# Double Sided PCB Fabrication

With the development of high-tech, people need electronic products with high performance, small size and many functions, which promote the development of **Double-sided circuit board** manufacturing to light, thin, short and small, with limited space to achieve more functions, larger wiring density and smaller aperture.

From 1995 to 2005, the minimum pore size of mechanical drilling capacity decreased from 0.4 mm to 0.2 mm, or even smaller. The diameter of metallized pore is becoming smaller and smaller. The quality of the metallized holes on which the interlayer interconnection depends is directly related to the reliability of PCB.

With the shrinkage of pore size, impurities that had no effect on larger pore size, such as grinding debris and volcanic ash, once left in the pore, will make the chemical precipitation and electroplating of copper lose their function, and the pore is copper-free, becoming the lethal killer of pore metallization.

JHY PCB is a professional **Double-sided circuit board manufacturer** and

supplier, We have nearly 10 years of Double Sided PCB Fabrication experience,We have very advanced **Double Sided PCB Manufacturing Process**. Whether it is a **Double Sided PCB Board Prototype** or a small batch, we can make it perfectly according to your requirements.

**Double-sided circuit board manufacturing process**

In recent years, the typical process of manufacturing double-sided metallized printed boards is the SMOBC method and the graphic plating method. In some specific occasions also use the process wire method.

**1, Graphic plating process**

Veneer -> Cutting -> Drilling Benchmarking -> CNC Drilling -> Inspection -> Deburring -> Electroless Plating Copper -> Plating Thin Copper -> Inspection -> (Cn + Sn / Pb) -> Filtration -> Etching -> Coating - Check the plating plate -> plug nickel plating -> hot melt cleaning -> electrical on - detection -> cleaning -> screen printing resistance welding graphics -> curing -> screen mark symbols -> Curing -> shape processing -> cleaning and drying -> inspection -> packaging -> finished.

In the process of "chemical plating thin copper -> electroplating thin copper" these two processes can be used "chemical plating thick copper" a process to replace the two have their own advantages and disadvantages. Graphic Electroplating - Etching Method The double-sided metallization plate is a typical process in the sixties and seventies. In the eighties, the brass coating process (SMOBC) gradually developed, especially in the manufacture of precision double-sided panel has become the mainstream process.

**2, SMOBC process**

SMOBC board's main advantage is to solve the thin line between the solder bridge short circuit phenomenon, and because the proportion of lead and tin constant, than the hot melt has better solderability and storage.

Manufacturing SMOBC board a lot of ways, there are standard graphics plating minus the method and then back to the lead of the SMOBC process; with tin or dip tin instead of electroplating lead tin reduction method of graphic plating SMOBC process; plugging or masking method

SMOBC process ; Addition method SMOBC process. The following describes the graphics plating method and then back to the lead tin SMOBC process and plugging method SMOBC process.

Graphic electroplating method and then back to the lead tin SMOBC process method is similar to the graphic plating process. Only after etching changes.

Double-sided Copper Foil Plates -> Graphic Plating Process to Etching Process -> Drop Lead Tin -> Inspection -> Cleaning -> Solder Mask -> Plug Nickel Plating -> Plug Tape -> hot air leveling -> cleaning -> screen markings -> shape processing -> cleaning and drying -> finished product inspection -> packaging -> finished.

**The main process flow is as follows:**

Sided copper foil -> Drilling -> Electroless copper plating -> Plating copper plating -> Plugging -> Screen printing (just like) -> Etching -> Screen printing, To plug the hole material -> cleaning -> solder resist graphics -> plug nickel, gold -> plug tape -> hot air leveling -> the following process with the same to the finished product.

The process steps of this process are relatively simple, the key is to plug and wash the plug of ink.

In the plugging process, if you do not use plugging ink plugging and screen printing, and the use of a special masking dry film to cover the hole, and then made into a positive graphics, which is masking hole process. Compared with the plugging method, it no longer exists to wash the hole in the ink problem, but the masking dry film has a higher demand.

SMOBC process is based on the first system of bare copper hole metal double panel, and then application of hot air leveling process.

**Double sided PCB Technological process**

**Double sided tin sheet/sunken gold sheet manufacturing process:**

Opening - - - Drilling - - - sinking copper - - - circuit - - - graph and electricity - - - etching - - - soldering - - character - - - tin spraying (or gold) - Gong edge - V cutting (some boards do not need) - - flying test - - vacuum packaging

**Production process of double-sided gold-plated sheet:**

Opening - - - Drilling - - - sinking copper - - - circuit - - - drawing - - - electroplating - - etching - - Welding - - character - - - Gong edge - - - V cutting - - flying test - - vacuum packaging

**Manufacturing process of multi-layer tin sheet/sunken gold sheet:**

Opening - - - Inner - - - lamination - - - Drilling - - - sinking copper - - - circuit - - - electrograph - - - etching - - - resistance welding - - - character - - - spraying tin (or sinking gold) - - Gong edge - V cutting (some boards do not need) - - flying test - - - vacuum packaging

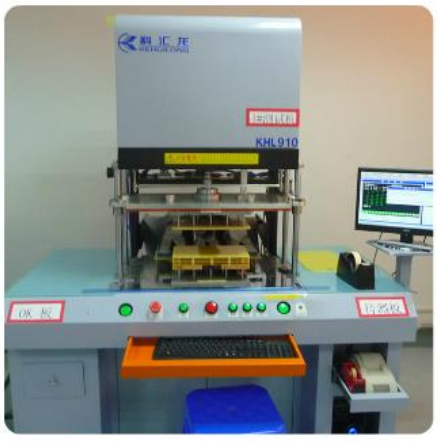
**Manufacturing process of multi-layer gold-plated sheet:**

Opening - - - Inner - - - lamination - - - Drilling - - - sinking copper - - - circuit - - - electrograph - - - gold plating - - etching - - Welding - - - character - - - Gong edge - - - V cutting - - flying test - - vacuum packaging

**Double Sided PCB Fabrication Factory**



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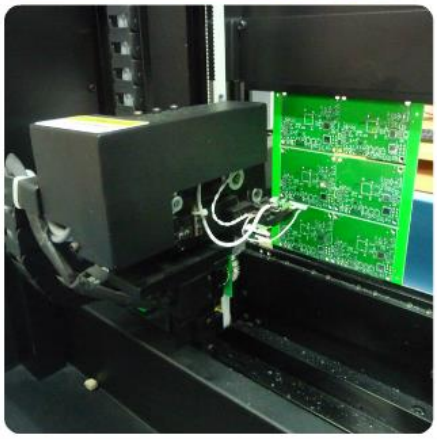


## Why choose us to make your Double Sided PCB ?

- Save money & time! Achieve peace of mind!
- A professional and trustworthy PCB prototype manufacturer.
- Fastest PCB Prototype.
- One stop solution for various PCB & SMT Stencil.
- Low cost for simple PCB.
- Affordable price for high-tech PCB.
- Minimum orders 1pcs.
- 24-hour online customer service.
- Professional PCB engineer for one-to-one service.
- Shipment on time.
- Guarantee good service and quality from PCB quotation to delivery.