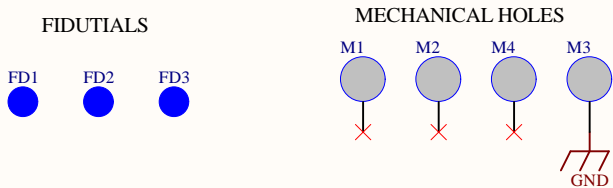


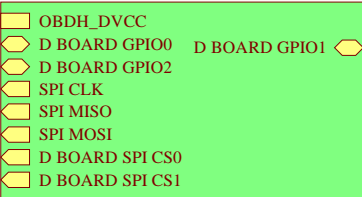
Rev	Description	Date	Author
1.0	Initial release.	26-Fev-2020	Yan C. de Azeredo
1.1	Changes to PCB layout, new sheet hierarchy and added first output, manufacture and BOM files to project.	21-Mar-2020	Yan C. de Azeredo
1.2	PCB design checklist completed and finishing touches in schematic and PCB design.	20-Apr-2020	Yan C. de Azeredo

Revision History



PCB Elements

OBDH 2.0 to DB_Memory interface connector
1_Interface.SchDoc



Interface connector to motherboard (OBDH 2.0)

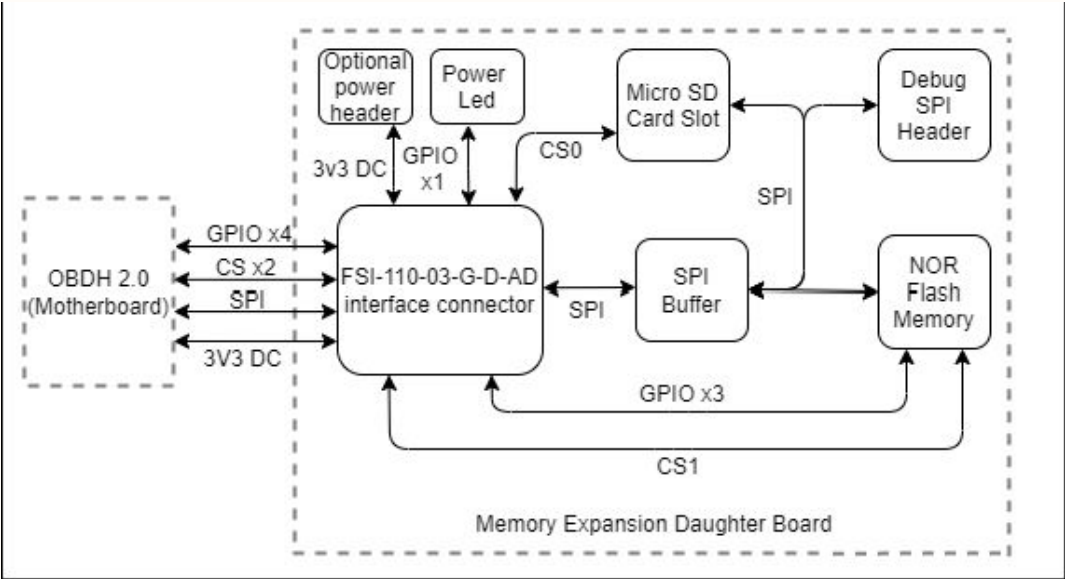
Memory Expansion Daughter Board (DB_Memory) of OBDH 2.0

