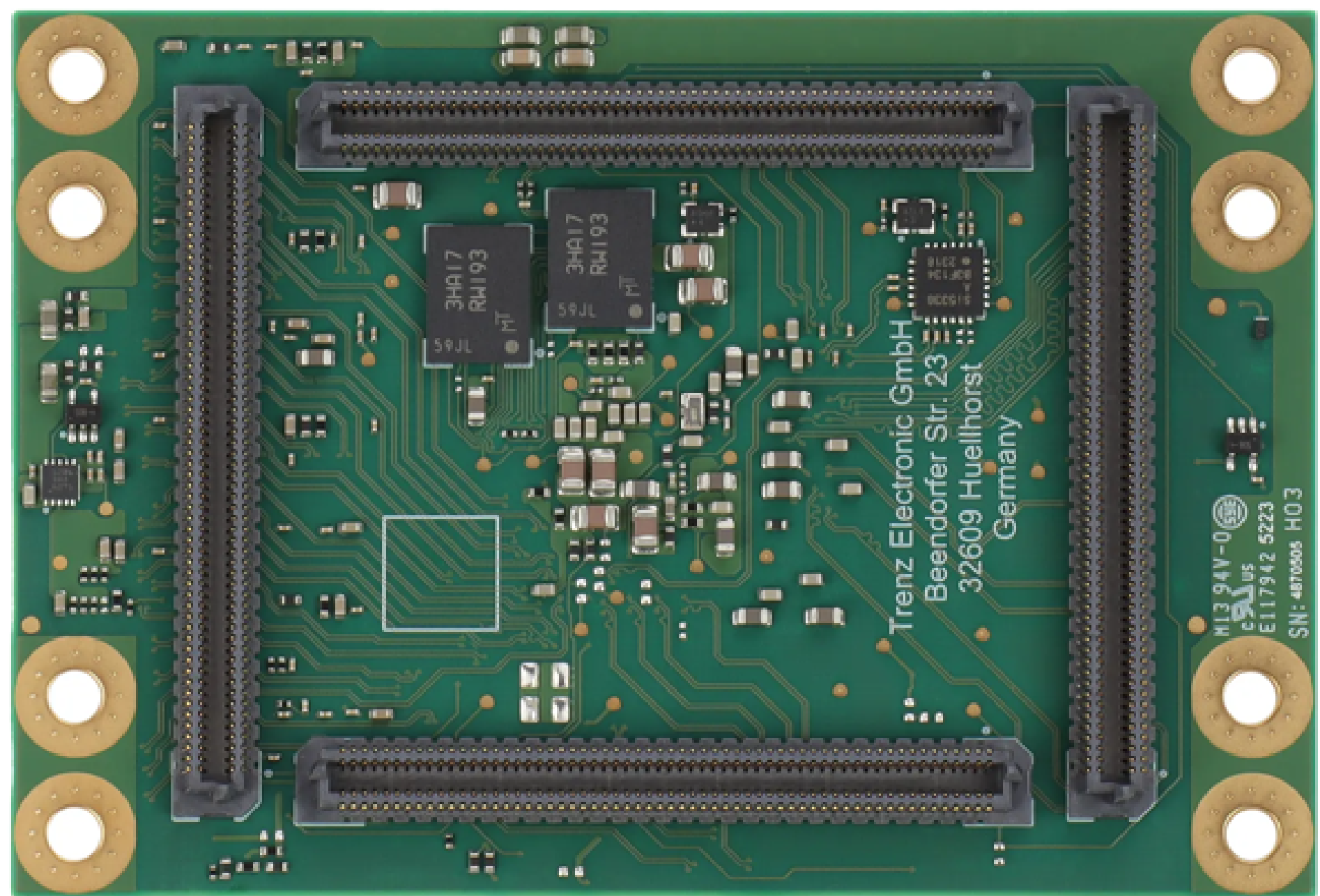
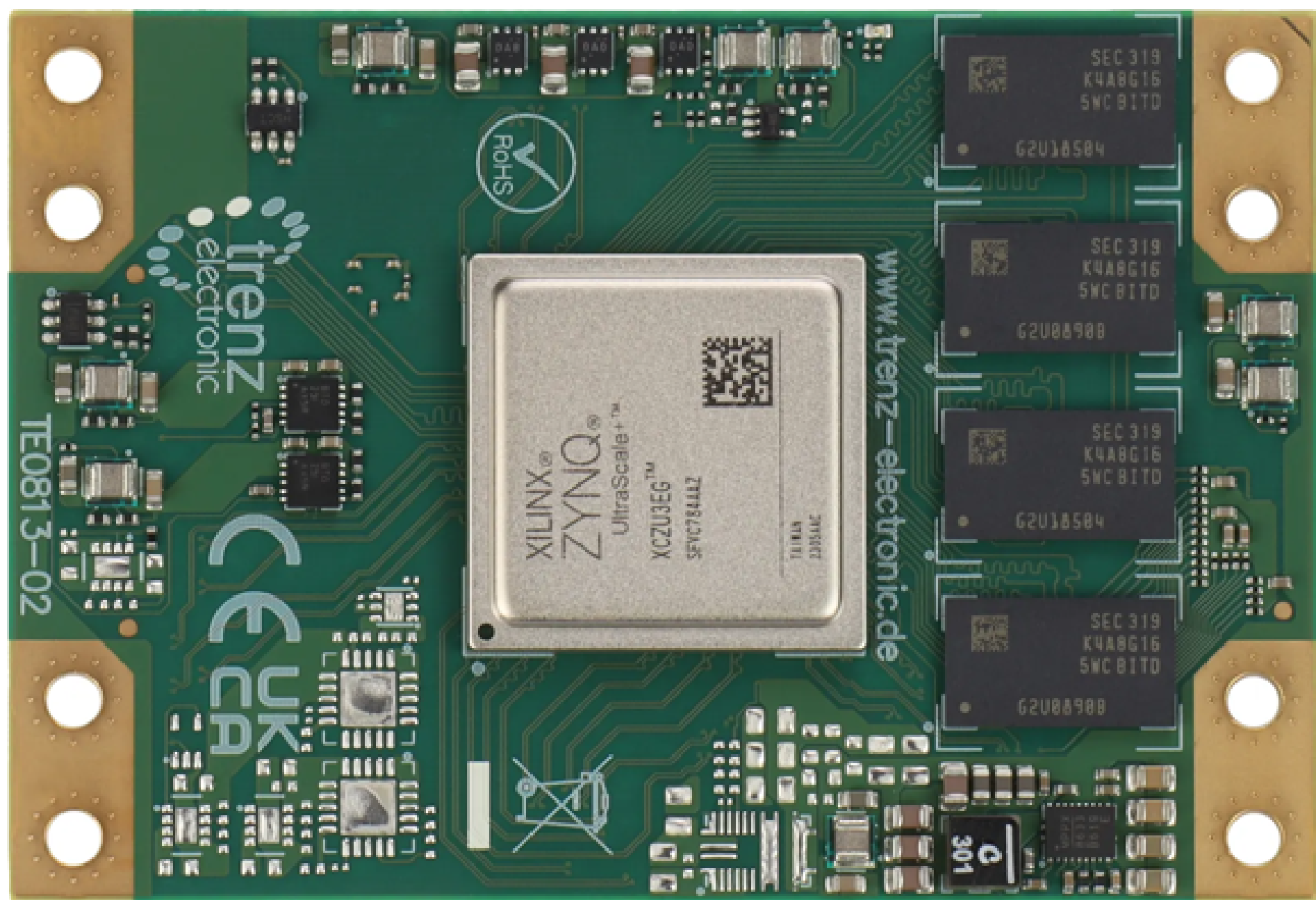
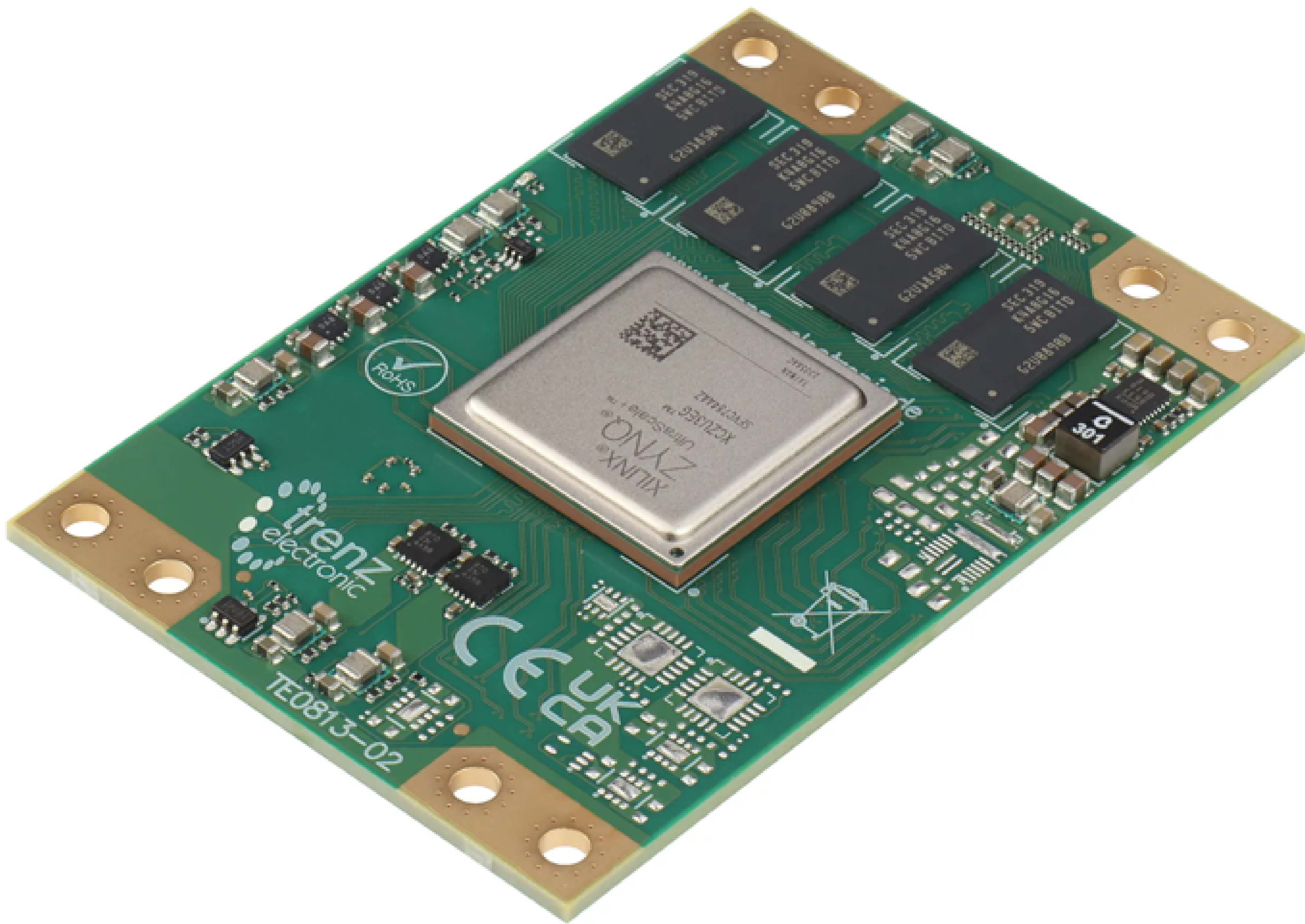




Regarding the usage of our schematics and alike documentation for Trenz module TE0813.
Project is protected under copyright and we strongly and strictly prohibit the reverse engineering or recreation,
even if the design is just adapted or modified.
TE0813 is protected under such right and in case of 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	4BI61-A
Created by	VG
Modified by	VG
Modified at	2025-12-17



Title: TE0813 - Legal Notices		
A4	Number: TE0813 4BI61-A	Rev. 02
Date: 04.05.2026	Copyright: Trenz Electronic GmbH	Page 1 of 30
Filename: Legal Notices Modules.SchDoc		

