

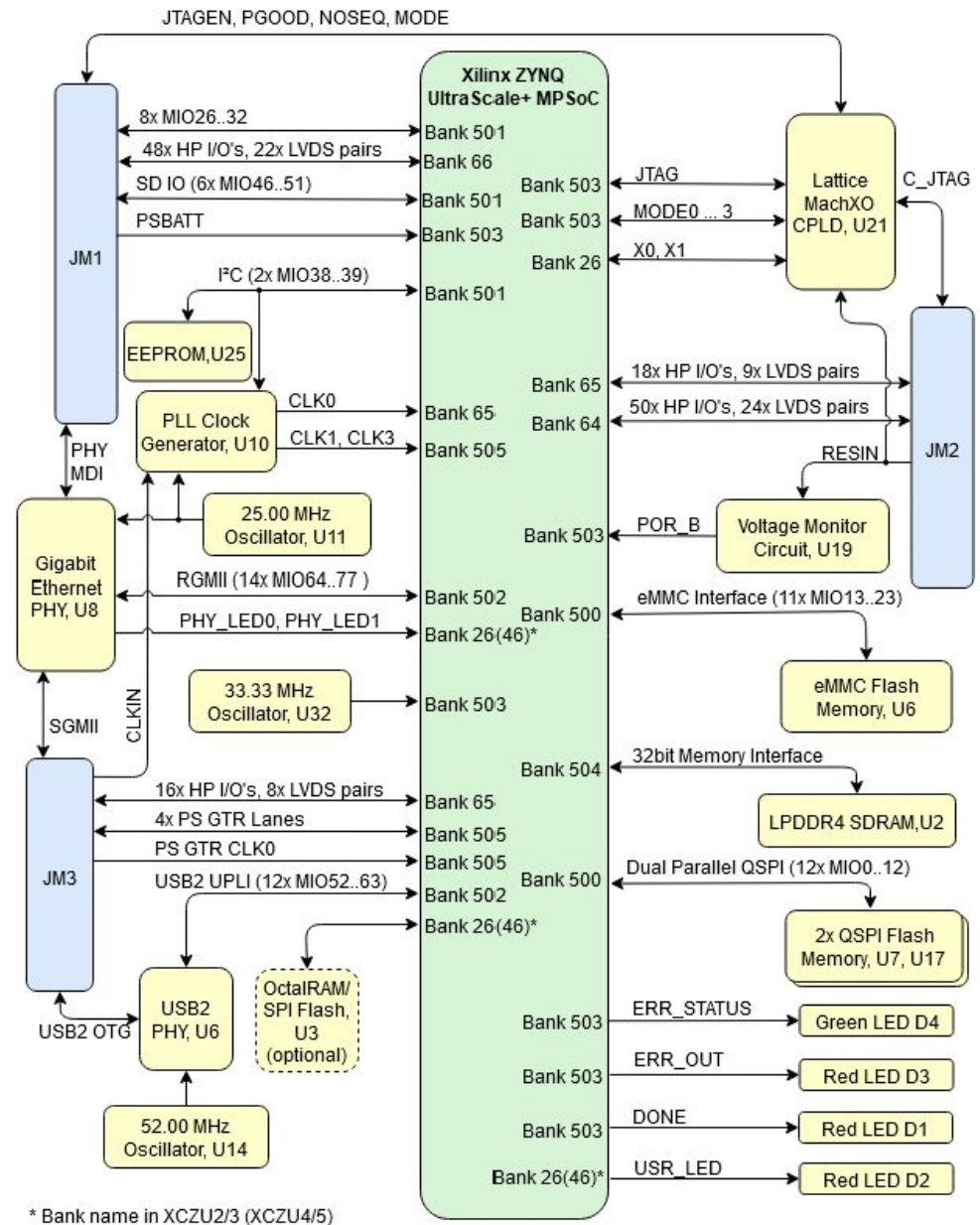
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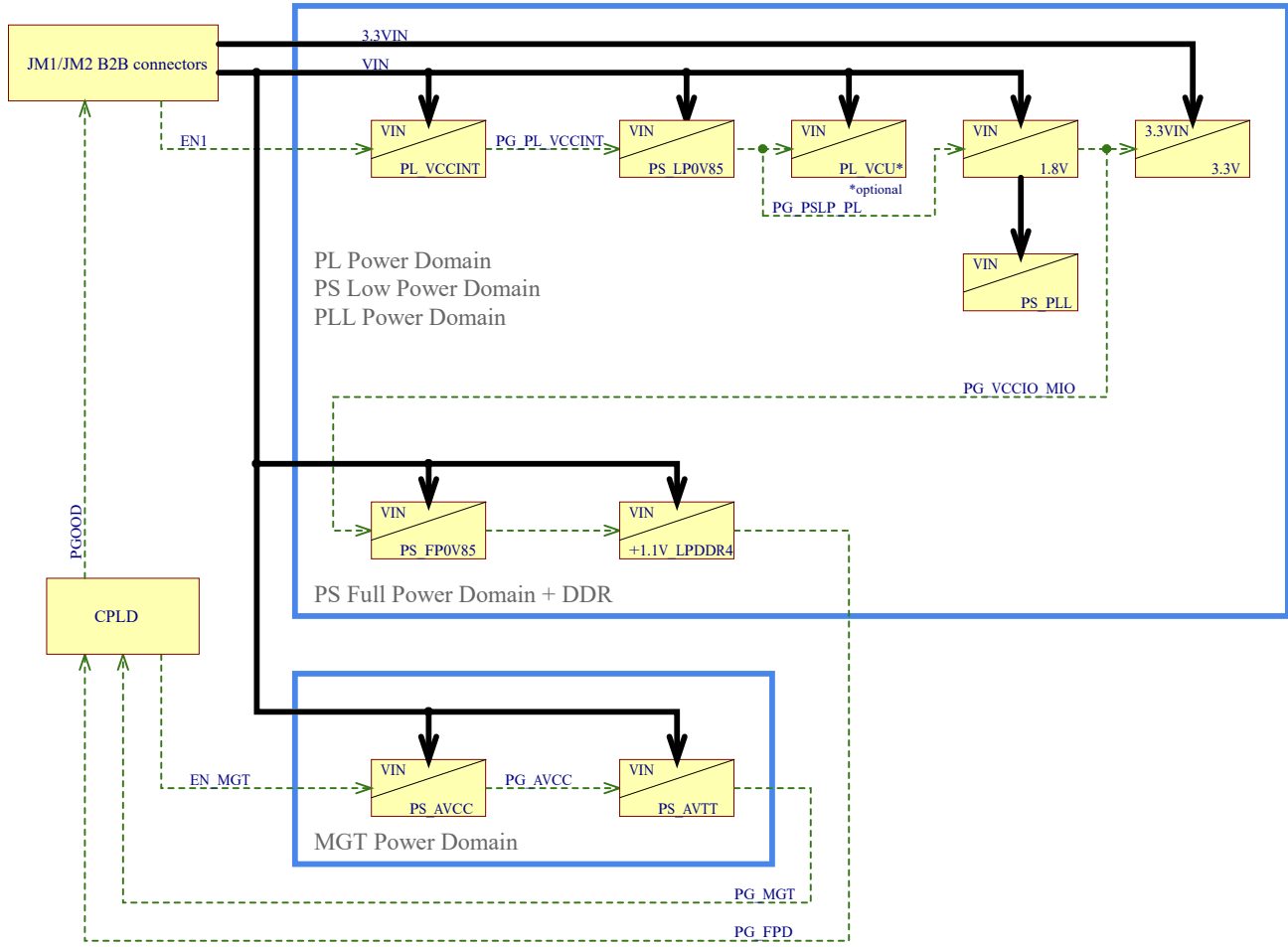
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	Title: <b>TE0823 - Legal notices</b>	
	A4	Number: <b>TE0823 3PIU1FL</b>
	Date: <b>2020-10-29</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>
	Filename: <b>Legal Notices Modules.SchDoc</b>	

# TE0823



	Title: TE0823 - System Overview		
	A4	Number: TE0823 3PIU1FL	Rev. 01
	Date: 2020-10-29	Copyright: Trenz Electronic GmbH	Page 2 of 25
	Drawn by: VY	Filename: TE0823-Overview.SchDoc	

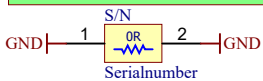


	Title: <b>TE0823 - Power Overview</b>		
	A4	Number: <b>TE0823 3PIU1FL</b>	Rev. <b>01</b>
	Date: <b>2020-10-29</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>3</b> of <b>25</b>
	Drawn by: <b>VY</b>	Filename: <b>TE0823-Power-Overview.SchDoc</b>	

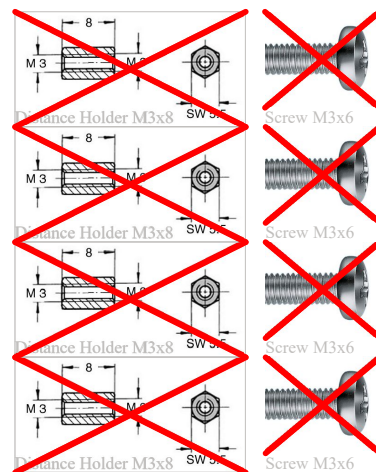
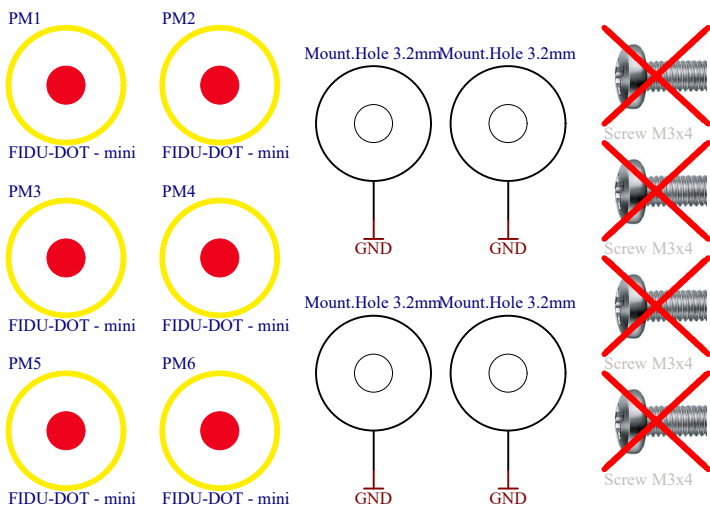
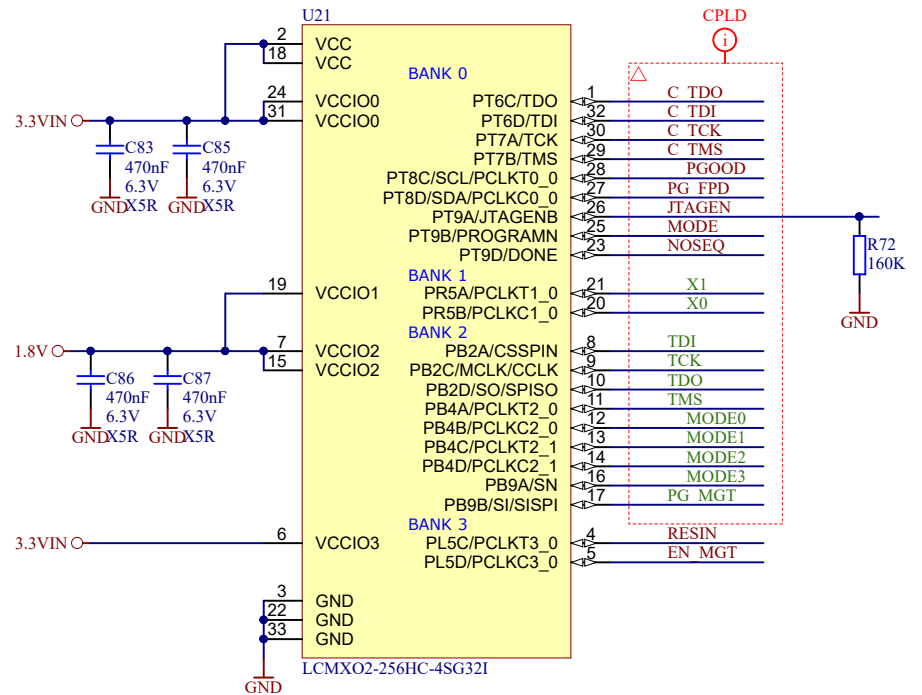
U_USB-PHY	USB-PHY.SchDoc
U_ETH-PHY	ETH-PHY.SchDoc
U_B_HD	B_HD.SchDoc
U_B64	B64.SchDoc
U_B65	B65.SchDoc
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U_B_PS_GT	B_PS_GT.SchDoc
U_CLK	CLK.SchDoc
U_Revision_Changes	Revision Changes.SchDoc
U_POV	TE0823-Power-Overview.SchDoc

