

Axiom Electronics PCBA Design for Manufacturability Guidelines

Section: 10.10

Revision: A

Revision Date: 2/14/13

DFM Subject: Soldermask Defined Lands

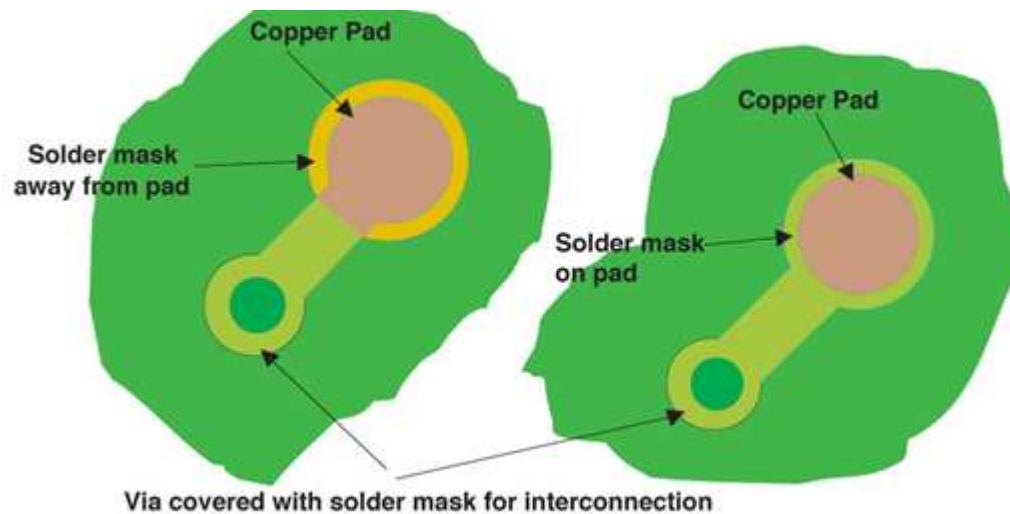
DFM Requirement:

- Soldermask defined lands (pads) should not be used on any SMT component.
- Only non-soldermask defined lands (i.e. metal defined lands) should be used.
- If necessary, consult with manufacturing engineering to discuss other options.

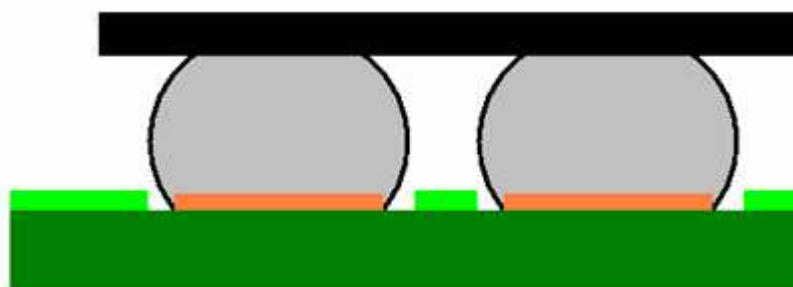
DFM Impact:

The disadvantage of soldermask defined lands is reliability; this approach can decrease the fatigue life by up to 70 percent when compared to non-soldermask defined lands. An area of high stress is created at the soldermask opening (see detail section below). Non-soldermask defined lands create a better solder joint geometry, which gives a longer fatigue life.

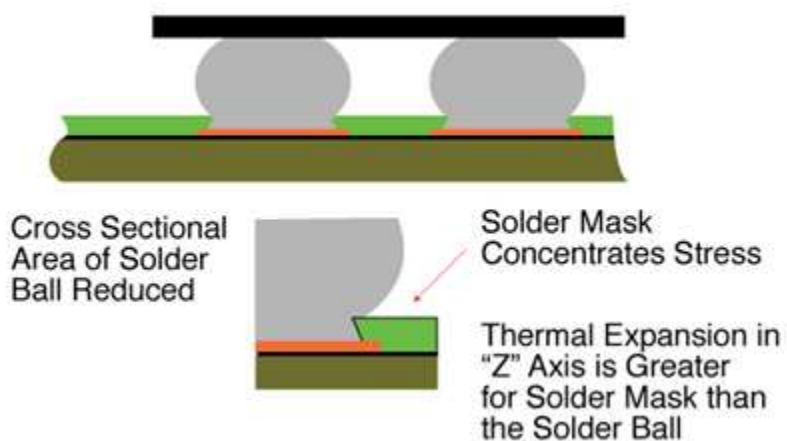
DFM Details: Soldermask Defined Lands



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Non-soldermask defined land attachment profile



Soldermask defined land stress concentration