

## Experiments with a 31-cm High-T<sub>c</sub>/ Superconducting Thin Film Transmission Line

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L.A. Hornak, M. Hatamian, S.K. Tewksbury, E.G. Burkhardt, R.E. Howard, P.M. Mankiewicz, B.L. Straughn and C.D. Brandle. "Experiments with a 31-cm High-T<sub>c</sub>/ Superconducting Thin Film Transmission Line." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 623-626.

Electrical time domain measurements and transmission response measurements were made using a 31 cm long, YBaCuO superconducting thin film microstrip line and a YBaCuO ground plane, each on separate 1 cm LaGaO<sub>3</sub> substrates, with a 125 μm sapphire substrate serving as the dielectric insulator. Degradation of the performance of the line for currents up to the critical current density and for magnetic fields moderately above the lower critical magnetic field H<sub>c1</sub> were evaluated in a variety of simple measurements.

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