

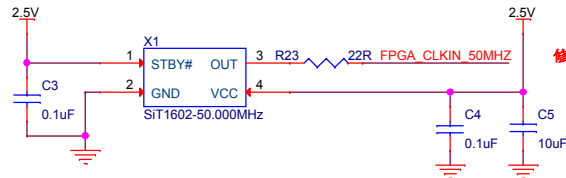
P1-2	
IO_3B_W11/CLK0N,FPLL_BL_FBN/DIFFIO_RX_B31N	W11 5CSX 3B IO0
IO_3B_V11/CLK0P,FPLL_BL_FBP/DIFFIO_RX_B31P	V11 5CSX 3B IO1
IO_3B_AH4/FPLL_BL_CLKOUT1,FPLL_BL_CLKOUTN/DIFFIO_TX_B37N/DQ3B	AH4 5CSX IOn11
IO_3B_AG5/FPLL_BL_CLKOUT0,FPLL_BL_CLKOUTP,FPLL_BL_FB/DIFFIO_TX_B37P/DQ3B	AG5 5CSX IOp11
IO_3A_AD5/DIFFIO_TX_B8P/DQ1B	
IO_3B_AF4/DIFFIO_TX_B25N	
IO_3B_AE9/DIFFIO_RX_B26N/DQ2B	AE9 5CSX 3B IO3
IO_3B_AE4/DIFFIO_TX_B25P/DQ2B	AE4 5CSX 3B IO4
IO_3B_AD10/DIFFIO_RX_B26P/DQ2B	AD10 5CSX 3B IO5
IO_3B_U11/DIFFIO_RX_B27N/DQSN2B	U11 5CSX 3B IO6
IO_3B_AF8/DIFFIO_TX_B28N/DQ2B	AF8 5CSX 3B IO7
IO_3B_T11/DIFFIO_RX_B27P/DQSN2B	T11 5CSX 3B IO8
IO_3B_AE7/DIFFIO_TX_B28P	AE7 5CSX 3B IO9
IO_3B_AF9/DIFFIO_TX_B29N/DQ2B	AF9 5CSX 3B IO10
IO_3B_AE11/DIFFIO_RX_B30N/DQ2B	AE11 5CSX 3B IO11
IO_3B_AE8/DIFFIO_TX_B29P/DQ2B	AE8 5CSX 3B IO12
IO_3B_AD11/DIFFIO_RX_B30P/DQ2B	AD11 5CSX 3B IO13
IO_3B_AF6/DIFFIO_TX_B32N/DQ2B	AF6 5CSX 3B IO14
IO_3B_AF5/DIFFIO_TX_B32P/DQ2B	AF5 5CSX 3B IO15
IO_3B_AG6/DIFFIO_TX_B33N	AG6 5CSX 3B IO16
IO_3B_AF10/DIFFIO_RX_B34N/DQ3B	AF10 5CSX 3B IO17
IO_3B_AF7/DIFFIO_TX_B33P/DQ3B	AF7 5CSX 3B IO18
IO_3B_AF11/DIFFIO_RX_B34P/DQ3B	AF11 5CSX 3B IO19
IO_3B_T12/DIFFIO_RX_B35N/DQSN3B	T12 5CSX 3B IO20
IO_3B_AH2/DIFFIO_TX_B36N/DQ3B	AH2 5CSX IOn10
IO_3B_T13/DIFFIO_RX_B35P/DQSN3B	T13 5CSX 3B IO21
IO_3B_AH3/DIFFIO_TX_B36P	AH3 5CSX IOp10
IO_3B_AD12/DIFFIO_RX_B38N/DQ3B	AD12 5CSX 3B IO22
IO_3B_AE12/DIFFIO_RX_B38P/DQ3B	AE12 5CSX 3B IO23
IO_3B_AH5/DIFFIO_TX_B40N/DQ3B	AH5 5CSX IOn9
IO_3B_AH6/DIFFIO_TX_B40P/DQ3B	AH6 5CSX IOp9

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修改一： AB26,AA26,W24:原空置，现接地；
Y24:原接50MHz晶振，现接地；

P1-4	
IO_5B_AB26/FPLL_BR_CLKOUT0,FPLL_BR_CLKOUTP,FPLL_BR_FB/DIFFIO_TX_R22P	AB26
IO_5B_AA26/FPLL_BR_CLKOUT1,FPLL_BR_CLKOUTN/DIFFIO_TX_R22N	AA26
IO_5B_Y24/CLK4P,FPLL_BR_FBP/DIFFIO_RX_R23P	Y24
IO_5B_W24/CLK4N,FPLL_BR_FBN/DIFFIO_RX_R23N	W24
IO_5A_Y17/DIFFIO_RX_R4P/DQ1R	
IO_5A_Y18/DIFFIO_RX_R4N/DQ1R	Y18 5CSX 5A IO8
IO_5A_Y16/DIFFIO_RX_R6P/DQSN1R	Y16 5CSX 5A IO9
IO_5A_AA24/DIFFIO_TX_R7P/DQ1R	Y16 5CSX 5A IO10
IO_5A_V16/DIFFIO_RX_R8P/DQ1R	AA24 5CSX 5A IO11
IO_5A_AA23/DIFFIO_TX_R7N	V16 5CSX 5A IO12
IO_5A_V15/DIFFIO_RX_R8N/DQ1R	AA23 5CSX 5A IO13
	V15 5CSX 5A IO14

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修改二： 50MHz晶振输出原接Y24，现接E11；

P1-3	
IO_4A_AF13/DIFFIO_RX_B42N/DQ4B	AF13 5CSX 4A IO0
IO_4A_AG8/DIFFIO_TX_B41P/DQ4B	AG8 5CSX 4A IO1
IO_4A_AG13/DIFFIO_RX_B42P/DQ4B	AG13 5CSX 4A IO2
IO_4A_U13/DIFFIO_RX_B43N/DQSN4B	U13 5CSX 4A IO3
IO_4A_AH8/DIFFIO_TX_B44N/DQ4B	AH8 5CSX IOn8
IO_4A_U14/DIFFIO_RX_B43P/DQSN4B	U14 5CSX 4A IO4
IO_4A_AH9/DIFFIO_TX_B45N/DQ4B	AG9 5CSX IOp8
IO_4A_AE15/DIFFIO_RX_B46N/DQ4B	AH9 5CSX IOn7
IO_4A_AG10/DIFFIO_TX_B45P/DQ4B	AE15 5CSX 4A IO5
IO_4A_AF15/DIFFIO_RX_B46P/DQ4B	AG10 5CSX IOp7
IO_4A_AH11/DIFFIO_TX_B48N/DQ4B	AF15 5CSX 4A IO6
IO_4A_AG11/DIFFIO_TX_B48P/DQ4B	AH11 5CSX IOn6
IO_4A_AG16/DIFFIO_RX_B50N/DQ5B	AG11 5CSX IOp6
IO_4A_AH12/DIFFIO_TX_B49P/DQ5B	AG16 5CSX 4A IO7
IO_4A_AF17/DIFFIO_RX_B50P/DQ5B	AH12 5CSX 4A IO8
IO_4A_V13/DIFFIO_RX_B51N/DQSN5B	AF17 5CSX 4A IO9
IO_4A_AH13/DIFFIO_TX_B52N/DQ5B	V13 5CSX 4A IO10
IO_4A_W14/DIFFIO_RX_B51P/DQSN5B	AH13 5CSX IOn5
IO_4A_AH14/DIFFIO_TX_B52P	W14 5CSX 4A IO11
IO_4A_AE17/DIFFIO_RX_B54N/DQ5B	AG14 5CSX IOp5
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH14 5CSX IOn4
IO_4A_AG15/DIFFIO_TX_B53P/DQ5B	AE17 5CSX 4A IO12
IO_4A_AD17/DIFFIO_RX_B54P/DQ5B	AG15 5CSX IOp4
IO_4A_AH16/DIFFIO_TX_B56N/DQ5B	AD17 5CSX 4A IO13
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH16 5CSX IOn3
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH17 5CSX IOp3
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AD19 5CSX 4A IO14
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF18 5CSX 4A IO15
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AE19 5CSX 4A IO16
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AA18 5CSX 4A IO17
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH18 5CSX IOn2
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AA19 5CSX 4A IO18
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG18 5CSX IOp2
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH19 5CSX IOn1
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AD20 5CSX 4A IO19
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG19 5CSX IOp1
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AE20 5CSX 4A IO20
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG20 5CSX 4A IO21
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF20 5CSX 4A IO22
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF21 5CSX 4A IO23
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG21 5CSX 4A IO24
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF22 5CSX 4A IO25
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AE22 5CSX 4A IO26
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH21 5CSX 4A IO27
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AD23 5CSX 4A IO28
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH22 5CSX IOn0
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF23 5CSX 4A IO29
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH23 5CSX IOp0
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG23 5CSX 4A IO30
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH24 5CSX 4A IO31
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG24 5CSX 4A IO32
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AE23 5CSX 4A IO33
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG26 5CSX 4A IO34
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AE24 5CSX 4A IO35
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AC23 5CSX 4A IO36
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH26 5CSX 4A IO37
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AC22 5CSX 4A IO38
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AH27 5CSX 4A IO39
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG25 5CSX 4A IO40
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AG28 5CSX 4A IO41
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF25 5CSX 4A IO42
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF28 5CSX 4A IO43
IO_4A_AH17/DIFFIO_TX_B56P/DQ5B	AF27 5CSX 4A IO44

