

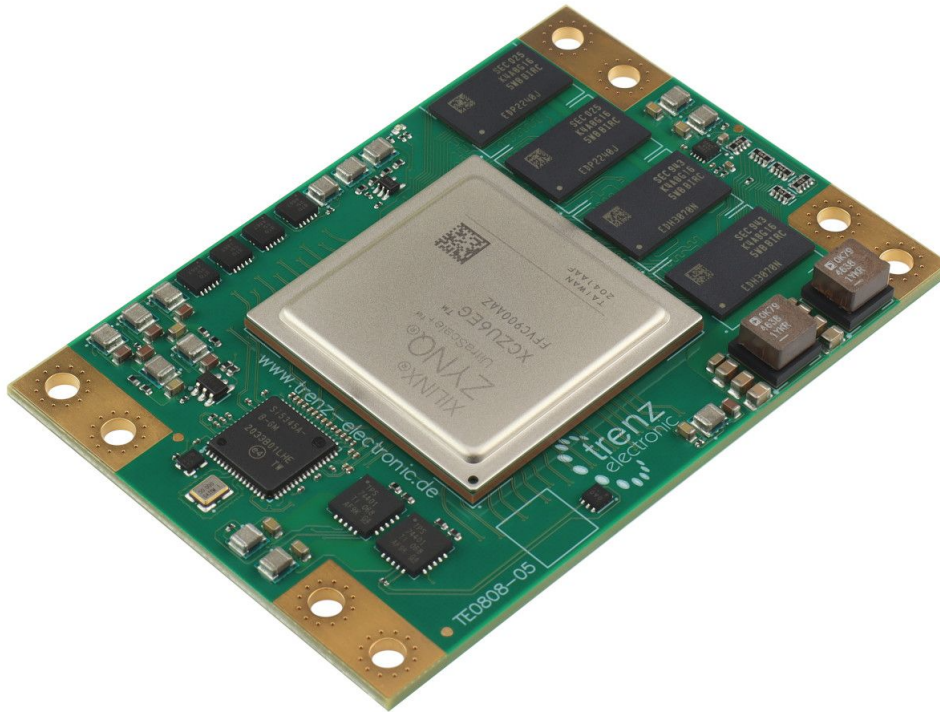


Photo Shows Similar Product

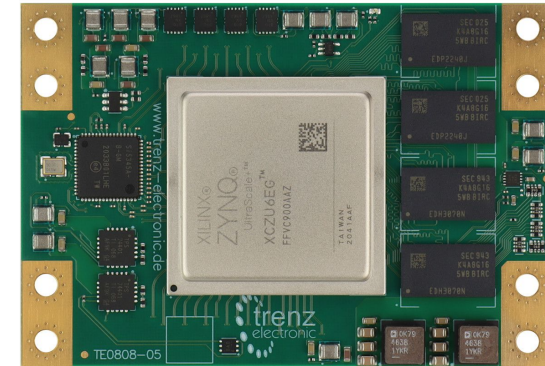


Photo Shows Similar Product

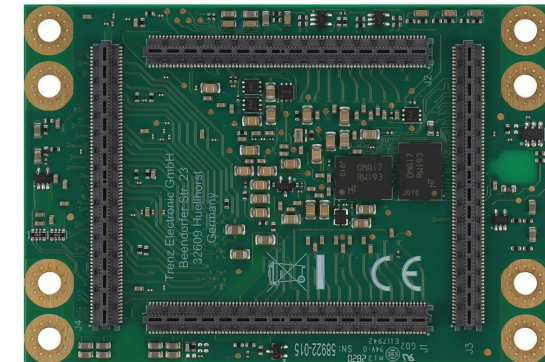


Photo Shows Similar Product

Regarding the usage of our schematics and alike documentation for Trenz module TE0808.

Project is protected under copyright and we strongly and strictly prohibit the reverse engineering or recreation, even if the design is just adapted or modified. TE0808 is protected under such right and in case of plagiarism we will have to do anything necessary in order to protect our assets.

Schematics and other handouts serve for informational purposes only!

	Title: TE0808 - Legal Notices		
	A4	Number: TE0808 9GI51-E	Rev. 06
	Date: 12/4/2025	Copyright: Trenz Electronic GmbH	Page 1 of 32
	Filename: Legal Notices.SchDoc		

1		2		3		4														
A	<table><tr><td>REV</td><td>Description</td><td></td></tr><tr><td>-01</td><td>Initial revision</td><td></td></tr><tr><td>-04</td><td>1) Added resistors R65,R82,R86,R87 (240R) for each DDR4-chip for supporting DDP DDR4 chips 2) Full library update</td><td></td></tr><tr><td>-04a</td><td>1) R19 value was changed to 10K (was: 4K99) to set PS_MGTRAVCC 0.85V</td><td>VY</td></tr></table>		REV	Description		-01	Initial revision		-04	1) Added resistors R65,R82,R86,R87 (240R) for each DDR4-chip for supporting DDP DDR4 chips 2) Full library update		-04a	1) R19 value was changed to 10K (was: 4K99) to set PS_MGTRAVCC 0.85V	VY						
	REV	Description																		
	-01	Initial revision																		
	-04	1) Added resistors R65,R82,R86,R87 (240R) for each DDR4-chip for supporting DDP DDR4 chips 2) Full library update																		
-04a	1) R19 value was changed to 10K (was: 4K99) to set PS_MGTRAVCC 0.85V	VY																		
B	<table><tr><td>-05</td><td>1) Revised PL_VCCINT power supply. PCB: revised routing and components placement; 2) Added signal BG1 for DDP DDR4 IC. Added support of new packages. PCB: revised routing and components placement; 3) R5 pulled up to 1.2V. R5 value changed to 49.9R; 4) Added test points; 5) Added MAC EEPROM U48. I2C bus PLL_SCL/SDA. Added pull up resistor to I2C bus; 6) PCB - revised FPGA location. Package placed 1.5mm closer to connector J3; 7) PCB - updated silkscreen. Added company address, CE and WEEE symbols; 8) 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" 30.04.2025 10) MT: L1-L5, L7 (obsolete) changed to MPZ0603S121HT000</td><td>VY</td></tr></table>		-05	1) Revised PL_VCCINT power supply. PCB: revised routing and components placement; 2) Added signal BG1 for DDP DDR4 IC. Added support of new packages. PCB: revised routing and components placement; 3) R5 pulled up to 1.2V. R5 value changed to 49.9R; 4) Added test points; 5) Added MAC EEPROM U48. I2C bus PLL_SCL/SDA. Added pull up resistor to I2C bus; 6) PCB - revised FPGA location. Package placed 1.5mm closer to connector J3; 7) PCB - updated silkscreen. Added company address, CE and WEEE symbols; 8) 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" 30.04.2025 10) MT: L1-L5, L7 (obsolete) changed to MPZ0603S121HT000	VY															
	-05	1) Revised PL_VCCINT power supply. PCB: revised routing and components placement; 2) Added signal BG1 for DDP DDR4 IC. Added support of new packages. PCB: revised routing and components placement; 3) R5 pulled up to 1.2V. R5 value changed to 49.9R; 4) Added test points; 5) Added MAC EEPROM U48. I2C bus PLL_SCL/SDA. Added pull up resistor to I2C bus; 6) PCB - revised FPGA location. Package placed 1.5mm closer to connector J3; 7) PCB - updated silkscreen. Added company address, CE and WEEE symbols; 8) 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" 30.04.2025 10) MT: L1-L5, L7 (obsolete) changed to MPZ0603S121HT000	VY																	
C	<table><tr><td>-06</td><td>1) R103 , R104 added (strap option POR_OVERRIDE) 2) All TEN pins connected together. R105 and TP23 added 3) Net name REF_1V25 added (U33 pin 2) 4) C195 - C201 added according to AMD DDR routing recommendations 5) All capacitors X5R changed to X6S with the same size and voltage rating but with better temperature grade 6) TP25 , TP37 - TP66 added 7) Trace lengths changed 8) R109 - R112 added according to AMD recommendations 9) Legal Notices page, System overview, Power diagram, UKCA logo added 10) Diode AND gate D2 BAT54AWT1G changed to AND gate U46 SN74LV1T08DCKR for isolating different power domains from each other 11) Components changed for BOM optimization: - U39 , U40 , U42 , U43 , U44 NC7S08P5X to SN74LV1T08DCKR - C112 16V 0402 to 10V 0201 - R13 , R48 2k to 2k2 - L6 , L8 MPZ1608S221A to MPZ0603S121HT000 12) Diode D3 added according to U41 datasheet recommendation 13) R72 , R73 , R75 , R77 - R79 , R88 , R89 , R93 , R94 4k7 changed to 10k according to TPS82085SIL datasheet PG sink current rating 14) U47 STSAFE-TPM with corresponding circuits added 15) U19 and U37 LTM4638EY#PBF changed to TPS6287B15VA0WRZVR with corresponding circuits 16) R116 and net POR_B_R added</td><td>MT</td></tr></table>		-06	1) R103 , R104 added (strap option POR_OVERRIDE) 2) All TEN pins connected together. R105 and TP23 added 3) Net name REF_1V25 added (U33 pin 2) 4) C195 - C201 added according to AMD DDR routing recommendations 5) All capacitors X5R changed to X6S with the same size and voltage rating but with better temperature grade 6) TP25 , TP37 - TP66 added 7) Trace lengths changed 8) R109 - R112 added according to AMD recommendations 9) Legal Notices page, System overview, Power diagram, UKCA logo added 10) Diode AND gate D2 BAT54AWT1G changed to AND gate U46 SN74LV1T08DCKR for isolating different power domains from each other 11) Components changed for BOM optimization: - U39 , U40 , U42 , U43 , U44 NC7S08P5X to SN74LV1T08DCKR - C112 16V 0402 to 10V 0201 - R13 , R48 2k to 2k2 - L6 , L8 MPZ1608S221A to MPZ0603S121HT000 12) Diode D3 added according to U41 datasheet recommendation 13) R72 , R73 , R75 , R77 - R79 , R88 , R89 , R93 , R94 4k7 changed to 10k according to TPS82085SIL datasheet PG sink current rating 14) U47 STSAFE-TPM with corresponding circuits added 15) U19 and U37 LTM4638EY#PBF changed to TPS6287B15VA0WRZVR with corresponding circuits 16) R116 and net POR_B_R added	MT															
-06	1) R103 , R104 added (strap option POR_OVERRIDE) 2) All TEN pins connected together. R105 and TP23 added 3) Net name REF_1V25 added (U33 pin 2) 4) C195 - C201 added according to AMD DDR routing recommendations 5) All capacitors X5R changed to X6S with the same size and voltage rating but with better temperature grade 6) TP25 , TP37 - TP66 added 7) Trace lengths changed 8) R109 - R112 added according to AMD recommendations 9) Legal Notices page, System overview, Power diagram, UKCA logo added 10) Diode AND gate D2 BAT54AWT1G changed to AND gate U46 SN74LV1T08DCKR for isolating different power domains from each other 11) Components changed for BOM optimization: - U39 , U40 , U42 , U43 , U44 NC7S08P5X to SN74LV1T08DCKR - C112 16V 0402 to 10V 0201 - R13 , R48 2k to 2k2 - L6 , L8 MPZ1608S221A to MPZ0603S121HT000 12) Diode D3 added according to U41 datasheet recommendation 13) R72 , R73 , R75 , R77 - R79 , R88 , R89 , R93 , R94 4k7 changed to 10k according to TPS82085SIL datasheet PG sink current rating 14) U47 STSAFE-TPM with corresponding circuits added 15) U19 and U37 LTM4638EY#PBF changed to TPS6287B15VA0WRZVR with corresponding circuits 16) R116 and net POR_B_R added	MT																		
D			<table><tr><td colspan="2" rowspan="4"></td><td colspan="2">Title: TE0808 - Changes list</td></tr><tr><td>A4</td><td>Number: TE0808 9GI51-E</td><td>Rev. 06</td></tr><tr><td>Date: 2/26/2026</td><td>Copyright: Trenz Electronic GmbH</td><td>Page 2 of 32</td></tr><tr><td colspan="3">Filename: Revision_Changes.SchDoc</td></tr></table>							Title: TE0808 - Changes list		A4	Number: TE0808 9GI51-E	Rev. 06	Date: 2/26/2026	Copyright: Trenz Electronic GmbH	Page 2 of 32	Filename: Revision_Changes.SchDoc		
			Title: TE0808 - Changes list																	
			A4	Number: TE0808 9GI51-E	Rev. 06															
			Date: 2/26/2026	Copyright: Trenz Electronic GmbH	Page 2 of 32															
Filename: Revision_Changes.SchDoc																				
1		2		3		4														

A

D

EN_XY Net name

Power bus

Control signal

U2

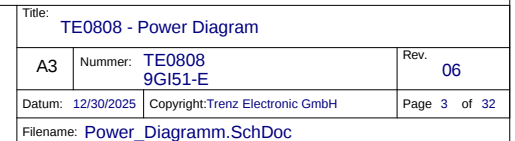
VIN VOUT PG

Power converter / Switch

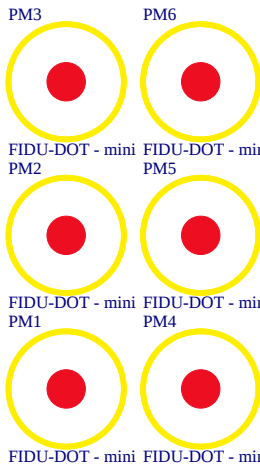
B2B

Board-to-Board Samtec Connector

AND gate



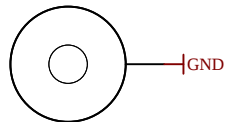
Special notes:



