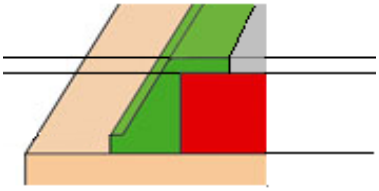
Basematerial

Soldermask (10-30µm/each side)



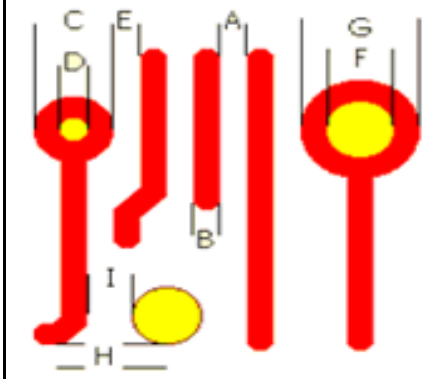
Plating on Pads (10 – 15 µm HAL, 1µm)

Copper (30-50µm each Side)

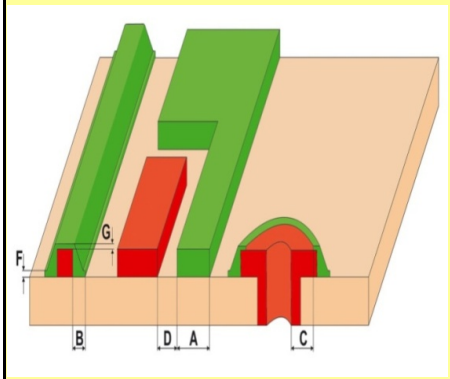
Standard Industry Quality FR4 1,55mm (+/- 0,13mm)

Surface	Layer build up	Thickness	Shelf life
ChemTin (Lead free)	Sn	~ 1µm	ca.12 Month
Hot Air Leveling (Lead free)	SnCu 0,7 Ni	~ 10µm	ca.12 Month

A lot of components start even with a diameter of **0,5mm/20mil** endsize, due to this we need at least an annular ring of **0,2mm/8mil** around



	min.	Standard
Smallest Drill / Enddiameter (F)	0,2mm/8mil**	0,3mm/12mil
minimum Air-gap (A)	0,125mm/5mil *	0,15mm/6mil
minimum track width (B)	0,125mm/5mil *	0,15mm/6mil
Smallest annular ring on vias (C-D)	0,25mm/10mil *	0,3mm/12mil
Smallest annular ring on drills (G-F)	-	0,4mm/16mil
Minimum clearance for rout contour (H)	-	0,3mm/12mil
Minimun clearance for npt holes (I)	-	0,3mm/12mil



	min.	Standard
Minimum Soldermask pad (A)	0,1mm/4mil	0,1mm/4mil
Minimum Soldermask width (B)	0,075mm/3mil	0,075mm/3mil
Minimum gap for drills (C)	0,125mm/5mil *	0,15mm/6mil
Minimum gap on solder surfaces (D)	0,075mm/4mil	0,075mm/4mil
Soldermask layer thickness (F)	0,02mm-0,05mm 0,8mil - 2mil	0,02mm-0,05mm 0,8mil - 2mil
Minimum soldermask layer-thickness over tracks (G)	0,008mm/0,3mil	0,008mm/0,3mil

*** extracharge**

**** extracharge / only Chemical Tin**

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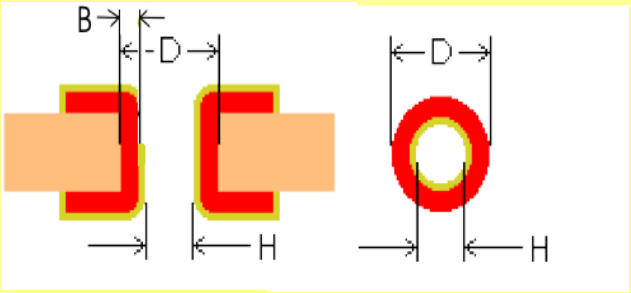
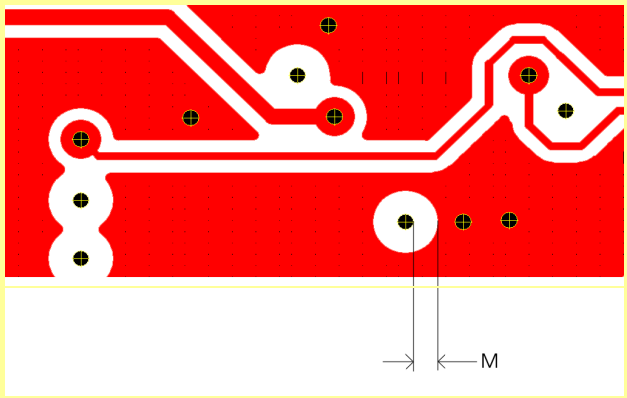