1

2

3

4

Special notes:

A

B

C

D

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

Mount.Hole 3.2mm für Unterlegscheibe

Mount.Hole 3.2mm für Unterlegscheibe

Mount.Hole 3.2mm für Unterlegscheibe

Mount.Hole 3.2mm für Unterlegscheibe

PM1

PM2

FIDU-DOT - mini

FIDU-DOT - mini

PM3

PM4

FIDU-DOT - mini

FIDU-DOT - mini

PM5

PM6

FIDU-DOT - mini

FIDU-DOT - mini

UKCA1

UKCA Logo on Top Overlay

UKCA-TOPOVERLAY

CE1

CE Logo on Top Overlay

CE-TOPOVERLAY

MECH1

TE Address Overlay

LOGO ADDRESS

LOGO1

TE Logo PRINT Layer

LOGO PRINT

Serial

Serial

Serialnumber 6,3 x 6.3mm

trenz

electronic

Title: TE0813

A4

Number: TE0813
4BI61-A

Rev. 02

Date: 06.01.2026

Copyright: Trenz Electronic GmbH

Page 5 of 30

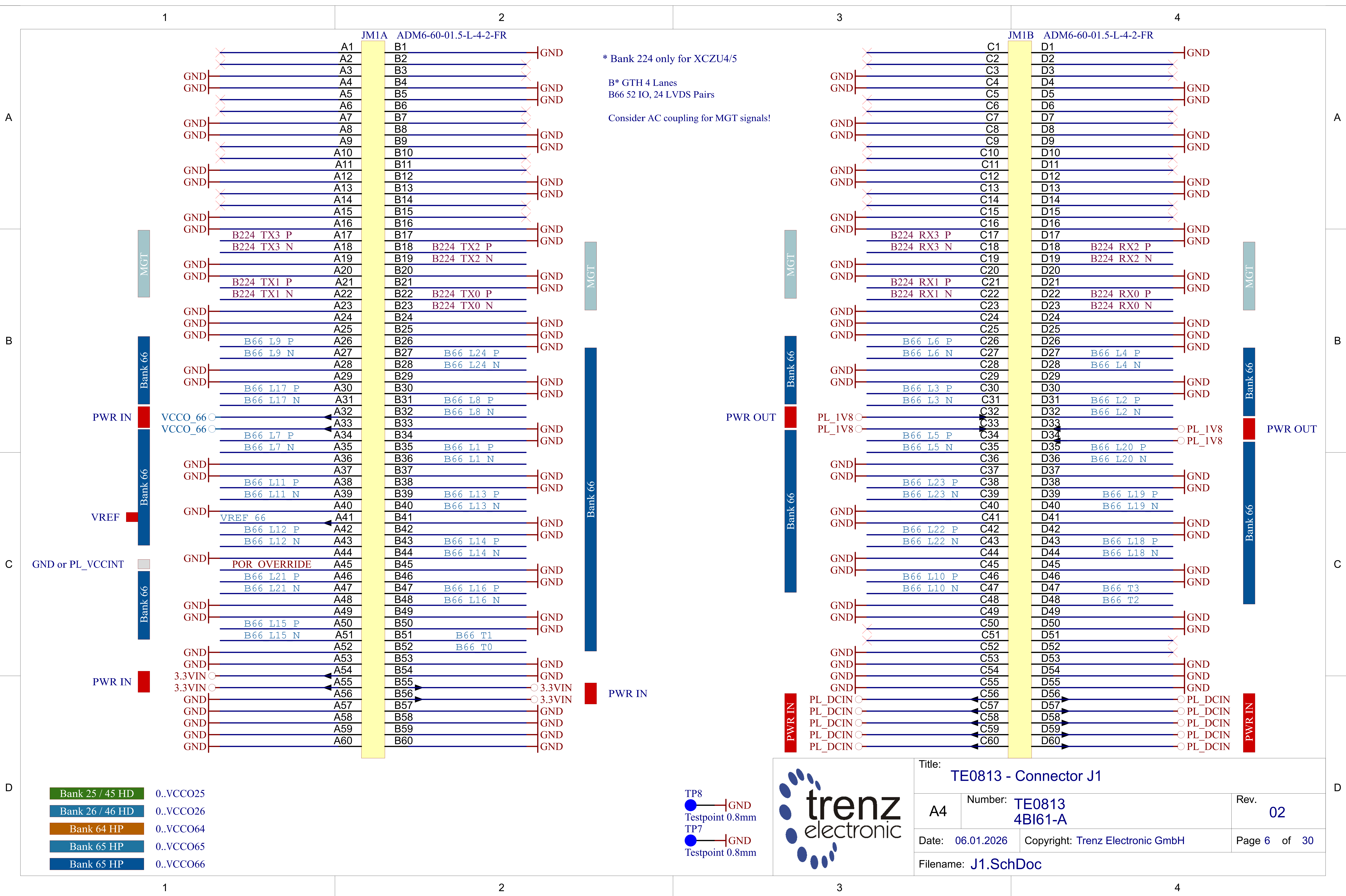
Filename: TE0813.SchDoc

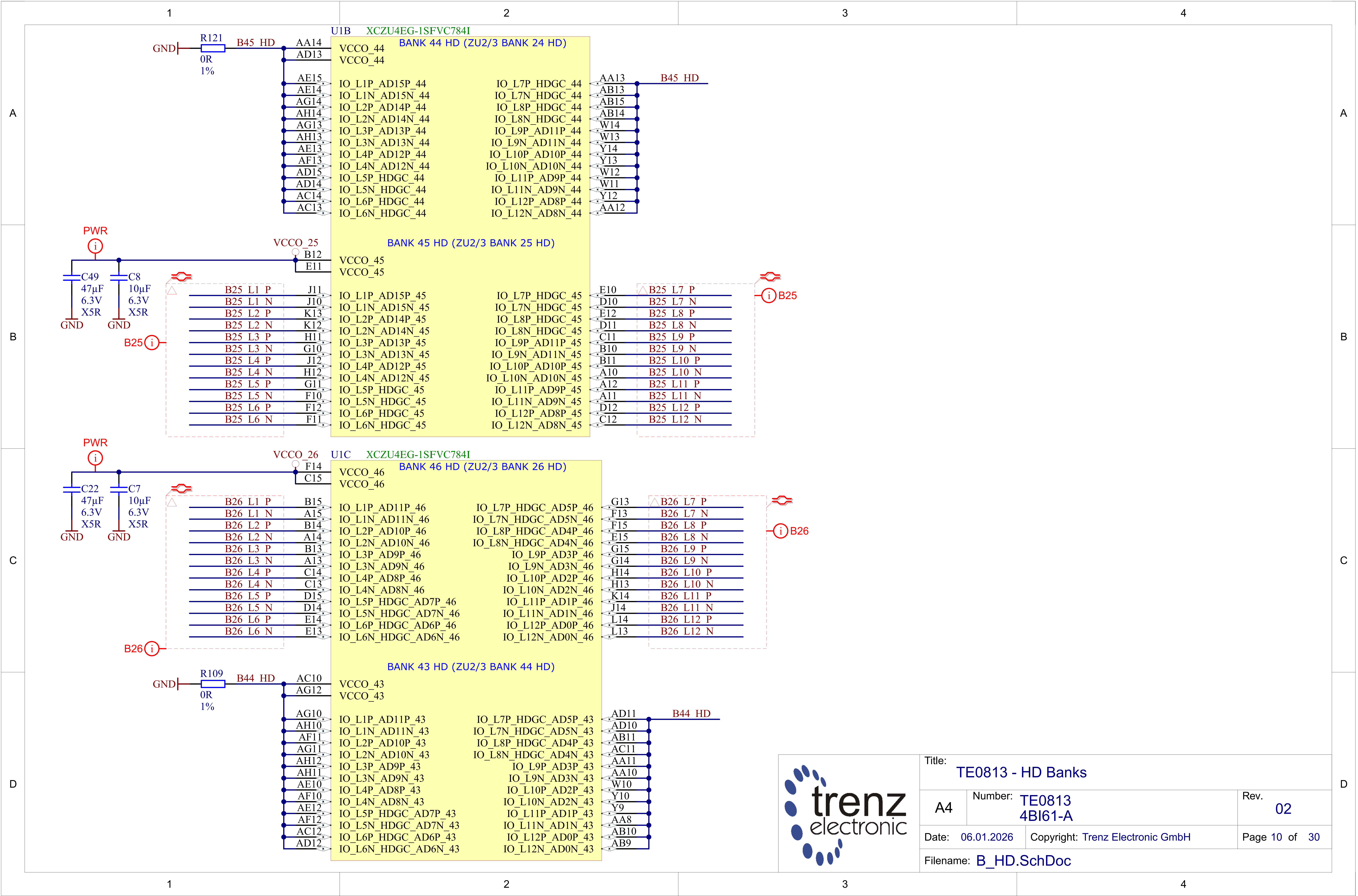
1

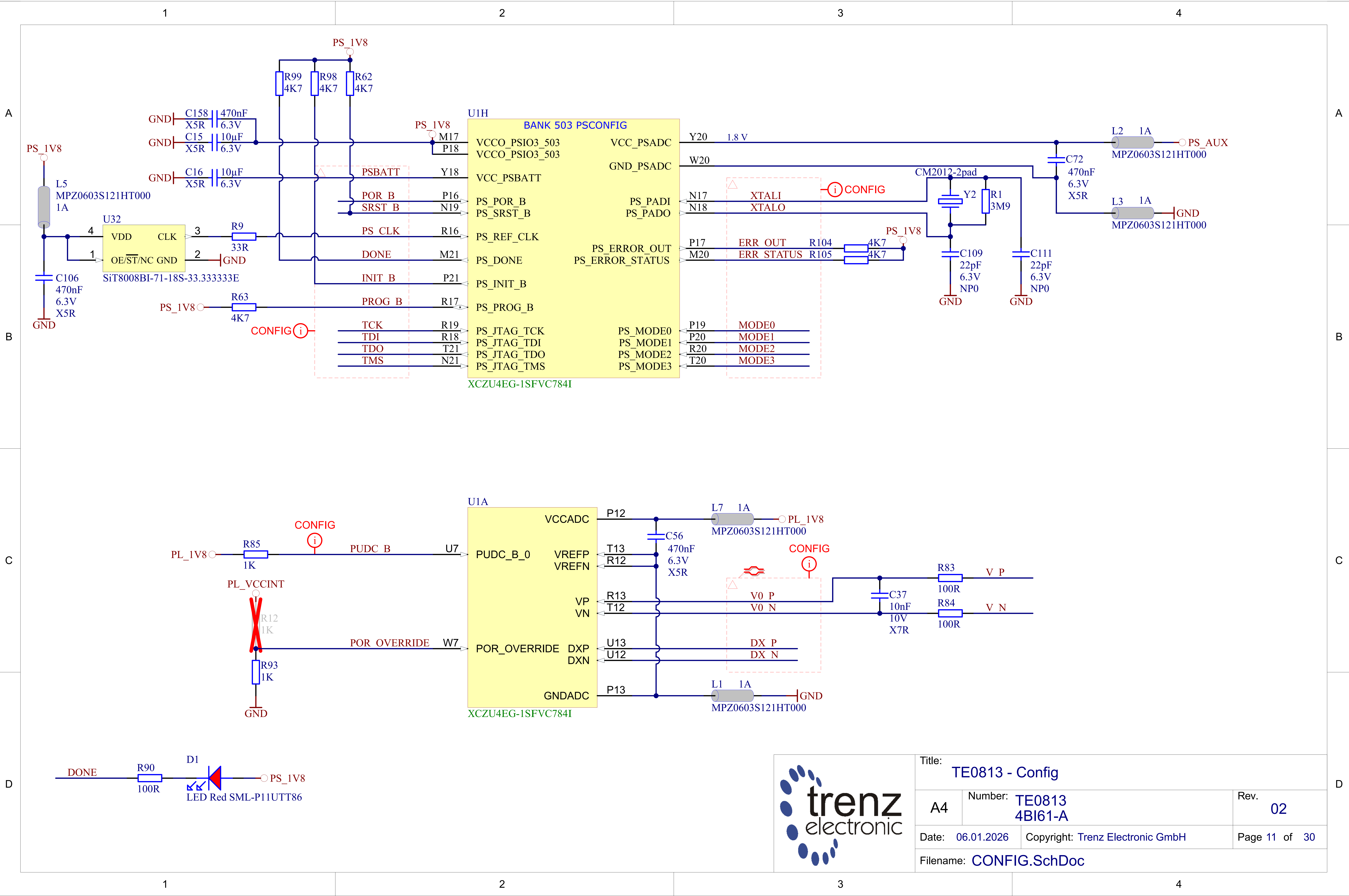
2

3

4





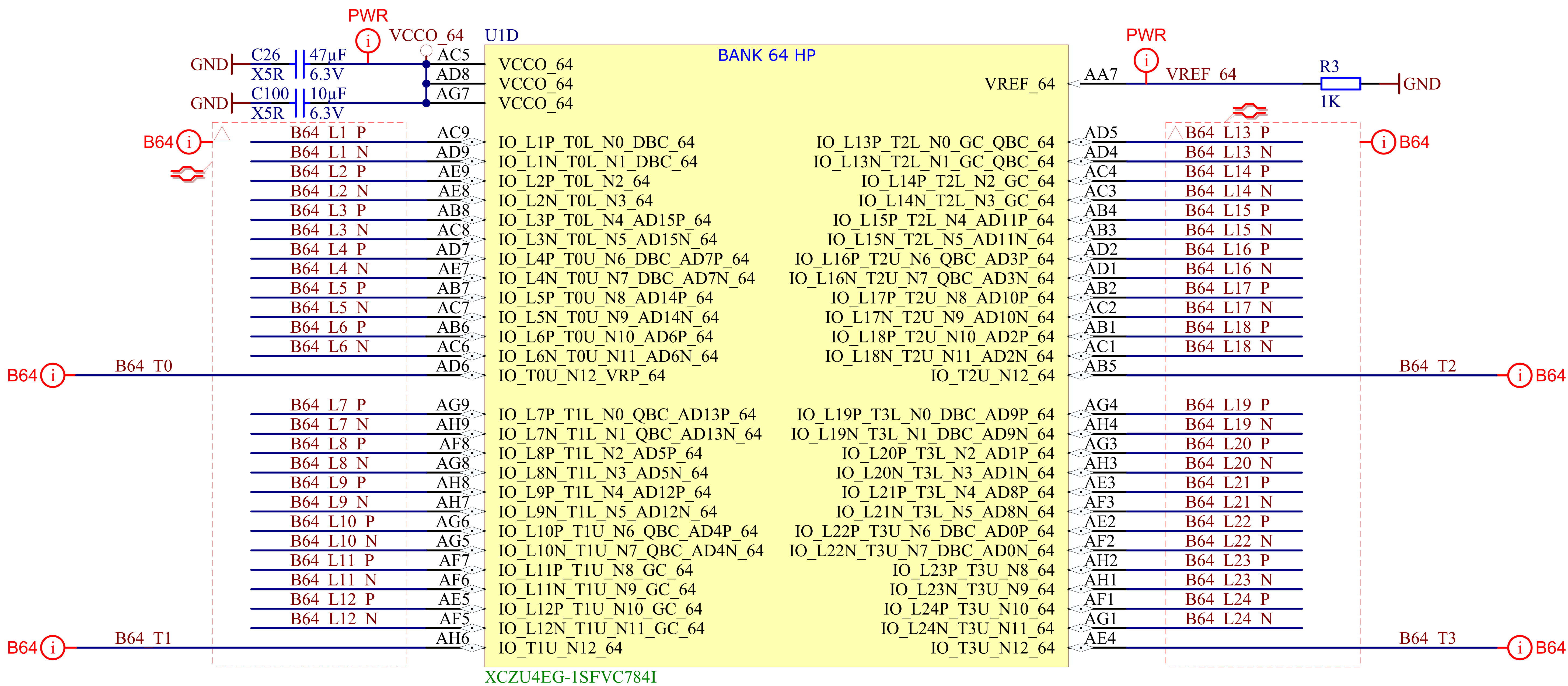


Title:

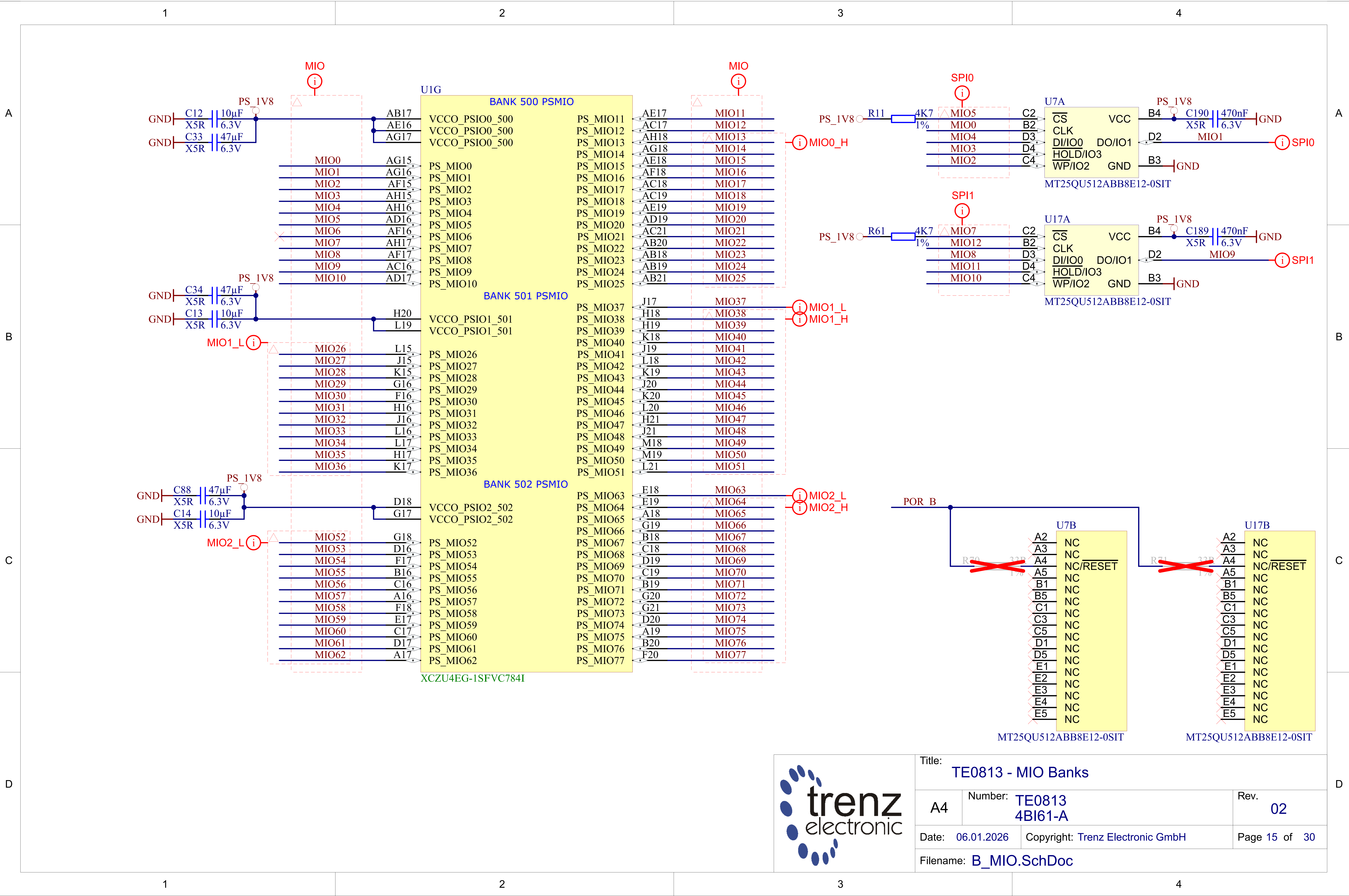
TE0813 - Config

A4	Number: TE0813 4BI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 11 of 30

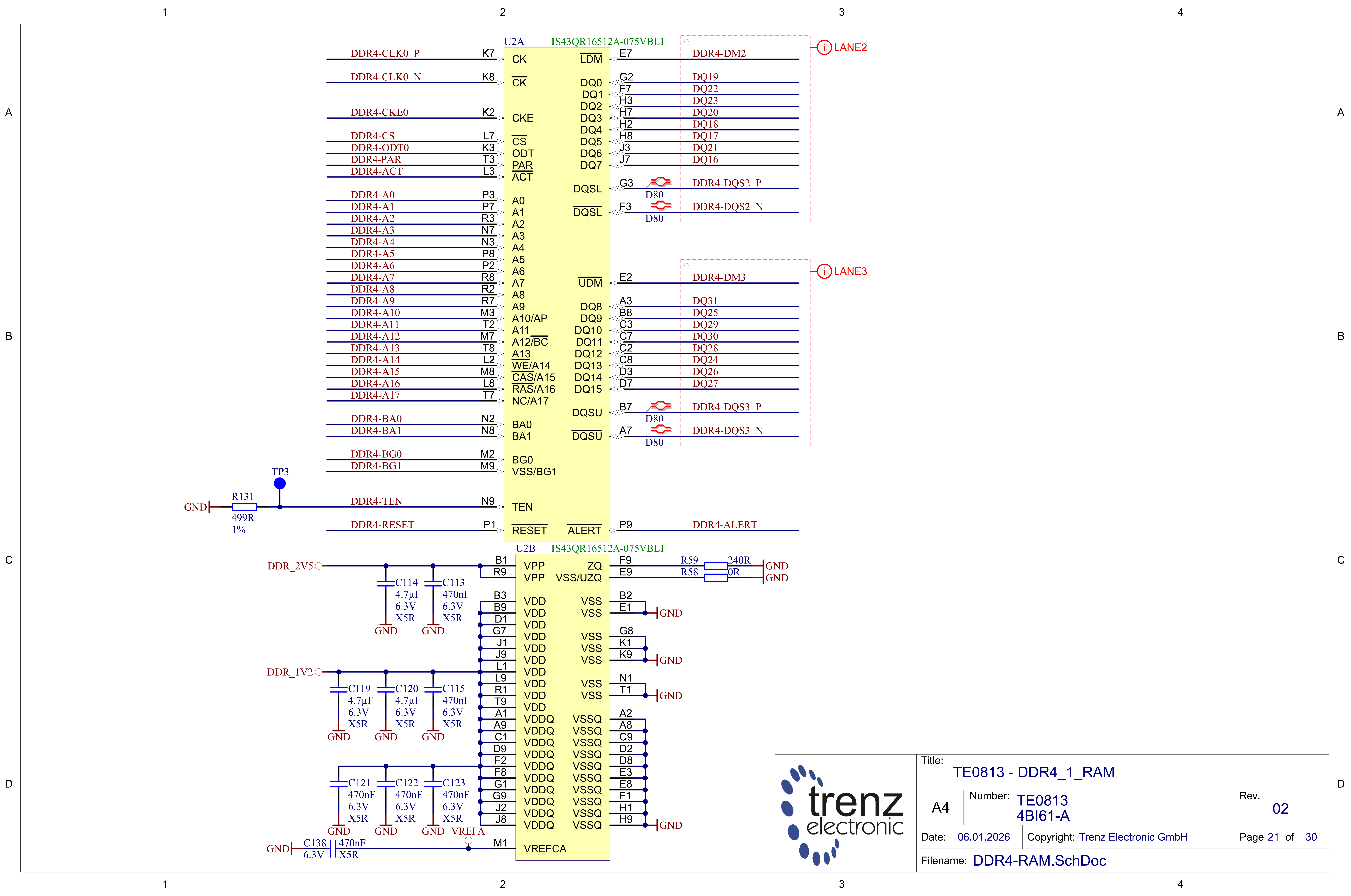
Filename: CONFIG.SchDoc



Title: TE0813 - B64		
A4	Number: TE0813 4BI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 12 of 30
Filename: B64.SchDoc		









