

Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Dk	Type	Gerber
	Top Overlay				Legend	GTO
Surface Material	Top Solder	0.020mm(0.787mil)	Solder Resist	3,5	Solder Mask	GTS
Copper	Top Layer	0.035mm(1.378mil)			Signal	GTL
Prepreg		0.150mm(5.906mil)	FR-4	4,2	Dielectric	
Copper	P1-GND	0.035mm(1.378mil)			Internal Plane	GP1
Core		0.250mm(9.843mil)	FR-4	4,2	Dielectric	
Copper	L1-Signal	0.035mm(1.378mil)			Signal	G1
Prepreg		0.150mm(5.906mil)	FR-4	4,2	Dielectric	
FR-4	L2-Signal	0.035mm(1.378mil)			Signal	G2
Core		0.250mm(9.843mil)	FR-4	4,2	Dielectric	
FR-4	L3-Signal	0.035mm(1.378mil)			Signal	G3
Prepreg		0.150mm(5.906mil)	FR-4	4,2	Dielectric	
Copper	L4-Signal	0.035mm(1.378mil)			Signal	G4
Core		0.250mm(9.843mil)	FR-4	4,2	Dielectric	
Copper	P2-GND	0.035mm(1.378mil)			Internal Plane	GP2
Prepreg		0.150mm(5.906mil)	FR-4	4,2	Dielectric	
Copper	Bottom Layer	0.035mm(1.378mil)			Signal	GBL
Surface Material	Bottom Solder	0.020mm(0.787mil)	Solder Resist	3,5	Solder Mask	GBS
	Bottom Overlay				Legend	GBO

Total thickness: 1.670mm(65.748mil)

Notes:

19 Reducing the thickness of prepregs below 0.15 mm is NOT allowed due to electrical insulation requirements.

Notes:

- Board type : Single piece
- Material: FR4 150Tg or 170Tg
- Thickness: 1.6 mm
- Min Track/Spacing: 6/6 mil
- Min Hole Size: 0.3 mm
- Solder Mask: Green
- Silkscreen: White
- Gold fingers: No
- Surface Finish: Immersion gold (ENIG). Thickness: 1U"
- Via Process : Tenting vias
- Finished Copper: 1 oz Cu
- Inner Copper: 1 oz Cu
- Impedance controlled nets (adjsument allowed):
  - Impedance 50  $\Omega$   $\pm$ 10%
  - Impedance 90  $\Omega$   $\pm$ 15%
  - Impedance 95  $\Omega$   $\pm$ 15%
- Stencil type: framework.  
Size: 736x736 mm (Valid area 500x500mm)
- Stencil side: Top+Bottom(On Single Stencil).
- Thickness: 0.1 mm
- Existing fiducials: None
- Electropolishing: Yes

Drill Table

Symbol	Count	Hole Size	Plated	Hole Type	Via / Pad
○	1210	0.30	Plated	Round	(Mixed)
▽	4	0.60	Plated	Slot	Pad
☆	2	0.70	Non-Plated	Round	Pad
□	28	0.70	Plated	Round	Pad
⊕	1	0.80	Non-Plated	Round	Pad
◇	56	0.80	Plated	Round	Pad
◇	29	0.90	Plated	Round	Pad
▽	1	1.00	Plated	Round	Pad
⊕	1	1.10	Non-Plated	Round	Pad
⊕	1	1.15	Non-Plated	Round	Pad
⊗	10	1.20	Plated	Round	Pad
☆	40	1.30	Plated	Round	Pad
☆	4	1.50	Plated	Round	Pad
⊕	1	1.60	Non-Plated	Round	Pad
⊙	4	1.60	Plated	Round	Pad
⊗	1	1.65	Non-Plated	Round	Pad
⊗	4	2.30	Plated	Round	Pad
⊗	4	2.40	Non-Plated	Round	Pad
⊕	6	3.00	Non-Plated	Round	Pad
□	5	3.20	Plated	Round	Pad
⊗	4	3.25	Non-Plated	Round	Pad

