Abstracts

Intermixing Optical and Microwave Signals in GaAs Microstrip Circuits for Phase-Locking Applications

M.G. Li, E.A. Chauchard, C.H. Lee and H.-L.A. Hung. "Intermixing Optical and Microwave Signals in GaAs Microstrip Circuits for Phase-Locking Applications." 1990 Transactions on Microwave Theory and Techniques 38.12 (Dec. 1990 [T-MTT] (1990 Symposium Issue)): 1924-1931.

The microwave modulation of the interference generated by optical beams that are reflected from the top and bottom surfaces of GaAs substrate adjacent to a microstrip line is studied. The detected modulation is used to directly characterize the electro-optic effect. This optical-microwave intermixing technique is applied to phase-lock a free-running microwave oscillator with picosecond laser pulses. One potential application of this technique is for the optical on-wafer characterization of MMIC's.

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