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U_eMMC	eMMC.SchDoc
U_PS_DDR	PS_DDR.SchDoc
U_ZU_POWER	ZU_POWER.SchDoc
U_ZU_PS_POWER	ZU_PS_POWER.SchDoc
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U_POWER	POWER.SchDoc
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U_Overview	TE0823-Overview.SchDoc
U_B2B-Connectors_2	B2B-Connectors_2.SchDoc
U_LN	Legal Notices Modules.SchDoc

I2C-Address	Component
0x50	24AA025E48T-I/OT
0x70	SI5338A-B-GMR
0x..	PS MIO



Serial  
Serialnumber 6,3 x 6.3mm



Assembly variant	3PIU1FL
Created by	VY
Modified by	VY
Modified at	2020-01-13
SVN Revision	8870 [Locally Modified]

Title: TE0823 - System controller		
A4	Number: TE0823 3PIU1FL	Rev. 01
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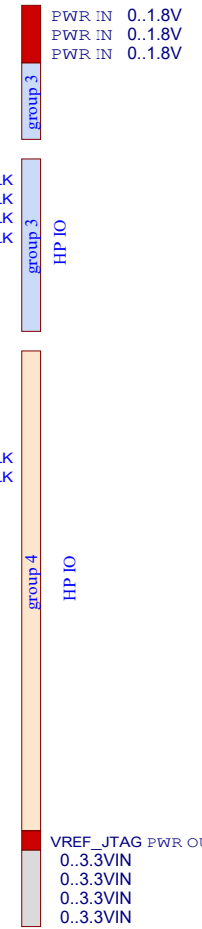
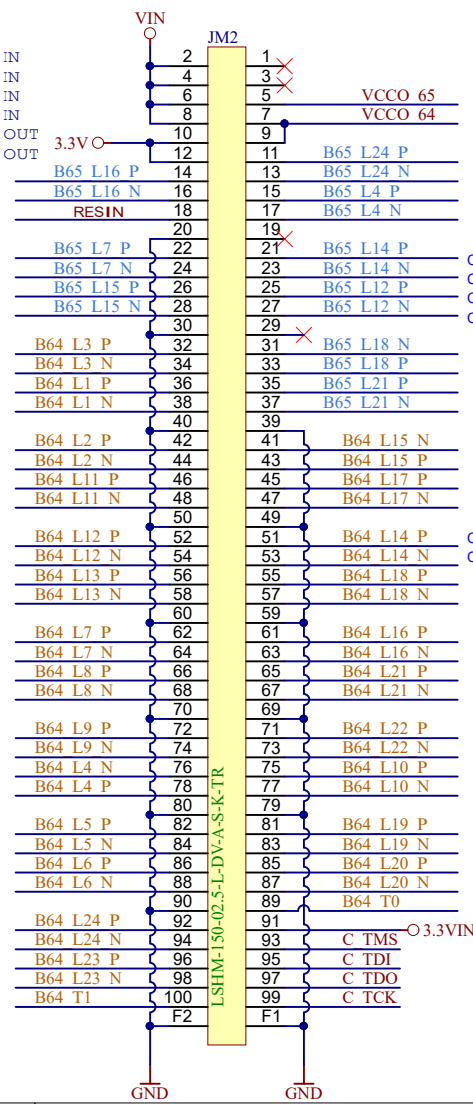
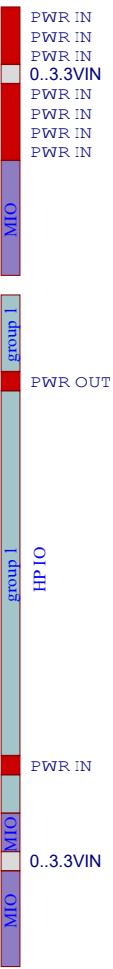
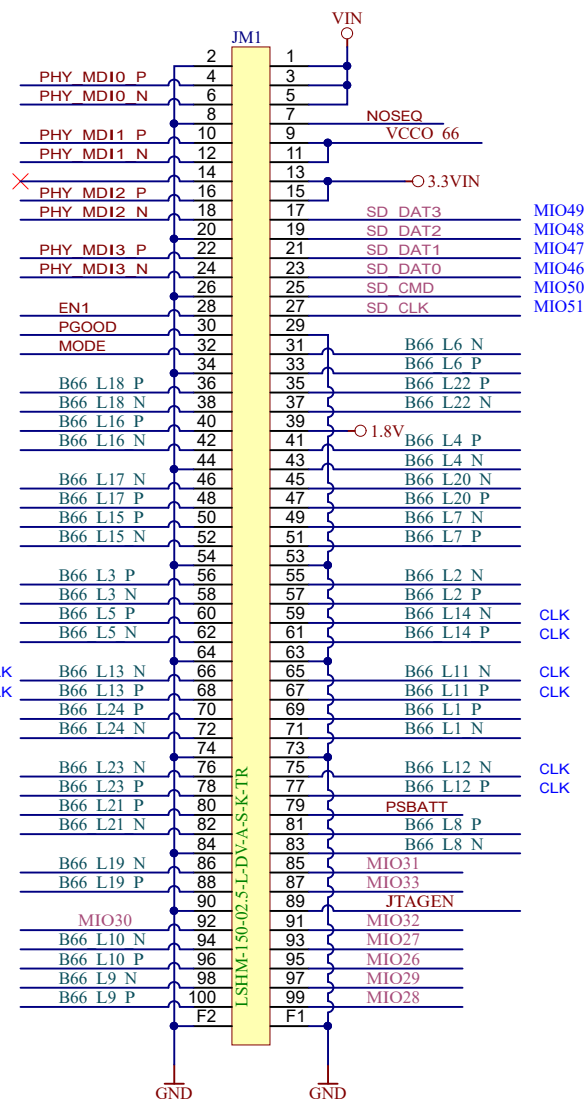
D

D

VCCO_64	0..1.8V
VCCO_65	0..1.8V
VCCO_66	0..1.8V
MIO	0..3.3V
group 1	0..VCCO_66
group 3	0..VCCO_65
group 4	0..VCCO_64

ETH MDI Copper  
 B64(HP) 50 IO, 24 LVDS Pairs  
 B65(HP) 18 IO, 9 LVDS Pairs  
 B66(HP) 48 IO, 24 LVDS Pairs

0..3.3VIN (PU)



0..3.3VIN (PD)  
 0..3.3VIN  
 0..3.3VIN

HP IO

group 1

CLK

CLK

CLK

CLK

PWR OUT

HP IO

PWR IN 1.2..1.5V

0..3.3VIN (PD)

MIO

MIO

HP IO

HP IO

HP IO

HP IO

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

CLK

PU - On board pull-up resistor  
 PD - On board pull-down resistor



Title: TE0823 - B2B Connectors		
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1

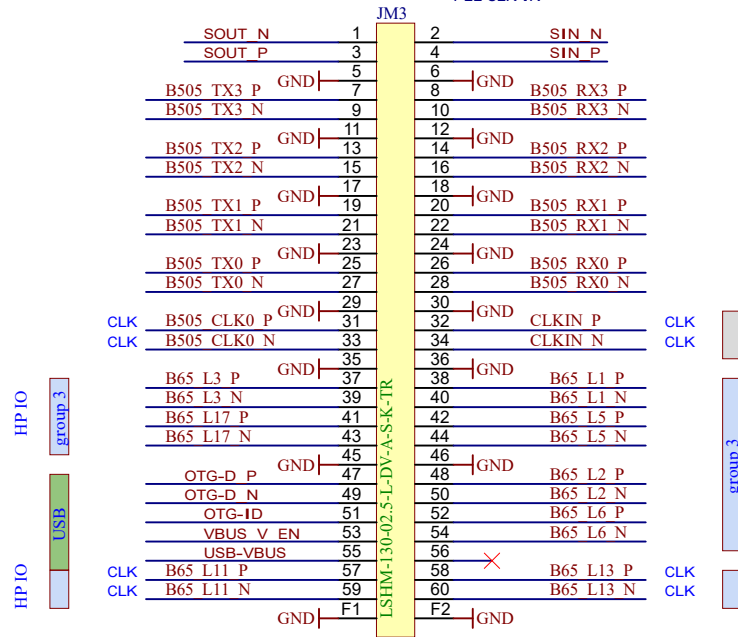
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B65(HP) 16 IO, 8 LVDS Pairs  
 USB OTG  
 ETH SGMII  
 PS\_GTR 4 Lanes  
 PS\_GTR CLK IN  
 PLL CLK IN

group 3 0..VCCO\_65



VCCO64, VCCO65, VCCO66 ->>> max. 1.8V (HP bank's)

		Title: TE0823 - B2B Connectors	
		A4	Number: TE0823 3PIU1FL
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Page 6 of 25		Filename: B2B-Connectors_2.SchDoc	
Drawn by: VY			

