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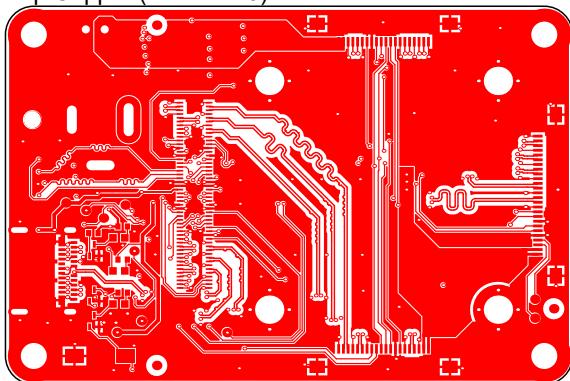
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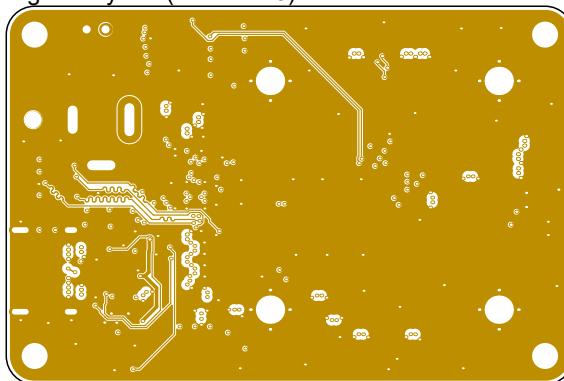
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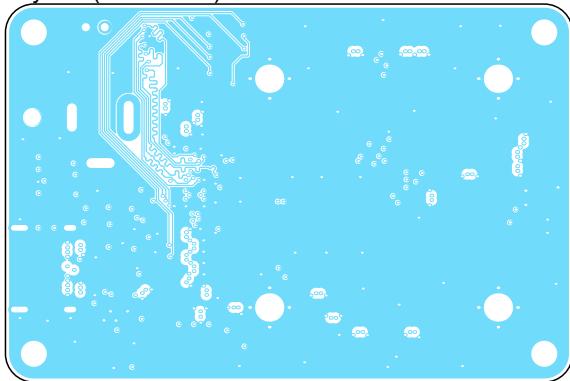
Top Copper (Scale 1.25)



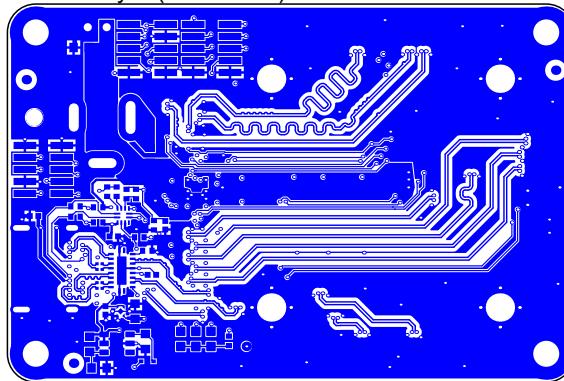
Signal Layer 1 (Scale 1.25)



Layer 1 (Scale 1.25)



Bottom Layer (Scale 1.25)



## FABRICATION NOTES:

Fabricate per IPC-6011 & IPC-6012 CLASS 2  
Inspect per IPC-A-600 CLASS 2  
Test per IPC-TM-650

PCB has 4 copper layers  
Copper thicknesses are finished and include base foil plus Cu plating on plated layers.

Plugging and plating not required for PTH-in-pad

PCB thickness: 63mil +/- 3mil

Min. trace width/clearance: 4/4mil

Min. hole drill/ring: 8mil/16mil

Soldermask gang relief is allowed for pads in same footprint, if footprint is NSMD.

Soldermask color: WHITE

Silkscreen, non-conductive epoxy ink, color: BLACK

Clip silkscreen as needed to prevent deposition on any exposed copper

Surface finish: ENIG

Hole dimensions are finished size, +/-3mil

Linear board dimension tolerance: +/-10mil

Bow, twist, warp not to exceed 0.75% of greatest diagonal span

PCB shall be UL Recognized printed wiring board (ZPMV2), minimum flammability rating 94V-0

PCB shall be marked with fabricator company or trade name, UL mark, and date code using legend ink on secondary side

All PCBs shall be electrically tested for opens and shorts per gerber.

