Abstracts

Ferroelectric films: nonlinear properties and applications in microwave devices

A. Kozyrev, A. Ivanov, V. Keis, M. Khazov, V. Osadchy, T. Samoilova, O. Soldatenkov, A. Pavlov, G. Koepf, C. Mueller, D. Galt and T. Rivkin. "Ferroelectric films: nonlinear properties and applications in microwave devices." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 985-988.

Small signal dielectric properties (/spl epsiv/, tan/spl delta/) of highly oriented ferroelectric SrTiO/sub 3/ and (Ba,Sr)TiO/sub 3/ films at 1 MHz, 3 GHz, 10 GHz, and 20 GHz were investigated. Microstrip resonator with tunable planar ferroelectric capacitor was the object of investigation for resonator response to elevated single tone microwave (MW) power (up to 100 W), to two-tone MW power (intermodulation distortion measurements) and to video pulse voltage. As a result, speed of resonator tuning and MW loss variation were measured. 1.9 GHz phase-shifter and 20 GHz tunable filter operating at T=300 K are presented.

❑ Return to main document.