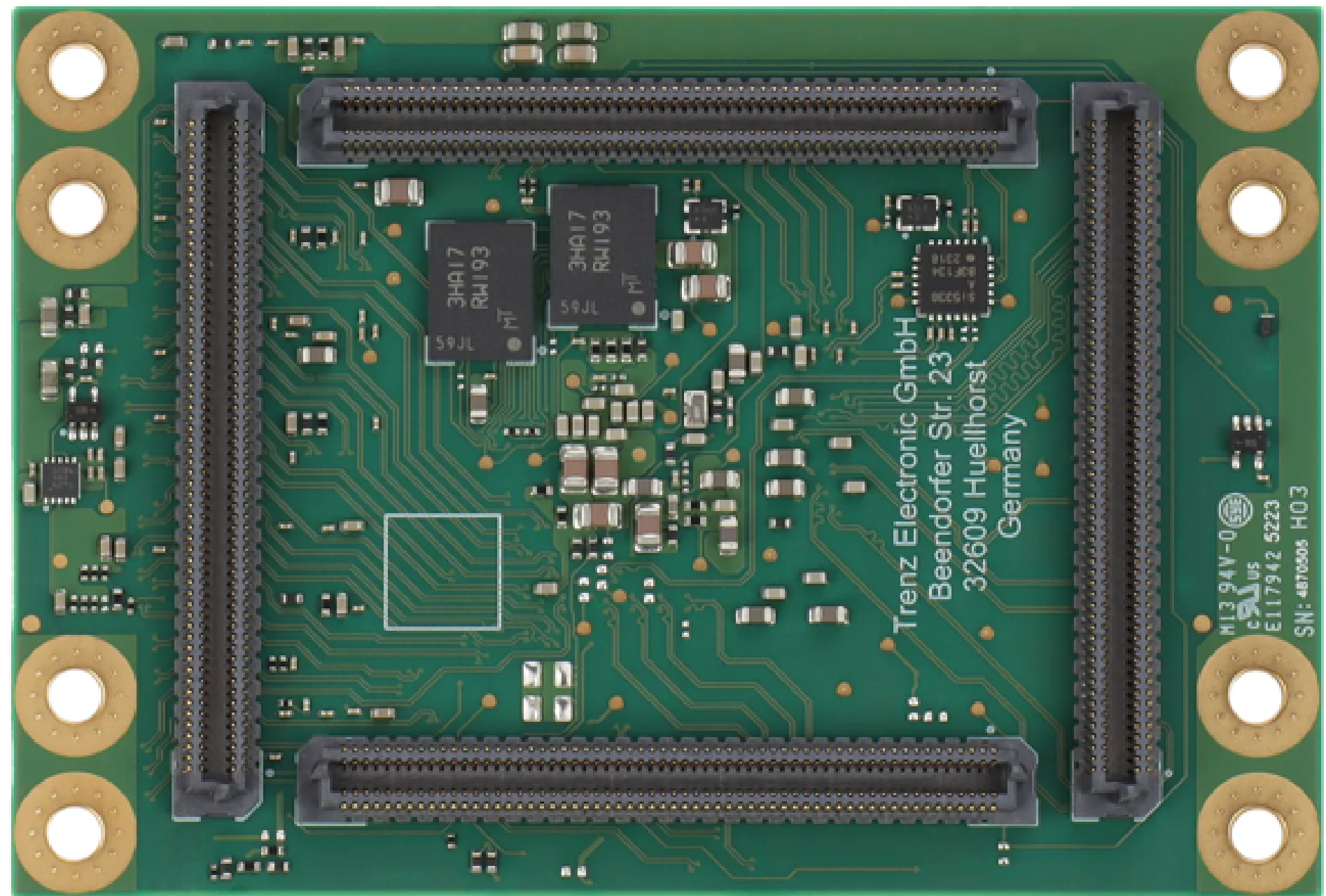
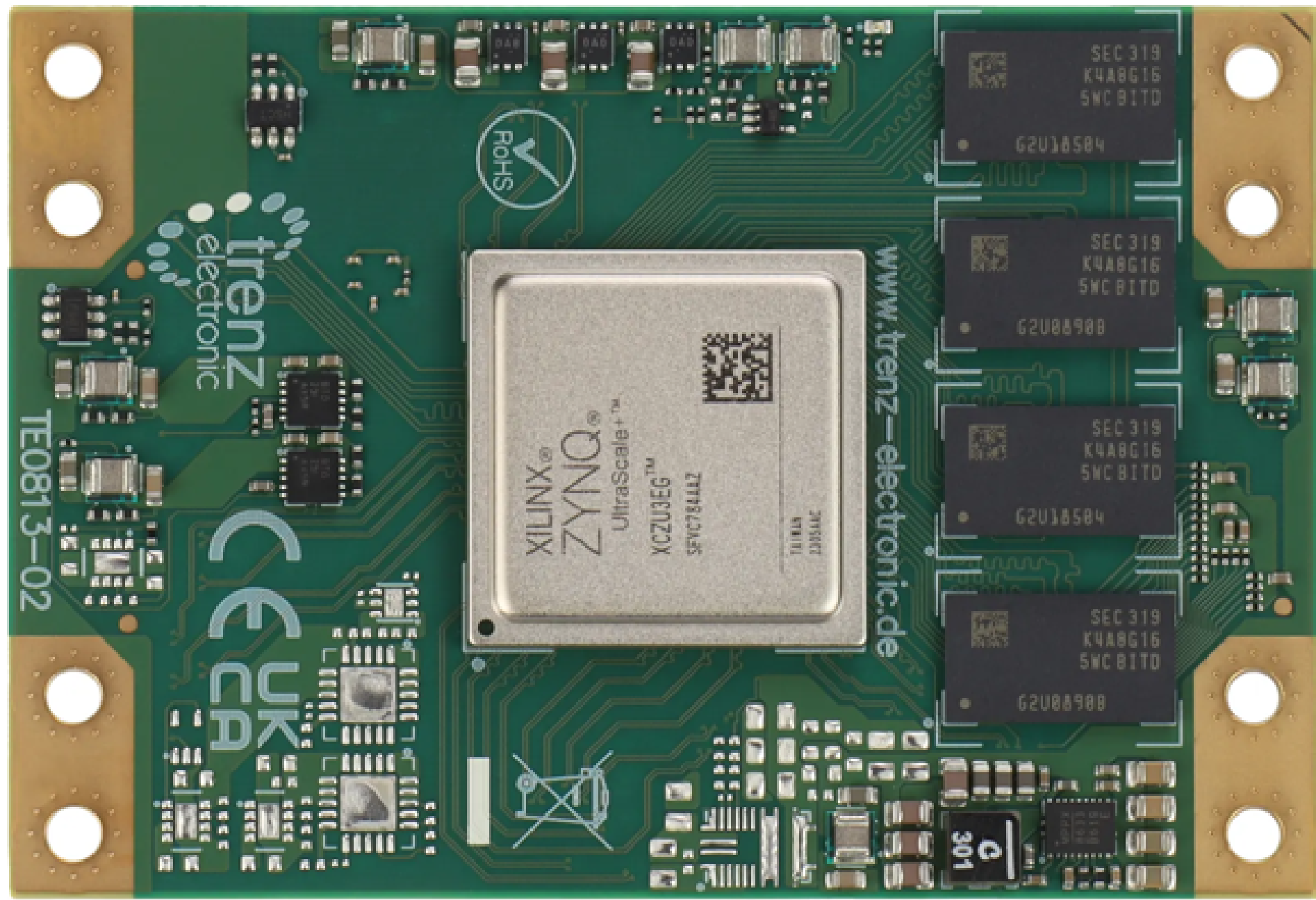
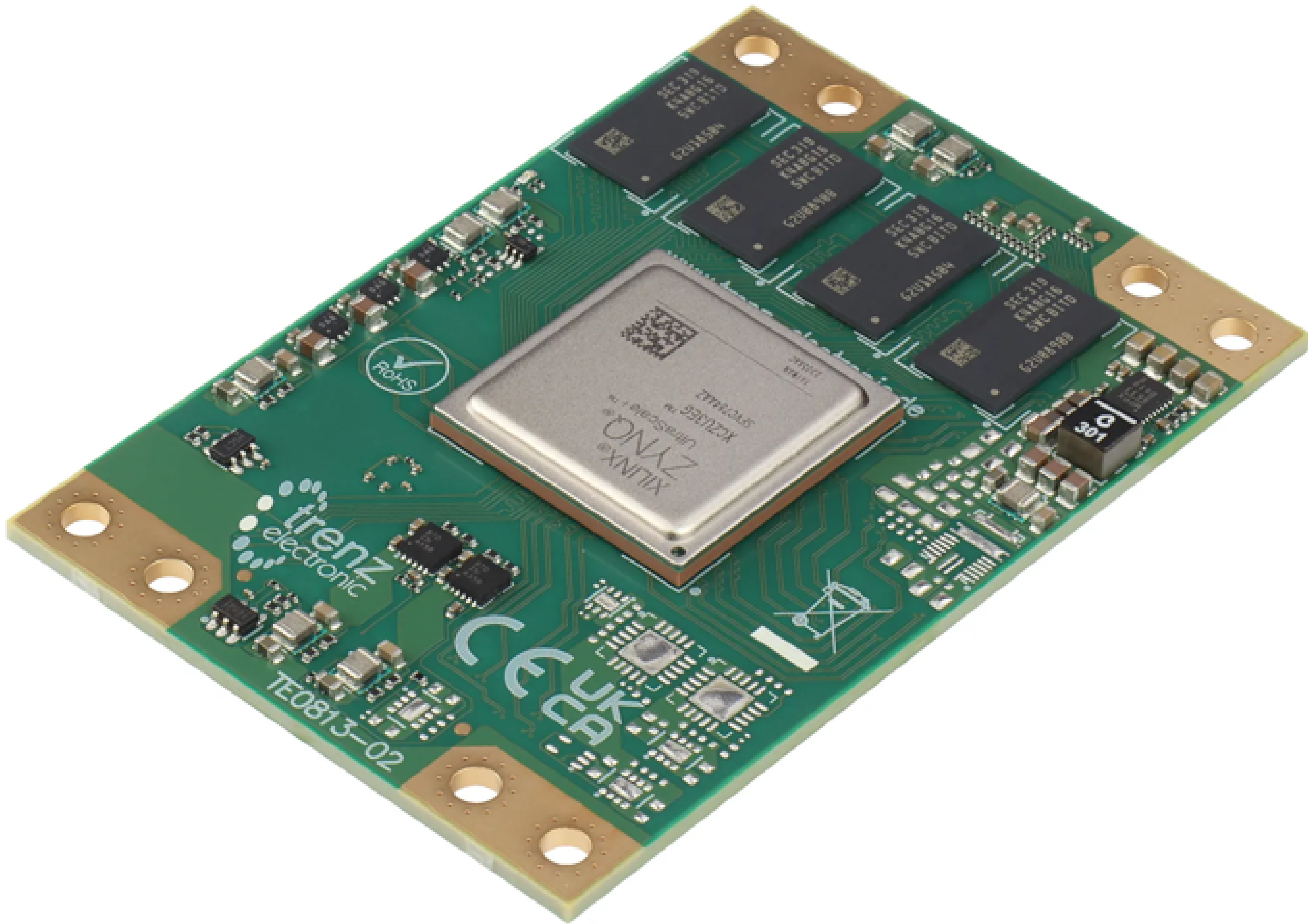


