CHAPTER OVERVIEW

5: Electrostatics

Electrostatics is the theory of the electric field in conditions in which its behavior is independent of magnetic fields, including

- The electric field associated with fixed distributions of electric charge
- *Capacitance* (the ability of a structure to store energy in an electric field)
- The *energy* associated with the electrostatic field
- *Steady current* induced in a conducting material in the presence of an electrostatic field (essentially, Ohm's Law)

The term "static" refers to the fact that these aspects of electromagnetic theory can be developed by assuming sources are time-invariant; we might say that electrostatics is the study of the electric field at DC. However, many aspects of electrostatics are relevant to AC, radio frequency, and higher-frequency applications as well.

Contributors and Attributions

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