Abstracts

A stability-ensuring procedure for designing high conversion-gain frequency doublers

I. Schmale and G. Kompa. "A stability-ensuring procedure for designing high conversion-gain frequency doublers." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 873-876.

This paper presents a new general procedure for designing optimum conversion gain class B FET frequency doublers. For the first time, the two key design variables, i.e. the reflection coefficients of the input and output matching networks, /spl Gamma//sub IMN,2fo/ and /spl Gamma//sub OMN,fo/, can be independently swept without risking device oscillation and hence simulator nonconvergence. This permits the designer to directly select the best parameters for maximum but insensitive conversion gain. Exemplary conversion gain contours typical for HEMTs and MESFETs are finally presented.

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