


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

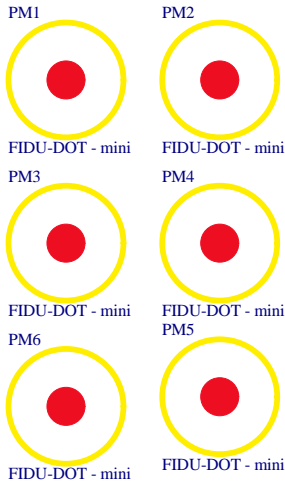
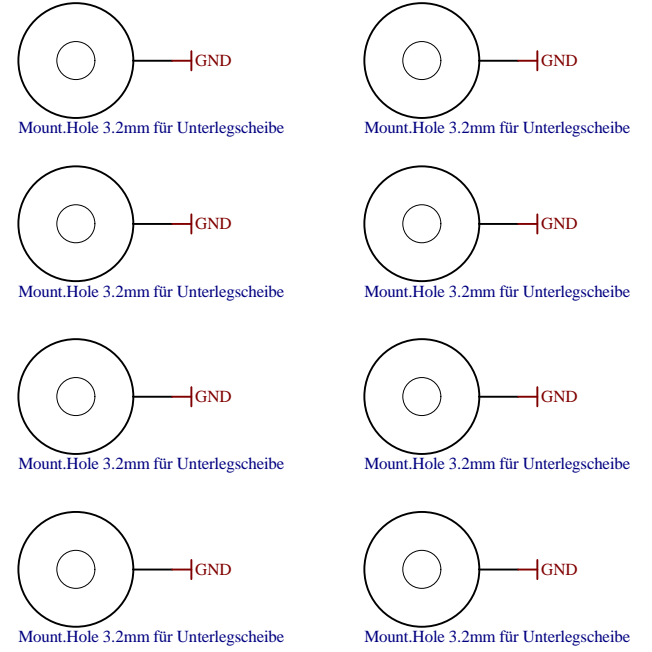
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Schematics and other handouts serve for informational purposes only!

	Title: TE0807 - Legal Notices		
	A4	Number: TE0807 4BE21-A	Rev. 03
	Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 1 of 29
	Filename: Legal Notices Modules.SchDoc		

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_B_GT B_GT.SchDoc	U_DDR4-RAM_3 DDR4-RAM_3.SchDoc	
U_B_GT_2 B_GT_2.SchDoc	U_DDR4-RAM_4 DDR4-RAM_4.SchDoc	


Special notes:

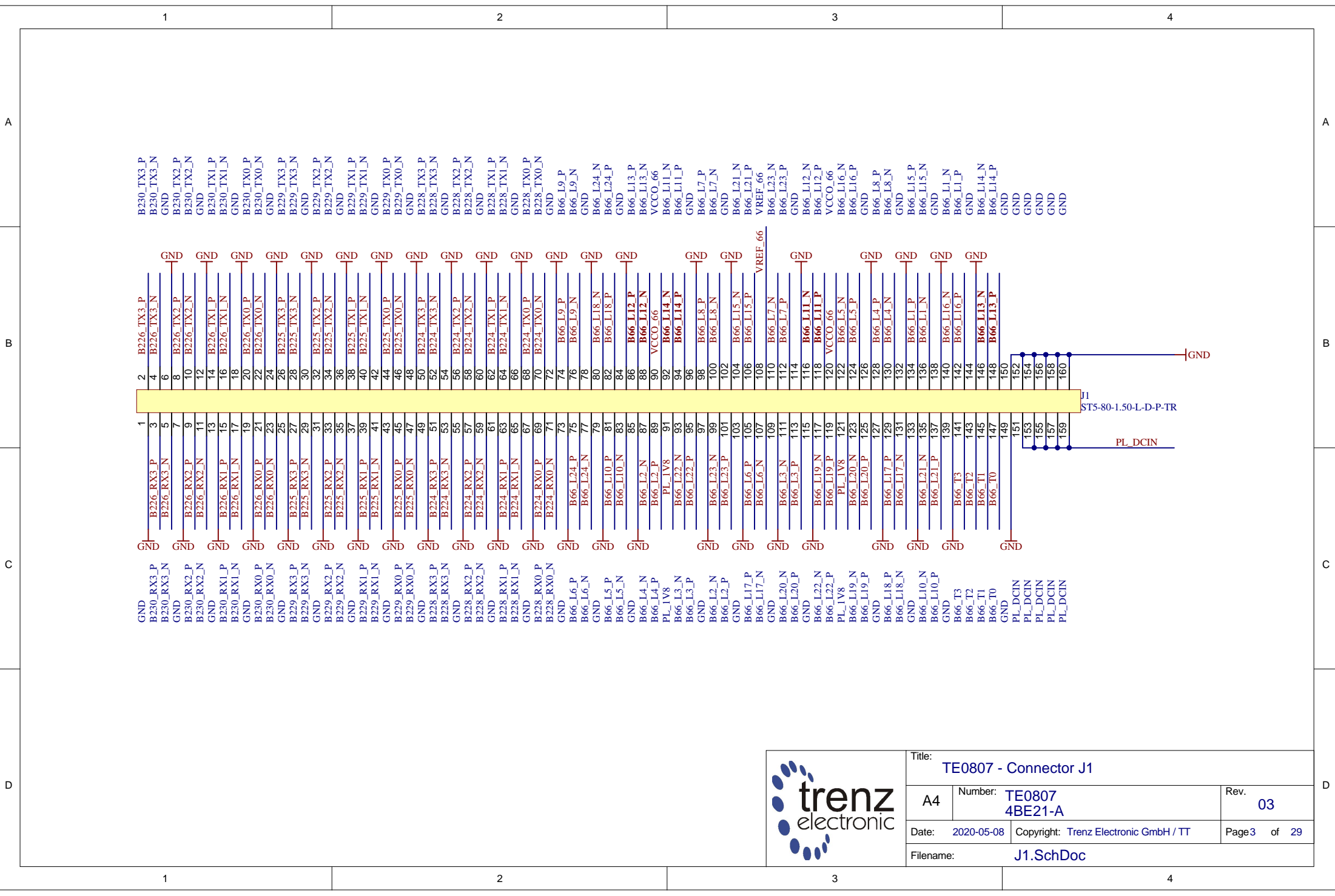


LOGO1
TE Logo PRINT Layer
LOGO PRINT

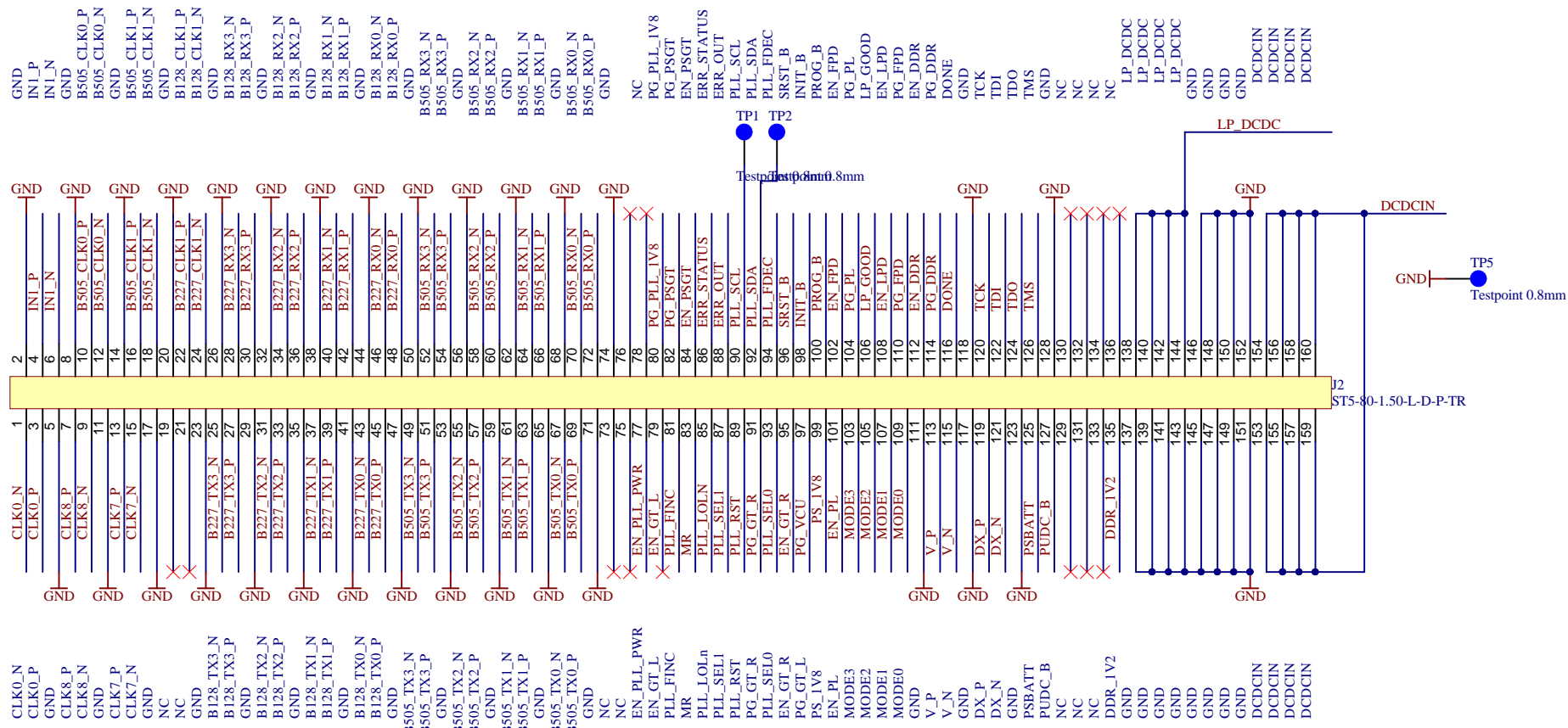
Serial
Serialnummer 6,3 x 6.3mm

Assembly variant	4BE21-A
Created by	VY
Modified by	VT
Modified at	2020-03-23
SVN Revision	9271 [Locally Modified]

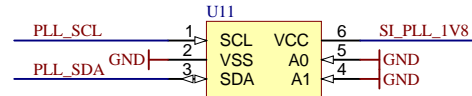
	Title: TE0807		
	A4	Number: TE0807 4BE21-A	Rev. 03
	Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 2 of 29
	Filename: TE0807.SchDoc		



Title: TE0807 - Connector J1		
A4	Number: TE0807 4BE21-A	Rev. 03
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Filename: J1.SchDoc		



