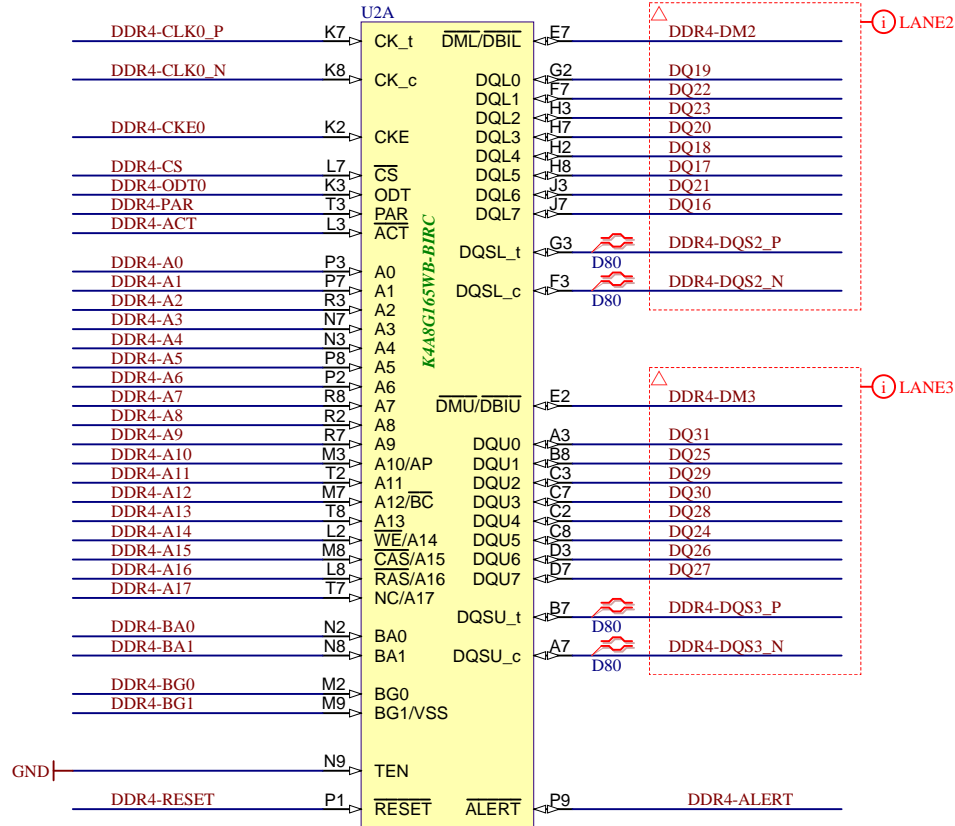
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Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT	
Filename: ZU_POWER.SchDoc		Page 16 of 26	