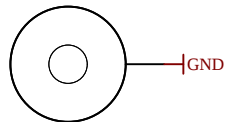
~~Serial1~~
Serialnumber 6,3 x 6.3mm

Serial2
Serial
Serialnumber 6,3 x 6.3mm
AD only

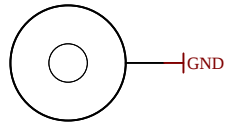
UKCA1
UKCA Logo on Top Overlay
UKCA-TOPOVERLAY



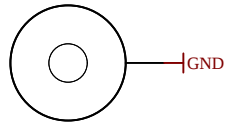
Mount.Hole 3.2mm für Unterlegscheibe



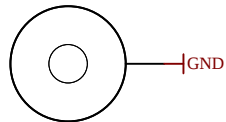
Mount.Hole 3.2mm für Unterlegscheibe



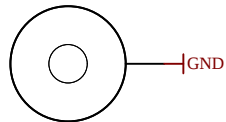
Mount.Hole 3.2mm für Unterlegscheibe



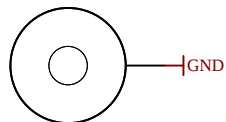
Mount.Hole 3.2mm für Unterlegscheibe



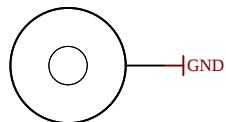
Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe

MECH1
TE Address Overlay

LOGO ADDRESS

LOGO1
TE Logo PRINT Layer

LOGO PRINT

Design drawn by: MT
Checked by: VY

Assembly variant: 9GI51-E
Created by: MT
Modified by: MT
Modified at: 2025-12-18



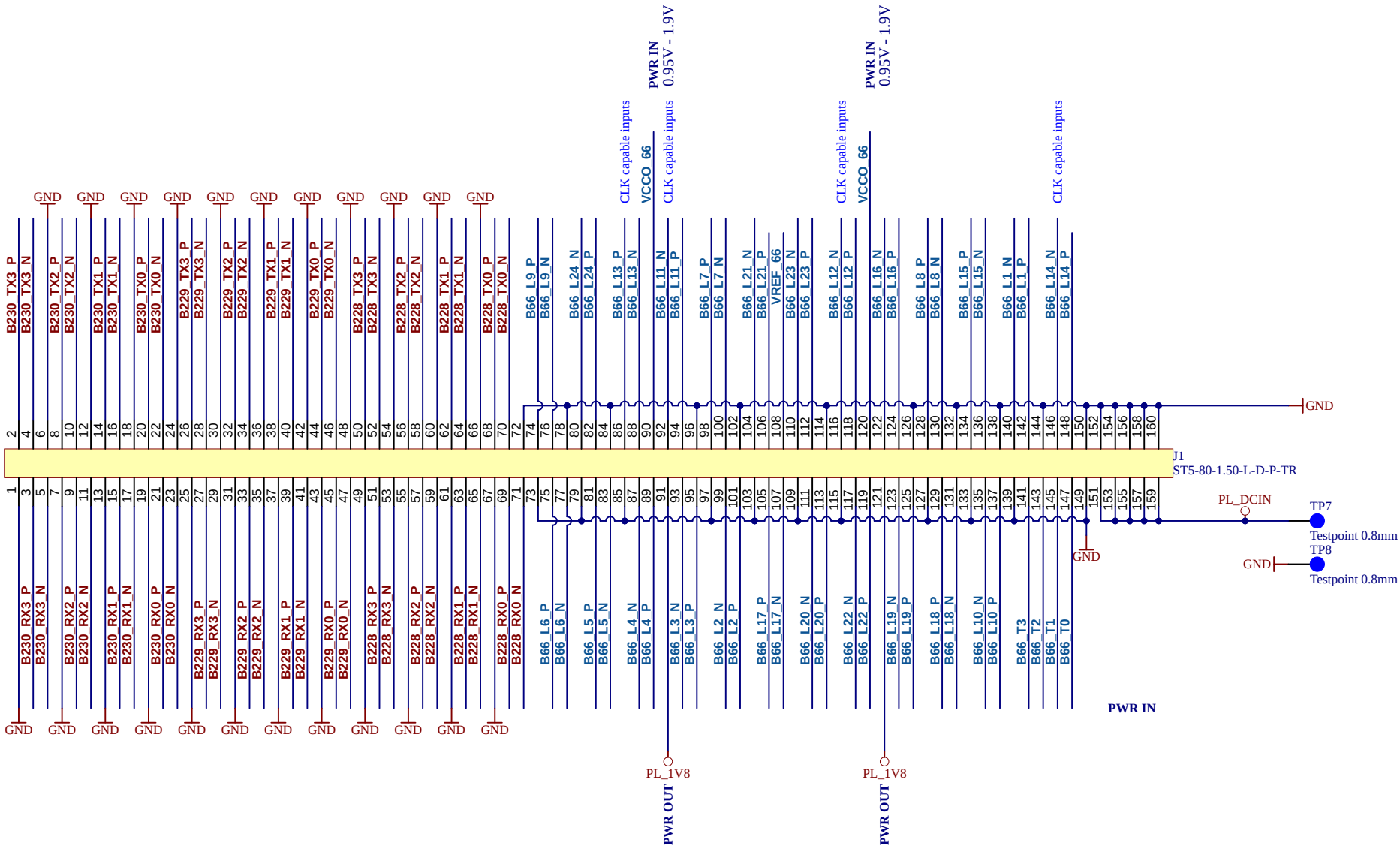
Title: TE0808		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 2/2/2026	Copyright: Trenz Electronic GmbH	Page 5 of 32
Filename: TE0808.SchDoc		

1

2

3

4



	Title: TE0808 - Connector J1		
	A4	Number: TE0808 9GI51-E	Rev. 06
	Date: 2/25/2026	Copyright: Trenz Electronic GmbH	Page 6 of 32
	Filename: J1.SchDoc		

1

2

3

4

1

2

3

4

A

B

C

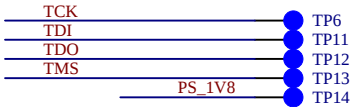
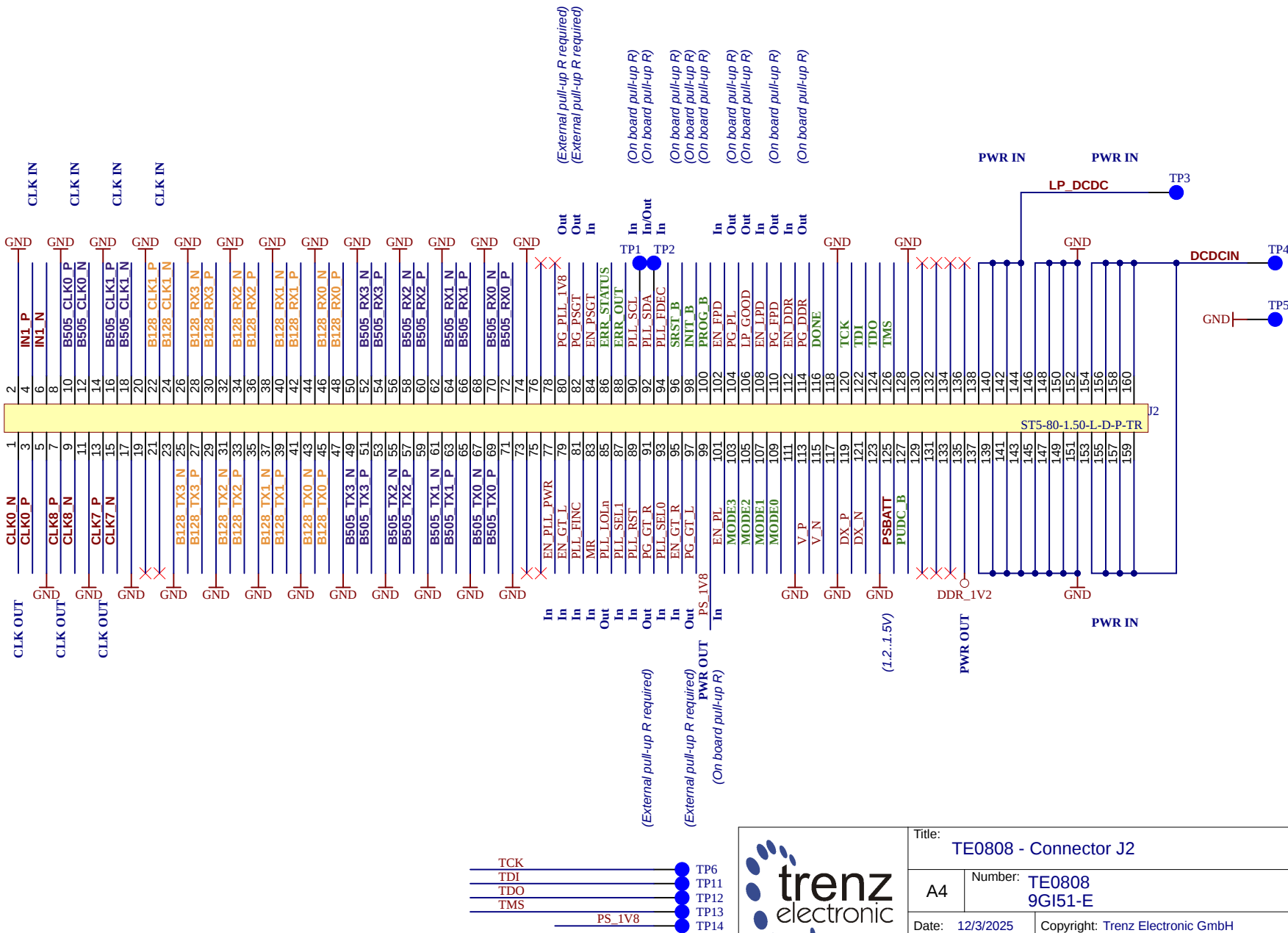
D

A

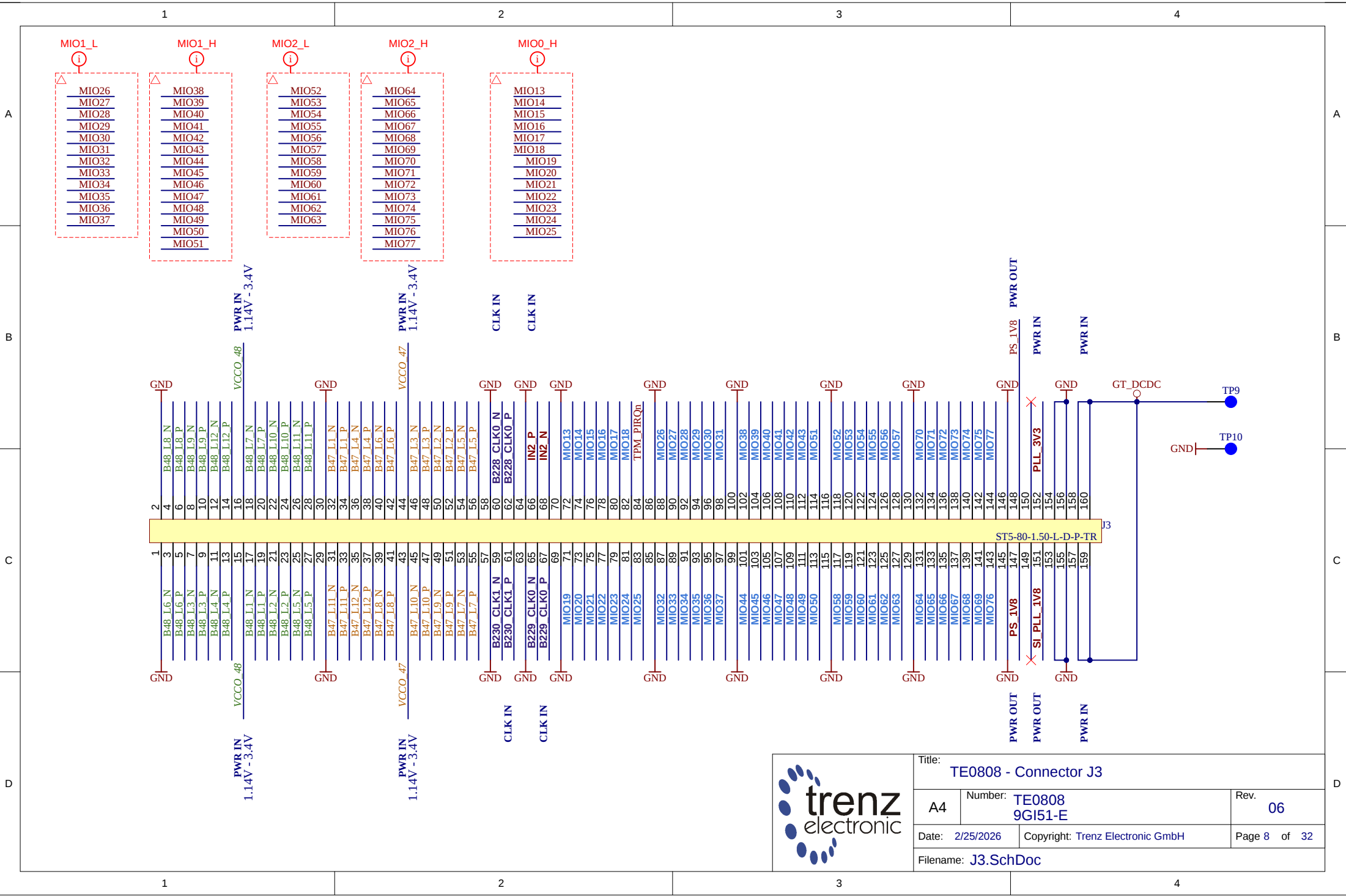
B

C

D

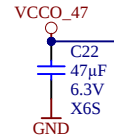


Title: TE0808 - Connector J2		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 12/3/2025	Copyright: Trenz Electronic GmbH	Page 7 of 32
Filename: J2.SchDoc		