EEPROM for MAC

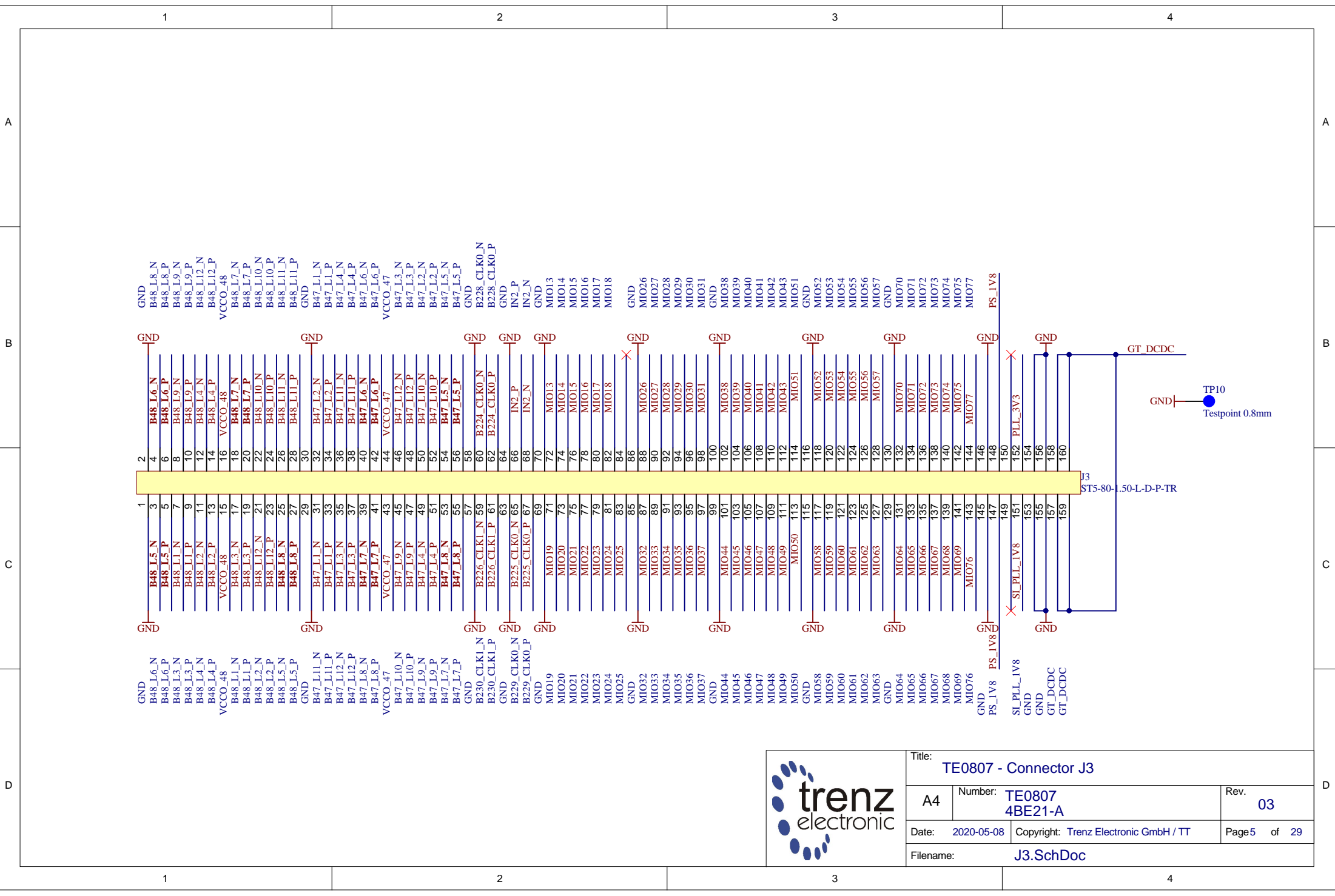


24AA025E48T-I/OT

Slave address: 101000x



Title: TE0807 - Connector J2		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 4 of 29
Filename: J2.SchDoc		



Title: TE0807 - Connector J3		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 5 of 29
Filename: J3.SchDoc		

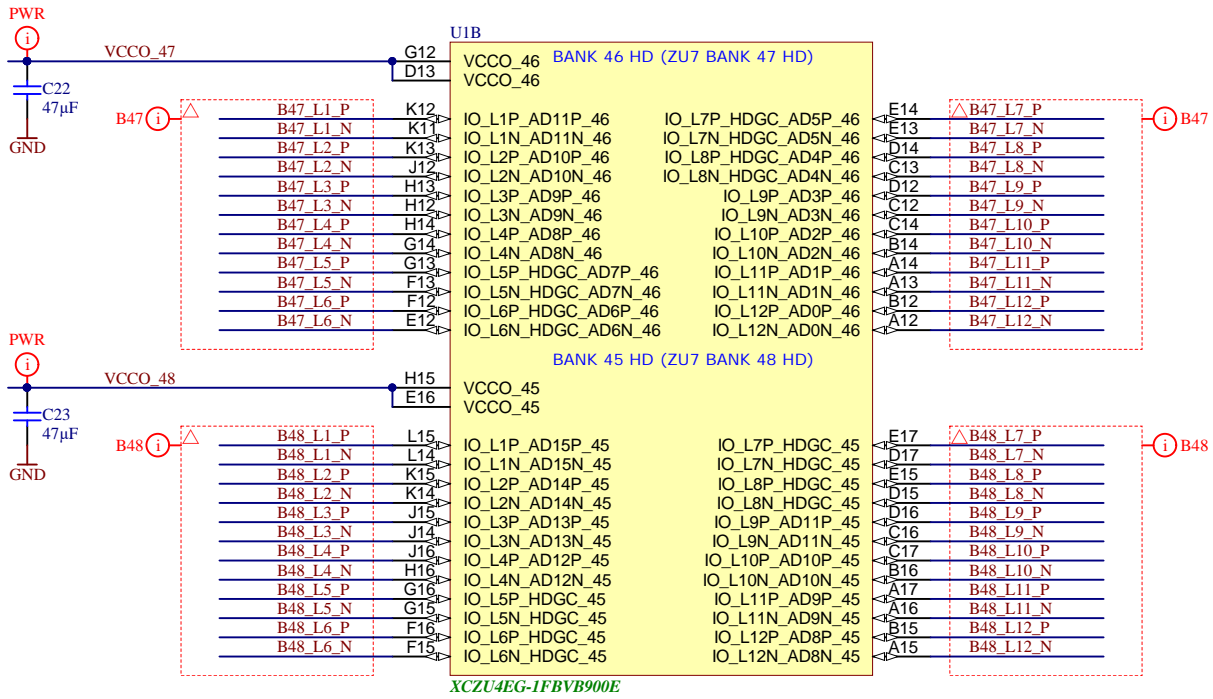
A
B
C
D

1	2	3	4
B65_T3 B65_T2 B65_T1 B65_T0 GND B65_L24_P B65_L24_N VREF_65 B65_L17_P GND B65_L22_P B65_L22_N GND B65_L21_P B65_L21_N GND B65_L20_P B65_L20_N GND B65_L23_P GND B65_L19_P B65_L19_N GND B65_L18_P B65_L18_N GND B65_L24_P B65_L24_N GND B65_L22_P B65_L22_N GND B65_L21_P B65_L21_N GND B65_L20_P B65_L20_N GND B65_L23_P GND B65_L19_P B65_L19_N GND B65_L18_P B65_L18_N GND B65_L15_P GND B65_L12_P B65_L12_N VCCO_65 B65_L7_P GND B65_L11_N B65_L11_P GND B65_L6_P GND B65_L13_P B65_L13_N GND B65_L10_P GND B65_L9_P GND B65_L9_P B65_L4_P GND B65_L14_P GND B65_L8_P B65_L8_N GND B65_L2_P B65_L2_N GND B65_L16_P B65_L16_N GND B65_L3_P B65_L3_N GND B65_L1_P B65_L1_N GND B65_L5_P GND NC NC	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102 104 106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142 144 146 148 150 152 154 156 160	B64_T2 B64_T3 B64_T1 B64_T0 GND B64_L24_N B64_L24_P GND B64_L22_P B64_L22_N GND B64_L23_P B64_L23_N GND B64_L19_N B64_L19_P GND B64_L15_P B64_L15_N GND B64_L21_P B64_L21_N GND B64_L20_N B64_L20_P GND B64_L18_P B64_L18_N VCCO_64 B64_L17_P B64_L17_N GND B64_L13_P B64_L13_N GND B64_L14_N B64_L14_P GND B64_L11_P B64_L11_N GND B64_L16_N B64_L16_P VREF_64 B64_L10_N B64_L10_P GND B64_L6_P B64_L6_N GND B64_L5_P B64_L5_N VCCO_64 B64_L9_P GND B64_L4_P B64_L4_N GND B64_L3_N B64_L3_P GND B64_L12_N B64_L12_P GND B64_L2_N B64_L2_P GND B64_L1_N B64_L1_P GND B64_L8_N B64_L8_P GND B64_L7_P B64_L7_N GND NC NC	

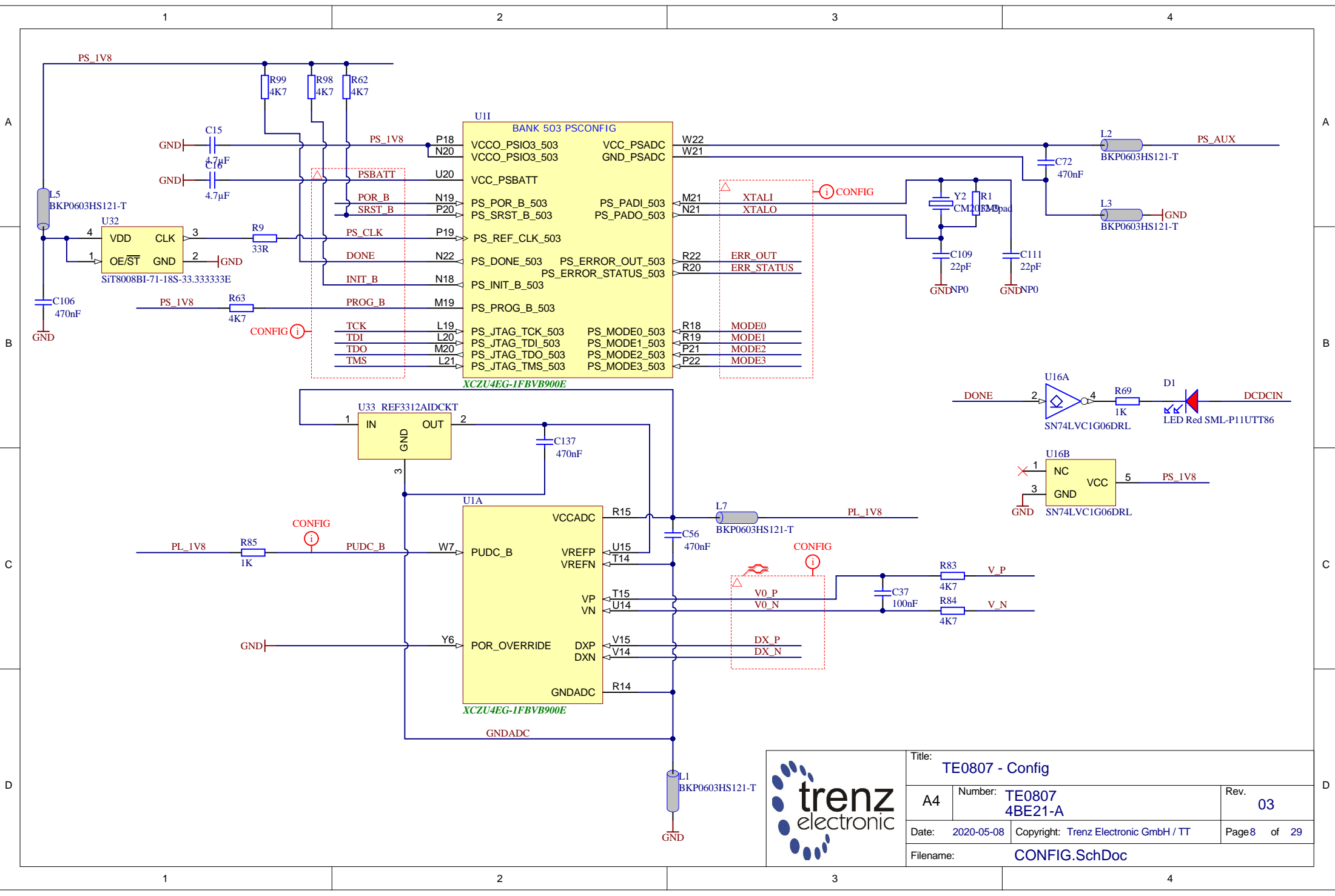
J4 ST5-80-1.50-L-D-P-TR




Title: TE0807 - Connector J4		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 6 of 29
Filename: J4.SchDoc		



Title: TE0807 - B47HD and B48HD		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 7 of 29
Filename: B_HD.SchDoc		



