Abstracts

Airbridge Gate FET for GaAs Monolithic Circuits

E.M. Bastida and G. Donzelli. "Airbridge Gate FET for GaAs Monolithic Circuits." 1985 Transactions on Microwave Theory and Techniques 33.12 (Dec. 1985 [T-MTT] (1985 Symposium Issue)): 1585-1590.

This paper describes a novel technology for producing micron- and submicron gate FET devices with improved gain and noise performances. The technique is particularly attractive for the production of very low-noise devices and is very useful in monolithic circuit fabrication. In the production of high-power devices, the technique has the advantage of not requiring complicated interdigitated structures. A noise figure improvement of 0.4 dB at 10 GHz was achieved using this technology. As an example of the developed technique, a two-stage monolithic preamplifier (2.8-dB NF, 15-dB gain between 11.7 and 12.5 GHz) is described. This amplifier was connected with other monolithic circuits to form a multichip DBS front-end receiver having 43± 2.5 dB conversion gain and 4-dB NF /sub MAX/.

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