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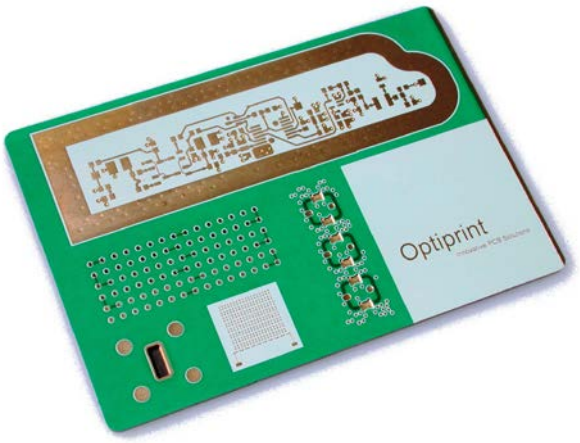
Innovative PCB Solutions

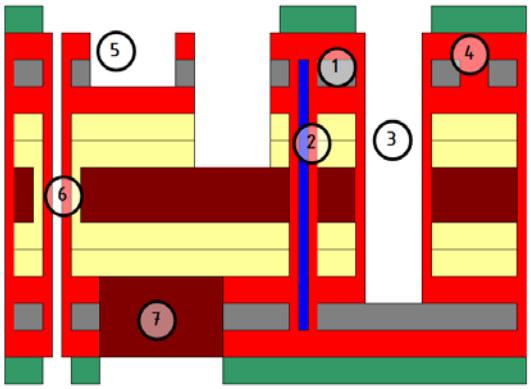
HF Demonstrator Board

- HF structures
- Pockets for MMIC Technologies
- Heatsink solutions
- Via hole filling
- Fine structures



The Demonstrator Board was designed to combine different PCB technologies in a single board. The idea is to show you as an engineer or designer of PCBs what can be integrated in a single PCB.
In the following the different features are described. Some of the features can be symbolised on a stack-up.

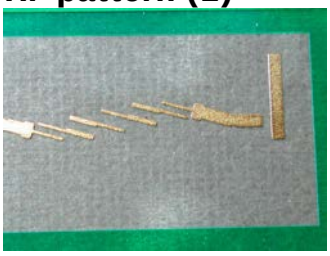
build-up



Soldermask	
Layer 01	0.040
Rogers Ultralam 3850	0.100
Layer 02	0.070
FR4 Prepreg	0.063
FR4 Prepreg	0.063
Copper Core	0.500
FR4 Prepreg	0.063
FR4 Prepreg	0.063
Layer 04	0.018
Rogers 5880	0.200
Layer 05	0.040
Soldermask	

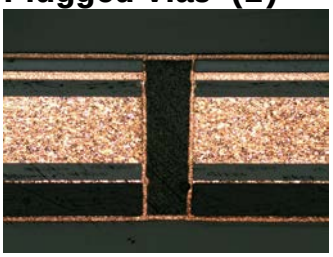
*Alternative materials from Neltec, Arlon or Taconic

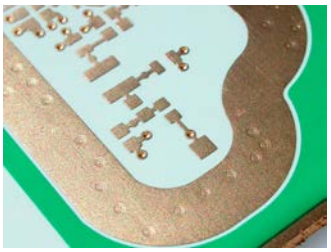
HF pattern (1)



- fine structures
- narrow tolerances
- ± 10µm

Plugged Vias (2)





- overplated vias
- for plated and unplated vias

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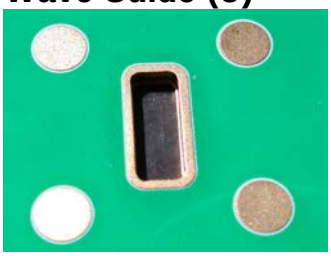
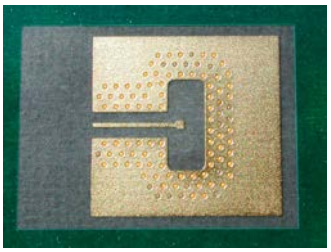
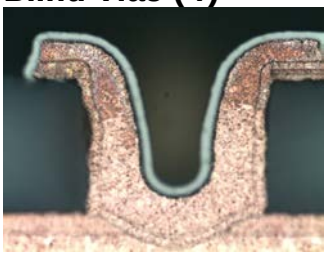
Wave Guide (3)

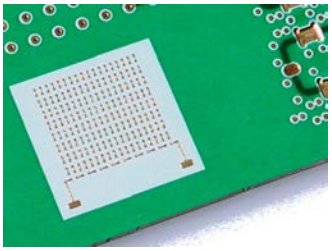




- depth controlled deep routing in to RF-Material
- ± 15µm
- controlled dimensions of RF-feed

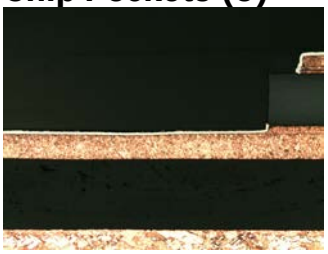
Blind Vias (4)

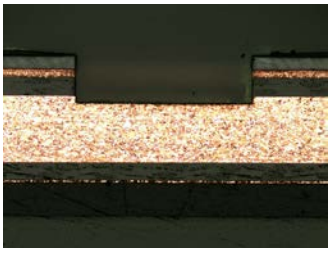




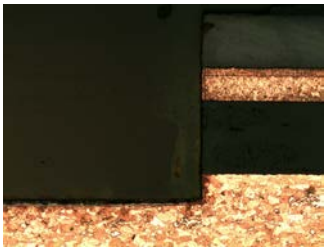
- laser drilled(≥ 40µm) or
- drilled with tools(≥ 75µm)

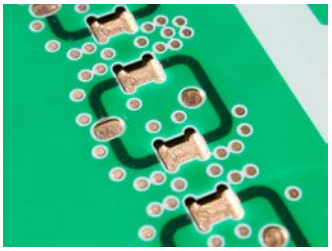
Chip Pockets (5)





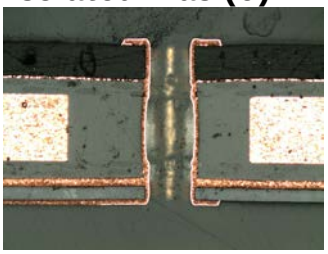
- contact routing into layers of 30µm copper only (see smaller pocket)
- ± 5µm

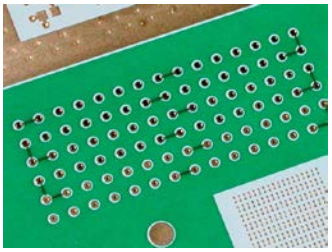




- smooth surface suitable for chips and MMIC's

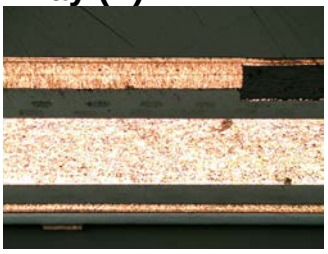
Isolated Vias (6)

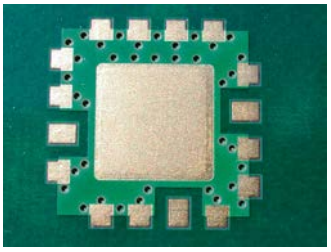




- pre drilled copper-core
- isolation with prepreg or plugging-paste

Inlay (7)





- better heat dissipation
- alternative to copper-core
- cost effective solution