Abstracts

A Novel Approach for the Large Signal Analysis and Optimisation of Microwave Frequency Doublers

S. El-Rabaie, J.A.C. Stewart, V.F. Fusco and J.J. McKeown. "A Novel Approach for the Large Signal Analysis and Optimisation of Microwave Frequency Doublers." 1988 MTT-S International Microwave Symposium Digest 88.2 (1988 Vol. II [MWSYM]): 1119-1122.

This paper describes a novel approach for the large signal analysis and optimization of microwave frequency doublers. A large signal lumped element model is used for an NE 71000 chip MESFET and a two level Harmonic Balance program employed in order to analyse and then optimize a target 'ideal' doubler. A practical circuit is then built in order to synthesize the 'ideal' doubler requirement. Agreement between experiment and theory is seen to be excellent.

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