

WEdirekt.

Circuit Boards & Stencils



Webinar HDI Microvia WEdirekt

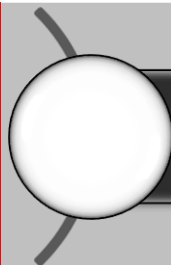


Agenda

- 1 Why HDI Microvia?
- 2 Nomenclature
- 3 WEdirekt „Design Rules“
- 4 Online order process

Why HDI Microvia?

- ➔ **High demand of our customers**
- ➔ **Future-oriented add-on**
- ➔ **Cost-efficient pooling**



Nomenclature

- ➔ **HDI = High Density Interconnection**
- ➔ **Microvia = smallest laser drill**
- ➔ **Pitch = distance from center of a pad to the center of the next pad**
- ➔ **Possible stack-ups = 1-2-1 and 1-4-1**

Nomenclature – layer stack ups

1 – 2 – 1 = 4 layer

HDI Microvia layer

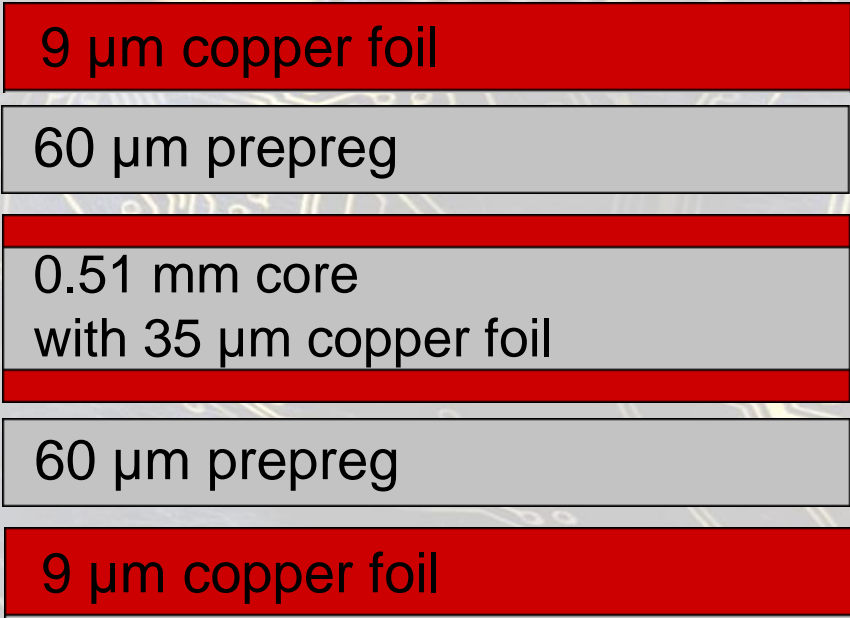
HDI Microvia layer

Innerlayer between the Microvia layer

- Possible thicknesses:
- 0.80 mm
 - 1.00 mm
 - 1.55 mm

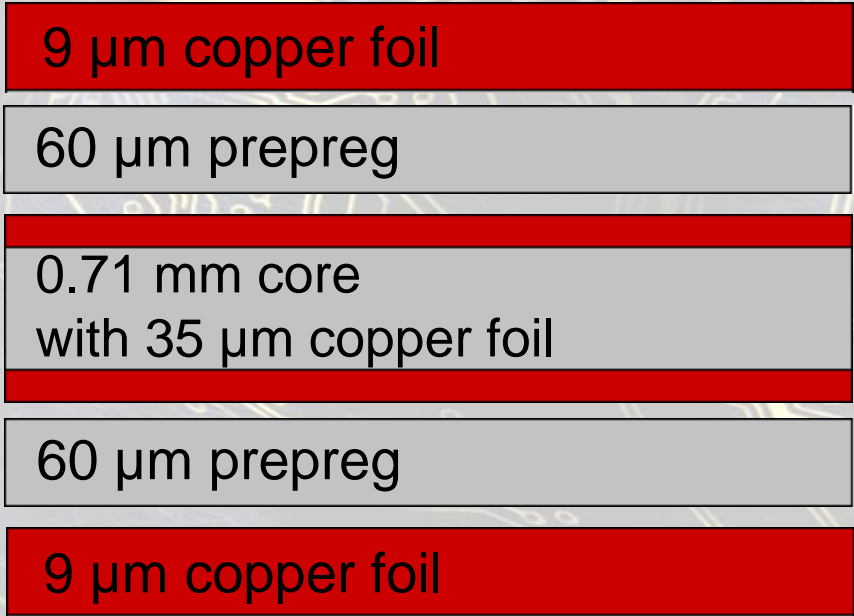
Nomenclature – layer stack ups

1-2-1 stack-up,
4 layer,
0.80 mm thickness



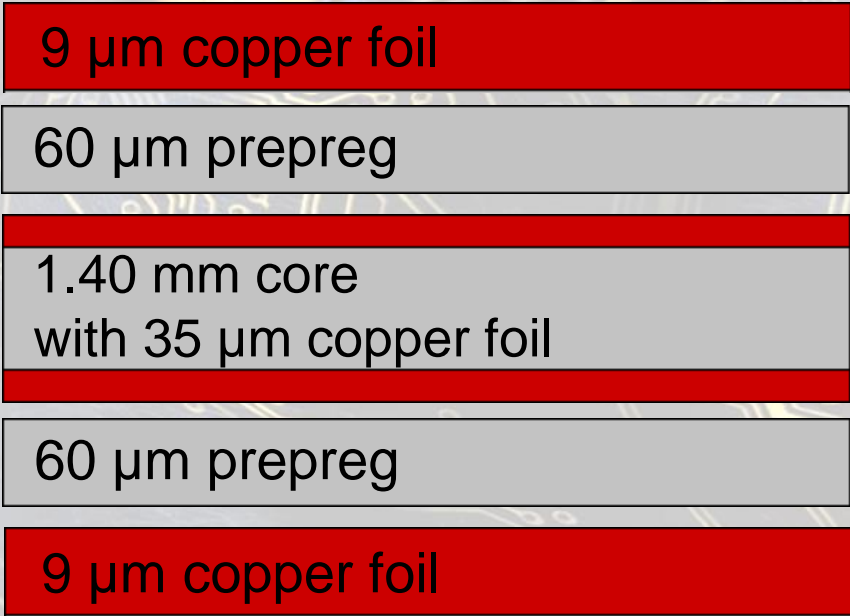
Nomenclature – layer stack ups

1-2-1 stack-up,
4 layer,
1.00 mm thickness



Nomenclature – layer stack ups

1-2-1 stack-up,
4 layer,
1.55 mm thickness



Nomenclature – layer stack ups

1 – 4 – 1 = 6 layer

HDI Microvia layer