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5CSX_3B_IO[0:23]
5CSX_4A_IO[0:44]
5CSX_5A_IO[0:14]

5CSX_IOp[0:11]
5CSX_IOn[0:11]

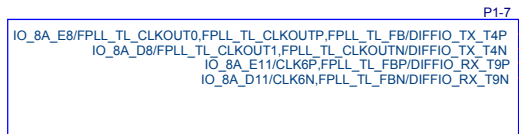
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IO_3B_V12/CLK1P/DIFFIO_RX_B39P	V12 5CSX CLK1
IO_4A_AA13/CLK2N/DIFFIO_RX_B47N	AA13 5CSX CLK2
IO_4A_Y13/CLK2P/DIFFIO_RX_B47P	Y13 5CSX CLK3
IO_4A_AA15/CLK3N/DIFFIO_RX_B55N	AA15 5CSX CLKn
IO_4A_Y15/CLK3P/DIFFIO_RX_B55P	Y15 5CSX CLKp
IO_5B_W21/CLK5P/DIFFIO_RX_R21P	W21 5CSX CLK6
IO_5B_W20/CLK5N/DIFFIO_RX_R21N	W20 5CSX CLK7
IO_8A_D12/CLK7P/DIFFIO_RX_T1P	D12 5CSX CLK4
IO_8A_C12/CLK7N/DIFFIO_RX_T1N	C12 5CSX CLK5
IO_4A_AH7/RZQ_0/DIFFIO_TX_B41N	
IO_5A_AF26/RZQ_1/DIFFIO_TX_R1P/DQ1R	AH7 R42 100R 1%
IO_5B_AB25/RZQ_2/DIFFIO_TX_R24N	AF26 R44 100R 1%
	AB25 R46 100R 1%
VREFB6BNO_HPS_B6_T27	
VREFB6ANO_HPS_6A_H28	H28 VREF_HPS_DDR3
VREFB3ANO_3A_AE5	AE5 5CSX VREF0
VREFB3BNO_3B_AF12	AF12 5CSX VREF1
VREFB4ANO_4A_AF16	AF16 5CSX VREF2
VREFB5ANO_5A_AC26	AC26 5CSX VREF3
VREFB5BNO_5B_AA25	AA25 5CSX VREF4
VREFB7A7B7C7DNO_HPS_D19	D19 5CSX VREF5
VREFB8ANO_8A_D9	D9 5CSX VREF6

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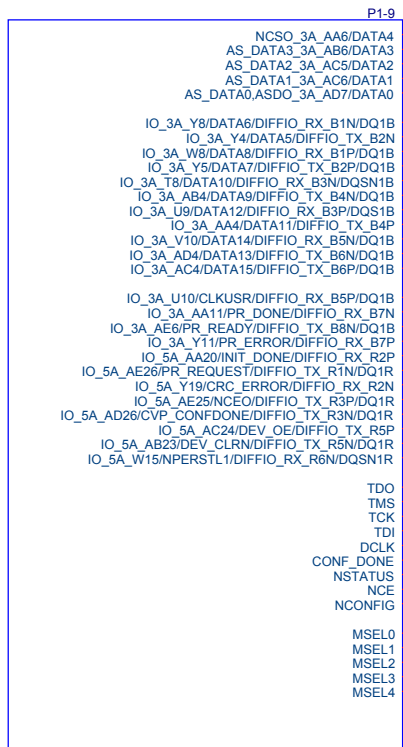
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5CSX_VREF[0:6]

5CSX_CLKn
5CSX_CLKp
FPGA_CLKIN_50MHZ
FPGA_CLKIN_50MHZ

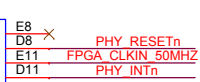
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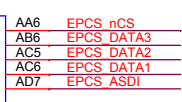
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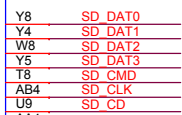
PHY_RESETn
FPGA_CLKIN_50MHZ
PHY_INTn

修改二: E11 原空置, 现接50MHz晶振;

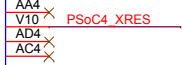
Delete EPCQ64, Remove ic to BaseBoard and Reserve I/O



EPCS_DCLK
EPCS_ASDI
EPCS_DATA1
EPCS_DATA2
EPCS_DATA3
EPCS_nCS



SD_DAT0
SD_DAT1
SD_DAT2
SD_DAT3
SD_CMD
SD_CLK
SD_CD

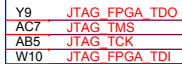


PSoC4_XRES

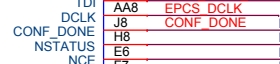


5CSX_5A_I00
5CSX_5A_I01
5CSX_5A_I02
5CSX_5A_I03
5CSX_5A_I04
5CSX_5A_I05
5CSX_5A_I06
5CSX_5A_I07

5CSX_5A_I0[0:14]



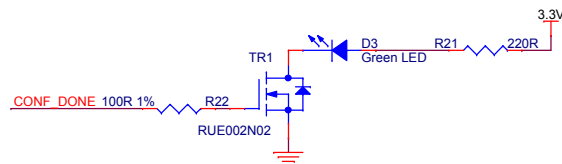
JTAG_FPGA_TDO
JTAG_TMS
JTAG_TCK
JTAG_FPGA_TDI
EPCS_DCLK



CONF_DONE
10k
10k
10k
10k



MSEL0
MSEL1
MSEL2
MSEL3
MSEL4



Micro SD

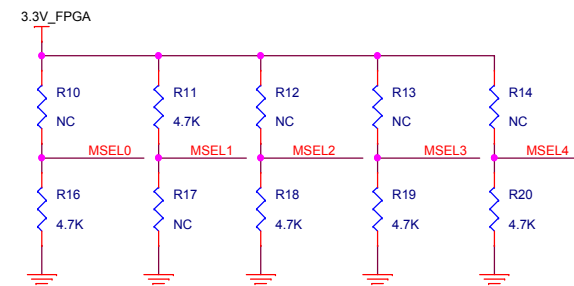


PSoC4_XRES



PHY_INTn
PHY_RESETn

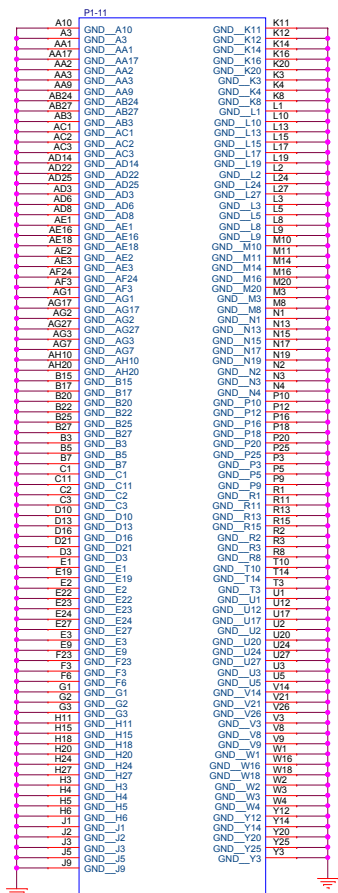
FPGA_CLKIN_50MHZ



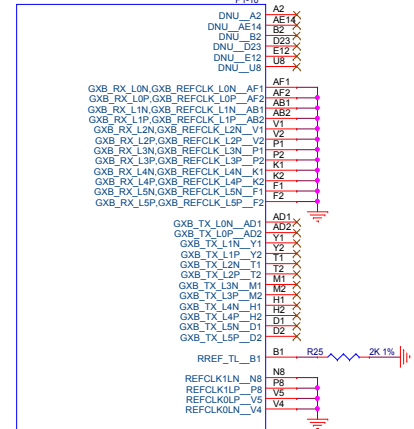
Left R10,R12,R13 and R14 not connected. Install R16,R18,R19 and R20 using 4.7k resistors.

