

# **PCB DESIGN FROM ONE TO DONE**

**BROUGHT TO YOU BY IEEE MSB**



**DESIGNED BY:EMAD R. ELZORQANY**

وَمَا أَوْفَيْتُمْ بِهِمْ لَعَلَّهُمْ يَاقِلُونَ

# CONTENT

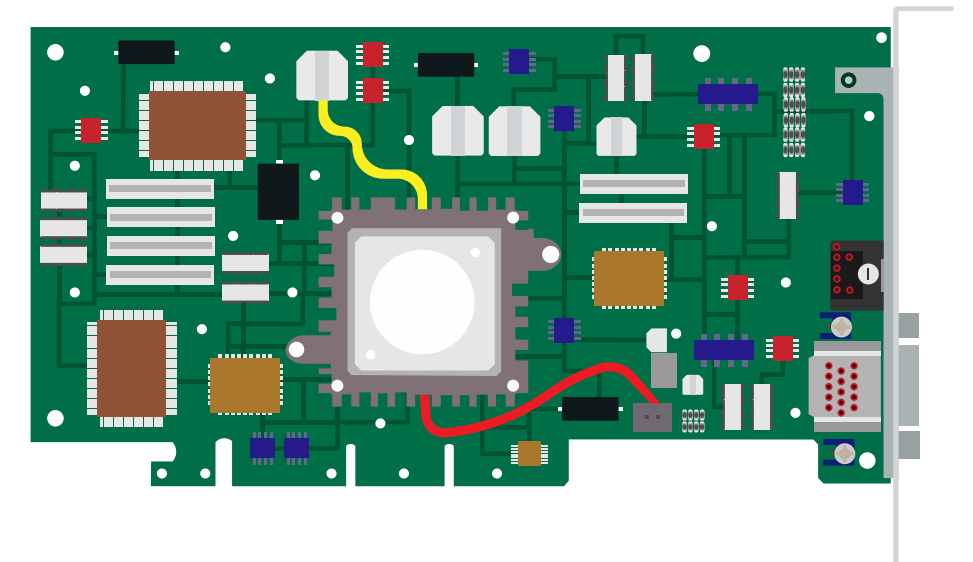
