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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\_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\_DDR4-TERM  
DDR4-TERM.SchDoc

U\_ZU\_POWER  
ZU\_POWER.SchDoc

U\_ZU\_PS\_POWER  
ZU\_PS\_POWER.SchDoc

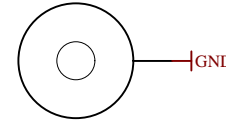
U\_POWER  
POWER.SchDoc

U\_POWER\_2  
POWER\_2.SchDoc

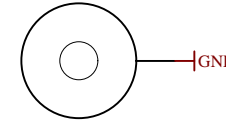
U\_POWER\_4  
POWER\_4.SchDoc

U\_REV\_CH  
Revision\_Changes.SchDoc

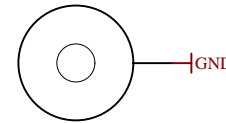
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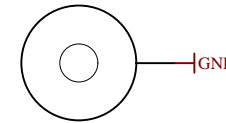
Mount.Hole 3.2mm für Unterlegscheibe



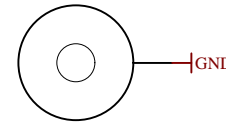
Mount.Hole 3.2mm für Unterlegscheibe



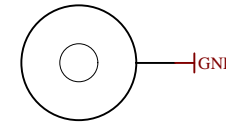
Mount.Hole 3.2mm für Unterlegscheibe



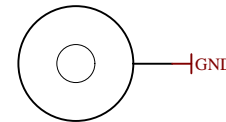
Mount.Hole 3.2mm für Unterlegscheibe



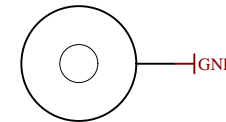
Mount.Hole 3.2mm für Unterlegscheibe



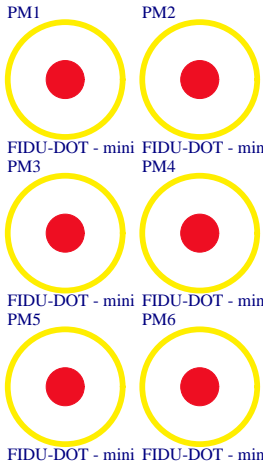
Mount.Hole 3.2mm für Unterlegscheibe



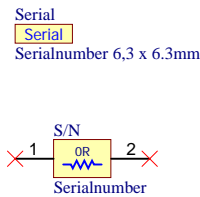
Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



LOGO1  
TE Logo PRINT Layer  
LOGO PRINT



Assembly variant	4BI61-A
Created by	VY
Modified by	VY
Modified at	2020-12-09
SVN Revision	9226



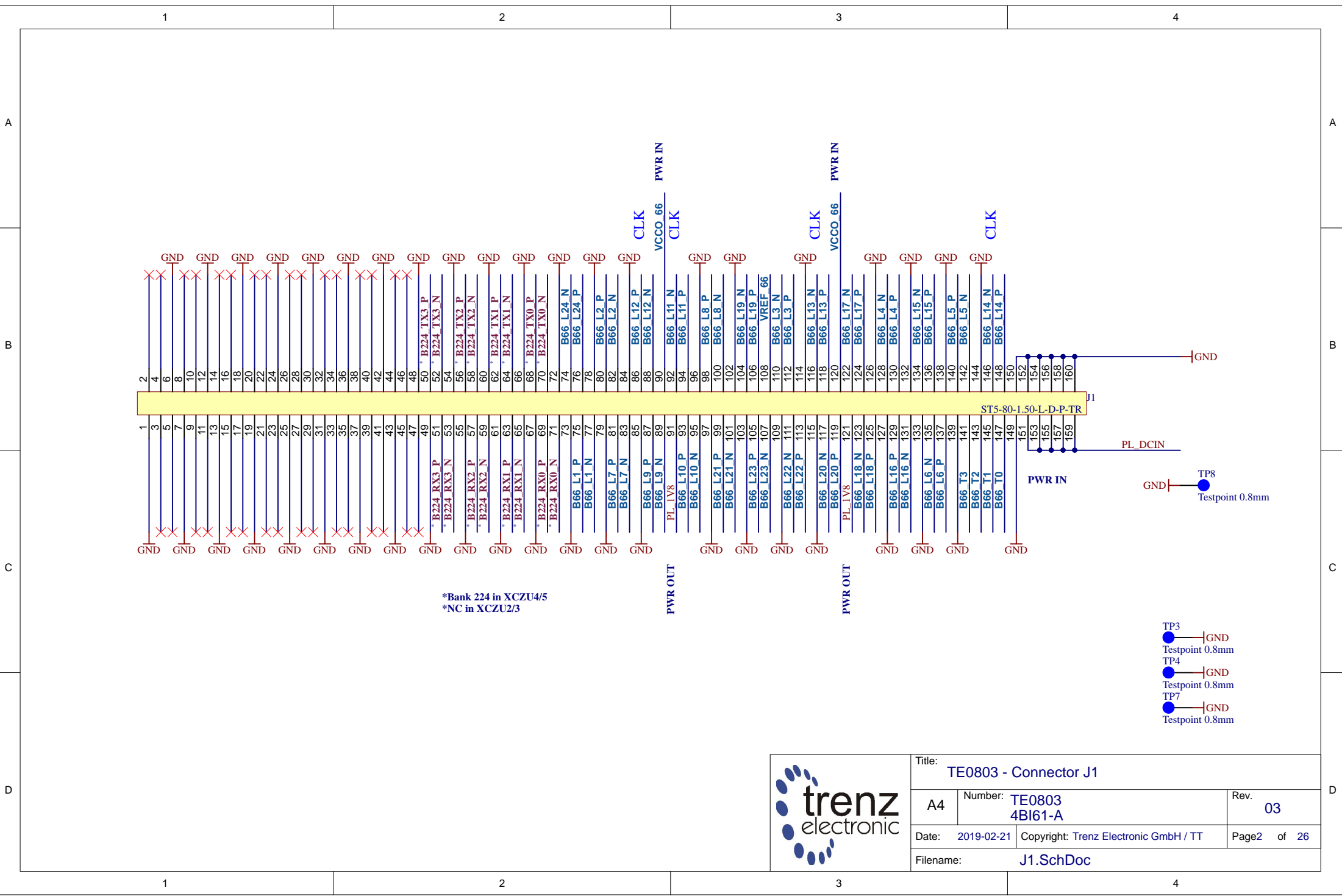
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A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page1 of 26
Filename: TE0803.SchDoc		

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



Title: TE0803 - Connector J1		
A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page2 of 26
Filename: J1.SchDoc		

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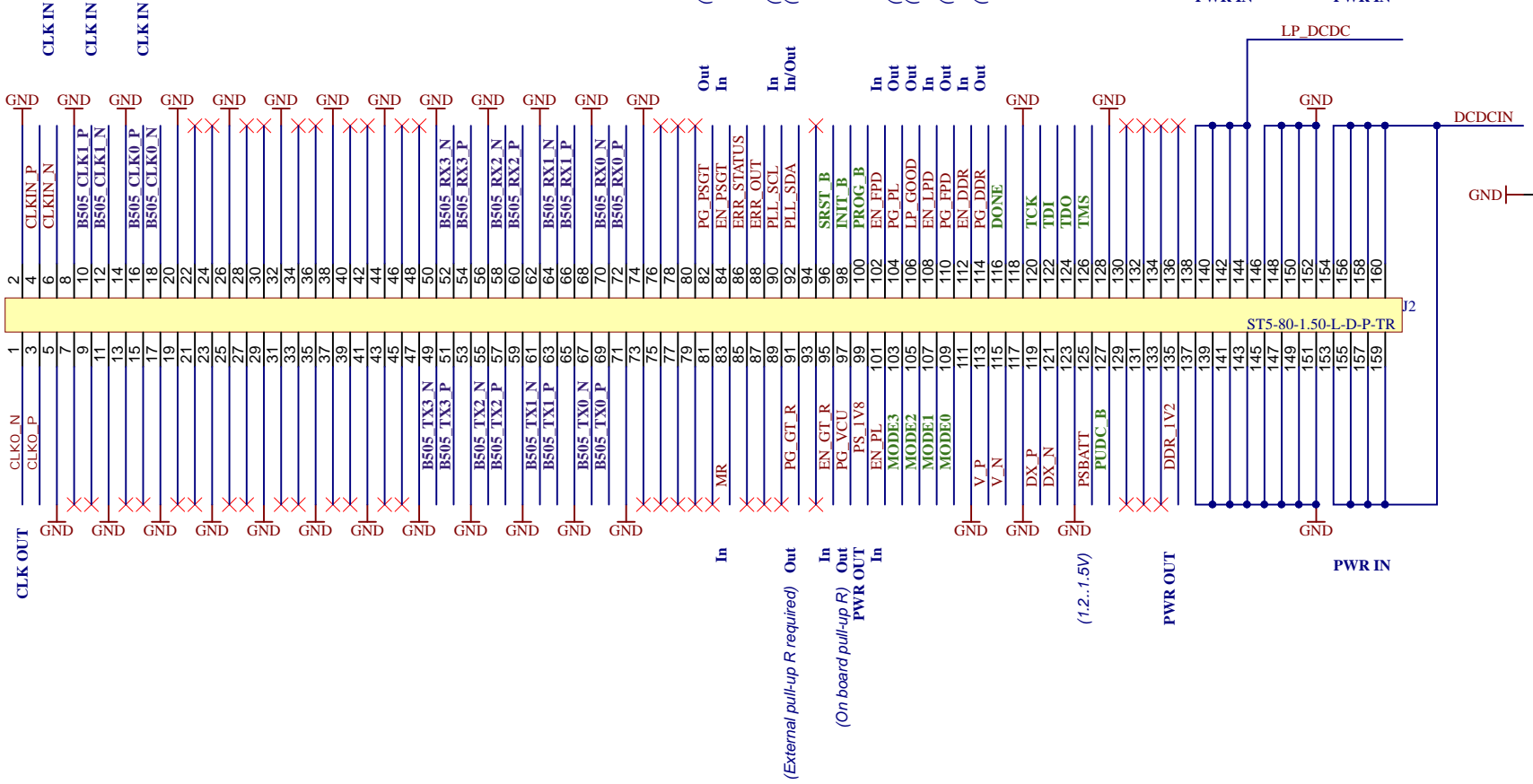
B