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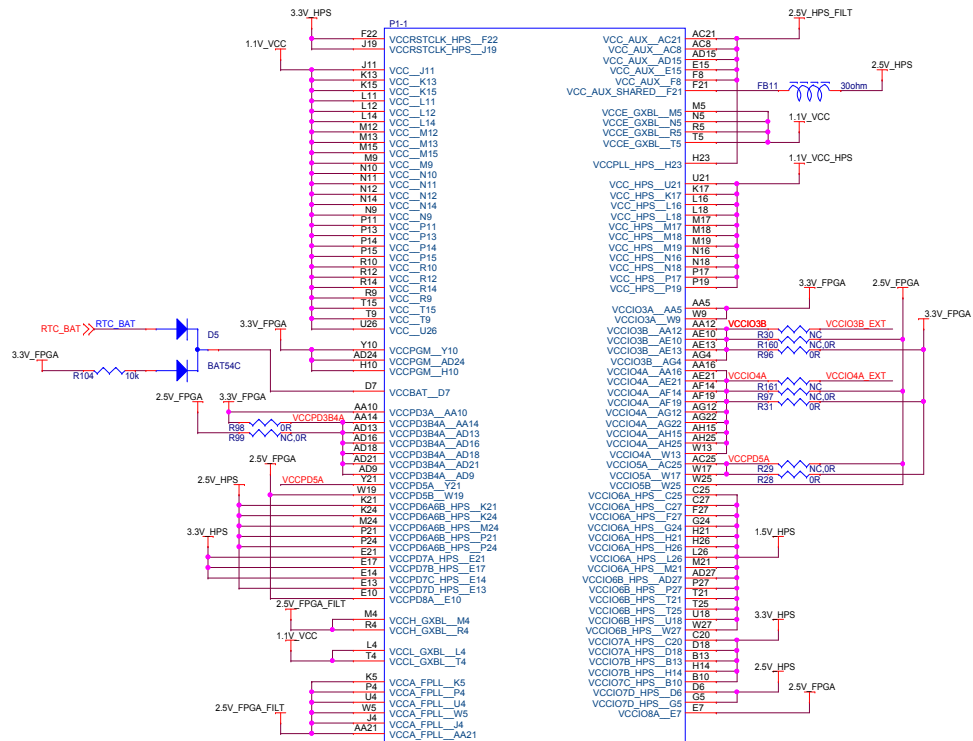
Cyclone V SoC Power



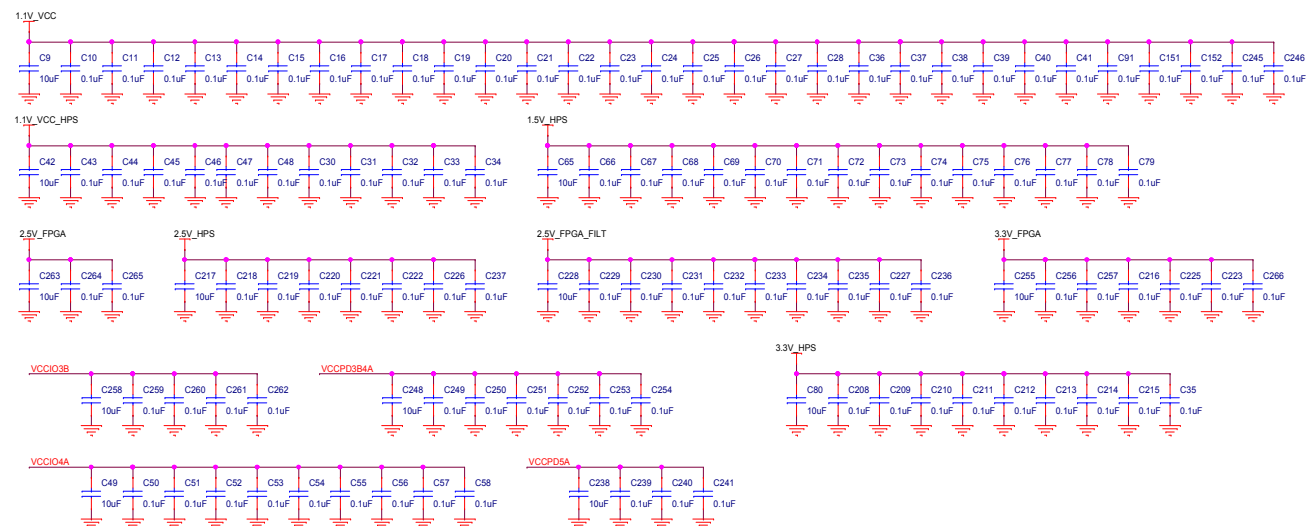
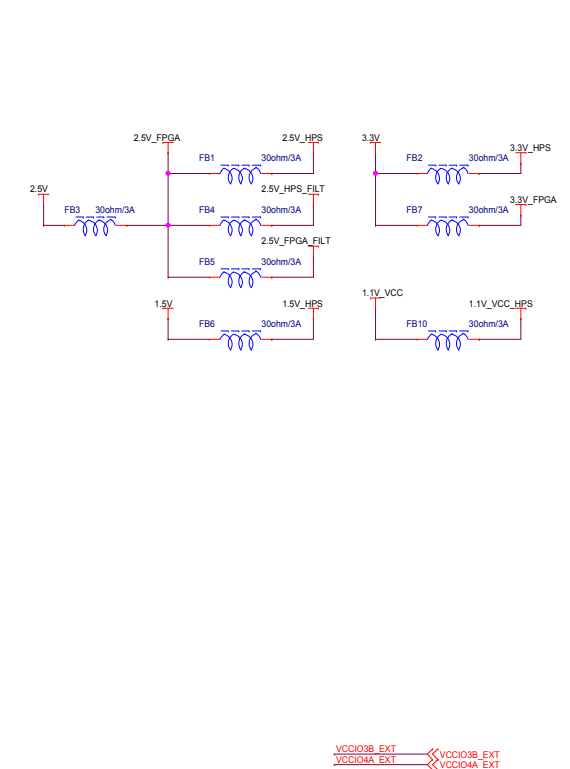
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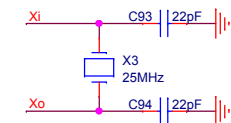
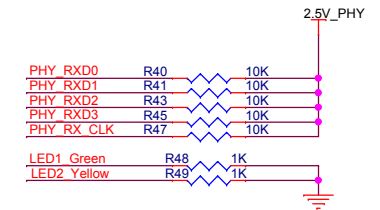
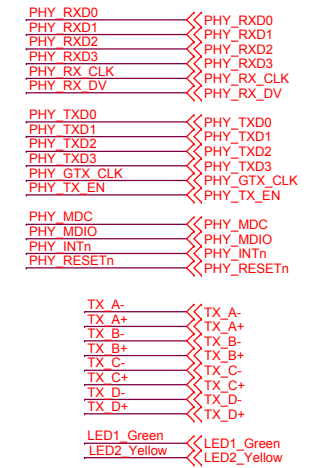
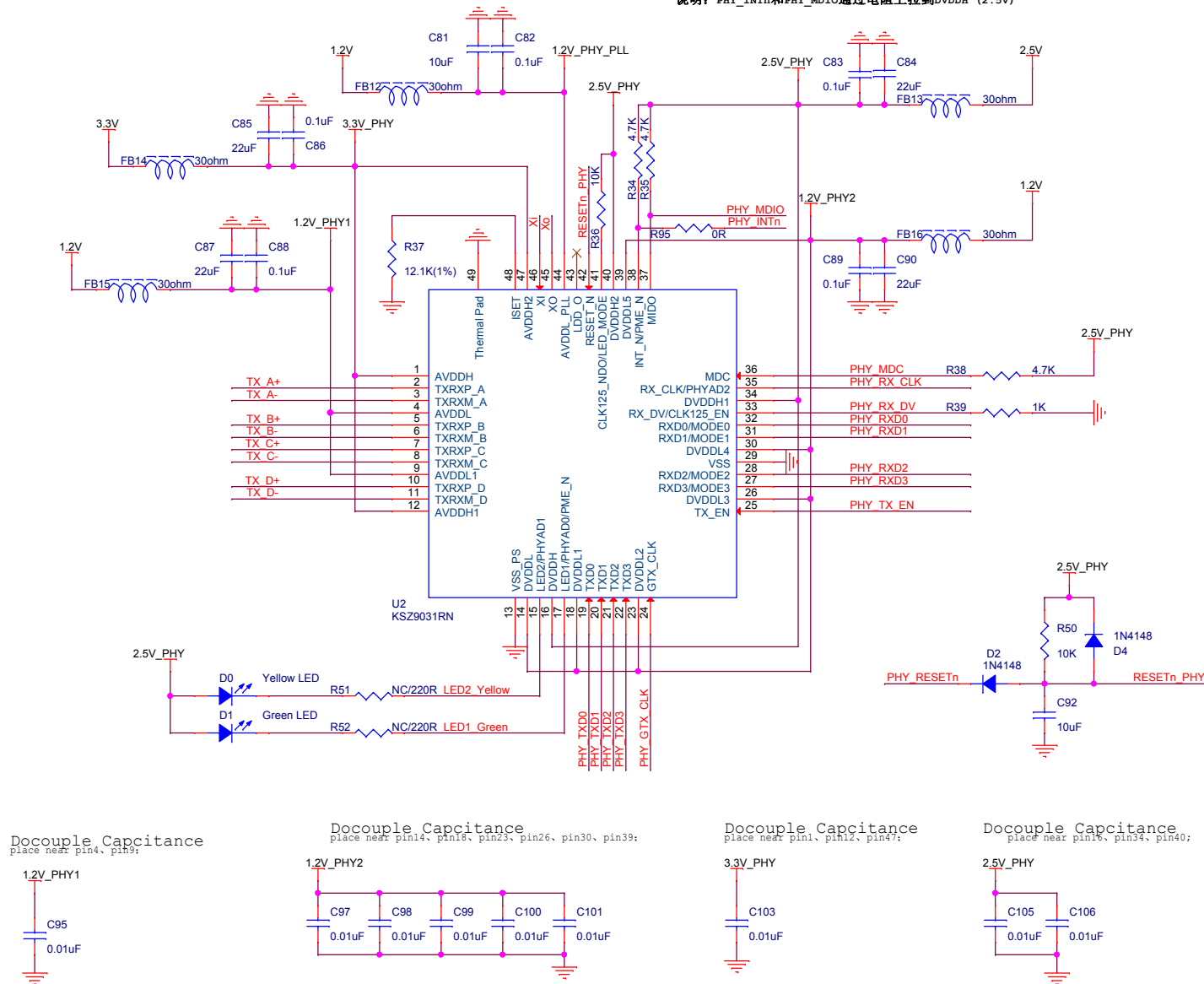
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10/100/1000M Ethernet

