U_Power
Power.SchDoc

U_FPGA_PWR
FPGA_PWR.SchDoc

U_DDR3_RAM
DDR3_RAM.SchDoc

U_FPGA_CFG_CLK
FPGA_CFG_CLK.SchDoc

U_FPGA_B3
FPGA_B3.SchDoc

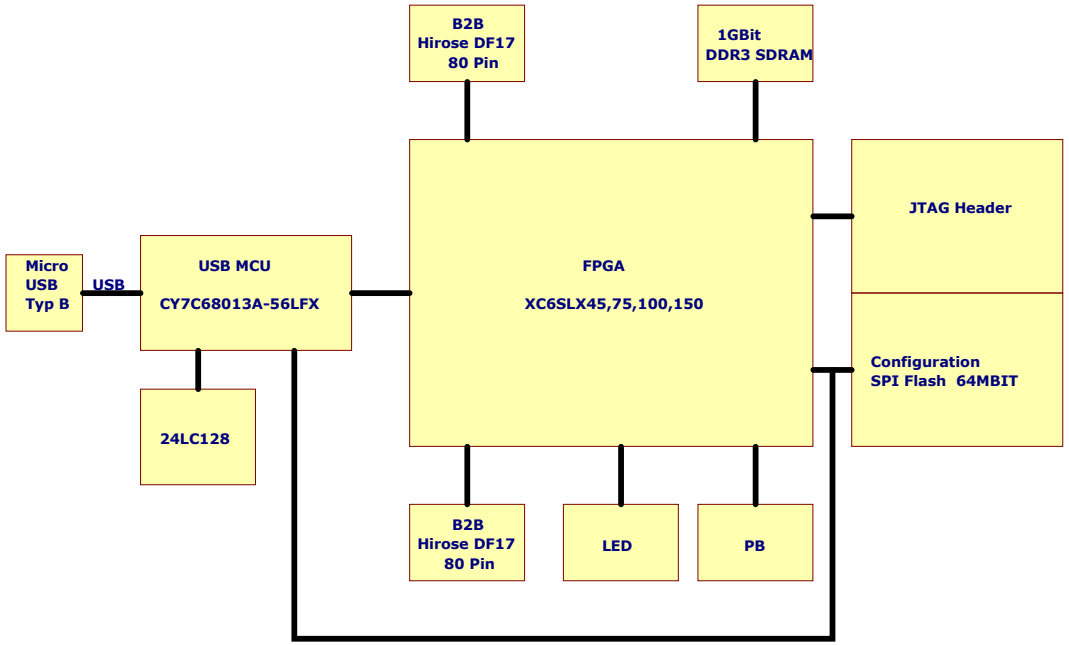
U_FPGA_DDR3
FPGA_DDR3.SchDoc

U_FPGA_B2
FPGA_B2.SchDoc

U_FPGA_B0
FPGA_B0.SchDoc

U_USB
USB.SchDoc

U_B2B_Connectors
B2B_Connectors.SchDoc



Serial
Serial
Serialnumber 6,3 x 6.3mm

LOGO1
TE Logo PRINT Layer
LOGO PRINT

PM3 PM1 PM2
PM4 PM5 PM6

FGND Mount.Hole 3.2mm
FGND Mount.Hole 3.2mm
FGND Mount.Hole 3.2mm
FGND Mount.Hole 3.2mm

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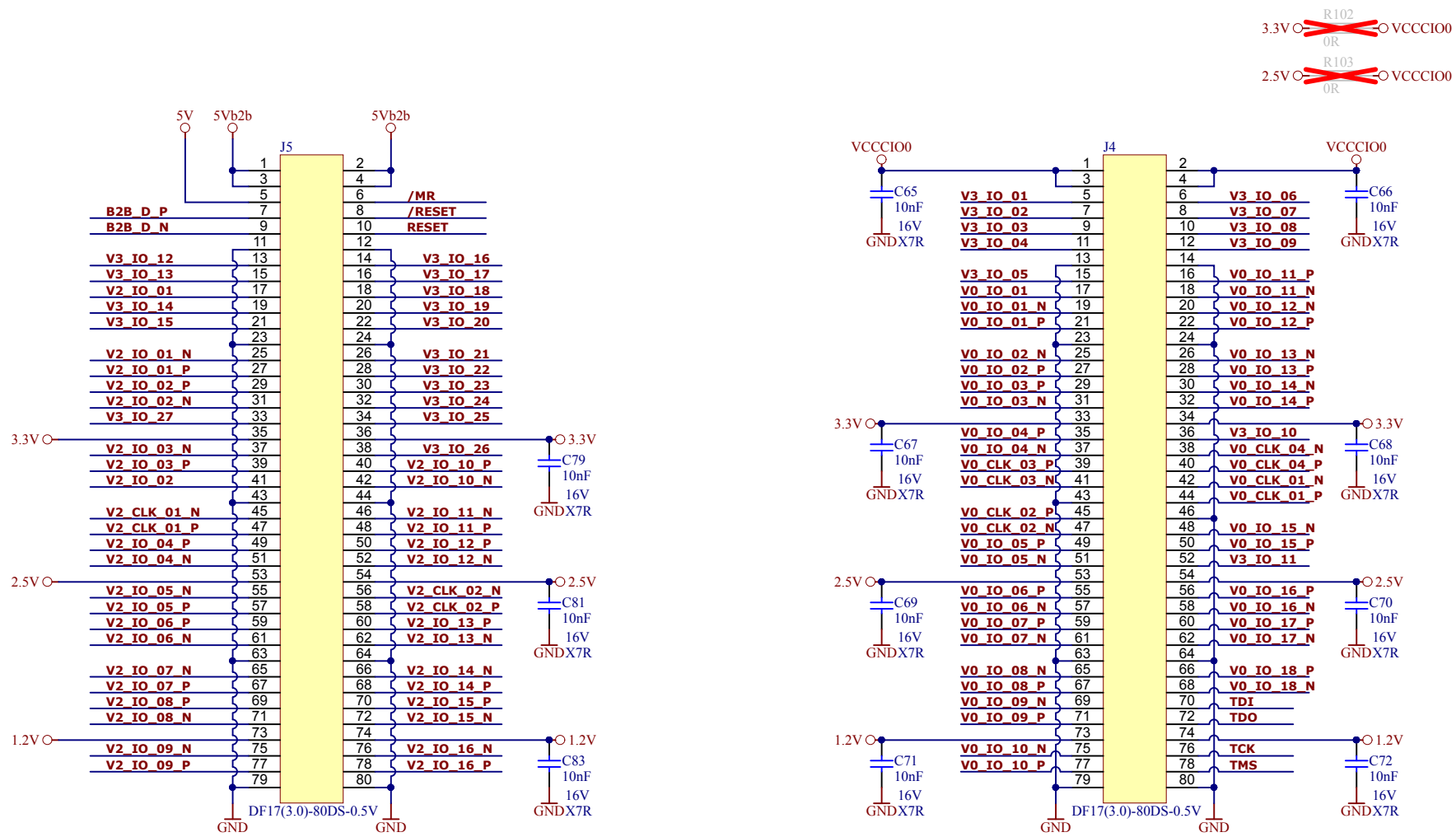
Title: TE0630			
A4	Number: TE630 TE0630-01I		Rev. 01
Date: 2015-10-01	Copyright: Trenz Electronic GmbH / TT		Page1 of 11
Filename: TE0630.SchDoc			



