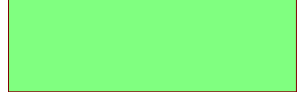


U_RPi-Headers
RPi-Headers.SchDoc



U_DDR3-RAM
DDR3-RAM.SchDoc



U_PowerSupply
PowerSupply.SchDoc



U_FTDI
FTDI.SchDoc



U_Soc_1
Soc_1.SchDoc



U_Soc_2
Soc_2.SchDoc



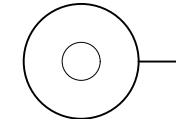
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Soc_3.SchDoc



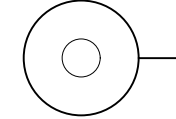
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ETH.SchDoc



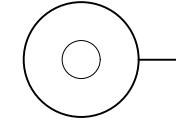
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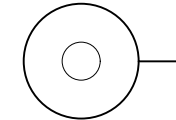
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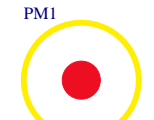
Mount.Hole 2.7mm (unplated)



Mount.Hole 2.7mm (unplated)



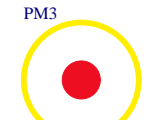
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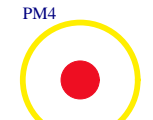
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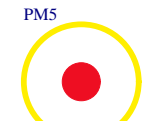
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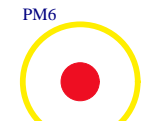
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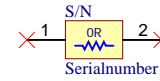
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FIDU-DOT - small



FIDU-DOT - small



LOGO1



LOGO PRINT

Serial
Serial

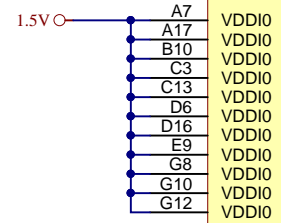
Serialnumber 6,3 x 6.3mm



Title: TEM0002		
A4	Number: TEM0002 010C	Rev. 02
Date: 28.05.2018	Copyright: Trenz Electronic GmbH	Page1 of 11
Filename: TEM0002.SchDoc		

U2A

BANK 0

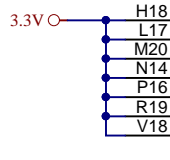


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VDDI0	DDRIO29NB0/MDDR_ADDR15	B18	DDR3-A15
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VDDI0	DDRIO30NB0/MDDR_ADDR13	C17	DDR3-A13
VDDI0	DDRIO31PB0/MDDR_ADDR10	D15	DDR3-A10
VDDI0	DDRIO31NB0/MDDR_ADDR11	E15	DDR3-A11
VDDI0	DDRIO32PB0/MDDR_ADDR8	A16	DDR3-A8
VDDI0	DDRIO32NB0/MDDR_ADDR9	B17	DDR3-A9
VDDI0	DDRIO33PB0/MDDR_ODT	B16	DDR3-ODT
VDDI0	DDRIO33NB0/MDDR_ADDR7	C16	DDR3-A7
VDDI0	DDRIO34PB0/MDDR_ADDR5	B14	DDR3-A5
VDDI0	DDRIO34NB0/MDDR_ADDR6	A15	DDR3-A6
VDDI0	DDRIO35PB0/MDDR_ADDR3	C14	DDR3-A3
VDDI0	DDRIO35NB0/MDDR_ADDR4	C15	DDR3-A4
VDDI0	DDRIO36PB0/MDDR_ADDR1	A13	DDR3-A1
VDDI0	DDRIO36NB0/MDDR_ADDR2	A14	DDR3-A2
VDDI0	DDRIO37PB0/MDDR_BA2	D13	DDR3-BA2
VDDI0	DDRIO37NB0/MDDR_ADDR0	D14	DDR3-A0
VDDI0	DDRIO38PB0/MDDR_BA0	E13	DDR3-BA0
VDDI0	DDRIO38NB0/MDDR_BA1	F13	DDR3-BA1
VDDI0	DDRIO39PB0/MDDR_CLK	B13	DDR3-CLK_P
VDDI0	DDRIO39NB0/MDDR_CLK_N	B12	DDR3-CLK_N
VDDI0	DDRIO40PB0/MDDR_RESET_N	F11	DDR3-RESET
VDDI0	DDRIO40NB0/MDDR_CAS_N	E12	DDR3-CAS
VDDI0	DDRIO41PB0/MDDR_CKE	C12	DDR3-CKE
VDDI0	DDRIO41NB0/MDDR_CS_N	C11	DDR3-CS
VDDI0	DDRIO42PB0/MDDR_RAS_N	D12	DDR3-RAS
VDDI0	DDRIO42NB0/MDDR_WE_N	E11	DDR3-WE
VDDI0	DDRIO43PB0/MDDR_DQ14	A11	DDR3-D14
VDDI0	DDRIO43NB0/MDDR_DQ15	B11	DDR3-D15
VDDI0	DDRIO44PB0/MDDR_DQ12	D10	DDR3-D12
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VDDI0	DDRIO45PB0/MDDR_TMATCH_0_IN	E8	TMATCH
VDDI0	DDRIO45NB0/MDDR_DM_RDQS1	F9	DDR3-DM1
VDDI0	DDRIO46PB0/MDDR_DQS1	C9	DDR3-DQS1_P
VDDI0	DDRIO46NB0/MDDR_DQS1_N	B9	DDR3-DQS1_N
VDDI0	DDRIO47PB0/MDDR_DQ10	D9	DDR3-D10
VDDI0	DDRIO47NB0/MDDR_DQ11	C10	DDR3-D11
VDDI0	DDRIO48PB0/MDDR_DQ8	A9	DDR3-D8
VDDI0	DDRIO48NB0/MDDR_DQ9	A10	DDR3-D9
VDDI0	DDRIO49PB0/MDDR_DQ7	D7	DDR3-D7
VDDI0	DDRIO49NB0/MDDR_TMATCH_0_OUT	D8	
VDDI0	DDRIO50PB0/MDDR_DQ5	A8	DDR3-D5
VDDI0	DDRIO50NB0/MDDR_DQ6	B8	DDR3-D6
VDDI0	DDRIO51PB0/MDDR_DM_RDQS0	B6	DDR3-DM0
VDDI0	DDRIO51NB0/MDDR_DQ4	B7	DDR3-D4
VDDI0	DDRIO52PB0/MDDR_DQS0	C6	DDR3-DQS0_P
VDDI0	DDRIO52NB0/MDDR_DQS0_N	C7	DDR3-DQS0_N
VDDI0	DDRIO53PB0/MDDR_DQ2	A5	DDR3-D2
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VDDI0	DDRIO54PB0/MDDR_DQ0	E7	DDR3-D0
VDDI0	DDRIO54NB0/MDDR_DQ1	F8	DDR3-D1
VDDI0	DDRIO55PB0/CCC_NE0_CLKI3	E6	
VDDI0	DDRIO55NB0	D5	
VDDI0	DDRIO56PB0/MDDR_DQ_ECC1	A3	
VDDI0	DDRIO56NB0/MDDR_DQ_ECC0	A4	
VDDI0	DDRIO57PB0/MDDR_TMATCH_ECC_IN	D4	TMATCH_ECC
VDDI0	DDRIO57NB0/MDDR_DM_RDQS_ECC	C5	
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VDDI0	DDRIO59NB0/GB4	B1	
VDDI0	DDRIO60PB0/MDDR_TMATCH_ECC_OUT	C4	
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M2S010-VFG400

