

FAR-Field Approximation Module



EM-ISight with the far-field approximation module is a complete solution for the assessment of electronics during design, development, optimisation, analysis, quality control & management.

APREL Far-Field Approximation (FFA) module is based on near-field measurements of a complex device and running a series of processes to determine the equivalent far field value based on distribution of evanescent waves.

An **evanescent wave** is a near-field standing wave with an intensity that exhibits exponential decay with distance from the boundary at which the wave was formed. Depending on the impedance of the radiating source element, the evanescent wave is either predominantly electric (capacitive) or magnetic (inductive), thus by determining such properties at source we use EM-ISight to establish fields that will radiate and may impact the design. Using this phenomenon the Far Field Approximation module aids the user in determining non evanescent waves to establish an equivalent propagation value from 1M onwards.

Features

- Assess the near-field of a circuit design for signal integrity
- Normal near field scan is executed on a device following the standard operation flow
- User determines where the FFA (Far Field Approximation) must be executed
- Specific settings relating to frequency, span, RBW/VBW etc. are defined by the user
- FFA will make calculations based on frequency selected by user for the appropriate volumetric scan parameters
- User has complete control over the settings relating to the measurement process
- Perform Phase Layer tracing analysis where the system performs a volumetric scan automatically derived
- Perform Layer Expansion Mode analysis where user has more control over the volumetric scan profile
- User can select specific detector types after volumetric scan e.g. CISPR Quasi Peak
- User can define FFA value to any point from 1M through to 100M
- Final unit measured can be changed by user after FFA has been executed

