Abstracts

Singularity Extraction from the Electric Green's Function for a Spherical Resonator (Short Papers)

M. Bressan and G. Conciauro. "Singularity Extraction from the Electric Green's Function for a Spherical Resonator (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.5 (May 1985 [T-MTT]): 407-414.

The electric dyadic Green's function for a spherical resonator is expressed as a sum of two dyadics given in closed form and a dyadic given in the form of a series. The first two dyadics diverge at the source point and they represent a low-frequency approximation for the Green's function, valid up to frequencies moderately lower than the resonant frequency of the dominant mode. The dyadic given in the form of a series is finite at the source and takes into account cavity resonances. It is given either as a one-index series, whose terms are transcendental functions of the frequency, or as a double series, whose terms are rational functions of the frequency. Both series have very good converging properties everywhere inside the cavity.

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