PCB Fabrication Specification

1.	General Quality criteria
1.1	Quality management according to ISO 9001.
1.2	PCB Acceptability in accordance with IPC-A-600/IPC-6012, Class 3.
1.3	Reference numbers indicating to UL compliance, both with the technology and materials used, must be printed on the PCB. UL certification documentation must be available upon request.
1.4	Shipping PCBs that deviate from standards specified in this document without prior written authorization is strictly prohibited.
2.	**Laminate**
2.1	PCB substrate according to IPC-4101/124. Final material selection and deviations from requested stack-up must be confirmed in written form.
2.2	Minimal Glass Transition Temp Tg 150° C.
2.3	Comparative Tracking Index CTI Class 3a (175V≤ CTI <400V) or better.
2.4	UL flammability rating of UL 94V-0.
2.5	-
3.	**Electroplating**
3.1	All specified copper layer thicknesses refer to targets post-plating process.
4.	**Surface finish**
4.1	ENIG as per IPC-4552.
4.2	Copper thieving pads prohibited.
5.	**Via filling**
5.1	Vias filled & capped from both sides according to IPC-4761 type VII.
5.2	-

6.	Solder mask
6.1	Solder mask over both PCB sides, over bare copper, using photoimageable GREEN ink.
6.2	Solder mask thickness according to IPC SM-840, conductor edge thickness ≥ 8 µm.
6.3	Solder mask quality IPC SM-840 Class H.
6.4	Finished solder mask surface energy shall be equal to or greater than 40 dynes/cm.
7.	**Silk screen**
7.1	Printed on BOTH sides using WHITE non-conductive resin or equivalent.
7.2	No resin allowed in holes or pad mask openings.
7.3	UL recognition mark, UL retardant class, manufacturer identifcation must be marked inside dedicated area "PCB info", refer to page 4 of this document.
7.4	4-digit production date and factory identification code shall be added to the same box as 7.3.
8.	**Testing**
8.1	All boards shall be tested according to IPC 9252A.
8.2	-
9.	**Panelization**
9.1	PCB shall be panelized by EMS as suitable for PCB Assembly.
10.	**Environmental**
10.1	RoHS Compliance.
10.2	REACH Compliance.

Title:	*KR-Df-01-EL-00_FAB.PCBDwf*		Size: A3	Sheet: 1 of 4
Project:	KR-Df-01-EL-00	Revision: v1	Date: 2024-10-24	
Variant:	[No Variations]	Revision R&D: IK,KK	Last modified: 19/12/2024	
		Checked By: KK	Date: 2024-02-23	

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Akadeemia tee 21/4-304
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Estonia 12618

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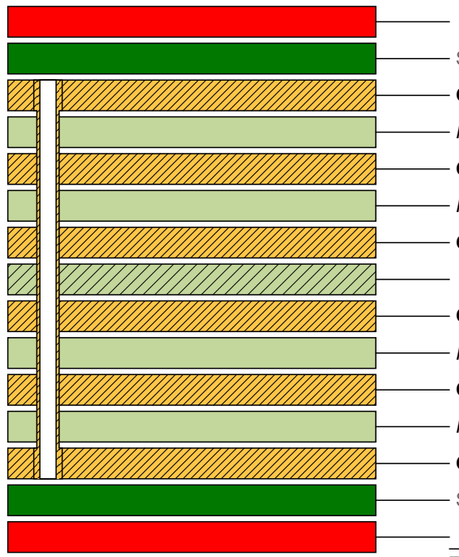
Layer Stack Legend



Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
Surface Material	Top Solder	0.015mm	Solder Resist	Solder Mask	GTS
CF-004	**Top Layer 1**	**0.070mm**		**Signal**	**GTL**
Prepreg		*0.220mm*	*PP-006*	*Dielectric*	
Copper	**Layer 2**	**0.069mm**		**Signal**	**G1**
Prepreg		*0.360mm*	*PP-006*	*Dielectric*	
CF-004	**Layer 3**	**0.069mm**		**Signal**	**G2**
		0.220mm	*FR-4*	*Dielectric*	
CF-004	**Layer 4**	**0.069mm**		**Signal**	**G3**
Prepreg		*0.360mm*	*PP-006*	*Dielectric*	
Copper	**Layer 5**	**0.069mm**		**Signal**	**G4**
Prepreg		*0.220mm*	*PP-006*	*Dielectric*	
CF-004	**Bottom Layer 6**	**0.070mm**		**Signal**	**GBL**
Surface Material	Bottom Solder	0.015mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