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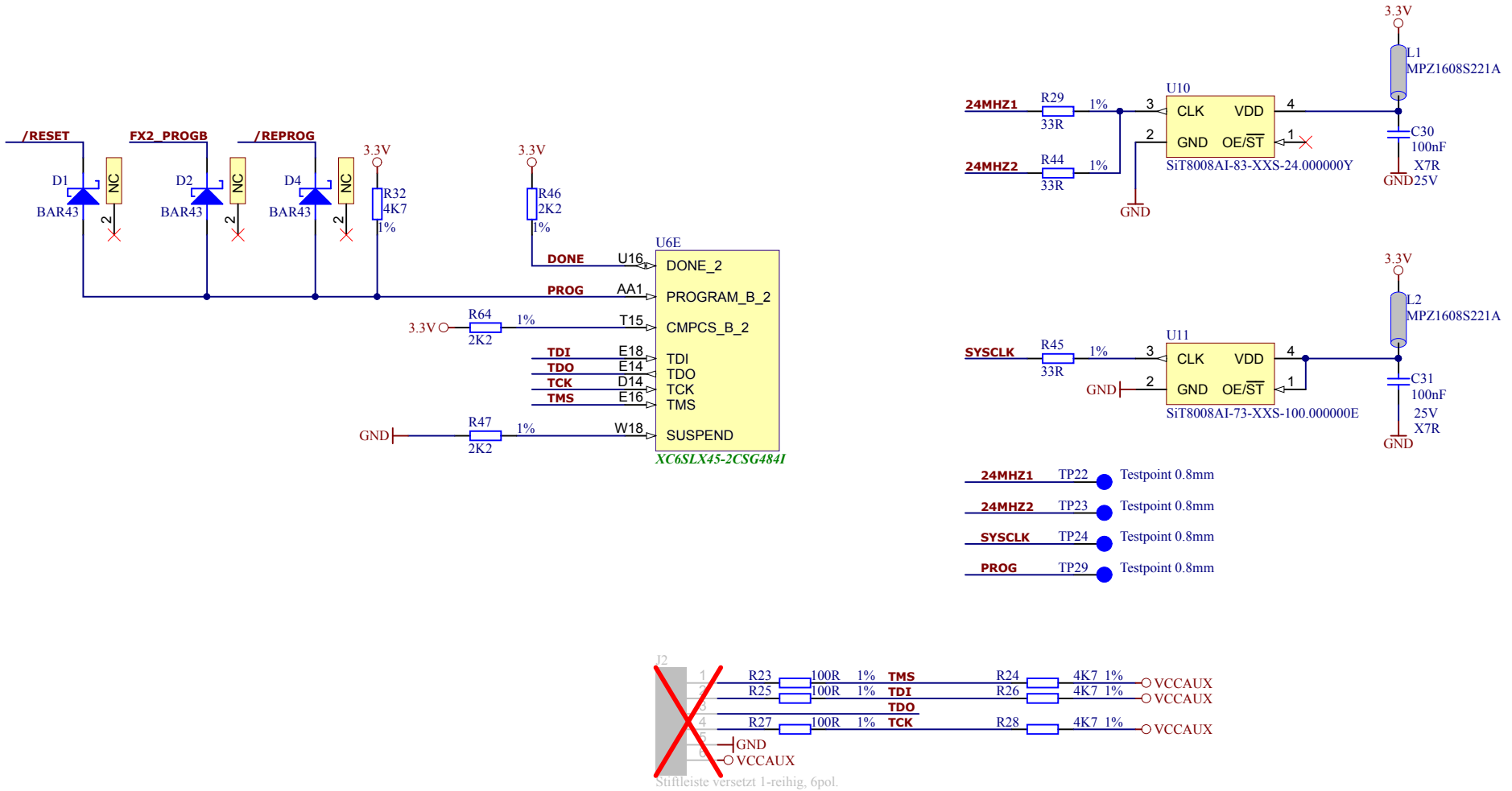
Date: 2015-10-01	Copyright: Trenz Electronic GmbH / TT		Page2 of 11
Filename: B2B_Connectors.SchDoc			



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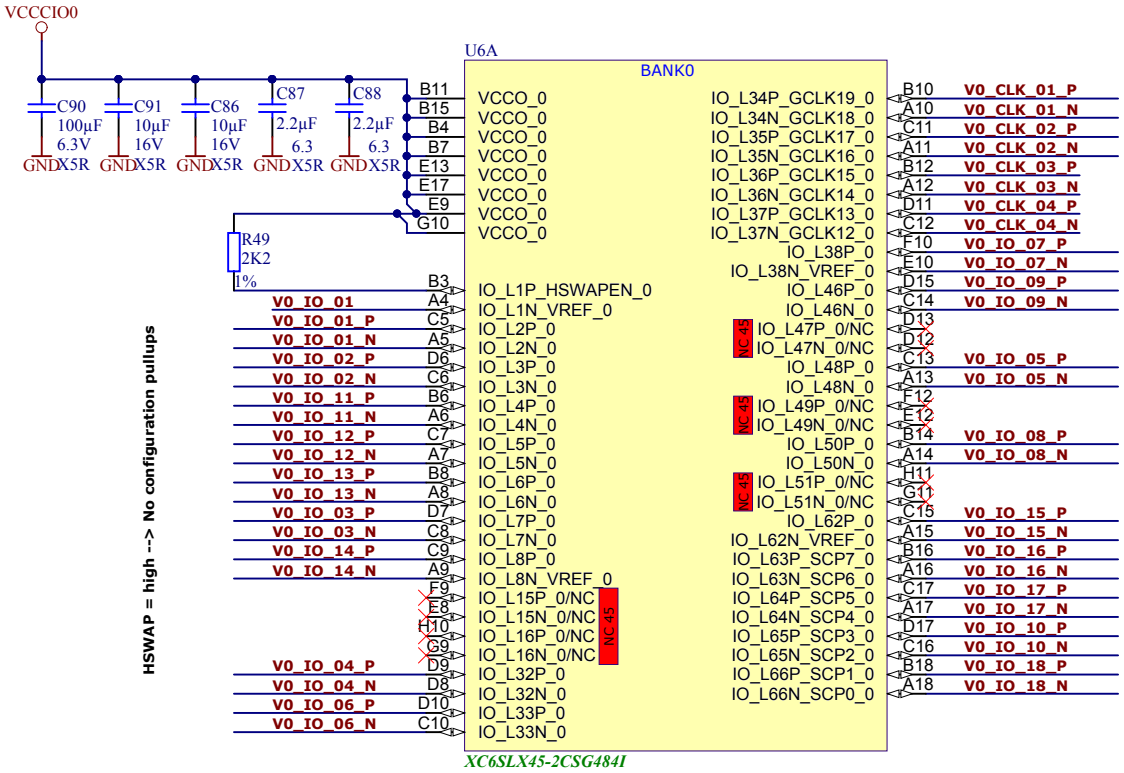
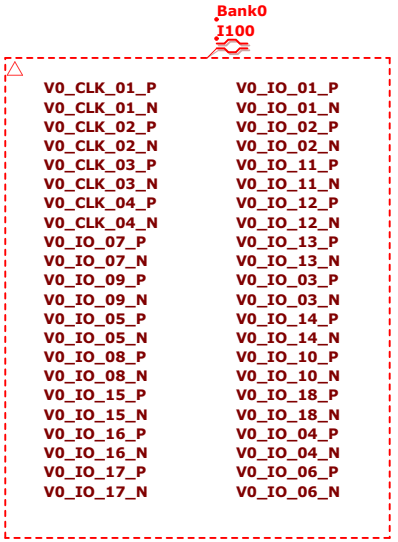
	A4	Number: TE630 TE0630-01I	Rev. 01
	Date: 2015-10-01	Copyright: Trenz Electronic GmbH / TT	Page3 of 11
	Filename: FPGA_CFG_CLK.SchDoc		