C

C

D

D



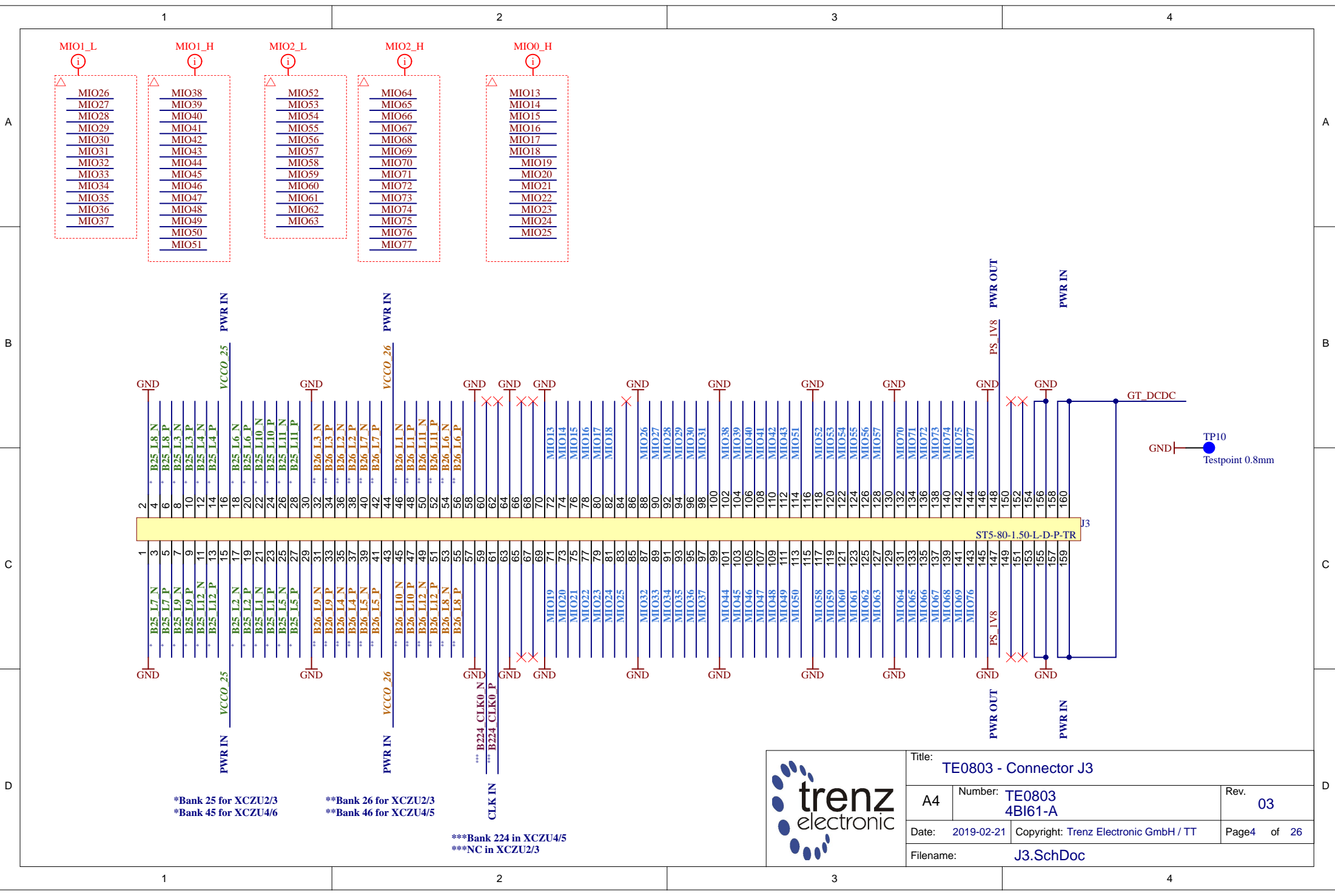
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		A4	Number: TE0803 4BI61-A
Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT	
Filename: J2.SchDoc		Page3 of 26	

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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 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page4 of 26
Filename: J3.SchDoc		

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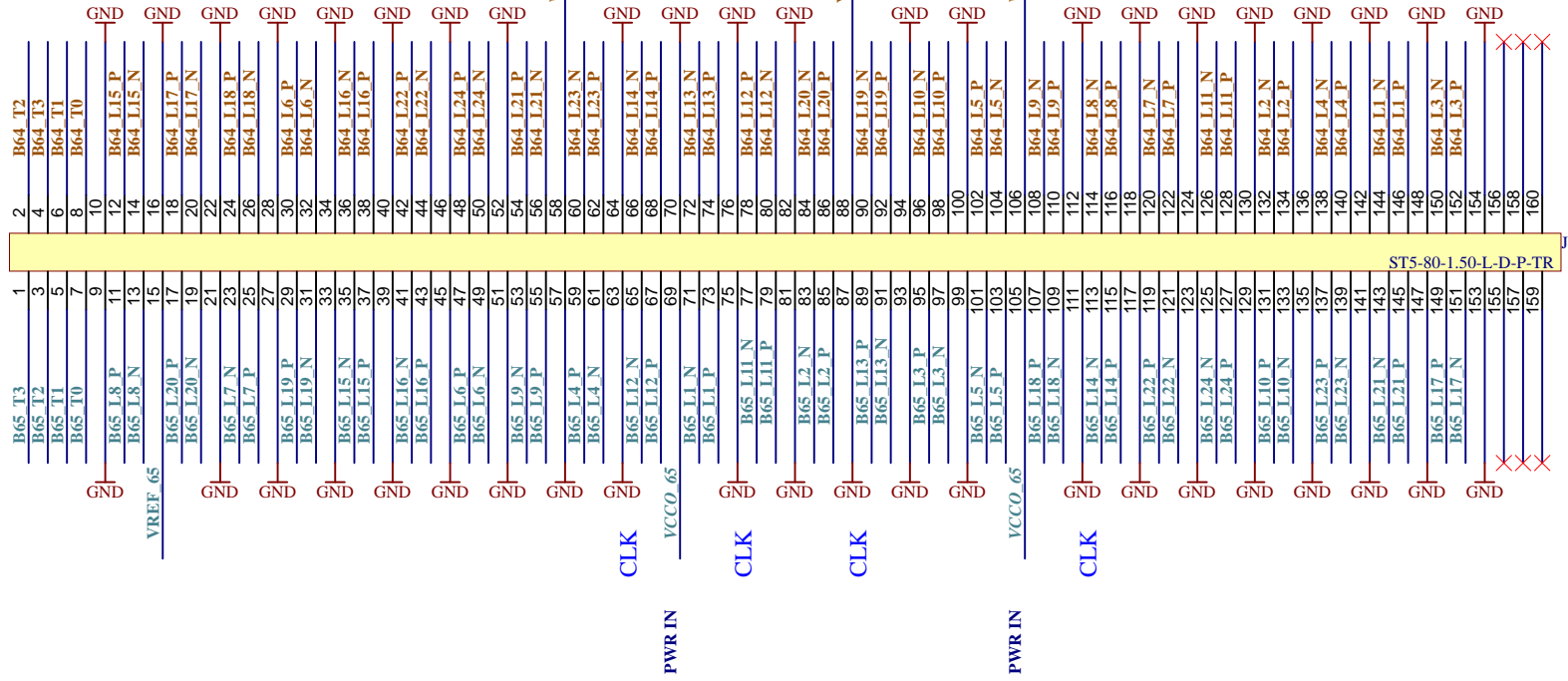
B

C

C

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D




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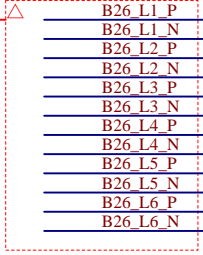
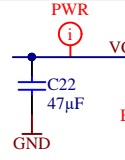
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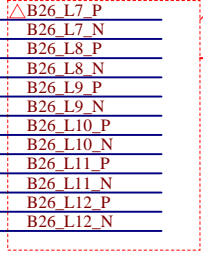
Title: TE0803 - Connector J4		
A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page5 of 26
Filename: J4.SchDoc		



**U1C XCZU4EG-1SFVC784I**

**BANK 46 HD (ZU2/3 BANK 26 HD)**

F14	VCCO_46		
C15	VCCO_46		
B15	IO_L1P_AD11P_46	IO_L7P_HDGC_AD5P_46	G13
A15	IO_L1N_AD11N_46	IO_L7N_HDGC_AD5N_46	F13
B14	IO_L2P_AD10P_46	IO_L8P_HDGC_AD4P_46	F15
A14	IO_L2N_AD10N_46	IO_L8N_HDGC_AD4N_46	E15
B13	IO_L3P_AD9P_46	IO_L9P_AD3P_46	G15
A13	IO_L3N_AD9N_46	IO_L9N_AD3N_46	G14
C14	IO_L4P_AD8P_46	IO_L10P_AD2P_46	H14
C13	IO_L4N_AD8N_46	IO_L10N_AD2N_46	H13
D15	IO_L5P_HDGC_AD7P_46	IO_L11P_AD1P_46	K14
D14	IO_L5N_HDGC_AD7N_46	IO_L11N_AD1N_46	J14
E14	IO_L6P_HDGC_AD6P_46	IO_L12P_AD0P_46	L14
E13	IO_L6N_HDGC_AD6N_46	IO_L12N_AD0N_46	L13



**BANK 43 HD (ZU2/3 BANK 44 HD)**

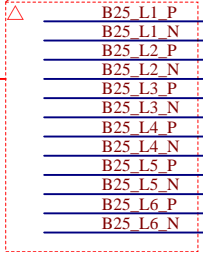
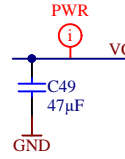
AC10	VCCO_43		
AG12	VCCO_43		
AG10	IO_L1P_AD11P_43	IO_L7P_HDGC_AD5P_43	AD11
AH10	IO_L1N_AD11N_43	IO_L7N_HDGC_AD5N_43	AD10
AF11	IO_L2P_AD10P_43	IO_L8P_HDGC_AD4P_43	AB11
AG11	IO_L2N_AD10N_43	IO_L8N_HDGC_AD4N_43	AC11
AH12	IO_L3P_AD9P_43	IO_L9P_AD3P_43	AA11
AH11	IO_L3N_AD9N_43	IO_L9N_AD3N_43	AA10
AE10	IO_L4P_AD8P_43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



**U1B**

**BANK 44 HD (ZU2/3 BANK 24 HD)**

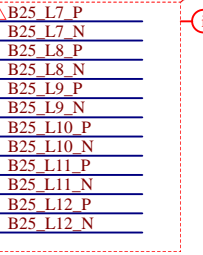
AA14	VCCO_44		
AD13	VCCO_44		
AE15	IO_L1P_AD15P_44	IO_L7P_HDGC_44	AA13
AE14	IO_L1N_AD15N_44	IO_L7N_HDGC_44	AB13
AG14	IO_L2P_AD14P_44	IO_L8P_HDGC_44	AB15
AH11	IO_L2N_AD14N_44	IO_L8N_HDGC_44	AB14
AG13	IO_L3P_AD13P_44	IO_L9P_AD11P_44	W14
AH13	IO_L3N_AD13N_44	IO_L9N_AD11N_44	W13
AE13	IO_L4P_AD12P_44	IO_L10P_AD10P_44	Y14
AF13	IO_L4N_AD12N_44	IO_L10N_AD10N_44	Y13
AD15	IO_L5P_HDGC_44	IO_L11P_AD9P_44	W12
AD14	IO_L5N_HDGC_44	IO_L11N_AD9N_44	W11
AC14	IO_L6P_HDGC_44	IO_L12P_AD8P_44	Y12
AC13	IO_L6N_HDGC_44	IO_L12N_AD8N_44	AA12