U2C

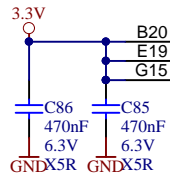
BANK 2



VDDI2	MSIO0PB2	V20	PD_04
VDDI2	MSIO0NB2/USB_DATA7_B	V19	PD_08
VDDI2	MSIO1PB2/USB_XCLK_B	U18	GPIO14
VDDI2	MSIO1NB2/USB_DIR_B	U19	PD_07
VDDI2	MSIO2PB2/USB_STP_B	T18	GPIO4
VDDI2	MSIO2NB2/USB_NXT_B	T19	PD_03
VDDI2	MSIO3PB2/USB_DATA0_B	R20	PD_06
VDDI2	MSIO3NB2/USB_DATA1_B	R20	PD_02
VDDI2	MSIO4PB2/USB_DATA2_B	F20	PD_01
VDDI2	MSIO4NB2/USB_DATA3_B	N19	GPIO21
VDDI2	MSIO5PB2/USB_DATA4_B	R17	SD_D3
VDDI2	MSIO5NB2/USB_DATA5_B	R18	GPIO15
VDDI2	MSIO6PB2/USB_DATA6_B	F18	GPIO18
VDDI2	MSIO6NB2	P19	PD_05
VDDI2	MSIO7PB2	R16	SD_D2
VDDI2	MSIO7NB2/CAN_TX/GPIO_2_A/USB_DATA0_A	R15	SD_CMD
VDDI2	MSIO8PB2/CAN_RX/GPIO_3_A/USB_DATA1_A	N20	GPIO26
VDDI2	MSIO8NB2/CAN_TX_EN_N/GPIO_4_A/USB_DATA2_A	M19	GPIO20
VDDI2	MSIO11PB2/CCC_NE0_CLKI1/I2C_1_SDA/GPIO_0_A/USB_DATA3_A	N16	GPIO23
VDDI2	MSIO11NB2/CCC_NE0_CLKI2/I2C_1_SCL/GPIO_1_A/USB_DATA4_A	M17	GPIO17
VDDI2	MSIO12PB2/SPI_0_CLK/USB_XCLK_A	P15	SD_CLK
VDDI2	MSIO12NB2/SPI_0_SDI/GPIO_5_A/USB_DIR_A	N15	SD_D0
VDDI2	MSIO13PB2/SPI_0_SDO/GPIO_6_A/USB_STP_A	L20	GPIO16
VDDI2	MSIO13NB2/SPI_0_SS0/GPIO_7_A/USB_NXT_A	L19	GPIO19
VDDI2	MSIO14PB2/SPI_1_CLK	L15	GPIO27
VDDI2	MSIO14NB2/SPI_1_SDI/GPIO_11_A	L16	GPIO13
VDDI2	MSIO15PB2/SPI_1_SDO/GPIO_12_A	R20	GPIO12
VDDI2	MSIO15NB2/SPI_1_SS0/GPIO_13_A	L20	GPIO6
VDDI2	MSIO16PB2/SPI_1_SS4/GPIO_17_A	J17	GPIO3
VDDI2	MSIO16NB2/SPI_1_SS5/GPIO_18_A	H18	GPIO5
VDDI2	MSIO17PB2/SPI_1_SS6/GPIO_23_A	K16	GPIO22
VDDI2	MSIO17NB2/SPI_1_SS7/GPIO_24_A	K15	
VDDI2	MSIO18PB2/SPI_0_SS1/GPIO_8_A/USB_DATA5_A	H19	GPIO7
VDDI2	MSIO18NB2/SPI_0_SS2/GPIO_9_A/USB_DATA6_A	G18	SD_D1
VDDI2	MSIO19PB2/SPI_0_SS3/GPIO_10_A/USB_DATA7_A	H17	GPIO2
VDDI2	MSIO19NB2/SPI_1_SS1/GPIO_14_A	H16	SD_CD
VDDI2	MSIO20PB2/SPI_1_SS2/GPIO_15_A	G19	GPIO8
VDDI2	MSIO20NB2/SPI_1_SS3/GPIO_16_A	F20	GPIO11

