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_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_4
POWER_4.SchDoc

U_REV_CH
Revision_Changes.SchDoc

GND
Mount.Hole 3.2mm für Unterlegscheibe

GND
Mount.Hole 3.2mm für Unterlegscheibe

GND
Mount.Hole 3.2mm für Unterlegscheibe

GND
Mount.Hole 3.2mm für Unterlegscheibe

GND
Mount.Hole 3.2mm für Unterlegscheibe

GND
Mount.Hole 3.2mm für Unterlegscheibe

GND
Mount.Hole 3.2mm für Unterlegscheibe

GND
Mount.Hole 3.2mm für Unterlegscheibe

PM1
FIDU-DOT - mini

PM2
FIDU-DOT - mini

PM3
FIDU-DOT - mini

PM4
FIDU-DOT - mini

PM5
FIDU-DOT - mini

PM6
FIDU-DOT - mini

LOGO1
TE Logo PRINT Layer
LOGO PRINT

Serial
Serial
Serialnumber 6,3 x 6.3mm

S/N
1
0R
2
Serialnumber

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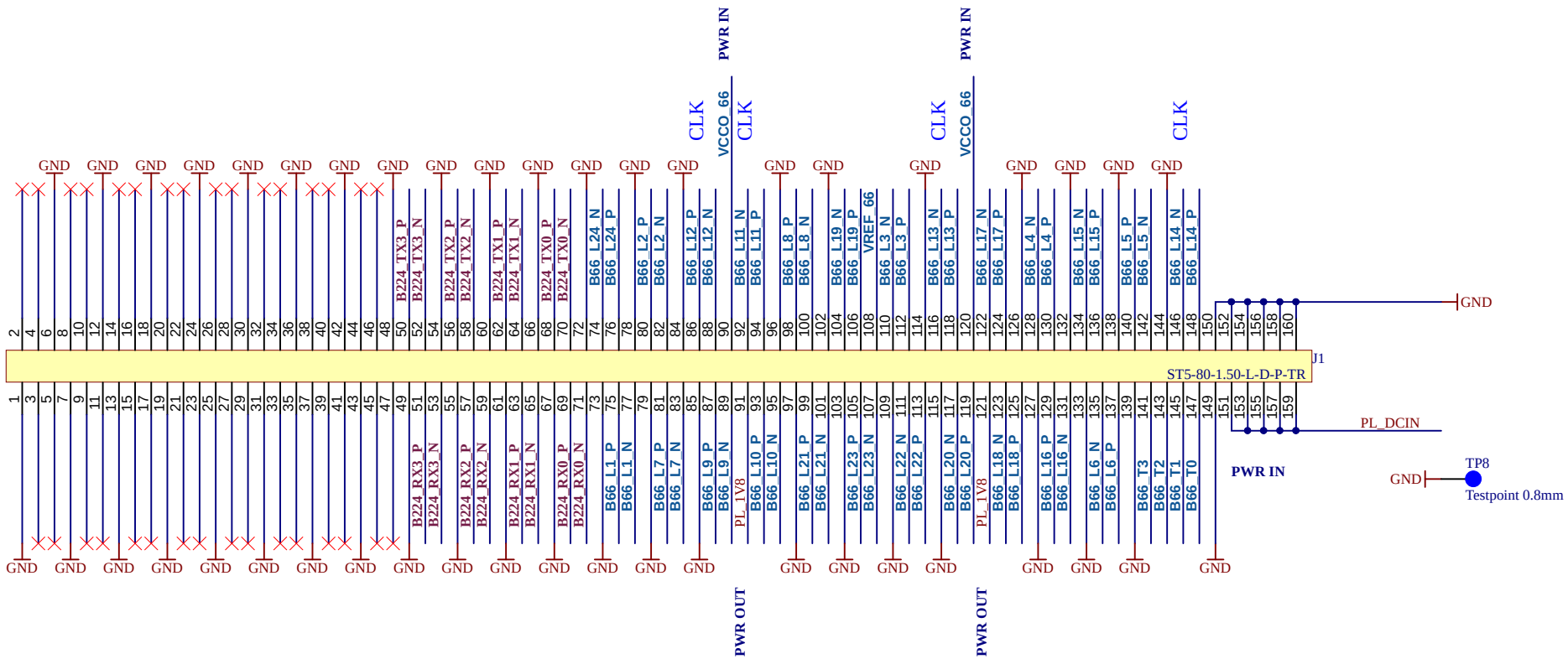
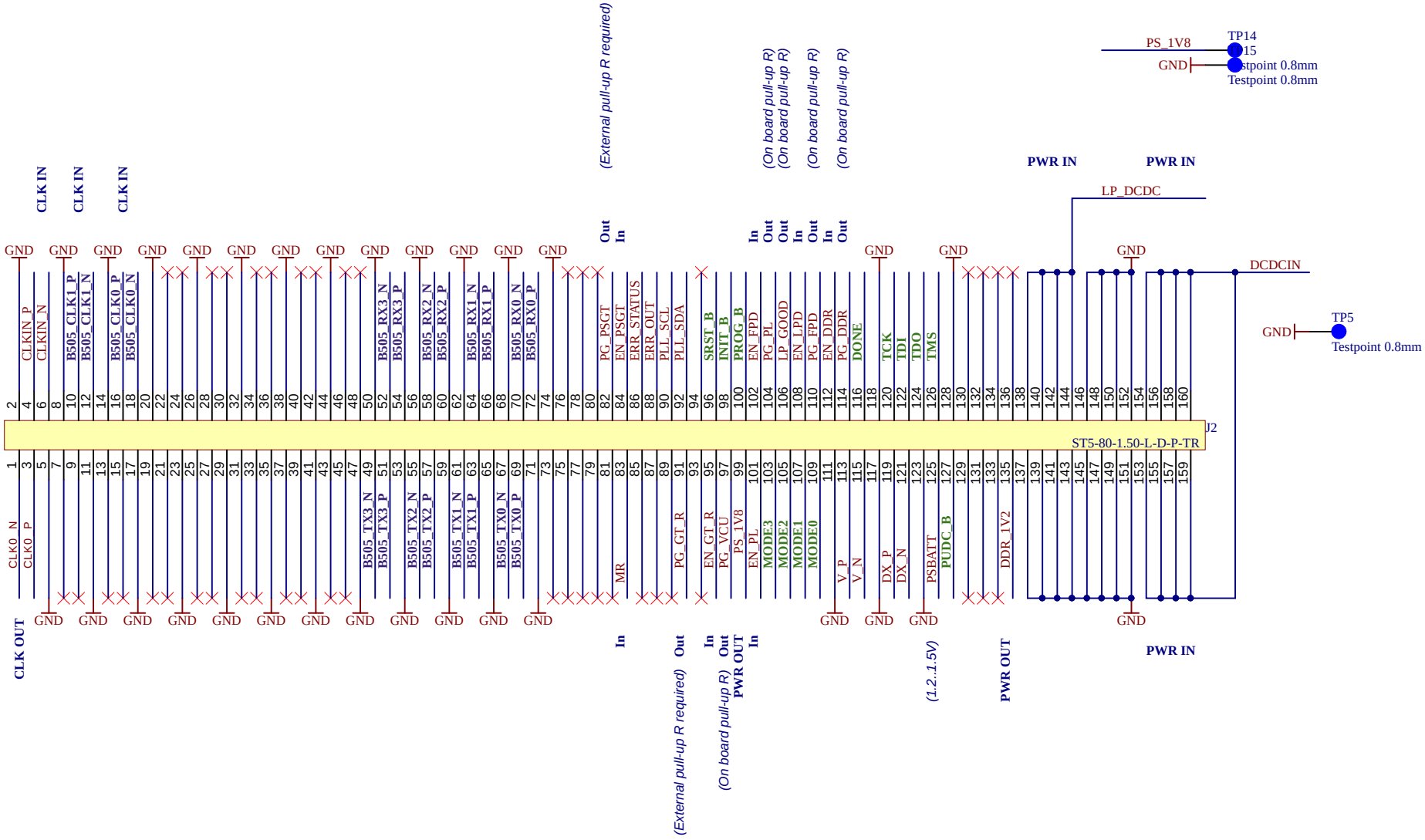
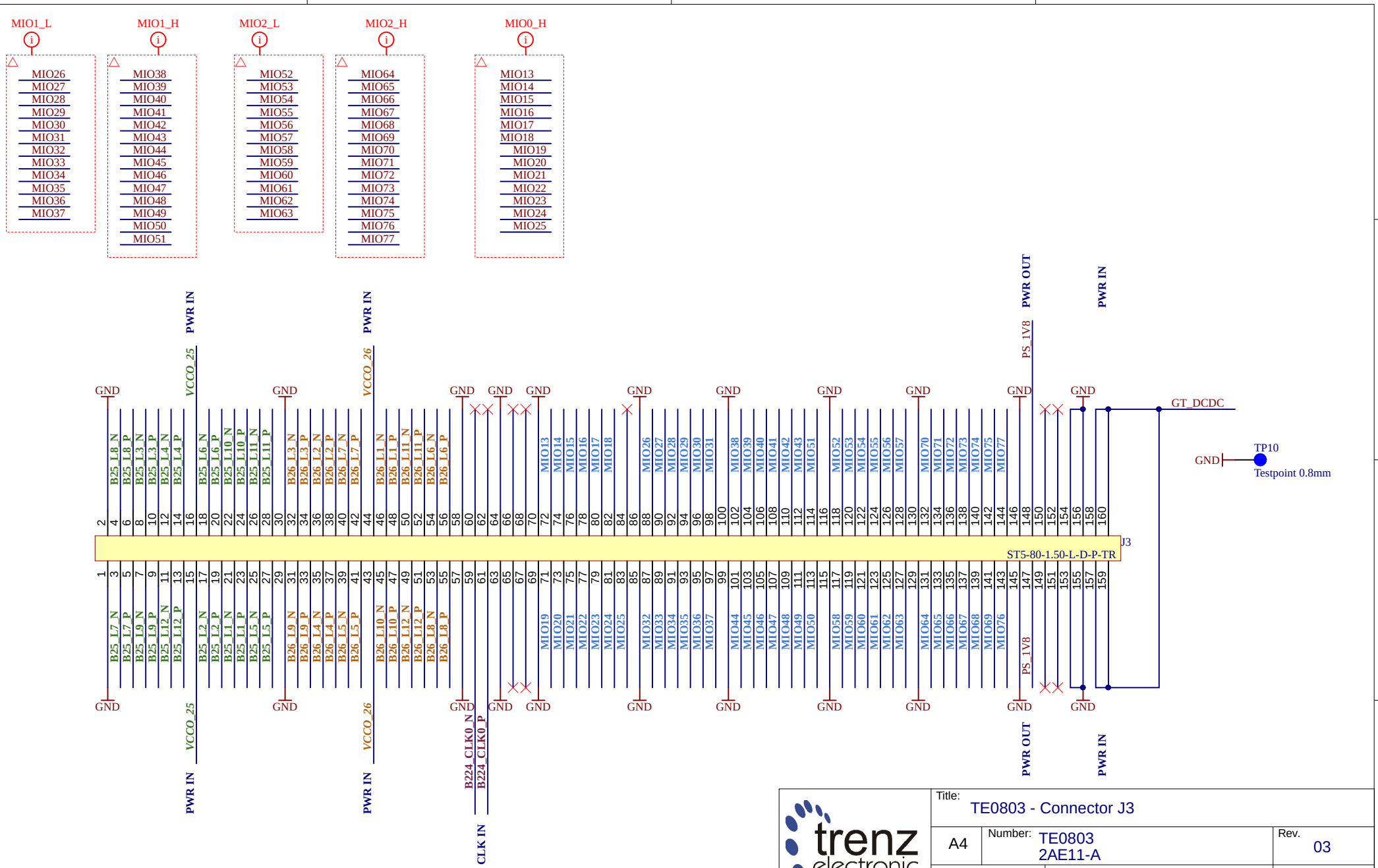
Title: TE0803			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page1 of 26
Filename: TE0803.SchDoc			