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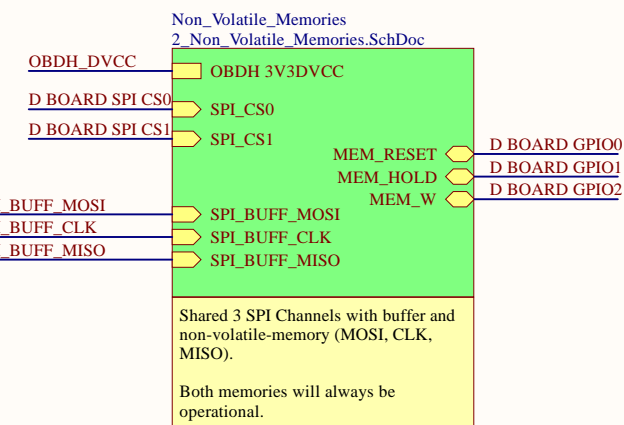
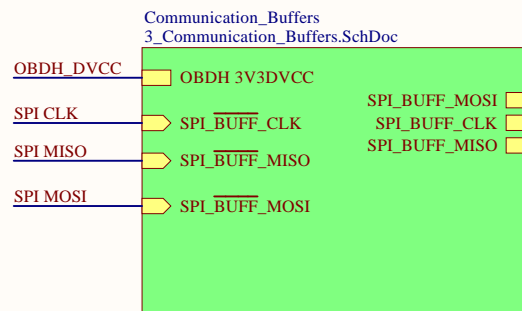
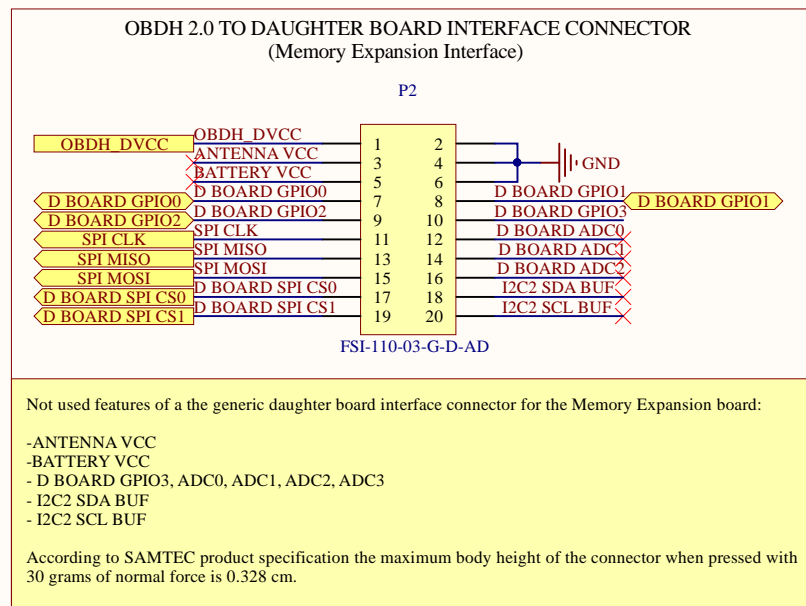
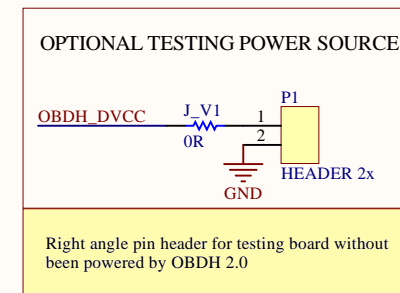
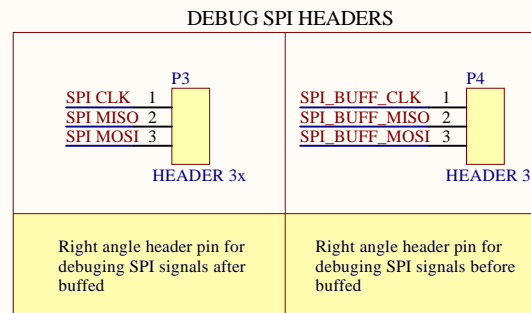
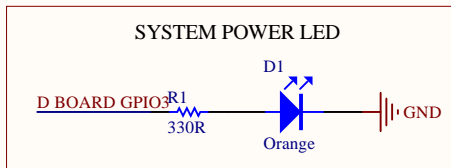
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- Drawn by: Yan Castro de Azeredo.
- Reviewers: André Martins Pio de Mattos and Gabriel Mariano Marcelino.
- Based on OBDH 2.0 designed by: André Martins Pio de Mattos.
- Support: Kleber Reis Gouveia Júnior.

