


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 Core	FR-4	1.500mm	4.2	
5	Bottom Layer	Copper	0.035mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

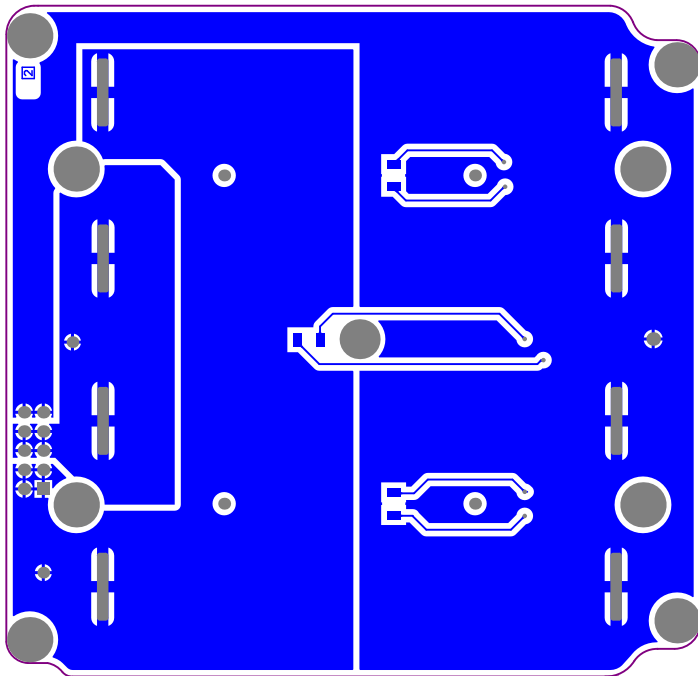
Fabrication specifications:

- 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: Green
 - Vias: Force Complete Tenting
 - 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: Battery Board 4 cells		
Layer: Top Layer Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4




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 Core	FR-4	1.500mm	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: Green
 - Vias: Force Complete Tenting
 - 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: Battery Board 4 cells		
Layer: Bottom Layer Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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A

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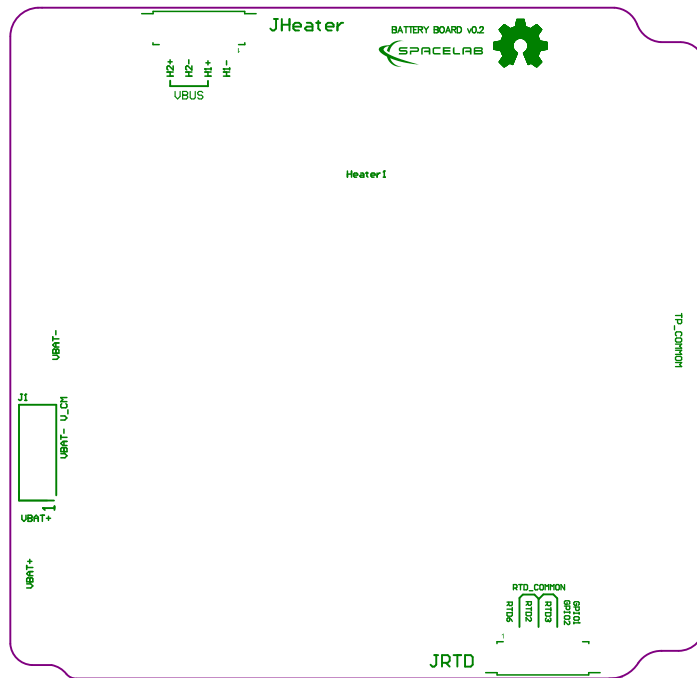
B

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 Core	FR-4	1.500mm	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: Green
- Vias: Force Complete Tenting
- Stack-up (herein included)

Assembly specifications:

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

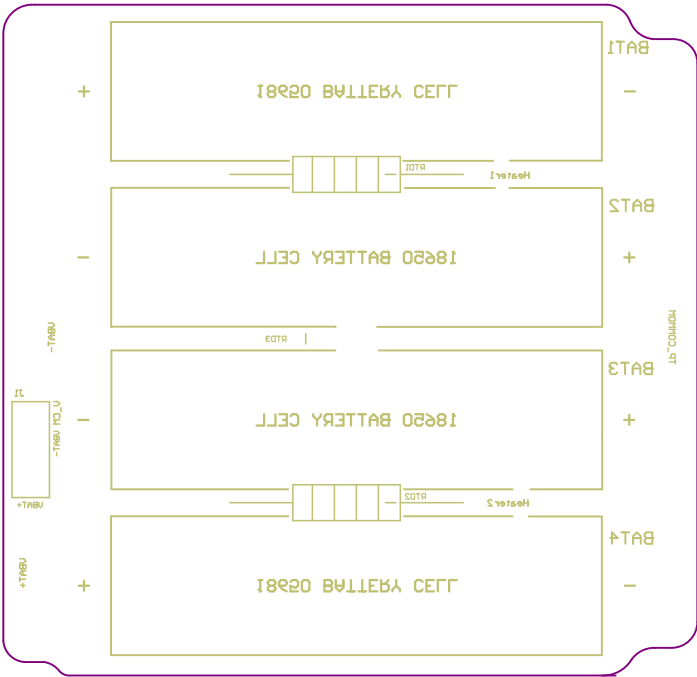
SpaceLab - Federal University of Santa Catarina		
Project: Battery Board 4 cells		
Layer: Top Overlay Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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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 Core	FR-4	1.500mm	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 Tickness: 1.6mm
 - PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
 - Soldermask Color: Green
 - Vias: Force Complete Tenting
 - 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: Battery Board 4 cells		
Layer: Bottom Overlay Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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A

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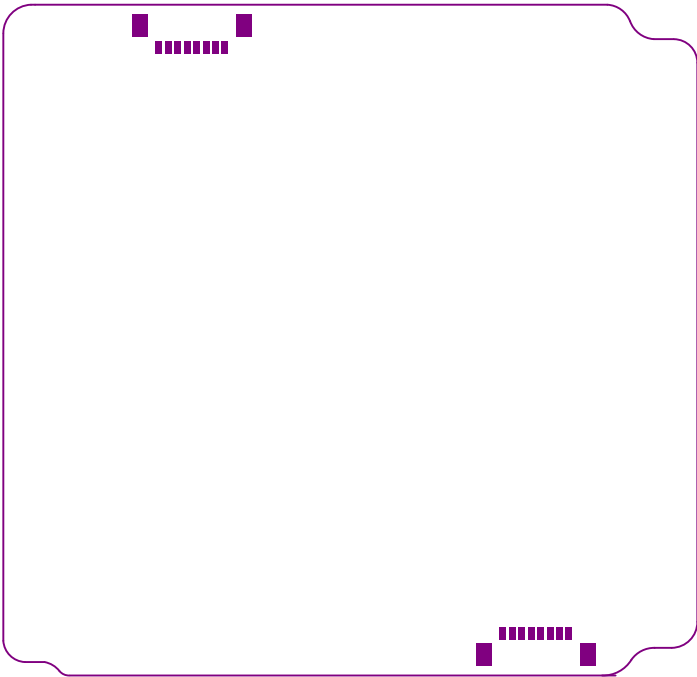
B