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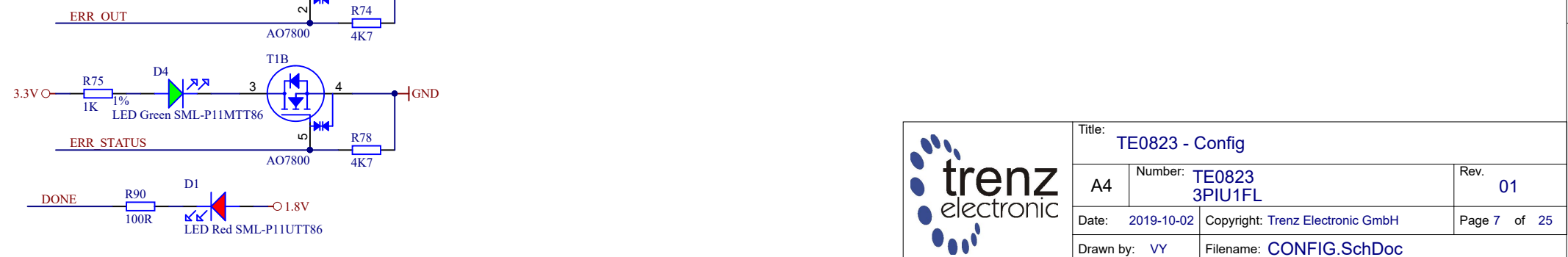
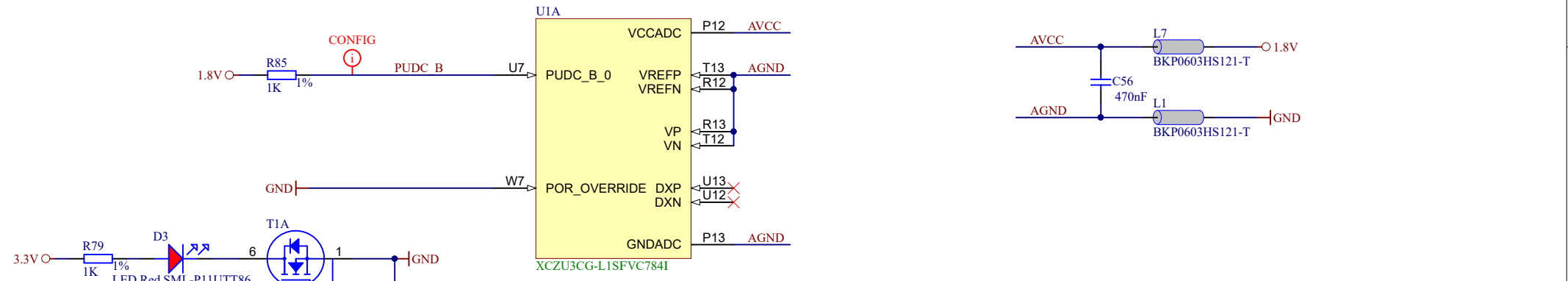
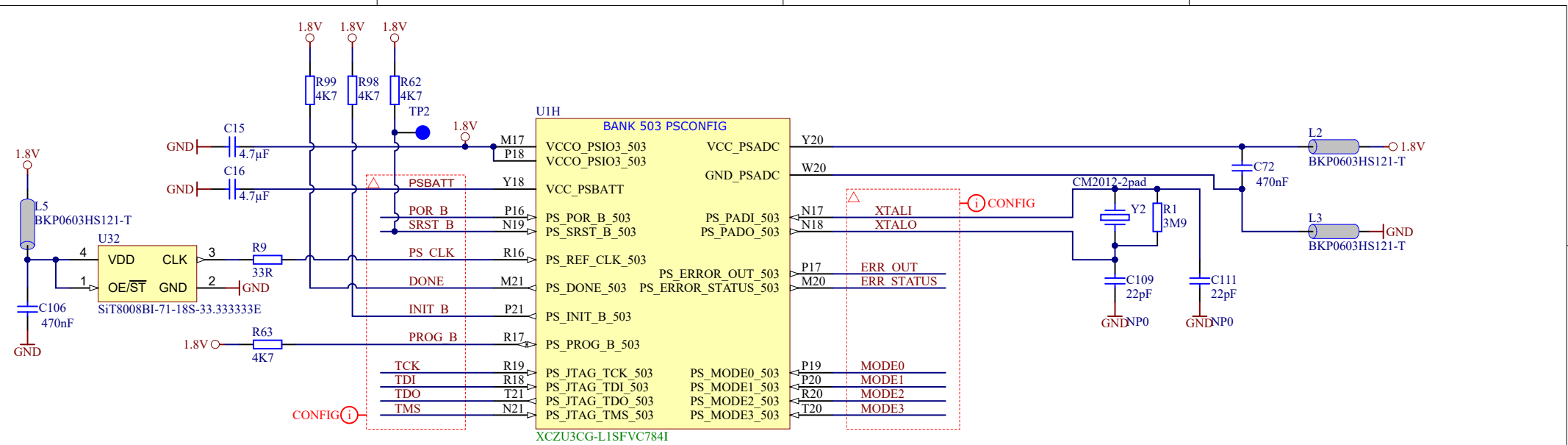

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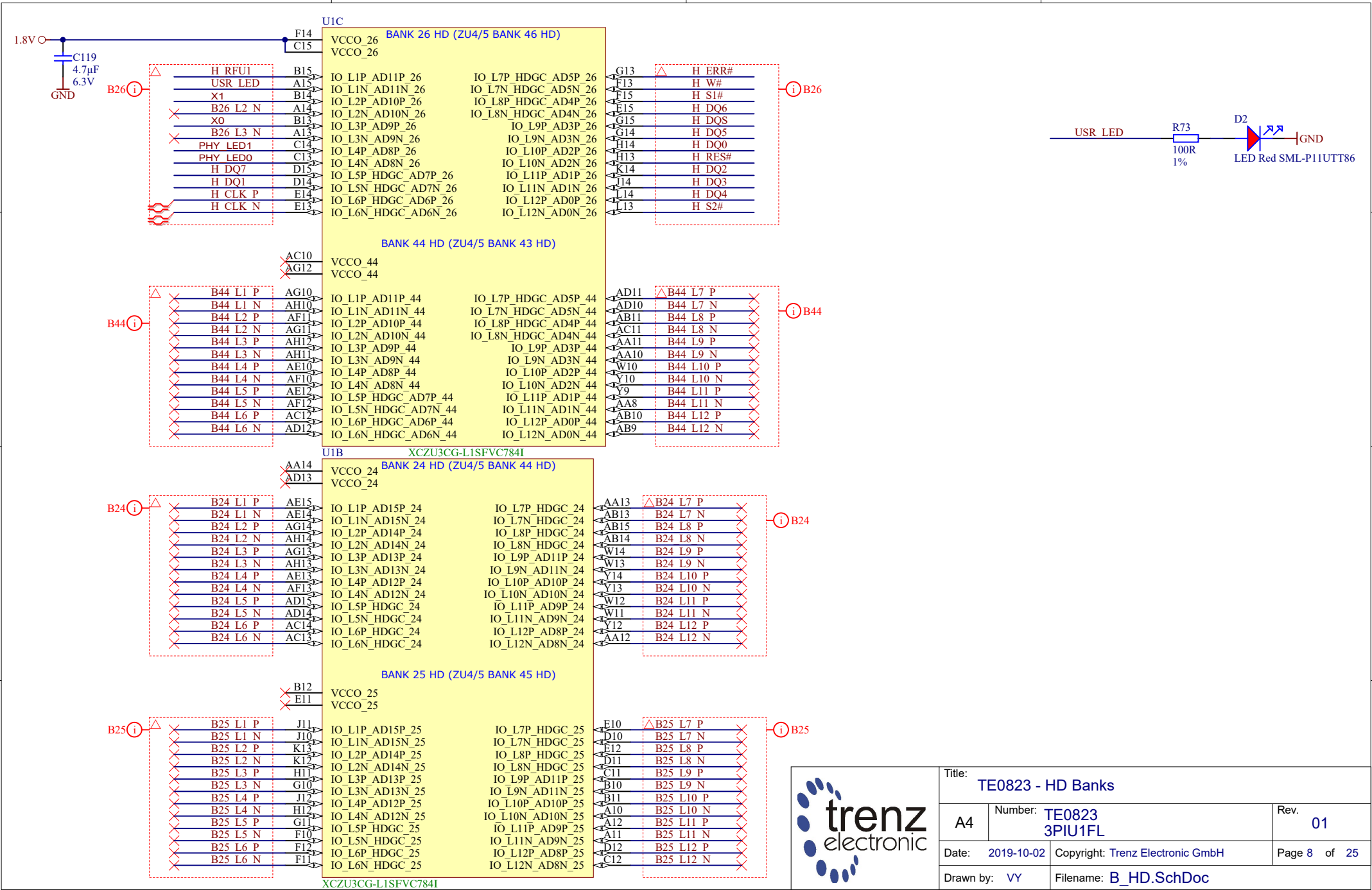
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A4	Number: <b>TE0823 3PIU1FL</b>	Rev. <b>01</b>
Date: <b>2019-10-02</b>	Copyright: Trenz Electronic GmbH	
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Drawn by: <b>VY</b>	Filename: <b>CONFIG.SchDoc</b>	

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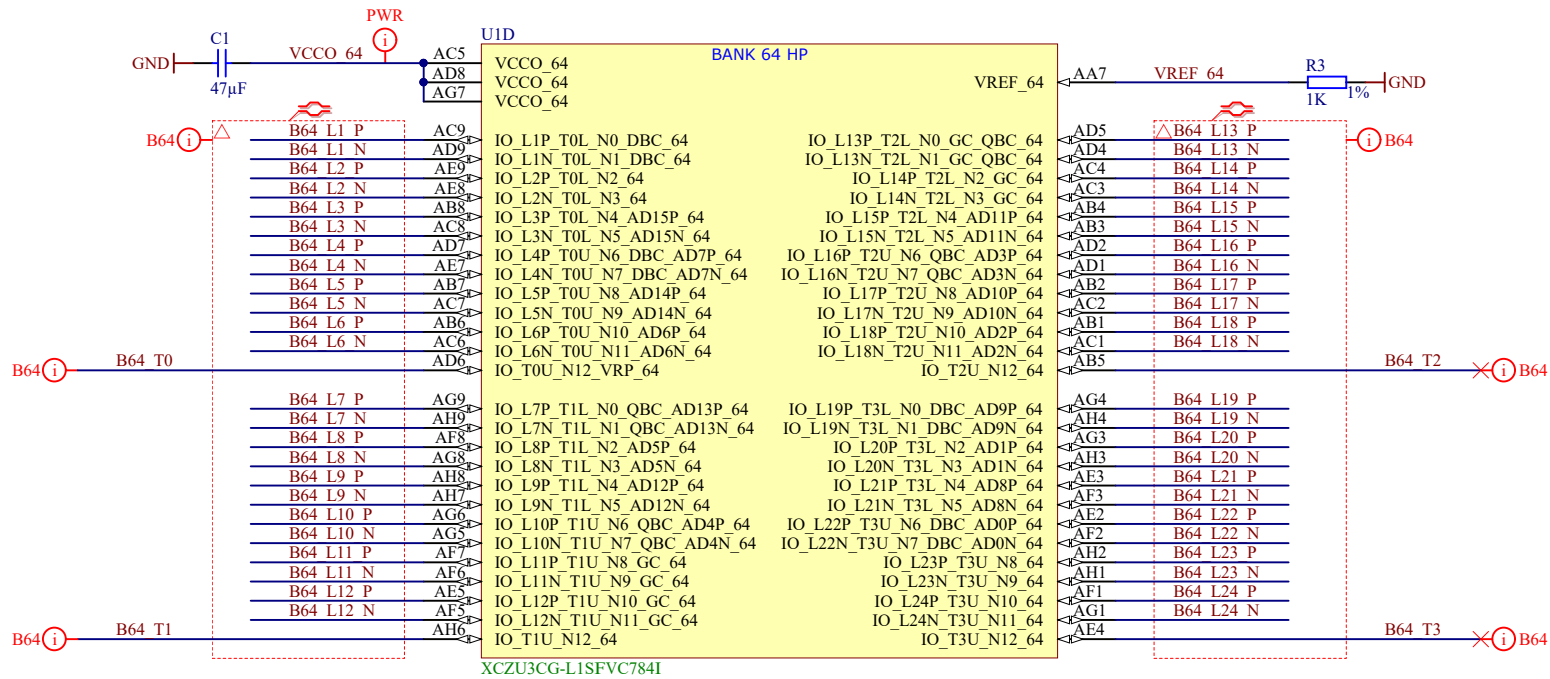
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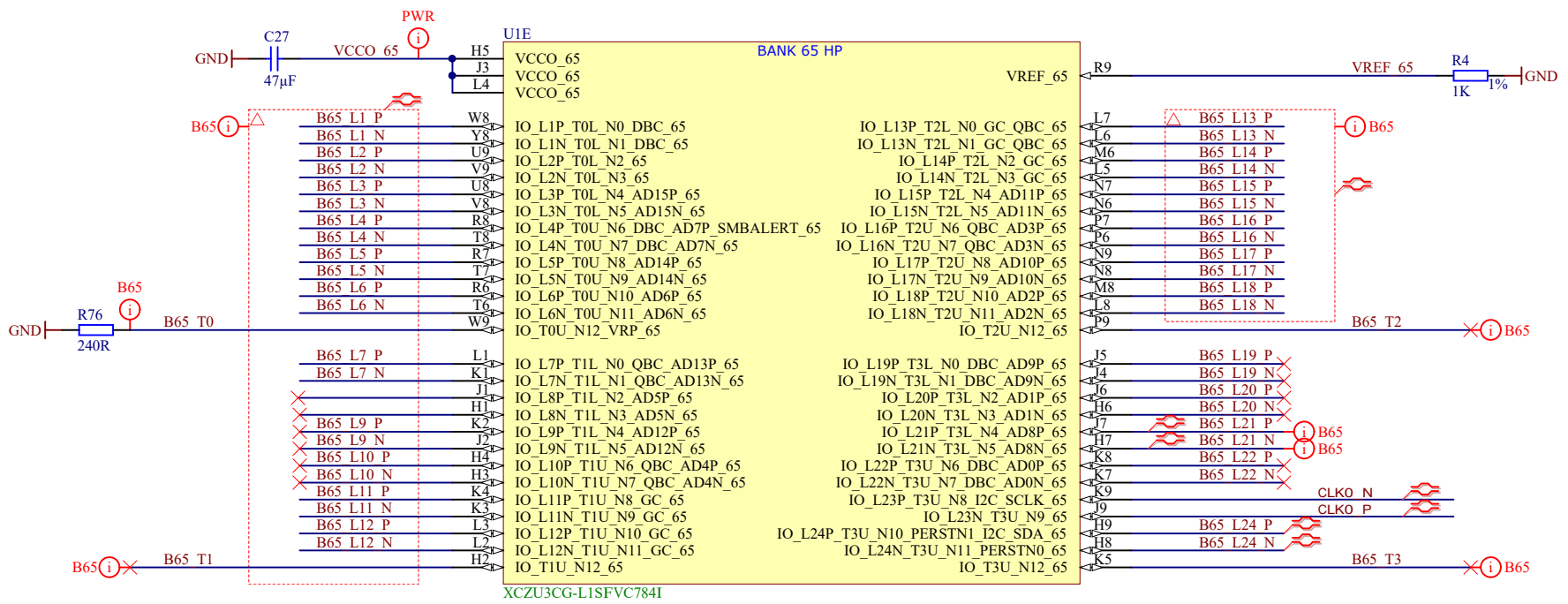