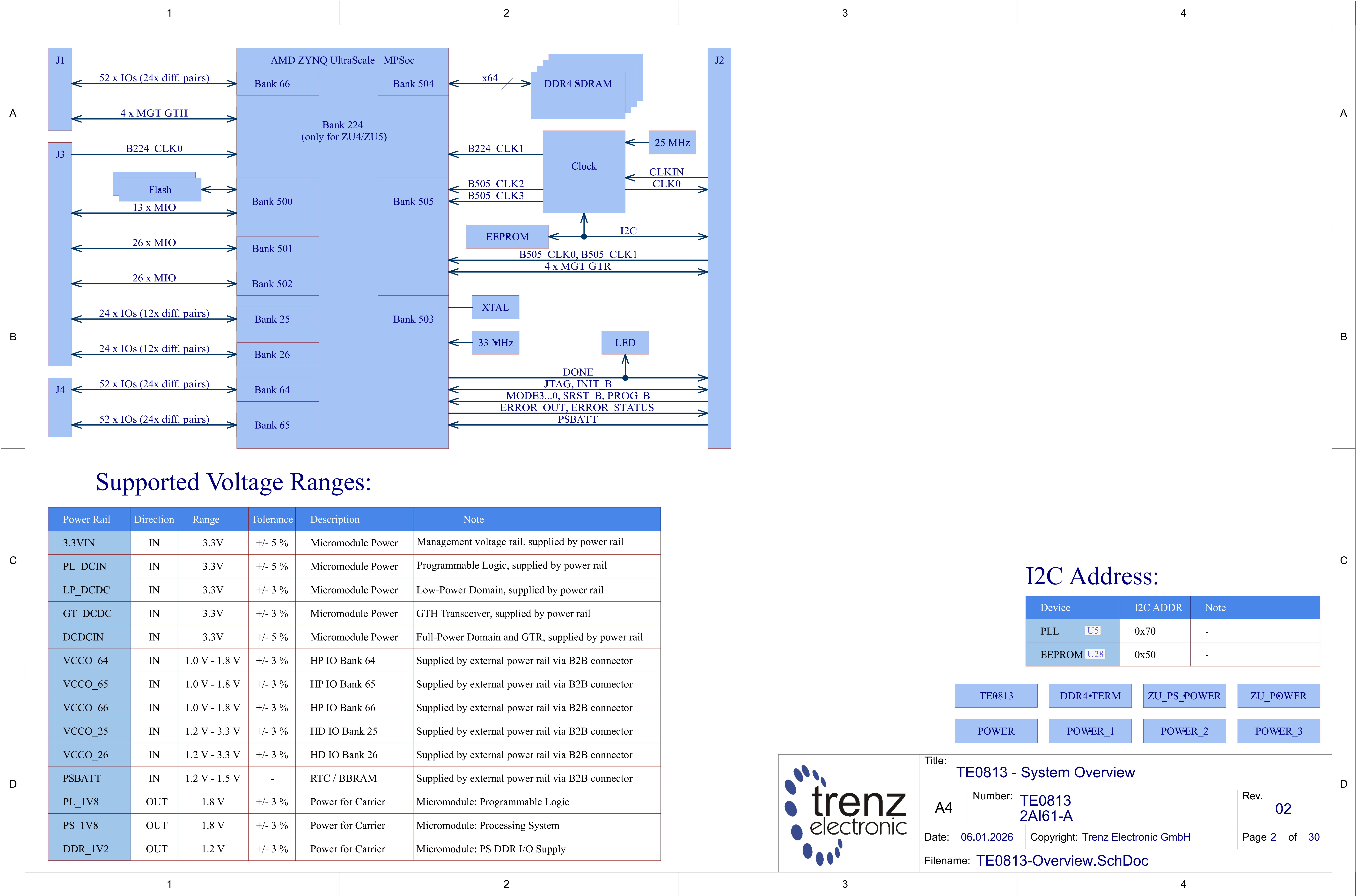


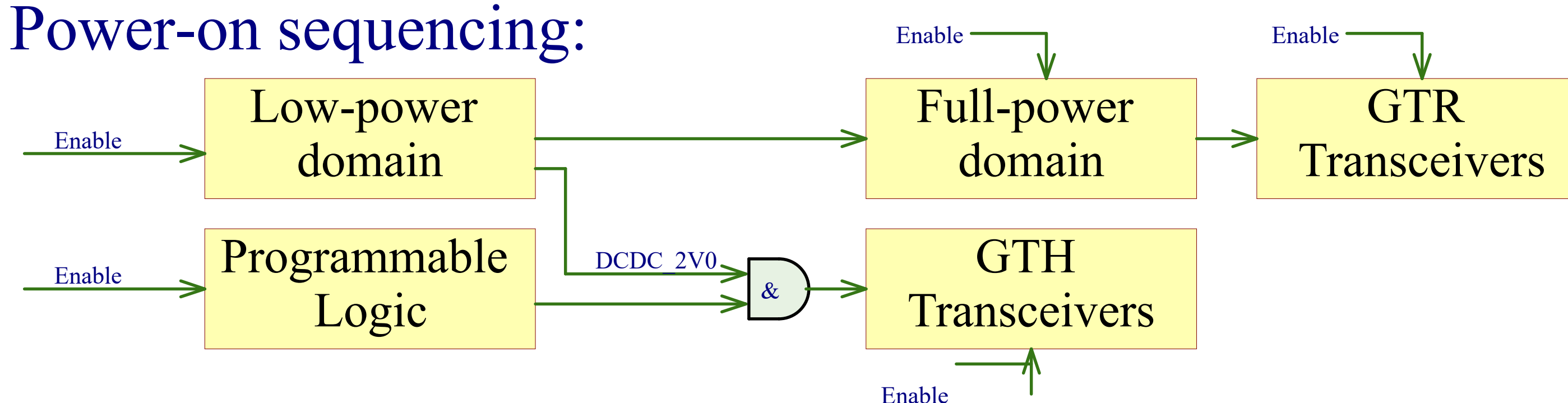
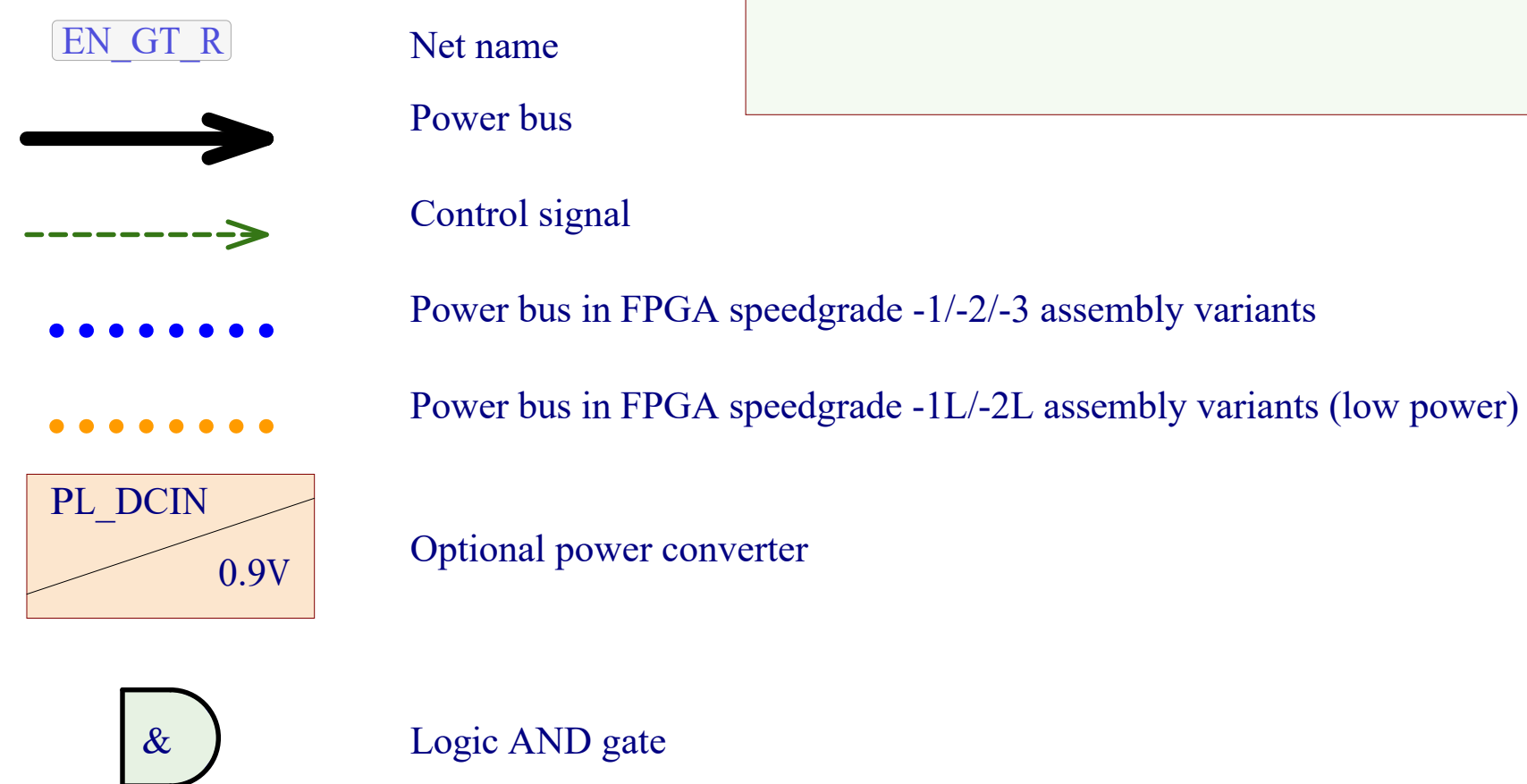
Regarding the usage of our schematics and alike documentation for Trenz module TE0813.
Project is protected under copyright and we strongly and strictly prohibit the reverse engineering or recreation,
even if the design is just adapted or modified.
TE0813 is protected under such right and in case of plagiarism we will have to do anything necessary in order to protect our assets.
Schematics and other handouts serve for informational purposes only!

Drawn by	ED
Checked by	MR
Assembly variant	2AI61-A
Created by	VG
Modified by	VG
Modified at	2025-12-17

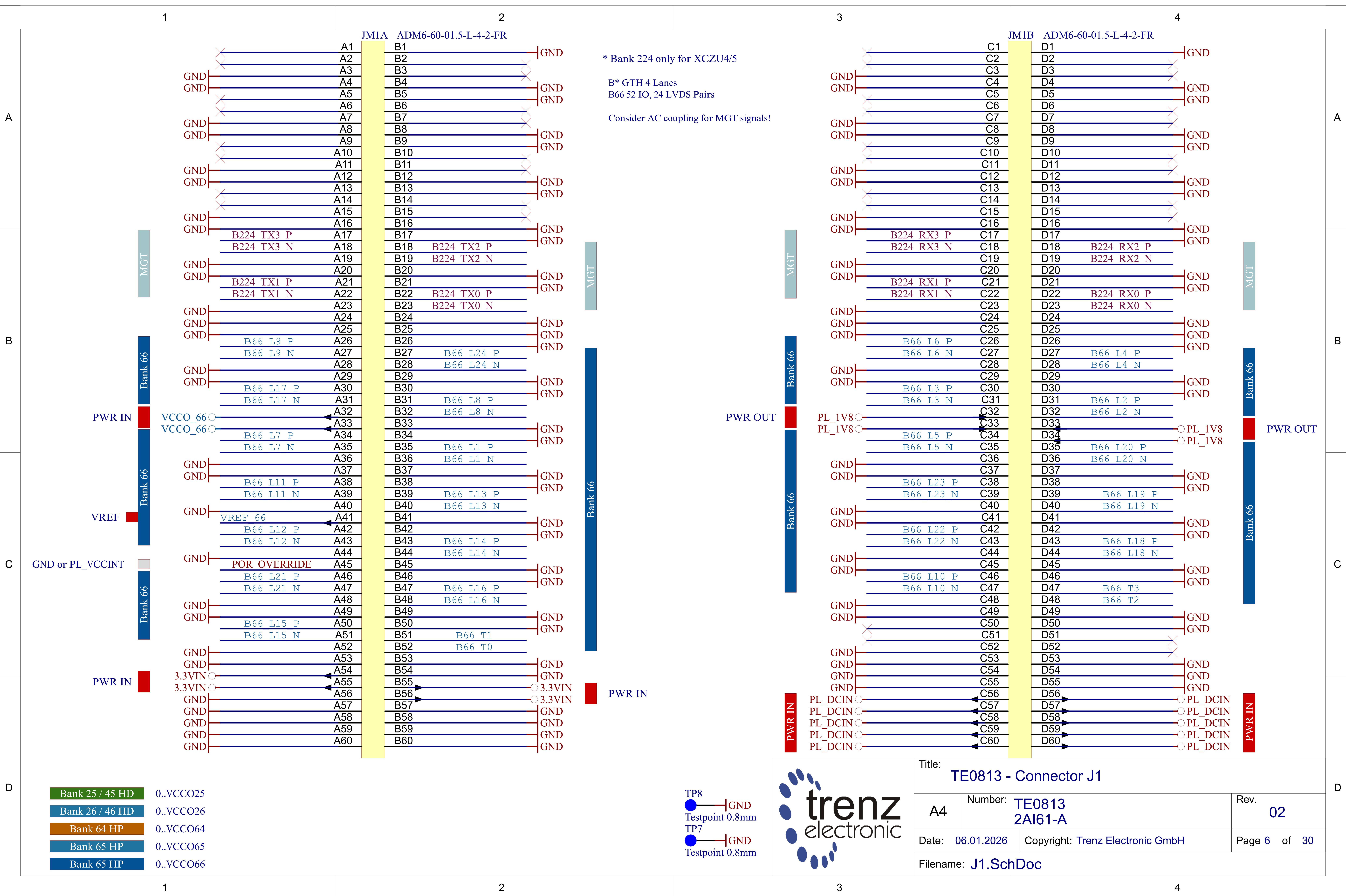


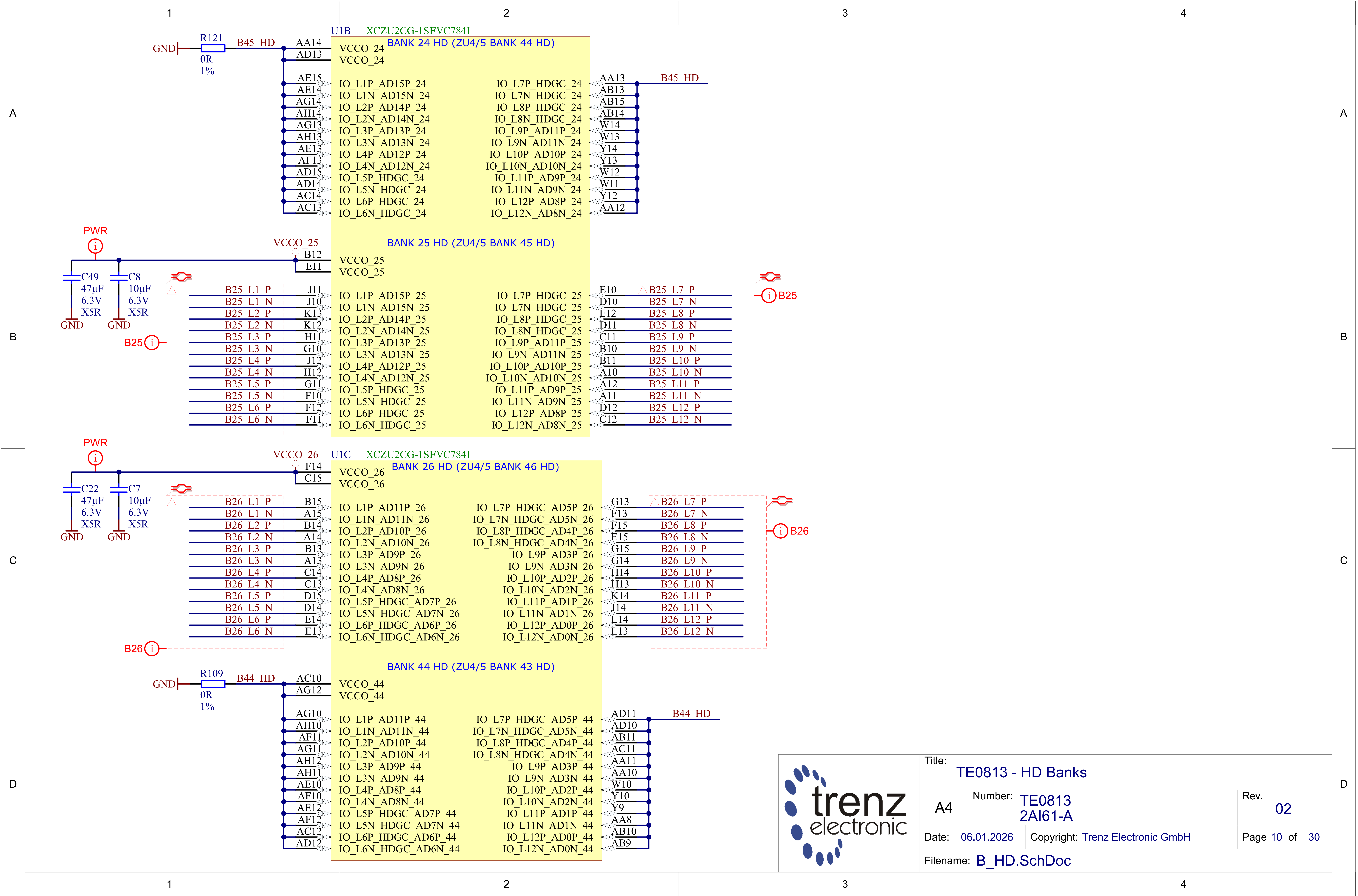
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A4	Number: TE0813 2AI61-A	Rev. 02
Date: 04.05.2026	Copyright: Trenz Electronic GmbH	Page 1 of 30
Filename: Legal Notices Modules.SchDoc		

