

Abstracts

Criteria for the Onset of Oscillation in Microwave Circuits (Short Papers)

R.W. Jackson. "Criteria for the Onset of Oscillation in Microwave Circuits (Short Papers)." 1992 Transactions on Microwave Theory and Techniques 40.3 (Mar. 1992 [T-MTT]): 566-569.

A commonly used criterion for oscillator startup is demonstrated not to be universally valid. In order to investigate startup conditions, the Nyquist stability criterion is written in terms of microwave quantities. It is shown that widely available microwave CAD can be used to create Nyquist stability plots. Since the Nyquist criterion gives only global stability information, a convenient graphical criterion is developed to determine whether an oscillation will start up near a particular resonance frequency.

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