

A

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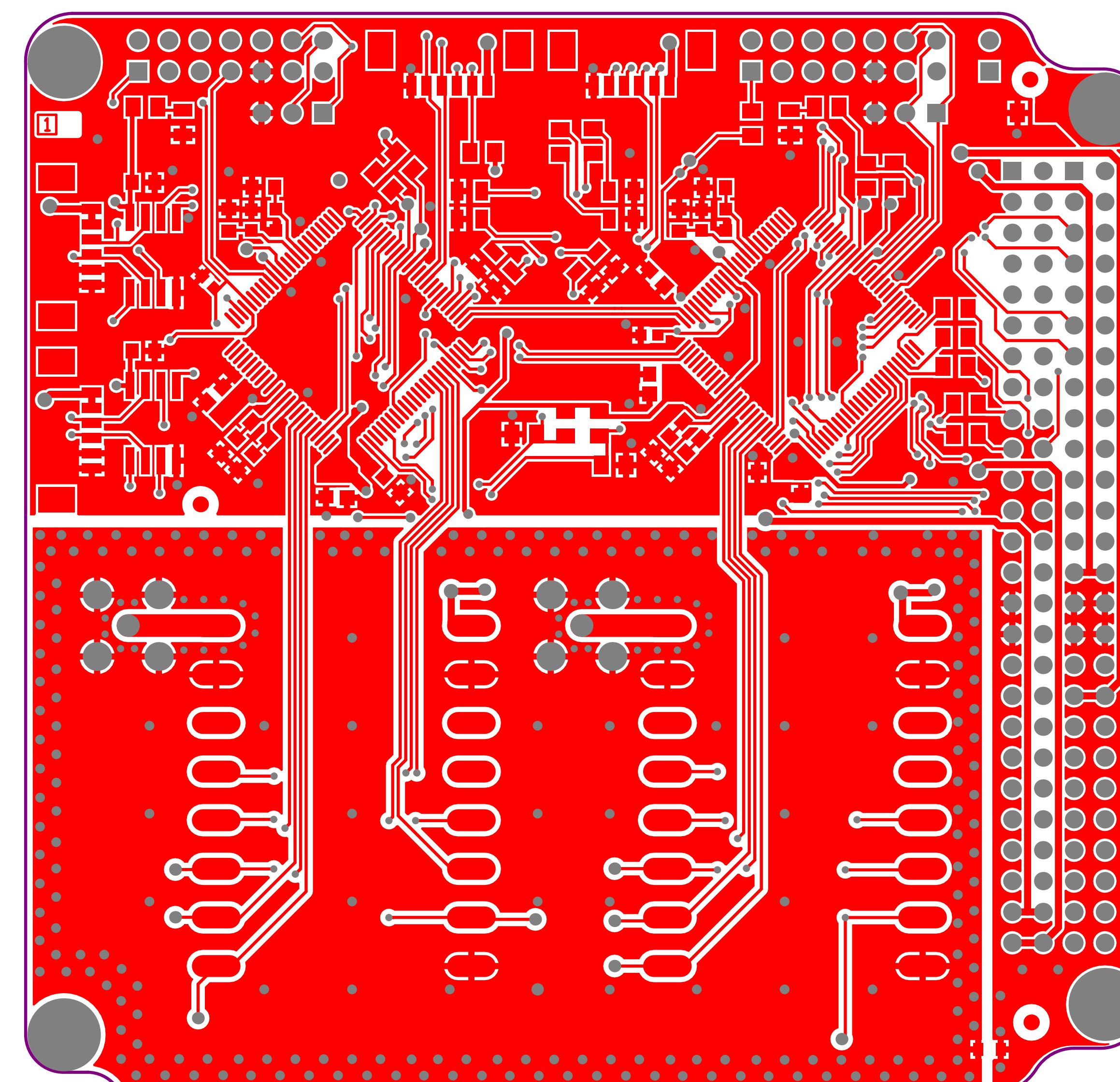
B

C

C

D

D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	
Project: TTC2	
Layer: Top Layer	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

