Abstracts

Ferrite Phase Shifters Using Stress Insensitive Garnet Materials (1994 Vol. I [MWSYM])

J.T. Vaughn, P.R. Cox, G.P. Rodrigue and G.R. Harrison. "Ferrite Phase Shifters Using Stress Insensitive Garnet Materials (1994 Vol. I [MWSYM])." 1994 MTT-S International Microwave Symposium Digest 94.1 (1994 Vol. I [MWSYM]): 113-116.

Stable hysteresis characteristics of ferrimagnetic materials are critical to the RF performance of microwave ferrite toroidal phasers. Particularly troublesome is 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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