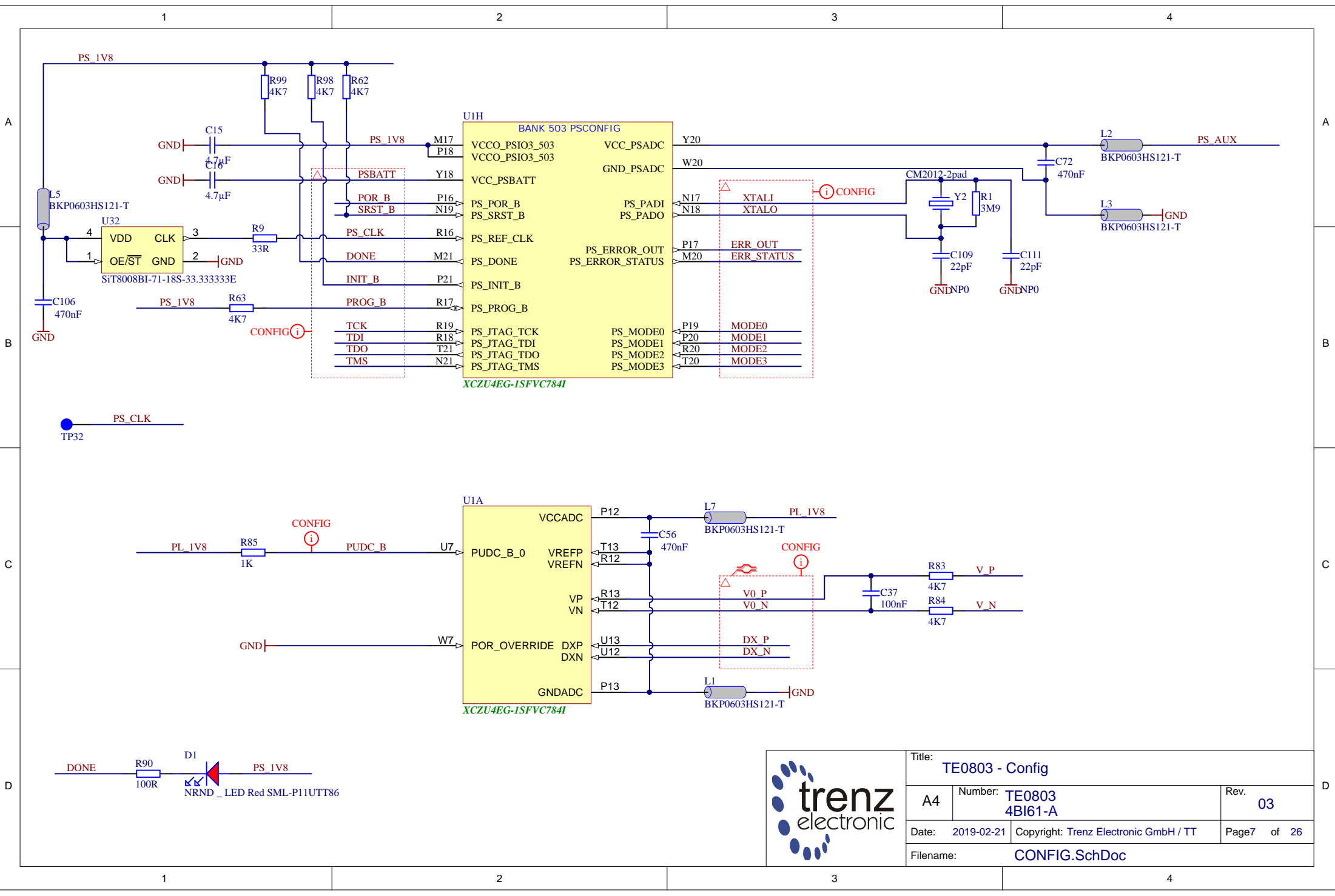
**XCZU4EG-1SFVC784I**

**BANK 45 HD (ZU2/3 BANK 25 HD)**

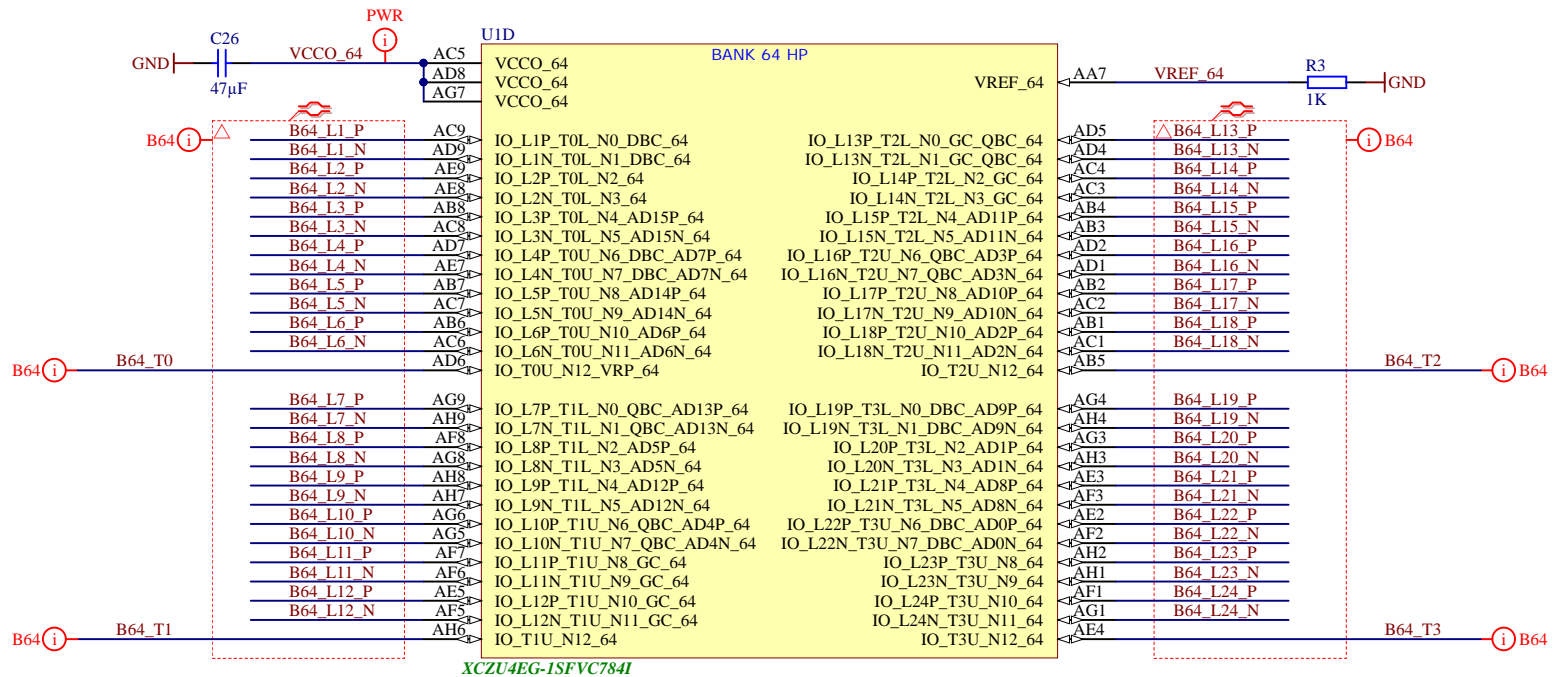
B12	VCCO_45		
E11	VCCO_45		
J11	IO_L1P_AD15P_45	IO_L7P_HDGC_45	E10
J10	IO_L1N_AD15N_45	IO_L7N_HDGC_45	D10
K13	IO_L2P_AD14P_45	IO_L8P_HDGC_45	E12
K12	IO_L2N_AD14N_45	IO_L8N_HDGC_45	D11
H11	IO_L3P_AD13P_45	IO_L9P_AD11P_45	C11
G10	IO_L3N_AD13N_45	IO_L9N_AD11N_45	B10
J12	IO_L4P_AD12P_45	IO_L10P_AD10P_45	B11
H12	IO_L4N_AD12N_45	IO_L10N_AD10N_45	A10
G11	IO_L5P_HDGC_45	IO_L11P_AD9P_45	A12
F11	IO_L5N_HDGC_45	IO_L11N_AD9N_45	A11
F12	IO_L6P_HDGC_45	IO_L12P_AD8P_45	D12
F11	IO_L6N_HDGC_45	IO_L12N_AD8N_45	C12



Title: <b>TE0803 - HD Banks</b>		
A4	Number: <b>TE0803 4BI61-A</b>	Rev. <b>03</b>
Date: <b>2019-02-21</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	Page <b>6</b> of <b>26</b>
Filename: <b>B_HD.SchDoc</b>		

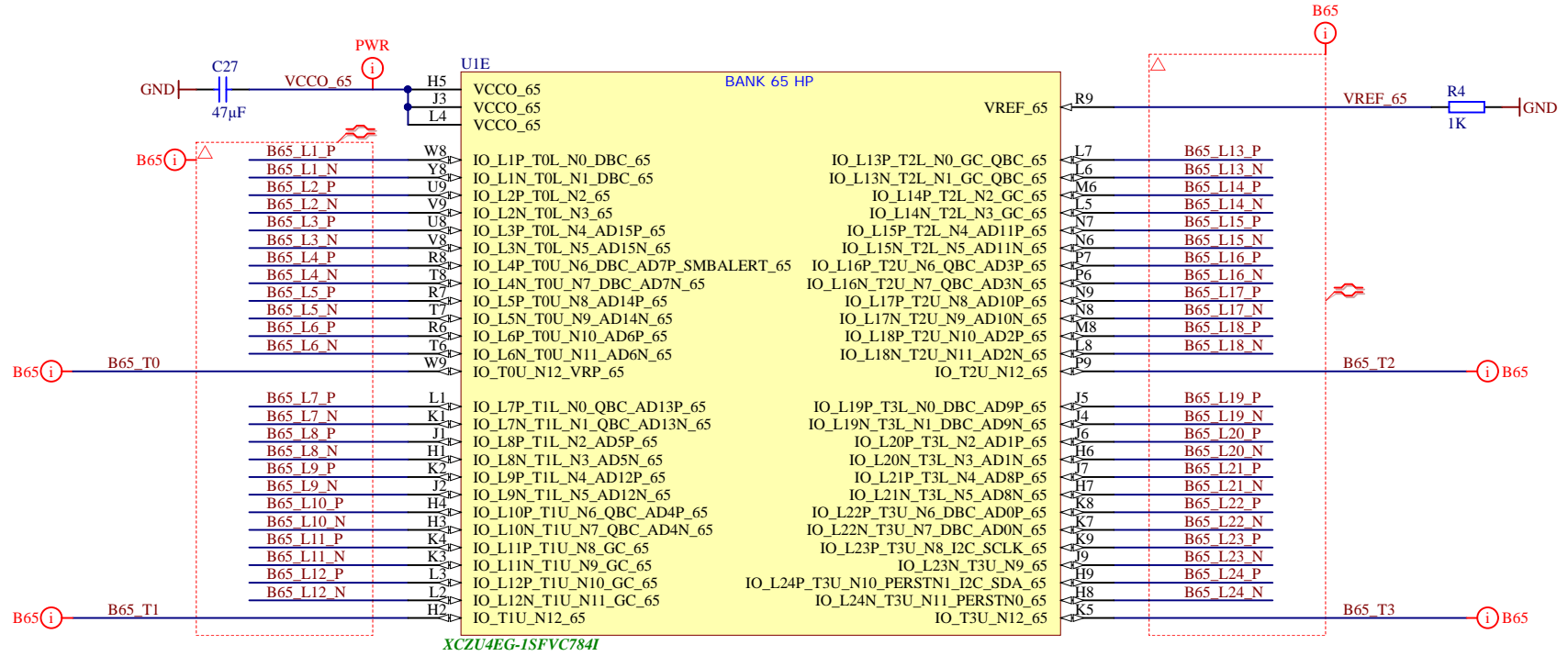


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A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 7 of 26
Filename: CONFIG.SchDoc		

