PCB Layout Design

Introduction to PCB

- PCB means Printed Circuit Board.
- PCB helps in connecting the electronic components with pads, tracks and lines incorporated on a laminated copper sheet.
- It is considered as an insulating material which can be developed using epoxy on which copper layer is laminated.

Types of PCB’s

There are mainly three types of PCB’s:

- Single sided PCB
- Double sided PCB
- Multilayer PCB

Single sided PCB : It has the conductive copper and components mounted on one side of the board and the conductive wiring connected on the other side.

Double sided PCB : It is a type of PCB which has conductive copper layers on both sides of the board.

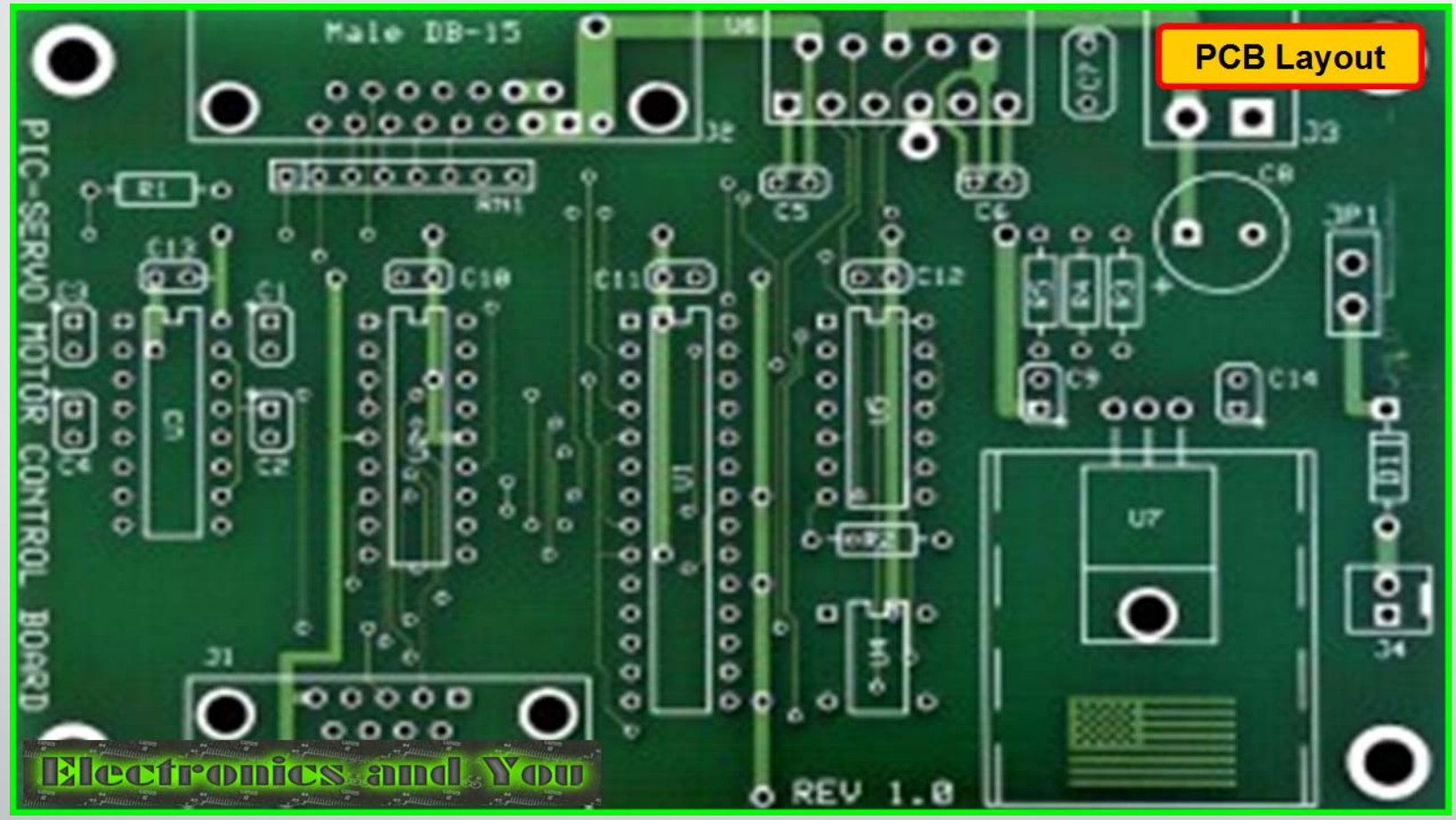
Multilayer PCB : It is a circuit board that has more than two layers.

What is PCB made of ?

A basic PCB starts with a copper-clad fiberglass material or thin copper sheets attached to either side of the board. It consists of :

- Copper Foil
- Copper Plating
- Solder Flow
- Solder Mask
- Trace

Slots and cut outs


PCB Layout
Male DB-15
PIC-SERVO MOTOR CONTROL BOARD
Electronics and You
REV 1.0

Uses of PCB's

- Transformers and capacitors
- Electrical equipment including voltage regulators, switches and electromagnets
- Motors and hydraulic systems
- Old electrical devices or appliances containing PCB capacitors
- Fluorescent lights
- Cable insulation

Advantages of PCB's

- All of the PCB components are fixed.
- Minimal concern on short circuits and wrong wirings.
- No need of further inspection.
- Low electric noise.
- Affordable cost and reliability.

Disadvantages of PCB's

- Not easy to repair once damaged.
- It cannot to updated.
- It can be used only for specific circuits.

Thank You

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