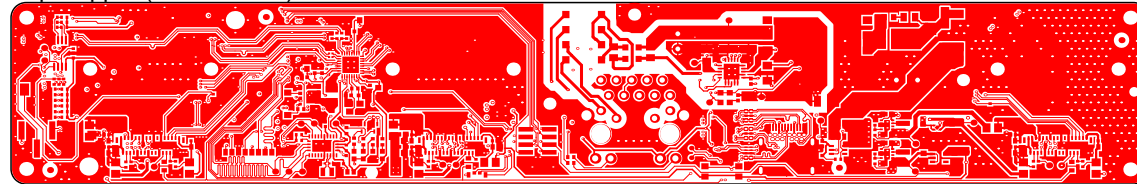
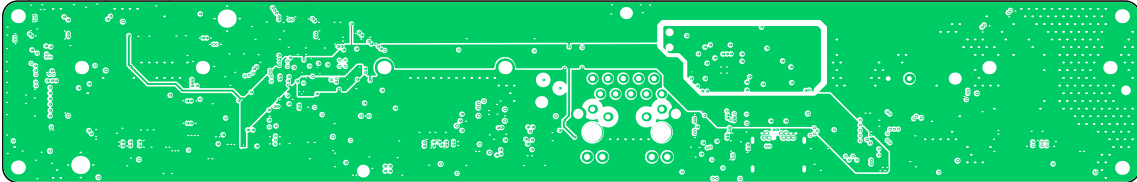


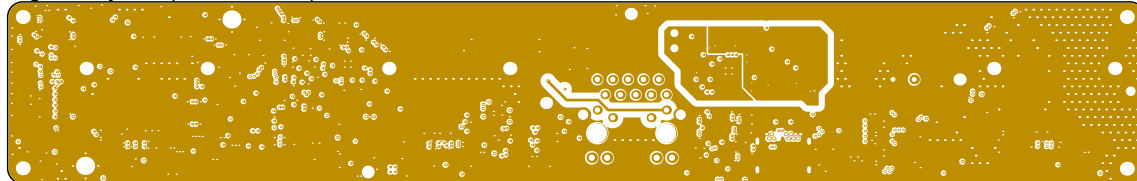
Top Copper (Scale 1:1.25)



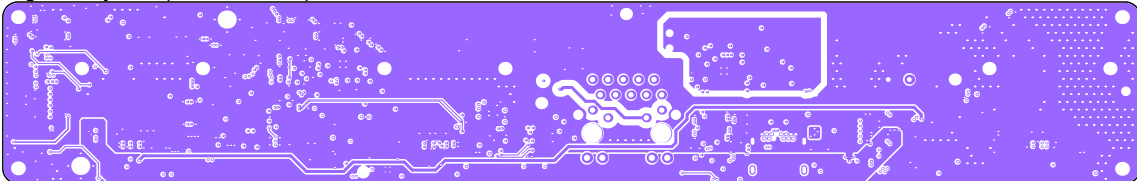
Signal Layer 3 (Scale 1:1.25)



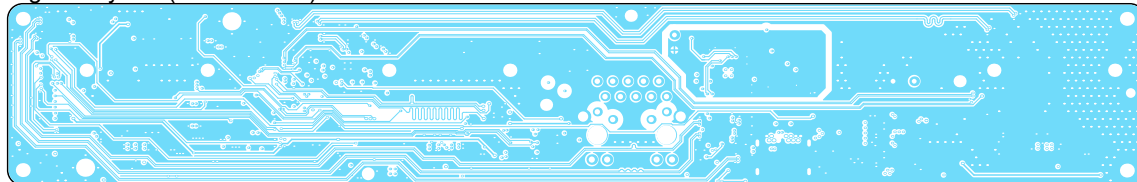
Signal Layer 1 (Scale 1:1.25)



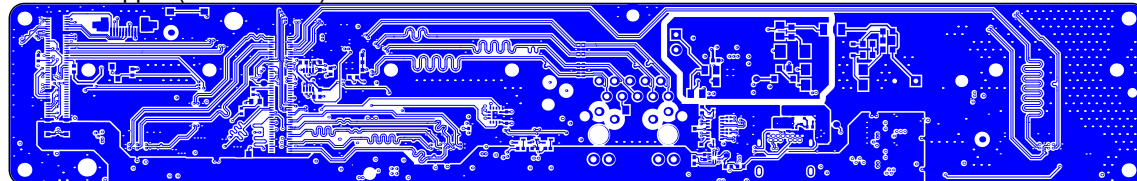
Signal Layer 4 (Scale 1:1.25)



