

	A	B	C	D	E
1	<div>L1 TOP (Scale 1:1.25)</div>	<div>L4 POWER (Scale 1:1.25)</div>		<div>FABRICATION NOTES:</div> <p>Fabricate per IPC-6011 & IPC-6012 CLASS 2 Inspect per IPC-A-600 CLASS 2 Test per IPC-TM-650</p> <ul style="list-style-type: none"> * 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 slikscreen 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 secondard side. * GM1 shall be used as PCB outline GKO can be ignored. <p>Fabricator shall panelize the PCB using mouse bites and tab routing. V-scoring not allowed.</p> <p>Controlled impedance differential pairs shall be within +/-10% of target impedance. See sheets below for more detail.</p>	1
2	<div>L2 GND (Scale 1:1.25)</div>	<div>L5 GND (Scale 1:1.25)</div>			2
3	<div>L3 HS (Scale 1:1.25)</div>	<div>L6 BOT (Scale 1:1.25)</div>			3
4					4
	A	B	C	D	E

Title: EL2086	
Number: D2088000	Revision: R0M0 E0
Date: 19/05/2023	Sheet: 1 of 4
Drawn by: Eason Lin	

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Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
⬢	345	8.00mil(0.203mm)	Plated	
⊙	155	10.00mil(0.254mm)	Plated	
☆	34	12.00mil(0.305mm)	Plated	
B	1	27.56mil(0.700mm)	Non-Plated	
○	1	35.43mil(0.900mm)	Non-Plated	
⊕	2	59.06mil(1.500mm)	Non-Plated	
□	2	90.55mil(2.300mm)	Plated	
⊛	2	106.30mil(2.700mm)	Plated	
▽	2	118.11mil(3.000mm)	Plated	
544 Total				

Layer Stack Legend

Layer	Thickness	Type	Gerber	Df	Dk
Top Overlay		Legend	GTO		
Top Mask	0.70mil(0.018mm)	Solder Mask	GTS		3.8
L1_TOP	1.40mil(0.036mm)	Signal	GTL		
	3.00mil(0.076mm)	Dielectric			4.05
L2_GND	1.30mil(0.033mm)	Internal Plane	GP1		
	4.00mil(0.102mm)	Dielectric			4.5
L3_HS	1.30mil(0.033mm)	Signal	G1		
	39.60mil(1.006mm)	Dielectric			4.25
L4_POWER	1.30mil(0.033mm)	Signal	G2		
	4.00mil(0.102mm)	Dielectric			4.5
L5_GND	1.30mil(0.033mm)	Signal	G3		
	3.00mil(0.076mm)	Dielectric			4.05
L6_BOT	1.40mil(0.036mm)	Signal	GBL		
Bottom Mask	0.70mil(0.018mm)	Solder Mask	GBS		3.8
Bottom Overlay		Legend	GBO		
Total thickness: 63.00mil(1.600mm)					

