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_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

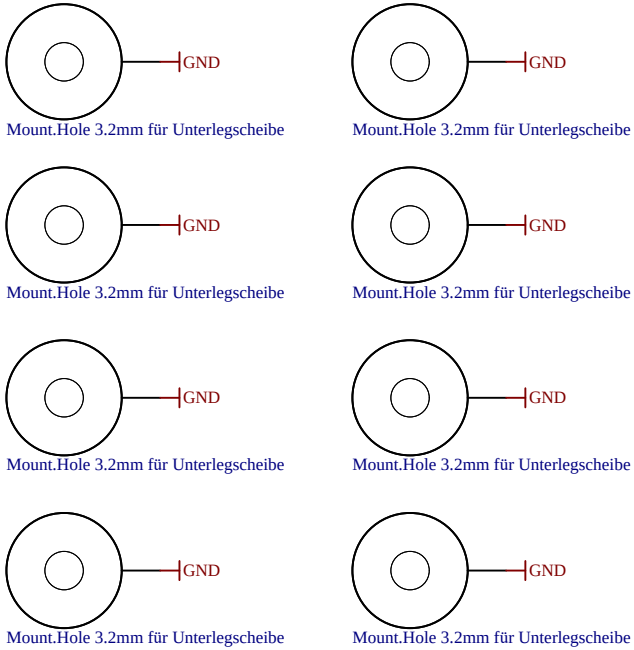
U_POWER_2
POWER_2.SchDoc

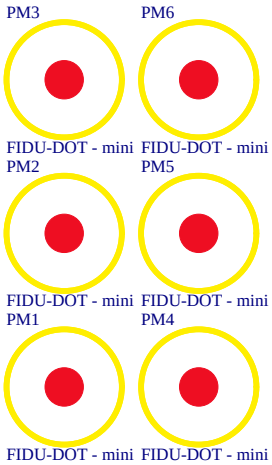
U_POWER_3.
POWER_3.SchDoc

U_POWER_4
POWER_4.SchDoc

U_RC
Revision_Changes.SchDoc

Special notes:





Serial
Serial
Serialnumber 6,3 x 6.3mm

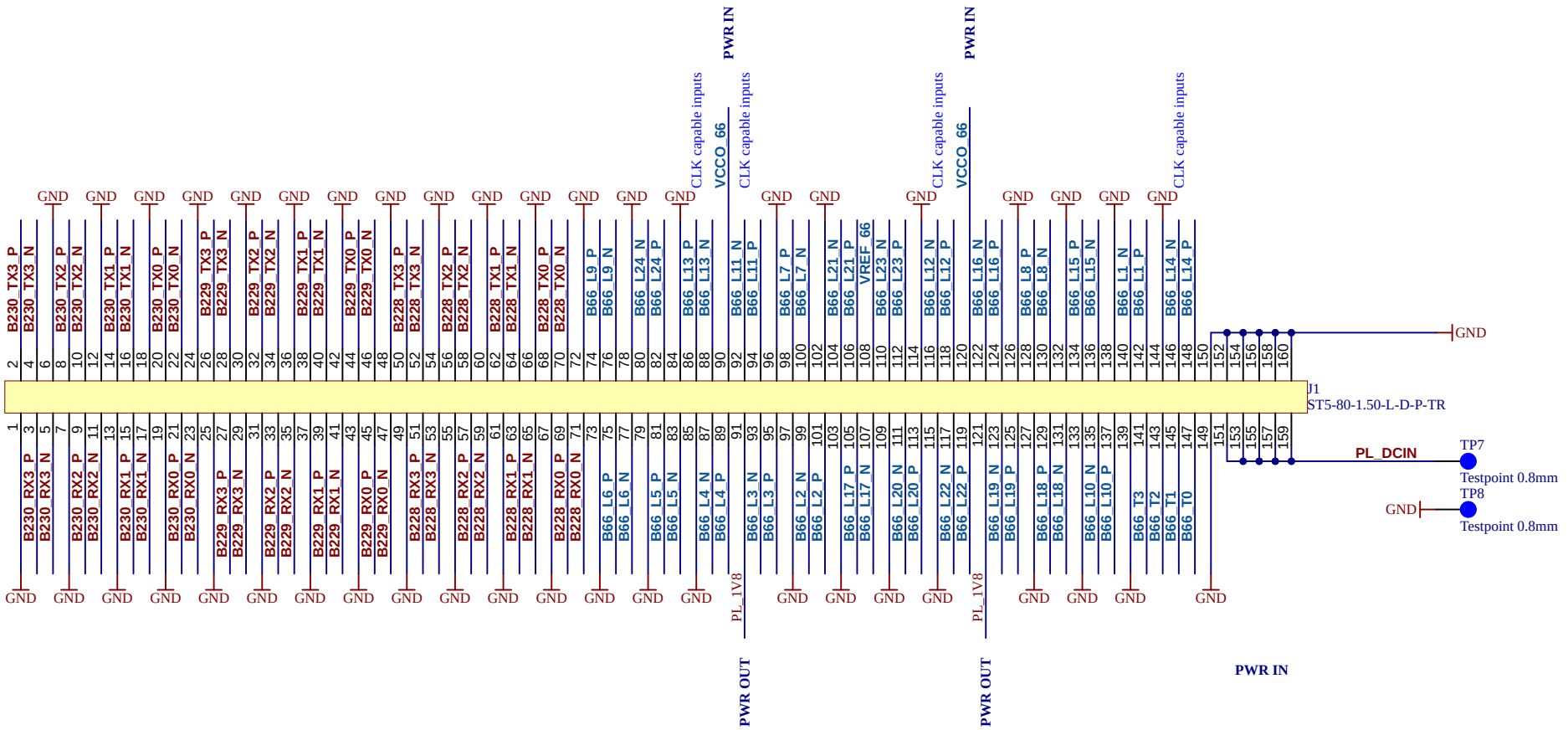
MECH1
TE Address Overlay
LOGO ADDRESS

LOGO1
TE Logo PRINT Layer
LOGO PRINT

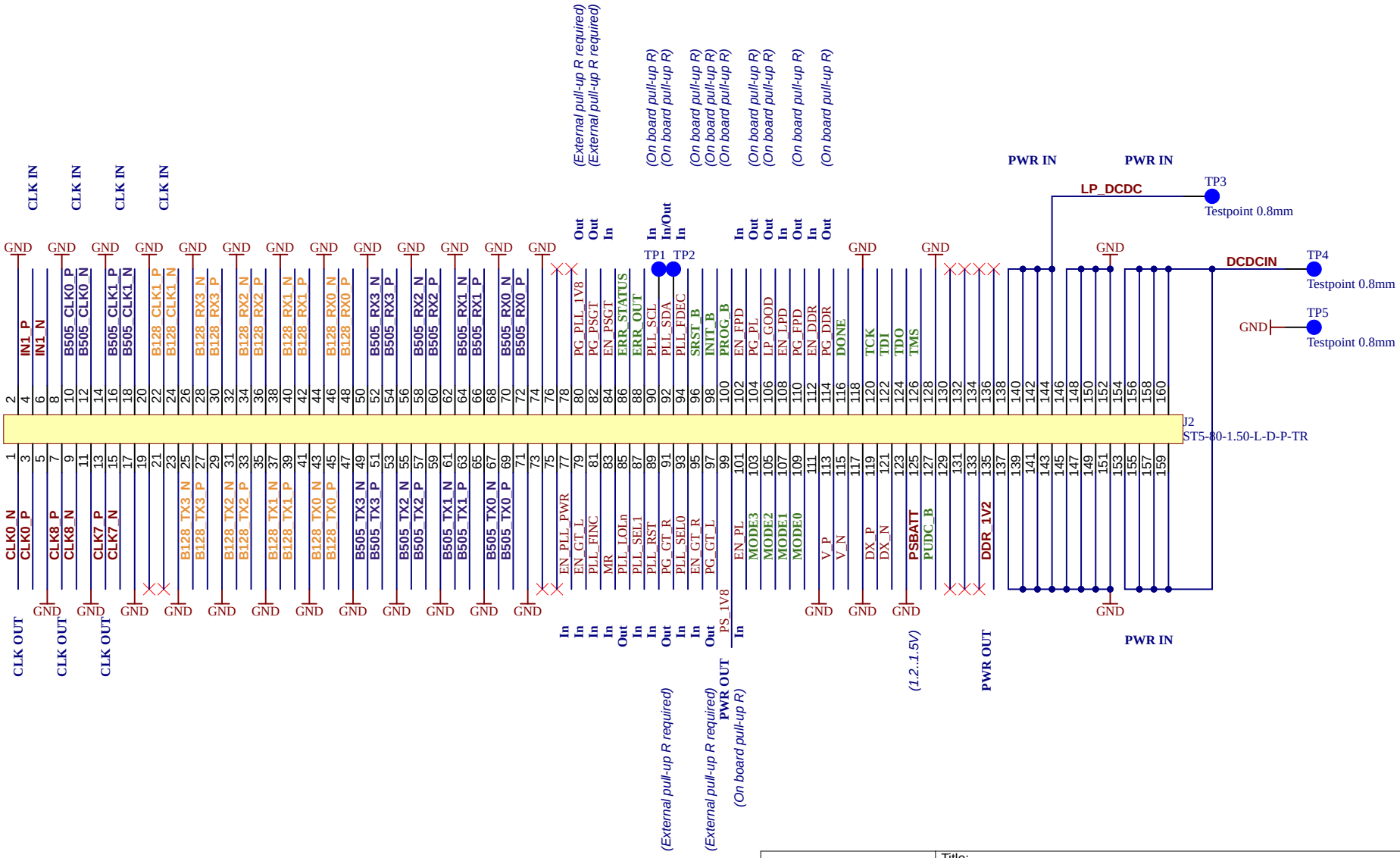
Design drawn by:	VY
Checked by:	MR
Assembly variant:	BBE81-A
Created by:	ED
Modified by:	ED
Modified at:	2022-07-25

trenz electronic

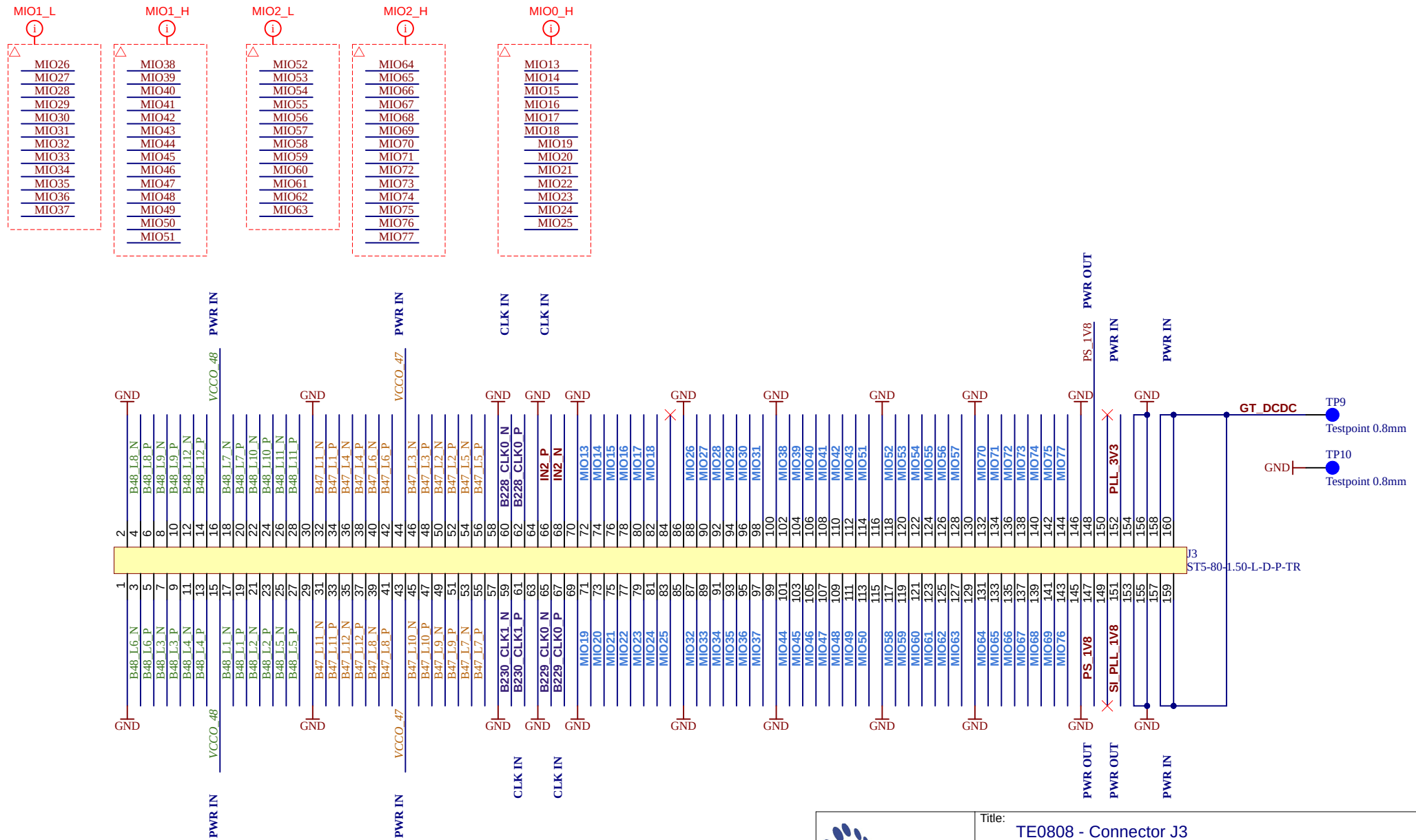
Title: TE0808			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 1 of 28
Filename: TE0808.SchDoc			



