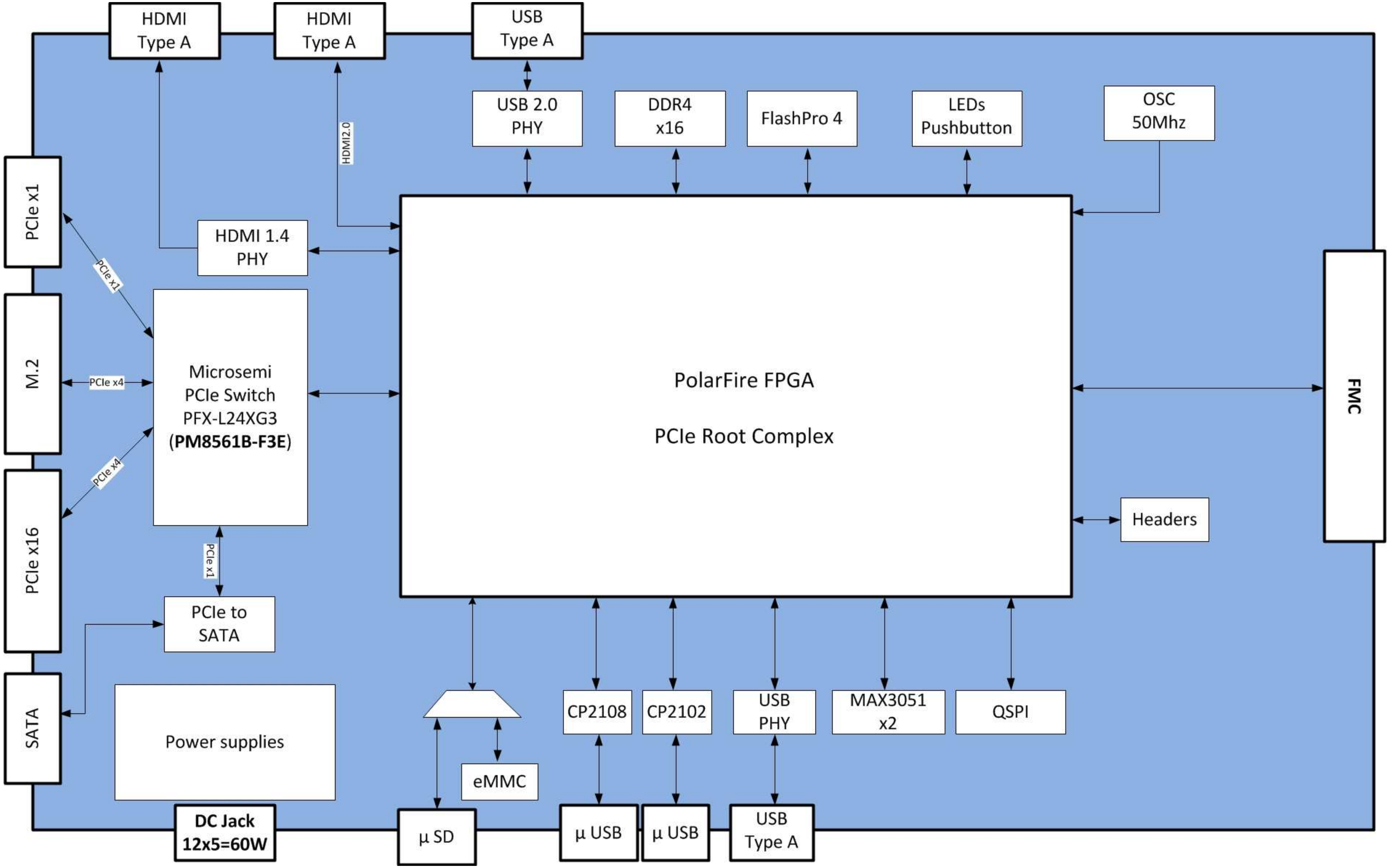
HFU540-EXP_KIT

Microsemi

Project Name: HFU540-EXP_KIT		
Rev 2	Part Number: MICROSEMI DVP-100-000506-001	PACTRON:
Originator: GHURU KUMARAVELU		
Size Custom	Date: Friday, April 06, 2018	Sheet 1 of 46

BLOCK DIAGRAM



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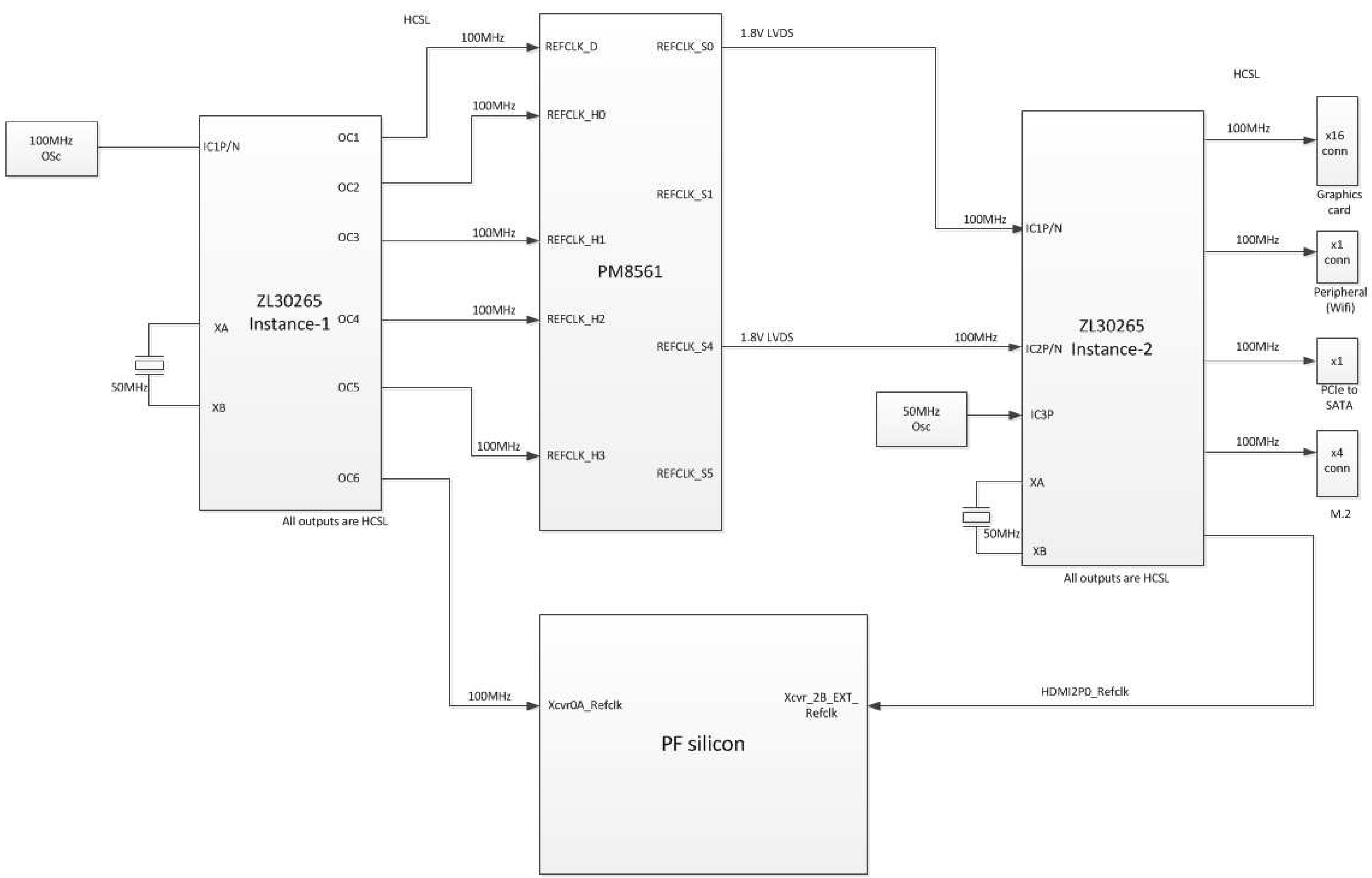
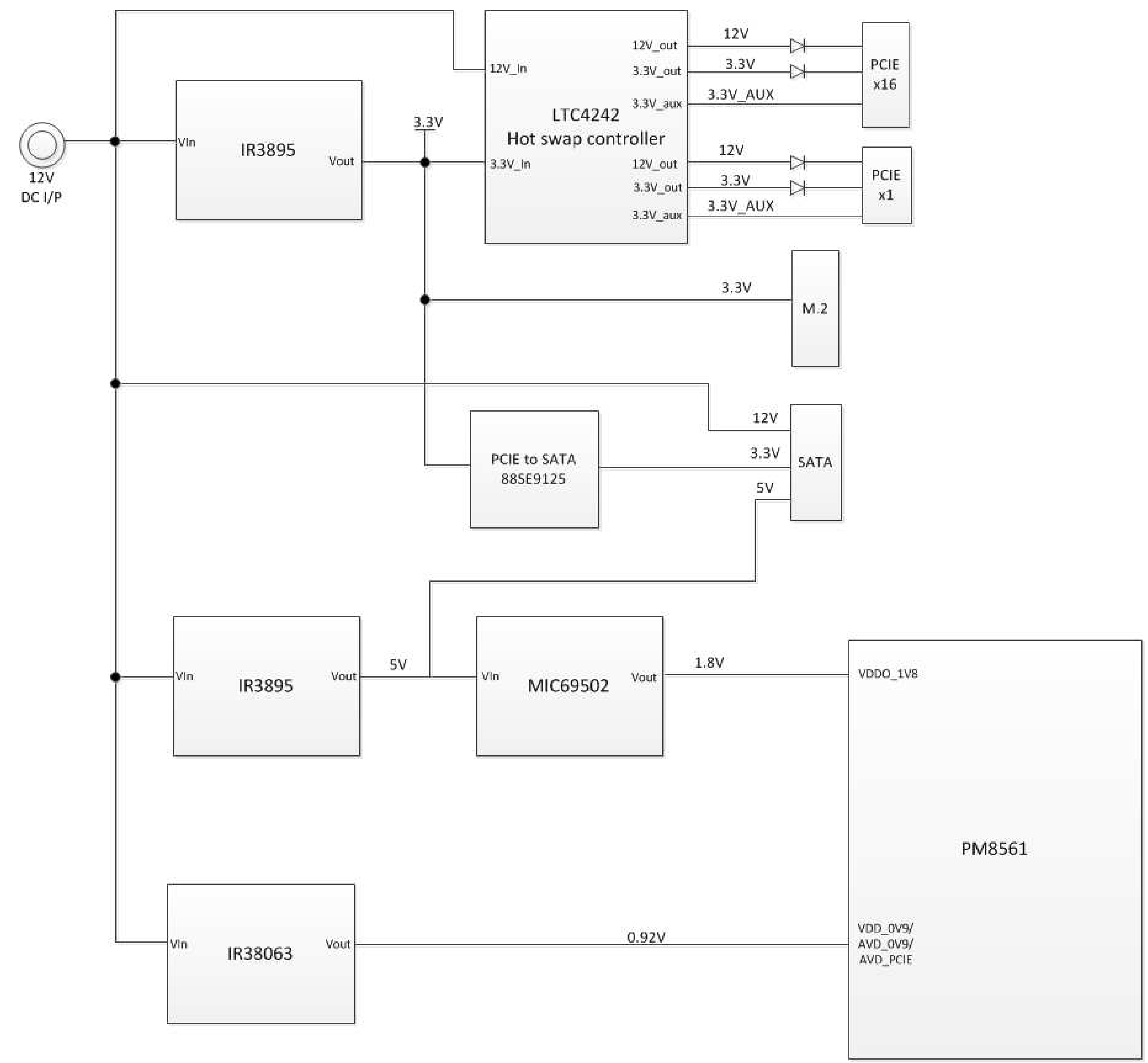
Clock scheme – PCIe switch



Power scheme – PCIe switch



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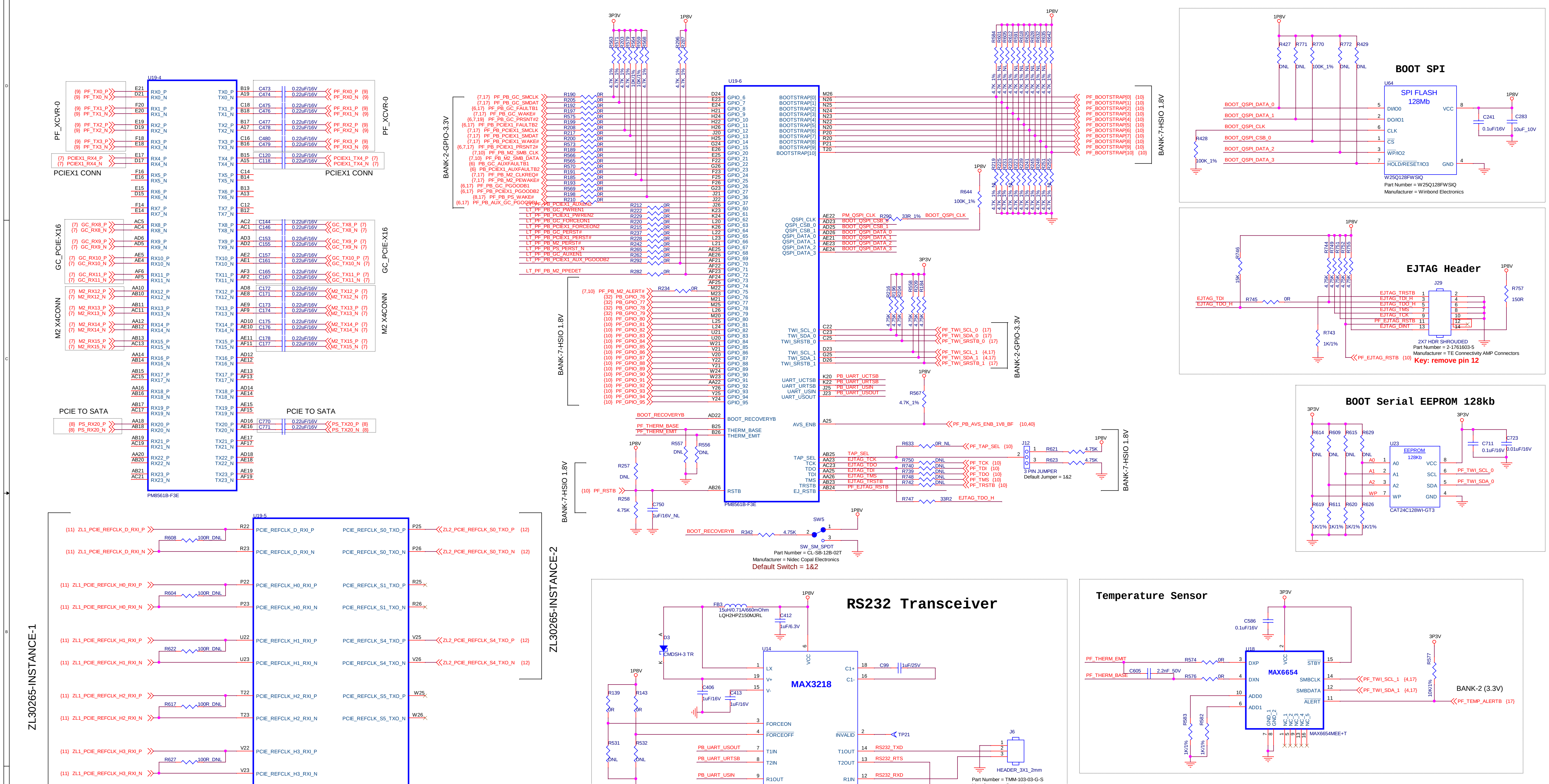
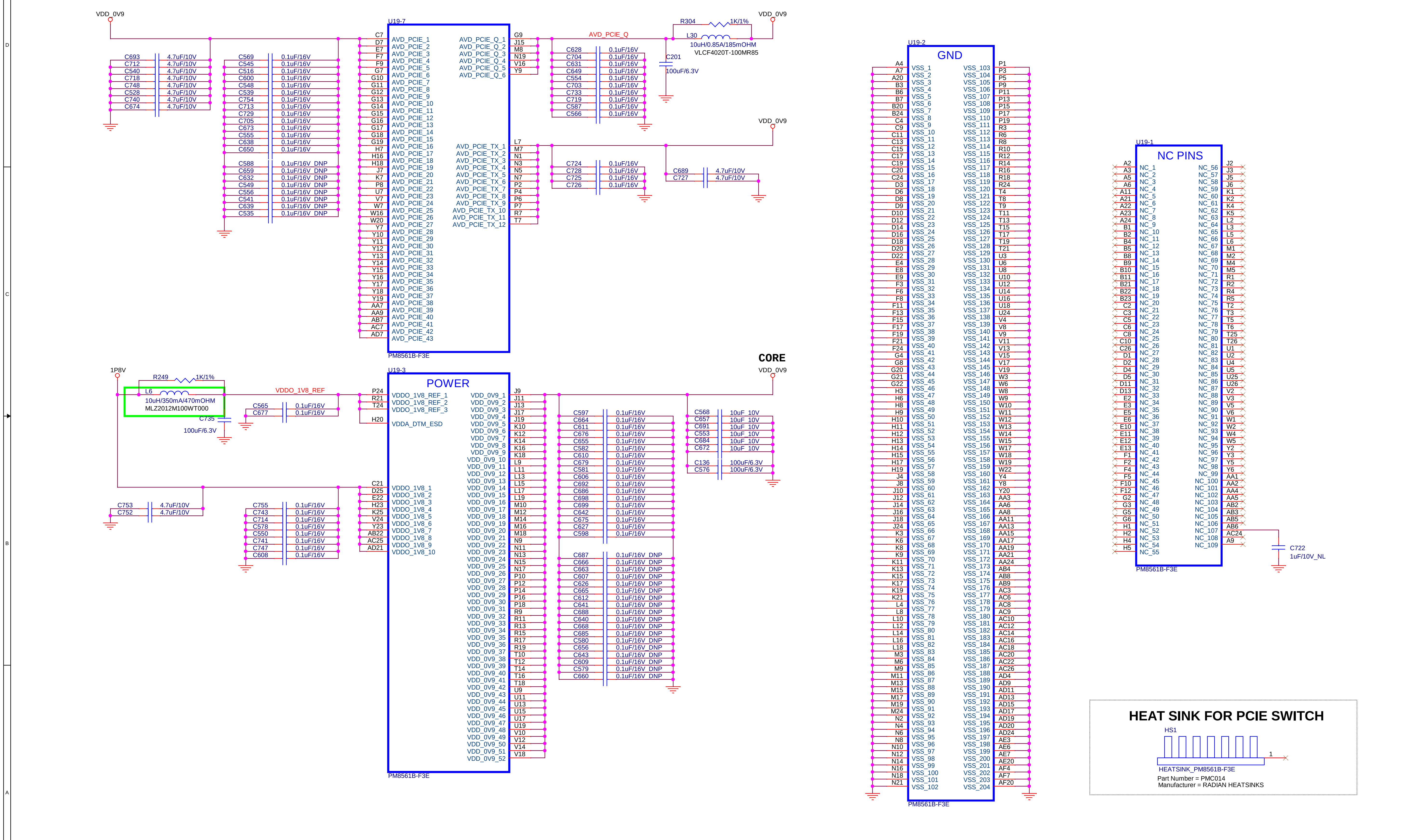
PM8561B-F3E SIGNAL CONNECTION



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



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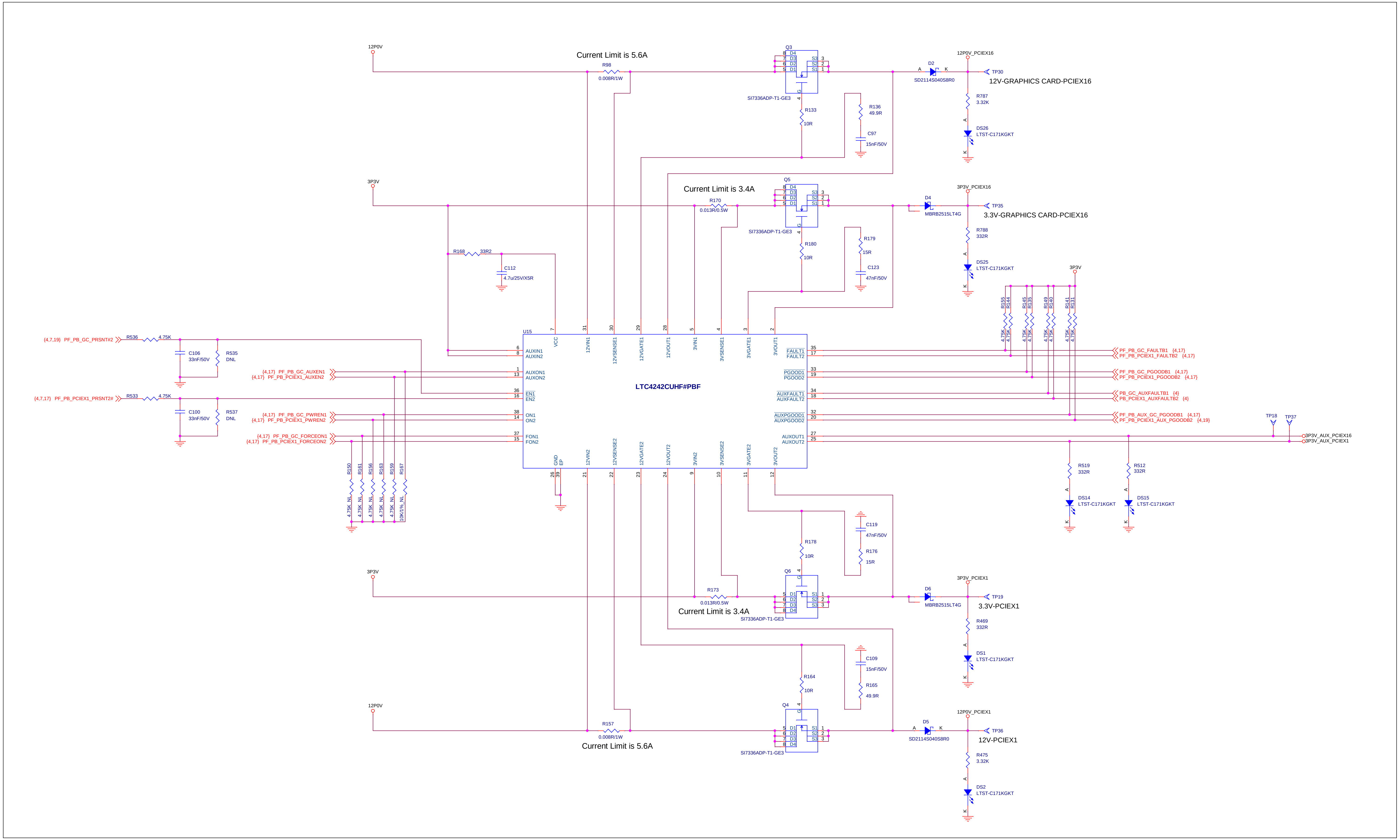
HOT PLUG CONTROLLER FOR PCIe x16 and x1 CONNECTORS



