

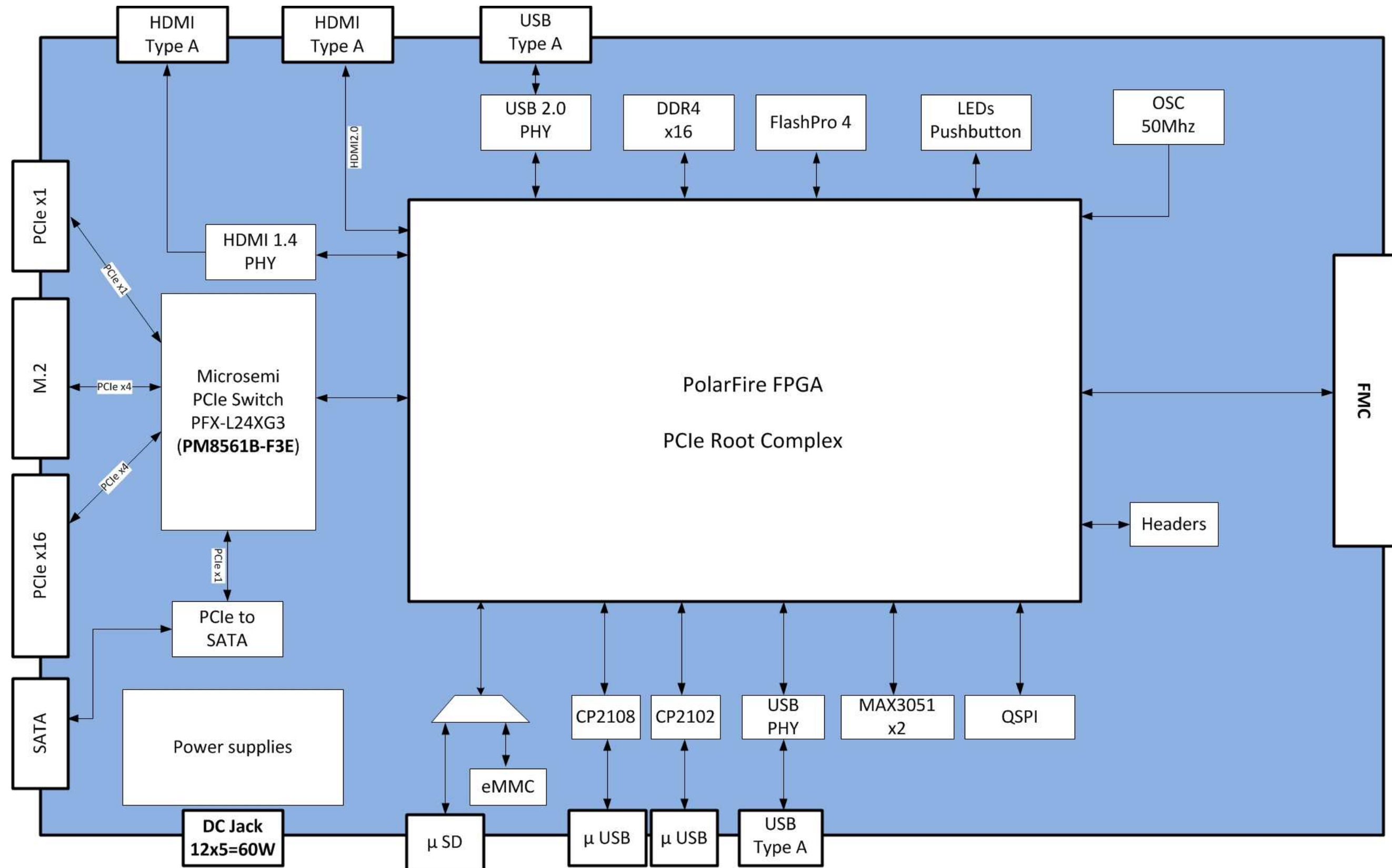
HFU540-EXP

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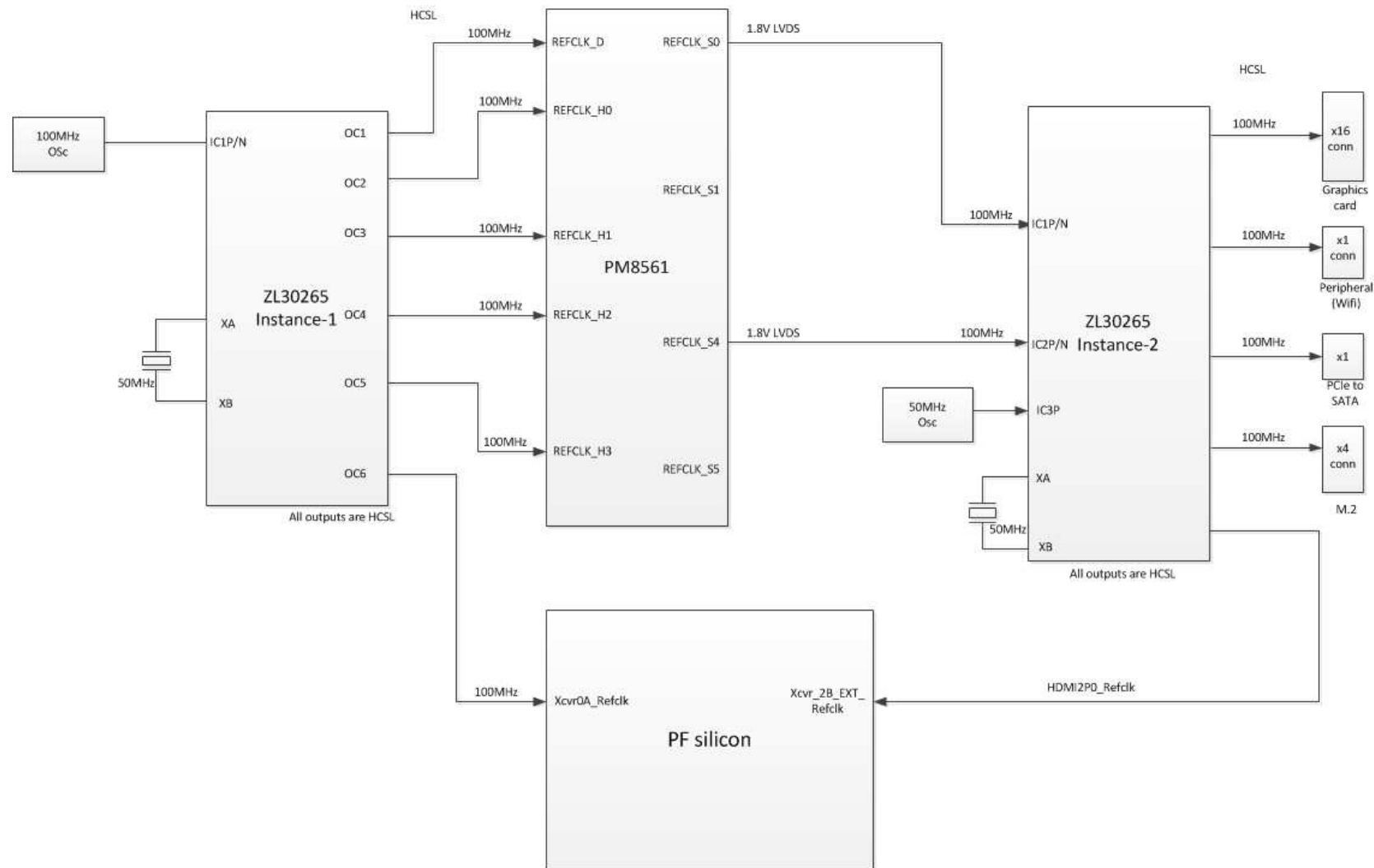


Project Name:		
HFU540-EXP		
Rev	Part Number:	
2	MICROSEMI DVP-100-000506-001	PACTRON:
Originator:		
GHURU KUMARAVELU		
Size	Date:	
Custom	Tuesday, May 08, 2018	
		Sheet 1 of 46

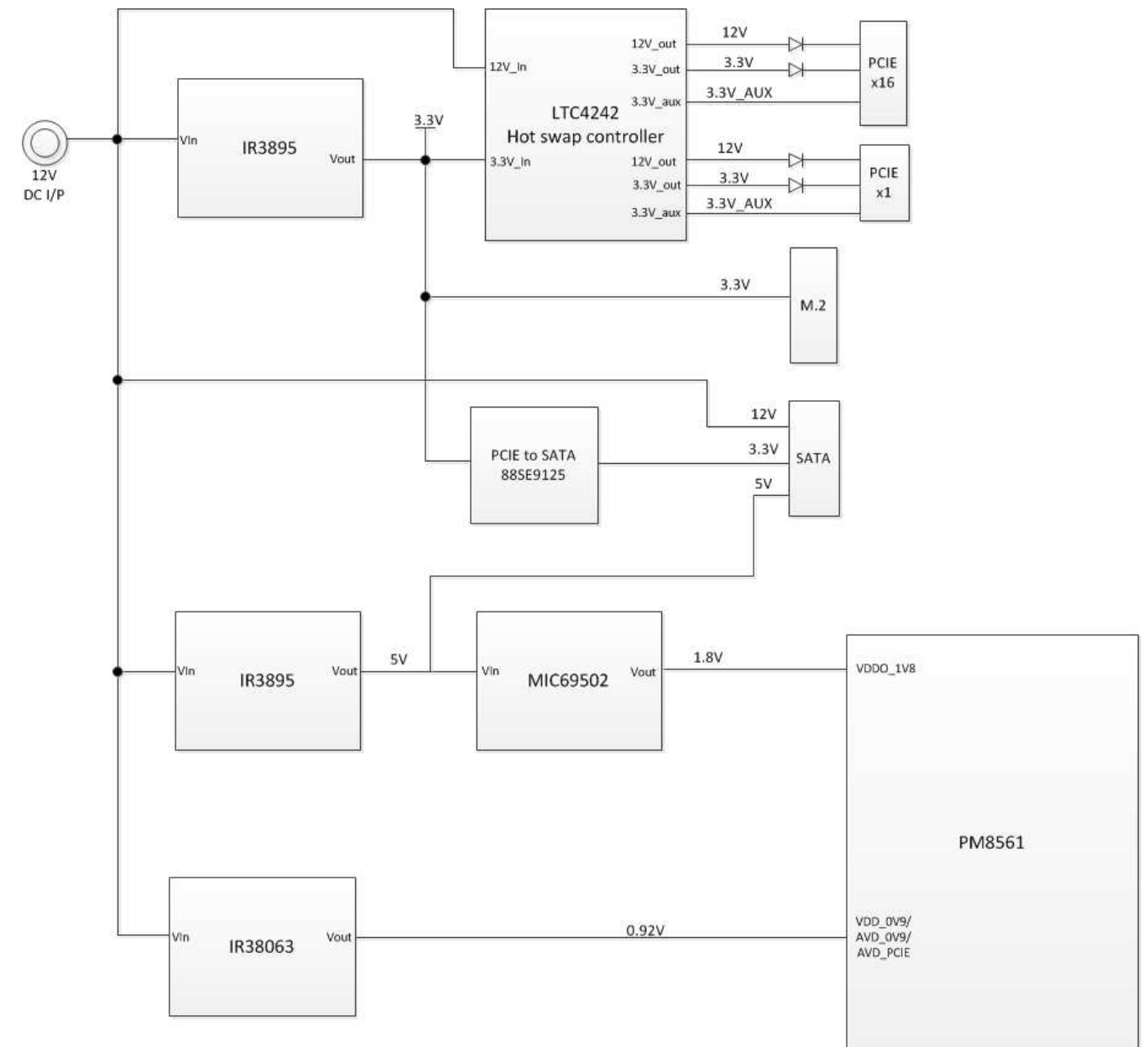
BLOCK DIAGRAM



Clock scheme - PCIe switch

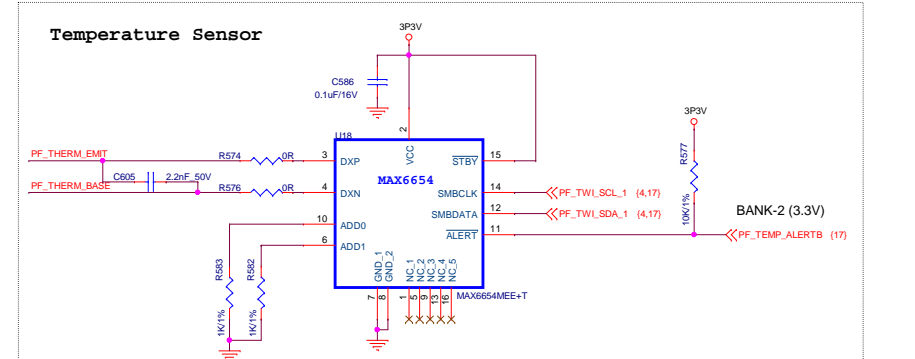
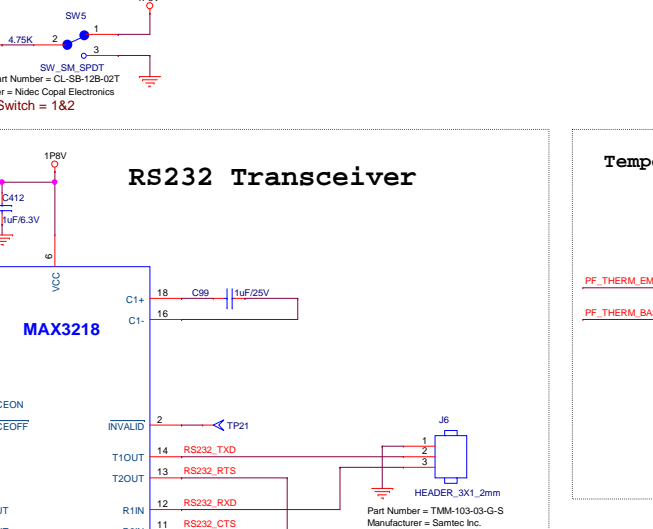
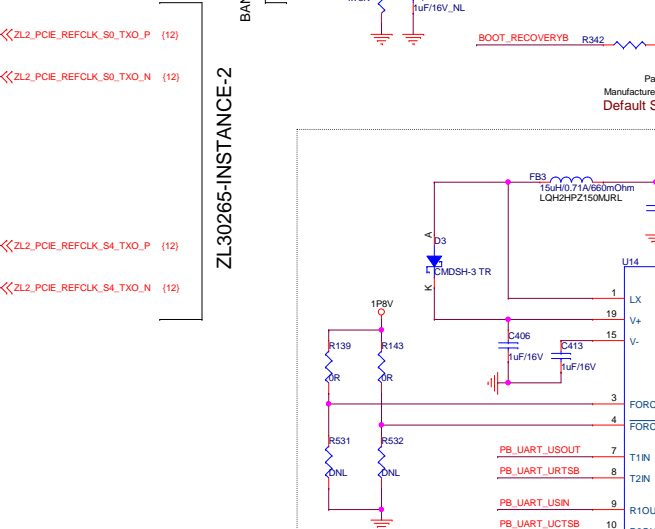
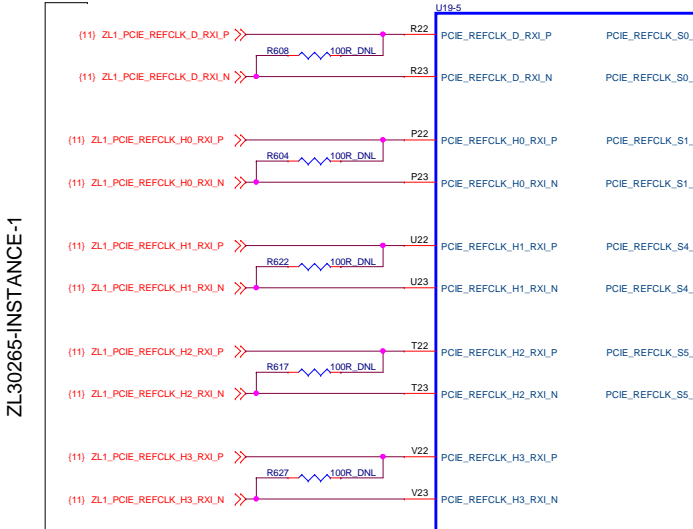
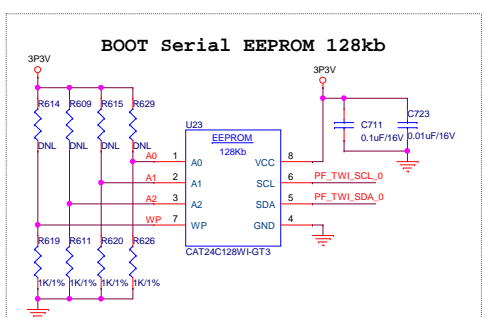
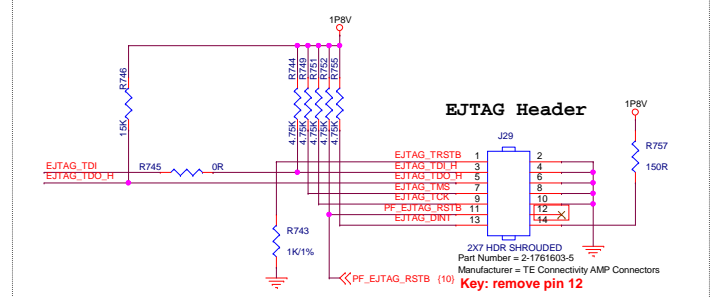
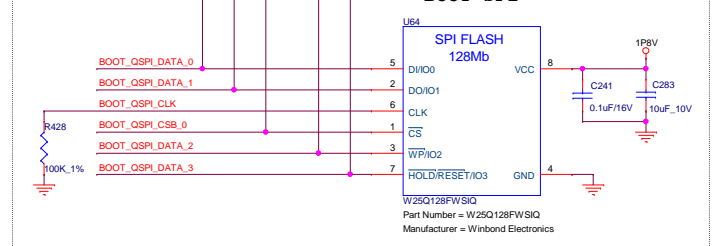
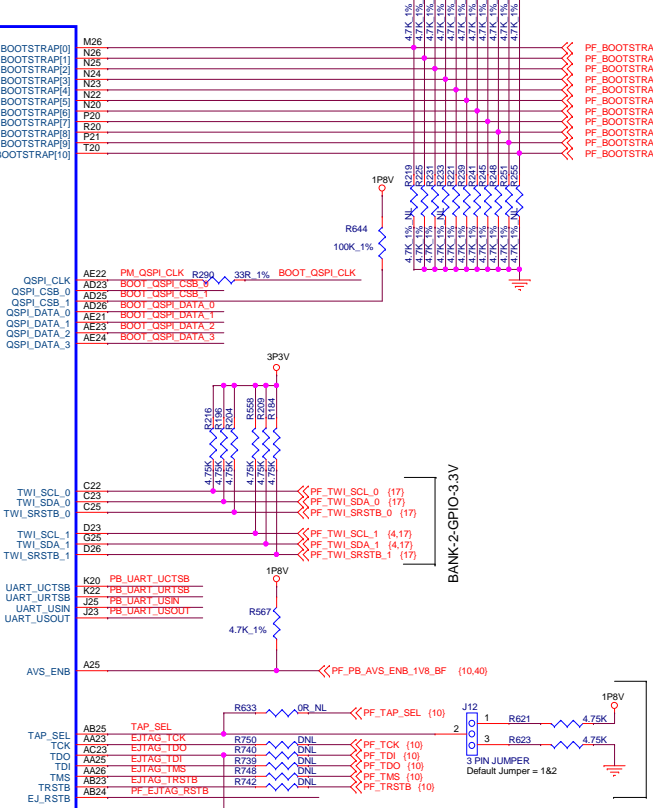
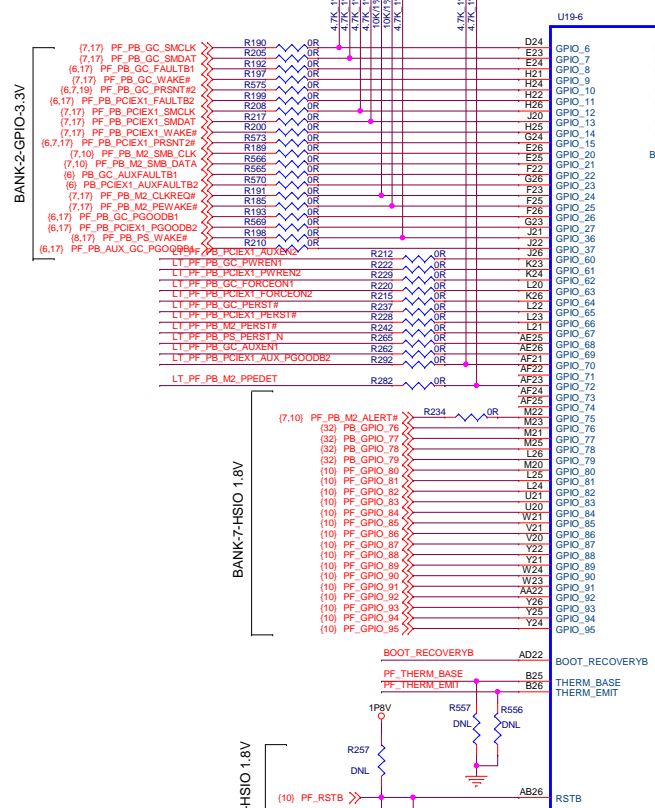
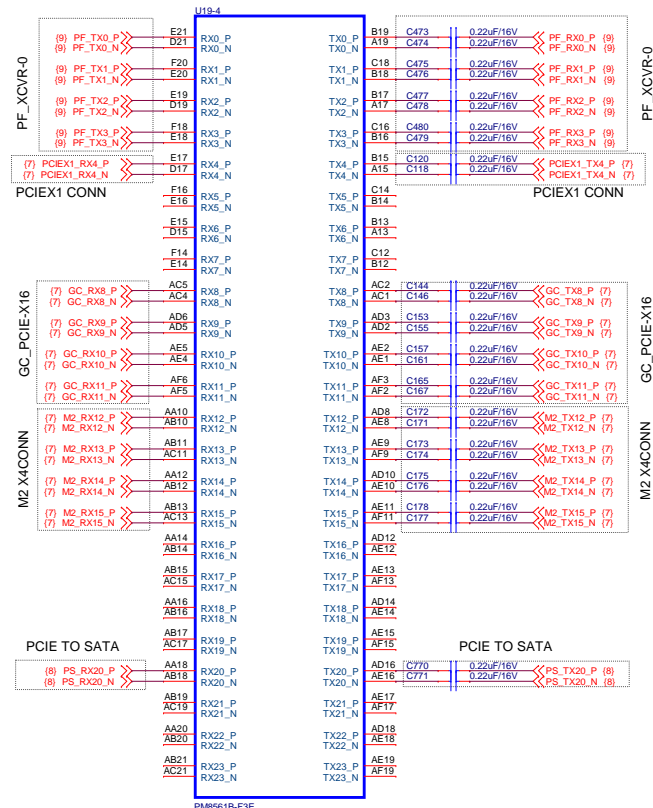


Power scheme - PCIe switch

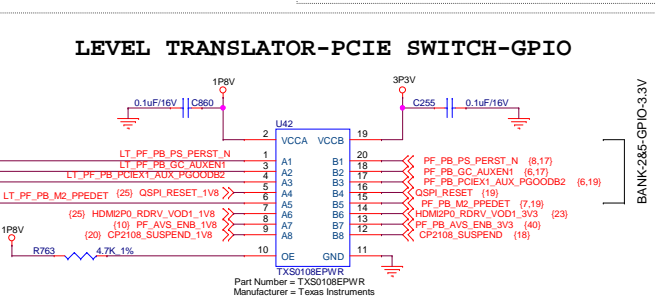
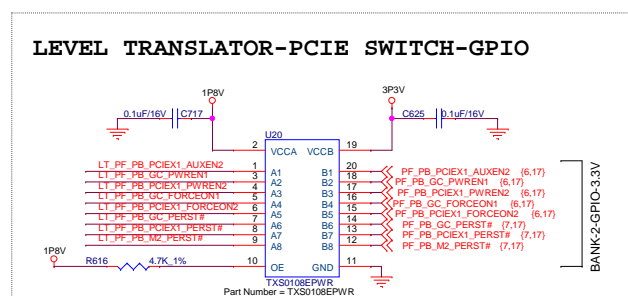


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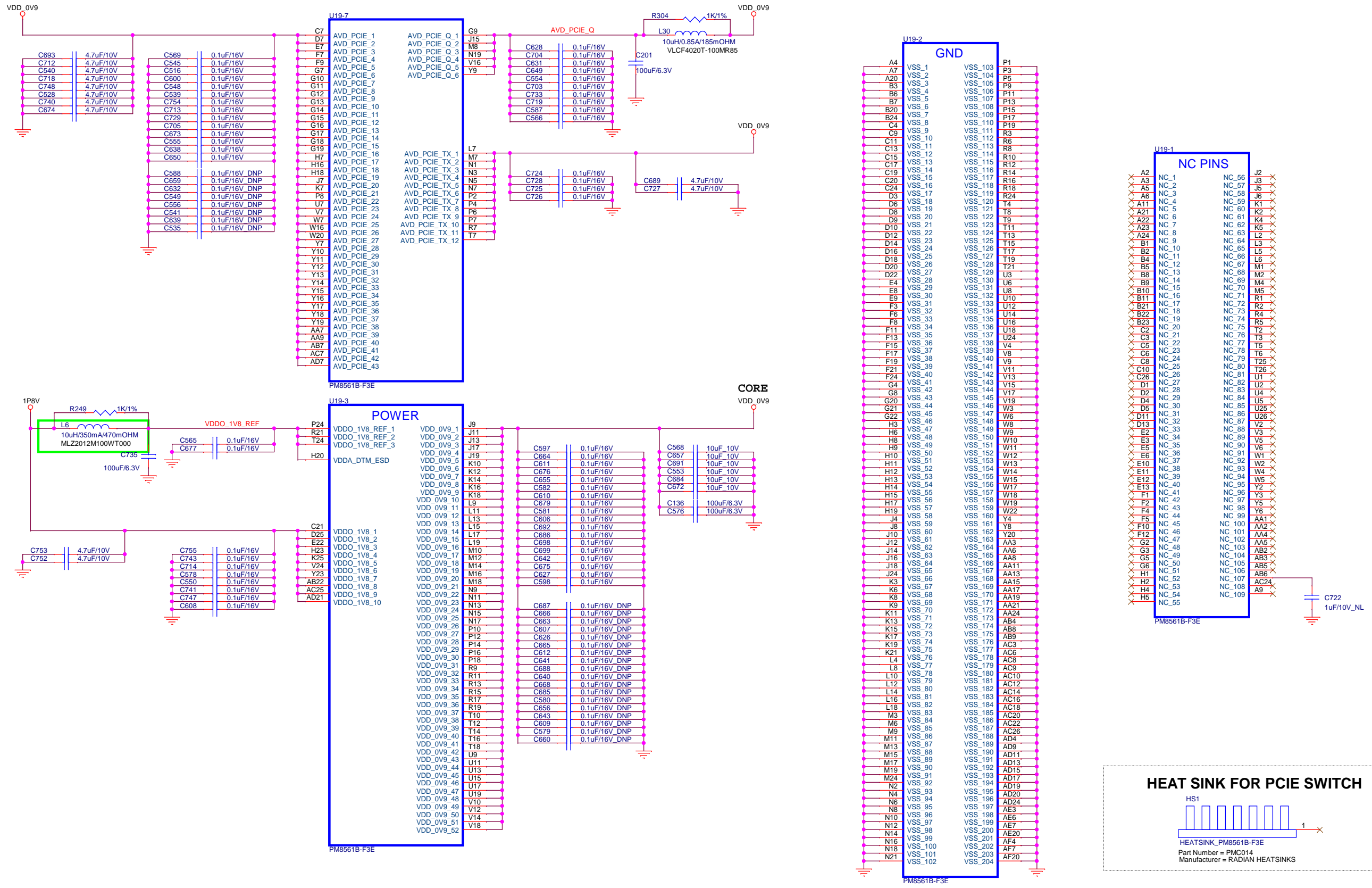
PM8561B-F3E SIGNAL CONNECTION



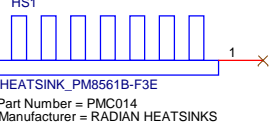
Boot strapping options		
BOOTSTRAP[0]	SPI Mode	1 - Quad SPI Mode
BOOTSTRAP[1]	SPI Device Select	0 - NOR Flash 1 - MRAM
BOOTSTRAP[2]	Inline ECC	0 - Inline ECC is disabled on boot device at boot-up 1 - Inline ECC is enabled on boot device at boot-up
BOOTSTRAP[3]	Boot Device	1 - Correct device operation
BOOTSTRAP[7:4]	Reserved	0000b - Correct device operation
BOOTSTRAP[8]	Reserved	0 - Correct device operation
BOOTSTRAP[9]	Reserved	0 - Correct device operation
BOOTSTRAP[10]	Reserved	1 - Correct device operation



