Specifications LPKF ProConduct®	
Max. base material	229 mm x 305 mm (9'' x 12'')
Min. hole diameter	0.4 mm (15 mil) up to aspect ratio of 1:4*
Number of through-plated holes per circuit board	no limit
Number of layers	4
Solderability	reflow soldering <220 °C (428 °F), manual soldering**
Base material types	FR4, FR3, RF and micromave materials incl. PTFE based materials
Process duration	35 min
Resistance (hole diameter 0.4-1.0 mm at 1.6 mm (63 mil) material thickness)	average 19.2 mΩ with standard deviation of 7.7 mΩ

*smaller holes on request

**ask for recommended types of solder

LPKF ProConduct®
Part number 115790

Hot-air oven
Part number 115877

Desktop vacuum table
Part number 115878

Vacuum pump
Part number 114647

LPKF Laser & Electronics AG
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D-30827 Garbsen
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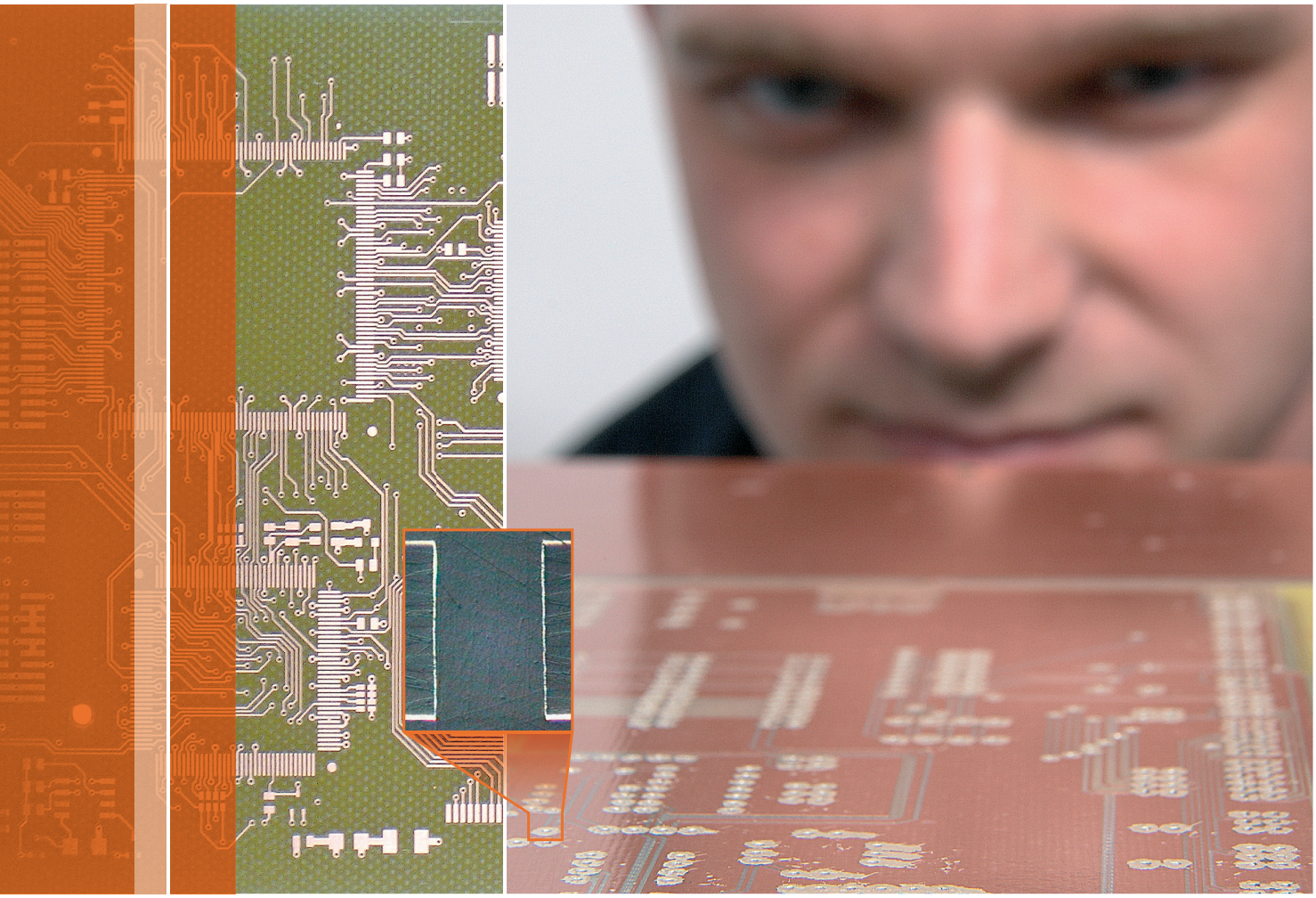
www.lpkf.com

