

# Capacitors | Notes

## Capacitors, conductors and electric fields

**Coulombs law:**  $F = \frac{Q_1 Q_2}{d^2}$

**Capacitance:** Ratio of the charge of the capacitor compared to the potential difference applied across it is one C/V

**The Farad:** Capacitance of one farad when the ratio of charge to potential difference on a capacitor is one coulomb per volt

**Potential difference:** work done when bringing a charge of 1C from one point to another

**Capacitor:** Device that stores electrical charge

**Fuse:** Small electric component that protects a circuit from excessive electric current. Fuse melts when the current exceeds its limit

**Electromagnetic induction:** Production of an EMF of current when there is relative motion between a conductor and an electric field

**Ohms law:** Current is proportional to potential difference at constant temperature

**Resistance:** Ratio of potential difference to current

**Direct current:** Current flowing in one direction only

**Alternating current:** An Electric current that periodically reverses direction