

DT CHAMBERS:  
Final Layout of  
HV distribution board “HVB”  
HVB\_v5



by

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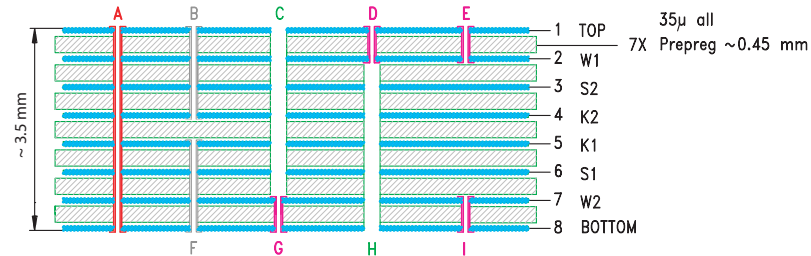
Hans Reithler  
040428

- 8 layers
- ~0.035 mm Cu everywhere
- ~0.455 mm FR4 insulator inside
- glue over Cu of outer layers
- vias through 2, 4, 8 layers
- ~3.5 mm total thickness
- matching GND clamps required

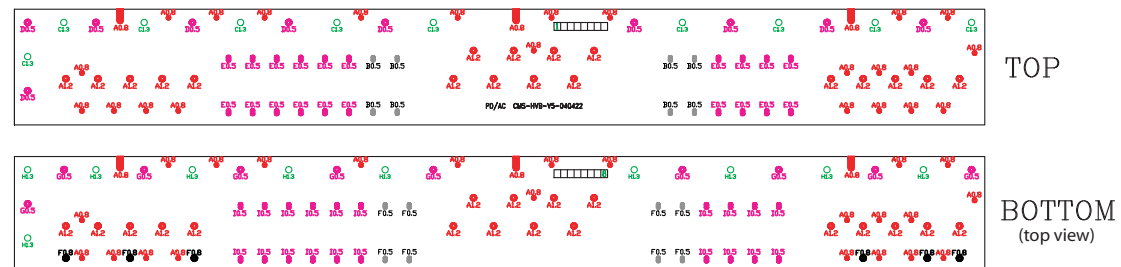
File: 040422HVB\_v5\_bohr1-8.pdf

CMS-HVB\_v5  
status 040422  
EB/GH/HR/PZ

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For detailed information, refer to CAD files.



- Notes:
- Color coding indicates type of vias, in this drawing
  - The numbers next to the letter indicate the final hole diameter in mm
  - To simplify the fabrication, vias are through 2, 4 or 8 layers.