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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 Core	FR-4	1.500mm	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: Green
 - Vias: Force Complete Tenting
 - 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: Battery Board 4 cells		
Layer: Top Paste Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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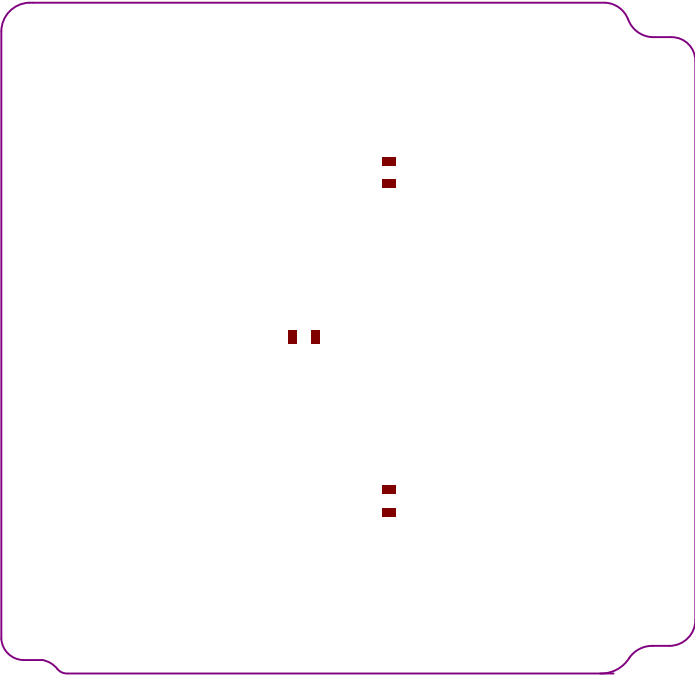
B

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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 Core	FR-4	1.500mm	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 Tickness: 1.6mm
 - PCB Surface: HASL (with lead)
- Silkscreen Color: White (top and bottom)
 - Soldermask Color: Green
 - Vias: Force Complete Tenting
 - 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: Battery Board 4 cells		
Layer: Bottom Paste Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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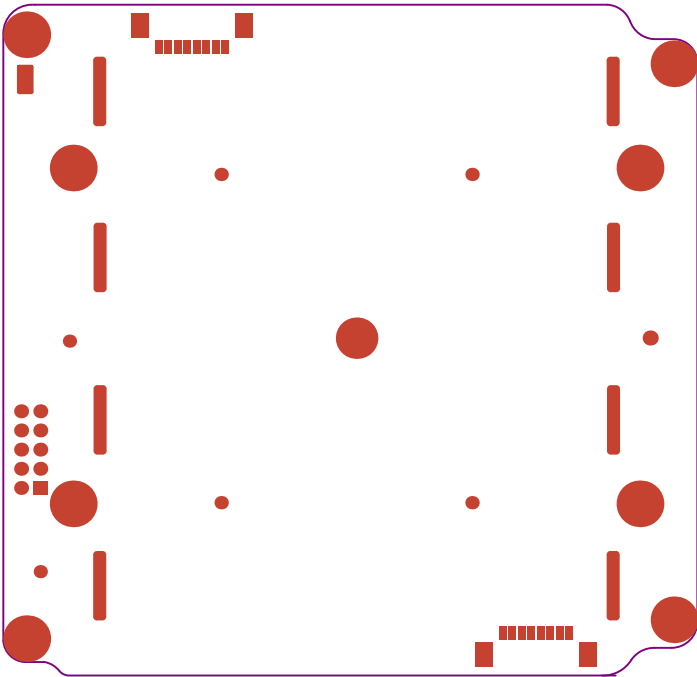
B