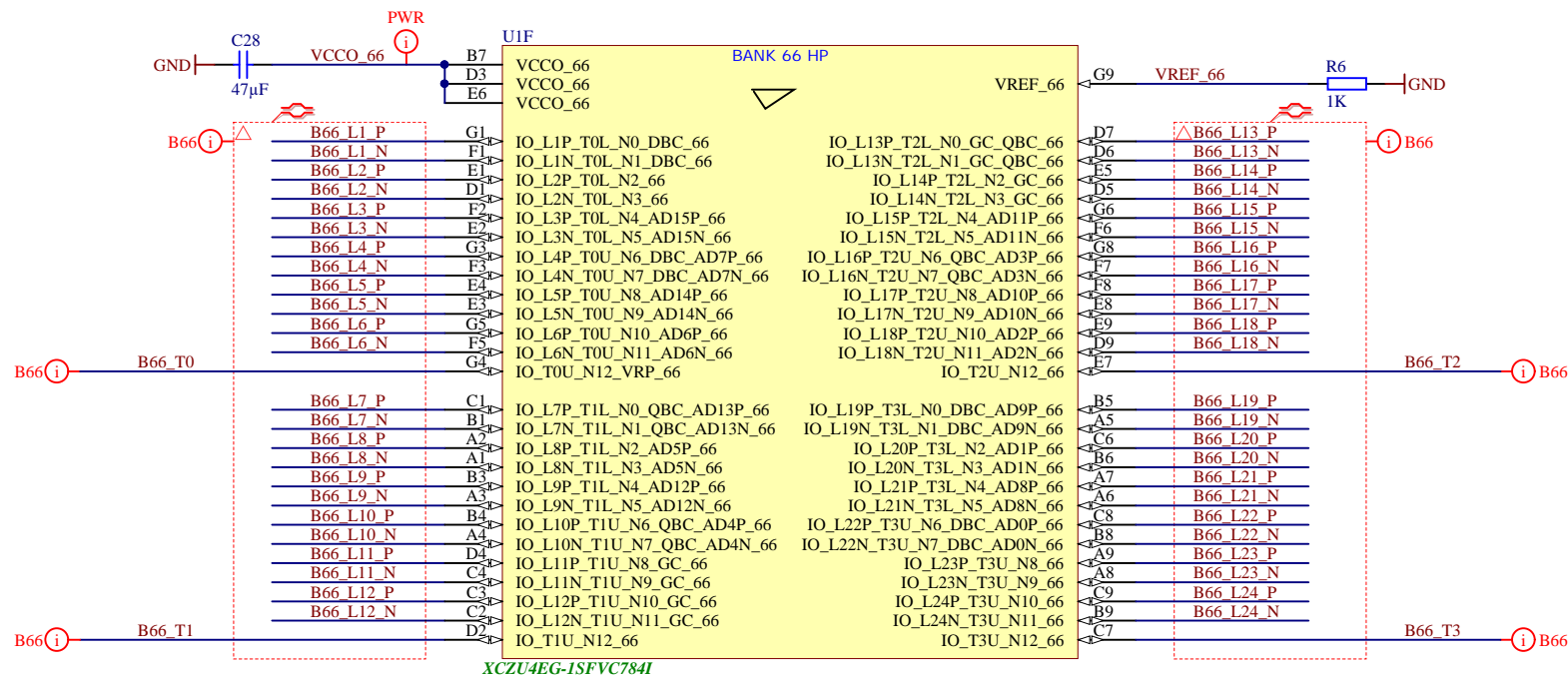



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A4	Number: <b>TE0803 4BI61-A</b>	Rev. <b>03</b>
Date: <b>2019-02-21</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	Page <b>8</b> of <b>26</b>
Filename: <b>B64.SchDoc</b>		

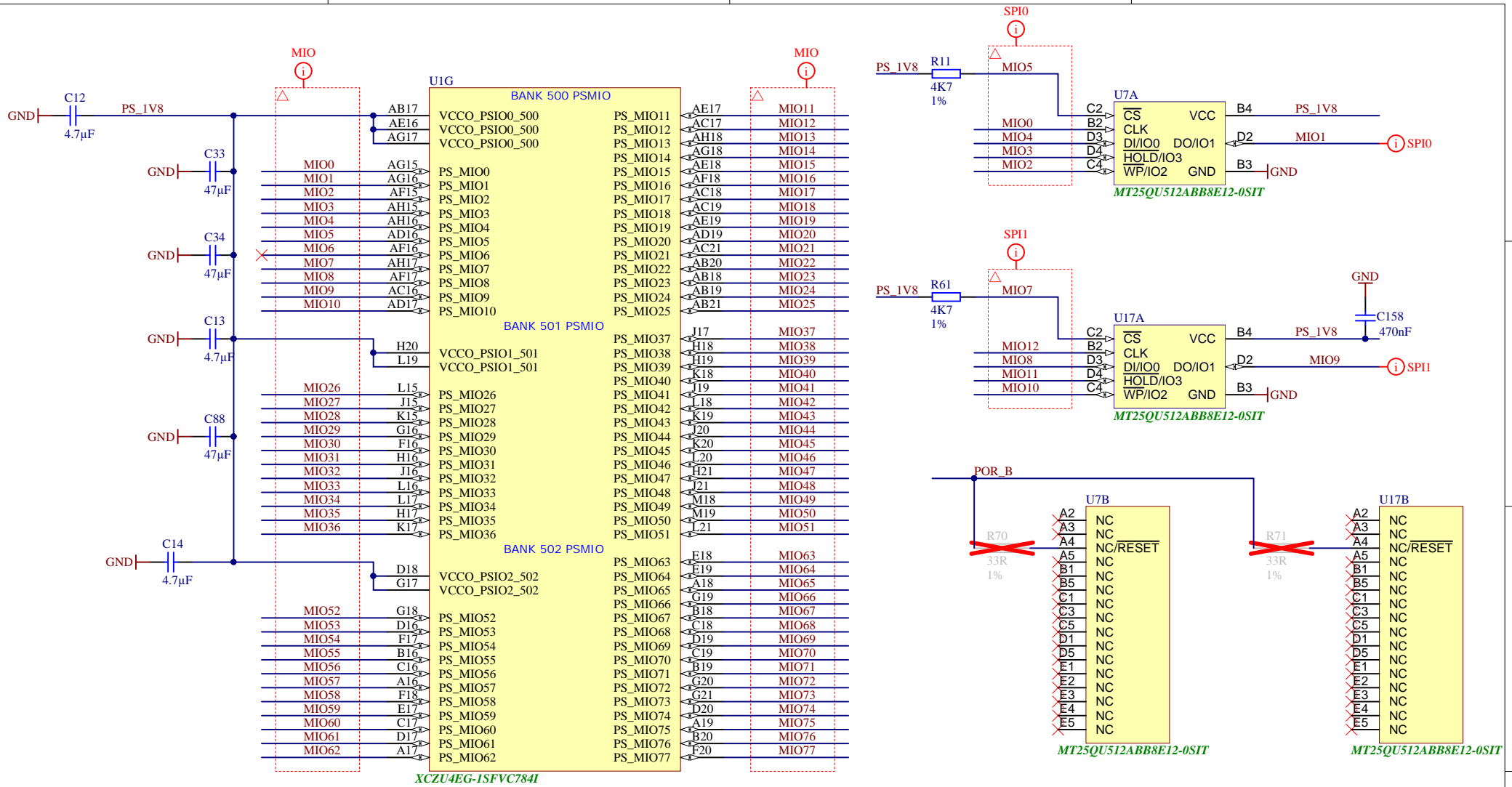





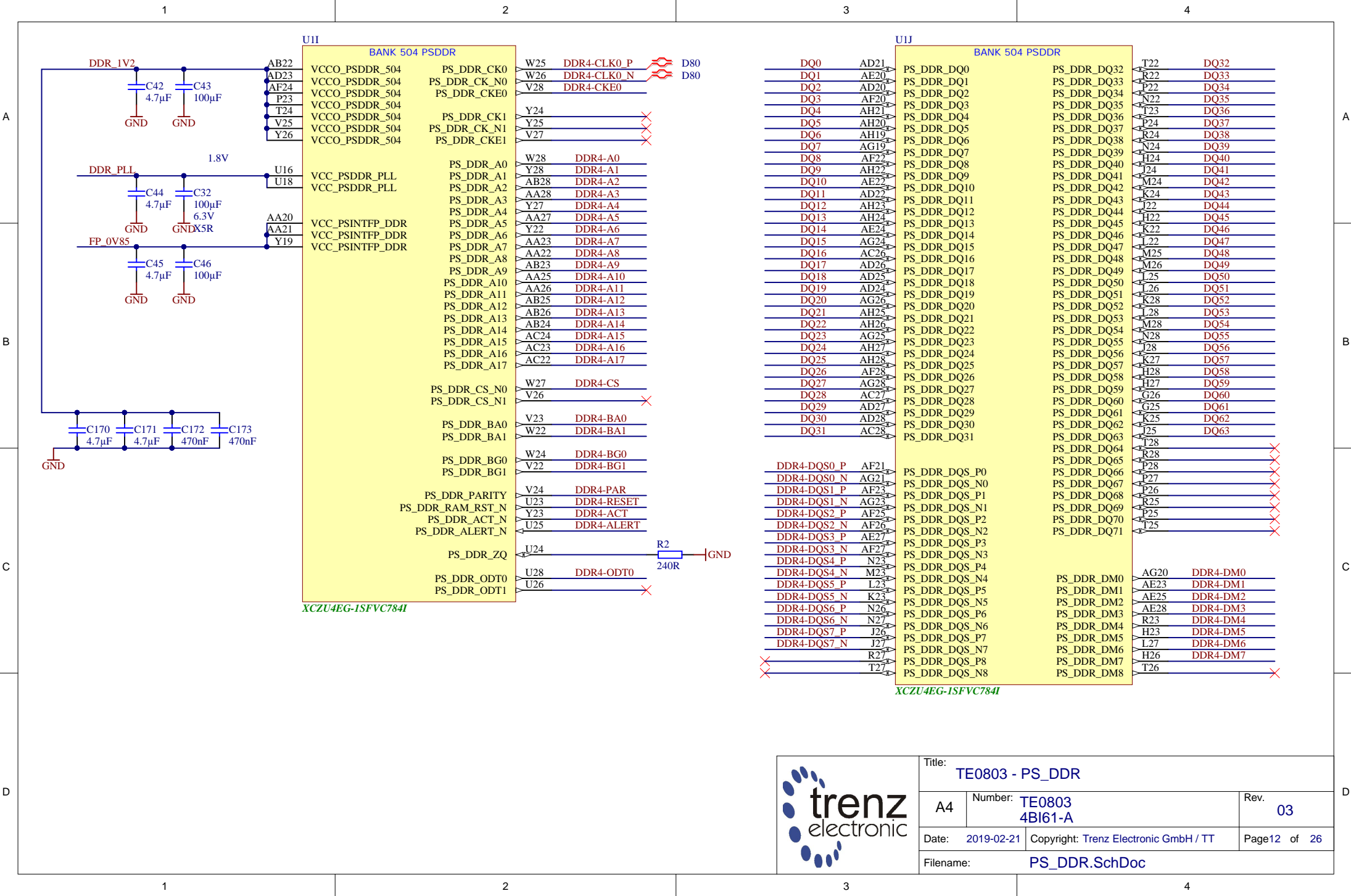
Title: TE0803 - B65		
A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page9 of 26
Filename: B65.SchDoc		

