

## KAPABILITET



### MIX:

Production time	Minimum 2 days
Shipment time	2 days
Base materials	FR4 FR4 High TG
Product range	1, 2 and 4 layer. 1.6 mm; 35 um copper in all layers. 4-layer have unspecified distance between layers.
Surface finish	Lead-free HASL
Solder mask	Green 0.1 mm bridge
Component printing	White Minimum 0.125 mm track width
Hole, minimum size	0.30 mm
Conductor width	0.125 mm
Conductor spacing	0.125 mm
Annular ring	0.15 mm

### General:

	Standard	Special
Production standard	IPC 6012C, Class 2	IPC 6012C, Class 3 Perfag Any special requirements
Production time	5 days	1-2 days
Shipment time	2 days	1 day. 3 days -3 weeks on series
Base materials	FR4 FR4 High TG	Rogers Aluminium core/carrier Polyimide Arlon
Product Range	Single sided, double sided Multilayer Prototypes Small & large production series	High density interconnect (HDI) Flex, Flex-Rigid Metal core/carrier (Alu) Impedance controlled PCBs
Board size	Min 25x25, if smaller PCB must be panelized Max 500x600 mm	Max 520-720 mm
PCB thickness	1.6 mm standard, $\pm 10\%$	FR4: 0.1 – 6.0 mm Min inner layer: 0.05 mm

Copper thickness	35μ Plating: 20μ for IPC Class 2	12-200μ Plating: 25μ for IPC Class 3
Surface finish	Lead free HASL ENIG (chem. NiAu)	Silver Chemical Tin Hard Gold HASL (Non RoHS, with lead)
Mechanical processing	Routing (2.4, 2.0, 1.6 mm) Routing tolerance: ±0.10 mm Scoring (PCB thickness: 0.8-2.4 mm) Scoring, min dist. Copper: 0.4 mm	Min. routing tool: 0.6 mm dia. Plated edges Depth controlled routing Castellated holes (half moon holes) Blind & buried vias Peelable (blue) mask
Holes	Mechanical: 0.25-6.2 mm Aspect ratio Through hole: 1:10 Aspect ratio blind hole: 1:1 Finished hole dia. tolerance: ± 0.1 mm.	Mechanical: 0.10 mm Laser drill: 0.1 mm (0.07 mm possible) Aspect ratio Through hole: 1:20 Plugging: with solder mask, copper, non conductive paste. Overplate possible.
Solder mask	Color: Green Bridge: 0.1 mm Over size: 0.1 mm Thickness, typical: 8-40μ	Color: Red, white, black & blue Bridge: 0.07 mm Over size: 0.075 mm
Component printing	Color: White Minimum line width: 0.125 mm	Color: Yellow & Black Minimum line width: 0.1 mm
Data formats	Macaos orders Gerber Extended, drill files ODB++	Basic Gerber pdf, doc, xls ect.
Minimum distances: - Npt – copper - Outline – copper - Scoring – copper - Copper – copper	See tables below 0.2 mm 0.4 mm See tables below	See tables below 0.1 mm 0.3 mm See tables below

**Outer layer , copper thickness and line/space. Cheapest (Minimum)**

Starting copper thickness	Line width	Line space	NPTH – copper
18μ (43 plated)*	150μ (100μ)**	150μ (100μ)**	200μ (150μ)
35μ (70 plated)	200μ (150μ)	200μ (150μ)	225μ (175μ)
70μ (105 plated)	300μ (250μ)	300μ (250μ)	250μ (200μ)
105 (140 plated)	400μ (300μ)	400μ (350μ)	300μ (250μ)
140μ	500μ (400μ)	500μ (400μ)	400μ (300μ)
210μ	600μ (500μ)	600μ (500μ)	500μ (400μ)

\*) Commonly known as 35μ/1oz.

\*\*\*) Down to 50μ width/space on 9μ base copper.

**Inner layer , copper thickness and line/space. Cheapest (Minimum)**

Starting copper thickness	Line width (A)	Line space (B)	NPTH – copper (C)
18μ	150μ (100μ)	150μ (100μ)	(300μ)
35μ	150μ (125μ)	150μ (125μ)	(300μ)
70μ	250μ (200μ)	250μ (200μ)	(300μ)
105	300μ (250μ)	300μ (250μ)	(300μ)
140μ	500μ (350μ)	500μ (350μ)	(400μ)
210μ	600μ (500μ)	600μ (500μ)	(500μ)

**Stencils:**

Maximum size	595x595 mm
Thickness	100, 120, 130, 150, 180, 200, 250μ
Treatment	Electro polished
Etching	Up to 2 thicknesses pr. stencil. Etch down in 10μ steps from base thickness.
Minimum opening size	50μ
Minimum distance opening to opening	150μ