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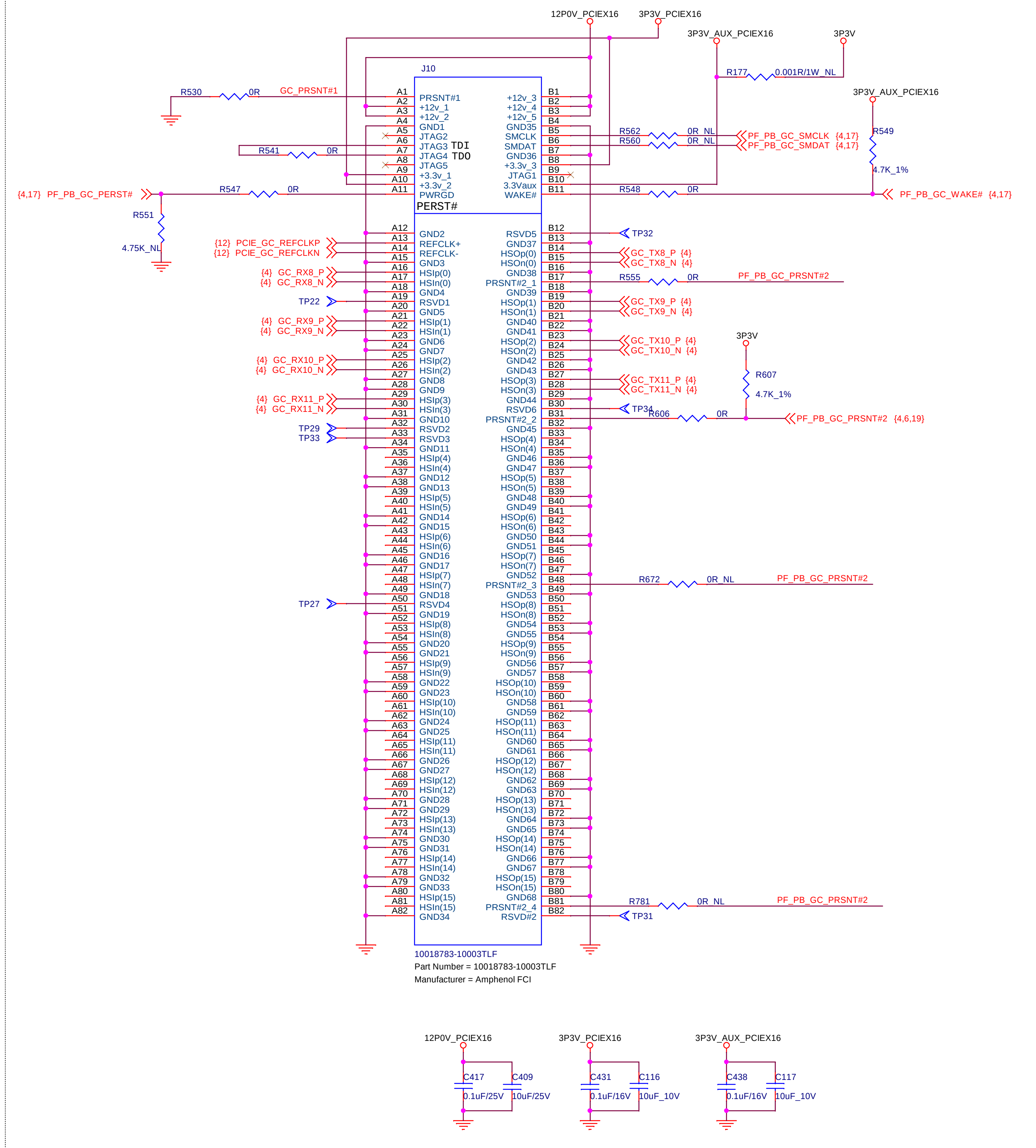
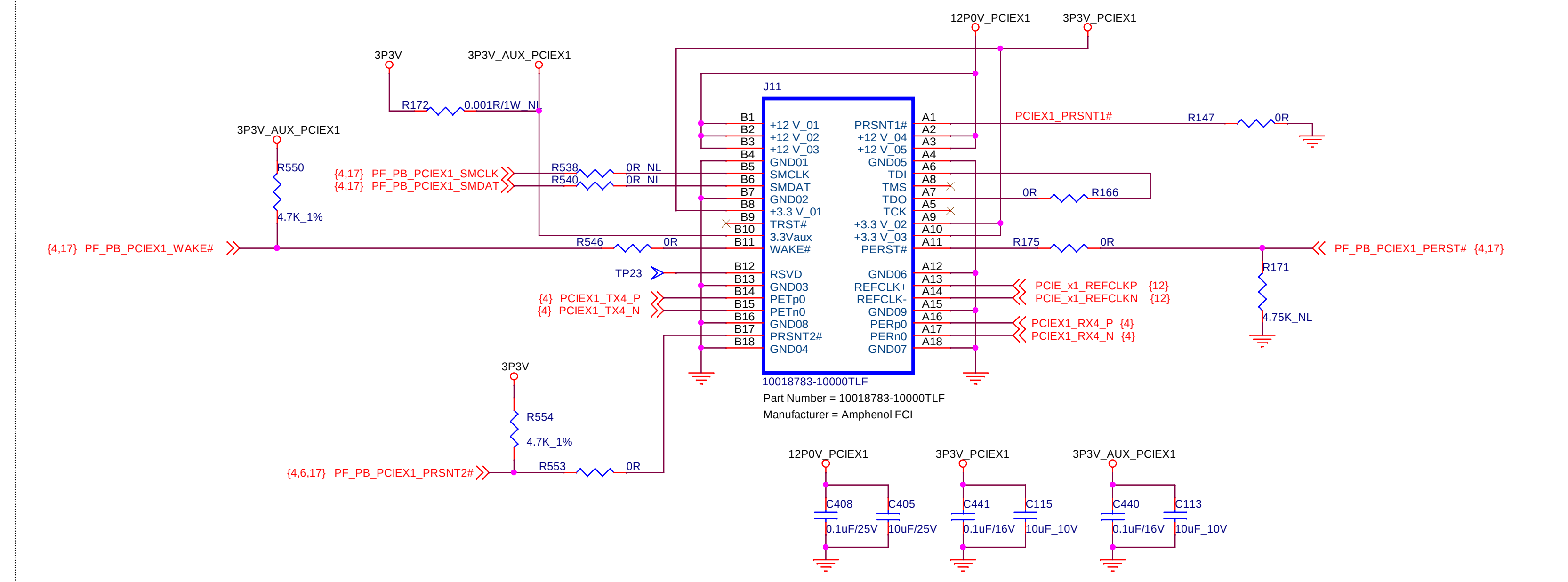
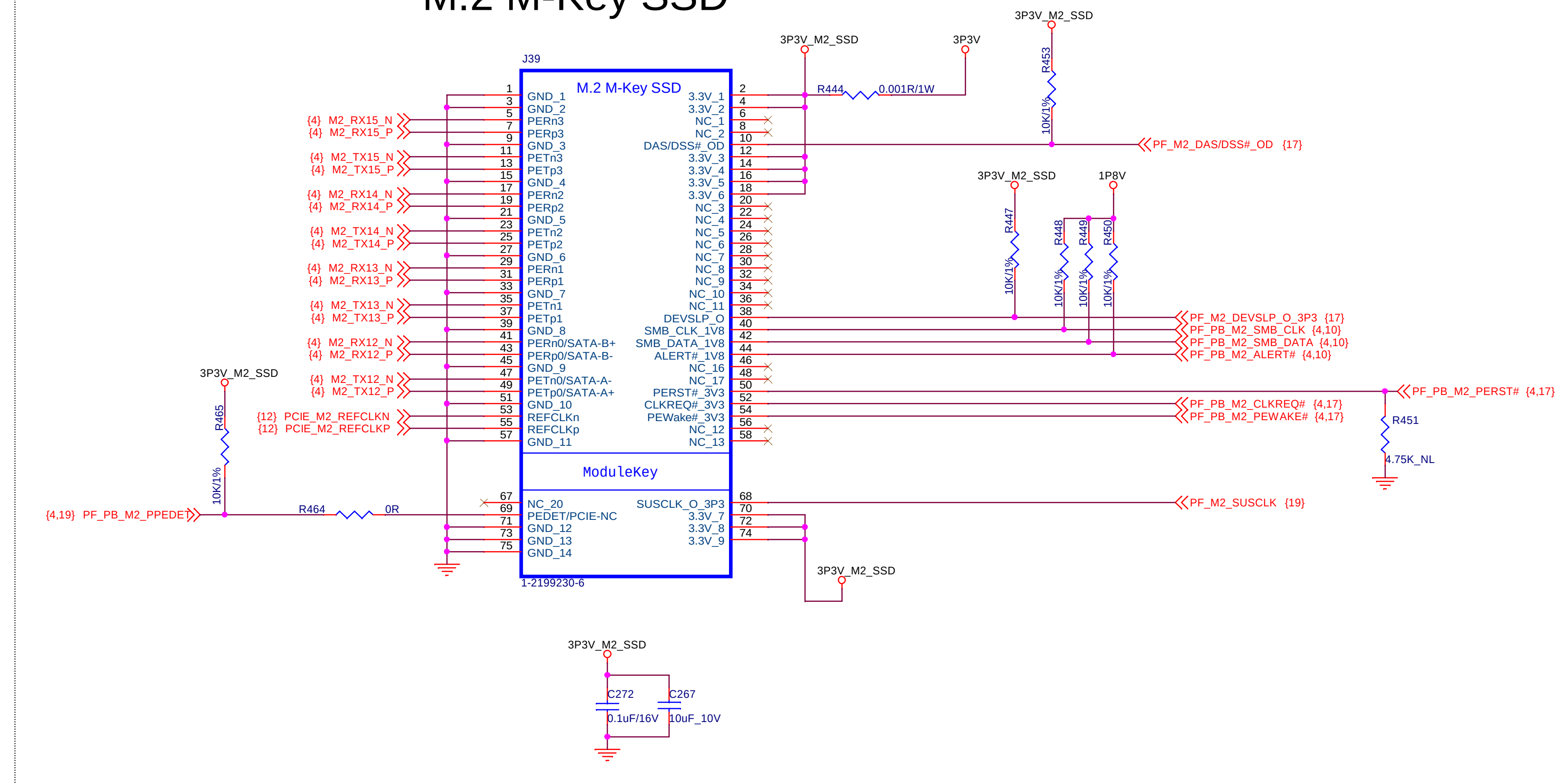
GRAPHICS CARD-PCIEX16



PCIEX1



M.2 M-Key SSD



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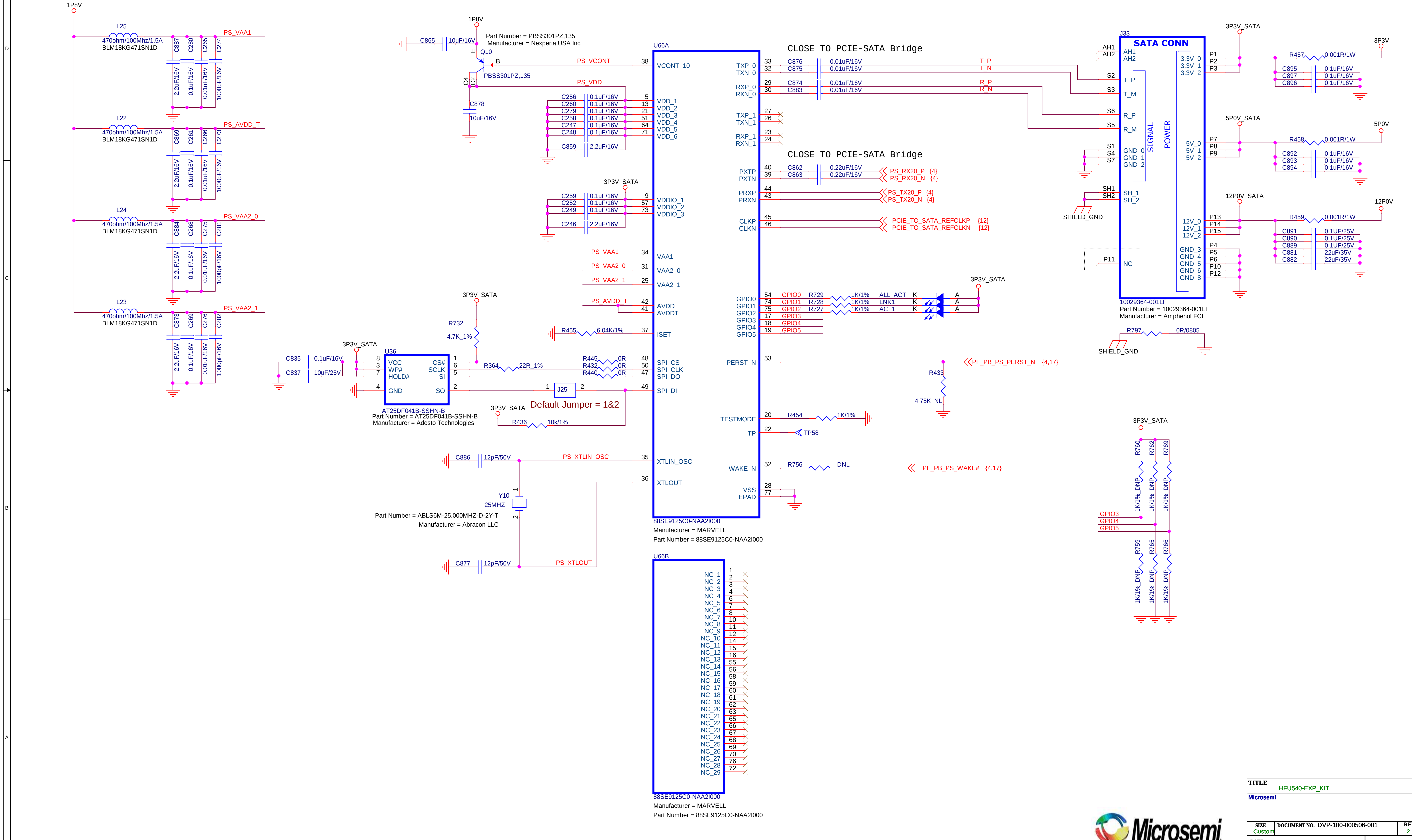
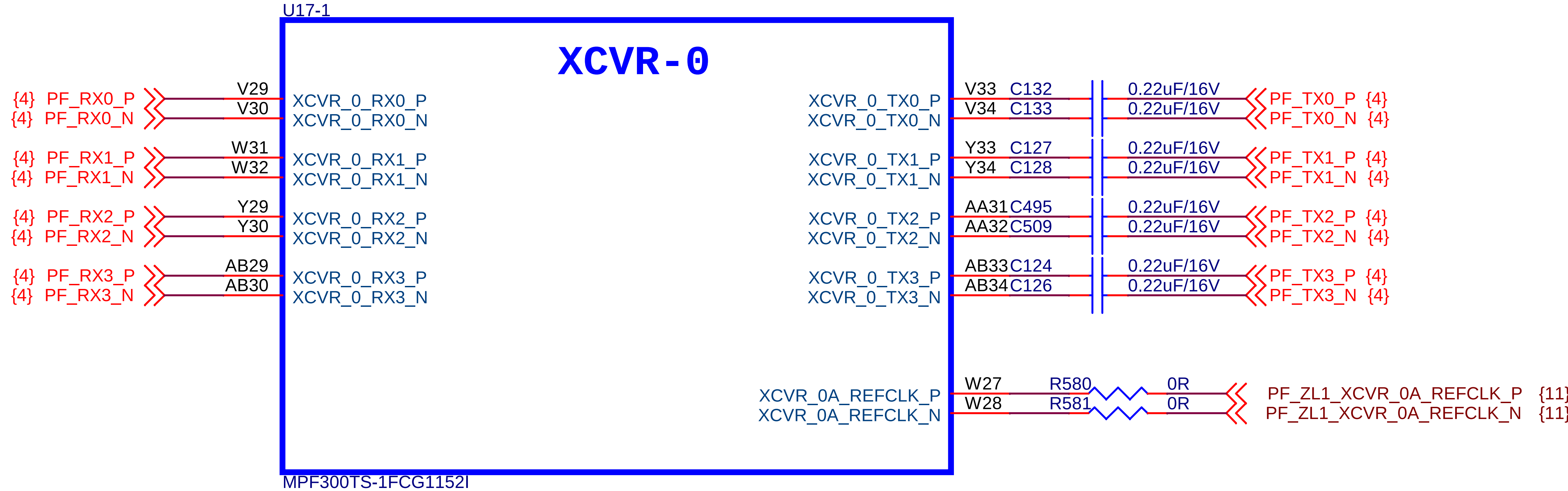
PCIE SATA CONTROLLER



TRANSCEIVER 0



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TITLE	HFU540-EXP_KIT	
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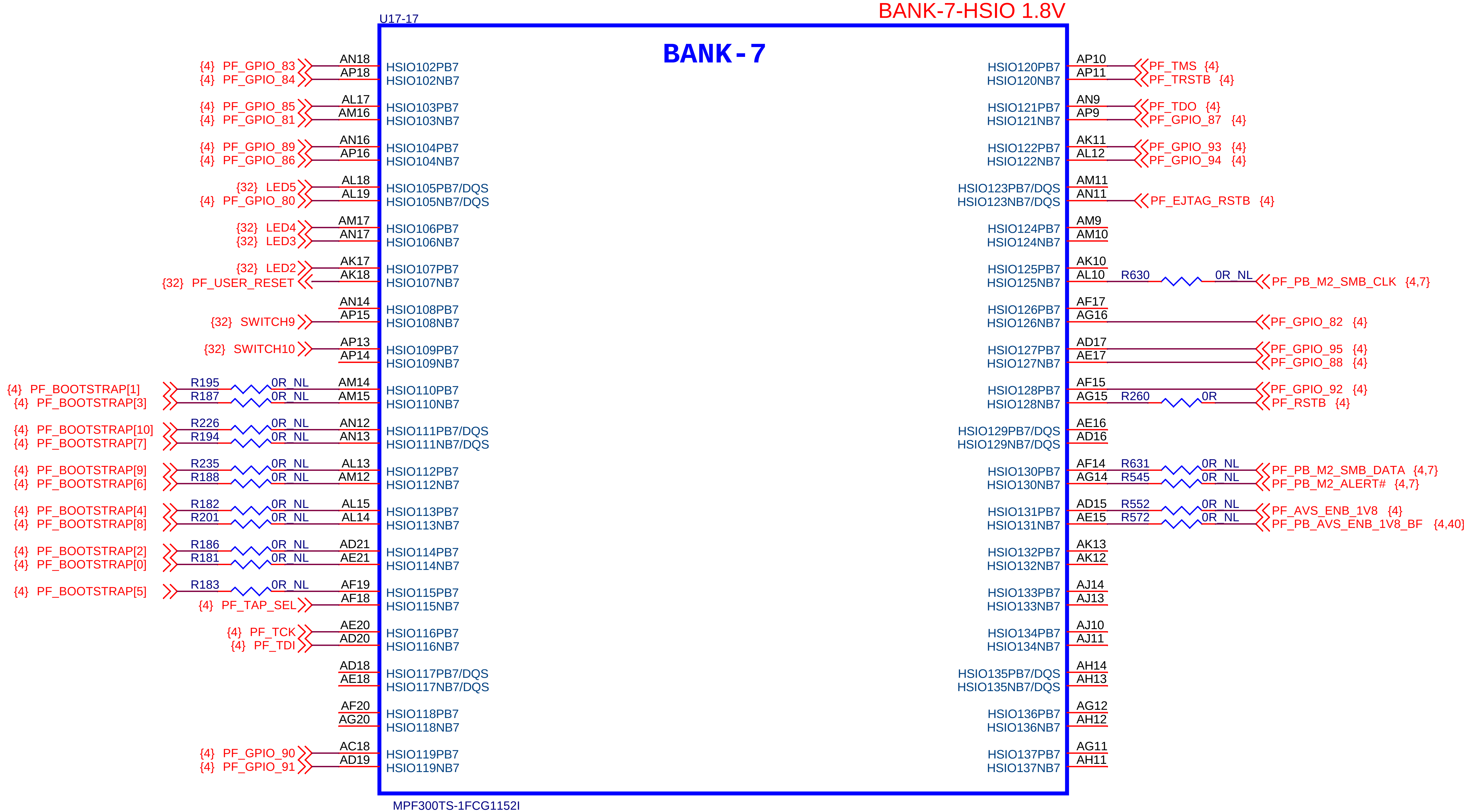

Microsemi

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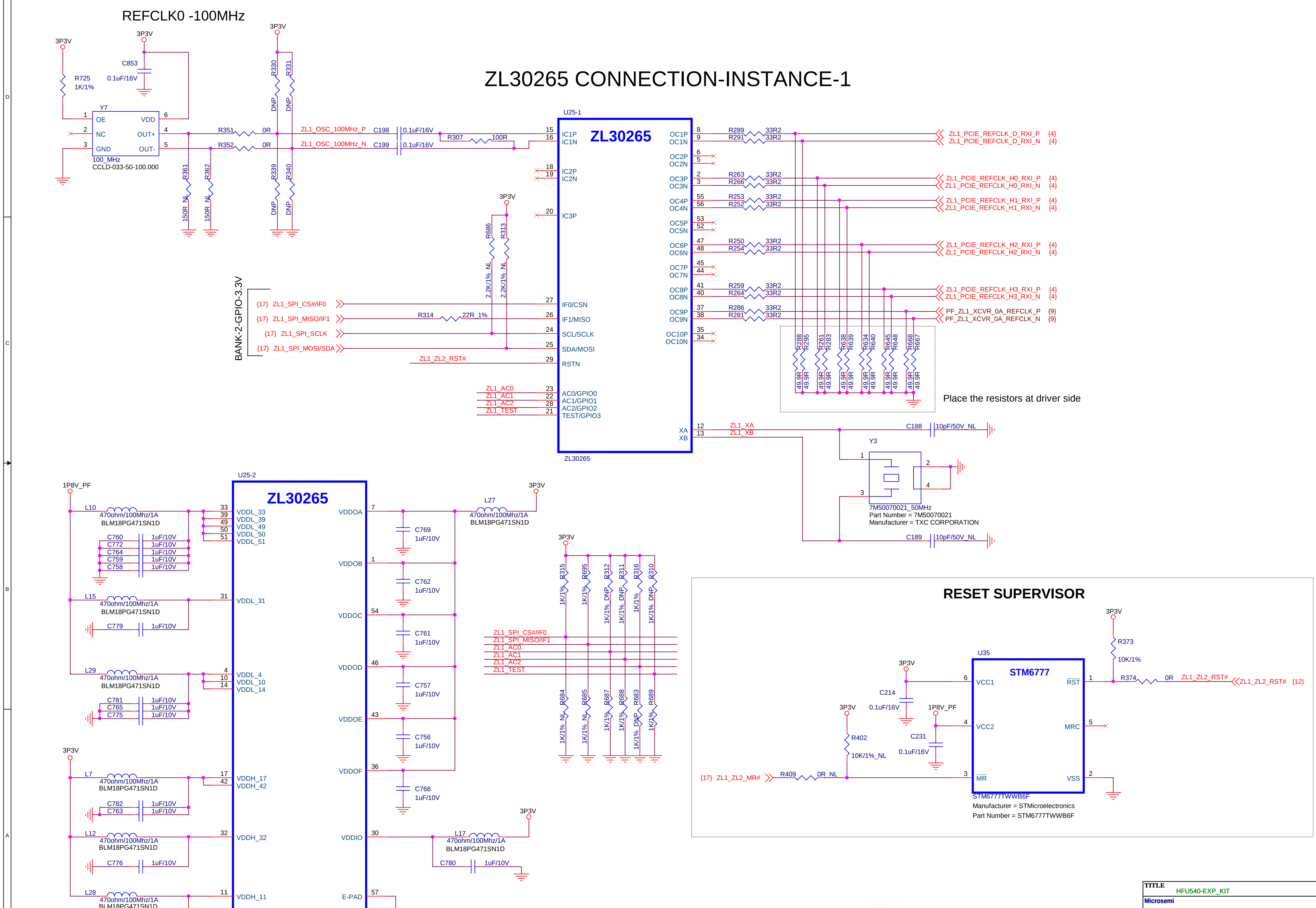