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Title: TE0630 - FPGA_B0			
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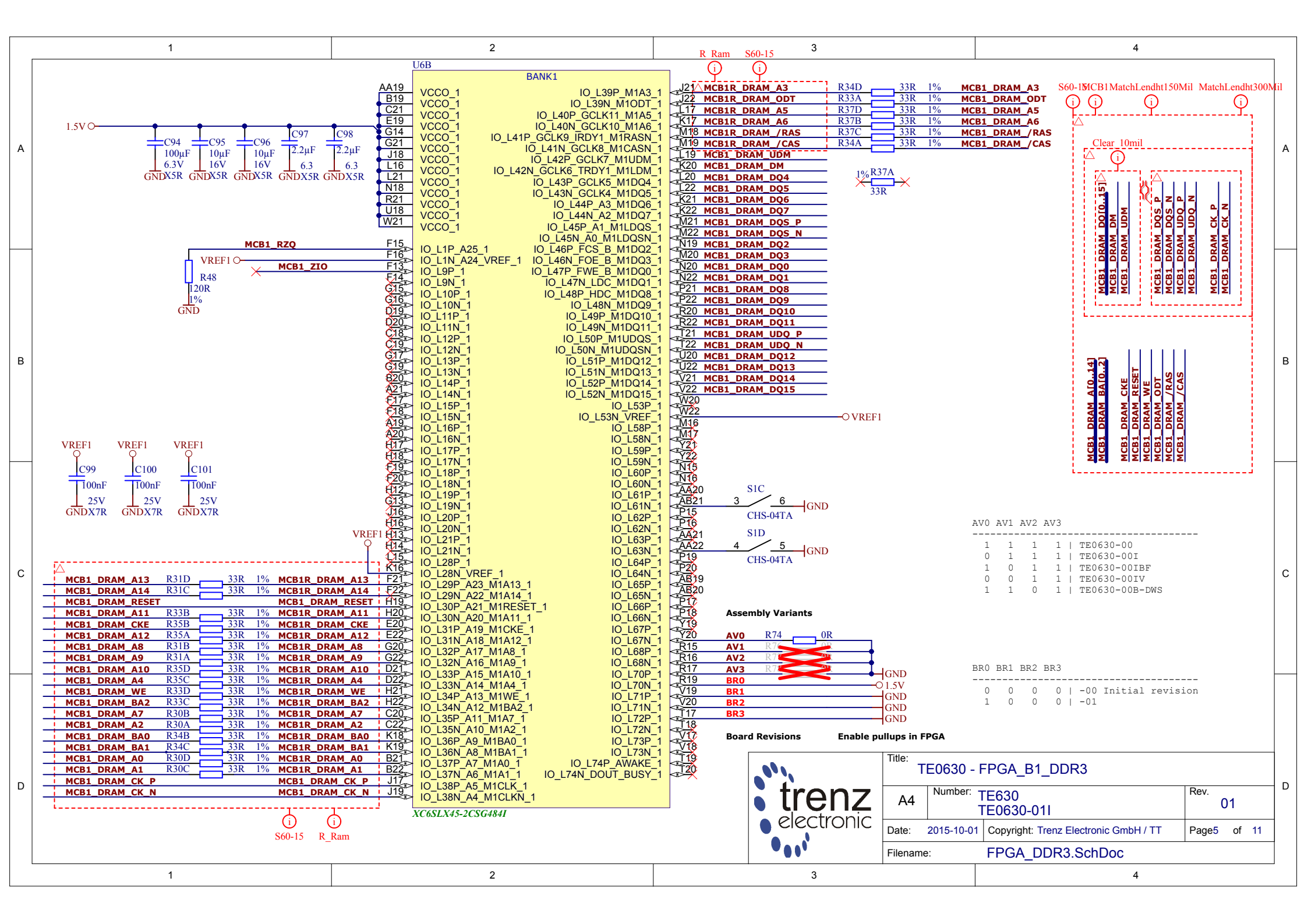
Date: 2015-10-01	Copyright: Trenz Electronic GmbH / TT		Page4 of 11
Filename: FPGA_B0.SchDoc			


