

Abstracts

Dielectric materials, devices, and circuits

S.J. Fiedziuszko, I.C. Hunter, T. Itoh, Y. Kobayashi, T. Nishikawa, S.N. Stitzer and K. Wakino. "Dielectric materials, devices, and circuits." 2002 Transactions on Microwave Theory and Techniques 50.3 (Mar. 2002 [T-MTT] (50th Anniversary Issue)): 706-720.

Dielectric materials are continuing to play a very important role in the microwave communication systems. These materials are key in realization of low-loss temperature-stable resonators and filters for satellite and broadcasting equipment, and in many other microwave devices. High dielectric-constant materials are critical to the miniaturization of wireless systems, both for the terminals and base-stations, as well as for handsets. In this paper, a sequential evolution of the dielectric materials applications in microwave devices will be reviewed. This includes dielectric waveguides, low-loss temperature-stable ceramic materials, dielectric resonators, and filters. The recent advances in the multilayer circuit modules, dielectric antennas, and ferroelectrics are also described.

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