Title: <b>TE0823 - HD Banks</b>		
A4	Number: <b>TE0823 3PIU1FL</b>	Rev. <b>01</b>
Date: <b>2019-10-02</b>	Copyright: <b>Trenz Electronic GmbH</b>	
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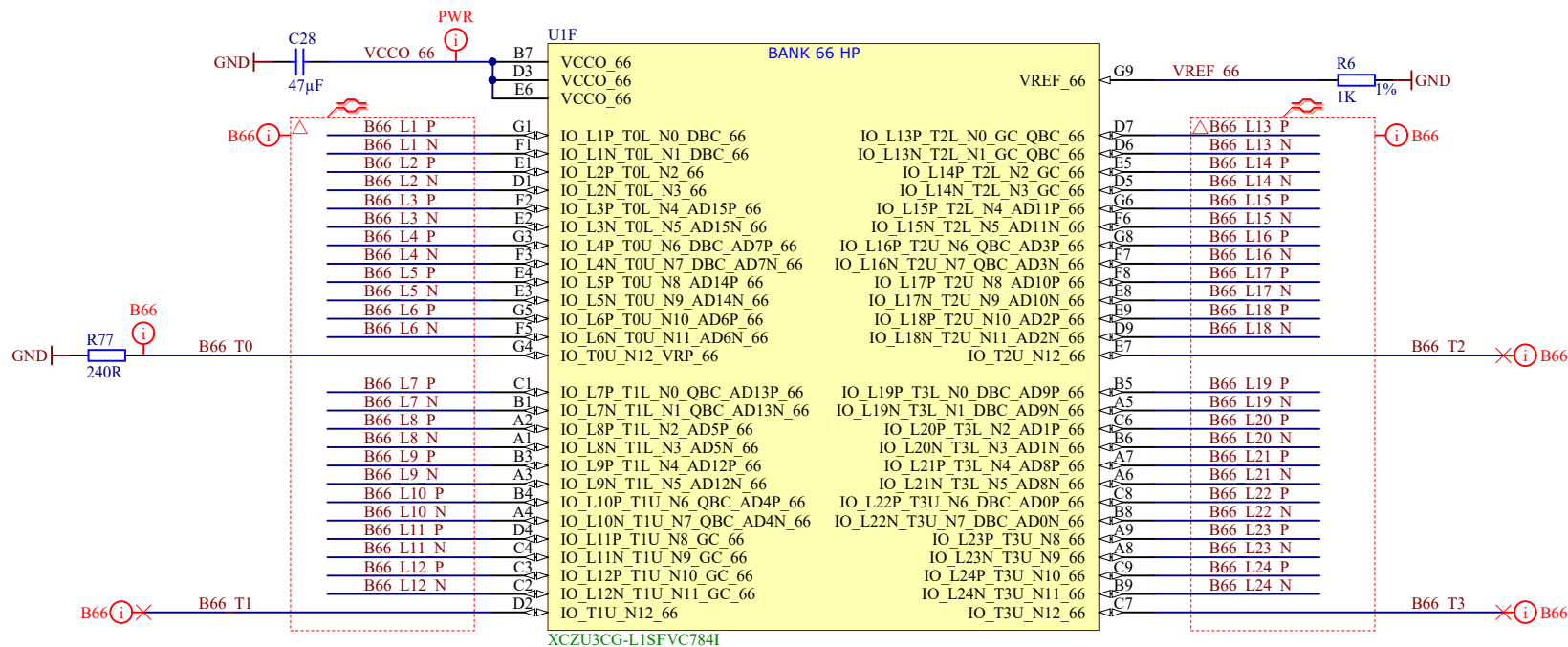




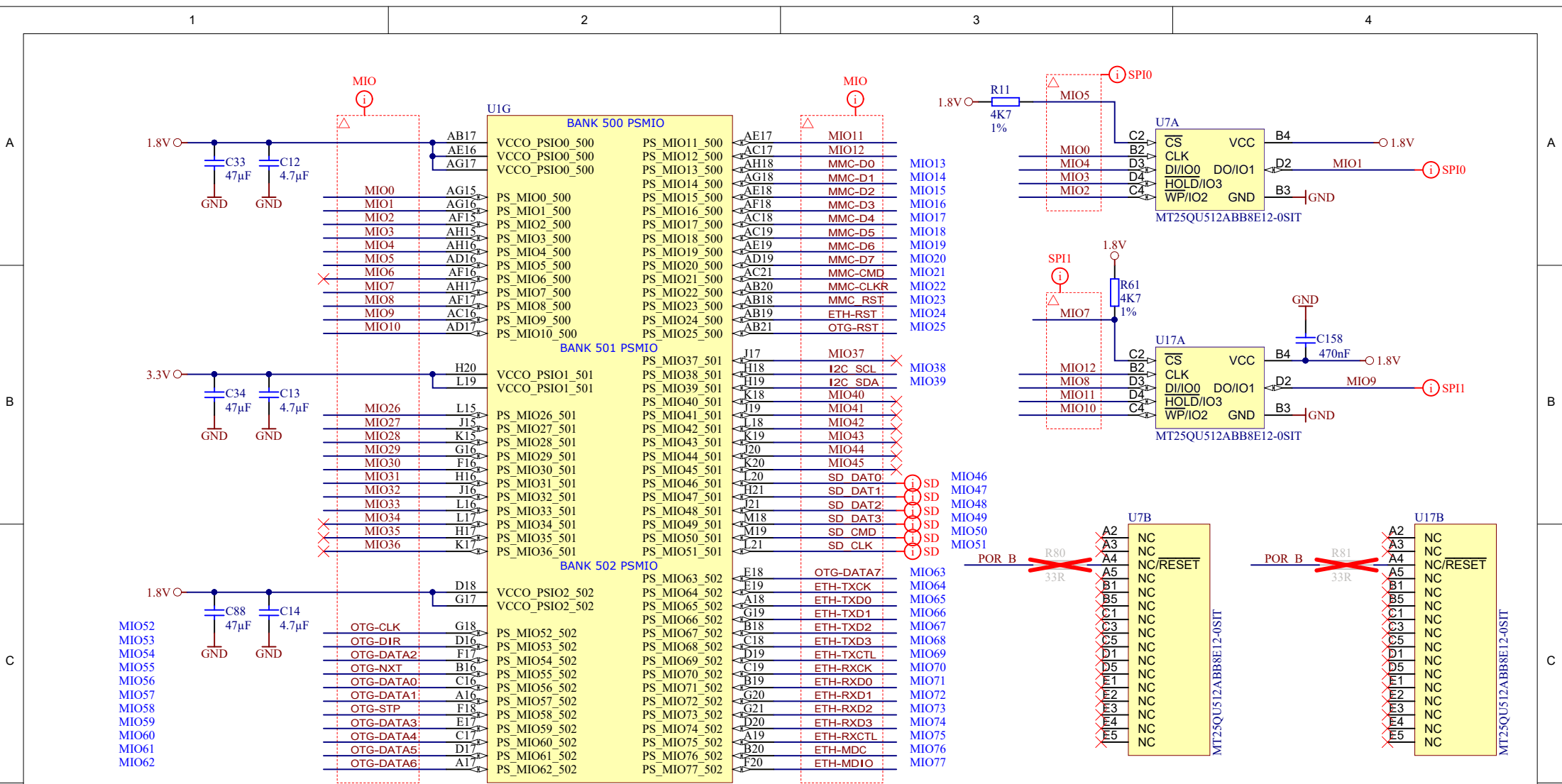
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A4	Number: TE0823 3PIU1FL	Rev. 01
Date: 2019-10-02	Copyright: Trenz Electronic GmbH	Page 9 of 25
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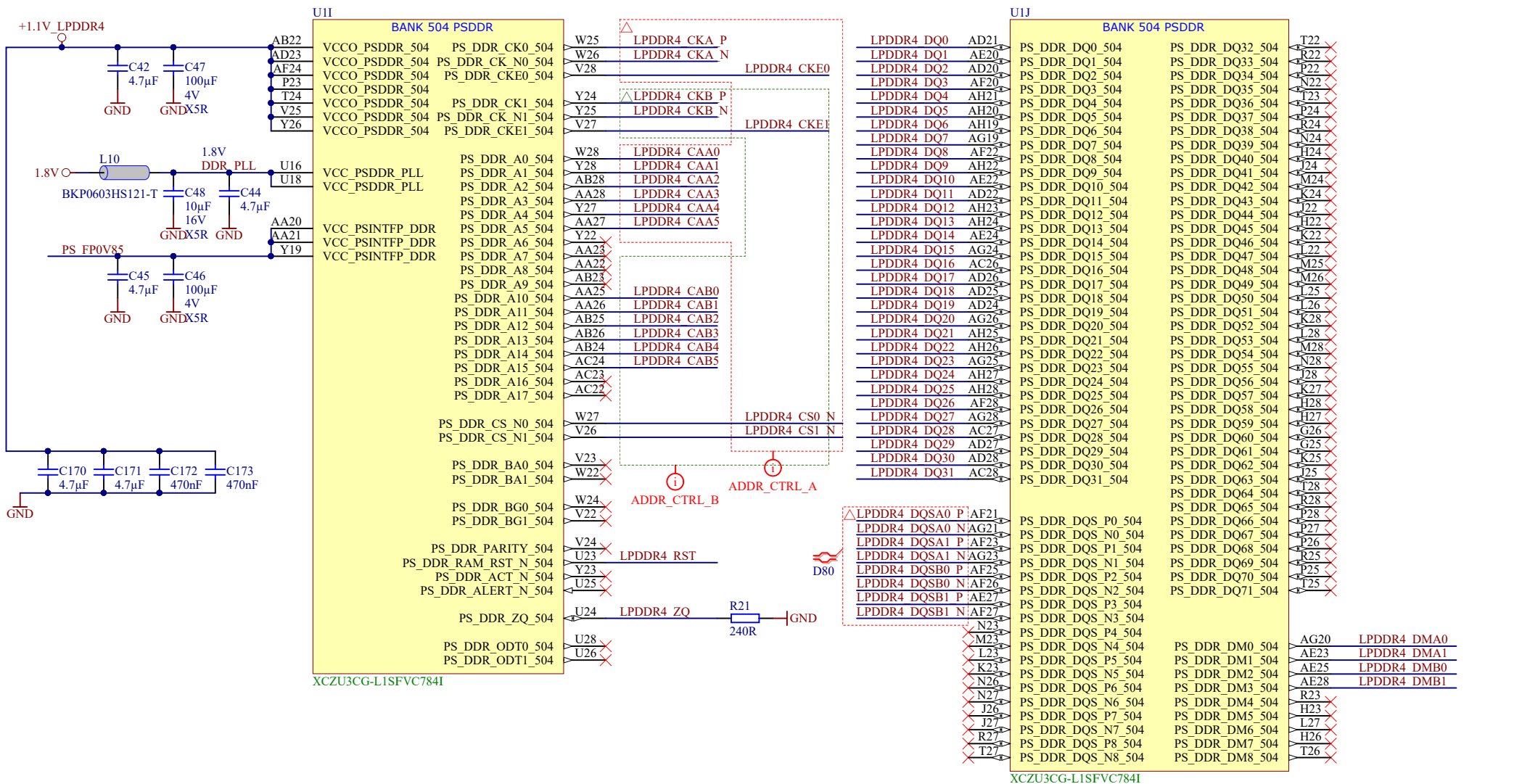

