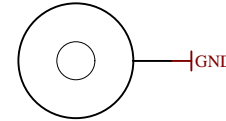
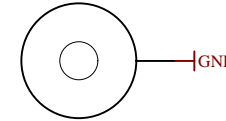


U_J1 J1.SchDoc	U_B_PS_GT B_PS_GT.SchDoc	U_DDR4-TERM DDR4-TERM.SchDoc
U_J2 J2.SchDoc	U_PS_DDR PS_DDR.SchDoc	U_ZU_POWER ZU_POWER.SchDoc
U_J3 J3.SchDoc	U_B_MIO B_MIO.SchDoc	U_ZU_PS_POWER ZU_PS_POWER.SchDoc
U_J4 J4.SchDoc	U_B_HD B_HD.SchDoc	U_POWER POWER.SchDoc
U_DDR4-TERM DDR4-TERM.SchDoc	U_Clock Clock.SchDoc	U_POWER_2 POWER_2.SchDoc
U_B64 B64.SchDoc	U_CONFIG CONFIG.SchDoc	
U_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_REV_CH Revision_Changes.SchDoc
U_B_GT B_GT.SchDoc	U_DDR4-RAM_3 DDR4-RAM_3.SchDoc	
	U_DDR4-RAM_4 DDR4-RAM_4.SchDoc	

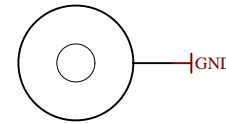
Special notes:



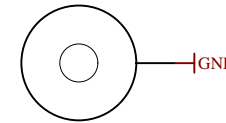
Mount.Hole 3.2mm für Unterlegscheibe



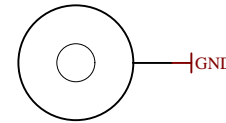
Mount.Hole 3.2mm für Unterlegscheibe



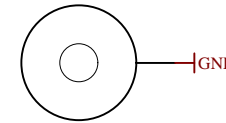
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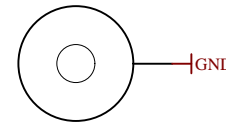
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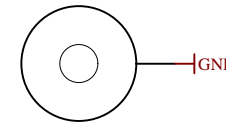
Mount.Hole 3.2mm für Unterlegscheibe



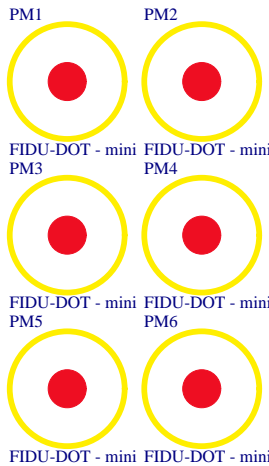
Mount.Hole 3.2mm für Unterlegscheibe



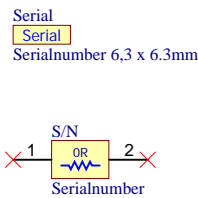
Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



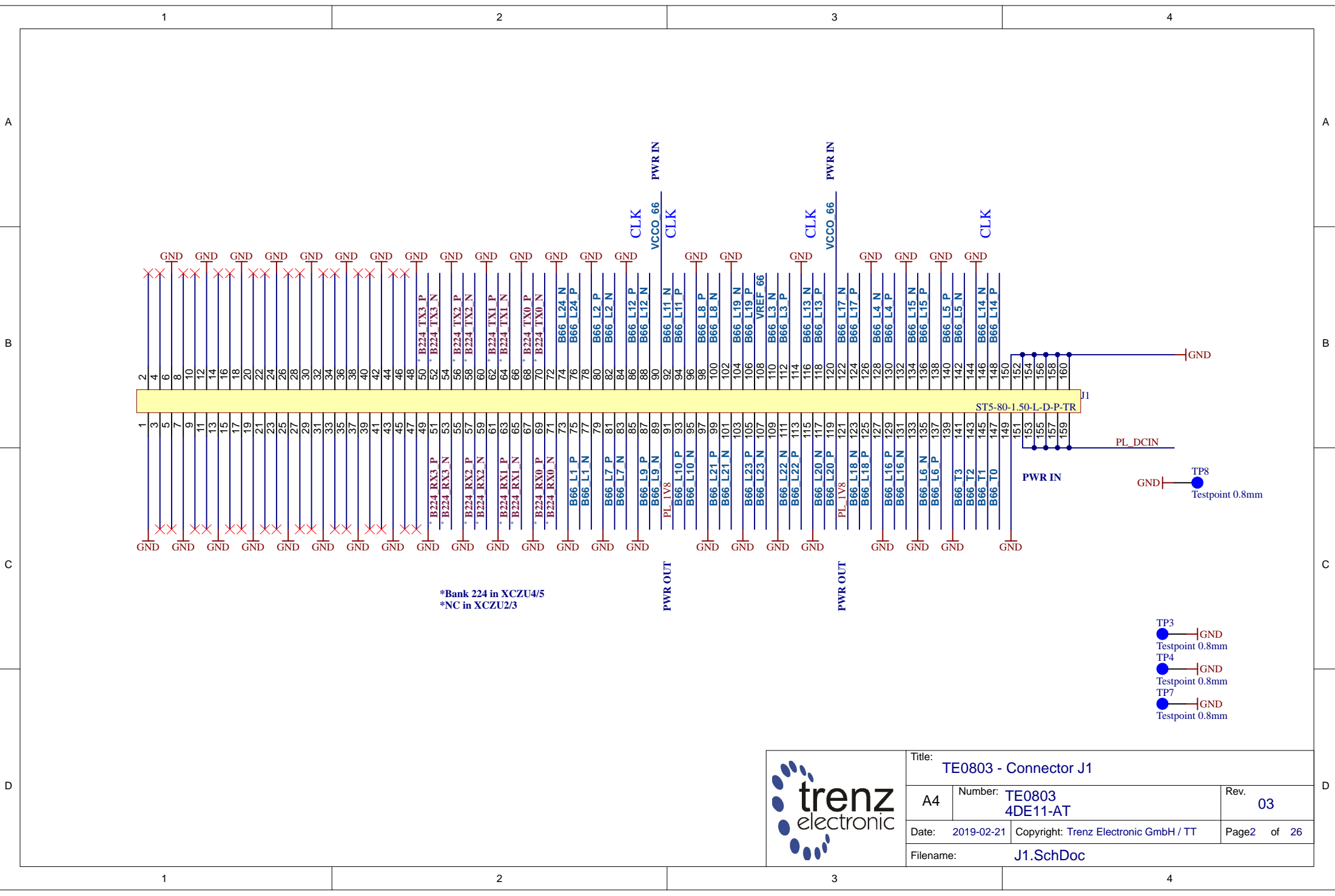
LOGO1
TE Logo PRINT Layer
LOGO PRINT



Assembly variant	4DE11-AT
Created by	VY
Modified by	VY
Modified at	2021-01-19
SVN Revision	



Title: TE0803		
A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page1 of 26
Filename: TE0803.SchDoc		



*Bank 224 in XCZU4/5
*NC in XCZU2/3



Title: TE0803 - Connector J1		
A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page2 of 26
Filename: J1.SchDoc		

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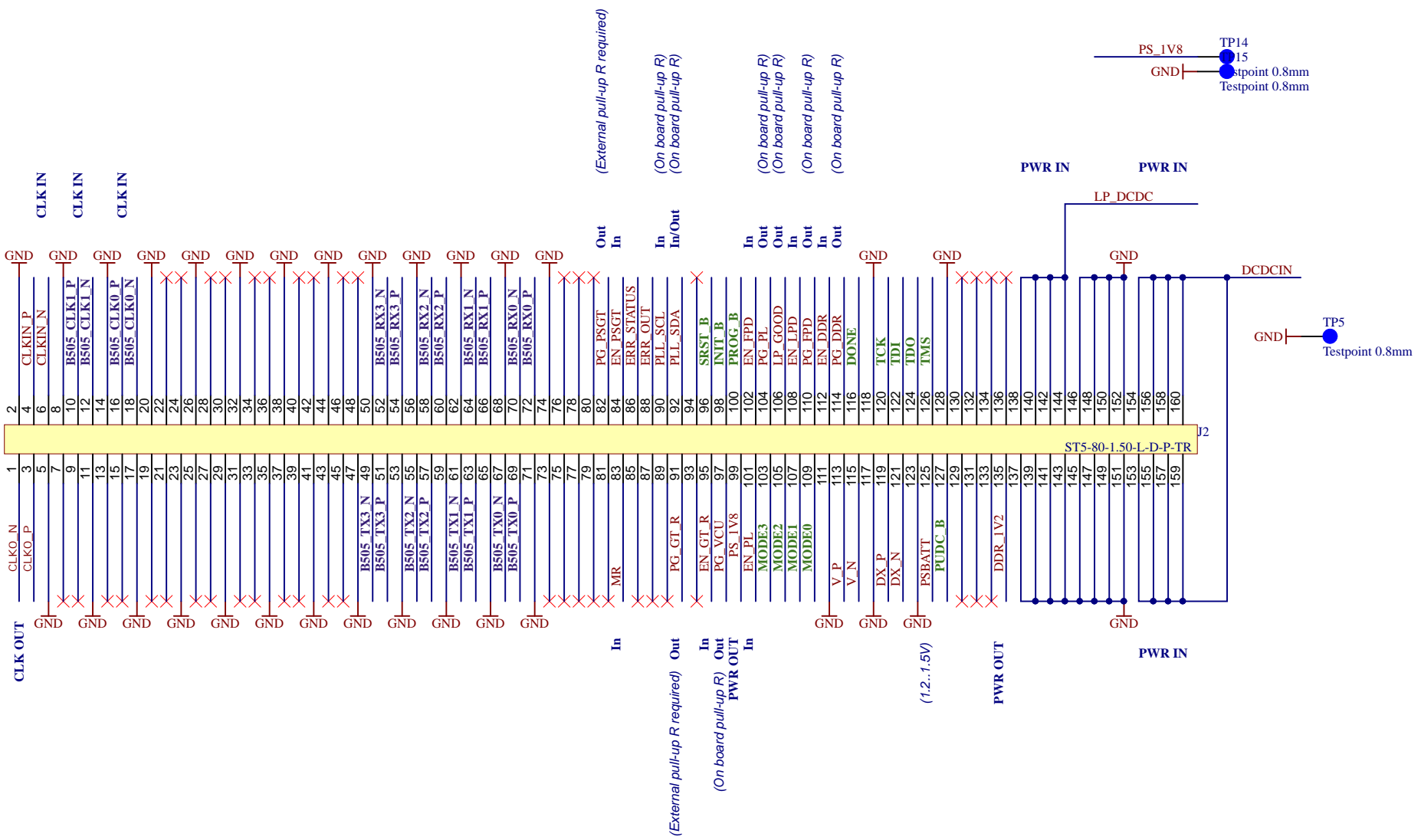