Title: TE0808 - Connector J3		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 2/25/2026	Copyright: Trenz Electronic GmbH	Page 8 of 32
Filename: J3.SchDoc		

1.14V - 3.4V



PWR

U1B

BANK 47 HD

B47

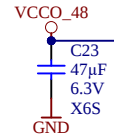
B47_L1_P	B15
B47_L1_N	A15
B47_L2_P	B14
B47_L2_N	A14
B47_L3_P	B13
B47_L3_N	A13
B47_L4_P	C14
B47_L4_N	C13
B47_L5_P	D15
B47_L5_N	D14
B47_L6_P	E14
B47_L6_N	E13

VCCO_47	IO_L1P_AD11P_47	IO_L7P_HDGC_AD5P_47
VCCO_47	IO_L1N_AD11N_47	IO_L7N_HDGC_AD5N_47
	IO_L2P_AD10P_47	IO_L8P_HDGC_AD4P_47
	IO_L2N_AD10N_47	IO_L8N_HDGC_AD4N_47
	IO_L3P_AD9P_47	IO_L9P_AD3P_47
	IO_L3N_AD9N_47	IO_L9N_AD3N_47
	IO_L4P_AD8P_47	IO_L10P_AD2P_47
	IO_L4N_AD8N_47	IO_L10N_AD2N_47
	IO_L5P_HDGC_AD7P_47	IO_L11P_AD1P_47
	IO_L5N_HDGC_AD7N_47	IO_L11N_AD1N_47
	IO_L6P_HDGC_AD6P_47	IO_L12P_AD0P_47
	IO_L6N_HDGC_AD6N_47	IO_L12N_AD0N_47

F15	B47_L7_P
E15	B47_L7_N
G13	B47_L8_P
F13	B47_L8_N
G15	B47_L9_P
G14	B47_L9_N
K15	B47_L10_P
J15	B47_L10_N
K14	B47_L11_P
J14	B47_L11_N
H14	B47_L12_P
H13	B47_L12_N

B47

1.14V - 3.4V



PWR

H10

K11

BANK 48 HD

B48

B48_L1_P	C12
B48_L1_N	B11
B48_L2_P	A12
B48_L2_N	A11
B48_L3_P	B10
B48_L3_N	A10
B48_L4_P	D11
B48_L4_N	C11
B48_L5_P	E12
B48_L5_N	D12
B48_L6_P	E10
B48_L6_N	D10

VCCO_48	IO_L1P_AD15P_48	IO_L7P_HDGC_48
VCCO_48	IO_L1N_AD15N_48	IO_L7N_HDGC_48
	IO_L2P_AD14P_48	IO_L8P_HDGC_48
	IO_L2N_AD14N_48	IO_L8N_HDGC_48
	IO_L3P_AD13P_48	IO_L9P_AD11P_48
	IO_L3N_AD13N_48	IO_L9N_AD11N_48
	IO_L4P_AD12P_48	IO_L10P_AD10P_48
	IO_L4N_AD12N_48	IO_L10N_AD10N_48
	IO_L5P_HDGC_48	IO_L11P_AD9P_48
	IO_L5N_HDGC_48	IO_L11N_AD9N_48
	IO_L6P_HDGC_48	IO_L12P_AD8P_48
	IO_L6N_HDGC_48	IO_L12N_AD8N_48

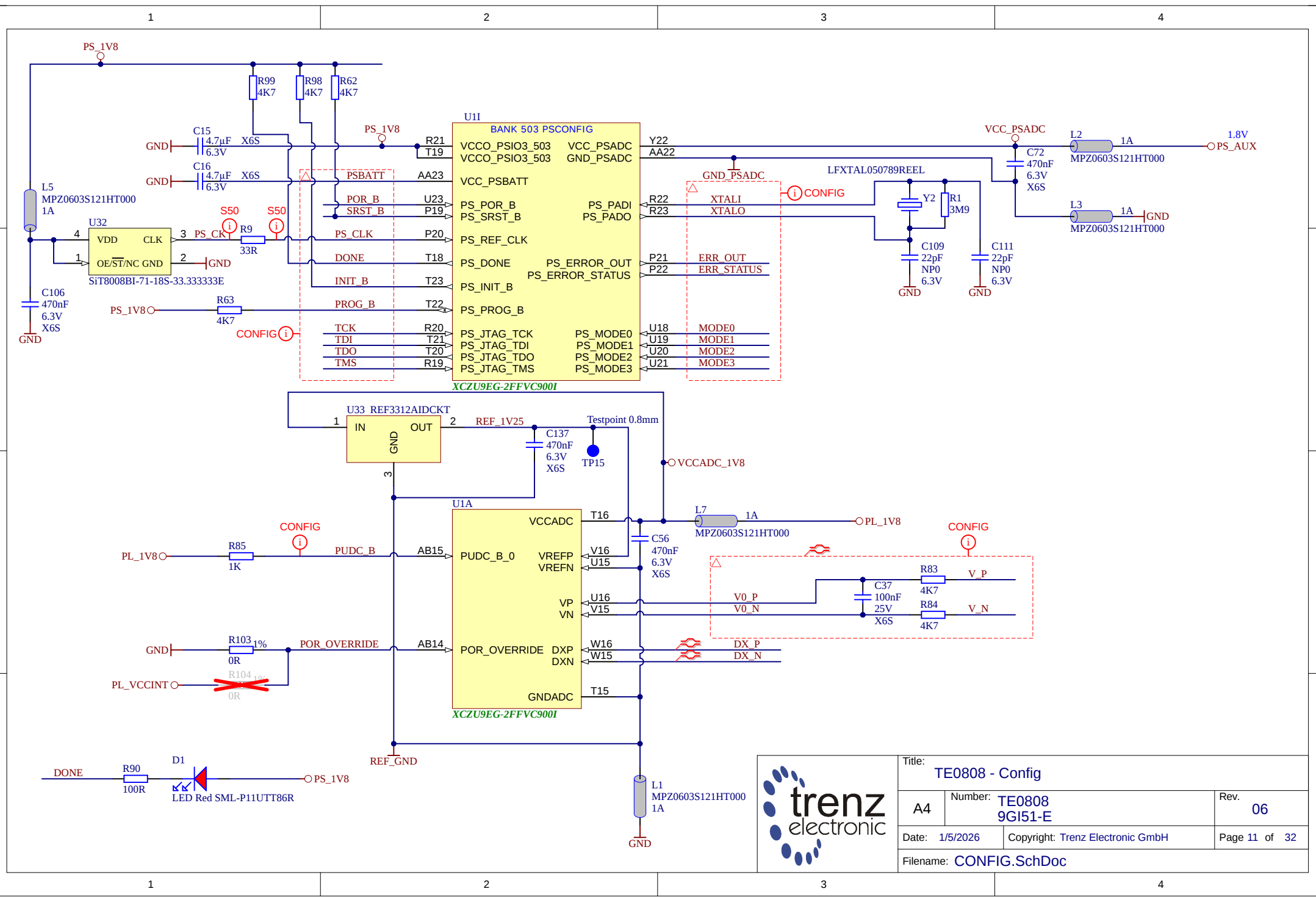
F12	B48_L7_P
F11	B48_L7_N
G10	B48_L8_P
F10	B48_L8_N
K13	B48_L9_P
K12	B48_L9_N
H12	B48_L10_P
G11	B48_L10_N
J12	B48_L11_P
H11	B48_L11_N
J11	B48_L12_P
J10	B48_L12_N

B48

XCZU9EG-2FFVC900I

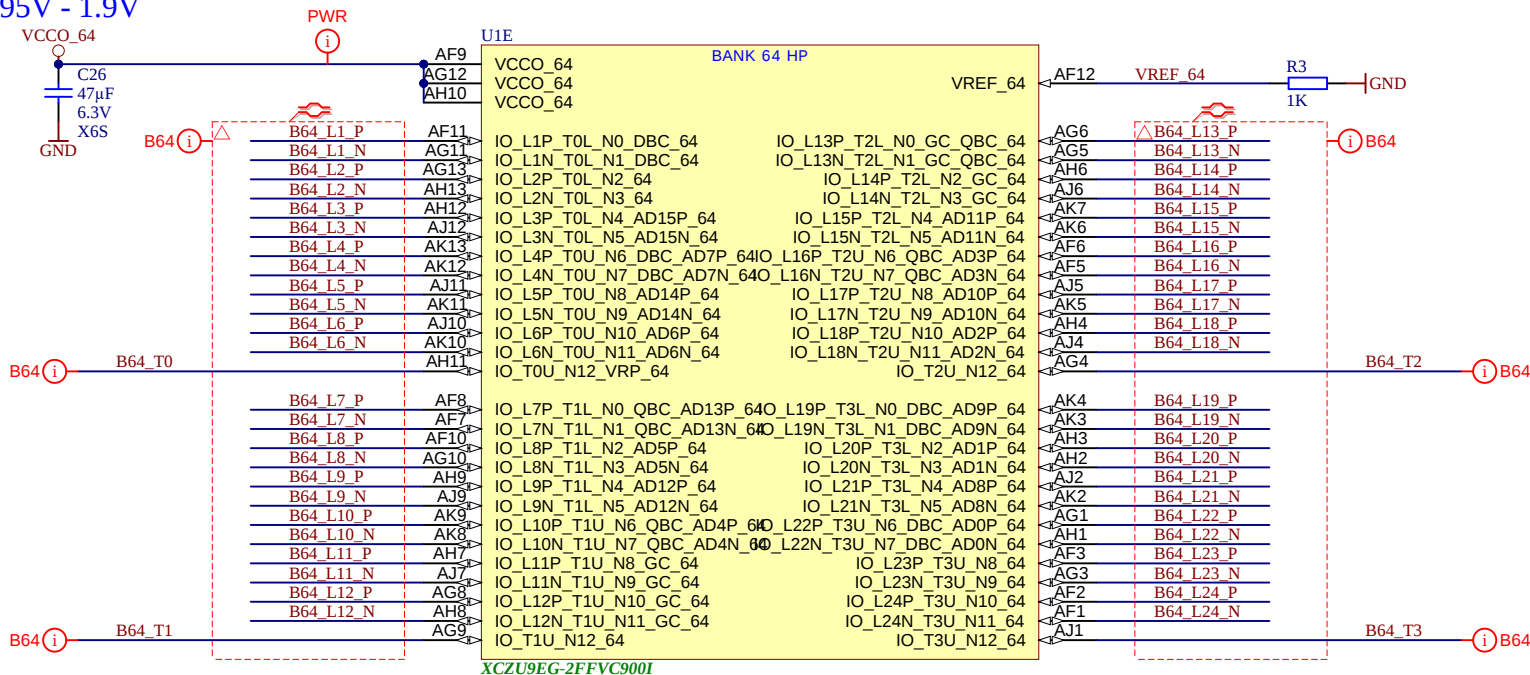


Title: TE0808 - B47HD and B48HD		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 8/15/2025	Copyright: Trenz Electronic GmbH	Page 10 of 32
Filename: B_HD.SchDoc		