Title: TE0813 - DDR4_2_RAM		
A4	Number: TE0813 4BI61-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

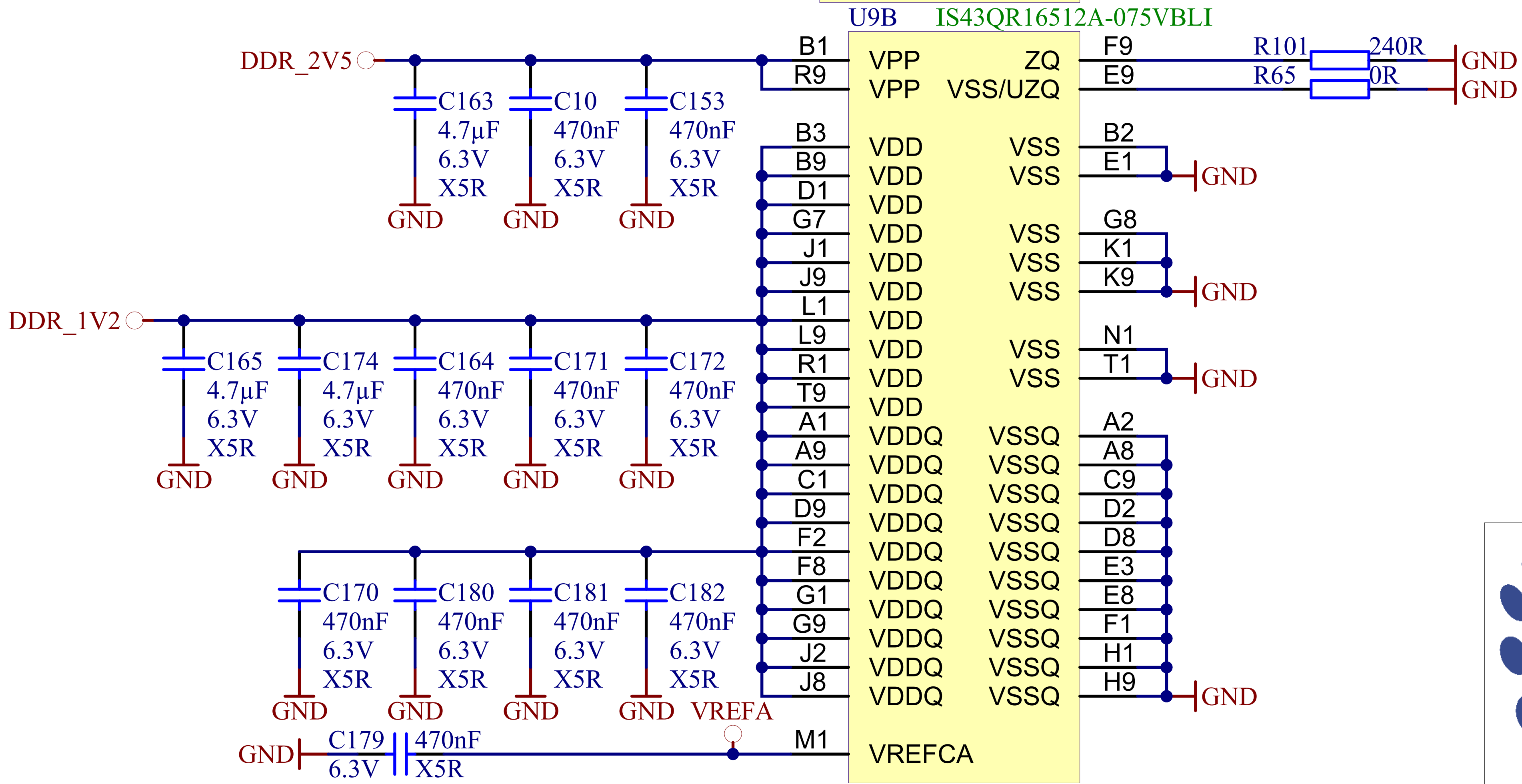
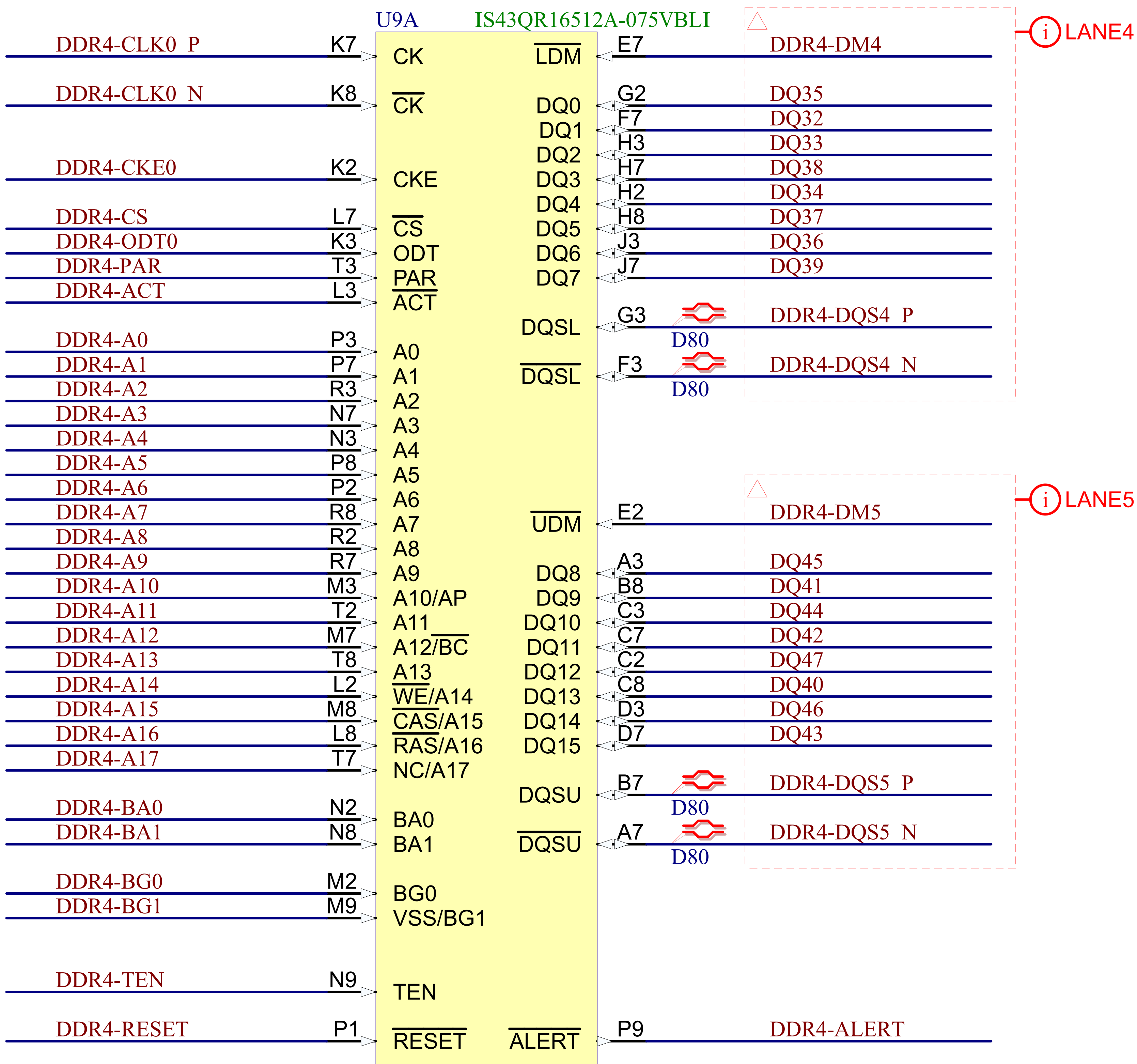
B

C

C

D

D



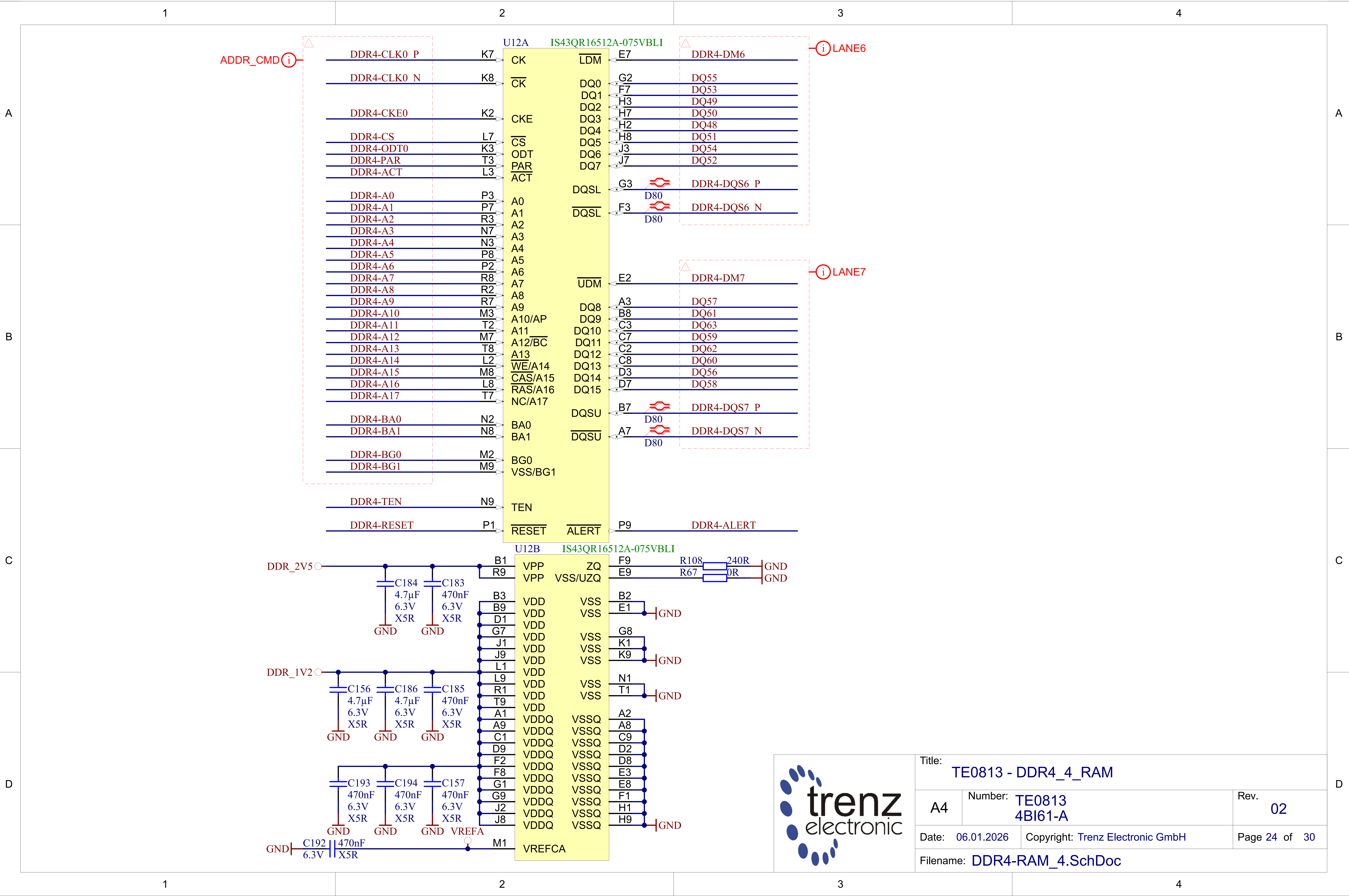
Title: TE0813 - DDR4_3_RAM		
A4	Number: TE0813 4BI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 23 of 30
Filename: DDR4-RAM_3.SchDoc		