M2S010-VFG400 U2B

BANK 1

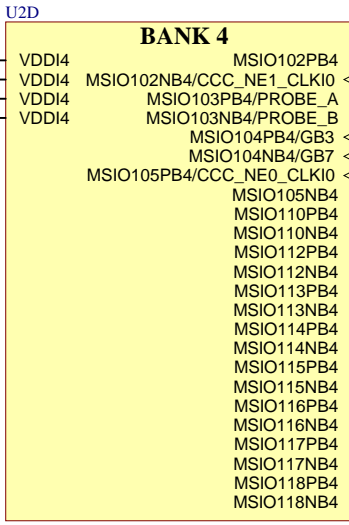


VDDI1	MSIO21PB1/GB5/USB_XCLK_C	G17	GLED
VDDI1	MSIO21NB1/MMUART_1_TXD/GPIO_24_B/USB_DATA2_C	G16	RLED
VDDI1	MSIO22PB1/GB6/MMUART_1_CLK/GPIO_25_B/USB_DATA4_C	E18	
VDDI1	MSIO22NB1/MMUART_1_RXD/GPIO_26_B/USB_DATA3_C	F18	GPIO25
VDDI1	MSIO23PB1/MMUART_0_RTS/GPIO_17_B/USB_DATA5_C	F15	BDBUS3
VDDI1	MSIO23NB1/MMUART_0_DTR/GPIO_18_B/USB_DATA6_C	F16	BDBUS2
VDDI1	MSIO24PB1/MMUART_0_CTS/GPIO_19_B/USB_DATA7_C	E17	USER_BTN1
VDDI1	MSIO24NB1/MMUART_0_DSR/GPIO_20_B	E16	USER_BTN2
VDDI1	MSIO25PB1/MMUART_0_RI/GPIO_21_B	D20	GPIO9
VDDI1	MSIO25NB1/MMUART_0_DCD/GPIO_22_B	C20	GPIO10
VDDI1	MSI26NB1/MMUART_0_TXD/GPIO_27_B/USB_DIR_C	D18	BDBUS1
VDDI1	MSIO27PB1/MMUART_0_RXD/GPIO_28_B/USB_STP_C	C19	BDBUS0
VDDI1	MSIO27NB1/MMUART_0_CLK/GPIO_29_B/USB_NXT_C	B19	GPIO24
VDDI1	MSIO28PB1/I2C_0_SDA/GPIO_30_B/USB_DATA0_C	A20	ID_SDA
VDDI1	FLASH_GOLDEN_N/MSIO28NB1/I2C_0_SCL/GPIO_31_B/USB_DATA1_C	A19	ID_SCL

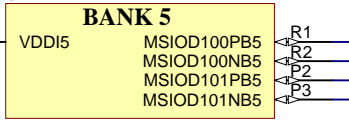
M2S010-VFG400



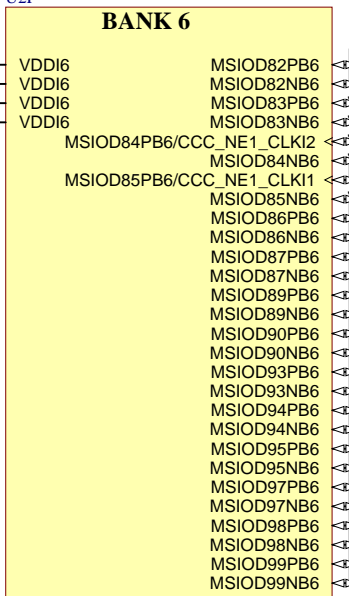
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A4	Number: TEM002 010C	Rev. 02	
Date: 28.05.2018	Copyright: Trenz Electronic GmbH	Page2 of 11	
Filename: Soc_1.SchDoc			



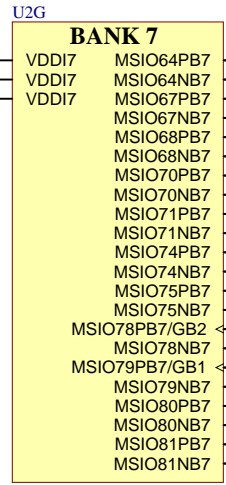
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U2E



M2S010-VFG400
U2F



M2S010-VFG400



M2S010-VFG400



Title: TEM0002 - CPLD		
A4	Number: TEM0002 010C	Rev. 02
Date: 28.05.2018	Copyright: Trenz Electronic GmbH	Page3 of 11
Filename: Soc_2.SchDoc		

