Abstracts

A novel approach to modeling the nonlinear propagation characteristics of HTS planar transmission lines

G.M. Coutts, R.R. Mansour and S.K. Chaudhuri. "A novel approach to modeling the nonlinear propagation characteristics of HTS planar transmission lines." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 1015-1018.

The paper presents a model for characterizing nonlinear effects in High Temperature Superconductor (HTS) transmission lines. The model is based on a recursive time domain approach. The changes in both the propagation and attenuation constants due to nonlinear effects are included in the analysis. The model accurately predicts the variation of the third order intercept (TOI) with respect to line width and length. The validity of the model has been verified by comparison with experimental results.

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