Abstracts

High Frequency Characterization of High-Temperature Superconducting Thin Film Lines

T.E. van Deventer, P.B. Katehi, J.Y. Josefowicz and D.B. Rensch. "High Frequency Characterization of High-Temperature Superconducting Thin Film Lines." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 285-288.

An integral equation approach is applied to calculate the propagation characteristics of high temperature thin-film superconducting lines at high frequencies. To evaluate losses in these lines, the superconducting strips are replaced by frequency-dependent surface impedance boundaries. The values of these surface impedances are measured experimentally by a stripline resonator technique. Using this method, phase and attenuation constants as well as characteristic impedance are evaluated and presented as functions of frequency and several other parameters.

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