

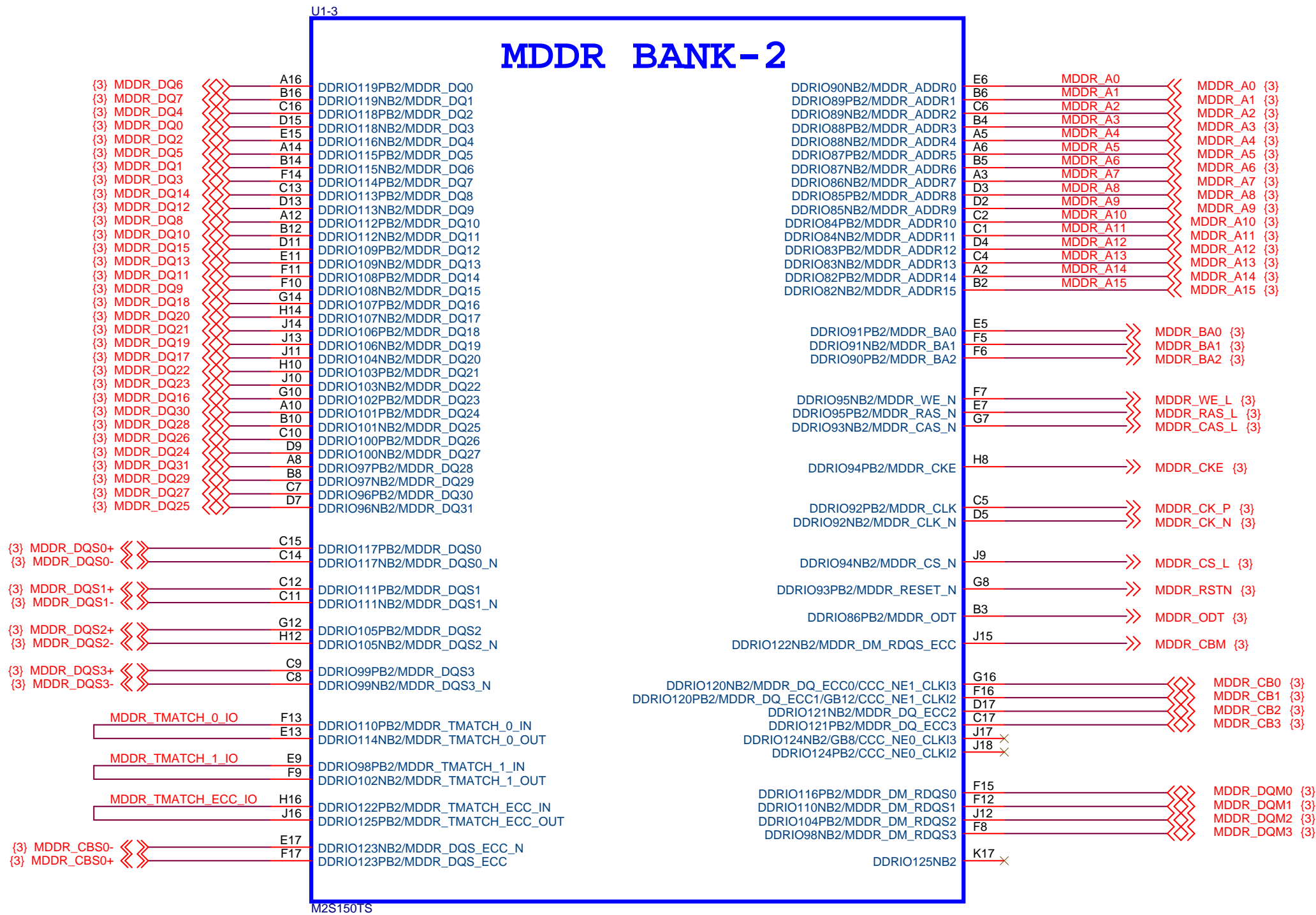


M2S150-ADV-DEV-KIT

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MDDR INTERACE - DDR3

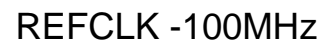


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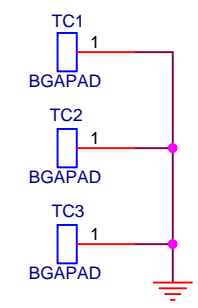
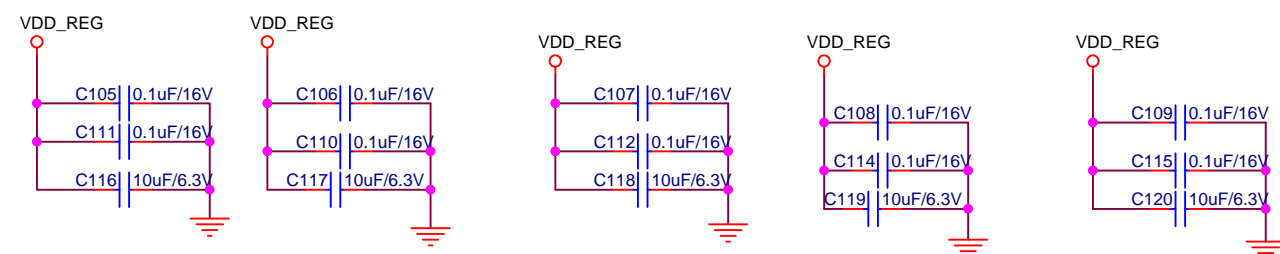
DDR3 MEMORY



SERDES-0



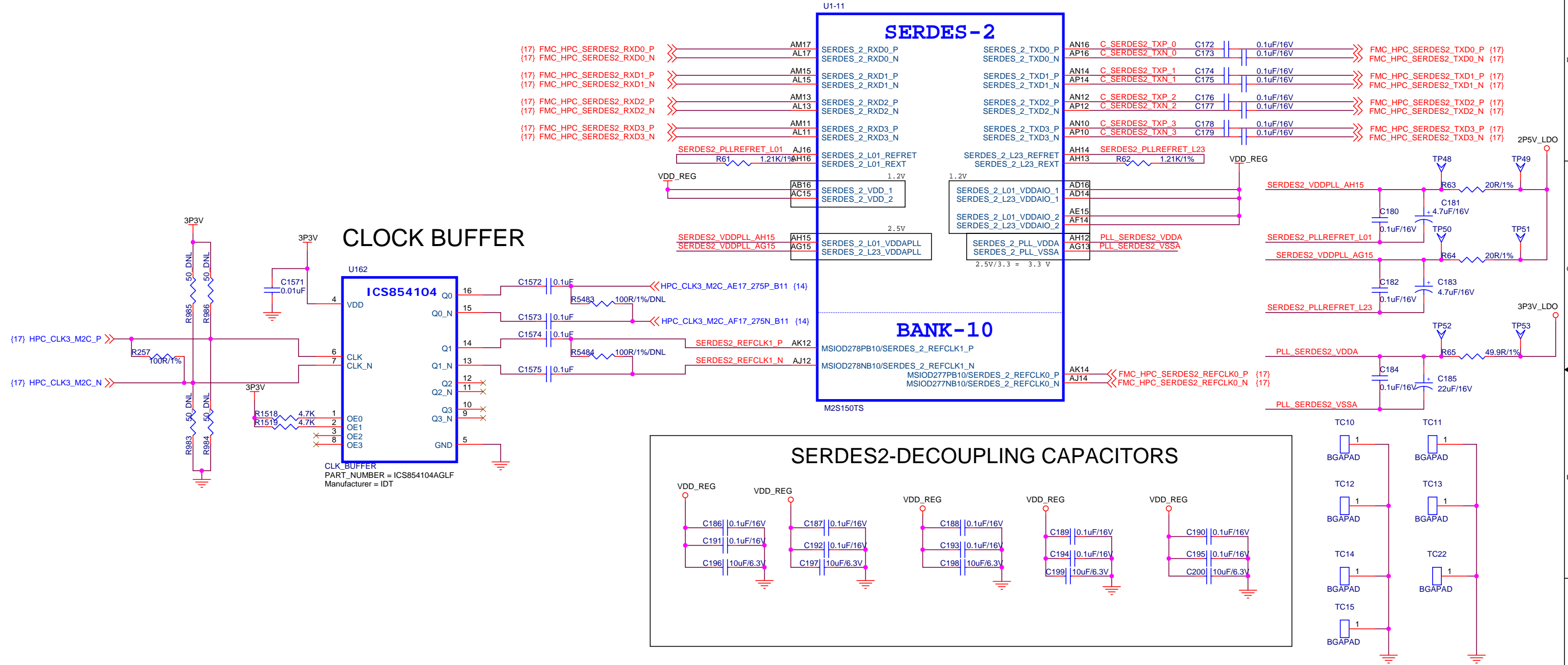
SERDES0-DECOUPLING CAPACITORS



SERDES-1

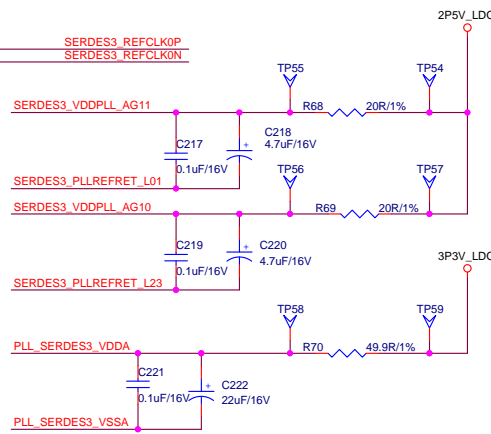


SERDES 2



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SERDES-3

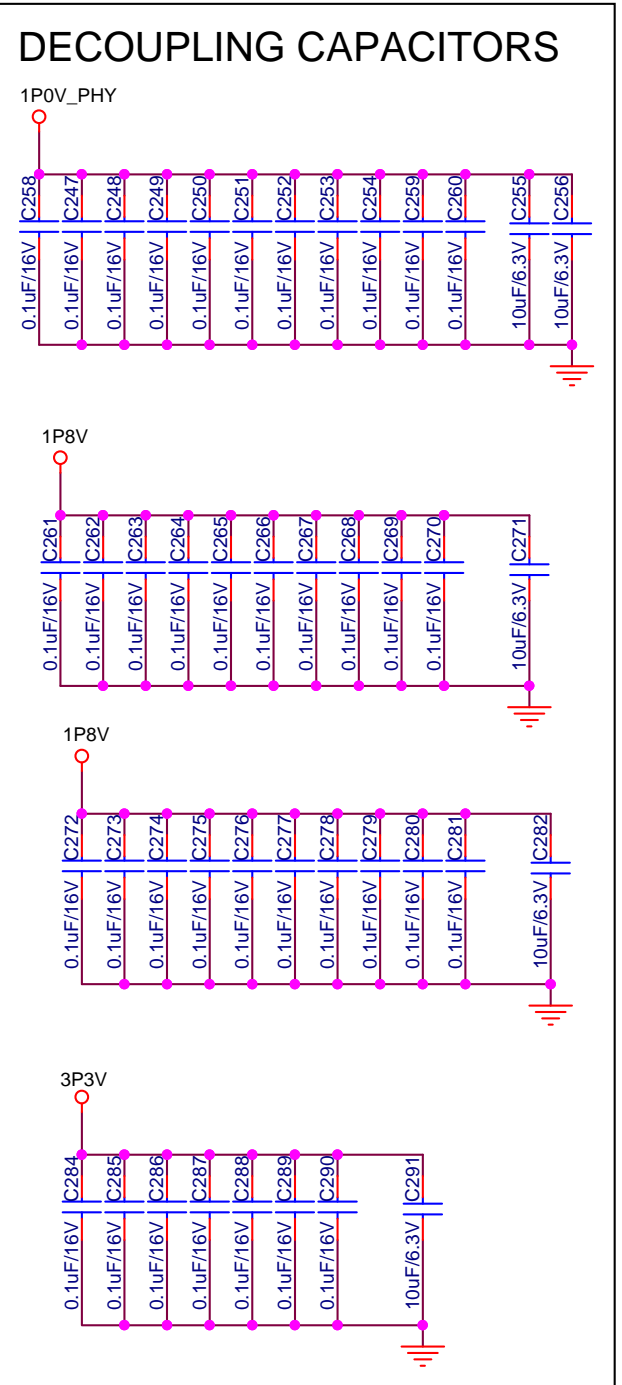
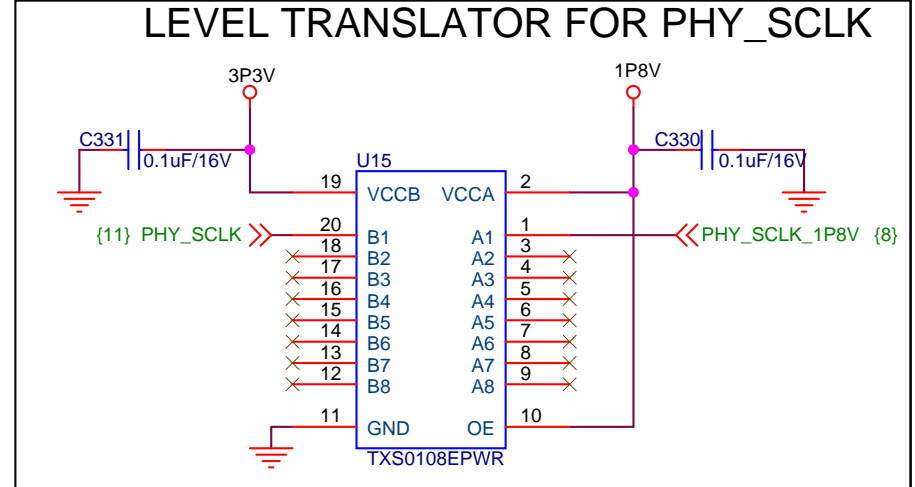
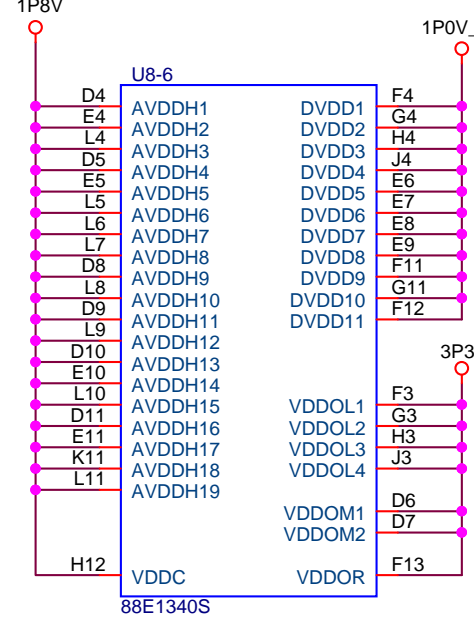
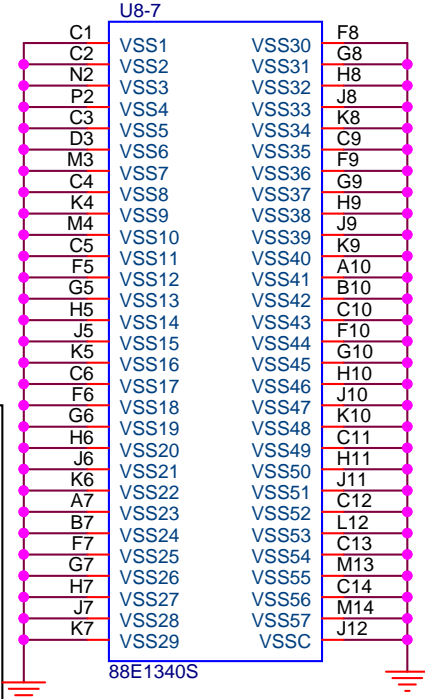
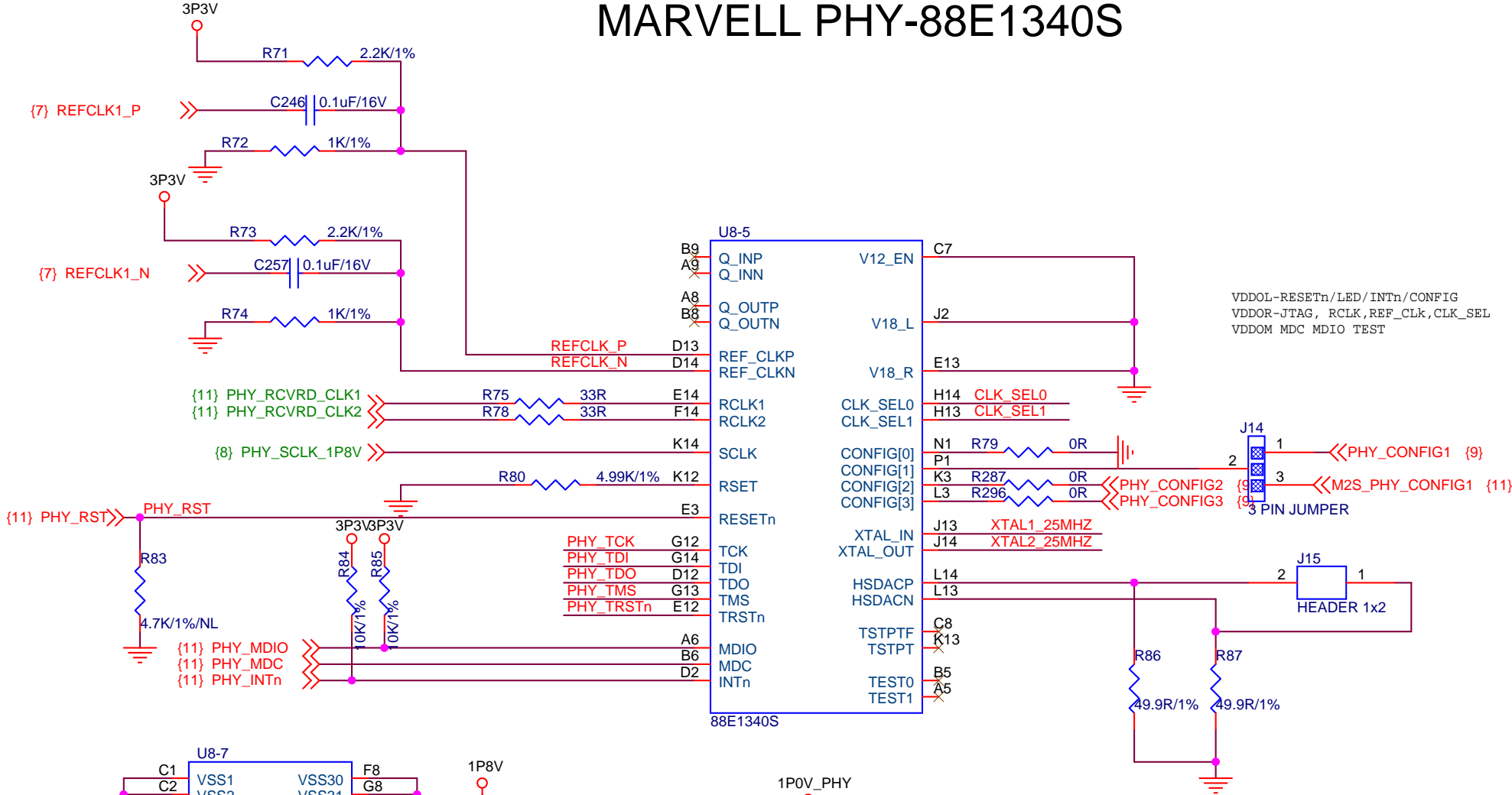
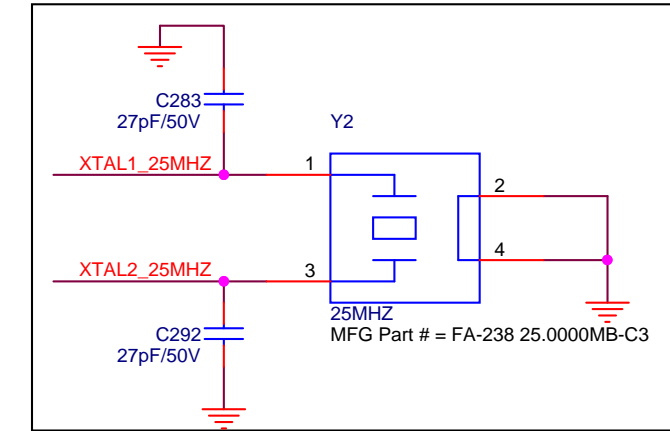
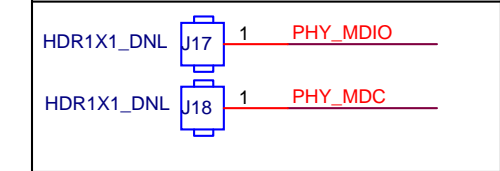
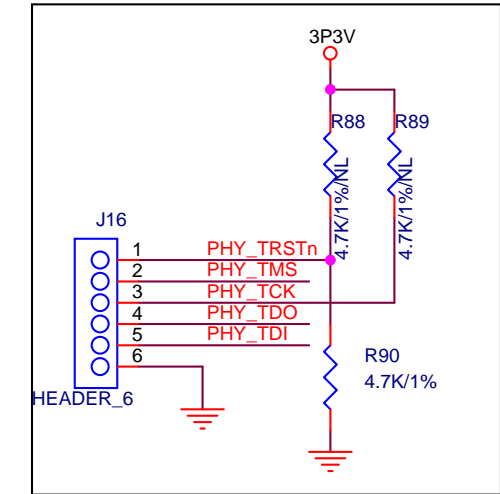
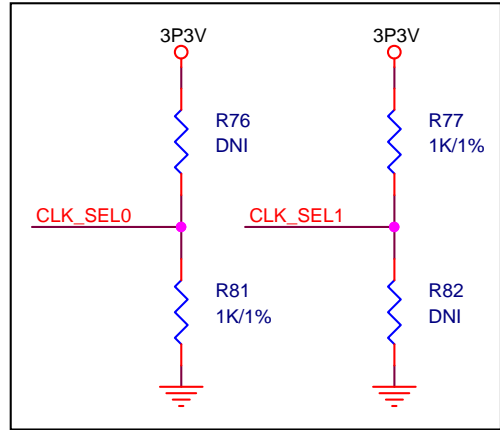


The diagram illustrates the internal architecture of the DS08MB200TTSQ_NOPB, divided into CHANNEL 0 and CHANNEL 1. CHANNEL 0 features a multiplexer (MUX_S0) and a serializer (SERDES3_RE). CHANNEL 1 features a deserializer (DS08MB200TTSQ_NOPB). The diagram also shows the connection of the REFCLK1_N and REFCLK1_P pins to the DS08MB200TTSQ_NOPB.