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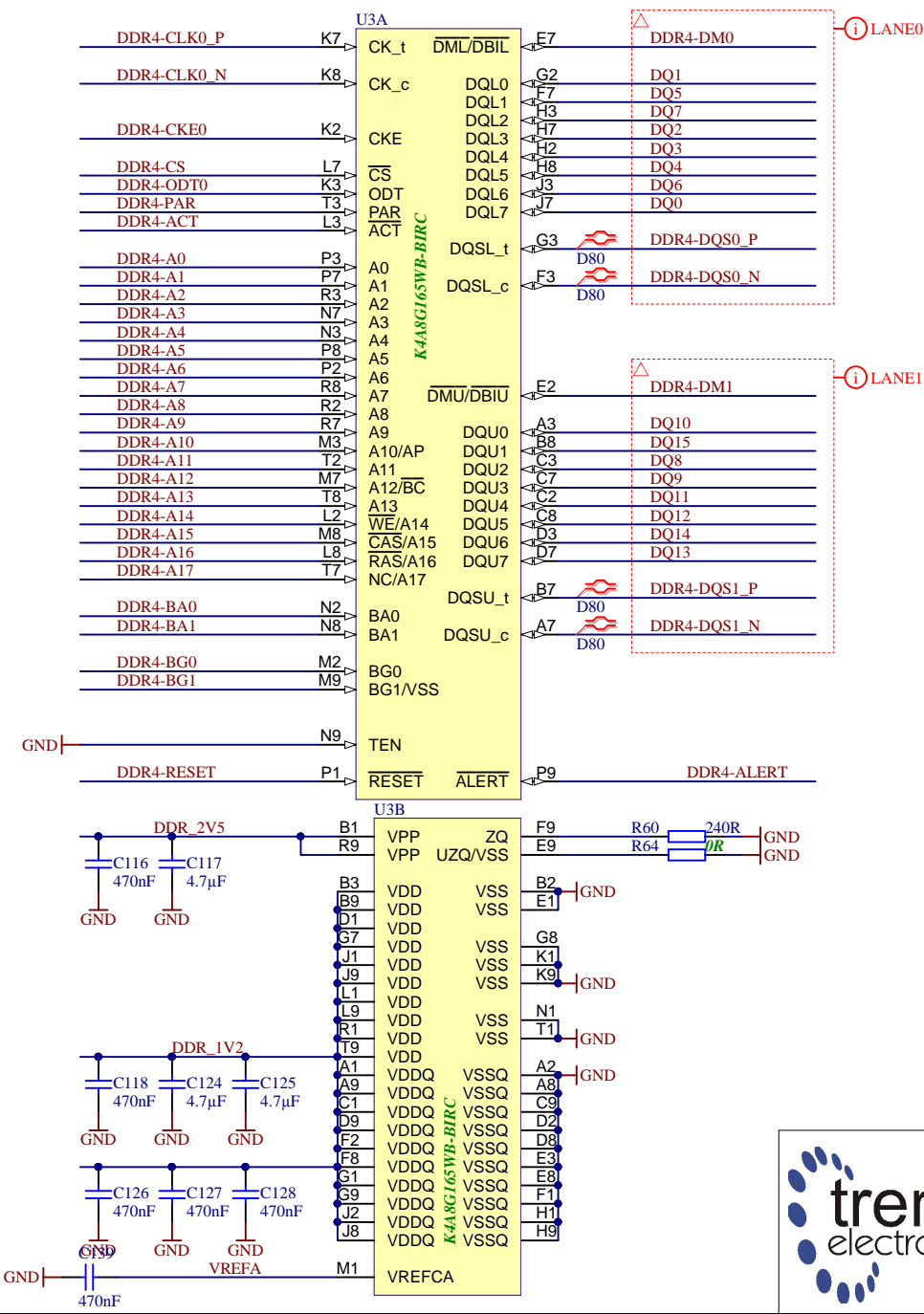
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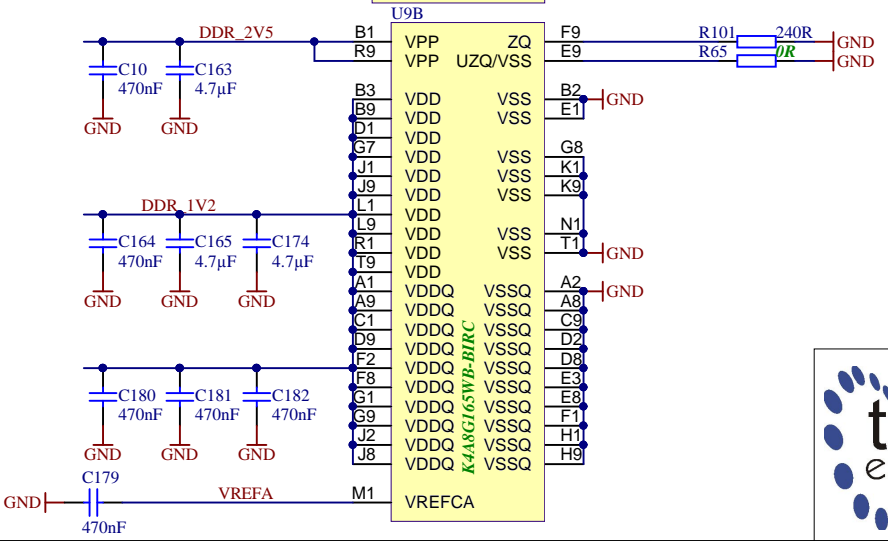
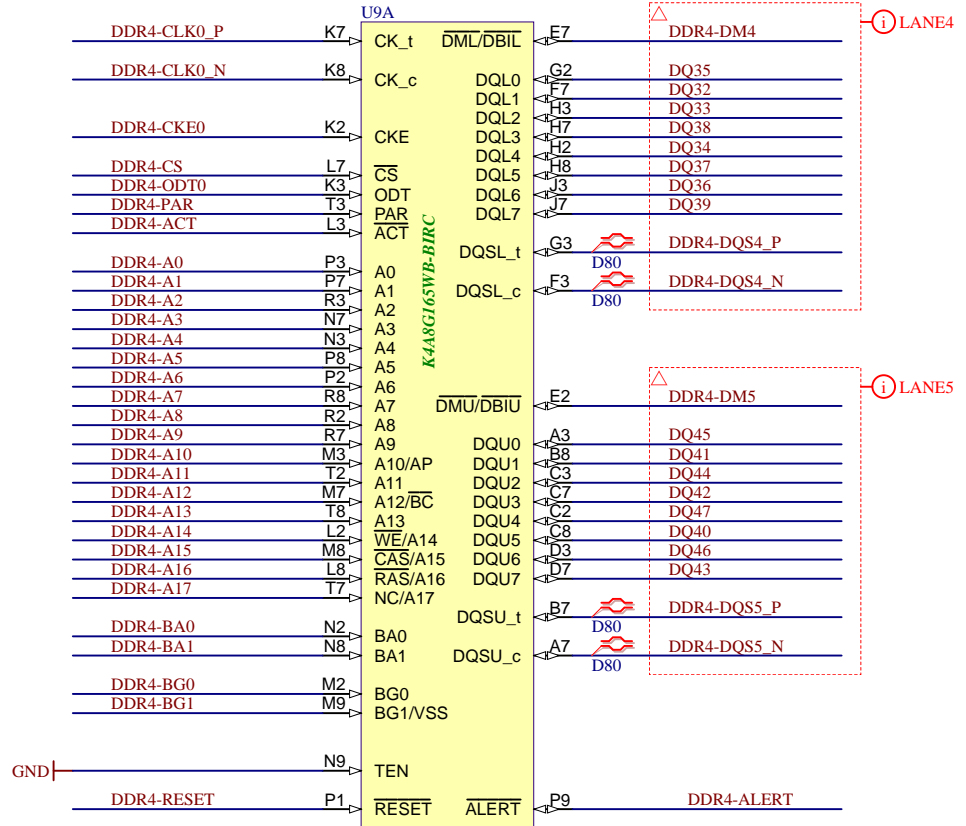