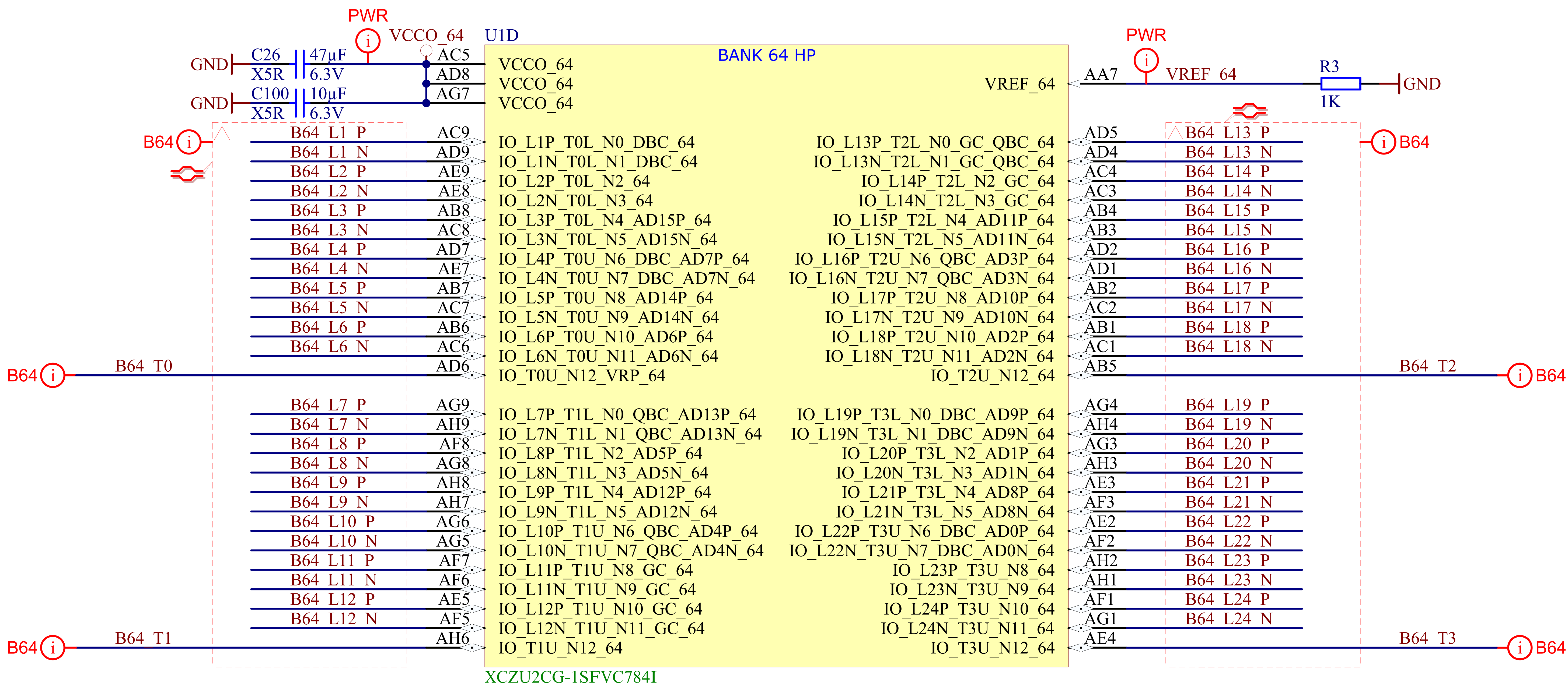




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A3	Number: TE0813 2AI61-A	Rev. 02	
Datum: 2021-01-19		Copyright: Trenz Electronic GmbH	Page 4 of 30
Filename: Power Diagram.SchDoc			





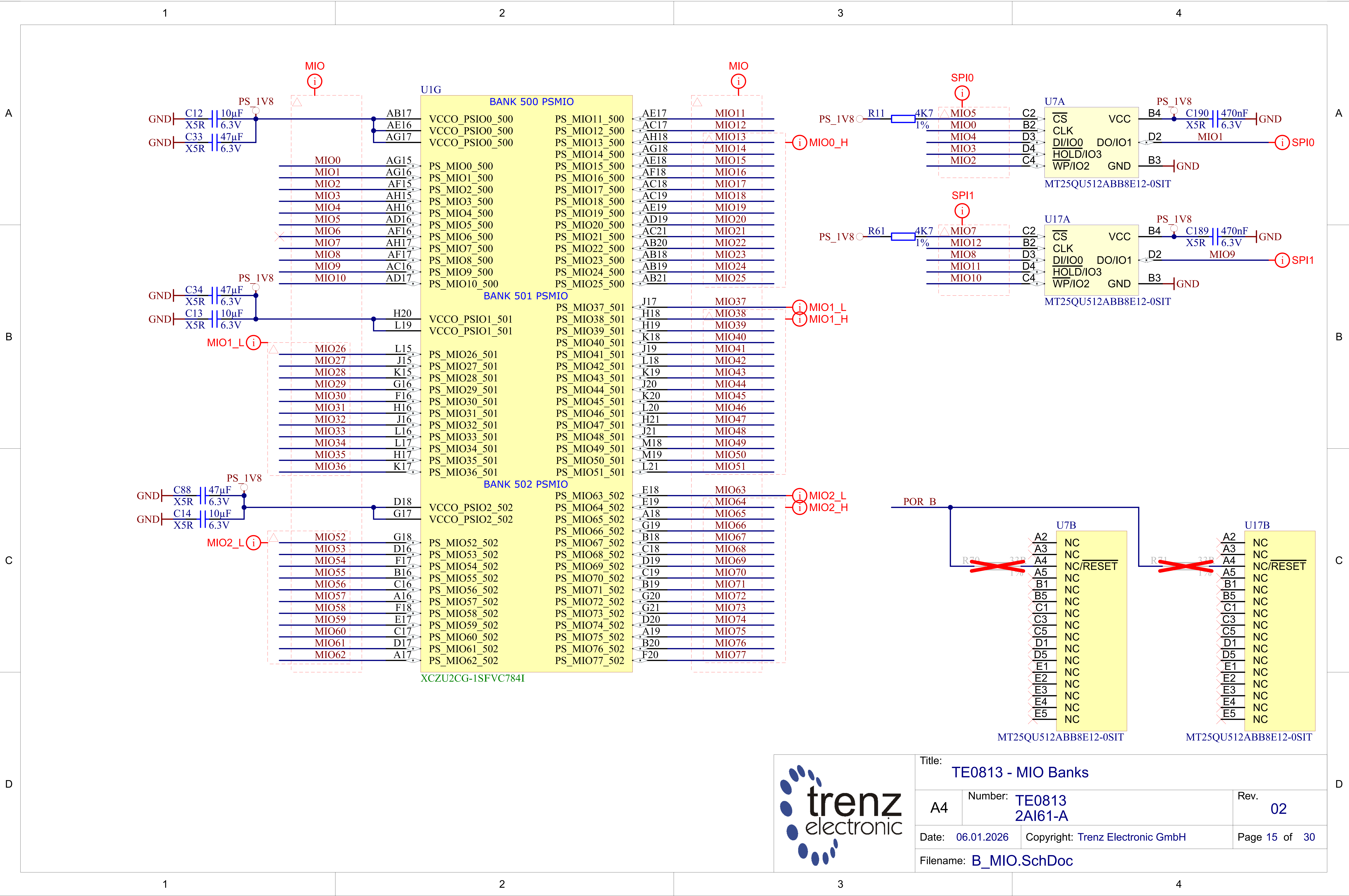


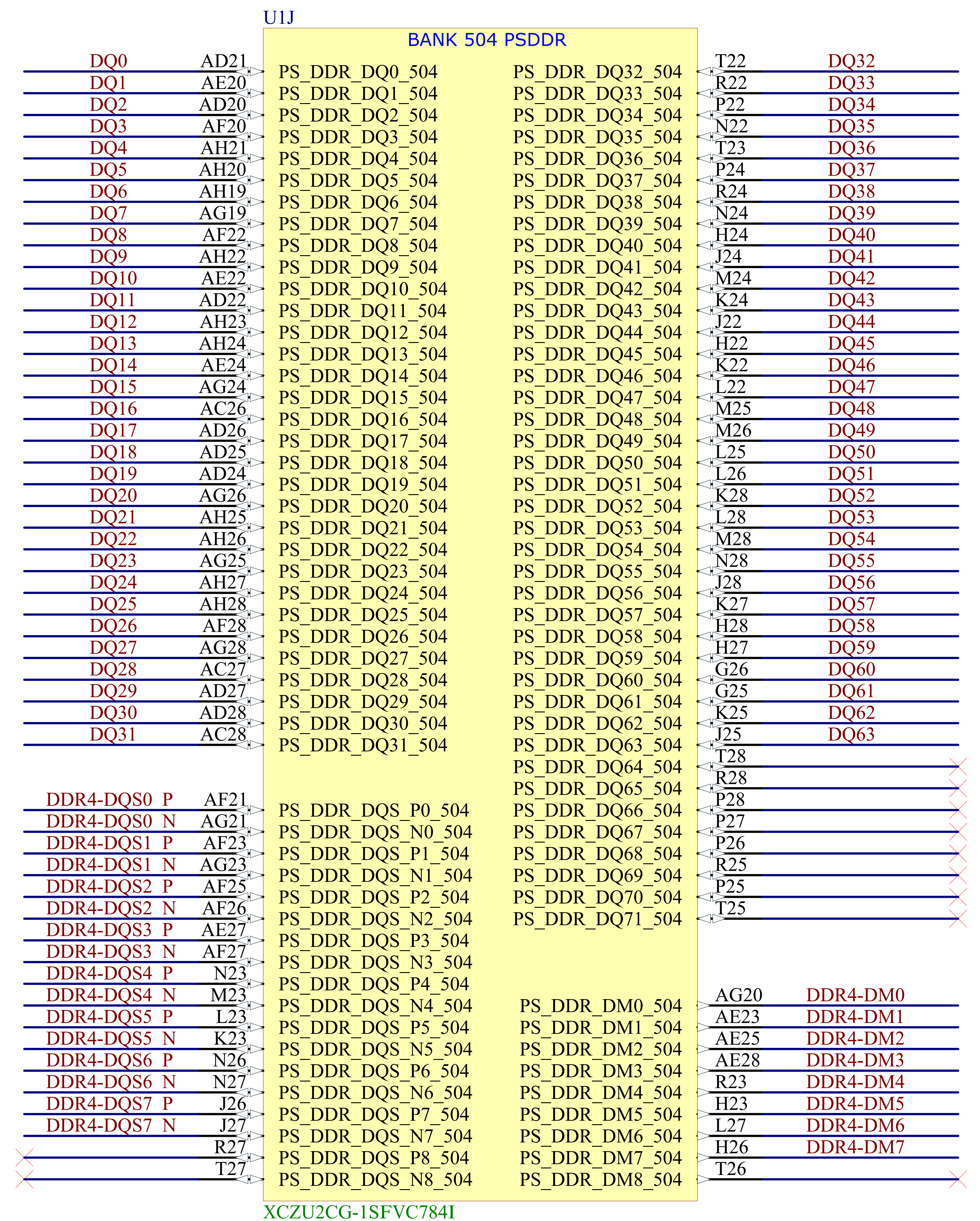
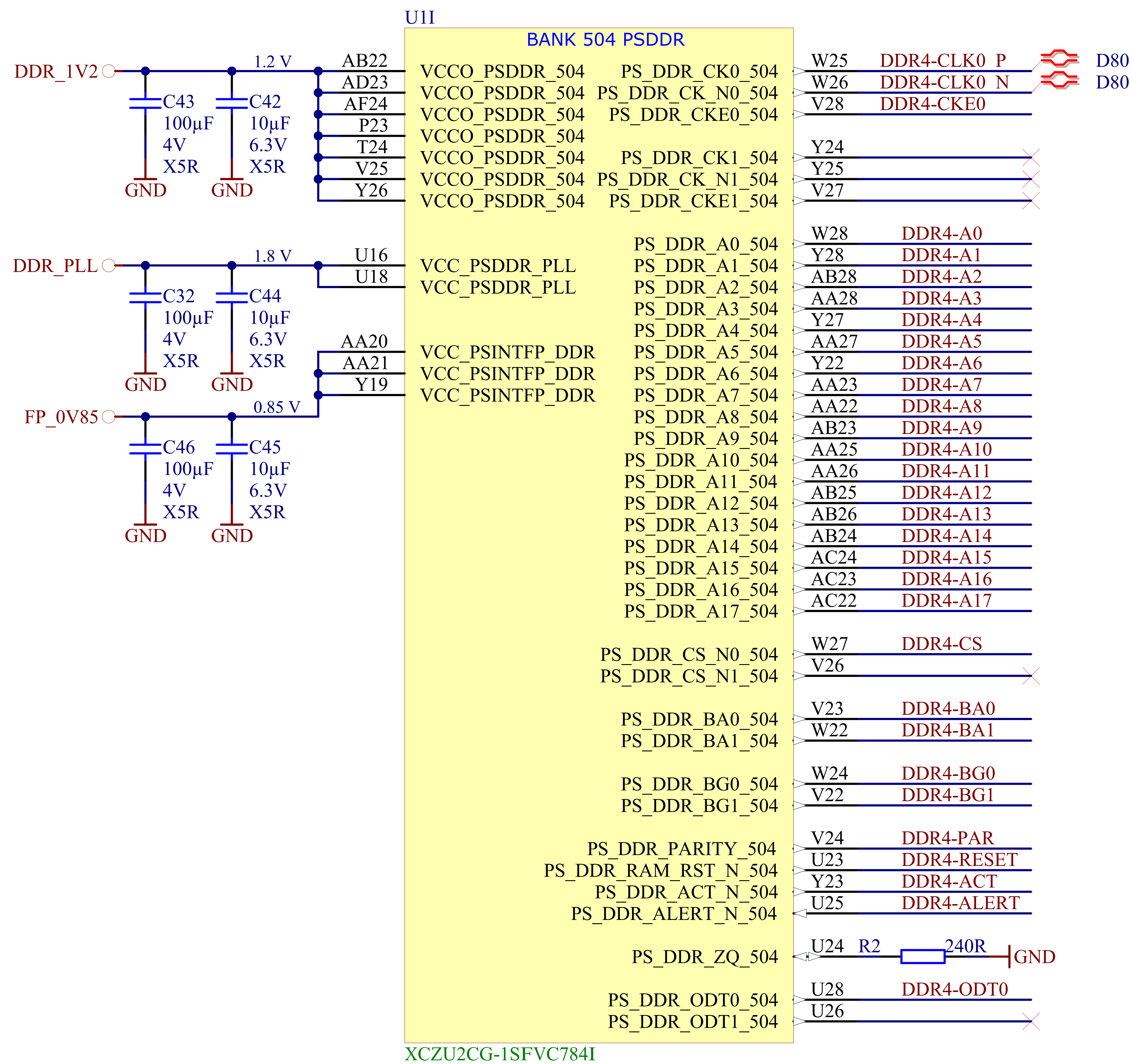
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TE0813 - B64

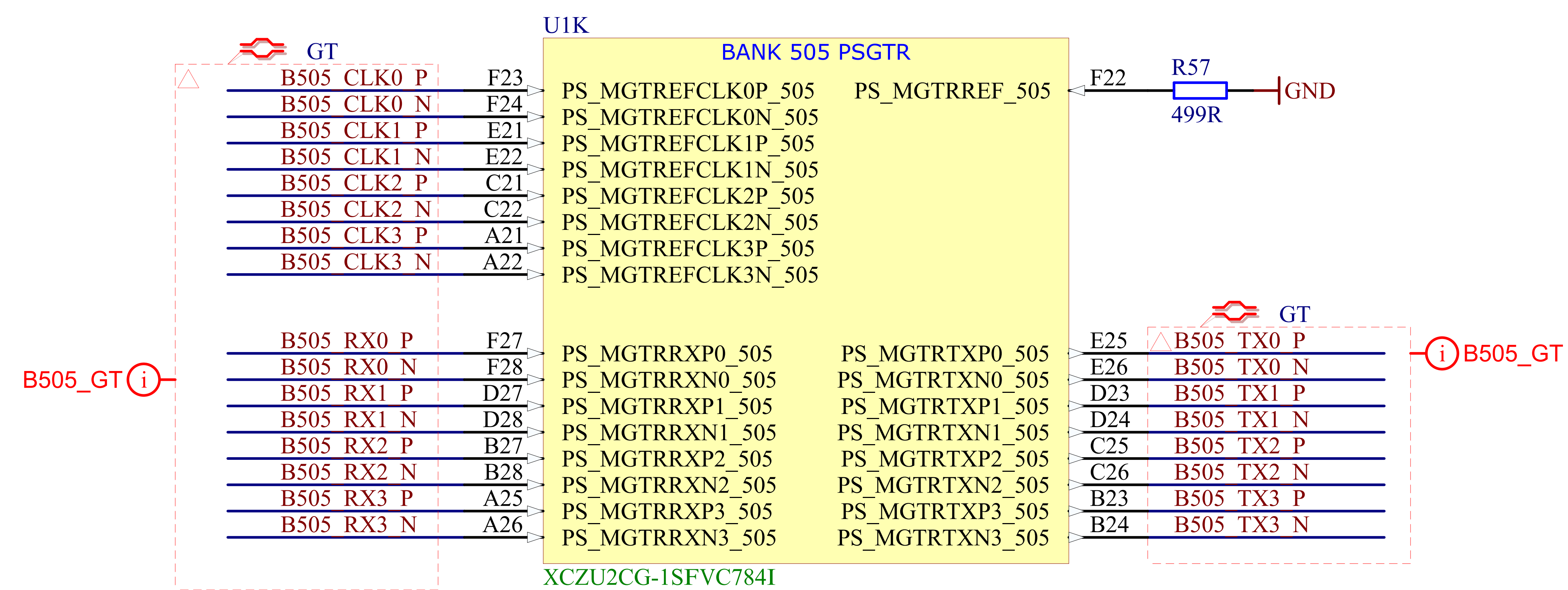
A4	Number: TE0813 2AI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 12 of 30