Title: TE0808 - Connector J1			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 2 of 28
Filename: J1.SchDoc			

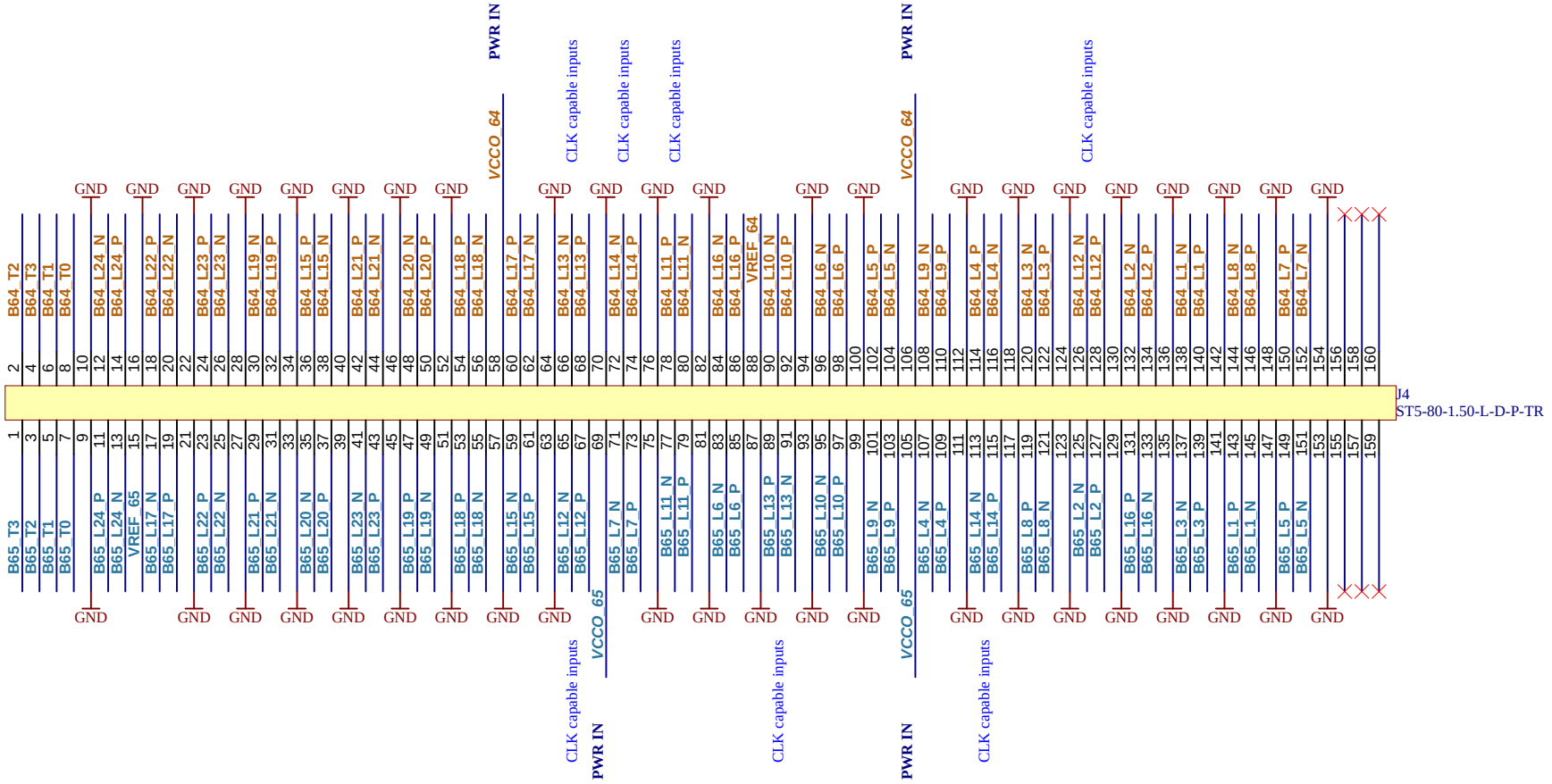


	Title: TE0808 - Connector J2		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 3 of 28
Filename: J2.SchDoc			

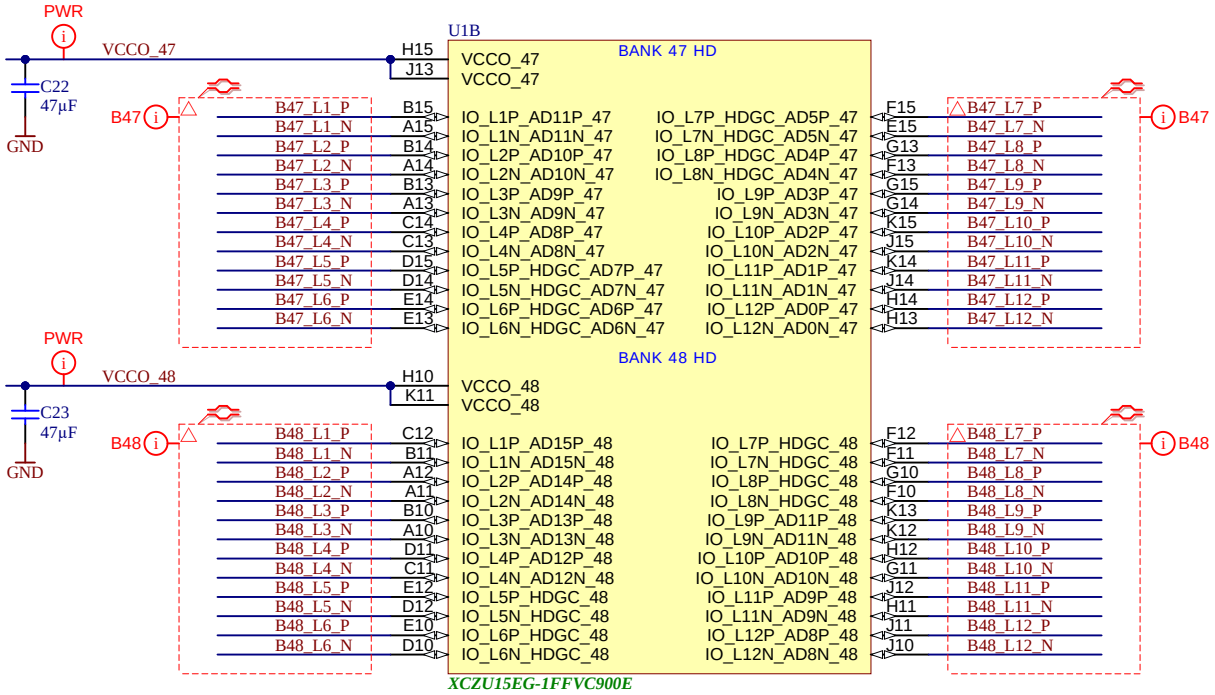


trenz electronic

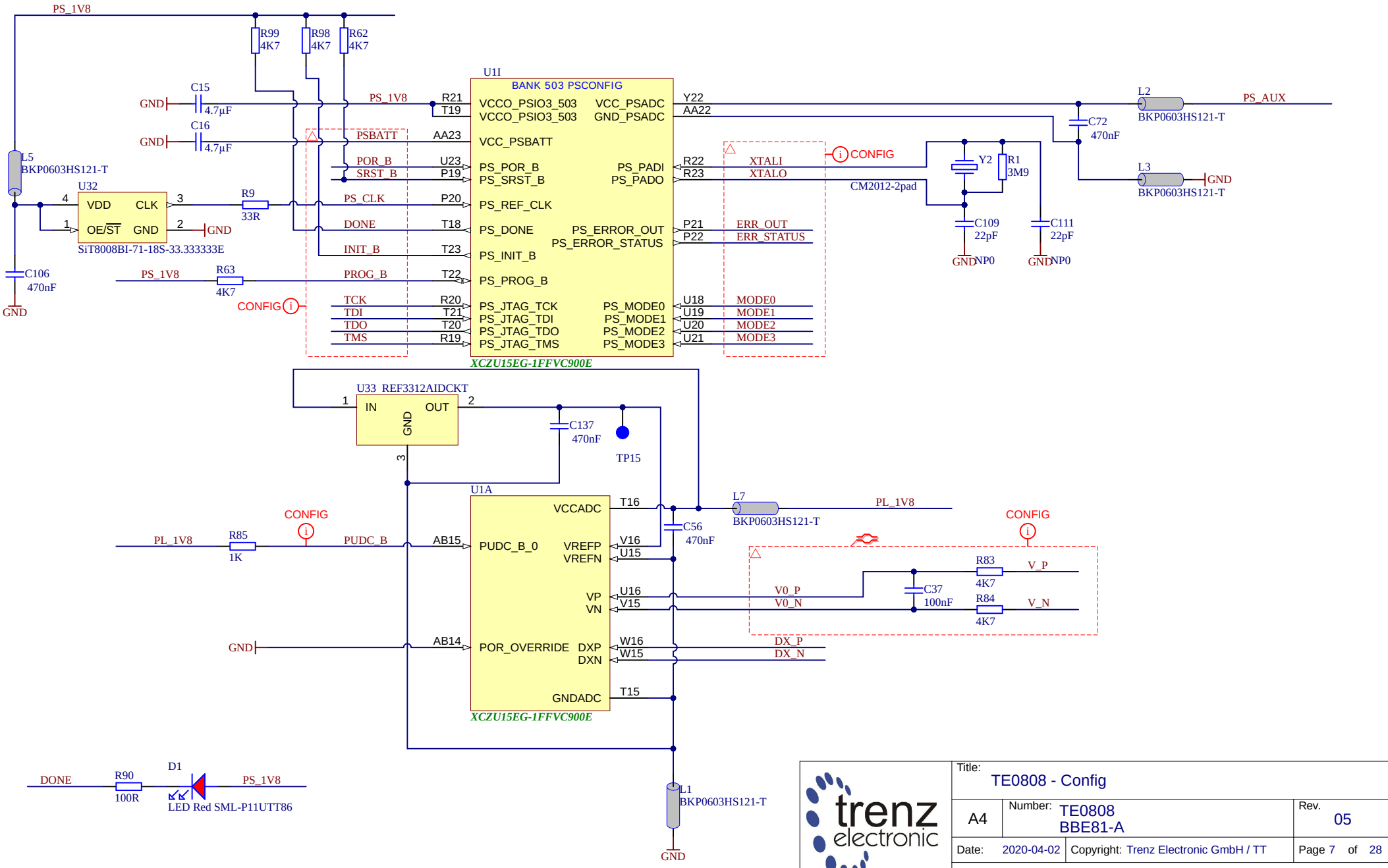
Title: TE0808 - Connector J3			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 4 of 28
Filename: J3.SchDoc			