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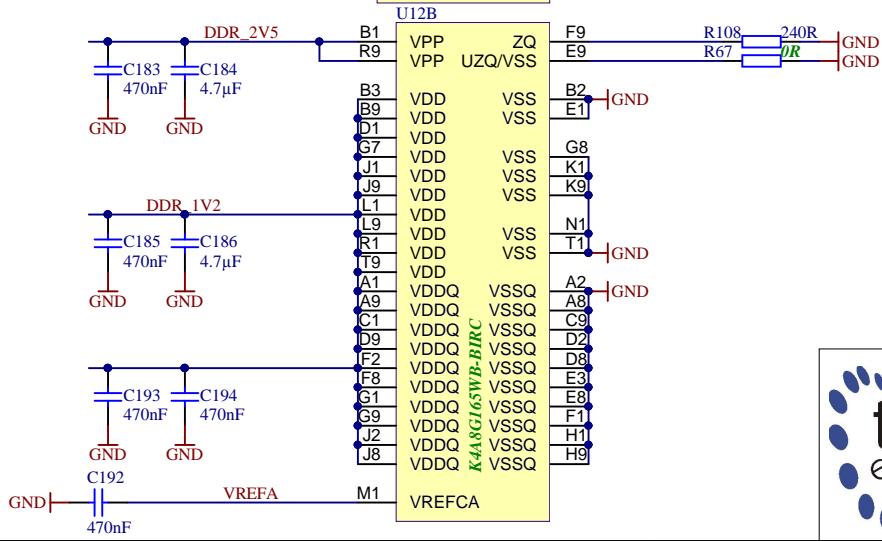
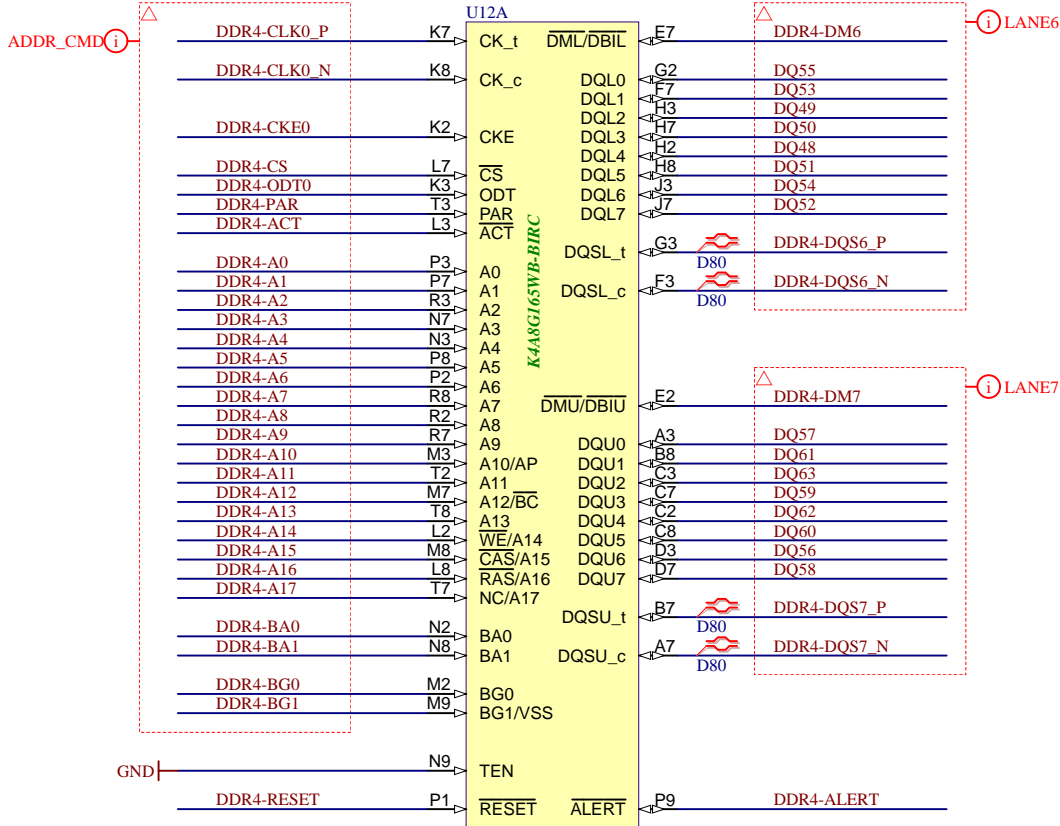
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A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 17 of 26
Filename: DDR4-RAM.SchDoc		