1

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3

4

A

A

B

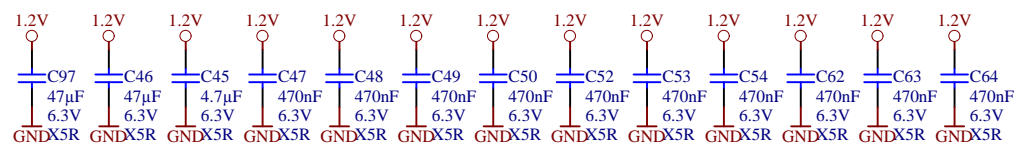
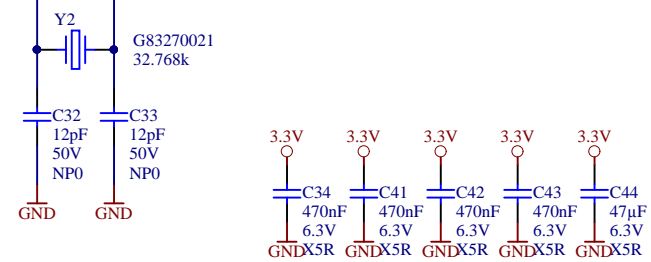
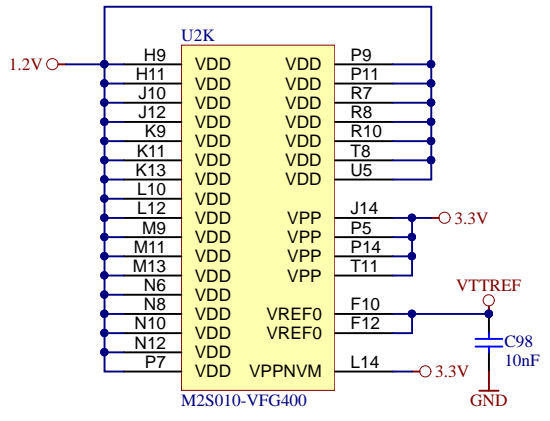
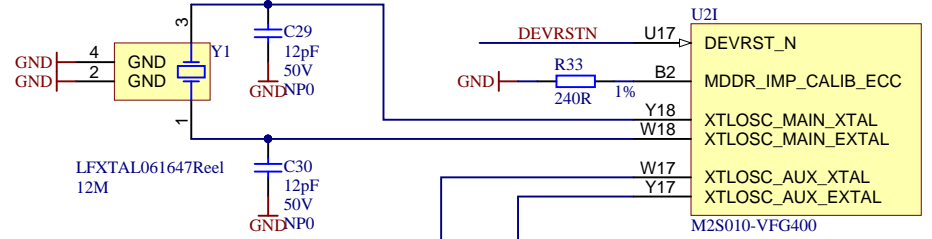
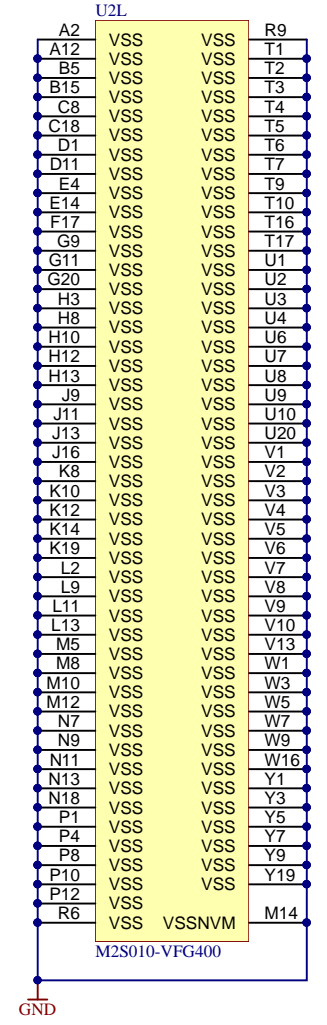
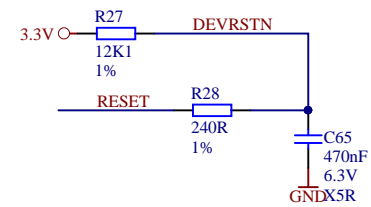
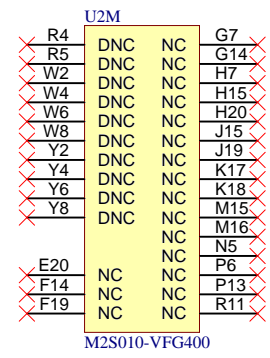
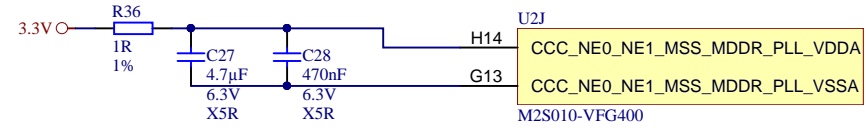
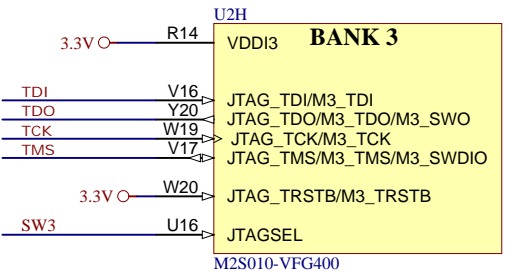
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C

C

D

D



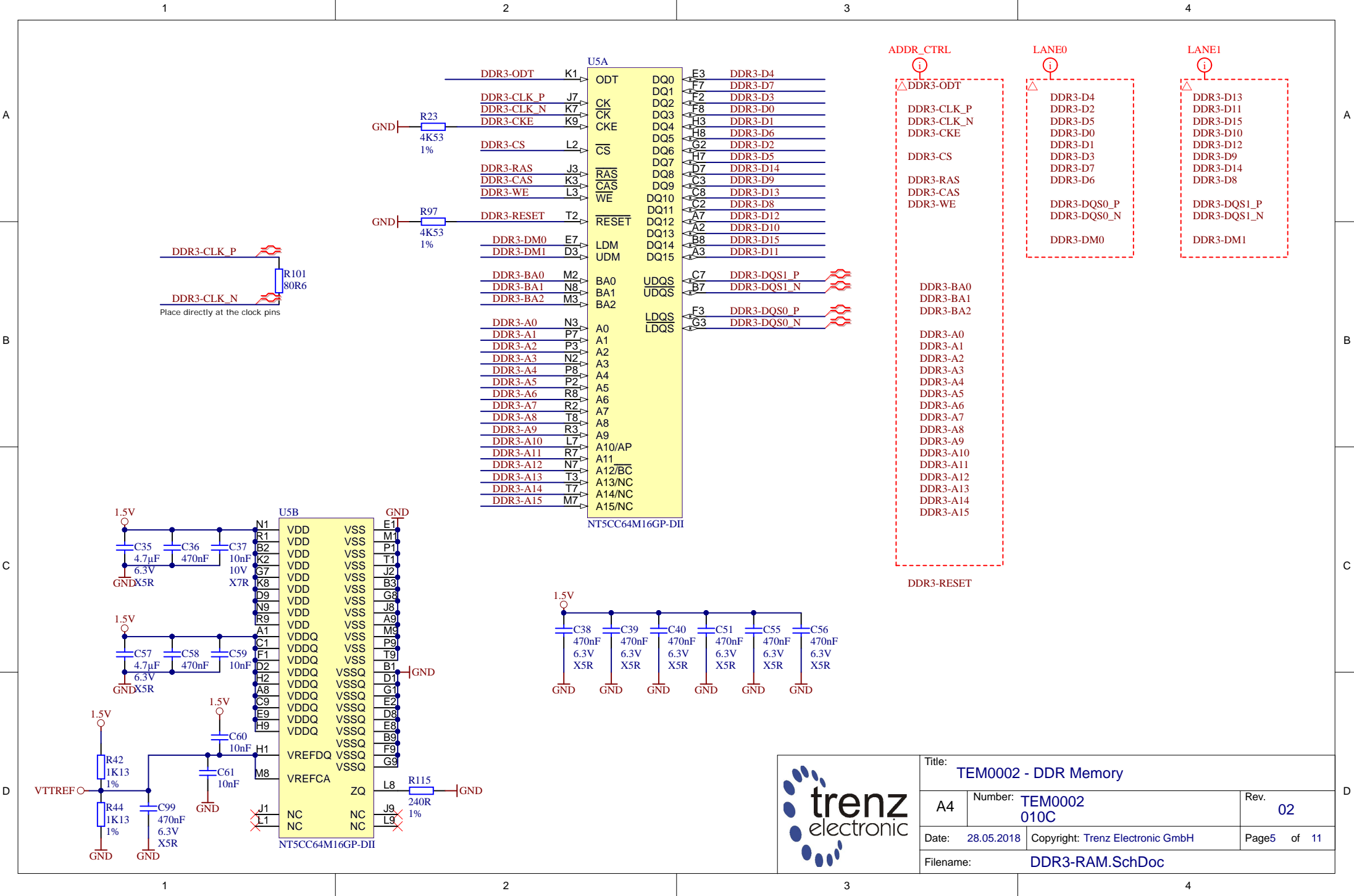
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Date: 28.05.2018	Copyright: Trenz Electronic GmbH	Page 4 of 11
Filename: Soc_3.SchDoc		

