Abstracts

Magnetic Waves Guided by a Linearly Tapered YIG Film

S.R. Seshadri and M.-C. Tsai. "Magnetic Waves Guided by a Linearly Tapered YIG Film." 1981 Transactions on Microwave Theory and Techniques 29.2 (Feb. 1981 [T-MTT]): 96-101.

A quasi-optical treatment is given for the dispersion relation and the group delay time of a magnetic wave guided by a YIG film having a weak linear taper in its thickness in the propagation direction of the guided magnetic wave. This treatment has 1) confirmed the intuitive results in which the local value of the thickness is used for the tapered film, 2) indicated the frequency regions of validity of the intuitive results, and 3) revealed interesting features of the wavenormal and ray directions inside a YIG film.

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