Abstracts

Microwave Lithium Ferrites: An Overview

G.M. Argentina and P.D. Baba. "Microwave Lithium Ferrites: An Overview." 1974 Transactions on Microwave Theory and Techniques 22.6 (Jun. 1974 [T-MTT] (Special Issue on Microwave Control Devices for Array Antenna Systems)): 652-658.

Lithium ferrites are discussed and compared with other spinel microwave ferrites and rare earth-iron garnets. Points of comparison are saturation magnetization, temperature performance, hysteresis loop properties, stress sensitivity, insertion loss, power handling capability, resonance linewidth, and cost. The main points of discussion deal with the relative effectiveness of lithium ferrites, nickel ferrites, magnesium ferrites, and garnets as elements employed in latching applications at frequencies in the S, C, X, and K/sub u/ bands. A section is devoted to the compositional modifications necessary for: 1) adjusting magnetization, spin-wave line width, coercive force, and magnetic anisotropy; 2) the minimization of stress sensitivity and dielectric loss; and 3) the improvement of microstructural characteristics.

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