说明: PHY_INTn和PHY_MDIO通过电阻上拉到D0VDDH (2.5V)



Docouple Capacitance
place near pin4, pin9;

Docouple Capacitance
place near pin14, pin16, pin23, pin26, pin30, pin39;

Docouple Capacitance
place near pin1, pin12, pin47;

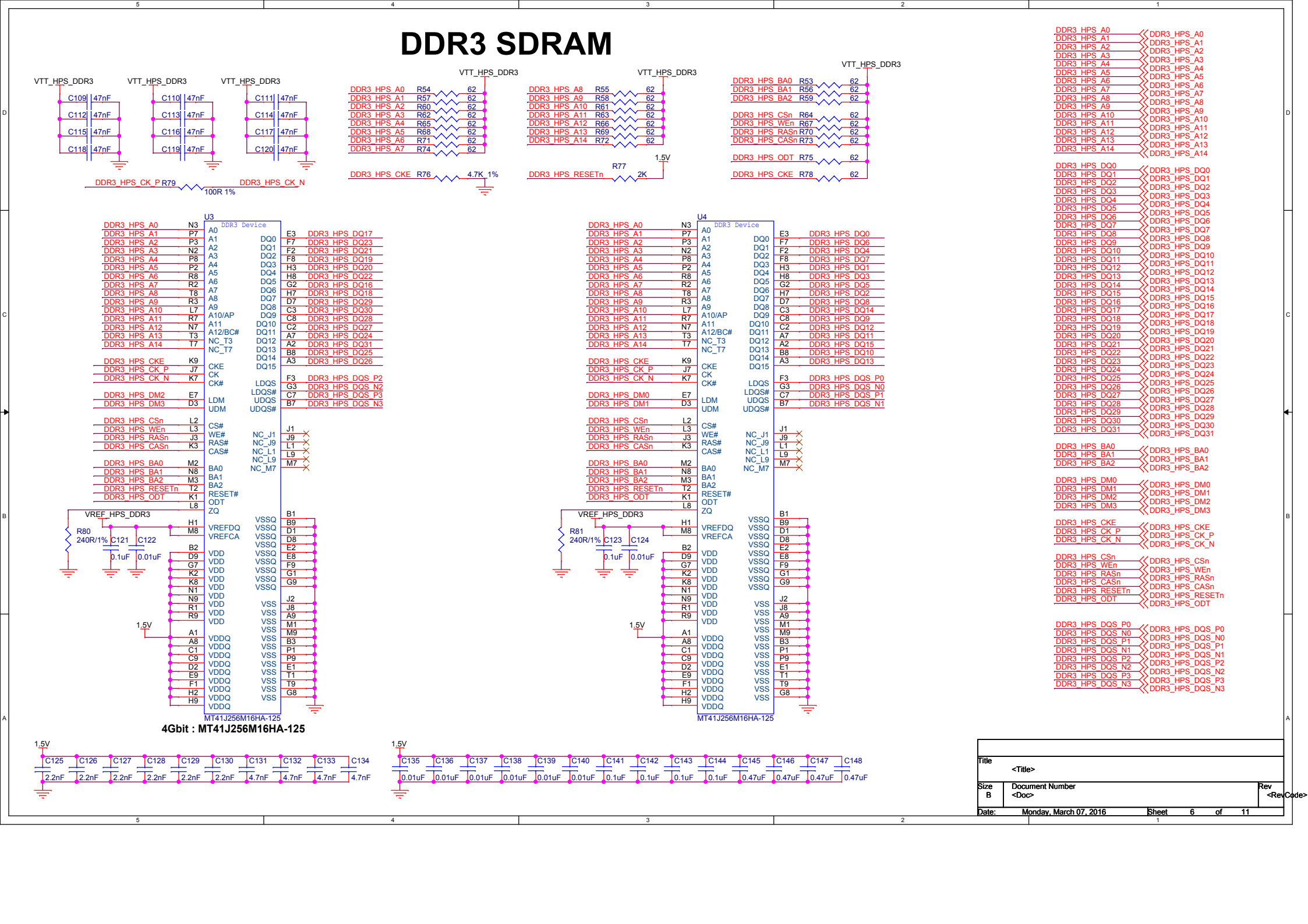
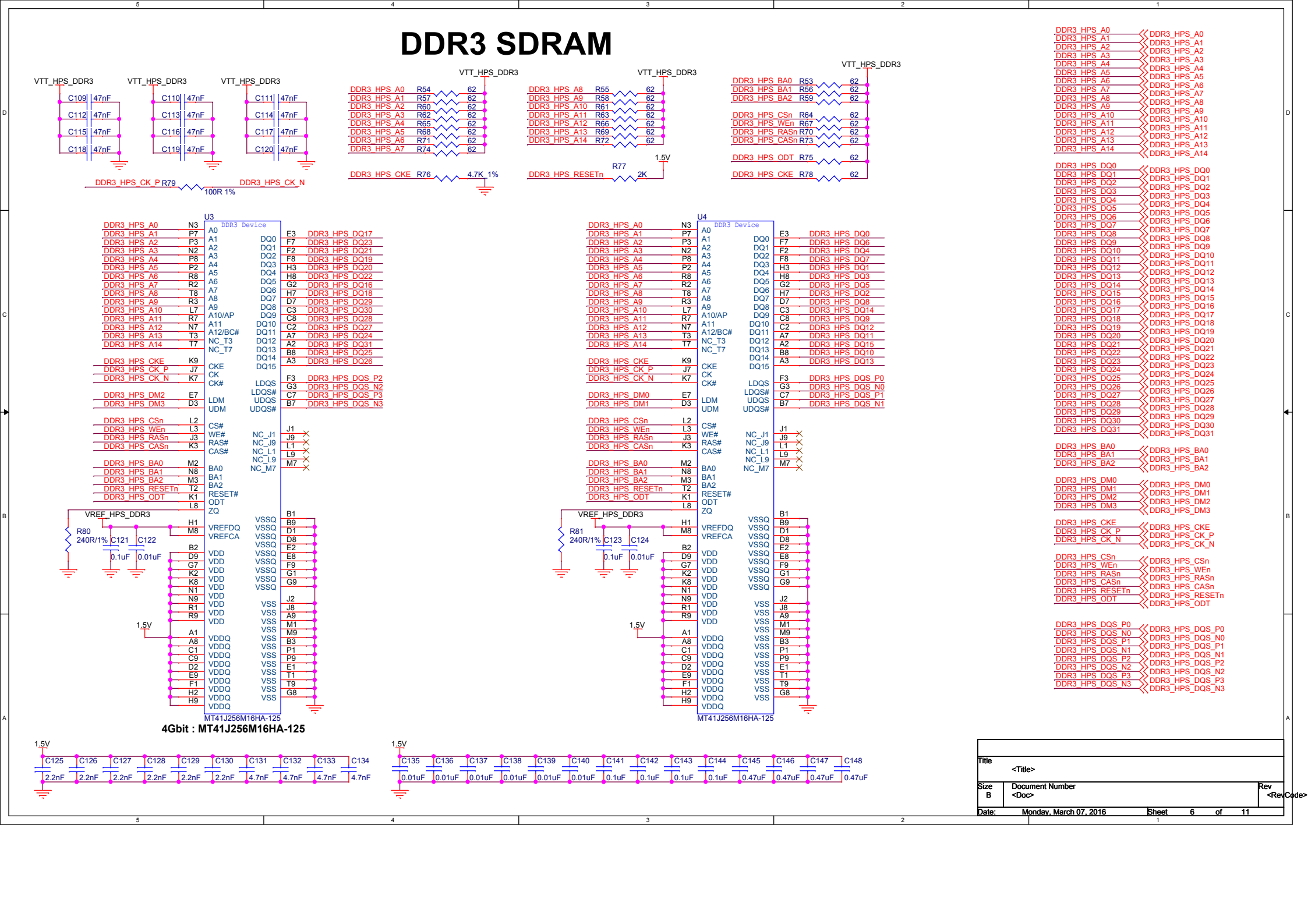
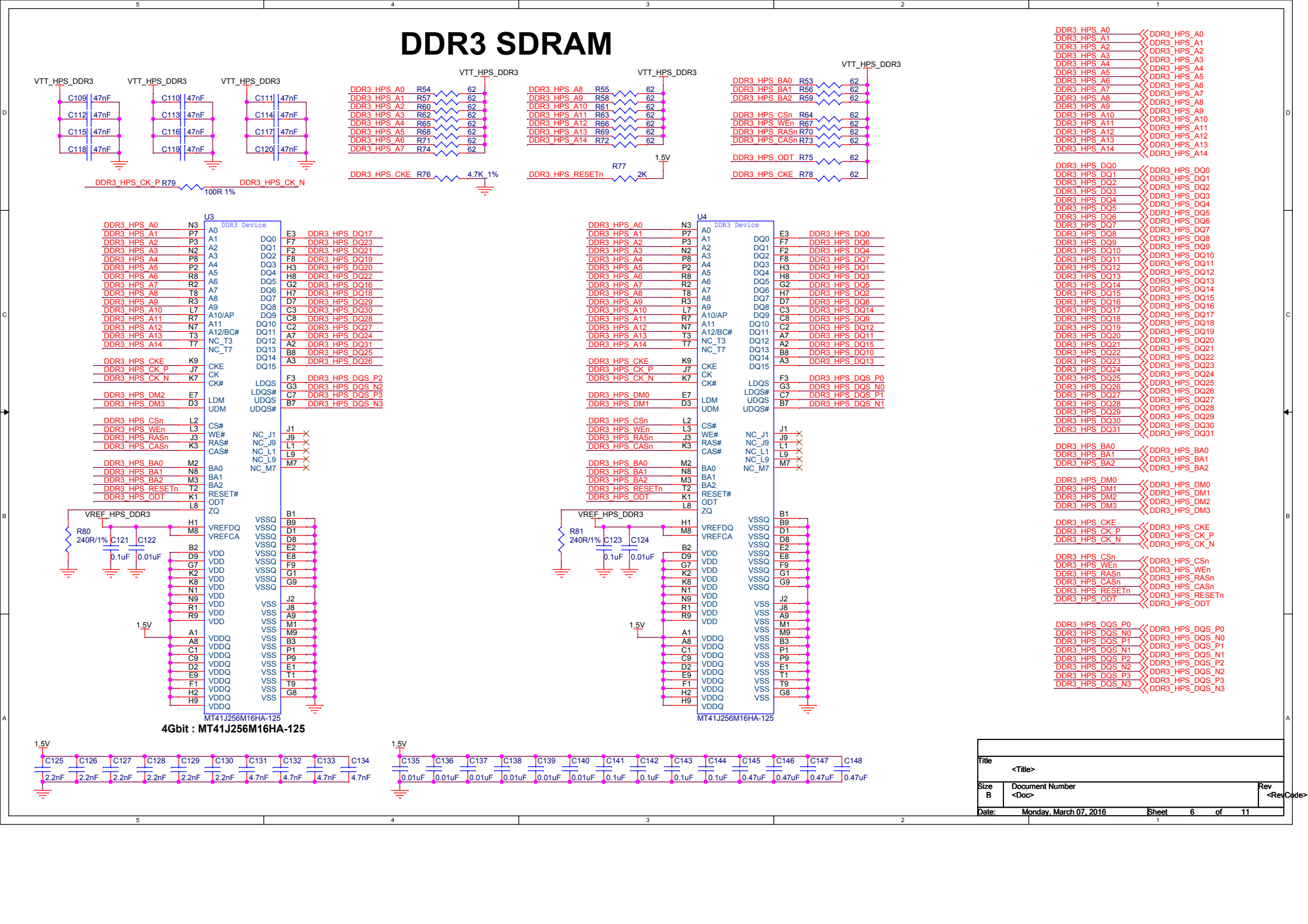
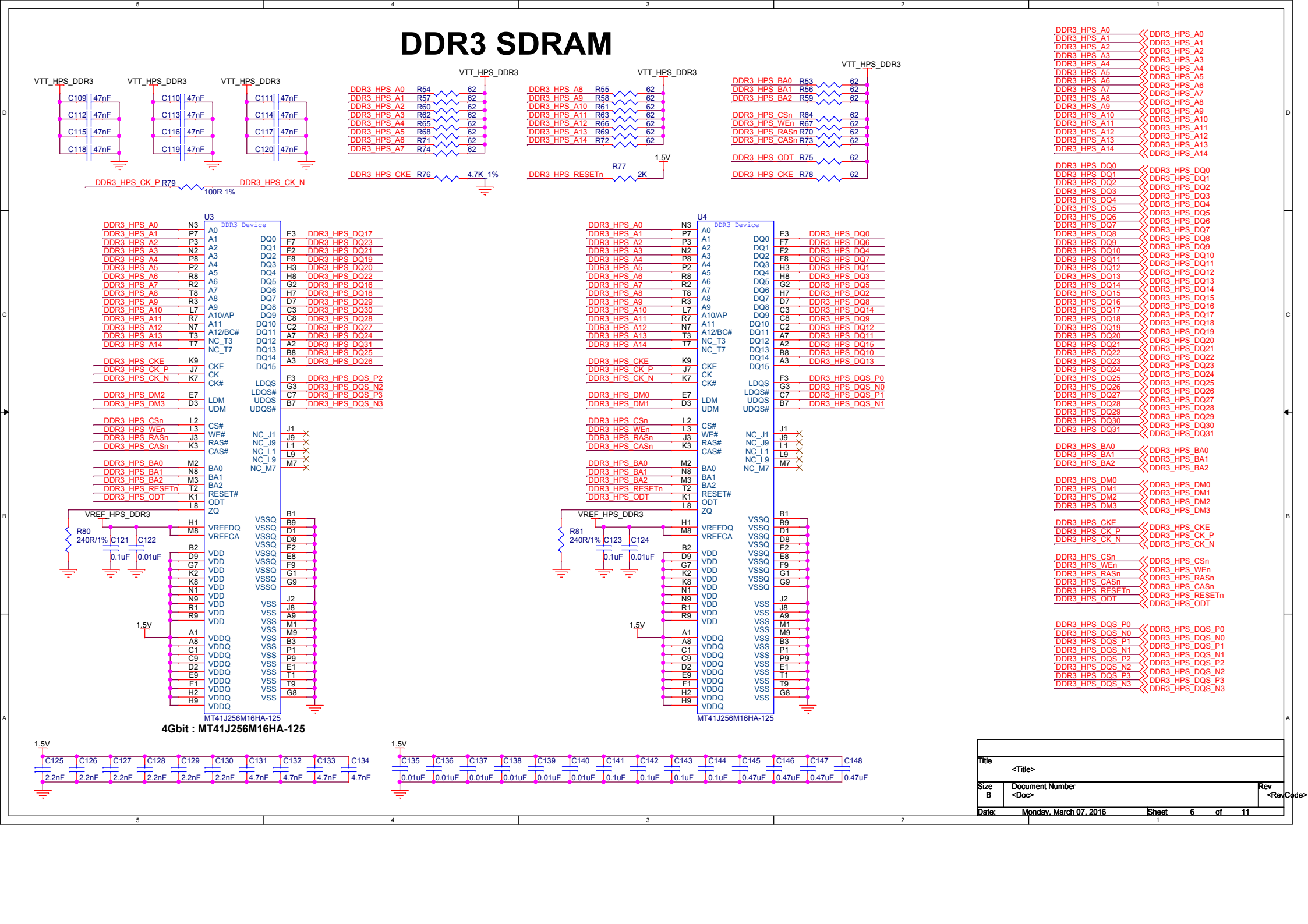