PM8561B-F3E POWER CONNECTION



HEAT SINK FOR PCIE SWITCH

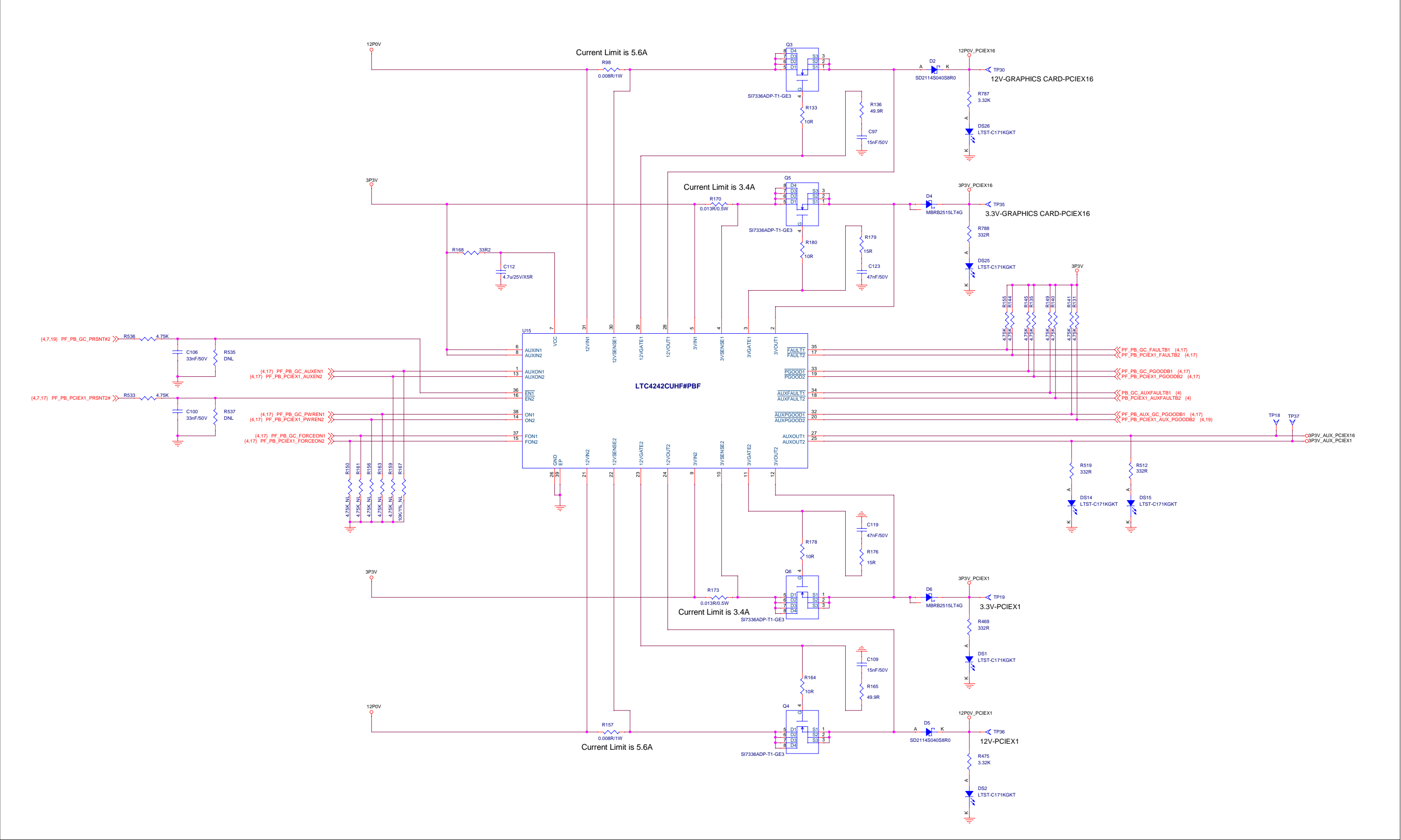


Part Number = PMC014
Manufacturer = RADIAN HEATSINKS

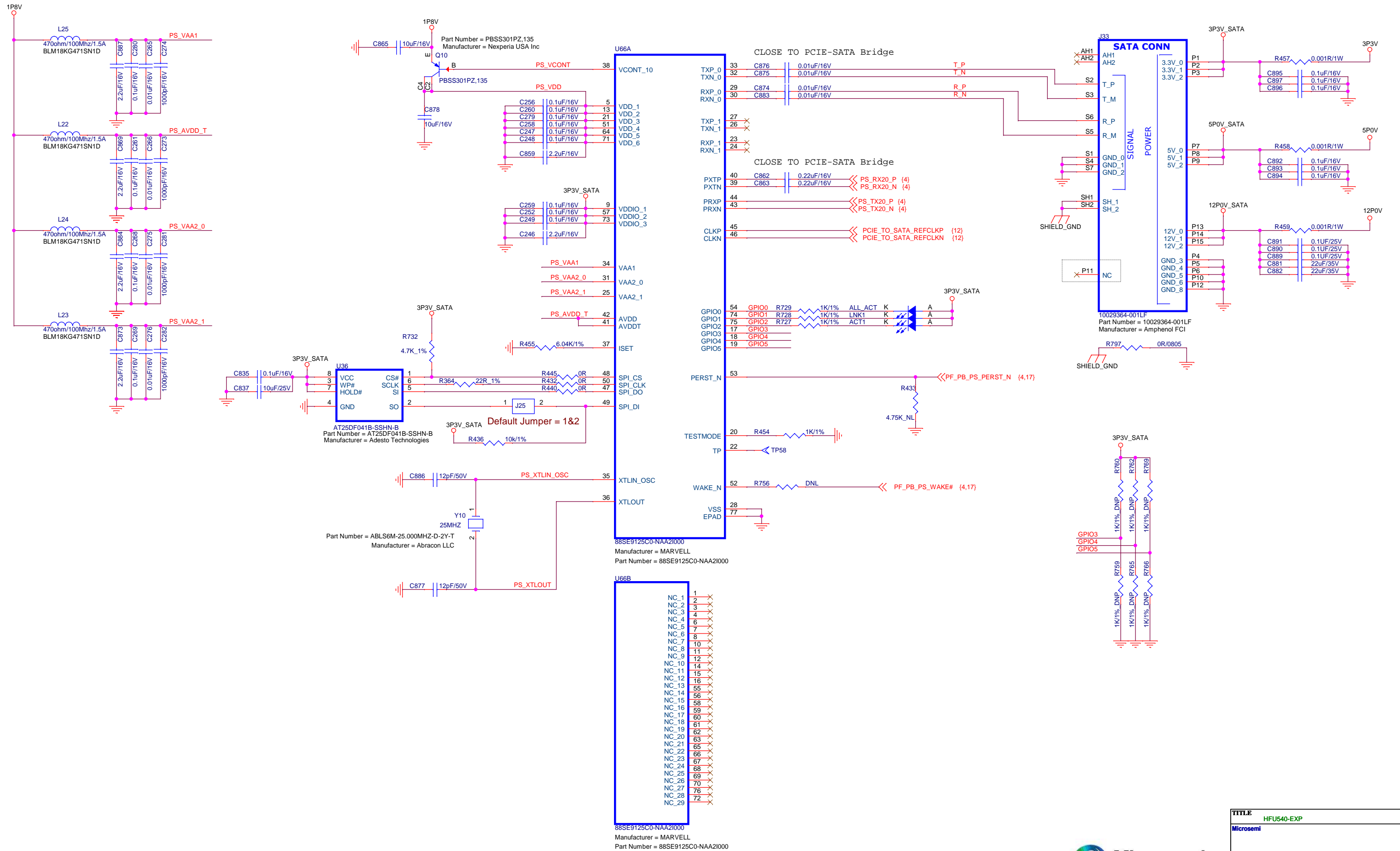


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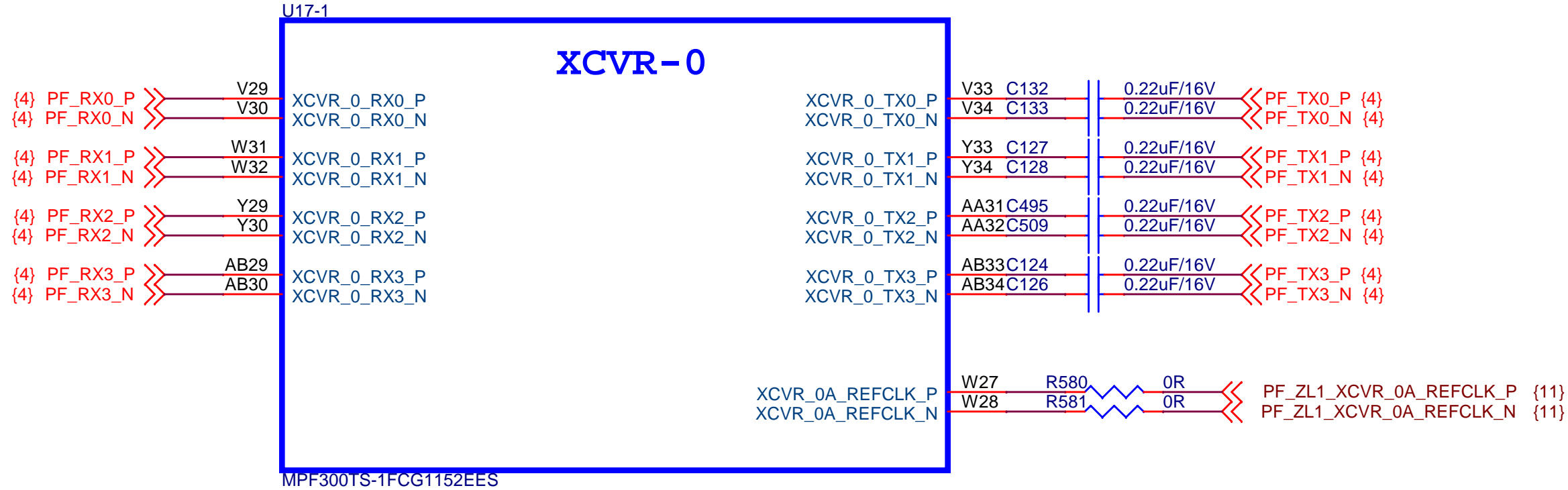
HOT PLUG CONTROLLER FOR PCIe x16 and x1 CONNECTORS



PCIE SATA CONTROLLER



TRANSCEIVER 0



TITLE			
HFU540-EXP			
Microsemi			
SIZE A	DOCUMENT NO.	DVP-100-000506-001	REV 2
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BANK-7-HSIO 1.8V

BANK - 7

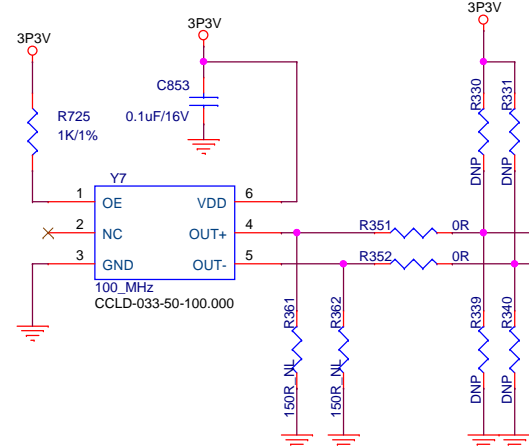
U17-17

MPF300TS-1FCG1152EES



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HFU540-EXP			
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REFCLK0 -100MHz



ZL30265 CONNECTION-INSTANCE-1

BANK-2-GPIO-3.3V

(17) ZL1_SPI_CS#/IF0
(17) ZL1_SPI_MISO/IF1
(17) ZL1_SPI_SCLK
(17) ZL1_SPI_MOSI/SDA

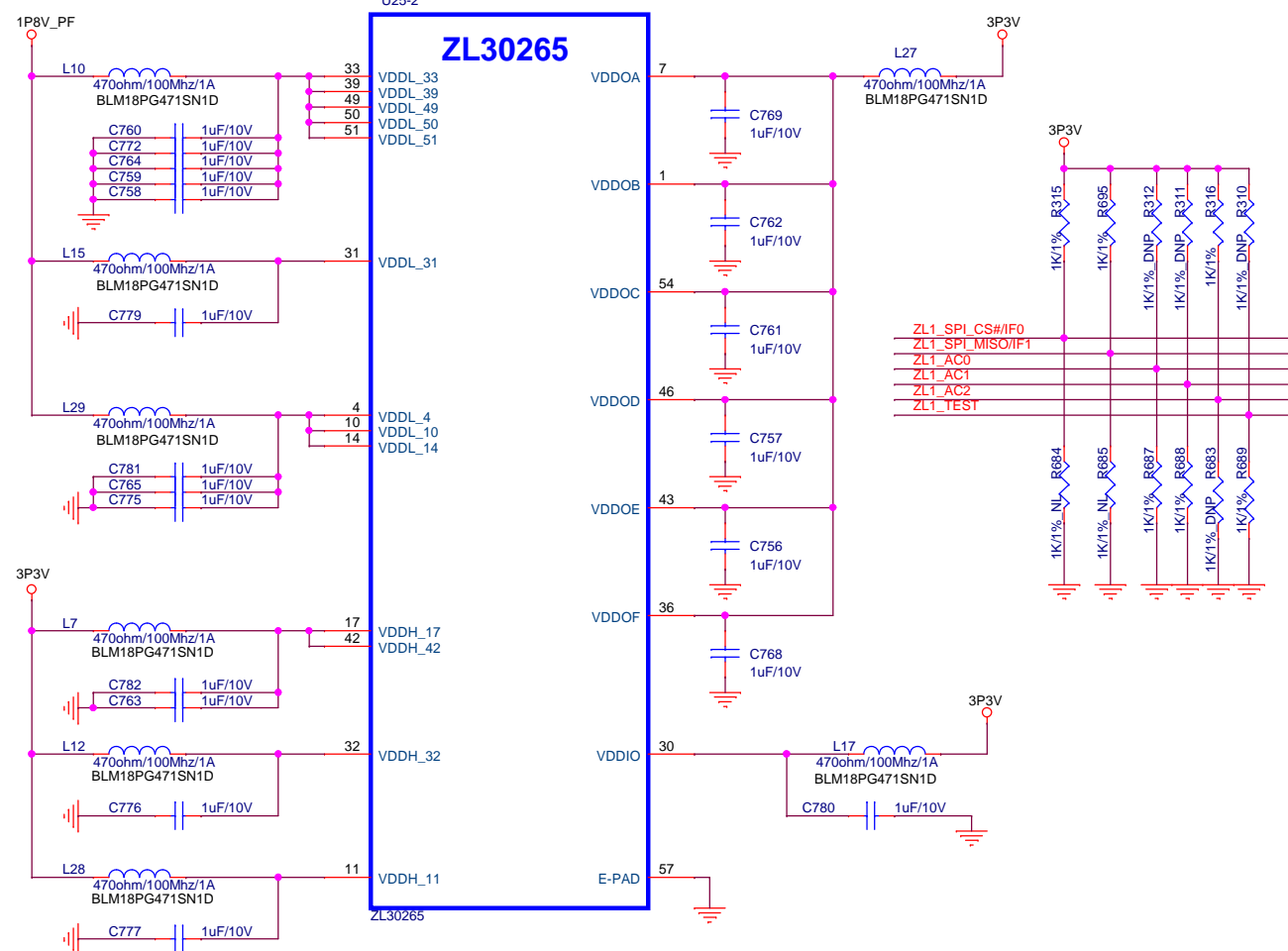
ZL1_ZL2_RST#

ZL1_AC0
ZL1_AC1
ZL1_AC2
ZL1_TEST

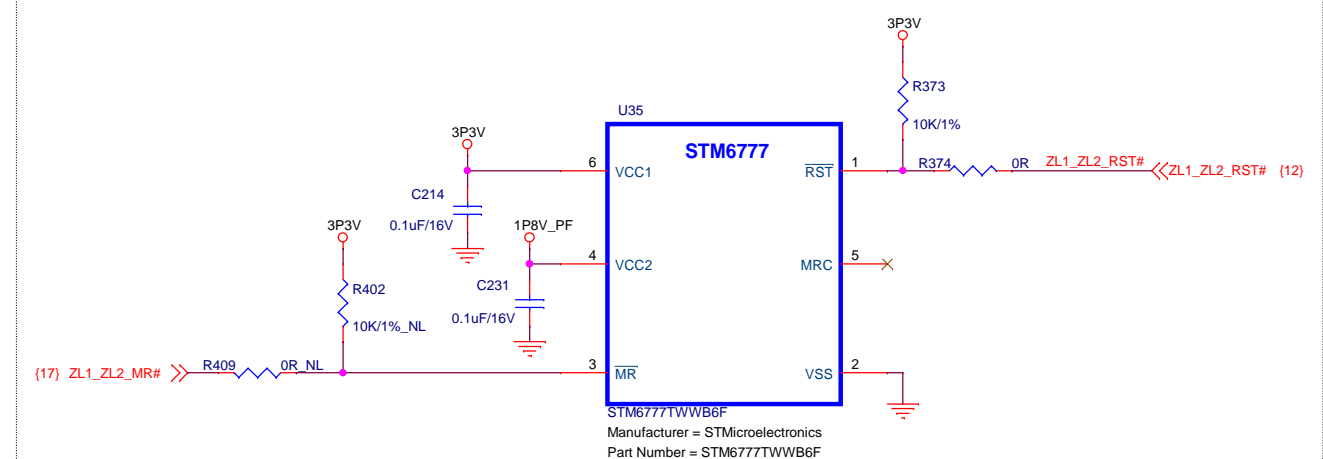
ZL30265

ZL30265

ZL30265

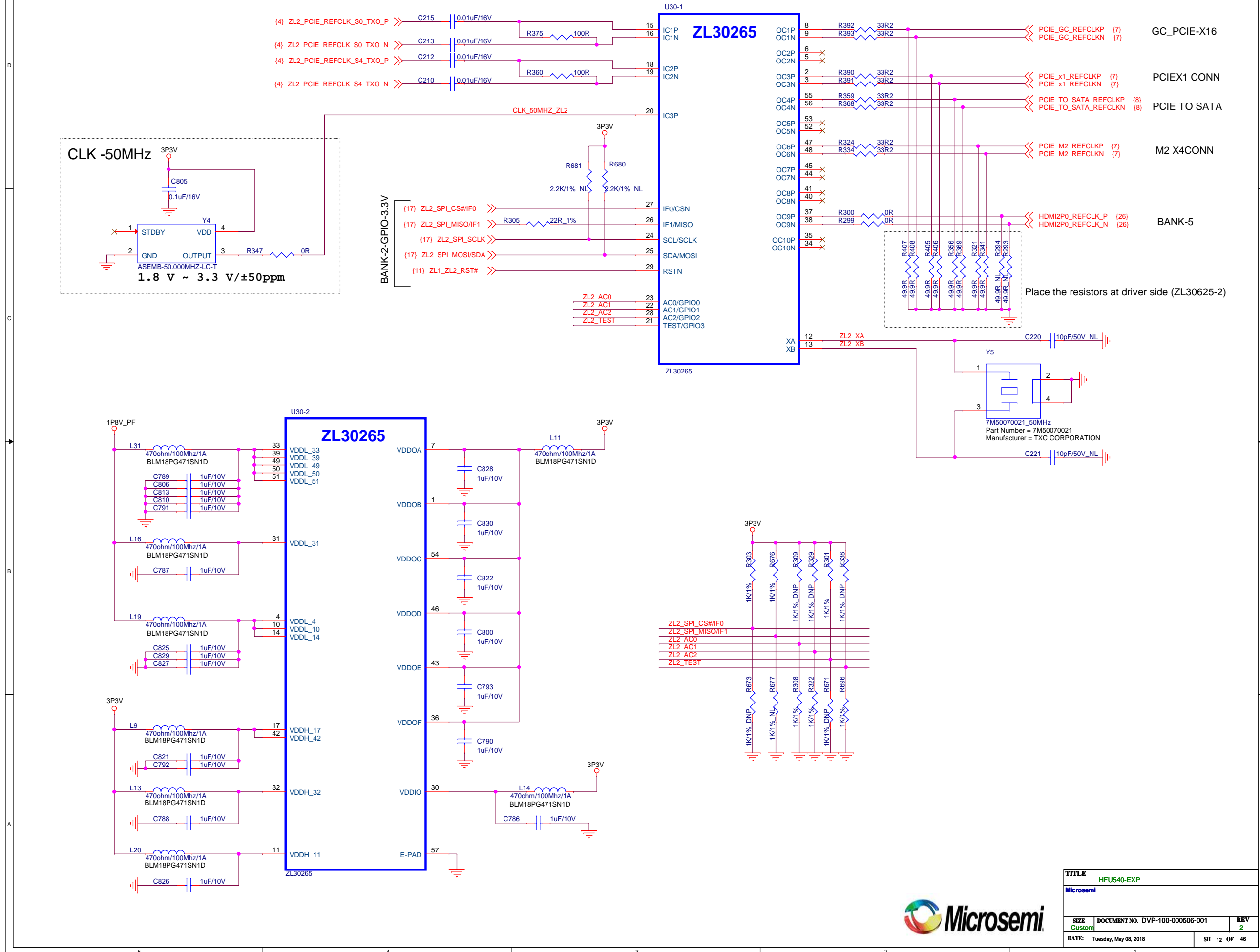


RESET SUPERVISOR



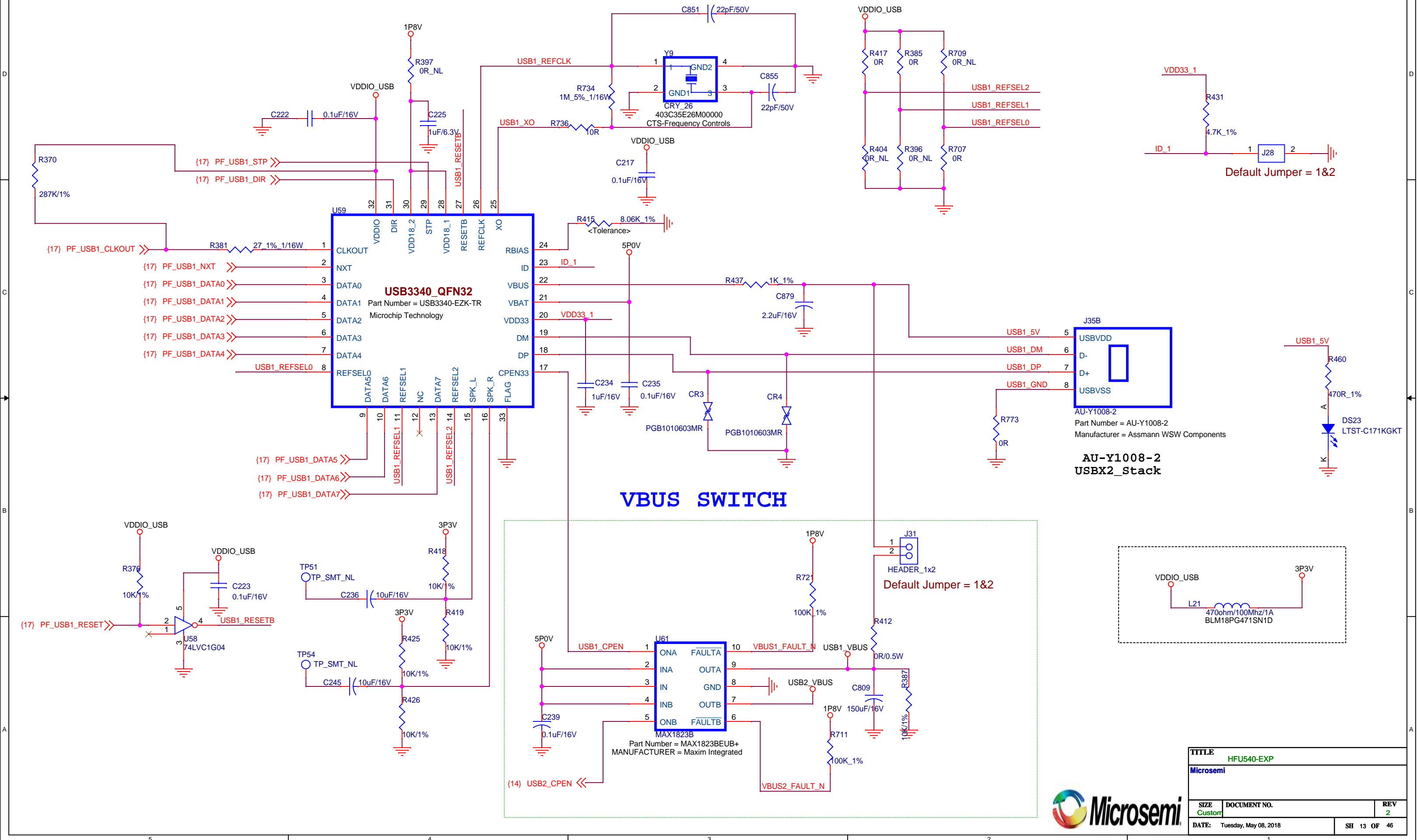
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HFU540-EXP		
Microsemi		
SIZE	DOCUMENT NO. DVP-100-000506-001	REV
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ZL30265 CONNECTION-INSTANCE-2



TITLE		
HFU540-EXP		
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Schematic shows 26.0 MHz Configuration.
REFCLK[2:0] = 110

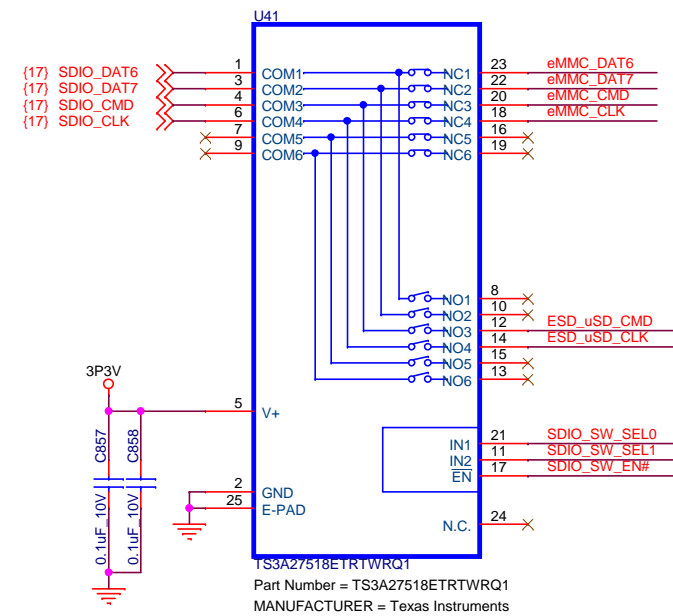
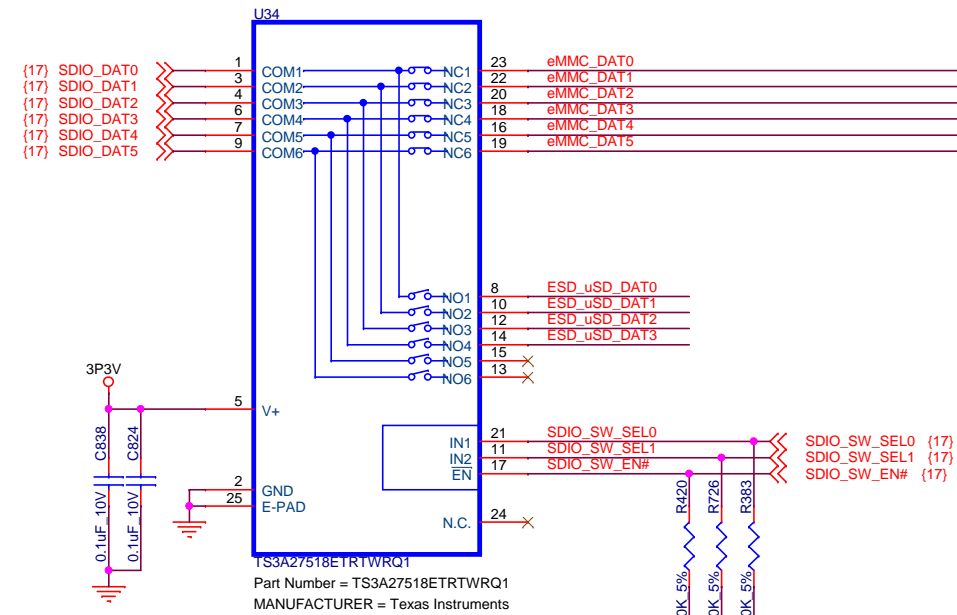