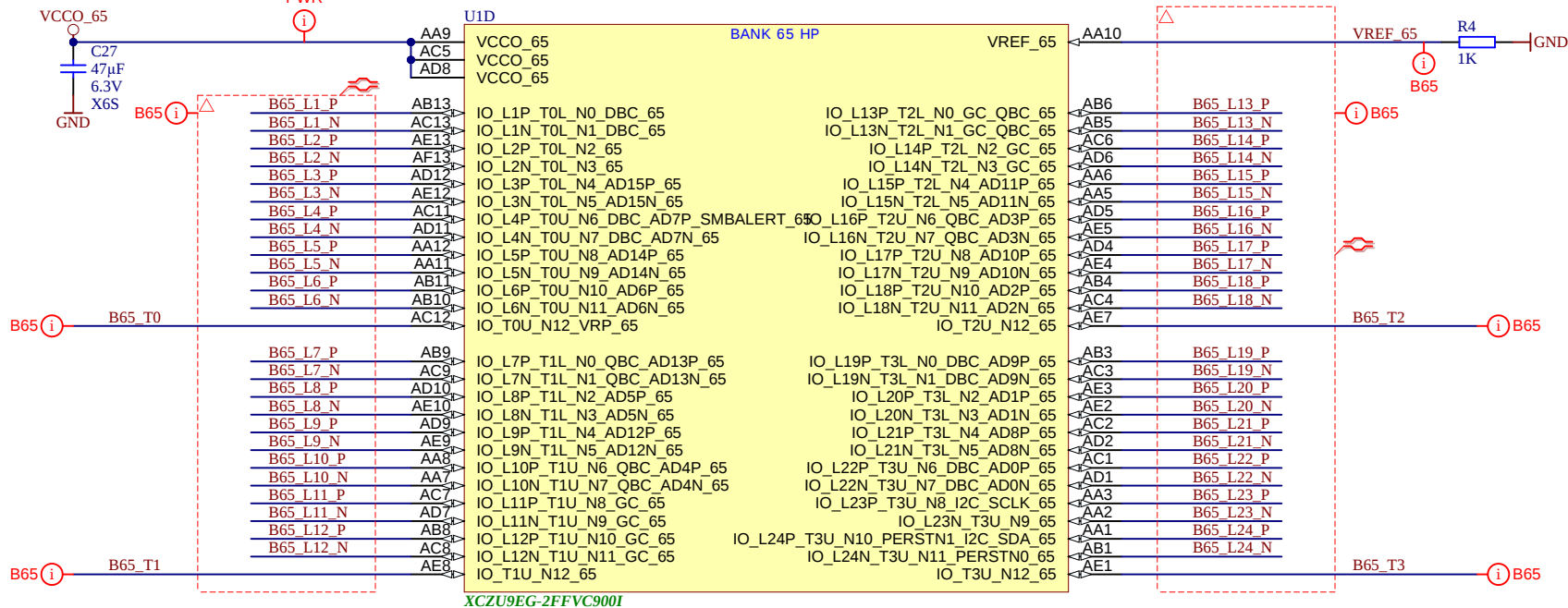
Title: TE0808 - Config		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 1/5/2026	Copyright: Trenz Electronic GmbH	Page 11 of 32
Filename: CONFIG.SchDoc		

0.95V - 1.9V



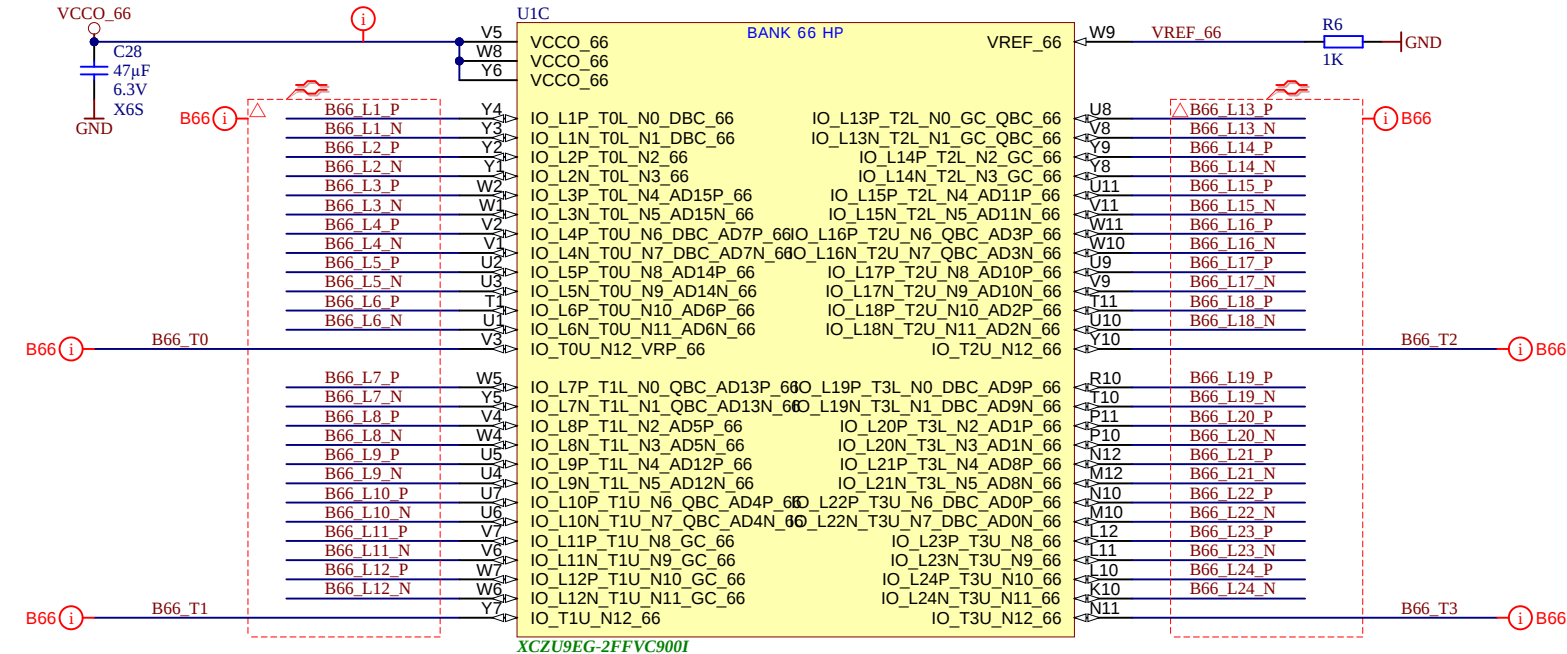
Title: TE0808 - B64		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 8/15/2025	Copyright: Trenz Electronic GmbH	Page 12 of 32
Filename: B64.SchDoc		

0.95V - 1.9V

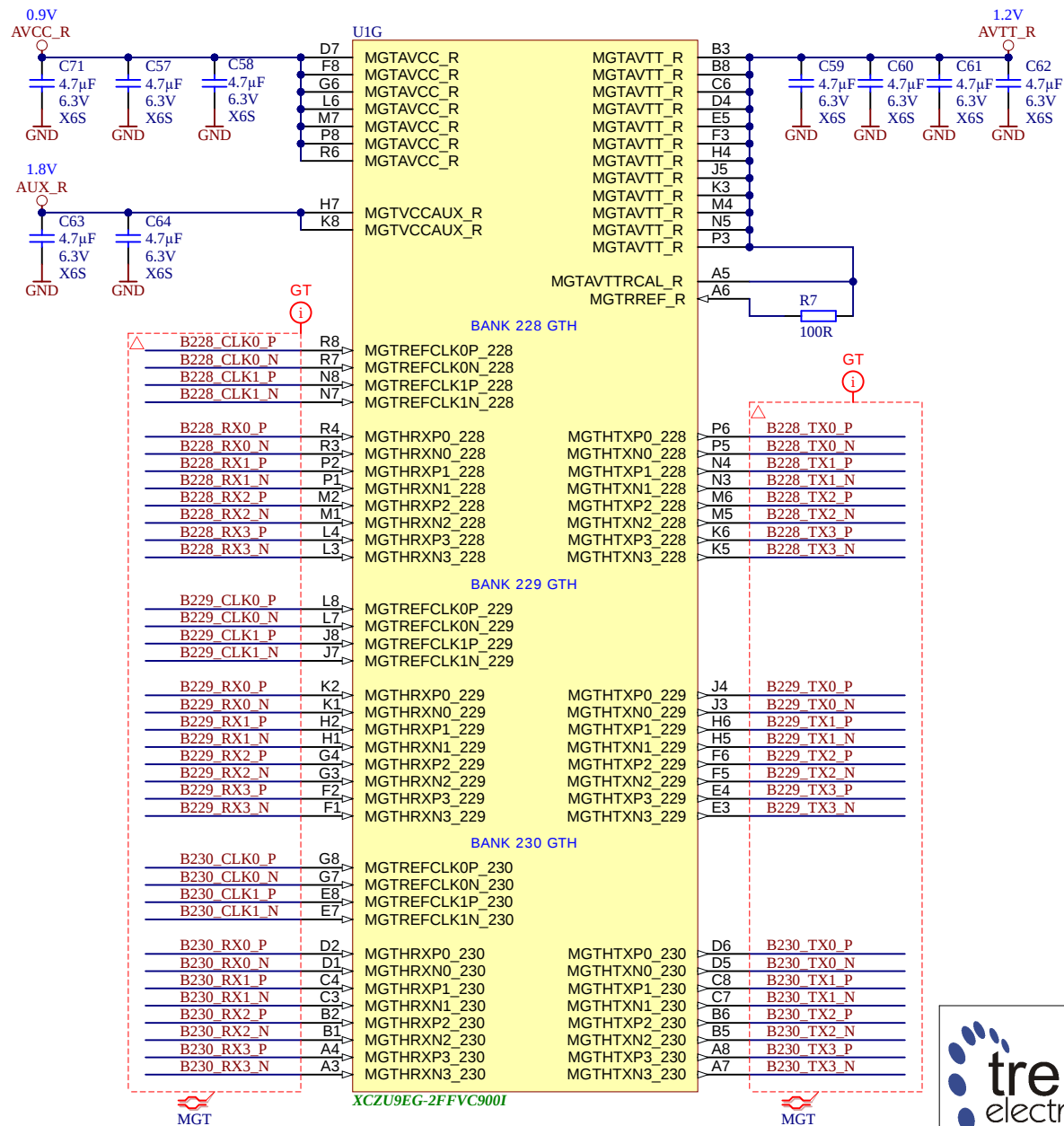


Title: TE0808 - B65			
A4	Number: TE0808 9GI51-E		Rev. 06
Date: 8/15/2025		Copyright: Trenz Electronic GmbH	Page 13 of 32
Filename: B65.SchDoc			

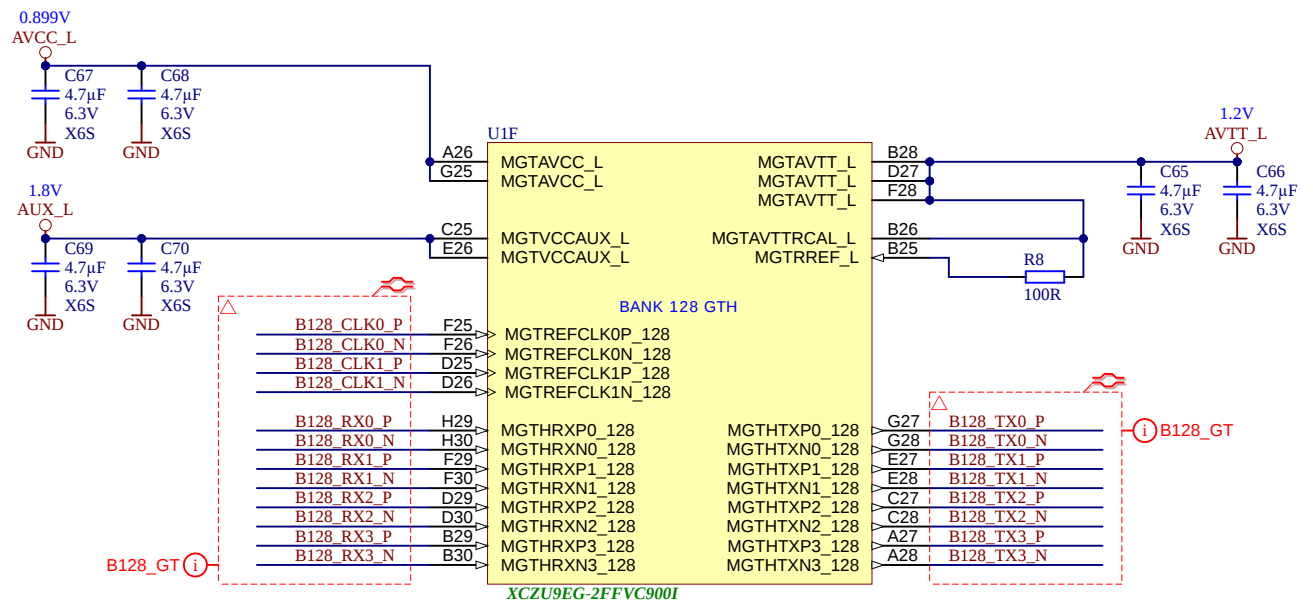
0.95V - 1.9V



Title: TE0808 - B66			
A4	Number: TE0808 9GI51-E		Rev. 06
Date: 11/27/2025		Copyright: Trenz Electronic GmbH	Page 14 of 32
Filename: B66.SchDoc			



Title: TE0808 - B228GTH_B229GTH_B230GTH		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 12/3/2025	Copyright: Trenz Electronic GmbH	Page 15 of 32
Filename: B_GT.SchDoc		



		Title: TE0808 - B128GTH	
		A4 Number: TE0808 9GI51-E	Rev. 06
Date: 12/3/2025		Copyright: Trenz Electronic GmbH	
Filename: B_GT_2.SchDoc		Page 16 of 32	