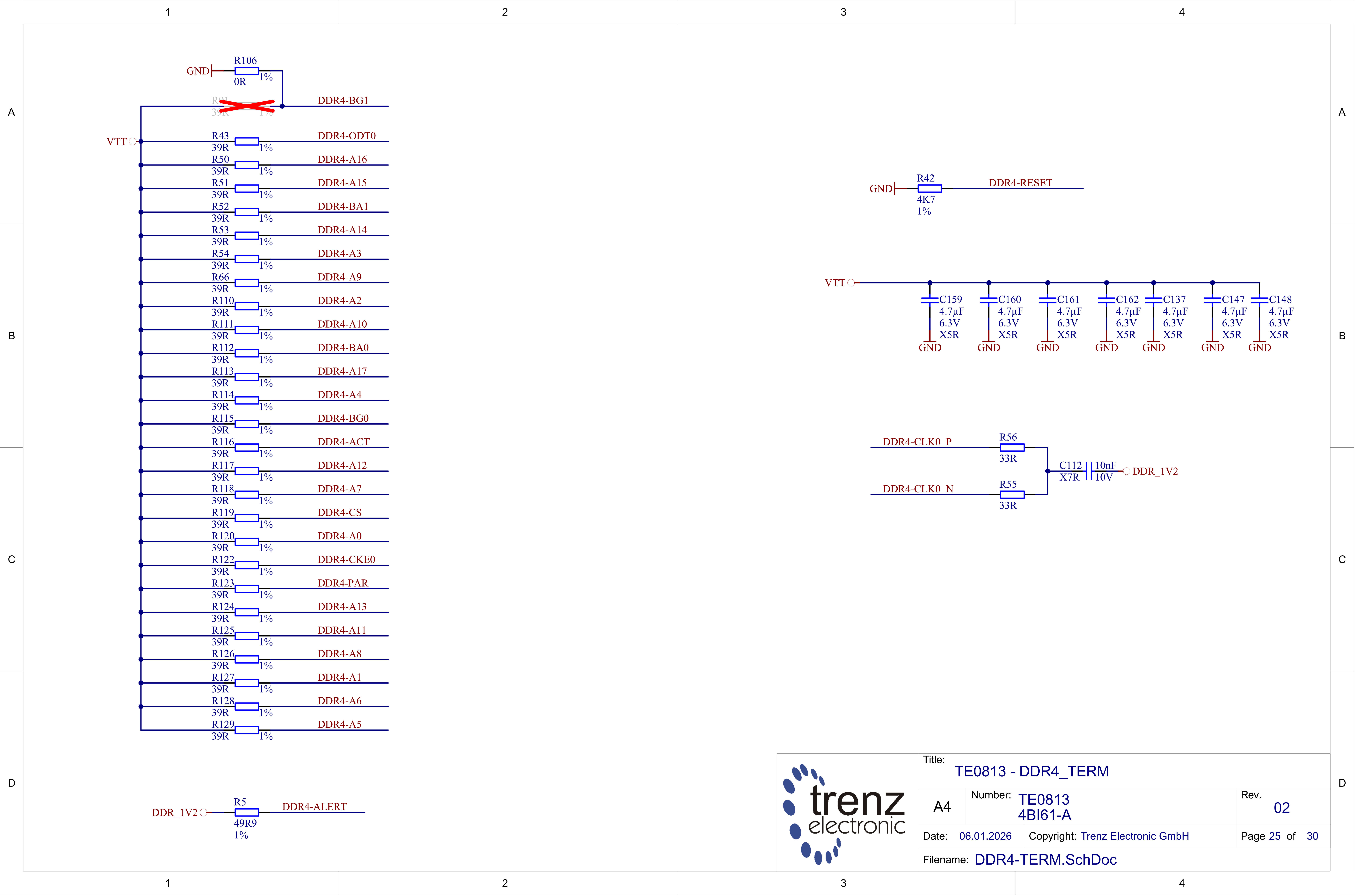
1

2

3

4



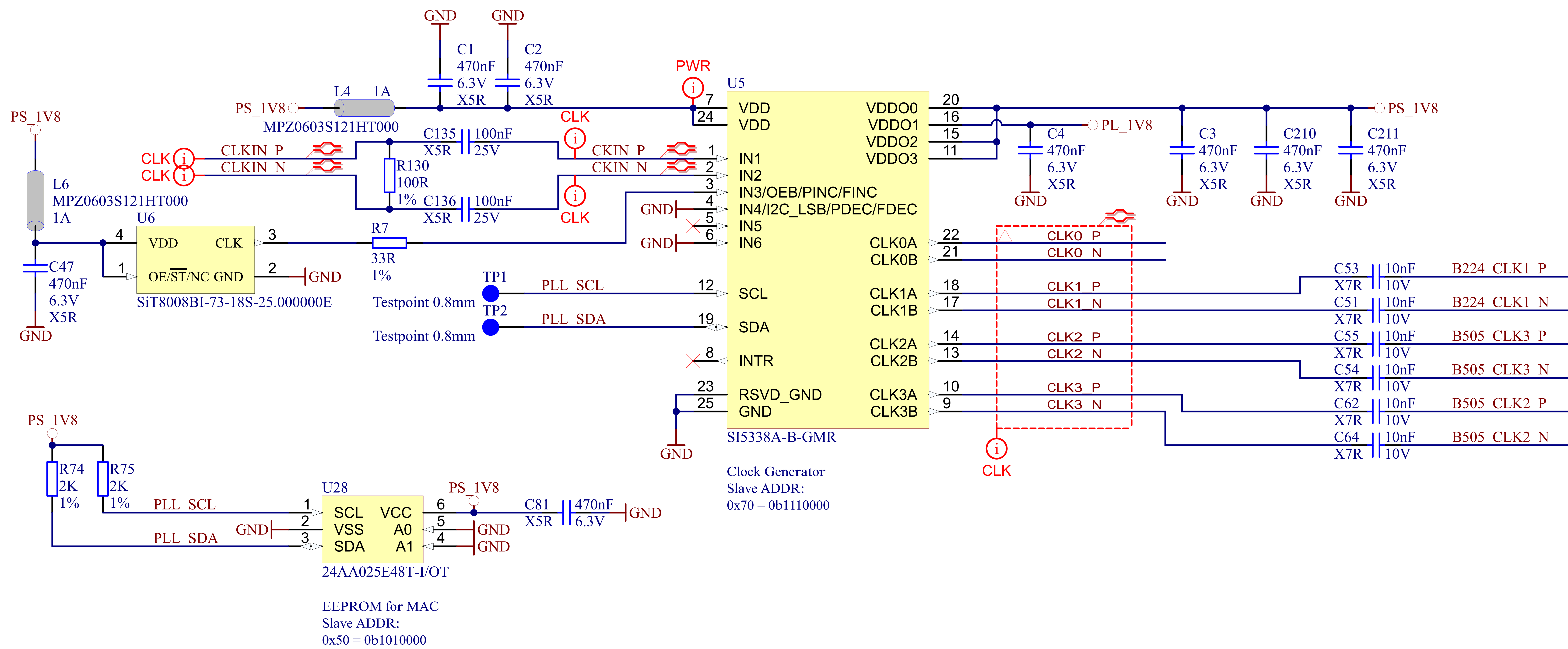


Title:

TE0813 - DDR4_TERM

A4	Number: TE0813 4BI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 25 of 30

Filename: DDR4-TERM.SchDoc

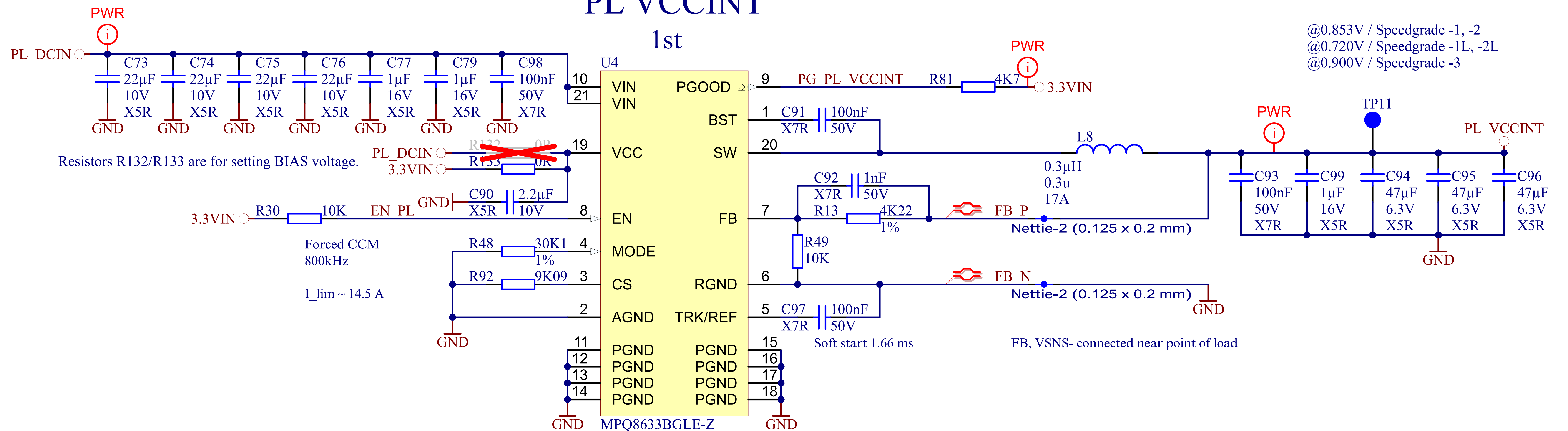


Title: TE0813 - CLOCK		
A4	Number: TE0813 4BI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 26 of 30
Filename: Clock.SchDoc		

U4 can be TPS548A28RWWR 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
--------	------------------

