

Abstracts

Surface Impedance of High T_{sub c}/ Superconductors

L. Drabeck, J. Carini, G. Gruner, T.L. Hylton, A. Kapitulnik and M.R. Beasley. "Surface Impedance of High T_{sub c}/ Superconductors." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 551-554.

The surface impedance of various high temperature superconductors has been examined in the millimeter wave spectral range. The ceramic, thin film and single crystal samples are characterized by a residual surface resistance $R_{\text{sub s}}(T \rightarrow 0)$ and a temperature dependent contribution $R_{\text{sub s}}(T)$. $R_{\text{sub s}}(T \rightarrow 0)$ is accounted for by a model of Josephson coupled grains. The surface resistance exceeds the Mattis-Bardeen limit in both ceramic and thin film specimens.

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