1

2

3

4

A

A

B

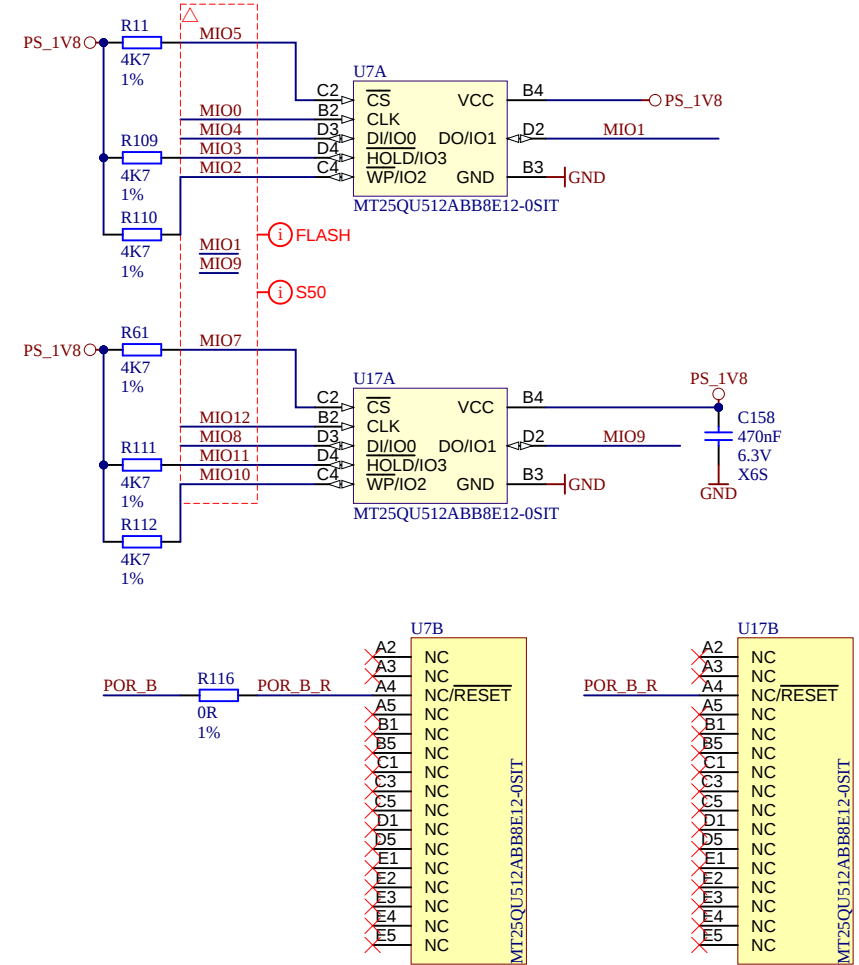
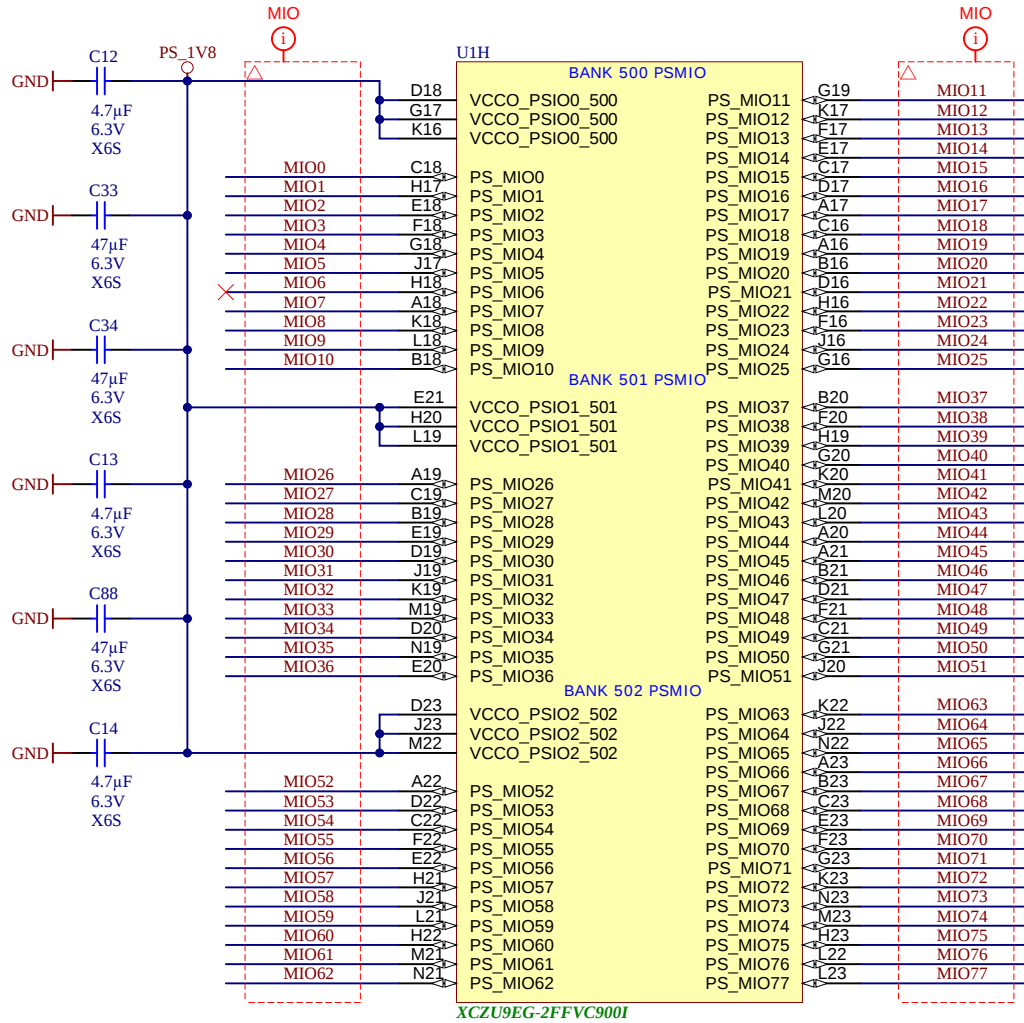
B

C

C

D

D



Title: TE0808 - MIO Banks		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 1/5/2026	Copyright: Trenz Electronic GmbH	Page 17 of 32
Filename: B_MIO.SchDoc		

1

2

3

4

1

2

3

4

A

A

B

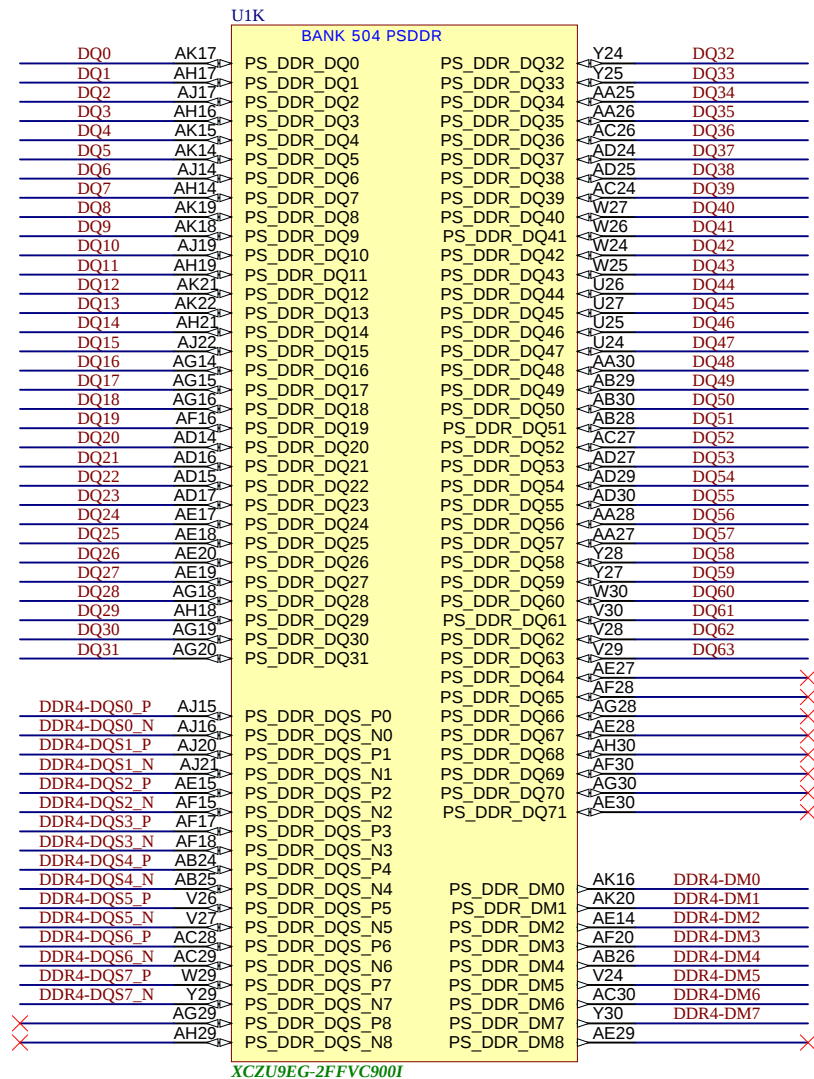
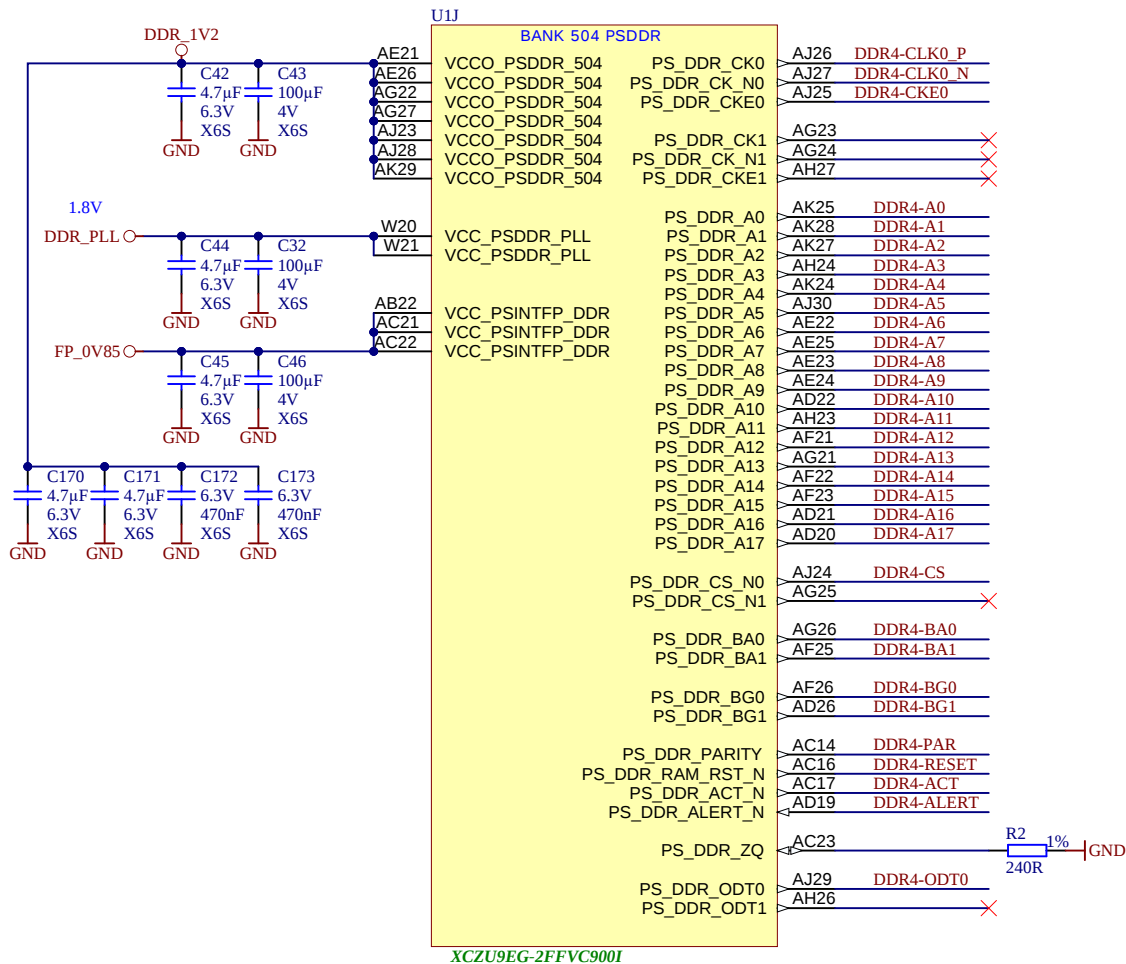
B