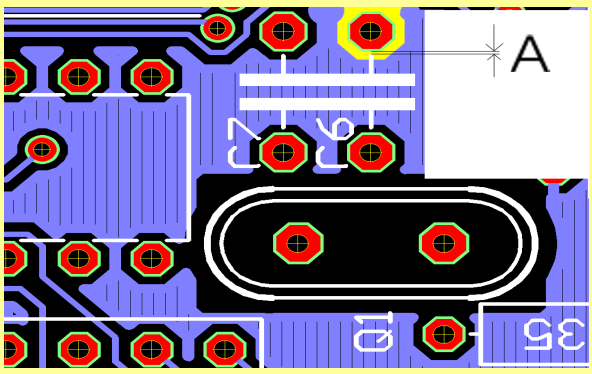
Minimum layer-thickness in the hole (B) 0,04mm
(0,03mmCu + 0,010mmHAL)

Tool diameter (D)
Finished diameter after manufacture (H)



Multilayer clearence recess on innerlayers(M) 0,5mm
(Gap between Drill and Copper)

Unfortunately blind and buried vias are not possible in PCB-POOL but we will be happy to offer you a "NonPool" quote for this kind of technology, just contact our sales team.



Silkscreen will be clipped back (to a diameter of 0,1mm) from any corresponding soldermask pad in order to prevent pads being printed on (A)

Recommended

Minimum script thickness 0,125mm
Script height 2,00mm

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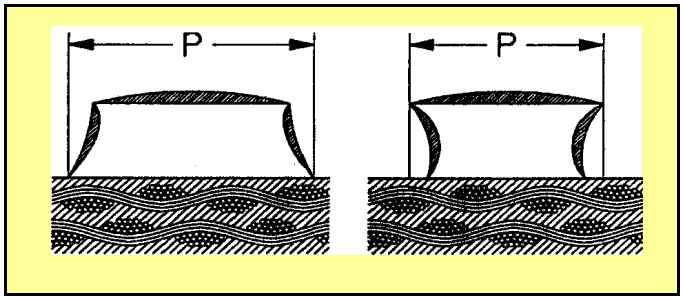
General Requirements

The 75% Rule

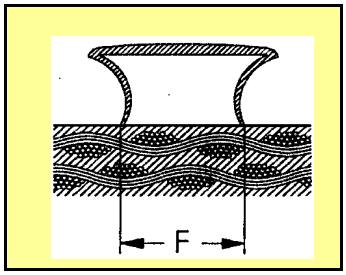
All dimensions are based on the vertical projection P on the PCB surface (Fig. 1)

Fig.1



To ensure the liability of the trace on the base material, the line width must not fall below 75% of their nominal

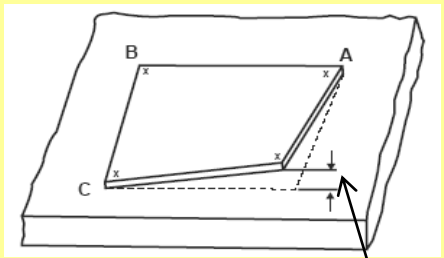
Fig.2



Warp and Twist

Normal Warp and Twist requirements:

	PCB thickness t	Warp and twist
Boards for manuall assembly	0,4 ≤ t < 0,8mm	≤ 1,5%
	0,8 ≤ t < 1,5mm	≤ 1,0%
	1,5 ≤ t ≤ 3,2mm	≤ 0,7%
Boards for automatic assembly	0,4 ≤ t < 0,8mm	≤ 1,2%
	0,8 ≤ t < 1,5mm	≤ 0,8%
	1,5 ≤ t ≤ 3,2mm	≤ 0,4%



The twist = (tv based on the diagonal length D): **V=(tv / D) * 100%**

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