ENL0-J8	MUX S0-J11	S0_A-TSE PHY	S0_B-Serdes3-Refclk1
L	X	X	X
H	L	Osc-100MHz	Osc-100MHz
H	H	Osc-125MHz	Osc-125MHz

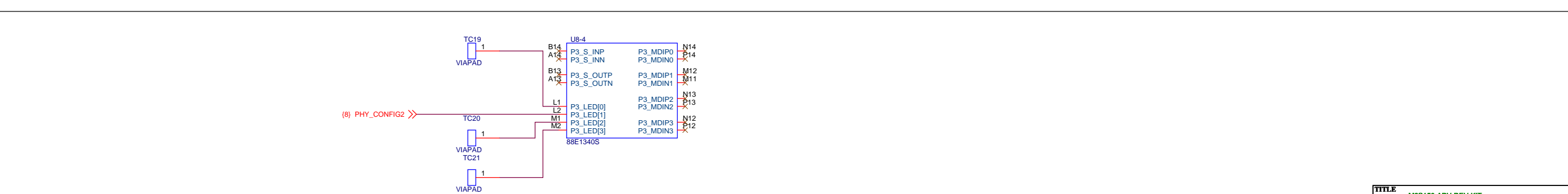
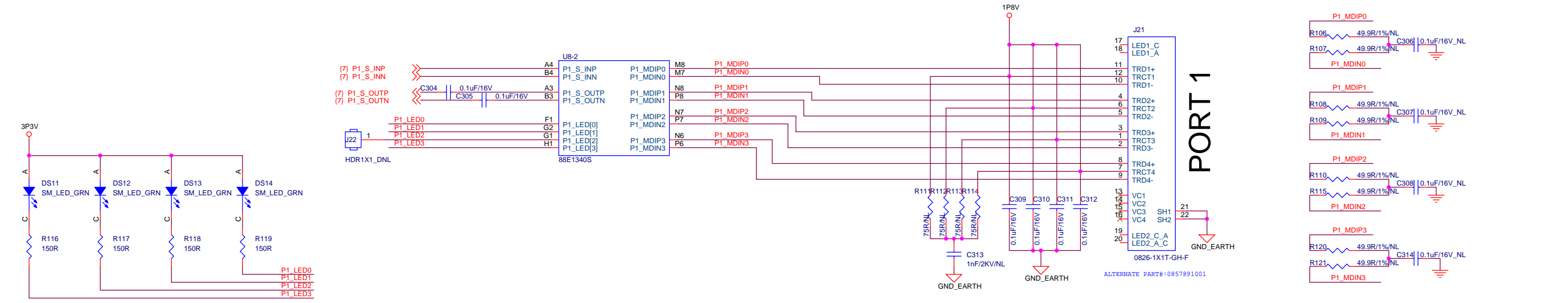
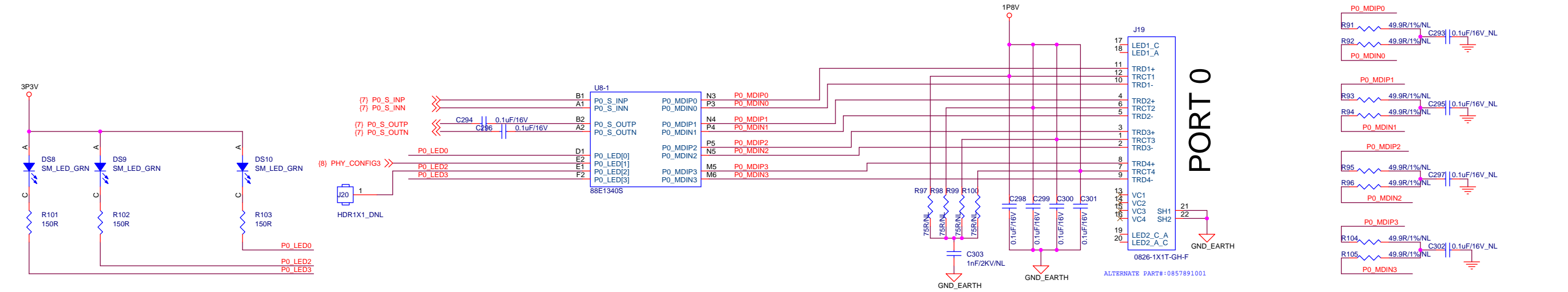
ENL1-J9	MUX S1-J10	S0_A-Serdes3-Refclk0
L	X	X
H	L	SMA-CLK
H	H	FMC-LPC-CLK

MARVELL PHY-88E1340S



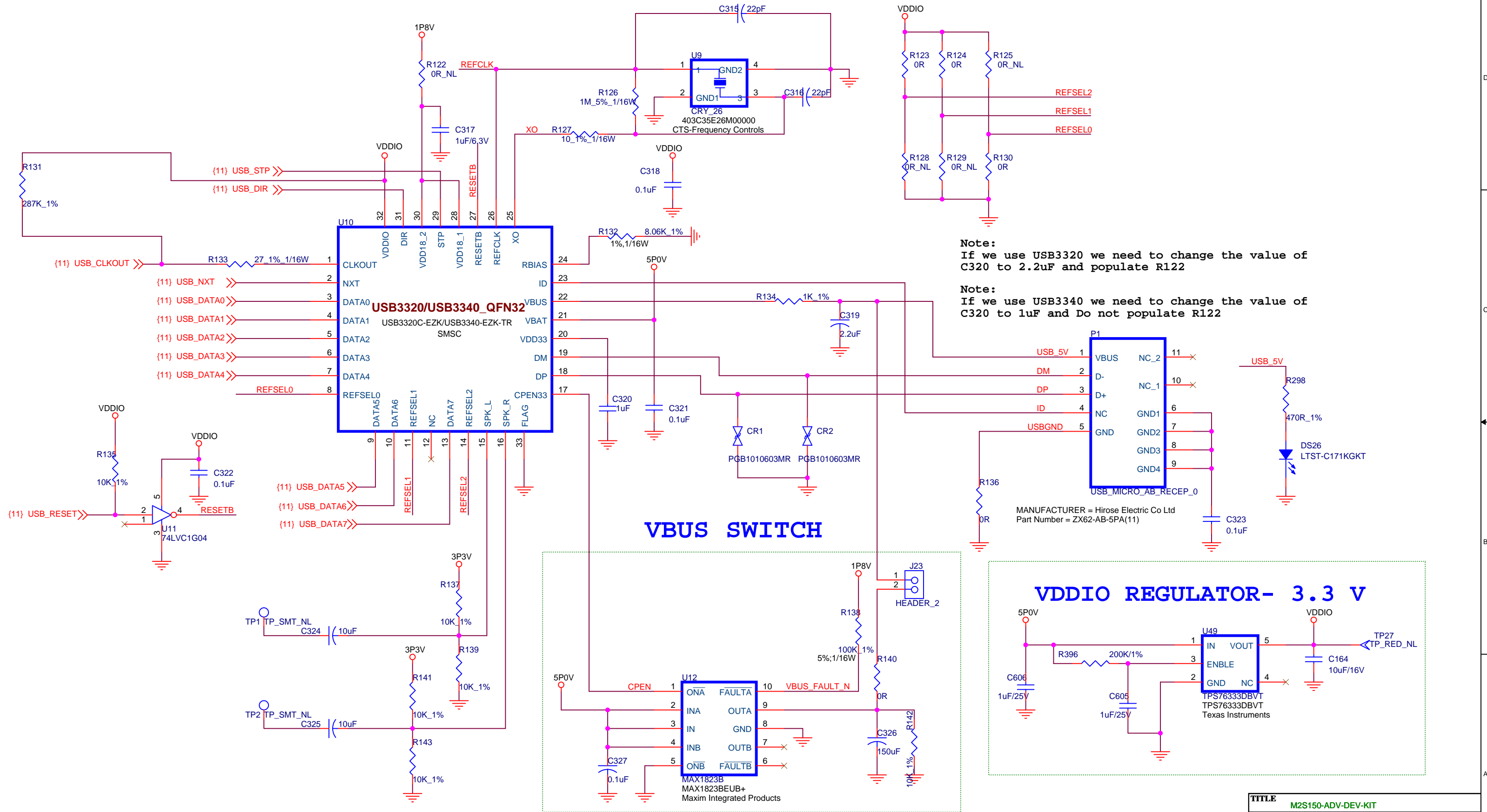
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MARVELL PHY - RJ45 INTERFACE



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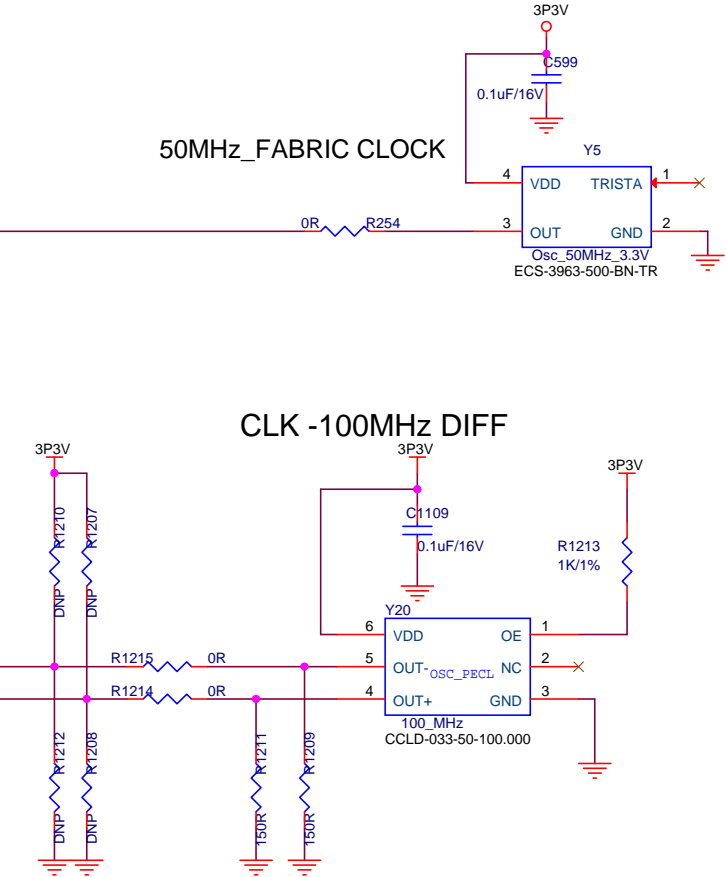
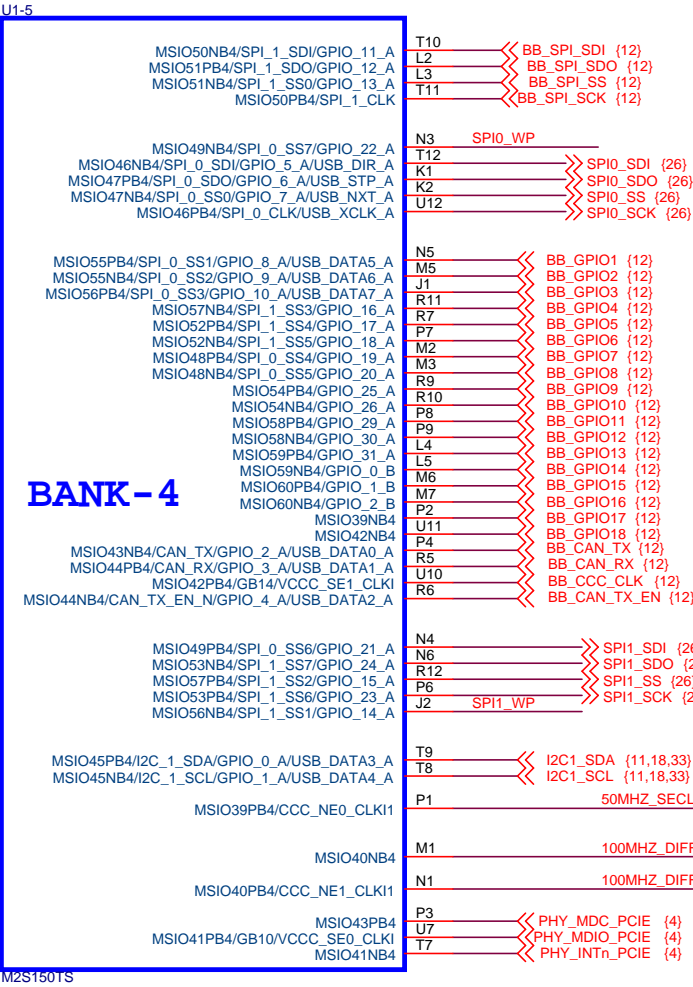
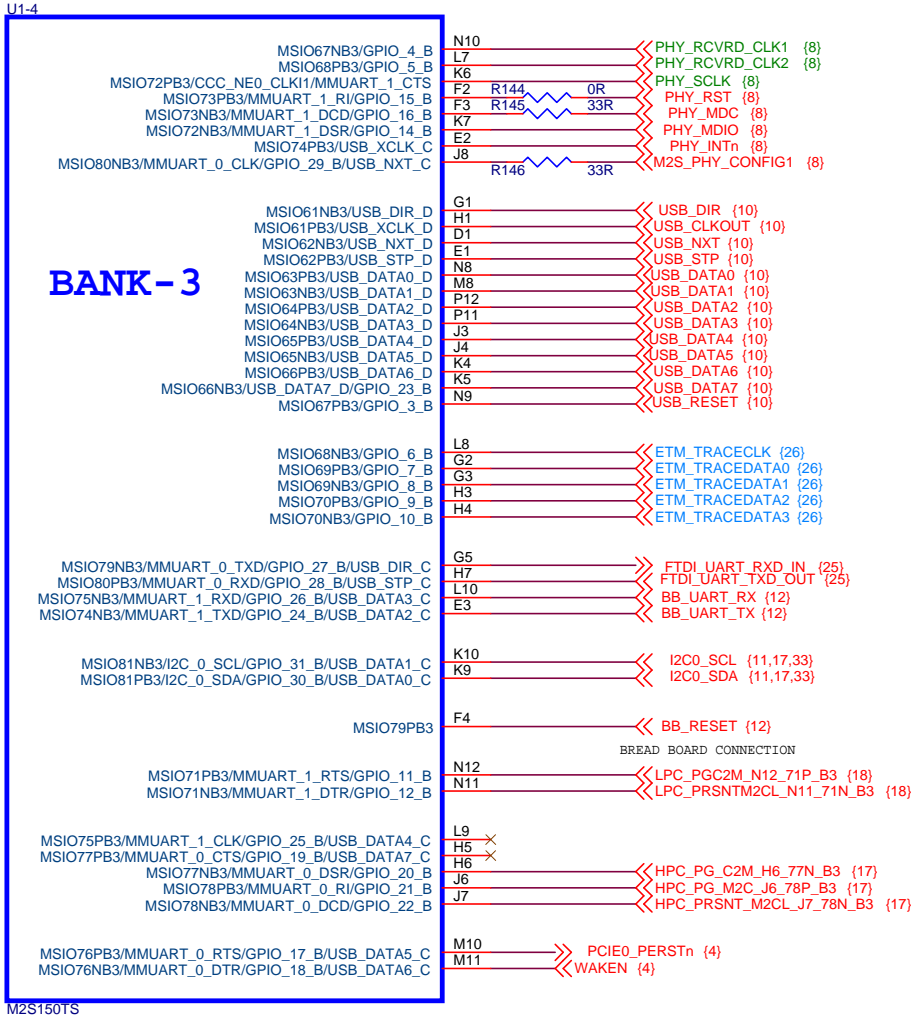
USB Interface



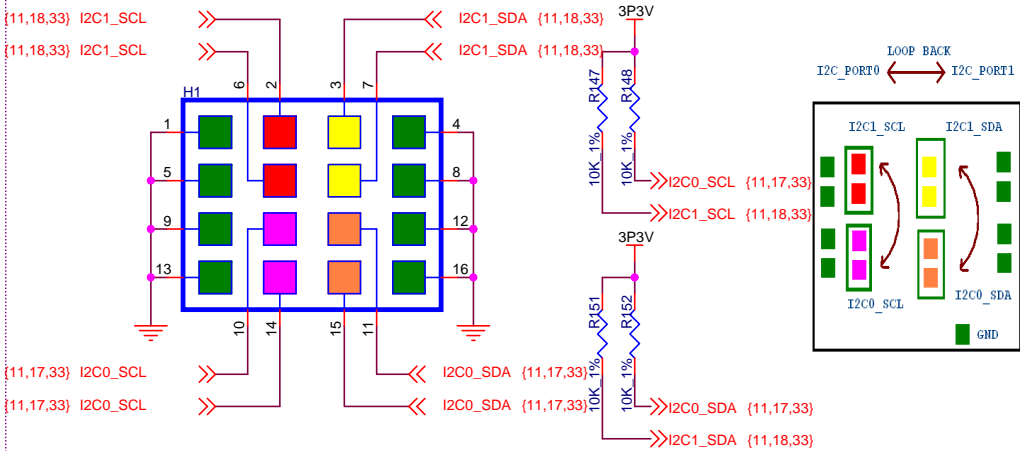
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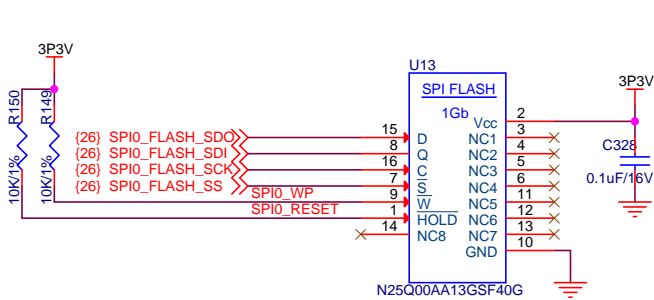
BANK3 & 4 CONNECTIONS