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A4	Number: <b>TE0823 3PIU1FL</b>	Rev. <b>01</b>
Date: <b>2019-10-02</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>10</b> of <b>25</b>
Drawn by: <b>VY</b>	Filename: <b>B65.SchDoc</b>	



	Title: TE0823 - B66		
	A4	Number: TE0823 3PIU1FL	Rev. 01
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	Drawn by: VY	Filename: B66.SchDoc	



			Title: <b>TE0823 - MIO Banks</b>	
			A4	Number: <b>TE0823 3PIU1FL</b>
Date: <b>2019-10-02</b>		Copyright: <b>Trenz Electronic GmbH</b>		Page <b>12</b> of <b>25</b>
Drawn by: <b>VY</b>		Filename: <b>B_MIO.SchDoc</b>		

Title: **TE0823 - PS\_DDR**

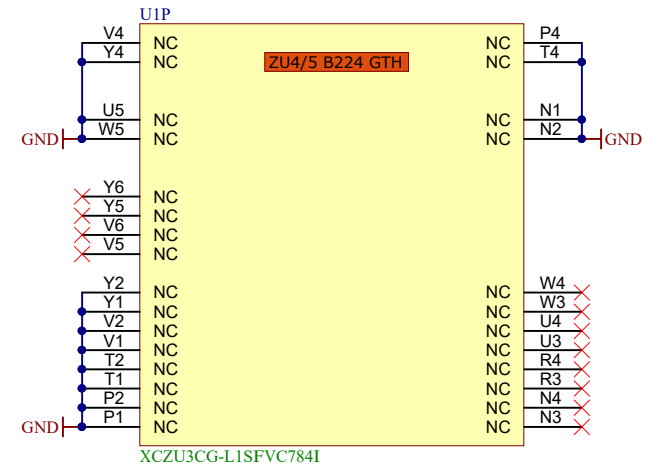
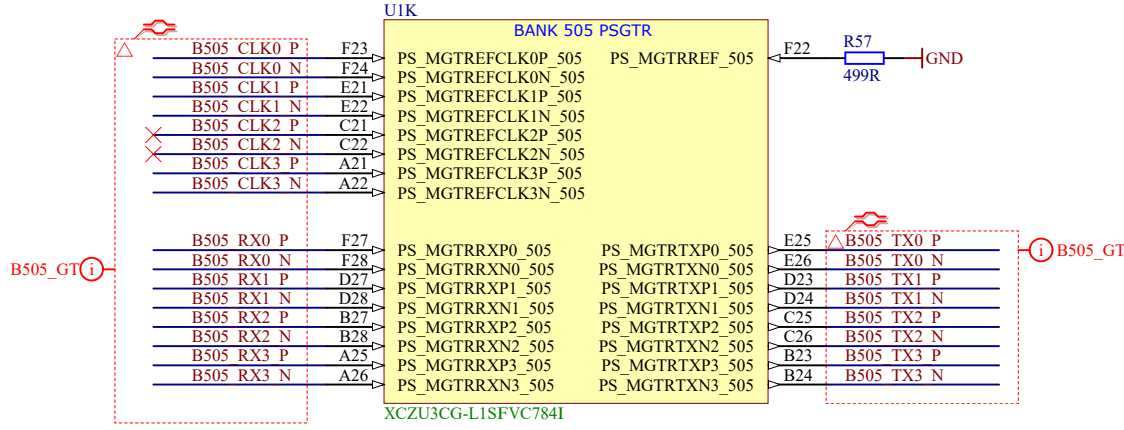
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Date: <b>2019-10-02</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>13</b> of <b>25</b>
Drawn by: <b>VY</b>	Filename: <b>PS_DDR.SchDoc</b>	

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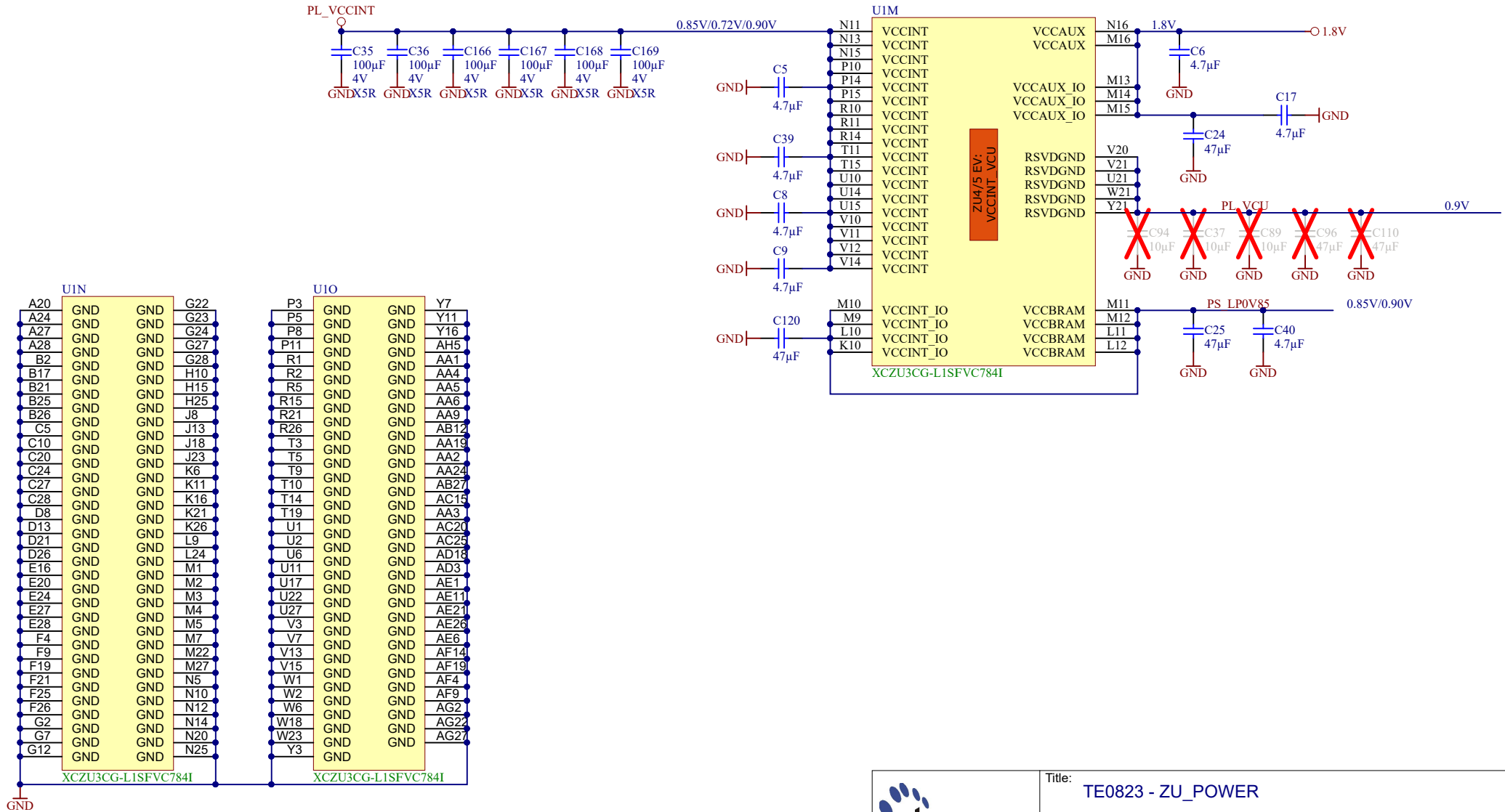
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Date: <b>2019-10-02</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>14</b> of <b>25</b>
Drawn by: <b>VY</b>	Filename: <b>B_PS_GT.SchDoc</b>	


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			Title: <b>TE0823 - ZU_POWER</b>	
			A4	Number: <b>TE0823 3PIU1FL</b>
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Drawn by: <b>VY</b>		Filename: <b>ZU_POWER.SchDoc</b>		

