Abstracts

Influence of Non-Ideal Circulator Effects on Negative-Resistance Amplifier Design

B.D. Bates and P.J. Khan. "Influence of Non-Ideal Circulator Effects on Negative-Resistance Amplifier Design." 1980 MTT-S International Microwave Symposium Digest 80.1 (1980 [MWSYM]): 174-176.

It is well known that the non-ideal properties of a circulator (non-unity VSWR, non-zero insertion loss, finite isolation) have a marked effect on the design of single-stage and multi-stage negative-resistance amplifiers. These effects are due to the frequency dependence of the circulator parameters, the feedback associated with multiple reflections between circulator ports and terminations, and the possibility of spurious pass-bands in the circulator characteristics away from the desired operating frequency range. Noise degradation also occurs with a low-noise amplifier circuit.

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