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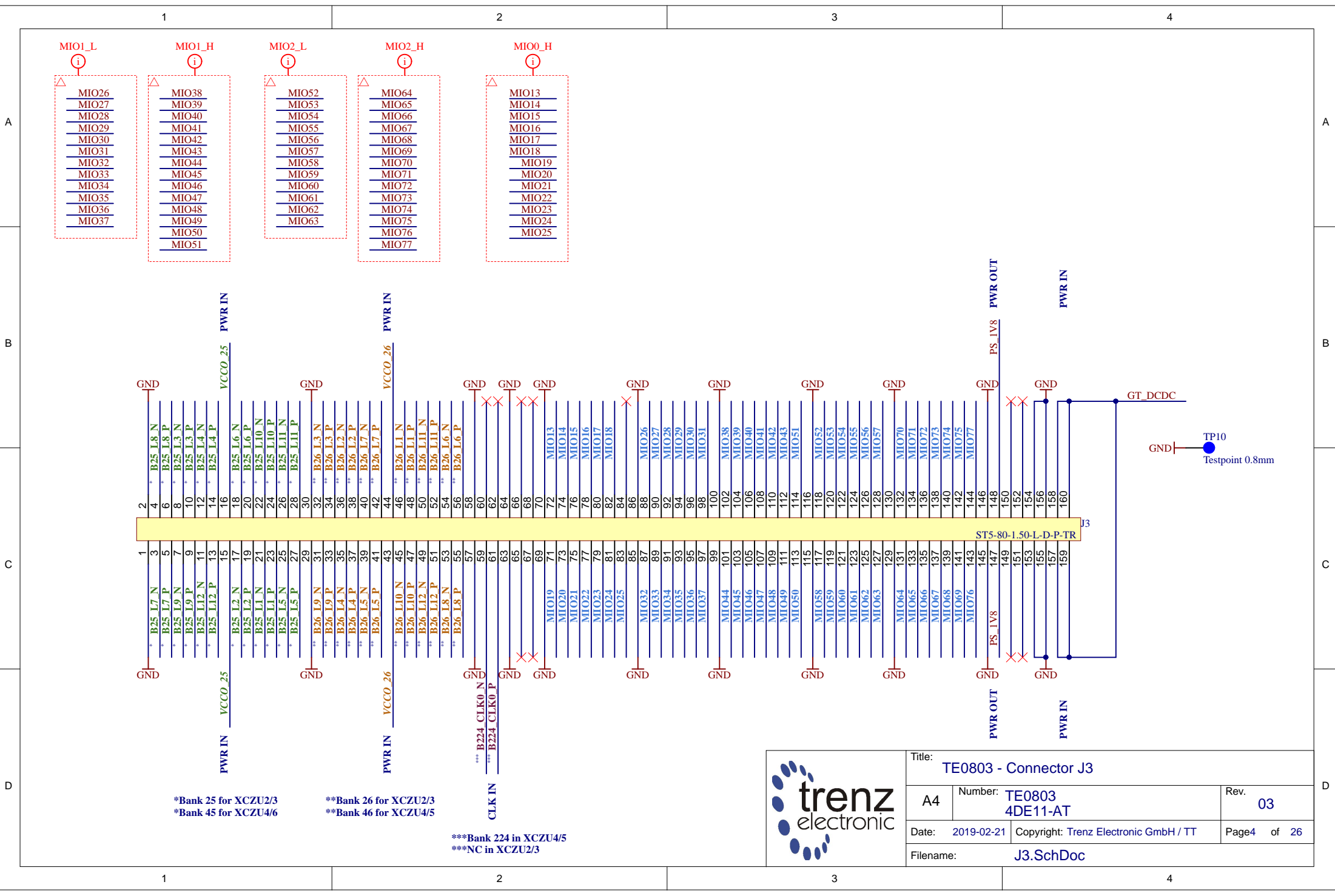
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A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page3 of 26
Filename: J2.SchDoc		

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- MIO1_L**
 - MIO26
 - MIO27
 - MIO28
 - MIO29
 - MIO30
 - MIO31
 - MIO32
 - MIO33
 - MIO34
 - MIO35
 - MIO36
 - MIO37
- MIO1_H**
 - MIO38
 - MIO39
 - MIO40
 - MIO41
 - MIO42
 - MIO43
 - MIO44
 - MIO45
 - MIO46
 - MIO47
 - MIO48
 - MIO49
 - MIO50
 - MIO51
- MIO2_L**
 - MIO52
 - MIO53
 - MIO54
 - MIO55
 - MIO56
 - MIO57
 - MIO58
 - MIO59
 - MIO60
 - MIO61
 - MIO62
 - MIO63
- MIO2_H**
 - MIO64
 - MIO65
 - MIO66
 - MIO67
 - MIO68
 - MIO69
 - MIO70
 - MIO71
 - MIO72
 - MIO73
 - MIO74
 - MIO75
 - MIO76
 - MIO77
- MIO0_H**
 - MIO13
 - MIO14
 - MIO15
 - MIO16
 - MIO17
 - MIO18
 - MIO19
 - MIO20
 - MIO21
 - MIO22
 - MIO23
 - MIO24
 - MIO25

*Bank 25 for XCZU2/3
 *Bank 45 for XCZU4/6

**Bank 26 for XCZU2/3
 **Bank 46 for XCZU4/5

***Bank 224 in XCZU4/5
 ***NC in XCZU2/3



Title: TE0803 - Connector J3		
A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page4 of 26
Filename: J3.SchDoc		

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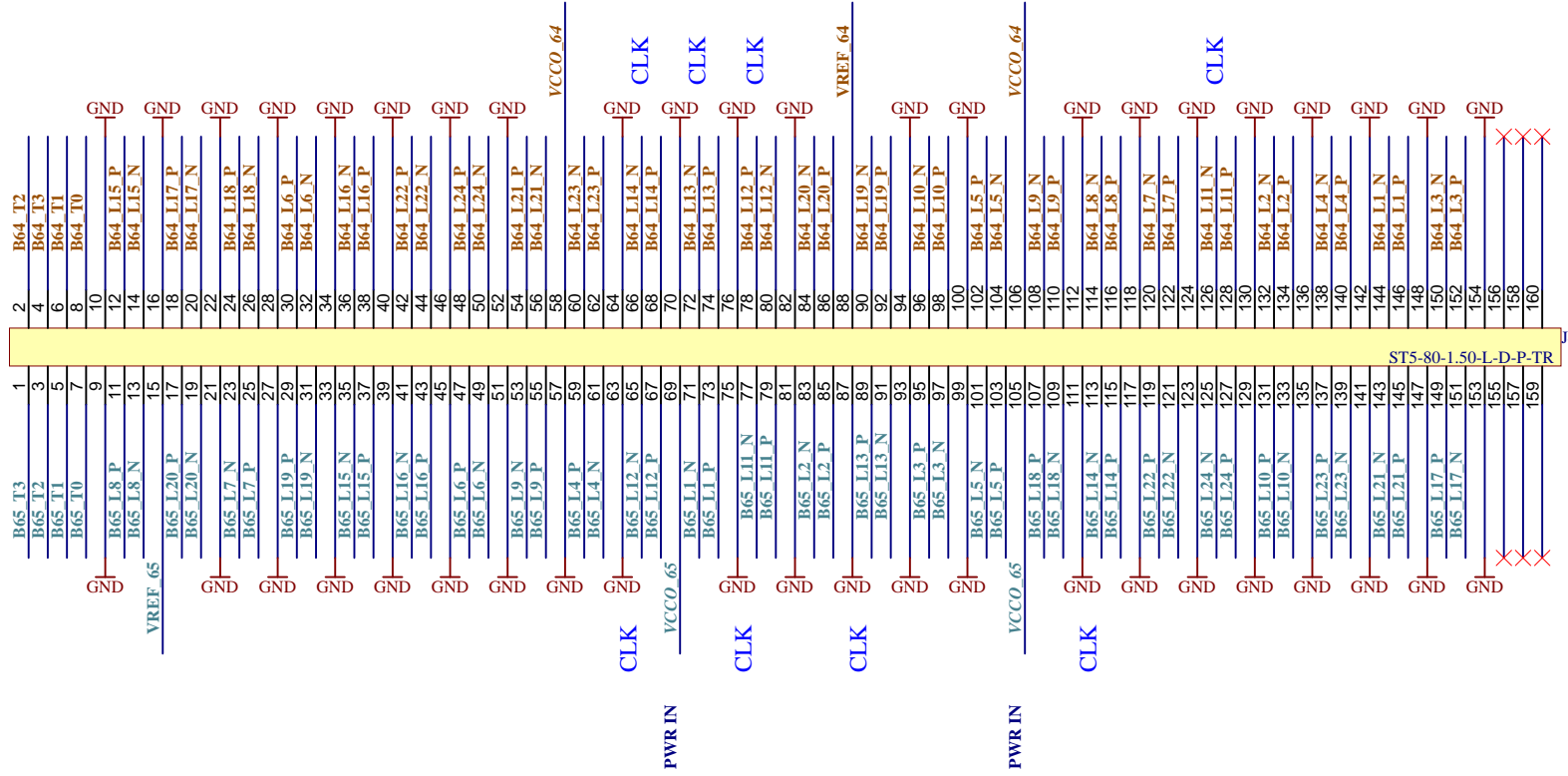
B

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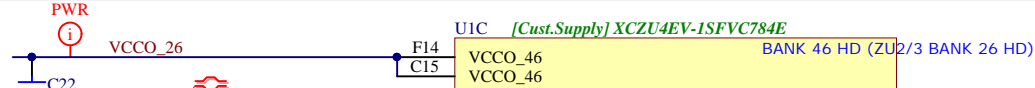
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A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page5 of 26
Filename: J4.SchDoc		

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U1C [Cust.Supply] XCZU4EV-1SFVC784E

BANK 46 HD (ZU2/3 BANK 26 HD)

B26 L1 P	B15	IO_L1P_AD11P_46	IO_L7P_HDGC_AD5P_46	G13	B26 L7 P
B26 L1 N	A15	IO_L1N_AD11N_46	IO_L7N_HDGC_AD5N_46	F13	B26 L7 N
B26 L2 P	B14	IO_L2P_AD10P_46	IO_L8P_HDGC_AD4P_46	F15	B26 L8 P
B26 L2 N	A14	IO_L2N_AD10N_46	IO_L8N_HDGC_AD4N_46	E15	B26 L8 N
B26 L3 P	B13	IO_L3P_AD9P_46	IO_L9P_AD3P_46	G15	B26 L9 P
B26 L3 N	A13	IO_L3N_AD9N_46	IO_L9N_AD3N_46	G14	B26 L9 N
B26 L4 P	C14	IO_L4P_AD8P_46	IO_L10P_AD2P_46	H14	B26 L10 P
B26 L4 N	C13	IO_L4N_AD8N_46	IO_L10N_AD2N_46	H13	B26 L10 N
B26 L5 P	D15	IO_L5P_HDGC_AD7P_46	IO_L11P_AD1P_46	K14	B26 L11 P
B26 L5 N	D14	IO_L5N_HDGC_AD7N_46	IO_L11N_AD1N_46	J14	B26 L11 N
B26 L6 P	E14	IO_L6P_HDGC_AD6P_46	IO_L12P_AD0P_46	L14	B26 L12 P
B26 L6 N	E13	IO_L6N_HDGC_AD6N_46	IO_L12N_AD0N_46	L13	B26 L12 N

BANK 43 HD (ZU2/3 BANK 44 HD)

AC10	VCCO_43			AD11
AG12	VCCO_43			AD10
AG10	IO_L1P_AD11P_43	IO_L7P_HDGC_AD5P_43	AD10	AB11
AH10	IO_L1N_AD11N_43	IO_L7N_HDGC_AD5N_43	AC11	AA11
AF11	IO_L2P_AD10P_43	IO_L8P_HDGC_AD4P_43	AA10	W10
AG11	IO_L2N_AD10N_43	IO_L8N_HDGC_AD4N_43	Y10	Y9
AH12	IO_L3P_AD9P_43	IO_L9P_AD3P_43	Y9	AA8
AH11	IO_L3N_AD9N_43	IO_L9N_AD3N_43	AB10	AB9
AE10	IO_L4P_AD8P_43	IO_L10P_AD2P_43		
AF10	IO_L4N_AD8N_43	IO_L10N_AD2N_43		
AE12	IO_L5P_HDGC_AD7P_43	IO_L11P_AD1P_43		
AF12	IO_L5N_HDGC_AD7N_43	IO_L11N_AD1N_43		
AC13	IO_L6P_HDGC_AD6P_43	IO_L12P_AD0P_43		
AD12	IO_L6N_HDGC_AD6N_43	IO_L12N_AD0N_43		

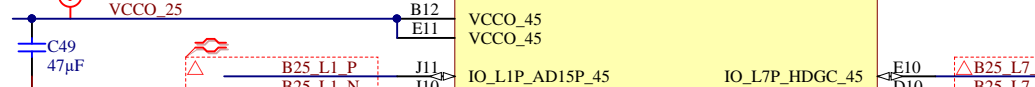
U1B

BANK 44 HD (ZU2/3 BANK 24 HD)