# Final Layout HVB\_v5



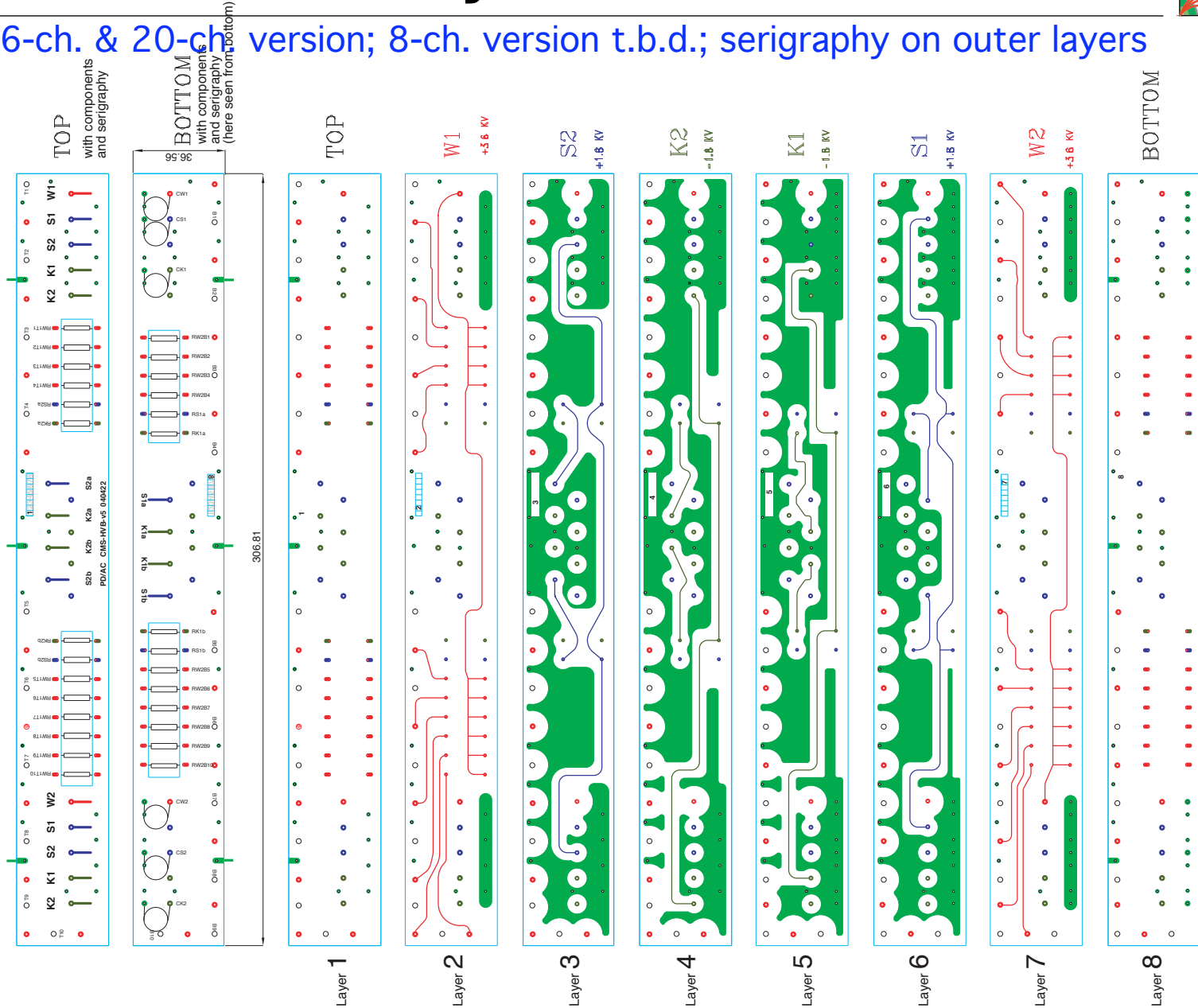
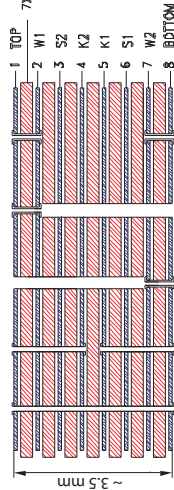
here: 16-ch. & 20-ch version; 8-ch. version t.b.d.; serigraphy on outer layers

File:04022HVB\_v5\_1-8.pdf

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35µm oil  
7X Prepreg ~0.45 mm



## Layout:

Finished for 16- and 20-channel version  
ESR group also agrees to layout  
To be adapted for 8-ch. version (is ~3% of PCBs)

## HVB assembly:

Considering, as complement to IHEP, further assembly at Budapest.

## Validation:

Tests on preseries  
Routine tests at HVB assembly site(s), on jigs  
Long-term tests at DT assembly sites and at CERN, on chambers

## Offers:

From 7 producers, prices differ by factor  $>2$  and saturate at ~2000 PCBs  
Producers desire to deliver ~1000 to 1500 PCB/m max.  
Preseries within ~12 working days  
Can discontinue ordering after each delivery

## Ordering:

Go to two producers, for safety in suitable product and schedule  
Preseries of 200, from two producers  
Batch of 2000 from one producer  
Submitted (at Ac and Pd) to administration; takes ~10 working days.