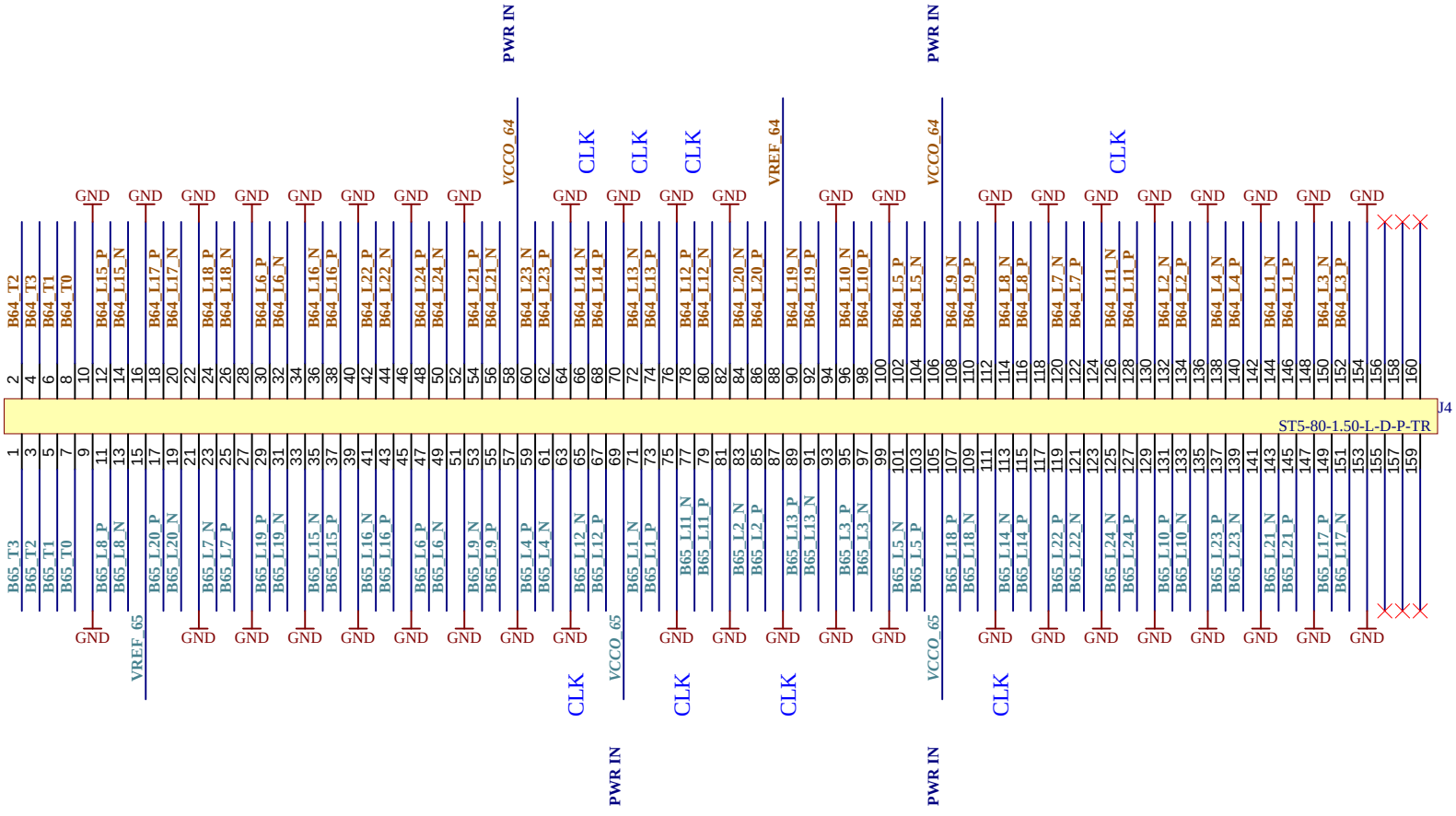


Title: TE0803 - Connector J1			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page2 of 26
Filename: J1.SchDoc			

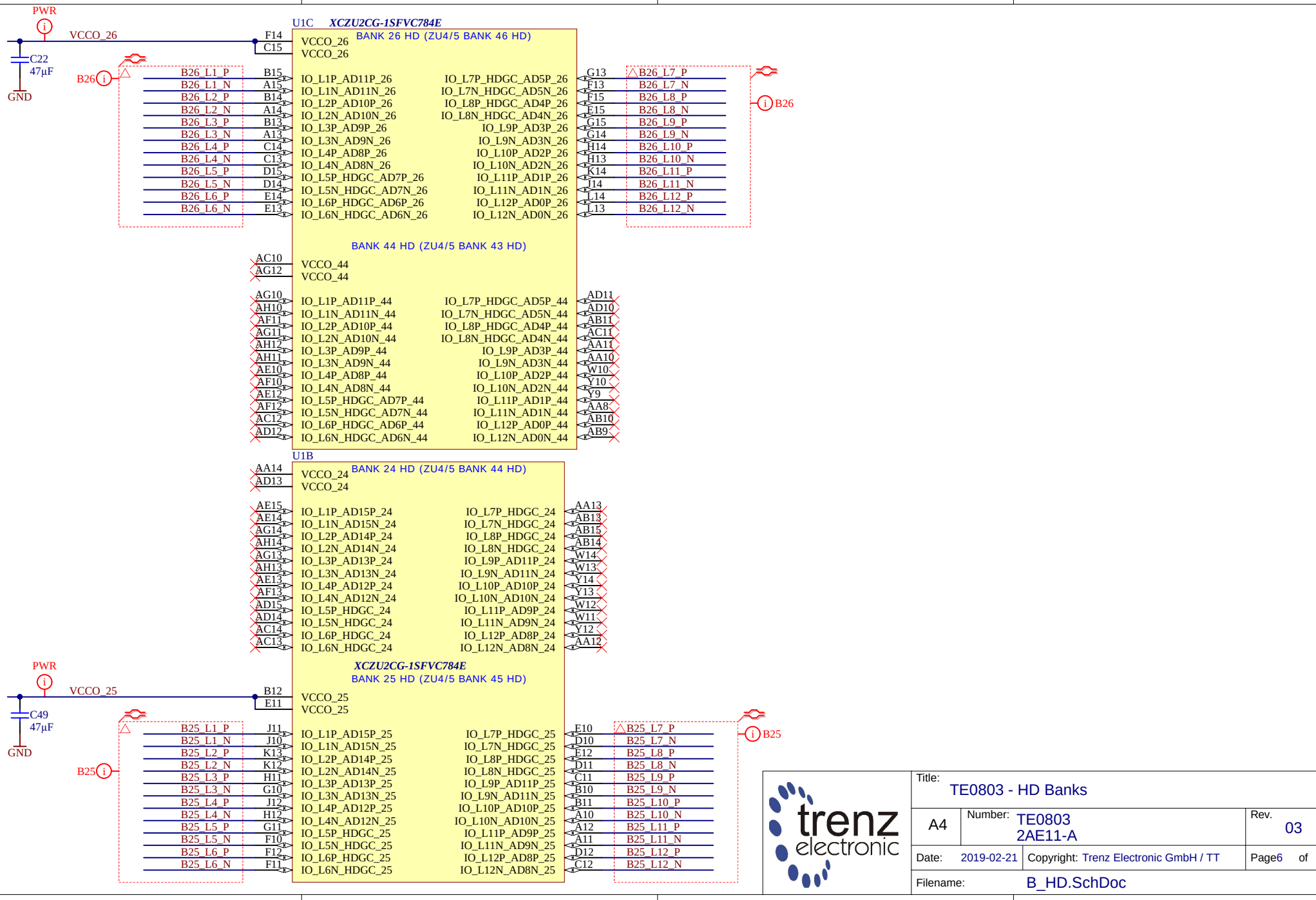

PS_1V8
TP14
GND
Testpoint 0.8mm
PWR IN
PWR IN
LP_DCDC
DCDCIN
TP5
GND
Testpoint 0.8mm
J2
ST5-80-1.50-L-D-P-TR
CLK IN
CLK IN
CLK IN
CLK OUT
PWR OUT
PWR IN
(External pull-up R required)
(On board pull-up R)
(1.2..1.5V)
CLKIN_P
CLKIN_N
B505_CLK1_P
B505_CLK1_N
B505_CLK0_P
B505_CLK0_N
CLK0_N
CLK0_P
B505_RX3_N
B505_RX3_P
B505_RX2_N
B505_RX2_P
B505_RX1_N
B505_RX1_P
B505_RX0_N
B505_RX0_P
B505_TX3_N
B505_TX3_P
B505_TX2_N
B505_TX2_P
B505_TX1_N
B505_TX1_P
B505_TX0_N
B505_TX0_P
PG_PSGT
EN_PSGT
ERR_STATUS
ERR_OUT
PLL_SCL
PLL_SDA
SRST_B
INIT_B
PROG_B
EN_FPD
PG_PL
LP_GOOD
EN_LPD
PG_FPD
EN_DDR
DONE
TCK
TDI
TDO
TMS
MR
PG_GT_R
EN_GT_R
PG_VCU
PS_1V8
EN_PL
MODE3
MODE2
MODE1
MODE0
V_P
V_N
DX_P
DX_N
PSBATT
PUDC_B
DDR_1V2
GND
Title: TE0803 - Connector J2
A4
Number: TE0803 2AE11-A
Rev. 03
Date: 2019-02-21
Copyright: Trenz Electronic GmbH / TT
Page3 of 26
Filename: J2.SchDoc

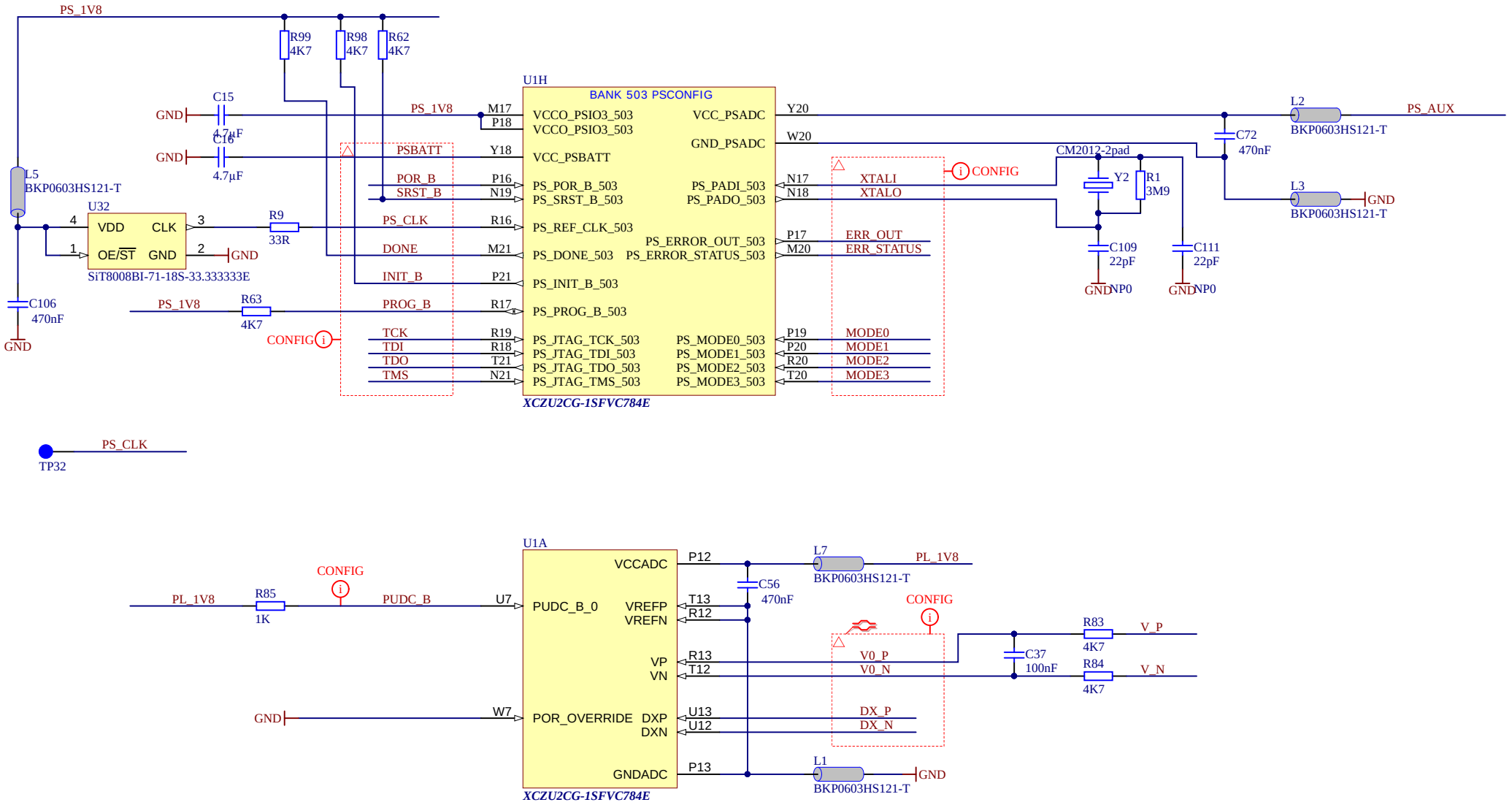


Title: TE0803 - Connector J3			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page4 of 26
Filename: J3.SchDoc			