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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 Core	FR-4	1.500mm	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: Green
 - Vias: Force Complete Tenting
 - 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: Battery Board 4 cells		
Layer: Top Solder Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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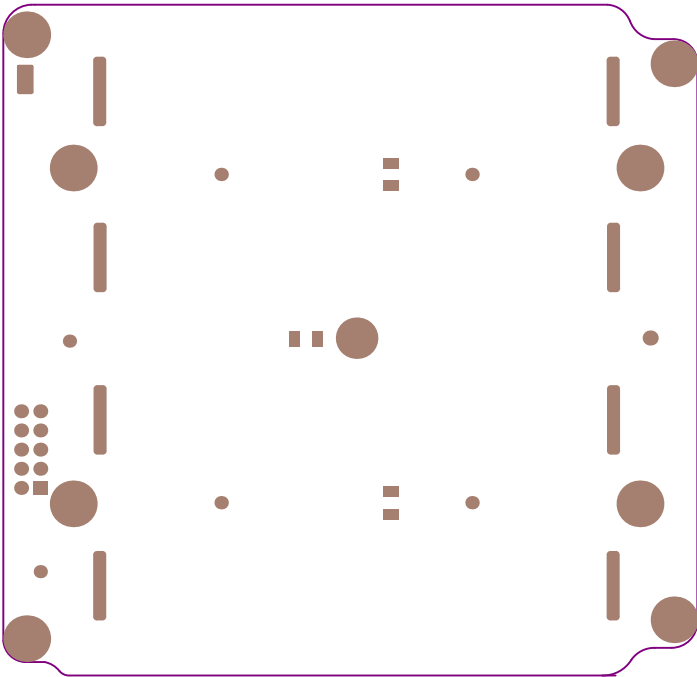
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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.035mm		
4	Dielectric Core	FR-4	1.500mm	4.2	
5	Bottom Layer	Copper	0.035mm		
6	Bottom Solder	Solder Resist	0.010mm	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: Green
 - Vias: Force Complete Tenting
 - 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: Battery Board 4 cells		
Layer: Bottom Solder Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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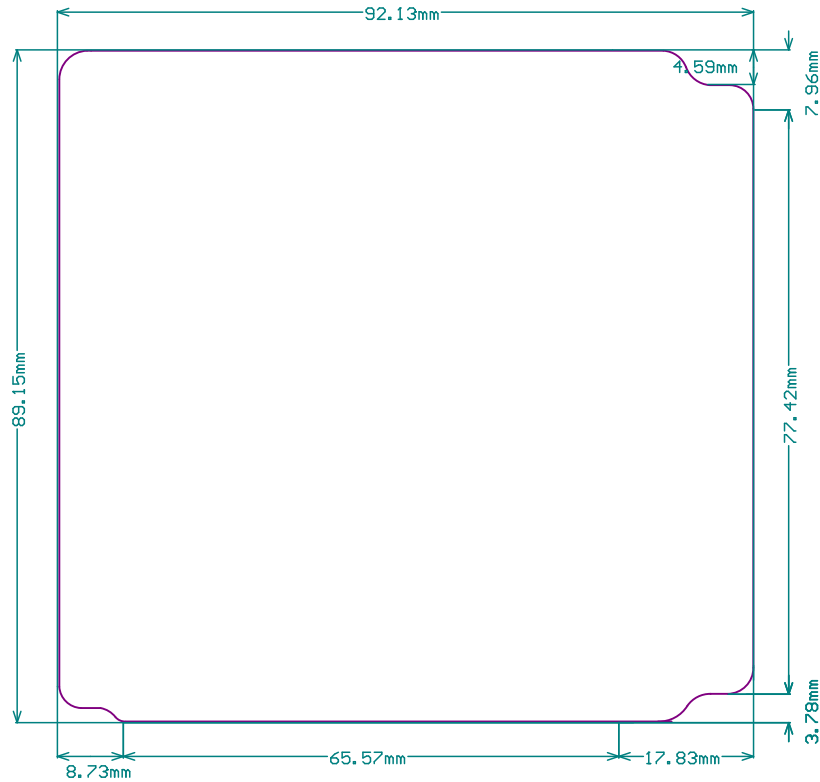
B

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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 Core	FR-4	1.500mm	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: Green
- Vias: Force Complete Tenting
- 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: Battery Board 4 cells		
Layer: Dimension Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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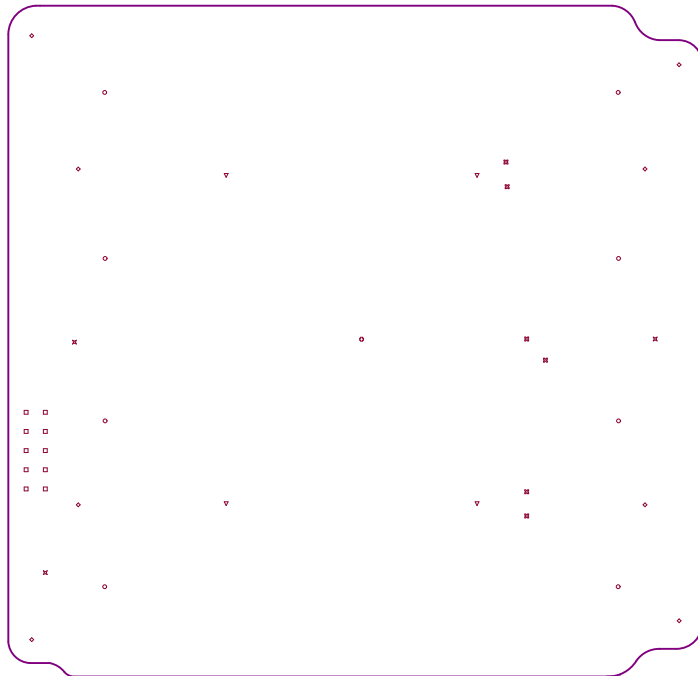
B