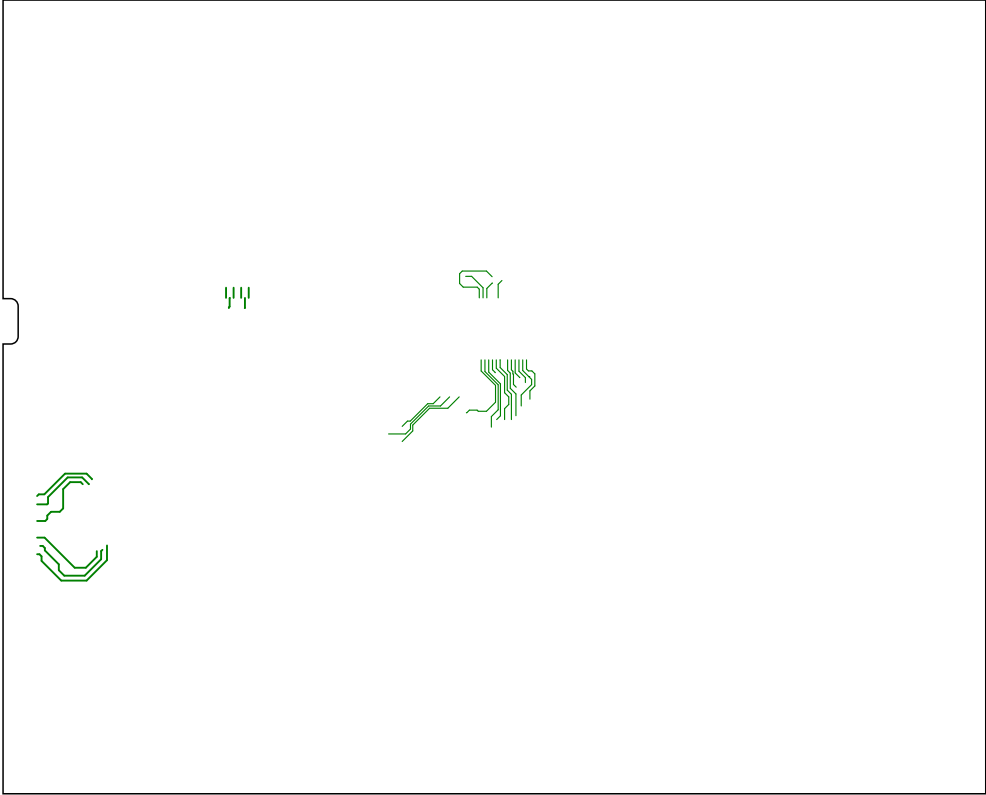
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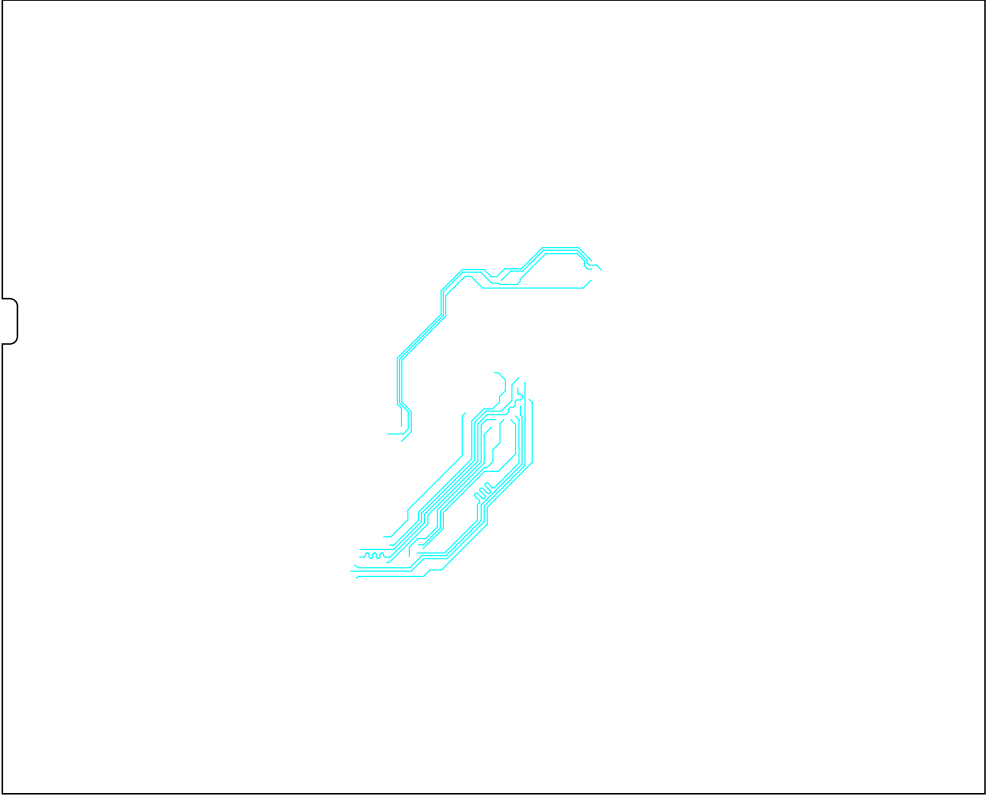
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		FRACTIONAL±	ENG APPR.						
		ANGULAR: MACH± BEND ±	MFG APPR.						
		TWO PLACE DECIMAL ±							
		THREE PLACE DECIMAL ±				SIZE DWG. NO.  46806004			
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		MATERIAL	COMMENTS:						
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SCALE:	1:1	WEIGHT:	SHEET 1 OF 4