			Title: TE0807 - Config	
			A4	Number: TE0807 4BE21-A
Date: 2020-05-08		Copyright: Trenz Electronic GmbH / TT		Page 8 of 29
Filename: CONFIG.SchDoc				

1

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A

A

B

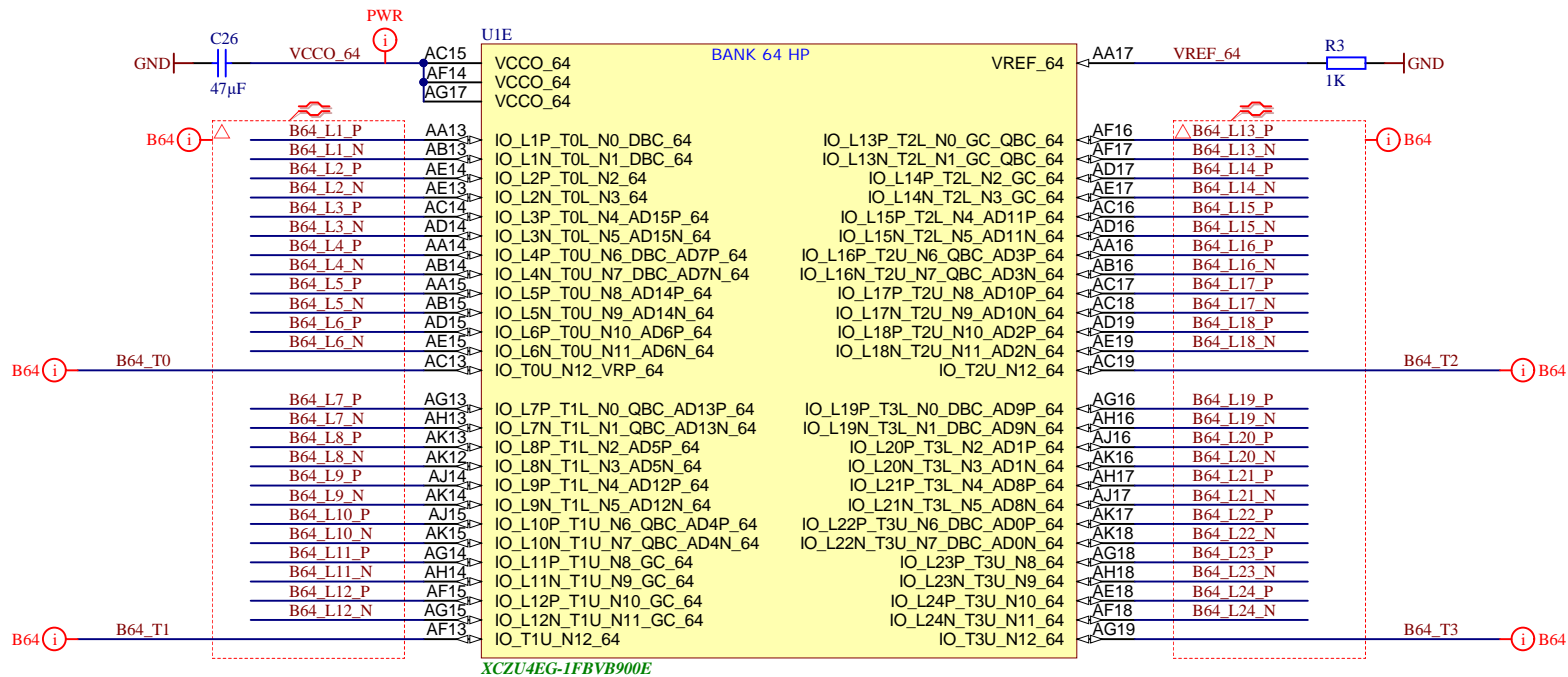
B

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C

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D



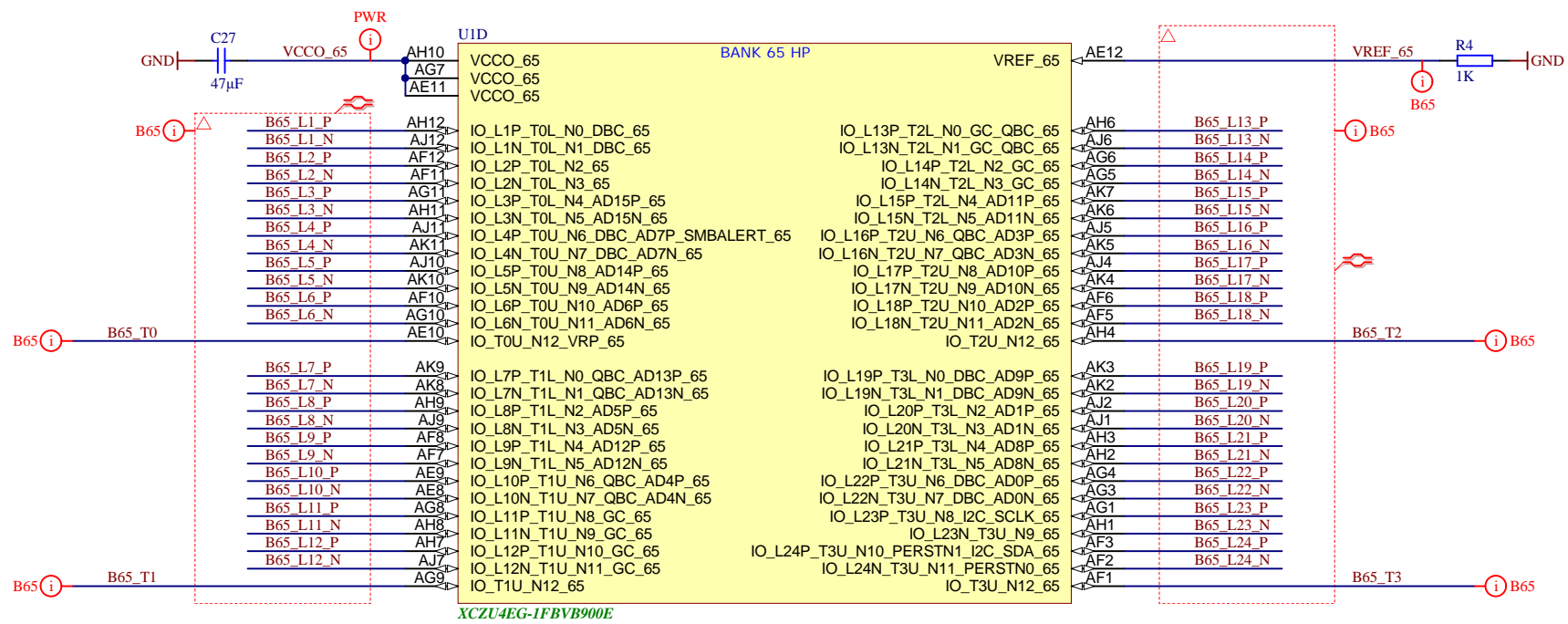
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A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 9 of 29
Filename: B64.SchDoc		

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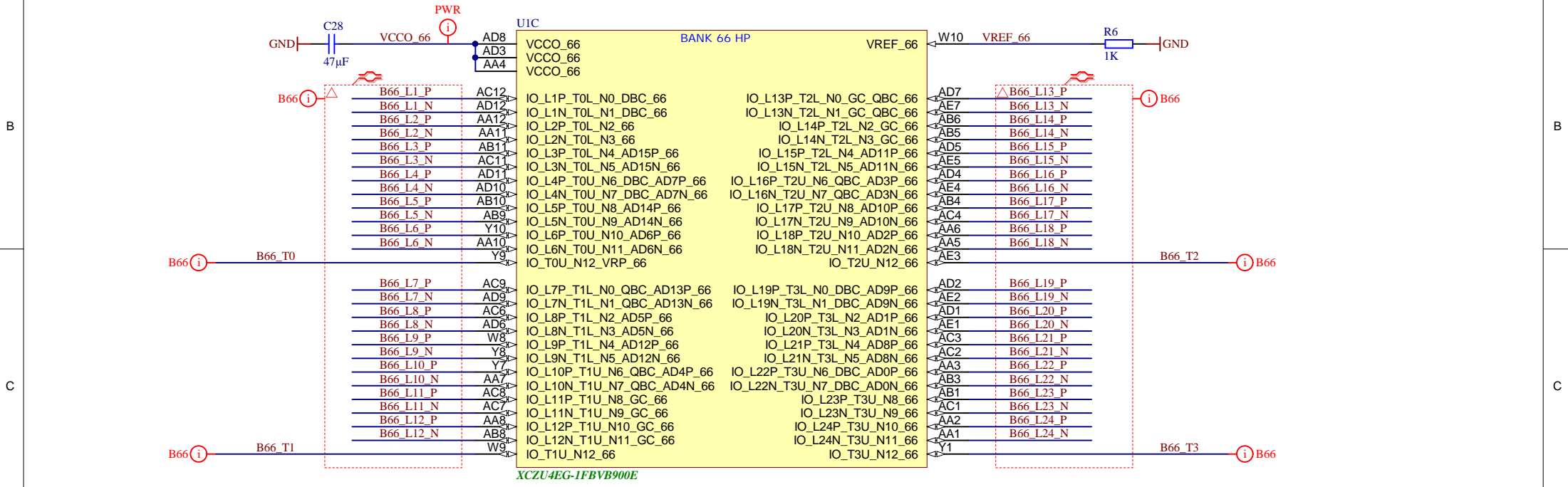
2

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Title: TE0807 - B65		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 10 of 29
Filename: B65.SchDoc		



Title: TE0807 - B66		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 11 of 29
Filename: B66.SchDoc		

