Abstracts

Parallel Pumping in Hexagonal Ferrites with the DC Field Off the Easy Plane

J. Helszajn and J. McStay. "Parallel Pumping in Hexagonal Ferrites with the DC Field Off the Easy Plane." 1970 Transactions on Microwave Theory and Techniques 18.9 (Sep. 1970 [T-MTT]): 518-524.

This paper gives the theory of spinwave instability under parallel pumping in hexagonal Zn/sub 2/Y ferrites with planar anisotropy in the case of a sphere. The configuration considered in this paper is the one in which the dc field makes an angle beta with the easy plane and the resultant magnetization lies at an angle alpha to it. To obtain parallel pumping with this arrangement it is necessfly to align the RF field along the magnetization. This leads to a new spinwave spectrometer which allows the dependence of the spinwave linewidth upon the angle alpha which the unstable spinwave makes with the c axis of the crystal to be determined. The experimental results obtained on two Mn-Zn/sub 2/Y single-crystal ferrite spheres show that the spinwave linewidth increases with the angle alpha.

❑ Return to main document.