Microsemi

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Microsemi		
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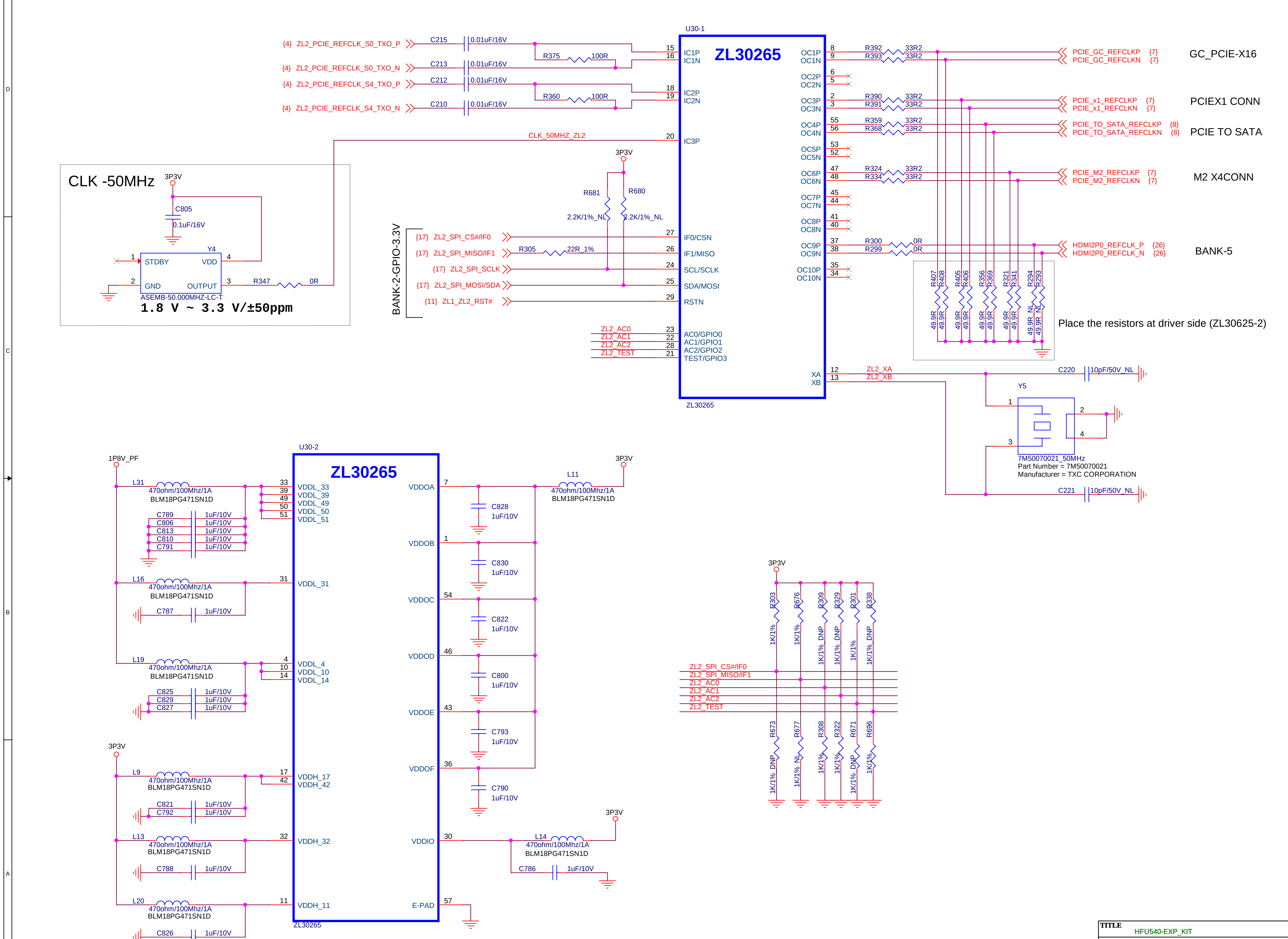
ZL30265 CONNECTION-INSTANCE-2



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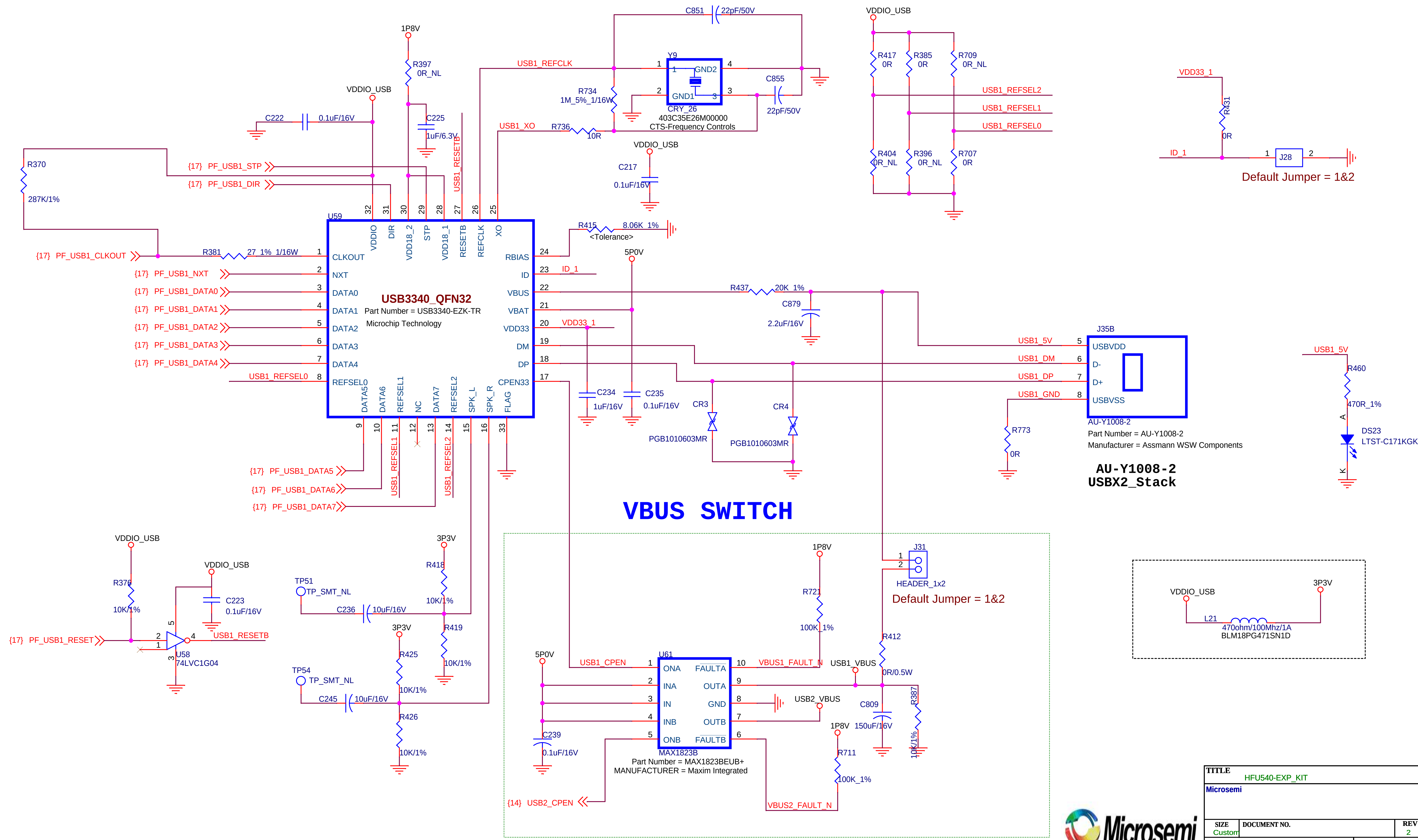
USB-ULPI Interface 1

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



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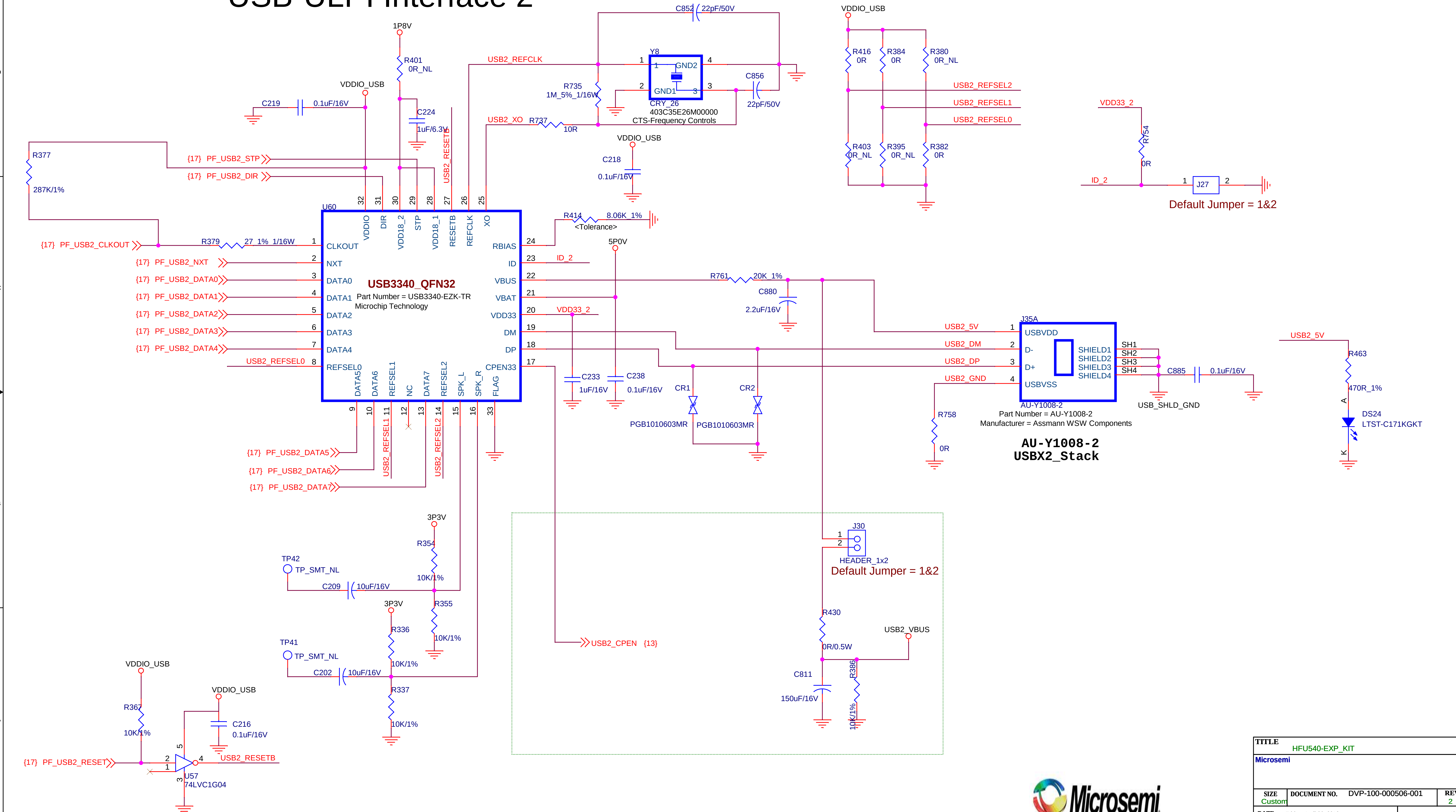
USB-ULPI Interface 2

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



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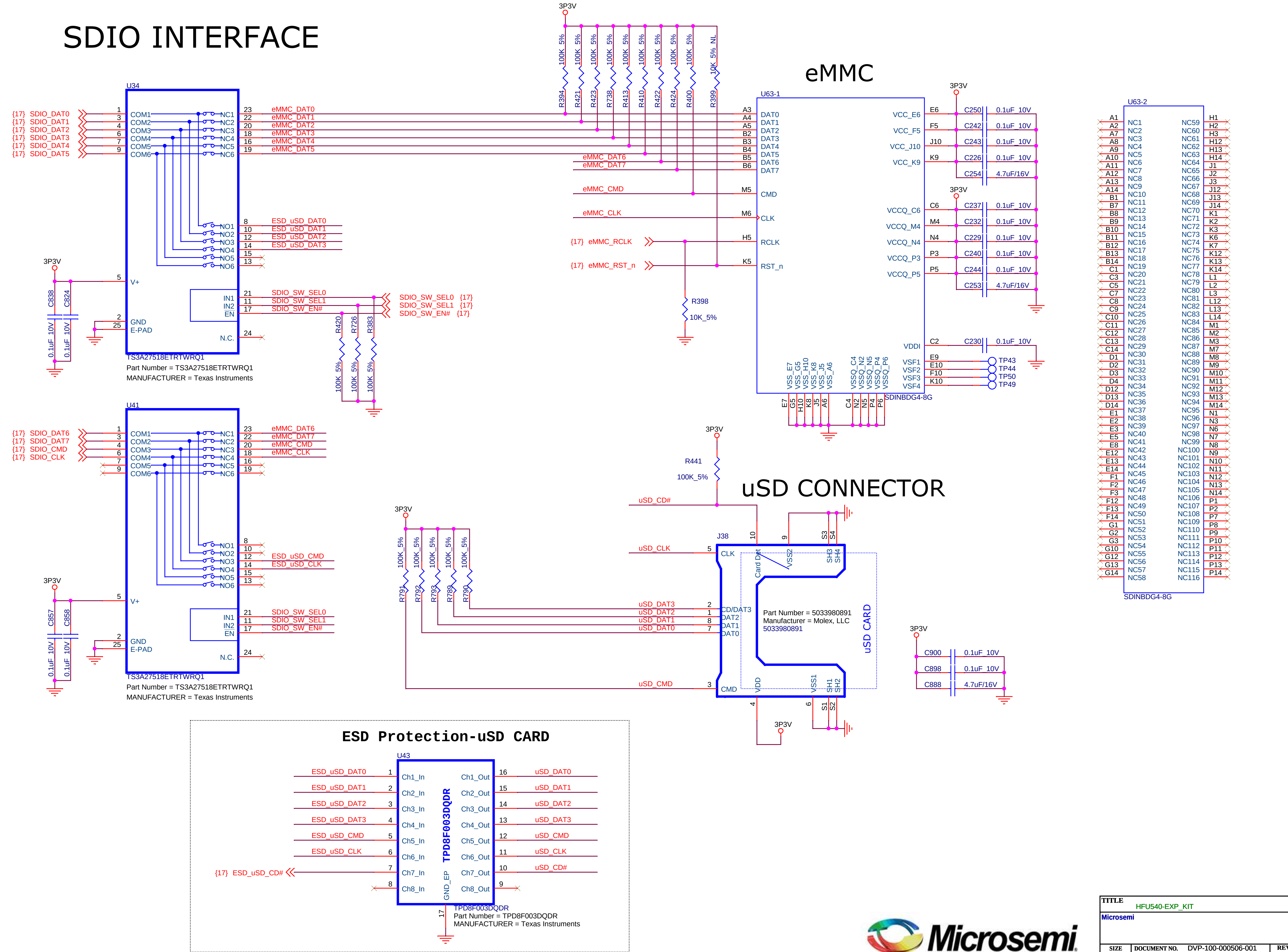

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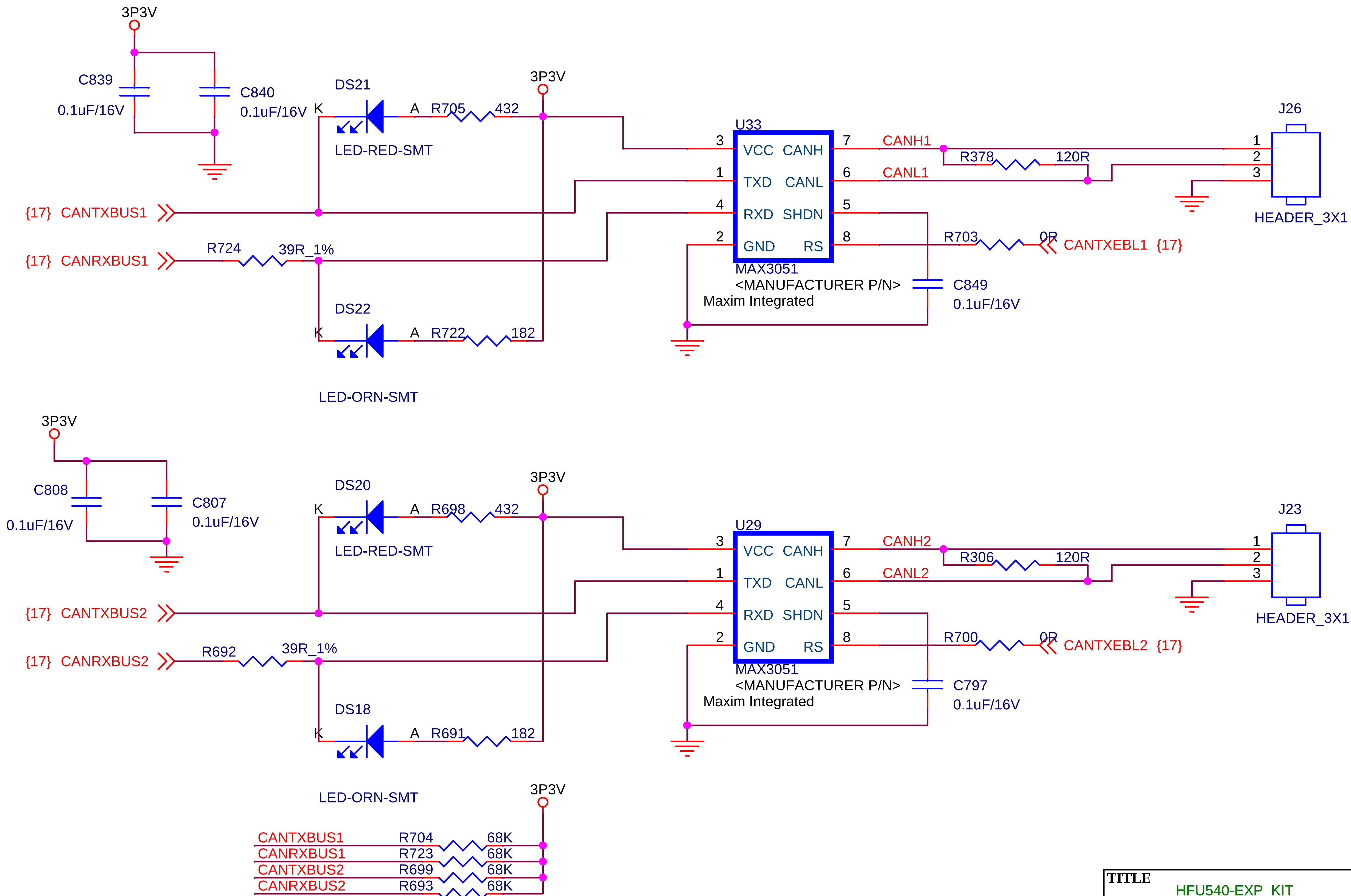
CAN Interface



TITLE HFU540-EXP_KIT

Microsemi

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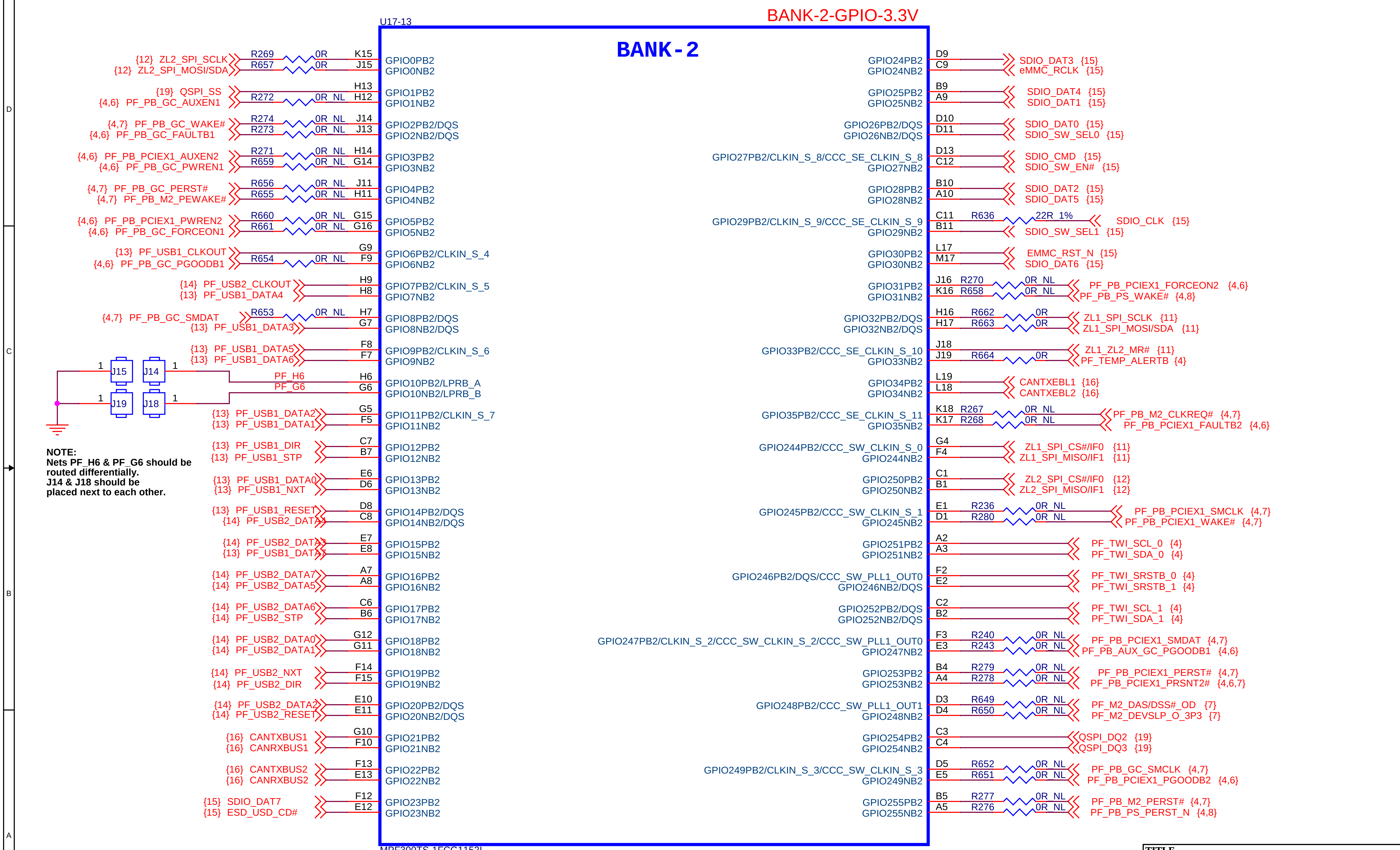