Title: TE0803 - B66		
A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 10 of 26
Filename: B66.SchDoc		



			Title: <b>TE0803 - MIO Banks</b>	
			A4	Number: <b>TE0803 4BI61-A</b>
Date: <b>2019-02-21</b>		Copyright: Trenz Electronic GmbH / TT		Page11 of 26
Filename: <b>B_MIO.SchDoc</b>				



**trenz electronic**

Title: **TE0803 - PS\_DDR**

A4	Number: <b>TE0803 4BI61-A</b>	Rev. <b>03</b>
Date: <b>2019-02-21</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	Page <b>12</b> of <b>26</b>
Filename: <b>PS_DDR.SchDoc</b>		

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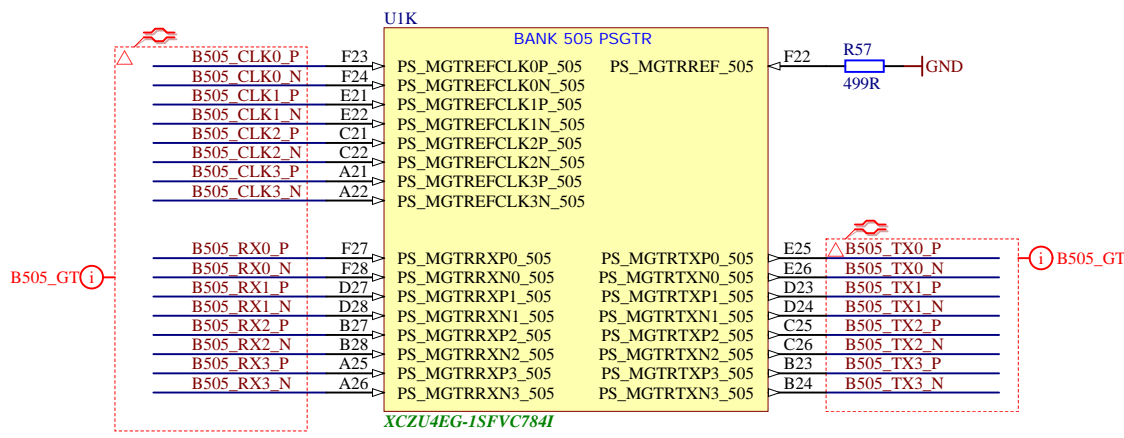
B

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D



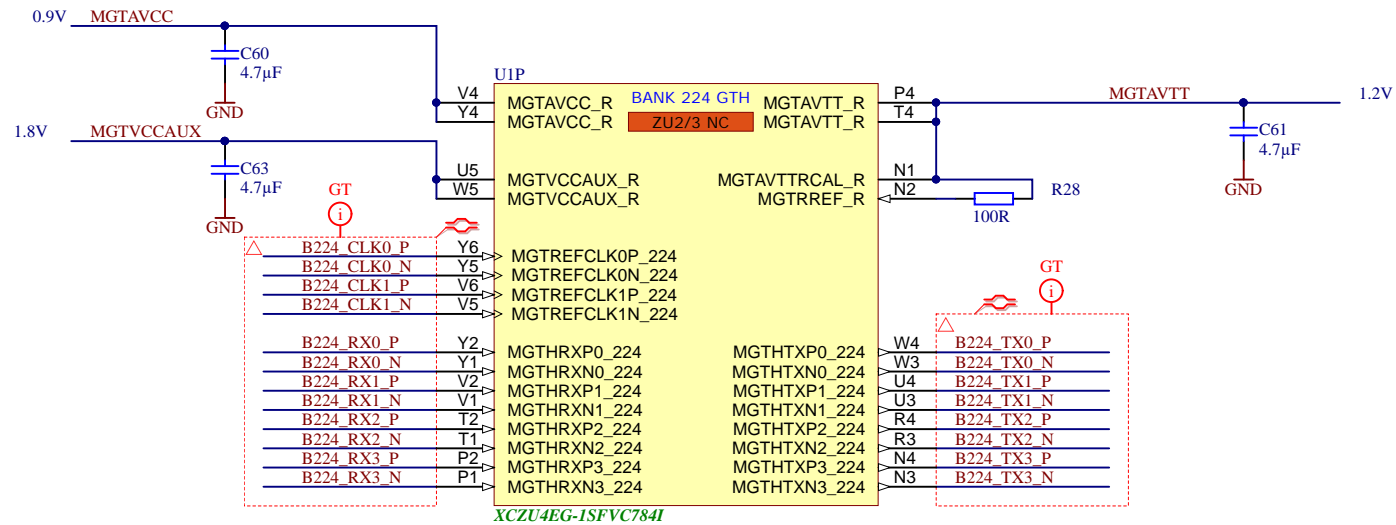
Title: <b>TE0803 - PS_GT</b>		
A4	Number: <b>TE0803 4BI61-A</b>	Rev. <b>03</b>
Date: <b>2019-02-21</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	Page <b>13</b> of <b>26</b>
Filename: <b>B_PS_GT.SchDoc</b>		


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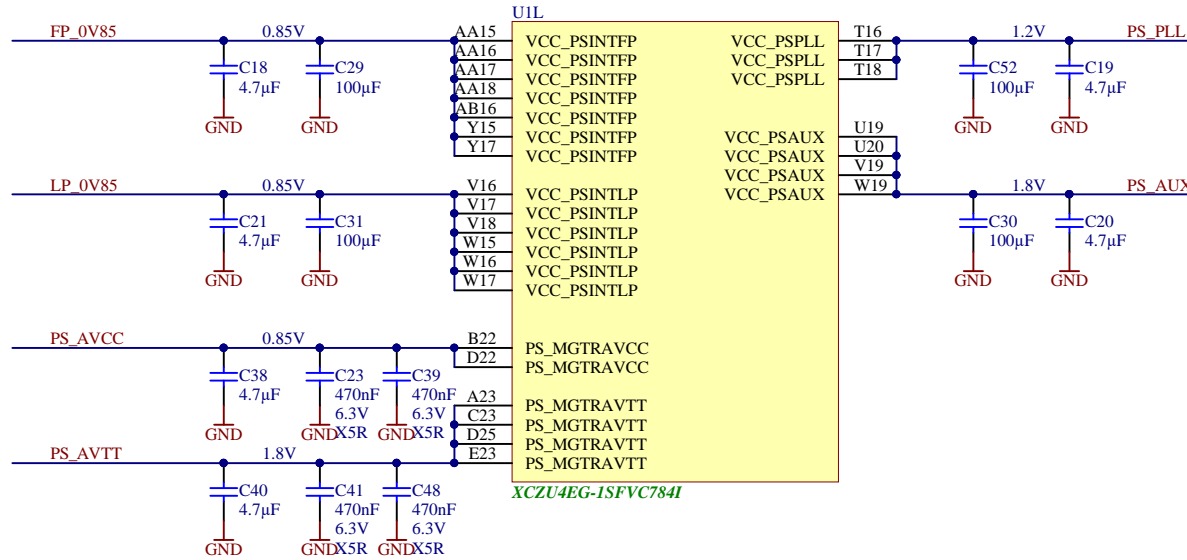
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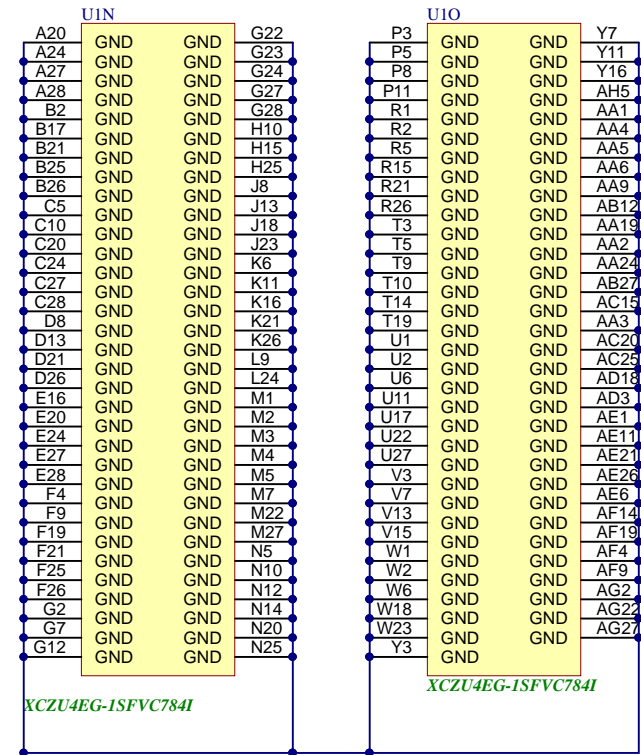
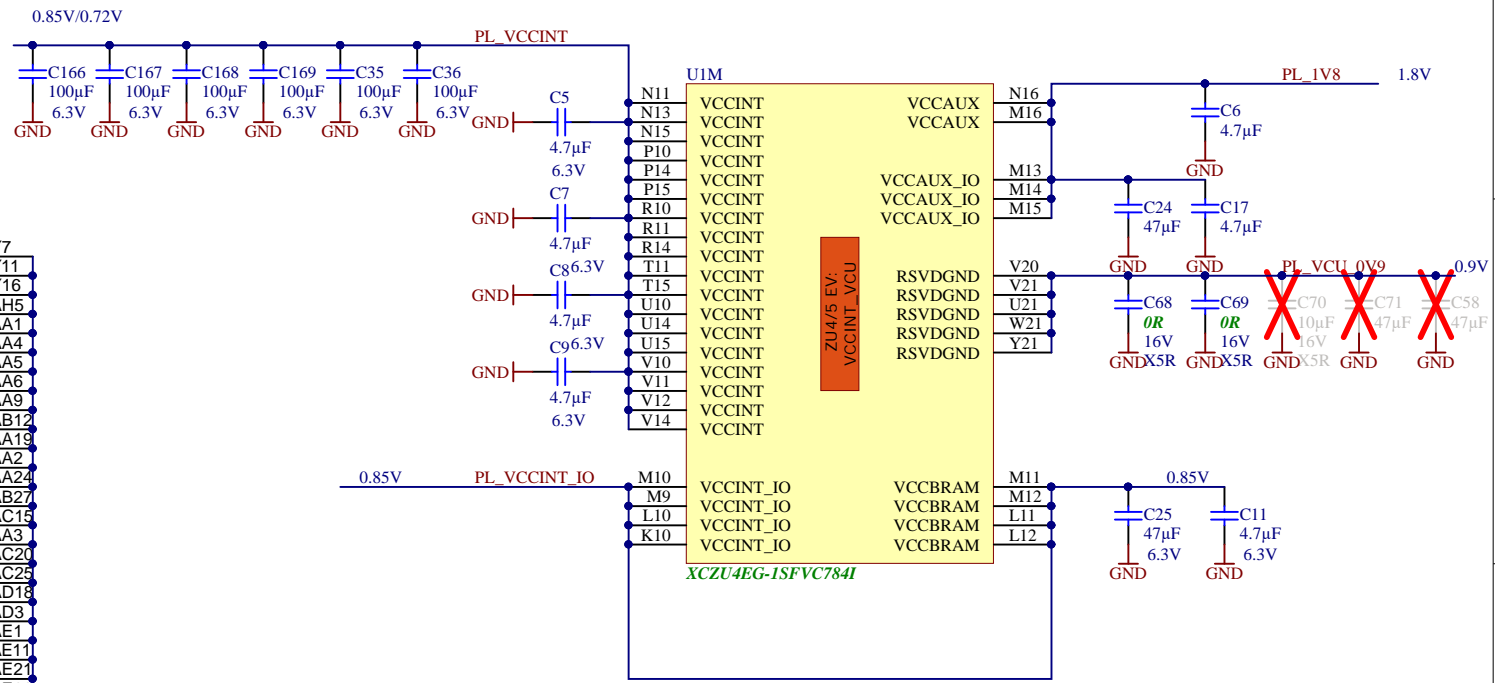
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		A4	Number: TE0803 4BI61-A
Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT	
Filename: B_GT.SchDoc		Page 14 of 26	