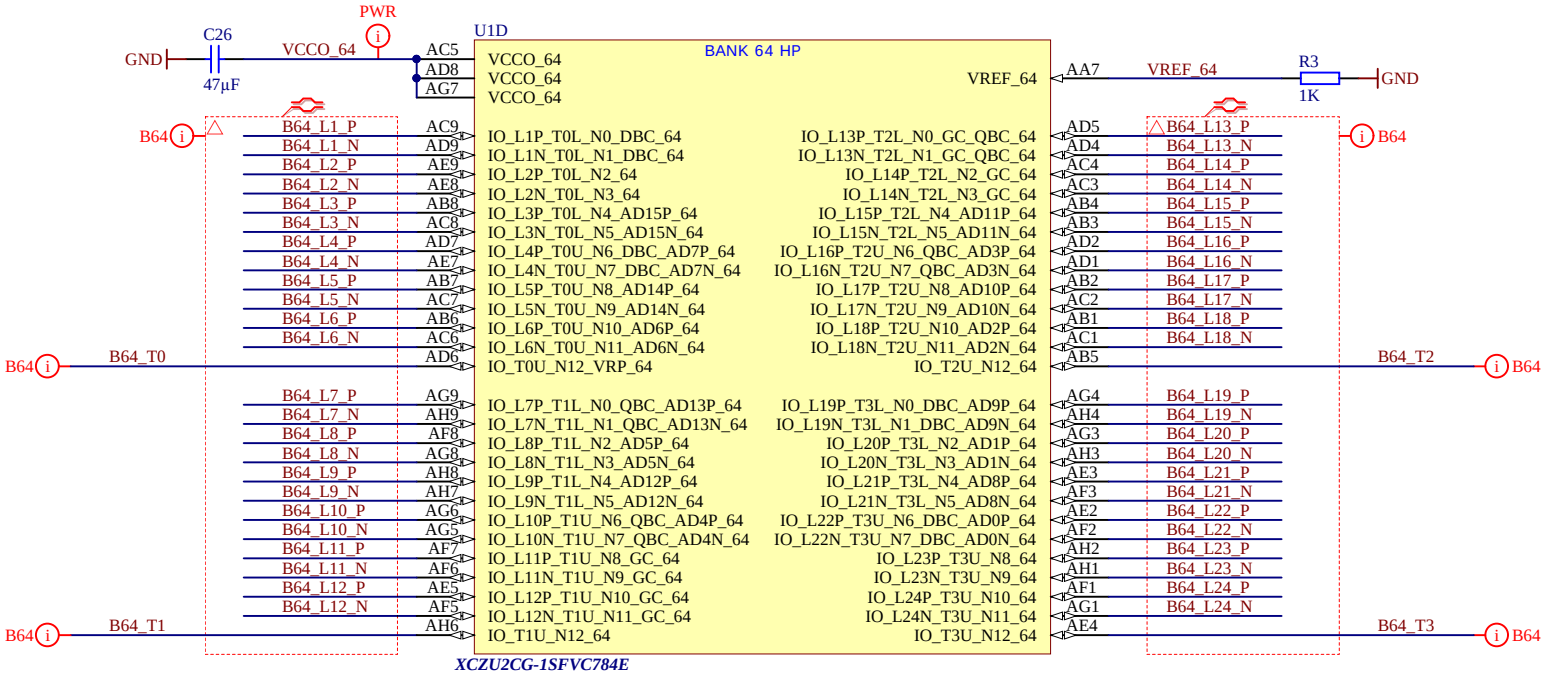


trenz electronic	Title: TE0803 - Connector J4		
	A4	Number: TE0803 2AE11-A	Rev. 03
	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page5 of 26
	Filename: J4.SchDoc		

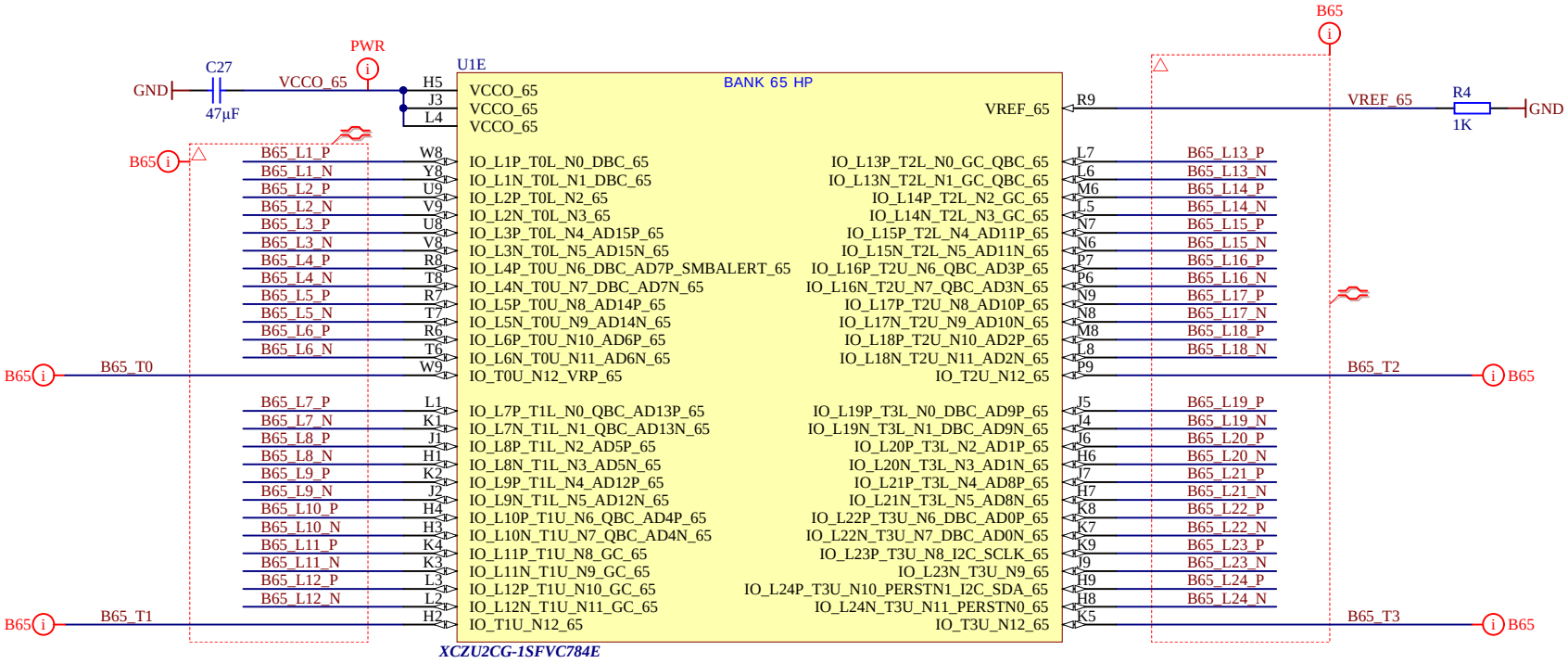

PWR
VCCO_26
C22
47µF
GND
U1C
XCZU2CG-1SFVC784E
BANK 26 HD (ZU4/5 BANK 46 HD)
VCCO_26
VCCO_26
IO_L1P_AD11P_26
IO_L1N_AD11N_26
IO_L2P_AD10P_26
IO_L2N_AD10N_26
IO_L3P_AD9P_26
IO_L3N_AD9N_26
IO_L4P_AD8P_26
IO_L4N_AD8N_26
IO_L5P_HDGC_AD7P_26
IO_L5N_HDGC_AD7N_26
IO_L6P_HDGC_AD6P_26
IO_L6N_HDGC_AD6N_26
IO_L7P_HDGC_AD5P_26
IO_L7N_HDGC_AD5N_26
IO_L8P_HDGC_AD4P_26
IO_L8N_HDGC_AD4N_26
IO_L9P_AD3P_26
IO_L9N_AD3N_26
IO_L10P_AD2P_26
IO_L10N_AD2N_26
IO_L11P_AD1P_26
IO_L11N_AD1N_26
IO_L12P_AD0P_26
IO_L12N_AD0N_26
B26_L1_P
B26_L1_N
B26_L2_P
B26_L2_N
B26_L3_P
B26_L3_N
B26_L4_P
B26_L4_N
B26_L5_P
B26_L5_N
B26_L6_P
B26_L6_N
B26_L7_P
B26_L7_N
B26_L8_P
B26_L8_N
B26_L9_P
B26_L9_N
B26_L10_P
B26_L10_N
B26_L11_P
B26_L11_N
B26_L12_P
B26_L12_N
B26
BANK 44 HD (ZU4/5 BANK 43 HD)
VCCO_44
VCCO_44
IO_L1P_AD11P_44
IO_L1N_AD11N_44
IO_L2P_AD10P_44
IO_L2N_AD10N_44
IO_L3P_AD9P_44
IO_L3N_AD9N_44
IO_L4P_AD8P_44
IO_L4N_AD8N_44
IO_L5P_HDGC_AD7P_44
IO_L5N_HDGC_AD7N_44
IO_L6P_HDGC_AD6P_44
IO_L6N_HDGC_AD6N_44
IO_L7P_HDGC_AD5P_44
IO_L7N_HDGC_AD5N_44
IO_L8P_HDGC_AD4P_44
IO_L8N_HDGC_AD4N_44
IO_L9P_AD3P_44
IO_L9N_AD3N_44
IO_L10P_AD2P_44
IO_L10N_AD2N_44
IO_L11P_AD1P_44
IO_L11N_AD1N_44
IO_L12P_AD0P_44
IO_L12N_AD0N_44
U1B
BANK 24 HD (ZU4/5 BANK 44 HD)
VCCO_24
VCCO_24
IO_L1P_AD15P_24
IO_L1N_AD15N_24
IO_L2P_AD14P_24
IO_L2N_AD14N_24
IO_L3P_AD13P_24
IO_L3N_AD13N_24
IO_L4P_AD12P_24
IO_L4N_AD12N_24
IO_L5P_HDGC_24
IO_L5N_HDGC_24
IO_L6P_HDGC_24
IO_L6N_HDGC_24
IO_L7P_HDGC_24
IO_L7N_HDGC_24
IO_L8P_HDGC_24
IO_L8N_HDGC_24
IO_L9P_AD11P_24
IO_L9N_AD11N_24
IO_L10P_AD10P_24
IO_L10N_AD10N_24
IO_L11P_AD9P_24
IO_L11N_AD9N_24
IO_L12P_AD8P_24
IO_L12N_AD8N_24
XCZU2CG-1SFVC784E
BANK 25 HD (ZU4/5 BANK 45 HD)
PWR
VCCO_25
C49
47µF
GND
VCCO_25
VCCO_25
IO_L1P_AD15P_25
IO_L1N_AD15N_25
IO_L2P_AD14P_25
IO_L2N_AD14N_25
IO_L3P_AD13P_25
IO_L3N_AD13N_25
IO_L4P_AD12P_25
IO_L4N_AD12N_25
IO_L5P_HDGC_25
IO_L5N_HDGC_25
IO_L6P_HDGC_25
IO_L6N_HDGC_25
IO_L7P_HDGC_25
IO_L7N_HDGC_25
IO_L8P_HDGC_25
IO_L8N_HDGC_25
IO_L9P_AD11P_25
IO_L9N_AD11N_25
IO_L10P_AD10P_25
IO_L10N_AD10N_25
IO_L11P_AD9P_25
IO_L11N_AD9N_25
IO_L12P_AD8P_25
IO_L12N_AD8N_25
B25_L1_P
B25_L1_N
B25_L2_P
B25_L2_N
B25_L3_P
B25_L3_N
B25_L4_P
B25_L4_N
B25_L5_P
B25_L5_N
B25_L6_P
B25_L6_N
B25_L7_P
B25_L7_N
B25_L8_P
B25_L8_N
B25_L9_P
B25_L9_N
B25_L10_P
B25_L10_N
B25_L11_P
B25_L11_N
B25_L12_P
B25_L12_N
B25
trenz electronic
Title: TE0803 - HD Banks
A4
Number: TE0803 2AE11-A
Rev. 03
Date: 2019-02-21
Copyright: Trenz Electronic GmbH / TT
Page6 of 26
Filename: B_HD.SchDoc