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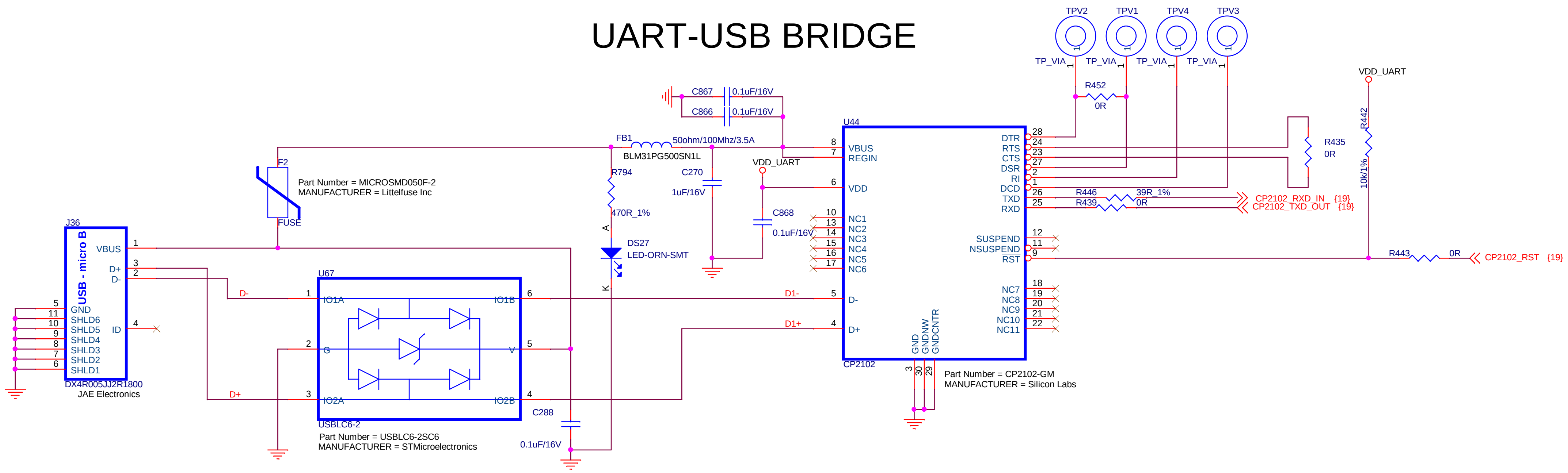
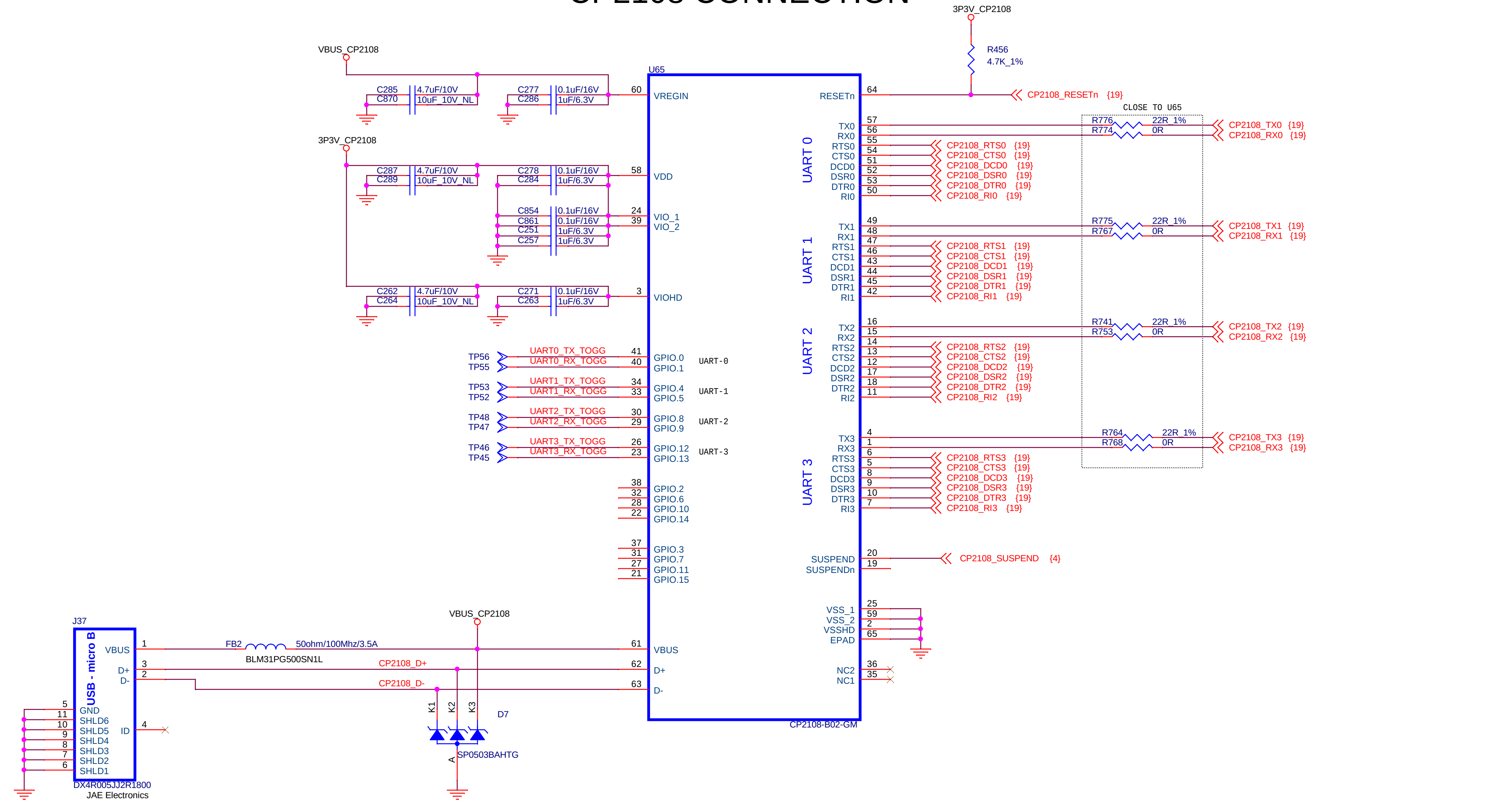
UART-USB BRIDGE



CP2108 CONNECTION



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Microsemi		
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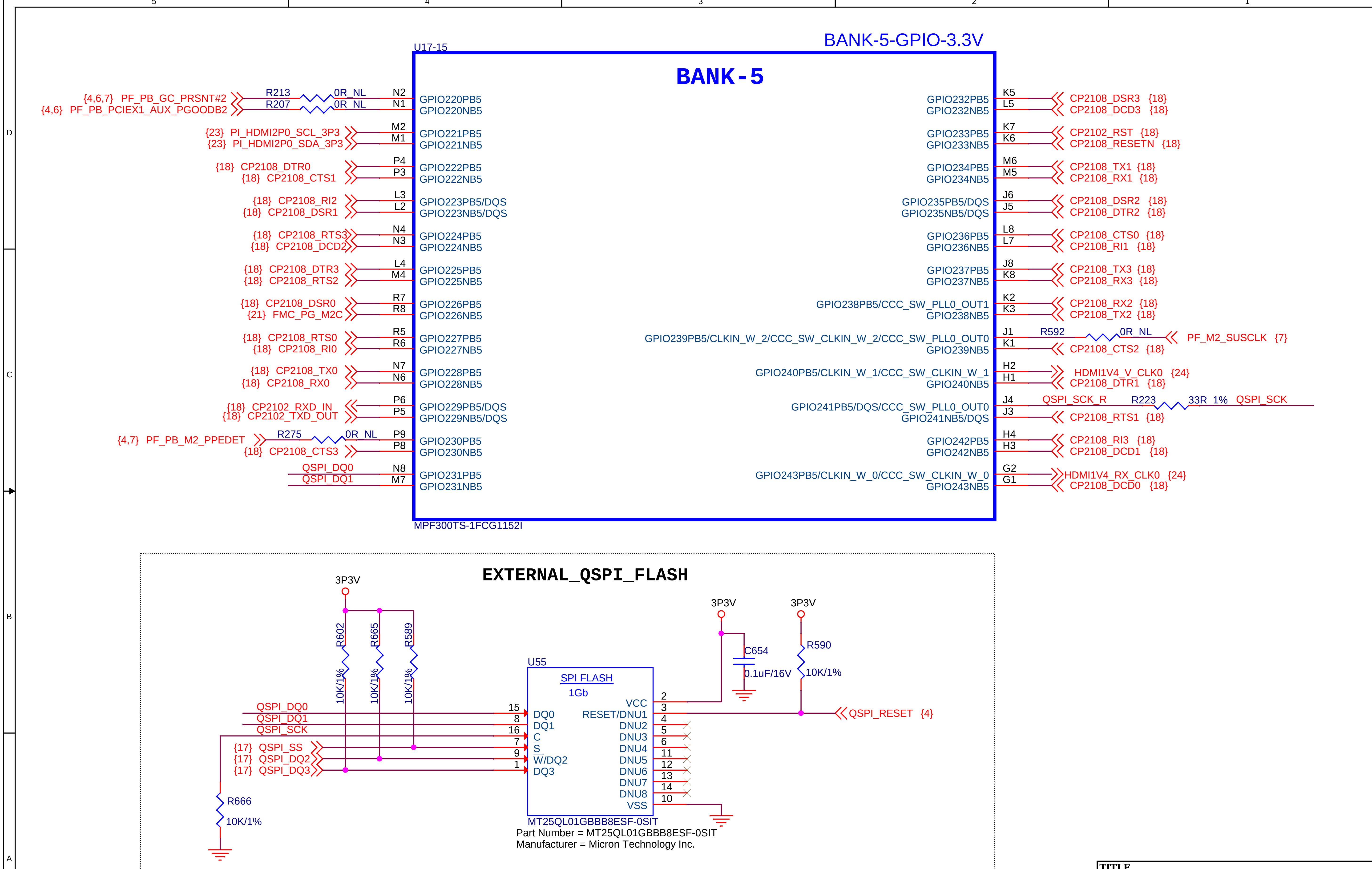

Microsemi

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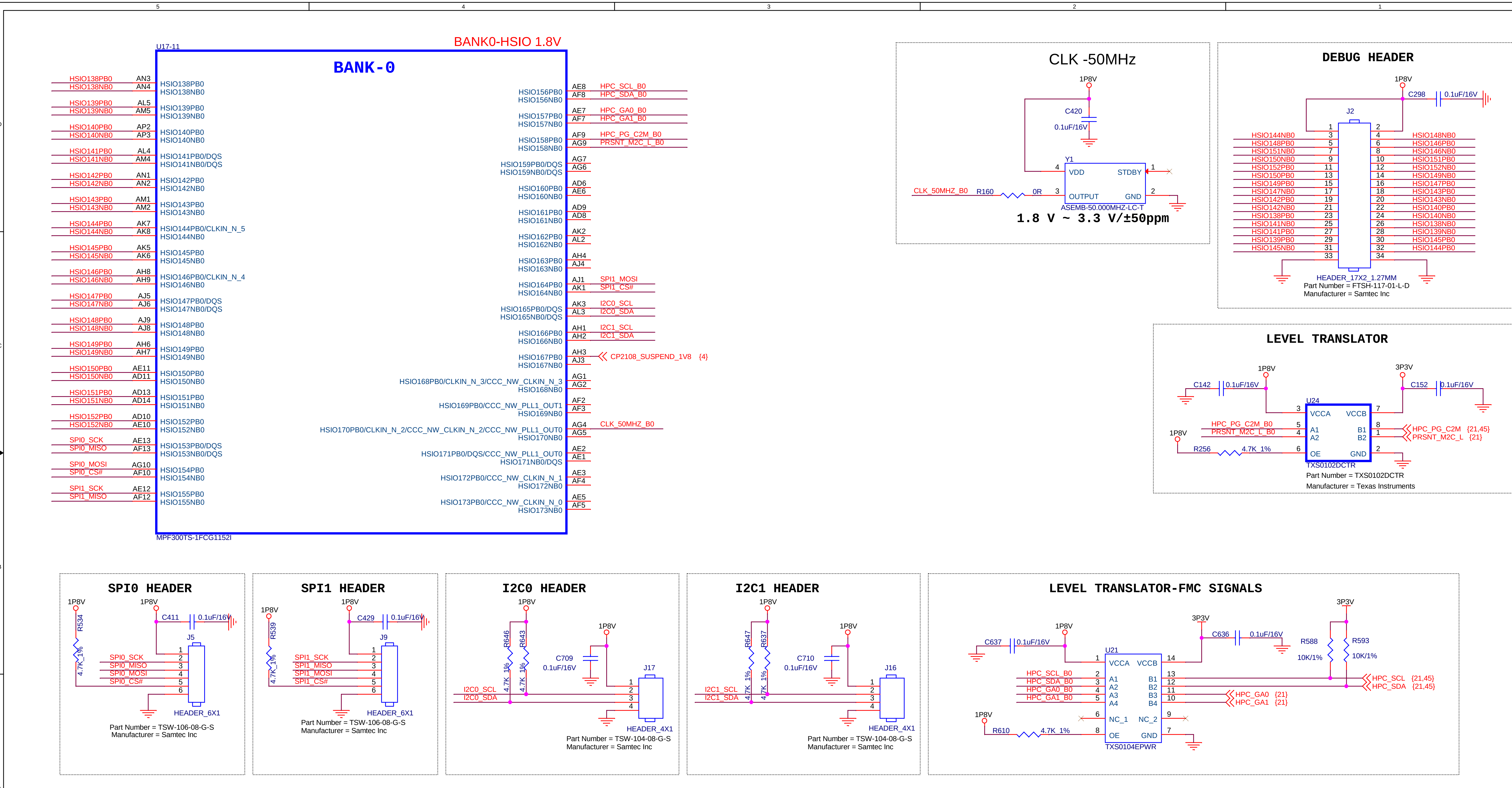

Microsemi

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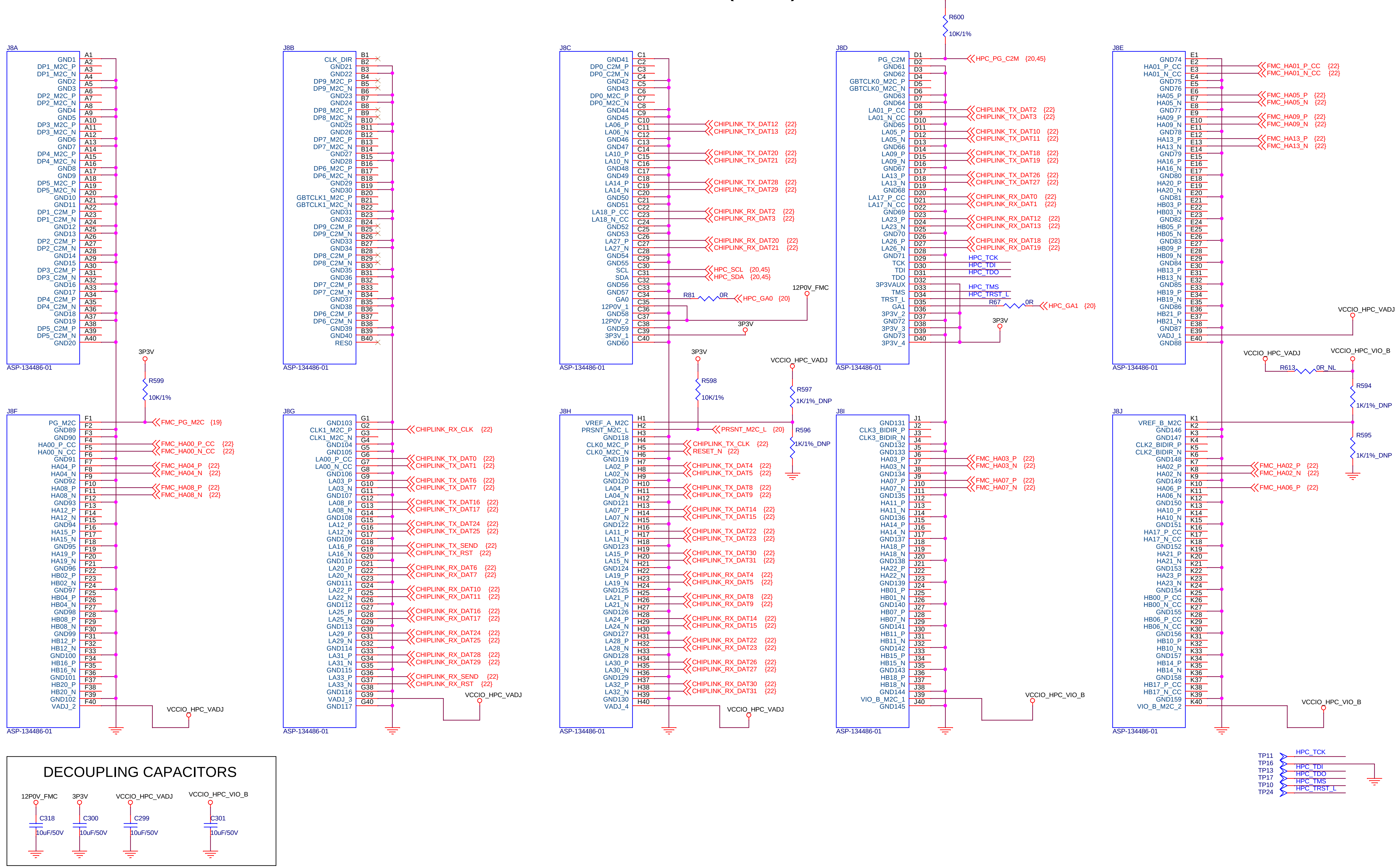
FMC CONNECTOR(HPC)



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SIZE C	DOCUMENT NO. DVP-100-000506-001		REV 2
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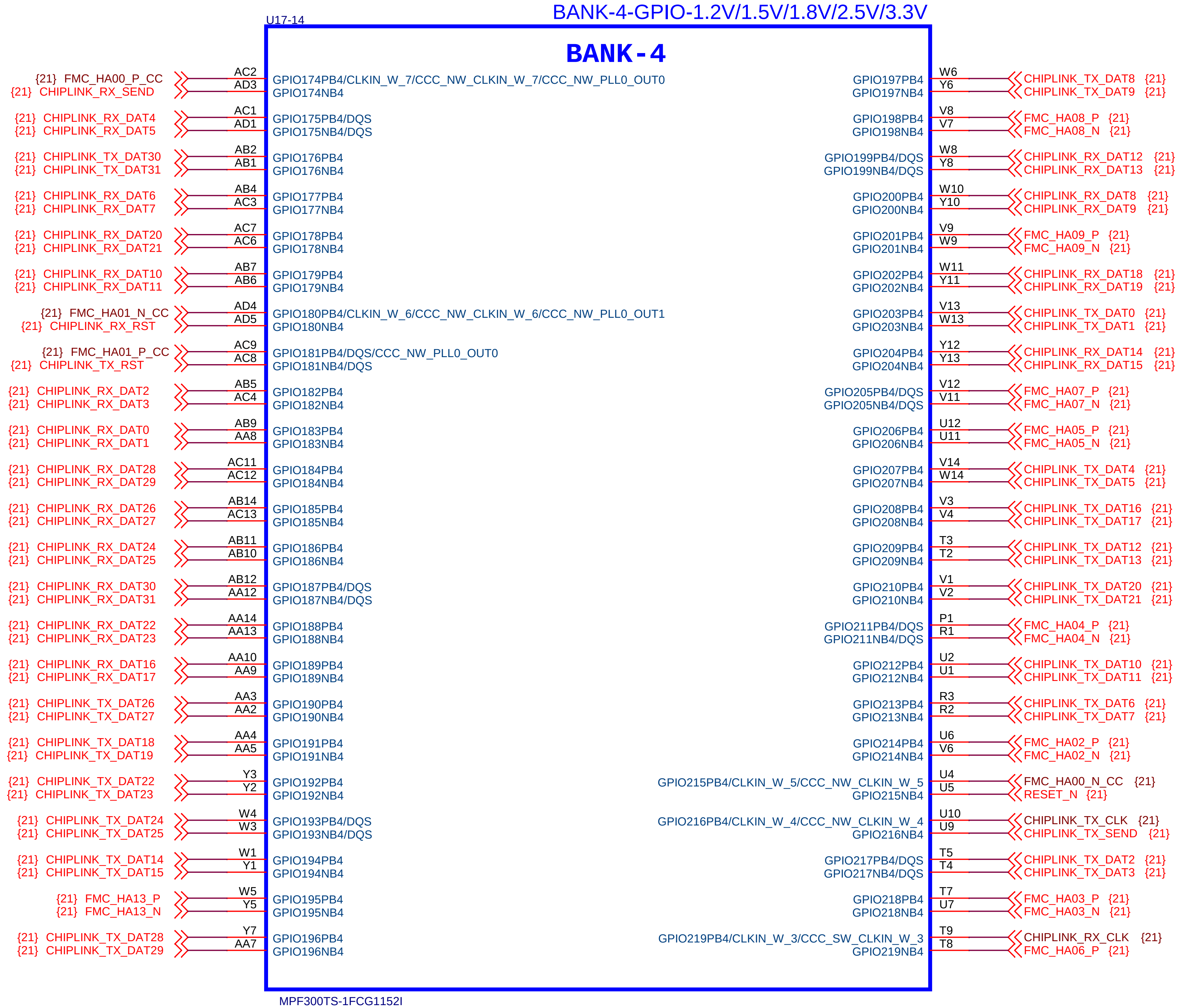

Microsemi

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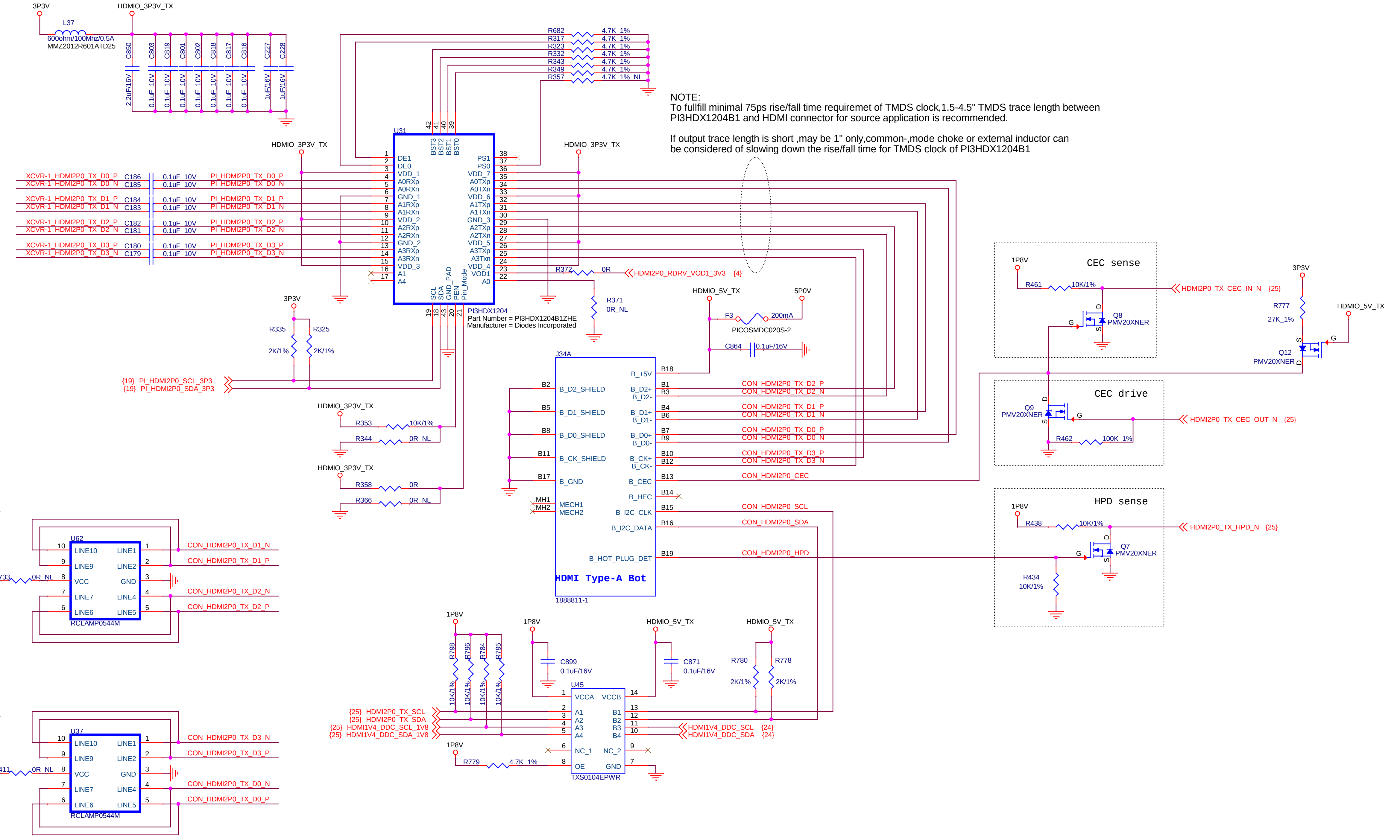
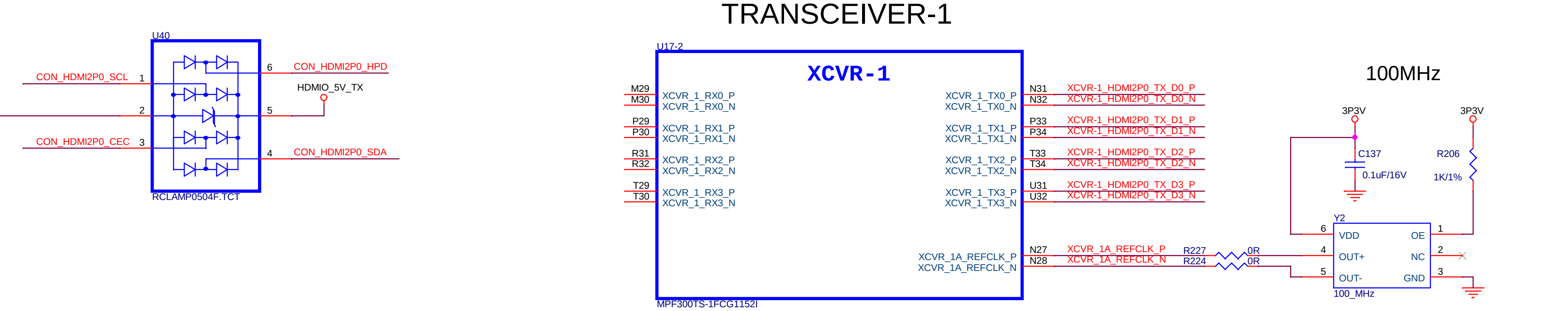
HDMI2P0 INTERFACE-SERDES

NOTE:
To fullfill minimal 75ps rise/fall time requiremet of TMDS clock,1.5-4.5" TMDS trace length between PI3HDX1204B1 and HDMI connector for source application is recommended.