Test marking shall be marked on secondard side.

Fabricator shall panelize the PCB using mouse bites and tab routing.  
V-scoring not allowed.

Controlled impedance differential pairs shall be within +/-10% for 100ohm targets, and +/-10% for 90ohm targets. See Sheet 3 for transmission line details and location of 90ohm differential pairs.

Title: **BW1098FFC**

Number: D0000190      Revision: R1M1  
E1

Date: 11/29/2019      Sheet: 1 of 3

Drawn by: Brian Weinstein

**LUXonjs**

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### Layer Stack Legend

Layer	Thickness	Type	Gerber	Df	Dk
Top Overlay		Legend	GTO		
Top Mask	0.59mil(0.015mm)	Solder Mask	GTS	3.8	
Top Copper	1.69mil(0.043mm)	Signal	GTL		
	8.27mil(0.210mm)	Dielectric		0.02	4.2
Signal Layer 1	1.40mil(0.036mm)	Signal	G1		
	39.37mil(1.000mm)	Dielectric		0.02	4.2
Layer 1	1.40mil(0.036mm)	Signal	G2		
	8.27mil(0.210mm)	Dielectric		0.02	4.2
Bottom Layer	1.69mil(0.043mm)	Signal	GBL		
Bottom Solder	0.59mil(0.015mm)	Solder Mask	GBS	3.8	
Bottom Overlay		Legend	GBO		
<b>Total thickness: 63.27mil(1.607mm)</b>					

### Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
☆	297	8.00mil(0.203mm)	Plated	None
✖	16	10.00mil(0.254mm)	Plated	None
◇	4	23.62mil(0.600mm)	Plated	None
☒	2	33.86mil(0.860mm)	Plated	None
❖	3	41.34mil(1.050mm)	Plated	None
✚	1	70.87mil(1.800mm)	Non-Plated	None
○	4	108.27mil(2.750mm)	Plated	None
□	4	118.11mil(3.000mm)	Plated	None
331 Total				