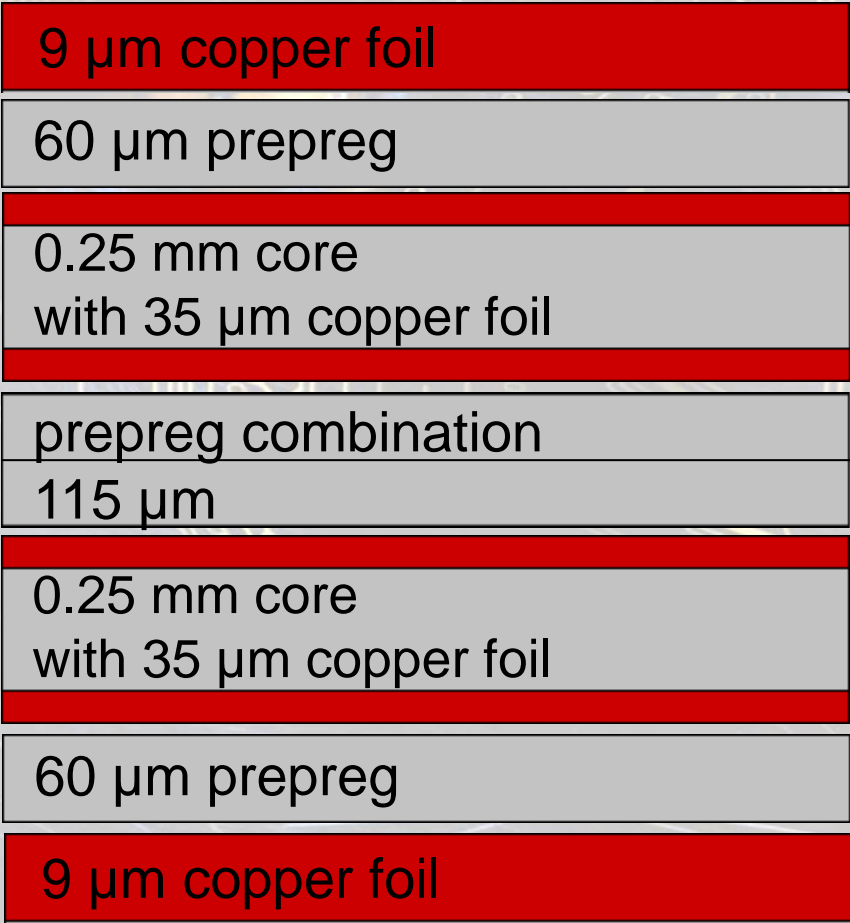
HDI Microvia layer

Innerlayer between the Microvia layer

Possible thicknesses:
- 1.00 mm
- 1.55 mm

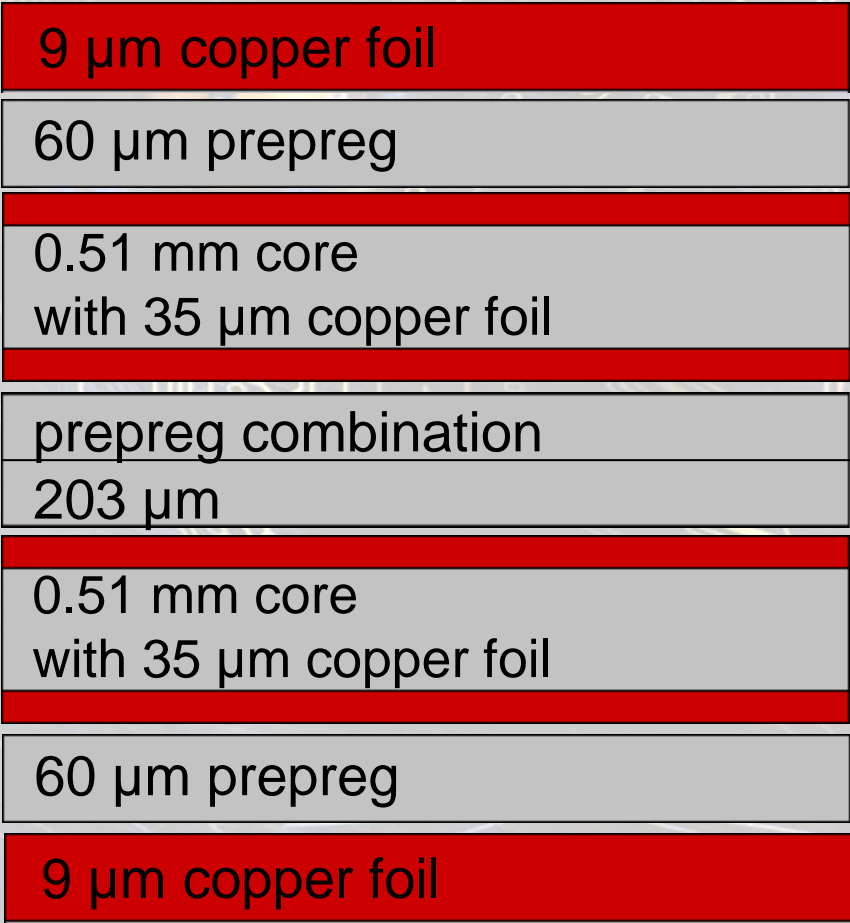
Nomenclature – layer stack ups

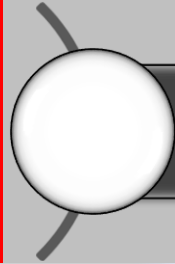
1-4-1 stack-up,
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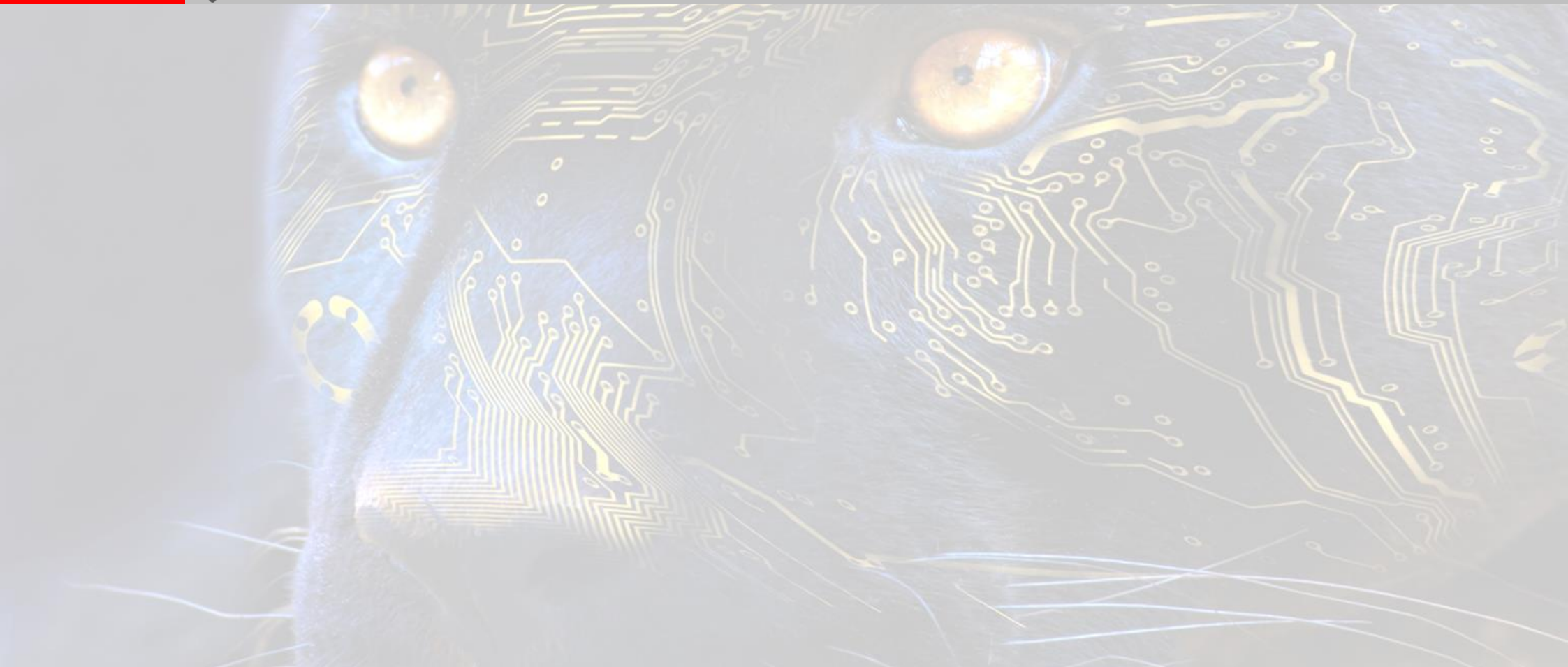
Nomenclature – layer stack ups

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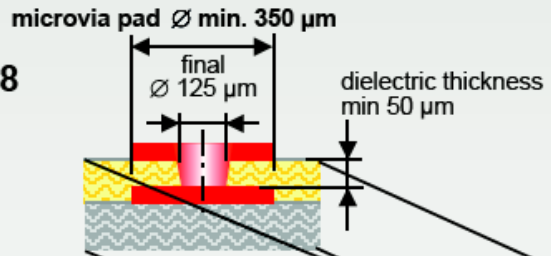




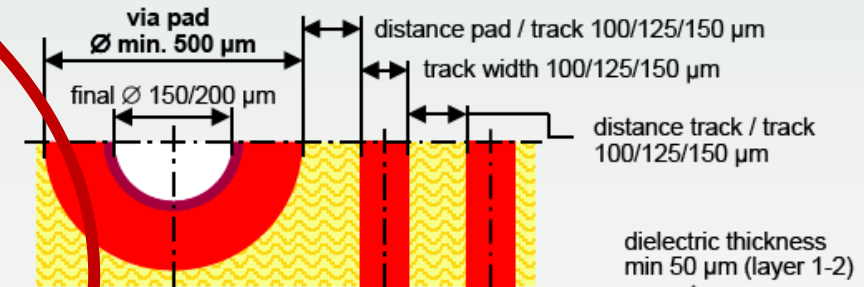
WEdirekt „Design Rules“



microvia
aspect ratio = 1 : 0.8
(diameter / depth)