AA14	VCCO_44			AA13
AD13	VCCO_44			AB13
AE15	IO_L1P_AD15P_44	IO_L7P_HDGC_44	AB15	AB14
AE14	IO_L1N_AD15N_44	IO_L7N_HDGC_44	W14	W13
AG14	IO_L2P_AD14P_44	IO_L8P_HDGC_44	Y14	Y13
AH14	IO_L2N_AD14N_44	IO_L8N_HDGC_44	W12	W11
AG13	IO_L3P_AD13P_44	IO_L9P_AD11P_44	Y12	AA12
AH13	IO_L3N_AD13N_44	IO_L9N_AD11N_44		
AE13	IO_L4P_AD12P_44	IO_L10P_AD10P_44		
AF13	IO_L4N_AD12N_44	IO_L10N_AD10N_44		
AD15	IO_L5P_HDGC_44	IO_L11P_AD9P_44		
AD14	IO_L5N_HDGC_44	IO_L11N_AD9N_44		
AC14	IO_L6P_HDGC_44	IO_L12P_AD8P_44		
AC13	IO_L6N_HDGC_44	IO_L12N_AD8N_44		

[Cust.Supply] XCZU4EV-1SFVC784E

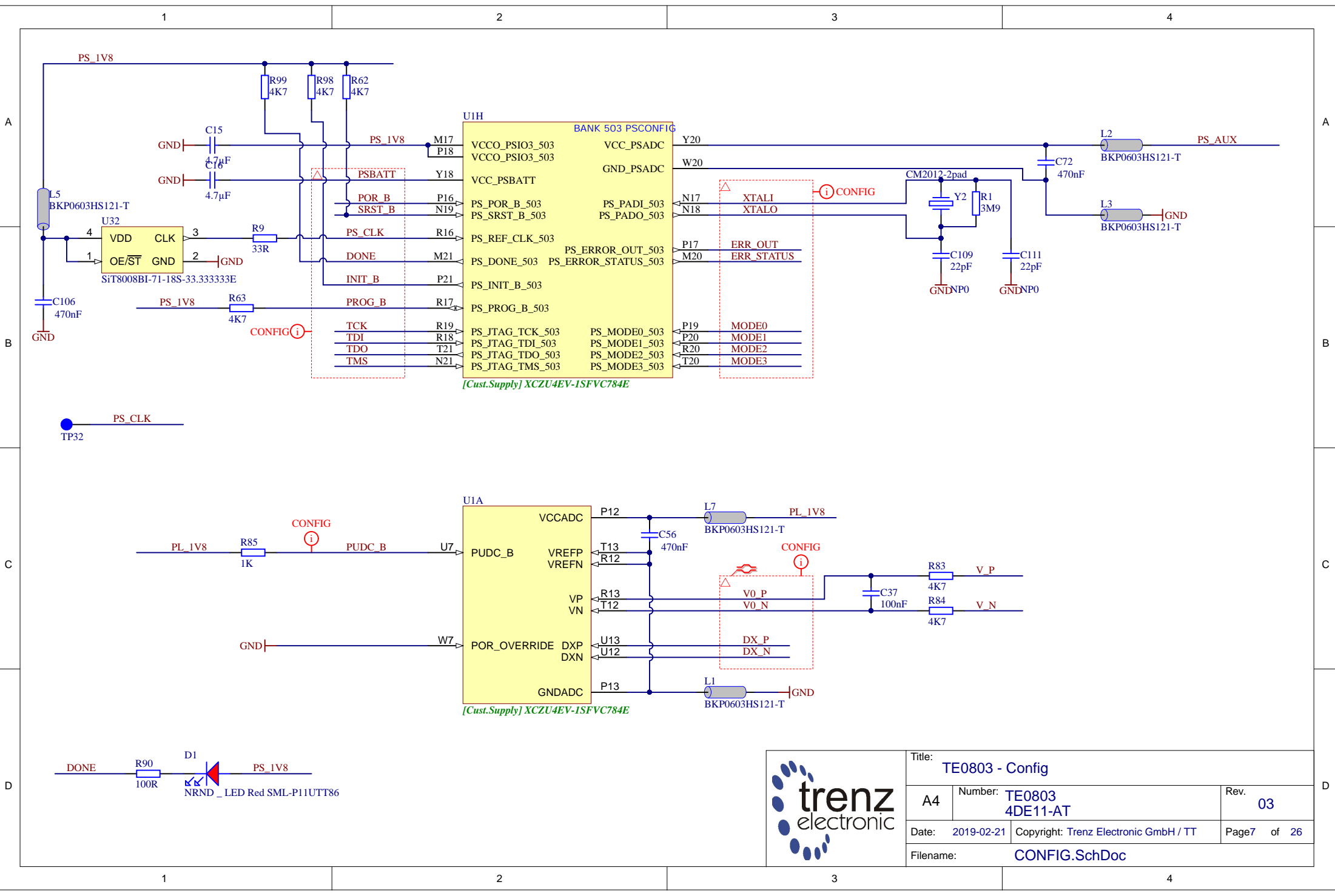
BANK 45 HD (ZU2/3 BANK 25 HD)



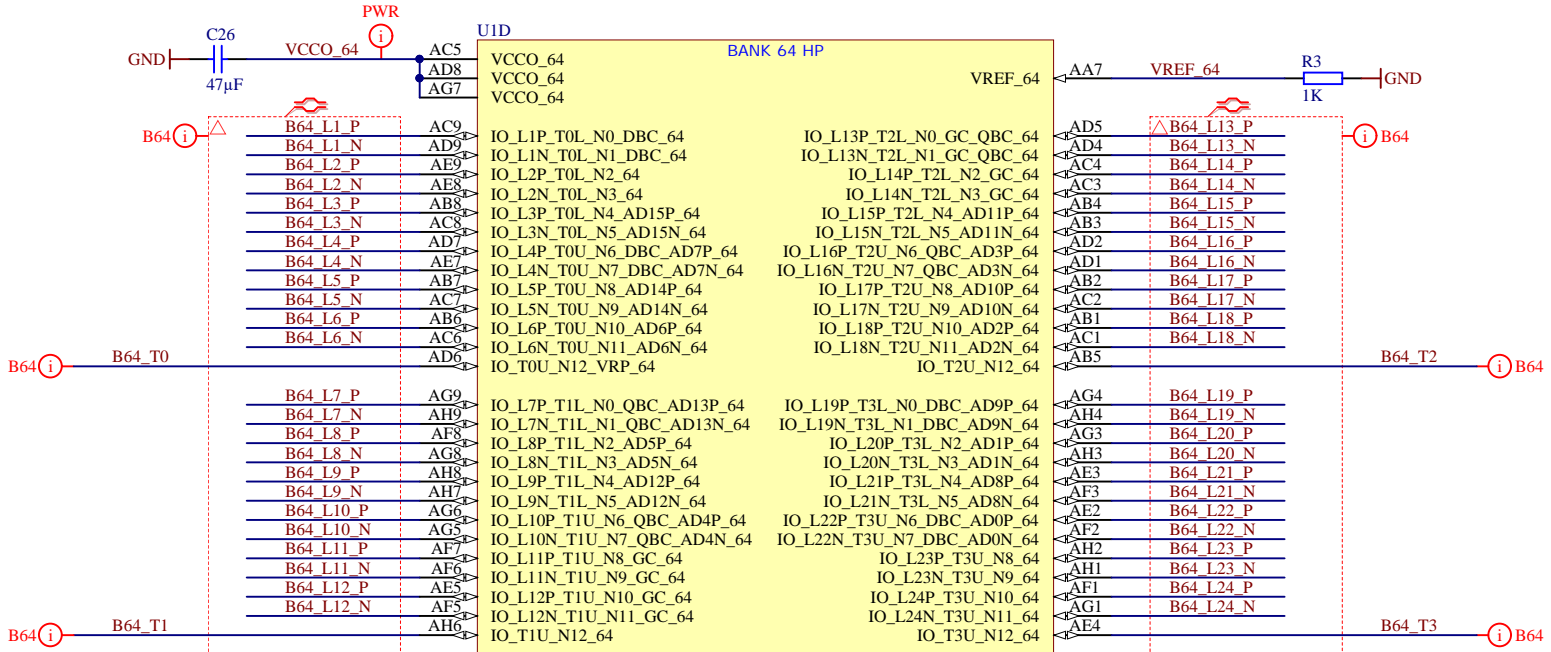
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B25 L1 N	J10	IO_L1N_AD15N_45	IO_L7N_HDGC_45	D10	B25 L7 N
B25 L2 P	K13	IO_L2P_AD14P_45	IO_L8P_HDGC_45	E12	B25 L8 P
B25 L2 N	K12	IO_L2N_AD14N_45	IO_L8N_HDGC_45	D11	B25 L8 N
B25 L3 P	H11	IO_L3P_AD13P_45	IO_L9P_AD11P_45	C11	B25 L9 P
B25 L3 N	G10	IO_L3N_AD13N_45	IO_L9N_AD11N_45	B10	B25 L9 N
B25 L4 P	J12	IO_L4P_AD12P_45	IO_L10P_AD10P_45	B11	B25 L10 P
B25 L4 N	H12	IO_L4N_AD12N_45	IO_L10N_AD10N_45	A10	B25 L10 N
B25 L5 P	G11	IO_L5P_HDGC_45	IO_L11P_AD9P_45	A12	B25 L11 P
B25 L5 N	F11	IO_L5N_HDGC_45	IO_L11N_AD9N_45	A11	B25 L11 N
B25 L6 P	F12	IO_L6P_HDGC_45	IO_L12P_AD8P_45	D12	B25 L12 P
B25 L6 N	F11	IO_L6N_HDGC_45	IO_L12N_AD8N_45	C12	B25 L12 N



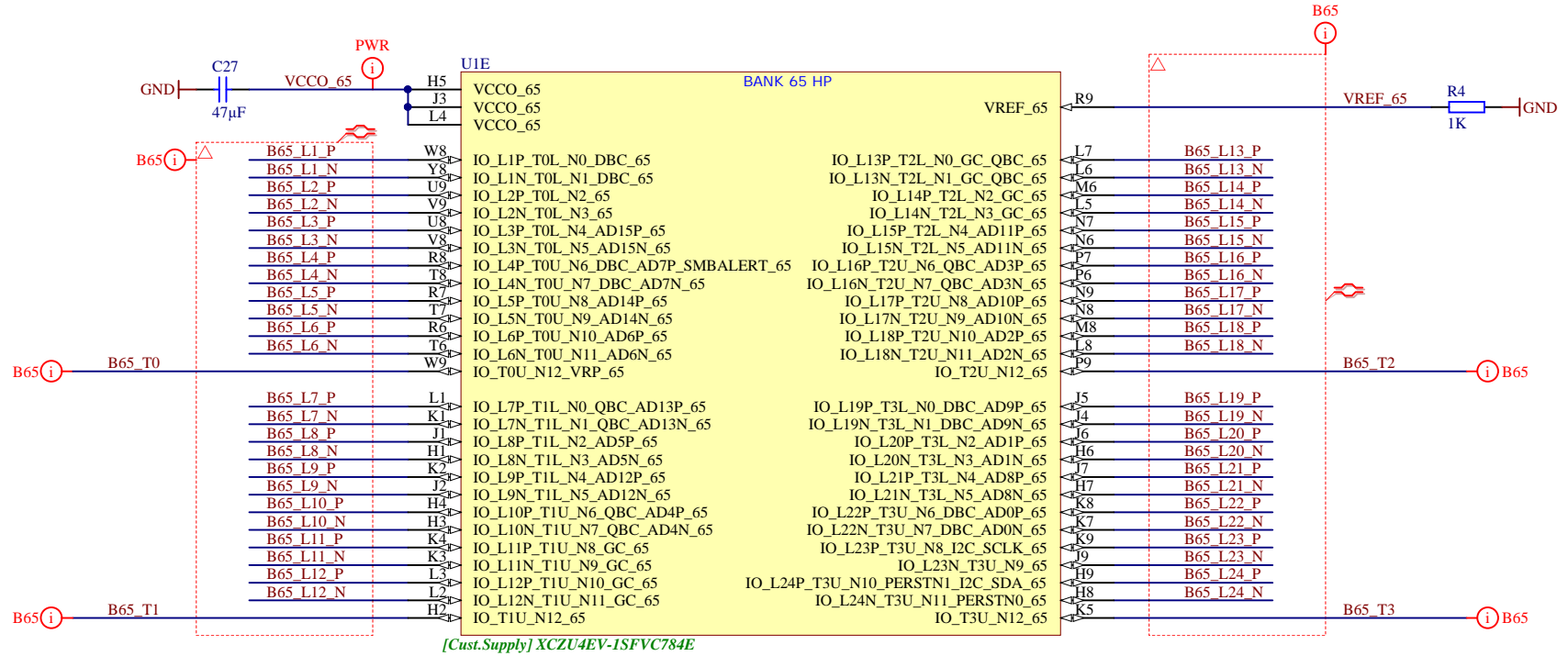
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page6 of 26
Filename: B_HD.SchDoc		