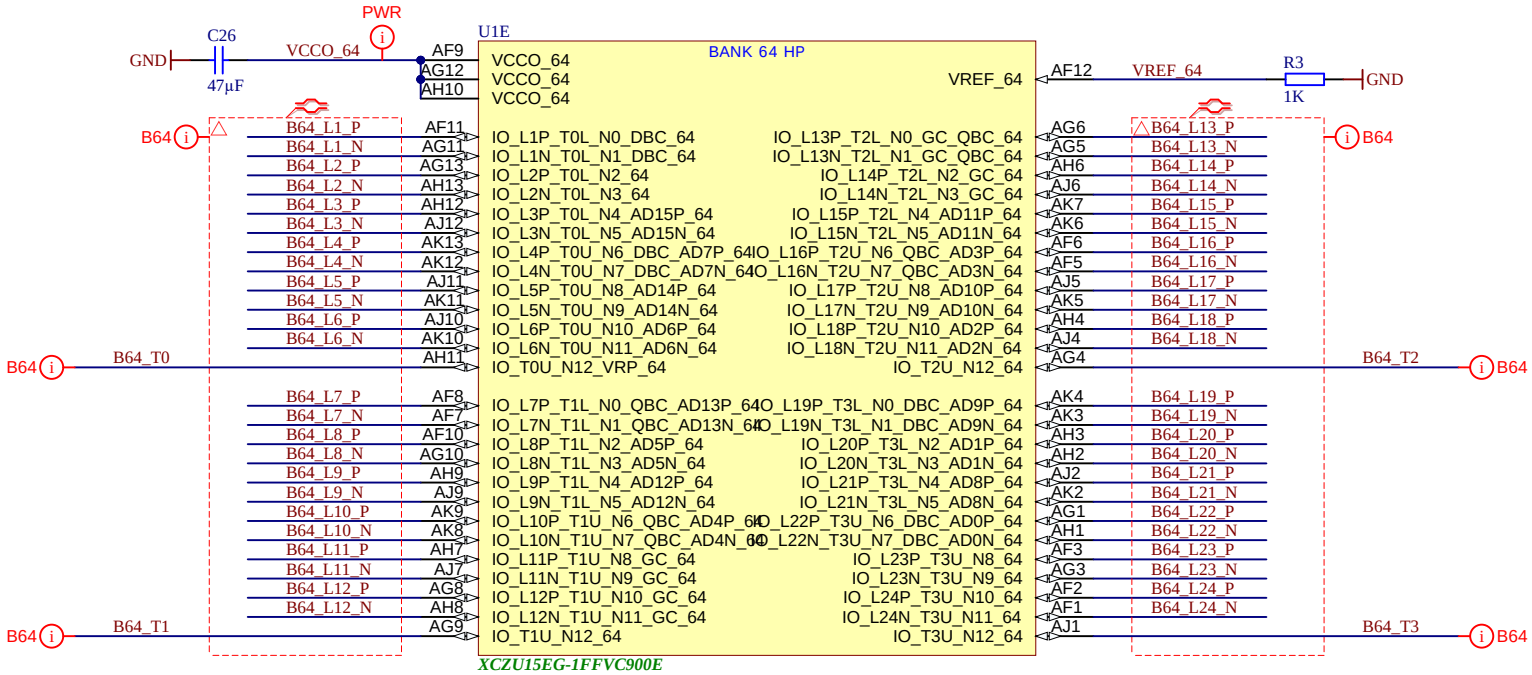
trenz electronic	Title: TE0808 - Connector J4		
	A4	Number: TE0808 BBE81-A	Rev. 05
	Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT	Page 5 of 28
	Filename: J4.SchDoc		



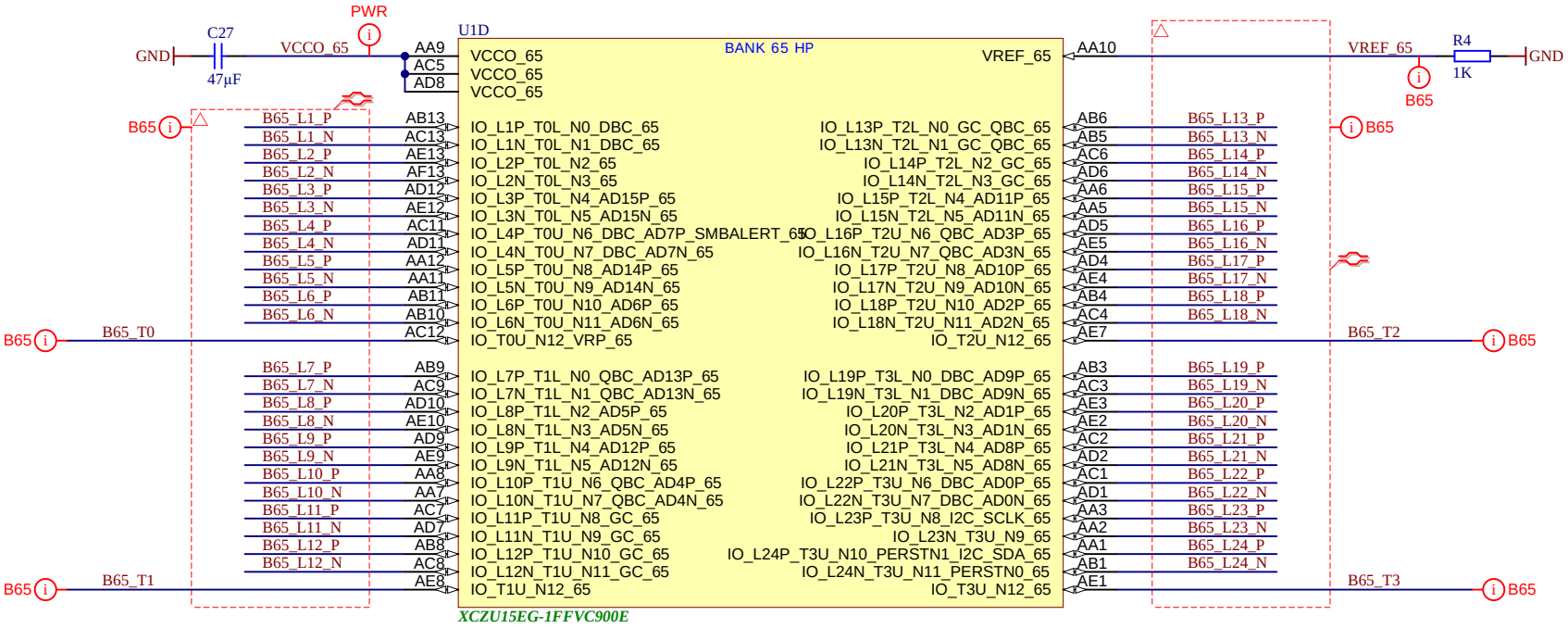
trenz electronic	Title: TE0808 - B47HD and B48HD		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 6 of 28
Filename: B_HD.SchDoc			



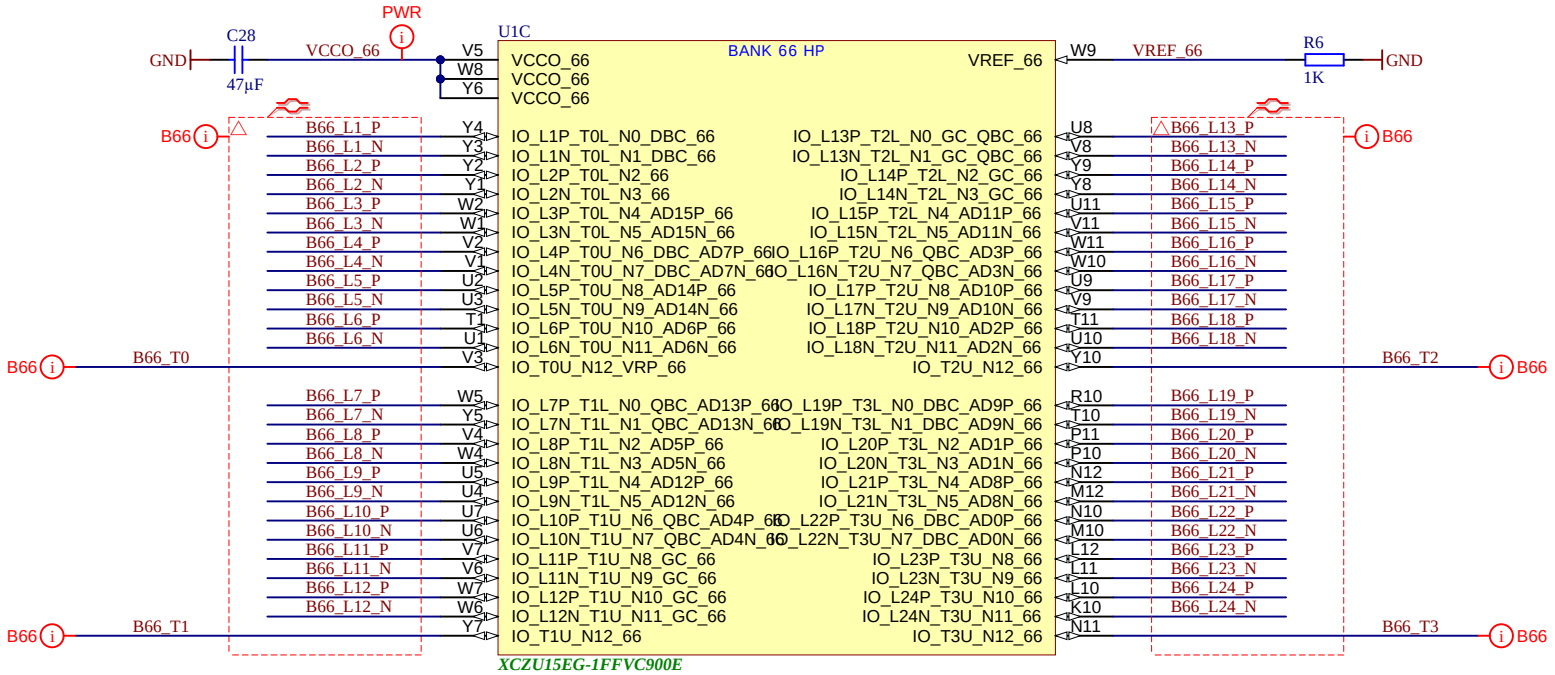
Title: TE0808 - Config			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 7 of 28
Filename: CONFIG.SchDoc			



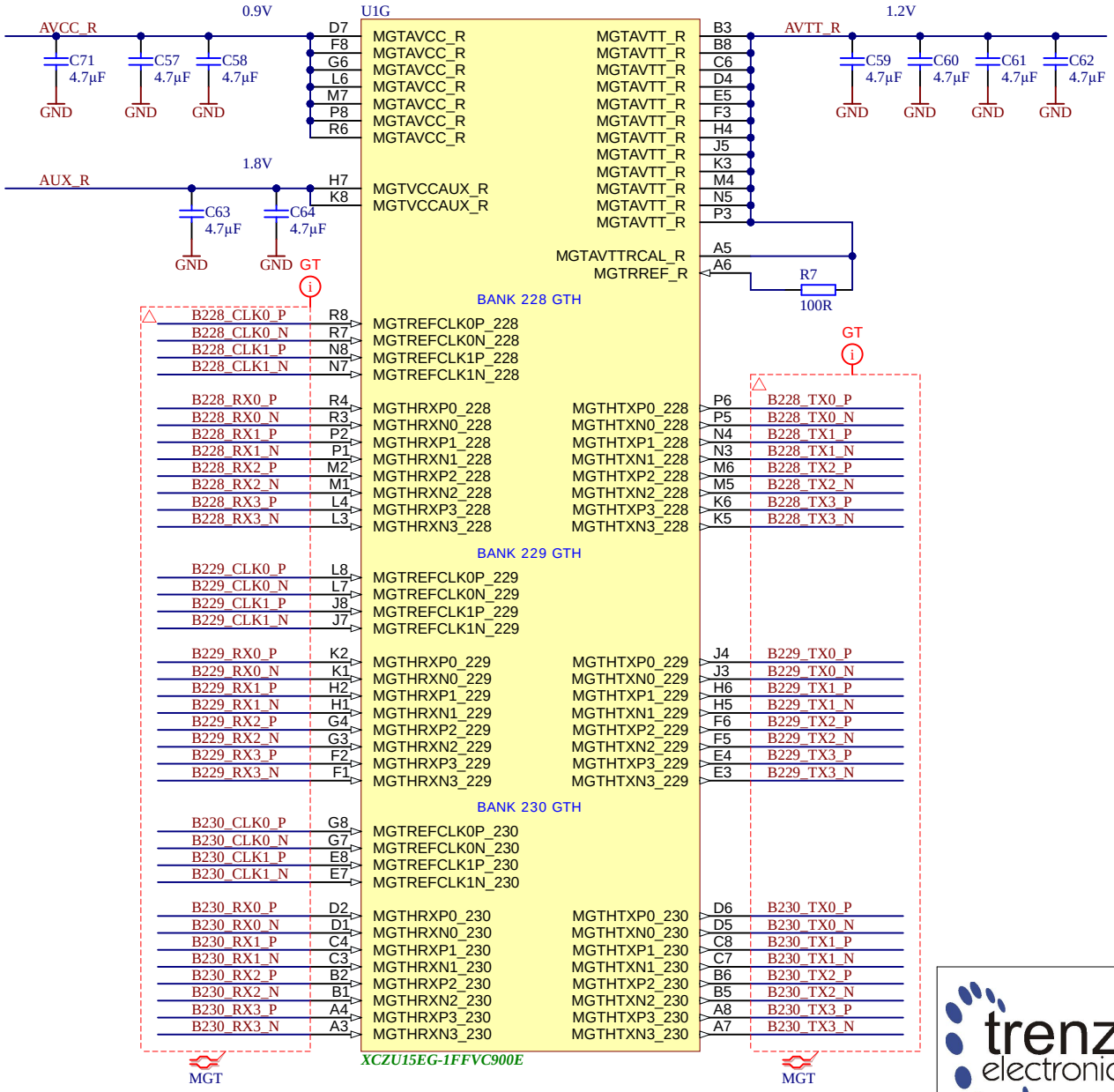
	Title: TE0808 - B64		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 8 of 28
Filename: B64.SchDoc			



