Capacitors: Types and Applications A capacitor is an electrical component that stores electrical energy by accumulating electric charges on two closely spaced surfaces that are insulated from each other.o Mica Capacitors: Used in high-frequency applications due to their stability and low losses.Mica Capacitors: Used in high-frequency applications due to their stability and low losses.o Variable Capacitors (Varicap Diodes): Used for voltage-controlled tuning in radio receivers.o Variable Capacitors (Varicap Diodes): Used for voltage-controlled tuning in radio receivers.Voltage Rating: Indicates the maximum voltage the capacitor can handle, measured in volts (V).Signal Processing: Capacitors are essential in filters, oscillators, and timing circuits .4Fixed Capacitors: o These capacitors have a fixed capacitance value.The capacitor was originally known as the condenser, a term still encountered in a few compound names, such as the condenser microphone.Capacitance Value: Capacitance is measured in farads (F), microfarads (uF), and nanofarads (nF).o Ceramic Capacitors: Commonly employed for bypass and decoupling in power supplies.o Aluminum Electrolytic Capacitors: Widely used in electronics and electrical systems.o Tantalum Electrolytic Capacitors: Known for their high capacitance-to-volume ratio..4Adjustable and Variable Capacitors: o Adjustable Capacitors: Used for tuning and resonance in radio circuits.o Coupling and Decoupling: Used to couple or decouple signals in electronic circuits.2 .Coupling and Decoupling: Used to couple or decouple signals in electronic circuits.o Ceramic Capacitors: Commonly employed for bypass and decoupling in power supplies.o Aluminum Electrolytic Capacitors: Widely used in electronics and electrical systems.o Tantalum Electrolytic Capacitors: Known for their high capacitance-to-volume ratio..7 Adjustable and Variable Capacitors: o Adjustable Capacitors: Used for tuning and resonance in radio circuits.o Coupling and Decoupling: Used to couple or decouple signals in electronic circuits.Capacitor Specifications 1.Applications of Capacitors 1.2.3.4.5.6.7.3.