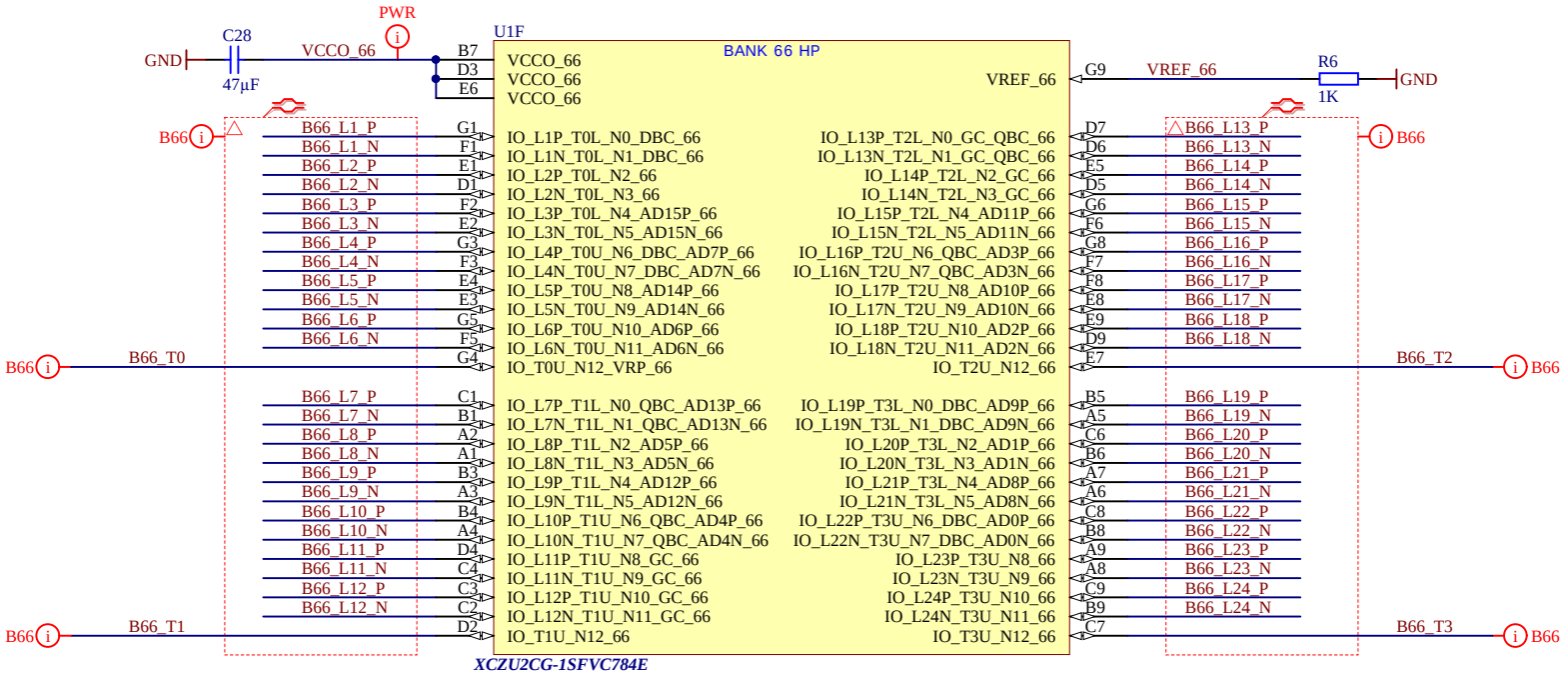
Title: TE0803 - Config			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page7 of 26
Filename: CONFIG.SchDoc			



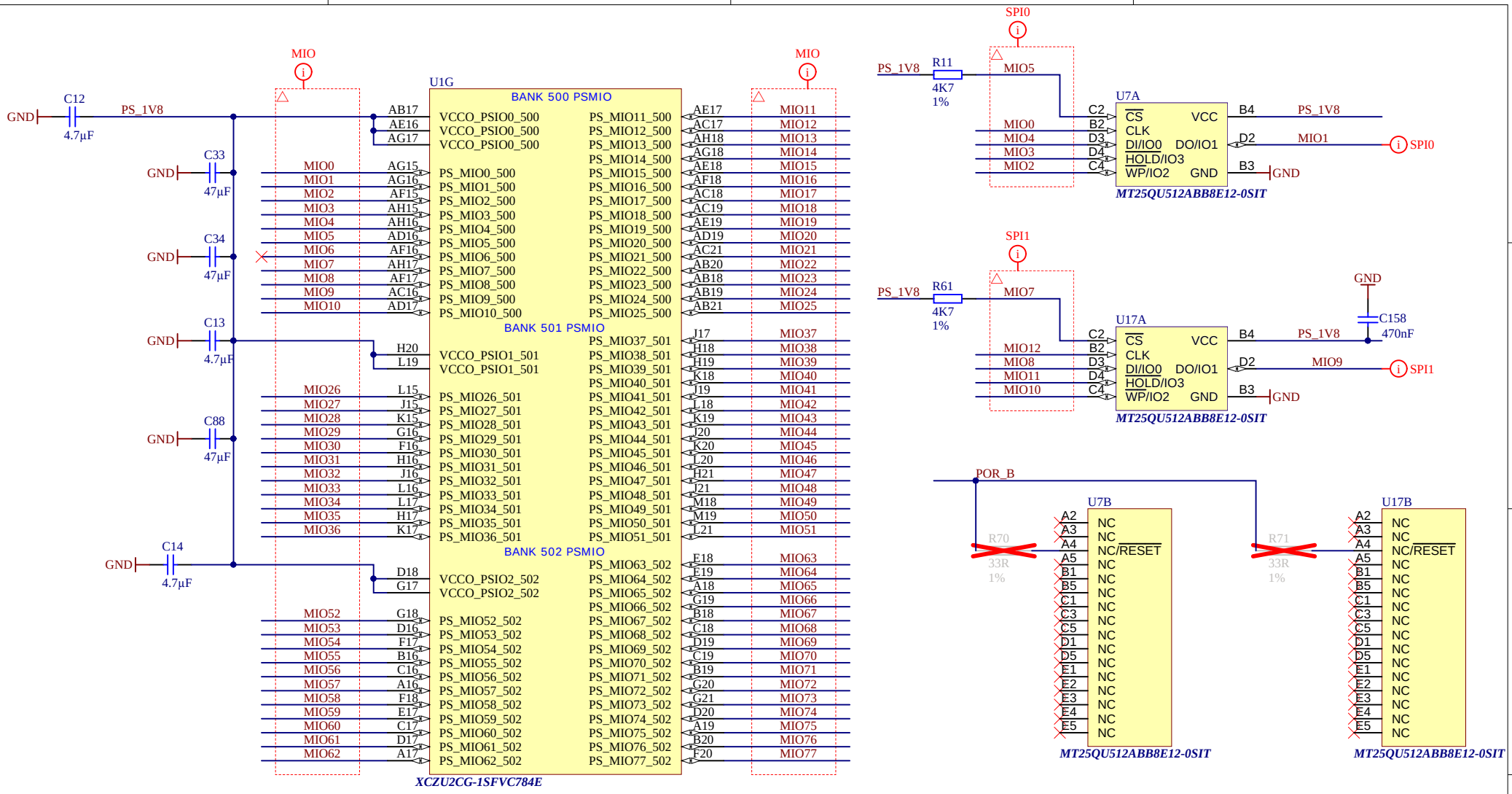
Title: TE0803 - B64			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page8 of 26
Filename: B64.SchDoc			



trenz electronic	Title: TE0803 - B65		
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page9 of 26
Filename: B65.SchDoc			



trenz electronic	Title: TE0803 - B66		
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page10 of 26
Filename: B66.SchDoc			



