

Abstracts

Dominance of Resistive Losses Over Hysteretic Losses in Ferromagnetic Conductors (Short Papers)

K.K. Thornber. "Dominance of Resistive Losses Over Hysteretic Losses in Ferromagnetic Conductors (Short Papers)." 1989 Transactions on Microwave Theory and Techniques 37.7 (Jul. 1989 [T-MTT]): 1152-1153.

In the presence of ferromagnetic conductors, electromagnetic signal propagation might be seriously degraded through hysteretic losses. It is shown, however, that, independent of frequency, such losses are always smaller than the ordinary resistive losses one would calculate for a similarly resistive, equivalent paramagnetic material. This indicates that measurements of conductivity and permeability suffice to bound hysteretic losses, obviating the necessity for measurements of hysteresis at operating frequencies.

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