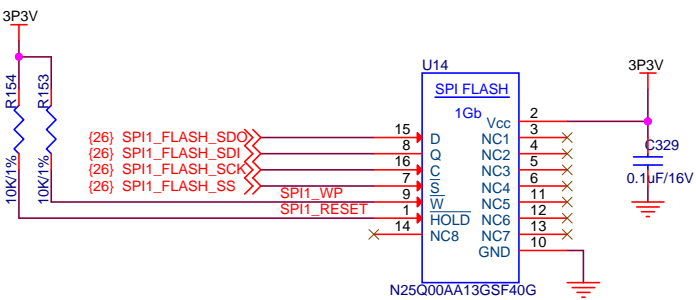
I2C PORT HEADER



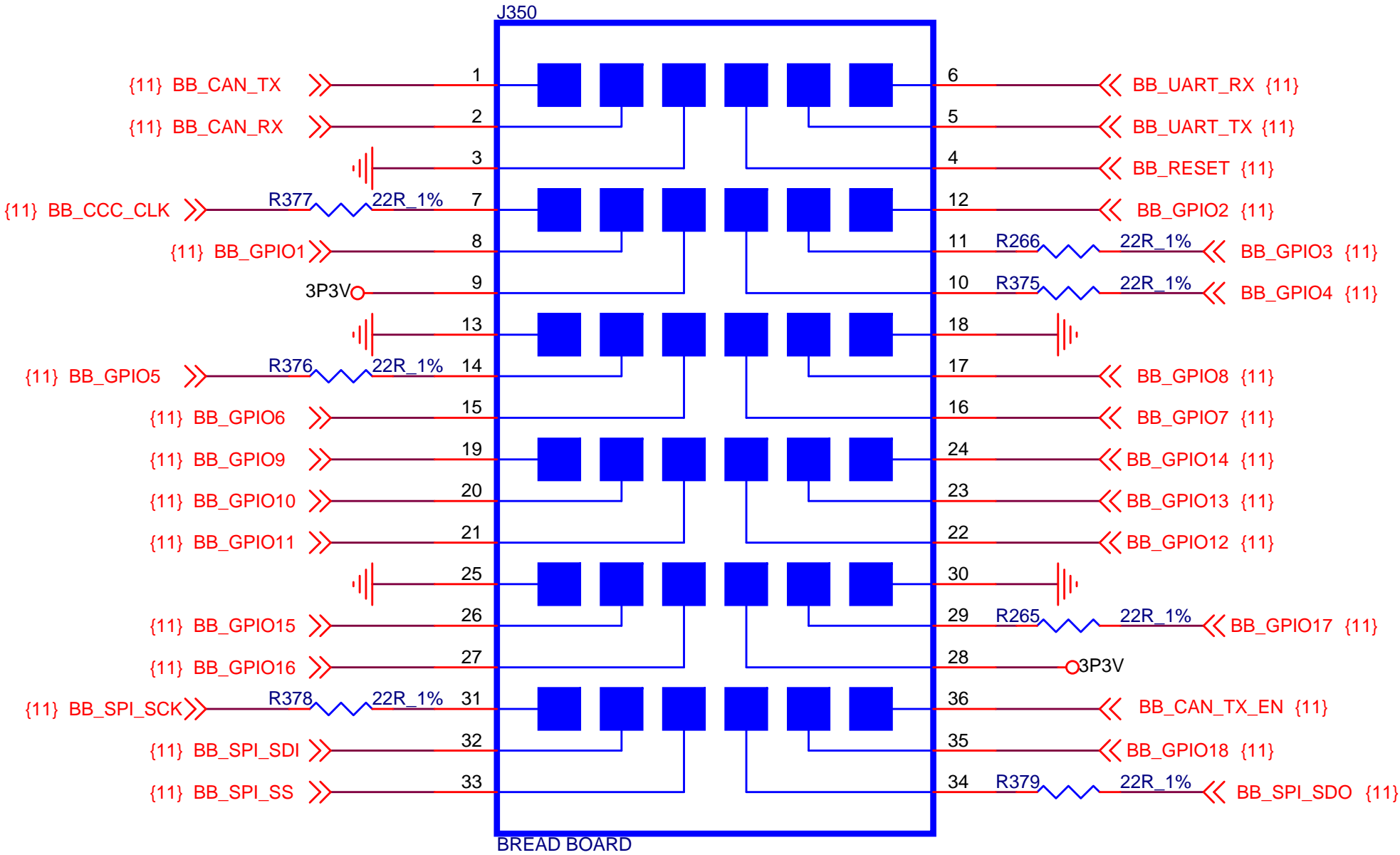
SPI0_FLASH



SPI1_FLASH

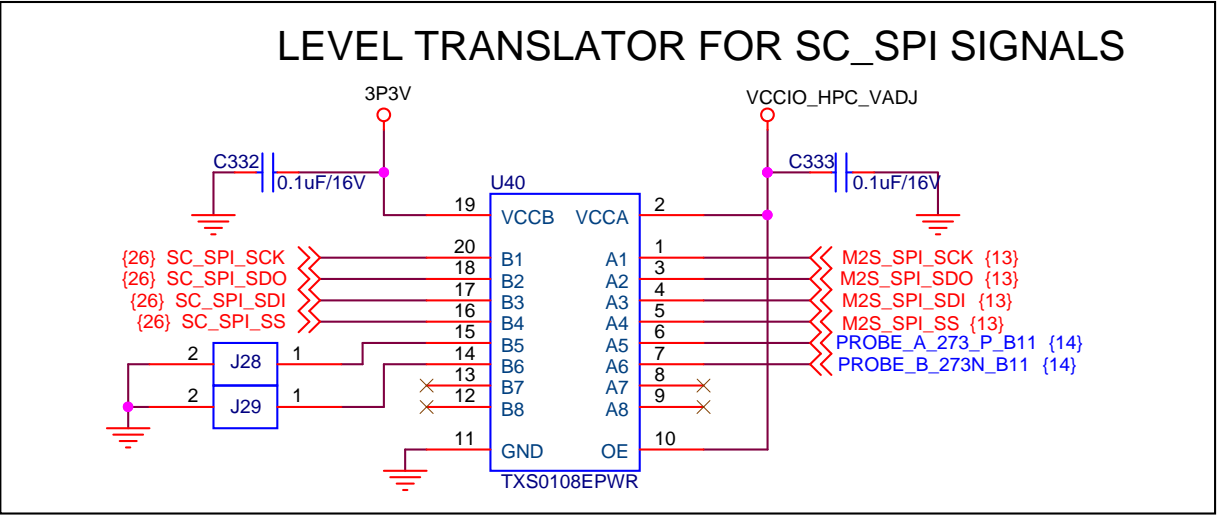
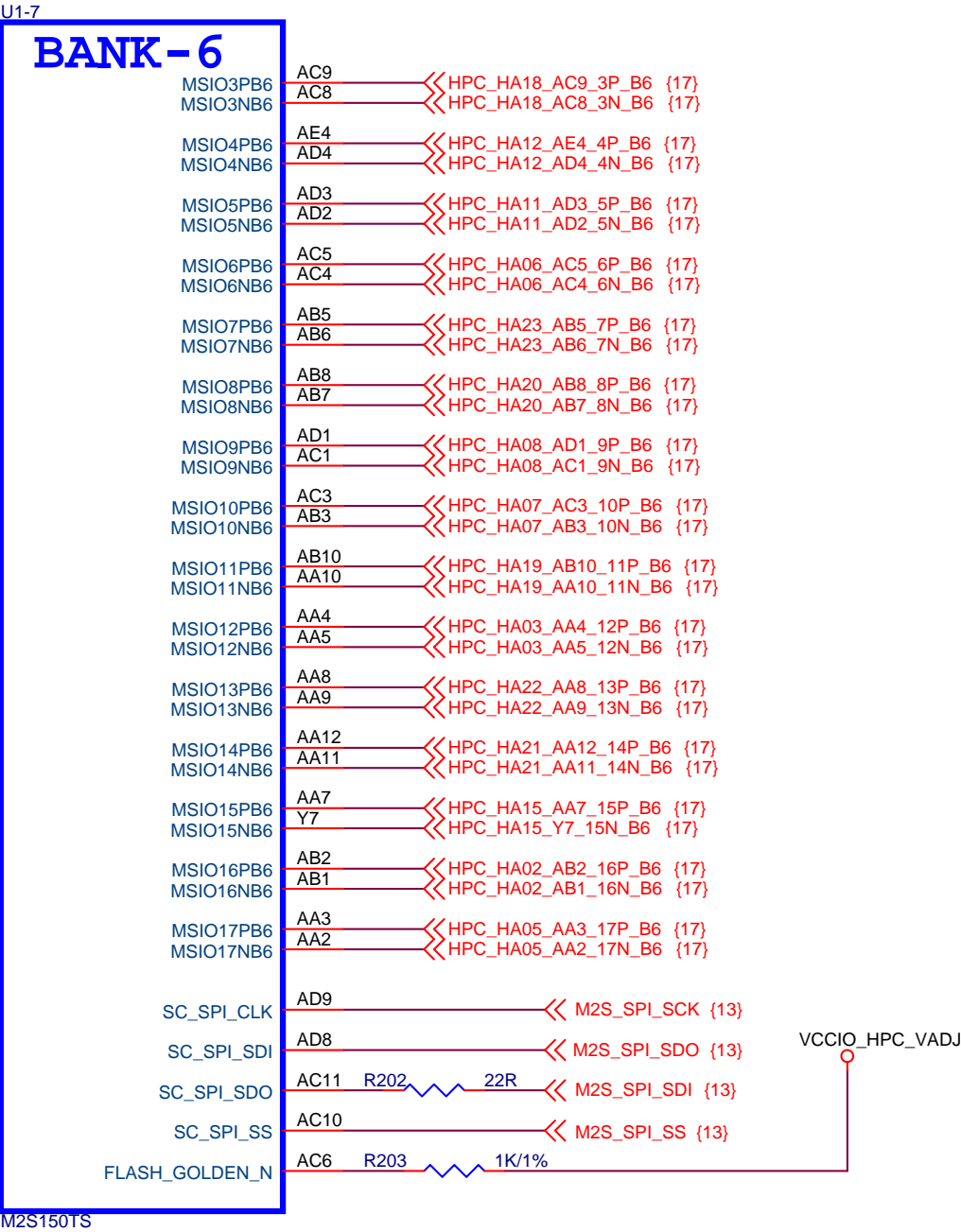
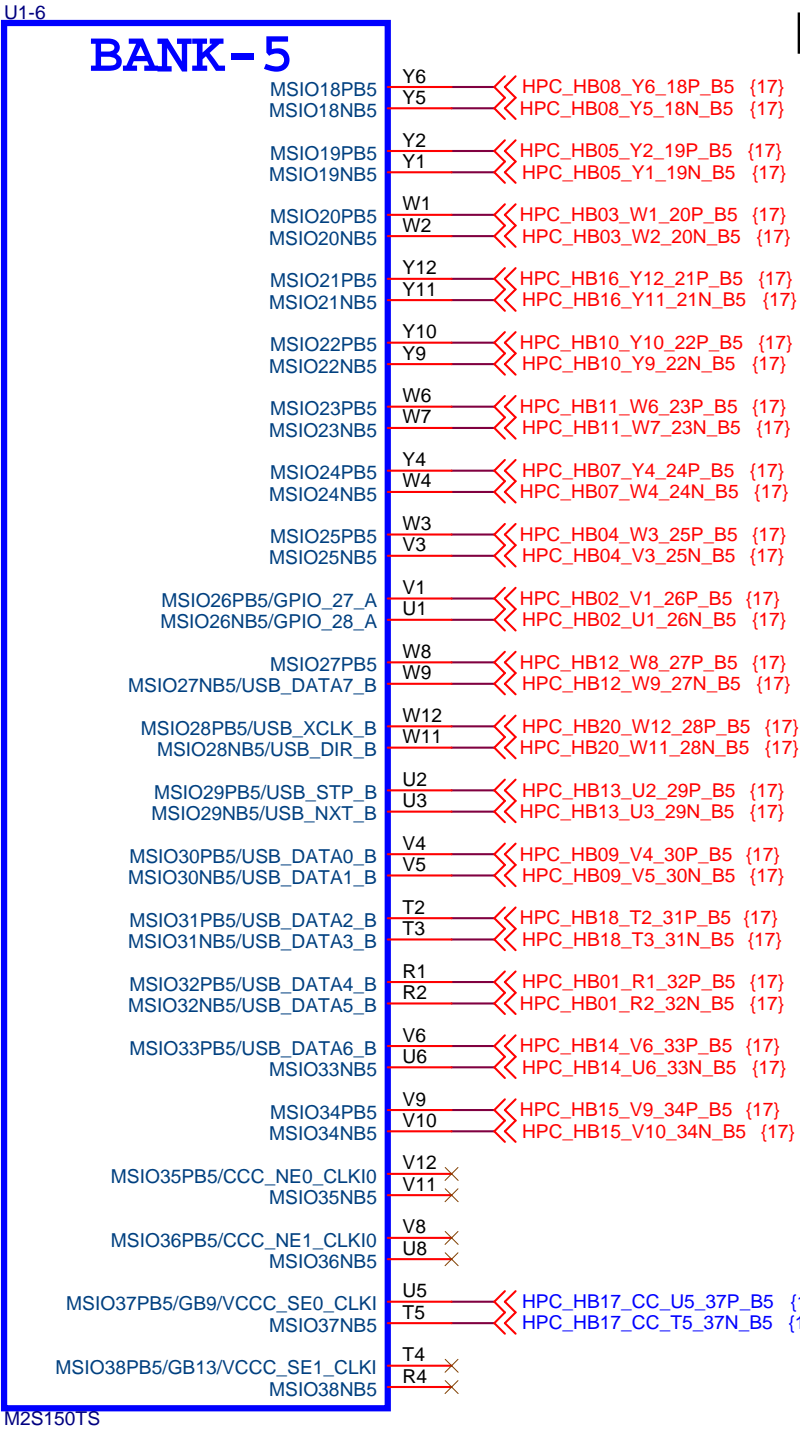


BREAD BOARD CONNECTOR



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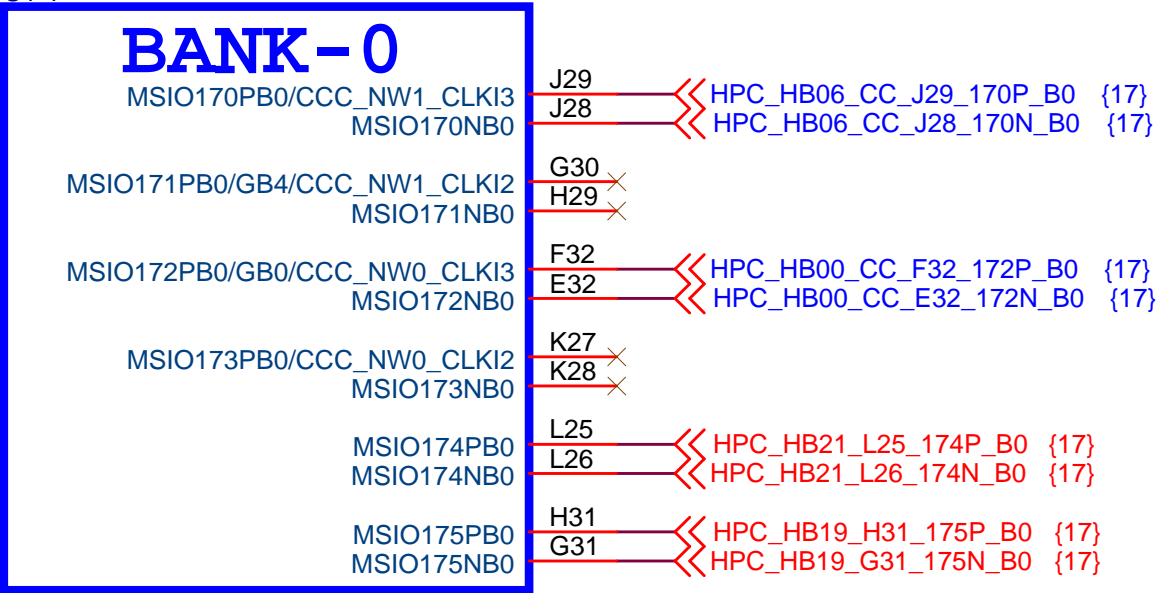
FMC HPC CONNECTIONS



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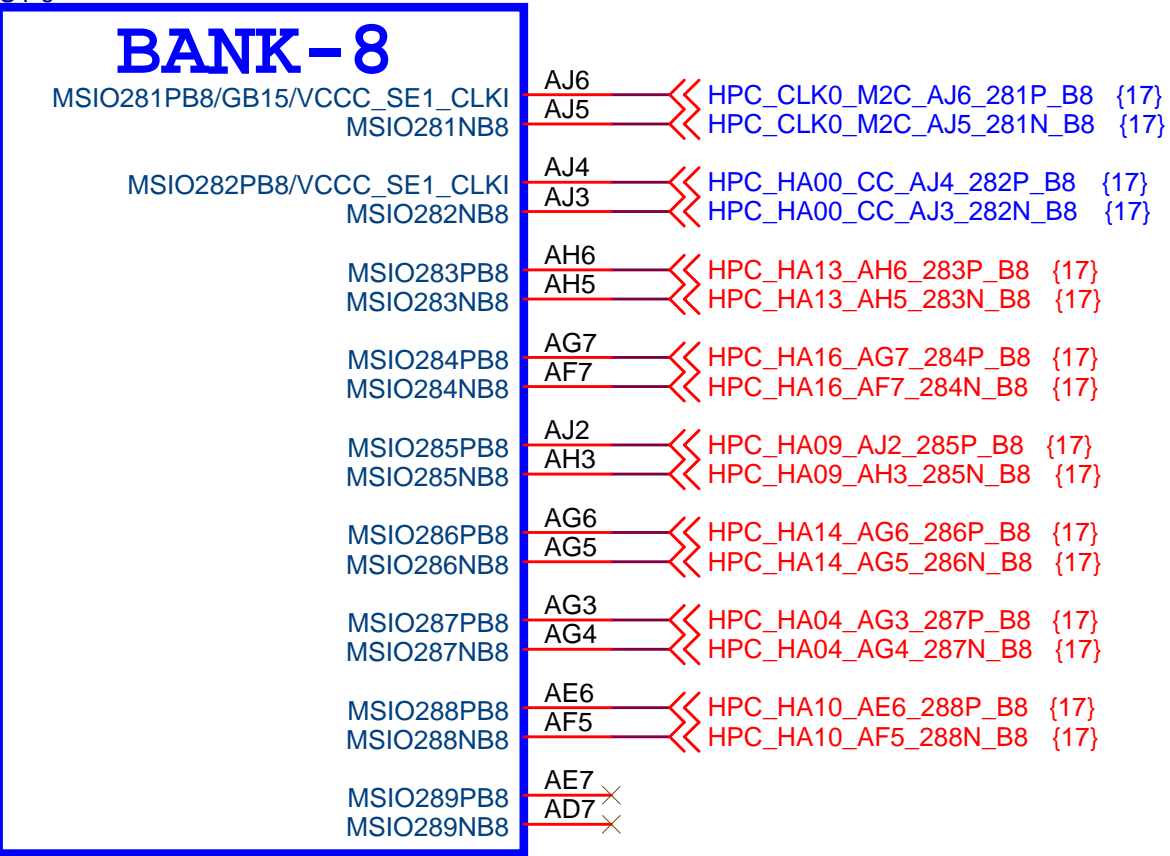
FMC HPC CONNECTIONS

U1-1



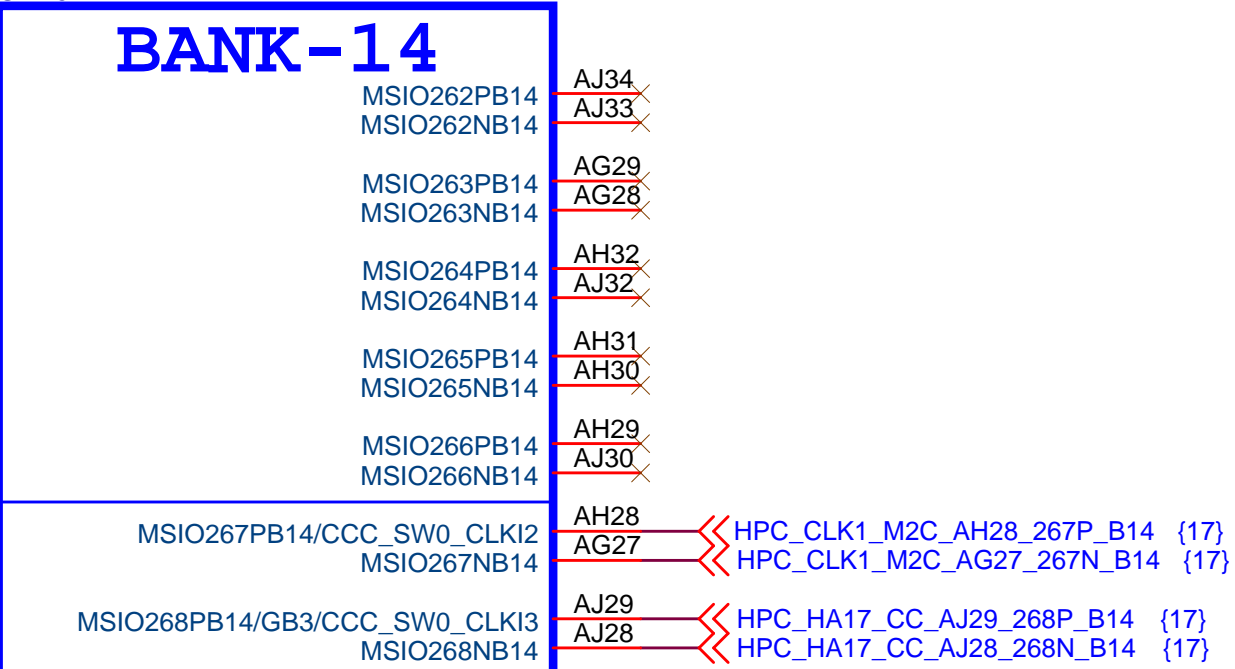
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U1-9



