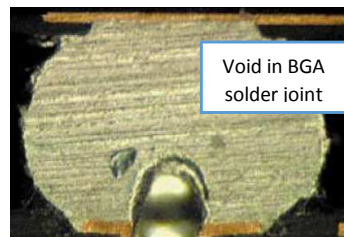
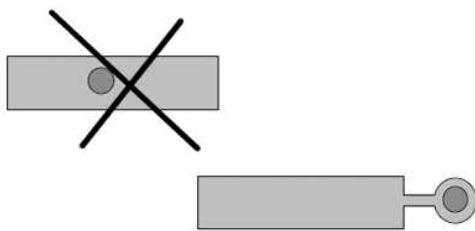


Via in pad – Capped via

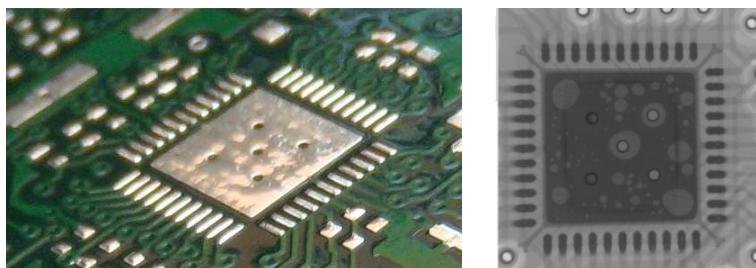
BGA with high density and QFN with cooling surfaces, both might require via in pad. And the component manufacturers design rules are sometimes not the best.

Via in pad is normally not recommended. Solder might wick down the via, with potential risk for a weaker solder joint. Heat loss can occur and a large number of voids can appear in the solder joint.

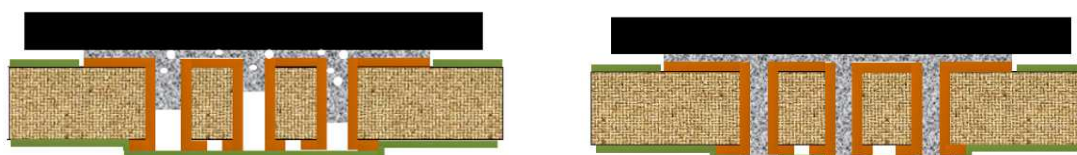


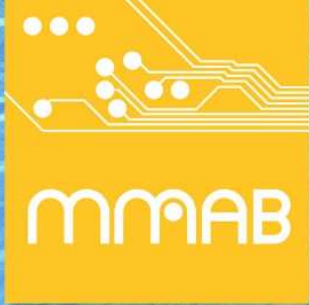
Cooling surfaces under QFN

A common solution is via in pad for cooling surfaces, for example under QFN. The component manufacturers often recommend single sided soldermask coverage. This can entrap gas inside the vias and cause voids in the solder joint.



Single sided soldermask coverage shown below to the left, can cause voids in the solder joints. The solution to the right have small soldermask openings, requiring more solder paste but reduces voids.



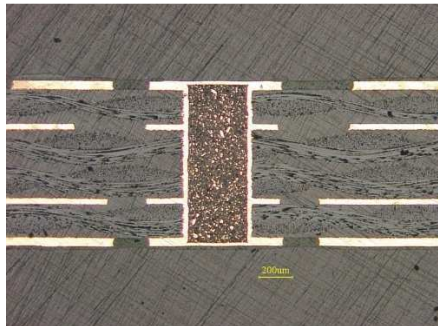


Technical Update

#4 2017

Capped vias

Plug and plate is the ideal solution where via in pad is required, for example BGA-pads and other critical pads. So called capped vias or overplated vias are made by epoxy resin filling of the holes. After filling the resin is cured and planed in a grinding process. A second plating process forms a copper lid over the via, leaving a nearly flat surface.



Plug and plate are normally made according to IPC-4761 method type VII. However, this method require special equipment and a number of extra processing steps, increasing cost and lead time.

Increased manufacturing of prototypes and quick turnaround in our factory!

MMAB demonstrates a strong and steady trend as a successful supplier of prototypes and quick turnaround for the European market.

During 2016 we have steadily increased the share of printed circuit boards made in our own factory in Malmö Sweden, in order to fulfill new as well as established customers need of quick prototypes. We have actually experienced a 600% increase compared to 2015 and the trend continues in 2017

During the year we will continue on the path, to be able to receive even more orders. We will also adapt our manufacturing processes in order to meet increased capability requirements.



More information about our products can be found at www.mmab-pcb.com

MMAB Group, Sweden +46 40 64 24 600, sales@mmab-pcb.se

Hungary +36 30 658 22 60, sales.hungary@mmab-pcb.com

Czech Republic +420 601 151 377, sales.czech@mmab-pcb.com