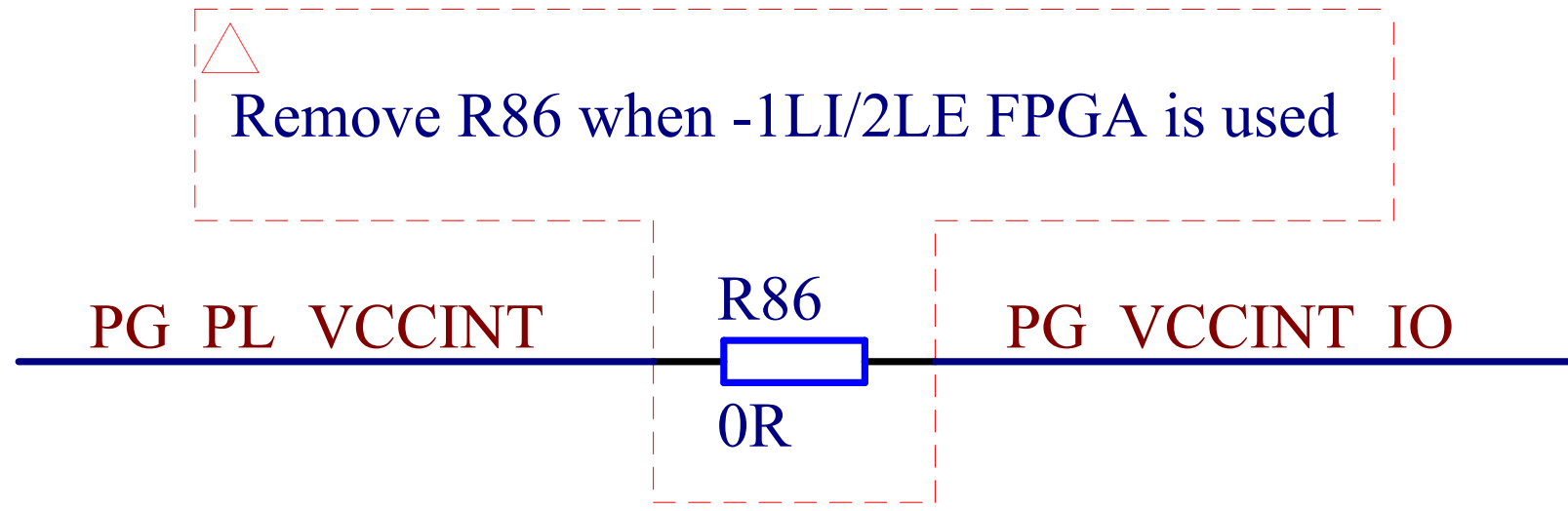
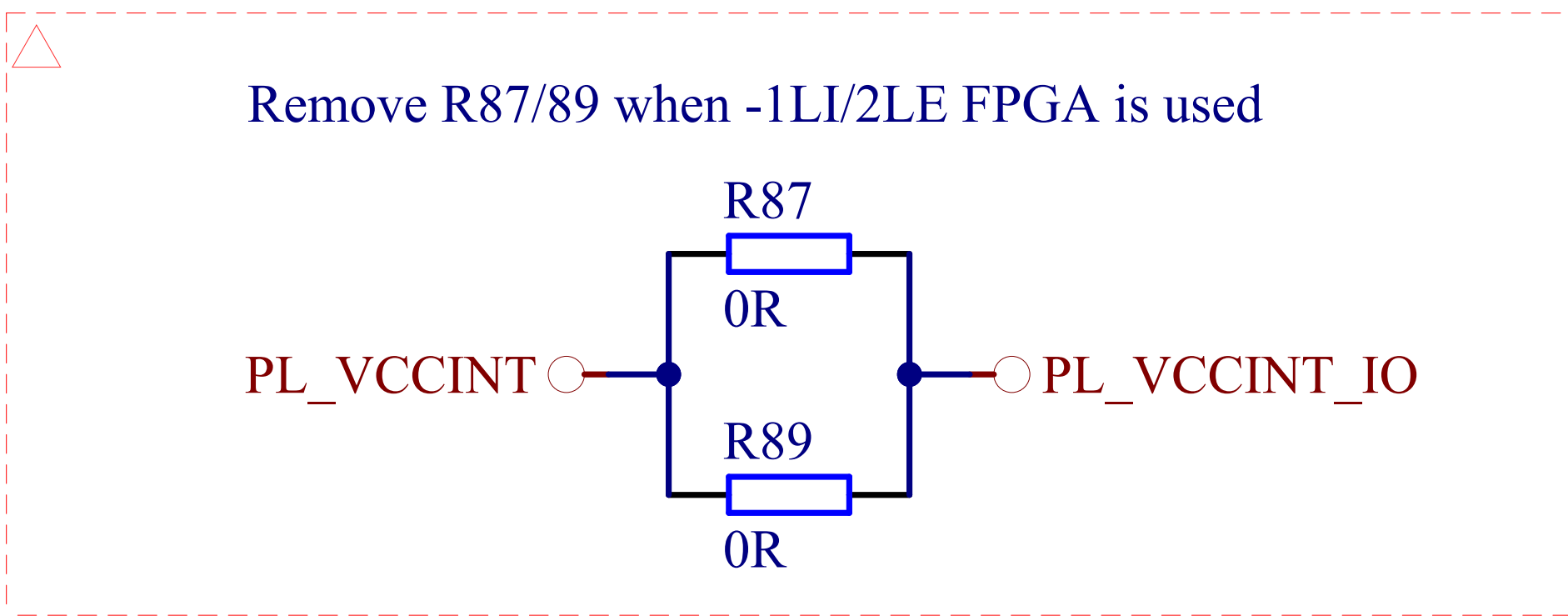
A4	Number: TE0813 4BI61-A
----	---------------------------

Rev. 02

Date: 06.01.2026	Copyright: Trenz Electronic GmbH
------------------	----------------------------------

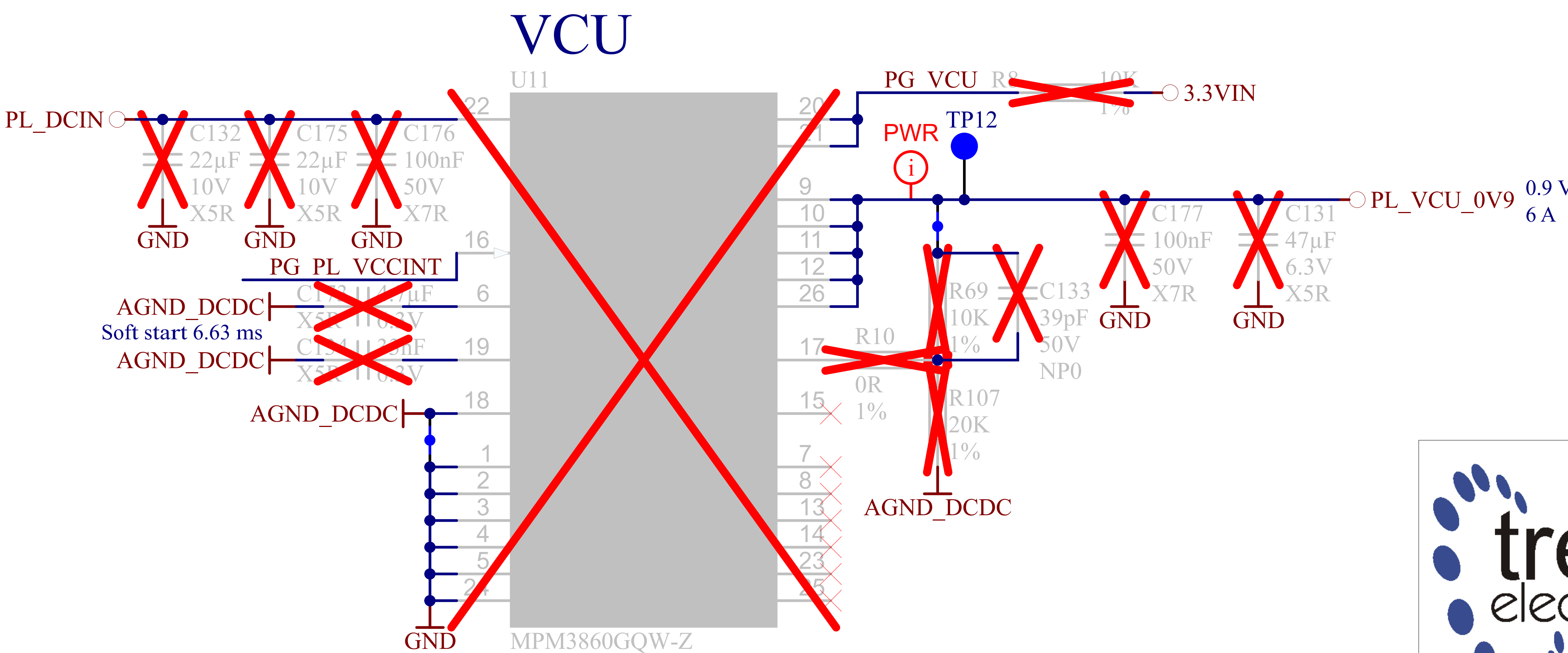
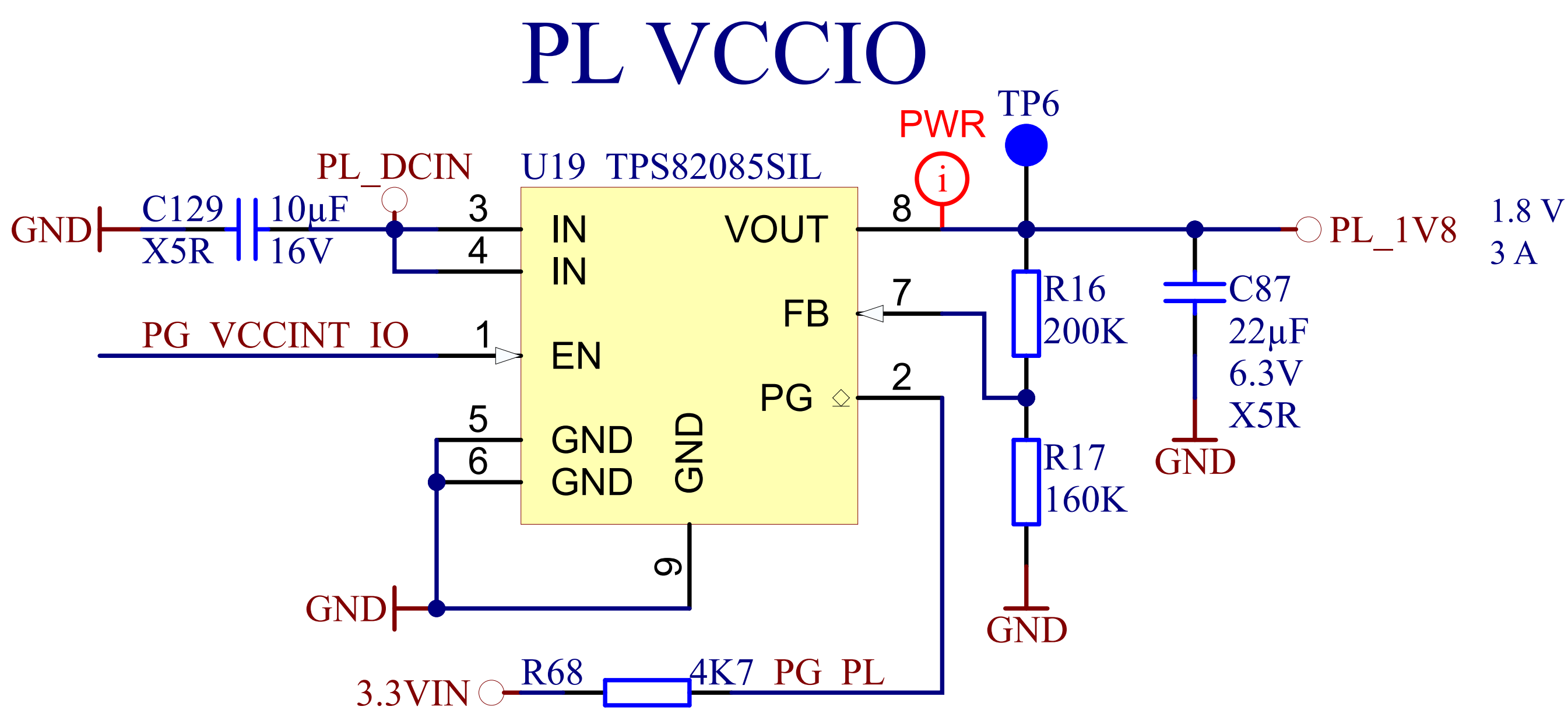
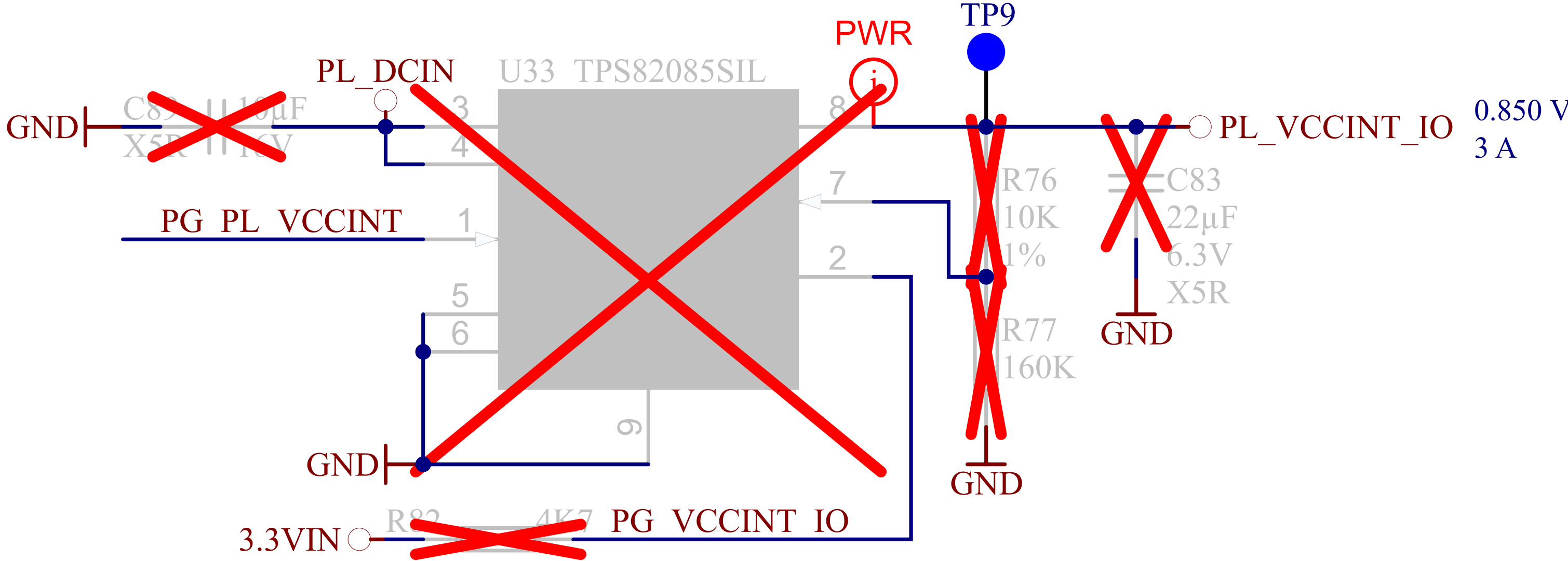
Filename: POWER.SchDoc

