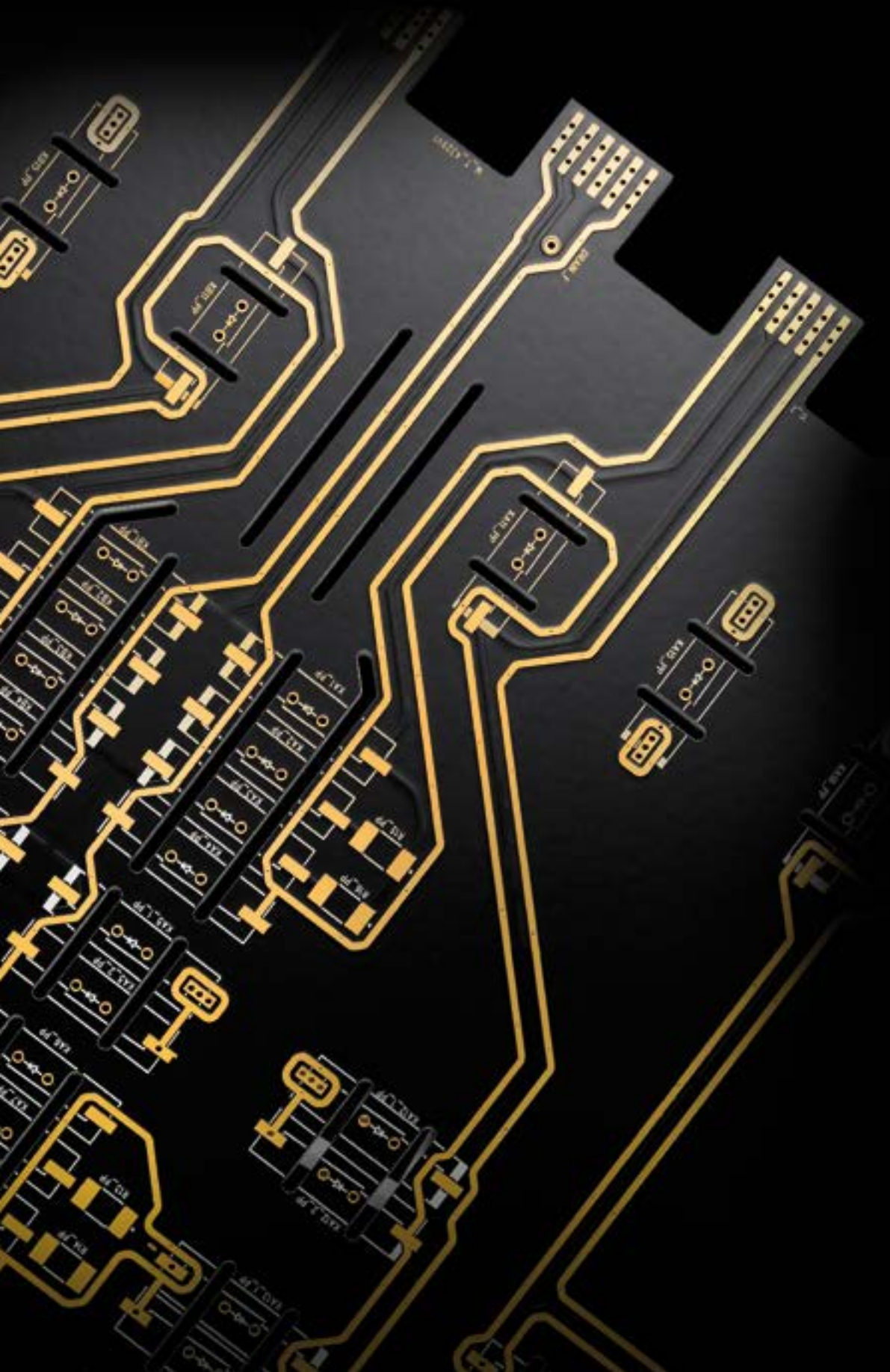
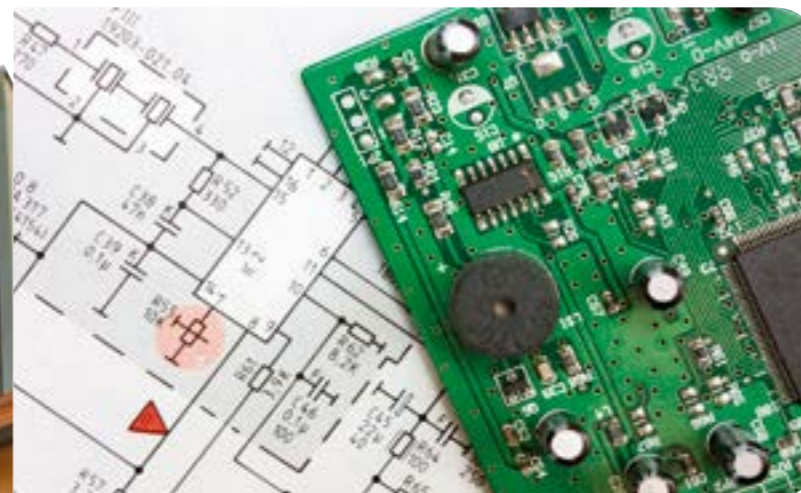