A

A

B

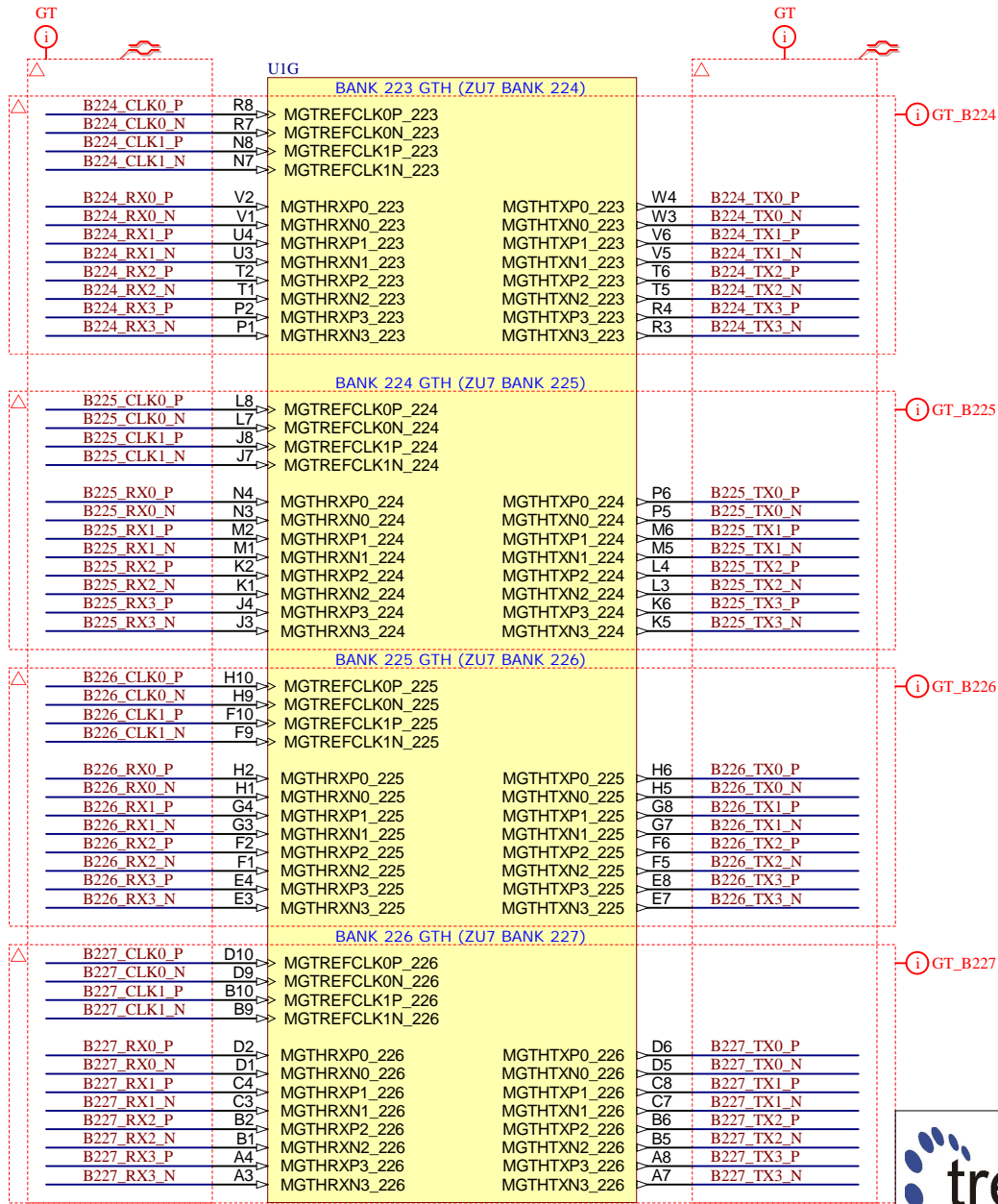
B

C

C

D

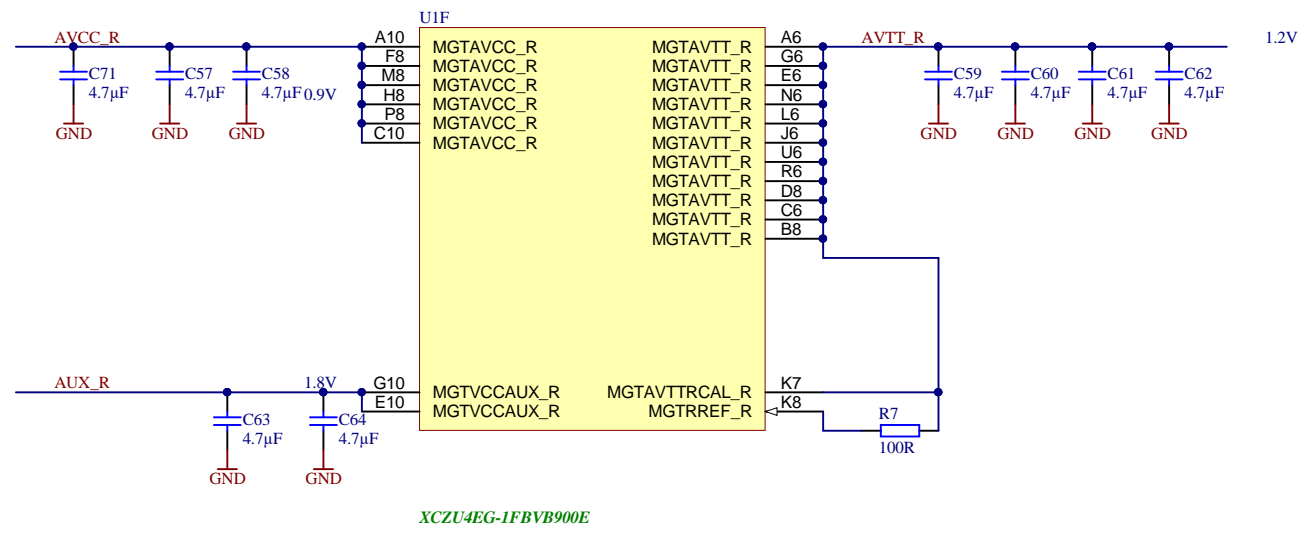
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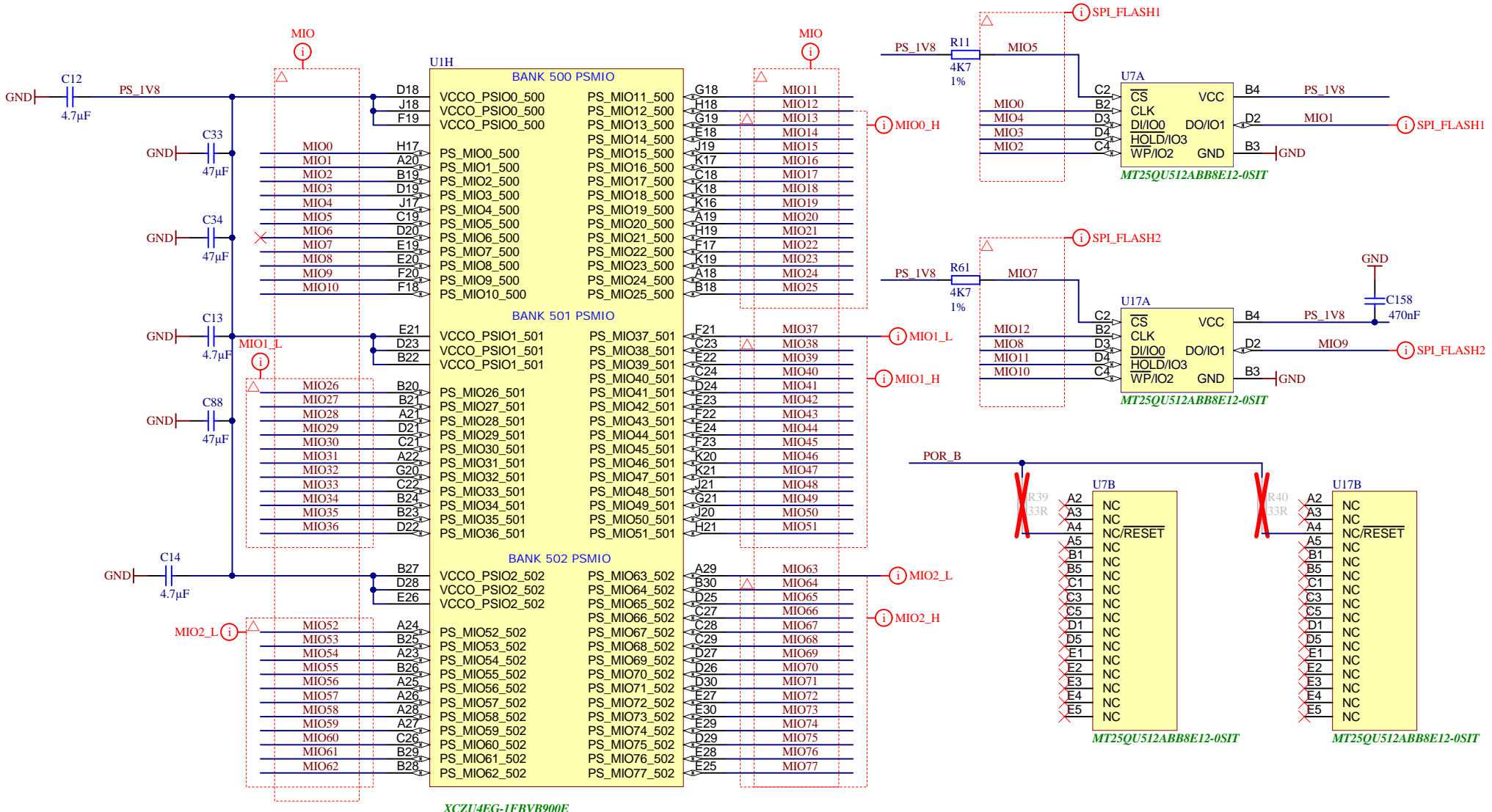
XCZU4EG-1FBVB900E




Title: TE0807 - GTH_Banks		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 12 of 29
Filename: B_GT.SchDoc		



		Title: TE0807 - GTH_PWR	
		A4	Number: TE0807 4BE21-A
Date: 2020-05-08		Copyright: Trenz Electronic GmbH / TT	
Filename: B_GT_2.SchDoc		Page 13 of 29	



		Title: TE0807 - MIO Banks	
		A4	Number: TE0807 4BE21-A
Date: 2020-05-08		Copyright: Trenz Electronic GmbH / TT	
Filename: B_MIO.SchDoc		Page 14 of 29	

1

2

3

4

A

A

B

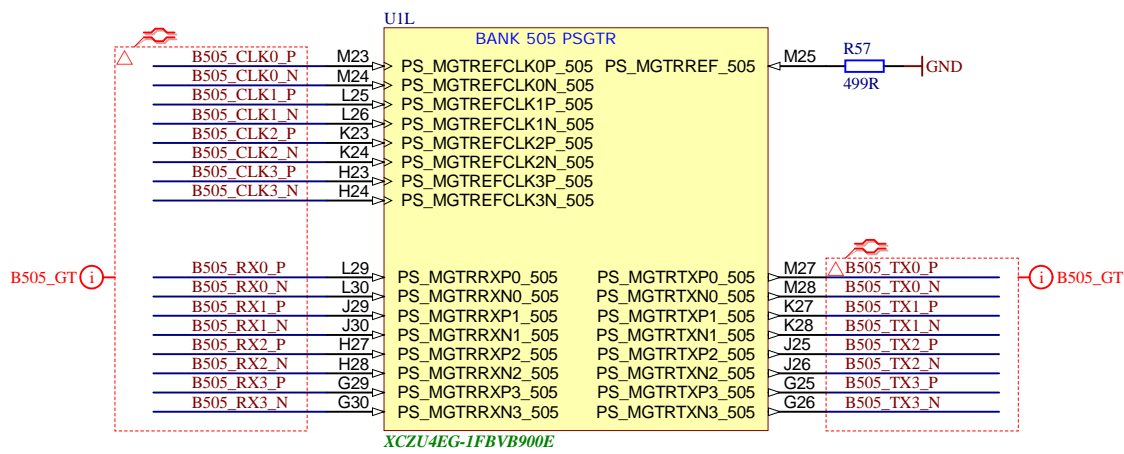
B

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D



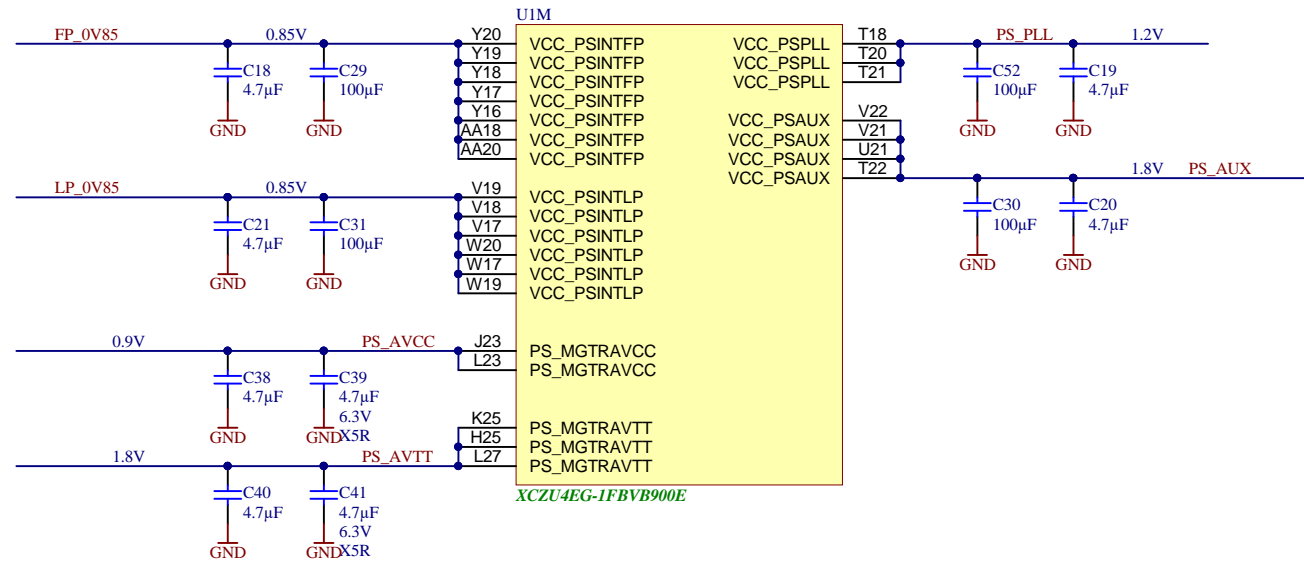
Title: TE0807 - PS_GT		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 16 of 29
Filename: B_PS_GT.SchDoc		