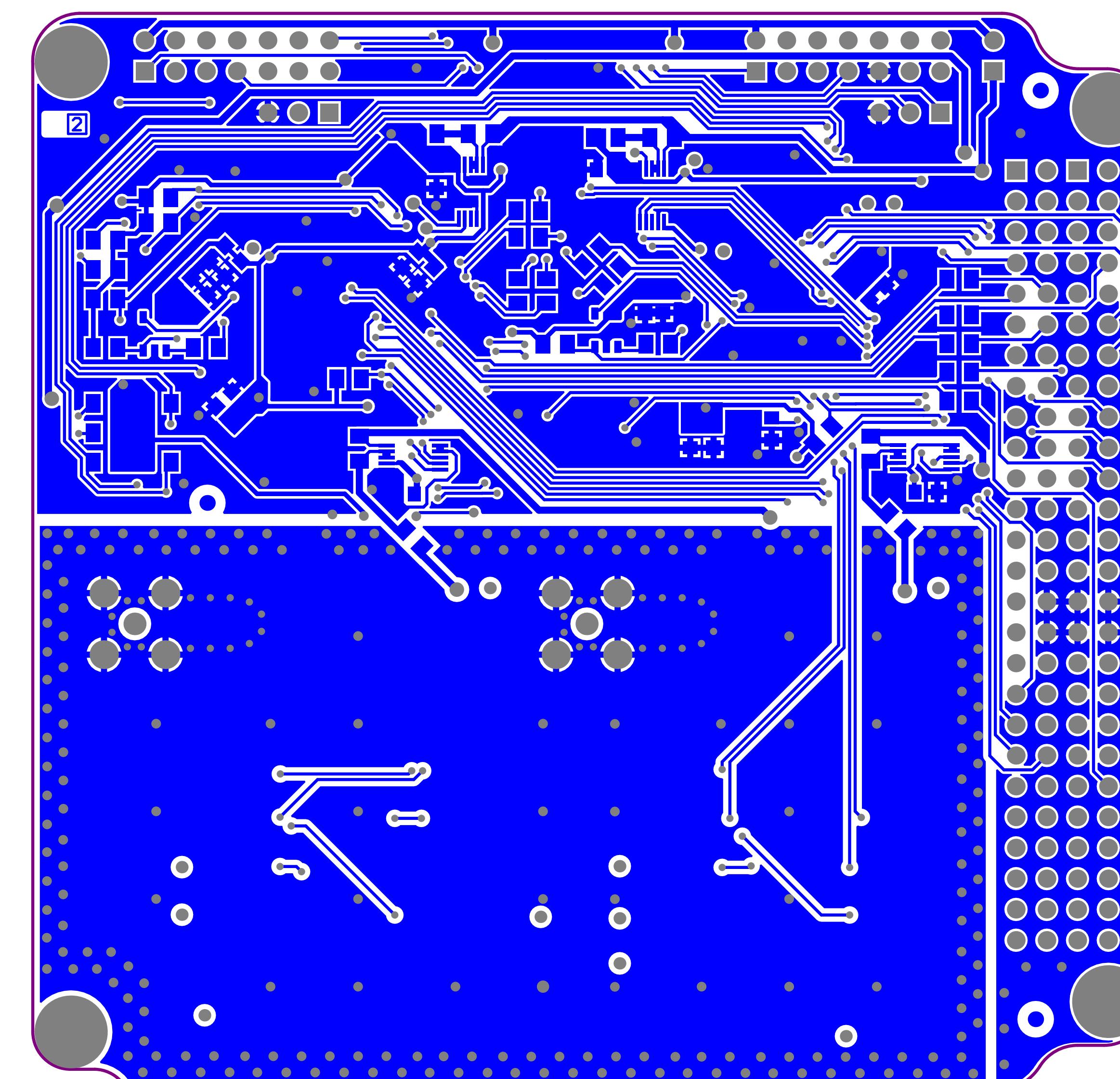
B

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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	 + SPACE + LAB + L
Project: TTC2	
Layer: Bottom Layer	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

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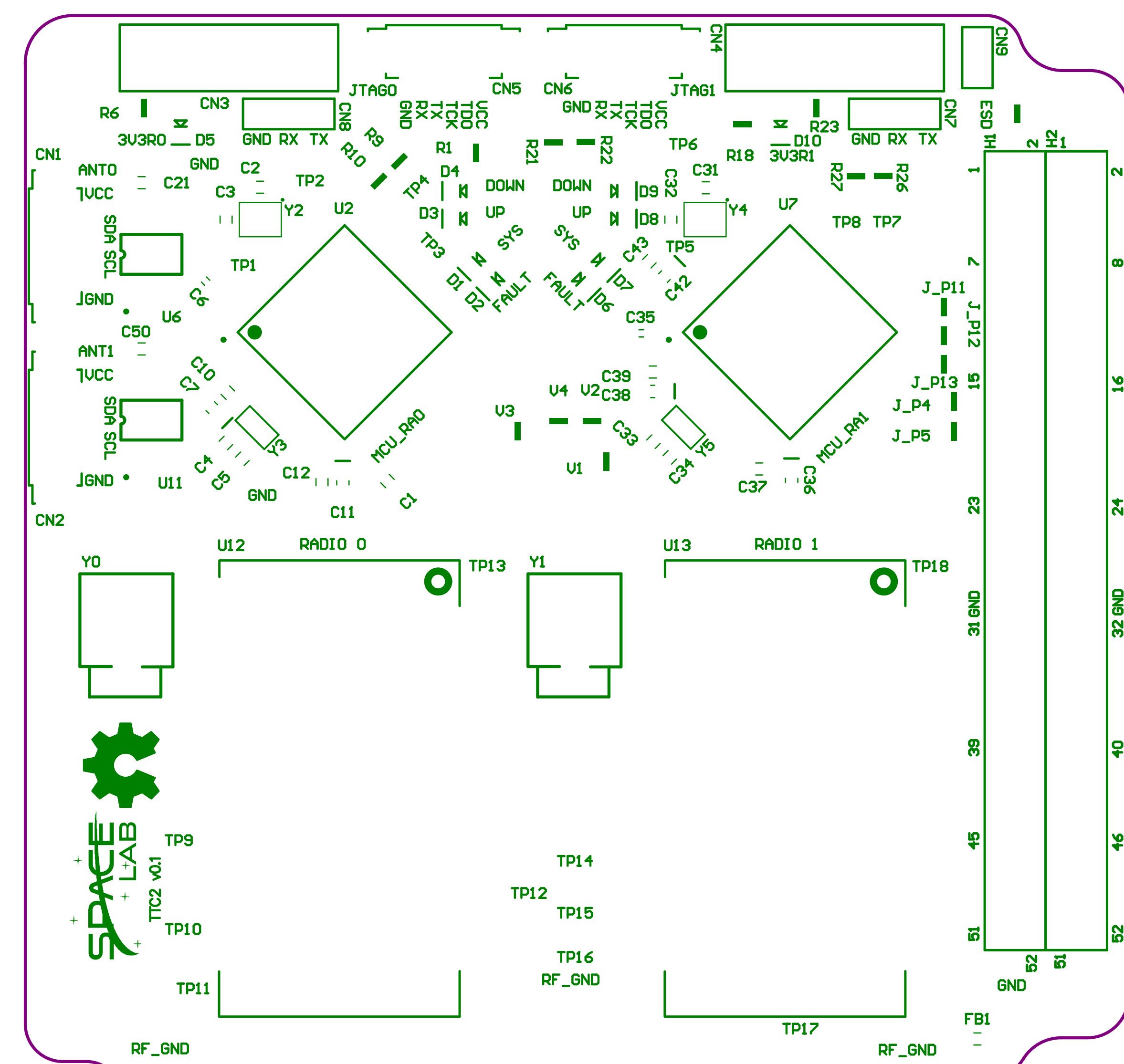
D