C

C

D

D



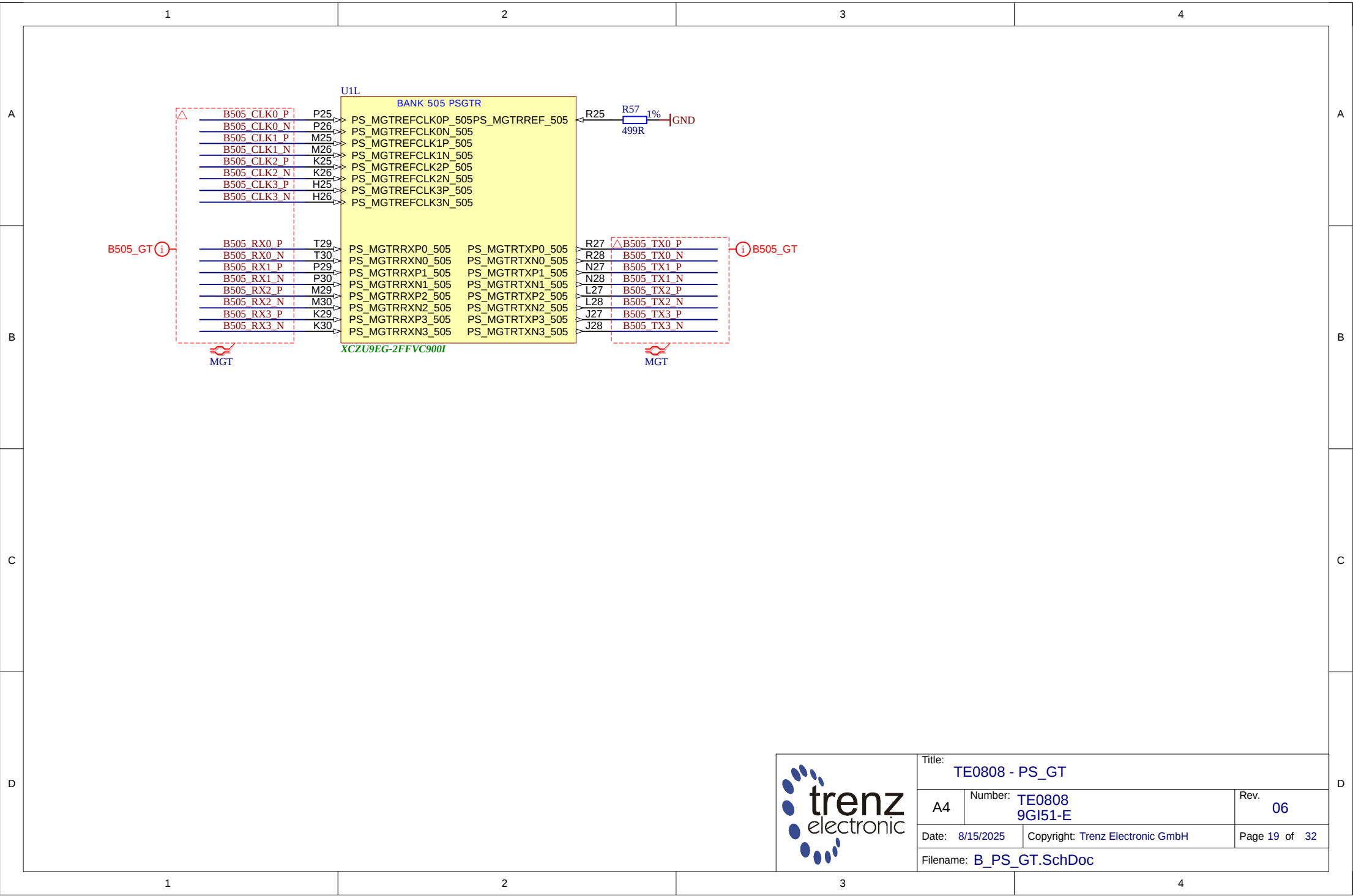
Title: TE0808 - PS_DDR		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 12/3/2025	Copyright: Trenz Electronic GmbH	Page 18 of 32
Filename: PS_DDR.SchDoc		

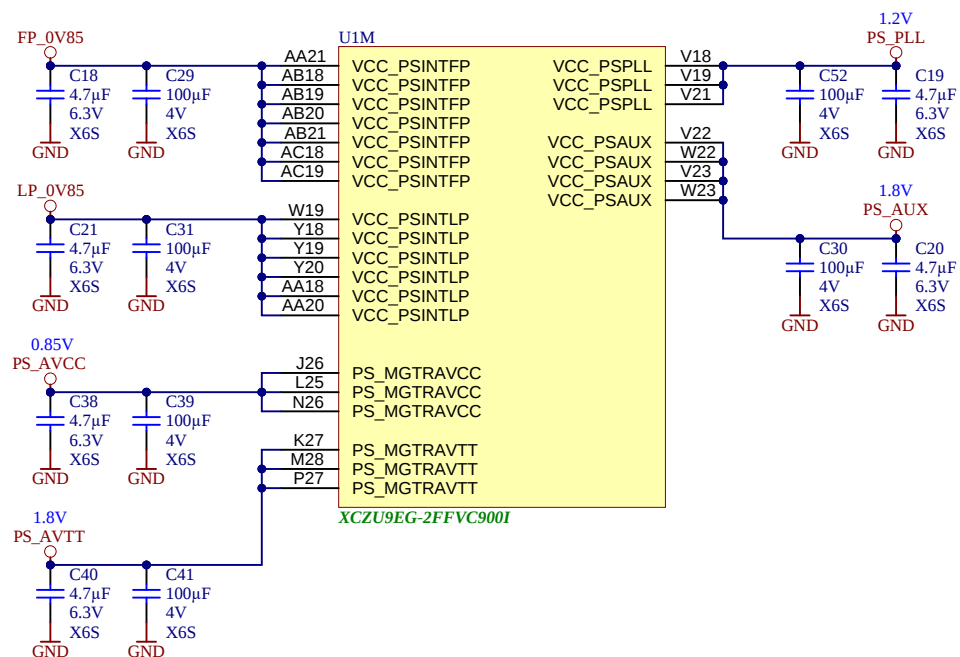
1

2

3

4





		Title: TE0808 - ZU_PS_POWER	
		A4	Number: TE0808 9GI51-E
Date: 12/3/2025		Copyright: Trenz Electronic GmbH	
Filename: ZU_PS_POWER.SchDoc		Page 20 of 32	

1

2

3

4

A

A

B

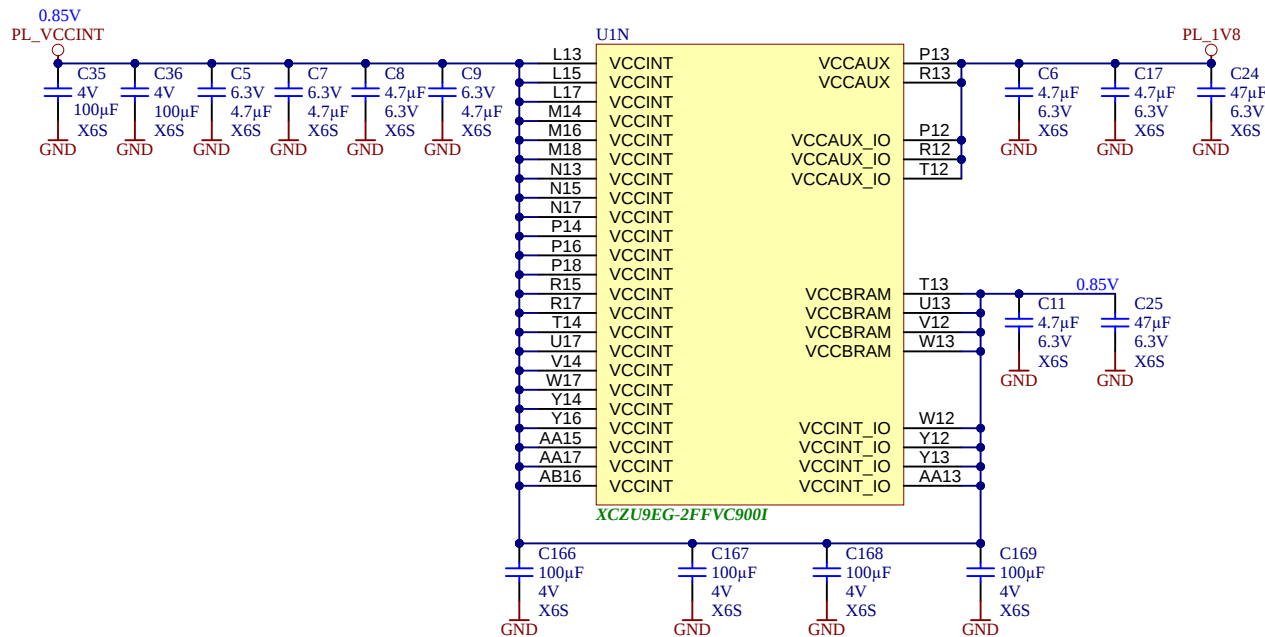
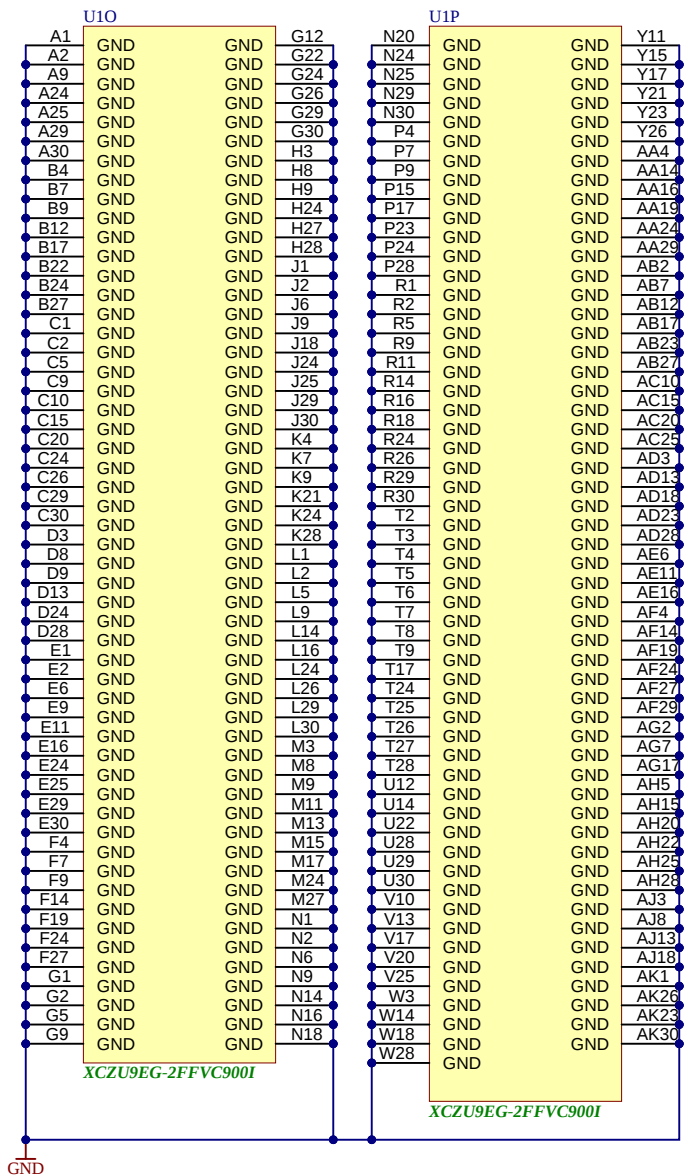
B

C

C

D

D



Title: TE0808 - ZU_POWER		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 12/3/2025	Copyright: Trenz Electronic GmbH	Page 21 of 32
Filename: ZU_POWER.SchDoc		

1

2

3

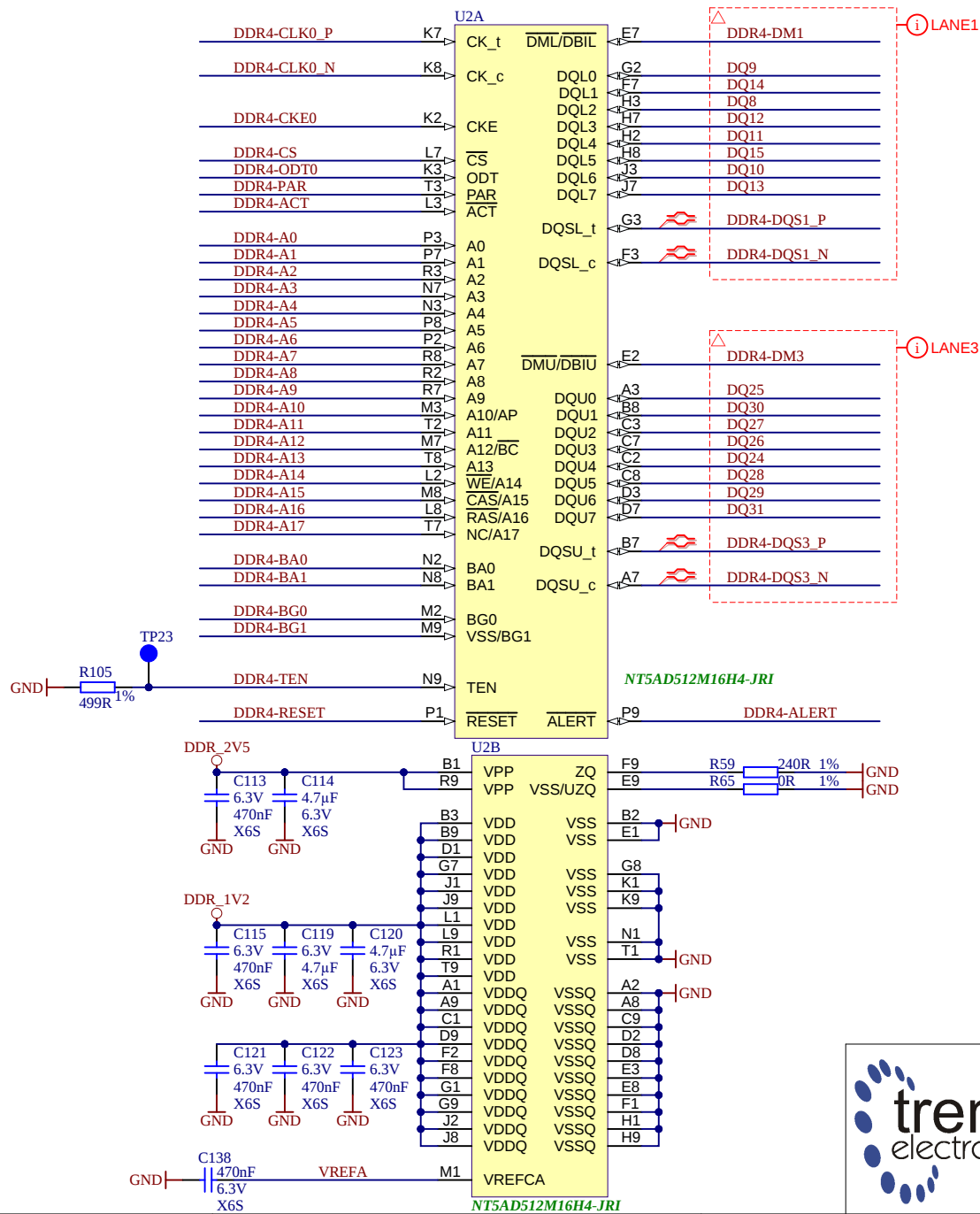
4

1

2

3

4



Title: TE0808 - DDR4_1_RAM		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 12/3/2025	Copyright: Trenz Electronic GmbH	Page 22 of 32
Filename: DDR4-RAM.SchDoc		