1

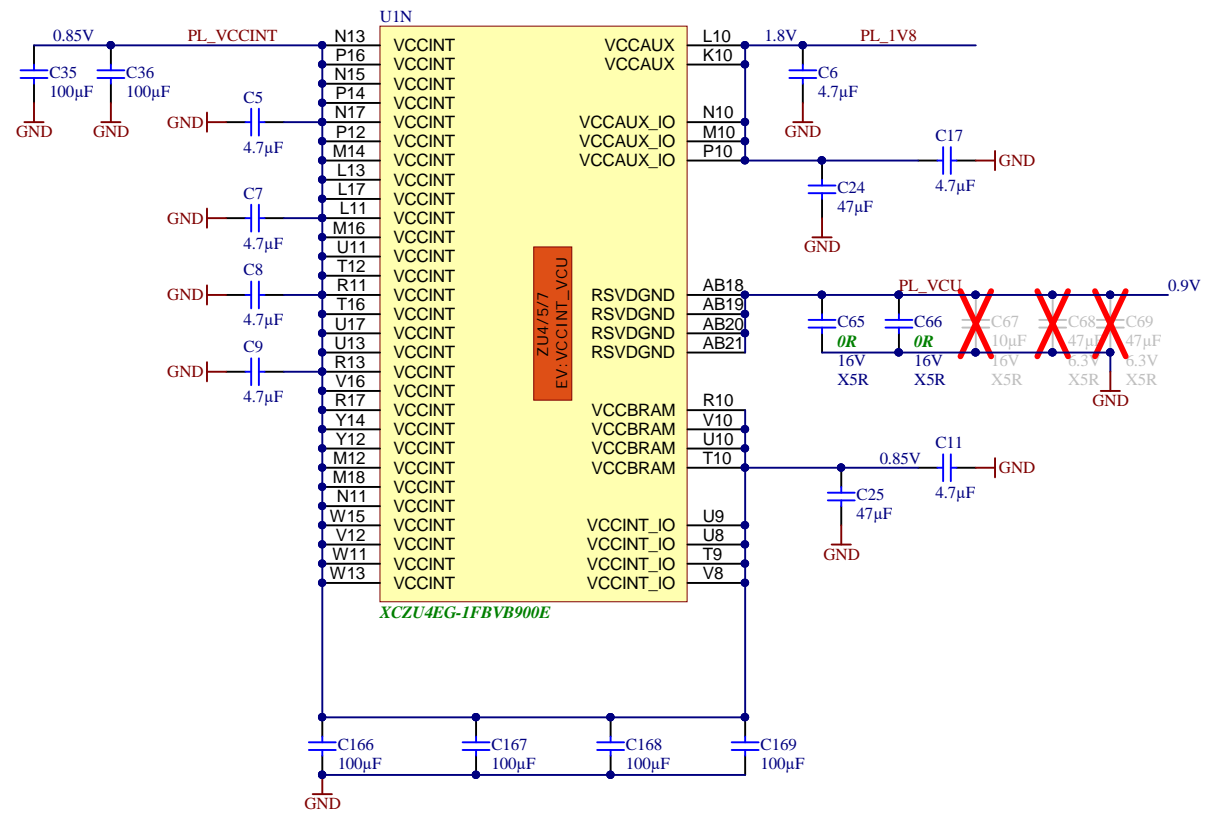
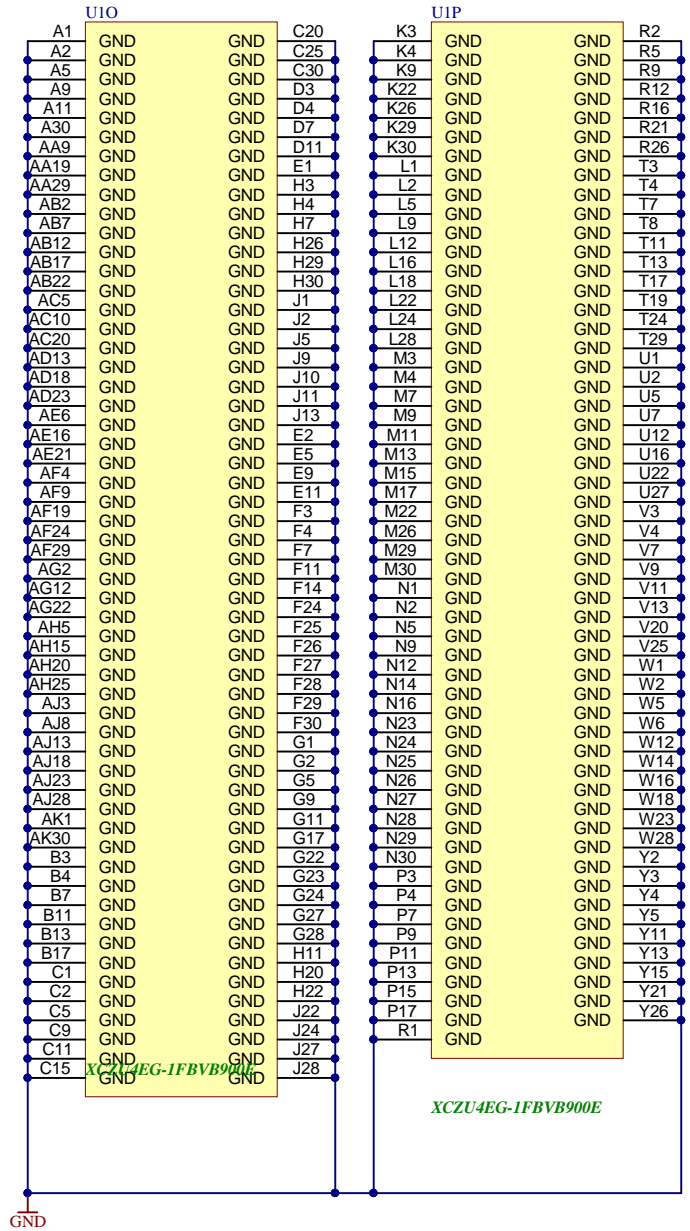
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3

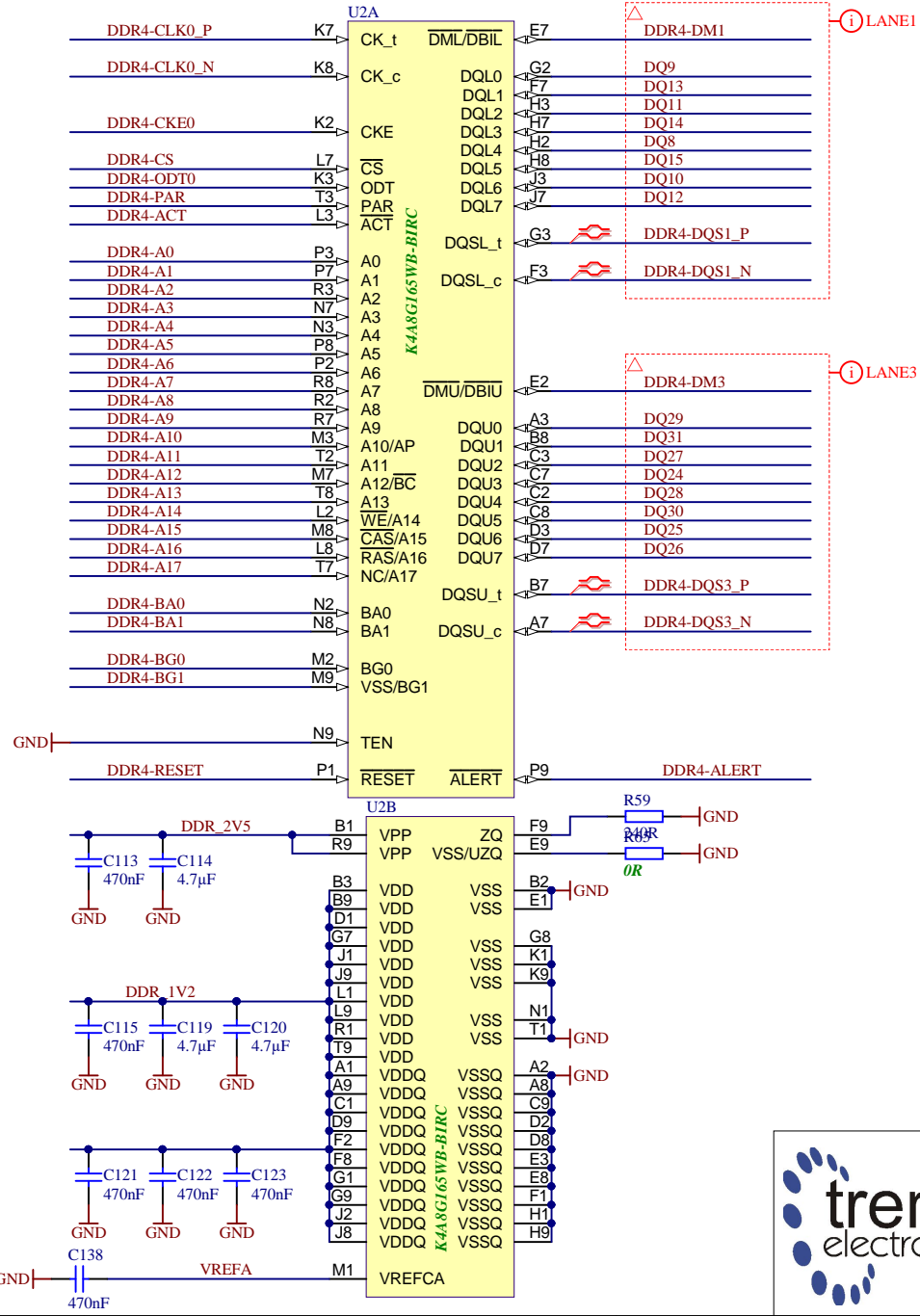
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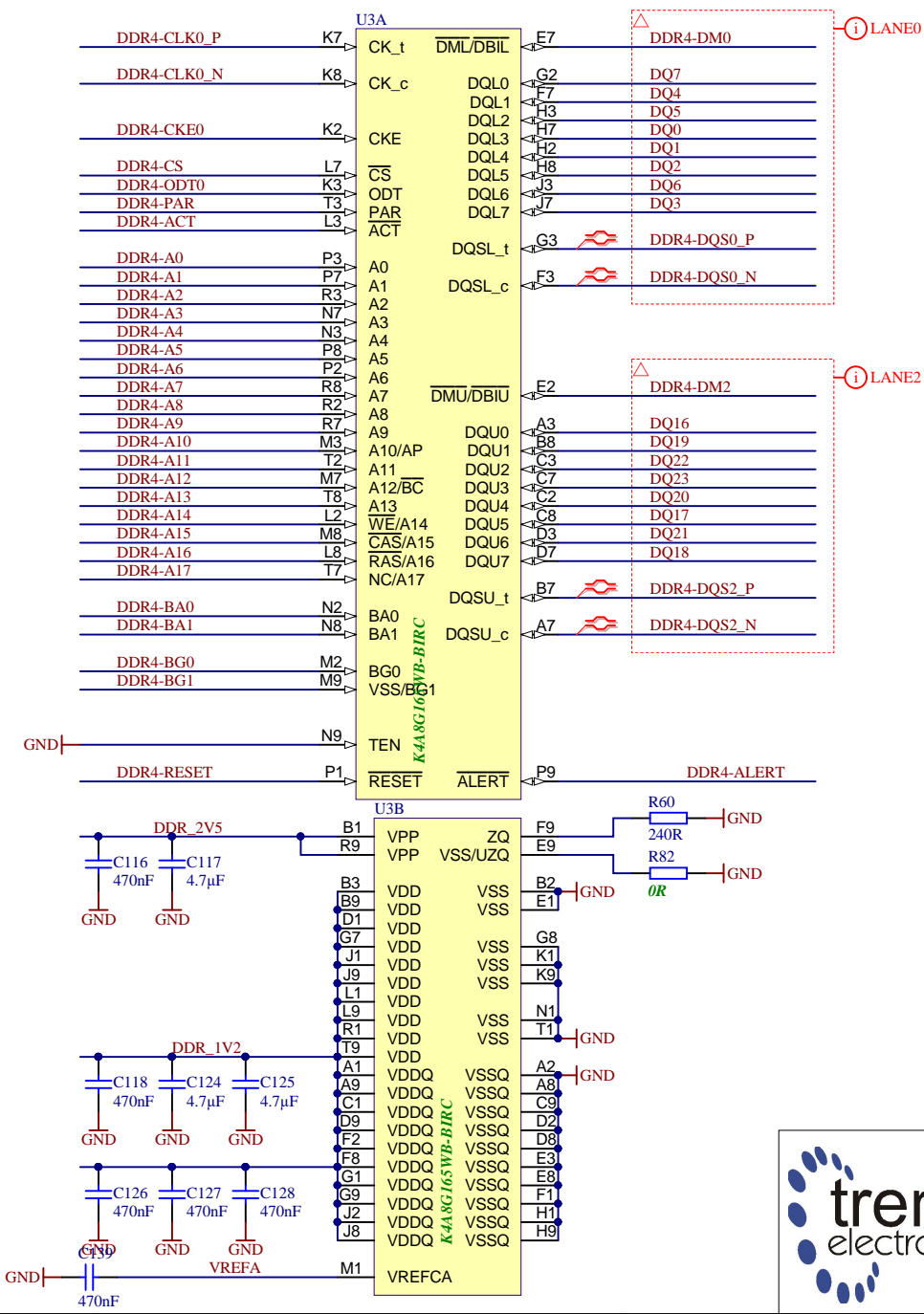

