Abstracts

Ferrite Phase Shifters Using Stress-Insensitive Garnet Materials (May 1995 [T-MTT])

J.T. Vaughn, P.R. Cox, G.P. Rodrigue and G.R. Harrison. "Ferrite Phase Shifters Using Stress-Insensitive Garnet Materials (May 1995 [T-MTT])." 1995 Transactions on Microwave Theory and Techniques 43.5 (May 1995 [T-MTT]): 1017-1022.

Stable hysteresis characteristics of ferrimagnetic materials are critical to the RF performance of microwave ferrite toroidal phasers. Particularly troublesome are the magnetostrictive characteristics where the hysteresis properties are altered by stress. This paper presents the results of a study addressing MN/sup +3/ substitutions in garnets to improve the resultant magnetostrictive characteristics in order to achieve stress-insensitive performance in waveguide toroidal phasers.

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