Title:	TE0803 - MIO Banks		
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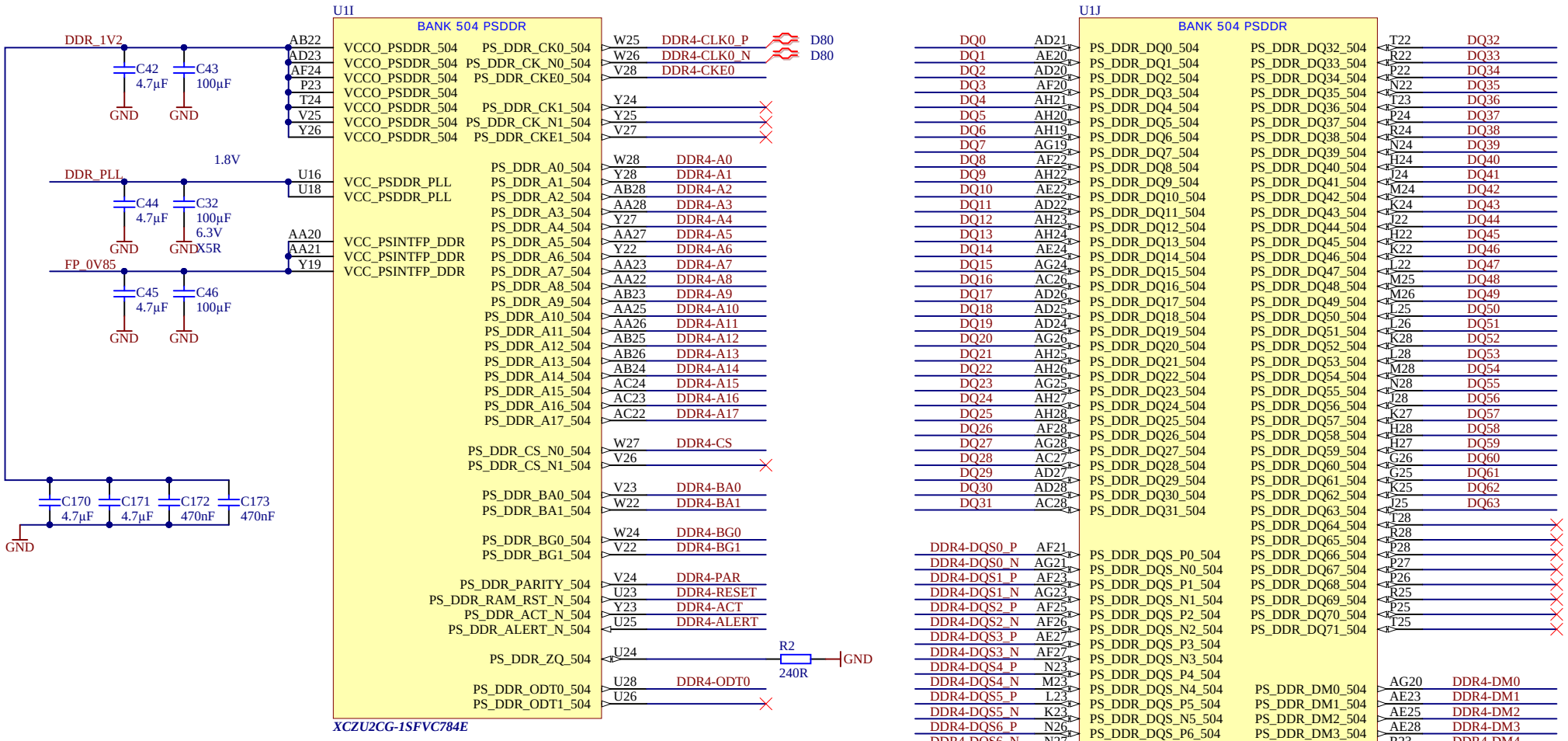
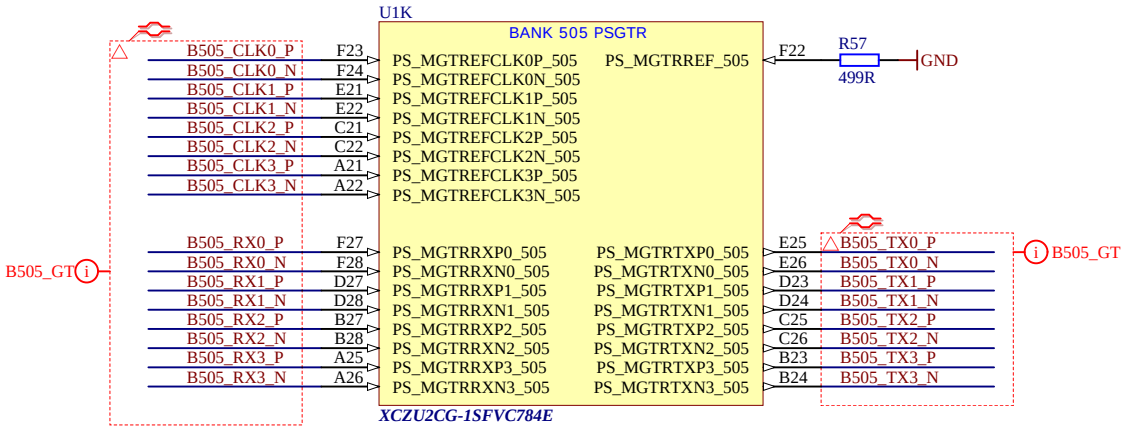
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page11 of 26
Filename:	B_MIO.SchDoc		



trenz electronic	Title: TE0803 - PS_DDR		
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page12 of 26
Filename: PS_DDR.SchDoc			



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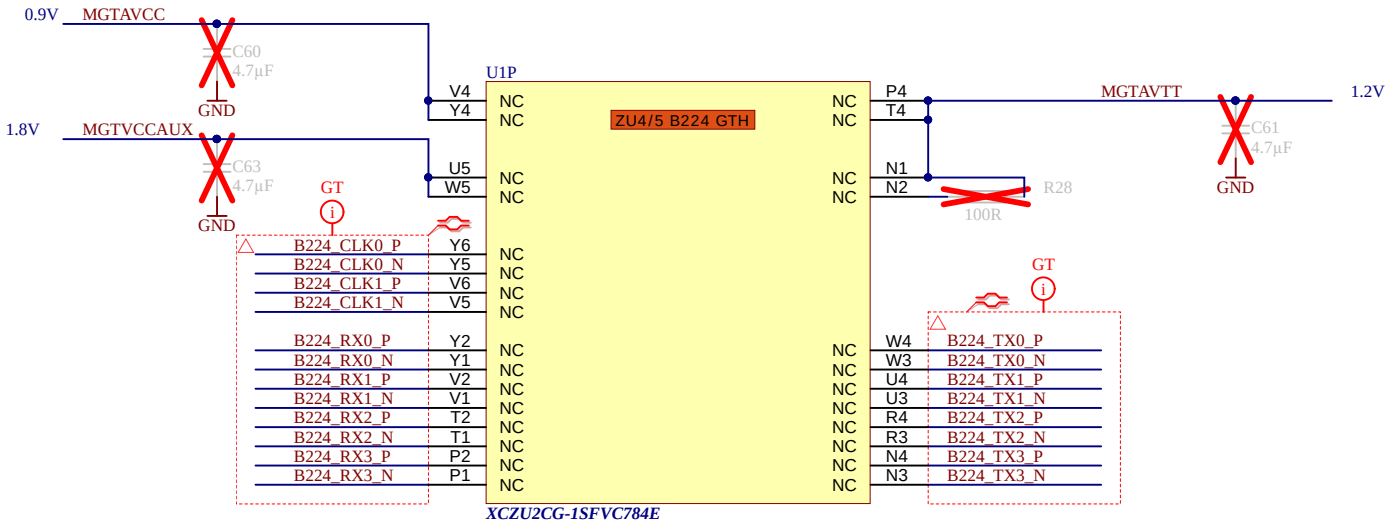
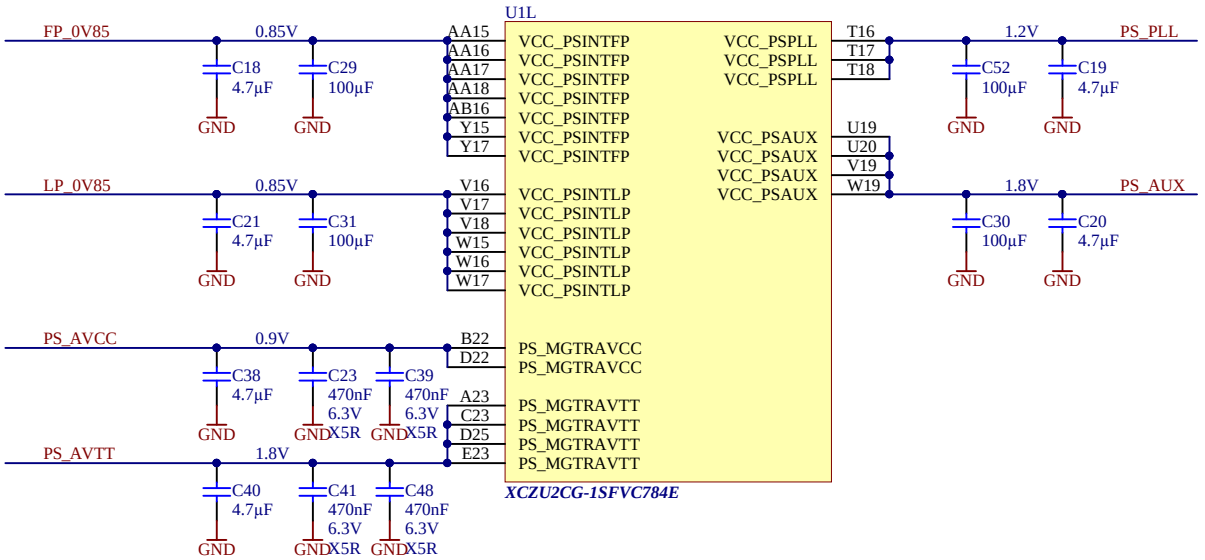
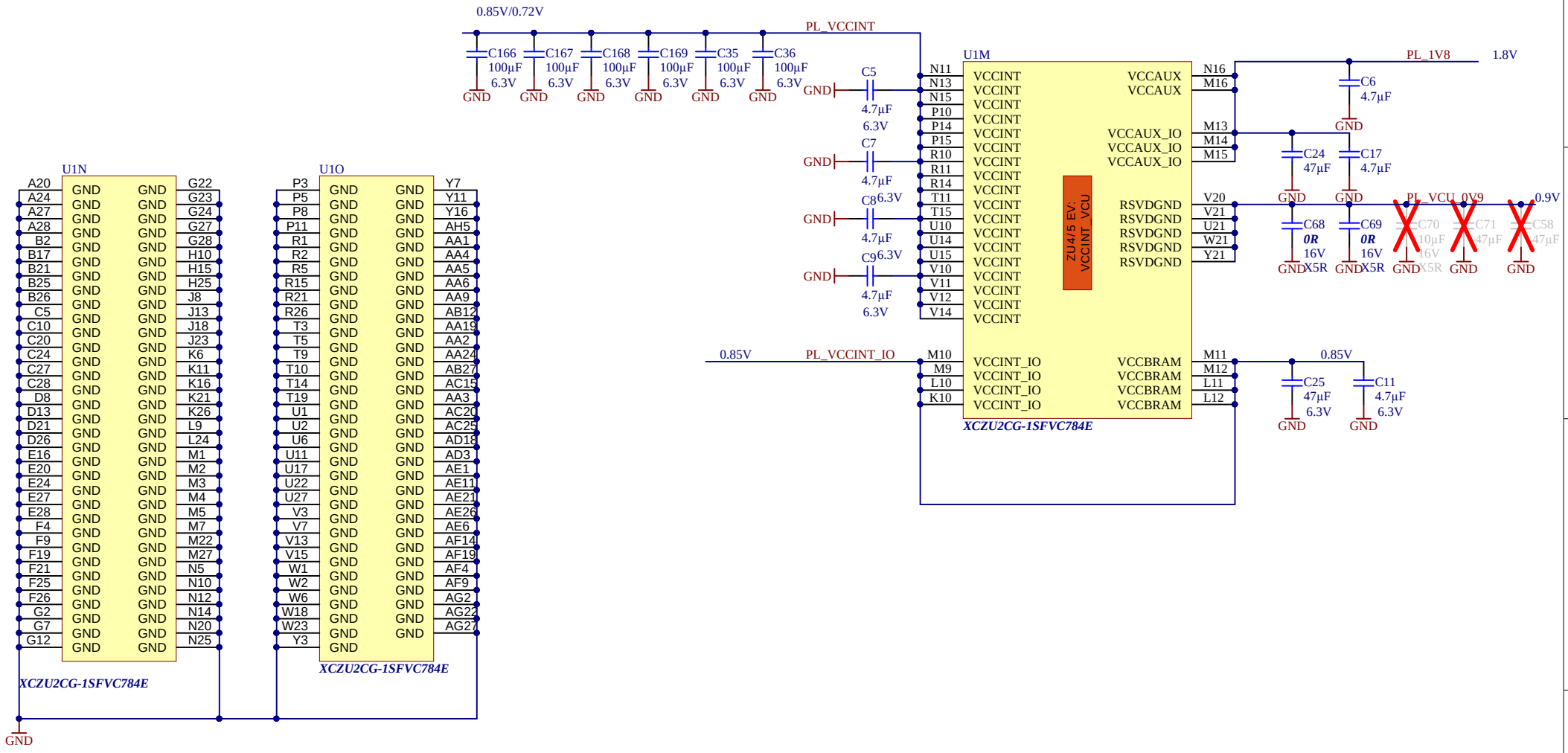
Title: TE0803 - PS_GT		
A4	Number: TE0803 2AE11-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page13 of 26
Filename: B_PS_GT.SchDoc		



