Abstracts

Effects of Superconducting Losses in Pulse Propagation on Microstrip Lines

O.R. Baiocchi, K.-S. Kong, H. Ling and T. Itoh. "Effects of Superconducting Losses in Pulse Propagation on Microstrip Lines." 1991 Microwave and Guided Wave Letters 1.1 (Jan. 1991 [MGWL]): 2-4.

An analysis of the effect of losses in the propagation of pulses on superconducting microstrip lines is presented. It is based on the phenomenological equivalence method (PEM) and the two-fluid model of superconductivity to calculate the propagation characteristics of the superconducting line. For most practical situations, it is shown that these losses do not introduce phase distortion, and the attenuation constant can be approximated by a quadratic expression of the frequency. Therefore, the effect of attenuation can be easily evaluated through a simple equivalent filter.

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