Title: TE0807 - ZU_PS_POWER		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 17 of 29
Filename: ZU_PS_POWER.SchDoc		



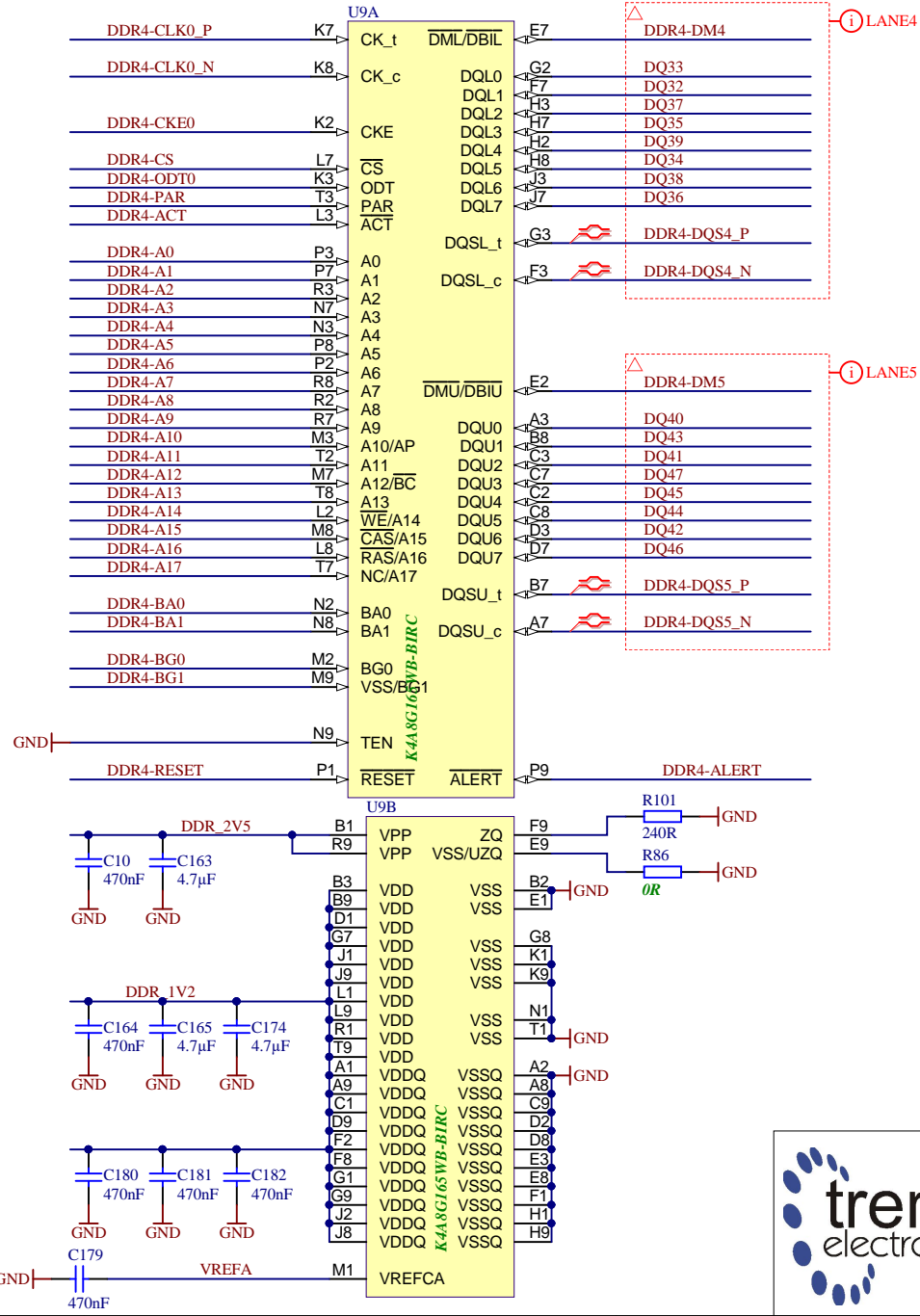
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		A4	Number: TE0807 4BE21-A
Date: 2020-05-08		Copyright: Trenz Electronic GmbH / TT	
Page 18 of 29		Page 18 of 29	
Filename: ZU_POWER.SchDoc		Page 18 of 29	



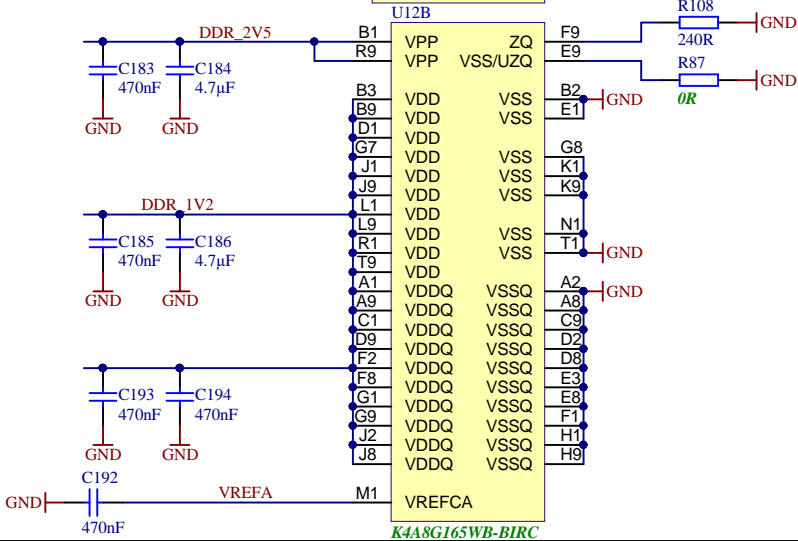
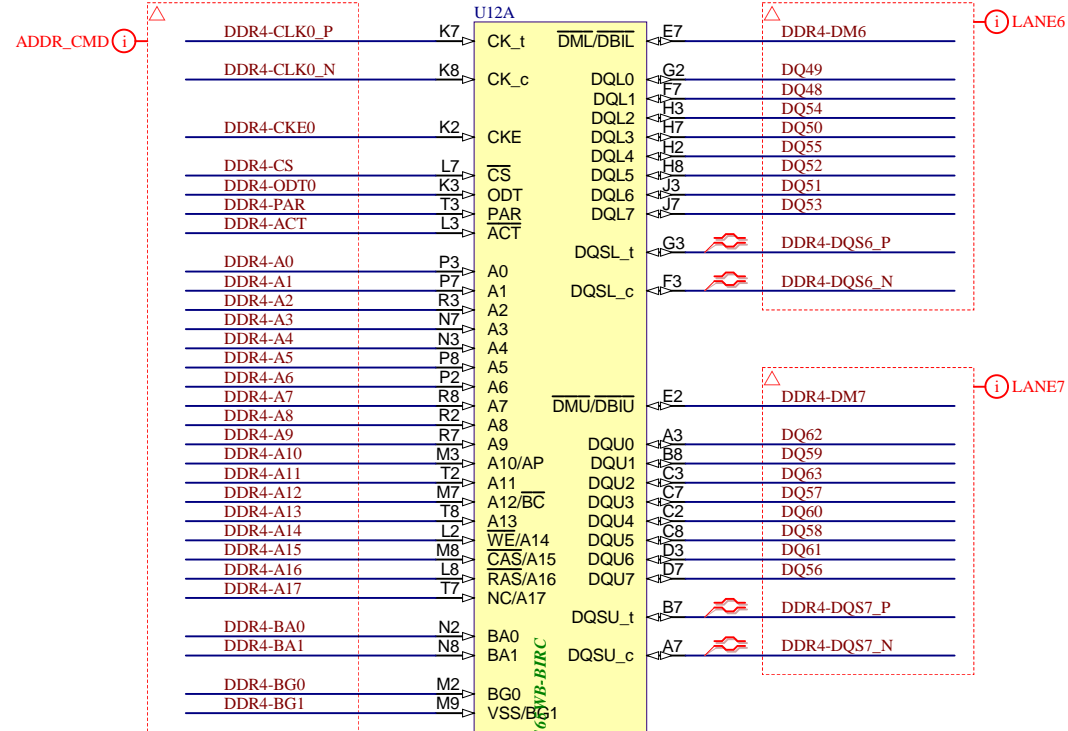

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Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 19 of 29
Filename: DDR4-RAM.SchDoc		