Page 27 of 30



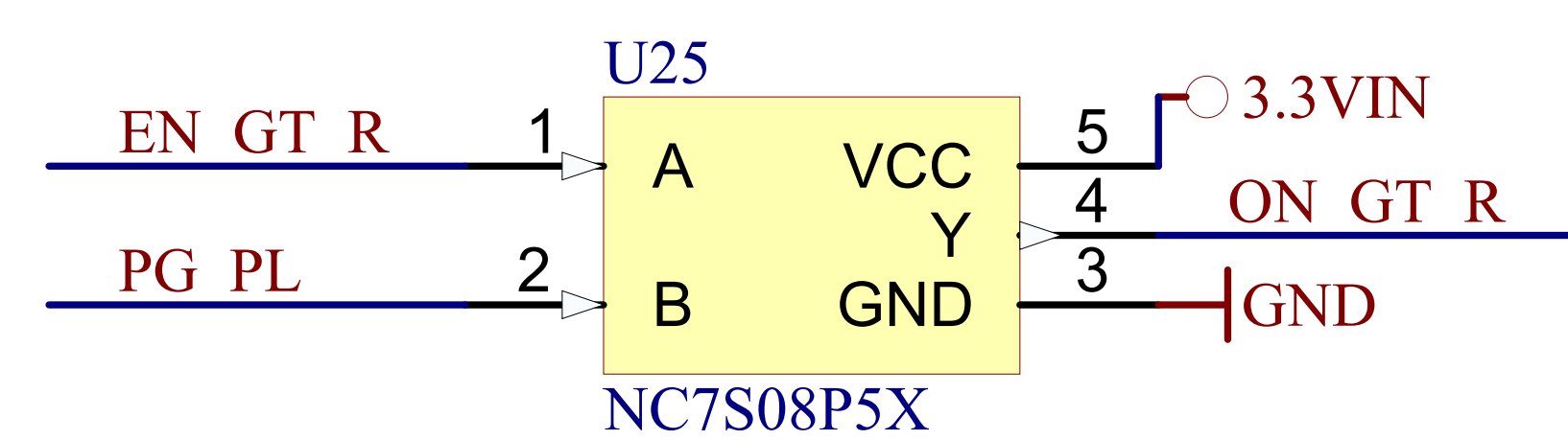
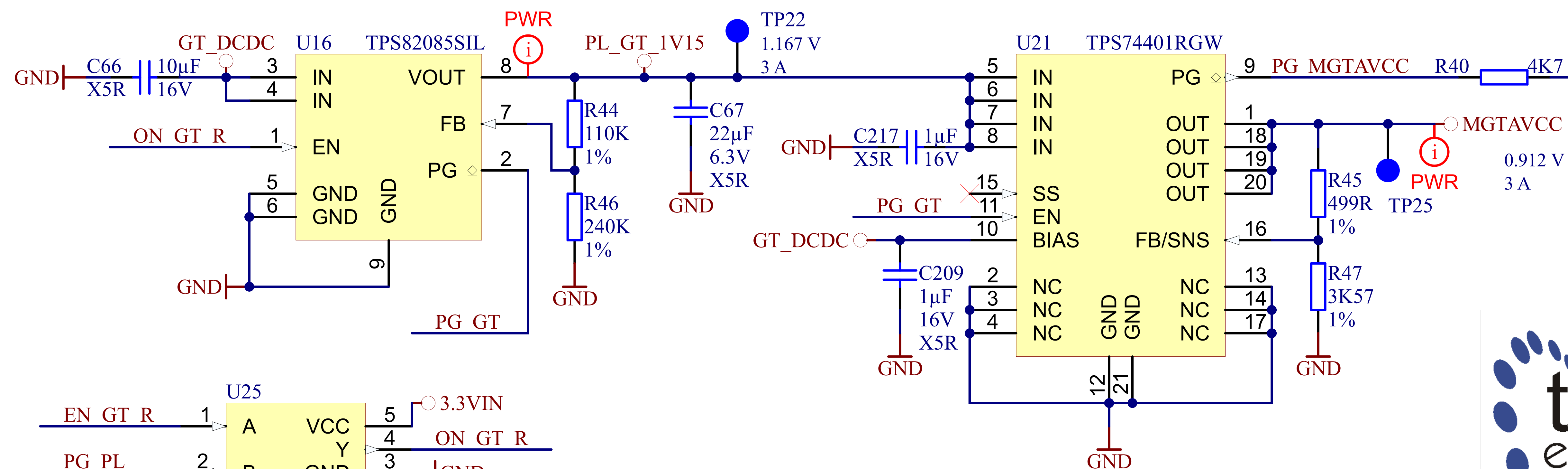
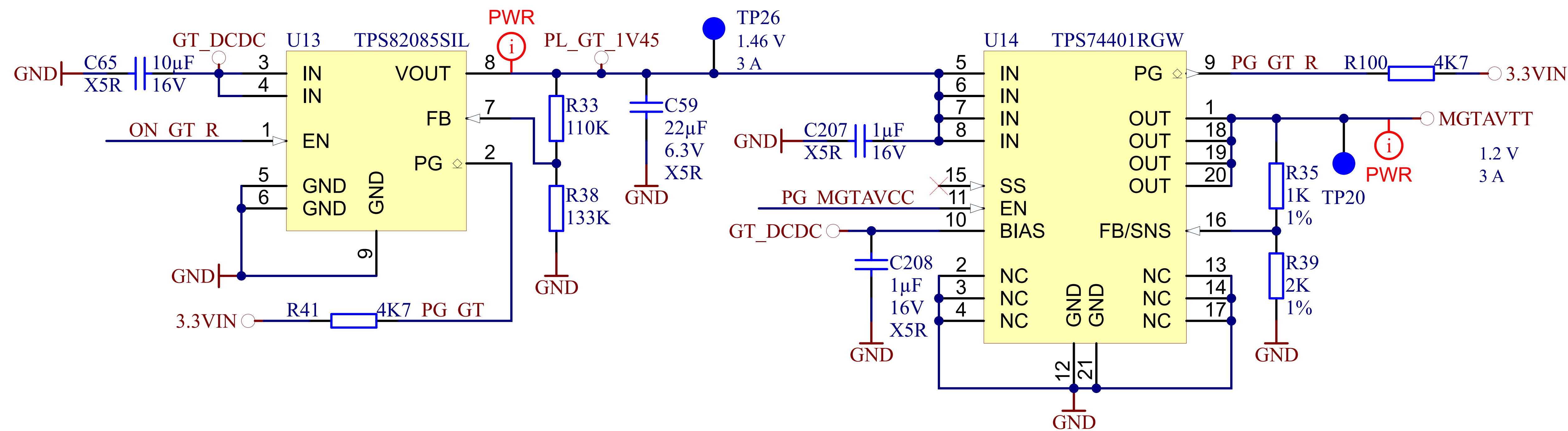
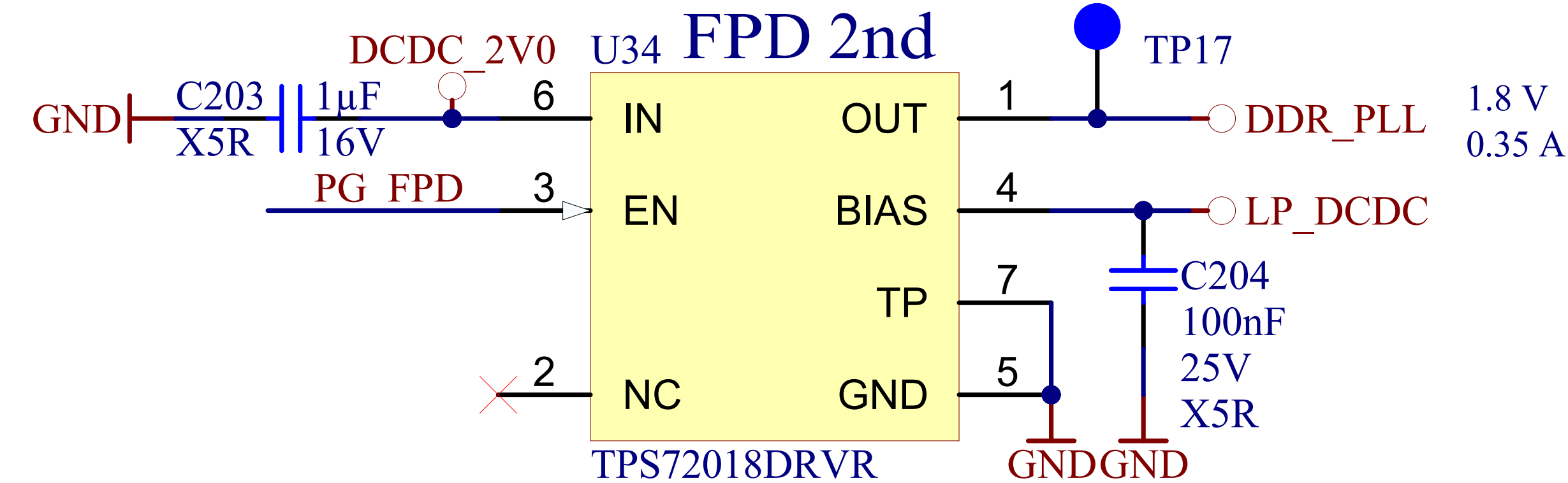
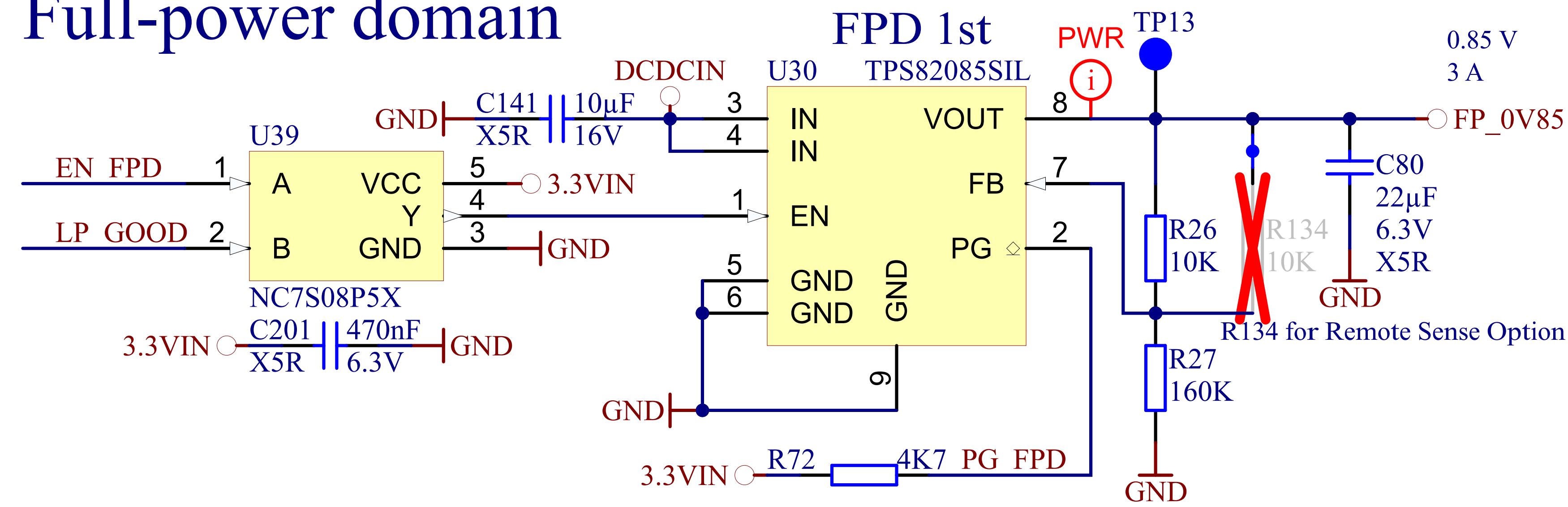
VCCINT_IO & VCCBRAM