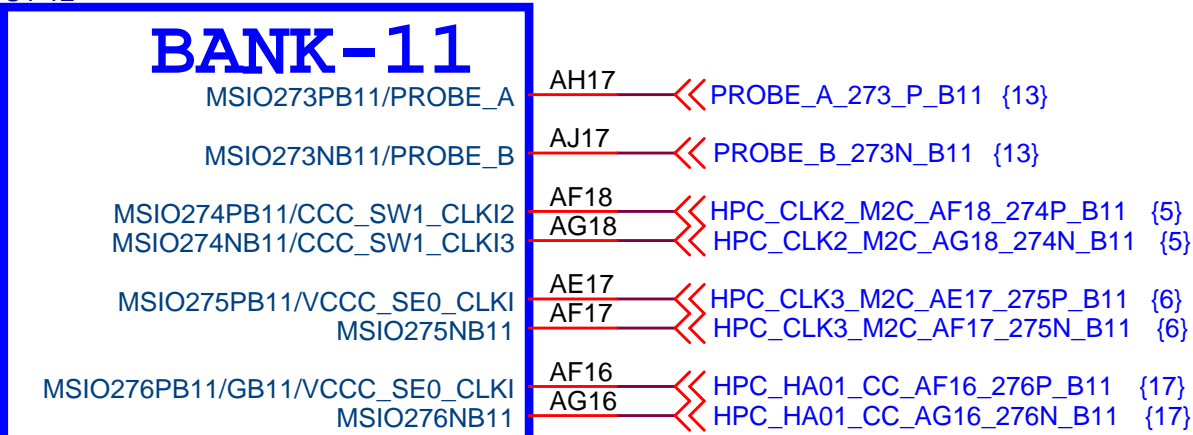
M2S150TS

U1-15



M2S150TS

U1-12

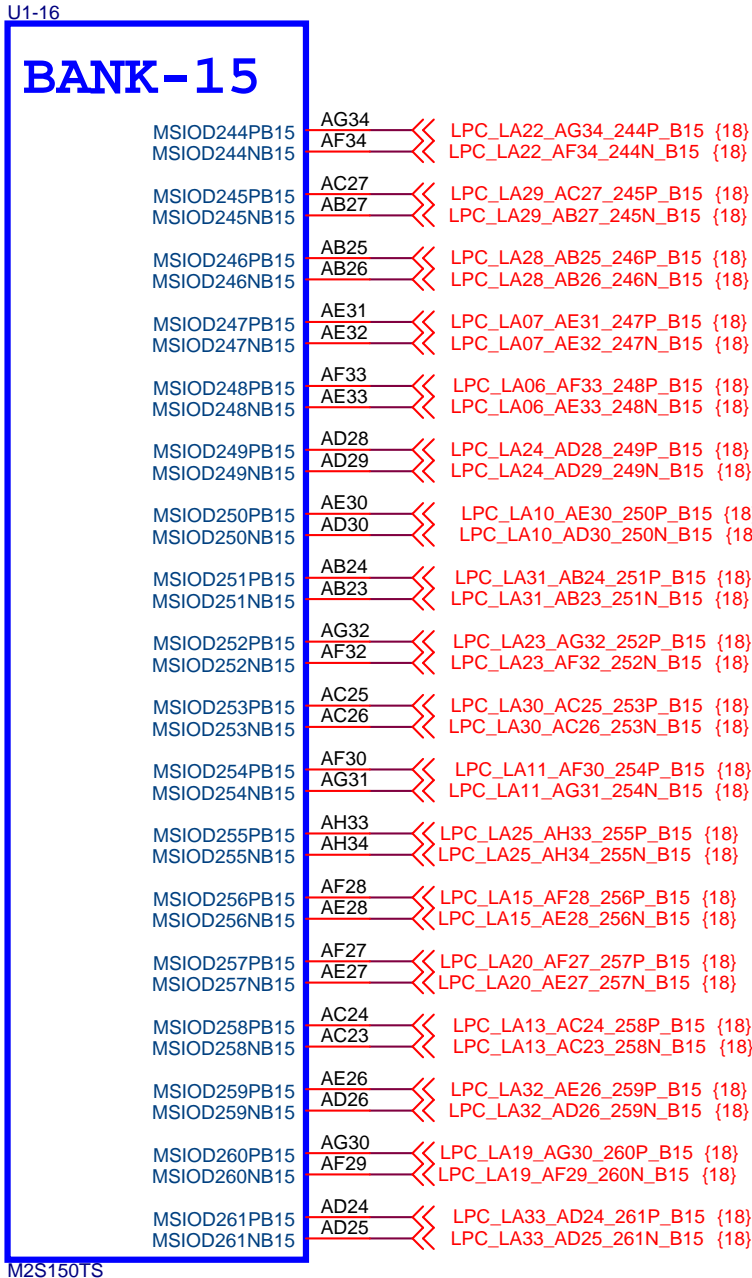


M2S150TS

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FMC HPC CONNECTIONS



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FMC-LPC CONNECTIONS

U1-18

BANK-17

MSIO197PB17	M34	⟷	HPC_LA25_M34_197P_B17 {17}
MSIO197NB17	L34	⟷	HPC_LA25_L34_197N_B17 {17}
MSIO198PB17	P29	⟷	HPC_LA14_P29_198P_B17 {17}
MSIO198NB17	P28	⟷	HPC_LA14_P28_198N_B17 {17}
MSIO199PB17	P31	⟷	HPC_LA19_P31_199P_B17 {17}
MSIO199NB17	P30	⟷	HPC_LA19_P30_199N_B17 {17}
MSIO200PB17	R23	⟷	HPC_LA09_R23_200P_B17 {17}
MSIO200NB17	R24	⟷	HPC_LA09_R24_200N_B17 {17}
MSIO201PB17	N32	⟷	HPC_LA03_N32_201P_B17 {17}
MSIO201NB17	N31	⟷	HPC_LA03_N31_201N_B17 {17}
MSIO202PB17	R26	⟷	HPC_LA13_R26_202P_B17 {17}
MSIO202NB17	R25	⟷	HPC_LA13_R25_202N_B17 {17}
MSIO203PB17	P33	⟷	HPC_LA21_P33_203P_B17 {17}
MSIO203NB17	N33	⟷	HPC_LA21_N33_203N_B17 {17}
MSIO204PB17	R28	✗	
MSIO204NB17	R27	✗	
MSIO205PB17	R31	⟷	HPC_LA20_R31_205P_B17 {17}
MSIO205NB17	R30	⟷	HPC_LA20_R30_205N_B17 {17}
MSIO206PB17	T23	⟷	HPC_LA10_T23_206P_B17 {17}
MSIO206NB17	T24	⟷	HPC_LA10_T24_206N_B17 {17}
MSIO207PB17	R33	⟷	HPC_LA22_R33_207P_B17 {17}
MSIO207NB17	R32	⟷	HPC_LA22_R32_207N_B17 {17}
MSIO208PB17	P34	⟷	HPC_LA27_P34_208P_B17 {17}
MSIO208NB17	N34	⟷	HPC_LA27_N34_208N_B17 {17}
MSIO209PB17	T28	⟷	HPC_LA16_T28_209P_B17 {17}
MSIO209NB17	T27	⟷	HPC_LA16_T27_209N_B17 {17}
MSIO210PB17	T30	⟷	HPC_LA11_T30_210P_B17 {17}
MSIO210NB17	T29	⟷	HPC_LA11_T29_210N_B17 {17}
MSIO211PB17	U25	✗	
MSIO211NB17	T25	✗	
MSIO212PB17	T33	⟷	HPC_LA23_T33_212P_B17 {17}
MSIO212NB17	T32	⟷	HPC_LA23_T32_212N_B17 {17}
MSIO213PB17/GB6/CCC_NW1_CLKI1	U31	⟷	HPC_LA17_CC_U31_213P_B17 {17}
MSIO213NB17	U32	⟷	HPC_LA17_CC_U32_213N_B17 {17}
MSIO214PB17/GB2/CCC_NW0_CLKI1	U23	⟷	HPC_LA00_CC_U23_214P_B17 {17}
MSIO214NB17	U24	⟷	HPC_LA00_CC_U24_214N_B17 {17}
MSIO215PB17/CCC_NW1_CLKI0	U29	⟷	HPC_LA18_CC_U29_215P_B17 {17}
MSIO215NB17	U30	⟷	HPC_LA18_CC_U30_215N_B17 {17}
MSIO216PB17/CCC_NW0_CLKI0	U27	⟷	HPC_LA01_CC_U27_216P_B17 {17}
MSIO216NB17	U26	⟷	HPC_LA01_CC_U26_216N_B17 {17}

M2S150TS

U1-19

BANK-18

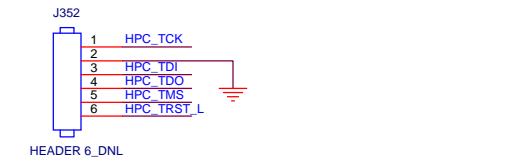
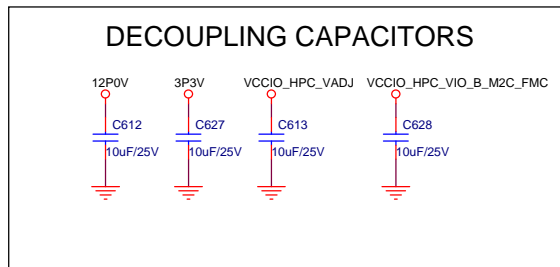
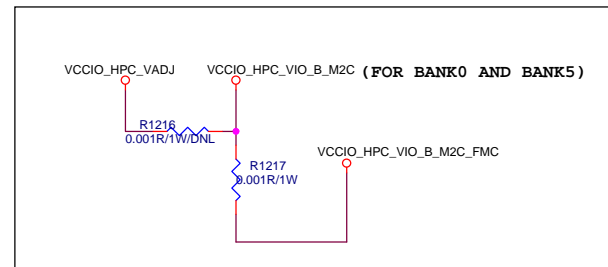
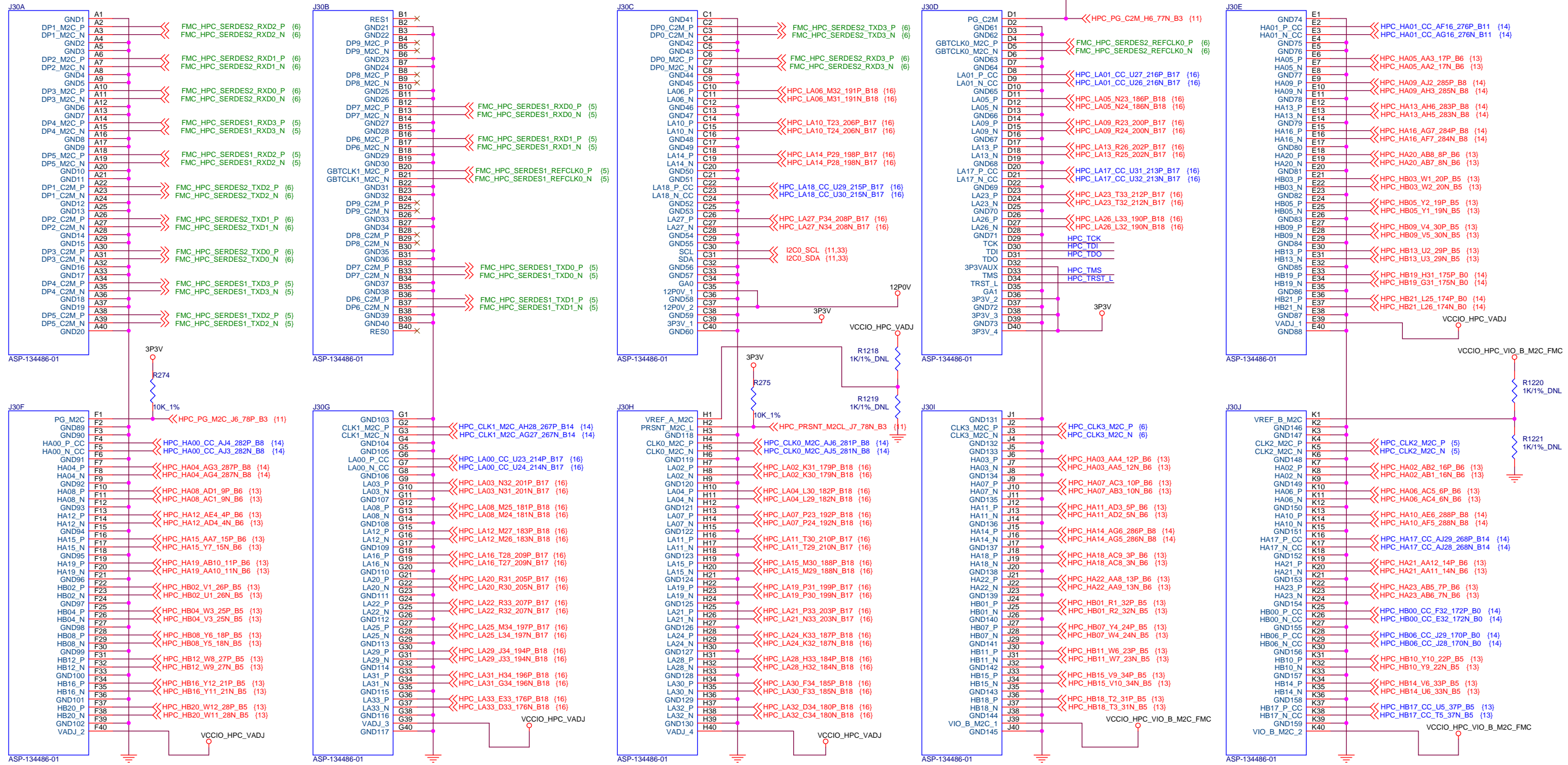
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MSIO176NB18	D33	⟷	HPC_LA33_D33_176N_B18 {17}
MSIO177PB18	J31	✗	
MSIO177NB18	J30	✗	
MSIO178PB18	L28	✗	
MSIO178NB18	L27	✗	
MSIO179PB18	K31	⟷	HPC_LA02_K31_179P_B18 {17}
MSIO179NB18	K30	⟷	HPC_LA02_K30_179N_B18 {17}
MSIO180PB18	D34	⟷	HPC_LA32_D34_180P_B18 {17}
MSIO180NB18	C34	⟷	HPC_LA32_C34_180N_B18 {17}
MSIO181PB18	M25	⟷	HPC_LA08_M25_181P_B18 {17}
MSIO181NB18	M24	⟷	HPC_LA08_M24_181N_B18 {17}
MSIO182PB18	L30	⟷	HPC_LA04_L30_182P_B18 {17}
MSIO182NB18	L29	⟷	HPC_LA04_L29_182N_B18 {17}
MSIO183PB18	M27	⟷	HPC_LA12_M27_183P_B18 {17}
MSIO183NB18	M26	⟷	HPC_LA12_M26_183N_B18 {17}
MSIO184PB18	H33	⟷	HPC_LA28_H33_184P_B18 {17}
MSIO184NB18	H32	⟷	HPC_LA28_H32_184N_B18 {17}
MSIO185PB18	F34	⟷	HPC_LA30_F34_185P_B18 {17}
MSIO185NB18	F33	⟷	HPC_LA30_F33_185N_B18 {17}
MSIO186PB18	N23	⟷	HPC_LA05_N23_186P_B18 {17}
MSIO186NB18	N24	⟷	HPC_LA05_N24_186N_B18 {17}
MSIO187PB18	K33	⟷	HPC_LA24_K33_187P_B18 {17}
MSIO187NB18	K32	⟷	HPC_LA24_K32_187N_B18 {17}
MSIO188PB18	M30	⟷	HPC_LA15_M30_188P_B18 {17}
MSIO188NB18	M29	⟷	HPC_LA15_M29_188N_B18 {17}
MSIO189PB18	N27	✗	
MSIO189NB18	N26	✗	
MSIO190PB18	L33	⟷	HPC_LA26_L33_190P_B18 {17}
MSIO190NB18	L32	⟷	HPC_LA26_L32_190N_B18 {17}
MSIO191PB18	M32	⟷	HPC_LA06_M32_191P_B18 {17}
MSIO191NB18	M31	⟷	HPC_LA06_M31_191N_B18 {17}
MSIO192PB18	P23	⟷	HPC_LA07_P23_192P_B18 {17}
MSIO192NB18	P24	⟷	HPC_LA07_P24_192N_B18 {17}
MSIO193PB18	N29	✗	
MSIO193NB18	N28	✗	
MSIO194PB18	J34	⟷	HPC_LA29_J34_194P_B18 {17}
MSIO194NB18	J33	⟷	HPC_LA29_J33_194N_B18 {17}
MSIO195PB18	P26	✗	
MSIO195NB18	P25	✗	
MSIO196PB18	H34	⟷	HPC_LA31_H34_196P_B18 {17}
MSIO196NB18	G34	⟷	HPC_LA31_G34_196N_B18 {17}

M2S150TS



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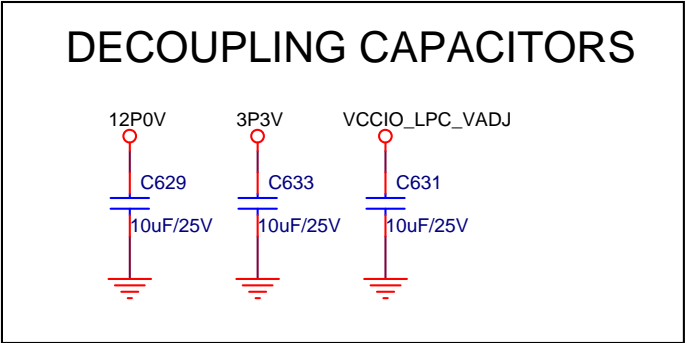
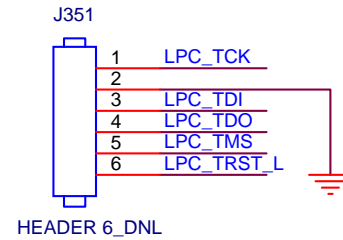
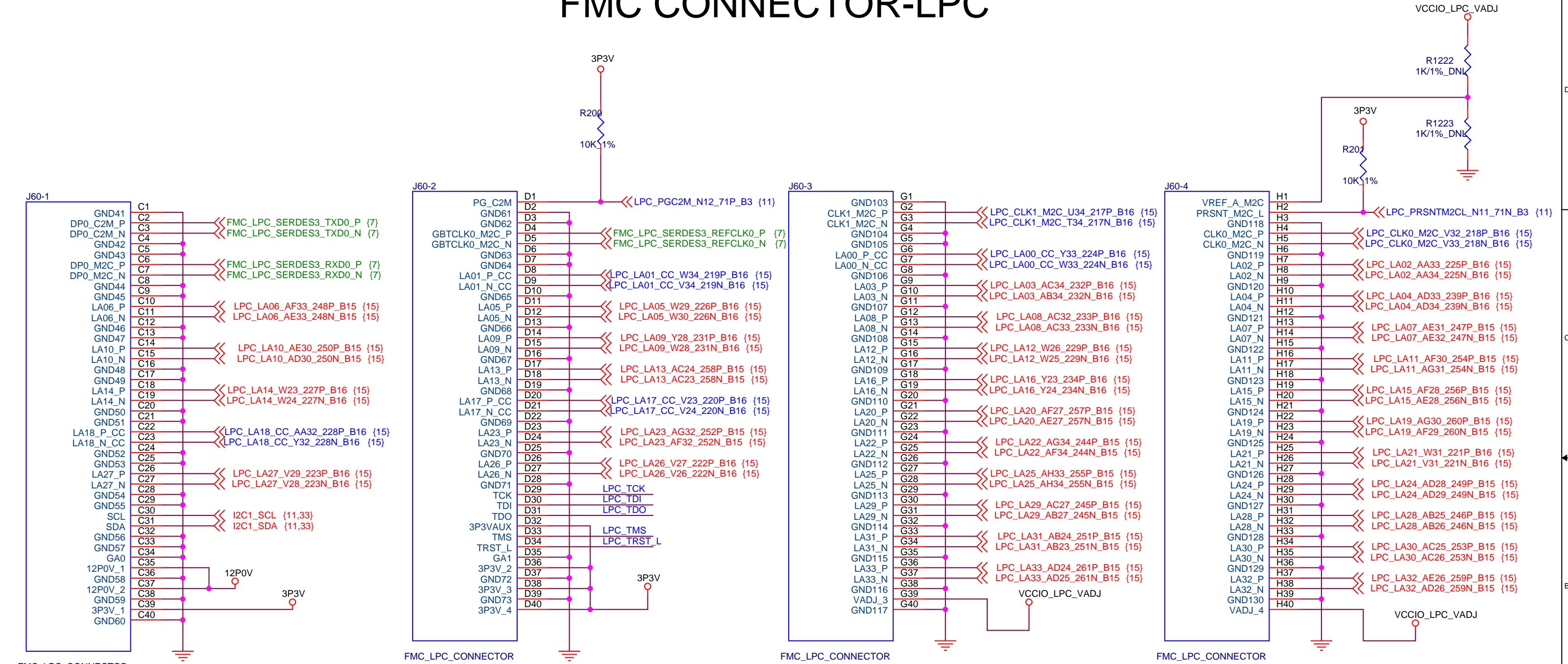
FMC CONNECTOR-HPC



