

Abstracts

Dynamic Considerations of Injection Locked Pulsed Oscillators with Very Fast Switching Characteristics

D. Pavlidis, H.L. Hartnagel and K. Tomizawa. "Dynamic Considerations of Injection Locked Pulsed Oscillators with Very Fast Switching Characteristics." 1978 Transactions on Microwave Theory and Techniques 26.3 (Mar. 1978 [T-MTT]): 162-169.

A theory is reported which describes, in a more accurate manner than previously, the voltage and phase transients of injection locked pulsed oscillators with very fast growth times by incorporating second-order effects which become important under certain conditions. The locking transients are determined either in the time domain or on a phase plane in which the variables are the oscillation amplitude and the phase ϕ . The optimum conditions for fast switching are demonstrated with the aid of experimentally obtained data for Gunn oscillators, which give some experimental verification of the theory presented here.

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