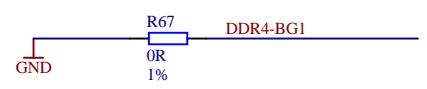
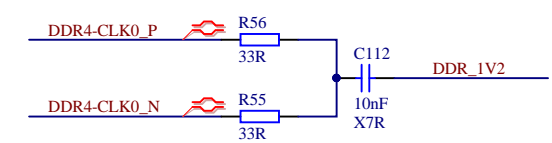
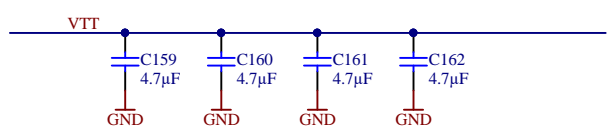
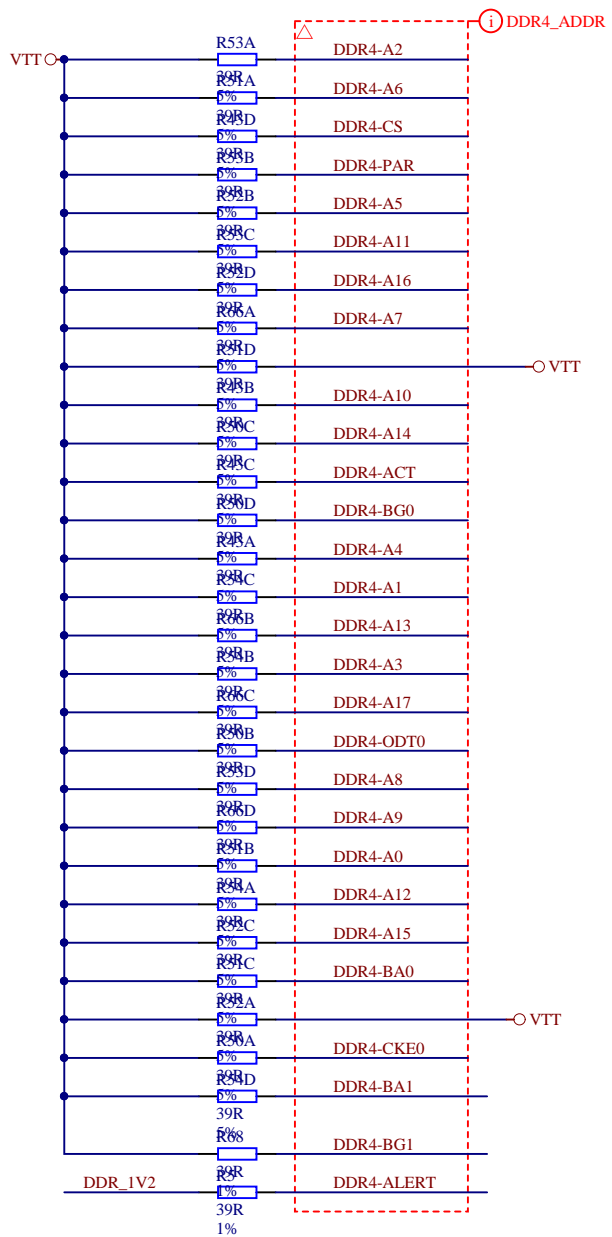
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A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 20 of 29
Filename: DDR4-RAM_2.SchDoc		



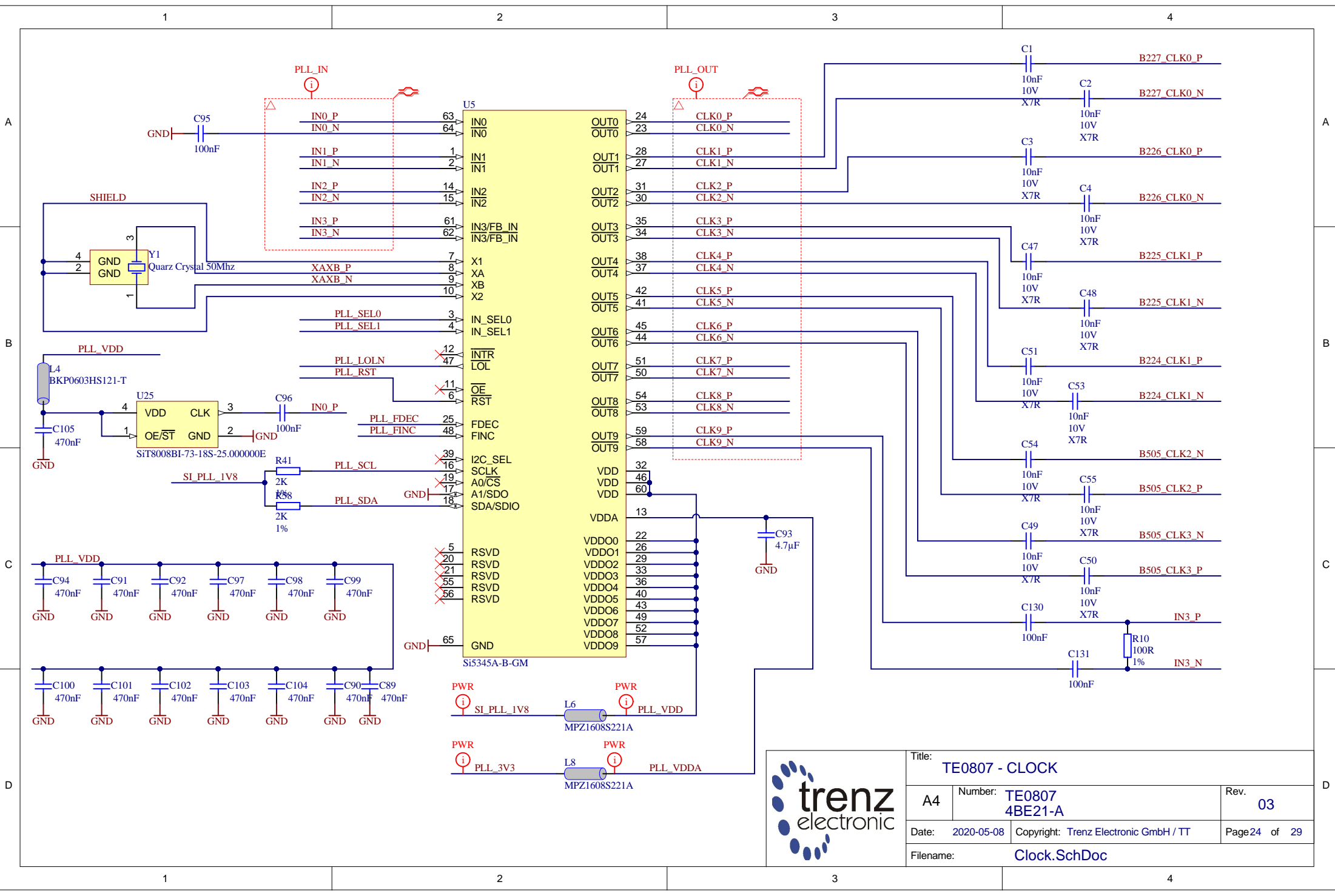
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Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 21 of 29
Filename: DDR4-RAM_3.SchDoc		

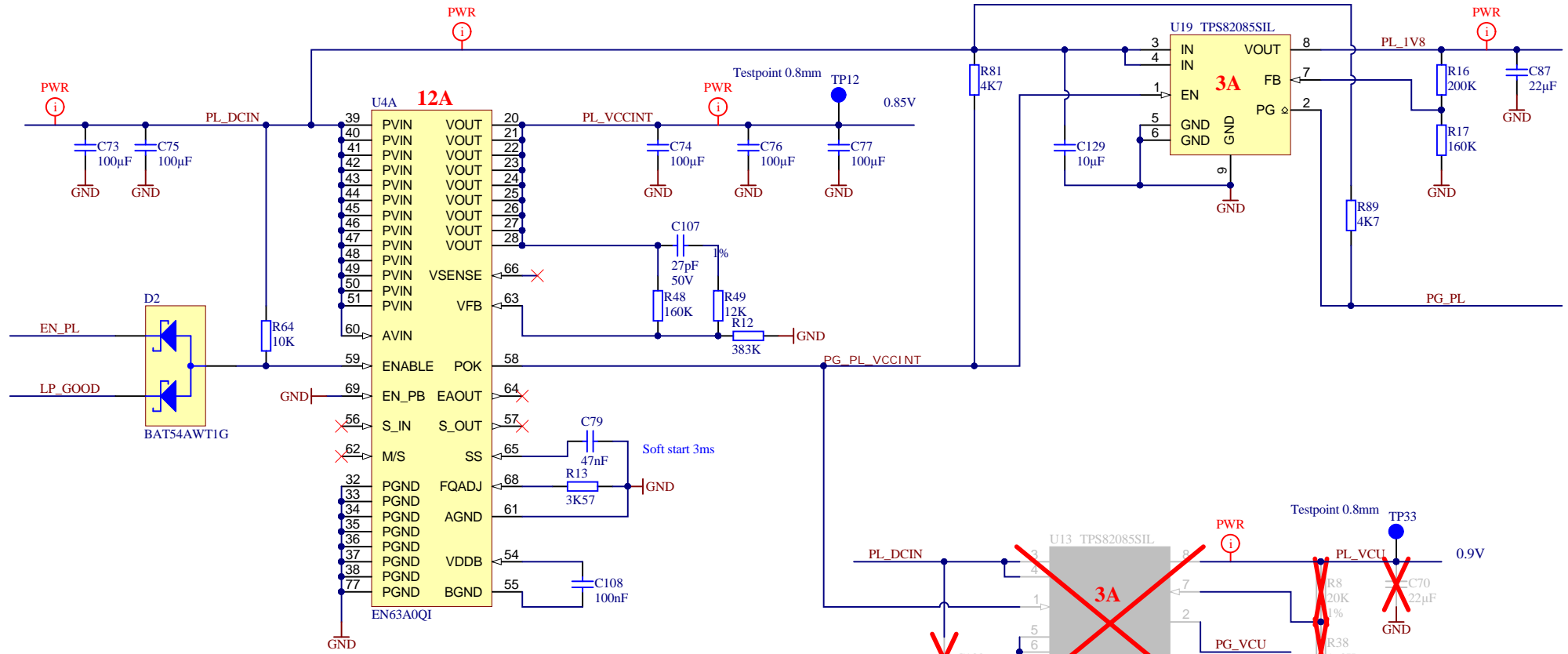
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A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 22 of 29
Filename: DDR4-RAM_4.SchDoc		



Title: TE0807 - DDR4_TERM		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 23 of 29
Filename: DDR4-TERM.SchDoc		



Title: TE0807 - CLOCK		
A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 24 of 29
Filename: Clock.SchDoc		