Schematic shows 26.0 MHz Configuration.
REFCLK[2:0] = 110

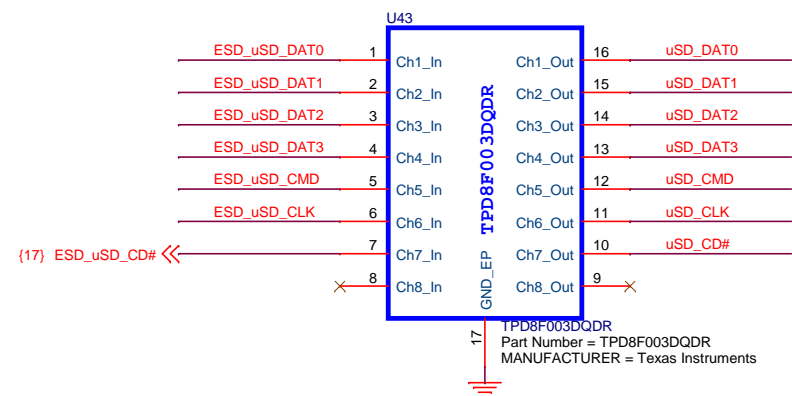


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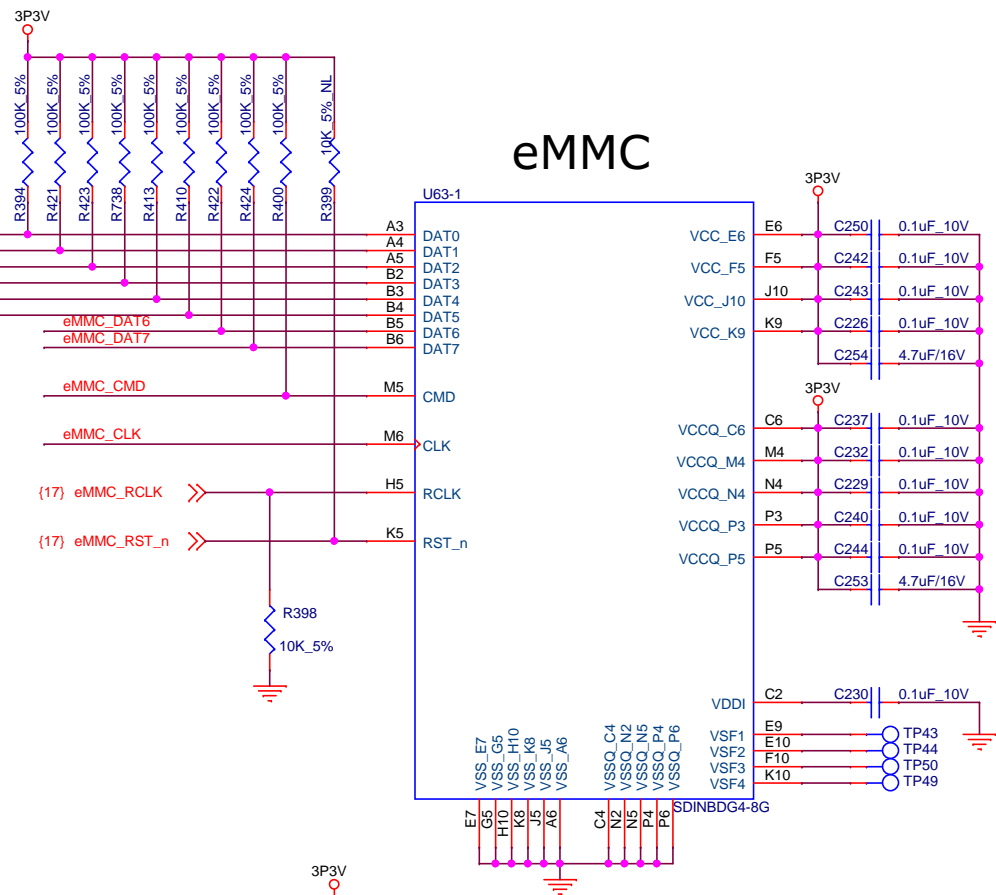
SDIO INTERFACE



ESD Protection-uSD CARD

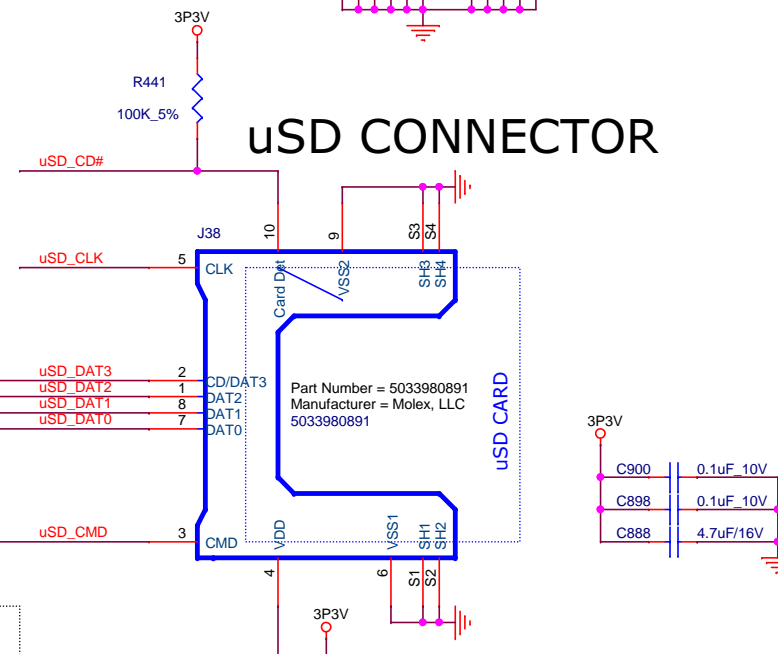


eMMC



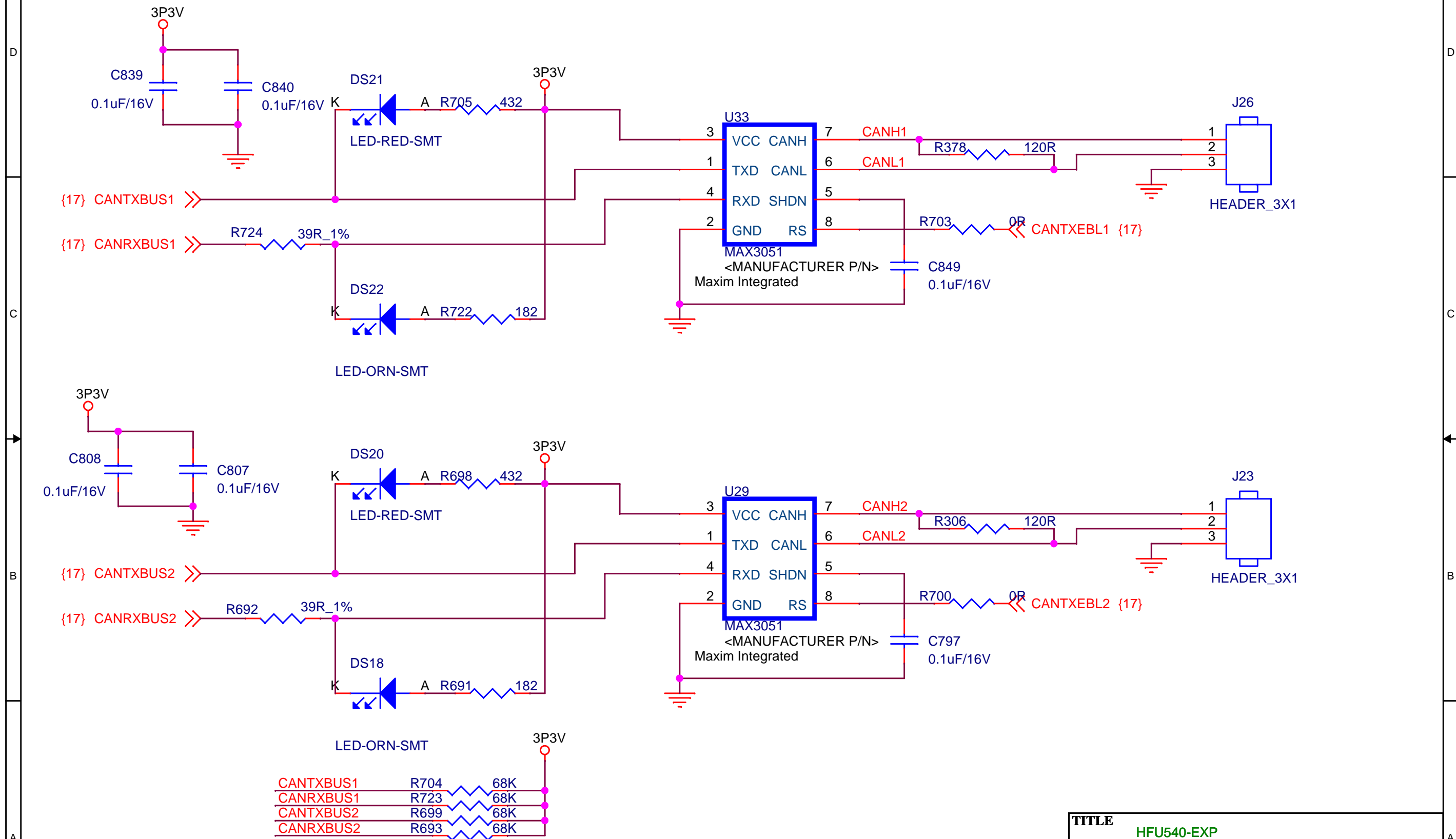
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A2	NC2	NC60	H2
A7	NC3	NC61	H3
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A10	NC6	NC64	H14
A11	NC7	NC65	J1
A12	NC8	NC66	J2
A13	NC9	NC67	J3
A14	NC10	NC68	J12
B1	NC11	NC69	J13
B7	NC12	NC70	J14
B8	NC13	NC71	K1
B9	NC14	NC72	K2
B10	NC15	NC73	K3
B12	NC16	NC74	K6
B13	NC17	NC75	K7
C1	NC18	NC76	K12
C3	NC19	NC77	K13
C5	NC20	NC78	K14
C7	NC21	NC79	L1
C8	NC22	NC80	L2
C9	NC23	NC81	L12
C10	NC24	NC82	L13
C11	NC25	NC83	L14
C12	NC26	NC84	M1
C13	NC27	NC85	M2
C14	NC28	NC86	M3
D1	NC29	NC87	M7
D2	NC30	NC88	M8
D3	NC31	NC89	M9
D4	NC32	NC90	M10
D12	NC33	NC91	M11
D13	NC34	NC92	M12
D14	NC35	NC93	M13
E1	NC36	NC94	M14
E2	NC37	NC95	N1
E3	NC38	NC96	N3
E4	NC39	NC97	N6
E5	NC40	NC98	N7
E6	NC41	NC99	N8
E7	NC42	NC100	N9
E8	NC43	NC101	N10
F1	NC44	NC102	N11
F2	NC45	NC103	N12
F3	NC46	NC104	N13
F4	NC47	NC105	N14
F5	NC48	NC106	P1
F6	NC49	NC107	P2
F7	NC50	NC108	P7
F8	NC51	NC109	P8
F9	NC52	NC110	P9
F10	NC53	NC111	P10
F11	NC54	NC112	P11
F12	NC55	NC113	P12
F13	NC56	NC114	P13
F14	NC57	NC115	P14
G1	NC58	NC116	

uSD CONNECTOR

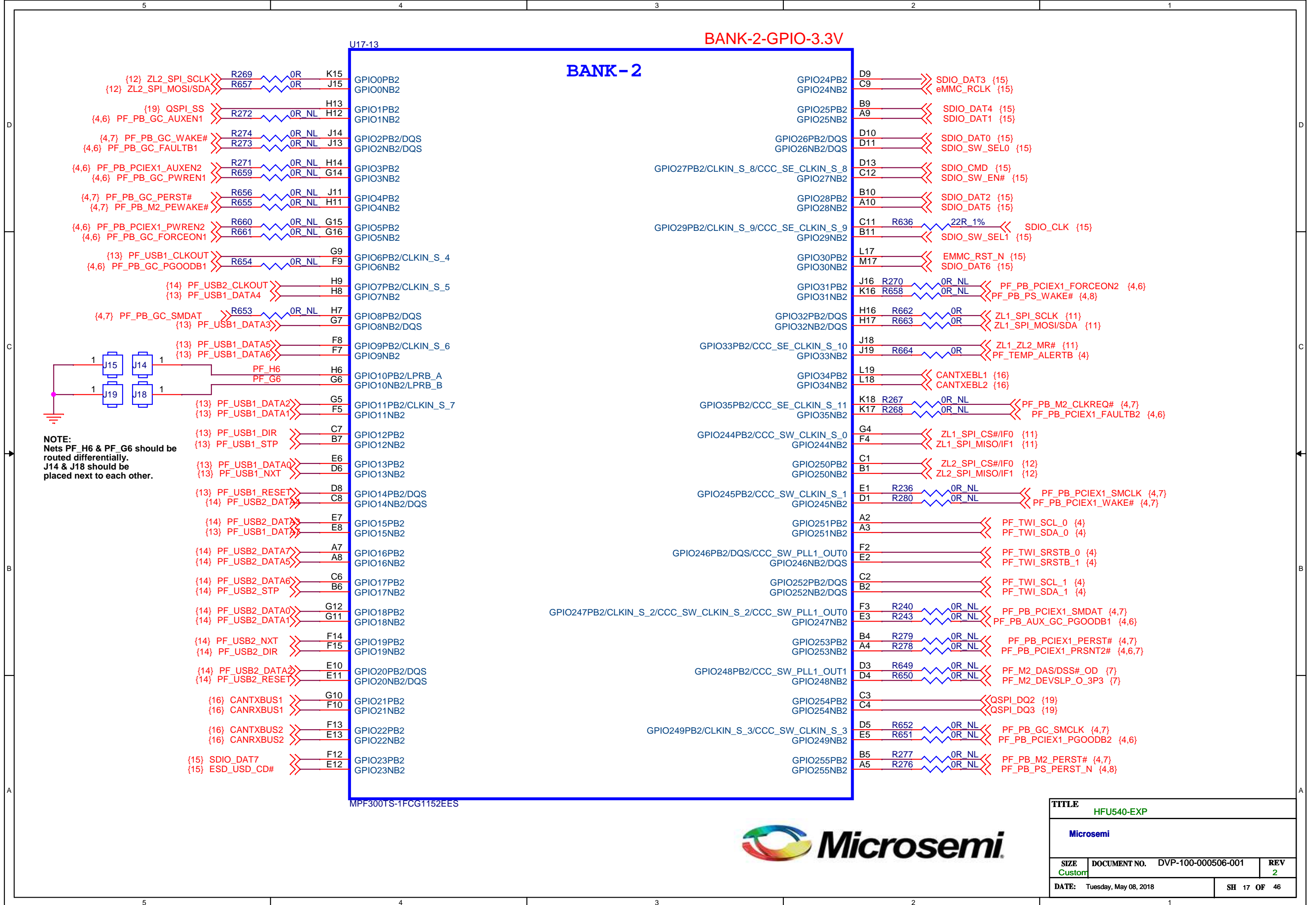


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CAN Interface

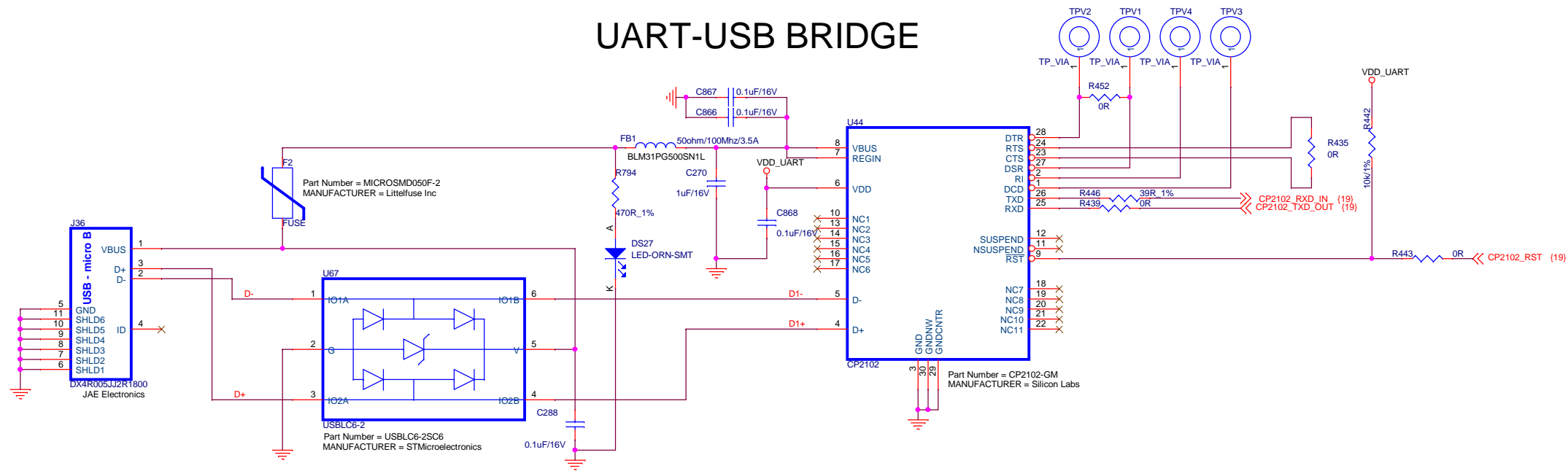


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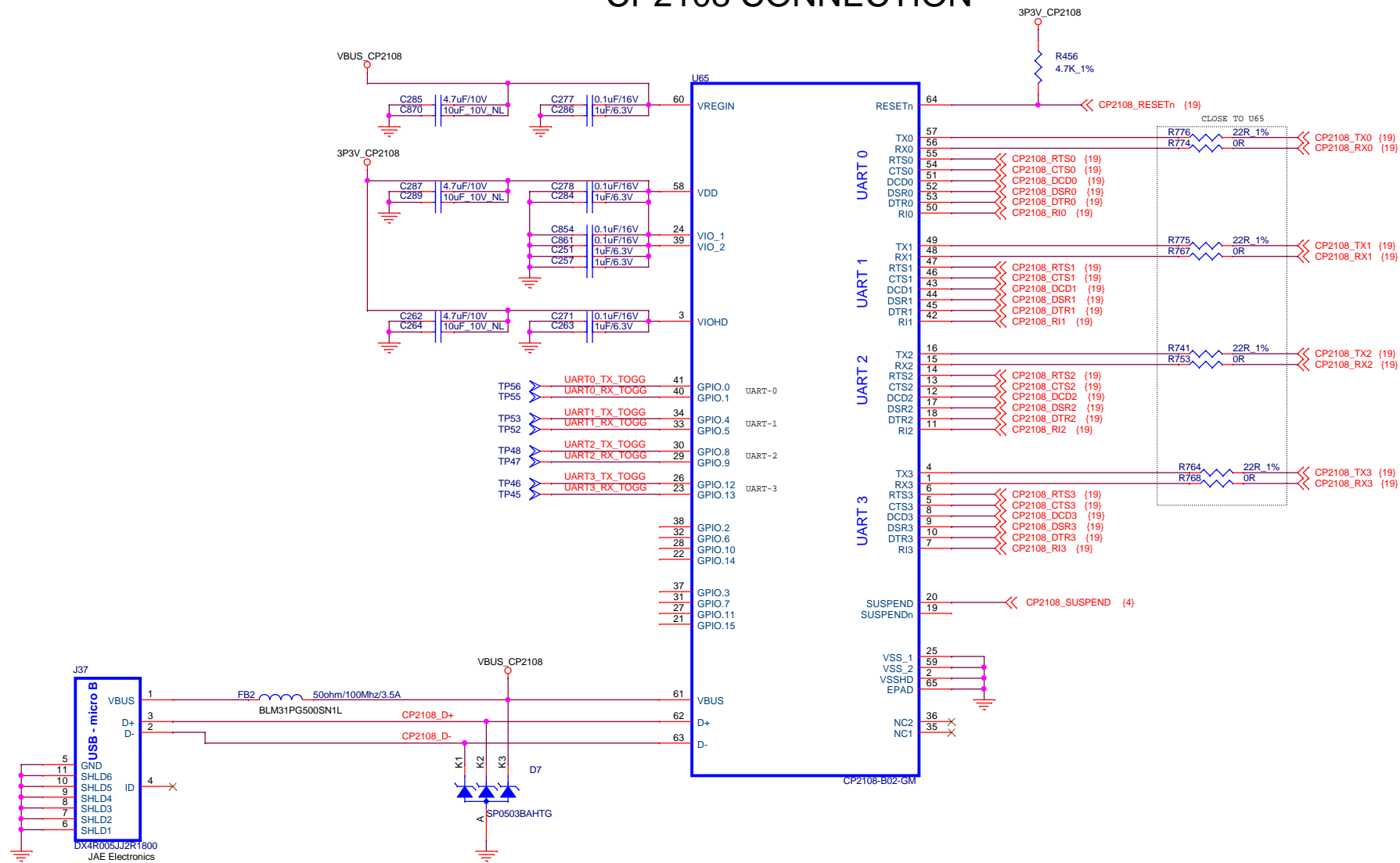


