

Double Sided Prototype PCB

Keywords:

Metal Core PCB Double Sided

Double Sided Copper Prototype PCB

Cost of Double Sided PCB

Double Sided Prototype PCB manufacturer

The circuit board is the substrate of nearly all electronic circuits.

Custom printed circuit board design and fabrication can be useful for a final product, but early in development, it is often more convenient to build on a board designed for prototyping.

With the continuous development and updating of electronic products, many products need to use Double Sided PCB Board. However, whether the design is reasonable or not, and whether it can achieve the effect after the product is finally put into mass production, this requires us to make a **Double Sided Prototype PCB** for testing ahead of time.

Depending on the requirements and materials, you may also need: **Metal Core PCB Double Sided, Double Sided Copper Prototype PCB.**

How Are Double Sided PCBs Made?



Construction of Double Sided Prototype PCB

Construction of double sided PCB is similar to single sided PCB with some exceptions i.e. some layers are laminated on both side of the board.

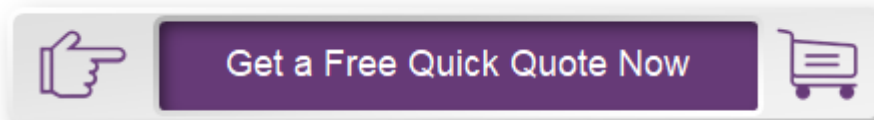
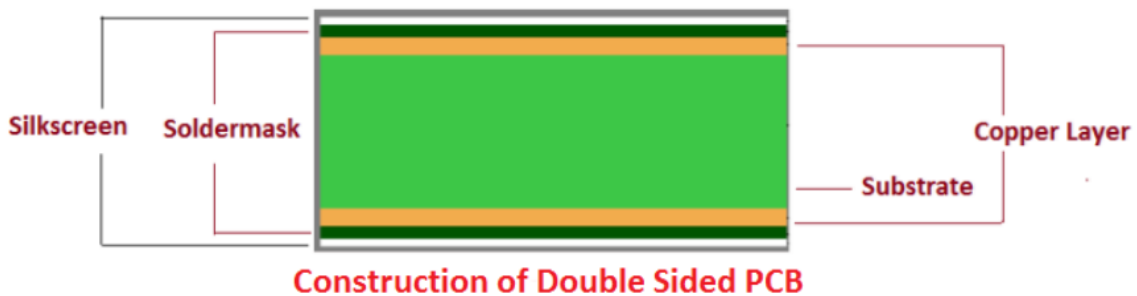
Base of the double sided PCB is composed of insulating material also known as substrate which is mainly fiber glass epoxy resin. What type of base material is used, defines if PCB board is Flexible PCB or Rigid PCB.

Copper foil is laminated on both side of the substrate in case of double sided PCB.

Similarly solder mask lies above the copper foil on both side of the board which gives protection.

There exists a silk screen above solder mask on both side of the board which is mainly used for adding symbols and characters on the board so a common person can understand the board functions.

All these layers that are used in the construction of double sided PCB are used in the construction of single sided PCB, but these layers are appeared to both side of the board as compared to single sided PCB on which these layers are present only on one side of the board.



Benefits of Double Sided Prototype PCB:

More flexibility for designers

Double sided PCB is an ideal choice for most of the professionals in terms of its flexibility

and ease of use.

Increased circuit density

If you intend to sink or source current or in other words if your board act like providing a current to other shields or slaves, then picking double sided PCB makes sense because it comes with both top layer and bottom layer. You can use bottom layer as a ground copper pour.

Relatively lower costs

It comes with increased circuit density and pertains to lower cost as compared to multilayer complex PCBs.

Intermediate level of circuit complexity

Double sided boards have a leg over other single sided boards in terms of their complexity because if your board is densely populated and you intend to connect lot of components on single board then it is better to have some components connected on the bottom side of the board.

Reduced board size (which can reduce costs)

Double sided PCB can be developed using reduced board size which ultimately helps in reducing overall cost. If you interested in advanced electronics, you can use Proteus Ares to design your PCB.

If you are not allowed to change board size that can limit putting thicker traces, and you are instructed to route Vcc and GND on a single board, then it is better pick a two layer board and route Vcc and GND on the bottom layer.

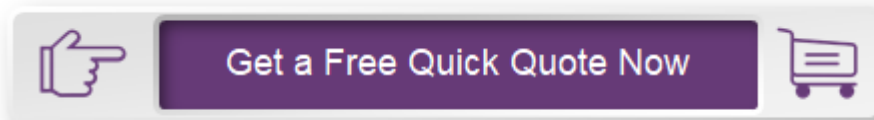
Applications of Double Sided Prototype PCB

There are near limitless applications for old and new designs. Fine line surface mount, ultra high copper build, high and low temperature, Solder coated, Silver, and Gold finishes are just a few examples of DSPT applications.