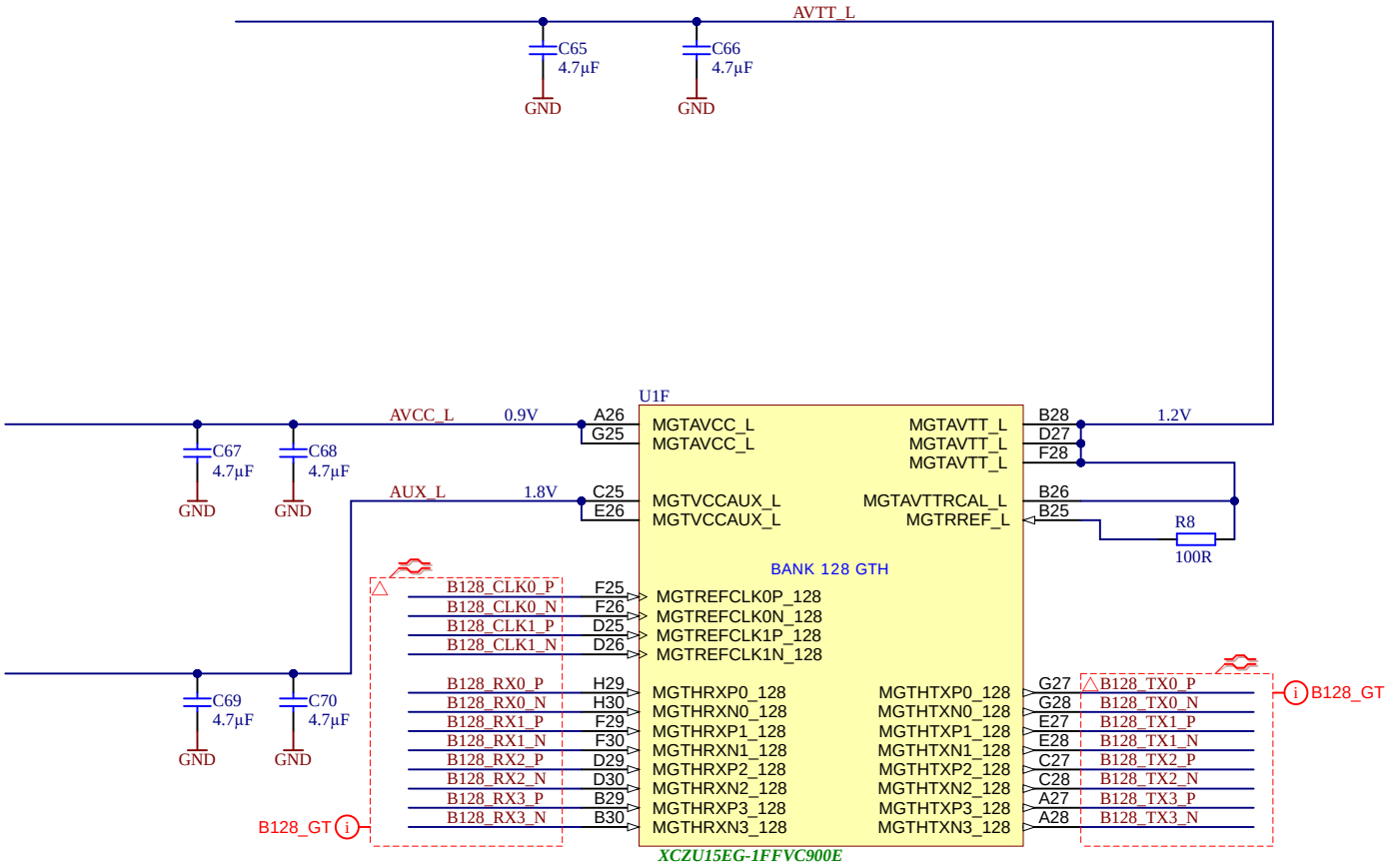
trenz electronic	Title: TE0808 - B65		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 9 of 28
Filename: B65.SchDoc			



trenz electronic	Title: TE0808 - B66		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 10 of 28
Filename: B66.SchDoc			

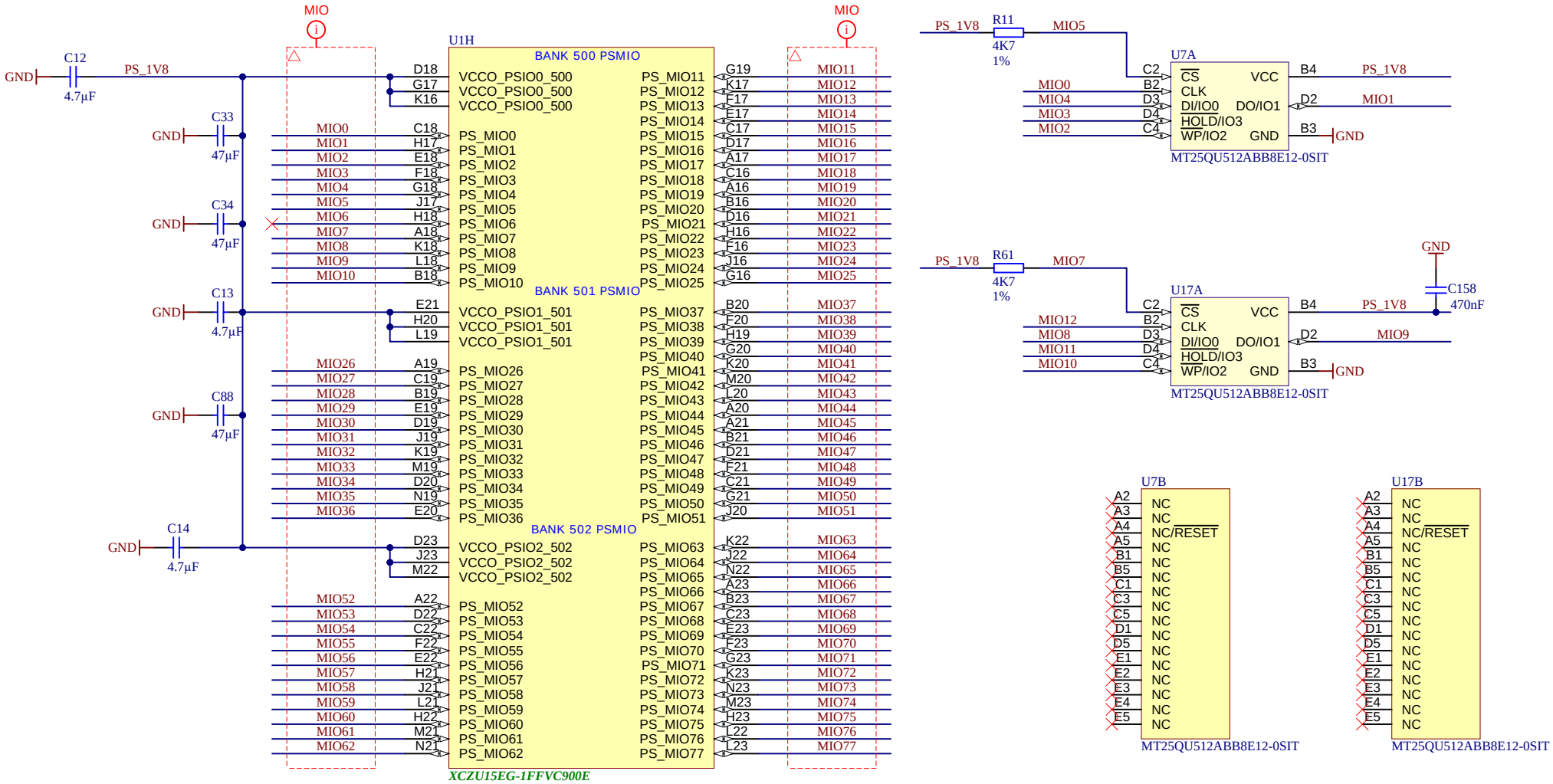


trenz electronic	Title: TE0808 - B228GTH_B229GTH_B230GTH		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 11 of 28
Filename: B_GT.SchDoc			

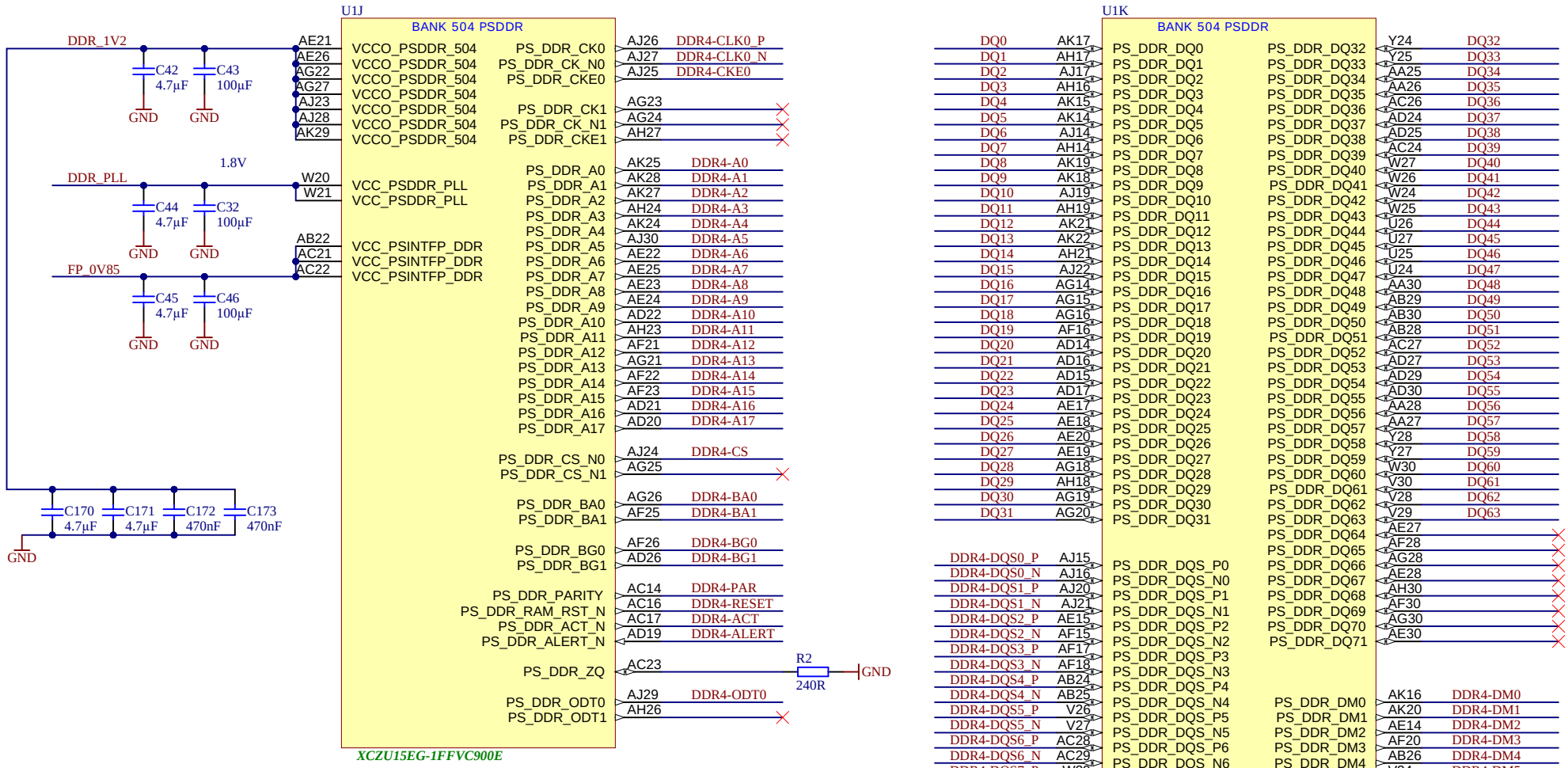


trenz electronic

Title: TE0808 - B128GTH		
A4	Number: TE0808 BBE81-A	Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT	Page 12 of 28
Filename: B_GT_2.SchDoc		

