Abstracts

Microwave Modelling of H. F. Antennas Over Lossy Earth

J.H. Benjamin and G.G. Gerardo. "Microwave Modelling of H. F. Antennas Over Lossy Earth." 1981 MTT-S International Microwave Symposium Digest 81.1 (1981 [MWSYM]): 90-92.

The dielectric constant and loss tangent values of several mixtures of sand, water and salt are measured at 9.3 GHz, in order to investigate the feasibility of microwave modelling of H.F. antennas which operate over imperfectly conducting ground. A particular mixture is used for modelling a monopole antenna over a circular metal disk which is lying on a lossy half-space. Good agreement between theoretical and experimental results is obtained for both input impedance and radiation pattern as a function of the radius of the ground system.

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