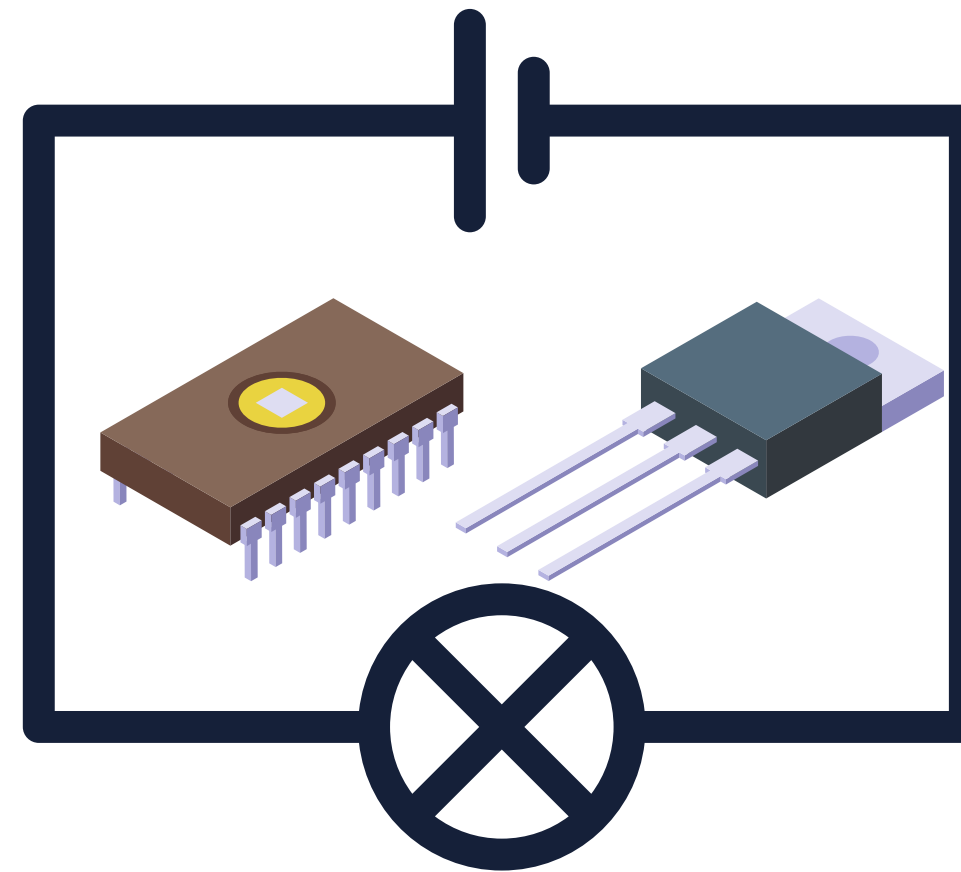
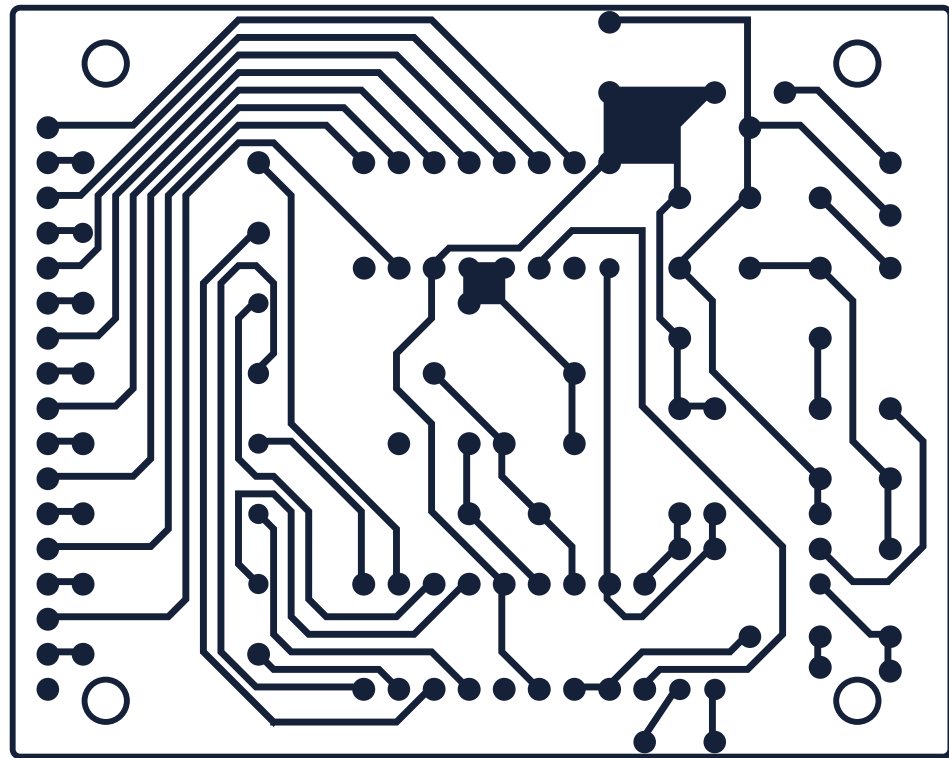
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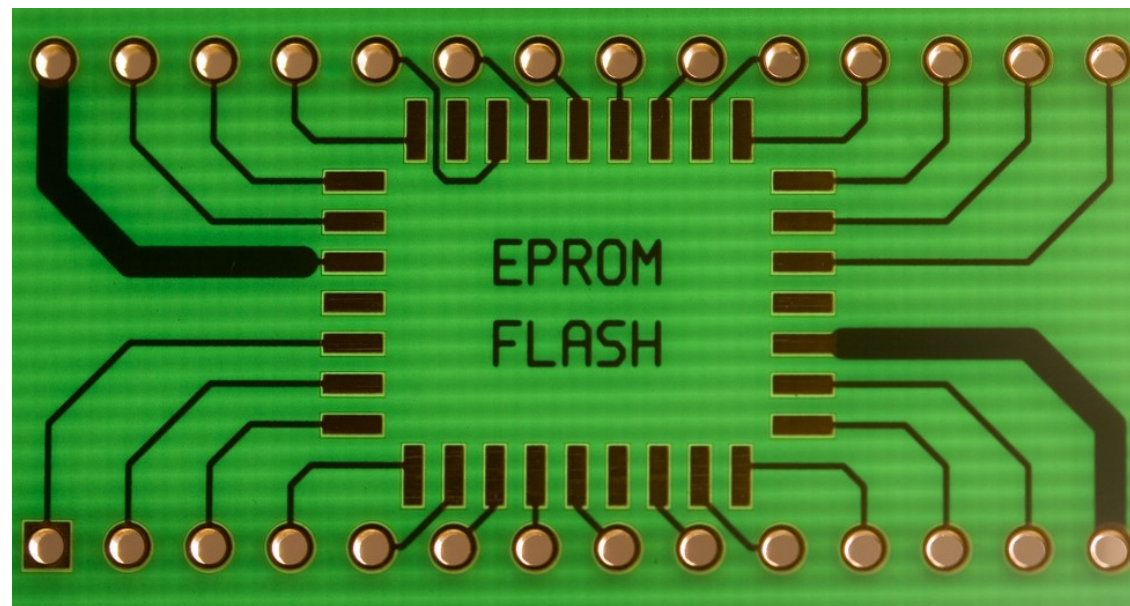
# WHAT IS THE PCB?