Single Impedance 50 Ω ±10%

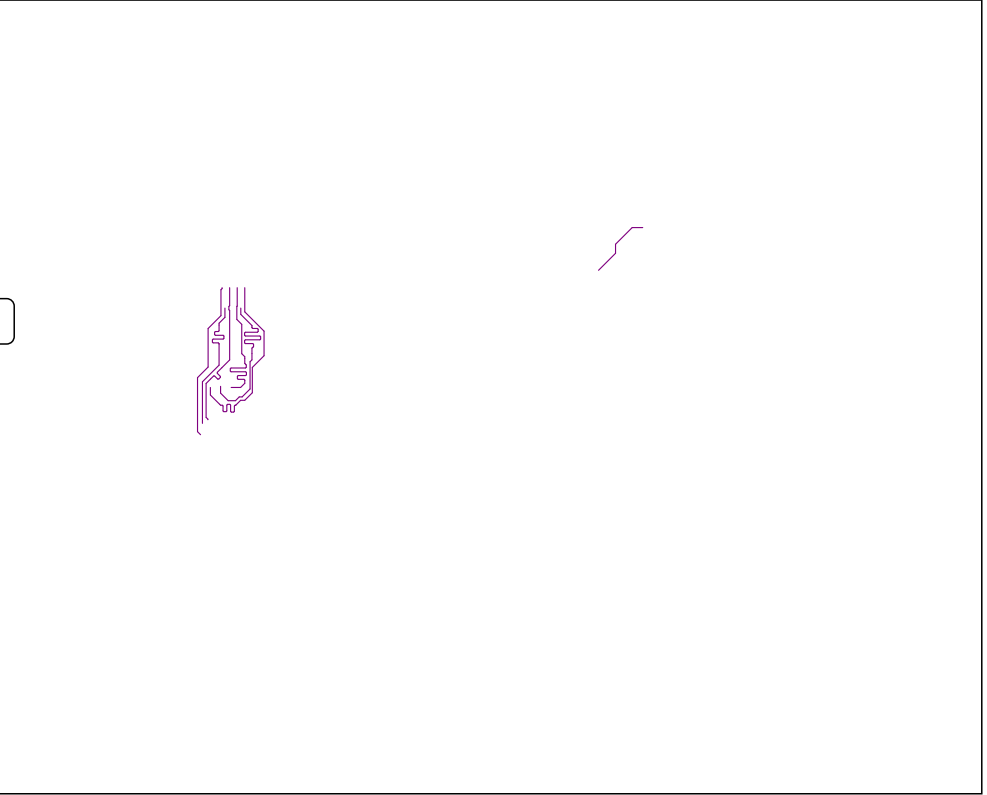
50R - TOP (Scale 1:1)



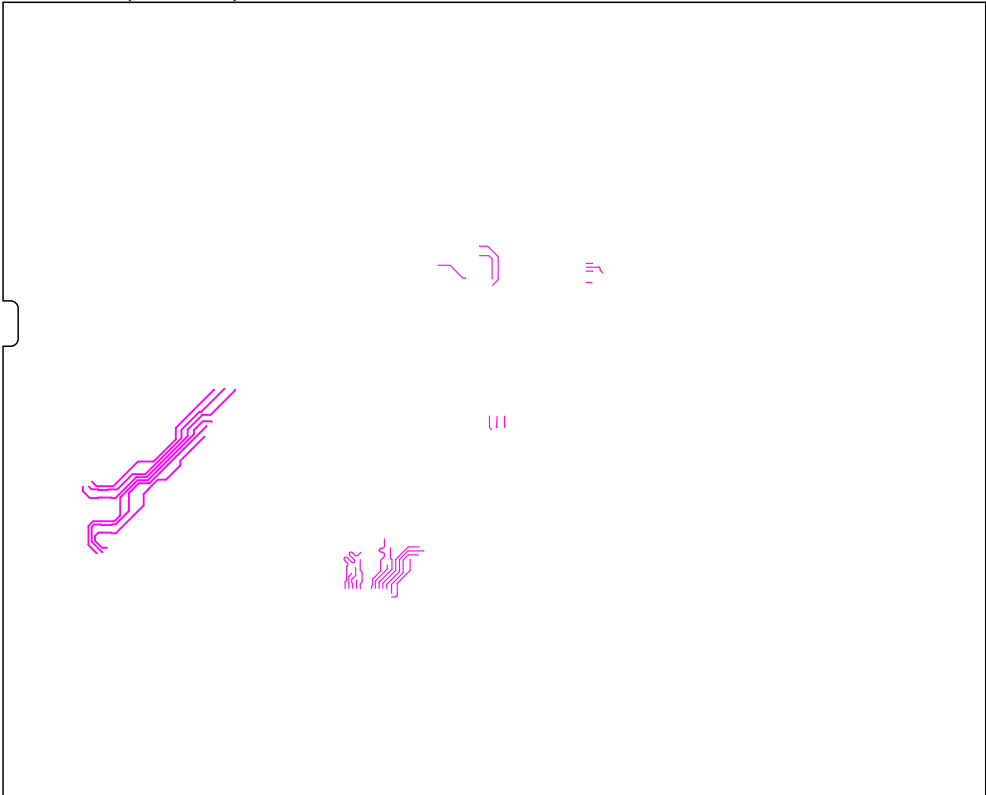
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50R - L2-Signal (Scale 1:1)



50R - BOT (Scale 1:1)



Transmission Line Structure Table

Impedance Id	Transmission Line	Target Impedance	Calculated Impedance	Trace layer	Reference layers	Target Tolerance
1	Coated Microstrip	50	50.64	Top Layer	P1-GND	10%
2	Edge-Coupled Coated Microstrip	90	91.06	Top Layer	P1-GND	15%
3	Edge-Coupled Coated Microstrip	95	95.00	Top Layer	P1-GND	15%
4	Offset Stripline	50	48.17	L1-Signal	P1-GND,L2-Signal	10%
5	Edge-Coupled Offset Stripline	90	89.33	L1-Signal	P1-GND,L2-Signal	15%
6	Edge-Coupled Offset Stripline	95	93.02	L1-Signal	P1-GND,L2-Signal	15%
7	Offset Stripline	50	48.17	L4-Signal	L3-Signal,P2-GND	10%
8	Edge-Coupled Offset Stripline	90	89.33	L4-Signal	L3-Signal,P2-GND	15%
9	Edge-Coupled Offset Stripline	95	93.02	L4-Signal	L3-Signal,P2-GND	15%
10	Coated Microstrip	50	50.64	Bottom Layer	P2-GND	10%
11	Edge-Coupled Coated Microstrip	90	91.06	Bottom Layer	P2-GND	15%
12	Edge-Coupled Coated Microstrip	95	95.00	Bottom Layer	P2-GND	15%