Title: **BW1098FFC**Number: D0000190 Revision: R1M1  
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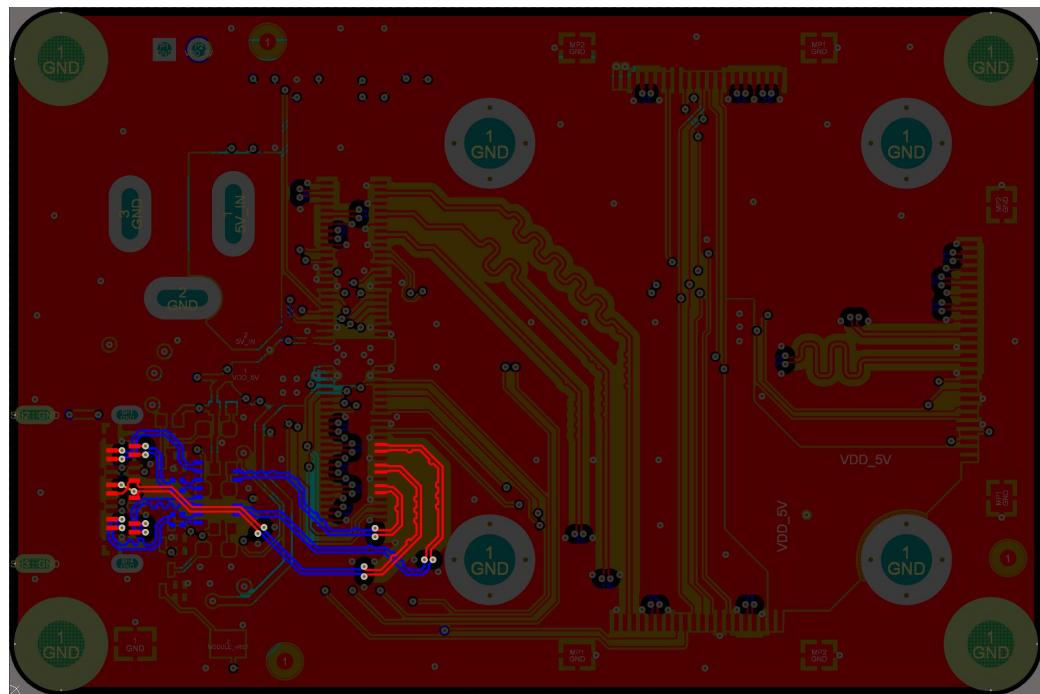
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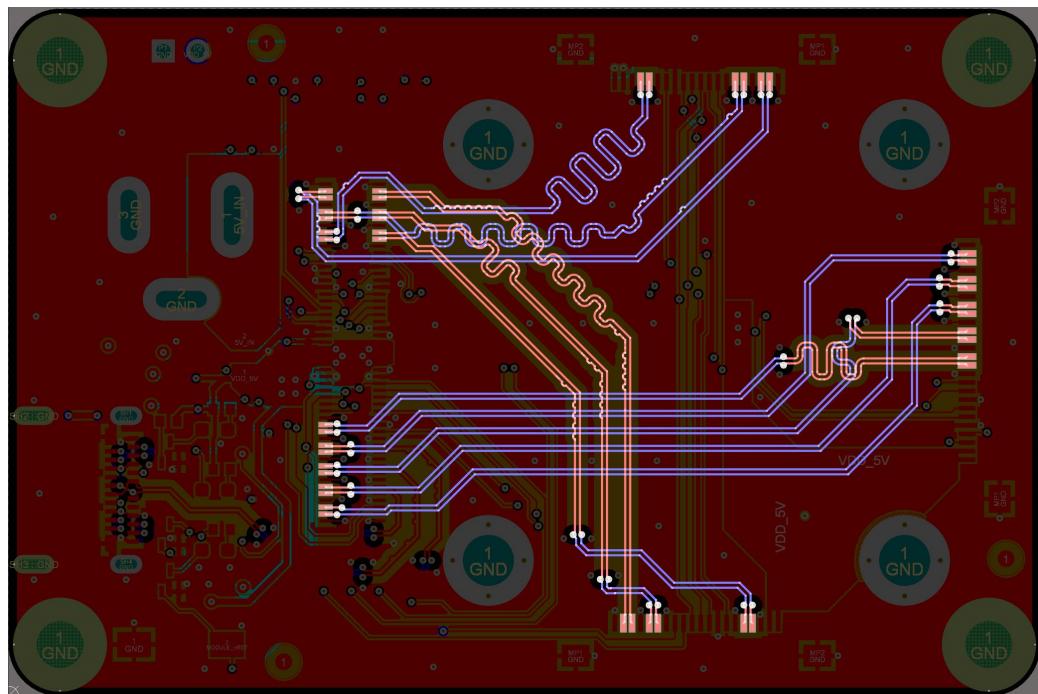
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90 OHM (+/-10%) DIFF PAIRS



100 OHM (+/-10%) DIFF PAIRS



Transmission Line Structure Table

Transmission Line	Target Impedance	Calculated Impedance	Trace layer	Trace Width	Gap	Reference layers
Edge-Coupled Coated Microstrip	100	104.17	Top Copper	6.00mil(0.152mm)	5.42mil(0.138mm)	Signal Layer 1
Edge-Coupled Coated Microstrip	90	93.38	Top Copper	6.22mil(0.158mm)	4.00mil(0.102mm)	Signal Layer 1
Edge-Coupled Coated Microstrip	100	104.17	Bottom Layer	6.00mil(0.152mm)	5.42mil(0.138mm)	Layer 1
Edge-Coupled Coated Microstrip	90	93.38	Bottom Layer	6.22mil(0.158mm)	4.00mil(0.102mm)	Layer 1

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Number: D0000190 Revision: R1M1  
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