THE **PCB** TERM MEANS **P**RINTED **C**IRCUIT **B**OARD.



# PCB TYPES

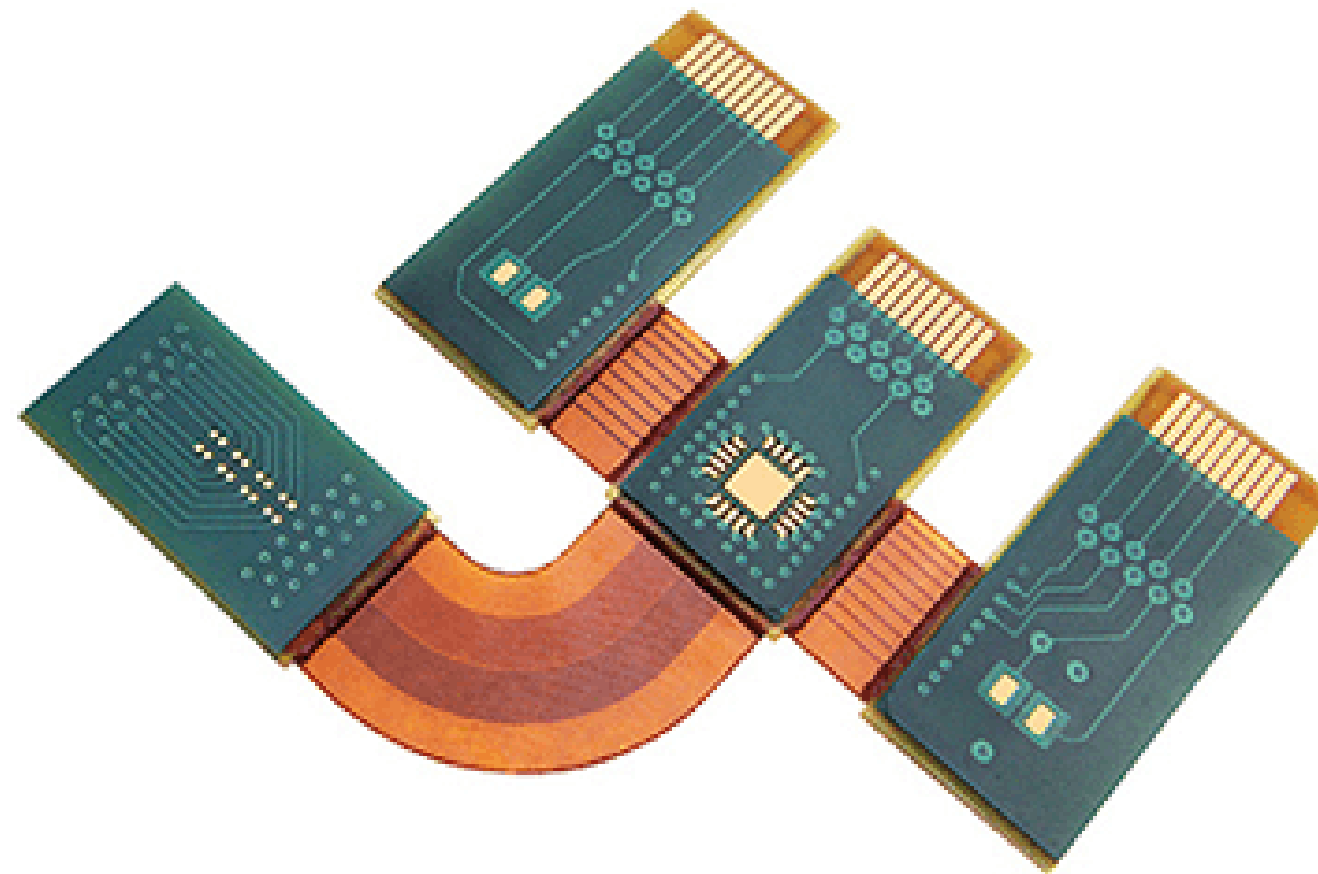
- *Rigid PCB*



- *Flexible PCB*

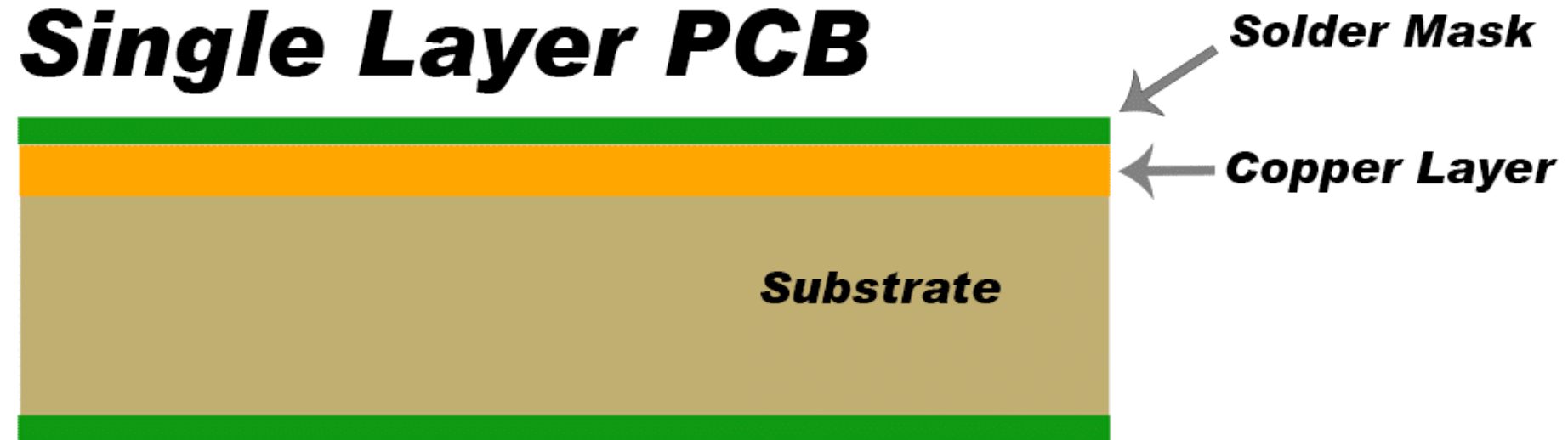


- *Rigid Flexible PCB*



