

Estimations of impedance characteristics of a sectoral cylindrical cavity-backed slot antenna fed by probe

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Abstract

This paper presents the estimations of impedance characteristics such as input impedance and the standing wave ratio of the so-called sectoral cylindrical cavity-backed slot antenna excited by probe. The antenna structure is simple and suitable for mass production. The analysis method is carried out by formulating the integral equation corresponding to the boundary condition of the antenna structure. Then, the unknown function is solved by using Method of Moments together with the aids of the dyadic Green's functions. The results of impedance characteristics are obtained and analyzed. This antenna is essential to be the element of the array antenna for mobile communications.