Abstracts

An efficient series expansion for the 2D Green's function of a microstrip substrate using perfectly matched layers

H. Derudder, F. Olyslager and D. De Zutter. "An efficient series expansion for the 2D Green's function of a microstrip substrate using perfectly matched layers." 1999 Microwave and Guided Wave Letters 9.12 (Dec. 1999 [MGWL]): 505-507.

A new efficient technique is proposed to derive a series representation for the two-dimensional (2-D) Green's function of a planar substrate. A perfectly matched layer (PML) is used to turn the original open configuration into a closed one. The resulting structure is regarded as a waveguide and the resulting-analytically known-discrete set of eigenmodes is then used to expand the Green's function. The method turns out to be elegant and efficient for distances larger than 0.1/spl lambda/ away from the source.

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