Project Information



Block Diagram



A

A

B

B

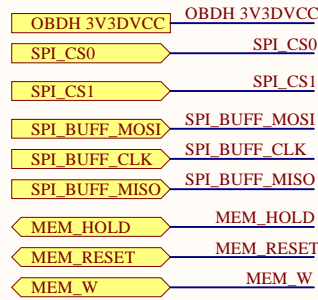
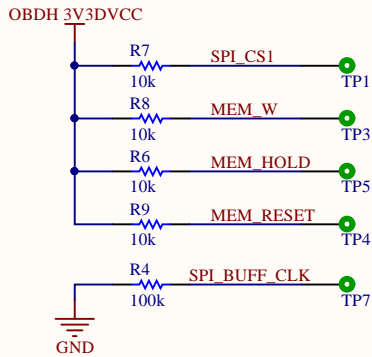
C

C

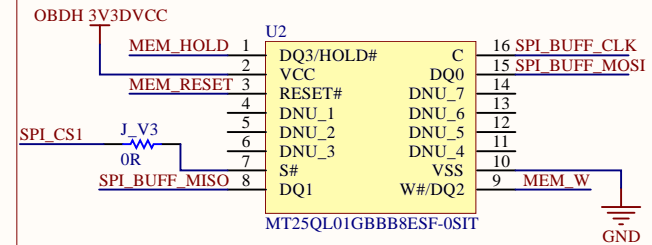
D

D

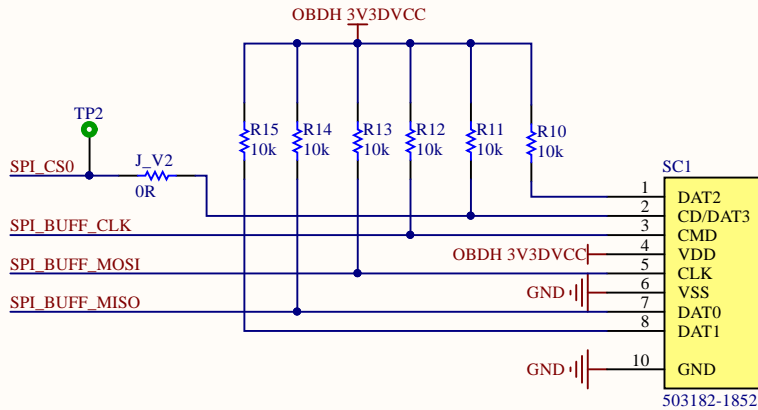
PULL UP AND PULL DOWN RESISTORS



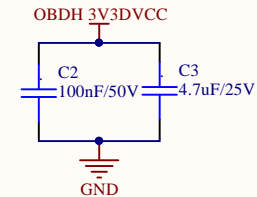
NON-VOLATILE MEMORY

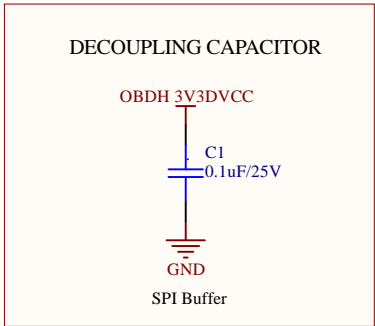
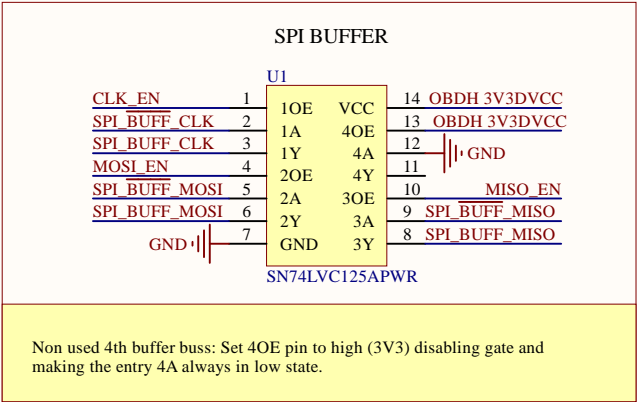
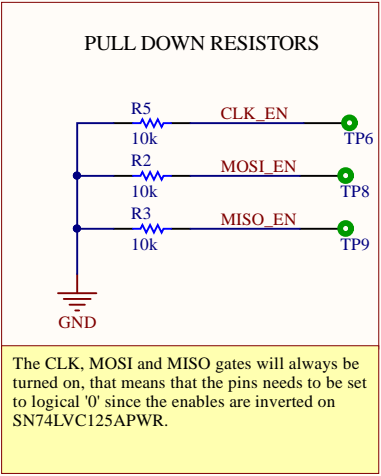
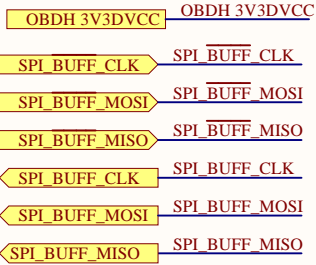