Filename: B64.SchDoc

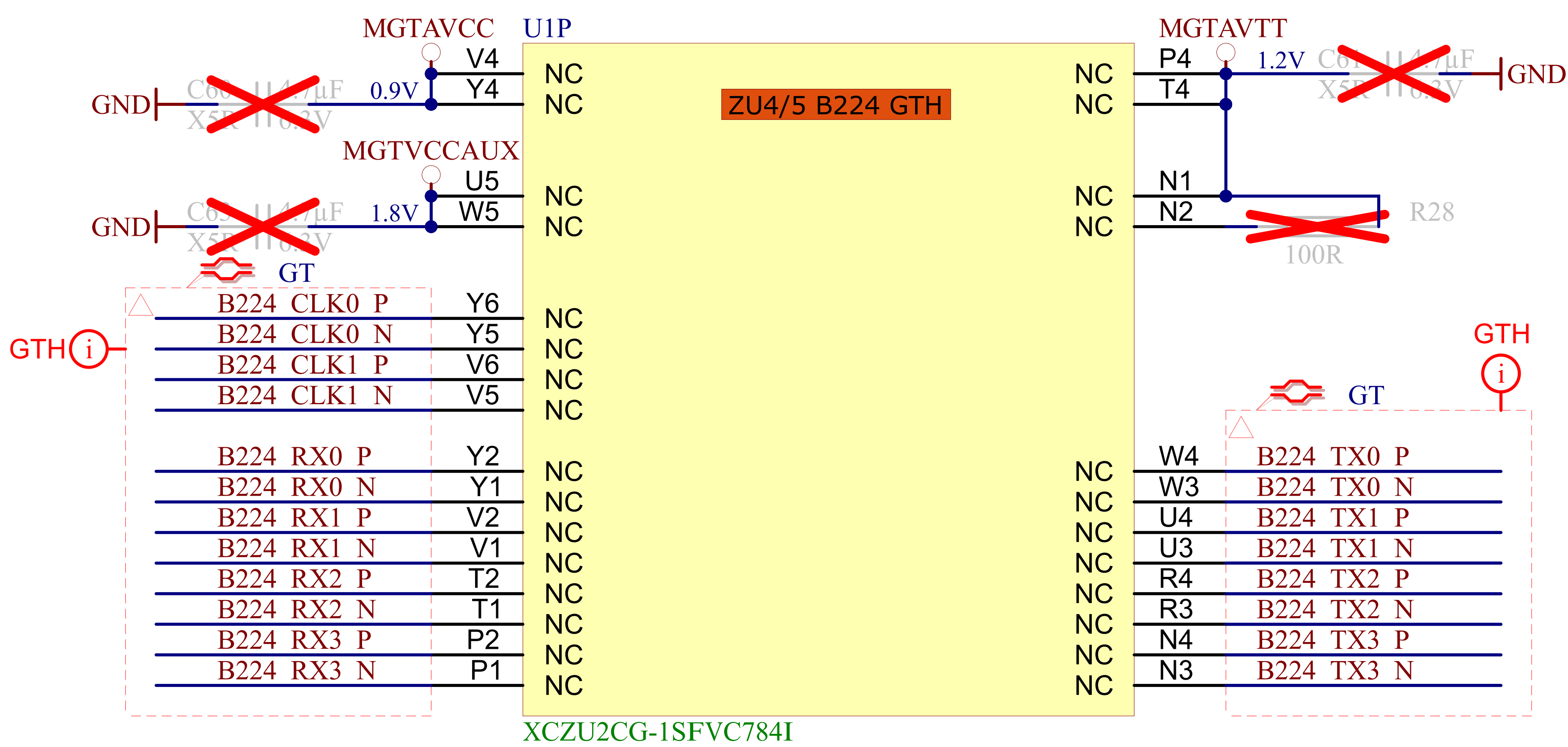




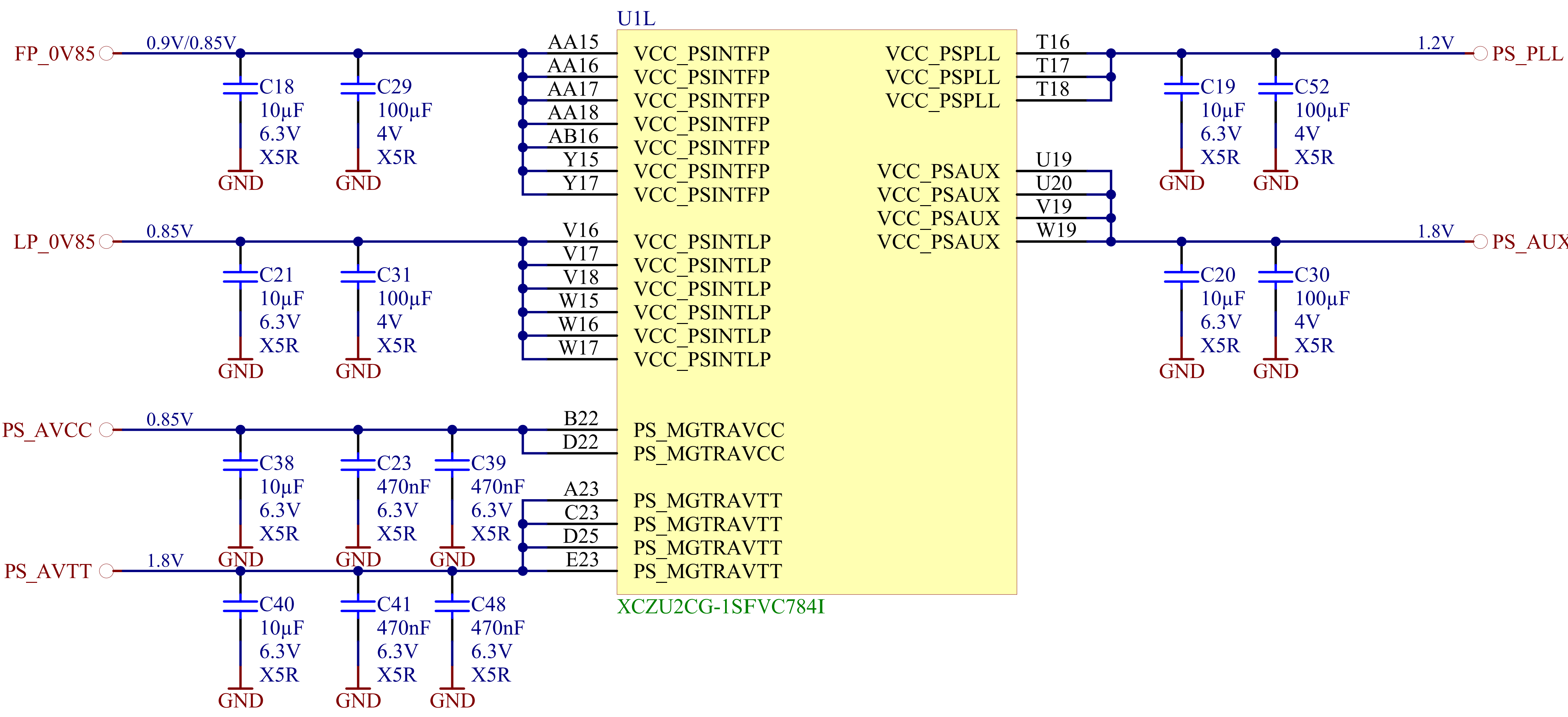
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Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 16 of 30
Filename: PS_DDR.SchDoc		



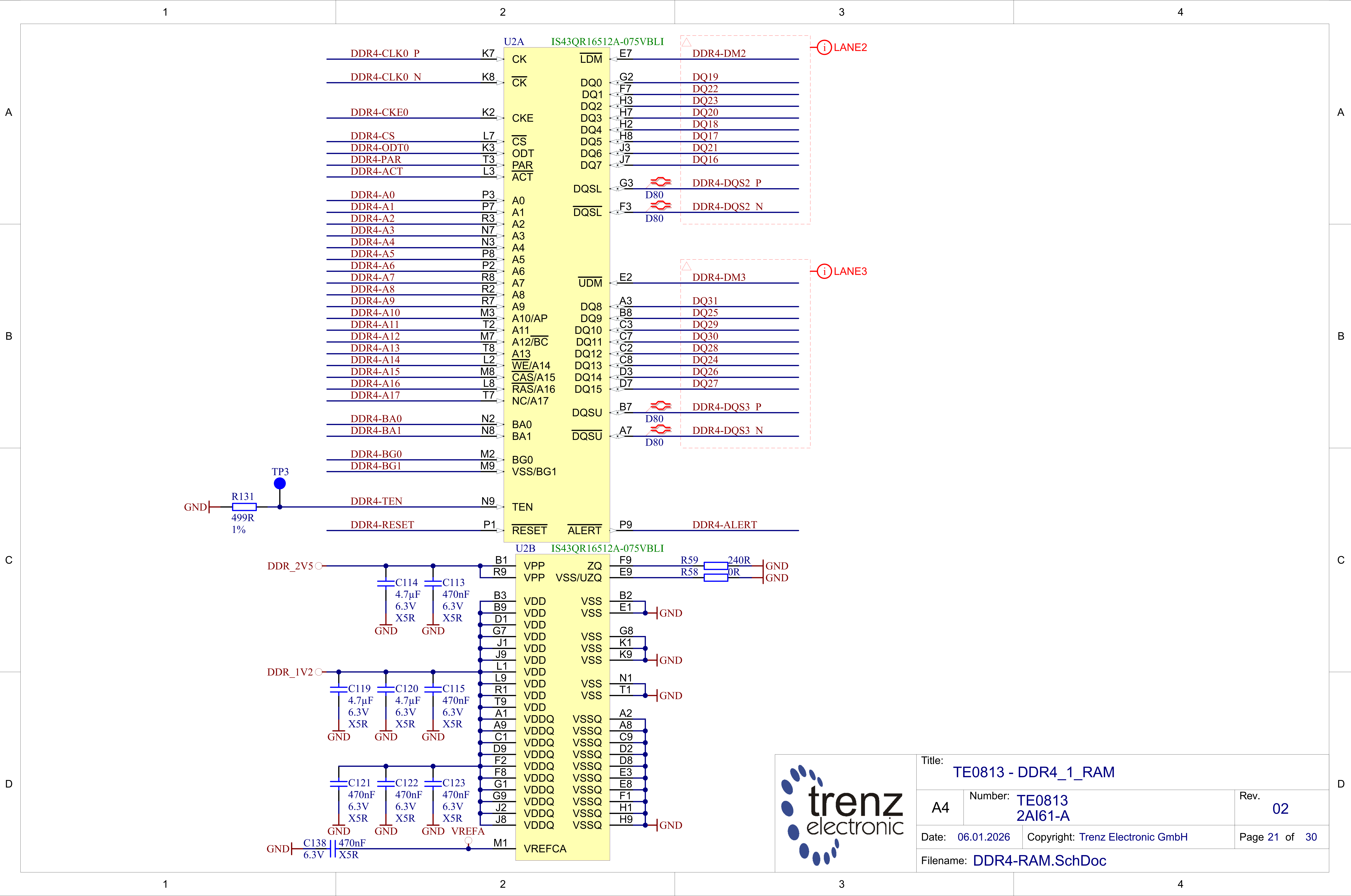
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A4	Number: TE0813 2AI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 17 of 30
Filename: B PS_GT.SchDoc		



Title: TE0813 - B224 - GTH			
A4	Number: TE0813 2AI61-A		Rev. 02
Date: 06.01.2026		Copyright: Trenz Electronic GmbH	Page 18 of 30
Filename: B_GT.SchDoc			



Title: TE0813 - ZU_PS_POWER		
A4	Number: TE0813 2AI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 19 of 30
Filename: ZU_PS_POWER.SchDoc		



A

B

C

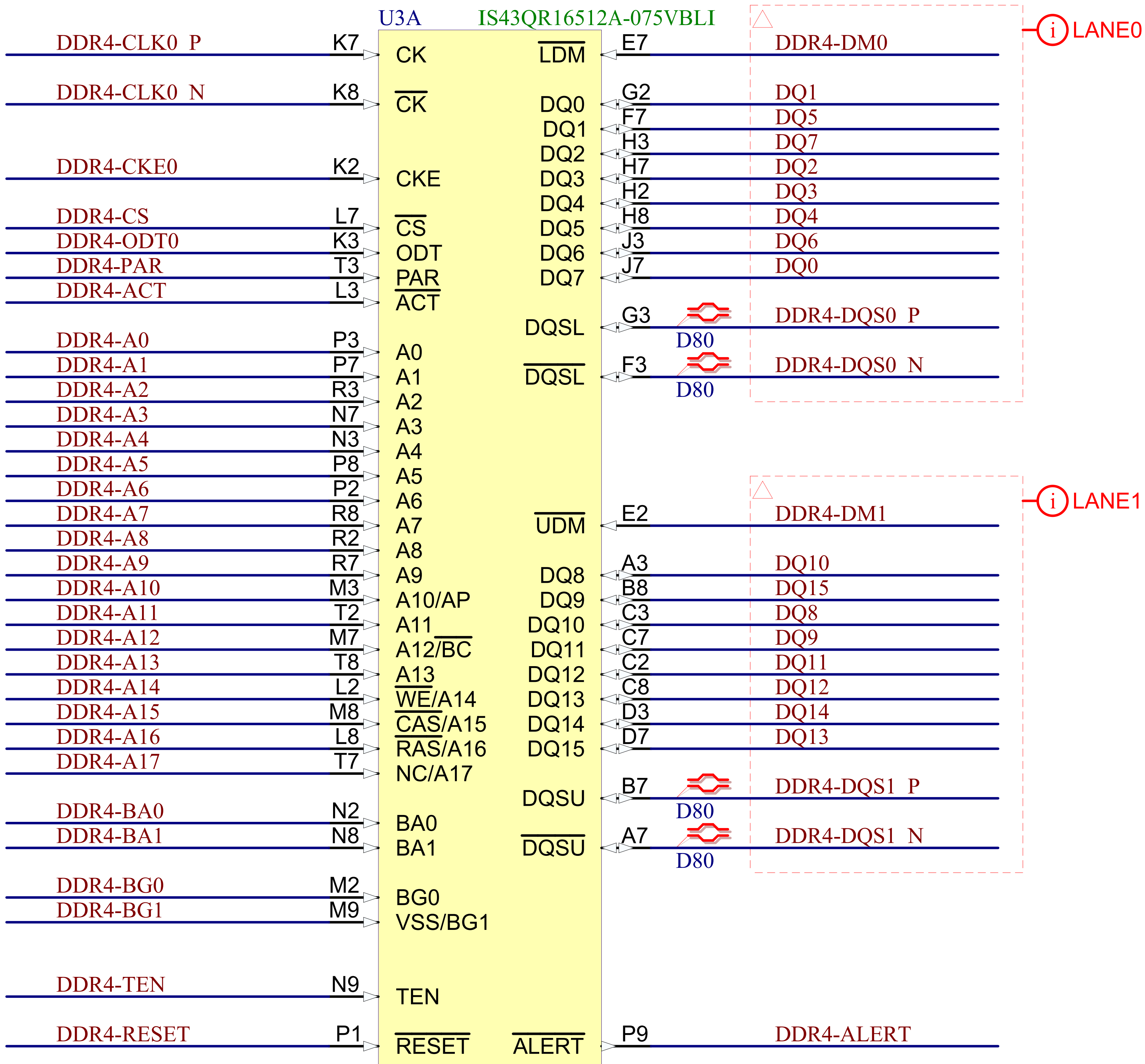
D

A

B

C

D



Title: TE0813 - DDR4_2_RAM		
A4	Number: TE0813 2AI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 22 of 30
Filename: DDR4-RAM_2.SchDoc		

