Abstracts

Effects of optical modulation on continuously variable millimeter-wave delay lines based on optical fiber gratings

J.L. Corral, J. Marti and J.M. Fuster. "Effects of optical modulation on continuously variable millimeter-wave delay lines based on optical fiber gratings." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1117-1120 vol.3.

The performance of a continuously variable millimeter-wave true time delay unit based on one chirped fiber grating is analyzed. Different optical modulations schemes (DSB+C, SSB+C, self-heterodyne) are studied and the main limitations introduced. Microwave signal level influence on time delay and amplitude ripple on detected signal is analyzed. The theoretical results have been confirmed with measurements on a 4 nm bandwidth chirped fiber grating.

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