Abstracts

Manganese Substitution in Garnets for Remanent Phase Shifters (Correspondence)

A.S. Hudson, J. Sneider and J.W.F. Dorleijn. "Manganese Substitution in Garnets for Remanent Phase Shifters (Correspondence)." 1971 Transactions on Microwave Theory and Techniques 19.1 (Jan. 1971 [T-MTT]): 119-120.

Results of experiments to determine the effect of small manganese substitution on the properties of mixed yttrium-gadolinium garnets are reported. The composition Y/sub 2.1/Gd/sub 0.9/Fe/sub 5-z/ Mn/sub z/0/sub 12/ (0<z<0.15) has been investigated, and the variation of remanent properties, resonance linewidth, and dielectric loss tangent are given. It is shown that the use of manganese can lead to a significant reduction in the variation of remanent phase shift with external stress, and the composition with z = 0.15 is shown to be comparable with magnesium-manganese-aluminium spinel in this respect.

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