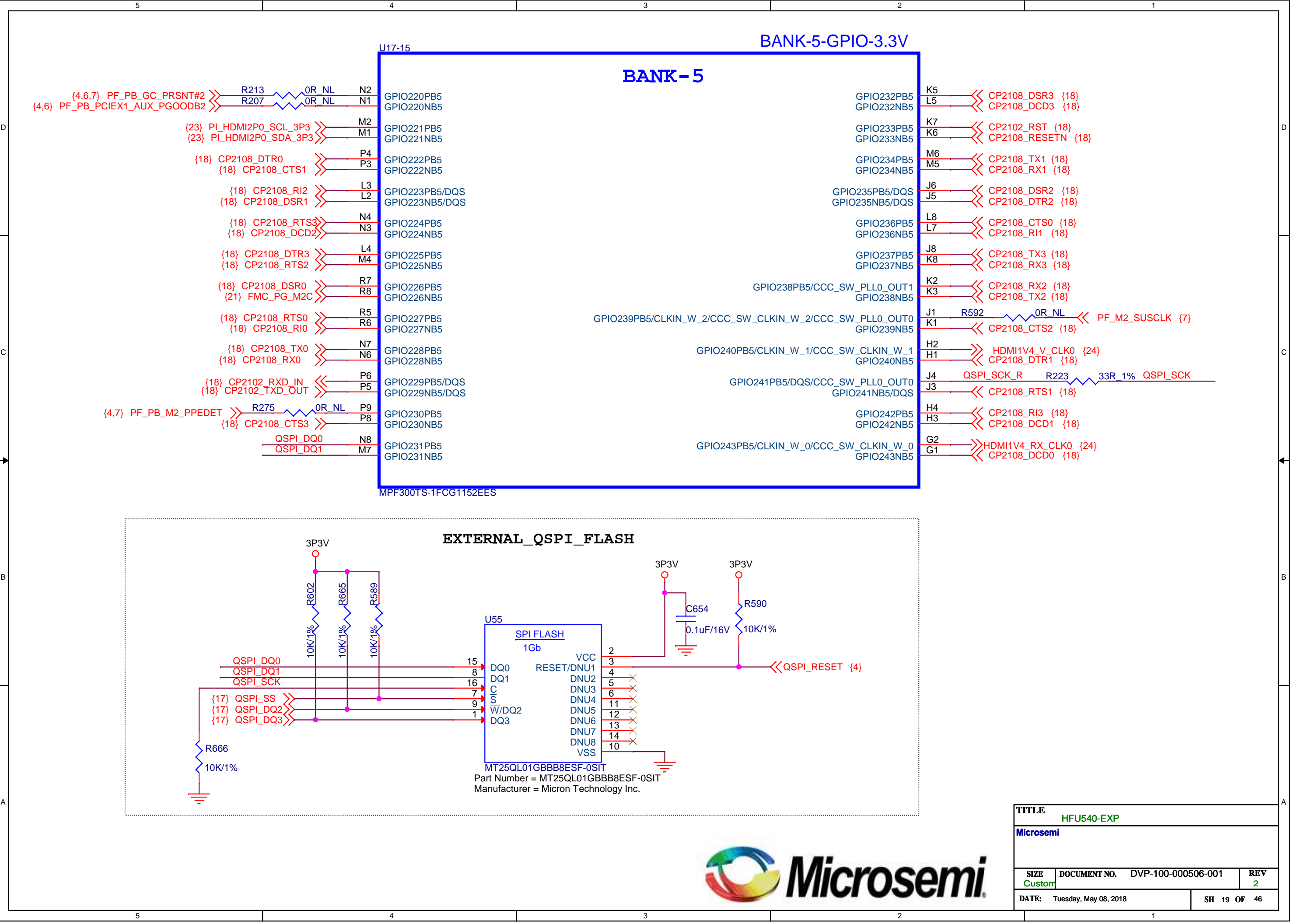
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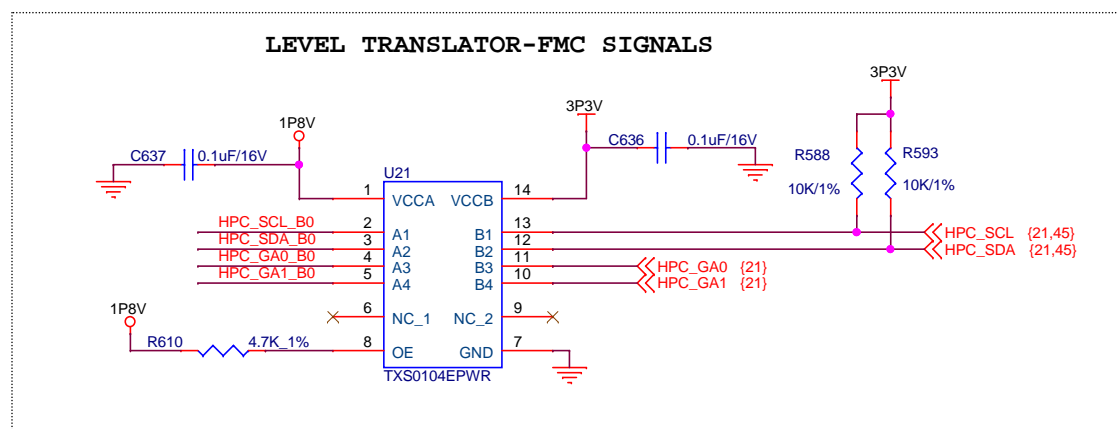
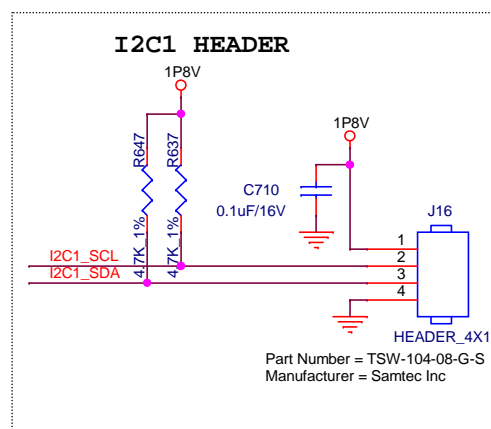
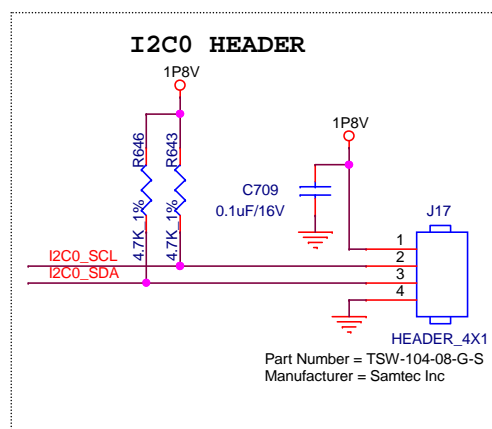
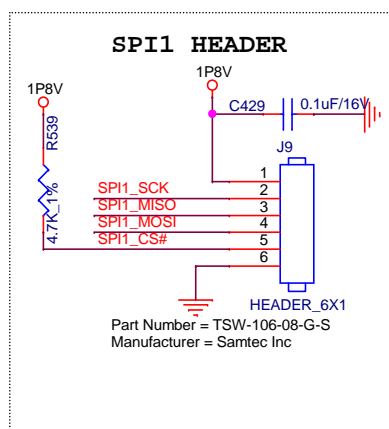
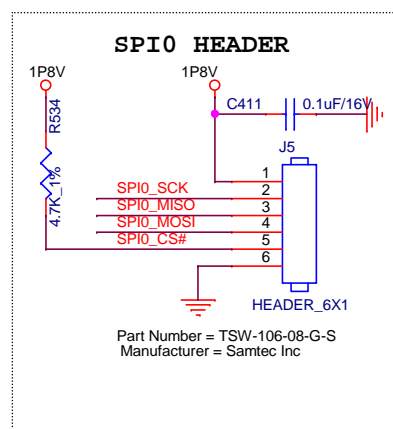
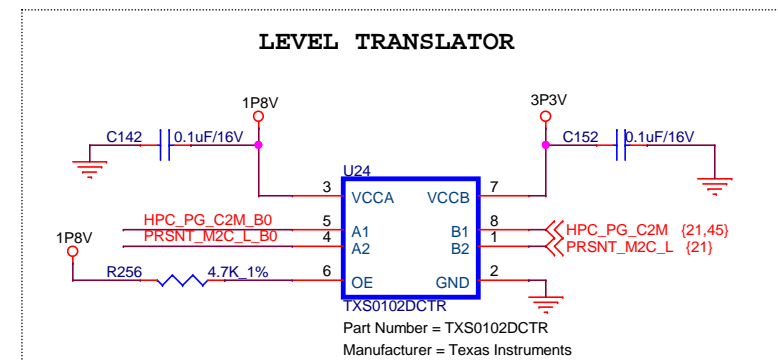
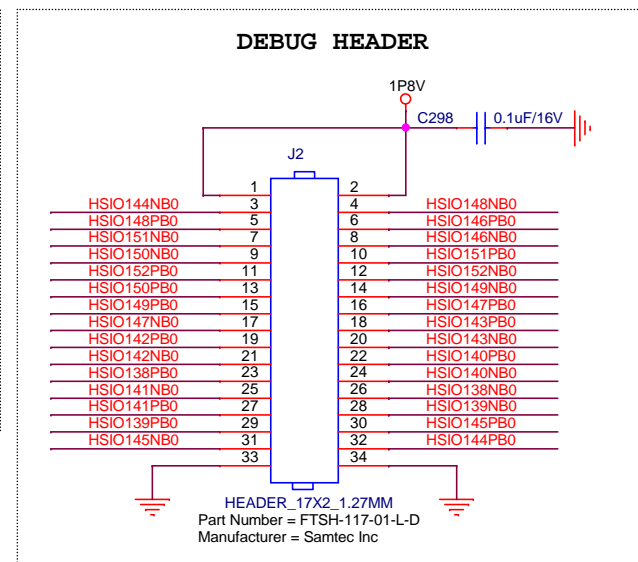
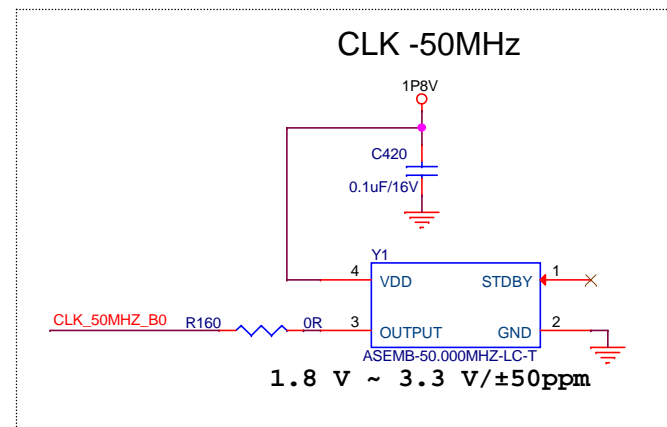
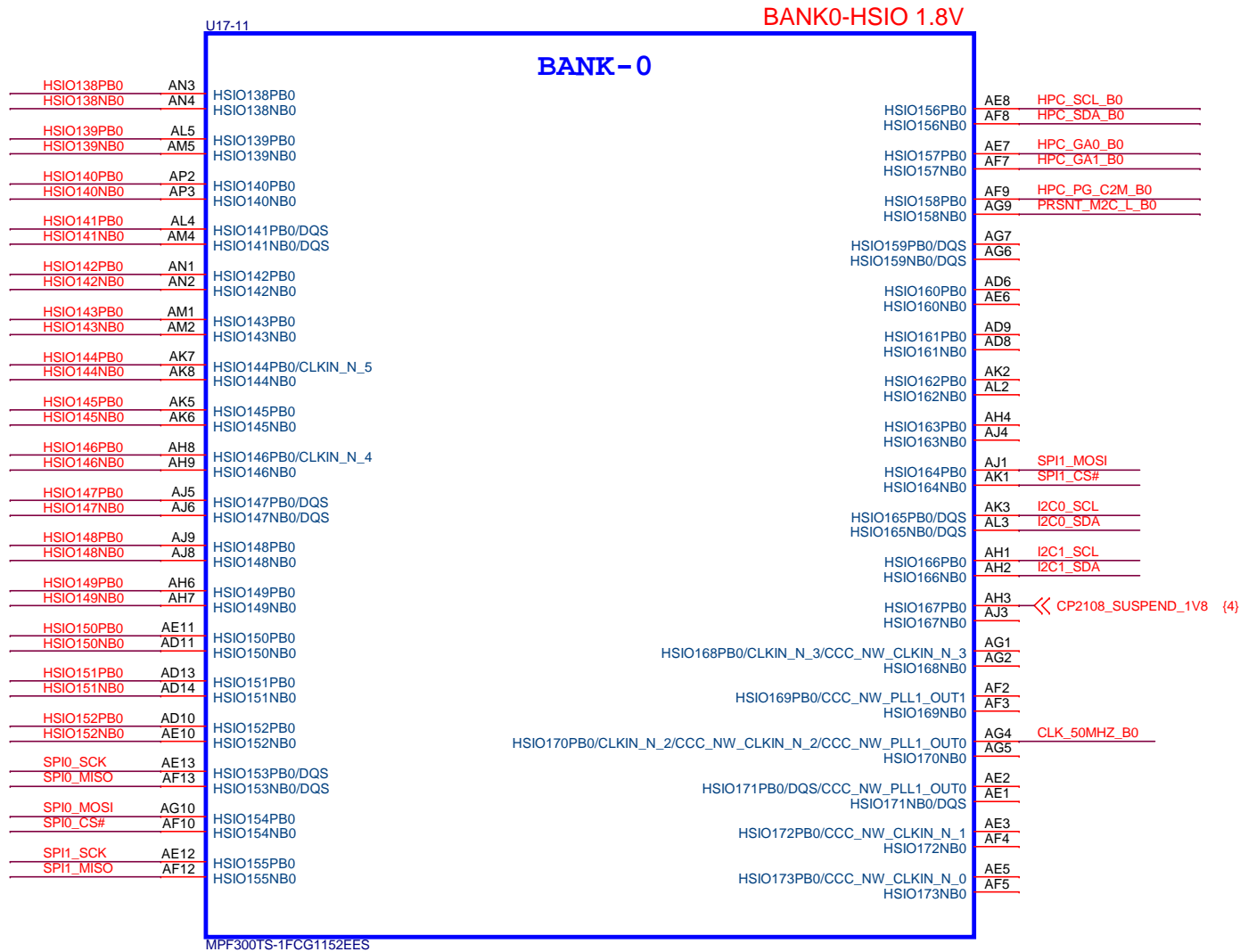
UART-USB BRIDGE



CP2108 CONNECTION

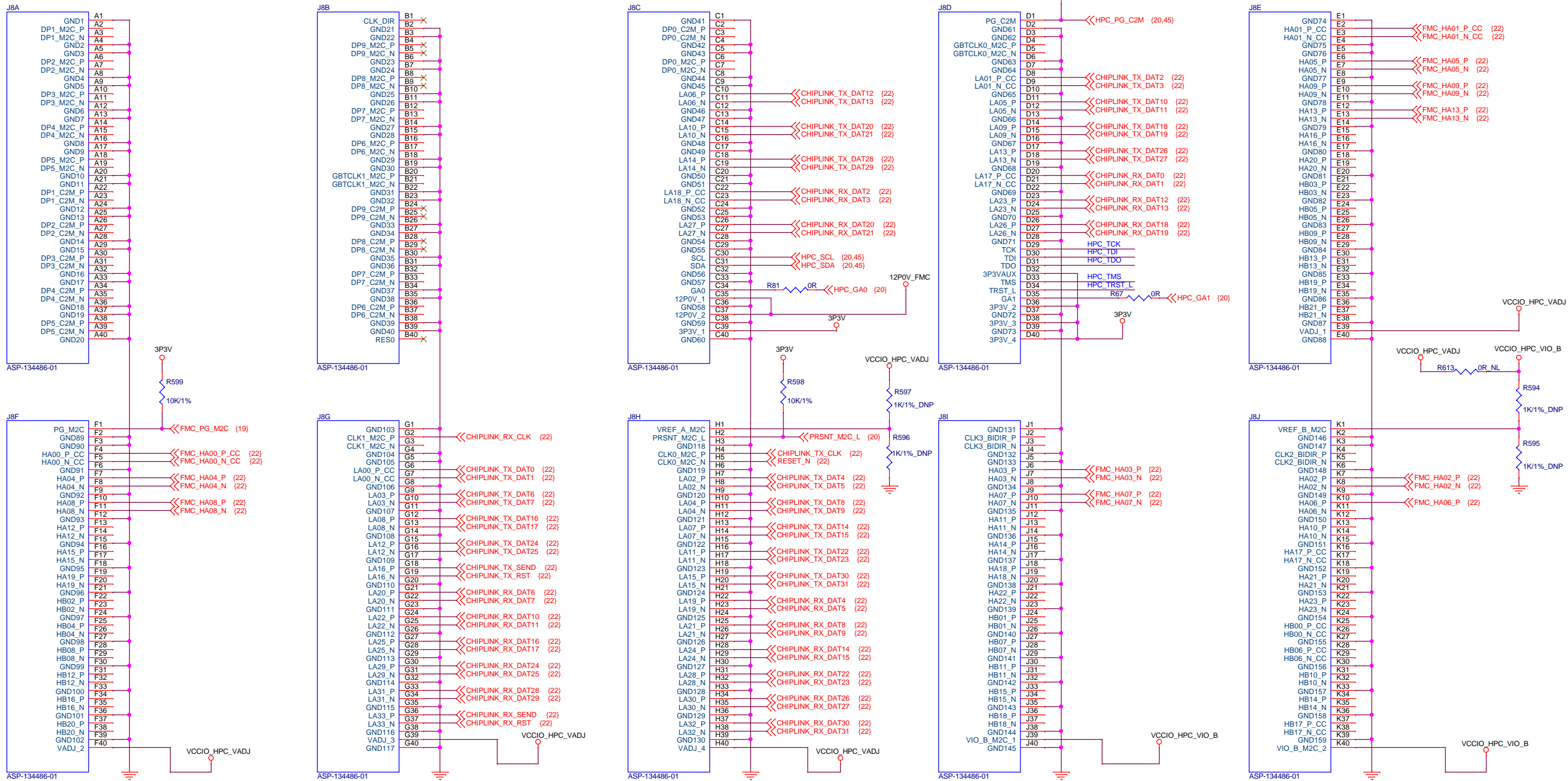


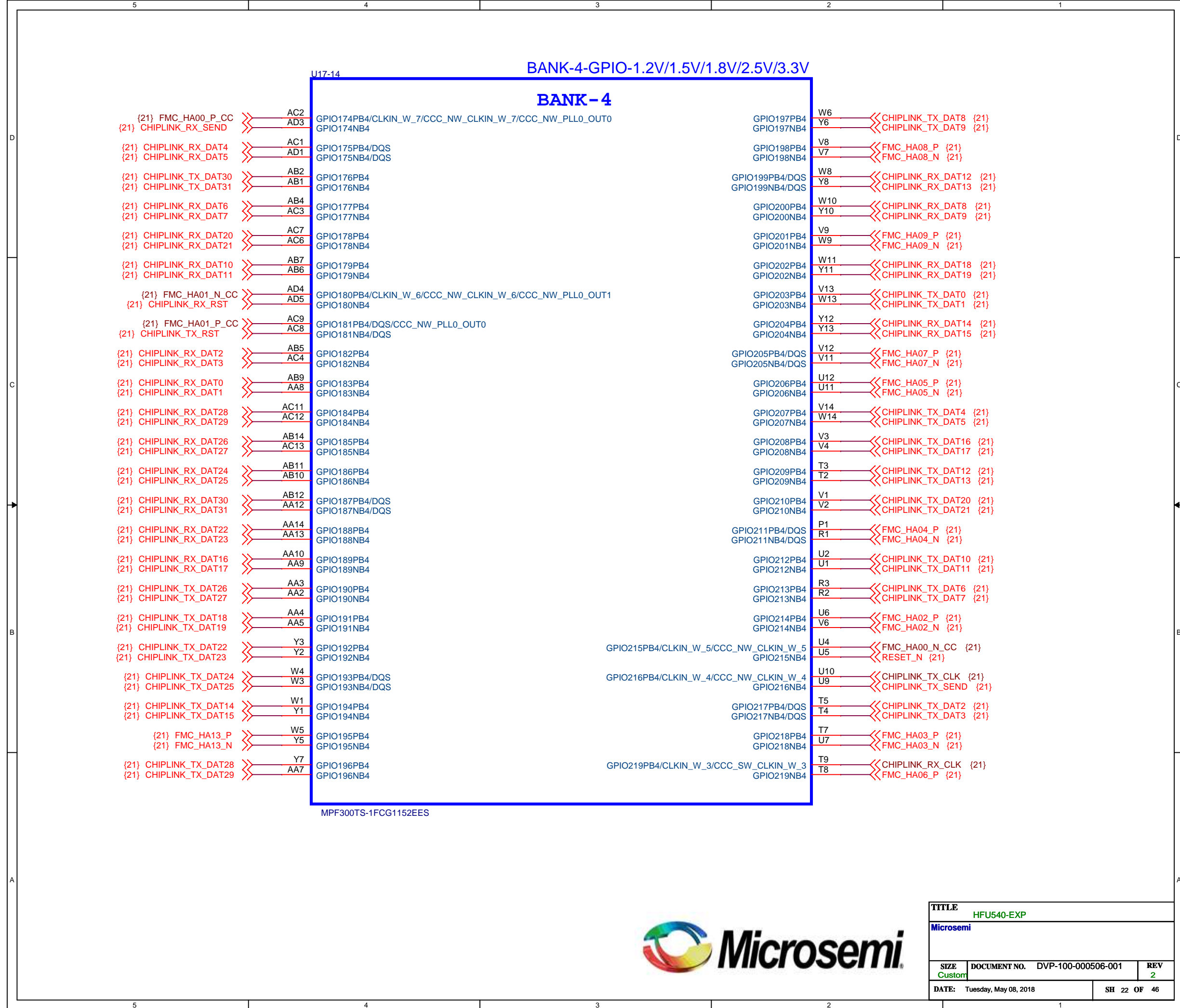




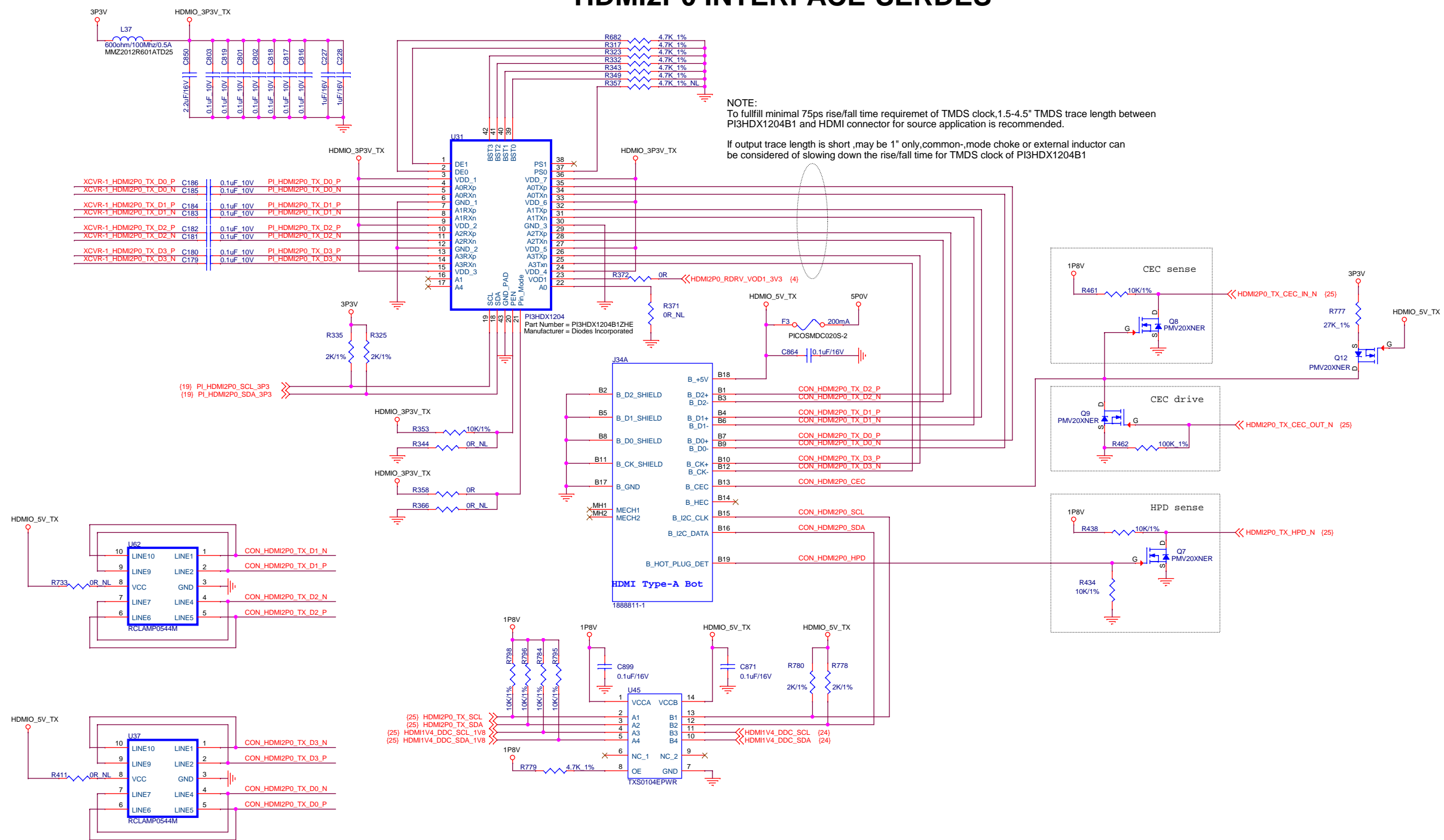
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HFU540-EXP			
Microsemi			
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FMC CONNECTOR(HPC)

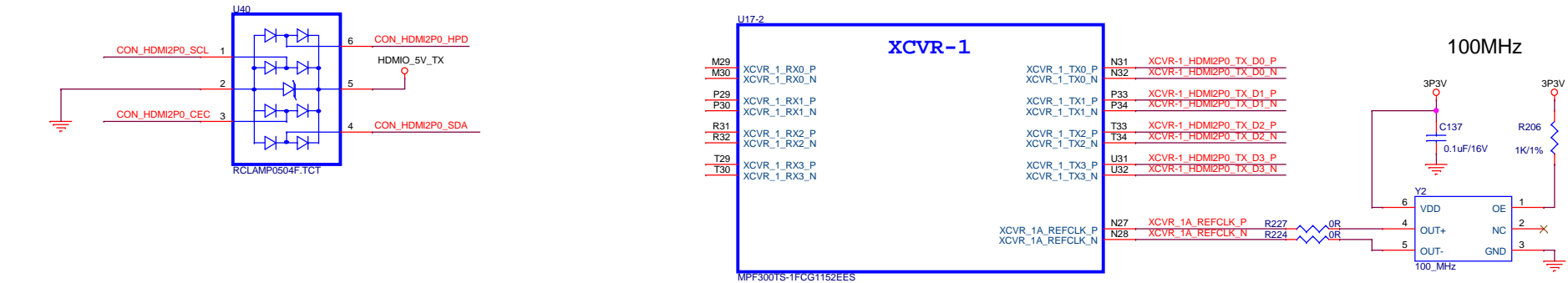




HDMI2P0 INTERFACE-SERDES

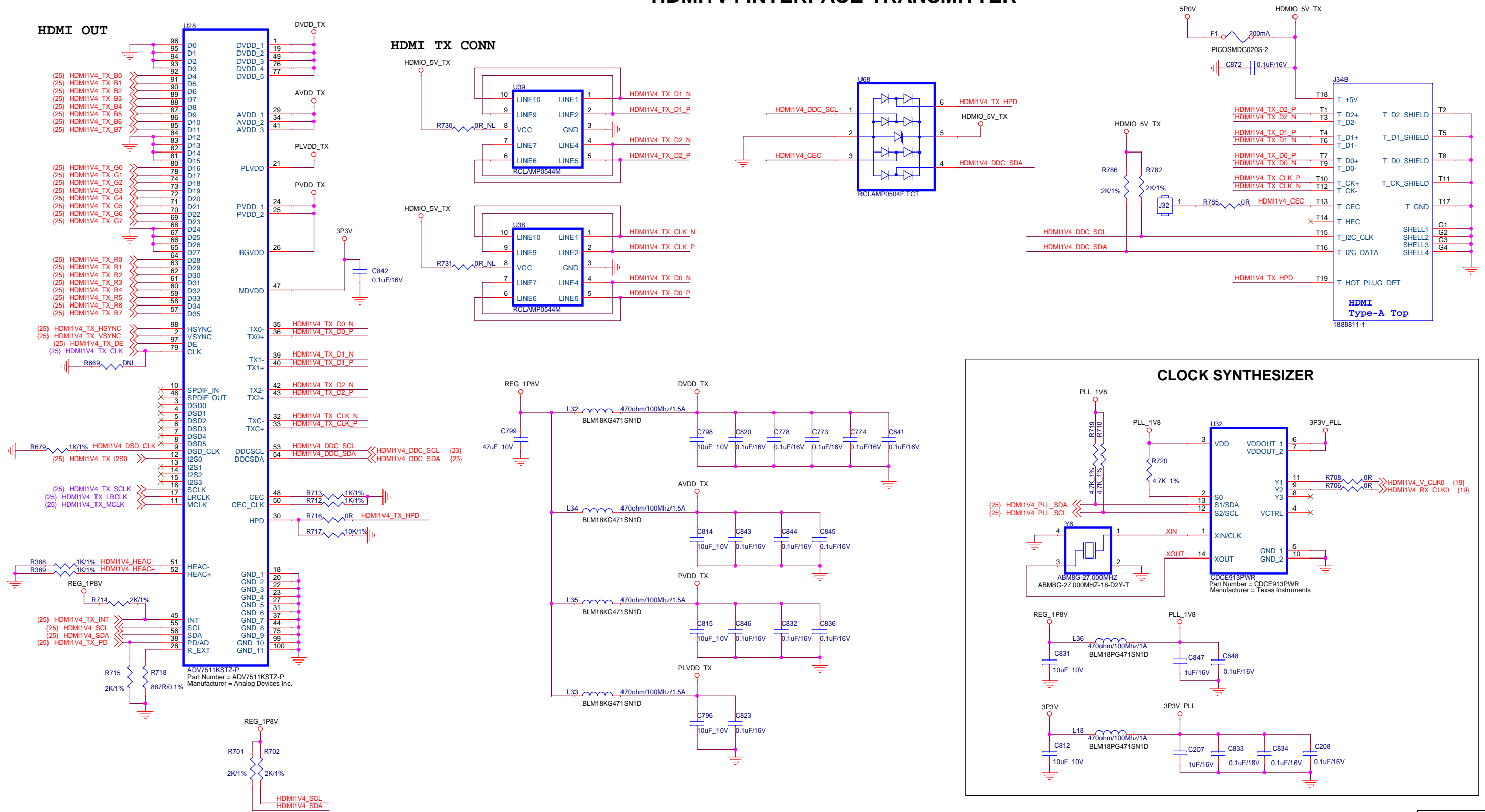


TRANSCEIVER-1

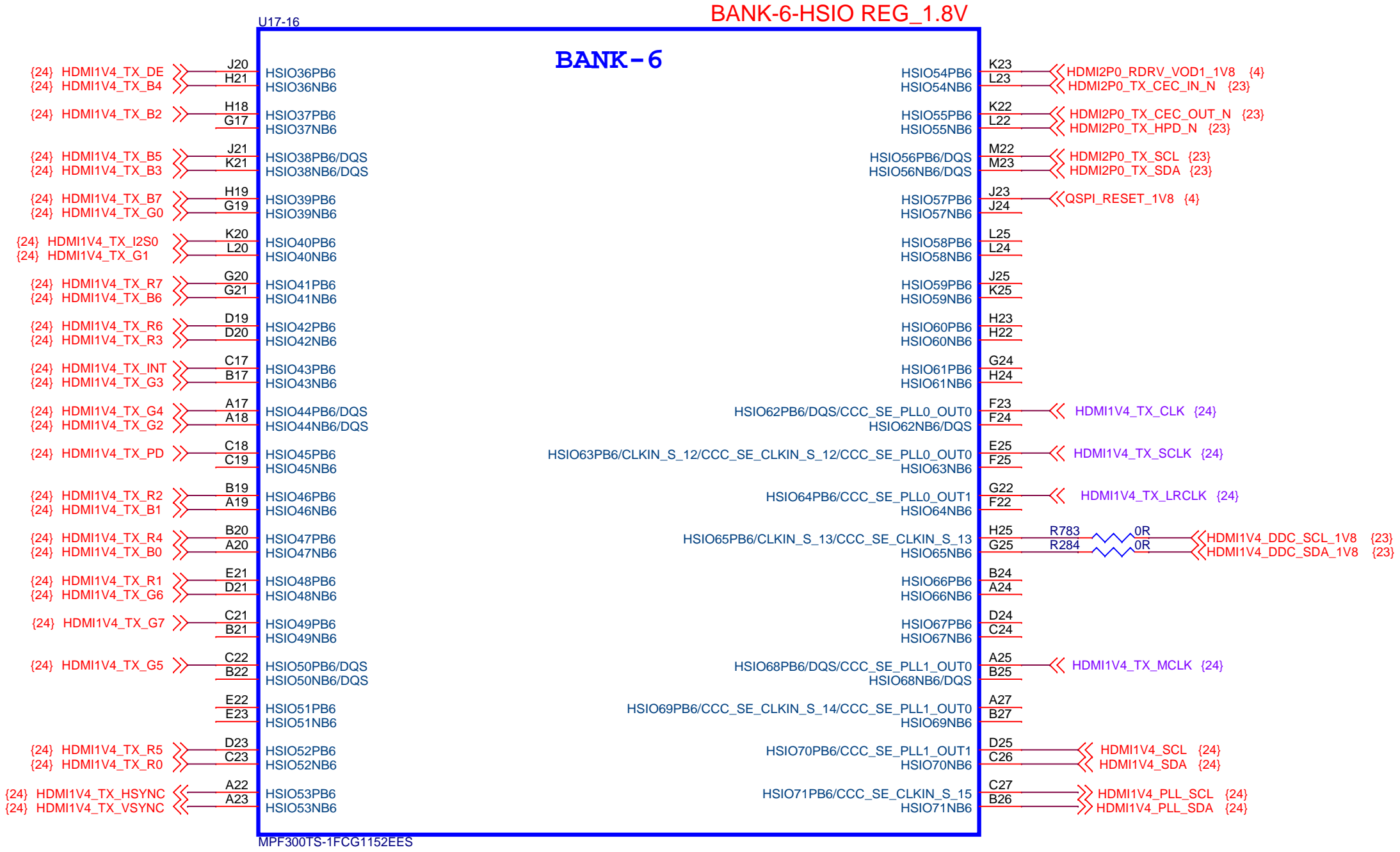


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HDMI1V4 INTERFACE-TRANSMITTER