A

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D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	
Project: TTC2	
Layer: Top Overlay	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

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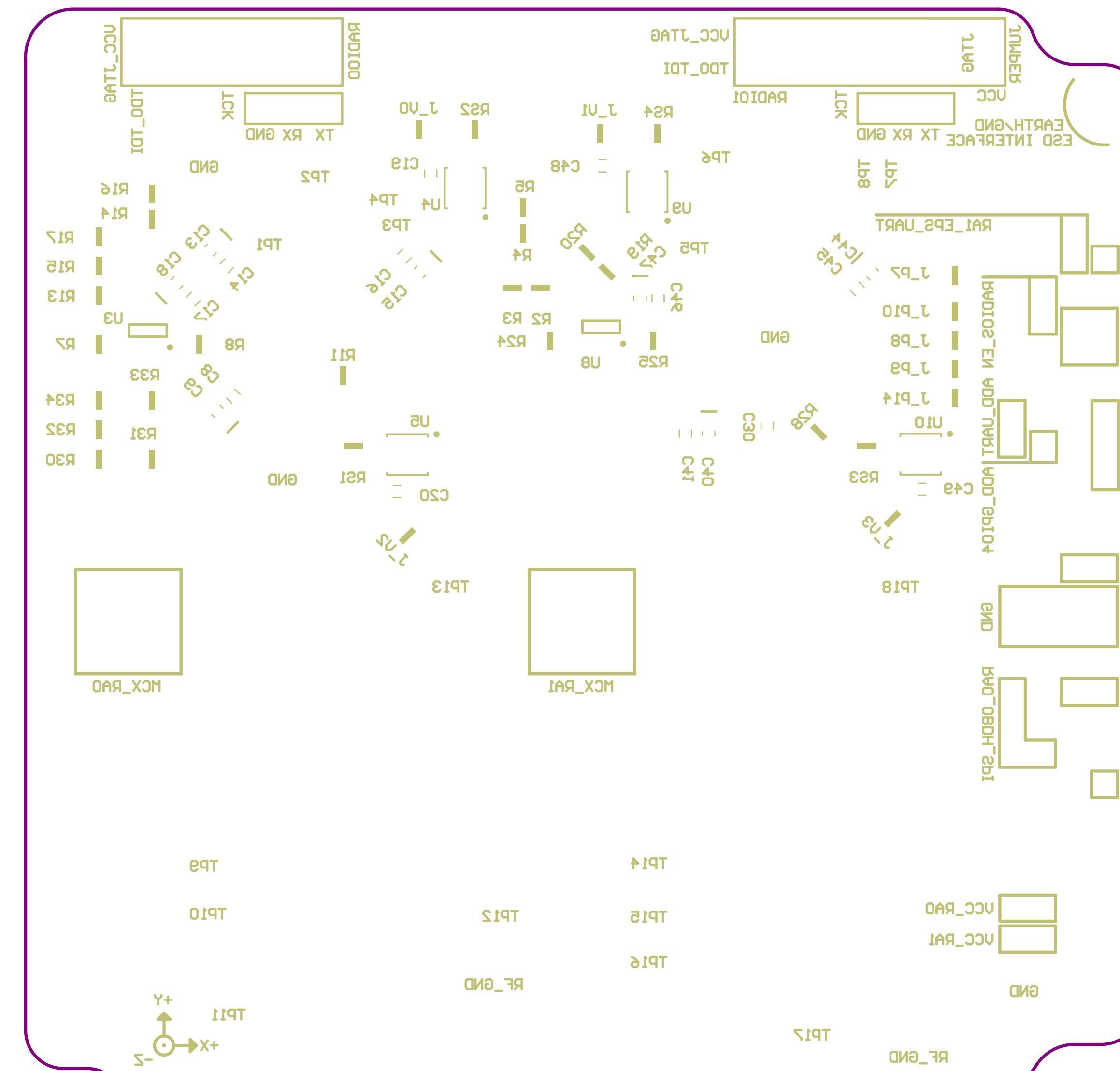
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A

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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	+ SPACE + LAB
Project: TTC2	
Layer: Bottom Overlay	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

