Abstracts

Propagation and Radiation Behaviour of Dielectric Coated E-Plane Sectoral Horn

A.K. Kamal, S.C. Gupta and R.A. Nair. "Propagation and Radiation Behaviour of Dielectric Coated E-Plane Sectoral Horn." 1977 MTT-S International Microwave Symposium Digest 77.1 (1977 [MWSYM]): 547-549.

The analytical and experimental results of the radiation behaviour of an improved feed system with increased directivity, greater gain and low sidelobe levels consisting of a dielectric coated E-plane sectoral horn are reported. The characteristic equation for the separation constant for the HE/sub 1P/ mode is obtained and the radiation characteristics with power gain for the system are derived for HE/sub 11/ mode excitation. Analytical results are established by good agreement with experiments. Results of the experimental investigations in further improving the radiation characteristics of the dielectric coated E-plane sectoral horn using dielectric spheres are also included.

❑ Return to main document.