

Abstracts

Locking Behavior of a Microwave Multiple-Device Ladder Oscillator

S. Nogi and K. Fukui. "Locking Behavior of a Microwave Multiple-Device Ladder Oscillator." 1985 Transactions on Microwave Theory and Techniques 33.3 (Mar. 1985 [T-MTT]): 253-262.

This paper presents a detailed discussion on the injection-locking property of a microwave ladder oscillator which is essentially an array of diode mount-pairs in a rectangular waveguide cavity. It is shown both analytically and experimentally that the use of a ladder structure is advantageous both in obtaining a large locking figure of merit (i.e., $2Q_{\text{sub ex}}/\sup -1/$) and in rapidity of the transient response to the PSK signal injection.

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