# PCB CONSTRUCTION

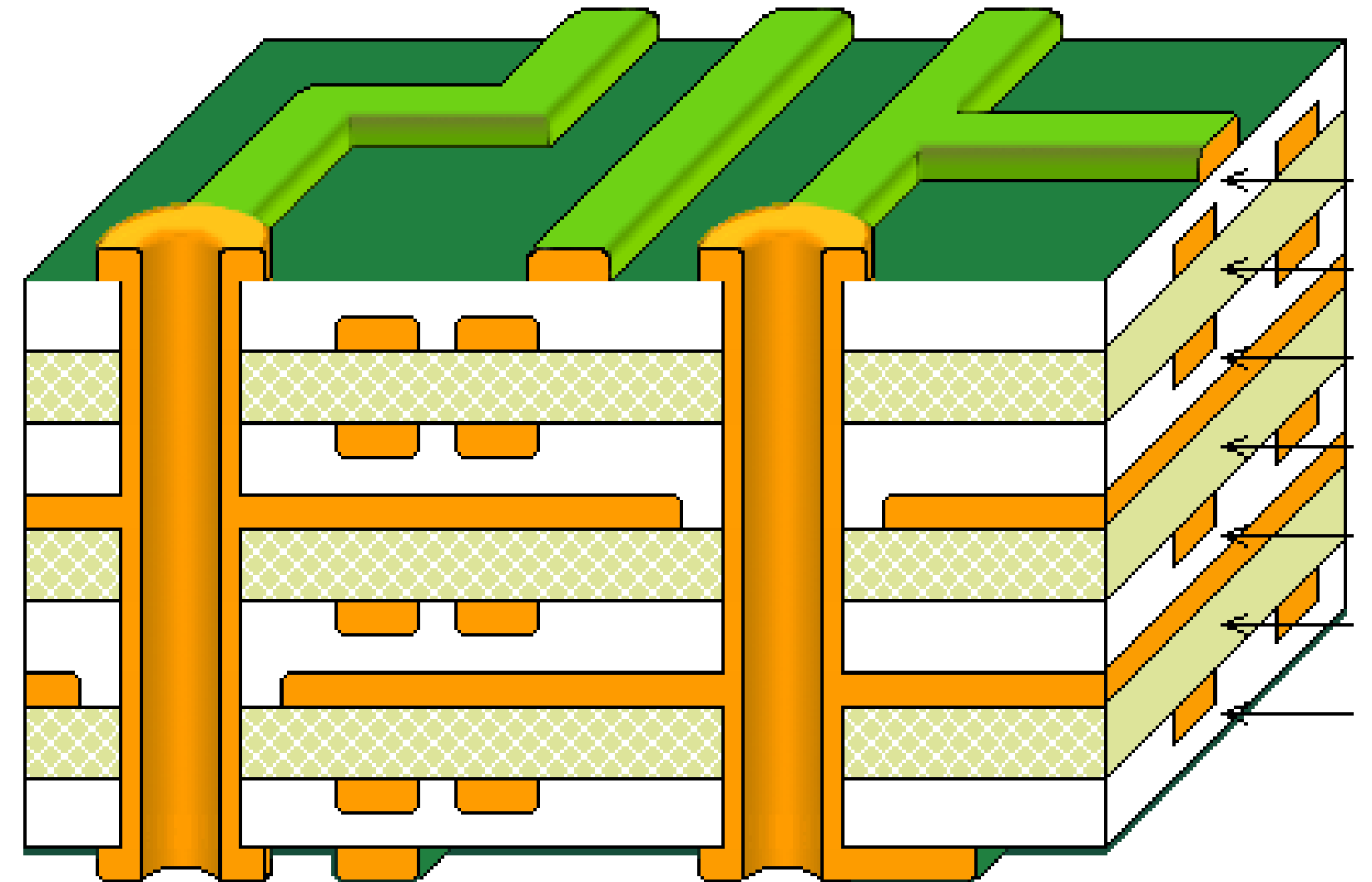
## Single Layer PCB



## Double Layer PCB



## Multi-Layer PCB



# **MOST USED ELECTRONIC COMPONENTS**

*Capacitors      Resistors      inductors      Switches*