uSDCard

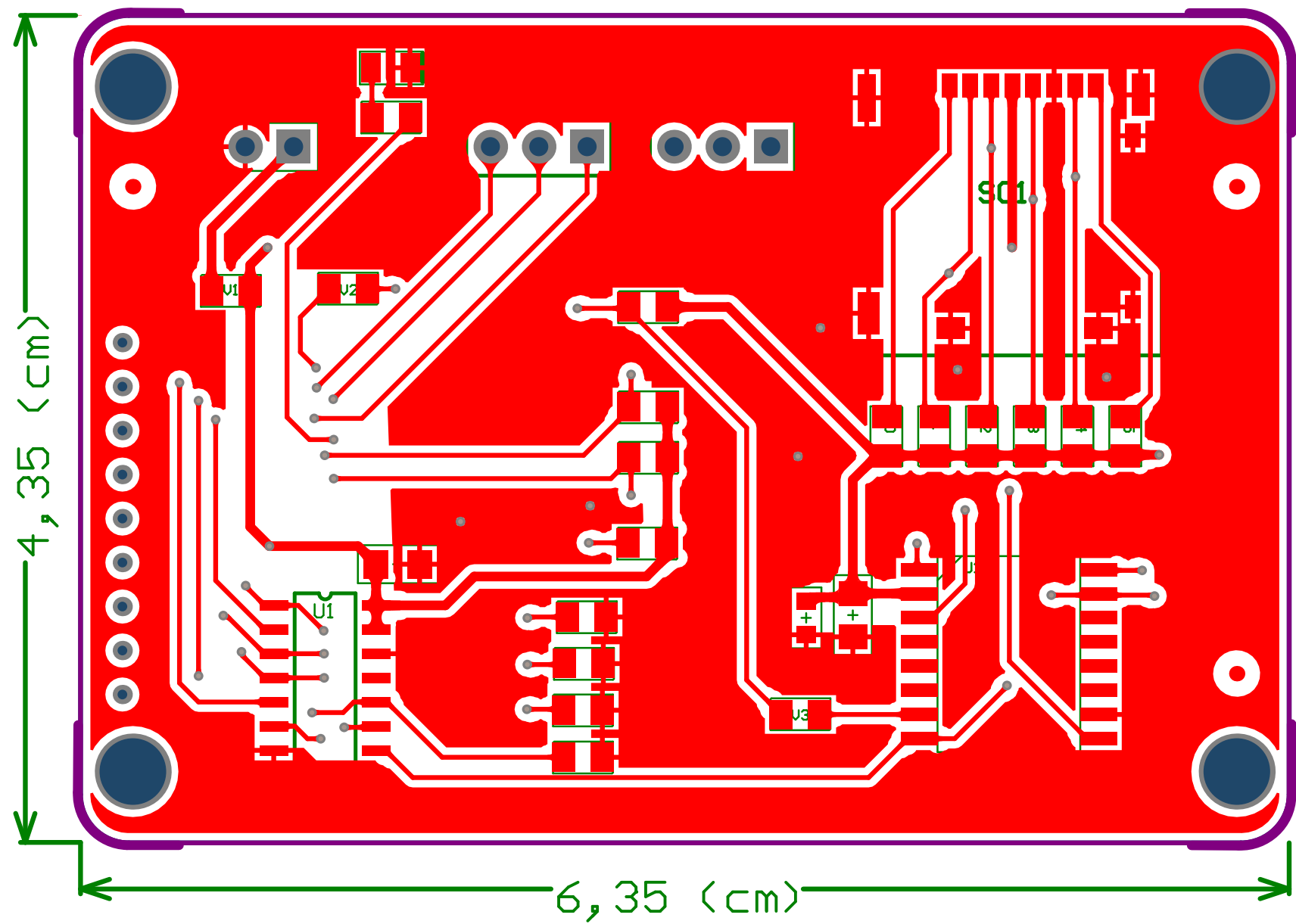


DECOUPLING CAPACITOR



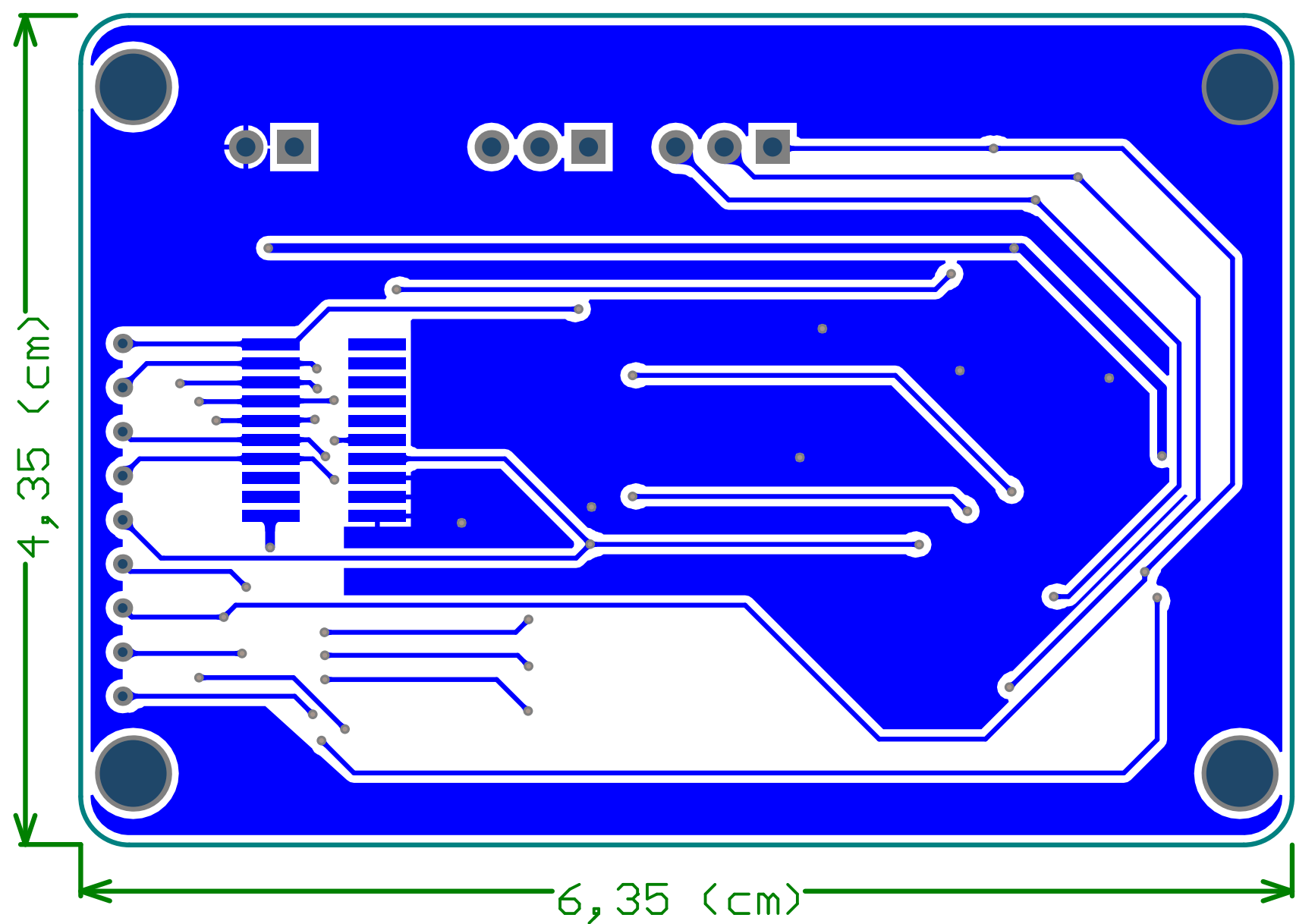


Layer	Name	Material	Thickness	Constant
1	Top Overlay			
2	Top Solder	Solder Resist	0,010mm	3,5
3	Top Layer	Copper	0,036mm	
4	Dielectric 1	FR-4	1,600mm	4,8
5	Bottom Layer	Copper	0,036mm	
6	Bottom Solder	Solder Resist	0,010mm	3,5
7	Bottom Overlay			