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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 Core	FR-4	1.500mm	4.2	
5	Bottom Layer	Copper	0.035mm		
6	Bottom Solder	Solder Resist	0.010mm	3.5	
7	Bottom Overlay				

Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad
⊕	1	2.500mm (98.43mil)	PTH	Round	Top Layer - Bottom Layer	Pad
⊗	3	1.000mm (39.37mil)	PTH	Round	Top Layer - Bottom Layer	Pad
▽	4	1.050mm (41.34mil)	PTH	Round	Top Layer - Bottom Layer	Pad
⊗	6	0.300mm (11.81mil)	PTH	Round	Top Layer - Bottom Layer	Via
○	8	0.500mm (19.69mil)	PTH	Slot	Top Layer - Bottom Layer	Pad
◇	8	3.200mm (125.98mil)	PTH	Round	Top Layer - Bottom Layer	Pad
□	10	1.100mm (43.31mil)	PTH	Round	Top Layer - Bottom Layer	Pad
40 Total						


Slot definitions : Routed Path Length = Calculated from tool start centre position to tool end centre position.
Hole Length = Routed Path Length + Tool Size = Slot length as defined in the PCB layout

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: Green
- Vias: Force Complete Tenting
- 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: Battery Board 4 cells		
Layer: Drill Drawing Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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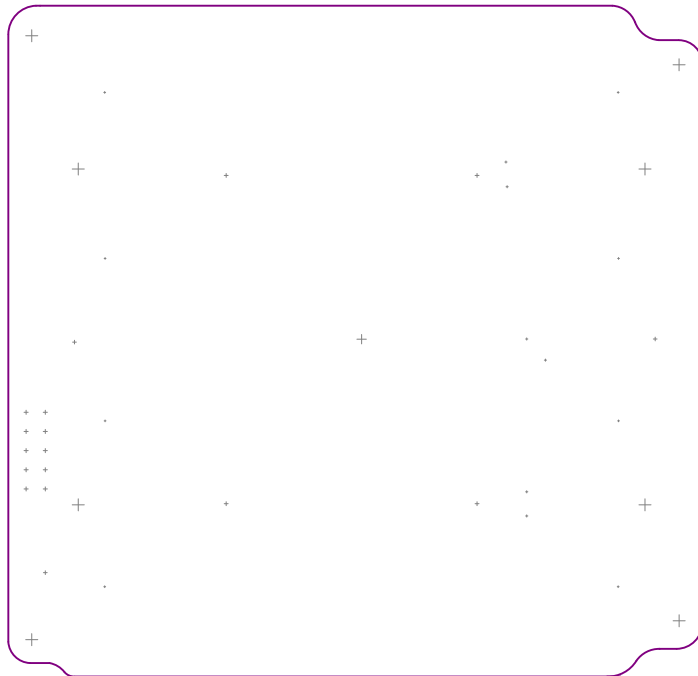
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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Top Layer	Copper	0.035mm		
4	Dielectric Core	FR-4	1.500mm	4.2	
5	Bottom Layer	Copper	0.035mm		
6	Bottom Solder	Solder Resist	0.010mm	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: Green
- Vias: Force Complete Tenting
- 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: Battery Board 4 cells		
Layer: Drill Guide Board Edge		
Designed by: Amanda B. Medeiros (based on FSat-I Bat)		Project Code: BAT4C
Date: 6/16/2021	Version: v0.2	Size: A4

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