NOTE:

- 1.The VREF_A_M2C pin no H1 and VREF_B_M2C pin no K1 are not connected to the FPGA as there are no REF pins in corresponding banks in FPGA.
- 2.FMC HPC IO's support maximum of 3.3V
- 3.The Supporting Voltages of FMC HPC(VCCIO_HPC_VADJ) are 1.2V,1.5V,1.8V, 2.5V and 3.3V

FMC CONNECTOR-LPC



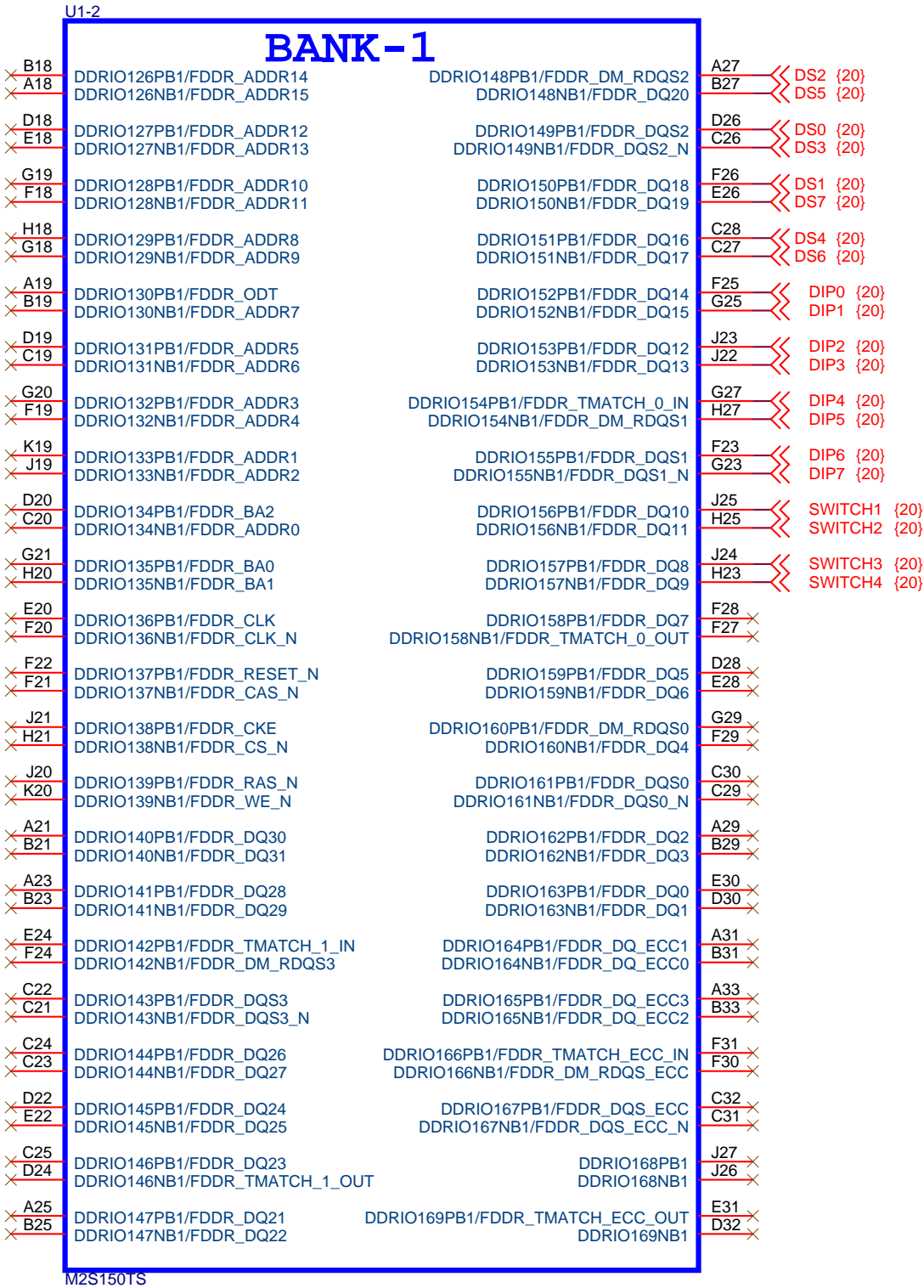
NOTE:

- 1.The VREF_A_M2C pin no H1 is not connected to the FPGA as there are no REF pins in corresponding banks in FPGA.
- 2.FMC LPC IO's support maximum of 2.5V
- 3.The Supporting Voltages of FMC LPC(VCCIO_LPC_VADJ) are 1.2V,1.5V,1.8V and 2.5V



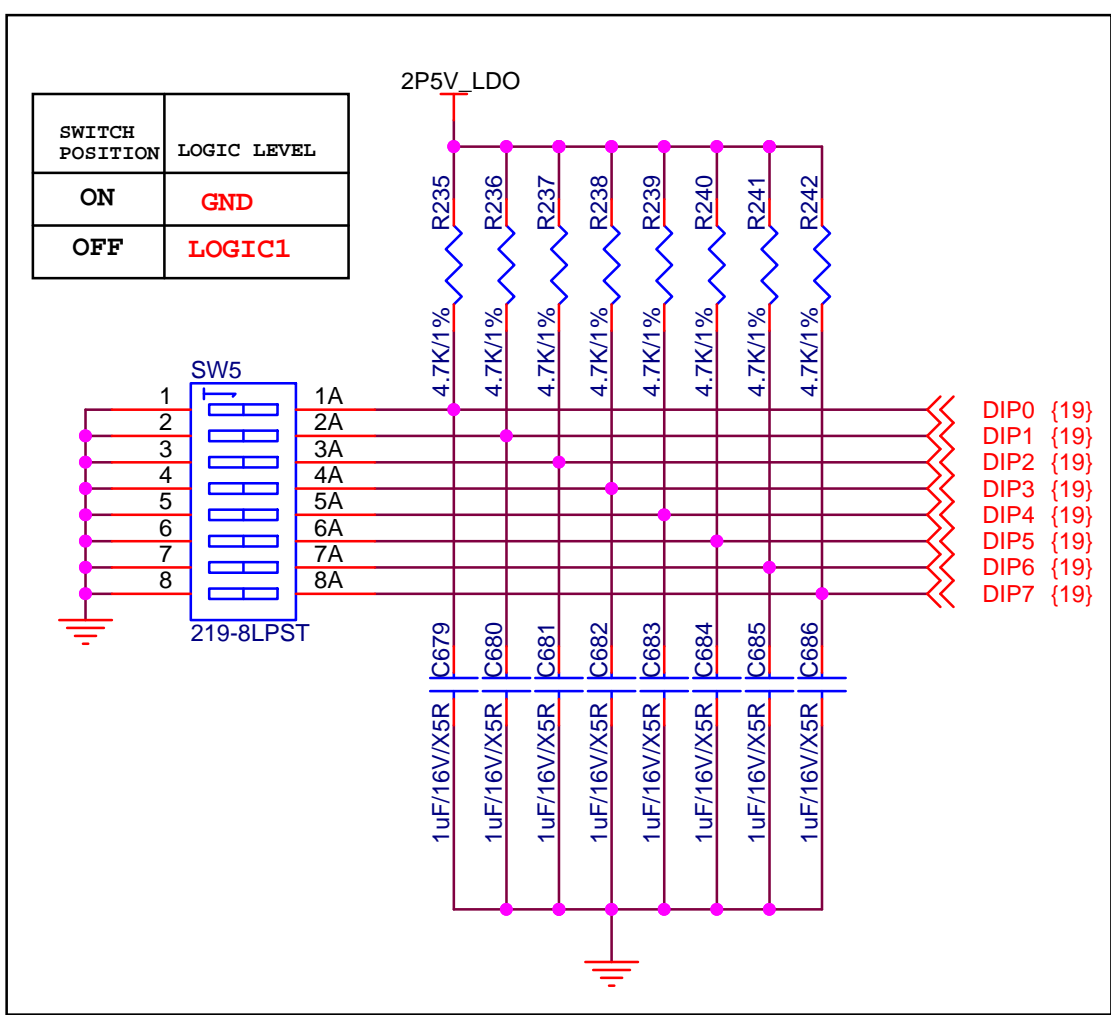
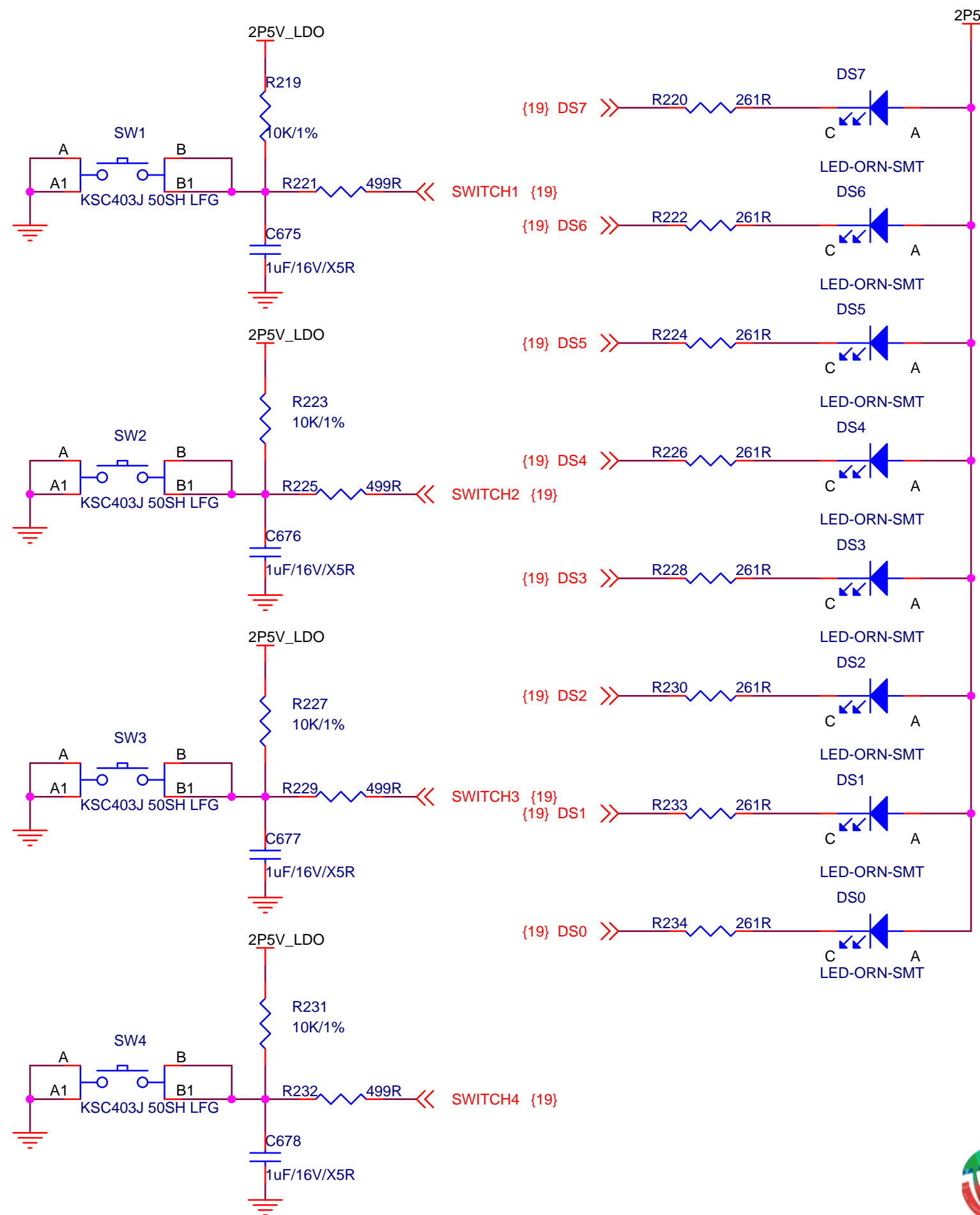
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BANK-1 CONNECTIONS