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

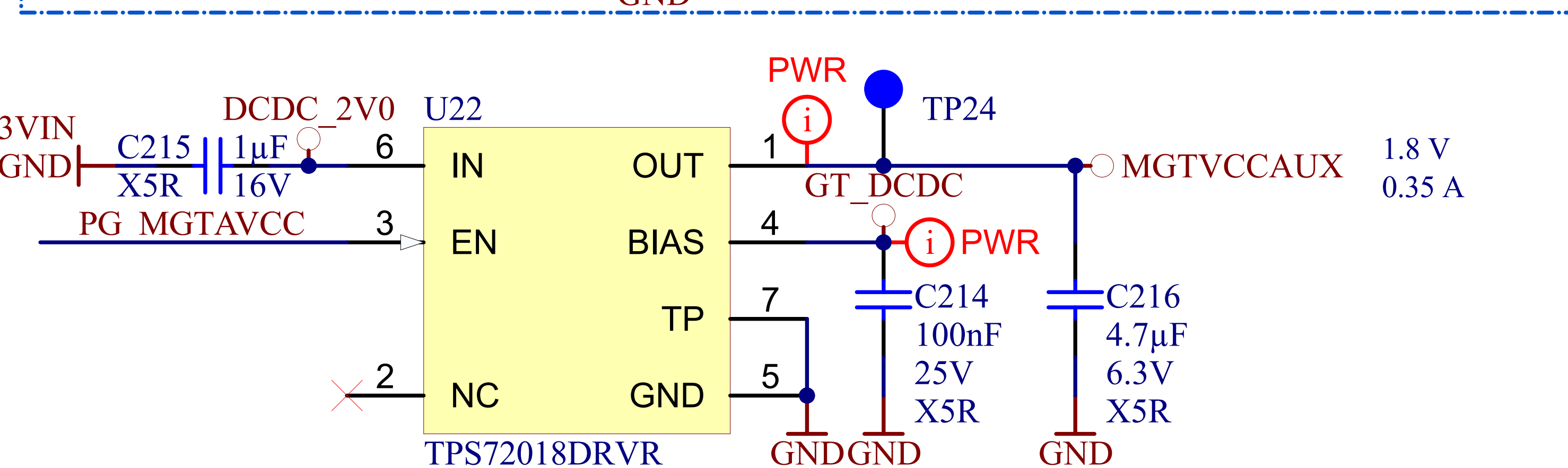
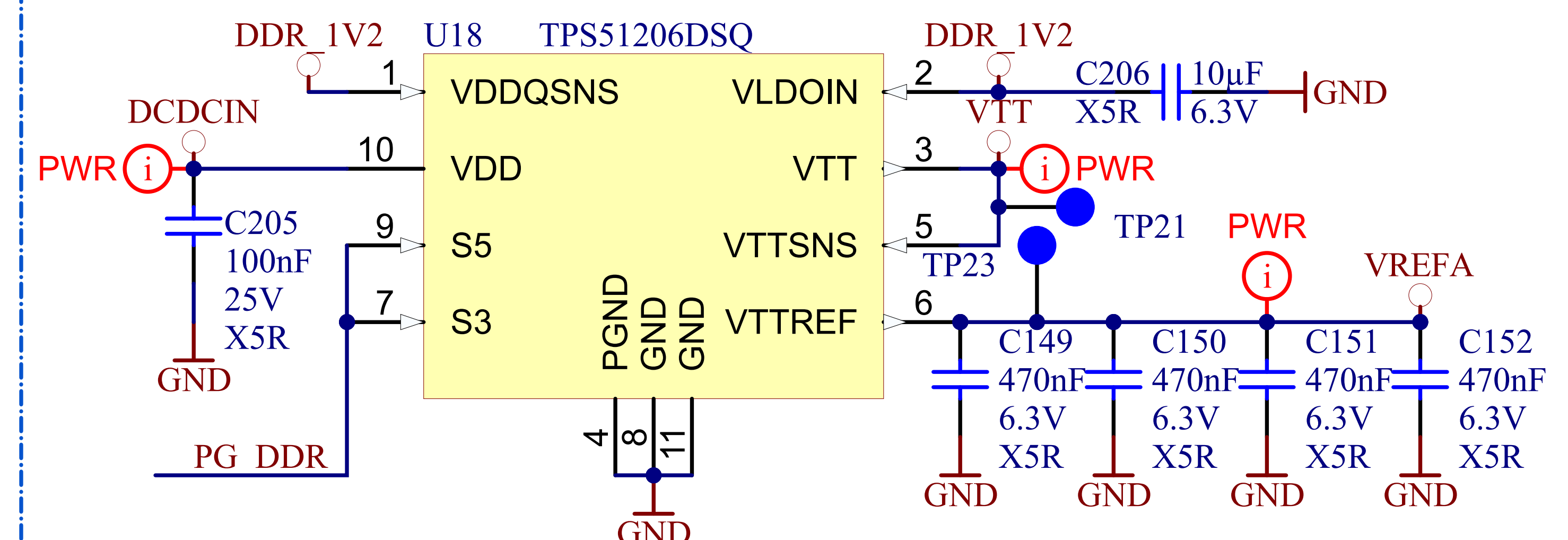
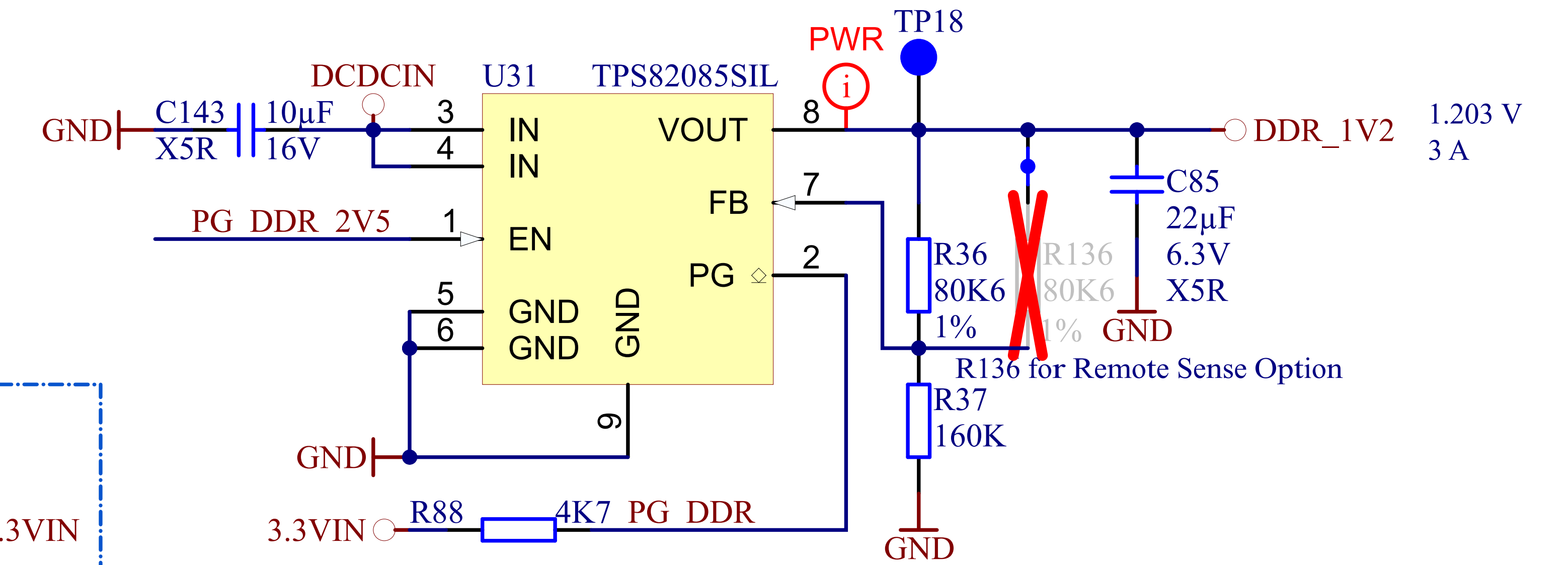
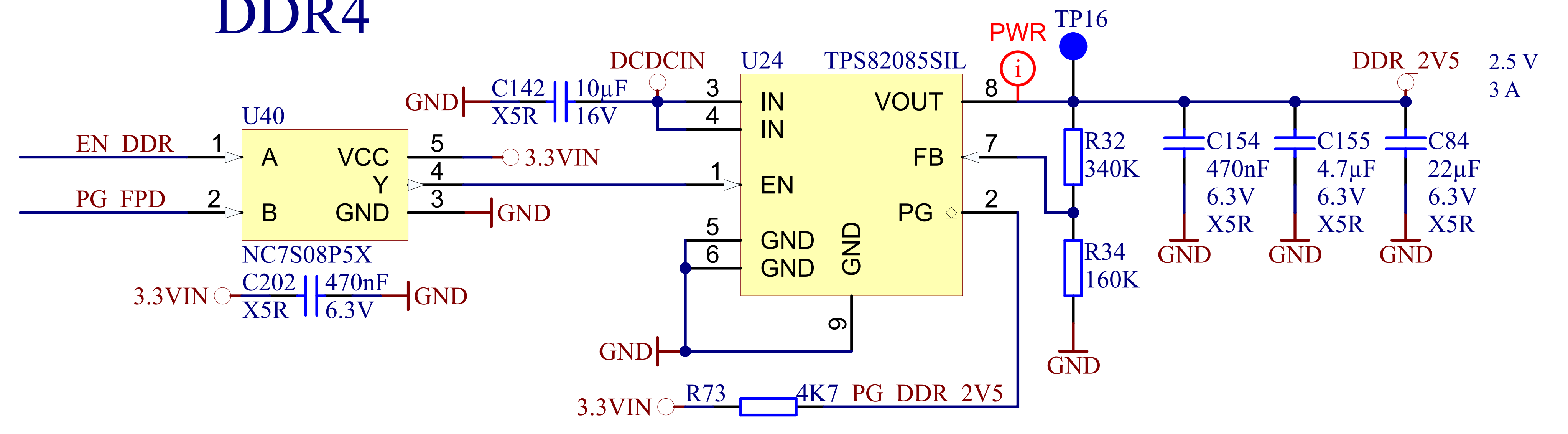


Title: TE0813 - POWER_2		
A4	Number: TE0813 4BI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 28 of 30
Filename: POWER_1.SchDoc		

Full-power domain



DDR4



PL MGT

Title: TE0813 - POWER_3		
A4	Number: TE0813 4BI61-A	Rev. 02
Date: 06.01.2026	Copyright: Trenz Electronic GmbH	Page 29 of 30
Filename: POWER_2.SchDoc		

Low-power domain

PS MGT

PS MIO VCCIO



Title: TE0813 - POWER_4		
A4	Number: TE0813 4BI61-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