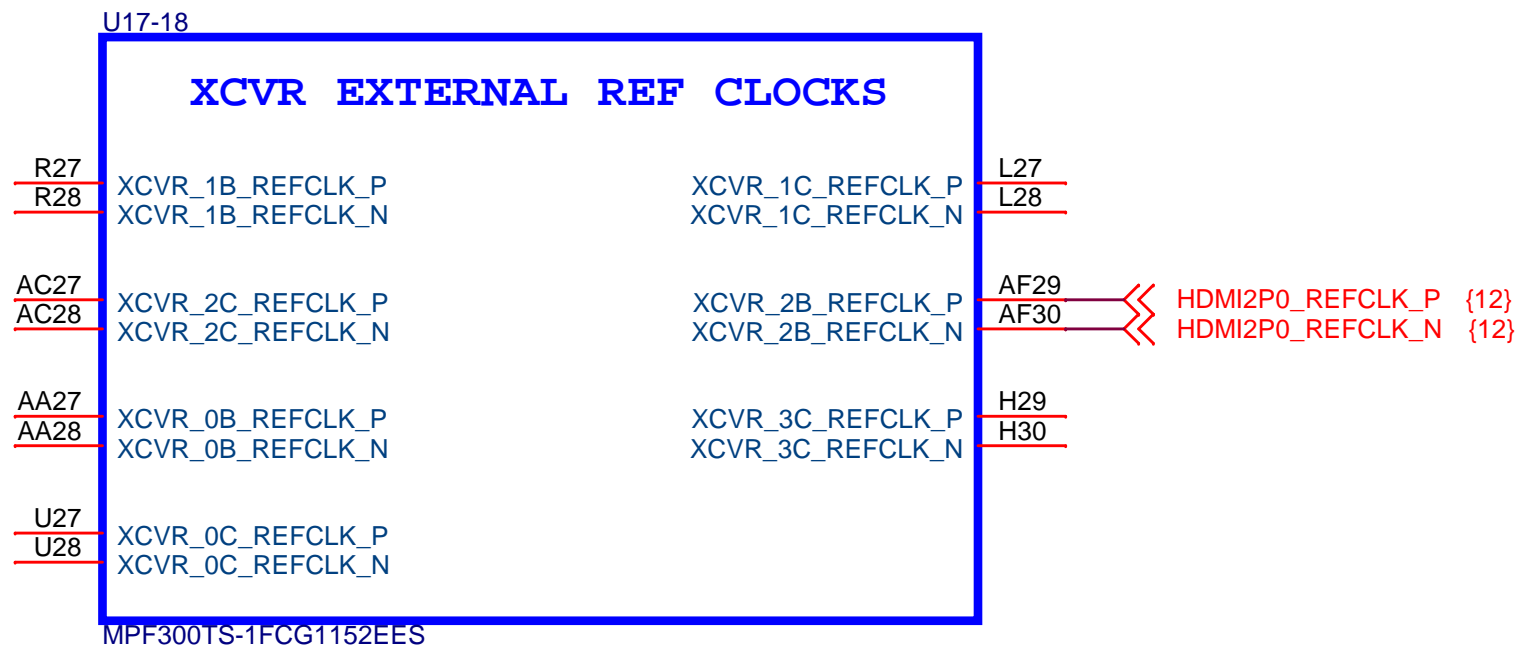


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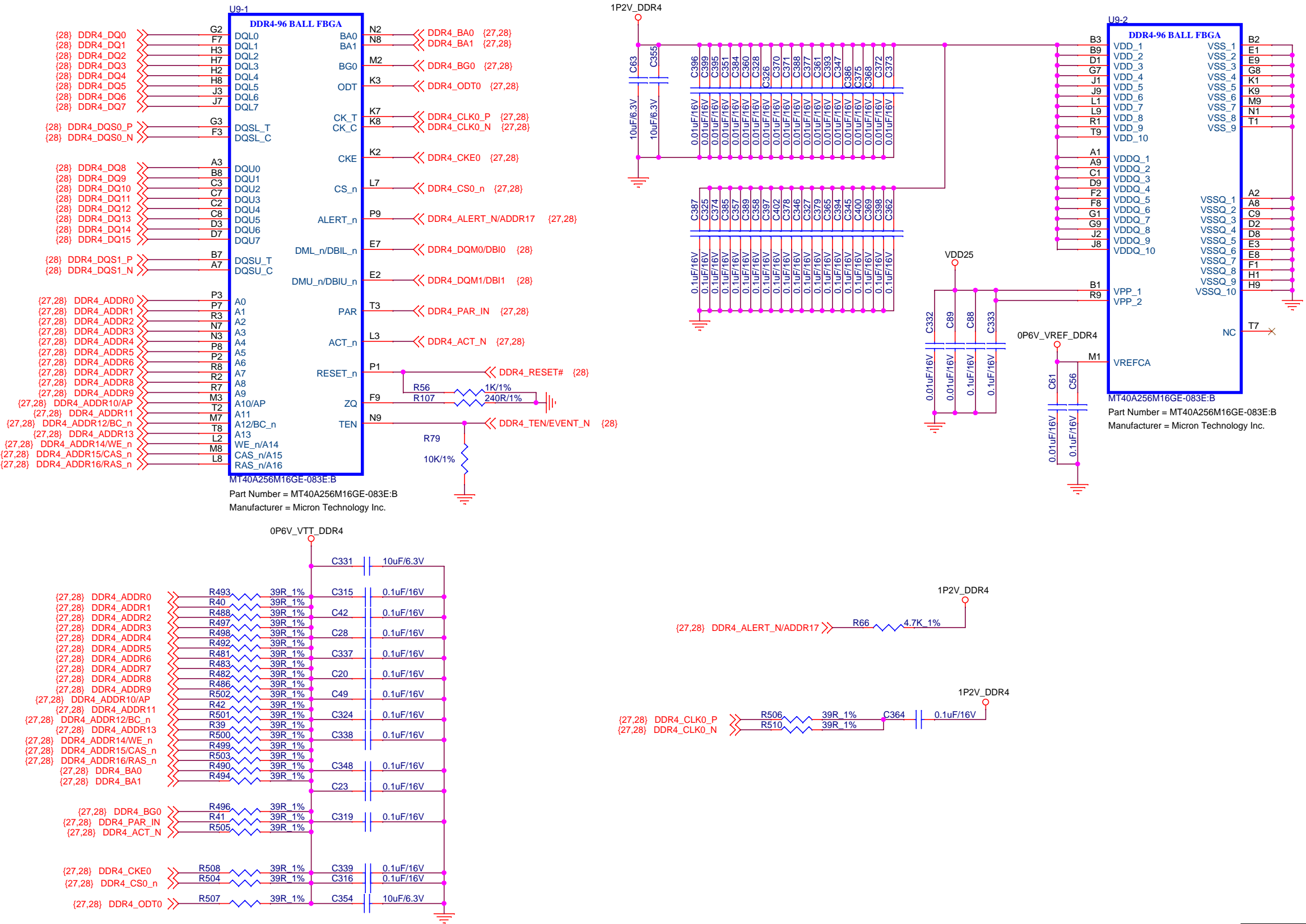
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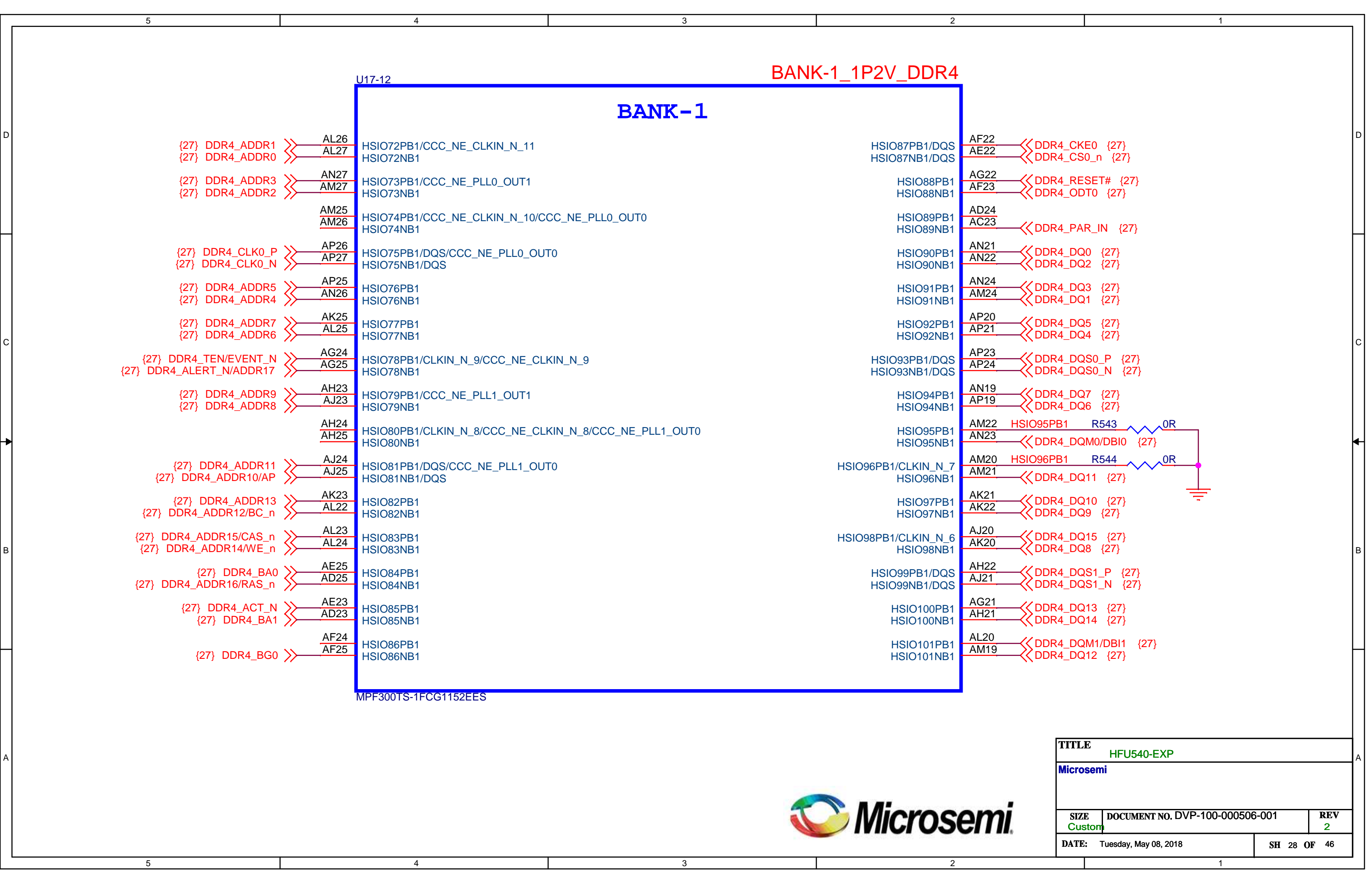
TRANSCEIVER EXTERNAL REF CLOCKS



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DDR4 MEMORY -BANK 1



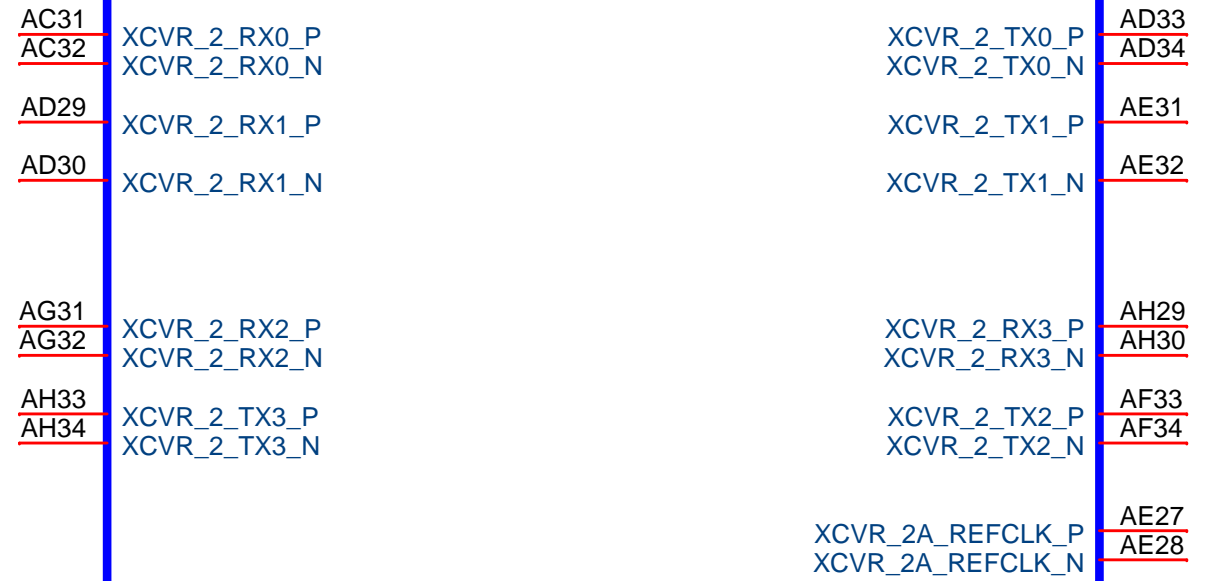


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TRANSCEIVER 2&3

U17-3

XCVR-2



MPF300TS-1FCG1152EES

U17-4

XCVR-3

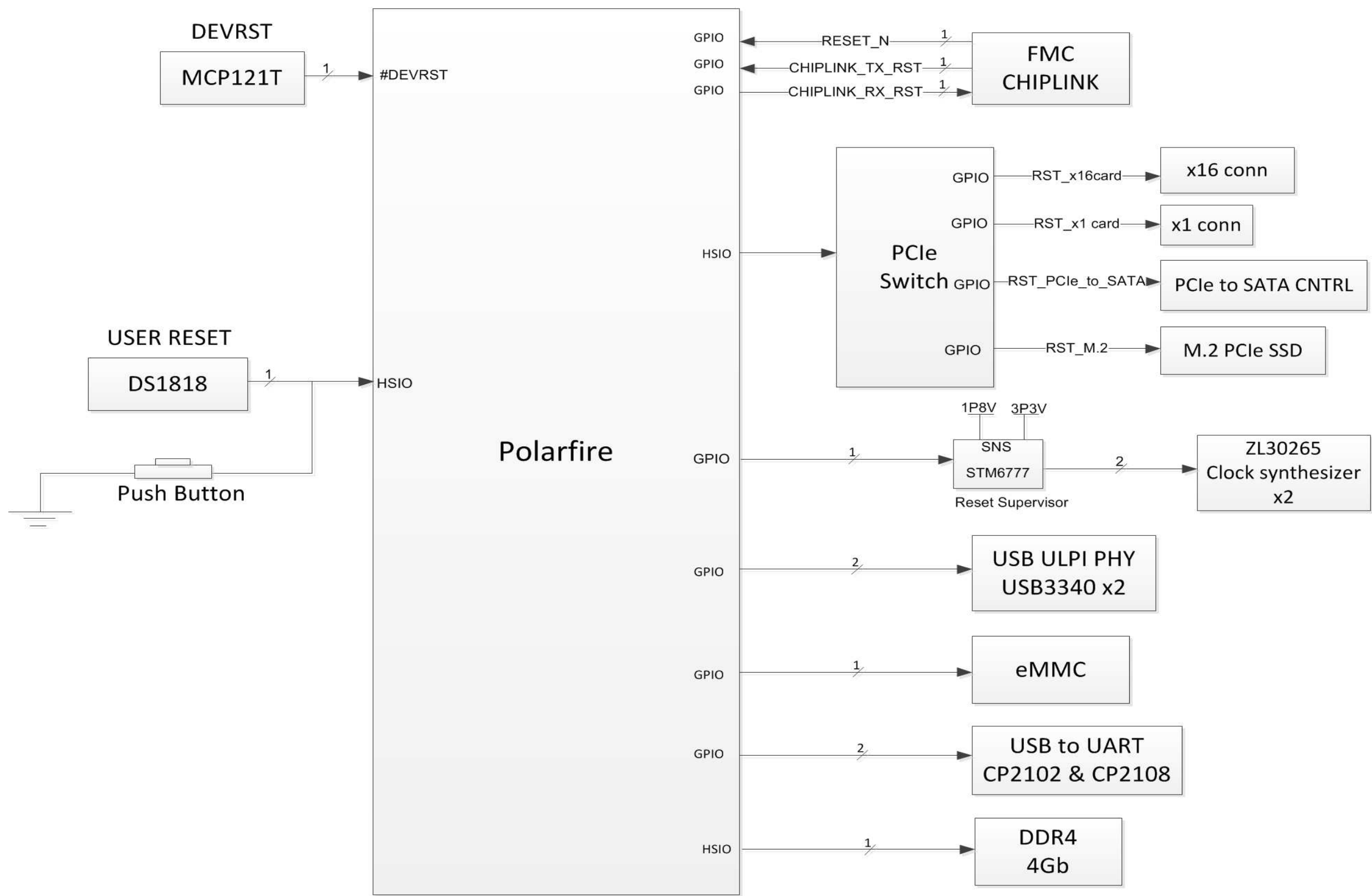


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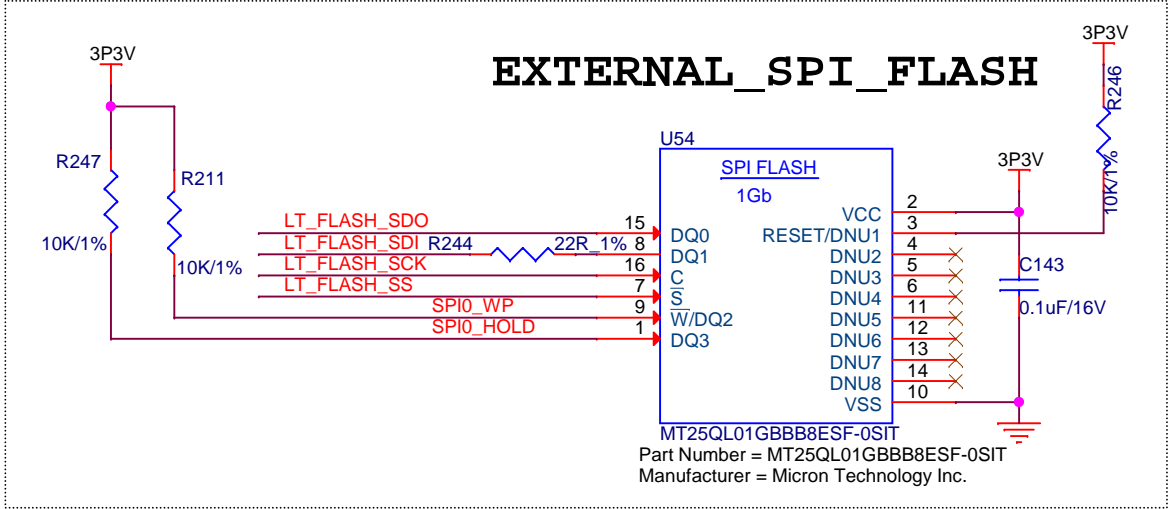
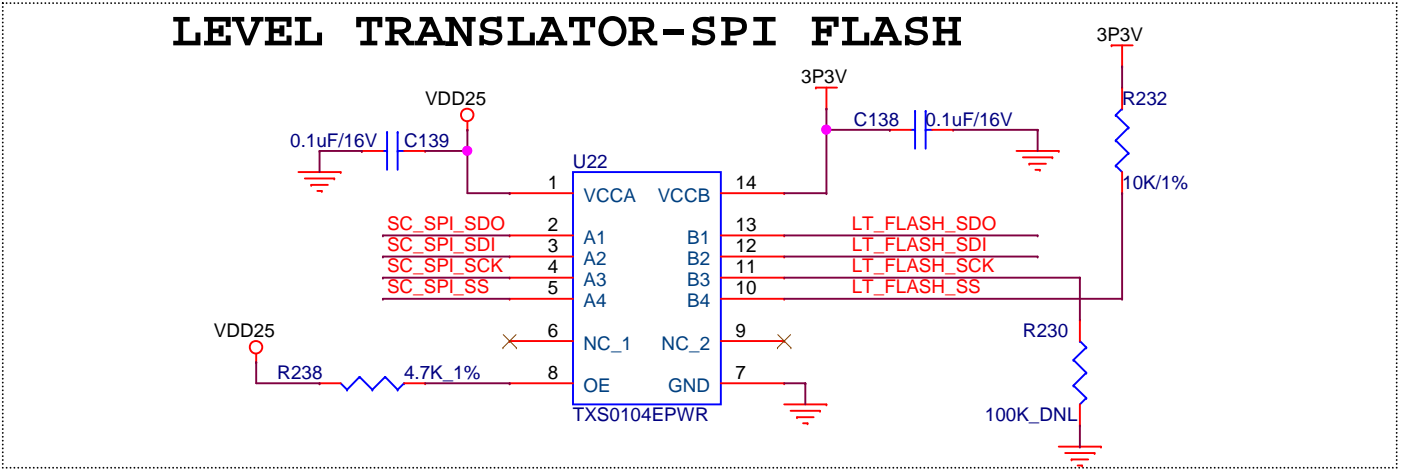
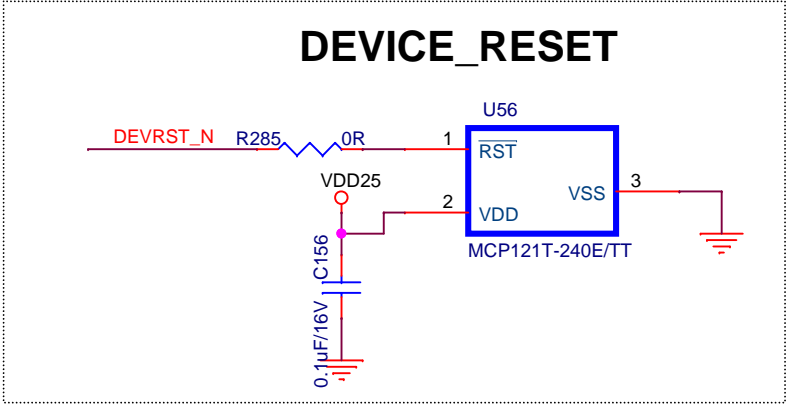
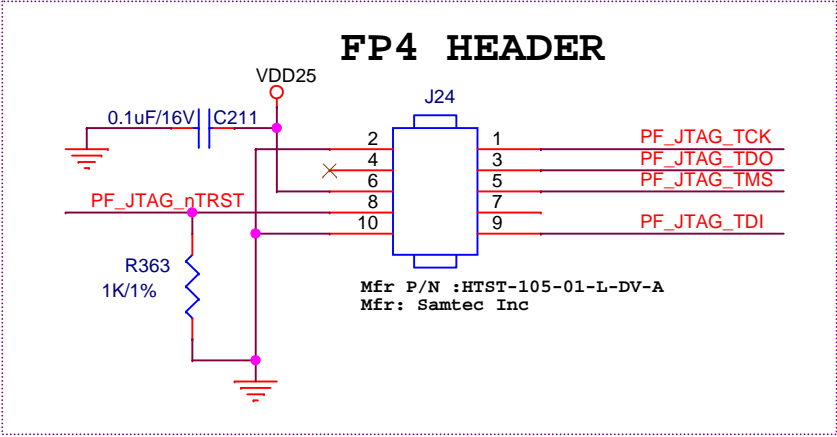
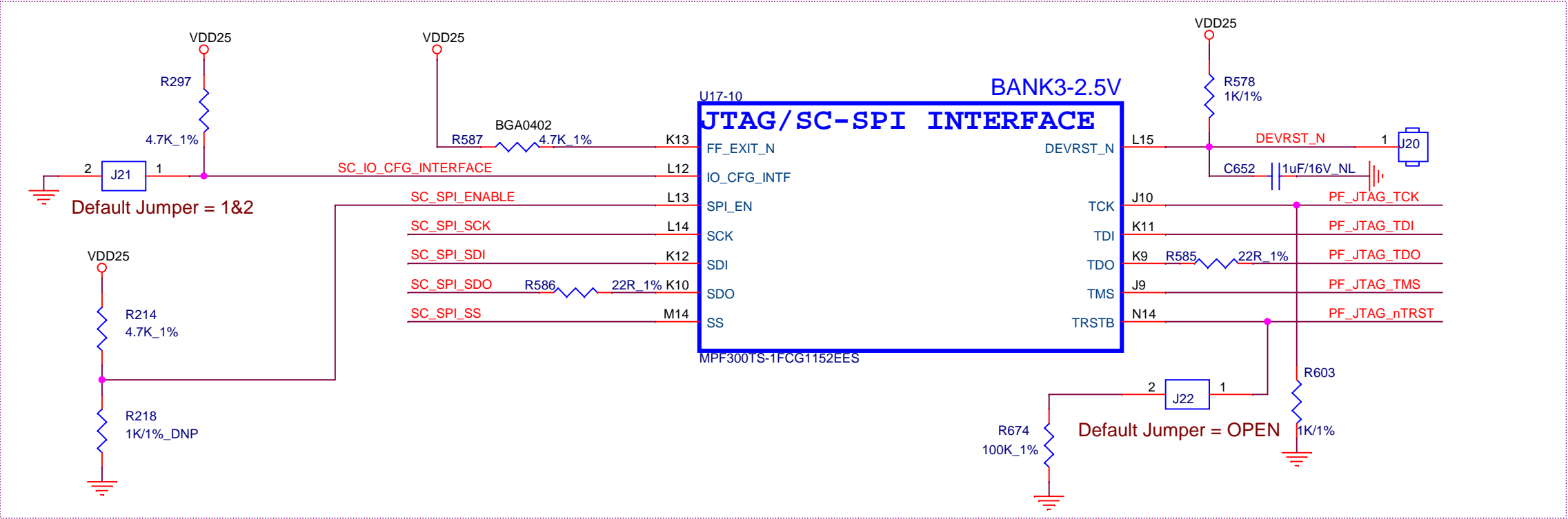


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RESET Scheme VERA KIT

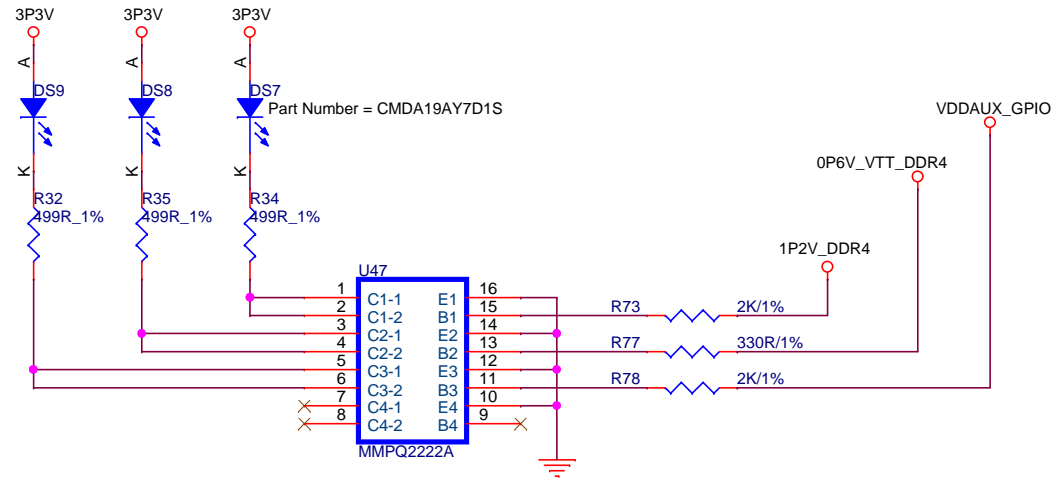
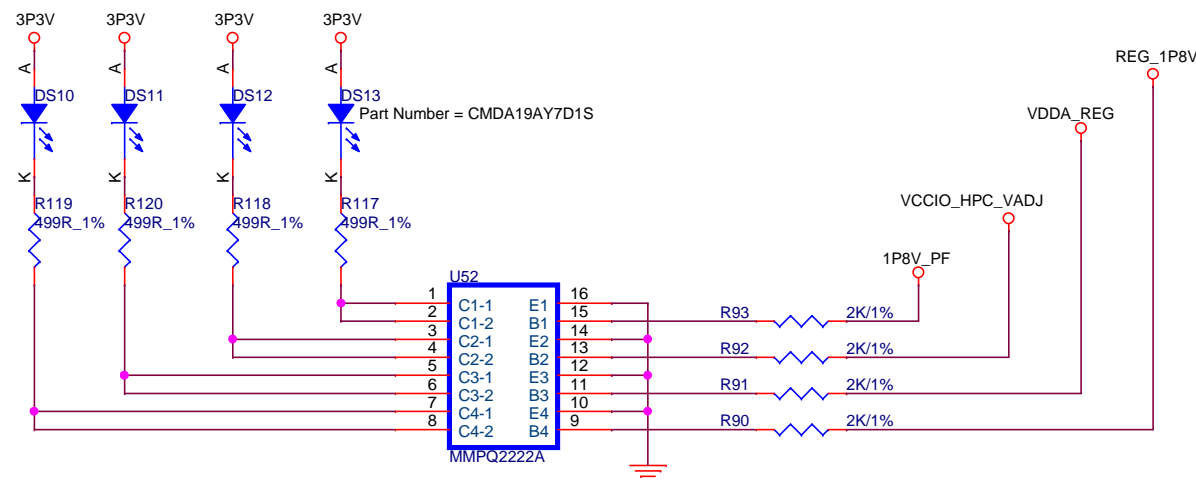
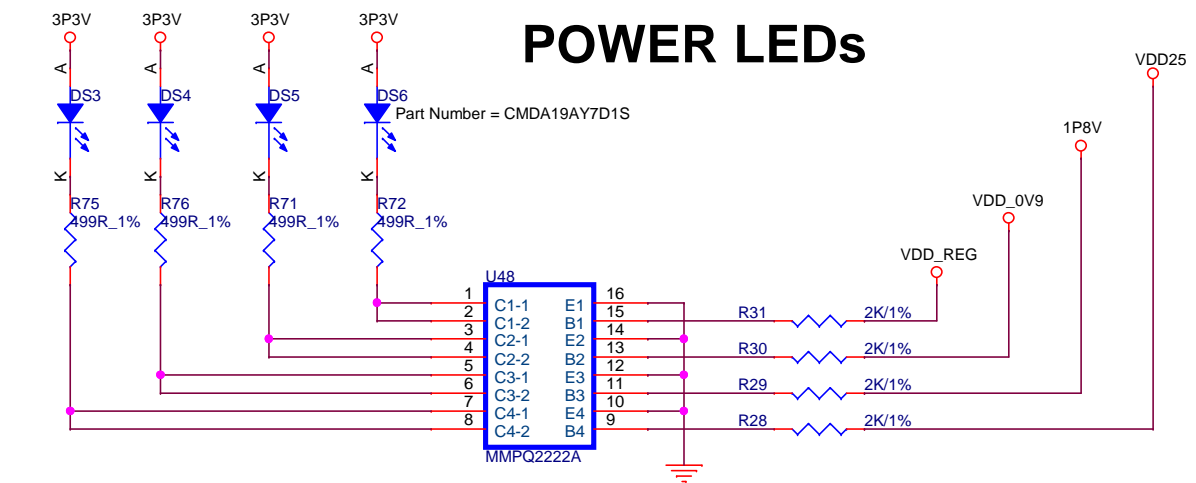