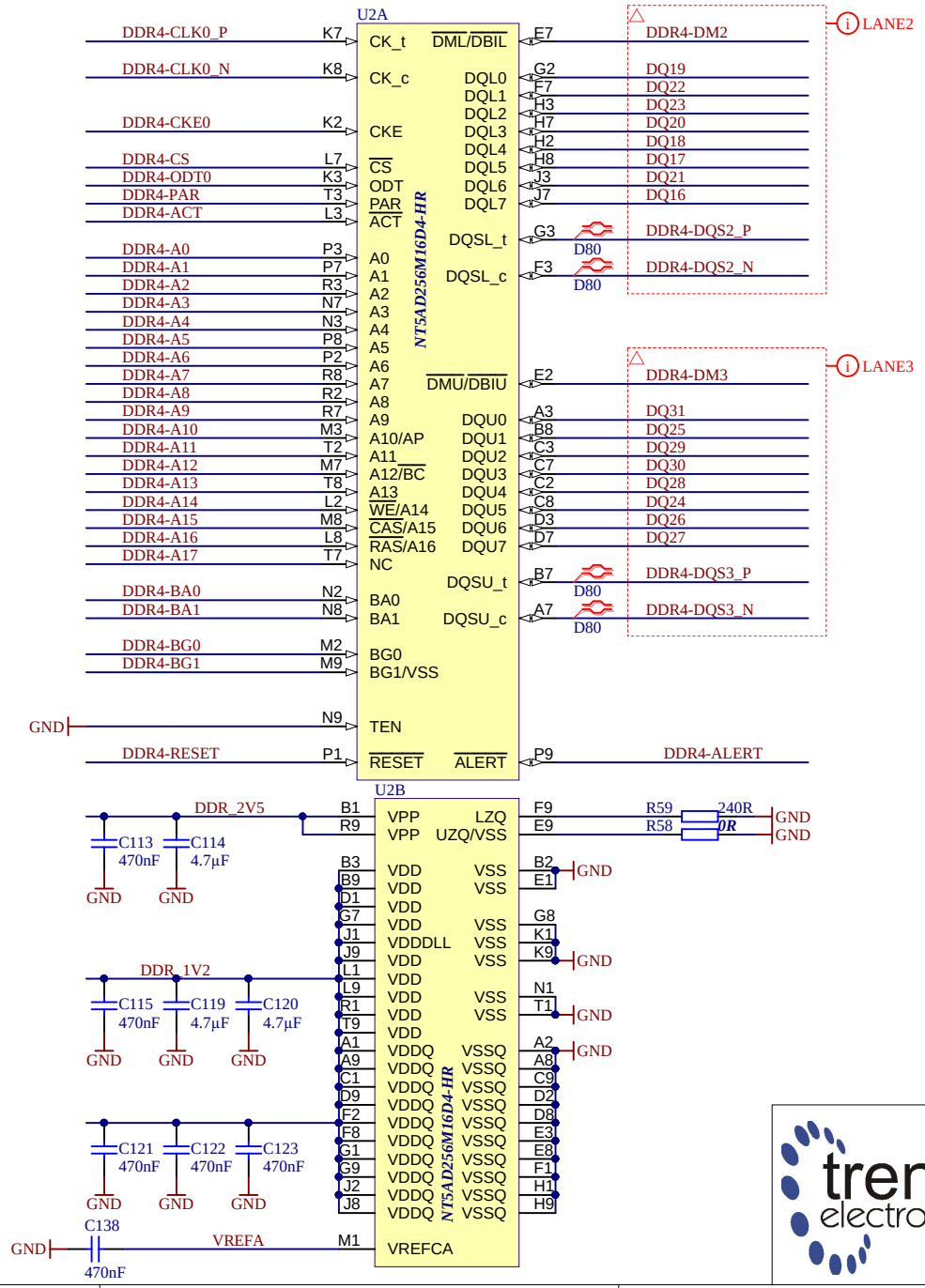
Title: TE0803 - B224GTH			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page14 of 26
Filename: B_GT.SchDoc			



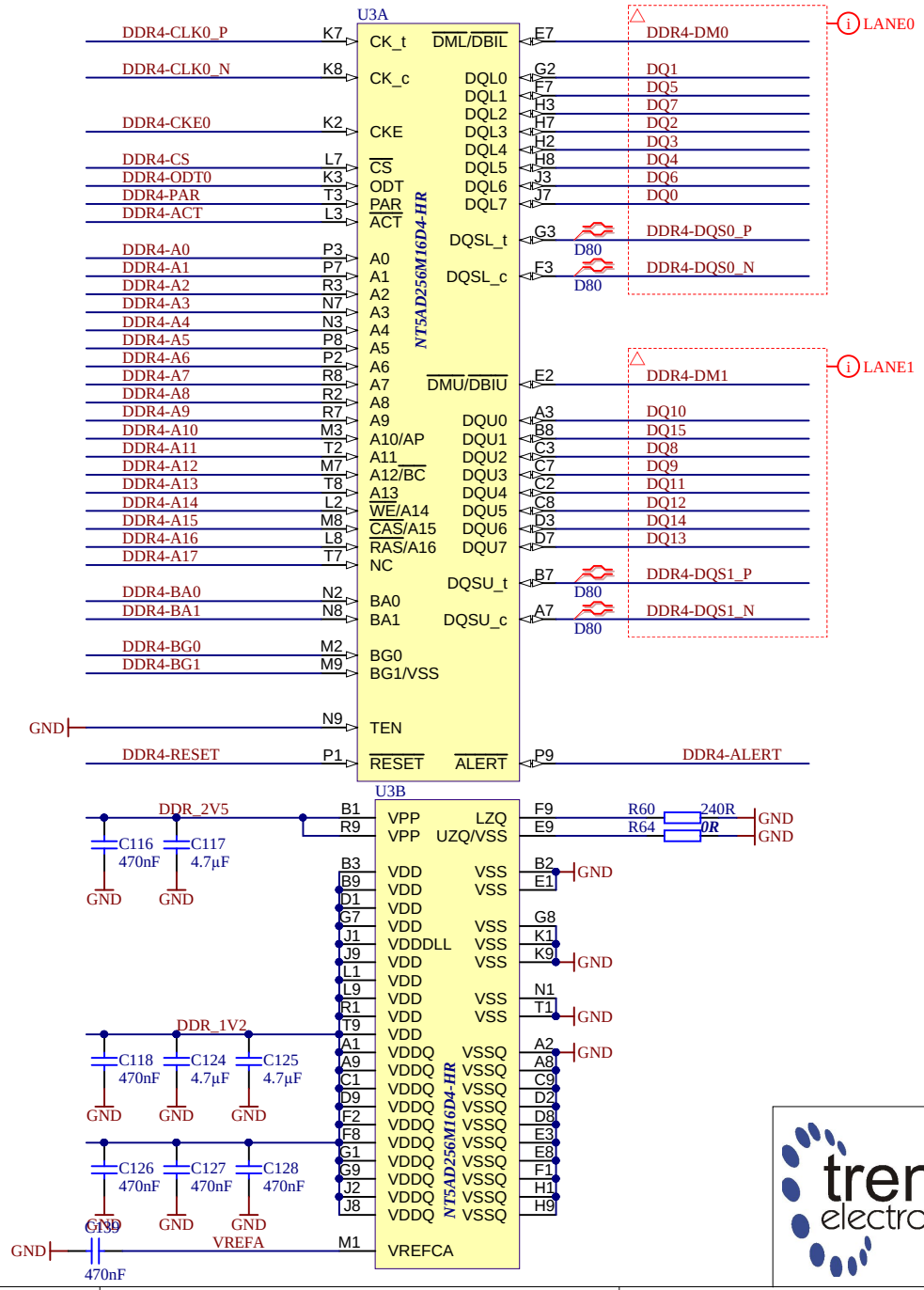
trenz electronic	Title: TE0803 - ZU_PS_POWER		
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page15 of 26
Filename: ZU_PS_POWER.SchDoc			



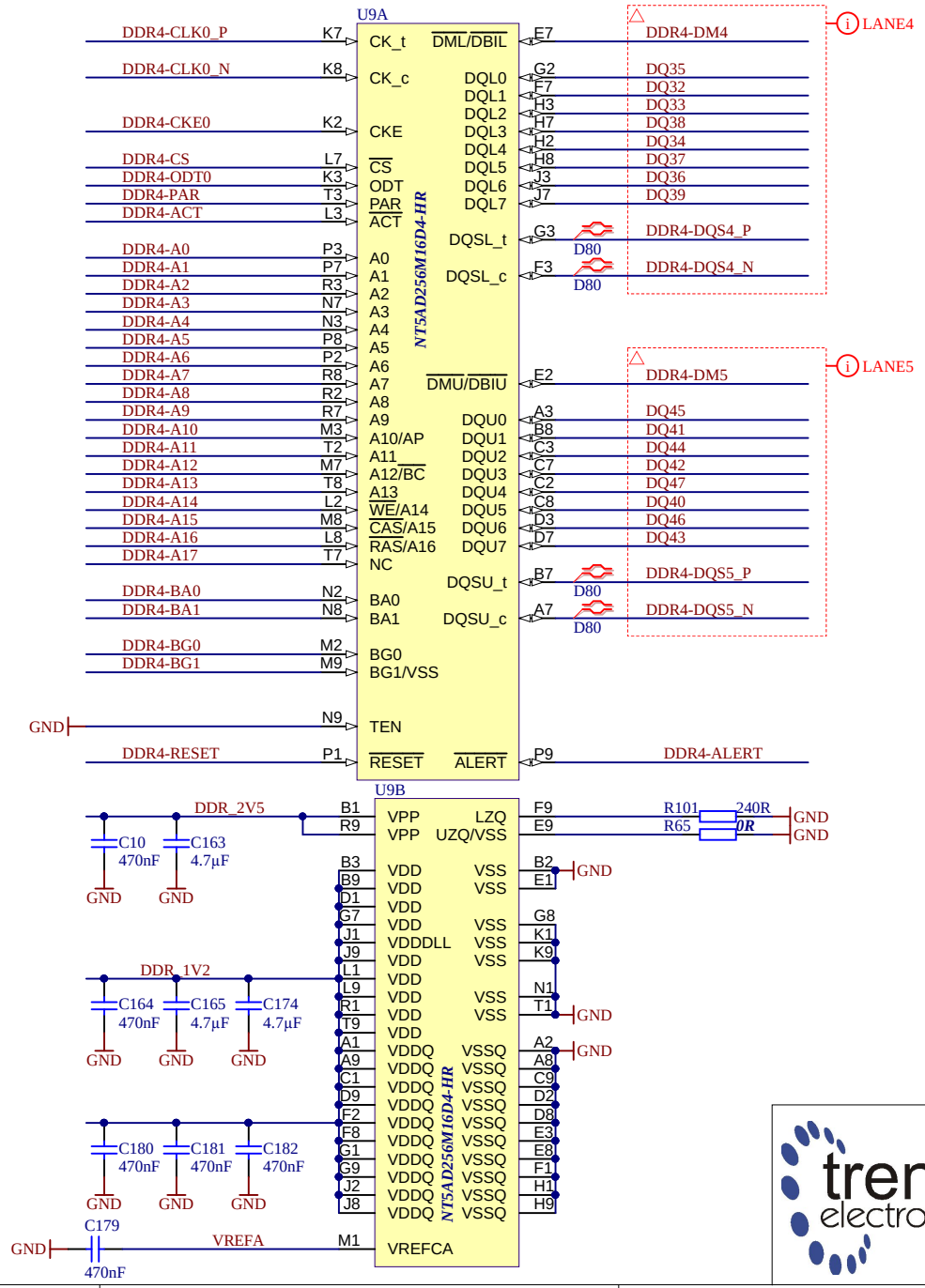
Title: TE0803 - ZU_POWER			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page16 of 26
Filename: ZU_POWER.SchDoc			



trenz electronic	Title: TE0803 - DDR4_1_RAM		
	A4	Number: TE0803 2AE11-A	Rev. 03
	Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page17 of 26
	Filename: DDR4-RAM.SchDoc		



	Title: TE0803 - DDR4_2_RAM		
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page18 of 26
Filename: DDR4-RAM_2.SchDoc			