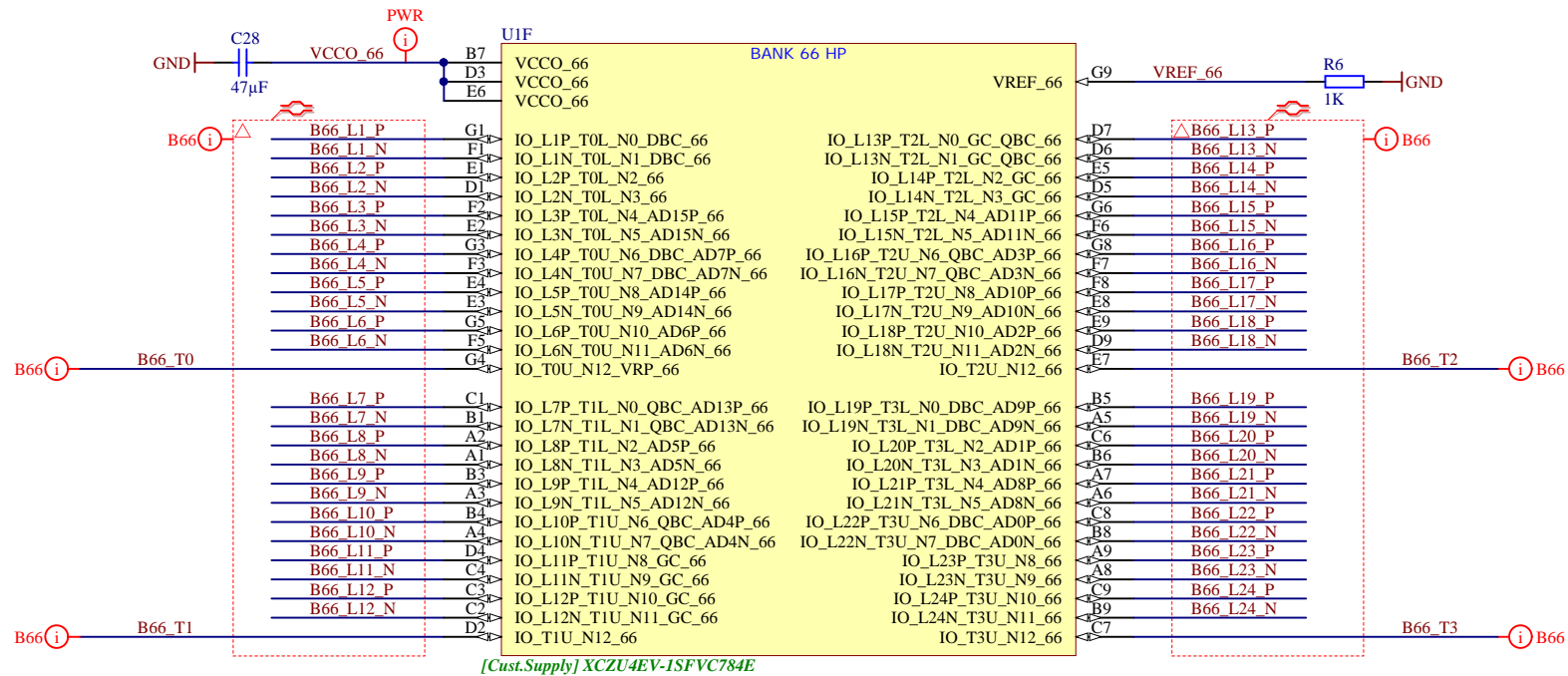
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A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 7 of 26
Filename: CONFIG.SchDoc		



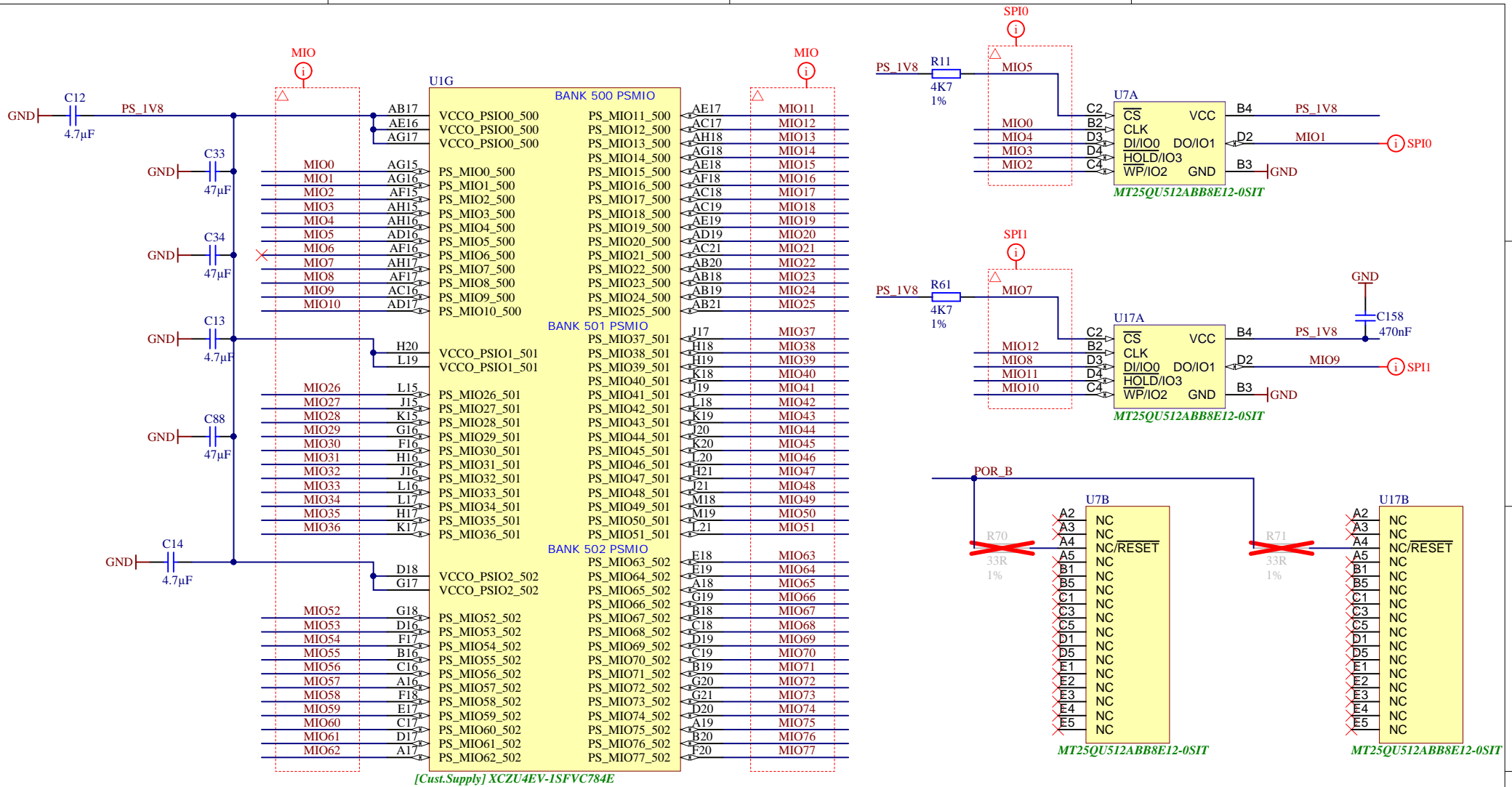
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Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page8 of 26
Filename: B64.SchDoc		



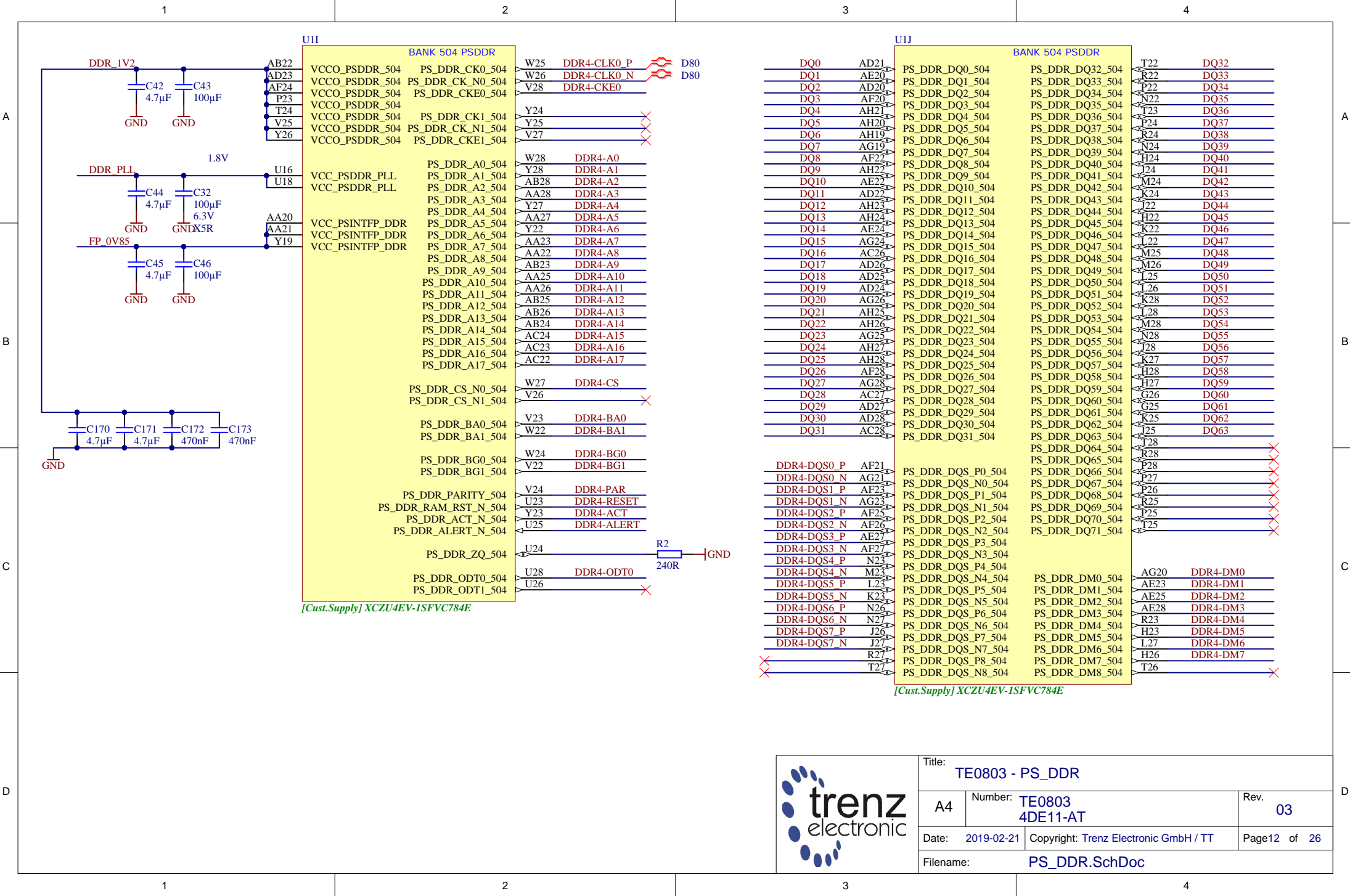
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A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page9 of 26
Filename: B65.SchDoc		