U6B
BANK1
XC6SLX45-2CSG484I
1.5V
C94 100µF 6.3V X5R
C95 10µF 16V X5R
C96 10µF 16V X5R
C97 2.2µF 6.3 X5R
C98 2.2µF 6.3 X5R
MCB1_RZQ
R48 120R 1%
MCB1_ZIO
VREF1
C99 100nF 25V X7R
C100 100nF 25V X7R
C101 100nF 25V X7R
R_Ram
S60-15
R34D 33R 1% MCB1_DRAM_A3
R33A 33R 1% MCB1_DRAM_ODT
R37D 33R 1% MCB1_DRAM_A5
R37B 33R 1% MCB1_DRAM_A6
R37C 33R 1% MCB1_DRAM_/RAS
R34A 33R 1% MCB1_DRAM_/CAS
R37A 33R 1%
MCB1_DRAM_DQ[0..15]
MCB1_DRAM_A[0..14]
MCB1_DRAM_BA[0..2]
MCB1_DRAM_DQS_P
MCB1_DRAM_DQS_N
MCB1_DRAM_UDQ_P
MCB1_DRAM_UDQ_N
MCB1_DRAM_CK_P
MCB1_DRAM_CK_N
MCB1_DRAM_DM
MCB1_DRAM_UDM
MCB1_DRAM_CKE
MCB1_DRAM_RESET
MCB1_DRAM_WE
MCB1_DRAM_ODT
MCB1_DRAM_/RAS
MCB1_DRAM_/CAS
MCB1MatchLendht150Mil
MatchLendht300Mil
Clear_10mil
S1C CHS-04TA
S1D CHS-04TA
GND
Assembly Variants
AV0 R74 0R
AV1
AV2
AV3
BR0
BR1
BR2
BR3
1.5V
Board Revisions
Enable pullups in FPGA
AV0 AV1 AV2 AV3
1 1 1 1 | TE0630-00
0 1 1 1 | TE0630-00I
1 0 1 1 | TE0630-00IBF
0 0 1 1 | TE0630-00IV
1 1 0 1 | TE0630-00B-DWS
BR0 BR1 BR2 BR3
0 0 0 0 | -00 Initial revision
1 0 0 0 | -01
trenz electronic
Title: TE0630 - FPGA_B1_DDR3
A4
Number: TE630 TE0630-01I
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Date: 2015-10-01
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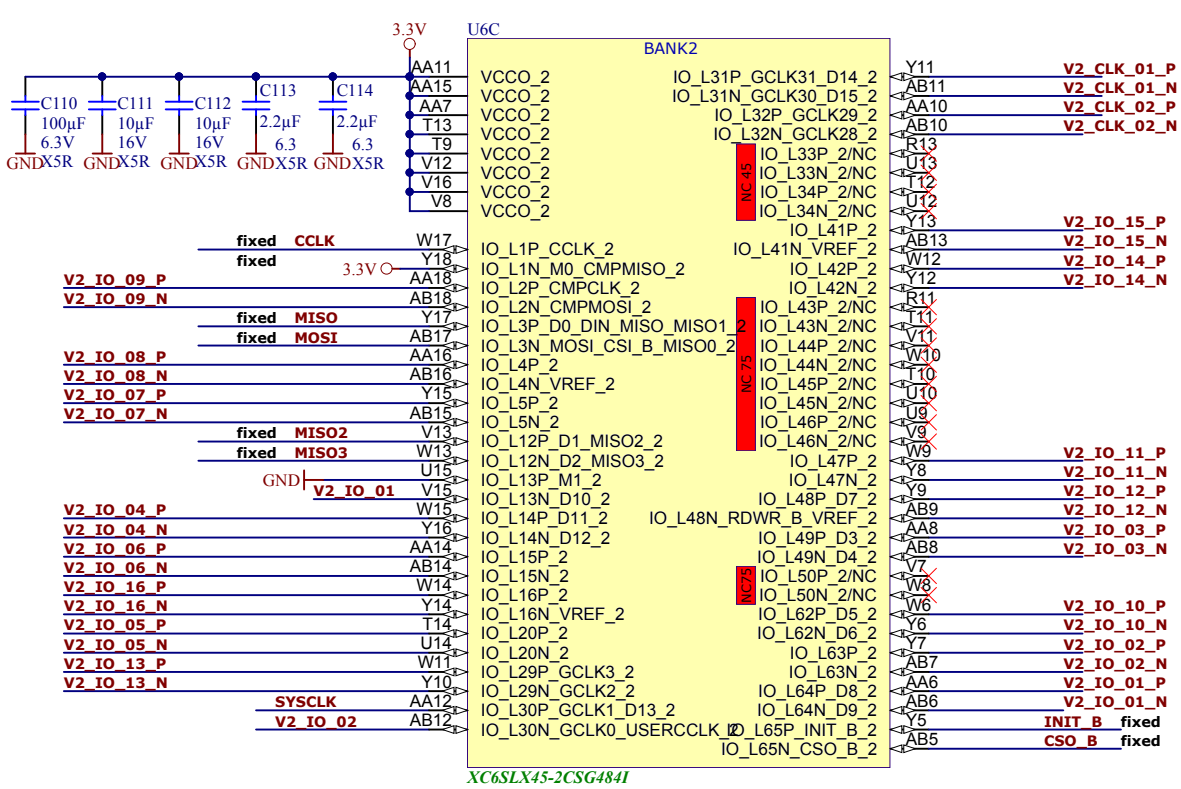
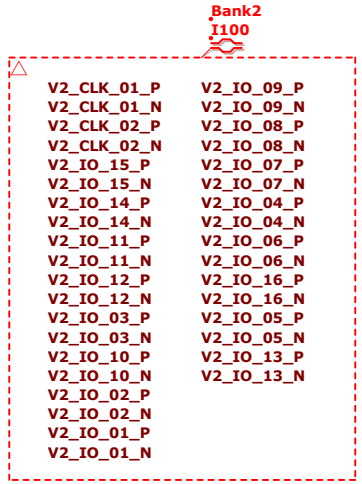
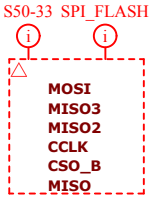
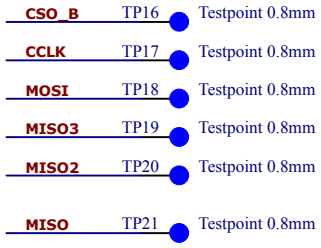
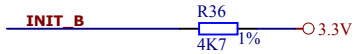
Filename: FPGA_DDR3.SchDoc

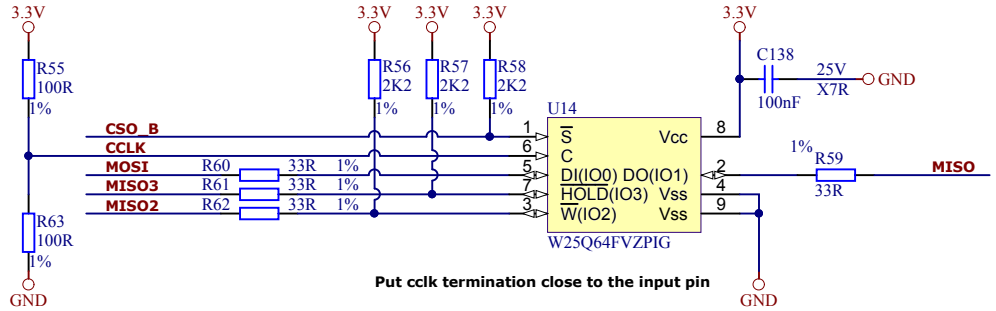












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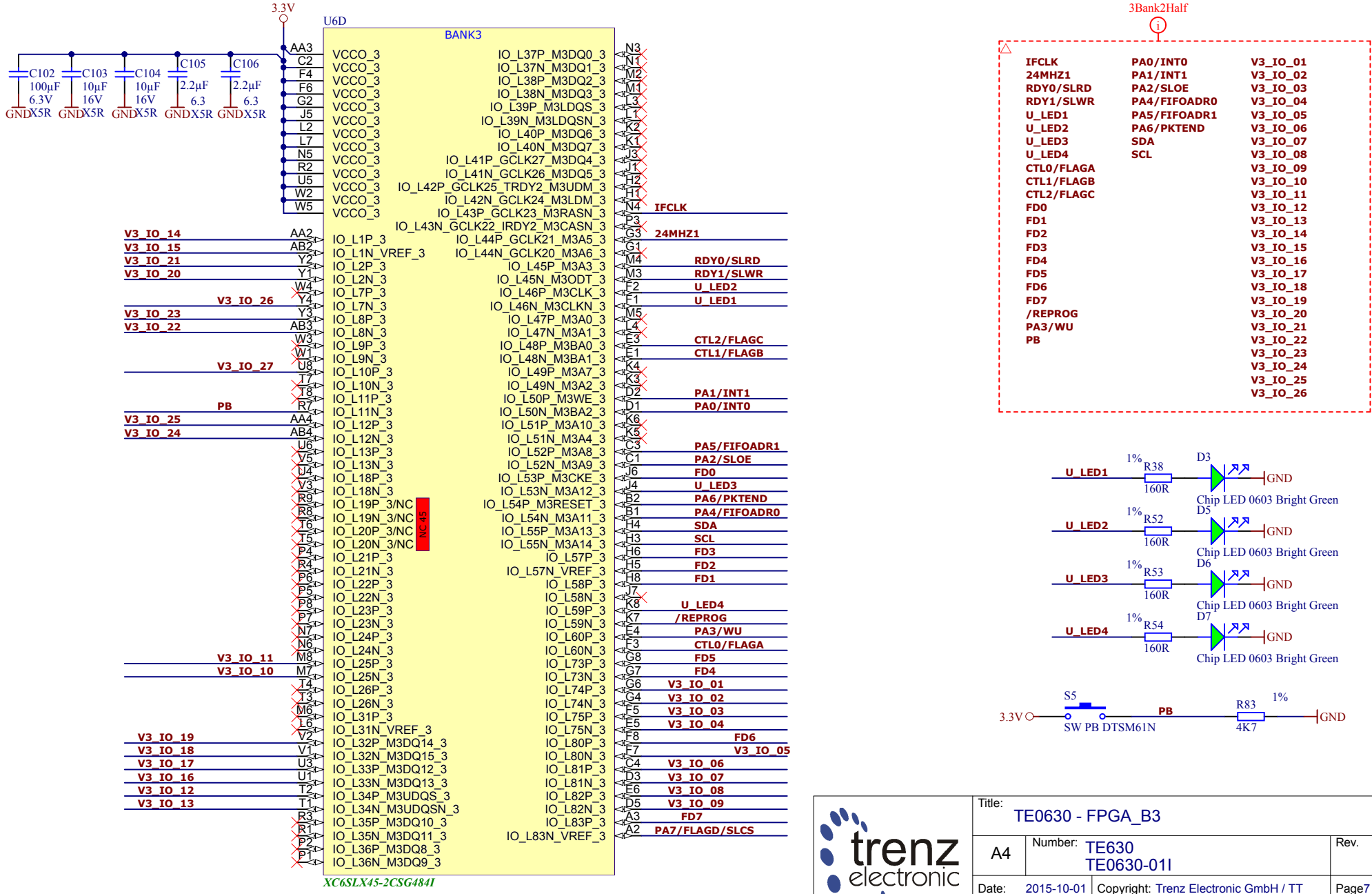
Title: TE0630 - FPGA_B2			
A4	Number: TE630 TE0630-01I		Rev. 01
Date: 2015-10-01	Copyright: Trenz Electronic GmbH / TT		Page6 of 11
Filename: FPGA_B2.SchDoc			