TITLE			
HFU540-EXP			
Microsemi			
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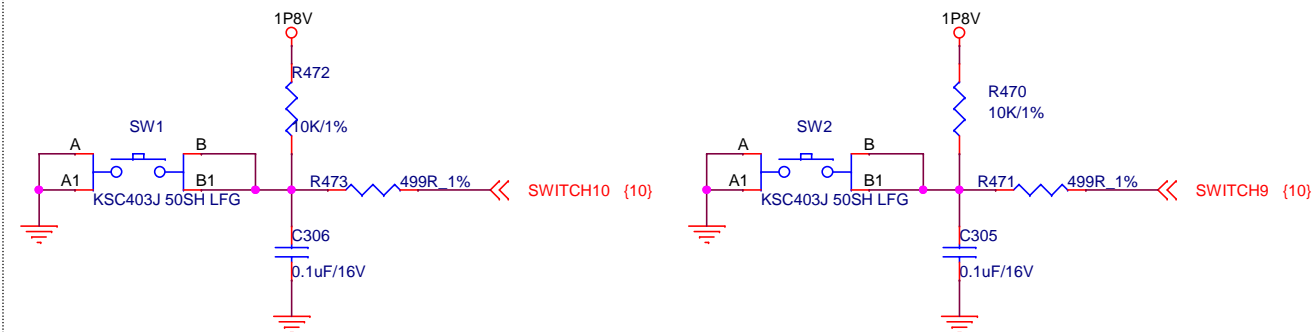


TITLE		
HFU540-EXP		
Microsemi		
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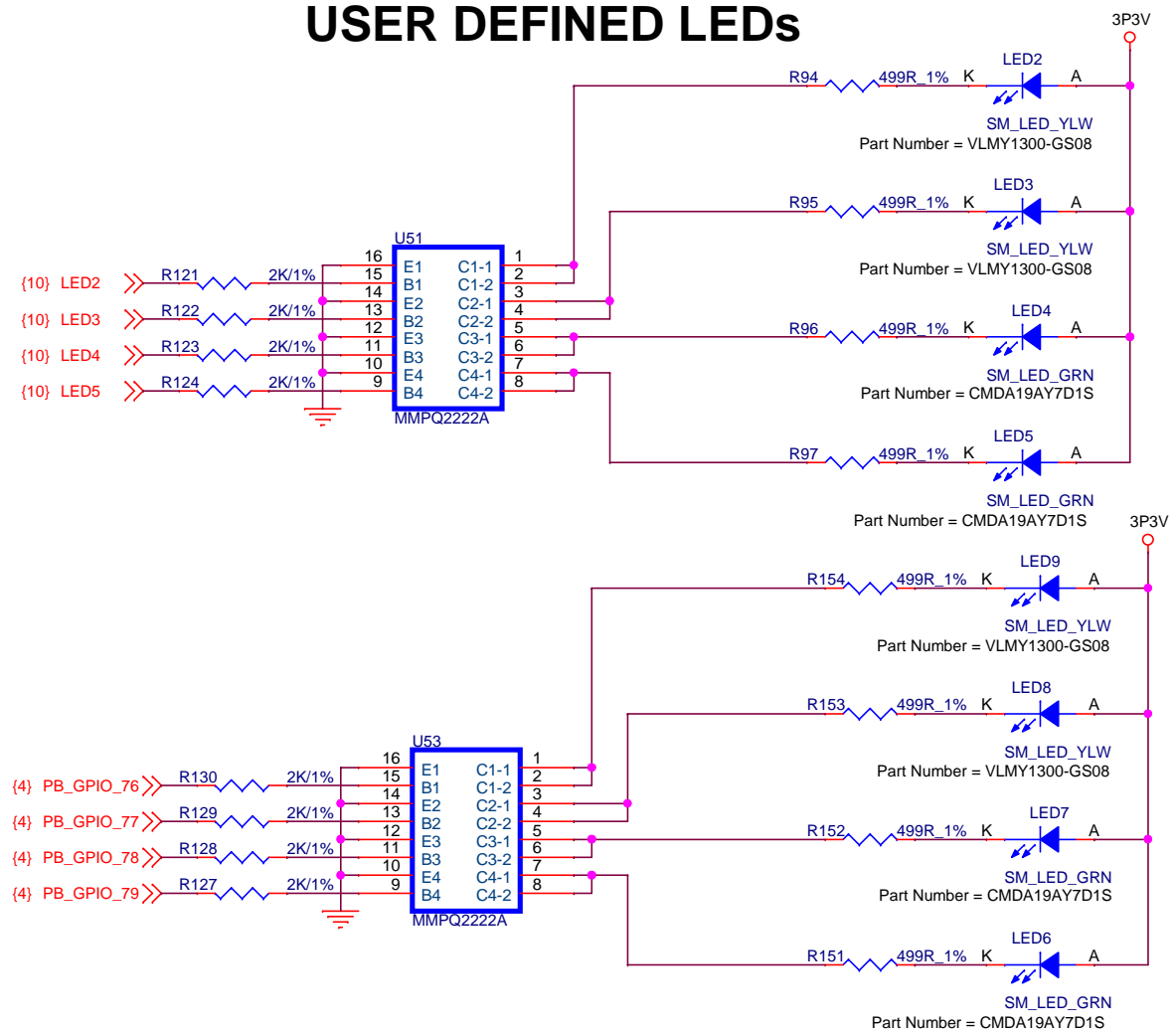
POWER LEDs



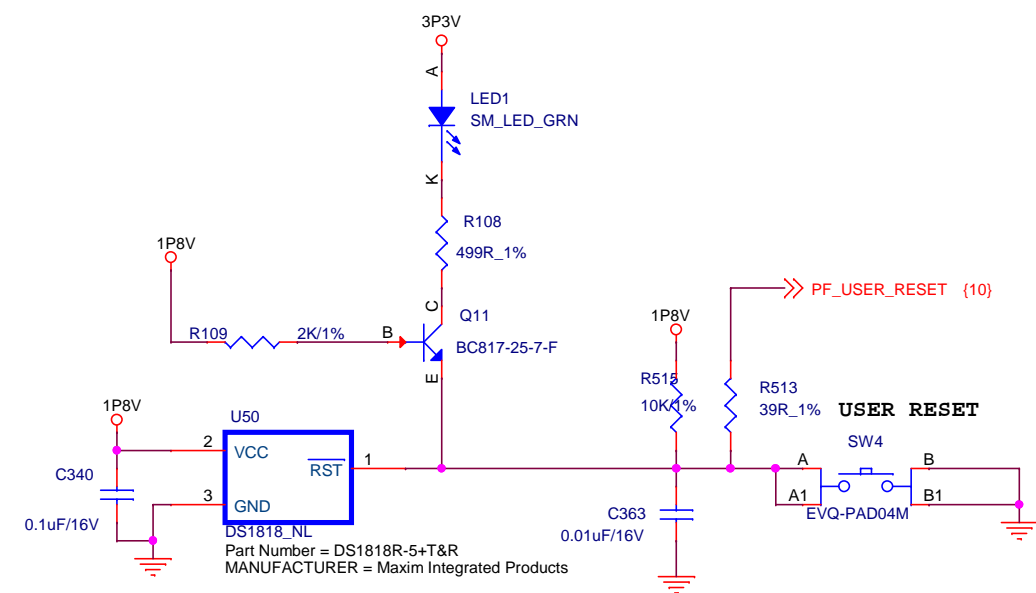
DEBUG CIRCUITRY



USER DEFINED LEDs

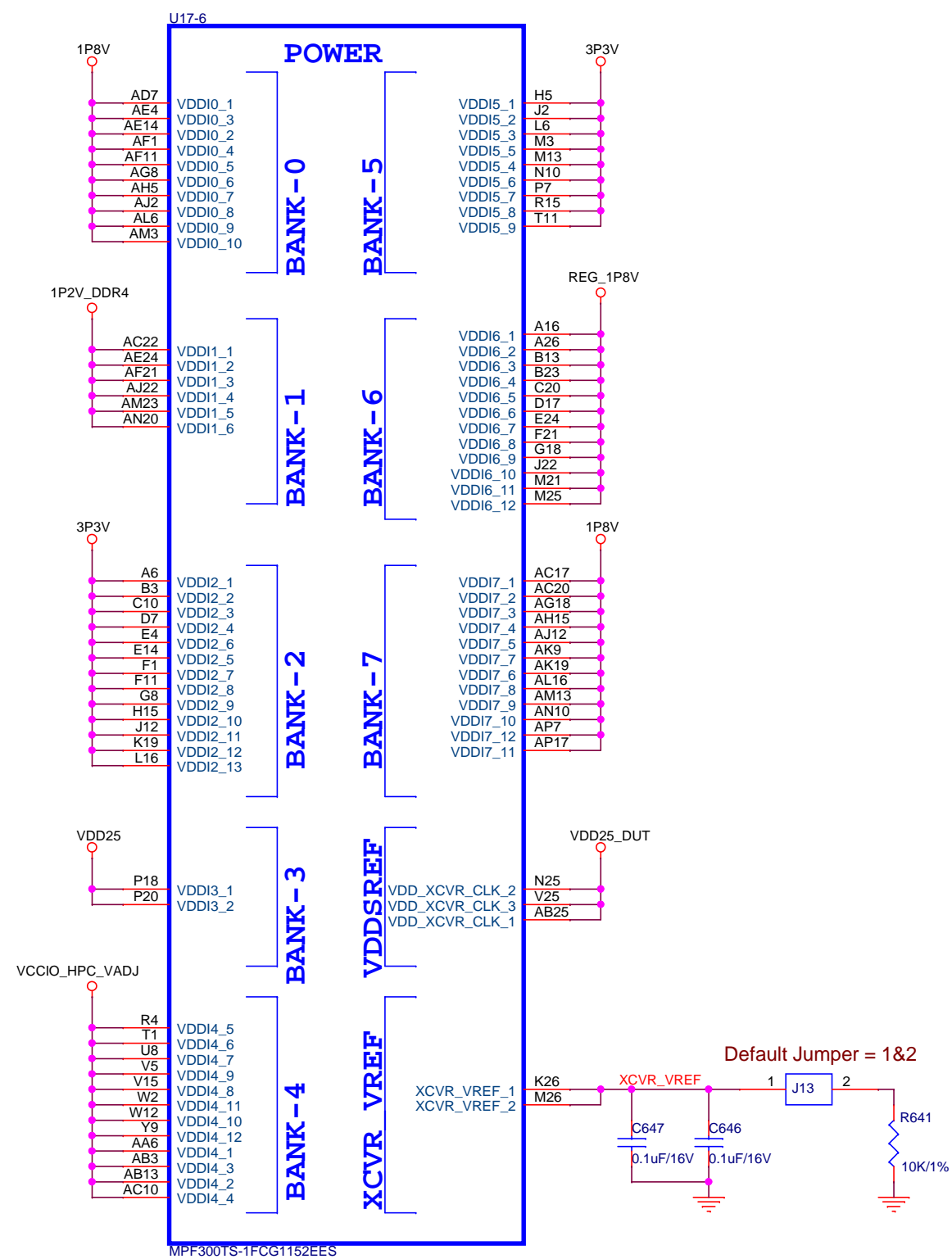
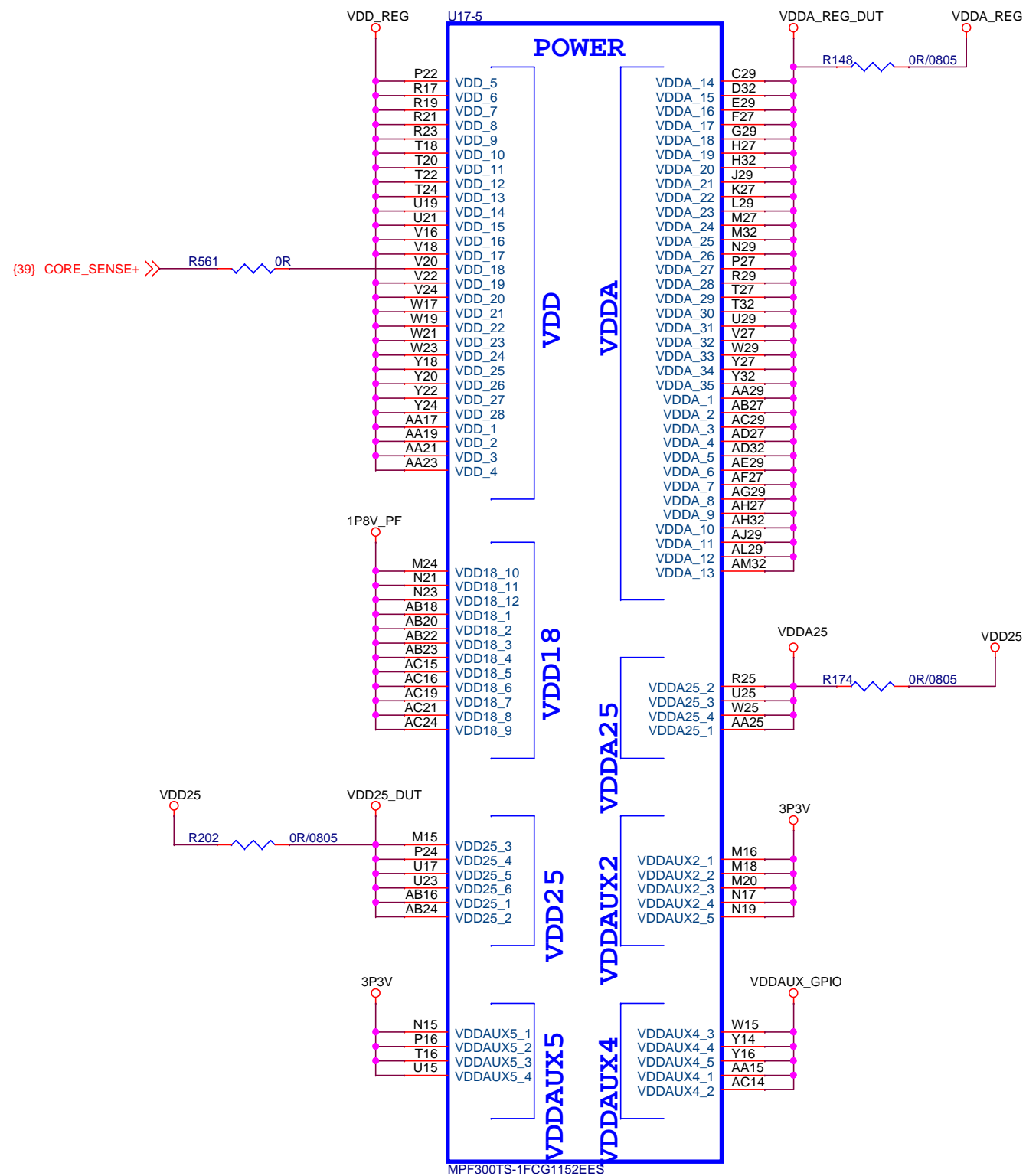


PolarFire_USER_RESET



TITLE			
HFU540-EXP			
Microsemi			
SIZE	DOCUMENT NO.	DVP-100-000506-001	REV
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POWER CONNECTIONS

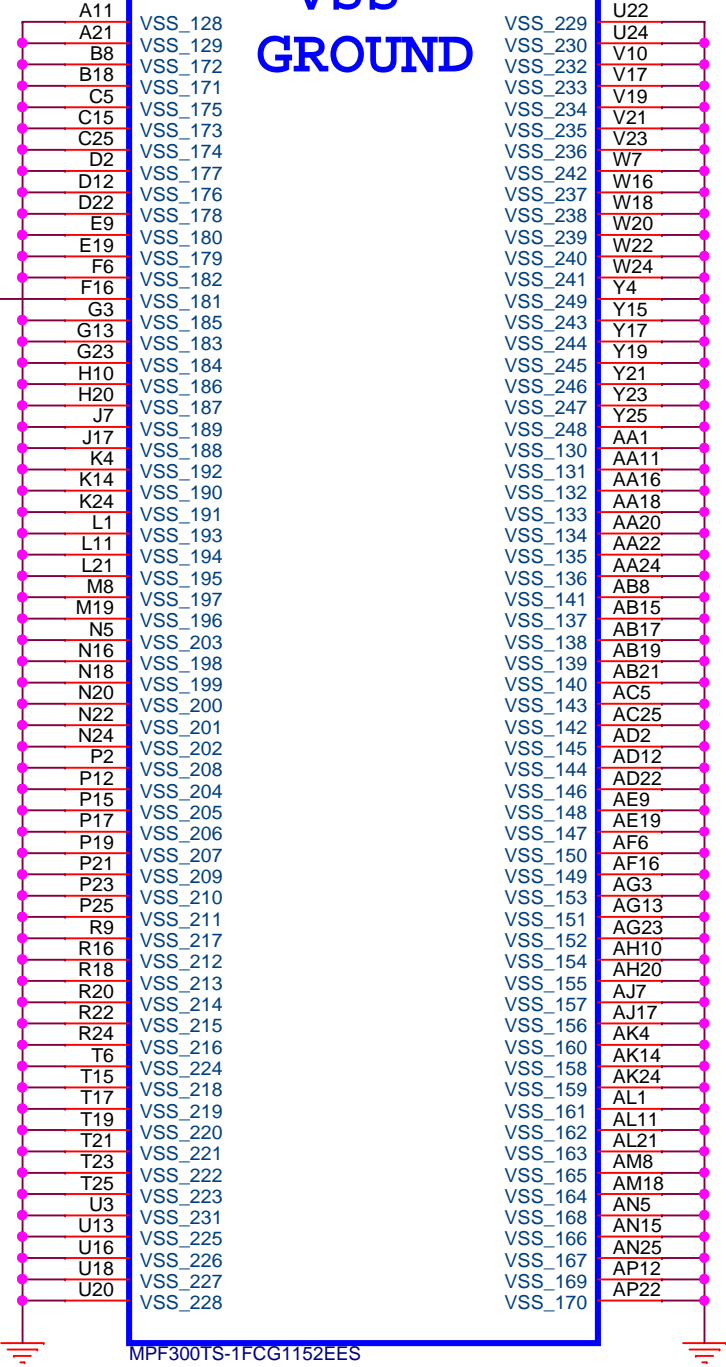


TITLE			
HFU540-EXP			
Microsemi			
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GROUND & NC CONNECTION