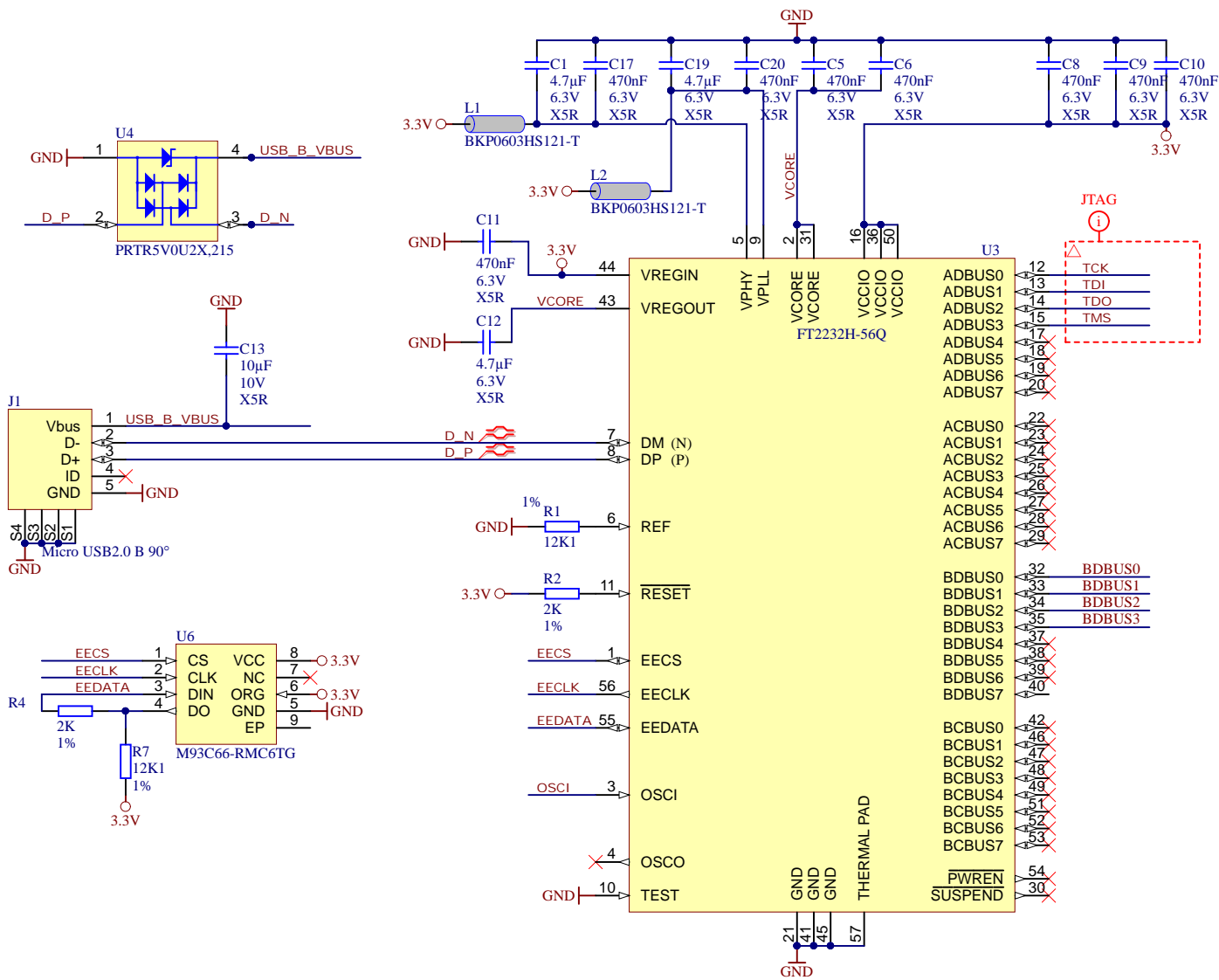
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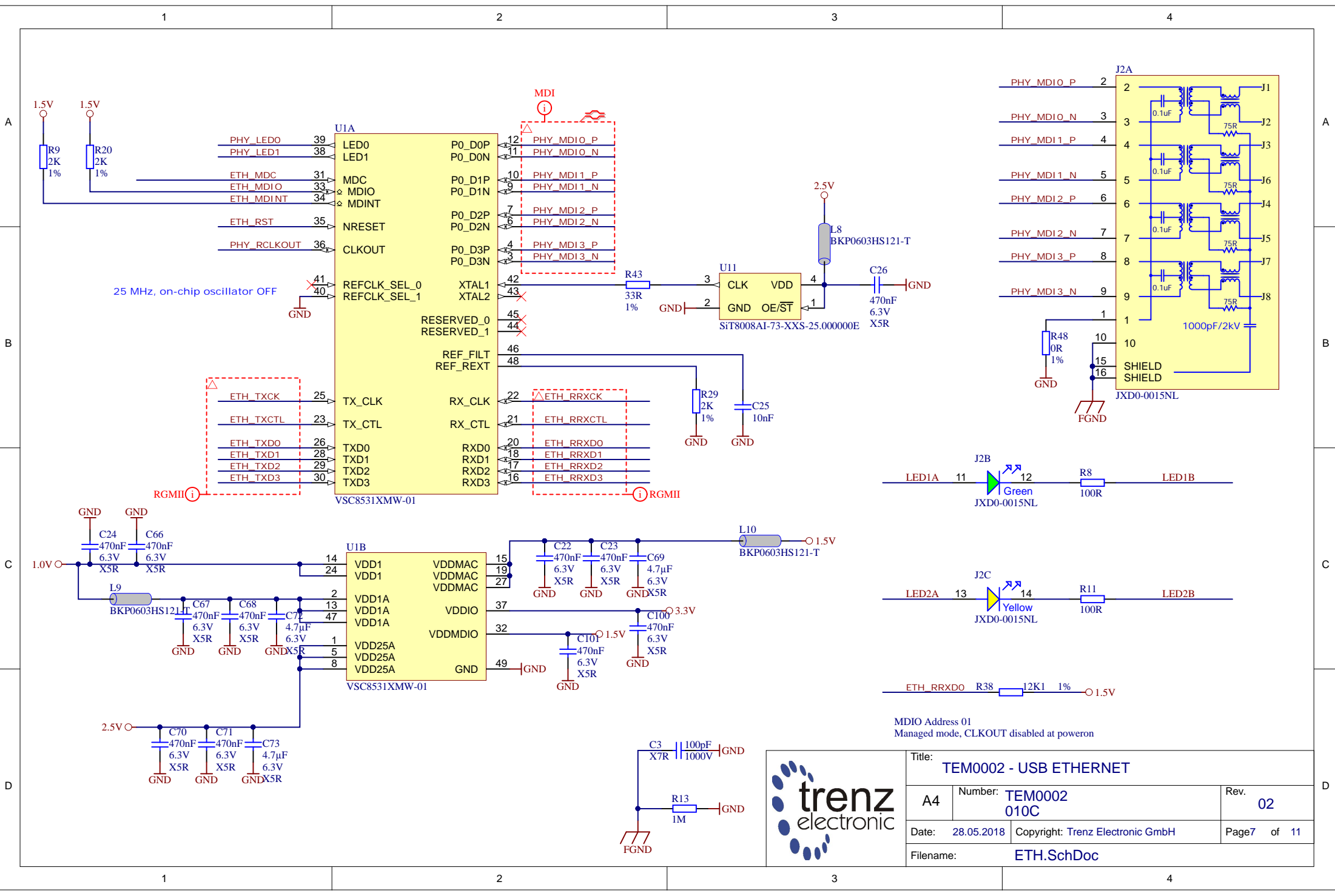
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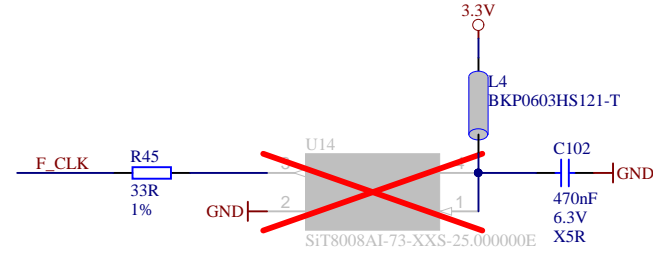
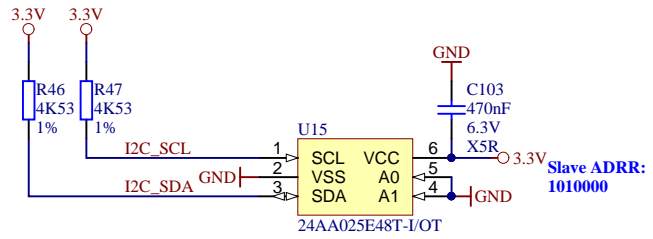
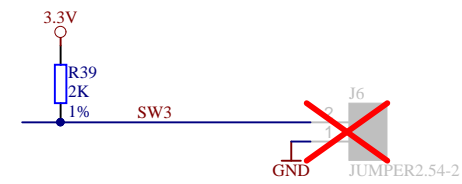
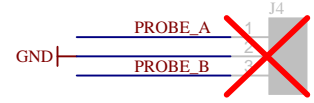
