Abstracts

Phase modulation of a loop phase-locked grid oscillator array

Wenzhang Wang and L.W. Pearson. "Phase modulation of a loop phase-locked grid oscillator array." 2001 Microwave and Wireless Components Letters 11.11 (Nov. 2001 [MWCL]): 441-443.

In this letter, we describe a method for phase modulation of a loop phase-locked grid oscillator array and report results obtained in a test bed implementation of the method. The key to the scheme lies in introducing the phase-locked loop (PLL) in such a way that the modulating data stream is introduced in parallel with the loop rather than through it, thereby circumventing the bandwidth limitation of the PLL. The experiment was performed at 4.7 GHz with a phase-locked grid oscillator array. The grid oscillator was successfully modulated by a 1 MHz signal, which is ten times higher than the bandwidth of the phase-locked loop.

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