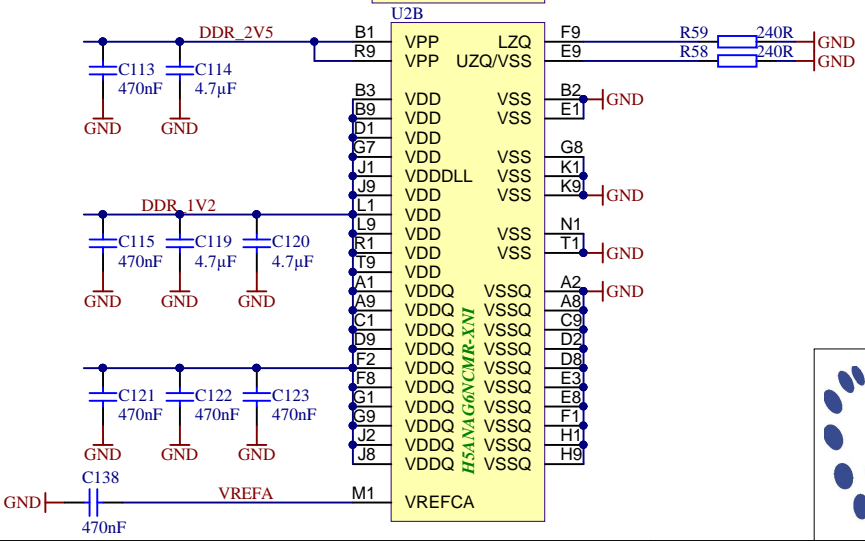
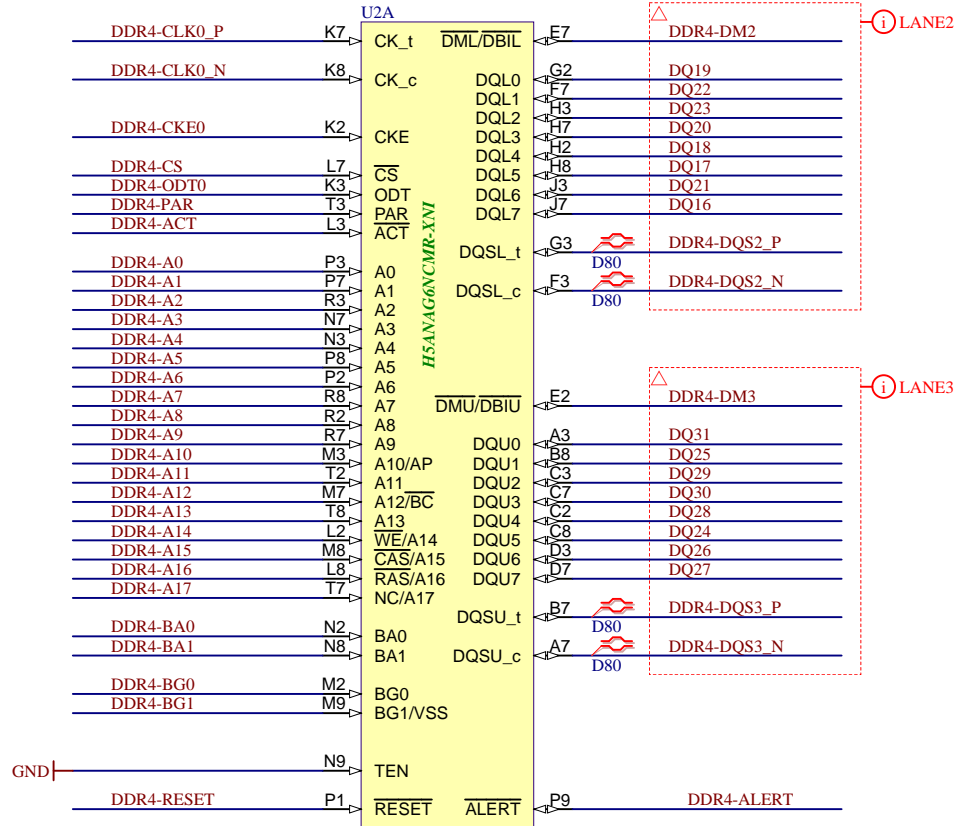


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	A4	Number: <b>TE0803 4BI61-A</b>	Rev. <b>03</b>
	Date: <b>2019-02-21</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	Page <b>15</b> of <b>26</b>
	Filename: <b>ZU_PS_POWER.SchDoc</b>		

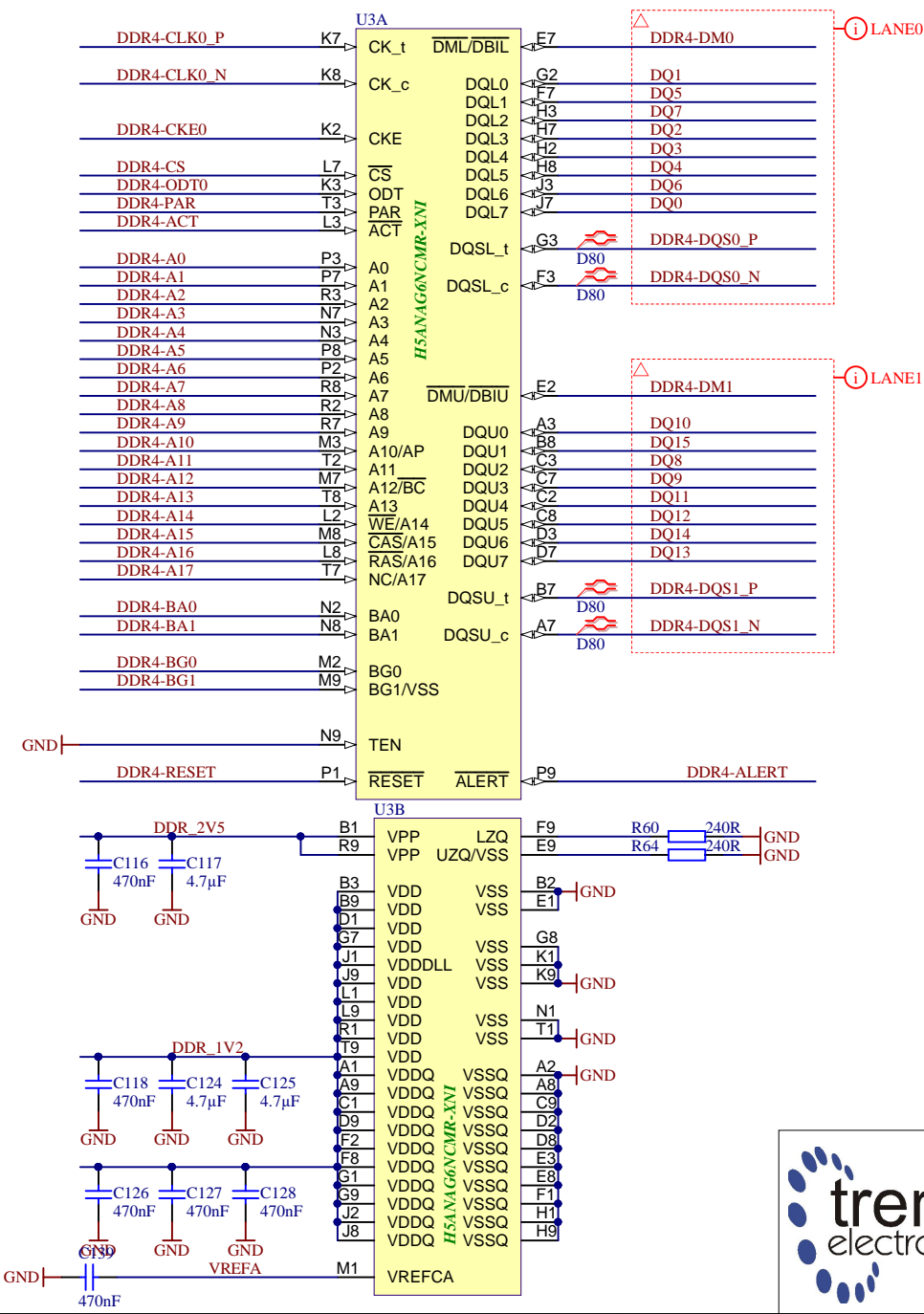



	Title: TE0803 - ZU_POWER		
	A4	Number: TE0803 4BI61-A	Rev. 03
	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 16 of 26
	Filename: ZU_POWER.SchDoc		