TITLE: OBDH 2.0 DAUGHTERBOARD		REV: 1.2	DATE: 20/04/2020
MATERIAL: FR4	Silkscreen color: yellow	Project: DB Memory	
Board Thickness: 1.69mm	Layers: 02	Space Technology Research Laboraty Federal University of Santa Catarina SpaceLab UFSC	
PCB Surface: ENIG	Drawing: Yan C. de Azeredo		

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PCB Surface: ENIG	Drawing: Yan C. de Azeredo		

P1

D1

R1

P3

P4

SC1

J_V1

J_V2

R7

R8

R9

R10

R11

R12

R13

R14

R15

R6

C3 +

U1

R5

R4

R2

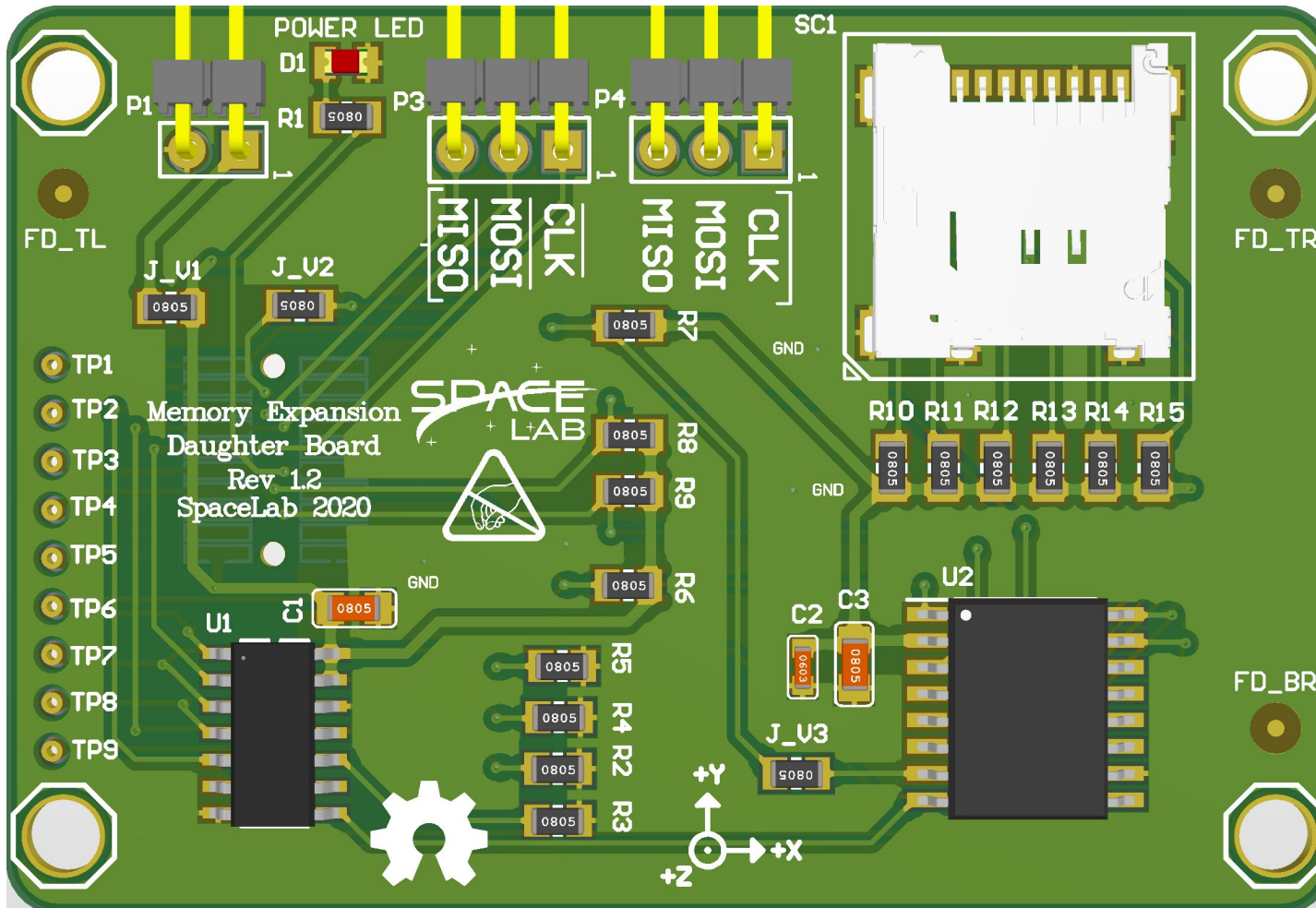
R3

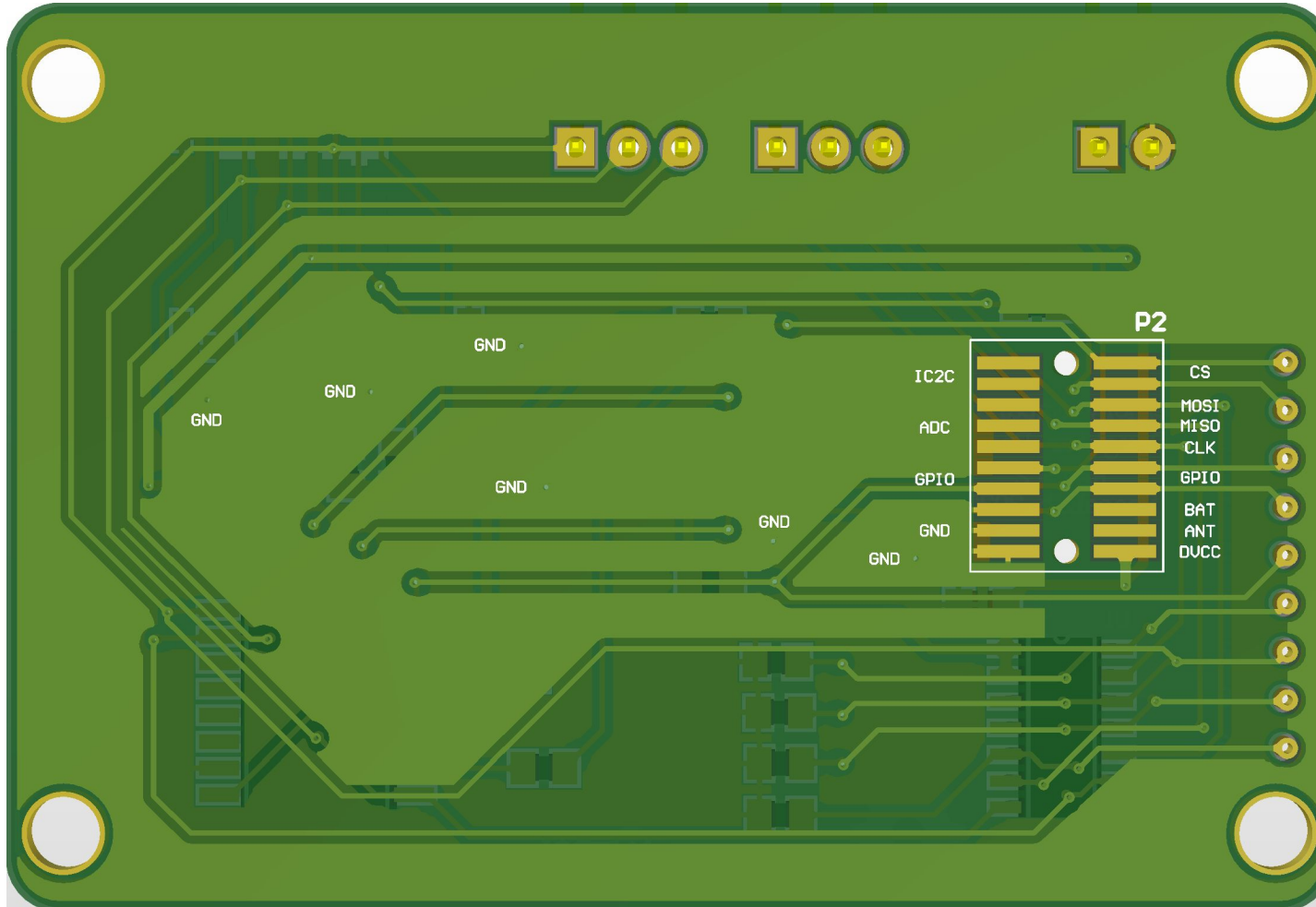
C1 +

C2 +

J_V3

U1







Bill of Materials

Source Data From: DB_Memory.PrjPCB

Project: DB_Memory.PrjPCB

Variant: None

Project Code: <Parameter ProductCode not found>

Report Date: 20/04/2020

17:12:28

Print Date: 20/04/2020

17:12:43