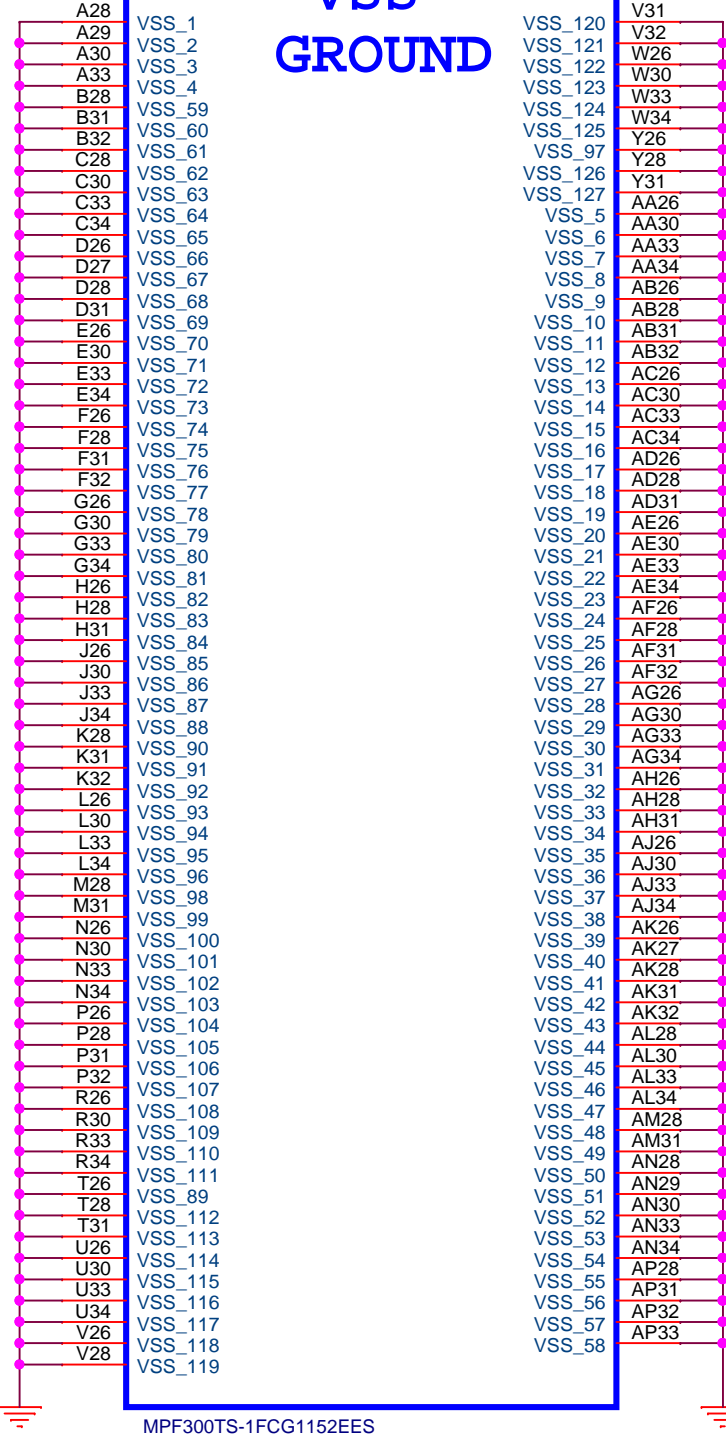
U17-8

VSS
GROUND



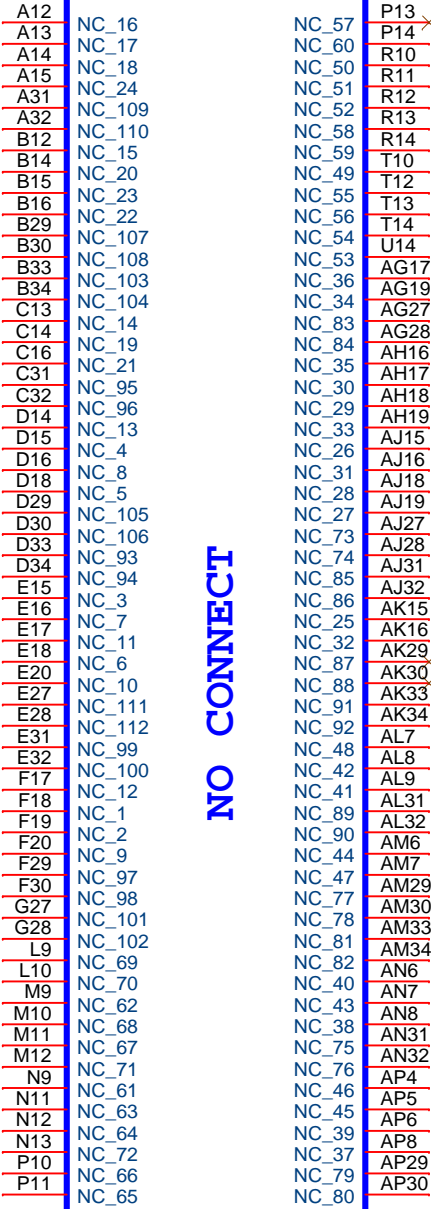
U17-9

VSS
GROUND



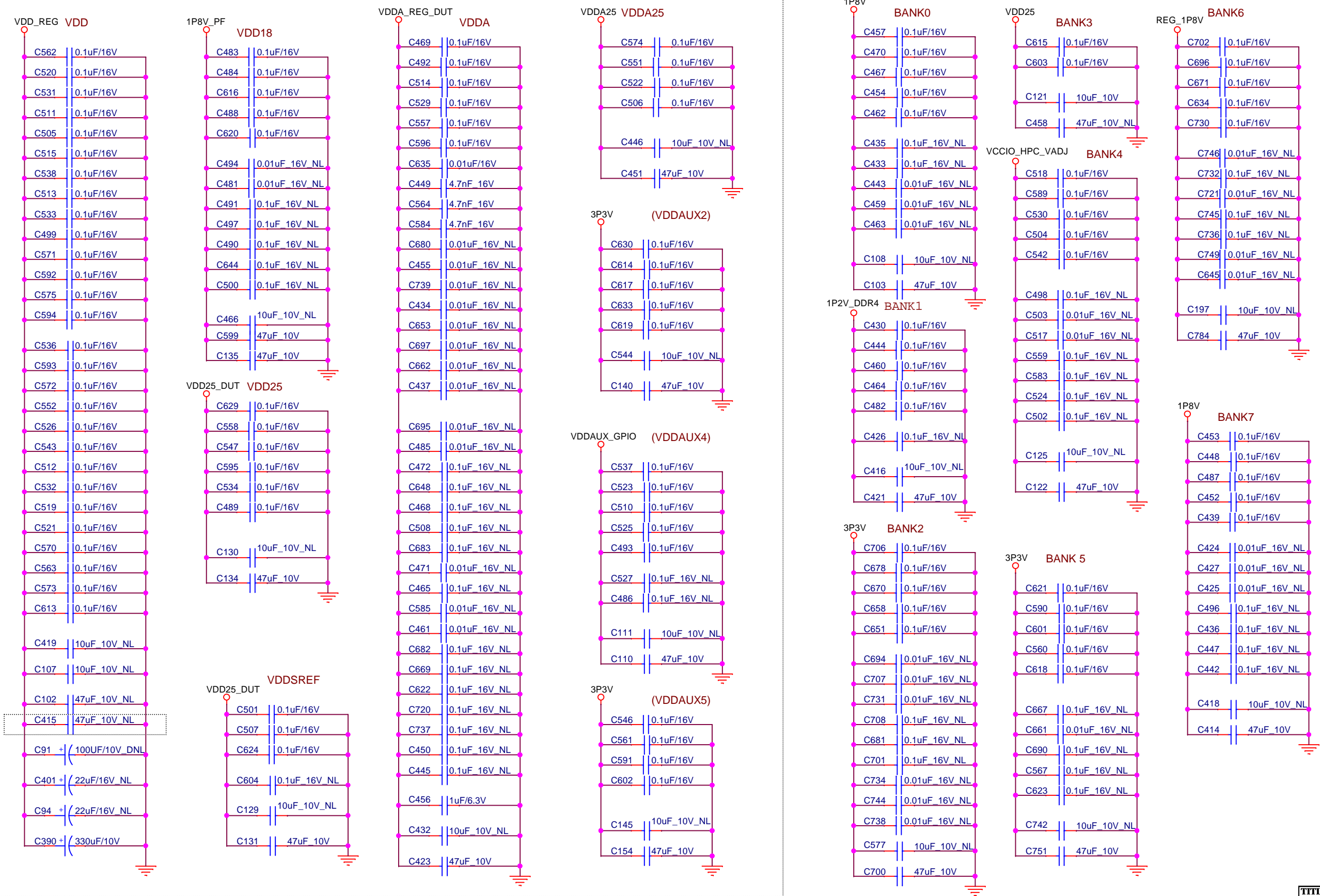
U17-7

NO CONNECT



TITLE		
HFU540-EXP		
Microsemi		
SIZE	DOCUMENT NO. DVP-100-000506-001	REV
B		2
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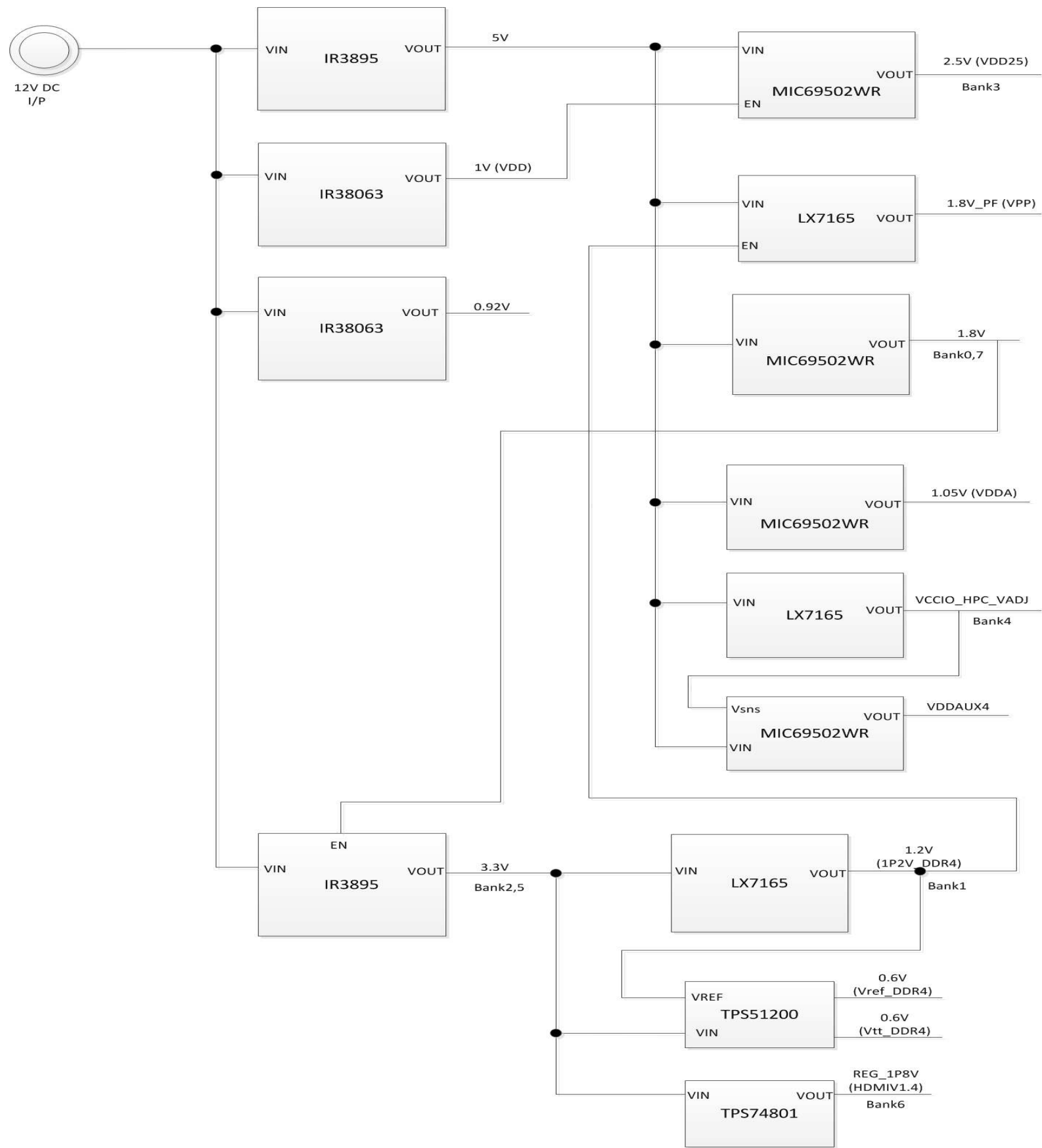
DECOUPLING CAPACITORS



TITLE			
HFU540-EXP			
Microsemi			
SIZE	DOCUMENT NO.	DVP-100-000506-001	REV
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POWER SCHEME

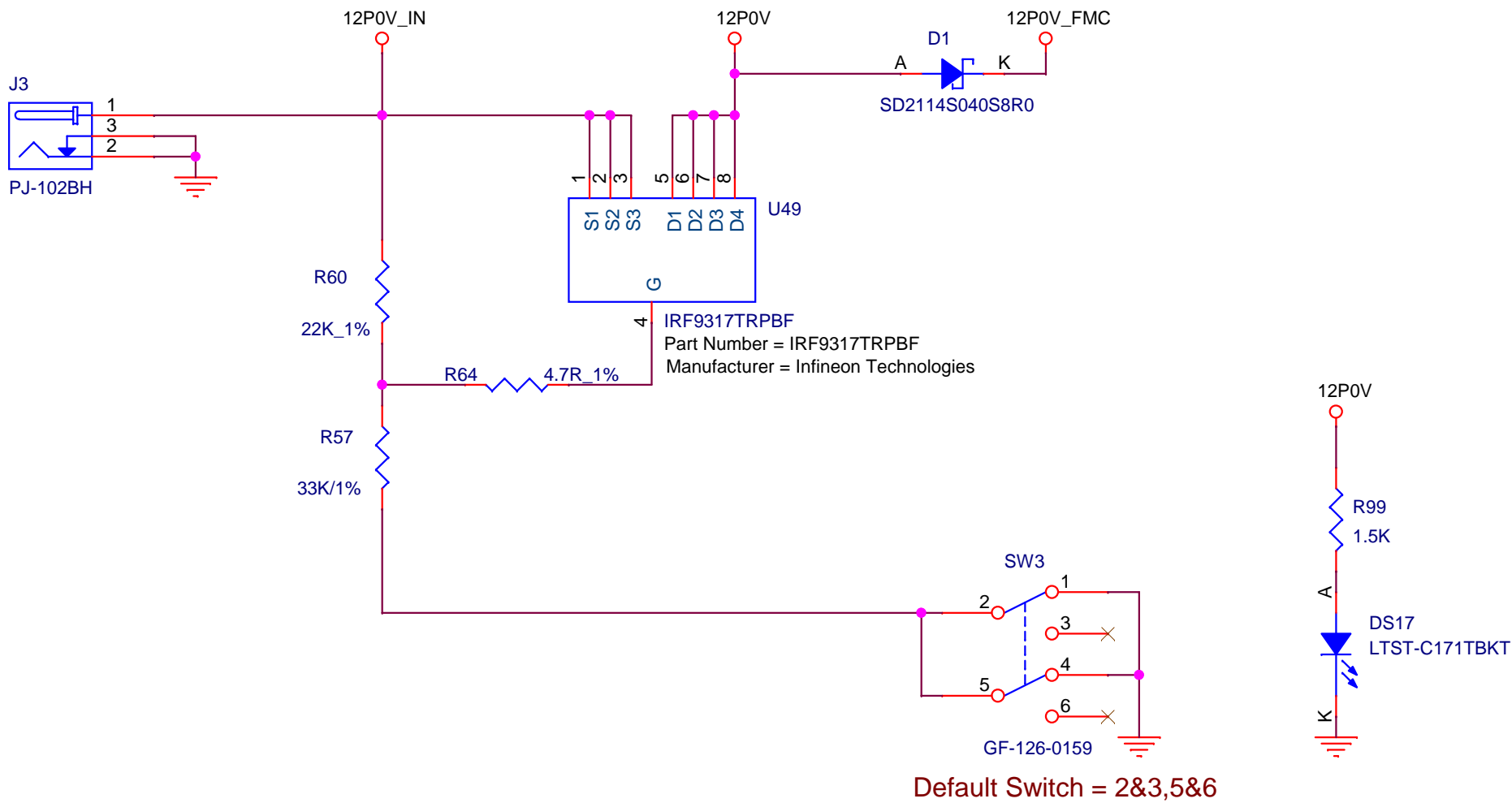
Vera Kit Power scheme



TITLE			
HFU540-EXP			
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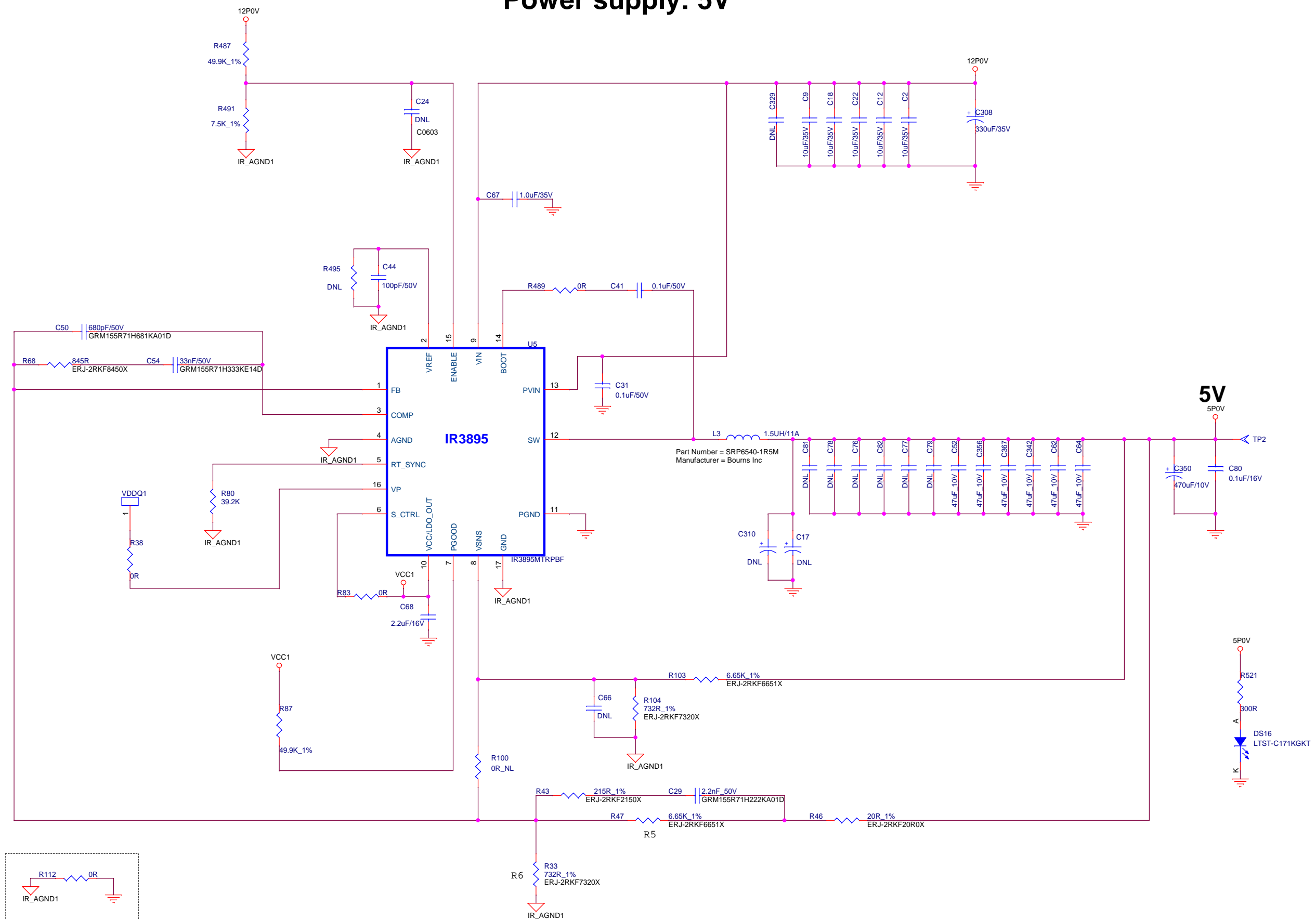
12V EXTERNAL SUPPLY

12V/5A



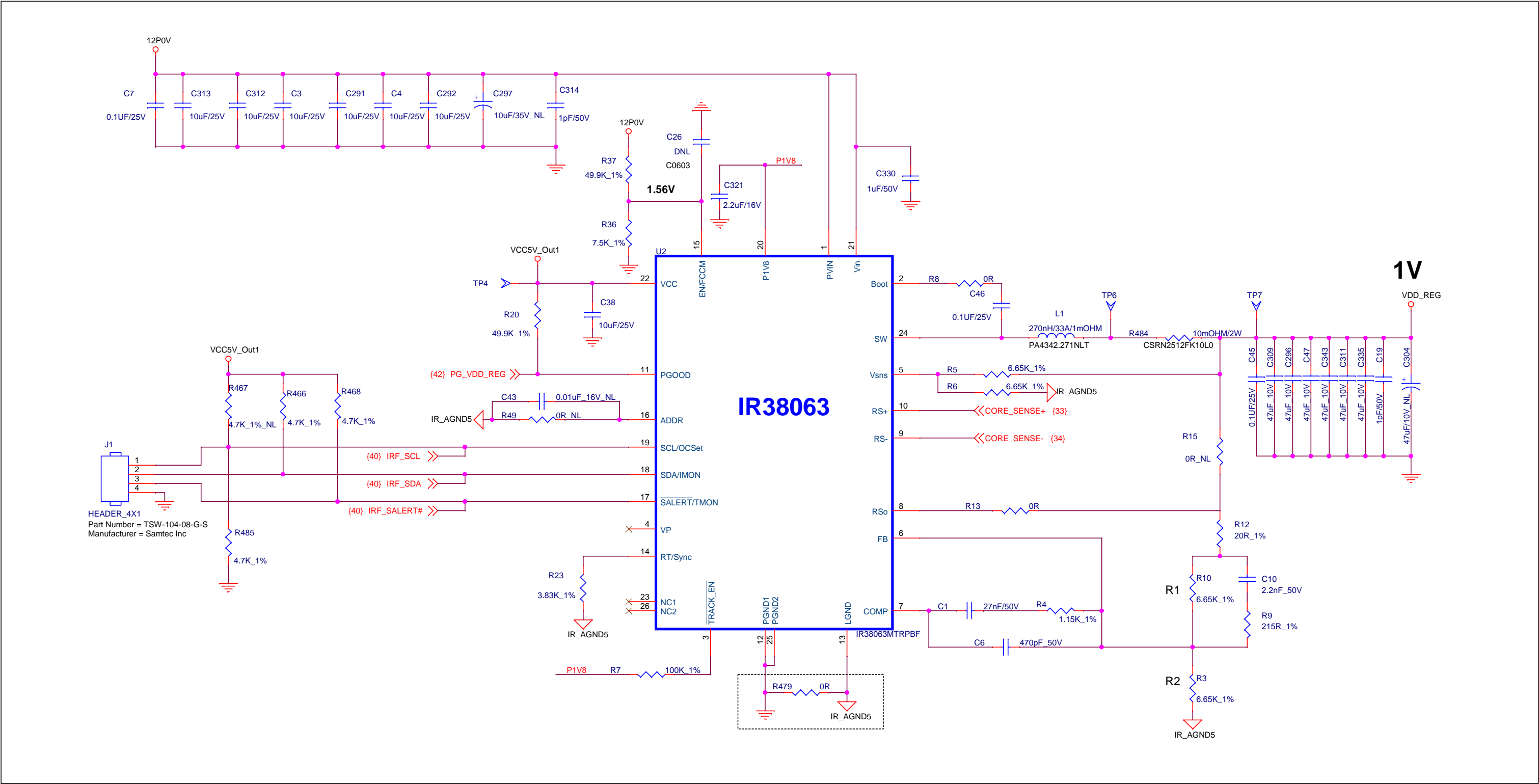
TITLE			
HFU540-EXP			
Microsemi			
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Custom			2
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Power supply: 5V



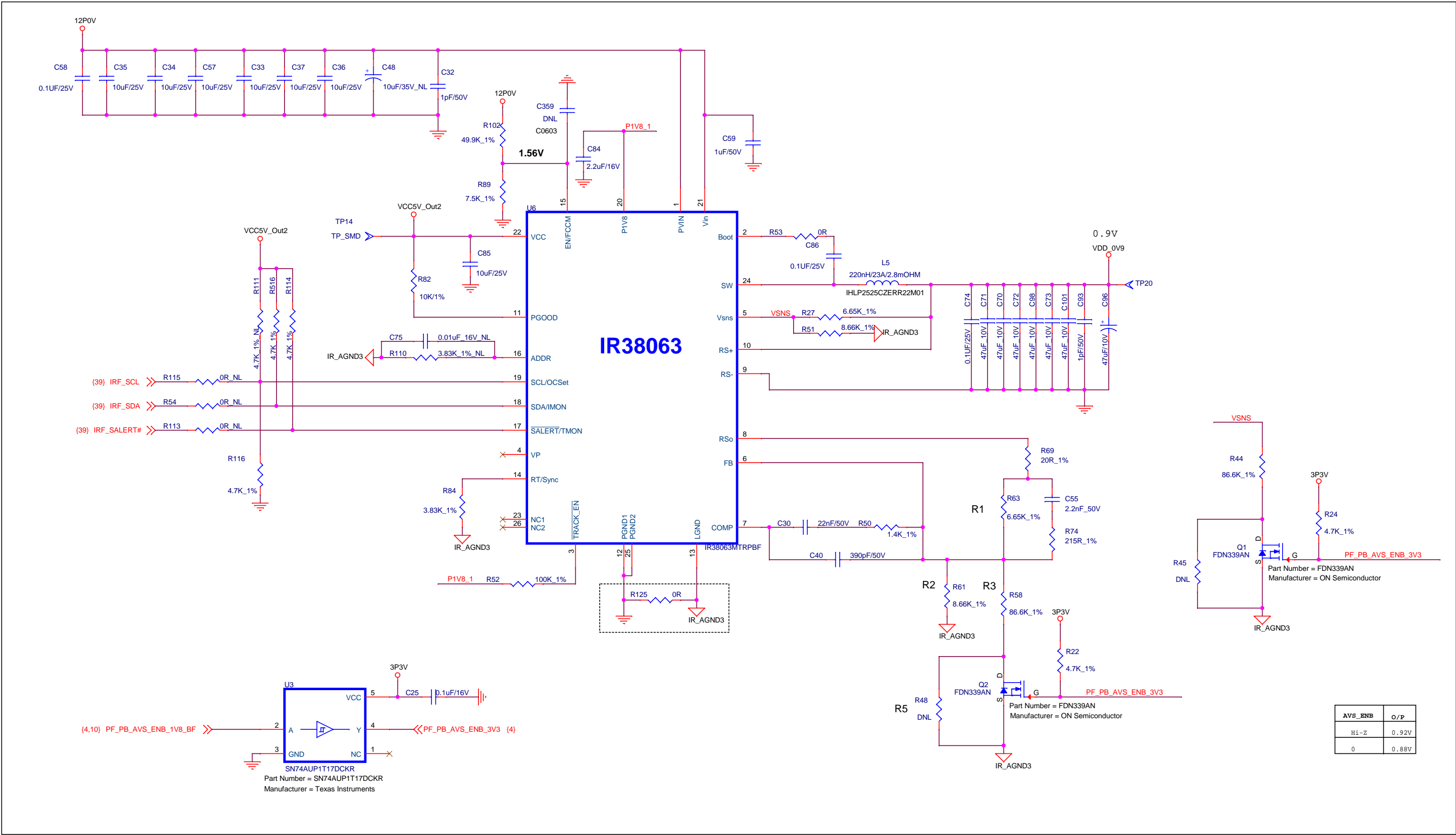
TITLE			
HFU540-EXP			
Microsemi			
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Power supply: 1V



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Power supply: 0.9V

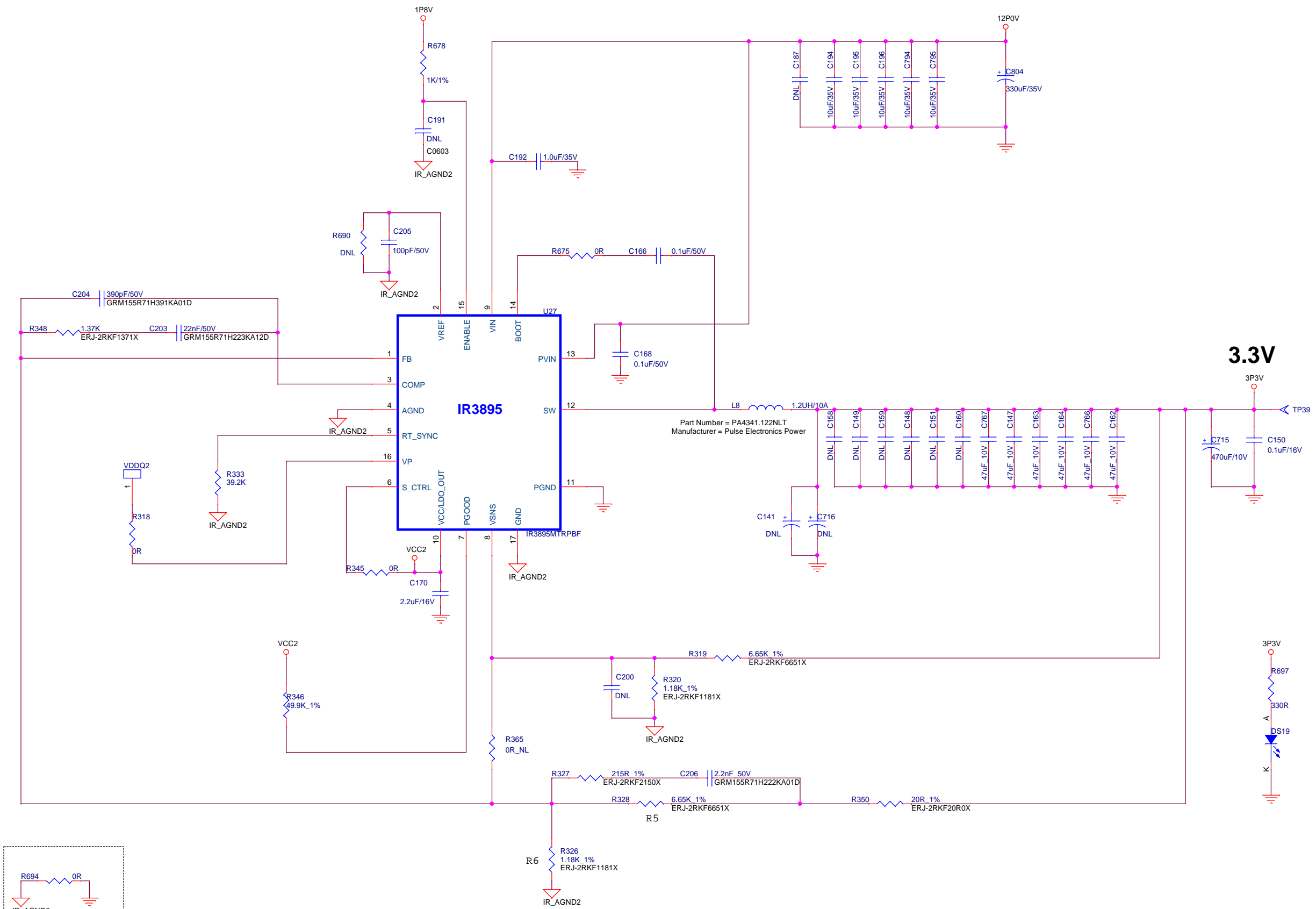


AVS_ENB	O/P
Hi-Z	0.92V
0	0.88V



TITLE			
HFU540-EXP			
Microsemi			
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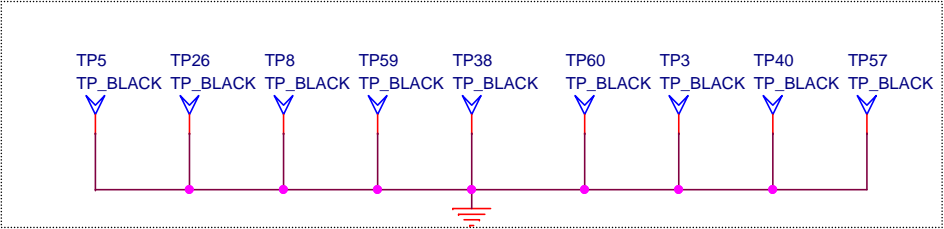
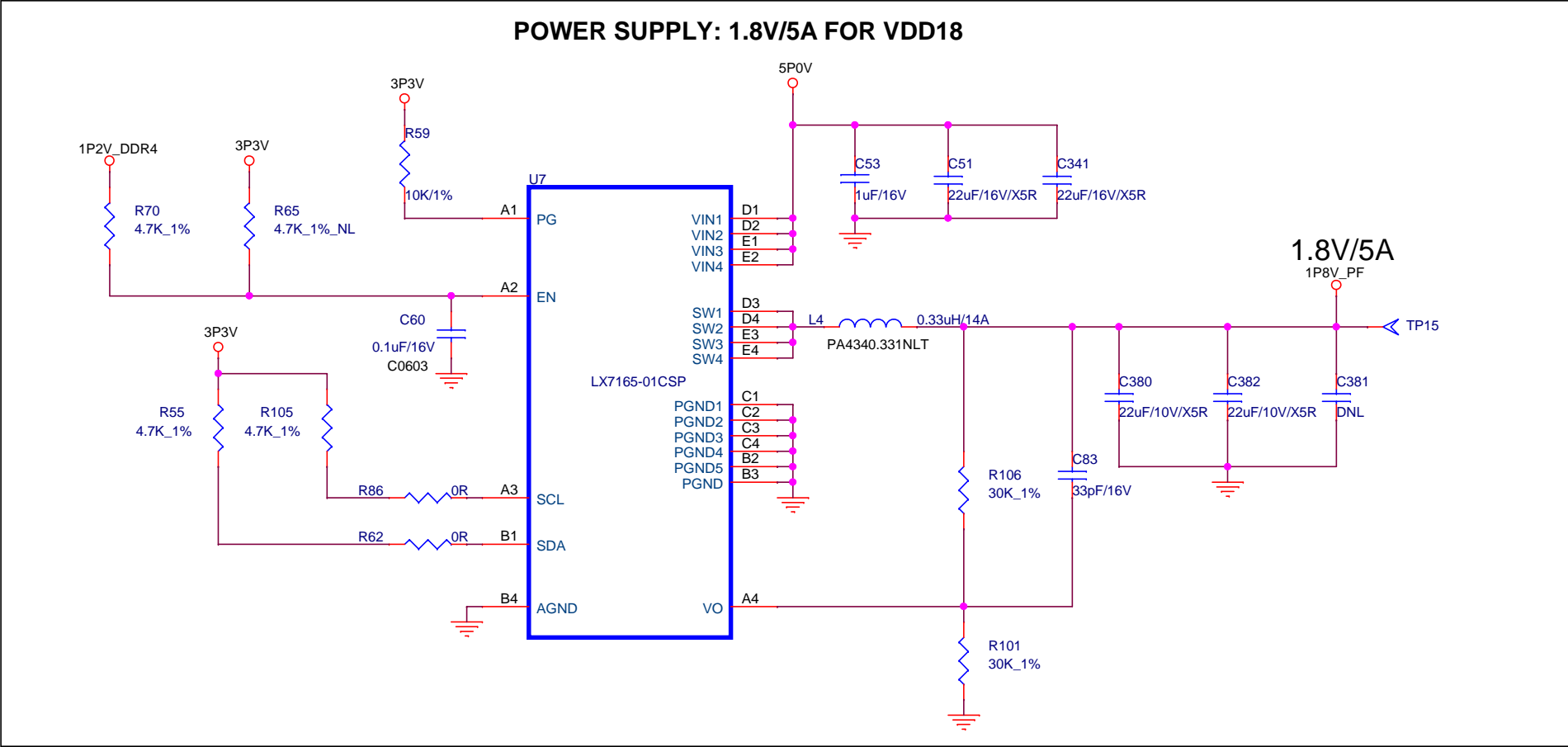
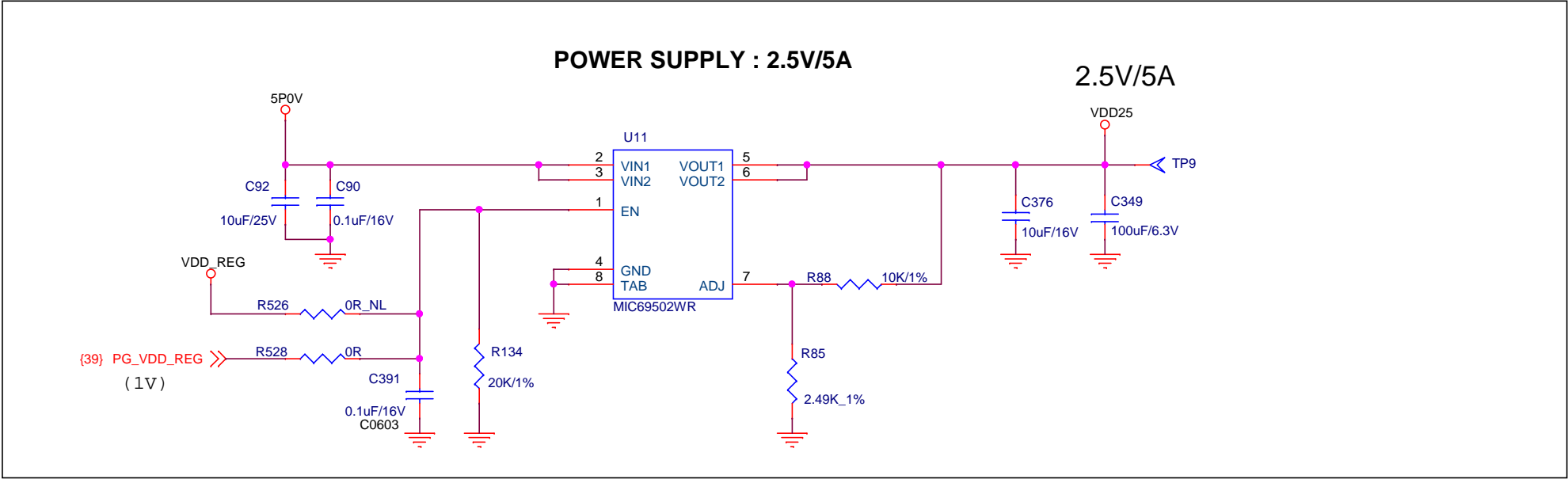
Power supply: 3.3V