fima

THE DIGITAL PCB FACTORY





THE COMPANY

FIMA is an Italian company operating since 1974 on the high quality PCB segment.

The 5000 m² manufacturing facility is located in Vicenza – in the Veneto northern region of Italy— where FIMA employs a team of

highly skilled professionals engaging a top-flight multinational market. While being a technology innovation leader for many years, FIMA today is a top manufacturer operating the most modern facilities available for the production of rigid and rigid-flex top quality PCBs

in the quickest turnaround time. Entrusted by the major European partners in electronics, FIMA is the PCB Company of choice when quality and quick response are critical business factors.

TECHNICAL SUPPORT

FIMA is committed to offer the best technical consulting services available on the market. The company relies on a specialized structure which is able to provide customer support during all phases of a PCB project. Support is not just limited to a productivity assessment: FIMA technicians are able to offer a global evaluation including base material selection, layout optimization, mechanical and galvanic processing optimization, stack-up design derived from specific functional requirements. FIMA shares with his Customers its unique experience and creates products that exceed the most rigorous qualification tests and outlines the technical standards of tomorrow.

SPEED OF DELIVERY

The production process, fully adaptable, allows FIMA to meet the most demanding delivery requests with unmatched response time. The constant, last generation production line updates and the adoption of Laser Technologies for both Image Transfer and special mechanical processes allow FIMA to create PCBs of particular complexity and high quality in extremely short time.

BEING INTERNATIONAL

Strong of an 80% production export, FIMA has been an international company for twenty years, with sales offices in Italy, France and Germany, covering Europe, North and South America and Far East. Everything, from technical review of the project to full commercial support before and after sales, is delivered to the Customer in his own language.

DOCUMENTED QUALITY

In support of the delivery of prototypes and individual batches of PCB, FIMA offers – on request – a high-level document service, able to comply with the most demanding PCB qualification protocols (FAI, PPAP).

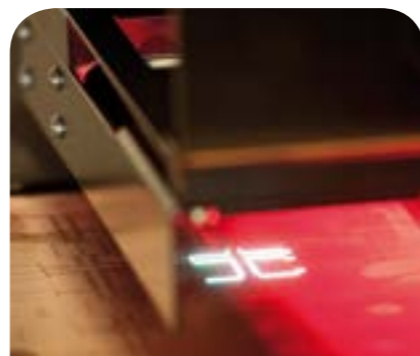
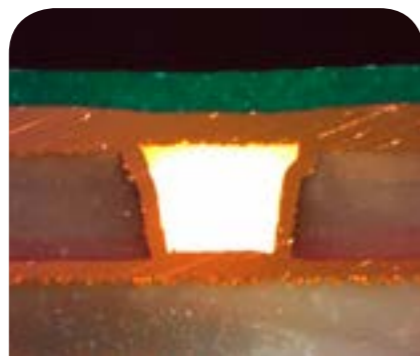
Documentation includes inter alia: full metrological control, with process capability studies of critical dimensions defined by the customer; full microsection report including microscopic analysis before and after thermal stress; XRF certification of surface finish thickness; certification and traceability of base materials and ingredients; certification of impedance measurements; certification of compliance with REACH, RoHS and ATEX European directives.



