

Inductorless Monolithic Microwave Amplifiers with Directly Cascaded Cells

I.E. Ho and R.L. Van Tuyl. "Inductorless Monolithic Microwave Amplifiers with Directly Cascaded Cells." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 515-518.

Design and performance of inductorless cascadable amplifier cells are described. Using an $f_{\text{sub T}} = 15$ GHz GaAs FET MMIC process, broadband cells employing a new "additive gain" technique are directly cascaded to form a 26 dB-gain, 80 MHz - 4.5 GHz amplifier. A multistage narrowband design exhibits 25 dB gain at 3.5 GHz with 1.6 GHz bandwidth. A compact FET synthetic inductor is compared to square spiral inductors for these designs.

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