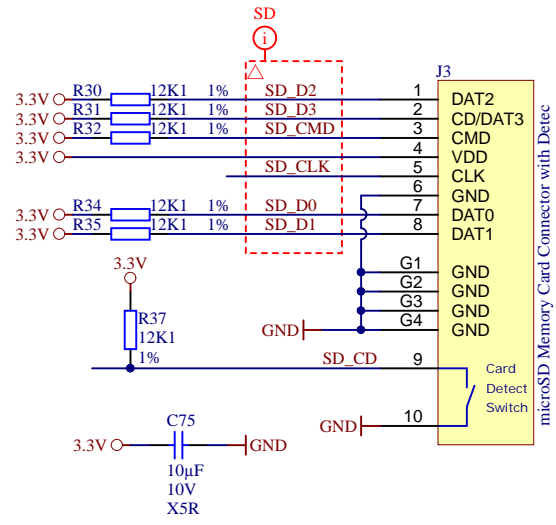
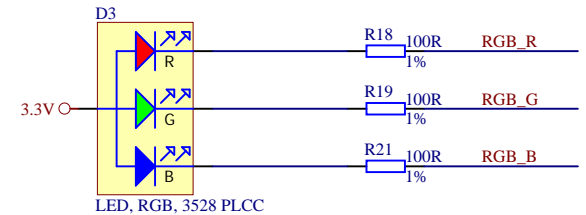
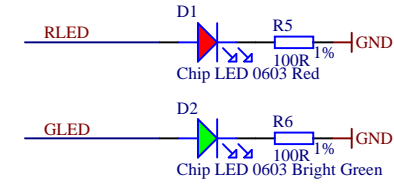
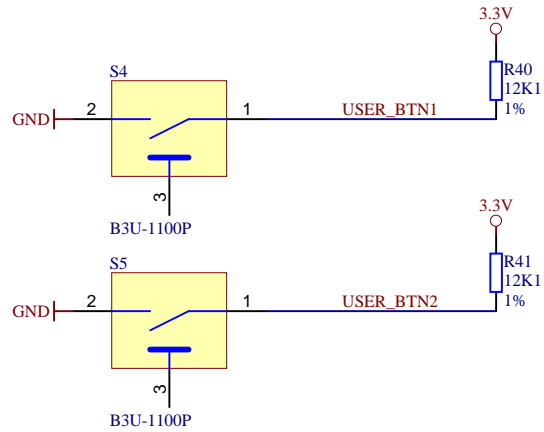
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Date: 28.05.2018		Copyright: Trenz Electronic GmbH		Page 6 of 11
Filename: FTDI.SchDoc				




