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A Network Formulation of the Power Balance Method for High-Frequency Coupling

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This paper deals with a network formulation of the power balance approach in order to estimate high frequency coupling mechanisms in complex systems. After giving the general principles of this approach found in the scientific literature, the network development of the method is presented, based on an electromagnetic topology analysis. Finally, the network formulation of this approach is applied on a simple two contiguous cylindrical structure by easily adapting a computer code initially dedicated to electromagnetic topology on cable networks.

Keywords:

EM coupling | quality factor | coupling cross sections | EM topology | BLT equation

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