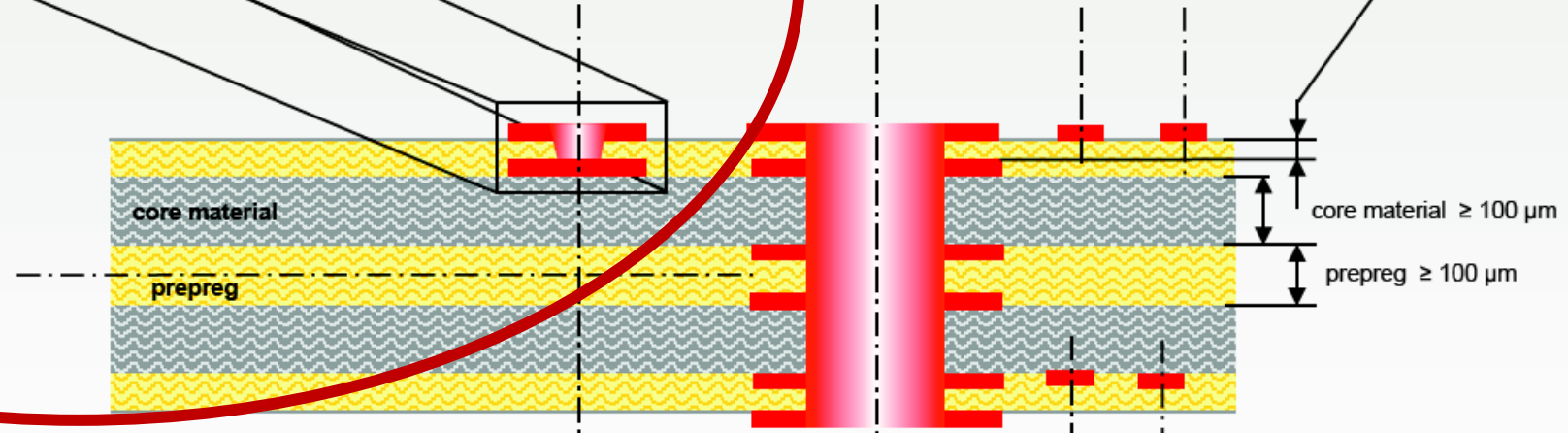


outer layer layout

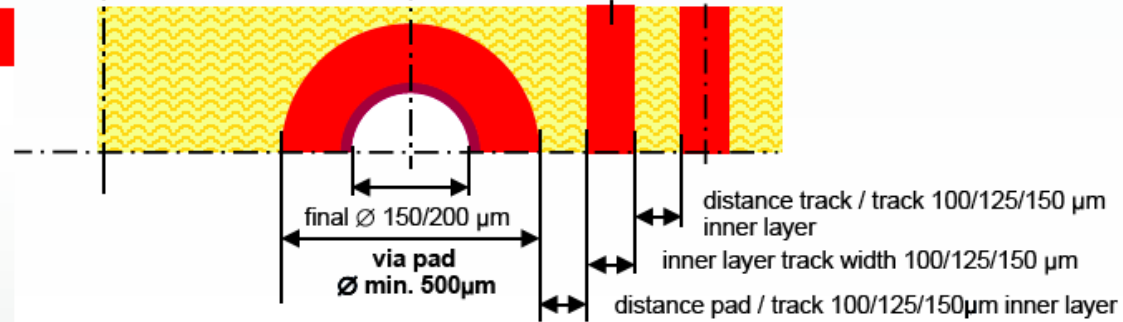
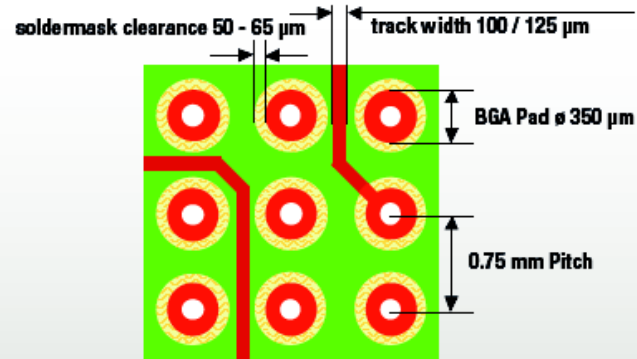
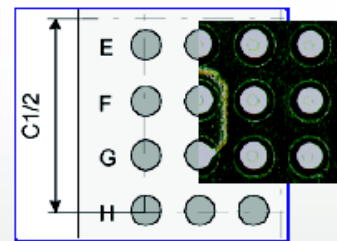


Attention:

- PCB stack-up is not freely selectable / 35 μm Cu outer layers and inner layers according to IPC class 2
- For track widths and spacing please refer to the Wedirekt specification (www.wedirekt.com)
- Microvias will not be filled
- Microvia pads will be increased to 350 μm without prior consultation
- Minimum pitch: 750 μm



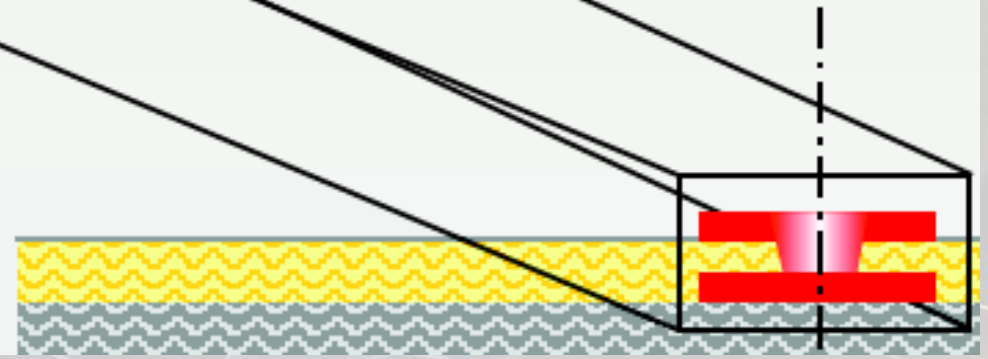
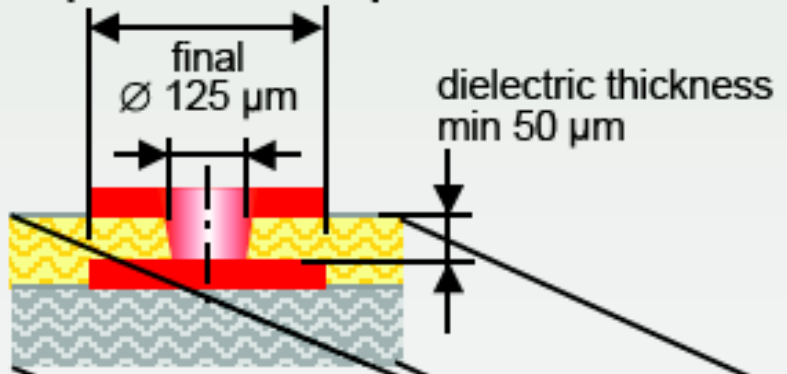
BGA 0.75 mm Pitch



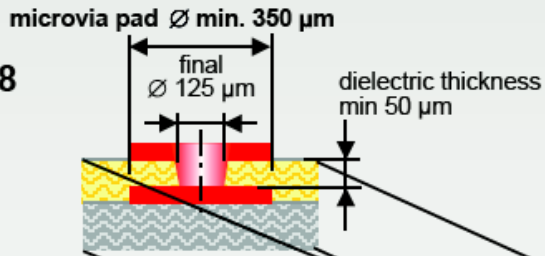
WE direkt „Design Rules“

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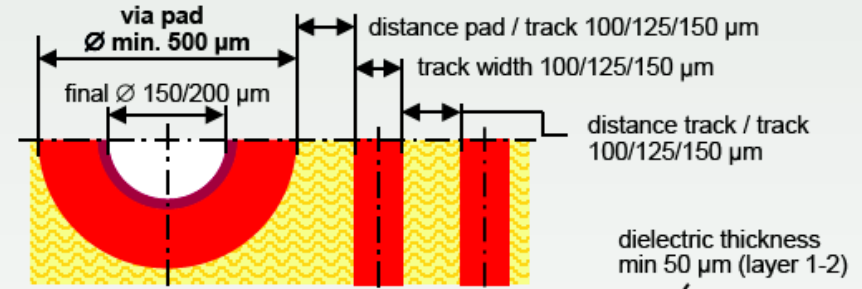
microvia pad \varnothing min. 350 μm