*Push buttons      ic's      diodes      Transistors      Relays*

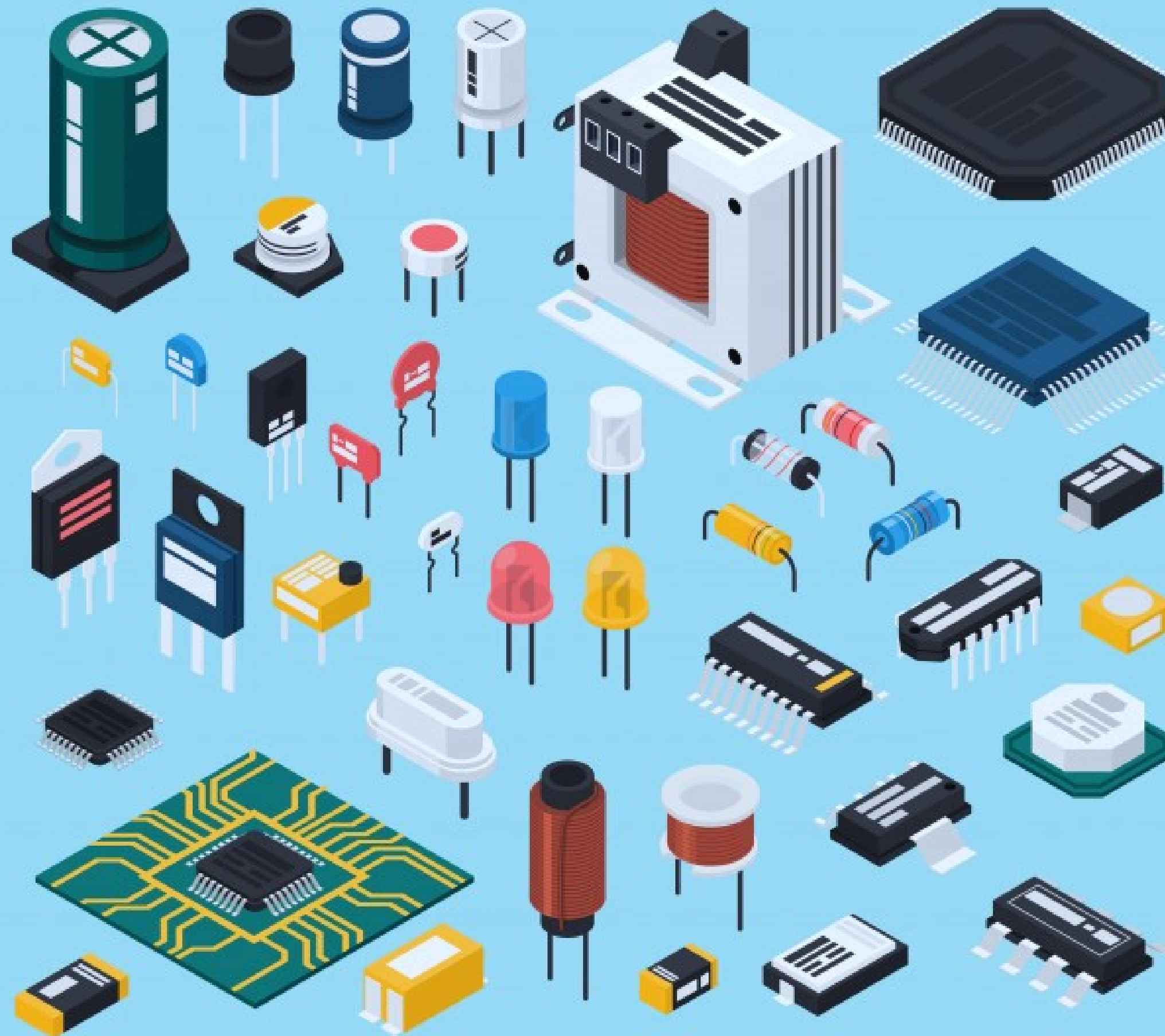
# **MOST USED ELECTRONIC CONNECTORS**

*Terminal blocks      pin headers      AUX      DSL*

*USB      VGA      HDMI      jacks*