1

2

3

4

A

A

B

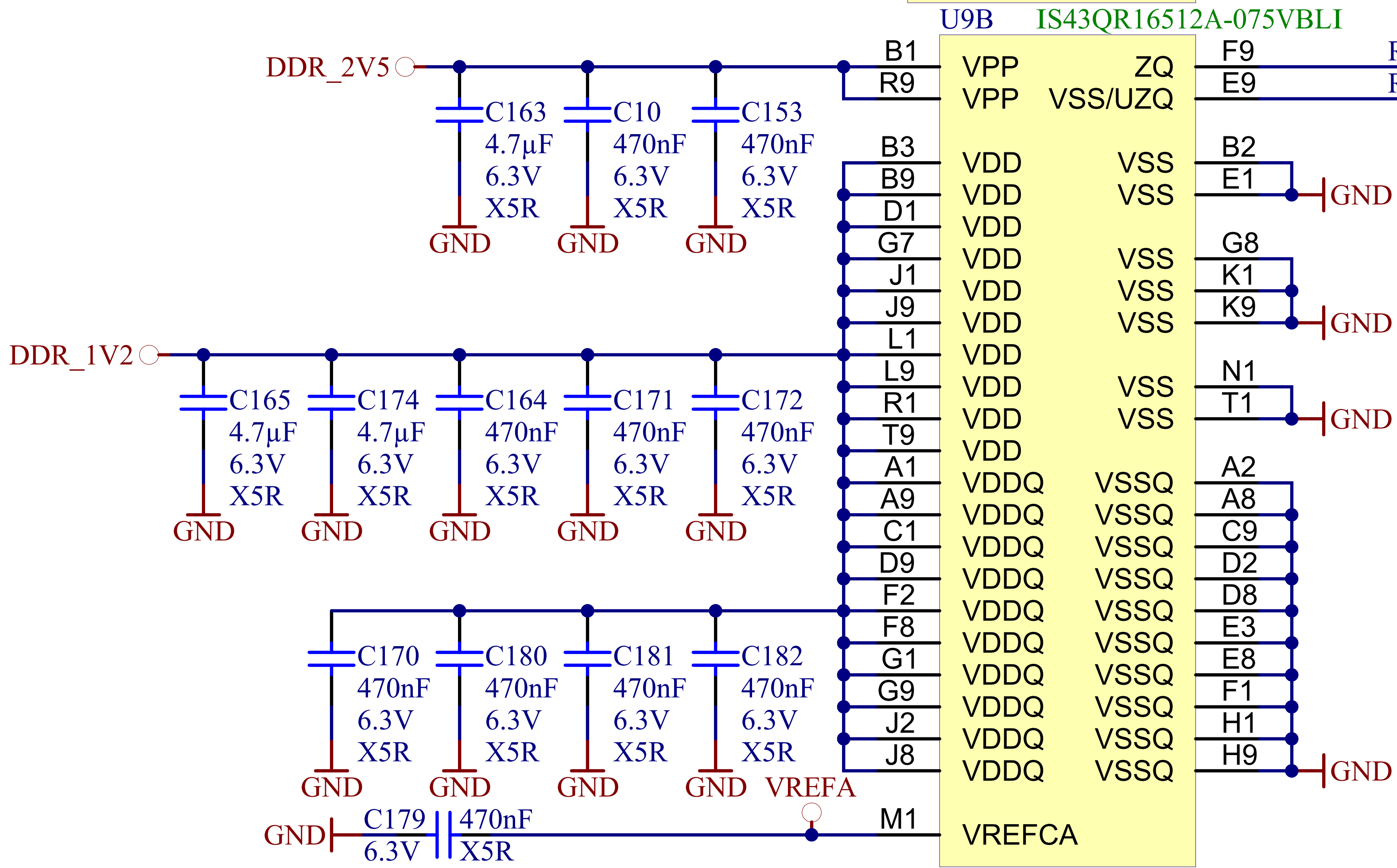
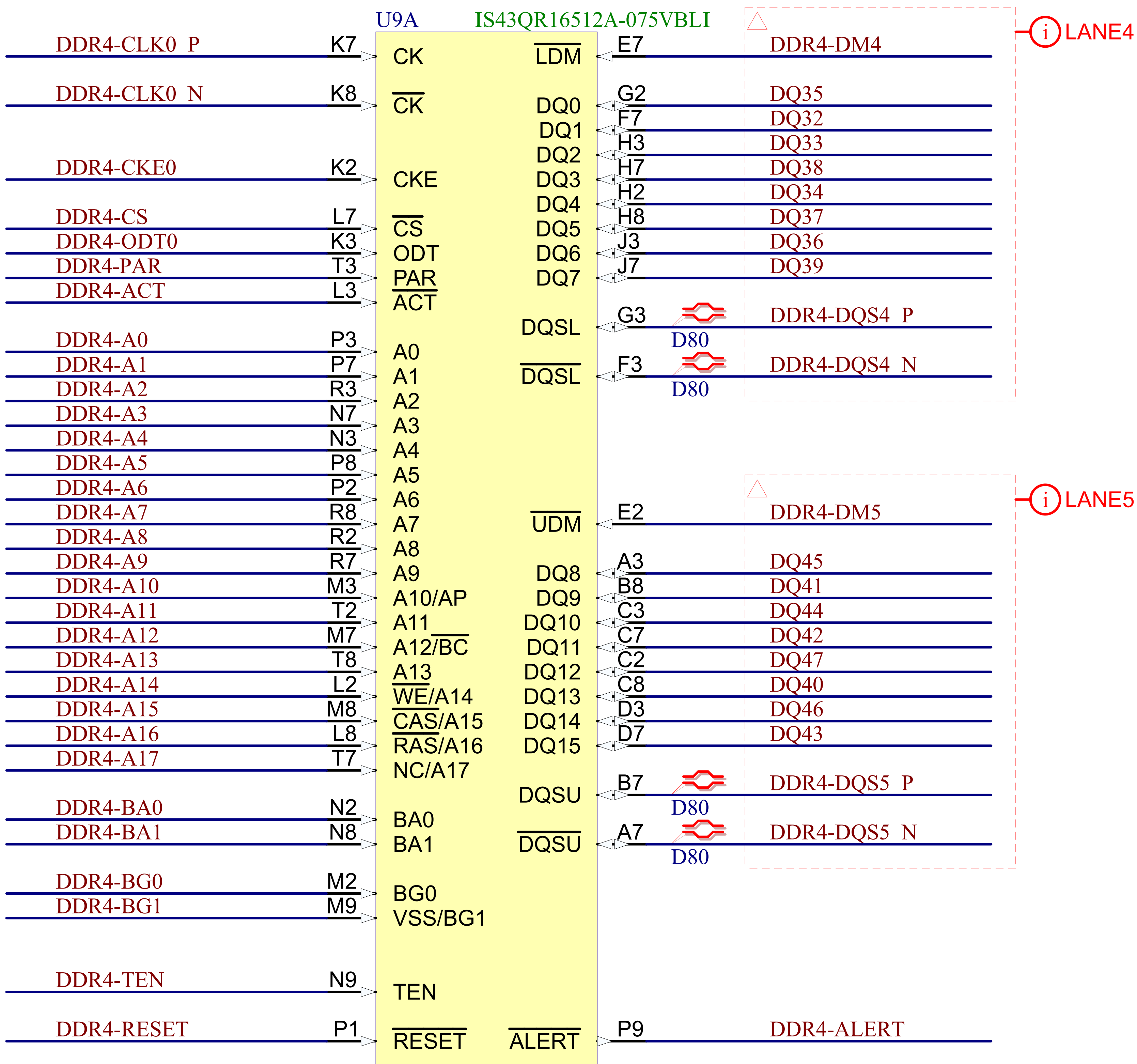
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C

C

D

D



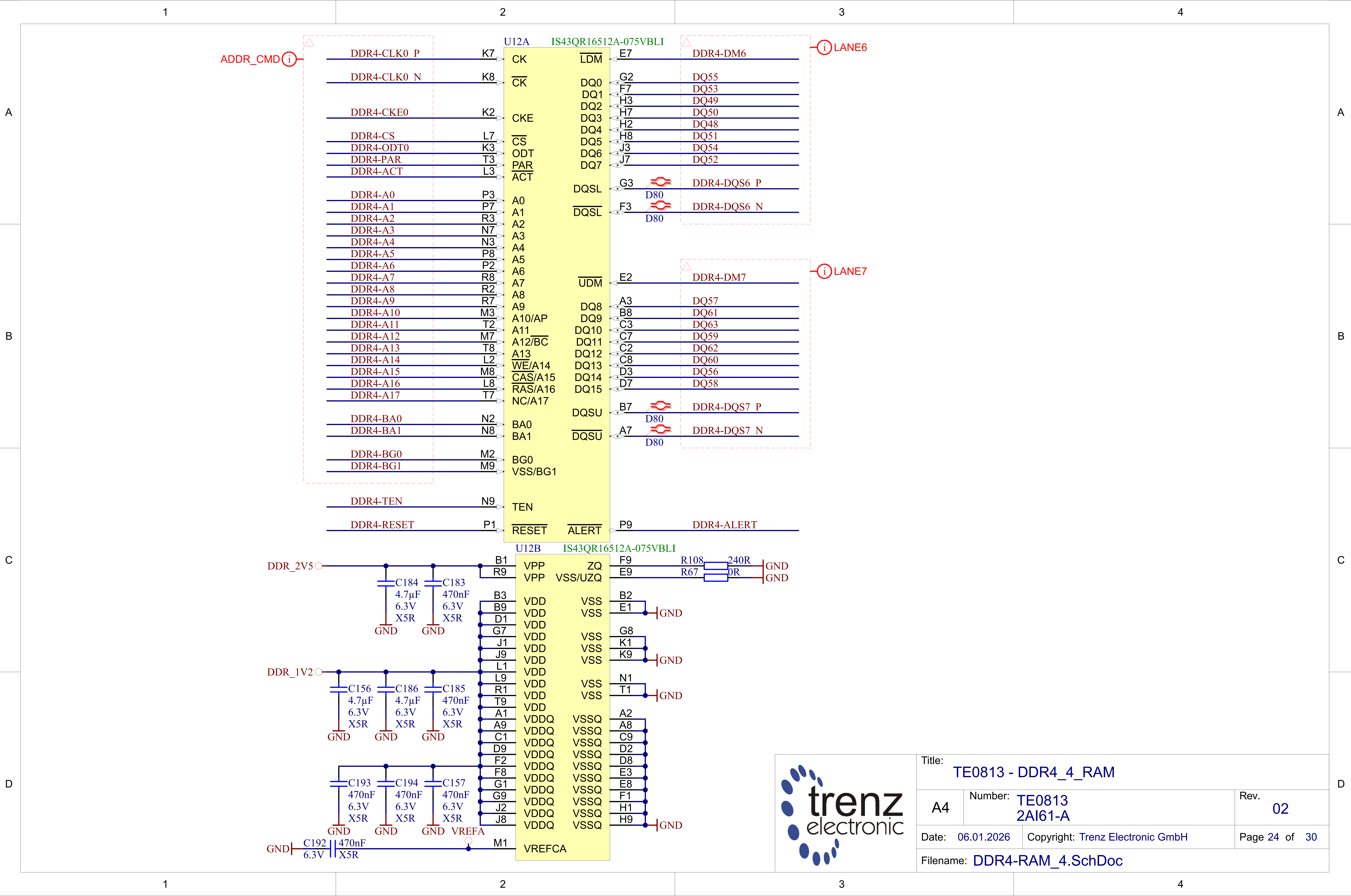
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Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 23 of 30
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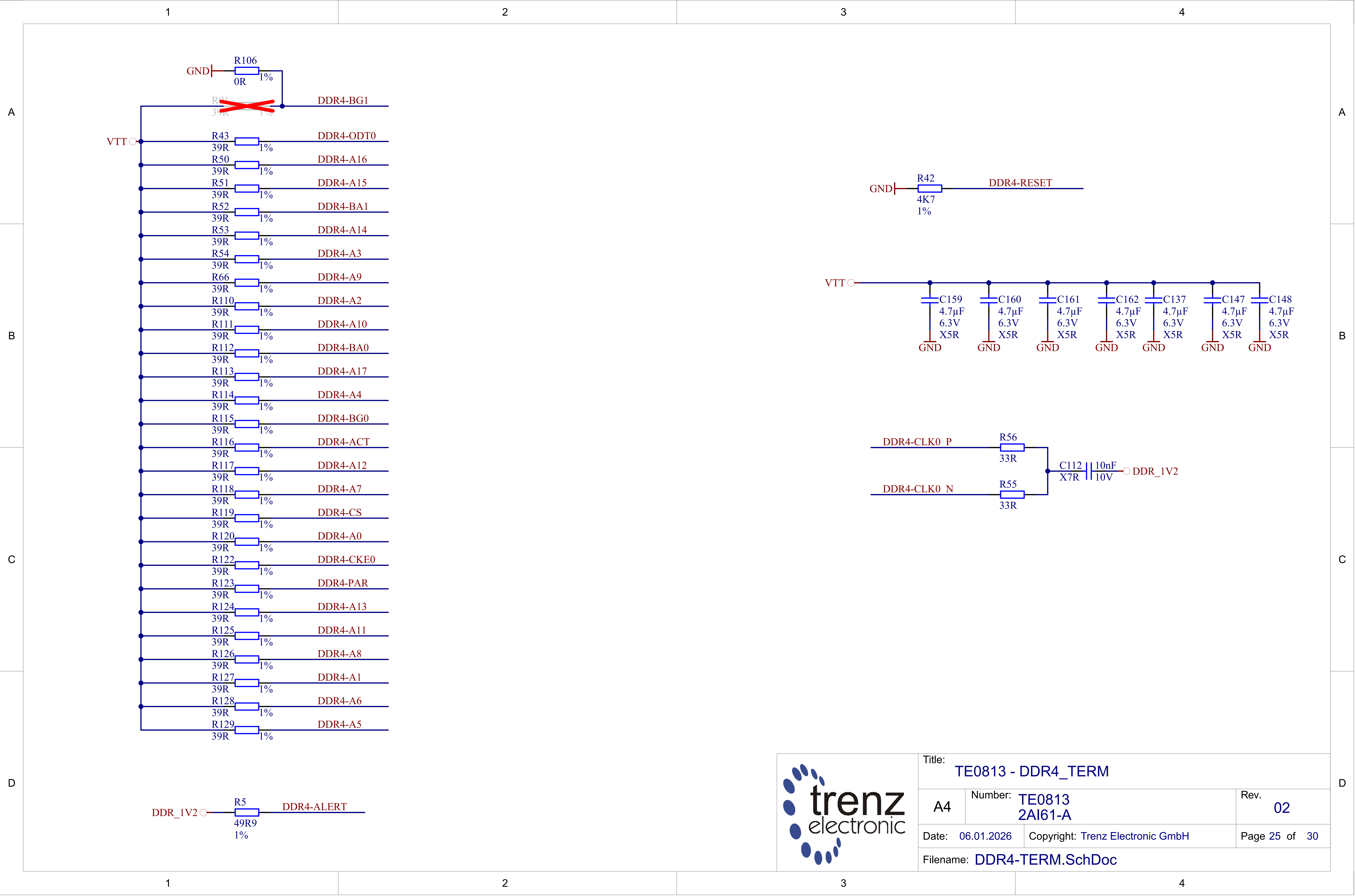
1

