Abstracts

Absorption Characteristics of Periodic Arrangements of Infinite Helices

J. Svigelj, E. Michielssen and R. Mittra. "Absorption Characteristics of Periodic Arrangements of Infinite Helices." 1992 Microwave and Guided Wave Letters 2.12 (Dec. 1992 [MGWL]): 495-496.

The absorption properties of periodic arrangements of lossy, infinite helices are investigated. The helices are assumed to be embedded in free space and backed by a p.e.c. plane. The method of moments is used to solve for the scattering parameters of a single layer, and a multiscattering technique is used to form a composite matrix that describes the scattering due to several layers. The resistivity of the wire, the pitch to length ratio of the helix, and the thickness of the layer are shown to affect the power absorbed.

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