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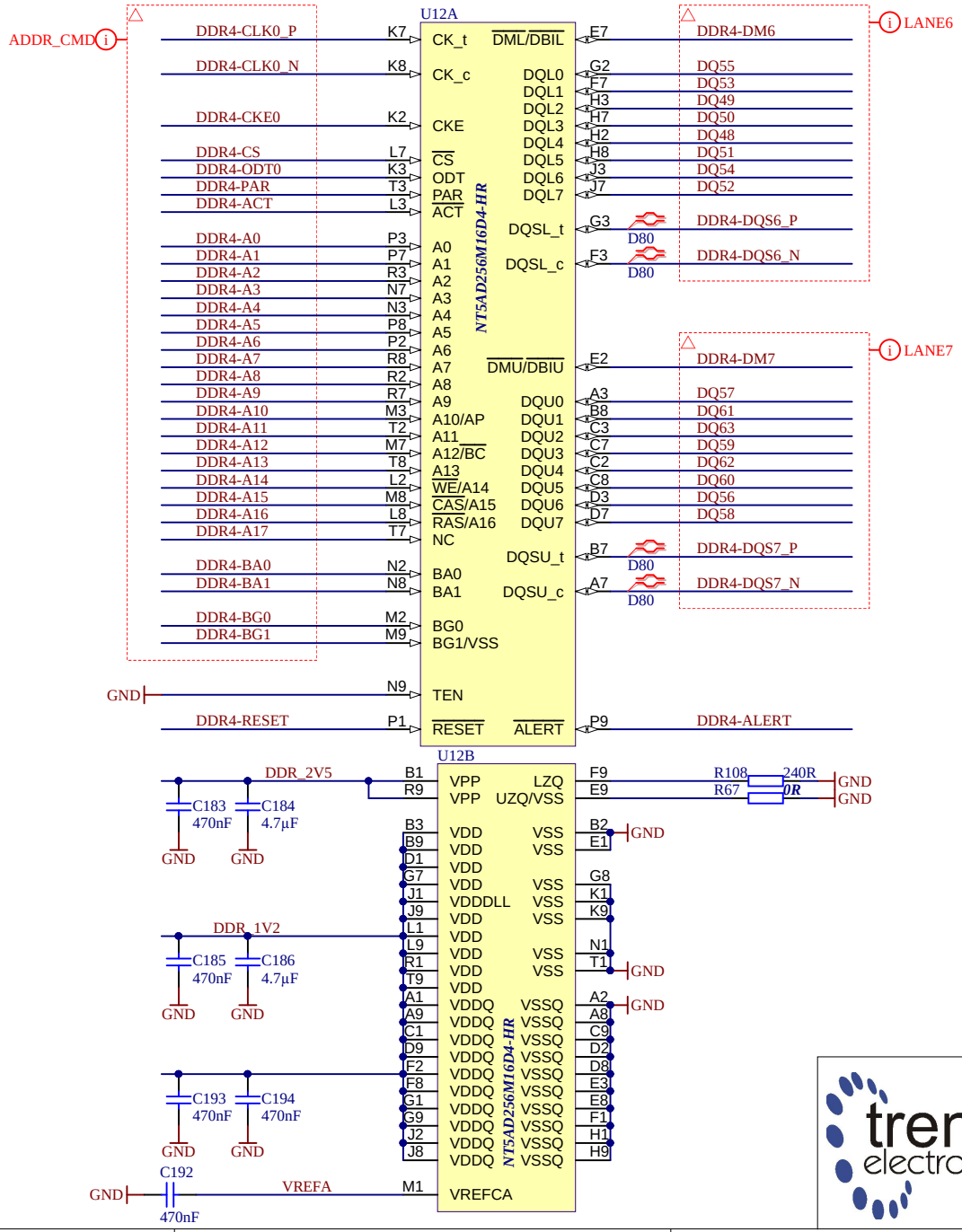
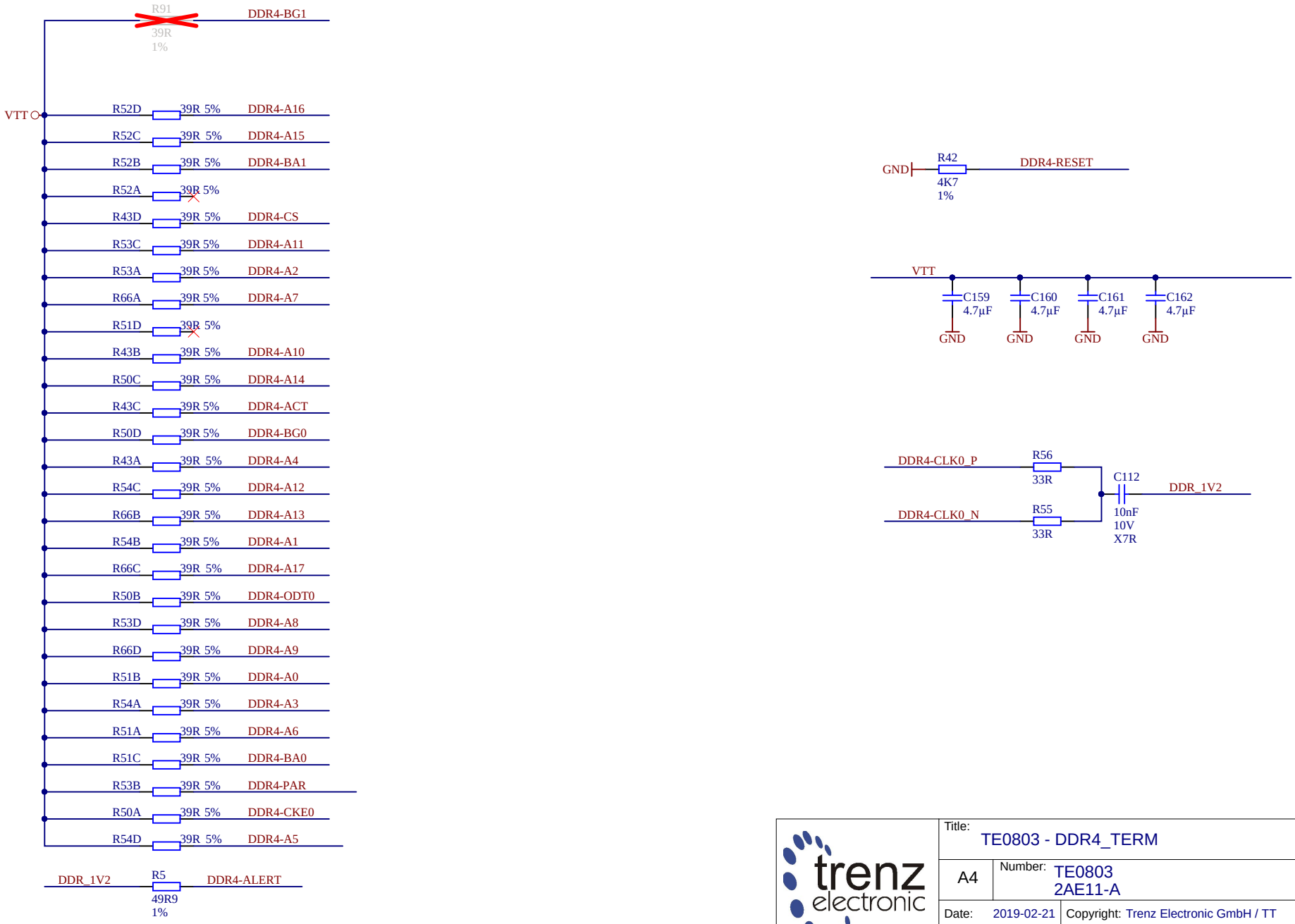
Title: TE0803 - DDR4_3_RAM			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page19 of 26
Filename: DDR4-RAM_3.SchDoc			



Title: TE0803 - DDR4_4_RAM			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page20 of 26
Filename: DDR4-RAM_4.SchDoc			