LASER DRILLING

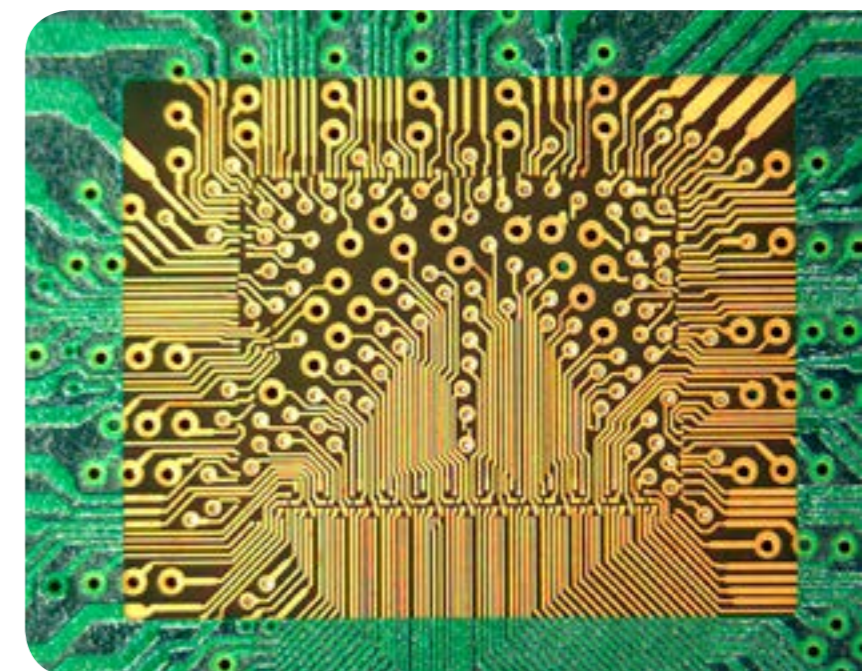
Specialized on HDI boards, FIMA uses a laser drilling machine to drill blind microvias. This equipment allows to overcome the limitations of the mechanical Z-controlled drilling: laser drilling machine drills holes down to 50 μm hole size with an

unbeatable accuracy of the hole position and depth. Furthermore, this equipment has initiated a huge impulse to the production of flex and rigid-flex PCBs, thanks to its extreme ease to run some of the typical processes involved with this type of products.



LDI

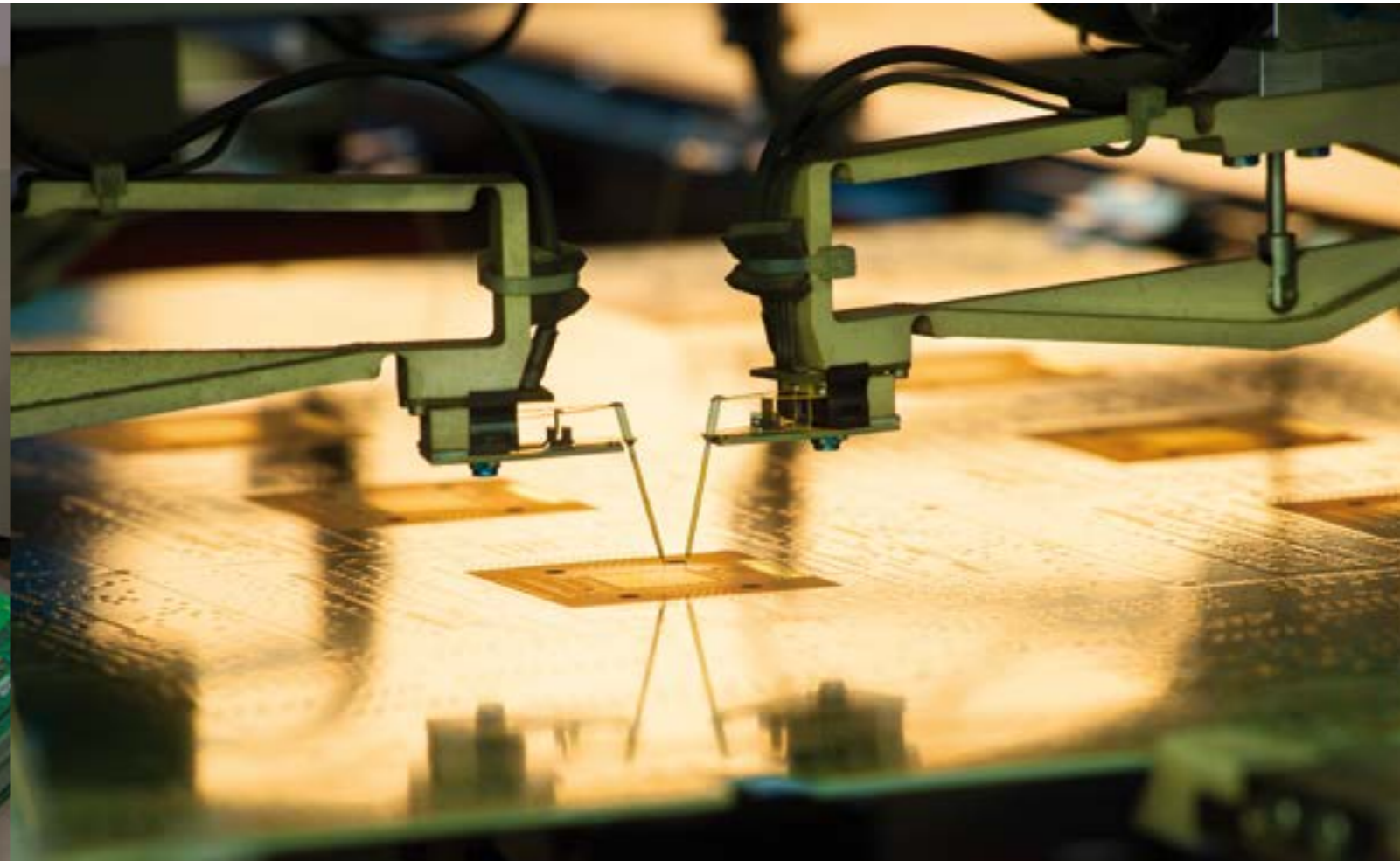
Thanks to two LDI machines, FIMA has abandoned the traditional film technology for imaging and is now producing its printed circuits almost exclusively with Laser Direct Imaging technology. Using this process, FIMA can achieve an unbeatable definition for tracks, down to 25 μm of track width. LDI technology is applied to image inner layers, outer layers and recently also solder mask. This technology enables FIMA to be much more flexible and to handle priorities efficiently. It is also a perfect to all production requirements of a factory specialized in quick turnaround services like FIMA.



