

Iliyana Arestova, Rositza Tomova, Gergina Angelova. THE DISPERSION AND COMPONENTS OF THE DOMINANT MODE ON THE IMAGE GUIDE FOR MILLIMETER WAVES

The image guide is a guiding structure which has been intensively investigated for application in the millimeter wavelength range. It has been considered as a perspective both for a guiding structure and for a possible base for design of components – directional couplers, isolators etc. Here we have studied experimentally by the cavity resonator method (CRM) and numerically by the finite element method (FEM) the dispersion on the alumina image guide in the frequency range of 28 – 38 GHz. Also, we have simulated by the FEM the distributions of the components of the dominant mode, and measured with the help of electric probes the electric field components.

Keywords: dielectric waveguides, image guide, millimeter waves

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