2

3

4



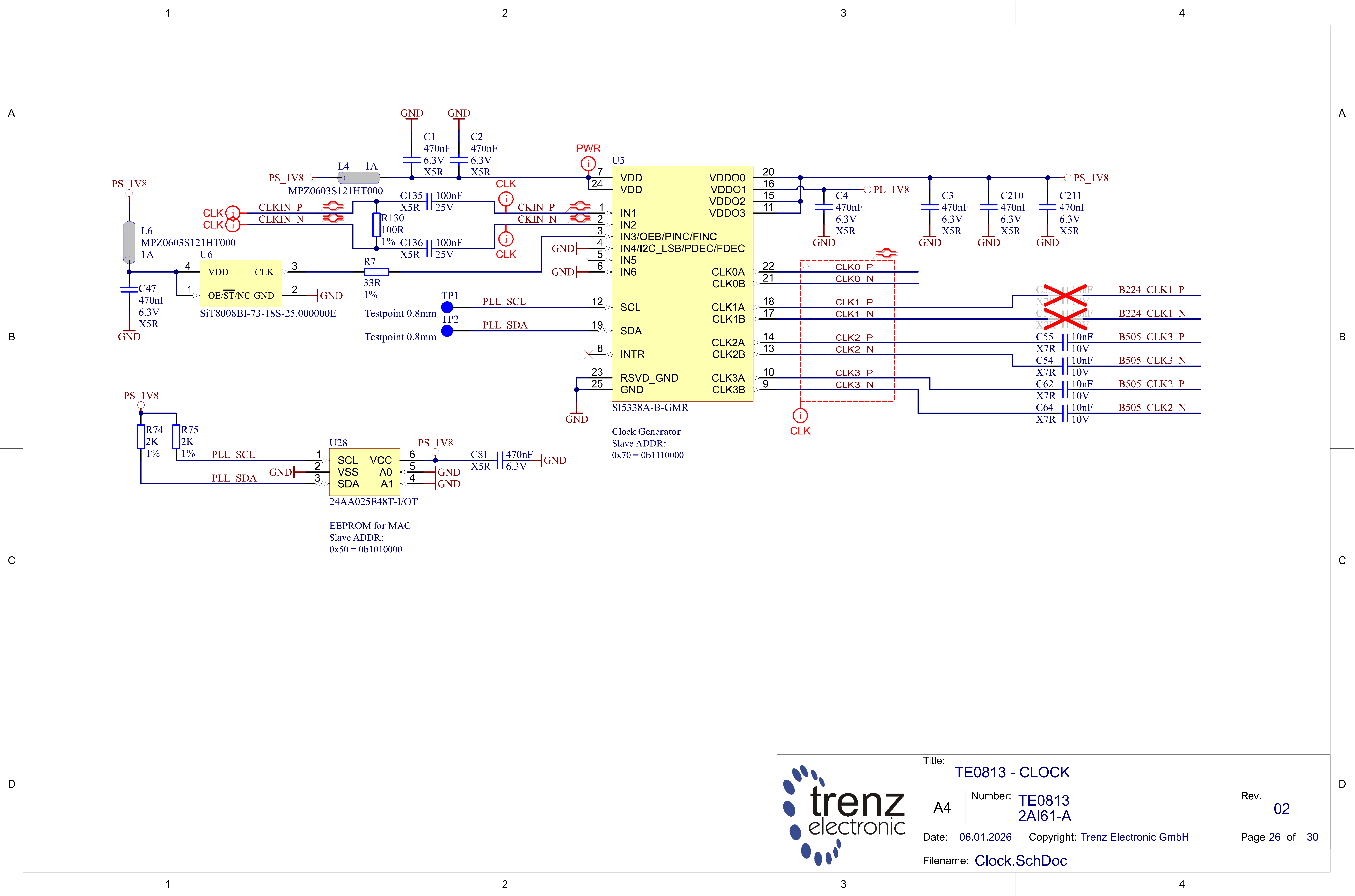


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TE0813 - DDR4_TERM

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Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 25 of 30

Filename: DDR4-TERM.SchDoc

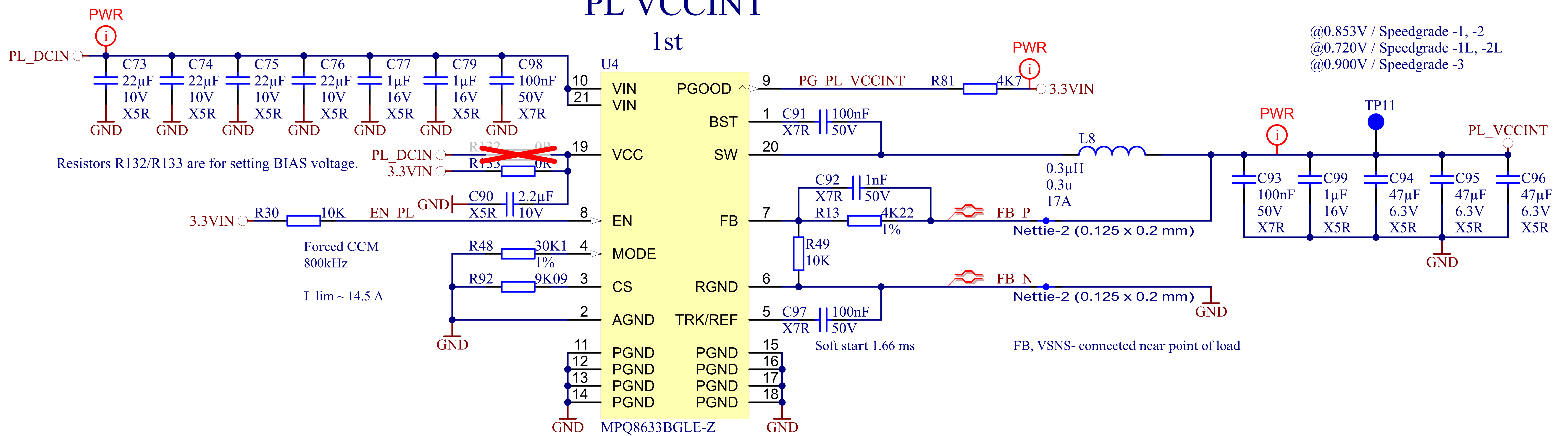


Title: TE0813 - CLOCK		
A4	Number: TE0813 2AI61-A	Rev. 02
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Filename: Clock.SchDoc		

U4 can be TPS548A28RWW or MPQ8633BGLE-Z which is up to Trenz Electronic GmbH.

PL VCCINT

1st



FPGA Speedgrade	R13	R49	PL_VCCINT
-1LI	2 kOhm	10 kOhm	0.720 V
-2LE	2 kOhm	10 kOhm	0.720 V
-1	4.22 kOhm	10 kOhm	0.853 V
-2	4.22 kOhm	10 kOhm	0.853 V
-3E	10 kOhm	20 kOhm	0.900 V

U4 pin compatible with

- TPS548B28 (20A)
- TPS548A28 (15A)
- TPS54JA20 (12A)



Title: TE0813 - POWER_1

A4

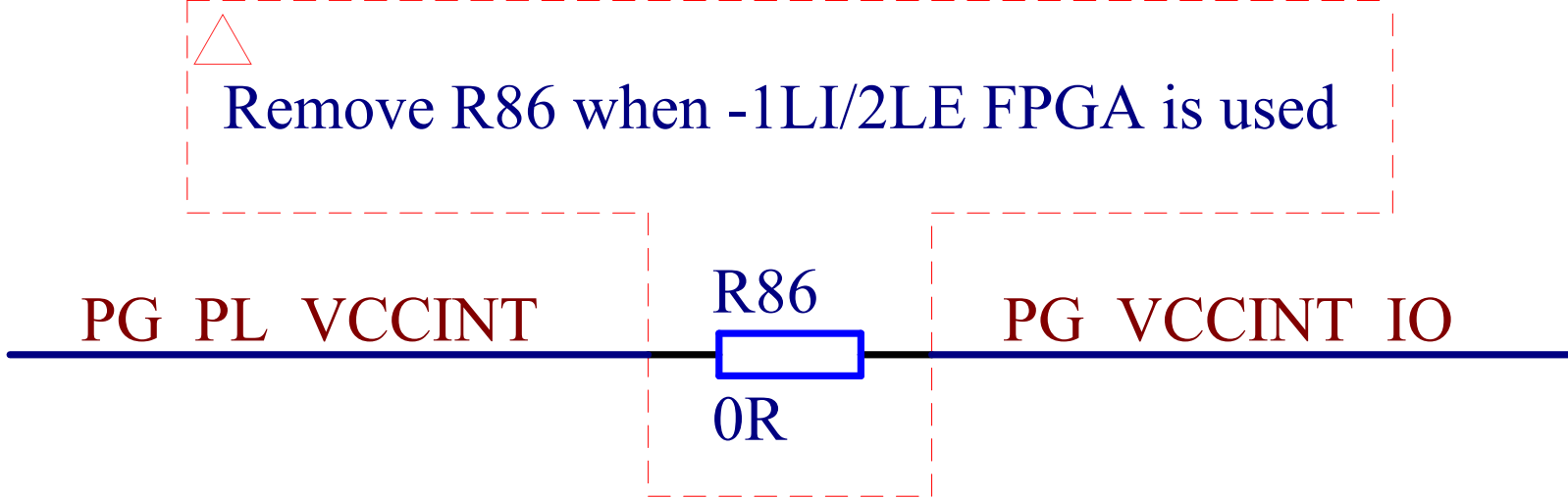
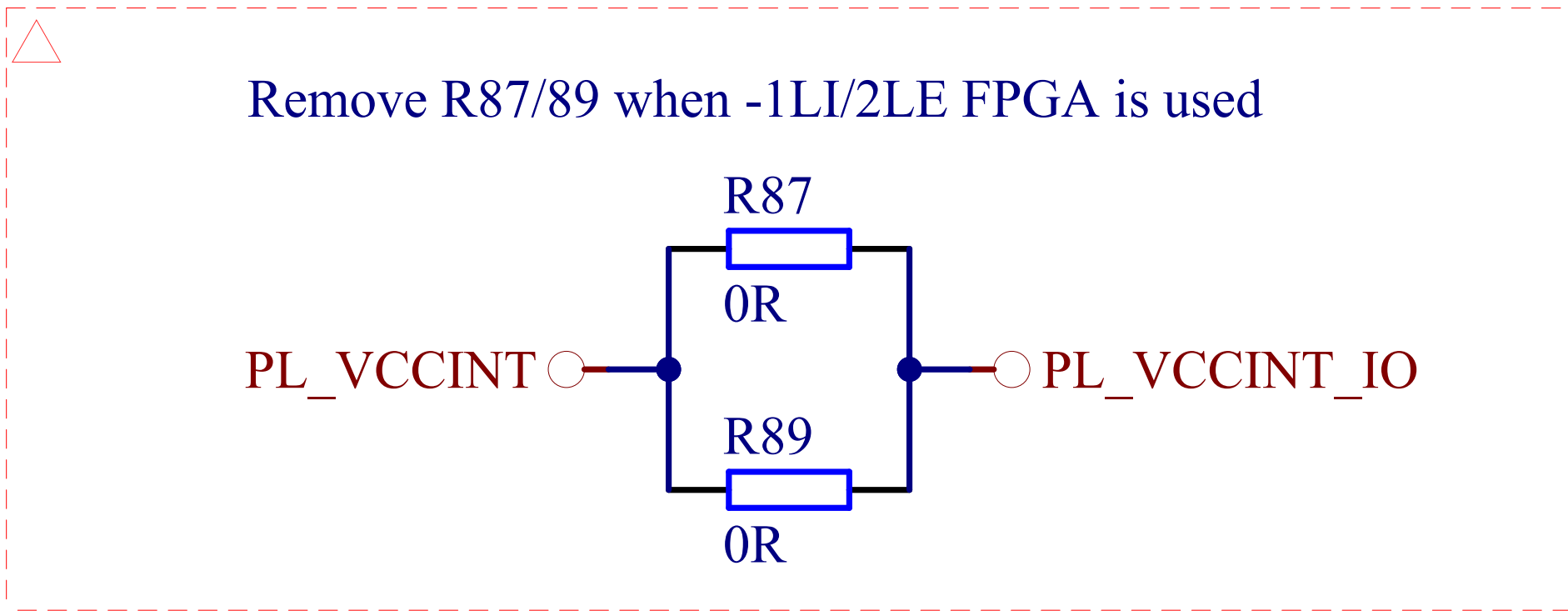
Number: TE0813
2A161-A