PRODUCTS

PCBS FOR ANY ELECTRONIC APPLICATION

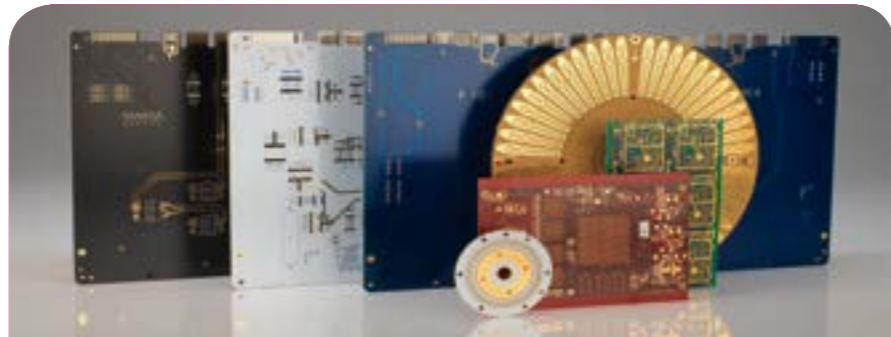




SOLDER MASK AND MILLING

Beside our green solder mask line, a second air spray machine is available to deposit colored solder masks: with three different guns and three separated hydraulic circuits, this equipment allows us to spray colored solder mask (white, black, red, blue, yellow ...) without interfering with the normal production (mainly green).

Thanks to a recently installed milling machine, it is now possible to mill PCBs with automatic alignment driven by a CCD camera: this way FIMA guarantees to satisfy tightest dimensional tolerances. This equipment makes it also possible to carry out Z-axis controlled counterbores with a still unbeaten precision of +/-10 µm.



