Abstracts

Hybrid-Frequency Cutoffs in Gyrotropic Waveguides (Short Papers)

P. de Santis and G. Franceschetti. "Hybrid-Frequency Cutoffs in Gyrotropic Waveguides (Short Papers)." 1972 Transactions on Microwave Theory and Techniques 20.3 (Mar. 1972 [T-MTT]): 237-238.

The behavior of the Brillouin diagram omega versus beta/sub z/ is analyzed for axially magnetized gyrotropic waveguides in the vicinity of the hybrid frequencies omega/sub k/ and omega/sub i/. Starting from the exact dispersion relation for the modes in the waveguides under consideration it is shown that 1) the dispersion curves terminate at discrete cutoff points located along the omega = omega/sub k/, omega/sub i/ line and 2) the group velocity at these points is zero. These results modify the behavior of the dispersion curves existing in the literature.

❑ Return to main document.