MDIO Address 01
Managed mode, CLKOUT disabled at poweron



Title: TEM0002 - USB ETHERNET		
A4	Number: TEM0002 010C	Rev. 02
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Filename: ETH.SchDoc		



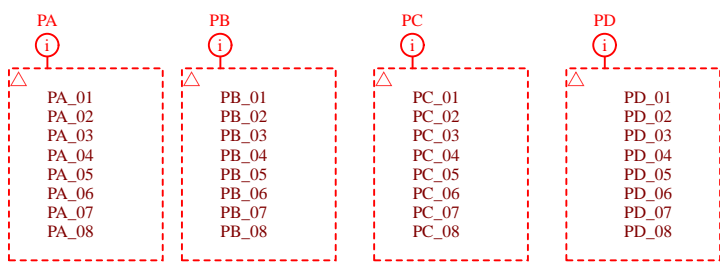
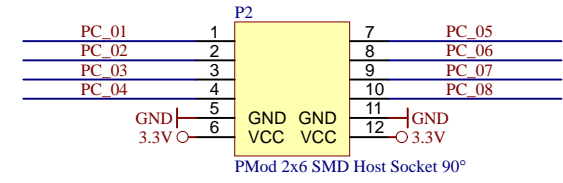
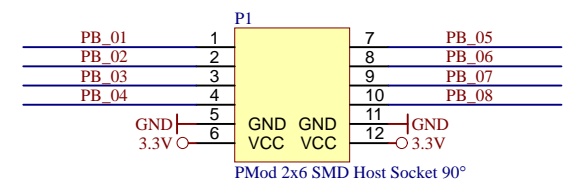
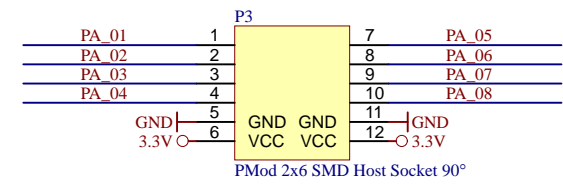
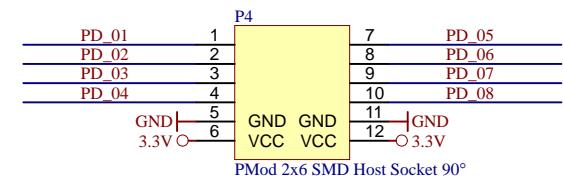
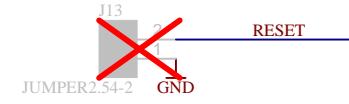
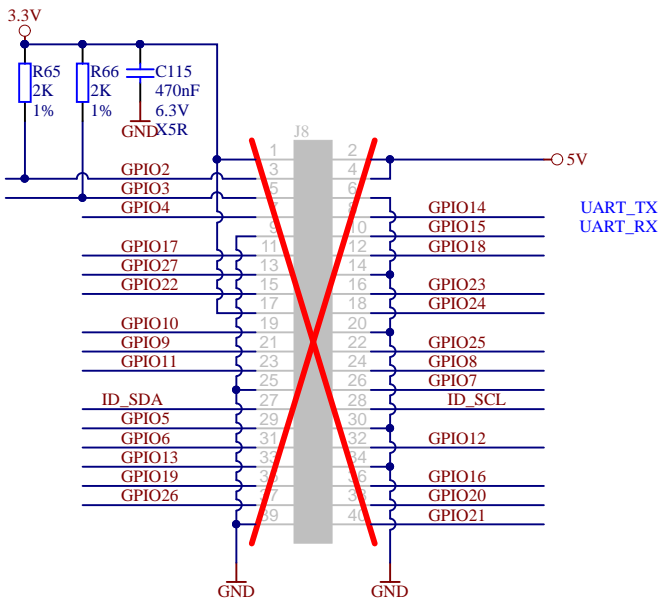
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Date: 28.05.2018		Copyright: Trenz Electronic GmbH		Page8 of 11
Filename: misc.SchDoc				