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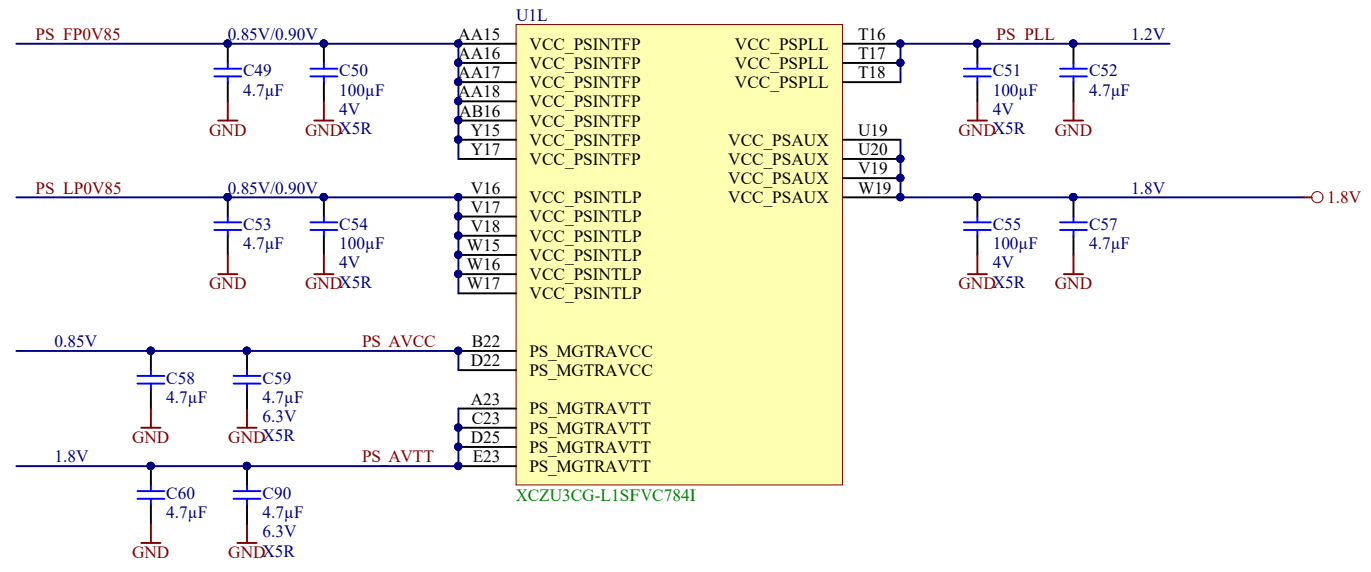
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		Title: TE0823 - ZU_PS_POWER	
		A4	Number: TE0823 3PIU1FL
Date: 2019-10-02		Copyright: Trenz Electronic GmbH	
Page 16 of 25		Filename: ZU_PS_POWER.SchDoc	
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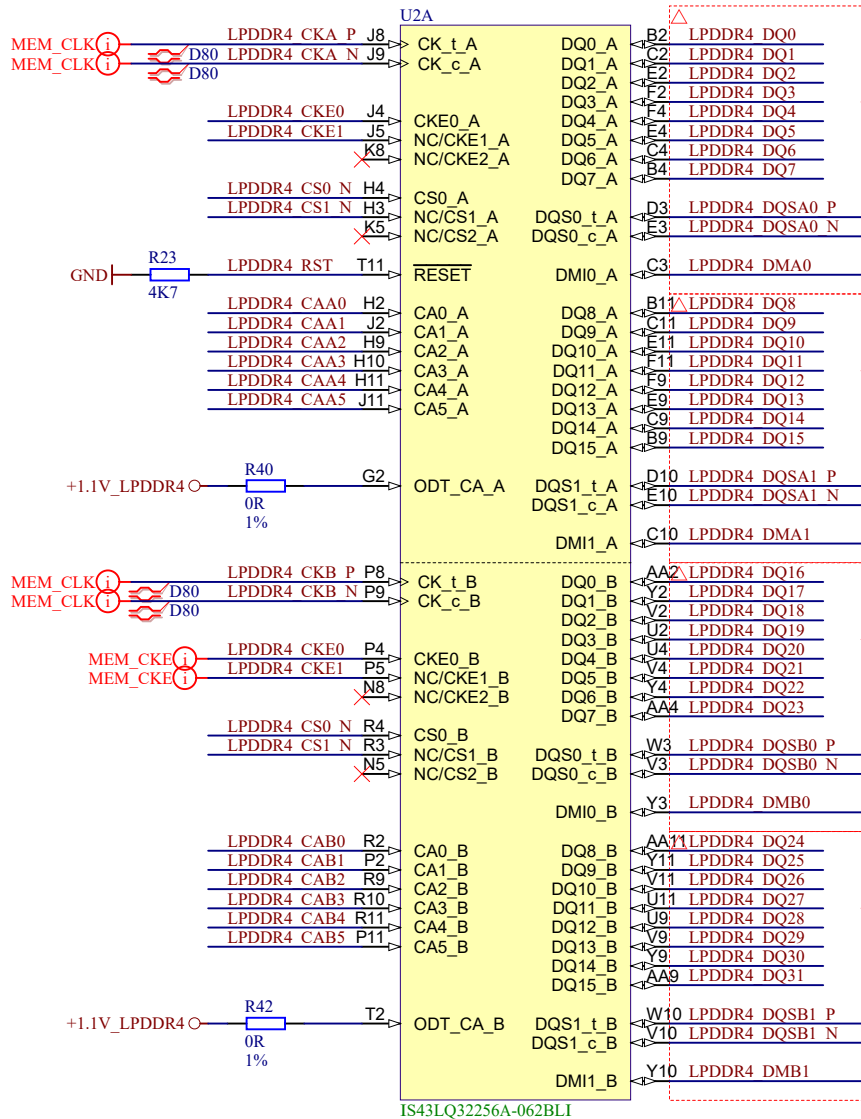
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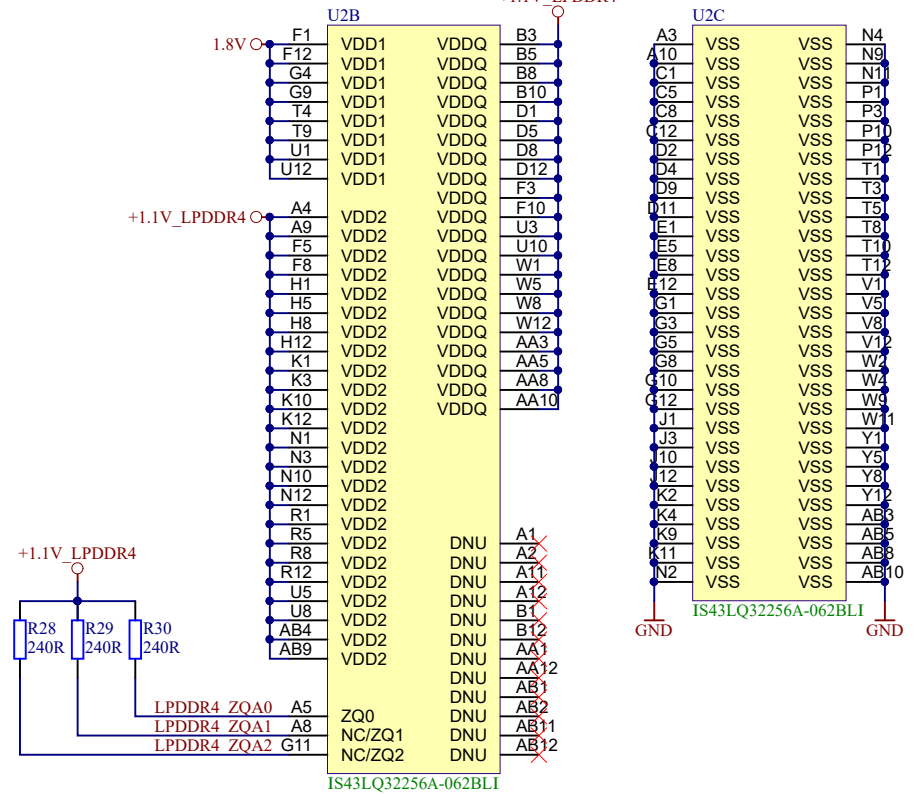


MEM\_DQ\_L0

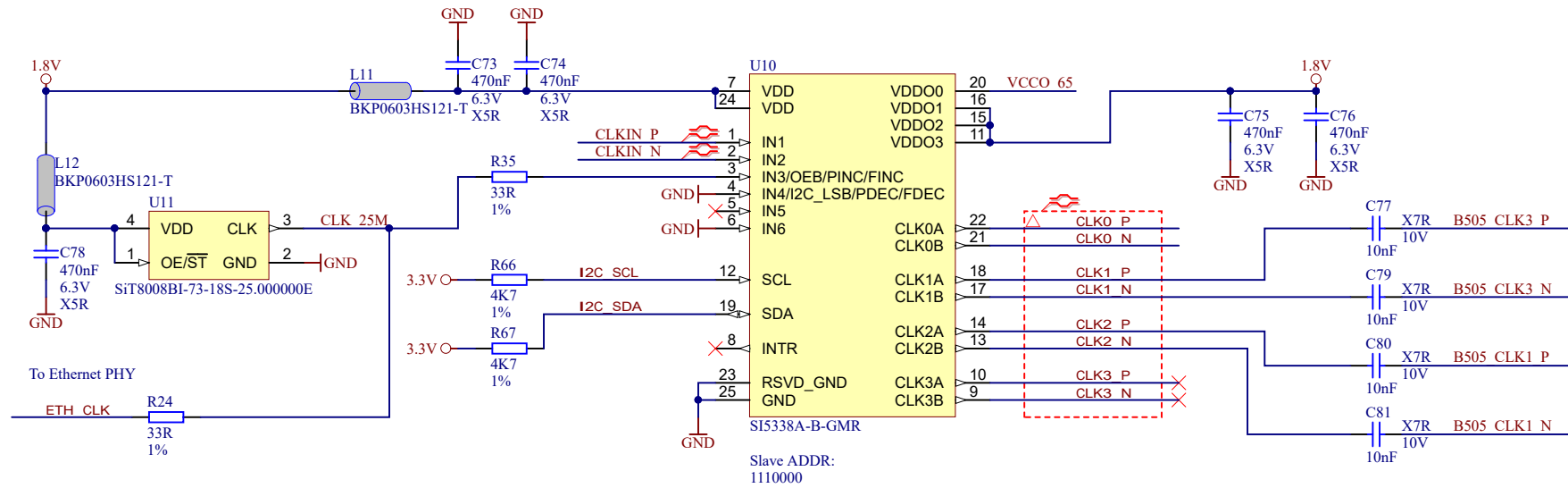
MEM\_DQ\_L1


MEM\_DQ\_L2

MEM\_DQ\_L3



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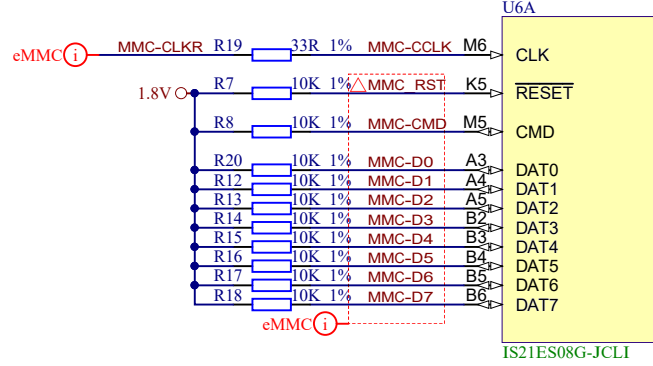


		Title: TE0823 - CLK	
		A4	Number: TE0823 3PIU1FL
Date: 2019-10-02		Copyright: Trenz Electronic GmbH	
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Drawn by: VY		Filename: CLK.SchDoc	

U6D

A1	NC	NC	H2
A2	NC	NC	H3
A8	NC	NC	H12
A9	NC	NC	H13
A10	NC	NC	H14
A11	NC	NC	J1
A12	NC	NC	J2
A13	NC	NC	J3
A14	NC	NC	J12
B1	NC	NC	J13
B7	NC	NC	J14
B8	NC	NC	K1
B9	NC	NC	K2
B10	NC	NC	K3
B11	NC	NC	K12
B12	NC	NC	K13
B13	NC	NC	K14
B14	NC	NC	L1
C1	NC	NC	L2
C3	NC	NC	L3
C7	NC	NC	L12
C8	NC	NC	L13
C9	NC	NC	L14
C10	NC	NC	M1
C11	NC	NC	M2
C12	NC	NC	M3
C13	NC	NC	M7
C14	NC	NC	M8
D1	NC	NC	M9
D2	NC	NC	M10
D3	NC	NC	M11
D4	NC	NC	M12
D12	NC	NC	M13
D13	NC	NC	M14
D14	NC	NC	N1
E1	NC	NC	N3
E2	NC	NC	N6
E3	NC	NC	N7
E12	NC	NC	N8
E13	NC	NC	N9
E14	NC	NC	N10
F1	NC	NC	N11
F2	NC	NC	N12
F3	NC	NC	N13
F12	NC	NC	N14
F13	NC	NC	P1
F14	NC	NC	P2
G1	NC	NC	P8
G2	NC	NC	P9
G12	NC	NC	P11
G13	NC	NC	P12
G14	NC	NC	P13
H1	NC	NC	P14