Title: TE0803 - DDR4_2_RAM		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 18 of 26
Filename: DDR4-RAM_2.SchDoc		



Title: TE0803 - DDR4_3_RAM		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 19 of 26
Filename: DDR4-RAM_3.SchDoc		



Title: TE0803 - DDR4_4_RAM		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page20 of 26
Filename: DDR4-RAM_4.SchDoc		

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A

B

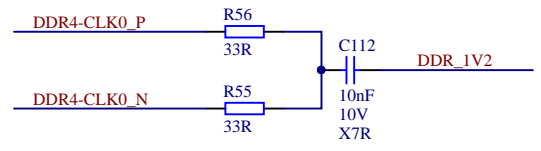
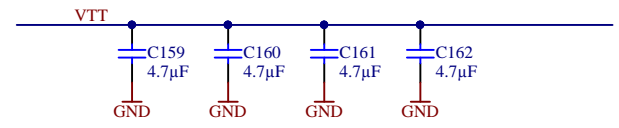
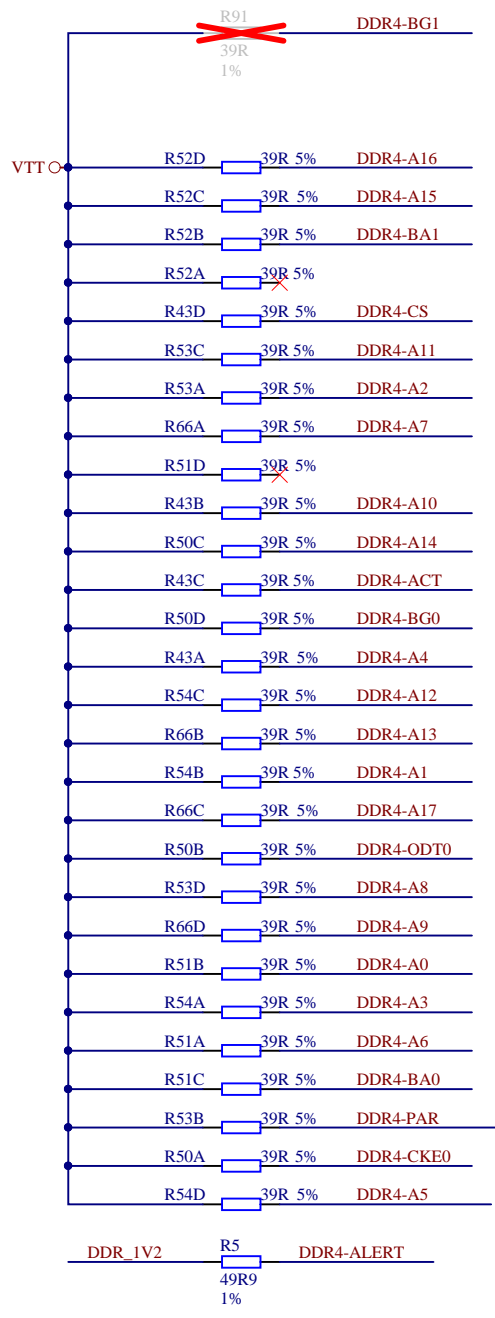
B