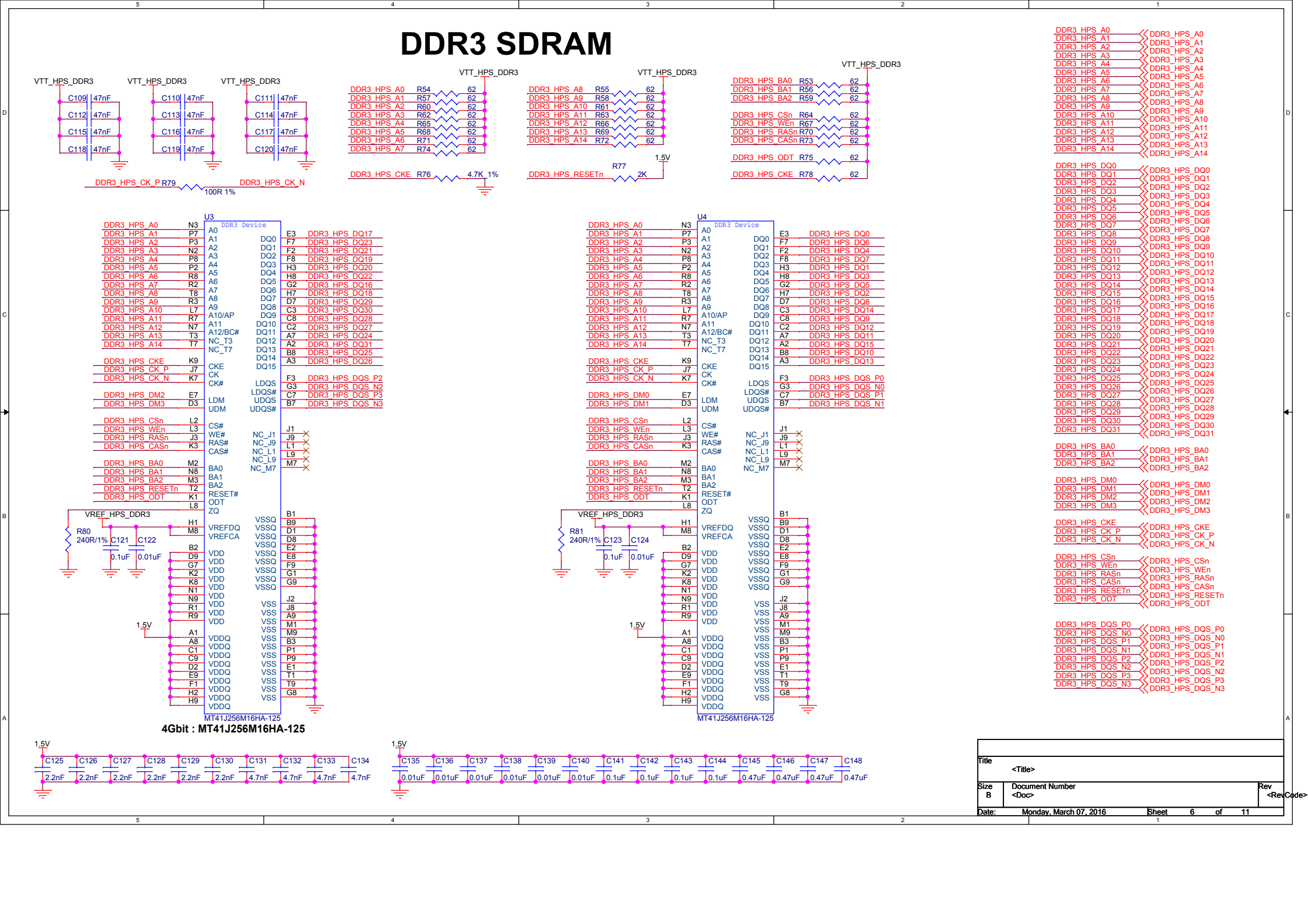
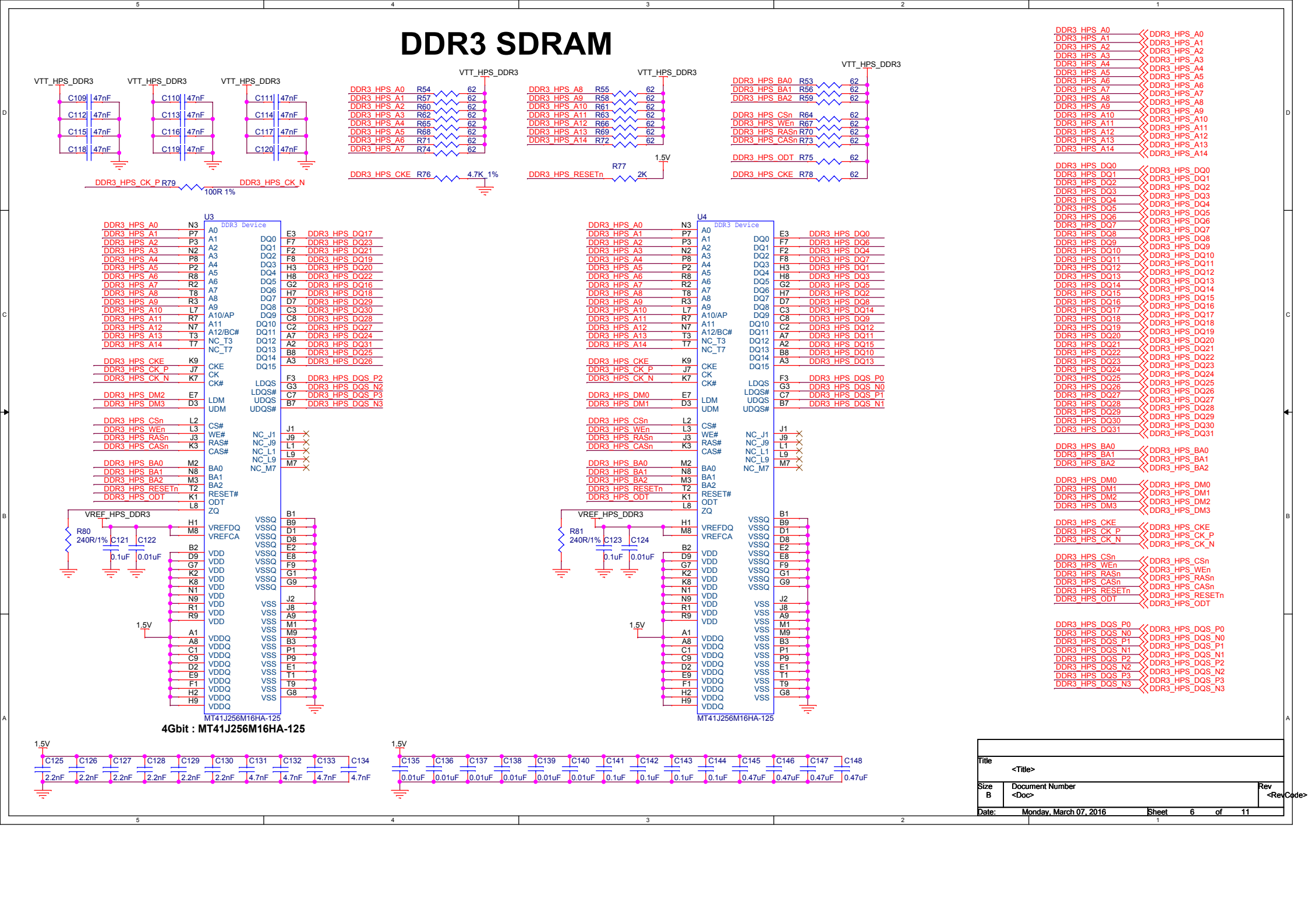
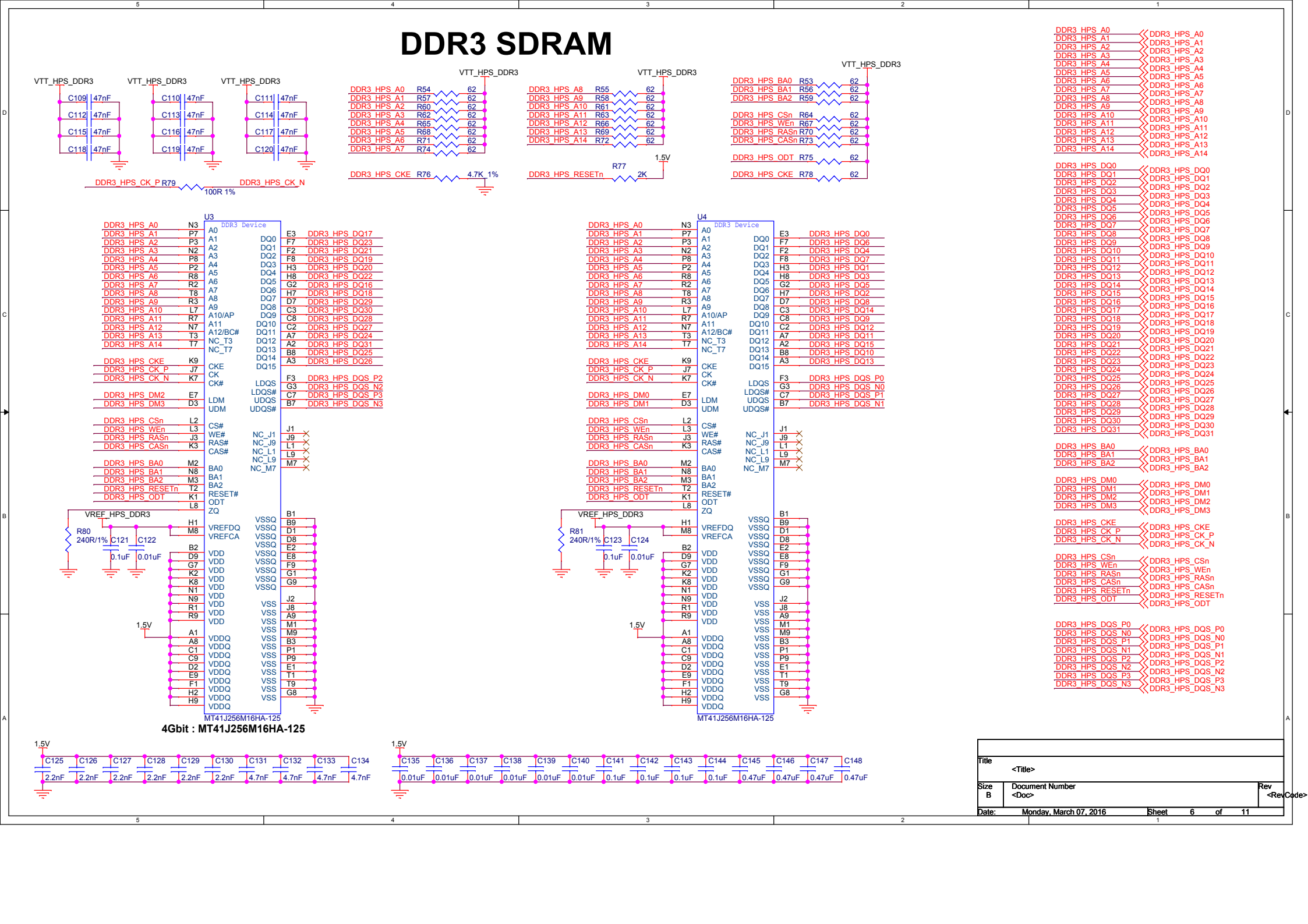
Docouple Capacitance
place near pin16, pin34, pin40;