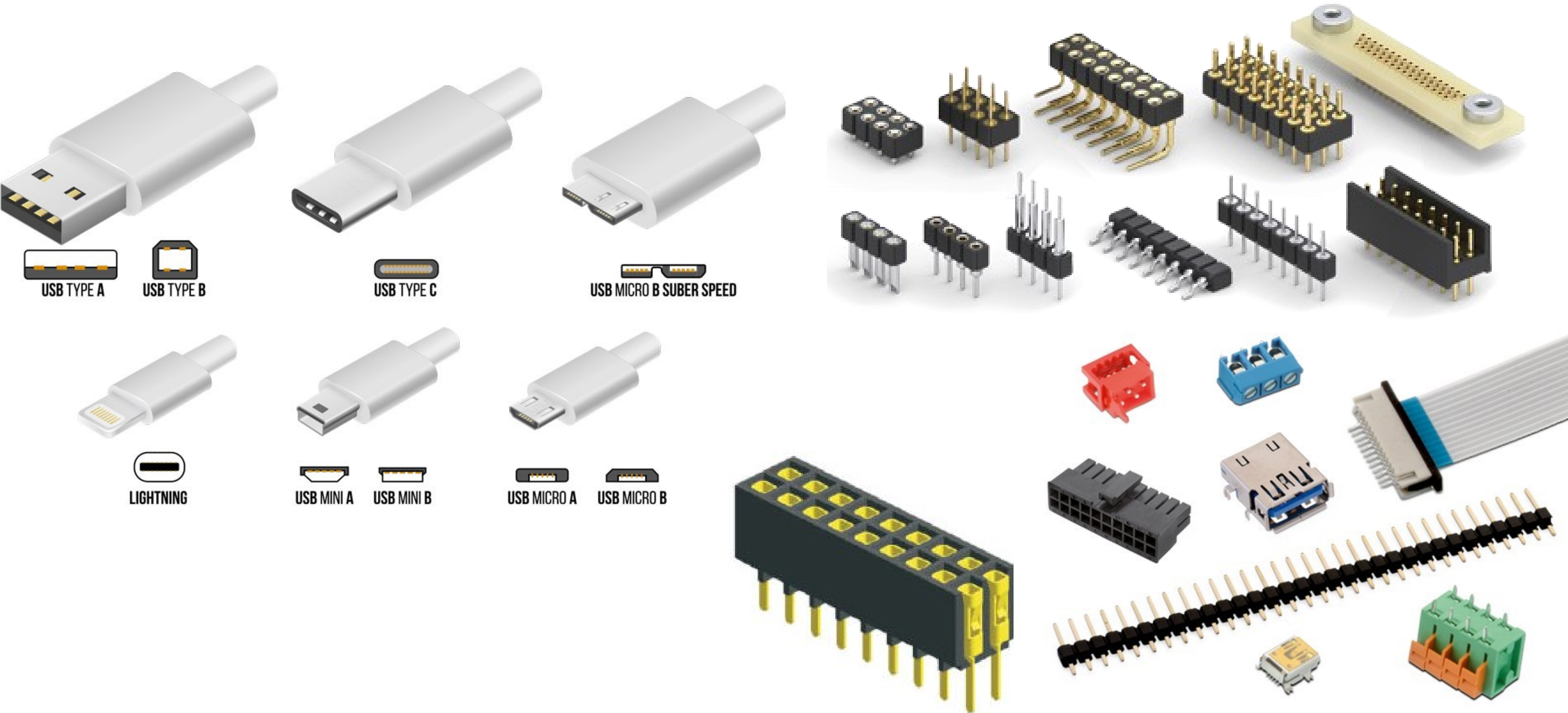


# MOST USED ELECTRONIC COMPONENTS



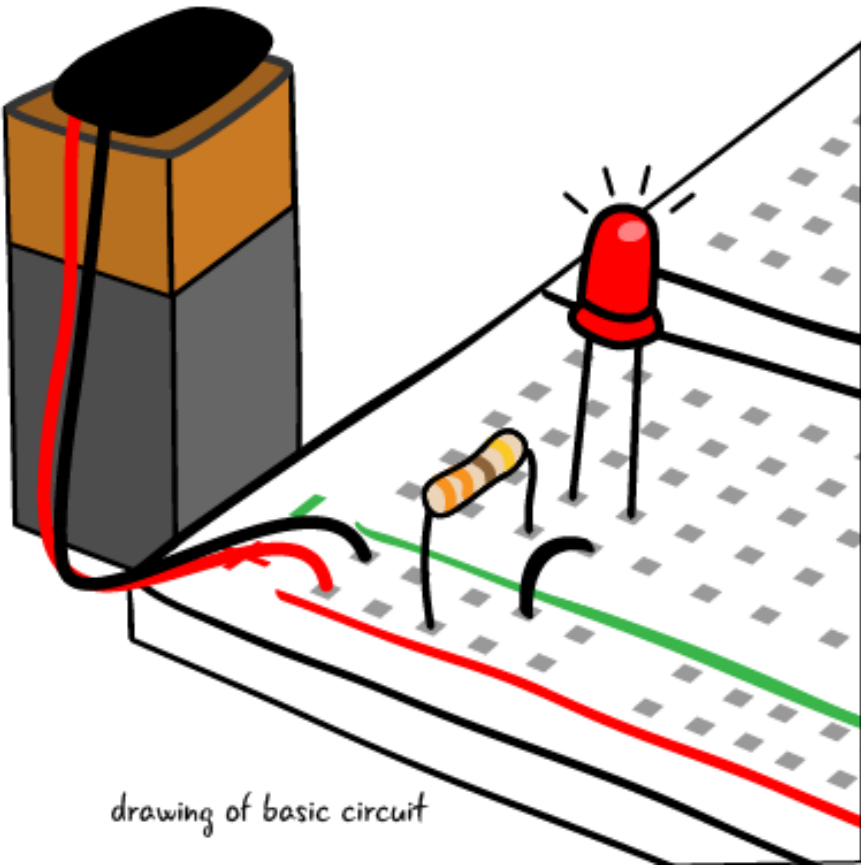
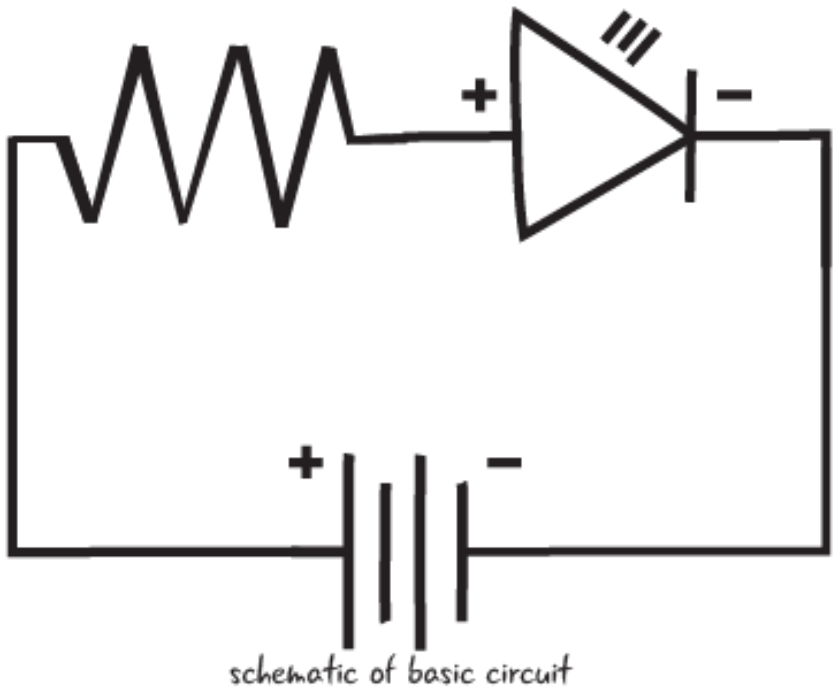
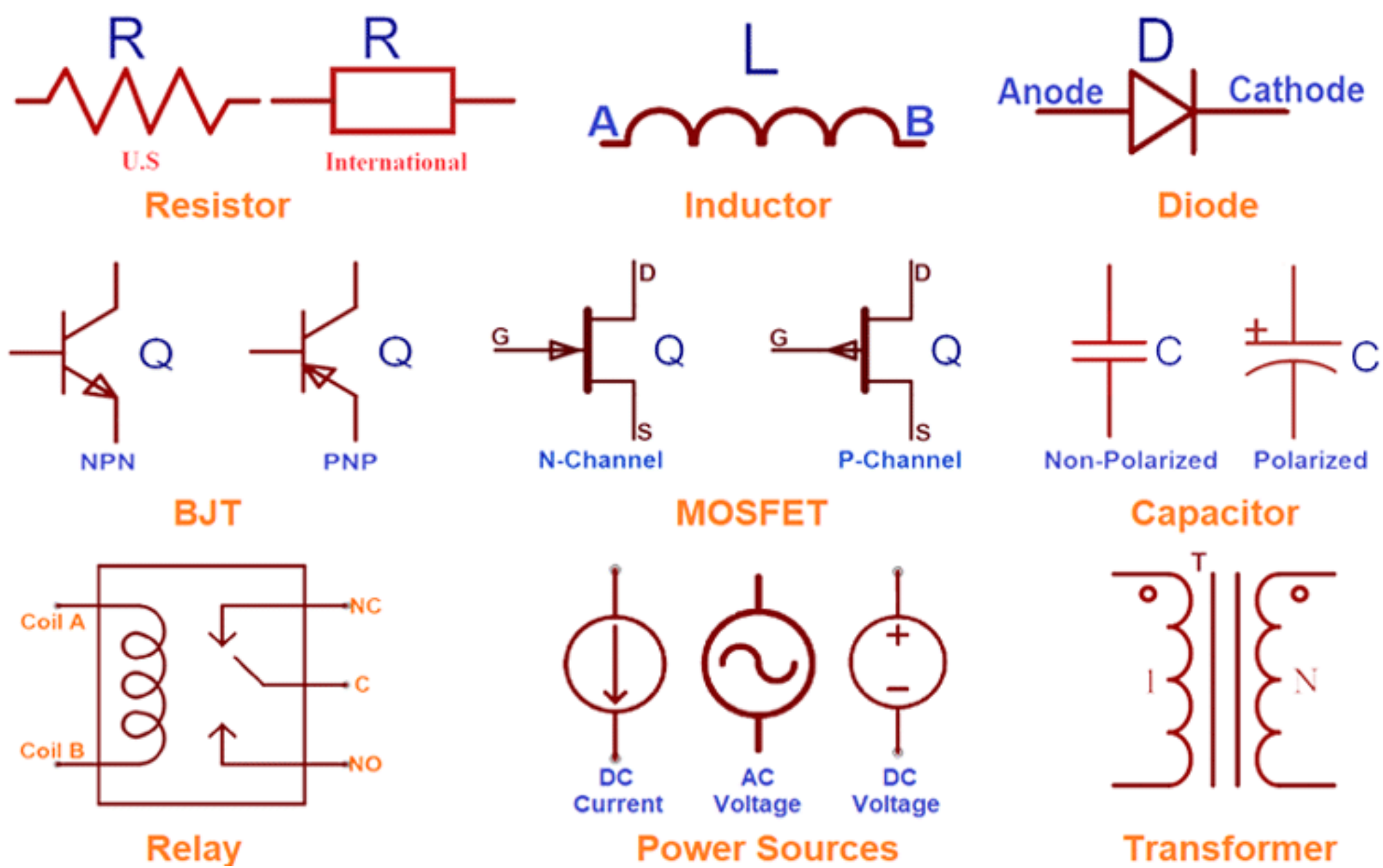