1

2

3

4

1

2

3

4

A

A

B

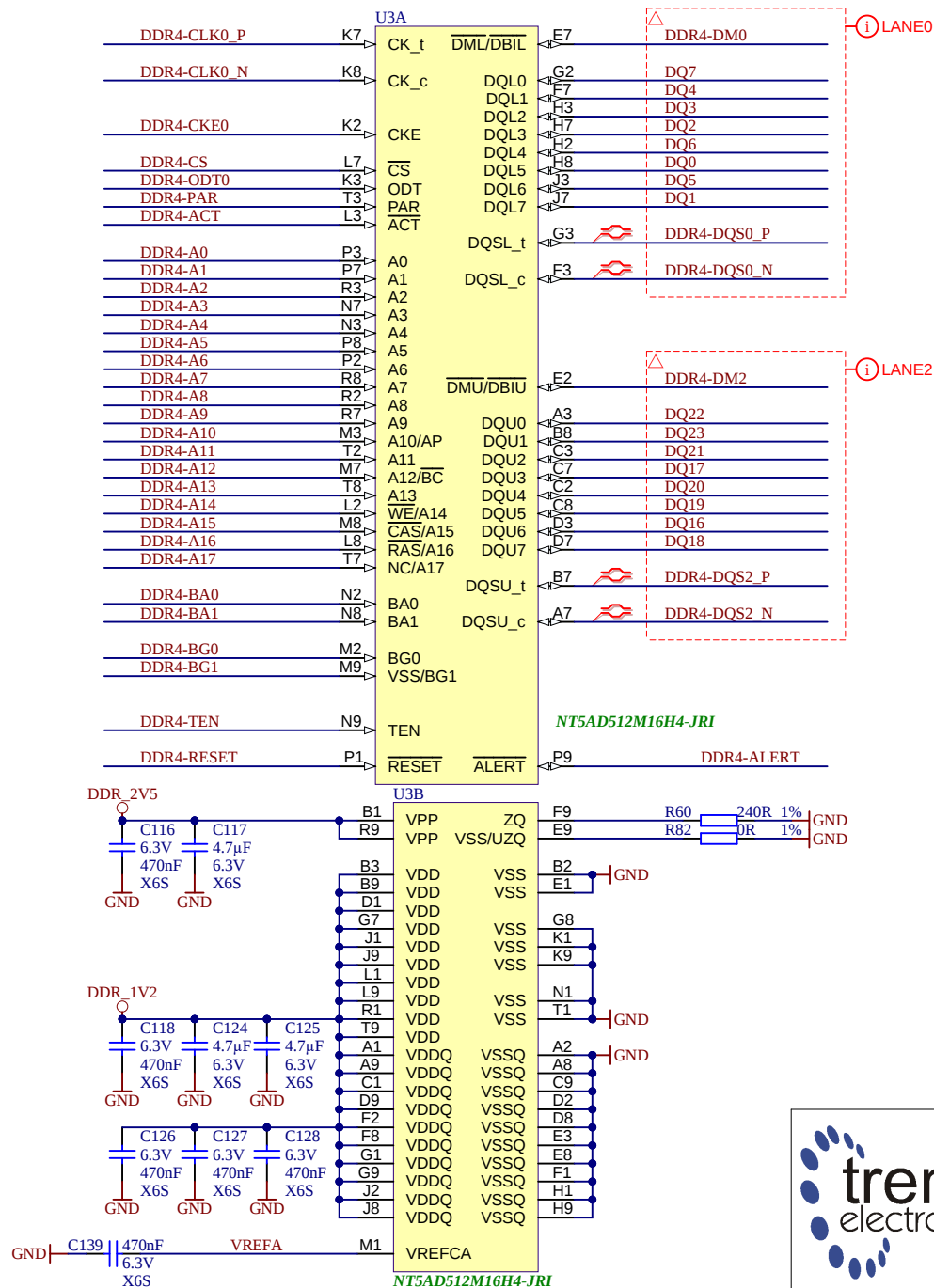
B

C

C

D

D



Title: TE0808 - DDR4_2_RAM		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 2020-04-02	Copyright: Trenz Electronic GmbH	Page 23 of 32
Filename: DDR4-RAM_2.SchDoc		

1

2

3

4

1

2

3

4

A

A

B

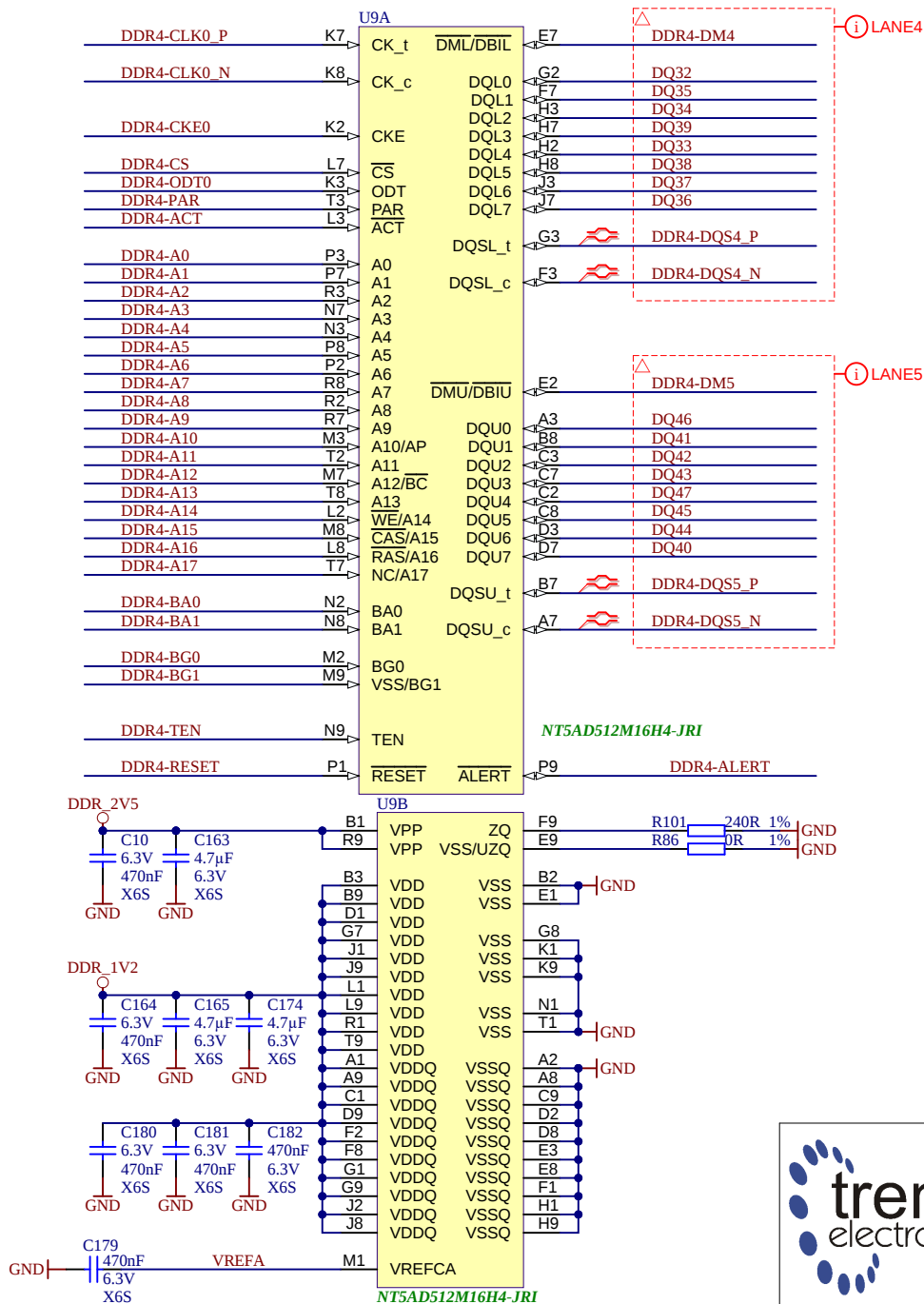
B

C

C

D

D



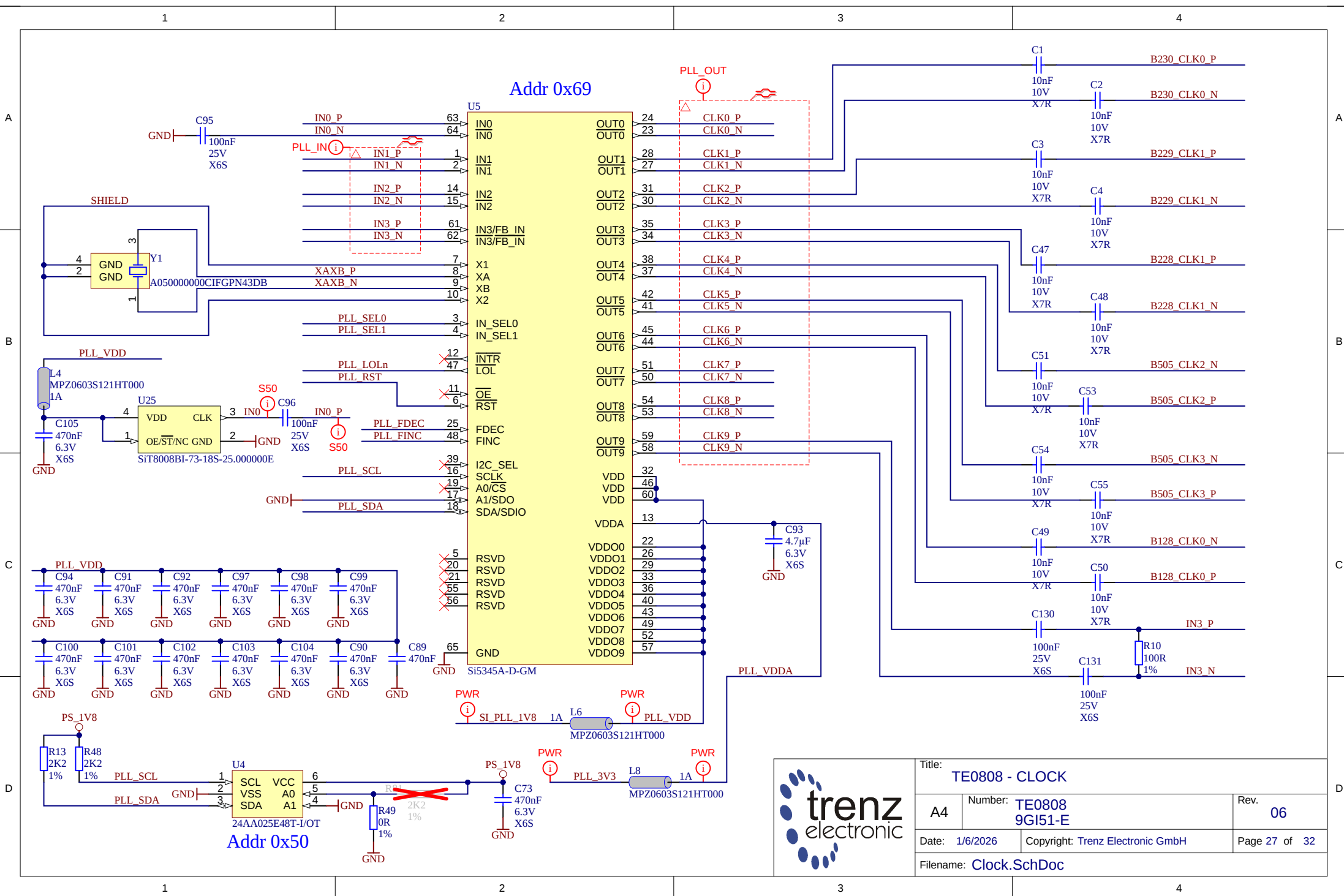
Title: TE0808 - DDR4_3_RAM		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 12/3/2025	Copyright: Trenz Electronic GmbH	Page 24 of 32
Filename: DDR4-RAM_3.SchDoc		