3.3V
U6D
BANK3
C102 100µF 6.3V X5R
C103 10µF 16V X5R
C104 10µF 16V X5R
C105 2.2µF 6.3 X5R
C106 2.2µF 6.3 X5R
GND
VCCO_3
IO_L37P_M3DQ0_3
IO_L37N_M3DQ1_3
IO_L38P_M3DQ2_3
IO_L38N_M3DQ3_3
IO_L39P_M3LDQS_3
IO_L39N_M3LDQSN_3
IO_L40P_M3DQ6_3
IO_L40N_M3DQ7_3
IO_L41P_GCLK27_M3DQ4_3
IO_L41N_GCLK26_M3DQ5_3
IO_L42P_GCLK25_TRDY2_M3UDM_3
IO_L42N_GCLK24_M3LDM_3
IO_L43P_GCLK23_M3RASN_3
IO_L43N_GCLK22_IRDY2_M3CASN_3
IO_L1P_3
IO_L1N_VREF_3
IO_L44P_GCLK21_M3A5_3
IO_L44N_GCLK20_M3A6_3
IO_L2P_3
IO_L45P_M3A3_3
IO_L2N_3
IO_L45N_M3ODT_3
IO_L7P_3
IO_L46P_M3CLK_3
IO_L7N_3
IO_L46N_M3CLKN_3
IO_L8P_3
IO_L47P_M3A0_3
IO_L8N_3
IO_L47N_M3A1_3
IO_L9P_3
IO_L48P_M3BA0_3
IO_L9N_3
IO_L48N_M3BA1_3
IO_L10P_3
IO_L49P_M3A7_3
IO_L10N_3
IO_L49N_M3A2_3
IO_L11P_3
IO_L50P_M3WE_3
IO_L11N_3
IO_L50N_M3BA2_3
IO_L12P_3
IO_L51P_M3A10_3
IO_L12N_3
IO_L51N_M3A4_3
IO_L13P_3
IO_L52P_M3A8_3
IO_L13N_3
IO_L52N_M3A9_3
IO_L18P_3
IO_L53P_M3CKE_3
IO_L18N_3
IO_L53N_M3A12_3
IO_L19P_3/NC
IO_L54P_M3RESET_3
IO_L19N_3/NC
IO_L54N_M3A11_3
IO_L20P_3/NC
IO_L55P_M3A13_3
IO_L20N_3/NC
IO_L55N_M3A14_3
NC 45
IO_L21P_3
IO_L57P_3
IO_L21N_3
IO_L57N_VREF_3
IO_L22P_3
IO_L58P_3
IO_L22N_3
IO_L58N_3
IO_L23P_3
IO_L59P_3
IO_L23N_3
IO_L59N_3
IO_L24P_3
IO_L60P_3
IO_L24N_3
IO_L60N_3
IO_L25P_3
IO_L73P_3
IO_L25N_3
IO_L73N_3
IO_L26P_3
IO_L74P_3
IO_L26N_3
IO_L74N_3
IO_L31P_3
IO_L75P_3
IO_L31N_VREF_3
IO_L75N_3
IO_L32P_M3DQ14_3
IO_L80P_3
IO_L32N_M3DQ15_3
IO_L80N_3
IO_L33P_M3DQ12_3
IO_L81P_3
IO_L33N_M3DQ13_3
IO_L81N_3
IO_L34P_M3UDQS_3
IO_L82P_3
IO_L34N_M3UDQSN_3
IO_L82N_3
IO_L35P_M3DQ10_3
IO_L83P_3
IO_L35N_M3DQ11_3
IO_L83N_VREF_3
IO_L36P_M3DQ8_3
IO_L36N_M3DQ9_3
XC6SLX45-2CSG484I
V3_IO_14
V3_IO_15
V3_IO_21
V3_IO_20
V3_IO_26
V3_IO_23
V3_IO_22
V3_IO_27
PB
V3_IO_25
V3_IO_24
V3_IO_11
V3_IO_10
V3_IO_19
V3_IO_18
V3_IO_17
V3_IO_16
V3_IO_12
V3_IO_13
IFCLK
24MHZ1
RDY0/SLRD
RDY1/SLWR
U_LED2
U_LED1
CTL2/FLAGC
CTL1/FLAGB
PA1/INT1
PA0/INT0
PA5/FIFOADR1
PA2/SLOE
FD0
U_LED3
PA6/PKTEND
PA4/FIFOADR0
SDA
SCL
FD3
FD2
FD1
U_LED4
/REPROG
PA3/WU
CTL0/FLAGA
FD5
FD4
V3_IO_01
V3_IO_02
V3_IO_03
V3_IO_04
FD6
V3_IO_05
V3_IO_06
V3_IO_07
V3_IO_08
V3_IO_09
FD7
PA7/FLAGD/SLCS
3Bank2Half
IFCLK
24MHZ1
RDY0/SLRD
RDY1/SLWR
U_LED1
U_LED2
U_LED3
U_LED4
CTL0/FLAGA
CTL1/FLAGB
CTL2/FLAGC
FD0
FD1
FD2
FD3
FD4
FD5
FD6
FD7
/REPROG
PA3/WU
PB
PA0/INT0
PA1/INT1
PA2/SLOE
PA4/FIFOADR0
PA5/FIFOADR1
PA6/PKTEND
SDA
SCL
V3_IO_01
V3_IO_02
V3_IO_03
V3_IO_04
V3_IO_05
V3_IO_06
V3_IO_07
V3_IO_08
V3_IO_09
V3_IO_10
V3_IO_11
V3_IO_12
V3_IO_13
V3_IO_14
V3_IO_15
V3_IO_16
V3_IO_17
V3_IO_18
V3_IO_19
V3_IO_20
V3_IO_21
V3_IO_22
V3_IO_23
V3_IO_24
V3_IO_25
V3_IO_26
1%
R38
160R
D3
Chip LED 0603 Bright Green
R52
D5
R53
D6
R54
D7
S5
SW PB DTSM61N
R83
4K7
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Title: TE0630 - FPGA_B3
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Number: TE630 TE0630-01I
Rev. 01
Date: 2015-10-01
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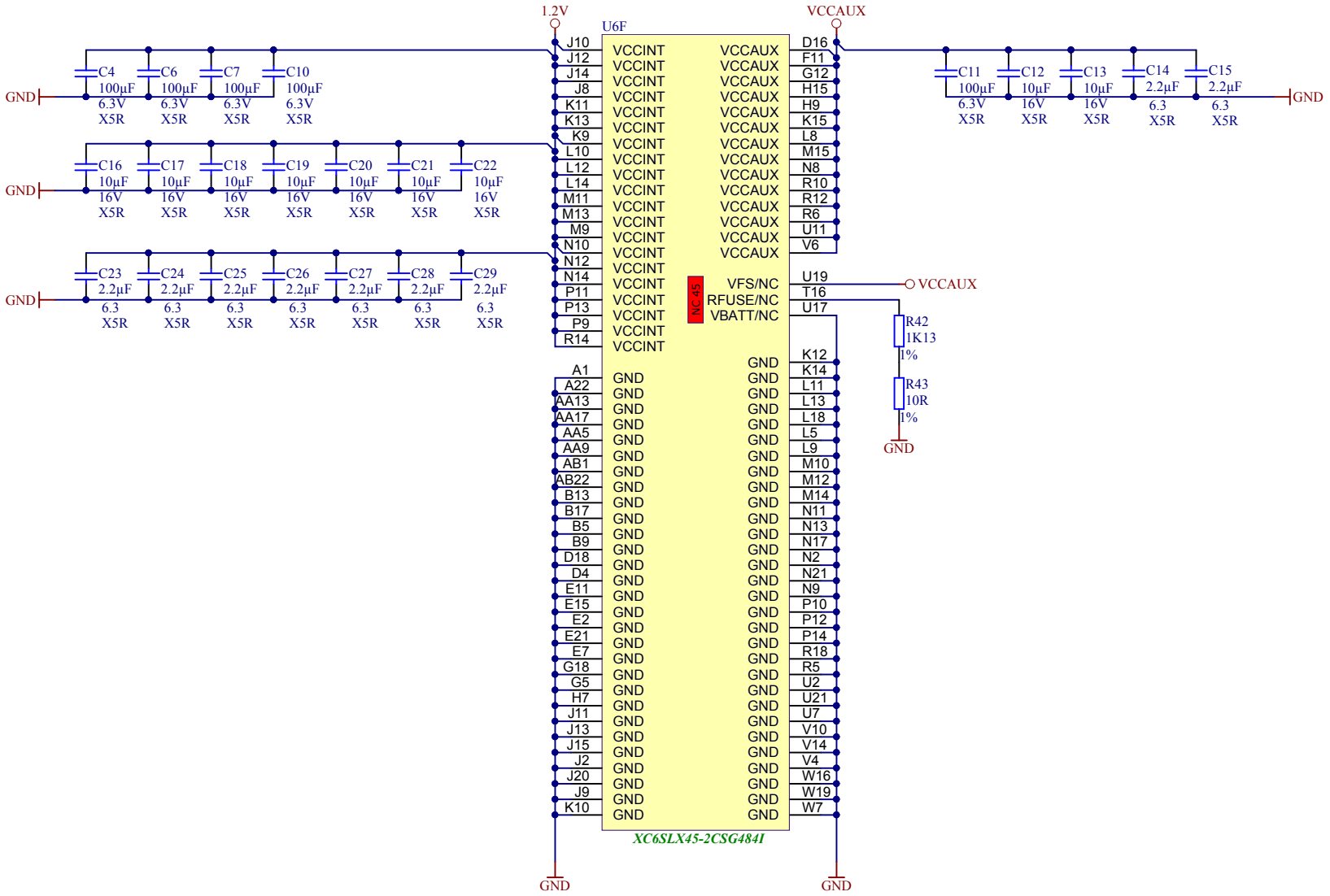
Filename: FPGA_B3.SchDoc