If output trace length is short ,may be 1" only,common-,mode choke or external inductor can be considered of slowing down the rise/fall time for TMDS clock of PI3HDX1204B1



TRANSCEIVER-1



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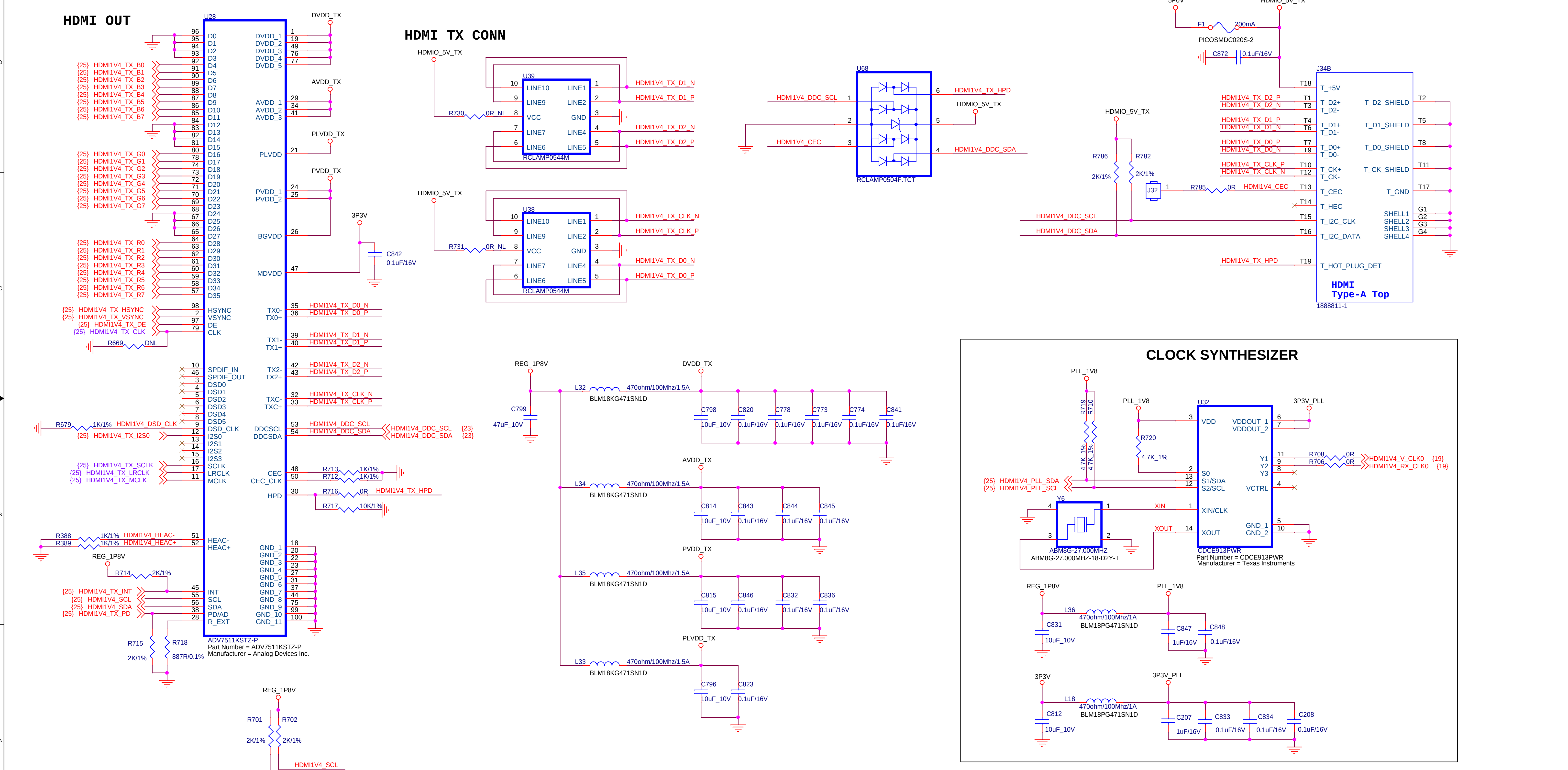
HDMI1V4 INTERFACE-TRANSMITTER



Microsemi

TITLE	HFU540-EXP_KIT		
Microsemi			
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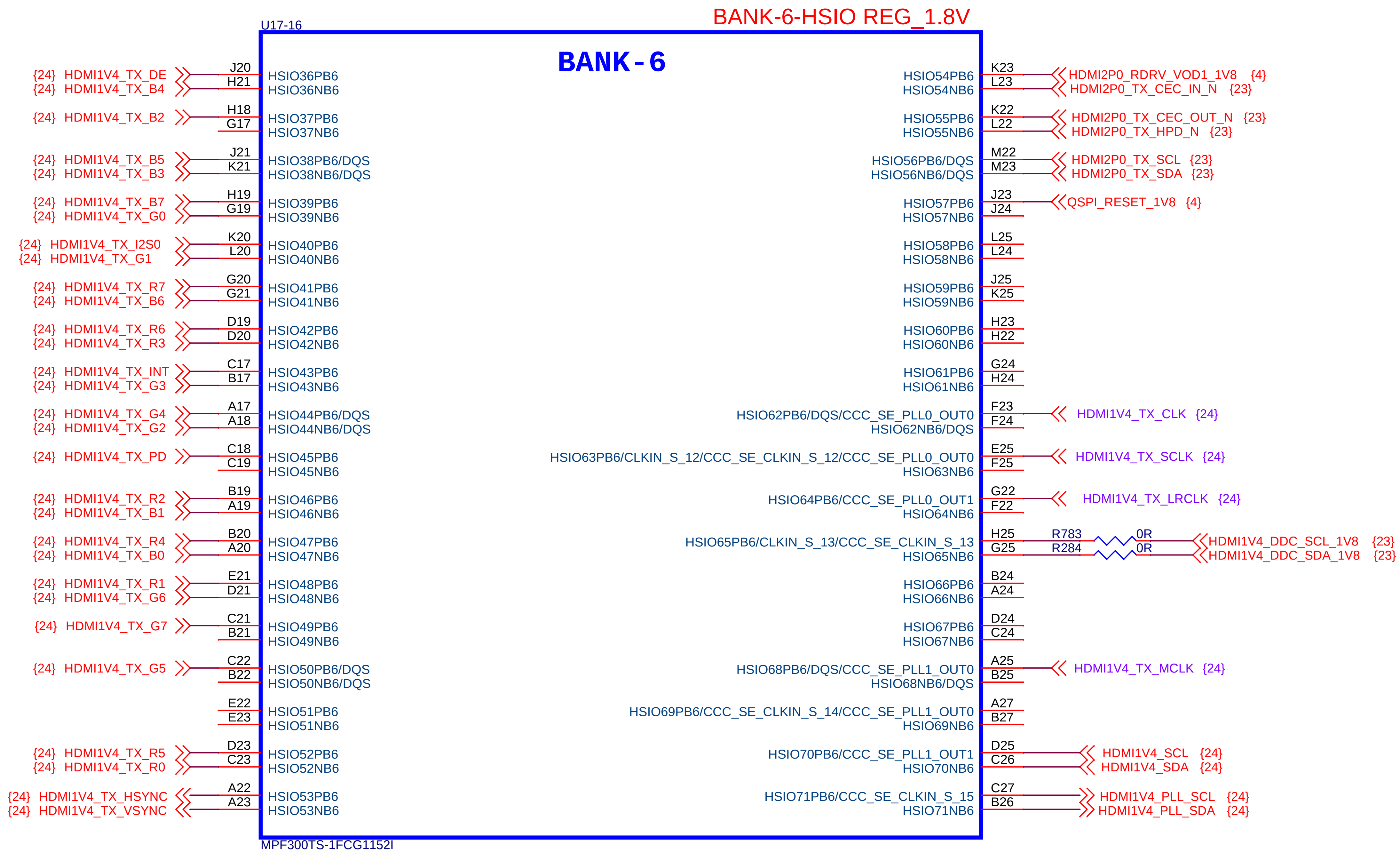

TITLE	HFU540-EXP_KIT	
Microsemi		
SIZE Custom	DOCUMENT NO. DVP-100-000506-001	REV 2
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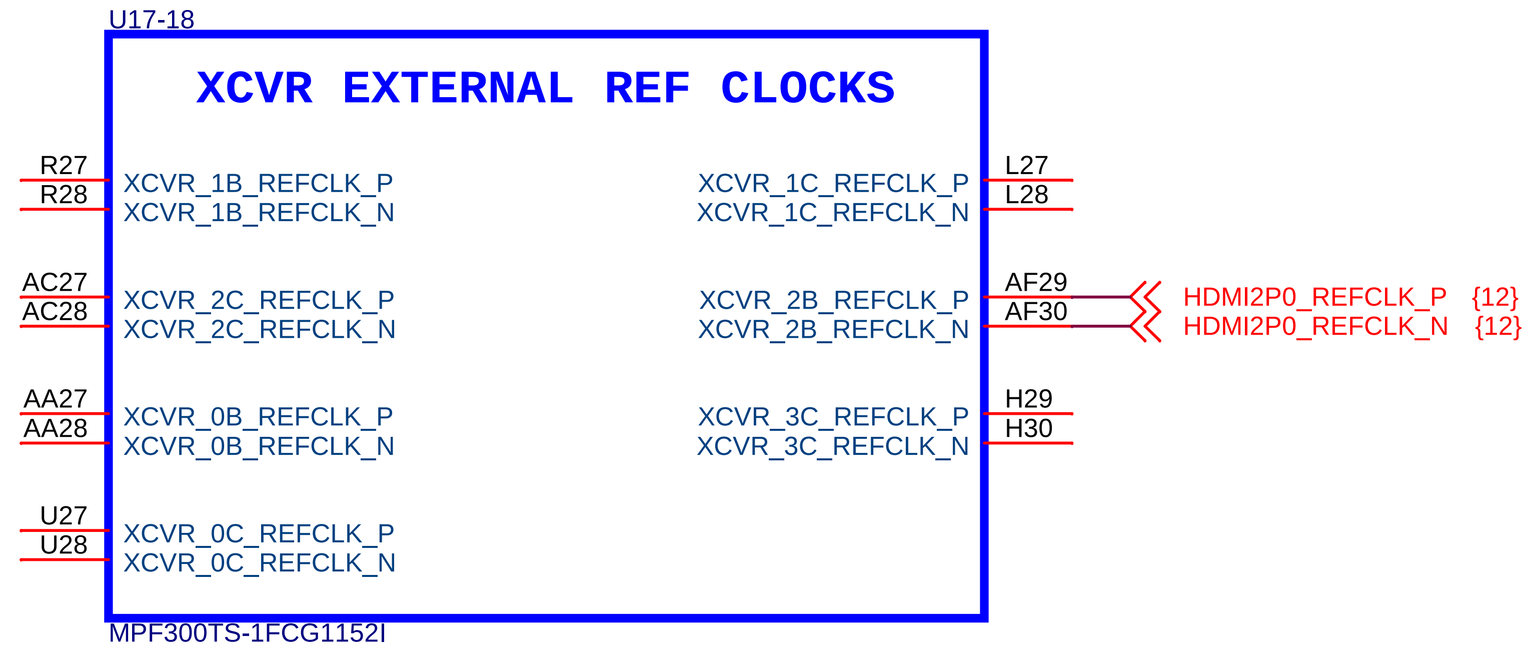
TRANSCEIVER EXTERNAL REF CLOCKS



Microsemi

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SIZE A	DOCUMENT NO. DVP-100-000506-001		REV 2
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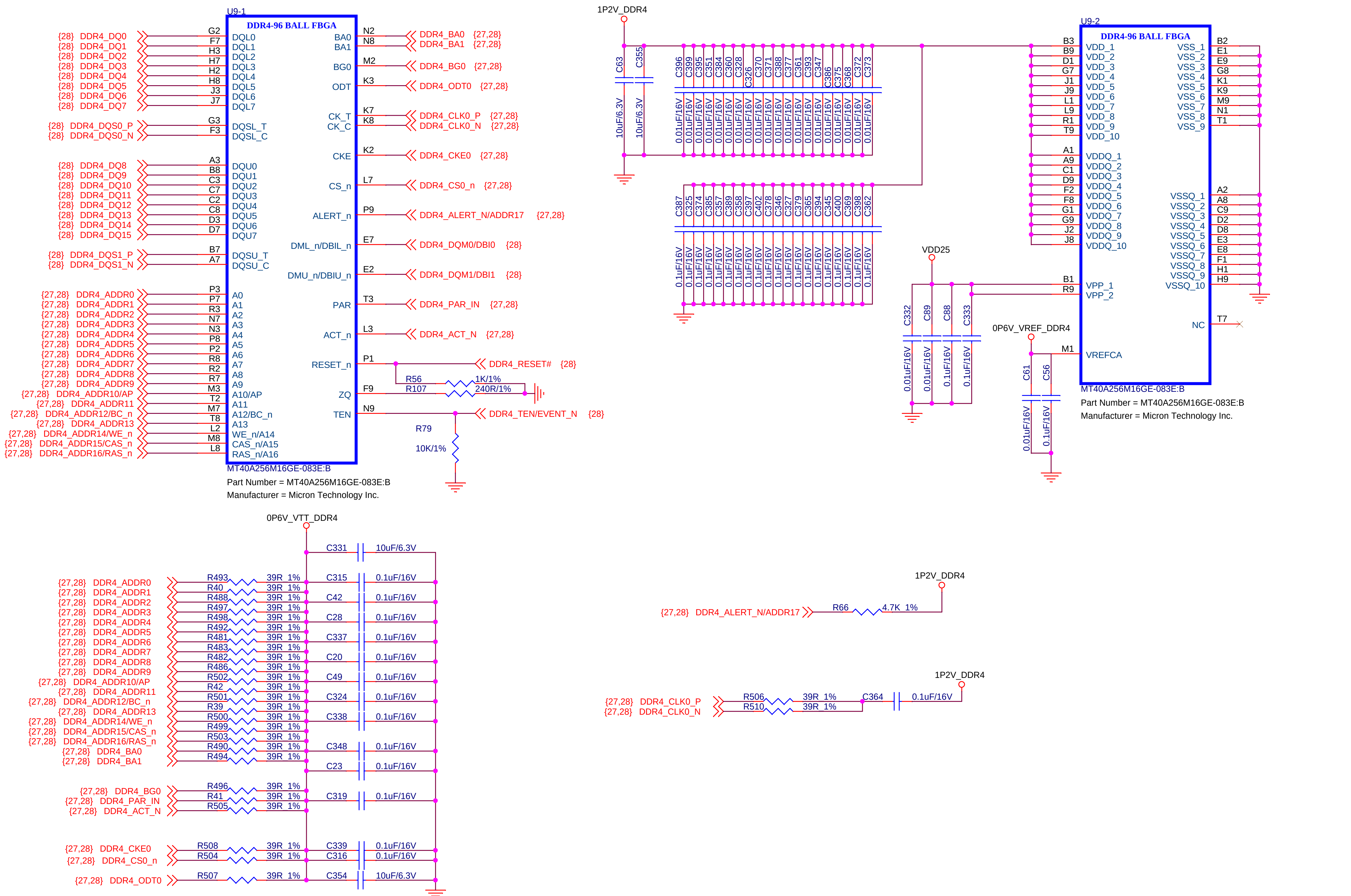
DDR4 MEMORY -BANK 1



Microsemi

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SIZE Custom	DOCUMENT NO. DVP-100-000506-001 — REV 2
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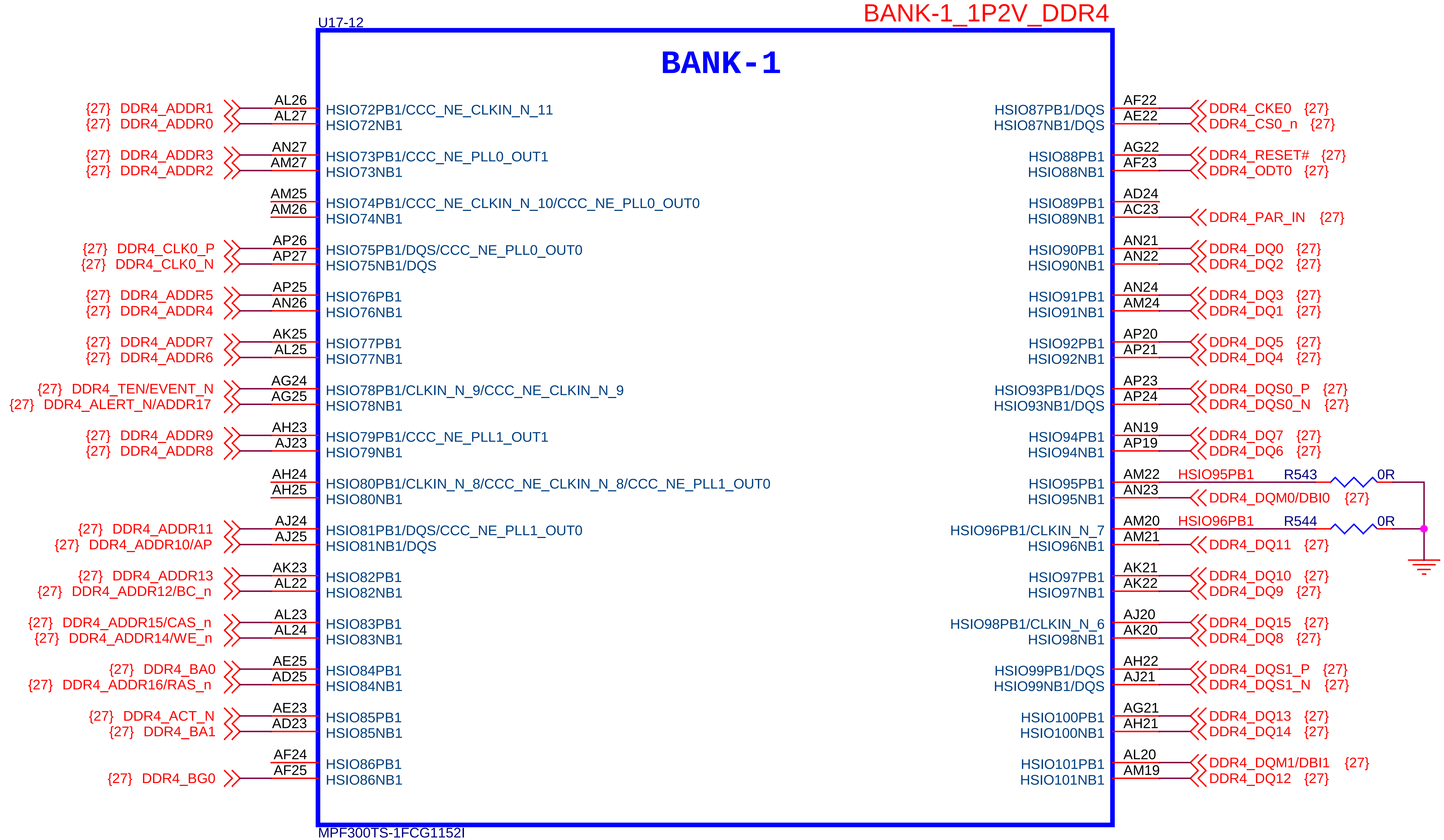

Microsemi

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Microsemi		
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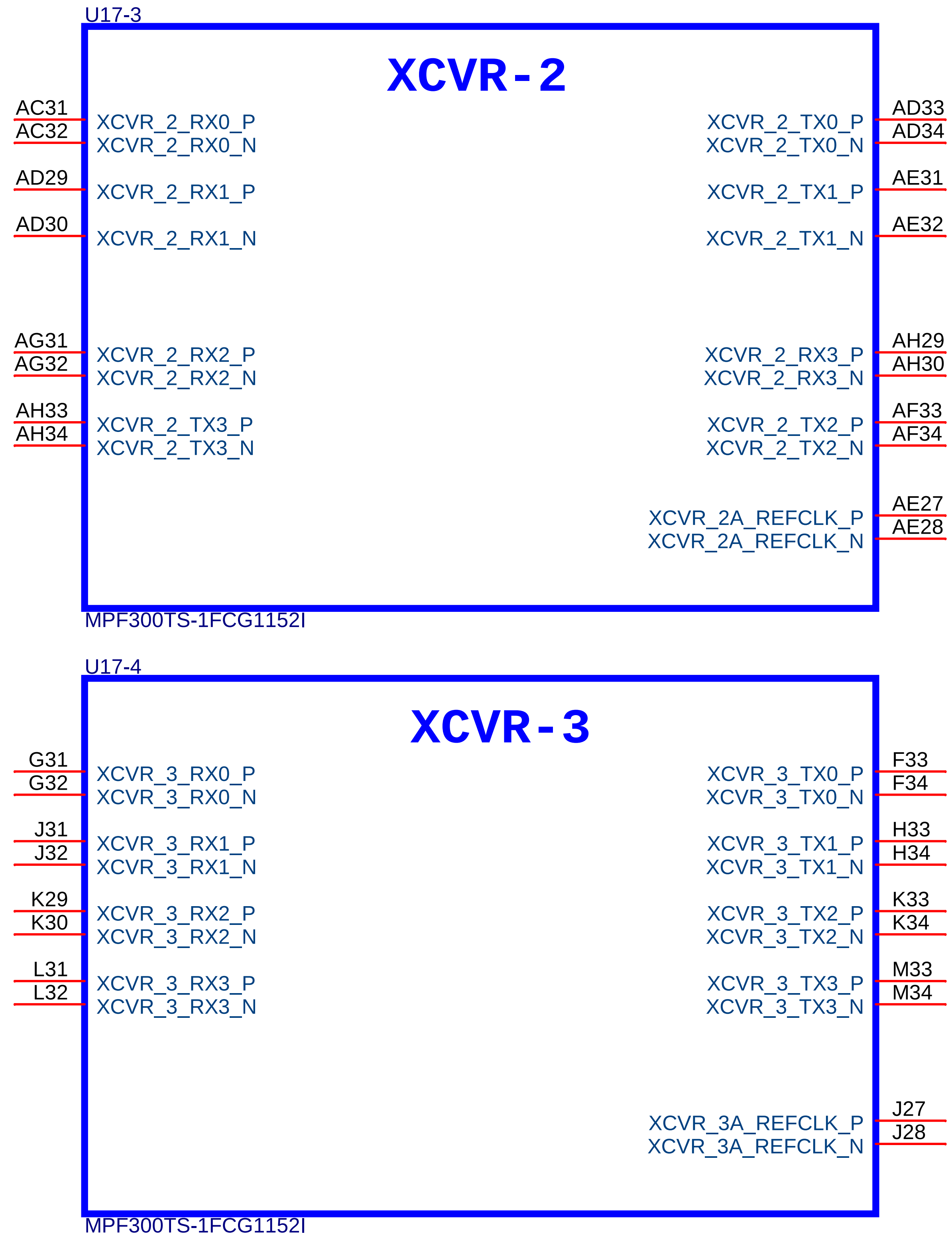
TRANSCEIVER 2&3