LPKF-Distributor

LPKF AG, 116240-0806-EN



LPKF ProConduct®

PCB through-hole conductivity without chemicals

- No plating tank or chemicals required
- Reliable and thermally stable plating results
- Compact, fast and easy to use
- Key plating component for PTFE and other difficult substrates (RF)

LPKF® Laser & Electronics

LPKF ProConduct® A totally new through-hole plating solution for Rapid PCB prototyping

The LPKF ProConduct® introduces revolutionary technology to produce plated through-holes, which does not require a plating tank or potentially hazardous processing chemicals. This compact system is extremely fast and easy to use. Its rapid parallel processing method delivers completely safe, reliable and thermally stable via plating results for double-sided or multilayer boards.

Easy to handle

Circuit board prototypes can be easily fabricated in-house in a single day when the LPKF ProConduct® system is combined with an LPKF ProtoMat® circuit board plotter. In-house PCB prototyping gets your designs to market faster by eliminating production delays and high costs that can occur with outside vendors. It also makes your precious design data secure by keeping it under your control.

Perfect results with advanced technology

LPKF ProConduct® uses specially-developed plating technology to rapidly plate vias as small as 0.4 mm (15 mil) up to aspect ratio of 1:4. Even smaller holes are possible under special conditions. The entire process can be completed in just a few minutes for double-sided and even multilayer boards. The electrical resistance of LPKF ProConduct® plating is extremely low with 19.2 mΩ depending on the material thickness*.

* see specifications

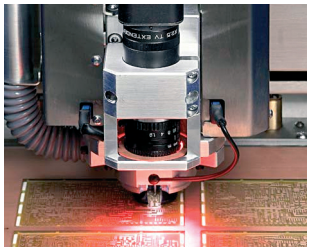
LPKF ProConduct® uses a specially-developed conductive polymer to quickly and easily plate vias in as little as three minutes. These are the simple processing steps:

1 **Mill the board**
Mill the board layout using a LPKF circuit board plotter.

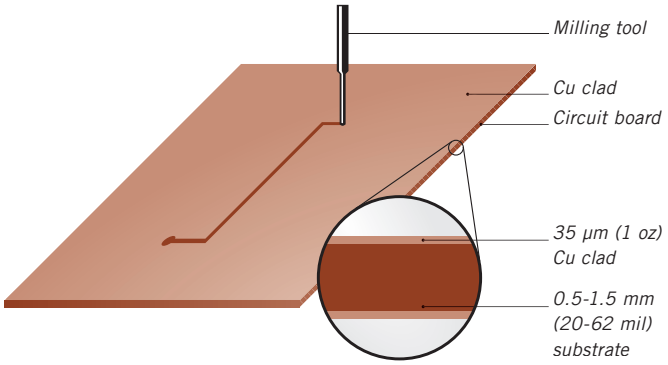
2 **Apply the protective film and drill the holes**
Apply a special protective film to the surface of a milled PCB and drill the through-holes.