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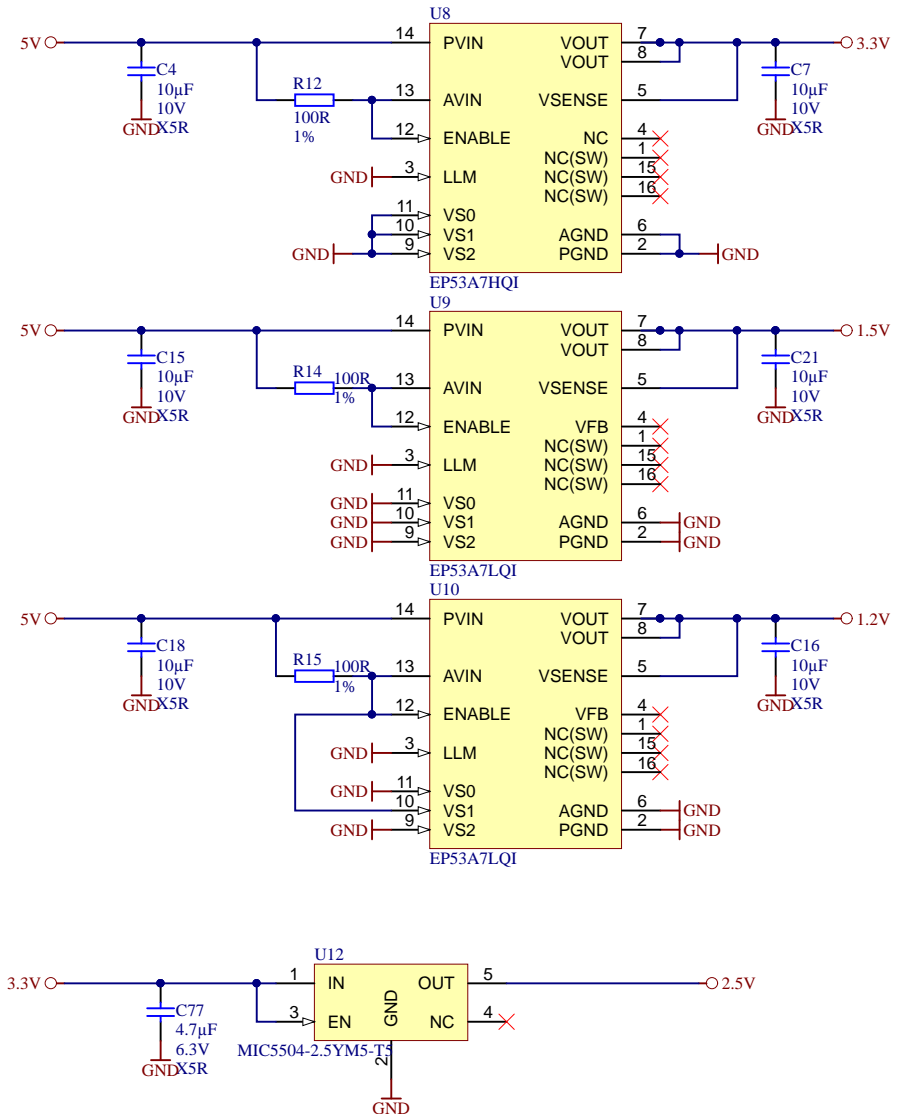
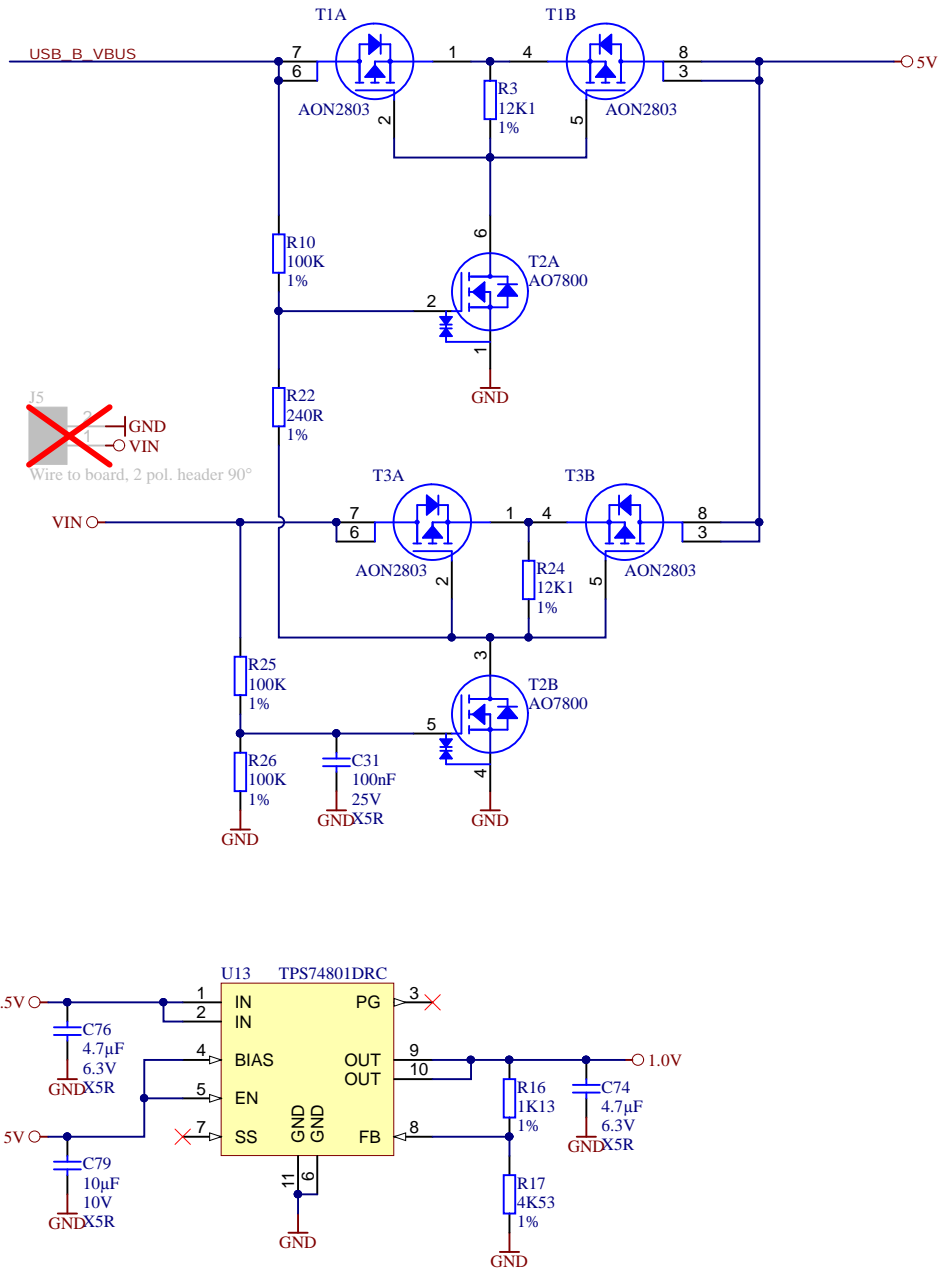
Title: TEM0002 - Connectors		
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REV02

-
- 1) Added MAC EEPROM 24AA025E48T-I/OT (U15)
 - 2) Crystal oscillator Y1 replaced from 25MHz to 12MHz
 - 3) New Gigabit Ethernet Connector - Pulse JXD0-0015NL (status leds are unidirectional)
 - 4) BOM optimization.
 - 5) U10 pin 10 (VS1) connected to U10 pin 13 (AVIN)

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	Title: TEM0002 - Revision changes		
	A4	Number: TEM0002 010C	Rev. 02
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