Rev. 02

Date: 06.01.2026 Copyright: Trenz Electronic GmbH

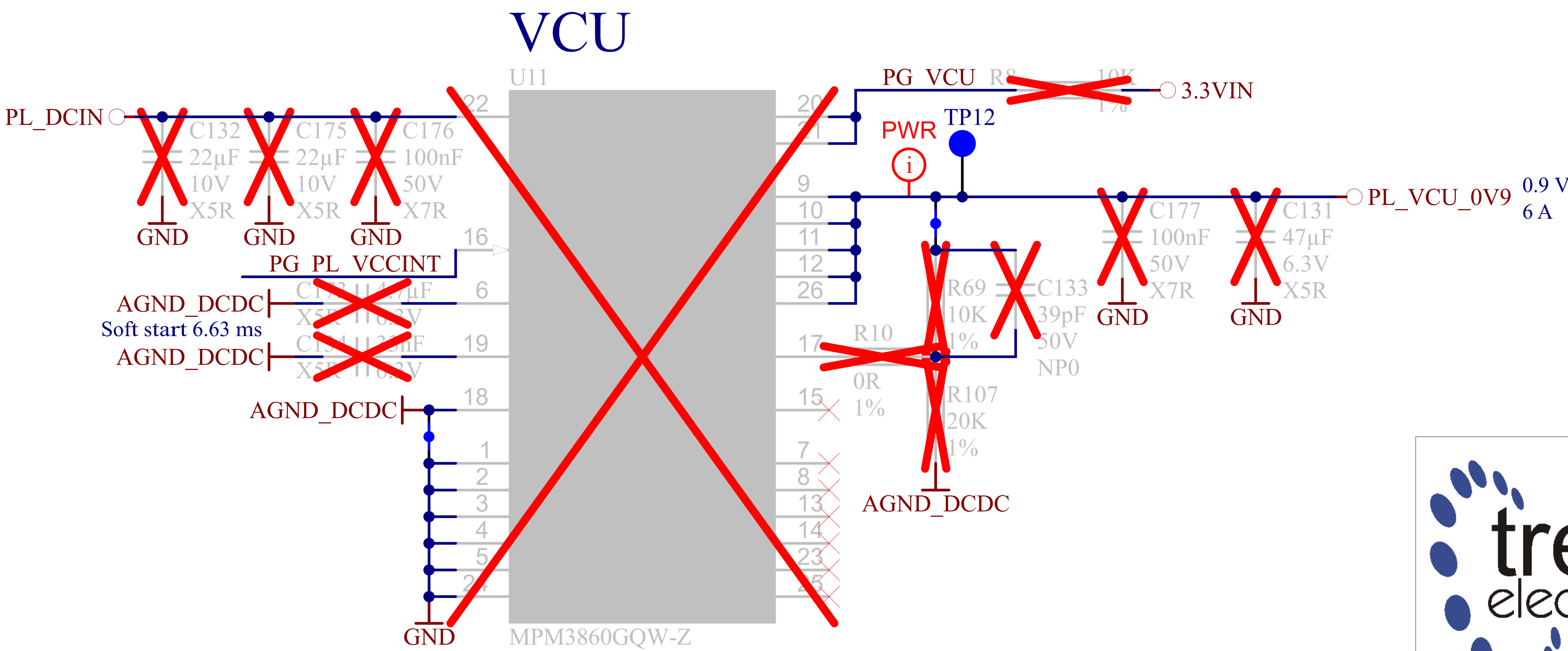
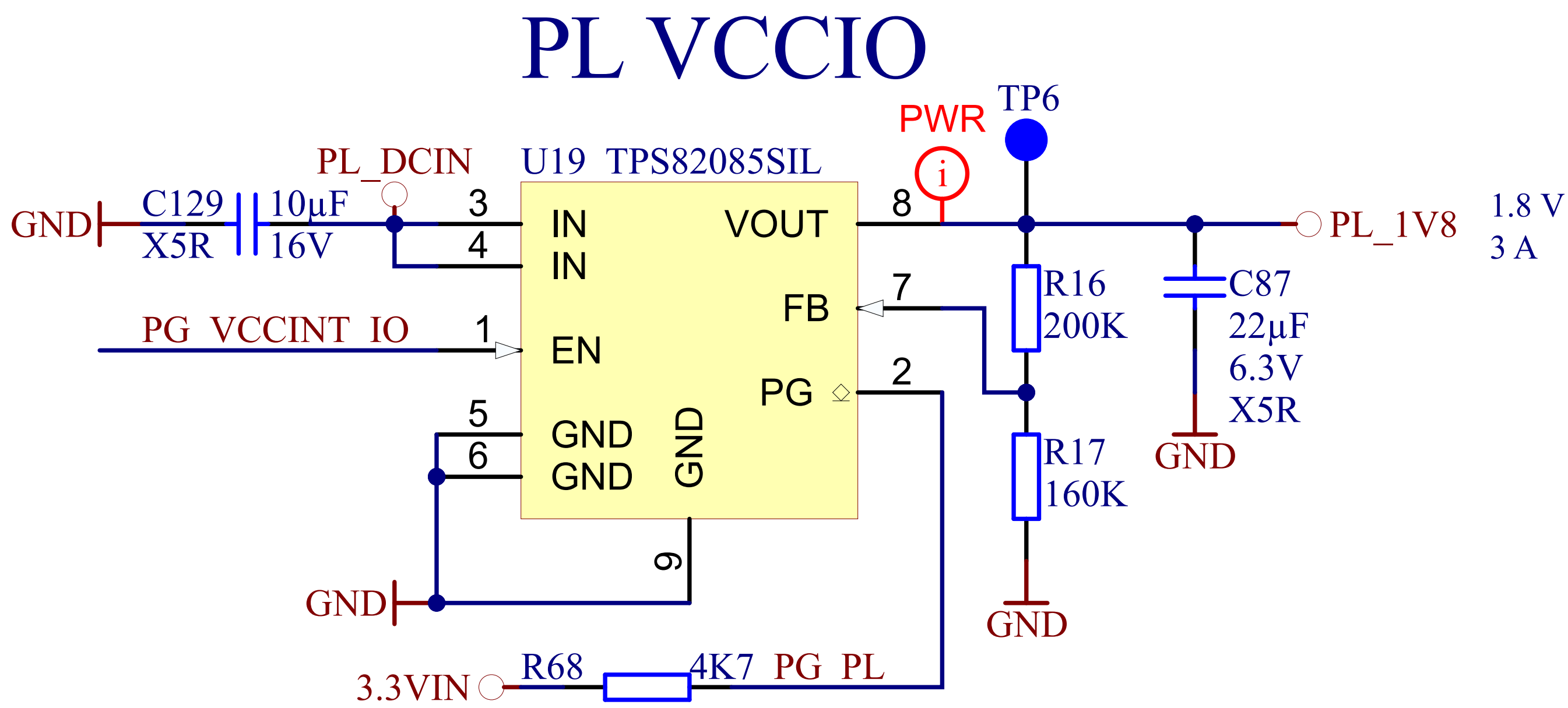
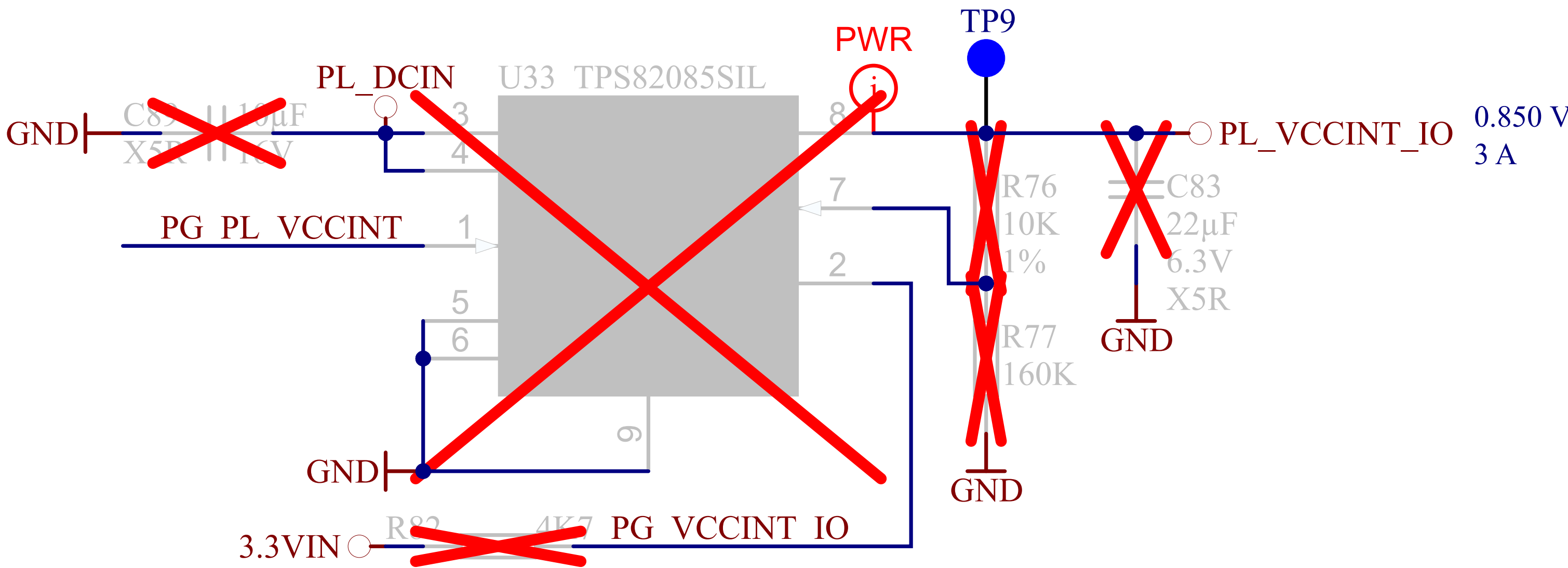
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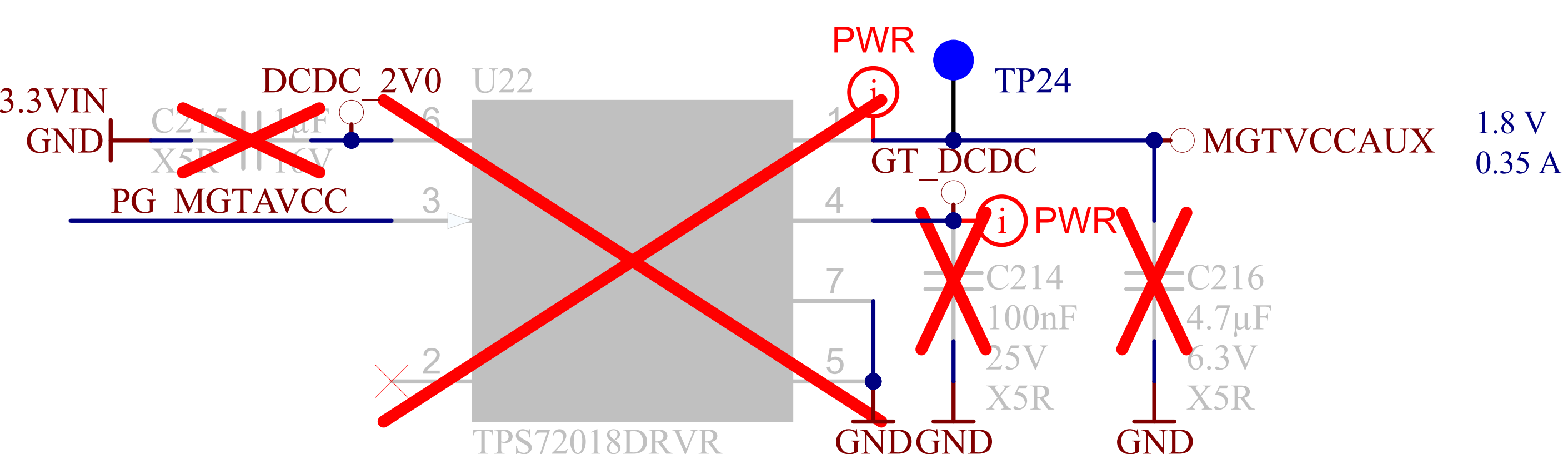
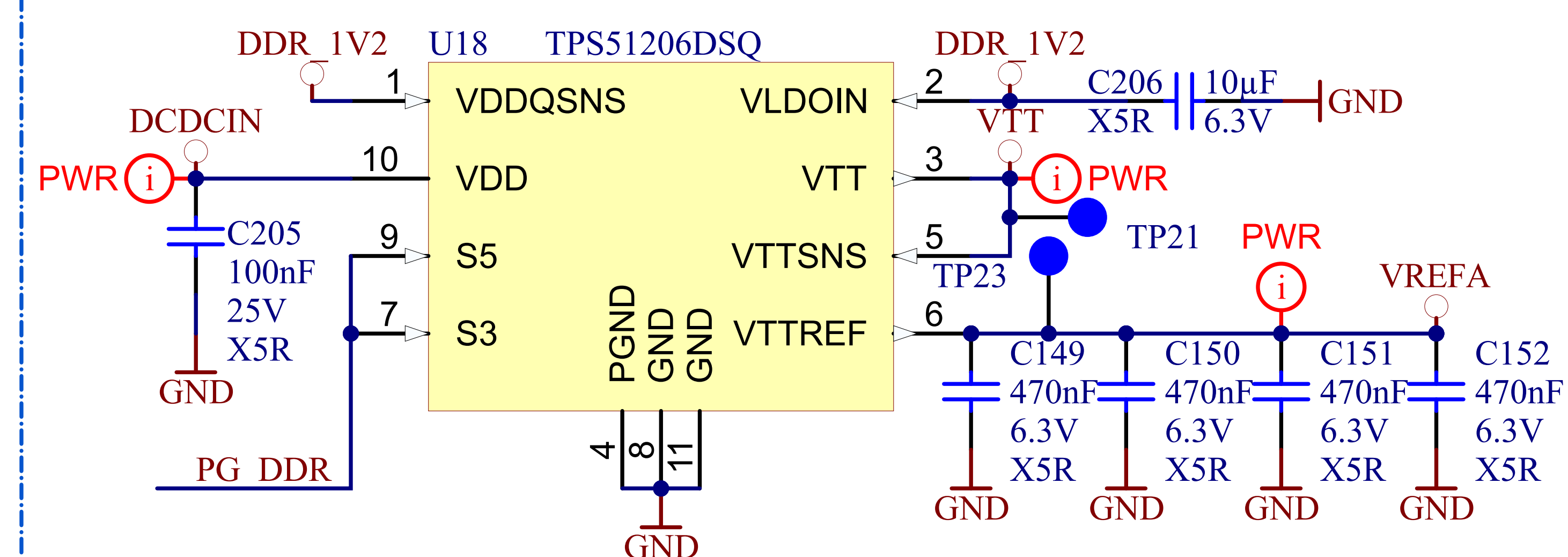
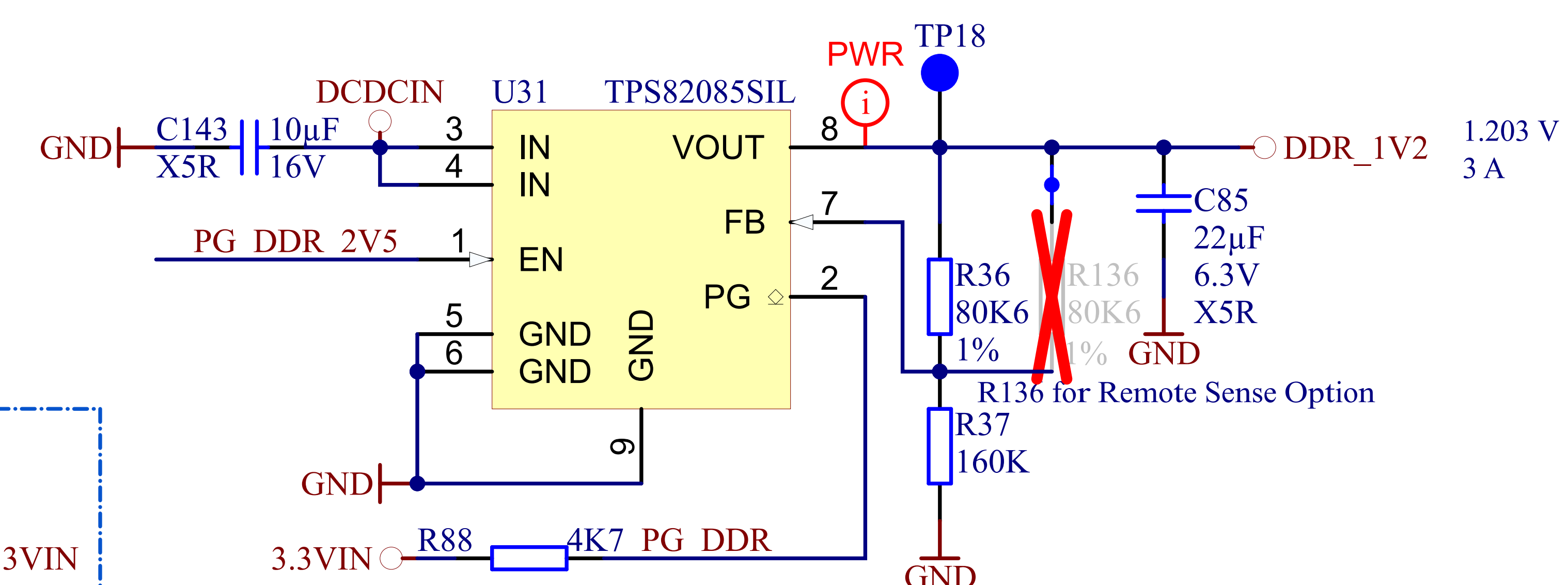
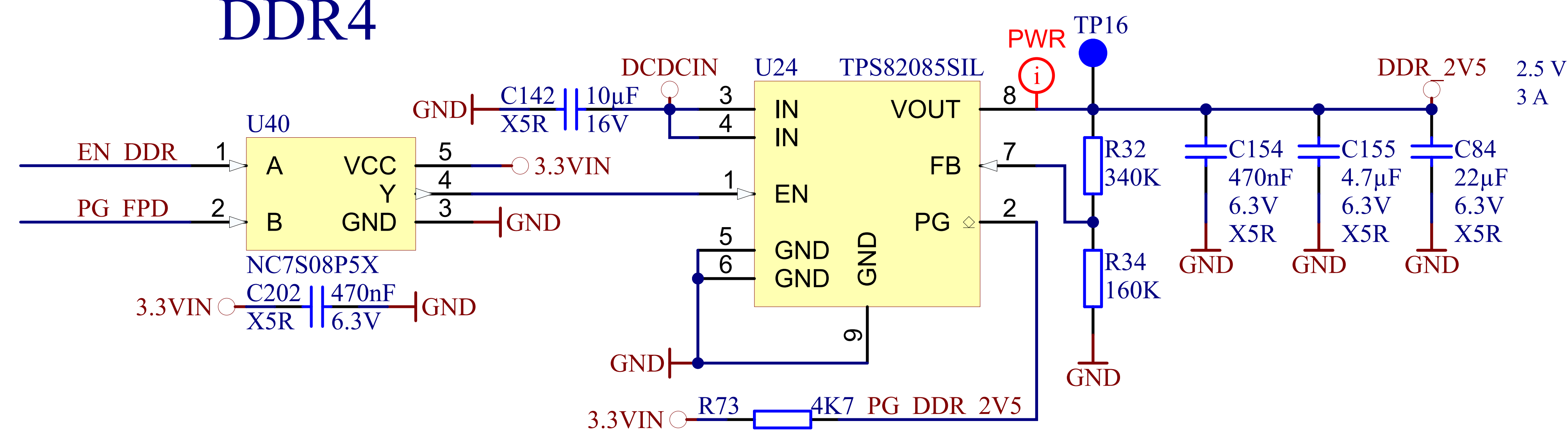
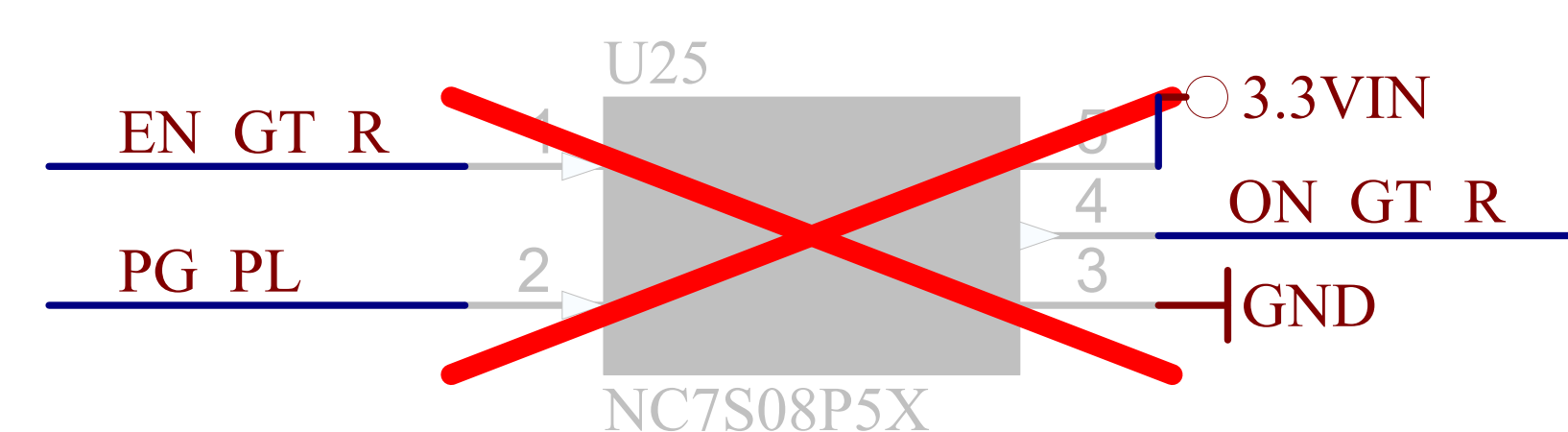
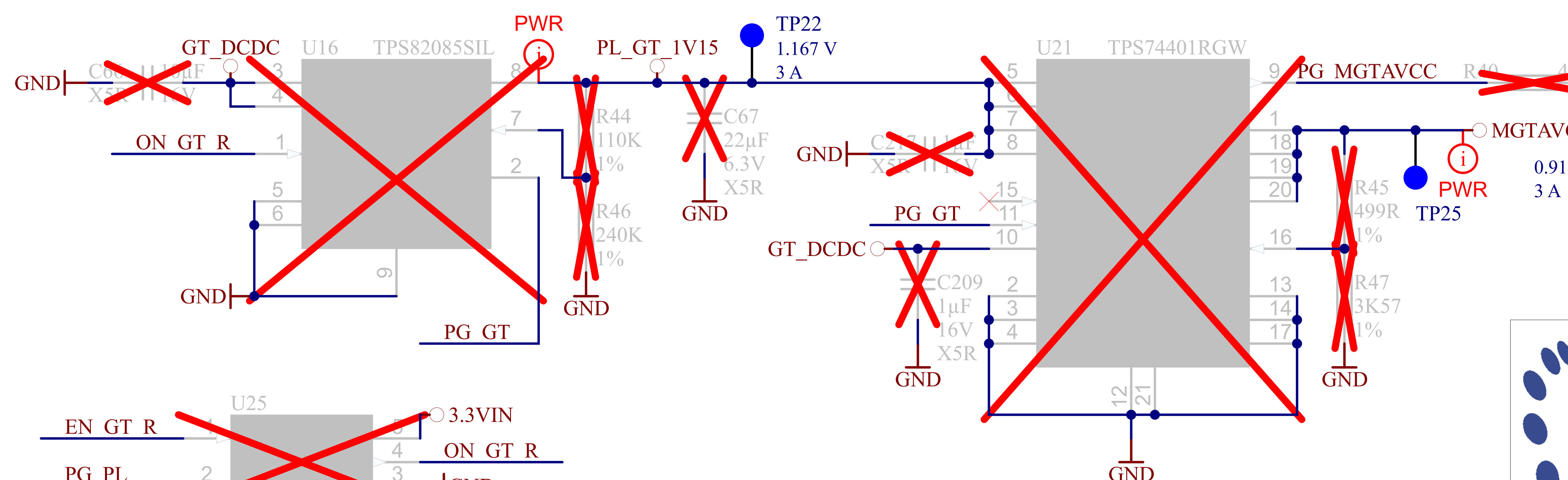
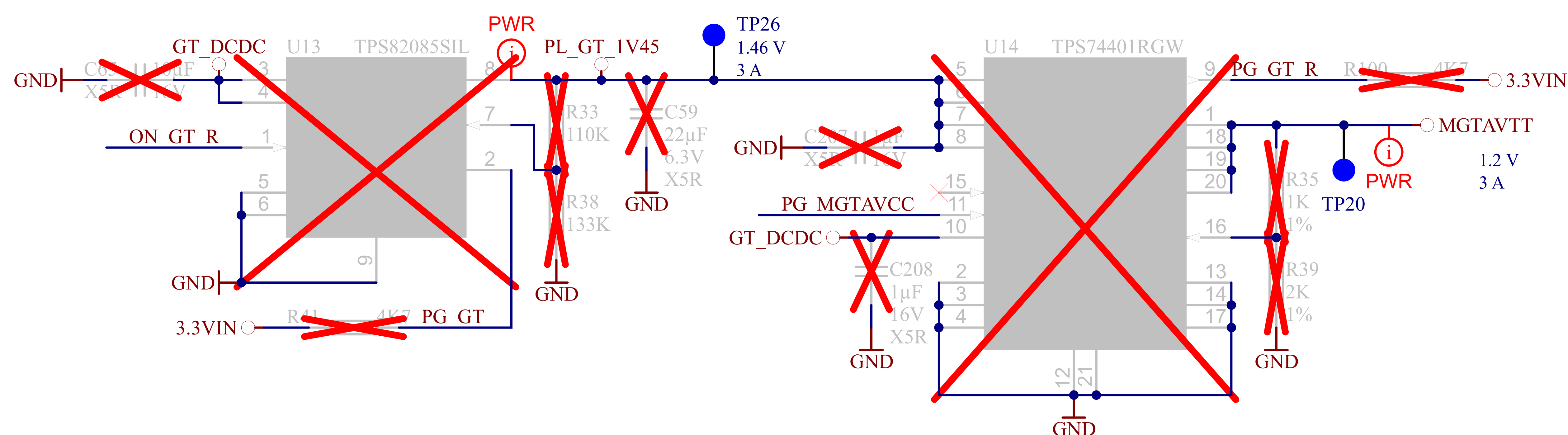
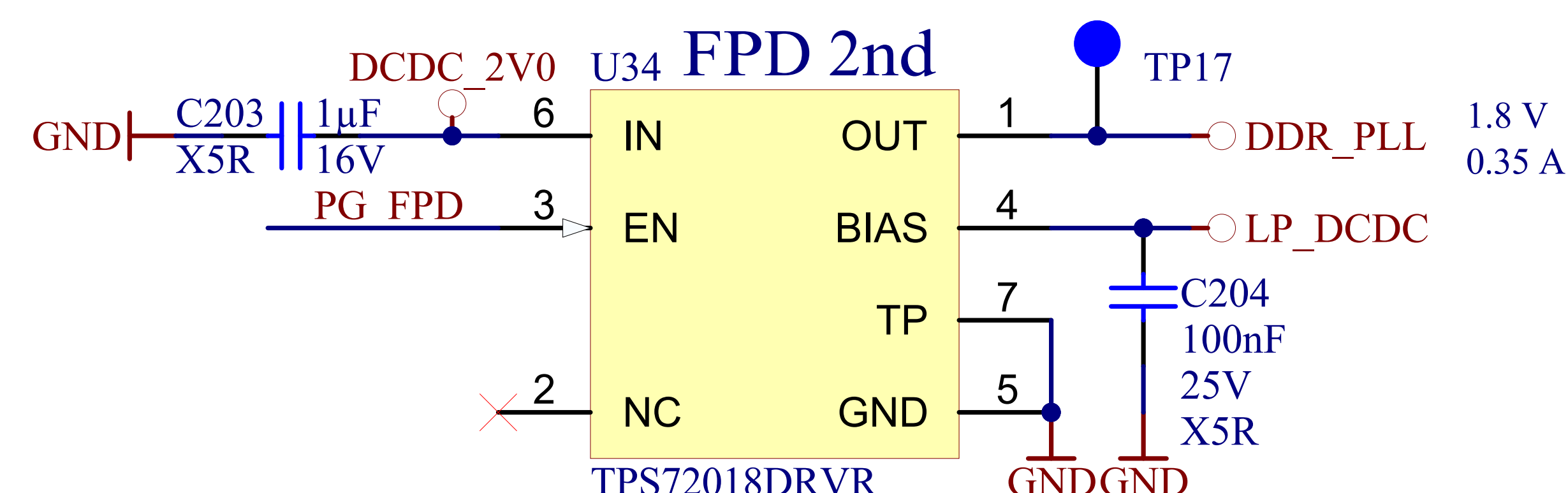