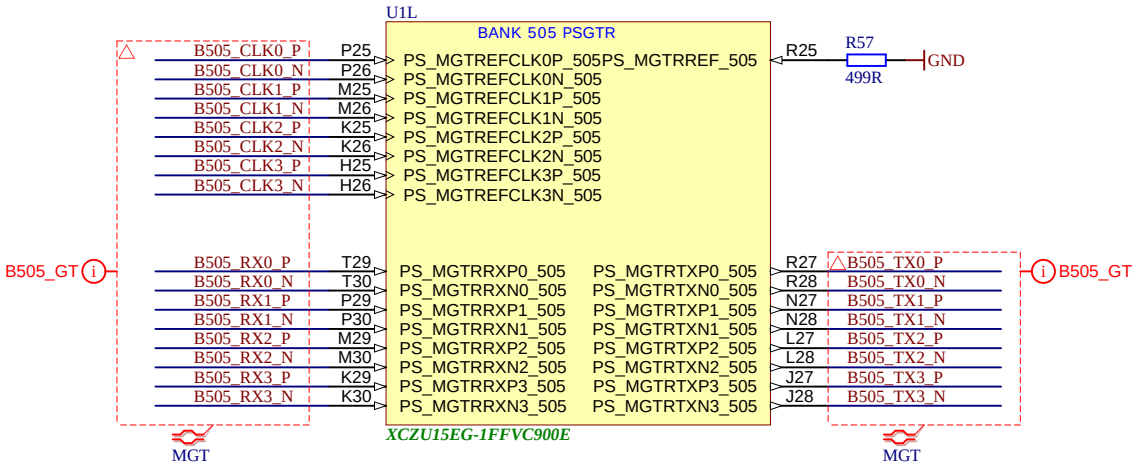


trenz electronic	Title: TE0808 - MIO Banks		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 13 of 28
Filename: B_MIO.SchDoc			

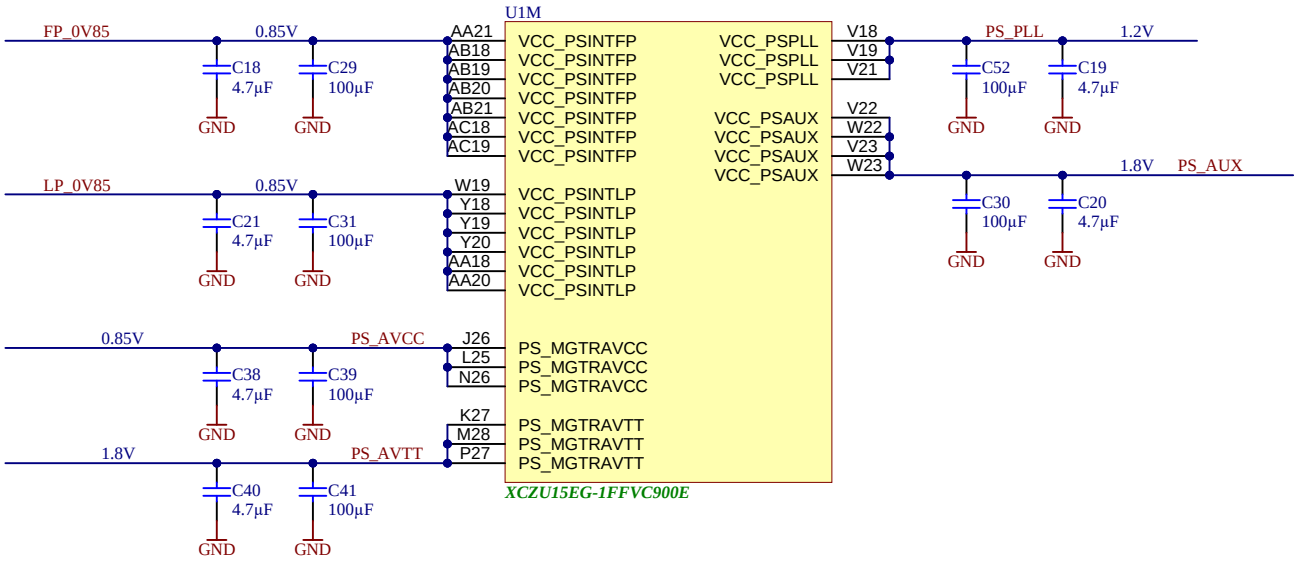


trenz electronic

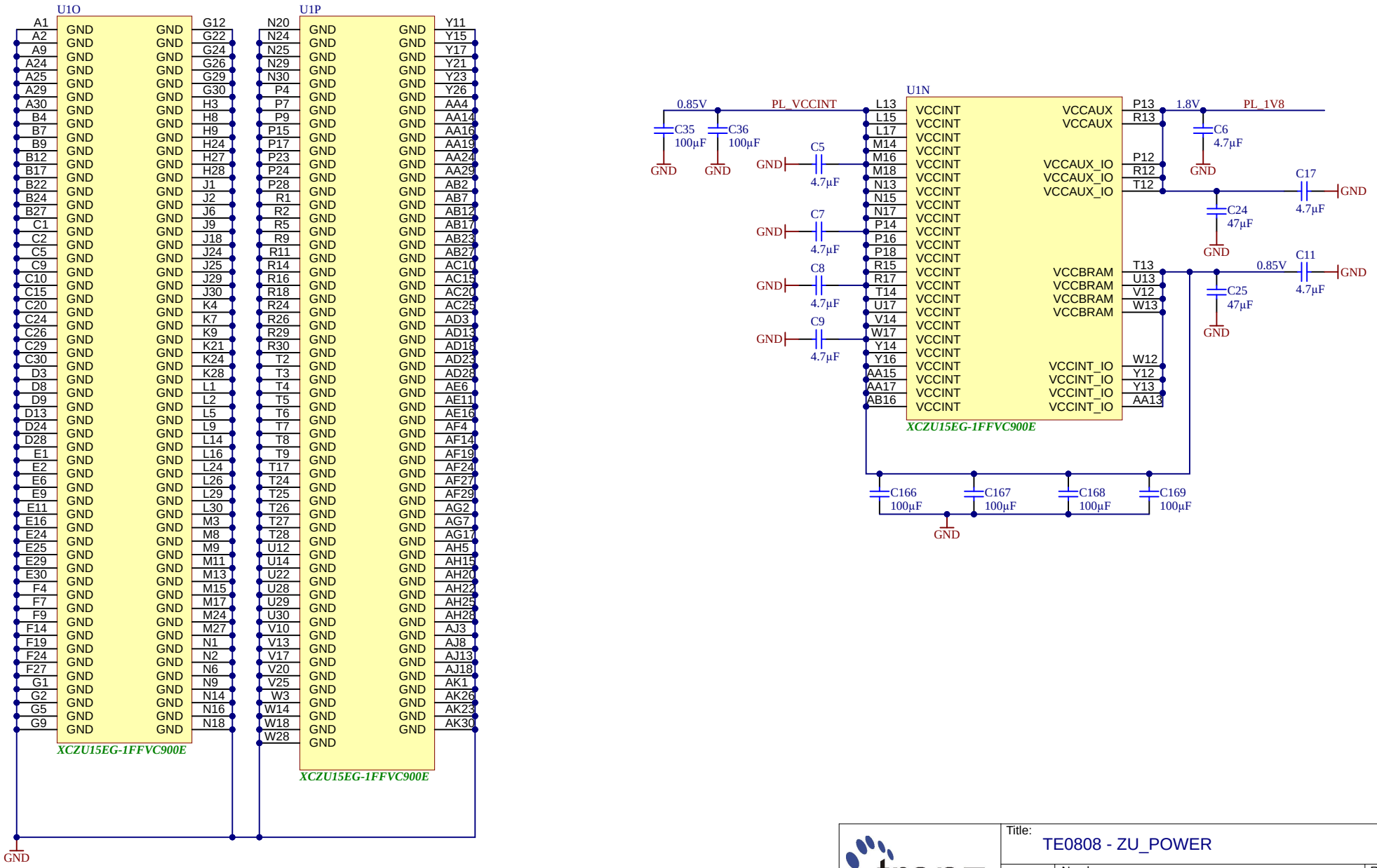
Title: TE0808 - PS_DDR		
A4	Number: TE0808 BBE81-A	Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT	Page 14 of 28
Filename: PS_DDR.SchDoc		



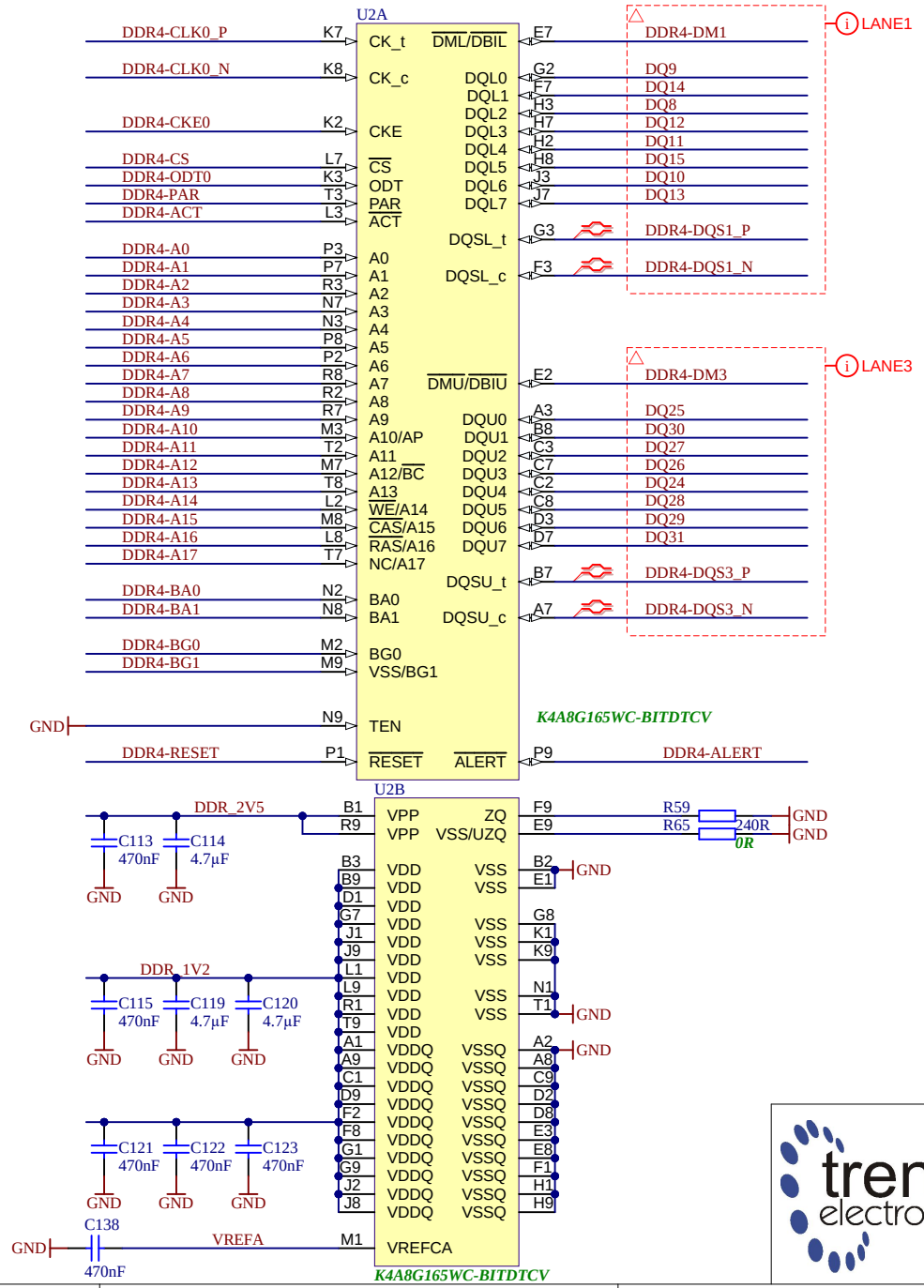
Title: TE0808 - PS_GT			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 15 of 28
Filename: B_PS_GT.SchDoc			



trenz electronic	Title: TE0808 - ZU_PS_POWER		
	A4	Number: TE0808 BBE81-A	Rev. 05
	Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT	Page 16 of 28
	Filename: ZU_PS_POWER.SchDoc		