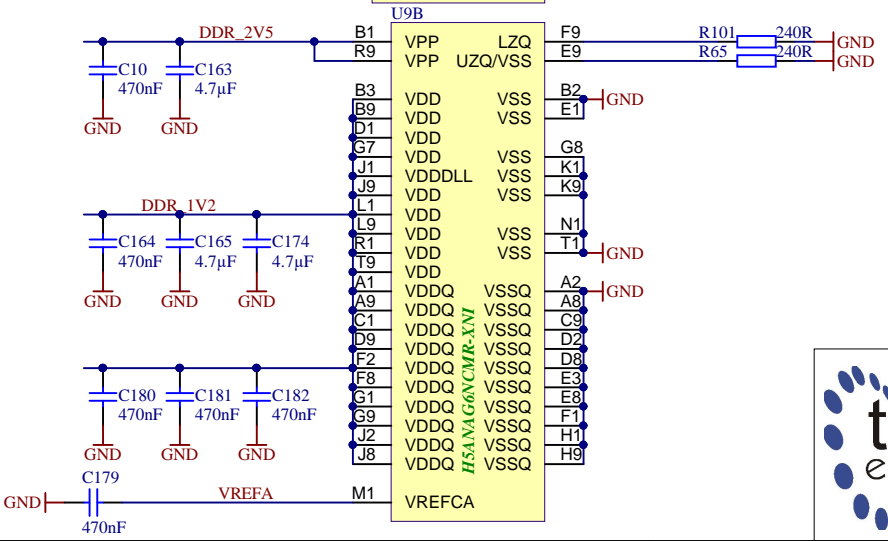
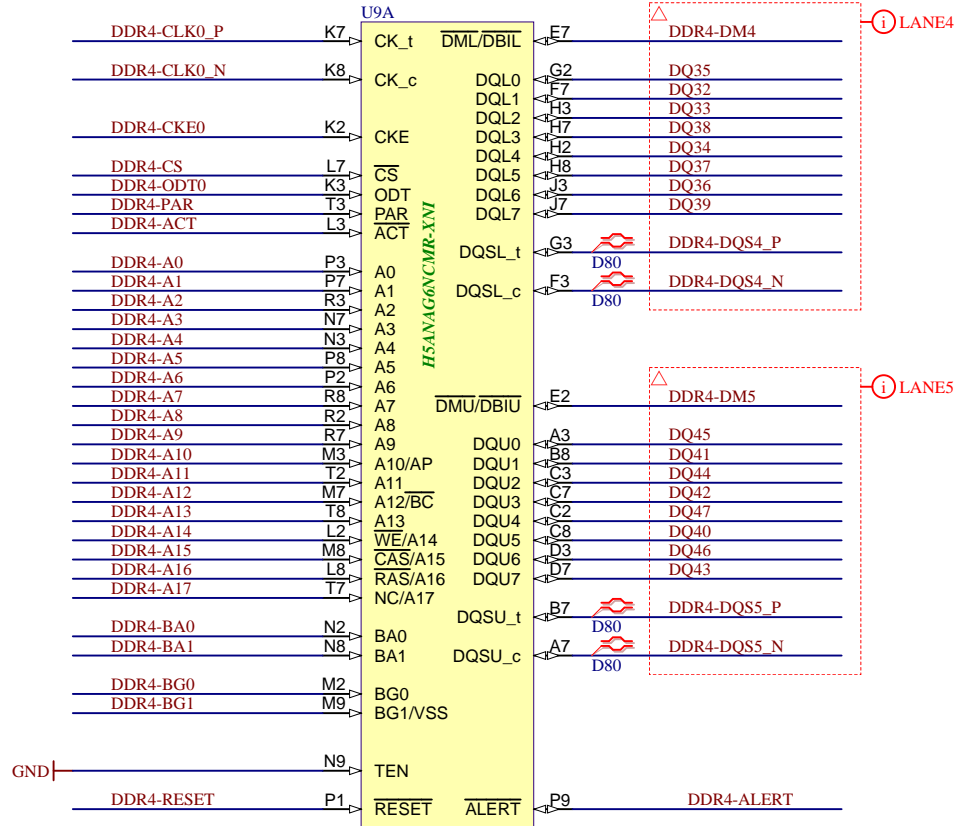




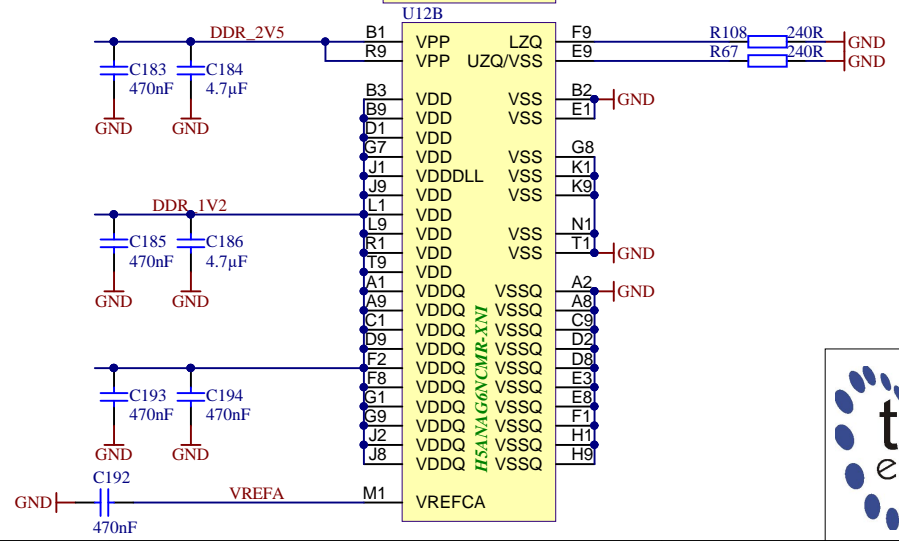
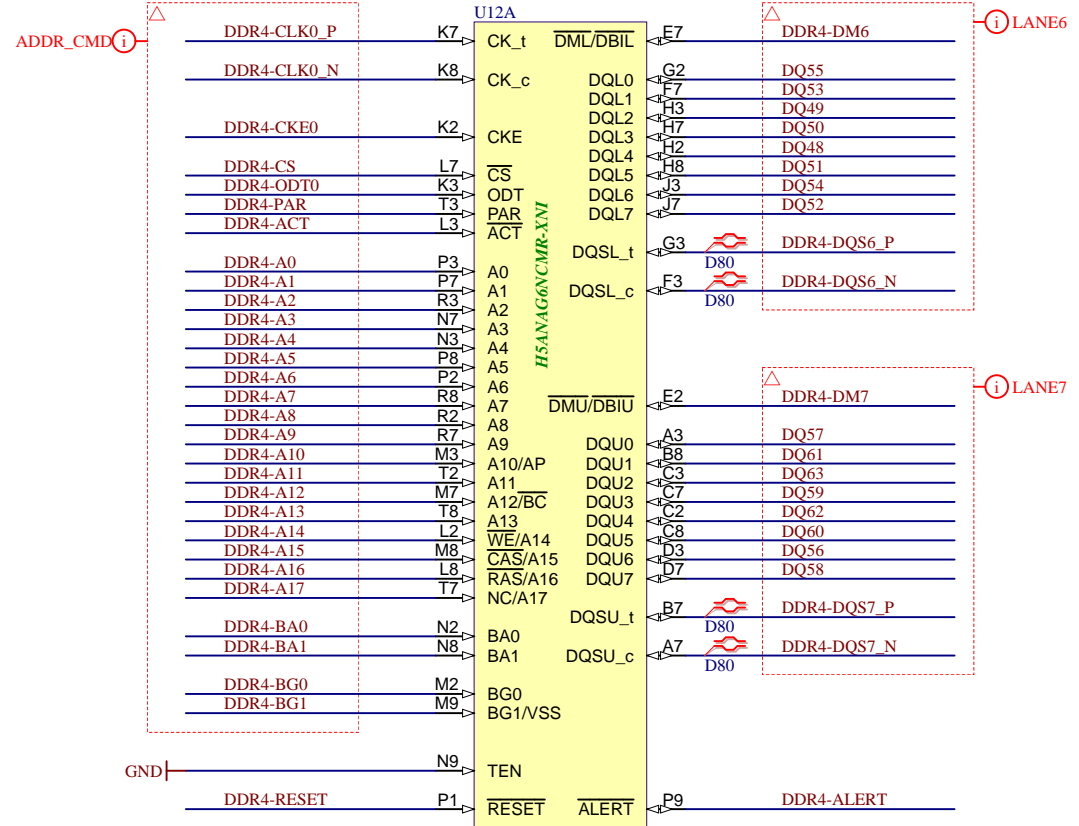
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A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 17 of 26
Filename: DDR4-RAM.SchDoc		

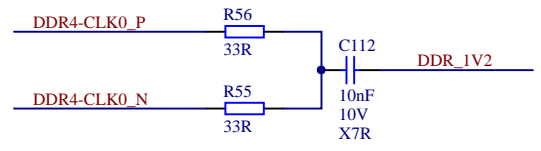
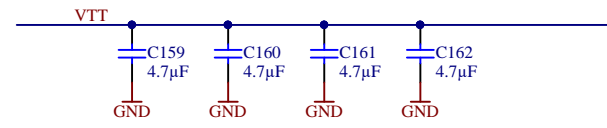
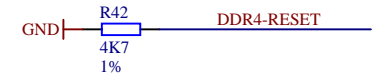
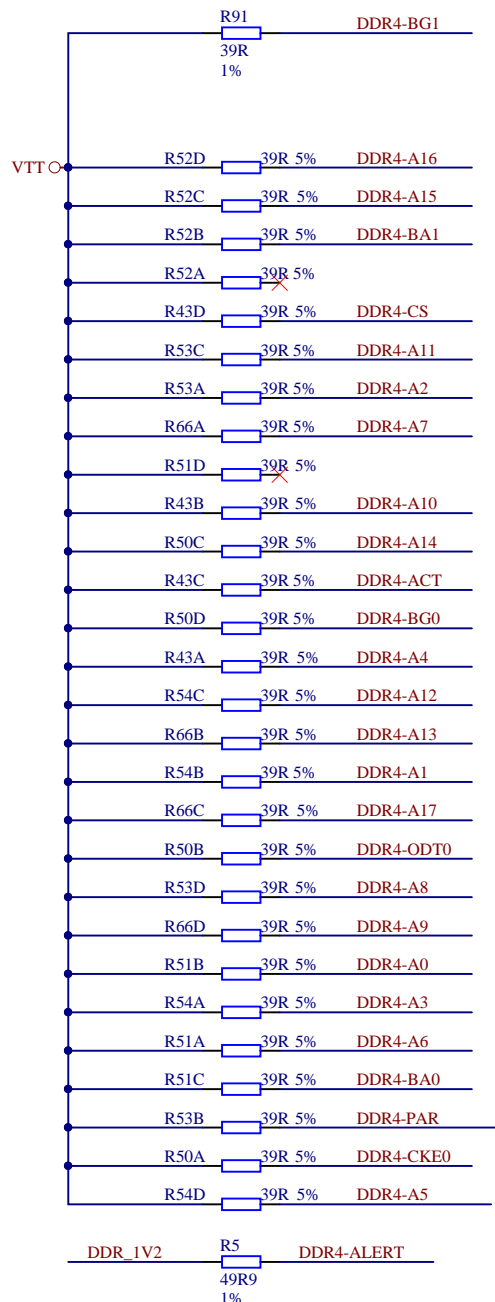
Title: TE0803 - DDR4_2_RAM		
A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 18 of 26
Filename: DDR4-RAM_2.SchDoc		