1.2V
VCCAUX
U6F
GND
C4 100µF 6.3V X5R
C6 100µF 6.3V X5R
C7 100µF 6.3V X5R
C10 100µF 6.3V X5R
C11 100µF 6.3V X5R
C12 10µF 16V X5R
C13 10µF 16V X5R
C14 2.2µF 6.3 X5R
C15 2.2µF 6.3 X5R
C16 10µF 16V X5R
C17 10µF 16V X5R
C18 10µF 16V X5R
C19 10µF 16V X5R
C20 10µF 16V X5R
C21 10µF 16V X5R
C22 10µF 16V X5R
C23 2.2µF 6.3 X5R
C24 2.2µF 6.3 X5R
C25 2.2µF 6.3 X5R
C26 2.2µF 6.3 X5R
C27 2.2µF 6.3 X5R
C28 2.2µF 6.3 X5R
C29 2.2µF 6.3 X5R
R42 1K13 1%
R43 10R 1%
NC 45
VFS/NC
RFUSE/NC
VBATT/NC
XC6SLX45-2CSG484I
Title: TE0630 - FPGA_PWR
A4
Number: TE630 TE0630-01I
Rev. 01
Date: 2015-10-01
Copyright: Trenz Electronic GmbH / TT
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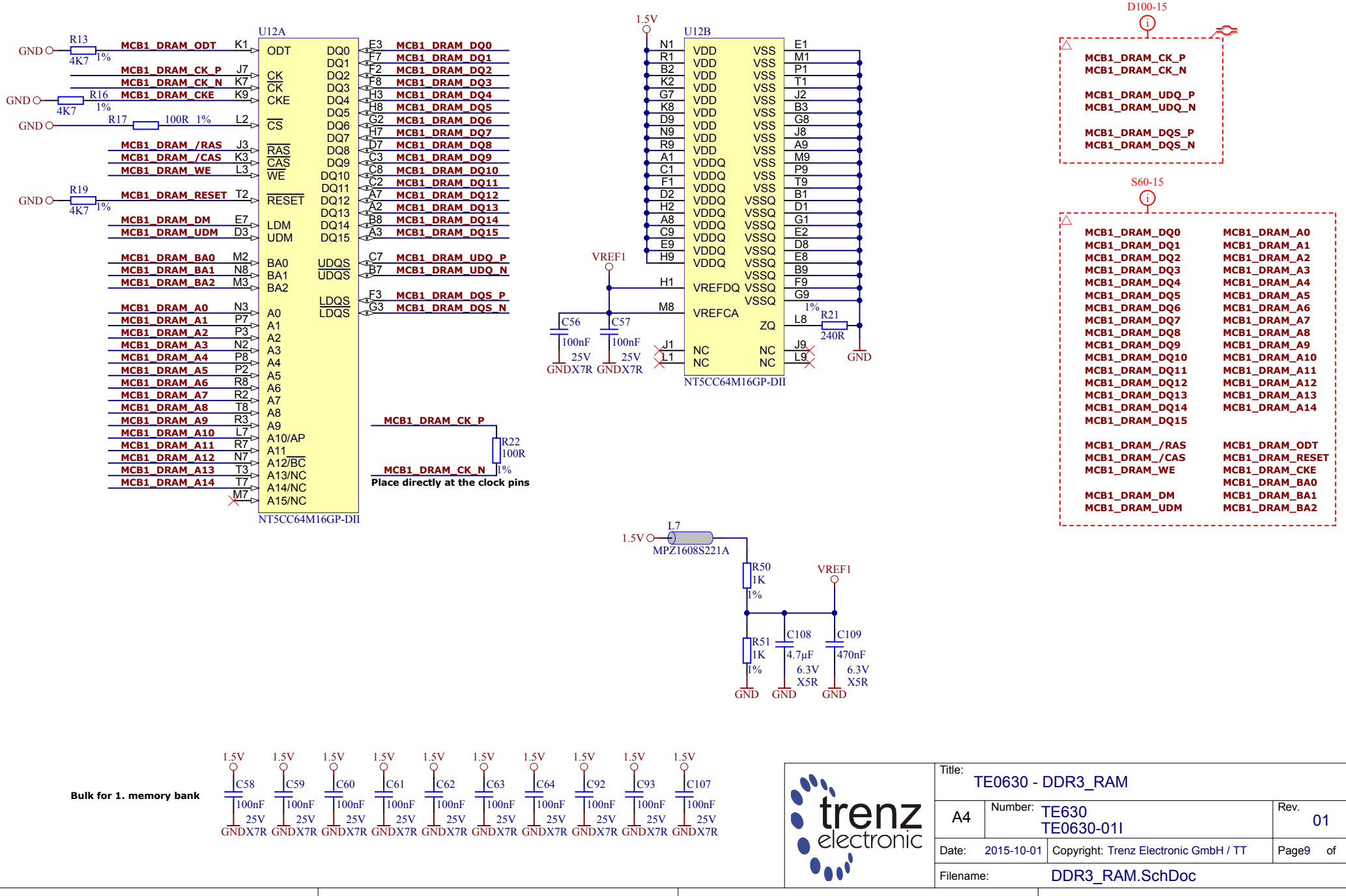
Filename: FPGA_PWR.SchDoc