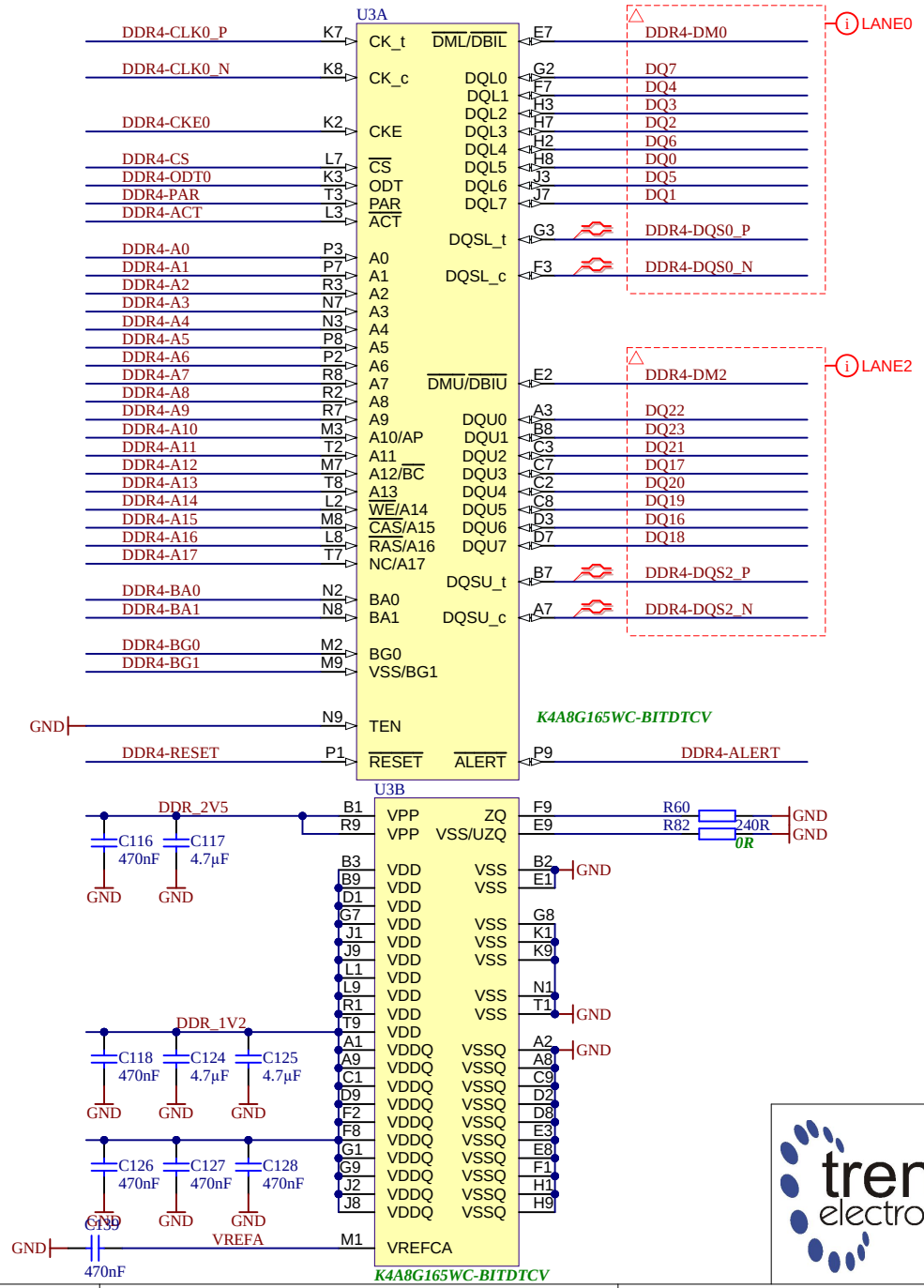


Title: TE0808 - ZU_POWER			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 17 of 28
Filename: ZU_POWER.SchDoc			

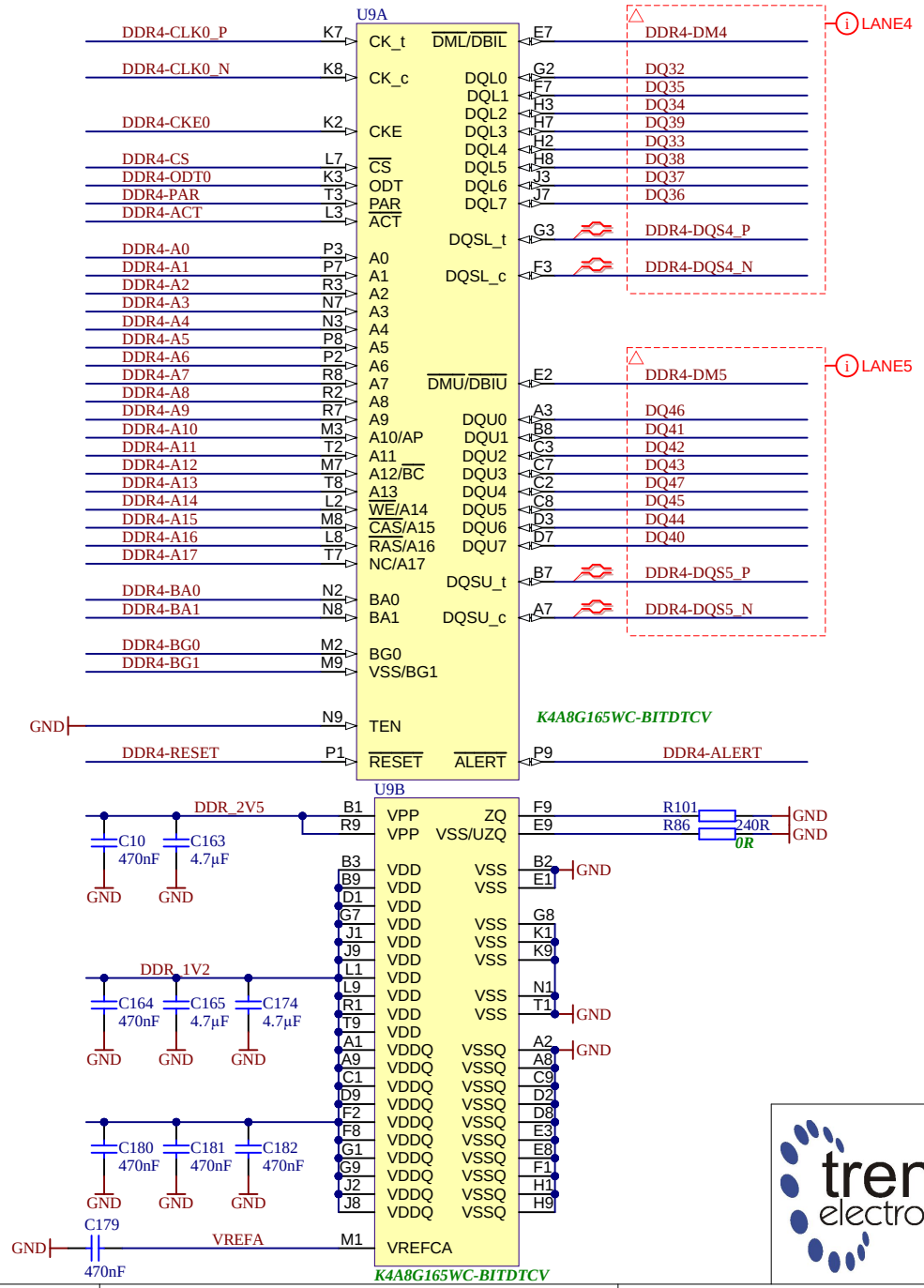


trenz electronic

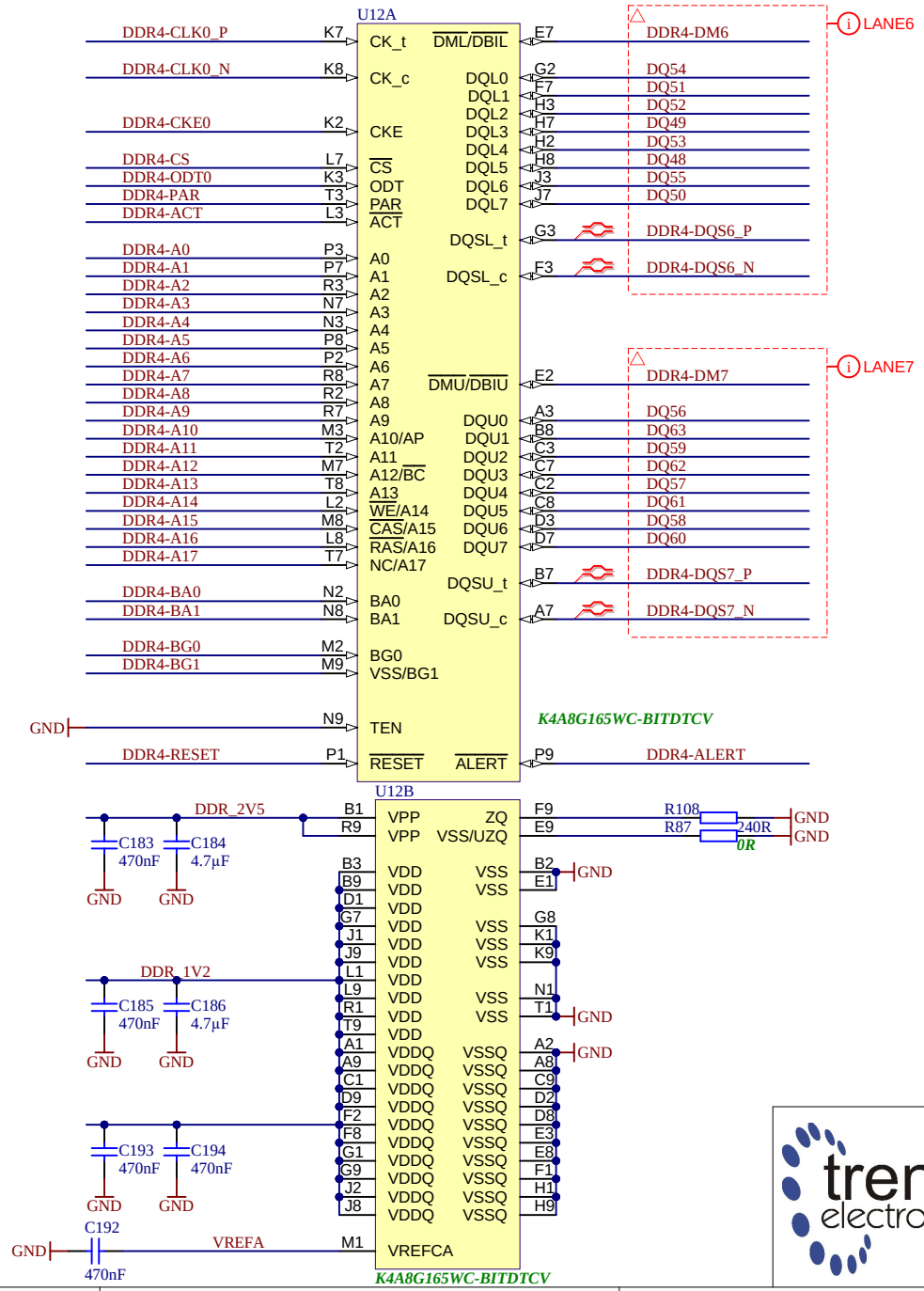
Title: TE0808 - DDR4_1_RAM			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 18 of 28
Filename: DDR4-RAM.SchDoc			