TITLE			
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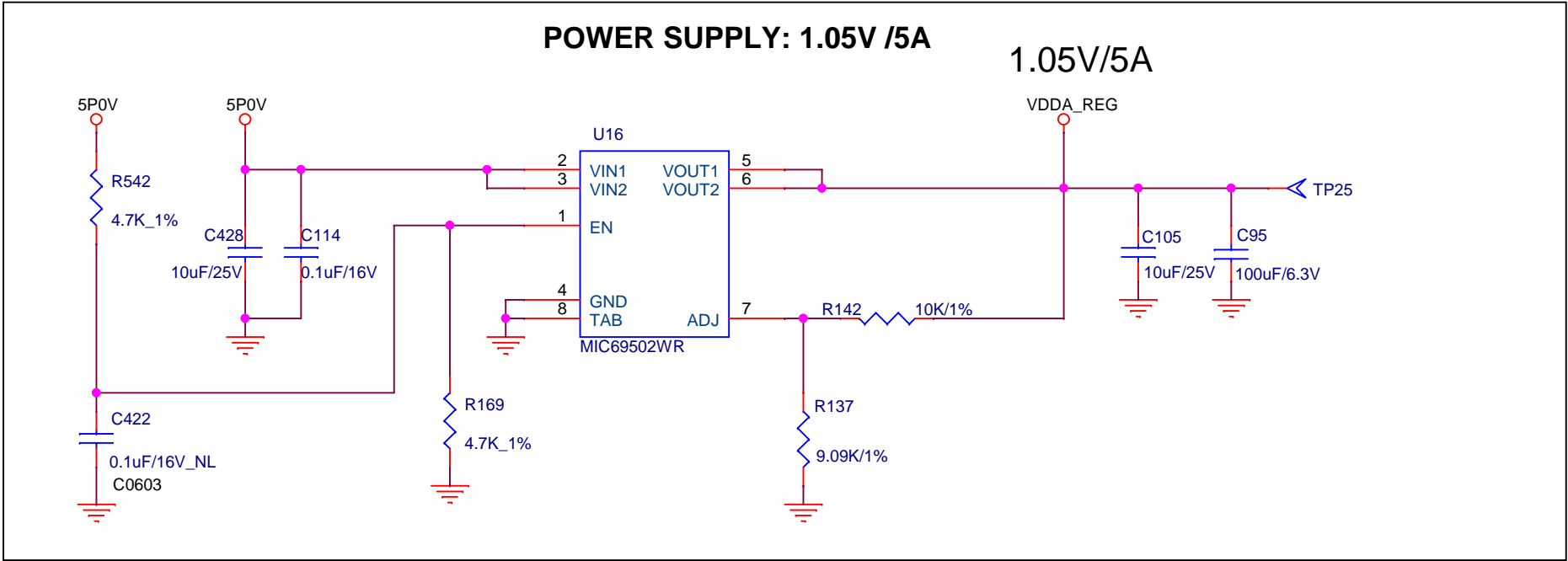
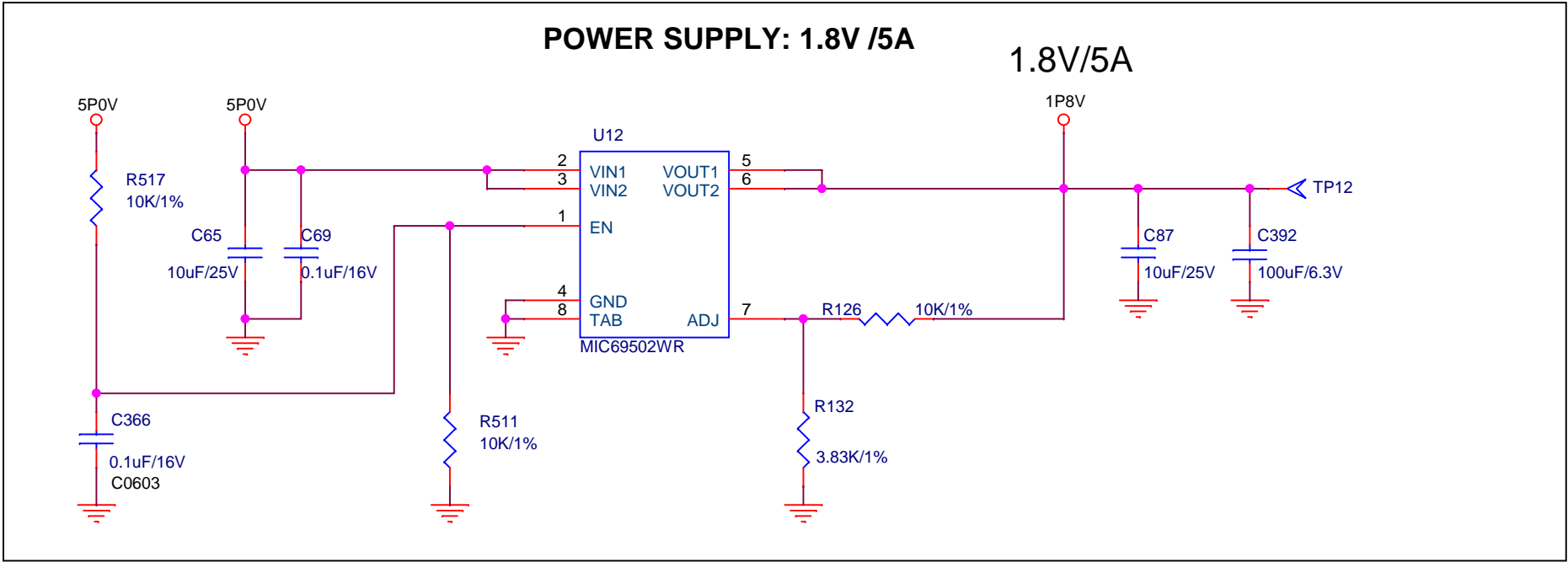


POWER SUPPLIES:2.5V (VDD25) / 1.8V (VDD18)



TITLE			
HFU540-EXP			
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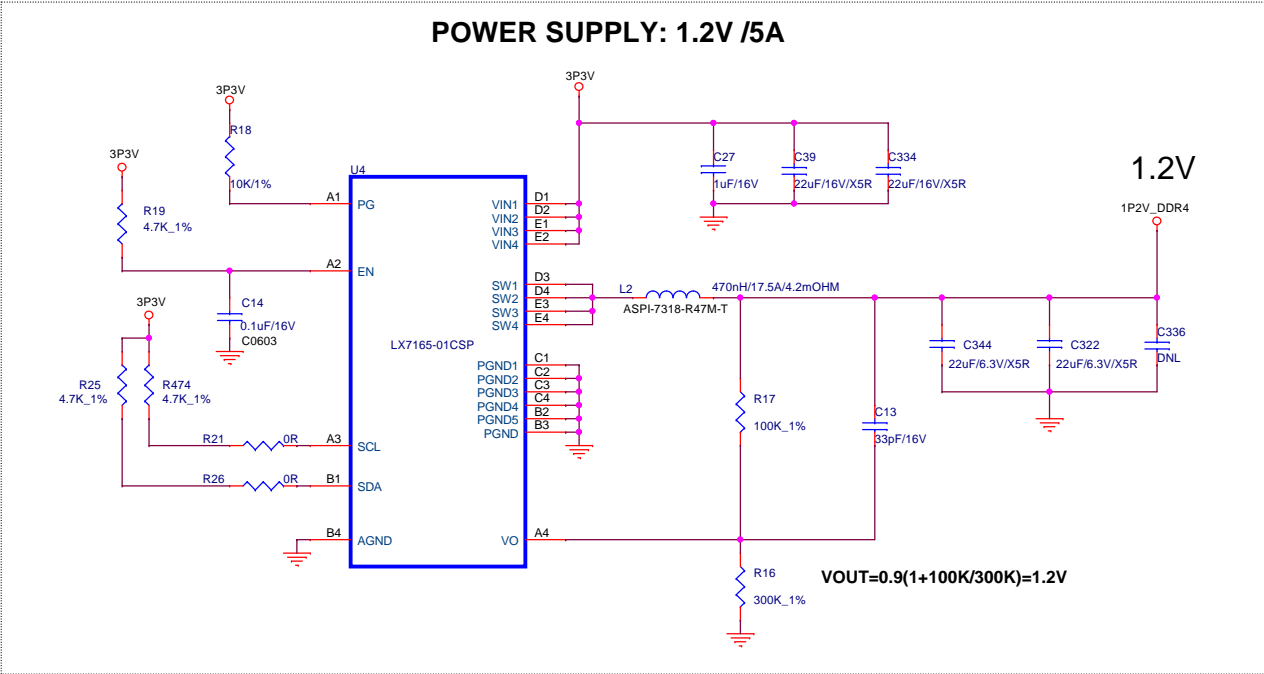
POWER SUPPLIES: 1.8V/1.05V-VDDA



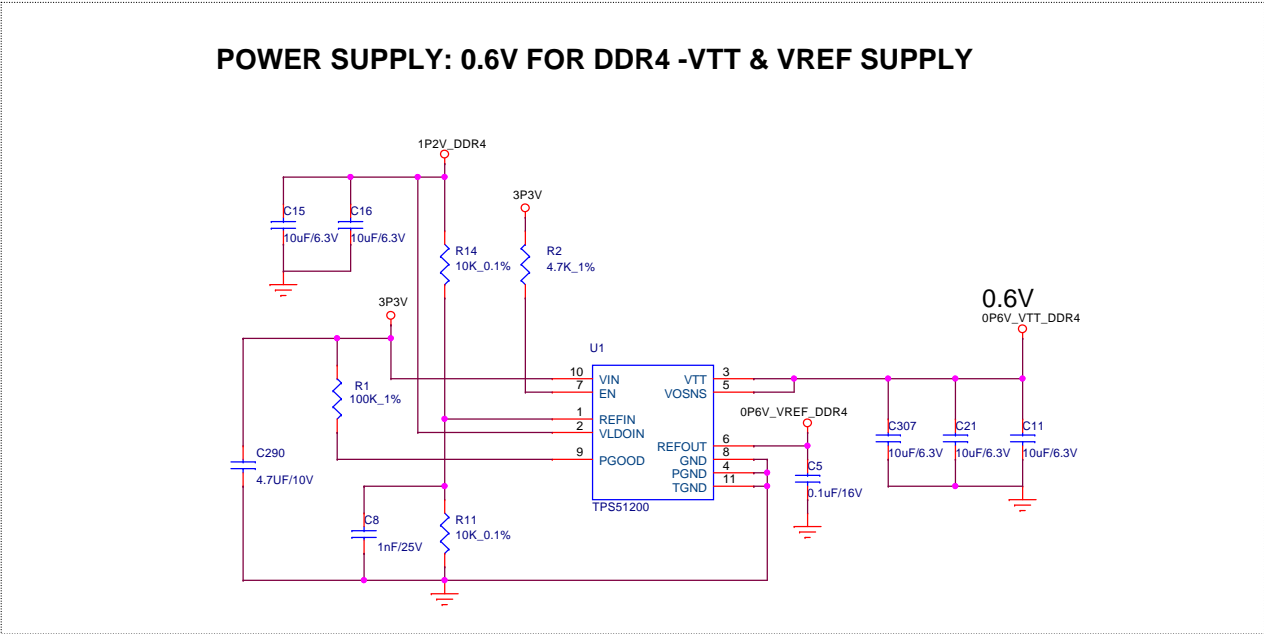
TITLE			
HFU540-EXP			
Microsemi			
SIZE	DOCUMENT NO.	DVP-100-000506-001	REV
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POWER SUPPLIES: 1.2V/0.6V/REG_1P8V

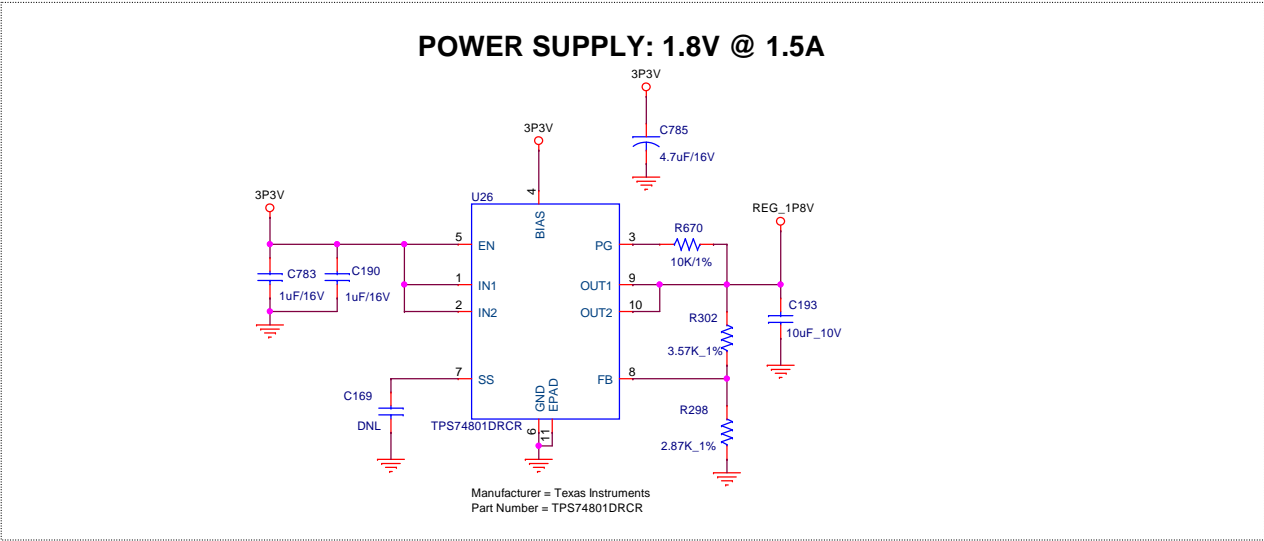
POWER SUPPLY: 1.2V /5A



POWER SUPPLY: 0.6V FOR DDR4 -VTT & VREF SUPPLY



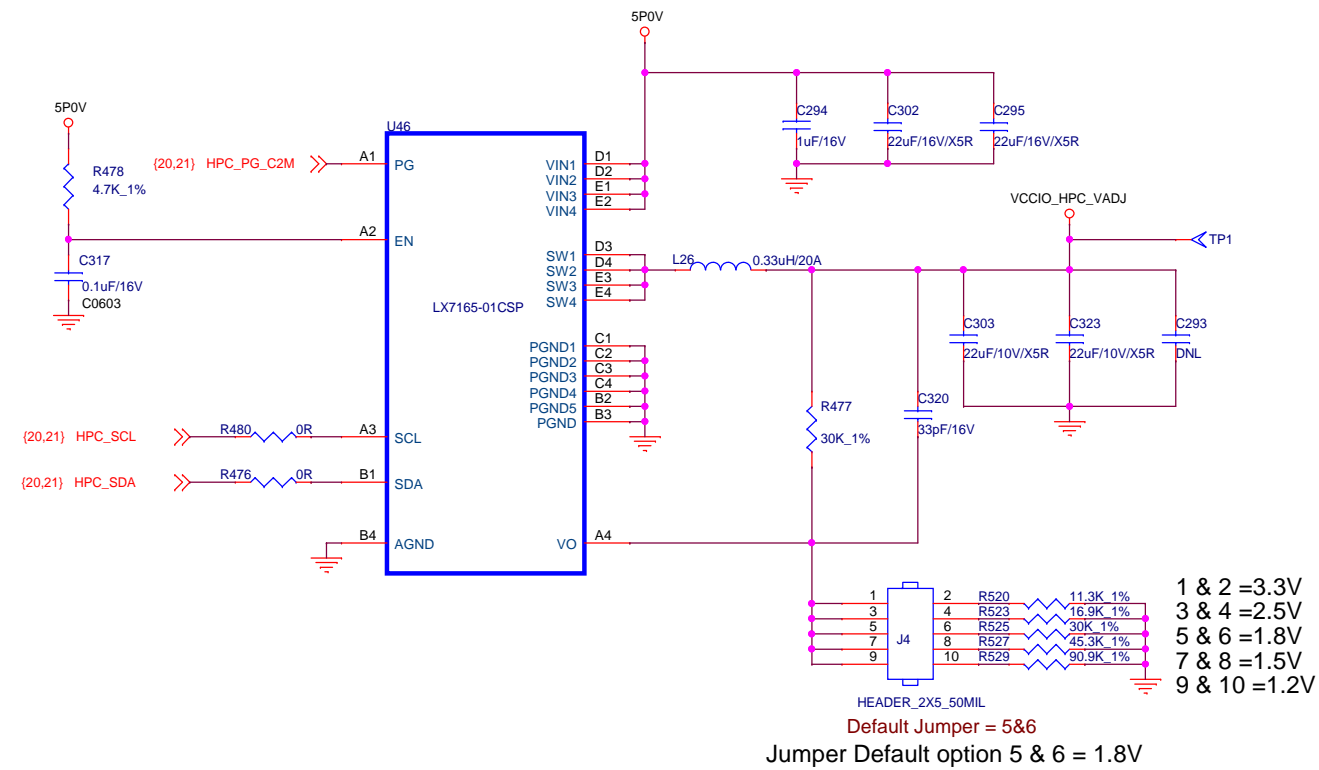
POWER SUPPLY: 1.8V @ 1.5A



TITLE			
HFU540-EXP			
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Custom			2
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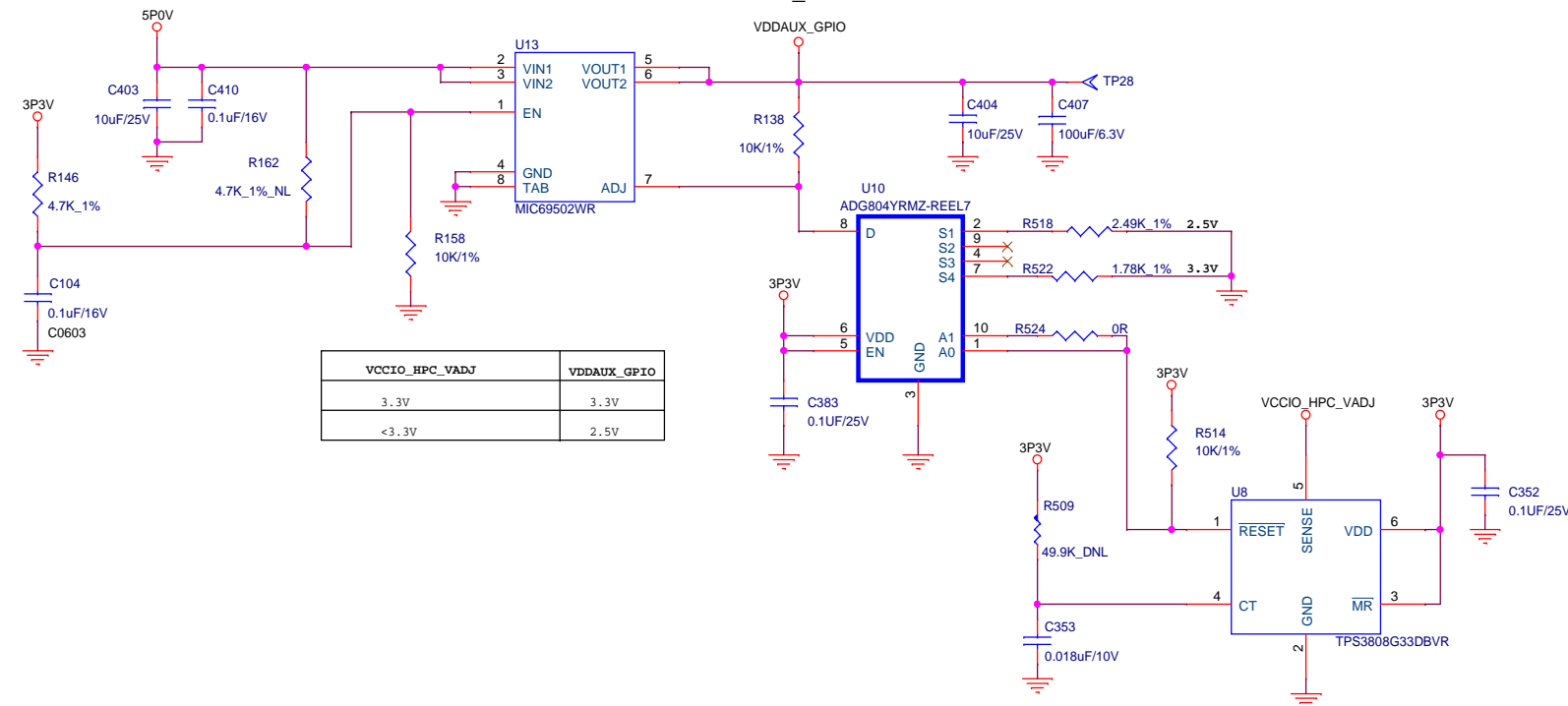
POWER SUPPLIES: FMC_HPC/VDDAUX4

POWER SUPPLY : 5A REGULATOR FOR FMC HPC



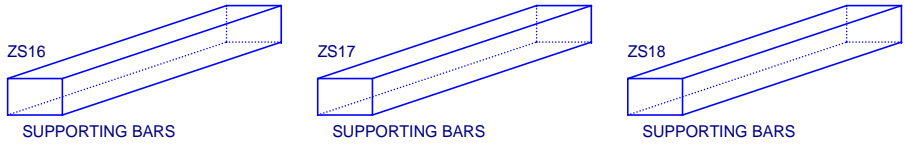
POWER SUPPLY: 5V to 2.5V/3.3V/5A

VDDAUX_GPIO/5A

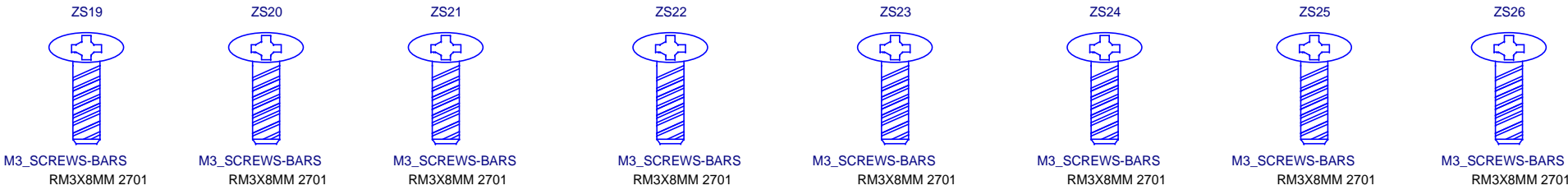


MECHANICALS

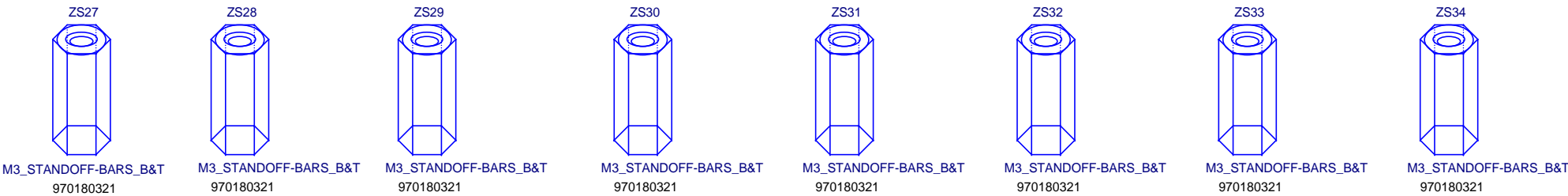
SUPPORTING BARS



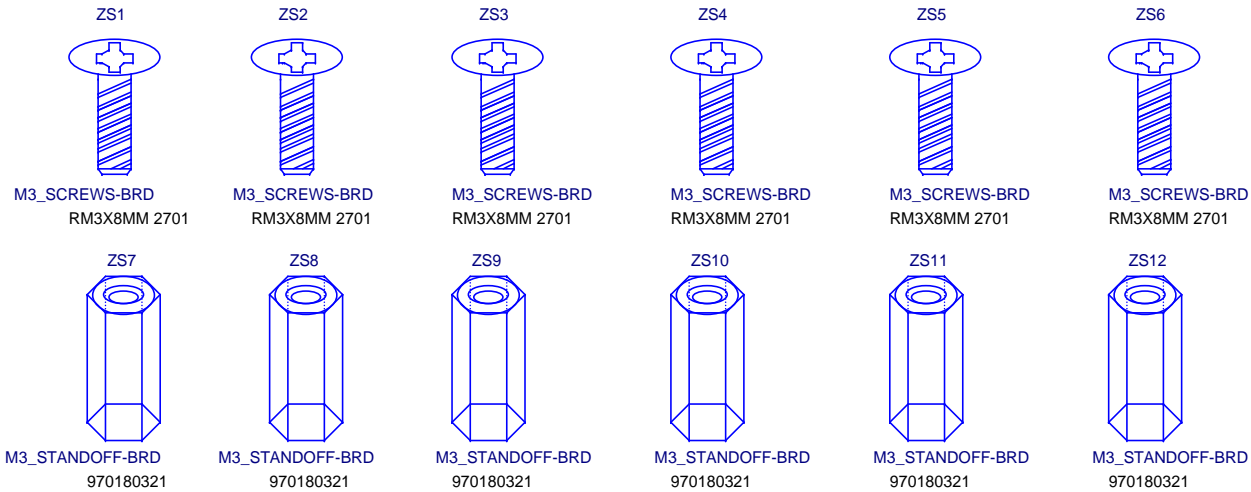
M3-SCREWS FOR SUPPORTING BARS



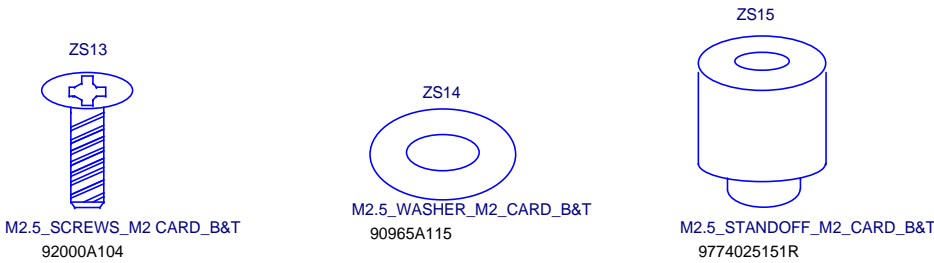
M3-STANDOFF FOR SUPPORTING BARS-BAG & TAG



M3-STANDOFF & SCREWS FOR BOARD



M2.5-STANDOFF & SCREWS FOR M.2 SSD-BAG & TAG



TITLE			
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