Abstracts

A Study of Subharmonic Injection Locking for Local Oscillators

X. Zhang, X. Zhou, B. Aliener and A.S. Daryoush. "A Study of Subharmonic Injection Locking for Local Oscillators." 1992 Microwave and Guided Wave Letters 2.3 (Mar. 1992 [MGWL]): 97-99.

The analysis of a subharmonic injection locked local oscillator introduced here is based on a general nonlinear input-output model for the subharmonic synchronized oscillator. The results show the nth-order subharmonic injection locking oscillator is locked primarily by the nth harmonic output of injected signal that is generated by the current-voltage nonlinearity of the active device. The measurement of subharmonic injection locking range, at factors of 1/2, 1/3, and 1/4, of a MESFET DRO verified these results.

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