Title: **EL2086**

Number: D2088000 Revision: R0M0
E0

Date: 19/05/2023 Sheet: 2 of 4

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A

B

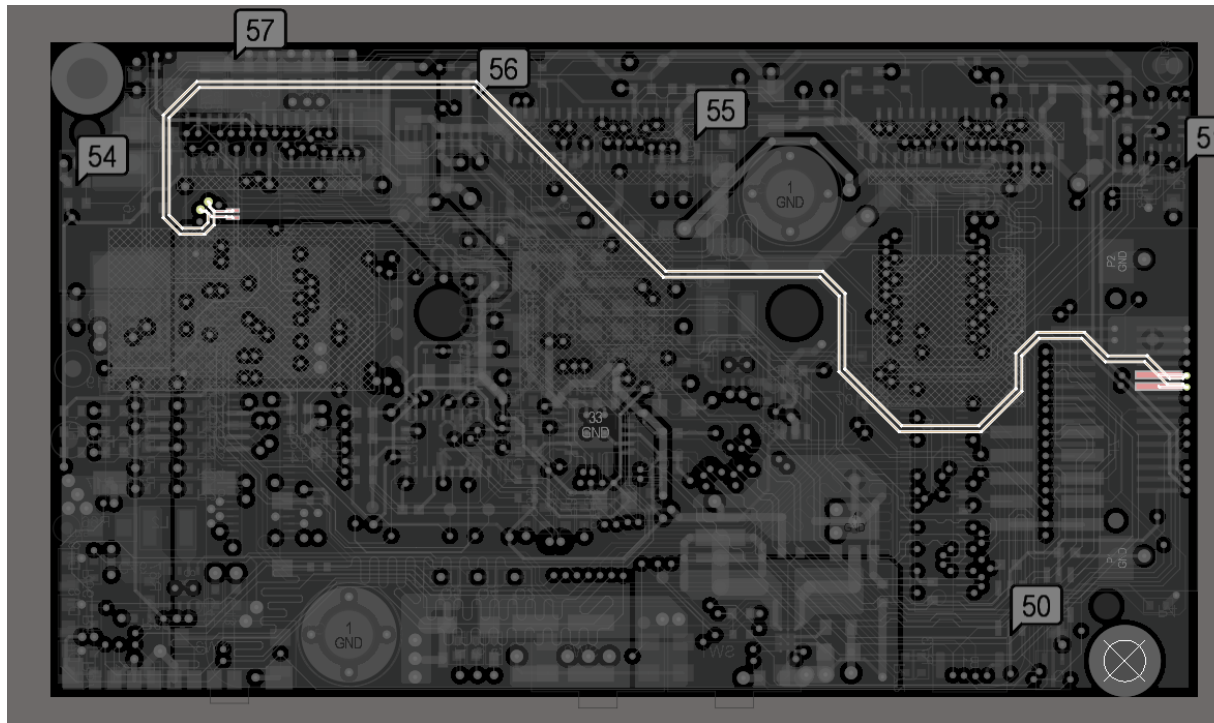
C

D

E

85 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	85	90.02	L1_TOP	5.00mil	8.00mil	L2_GND	5.00mil	10%
5	85	80.94	L3_HS	5.50mil	8.00mil	L2_GND,L4_POWER	0.00mil	10%
9	85	90.02	L6_BOT	5.00mil	8.00mil	L5_GND	5.00mil	10%

Title: **EL2086**

Number: D2088000

Revision: R0M0
E0

Date: 19/05/2023

Sheet: 3 of 4

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A

B

C

D

E

A

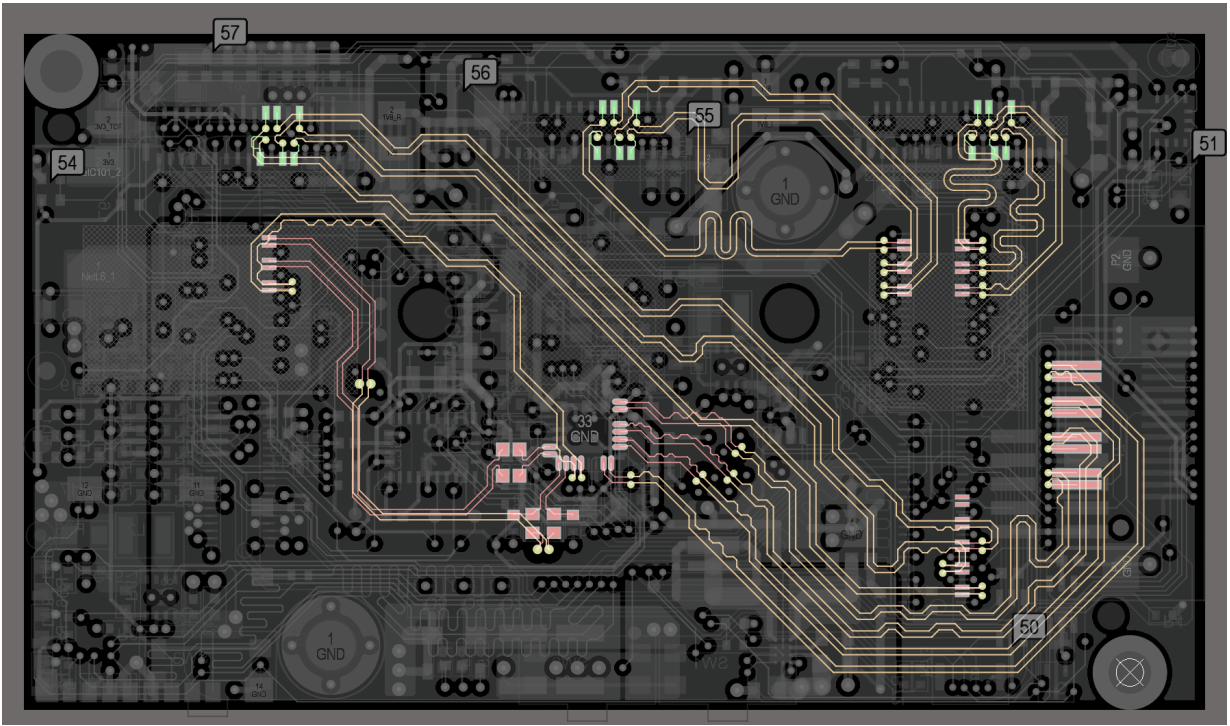
B

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	104.76	L1_TOP	3.50mil	8.00mil	L2_GND	5.00mil	10%
4	100	93.48	L3_HS	4.00mil	9.00mil	L2_GND,L4_POWER	0.00mil	10%
8	100	104.76	L6_BOT	3.50mil	8.00mil	L5_GND	5.00mil	10%

Title: EL2086	
Number: D2088000	Revision: R0M0 E0
Date: 19/05/2023	Sheet: 4 of 4
Drawn by: Eason Lin	

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A

B

C

D

E