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DDR3 SDRAM

4Gbitt : MT41J256M16HA-125

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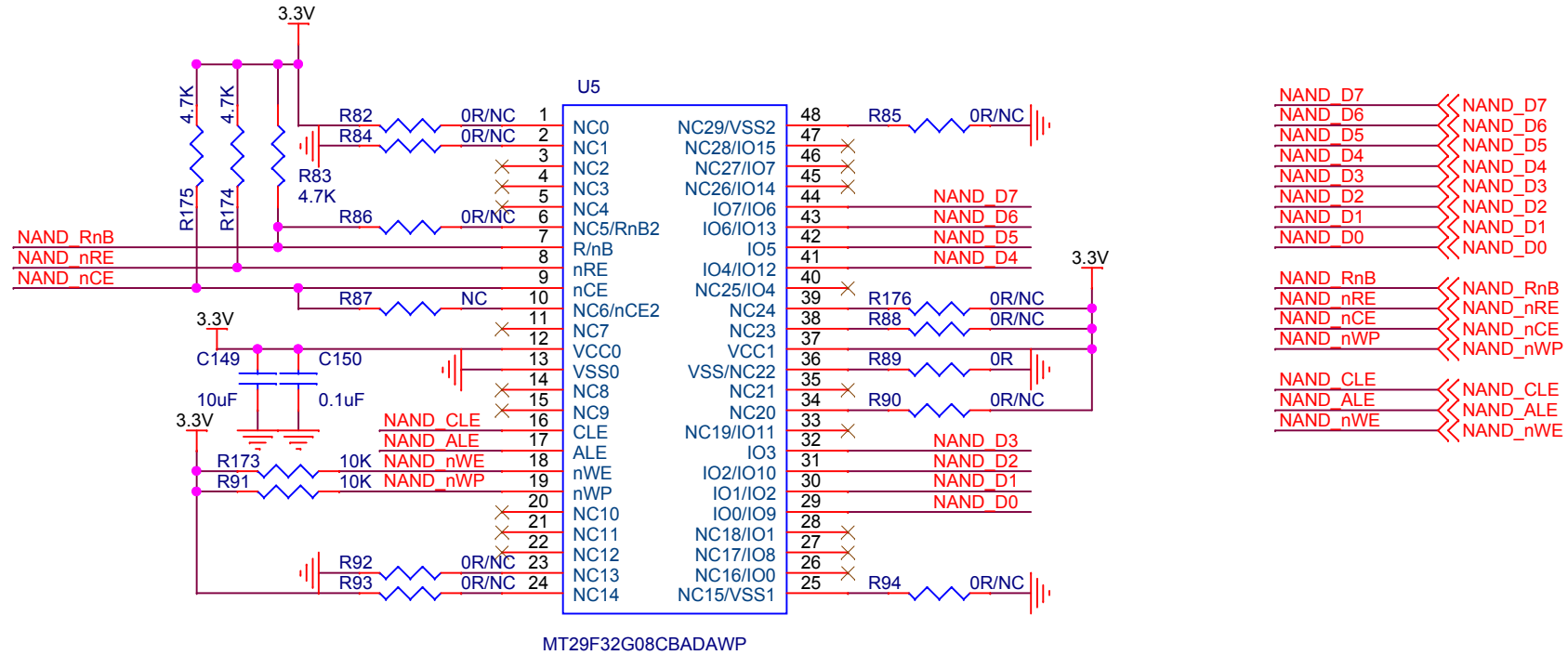
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DDR3 SDRAM