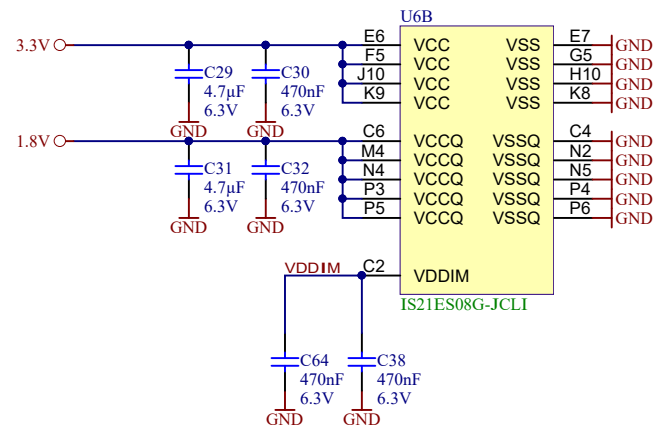
IS21ES08G-JCLI



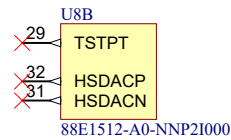
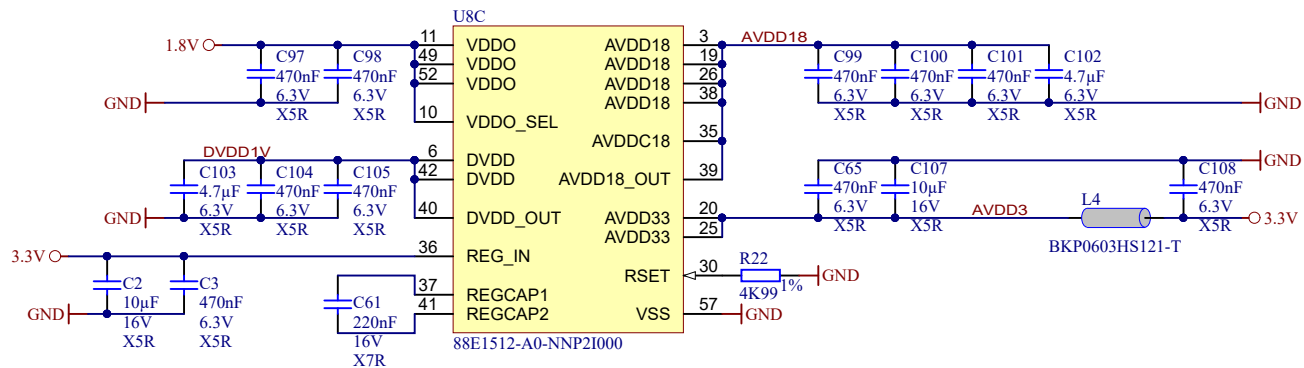
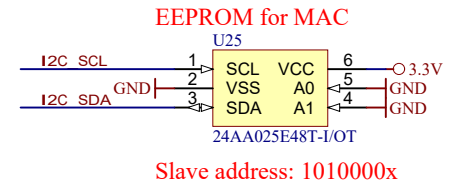
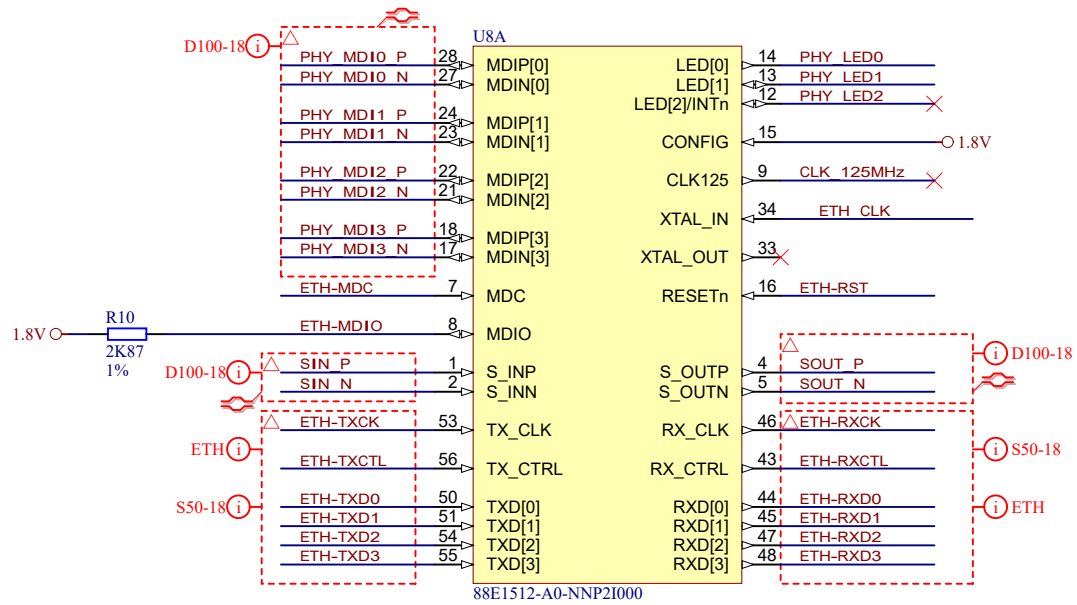
U6C

A6	RFU/VSS
A7	RFU
C5	RFU/NC
E5	RFU
E8	RFU
E9	RFU
E10	RFU
F10	RFU
G3	RFU/NC
G10	RFU
H5	RFU/DS
J5	RFU/VSS
K6	RFU
K7	RFU
K10	RFU
P7	RFU/NC
P10	RFU

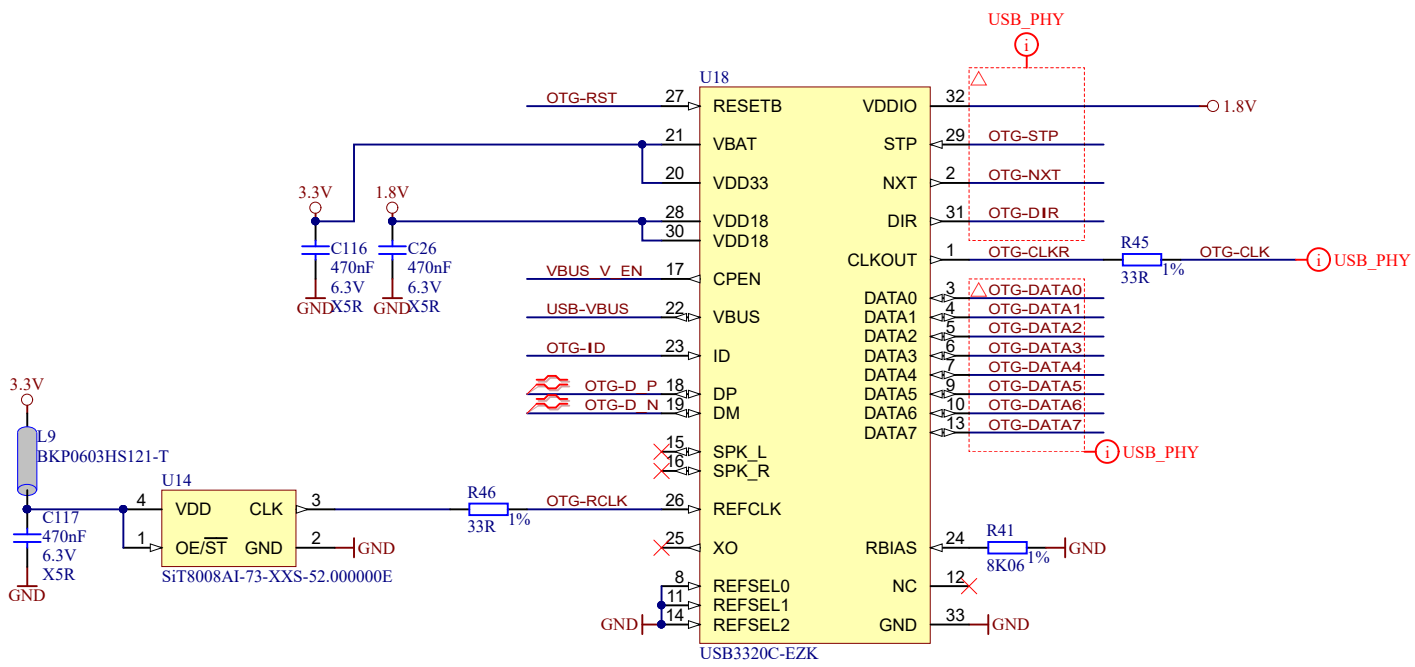
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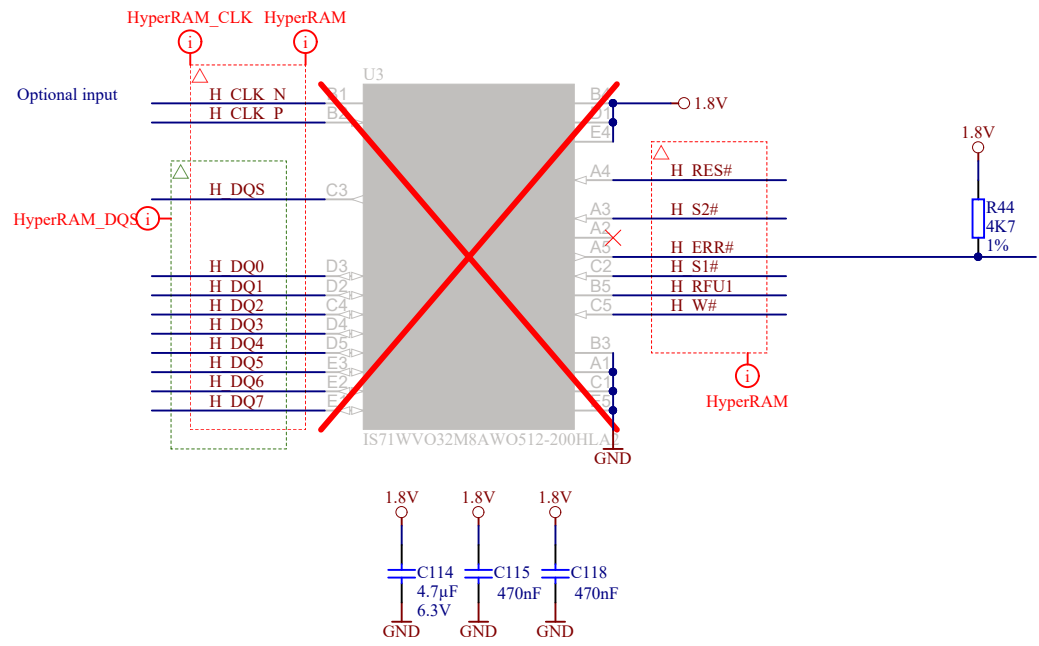
Title: TE0823 - eMMC		
A4	Number: TE0823 3PIU1FL	Rev. 01
Date: 2019-10-02	Copyright: Trenz Electronic GmbH	Page 19 of 25
Drawn by: VY	Filename: eMMC.SchDoc	