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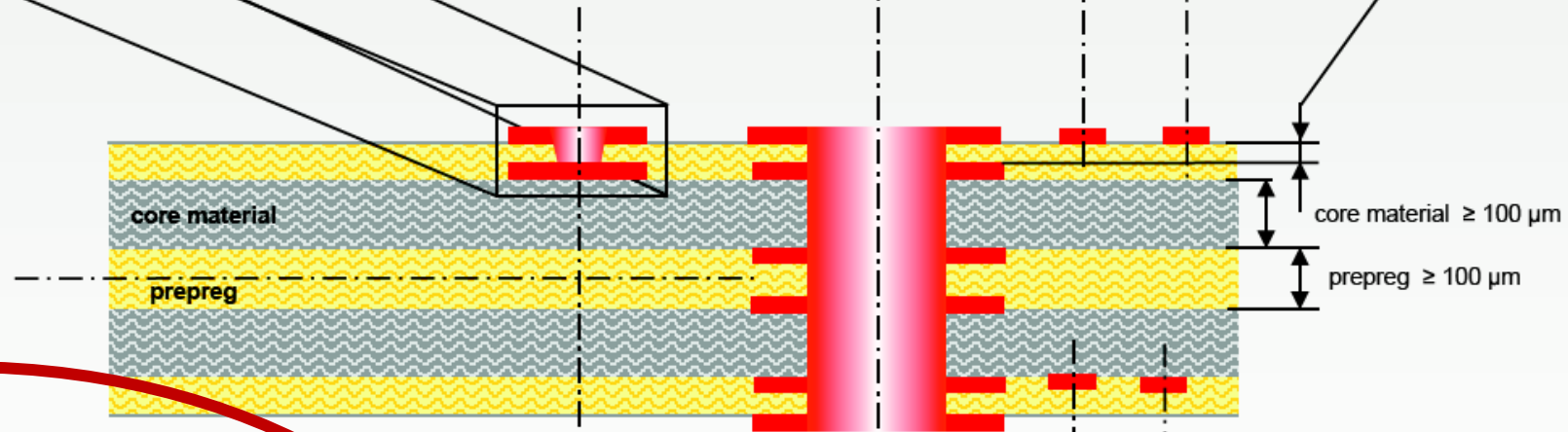


outer layer layout

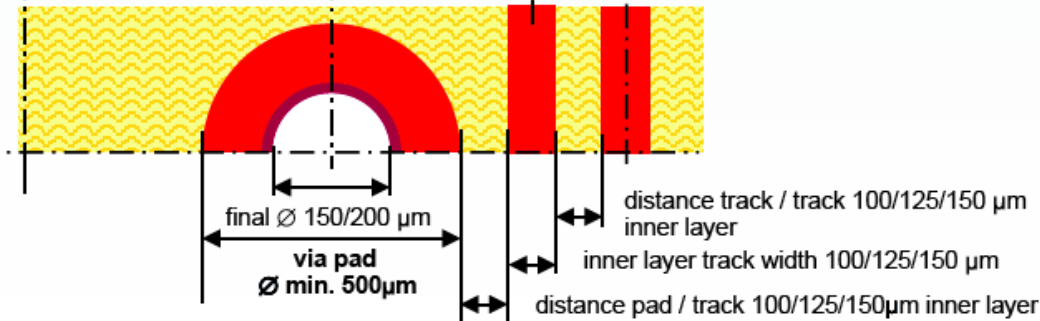
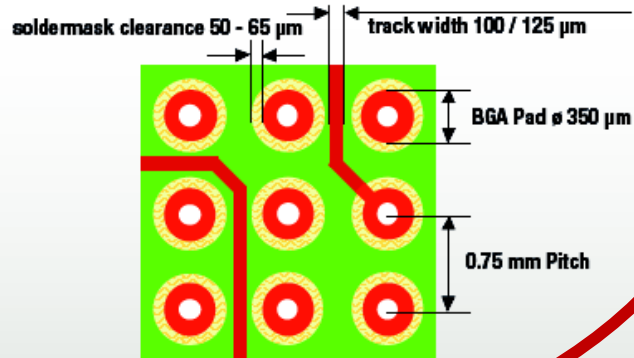
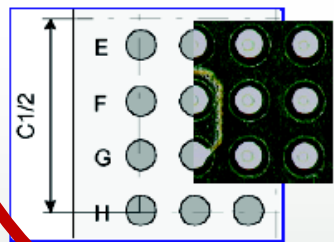


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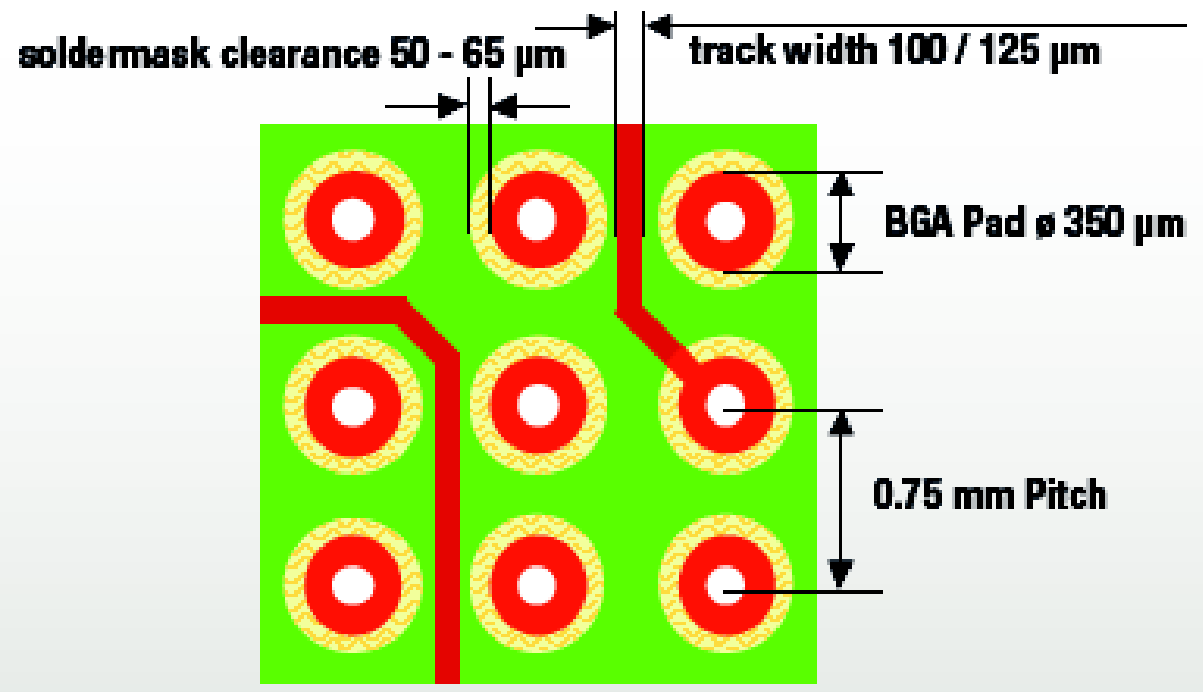
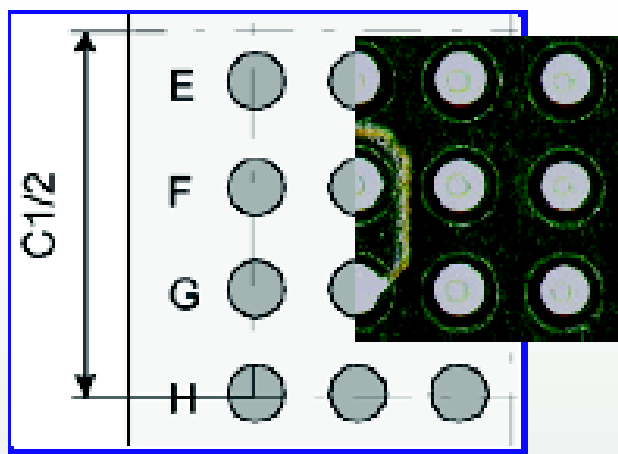