Title: TE0803 - B66		
A4	Number: TE0803 4DE11-AT	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 4DE11-AT Date: 2019-02-21 Copyright: Trenz Electronic GmbH / TT Filename: B_MIO.SchDoc
		Rev. 03	Page 11 of 26



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Title: TE0803 - PS_DDR		
A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 12 of 26
Filename: PS_DDR.SchDoc		

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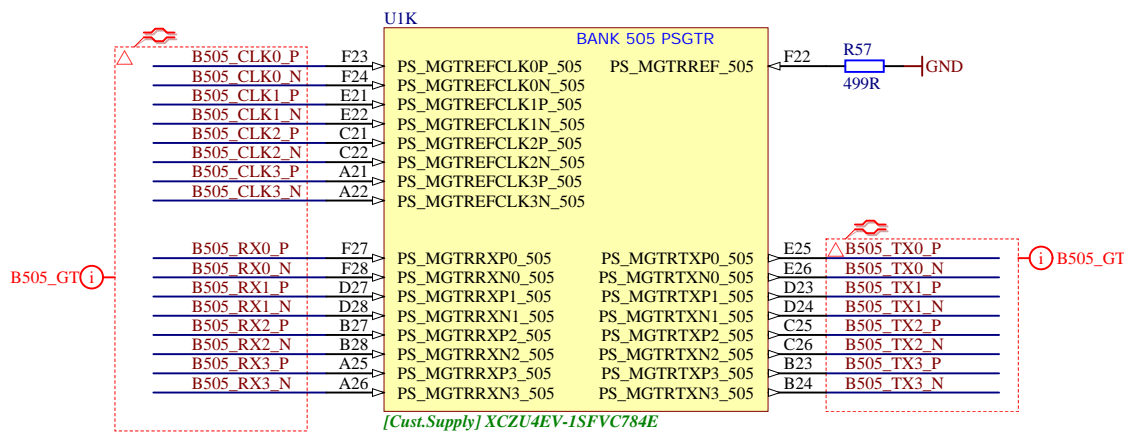
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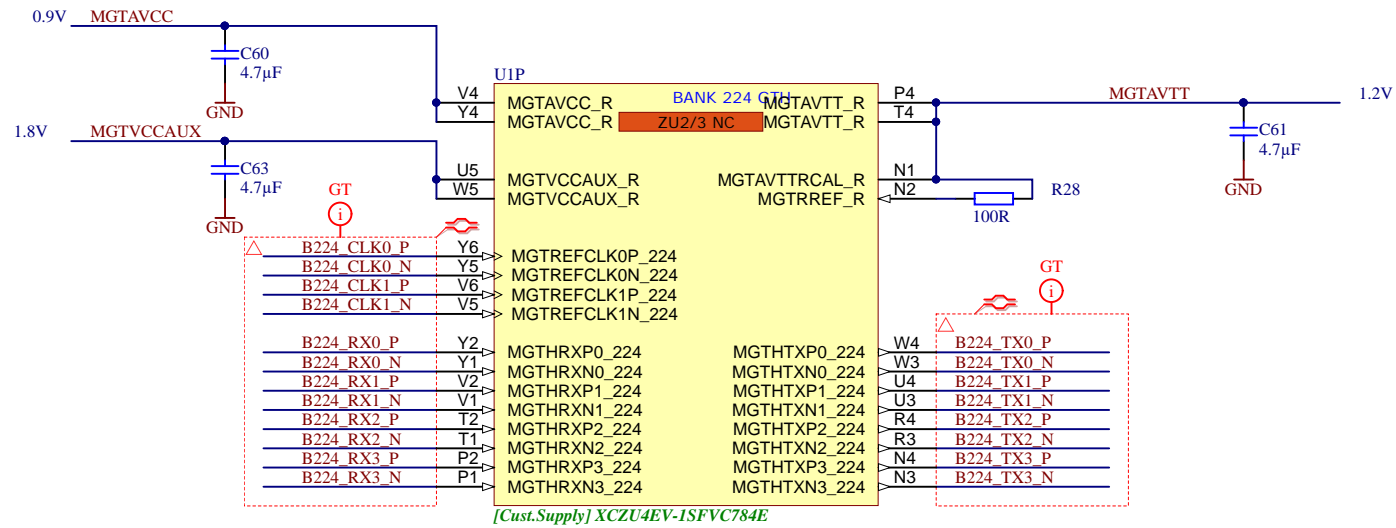
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	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 13 of 26
	Filename: B_PS_GT.SchDoc		


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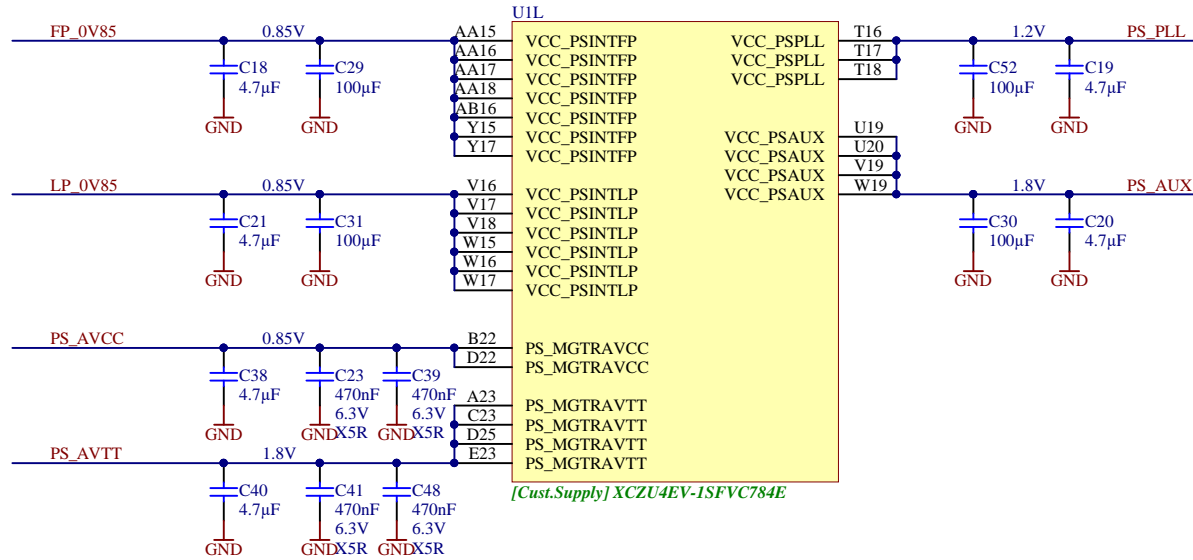
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	Title: TE0803 - B224GT		
	A4	Number: TE0803 4DE11-AT	Rev. 03
	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 14 of 26
	Filename: B_GT.SchDoc		



Title: TE0803 - ZU_PS_POWER		
A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page15 of 26
Filename: ZU_PS_POWER.SchDoc		

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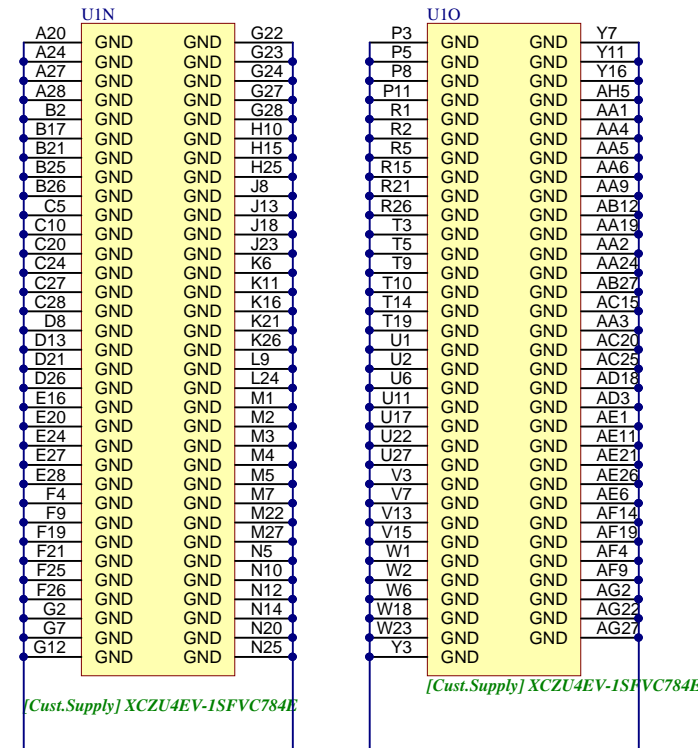
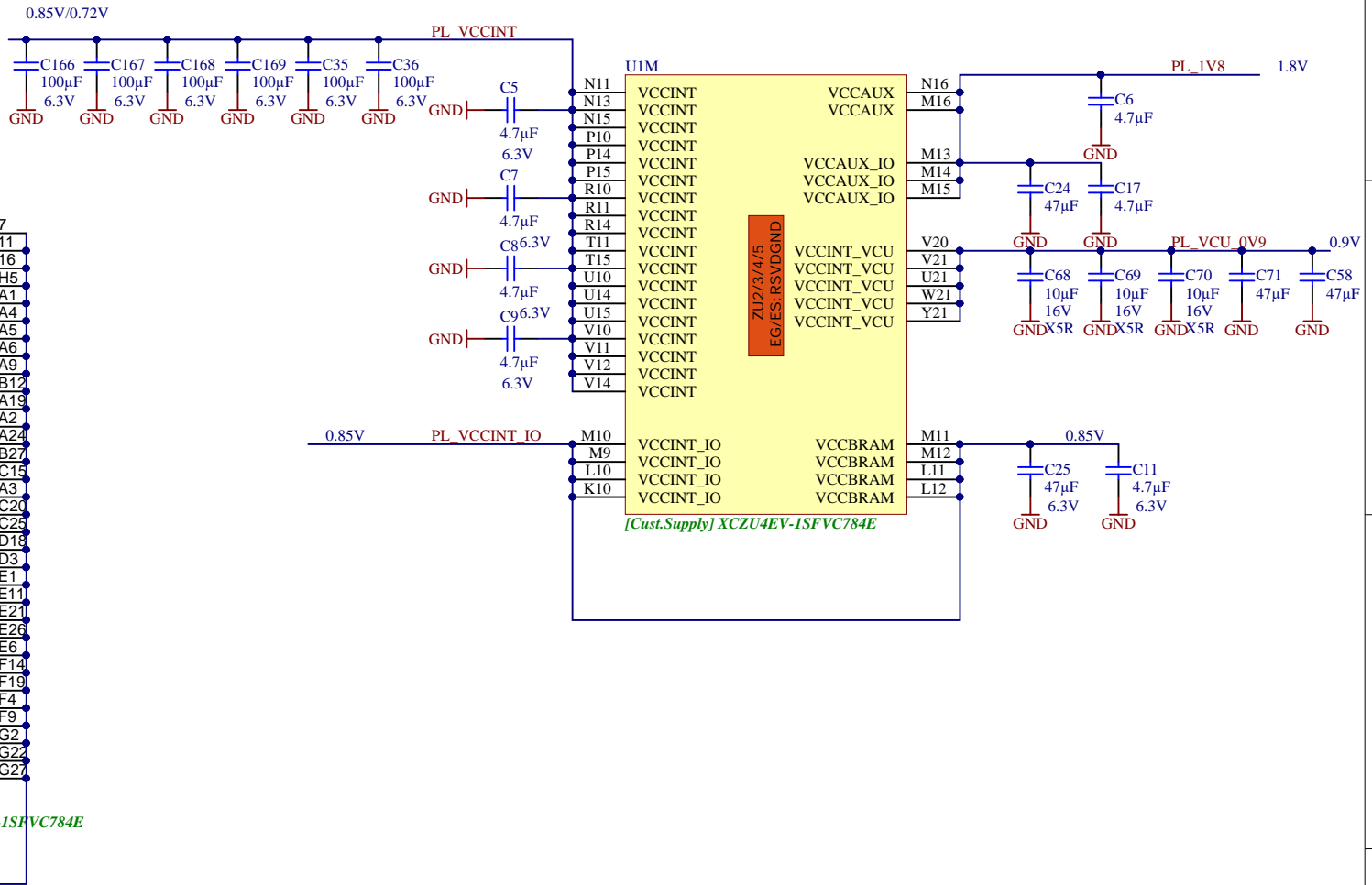
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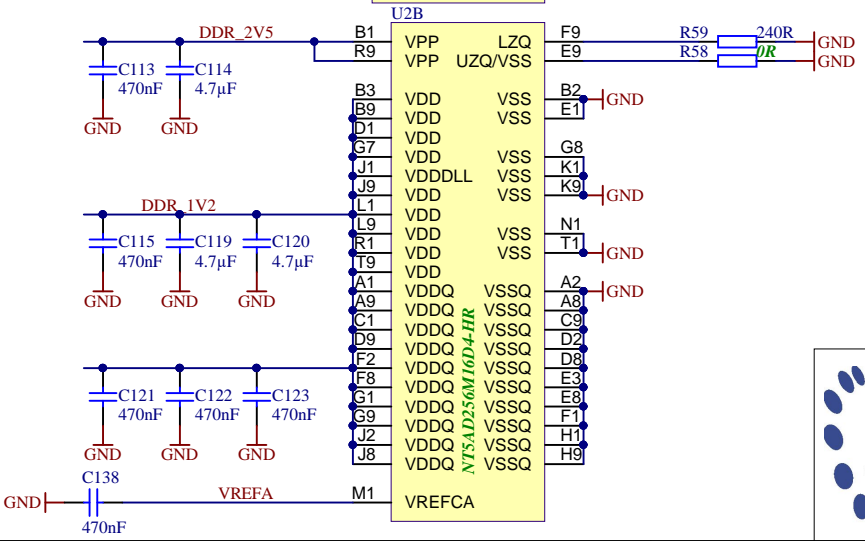
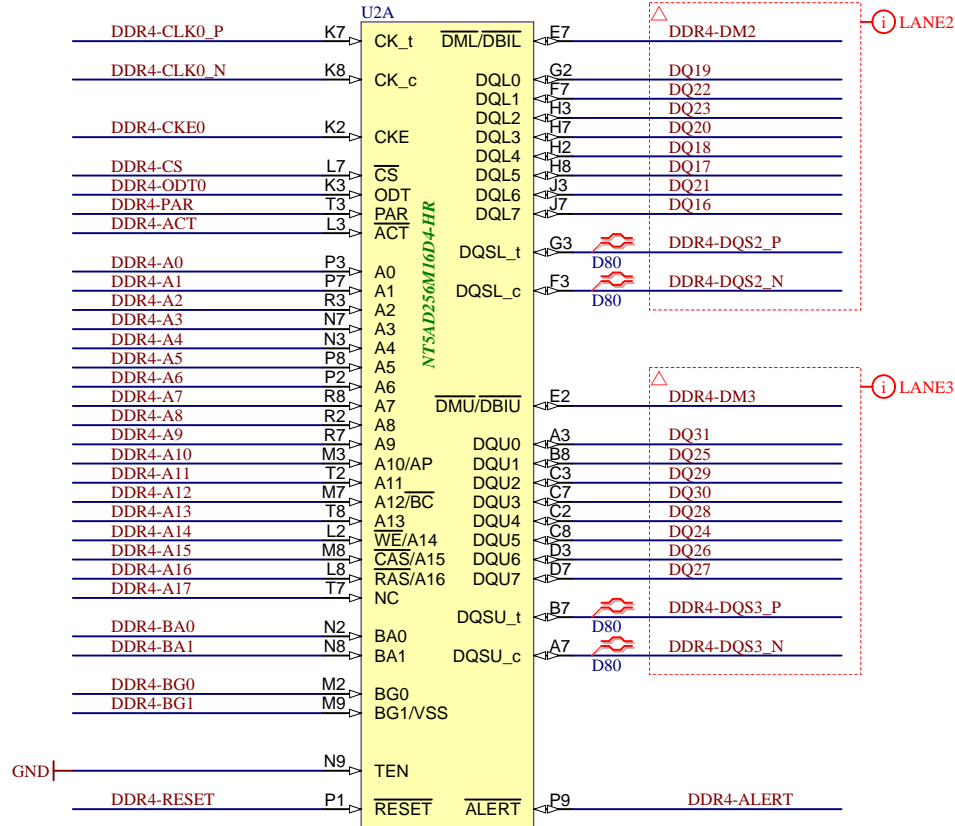
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		A4	Number: TE0803 4DE11-AT
Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT	
Filename: ZU_POWER.SchDoc		Page 16 of 26	

