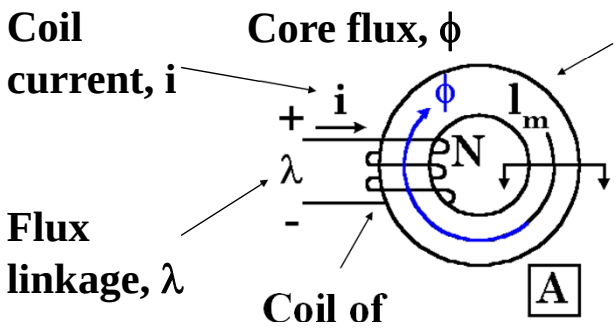
E E 2315

Lecture 06 - Inductors and Capacitors

Physics of an Inductor (1/2)



Physics of an Inductor (2/2)

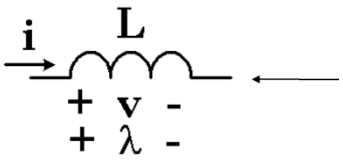
Mmf: $F = N \cdot i$

Magnetic Reluctance:

Core Flux:

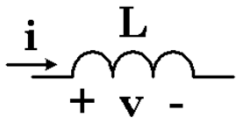
Flux linkage:

Voltage Drop Across Inductor



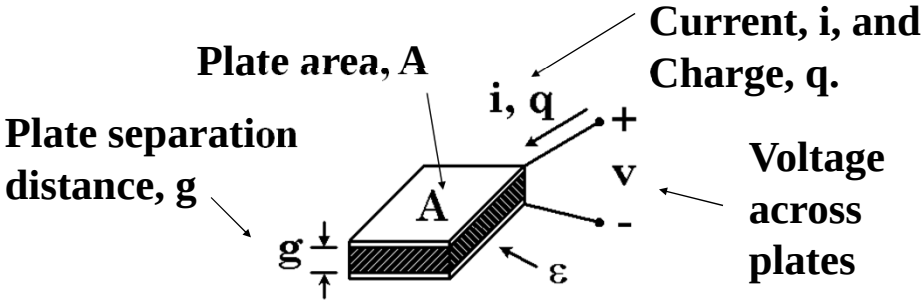
Note Passive Sign Convention

Energy in an Inductor

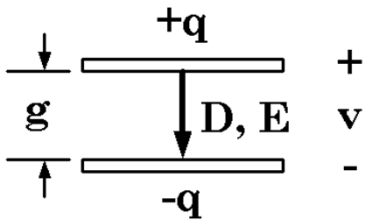


Stored Energy

Physics of a Capacitor (1/3)



Physics of a Capacitor (2/3)



Vector fields:

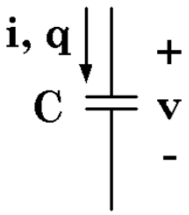
Electric Charge:

Physics of a Capacitor (3/3)

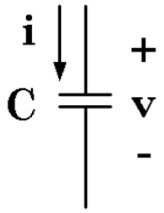
Current:

Capacitance:

Note Passive Sign Convention:

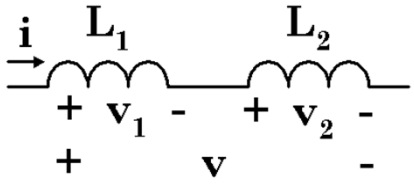


Energy in a Capacitor

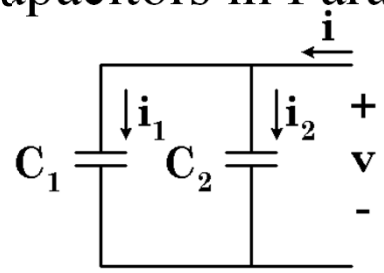


Stored Energy:

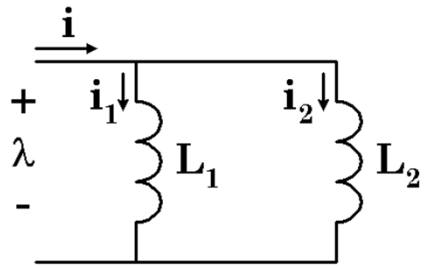
Inductors in Series



Capacitors in Parallel



Inductors in Parallel



Capacitors in Series