ELECTRICAL TEST

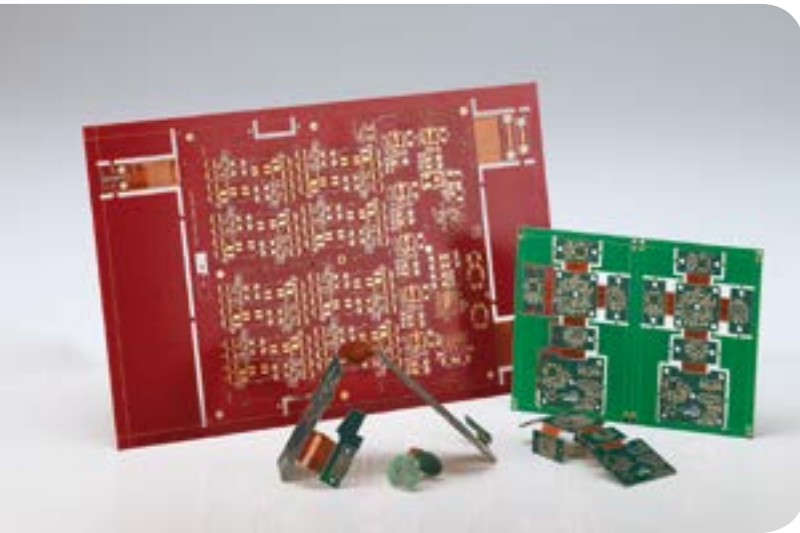
FIMA is equipped with two universal, bed of nails, electrical testers and two flying probe testers.

Therefore it is possible to electrically test printed circuits under any test parameters required by the customer (in certain cases up to 500 V).

The sorting of the "good" and "bad" PCBs after testing is fully automatic which totally eliminates human errors. In addition, impedance values can also be measured upon request and test coupons are available for proof. A measuring report is also provided.

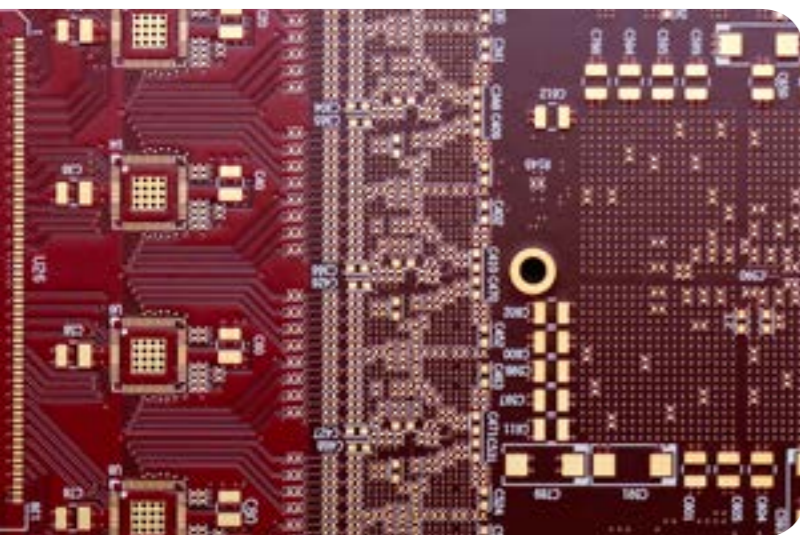


SPECIAL PRODUCTS



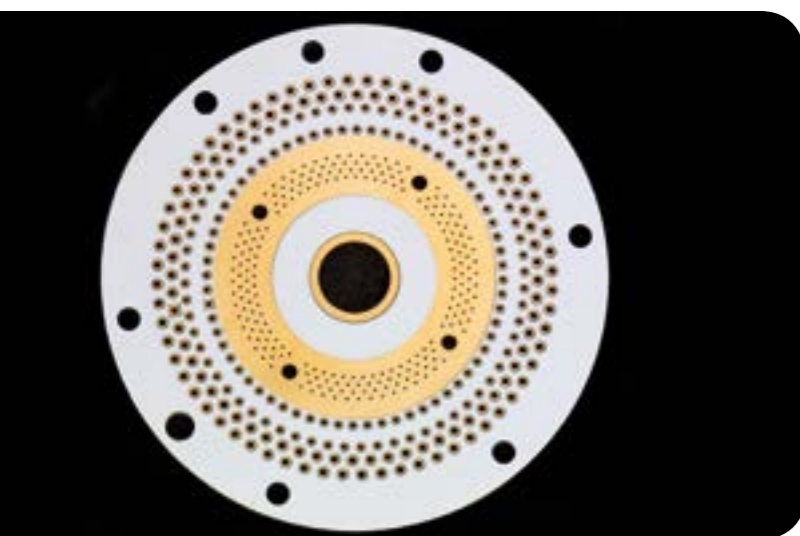
FLEX AND RIGID-FLEX PCBs

Typically used in avionics and military applications, FIMA is able to supply flexible single sided, double sided, multilayer circuits and multilayer rigid-flex circuits, with two or more different flexible layers, with blind vias et all surface finishings.