Microsemi

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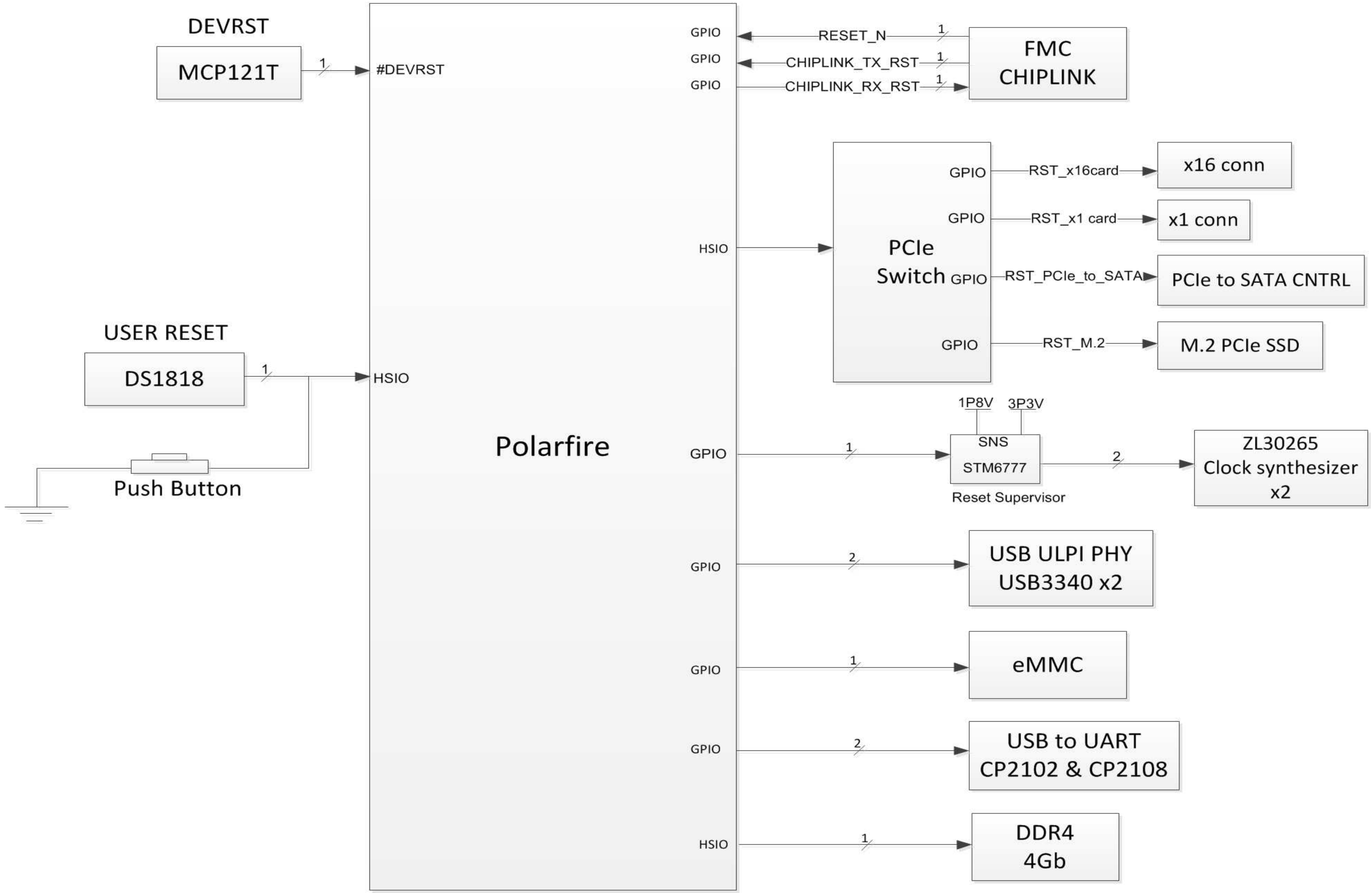
RESET Scheme VERA KIT



Microsemi

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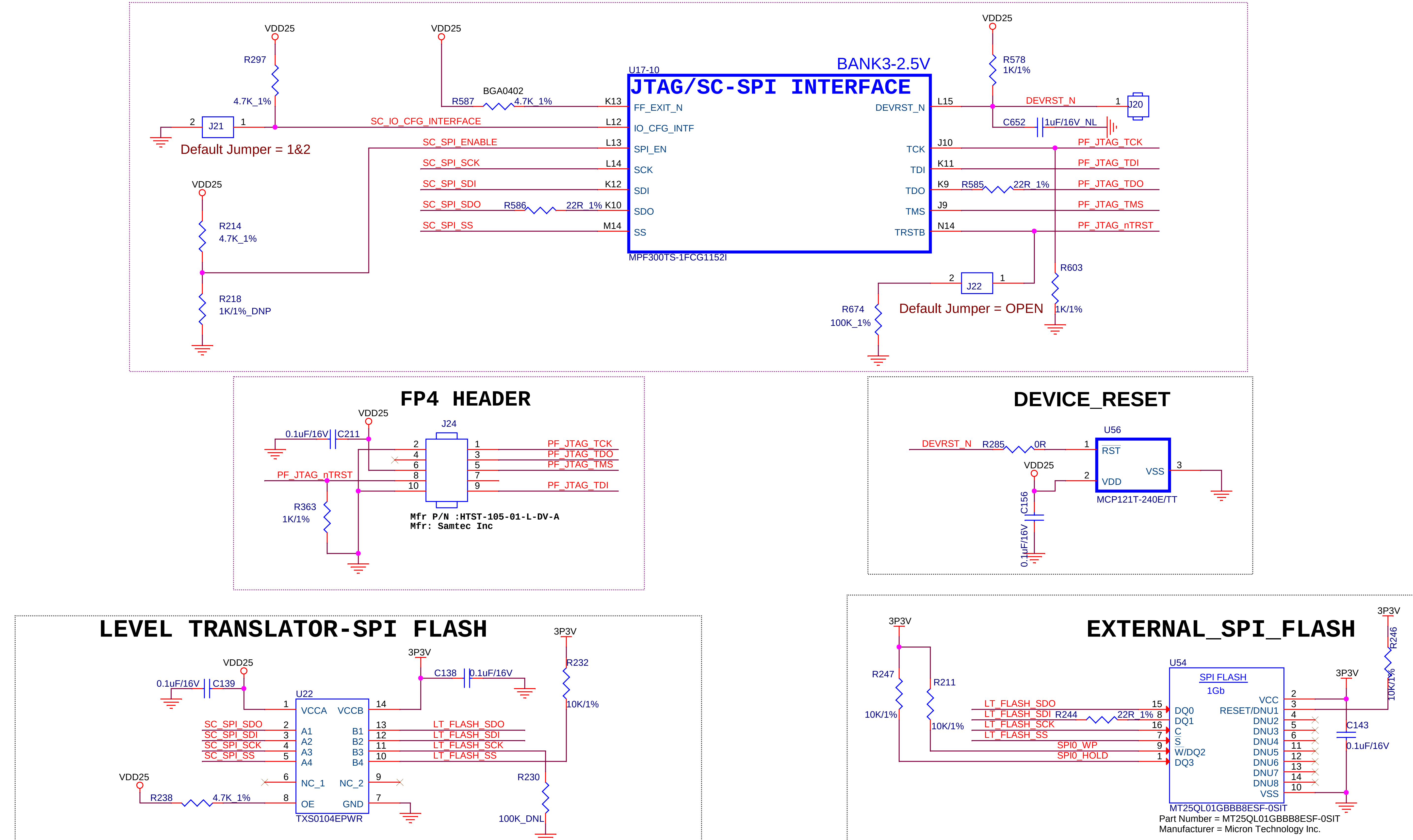

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SIZE: Custom	DOCUMENT NO. DVP-100-000506-001 — REV 2
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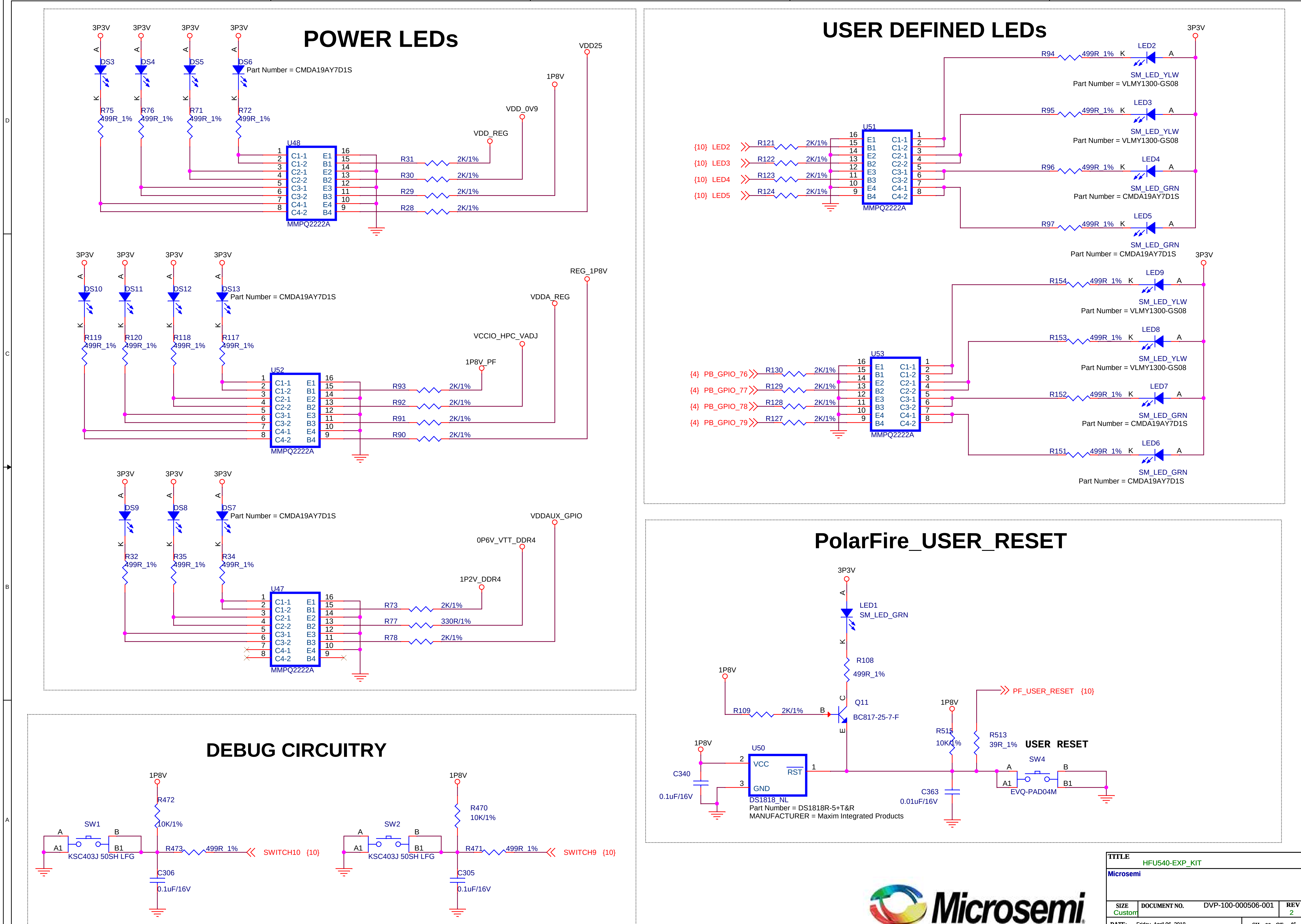

Microsemi

TITLE HFU540-EXP_KIT

Microsemi

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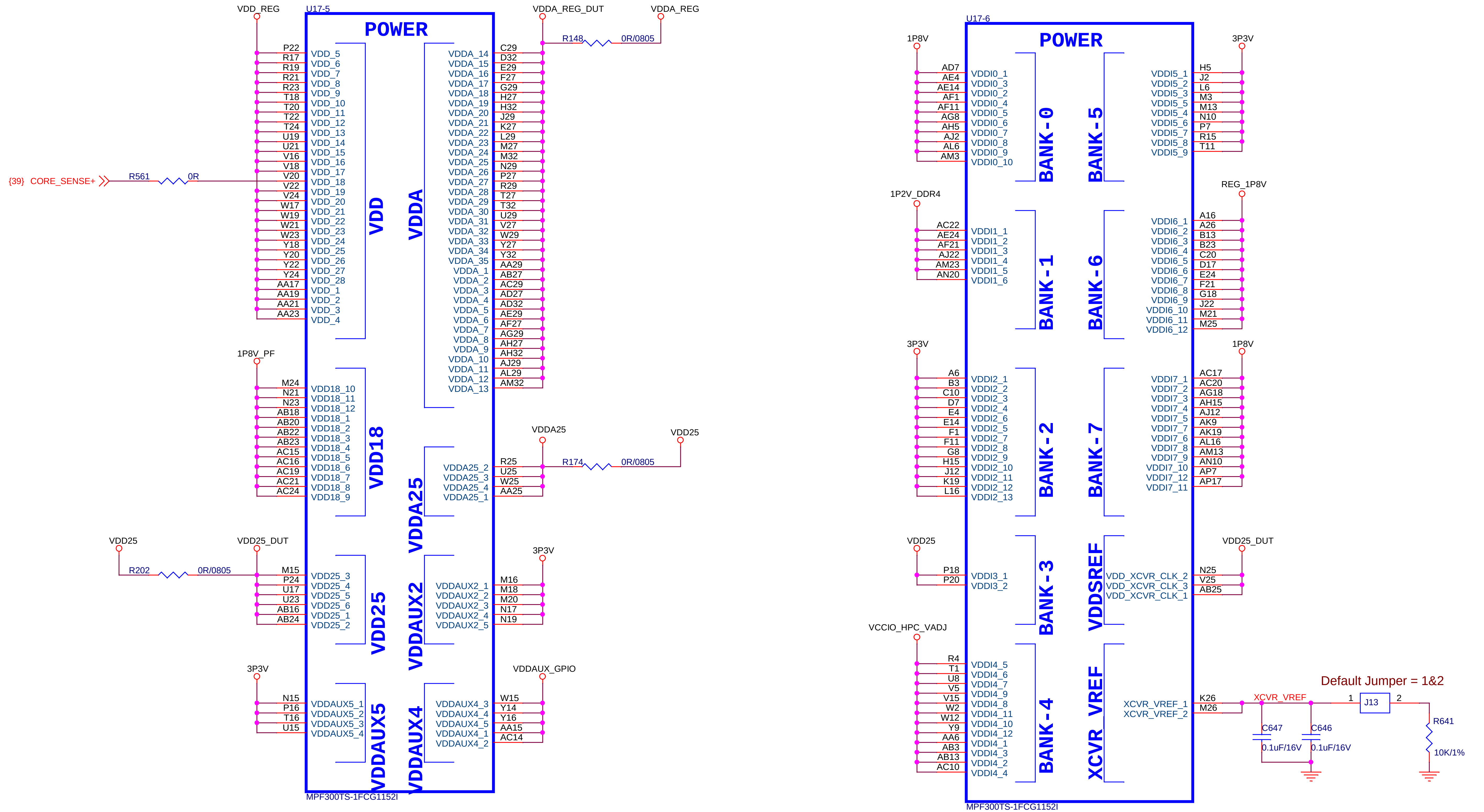
POWER CONNECTIONS



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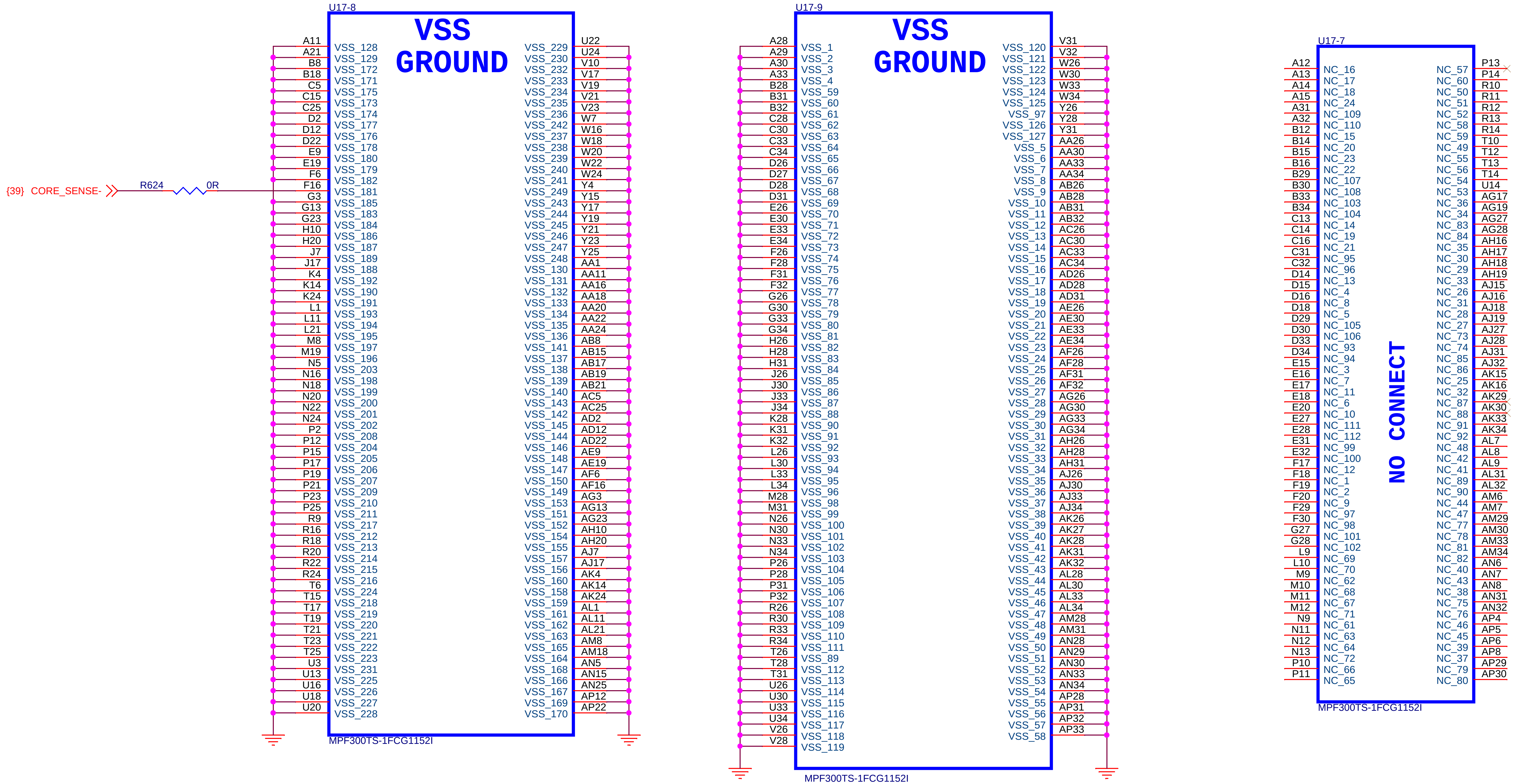
GROUND & NC CONNECTION



Microsemi

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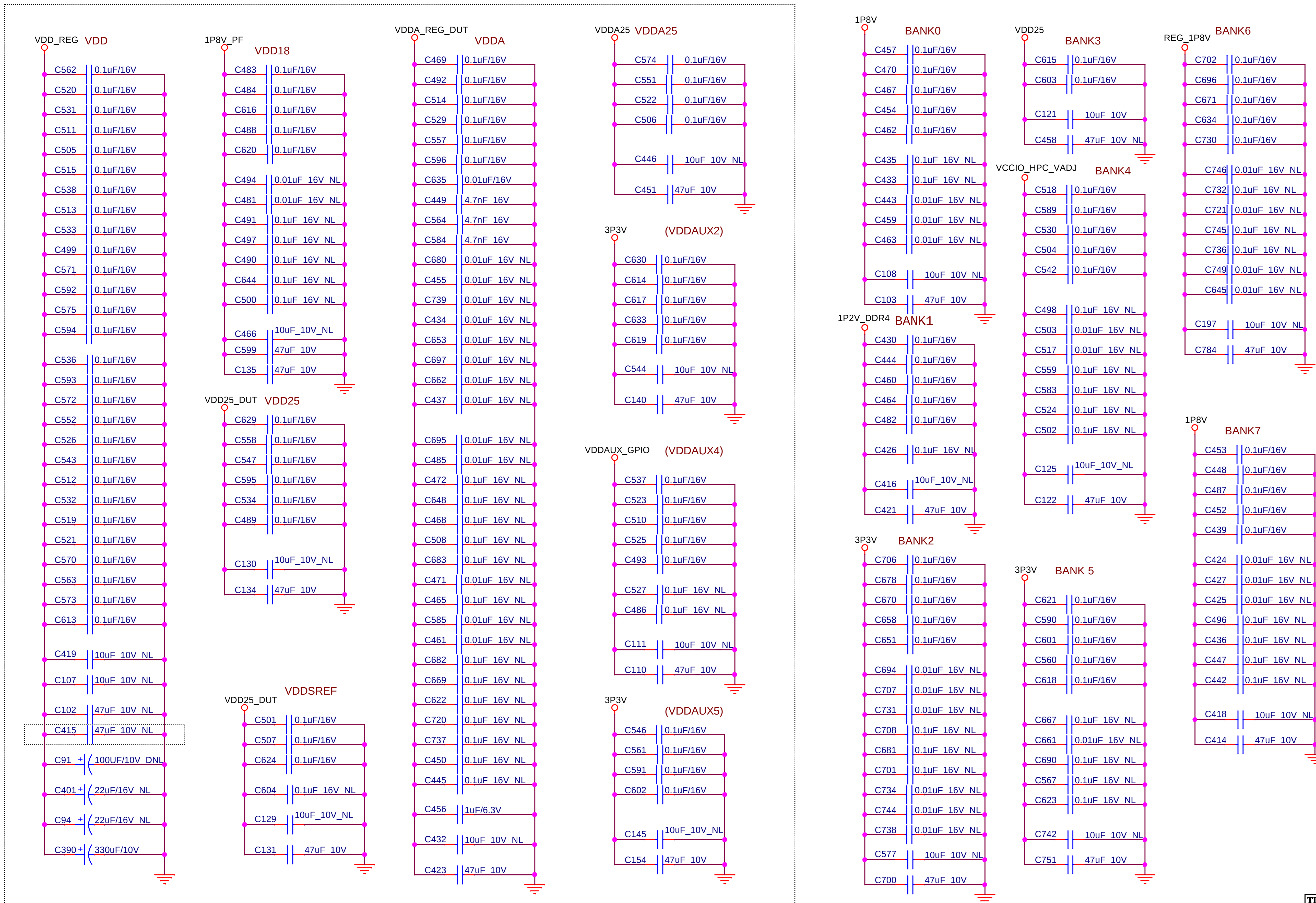
DECOUPLING CAPACITORS