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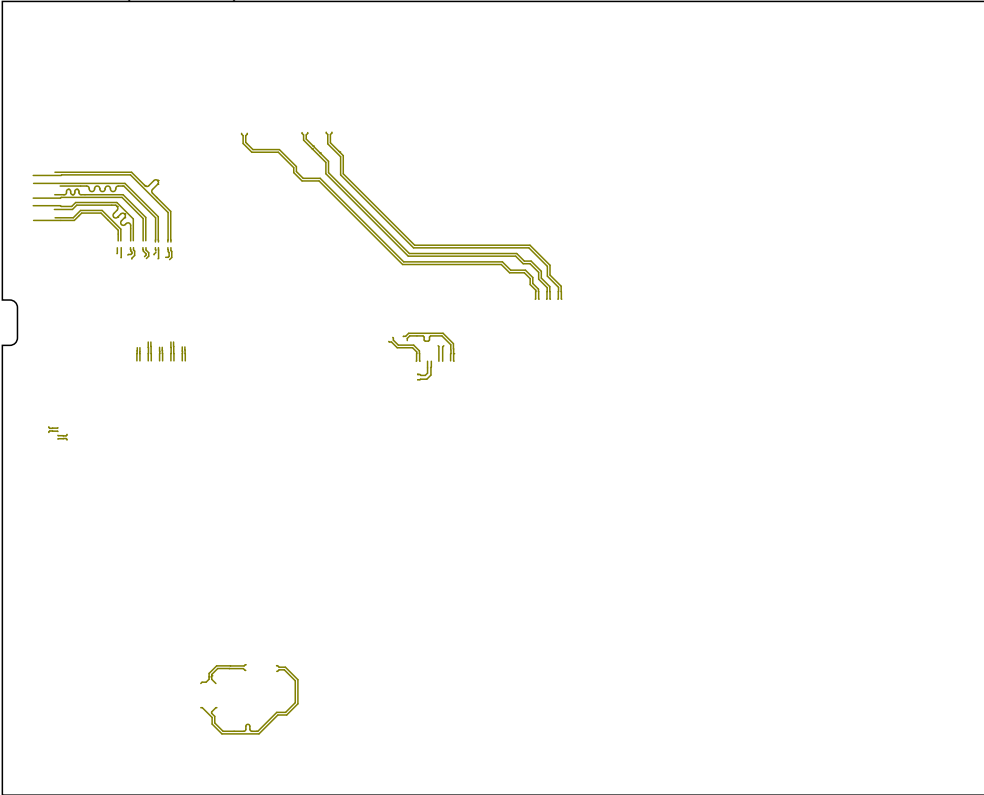
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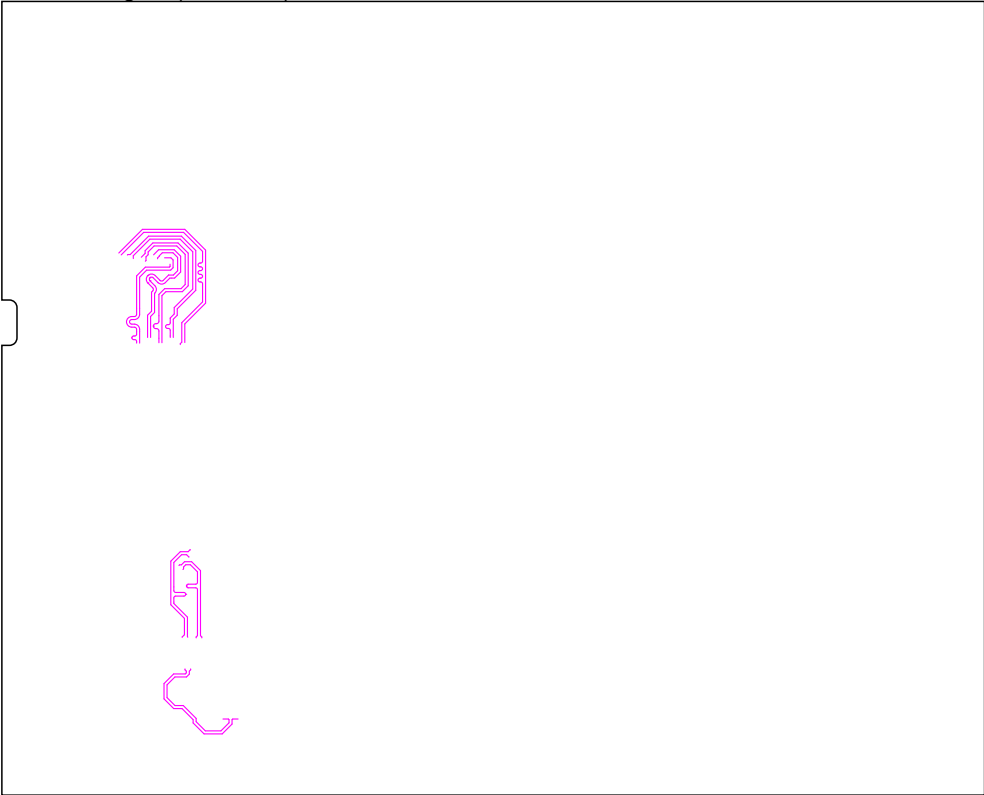
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Diff. Impedance 90 Ω ±15%