Signal Layer 2 (Scale 1:1.25)



Bottom Copper (Scale 1:1.25)



FABRICATION NOTES:

Fabricate per IPC-6011 & IPC-6012 CLASS 2

Inspect per IPC-A-600 CLASS 2

Test per IPC-TM-650

- * PCB has 6 copper layers
- * Copper thicknesses are finished and include base foil plus Cu plating on plated layers.
- * PCB thickness: please refer to the Layer Stack Legend
- * Min. trace width/clearance: 4/4mil
- * Min. hole drill/ring: 8mil/16mil
- * All vias-in-pad shall be plugged and plated over (VIPPO)
- * Soldermask gang relief is allowed for pads in same footprint, if footprint is NSMD.
- * Silkscreen, non-conductive epoxy ink, color: white
- * Remove silkscreen as needed to prevent ink 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 second side.
- * GM1 shall be used as PCB outline GKO can be ignored.

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

Controlled impedance differential pairs shall be within +/-10% of target impedance. See sheets below for more detail.

Title: **BC2087**

Number: D2088000

Revision: R1M1
E1

Date: 14/02/2023

Sheet: 1 of 4

Drawn by: Boris Chou / Blaz Kvas

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Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
✕	36	7.95mil(0.202mm)	Plated	
◇	531	8.00mil(0.203mm)	Plated	
◎	299	10.00mil(0.254mm)	Plated	
⊕	1	11.81mil(0.300mm)	Plated	
⊗	14	15.75mil(0.400mm)	Plated	
✱	4	23.62mil(0.600mm)	Plated	
◇	4	31.50mil(0.800mm)	Plated	
✱	14	35.43mil(0.900mm)	Plated	
✱	4	40.16mil(1.020mm)	Plated	
⊗	1	62.99mil(1.600mm)	Non-Plated	
○	1	62.99mil(1.600mm)	Plated	
☆	2	66.93mil(1.700mm)	Plated	
□	3	78.74mil(2.000mm)	Plated	
A	6	86.61mil(2.200mm)	Plated	
B	4	90.55mil(2.300mm)	Plated	
▽	2	118.11mil(3.000mm)	Plated	
✕	2	125.98mil(3.200mm)	Plated	+/-0.00mil(0.000mm)
928 Total				

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	1.38mil(0.035mm)	Signal	GTL		
	3.94mil(0.100mm)	Dielectric			4,05
Signal Layer 1	0.69mil(0.018mm)	Signal	G1		
	22.24mil(0.565mm)	Dielectric			4,5
Signal Layer 2	0.69mil(0.018mm)	Signal	G2		
	5.00mil(0.127mm)	Dielectric			4,25
Signal Layer 3	0.69mil(0.018mm)	Signal	G3		
	22.24mil(0.565mm)	Dielectric			4,5
Signal Layer 4	0.69mil(0.018mm)	Signal	G4		
	3.94mil(0.100mm)	Dielectric			4,05
Bottom Copper	1.38mil(0.035mm)	Signal	GBL		
Bottom Mask	0.59mil(0.015mm)	Solder Mask	GBS		3,8
Bottom Overlay		Legend	GBO		

Total thickness: 64.06mil(1.627mm)

Title: **BC2087**

Number: D2088000

Revision: R1M1
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Sheet: 2 of 4

