Abstracts

W band silicon dielectric resonator for semiconductor substrate characterization

P. Blondy, D. Cros, P. Guillon, F. Balleras and C. Massit. "W band silicon dielectric resonator for semiconductor substrate characterization." 1998 MTT-S International Microwave Symposium Digest 98.3 (1998 Vol. III [MWSYM]): 1349-1352.

This paper is about the use of planar millimeter wave whispering gallery dielectric resonator modes for material characterization. Experimental results and theoretical ones obtained with finite element method permit to determine electromagnetic characteristics of a material like silicon. The results on loss factor are compared to basic electromagnetic theory. It is shown that high resistivity silicon dielectric resonators could be used to build high Q millimeter wave resonators.

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