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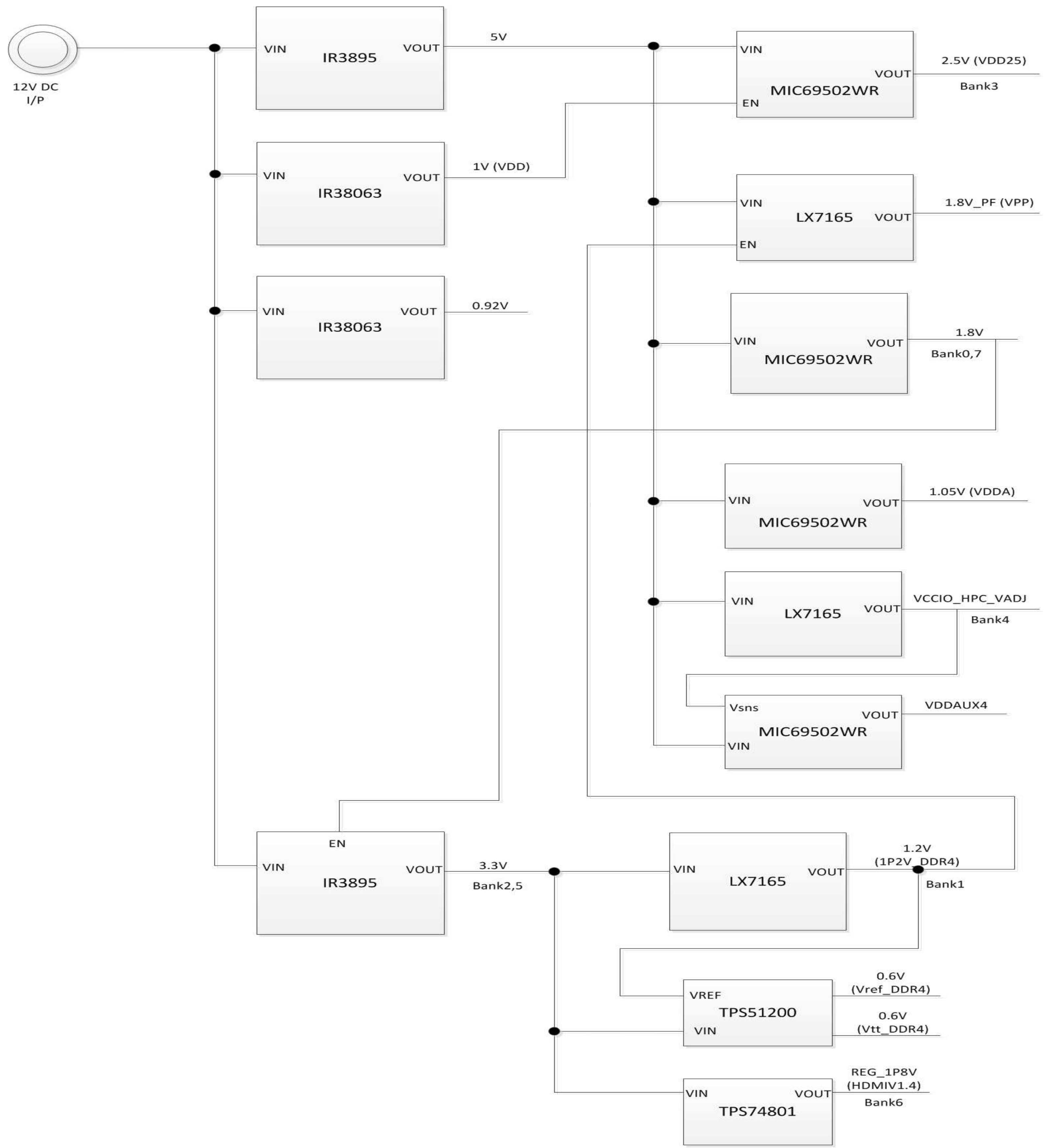
POWER SCHEME

Vera Kit Power scheme



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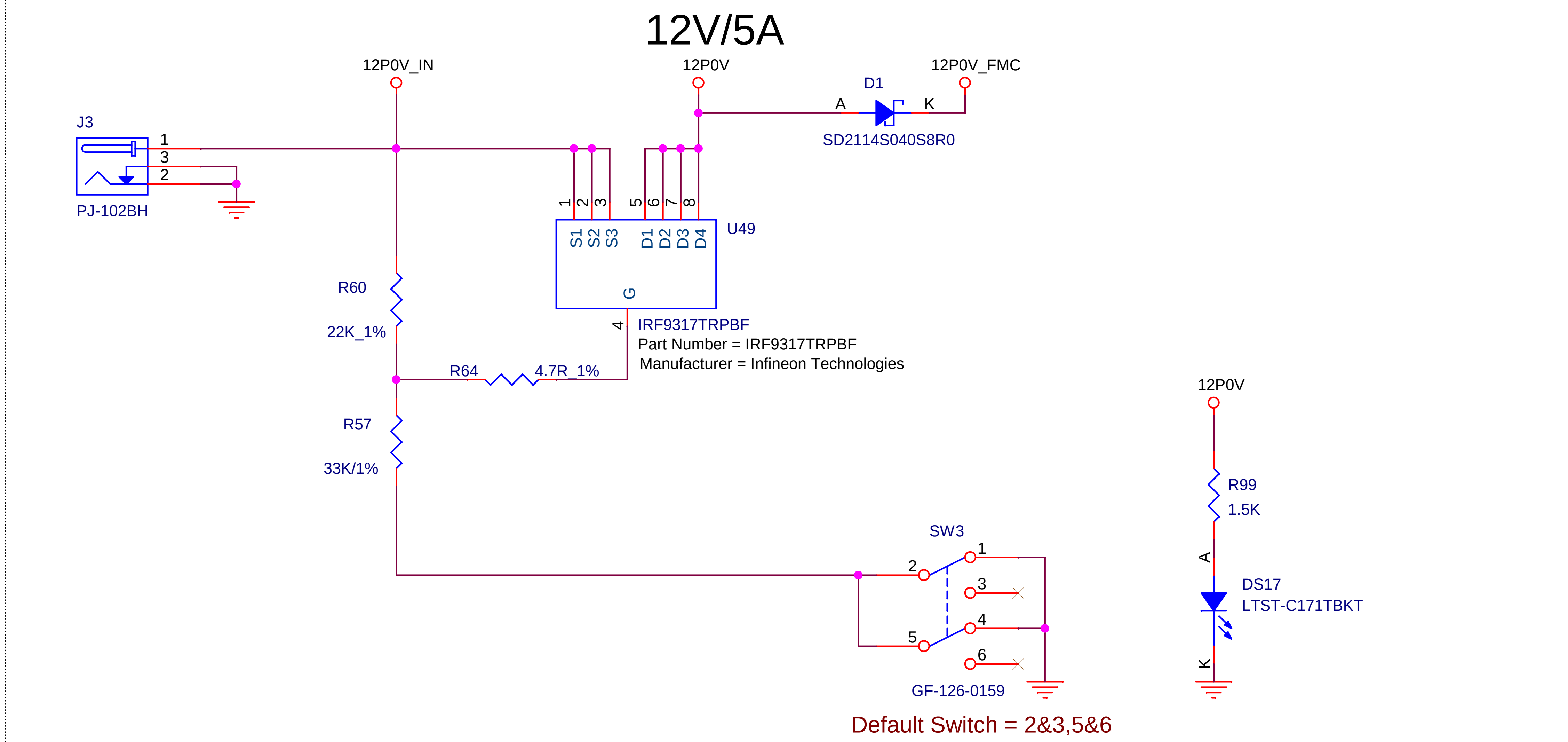
12V EXTERNAL SUPPLY



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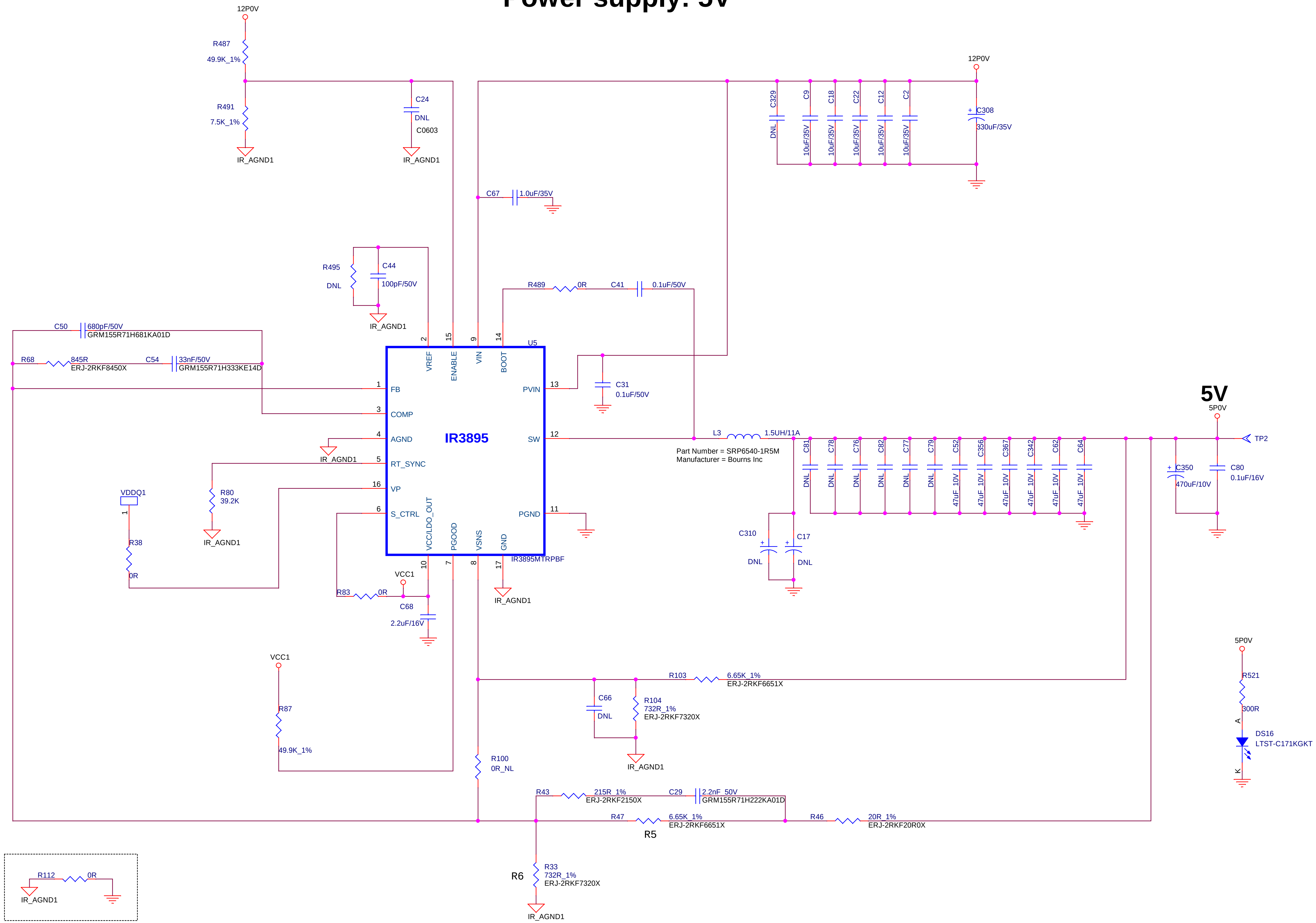
Power supply: 5V



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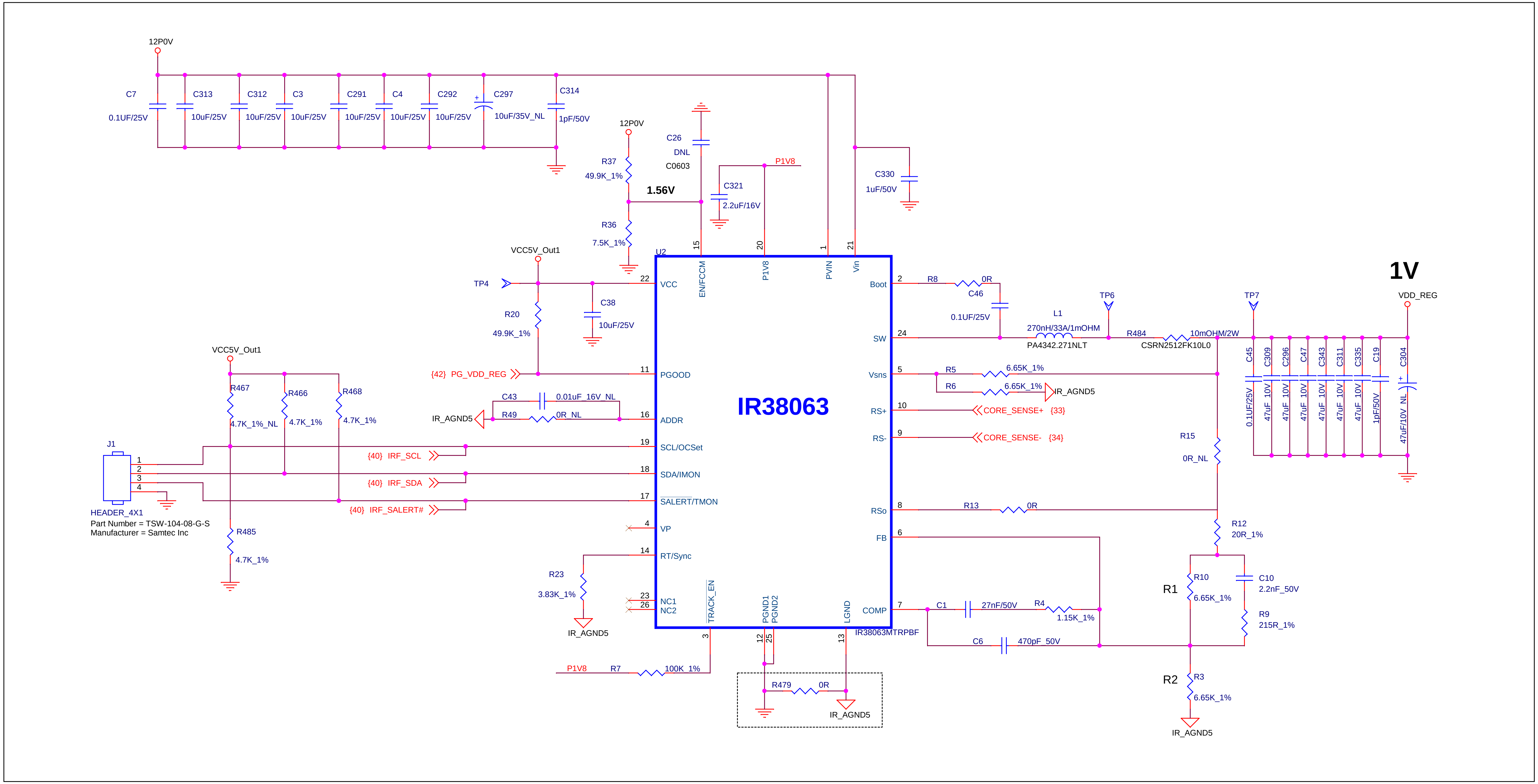
Power supply: 1V



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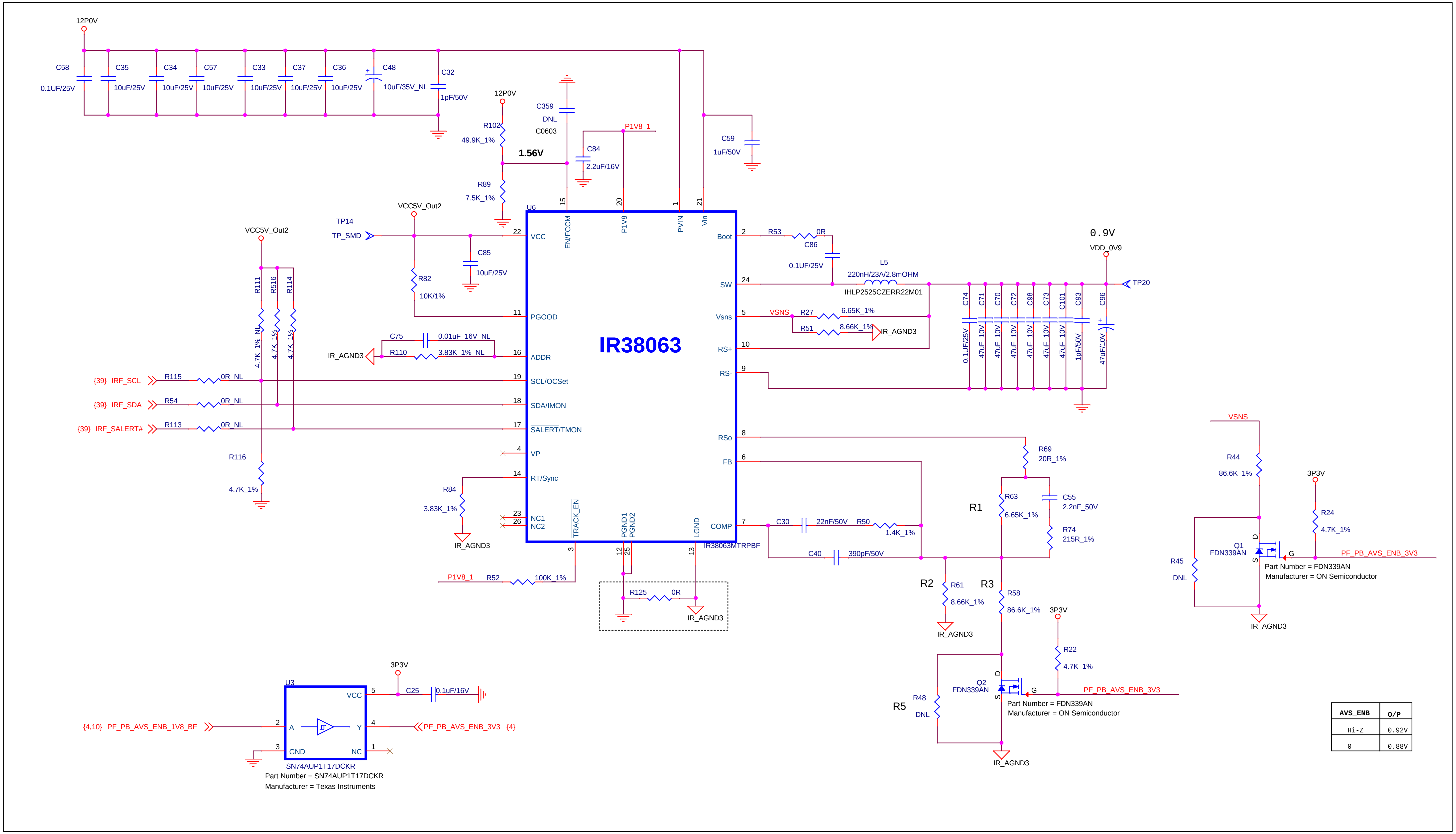
Power supply: 0.9V



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

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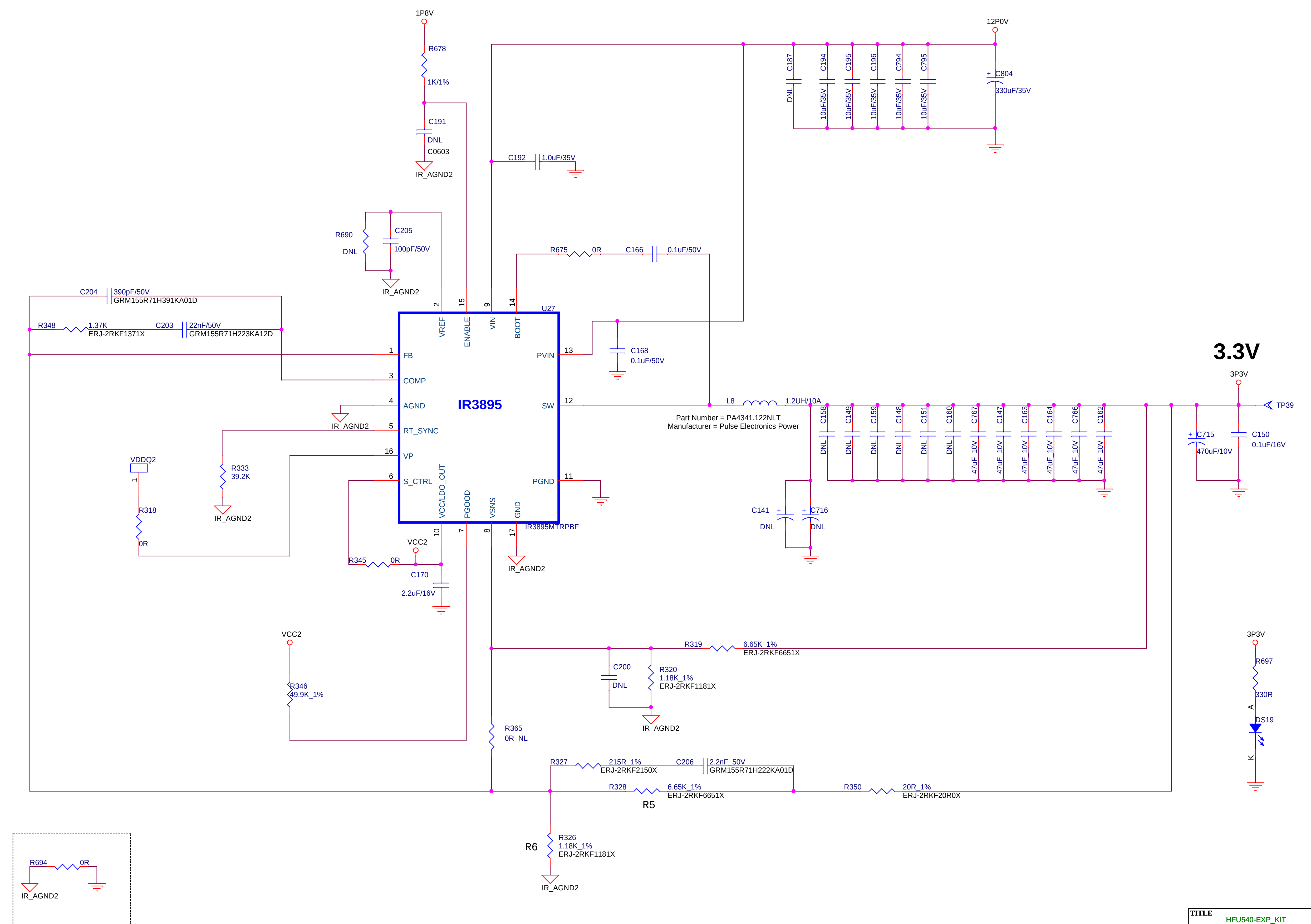
Power supply: 3.3V