THE FOLLOWING ARE APPLICATIONS IN WHICH DOUBLE SIDED PCBs CAN BE USED:

- Industrial controls
- Power supplies
- Converters
- Control relays

- Instrumentation
- Regulators
- UPS systems
- Power conversion
- HVAC
- LED lighting
- Hard drives
- Printers
- Phone systems
- Power monitoring
- Automotive dashboards
- Line reactors
- Test equipment
- Amplifiers
- Traffic systems
- Vending machines



Related questions

What is prototype PCB?

Engineers designing printed circuit boards (PCBs) commonly generate a prototype board prior to full-scale manufacturing of boards for end products. ... Manufacturing of high-density or multi-layer boards are scenarios where prototyping can accelerate the processes of PCB circuit concept-to-production.

How does a prototype board work?

A breadboard is a construction base for prototyping of electronics. ... A stripboard (Veroboard) and similar prototyping printed circuit boards, which are used to build semi-permanent soldered prototypes or one-offs, cannot easily be reused.

What is single sided PCB?

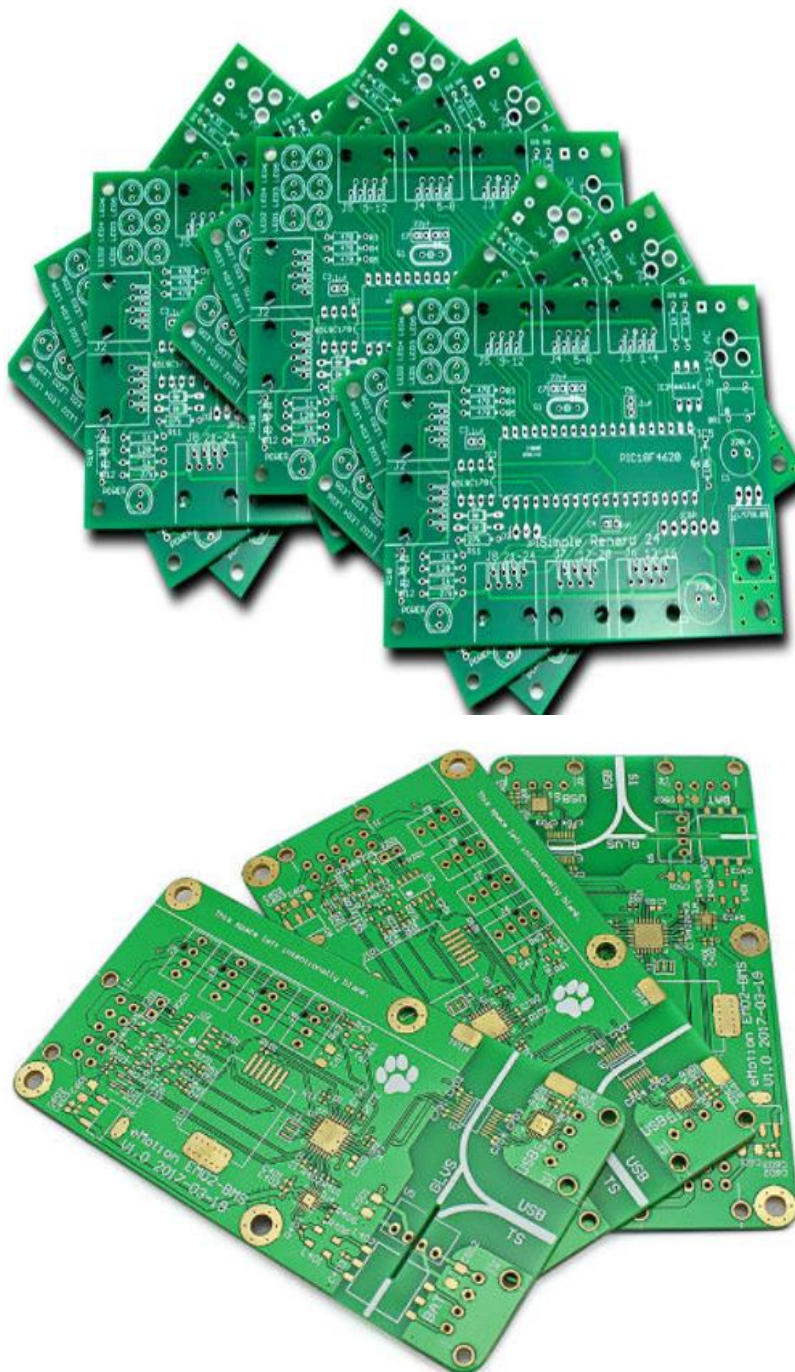
Single Sided PCB. Single Sided PCBs contain only one layer of conductive material and are best suited for low density designs. ... Single-sided printed circuit boards are easily designed and quickly manufactured. They serve as the most cost effective platform in the