HDI PCBs

FIMA can produce printed circuit boards with very dense interconnections (HDI), very fine lines and gaps (down to 25 μm). Usually these PCBs have buried vias, simple, staggered, stacked blind microvias over several levels: the production of HDI boards is made easy by the use of laser technology. Available surface finishings on these PCBs are: ENIG, ENEPIG and Immersion Tin.



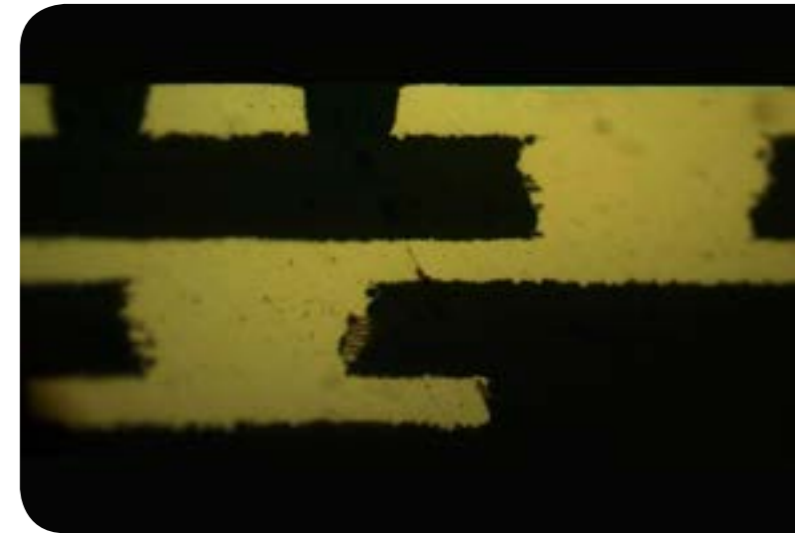
RF PCBs

These PCBs are designed for high frequency applications: they are produced using special laminates, often a mix of different materials. RF PCBs need dimensional checks of the pattern through an automatic optical inspection (AOI) machine. The impedance values of the signal lines have to be certified through coupons and measurement protocols.

LEADING EDGE PROCESSES

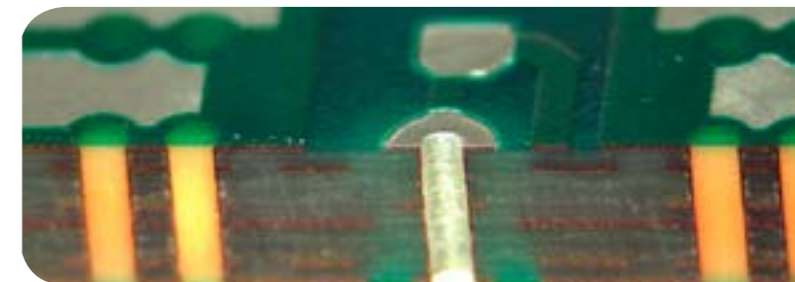
COPPER VIA FILLING

Two lines dedicated to copper filling of blind vias are available at FIMA: the first one is a stand-alone line and the second one is integrated into the plating line for panel plating. This process is expressly required for HDI boards where vias-in-pad holes are present. The highest depth of the dimple is guaranteed to be lower than 5 μm .



VIAS FILLED & CAPPED AND RESIN FILLED

The Filled&Capped process is meant to fill blind vias or PTH holes with resin and to plate its top and bottom. The resulting cylinder allows soldering or electrical/mechanical contact. This process is carried out by a machine, filling the holes with epoxy resin. The excess resin is removed by a planing machine to achieve a clean and uniform surface. The dimple depth is in practice absent. The same machine is also used to fill selectively PTH holes with resin after etching.



LASER MICROVIAS AND SBU TECHNOLOGY

SBU (Sequential Build Up) technology is used for HDI circuits requiring several lamination and drilling levels: drill sizes down to 50 μm , track and gap width down to 25 μm are their main features. This technology is available at FIMA and is performed by LDI machines to print inner layers, outer layer and solder mask whilst laser drilling machine is used to drill the blind microvias.





FIMA SRL
VIALE DEL LAVORO, 20
36100 VICENZA - ITALY
TEL: +39 0444 570277
FAX: +39 0444 570204
WWW.FIMAWEB.COM
INFO@FIMAWEB.COM