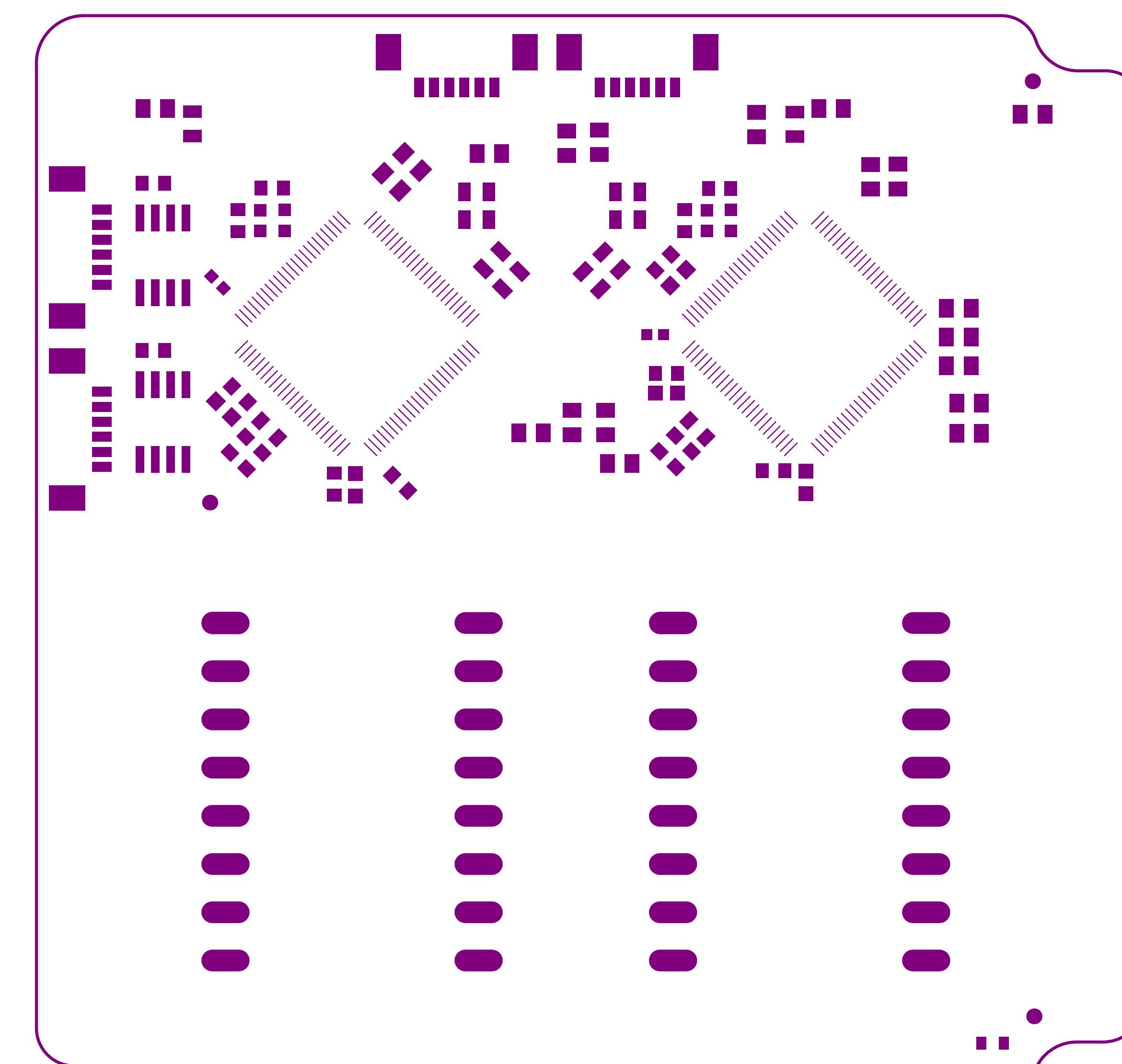
B

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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	 + SPACE + LAB + +
Project: TTC2	
Layer: Top Paste	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