C

C

D

D



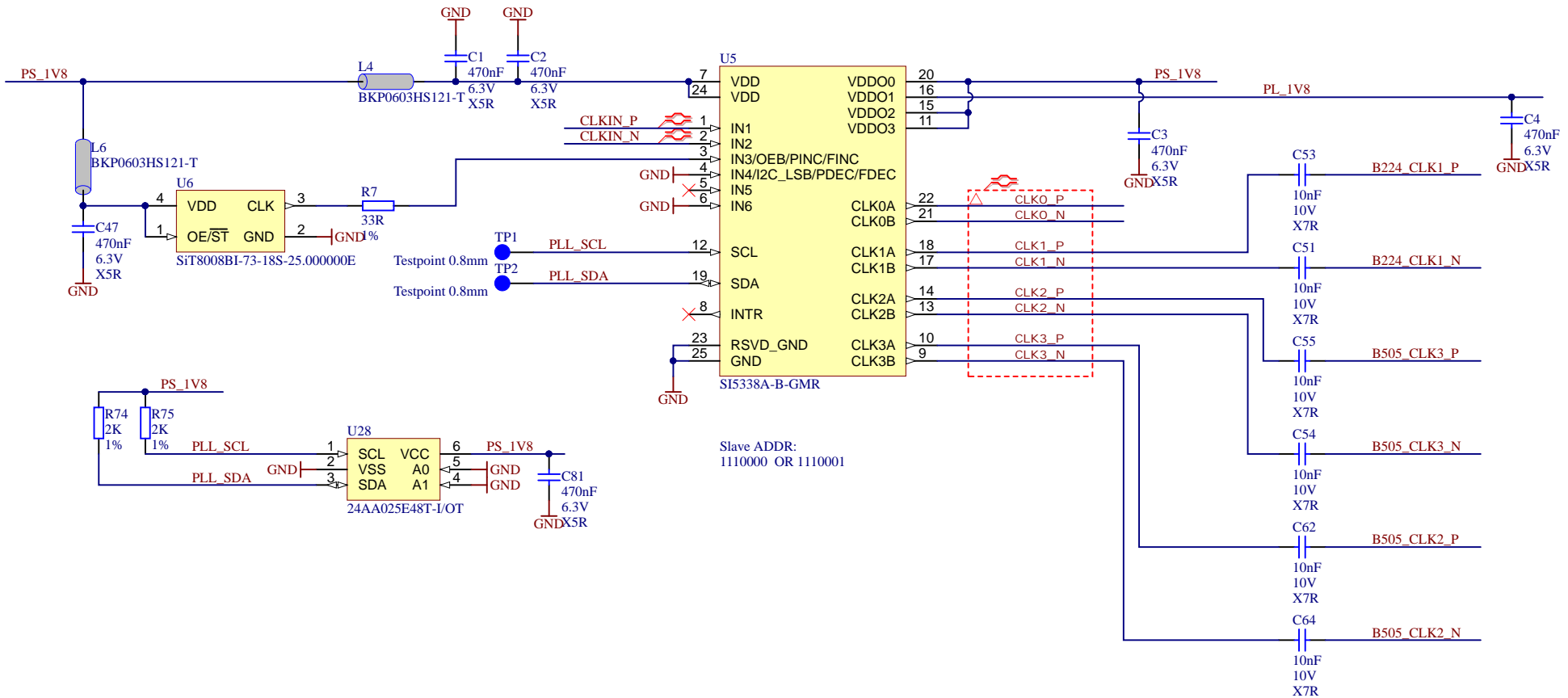
Title: TE0803 - DDR4_TERM		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page21 of 26
Filename: DDR4-TERM.SchDoc		