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Title: TE0803 - DDR4_1_RAM			
A4	Number: TE0803 4DE11-AT	Rev. 03	
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 17 of 26	
Filename: DDR4-RAM.SchDoc			

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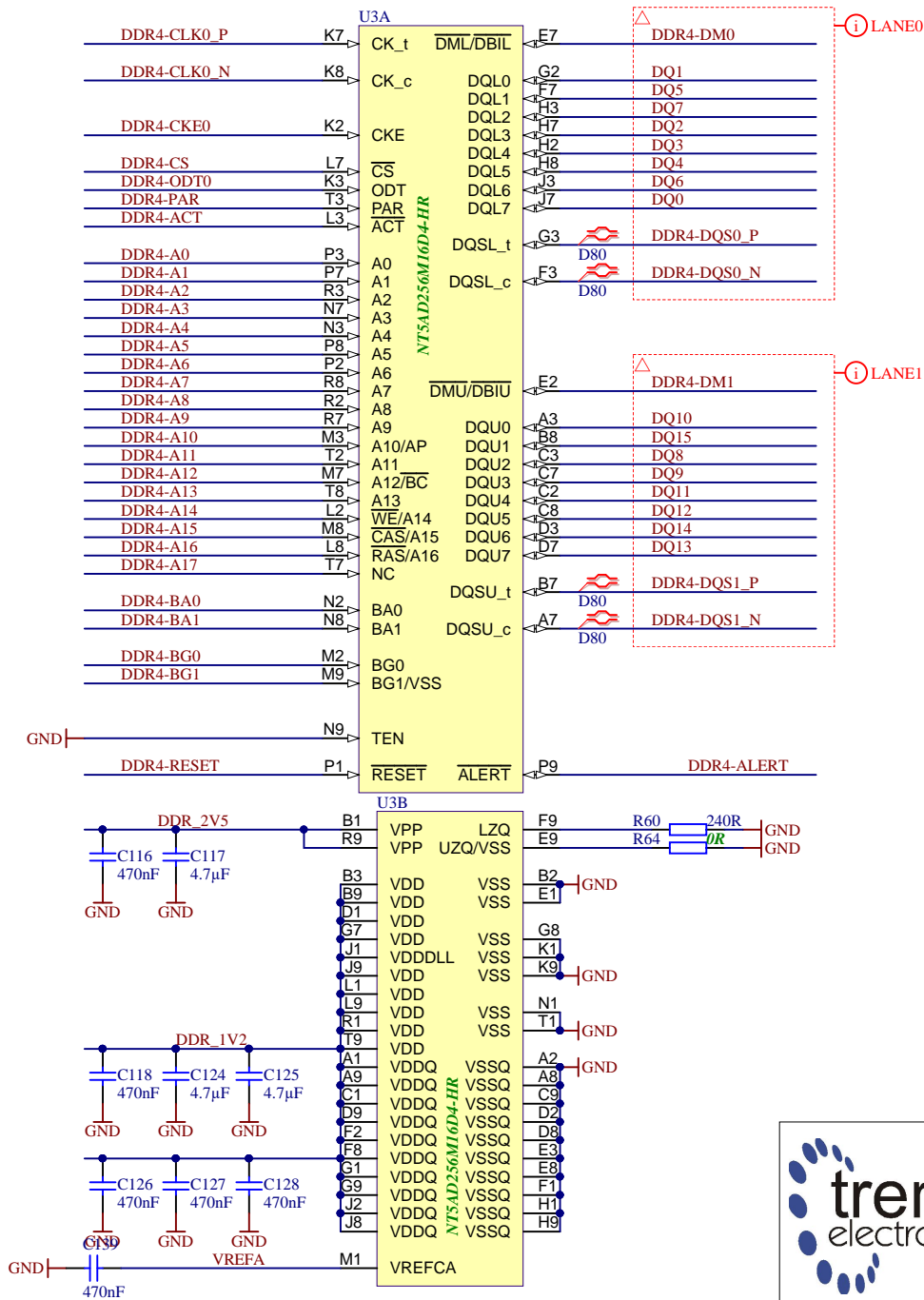

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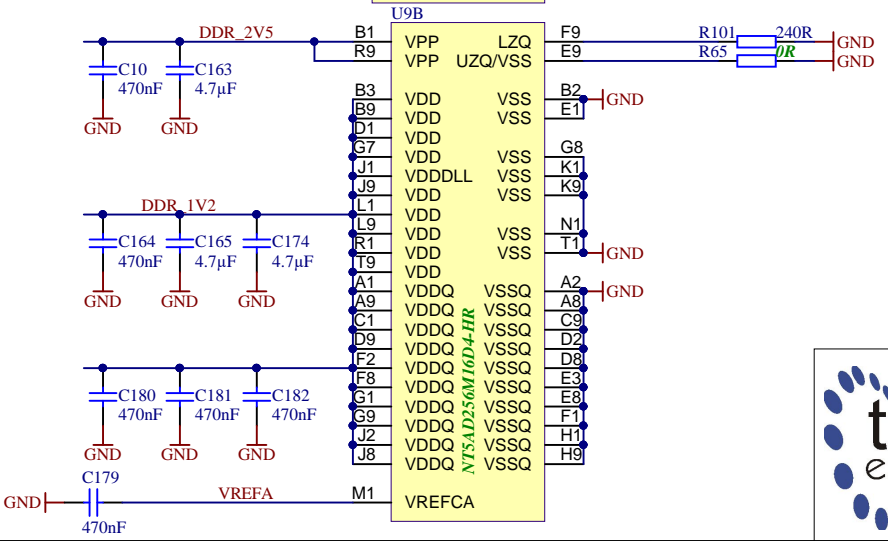
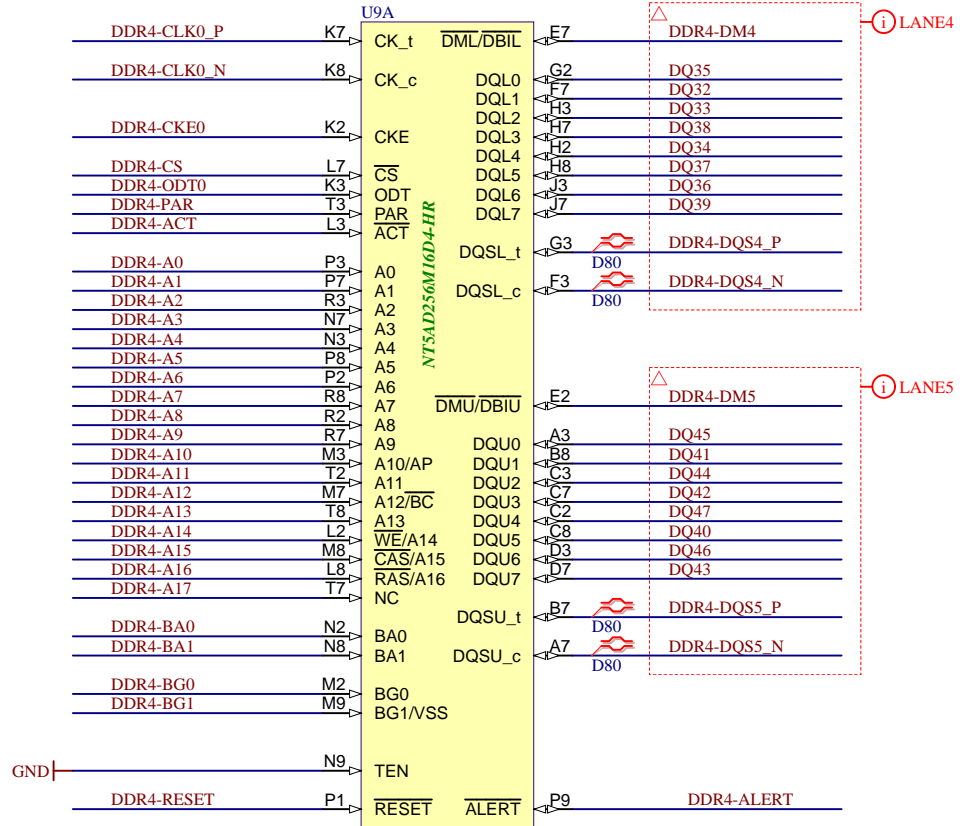
C

