Abstracts

A 94 GHz Synchronized Oscillator-Chain for Fast, Continuous 360° Phase Modulation

H. Barth. "A 94 GHz Synchronized Oscillator-Chain for Fast, Continuous 360° Phase Modulation." 1987 MTT-S International Microwave Symposium Digest 87.1 (1987 Vol. I [MWSYM]): 433-436.

A continuous phase shift of 0 to 360° has been achieved at 94 GHz by injection locking a 2nd harmonic mode Gunn-oscillator at its fundamental frequency. Phase shifting is achieved by varactor tuning the free running fundamental frequency within the locking range. The resulting phase shift between reference signal and the VCO output signal is ±90 degrees at the fundamental frequency and doubled to ±180 degrees at the 2nd harmonic frequency. The phase shifted signal as well as the reference signal each have output powers of more than 20 mW at 94 GHz.

❑ Return to main document.