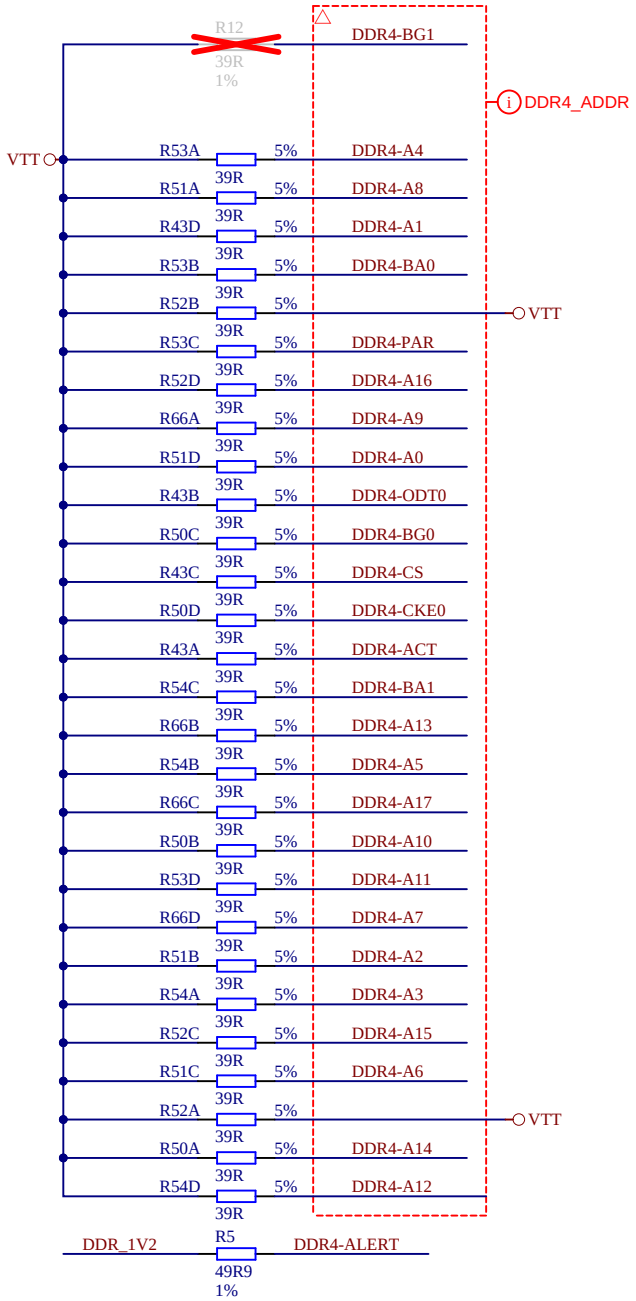
	Title: TE0808 - DDR4_2_RAM		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 19 of 28
Filename: DDR4-RAM_2.SchDoc			

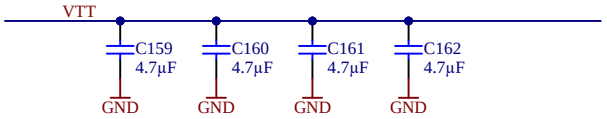


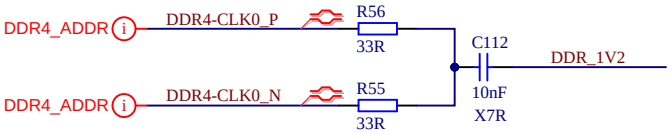
	Title: TE0808 - DDR4_3_RAM		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 20 of 28
Filename: DDR4-RAM_3.SchDoc			



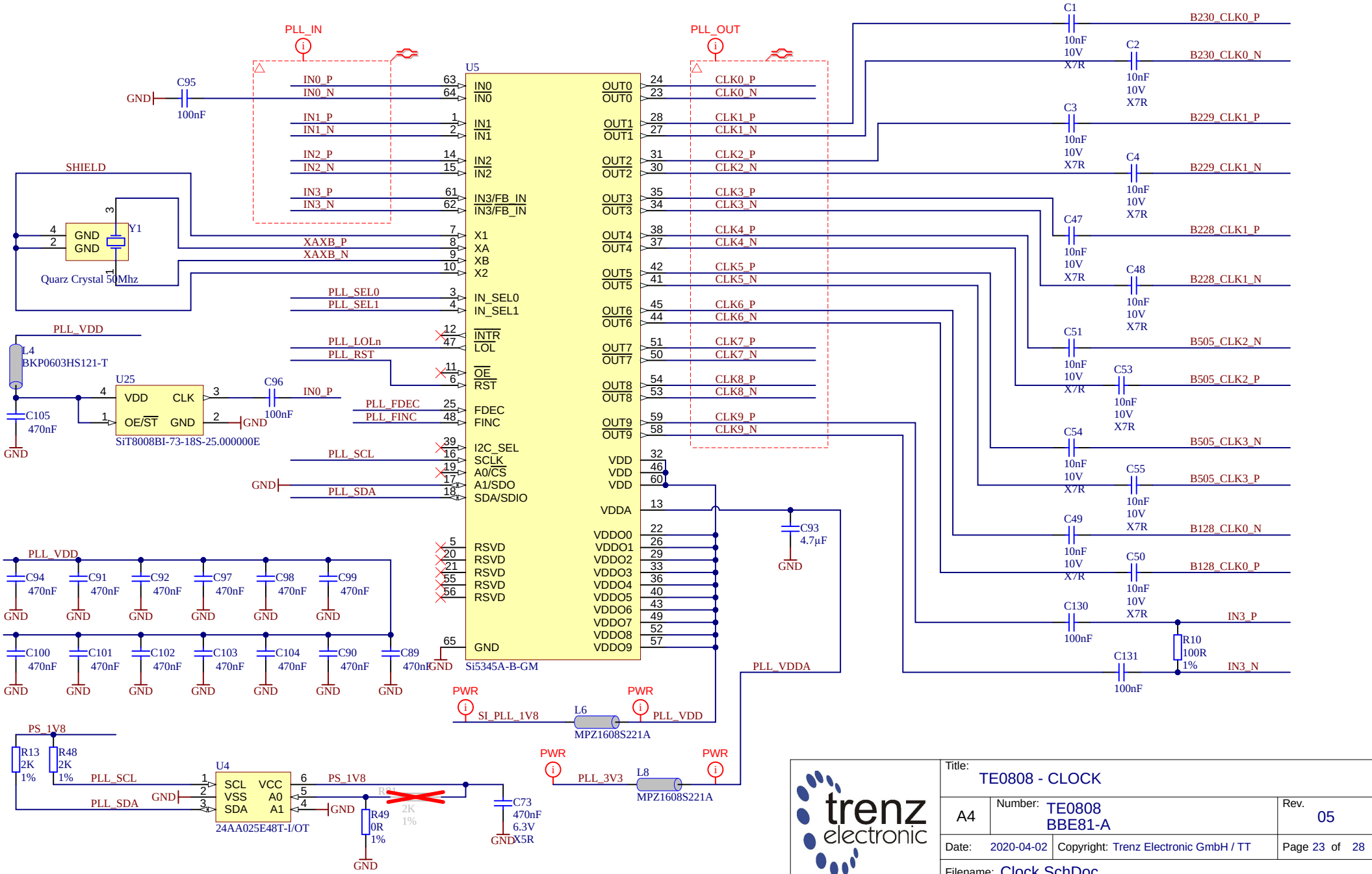
	Title: TE0808 - DDR4_4_RAM		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 21 of 28
Filename: DDR4-RAM_4.SchDoc			