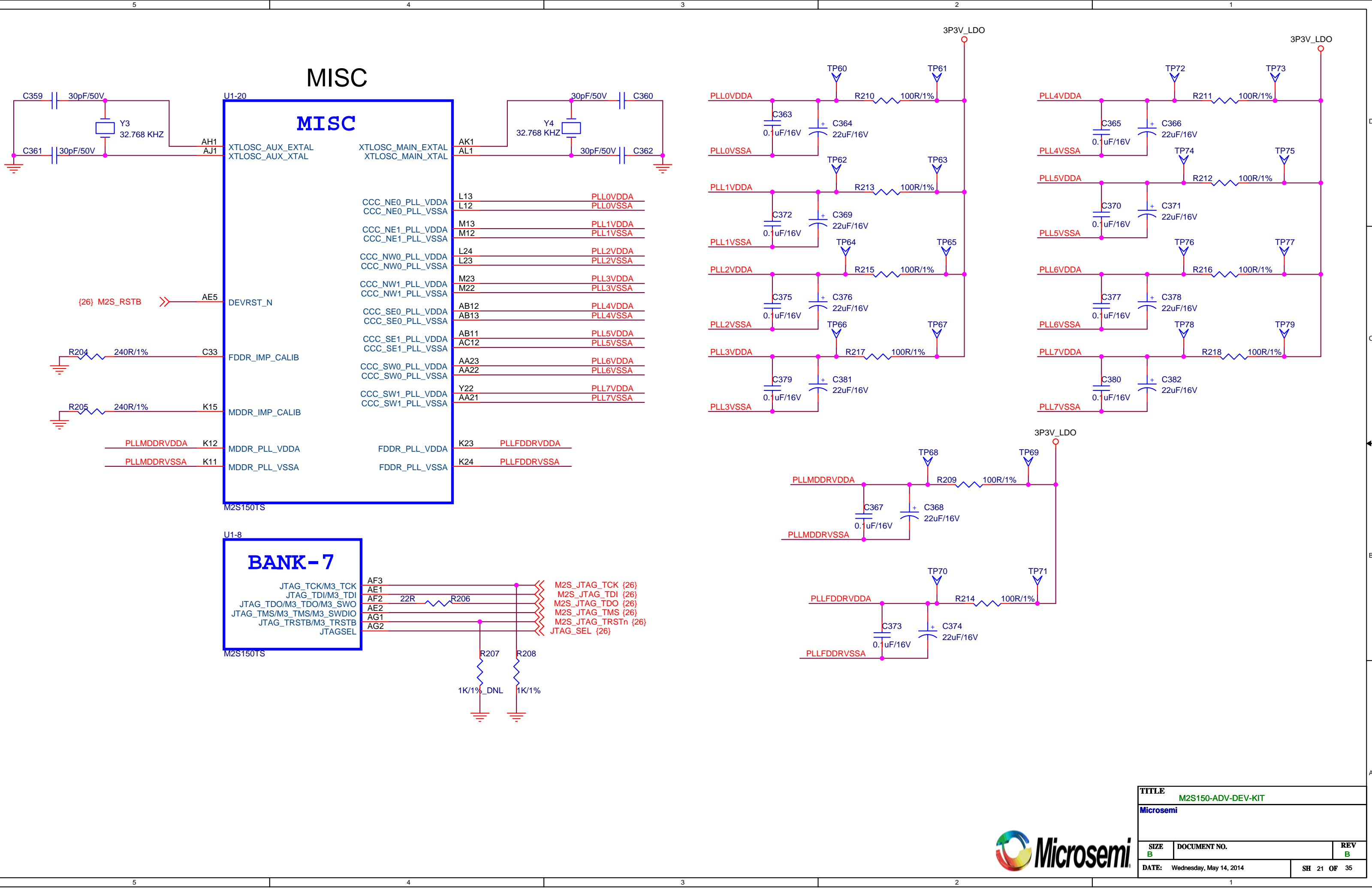


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DEBUG CIRCUITRY

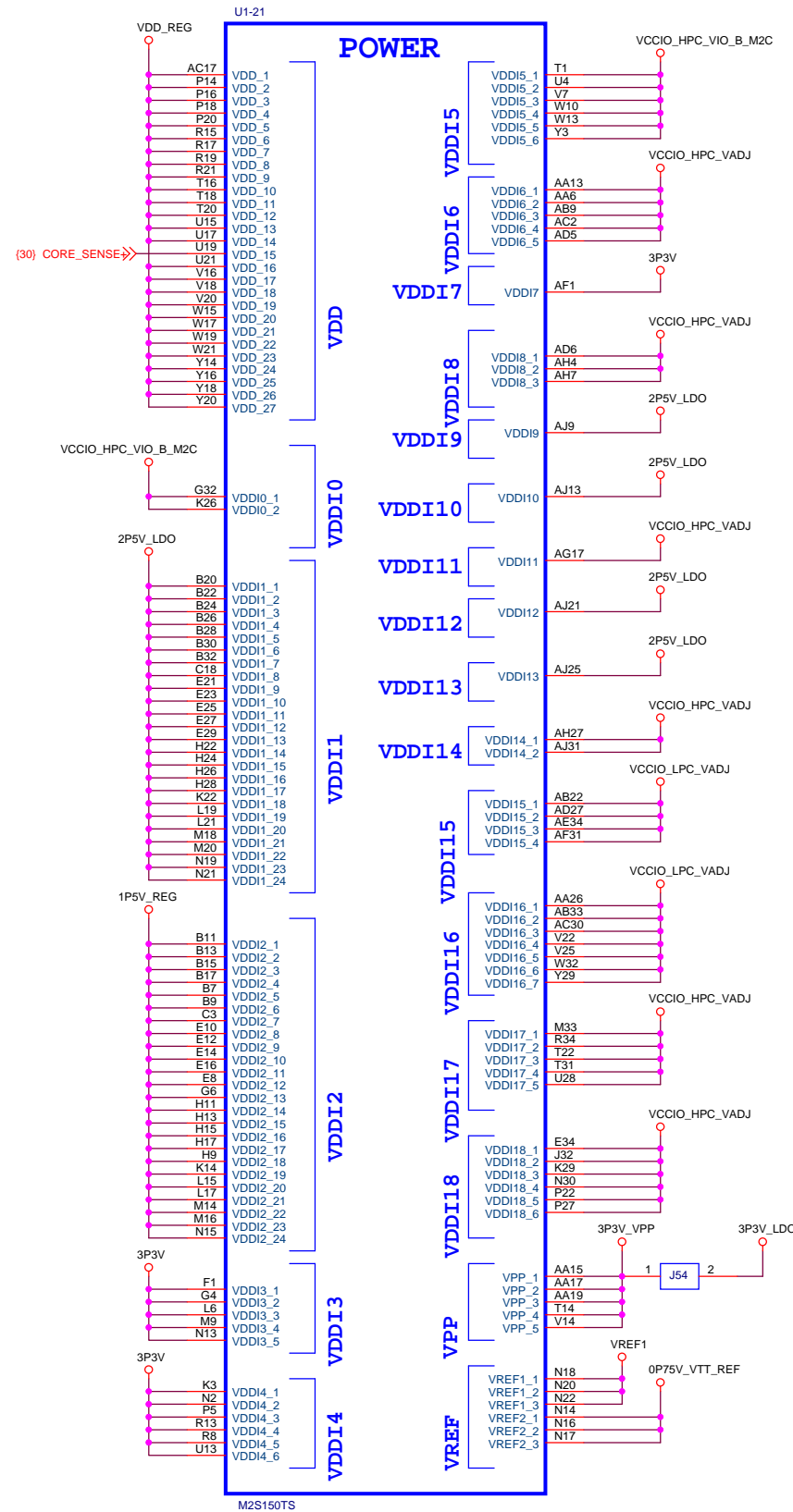


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Custom		B
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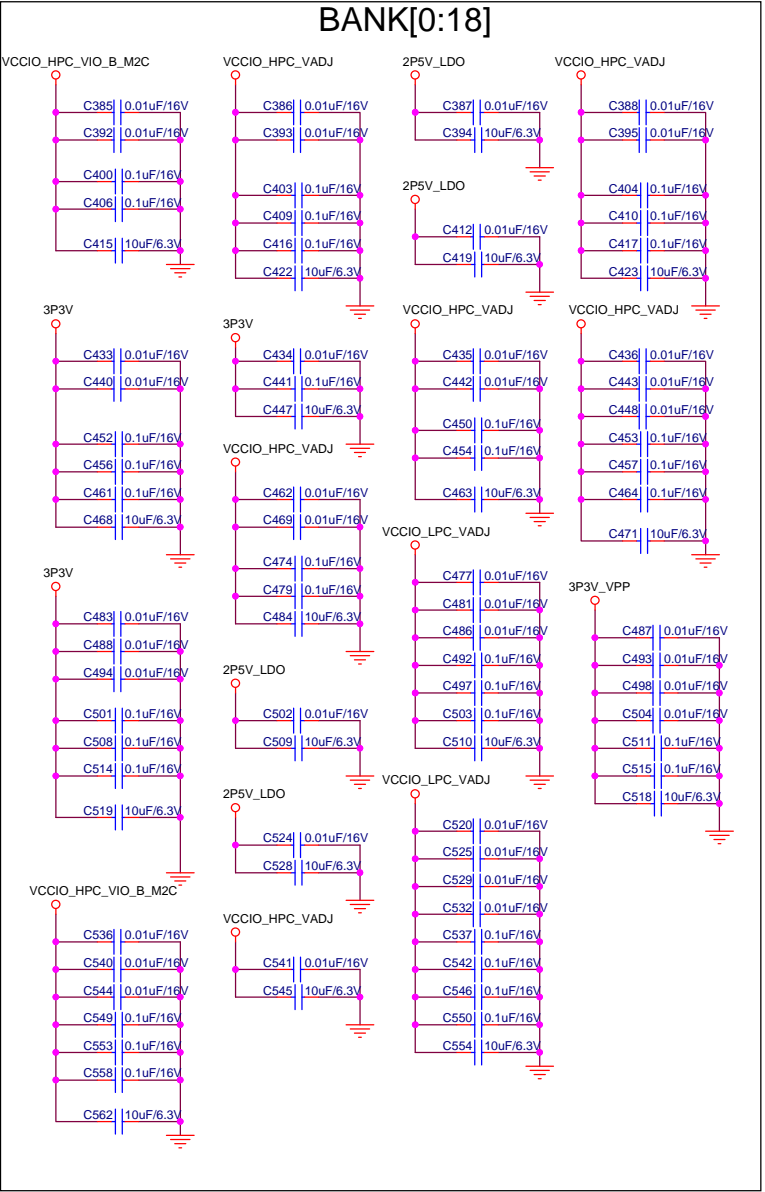
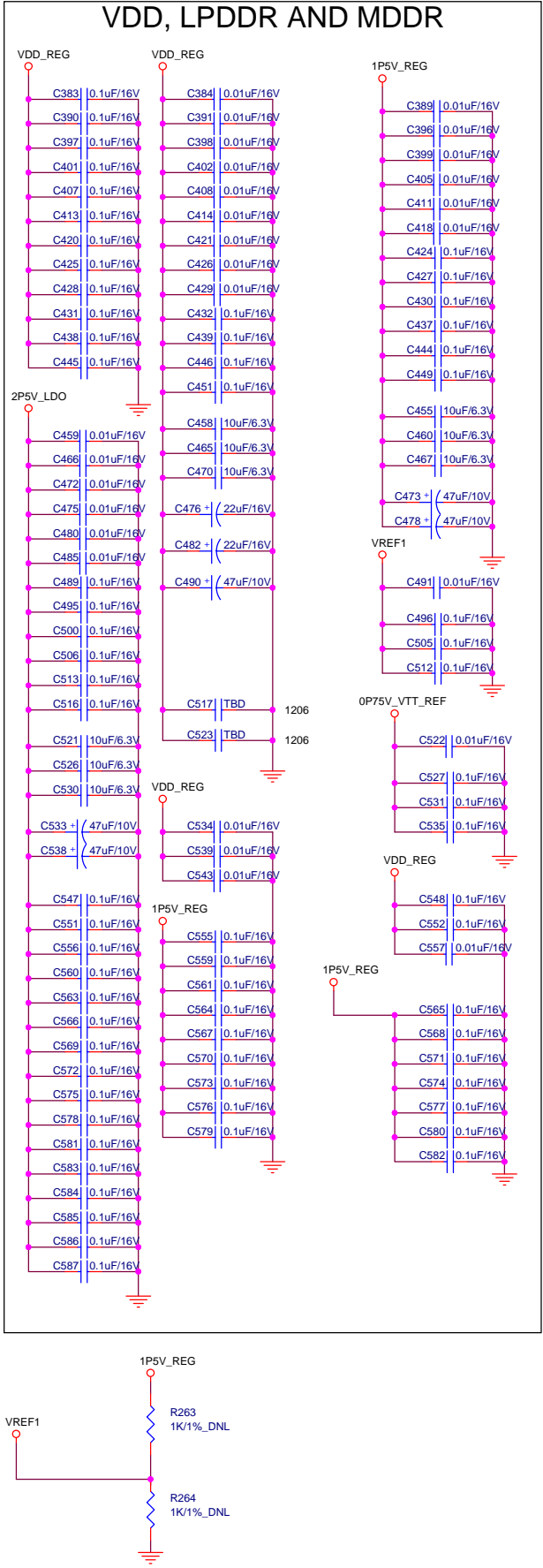


TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE B	DOCUMENT NO.	REV B
DATE: Wednesday, May 14, 2014	SH 21 OF 35	

POWER

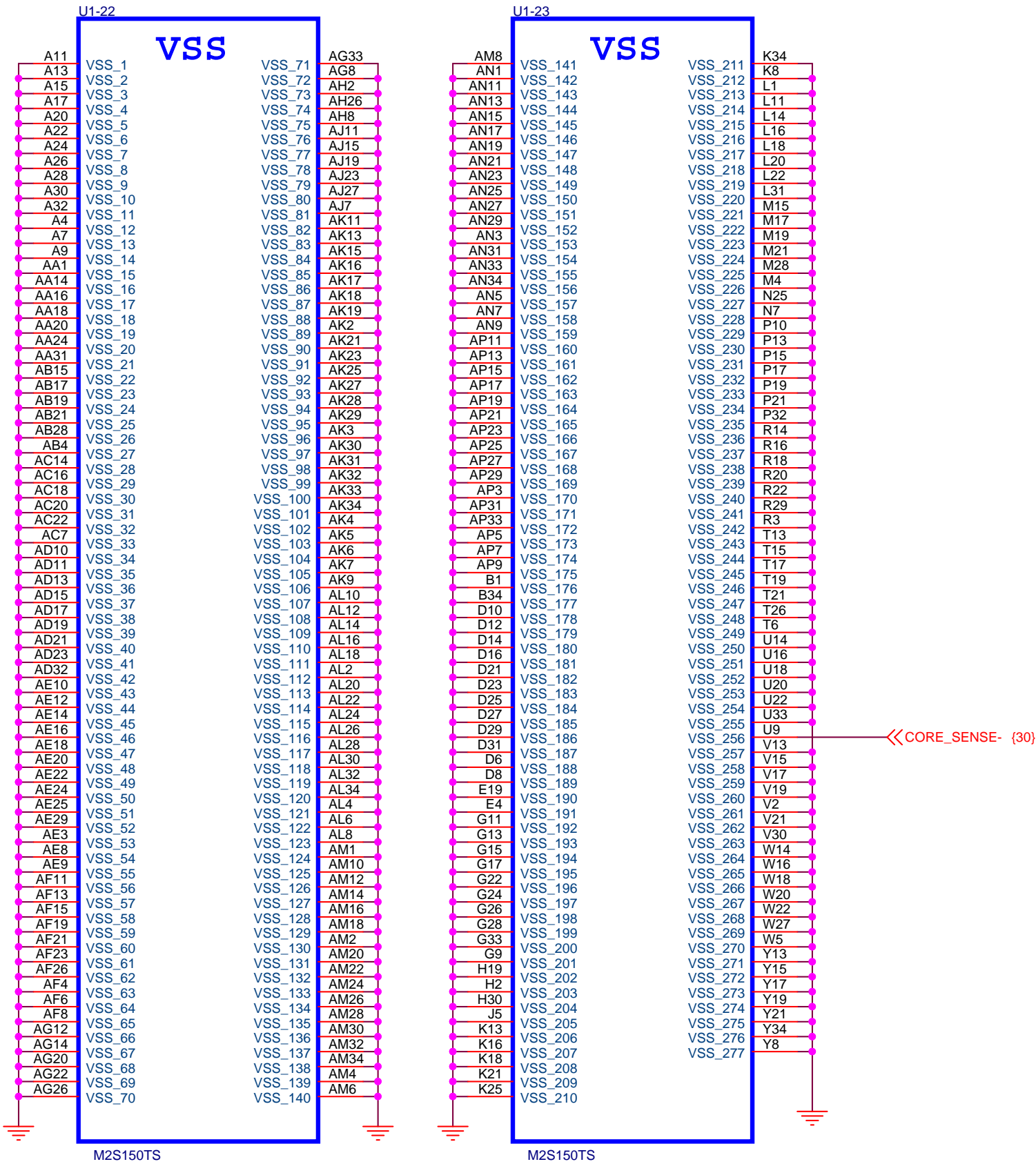


DECOUPLING CAPACITORS



TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
C		B
DATE:	Wednesday, May 14, 2014	SH 22 OF 35

GROUND

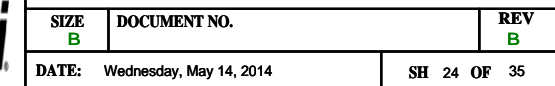


TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
Custom		B
DATE:	Wednesday, May 14, 2014	SH 23 OF 35

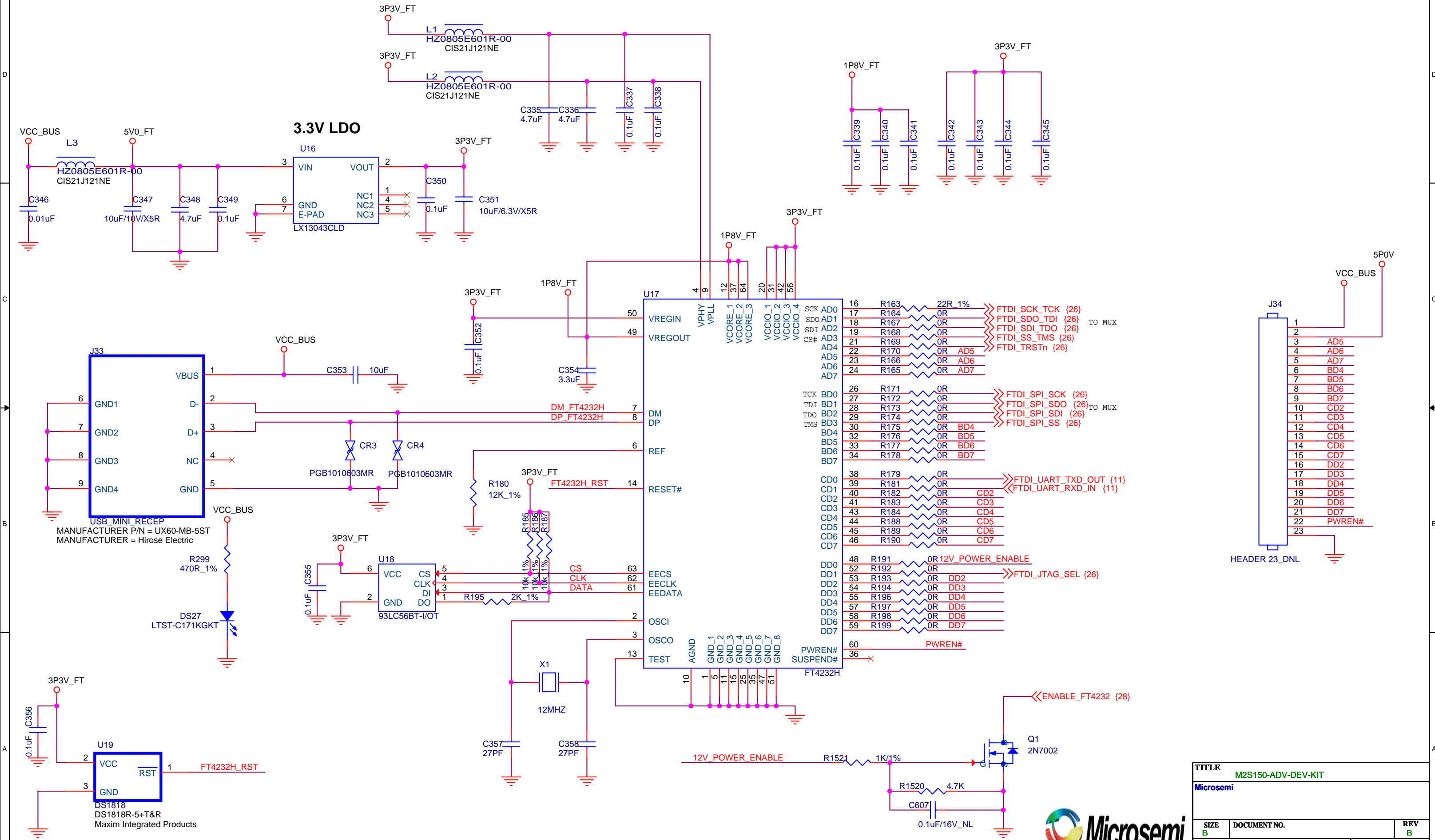




TITLE			
M2S150-ADV-DEV-KIT			
Microsemi			
SIZE B	DOCUMENT NO.		REV B
DATE: Wednesday, May 14, 2014		SH 24 OF 35	



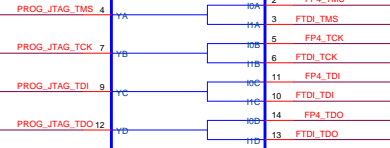
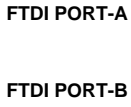
FT4232H CIRCUITRY



TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
B		B
DATE:	Wednesday, May 14, 2014	SH 25 OF 35

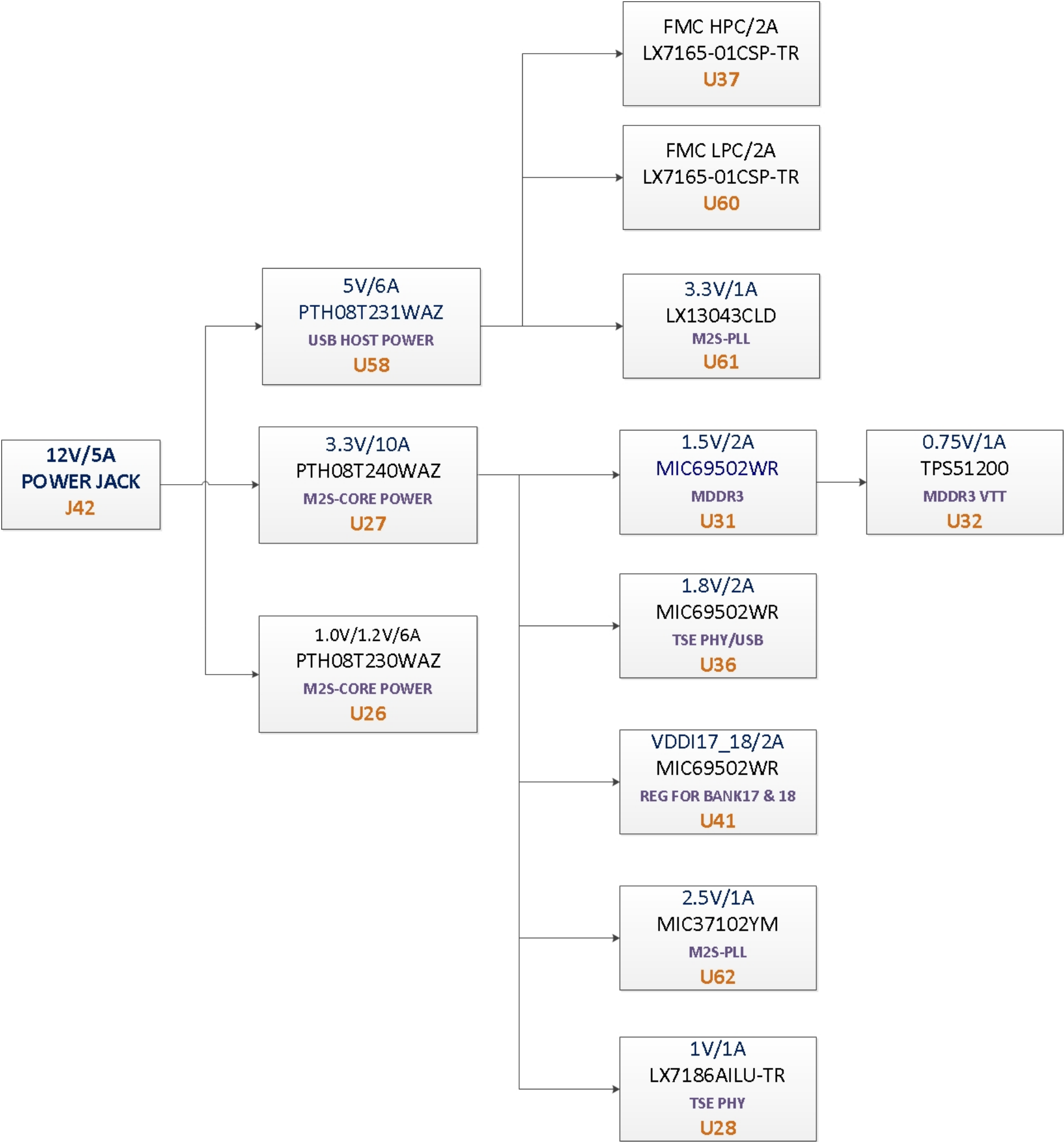


PROGRAMMING CIRCUITRY



TITLE			
M2S150-ADV-DEV-KIT			
Microsemi			
SIZE	DOCUMENT NO.		REV
Custom			B
DATE: Wednesday, May 14, 2014		SH	OF
		26	30

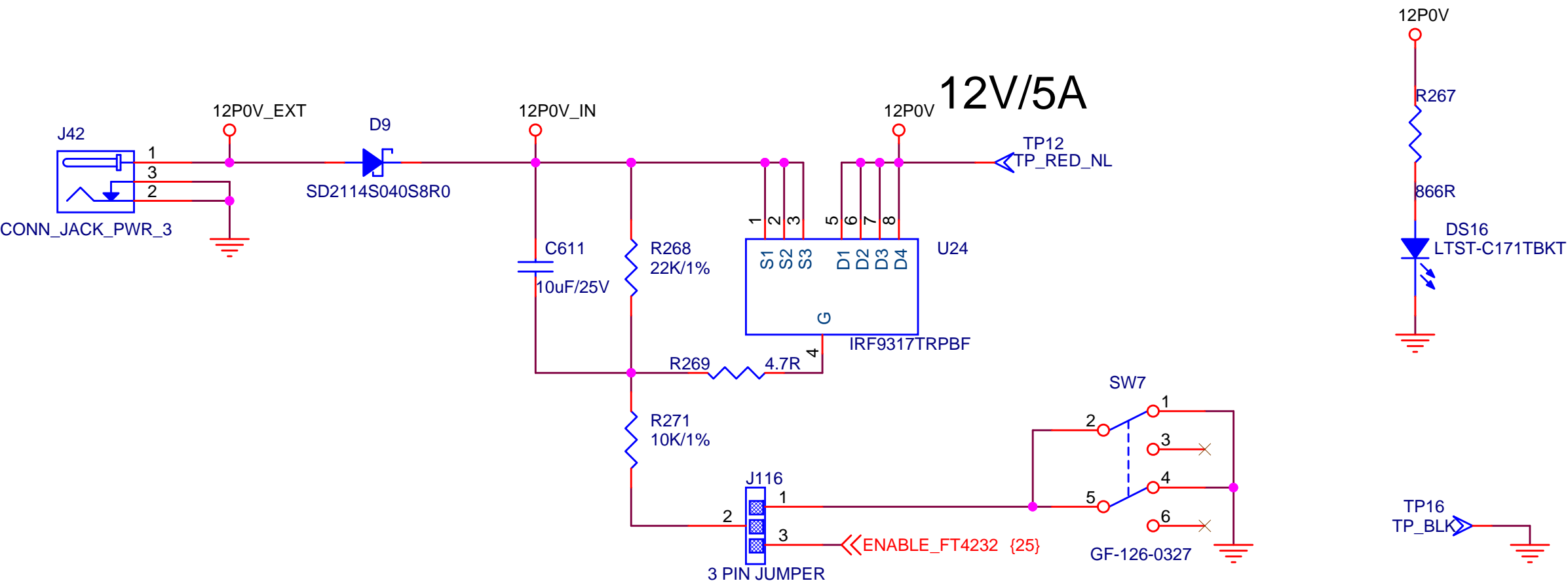
POWER SCHEME



TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
C		B
DATE:	Wednesday, May 14, 2014	SH 27 OF 35