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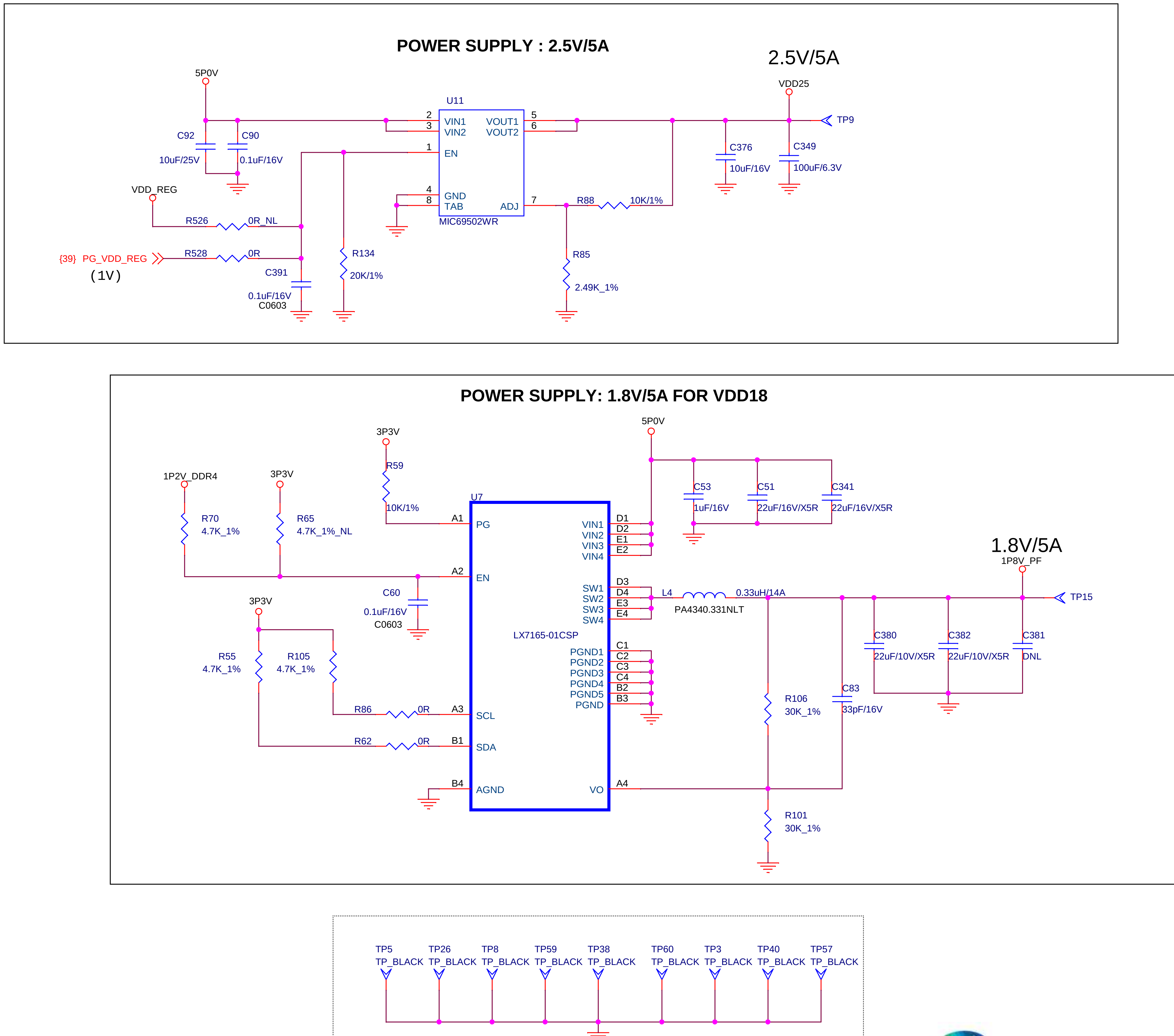
POWER SUPPLIES:2.5V (VDD25) / 1.8V (VDD18)



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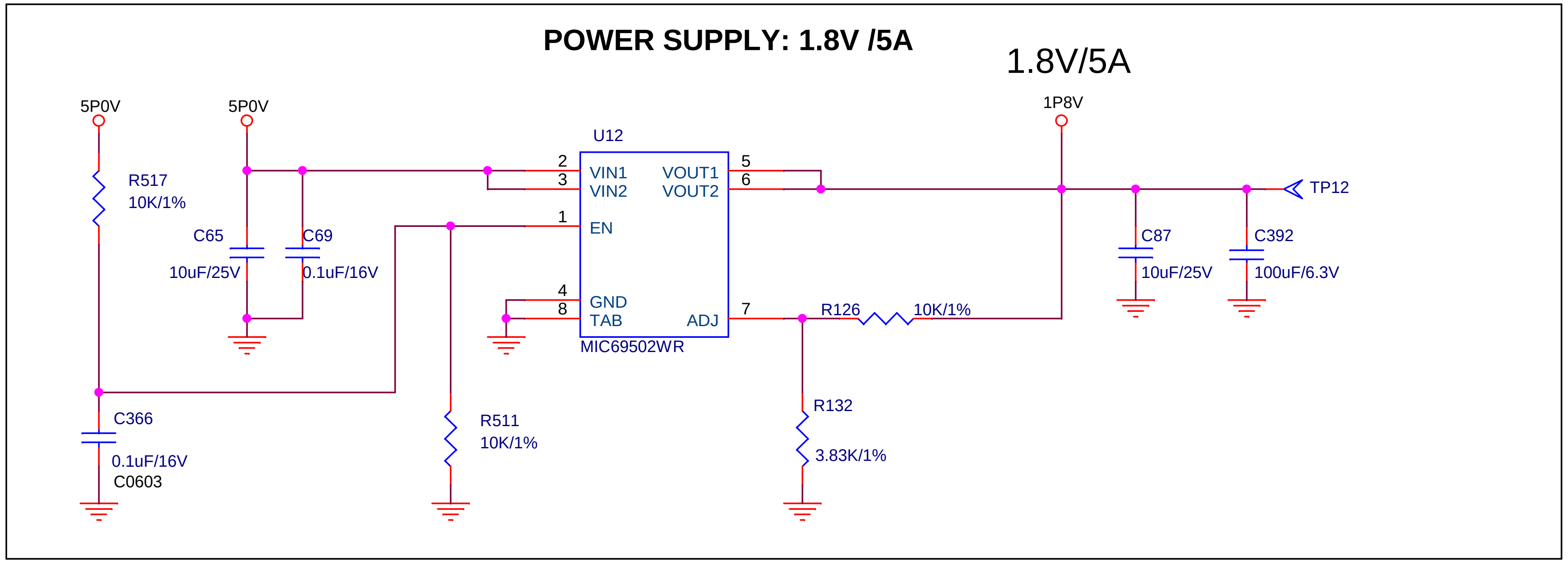
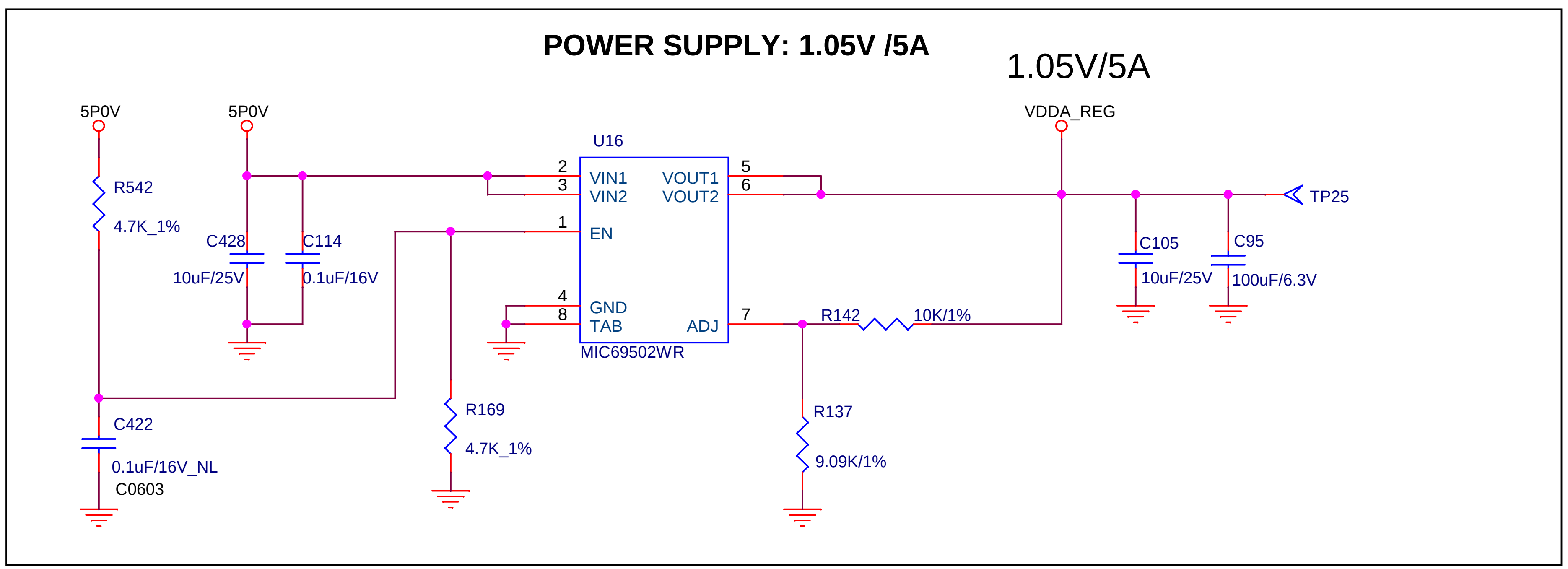
POWER SUPPLIES: 1.8V/1.05V-VDDA





Microsemi

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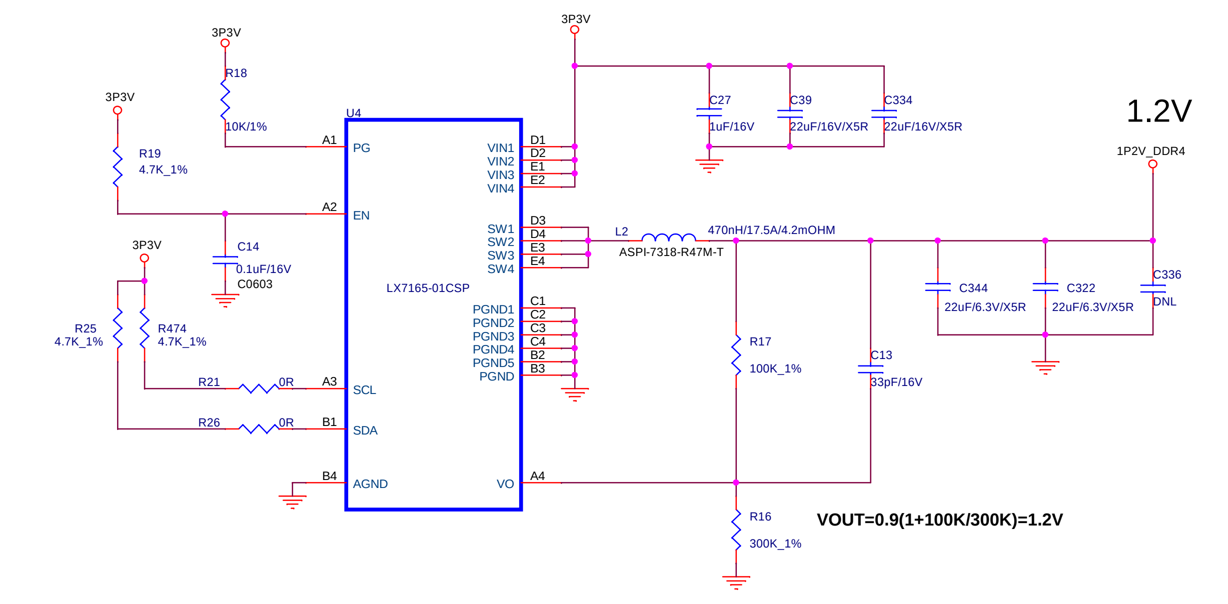
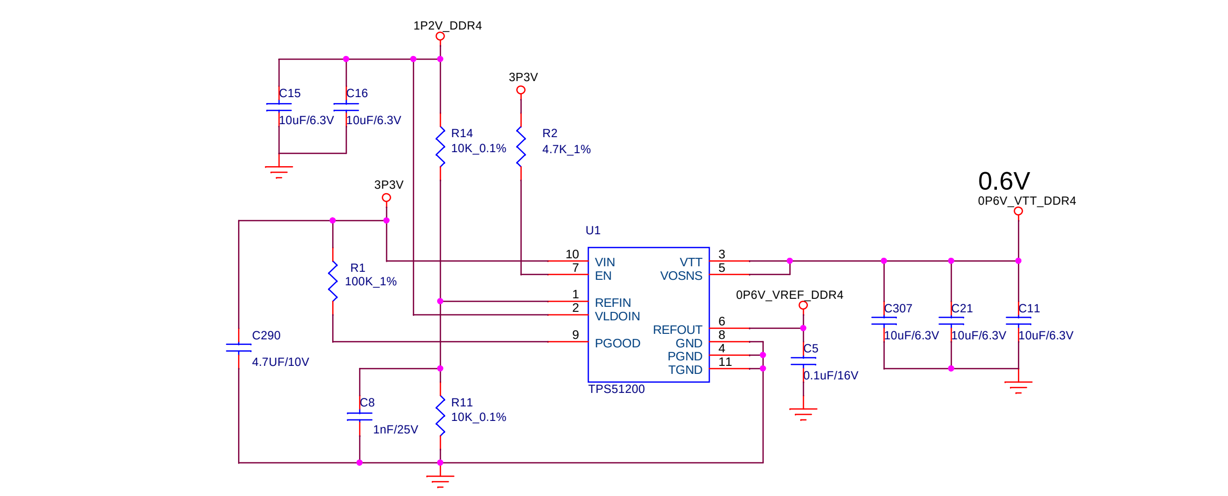
POWER SUPPLIES: 1.2V/0.6V/REG_1P8V

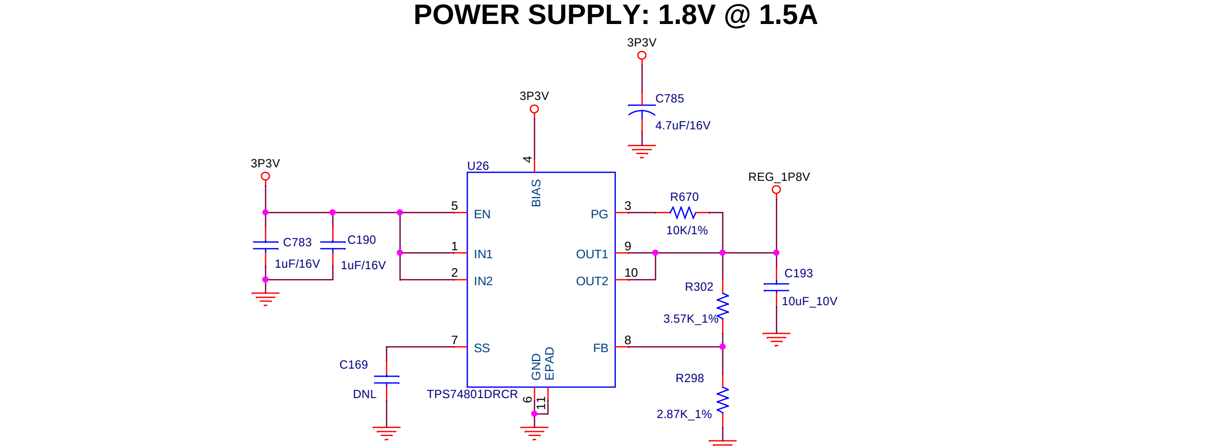
POWER SUPPLY: 1.2V /5A



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



POWER SUPPLY: 1.8V @ 1.5A



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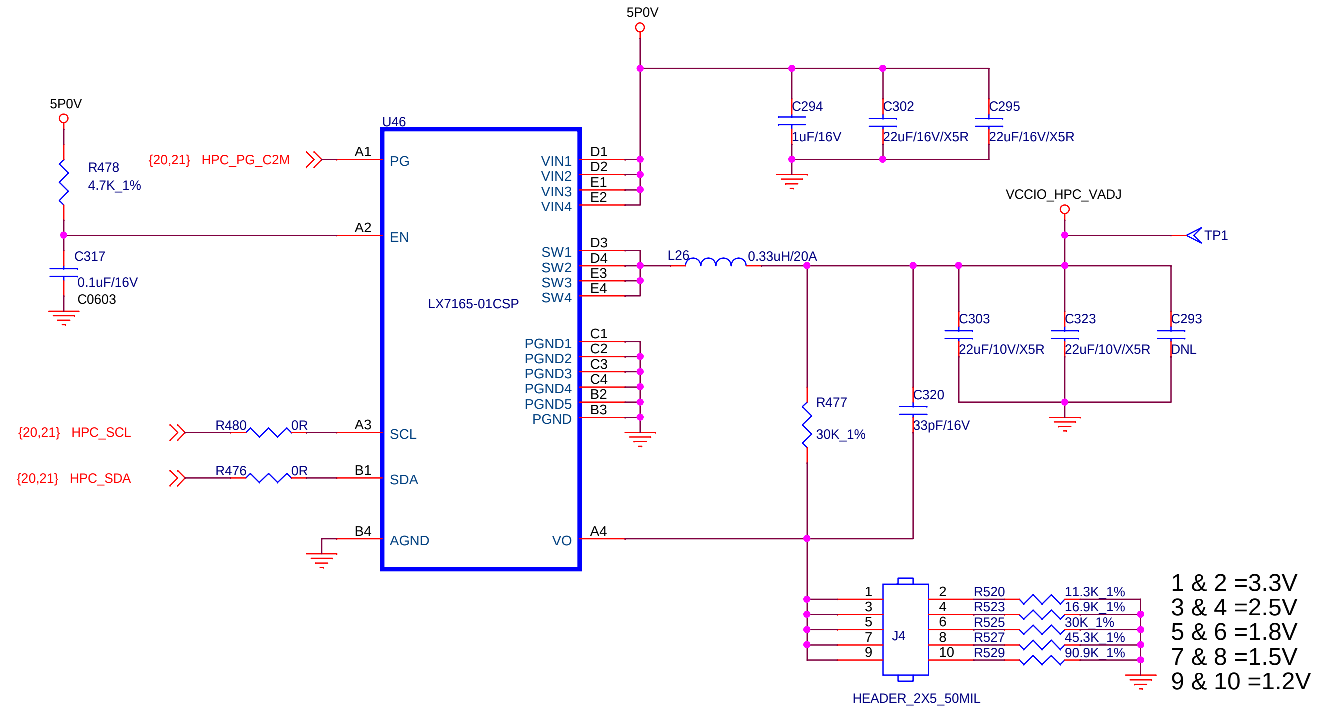
POWER SUPPLIES: FMC_HPC/VDDAUX4

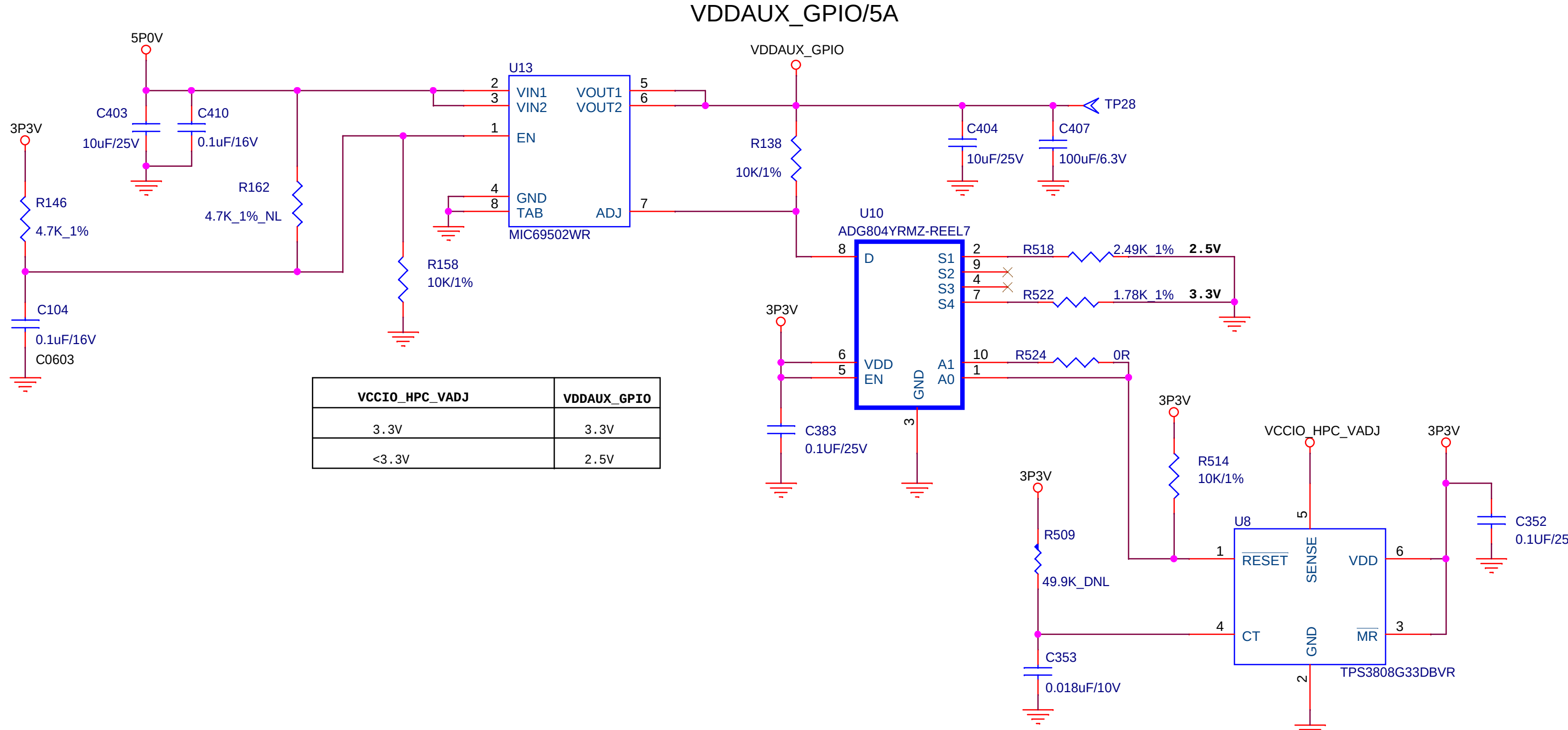
POWER SUPPLY : 5A REGULATOR FOR FMC HPC



Jumper Default option 5 & 6 = 1.8V

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

VDDAUX_GPIO/5A



VCCIO_HPC_VADJ	VDDAUX_GPIO
3.3V	3.3V
<3.3V	2.5V

Microsemi

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MECHANICALS

M3-SCREWS FOR BOARD STANDOFF

Ref	Part	Value
ZS19	M3_SCREWS_BRD	RM3X8MM 2701
ZS20	M3_SCREWS_BRD	RM3X8MM 2701
ZS21	M3_SCREWS_BRD	RM3X8MM 2701
ZS22	M3_SCREWS_BRD	RM3X8MM 2701
ZS23	M3_SCREWS_BRD	RM3X8MM 2701
ZS24	M3_SCREWS_BRD	RM3X8MM 2701
ZS25	M3_SCREWS_BRD	RM3X8MM 2701
ZS26	M3_SCREWS_BRD	RM3X8MM 2701

M3-STANDOFF FOR BOARD

Ref	Part	Value
ZS27	M3_STANDOFF_BRD	970180321
ZS28	M3_STANDOFF_BRD	970180321
ZS29	M3_STANDOFF_BRD	970180321
ZS30	M3_STANDOFF_BRD	970180321
ZS31	M3_STANDOFF_BRD	970180321
ZS32	M3_STANDOFF_BRD	970180321
ZS33	M3_STANDOFF_BRD	970180321
ZS34	M3_STANDOFF_BRD	970180321

M3-STANDOFF & SCREWS FOR BOARD

Ref	Part	Value
ZS1	M3_SCREWS-BRD	RM3X8MM 2701
ZS2	M3_SCREWS-BRD	RM3X8MM 2701
ZS3	M3_SCREWS-BRD	RM3X8MM 2701
ZS4	M3_SCREWS-BRD	RM3X8MM 2701
ZS5	M3_SCREWS-BRD	RM3X8MM 2701
ZS6	M3_SCREWS-BRD	RM3X8MM 2701
ZS7	M3_STANDOFF-BRD	970180321
ZS8	M3_STANDOFF-BRD	970180321
ZS9	M3_STANDOFF-BRD	970180321
ZS10	M3_STANDOFF-BRD	970180321
ZS11	M3_STANDOFF-BRD	970180321
ZS12	M3_STANDOFF-BRD	970180321

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

Ref	Part	Value
ZS13	M2.5_SCREWS_M2 CARD_B&T	92000A104
ZS14	M2.5_WASHER_M2_CARD_B&T	90965A115
ZS15	M2.5_STANDOFF_M2_CARD_B&T	9774025151R

Microsemi

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