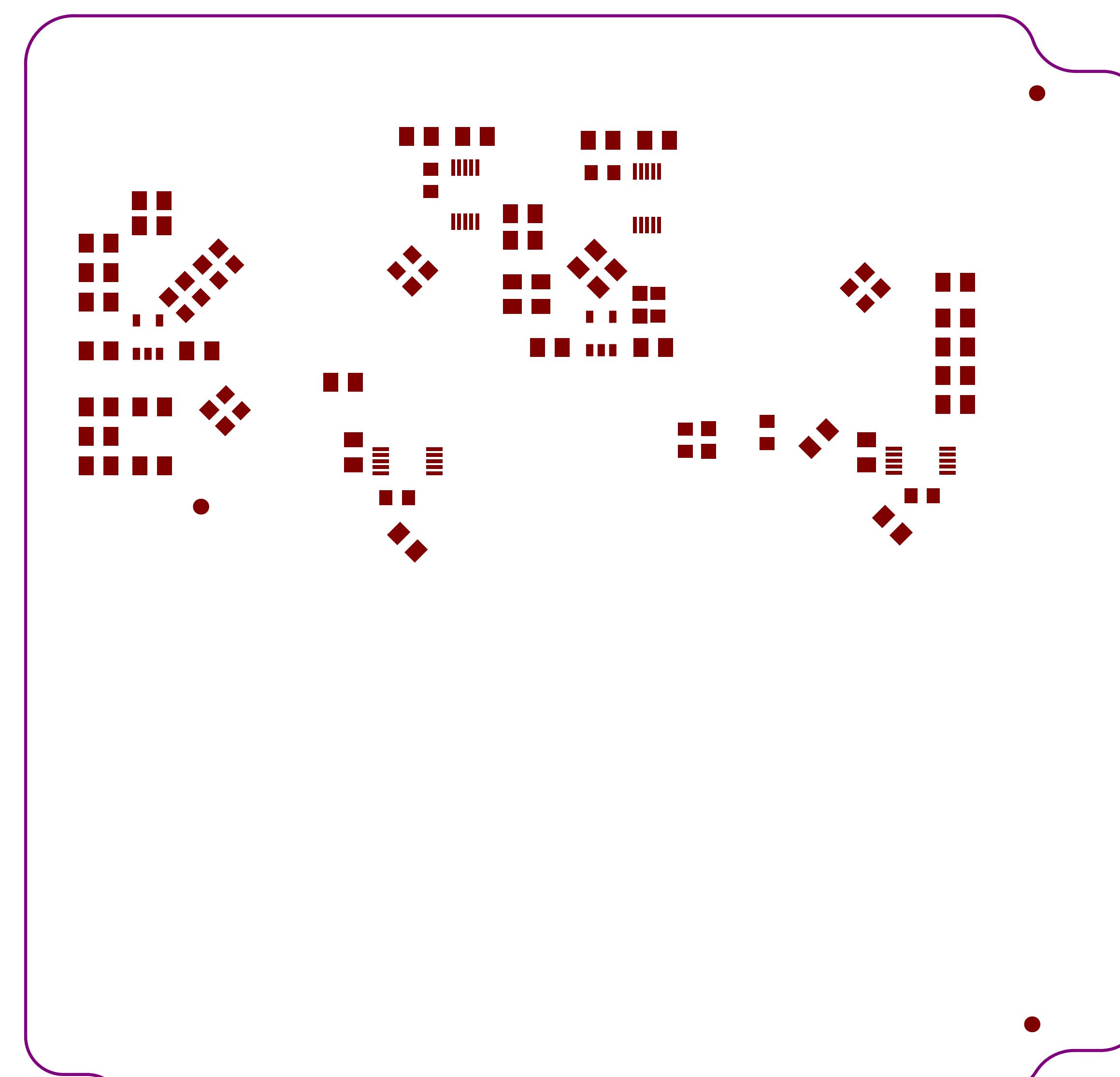
B

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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	
Project: TTC2	
Layer: Bottom Paste	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

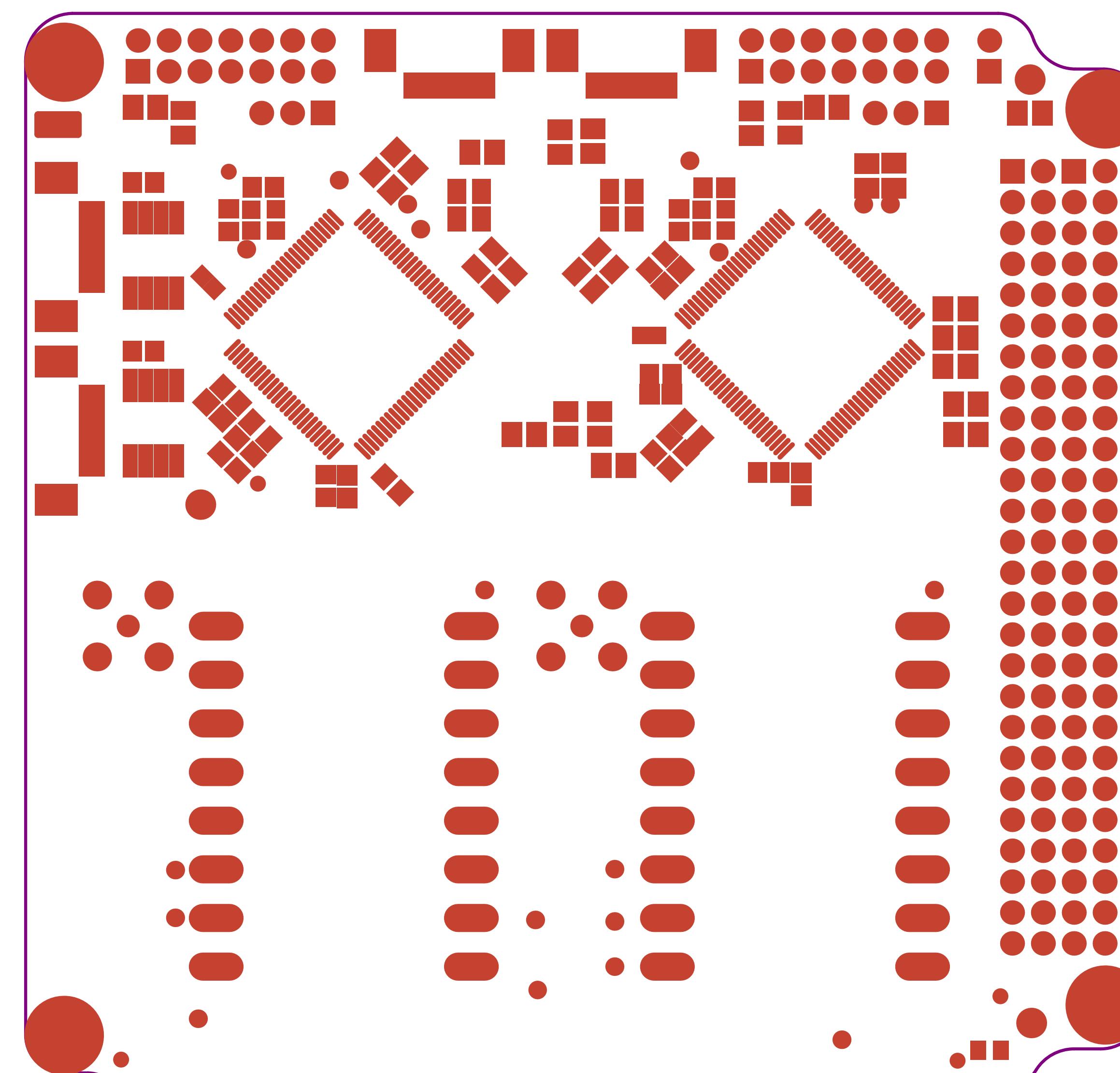
B

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D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	 + LAB
Project: TTC2	
Layer: Top Solder	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A