U12A
NT5CC64M16GP-DII
U12B
NT5CC64M16GP-DII
D100-15
MCB1_DRAM_CK_P
MCB1_DRAM_CK_N
MCB1_DRAM_UDQ_P
MCB1_DRAM_UDQ_N
MCB1_DRAM_DQS_P
MCB1_DRAM_DQS_N
S60-15
MCB1_DRAM_DQ0
MCB1_DRAM_DQ1
MCB1_DRAM_DQ2
MCB1_DRAM_DQ3
MCB1_DRAM_DQ4
MCB1_DRAM_DQ5
MCB1_DRAM_DQ6
MCB1_DRAM_DQ7
MCB1_DRAM_DQ8
MCB1_DRAM_DQ9
MCB1_DRAM_DQ10
MCB1_DRAM_DQ11
MCB1_DRAM_DQ12
MCB1_DRAM_DQ13
MCB1_DRAM_DQ14
MCB1_DRAM_DQ15
MCB1_DRAM_A0
MCB1_DRAM_A1
MCB1_DRAM_A2
MCB1_DRAM_A3
MCB1_DRAM_A4
MCB1_DRAM_A5
MCB1_DRAM_A6
MCB1_DRAM_A7
MCB1_DRAM_A8
MCB1_DRAM_A9
MCB1_DRAM_A10
MCB1_DRAM_A11
MCB1_DRAM_A12
MCB1_DRAM_A13
MCB1_DRAM_A14
MCB1_DRAM_/RAS
MCB1_DRAM_/CAS
MCB1_DRAM_WE
MCB1_DRAM_ODT
MCB1_DRAM_RESET
MCB1_DRAM_CKE
MCB1_DRAM_BA0
MCB1_DRAM_DM
MCB1_DRAM_BA1
MCB1_DRAM_UDM
MCB1_DRAM_BA2
MCB1_DRAM_CK_P
MCB1_DRAM_CK_N
R22
100R
1%
Place directly at the clock pins
L7
MPZ1608S221A
1.5V
R50
1K
1%
VREF1
R51
1K
1%
C108
4.7µF
6.3V
X5R
C109
470nF
6.3V
X5R
GND
Bulk for 1. memory bank
C58
C59
C60
C61
C62
C63
C64
C92
C93
C107
100nF
25V
X7R
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Title: TE0630 - DDR3_RAM
A4
Number: TE630 TE0630-01I
Rev. 01
Date: 2015-10-01
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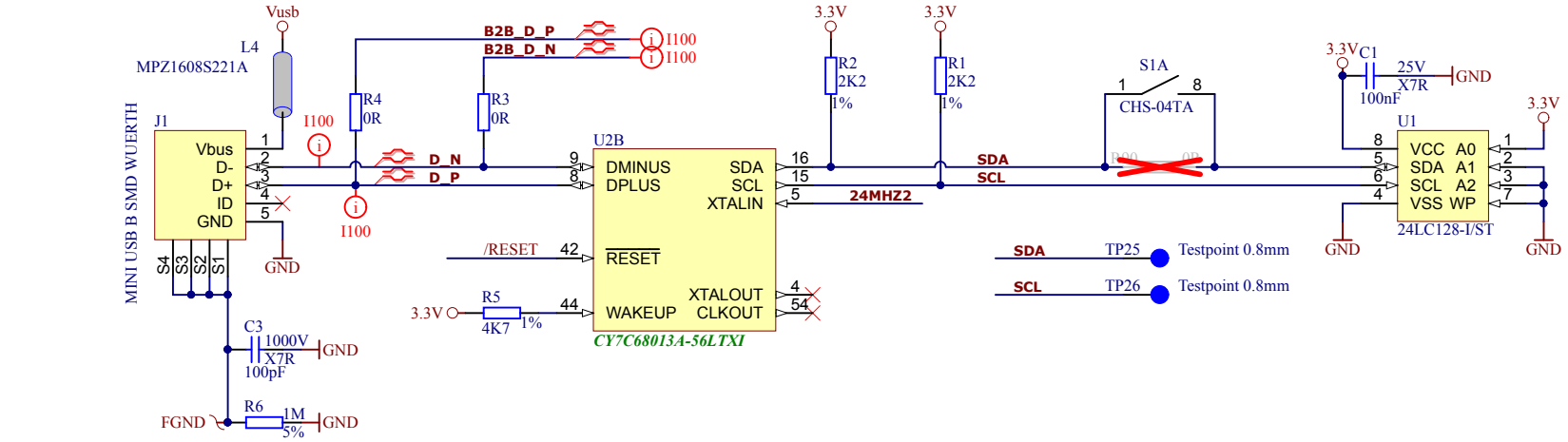
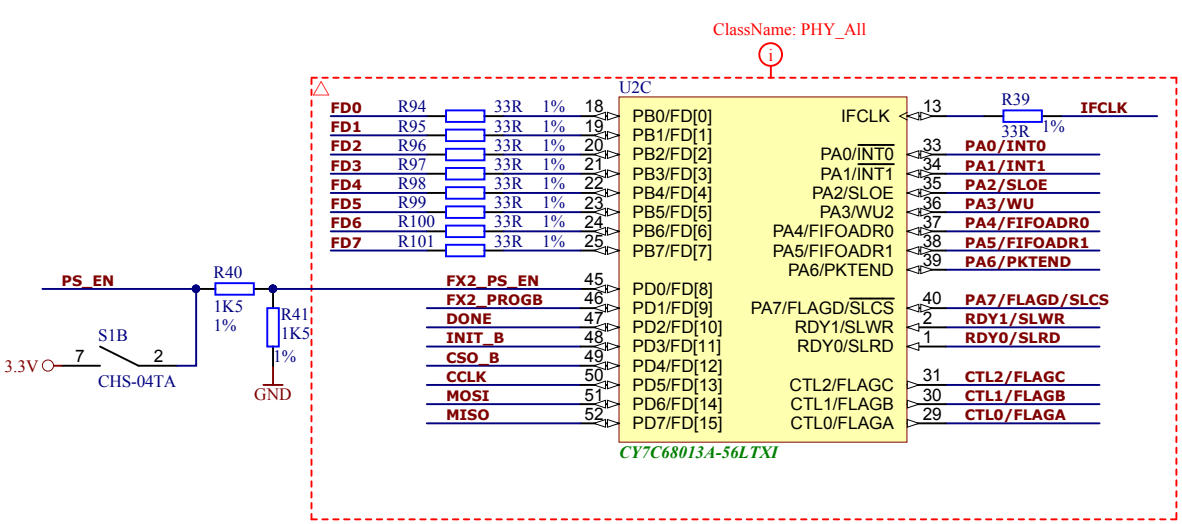
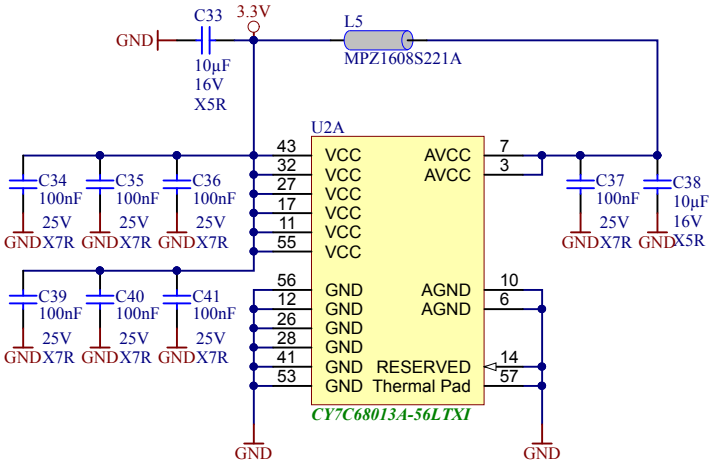
Filename: DDR3_RAM.SchDoc