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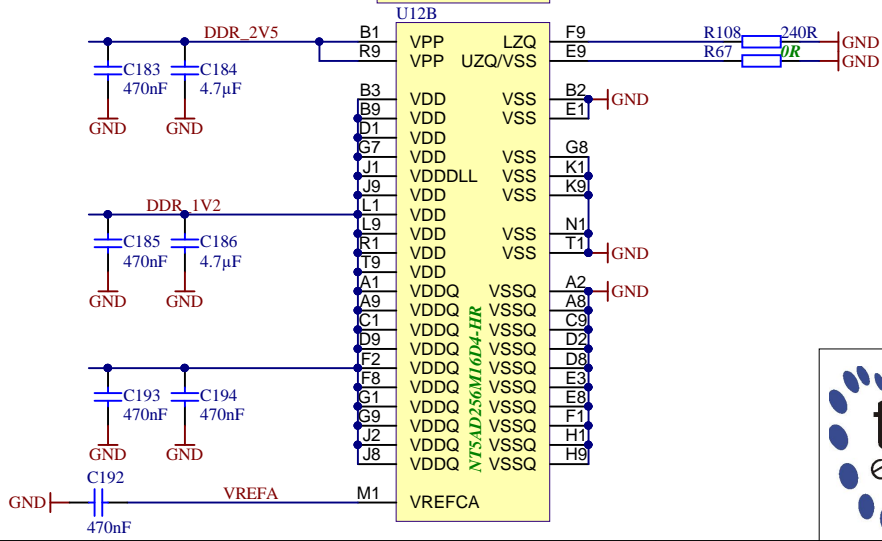
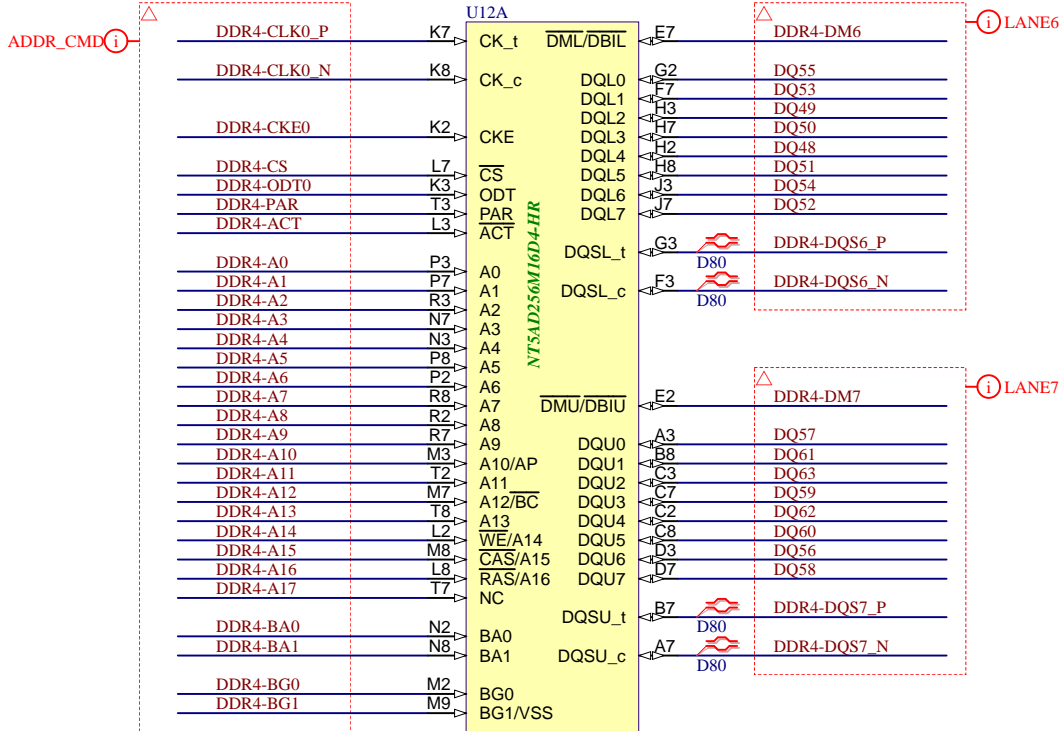

D

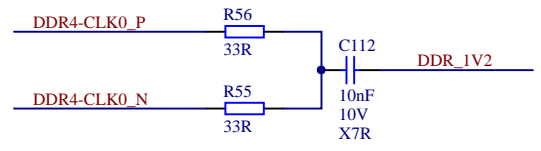
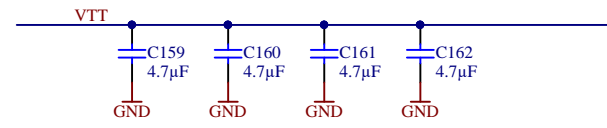
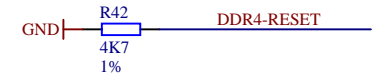
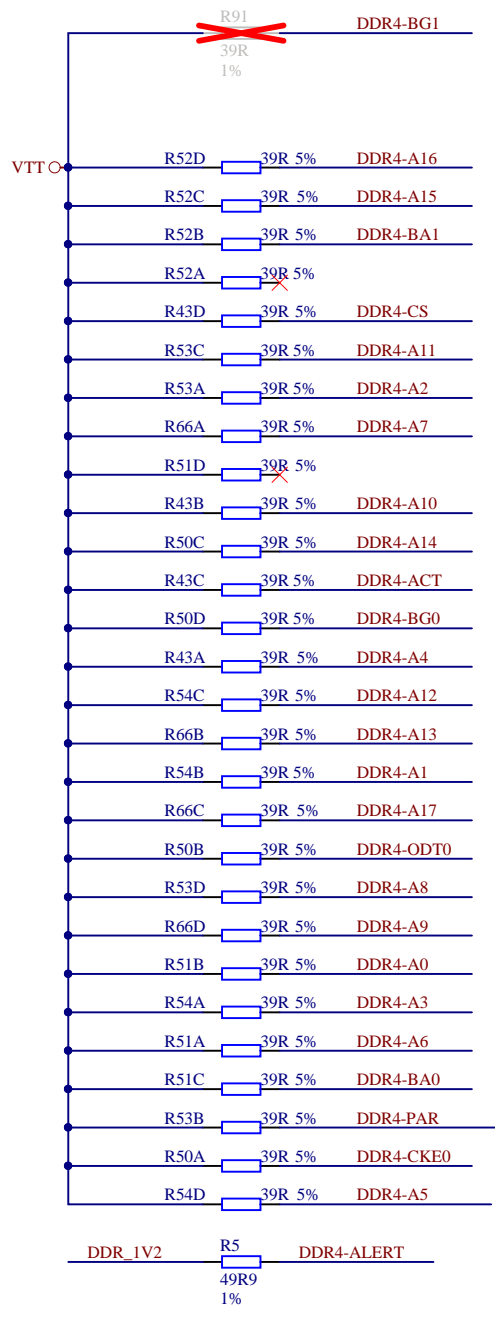
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A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page18 of 26
Filename: DDR4-RAM_2.SchDoc		



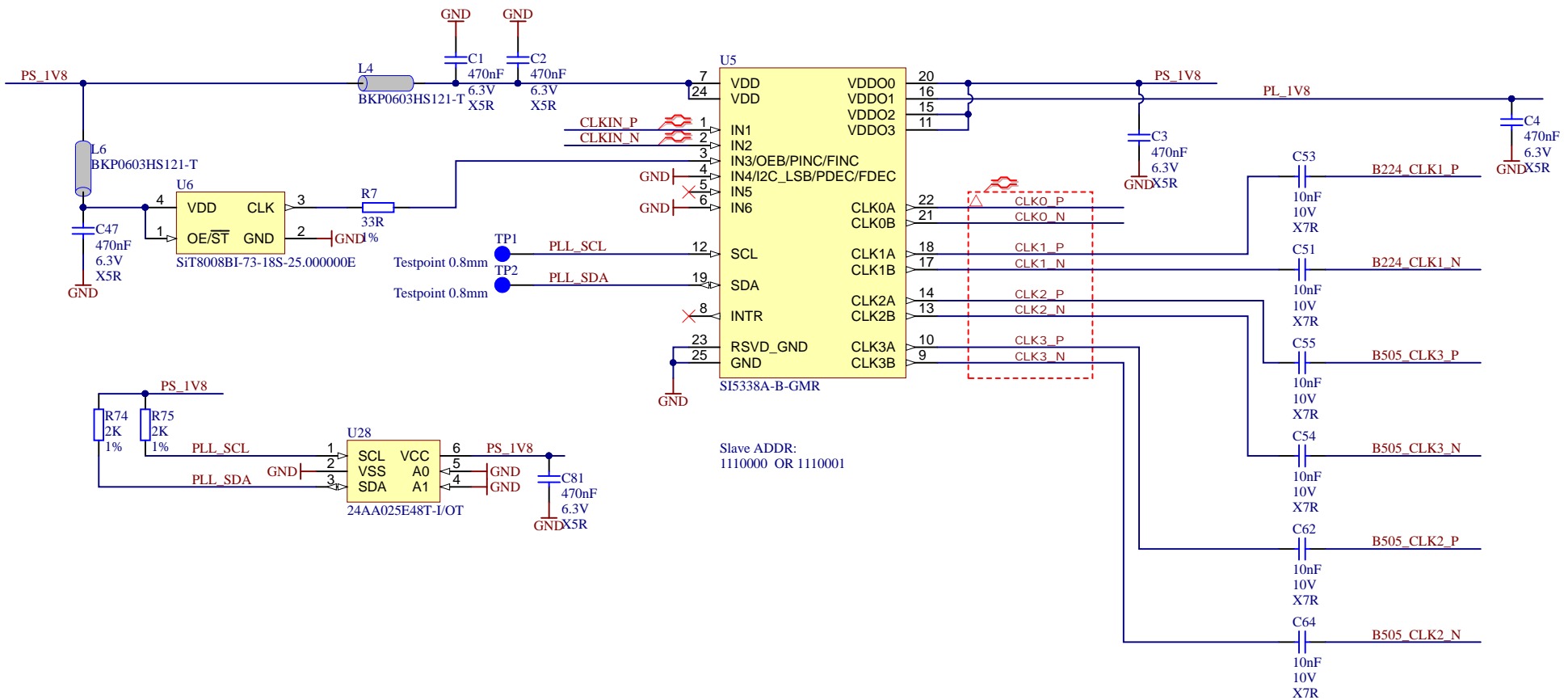
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A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 19 of 26
Filename: DDR4-RAM_3.SchDoc		