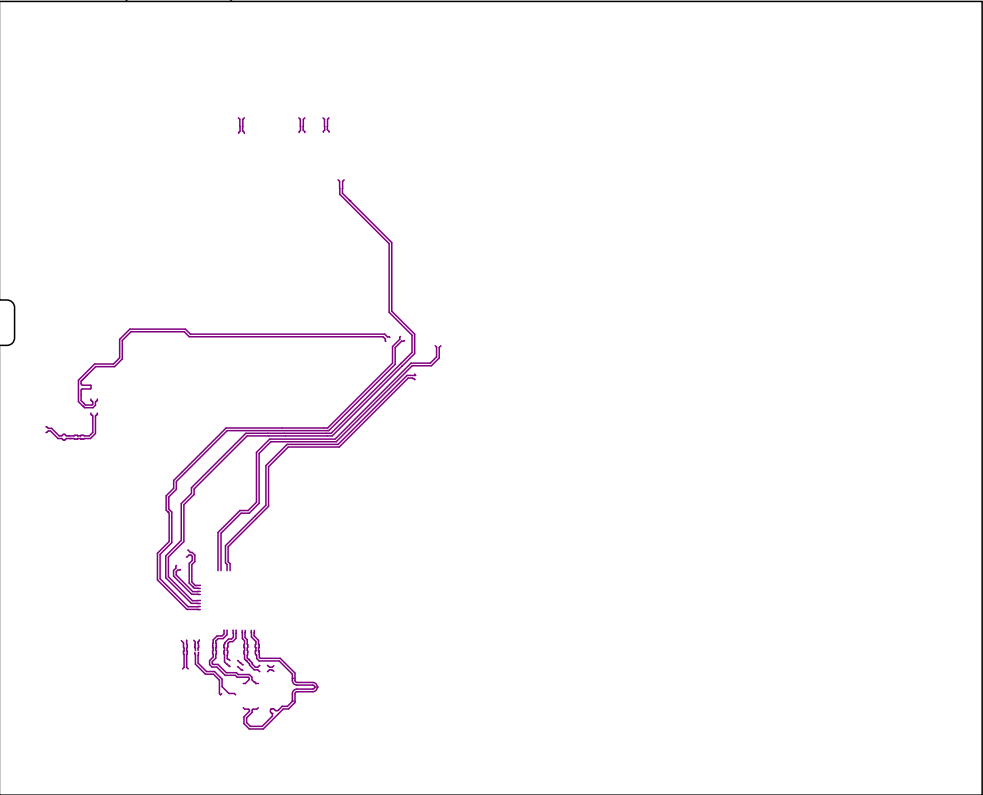
90R - TOP (Scale 1:1)



90R - L1-Signal (Scale 1:1)



90R - BOT (Scale 1:1)