A

B

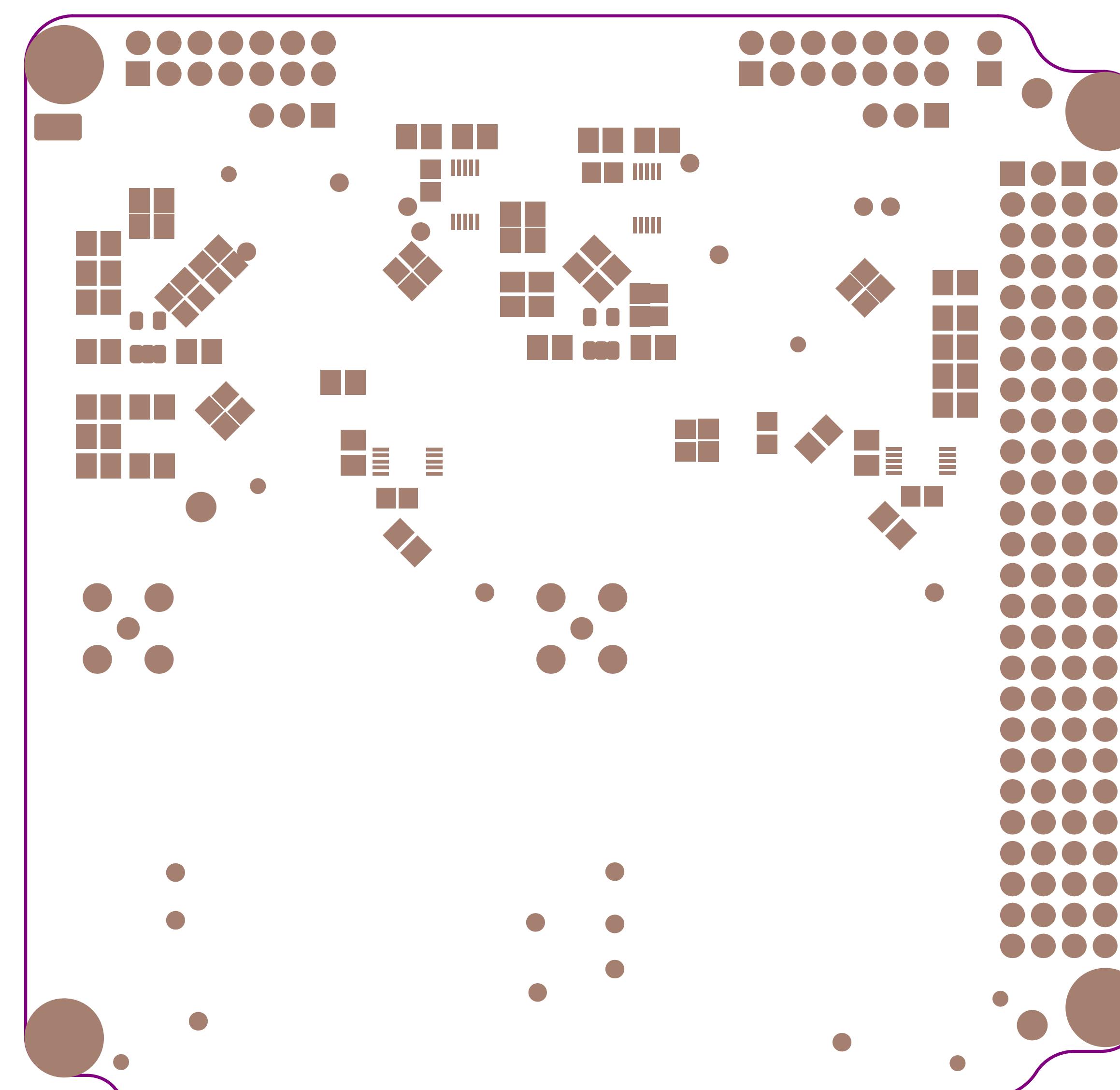
B

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D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

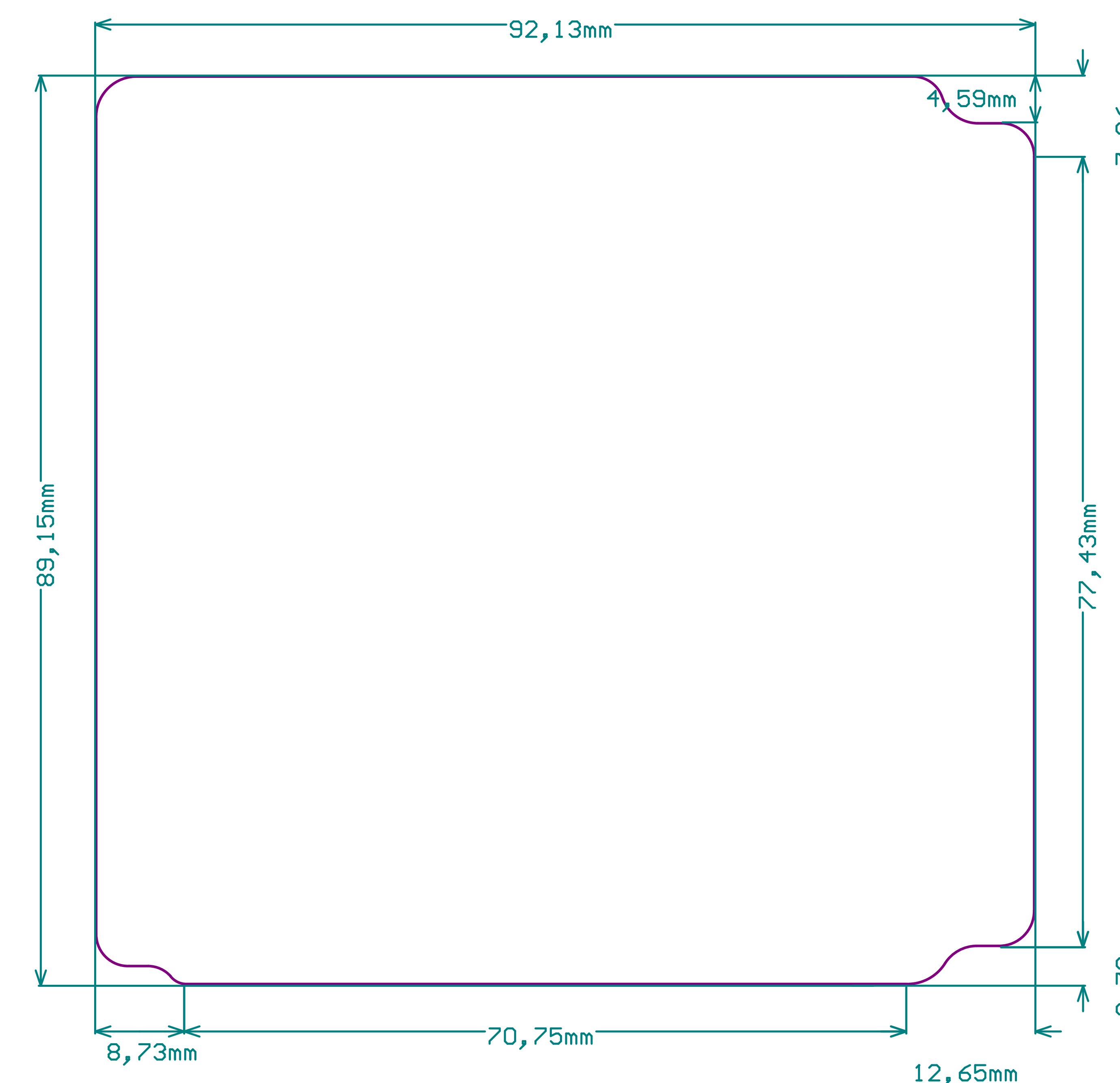
- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	SPACE + LAB
Project: TTC2	
Layer: Bottom Solder	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay		0,010mm	3,5	
2	Top Solder	Solder Resist	0,035mm		
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