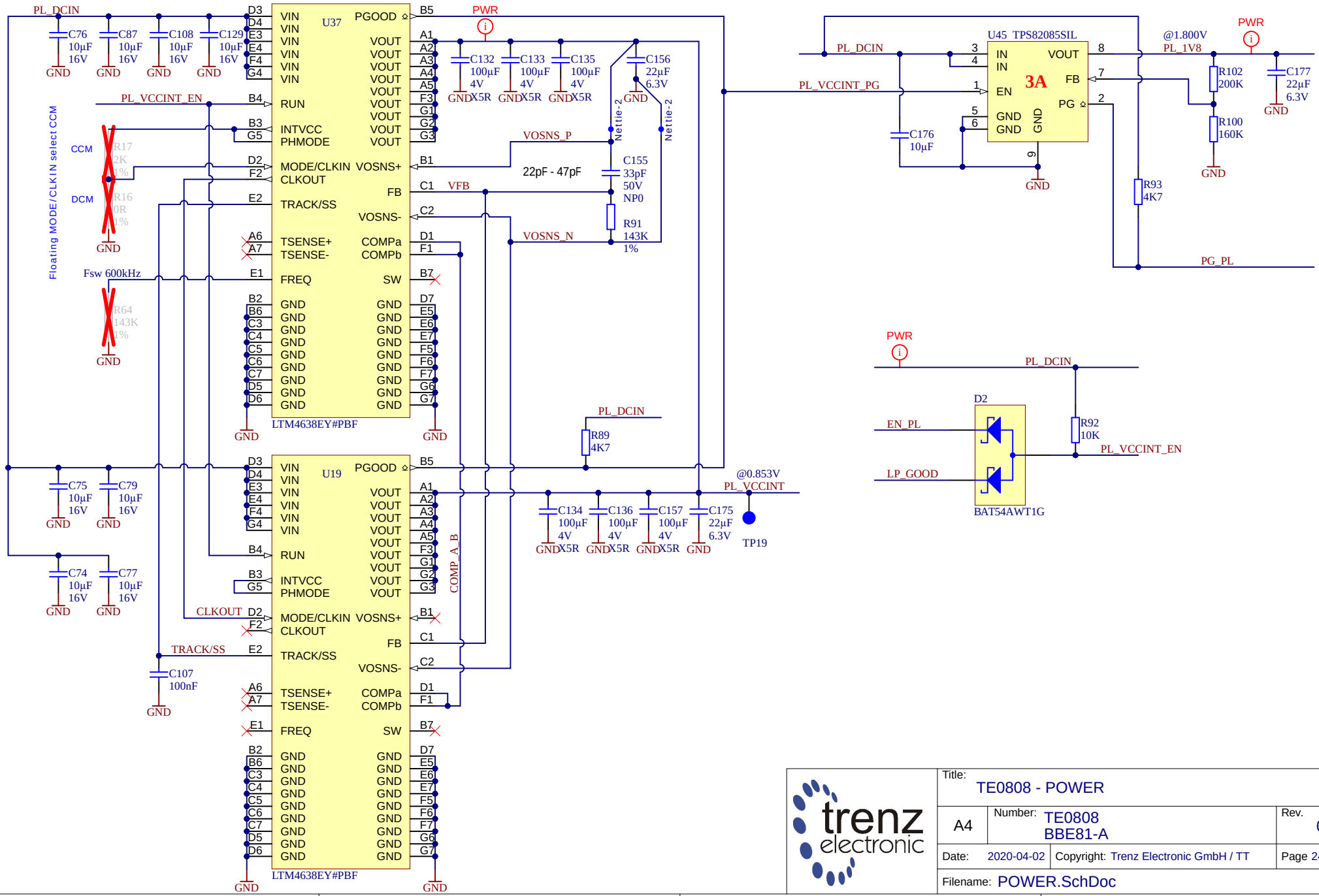




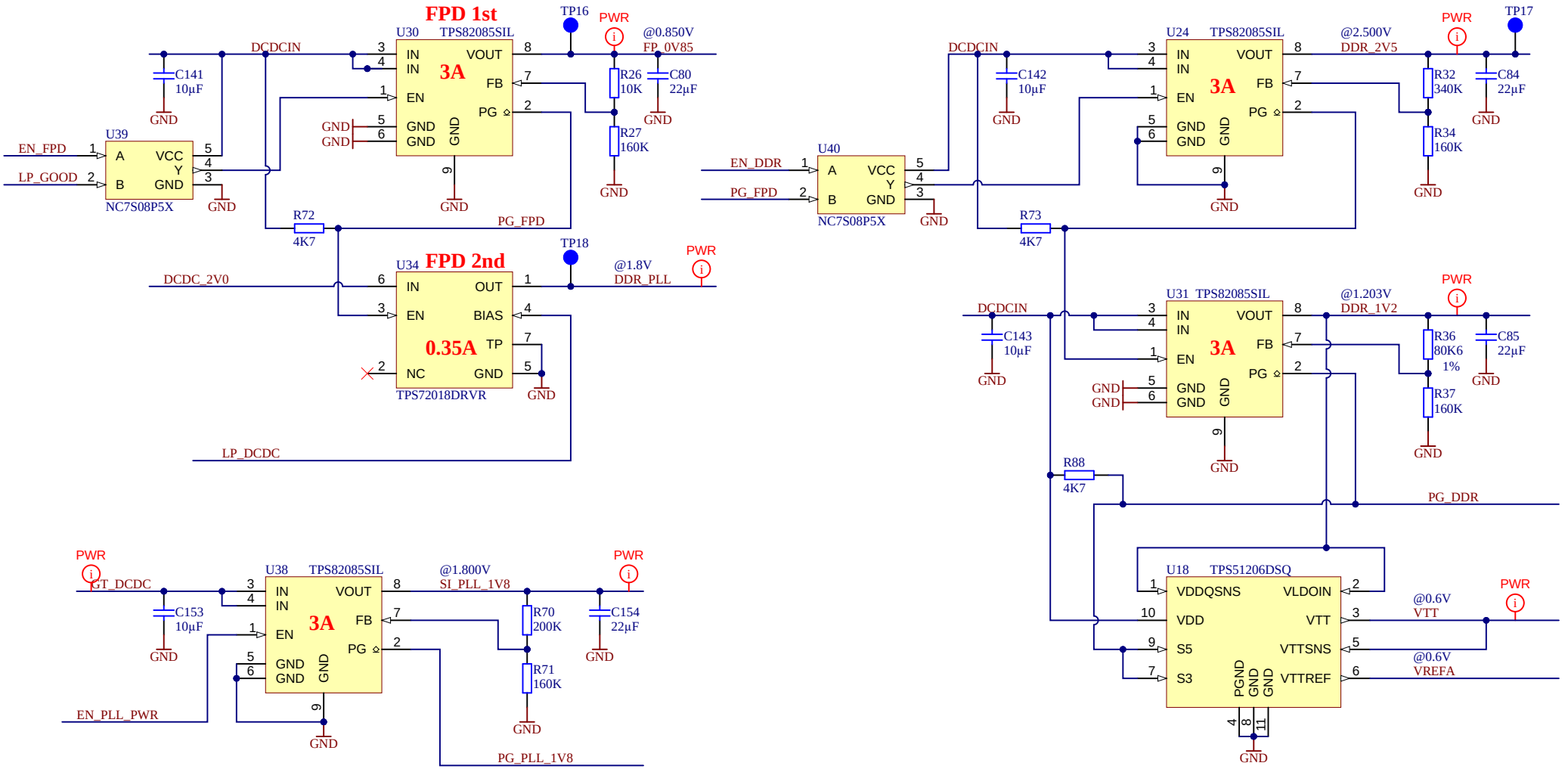


Title: TE0808 - DDR4_TERM			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 22 of 28
Filename: DDR4-TERM.SchDoc			

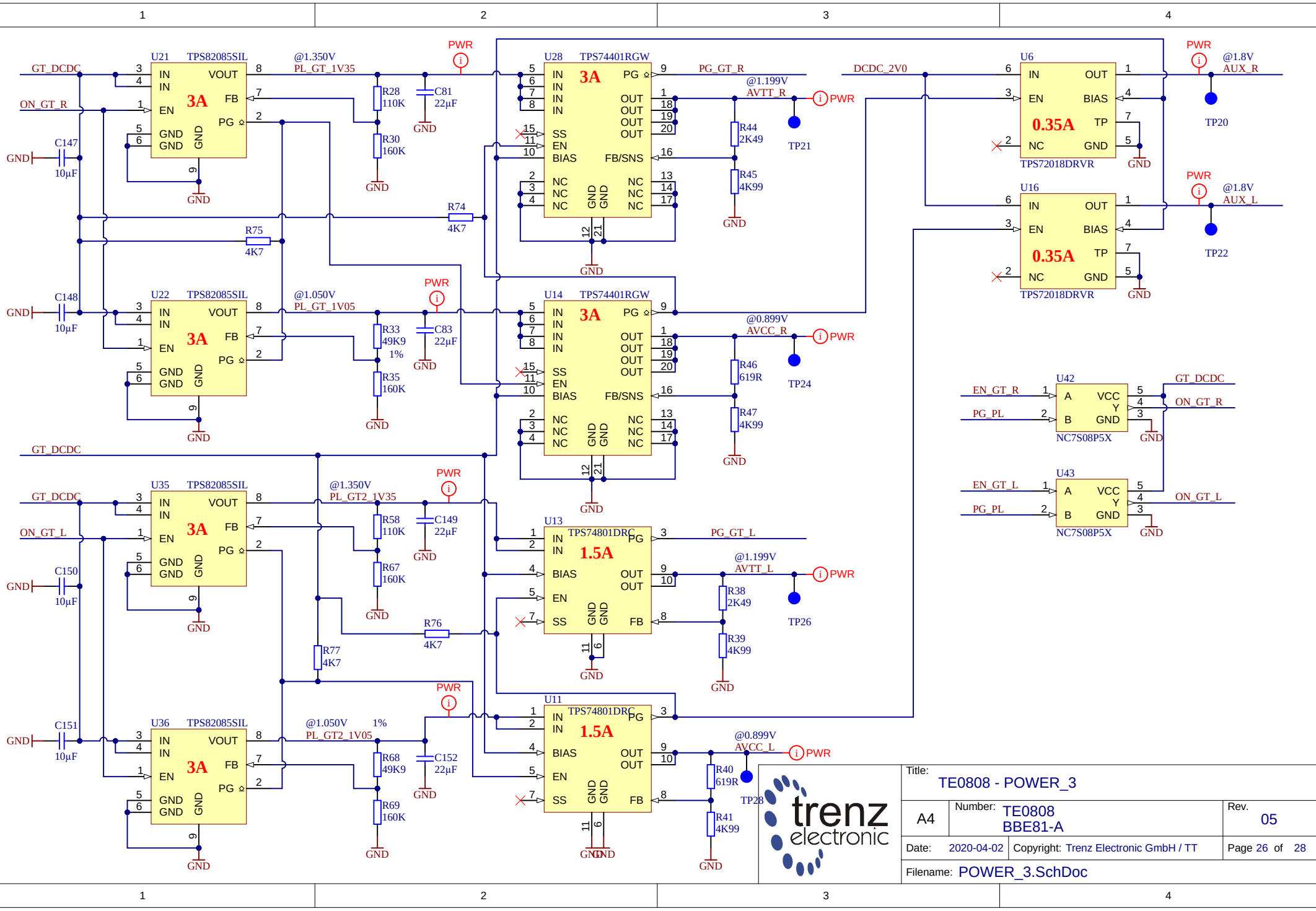

PLL_IN
PLL_OUT
U5
Si5345A-B-GM
SHIELD
Quarz Crystal 50Mhz
Y1
PLL_VDD
L4
BKP0603HS121-T
U25
SiT8008BI-73-18S-25.000000E
PS_1V8
U4
24AA025E48T-I/OT
PLL_VDDA
PLL_3V3
SI_PLL_1V8
L6
L8
MPZ1608S221A
B230_CLK0_P
B230_CLK0_N
B229_CLK1_P
B229_CLK1_N
B228_CLK1_P
B228_CLK1_N
B505_CLK2_N
B505_CLK2_P
B505_CLK3_N
B505_CLK3_P
B128_CLK0_N
B128_CLK0_P
IN3_P
IN3_N
trenz electronic
Title: TE0808 - CLOCK
A4
Number: TE0808 BBE81-A
Rev. 05
Date: 2020-04-02
Copyright: Trenz Electronic GmbH / TT
Page 23 of 28
Filename: Clock.SchDoc



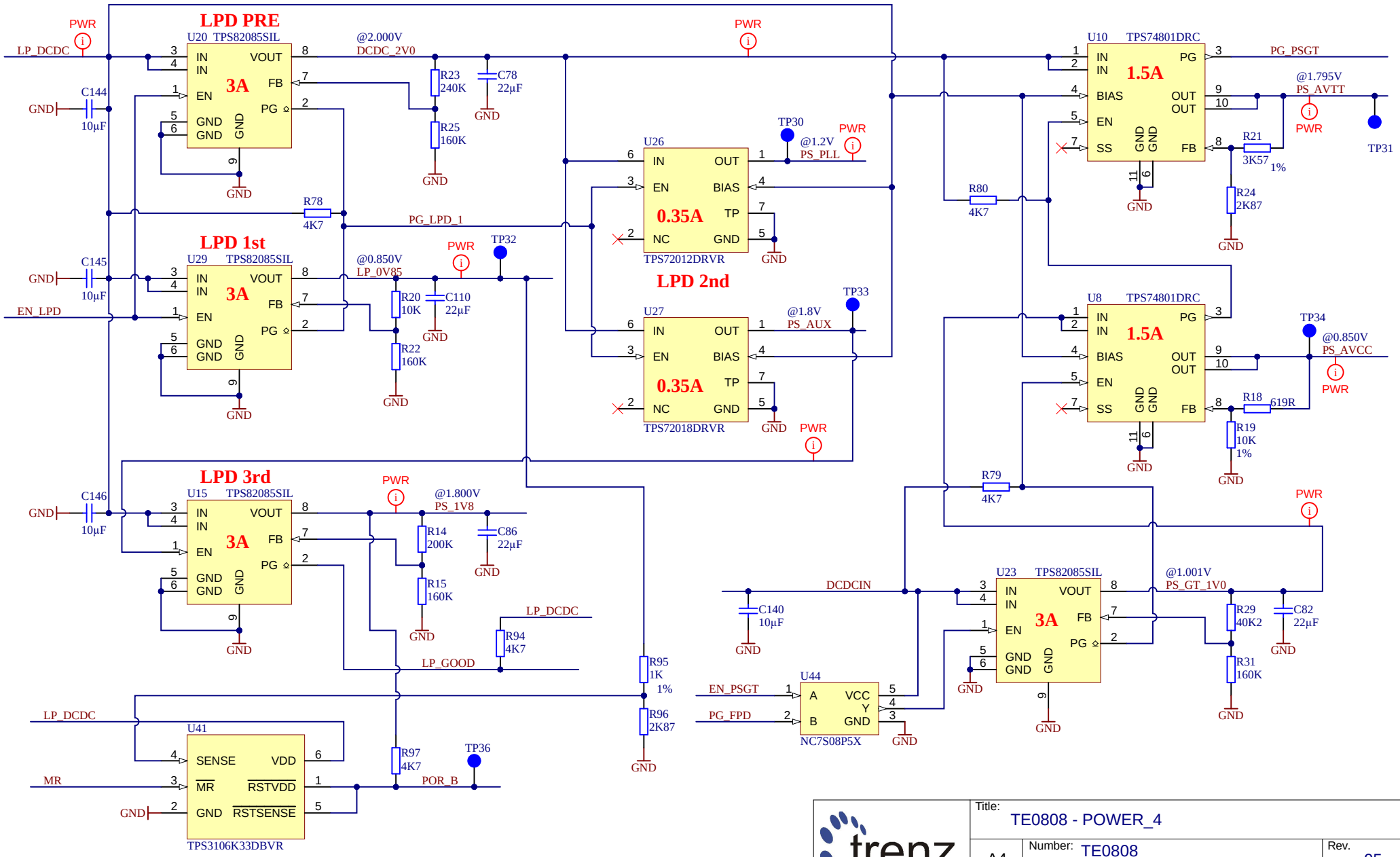
trenz electronic	Title: TE0808 - POWER		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 24 of 28
Filename: POWER.SchDoc			



trenz electronic	Title: TE0808 - POWER_2		
	A4	Number: TE0808 BBE81-A	Rev. 05
	Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT	Page 25 of 28
	Filename: POWER_2.SchDoc		



Title: TE0808 - POWER_3			
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 26 of 28
Filename: POWER_3.SchDoc			



trenz electronic	Title: TE0808 - POWER_4		
A4	Number: TE0808 BBE81-A		Rev. 05
Date: 2020-04-02	Copyright: Trenz Electronic GmbH / TT		Page 27 of 28
Filename: POWER_4.SchDoc			

Revision 04:
---
1. Added resistors R65,R82,R86,R87 (240R) for each DDR4-chip for supporting DDP DDR4 chips
2. Full library update

Revision 04a (09.06.2020):
1. VY: R19 value was changed to 10K (was: 4K99) to set PS_MGTRAVCC 0.85V

Revision 05:
---
1. VY: revised PL_VCCINT power supply. PCB: revised routing and components placement;
2. VY: added signal BG1 for DDP DDR4 IC. Added support of new packages. PCB: revised routing and components placement;
3. VY: R5 pulled up to 1.2V. R5 value changed to 49.9R;
4. VY: added test points;
5. VY: added MAC EEPROM U48. I2C bus PLL_SCL/SDA. Added pull up resistor to I2C bus;
6. VY: PCB - revised FPGA location. Package placed 1.5mm closer to connector J3;
7. VY: PCB - updated silckscreen. Added company address, CE and WEEE symbols;
8. VY: PCB - updated signal trace lengths.

29.11.2022
9. Chnaged note near J2.97 and net PG_GT_L from "On board pull-up R" to "External pull-up R Required"

trenz electronic	Title: TE0808 - Changes list		
	A4	Number: TE0808 BBE81-A	Rev. 05
	Date: 2020-04-02	Copyright: Trenz Electronic GmbH	Page 28 of 28
	Filename: Revision_Changes.SchDoc		