Total thickness: 1.824mm

Title:	*KR-Df-01-EL-00_FAB.PCBDwf*		Size: A3	Sheet: 2 of 4
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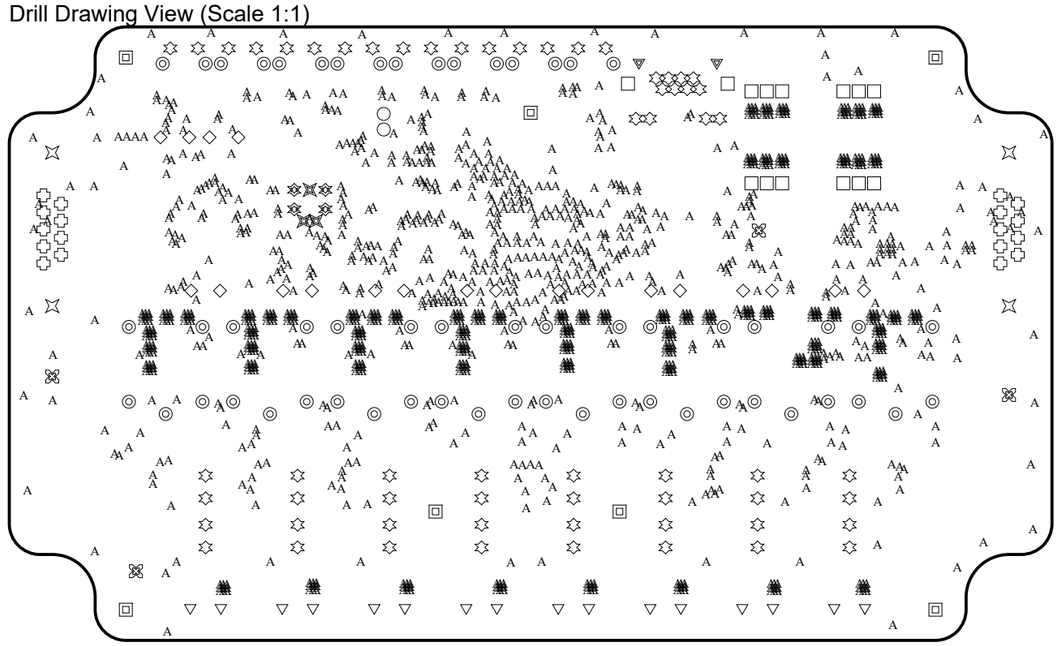
Drill Drawing

Drill Drawing View (Scale 1:1)



Drill Table

Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via / Pad	Pad Shape
A	1376	0.30mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Via	
	3	1.00mm	Non-Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	60	1.00mm	Plated	(Mixed)	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	2	1.10mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	(Mixed)
	18	1.20mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	56	1.30mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	16	1.40mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	20	1.60mm	Non-Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	14	1.70mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	4	2.40mm	Non-Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	4	3.00mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	4	3.20mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	2	3.30mm	Non-Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	7	4.20mm	Plated	Round	Top Layer 1 - Bottom Layer 6	Pad	Rounded
	1586 Total						

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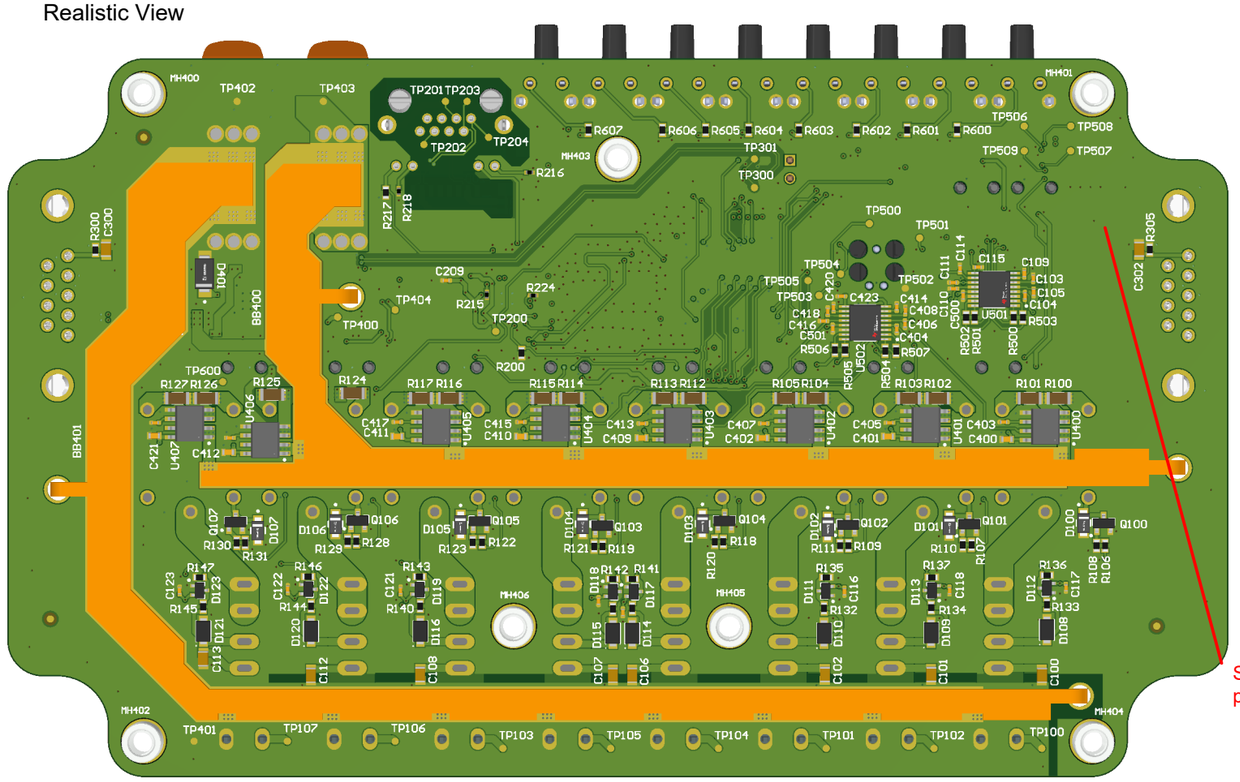
Realistic View

Realistic View



Specify Spec. 7.3/7.4
printing location

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