1

1

2

2

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C

D

A

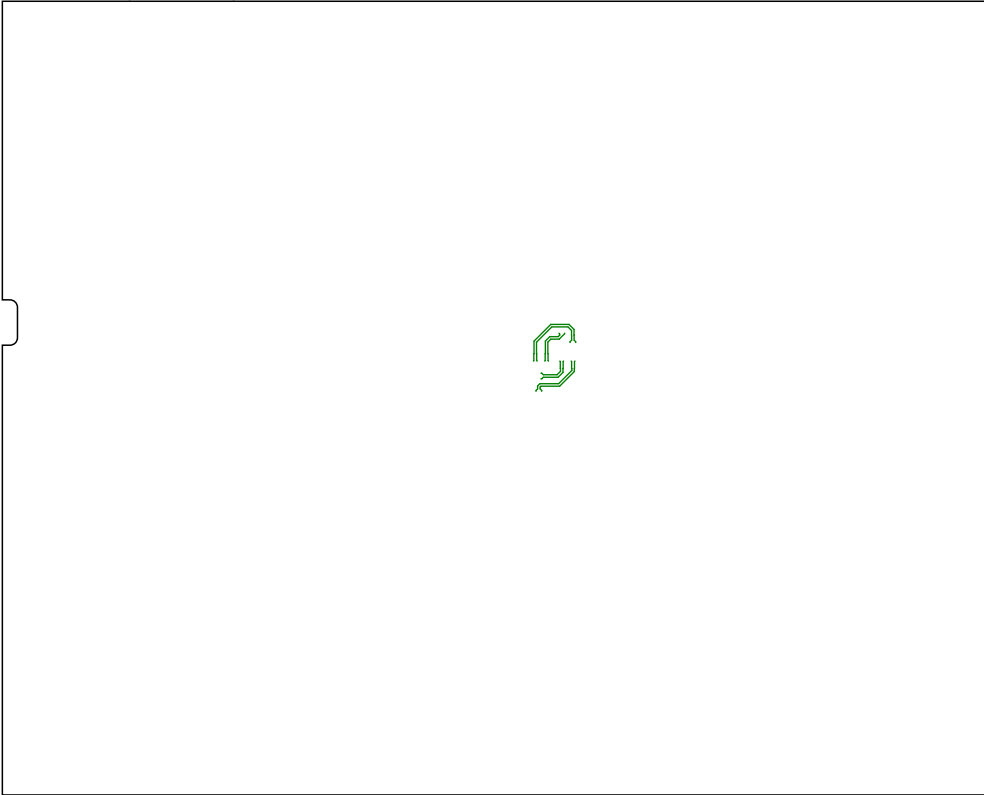
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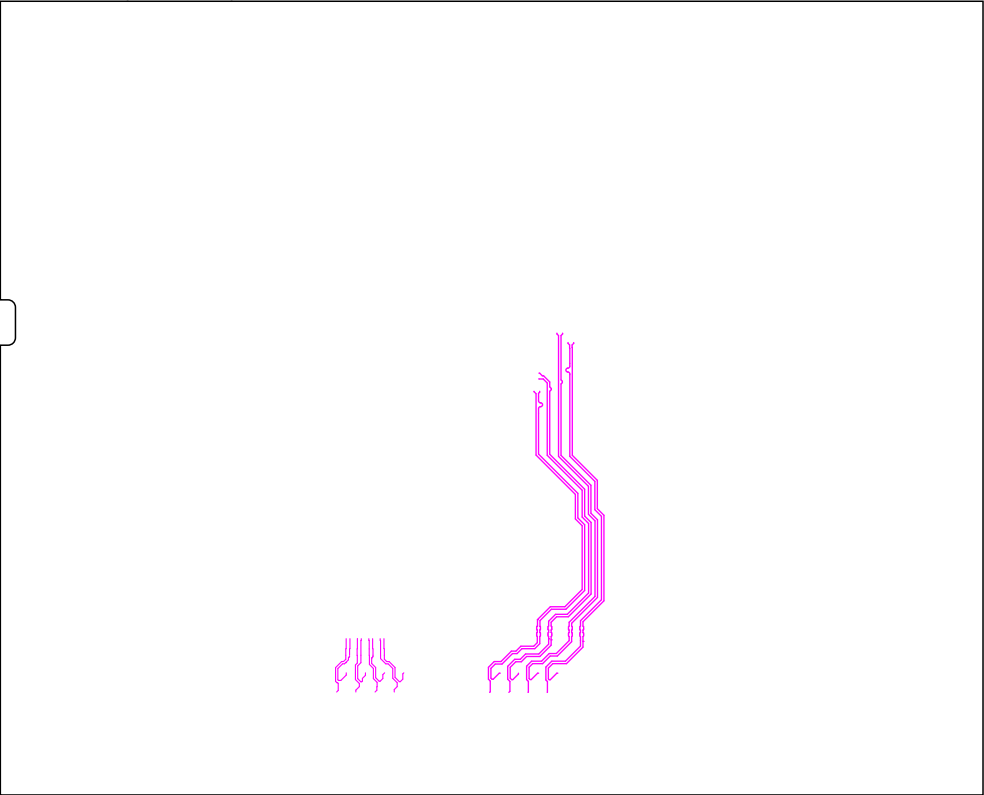
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Diff. Impedance 95 Ω ±15%

95R - TOP (Scale 1:1)



95R - BOT (Scale 1:1)