BGA 0.75 mm Pitch

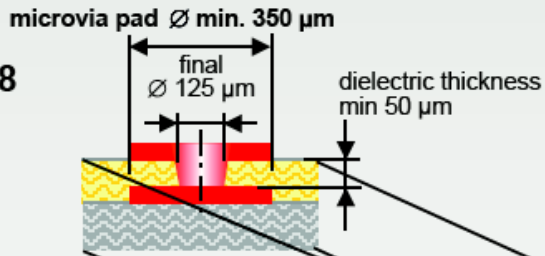


WE direkt „Design Rules“

BGA 0.75 mm Pitch

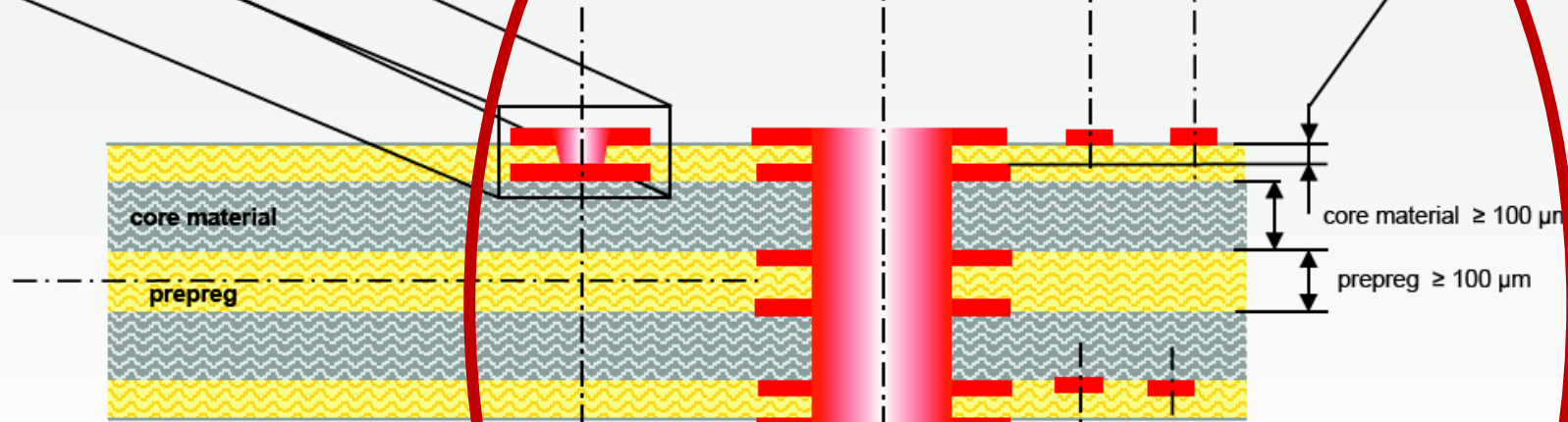


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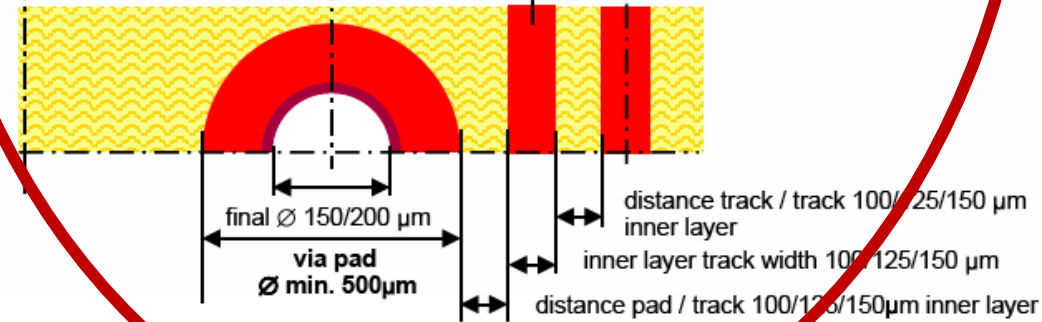
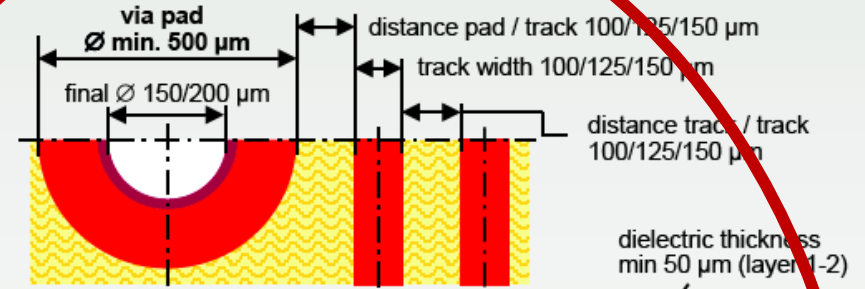


Attention:

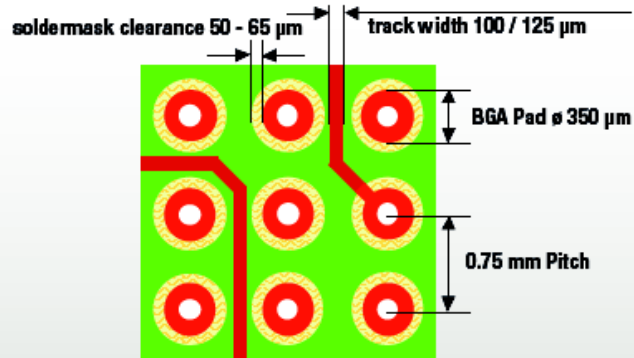
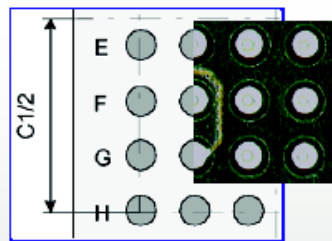
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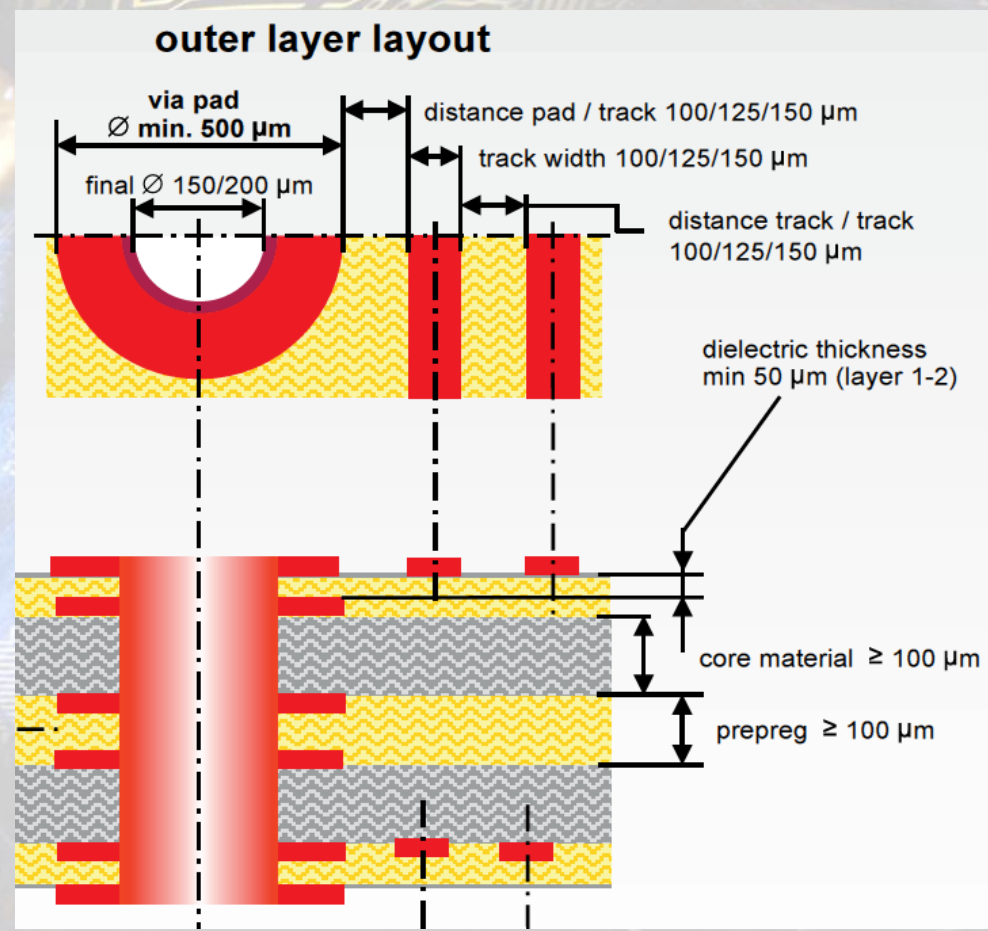
outer layer layout



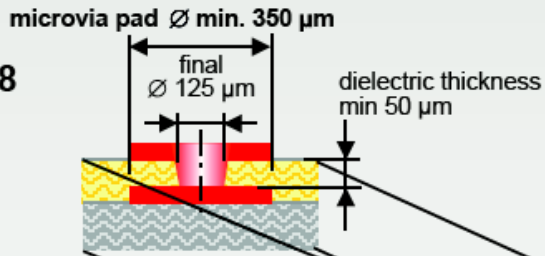
BGA 0.75 mm Pitch



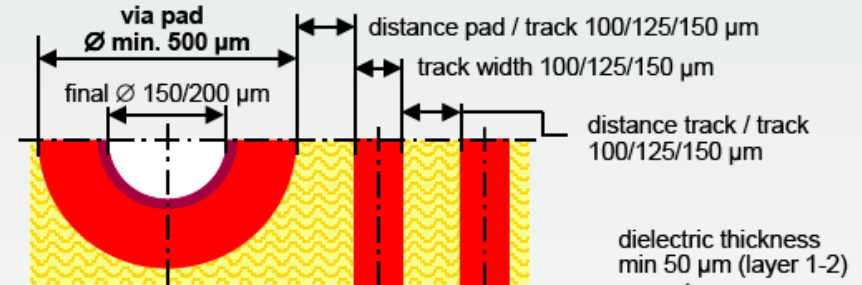
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microvia
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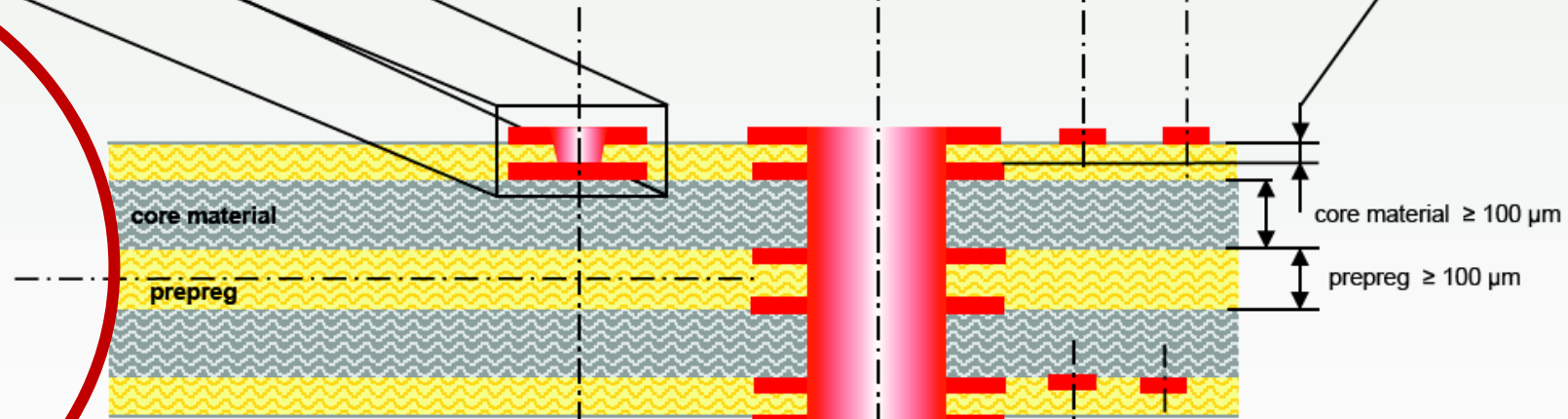