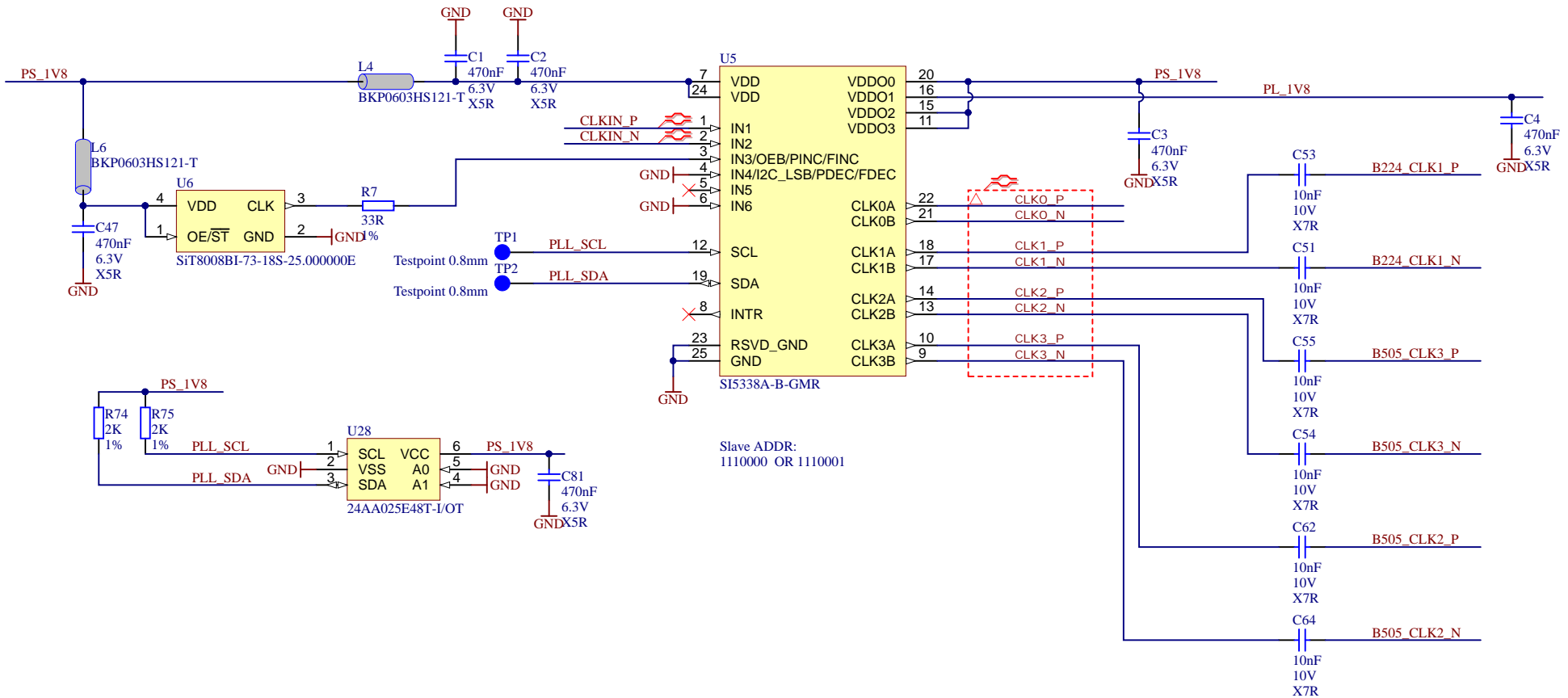
Title: TE0803 - DDR4_3_RAM		
A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page 19 of 26
Filename: DDR4-RAM_3.SchDoc		




Title: TE0803 - DDR4_4_RAM		
A4	Number: TE0803 4BI61-A	Rev. 03
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Filename: DDR4-RAM_4.SchDoc		

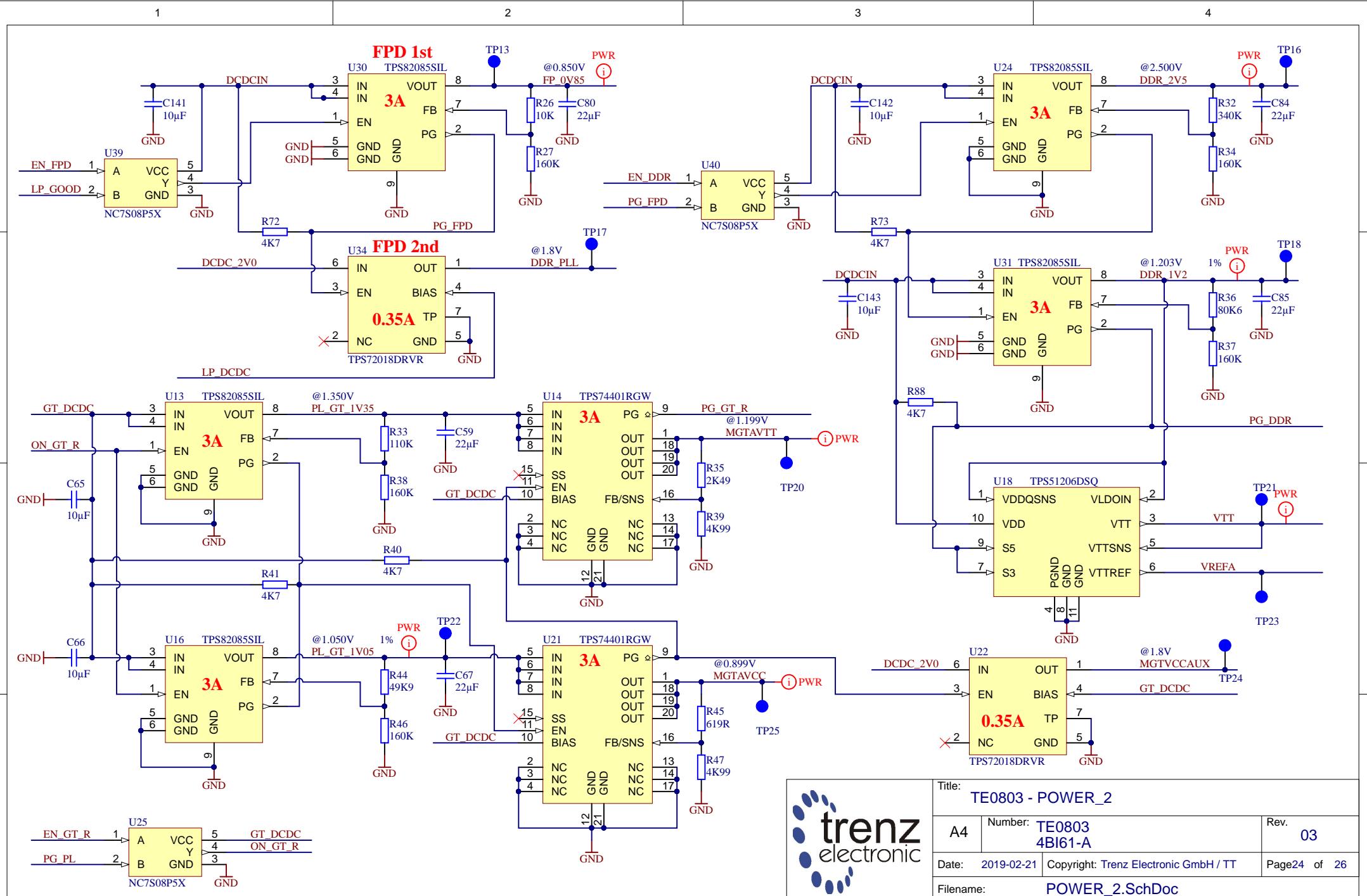


Title: TE0803 - DDR4_TERM		
A4	Number: TE0803 4BI61-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page21 of 26
Filename: DDR4-TERM.SchDoc		



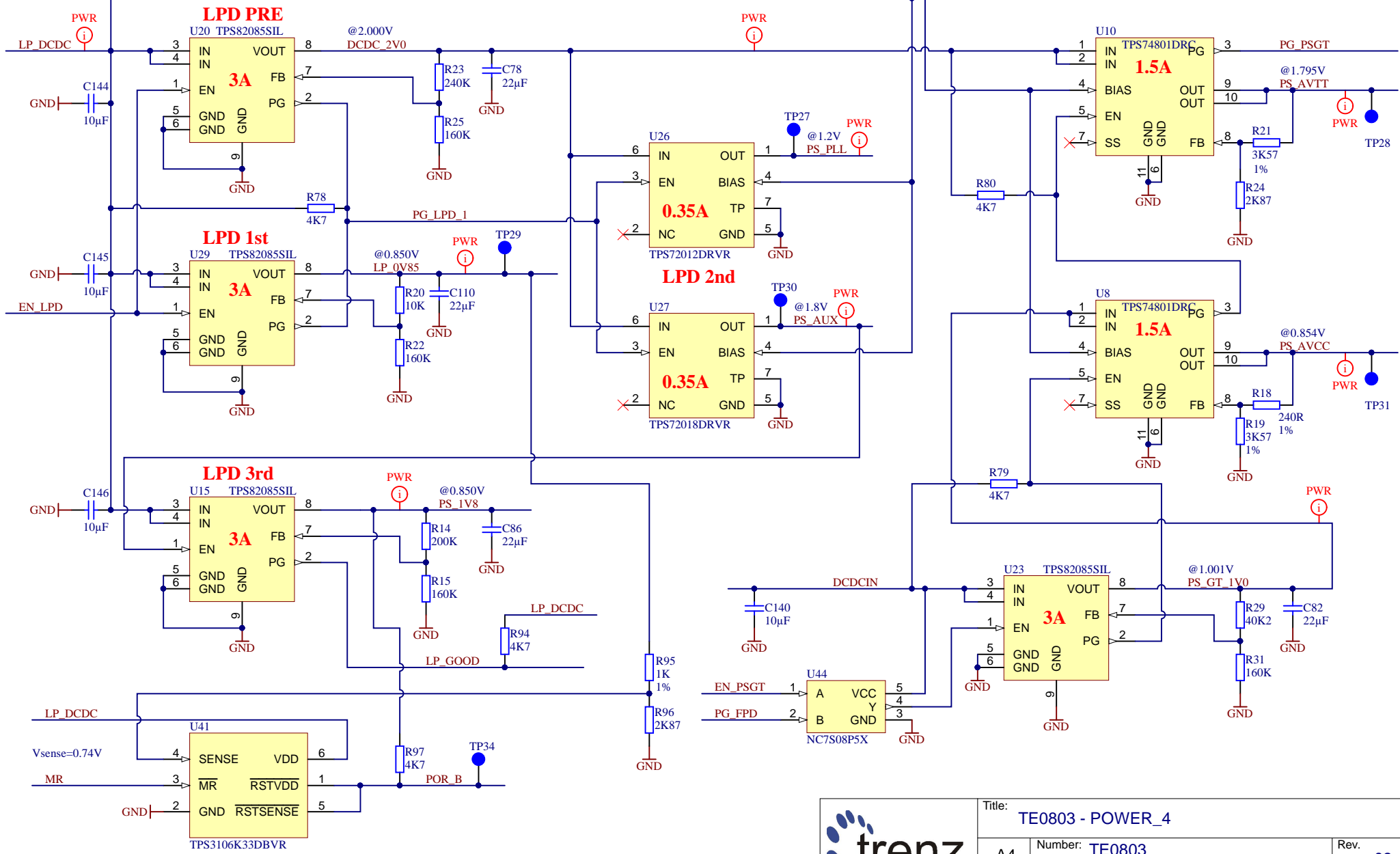
			Title: TE0803 - CLOCK	
			A4	Number: TE0803 4BI61-A
Date: 2019-02-21		Copyright: Trenz Electronic GmbH / TT		Page22 of 26
Filename: Clock.SchDoc				





Title: <b>TE0803 - POWER_2</b>		
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Filename: <b>POWER_2.SchDoc</b>		





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

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D

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Title: <b>TE0803 - Changes list</b>		
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Filename: <b>Revision_Changes.SchDoc</b>		

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