#	Supplier 1	Supplier Part Number 1	Supplier 2	Supplier Part Number 2	Manufacturer	Comment	Description	Quantity	Designator	Item Name Error	Notes
1	Digi-Key	541-10.0KCCT-ND	Mouser	71-CRCW0805-10K-E3	Vishay	10k	RES 10K OHM 1/8W 1% 0805	13	R2, R3, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15		
2						DB Mechanical Hole	Mechanical Hole for DB board variants	4	M1, M2, M3, M4		
3						Fiducial	Fiducial for DB board variants	3	FD1, FD2, FD3		
4	Digi-Key	311-0.0ARCT-ND	Mouser	603-RC0805JR-070RL	Yageo	0R	RES 0R OHM 1/8W JUMPER 0805	3	J_V1, J_V2, J_V3		
5	Mouser	200-TSW10308GSRA	Digi-Key	SAM1039-03-ND	Samtec	HEADER 3x	Conn Unshrouded Header HDR 3 POS 2.54mm Solder RA Thru-Hole Automotive Bulk	2	P3, P4		
6	Digi-Key	160-1413-1-ND	Mouser	859-LTST-C170KFKT	Vishay Lite-On	Orange	SMD Orange LED	1	D1		
7	Digi-Key	296-1222-1-ND	Mouser	595-SN74LVC125APWR	Texas Instruments	SN74LVC125APWR	IC BUF NON-INVERT 3.6V 14TSSOP	1	U1		
8	Digi-Key	311-100KCRCCT-ND	Mouser	603-RC0805FR-07100KL	Yageo	100k	RES 100K OHM 1/8W 1% 0805	1	R4		
9	Digi-Key	311-1141-1-ND	Mouser	603-CC805KRX7R8BB104	Yageo	0.1uF/25V	CAP CER 0.1UF 25V 10% X7R 0805	1	C1		