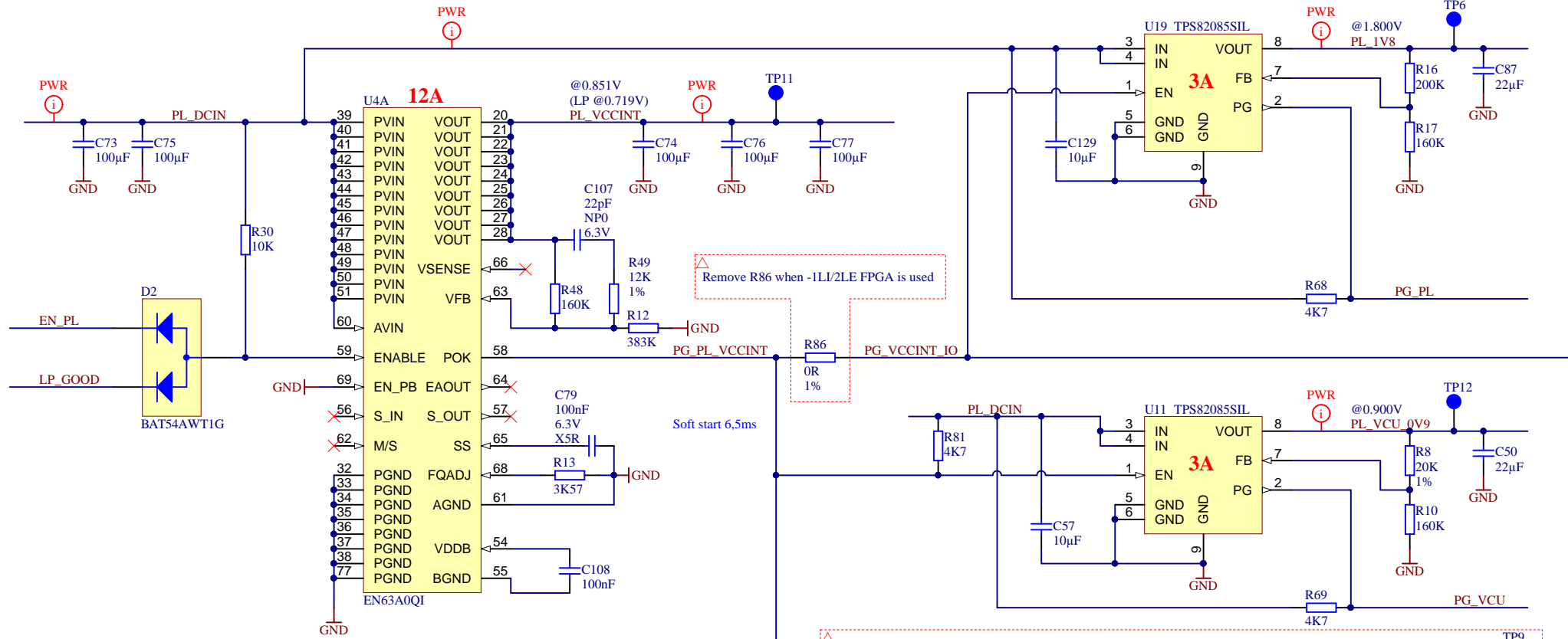
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A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page20 of 26
Filename: DDR4-RAM_4.SchDoc		



Title: TE0803 - DDR4_TERM		
A4	Number: TE0803 4DE11-AT	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 21 of 26
Filename: DDR4-TERM.SchDoc		



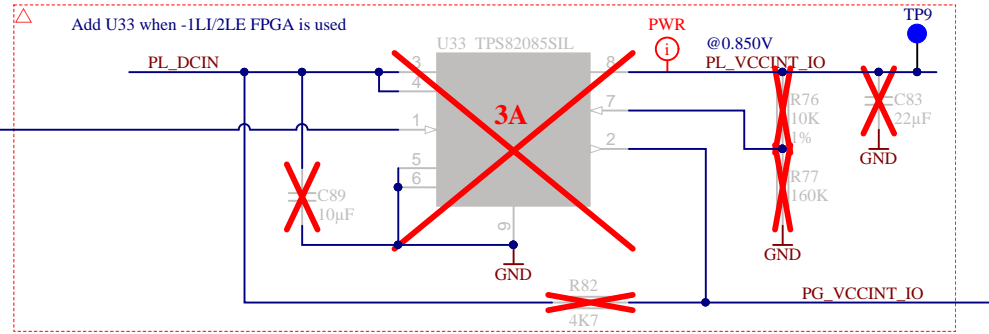
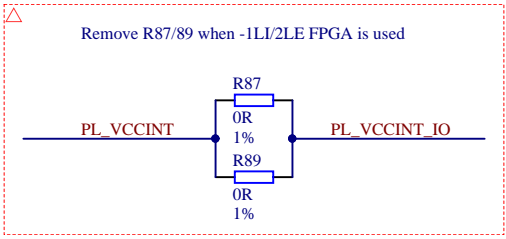
		Title: TE0803 - CLOCK	
		A4	Number: TE0803 4DE11-AT
Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT	
Filename: Clock.SchDoc		Page 22 of 26	



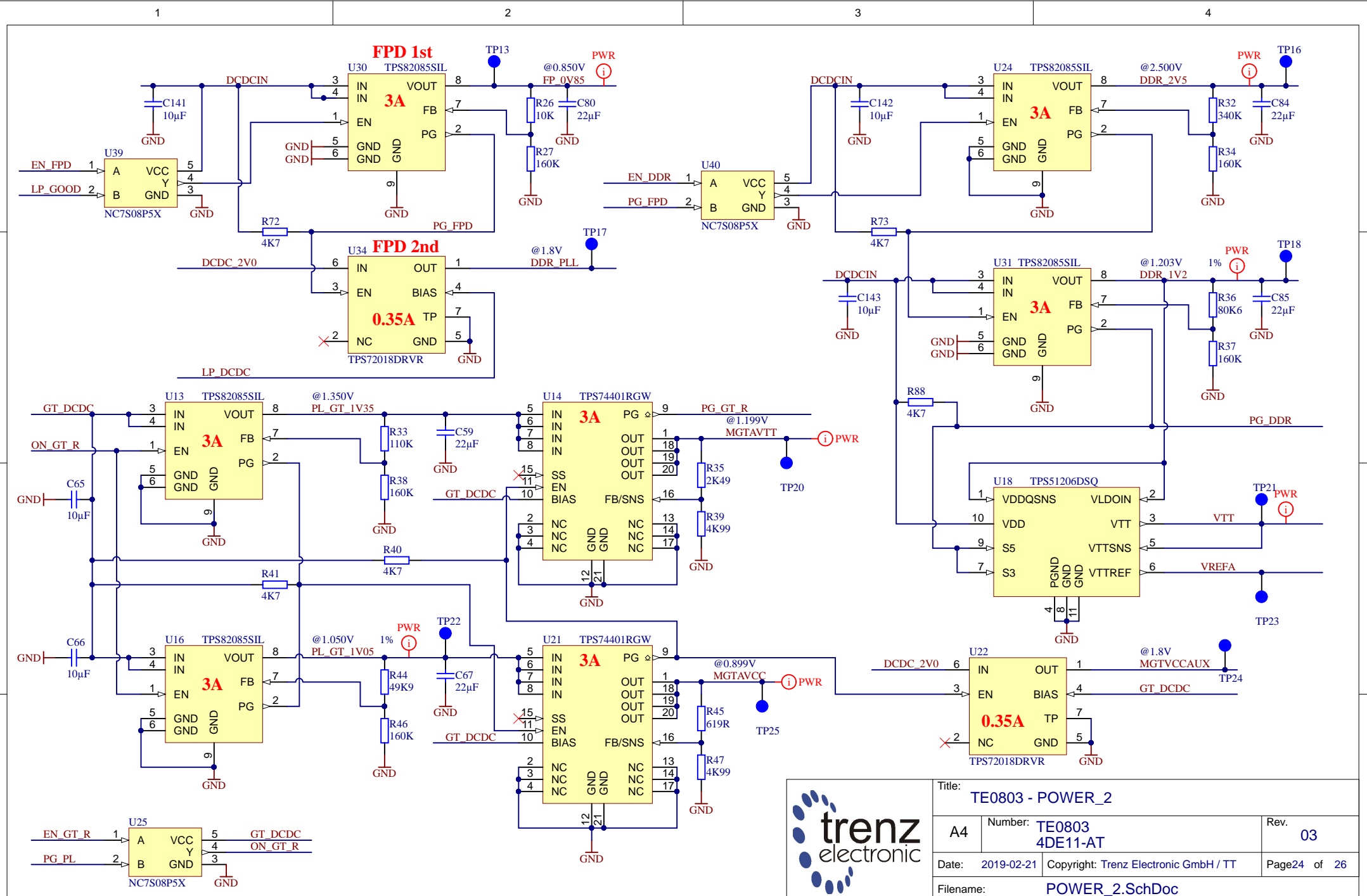
U4B

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

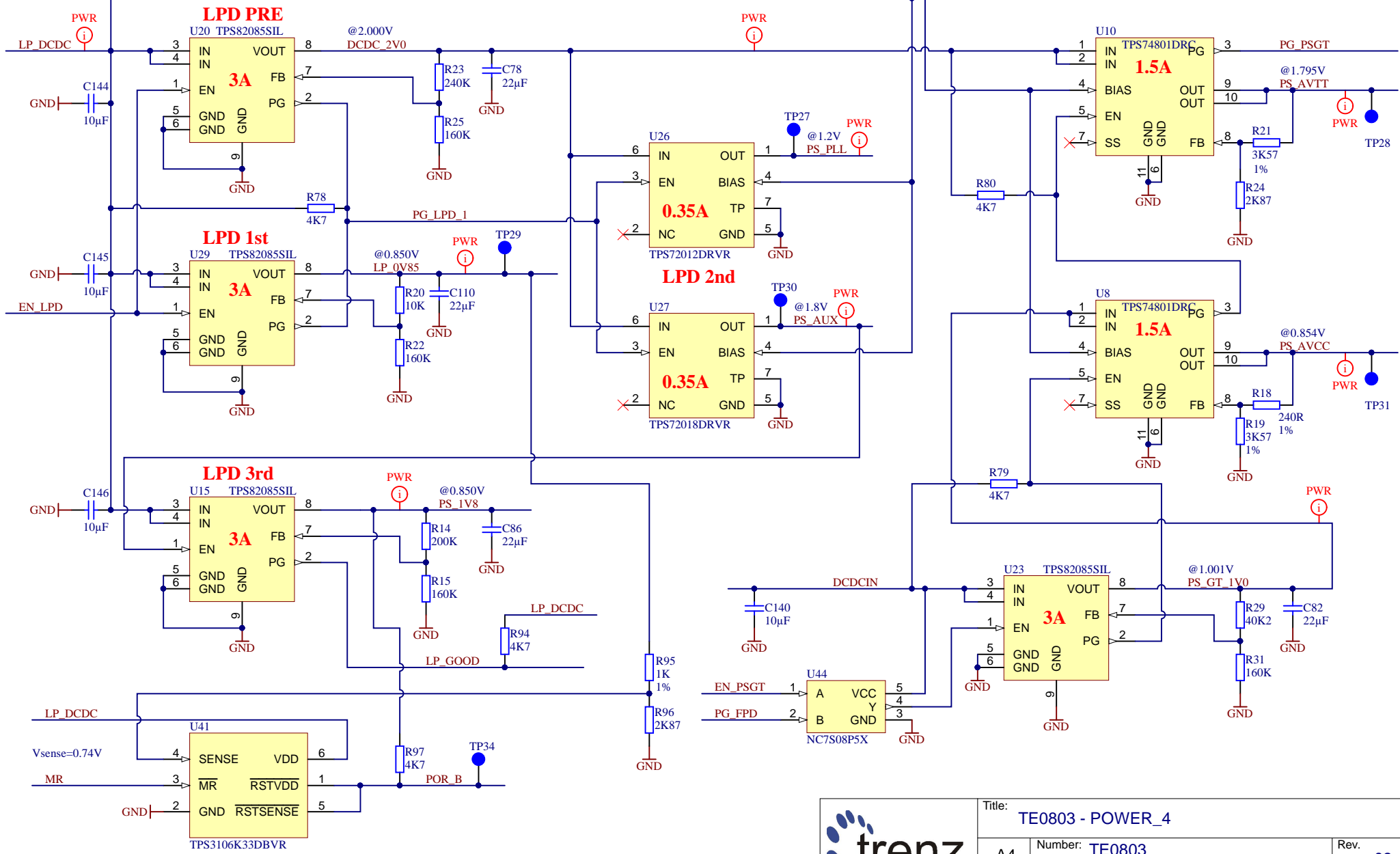
EN63A0QI



Title: TE0803 - POWER		
A4	Number: TE0803 4DE11-AT	Rev. 03
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Filename: POWER.SchDoc		



Title: TE0803 - POWER_2		
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Title: TE0803 - POWER_4		
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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 wath length matched with tollerance 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		
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