Abstracts

Optoelectronic Phase Locking of Microwave Signals Up to 4 GHz Using a Laser-Diode-Based Electrooptic Harmonic Mixer

C.-L. Pan, K.-Y. Tang and H.-H. Wu. "Optoelectronic Phase Locking of Microwave Signals Up to 4 GHz Using a Laser-Diode-Based Electrooptic Harmonic Mixer." 1993 Microwave and Guided Wave Letters 3.4 (Apr. 1993 [MGWL]): 113-115.

A reflection-mode GaAs electrooptical sampler has been used for constructing a harmonic mixer to optoelectronically phase-lock microwave signals up to 4 GHz in a laser-diode-based system. The conversion loss of the harmonic mixer is 81 dB. The phase noise degradation of the phase-locked 4-GHz signal at 5-kHz offset measured with respect to the 500 MHz synthesizer signal driving the laser diode is 38 dB.

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