1

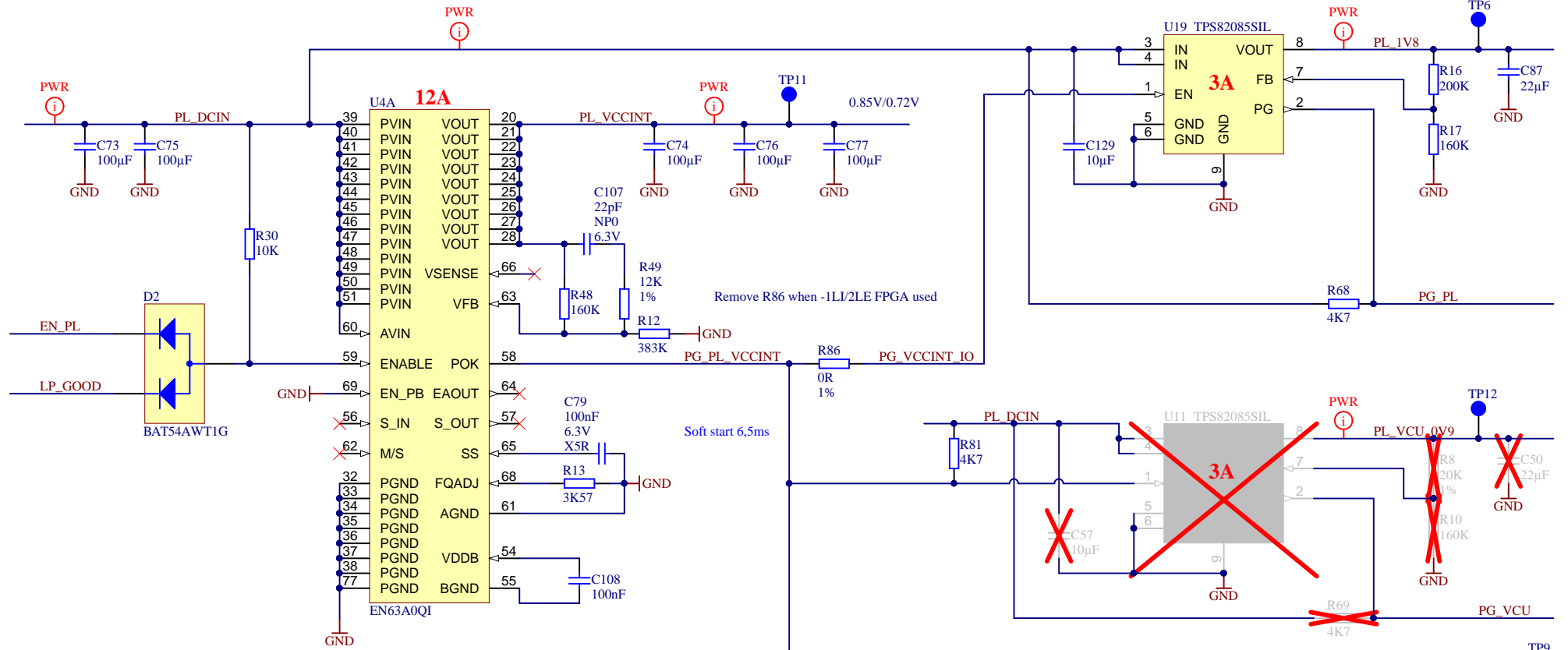
2

3

4



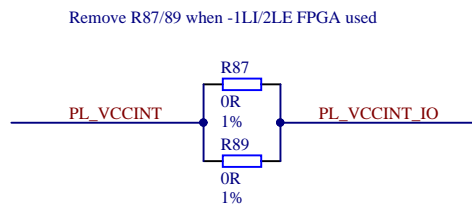
			Title: TE0803 - CLOCK	
			A4	Number: TE0803 4GE21-L
Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT		Page 22 of 26
Filename: Clock.SchDoc				