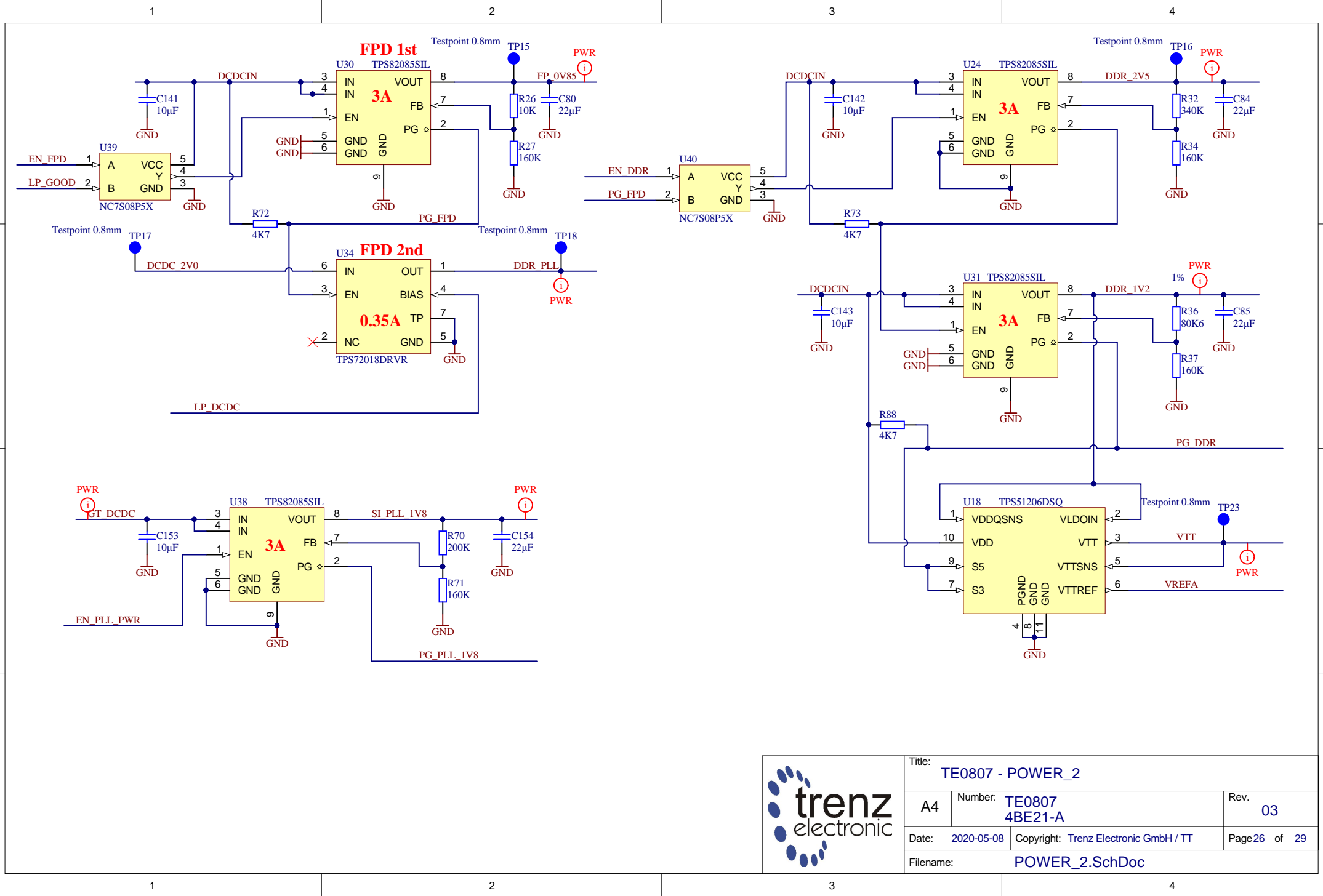



U4B
EN63A0QI

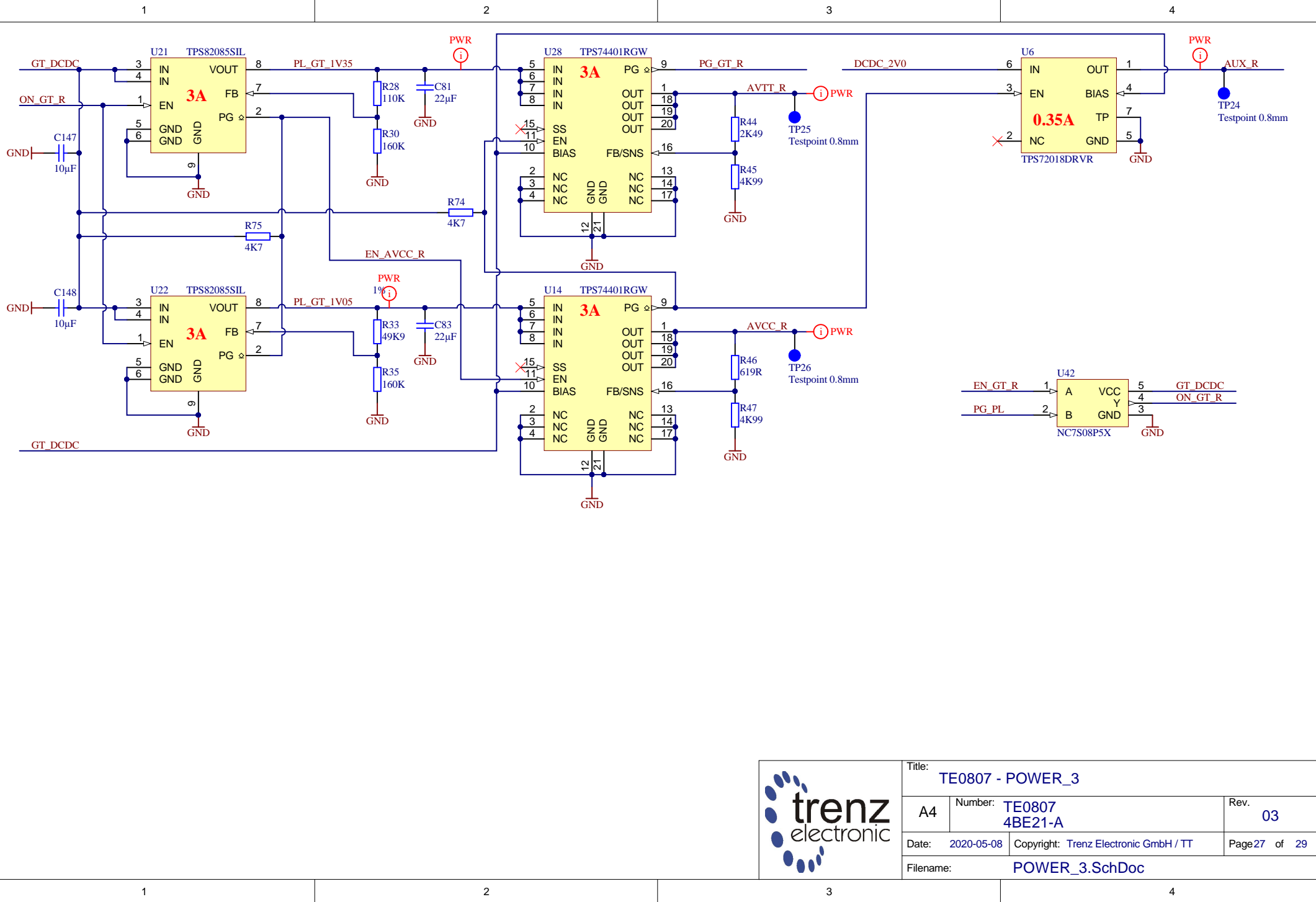
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2	NC	NC	18
3	NC	NC	19
4	NC	NC	29
5	NC	NC(SW)	30
6	NC	NC(SW)	31
7	NC	NC	52
8	NC	NC	53
9	NC	NC	67
10	NC	NC(SW)	70
11	NC	NC(SW)	71
12	NC	NC(SW)	72
13	NC	NC	73
14	NC	NC	74
15	NC	NC	75
16	NC	NC	76




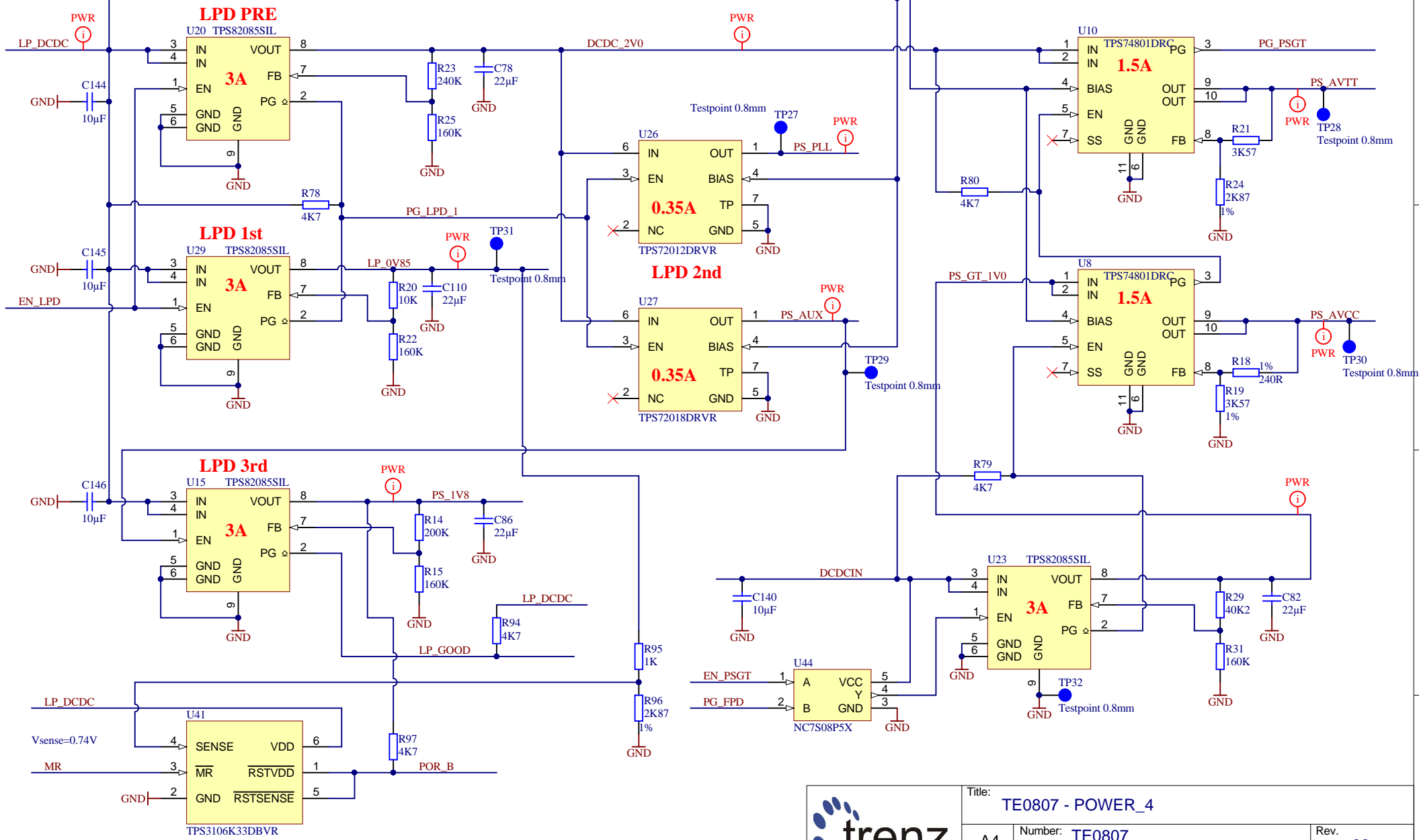
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A4	Number: TE0807 4BE21-A	Rev. 03
Date: 2020-05-08	Copyright: Trenz Electronic GmbH / TT	Page 25 of 29
Filename: POWER.SchDoc		



		Title: TE0807 - POWER_2	
		A4	Number: TE0807 4BE21-A
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Filename: POWER_2.SchDoc		Page 26 of 29	



			Title: TE0807 - POWER_3	
			A4	Number: TE0807 4BE21-A
Date: 2020-05-08		Copyright: Trenz Electronic GmbH / TT		Page 27 of 29
Filename: POWER_3.SchDoc				



Title: TE0807 - POWER_4		
A4	Number: TE0807 4BE21-A	Rev. 03
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Filename: POWER_4.SchDoc		

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A

A

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D

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CHANGES REV01 to REV02

- 1) Added EEPROM (U11,24AA025E48T-I/OT)
- 2) Added optional resistors R39/R40 for QSPI flash (do not populated)
- 3) Fixed VCU connection (added additional DCDC and capacitors), recommendation from Xilinx
- 4) Changed obsolete DDR4 chips (NT5AD256M16B2-GN -> K4A8G165WB-BIRC)
- 5) Added net "PG_VCU" to J2 (pin97)
- 6) full update lib

CHANGES REV02 to REV03 (06.2020)

- VT: 1) Fixed ADC connection
 2) Fixed DDR4 connection (support B-die DDR4 chips)
 3) Fixed DDR4 connection (alert_n pin connection)
 4) Added U16
 4) Added testpoints
 5) Full update LIB

A

A

B


B

C

C

D

D

	Title: TE0807 - Changes list		
	A4	Number: TE0807 4BE21-A	Rev. 03
	Date: 2020-05-08	Copyright: Trenz Electronic GmbH	Page 29 of 29
	Filename: Revision_Changes.SchDoc		

1

2

3

4