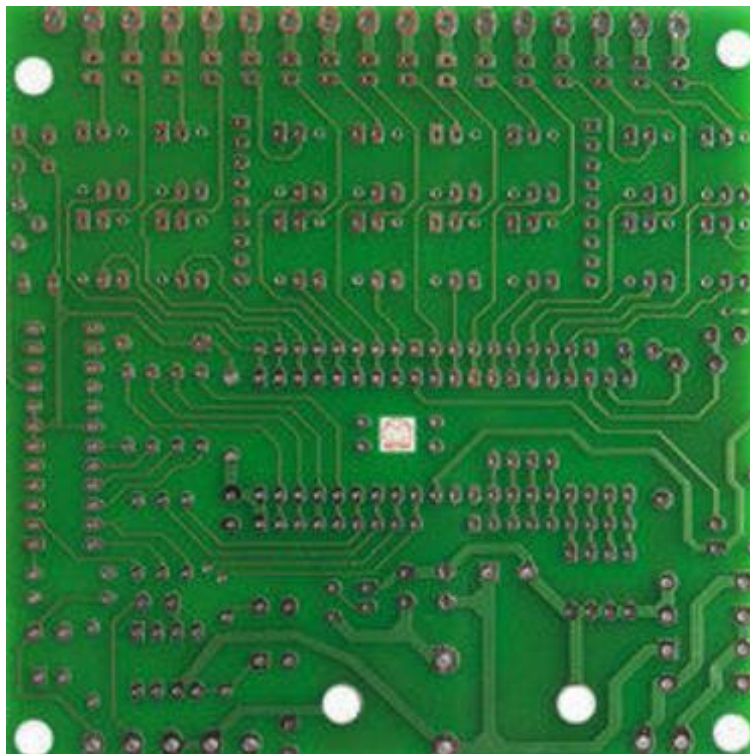
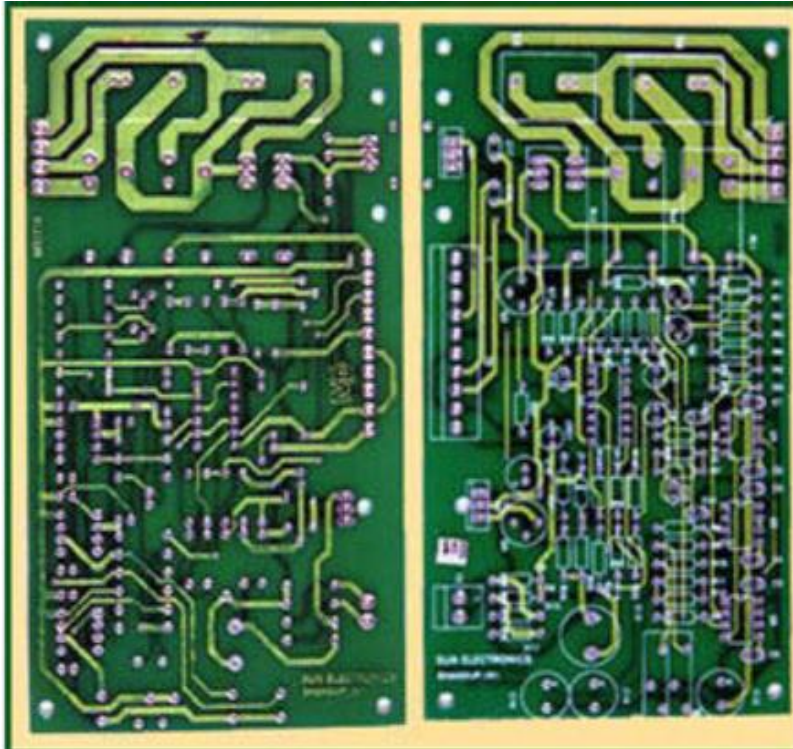
industry.

What is PCB layout?

A printed circuit board (PCB) mechanically supports and electrically connects electronic components or electrical components using conductive tracks, pads and other features etched from one or more sheet layers of copper laminated onto and/or between sheet layers of a non-conductive substrate.

Image for Double Sided PCB





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