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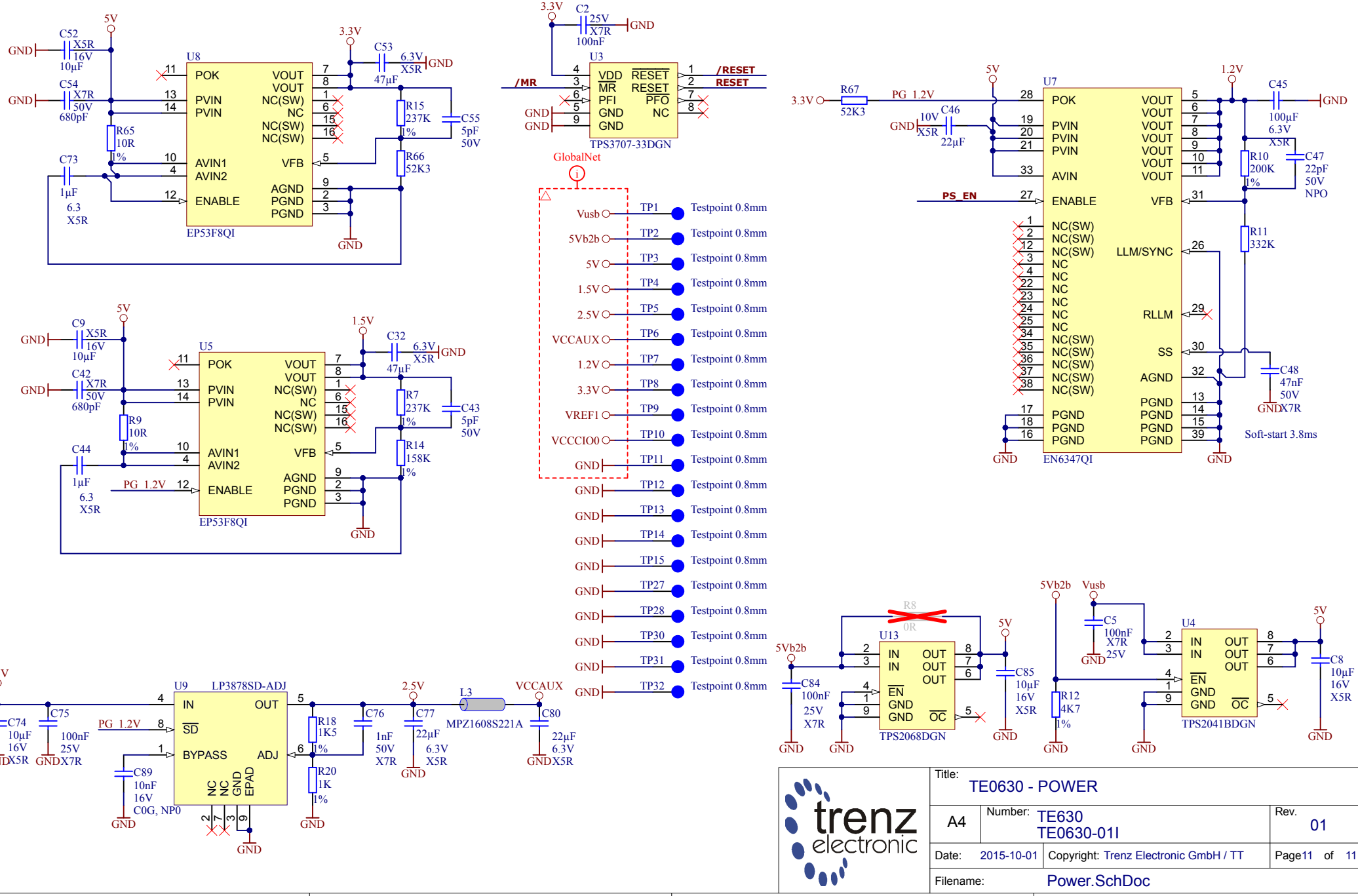
A4	Number: TE630 TE0630-01I		Rev. 01
Date: 2015-10-01	Copyright: Trenz Electronic GmbH / TT		Page10 of 11
Filename: USB.SchDoc			


U8
EP53F8QI
U5
EP53F8QI
U3
TPS3707-33DGN
GlobalNet
U7
EN6347QI
Soft-start 3.8ms
U9
LP3878SD-ADJ
MPZ1608S221A
U13
TPS2068DGN
U4
TPS2041BDGN
R8
0R
Testpoint 0.8mm
Title: TE0630 - POWER
A4
Number: TE630
TE0630-01I
Rev. 01
Date: 2015-10-01
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Filename: Power.SchDoc