Ansys HFSS Getting Started



Universidad de Granada

Departamento de Electrónica y Tecnología de Computadores

Dipole Antenna Example



Simulación Electromagnética con ANSYS para el diseño electrónico 1ª Edición

Prof. Andrés Roldán Aranda

1: Create HFSS Project

Insert into Electronics Desktop using Project > Insert HFSS Design



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2: Set Driven Modal Solution Type

Select HFSS > Solution Type > Modal

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Tipos de soluciones disponibles

Eigenmode solution

- Solves for natural resonances of structure based on geometry, materials, and boundaries
- Provides modal frequencies, unloaded Qfactors, and fields

Driven solution

- Port or incident field used to excite the structure
- Driven modal method commonly used for RF/microwave designs
- Driven terminal method commonly used for multi-conductor transmission lines
- Provides S-parameters and fields

Driven Modal

- Fields based transmission line interpretation
- Port's signal decomposed into incident and reflected waves
- Excitation's magnitude described as an incident power



Driven Terminal

- Circuit Based transmission line interpretation
- Port's signal interpreted as a total voltage (Vtotal = Vinc + Vref)
- Excitation's magnitude described as either a total voltage or an incident voltage
- Supports Differential S-Parameters

Terminal Propagation

•Each conductor touching the port is considered a terminal or a ground •Energy propagates along each terminal in a single TEM mode

- •Each Terminal has its own column and row in the S, Y and Z parameters
- •Does not support symmetry boundaries or Floquet Ports

Network Circuit System

3: Set Model Units

Select Modeler > Units > cm

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Más contenidos en el Curso