# MOST USED ELECTRONIC CONNECTORS



# SCHEMATIC DIAGRAM EXPLAINED

## Electronic Component Symbols

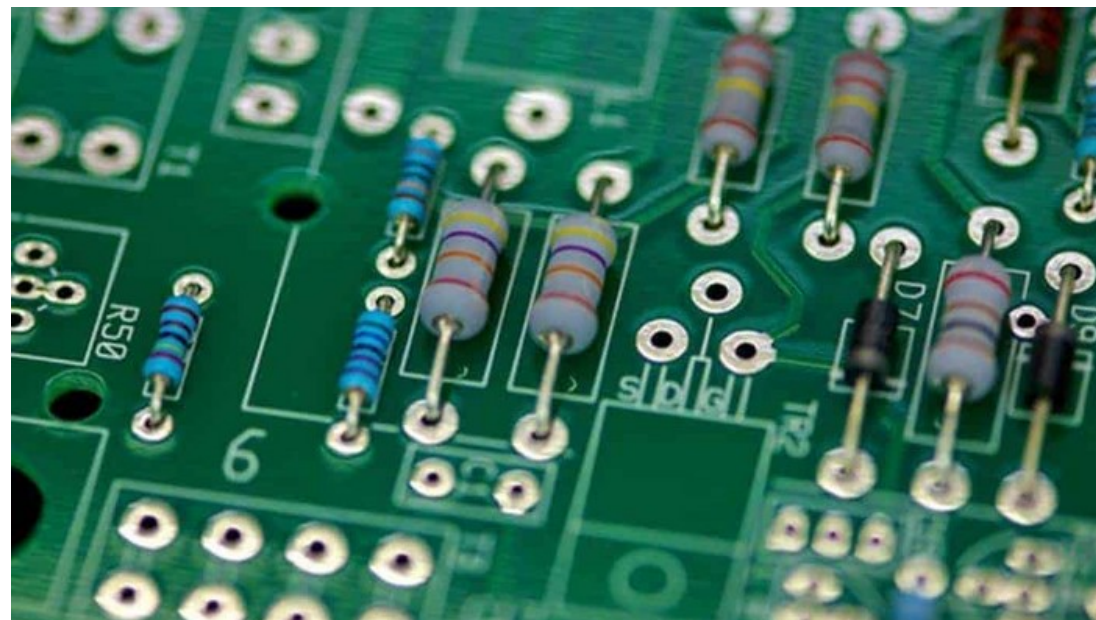
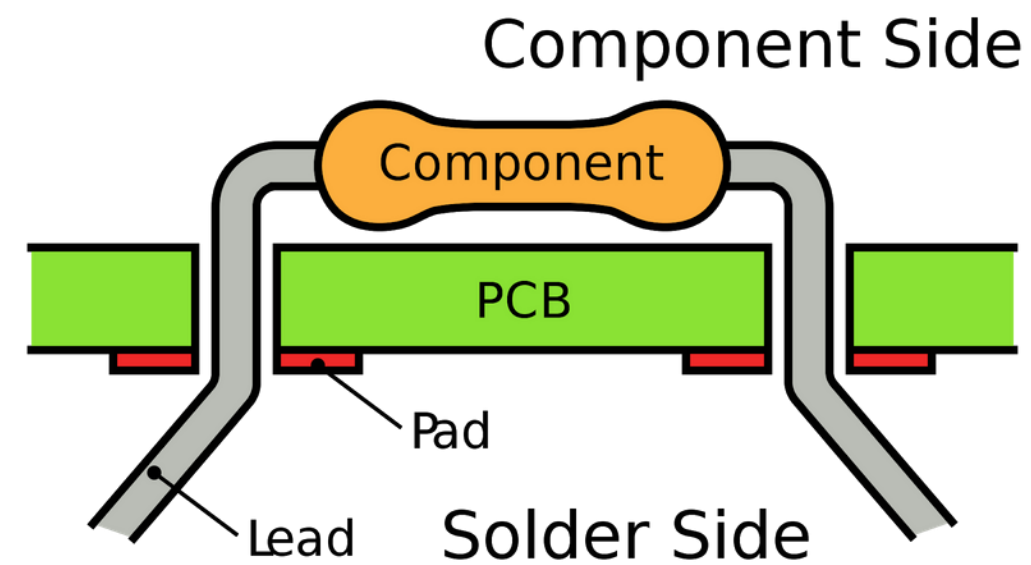