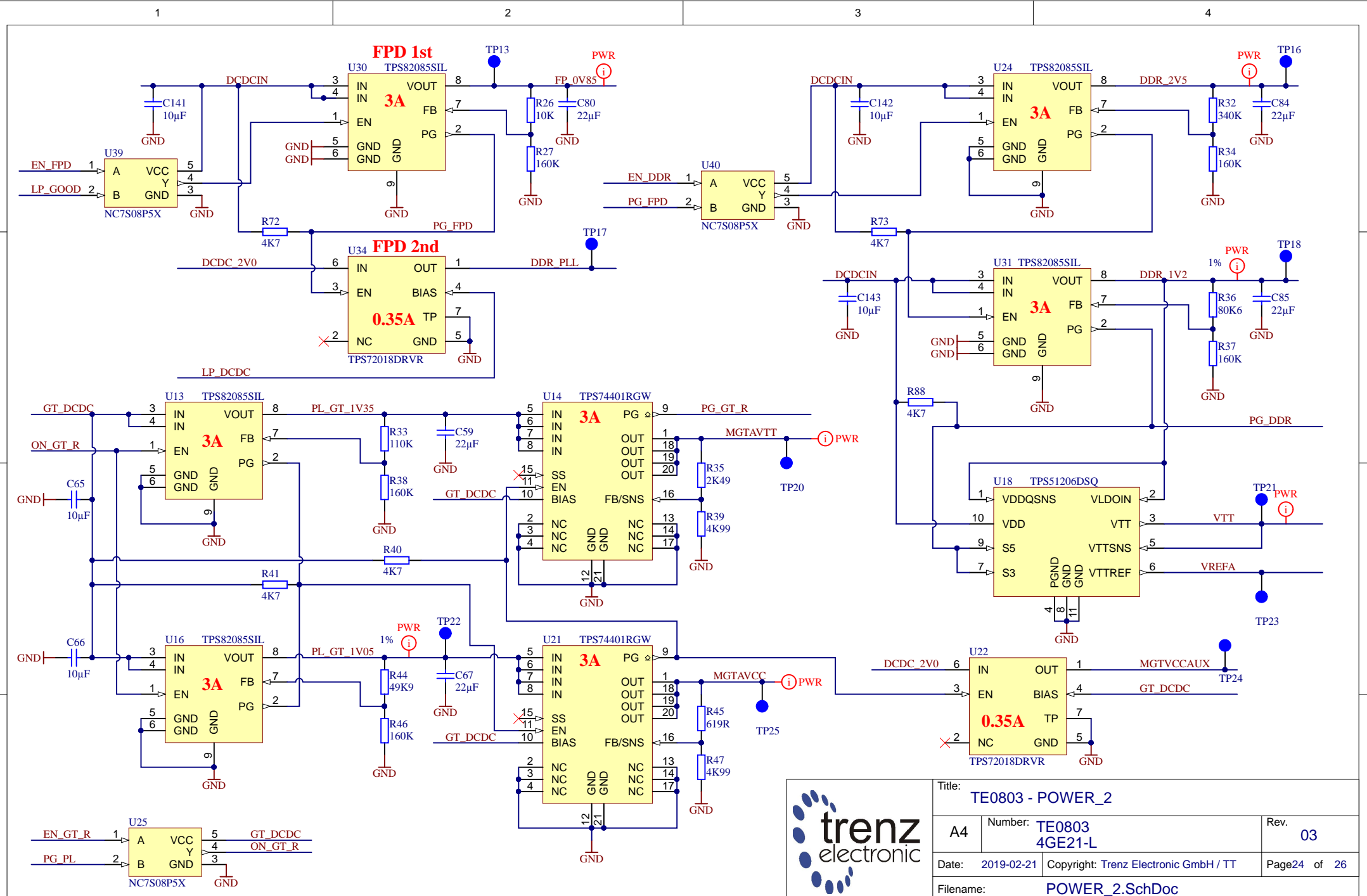
U4B

1	NC	NC	17
2	NC	NC	18
3	NC	NC	19
4	NC	NC	29
5	NC	NC	30
6	NC	NC(SW)	31
7	NC	NC(SW)	52
8	NC	NC	53
9	NC	NC	67
10	NC	NC	70
11	NC	NC(SW)	71
12	NC	NC(SW)	72
13	NC	NC	73
14	NC	NC	74
15	NC	NC	75
16	NC	NC	76