10	Digi-Key	311-1401-1-ND	Mouser	603-CC201KRX7R9BB101	Yageo	100nF/50V	CAP CER 100nF 50V 0603 10%	1	C2		
11	Digi-Key	587-2990-6-ND	Mouser	963-TMK212AB7475KG-T	Taiyo Yuden	4.7uF/25V	CAP CER 4.7UF 25V 10% X7R 0805	1	C3		
12	Digi-Key	2019-RK73H2ATTD3300FCT-ND	Mouser	660-RK73H2ATTD3300F	KOA Speer	330R	RES 330R OHM 1/4W 1% 0805	1	R1		
13	Mouser	200-FSI11003GDAD	Digi-Key	SAM9412-ND	Samtec	FSI-110-03-G-D-AD	CONN STACKING 20POS SMD GOLD	1	P2		
14	Mouser	200-TSW10208GSRA	Digi-Key	SAM1039-02-ND	Samtec	HEADER 2x	Conn Unshrouded Header HDR 2 POS 2.54mm Solder RA Thru-Hole Automotive Bulk	1	P1		
15	Mouser	340-278808-TRAY	Digi-Key	557-1789-ND	Micron Technology	MT25QL01G8BB8ESF-OSIT	NOR Flash Serial-SPI 3V 1Gbit 1024M/512M/256M x 1bit/2bit/4bit 6ns 16-Pin SOP-II	1	U2		
16	Mouser	538-503182-1852	Digi-Key	WM12834CT-ND	Molex	MicroSD Card Connector	MOLEX - 503182-1852 - Micro SD Normal UltraLowPro8CktEmbsTpPkg RoHS Compliant: Yes	1	SC1		