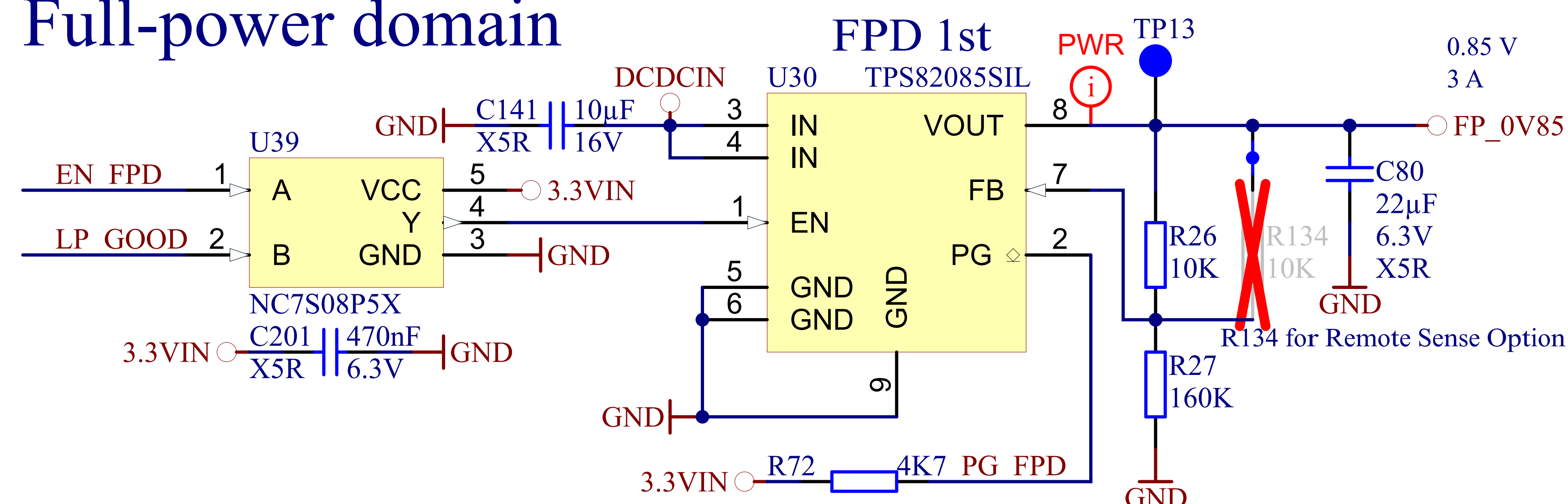


VCCINT_IO & VCCBRAM

Add U33 when -1LI/2LE FPGA is used



Title: TE0813 - POWER_2		
A4	Number: TE0813 2AI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 28 of 30
Filename: POWER_1.SchDoc		



PL MGT

Filename: POWER 2.SchDoc

Low-power domain

PS MGT

PS MIO VCCIO



Title: TE0813 - POWER_4		
A4	Number: TE0813 2AI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 30 of 30
Filename: POWER_3.SchDoc		

Net Name	Voltage Rail	Low Detect
LP_0V85	0.85 V	0.743 V
3.3VIN	3.3 V	2.941 V