Title: TE0803 - DDR4_TERM			
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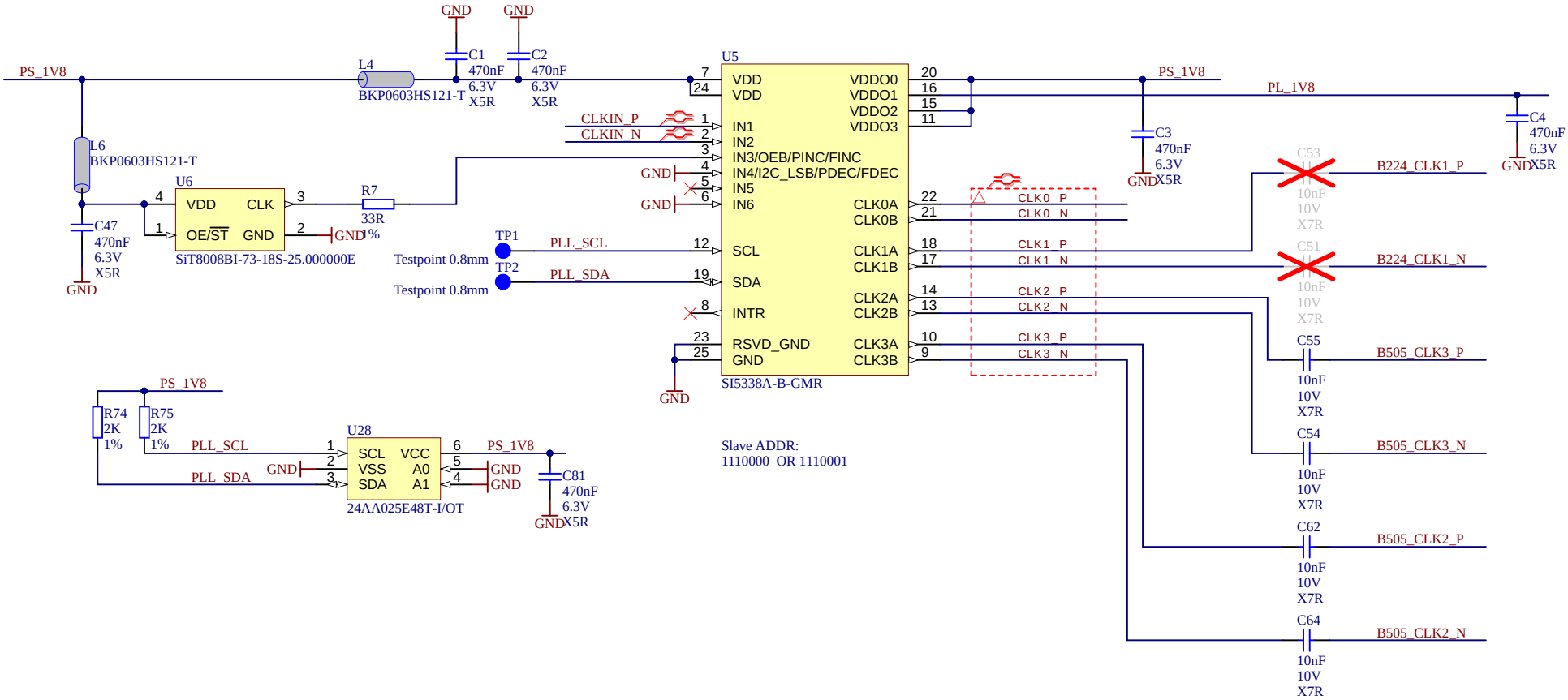
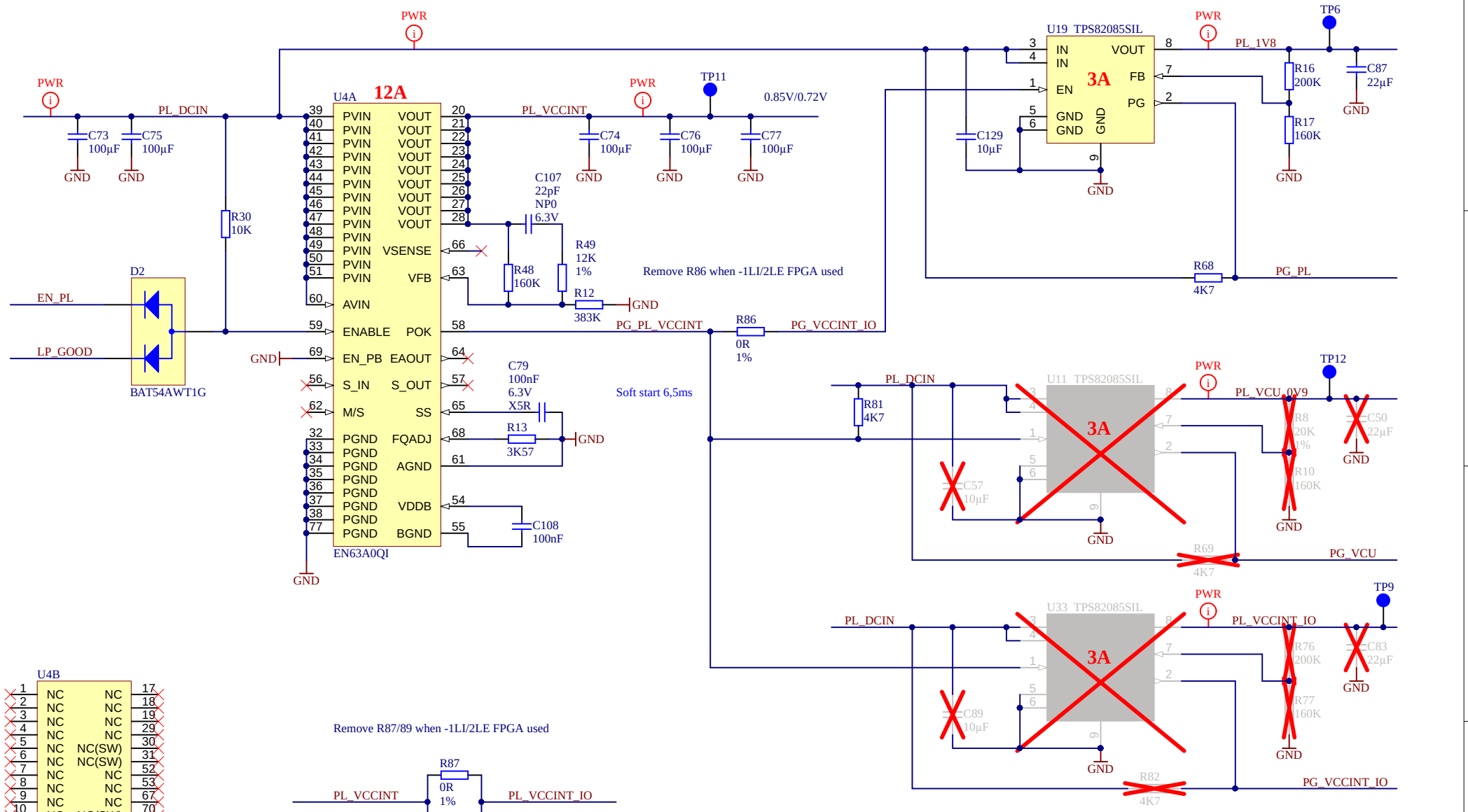
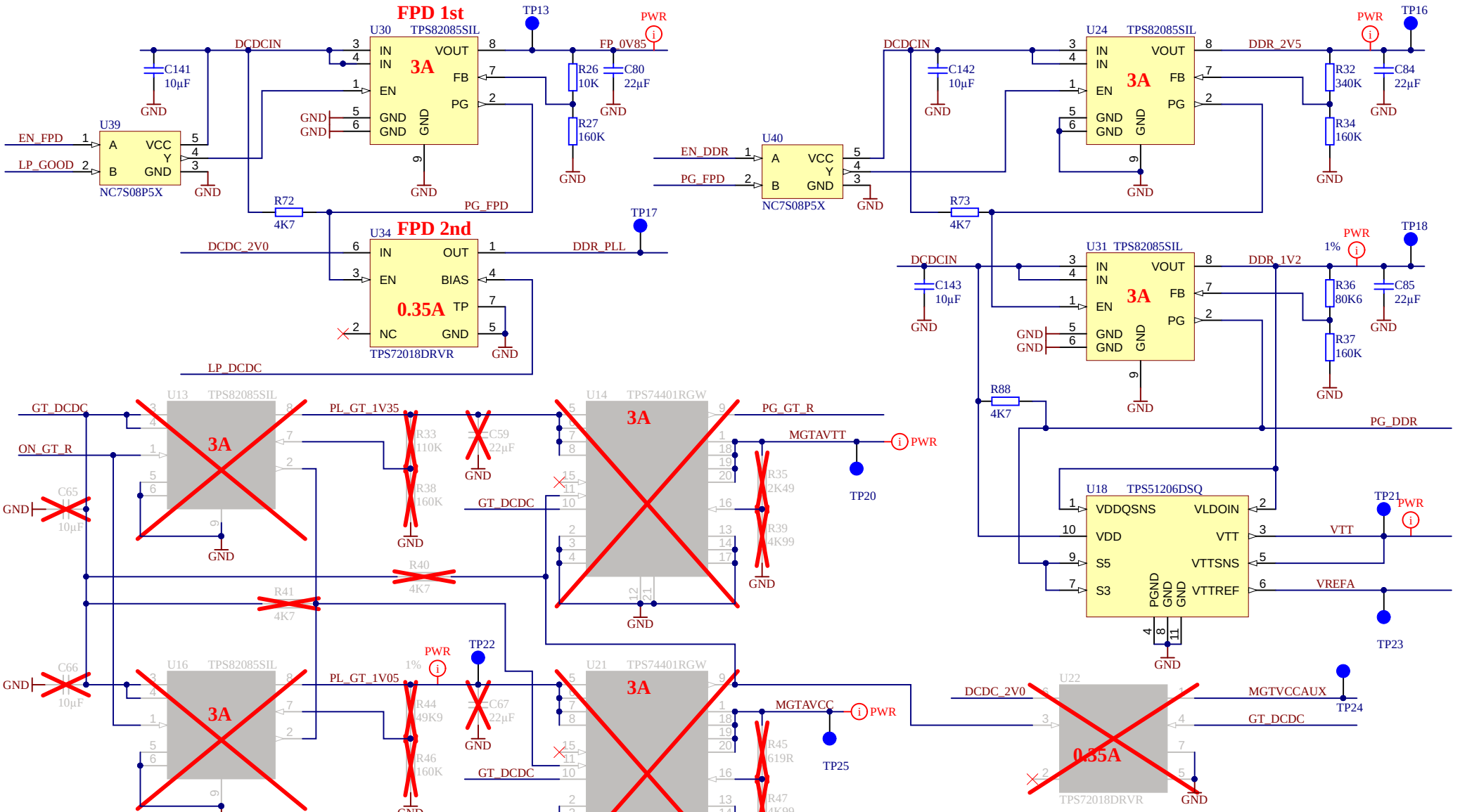
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page21 of 26
Filename: DDR4-TERM.SchDoc			



Title: TE0803 - CLOCK			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page22 of 26
Filename: Clock.SchDoc			



Title: TE0803 - POWER		
A4	Number: TE0803 2AE11-A	Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT	Page23 of 26
Filename: POWER.SchDoc		



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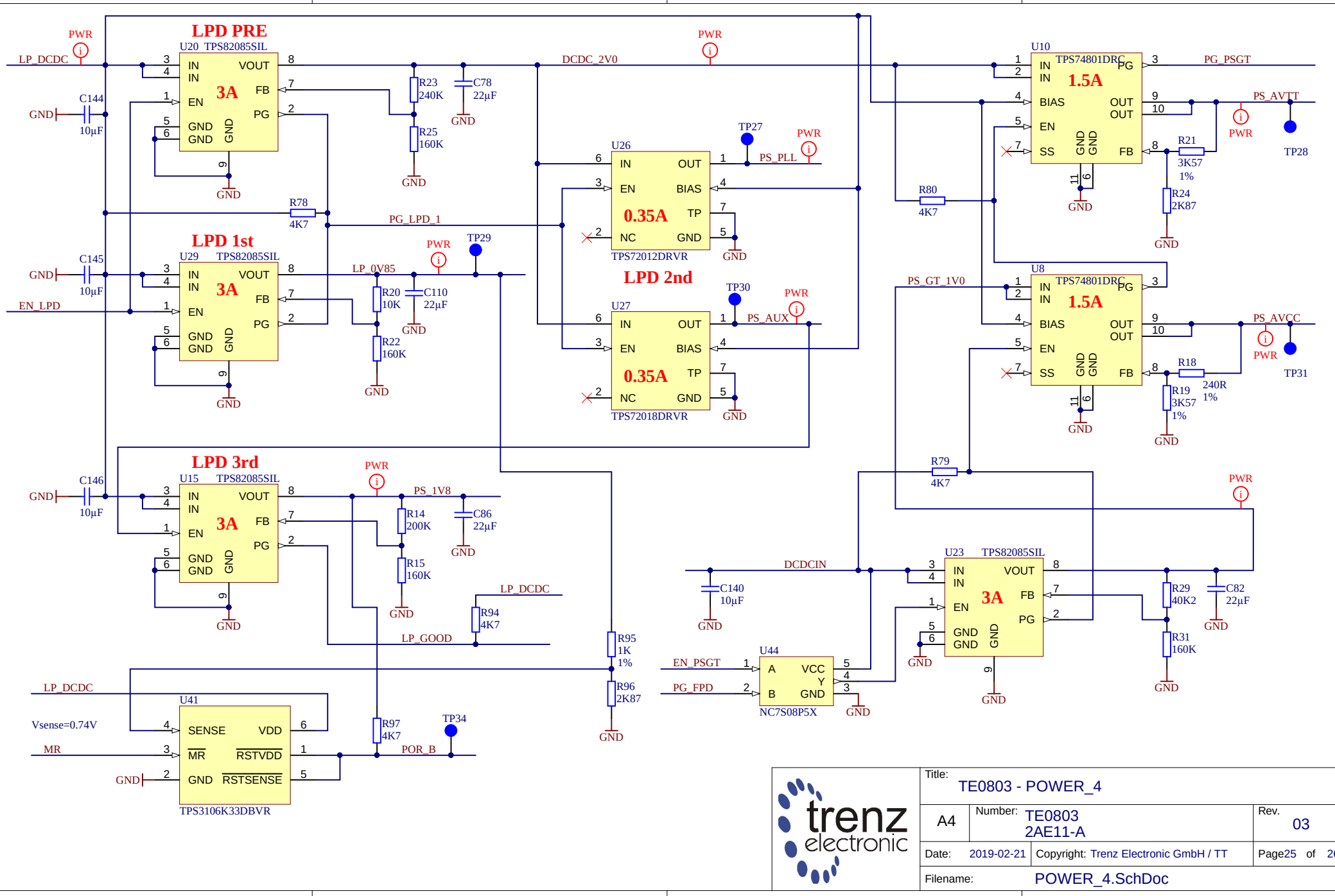
Title:	TE0803 - POWER_2		
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page24 of 26
Filename:	POWER_2.SchDoc		



Title: TE0803 - POWER_4			
A4	Number: TE0803 2AE11-A		Rev. 03
Date: 2019-02-21	Copyright: Trenz Electronic GmbH / TT		Page25 of 26
Filename: POWER_4.SchDoc			

CHANGES REV01a (20.11.2017):
---
1) VCU voltage set to 0.9V, R20 changed to 40K , PL_VCU_1V0 renamed to PL_VCU_0V9.

CHANGES REV02 (20.06.2018):
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1) Added LDO to DDR_PLL
2) All differential pairs wath length matched with tollerance 0.1mm (excluding package delays)
3) Added MAC EEPROM U28
4) VPS_MGTRAVCC set to 0.85V
5) Added pull-up resistors R68,R69

CHANGES REV03 (21.02.2019):
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1) Added support of DDP DDR4
2) Added support of Low power FPGA (-L1/L2).
3) Revised testpoints
4) Revised J1-J4 connectors net label style

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