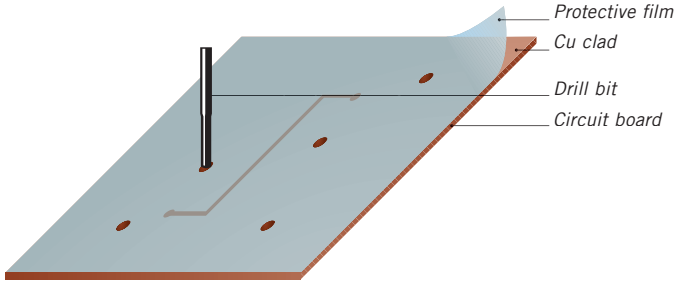
Milling the board

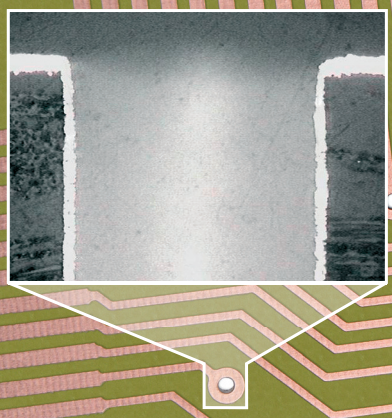
Applying the protective film

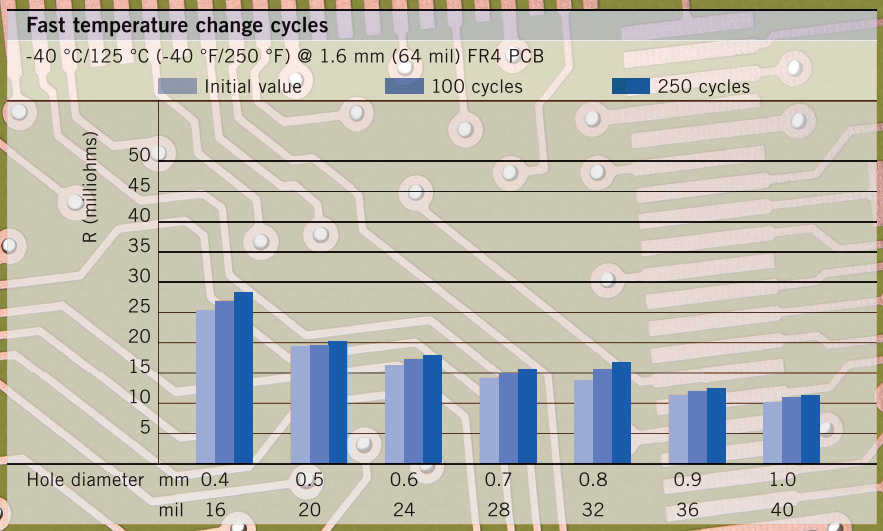


Drilling the board









3 Apply the conductive polymer

Secure the board to the vacuum table and apply the conductive polymer to the protective film with the squeegee provided. The vacuum process draws the polymer through the holes. The board can be flipped and polymer can be applied to the opposite side to ensure that the holes are completely coated.

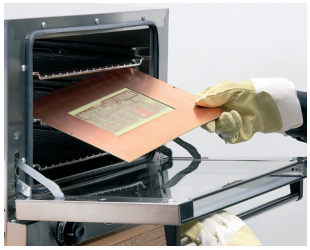
4 Cure the treated PCB

Remove the film after the conductive polymer is applied, then insert the board into a hot-air oven for 30 minutes to cure the treated PCB. After the board has cooled for a few minutes it can be populated with components and tested.

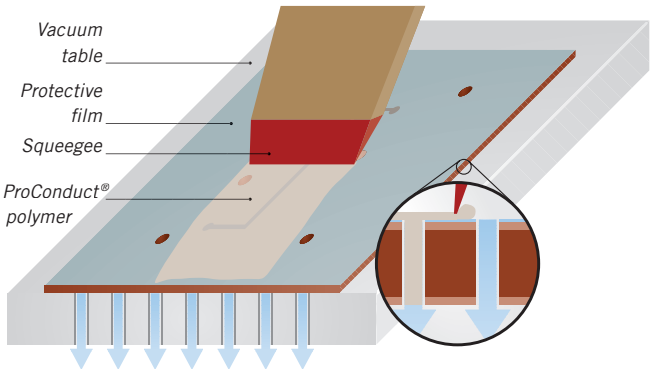
Using the squeegee to apply the conductor

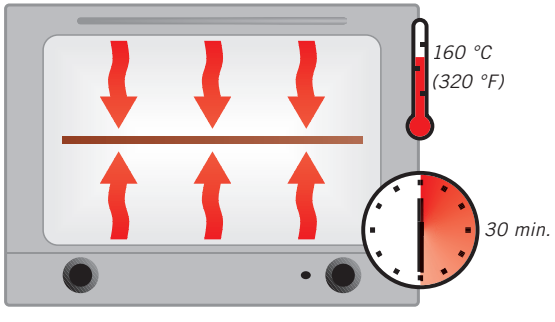
Flipping the board

Removing the film



Curing the polymer in a hot-air oven





Hot-air oven