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A

B

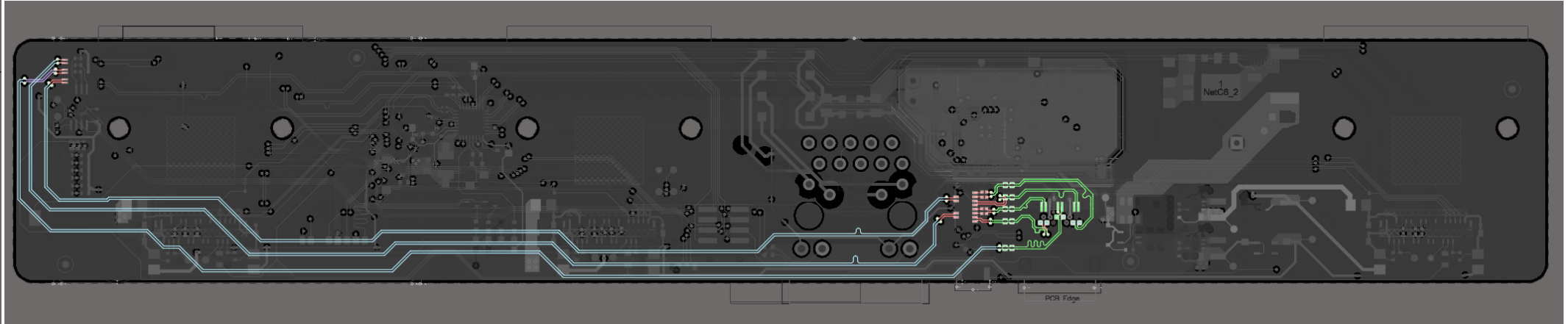
C

D

E

90 OHM (+/-10%) DIFF PAIRS

USB differential pairs



Transmission Line Structure Table

Impedance Id	Target Impedance	Calculated Impedance	Trace layer	Wide Trace Width	Gap	Reference layers	Clearance	Target Tolerance
2	90	92.83	Top Copper	5.12mil	5.12mil	Signal Layer 1	5.00mil	10%
4	90	89.97	Signal Layer 2	5.17mil	5.89mil	Signal Layer 1,Signal Layer 3	0.00mil	10%
5	90	90.62	Signal Layer 4	4.33mil	5.51mil	Signal Layer 3,Bottom Copper	0.00mil	10%
7	90	92.83	Bottom Copper	5.12mil	5.12mil	Signal Layer 4	5.00mil	10%

Title: **BC2087**Number: D2088000 Revision: R1M1
E1

Date: 14/02/2023 Sheet: 3 of 4

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A

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A

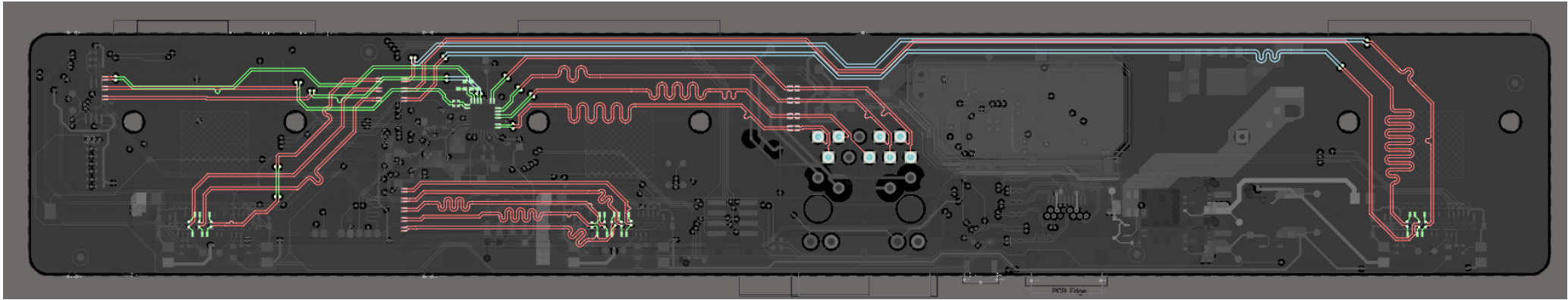
B

C

D


E

100 OHM (+/-10%) DIFF PAIRS



Transmission Line Structure Table

Impedance Id	Target Impedance	Calculated Impedance	Trace layer	Wide Trace Width	Gap	Reference layers	Clearance	Target Tolerance
1	100	100.02	Top Copper	5.12mil	7.67mil	Signal Layer 1	5.00mil	10%
3	100	99.98	Signal Layer 2	5.12mil	10.52mil	Signal Layer 1,Signal Layer 3	0.00mil	10%
6	100	100.02	Bottom Copper	5.12mil	7.67mil	Signal Layer 4	5.00mil	10%

Title: BC2087		
Number: D2088000	Revision: R1M1 E1	
Date: 14/02/2023	Sheet: 4 of 4	PROPRIETARY AND CONFIDENTIAL
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A

B

C

D

E