# COMPONENTS PACKAGING TYPES

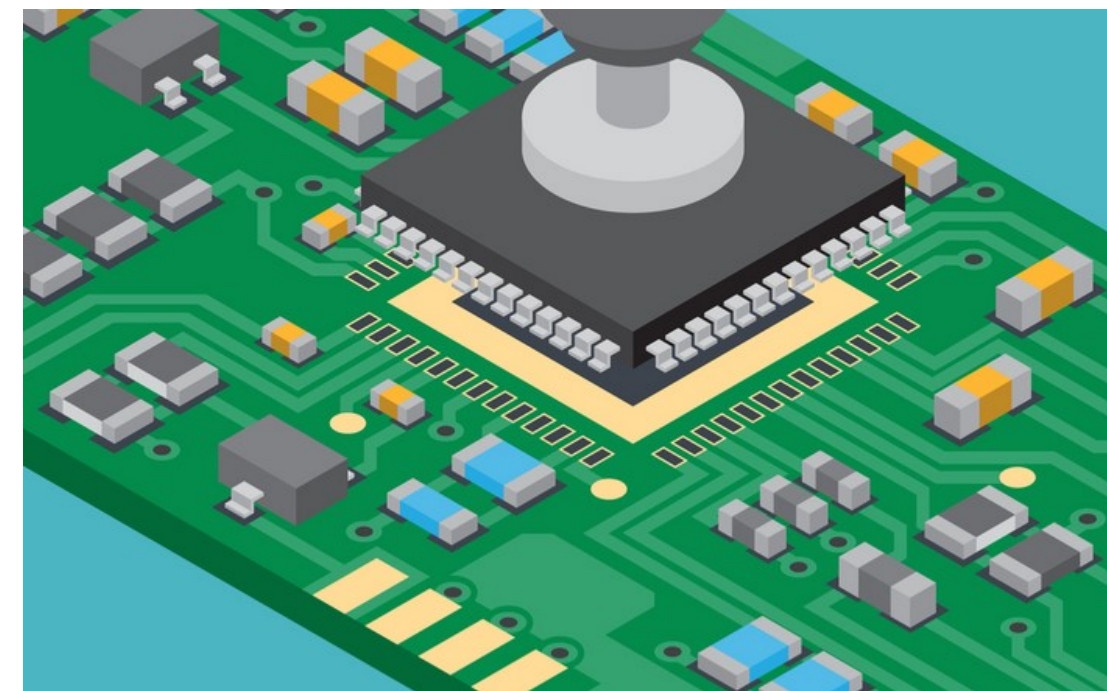
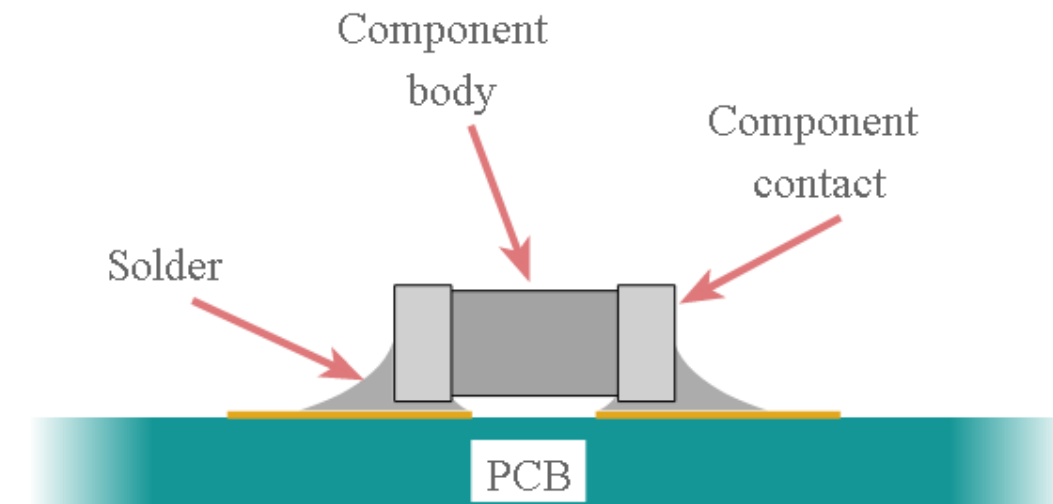
*THT*

*Through Hole Technology*



*SMT*

*Surface Mount Technology*



# LAYOUT EXPLAINED