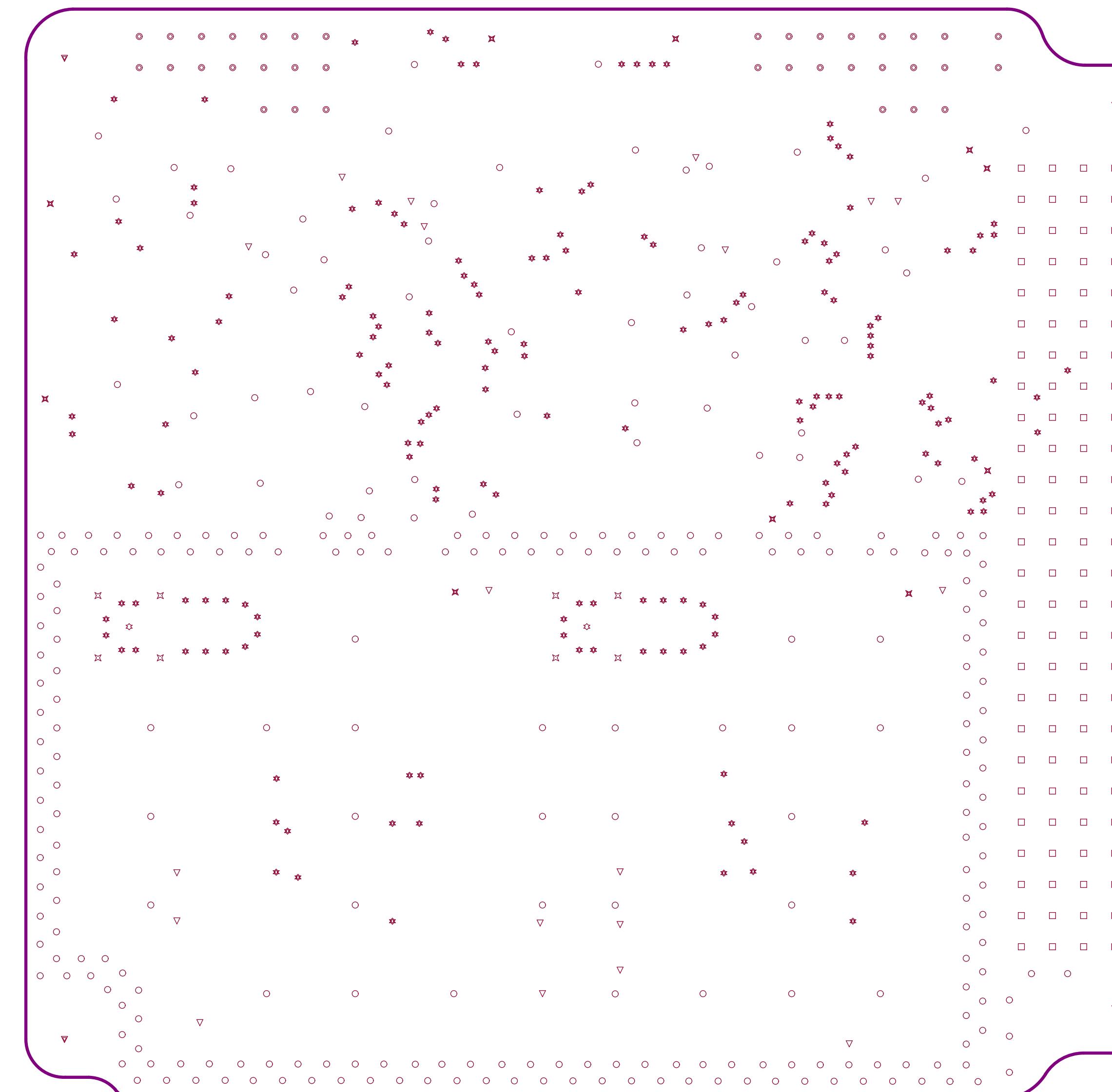
- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	+ SPACE + LAB
Project: TTC2	
Layer: Dimension	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

