Abstracts

Full 360° Phase Shifting of Injection-Locked Oscillators

X. Zhang and A.S. Daryoush. "Full 360° Phase Shifting of Injection-Locked Oscillators." 1993 Microwave and Guided Wave Letters 3.1 (Jan. 1993 [MGWL]): 14-16.

A novel design is presented to produce analog phase shift of 0° to 360° in optically controlled oscillators which are subharmonically injection-locked. The proposed concept was analytically described and experimentally demonstrated by producing 360° of phase shift in an 8 GHz oscillator that is indirect optically injection-locked to a 4 GHz subharmonic frequency. This design concept could eliminate the need for switched delay-line phase shifters in the T/R modules of optically controlled phased array antennas, thus making T/R module more compact and efficient.

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