Abstracts

12 GHz Low-Noise MMIC Amplifier Designed with a Noise Model that Scales with MODFET Size and Bias (Dec. 1993 [T-MTT])

B. Hughes, J. Perdomo and H. Kondoh. "12 GHz Low-Noise MMIC Amplifier Designed with a Noise Model that Scales with MODFET Size and Bias (Dec. 1993 [T-MTT])." 1993 Transactions on Microwave Theory and Techniques 41.11 (Dec. 1993 [T-MTT] (1993 Symposium Issue)): 2311-2316.

A scalable, bias-dependent FET noise model was developed for MMIC design. A three-stage, 12 GHz, MMIC, low-noise amplifier (LNA) was designed with the model. The LNA has a 1.6 dB noise figure and 25.6 dB gain. Lumped elements were used to design an LNA that was significantly smaller per stage (0.31 mm^2) than previous MMIC LNA's.

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