outer layer layout

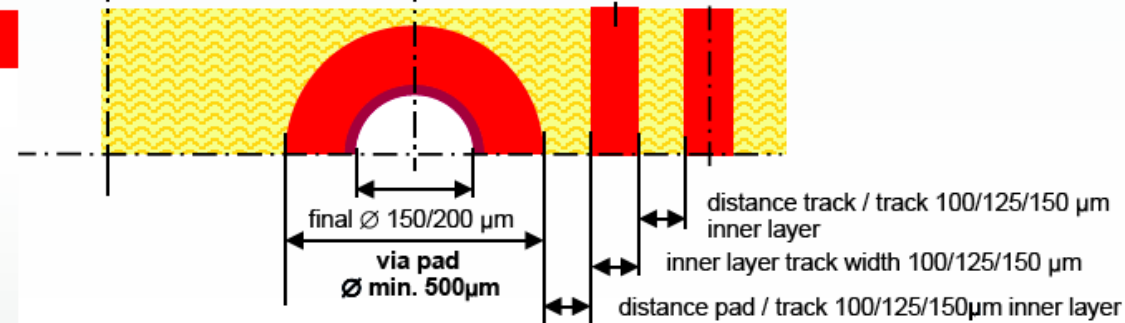
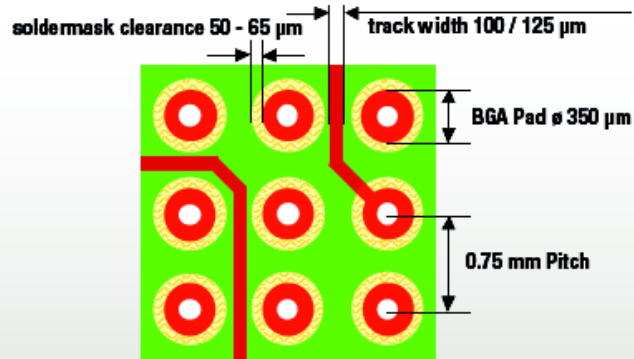
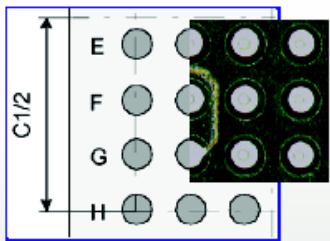


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- Minimum pitch: 750 μ m



BGA 0.75 mm Pitch



WEdirekt „Design Rules“

PCB stack-up is not freely selectable (copper outer and inner layers according to IPC class 2).

For track widths and spacing please refer to the WEdirekt specification (www.wedirekt.com).

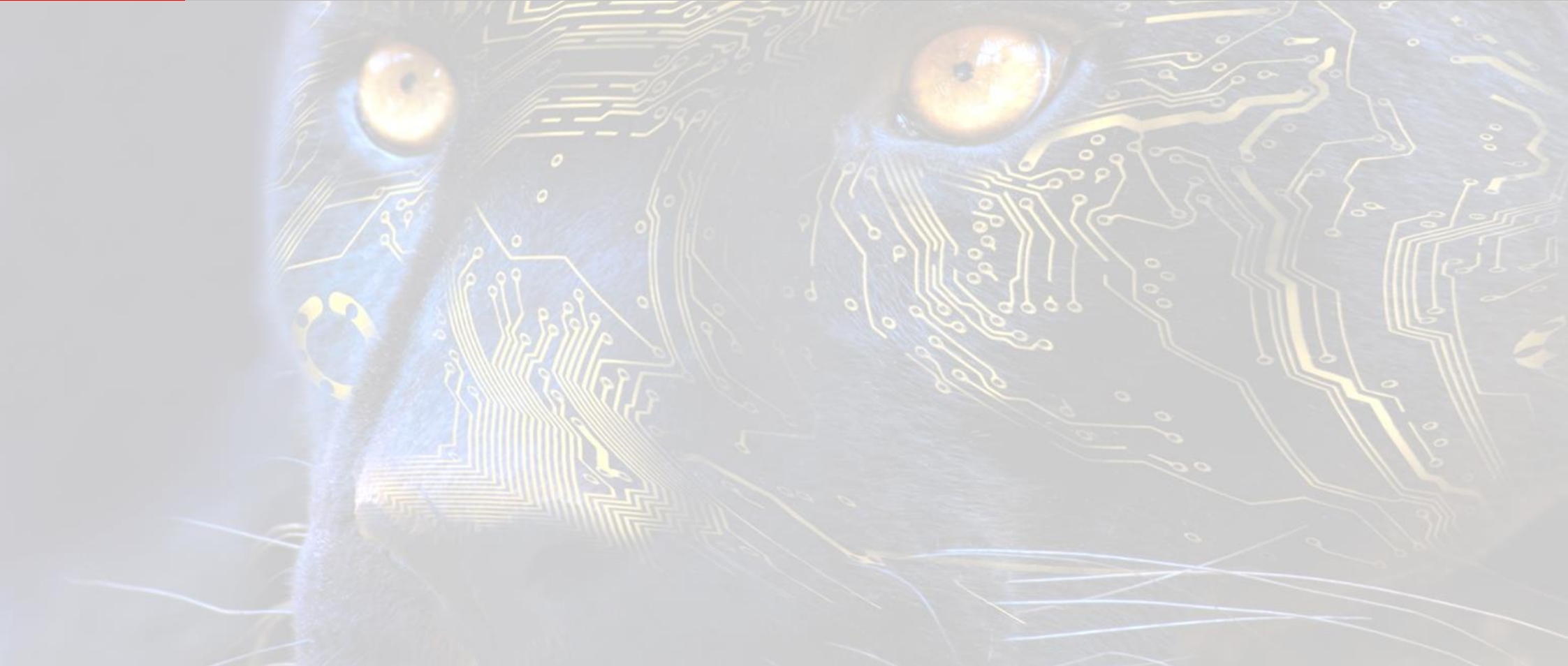
Microvias will not be filled.

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Minimum pitch: 750µm.



Online order process



Survey

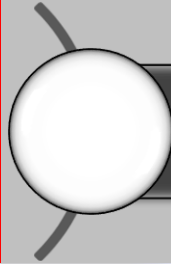
**What are the possible WEdirekt HDI
Microvia stack-ups?**

a: 1-4-1 and 1-6-1

b: 1-4-1 and 1-2-1

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Online order process

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