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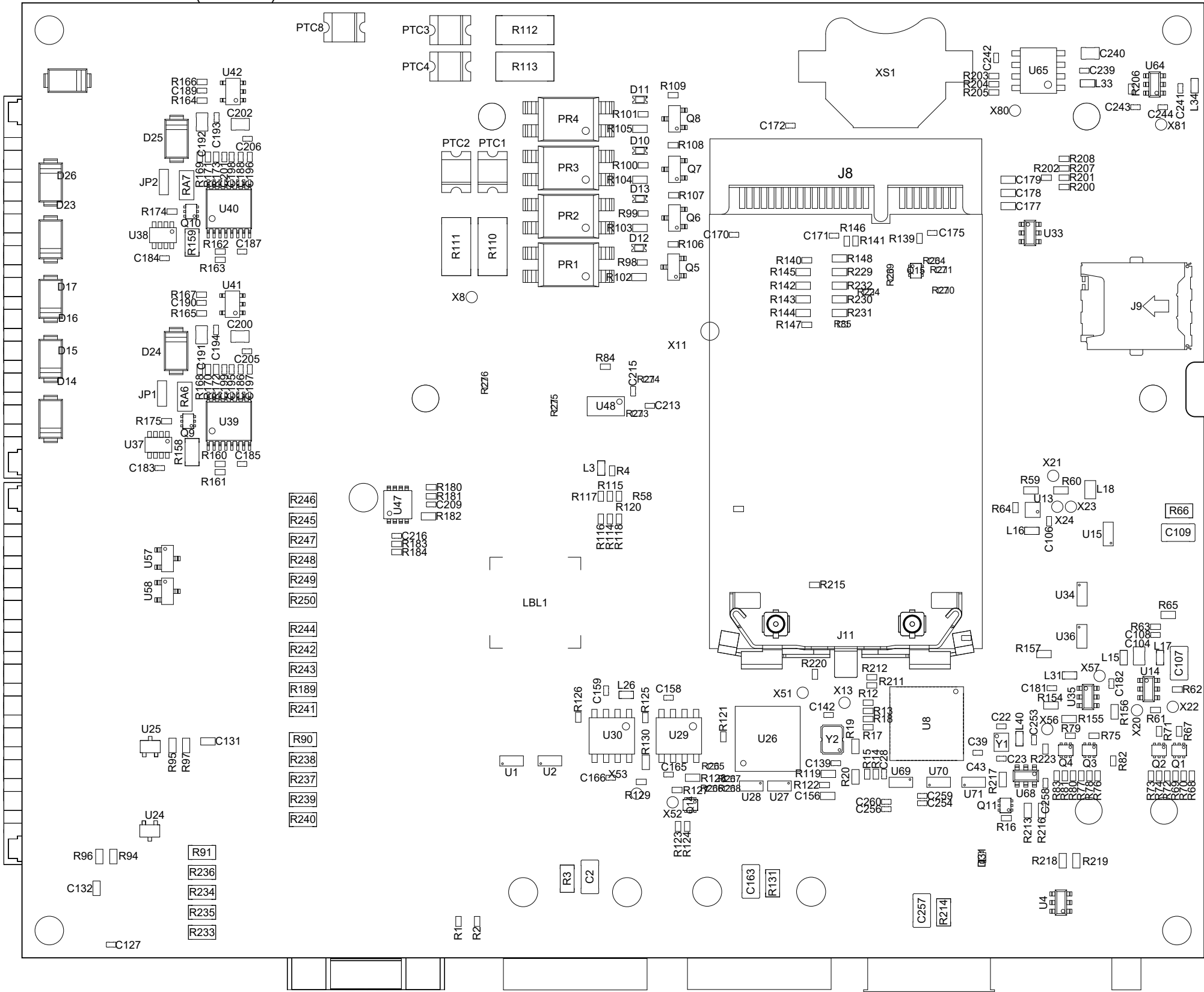
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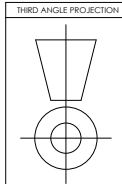
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View from Bottom side (Scale 2:1)