A



B

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

A

Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad
△	2	1,200mm <47,24mil>	PTH	Round	Top Layer - Bottom Layer	Pad
▼	4	3,200mm <125,98mil>	PTH	Round	Top Layer - Bottom Layer	Pad
✖	8	1,700mm <66,93mil>	PTH	Round	Top Layer - Bottom Layer	Pad
✖	10	0,600mm <23,62mil>	PTH	Round	Top Layer - Bottom Layer	Ula
▼	19	0,500mm <20,00mil>	PTH	Round	Top Layer - Bottom Layer	(Mixed)
●	36	1,000mm <39,37mil>	PTH	Round	Top Layer - Bottom Layer	Pad
□	104	0,900mm <35,43mil>	PTH	Round	Top Layer - Bottom Layer	Pad
*	181	0,300mm <11,81mil>	PTH	Round	Top Layer - Bottom Layer	Ula
○	284	0,400mm <15,78mil>	PTH	Round	Top Layer - Bottom Layer	Ula
648 Total						

B

Fabrication specifications:

- Copper base 1OZ:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

C

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

C

SpaceLab - Federal University of Santa Catarina	
Project: TTC2	
Layer: Drill Drawing	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4

D

A

A

B

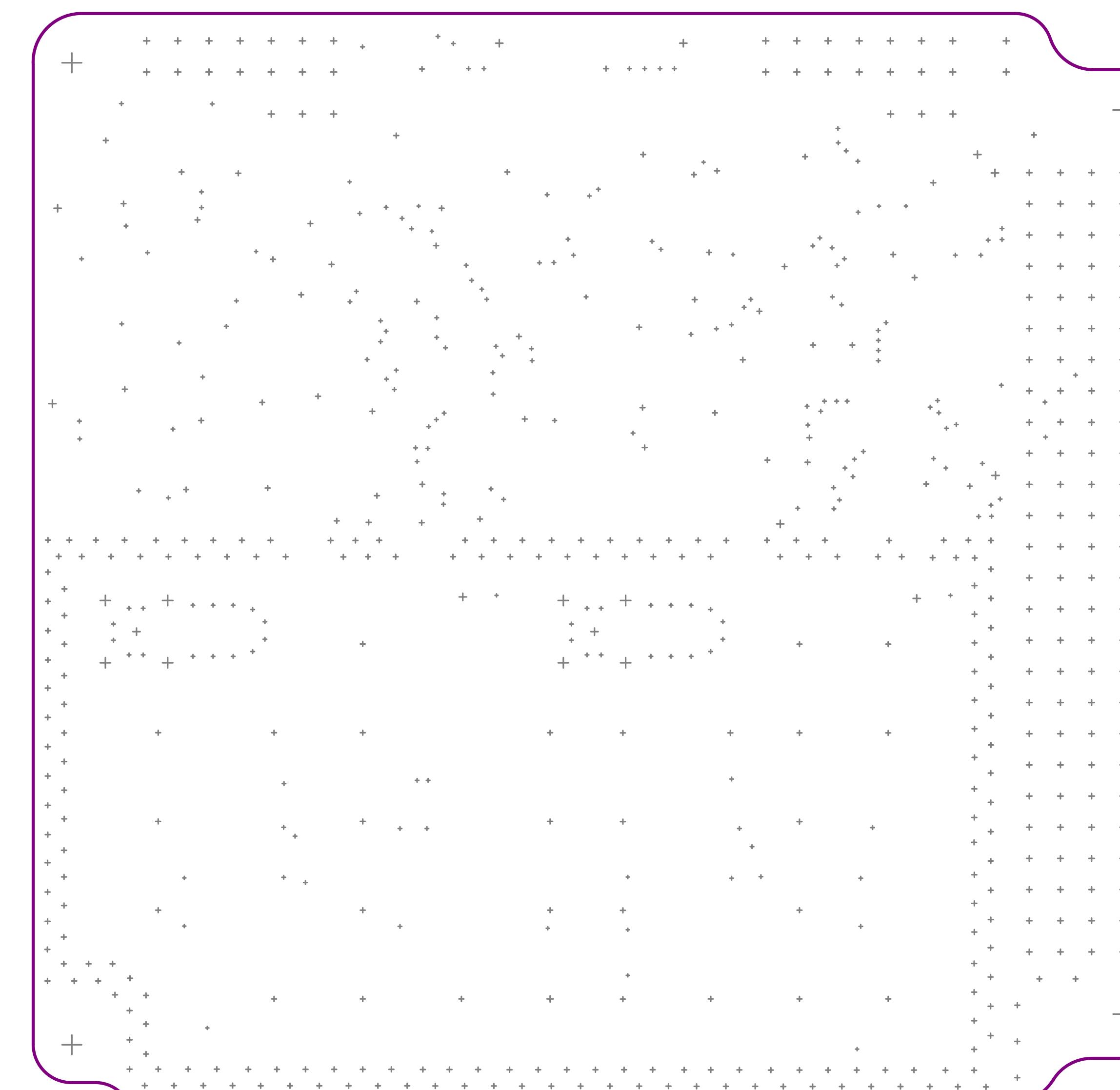
B

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C

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D



Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0,010mm	3,5	
3	Top Layer	Copper	0,035mm		
4	Dielectric		1,620mm	4,2	
5	Bottom Layer	Copper	0,035mm		
6	Bottom Solder	Solder Resist	0,010mm	3,5	
7	Bottom Overlay				

Fabrication specifications:

- Copper base 10Z:
- PCB Material: Prepeg FR4—Standard
- PCB Thickness: 1.6mm
- PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
- Soldermask Color: Blue
- Vias: Force Complete Tenting
- Special: Stack-up (herein included)

Assembly specifications:

- Solder composition: Include lead
- Fiducials: 3 top and 3 bottom available
- Check BOM for not placed components

SpaceLab - Federal University of Santa Catarina	
Project: TTC2	
Layer: Drill Guide	
Designed by: Andre M. P. Mattos	
Date: 02/05/2021	Project Code: TTC2
Version: v0.1	Size: A4