12V POWER SUPPLY

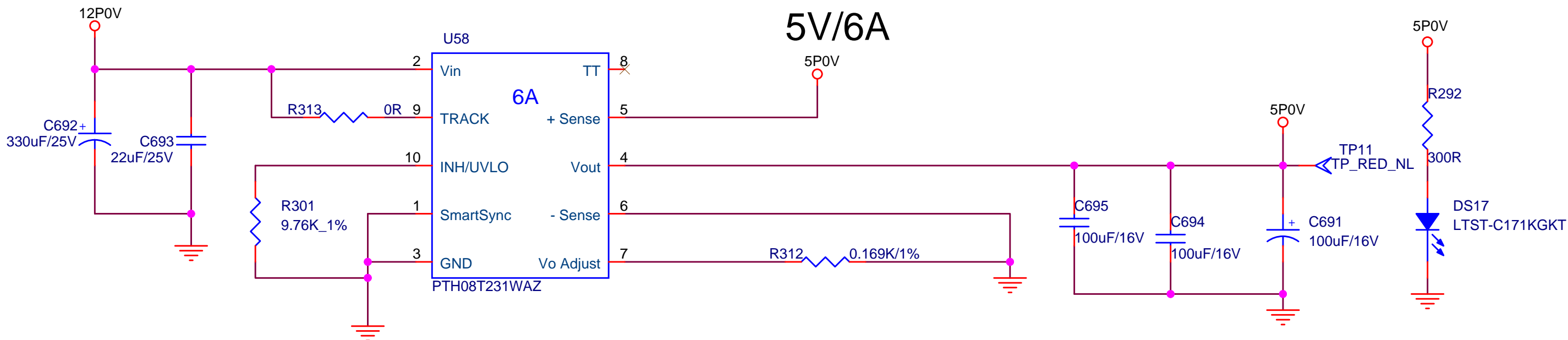
12V/5A



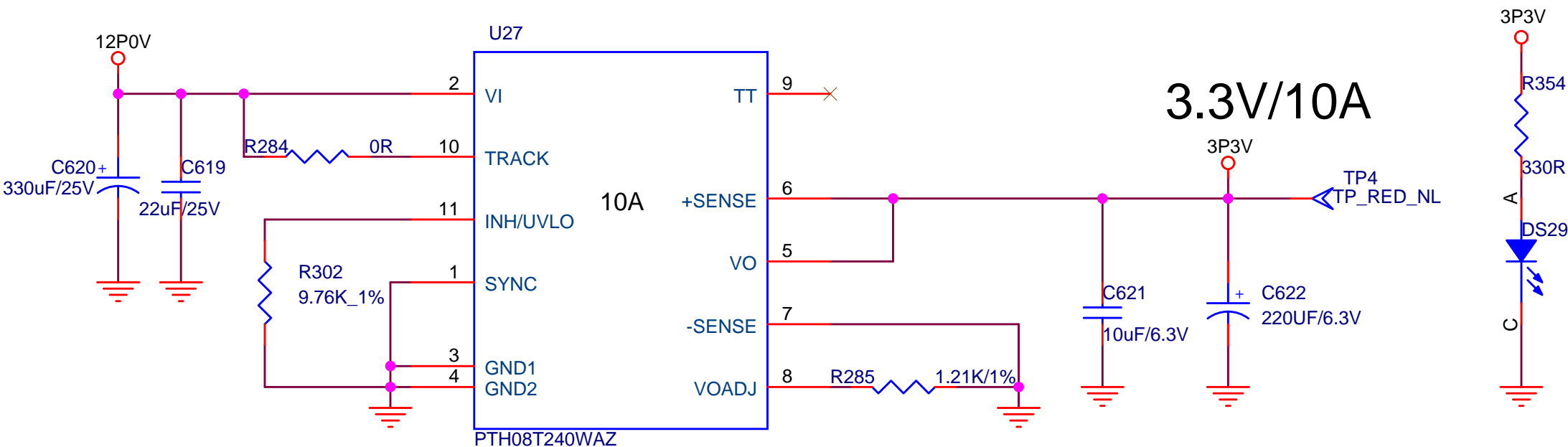
TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
A		B
DATE:	Wednesday, May 14, 2014	SH 28 OF 35

POWER SUPPLIES - 1

REGULATOR 1: 5V/6A



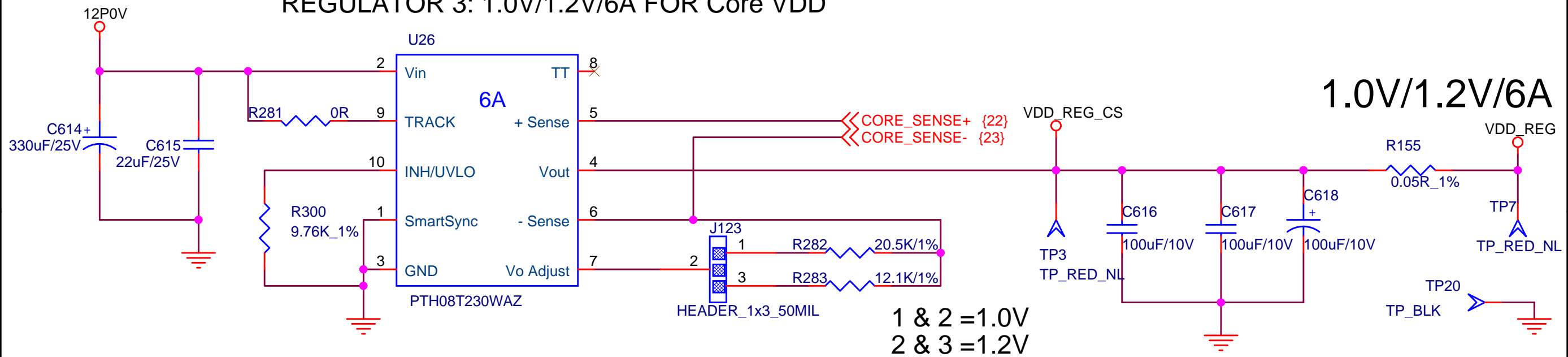
REGULATOR 2: 3.3V/10A



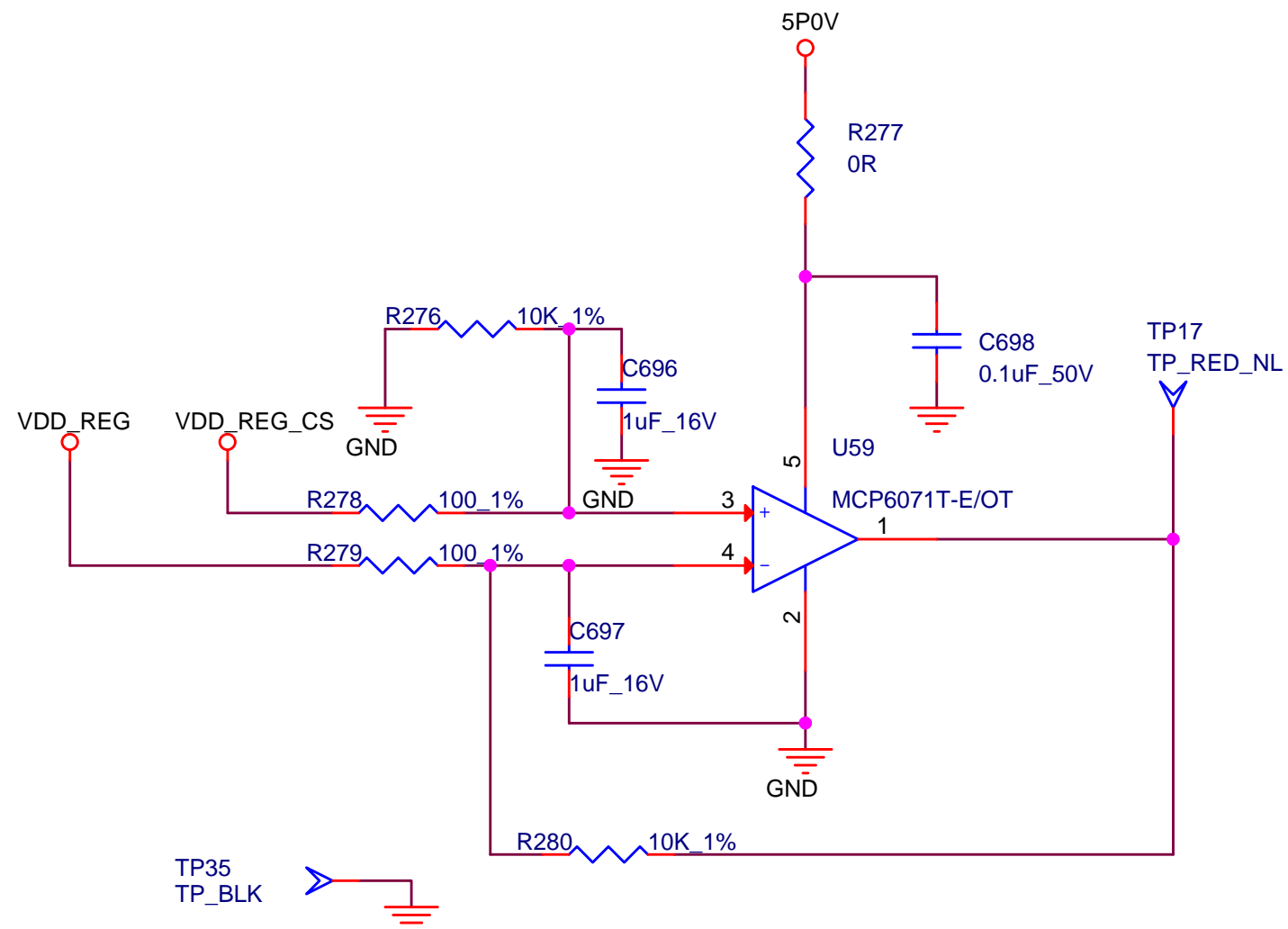
TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
Custom		B
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POWER SUPPLIES - 2



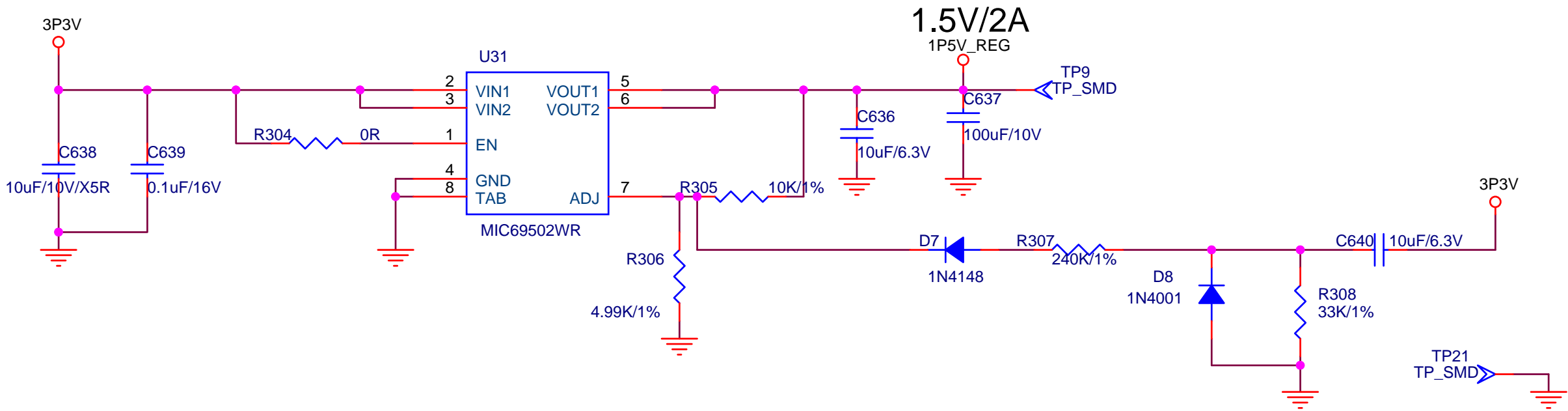
1.0V/ 1.2V CURRENT SENSING CIRCUIT



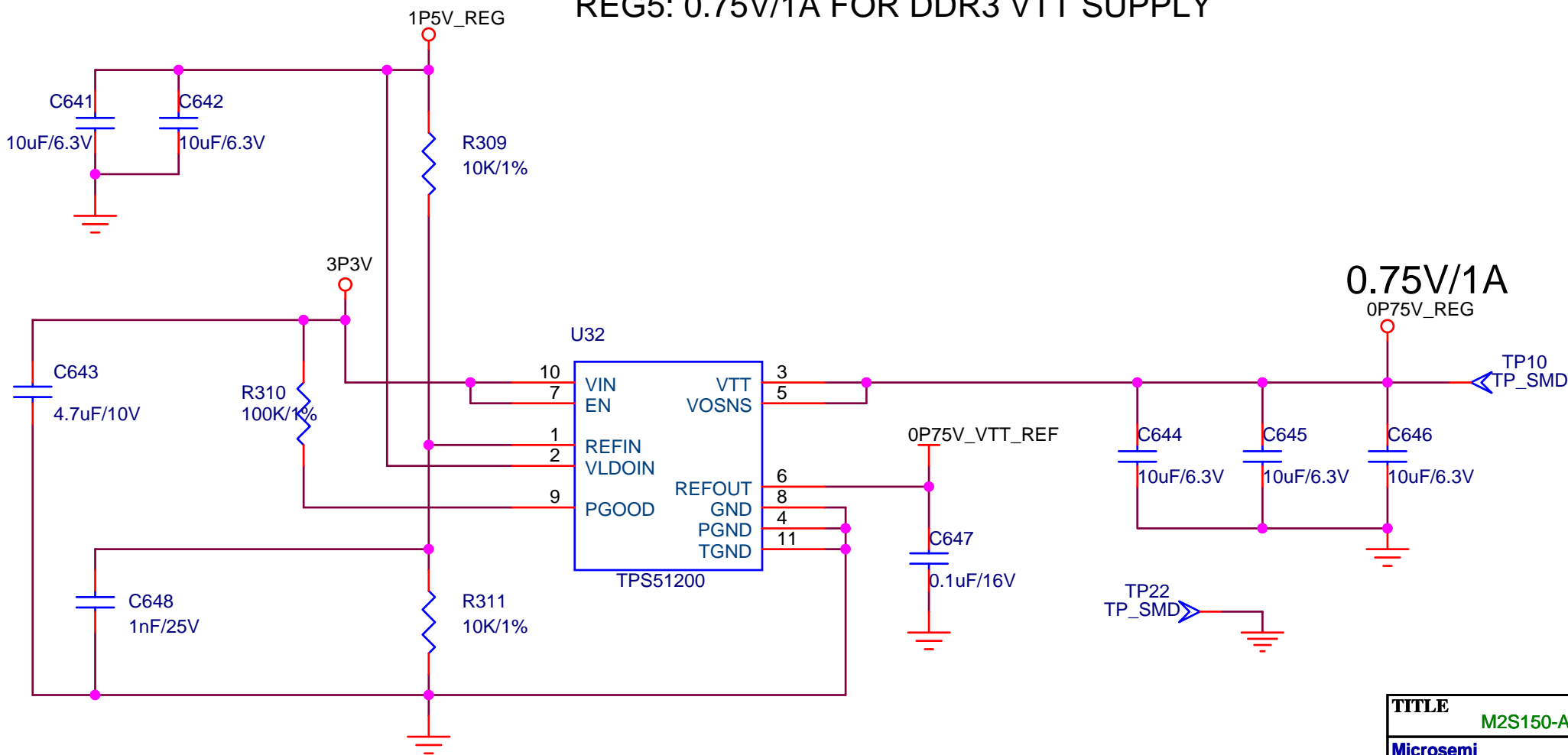
TITLE			
M2S150-ADV-DEV-KIT			
Microsemi			
SIZE	DOCUMENT NO.		REV
A			B
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POWER SUPPLIES - 3

REGULATOR 4: 1.5V/2A FOR MDDR INTERACE



REG5: 0.75V/1A FOR DDR3 VTT SUPPLY



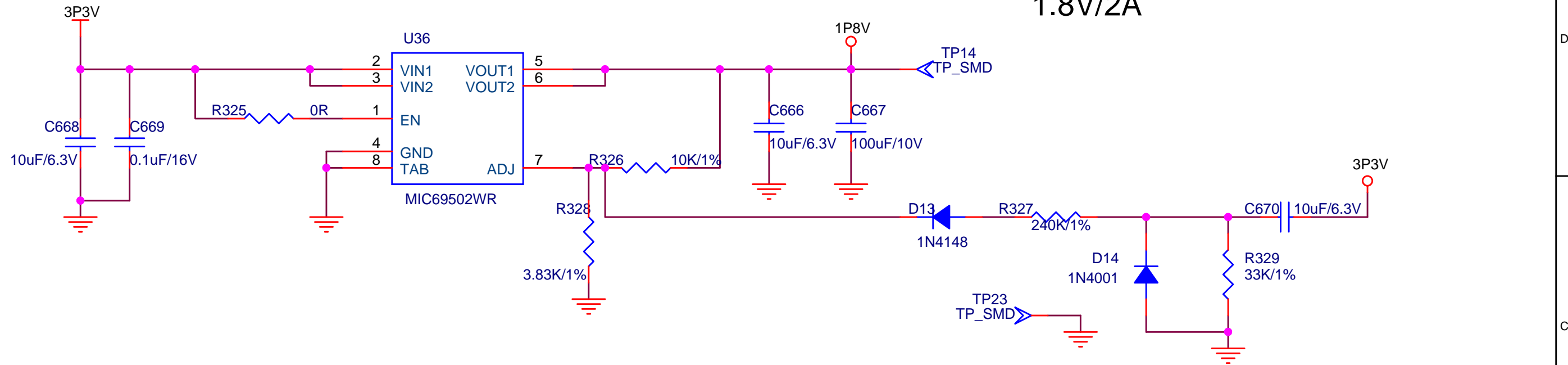
TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
Custom		B
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POWER SUPPLIES - 4

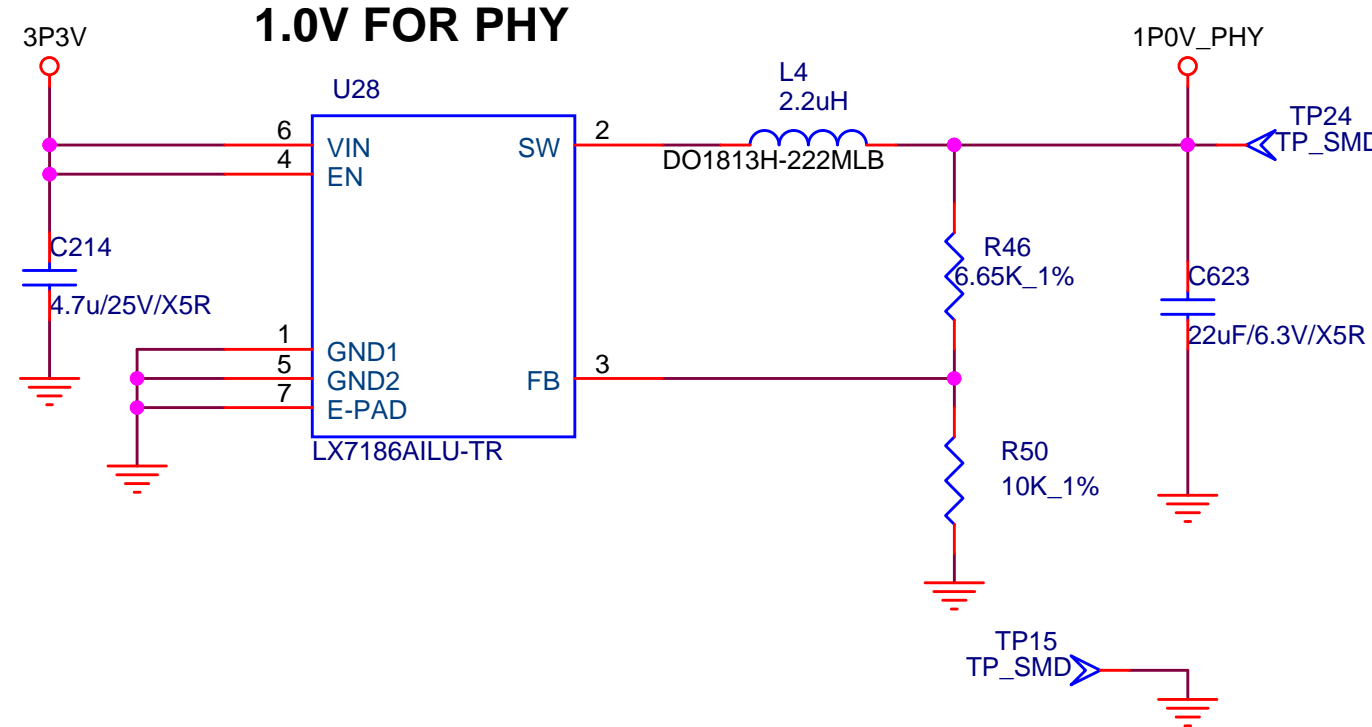
REGULATOR 6: 1.8V/2A FOR 88E1340 ANALOG CORE/USB