Note:  
2 Standard Version Bottom Side

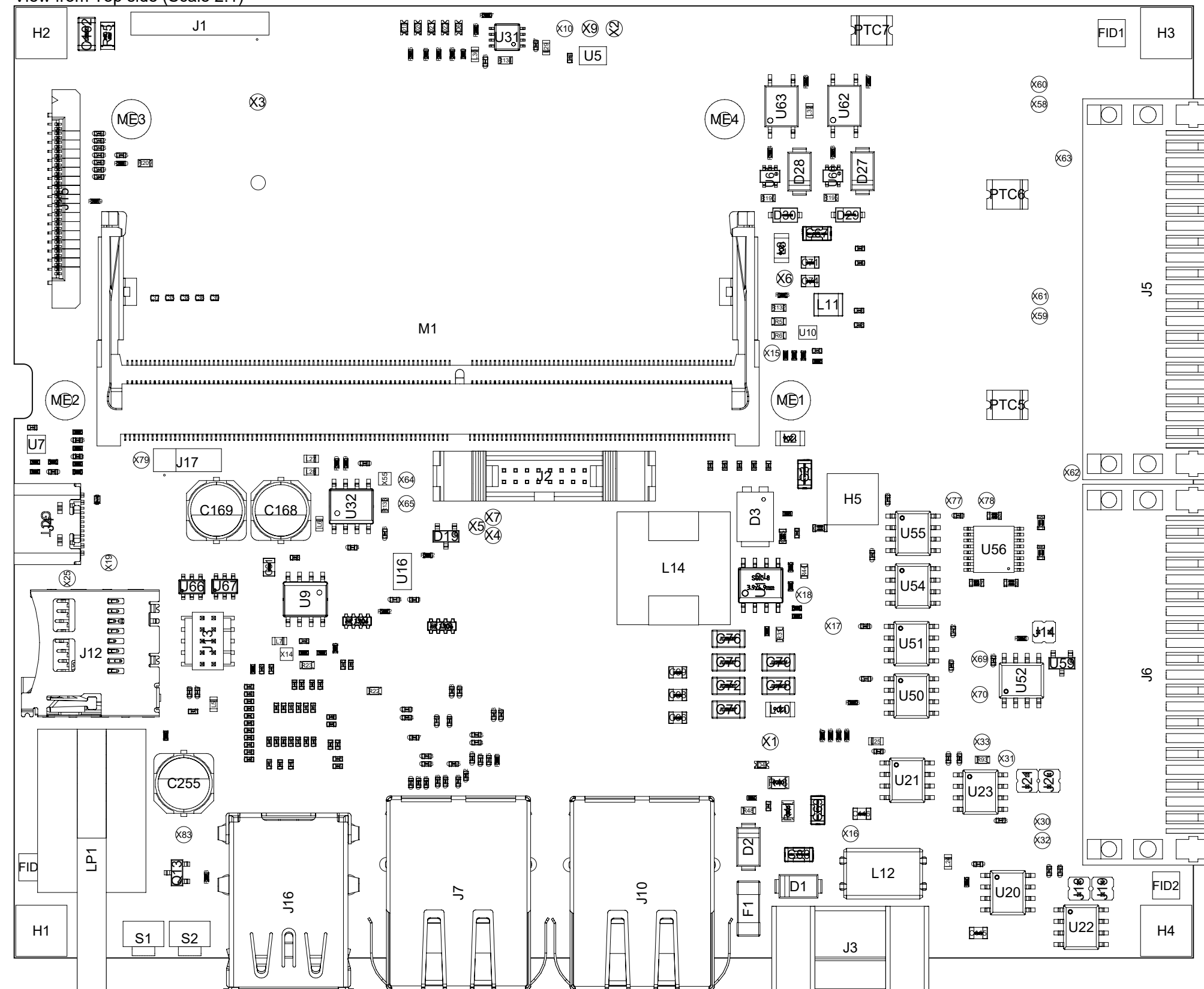


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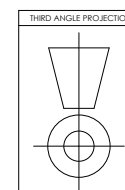
View from Top side (Scale 2:1)



Note:



3 Extended Version Top Side



	NEXT ASSY	USED ON
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Toradex Solutions Inc.

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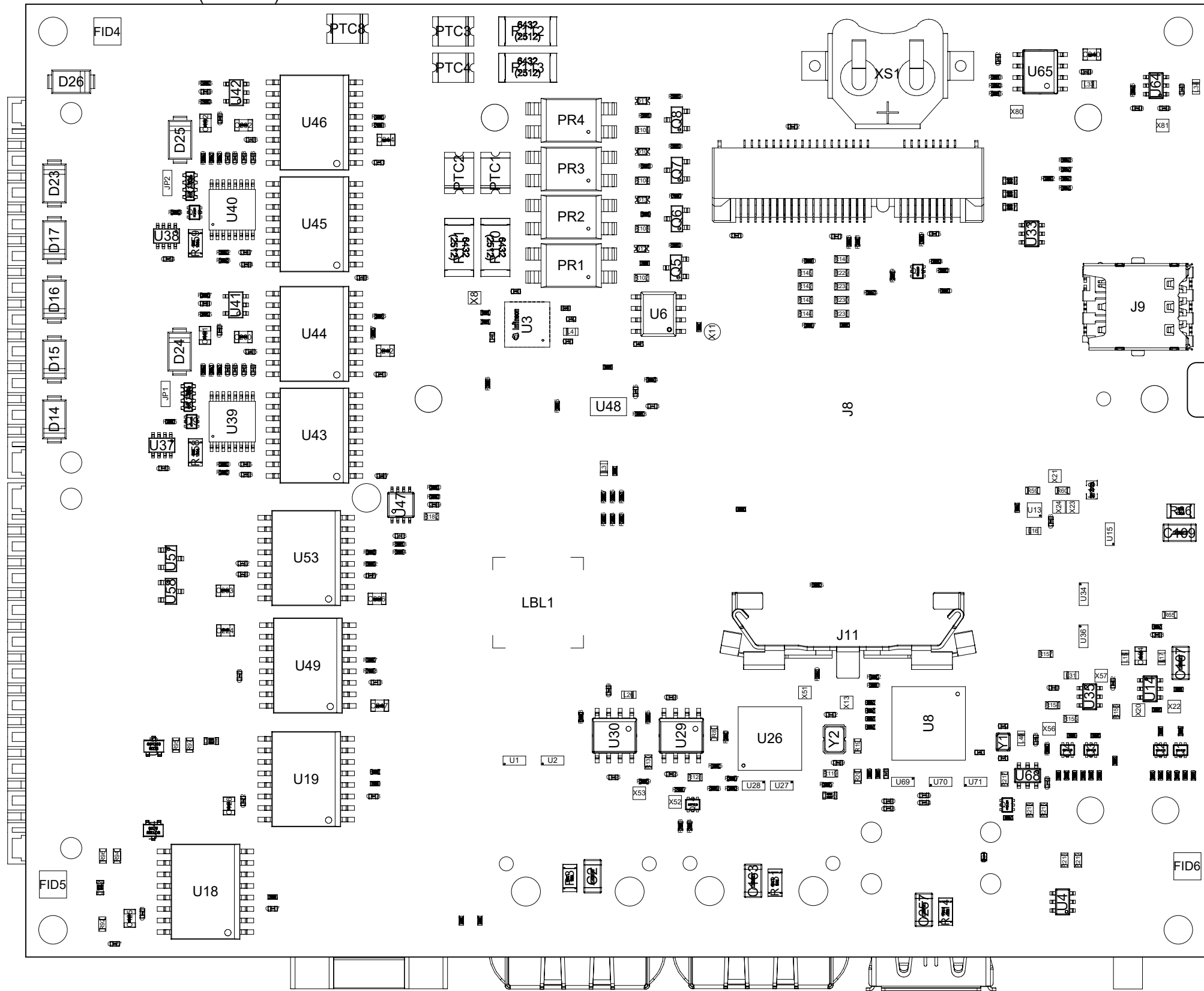
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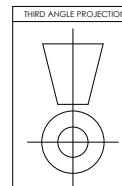
View from Bottom side (Scale 2:1)



Note:



Extended Version Bottom Side



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SHEET:		4 OF 4	