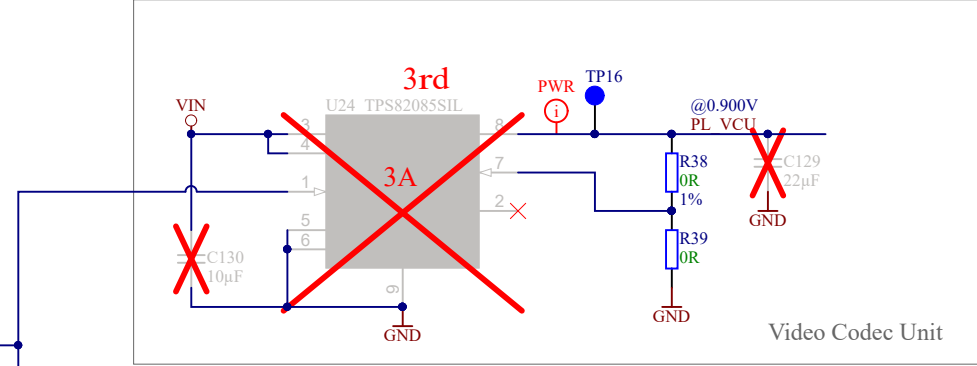
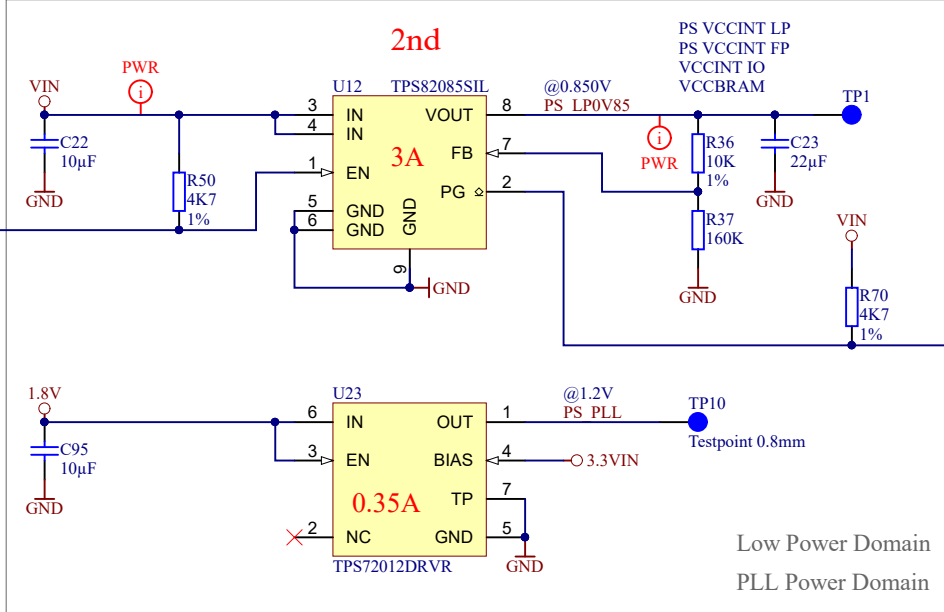
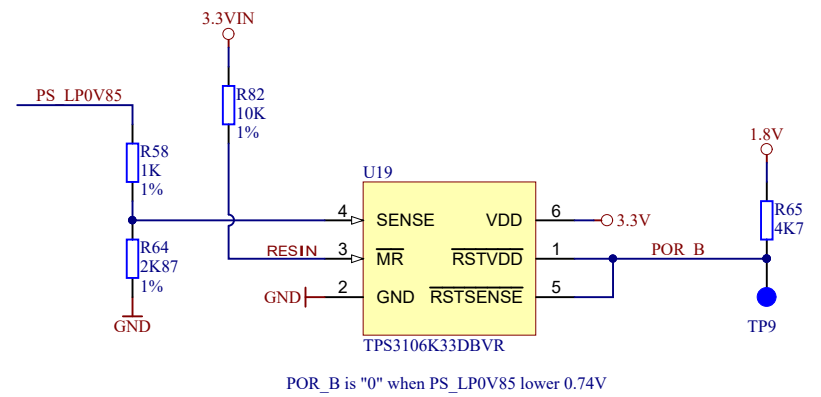
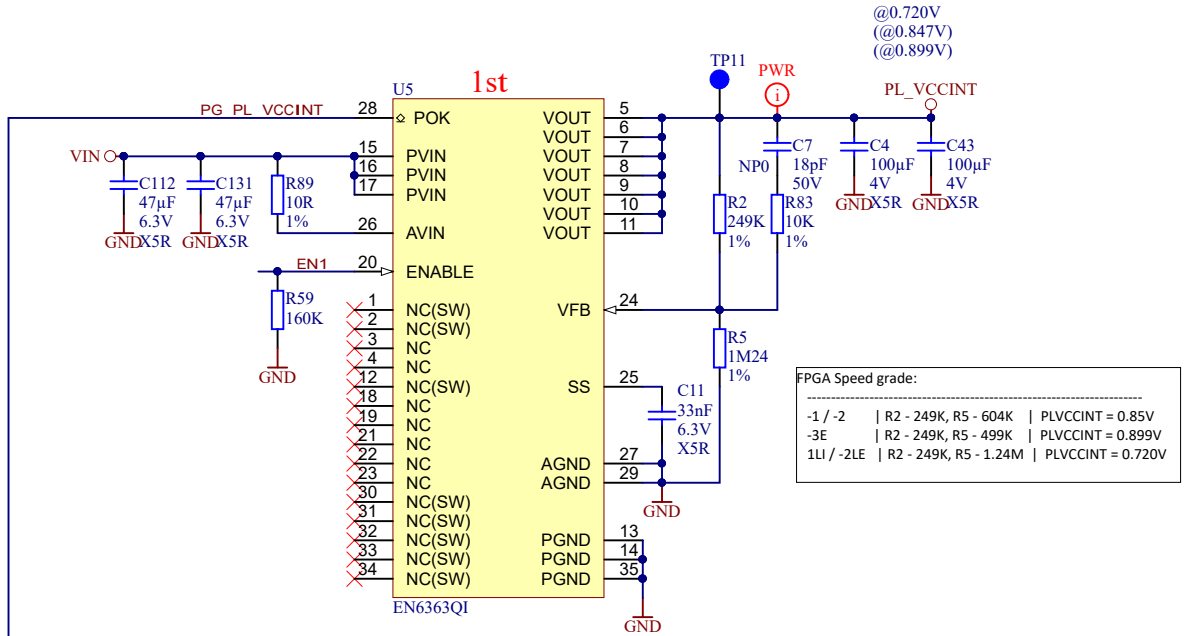
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A4	Number: TE0823 3PIU1FL	Rev. 01
Date: 2019-10-02	Copyright: Trenz Electronic GmbH	Page 20 of 25
Drawn by: VY	Filename: ETH-PHY.SchDoc	



		Title: TE0823 - USB2.0 PHY	
		A4	Number: TE0823 3PIU1FL
Date: 2019-10-02		Copyright: Trenz Electronic GmbH	
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Drawn by: VY		Filename: USB-PHY.SchDoc	



	Title: TE0823 - HyperRAM/HyperFLASH		
	A4	Number: TE0823 3PIU1FL	Rev. 01
	Date: 2019-10-02	Copyright: Trenz Electronic GmbH	Page 22 of 25
	Drawn by: VY	Filename: HyperRAM.SchDoc	



			Title: TE0823 - POWER PL	
			A4	Number: TE0823 3PIU1FL
Date: 2019-10-02		Copyright: Trenz Electronic GmbH		Rev. 01
Drawn by: VY		Page 23 of 25		
		Filename: POWER.SchDoc		

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A

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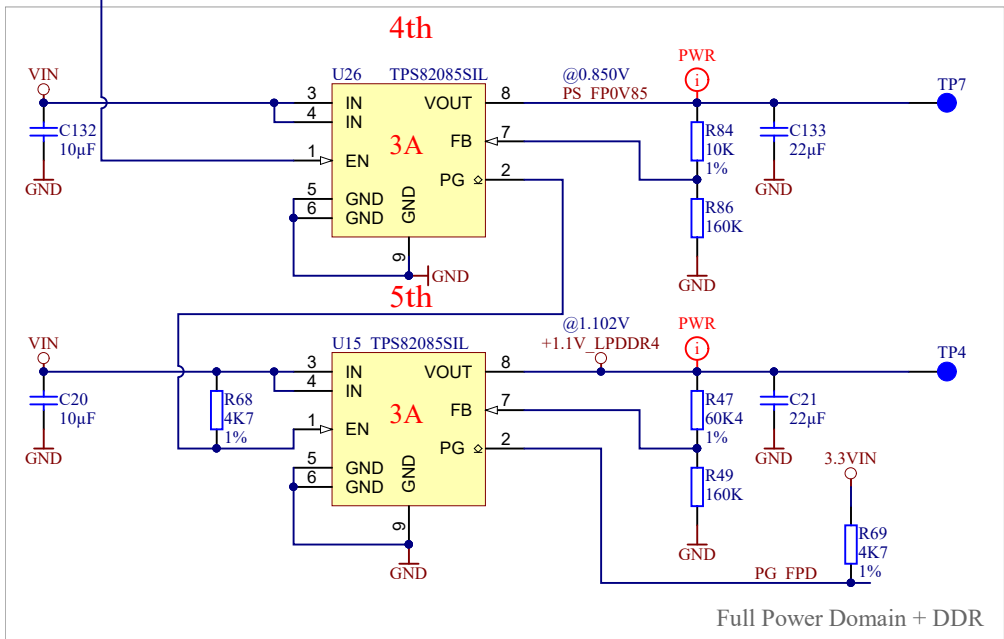
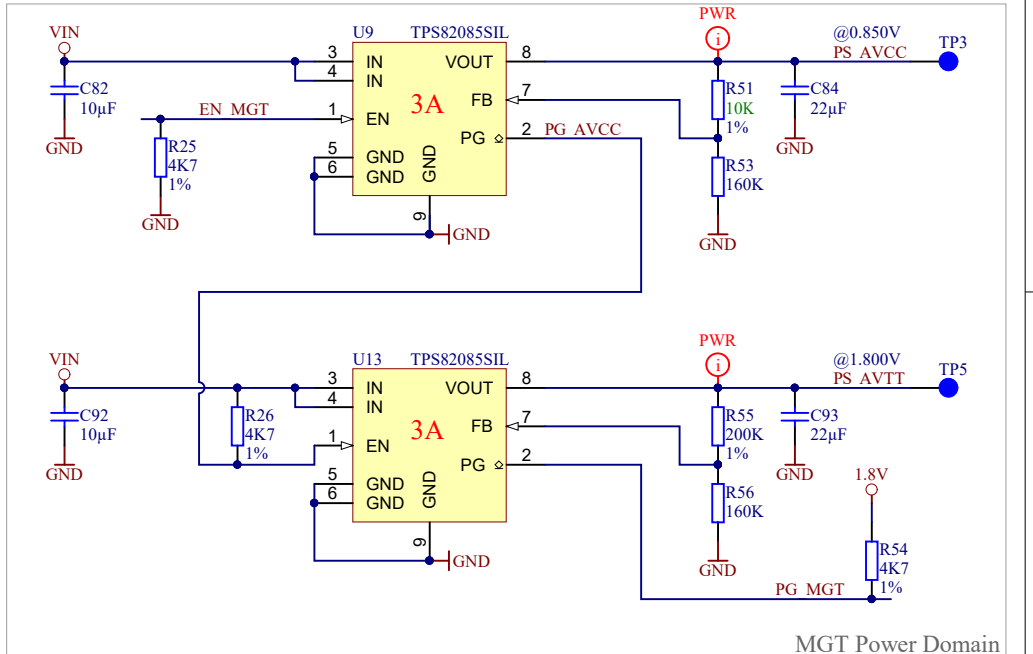
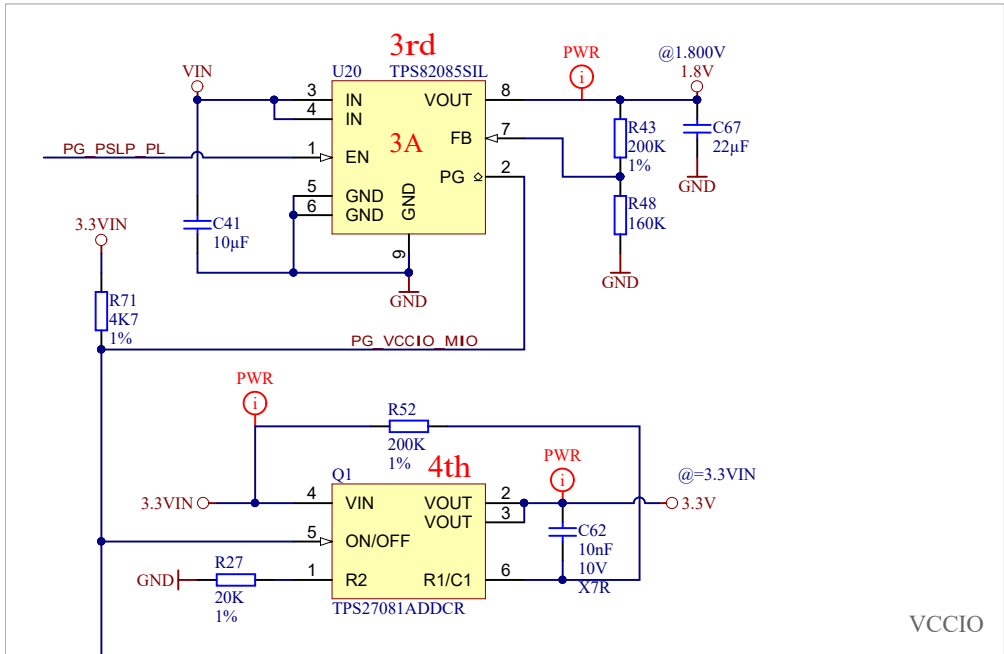
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Title: TE0823 - POWER PS_DDR		
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Drawn by: VY	Filename: POWER_1.SchDoc	

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Revision 01a (01.07.2020):

1. VY: R38 value was changed to 20K (was: 40K2) to set VCU 0.9V

Revision 01b (29.10.2020):

- 1. VY: added block diagram
- 2. VY: added page "Legal notices"
- 3. VY: R51 value was changed to 10K (was: 20K) to set PS\_VCU 0.85V

A

A

B


B

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			Title: <b>TE0823 - Revision Changes List</b>		
			A4	Number: <b>TE0823 3PIU1FL</b>	Rev. <b>01</b>
Date: <b>2019-10-02</b>		Copyright: <b>Trenz Electronic GmbH</b>		Page <b>25</b> of <b>25</b>	
Drawn by: <b>VY</b>			Filename: <b>Revision Changes.SchDoc</b>		

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