1.8V/2A



REGULATOR 7: 1V/1A_FOR PHY 88E1340

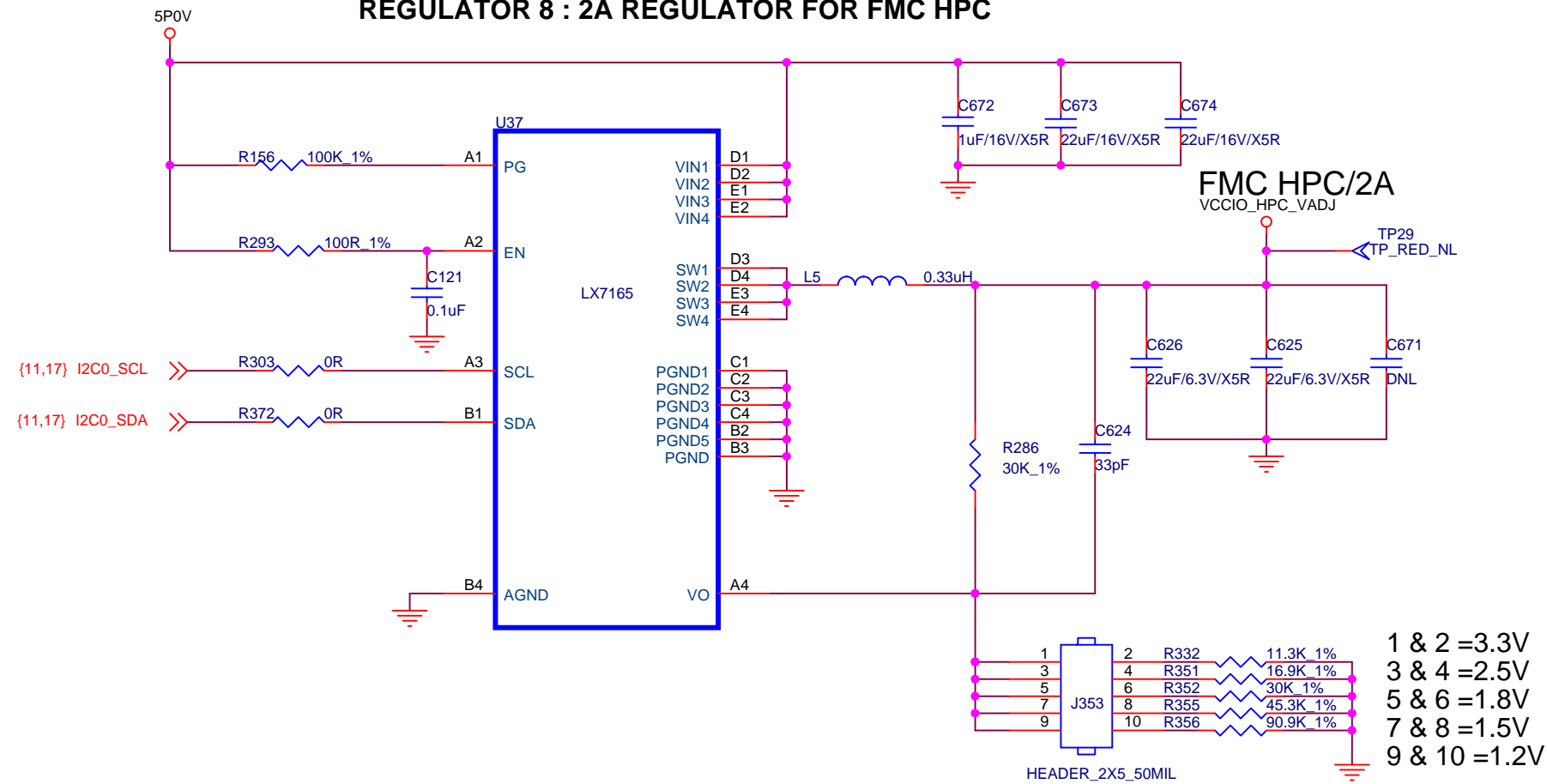
1.0V/1A



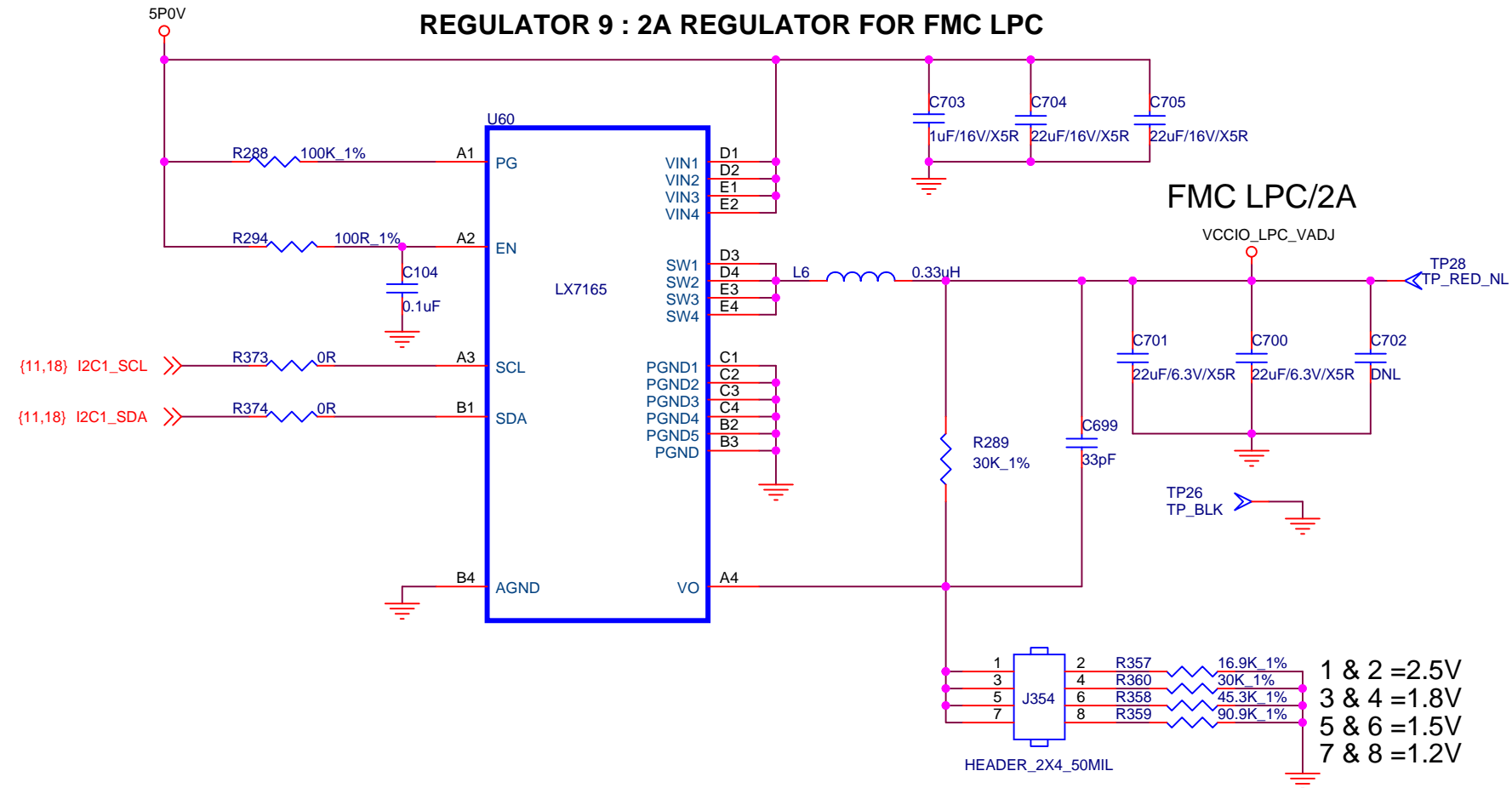
TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
A		B
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POWER SUPPLIES - 5

REGULATOR 8 : 2A REGULATOR FOR FMC HPC



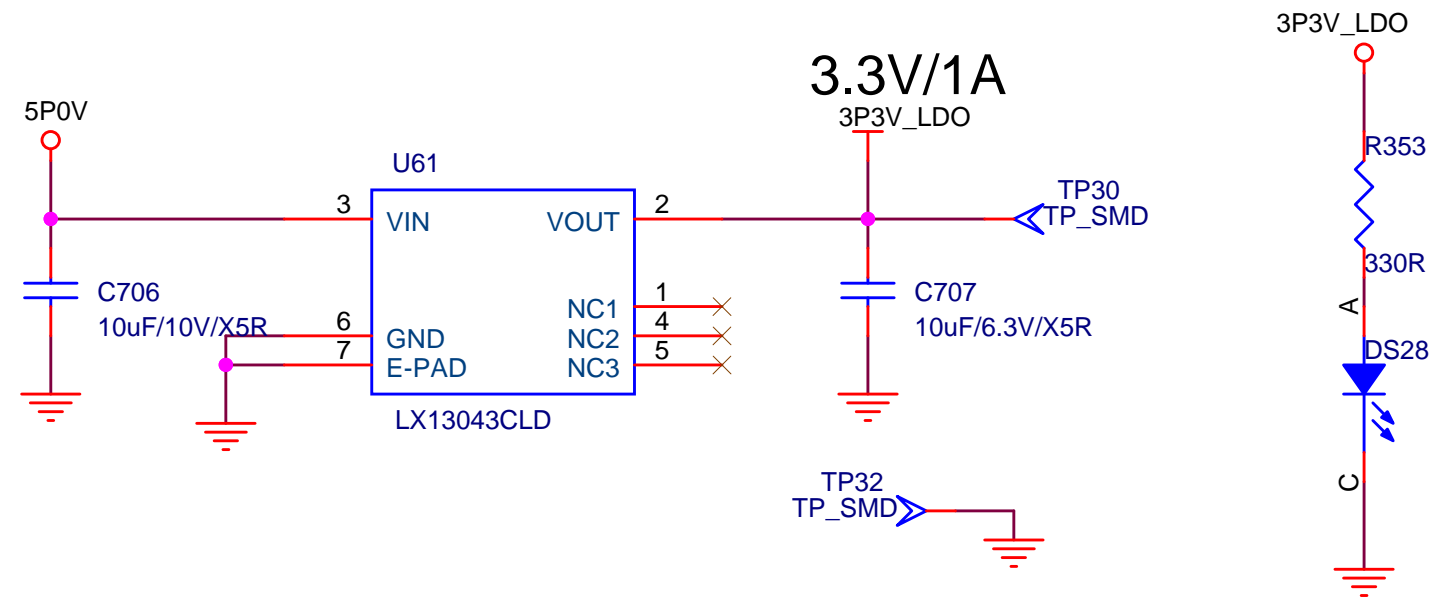
REGULATOR 9 : 2A REGULATOR FOR FMC LPC



TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
Custom		B
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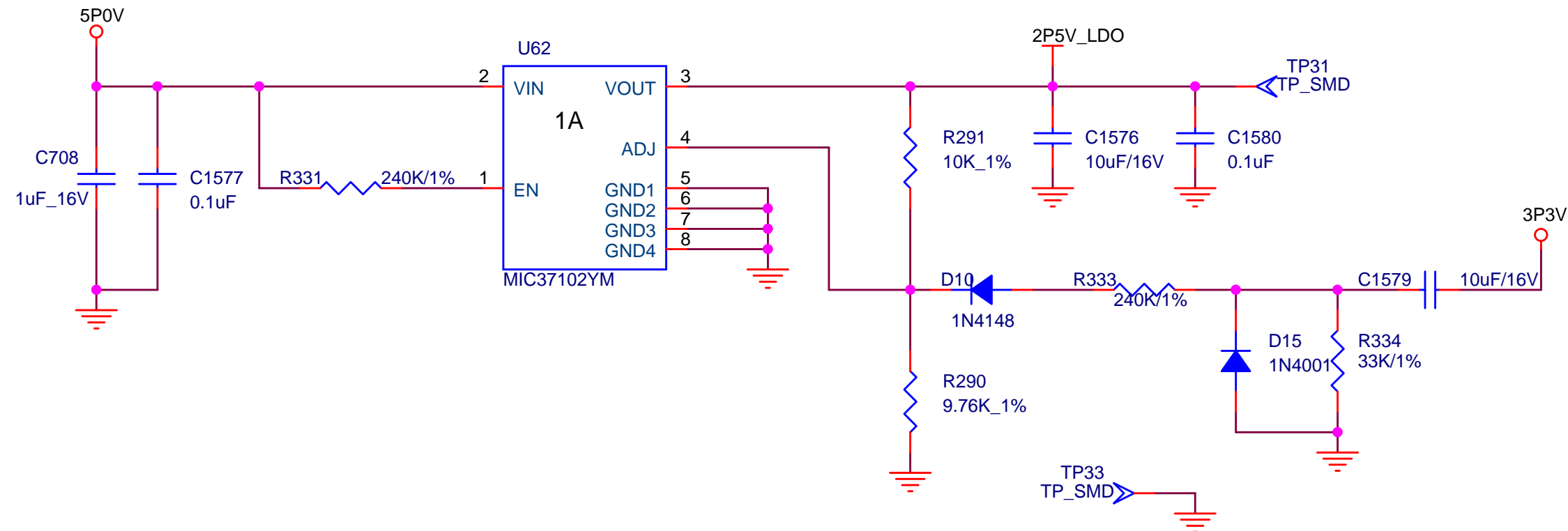
POWER SUPPLIES - 6

REGULATOR 10 : 3.3V/1A FOR PLL



REGULATOR 11: 2.5V/1A FOR PLL

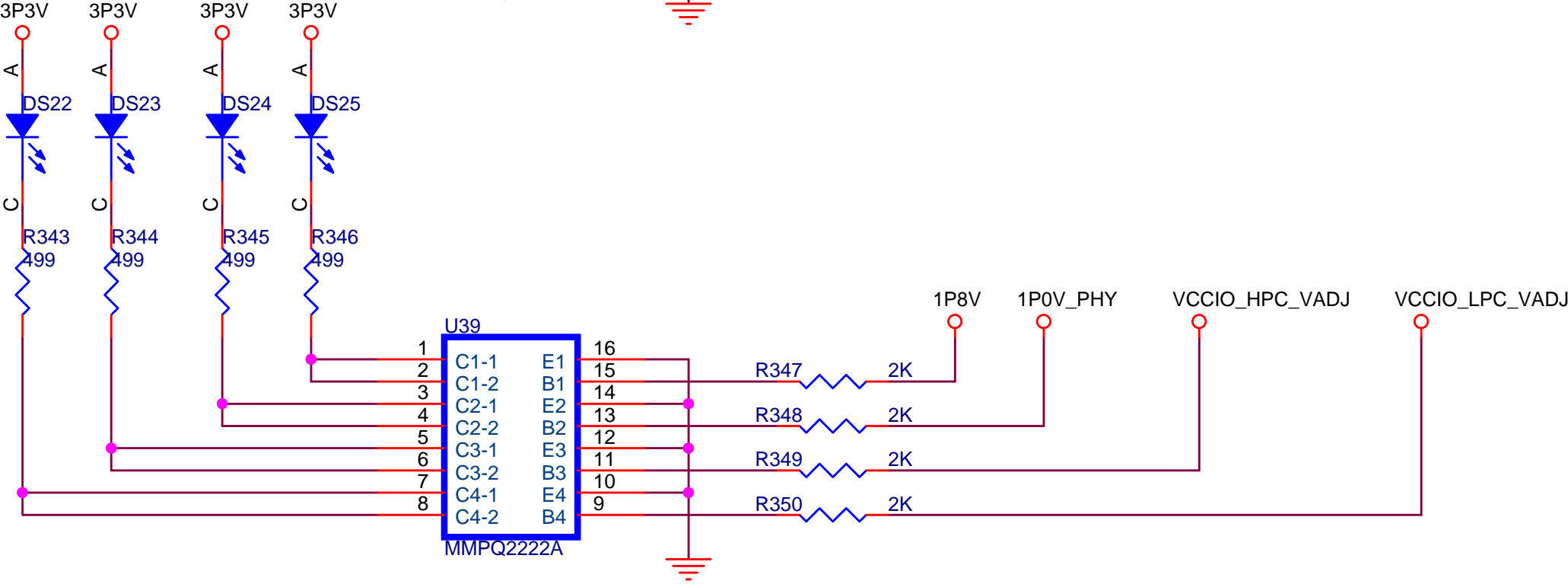
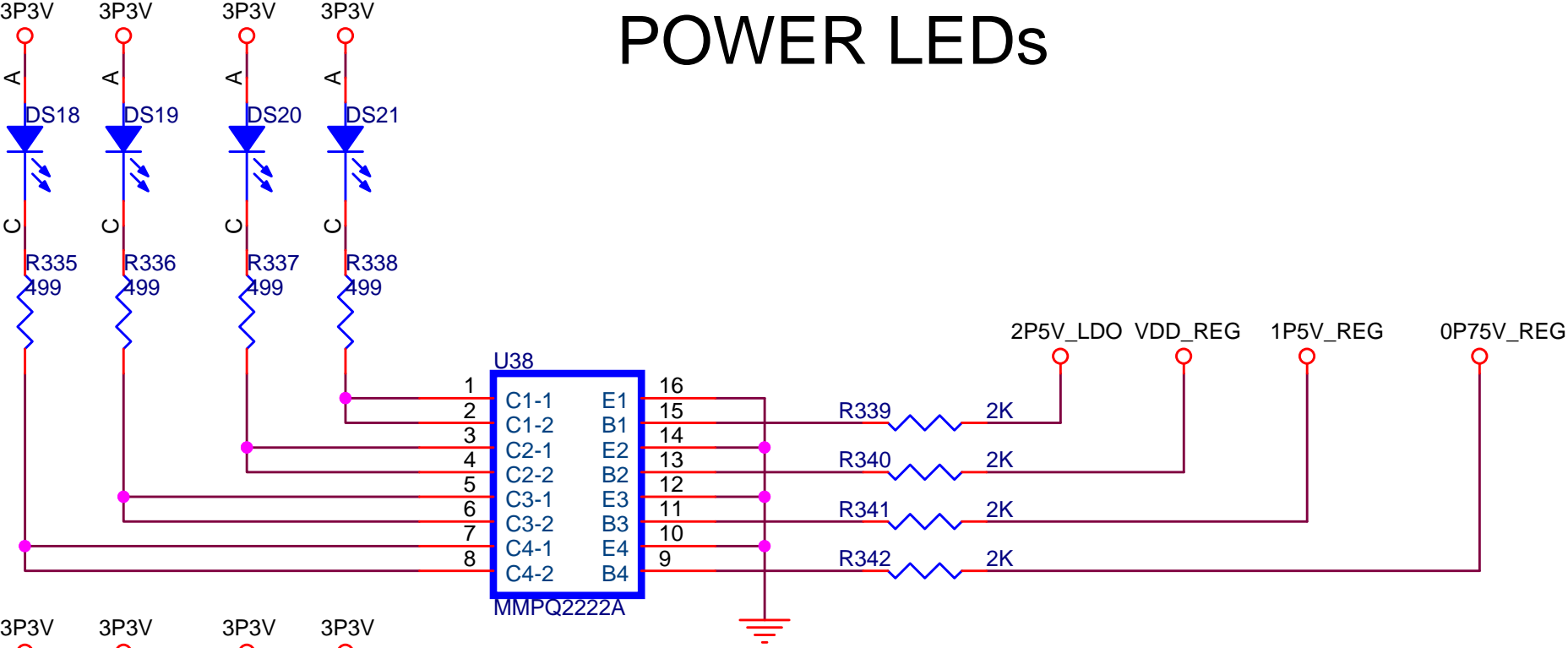
2.5V/1A



TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
A		B
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POWER LEDs



TITLE		
M2S150-ADV-DEV-KIT		
Microsemi		
SIZE	DOCUMENT NO.	REV
A		B
DATE:	Wednesday, May 14, 2014	SH 35 OF 35

