

Abstracts

Comparative Microwave Measurements of Complex Dielectric Constant of High Permittivity Thin Films

P. Pramanick and C. Dasgupta. "Comparative Microwave Measurements of Complex Dielectric Constant of High Permittivity Thin Films." 1979 MTT-S International Microwave Symposium Digest 79.1 (1979 [MWSYM]): 95-97.

In the proposed work, complex dielectric constants of high permittivity thin films of BaTiO₃ and PbNb₃ are measured at microwave frequencies. Working equations are presented for ϵ' and $\tg\delta$ by means of a new method of measurement, earlier reported by the author, with corrections for supporting substrate reactance in the present work. Verification of experimental results are done by means of multilayered dielectric slab loaded waveguide method and modified Drude's method. The working equations for latter two methods are also presented. Experimental results of BaTiO₃ and PbNb₃ thin films as measured by these three methods are given.

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