Abstracts

Microwave Characteristics of High T/sub c/ Superconducting Coplanar Waveguide Resonator

H. How, R.G. Seed, C. Vittoria, D.B. Chrisey, J.S. Horwitz, C. Carosella and V. Folen. "Microwave Characteristics of High T/sub c/ Superconducting Coplanar Waveguide Resonator." 1992 Transactions on Microwave Theory and Techniques 40.8 (Aug. 1992 [T-MTT]): 1668-1673.

A theoretical formulation has been developed to calculate the coupling coefficient, London penetration depth, and surface resistance of a coplanar waveguide resonator fabricated from films of superconducting YBCO material. Experimental data of the reflection coefficient as a function of temperature and frequency agree reasonably well with calculations. The formulation is of sufficient generality to be applicable to other guided structures.

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