4Gb: MT41J256M16HA-125

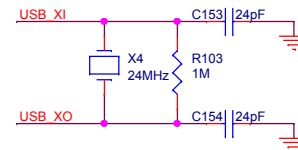
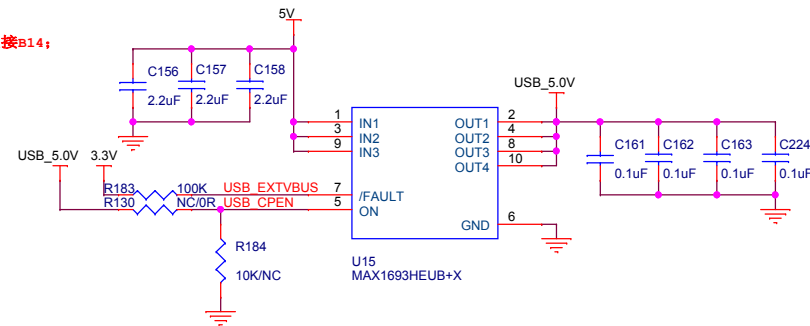
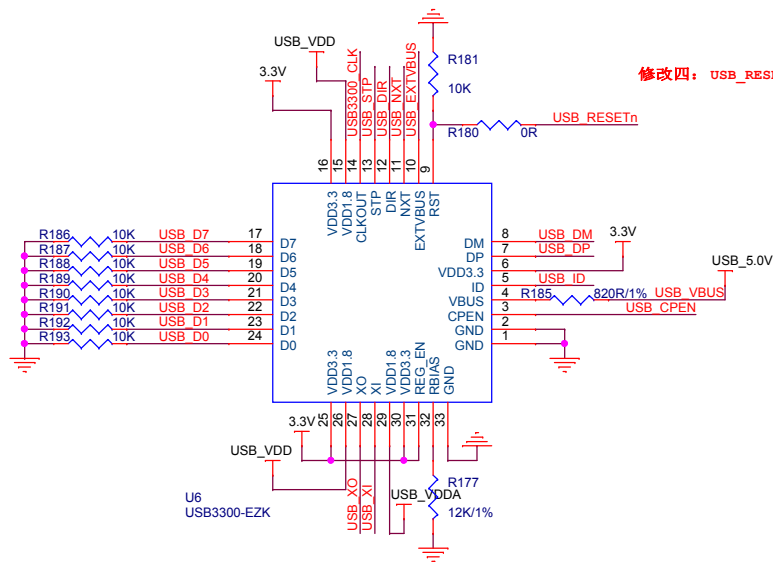
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NAND FLASH

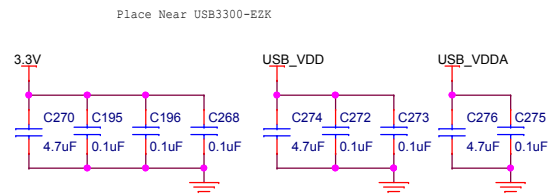


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USB2.0 OTG

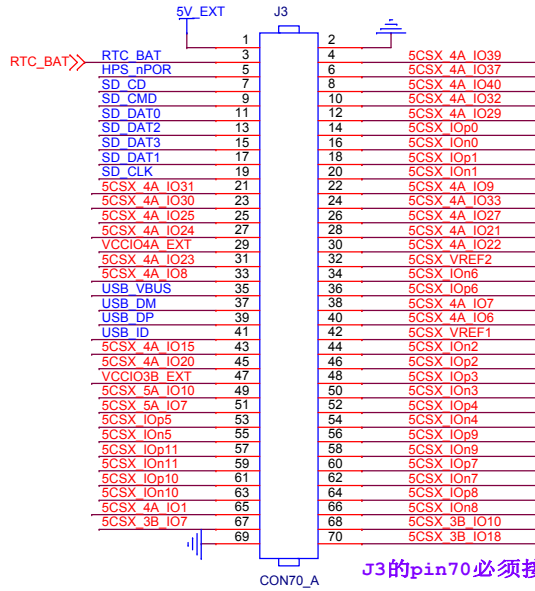


USB_D0	↔	USB_D0
USB_D1	↔	USB_D1
USB_D2	↔	USB_D2
USB_D3	↔	USB_D3
USB_D4	↔	USB_D4
USB_D5	↔	USB_D5
USB_D6	↔	USB_D6
USB_D7	↔	USB_D7
USB_DIR	↔	USB_DIR
USB_STP	↔	USB_STP
USB_NXT	↔	USB_NXT
USB_RESETn	↔	USB_RESETn
USB_DM	↔	USB_DM
USB_DP	↔	USB_DP
USB3300_CLK	↔	USB3300_CLK
USB_ID	↔	USB_ID
USB_VBUS	↔	USB_VBUS



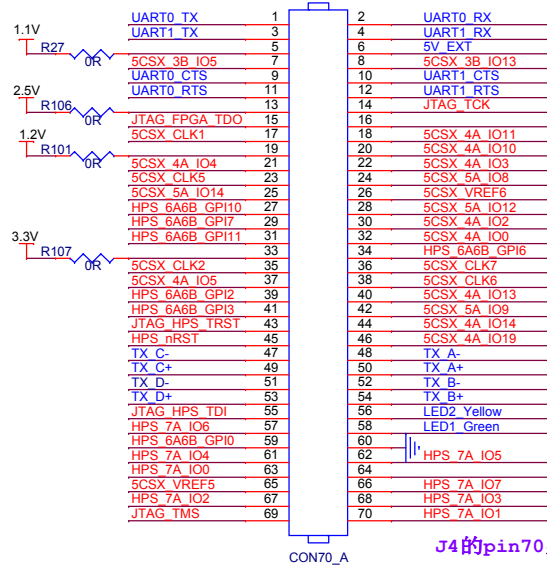
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J3的pin21-pin28必须接GPIO



J3的pin70必须接GPIO

J4的pin7和pin8必须接GPIO

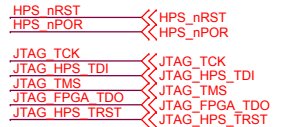
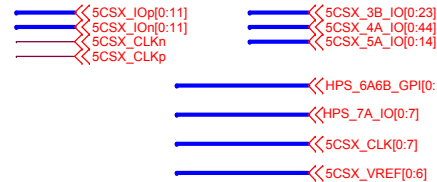


J4的pin18必须接GPIO

J4的pin32必须接GPIO

J4的pin62必须接GPIO

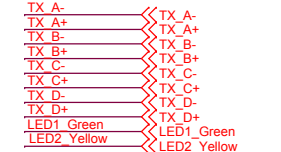
J4的pin70必须接GPIO



Micro SD



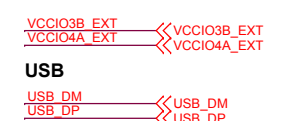
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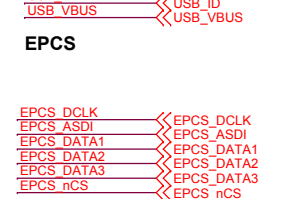
UART to USB



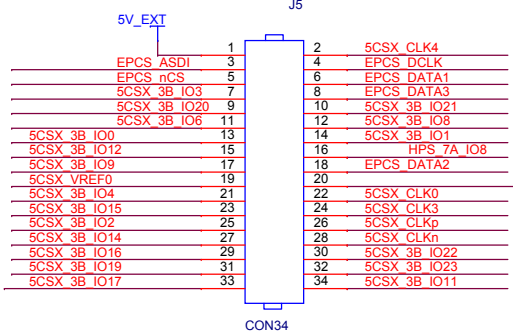
USB



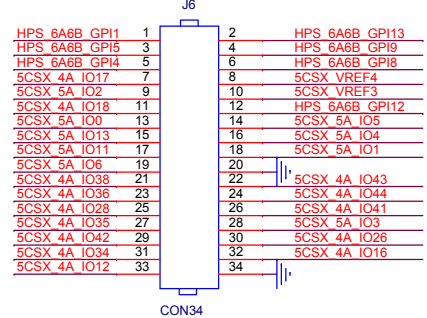
EPCS



修改三：
J5.16原空置，现引出到B19；



CON34



CON34

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