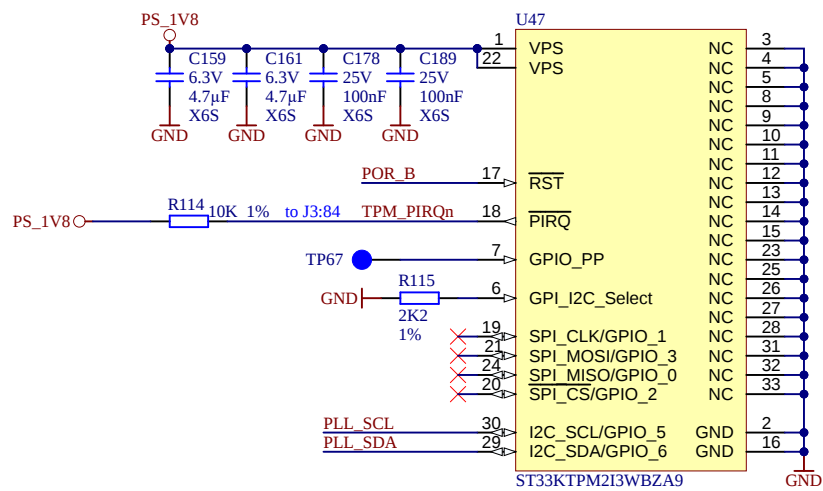
1

2

3

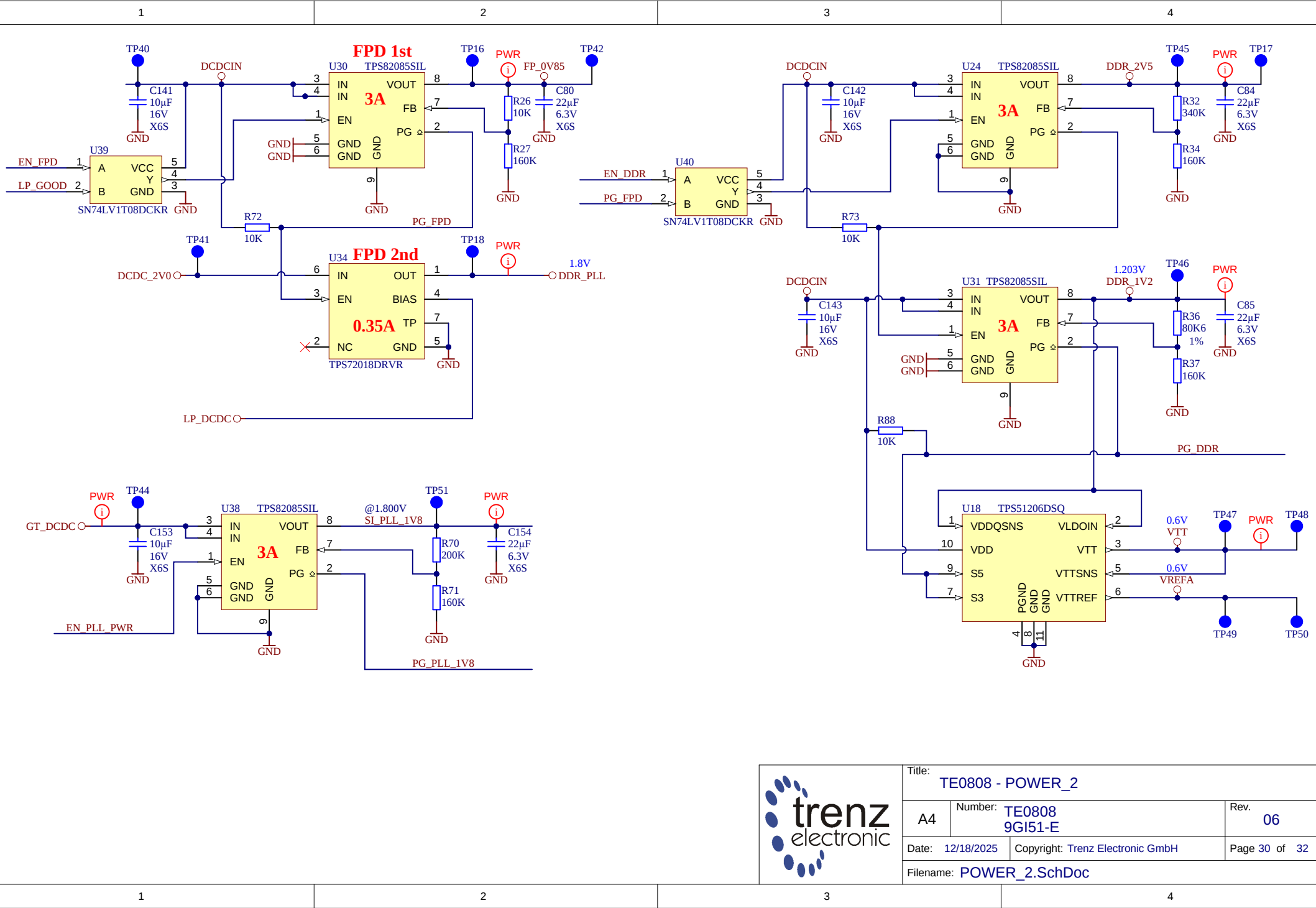
4

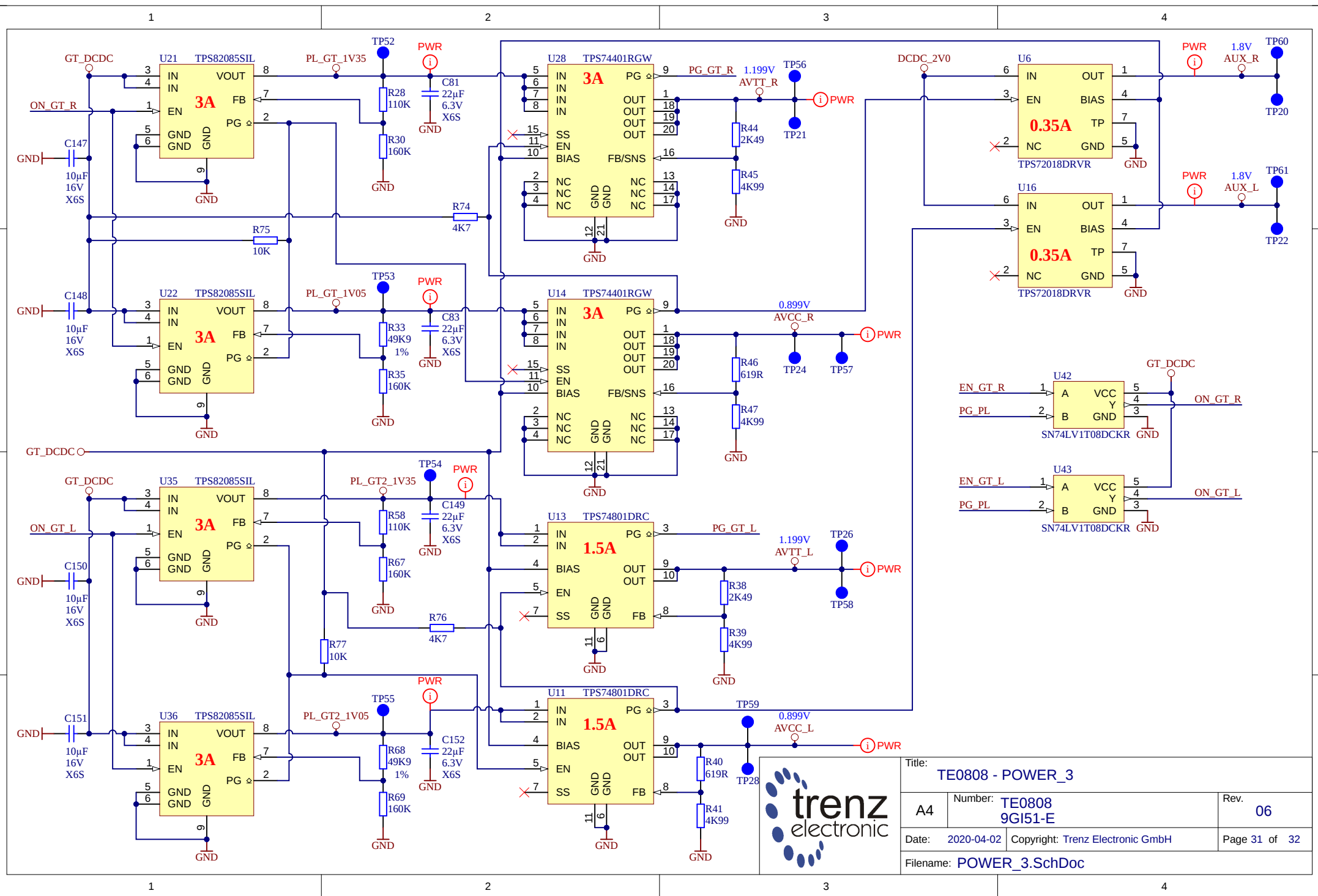




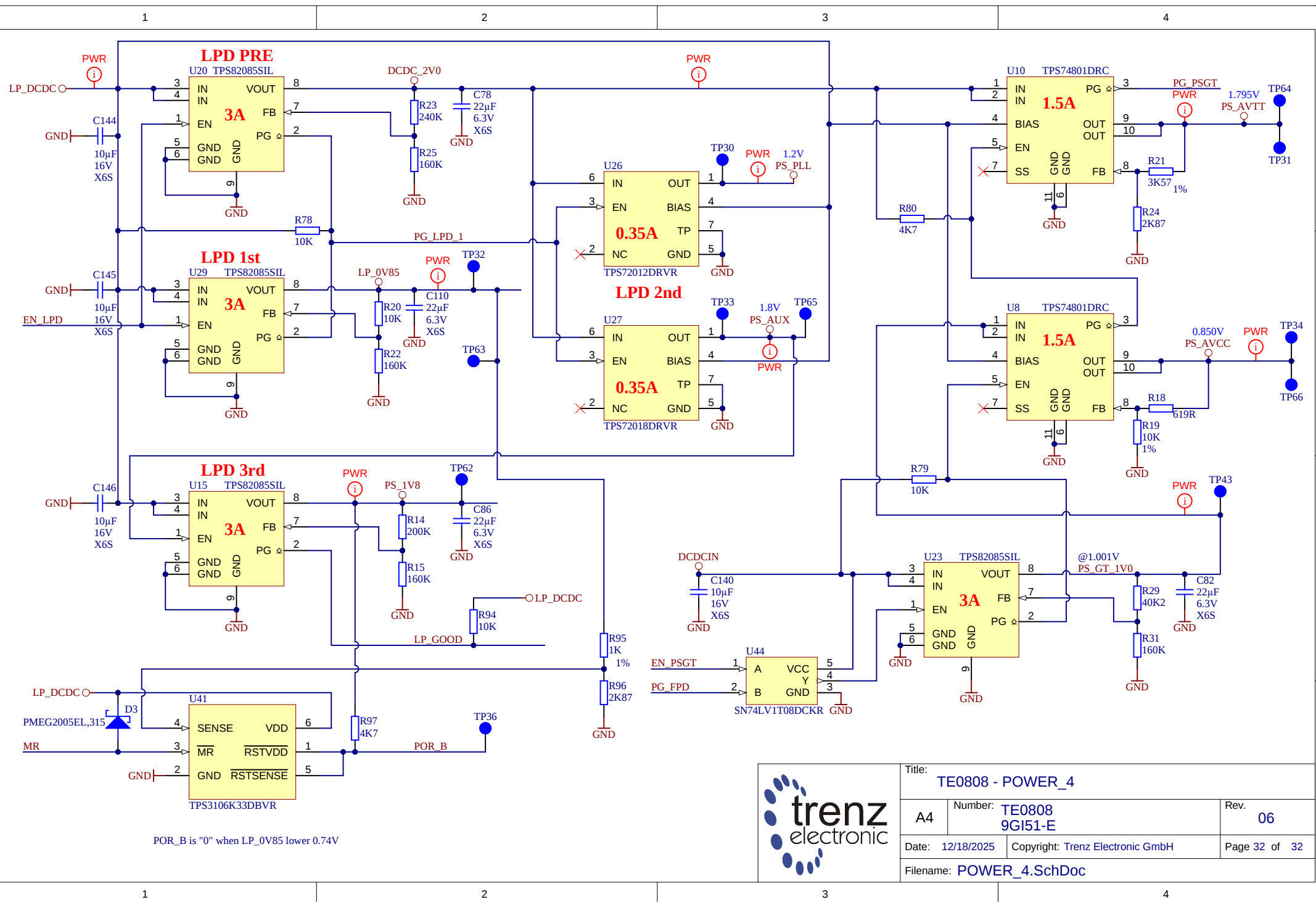
Addr 0x2E

		Title: TE0808 - TPM	
		A4	Number: TE0808 9GI51-E
Date: 1/6/2026		Copyright: Trenz Electronic GmbH	
Filename: TPM.SchDoc		Page 28 of 32	





Title: TE0808 - POWER_3		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 2020-04-02	Copyright: Trenz Electronic GmbH	
Page 31 of 32		Filename: POWER_3.SchDoc



Title: TE0808 - POWER_4		
A4	Number: TE0808 9GI51-E	Rev. 06
Date: 12/18/2025	Copyright: Trenz Electronic GmbH	Page 32 of 32
Filename: POWER_4.SchDoc		