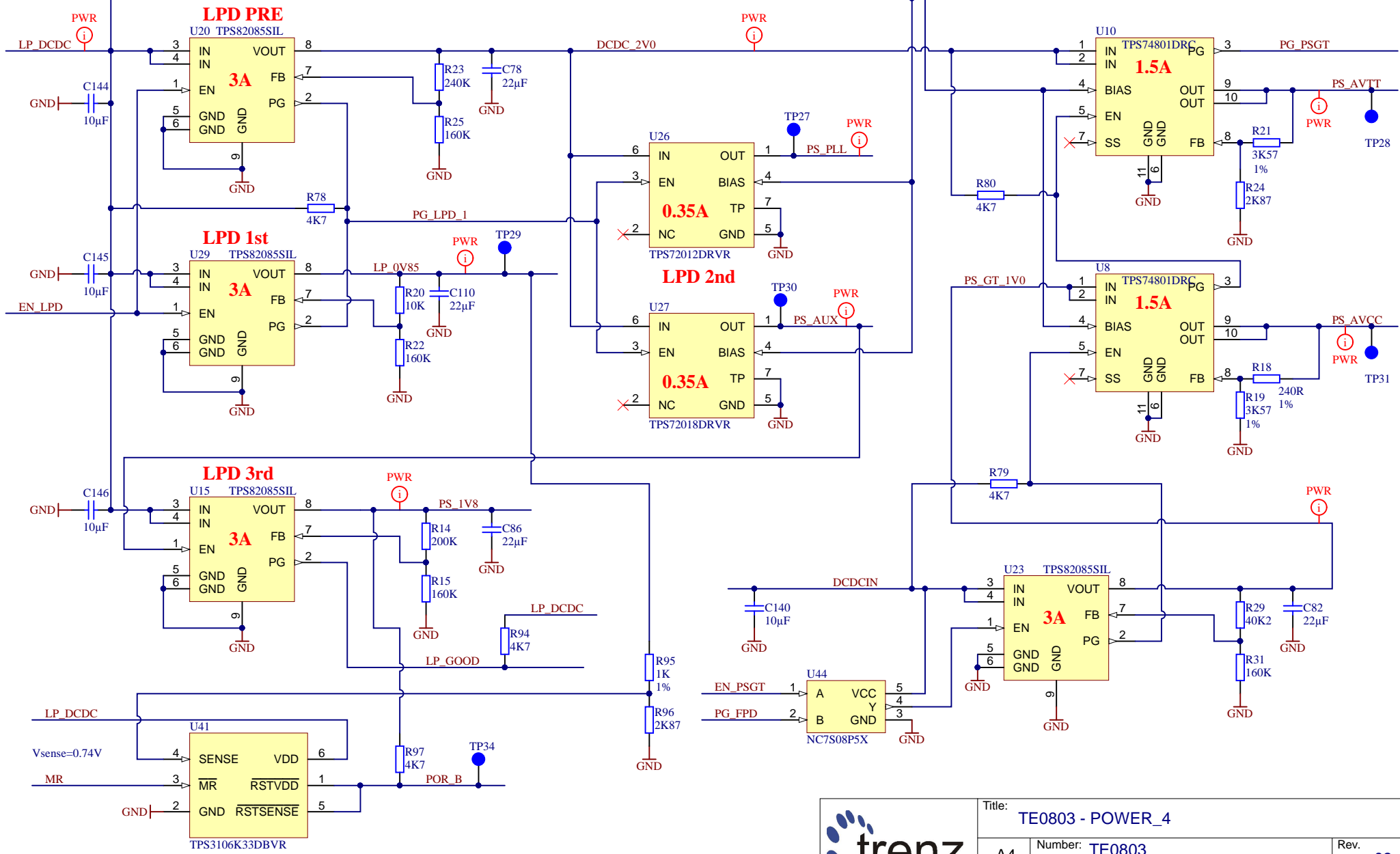
EN63A0QI



Title: TE0803 - POWER		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 23 of 26
Filename: POWER.SchDoc		



Title: TE0803 - POWER_2		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 24 of 26
Filename: POWER_2.SchDoc		



Title: TE0803 - POWER_4		
A4	Number: TE0803 4GE21-L	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 25 of 26
Filename: POWER_4.SchDoc		

1

2

3

4

CHANGES REV01a (20.11.2017):

- 1) VCU voltage set to 0.9V, R20 changed to 40K , PL_VCU_1V0 renamed to PL_VCU_0V9.

CHANGES REV02 (20.06.2018):

- 1) Added LDO to DDR_PLL
- 2) All differential pairs with length matched with tolerance 0.1mm (excluding package delays)
- 3) Added MAC EEPROM U28
- 4) VPS_MGTRAVCC set to 0.85V
- 5) Added pull-up resistors R68,R69

CHANGES REV03 (21.02.2019):

- 1) Added support of DDP DDR4
- 2) Added support of Low power FPGA (-L1/L2).
- 3) Revised testpoints
- 4) Revised J1-J4 connectors net label style

A

A

B


B

C

C

D

D

	Title: TE0803 - Changes list		
	A4	Number: TE0803 4GE21-L	Rev. 03
	Date: 2019-02-21	Copyright: Trenz Electronic GmbH	Page 26 of 26
	Filename: Revision_Changes.SchDoc		

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2

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4