PRODUCT INFORMATION

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STEP TECHNOLOGY

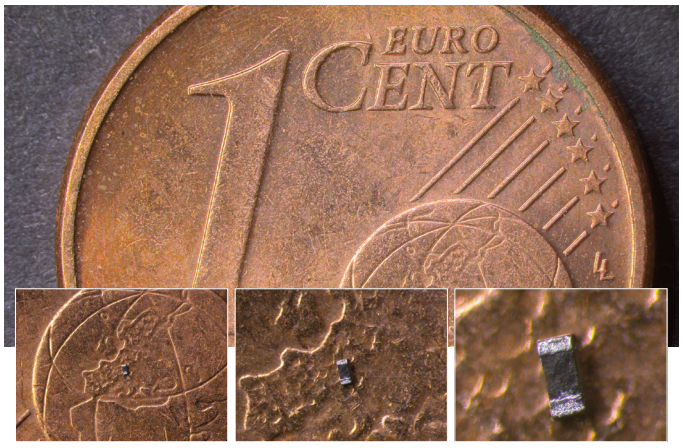
STEPPED STENCILS KEEP A FIRM GRIP ON SMD SOLDER PASTE

Stepped stencils compensate for height differences on the board surface, which can result from labels, for example, or excessively high via-hole pluggings. Height differences are compensated for by recesses on the underside of the SMD stencil, preventing unintended snap-off and subsequent print smearing. The production of stepped stencils is patented by Christian Koenen GmbH.

Added value:

Increased printing process window with a wide component spectrum

Patented production process



Component 03015 on a one-cent coin

Special CK Process – Step Technology

Defined material thickness

Exact pad geometry and positioning

Step-up and step-down stencils possible on both sides

Smooth transition in the step

No film has to be prepared as an intermediate stage

Adjusted to the component's paste requirements
- *Change in the stencil's material thickness*
- *Every component is given the right amount of paste*

Compensates for uneven substrate surfaces
- *Cavities or "pins" on the underside of the stencil*
- *For example: vias, solder resist and height differences can be leveled out*

Printing on different levels

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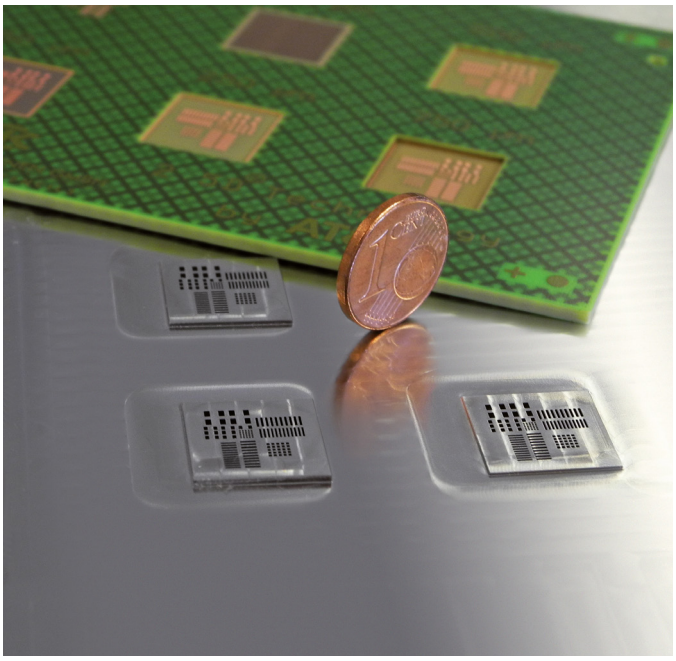
STEP TECHNOLOGY

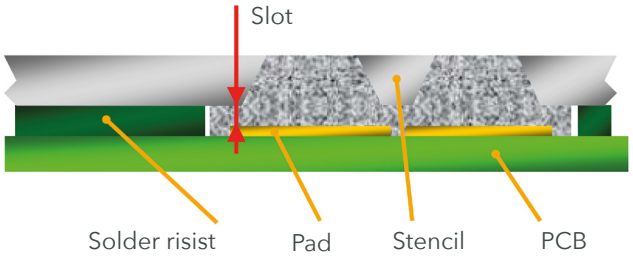


IMPACT OF UNEVEN SUBSTRATES

Stencil apertures poorly sealed by the pads

Unevenness can be caused by solder resist, via fills, impurities, printed lettering and similar factors

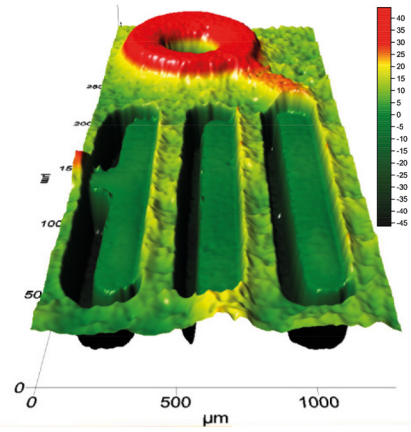
Image: Solder resist too high
- No seal formed with the pad
- Bridging; smearing

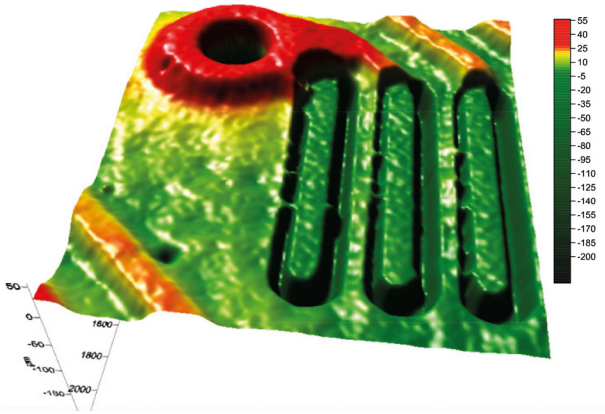


VIA TOO HIGH

Gaps on the underside of the stencil enable the vias to be immersed into the stencil

Optimal stencil sealing in vias that are too high (with or without filling)





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