Abstracts

Solid-State YIG Serrodyne

D.C. Webb and R.A. Moore. "Solid-State YIG Serrodyne." 1967 Transactions on Microwave Theory and Techniques 15.7 (Jul. 1967 [T-MTT]): 421-427.

Theory and operation of a serrodyne based upon phase velocity modulation of magnetostatic modes in YIG are described. Sources of limitation on the spectral performance are evaluated in terms of measured device parameters. The most critical sources of unwanted spectral generation are flyback time, nonlinear current sawtooth, logarithmic phase variation, and variation in attenuation with applied magnetic bias. Design and operation of a C-band stripline device is described. All unwanted sidebands were suppressed by 22 dB river the desired signal output, limited primarily by the flyback time.

❑ Return to main document.